

**TWELFTH of JULY PROJECT**

**YMIP TARGET EVALUATION PROGRAM**

**2012-073**

**YUKON TERRITORY**

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**Whitehorse Mining District, NTS: 115G0, 115H04  
61.10.50 N, 138.00.24 W**

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Dated: January 31, 2013

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## APPENDICES

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Appendix 2:	References
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## 1.0 Summary and Introduction

### 1.1 Twelfth of July Creek Area

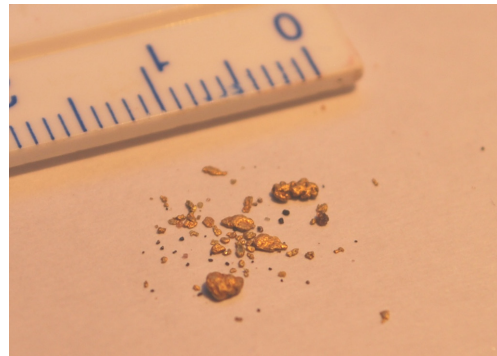
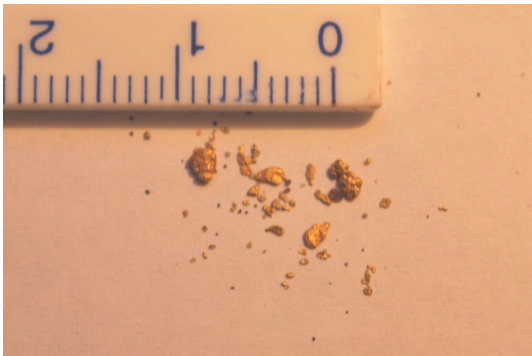
In 2011 Malcolm Journey and his family investigated placer creeks and opportunities in the Yukon. During their travels Malcolm contacted Tom Churchill who operated a placer operation on Fourth of July Creek in the 1980's and was interested in selling or leasing his claims on Twelfth of July Creek. It was then decided to investigate the Twelfth of July Creek area.

Ron Barrett, a local prospector with 30 plus years experience was hired and he travelled with us to the Kluane Lake area, where we camped and spent 3 days prospecting the Twelfth of July Creek. On an average, we found 20+ colours per pan per cubic foot of dirt sluiced from the edges of Twelfth of July Creek. As well, there were many, many small garnets present.

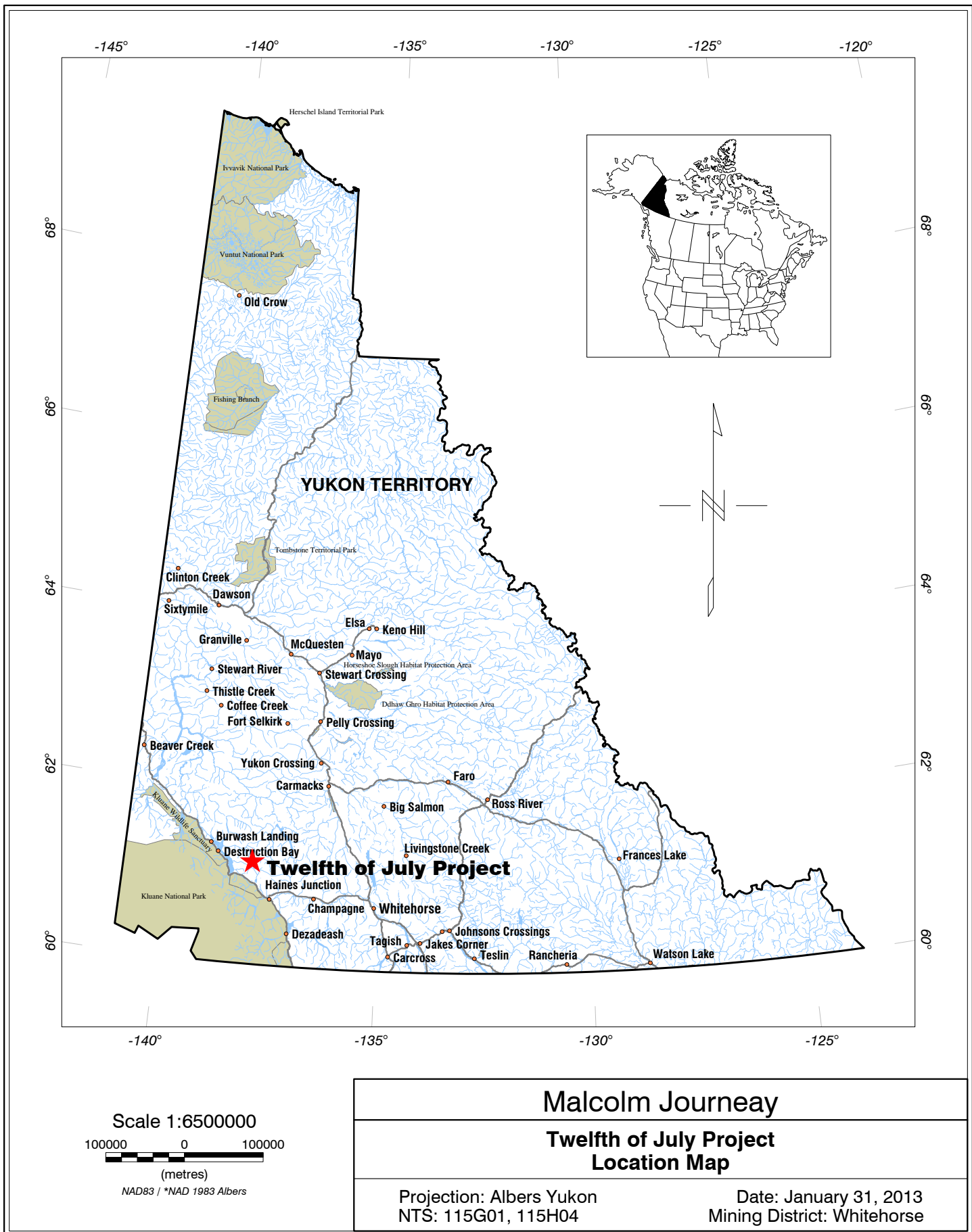
The testing consisted of six (6) locations northeast of the canyon on Tom Churchill's claims (Twelfth of July creek, claims numbers T15-T24) with his permission as he was interested in selling these claims at the time. We found good colours, on average 20+ per pan, at all of the locations tested. The gold we found was approximately 18-200 mesh and was rough on the edges indicating that it had not traveled too far. In each test we also found a large number of red garnets combined with black and magnetic sands.

Each test done was 12 shovels (approximately 3 cubic feet) taken from the inside edges of the existing creek and behind boulders in the creek. The gravel was then put through a 3 ft Keene sluice, then classified down with a 12 mesh sieve and then panned. The average composition of the pans were as follows: Gold 1%, Red Garnets 35% and Black Sands 64%. The amount of gold that we collect is approximately 12 grains (This is not an accurate volume due to the fact that some gold was lost).

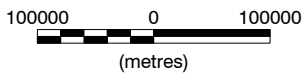
The results of the prospecting were very encouraging and Ron helped me stake a 1 mile lease at the end of Tom Churchill's claims on Twelfth of July Creek. Subsequently, in my wife's name, Yvonne Journey, we staked another 3.25 miles on February 21st 2012, making our combined leases a total of 4.25 miles. The staking in Feb 2012 was done by Ed Long at All-in Exploration Solutions Inc.



Results of testing in 2011, scale in mm



Scale 1:6500000



(metres)  
NAD83 / \*NAD 1983 Albers

## Malcolm Journey

### Twelfth of July Project Location Map

Projection: Albers Yukon  
NTS: 115G01, 115H04

Date: January 31, 2013  
Mining District: Whitehorse

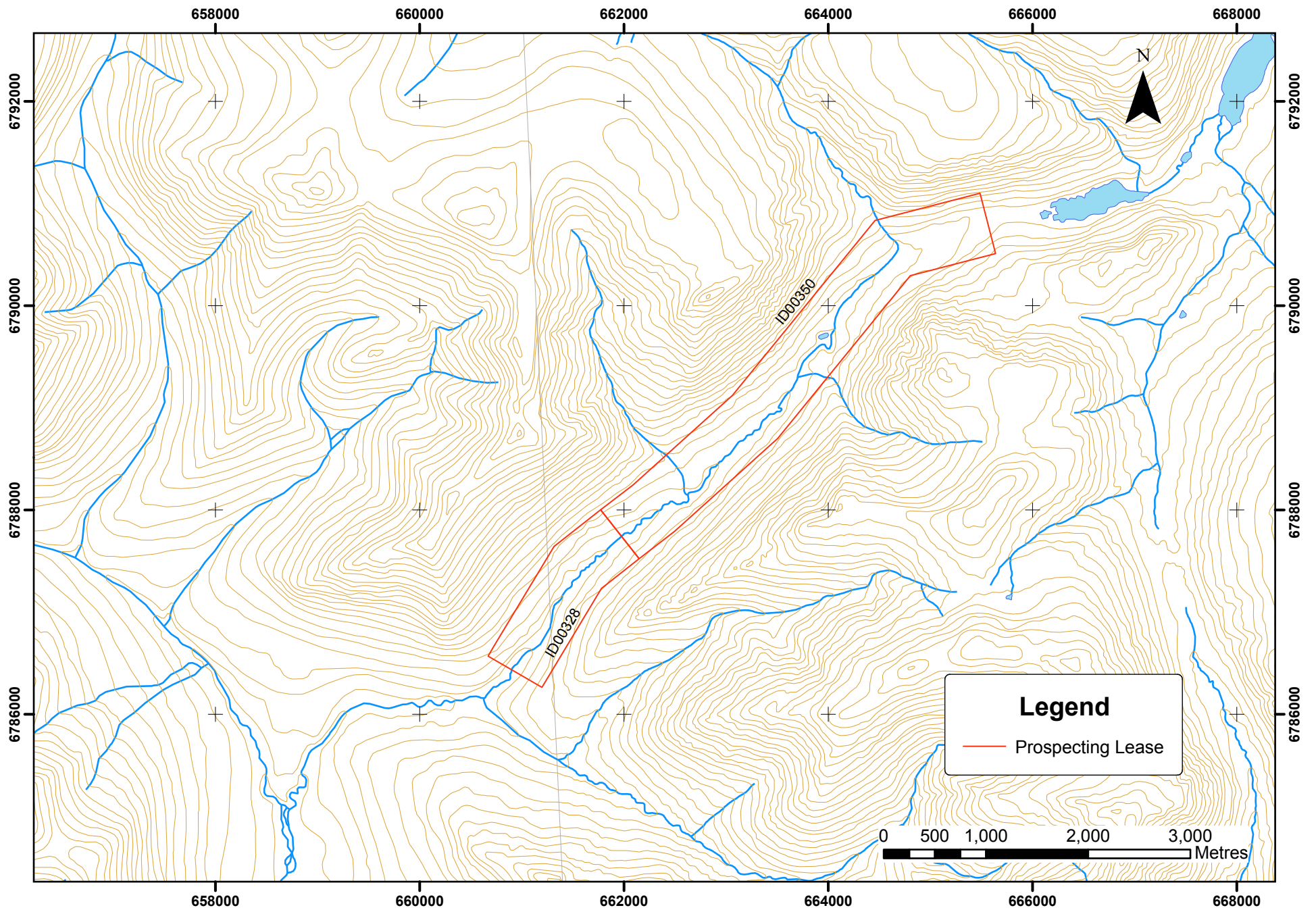


Figure 2: Location of Prospecting Leases, Twelfth of July Creek

NAD 83 / UTM zone 7N  
Scale 1:50,000

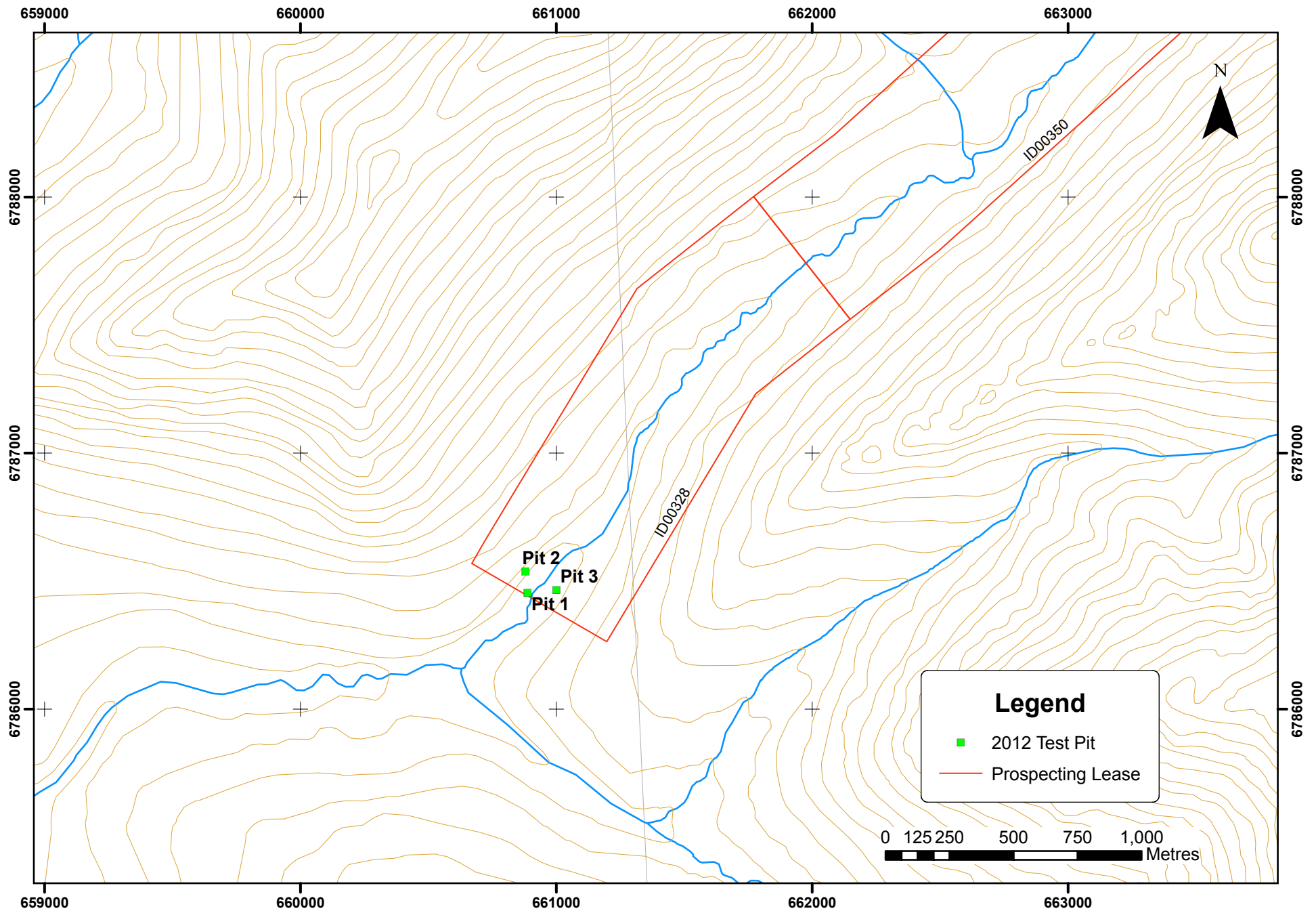


Figure 3: Location of Test Pits, Twelfth of July Creek

NAD 83 / UTM zone 7N  
Scale 1:20,000

## 2.0 Property Description and Location

The Twelfth of July placer prospecting leases are located on NTS map sheets 115G01 and 115H04. See Figure 2, Location of Prospecting Leases

