Geophysical and Drilling Report

Yukon Mineral Exploration Program (YMEP)

Reindeer Creek Placer Property

Dawson Mining District

NTS: 115O/11 & 115O/12
Latitude: 63° 39.92" N Longitude: -139° 35.51" W

Lease List:

5 Mile Placer Lease
ID01735
Owner - April Gaudet – 100%

4 Mile Placer Lease
ID01736
Dylan Thomas Wales – 100%

Work Performed:

Mobilization:	25 & 26, September, 2020
GPR Survey:	5 October, 2020
RAB Drilling:	27 September to 5 October, 2020

Prepared for GroundTruth Exploration Inc.

Written by: Allison Feduk January 31, 2021

Box 70, DAWSON, YT
Y0B 1G0

Table of Contents

List of Figures

List of Tables

1 Introduction

Reindeer Creek is a right limit tributary of the Yukon River. Reindeer Creek has been targeted based on the discovery three main gold-in-soil anomalies and sources located around Reindeer Creek, including Peso, Guilder and Lira.

Shawn Ryan reviewed the various placer camps (outside the Klondike gold fields) in the Yukon and noticed a general theme: creeks flowing from significant gold deposits contain placer gold. Proven examples include Dublin Gulch deposit, Scheelite Dome, Clear Creek, Freegold Area, Moose Horn range, Mt Nansen, White Gold Deposit, Casino Deposit. This theory was the incentive to stake nine miles Reindeer Creek.

Shawn Ryan hired GroundTruth Exploration Inc. and GroundTruth Drilling Inc. to conduct a thirty two-hole drill program executed between the 27th of September to the 5th of October, 2020 and a 1,175 line-m Ground Penetrating Radar survey completed between 5th of October 2020. The GPR work, including both 80 MHz and 160 MHz, was intended to measure the depth to bedrock and to map underlying lithology thickness to determine if any paleochannels favorable to gold deposition could be detected. The Ground Penetrating Radar surveys were ran after drilling had been completed; therefore the drilling portion of the program was not able to use these surveys. The drilling results indicated that placer gold is scarce on the large bench and on the channel and flood plain.

2 Previous Investigations

A small amount of work has been performed on the Reindeer Creek placer properties. The work has been limited to Res/IP and UAV Drone surveys conducted in 2019.

3 Location and Access

The Reindeer Creek prospecting leases are located approximately 40 km South of Dawson City within the Yukon River drainage system in west-central Yukon Territory. The targets are centered at 63° 39.92” N and -139° 35.51” W and located on NTS map sheet 115O/11 and 115/O12 (Figure 1). The leases are accessible by helicopter year-round and can be accessed in the winter, by snowmobile, via the Yukon River. The Lower Sixty Mile Airstrip is located 13 km to the southwest which can also be accessed year-round.

