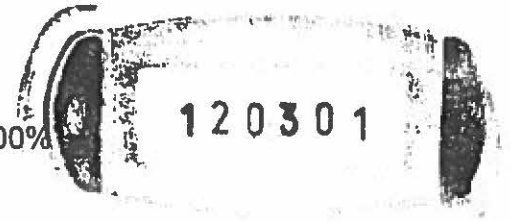


**GEOPHYSICAL REPORT**  
on the  
**Carlisle Creek**  
**Placer Prospecting Lease**



Whitehorse, Yukon Territory

**Carlisle Creek:**  
Lease No.: IW00436 – Owner: Chad Cote 100%



NTS # 115J/13

Latitude: 62° 59 N Longitude: 139° 32.5 W

Whitehorse Mining District

WORK PERFORMED: March 7-9th, 2015  
DATE OF REPORT: March 16<sup>th</sup>, 2015

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## Summary

A High Resolution DC Resistivity survey was conducted on the Carlisle Creek placer lease to map bedrock profile and classify overburden material. The lease is located 120km South of Dawson on Carlisle Creek which flows directly into the Yukon River (figure 1).

The survey was conducted by Groundtruth Exploration on March 7-9, 2015. The property was accessed by snowmobile, and fixed wing/helicopter based in Dawson, YT. One resistivity profile was set up and read using 3 separate arrays. The Resistivity Survey was read using a Supersting R84 resistivity meter with 84 electrodes spaced at 5m. Electrode locations were surveyed with DGPS for accurate positioning and topography in the processed resistivity model.

The resistivity survey was successful in profiling a conductive horizon on the upslope portion of the profile, interpreted to be a gravel bed. Contact resistance was high on the lower portion of this survey, requiring more data to support interpretation in the creek bottom.

### 1.0 Location and Access

The prospecting lease is located 120km South of Dawson City within the Yukon river drainage system in west-central Yukon Territory. It is centered at 62° 59 N, 139° 32.5 W, on NTS mapsheet 115J/13 (Figure 1). It is accessible in winter on the Yukon river via snowmobile, and accessible by helicopter year round. Neighbouring Thistle Creek (~10km to the north) has placer mines which are currently accessed from Dawson City by barge on the Yukon River to the mouth of Thistle creek.

