

120335



GroundTruth Exploration Inc.

Box 70, Dawson YT, Y0B 1G0 (867) 993-5612

Geophysical report

On the Minneapolis Creek Placer Prospecting Lease

Dawson Mining District

Lease No.: ID01100,

Owner: Ron Frederickson 100%

Prepared by: Isaac Fage

GroundTruth Exploration Inc.



Location: 63° 10.460N, -139° 32.392W
NTS Mapsheet: 1150/03, 04
Surveyed on: 17 May 2015
Report Date: 20 May 2015



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Summary

A high resolution GPR survey was conducted on May 17, 2015 at Minneapolis Creek in Yukon Territory. A total of 8 North-South oriented, cross creek profiles were surveyed upstream of the 2014 GPR survey conducted by GroundTruth. GPR successfully profiled the bedrock depth on all the lines. The obtained GPR radargrams (2D sections) produced reliable results and the bedrock interface is well defined. The goal of the survey was to explore upstream to find shallower depth to bedrock while moving closer to location of the Golden Saddle Deposit located above the headwaters of the creek.

1.0 History

Little has been recorded for historic placer exploration on Minneapolis Creek. The 2015 Minneapolis GPR survey is an upstream continuation of the same survey conducted in 2014. The 2014 survey showed reasonably consistent bedrock depths averaging 11-14m across the survey area. In 2005, a hand test pit was excavated in the vicinity of 2014 GPR Line 1, which is 100m downstream from the start of the 2015 GPR survey. The pit was excavated to a depth of 8m (26'). Large, angular fractured rock was encountered, dipping shallowly away from the creek (SW) at the termination of this test pit. Competent bedrock was not encountered when the shaft was abandoned, however the bottom of the shaft possessed large angular rocks and was showing clear signs of bedding. It was concluded bedrock would have been encountered just below the 26' level. See figure 1 for shaft location relative to survey and figure 2, for 2005 shaft photo.

2.0 Survey location and description

Minneapolis creek is located 97 km south of Dawson. It is accessible by boat in summer, snowmobile in winter and helicopter year round. The 2015 GPR survey on Minneapolis was accessed by helicopter on May 17, 2015. 8 Cross creek profiles averaging 200m in length and spaced at 100m were surveyed in one full day. Additional traverses were planned, but not possible due to challenging survey conditions with extensive deadfall in the survey area. Spring melt runoff was significant and it was decided to turn off the survey unit while crossing the creek to prevent water damage. Permafrost is expected to be thicker on the southern side of the creek with black spruce and alders. To the north of the creek there is a mix of white spruce, birch and poplar. There is an old wildfire burn in the lease area with new regrowth coming through. Extensive deadfall is encountered in many areas of the lease. Thawed ground and permafrost sections of ground do not show clearly on the radar images. See figure 1 for location.

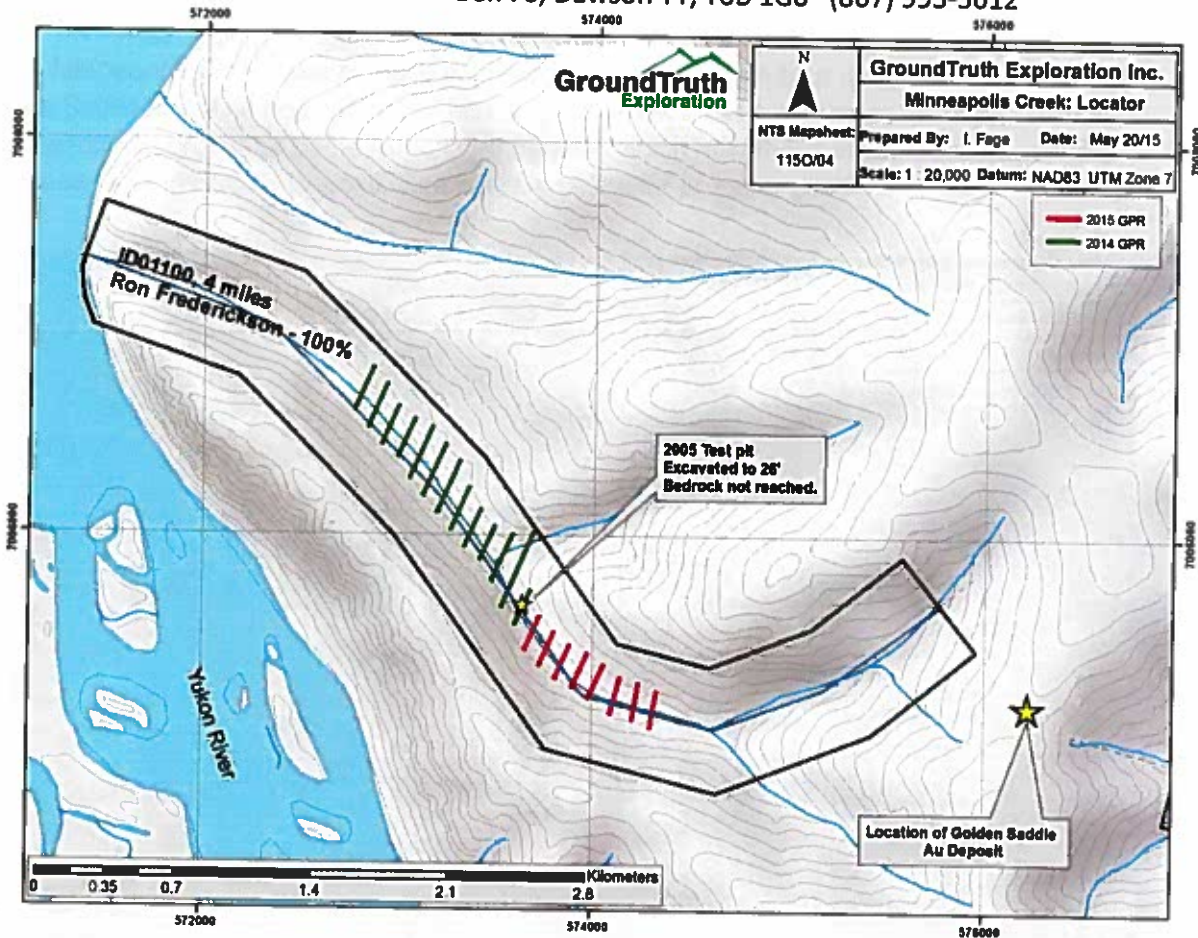
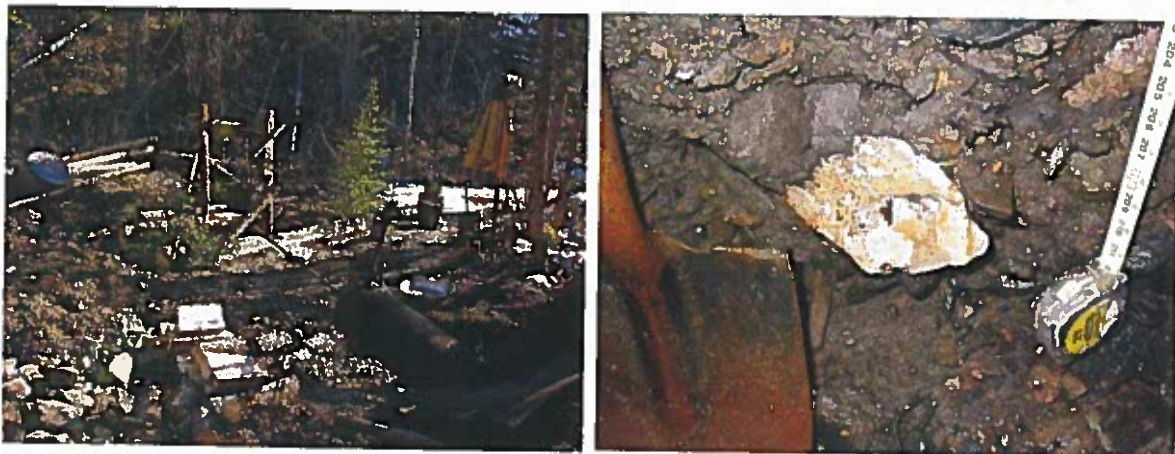


Figure 1 – Location of Minneapolis Creek Lease and 2015 GPR Survey



Figures 2,3 – Images of 2005 Minneapolis Creek Shaft, 100m downstream of GPR line 15-01

3.0 Geology

The Minneapolis creek placer lease is predominantly underlain by a metamorphosed Quartz-Mica Schist unit. The headwaters of Minneapolis creek drain a sequence of Amphibolite and Ultramafic-Gabros, and brittle Augen Orthogneiss which host the recently discovered, near surface Golden Saddle Deposit. See figure 4 below for property geology.