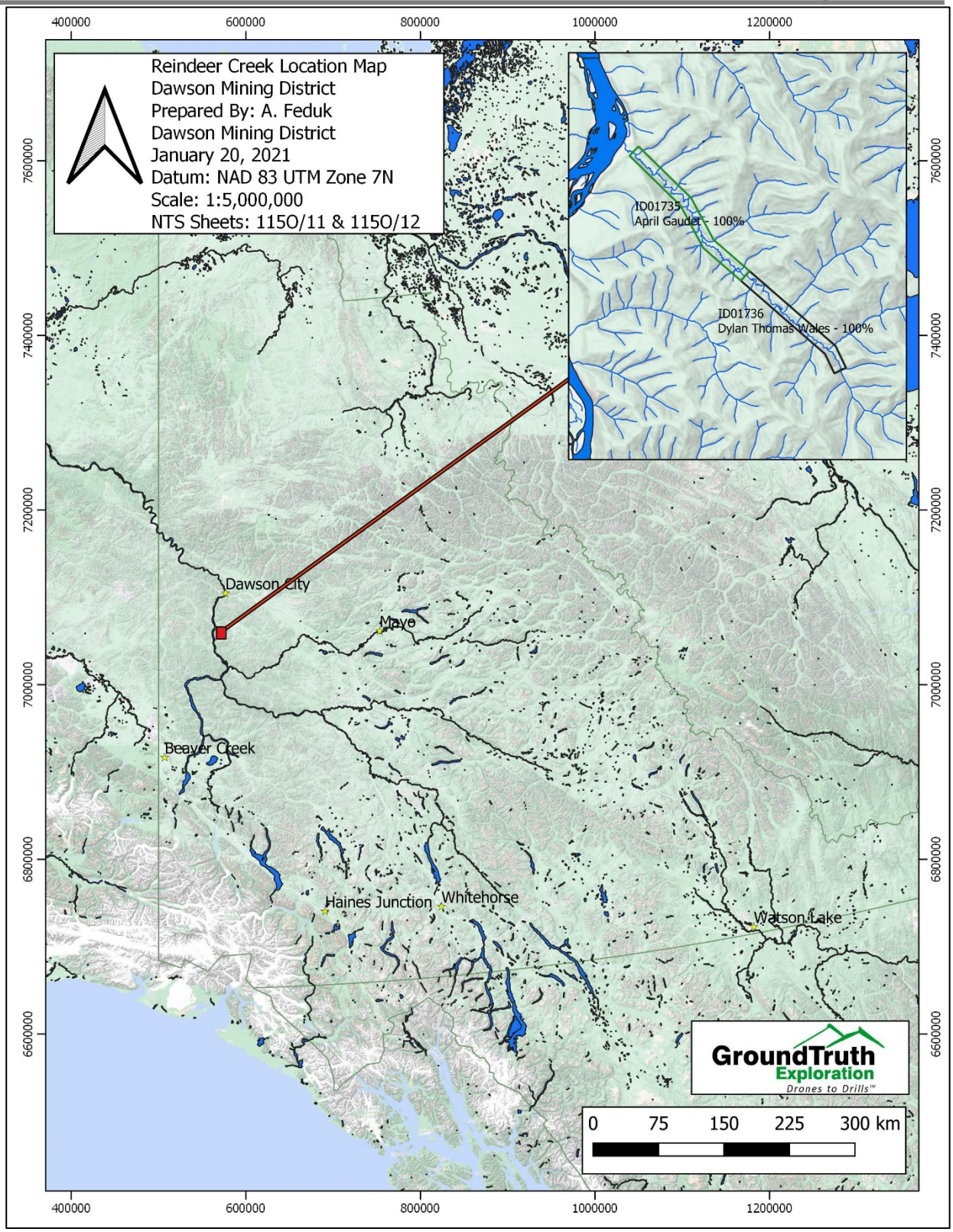

Figure 1: Reindeer Creek Location Map

4 Physiography and Climate

The landscape is composed broad valleys bordered by moderately sloped, tree-covered hills ranging in elevations from 366 m to 1036 m. The area experiences typical climatic conditions of the central Yukon Territory. The territory has a sub-arctic continental climate with a summer mean of 10°C and a winter mean of -23°C with temperatures reaching as high as 35°C in the summer and as low as minus 55°C in the winter. The property lies within Canada's discontinuous permafrost zone, most of the valley bottoms in this area are filled with permafrost.

5 Geology

5.1 Regional Geology

Reindeer Creek is situated in the Yukon-Tanana Terrane (YTT). The YTT is a late Devonian to middle Mississippian continental magmatic arc extending from northern British Columbia into west-central Yukon and eastern Alaska and is bounded to the northeast by the Tintina fault and to the south-west by the Denali fault (Colpron et al., 2006).

The YTT is composed of four main assemblages including the Snowcap, Finlayson, Klondike and Klinkit (Colpron et al. 2006) intruded by the Dawson Range batholith (phase of the Whitehorse Suite), Prospector Mountain plutonic suite and Casino plutonic suites (Mortensen et al., 2010).

The Snowcap assemblage (PDS1) forms the base of the YTT consisting of quartzite, psammite, pelite and marble with minor greenstone and amphibolite. The Finlayson assemblage (DMF1) is composed of amphibolite, garnet amphibolite and schist. The Klondike assemblage (PK1, PK2) consists of muscovite-chlorite quartz phyllite, quartz-muscovite-chlorite schist, micaceous quartzite, psammite, phyllonite and schist. The Whitehorse Suite (mKqW, mKgW), a phase of the Dawson Range Batholith, consists of biotite quartz monzonite, biotite granite, leucogranite, monzogranite, granodiorite, diorite, granite and tonalite.â€□ (Ryan et al., 2013). The Klinkit (CK1) is composed of mafic to intermediate metavolcaniclastic and metavolcanics rocks, with minor limestone and conglomerate (Colpron et al., 2006; Roots et al, 2004).