### 2.0 Property

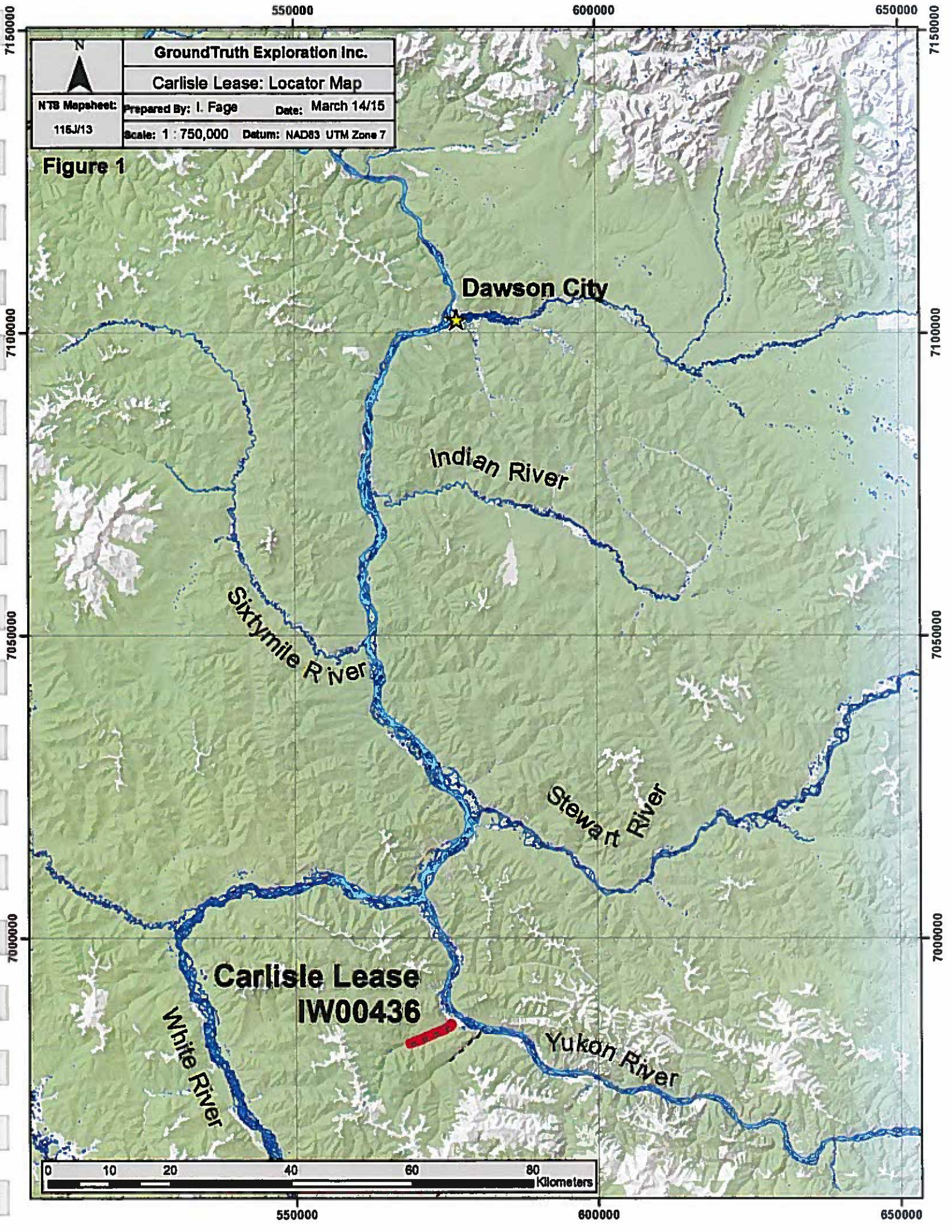
The Carlisle Creek Placer Prospecting lease Tenure:

