



GroundTruth Exploration Inc.

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

Geophysical Field Report On the Stewart River Placer Project

Dawson Mining District

Claims

Antares – P40037

Thrush – P38478

Hawk – P38028

Mucky Face – P37788

Golden Heart – P38278

Blackie – P39354

Lorraine – P37789

Crow – P40453

Meg 11 – P33922

Owner: Bob Stirling

Prepared by: Chad Cote

GroundTruth Exploration Inc.

Location: NAD 3, UTM Zone 8, E372500E N7055400N

NTS Mapsheet: 115P/12

Surveyed on: 29 May, 12 June 2015

Report Date: 16 July 2015



GroundTruth Exploration Inc.

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

Contents

Introduction	3
1.0 Survey Objective	3
2.0 GPR system and basic principle	3
3.0 Results and interpretation	4
4.0 Conclusions and recommendations.....	4
5.0 Survey Interpretive Figures.....	6



GroundTruth Exploration Inc.

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

Introduction

A high resolution GPR survey was conducted over two days: May 29th, 2015 and June 12, 2015. The survey was conducted just south of the McQuesten Airstrip in the Stewart River Valley, Yukon Territory. 7 lines totalling 3.488km in length were surveyed. The GPR data was calibrated for depth using drilling results also completed by GroundTruth. It seems to work well in delineating between gravels and clays, but more drilling or shafting should be done to better understand and confirm the correlations seen. The drill data we have does not reach bedrock, so there is significant uncertainty in the bedrock profile. In addition, clay is notoriously poor ground for GPR surveys as it minimizes the depth of penetration. The survey still appears to define bedrock on some profiles, particularly where there is less clay.

1.0 Survey Objective

The main objectives of the survey is to define gravel and clay deposits as well as map the depth to bedrock to find paleo-channels prospective for placer gold mining. Alluvial gold is expected to be concentrated at the base of the gravels overlying either clay or bedrock. To accomplish the above objectives 2D radar sections are interpreted and presented in this report.

2.0 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

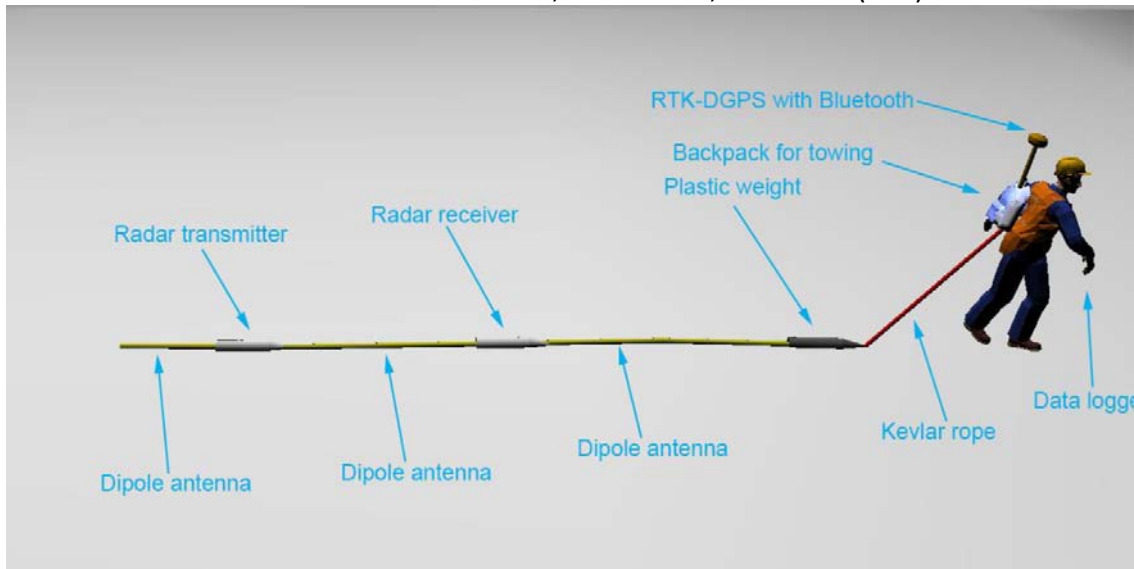


Figure 1: UltraGPR 30MHz system

3.0 Results and interpretation

This site has little data on the depth to bedrock. The composition of the overburden is primarily glacial till/gravels and clay layers. GroundTruth Exploration completed one drill hole on the property, which was used to aid in the interpretation and velocity calibration for the GPR radargram profiles. The drill hole did not reach all the way to bedrock, so a definitive depth was not confirmed, however the gravel/clay boundary between the GPR and the drill hole do match (figures 4 and 8), giving the results some confidence.