5.2 Property Geology

The Reindeer Creek property, located in the Yukon-Tanana Terrane, are underlain by Carbiniferous metamorphic rocks of the Simpson Range (MgSR) and Devonian metamorphic rocks of the Snowcap Assemblage (PDS1). MgSR is composed of horneblende bearing metagranodiorite, metadiorite, metatonalite and tonalite. PDS1 consists of quartzite, psammite, pelite and marble; minor greenstone and amphibolite, and quartz-mica-schist. The north-south trending Reindeer thrust fault to the east separates the Finlayson Assemblage (DMF3) from the Simpson Range (MgSR)" (Ryan, et al, 2016).

This region is located in an unglaciated area, thus placer gold should be located close to the hard rock sources. The properties bedrock geology is shown in Figure 2.

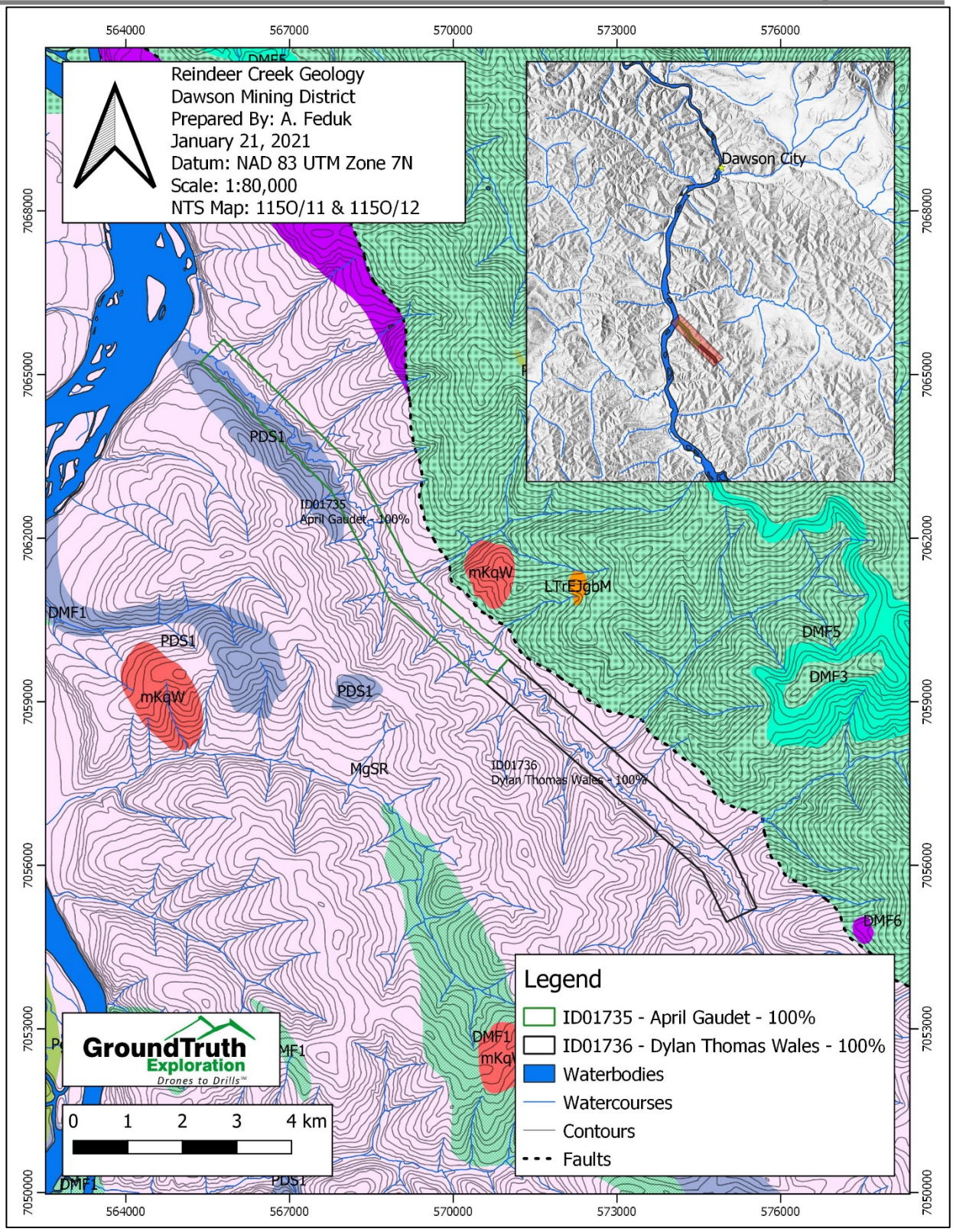

Figure 2: Reindeer Creek Geology Map

6 Rotary Air Blast (RAB) Drilling

6.1 Work Performed

The 2020 RAB Drilling program on Reindeer Creek consisted of thirty-two drill holes: REI20-01 to REI20-70. A total of 265.18 m was drilled between the 27th of September to the 5th of October, 2020.