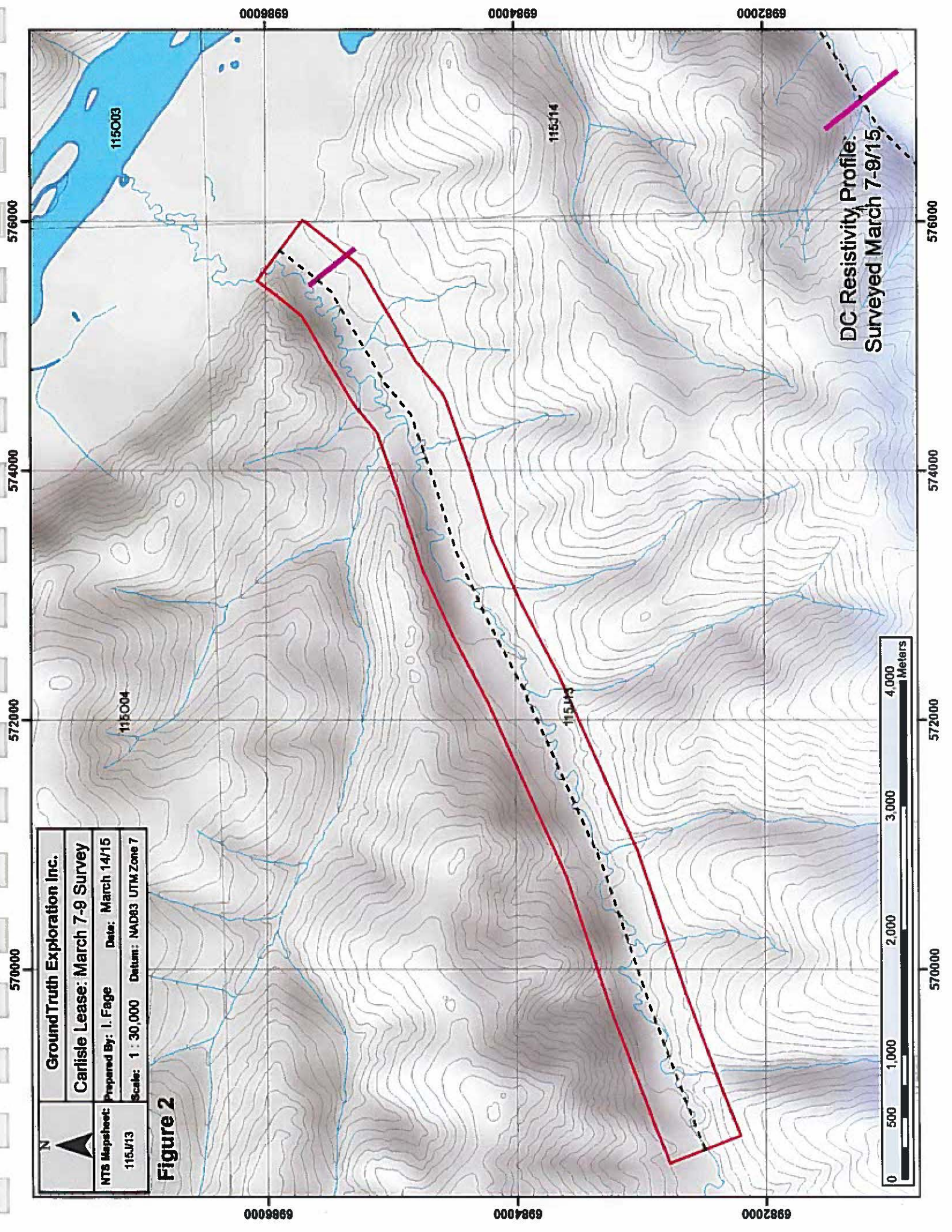
Location: Carlisle Creek, IW00436

Length: 5 miles

Expiry: October 10, 2015

(Figure 2)





	<b>Ground Truth Exploration Inc.</b>	
	<b>Carlisle Lease: March 7-9 Survey</b>	
MTS Mapsheet: 115J/13	Prepared By: I. Fage	Date: March 14/15
Scale: 1 : 30,000		Datum: NAD83 UTM Zone 7

**Figure 2**

**DC Resistivity Profile:**  
 Surveyed March 7-9/15



### 3.0 Physiology and Geology

The Carlisle Creek placer prospecting lease is located within the Yukon-Tanana Terrane. The landscape is composed broad valleys bordered by moderately sloped, tree covered hills ranging in elevations from 1200 to 5000 feet. The area experiences typical climatic conditions for central Yukon Territory with short, warm and dry summers and cold winters. Temperatures range from -20°C to -60°C in the winter and +10°C to +30°C in the summer.

The Carlisle Creek placer lease is completely underlain by a Devonian-Mississippian metamorphic unit. The southern headwaters of Carlisle creek are underlain by an early Jurassic plutonic unit but this is outside of the placer lease (approx. 10km away). See Figure 3.