District	Grant Number	Claim Owner	Recording Date	Staking Date	Expiry Date	NTS
Whitehorse	IW00328	Malcolm Journey - 100%	8/25/2011	8/23/2011	8/25/2012	115G01
Whitehorse	IW00350	Yvonne Journey - 100%	2/27/2012	2/21/2012	2/27/2013	115H04

## 3.0 Accessibility and Infrastructure

The leases are located 257km from Whitehorse on Twelfth of July Creek. Starting in Whitehorse the route used for access begins with driving 215km on a paved 2 lane portion of the Alaskan Highway towards Silver City. Prior to reaching Silver City an unnamed road (2 wheel drive gravel road) is taken north for 20km. At Cultus Bay the road forks to the right. The 2 wheel drive gravel road is taken for 22km to Fourth of July Creek. At Fourth of July Creek the road forks again and we travel north for 3.5km staying on the left side of the gravel creek bed until we reach Tom Churchill's camp on the right side of the creek. From here we continue north to the junction of Fourth of July and Twelfth of July Creeks; at this point the road switches from a gravel road to a trail suitable for walking and ATVs. At this point after crossing Twelfth of July Creek the road forks again to the right traveling up a sandy hill for 2km; this section of the trail is a bypass to get around a canyon inaccessible to motorized equipment. After bypassing the canyon, the trail continues on the Twelfth of July creek bed another 1km. This takes you to the junction between Twelfth of July and LaRose Creek. At this point there is a 450m trail made by Tom Churchill giving access on the left hand side of Twelfth of July creek to the end of his claims. Here we are at the beginning of our leases.

In order to access the leases, a Kubota KX121 was used to blade a trail for ATV use. A trail about 3 km long was bladed on the leases.

A seasonal camp was located on the right limit of Fourth of July Creek near the airstrip between the Jarvis River headwaters and Fourth of July Creek. The camp was located about 8 km downstream from the placer leases. It was necessary to make several creek crossings from camp to the leases and this became a challenge with the onset of heavy rain and high water.

## 4.0 History of the Area

### Operations (referenced from the Yukon Placer Database Stream Report)

As the major tributary to Fourth of July Creek, Twelfth of July Creek was probably first prospected during 1903 at the same time as other area creeks were discovered. In 1914 several ounces of coarse gold were recovered from a small area near the mouth of Larose Creek. During the period 1935 to 1953, intermittent testing and small scale mining was done. Prospectors active included: M. Savtchouk, C. Emminger and D. Duensing. In the late 1970's T. Churchill acquired claims on the creek. In 1989 Triple Gold Ltd. mined on his claims. In 1990 Mr. Churchill did some limited testing.

In 1989, heavy equipment included a Caterpillar D9H bulldozer and a Caterpillar 980B loader. The wash plant consisted of a Derocker with a 4 by 20 foot long sluice run. Washed material leaving the sluice run was screened to minus 2 inches on the metal deck prior to entering the

single run box. The washing rate was approximately 80 to 100 loose cubic yards per hour. A 6 by 6 inch pump powered by a four-cylinder diesel engine pumped sluice water.

The deposit consisted of less than 1 foot of organics overlaying 10 to 20 feet of unfrozen gravels on bedrock.

Gold purity is reportedly 810, other characteristics are unknown.

#### **Additional Information**

Tom Churchill believes that this ground is very good to start on due to his prior testing (2002) on Twelfth of July creek, the lack of overburden and the shallowness to the clay (12-15 feet). In his tests he also found a good quantity of gold. He was not able to do further work on the claims due to health issues.

#### **5.0 Physiography and Vegetation**

Twelfth of July Creek is a 9 km long left limit tributary to Fourth of July Creek. The creek is located in an alluvial valley within the limits of the McConnell Glaciation. The creek flows in a steep walled U-shaped depression. The valley walls were eroded by glaciers associated with the Ruby Ice-Sheet. Deposits consist of a thin layer of muck covering 3 to 6 metres of unfrozen gravels on bedrock. (Referenced from the Yukon Placer Database Stream Report)

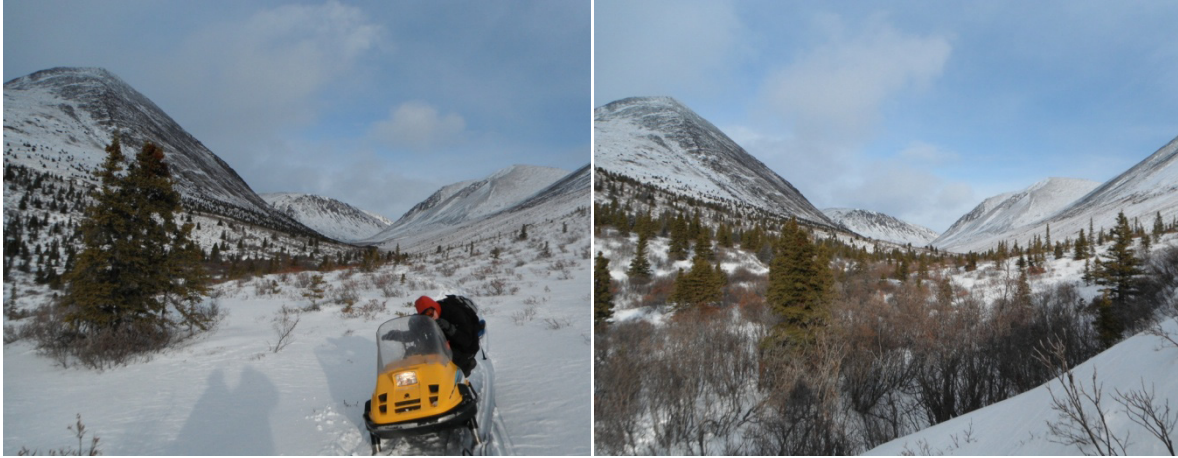
The elevation of the lease area is from 3,500 feet to 4,500 feet.

The vegetation consists of buck brush, and sparsely populated pine and birch trees. The general landscape is a “U” shaped valley with some flat areas up to 3 km wide. There was no visual evidence of permafrost.



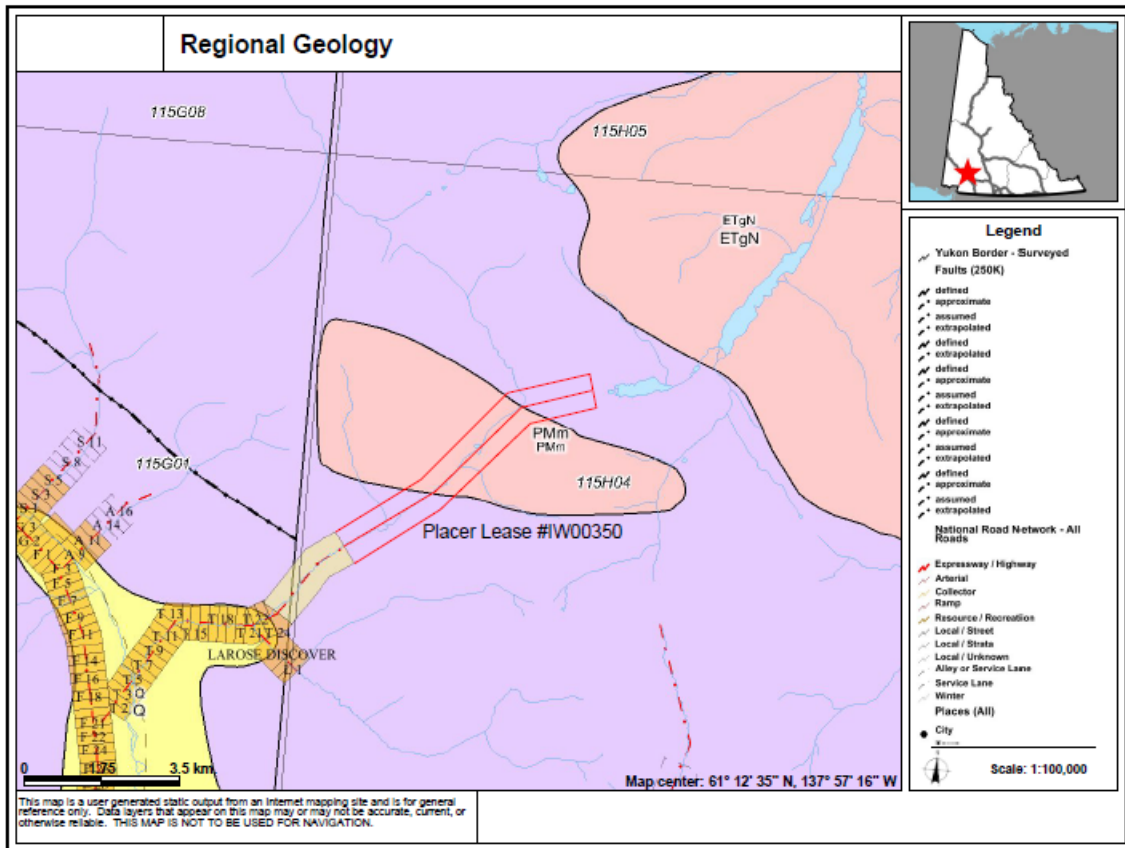


Twelfth of July Project, YMIP Target Evaluation Program 2012



Pictures taken by Ed Long February 2012.

## 6.0 Geological Setting



### QUATERNARY

**Q: QUATERNARY**  
unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluvialite silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits

### EARLY TERTIARY

**ETN: NISLING RANGE SUITE**  
medium to coarse grained equigranular to porphyritic rocks of intermediate composition (g), fine to coarse grained, equigranular and porphyritic granitic rocks of felsic composition (q) and felsic dyke rocks (f)

- f. orange and buff weathering light-coloured feldspar porphyry dyke and flow rocks of intermediate to acid composition
- g. biotite-hornblende granodiorite (locally K-feldspar megacrysts), quartz monzonite, quartz diorite; minor granodiorite-gneiss; hornblende and biotite hornblende diorite; biotite quartz feldspar porphyry and porphyritic biotite quartz monzonite (Ruby Range Suite)
- q. leucocratic, biotite granite; miarolitic alaskite; saccharoidal textured, mafic-poor biotite granite; biotite-hornblende granite to leucocratic granodiorite with sparse, white, alkali feldspar phenocrysts; biotite quartz monzonite (Nisling Range Suite, Nisling Range Alaskite, Coffee Creek Granite, Annie Ned Granite)

### PROTEROZOIC TO MESOZOIC

**PMm: UNDIVIDED METAMORPHICS**  
dark purplish brown staurolite cordierite biotite hornfels with relict schistose texture; quartz-sericite-chlorite schist; minor quartzite (metamorphosed Jura-Cretaceous Dezadeash Gp.? and undivided Nisling assem.)

## **7.0 Geophysical Survey**

Arctic Geophysics was contracted for a geophysical survey, 2D resistivity and total magnetic field. The work was performed from June 1 – 4, 2012. The survey personnel consisted of Survey Leader: Stefan Ostermaier, Field Assistant: Franz Piechotta and Documentation: Philipp Moll.

The purpose of the survey was to obtain profiles across the creek valley showing an interpretation of the materials present, including bedrock paleo-channels, bedrock terraces, areas of permafrost and groundwater.

Please see Appendix 1 for the report. “Geophysical Survey with 2D Resistivity 12<sup>th</sup> of July Creek, Yukon. Arctic Geophysics Inc., Box 747, Dawson City YT Y0B1G0, Canada. Author: Philipp Moll.

## **7.1 Interpretations and Conclusions of the Geophysical Survey**

Please refer to the geophysical report in Appendix 1.

## **8.0 Excavator Test Pits**

The program was hampered by heavy rain and high, fast water in the creeks. Crossing the creeks proved to be unsafe and sometimes dangerous for personnel. Repairs to the trails and roads were necessary. One of the quads was destroyed during a creek crossing.

The program was suspended from June 27 to July 20 because of rain and high water. Because of deeper than expected depths to bedrock that were interpreted from the geophysical survey, the Kubota KX121 was returned to Whitehorse on June 25. When we returned to the property later in July a Kubota KX080 was brought in. This machine was able to dig deeper and was more powerful than the KX121.

We were unable to test the areas recommended by the geophysical surveys due to:

- High water levels
- Difficulty in mobilizing the larger shaker plant to the surveyed lines
- Bedrock was beyond the digging depth of the equipment on site

Because of the above and continuing access problems it was decided to locate the test pits downstream of the geophysical survey lines. The test pits were best located to intersect the projection of the bedrock channels as described in the geophysical profiles.

Three test pits were dug and a total of 180 cubic yards of material was sluiced. The original Gold Machine test plant was not used because of the slow processing rate. A small test plant was borrowed from Dale Brewster who mines on Ruby Creek.

The Kubota KX080 was able to dig to about 4.5 metres deep. The ground was unstable with the sides caving in as the hole was advanced. Water flow was also encountered in the pits.



**KX080 excavator stockpiling vegetation prior to digging at pit 1**



**Running gravel through the shaker sluice at pit 1**

A Kubota KX080 excavator was used for the test pits. The excavator has a maximum digging depth of 15 feet and weighs 18,500 lb. The excavator was suited for working in this area.

Three test pits were dug and a total of 180 cubic yards of material was processed and evaluated.