6.2 Field Survey Operating Procedures

The GT RAB Drill is a light-weight rotary percussion drill rig mounted on a set of rubber tracks. The drill itself is powered by a 44.2 hp turbocharged Kubota diesel engine. The placer RAB drives a cased hole 4” in diameter and uses 4’ drill rods. The GT RAB Drill is equipped with a wireless remote-control system used to drive it between drill sites. There are four hydraulically operated vertical outriggers on the drill for self-leveling on drill sites. The rubber tracked platform on the GT RAB Drill has 2400sq inches of track coverage area giving it 1.8psi ground pressure allowing it to be extremely versatile and low impact in the field.

The GT RAB Drill is a lightweight exploration drill rig that involves the use of DTH rotary percussion drilling equipment using compressed air from a stationary air compressor which is connected to the rubber tracked drill using an air hose. The drill uses a pneumatic reciprocating piston driven ‘hammer’ to energetically drive a tungsten carbide tipped drill bit into overburden and rock. Compressed air is fed through the drill rod string to the DTH hammer and with rotation from the top drive; cuttings are then returned to the surface through the annulus under pressurized exhaust air. Cuttings then pass through the diverter/BOP and continue to the cyclone and are collected in a 24” x 36” Ore Bag at the bottom of the cyclone. Drill cuttings were processed in a Gold Hog Raptor concentrator to find gold.