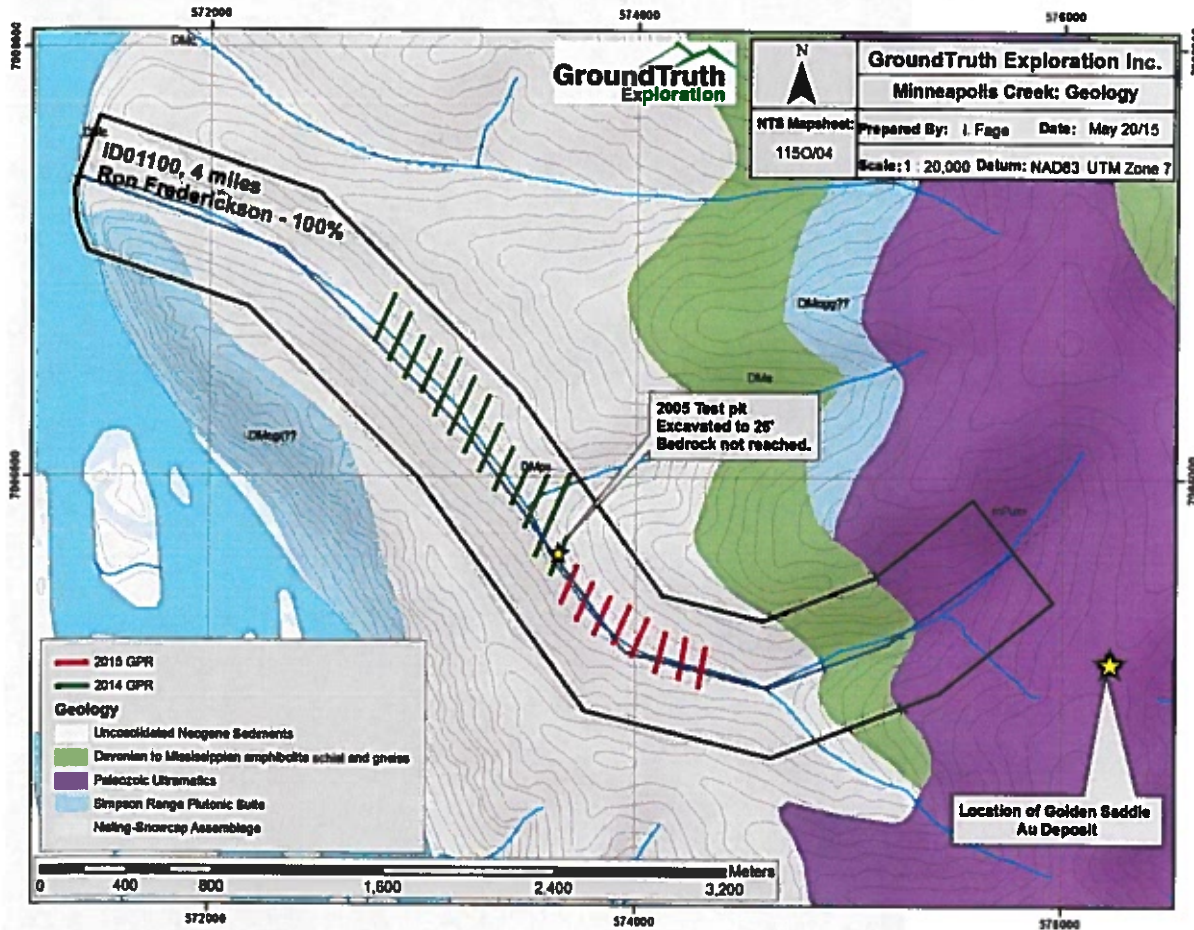


Figure 4: Bedrock Geology

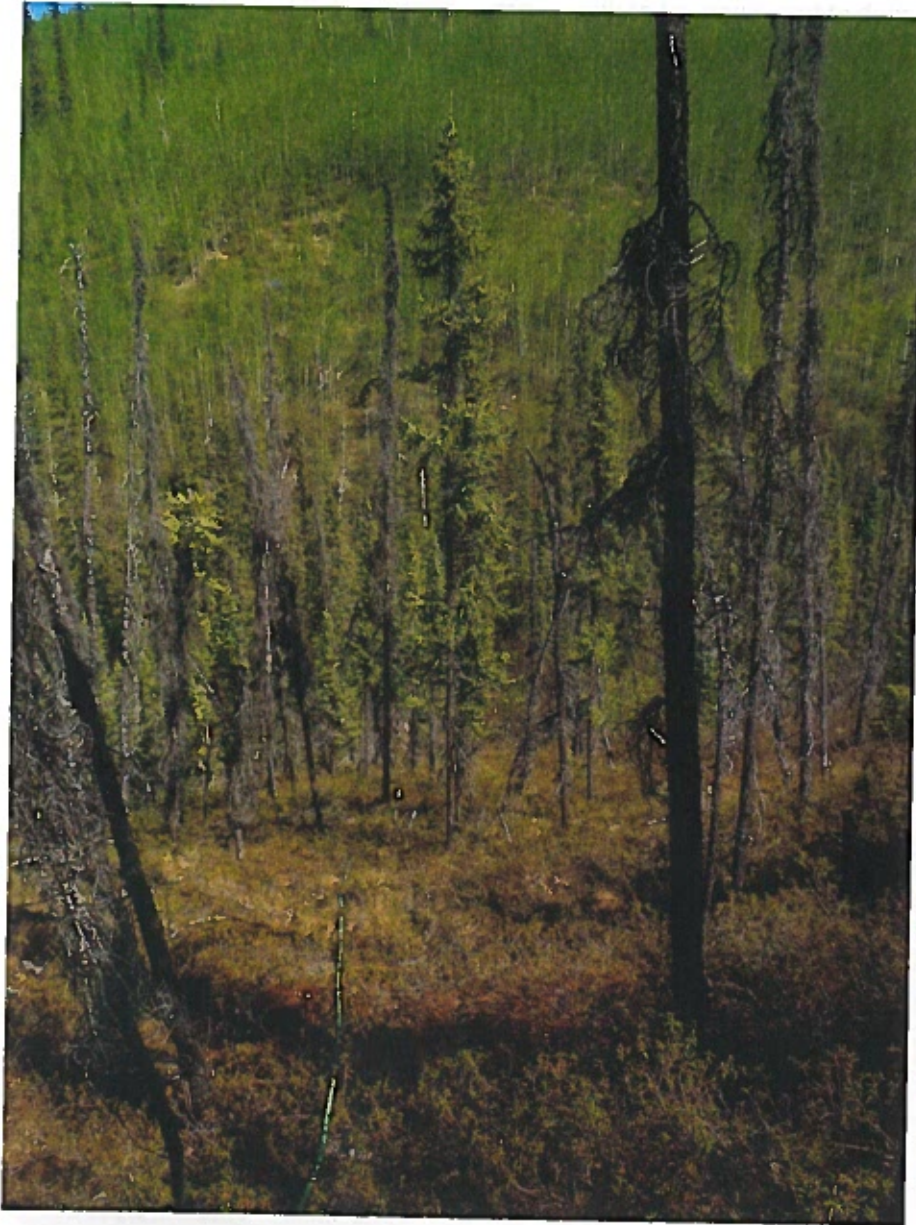


Figure 5 – GPR Survey at South end of Line 15-04, looking North

4.0 Survey Objective

The main objectives of the survey is to map depth to bedrock, and to delineate any buried channel that exists along the creek. Alluvial gold is expected to be concentrated at the base of the gravels and the bedrock. To accomplish the above objectives 2D radar sections are interpreted and presented in this report.