The sluice plant consists of a hopper that holds approximately 0.3 of a cubic yard. The material was washed from the hopper to a perforated shaking table powered by a two inch pump driving a water wheel with an eccentric weight; a 4 inch pump was used to supply water to the spray bars. The material would then be separated and washed through the screen and punch plate (screened to three quarter inch). The larger rocks and material would be cast off the front and onto the ground as tailings. The fines, after going through the expanded metal and punch plate, fall onto a slick plate measuring 2 ft square. From the slick plate the material goes through a small boil box (2ft x 10" deep) and washed over 1" expanded metal 10ft long x 2ft wide sluice with miners moss underneath then discharged.

At the end of the day the boil box would be drained and rinsed out through a 2" plug on the bottom and into a 20 litre pail. The expanded metal was removed and the miners moss was rolled up and placed into a tub and brought back to camp. We would further process the boil box concentrate using a 3 foot long Keene sluice. We panned the final concentrate using a gold pan.

An Ohaus digital scale was used to weigh the gold.



10.8 grams gold recovered from the 3 test pits



As above, 10.8 grams gold recovered from the 3 test pits

Following the sluicing and sampling, the test pits were backfilled and the surrounding area cleaned up with the excavator. The vegetative mat and other vegetation, trees and shrubs, relocated by the excavator were placed on the top elevation in order to assist with the revegetation.

### 8.1 Test Pit Summary

Description	Length	Width	Depth	Volume	Reclaimed	Lease	Gold Recovered
	yd	yd	yd	yard <sup>3</sup>			grams (raw weight)
Test Pit 1	3.25	4	5	65	yes	IW00328	7
Test Pit 2	2.75	4	5	55	yes	IW00328	1.5
Test Pit 3	3	4	5	60	yes	IW00328	2.3

Description	UTM83-7 E	UTM83-7 N
Test Pit 1	660888	6786454
Test Pit 2	660880	6786537
Test Pit 3	661001	6786464

### 8.2 Interpretations and Conclusions of the Test Pit Program

The total weight of gold recovered was 10.8 grams. The average grade was 0.060 grams per cubic yard. Churchill Placers reported a fineness of 810 (Yukon Placer Database 2007). The average grade (fine gold) was 0.0486 grams per cubic yard. At \$1650 USD per ounce the value of the sample sluiced was \$2.48 USD per cubic yard.

The result, 0.0486 grams per cubic yard, is interpreted as being uneconomic at \$1650 USD gold and current mining costs. This assumes setting up an operation from scratch.

Gold panned on surface during the prospecting program returned good values but the test pit values did not hold up as well. Gold was found in the section from surface to 8 feet in depth. From this point on to 15 feet in depth, very little gold was found. Bedrock was not located in any of the test pits.

### 8.3 Recommendations for the Twelfth of July Project

Because of the low values recovered it was decided to convert the prospecting lease IW00328 into only one claim at the lower end of the lease. Because of the deep overburden and groundwater on lease IW00350 it was felt that the cost to explore and develop this area would be excessive so no further work will be done there.

The downstream area tested may be suitable for a local or established miner to work as mobilization and setup costs would be minimized. The lower startup costs combined with the working knowledge and expertise in the area would favour an economic operation. The fact that stripping is minimal in this area is also favourable.

### 8.4 Test Pit Notes

#### Test Pit 1 – preparing area

Sixty-five (65) cubic yards were sluiced and 7 grams of gold recovered.



1.2 gram nugget recovered within top 3 feet

#### Test Pit 1 reclamation complete



**Test Pit 1, 12 - 14 feet deep, groundwater is present**



**Sluicing at Test Pit 1**



**Test Pit 2 – preparing the area prior to digging**

Fifty-five (55) cubic yards were sluiced and 1.5 grams of gold recovered.



**Groundwater entering pit 2**



**Test Pit 2 backfilling**



**Test Pit 2 reclamation complete**

**Test Pit 3 – with settling pond facing southwest**

Sixty (60) cubic yards were sluiced and 2.3 grams of gold recovered.



Twelfth of July Project, YMIP Target Evaluation Program 2012

## **Appendix 1**

Geophysical Survey with 2D Resistivity 12<sup>th</sup> of July Creek, Yukon. Arctic Geophysics Inc., Box 747, Dawson City YT Y0B1G0, Canada. Author: Philipp Moll.



# **Geophysical Survey with 2D Resistivity 12<sup>th</sup> July Creek, Yukon**

N61 11.308, W137 59.707

FOR

Malcolm Journey

Peninsula Cutting & Coring Inc.

440 Thorold Road; Welland, ON, L3C3W6

FROM

Arctic Geophysics Inc.

Box 747, Dawson City YT

Y0B1G0, Canada

[www.arctic-geophysics.com](http://www.arctic-geophysics.com)

AUTHOR

Philipp Moll

WORK PERFORMED

1<sup>st</sup> - 4<sup>th</sup> June 2012

DATE OF REPORT

25<sup>th</sup> June 2012

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## 1. Introduction

This geophysical investigation was done for Malcolm Journey, Peninsula Cutting & Coring Inc., at 12<sup>th</sup> July Creek.

The survey, using 2D Resistivity /IP, was conducted to prospect the ground for placer mining interests. The geophysical prospecting program was focussed on measuring and interpreting the following placer-related subsurface characteristics:

1. Depth and topography of bedrock  
Paleochannels, terraces
2. Sedimentary stratification
3. Groundwater, permafrost
4. Mining/prospecting history

The ground was tested with four measuring lines with a length of up to 480m and a depth of 90m. The fieldwork was done from 1<sup>st</sup> - 4<sup>th</sup> June 2012.

## 2. Crew

Survey Leader: Stefan Ostermaier  
Field Assistant: Franz Piechotta  
Documentation: Philipp Moll

## 3. Claims

Grant Number	Tenure	#	Owner
IW00328	Prospecting Lease (1Mile)	-	Malcolm Journey
IW00350	Ditto (3 Miles)	-	Yvonne Journey

## 4. Access

The mining area was reached via mining road.

## 5. Geophysical Methods

**Resistivity** is not a time domain geophysical method such as Ground Penetrating Radar or Seismic. Resistivity measures a material property. In the Resistivity model the different underground zones are

material-dependently differentiated according to their electrical conductivity. Thus, Resistivity promises good chances in respect of measuring the kind and character of the subsurface materials as well as the groundwater distribution, which would be of interest for placer mining. The equipment used (see below) allows for measuring of layer interfaces in depths from 0.5m to 100m by varying the electrode spacing. – Therefore, this prospecting concept is based on the use of 2D Resistivity.



Figure 1: 2D Resistivity/IP measurement, Stefan Ostermaier, Arctic Geophysics Inc., Yukon 2009 (Moll)

**Magnetics** is based on the characteristic of the earth's magnetic field to induce all matter, magnetic or non-magnetic, with magnetic properties (magnetic susceptibility). Rocks and other objects show a different magnetization depending on their material composition. Magnetics is a reliable method for investigating primary and secondary deposits. The measurability of gold placers depends on the ratio of the depth to the concentration of signal inducing, heavy placer minerals, especially magnetite.

## 6. Use of Geophysical Methods

### 6.1. Instrumentation

#### Resistivity

For this survey a lightweight, custom-built 2D RESISTIVITY and INDUCED POLARIZATION (IP) imaging system with rapid data acquisition was used. The system includes:

- “4 POINT LIGHT” EARTH RESISTIVITY METER<sup>1</sup>
- 96 ELECTRODE CONTROL MODULES<sup>2</sup>
- 96 STAINLESS STEEL ELECTRODES<sup>3</sup>
- 480m MULTICORE CABLE: CONNECTOR SPACING: 5m<sup>4</sup>

This system weighs approximately 120 kg which is about one third of regular standard equipment. It can be run with a 12V lead battery. The equipment facilitates high mobility and rapid data acquisition with a small crew.

#### Magnetics

We use a GEMSYS GSM-19 GW with differential GPS as a walking magnetometer, and a GEMSYS GSM-19 as a base station.

### 6.2. Data Acquisition

#### Resistivity

The data acquisition is carried out by the automatic activation of 4-point-electrodes. Thus several thousand measurements are taken, one every 1-2 seconds. The AC transmitter current of 0.26 to 30 Hz is amplified by the electrode control modules, up to a maximum of 100mA and 400V peak to peak. The voltage measured at the receiver electrodes (M, N) is also amplified.

In this geoelectrical survey the **Schlumberger-array** was used. This array is appropriate to image horizontally running layers as is needed for placer prospecting.

The 2D Resistivity imaging system, used for this survey, allows measurements with a depth of up to 100m. With a depth to bedrock of more than 6m, an electrode spacing of 5m can be used for placer surveys. This allows the measuring of large profile lengths in short time with a horizontal measuring resolution of 2.5m. This quantification has proven itself to be reliable in the determination of the bedrock topography and sedimentary arrangement for placer investigation at the most environmental conditions.

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<sup>1</sup> Constructed and produced by LGM (Germany)

<sup>2</sup> Ditto

<sup>3</sup> Constructed and produced by GEOANALYSIS.DE (Germany)

<sup>4</sup> Ditto



The Schlumberger array, used in this geoelectrical survey, is appropriate to measure subsurface conditions predominantly showing a horizontal zoning of the ground materials.

### **Magnetics**

Magnetic data were taken manually at the electrode locations, every 5 meter.<sup>5</sup> Thus, the geoelectrical profiles and the magnetogram do spatially coincide 100%.

The walking magnetometer was synchronized with a base station.

## **6.3. Processing**

### **Resistivity**

The measured Resistivity/IP data were processed with the **RES2DINV** inversion program<sup>6</sup>.

### **Magnetics**

The magnetic data were processed with the **GemLink5.0.0** program.

The magnetic data were normalized at 56 000 n Tesla

## **6.4. Interpretation**

The resistivity profile is the basic source for the interpretation of placer-related subsurface aspects of overburden and bedrock. The IP model supports the interpretation of the resistivity profile.

The interpretation of the data should be verified by physical prospecting methods such as drilling, trenching, or test pitting, or shafting since this information about the subsurface cannot be guaranteed.

## **7. Profile image**

In the **Resistivity profile** the interpreted layer interfaces are marked with a black line. The profiles show ground-layers approximately 15% thicker than they are in reality. The thickening of the model layers is caused by the inversion software. The **correction factor** of 0.85 for the determination of the true layer thickness has been established by the Arctic Geophysics Inc. team on the basis of numerous geoelectrical profiles verified by drilling, trenching, and mining done by our customers.<sup>7</sup>

The **graphical markings** showing the interpreted layer interfaces in the profiles (using a black line) are done according to the data structure in the profile itself. This means: the layers there will also show up

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<sup>5</sup> Plastic probes were set instead of the stainless steel electrodes.

<sup>6</sup> Produced by GEOTOMO SOFTWARE (Malaysia)

<sup>7</sup> Program settings in RES2DINV for modifying the layer thickness do frequently not work well for our use and could falsify the profile. That's why this mode was not used.

approximately 15% thicker than they are expected in reality. In the interpretation text, the layer thicknesses and depths have been recalculated to the expected real values.

## 8. Line Arrangement

The **line locations** were discussed and decided upon by Stefan Ostermaier from Arctic Geophysics Inc. and Malcolm Journey.

## 9. Geophysical Implications

The different components of the overburden (glacial till, glaciofluvial deposits, and colluvium) can hardly be differentiated in the Resistivity profiles, because they show quite similar resistivity data and are sometimes too thin to be measured. The reason for the similar resistivity of the overburden materials is the relatively high amount of fine material such as silt and clay (matrix) of the sediments. The rock components of the gravels, clasts, or boulders show low resistivity itself and support the similarity of the resistivity.

The interface between overburden and bedrock was clearly measured and realistically interpreted in the most parts of the resistivity images.

## 10. Placer Targets<sup>8</sup>

Clay-layers, too thin to be measured in the resistivity profile, could act as “false bedrock”: The upper part of the clay-layer itself and the material closely on top of it could contain concentrations of placer gold.

Clay layers can also protect the deposits underneath from glacial erosion. So, the material below a clay-rich layer could have preserved older placers.

Normally, glaciofluvial gravels have higher potential for placer gold deposits than till, especially if they are reworking pre-existing placers or eroding and re-depositing gold-bearing bedrock.

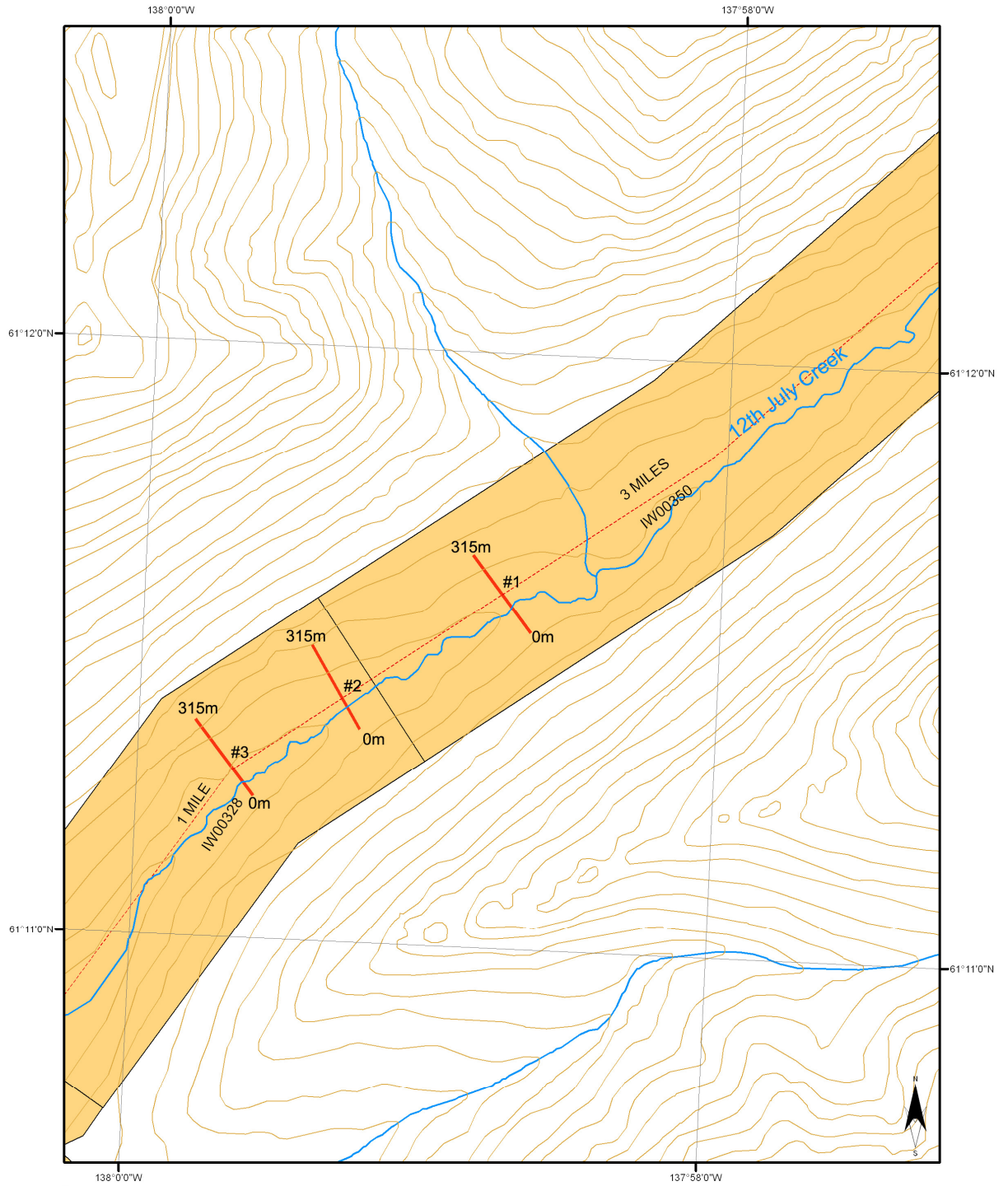
The general case is that glacial till will incorporate placer gold into it and dilute rich paystreaks into a larger volume lower grade deposit which may be uneconomic. So placer gold in till is actually fairly rare in most settings, and usually only occurs when the glacial activity is right on top of a bedrock gold source. But this actually may be the case in 12<sup>th</sup> Mile Creek (and especially Dublin Gulch).

