



# **Geochemical Report**

# Yukon Mineral Exploration Program (YMEP)

# NORTH Regional Exploration Program

## **Watson Lake Mining District**

NTS: 95E/05, 95E/12 Latitude: 61°25' N Longitude: -127°46' W

Work Performed On: August 12 - 18, 2014

Prepared for Shawn Ryan. By GroundTruth Exploration Inc.

Written by: Isaac Fage

March 29, 2015



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### 1 Introduction

GroundTruth Exploration Inc. conducted a regional soil sampling program over the targets proposed in the North Regional Exploration Program application. A total of 1501 soil samples were collected with a 10 person crew based from the Golden Predator's 3 Aces Camp on the Nahanni Range Road between Aug 12 – 18, 2015. The regional program consisted of ridge and spur soil sampling at 50m station spacing on 47 traverses.

The primary target of the regional program is to locate tungsten-gold bearing skarns. Digitized heavy mineral samples from Cyprus Anvil (Anmac) 1980-01, prospective regional geology and airborne geophysical data and YGS silt samples were used by Shawn Ryan to position the traverses on the regional program.

## **Property Description**

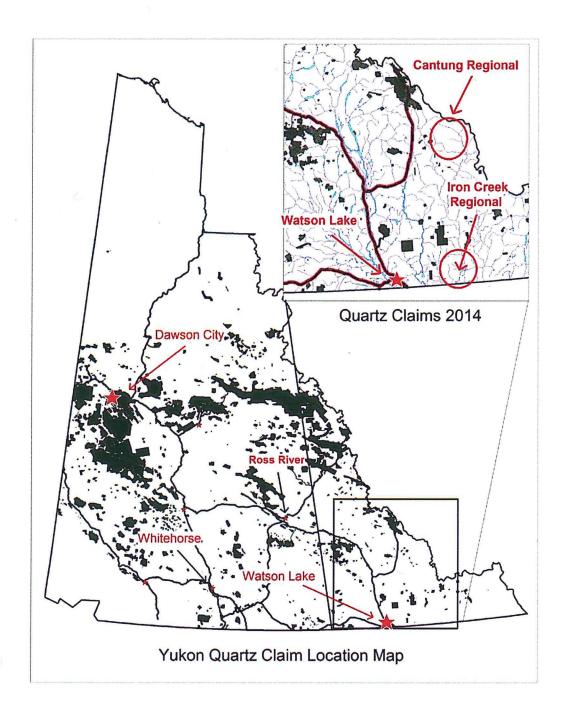
The North Regional Exploration program is located in South East Yukon, approximately 150km North East of the community of Watson Lake (figure 1). The approximate center of the regional is located at Latitude 61° 25′ N and Longitude -127° 46′ W.

The regional is located in the Logan mountains on the Southern portion and the Selwyn Mountains in the Northern part. Vegetation is typical of SE Yukon alpine and subalpine, with mixed spruce and pine in valley bottoms, transitioning to balsam fir and dwarf birch at medium elevations and free of all vegetation at the highest elevations.

Access to the area is by helicopter. The nearest permanent base is in the community of Watson Lake. The regional was operated by positioning an Astar D2 at the Golden Predator 3 Ace camp located ~30km West of the program on the Nahanni Range Road. The Nahanni Range road is accessible year round and there is a roadside seasonal airstrip located 30km West of the project area also.



Figure 1: Location Map (Cantung Regional – is the area referred to in this report)





# **Geology and Geophysics**

### 1.1 Regional Geology

The regional area occurs within the Selwyn Basin Terrane. For major regional units on the sampling areas: The northern 'Cleo' target is underlain by ICG1- Gull Lake Assemblage. The central 'Caesar North' targets are underlain by PCH – Hyland Group and COR1 – Rabbitkettle Formation. The Southern 'CZAR' target is covered by by uPCV-Vampire unit. (Figure 2)

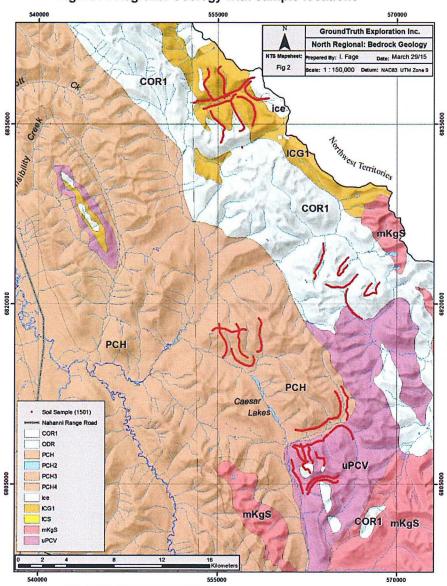


Figure 2: Regional Geology with sample locations



### GSC Geology Description

#### MID-CRETACEOUS



#### mKS: SELWYN SUITE

plutonic suite of intermediate (g) to more felsic composition (q) and rarely syenitic (y); equivalent felsic dykes (f); complete compositional gradation so that these designations are somewhat arbitrary