5.0 GPR system and basic principle

Ground penetrating radar(GPR) works like seismic, in that it is based on transmitting energy to the ground and measuring the time taken for the energy to be reflected back at geological targets, be they localised ore-bodies or geological interfaces/boundaries. Instead of seismic or shock waves, GPR transmits electromagnetic energy of high frequency compared to other geophysical methods. It is a very high resolution technique that is very site specific, for example it works very well where the target is within a host rock that has a higher electrical resistivity compared to the target itself, and where there are no conductive surficial layers to absorb radar energy before reaching the target. Another important factor is that radar energy can be scattered and not captured optimally if the reflecting geology or target is not consolidated or of a certain geometry. In conducive settings GPR is a fast high resolution method, can be operated by a single person and can supplement other geophysical methods very well. Depth of penetration can be a few to hundreds of meters in electrically resistive soils and rocks. For this particular project, the "snake" UltraGPR supplied by Groundradar (see www.groundradar.com) was used. The system works together with a differential GPS (RTK-DGPS) for data positioning and a portable data logger

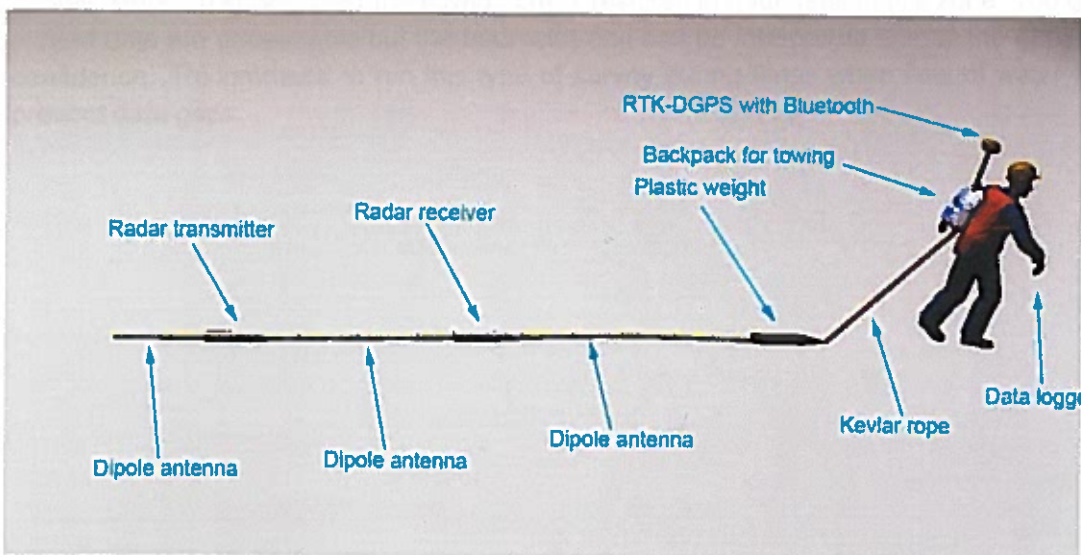


Figure 6- UltraGPR 30MHz system

6.0 Results and interpretation

The GPR 2D sections (see section 6) show a clear signal character change in the upper and lower sections indicated by solid black lines. The radargrams have been symbolized using a Red-Green-Blue color ramp to highlight reflectors and the main transition zone. The upper layer is interpreted as surficial sediments consisting of organic permafrost overlying gravels. The layer below the black interpretation line is bedrock. The survey was run across 800m of the creek. Results from line to line are very consistent, showing that the data is repeatable. All of the sections show deeper cover on the southern side of the creek which is expected to be slumped permafrost significant depth. GPR is not clearly discriminating the organic permafrost-gravels interface. It is speculated that there is a weathered profile within the bedrock that may need to be accounted for in the depth interpretations. The only first hand depth information on this creek to correlate with the GPR is a shaft that was excavated to 26' depth, located 100m downstream from line 2015-01. The shaft was abandoned, but was very near to bedrock at it's max depth. GPR interpreted depth on line 2015-01 depth correlates very well with the adjacent shaft depth. Correlation with features and depths are reasonable between the 2014 and 2015 surveys. GPR depths were generally slightly greater on the downstream survey.

The GPR operator was instructed to carry the survey unit over the creek during this survey to prevent water damage to the unit. This was not done in the 2014 GPR survey which was also during the high spring runoff period and resulted in minor water damage of the unit. In the 2015 survey, stopping survey over the flowing creek resulted in data gaps in this zone. The gaps in the plotted data are undesirable but the bedrock trend can be interpreted across the gaps with good confidence. Recommend to run this type of survey during times when flow of water is lower to prevent data gaps.

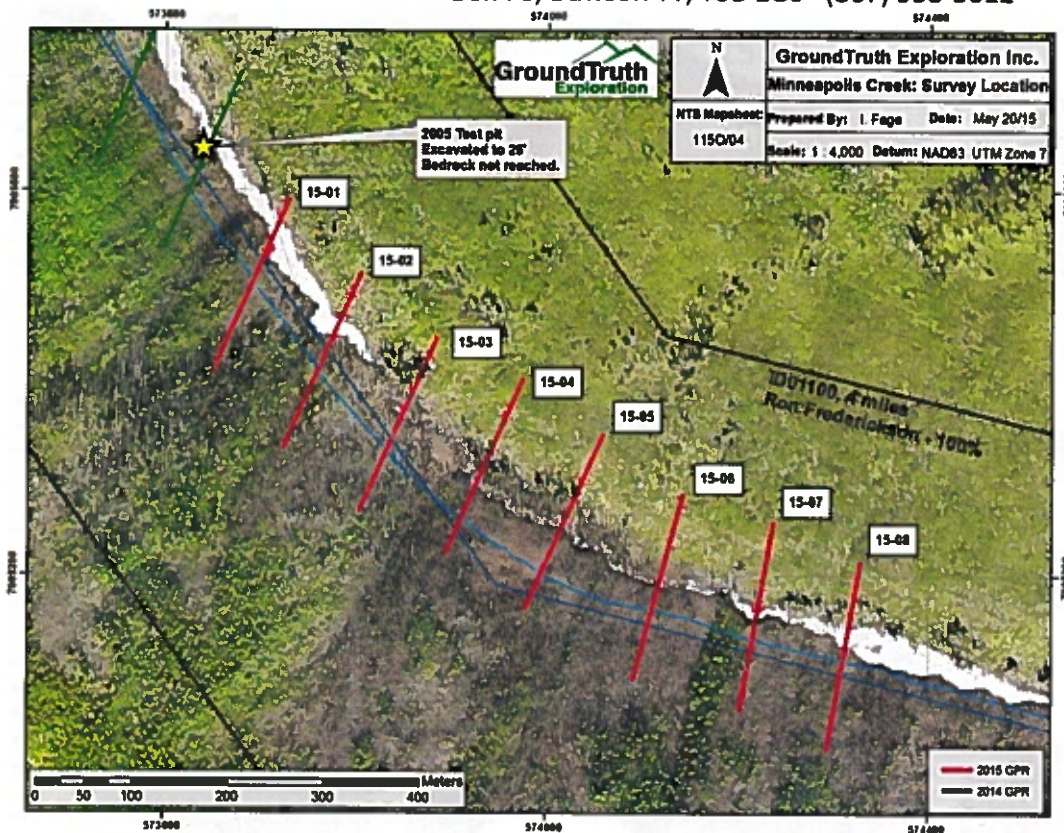


Figure 7 – GPR Traverse location on drone orthophoto:

Line/traverse	Interpreted maximum depth to basement in valley bottom (feet)
2015 Line 1	25
2015 Line 2	32
2015 Line 3	29
2015 Line 4	28
2015 Line 5	39?
2015 Line 6	35
2015 Line 7	25
2015 Line 8	25