The interpretations aim to map the gravel and clay depositions, as well as the depth to bedrock. While the survey seemed to do a good job delineating the overburden material, there is some uncertainty due to the dynamic and transitional nature of these depositional features, as often they are found in a mixed state. Bedrock has been interpreted on most sections, however considerable discretion should be taken until more drill results or pits have confirmed spot locations.

The radargrams have been symbolized using a Red-Green-Blue color ramp to highlight reflectors and the main transition zone.

4.0 Conclusions and recommendations

The maximum interpreted depth to bedrock ranges between 80-165 feet. GPR response for river gravel and clay depositions seem to be distinctive, however unsorted glacial till or a gravel clay mixture may be hard to delineate from a clay bed.



GroundTruth Exploration Inc.

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

The interpreted gravel/clay intersections are consistent with the single drill hole located on lines 2 and 5. Bedrock has yet to be groundtruthed, but does show some consistency between lines and shows deeper than the drilling done on site.

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 should be used to calibrate the calculated depths to higher absolute confidence and are recommended as follow-up to this initial survey.

Line/traverse	Interpreted maximum depth to basement in valley bottom (meters/feet)
2015 Line 1	33/108
2015 Line 2	50/164
2015 Line 3.1	24/79
2015 Line 3.2	?
2015 Line 4	44/144
2015 Line 5	45/148
2015 Line 6	?
2015 Line 7	35/115