#### Legend for Figure 3: Regional Geology:

##### Devonian-Mississippian

<b>DMN3</b>	<b>DMN3: NASINA:</b> quartzite, micaceous quartzite, quartz muscovite (chlorite; feldspar augen) schist, and minor metaconglomerate and metagrit as in (1), but may locally include significant Nisling Assemblage
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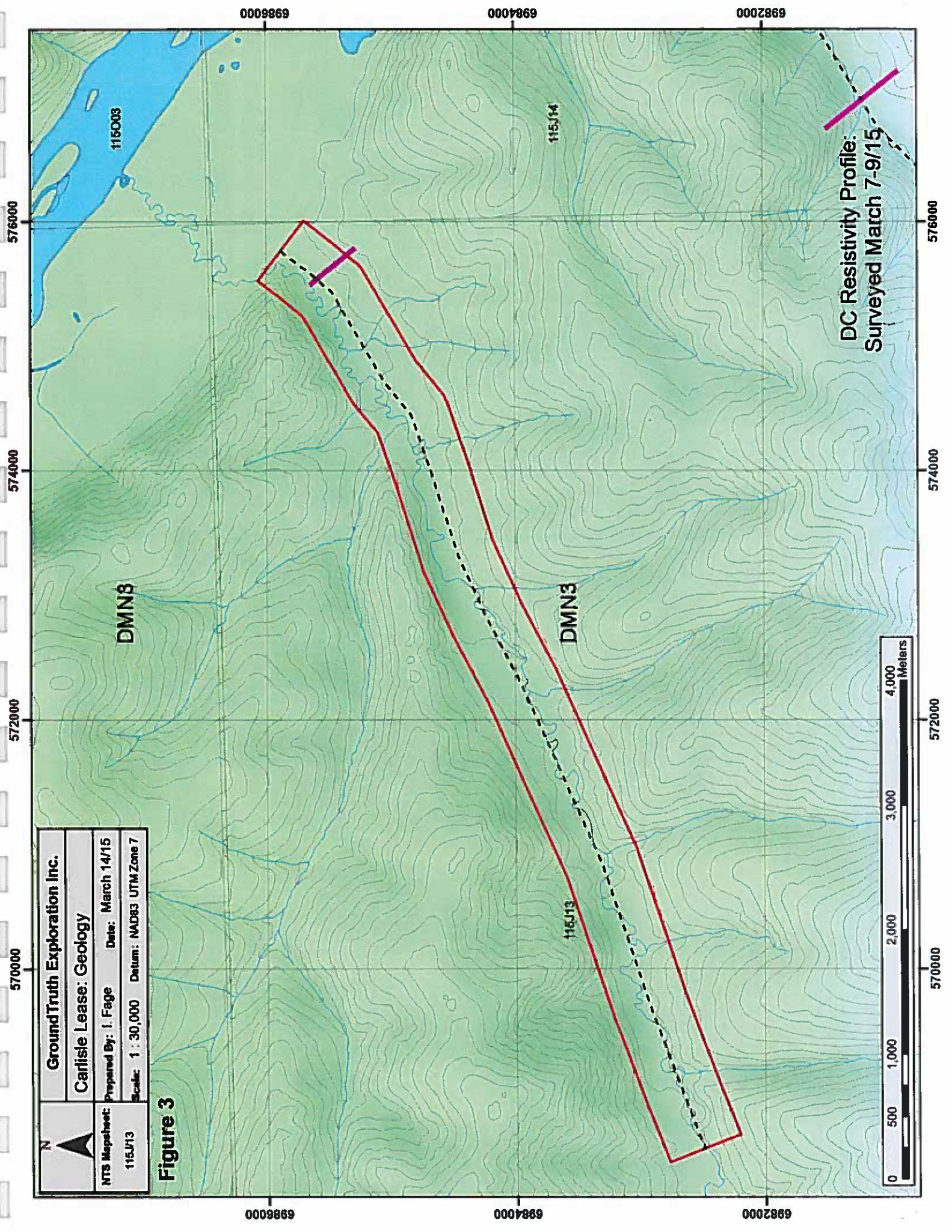
##### Early Jurassic

<b>EJgA</b>	<b>EJgA: AISHIHIK SUITE:</b> medium- to coarse- grained, foliated biotite-hornblende granodiorite; biotite-rich screens and gneissic schlieren; foliated hornblende diorite to monzodiorite with local K-feldspar megacrysts; may include unfoliated monzonite of the Long Lake Suite (Aishihik Suite)
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<b>EJqL</b>	<b>EJqL: LONG LAKE SUITE:</b> massive to weakly foliated, fine to coarse grained biotite, biotite-muscovite and biotite-hornblende quartz monzonite to granite, including abundant pegmatite and aplite phases; commonly K-feldspar megacrystic (Long Lake Suite)
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##### Upper Cretaceous

<b>uKC1</b>	<b>uKC1: CARMACKS:</b> augite olivine basalt and breccia; hornblende feldspar porphyry andesite and dacite flows; vesicular, augite phyric andesite and trachyte; minor sandy tuff, granite boulder conglomerate, agglomerate and associated epiclastic rocks (Carmacks Gp., Little Ridge Volcanics, Casino Volcanics)
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 N	<b>Ground Truth Exploration Inc.</b>	
	<b>Carlisle Lease: Geology</b>	
MTS Mapsheet: 115J13	Prepared By: I. Fage	Date: March 14/15
Scale: 1 : 30,000		Datum: NAD83 UTM Zone 7