#### **UPPER CAMBRIAN AND ORDOVICIAN**

COR

#### **COR: RABBITKETTLE**

basinal limestone (1) that may locally include older and younger basinal pelitic strata undivided (2)

1.

thin bedded, wavy banded, silty limestone and grey lustrous calcareous phyllite; limestone intraclast breccia and conglomerate; massive to laminated, grey quartzose siltsone and chert and rare black slate; local mafic flows, breccia, and tuff (Rabbitkettle)

#### LOWER CAMBRIAN



#### ICG: GULL LAKE

dominantly fine clastic assemblage (1) with local volcanic units (2)

1.

shale, siltstone and mudstone, locally bioturbated, with minor quartz sandstone; rare green-grey chert; local basal limestone and limestone conglomerate; phyllite to quartz-muscovite-biotite schist (+/-gamet +/-sillimanite +/-staurolite +/-andalusite) (Gull Lake)

Lake)

2.

dark green massive to fragmental mafie metavolcanic and volcaniclastic rocks; siltstone and

argillite

#### UPPER PROTEROZOIC TO LOWER CAMBRIAN

PCH

#### PCH: HYLAND

consists upwards of coarse turbiditic clastics (1), limestone (2) and fine clastics typified by maroon and green shale (3); may include younger (4) units; includes scattered mafie volcanic rocks (5) (Hyland Gp.)

3.

distinctive, recessive, maroon weathering, interbedded maroon and apple-green slate; "Oldhamia" trace fossils; rare grey chert; locally basal member and interbeds of quartz siltstone, sandstone and quartz-pebble conglomerate (Hyland Gp., Narchilla, Senoah, Arrowhead Lake)

4.

quartzose clastic rocks as described in (1); mostly(?) equivalent to (1) but may include younger units (Hyland Gp., mostly(?) Yusezyu)



## 1.2 Regional Geophysics

This regional is targeting skarn style deposits. Magnetic high features coincident with limestone units, specifically Rabbitkettle formation are primary targets. Where the assumption is buried intrusives exist under limestone units for skarn formation conditions.

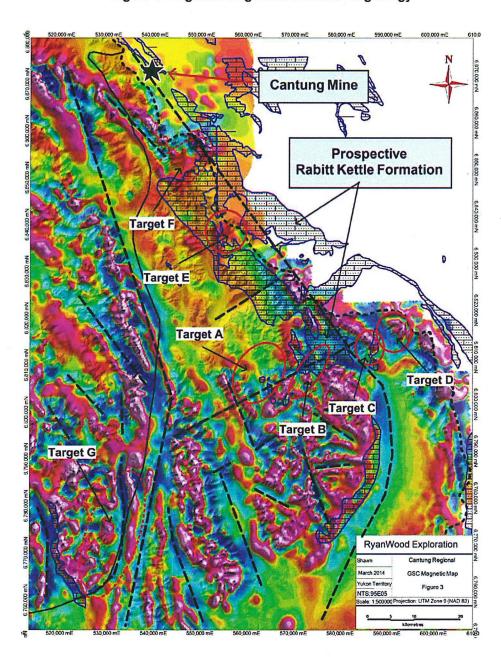


Figure 3: Regional magnetics overlaid on geology



## 2 Regional Soil Sampling

### 2.1 Personnel

The soil sampling was conducted by the following GroundTruth Exploration personnel:

1. Isaac Fage	Foremar
2. Connor Paquette	Foreman
3. Silas Dubelaar	Soil Sampler
4. Julian Moore	Soil Sampler
5. Heidi Bradley	Soil Sampler
6. Brett Godwin	Soil Sampler
7. Rowan Huggard	Soil Sampler
8. Dan Brown	Soil Sampler
9. Hector Barrientos	Soil Sampler
10. Ryan Humphries	Soil Sampler

#### 2.2 Work Performed

A total of 1501 soil samples were collected along 47 traverses at 50m. Samplers collected an average of 32 soils per traverse. Sample quality was good overall. Some traverses were very rocky with challenges to find adequate soil to collect and some traverses on limestone had a layer of black organic over limestone rubble with minimal soil, both requiring extra effort to collect quality samples. Few samples were missed due to lack of soil. Talus fines were the medium collected in the higher elevation sites. Soil samplers were instructed to run creek contour traverses above the break in slope to ensure till was not collected. Georeferenced photos and comprehensive descriptions were collected at all sites to monitor quality of samples collected.

# 2.3 Soil Sample Procedure:

The survey is completed in the field according to the following procedure:

All sampling traverses are pre-planned, with pre -specified sampling intervals, typically 50m. Field technicians navigate to sample site using handheld GPS units. The soil sampler arrives at each sample site, identifies the most appropriate location to collect the sample and lays out a sheet of plastic (12"x20" ore bag). The soil sample is taken using an Eijklcamp brand hand auger at a depth of between 20cm and 110cm. Samplers strive



to consistently collect C-Horizon sample material. Where necessary (rocky or frozen ground) a prospector's pick ('mattock') is used to obtain the sample.

