



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Assessment Report on the 2011 Geophysical and Geochemical work

TOTAL COST: \$71,290

AUTHOR(S): William E Poole
SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): N/A

STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5174927

YEAR OF WORK: 2011

PROPERTY NAME: Murray

CLAIM NAME(S) (on which work was done): 513715, 515065, 515067, 845257, 560897

COMMODITIES SOUGHT: Cu, Mo, Au, Ag

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN:

MINING DIVISION: Cariboo

NTS / BCGS: 93G013, 93G014, 93G023, 93G024

LATITUDE: ____ 53 ____ ° ____ 21 ____ ' ____ 0 ____ "

LONGITUDE: ____ 123 ____ ° ____ 41 ____ ' ____ 0 ____ " (at centre of work)

UTM Zone: 10 EASTING: 473000 NORTHING 5895000:

OWNER(S): William E Poole

MAILING ADDRESS: 841 Elm Street, Quesnel, B.C. V2J 7J8

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

MAILING ADDRESS: as above

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Cache Creek Group, Granodiorite pluton, Jurassic-Cretaceous, Porphyry Cu Mo

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
25224, 25398, 25504, 25911, 25912, 25917, 28536, 30392, 32138, 32621

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	12,405 m	513715,515065,515067	\$2,700
Electromagnetic			
Induced Polarization	6,130 m	513715, 515065	\$28,390
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil	26,400 m	513715,515065,515067, 845257, 560897	\$23,400
Silt			
Rock			
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying	271 samples	513715,515065,515067, 845257, 560897	\$10,700
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)	9.0	513715,515065,515067	\$6,100
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other			
		TOTAL COST	\$71,290

EXPLORATION REPORT
on
IP, RESISTIVITY and MAGNETIC
GEOPHYSICAL SURVEYS
and an
MMI SOIL GEOCHEMISTRY SURVEY
on the
MURRAY PROPERTY
BLACKWATER RIVER, QUESNEL AREA
CARIBOO MINING DIVISION, BRITISH COLUMBIA

PROPERTY LOCATION: 66 km northwest of Quesnel
53° 21' N Latitude, 123° 41' W Longitude
NTS: 93G/03,06

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DATED: December 16, 2011



BC Geological Survey
Assessment Report
32899

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Geology Map, after page 8	1:1,231,000	4
Geology Map Legend, after page 8	n/a	4a

MMI STACKED HISTOGRAMS

	Copper, Molybdenum, Gold, Silver, Cobalt	Cerium, Lead, Zinc, Nickel
Line 93650N & 4N	Fig H1A	Fig H1B
Line 93750N	Fig H2A	Fig H2B
Line 94500N	Fig H3A	Fig H3B
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Line 95250N	Fig H6A	Fig H6B
Line 95400N	Fig H7A	Fig H7B
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Line 95700N	Fig H9A	Fig H9B
Line 95850N	Fig H10A	Fig H10B
Line 96000N	Fig H11A	Fig H11B
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Line 96300N	Fig H13A	Fig H13B
Line 1N	Fig H14A	Fig H14B
Line 2N	Fig H15A	Fig H15B
Line 3N	Fig H16A	Fig H16B

*This is the scale of the maps when produced on letter-size paper.

MMI SURVEY PLAN MAPS

Metal	Production Scale*	Map/Fig#
Silver	1:10,000	GC-1
Gold	1:10,000	GC-2
Cadmium	1:10,000	GC-3
Cerium	1:10,000	GC-4
Cobalt	1:10,000	GC-5
Copper	1:10,000	GC-6
Molybdenum	1:10,000	GC-7
Nickel	1:10,000	GC-8
Lead	1:10,000	GC-9
Uranium	1:10,000	GC-10
Zinc	1:10,000	GC-11

MAGNETIC SURVEY PLAN MAPS

Map Type	Production Scale*	Map/Fig#
Contour Plan	1:10,000	GP-1A
Profile Plan	1:10,000	GP-1B
Contour Plan on MMI Grid	1:10,000	GP-1C

IP/RESISTIVITY SURVEY

PSEUDOSECTIONS

Map Type	Production Scale*	Map/Fig#
Line 95250N	n/a	GP-2A
Line 95400N	n/a	GP-3A
Line 95550N	n/a	GP-4A
Line 95700N	n/a	GP-5A
Line 95850N	n/a	GP-6A

INVERSIONS

Map Type	Production Scale*	Map/Fig#
Line 95250N	n/a	GP-2B
Line 95400N	n/a	GP-3B
Line 95550N	n/a	GP-4B
Line 95700N	n/a	GP-5B
Line 95850N	n/a	GP-6B

*The maps were produced at these scales but may be reduced to fit within the report and thus have a smaller scale.

SUMMARY

MMI soil sampling, IP/resistivity and magnetic surveys were carried within the Murray Property which is situated in the Nechako Basin, Blackwater River area, Cariboo Mining Division, BC. The property, by air, is located about 60 km west-northwest of the town of Quesnel and about 450 km north of the city of Vancouver. By road, the property is 90 km from Quesnel.

Rio Tinto from 1967 to 1970 carried out an exploration program of soil sampling, IP, trenching, and diamond drilling. This resulted in the discovery of significant mineralization, consisting of copper and molybdenum appearing to occur over a wide area. This suggested the occurrence of porphyry copper type mineralized body. Therefore, the main purpose of the current exploration program was to expand on Rio Tinto's work.

The work was done in three phases, the first in summer, 2010, the second in the summer, 2011, and the third in the fall of 2011. The 2010 work consisted of 4 MMI reconnaissance soil sampling lines running in a mostly northwesterly direction and with the sample interval being 100 meters. The total number of samples was 60. The results were encouraging and thus was followed up with an MMI survey grid in the summer of 2011 and consisted of 271 samples taken along 13 east-west lines that had a line separation of 100, 150, 200 and 350 meters, for a total survey length of 26,400 meters. All MMI sampling was carried out by the property owners. The samples were sent to SGS labs in Toronto and tested for 53 elements.

Of the sample results, 11 elements were chosen out of the 53 reported on and these were silver, gold, cadmium, cobalt, cerium, copper, molybdenum, nickel, lead, uranium, and zinc. The mean background value was calculated for each of the 11 elements and this number was then divided into the reported value to obtain a figure called the response ratio, which is essentially the number times background. Two stacked histograms of the response ratios were then made for each of the grids. In addition, plan maps of each of the afore-mentioned elements were made for each grid where the data were plotted and contoured at a logarithmic interval.

The fall 2011 work consisted of magnetic surveying and IP/resistivity surveying carried out by Geotronics. This program was recommended by David Heberlein in his interpretive report on the MMI results. The magnetic surveys were carried out with two proton precession magnetometers, with one being a base station and one being a mobile unit, by taking readings every 12.5 m along the survey lines. The magnetic survey consisted of 8 lines for a total survey length of 12,405 meters. The readings were also plotted onto a contour plan map at a scale of 1:5000 and then profiled on a second map.

The resistivity and IP surveys were carried out using a BRGM Elrec-6 multi-channel receiver operating in the time-domain mode. The transmitter used was a BRGM VIP 4000 powered by a 6.5-kilowatt motor generator. The dipole length and reading interval chosen was 25 meters read up to 12 levels. Five lines of IP/resistivity surveying were carried out for a total survey length of 6,130 meters. The results were plotted both in pseudosection, and contoured. A 2-D inversion interpretation using Geotomo software, a least squares method, was also carried out along each of the IP lines and the results plotted and contoured.

CONCLUSIONS

1. Significant mineralization consisting of copper and molybdenum over a wide area was discovered by Rio Tinto in the late '60's within the central part of the Murray Property. It is suggestive of a porphyry copper style of mineral deposit.
2. The MMI soil sampling survey, carried out within the area of the Rio Tinto discovery, located two anomalies of exploration interest that have been labeled by the upper case letters A and B.
3. Anomaly A is the main anomaly because of its strength and large area and is the only area to be surveyed by IP, resistivity, and magnetics. It is roughly of oblong shape striking in a northwesterly direction with a strike length is 1,750 meters and an average width of 700 meters. The strongest responses are that of copper and molybdenum with additional strong responses in silver, gold and nickel. It also has responses in cadmium, uranium and zinc that occur mostly around the boundary of this anomaly.
4. A well-defined IP anomaly correlates directly with anomaly A making it an MMI/IP anomaly. It correlates with a resistivity sub-low within a resistivity high. Since an IP anomaly is usually caused by sulphide mineralization, this indicates that anomaly A is reflecting a large, low-grade body of copper-molybdenum mineralization with values in silver and gold, probably a porphyry copper type. The resistivity high is probably caused by the granodiorite intrusive and the sub-low by alteration and/or fracturing associated with the mineralization. Zinc and cadmium MMI anomalous responses occur around the boundary of anomaly A which suggests zinc and cadmium mineralization occurring around the main porphyry mineralized body. This is a common characteristic of porphyry copper-molybdenum deposits since the mineralization of porphyry deposits occurs in phases.
5. Supporting this interpretation is Rio Tinto's drill hole A-8 which occurs to the immediate south of Anomaly A. It encountered significant copper and molybdenum mineralization consisting of an average grade of 0.11% Cu and 0.04% MoS₂ from 29.3 to 152.4 meters, a width of 123.1 meters. Drill hole A-10, located 244 meters to the south of A-8, also encountered significant mineralization. Drill hole A-9, drilled 975 meters south of A-8, encountered significant pyrite, but little base metal sulphides, suggesting the occurrence of a pyrite halo, which commonly occurs around porphyry copper deposits.
6. The Rio Tinto drilling in conjunction with the IP and MMI results suggest the mineralization may occur over a much wider area than is suggested by anomaly A, perhaps with one dimension as much as 2000 meters.
7. Anomaly B occurs about 600 meters to the southwest of anomaly A within the southwestern part of the grid area. It is principally a copper-zinc-silver anomaly with correlating nickel and cadmium values.

8. Anomaly B is also oblong in shape with a north-northwesterly strike direction. It is about 650 meters in width and a minimum 1,350 meters in strike length with it being open to the south. It occurs within basaltic volcanic rocks adjacent to the southwest contact of the granodiorite intrusive.

RECOMMENDATIONS

1. The MMI sampling should be continued on the property as follows: -
 - (a) fill in the grid so that the line spacing is no more than 150 meters, but preferably 100 meters, and the station spacing is 25 meters, However, in some areas this will be limited by marsh lands, alluvial materials (stream sediments) and thick organics
 - (b) extend the grid to the north of anomaly A, and to the west and south of anomaly B also taking samples every 25 meters on lines 100 meters apart. The south is especially important because of the two Rio Tinto diamond drill holes encountering significant mineralization.
2. The magnetic surveying should also be continued over the same areas as the MMI sampling, but taking readings every 12.5 meters.
3. The IP and resistivity surveys should be continued to the north, south and west of the current IP survey area.
4. Geologically map the property, especially around anomalies A and B. This could be quite limited due to the widespread overburden cover. Consideration should therefore be given to trenching the MMI/IP anomalies.
5. Once the above is complete, then the stronger anomalies should be diamond drilled.

**EXPLORATION REPORT
on
IP, RESISTIVITY and MAGNETIC
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on the
MURRAY PROPERTY
BLACKWATER RIVER, QUESNEL AREA
CARIBOO MINING DIVISION, BRITISH COLUMBIA**

INTRODUCTION AND GENERAL REMARKS

This report discusses survey procedure, compilation of data, interpretation methods, and the results of IP, resistivity, and magnetic surveying, as well as MMI soil sampling carried out on the Murray Property which is located to the west-northwest of the town of Quesnel, BC, and is owned and operated by William E. Poole.

The MMI soil sampling was carried out initially by the owners of the property during the summer of 2010 along four reconnaissance lines, three of which were run in a northwest direction, and the fourth, easterly. Anomalous results were obtained and thus follow-up sampling was carried out in June of 2011, but this time on a grid with the lines running east. The results were positive and thus further work was warranted. Heberlein in an interpretive report on the MMI results recommended IP, resistivity, and magnetic surveying which was carried out by a Geotronics crew of six men during the period of October 31st to November 7th 2011.

The work consisted of the following:

Work Type	Date	Samples/Readings	Lines	Total Length (m)
MMI Soil Sampling	Aug, 2010	60	4	5,600
MMI Soil Sampling	June, 2011	271	13	26,400
Magnetic Survey	Nov, 2011	22,300 meters	8	12,405
IP/Resistivity Survey	Nov, 2011	n/a	5	6,130

Rio Tinto discovered the mineralization within the Murray Property, then called Pantages, during the late '70's, with a program of soil geochemistry, IP, trenching and diamond drilling. Their most significant hole was diamond drill hole A-8, as shown on the MMI and magnetic plan maps. It encountered significant copper and molybdenum mineralization

consisting of an average grade of 0.11% Cu and 0.04% MoS₂ from 29.3 to 152.4 meters, a width of 123.1 meters. This strongly suggests porphyry copper type mineralization and therefore, the main purpose of the above-described exploration program was to look for porphyry-type mineralization consisting of the base metals copper and molybdenum and probably associated silver and gold values.

The purpose of the MMI soil sampling is to look for mineralization directly. MMI stands for mobile metal ions and describes ions, which have moved in the weathering zone and that are weakly or loosely attached to surface soil particles. MMI, which requires special sampling and testing techniques, are particularly useful in responding to mineralization at depth probably in excess of 700 meters. It also is not affected by glacial till, while standard soil sample techniques are. MMI is characterized in having a high signal to noise ratio and therefore can provide accurate drill targets.

The purpose of the magnetic survey is to map rock types, geological structure, as well as alteration zones. The property is widely covered with overburden and thus other tools such as magnetic surveying are important to map geology.

The purpose of the IP survey is to determine whether sulphide mineralization is associated with MMI anomalies. This would indicate that base metal sulphides are the causative source of an MMI anomaly. The purpose of the resistivity survey is similar to that of the magnetic survey, that is, to map geology. In addition, its purpose is also to determine whether IP anomalies correlate with (1) resistivity highs, which may indicate that sulphide mineralization is associated with silicification; or (2) resistivity lows, which may indicate that alteration is associated with sulphide mineralization.

Sections of this report were taken from Assessment Report 30932 (2008) written by the registered owner William Poole.

PROPERTY AND OWNERSHIP

The property is comprised of 28 contiguous tenures that comprise an area of 8,539.7 ha and occurs within the Cariboo Mining Division as shown on figure #2: These tenures occur on NTS map sheets 93G/03 and 93G/06.

Tenure Number	Type	Claim Name	Good Until	Area (ha)
513715	Mineral		20120731	445.337
515065	Mineral	TREV	20120731	464.898
515067	Mineral	KEV	20120731	484.349
560897	Mineral	JEN 1	20120731	406.8069
560898	Mineral	JEN 2	20120731	484.5711
560899	Mineral	JEN 3	20120731	387.6583
581299	Mineral	JEN 6	20120731	154.9068
581300	Mineral	JEN 7	20120731	77.4535
581301	Mineral	JEN 8	20120731	116.2026

836008	Mineral	M1	20111215	58.0584
836010	Mineral	M2	20111215	77.4037
836011	Mineral	M3	20111215	77.4151
836012	Mineral	M4	20111215	116.1352
845253	Mineral	M5	20120202	77.43
845257	Mineral	M6	20120202	116.173
845258	Mineral	M7	20120202	232.3111
845259	Mineral	M8	20120202	193.6949
847457	Mineral	M9	20120225	484.4845
847458	Mineral	M10	20120225	484.1816
847459	Mineral	M11	20120225	483.9753
847460	Mineral	M12	20120225	483.9308
847461	Mineral	M13	20120225	483.6928
847462	Mineral	M14	20120225	483.635
847463	Mineral	M15	20120225	483.6774
847464	Mineral	M16	20120225	483.7868
847465	Mineral	M17	20120225	116.1577
847466	Mineral	M18	20120225	465.0343
847467	Mineral	M19	20120225	116.3136

Total Area: 8539.6744 ha

The registered owner of the claims is William E. Poole of Quesnel, BC. However, it is understood that there are other owners but are not registered.

LOCATION AND ACCESS

(from Poole, 2008)

The Murray Group of Claims is located approximately 60 km west-northwest of the town of Quesnel. The property is within the Cariboo Mining Division and is covered by map sheets NTS 93G013, 93G014, 93G023 and 93G024. The property is centered at latitude 53° 21' N and longitude 123° 41' W and consists of 28 contiguous mineral claims comprising 8,539.67 hectares. The NAD 83 UTM coordinates for the approximate center are 5896000 northing and 472000 easting, zone 10.

The most direct access to the claims is from Quesnel via the Blackwater Road. The Blackwater Road is a well constructed government maintained road that begins 8 km west of Quesnel on the Nazko Highway in the community of Bouchie Lake. By driving north on the Blackwater Road the claims can be accessed via several forest access roads that enter the Blackwater Road at 65 km, 79.3 km, 87.5 km and 92.5 km. Improved road access will be constructed within the claims in the near future to facilitate harvesting of beetle infested pine.

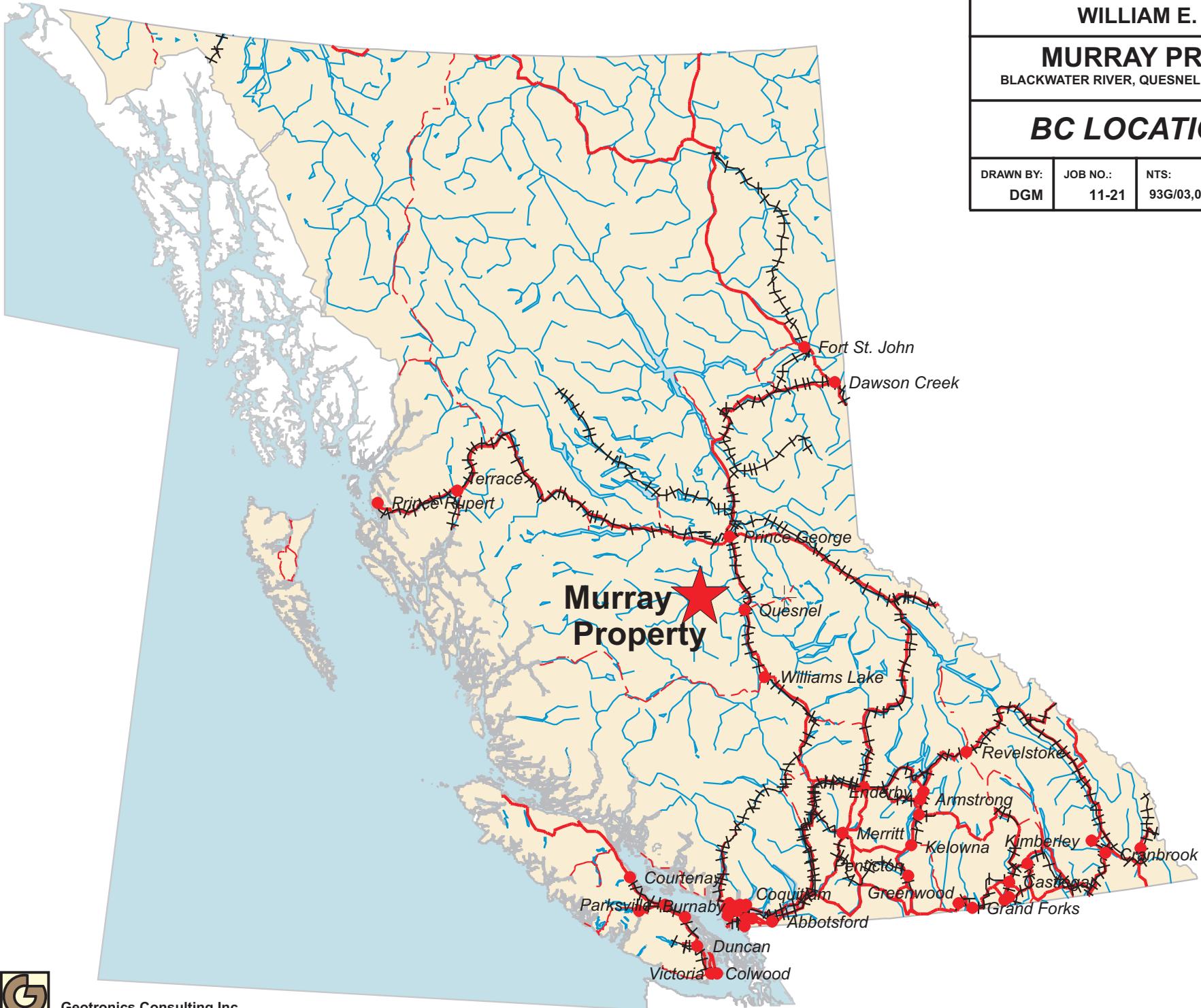
WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

BC LOCATION MAP

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/03,06	DEC 11	1



Geotronics Consulting Inc
Surrey B.C.



Murray
Property

Map Center: 53.1027N 123.0122W

0 2 5 10
Kilometers

Strathmaver
Dunkley

Fraser
River

CN Rail

Ten Mile Lake

Moose Heights

Bartow Creek

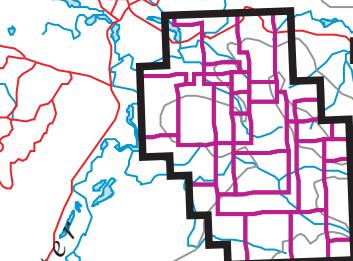
Bouchie Lake

Quesnel

Red Bluff

Lust Subdivision

Rich Bar



WILLIAM E. POOLE

MURRAY PROPERTY

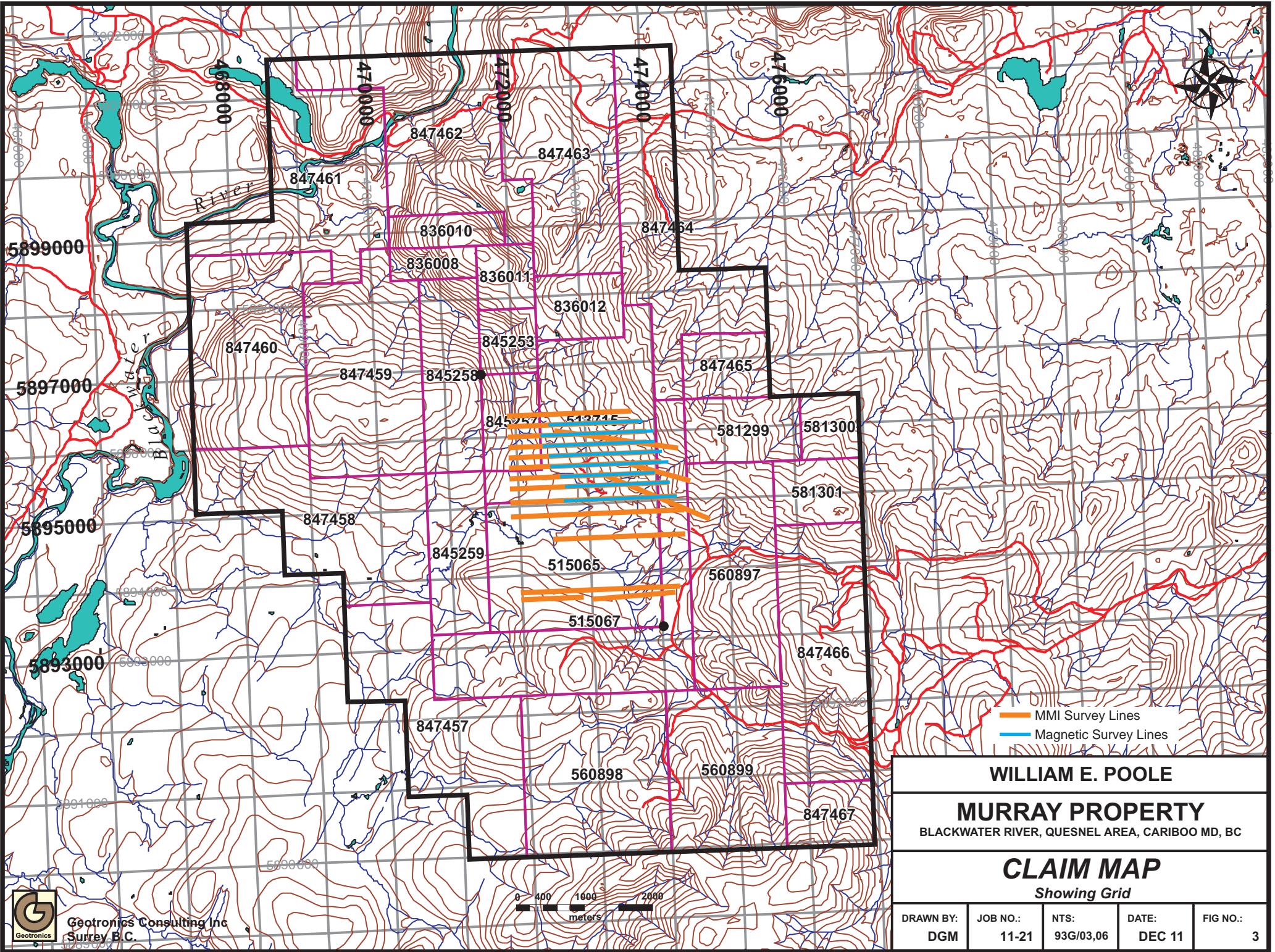
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

REGIONAL LOCATION MAP

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/03,06	DEC 11	2



Geotronics Consulting Inc
Surrey B.C.



PHYSIOGRAPHY AND VEGETATION

(from Poole, 2008, with changes by Poole to reflect recent forest fire)

The properties are situated regionally on the Fraser Plateau of the Interior Plateau physiographic area. The elevation ranges from 850 - 1,300 meters. The claims are dominated by a north south trending ridge rising 300 - 350 meters above the low valley bottom. This ridge is drained by a radial pattern of streams flowing north and west into the Blackwater River. The overall landscape is typical of the Fraser Plateau where ridged landforms reflect a topography modified by advances of Pleistocene ice from the south. Tipper (1972) interpreted the Blackwater River Valley as a major meltwater channel formed during deglaciation of the Fraser Ice Sheet. Ice-flow directions can be clearly identified by the orientation of rock drumlins and glacial grooves, on air photographs of the area surrounding the claim. South of the claim the ice-flow direction is from 010° to 015° whereas closer to the Blackwater River valley the direction becomes more easterly.

The change in ice-flow direction may be caused by deflection of the advancing ice by the ridge in the middle of the claim. Ice flow indicators are less clear in the central part of the claims and this may either be due to the softer nature of the observed bedrock, relatively stagnant ice over a topographical high or even the emergence of the land surface above the ice sheet. Deglaciation features mapped by Tipper (1972) in the immediate area of the claims include a small meltwater channel draining into the Blackwater River and an esker.

Lord and Walmsley, 1988, mapped much of the soil formed from the better-drained glacial deposits and colluvium as grey luvisol (Telegraph Series) or an orthic dystric brunisol (Westroad-Barrett Series). Both soils have a leached Ae horizon, a weakly developed Bf (iron accumulation) horizon or Bt (clay accumulation) horizon and dark brown Bm horizon (Canadian Soil Classification Working Group, 1988). Soil ph is typically less than 5.5. Depending on the parent materials soil texture ranges from sandy to gravelly loam. Organic soils and gysolic soils have formed in poorly drained depressions and along stream valleys where there is commonly a thick alder and devils club growth.

Over 50% of the claims were destroyed by forest fires in 2010 (Pelican fire complex). Approximately 20% of the claims area had been harvested prior to 2010 and most of the remaining unburnt timber is expected to be harvested at an accelerated rate due to the impact of the mountain pine beetle infestation. It is doubtful that any of the burnt areas will be harvested due to the poor quality of the burnt timber. Active logging is currently being conducted by three timber processing companies and B.C. Timber Sales.

The climate in the claims area is typical of the central interior with warm summers and moderately cold winters. Temperature extremes at Quesnel range from 36.7 Celsius in the summer to -46.7 Celsius in the winter. Annual precipitation is 54.0 centimetres.

HISTORY OF PREVIOUS WORK

(from Poole, 2008)

Exploration on the Murray Property dates back to the late 1960's when Rio Tinto Canadian Exploration Ltd conducted detailed work over a period of 3 years that led to the discovery of favourable mineralization in both a porphyry copper, molybdenum and a shear zone copper prospect.

More recently from 1997 to 2003, work conducted on the Murray Claims by Bill Poole was successful in the discovery of a potentially economic deposit of high aspect wollastonite, a precious metal enriched polymetallic vein showing, a vein gold showing and a talc-magnesite showing.

History of the Rio Tinto Canadian Explorations Ltd. 1967-1970

From 1967 - 1970 the area was held and worked by Rio Tinto Canadian Explorations Ltd. This was known as the Pantage project and consisted of 136 two-post claims. The claims are now almost completely contained within the southern portion of the present Murray Group. The Pantage project was covered by a reconnaissance stream sampling program in the summer of 1967. Three stream samples of significantly high copper led the company to do follow-up work in a more detailed fashion. A geochemical approach delineated two geochemically anomalous areas they referred to as the north (granodiorite) grid and the south (ultramafic-sediment shear zone) grid. In 1968 bulldozer trenching and induced polarization surveys were subsequently done on both the north and south grids.

The result of the work on the north grid indicated a medium strength chargeability anomaly that extends over 1,000 ft (300 m) wide and 2 miles (3.2 km) long. This area, informally referred to by Rio Tinto as the north, main and south zones, line up in a north-south direction and are demarcated by northwest-trending faults. The induced polarization survey over the west grid indicated several narrow chargeability anomalies on or near the contact of ultramafic-argillite. Bulldozer trenching uncovered fairly widespread mineralization in the ultramafic along a length of 1,600 ft (500 m). Within this area Rio Tinto took two rock samples. These samples, one from across a 7 ft. wide mineralized zone at the ultramafic-argillite contact, the other taken at random from the mineralized spots in the ultramafic, assayed 8.75% copper and 8.17% copper, respectively.

In November and December of 1969, 3,236 feet (1,000 m) of diamond drilling was completed on the property. Seven holes for a total footage of 1,671 ft were drilled in three sections to test a narrow chargeability anomaly and copper mineralization in the west grid (ultramafic-argillite zone). This chargeability anomaly was later determined to be caused by graphitic layers within the argillites. Drilling indicated that copper sulphides were oxidized to a vertical depth of greater than 275 feet, a depth greater than the penetration of the IP survey. The copper oxide mineralization in this zone was of medium grade and widths. Copper percent over seven sections from one hole ranged from 0.87% - 1.71%. This drilling was shut down in December 1969 due to cold temperatures and long water lines. Further

drilling was proposed to test a mineralized intersection to determine its attitude, strike length and grade of the copper sulphides beneath the oxide zone. Three holes for a total footage of 1,565 feet were drilled to test an I.P. chargeability anomaly over a granodiorite with known copper mineralization in the trenches. Diamond drill hole A-8 was drilled from the southern trenches beneath a 14 millisecond chargeability anomaly and is the only hole for which a drill log is available. The first sulphides were encountered at 71.5 feet and the first copper and molybdenum sulphides at 100 feet. The core recovery in the highly weathered rocks between 25 and 73 feet was very poor while the core recovery below the oxidized area (below 100 feet) was good. From 96 to 500 feet the hole was fairly uniformly mineralized with chalcopyrite, molybdenite and pyrite with chalcopyrite being the most prominent sulphide. Total sulphide content is probably 1%. This same section averaged 0.14 Cu and 0.04 MoS₂. The highest copper value was 0.25% and the highest molybdenite values were 0.22% and 0.38% MoS₂.

The best estimate for the location of DDH-A8, based on Rio Tinto's reports and the property owners' field reconnaissance is slightly south of station 72480E line 95050N. It is also believed that this hole is located near the northern extent of the Rio Tinto IP survey.

Hole DDH-A9 was drilled on a section 3200 feet (975 meters) south of hole DDH-A8. The chargeability's in this area were in the order of 35 milliseconds. In the hole granodiorite was intersected to 373 feet but Andesite predominated from 189 to the bottom of the hole at 467 feet. Sulphide mineralization consisted of primarily pyrite with a few specks of chalcopyrite and molybdenite. Pyrite content was estimated at 3%.

Hole DDH-A10 was drilled on a section 800 feet south of DDH-A8. From 26 to 598 feet the chalcopyrite, molybdenite and pyrite are disseminated fairly uniformly throughout the hole as in hole DDH-A8.

There are no drill logs available for DDH A-9 and A-10.

Murray Claims Group

The Murray Claim Group originated from the staking of one two-post claim to cover a classic ophiolite assemblage (Chris Ash, 2001) hosting a pervasive zone of iron carbonate alteration containing bright green chromium mica (mariposite). This showing lies north of the Blackwater River at approximately 94 km and was uncovered by a road construction crew while developing a rock quarry for road ballast. Forest road construction south of the Blackwater River opened up favourable ground when the roads exposed an intrusive with skarn altered and hornfels country rocks. Claims were staked to cover the area. Prospecting resulted in the discovery of a potentially economic deposit of high aspect wollastonite, a precious metal enriched polymetallic showing and a talc-magnesite showing. Prospecting was partly funded by three successive grants from the Prospecting Assistance Program. This program consisted of prospecting, geological mapping, soil, silt and rock geochemistry, excavator trenching and access trail development. As logging road access improved, more ground was added, eventually encompassing Rio Tinto's claims of the 1960's.

In 2006 an extensive post legacy claim program of prospecting, geological mapping and rock geochemistry was carried out over the entire property. This program discovered two zones of iron carbonate alteration on strike with Rio Tinto's shear zone copper discovery, extending the alteration zone to over 900 meters.

From June 1 - 30th, 2007 a program of excavator trenching was carried out to test the iron carbonate alteration. Five pits and seven trenches were excavated. Three pits did not hit bedrock, the remainder all hit iron carbonate alteration with widths ranging from 3.0 m to 28.0 meters. This alteration has developed along the contact between serpentinized ultramafic and a package of siliceous argillite. Silicification has overprinted the ultramafic and the meta-sediments and is characterized by narrow crustiform biotryoidal and vuggy white quartz veinlets. This work extended the strike length of the alteration zone to 1.2 km.

In 2008, a prospecting program was attempted to map the Eocene volcanics that lie east of the granodiorite intrusive and to re-evaluate two anomalous stream sediment samples taken from the area. The purpose was to explore the area's potential to host an Eocene volcanic covered porphyry copper deposit and/or an Eocene volcanic host epithermal gold deposit as indicated by these aforementioned stream anomalies.

GEOLOGY

(a) Regional

(from Poole, 2008)

The regional geology in the immediate area of the claims was described by H.W. Tipper, presented on G.S.C. Map 49-1960, Sheet 93G.

According to Tipper, the oldest rocks in the property and surrounding area is Cache Creek Group of Mississippian to Triassic age, consisting of ribbon cherts, black argillites, limestone and greenstone. This is followed by mafic to ultramafic volcanic and sub-volcanic rocks correlative with the Pennsylvanian to Jurassic Cache Creek Group. These rocks are intruded by a moderate size granodiorite pluton assumed to be Jurassic to Cretaceous in age (Tipper, 1960; Massey, 2005). Rocks east of the Cache Creek Group within the prospecting area are likely Eocene volcanic strata of the Endako Group which unconformably overlie the Cache Creek Group rocks. Unconsolidated overburden mantles over 90% of the claims area.

(b) Property

There is no documented bedrock mapping on the property so identification of the property geology must be taken from the regional scale bedrock government survey mapping.

The Murray property is believed to be underlain by Cache Creek sedimentary and volcanic rocks of upper Carboniferous-Triassic age. These rocks have been intruded by the Permian-Triassic Trembleur intrusive and by a granodiorite intrusive believed to be

late Jurassic, early Cretaceous in age. Eocene volcanic of the Endako group unconformity overlies the granodiorite intrusive and Cache Creek rock along the eastern margin of the claims. Chilcotin Group plateau basalt predominates along the western margin of the claims. The granodiorite intrusive and Cache Creek rocks have few exposures and are limited to steep gullies and a few road cuts. Government mapping show the granodiorite intrusive is of moderate size with the longest dimension being 8 km.

The geology of this granodiorite zone was discussed in the 1969 unpublished report by E.D. Cruz, Rio Tinto. Due to the near absence of rock outcrop in this area the geology was based on information gathered from bulldozer trenching and diamond drill holes.

Briefly, the area is believed to be underlain by sediment intruded by the Topley? intrusive as evident by the sediment generally occurring in the granodiorite. The sedimentary inclusion carries disseminated sulphides, chalcopyrite, pyrite and pyrrhotite.

MMI SOIL SAMPLING

(a) Sampling Collection

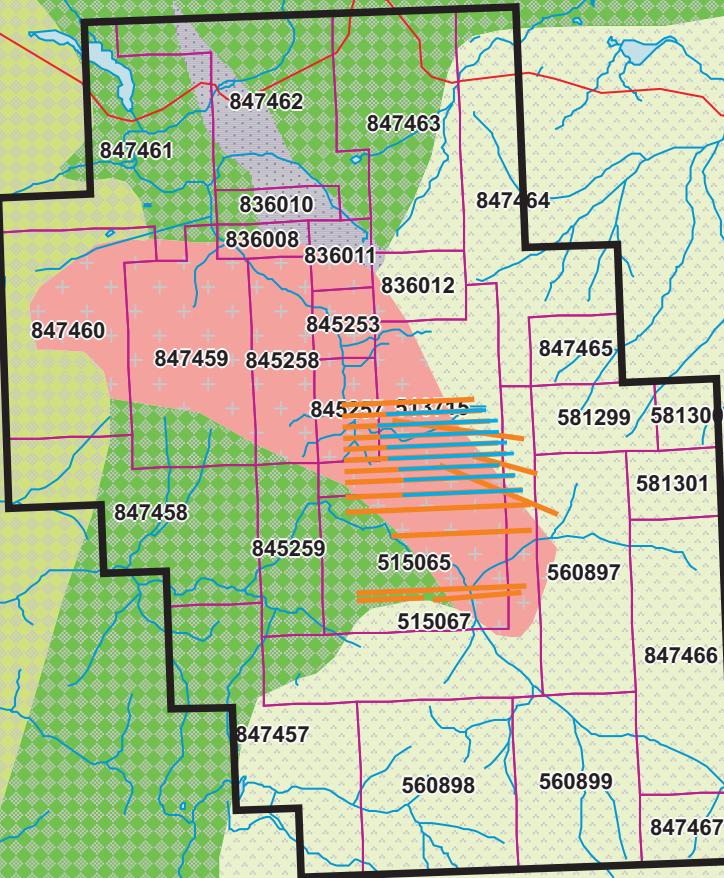
In October of 2010, 60 samples were collected on widely-spaced northwesterly-trending lines. Positive results were obtained and thus in the summer of 2011, as a follow-up, 271 samples were collected at 100 meter intervals on 13 east west lines. Line spacing was mainly 150 m but was changed to 100, 200 and 350 meters to avoid areas of wet lands and alluvial sediments.

(b) Sampling Procedure

The sampling procedure was to first remove the organic material from the sample site (A_0 layer) and then dig a pit over 25 cm deep with a shovel. Sample material was then scraped from the sides of the pit over the measured depth interval of 10 centimeters to 25 centimeters. About 250 grams of sample material was collected and then placed into a plastic Zip-loc sandwich bag with the sample location marked thereon. The 271 samples were then packaged and sent to SGS Minerals located at 1885 Leslie Street, Toronto, Ontario.

(c) Analytical Methods

At SGS Minerals, the testing procedure begins with weighing 50 grams of the sample into a plastic vial fitted with a screw cap. Next is added 50 ml of the MMI-M solution to the sample, which is then placed in trays and put into a shaker for 20 minutes. (The MMI-M solution is a neutral mixture of reagents that are used to detach loosely bound ions of any of the elements from the soil substrate and formulated to keep the ions in solution.) These are allowed to sit overnight and subsequently centrifuged for 10 minutes. The solution is then diluted 20 times for a total dilution factor of 200 times and then transferred into plastic test tubes, which are then analyzed on ICP-MS instruments.



0 600 1500 3000
meters

WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

GEOLOGY MAP
Showing Grid

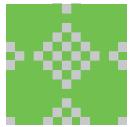
DRAWN BY: DGM	JOB NO.: 11-21	NTS: 93G/03,06	DATE: DEC 11	FIG NO.: 4
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Geotronics Consulting Inc
Surrey B.C.



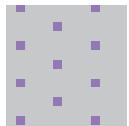
Permian to Triassic
chert, siliceous argillite, siliciclastic rocks



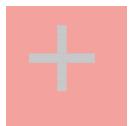
Permian to Triassic
basaltic volcanic rocks



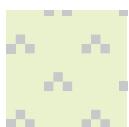
Permian to Triassic
chert, siliceous argillite, siliciclastic rocks



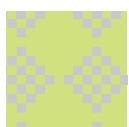
Permian to Triassic
ultramafic rocks



Jurassic to Cretaceous
intrusive rocks, undivided



Eocene to Oligocene
undivided volcanic rocks



Miocene to Pleistocene
basaltic volcanic rocks

WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

GEOLOGY LEGEND



Geotronics Consulting Inc
Surrey B.C.

DRAWN BY: DGM	JOB NO.: 11-21	NTS: 93G/03,06	DATE: DEC 11	FIG NO.: 4a
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Results from the instruments for the 53 elements are processed automatically, loaded into the LIMS (laboratory information management system which is computer software used by laboratories) where the quality control parameters are checked before final reporting.

(d) Compilation of Data

Then 11 elements were chosen out of the 53 reported on and these were silver, gold, cadmium, cobalt, cerium, copper, molybdenum, nickel, lead, uranium, and zinc. The mean background value was calculated for each of the 11 elements and this number was then divided into the reported value to obtain a figure called the response ratio, which is essentially the number times background. The background for each of the 11 elements is given below in parts per billion (ppb):

Ag	Au	Cd	Ce	Co	Cu	Mo	Ni	Pb	U	Zn
1.71	0.05		27.32	27.63	430.00	2.50	115.47	5.00		12.50

Two stacked histograms of the response ratios were then made. The first stacked histogram consisted of copper, molybdenum, gold, silver, and cobalt while the second stacked histogram of cerium, nickel, lead, and zinc.

In addition, a plan maps were made for each of the 11 elements, GC-1 to GC-11, at a scale of 1:10,000. On each map, the data were plotted and contoured at a logarithmic interval.

MAGNETIC SURVEY

(a) Instrumentation

The magnetic survey was carried out with two model G-856 proton precession magnetometers manufactured by Geometrics of San Jose, California. One was used as a base station and the other was used as the field unit. This instrument reads out directly in nanoTeslas (nT) to an accuracy of ± 1 nT, over a range of 20,000 - 100,000 nT. The operating temperature range is -40° to $+50^\circ$ C, and its gradient tolerance is up to 3,000 gammas per meter.

(b) Theory

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite and therefore magnetic surveys are used to detect the presence of these minerals in varying concentrations, as follows:

- Magnetite and pyrrhotite may occur with economic mineralization on a specific property and therefore a magnetic survey may be used to locate this mineralization.

- Different rock types have different background amounts of magnetite (and pyrrhotite in some rare cases) and thus a magnetic survey can be used to map lithology. Generally, the more basic a rock-type, the more magnetite it may contain, though this is not always the case. In mapping lithology, not only is the amount of magnetite important, but also the way it may occur. For example, young basic rocks are often characterized by thumbprint-type magnetic highs and lows.
- Magnetic surveys can also be used in mapping geologic structure. For example, the action of faults and shear zones will often chemically alter magnetite and thus these will show up as lineal-shaped lows. Or, sometimes lineal-shaped highs or a lineation of highs will be reflecting a fault since a magnetite-containing magmatic fluid has intruded along a zone of weakness, being the fault.

(c) Survey Procedure

Readings of the earth's total magnetic field were taken every 12.5 meters along 8 east-west survey lines with a separation of 150 and 200 meters. The total amount of surveying was 12,405 meters.

During the survey the diurnal variation was monitored in the field by a base station.

(d) Data Reduction

The data was input into a computer. Using Geosoft software, it was next plotted onto a contour plan map and then onto a second map where it was profiled.

INDUCED POLARIZATION AND RESISTIVITY SURVEYS

(a) Instrumentation

The transmitter used was a BRGM model VIP 4000. It was powered by a Honda 6.5 kW motor generator. The receiver used was a six-channel BRGM model Elrec-6. This is state-of -the-art equipment, with software-controlled functions, programmable through a keyboard located on the front of the instrument. It can measure up to 6 chargeability windows and store up to 2,500 measurements within the internal memory.

(b) Theory

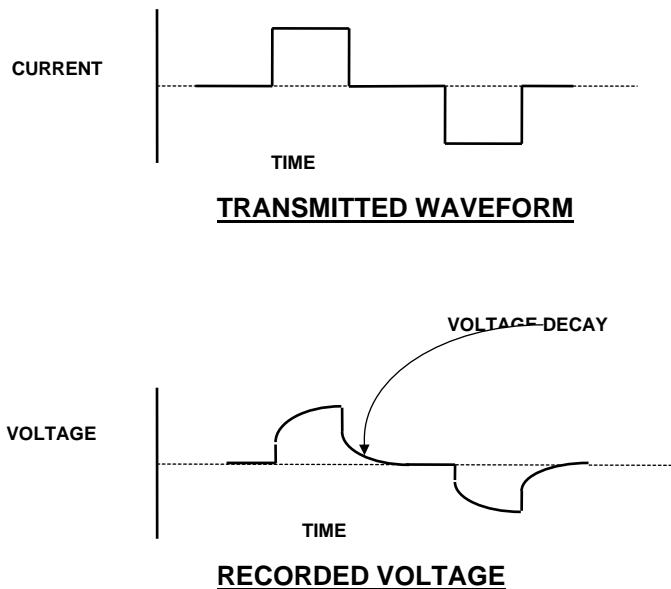
When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain mineral particles that transport current by electrons (mostly sulphides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface, positive ones where the current enters the particle and negative ones where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomena is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absence of metallic-type conductors.

Most IP surveys are carried out by taking measurements in the “time-domain” or the “frequency-domain”.

Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive a dimensionless parameter, the chargeability “M”, which is a measure of the strength of the induced polarization effect. Measurements in the frequency domain are based on the fact that the resistance produced at the electrolyte-charged particle interface decreases with increasing frequency. The difference between apparent resistivity readings at a high and low frequency is expressed as the percentage frequency effect, or “PFE”.

The quantity, apparent resistivity, ρ_a , computed from electrical survey results is only the true earth resistivity in a homogenous sub-surface. When vertical (and lateral) variations in electrical properties occur, as they almost always will, the apparent resistivity will be influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading, therefore, cannot be attributed to a particular depth.



The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely dependent on the volume, nature and content of the pore space. Empirical relationships can be derived linking the formation resistivity to the

pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation) in clean formations:

$$R_o = O^{-2} R_w$$

Where: R_o is formation resistivity

R_w is pore water resistivity

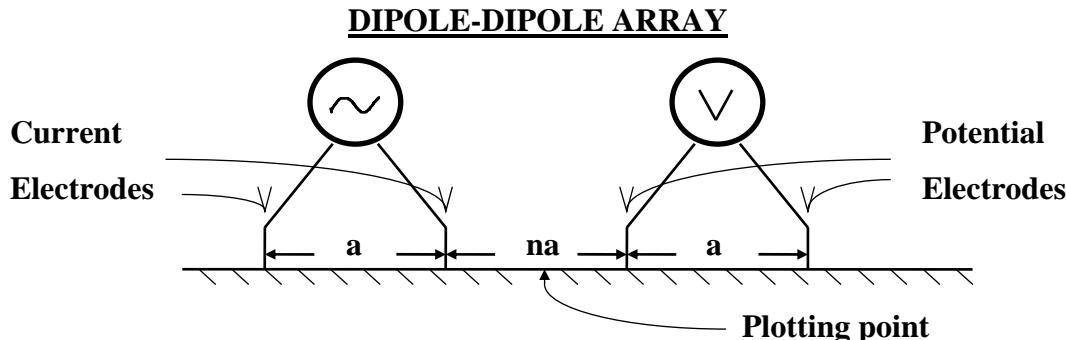
O is porosity

(c) Survey Procedure

The main purpose of the IP/resistivity surveying was to determine whether there was sulphide mineralization occurring with the main MMI anomaly located within the center of the grid. These were mainly base metal type anomalies discovered from the MMI work suggesting that they may be reflecting low grade, large tonnage sulphide mineralization.

The IP and resistivity measurements were taken in the time-domain mode using an 8-second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative charge, 2-seconds off). The delay time used after the charge shuts off was 80 milliseconds and the integration time used was 1,760 milliseconds divided into 10 windows.

The array chosen was the dipole-dipole, shown as follows:



For the IP survey the electrode separation, or 'a' spacing, and reading interval was chosen to be 50 meters read to 12 separations, which is the 'na' in the above diagram. The 12 separations give a theoretical depth penetration of about 300 meters, or 1,000 feet. The survey covered 5 lines for a total survey length of 6,130 meters.

Stainless steel stakes were used for current electrodes as well as for the potential electrodes.

(d) Compilation of Data

All the data were reduced by a computer software program developed by Geosoft Inc. of Toronto, Ontario. The computerized data reduction included the resistivity calculations, pseudosection plotting, survey plan plotting and contouring.

The chargeability (IP) values are read directly from the instrument and no data processing is therefore required prior to plotting. However, the data is edited for errors and for reliability. The reliability is usually dependant on the strength of the signal, which weakens at greater dipole separations.

The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the dipole-dipole array to compute the apparent resistivity. The resistivity data were relatively reliable to the 12 separations.

All the data have been plotted in pseudosection form at a scale of 1:10,000. One map has been plotted for each of the pseudosections, as shown on the above table and in the Table of Contents. The pseudosection is formed by each value being plotted at a point formed from the intersection of a line drawn from the mid-point of each of the two dipoles. The result of this method of plotting is that the farther the dipoles are separated, the deeper the reading is plotted. The resistivity pseudosection is plotted on the upper part of the map for each of the lines, and the chargeability pseudosection is plotted on the lower part.

All chargeability and resistivity pseudosections were contoured at a logarithmic interval to the base 10.

The self-potential (SP) data from the IP and resistivity surveys were plotted and profiled above the two pseudosections for each line at a scale of 1 cm = 100 millivolts with a base of zero millivolts. It is not expected that the SP data will be important in the exploration of the property, especially with the dipole length used, but considering that the data was taken, it was plotted and profiled for its possible usefulness.

(e) Inversion Interpretation

A 2-D inversion interpretation by a least squares method using computer software produced by Geotomo Software was carried out on the IP and resistivity data. This program uses the smoothness-constrained least-squares method inversion technique. The purpose of inversion interpretation is to eliminate the electrode effect that is endemic with IP and resistivity data and thus locate the causative sources more accurately.

DISCUSSION OF RESULTS

The MMI survey has revealed several anomalies throughout the main grid area, both large and small. Two of these are considered to have stronger exploration interest and thus have been labeled by the upper case letters, A and B.

Anomaly A is the larger of the two with the more intense readings and thus, at this point, is the main anomaly. For this reason the IP, resistivity and magnetic surveys were carried out across this anomaly. This anomaly was defined by the stacked histograms and thus is defined by several metals, though mainly copper and molybdenum.

Anomaly A is roughly of oblong shape striking in a northwesterly direction. The strike length is 1,750 meters and the average width is 700 meters across the main part. The strongest responses are that of copper and molybdenum with additional strong responses in silver, gold and nickel. It also has responses in cadmium, uranium and zinc that occur mostly around its boundary.

The IP survey revealed a strong anomalous response that correlates directly with the MMI anomaly. Since an IP anomaly is usually caused by sulphide mineralization, this indicates that anomaly A is reflecting a large, low-grade body of copper-molybdenum mineralization with values in silver and gold, probably a porphyry copper type. The zinc and cadmium MMI anomalous response around the edge of anomaly A suggests zinc and cadmium mineralization occurring around the main porphyry mineralized body. This is a common characteristic of porphyry copper-molybdenum deposits since the mineralization of porphyry deposits occurs in phases. In support of this, Rio Tinto's diamond drill hole A-8 occurs to the immediate south of anomaly A, as shown on the plan maps, and encountered significant copper and molybdenum mineralization (average grade of 0.11% Cu and 0.04% MoS₂ from 29.3 to 152.4 meters, a width of 123.1 meters).

The uranium anomalous MMI response occurring around the suggested main porphyry body with the zinc and cadmium is also a reflection of the phased intrusive. However, the uranium response is probably due to lithology rather than mineralization (Fedikow).

The correlating nickel anomaly may be reflecting nickel mineralization, but often nickel MMI anomalous responses are lithological, that is, they may be caused by basic and ultrabasic rock types. In support of this is that the western part of the nickel anomaly correlates directly with a localized magnetic high. However, this nickel anomaly also correlates very closely with the copper anomaly thus suggesting that the nickel MMI anomaly could be reflecting nickel mineralization.

The IP anomaly occurs on the eastern part of a resistivity high and/or with a resistivity low within this high. It would appear that the resistivity high is reflecting the granodiorite intrusive as shown on the geology map of fig. 4. The eastern part of this resistivity high correlates closely with the eastern edge of the granodiorite. Lows within this high may be reflecting alteration and/or fracturing within the granodiorite which are often associated with porphyry deposits. Or the lows may simply be reflecting an intrusive phase of the porphyry.

The magnetic survey shows a large north-northwesterly trending magnetic low correlating directly with that part of the IP anomaly which, according to the inversion interpretation, occurs closest to the surface. It also correlates on some lines with resistivity lows, which suggests that the magnetic low is reflecting the same geologic feature as the resistivity low, that is, alteration, fracturing and/or an intrusive phase which would contain a lower amount of magnetite.