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<sup>8</sup> Discussion between William LeBarge and Philipp Moll

All of the sandy and gravelly sediments at 12<sup>th</sup> Mile Creek valley can potentially contain placer gold. Each new sediment discovered when doing physical prospecting would be worth sampling.

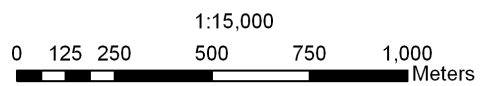
# 11. Survey Map



## Legend

- contour line
- water course
- water body
- placer baseline
- measuring line
- placer claims
- prospecting lease

**12th July Creek Survey Map**  
**115H04**



## **12. Profiles: Interpretation / Recommendations**

The interpretation of the geophysical profiles is printed in black letters.

The recommendations for physical prospecting are printed in blue letters.

12th July Creek 01

2D Resistivity/IP, Schlumberger array  
64 Electrodes: spacing 5m, Horizontal resolution 2.5m  
Horizontal and vertical measure in [meter], Iteration error in [%]  
Vertical exaggeration in model section display = 1.00  
Data acquisition: Stefan Ostermaier, Franz Piechotta 2nd June 2012  
Processing: Stefan Ostermaier, 2nd June 2012  
Arctic Geophysics Inc., Yukon

The profile might show the ground-layers up to approximately 15% thicker than expected in reality. This 2D Resistivity measuring result is an interpretation of geophysical data. The verification of the interpretation by drilling, trenching, or shafting is recommended.

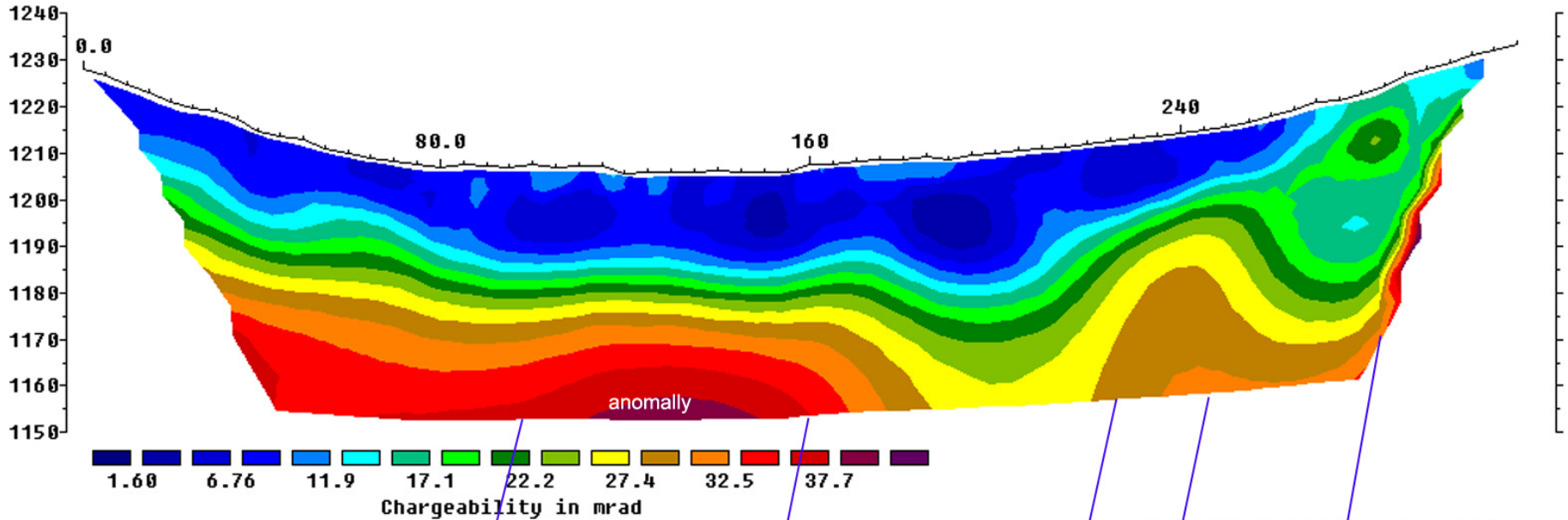
Arctic Geophysics Inc.



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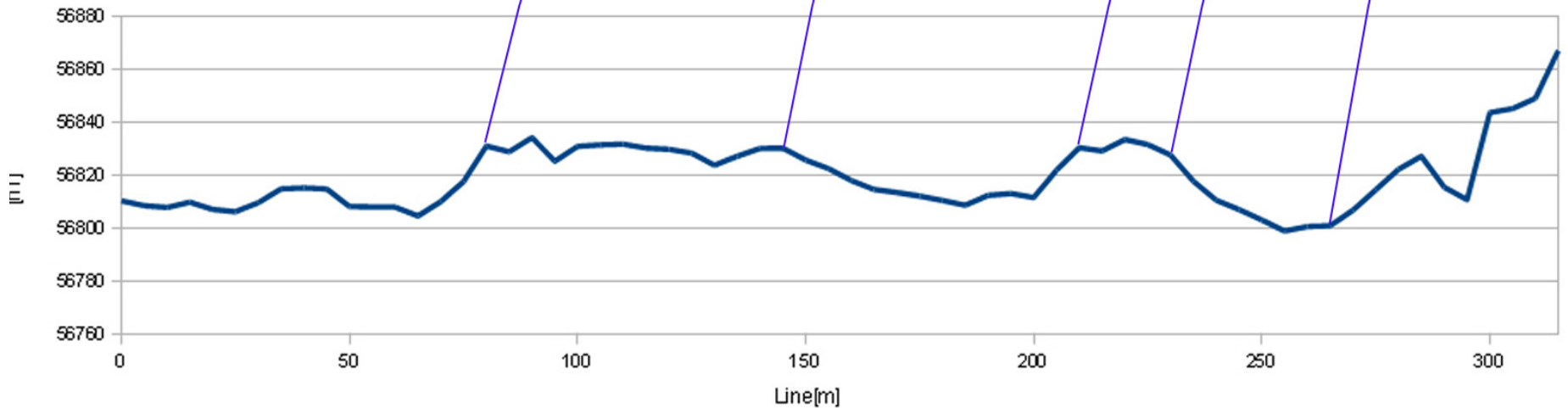
www.arctic-geophysics.com  
Box 747, Dawson City Y.T., Y0B-1G0, Canada  
Phone: 867-993-3671 (Cell), info@arctic-geophysics.com

Model IP with topography  
Iteration 5 Abs. error = 1.4



12th July Creek - Line01 - Total Field Magnetics

Datum point every 5m, data acquisition June 2nd 2012;

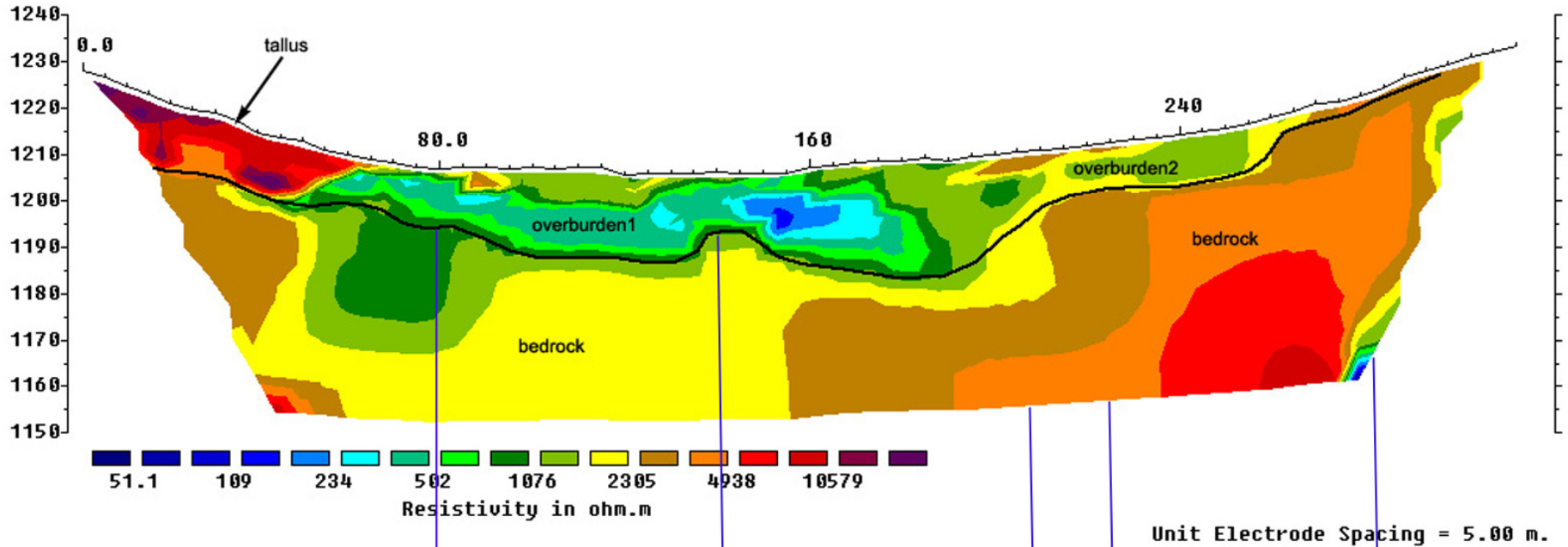


12th July Creek 01

2D Resistivity/IP, Schlumberger array  
 64 Electrodes: spacing 5m, Horizontal resolution 2.5m  
 Horizontal and vertical measure in [meter], Iteration error in [%]  
 Vertical exaggeration in model section display = 1.00  
 Data acquisition: Stefan Ostermaier, Franz Plechotta 2nd June 2012  
 Processing: Stefan Ostermaier, 2nd June 2012  
 Arctic Geophysics Inc., Yukon

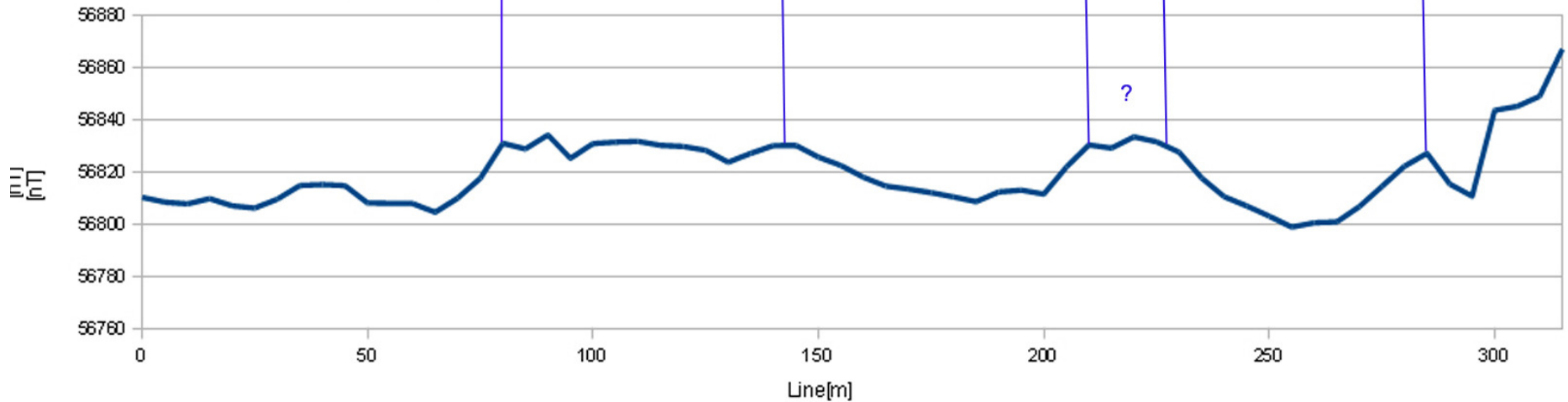
The profile might show the ground-layers up to approximately 15% thicker than expected in reality. This 2D Resistivity measuring result is an interpretation of geophysical data. The verification of the interpretation by drilling, trenching, or shafting is recommended.

Model resistivity with topography  
 Elevation Iteration 5 Abs. error = 1.3



12th July Creek - Line01 - Total Field Magnetics

Datum point every 5m, data acquisition June 2nd 2012;



## Interpretation

**Resistivity profile\_01** might show 2-22m of overburden on top of bedrock.

At 0-75m in the bedrock seems to be around 10m deep, covered with tallus (colluvium) or frozen gravel.

After 75m the bedrock seems to drop into a paleo-channel showing its bottom between 100 and 135m. At 125m this channel might be 16m deep (deepest point). The overburden on top of the channel is bi-layered: The topmost green layer, 4m thick, should be less saturated with groundwater. The layer below (green-turquoise) seems to contain much ground water. Both layers could consist of glacial till and glaciofluvial deposits. (These two sediment types cannot be differentiated in the resistivity profile.). The magnetic high at the channel would be an indication for magnetite ("black sand)", which is frequently associated with placer gold in Yukon valleys. [At 12<sup>th</sup> Miles Creek glaciofluvial gravels have high potential to contain commercial placer gold deposits. Glacial till could contain placer gold near bedrock. We recommend drilling this channel at 110m or 125m. When using an auger drill the gold samples could be falsified because of the higher groundwater amount.](#)

At 150 to 210m the main channel seems to be located. At 185m the channel seems to be around 22m deep (deepest point). At the blue zone the water saturation might be highest. The overburden consists of till and glaciofluvial deposits as well. The lower magnetic signal at the main channel could be caused by the larger bedrock depth.