6.3 Drilling Results

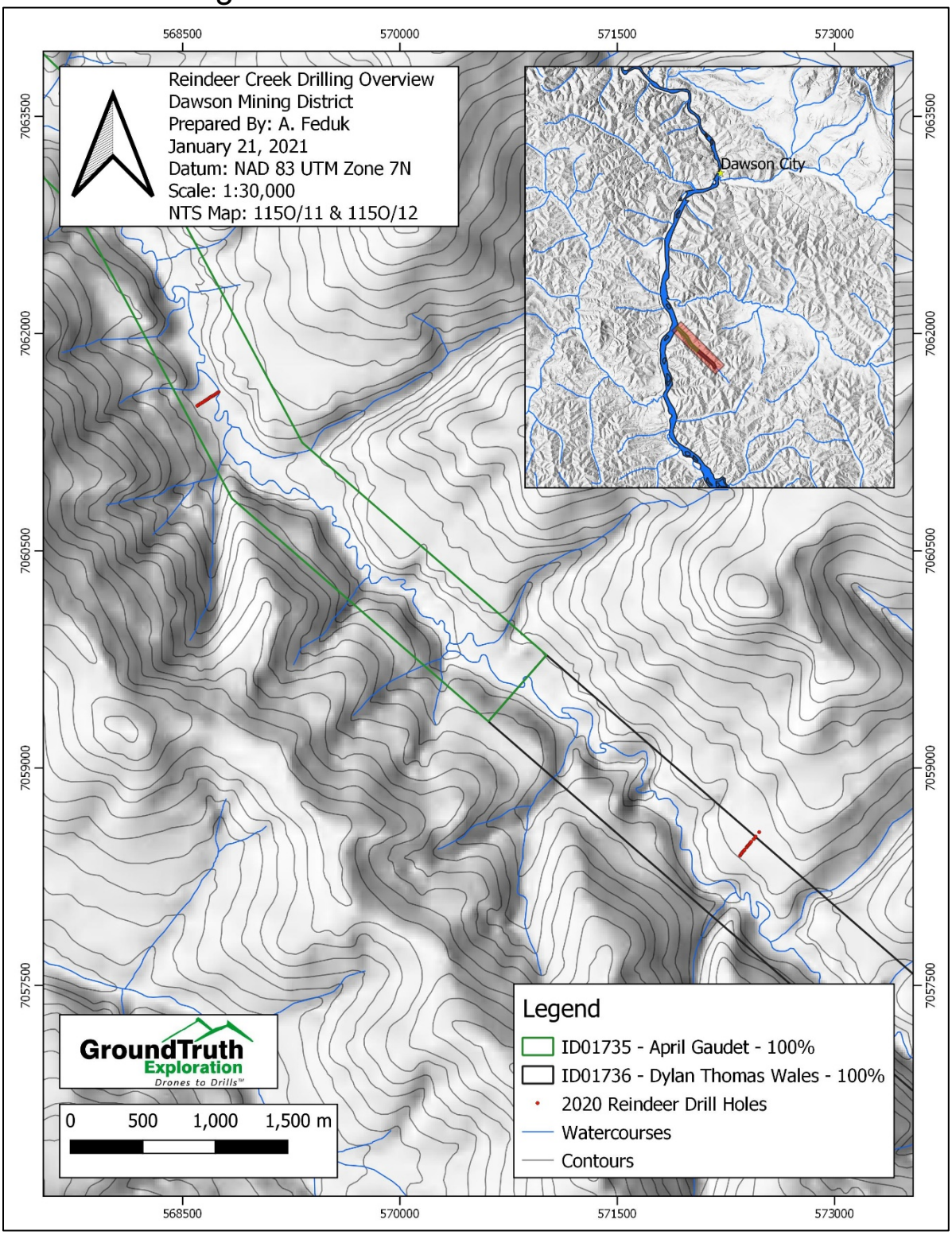

Figure 3: Reindeer Creek Drilling Overview

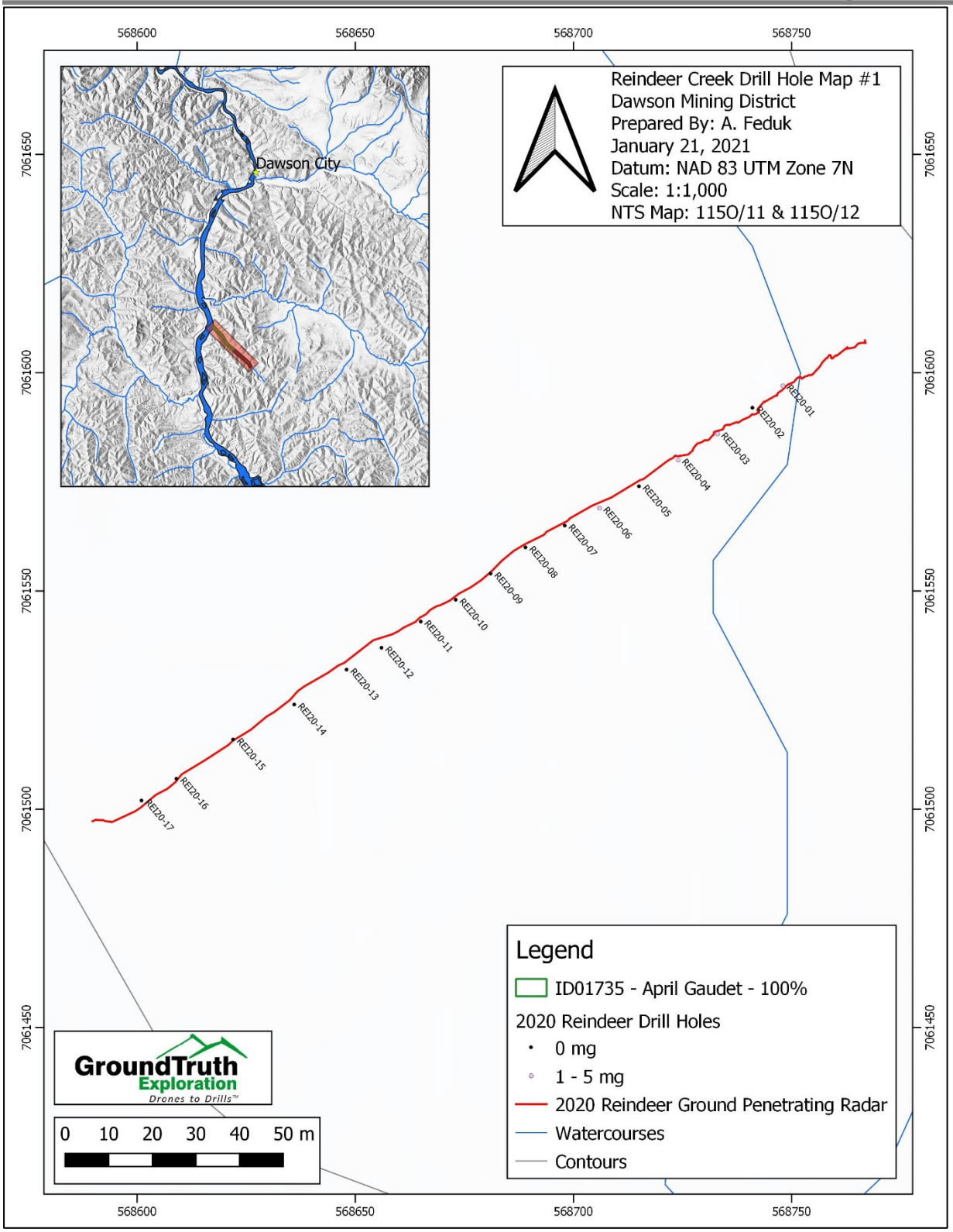

Figure 4: Drill Holes and GPR on Drill Line 1 with Au Weight