The soil is laid out on the sheet of plastic in the order it was recovered from the sample hole. Two Standardized photos are taken at each sample site- 1) Sample Location photo: across slope, 5m from sample hole with auger inserted and 2) Sample Profile photo: Close up of sample laid out on ore bag with barcode tag and munsell color chart in photo.

The sampler places the necessary amount of soil (400-500 grams) from the bottom of the hole into a kraft sample bag. The bag labeled with the 3-letter project and tagged with a plastic barcode ID tag containing a unique 7 digit sample identification number is inserted. A plastic barcode ID tag with the sample identification number is attached to a rock or branch in a visible area at the sample site along with a length of pink flagging tape.

A field duplicate sample is taken once for every 25 samples. Both samples are given unique Sample identification number. The data for both samples is recorded and a note is made indicating the duplicate and its corresponding sample identification number. At client's discression standard reference material is inserted into the sample stream at an interval of 1:50.

The GPS location of the sample site is recorded with a Garmin GPSMap 60cx or 76cx GPS device in UTM NAD 83 format, and the waypoint is labeled with the project name and the sample identification number. A weather-proof handheld device equipped with a barcode scanner is used in the field to record the descriptive attributes of the sample collected. This includes: sample identification number (scanned into device at sample site), soil colour, soil horizon, slope, sample depth, ground and tree vegetation and sample quality and any other relevant information. As well, the GPS coordinates are entered into the handheld device as a secondary backup in case of GPS failure.

### 2.4 Interpretation

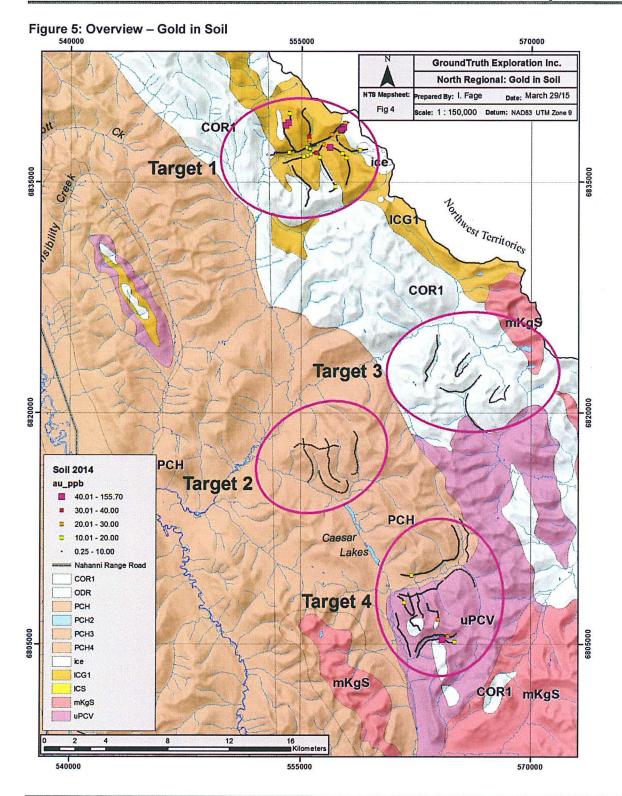
The North Regional has four zones of focus, as shown on the following Target locator (figure 4). Target 1 'Cleo' produced a significant multi station Au-As-Ag-Sb anomalies. See figures 10-14. Target 4 'CZAR' generated a coincident Au-As-Sb Anomaly. See figures 15-17. Targets 2 and 3 did not generate significant anomalies on first pass.