Interpreted maximum depth to bedrock from section figures

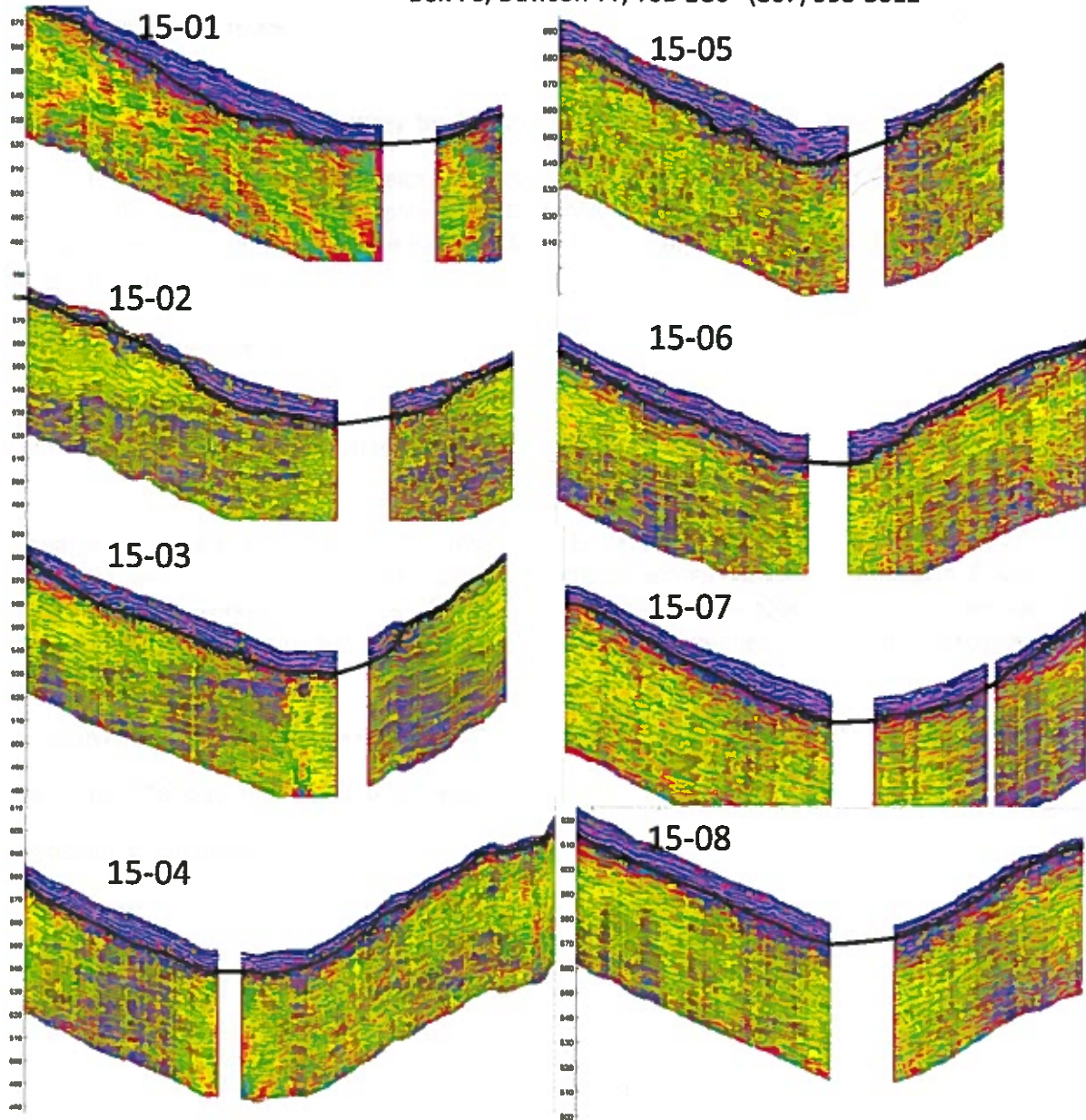


Figure 8 – Compilation of 2015 radargram sections



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7.0 Project Expenses

Ground Penetrating Radar Survey by GroundTruth Exploration Inc., May 17, 2015

GroundTruth Exploration – 1 Operator, 1 Assistant + 30MHz GPR Unit: \$1,200
GroundRadar - Processing of 8 Profiles at \$100/profile: \$800
GroundTruth Exploration – Produce Bedrock Model and Interpretations/plots: \$1,000
Assessment Report: \$900

Total Expenses: \$4100.00

8.0 Statement of Qualifications

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 Minneapolis Creek placer lease.

Dated this 21st day of May, 2015 in Dawson, YT.

Respectfully submitted

A handwritten signature in black ink, appearing to read 'Isaac Fage', is written over a faint, illegible stamp.

Isaac Fage

9.0 Conclusions and recommendations

On average the maximum bedrock depth in the valley bottom is interpreted to average between 25-30 feet. Lines 15-05 and 15-06 showed deeper interpreted depths however the GPR response for weathered bedrock may be similar to the gravel overburden and would need to be verified by another method such as drilling or test pit. The interpreted depths are consistent with the excavated shaft that is located 100m downstream from the 2015 survey. Overburden is interpreted to be deep on the south side of the creek. It is inferred to be slumping permafrost and may or may not contain gravels below. No gravels or overburden is interpreted to exist on the slope on the North side of the creek.

The interpreted qualitative trends of bedrock depth and topography are of good confidence. Quantitatively, depths may vary slightly due to assumed GPR velocity used to generate GPR pulse two way time to depth. Drilling and or test pits can be used to calibrate the calculated depths to higher absolute confidence and are recommended as followup to this initial survey.