[The interpreted main channel is a promising target for physical prospecting such a drilling or test pitting. Higher amounts of groundwater are expected, especially at 125m, this could falsify drill samples from an auger drill.](#)

At 220 to 255m a bedrock terrace seems to be located. At 240m it would be 9m deep. The magnetic data are low at this terrace, however, placer gold deposits does not have to be associated with significant amounts of magnetite.

[This spot \(240m\) is a promising target for physical testing/sampling. A test pit dug by excavator seems to be manageable easily since the amount of groundwater is lower at this location. Good samples are expected using an auger drill. Another target for sampling would be at 215m. Here the magnetic data are high which could be a sigh for placer gold on bedrock, about 8m deep.](#)

**IP profile\_01** supports the interpretation of the main channel.

At the IP profile the spatial structure of the data (depth and location of the ground zones) are shown much rougher than in the Resistivity profile. Thus the data pattern of the IP profile was likely moved to the left of about 20m. If this would be the case, the magnetic highs could correlate with the zones of high chargeability. [The correlation of high IP-data and magnetic data could be caused by ore bodies in the bedrock. Native copper was panned by Malcolm Journey in the upper sediments, which could explain the data. At 130m the drill should go at least 60m deep to check the anomaly.](#)



12th July Creek 02  
 2D Resistivity/IP, Schlumberger array  
 64 Electrodes: spacing 5m, Horizontal resolution 2.5m  
 Horizontal and vertical measure in [meter], Iteration error in [%]  
 Vertical exaggeration in model section display = 1.00  
 Data acquisition: Stefan Ostermaier, Franz Plechotta 3rd June 2012  
 Processing: Stefan Ostermaier, 3rd June 2012  
 Arctic Geophysics Inc., Yukon

The profile might show the ground-layers up to approximately 15% thicker than expected in reality. This 2D Resistivity measuring result is an interpretation of geophysical data. The verification of the interpretation by drilling, trenching, or shafting is recommended.

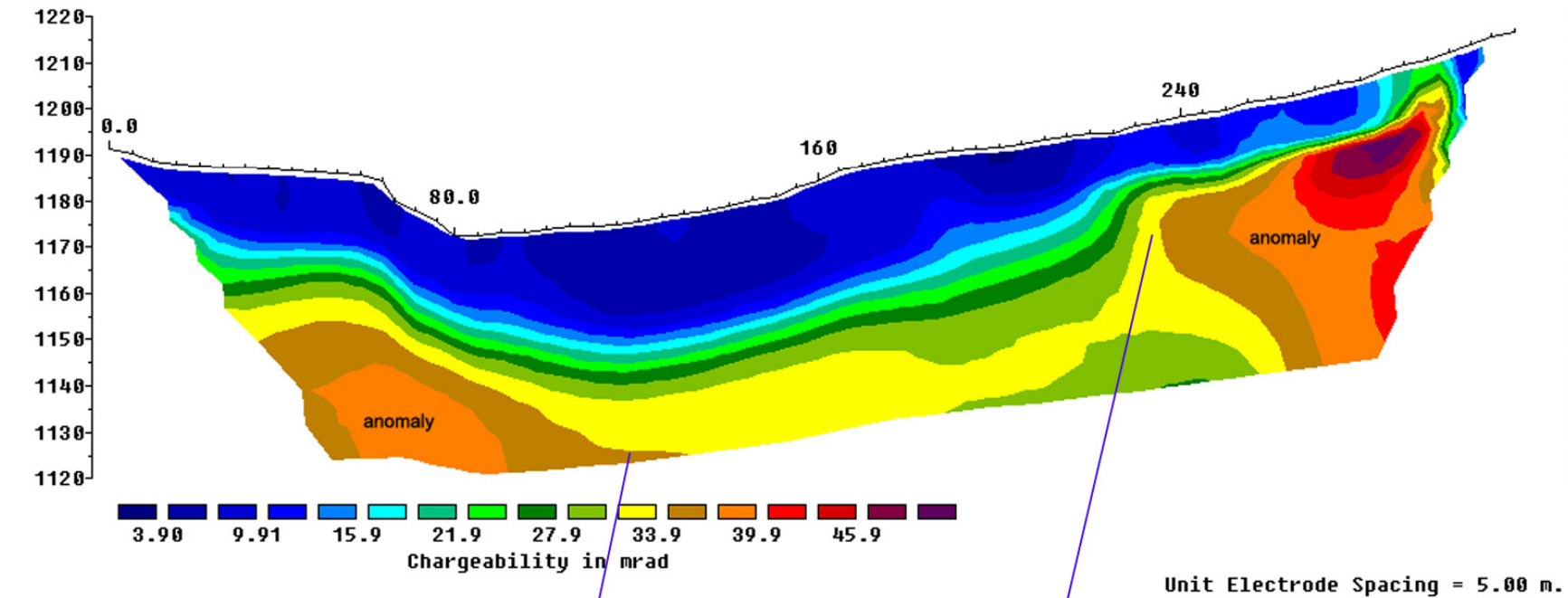
Arctic Geophysics Inc.



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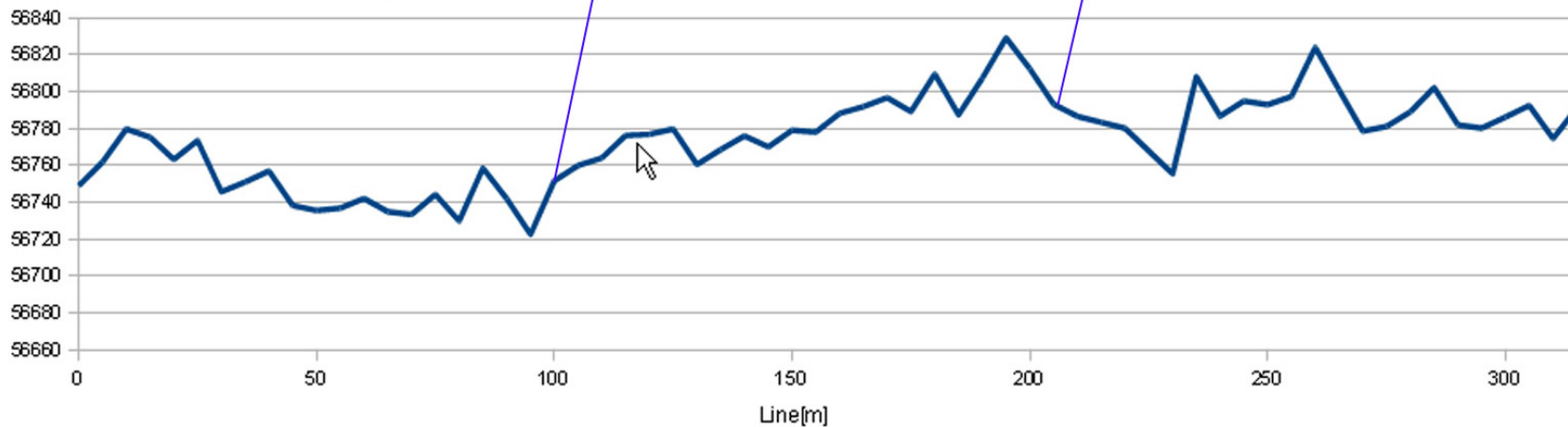
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 Box 747, Dawson City Y.T., Y0B-1G0, Canada  
 Phone: 867-993-3671 (Cell), info@arctic-geophysics.com

Model IP with topography  
 Iteration 4 Abs. error = 1.6



12th July Creek - Line02 - Total Field Magnetics

Datum point every 5m, data acquisition June 3rd 2012;



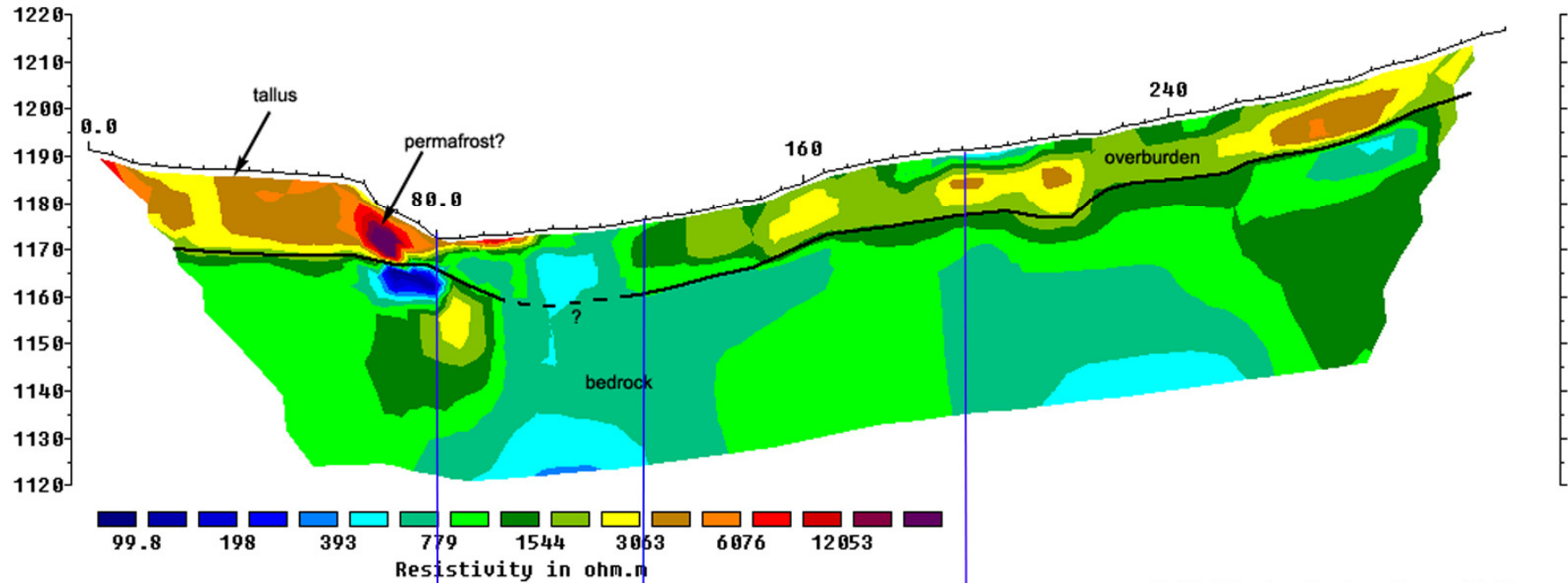
12th July Creek 02  
 2D Resistivity/IP, Schlumberger array  
 64 Electrodes: spacing 5m, Horizontal resolution 2.5m  
 Horizontal and vertical measure in [meter], Iteration error in [%]  
 Vertical exaggeration in model section display = 1.00  
 Data acquisition: Stefan Ostermaier, Franz Piechotta 3rd June 2012  
 Processing: Stefan Ostermaier, 3rd June 2012  
 Arctic Geophysics Inc., Yukon

The profile might show the ground-layers up to approximately 15% thicker than expected in reality. This 2D Resistivity measuring result is an interpretation of geophysical data. The verification of the interpretation by drilling, trenching, or shafting is recommended.



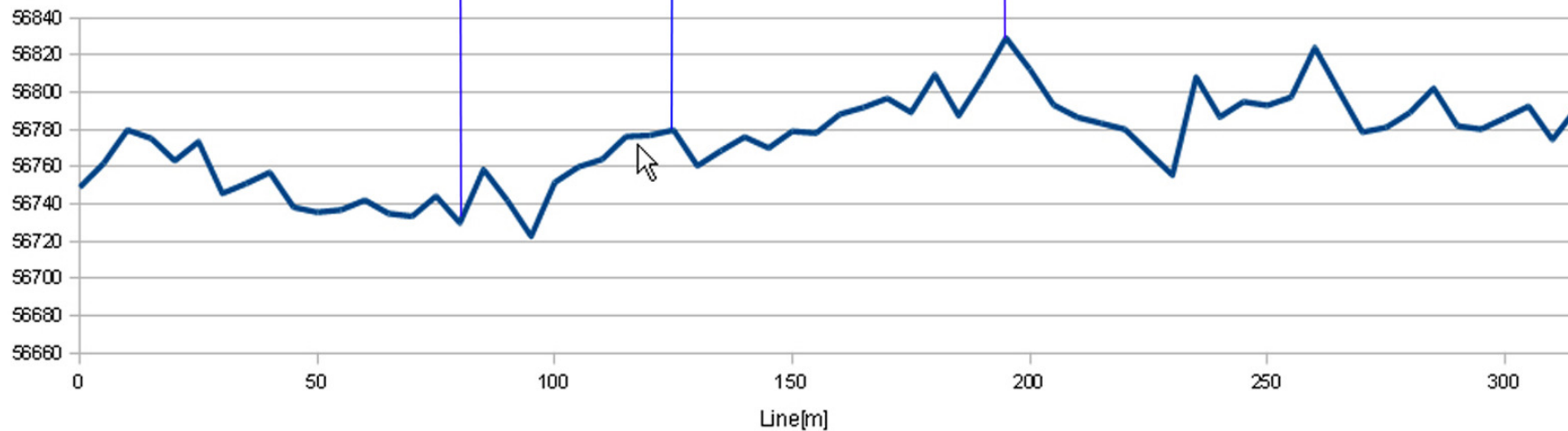
Model resistivity with topography

Elevation Iteration 4 Abs. error = 2.3



Unit Electrode Spacing = 5.00 m.

12th July Creek - Line02 - Total Field Magnetics  
 Datum point every 5m, data acquisition June 3rd 2012;



## Interpretation

**Resistivity profile\_02** might show 10-15m of overburden on top of bedrock.

At 0-80m in the bedrock seems to be around 15m, covered with tallus (colluvium) or frozen gravel.

At 80 to 160m the main channel seems to be located. At 105m the channel seems to be around 15m deep (deepest point). In this profile the main channel is shallower because the erosion of the sediments has been higher than in profile\_01. This higher erosion can be observed at the surficial topography. In the turquoise zone, the water saturation might be highest. The overburden consist of glacial till and glaciofluvial deposits. (These two sediment types cannot be differentiated in the resistivity profile.). The magnetic data are weakly elevated at the channel, however, the lower magnetic signal at the main channel could be caused by the higher bedrock depth. Also, placer gold deposits do not have to be associated with significant amounts of magnetite.