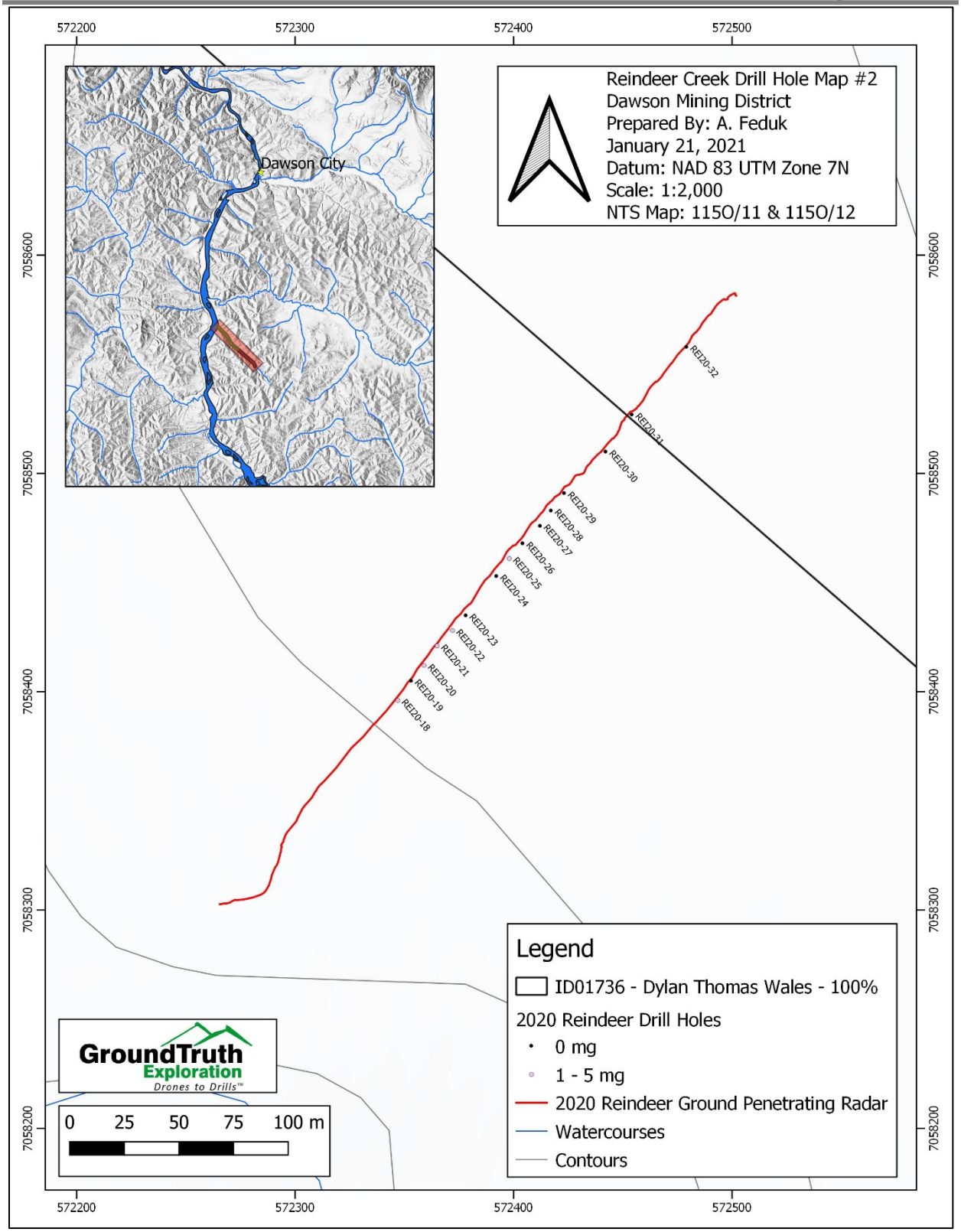

Figure 5: Drill Holes and GPR on Drill Line 2 with Au Weight

Table 1 outlines the location and summary data of the drill holes. The detailed downhole results of each hole can be found in Appendix A.