10.0 Survey Interpretive Figures

Figure 9 – 3D View of Paleochannel

Figure 10- GPR Line 1 Interp

Figure 11- GPR Line 2 Interp

Figure 12- GPR Line 3 Interp

Figure 13- GPR Line 4 Interp

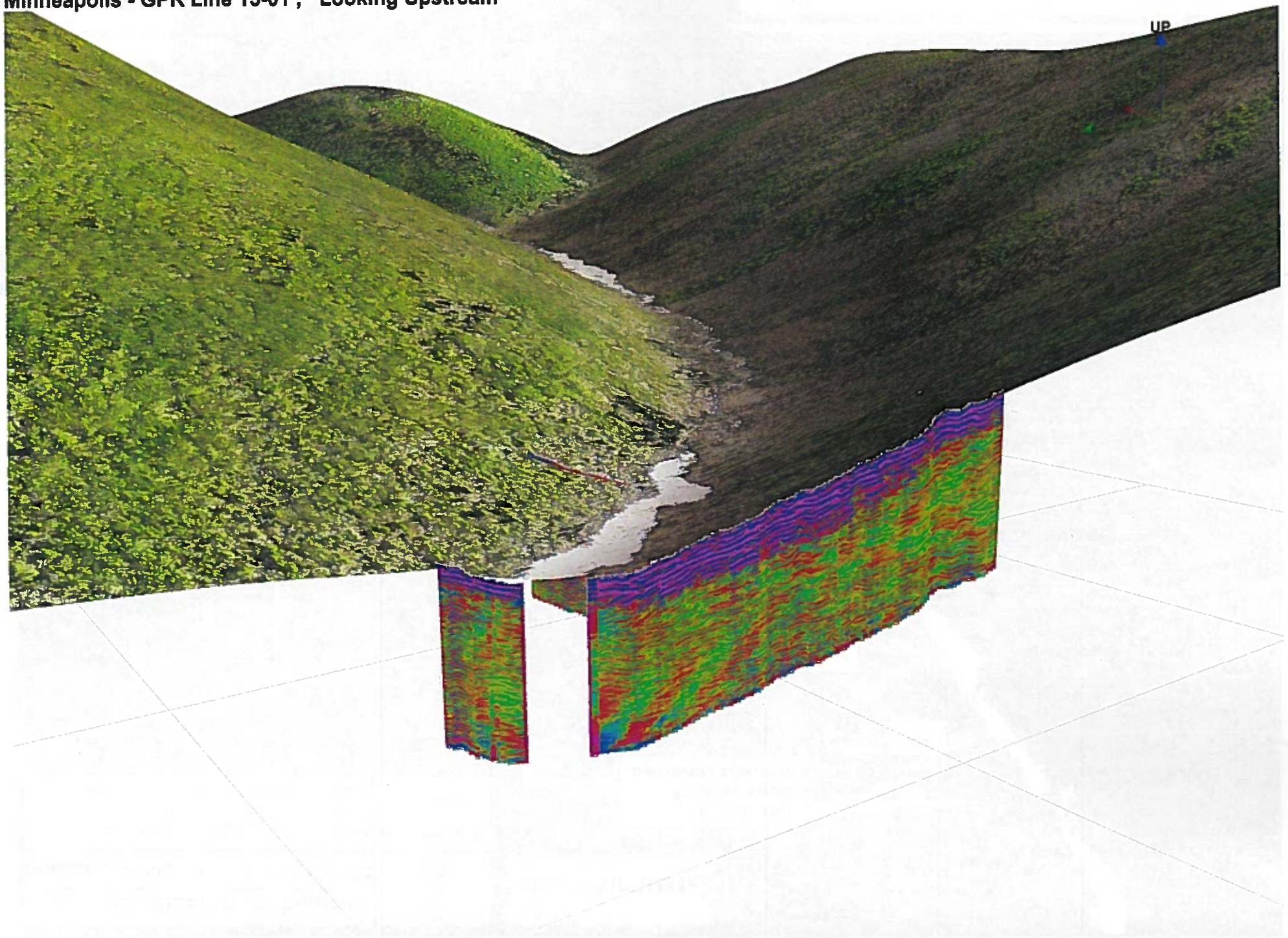
Figure 14- GPR Line 5 Interp

Figure 15- GPR Line 6 Interp

Figure 16- GPR Line 7 Interp

Figure 17- GPR Line 8 Interp

Minneapolis - GPR Line 15-01 , Looking Upstream





GroundTruth Exploration Inc.
Minneapolis Creek: Survey Location

NTS Mapsheet:
1150/04

Prepared By: I. Fage Date: May 20/15
Scale: 1 : 4,000 Datum: NAD83 UTM Zone 7

2005 Test pit
Excavated to 26'
Bedrock not reached.

15-01

15-02

15-03

15-04

15-05

15-06

15-07

15-08

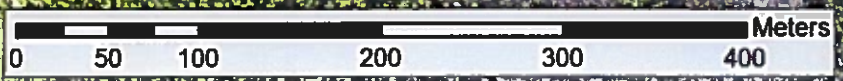
ID01100, 4 miles
Ron Fredericksen - 100%

7005600

7005600

7005200

7005200

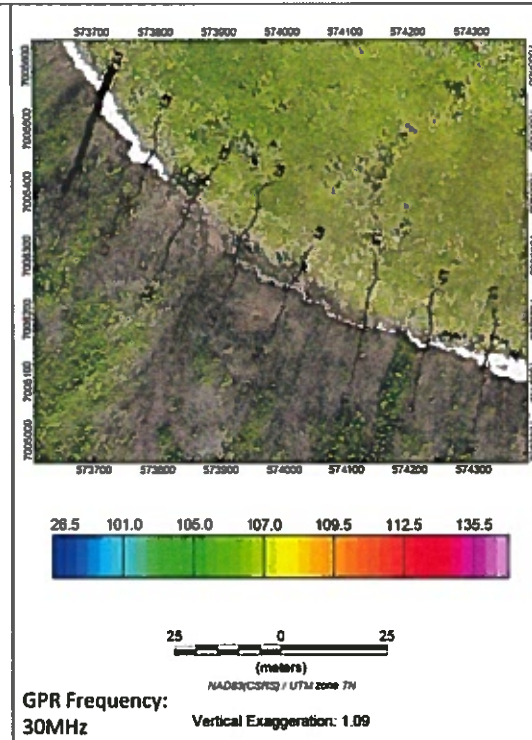
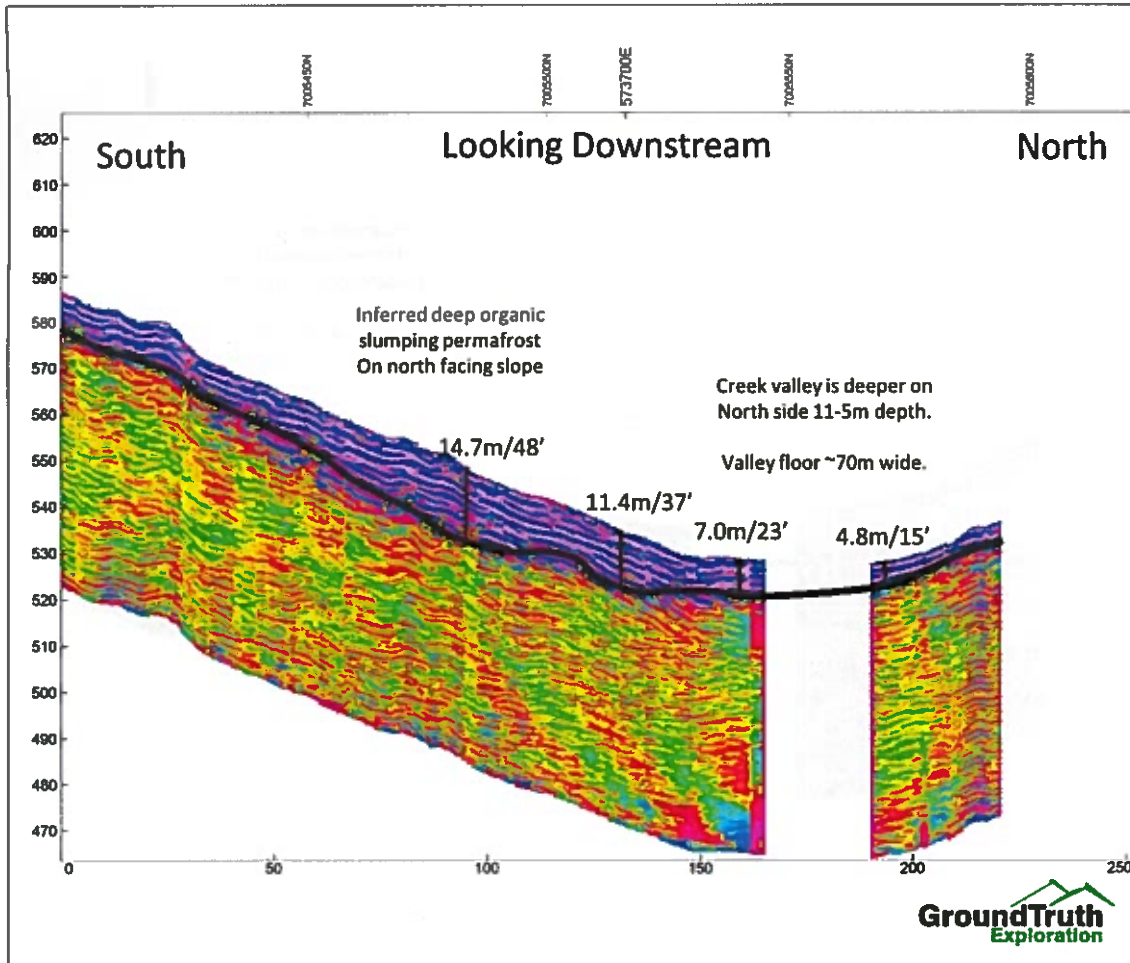