**Figure 3**

**DC Resistivity Profile:  
Surveyed Match 7-9/15**



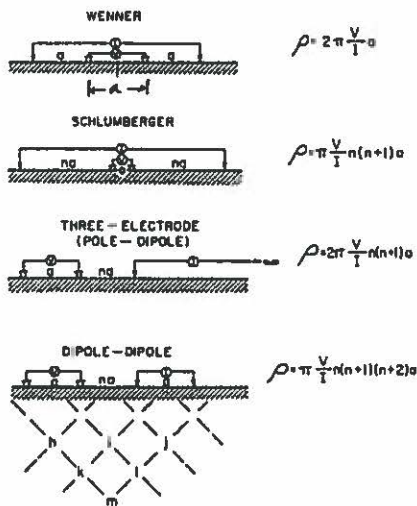
### 4.0 Resistivity Survey Procedure(s)

Ground Truth crew camped onsite to conduct the survey. The pre-arranged traverse was located using Ashtech GPS, then brushed & chained at 5m, for the 415M traverses .

The DC Resistivity survey was completed using Advanced Geoscience Inc., Supersting instrument (Instr. specs. Addendum). The instrument is placed at a center point of the traverse; referred to as electrode #42, with 42 electrodes on either side. The Supersting gathered apparent Resistivity component only, using the -following arrays:

1. Inverse Schlumberger **Si3 Array** (with expanding AB and MN dipoles) A= 5m
2. Extended Dipole Dipole **DD Array** (with expanding AB and MN)

The equipment comprises; Supersting (combined transmitter/ receiver), switch box, motor generator with 6 x 14 electrode cable= 84 electrodes.



Contact Resistances (CRS) are the governing factor for collecting good data, giving high Signal/Noise ratio.

CRS are taken before survey, and attempts always put forward to keep them below the 2 kohm threshold when doing IP effects simultaneously.

The traverse is also surveyed using differential GPS to produce an accurate terrain file, for post processing.

The survey result is presented here-in using Earth Imager, and Surfer software.

### 4.1 Resistivity Survey Theory Applied to Placer Exploration

High Resolution DC Resistivity surveys can be applied to placer exploration by exploiting unique petrophysical properties of overburden and bedrock material. Measurement of the apparent resistivity at depth on continuous profiles provides a method to discriminate between overburden (muck/gravel) and bedrock interface. The results are mapped in symbolized section figures and interpreted. Ideally these interpretations should be validated by drilling or test pits to confirm the resistivity based interpretation.

## 6.0 DC Resistivity Results and Interpretation

### DC Resistivity Surveys:

Survey 1: 84 Electrodes spaced at 5m, 415m horizontal length

Arrays Read: (1) Inverse Schlumberger (Si3), (2) Dipole-Dipole (xDD)

### Inverse Schlumberger and Dipole-Dipole Arrays

The Inverse Schlumberger array shows a defined near surface horizon between L04W-535N and 700N characterized by a moderate resistivity low (200-300 Ohm-m). This is interpreted to be a gravel bed. It is interpreted to extend from surface to approximately 20m depth. A similar expression is shown on the Dipole-Dipole inversion. Higher resistivity values are measured near surface from 700-900m which is interpreted as permafrost as high ice content. Further data collection will be required to properly evaluate the subsurface in the creek valley.