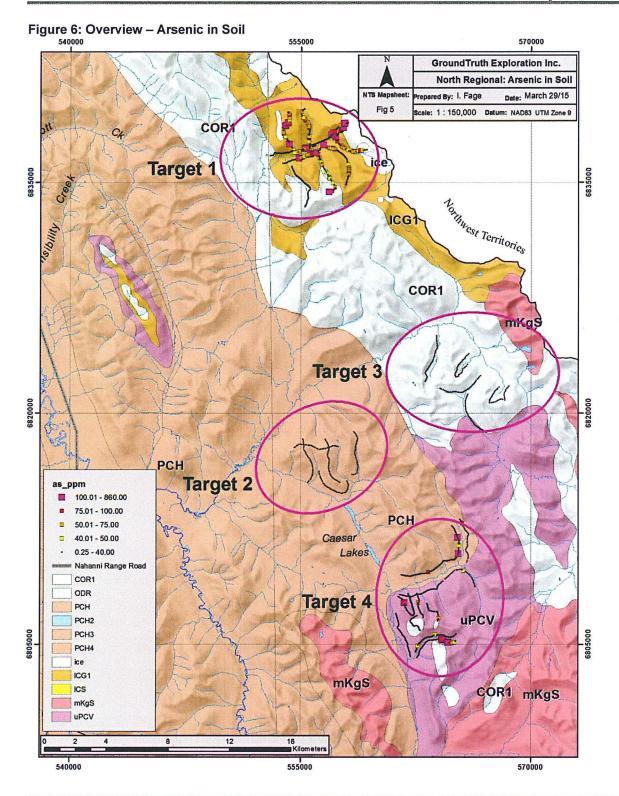
### 2.5 Results

Figure 4: Location of North Regional targets and sample location 570000 GroundTruth Exploration Inc. North Regional: Locator NTS Mapsheet: Date: March 29/15 Prepared By: I. Fage Flg 4 Scale: 1:150,000 Datum: NAD83 UTM Zone 9 COR Target 1 Northwest Territories ICG COR1 mKgS Target 3 PCH Target 2 PCH Caesar Soil Sample (1501) Lakes Nahanni Range Road COR1 ODR **Target 4** PCH **uPCV** PCH2 **РСН3** PCH4 ICG1 mKgS COR1 mKgs ICS mKgS uPCV 555000 570000 540000