Interpreted maximum depth to bedrock from section figures

5.0 Survey Interpretive Figures

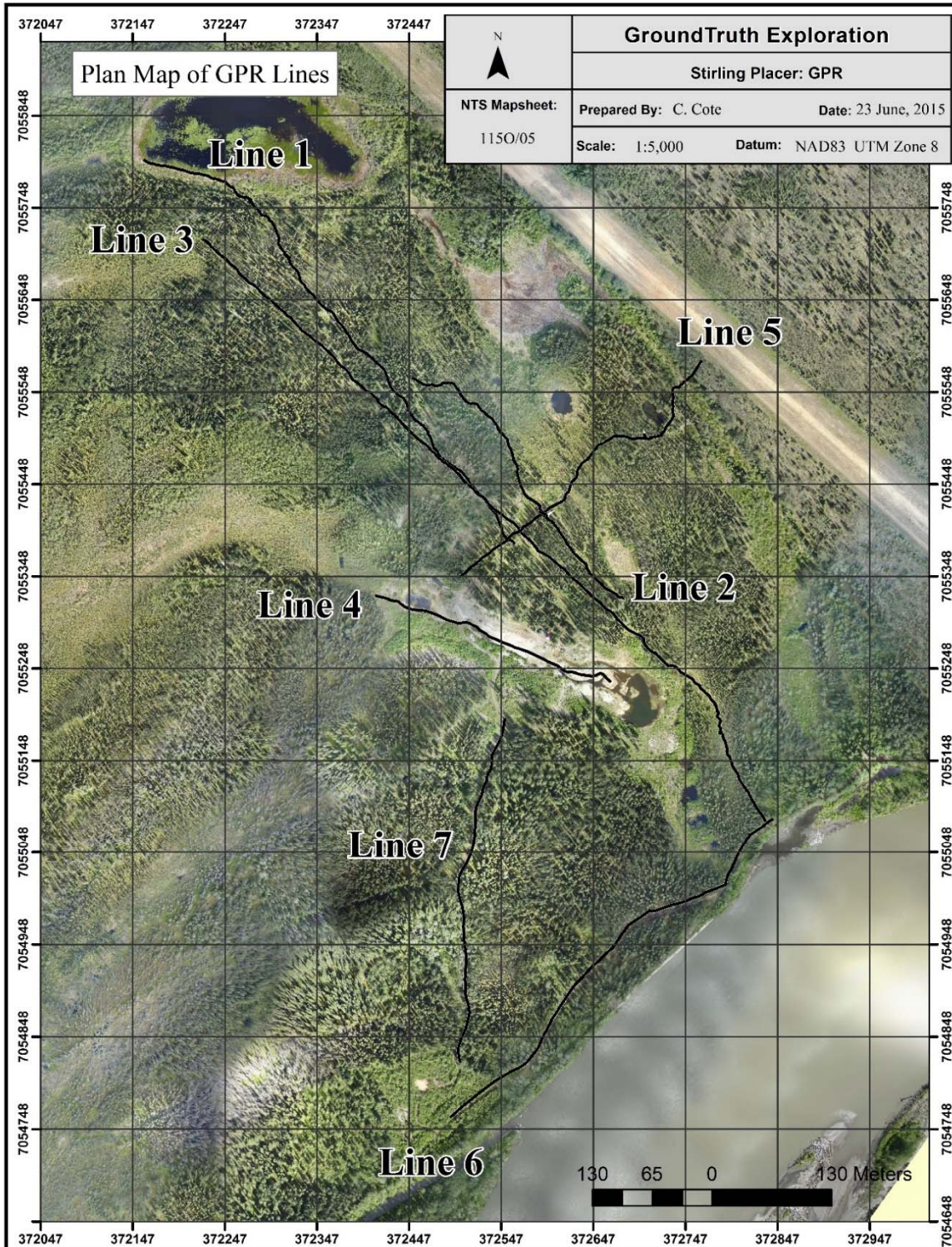


Figure 2: Plan map of GPR traverses.