— 2015 GPR
— 2014 GPR

573600

574000

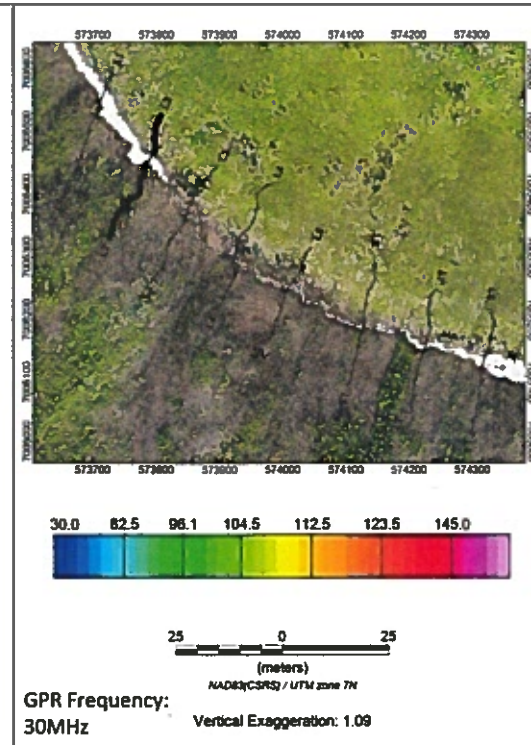
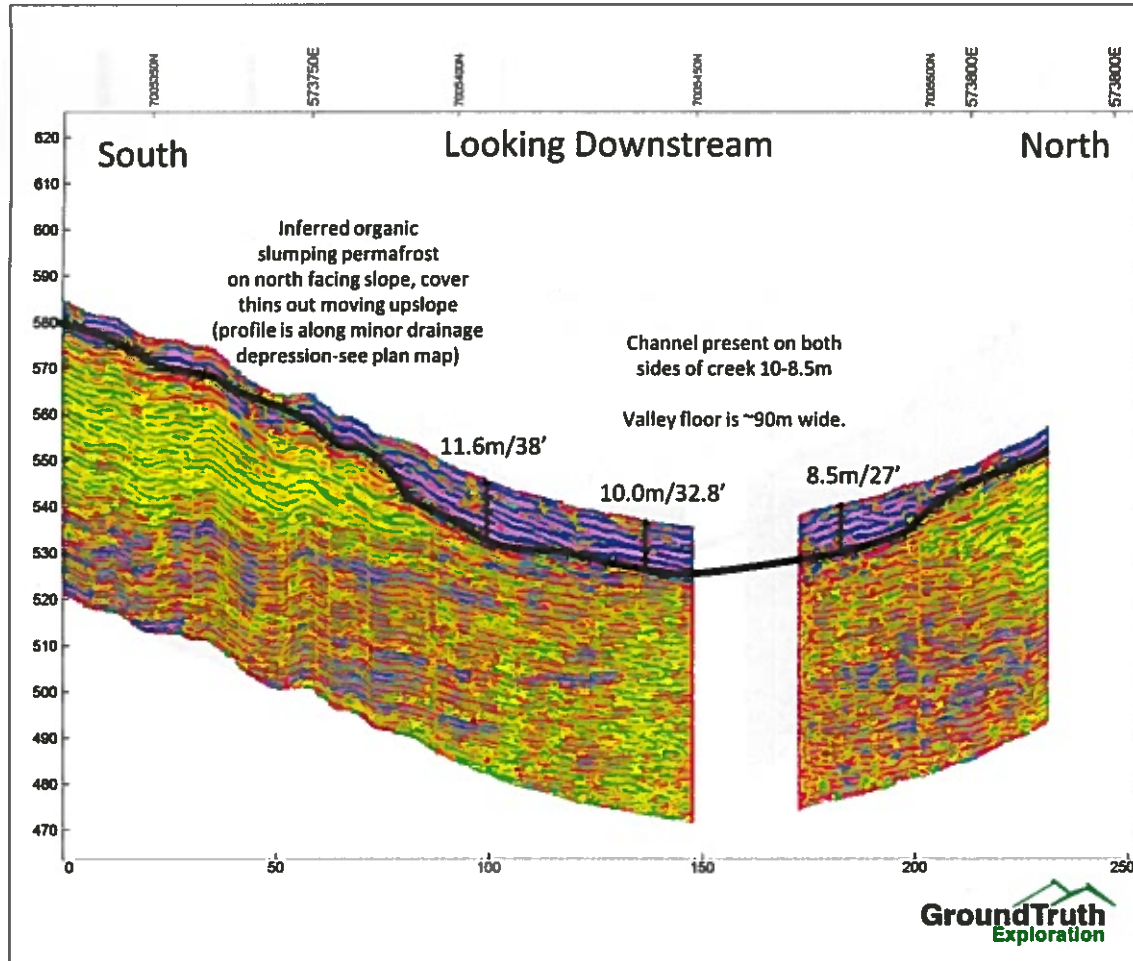
574400



Interpreted Ground Penetrating Radar Section

Line 1
Minneapolis Creek
GPR Survey 2015

Surveyed: May 17, 2015 By: I. Fage
NAD 83, UTM 7N For: R. Frederickson

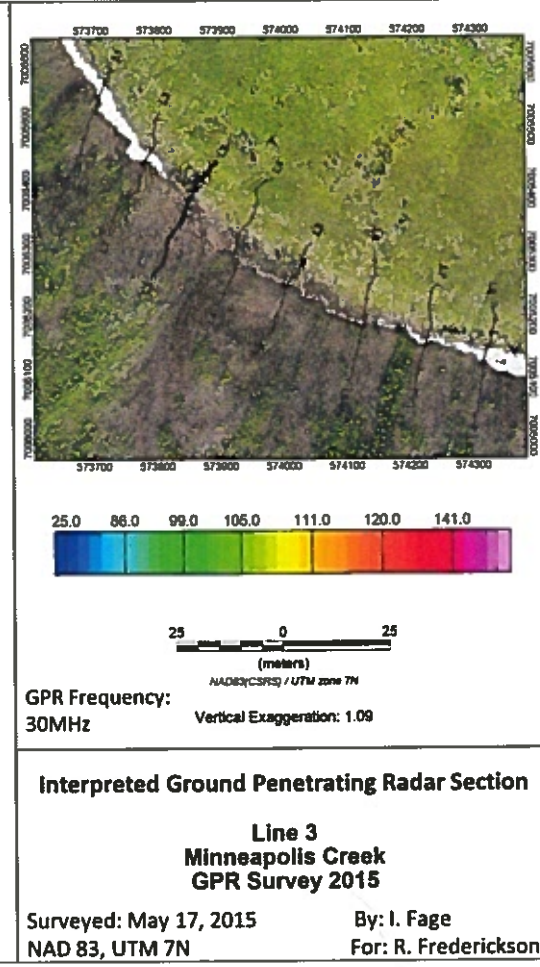
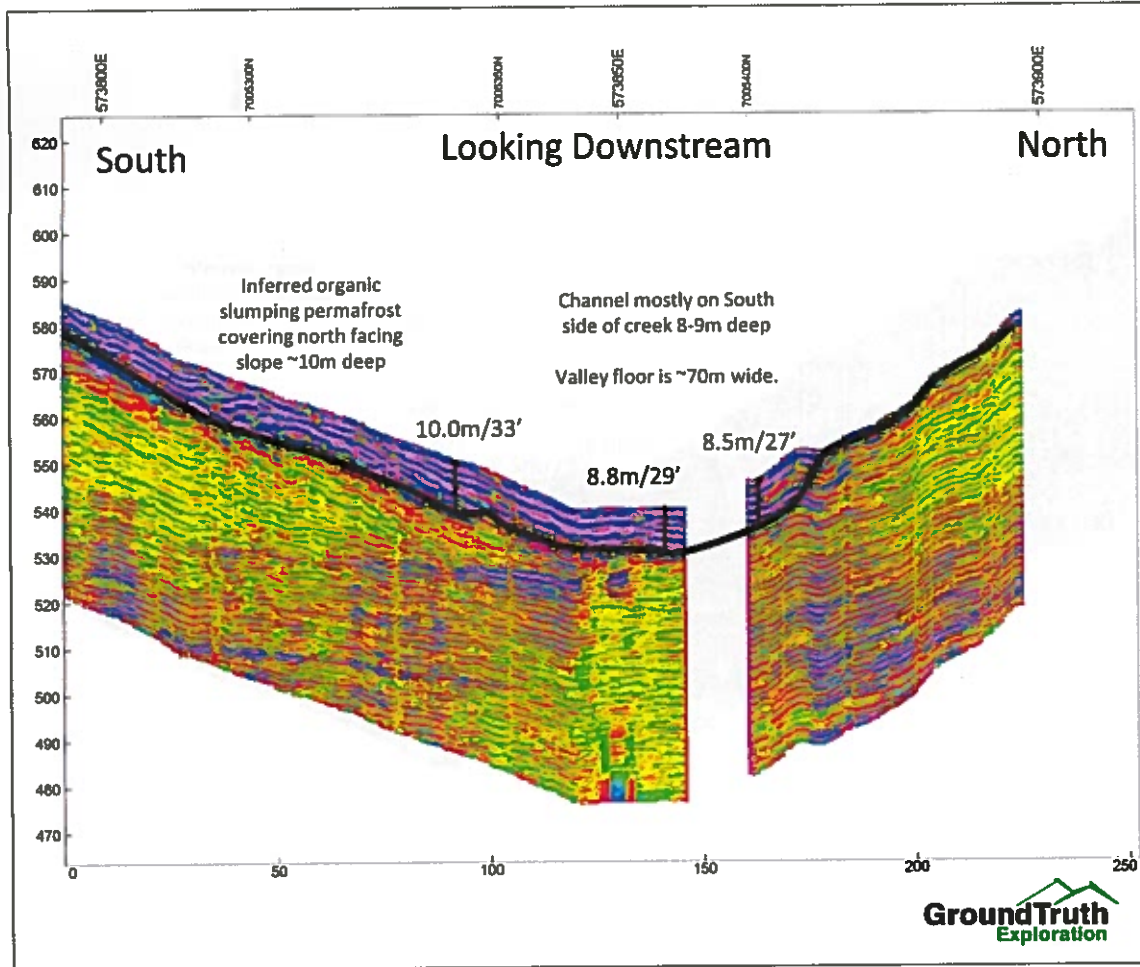