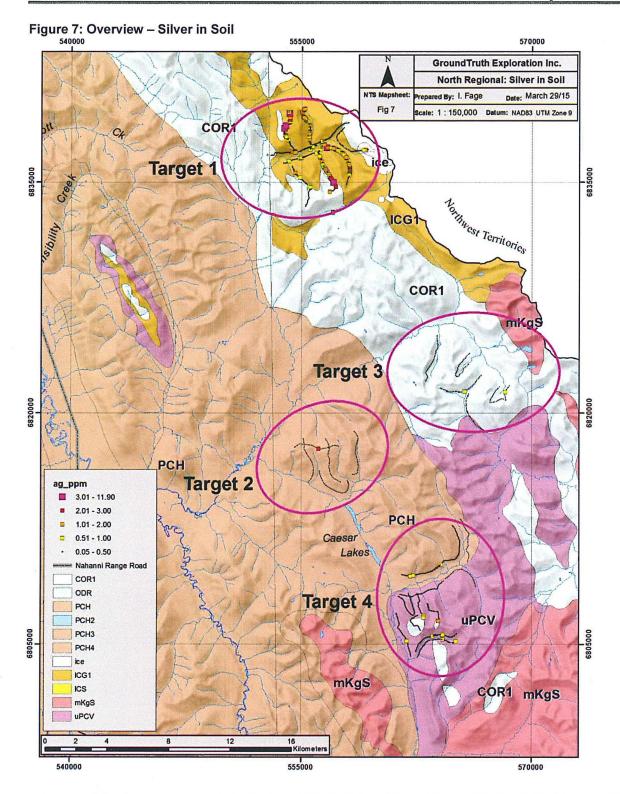




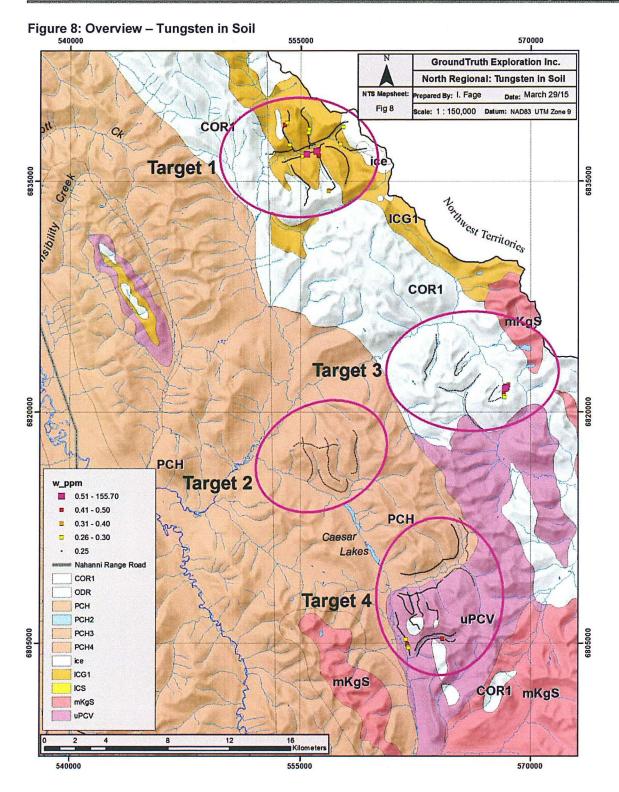




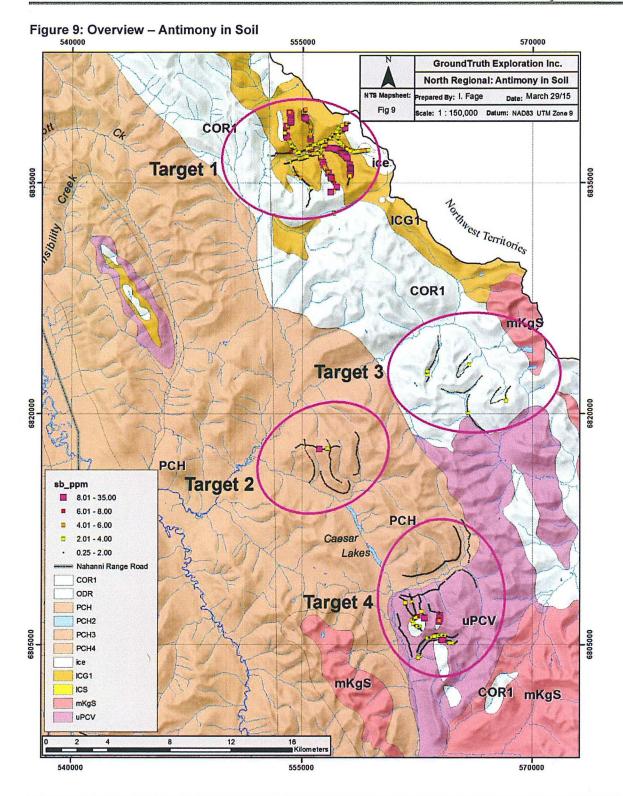




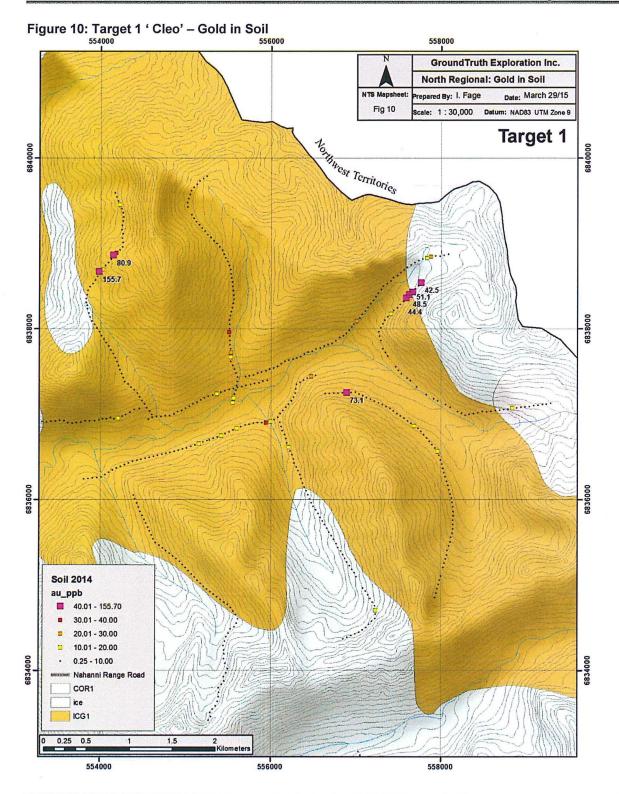




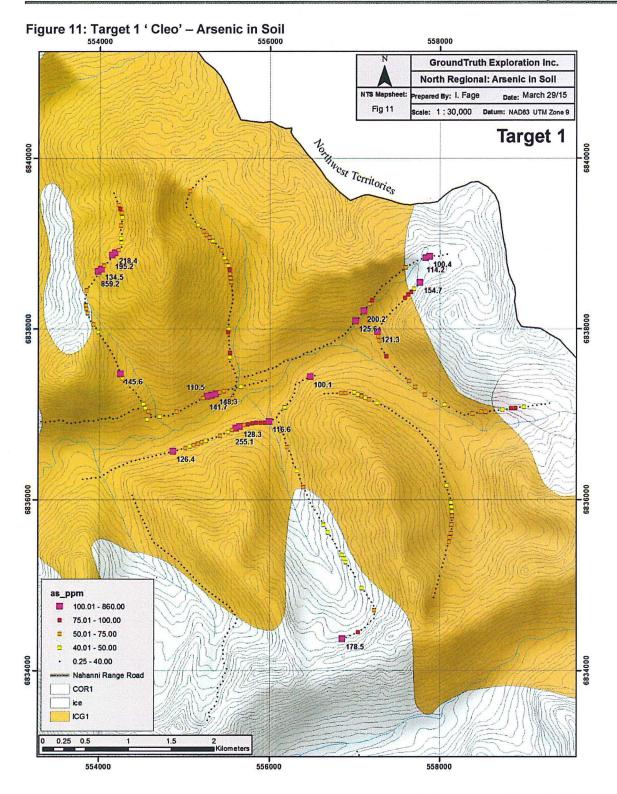




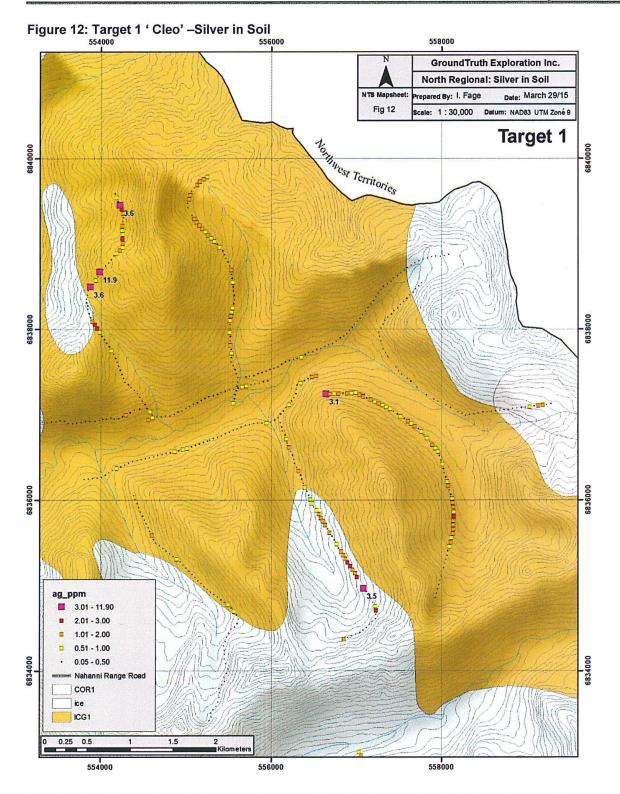