Figure 3: GPR Line 1

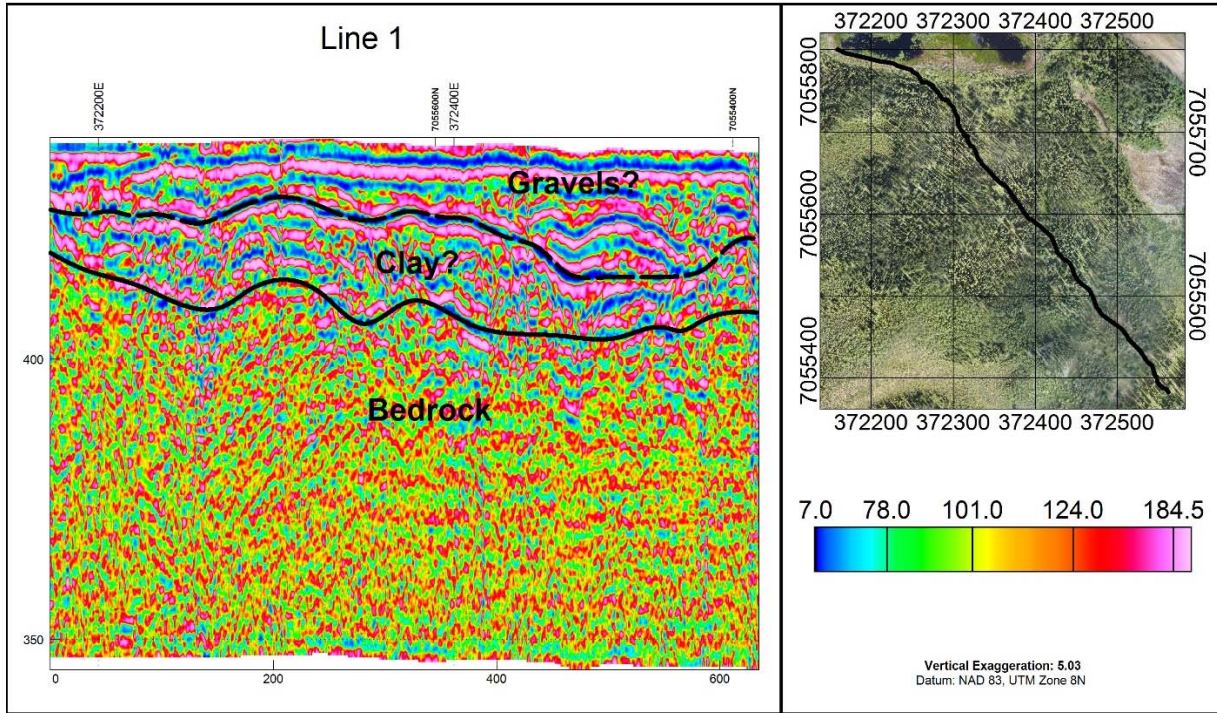


Figure 4: GPR Line 2

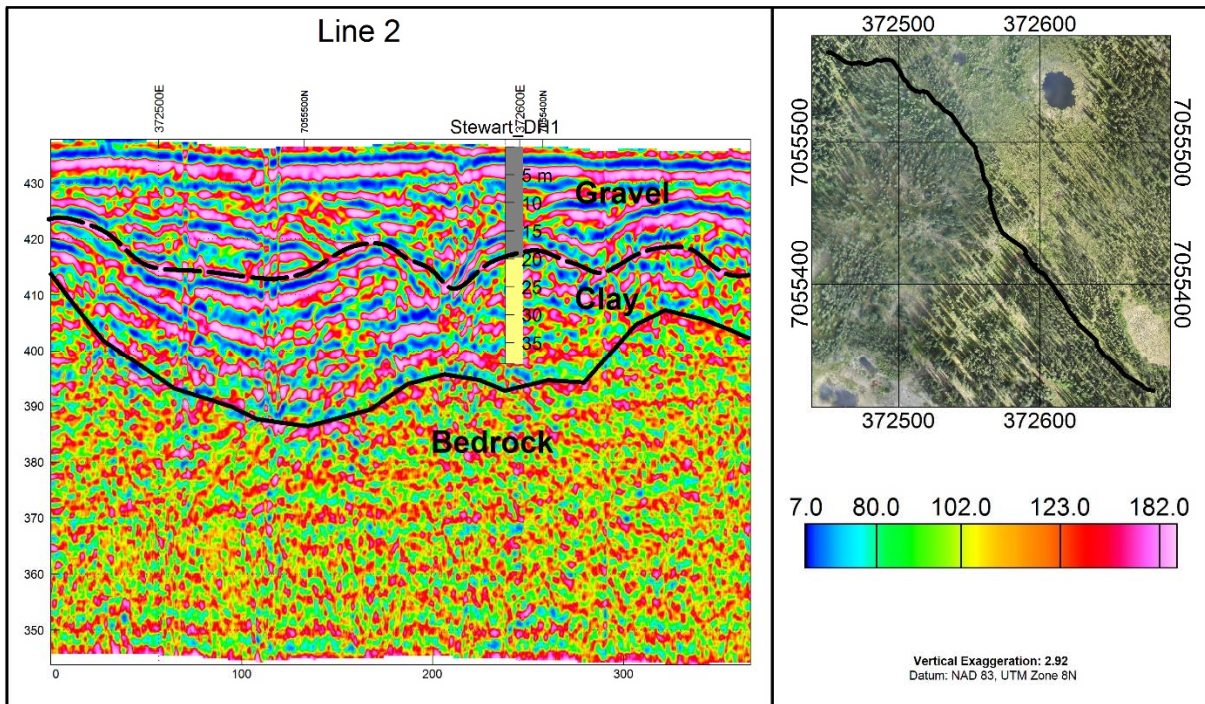