Table 1: Collar Table and Summary Statistics for Drill Holes

Date	HoleID	X	Y	TD_m	TD_m	Au_mg
2020-09-27	REI20-01	568748	7061597	6.858	5.334	0.1
2020-09-27	REI20-02	568741	7061592	6.858	5.334	0
2020-09-28	REI20-03	568733	7061586	6.858	4.8768	0.1
2020-09-28	REI20-04	568724	7061580	6.858	4.8768	2.3
2020-09-28	REI20-05	568715	7061574	5.334	4.8768	0
2020-09-28	REI20-06	568706	7061569	6.858	5.334	0.1
2020-09-28	REI20-07	568698	7061565	5.334	4.572	0
2020-09-29	REI20-08	568689	7061560	5.334	5.1816	0
2020-09-29	REI20-09	568681	7061554	6.858	6.4008	0
2020-09-29	REI20-10	568673	7061548	5.334	5.0292	0
2020-09-29	REI20-11	568665	7061543	6.858	6.2484	0
2020-09-29	REI20-12	568656	7061537	6.858	6.4008	0
2020-09-30	REI20-13	568648	7061532	6.858	6.7056	0
2020-09-30	REI20-14	568636	7061524	8.382	7.62	0
2020-09-30	REI20-15	568622	7061516	9.906	8.6868	0
2020-09-30	REI20-16	568609	7061507	9.906	9.6012	0
2020-10-01	REI20-17	568601	7061502	11.43	10.9728	0
2020-10-01	REI20-18	572347	7058396	6.858	5.6388	0.1
2020-10-02	REI20-19	572353	7058405	6.858	5.9436	0
2020-10-02	REI20-20	572359	7058412	8.382	7.0104	0.1
2020-10-02	REI20-21	572365	7058421	8.382	7.0104	0.1
2020-10-02	REI20-22	572372	7058428	8.382	7.3152	0.2
2020-10-02	REI20-23	572378	7058435	11.43	7.62	0
2020-10-02	REI20-24	572392	7058453	9.906	9.4488	0
2020-10-03	REI20-25	572398	7058461	8.382	7.4676	0.2
2020-10-03	REI20-26	572404	7058468	6.858	6.858	0
2020-10-03	REI20-27	572412	7058476	8.382	7.9248	0
2020-10-03	REI20-28	572417	7058483	11.43	10.3632	0
2020-10-04	REI20-29	572423	7058491	9.906	8.5344	0
2020-10-04	REI20-30	572442	7058510	11.43	10.9728	0
2020-10-05	REI20-31	572454	7058527	11.43	10.668	0
2020-10-05	REI20-32	572479	7058558	14.478	clay	0

7 Ground Penetrating Radar Surveys

7.1 Work Performed

The Ground Penetrating Radar (GPR) surveys were conducted on the 5th of October 2020. The placer leases under study included ID01735, owner April Gaudet, and ID01736, owner Dylan Thomas Wales. (Figures 6 to 9). The goal of the GPR survey is to complement the drilling data for the identification of fluvial deposits and defining important contacts.

The traverses for the GPR consisted of 4 survey lines, with a total of 1,175 line-m, the 80 MHz survey totaled 585 line-m and the 160 MHz survey totaled 590 line-m.

The GPR system used was an ABEM MALA GX system with 80 MHz, 160 MHz shielded antennas and an integrated DGPS for more accurate positioning. The HDR technology offers fast data acquisition rates with a penetration depth of about 30 m at 80 MHz and > 15m at 160 MHz at a radar wave velocity of 0.085 m/ns.

A pulseEKKO PRO and Ultra system developed Sensors and Software, Canada with 50, 100 and 200 MHz central frequency antennas were tested in this study. Radar signals were processed and analyzed by the EKKO view deluxe software. Measurements were conducted using the common-midpoint (CMP) method for velocity profile estimation of radar waves.

7.2 Working Procedure for Ground Penetrating Radar

- A crew of 2 is deployed to run the survey.
- An operator runs the GPR unit while the other person cuts brush along lines. The brush must be cut low to the ground for the best survey results.
- The ABEM MALA GX system with 80 MHz or 160 MHz controller and shielded antenna are set up on the rough terrain cart.
- The machine is calibrated, and baseline is set for the X and Y coordinates of the start and stop positions.
- The rough terrain cart is rolled over the line.
- The data file is loaded into RadExplorer software for further processing.