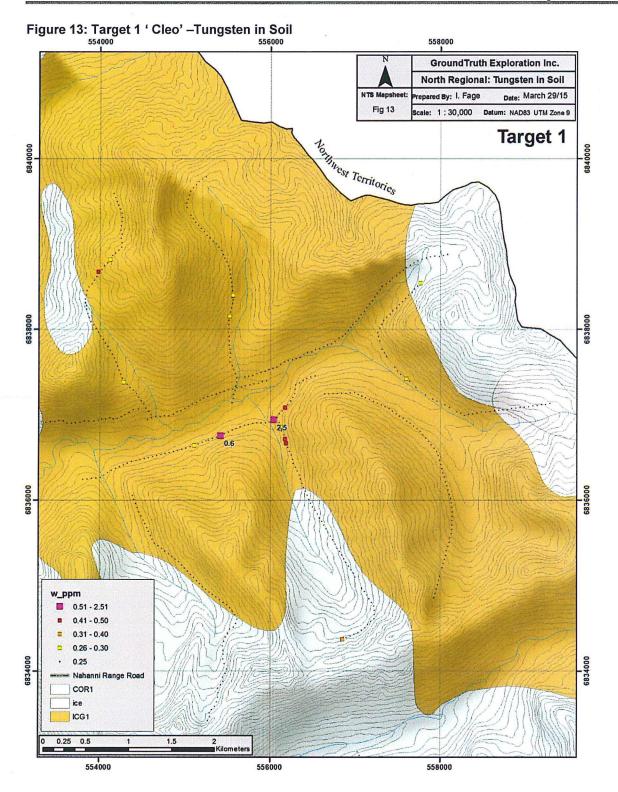




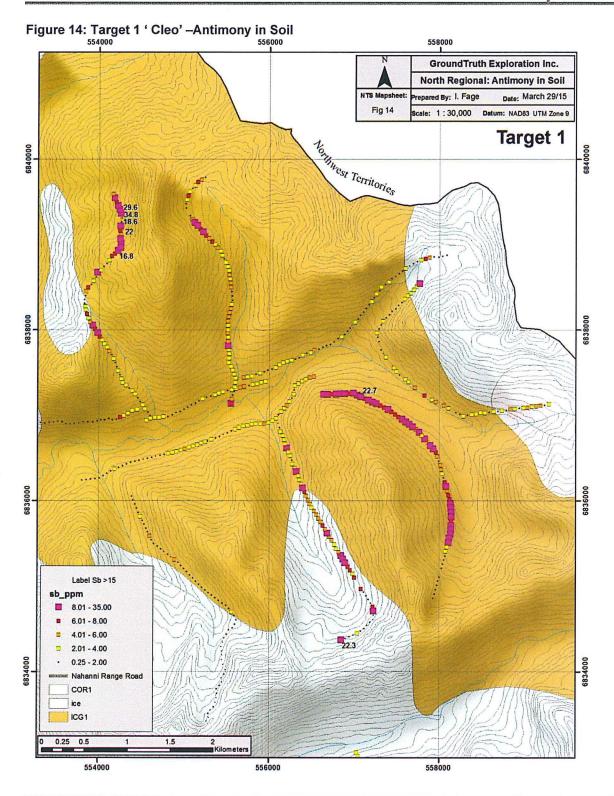




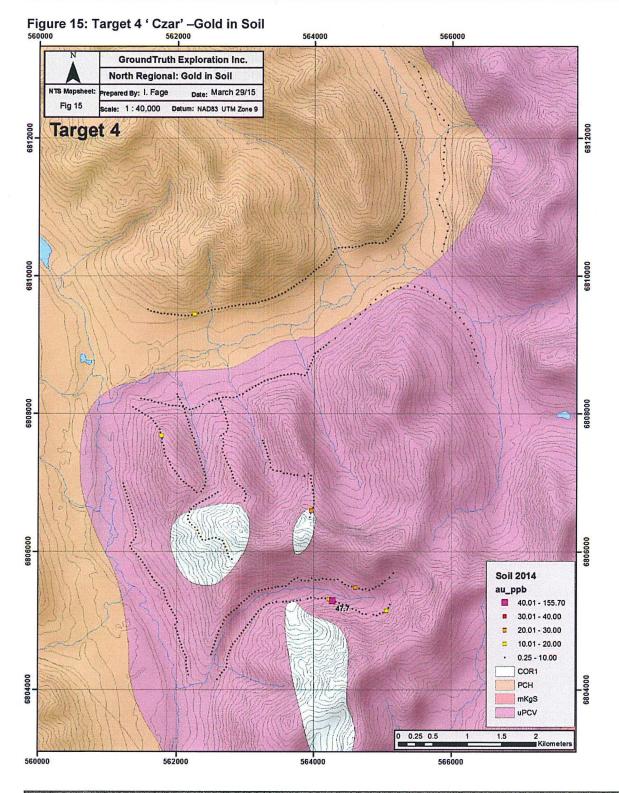




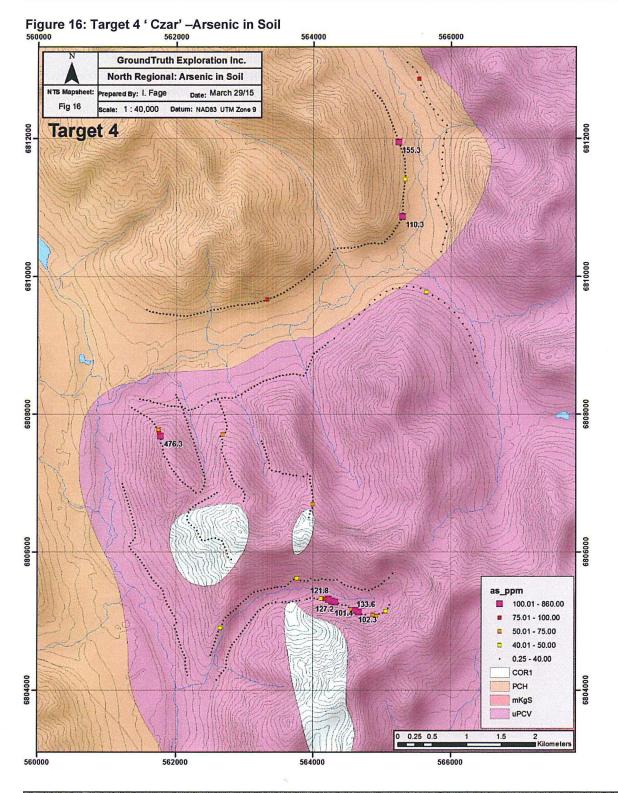




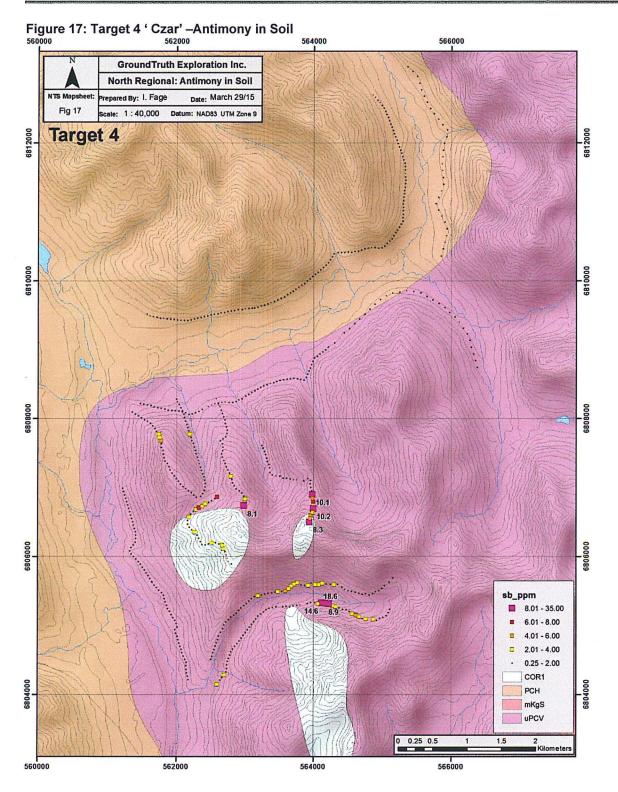














#### 3 Recommendations

Additional followup of the identified multi element anomalies is recommended. Grid sampling, geological mapping and/or prospecting should be done to evaluate the significance of the soil anomalies.

## 4 Expenditures:

Soil Sampling: 1501 soil samples

GroundTruth Exploration Inc.