To the west of the magnetic low is a magnetic high which occurs within the western half of the MMI anomaly. In other words, as can be seen on the magnetic plan maps, the MMI

anomaly occurs over a magnetic low as well as the adjacent magnetic high. This is the same for the resistivity results with MMI anomaly A correlating with a resistivity high as well as a low with this high. This may indicate that the suggested mineralization occurs within two different phases of the mineralized intrusive, or that it occurs within an altered as well as within a less altered rock-type, or that it occurs within a fractured as well as within a less fractured rock-type.

It is assumed that the MMI/IP anomaly is reflecting one large body of mineralization and certainly the inversion results suggest this. However, anomaly A may be reflecting several smaller bodies of mineralization rather than one large one. Some of the IP pseudosections and inversion sections suggest this as well as some the MMI results. The MMI, however, was carried out with a large station spacing and thus in-fill sampling may help sort this out.

Scattered thumbprint-type small cobalt anomalies occur throughout anomaly A as well as around it. In other words there is little cobalt correlation with anomaly A. Cobalt is often a reflection of pyrite since it occurs within the crystal structure of pyrite. Thus if a pyrite halo occurred around this possible porphyry deposit, as often is the case but not always, then one would expect the possibility of cobalt occurring around anomaly A as well as an IP anomaly. However, neither occurs and thus it would appear that this possible deposit is not associated with a pyrite halo. Nevertheless, Rio Tinto's drill hole A-9, located 3200 feet (975 meters) south of drill hole A-8, encountered a significant amount of pyrite, which could be attributed to a pyrite halo. If this is the case, then perhaps the mineralization occurs over a wider area than is shown by anomaly A. Rio Tinto's drilling within hole A-10, which is located 800 feet (152 meters) south of hole A-8, does suggest this possibility.

The Rio Tinto drilling with the MMI and IP anomaly A indicate that the mineralization may occur over a much wider area than as just indicated by anomaly A, perhaps as much as 2,000 meters in one dimension.

Cerium results are always looked at, since cerium anomalies are often a reflection of acidic intrusives, besides being a reflection of rare earth mineralization. There is little correlation of anomalous cerium results with Anomaly A but higher cerium values occur to the east of anomaly A. This may be a reflection of the volcanics to the east of the intrusive suggesting that the volcanics may be acidic in composition.

Anomalous values in cobalt, which could be reflecting pyrite, and anomalous values in cerium, which could be reflecting an acidic rock-type, occur to the immediate west-northwest of anomaly A. But in contact with the cobalt and cerium anomalous values are anomalous values in nickel which occur to the immediate east-southeast and could be reflecting a basic rock-type. As a result, this suggests the possibility that the mineralization occurs along a lithological contact with a more acidic rock-type to the west-northwest and a more basic rock-type to the east-southeast.

Anomaly B occurs about 600 meters to the southwest of anomaly A within the southwestern part of the grid area. It is principally a copper-zinc-silver anomaly with correlating nickel

and cadmium values. Also cobalt anomalous values occur within the southeastern part of the anomaly.

Anomaly B is also oblong in shape with a north-northwesterly strike direction. It is about 650 meters in width and a minimum 1,350 meters in strike length with it being open to the south. However, the shape and size of anomaly B is somewhat questionable because of the lack of sampling in this area.

Whereas anomaly A occurs within the granodiorite intrusive, the geology map suggests that anomaly B occurs within basaltic volcanic rocks adjacent to the southwest contact of the granodiorite intrusive.

The anomalous nickel values occur principally within the southeastern part of the anomaly suggesting they may be reflecting a basic or ultrabasic intrusive. A cerium anomaly, however, occurs within the northern part of anomaly B and thus this part of the anomaly may be reflecting an acidic rock type.

No other survey work, such as IP and magnetics, was carried out in the area of anomaly B.

SELECTED BIBLIOGRAPHY

- Beckmann, H., 1969, Report on Geophysical Surveys, Pantage Property, B. C., Private Report, Rio Tinto Canadian Exploration Limited
- Canada Soil Classification Working Group (1998), The Canadian System of Soil Classification, 3rd Edition, National Research Press, Ottawa, 1988, 187 pages
- Geological Survey of Canada, British Columbia Ministry of Energy and Mines (1986), National Geochemical Reconnaissance, Prince George, British Columbia (NTS 93G), Geological Survey of Canada, Open File 1214, 100 pages
- Fedikow, Dr. Mark, 2012, Verbal Communication on the MMI Results over the Murray Property
- Hall, H. I., 1970, Summary Report on the 1969 Diamond Drill Programme on the Pantage Property, British Columbia, Private Report, Rio Tinto Canadian Exploration Limited
- Heberlein, Dave, M.Sc., P.Geo, 2011, Murray Project, BC, An Interpretation of 2010 and 2011 MMI Results, for Bill Poole and Tony Bensted, Heberlein Geoconsulting, North Vancouver, BC
- Holland, S.S. 1976, Landforms of British Columbia, A Physiographic Outline, British Columbia Department of Mines and Petroleum Resources, Bulletin 48, 138 pages
- Lord, T.M. and Walmsley, M. 1988, Soils of the Nazko Area, British Columbia, Agricultural Canada, British Columbia Soil Survey Report, Number 38, 62 pages
- Massey, N.W.D., MacIntyre, D.G., Desjardins, P.J. And Cooney, R.T. (2005), Digital Map of British Columbia, tile NM 10 Southwest B.C., British Columbia Ministry of Energy, Ministry of Petroleum Resources, Geofile 2005 - 03
- Poole, William E., 1998, Geological Report on the Murray Group, Blackwater River Area, Cariboo M. D., British Columbia, Canada, BC Geological Survey Branch, ARIS Report No. 25398
- Poole, William E., 1998, Geological Report on the Murray Group, Blackwater River Area, Cariboo M. D., British Columbia, Canada, BC Geological Survey Branch, ARIS Report No. 25504
- Poole, William E., 1999, Geological Report on the Murray Group, Blackwater River Area, Cariboo M. D., British Columbia, Canada, BC Geological Survey Branch, ARIS Report No. 25911
- Poole, William E., 1999, Geological Report on the Murray Group, Blackwater River Area, Cariboo M. D., British Columbia, Canada, BC Geological Survey Branch, ARIS Report No. 25912
- Poole, William E., 1999, Geological and Geochemical Report on the Murray Group, Blackwater River Area, Cariboo M. D., British Columbia, Canada, BC Geological Survey Branch, Aris Report No. 25917

Poole, William E., 2006, Prospecting Report on the Murray Group of Properties, Blackwater River Area, Cariboo M. D., British Columbia, Canada, BC Geological Survey Branch, ARIS Report No. 28536

Poole, William E., 2008, Assessment Report on Prospecting, Geochemical and Physical Work on the Murray Group of Properties, Mineral Tenures 581298, 581299, 581300, 581301, 515065, 515067, 513715 Blackwater River Area, British Columbia, Canada, BC Geological Survey Branch, ARIS Report No. 30932

Ray Lett, James Logan and Zoe Sandwith; GeoFile 2008-7, A Multi-media Geochemical orientation study over the Jen Claims (Murray Property), Blackwater River Area , B.C. NS 93G03

Tipper, H.W. (1971), Glacial Geomorphology and Pleistocene History of Central British Columbia, Geological Survey of Canada, Bulletin 196, 9 pages

Wetherup, S. and Struick, L.C., 1996; Vanderhoof Metamorphic Complex and Surrounding Rocks, Central British Columbia; 1996-A, Geological Survey of Canada, Page 63 - 70

GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Surrey, in the Province of British Columbia, do hereby certify that:

I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

I am a Consulting Geophysicist of Geotronics Consulting Inc, with offices at 6204 – 125th Street, Surrey, British Columbia.

I further certify that:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practicing my profession for the past 41 years, and have been active in the mining industry for the past 44 years.
3. This report is compiled from data obtained from an MMI soil geochemistry survey carried out by the owner William Poole from 2010-2011, as well as induced polarization, resistivity and magnetic geophysical surveys, carried out by a crew of Geotronics Consulting in November, 2011, over the Murray Property located on Blackwater River 66 km due northwest of the city of Quesnel, within the Cariboo Mining Division of British Columbia.
4. I do not hold any interest in the property discussed in this report, nor in any other property held by William E. Poole or held by his co-owners, nor do I expect to receive any interest as a result of writing this report.

David G. Mark, P.Geo.
Geophysicist

December 16, 2011

AFFIDAVIT OF EXPENSES – IP and Magnetic Surveying

Induced polarization, resistivity, and magnetic surveying were carried out over the Murray Property, which occurs on and to the southeast of Blackwater River, a tributary of Fraser River, and which is located 60 km west-northwest of the town of Quesnel, B.C. This work was done during the period of October 31st, to November 10th, 2011, and to the value of the following:

<u>MOB/DEMOB:</u>		
Crew wages	\$4,000.00	
Truck rental and gas	1,050.00	
Room and board	<u>1,140.00</u>	
TOTAL	\$6,190.00	\$6,190.00
<u>FIELD:</u>		
IP/resistivity survey, 6-man crew, 5 days @ \$3,600/day	\$18,000.00	
Magnetic survey, 1-man crew, 2 days @ \$1,050/day	<u>\$2,100.00</u>	
TOTAL	\$20,100.00	\$20,100.00
<u>DATA REDUCTION and REPORT:</u>		
Geophysical technician, 54 hours @ \$50/hour	\$2,700.00	
Geophysicist, 3 days @ \$700/day	<u>\$2,100.00</u>	
TOTAL	\$4,800.00	\$4,800.00
GRAND TOTAL		<u>\$31,090.00</u>

Respectfully submitted,
Geotronics Consulting Inc.

David G. Mark, P.Geo,
Geophysicist.....December 16th, 2011

10.0 STATEMENT OF EXPENDITURES (Appended to Dec 16, 2011
 Report which does not include MMI, pH and line clearing costs)

10.1 Assessment Work

FIELD WORK				
Geo-chemical (MMI, pH)				
Field work	2 man Survey Crew	20 days @ \$900/day	\$18,000	
Transportation	4X4 Pick-up	18 days @ \$150/day	\$ 2,700	
			Sub-total	\$20,700
Line Preparation				
Field Work	2 man Field Crew	6 days @ \$800/day	\$4,800	
Transportation	4X4 Pick-up	6 days @ \$150/day	\$ 900	
ATV/power saw			\$ 400	
			Sub-total	\$6,100
REPORT				
	Dave Heberlein	Per contract	\$ 2,400	
Mapping	Cariboo Forest Consultants Ltd	6 hrs @ \$50/hr	\$ 300	
			Sub-total	\$2,700
TECHNICAL				
	SGS Minerals inc shipping	271 MMI samples	\$10,700	
			Sub-total	\$10,700.00
IP and Magnetic Surveying	As per page 20 of Dec 16, 2011 report		\$31,090.00	
			Sub-total	\$31,090
			TOTAL	\$71,290

APPENDIX I –GEOCHEMISTRY DATA

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
96300	71880	96300	7	48	5	0.5	2190	0.5	360	7	230	154	100	0.25	840	87	42.9	18.8
96300	71980	96300	7	24	5	0.1	1550	0.5	260	4	38	19	50	0.25	440	24	12.1	6
96300	72080	96300	6	124	5	0.05	800	0.5	90	11	34	59	50	4.7	400	10	5.5	2.3
96300	72180	96300	9	84	5	0.05	1430	0.5	160	6	20	50	50	2.4	190	5	2.4	1.3
96300	72280	96300	15	84	5	0.2	3100	0.5	360	2	9	31	50	1.6	300	2	0.9	0.8
96300	72380	96300	7	127	5	0.05	2230	0.5	230	3	33	33	50	2.7	540	5	2.7	1.6
96300	72480	96300	2	135	5	0.05	4380	0.5	210	2	68	33	50	2.1	310	6	3	2.6
96300	72580	96300	11	6	5	0.5	1670	0.5	330	3	31	256	100	0.25	2690	34	25.1	5.8
96300	72680	96300	1	3	5	0.05	1370	0.5	210	0.5	33	9	50	0.25	220	14	7.7	3.7
96300	72780	96300	3	4	5	0.2	1200	0.5	220	4	19	14	50	0.25	650	12	6.6	3.1
96300	72880	96300	18	12	5	0.3	770	0.5	190	7	38	33	50	0.5	990	14	7.5	3.8
96300	72980	96300	23	122	5	0.1	990	0.5	180	4	16	23	50	2.3	590	4	2.1	0.9
96300	73080	96300	9	136	5	0.05	2210	0.5	230	6	34	103	50	2.8	620	6	3	1.6
96300	73180	96300	2	37	5	0.1	5970	0.5	190	3	72	317	50	0.7	400	8	4.1	2.7
96300	73280	96300	5	21	10	0.3	2580	0.5	320	1	159	75	50	0.25	480	37	18.5	10.3
96300	73380	96300	1	31	5	0.05	6350	0.5	530	2	179	170	50	0.7	280	20	9	6.4
96300	73480	96300	1	95	5	0.05	4190	0.5	240	2	43	55	50	2.6	240	3	1.7	1.5
96300	73580	96300	0.5	109	5	0.3	3690	0.5	190	3	121	50	50	3	370	19	9.5	5
96300	73680	96300	2	38	5	0.2	1970	0.5	250	3	139	39	50	0.25	450	32	17.2	8.9
96150	71880	96150	2	91	5	0.1	4170	0.5	420	0.5	11	32	50	1.3	140	1	0.6	0.8
96150	71980	96150	5	95	5	0.3	5470	0.5	380	10	290	74	50	1	940	75	37.3	14.4
96150	72080	96150	8	113	5	0.05	8100	0.5	290	3	109	27	50	3.2	760	22	11.8	5.8
96150	72180	96150	5	117	5	0.05	4510	0.5	150	3	62	28	50	2.4	360	11	5.1	4.1
96150	72280	96150	18	182	5	0.05	1210	0.5	90	24	37	38	50	2.2	220	11	5.9	2.1
96150	72380	96150	0.5	42	5	0.05	4520	0.5	480	0.5	37	24	50	0.5	200	3	1.4	1.3
96150	72480	96150	2	89	5	0.05	1550	0.5	360	4	165	88	50	0.25	230	11	6.6	2.6
96150	72580	96150	4	140	5	0.1	1200	0.5	140	3	77	28	50	3.1	670	18	10.1	4.7
96150	72680	96150	3	4	5	0.05	1600	0.5	190	0.5	27	13	50	0.25	720	13	7.3	3.2
96150	72780	96150	11	2	5	0.3	1020	0.5	200	2	24	5	50	0.7	2390	26	15	5.7
96150	72880	96150	18	23	5	0.05	1380	0.5	220	4	24	34	50	0.25	1930	13	6.7	4
96150	72980	96150	24	16	5	0.2	1820	0.5	310	4	11	21	50	0.25	1550	8	4.9	2.3
96150	73080	96150	24	113	5	0.05	680	0.5	270	4	13	44	50	1.8	490	3	1.9	0.9
96150	73180	96150	9	64	5	0.05	2010	0.5	280	3	250	289	50	0.6	210	22	11	6.2
96150	73280	96150	0.5	19	5	0.2	3870	0.5	270	2	123	79	50	0.25	830	27	13.2	7.8
96150	73380	96150	0.5	57	5	0.2	4530	0.5	230	2	63	88	50	1.5	870	14	7.2	4.2
96150	73480	96150	6	101	5	0.1	2480	0.5	250	2	17	42	50	2.5	420	4	1.9	1.2
96150	73580	96150	2	194	5	0.05	2730	0.5	90	8	178	449	100	1.5	320	23	11.6	4.9
96150	73680	96150	3	16	5	0.2	1990	0.5	350	3	15	13	50	0.5	930	44	25	9.9
96150	73780	96150	6	74	5	0.05	5510	0.5	330	2	26	85	50	2.8	760	4	1.9	1.5
96000	71880	96000	2	8	5	0.05	2740	0.5	350	2	11	26	50	0.25	610	63	33	14.7
96000	71980	96000	5	55	5	0.05	2150	0.5	250	3	140	314	50	0.25	260	18	10.6	4.6
96000	72080	96000	3	129	5	0.05	3290	0.5	150	3	64	18	50	4.5	260	13	6.3	3.9
96000	72180	96000	3	135	5	0.8	1310	0.5	130	3	33	15	50	5.1	150	7	3.6	2.3
96000	72280	96000	5	31	5	0.5	2490	0.5	270	3	31	315	50	0.25	530	4	2	1.4
96000	72380	96000	6	103	5	0.05	2080	0.5	250	2	62	124	50	1.6	330	8	4.1	2.6
96000	72480	96000	3	18	5	0.05	2700	0.5	190	3	14	62	50	0.8	810	6	3.4	1.9
96000	72580	96000	16	100	5	0.1	5090	0.5	450	5	20	39	50	2.3	1130	3	1.7	1.3
96000	72680	96000	10	58	5	0.5	4960	0.5	240	4	31	103	50	1	1100	6	3.1	2.1
96000	72780	96000	4	4	5	0.8	1140	0.5	240	2	40	8	50	0.25	2840	73	35.8	19.4
96000	72880	96000	0.5	45	5	0.2	2970	0.5	210	2	50	289	50	1.1	700	7	3.3	2.2
96000	72980	96000	11	108	5	0.3	2000	0.5	240	5	28	30	50	2.5	1540	10	5.5	2.1

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Fe</u>	<u>Ga</u>	<u>Gd</u>	<u>Hg</u>	<u>In</u>	<u>K</u>	<u>La</u>	<u>Li</u>	<u>Mg</u>	<u>Mn</u>	<u>Mo</u>	<u>Nb</u>	<u>Nd</u>	<u>Ni</u>	<u>P</u>	<u>Pb</u>
96300	71880	96300	12	2	96	0.5	0.25	23.2	149	2.5	229	7130	2.5	0.7	285	2020	1.1	10
96300	71980	96300	16	2	31	0.5	0.25	34.1	48	2.5	147	490	2.5	1	106	431	2.6	5
96300	72080	96300	49	9	10	0.5	0.25	14.7	15	2.5	16	5600	14	0.9	28	104	3.1	50
96300	72180	96300	12	2	5	0.5	0.25	36.9	9	2.5	26	6220	16	0.25	12	33	1	20
96300	72280	96300	16	0.5	2	0.5	0.25	73.3	4	2.5	47	310	19	0.5	5	47	1.4	5
96300	72380	96300	46	2	5	0.5	0.25	35	16	2.5	30	780	2.5	1.7	18	123	2.7	40
96300	72480	96300	41	4	8	0.5	0.25	34.1	31	2.5	38	910	2.5	2.5	32	57	5	40
96300	72580	96300	8	0.5	35	0.5	0.25	34	26	8	357	6560	18	0.5	70	2070	0.2	5
96300	72680	96300	13	0.5	19	0.5	0.25	40.1	25	6	155	260	39	0.9	61	237	0.4	5
96300	72780	96300	7	0.5	16	0.5	0.25	27	16	11	252	190	11	0.9	44	907	0.7	5
96300	72880	96300	11	0.5	20	0.5	0.25	26.6	26	6	281	1020	14	0.8	62	1370	0.9	5
96300	72980	96300	63	3	3	0.5	0.25	22.7	7	2.5	65	420	2.5	1.2	10	360	3.1	30
96300	73080	96300	64	1	5	0.5	0.25	67.2	15	2.5	142	1050	31	1.1	18	781	2.4	30
96300	73180	96300	14	0.5	10	0.5	0.25	63.9	28	8	533	2300	2.5	1.3	37	1640	0.5	250
96300	73280	96300	20	0.5	49	0.5	0.25	26.2	87	2.5	186	1300	2.5	0.9	183	727	1.1	5
96300	73380	96300	16	0.5	27	0.5	0.25	22.9	85	2.5	229	1570	2.5	1.6	121	350	0.8	20
96300	73480	96300	28	0.5	4	0.5	0.25	61.7	17	2.5	39	5270	9	1.3	19	38	1.6	5
96300	73580	96300	28	2	22	0.5	0.25	37.4	51	2.5	68	800	2.5	1	77	166	1.3	30
96300	73680	96300	30	0.5	43	0.5	0.25	33.5	102	2.5	144	2320	6	1	183	438	1.4	5
96150	71880	96150	15	0.5	1	0.5	0.25	36.9	4	2.5	49	70	2.5	0.9	5	18	1.8	5
96150	71980	96150	24	1	70	0.5	0.25	28.2	144	2.5	122	2090	2.5	0.25	204	528	0.5	10
96150	72080	96150	13	0.5	22	0.5	0.25	13.6	48	2.5	52	340	7	0.25	63	22	0.9	30
96150	72180	96150	24	3	13	0.5	0.25	12.1	29	2.5	21	430	13	1.5	45	23	2.6	60
96150	72280	96150	88	16	9	0.5	0.25	36.9	14	2.5	23	5000	2.5	1.8	25	291	9.3	50
96150	72380	96150	18	0.5	4	0.5	0.25	25	14	2.5	110	150	2.5	0.6	16	38	1.5	5
96150	72480	96150	44	0.5	12	0.5	0.25	33.2	29	12	201	1430	20	3.6	53	523	4.6	10
96150	72580	96150	64	5	20	0.5	0.25	12.8	38	2.5	41	250	11	1.9	63	249	4.6	40
96150	72680	96150	13	0.5	16	0.5	0.25	26.4	19	15	255	130	5	0.7	48	644	0.4	5
96150	72780	96150	6	0.5	29	0.5	0.25	29.5	21	7	438	190	2.5	0.6	63	1790	0.3	5
96150	72880	96150	16	0.5	19	0.5	0.25	42.5	35	2.5	305	1210	25	0.9	65	1810	2.2	5
96150	72980	96150	13	0.5	11	0.5	0.25	39.9	12	2.5	375	420	42	0.25	30	1520	0.7	5
96150	73080	96150	41	1	3	0.5	0.25	39.2	5	2.5	113	400	5	0.9	9	369	3.2	20
96150	73180	96150	38	0.5	28	0.5	0.25	44.7	81	2.5	103	4680	2.5	2.5	128	355	6.2	5
96150	73280	96150	23	0.5	36	0.5	0.25	40.6	81	2.5	148	800	2.5	0.8	147	389	0.9	5
96150	73380	96150	24	0.5	17	0.5	0.25	48.8	37	2.5	161	520	2.5	1	63	387	1.9	5
96150	73480	96150	14	0.5	4	0.5	0.25	43.6	8	2.5	31	1270	2.5	0.25	13	45	1.1	20
96150	73580	96150	149	7	21	0.5	0.25	50.5	48	2.5	79	3190	14	4.6	71	483	17	50
96150	73680	96150	17	0.5	56	0.5	0.25	47.4	57	6	226	380	5	1	162	527	0.8	5
96150	73780	96150	18	0.5	4	0.5	0.25	50.8	9	2.5	81	250	2.5	2.7	15	74	2.8	20
96000	71880	96000	9	0.5	82	0.5	0.25	39.9	85	7	178	540	2.5	1.1	237	864	0.8	5
96000	71980	96000	28	0.5	24	0.5	0.25	32.5	42	2.5	213	4320	5	0.7	82	425	1.3	5
96000	72080	96000	21	3	16	0.5	0.25	9.9	25	2.5	18	1450	14	1	49	23	2.1	70
96000	72180	96000	28	5	8	0.5	0.25	27.5	15	2.5	21	1520	16	0.9	26	20	3.5	40
96000	72280	96000	19	0.5	5	0.5	0.25	38	6	2.5	231	6070	20	0.7	14	263	2.2	5
96000	72380	96000	28	1	9	0.5	0.25	23.2	19	2.5	47	3250	2.5	1.1	31	41	4.3	20
96000	72480	96000	12	0.5	8	0.5	0.25	43.6	11	10	255	730	2.5	1.2	25	630	1.3	5
96000	72580	96000	16	0.5	3	0.5	0.25	23.7	8	2.5	119	270	6	1	11	87	1.1	20
96000	72680	96000	26	0.5	7	0.5	0.25	21.9	15	2.5	211	1040	7	1.1	25	165	1.9	20
96000	72780	96000	10	0.5	98	2	0.25	32.7	131	2.5	259	120	5	0.25	299	1080	0.2	5
96000	72880	96000	23	0.5	9	0.5	0.25	27.4	21	2.5	125	3680	10	0.9	34	99	1.6	5
96000	72980	96000	36	1	9	0.5	0.25	54.3	17	2.5	113	790	11	2.1	31	201	4.1	30

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
96300	71880	96300	2	55	0.5	32	0.5	42	74	0.5	3010	0.5	14	5	15.9	25	0.25	44	0.5
96300	71980	96300	1	19	0.5	38	0.5	24	27	0.5	2070	0.5	4	5	10.7	31	0.25	21	0.5
96300	72080	96300	0.5	5	0.5	101	0.5	33	8	0.5	390	0.5	2	5	4.4	159	0.25	4	0.5
96300	72180	96300	0.5	2	0.5	148	0.5	24	3	0.5	620	0.5	0.5	5	2	34	0.25	3	0.5
96300	72280	96300	0.5	1	0.5	177	0.5	7	1	0.5	1410	0.5	0.5	5	4.7	19	0.25	4	0.5
96300	72380	96300	0.5	4	0.5	195	0.5	17	4	0.5	1080	0.5	0.5	5	7	251	0.25	4	0.5
96300	72480	96300	1	7	0.5	106	0.5	20	7	0.5	1430	0.5	1	5	10.9	332	0.25	4	0.5
96300	72580	96300	0.5	11	0.5	50	0.5	23	22	0.5	1870	0.5	5	5	10.4	42	0.25	106	1
96300	72680	96300	0.5	10	0.5	51	0.5	15	16	0.5	1370	0.5	2	5	10.7	58	0.25	36	1
96300	72780	96300	0.5	7	0.5	42	0.5	9	12	0.5	1450	0.5	2	5	3.6	16	0.25	26	0.5
96300	72880	96300	0.5	11	0.5	29	0.5	10	16	0.5	1050	0.5	2	5	10.1	21	0.25	22	0.5
96300	72980	96300	0.5	2	0.5	137	0.5	21	3	0.5	1200	0.5	0.5	5	3.2	104	0.25	4	0.5
96300	73080	96300	0.5	4	0.5	116	0.5	20	4	0.5	1810	0.5	0.5	5	5.5	90	0.25	4	0.5
96300	73180	96300	0.5	8	0.5	153	0.5	12	9	0.5	1900	0.5	1	5	15.7	18	0.25	12	0.5
96300	73280	96300	2	34	0.5	16	0.5	23	44	0.5	2680	0.5	6	5	20.6	21	0.25	26	0.5
96300	73380	96300	2	26	0.5	77	0.5	17	25	0.5	5870	0.5	4	5	20	18	0.25	26	0.5
96300	73480	96300	0.5	5	0.5	300	0.5	10	4	0.5	1680	0.5	0.5	5	9.6	167	0.25	5	0.5
96300	73580	96300	1	16	0.5	194	0.5	36	19	0.5	1750	0.5	3	5	11.1	191	0.25	7	0.5
96300	73680	96300	1	35	0.5	77	0.5	23	41	0.5	1980	0.5	6	5	19.2	52	0.25	21	0.5
96150	71880	96150	0.5	0.5	0.5	63	0.5	2.5	1	0.5	3630	0.5	0.5	5	3.2	19	0.25	3	0.5
96150	71980	96150	2	41	0.5	68	0.5	129	52	0.5	4520	0.5	11	5	16.7	14	0.25	68	0.5
96150	72080	96150	0.5	12	0.5	88	0.5	33	16	0.5	2870	0.5	3	5	3.5	16	0.25	5	0.5
96150	72180	96150	1	9	0.5	85	0.5	24	11	0.5	1180	0.5	2	5	9.7	381	0.25	5	0.5
96150	72280	96150	0.5	5	0.5	139	0.5	29	7	0.5	440	0.5	2	5	6.1	509	0.25	5	0.5
96150	72380	96150	0.5	3	0.5	60	0.5	2.5	3	0.5	5070	0.5	0.5	5	3.6	16	0.25	4	0.5
96150	72480	96150	3	11	0.5	48	0.5	38	12	0.5	2530	0.5	2	5	24.4	83	0.25	13	0.5
96150	72580	96150	2	13	0.5	75	0.5	45	16	0.5	680	0.5	3	5	10.5	245	0.25	9	0.5
96150	72680	96150	0.5	8	0.5	45	0.5	11	13	0.5	1250	0.5	2	5	6.4	38	0.25	17	0.5
96150	72780	96150	0.5	10	0.5	53	0.5	19	20	0.5	1280	0.5	4	5	8.7	21	0.25	27	0.5
96150	72880	96150	0.5	12	0.5	19	0.5	13	16	0.5	1140	0.5	2	5	5.7	35	0.25	11	0.5
96150	72980	96150	0.5	5	0.5	49	0.5	11	8	0.5	1430	0.5	1	5	5	20	0.25	11	0.5
96150	73080	96150	0.5	2	0.5	97	0.5	12	2	0.5	1100	0.5	0.5	5	2.1	42	0.25	4	0.5
96150	73180	96150	3	27	0.5	143	0.5	32	27	0.5	2120	0.5	4	5	23.4	98	0.25	22	0.5
96150	73280	96150	1	28	0.5	51	0.5	17	33	0.5	2540	0.5	5	5	17.2	31	0.25	20	0.5
96150	73380	96150	1	12	0.5	138	0.5	16	15	0.5	2350	0.5	2	5	10.6	46	0.25	7	0.5
96150	73480	96150	0.5	3	0.5	170	0.5	14	3	0.5	1560	0.5	0.5	5	2.9	31	0.25	4	0.5
96150	73580	96150	4	15	0.5	168	0.5	66	18	0.5	1050	0.5	3	5	26.7	631	0.25	12	1
96150	73680	96150	2	26	0.5	124	0.5	25	44	0.5	2670	0.5	7	5	12.9	24	0.25	48	0.5
96150	73780	96150	1	3	0.5	156	0.5	7	4	0.5	3030	0.5	0.5	5	10.7	34	0.25	9	0.5
96000	71880	96000	2	38	0.5	97	0.5	29	65	0.5	3190	0.5	10	5	9.7	14	0.25	55	0.5
96000	71980	96000	1	15	0.5	71	0.5	19	20	0.5	2170	0.5	3	5	12.4	35	0.25	17	0.5
96000	72080	96000	1	9	0.5	181	0.5	31	13	0.5	1010	0.5	2	5	7.1	279	0.25	5	0.5
96000	72180	96000	1	5	0.5	216	0.5	21	7	0.5	450	0.5	1	5	7.1	237	0.25	5	0.5
96000	72280	96000	0.5	3	0.5	57	0.5	8	4	0.5	1770	0.5	0.5	5	5.3	28	0.25	10	0.5
96000	72380	96000	0.5	6	0.5	115	0.5	20	7	0.5	2100	0.5	1	5	8.9	117	0.25	7	0.5
96000	72480	96000	0.5	4	0.5	60	0.5	8	7	0.5	1350	0.5	1	5	5.3	23	0.25	7	0.5
96000	72580	96000	0.5	2	0.5	98	0.5	8	2	0.5	3740	0.5	0.5	5	5.4	13	0.25	3	0.5
96000	72680	96000	0.5	5	0.5	63	0.5	10	6	0.5	2130	0.5	0.5	5	6.1	34	0.25	6	0.5
96000	72780	96000	2	53	0.5	92	0.5	31	81	0.5	1730	0.5	13	5	18	12	0.25	73	1
96000	72880	96000	1	7	0.5	127	0.5	9	8	0.5	2240	0.5	1	5	13.6	38	0.25	6	0.5
96000	72980	96000	1	6	0.5	167	0.5	25	8	0.5	1330	0.5	1	5	9.5	78	0.25	11	1

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
96300	71880	96300	377	28	30	107
96300	71980	96300	121	9	20	91
96300	72080	96300	52	4	110	37
96300	72180	96300	23	2	60	21
96300	72280	96300	7	0.5	60	21
96300	72380	96300	26	2	110	39
96300	72480	96300	32	2	30	72
96300	72580	96300	188	24	10	57
96300	72680	96300	76	7	10	51
96300	72780	96300	69	5	40	25
96300	72880	96300	90	6	20	32
96300	72980	96300	19	2	60	25
96300	73080	96300	29	2	70	35
96300	73180	96300	39	3	30	41
96300	73280	96300	193	14	20	111
96300	73380	96300	98	7	10	107
96300	73480	96300	16	1	30	58
96300	73580	96300	94	7	40	87
96300	73680	96300	172	14	60	91
96150	71880	96150	6	0.5	10	18
96150	71980	96150	403	24	40	117
96150	72080	96150	129	8	50	34
96150	72180	96150	53	4	80	79
96150	72280	96150	55	4	760	46
96150	72380	96150	15	0.5	10	15
96150	72480	96150	54	6	40	137
96150	72580	96150	101	8	40	90
96150	72680	96150	80	6	10	38
96150	72780	96150	157	12	10	40
96150	72880	96150	87	5	70	18
96150	72980	96150	54	4	10	22
96150	73080	96150	19	1	70	16
96150	73180	96150	113	8	20	154
96150	73280	96150	143	10	10	76
96150	73380	96150	77	6	30	66
96150	73480	96150	19	1	60	28
96150	73580	96150	117	9	70	176
96150	73680	96150	263	20	10	83
96150	73780	96150	20	2	20	58
96000	71880	96000	345	25	20	103
96000	71980	96000	128	9	20	56
96000	72080	96000	69	5	220	57
96000	72180	96000	36	3	50	54
96000	72280	96000	21	2	80	31
96000	72380	96000	43	3	30	50
96000	72480	96000	38	3	20	32
96000	72580	96000	17	1	150	34
96000	72680	96000	33	3	90	29
96000	72780	96000	436	26	10	74
96000	72880	96000	35	2	20	70
96000	72980	96000	51	5	300	70

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
96000	73080	96000	19	53	5	0.1	2720	0.5	220	3	94	93	50	1.7	8530	13	7	3.4
96000	73180	96000	10	129	5	0.2	1650	0.5	250	2	16	62	50	2.4	920	2	1.5	0.9
96000	73280	96000	5	99	5	0.05	3350	0.5	270	2	65	68	50	2.2	430	9	4.8	2.8
96000	73380	96000	7	89	5	0.05	1810	0.5	290	7	133	34	50	1	480	26	14.4	6.1
96000	73480	96000	9	24	5	0.2	2550	0.5	260	2	171	116	50	0.6	1420	44	22.3	12.6
96000	73580	96000	4	31	5	0.3	1550	0.5	230	3	258	39	200	0.25	680	35	17.1	10.2
96000	73680	96000	1	41	5	0.3	4130	0.5	250	1	234	39	100	0.25	480	26	13.3	7.7
96000	73780	96000	1	59	5	0.1	2930	0.5	280	4	346	54	50	0.25	640	42	20.5	11.7
96000	73880	96000	2	135	10	0.05	4880	0.5	180	7	223	138	100	1.7	640	36	18.9	8.7
95850	71880	95850	4	3	5	0.1	770	0.5	320	5	2.5	173	50	0.25	270	3	2.8	0.25
95850	71980	95850	2	112	5	0.05	4720	0.5	330	2	23	41	50	2.3	260	3	2	1.3
95850	72080	95850	6	158	5	0.05	1470	0.5	100	6	149	91	50	2.3	370	23	11.5	6.4
95850	72180	95850	3	110	5	1	2080	0.5	170	3	153	36	50	3.2	370	22	10.8	7.1
95850	72280	95850	7	179	5	0.05	910	0.5	70	3	41	25	50	2.6	160	6	3	1.8
95850	72380	95850	3	55	5	0.05	1660	0.5	930	2	2.5	13	50	0.25	370	1	0.8	0.25
95850	72480	95850	11	120	5	0.05	2860	0.5	180	8	205	112	50	2.6	880	25	13.5	6.5
95850	72580	95850	15	9	5	0.3	730	0.5	330	7	29	39	50	0.25	7890	84	44.4	19.1
95850	72680	95850	3	3	10	0.5	1470	0.5	400	5	50	404	400	0.25	18800	24	14.9	6.3
95850	72780	95850	2	7	5	0.2	1670	0.5	190	1	41	21	50	0.25	720	21	11.8	5.6
95850	72880	95850	3	5	5	0.8	1110	0.5	200	2	38	21	50	0.25	1430	34	20	7.9
95850	72980	95850	14	14	5	0.6	1230	0.5	220	4	28	9	50	0.6	3560	44	22.9	10.6
95850	73080	95850	14	128	5	0.3	780	0.5	320	5	19	57	50	3.8	530	2	1.3	0.6
95850	73180	95850	16	21	5	0.05	1190	0.5	230	5	213	84	50	0.6	23300	103	55.6	28.1
95850	73280	95850	7	75	10	0.05	2520	0.5	200	6	109	282	100	0.25	9820	25	14.3	6.8
95850	73380	95850	2	123	5	0.05	5610	0.5	180	2	172	45	50	3.6	680	13	6	4.2
95850	73480	95850	8	97	5	0.1	4120	0.5	210	3	66	74	50	2.7	2530	9	4.3	2.7
95850	73580	95850	3	16	5	0.05	2410	0.5	360	7	157	87	50	0.25	920	38	23	9.3
95850	73680	95850	3	16	5	0.05	1930	0.5	310	2	45	19	50	0.8	610	30	18.2	6.9
95850	73780	95850	1	118	5	0.05	5550	0.5	230	2	56	45	50	3.7	230	6	3.1	2.2
95850	73880	95850	1	94	5	0.05	5530	0.5	250	3	311	74	50	2.5	720	33	15.9	9.6
95700	71880	95700	2	47	5	0.05	5570	0.5	230	3	18	54	50	0.8	550	8	5.2	2.4
95700	71980	95700	4	49	5	0.05	1160	0.5	220	6	55	32	50	1.1	610	12	5.9	3.4
95700	72080	95700	3	61	5	0.2	5530	0.5	150	8	45	32	50	2.6	1380	14	6.9	5
95700	72180	95700	3	85	5	0.05	4650	0.5	160	1	82	64	50	1.6	520	9	4.2	3.4
95700	72280	95700	4	35	5	0.3	2260	0.5	330	2	25	44	50	0.25	620	16	7.8	4.5
95700	72380	95700	2	21	5	0.05	2460	0.5	230	2	22	30	50	0.25	370	8	4.5	2.3
95700	72480	95700	2	9	5	1.9	1920	0.5	210	1	116	130	50	0.25	650	21	11.5	6.3
95700	72580	95700	9	96	5	0.3	1570	0.5	210	4	43	59	50	1.9	1020	6	3.1	1.7
95700	72680	95700	7	13	5	0.6	1480	0.5	260	7	29	23	50	0.25	1780	14	7.6	3.5
95700	72780	95700	60	123	5	0.05	1450	0.5	150	8	29	44	50	3.7	750	5	2.3	1.4
95700	72880	95700	10	8	5	0.9	1640	0.5	210	5	28	101	50	0.25	2880	7	3.5	2.1
95700	72980	95700	14	44	5	2	4910	0.5	340	3	38	79	50	2.4	3410	4	2.1	1.6
95700	73080	95700	15	3	10	2.8	1360	0.5	280	2	9	22	50	0.8	7680	52	26.6	13.6
95700	73180	95700	9	93	5	0.5	1040	0.5	210	5	170	119	50	1.6	1480	36	17.4	8
95700	73280	95700	32	28	5	0.6	3570	0.5	290	2	49	90	50	0.25	4430	5	2.5	1.7
95700	73380	95700	7	87	5	0.5	4120	0.5	270	3	99	114	50	1.2	580	9	4.3	2.9
95700	73480	95700	2	6	5	0.2	1520	0.5	230	0.5	80	19	50	3.1	510	21	11.5	5.6
95700	73580	95700	0.5	66	20	0.4	3200	0.5	150	2	256	321	300	0.25	1520	28	15.5	6.7
95700	73680	95700	0.5	10	5	0.8	1670	0.5	230	1	71	73	50	0.25	500	10	6	2.6
95700	73780	95700	4	101	5	0.4	2230	0.5	170	4	60	38	50	3.9	480	11	5.6	2.6
95700	73880	95700	0.5	75	5	0.4	2440	0.5	210	4	327	29	100	1.1	800	41	19	11.6

Murray Property
MMI Data

Line	x	y	Fe	Ga	Gd	Hg	In	K	La	Li	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb
96000	73080	96000	39	0.5	15	0.5	0.25	58.9	35	2.5	156	1280	12	1.6	60	409	2.6	20
96000	73180	96000	66	4	2	0.5	0.25	66.2	8	2.5	100	500	20	2	9	454	3	20
96000	73280	96000	36	0.5	10	0.5	0.25	45.3	26	2.5	133	650	2.5	2.2	38	498	4.1	30
96000	73380	96000	32	0.5	30	0.5	0.25	35.5	59	2.5	197	790	7	1.5	108	511	1.9	5
96000	73480	96000	48	0.5	59	0.5	0.25	33.7	169	2.5	236	1720	11	0.9	277	671	0.6	5
96000	73580	96000	46	1	48	0.5	0.25	43.9	153	2.5	151	2020	9	1.7	241	513	2	5
96000	73680	96000	47	3	36	0.5	0.25	61	128	2.5	146	500	8	1.8	173	348	1.3	5
96000	73780	96000	45	1	57	0.5	0.25	61	179	2.5	179	1210	8	2.2	275	534	1.9	5
96000	73880	96000	151	4	40	0.5	0.25	67.5	115	2.5	56	5600	9	5.9	158	255	7.5	30
95850	71880	95850	5	0.5	2	0.5	0.25	46.6	0.5	9	209	21200	16	0.25	0.5	1570	0.2	5
95850	71980	95850	16	1	3	0.5	0.25	16.1	10	2.5	56	220	2.5	0.8	13	40	0.9	30
95850	72080	95850	77	11	26	0.5	0.25	87.4	56	2.5	56	990	14	2.7	96	407	6.5	60
95850	72180	95850	16	4	30	0.5	0.25	58.8	63	2.5	25	1450	15	0.25	114	75	1.2	30
95850	72280	95850	64	18	6	0.5	0.25	38.6	17	2.5	3	1430	18	1.8	22	18	5.4	30
95850	72380	95850	27	0.5	1	0.5	0.25	73.5	2	2.5	302	80	72	0.25	4	316	1	5
95850	72480	95850	42	4	28	0.5	0.25	59.3	75	2.5	116	2280	2.5	1.4	106	899	1.8	80
95850	72580	95850	10	0.5	106	0.5	0.25	35.3	80	8	244	3720	58	0.25	237	5590	0.2	5
95850	72680	95850	11	0.5	31	0.5	0.25	26.2	34	10	301	16400	254	0.25	101	8290	0.2	5
95850	72780	95850	14	0.5	29	0.5	0.25	29	34	2.5	227	500	12	0.25	87	480	0.2	5
95850	72880	95850	12	0.5	44	0.5	0.25	37.9	37	2.5	344	1050	17	0.25	113	925	0.5	5
95850	72980	95850	10	0.5	57	0.5	0.25	59.6	54	2.5	245	980	9	0.25	150	1540	0.7	5
95850	73080	95850	26	2	2	0.5	0.25	35.8	6	2.5	63	980	15	1.6	9	229	5.6	10
95850	73180	95850	27	3	146	0.5	0.25	45	291	2.5	186	6010	41	0.25	545	3090	0.4	5
95850	73280	95850	79	3	32	0.5	0.25	104	75	2.5	108	6370	22	3.2	128	883	3.8	20
95850	73380	95850	40	5	15	0.5	0.25	34	66	2.5	39	410	2.5	2.7	72	70	2	30
95850	73480	95850	23	2	10	0.5	0.25	67.3	34	2.5	64	1510	16	0.9	43	127	1	30
95850	73580	95850	17	1	50	0.5	0.25	42.9	72	5	296	8970	12	0.25	180	1900	0.6	5
95850	73680	95850	15	0.5	40	0.5	0.25	39.6	38	2.5	164	920	2.5	0.25	113	259	0.6	5
95850	73780	95850	25	2	6	0.5	0.25	90.6	22	2.5	65	950	2.5	1.1	26	121	1	30
95850	73880	95850	24	3	43	0.5	0.25	58.2	129	2.5	62	2320	2.5	0.9	186	115	0.7	20
95700	71880	95700	12	0.5	10	0.5	0.25	37	11	2.5	200	450	2.5	0.25	26	470	0.8	5
95700	71980	95700	19	0.5	15	0.5	0.25	20.7	25	2.5	155	760	2.5	0.25	54	310	2.7	5
95700	72080	95700	15	1	19	0.5	0.25	35.3	30	2.5	111	670	24	0.25	61	124	0.8	10
95700	72180	95700	13	2	12	0.5	0.25	28.5	30	2.5	45	280	2.5	0.25	46	42	2.9	20
95700	72280	95700	13	0.5	20	0.5	0.25	15.5	23	2.5	151	1550	2.5	0.25	54	260	0.3	5
95700	72380	95700	18	0.5	11	0.5	0.25	23.8	14	2.5	187	120	2.5	0.25	32	297	0.5	5
95700	72480	95700	27	0.5	30	0.5	0.25	27.8	52	2.5	162	2610	2.5	0.25	111	578	0.3	5
95700	72580	95700	30	2	7	0.5	0.25	44.4	18	2.5	65	450	2.5	1	28	333	4.4	20
95700	72680	95700	11	0.5	17	0.5	0.25	41	21	6	213	2360	12	0.25	53	1030	1	5
95700	72780	95700	37	4	5	0.5	0.25	26.2	13	2.5	22	2410	18	0.7	16	79	2	30
95700	72880	95700	5	0.5	9	0.5	0.25	23.1	9	2.5	402	1170	9	0.25	23	2160	0.2	5
95700	72980	95700	16	0.5	6	0.5	0.25	44.7	16	2.5	109	500	31	0.25	23	142	0.4	5
95700	73080	95700	7	0.5	72	2	0.25	37.1	79	6	292	620	25	4.4	209	2450	0.2	5
95700	73180	95700	62	3	41	0.5	0.25	55	100	2.5	114	2240	29	4.8	149	654	3.1	30
95700	73280	95700	22	0.5	7	0.5	0.25	131	20	2.5	93	510	79	3.6	31	183	1	5
95700	73380	95700	31	2	11	0.5	0.25	104	42	2.5	78	2050	11	6.3	53	223	3.1	30
95700	73480	95700	20	0.5	30	0.5	0.25	45	56	30	161	470	5	56.8	119	437	0.5	5
95700	73580	95700	267	3	33	0.5	0.25	65.1	111	2.5	116	5300	10	11	153	914	10.8	20
95700	73680	95700	49	0.5	14	0.5	0.25	58.7	34	6	135	2830	2.5	3	59	208	1.6	5
95700	73780	95700	14	3	13	0.5	0.25	58.2	24	2.5	34	460	6	1.9	40	99	1	40
95700	73880	95700	42	3	54	0.5	0.25	32.4	189	2.5	85	490	2.5	3.7	259	223	1.3	5

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
96000	73080	96000	2	12	0.5	172	0.5	25	14	0.5	1660	0.5	2	5	14.9	65	0.25	13	0.5
96000	73180	96000	0.5	2	0.5	124	0.5	14	2	0.5	1210	0.5	0.5	5	6	391	0.25	5	2
96000	73280	96000	2	8	0.5	123	0.5	21	9	0.5	2220	0.5	1	5	10.5	127	0.25	9	0.5
96000	73380	96000	2	22	0.5	78	0.5	34	27	0.5	2050	0.5	4	5	21.2	65	0.25	15	0.5
96000	73480	96000	2	57	0.5	89	0.5	37	59	0.5	2380	0.5	8	5	31.2	50	0.25	59	0.5
96000	73580	96000	3	51	0.5	85	0.5	39	50	0.5	1820	0.5	6	5	36.8	164	0.25	45	2
96000	73680	96000	0.5	39	0.5	117	0.5	28	34	0.5	2320	0.5	5	5	32	182	0.25	24	0.5
96000	73780	96000	2	58	0.5	111	0.5	40	57	0.5	2390	0.5	7	5	25.1	87	0.25	31	0.5
96000	73880	96000	6	34	0.5	271	0.5	75	36	0.5	1310	0.5	6	5	36.8	903	0.25	22	0.5
95850	71880	95850	0.5	0.5	0.5	67	0.5	12	0.5	0.5	2190	0.5	0.5	5	0.8	6	1	88	2
95850	71980	95850	0.5	3	0.5	98	0.5	12	3	0.5	2470	0.5	0.5	5	4.6	27	0.25	4	0.5
95850	72080	95850	0.5	20	0.5	160	0.5	40	24	0.5	800	0.5	4	5	17.2	747	0.25	9	0.5
95850	72180	95850	0.5	23	0.5	212	0.5	42	28	0.5	690	0.5	4	5	6.7	117	0.25	10	0.5
95850	72280	95850	0.5	5	0.5	172	0.5	16	5	0.5	220	0.5	0.5	5	3.9	870	0.25	4	0.5
95850	72380	95850	0.5	0.5	0.5	16	0.5	2.5	1	0.5	5020	0.5	0.5	5	0.25	14	0.25	10	0.5
95850	72480	95850	0.5	23	0.5	144	0.5	43	26	0.5	1080	0.5	4	5	16.9	317	0.25	11	0.5
95850	72580	95850	0.5	39	0.5	29	0.5	21	75	0.5	1470	0.5	14	5	13.4	14	0.25	323	0.5
95850	72680	95850	0.5	18	0.5	30	0.5	10	27	0.5	1940	0.5	4	5	6.5	10	0.7	663	2
95850	72780	95850	0.5	15	0.5	41	0.5	16	23	0.5	1300	0.5	4	5	7.7	37	0.25	17	0.5
95850	72880	95850	0.5	18	0.5	70	0.5	22	32	0.5	1230	0.5	6	5	12.6	13	0.25	32	0.5
95850	72980	95850	0.5	25	0.5	106	0.5	25	44	0.5	1310	0.5	8	5	15.3	14	0.25	45	1
95850	73080	95850	0.5	2	0.5	133	0.5	12	2	0.5	1100	0.5	0.5	5	4.8	93	0.25	6	4
95850	73180	95850	0.5	106	0.5	85	0.5	42	125	0.5	1550	0.5	18	5	38.8	28	0.25	83	0.5
95850	73280	95850	0.5	26	0.5	67	0.5	32	29	0.5	1200	0.5	4	5	12.1	549	0.25	20	0.5
95850	73380	95850	0.5	17	0.5	148	0.5	24	15	0.5	1800	0.5	2	5	20	668	0.25	8	0.5
95850	73480	95850	0.5	10	0.5	178	0.5	17	10	0.5	1640	0.5	2	5	8.7	210	0.25	5	0.5
95850	73580	95850	0.5	32	0.5	131	0.5	24	44	0.5	2510	0.5	6	5	18.2	13	0.25	102	0.5
95850	73680	95850	0.5	19	0.5	251	0.5	25	31	0.5	2180	0.5	5	5	15.9	17	0.25	79	0.5
95850	73780	95850	0.5	6	0.5	296	0.5	18	6	0.5	1540	0.5	1	5	14.6	256	0.25	7	0.5
95850	73880	95850	1	40	0.5	192	0.5	39	41	0.5	2370	0.5	6	5	26.5	287	0.25	13	0.5
95700	71880	95700	0.5	5	0.5	68	0.5	11	8	0.5	1930	0.5	1	5	3.9	9	0.25	9	0.5
95700	71980	95700	0.5	10	0.5	61	0.5	15	14	0.5	1950	0.5	2	5	8	24	0.25	8	0.5
95700	72080	95700	0.5	12	0.5	89	0.5	20	16	0.5	2060	0.5	3	5	6.9	40	0.25	4	0.5
95700	72180	95700	0.5	9	0.5	92	0.5	15	11	0.5	1560	0.5	2	5	5.7	86	0.25	5	0.5
95700	72280	95700	0.5	10	0.5	53	0.5	14	15	0.5	2440	0.5	3	5	6.2	9	0.25	13	0.5
95700	72380	95700	0.5	6	0.5	38	0.5	8	8	0.5	1530	0.5	1	5	4.8	15	0.25	8	0.5
95700	72480	95700	0.5	20	0.5	59	0.5	19	26	0.5	1820	0.5	4	5	10.9	74	0.25	14	0.5
95700	72580	95700	0.5	6	0.5	116	0.5	12	7	0.5	1110	0.5	1	5	5.7	147	0.25	5	0.5
95700	72680	95700	0.5	9	0.5	47	0.5	13	14	0.5	1670	0.5	2	5	5.6	14	0.25	23	0.5
95700	72780	95700	0.5	4	0.5	115	0.5	19	4	0.5	570	0.5	0.5	5	5.5	245	0.25	3	0.5
95700	72880	95700	0.5	4	0.5	36	0.5	15	7	0.5	2120	0.5	1	5	5.1	7	0.25	10	0.5
95700	72980	95700	0.5	5	0.5	137	0.5	5	5	0.5	3170	0.5	0.5	5	8.3	13	0.25	6	0.5
95700	73080	95700	0.5	36	0.5	65	0.5	19	59	0.5	1760	2	9	5	10.1	22	0.25	68	5
95700	73180	95700	0.5	32	0.5	126	0.5	38	36	0.5	940	0.5	6	5	20.5	223	0.25	22	2
95700	73280	95700	0.5	6	0.5	147	0.5	2.5	7	0.5	2270	1	0.5	5	10.5	47	0.25	9	2
95700	73380	95700	0.5	12	0.5	179	0.5	14	11	0.5	2260	2	2	5	20.7	292	0.25	9	2
95700	73480	95700	5	23	0.5	69	2	17	28	9	1630	91	4	5	15.3	315	0.25	43	20
95700	73580	95700	1	35	0.5	55	0.5	64	33	0.5	1230	0.5	5	5	40.4	1400	0.25	29	2
95700	73680	95700	0.5	12	0.5	40	0.5	11	12	0.5	1560	0.5	2	5	14.2	100	0.25	20	2
95700	73780	95700	0.5	8	0.5	218	0.5	27	11	0.5	950	0.5	2	5	8.9	84	0.25	10	1
95700	73880	95700	0.5	58	0.5	169	0.5	34	55	0.5	1570	0.5	7	5	27.3	375	0.25	20	1