Figure 5: GPR Line 3.1, North-West end

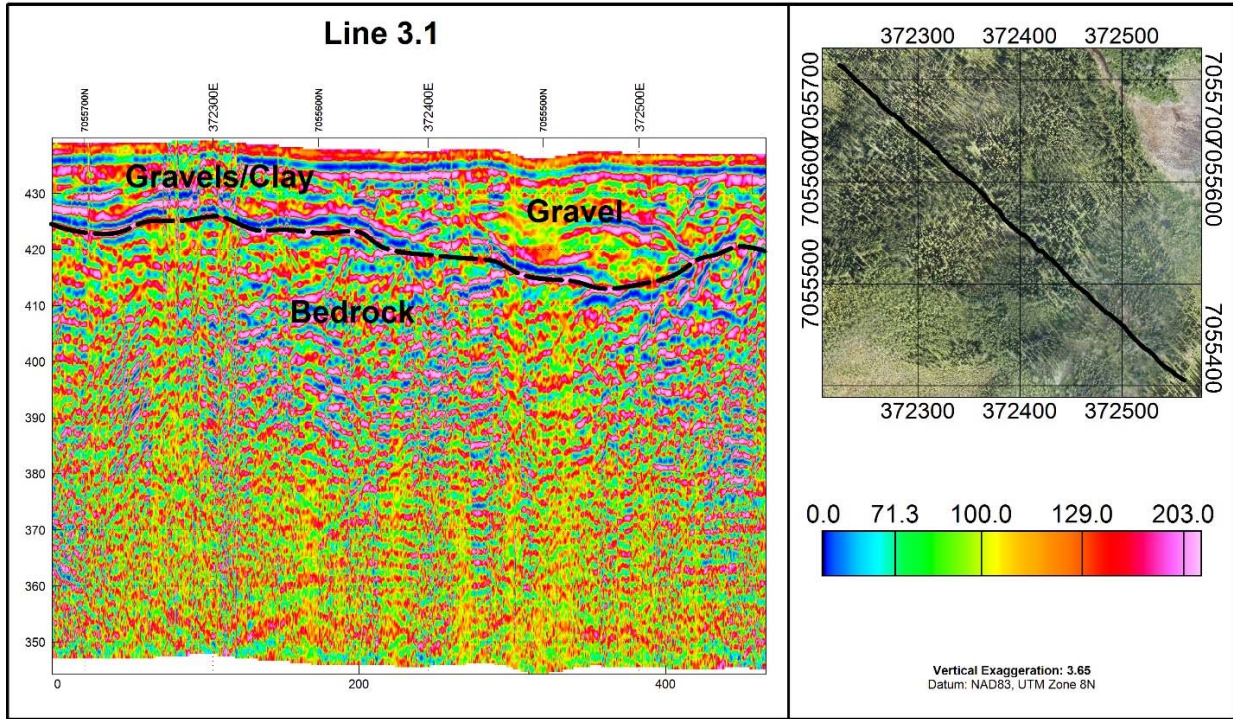


Figure 6: GPR Line 3.2, South East section