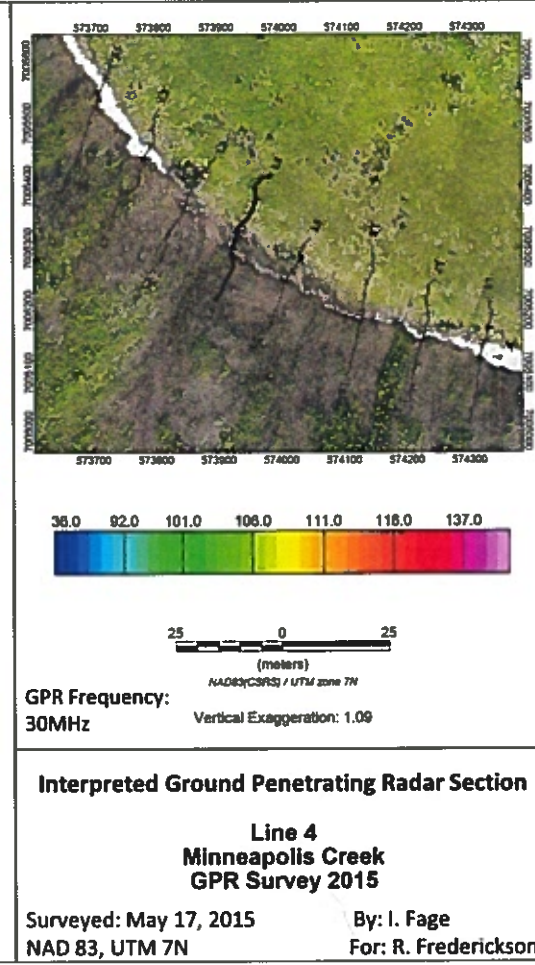
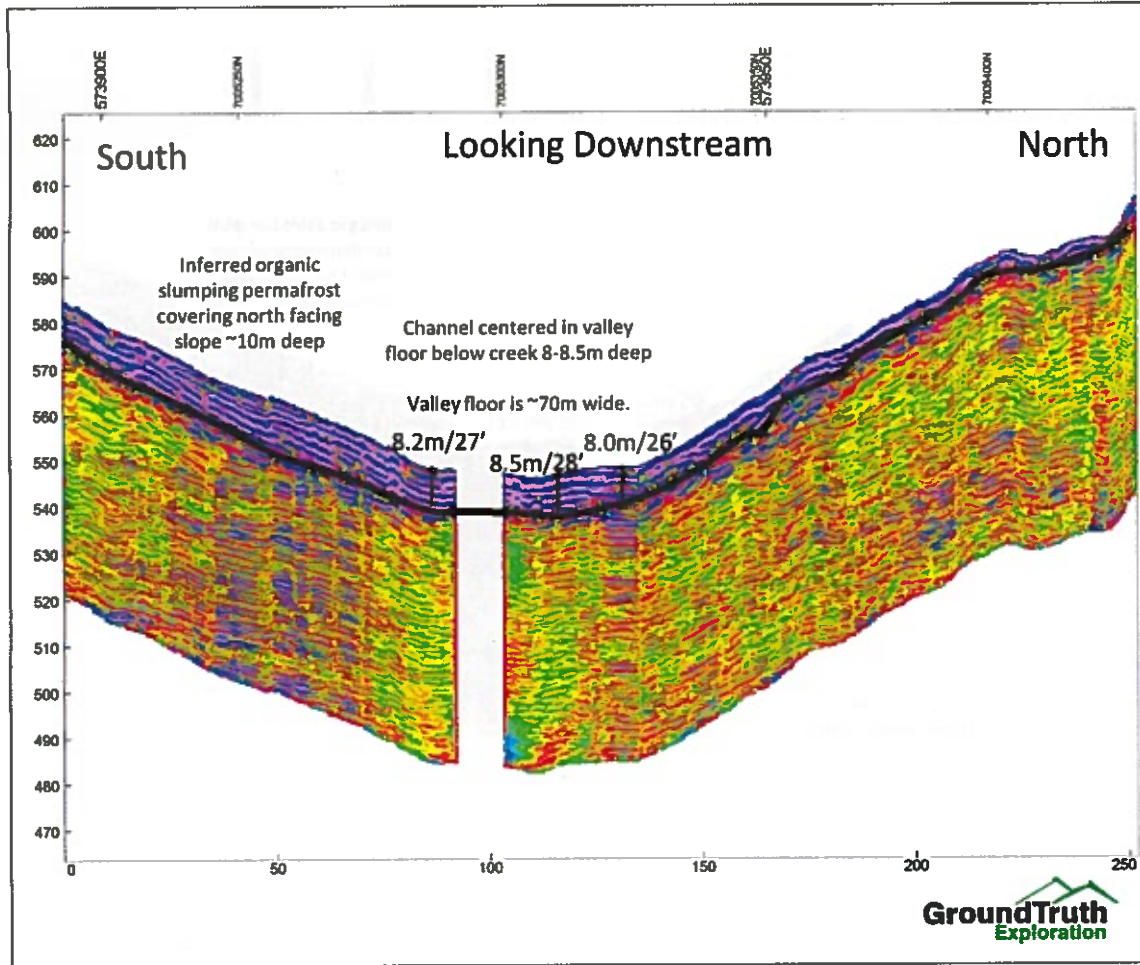
Interpreted Ground Penetrating Radar Section