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
96000	73080	96000	70	6	40	81
96000	73180	96000	12	1	40	34
96000	73280	96000	49	4	50	82
96000	73380	96000	153	12	80	124
96000	73480	96000	251	18	40	122
96000	73580	96000	185	14	60	165
96000	73680	96000	131	11	60	157
96000	73780	96000	232	17	160	112
96000	73880	96000	193	14	320	331
95850	71880	95850	14	3	10	42
95850	71980	95850	20	2	40	45
95850	72080	95850	107	9	80	144
95850	72180	95850	109	8	60	87
95850	72280	95850	28	2	60	34
95850	72380	95850	9	0.5	30	2.5
95850	72480	95850	118	11	130	122
95850	72580	95850	424	35	10	52
95850	72680	95850	133	16	10	39
95850	72780	95850	123	10	30	52
95850	72880	95850	220	17	10	70
95850	72980	95850	266	18	10	61
95850	73080	95850	11	1	50	50
95850	73180	95850	735	44	10	85
95850	73280	95850	145	13	40	79
95850	73380	95850	56	5	20	160
95850	73480	95850	43	3	70	63
95850	73580	95850	235	21	70	62
95850	73680	95850	179	16	10	106
95850	73780	95850	29	3	40	113
95850	73880	95850	162	12	40	183
95700	71880	95700	52	5	20	30
95700	71980	95700	57	5	20	69
95700	72080	95700	67	5	210	48
95700	72180	95700	45	3	20	46
95700	72280	95700	81	6	10	54
95700	72380	95700	45	4	30	36
95700	72480	95700	126	10	20	64
95700	72580	95700	27	2	30	55
95700	72680	95700	79	7	200	40
95700	72780	95700	22	2	150	47
95700	72880	95700	34	3	10	30
95700	72980	95700	21	2	10	36
95700	73080	95700	288	21	10	36
95700	73180	95700	188	13	120	78
95700	73280	95700	26	2	10	44
95700	73380	95700	42	3	40	128
95700	73480	95700	118	10	10	60
95700	73580	95700	134	14	120	257
95700	73680	95700	57	5	10	73
95700	73780	95700	49	4	50	98
95700	73880	95700	186	14	30	155

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MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
95700	73980	95700	4	99	5	0.4	3170	0.5	220	4	272	82	50	1.7	1060	52	24.8	14.4
95550	71880	95550	3	79	5	0.3	4540	0.5	230	4	21	122	50	1.6	640	8	4.3	2.7
95550	71980	95550	11	96	5	0.3	1030	0.5	140	15	88	98	50	2.4	320	19	10.5	4.5
95550	72180	95550	2	115	5	0.4	2420	0.5	180	9	398	130	50	1.9	610	23	10.8	6.7
95550	72280	95550	2	120	5	0.2	3850	0.5	170	6	199	84	50	2.1	400	25	12.4	7.4
95550	72380	95550	2	122	5	0.2	5250	0.5	160	3	102	93	50	2.6	320	13	6.2	4.3
95550	72480	95550	0.5	59	5	0.3	2160	0.5	220	5	154	253	50	0.5	1450	24	14.4	6.1
95550	72580	95550	0.5	74	5	0.2	2300	0.5	180	3	53	60	50	1.9	800	18	10.3	4.1
95550	72680	95550	6	108	5	0.2	7000	0.5	160	4	124	48	50	3.2	1150	16	8	5.3
95550	72780	95550	27	9	5	0.5	620	0.5	220	36	45	41	50	0.9	10600	63	33.7	14.6
95550	72880	95550	37	160	10	0.3	3540	0.5	150	9	69	30	50	4.1	1910	13	6.6	3.8
95550	72980	95550	10	13	5	0.5	2510	0.5	250	3	35	20	50	0.25	3500	19	10.2	5.2
95550	73080	95550	9	7	5	0.4	1100	0.5	230	2	43	8	50	0.25	2620	26	13.4	6.9
95550	73180	95550	7	8	5	0.4	1320	0.5	290	4	37	61	50	0.25	3450	32	15.7	8.1
95550	73280	95550	8	48	5	0.2	2970	0.5	230	3	64	37	50	1.5	4960	14	7.9	3.6
95550	73380	95550	11	128	5	0.2	3190	0.5	180	3	75	125	50	5.3	990	6	3.1	2.1
95550	73480	95550	7	45	5	1.6	2870	0.5	200	3	117	101	50	0.6	2120	13	6.1	3.8
95550	73580	95550	3	69	5	0.2	1860	0.5	170	5	233	185	100	0.6	1940	19	9.9	5.3
95550	73680	95550	5	110	5	0.1	4040	0.5	210	3	72	43	50	2.9	940	9	4.5	2.9
95550	73780	95550	0.5	77	5	0.2	2850	0.5	210	4	299	62	50	2.1	1640	39	18.9	10.3
95550	73880	95550	0.5	30	5	0.5	4480	0.5	250	3	109	33	50	0.7	1050	28	13.6	7.9
95550	73980	95550	1	84	5	0.2	2740	0.5	260	3	375	75	100	1.3	750	45	21.8	12.4
95550	74080	95550	0.5	33	5	0.2	2590	0.5	270	2	177	33	50	0.5	970	34	16.1	9.2
95400	71880	95400	4	8	5	0.2	1420	0.5	310	2	460	386	50	0.25	5310	88	53.9	22.2
95400	72080	95400	12	83	5	0.5	4440	0.5	160	4	83	82	50	2.4	950	26	13.2	7.9
95400	72180	95400	2	102	5	0.05	6190	0.5	250	5	359	271	50	1.6	460	29	13.7	8
95400	72380	95400	5	130	5	0.05	1320	0.5	150	3	84	24	50	2.3	260	12	5.5	3.8
95400	72480	95400	5	6	10	0.05	850	0.5	220	3	75	152	50	0.25	1290	18	9.9	5.1
95400	72580	95400	5	134	5	0.05	1430	0.5	180	6	67	57	50	2.7	270	6	3.2	2.1
95400	72780	95400	7	92	5	0.05	6230	0.5	200	5	20	50	50	1.6	580	5	2.8	1.9
95400	72880	95400	66	129	5	0.05	1380	0.5	300	24	22	71	50	2.4	1360	4	2	1.1
95400	72980	95400	18	11	5	0.6	720	0.5	370	21	74	91	300	0.25	3390	156	126	22.8
95400	73080	95400	16	7	10	0.8	1400	0.5	250	5	47	271	50	0.8	13900	77	43.5	21.2
95400	73180	95400	18	147	5	0.1	3660	0.5	310	5	29	56	50	5.3	2250	3	1.5	1.2
95400	73280	95400	61	86	5	0.8	3710	0.5	450	4	14	31	50	2.7	2020	2	1	0.9
95400	73380	95400	6	104	5	0.05	3960	0.5	180	5	132	69	100	2.3	2440	19	10	5.5
95400	73480	95400	10	8	5	0.3	1240	0.5	180	2	41	39	50	0.25	3690	60	30.3	16.7
95400	73580	95400	9	9	5	0.3	1630	0.5	220	2	64	36	50	0.25	2410	61	30.2	17.5
95400	73680	95400	14	45	5	0.05	990	0.5	200	12	50	106	50	1.6	7120	151	76.4	40.4
95400	73780	95400	4	40	5	0.05	1750	0.5	210	5	191	25	50	0.6	1390	72	36.5	20.4
95400	73880	95400	2	28	5	0.2	2310	0.5	170	3	98	55	100	0.6	1760	23	11.6	6.6
95400	73980	95400	3	40	5	0.2	2010	0.5	190	4	350	41	100	0.25	1590	59	28.1	17.2
95250	71880	95250	10	10	5	0.4	1730	0.5	350	8	111	57	300	0.25	2740	86	64.8	15.4
95250	71980	95250	8	7	5	0.3	2280	0.5	420	4	58	113	200	0.25	1430	82	64.2	12.8
95250	72080	95250	4	56	5	0.1	3290	0.5	300	11	44	72	50	0.25	720	21	10.2	5.8
95250	72180	95250	4	18	5	1.3	2200	0.5	200	6	64	102	50	0.25	1270	58	28.6	17.3
95250	72280	95250	9	79	5	0.05	2020	0.5	190	6	42	34	50	1	570	15	7.5	4.3
95250	72380	95250	4	33	5	0.2	1940	0.5	210	3	78	31	50	0.25	410	14	6.8	4.3
95250	72480	95250	5	20	5	0.2	5700	0.5	310	3	23	131	50	0.25	1030	9	4	3.3
95250	72580	95250	2	45	5	0.05	3600	0.5	220	5	35	107	50	1	1070	10	5.3	3
95250	72680	95250	4	17	5	0.1	3810	0.5	240	2	10	36	50	0.6	890	6	3.1	2.1

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MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Fe</u>	<u>Ga</u>	<u>Gd</u>	<u>Hg</u>	<u>In</u>	<u>K</u>	<u>La</u>	<u>Li</u>	<u>Mg</u>	<u>Mn</u>	<u>Mo</u>	<u>Nb</u>	<u>Nd</u>	<u>Ni</u>	<u>P</u>	<u>Pb</u>
95700	73980	95700	54	4	67	0.5	0.25	42.3	198	2.5	84	1280	2.5	4	296	311	1.7	20
95550	71880	95550	15	1	10	0.5	0.25	36.5	17	2.5	130	3610	8	1.4	32	131	0.6	20
95550	71980	95550	26	3	20	0.5	0.25	35.3	32	2.5	45	5990	15	1.3	59	102	0.9	30
95550	72180	95550	39	4	28	0.5	0.25	43.2	83	2.5	93	3300	20	3.4	117	242	3.4	30
95550	72280	95550	40	4	29	0.5	0.25	48	71	2.5	69	1840	9	1.9	105	169	2	40
95550	72380	95550	40	5	16	0.5	0.25	64	42	2.5	32	7560	15	2.6	58	146	2.5	40
95550	72480	95550	63	2	28	0.5	0.25	77.4	52	2.5	172	2750	20	2.4	101	1600	2	5
95550	72580	95550	12	1	19	0.5	0.25	45.5	21	2.5	81	940	13	0.25	47	78	0.6	10
95550	72680	95550	25	3	20	0.5	0.25	25.5	50	2.5	95	940	16	1.4	76	135	1.7	50
95550	72780	95550	7	0.5	81	0.5	0.25	41.4	62	2.5	296	9100	114	0.6	190	8900	0.4	5
95550	72880	95550	37	5	15	0.5	0.25	44.4	43	2.5	30	2480	48	3.3	57	448	2.5	40
95550	72980	95550	14	0.5	26	0.5	0.25	39.4	42	2.5	283	540	39	1.6	88	1620	0.5	5
95550	73080	95550	19	0.5	36	0.5	0.25	34.9	62	2.5	218	290	61	0.25	138	598	0.2	5
95550	73180	95550	16	0.5	42	0.5	0.25	52.4	71	2.5	215	2980	55	1.2	161	987	0.3	5
95550	73280	95550	38	0.5	18	0.5	0.25	44.6	47	7	161	630	7	3.7	77	392	2.9	20
95550	73380	95550	38	5	7	0.5	0.25	36.2	31	2.5	68	2430	6	7.9	36	211	6	40
95550	73480	95550	24	1	17	0.5	0.25	36.7	59	2.5	161	1110	15	0.8	80	466	0.9	5
95550	73580	95550	48	3	25	0.5	0.25	111	84	2.5	150	1750	55	2.1	114	1010	3.3	20
95550	73680	95550	20	2	12	0.5	0.25	81.9	34	2.5	66	420	11	1.6	45	114	0.9	40
95550	73780	95550	43	3	48	0.5	0.25	61.7	151	2.5	107	910	22	2.4	216	396	2.4	10
95550	73880	95550	24	1	37	0.5	0.25	42.4	99	2.5	128	370	2.5	0.5	163	210	0.6	5
95550	73980	95550	70	3	59	0.5	0.25	30.7	205	2.5	117	3600	8	3.5	283	478	2	10
95550	74080	95550	36	2	45	0.5	0.25	36.8	131	2.5	180	780	2.5	1.2	213	390	0.8	5
95400	71880	95400	83	4	113	0.5	0.25	17.8	193	2.5	246	24700	35	1	461	1100	0.6	5
95400	72080	95400	7	2	36	0.5	0.25	34	33	2.5	57	160	20	0.25	84	34	2	40
95400	72180	95400	14	2	30	0.5	0.25	35.6	91	2.5	90	8660	8	0.25	111	127	0.5	30
95400	72380	95400	28	6	15	0.5	0.25	49.7	36	2.5	23	900	36	1.5	58	48	1.9	40
95400	72480	95400	16	0.5	25	0.5	0.25	25.2	34	7	302	4960	28	0.7	89	1630	0.4	5
95400	72580	95400	33	5	7	0.5	0.25	37.8	21	2.5	44	2480	20	2.7	30	117	7.2	20
95400	72780	95400	12	2	6	0.5	0.25	43.6	10	2.5	46	2960	22	0.25	20	51	0.8	10
95400	72880	95400	50	3	4	0.5	0.25	32.5	9	2.5	93	1860	57	1.9	14	479	4.2	30
95400	72980	95400	7	1	147	0.5	0.25	34	86	9	380	18700	258	0.25	276	6990	0.5	5
95400	73080	95400	12	1	104	0.5	0.25	32.8	140	14	338	4660	85	0.25	346	6390	0.5	5
95400	73180	95400	38	3	3	0.5	0.25	47.9	13	2.5	93	2790	45	1.7	14	251	1.9	30
95400	73280	95400	16	0.5	2	0.5	0.25	50.5	5	2.5	95	170	39	0.8	7	350	0.5	20
95400	73380	95400	67	4	24	0.5	0.25	44.9	75	2.5	152	1710	31	4.6	108	430	3.8	30
95400	73480	95400	25	1	82	0.5	0.25	42.3	165	2.5	249	1590	10	0.7	348	2310	0.6	5
95400	73580	95400	22	2	88	0.5	0.25	46.2	183	2.5	227	450	8	0.8	385	1410	0.6	5
95400	73680	95400	21	3	204	0.5	0.25	129	432	2.5	144	8150	98	0.8	838	3930	1.5	5
95400	73780	95400	35	2	99	0.5	0.25	61.7	274	2.5	173	1120	27	1.3	467	1040	1.8	5
95400	73880	95400	35	1	31	0.5	0.25	35.9	83	2.5	173	630	11	1.2	142	583	0.7	5
95400	73980	95400	51	3	81	0.5	0.25	32.3	289	2.5	142	570	7	1.8	413	839	1.4	5
95250	71880	95250	30	1	91	0.5	0.25	19.5	72	10	291	4980	47	0.6	219	4090	0.4	5
95250	71980	95250	10	0.5	81	0.5	0.25	26.7	39	5	376	5160	19	0.25	141	1680	0.2	5
95250	72080	95250	14	0.5	25	0.5	0.25	40.4	31	2.5	234	2360	7	0.25	74	1180	1.8	5
95250	72180	95250	12	1	81	0.5	0.25	16.4	103	2.5	284	4130	2.5	0.25	262	3740	0.4	5
95250	72280	95250	19	1	18	0.5	0.25	33.1	28	2.5	163	320	2.5	0.8	58	444	2.8	20
95250	72380	95250	21	0.5	18	0.5	0.25	19.4	38	2.5	207	1130	5	0.25	71	493	0.6	5
95250	72480	95250	14	0.5	12	0.5	0.25	39.9	21	2.5	156	1630	9	0.25	42	261	0.8	5
95250	72580	95250	16	0.5	13	0.5	0.25	29.5	17	2.5	116	1030	9	0.25	39	174	1.4	5
95250	72680	95250	12	0.5	8	0.5	0.25	27.3	11	2.5	162	450	2.5	0.25	27	285	0.6	5

Murray Property
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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
95700	73980	95700	0.5	65	0.5	169	0.5	41	66	0.5	1480	0.5	9	5	29.6	523	0.25	21	1
95550	71880	95550	0.5	6	0.5	98	0.5	20	8	0.5	1530	0.5	1	5	5.7	31	0.25	5	0.5
95550	71980	95550	0.5	11	0.5	160	0.5	45	16	0.5	810	0.5	3	5	4	106	0.25	5	0.5
95550	72180	95550	0.5	26	0.5	117	0.5	45	27	0.5	1810	0.5	4	5	26.5	453	0.25	8	1
95550	72280	95550	0.5	22	0.5	143	0.5	53	26	0.5	1290	0.5	4	5	11.4	471	0.25	7	0.5
95550	72380	95550	0.5	13	0.5	190	0.5	29	14	0.5	960	0.5	2	5	9.6	556	0.25	6	1
95550	72480	95550	0.5	20	0.5	40	0.5	41	24	0.5	1350	0.5	4	5	10.5	126	0.25	12	1
95550	72580	95550	0.5	8	0.5	133	0.5	35	14	0.5	1260	0.5	3	5	2.3	1.5	0.25	3	0.5
95550	72680	95550	0.5	16	0.5	96	0.5	24	18	0.5	1480	0.5	3	5	11.8	371	0.25	7	0.5
95550	72780	95550	0.5	31	0.5	71	0.5	31	58	0.5	1120	0.5	11	5	14.5	1.5	0.7	74	4
95550	72880	95550	0.5	12	0.5	126	0.5	23	14	0.5	660	0.5	2	5	10.3	504	0.25	7	2
95550	72980	95550	0.5	16	0.5	50	0.5	10	22	0.5	1620	1	3	5	5.3	13	0.25	32	2
95550	73080	95550	0.5	25	0.5	48	0.5	15	33	0.5	1330	0.5	5	5	15.2	41	0.25	35	2
95550	73180	95550	0.5	31	0.5	90	0.5	30	39	0.5	1830	0.5	6	5	20.9	15	0.25	68	2
95550	73280	95550	0.5	16	0.5	94	0.5	16	17	0.5	1530	0.5	2	5	16.1	87	0.25	15	1
95550	73380	95550	1	9	0.5	192	0.5	19	8	0.5	1210	0.5	1	5	22.6	522	0.25	10	2
95550	73480	95550	0.5	17	0.5	59	0.5	15	16	0.5	1960	0.5	2	5	16.3	79	0.25	9	0.5
95550	73580	95550	0.5	26	0.5	101	0.5	32	24	0.5	1040	0.5	3	5	23.6	367	0.25	13	0.5
95550	73680	95550	0.5	10	0.5	170	0.5	17	11	0.5	1120	0.5	2	5	13.1	256	0.25	7	0.5
95550	73780	95550	0.5	47	0.5	187	0.5	33	47	0.5	1610	0.5	7	5	28.5	287	0.25	19	1
95550	73880	95550	0.5	34	0.5	139	0.5	21	36	0.5	2630	0.5	5	5	25.1	65	0.25	21	1
95550	73980	95550	0.5	63	0.5	93	0.5	37	59	0.5	1750	0.5	8	5	29.7	459	0.25	19	1
95550	74080	95550	0.5	44	0.5	93	0.5	26	45	0.5	2170	0.5	6	5	25.6	94	0.25	21	1
95400	71880	95400	0.5	86	0.5	22	2	54	108	0.5	1900	0.5	15	5	32.9	64	0.25	219	1
95400	72080	95400	0.5	14	0.5	112	0.5	29	25	0.5	1830	0.5	4	5	1.7	4	0.25	4	0.5
95400	72180	95400	0.5	24	0.5	112	0.5	84	25	0.5	3250	0.5	5	5	10.8	39	0.25	8	0.5
95400	72380	95400	0.5	12	0.5	135	0.5	26	14	0.5	550	0.5	2	5	8	355	0.25	6	0.5
95400	72480	95400	0.5	16	0.5	23	0.5	13	23	0.5	1260	0.5	3	5	12.2	18	0.25	183	0.5
95400	72580	95400	0.5	7	0.5	147	0.5	16	7	0.5	830	0.5	1	5	11.6	318	0.25	8	0.5
95400	72780	95400	0.5	4	0.5	153	0.5	7	5	0.5	1600	0.5	0.5	5	1.5	52	0.25	2	0.5
95400	72880	95400	0.5	3	0.5	83	0.5	8	4	0.5	1480	0.5	0.5	5	4.1	184	0.25	4	0.5
95400	72980	95400	0.5	44	0.5	56	0.5	68	90	0.5	2240	0.5	22	5	28.5	1.5	1	780	3
95400	73080	95400	0.5	61	0.5	35	0.5	15	89	0.5	1540	0.5	13	5	9.2	1.5	0.25	104	1
95400	73180	95400	0.5	3	0.5	122	0.5	6	3	0.5	2370	0.5	0.5	5	8.3	180	0.25	4	0.5
95400	73280	95400	0.5	1	0.5	135	0.5	2.5	2	0.5	3690	0.5	0.5	5	4.8	1.5	0.25	4	0.5
95400	73380	95400	0.5	23	0.5	106	0.5	22	24	0.5	1210	0.5	3	5	15.1	621	0.25	10	1
95400	73480	95400	0.5	66	0.5	164	0.5	26	80	0.5	1280	0.5	11	5	26.3	92	0.25	52	2
95400	73580	95400	0.5	73	0.5	87	0.5	30	87	0.5	1770	0.5	11	5	28.5	48	0.25	43	1
95400	73680	95400	0.5	162	0.5	183	0.5	39	194	0.5	1170	0.5	26	5	25.5	62	0.5	202	1
95400	73780	95400	0.5	99	0.5	137	0.5	38	101	0.5	1570	0.5	13	5	35.2	139	0.25	40	1
95400	73880	95400	0.5	29	0.5	130	0.5	16	32	0.5	1700	0.5	4	5	21.3	219	0.25	14	1
95400	73980	95400	0.5	90	0.5	75	0.5	43	83	0.5	1530	0.5	10	5	35.8	221	0.25	25	1
95250	71880	95250	0.5	35	0.5	37	1	39	63	0.5	2650	0.5	13	5	21.7	6	0.25	186	0.5
95250	71980	95250	0.5	21	0.5	34	0.5	49	47	0.5	2740	0.5	11	5	8.5	1.5	0.25	164	0.5
95250	72080	95250	0.5	13	0.5	64	0.5	27	21	0.5	3260	0.5	4	5	4.9	4	0.25	10	0.5
95250	72180	95250	0.5	44	0.5	39	0.5	32	68	0.5	1940	0.5	10	5	11.3	1.5	0.25	25	0.5
95250	72280	95250	0.5	11	0.5	89	0.5	24	15	0.5	1240	0.5	2	5	9.1	49	0.25	8	0.5
95250	72380	95250	0.5	14	0.5	56	0.5	13	17	0.5	1690	0.5	2	5	11.2	36	0.25	8	0.5
95250	72480	95250	0.5	8	0.5	45	0.5	8	10	0.5	3370	0.5	2	5	4.5	1.5	0.25	8	0.5
95250	72580	95250	0.5	7	0.5	113	0.5	10	11	0.5	2850	0.5	2	5	7.5	5	0.25	7	0.5
95250	72680	95250	0.5	5	0.5	53	0.5	6	7	0.5	2610	0.5	1	5	6.9	1.5	0.25	7	0.5

Murray Property
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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
95700	73980	95700	238	18	60	163
95550	71880	95550	41	3	90	36
95550	71980	95550	104	7	170	38
95550	72180	95550	98	8	80	178
95550	72280	95550	119	9	80	96
95550	72380	95550	57	5	110	70
95550	72480	95550	133	13	770	71
95550	72580	95550	95	8	100	24
95550	72680	95550	77	6	50	86
95550	72780	95550	394	26	40	55
95550	72880	95550	64	5	110	77
95550	72980	95550	114	8	40	20
95550	73080	95550	138	10	10	67
95550	73180	95550	159	12	10	92
95550	73280	95550	80	7	160	75
95550	73380	95550	27	3	30	180
95550	73480	95550	62	5	10	76
95550	73580	95550	90	8	50	119
95550	73680	95550	44	3	30	79
95550	73780	95550	185	14	70	136
95550	73880	95550	129	10	10	101
95550	73980	95550	219	16	110	152
95550	74080	95550	160	12	130	128
95400	71880	95400	602	53	10	185
95400	72080	95400	141	9	90	17
95400	72180	95400	140	9	60	82
95400	72380	95400	55	4	50	78
95400	72480	95400	117	9	10	30
95400	72580	95400	29	3	100	110
95400	72780	95400	29	2	90	16
95400	72880	95400	20	2	150	31
95400	72980	95400	853	129	10	87
95400	73080	95400	494	38	10	17
95400	73180	95400	15	1	80	59
95400	73280	95400	9	0.5	10	18
95400	73380	95400	106	8	140	95
95400	73480	95400	339	24	30	97
95400	73580	95400	335	24	20	105
95400	73680	95400	873	61	30	99
95400	73780	95400	405	28	80	129
95400	73880	95400	123	10	20	117
95400	73980	95400	291	22	40	177
95250	71880	95250	539	67	40	103
95250	71980	95250	437	65	50	92
95250	72080	95250	94	8	110	33
95250	72180	95250	315	22	100	47
95250	72280	95250	78	6	100	46
95250	72380	95250	72	5	40	43
95250	72480	95250	44	3	50	27
95250	72580	95250	53	4	140	32
95250	72680	95250	33	2	110	31

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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
95250	72780	95250	11	49	5	0.3	3410	0.5	290	3	30	71	50	1.4	2110	4	2	1.5
95250	72880	95250	12	118	5	0.05	2660	0.5	210	2	54	71	50	3.8	840	6	3.1	1.7
95250	72980	95250	10	70	5	0.2	2290	0.5	330	3	53	157	50	0.7	700	5	2.6	1.7
95250	73080	95250	55	90	5	0.2	2480	0.5	310	7	10	167	50	4.2	8740	2	0.9	0.8
95250	73180	95250	5	27	5	0.2	1610	0.5	320	21	282	55	400	0.25	3130	280	204	53.9
95250	73280	95250	40	130	5	0.2	1460	0.5	260	6	36	48	50	3.9	4070	5	2.9	1.5
95250	73380	95250	9	7	10	0.5	810	0.5	290	2	101	25	50	0.25	4450	36	20.3	9.7
95250	73480	95250	35	112	5	0.1	1130	0.5	290	17	25	67	50	2.8	1400	3	1.5	0.9
95250	73580	95250	7	25	5	0.3	4090	0.5	180	2	96	92	50	0.5	3910	12	5.7	4.5
95250	73680	95250	12	34	5	0.2	2950	0.5	190	5	117	123	50	1	2870	6	2.7	2.2
95250	73780	95250	9	135	5	0.05	2660	0.5	170	9	273	116	50	3	1610	45	22.8	9.9
95250	73880	95250	4	9	5	0.3	1720	0.5	240	1	187	42	50	0.25	4640	52	26.2	15.1
95250	73980	95250	3	79	20	0.05	1560	0.5	140	7	575	608	100	0.25	2620	65	33.9	16.2
95250	74080	95250	0.5	6	10	0.05	4740	0.5	220	1	117	91	50	0.25	970	34	19.4	9.7
95250	74180	95250	2	145	5	0.05	1740	0.5	130	5	245	43	50	4.1	500	39	18.8	11.1
95050	71880	95050	4	24	5	0.3	1340	0.5	270	2	21	9	50	0.25	640	52	30.4	11.9
95050	71980	95050	4	58	5	0.1	2760	0.5	330	3	109	13	50	0.25	540	21	10.6	5.3
95050	72080	95050	1	71	5	0.1	7450	0.5	270	2	72	64	50	2	470	10	4.3	3.4
95050	72180	95050	5	61	5	0.05	5230	0.5	190	5	19	54	50	1.5	810	12	5.7	3.9
95050	72280	95050	8	22	5	0.4	2680	0.5	350	3	19	19	50	0.25	820	38	17.1	11.2
95050	72380	95050	6	57	5	0.05	1740	0.5	220	5	67	95	200	0.9	440	10	5.3	3.2
95050	72480	95050	2	63	5	0.1	5230	0.5	260	3	101	74	50	1.3	830	20	9.5	5.9
95050	72580	95050	0.5	51	5	0.1	5820	0.5	240	2	78	69	50	0.8	1620	16	8.1	4.6
95050	72680	95050	2	57	5	0.05	4560	0.5	230	2	148	88	100	0.7	620	15	7.3	4.8
95050	72780	95050	4	22	5	0.1	5480	0.5	270	2	21	50	50	0.25	1190	18	9	5.2
95050	72880	95050	5	122	5	0.2	6410	0.5	210	3	625	76	50	1.2	840	40	18.7	11.5
95050	72980	95050	4	118	5	0.05	1910	0.5	170	4	182	61	50	2.1	280	21	10	6.3
95050	73080	95050	15	49	5	0.05	1760	0.5	250	3	52	38	50	0.25	700	10	4.8	2.7
95050	73180	95050	7	45	5	0.2	2800	0.5	260	3	66	40	50	0.25	700	14	6.6	3.8
95050	73280	95050	4	33	5	0.4	2480	0.5	310	2	184	23	50	0.25	840	29	14.2	8.9
95050	73380	95050	10	30	5	0.3	2400	0.5	300	2	50	56	50	0.25	840	15	7.1	4.2
95050	73480	95050	116	103	5	0.1	3210	0.5	240	5	41	47	50	2.5	2530	3	1.6	1.4
95050	73580	95050	28	133	5	0.05	2050	0.5	200	5	90	59	50	2.9	490	11	5.5	2.9
95050	73680	95050	15	72	5	0.2	5280	0.5	290	6	24	63	50	2.3	1450	3	1.7	1.4
95050	73780	95050	4	39	5	0.05	2130	0.5	170	3	132	34	50	1.3	1460	23	11.1	6.7
95050	73880	95050	2	7	5	0.2	2000	0.5	210	1	104	23	50	0.25	680	37	18.7	9.9
95050	73980	95050	3	121	5	0.2	2990	0.5	230	3	44	42	50	3.2	950	5	2.7	1.8
95050	74080	95050	5	131	5	0.05	1830	0.5	220	2	54	26	50	3.8	310	6	2.9	1.8
95050	74180	95050	0.5	100	5	0.05	3180	0.5	190	1	139	47	50	2.2	730	15	6.8	4.3
95050	74280	95050	0.5	93	5	0.05	3690	0.5	230	2	60	50	50	4.4	360	7	3.7	2.4
94850	71880	94850	3	36	5	0.05	1460	0.5	320	5	152	272	50	0.5	420	11	5.2	2.8
94850	71980	94850	9	28	5	0.6	2980	0.5	390	3	41	2.5	50	0.25	1170	42	20.8	10.5
94850	72080	94850	15	28	5	0.2	2260	0.5	280	3	696	143	200	0.25	2060	132	76.1	32.1
94850	72180	94850	6	44	5	0.3	2790	0.5	230	5	32	56	50	1.3	1000	12	5.6	4.2
94850	72280	94850	9	17	5	0.3	1210	0.5	380	14	2.5	64	50	0.25	650	8	4.1	1.7
94850	72380	94850	3	28	5	0.2	3630	0.5	370	2	6	29	50	0.25	910	13	6.4	3.8
94850	72480	94850	4	36	5	0.5	4510	0.5	270	2	198	83	100	0.5	1190	32	15.6	10.6
94850	72580	94850	2	40	5	0.2	4970	0.5	250	2	38	48	50	0.25	910	10	4.5	3.7
94850	72680	94850	2	12	5	0.05	2200	0.5	200	5	28	96	50	0.25	580	11	6	3.1
94850	72780	94850	8	26	5	0.05	4650	0.5	180	5	54	337	50	0.8	1190	12	6	3.6
94850	72880	94850	3	18	5	0.05	3010	0.5	260	4	14	111	50	0.25	1590	4	2.1	1.3

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Fe</u>	<u>Ga</u>	<u>Gd</u>	<u>Hg</u>	<u>In</u>	<u>K</u>	<u>La</u>	<u>Li</u>	<u>Mg</u>	<u>Mn</u>	<u>Mo</u>	<u>Nb</u>	<u>Nd</u>	<u>Ni</u>	<u>P</u>	<u>Pb</u>
95250	72780	95250	14	0.5	5	0.5	0.25	41.1	11	2.5	174	560	6	1.9	19	329	2.4	10
95250	72880	95250	26	3	6	0.5	0.25	47.5	16	2.5	61	2300	15	3	27	221	4.4	20
95250	72980	95250	35	0.5	7	0.5	0.25	76.3	19	2.5	79	2960	43	1.6	29	281	3.9	5
95250	73080	95250	21	0.5	2	0.5	0.25	26.5	5	2.5	210	260	36	0.25	6	815	0.5	10
95250	73180	95250	21	4	303	0.5	0.25	42.5	477	17	283	9110	38	0.6	976	9520	0.2	5
95250	73280	95250	46	4	5	0.5	0.25	69.2	16	2.5	91	1080	52	1.7	20	356	2.4	20
95250	73380	95250	13	0.5	50	1	0.25	37.2	44	7	326	1370	19	0.5	138	976	0.3	5
95250	73480	95250	35	2	3	0.5	0.25	61.8	8	2.5	68	2190	30	1.7	13	401	4.5	10
95250	73580	95250	30	0.5	18	0.5	0.25	25	60	2.5	224	470	13	1.2	89	622	1.3	5
95250	73680	95250	11	0.5	8	0.5	0.25	16.1	22	2.5	313	820	6	0.6	35	1200	0.7	5
95250	73780	95250	33	5	45	0.5	0.25	34.6	107	2.5	94	15100	13	1	153	576	1	20
95250	73880	95250	36	2	74	0.5	0.25	31.6	162	2.5	253	1340	8	0.6	318	1780	0.4	5
95250	73980	95250	217	5	77	0.5	0.25	47.6	263	2.5	89	21900	19	7.2	385	1290	4.7	20
95250	74080	95250	26	0.5	49	0.5	0.25	66.5	105	12	143	2340	2.5	1.6	208	356	0.6	5
95250	74180	95250	54	11	52	0.5	0.25	30	178	2.5	40	1300	2.5	4.3	231	121	2.5	50
95050	71880	95050	9	0.5	69	0.5	0.25	12.5	43	2.5	254	830	6	0.25	149	2390	0.6	5
95050	71980	95050	17	1	26	0.5	0.25	32.6	42	2.5	117	600	2.5	0.25	88	241	1.3	5
95050	72080	95050	9	1	13	0.5	0.25	35	28	2.5	110	180	2.5	0.25	42	41	1.3	20
95050	72180	95050	10	0.5	16	0.5	0.25	34.6	24	2.5	156	700	2.5	0.25	50	281	1.5	20
95050	72280	95050	9	0.5	51	0.5	0.25	12.1	51	2.5	234	360	2.5	0.25	136	596	0.4	5
95050	72380	95050	40	2	13	0.5	0.25	16.8	32	2.5	146	7070	10	1	54	279	1.4	5
95050	72480	95050	16	1	24	0.5	0.25	25	42	2.5	93	480	7	0.25	77	61	0.6	5
95050	72580	95050	20	0.5	19	0.5	0.25	32.2	30	2.5	144	300	2.5	0.25	57	147	0.9	5
95050	72680	95050	22	1	19	0.5	0.25	24.4	46	2.5	133	1020	2.5	0.5	78	168	0.6	5
95050	72780	95050	12	0.5	25	0.5	0.25	37.9	31	2.5	158	550	2.5	0.25	71	387	0.6	5
95050	72880	95050	50	5	47	0.5	0.25	75	208	2.5	78	670	9	3.3	238	183	3.3	30
95050	72980	95050	25	5	26	0.5	0.25	31.3	72	2.5	39	890	16	0.8	105	78	1.5	30
95050	73080	95050	33	0.5	12	0.5	0.25	59.7	30	2.5	160	430	12	1.9	49	346	4.8	10
95050	73180	95050	23	0.5	17	0.5	0.25	20.3	32	2.5	161	210	2.5	0.6	60	203	1.5	5
95050	73280	95050	29	1	39	0.5	0.25	29.7	84	2.5	191	620	6	0.25	159	365	0.3	5
95050	73380	95050	20	0.5	19	0.5	0.25	28.5	33	2.5	177	990	6	0.6	68	243	1.1	5
95050	73480	95050	24	2	4	0.5	0.25	52.2	17	2.5	31	480	22	2	21	41	2.3	20
95050	73580	95050	40	4	12	0.5	0.25	62.8	30	2.5	25	1760	12	1	44	146	1.4	20
95050	73680	95050	18	1	4	0.5	0.25	31.4	10	2.5	73	1480	12	0.6	16	43	0.9	10
95050	73780	95050	31	2	31	0.5	0.25	48.6	82	2.5	135	460	5	1.2	137	441	0.7	5
95050	73880	95050	16	1	50	0.5	0.25	46.1	100	7	199	770	2.5	0.8	199	540	0.3	5
95050	73980	95050	13	3	6	0.5	0.25	84.8	21	2.5	39	1740	70	1.1	27	36	1	20
95050	74080	95050	30	4	7	0.5	0.25	103	24	2.5	71	250	5	4.2	28	44	3.6	40
95050	74180	95050	29	3	17	0.5	0.25	20.9	59	2.5	83	140	2.5	2.4	73	32	2.2	20
95050	74280	95050	20	2	9	0.5	0.25	61.9	25	2.5	52	460	5	1.6	36	21	2.1	20
94850	71880	94850	33	0.5	13	0.5	0.25	26.2	32	2.5	130	8520	2.5	2.3	57	344	3.2	5
94850	71980	94850	13	0.5	55	0.5	0.25	29.6	70	2.5	141	160	2.5	0.25	168	494	0.9	5
94850	72080	94850	43	4	172	0.5	0.25	27.7	337	6	222	1960	10	1.1	678	1800	0.4	5
94850	72180	94850	19	0.5	16	0.5	0.25	24.6	33	2.5	110	470	6	0.25	61	192	2.3	5
94850	72280	94850	7	0.5	8	0.5	0.25	20.3	0.5	2.5	175	3020	6	0.25	8	824	0.2	5
94850	72380	94850	12	0.5	16	0.5	0.25	20.9	16	2.5	157	300	2.5	0.25	40	214	0.7	5
94850	72480	94850	32	1	44	0.5	0.25	23.5	98	2.5	224	740	2.5	0.25	178	781	0.4	5
94850	72580	94850	11	0.5	13	0.5	0.25	22.1	26	2.5	179	200	5	0.25	49	244	0.7	5
94850	72680	94850	8	0.5	14	0.5	0.25	30	17	2.5	328	1750	5	0.5	43	1750	0.7	5
94850	72780	94850	10	0.5	16	0.5	0.25	18.3	27	2.5	219	4420	2.5	0.25	59	528	0.9	5
94850	72880	94850	8	0.5	5	0.5	0.25	29.7	7	2.5	206	1650	2.5	0.25	15	1660	0.6	5

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
95250	72780	95250	0.5	4	0.5	125	0.5	2.5	4	0.5	3330	0.5	0.5	5	7.2	9	0.25	9	0.5
95250	72880	95250	0.5	6	0.5	213	0.5	13	7	0.5	1410	0.5	0.5	5	19.2	230	0.25	7	1
95250	72980	95250	0.5	6	0.5	120	0.5	7	6	0.5	2010	0.5	0.5	5	8.9	59	0.25	5	0.5
95250	73080	95250	0.5	1	0.5	94	0.5	2.5	2	0.5	2210	0.5	0.5	5	2	4	0.25	3	0.5
95250	73180	95250	0.5	185	0.5	141	0.5	69	243	0.5	2290	0.5	42	5	42.7	9	0.25	744	2
95250	73280	95250	0.5	4	0.5	164	0.5	22	5	0.5	1380	0.5	0.5	5	5.7	347	0.25	7	1
95250	73380	95250	0.5	22	0.5	34	0.5	21	38	0.5	1740	0.5	6	5	17.8	1.5	0.25	55	0.5
95250	73480	95250	0.5	3	0.5	191	0.5	7	3	0.5	1520	0.5	0.5	5	5.5	136	0.25	5	0.5
95250	73580	95250	0.5	18	0.5	58	0.5	10	18	0.5	2270	0.5	2	5	9.5	86	0.25	8	0.5
95250	73680	95250	0.5	7	0.5	88	0.5	7	8	0.5	1920	0.5	1	5	11.6	8	0.25	7	0.5
95250	73780	95250	0.5	33	0.5	157	0.5	90	38	0.5	1090	0.5	7	5	32.4	273	0.9	50	0.5
95250	73880	95250	0.5	61	0.5	64	0.5	33	70	0.5	1920	0.5	9	5	28	51	0.6	47	1
95250	73980	95250	0.5	84	0.5	59	0.5	67	79	0.5	1050	0.5	11	5	43.7	856	0.25	41	2
95250	74080	95250	0.5	39	0.5	153	0.5	12	45	0.5	1700	0.5	6	5	28.7	54	0.25	37	1
95250	74180	95250	0.5	50	0.5	240	0.5	35	50	0.5	720	0.5	7	5	29.3	845	0.6	17	0.5
95050	71880	95050	0.5	22	0.5	24	0.5	21	47	0.5	2490	0.5	8	5	5.8	5	0.25	69	0.5
95050	71980	95050	0.5	16	0.5	87	0.5	20	22	0.5	2850	0.5	4	5	7	6	0.25	24	0.5
95050	72080	95050	0.5	8	0.5	120	0.5	7	10	0.5	2940	0.5	2	5	4.9	1.5	0.25	3	0.5
95050	72180	95050	0.5	9	0.5	98	0.5	9	13	0.5	2290	0.5	2	5	5	4	0.25	4	0.5
95050	72280	95050	0.5	23	0.5	25	0.5	19	38	0.5	3420	0.5	7	5	5	1.5	0.25	9	0.5
95050	72380	95050	0.5	11	0.5	79	0.5	11	12	0.5	1630	0.5	2	5	9.4	150	0.25	9	0.5
95050	72480	95050	0.5	14	0.5	114	0.5	14	20	0.5	3390	0.5	3	5	9	26	0.25	5	0.5
95050	72580	95050	0.5	10	0.5	109	0.5	18	15	0.5	3240	0.5	3	5	9.6	15	0.25	5	0.5
95050	72680	95050	0.5	16	0.5	89	0.5	16	18	0.5	2870	0.5	3	5	17.7	65	0.25	8	0.5
95050	72780	95050	0.5	12	0.5	86	0.5	14	19	0.5	3310	0.5	3	5	6.6	3	0.25	10	0.5
95050	72880	95050	0.5	56	0.5	126	0.5	52	49	0.5	2540	0.5	7	5	31.7	592	0.5	13	0.5
95050	72980	95050	0.5	23	0.5	191	0.5	35	25	0.5	900	0.5	4	5	12.2	244	0.25	10	0.5
95050	73080	95050	0.5	10	0.5	81	0.5	8	11	0.5	1760	0.5	2	5	10.4	60	0.25	8	0.5
95050	73180	95050	0.5	11	0.5	81	0.5	6	15	0.5	2320	0.5	2	5	11.3	18	0.25	6	0.5
95050	73280	95050	0.5	31	0.5	68	0.5	18	37	0.5	2920	0.5	5	5	15.8	8	0.25	13	0.5
95050	73380	95050	0.5	13	0.5	40	0.5	11	17	0.5	2720	0.5	3	5	10.3	13	0.25	12	0.5
95050	73480	95050	0.5	4	0.5	125	0.5	2.5	4	0.5	1830	0.5	0.5	5	10.8	381	0.25	4	0.5
95050	73580	95050	0.5	9	0.5	224	0.5	22	11	0.5	1050	0.5	2	5	8.8	200	0.25	6	0.5
95050	73680	95050	0.5	3	0.5	179	0.5	2.5	4	0.5	2880	0.5	0.5	5	5.8	39	0.25	4	0.5
95050	73780	95050	0.5	28	0.5	171	0.5	15	30	0.5	1540	0.5	4	5	17.1	190	0.25	12	0.5
95050	73880	95050	0.5	38	0.5	119	0.5	22	47	0.5	1670	0.5	7	5	19.7	41	0.25	28	0.5
95050	73980	95050	0.5	6	0.5	275	0.5	10	6	0.5	1180	0.5	0.5	5	12.9	154	0.25	7	1
95050	74080	95050	0.5	6	0.5	188	0.5	10	6	0.5	1260	0.5	0.5	5	12.9	314	0.25	8	0.5
95050	74180	95050	0.5	16	0.5	124	0.5	19	16	0.5	1710	0.5	2	5	18.6	423	0.25	9	0.5
95050	74280	95050	0.5	8	0.5	233	0.5	8	8	0.5	1990	0.5	1	5	14.7	202	0.25	7	0.5
94850	71880	94850	0.5	12	0.5	70	0.5	18	13	0.5	2450	0.5	2	5	15.5	44	0.25	40	0.5
94850	71980	94850	0.5	30	0.5	66	0.5	23	44	0.5	3120	0.5	7	5	6.6	10	0.25	84	0.5
94850	72080	94850	0.5	131	0.5	36	0.5	56	156	0.5	1850	0.5	22	5	39.4	40	0.25	161	0.5
94850	72180	94850	0.5	12	0.5	89	0.5	18	15	0.5	1930	0.5	2	5	7	33	0.25	9	0.5
94850	72280	94850	0.5	0.5	0.5	39	0.5	19	5	0.5	3060	0.5	1	5	2.2	1.5	0.25	19	0.5
94850	72380	94850	0.5	7	0.5	42	0.5	16	12	0.5	3590	0.5	2	5	3	6	0.25	5	0.5
94850	72480	94850	0.5	35	0.5	64	0.5	30	41	0.5	2630	0.5	6	5	13.4	43	0.25	9	0.5
94850	72580	94850	0.5	9	0.5	57	0.5	19	12	0.5	2950	0.5	2	5	5.4	8	0.25	4	0.5
94850	72680	94850	0.5	8	0.5	43	0.5	18	11	0.5	1760	0.5	2	5	6.3	9	0.25	10	0.5
94850	72780	94850	0.5	11	0.5	63	0.5	14	15	0.5	2430	0.5	2	5	7.3	13	0.25	9	0.5
94850	72880	94850	0.5	3	0.5	67	0.5	11	4	0.5	2070	0.5	0.5	5	3.7	5	0.25	9	0.5

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
95250	72780	95250	19	2	40	57
95250	72880	95250	26	3	30	176
95250	72980	95250	27	2	70	44
95250	73080	95250	8	0.5	30	10
95250	73180	95250	1590	209	30	146
95250	73280	95250	27	2	140	39
95250	73380	95250	227	16	20	62
95250	73480	95250	14	1	30	29
95250	73580	95250	62	4	50	45
95250	73680	95250	27	2	20	47
95250	73780	95250	240	17	40	131
95250	73880	95250	290	21	10	139
95250	73980	95250	360	27	250	180
95250	74080	95250	194	17	30	71
95250	74180	95250	210	14	40	166
95050	71880	95050	346	24	10	52
95050	71980	95050	111	8	130	45
95050	72080	95050	50	3	10	29
95050	72180	95050	58	4	40	26
95050	72280	95050	189	11	30	30
95050	72380	95050	56	4	110	50
95050	72480	95050	95	7	60	41
95050	72580	95050	78	6	30	48
95050	72680	95050	68	6	60	82
95050	72780	95050	93	6	20	46
95050	72880	95050	209	13	120	221
95050	72980	95050	105	7	70	101
95050	73080	95050	48	4	50	53
95050	73180	95050	68	5	40	57
95050	73280	95050	151	11	10	65
95050	73380	95050	70	5	10	65
95050	73480	95050	16	1	30	53
95050	73580	95050	55	4	30	62
95050	73680	95050	16	1	10	25
95050	73780	95050	113	8	10	74
95050	73880	95050	207	15	10	67
95050	73980	95050	24	2	60	87
95050	74080	95050	28	2	30	82
95050	74180	95050	65	5	10	131
95050	74280	95050	36	3	10	94
94850	71880	94850	45	4	70	149
94850	71980	94850	210	15	90	48
94850	72080	94850	810	66	30	229
94850	72180	94850	55	4	50	58
94850	72280	94850	30	3	30	46
94850	72380	94850	67	5	20	26
94850	72480	94850	164	12	50	78
94850	72580	94850	48	3	50	29
94850	72680	94850	63	5	10	36
94850	72780	94850	59	5	20	35
94850	72880	94850	19	2	10	28

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
94850	72980	94850	4	50	5	0.3	3740	0.5	260	2	233	291	50	1	1080	18	7.1	5.7
94850	73080	94850	19	9	5	0.3	1090	0.5	280	6	29	47	50	0.25	1900	18	9.6	5.2
94850	73180	94850	5	131	5	0.5	5310	0.5	170	3	124	90	50	2.7	910	9	4.1	3.1
94850	73280	94850	3	110	5	0.05	4760	0.5	200	3	98	46	50	2.9	450	11	5.3	4
94850	73380	94850	8	45	5	0.05	2120	0.5	200	1	55	52	50	1.1	2380	10	5.1	3
94850	73480	94850	4	32	5	0.1	2490	0.5	290	2	171	138	50	0.25	1040	23	11.3	7.7
94850	73580	94850	15	31	5	0.2	4520	0.5	250	1	118	21	50	1.1	5930	17	8	6
94850	73680	94850	4	4	5	0.5	1330	0.5	270	1	59	29	50	0.25	950	24	13	5.7
94850	73780	94850	2	9	10	0.05	990	0.5	160	2	333	49	100	0.25	1790	79	40.3	20.3
94850	73880	94850	0.5	33	5	0.1	3700	0.5	170	2	69	99	50	0.8	930	20	10	6.4
94850	73980	94850	1	15	5	0.4	1880	0.5	240	1	122	27	50	0.25	480	17	8.1	5
94850	74080	94850	5	67	5	0.05	1450	0.5	270	1	97	67	50	1.9	650	19	9.7	5
94850	74180	94850	2	8	5	0.2	3470	0.5	280	1	17	13	50	0.25	730	30	13.9	8.5
94850	74280	94850	0.5	18	5	0.1	3460	0.5	260	1	78	86	50	0.25	620	22	10.5	7.3
94850	74380	94850	2	14	5	0.6	2950	0.5	300	2	42	20	50	0.25	620	21	10.5	6.4
94500	72480	94500	13	52	5	0.5	2270	0.5	360	8	506	35	600	0.9	1910	219	164	38.2
94500	72580	94500	3	42	5	0.3	5720	0.5	260	2	111	66	50	0.6	1520	19	9.3	6.7
94500	72680	94500	14	70	5	0.4	6900	0.5	200	3	52	120	50	1.6	840	7	3.4	3.2
94500	72780	94500	4	47	5	0.2	4530	0.5	370	2	6	53	50	0.6	480	16	7.2	4.5
94500	72880	94500	4	9	5	0.3	3610	0.5	350	0.5	22	30	50	0.25	300	9	4.6	2.8
94500	72980	94500	17	44	5	0.2	2520	0.5	230	6	28	239	50	0.25	1290	13	6.9	4.3
94500	73080	94500	4	11	5	0.3	2180	0.5	250	1	48	58	50	0.25	790	11	5.7	3.3
94500	73180	94500	10	124	5	0.05	1660	0.5	200	14	374	16	50	2.5	990	69	36	15
94500	73280	94500	17	156	5	0.05	1020	0.5	130	7	91	64	50	3	770	12	6.1	3.5
94500	73380	94500	1	98	5	0.05	5300	0.5	180	3	163	53	50	3	940	18	8.3	6.6
94500	73480	94500	7	2	10	1.7	1520	0.5	330	1	97	76	200	0.25	3530	103	64.9	19.3
94500	73580	94500	2	80	5	0.05	1400	0.5	110	3	90	31	50	2.4	640	19	9.2	5.8
94500	73680	94500	1	4	5	0.2	2350	0.5	290	0.5	43	146	50	0.25	980	8	3.9	2.6
94500	73780	94500	0.5	12	5	0.1	4870	0.5	270	2	56	164	50	0.7	810	8	3.9	2.9
94500	73880	94500	5	49	5	0.3	5310	0.5	220	2	72	226	50	1	1170	10	5.4	3.9
94500	73980	94500	1	75	5	0.8	4590	0.5	200	2	71	180	50	2.1	640	8	3.9	2.8
94500	74080	94500	0.5	12	5	1	1320	0.5	210	1	137	78	200	0.25	590	21	11	6.1
94500	74180	94500	4	2	10	0.1	1510	0.5	380	1	55	20	50	0.25	980	48	27.2	11.5
94500	74280	94500	0.5	7	5	0.2	2940	0.5	230	0.5	49	49	50	0.25	600	24	12.9	7.3
94500	74380	94500	0.5	4	5	0.5	1250	0.5	250	0.5	97	17	50	0.25	350	29	15.4	7.9
93750	71980	93750	5	26	5	0.3	2270	0.5	100	2	136	23	400	0.25	630	22	10.4	6.9
93750	72080	93750	4	41	5	1.9	2550	0.5	180	1	134	62	600	0.25	570	15	7	4.9
93750	72180	93750	4	34	5	0.2	2800	0.5	140	3	124	68	500	0.25	910	21	10.2	6.1
93750	72280	93750	11	21	5	0.5	2260	0.5	220	8	310	1060	300	0.25	1430	53	33.5	9.9
93750	72380	93750	13	166	10	0.1	1880	0.5	180	18	238	408	200	1.4	530	17	8.4	4.3
93750	72480	93750	14	106	5	0.05	2000	0.5	170	11	99	98	200	2.1	1740	25	12.6	7.2
93750	72580	93750	14	27	5	0.1	1110	0.5	230	44	91	381	100	0.25	10100	129	80.4	29.1
93750	72680	93750	16	97	5	0.1	2830	0.5	150	8	104	267	200	1.9	1990	12	6.3	3.8
93750	72780	93750	16	26	5	0.2	3150	0.5	250	4	58	66	50	0.25	1370	8	3.8	2.9
93750	72880	93750	4	27	5	0.05	4440	0.5	190	3	102	76	50	0.25	780	10	4.9	3.6
93750	72980	93750	15	13	5	0.3	1030	0.5	200	16	51	35	300	0.25	7810	118	88.8	21.7
93750	73180	93750	5	18	5	0.4	990	0.5	170	3	68	74	100	0.25	360	11	6.6	2.8
93750	73380	93750	6	6	5	0.05	730	0.5	370	3	8	7	50	0.9	580	4	2.5	1
93750	73480	93750	4	38	10	0.2	1420	0.5	190	55	305	704	50	0.8	3750	77	52.8	15.2
93750	73580	93750	50	23	5	0.5	2660	0.5	430	5	41	98	50	0.25	1110	20	9.3	6.4
93750	73680	93750	3	47	5	0.2	4270	0.5	270	2	53	87	50	0.6	860	9	4.3	3.4