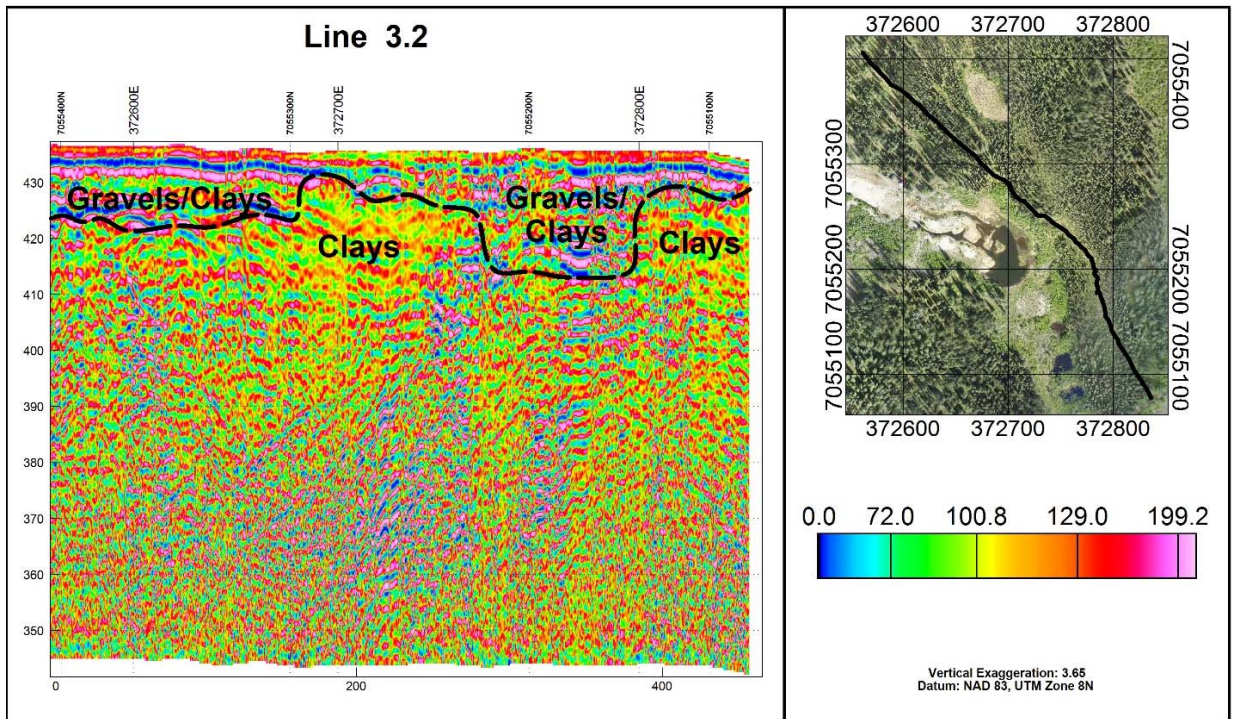


Figure 7: GPR Line 4

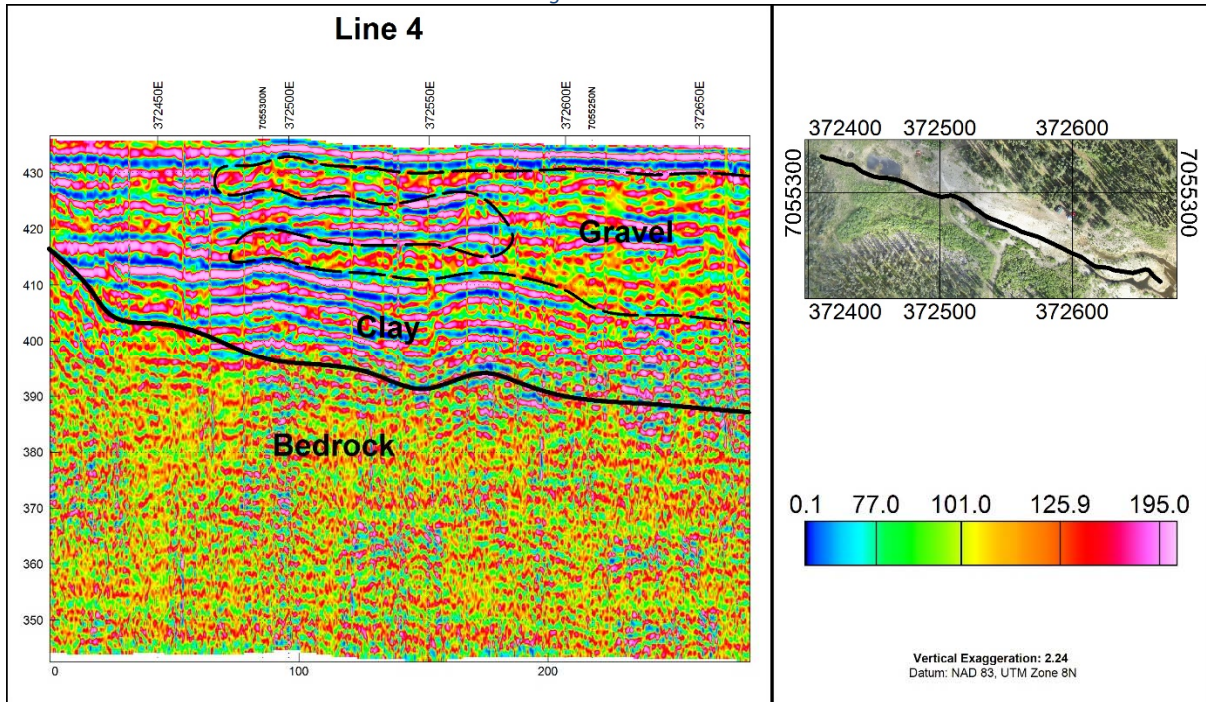


Figure 8: GPR Line 5