At 12<sup>th</sup> Miles Creek glaciofluvial gravels have high potential to contain commercial placer gold deposits. Glacial till could contain placer gold near bedrock. The interpreted main channel is a promising target for physical prospecting such a drilling or test pitting. We recommend the investigation of this channel at 105m (about 16m to bedrock). Higher amounts of groundwater are expected. So when using an auger drill, the gold samples could be falsified because of the higher groundwater amount.

At 215m a small high-channel, 15m deep at 215m, most likely created by glaciofluvial processes, could be located. This channel seems to be covered with colluvium. But on the bottom, near the bedrock, some glaciofluvial material could have been preserved. Possibly the magnetic peak could be a sign for placer gold in this channel.

This spot is a promising target for physical testing. A test pit dug by excavator seems to be possible since the amount of groundwater is lower at this location. When using an auger drill the gold samples could be falsified because of the higher groundwater amount.

At the **IP profile\_02** the spatial structure of the data (depth and location of the ground zones) are shown much rougher than in the Resistivity profile. Thus the data pattern of the IP profile could be moved to the left for about 25m. The anomaly on the left side coincides with weakly elevated IP data. In the middle of the profile the relatively high magnetic data could be caused by ore zones deeper in the ground than shown on the profile. The IP-anomaly on the right side of the profile coincides with relatively high chargeability.

The correlation of high IP-data and magnetic data could be caused by ore bodies in the bedrock. Native copper was panned by Malcolm Journey in the upper sediments which could explain the data.

At 130m the drill should go at least 60m deep to check the anomaly.

12th July Creek 03

2D Resistivity/IP, Schlumberger array  
 64 Electrodes: spacing 5m, Horizontal resolution 2.5m  
 Horizontal and vertical measure in [meter], Iteration error in [%]  
 Processing: Stefan Ostermaier, 4th June 2012  
 Arctic Geophysics Inc., Yukon

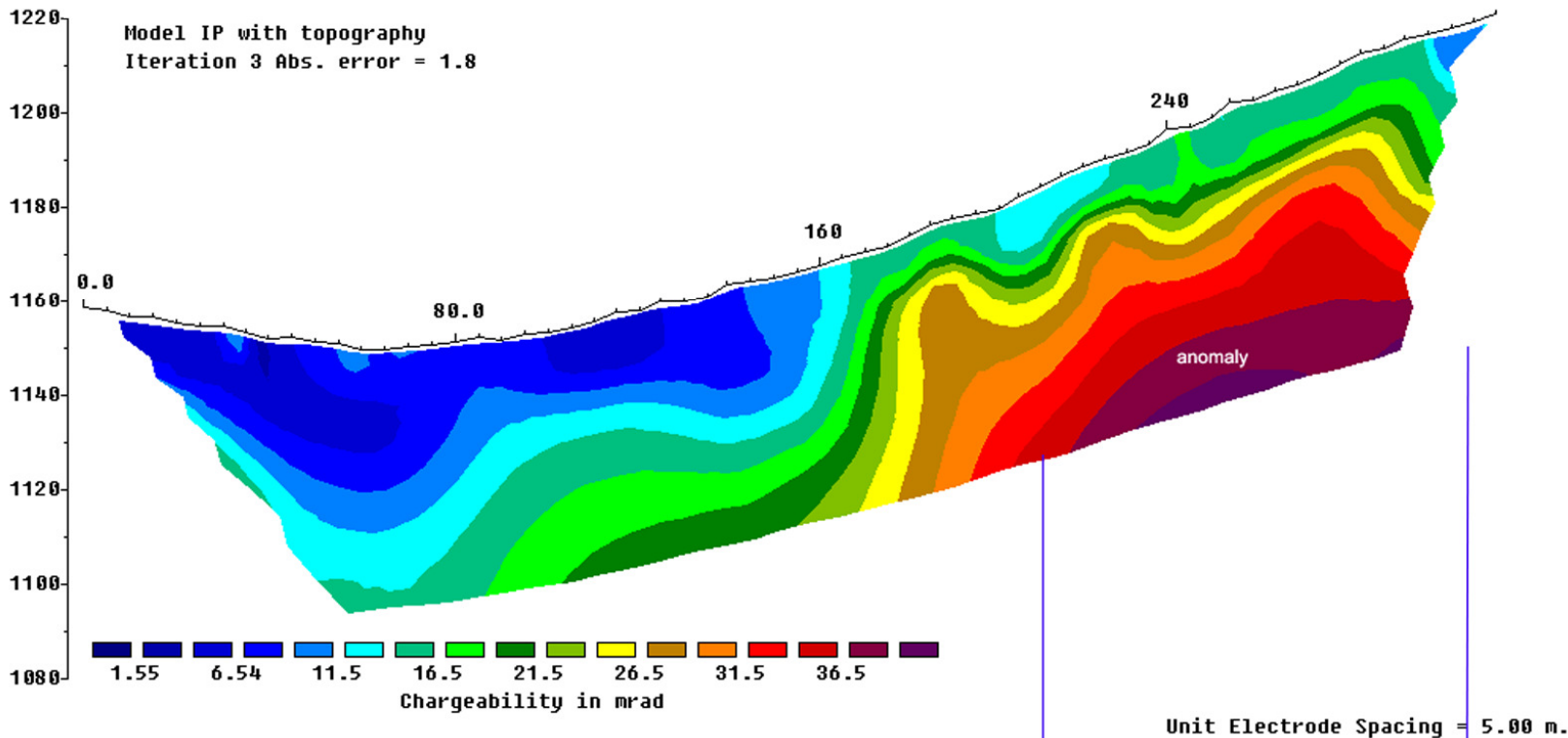
The profile might show the ground-layers up to approximately 15% thicker than expected in reality. This 2D Resistivity measuring result is an interpretation of geophysical data. The verification of the interpretation by drilling, trenching, or shafting is recommended.

Arctic Geophysics Inc.



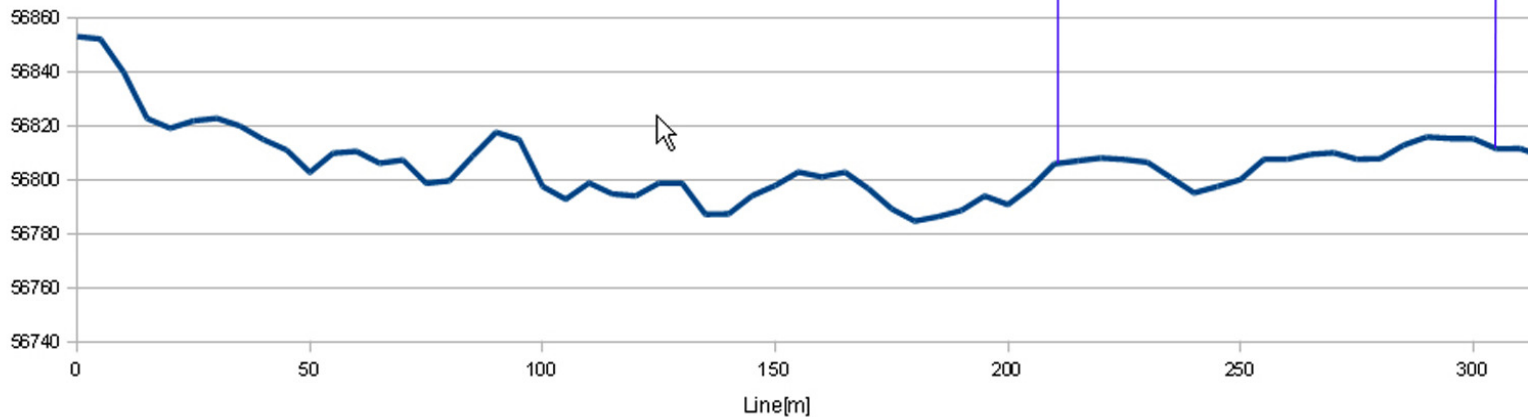
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12th July Creek - Line03 - Total Field Magnetics

Datum point every 5m, data acquisition June 4th 2012;



12th July Creek 03

2D Resistivity/IP, Schlumberger array  
 64 Electrodes: spacing 5m, Horizontal resolution 2.5m  
 Horizontal and vertical measure in [meter], Iteration error in [%]  
 Vertical exaggeration in model section display = 1.00  
 Data acquisition: Stefan Ostermaier, Franz Plechotta 4th June 2012  
 Processing: Stefan Ostermaier, 4th June 2012  
 Arctic Geophysics Inc., Yukon

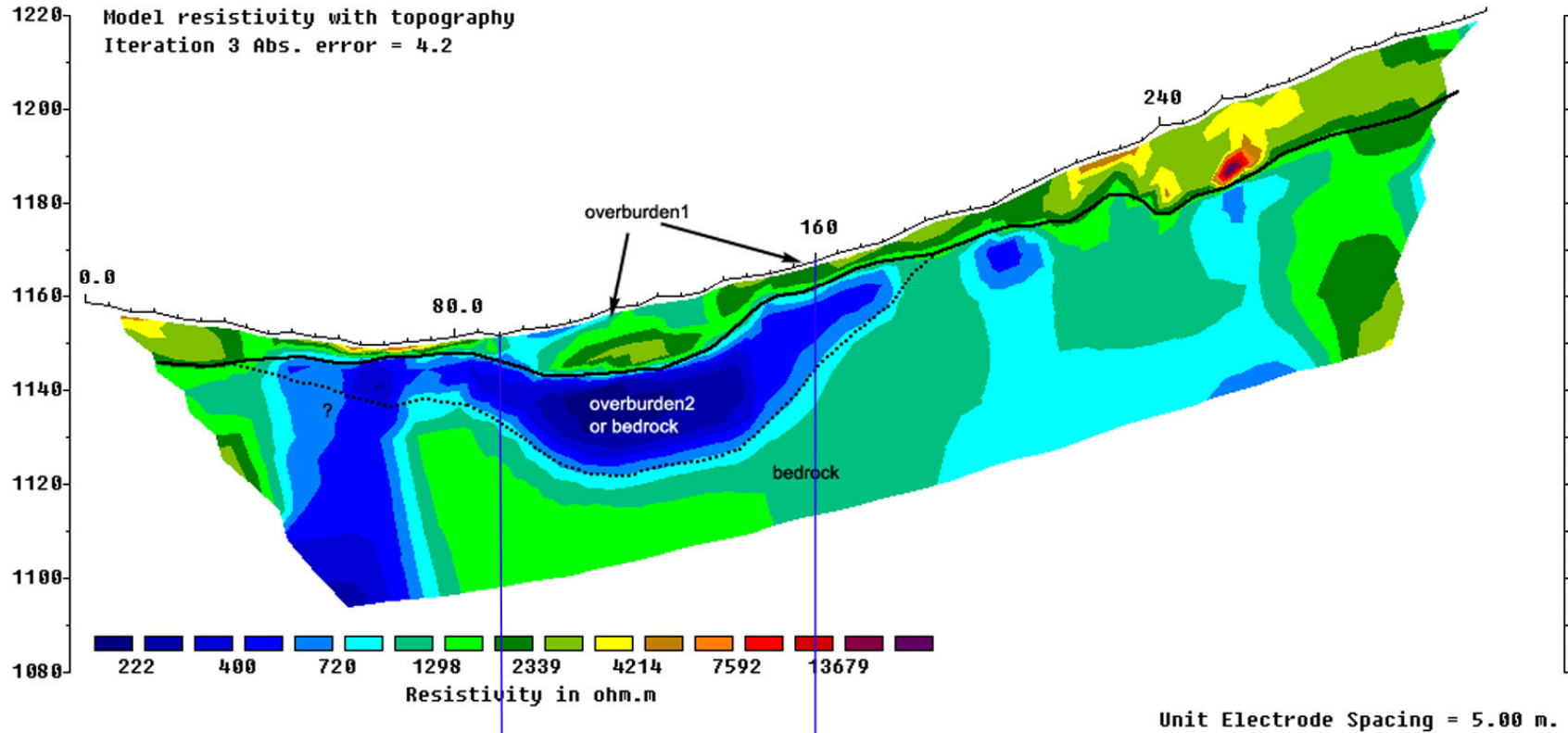
The profile might show the ground-layers up to approximately 15% thicker than expected in reality. This 2D Resistivity measuring result is an interpretation of geophysical data. The verification of the interpretation by drilling, trenching, or shafting is recommended.

Arctic Geophysics Inc.

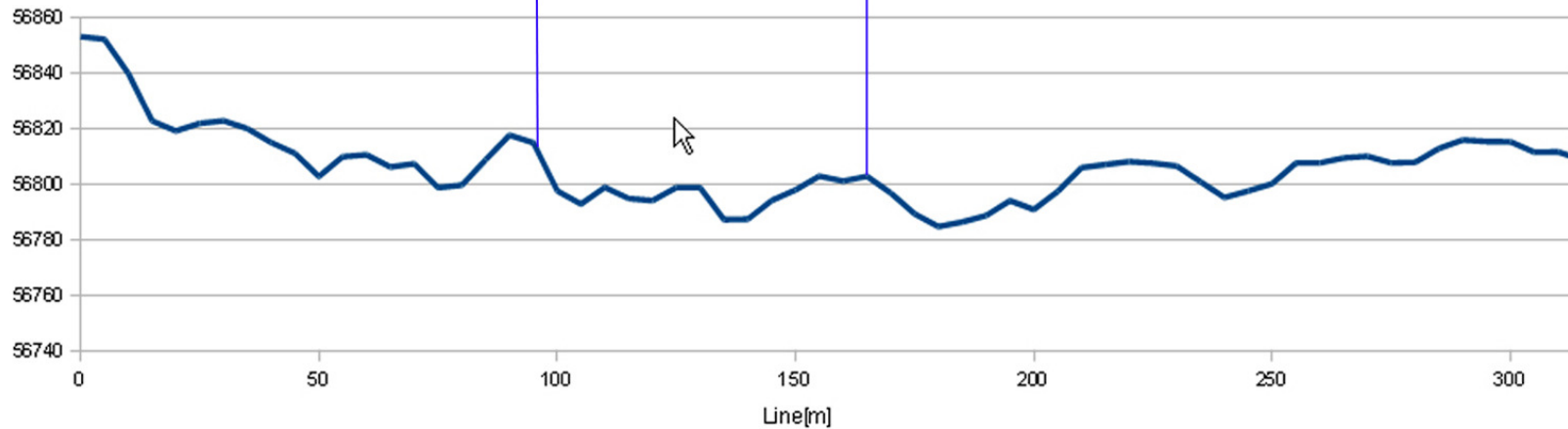


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12th July Creek - Line03 - Total Field Magnetics  
 Datum point every 5m, data acquisition June 4th 2012;



## Interpretation

**Resistivity profile\_03** might show 4-11m of overburden on top of bedrock. The overburden seems to be much eroded by the glacier.