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Fe</u>	<u>Ga</u>	<u>Gd</u>	<u>Hg</u>	<u>In</u>	<u>K</u>	<u>La</u>	<u>Li</u>	<u>Mg</u>	<u>Mn</u>	<u>Mo</u>	<u>Nb</u>	<u>Nd</u>	<u>Ni</u>	<u>P</u>	<u>Pb</u>
94850	72980	94850	18	1	24	0.5	0.25	22.2	107	2.5	124	5120	2.5	1.1	130	328	1.4	5
94850	73080	94850	8	0.5	26	0.5	0.25	30.1	33	2.5	184	2490	23	0.6	87	1070	0.7	5
94850	73180	94850	55	4	12	0.5	0.25	39.1	46	2.5	49	2040	6	5	56	159	3.5	40
94850	73280	94850	22	3	15	0.5	0.25	57	40	2.5	29	1580	7	1.3	61	52	1.5	20
94850	73380	94850	31	0.5	13	0.5	0.25	36.2	29	2.5	117	330	7	1.5	55	288	4.4	5
94850	73480	94850	44	1	33	0.5	0.25	40.9	90	2.5	145	3750	14	0.8	159	240	0.7	5
94850	73580	94850	20	1	25	0.5	0.25	29.8	69	2.5	112	90	2.5	0.6	111	184	0.8	5
94850	73680	94850	10	0.5	32	0.5	0.25	34.2	39	5	256	1170	2.5	0.7	99	1080	0.2	5
94850	73780	94850	31	2	106	0.5	0.25	26.3	243	2.5	164	1050	2.5	1.1	421	1320	0.6	5
94850	73880	94850	22	0.5	30	0.5	0.25	35.2	71	2.5	196	740	2.5	1.3	127	507	1.3	5
94850	73980	94850	23	0.5	24	0.5	0.25	37.7	65	2.5	142	240	2.5	0.7	111	289	0.9	5
94850	74080	94850	39	2	25	0.5	0.25	53.7	66	2.5	109	1620	5	2.1	112	154	3	5
94850	74180	94850	11	0.5	43	0.5	0.25	36.7	86	2.5	184	90	2.5	0.8	174	336	0.6	5
94850	74280	94850	21	0.5	33	0.5	0.25	44.7	94	2.5	161	1050	2.5	1.1	160	259	1.2	5
94850	74380	94850	20	0.5	31	0.5	0.25	48.6	67	2.5	163	140	2.5	1.2	131	341	1.1	5
94500	72480	94500	41	4	224	0.5	0.25	9.5	288	16	203	2260	9	0.9	644	4190	0.4	5
94500	72580	94500	15	1	29	0.5	0.25	38.8	55	2.5	84	410	6	0.25	112	131	1.2	5
94500	72680	94500	14	1	11	0.5	0.25	40.5	25	2.5	64	910	6	0.6	44	66	1	5
94500	72780	94500	8	0.5	21	0.5	0.25	27.2	24	2.5	74	1050	8	0.25	55	111	0.5	5
94500	72880	94500	10	0.5	11	0.5	0.25	16.1	15	5	228	100	2.5	0.25	32	261	0.2	5
94500	72980	94500	14	0.5	19	0.5	0.25	30.8	31	2.5	182	5730	5	0.25	73	841	1.6	5
94500	73080	94500	13	0.5	15	1	0.25	14.7	21	6	244	340	2.5	0.25	49	795	0.3	5
94500	73180	94500	27	3	68	0.5	0.25	18.2	96	2.5	51	1040	2.5	0.25	203	316	0.4	20
94500	73280	94500	84	11	13	0.5	0.25	37.8	35	2.5	25	1290	11	4.1	54	140	13.2	40
94500	73380	94500	14	3	25	0.5	0.25	65.3	65	2.5	51	390	11	0.7	103	51	1.1	20
94500	73480	94500	6	0.5	114	0.5	0.25	22.6	71	6	474	880	2.5	0.25	217	2520	0.1	5
94500	73580	94500	11	3	23	0.5	0.25	21.4	36	2.5	39	180	27	0.25	76	58	0.5	30
94500	73680	94500	13	0.5	11	0.5	0.25	31.6	20	8	349	4360	5	0.6	45	931	0.3	5
94500	73780	94500	25	0.5	11	0.5	0.25	26.5	31	2.5	190	1260	2.5	1	53	205	1	5
94500	73880	94500	20	0.5	14	0.5	0.25	23.7	31	2.5	178	1760	6	0.6	57	238	1.4	5
94500	73980	94500	35	2	10	0.5	0.25	49.8	35	2.5	122	2170	12	2.1	46	213	1.2	10
94500	74080	94500	44	0.5	30	0.5	0.25	30.7	74	6	157	1680	5	1.1	133	461	1	5
94500	74180	94500	7	0.5	63	0.5	0.25	34.9	52	6	272	550	16	0.7	157	902	0.3	5
94500	74280	94500	23	0.5	36	0.5	0.25	48.1	83	2.5	184	360	2.5	0.7	154	364	0.7	5
94500	74380	94500	15	0.5	42	0.5	0.25	30.7	81	6	165	340	2.5	0.6	171	308	0.3	5
93750	71980	93750	23	1	29	0.5	0.25	20.5	69	2.5	277	210	2.5	0.7	119	2600	0.4	5
93750	72080	93750	31	1	20	0.5	0.25	25.4	61	2.5	224	620	2.5	1	95	1640	0.7	5
93750	72180	93750	22	1	27	0.5	0.25	14.4	50	2.5	309	910	2.5	0.25	100	3790	0.4	5
93750	72280	93750	7	1	46	0.5	0.25	33.1	67	2.5	524	17700	5	0.6	137	15600	0.8	20
93750	72380	93750	144	7	18	0.5	0.25	24.2	41	2.5	76	9710	7	3.9	71	1340	4	60
93750	72480	93750	65	3	32	0.5	0.25	46.2	84	2.5	157	960	2.5	2.5	131	2180	3.2	20
93750	72580	93750	27	2	150	0.5	0.25	31.8	249	2.5	377	7120	2.5	0.5	486	16200	0.4	20
93750	72680	93750	93	3	16	0.5	0.25	49.5	44	2.5	144	3740	6	2.7	65	1170	3.5	20
93750	72780	93750	29	0.5	11	0.5	0.25	41.4	27	2.5	211	280	2.5	0.25	48	697	0.5	5
93750	72880	93750	13	0.5	13	0.5	0.25	33.8	28	2.5	229	230	2.5	0.25	52	311	0.6	5
93750	72980	93750	14	0.5	115	0.5	0.25	23.8	88	2.5	452	1270	2.5	0.25	249	18500	0.2	5
93750	73180	93750	36	0.5	14	0.5	0.25	18.6	19	8	258	2450	6	0.8	49	613	0.7	5
93750	73380	93750	10	0.5	5	0.5	0.25	31.7	4	2.5	309	250	2.5	0.25	13	1280	0.2	5
93750	73480	93750	228	2	80	0.5	0.25	21.8	112	13	100	28900	44	2.2	278	3280	1.2	5
93750	73580	93750	21	0.5	27	0.5	0.25	27.5	41	2.5	201	5970	2.5	0.25	91	595	0.2	5
93750	73680	93750	15	0.5	13	0.5	0.25	27.2	21	2.5	96	390	2.5	0.25	44	107	1.3	5

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
94850	72980	94850	0.5	30	0.5	75	0.5	29	26	0.5	3060	0.5	3	5	19.5	61	0.25	12	0.5
94850	73080	94850	0.5	15	0.5	67	0.5	18	23	0.5	1800	0.5	3	5	8.6	13	0.25	22	0.5
94850	73180	94850	0.5	13	0.5	157	0.5	16	12	0.5	1210	0.5	2	5	17.9	765	0.25	5	0.5
94850	73280	94850	0.5	13	0.5	166	0.5	25	14	0.5	1310	0.5	2	5	7.8	293	0.25	4	0.5
94850	73380	94850	0.5	11	0.5	79	0.5	12	12	0.5	1420	0.5	2	5	8.3	114	0.25	6	0.5
94850	73480	94850	0.5	32	0.5	63	0.5	18	33	0.5	2660	0.5	4	5	15.8	55	0.25	13	0.5
94850	73580	94850	0.5	22	0.5	125	0.5	12	24	0.5	2820	0.5	3	5	10.3	59	0.25	9	0.5
94850	73680	94850	0.5	17	0.5	65	0.5	16	26	0.5	1670	0.5	4	5	10.5	15	0.25	40	0.5
94850	73780	94850	0.5	85	0.5	55	0.5	38	95	0.5	1080	0.5	14	5	25.8	248	0.25	46	0.5
94850	73880	94850	0.5	25	0.5	118	0.5	18	28	0.5	2040	0.5	4	5	15.3	108	0.25	10	0.5
94850	73980	94850	0.5	23	0.5	84	0.5	16	24	0.5	2080	0.5	3	5	16.1	47	0.25	14	0.5
94850	74080	94850	0.5	23	0.5	135	0.5	19	24	0.5	1740	0.5	3	5	13.7	93	0.25	13	0.5
94850	74180	94850	0.5	33	0.5	69	0.5	17	40	0.5	2540	0.5	5	5	11.2	17	0.25	19	0.5
94850	74280	94850	0.5	33	0.5	91	0.5	14	34	0.5	2320	0.5	4	5	15	38	0.25	16	0.5
94850	74380	94850	0.5	26	0.5	97	0.5	18	30	0.5	2490	0.5	4	5	11.3	30	0.25	20	0.5
94500	72480	94500	0.5	118	0.5	69	2	97	168	0.5	2900	0.5	32	5	35.7	76	0.9	208	1
94500	72580	94500	0.5	21	0.5	120	0.5	17	26	0.5	2400	0.5	4	5	7.4	14	0.25	8	0.5
94500	72680	94500	0.5	9	0.5	121	0.5	12	10	0.5	2380	0.5	1	5	8.7	124	0.25	4	0.5
94500	72780	94500	0.5	10	0.5	94	0.5	17	16	0.5	3970	0.5	3	5	3.2	1.5	0.25	4	0.5
94500	72880	94500	0.5	6	0.5	48	0.5	11	9	0.5	2830	0.5	1	5	5	7	0.25	11	0.5
94500	72980	94500	0.5	13	0.5	64	0.5	19	17	0.5	1690	0.5	2	5	5.6	16	0.25	7	0.5
94500	73080	94500	0.5	9	0.5	13	0.5	11	13	0.5	2000	0.5	2	5	5.7	23	0.25	9	0.5
94500	73180	94500	0.5	40	0.5	140	0.5	105	56	0.5	1370	0.5	11	5	22.6	47	0.25	16	0.5
94500	73280	94500	0.5	12	0.5	138	0.5	42	13	0.5	430	0.5	2	5	12.8	642	0.25	8	1
94500	73380	94500	0.5	21	0.5	179	0.5	32	24	0.5	1970	0.5	3	5	6.6	182	0.25	6	0.5
94500	73480	94500	0.5	35	0.5	31	0.5	36	72	0.5	2190	0.5	16	5	10.8	5	0.25	163	0.5
94500	73580	94500	0.5	15	0.5	135	0.5	39	22	0.5	440	0.5	3	5	5.5	63	0.25	7	0.5
94500	73680	94500	0.5	9	0.5	27	0.5	11	11	0.5	2210	0.5	1	5	6.5	16	0.25	15	0.5
94500	73780	94500	0.5	11	0.5	106	0.5	12	11	0.5	2780	0.5	1	5	9.8	24	0.25	12	0.5
94500	73880	94500	0.5	11	0.5	97	0.5	11	13	0.5	2390	0.5	2	5	5.9	18	0.25	4	0.5
94500	73980	94500	0.5	10	0.5	131	0.5	15	10	0.5	1780	0.5	1	5	13.6	409	0.25	5	0.5
94500	74080	94500	0.5	27	0.5	66	0.5	21	29	0.5	1440	0.5	4	5	15.1	200	0.25	22	0.5
94500	74180	94500	0.5	26	0.5	40	0.5	17	47	0.5	2360	0.5	8	5	7.9	6	0.25	333	0.5
94500	74280	94500	0.5	30	0.5	73	0.5	17	34	0.5	1970	0.5	4	5	12	49	0.25	17	0.5
94500	74380	94500	0.5	31	0.5	57	0.5	20	39	0.5	1700	0.5	5	5	12.6	47	0.25	25	0.5
93750	71980	93750	0.5	25	0.5	46	0.5	26	28	0.5	900	0.5	4	5	13.2	166	0.25	7	0.5
93750	72080	93750	0.5	20	0.5	41	0.5	20	20	0.5	1300	0.5	3	5	14.5	182	0.25	8	1
93750	72180	93750	0.5	20	0.5	57	0.5	30	24	0.5	1200	0.5	4	5	12.8	89	0.25	7	1
93750	72280	93750	0.5	28	0.5	29	0.5	71	38	0.5	1910	0.5	8	5	30.8	11	0.25	34	2
93750	72380	93750	0.5	15	0.5	86	0.5	40	17	0.5	1230	0.5	3	5	24.3	870	0.25	10	2
93750	72480	93750	0.5	27	0.5	95	0.5	35	30	0.5	840	0.5	4	5	7.2	454	0.25	9	2
93750	72580	93750	0.5	93	0.5	27	0.5	41	120	0.5	1110	0.5	21	5	12.1	15	0.25	95	0.5
93750	72680	93750	0.5	14	0.5	82	0.5	32	15	0.5	790	0.5	2	5	7.3	598	0.25	6	2
93750	72780	93750	0.5	10	0.5	22	0.5	16	11	0.5	1700	0.5	1	5	7.2	65	0.25	7	0.5
93750	72880	93750	0.5	10	0.5	42	0.5	23	13	0.5	2290	0.5	2	5	8.3	11	0.25	4	0.5
93750	72980	93750	0.5	42	0.5	31	0.5	40	78	0.5	950	0.5	17	5	11.4	14	0.25	143	1
93750	73180	93750	0.5	9	0.5	62	0.5	20	12	0.5	1060	0.5	2	5	16.5	163	0.25	13	0.5
93750	73380	93750	0.5	2	0.5	73	0.5	11	4	0.5	1450	0.5	0.5	5	2.6	13	0.25	58	0.5
93750	73480	93750	0.5	51	0.5	48	2	119	71	0.5	1490	0.5	12	5	19.1	271	0.9	171	0.5
93750	73580	93750	0.5	17	0.5	30	0.5	20	23	0.5	2890	0.5	4	5	12	17	0.25	24	0.5
93750	73680	93750	0.5	8	0.5	90	0.5	19	11	0.5	2950	0.5	2	5	4.2	20	0.25	4	0.5

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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
94850	72980	94850	67	5	60	121
94850	73080	94850	108	8	20	50
94850	73180	94850	41	3	30	132
94850	73280	94850	54	4	20	62
94850	73380	94850	56	4	80	64
94850	73480	94850	120	9	30	78
94850	73580	94850	88	6	10	56
94850	73680	94850	141	11	10	65
94850	73780	94850	489	30	30	94
94850	73880	94850	111	8	10	71
94850	73980	94850	84	6	10	108
94850	74080	94850	99	8	10	95
94850	74180	94850	151	10	10	83
94850	74280	94850	113	8	10	86
94850	74380	94850	110	8	20	70
94500	72480	94500	1340	163	150	303
94500	72580	94500	104	6	30	40
94500	72680	94500	36	2	70	43
94500	72780	94500	76	5	30	18
94500	72880	94500	47	3	40	25
94500	72980	94500	74	6	160	31
94500	73080	94500	64	4	80	32
94500	73180	94500	362	26	10	81
94500	73280	94500	54	5	70	119
94500	73380	94500	92	6	30	56
94500	73480	94500	557	56	10	40
94500	73580	94500	90	7	10	44
94500	73680	94500	39	3	10	33
94500	73780	94500	39	3	10	48
94500	73880	94500	57	4	90	24
94500	73980	94500	38	3	30	87
94500	74080	94500	110	9	10	92
94500	74180	94500	269	22	10	38
94500	74280	94500	138	10	10	58
94500	74380	94500	165	13	10	71
93750	71980	93750	108	8	30	57
93750	72080	93750	70	5	130	68
93750	72180	93750	102	8	50	53
93750	72280	93750	170	30	370	91
93750	72380	93750	75	7	160	123
93750	72480	93750	138	10	280	47
93750	72580	93750	878	68	230	34
93750	72680	93750	60	5	380	53
93750	72780	93750	40	3	160	30
93750	72880	93750	46	4	190	38
93750	72980	93750	723	86	10	52
93750	73180	93750	65	6	20	67
93750	73380	93750	25	2	10	13
93750	73480	93750	491	52	250	285
93750	73580	93750	99	7	70	43
93750	73680	93750	46	3	30	25

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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
93750	73780	93750	4	76	5	0.05	3390	0.5	330	6	103	102	50	0.9	450	10	5.5	2.9
93750	73880	93750	5	52	5	0.05	1900	0.5	250	2	89	87	50	1.5	990	30	16.6	8.9
93750	73980	93750	3	23	5	0.2	2860	0.5	270	5	68	64	50	0.25	530	14	6.6	4.2
93750	74080	93750	7	202	5	0.05	960	0.5	100	5	47	61	50	3.3	140	7	4.1	2.2
93750	74180	93750	0.5	72	5	0.3	6540	0.5	250	4	61	96	50	2.4	780	5	2.4	2
93750	74280	93750	0.5	39	5	0.05	1310	0.5	250	5	242	76	100	0.25	310	31	16.7	8
93650	71980	93650	2	148	5	0.05	3220	0.5	230	5	64	25	50	1.6	1760	11	5.5	3
93650	72080	93650	7	202	5	0.05	8760	0.5	160	22	87	207	200	3.5	1340	15	7.3	4.8
93650	72180	93650	0.5	6	5	0.05	220	0.5	110	9	2.5	252	50	0.7	50	2	1.6	0.25
93650	72280	93650	4	48	5	0.4	3080	0.5	260	3	170	34	100	0.25	1250	25	11.9	7.7
93650	72380	93650	7	30	5	0.3	2030	0.5	210	4	92	16	100	0.25	1370	16	8	5.2
93650	72480	93650	15	187	5	0.05	2930	0.5	200	13	67	242	400	2.2	840	7	3.6	2.3
93650	72580	93650	18	9	5	0.3	1900	0.5	210	14	53	186	50	0.25	2600	11	6.3	3.3
93650	72680	93650	22	12	5	0.9	1150	0.5	140	10	67	243	50	0.25	1810	11	5.8	3.5
93650	72780	93650	11	9	5	0.1	1010	0.5	120	8	58	295	50	0.25	1540	11	6.3	3.3
93650	72880	93650	13	148	5	0.05	1260	0.5	100	18	60	354	300	2.1	340	8	4.1	2.2
1	72557	96069	21	8	5	0.2	4020	0.5	250	4	16	38	50	0.5	4750	39	19.4	11.9
1	72655	96051	13	5	5	0.1	1190	0.5	180	5	60	7	50	0.25	1890	27	15.1	7.6
1	72754	96033	18	6	5	0.5	1950	0.5	240	4	40	77	100	0.25	3630	82	55.5	14.7
1	72852	96014	4	8	5	0.8	3060	0.5	190	1	17	5	50	0.25	1730	19	10	5.1
1	72951	95996	5	12	5	1.1	3400	0.5	240	1	45	14	50	0.25	2090	35	19.8	9.3
1	73049	95978	20	119	5	0.05	1610	0.5	140	5	54	48	50	3.1	340	7	3.7	2.5
1	73148	95960	18	108	5	0.1	6240	0.5	400	3	66	46	50	1.8	2360	7	3.6	1.7
1	73246	95942	12	193	5	0.05	3030	0.5	160	6	61	128	50	4.8	1620	8	3.8	2.1
1	73345	95924	4	143	5	0.05	2850	0.5	150	4	263	62	50	3.4	420	29	16.2	9.5
1	73443	95906	80	131	10	0.1	6650	0.5	190	4	139	85	50	3.8	5110	13	6.3	4
1	73542	95887	3	33	5	0.05	2810	0.5	170	7	148	114	300	1.5	440	12	6.1	2.9
1	73640	95869	4	11	5	0.1	3120	0.5	310	2	292	13	50	0.25	1010	99	58.8	27.1
1	73739	95851	2	77	5	0.05	5610	0.5	340	3	130	31	50	1.5	260	18	9.6	4.7
1	73837	95833	1	71	5	0.05	11600	0.5	240	2	123	25	50	1.2	610	28	13	8.3
1	73936	95815	1	50	5	0.05	4340	0.5	210	3	313	18	50	0.6	610	36	17.3	10.7
1	74035	95797	0.5	48	5	0.2	3310	0.5	210	4	283	22	50	0.7	690	38	17.5	11.3
1	74133	95779	0.5	100	5	0.1	11100	0.5	200	3	260	45	50	2.4	1040	29	13.7	8.8
1	74232	95760	1	99	5	0.05	17400	0.5	540	3	165	22	50	2.6	160	29	15.5	6.6
1	74330	95742	2	155	5	0.05	5910	0.5	160	3	150	25	50	3.5	260	13	6.7	4.5
2	73625	95543	3	8	5	0.1	1930	0.5	210	2	156	9	50	0.25	1100	52	26.4	14.1
2	73720	95512	2	48	5	0.1	7100	0.5	190	6	156	59	50	0.6	1890	26	12.6	7.5
2	73816	95481	4	108	5	0.05	7310	0.5	170	3	167	55	50	2.3	780	13	6.1	4.2
2	73912	95450	4	151	5	0.05	4200	0.5	140	5	283	31	50	5.7	850	52	24.9	12.9
2	74008	95418	2	23	5	0.3	3390	0.5	200	0.5	182	12	50	0.25	630	25	12.1	7.1
2	74103	95387	7	26	5	0.05	1830	0.5	240	10	640	233	50	0.7	1430	115	77.7	29.4
2	74199	95356	5	16	20	0.05	1360	0.5	170	7	1260	344	100	1.2	1700	123	83.8	29.2
2	74295	95325	0.5	119	5	0.05	3960	0.5	130	2	1050	39	50	2.4	820	94	45.5	27.4
2	74390	95294	0.5	197	5	0.1	9420	0.5	120	2	227	33	50	5	410	22	9.5	6.6
2	74486	95263	0.5	99	5	0.4	9150	0.5	400	2	301	30	50	1.6	120	37	18	9.4
3	73168	95440	39	101	5	1	5420	0.5	320	4	29	80	50	2.2	2710	6	3.5	1.7
3	73260	95396	52	71	5	0.9	7250	0.5	410	4	12	21	50	3.4	1130	0.5	0.25	0.25
3	73353	95353	22	139	5	0.2	5070	0.5	320	7	27	72	50	6	2140	4	2	1
3	73446	95310	67	125	5	0.2	3330	0.5	380	11	29	31	50	4.1	1300	4	2.3	0.9
3	73539	95266	21	104	5	0.05	5820	0.5	220	3	84	68	50	3.8	1490	7	3.9	1.9
3	73631	95223	10	74	5	0.05	8180	0.5	180	3	80	143	100	2.5	1590	8	4.1	2.6

Murray Property
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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Fe</u>	<u>Ga</u>	<u>Gd</u>	<u>Hg</u>	<u>In</u>	<u>K</u>	<u>La</u>	<u>Li</u>	<u>Mg</u>	<u>Mn</u>	<u>Mo</u>	<u>Nb</u>	<u>Nd</u>	<u>Ni</u>	<u>P</u>	<u>Pb</u>
93750	73780	93750	17	0.5	12	0.5	0.25	32.3	22	2.5	102	3850	2.5	0.9	43	146	1.3	5
93750	73880	93750	32	1	42	0.5	0.25	49.8	68	2.5	153	920	2.5	0.5	157	1940	0.5	5
93750	73980	93750	19	0.5	20	0.5	0.25	40.5	48	2.5	140	1280	2.5	0.6	88	255	1	5
93750	74080	93750	92	19	7	0.5	0.25	32.2	20	2.5	13	3980	11	4.4	29	113	9.5	60
93750	74180	93750	19	0.5	6	0.5	0.25	55.1	26	2.5	82	150	6	2.3	30	40	0.9	10
93750	74280	93750	76	2	40	0.5	0.25	58.6	158	2.5	197	1810	2.5	2.9	214	254	1.3	5
93650	71980	93650	21	3	10	0.5	0.25	47.2	27	2.5	35	2380	2.5	0.25	33	47	0.5	70
93650	72080	93650	76	7	14	0.5	0.25	26.1	32	2.5	35	4940	9	1.9	40	1170	4.5	80
93650	72180	93650	5	0.5	2	0.5	0.25	103	0.5	2.5	465	7750	2.5	0.25	3	21300	0.9	5
93650	72280	93650	22	1	34	0.5	0.25	18.2	83	2.5	278	940	2.5	0.6	139	846	0.5	5
93650	72380	93650	28	0.5	23	0.5	0.25	38.4	55	2.5	248	740	2.5	0.7	98	1300	0.8	5
93650	72480	93650	124	7	8	0.5	0.25	73.9	27	2.5	94	6180	10	5	32	1100	6.8	50
93650	72580	93650	18	0.5	15	0.5	0.25	31.6	24	6	305	5420	2.5	0.9	56	1950	1.1	5
93650	72680	93650	22	0.5	17	0.5	0.25	35.6	36	2.5	324	10100	7	0.9	73	2480	0.8	5
93650	72780	93650	19	0.5	16	0.5	0.25	27	27	2.5	356	8500	2.5	0.8	61	3730	0.7	5
93650	72880	93650	142	9	9	0.5	0.25	26.2	21	2.5	120	7140	2.5	4.1	34	2980	10.7	50
1	72557	96069	11	56	59	0.5	0.25	35.3	79	6	237	620	9	0.6	187	2000	0.3	5
1	72655	96051	15	16	37	0.5	0.25	30	44	6	331	220	9	0.7	114	1970	0.4	5
1	72754	96033	11	27	84	2	0.25	30.4	48	7	441	3500	10	0.8	151	2060	0.2	5
1	72852	96014	13	41	27	2	0.25	33.7	42	2.5	211	100	7	0.25	92	412	0.4	5
1	72951	95996	24	46	49	0.5	0.25	39	76	2.5	216	110	7	0.6	162	730	0.6	5
1	73049	95978	44	29	9	0.5	0.25	38.4	25	2.5	26	1430	16	2.3	34	151	3.6	30
1	73148	95960	27	81	8	0.5	0.25	35.9	28	2.5	181	540	2.5	0.8	29	228	0.7	30
1	73246	95942	87	45	8	0.5	0.25	22.6	28	2.5	56	2410	6	2.2	29	525	4.1	40
1	73345	95924	44	44	43	0.5	0.25	53	105	2.5	42	2820	8	2.2	187	168	3	40
1	73443	95906	49	92	17	1	0.25	62	66	2.5	59	340	12	2.6	71	322	2	40
1	73542	95887	20	37	13	0.5	0.25	12.5	25	2.5	610	1380	2.5	0.25	45	10500	0.6	5
1	73640	95869	26	40	146	0.5	0.25	50.3	205	2.5	173	730	12	1	515	666	0.8	5
1	73739	95851	31	72	24	0.5	0.25	61.3	65	2.5	122	650	2.5	2.6	96	194	2.9	10
1	73837	95833	20	149	40	0.5	0.25	49	101	2.5	90	480	2.5	1.3	161	88	0.7	10
1	73936	95815	37	59	53	0.5	0.25	36.8	159	2.5	135	350	2.5	1.8	234	275	1.4	5
1	74035	95797	32	44	56	0.5	0.25	37.1	161	2.5	145	920	11	1.2	243	292	1.2	5
1	74133	95779	36	144	42	0.5	0.25	14	131	2.5	73	640	2.5	2.7	173	91	1.3	20
1	74232	95760	22	222	29	0.5	0.25	46.6	78	2.5	137	880	6	1.2	94	66	0.4	20
1	74330	95742	44	85	17	0.5	0.25	35.2	61	2.5	24	670	2.5	2.6	67	58	2	40
2	73625	95543	20	25	73	0.5	0.25	37.8	166	5	177	470	2.5	0.8	285	750	0.5	5
2	73720	95512	24	94	38	0.5	0.25	48.3	106	2.5	124	600	2.5	1.5	158	436	1.3	10
2	73816	95481	40	97	19	0.5	0.25	42.3	75	2.5	59	400	5	4.1	80	99	2.4	50
2	73912	95450	66	61	58	0.5	0.25	42.3	155	2.5	52	650	2.5	4.3	201	197	2.5	90
2	74008	95418	29	45	36	0.5	0.25	33.5	104	2.5	153	400	2.5	1.1	155	304	0.9	5
2	74103	95387	91	25	159	0.5	0.25	53.1	316	11	155	13000	6	1.7	635	1330	0.9	5
2	74199	95356	149	19	157	0.5	0.25	31.4	322	10	73	16600	8	7.5	618	807	2.5	5
2	74295	95325	38	58	125	0.5	0.25	40.8	295	2.5	39	670	2.5	1.7	487	281	0.9	40
2	74390	95294	58	137	26	0.5	0.25	52.4	108	2.5	23	930	2.5	4.3	106	127	3.2	60
2	74486	95263	22	119	42	0.5	0.25	18.6	107	2.5	98	1010	2.5	2.1	144	76	0.8	10
3	73168	95440	32	71	8	0.5	0.25	47.4	21	2.5	130	470	72	1.6	28	475	2.5	30
3	73260	95396	21	94	1	0.5	0.25	125	4	2.5	115	160	134	1.3	4	285	1.3	10
3	73353	95353	29	69	4	2	0.25	23.4	11	2.5	73	540	52	0.8	12	242	1.6	20
3	73446	95310	27	45	4	1	0.25	30.8	10	2.5	99	5240	15	0.7	13	223	1.2	10
3	73539	95266	39	81	9	0.5	0.25	54	33	2.5	94	1240	9	5.2	41	343	3.9	70
3	73631	95223	24	108	11	0.5	0.25	15.3	35	2.5	258	340	8	1	43	809	0.8	40

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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
93750	73780	93750	0.5	8	0.5	106	0.5	26	11	0.5	3130	0.5	2	5	9.6	14	0.25	9	0.5
93750	73880	93750	0.5	28	0.5	110	0.5	28	38	0.5	1620	0.5	5	5	10	46	0.25	14	0.5
93750	73980	93750	0.5	17	0.5	84	0.5	14	19	0.5	2240	0.5	2	5	12.2	38	0.25	15	0.5
93750	74080	93750	0.5	6	0.5	161	0.5	36	7	0.5	600	0.5	1	5	13.9	943	0.25	8	0.5
93750	74180	93750	0.5	7	0.5	199	0.5	11	6	0.5	2670	0.5	0.5	5	15.2	142	0.25	6	0.5
93750	74280	93750	0.5	48	0.5	130	0.5	30	41	0.5	1760	0.5	5	5	37	184	0.25	36	0.5
93650	71980	93650	0.5	7	0.5	113	0.5	32	8	0.5	1520	0.5	2	5	6.4	89	0.25	3	0.5
93650	72080	93650	0.5	9	0.5	164	0.5	44	11	0.5	480	0.5	2	5	9.9	629	0.5	10	1
93650	72180	93650	0.5	0.5	0.5	107	0.5	27	1	0.5	330	0.5	0.5	5	0.5	8	0.25	12	0.5
93650	72280	93650	0.5	28	0.5	56	0.5	32	31	0.5	2130	0.5	4	5	14.6	28	0.25	7	0.5
93650	72380	93650	0.5	20	0.5	19	0.5	21	22	0.5	1380	0.5	3	5	12.7	84	0.25	9	1
93650	72480	93650	0.5	7	0.5	127	0.5	42	7	0.5	800	0.5	1	5	10	991	0.25	6	2
93650	72580	93650	0.5	11	0.5	17	0.5	16	14	0.5	980	0.5	2	5	8.4	41	0.25	16	2
93650	72680	93650	0.5	14	0.5	11	0.5	15	16	0.5	760	0.5	2	5	8.3	72	0.25	8	2
93650	72780	93650	0.5	11	0.5	16	0.5	17	14	0.5	660	0.5	2	5	8.9	51	0.25	10	1
93650	72880	93650	0.5	7	0.5	104	0.5	40	8	0.5	490	0.5	1	5	8.3	1090	0.25	5	1
1	72557	96069	0.5	34	0.5	88	0.5	14	49	0.5	1940	0.5	8	5	7.9	16	0.25	36	0.5
1	72655	96051	0.5	20	0.5	62	0.5	15	30	0.5	1170	0.5	5	5	12.4	18	0.25	27	0.5
1	72754	96033	0.5	24	0.5	73	0.5	33	52	0.5	1450	0.5	13	5	14	100	0.25	83	1
1	72852	96014	0.5	17	0.5	73	0.5	14	23	0.5	1710	0.5	4	5	9.7	19	0.25	16	0.5
1	72951	95996	0.5	29	0.5	64	0.5	18	39	0.5	2310	0.5	6	5	13.2	121	0.25	19	0.5
1	73049	95978	0.5	8	0.5	234	0.5	21	8	0.5	470	0.5	1	5	9.7	462	0.25	6	0.5
1	73148	95960	0.5	7	0.5	97	0.5	12	7	0.5	4510	0.5	1	5	5.4	24	0.25	4	0.5
1	73246	95942	0.5	7	0.5	139	0.5	22	7	0.5	1090	0.5	1	5	9.9	385	0.25	6	1
1	73345	95924	1	39	0.5	224	0.5	55	40	0.5	1020	0.5	5	5	19.5	486	0.25	8	0.5
1	73443	95906	0.5	17	0.5	175	0.5	25	16	0.5	1560	0.5	2	5	19.4	600	0.25	9	3
1	73542	95887	0.5	9	0.5	71	0.5	50	12	0.5	1560	0.5	2	5	11	14	0.25	8	0.5
1	73640	95869	0.5	95	0.5	203	0.5	44	126	0.5	2450	0.5	19	5	43.9	23	0.25	158	1
1	73739	95851	0.5	21	0.5	301	0.5	23	21	0.5	3460	0.5	3	5	14.1	93	0.25	19	0.5
1	73837	95833	0.5	33	0.5	216	0.5	28	37	0.5	3230	0.5	6	5	25	206	0.25	13	0.5
1	73936	95815	0.5	52	0.5	124	0.5	28	50	0.5	2280	0.5	7	5	28.4	153	0.25	18	0.5
1	74035	95797	0.5	52	0.5	109	0.5	27	51	0.5	2170	0.5	8	5	29.5	107	0.25	19	0.5
1	74133	95779	0.5	38	0.5	137	0.5	28	38	0.5	3000	0.5	6	5	26.4	529	0.25	10	0.5
1	74232	95760	0.5	21	0.5	183	0.5	59	23	0.5	8860	0.5	5	5	10.7	23	0.25	15	0.5
1	74330	95742	0.5	16	0.5	243	0.5	30	15	0.5	1360	0.5	2	5	17.8	456	0.25	8	0.5
2	73625	95543	0.5	60	0.5	73	0.5	34	65	0.5	1820	0.5	10	5	29.3	52	0.25	65	0.5
2	73720	95512	0.5	34	0.5	136	0.5	23	34	0.5	2710	0.5	5	5	21.7	142	0.25	13	0.5
2	73816	95481	0.5	19	0.5	199	0.5	27	17	0.5	1890	0.5	3	5	22	694	0.25	9	0.5
2	73912	95450	1	45	0.5	230	0.5	66	50	0.5	1120	0.5	9	5	32.9	537	0.25	22	0.5
2	74008	95418	0.5	33	0.5	94	0.5	23	33	0.5	2060	0.5	5	5	23.9	114	0.25	17	0.5
2	74103	95387	1	124	0.5	275	0.5	72	142	0.5	1890	0.5	21	5	43.7	89	0.25	136	1
2	74199	95356	2	125	0.5	249	0.5	89	141	0.5	1130	0.5	22	5	81.3	585	0.25	145	3
2	74295	95325	2	104	0.5	215	0.5	102	118	0.5	1360	0.5	18	5	42.9	312	0.25	24	0.5
2	74390	95294	1	26	0.5	272	0.5	36	24	0.5	1000	0.5	4	5	36.7	1040	0.25	10	0.5
2	74486	95263	1	32	0.5	142	0.5	77	35	0.5	6540	0.5	7	5	27.4	34	0.25	23	0.5
3	73168	95440	0.5	6	0.5	121	0.5	10	7	0.5	2710	0.5	1	5	4.4	46	0.25	5	0.5
3	73260	95396	0.5	1	0.5	143	0.5	2.5	1	0.5	3590	0.5	0.5	5	4	22	0.25	4	0.5
3	73353	95353	0.5	3	0.5	107	0.5	14	3	0.5	2870	0.5	0.5	5	4.5	58	0.25	4	0.5
3	73446	95310	0.5	3	0.5	106	0.5	18	3	0.5	3120	0.5	0.5	5	3.5	17	0.25	6	0.5
3	73539	95266	0.5	9	0.5	182	0.5	16	9	0.5	2290	0.5	1	5	14.5	439	0.25	8	0.5
3	73631	95223	0.5	9	0.5	116	0.5	17	9	0.5	2490	0.5	2	5	9.7	49	0.25	5	0.5

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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
93750	73780	93750	52	4	510	61
93750	73880	93750	184	14	1020	46
93750	73980	93750	69	5	30	62
93750	74080	93750	35	4	190	132
93750	74180	93750	24	2	10	67
93750	74280	93750	176	14	20	130
93650	71980	93650	55	4	80	40
93650	72080	93650	71	5	570	69
93650	72180	93650	13	1	450	2.5
93650	72280	93650	129	9	60	59
93650	72380	93650	87	6	180	52
93650	72480	93650	32	3	550	78
93650	72580	93650	64	5	170	37
93650	72680	93650	69	5	30	32
93650	72780	93650	73	5	30	33
93650	72880	93650	38	3	650	57
1	72557	96069	226	16	10	26
1	72655	96051	169	14	40	34
1	72754	96033	439	51	10	49
1	72852	96014	116	8	10	41
1	72951	95996	222	17	10	53
1	73049	95978	34	3	70	84
1	73148	95960	40	3	20	25
1	73246	95942	38	3	110	60
1	73345	95924	176	13	40	168
1	73443	95906	63	5	50	102
1	73542	95887	63	5	60	35
1	73640	95869	637	50	20	155
1	73739	95851	107	8	60	86
1	73837	95833	140	10	30	125
1	73936	95815	188	13	30	137
1	74035	95797	199	13	130	127
1	74133	95779	155	10	40	142
1	74232	95760	170	11	60	108
1	74330	95742	72	5	40	145
2	73625	95543	277	21	10	107
2	73720	95512	130	10	60	106
2	73816	95481	65	5	30	137
2	73912	95450	274	19	10	216
2	74008	95418	129	9	10	138
2	74103	95387	807	74	50	167
2	74199	95356	846	84	50	339
2	74295	95325	434	35	20	263
2	74390	95294	101	7	30	213
2	74486	95263	194	13	10	188
3	73168	95440	37	3	60	22
3	73260	95396	2.5	0.5	30	17
3	73353	95353	20	2	80	34
3	73446	95310	26	2	310	26
3	73539	95266	40	3	40	124
3	73631	95223	46	3	20	45

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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Aq</u>	<u>Al</u>	<u>As</u>	<u>Au</u>	<u>Ba</u>	<u>Bi</u>	<u>Ca</u>	<u>Cd</u>	<u>Ce</u>	<u>Co</u>	<u>Cr</u>	<u>Cs</u>	<u>Cu</u>	<u>Dy</u>	<u>Er</u>	<u>Eu</u>
3	73724	95179	15	81	5	0.2	2890	0.5	160	2	48	87	50	3.1	1590	3	1.7	1.3
3	73817	95136	16	206	5	0.05	2600	0.5	110	6	168	124	100	3.1	910	16	7.7	4.7
3	73909	95093	2	53	5	0.1	8650	0.5	160	3	185	54	100	0.8	1970	38	19.2	10.7
3	74002	95049	6	180	5	0.05	2660	0.5	130	4	123	44	50	5	960	14	7.3	4.5
3	74095	95006	2	39	5	0.1	5340	0.5	230	1	203	36	50	0.25	590	27	12.9	8.1
3	74187	94963	0.5	38	5	0.2	4440	0.5	250	2	134	48	50	0.25	430	20	9.3	6.2
3	74280	94919	0.5	39	5	0.3	8470	0.5	220	1	155	72	50	1	500	9	4.1	3
3	74373	94876	2	16	5	0.3	2230	0.5	220	2	101	17	50	0.25	310	23	12	6.4
3	74466	94833	0.5	29	5	0.05	5140	0.5	260	2	90	23	50	0.7	530	33	16.9	9.8
3	74558	94789	0.5	150	5	0.05	5970	0.5	190	2	131	54	50	3.3	190	13	6.2	3.9
3	74651	94746	0.5	127	5	0.05	4540	0.5	190	1	175	23	50	2.4	170	16	8.3	2.1
3	74744	94702	0.5	72	5	0.05	6970	0.5	440	2	46	21	50	1.8	130	11	6.3	2.9
4	73008	93616	33	7	5	0.1	1530	0.5	200	4	29	8	200	0.25	1920	47	29.5	9.3
4	73108	93621	9	2	5	0.4	1600	0.5	260	3	14	11	100	0.25	2340	14	8.1	3.4
4	73207	93625	12	87	5	0.05	1180	0.5	70	4	477	45	50	2.3	550	44	20.1	15.2
4	73307	93630	3	63	5	0.1	7080	0.5	160	5	225	73	50	1.3	1250	26	11.9	9.1
4	73407	93635	8	7	5	0.05	1170	0.5	170	8	63	50	50	0.6	570	14	8.4	3.4
4	73507	93640	3	66	5	0.4	4210	0.5	270	10	270	497	50	1.1	680	24	13.1	6.6
4	73606	93644	11	6	5	0.3	2240	0.5	300	4	47	132	200	0.25	1870	53	34	11.1
4	73706	93649	11	29	5	0.3	2110	0.5	340	9	81	41	100	0.25	970	98	52.7	20.4
4	73806	93654	4	26	5	0.4	2390	0.5	230	5	957	38	200	0.25	1540	153	77.7	43.8
4	73906	93659	3	52	5	0.05	2130	0.5	270	11	1730	161	200	0.25	1340	233	125	57.3
4	74006	93664	2	60	5	0.05	2150	0.5	240	5	254	29	50	0.7	200	29	14.8	8.4
4	74105	93668	1	52	5	0.6	2190	0.5	240	4	148	11	100	0.25	260	17	8.9	4.6
4	74205	93673	0.5	152	5	0.05	3880	0.5	110	3	350	36	100	3.4	370	39	19.7	11.1

Murray Property
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<u>Line</u>	<u>x</u>	<u>y</u>	<u>Fe</u>	<u>Ga</u>	<u>Gd</u>	<u>Hg</u>	<u>In</u>	<u>K</u>	<u>La</u>	<u>Li</u>	<u>Mg</u>	<u>Mn</u>	<u>Mo</u>	<u>Nb</u>	<u>Nd</u>	<u>Ni</u>	<u>P</u>	<u>Pb</u>
3	73724	95179	22	40	5	0.5	0.25	25.3	19	2.5	107	830	6	1.8	23	74	3.9	20
3	73817	95136	110	44	19	0.5	0.25	34.8	76	2.5	28	2500	13	4.3	75	274	6.7	70
3	73909	95093	38	113	55	0.5	0.25	83	159	2.5	118	480	2.5	1.9	232	432	1.4	5
3	74002	95049	70	44	17	0.5	0.25	62.5	61	2.5	22	2250	48	4	70	217	3.1	60
3	74095	95006	34	70	40	0.5	0.25	36.8	125	2.5	131	460	2.5	1.8	179	258	1.3	5
3	74187	94963	33	59	31	0.5	0.25	37.4	99	2.5	122	120	2.5	1.9	142	173	2.2	5
3	74280	94919	15	111	15	0.5	0.25	48.8	56	2.5	115	200	5	0.9	68	49	1.5	5
3	74373	94876	29	30	33	0.5	0.25	34.6	79	2.5	171	230	2.5	1.2	138	282	1.2	5
3	74466	94833	23	68	51	0.5	0.25	47.7	118	2.5	167	250	6	1.4	203	255	1.2	5
3	74558	94789	65	84	17	0.5	0.25	62.5	62	2.5	31	2700	6	3.6	72	123	4.1	30
3	74651	94746	40	65	21	0.5	0.25	43	56	2.5	37	2300	2.5	3.8	92	27	3.8	30
3	74744	94702	24	90	13	0.5	0.25	73.2	22	2.5	87	510	2.5	1.4	39	65	1.7	10
4	73008	93616	12	21	50	0.5	0.25	22.5	31	2.5	476	400	2.5	0.5	96	2710	0.2	5
4	73108	93621	7	21	18	0.5	0.25	23.2	12	5	366	250	2.5	0.25	38	1920	0.3	5
4	73207	93625	23	23	63	0.5	0.25	31.8	108	2.5	26	2320	9	0.25	226	84	0.9	40
4	73307	93630	22	95	38	0.5	0.25	22.9	82	2.5	134	700	6	0.9	141	171	0.8	10
4	73407	93635	15	15	18	0.5	0.25	28.6	20	9	366	2520	2.5	0.6	54	1930	0.7	5
4	73507	93640	126	55	33	0.5	0.25	36.6	97	2.5	97	31400	11	3.6	153	598	3.2	5
4	73606	93644	12	29	58	0.5	0.25	24.6	33	8	302	3160	2.5	1.8	102	3110	0.9	5
4	73706	93649	13	28	98	0.5	0.25	54.2	86	2.5	337	2680	6	0.7	224	3630	0.6	20
4	73806	93654	36	32	208	0.5	0.25	31.3	464	7	188	1020	2.5	0.25	758	2370	0.3	5
4	73906	93659	83	28	284	0.5	0.25	41.8	675	9	178	4050	2.5	0.5	994	3100	0.4	5
4	74006	93664	38	30	41	0.5	0.25	39.3	108	2.5	111	1400	2.5	2.2	180	389	3.3	5
4	74105	93668	36	31	24	0.5	0.25	37	72	2.5	147	280	2.5	1.3	105	299	1.5	5
4	74205	93673	93	61	52	0.5	0.25	48.9	142	2.5	47	350	2.5	6.5	215	107	2.3	50

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Pd</u>	<u>Pr</u>	<u>Pt</u>	<u>Rb</u>	<u>Sb</u>	<u>Sc</u>	<u>Sm</u>	<u>Sn</u>	<u>Sr</u>	<u>Ta</u>	<u>Tb</u>	<u>Te</u>	<u>Th</u>	<u>Ti</u>	<u>Tl</u>	<u>U</u>	<u>W</u>
3	73724	95179	0.5	5	0.5	121	0.5	9	5	0.5	1330	0.5	0.5	5	8.7	180	0.25	5	0.5
3	73817	95136	0.5	18	0.5	153	0.5	36	17	0.5	740	0.5	3	5	24.2	881	0.25	10	0.5
3	73909	95093	0.5	51	0.5	169	0.5	34	51	0.5	2000	0.5	7	5	24.5	445	0.25	14	0.5
3	74002	95049	1	17	0.5	247	0.5	27	16	0.5	760	0.5	3	5	27.2	744	0.25	11	0.5
3	74095	95006	0.5	39	0.5	67	0.5	19	38	0.5	2330	0.5	5	5	20.5	128	0.25	13	0.5
3	74187	94963	0.5	31	0.5	87	0.5	17	29	0.5	2680	0.5	4	5	19.4	71	0.25	14	0.5
3	74280	94919	0.5	15	0.5	157	0.5	11	13	0.5	3750	0.5	2	5	16.1	24	0.25	8	0.5
3	74373	94876	0.5	28	0.5	51	0.5	18	30	0.5	1820	0.5	4	5	15.3	72	0.25	18	0.5
3	74466	94833	0.5	41	0.5	129	0.5	14	45	0.5	3000	0.5	7	5	12.8	32	0.25	15	0.5
3	74558	94789	0.5	17	0.5	245	0.5	22	16	0.5	1710	0.5	2	5	16.5	732	0.25	7	0.5
3	74651	94746	1	20	0.5	275	0.5	29	20	0.5	1550	0.5	3	5	17.8	571	0.25	14	0.5
3	74744	94702	0.5	8	0.5	309	0.5	20	10	0.5	4450	0.5	2	5	5.6	34	0.25	13	0.5
4	73008	93616	0.5	16	0.5	35	0.5	29	32	0.5	1250	0.5	7	5	11.7	17	0.25	39	0.5
4	73108	93621	0.5	6	0.5	22	0.5	12	12	0.5	1110	0.5	2	5	4.6	13	0.25	38	1
4	73207	93625	0.5	45	0.5	153	0.5	75	57	0.5	440	0.5	9	5	9.9	102	0.25	12	0.5
4	73307	93630	0.5	28	0.5	125	0.5	66	33	0.5	2170	0.5	5	5	9.1	245	0.25	7	0.5
4	73407	93635	0.5	10	0.5	78	0.5	13	14	0.5	1040	0.5	2	5	10.1	19	0.25	21	0.5
4	73507	93640	0.5	33	0.5	132	0.5	47	30	0.5	2590	0.5	5	5	15.6	193	0.25	22	0.5
4	73606	93644	0.5	16	0.5	46	0.5	31	35	0.5	2610	0.5	9	5	9	53	0.25	79	1
4	73706	93649	0.5	42	0.5	32	0.5	83	69	0.5	3170	0.5	16	5	14.9	87	0.25	54	0.5
4	73806	93654	0.5	158	0.5	80	0.5	57	177	0.5	1940	0.5	29	5	45	42	0.25	85	0.5
4	73906	93659	1	215	0.5	56	0.5	166	244	0.5	2010	0.5	43	5	43.8	54	0.25	194	1
4	74006	93664	0.5	39	0.5	109	0.5	17	38	0.5	2120	0.5	5	5	12.2	176	0.25	14	0.5
4	74105	93668	0.5	23	0.5	56	0.5	17	22	0.5	2100	0.5	3	5	17.9	95	0.25	14	0.5
4	74205	93673	2	48	0.5	213	0.5	72	49	0.5	1130	0.5	7	5	51	1240	0.25	22	0.5

Murray Property
MMI Data

<u>Line</u>	<u>x</u>	<u>y</u>	<u>Yt</u>	<u>Yb</u>	<u>Zn</u>	<u>Zr</u>
3	73724	95179	17	1	20	58
3	73817	95136	79	6	60	155
3	73909	95093	202	15	40	119
3	74002	95049	71	6	30	159
3	74095	95006	136	10	30	96
3	74187	94963	100	7	10	93
3	74280	94919	47	3	10	69
3	74373	94876	129	10	10	72
3	74466	94833	194	13	20	55
3	74558	94789	69	5	50	126
3	74651	94746	87	6	30	170
3	74744	94702	63	5	10	51
4	73008	93616	280	26	10	34
4	73108	93621	92	7	10	21
4	73207	93625	213	14	50	70
4	73307	93630	138	8	70	63
4	73407	93635	94	8	40	66
4	73507	93640	132	11	550	117
4	73606	93644	292	31	20	55
4	73706	93649	339	42	30	118
4	73806	93654	880	57	120	99
4	73906	93659	1350	94	60	172
4	74006	93664	155	12	260	59
4	74105	93668	93	7	90	88
4	74205	93673	189	16	50	326

**APPENDIX II – MURRAY PROJECT, BC, An Interpretation of 2010 and
2011 MMI Results (Heberlein Geoconsulting)**



Heberlein Geoconsulting
Extracting value from geochemistry

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MURRAY PROJECT, BC

*An Interpretation of 2010 and 2011 MMI Results
For Bill Pool and Tony Bensted.*

By

*Dave Heberlein M.Sc., P.Geo.
Consulting Exploration Geochemist*

October 5th, 2011

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INTRODUCTION

At the request of Bill Poole, the author has carried out an interpretation of the 2010-11 MMI soil geochemistry results from the Murray Property. The property, which consists of 12 contiguous mineral claims totaling an area of 2,517 ha, is located in the Caribou Mining District approximately 80 km northwest of Quesnel, BC.