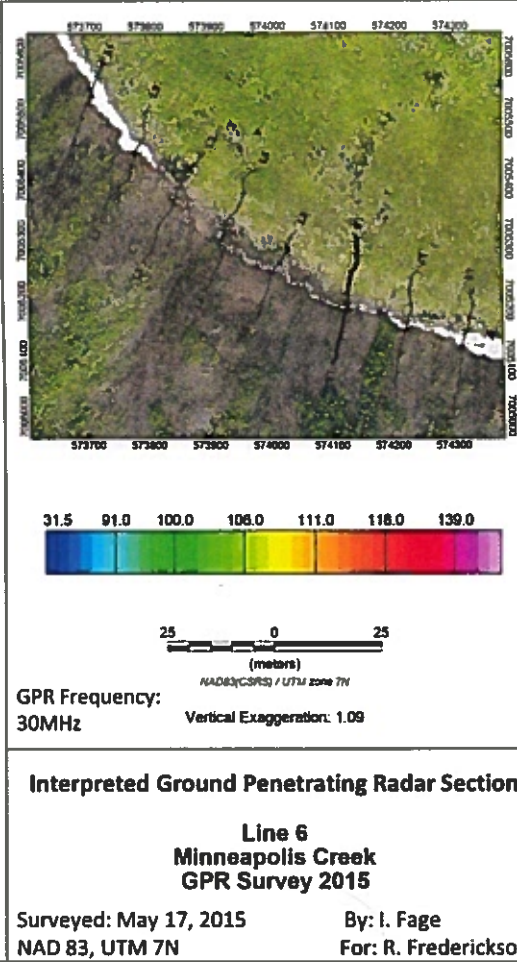
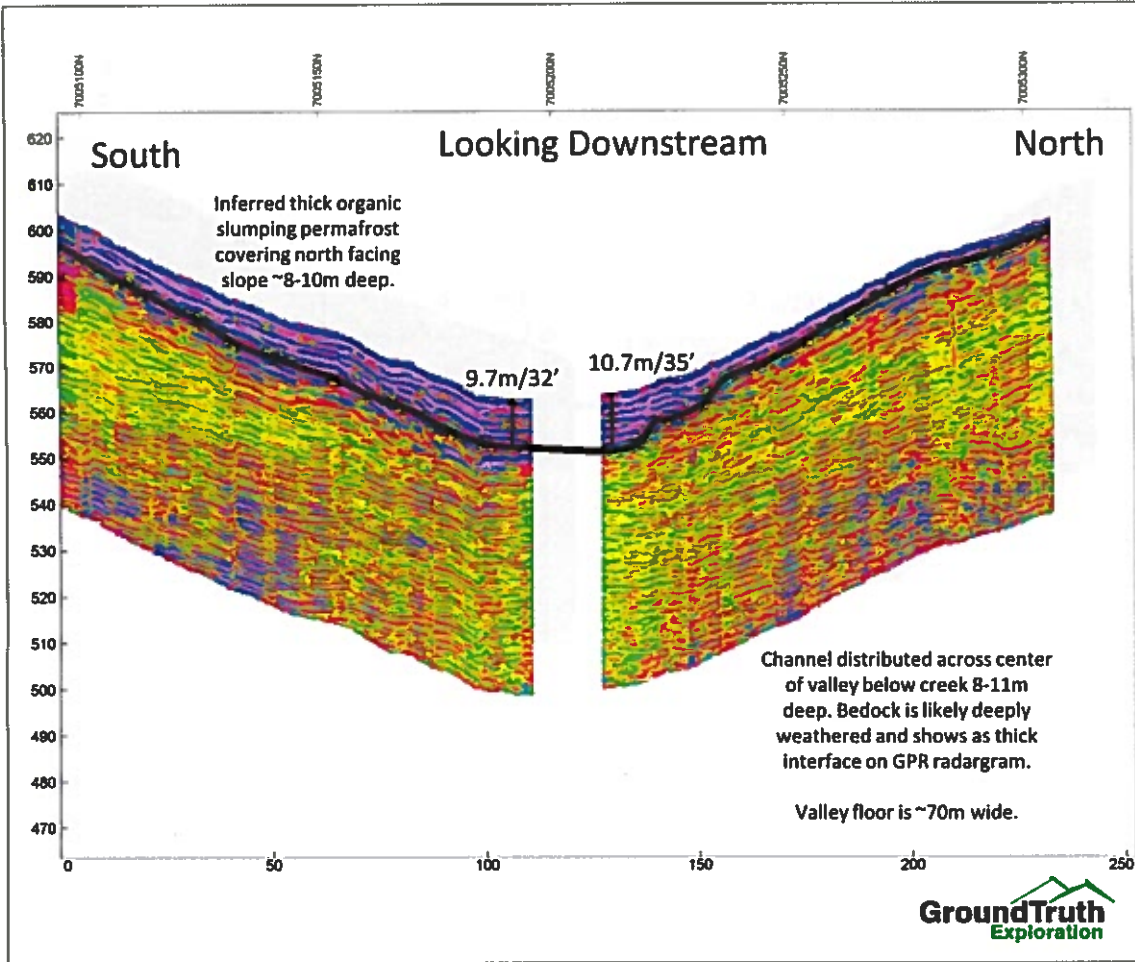
**Line 2
Minneapolis Creek
GPR Survey 2015**

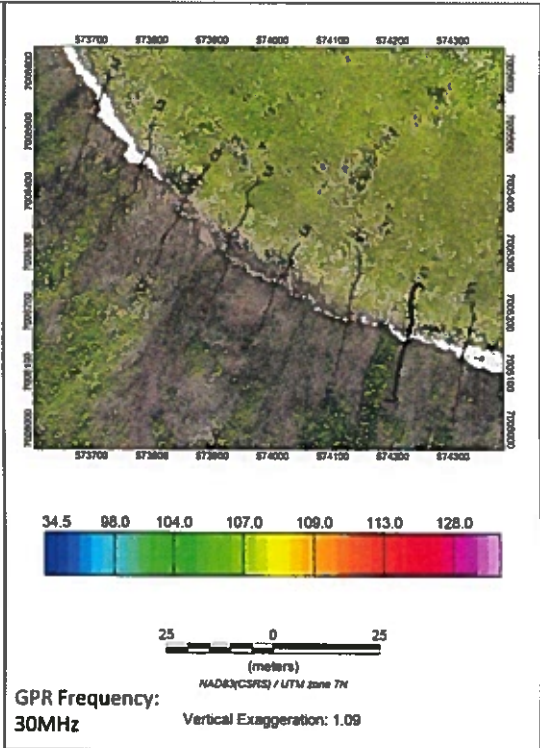
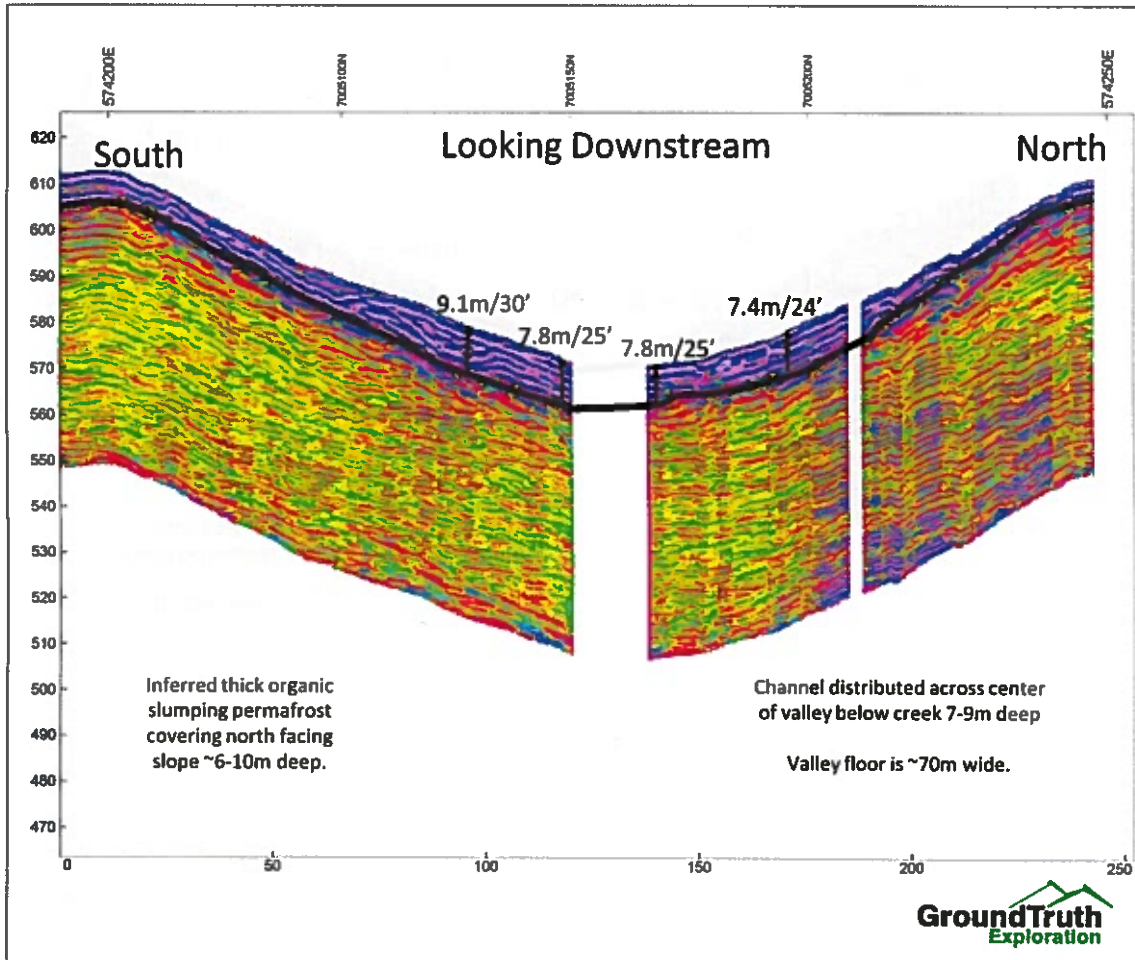
Surveyed: May 17, 2015
NAD 83, UTM 7N

By: I. Fage
For: R. Frederickson









Interpreted Ground Penetrating Radar Section

Line 7
Minneapolis Creek
GPR Survey 2015

Surveyed: May 17, 2015 By: I. Fage
 NAD 83, UTM 7N For: R. Frederickson