Invoice: GT-CLE2015-01 (Appendix A) \$46,462.25

Helicopter: Aug 12-18 sampling +ferries: 19.1h

Trans North Helicopters, Astar D2

19.1 hours @ \$2,000/h wet \$38,200.00

Soil Assay: 1501 soils ICPMS

Acme Labs: Certs- WHI14000118, 119, 120,121, 122

1501 soils @ \$20/sample \$30,020.00

Report:

GroundTruth Exploration: \$ 750.00

Grand total \$114,432.00

## 5 Qualification

I, Isaac Fage have been president of GroundTruth Exploration in Dawson City since May 2010. I have overseen the collection of 300,000 + soil samples across numerous projects in Yukon Territory. I have worked continuously in Mineral Exploration since 2004. I hold an advanced diploma in Remote Sensing from the Centre of Geographic Sciences in Lawrencetown, Nova Scotia.

I have overseen the survey work described in this report on the North Regional.

Dated this 31st day of March, 2015 in Dawson, YT.

Respectfully submitted

Ar

Isaac Fage



# Appendix A: Soil Sampling Invoice

Summary: Grid sampling on CZAR, CLEO Project from 12th to 18 of August, 2014. 1501 field samples were collected with 47 field man days.

	Day Ra	ate	Unit	Total		Description
Wages:		222				
1 Foreman soil sampler * \$400/day	\$ 400	0.00	10.0	\$ 4,0	00.00	2 Forman for 5 days soiling
1 Foreman soil sampler * \$400/day	\$ 400	0.00	3.0	\$ 1,2	00.00	I. Fage 2 days soiling, Droning on rest of days
8 Soil sampling technicians * \$350/day	\$ 350	0.00				7 man crew for 5 days soiling
MOB & DEMOB 9 man/crew * \$250/day/crew	\$ 250	0.00	20.0	\$ 5,0	00.00	2 - 5 man crew Mobe (Aug 12) and Demobe (Aug 18)
Packing and Prep \$250/day	\$ 250	0.00	7.5	\$ 1,8	75.00	Prep on August 10 & 11
STAT Pay - 18 August 2014 - Discovery Day	\$ 2,500	0.00	1.0	\$ 2,5	00.00	10 man crew Demobe on STAT
Food/Camp:	in the s					
Food: Crew of \$50/man/day	\$ 50	0.00	84.0	\$ 4,2	00.00	GT crew of 10 + Centerra crew of 2 for 7 days
Camp: Crew of 5 * \$7/man/day	\$ 35	5.00	72.0	\$ 2,5	20.00	Gt crew of 10 + Centerra crew of 2 for 6 days
Data Management and Processing Services						
GIS/Job Layout/Mapping/Results Plotting @ \$75/hr	\$ 75	5.00	6.0	\$ 4	50.00	6 hours prep & mapping
Data Processing in the field @ \$60/hr	\$ 60	0.00	10.0	\$ 6	00.00	2 nightly downloads from GPS
Database Management/Chain of Custody/Barcoded Samples @ \$0.50/sample	\$ 0	0.50	1501.0	\$ 7	50.50	
QA/QC Standard and Blank Material and Standardized Insertion @ \$0.25/sample	\$ 0	0.25	1501.0	\$ 3	75.25	
Georeferenced Photo Database 1 sample+ 1 site photo (\$1/sample)	\$ 1	1.00	1501.0	\$ 1,5	01.00	
Survey Equipment:						
Field Laptop/Software for nightly download @ \$50/day	\$ 50	0.00	10.0	\$ 5	00.00	2 crew nightly download for 5 days (Aug 13-17)
Iridium Sat Phone @ \$35/day	\$ 35	5.00	14.0	\$ 4	90.00	2 crews for 7 days (Aug 12-18)
Satellite Internet @ \$25/day	\$ 25	5.00	5.0	\$ 1	25.00	5 field days (Aug 13-17)
Chainsaw for helipads/camp * \$35/day	\$ 35	5.00	5.0	\$ 1	75.00	5 field days (Aug 13-17)
Radios: 5 * \$5/day	\$ 5	5.00	50.0	\$ 2	50.00	9 man crew for 5 field days + 5 field days for I Fage
Handheld data logger/GPS/Camera: 5 * \$15/day	\$ 15	5.00	47.0	\$ 7	05.00	9 man crew for 5 field days + 2 field days for I Fage
Truck Rental: Fuel Extra	\$15	0.00	4.0		00.00	
Flat Deck Trailer	\$10	0.00	4.0		00.00	
Fuel	\$ 0	0.60	5440.0	\$ 3,2	64.00	2 trucks Dawson/Hyland Air Strip/Dawson
Consumable Supplies:		200				
Consumable Supplies: Soil and Ore bags, Flagging, Barcode tags, Sampling tools, Soil auger, Outfitted Field packs, Mattock @ \$1.50/sample * 150 samples	\$ 1	1.50	1501.0	\$ 2,2	51.50	
Grocery Resupply & sample inventory & shipping	\$ 60	0.00	8.0	\$ 4	80.00	Sample prep and shipping

Sub-Total	\$ 46,462.25	\$ 23,231.13
GST	\$ 2,323.11	\$ 1,161.56
TOTAL	\$ 48,785.36	\$ 24,392.68



# **Appendix B: Sample Locations**



# **Appendix C: Assay Certificates**