Cache Creek Complex rocks underlie the northern and southern parts of the claim area (see AR 28536; Fig. 3). These consist predominantly of basaltic volcanic and sedimentary rocks and include a small ultramafic body in the northern part of the property. Along the eastern property margin younger Eocene-Oligocene-age Endako Group volcanic rocks are exposed. The central property area is cut by a northwest-southeast elongated granodiorite body.

Two styles of mineralization occur on the claims: shear zone hosted copper-gold mineralization associated with listwanites hosted in and adjacent to the ultramafic body; and porphyry-style mineralization hosted in the Jurassic granodiorite. The porphyry target was tested with a seven hole diamond drilling program (986.33 metres) carried out by Rio Tinto Canadian Exploration Ltd. in 1969. Results indicated the presence of porphyry-style mineralization with anomalous copper and molybdenum values. The best intercept from this drilling was 0.11% Cu and 0.04% MoS₂ over 123.14 metres (DDH A8; Rio Tinto Internal Summary Report, 1969). The porphyry target is the focus of current exploration.

This report documents the results and interpretation from two MMI (MMI-M5) surveys carried out by the property owners over the granodiorite target in 2010 and 2011. The initial survey consisted of three west-northwest oriented lines totaling 60 samples. This was followed up by a grid survey consisting of 271 samples collected on 13 east-west lines. Sample locations are illustrated in Figure 1.

MMI is a proprietary partial extraction method offered by SGS Laboratories. It works by liberating the most loosely bound or mobile ions from trap sites in the sample and keeping them in solution using specific ligands. The method is non-selective and will extract metals from clays, oxides organics and carbonate minerals. It has proven to be effective at detecting ionic dispersion from blind mineralization beneath transported overburden.

SCOPE OF WORK AND DATA

The objective of this interpretation is to identify potential targets for porphyry-style copper-molybdenum mineralization within and adjacent to the Jurassic granodiorite intrusion. This interpretation is based on the following information provided by the property owners:

- MMI Sample locations (NAD83 Zone 10)
- Laboratory certificates.
- Rio Tinto 1969 drilling report.

Additional information used includes:

- Digital 1:50,000 scale topographic data for NTS map sheets 093G03 and 093G06.

- 2005 Digital Geology map of BC.
- MTO Claim outlines (April 2011)

No sample descriptions were included with the data package.

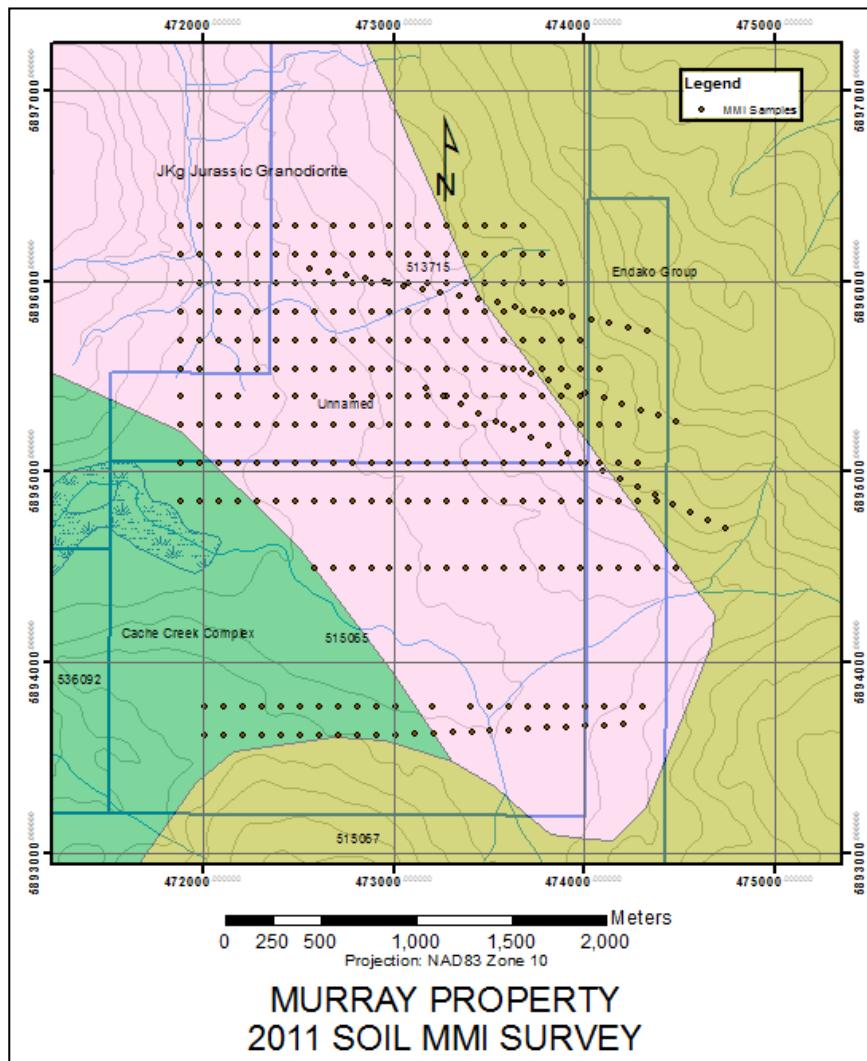


Figure 1 Part of the Murray Property showing MMI Sample Locations

SURFICIAL ENVIRONMENT

The survey area covers the western lower slopes of a northwest trending ridge and parts of the valley floor immediately to the west. Topography is relatively subdued with elevations ranging from highs of about 1340 metres on the ridge crest to 960 metres along the western grid margin.

Hill tops and upper slopes consist of residual domains with outcrop on the hill crests and shallow, locally derived colluvium mantling the slopes. Colluvial deposits thicken down-slope towards the valley floor and effectively mask the underlying bedrock. In the valley floor poorly drained ground suggests the presence of a till blanket.

DATA PROCESSING

Prior to interpretation, the MMI results were treated using the following steps:

- a) Analytical results and field locations were merged using Geosoft Target software. Merged data was then exported into a csv file format. During the merge, below detection limit values (i.e. <) are automatically replaced with a value equivalent to half the detection limit.
- b) The csv file was imported into ioGAS software where the results were validated. Validation included checking sample locations for coordinate errors and replacement of zero values and text strings with nulls.
- c) Histograms for each element were then assessed to determine their distribution type (i.e. arithmetic or log normal). Relative standard deviation (RSD) values were calculated for each element to determine whether a transformation was required. In general, elements with RSD values > 100% require a log transformation.
- d) Logarithmically distributed elements (i.e. with RSD >100%) were transformed using a Log (10) Z-Score transformation. This transformation converts log-normally distributed data to a normal distribution and sets the median at zero. Values are distributed positively and negatively around zero with the larger values (both positive and negative) representing the most anomalous samples. A Z unit is roughly equivalent to one standard deviation. By using this transformation all elements are converted to the same range and units, which facilitates plotting and comparison. A log Z-score can be used in the same way as a response ratio but it has the advantage of being statistically more robust. An example of raw and transformed data for copper is shown in Figure 2.

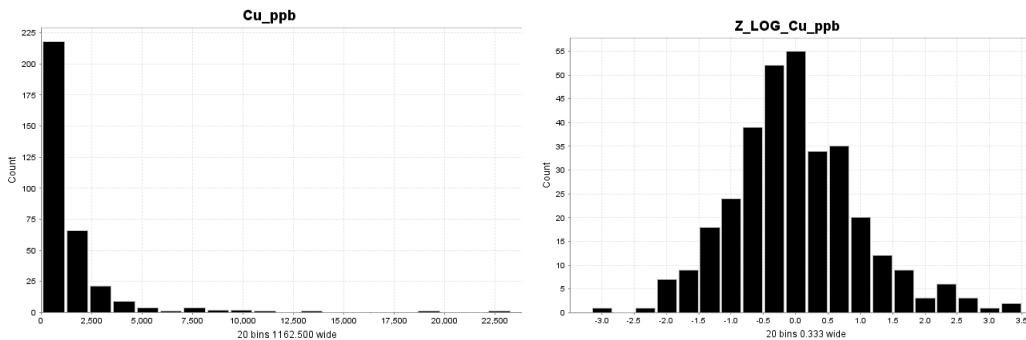


Figure 2 A comparison of histograms for non-transformed and transformed copper results

- e) Transformed data was then imported into ArcGIS where dot maps were generated. Symbol sizes and colours were determined using the following percentile breaks: <50, 75, 80, 90, 95 and >95%.
- f) Symbols were plotted over topography and geology for interpretation.

RESULTS

Thematic maps for each element are included in Appendix A. The following discussion concentrates on the a selection of elements that are indicative of porphyry-style mineralization: copper, molybdenum, gold, silver and cesium.

Copper

Copper results are illustrated in Figure 3. There is a compelling copper anomaly located on the lower slopes in the north-central part of the grid. This feature measures 1600 by 800 metres and has a pronounced northwest elongation parallel to the valley and granodiorite contact. The axis of the anomaly lies more or less at the break in slope suggesting that it may in part be of hydromorphic origin (seepages zones). Highly anomalous values (magenta) following a west draining creek valley near the northern end of the anomaly also suggest a hydromorphic component.

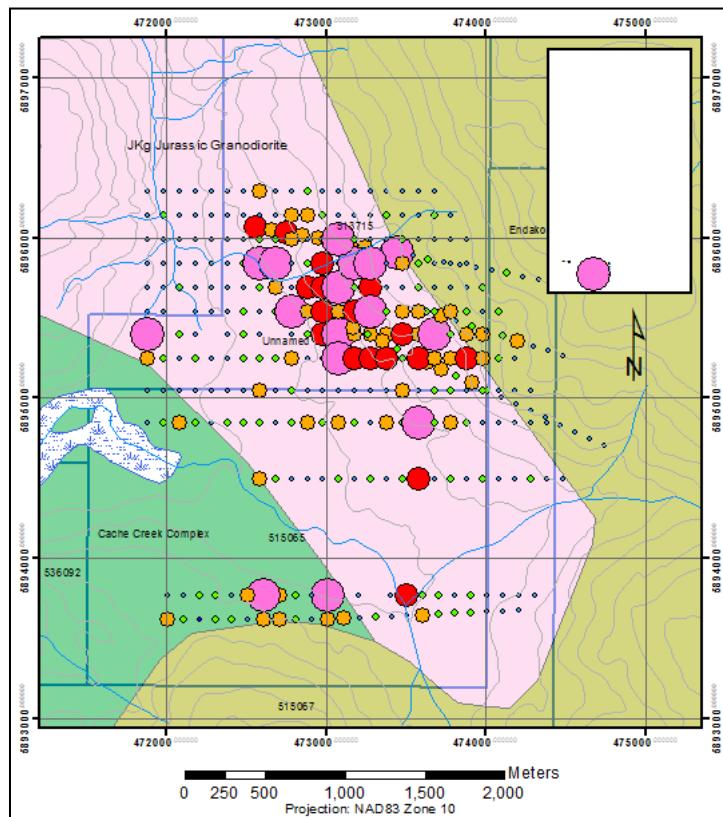


Figure 3 Transformed results for MMI Copper

Scattered single sample anomalies occur in the southern and western part of the grid but are not considered to be significant targets.

Molybdenum

Molybdenum (Fig. 4) shows a coincident anomaly with copper. It is more constrained than copper, forming a more or less circular zone some 600 metres in diameter. Three highly anomalous samples in the northwest part of the feature follow drainage, suggesting hydromorphic dispersion in that area. Outside of the coherent anomaly, scattered elevated values coincide with the mapped distribution of the granodiorite unit. There are no anomalous samples outside of the intrusion.

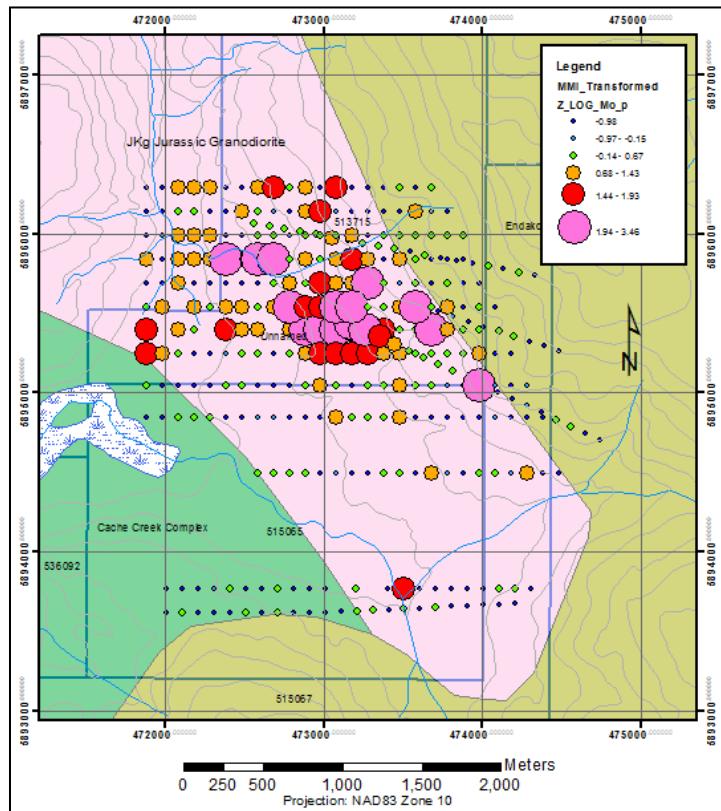


Figure 4 Transformed results for MMI Molybdenum

Gold

Gold shows a similar distribution to copper and molybdenum (Fig. 5). Unlike molybdenum, which has a well constrained anomaly, gold has a much more erratic distribution. Elevated values are scattered over the entire grid, particularly within the granodiorite intrusion. This scatter likely reflects the generally poor precision of gold analyses in partial extraction methods. The MMI extraction will also dissolve any particulate gold present in the colluvial and glacial deposits, which could also contribute to the scattered distribution. Nevertheless, elevated values do form a coherent anomaly some 800 by 400 metres in size elongated parallel to the slope and intrusive contact. The centre of this feature is displaced slightly to the northwest from that of the molybdenum anomaly.

Silver

Silver results are illustrated in Figure 6. Again, there appears to be a cluster of anomalous values in the north-central part of the grid. The centre of the cluster appears to be displaced slightly to the southeast from that of gold. The anomaly is divided into two parts by the east-west drainage near the north grid extent. Values on the south side of the drainage appear to be significantly higher than those to the north. Spotty values in the lower reaches of the drainage to the west are interpreted to be hydromorphic anomalies. Like gold there is a fair amount of scatter in the silver results, which probably reflects poor precision for this element.

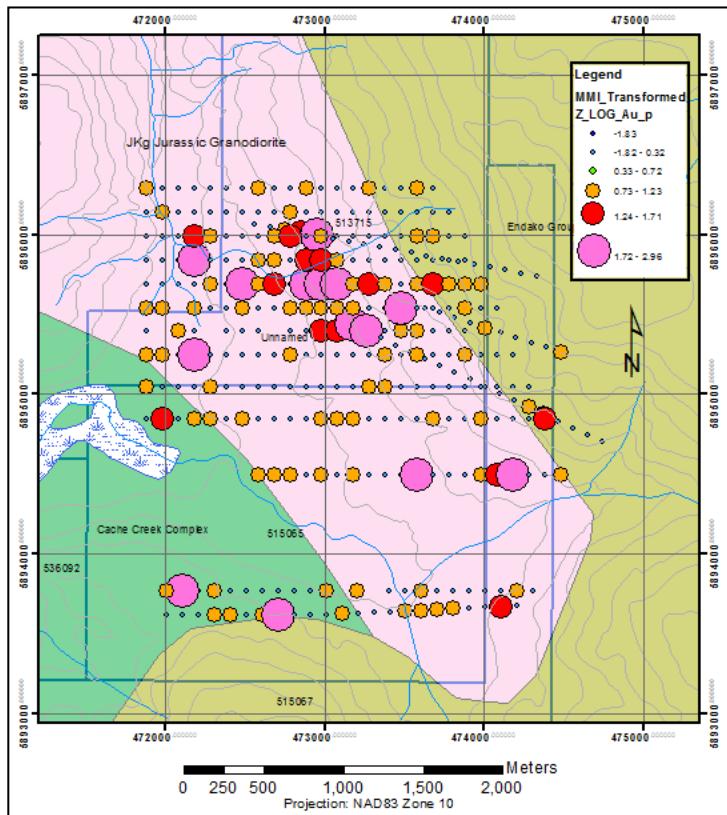


Figure 5 Transformed results for MMI Gold

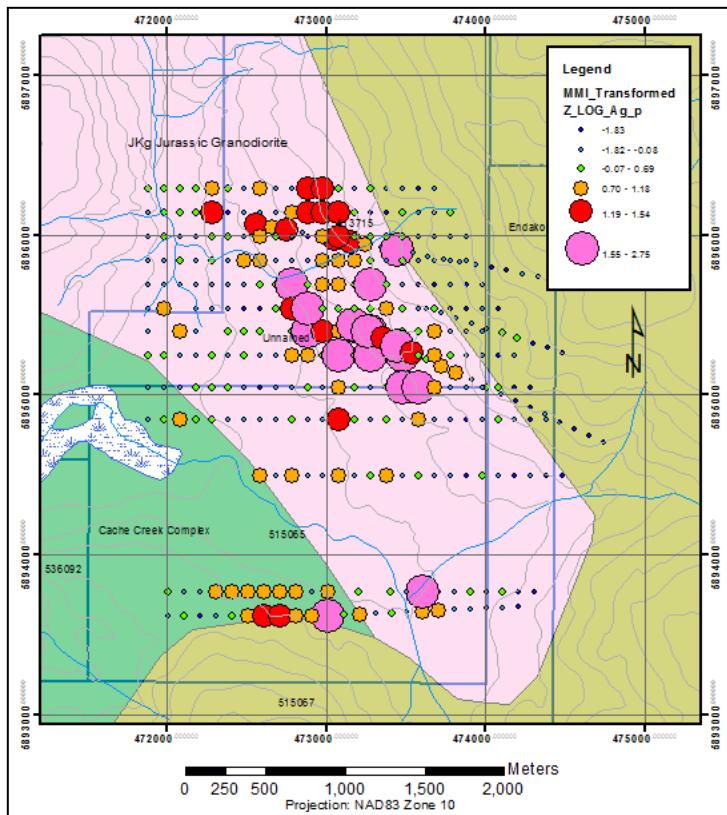


Figure 6 Transformed results for MMI Silver

Cesium

Finally, cesium results are plotted in Figure 7. This element is a good proxy for potassium and can be useful for identifying potential potassic minerals in the underlying bedrock. It can be a useful indicator of potassic (biotite and K-feldspar) and sericitic alteration.

Cesium shows a broad anomaly that is partially coincident with those of the ore elements mentioned above. In fact the strongest part of the copper anomaly corresponds to a relative low in the cesium, suggesting that elevated cesium may be forming an annulus or ring around the elevated copper. An annulus is equivalent to a rabbit ear feature seen in profile and can indicate an ionic anomaly developed on the edges of a blind sulphide bearing zone. The cesium anomaly is not constrained to the granodiorite body, it also extends east over the very much younger Endako Group volcanics. This is more evidence that this could be an ionic anomaly.

There is a second cesium anomaly in the valley floor at the northwest corner of the grid. Here elevated values lie adjacent to a north-south drainage and therefore are interpreted to be a displaced hydromorphic anomaly.

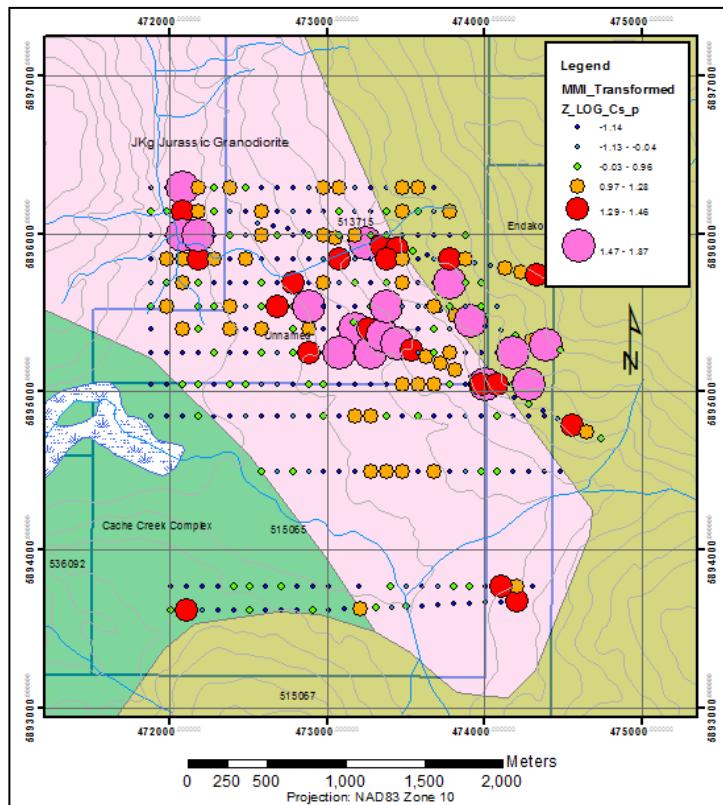


Figure 7 Transformed results for MMI Cesium

SYNTHESIS OF RESULTS

The geochemical patterns discussed above provide compelling evidence of a potential porphyry system in the north-central part of the grid. The coincident copper-molybdenum-gold-silver anomaly and associated annular cesium anomaly are consistent with a potential blind sulphide source. The distribution of these elements is blurred somewhat by displaced hydromorphic anomalies along

drainages and therefore the size of the target is likely to be somewhat smaller than the dispersion patterns seen in the MMI results.

Figure 8 is a compilation of the results for the five elements described above, **presented as a 'porphyry index'.** The index is derived by summing the Z-scores for the five elements. Results are presented as gridded image to visually highlight the target.

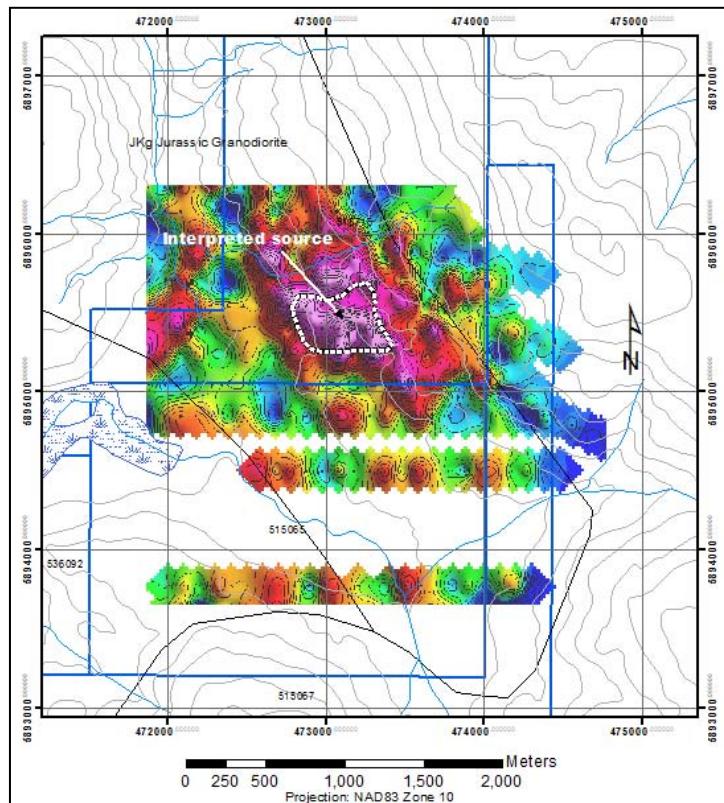


Figure 8 A gridded image for the Porphyry Index

The white dashed outline represents the interpreted position of the source area for the MMI metal anomalies.

RECOMMENDATIONS

The following recommendations arise from this interpretation:

- The MMI soil geochemistry is not a standalone method. Validation of the target using other types of geoscience information is strongly recommended. This should include airborne and ground geophysical data (if available).
- Field validation of the target using soil pH is recommended in order to confirm the position of the potential sulphide source.
- Validation for the target using a second geochemical technique such as Ah horizon soils is recommended. This could be done on a single line across the target.

- d) Prior to drill testing, ground geophysics should be carried out to map out the extent of the underlying sulphide zone (IP) and to highlight potential potassic alteration (ground mag).

Respectfully submitted by:

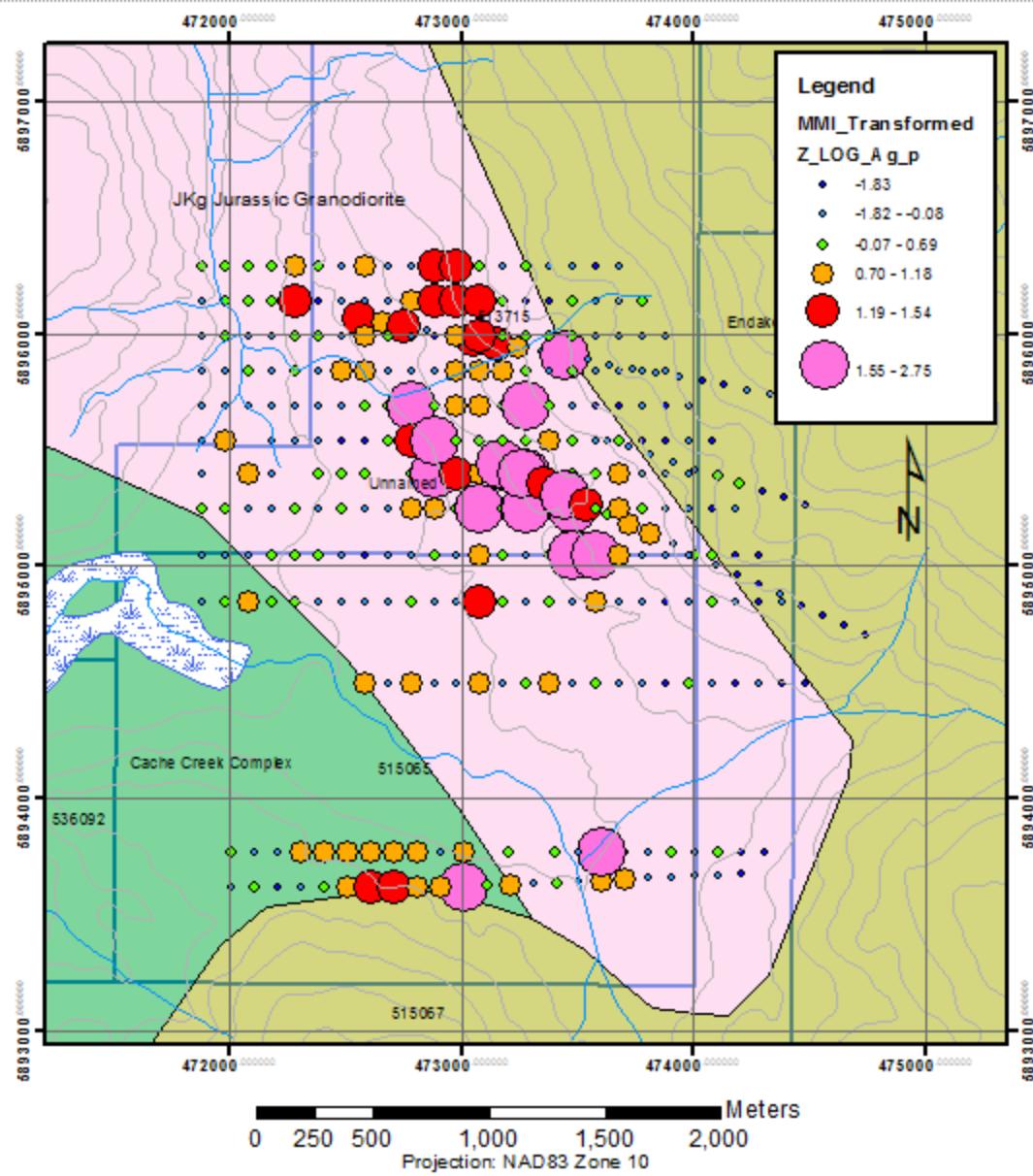


Dave Heberlein M.Sc. P.Geo.

October 5th, 2011

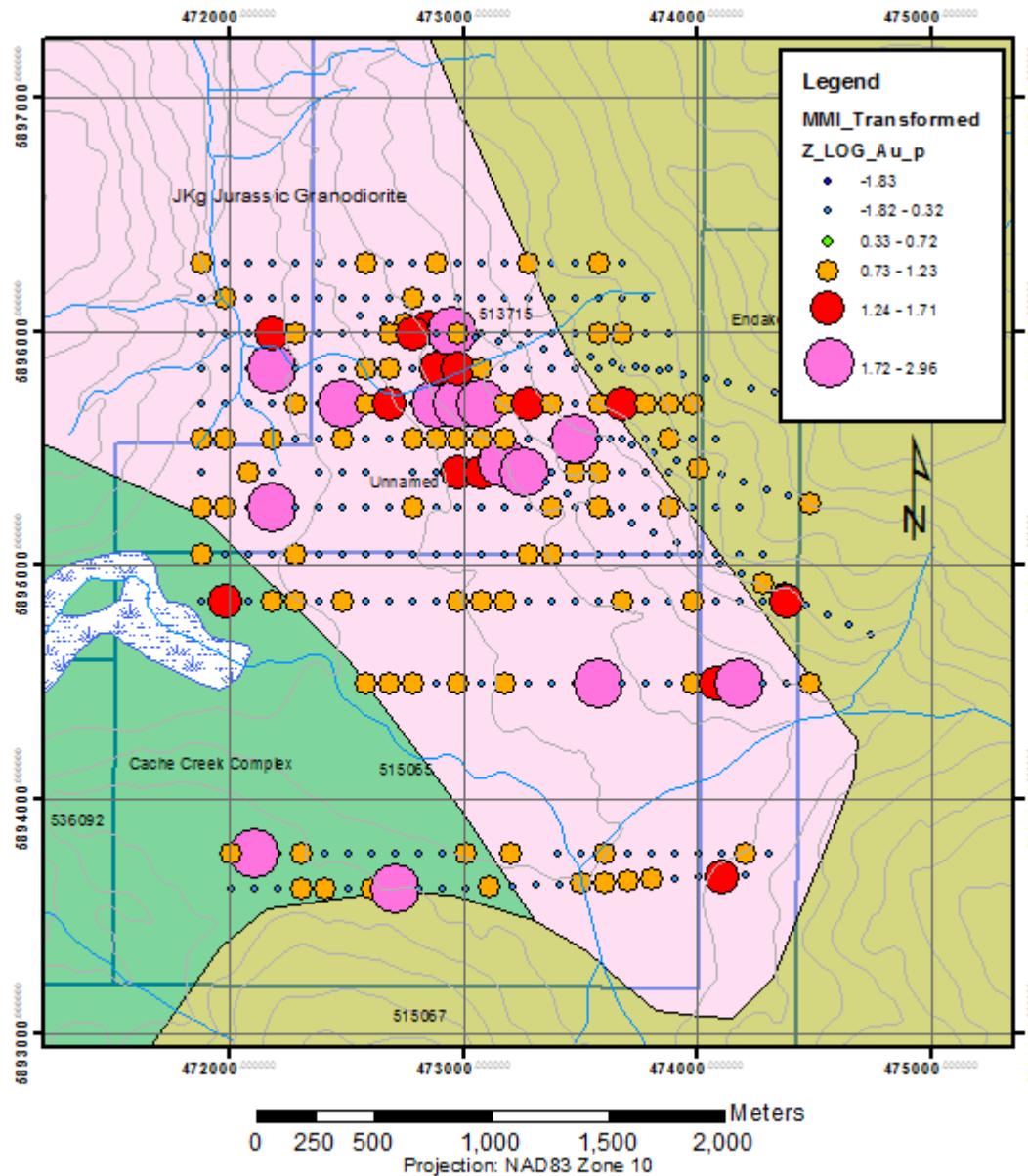
Appendix A

Single Element Z-Score Plots
MMI Results



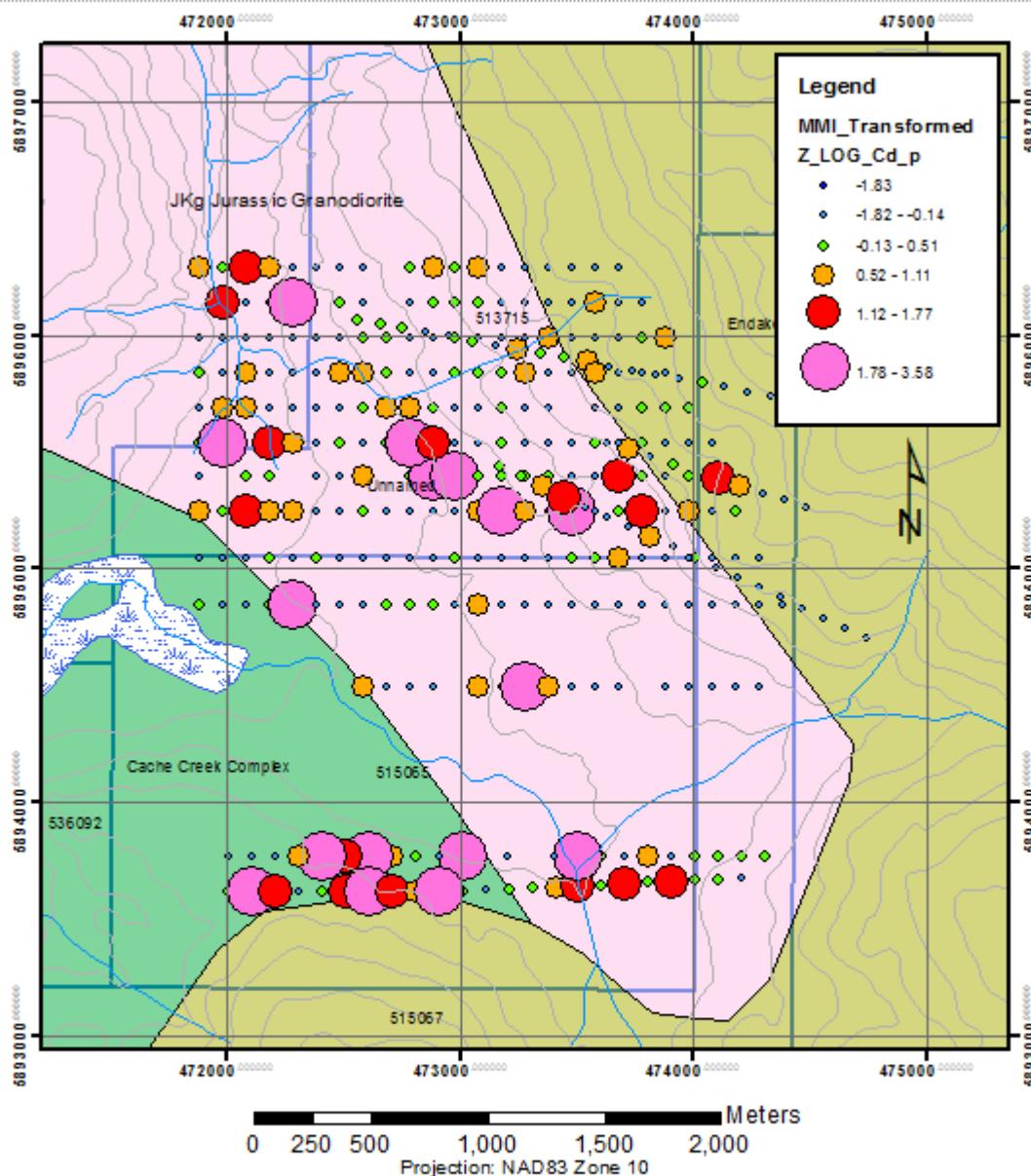
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Silver



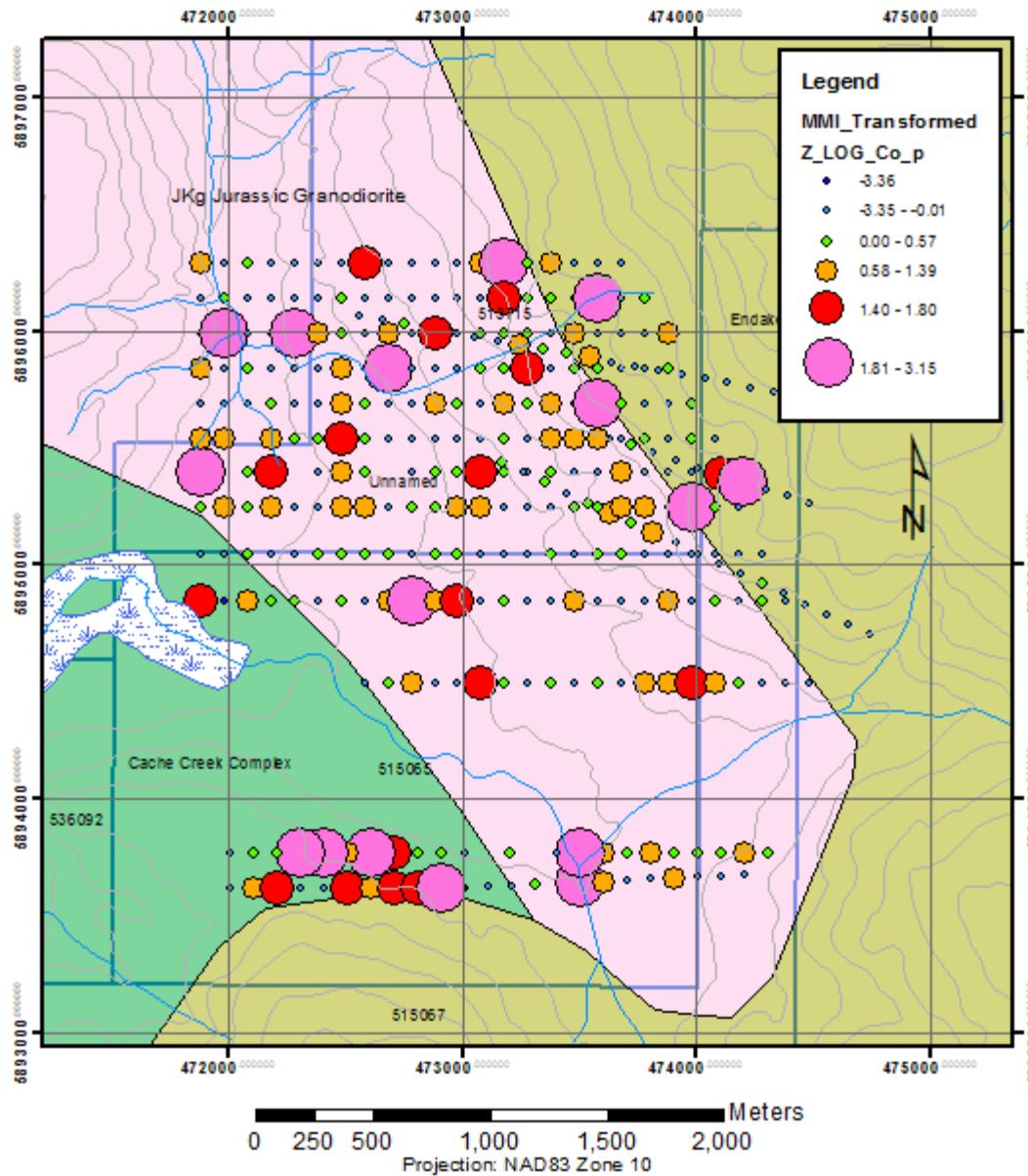
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Gold



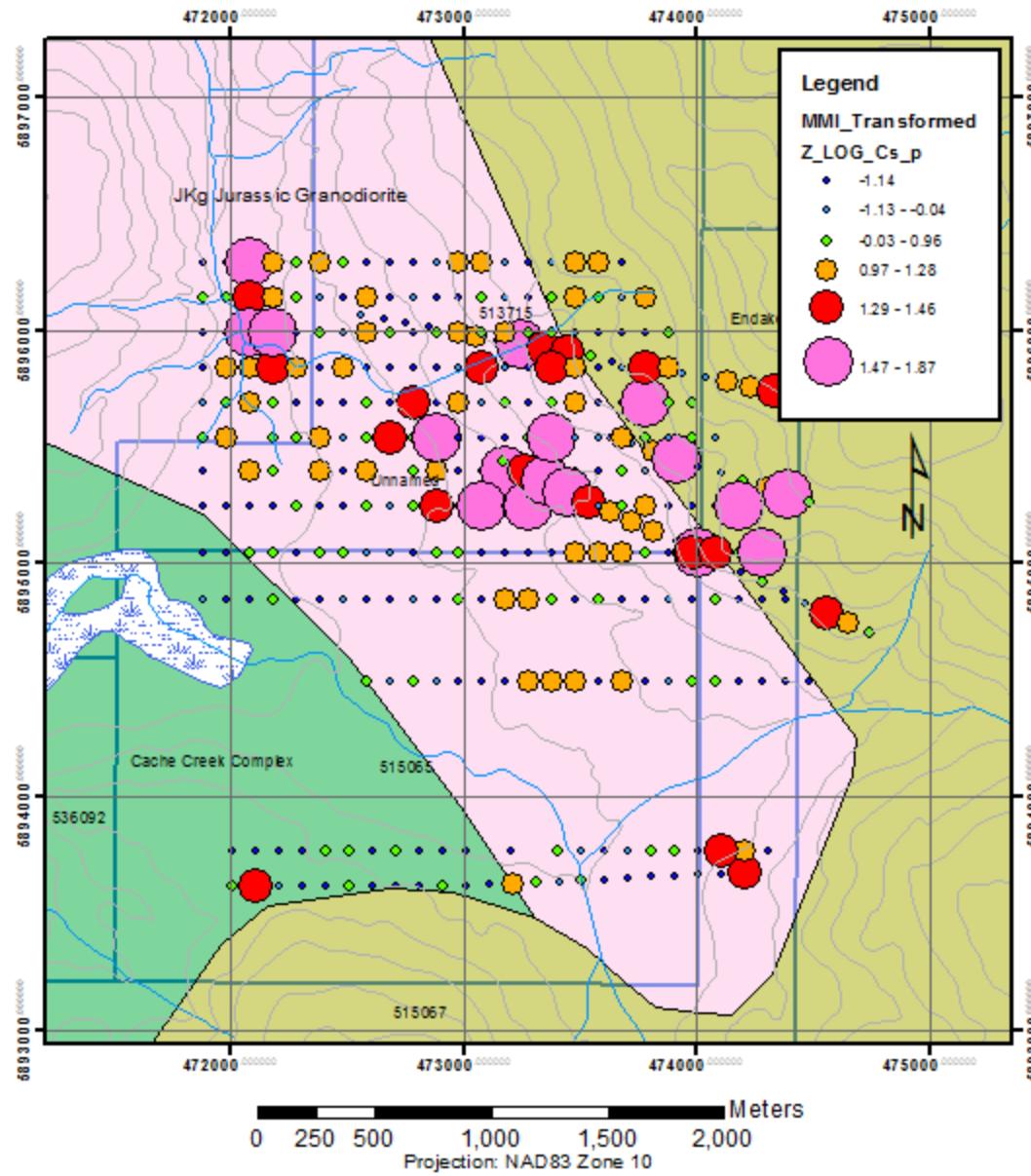
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Cadmium



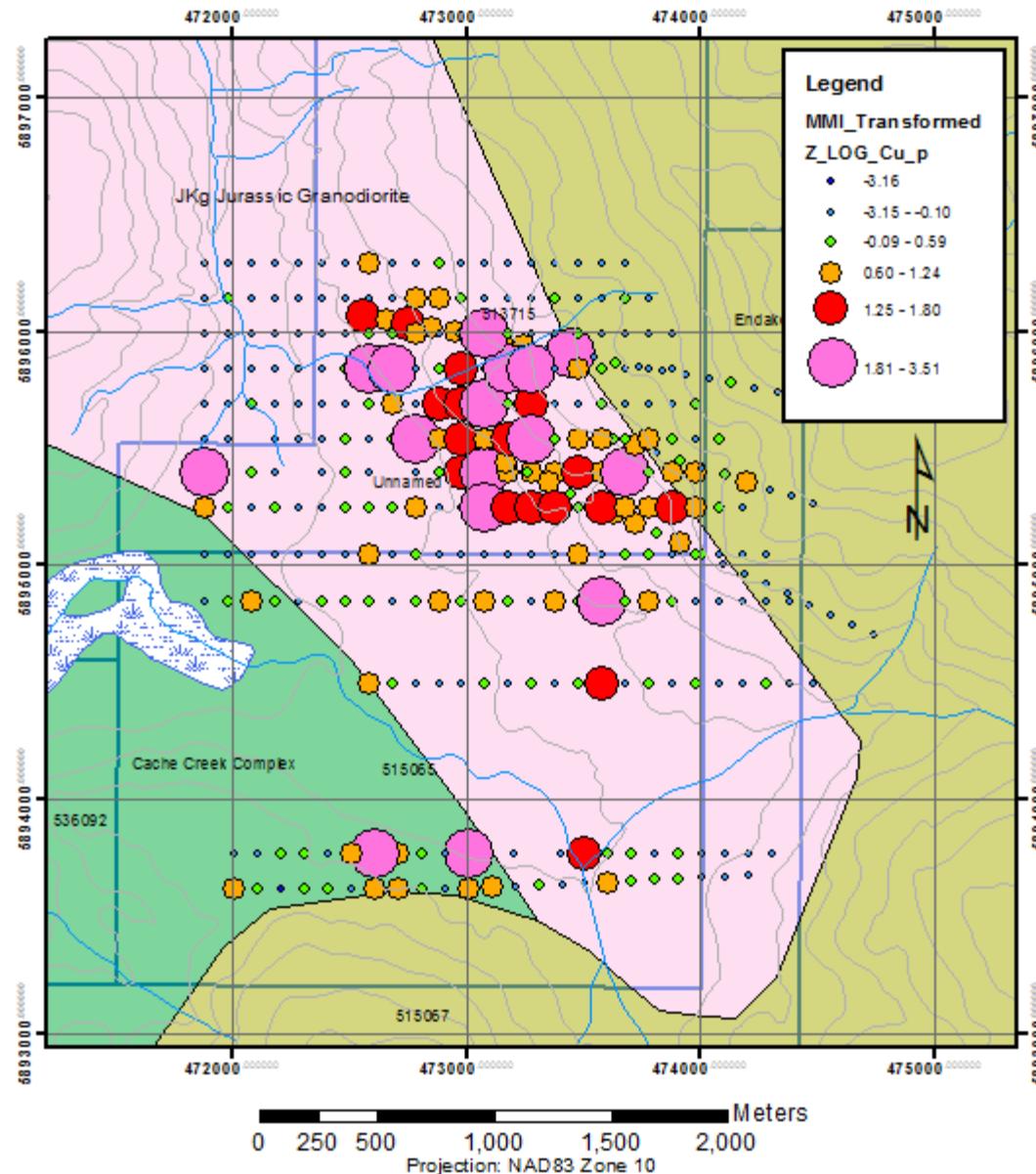
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Cobalt



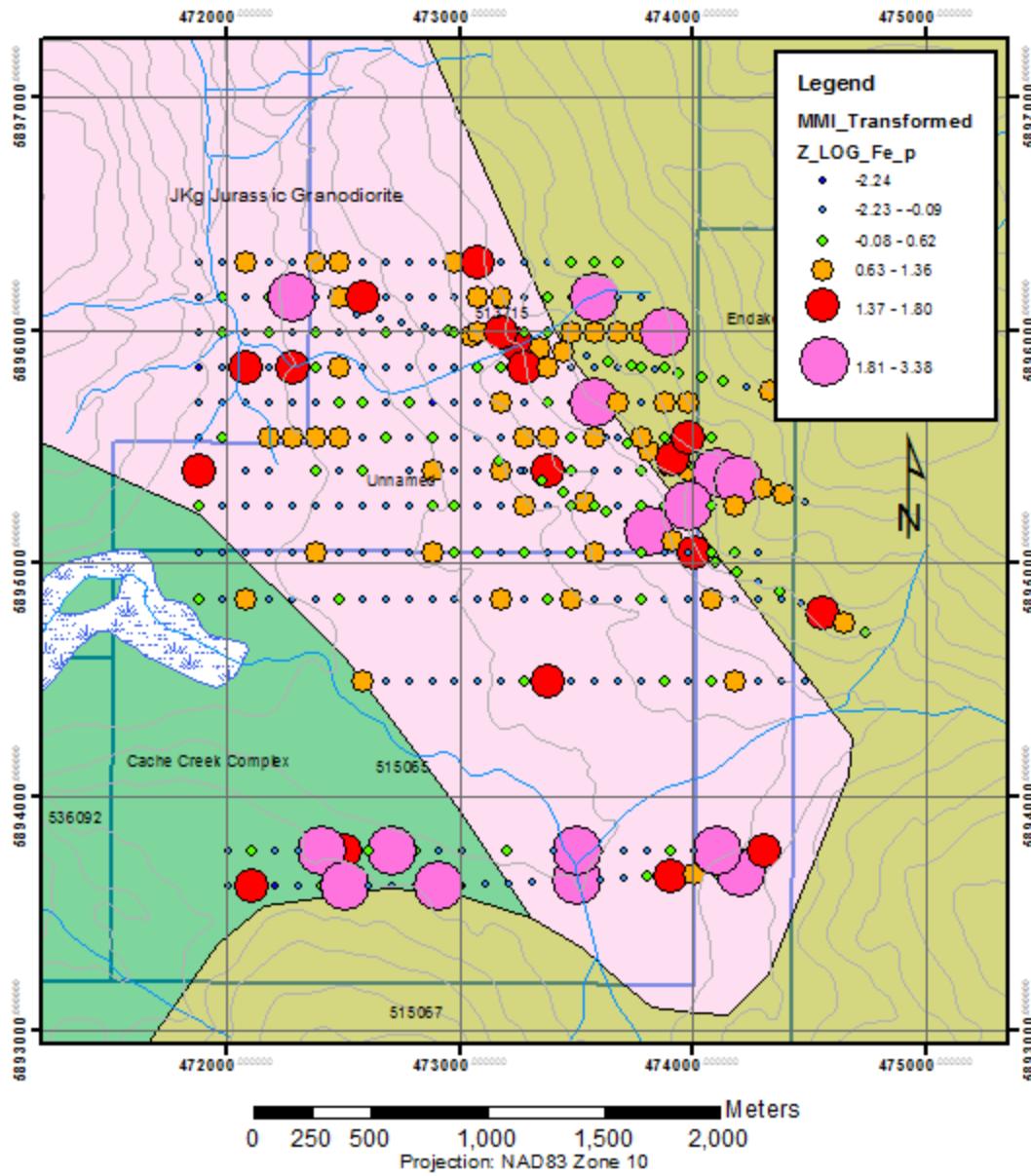
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Cesium



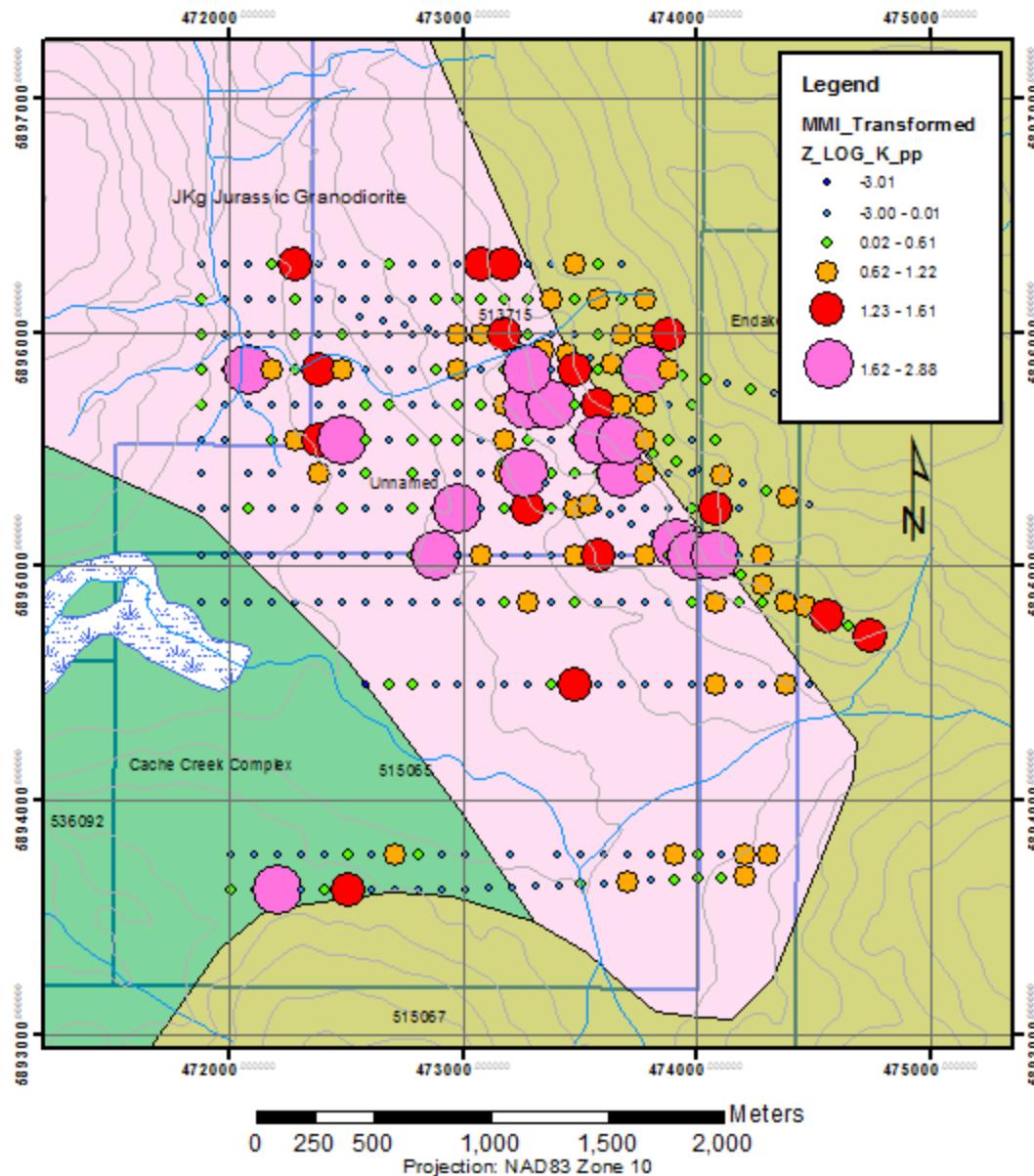
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Copper