At 0 - 85m the overburden seems to thin out towards the valley bottom. At 55m the bedrock seems to be 2.5m deep. Alternatively the bedrock could drop to about 20m depth at 55m; this interpretation would be supported by the IP profile. The overburden consists of glacial till and glaciofluvial deposits. (These two sediment types cannot be differentiated in the resistivity profile.). [At 12<sup>th</sup> Miles Creek glaciofluvial gravels have high potential to contain commercial placer gold deposits. Glacial till could contain placer gold near bedrock.](#)

[At 90 -140m a channel seems to be located. At 105m the channel might be 11m deep.](#) This channel was most likely created by glaciofluvial processes. It seems to be covered with a domination of glaciofluvial deposits besides inter-layers of till and colluvium. But on the bottom, near the bedrock, a smaller portion of glaciofluvial material could have been preserved. The magnetogram does not show higher data around the channel since the amount of magnetite does not seem to be high enough to be measured. [This spot is a promising target for physical testing. A test pit dug by excavator seems to be manageable easily since the amount of groundwater is lower at this location. When using an auger drill, the samples are expected to be good because of the lower amount of groundwater.](#)

After 140m the bedrock seems to be around 15m, covered with tallus (colluvium) or frozen gravel. The magnetic data is hardly elevated around the channel, however, placer gold deposits do not have to be associated with significant amounts of magnetite.

At 240m there could be a high-channel, 15m deep, filled with the local specific overburden.

In the **IP profile\_03** the spatial structure of the data (depth and location of the ground zones) are shown much rougher than in the Resistivity profile. The IP-anomaly on the right side of the profile weakly coincides with higher magnetic data.

[The correlation of high IP-data and magnetic data could be caused by ore bodies in the bedrock. Native copper was panned by Malcolm Journey in the upper sediments which could explain the data.](#)

[At 240m the drill should go at least 60m deep to check the anomaly.](#)

## 13. Qualifications



### Philipp Moll

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Email: [philipp.moll@arctic-geophysics.com](mailto:philipp.moll@arctic-geophysics.com)

- Study of geology, University of Freiburg, Germany
- Visit of geophysical field courses, University of Karlsruhe and University of Stuttgart, Germany
- Working for Arctic Geophysics Inc. since June 2007 (foundation)  
Geophysical field surveys using 2D Resistivity, Induced Polarization, Magnetics: Data acquisition, processing, interpretation, documentation
- Geophysical surveying for Mining Exploration in the Yukon since 2005
- Geological Prospecting for precious metals and minerals in the Yukon, NWTs, and Alaska since 1989
- Publications:
  - A) Numerous Assessment Reports about geophysical surveys done for Yukon mining companies, filed at Yukon Mining Recorder
  - B) Geophysical survey (45 field days) for Yukon Government: Yukon Geological Survey, Publication:  
<http://www.geology.gov.yk.ca/recent.html> Open Files: Moll, P., & Ostermaier, S., 2010. 2D Resistivity/IP Data Release for Placer Mining and shallow Quartz Mining - Yukon 2010. Yukon Geological Survey Miscellaneous Report MR-4. [PDF Report](#) [10.3 MB Data Profiles [45.4 MB 



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Philipp Moll

## **14. Appendix**

### **Literature**

Chesterman W. Ch. and Lowe K.E. Field Guide to Rocks and Minerals - North America, Chanticleer Press Inc. New York 2007

Evans A.M. Erzlagerstättenkunde, Ferdinand Enke Verlag Stuttgart (1992)

Griffiths, D.H.,Turnbull, J. and Olayinka,A.I. Two dimensional resistivity mapping with a computer-controlled array, First Break 8: 121-129 (1990)

Griffiths, D.H. and Barker, R.D. Two-dimensional resistivity imaging and modeling in areas of complex geology. Journal of Applied Geophysics 29 : 211 - 226. (1993)

Keller, G.V.and Frischknecht, F.C. Electrical methods in geophysical prospecting. Oxford: Pergamon Press Inc. (1966)

Loke M.H. and Barker R.D. Rapid least-squares inversion of apparent resistivity pseudosections by a quasi-Newton method. Geophysical Prospecting 44: 131-152 (1996)

Ostensoe Eric A. "Report on the Gladstone Creek, Placer Gold Property, Kluane Area" (Feb 1984), for: CATEAR RESOURCES LTD.

Press F., Siever R., Grotzinger J., Thomas H.J. Understanding Earth, W.H. Freeman and Company, New York (2004)

Robb L. Introducing to Ore-Forming Processes, Backwell Science Ltd., 2005

### **Maps**

Energy, Mines and Resources: CSW\_MINING.PLACER\_LANDUSE\_PERMIT\_POLY\_50K

Government of Canada, Natural Resources Canada, Centre for Topographic Information: 115H 04



## Geophysical Data Table

Rock type	Resistivity range ( $\Omega\text{m}$ )
Granite porphyry	$4.5 \times 10^3$ (wet) – $1.3 \times 10^6$ (dry)
Feldspar porphyry	$4 \times 10^3$ (wet)
Syenite	$10^2$ – $10^6$
Diorite porphyry	$1.9 \times 10^3$ (wet) – $2.8 \times 10^4$ (dry)
Porphyrite	$10$ – $5 \times 10^4$ (wet) – $3.3 \times 10^3$ (dry)
Carbonatized porphyry	$2.5 \times 10^3$ (wet) – $6 \times 10^4$ (dry)
Quartz diorite	$2 \times 10^4$ – $2 \times 10^6$ (wet) – $1.8 \times 10^5$ (dry)
Porphyry (various)	$60$ – $10^4$
Dacite	$2 \times 10^4$ (wet)
Andesite	$4.5 \times 10^4$ (wet) – $1.7 \times 10^2$ (dry)
Diabase (various)	$20$ – $5 \times 10^7$
Lavas	$10^2$ – $5 \times 10^4$
Gabbro	$10^3$ – $10^6$
Basalt	$10$ – $1.3 \times 10^7$ (dry)
Olivine norite	$10^3$ – $6 \times 10^4$ (wet)
Peridotite	$3 \times 10^3$ (wet) – $6.5 \times 10^3$ (dry)
Hornfels	$8 \times 10^3$ (wet) – $6 \times 10^7$ (dry)
Schists (calcareous and mica)	$20$ – $10^4$
Tuffs	$2 \times 10^3$ (wet) – $10^5$ (dry)
Graphite schist	$10$ – $10^2$
Slates (various)	$6 \times 10^2$ – $4 \times 10^7$
Gneiss (various)	$6.8 \times 10^4$ (wet) – $3 \times 10^6$ (dry)
Marble	$10^2$ – $2.5 \times 10^8$ (dry)
Skarn	$2.5 \times 10^2$ (wet) – $2.5 \times 10^8$ (dry)
Quartzites (various)	$10$ – $2 \times 10^8$
Consolidated shales	$20$ – $2 \times 10^3$
Argillites	$10$ – $8 \times 10^2$
Conglomerates	$2 \times 10^3$ – $10^4$
Sandstones	$1$ – $6.4 \times 10^8$
Limestones	$50$ – $10^7$
Dolomite	$3.5 \times 10^2$ – $5 \times 10^3$
Unconsolidated wet clay	20
Marls	3 – 70
Clays	1 – 100
Oil sands	4 – 800

## Costs

# Arctic Geophysics Inc.



Geophysical Surveys • Prospe

Malcolm Journeay  
Ruby Range Mining Inc.

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info@arctic-geophysics.com  
[www.arctic-geophysics.com](http://www.arctic-geophysics.com)

Resistivity/Magnetics Survey, 12<sup>th</sup> Miles Creek  
**Invoice Number: 20120626**

Date: 26<sup>th</sup> June 2012

Quantity	Description	Amount \$CAN
<b>Mob/Demob</b>		
5 days	Vehicle \$ 70.-- / day - [minus 1 day = 50% share]	175.--
1760 Km	\$ 0.55 / km [50%] share	484.--
2 days	Driving \$ 450.-- / day, operator + assistant- [50% share] Dawson – 12 <sup>th</sup> of Miles Creek – Dawson - [50%]Share	450.--
<b>Geophysical Survey</b>		
3 days	Geoelectrical 2D-Resistivity Imaging System + two magnetometer + survey leader \$ 880.-- / day	2 640.--
4 days	Field Assistant 250.--	1000.--
1 day	Fieldwork survey leader 400.--	400.--
1 day	First Documentation \$ 350.-- / day	350.--
2 days	Writing report \$ 350.-- / day Printing / Binding /Shipping	700.-- 60.--
		<b>NET Amount</b> \$ 6 259.--
<b>GST Number</b> 846363216RT0001		<b>G.S.T. (5%)</b> \$ 312.95
<b>Total Due</b>		<b>\$ 6 571.95</b>

## GPS-Data

### 12th July Creek\_Line01

Electrode No.	Location in Profile [m]	GPS-Coordinates Latitude/ Longitude hddd° mm.mmm'	GPS-Accuracy [m]	Post [ * ]
1	0.0	N61 11.532 W137 58.655	3	*
2	5.0	N61 11.536 W137 58.652	3	
3	10.0	N61 11.539 W137 58.657	3	
4	15.0	N61 11.541 W137 58.661	3	
5	20.0	N61 11.541 W137 58.664	3	
6	25.0	N61 11.543 W137 58.668	3	
7	30.0	N61 11.545 W137 58.672	3	
8	35.0	N61 11.547 W137 58.676	3	
9	40.0	N61 11.549 W137 58.677	3	
10	45.0	N61 11.551 W137 58.680	3	
11	50.0	N61 11.552 W137 58.685	3	
12	55.0	N61 11.554 W137 58.687	3	
13	60.0	N61 11.556 W137 58.692	3	
14	65.0	N61 11.558 W137 58.696	3	
15	70.0	N61 11.561 W137 58.702	3	
16	75.0	N61 11.563 W137 58.704	3	
17	80.0	N61 11.564 W137 58.705	3	
18	85.0	N61 11.565 W137 58.711	3	
19	90.0	N61 11.568 W137 58.715	3	
20	95.0	N61 11.570 W137 58.718	3	
21	100.0	N61 11.572 W137 58.721	3	
22	105.0	N61 11.573 W137 58.723	3	
23	110.0	N61 11.576 W137 58.728	3	
24	115.0	N61 11.577 W137 58.731	3	
25	120.0	N61 11.579 W137 58.734	3	
26	125.0	N61 11.581 W137 58.738	3	
27	130.0	N61 11.583 W137 58.740	3	
28	135.0	N61 11.586 W137 58.744	3	
29	140.0	N61 11.587 W137 58.746	3	
30	145.0	N61 11.589 W137 58.749	3	
31	150.0	N61 11.591 W137 58.755	3	
32	155.0	N61 11.593 W137 58.758	3	
33	160.0	N61 11.596 W137 58.762	3	*
34	165.0	N61 11.598 W137 58.765	3	
35	170.0	N61 11.600 W137 58.769	3	
36	175.0	N61 11.602 W137 58.774	3	
37	180.0	N61 11.605 W137 58.778	3	

<b>Electrode No.</b>	<b>Location in Profile [m]</b>	<b>GPS-Coordinates Latitude/ Longitude hddd° mm.mmm'</b>	<b>GPS-Accuracy [m]</b>	<b>Post [ * ]</b>
38	185.0	N61 11.606 W137 58.781	3	
39	190.0	N61 11.608 W137 58.784	3	
40	195.0	N61 11.610 W137 58.789	3	
41	200.0	N61 11.612 W137 58.791	3	
42	205.0	N61 11.613 W137 58.794	3	
43	210.0	N61 11.616 W137 58.799	3	
44	215.0	N61 11.618 W137 58.801	3	
45	220.0	N61 11.620 W137 58.805	3	
46	225.0	N61 11.622 W137 58.807	3	
47	230.0	N61 11.624 W137 58.810	3	
48	235.0	N61 11.625 W137 58.812	3	
49	240.0	N61 11.628 W137 58.819	3	
50	245.0	N61 11.630 W137 58.823	3	
51	250.0	N61 11.632 W137 58.826	3	
52	255.0	N61 11.635 W137 58.829	3	
53	260.0	N61 11.636 W137 58.834	3	
54	265.0	N61 11.638 W137 58.836	3	
55	270.0	N61 11.640 W137 58.838	3	
56	275.0	N61 11.642 W137 58.840	3	
57	280.0	N61 11.644 W137 58.845	3	
58	285.0	N61 11.648 W137 58.850	3	
59	290.0	N61 11.649 W137 58.854	3	
60	295.0	N61 11.651 W137 58.855	3	
61	300.0	N61 11.652 W137 58.858	3	
62	305.0	N61 11.655 W137 58.862	3	
63	310.0	N61 11.658 W137 58.864	3	
64	315.0	N61 11.659 W137 58.868	3	*

12th July Creek\_Line02

Electrode No.	Location in Profile [m]	GPS-Coordinates Latitude/ Longitude hddd° mm.mmm'	GPS-Accuracy [m]	Post [ * ]
1	0.0	N61 11.358 W137 59.233	3	*
2	5.0	N61 11.361 W137 59.235	3	
3	10.0	N61 11.363 W137 59.238	3	
4	15.0	N61 11.365 W137 59.241	3	
5	20.0	N61 11.367 W137 59.244	3	
6	25.0	N61 11.370 W137 59.246	3	
7	30.0	N61 11.372 W137 59.248	3	
8	35.0	N61 11.375 W137 59.250	3	
9	40.0	N61 11.377 W137 59.253	3	
10	45.0	N61 11.379 W137 59.256	3	
11	50.0	N61 11.381 W137 59.259	3	
12	55.0	N61 11.384 W137 59.264	3	
13	60.0	N61 11.386 W137 59.267	3	
14	65.0	N61 11.387 W137 59.270	3	
15	70.0	N61 11.390 W137 59.272	3	
16	75.0	N61 11.393 W137 59.274	3	
17	80.0	N61 11.394 W137 59.276	3	
18	85.0	N61 11.397 W137 59.279	3	
19	90.0	N61 11.399 W137 59.279	3	
20	95.0	N61 11.401 W137 59.283	3	
21	100.0	N61 11.403 W137 59.287	3	
22	105.0	N61 11.406 W137 59.289	3	
23	110.0	N61 11.407 W137 59.291	3	
24	115.0	N61 11.409 W137 59.294	3	
25	120.0	N61 11.411 W137 59.297	3	
26	125.0	N61 11.414 W137 59.302	3	
27	130.0	N61 11.416 W137 59.303	3	
28	135.0	N61 11.419 W137 59.307	3	
29	140.0	N61 11.421 W137 59.309	3	
30	145.0	N61 11.423 W137 59.312	3	
31	150.0	N61 11.426 W137 59.314	3	*
32	155.0	N61 11.428 W137 59.317	3	
33	160.0	N61 11.430 W137 59.319	3	
34	165.0	N61 11.432 W137 59.321	3	
35	170.0	N61 11.435 W137 59.324	3	
36	175.0	N61 11.437 W137 59.328	3	
37	180.0	N61 11.439 W137 59.331	3	