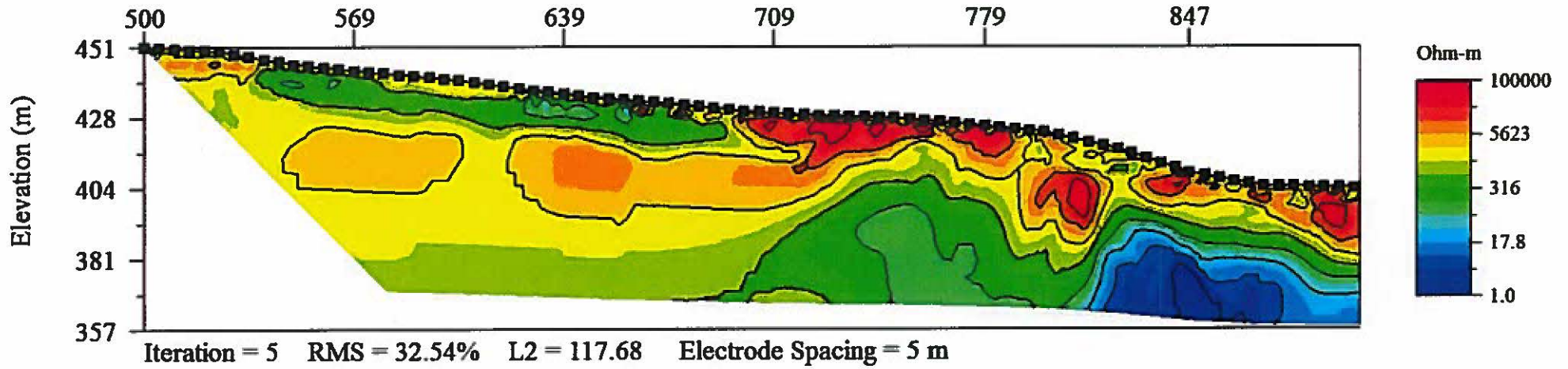
(See inversion figure 4)

## 7.0 Conclusion/ Recommendations

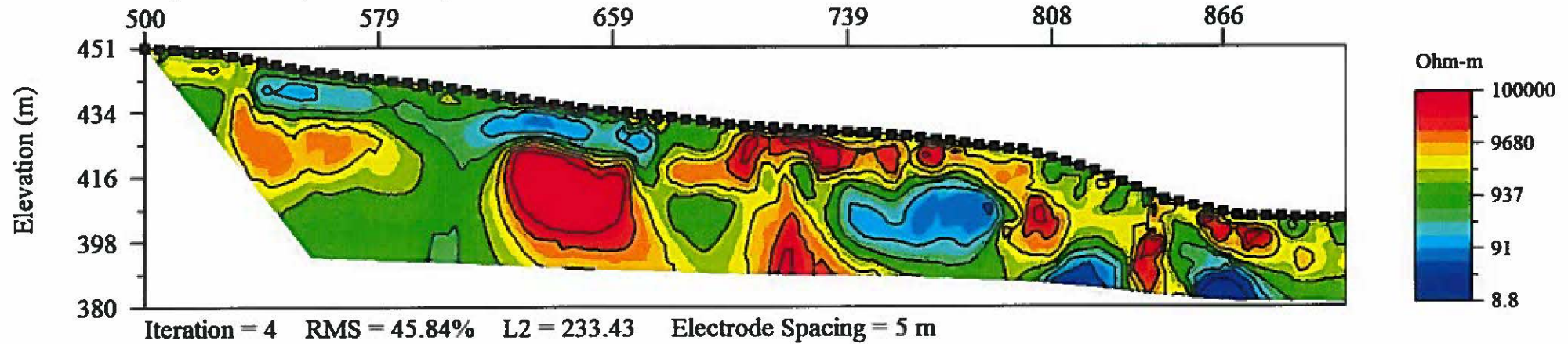
Additional work will be conducted on this creek to better evaluate the bedrock depth and permafrost depth. The 5m electrode spacing provides good lateral coverage but sacrifices detail when interpreting the near surface and measures to a depth well beyond the expected bedrock depth. The 5m spacing could be used as a first pass to provide an overview of the entire creek valley on wider valleys such as Carlisle. Additional surveys at closer electrode spacing (1.5m) could be employed to provide detailed evaluation on priority targets identified on the 5m surveys. Winter DC Resistivity surveys have given challenges to produce low contact resistance in challenging areas such as saturated permafrost and creek 'overflow' ice where it is tough to produce quality data. Solutions would be to run reconnaissance survey such as UAV drone to identify potentially adverse survey areas prior to survey, or to run alternative surveys in winter for targeting such as Ground Penetrating Radar and wait until summer to run followup DC Resistivity surveys. Results need to be proofed by follow-up method such as drilling.