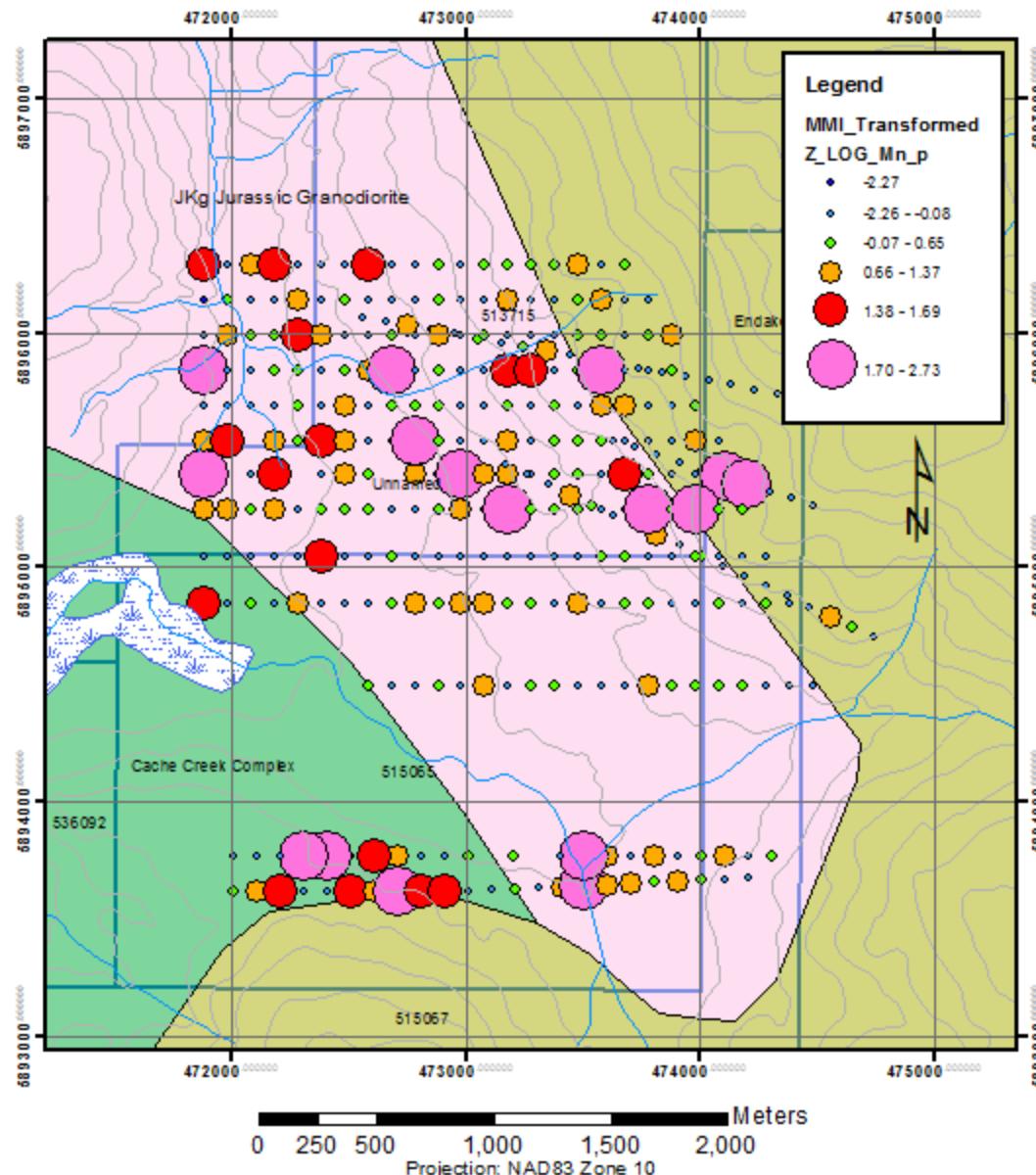
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Iron



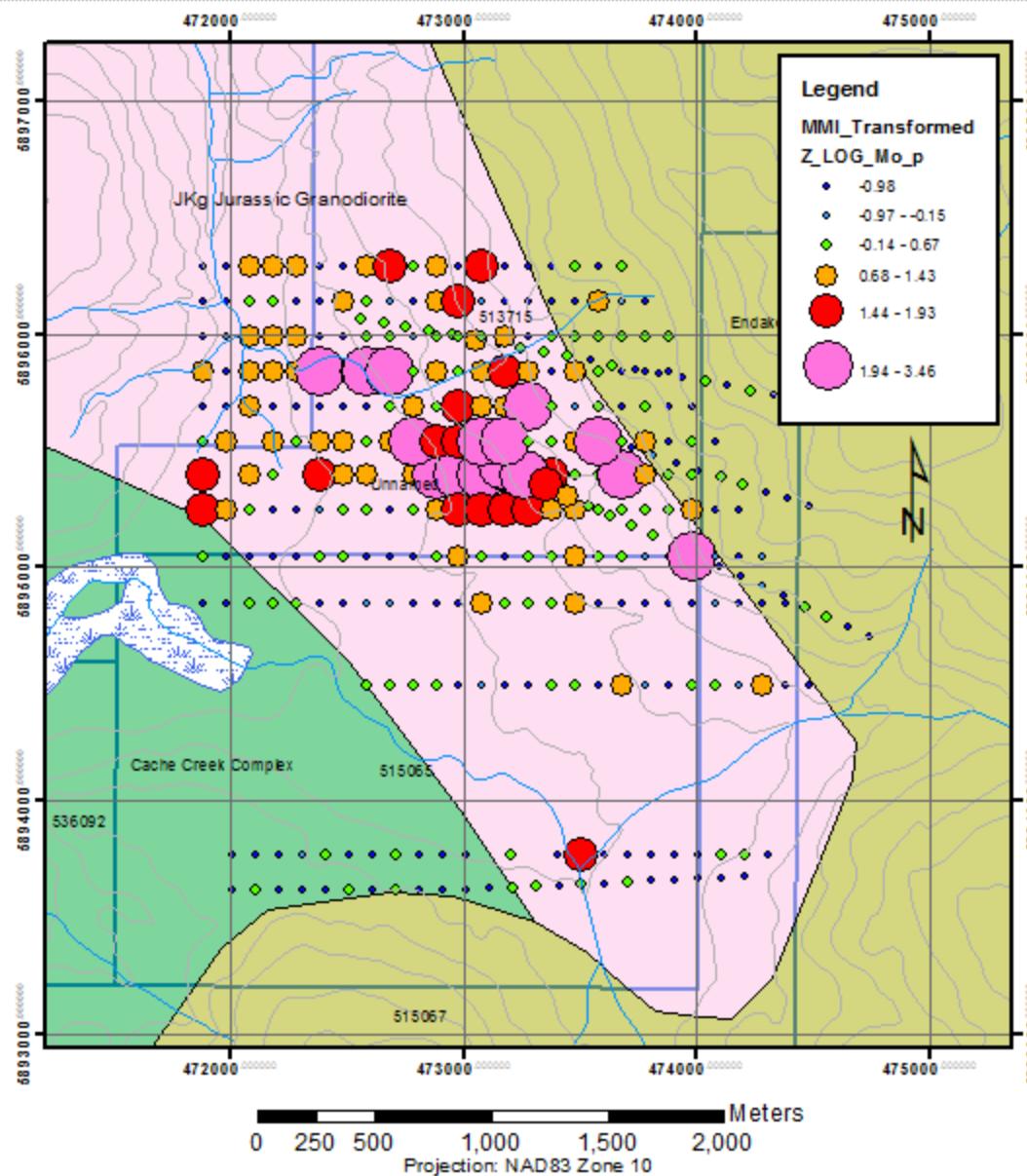
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Potassium



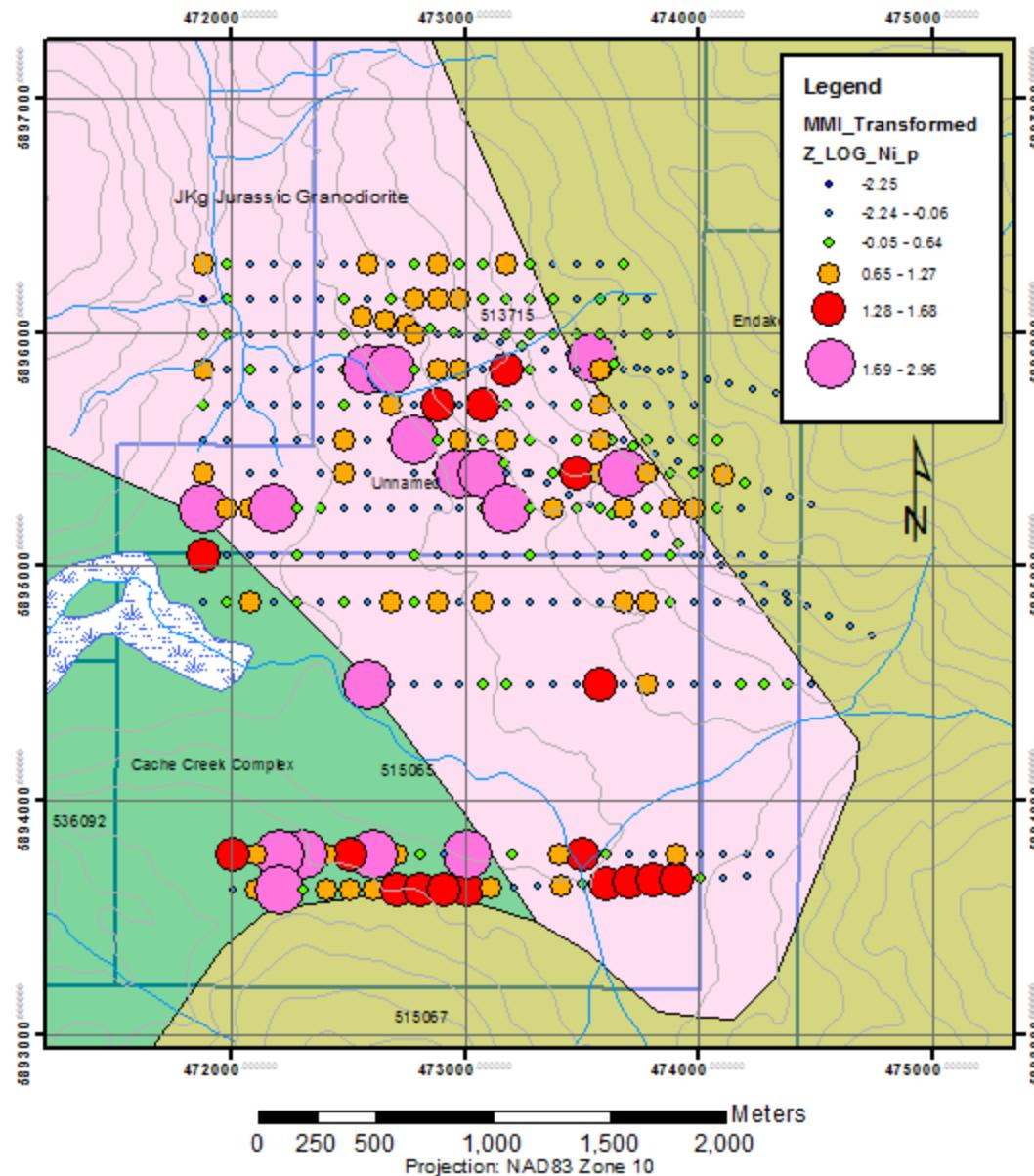
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Manganese



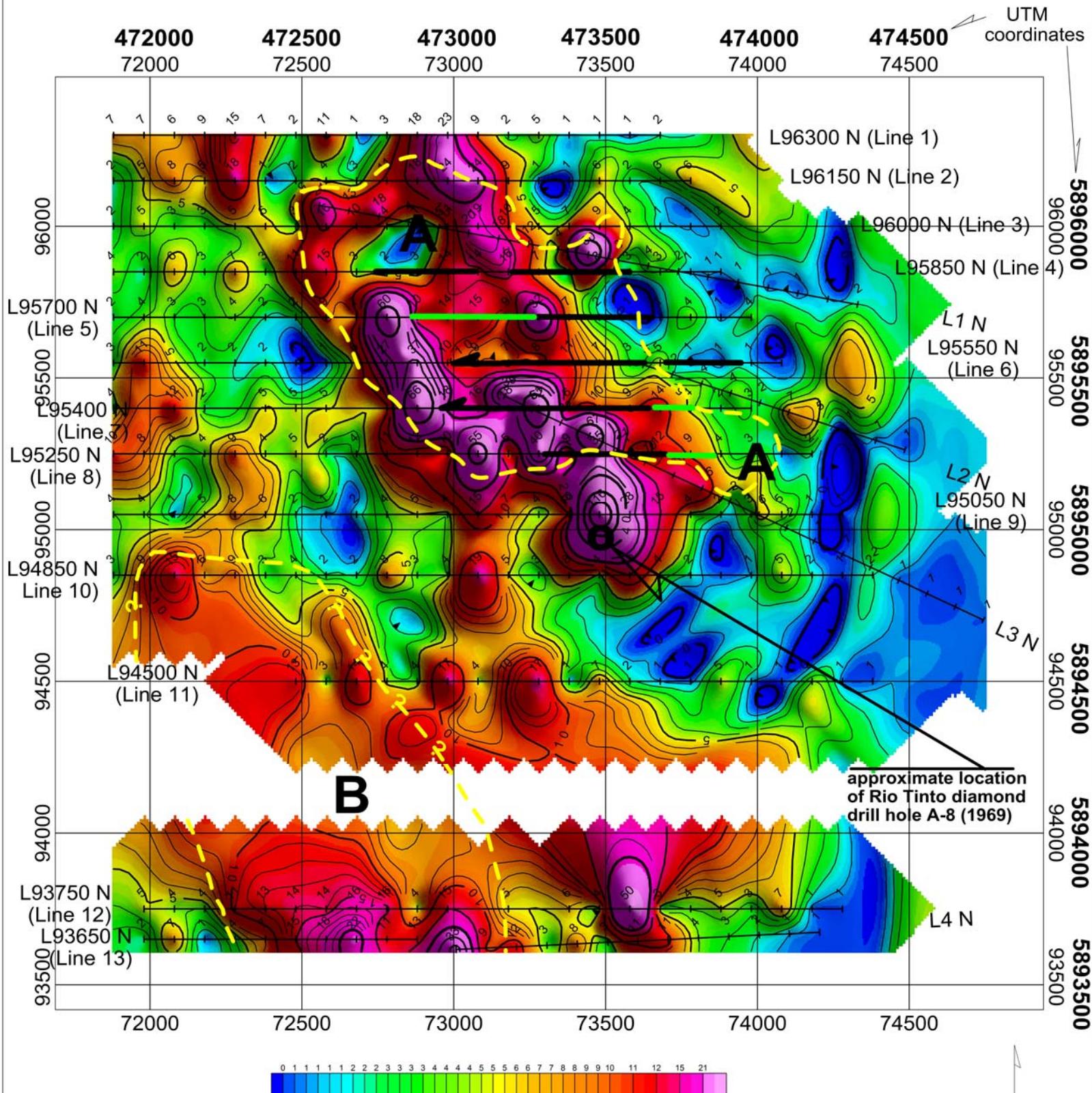
MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Molybdenum



MURRAY PROPERTY
2011 SOIL MMI SURVEY

MMI Nickel

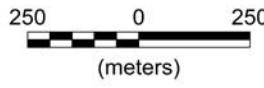


Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

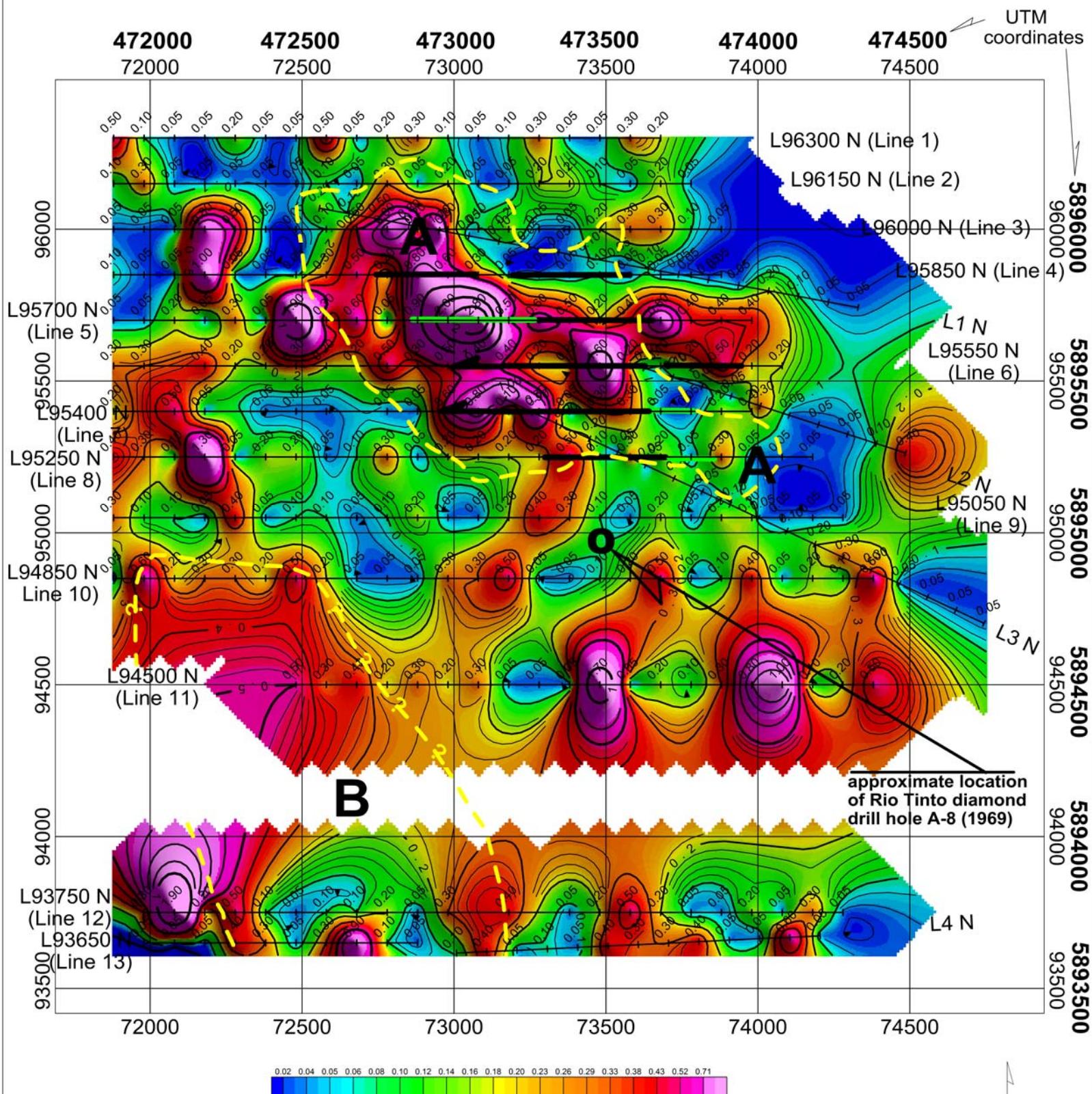
MMI SOIL GEOCHEMISTRY SURVEY
CONTOUR PLAN

SILVER (ppb)

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-1



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Surrey B.C.



- IP Anomaly showing dip
- IP Anomaly at depth
- - - MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

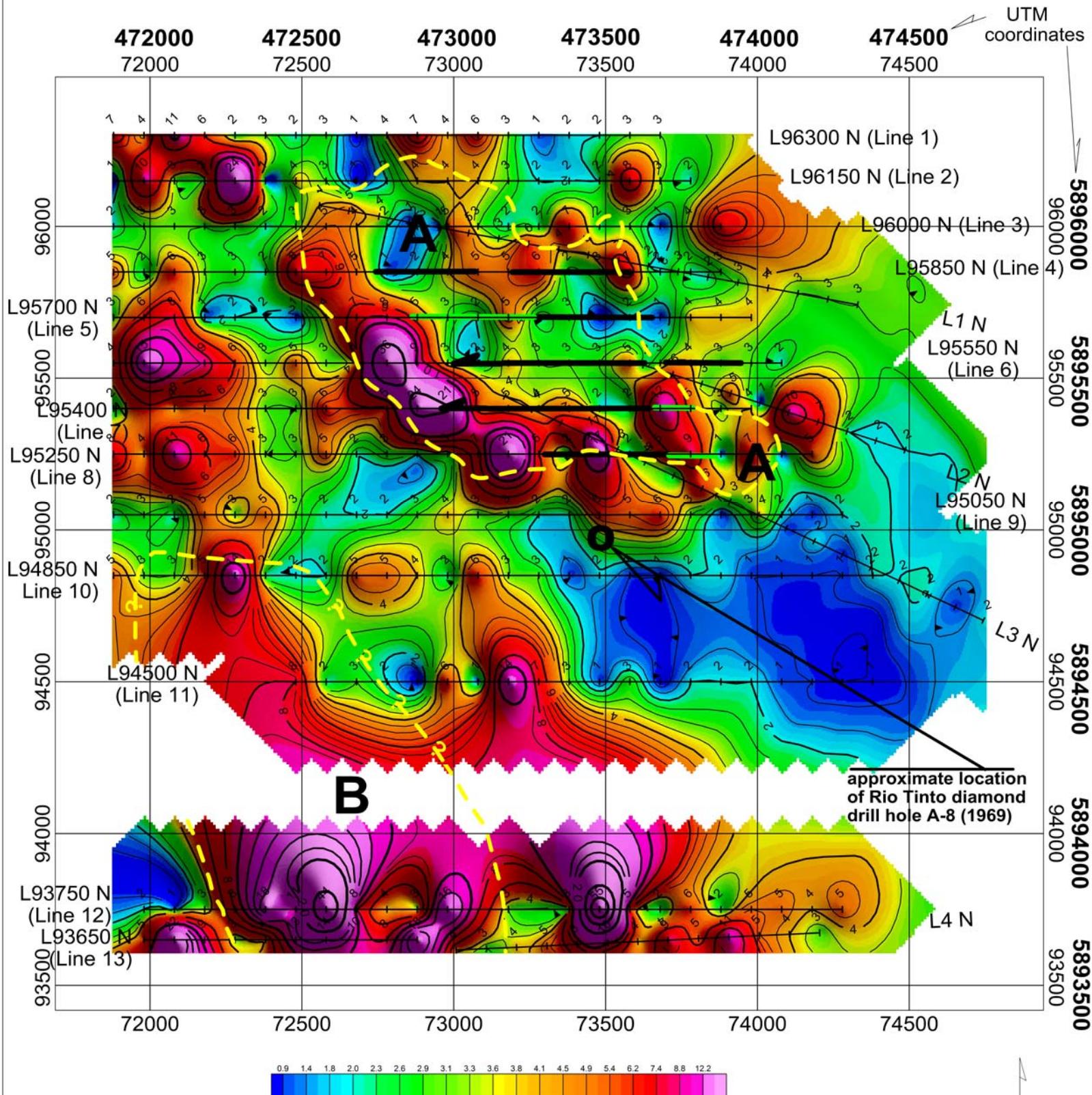
Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
eg. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400

250 0 250
(meters)

WILLIAM E. POOLE				
MURRAY PROPERTY				
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC				
MMI SOIL GEOCHEMISTRY SURVEY CONTOUR PLAN				
GOLD (ppb)				
DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-2





— IP Anomaly showing dip

— IP Anomaly at depth

— MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400

250 0 250
(meters)



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

MMI SOIL GEOCHEMISTRY SURVEY

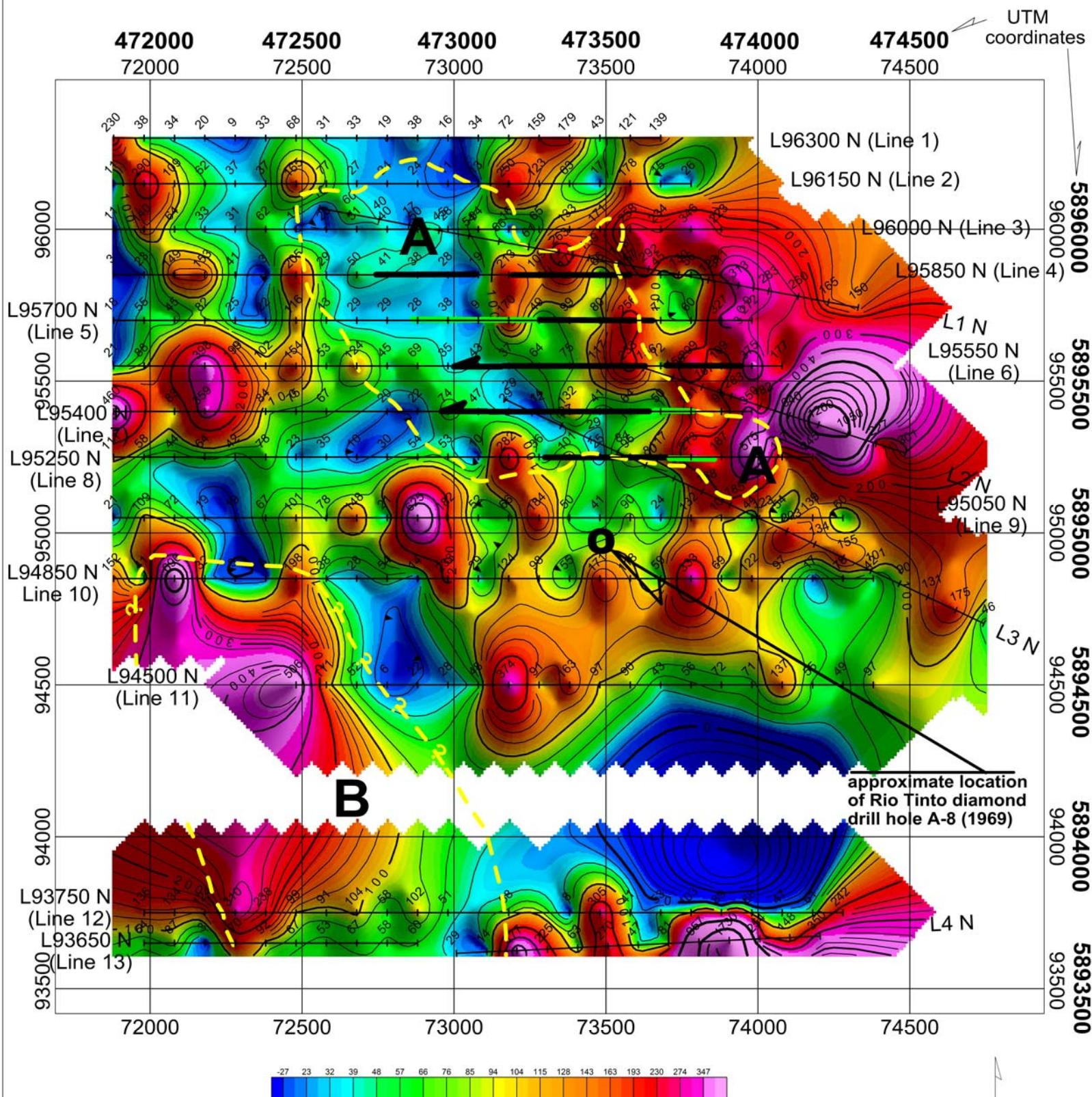
CONTOUR PLAN

CADMUM (ppb)

DRAWN BY: DGM	JOB NO.: 11-21	NTS: 93G/23	DATE: NOV '11	FIG NO.: GC-3
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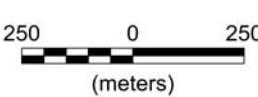
- IP Anomaly showing dip
- IP Anomaly at depth
- MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

MMI SOIL GEOCHEMISTRY SURVEY

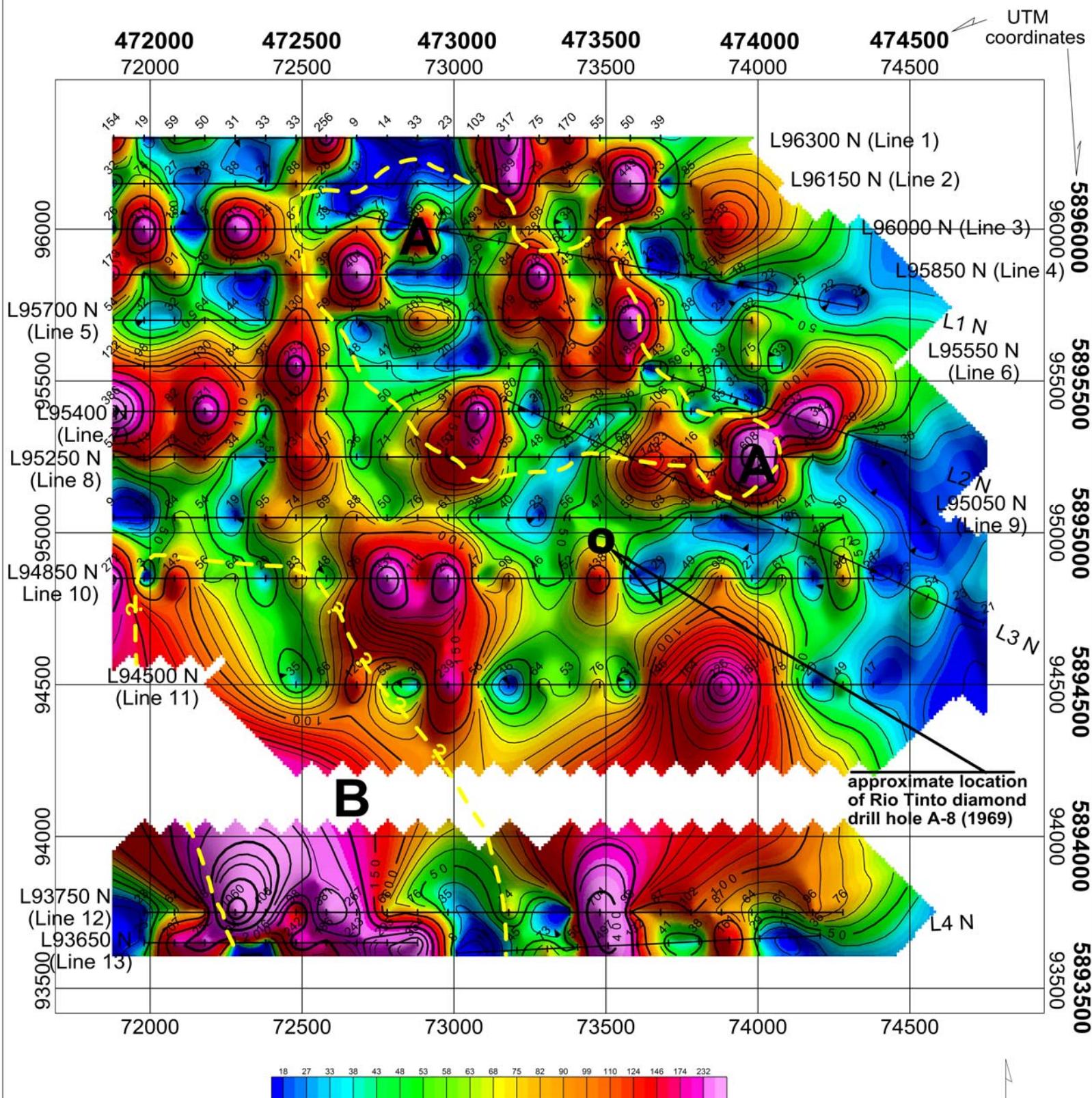
CONTOUR PLAN

CERIUM (ppb)

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-4



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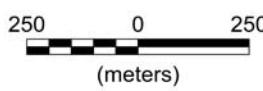


Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

MMI SOIL GEOCHEMISTRY SURVEY

CONTOUR PLAN

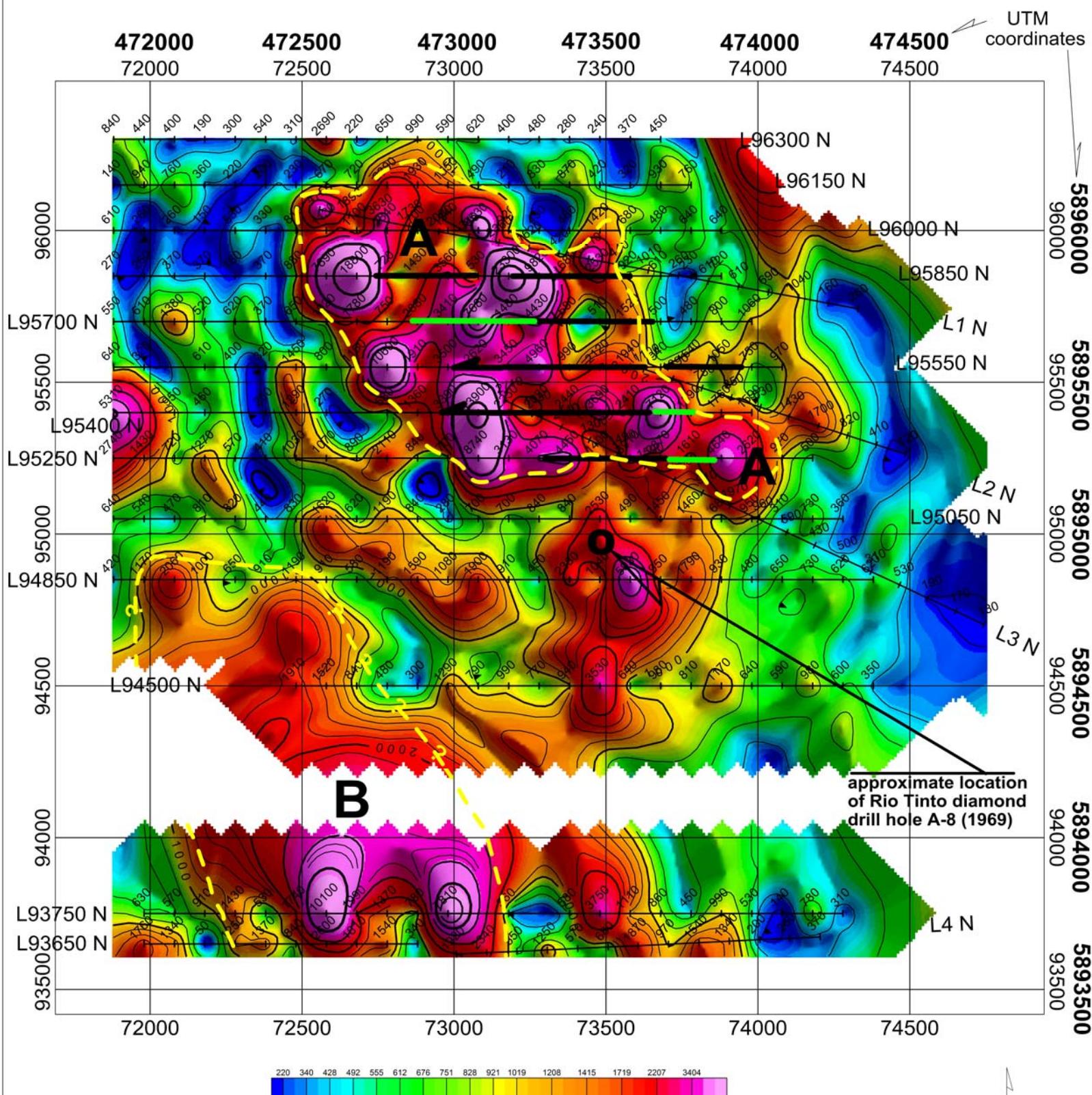
COBALT (ppb)

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-5

MMI Anomaly



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IP Anomaly showing dip

IP Anomaly at depth

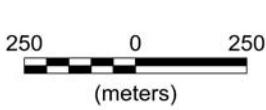
MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

MMI SOIL GEOCHEMISTRY SURVEY

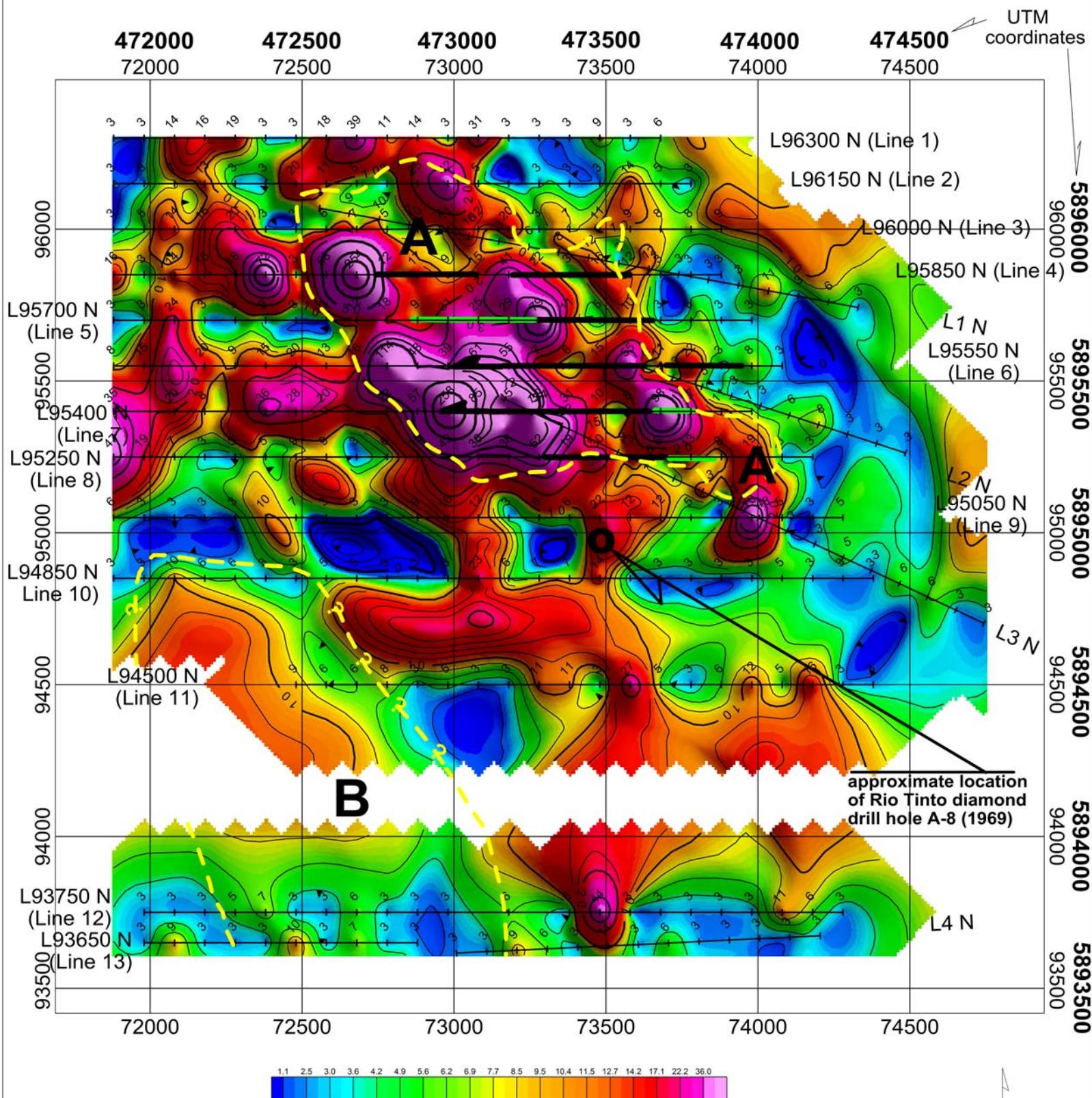
CONTOUR PLAN

COPPER (ppb)

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-6



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— IP Anomaly showing dip

— IP Anomaly at depth

- - - MMI Anomaly

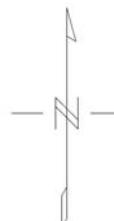
Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400

250 0 250
(meters)



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

MMI SOIL GEOCHEMISTRY SURVEY

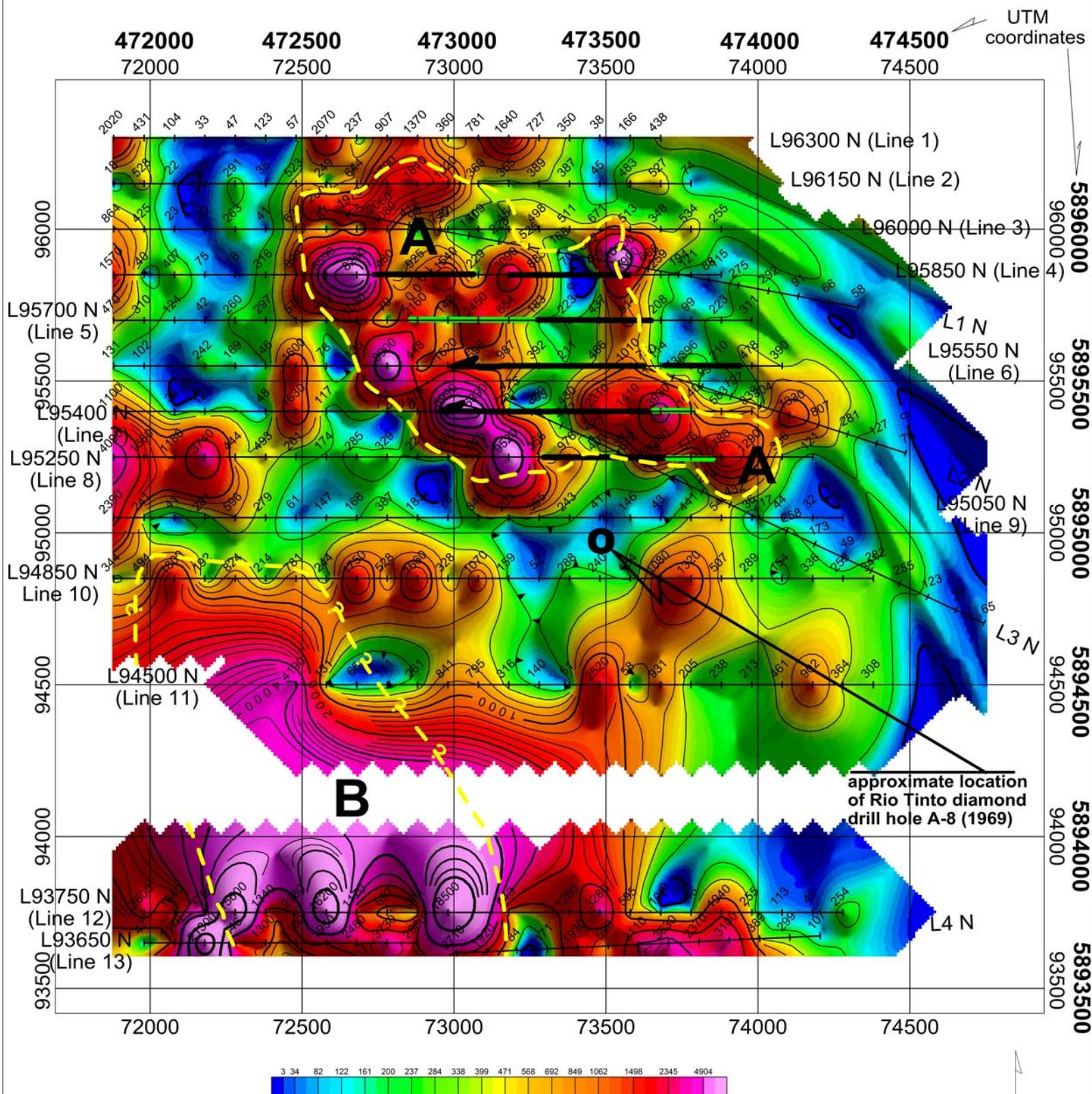
CONTOUR PLAN

MOLYBDENUM (ppb)

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-7



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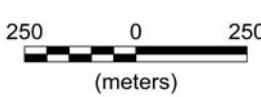
- IP Anomaly showing dip
- IP Anomaly at depth
- MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

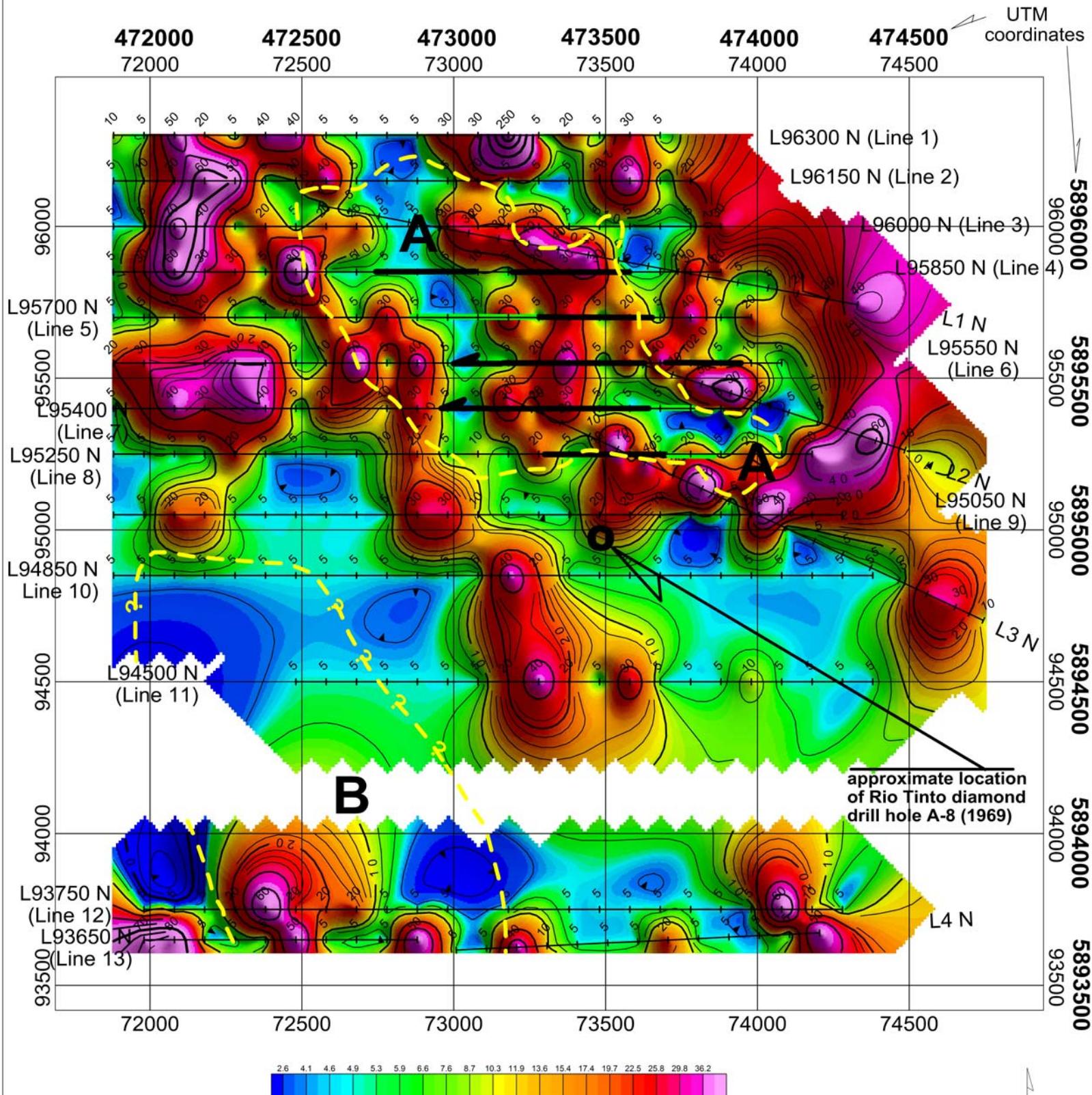
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

**MMI SOIL GEOCHEMISTRY SURVEY
CONTOUR PLAN
NICKEL (ppb)**

DRAWN BY: DGM	JOB NO.: 11-21	NTS: 93G/23	DATE: NOV '11	FIG NO.: GC-8
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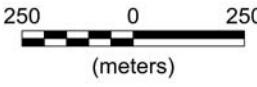
- IP Anomaly showing dip
- IP Anomaly at depth
- MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

MMI SOIL GEOCHEMISTRY SURVEY

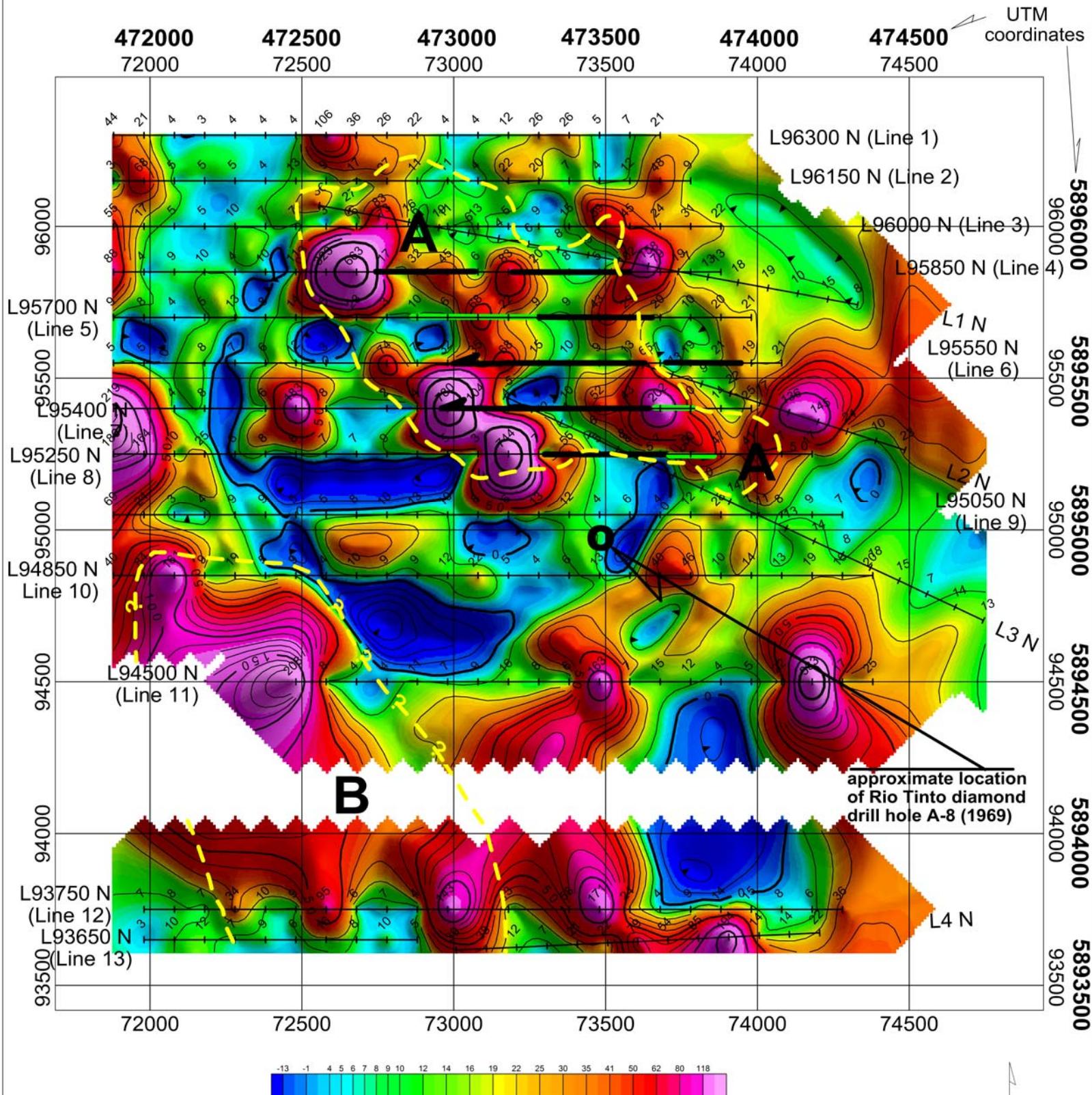
CONTOUR PLAN

LEAD (ppb)