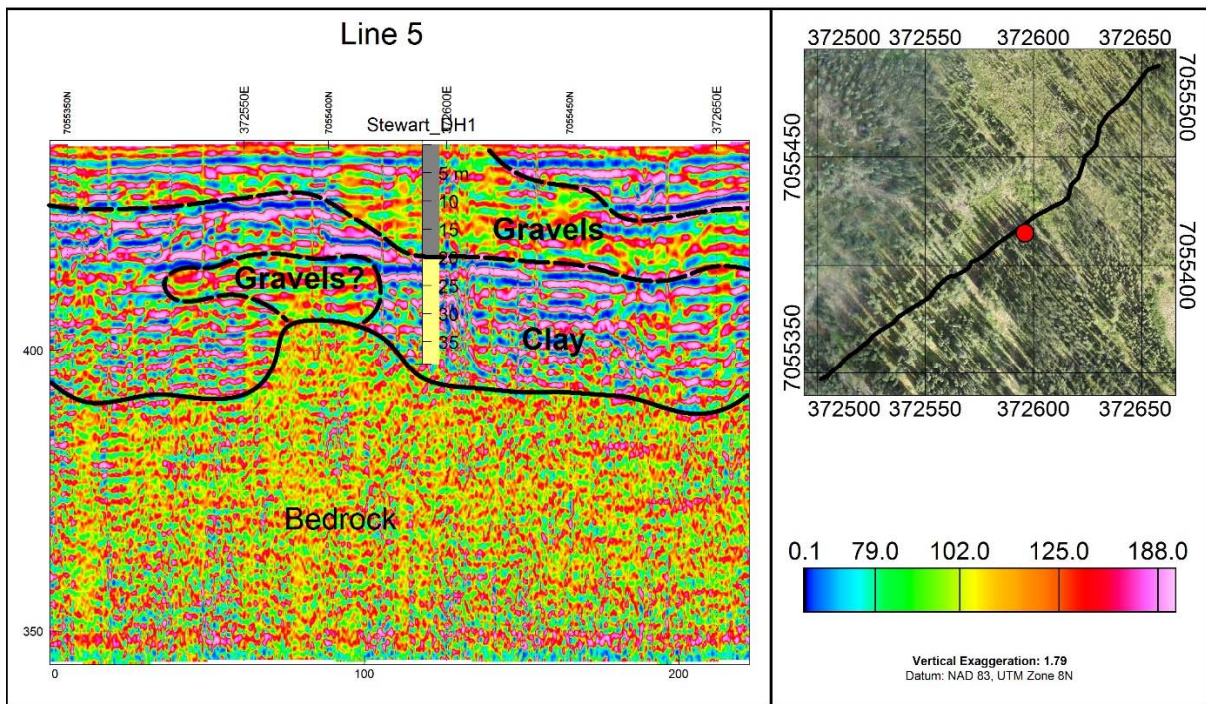


Figure 9: GPR Line 6

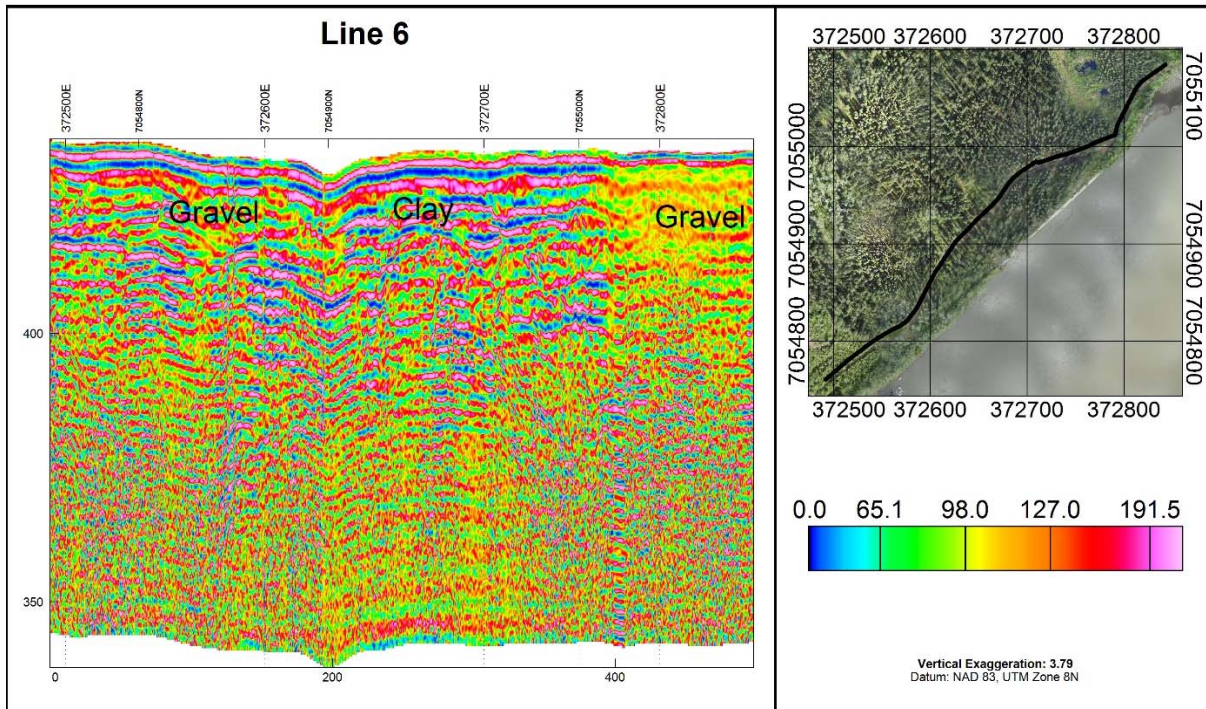


Figure 10: GPR Line 7