<b>Electrode No.</b>	<b>Location in Profile [m]</b>	<b>GPS-Coordinates Latitude/ Longitude hddd° mm.mmm'</b>	<b>GPS-Accuracy [m]</b>	<b>Post [ * ]</b>
38	185.0	N61 11.441 W137 59.332	3	
39	190.0	N61 11.443 W137 59.335	3	
40	195.0	N61 11.446 W137 59.339	3	
41	200.0	N61 11.448 W137 59.343	3	
42	205.0	N61 11.450 W137 59.347	3	
43	210.0	N61 11.452 W137 59.350	3	
44	215.0	N61 11.454 W137 59.351	3	
45	220.0	N61 11.456 W137 59.355	3	
46	225.0	N61 11.458 W137 59.358	3	
47	230.0	N61 11.460 W137 59.361	3	
48	235.0	N61 11.463 W137 59.364	3	
49	240.0	N61 11.466 W137 59.368	3	
50	245.0	N61 11.468 W137 59.369	3	
51	250.0	N61 11.470 W137 59.372	3	
52	255.0	N61 11.471 W137 59.374	3	
53	260.0	N61 11.473 W137 59.379	3	
54	265.0	N61 11.476 W137 59.383	3	
55	270.0	N61 11.479 W137 59.384	3	
56	275.0	N61 11.480 W137 59.389	3	
57	280.0	N61 11.483 W137 59.392	3	
58	285.0	N61 11.485 W137 59.394	3	
59	290.0	N61 11.487 W137 59.396	3	
60	295.0	N61 11.489 W137 59.400	3	
61	300.0	N61 11.490 W137 59.404	3	
62	305.0	N61 11.492 W137 59.405	3	
63	310.0	N61 11.495 W137 59.409	3	
64	315.0	N61 11.497 W137 59.412	3	*

**12th July Creek Line03**

<b>Electrode No.</b>	<b>Location in Profile [m]</b>	<b>GPS-Coordinates Latitude/ Longitude hddd° mm.mmm'</b>	<b>GPS-Accuracy [m]</b>	<b>Post [ * ]</b>
1	0.0	N61 11.238 W137 59.593	3	*
2	5.0	N61 11.241 W137 59.596	3	
3	10.0	N61 11.242 W137 59.598	3	
4	15.0	N61 11.245 W137 59.601	3	
5	20.0	N61 11.247 W137 59.606	3	
6	25.0	N61 11.249 W137 59.609	3	
7	30.0	N61 11.251 W137 59.613	3	
8	35.0	N61 11.254 W137 59.616	3	
9	40.0	N61 11.254 W137 59.619	3	
10	45.0	N61 11.256 W137 59.623	3	
11	50.0	N61 11.259 W137 59.626	3	
12	55.0	N61 11.261 W137 59.630	3	
13	60.0	N61 11.263 W137 59.634	3	
14	65.0	N61 11.266 W137 59.638	3	
15	70.0	N61 11.267 W137 59.641	3	
16	75.0	N61 11.269 W137 59.642	3	
17	80.0	N61 11.270 W137 59.644	3	
18	85.0	N61 11.273 W137 59.649	3	
19	90.0	N61 11.276 W137 59.653	3	
20	95.0	N61 11.278 W137 59.658	3	
21	100.0	N61 11.280 W137 59.662	3	
22	105.0	N61 11.282 W137 59.665	3	
23	110.0	N61 11.284 W137 59.668	3	
24	115.0	N61 11.285 W137 59.671	3	
25	120.0	N61 11.288 W137 59.675	3	
26	125.0	N61 11.290 W137 59.677	3	
27	130.0	N61 11.292 W137 59.682	3	
28	135.0	N61 11.294 W137 59.685	3	
29	140.0	N61 11.296 W137 59.689	3	
30	145.0	N61 11.298 W137 59.691	3	
31	150.0	N61 11.300 W137 59.693	3	*
32	155.0	N61 11.302 W137 59.697	3	
33	160.0	N61 11.304 W137 59.701	3	
34	165.0	N61 11.306 W137 59.704	3	
35	170.0	N61 11.308 W137 59.707	3	
36	175.0	N61 11.310 W137 59.712	3	
37	180.0	N61 11.312 W137 59.713	3	

<b>Electrode No.</b>	<b>Location in Profile [m]</b>	<b>GPS-Coordinates Latitude/ Longitude hddd° mm.mmm'</b>	<b>GPS-Accuracy [m]</b>	<b>Post [ * ]</b>
38	185.0	N61 11.314 W137 59.717	3	
39	190.0	N61 11.316 W137 59.721	3	
40	195.0	N61 11.318 W137 59.723	3	
41	200.0	N61 11.319 W137 59.727	3	
42	205.0	N61 11.321 W137 59.729	3	
43	210.0	N61 11.322 W137 59.731	3	
44	215.0	N61 11.324 W137 59.735	3	
45	220.0	N61 11.326 W137 59.738	3	
46	225.0	N61 11.328 W137 59.742	3	
47	230.0	N61 11.330 W137 59.747	3	
48	235.0	N61 11.332 W137 59.751	3	
49	240.0	N61 11.334 W137 59.753	3	
50	245.0	N61 11.336 W137 59.757	3	
51	250.0	N61 11.338 W137 59.761	3	
52	255.0	N61 11.340 W137 59.763	3	
53	260.0	N61 11.342 W137 59.766	3	
54	265.0	N61 11.344 W137 59.771	3	
55	270.0	N61 11.345 W137 59.774	3	
56	275.0	N61 11.348 W137 59.778	3	
57	280.0	N61 11.350 W137 59.781	3	
58	285.0	N61 11.351 W137 59.785	3	
59	290.0	N61 11.354 W137 59.788	3	
60	295.0	N61 11.356 W137 59.791	3	
61	300.0	N61 11.358 W137 59.793	3	
62	305.0	N61 11.360 W137 59.797	3	
63	310.0	N61 11.362 W137 59.801	3	
64	315.0	N61 11.363 W137 59.804	3	*



## **Appendix 2**

### **References**

Yukon Placer Database 2007.

Ron Barrett prospector, personal communication.

Tom Churchill placer miner, personal communication.

Summary of Work on the Kluane Project, Yukon Territory NTS 115G01, 07, 08 for Yukon Mining Incentive Program Economic Development, Government of Yukon Box 2703, Whitehorse, YT Y1A 2C6. File # 05-063 by J. Peter Ross, Prospector.

### **Appendix 3**

#### **Statement of Qualifications**

I, Robert Stirling, with business address of 12 Mossberry Lane, Whitehorse, Yukon Y1A 5W4, do hereby certify that:

I assisted Malcolm Journey in the compilation of data and preparation of this report.

I have been involved in mining and exploration in the Yukon and Northwest Territories since 1977.

I am experienced in performing total magnetic field surveys, processing data and producing maps.

I have been involved with placer prospecting in the Yukon since 1990.

I have produced maps and compiled data for geological reports since 1991.

I have no direct or indirect interest in the Twelfth of July Project.

Malcolm Journey, a registered claim owner and performer of the work, collected the data for this project.

The geophysical data was collected and interpreted by Arctic Geophysics Ltd.

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Robert Stirling

## Appendix 4

### Log of Work – Twelfth of July Project

Personnel: Malcolm Journeay, Prospector and John Journeay, Labourer

Dates worked: May 24 – June 26, July 20 – August 23

<i>Date</i>	<i>Description</i>
May 24	Arrive in Whitehorse.
May 25	Picked up the Kubota KX121 excavator from Totaltrac and met with Jeff Bond.
May 26	Travelled from Whitehorse to Twelfth of July Creek area.
May 27	Set up camp at the airstrip area, Jarvis River and Twelfth of July Creek.
May 28	Began to make a trail on the lower lease.
May 29	Return to Whitehorse.
May 30	Get supplies, meet with Derek re YMIP paperwork and leave back to camp. It was a four hour trip in from Whitehorse.
May 31	Continue trail with the Kubota, 3 cans of diesel used. The road is 1.7 km long and almost 1.6km along the stream. Worked from 9 am to 9 pm.
June 1	Continue trail with the Kubota, 1 km further and used 2 cans of diesel. The geologist from Arctic Geophysics arrives and marks the location of the first line for the 2D resistivity and magnetometer survey. Worked from 8 am to 7:30 pm.
June 2	Used 1 can of diesel for the Kubota and advanced the road to the fan/pup. Stephan and France ran the first line of resistivity and magnetics before the fan. A possible paleo-channel was discovered. Their hypothesis is that the paleo-channel is approximately 20 meters to bedrock. The next test line is planned for downstream. Praying for better results with a higher bedrock and less overburden. Start at 8:15 am and finished at 8 pm.
June 3	The next resistivity line was done and there is an interesting reading for bedrock approximately 15 metres deep, some sort of sulphide in the ground. It is the highest mag and resistivity reading he's ever seen. Panning was done and very little gold values were found. Possibility is its held up in the old paleo-channel. Started 10:15 am finished at 7:30 pm.
June 4	Panned going downstream from 3rd resistivity mag line. First test nothing, second test nothing, 3rd test approximately below where we had our first fire on the side of the hill showed 2 colors, 4th test behind a big rock using moss and gravel revealed 5 colors, and the 5 <sup>th</sup> test downstream using only two shovel scoops of moss revealed 4 colors on the surface. Finished and returned with the trailer full of the geologist gear ( Stephan, France) at 7 pm.
June 5	Malcolm brought the test plant from Dale Brewster. The Arctic Geophysics crew packed up and headed out. John cut up some wood. Malcolm talked to Ed long and asked how much it would cost to have him stake a hardrock quartz claim on 12 of July for them. They agreed to 50/50 split and we have to rent a excavator to dig 15 metres.
June 6	Visited Brian at his mine site in Ruby Creek, the water was getting quite high to cross.
June 7	Travelled to Whitehorse to drop mom and Bradley off and run errands.
June 8	Running errands in Whitehorse. We talked to Riley at All-In Exploration Solutions and gave them the survey data from Arctic Geophysics. They agreed to go up and stake the hardrock claim and then transfer it into Ed, and Malcolm's name in a joint venture.

Twelfth of July Project, YMIP Target Evaluation Program 2012

<i>Date</i>	<i>Description</i>
June 9	Purchased groceries, fuel and carpet then headed out to the camp. The water was down from the flood. But some of the tributary's were pushed out we needed to fill one in. Got the satellite set up.
June 10	Went up to 12th of July, the road was washed out in many places, dug a test hole as deep as we could with the excavator and panned, returned 3 flakes for 5-6 pans. On return Malcolm rolled the bike in the fast flowing creek. The handle bars and equipment has a good amount of damage. He's alive though.
June 11	Walked the excavator to the quad location at 4th and 12th of July creek. Removed the quad from the creek. Took the entire day.
June 12	Loaded the quad on the truck and went to town. Dropped it off at Honda dealer stayed in hotel.
June 13	Visited Inland Kenworth to look into a machine. Picked up diesel antifreeze. Driving back to camp. Worked on remaking the trail up 4th of July from it being washed out by previous high waters.
June 14	Continued with the road. We started 930 am and finished at 530 pm.
June 15	Finished the road to Larose and Twelfth of July creek meeting. The test plant needs some modifications. Started at 10 am to 6 pm.
June 16	Made the final adjustments to the plant including welding additional grizzlys.
June 17	We dug the first official hole. Sluiced almost 1 yard and found a nice little chunk of gold. Approximately 3-4.5 feet deep from surface. Started at 12:30 and finished at 7. The test hole is directly by the first post. The gold bearing ground seems to be covered and layered with silt.
June 18	Helped pull a guy out of the creek and assisted Brian changing the guys transmissions oil and water out of the fuel. The day was a write off.
June 19	A late start as it rained all night. Took a while to get to 12th of July creek, Ed helped us there. While there we continued to dig for a total of 2.5 yards now. On the way back the water was roaring down the creek. The bike flipped twice so we left it there and went for safety 5 hour walk to Brian's cabin.
June 20	The day was spent trying to get back to camp and we managed with the help of Dale.
June 23	Drove back to the claim and got the bike and excavator back to a safe area..
June 24	Went up to Ruby Range and saw Brian and Dale and saw their machine run. Picked up some borrowed chains.
June 25	Mobilize everything that we needed and headed out to Whitehorse.
June 26	Dealt with stuff in Whitehorse, went to Honda and Yukon Pump.
June 27	Returned to Ontario.
July 20	Returned to Whitehorse.
July 23	Travelled to camp with excavator and side by side.
July 24	Travelled to X creek to get Dale's plant,
July 25	Mobilize the plant half way.
July 26	Mobilize the plant to the first test site and set it up as much as we could.

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<i><b>Date</b></i>	<i><b>Description</b></i>
July 27	Started running the plant from 12 noon to 5 pm.
July 28	Trip to Whitehorse
July 29	Returned to camp.
July 30	Sluiced.
July 31	Sluiced.
August 1	Dug and found false bottom at 10.5 ft. A silty layer. The thickness of the silt is over 2ft. The hole is approximately 65 yards in volume.
August 2	Moved Dale's plant to next location right beside a bench and prepped a possible location for the base camp. Doing service on the bombardier, need parts.
August 3	Trip to Whitehorse
August 4	Returned to camp.
August 5	Sluice at the second location.
August 6	Finish the test pit, the volume dug was 55 cubic yards.
August 7	Moved the plant to the third location.
August 8	Began sluicing but stopped as a part needed welding.
August 9	Repaired the plant.
August 10	Trip to town to pickup family.
August 11	Returned to camp.
August 12	Continued the third test.
August 13	Finished the third test, 60 cubic yards total.
August 14	Move the test plant. And staked 1 mile lease on Larose creek
August 15	Dug a hole, it was majority muck close to second line
August 16	Bladed a trail to Larose Creek.
August 18	Cleanup test 2 and 3 with the gold cube.
August 23	Demobilize gear and travel to Whitehorse.