# DC Resistivity Inversion Results

## Inverse Schlumberger Array



## Dipole - Dipole Array



Carlisle Creek Placer Lease: lw00436  
Survey Date: March 7-9, 2015  
Inversion by: R. Daigle



## 8.0 Statement of Expenditures

### Carlisle Creek

5 Mile Prospecting Lease, Work Program

GroundTruth Exploration conducted a DC Resistivity Survey on the Carlisle Creek Placer Lease (IW00436) for the purpose of mapping bedrock depth and mapping overburden. The survey was conducted on March 8-9, 2015. The crew of 4 prepped the survey line on March 7th. On March 8-9/15, the first portion of the cross valley profile was read. The survey was laid out using 84 electrodes at 5m spacing.

#### DC Resistivity Survey -

March 7/15: Prep Survey Line

Wages: Foreman (1*\$450/day), Assistant Operator/DGPS Surveyor (1*400/day), Crew (3*\$350/day)	\$1,900.00
<b>Cost Per Survey Day</b>	<b>\$1,900.00</b>

March 8/15: Read Survey Line 1

Wages: Foreman (1*\$450/day), Assistant Operator/DGPS Surveyor (1*400/day), Crew (3*\$350/day)	\$1,900.00
DC Resistivity Meter: Supersting R8 w/cables/electrodes (\$600/day)	\$600.00
Precision DGPS (\$50/day)	\$50.00
Consumables - Electrodes, NaCl, Pickets, Spray paint	\$50.00
Processing and Inversion (\$75/hour) *1h per array	\$75.00
<b>Cost per Survey Day</b>	<b>\$2,675.00</b>


March 9/15: Read Survey Line 1

Wages: Foreman (1*\$450/day), Assistant Operator/DGPS Surveyor (1*400/day), Crew (3*\$350/day)	\$1,900.00
DC Resistivity Meter: Supersting R8 w/cables/electrodes (\$600/day)	\$600.00
Precision DGPS (\$50/day)	\$50.00
Consumables - Electrodes, NaCl, Pickets, Spray paint	\$50.00
Processing and Inversion (\$75/hour) *1h per array	\$75.00
<b>Cost per Survey Day</b>	<b>\$2,675.00</b>

**Total Expenditures for Lease IW00436: \$7,250.00**

## 9.0 Certification

I, Richard Daigle of Thorold, Ontario certify that I am a graduate Certified Electronic Technologist. I have been practicing Geophysics since 1980.

  
R. J Daigle

March 2015

I, Isaac Fage of Dawson, Yukon Territory certify that I hold an Advanced Diploma in GIS/Remote Sensing from the Centre of Geographic Sciences (COGS). I am an owner and President of GroundTruth Exploration Inc. I have been working in the Mineral Exploration continuously since 2004.

Isaac Fage



March 2015

## 10.0 List of Figures

1. Property Location
2. Tenure
3. Geology
4. Resistivity Survey

## 11.0 Supersting R8 IP Technical Specifications

from [www.agiusa.com](http://www.agiusa.com)

Measurement modes	Apparent resistivity, resistance, induced polarization (IP), battery voltage.
Measurement range	+/- 10V.
Measuring resolution	Max 30 nV, depends on voltage level.
Output current intensity	1mA - 2000 mA continuous, measured to high accuracy.
Output voltage	800 Vp-p, actual electrode voltage depends on transmitted current and ground resistivity.
Output power	200W.
Input channels	Eight channels.
Input gain ranging	Automatic, always uses full dynamic range of receiver.
Input impedance	>150 MOhm.
Input voltage	Max 10 V.
SP compensation	Automatic cancellation of SP voltages during resistivity measurement. Constant and linearly varying SP cancels completely (V/I and IP measurements).
Type of IP measurement	Time domain chargeability (M), six time slots measured and stored in memory.
IP current transmission	ON+, OFF, ON-, OFF.
IP cycle times	0.5, 1, 2, 4 and 8 s.
Noise suppression	Better than 100 dB at f >20 Hz.
Powerline noise suppression	Better than 120 dB at power line frequencies (16 2/3, 20, 50 & 60 Hz) for measurement cycles of 1.2 s and above.
Total accuracy	Better than 1% of reading in most cases (lab measurements). Field measurement accuracy depends on ground noise and resistivity. Instrument will calculate and display running estimate of measuring accuracy.