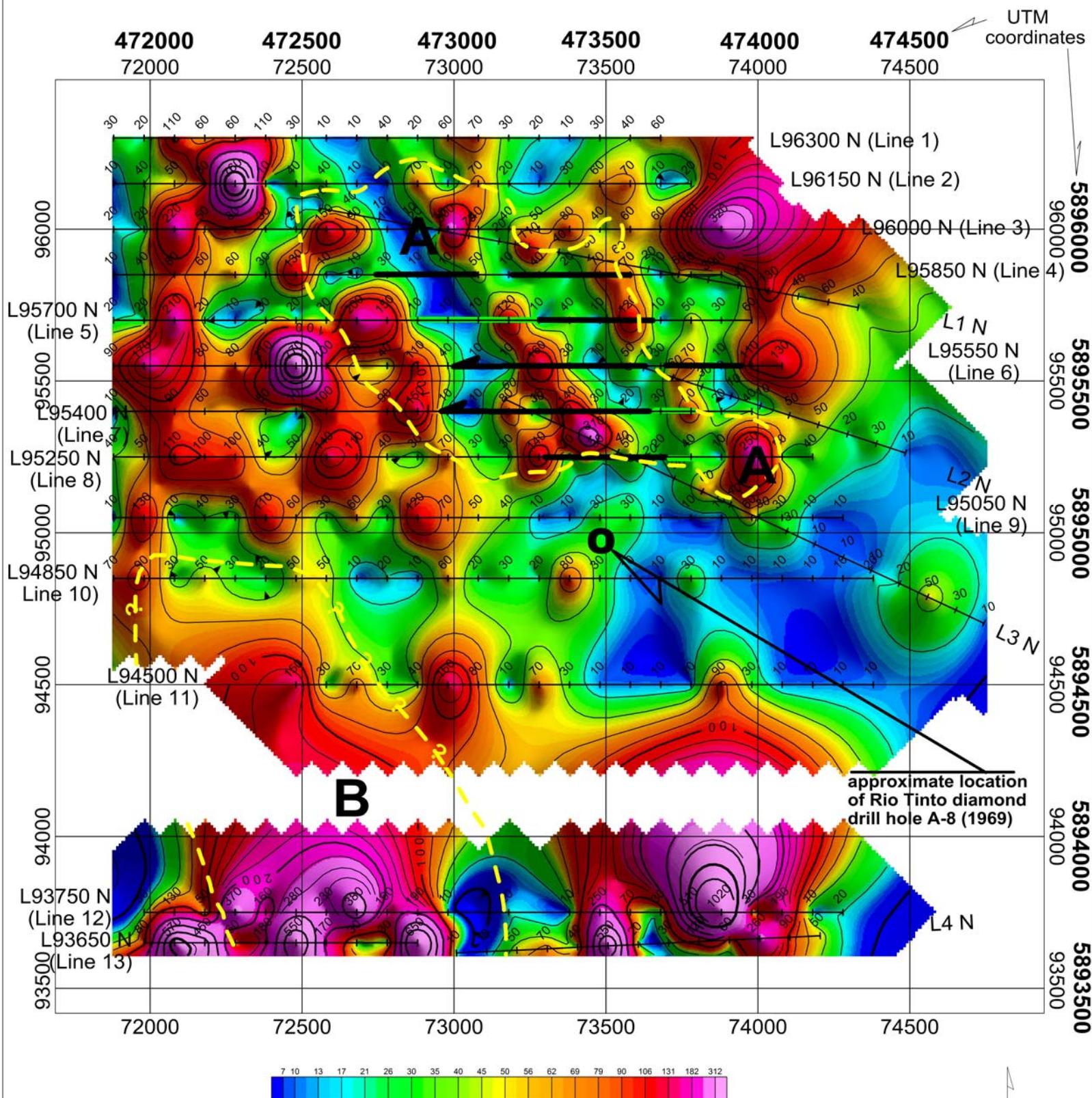
DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-9



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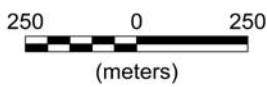
- IP Anomaly showing dip
- IP Anomaly at depth
- MMI Anomaly

Dates Samples Picked Up:
October, 2010; June-July 2011

Soils Tested By:
SGS Laboratories, Toronto, Ontario

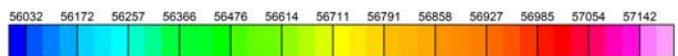
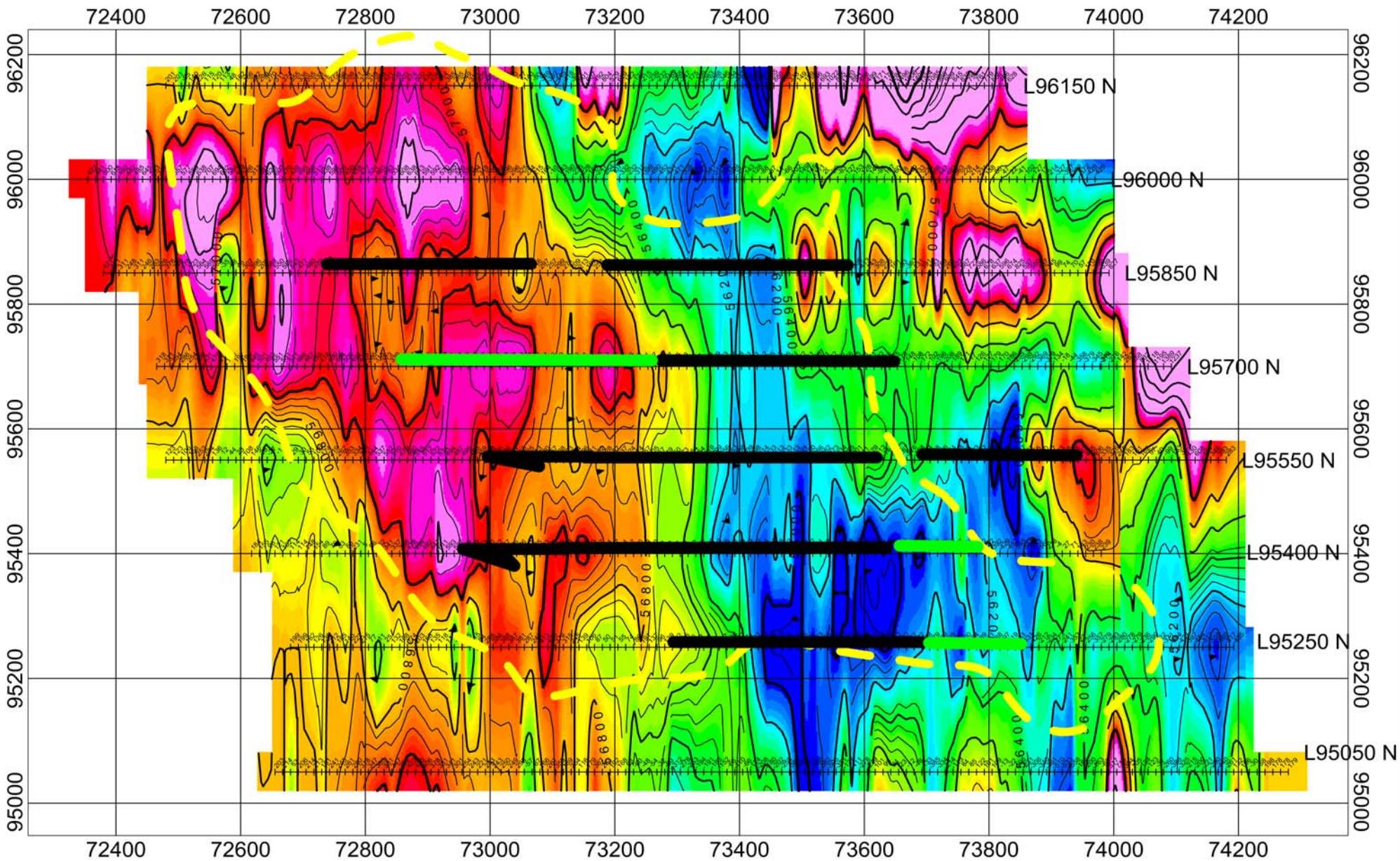
Units:
parts per billion (ppb)

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
e.g. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE				
MURRAY PROPERTY				
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC				
MMI SOIL GEOCHEMISTRY SURVEY CONTOUR PLAN				
ZINC (ppb)				
DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GC-10





IP Anomaly showing dip

IP Anomaly at depth

MMI anomaly

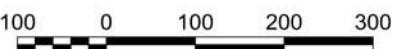
Instrumentation:
Geometrics Magnetometer
Model G-856

Survey Date:
Oct-Nov 2011

Units:
nanoTeslas (nT)

Magnetometer Reading Base:
56,600

Survey Grid Base
UTM, Nad 83 (last 5 digits)
Zone 10

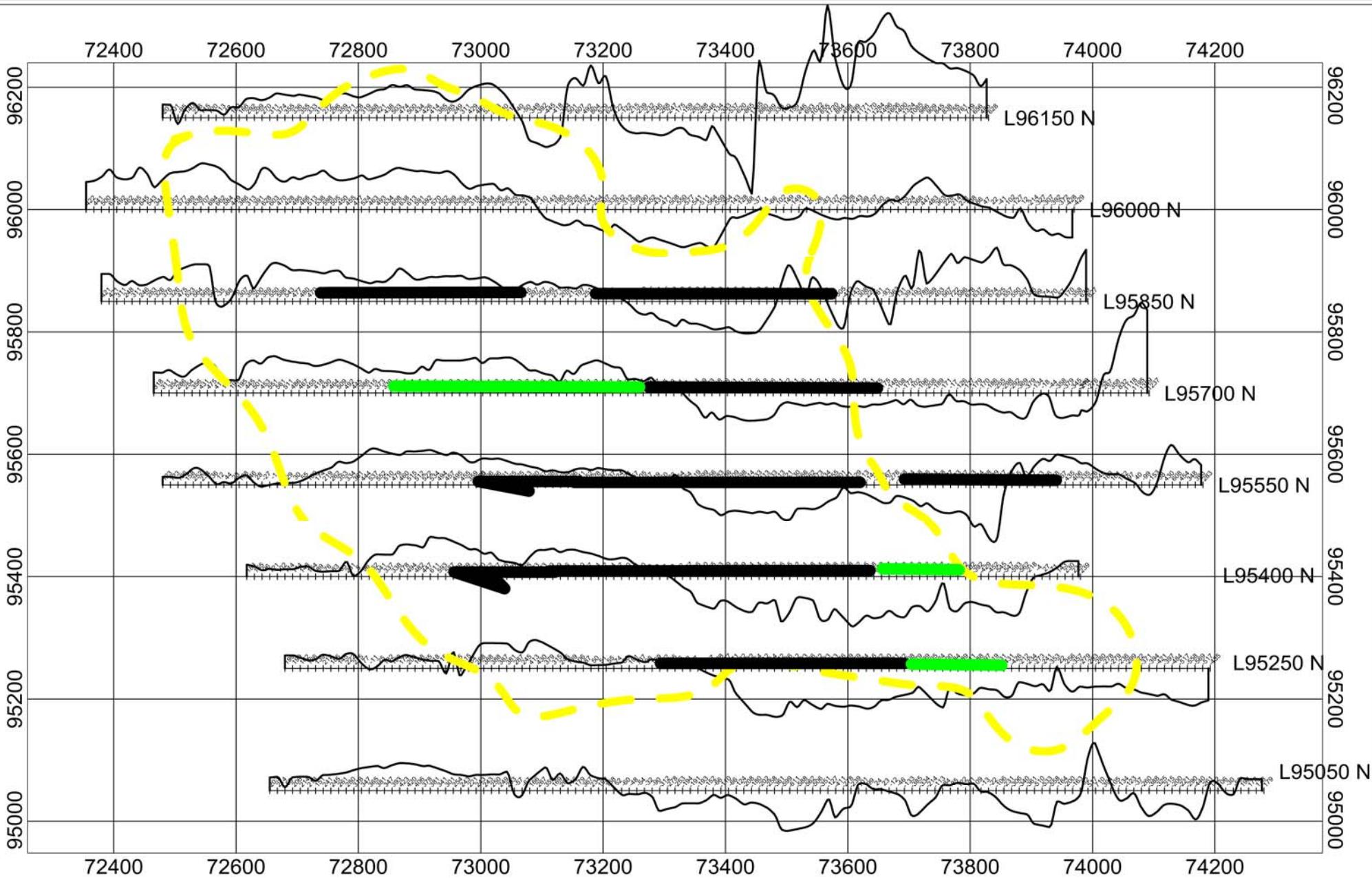


(meters)

WILLIAM E. POOLE			
MURRAY PROPERTY			
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC			
MAGNETIC SURVEY			
CONTOUR PLAN			
DRAWN BY:	JOB NO.:	NTS:	DATE:
DGM	11-21	93G/23	NOV '11
FIG NO.:			GP-1A



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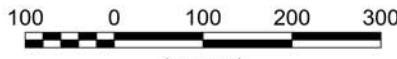
IP Anomaly
showing dip



MMI anomaly



IP Anomaly
at depth

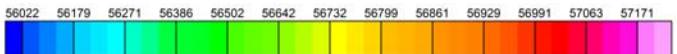
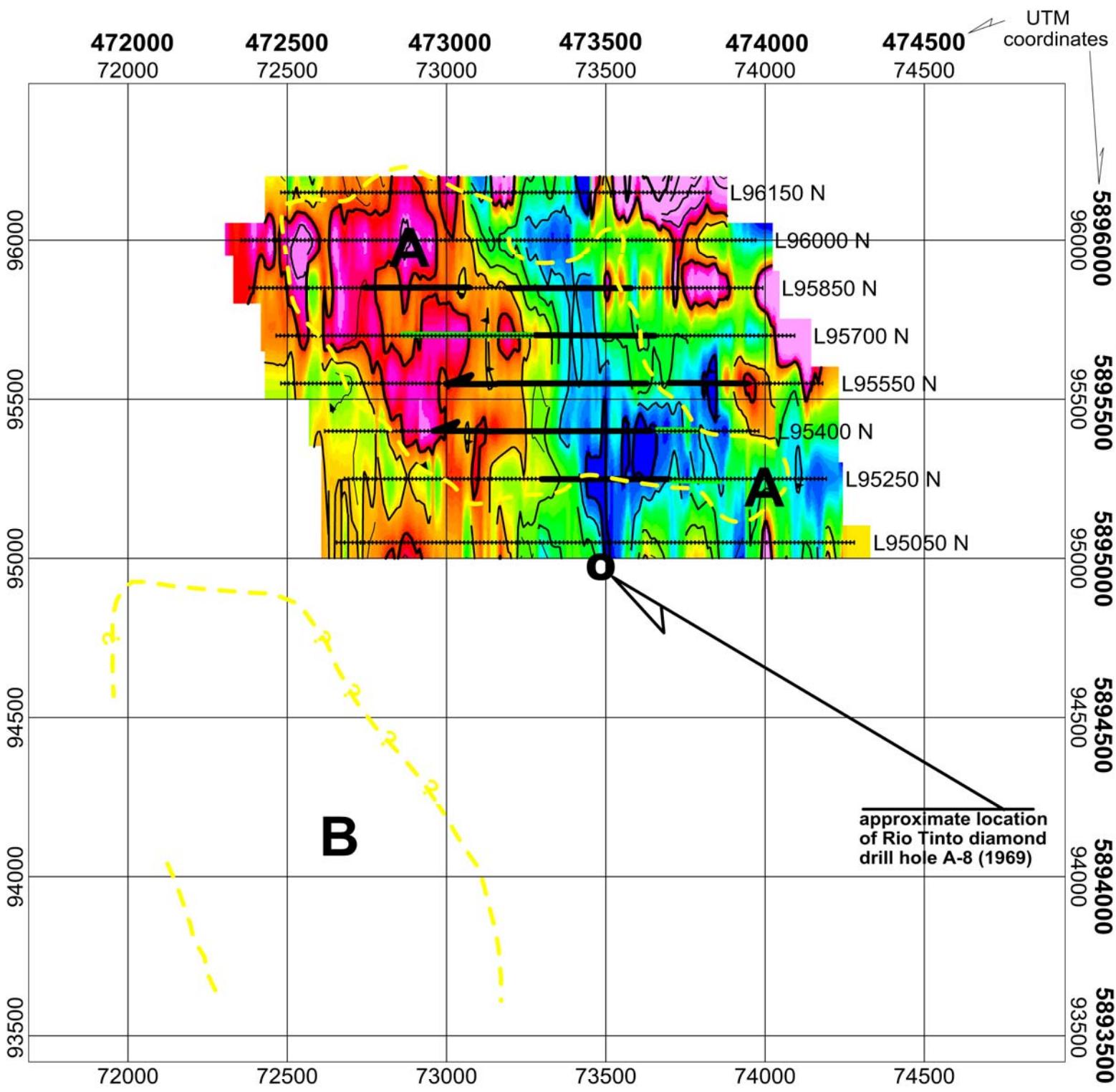


(meters)

WILLIAM E. POOLE MURRAY PROPERTY BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC				
MAGNETIC SURVEY PROFILE PLAN				
DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GP-1B



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- IP Anomaly showing dip
- IP Anomaly at depth
- - MMI Anomaly

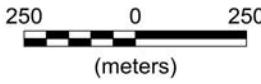
Instrumentation:
Geometrics Magnetometer
Model G-856

Survey Date:
Oct-Nov 2011

Units:
nanoTeslas (nT)

Magnetometer Reading Base:
56,600

Survey Grid Base:
UTM, NAD 83, Zone 10, last 5 digits
eg. line 95250E is UTM northing 5895250
and station 73400 is UTM easting 473400



WILLIAM E. POOLE

MURRAY PROPERTY

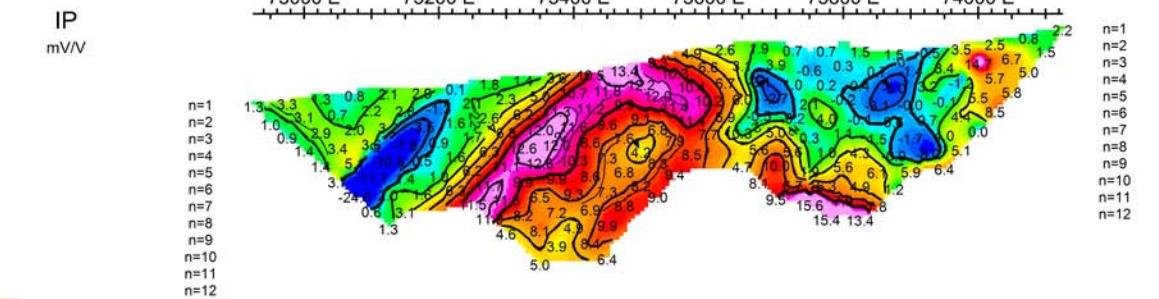
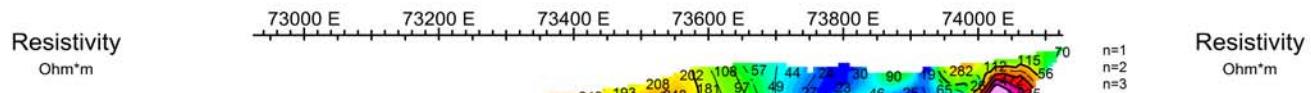
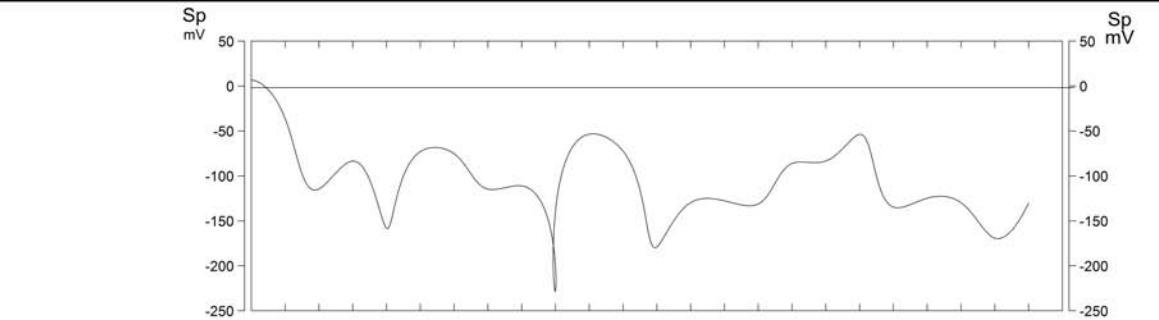
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

**MAGNETIC SURVEY
CONTOUR PLAN**

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/23	NOV '11	GP-1A

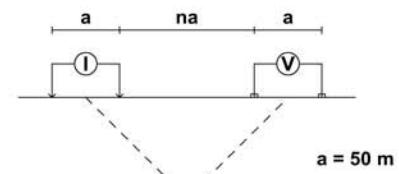


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Pseudo Section Plot

Dipole-Dipole Array



LEGEND:

CONTOUR INTERVALS:

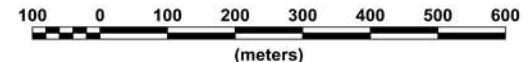
Resistivity: log base 10 ohm-meters
Chargeability (IP): log base 10 ohm-meters

INSTRUMENTATION:

IP Receiver: BRGM Iris Elrec 6
IP Transmitter: BRGM VIP 4000
IP Generator: 6.5 kWatt Honda

IP SURVEY PARAMETERS:

Survey Mode: Time Domain
Array: Dipole-dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration Time: 1600 milliseconds
Charge Cycle: 8 second square wave



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

INDUCED POLARIZATION and RESISTIVITY SURVEYS

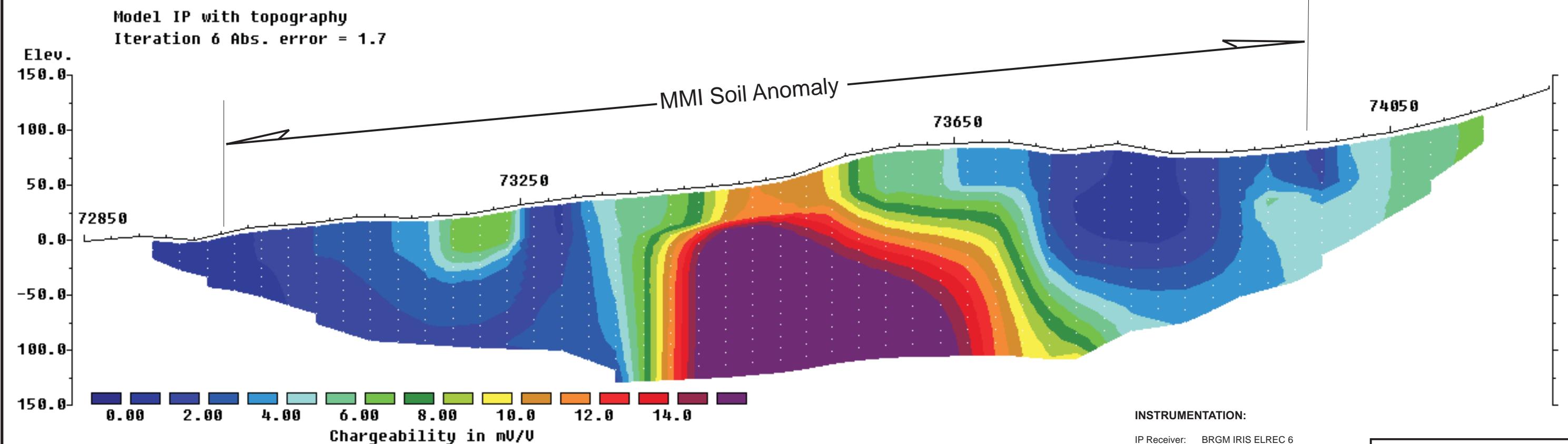
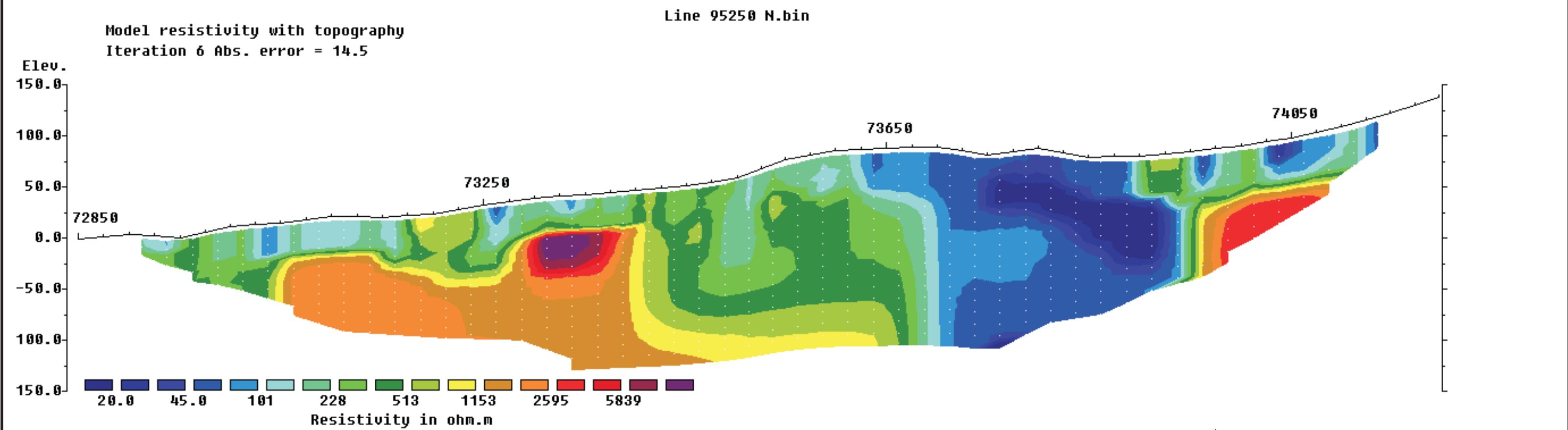
PSEUDO SECTION PLOT

Line 95250N

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/023,024	NOV '11	GP-2A



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Horizontal scale is 22.49 pixels per unit spacing
Vertical exaggeration in model section display = 1.00
First electrode is located at 72850.0 m.
Last electrode is located at 54.0 m.

Unit Electrode Spacing = 25.0 m.

INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6
IP Transmitter: BRGM VIP 4000
IP Generator: HONDA ES 6500

IP SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration: 1600 milliseconds
Charge Cycle: 8 second square wave

WILLIAM E. POOLE

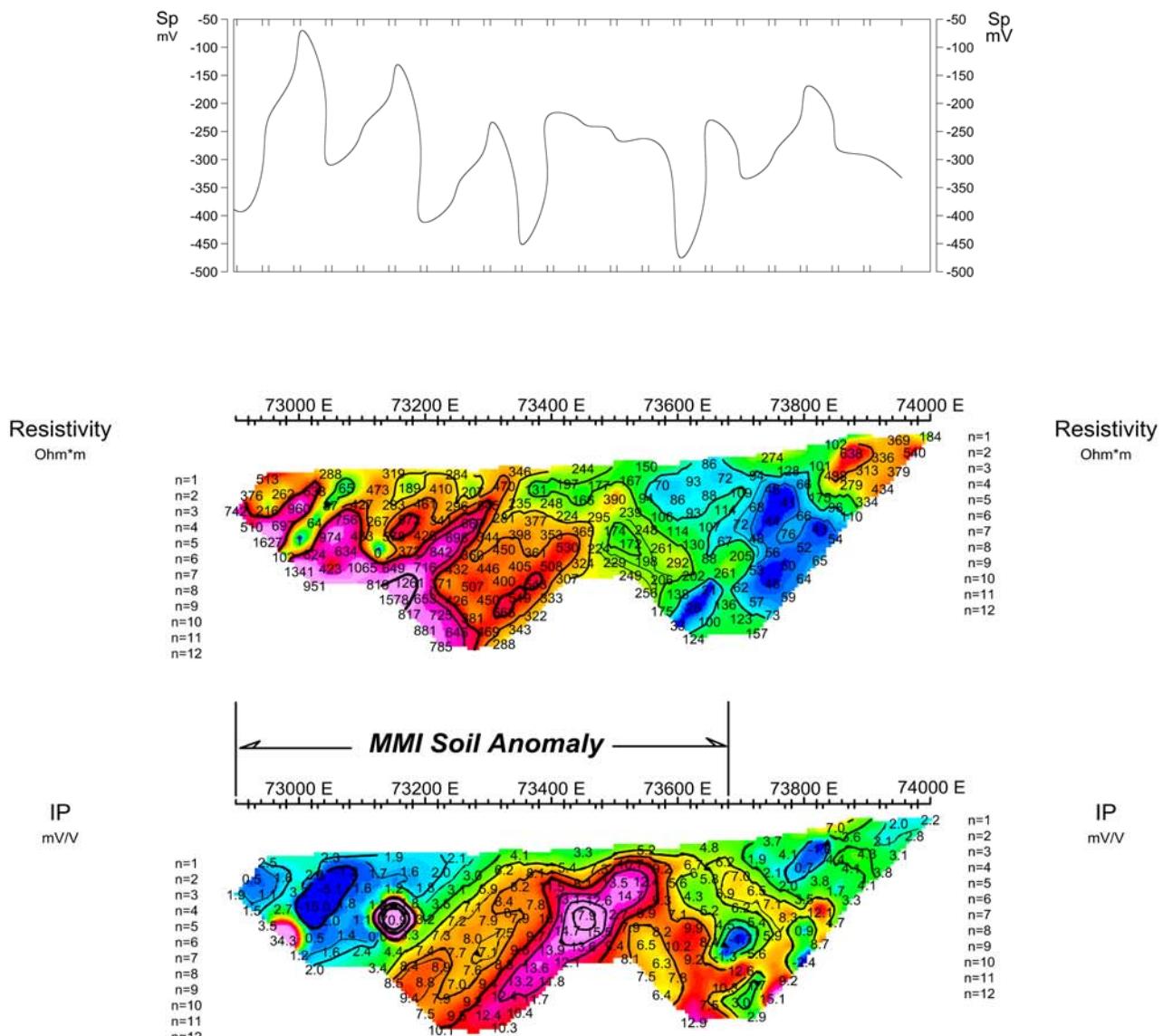
MURRAY PROPERTY
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

IP and RESISTIVITY SURVEYS
GEOTOMO INVERSION
LINE 95250N

DRAWN BY: DM/CM	JOB NO.: 11-21	BCGS: 93G 023,024	DATE: NOV '11	FIG NO.: GP-2B
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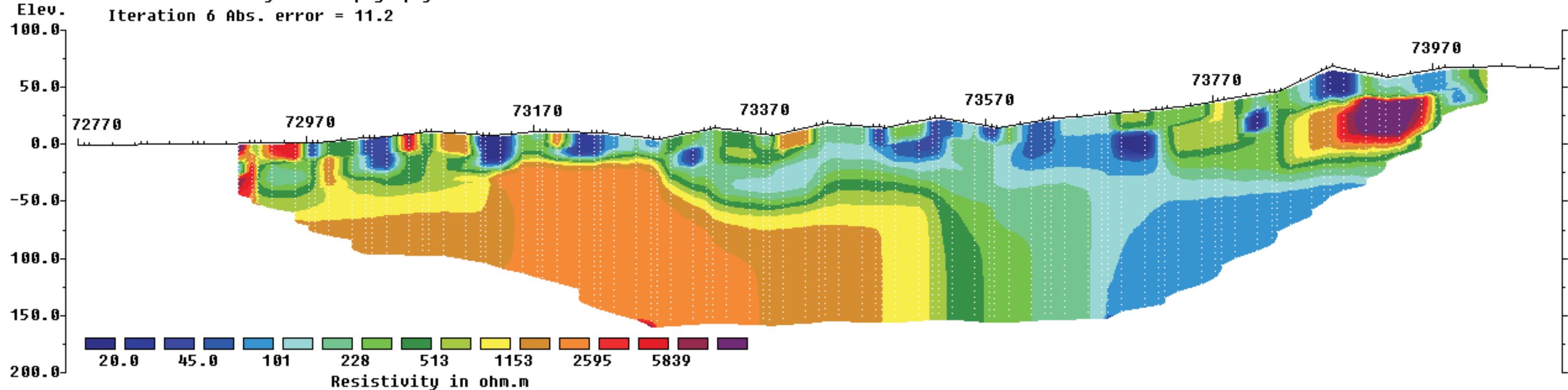
Geotronics Consulting Inc
Surrey B.C.



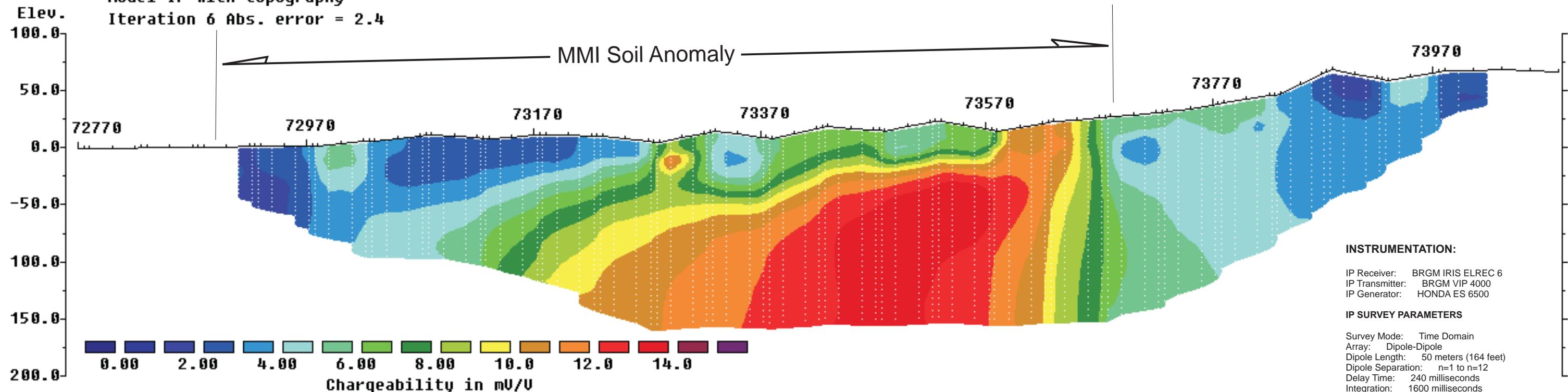
Geotronics Consulting Inc
Surrey B.C.

L95400N.bin

Model resistivity with topography
Iteration 6 Abs. error = 11.2



Model IP with topography
Iteration 6 Abs. error = 2.4



Horizontal scale is 9.25 pixels per unit spacing

Vertical exaggeration in model section display = 1.00

First electrode is located at 72770.0 m.

Last electrode is located at 131.0 m.

Unit Electrode Spacing = 10.0 m.

INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6
IP Transmitter: BRGM VIP 4000
IP Generator: HONDA ES 6500

IP SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration: 1600 milliseconds
Charge Cycle: 8 second square wave

WILLIAM E. POOLE

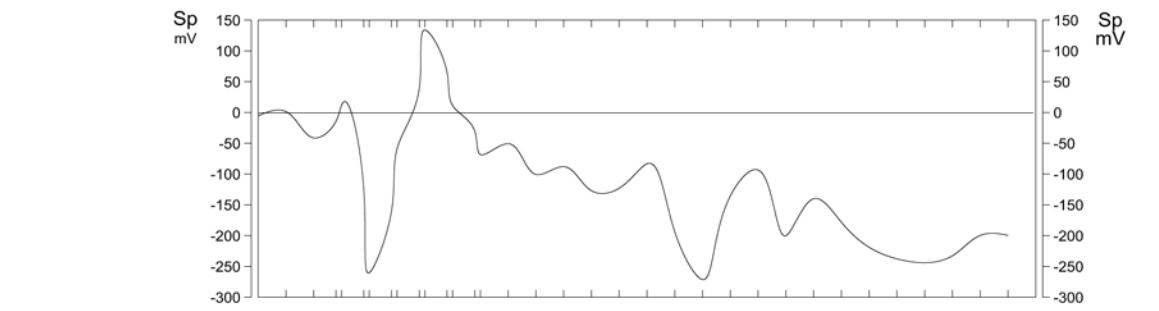
MURRAY PROPERTY
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

IP and RESISTIVITY SURVEYS
GEOTOMO INVERSION
LINE 95400N

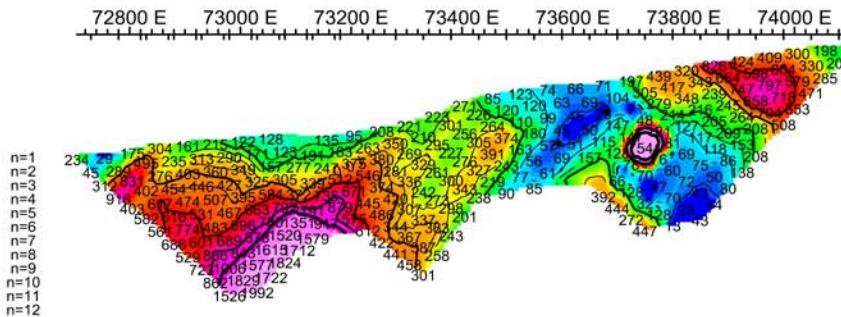
DRAWN BY: DM/CM	JOB NO.: 11-21	BCGS: 93G 023,024	DATE: NOV '11	FIG NO.: GP-3B
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Geotronics Consulting Inc
Surrey B.C.



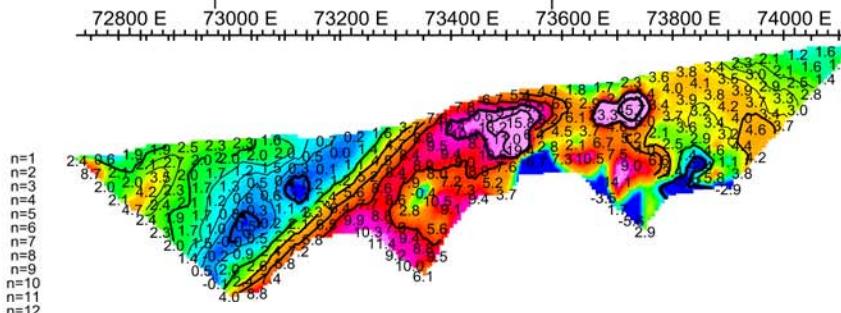
Resistivity
Ohm*m



Resistivity
Ohm*m

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10
n=11
n=12

IP
mV/V

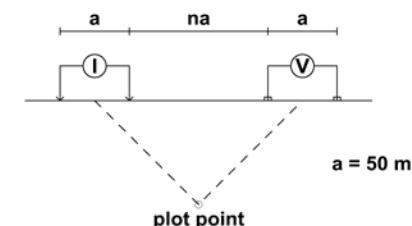


IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10
n=11
n=12

Pseudo Section Plot

Dipole-Dipole Array



LEGEND:

CONTOUR INTERVALS:

Resistivity: log base 10 ohm-meters
Chargeability (IP): log base 10 ohm-meters

INSTRUMENTATION:

IP Receiver: BRGM Iris Elrec 6
IP Transmitter: BRGM VIP 4000
IP Generator: 6.5 kWatt Honda

IP SURVEY PARAMETERS:

Survey Mode: Time Domain
Array: Dipole-dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration Time: 1600 milliseconds
Charge Cycle: 8 second square wave



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

INDUCED POLARIZATION and RESISTIVITY SURVEYS

PSEUDO SECTION PLOT

Line 95550N

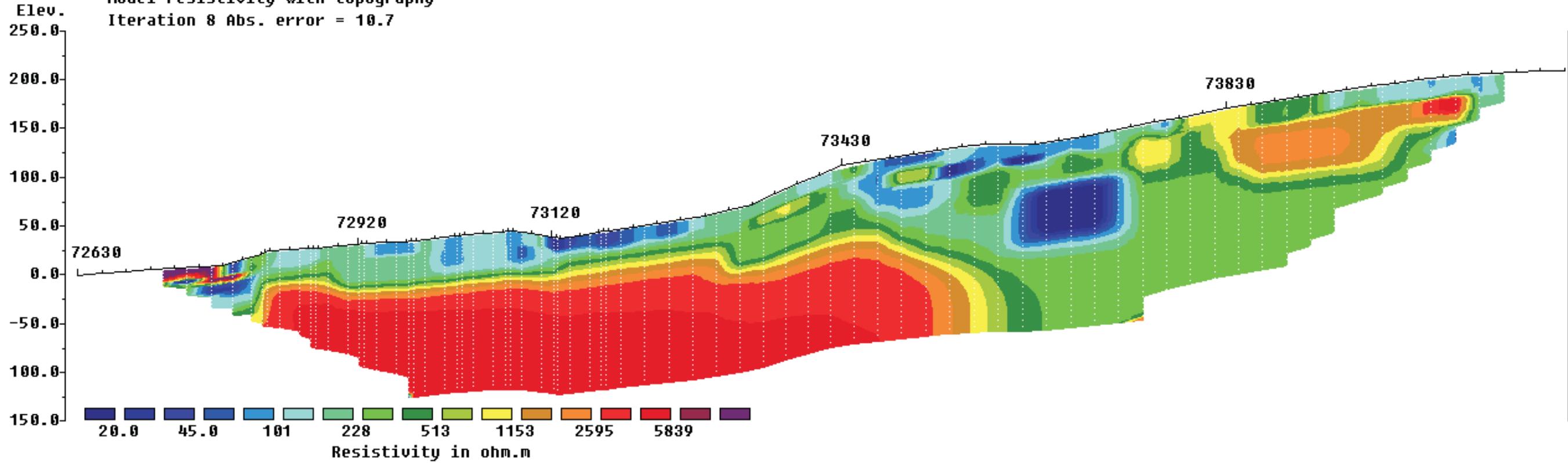
DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/023,024	NOV '11	GP-4A



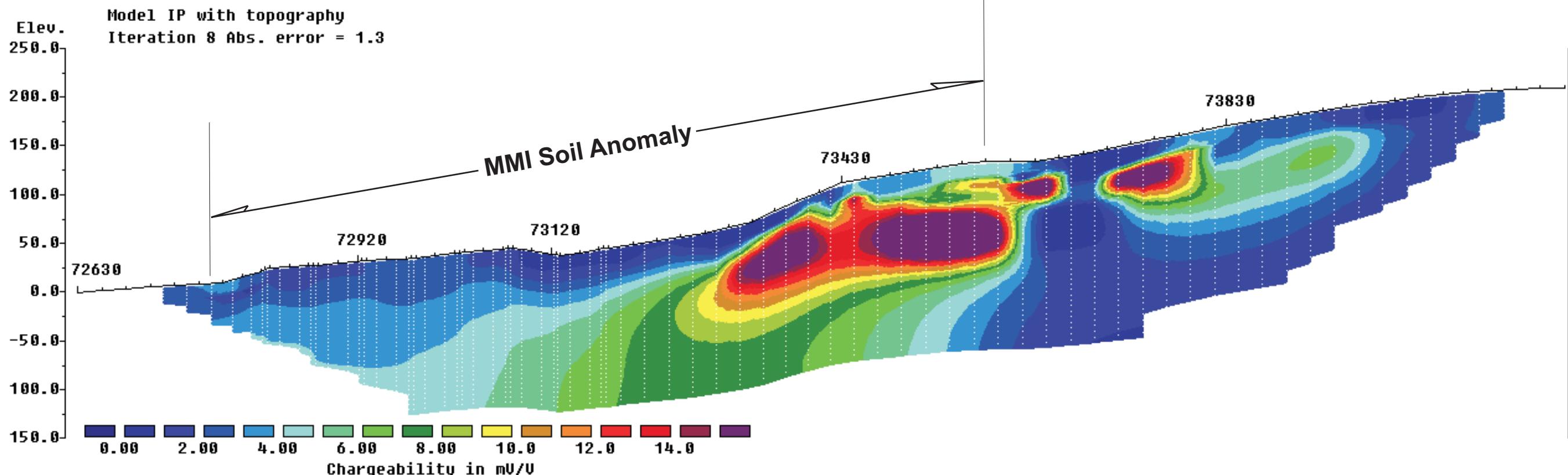
Geotronics Consulting Inc
Surrey B.C.

L95550N.bin

Model resistivity with topography
Iteration 8 Abs. error = 10.7



Model IP with topography
Iteration 8 Abs. error = 1.3



Horizontal scale is 7.85 pixels per unit spacing

Vertical exaggeration in model section display = 1.00

First electrode is located at 72630.0 m.

Last electrode is located at 155.0 m.

Unit Electrode Spacing = 10.0 m.

INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6
IP Transmitter: BRGM VIP 4000
IP Generator: HONDA ES 6500

IP SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration: 1600 milliseconds
Charge Cycle: 8 second square wave

WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

IP and RESISTIVITY SURVEYS

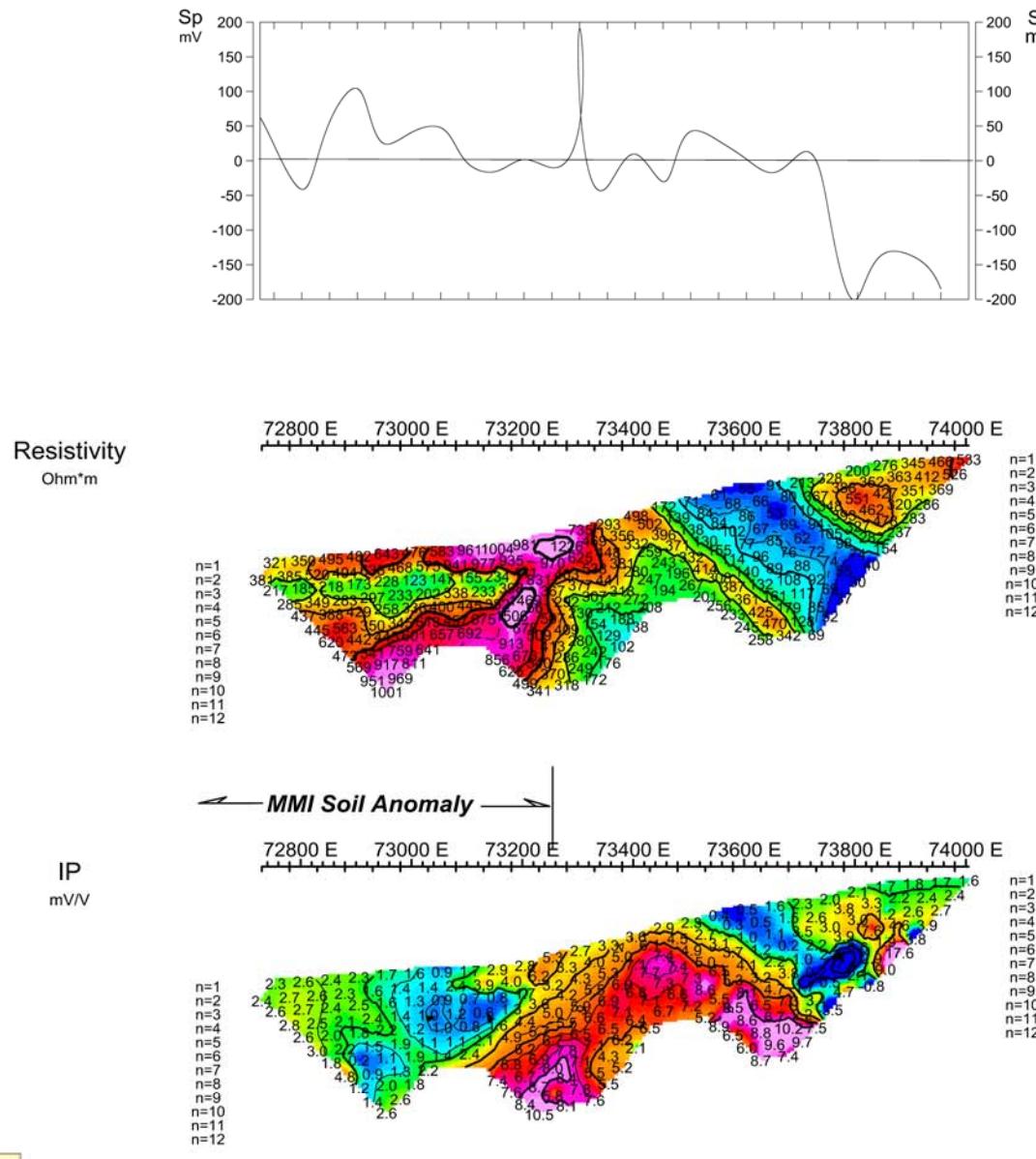
GEOTOMO INVERSION

LINE 95550N

DRAWN BY: DM/CM	JOB NO.: 11-21	BGGS: 93G 023,024	DATE: NOV '11	FIG NO.: GP-4B
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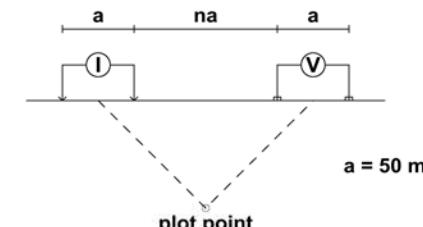


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Pseudo Section Plot

Dipole-Dipole Array



LEGEND:

CONTOUR INTERVALS:

Chargeability (IP): log base 10 ohm-meters

INSTRUMENTATION:

IP Receiver: BRGM Iris Elrec 6
IP Transmitter: BRGM VIP 4000
IP Generator: 6.5 kWatt Honda

IP SURVEY PARAMETERS:

Survey Mode: Time Domain
 Array: Dipole-dipole
 Dipole Length: 50 meters (164 feet)
 Dipole Separation: n=1 to n=12
 Delay Time: 240 milliseconds
 Integration Time: 1600 milliseconds
 Charge Cycle: 8 second square wave



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

INDUCED POLARIZATION and RESISTIVITY SURVEYS

PSEUDO SECTION PLOT
Line 95700N

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
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DGM 11-21 93G/023,024 NOV '11 GP-5A

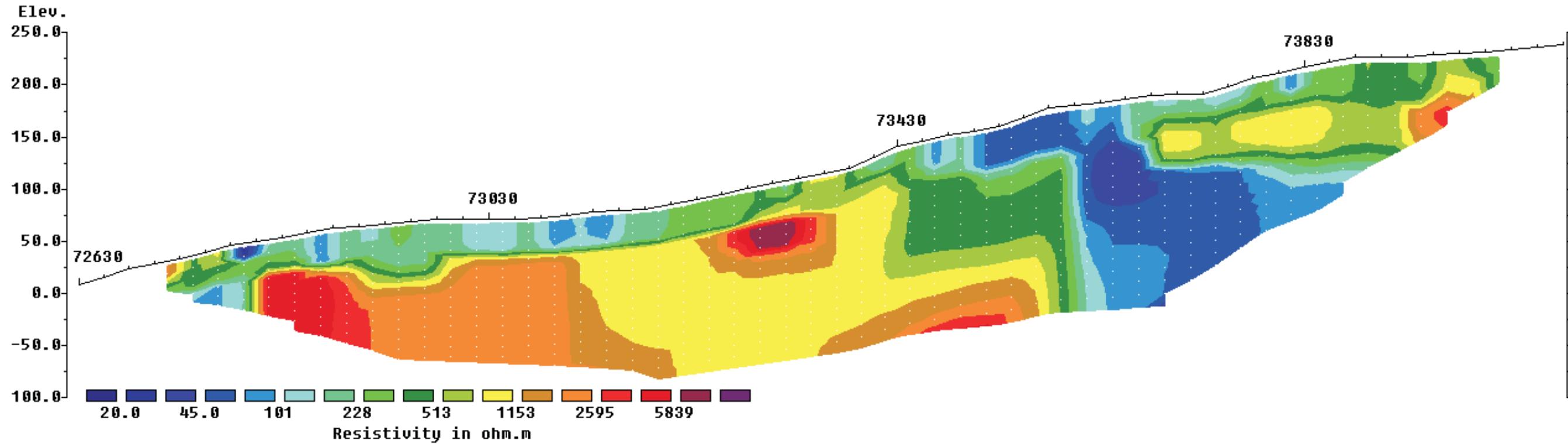
Digitized by srujanika@gmail.com



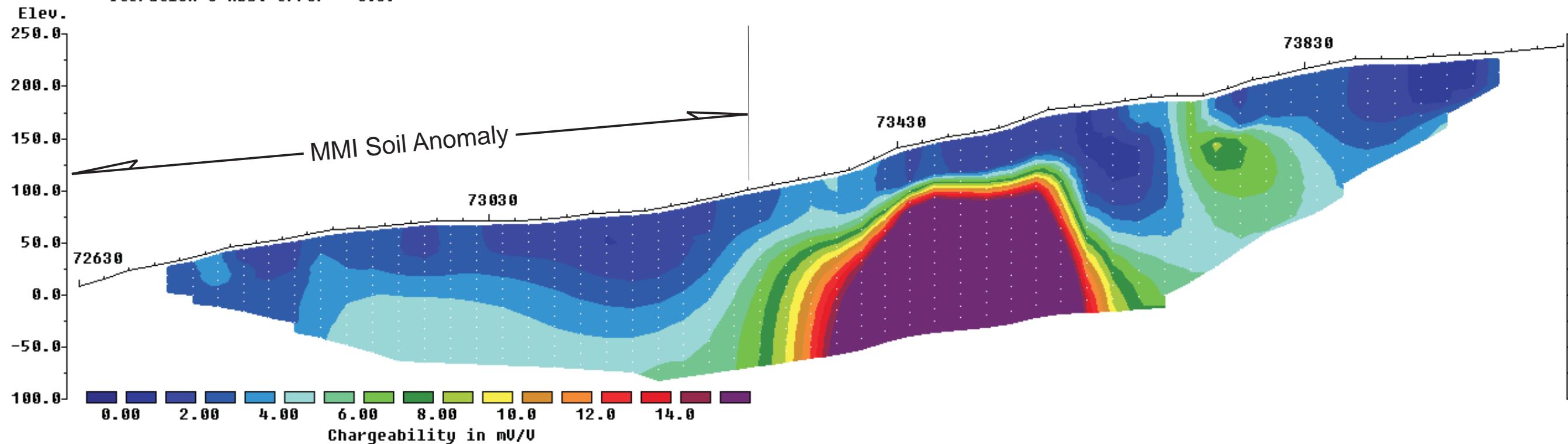
Geotronics Consulting Inc
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L95700.bin

Model resistivity with topography
Iteration 6 Abs. error = 3.1



Model IP with topography
Iteration 6 Abs. error = 0.89



Horizontal scale is 21.06 pixels per unit spacing
Vertical exaggeration in model section display = 1.00
First electrode is located at 72630.0 m.
Last electrode is located at 58.0 m.

INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6
IP Transmitter: BRGM VIP 4000
IP Generator: HONDA ES 6500

IP SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration: 1600 milliseconds
Charge Cycle: 8 second square wave

WILLIAM E. POOLE

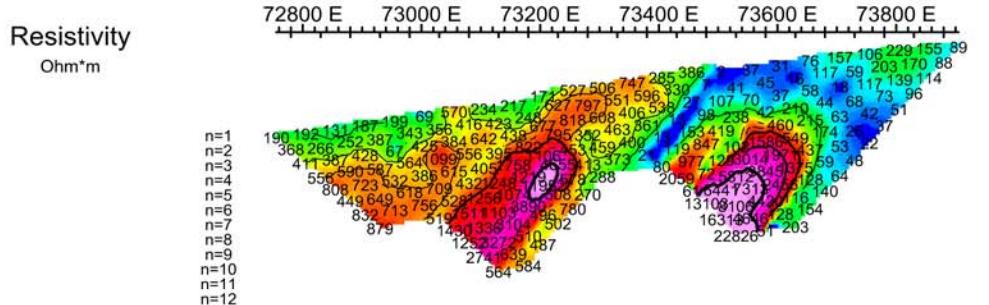
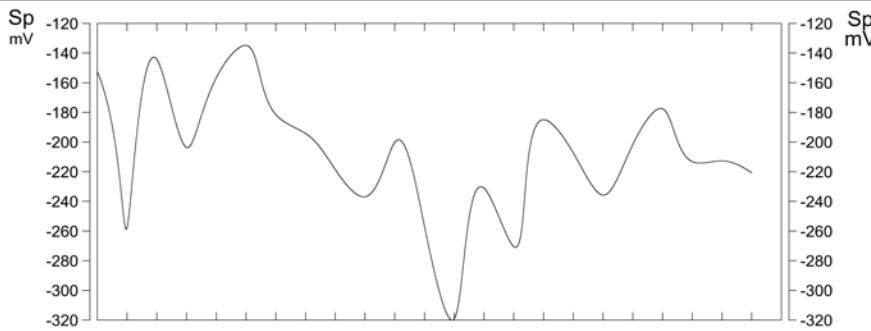
MURRAY PROPERTY
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

IP and RESISTIVITY SURVEYS
GEOTOMO INVERSION
LINE 95700N

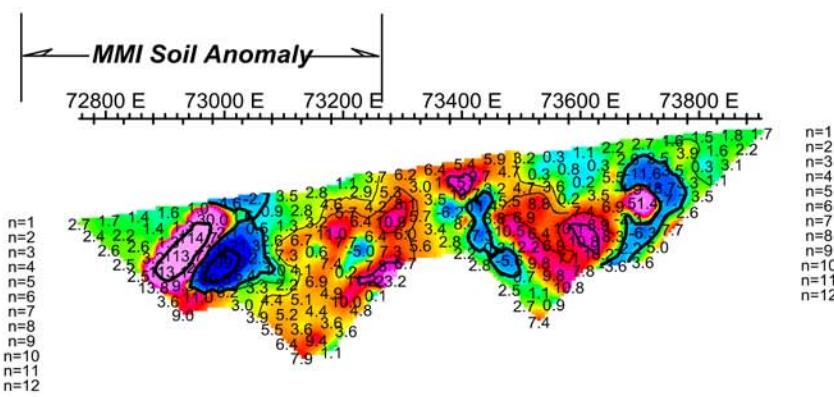
DRAWN BY: DM/CM	JOB NO.: 11-21	BCGS: 93G 023,024	DATE: NOV '11	FIG NO.: GP-5B
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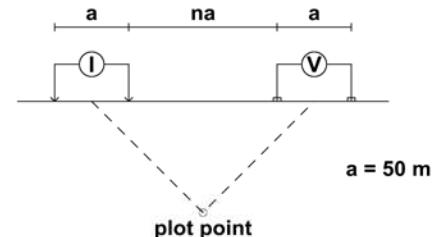
Resistivity
Ohm·m



IP
mV/V

Pseudo Section Plot

Dipole-Dipole Array



LEGEND:

CONTOUR INTERVALS:

Resistivity: log base 10 ohm-meters
Chargeability (IP): log base 10 ohm-meters

INSTRUMENTATION:

IP Receiver: BRGM Iris Elrec 6
IP Transmitter: BRGM VIP 4000
IP Generator: 6.5 kWatt Honda

IP SURVEY PARAMETERS:

Survey Mode: Time Domain
Array: Dipole-dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=12
Delay Time: 240 milliseconds
Integration Time: 1600 milliseconds
Charge Cycle: 8 second square wave



WILLIAM E. POOLE

MURRAY PROPERTY

BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

INDUCED POLARIZATION and RESISTIVITY SURVEYS
PSEUDO SECTION PLOT

Line 95850N

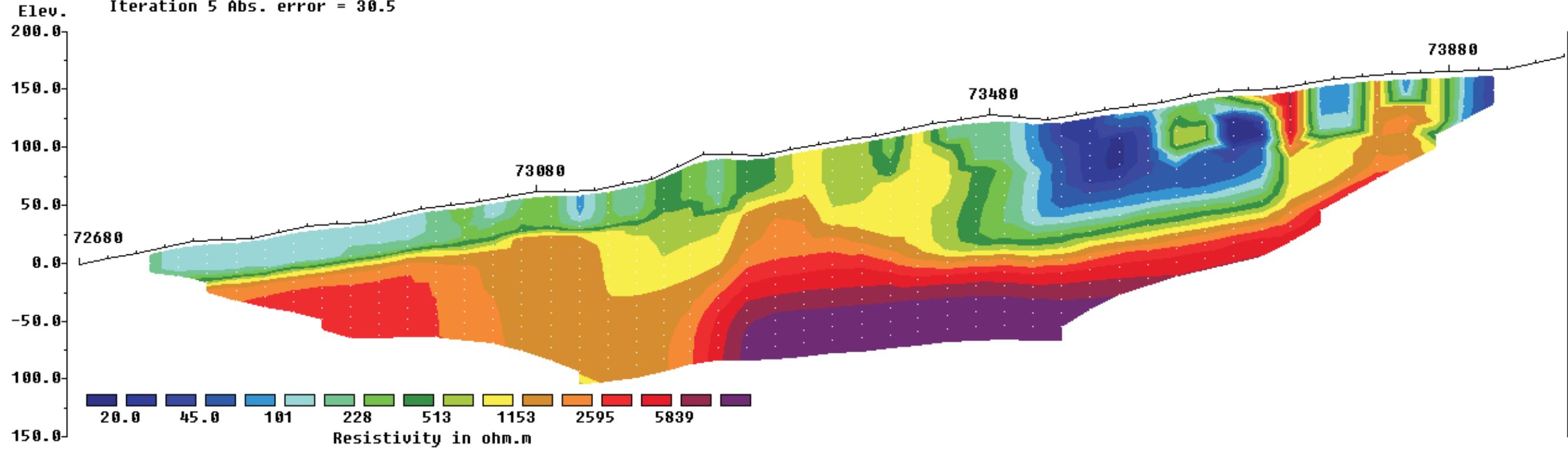
DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG NO.:
DGM	11-21	93G/023,024	NOV '11	GP-6A



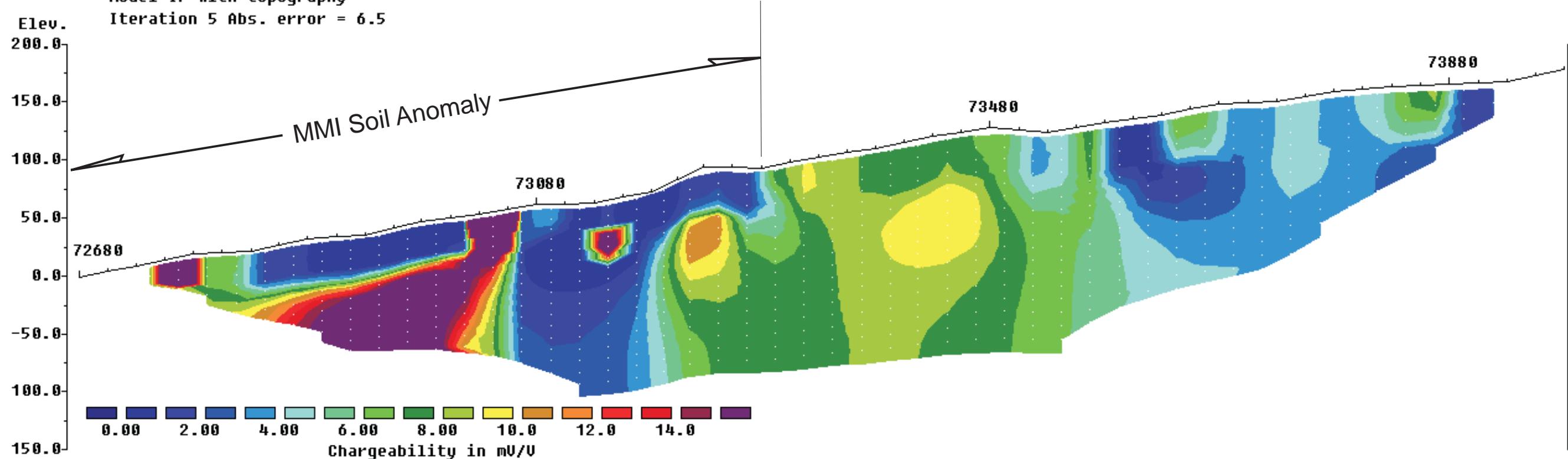
Geotronics Consulting Inc
Surrey B.C.

L95850N.bin

Model resistivity with topography
Iteration 5 Abs. error = 30.5



Model IP with topography
Iteration 5 Abs. error = 6.5



Horizontal scale is 23.41 pixels per unit spacing

Vertical exaggeration in model section display = 1.00

First electrode is located at 72680.0 m.

Last electrode is located at 52.0 m.

INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6
IP Transmitter: BRGM VIP 4000
IP Generator: HONDA ES 6500

IP SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 meters (164 feet)
Dipole Separation: n=1 to n=10
Delay Time: 240 milliseconds
Integration: 1600 milliseconds
Charge Cycle: 8 second square wave

WILLIAM E. POOLE

MURRAY PROPERTY
BLACKWATER RIVER, QUESNEL AREA, CARIBOO MD, BC

IP and RESISTIVITY SURVEYS
GEOTOMO INVERSION
LINE 95850N

DRAWN BY: DM/CM	JOB NO.: 11-21	BCGS: 93G 023,024	DATE: NOV '11	FIG NO.: GP-6B
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This document is appended to 'Murray Property Exploration Report, December 16, 2011'

Murray Claims MMI Soil Descriptors

Sample No	Eastings	Northings	Depth (cm)	Colour	Texture	Comments		
Line 1								
53601	471880	5896294	10 to 25	Grey Brown	Clay Loam		Gently sloping	Burnt timber
53602	471980	5896294	10 to 25	Grey Brown	Sandy Loam		Gently sloping	Burnt timber
53603	472080	5896294	10 to 25	Brown	Sandy Loam		Gently sloping	Burnt timber
53604	472180	5896294	10 to 25	Brown	Clay Loam		Gently sloping	Burnt timber
53605	472280	5896294	10 to 25	Grey Brown	Sandy Loam	Fresh eradic boulder field	Gently sloping	Burnt timber
53606	472380	5896294	10 to 25	Grey Brown	Sandy Loam	Leucocratic granitic outcrop	Gently sloping	Burnt timber
53607	472480	5896294	10 to 25	Grey Brown	Sandy Loam		Gently sloping	Burnt timber
53608	472580	5896294	10 to 25	Grey Brown	Clay Loam	wet	Gently sloping	Burnt timber
53609	472680	5896294	10 to 25	Grey Brown	Sandy Loam	wet - moved away from creek	Gently sloping	Burnt timber
53610	472780	5896294	10 to 25	Grey	Sandy Loam	Seepage, Granitic boulder eradics	Gently sloping	Burnt timber
53611	472880	5896294	10 to 25	Light Brown	Loam		35% slope	Burnt timber
53612	472980	5896294	10 to 25	Brown	Clay Loam	Granodiorite porphyry subcrop	Bottom of slope	Burnt timber
53613	473080	5896294	10 to 25	Brown	Loam	Granodiorite porphyry subcrop	Slope 30% west	Burnt timber
53614	473180	5896294	10 to 25	Brown	Loam	Granodiorite porphyry subcrop	Slope 30% west	Burnt timber
53615	473280	5896294	10 to 25	Brown	Clay Loam	Porphyry till	North slope of gully	Burnt timber
53616	473380	5896294	10 to 25	Brown	Loam	Porphyry subcrop		Burnt timber
53617	473480	5896294	10 to 25	Brown	Sandy Loam	Young volcanic outcrop		Burnt timber
53618	473580	5896294	10 to 25	Brown	Sandy Loam		Slope 20% SW	Burnt timber
53619	473680	5896294	10 to 25	Grey	Loam	Slope 20 to 30% Fresh eradic boulders		Burnt timber
Line 2								
53620	471880	5896144	10 to 25	Grey Brown	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53621	471980	5896144	10 to 25	Grey Brown	Clay Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53622	472080	5896144	10 to 25	Grey Brown	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53623	472180	5896144	10 to 25	Grey Brown	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53624	472280	5896144	10 to 25	Brown	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53625	472380	5896144	10 to 25	Brown	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53626	472480	5896144	10 to 25	Grey Brown	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53627	472580	5896144	10 to 25	Grey Brown	Sandy Loam	Fresh eradic granitic boulders, possible alluvium	Gently sloping	Burnt timber
53628	472680	5896144	10 to 25	Grey Brown	Clay Loam	Fresh eradic granitic boulders, possible alluvium	Gently sloping	Burnt timber
53629	472780	5896144	10 to 25	Grey	Sandy Loam	Fresh eradic granitic boulders	Gently sloping	Burnt timber
53630	472880	5896144	10 to 25	Light Brown	Loam	Shallow to porphyry subcrop		Burnt timber
53631	472980	5896144	10 to 25	Light Brown	Loam	Shallow to porphyry subcrop		Burnt timber
53632	473080	5896144	10 to 25	Brown	Sandy Loam	Granodiorite porphyry subcrop	Slope 20% West	Burnt timber
53633	473180	5896144	10 to 25	Brown	Loam	Located on side hill of gully	Slope 20% West	Burnt timber
53634	473280	5896144	10 to 25	Grey	Loam		Slope 20% SW	Burnt timber
53635	473380	5896144	10 to 25	Brown	Loam	Angular porphyry rock		Burnt timber
53636	473480	5896144	10 to 25	Red Brown	Loam	Possible porphyry subcrop		Burnt timber
53637	473580	5896144	10 to 25	Light Brown	Sandy Loam	Toe of slope near swamp		Burnt timber
53638	473680	5896144	10 to 25	Light Grey	Sandy Loam		Gently sloping west	Burnt timber
53639	473780	5896144	10 to 25	Light Brown	Sandy Loam		Gently sloping west	Burnt timber
Line 3								
53701	471880	5895994	10 to 25	Grey Brown	Sandy Loam			Burnt timber

This document is appended to 'Murray Property Exploration Report, December 16, 2011'

Murray Claims MMI Soil Descriptors

Sample	Eastings	Northings	Depth	Colour	Texture		Comments	
53702	471980	5895994	10 to 25	Grey Brown	Loam			Burnt timber
53703	472080	5895994	10 to 25	Orange Brown	Sandy Loam			Burnt timber
53704	472180	5895994	10 to 25	Grey Brown	Sandy Loam			Burnt timber
53705	472280	5895994	10 to 25	Grey Brown	Sandy Loam			Burnt timber
53706	472380	5895994	10 to 25	Brown	Sandy Loam			Burnt timber
53707	472480	5895994	10 to 25	Brown	Sandy Loam	Possible alluvial fan		Burnt timber
53708	472580	5895994	10 to 25	Brown	Sandy Loam	Possible alluvial fan		Burnt timber
53709	472680	5895994	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53710	472780	5895994	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53711	472880	5895994	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53712	472980	5895994	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53713	473080	5895994	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53714	473180	5895994	10 to 25	Brown	Sandy Loam	Possible porphyry subcrop		Burnt timber
53715	473280	5895994	10 to 25	Light Brown	Sandy Loam			Burnt timber
53716	473380	5895994	10 to 25	Light Brown	Sandy Loam	West of creek	Slope 20%	Burnt timber
53717	473480	5895994	10 to 25	Light Brown	Silty Clay Loam			Burnt timber
53718	473580	5895994	10 to 25	Grey	Loam			Burnt timber
53719	473680	5895994	10 to 25	Grey	Clay Loam	Edge of logging		Burnt timber
53720	473780	5895994	10 to 25	Grey	Loam	50 m inside logging		
53721	473880	5895994	10 to 25	Grey	Silty Clay Loam		Slope 20%	Logged, burnt and disc trenched
Line 4								
53523	471880	5895844	10 to 25	Brown	Silty Clay Loam		Flat to gently sloping	Burnt timber
53524	471980	5895844	10 to 25	Brown	Loam		Flat to gently sloping	Burnt timber
53525	472080	5895844	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53526	472180	5895844	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53527	472280	5895844	10 to 25	Brown	Sandy Loam	Fresh leucocratic bedrock	Flat to gently sloping	Burnt timber
53528	472380	5895844	10 to 25	Brown	Sandy Loam	Fresh leucocratic bedrock	Flat to gently sloping	Burnt timber
53529	472480	5895844	10 to 25	Brown	Sandy Loam		Flat to gently sloping	Burnt timber
53530	472580	5895844	10 to 25	Grey	Sandy Loam	Fresh leucocratic subcrop- bottom of gully	Flat to gently sloping	Burnt timber
53531	472680	5895844	10 to 25	Grey	Sandy Loam	Fresh boulder	Flat to gently sloping	Burnt timber
53532	472780	5895844	10 to 25	Grey	Sandy Loam	Fresh boulder	Flat to gently sloping	Burnt timber
53533	472880	5895844	10 to 25	Light Brown	Loam	Fresh boulder	Gently sloping	Burnt timber
53534	472980	5895844	10 to 25	Light Brown	Sandy Loam	Fresh boulder	Gently sloping	Burnt timber
53535	473080	5895844	10 to 25	Brown	Sandy Loam	Granodiorite subcrop	20% slope	Burnt timber
53536	473180	5895844	10 to 25	Grey	Loam		20% slope	Burnt timber
53537	473280	5895844	10 to 25	Grey	Loam	Crossed exploration trail	20% slope	Burnt timber
53538	473380	5895844	10 to 25	Brown	Sandy Loam	Granodiorite porphyry subcrop	20% slope	Burnt timber
53539	473480	5895844	10 to 25	Brown	Sandy Loam	Located between 2 gullies		Burnt timber
53540	473580	5895844	10 to 25	Grey	Loam	Granodiorite porphyry subcrop		Logged/Disk trenched/Planted
53541	473680	5895844	10 to 25	Light Brown	Loam		Slope 15 to 20%	Logged/Disk trenched/Planted
53542	473780	5895844	10 to 25	Light Brown	Sandy Loam		Slope 15 to 20%	Logged/Disk trenched/Planted
53543	473880	5895844	10 to 25	Light Brown	Silty Clay Loam		Slope 15 to 20%	Logged/Disk trenched/Planted
Line 5								
53501	471880	5895694	10 to 25	Grey Brown	Sandy Loam	Boulder morainal		Burnt timber

This document is appended to 'Murray Property Exploration Report, December 16, 2011'

Murray Claims MMI Soil Descriptors

Sample	Eastings	Northings	Depth	Colour	Texture		Comments	
53502	471980	5895694	10 to 25	Grey Brown	Sandy Loam	Wet area		Burnt timber
53503	472080	5895694	10 to 25	Grey Brown	Sandy Loam	Wet area		Burnt timber
53504	472180	5895694	10 to 25	Grey Brown	Sandy Loam	Fresh boulder eradics		Burnt timber
53505	472280	5895694	10 to 25	Grey Brown	Clay Loam	Fresh boulder eradics		Burnt timber
53506	472380	5895694	10 to 25	Grey Brown	Clay Loam	Fresh boulder eradics		Burnt timber
53507	472480	5895694	10 to 25	Grey Brown	Clay Loam	Porphyry till		Burnt timber
53508	472580	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53509	472680	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53510	472780	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53511	472880	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53512	472980	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53513	473080	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53514	473180	5895694	10 to 25	Grey Brown	Sandy Loam	Porphyry till		Burnt timber
53515	473280	5895694	10 to 25	Grey Brown	Loam	Porphyry till		Burnt timber
53516	473380	5895694	10 to 25	Grey	Sandy Loam	Porphyry till		Burnt timber
53517	473480	5895694	10 to 25	Grey	Clay Loam	Fresh boulder morainal		Burnt timber
53518	473580	5895694	10 to 25	Grey	Silty Loam	Fresh boulder morainal		Burnt timber
53519	473680	5895694	10 to 25	Grey	Silty Loam	Fresh boulder morainal		Burnt timber
53520	473780	5895694	10 to 25	Grey Brown	Sandy Loam	Boulder morainal		Logged, disc trenched
53521	473880	5895694	10 to 25	Brown	Sandy Loam	Boulder morainal		
53522	473980	5895694	10 to 25	Grey Brown	Sandy Loam	Boulder morainal		
Line 6								
53823	471880	5895544	10 to 25	Brown	Loam	Granitic till		Burnt Timber
53824	471980	5895544	10 to 25	Black	Clay	Swampy lacustrine		Burnt Timber
Deleted	472080	5895544	10 to 25			Swamp		
53826	472180	5895544	10 to 25	Grey	Loam		Hummocky	Burnt Timber
53827	472280	5895544	10 to 25	Brown	Loam		Hummocky	Burnt Timber
53828	472380	5895544	10 to 25	Brown	Loam		Hummocky	
53829	472480	5895544	10 to 25	Brown	Loam		Hummocky	Edge of logging
53830	472580	5895544	10 to 25	Light Brown	Loam		Hummocky	Burnt timber
53831	472680	5895544	10 to 25	Brown	Loam		Slopes less than 15%	Burnt timber
53832	472780	5895544	10 to 25	Brown	Loam		Slopes less than 15%	Burnt timber
53833	472880	5895544	10 to 25	Brown	Loam		Slopes less than 15%	Burnt timber
53834	472980	5895544	10 to 25	Brown	Loam		Slopes less than 15%	Burnt timber
53835	473080	5895544	10 to 25	Grey	Loam		Slope 15 to 20%	Burnt timber
53836	473180	5895544	10 to 25	Grey	Loam		Slope 15 to 20%	Burnt timber
53837	473280	5895544	10 to 25	Grey	Loam		Slope 15 to 20%	Burnt timber
53838	473380	5895544	10 to 25	Light Brown	Loam		Slope 15 to 20%	Burnt timber
53839	473480	5895544	10 to 25	Light Brown	Silty Loam	Porphyry till	Slope 0 to 15%	Burnt timber
53840	473580	5895544	10 to 25	Light Brown	Silty Loam	Porphyry till	Slope 0 to 15%	Burnt timber
53841	473680	5895544	10 to 25	Light Brown	Loam	Porphyry till	Slope 15 to 30%	Burnt timber
53842	473780	5895544	10 to 25	Light Brown	Loam	Porphyry till	Slope 15 to 30%	Burnt timber
53843	473880	5895544	10 to 25	Light Brown	Loam	Boulder morainal	Slope 15 to 30%	Burnt timber
53844	473980	5895544	10 to 25	Light Brown	Loam	Boulder morainal	Slope 15 to 30%	Logged, disc trenched

This document is appended to 'Murray Property Exploration Report, December 16, 2011'

Murray Claims MMI Soil Descriptors

Sample	Eastings	Northings	Depth	Colour	Texture		Comments	
			10 to 25	Light Brown	Loam	Boulder morainal	Slope 15 to 30%	Logged, disc trenched
53845	474080	5895544	10 to 25					
Line 7								
53801	471880	5895394	10 to 25	Grey	Clay	Edge of swamp		Burnt timber
Deleted	471980	5895394	10 to 25	Grey	Swamp	Nil sample		Burnt timber
53803	472080	5895394	10 to 25	Brown	Silty Loam	Stony, glacial fluvial		Burnt timber
53804	472180	5895394	10 to 25	Brown	Loam	Morainal	Gently sloping	Burnt timber
Deleted	472280	5895394	10 to 25		Swamp	Nil sample		Burnt timber
53806	472380	5895394	10 to 25	Grey	Loam	Morainal	Gently sloping	Burnt timber
53807	472480	5895394	10 to 25	Grey	Loam	Morainal	Gently sloping	Burnt timber
53808	472580	5895394	10 to 25	Brown	Sandy Loam	Morainal	Gently sloping	Burnt timber
Deleted	472680	5895394	10 to 25		Rd/Landing	Nil sample		Landing
53810	472780	5895394	10 to 25	Brown	Silty Loam	Moved from road		Burnt timber
53811	472880	5895394	10 to 25	Light Brown	Loam	Morainal	Gently sloping	Burnt timber
53812	472980	5895394	10 to 25	Grey	Silty Loam	Depression - possibly alluvial		Burnt timber
53813	473080	5895394	10 to 25	Grey	Loam	Seepage , east of road		Burnt timber
53814	473180	5895394	10 to 25	Brown	Sandy Loam			Burnt timber
53815	473280	5895394	10 to 25	Brown	Loam	Alluvial		Burnt timber
53816	473380	5895394	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53817	473480	5895394	10 to 25	Grey	Silty Loam	Morainal		Burnt timber
53818	473580	5895394	10 to 25	Grey	Loam	Morainal		Burnt timber
53819	473680	5895394	10 to 25	Grey	Loam	Seepage	Bottom of Gully	Burnt timber
53820	473780	5895394	10 to 25	Grey	Loam	Morainal	South of road	Burnt timber
53821	473880	5895394	10 to 25	Grey	Loam	Morainal		Burnt timber
53822	473980	5895394	10 to 25	Grey	Loam	Morainal		Burnt timber
Line 8								
53498	471880	5895244	10 to 25	Grey	Clay	Swampy		Burnt timber
53497	471980	5895244	10 to 25	Grey	Clay	Swampy		Burnt timber
53496	472080	5895244	10 to 25	Grey	Silty Loam	Moist		Burnt timber
53495	472180	5895244	10 to 25	Grey	Clay Loam	Organics - moved away from swamp		Burnt timber
53494	472280	5895244	10 to 25	Brown	Clay Loam	Moist		Burnt timber
53493	472380	5895244	10 to 25	Grey	Clay Loam	Morainal		Burnt timber
53492	472480	5895244	10 to 25	Grey Brown	Loam	Morainal		Burnt timber
53491	472580	5895244	10 to 25	Brown	Loam	Morainal		Burnt timber
53490	472680	5895244	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53489	472780	5895244	10 to 25	Light Brown	Sandy Loam	Morainal		Burnt timber
53488	472880	5895244	10 to 25	Light Brown	Sandy Loam	Morainal	Located north of road	Burnt timber
53487	472980	5895244	10 to 25	Brown	Sandy Loam	Morainal	Located south of road	Burnt timber
53486	473080	5895244	10 to 25	Brown		Morainal		Burnt timber
53485	473180	5895244	10 to 25	Brown		Morainal		Burnt timber
53484	473280	5895244	10 to 25	Brown		Morainal		Burnt timber
53483	473380	5895244	10 to 25	Brown		Between gullies		Burnt timber
53482	473480	5895244	10 to 25	Brown	Sandy Loam	Granodiorite porphyry colluviums		Burnt timber
53481	473580	5895244	10 to 25	Brown	Silty Clay Loam	Granodiorite porphyry colluviums		Burnt timber
53480	473680	5895244	10 to 25	Brown	Loam	Top of gully - rolling		Burnt timber

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Murray Claims MMI Soil Descriptors

Sample	Eastings	Northings	Depth	Colour	Texture		Comments	
53479	473780	5895244	10 to 25	Brown	Sandy Loam	Rolling broken terrain		Burnt timber
53478	473880	5895244	10 to 25	Brown	Loam	Boulder morainal		Burnt timber
53477	473980	5895244	10 to 25	Grey	Loam	Boulder morainal		Burnt timber
53476	474080	5895244	10 to 25	Grey	Loam	Boulder morainal		Burnt timber
53499	474180	5895244	10 to 25	Grey	Loam	Boulder morainal		Burnt timber
Line 9								
53451	471880	5895044	10 to 25	Grey	Clay Loam	Flat and wet		Burnt timber
53452	471980	5895044	10 to 25	Grey	Sandy Loam	Flat and wet		Burnt timber
53453	472080	5895044	10 to 25	Brown	Sandy Loam	morainal	Rolling	Burnt timber
53454	472180	5895044	10 to 25	Brown	Sandy Loam	morainal	Rolling	Burnt timber
53455	472280	5895044	10 to 25	Brown	Silty Clay Loam	morainal	Rolling	Burnt timber
53456	472380	5895044	10 to 25	Grey	Gravelly Loam	morainal	Rolling	Burnt timber
53457	472480	5895044	10 to 25	Light Grey	Loam	Granitic stony, morainal		Burnt timber
53458	472580	5895044	10 to 25	Brown	Sandy Loam	Granitic stony		Burnt timber
53459	472680	5895044	10 to 25	Brown	Loam	Fresh boulder morainal		Burnt timber
53460	472780	5895044	10 to 25	Brown	Loam	Fresh boulder morainal		Burnt timber
53461	472880	5895044	10 to 25	Brown	Sandy Stony Loam	Fresh boulder morainal		Burnt timber
53462	472980	5895044	10 to 25	Brown	Sandy Loam	Fresh boulder morainal		Burnt timber
53463	473080	5895044	10 to 25	Grey	Loam	Crossed narrow swamp		Burnt timber
53464	473180	5895044	10 to 25	Grey	Loam	Morainal	Hummocky	Burnt timber
53465	473280	5895044	10 to 25	Grey	Loam	Morainal	Hummocky	Burnt timber
53466	473380	5895044	10 to 25	Light Brown	Loam	Morainal, boulder		Burnt timber
53467	473480	5895044	10 to 25	Brown	Loam	Morainal, boulder		Burnt timber
53468	473580	5895044	10 to 25	Brown	Sandy Loam	Edge of exploration trail		Burnt timber
53469	473680	5895044	10 to 25	Brown	Silty Loam			Burnt timber
53470	473780	5895044	10 to 25	Grey	Loam	Edge of logging		Burnt timber
53471	473880	5895044	10 to 25	Grey	Loam	Boulder morainal		
53472	473980	5895044	10 to 25	Brown	Sandy Loam	Boulder morainal		
53473	474080	5895044	10 to 25	Brown	Sandy Loam	Boulder morainal		
53474	474180	5895044	10 to 25	Brown	Silty Loam	Boulder morainal		
53475	474280	5895044	10 to 25	Brown	Silty Loam	Boulder morainal		
Line 10								
53571	471880	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53572	471980	5894844	10 to 25	Brown	Silty Loam	Morainal		Burnt timber
53573	472080	5894844	10 to 25	Brown	Clay Loam	Morainal		Burnt timber
53574	472180	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53575	472280	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53576	472380	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53577	472480	5894844	10 to 25	Brown	Clay Loam	Morainal		Burnt timber
53578	472580	5894844	10 to 25	Brown	Sandy Loam	Alluvial?		Burnt timber
53579	472680	5894844	10 to 25	Brown	Sandy Loam	Alluvial?		Burnt timber
53580	472780	5894844	10 to 25	Brown	Sandy Loam	Cobbly alluvial		Burnt timber
53581	472880	5894844	10 to 25	Brown	Sandy Loam	Cobbly alluvial		Burnt timber
53582	472980	5894844	10 to 25	Brown	Sandy Loam	Cobbly alluvial		Burnt timber

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Murray Claims MMI Soil Descriptors

Sample	Eastings	Northings	Depth	Colour	Texture		Comments	
53583	473080	5894844	10 to 25	Brown	Sandy Loam	Cobbly alluvial		Burnt timber
53584	473180	5894844	10 to 25	Brown	Sandy Loam	Cobbly alluvial		Burnt timber
53585	473280	5894844	10 to 25	Brown	Sandy Loam	Cobbly alluvial		Burnt timber
53586	473380	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53587	473480	5894844	10 to 25	Grey	Loam	Morainal		Burnt timber
53588	473580	5894844	10 to 25	Grey	Sandy Loam	Morainal		Burnt timber
53589	473680	5894844	10 to 25	Grey	Sandy Loam	Morainal, wet		Burnt timber
53590	473780	5894844	10 to 25	Grey	Sandy Loam	Morainal, wet		Burnt timber
53591	473880	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53592	473980	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53593	474080	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
53594	474180	5894844	10 to 25	Grey	Sandy Loam	Morainal		Burnt timber
53595	474280	5894844	10 to 25	Grey	Sandy Loam	Morainal		Burnt timber
53596	474380	5894844	10 to 25	Brown	Sandy Loam	Morainal		Burnt timber
Line 11								
53551	472580	5894494	10 to 25	Grey	Clay Loam	Flat and wet		
53552	472680	5894494	10 to 25	Grey Brown	Sandy Loam	Gently rolling		
53553	472780	5894494	10 to 25	Brown	Sandy Loam	Rolling		Variable burnt timber
53554	472880	5894494	10 to 25	Red Grey	Silty Clay Loam	Rolling		Variable burnt timber
53555	472980	5894494	10 to 25			Rolling		Variable burnt timber
53556	473080	5894494	10 to 25		Silty Clay Loam	Rolling		Variable burnt timber
53557	473180	5894494	10 to 25	Grey	Clay Loam	Flat moist		Variable burnt timber
53558	473280	5894494	10 to 25	Red Brown	Silty Sand	Flat moist		Variable burnt timber
53559	473380	5894494	10 to 25	Brown		Flat moist		Variable burnt timber
53560	473480	5894494	10 to 25	Brown		Flat moist		Variable burnt timber
53561	473580	5894494	10 to 25	Grey			Hummocky	Variable burnt timber
53562	473680	5894494	10 to 25	Brown			Gently rolling	Variable burnt timber
53563	473780	5894494	10 to 25	Grey	Clay	Dry		Variable burnt timber
53564	473880	5894494	10 to 25	Grey	Loam	Edge of swamp		Variable burnt timber
53565	473980	5894494	10 to 25	Brown	Silty Clay Loam	Dry	Gently rolling	Variable burnt timber
53566	474080	5894494	10 to 25	Grey	Sandy Clay Loam	Wet		Variable burnt timber
53567	474180	5894494	10 to 25	Grey	Sandy Loam	Wet		Variable burnt timber
53568	474280	5894494	10 to 25	Grey	Loam	Gentle slope, high water table, 90% Blowdown		Variable burnt timber
53569	474380	5894494	10 to 25	Grey	Loam		20% Slope	Variable burnt timber
53570	474480	5894494	10 to 25	Grey	Loam		20% Slope	Variable burnt timber
Line 12								
19334	472006	5893768	10 to 25	Grey	Silty Clay Loam	Morainal		Logged/Disk trenched
19333	472106	5893768	10 to 25	Grey	Loam	Stony morainal		Logged/Disk trenched
19332	472206	5893768	10 to 25	Grey	Loam	Morainal		Logged/Disk trenched
19331	472306	5893768	10 to 25	Grey	Clay Loam	Morainal		Logged/Disk trenched
19330	472406	5893768	10 to 25	Grey	Loam			Logged/Disk trenched
19329	472506	5893768	10 to 25	Grey	Sandy Loam			Logged/Disk trenched
19328	472606	5893768	10 to 25	Grey	Loam			Logged/Disk trenched
19327	472706	5893768	10 to 25	Grey	Sandy Loam			Logged/Disk trenched

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Murray Claims MMI Soil Descriptors

Sample	Eastings	Northings	Depth	Colour	Texture		Comments	Logged/Disk trenched
19326	472806	5893768	10 to 25	Grey	Silty Clay Loam			
19325	472906	5893768	10 to 25	Brown	Loam	Fine textured wet soils		
19324	473006	5893768	10 to 25	Grey	Silty Clay	Seepage, possibly alluvial		
Deleted	473106	5893768	10 to 25			Alluvial fan		
19322	473206	5893768	10 to 25	Grey	Sandy Loam	Swampy, alluvial fan		
Deleted	473306	5893768	10 to 25			Alluvial fan		
19320	473406	5893768	10 to 25	Grey	Sandy	Mineral soil under 40 cm organic		
19319	473506	5893768	10 to 25	Grey	Clay	Alluvial fan - seepage		
19318	473606	5893768	10 to 25	Grey	Loam	Alluvial fan - seepage		
19317	473706	5893768	10 to 25	Grey	Loam	Morainal		
19316	473806	5893768	10 to 25	Brown	Loam	Morainal		
19315	473906	5893768	10 to 25	Grey	Loam	Morainal		
19314	474006	5893768	10 to 25	Grey	Sandy Loam	Morainal		
19313	474106	5893768	10 to 25	Brown	Sandy Loam	Morainal		
19312	474206	5893768	10 to 25	Grey	Loam	Morainal		
19311	474306	5893768	10 to 25	Grey	Loam	Morainal		
Line 13								
19335	472006	5893618	10 to 25	Dark Brown	Loam	Ultramafic subcrop		Logged/Disk trenched/Planted
19336	472106	5893618	10 to 25	Dark Brown	Loam	Ultramafic subcrop		Logged/Disk trenched/Planted
19337	472206	5893618	10 to 25	Dark Brown	Loam	Ultramafic subcrop		Logged/Disk trenched/Planted
19338	472306	5893618	10 to 25	Dark Brown	Loam	Ultramafic subcrop		Logged/Disk trenched/Planted
19339	472406	5893618	10 to 25	Grey	Loam	Loam morainal		Logged/Disk trenched/Planted
19340	472506	5893618	10 to 25	Grey	Loam	Loam morainal		Logged/Disk trenched/Planted
19341	472606	5893618	10 to 25	Grey	Loam	Loam morainal		Logged/Disk trenched/Planted
19342	472706	5893618	10 to 25	Grey	Loam	Loam morainal		Logged/Disk trenched/Planted
19343	472806	5893618	10 to 25	Grey	Loam	Loam morainal		Logged/Disk trenched/Planted
19344	472906	5893618	10 to 25	Grey	Loam	On north side of road		Timber

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pH Survey Methodology and Results

A total of 96 soil pH measurements were recorded at 50 meter intervals on three east west GPS located transect lines. These same transects were used for both MMI and IP, resistivity and magnetometer surveys. The measurements were recorded on material collected from the top centimeter of the mineral soil(usually the top of the Ae horizon). Ph measurements were made on a slurry using an Oakton Instruments double junction Ph tester 30. the instrument was calibrated daily using standard pH buffer solutions at pH 4.00, 7.00 and 10.00. Two pH measurements were taken on each sample; one 20 seconds after immersion of the electrode into the slurry and a second measurement 20 seconds after adding one drop of 10% hydrochloric acid and stirring. Measurements of the pH are recorded below along with the summary statistics.

				pH Readings	x squared	Acidified pH	Acidified pH squared	Inverse of pH - Acidified
Line 4								
S4-2	53528	472380	5895844	6.1	37.21	3.03	9.18	0.33
S4-3		472430	5895844	5.58	31.14	3.10	9.61	0.40
S4-4	53529	472480	5895844	5.21	27.14	3.10	9.61	0.47
S4-5		472530	5895844	5.78	33.41	3.14	9.86	0.38
S4-6	53530	472580	5895844	5.54	30.69	3.64	13.25	0.53
S4-7		472630	5895844	7.18	51.55	6.98	48.72	5.00
S4-8	53531	472680	5895844	7.3	53.29	4.80	23.04	0.40
S4-9		472730	5895844	6.65	44.22	4.98	24.80	0.60
S4-10	53532	472780	5895844	6.78	45.97	6.66	44.36	8.33
S4-11		472830	5895844	5.56	30.91	4.71	22.18	1.18
S4-12	53533	472880	5895844	7.29	53.14	6.71	45.02	1.72
S4-13		472930	5895844	4.86	23.62	3.12	9.73	0.57
S4-14	53534	472980	5895844	6.6	43.56	4.48	20.07	0.47
S4-15		473030	5895844	4.92	24.21	3.35	11.22	0.64
S4-16	53535	473080	5895844	4.67	21.81	3.02	9.12	0.61
S4-17		473130	5895844	5.35	28.62	2.78	7.73	0.39
S4-18	53536	473180	5895844	4.45	19.80	3.92	15.37	1.89
S4-19		473230	5895844	6.8	46.24	4.84	23.43	0.51
S4-20	53537	473280	5895844	5.01	25.10	2.78	7.73	0.45
S4-21		473330	5895844	4.53	20.52	2.53	6.40	0.50
S4-22	53538	473380	5895844	5.87	34.46	3.43	11.76	0.41
S4-23		473430	5895844	4.92	24.21	3.56	12.67	0.74
S4-24	53539	473480	5895844	6.39	40.83	5.15	26.52	0.81
S4-25		473530	5895844	6.47	41.86	4.43	19.62	0.49
S4-26	53540	473580	5895844	5.1	26.01	3.82	14.59	0.78
S4-27		473630	5895844	6.07	36.84	3.31	10.96	0.36
S4-28	53541	473680	5895844	6.98	48.72	4.45	19.80	0.40
S4-29		473730	5895844	7.44	55.35	6.80	46.24	1.56
S4-30	53542	473780	5895844	6.18	38.19	3.14	9.86	0.33
S4-31		473830	5895844	7	49.00	4.80	23.04	0.45
S4-32	53543	473880	5895844	6.12	37.45	4.60	21.16	0.66
Line 6								
S6-1	53828	472380	5895544	5.65	31.92	4.46	19.89	0.84
S6-2		472430	5895544	5.44	29.59	3.30	10.89	0.47
S6-3	53829	472480	5895544	5.01	25.10	4.01	16.08	1.00
S6-4		472530	5895544					
S6-5	53830	472580	5895544	4.93	24.30	3.64	13.25	0.78
S6-6		472630	5895544	6.97	48.58	5.55	30.80	0.70
S6-7	53831	472680	5895544	6.17	38.07	2.92	8.53	0.31
S6-8		472730	5895544	5.78	33.41	3.32	11.02	0.41
S6-9	53832	472780	5895544	6.45	41.60	4.40	19.36	0.49
S6-10		472830	5895544	5.11	26.11	3.20	10.24	0.52
S6-11	53833	472880	5895544	5.71	32.60	3.93	15.44	0.56
S6-12		472930	5895544	4.84	23.43	3.64	13.25	0.83
S6-13	53834	472980	5895544	6.98	48.72	4.28	18.32	0.37
S6-14		473030	5895544	6.91	47.75	5.46	29.81	0.69
S6-15	53835	473080	5895544	6.79	46.10	6.32	39.94	2.13

S6-16		473130	5895544	4.88	23.81	3.92	15.37	1.04
S6-17	53836	473180	5895544	6.43	41.34	5.82	33.87	1.64
S6-18		473230	5895544	5.33	28.41	2.32	5.38	0.33
S6-19	53837	473280	5895544	5.88	34.57	3.62	13.10	0.44
S6-20		473330	5895544	4.58	20.98	3.24	10.50	0.75
S6-21	53838	473380	5895544	5.95	35.40	3.61	13.03	0.43
S6-22		473430	5895544	5.08	25.81	3.42	11.70	0.60
S6-23	53839	473480	5895544	5.53	30.58	5.05	25.50	2.08
S6-24		473530	5895544	5.69	32.38	5.07	25.70	1.61
S6-25	53840	473580	5895544	4.95	24.50	4.30	18.49	1.54
S6-26		473630	5895544	4.46	19.89	2.86	8.18	0.63
S6-27	53841	473680	5895544	5.73	32.83	4.42	19.54	0.76
S6-28		473730	5895544	6.25	39.06	4.85	23.52	0.71
S6-29	53842	473780	5895544	4.87	23.72	3.37	11.36	0.67
S6-30		473830	5895544	4.88	23.81	2.58	6.66	0.43
S6-31	53843	473880	5895544	5.26	27.67	4.49	20.16	1.30
S6-32		473930	5895544	5.27	27.77	3.04	9.24	0.45
S6-33	53844	473980	5895544	6	36.00	3.32	11.02	0.37
S6-34		474030	5895544	5.48	30.03	4.13	17.06	0.74
S6-35	53845	474080	5895544	6.02	36.24	5.50	30.25	1.92
			Line 8					
S8-1	53490	472680	5895244	4.68	21.90	2.13	4.54	0.39
S8-2		472730	5895244	5.01	25.10	2.11	4.45	0.34
S8-3	53489	472780	5895244	5.76	33.18	2.73	7.45	0.33
S8-4		472830	5895244	5.32	28.30	2.49	6.20	0.35
S8-5	53488	472880	5895244	5.18	26.83	2.85	8.12	0.43
S8-6		472930	5895244	5.75	33.06	3.04	9.24	0.37
S8-7	53487	472980	5895244	4.97	24.70	3.87	14.98	0.91
S8-8		473030	5895244	4.4	19.36	4.05	16.40	2.86
S8-9	53486	473080	5895244	5.1	26.01	3.48	12.11	0.62
S8-10		473130	5895244	4.54	20.61	2.51	6.30	0.49
S8-11	53485	473180	5895244	6.87	47.20	5.64	31.81	0.81
S8-12		473230	5895244	5.39	29.05	3.58	12.82	0.55
S8-13	53484	473280	5895244	5.6	31.36	3.98	15.84	0.62
S8-14		473330	5895244	6.9	47.61	4.29	18.40	0.38
S8-15	53483	473380	5895244	6.79	46.10	5.57	31.02	0.82
S8-16		473430	5895244	5.62	31.58	3.03	9.18	0.39
S8-17	53482	473480	5895244	6.65	44.22	3.31	10.96	0.30
S8-18		473530	5895244	5.51	30.36	2.75	7.56	0.36
S8-19	53481	473580	5895244	4.93	24.30	2.75	7.56	0.46
S8-20		473630	5895244	5.71	32.60	4.62	21.34	0.92
S8-21	53480	473680	5895244	4.97	24.70	3.10	9.61	0.53
S8-22		473730	5895244	6.97	48.58	3.88	15.05	0.32
S8-23	53479	473780	5895244	4.82	23.23	3.26	10.63	0.64
S8-24		473830	5895244	5.49	30.14	3.57	12.74	0.52
S8-25	53478	473880	5895244	7.19	51.70	4.77	22.75	0.41
S8-26		473930	5895244	5.52	30.47	2.99	8.94	0.40
S8-27	53477	473980	5895244	5.45	29.70	3.42	11.70	0.49
S8-28		474030	5895244	5.87	34.46	3.80	14.44	0.48
S8-29	53476	474080	5895244	6.64	44.09	3.48	12.11	0.32
S8-30		474130	5895244	5.16	26.63	3.70	13.69	0.68
S8-31	53499	474180	5895244	5.15	26.52	3.71	13.76	0.69
			pH Readings	Acidified pH				
Number of samples		96	96					
Min			4.40	2.11				
Max			7.44	6.98				
Range			3.04	4.87				
Mean			5.73	3.91				
Stand. Deviation			0.80	1.08				

Variation		0.65	1.16	
Sum		549.87	374.98	
sum of squares		3210.88	1574.86	
Geometric Mean		5.67	3.77	
Median		5.59	3.64	
Mode		5.01	3.10	

Inverse of pH - Acidified Strip 4

Inverse of pH - Acidified Strip 4

Inverse of pH - Acidified Strip 6

Inverse of pH - Acidified Strip 6

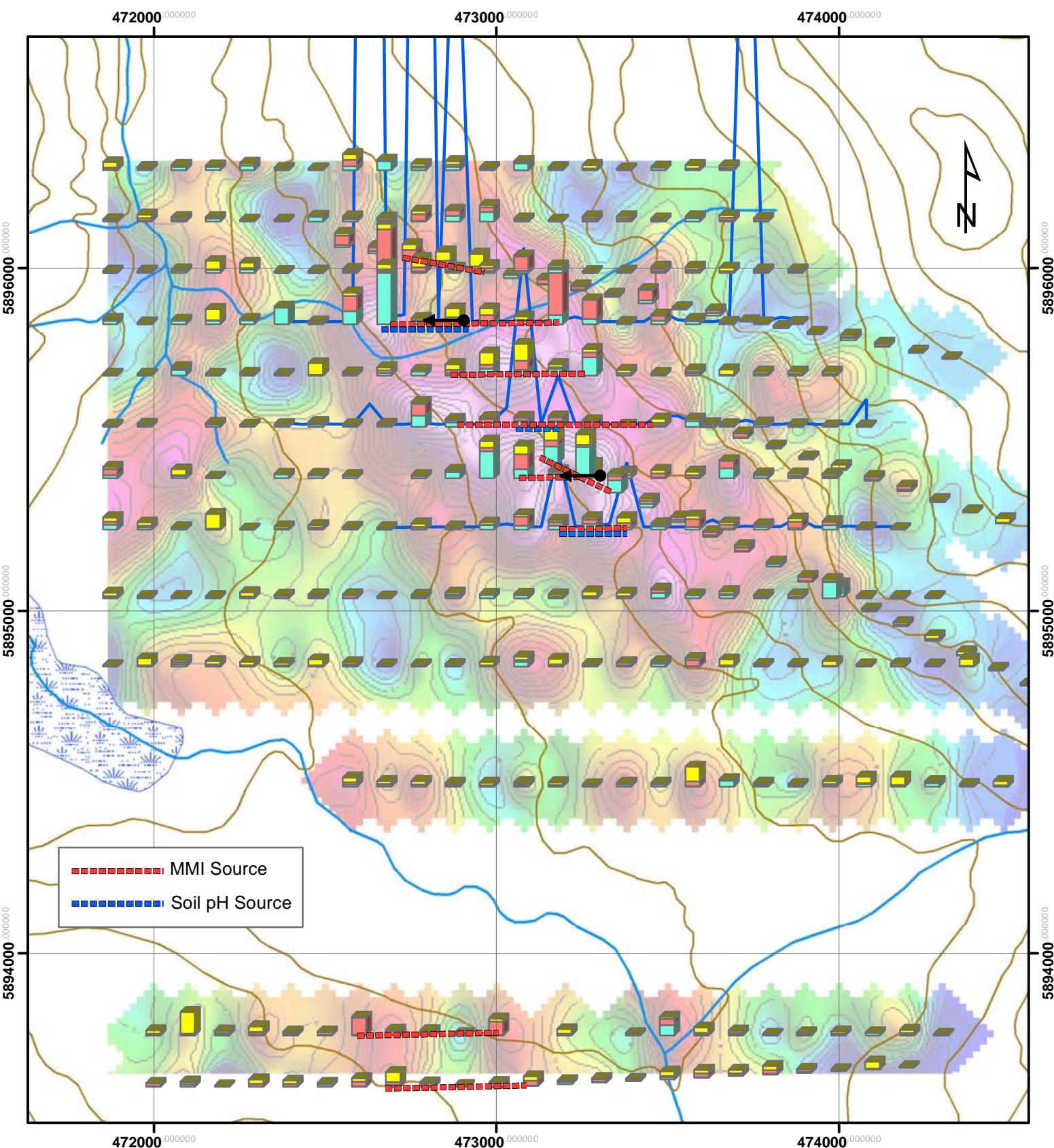
Inverse of pH - Acidified Strip 8

Inverse of pH - Acidified Strip 8

pH Interpretation

Following a review of the pH data by Dave Heberlein P. Geo, and the attached 'Interpretation Update', he has made the following comments.

- 1) I have indicated where I believe the MMI sources to be on the attached diagram (red dashed lines). There is a robust Cu-Mo-Au anomaly in the centre of the grid, which appears to be supported by the IP results
- 2) The soil pH most definitely validates the target. The profiles shown in dark blue on the attached figure show the IDH (Inverse Difference of Hydrogen Ions) component of the soil pH. This measures carbonate in the soil that has been redistributed as a result of the liberation of hydrogen ions from oxidizing sulphides at depth. The strongest responses are in the northern part of the MMI anomaly but decent anomalies occur within the MMI anomaly on all three lines with pH readings. I have indicated the position of interpreted sulphide sources as a blue dashed line.
- 3) The anomaly extends over much of the northern part of the grid and forms a continuous feature 1000 metres long and 560 metres wide at its widest point. In addition to this there is a weak copper-gold MMI anomaly on the southern two lines. This is a very subtle feature and is not considered to be a high priority target.
- 4) 1) The anomaly does have a strong molybdenum component but copper and gold are equally important. I would say that the signature is more akin to a calc-alkaline Cu-Au-Mo porphyry rather than a true molybdenum porphyry.
- 5) Results show a robust drill target supported by geochemical and geophysical datasets. I have indicated on the attached figure two drill hole locations to test what I consider to be the most prospective parts of the target. The holes indicated on the map are approximate locations only and would need to be refined so that they optimally test both the geochemical and geophysical targets.



Legend

MMI_Master_RR_DH_01032012

- 51
- Au_RR_Line
- Cu_RR_Line
- Mo_RR_Line
- IDH_Profiles_DH_01032012_In

Projection: NAD83 Zone 10

0 500 1,000 Meters

Murray Property
2011 SOIL MMI SURVEY
Interpretation Update