7.3 Data Processing

The raw data is converted to SEGY format and imported to Geosoft for georeferencing and processing. The continuous measurement mode data is decimated to achieve 10 cm spacing intervals. Velocity analysis is performed on Common Mid-Point (CMP) datasets which were collected by PulseEKKO sensors and software for one test location. The GPR sections are processed by conversion of time sections, assuming a constant radar velocity. The radar wave velocity of 0.085 m/ns is selected from the velocity spectrum of CMP data for time to depth conversion. The GPR depth sections are plotted with downhole geology logs.

7.4 Results

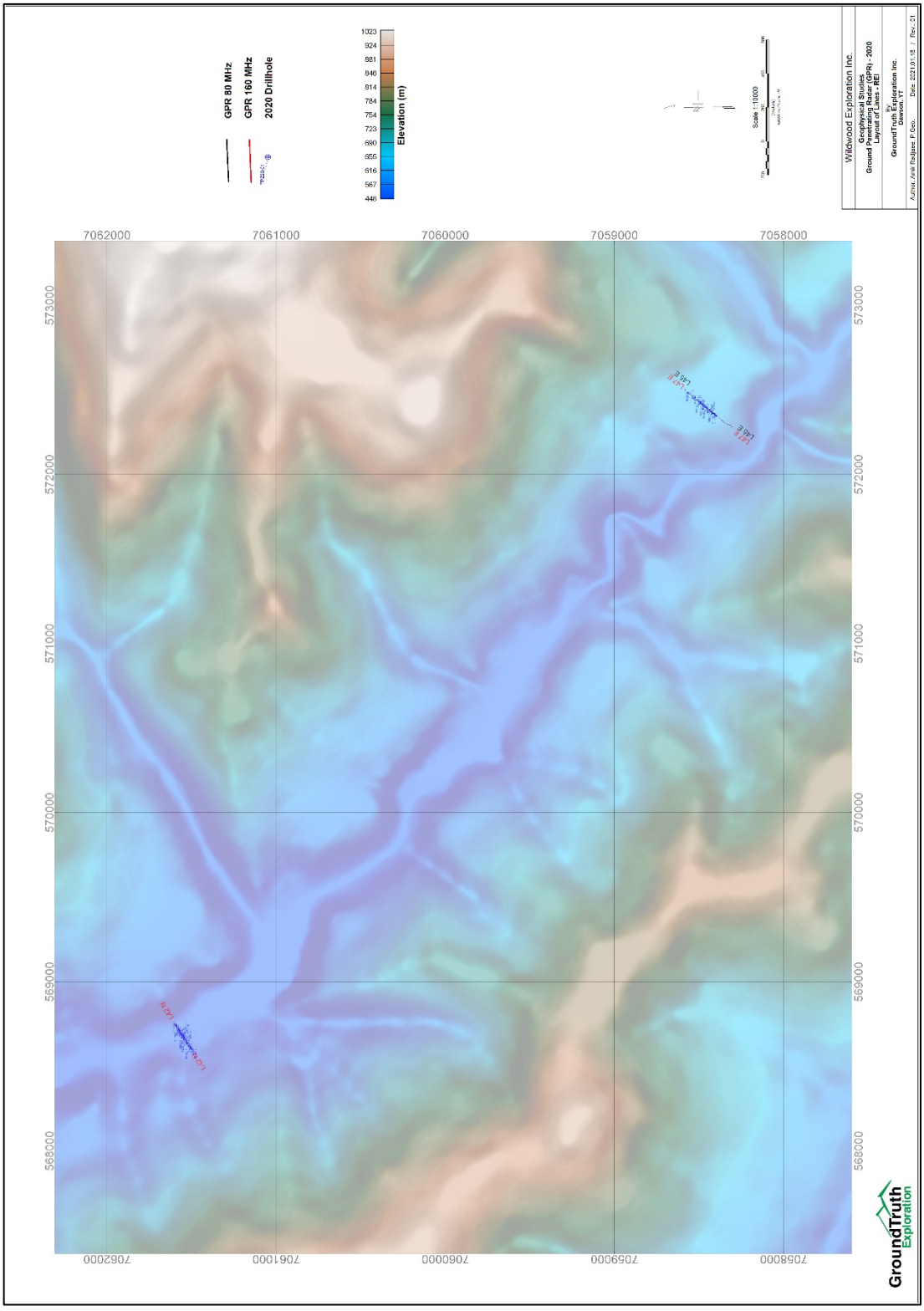

Figure 6: Reindeer Creek Ground Penetrating Radar Overview

Box 70, DAWSON, YT
Y0B 1G0

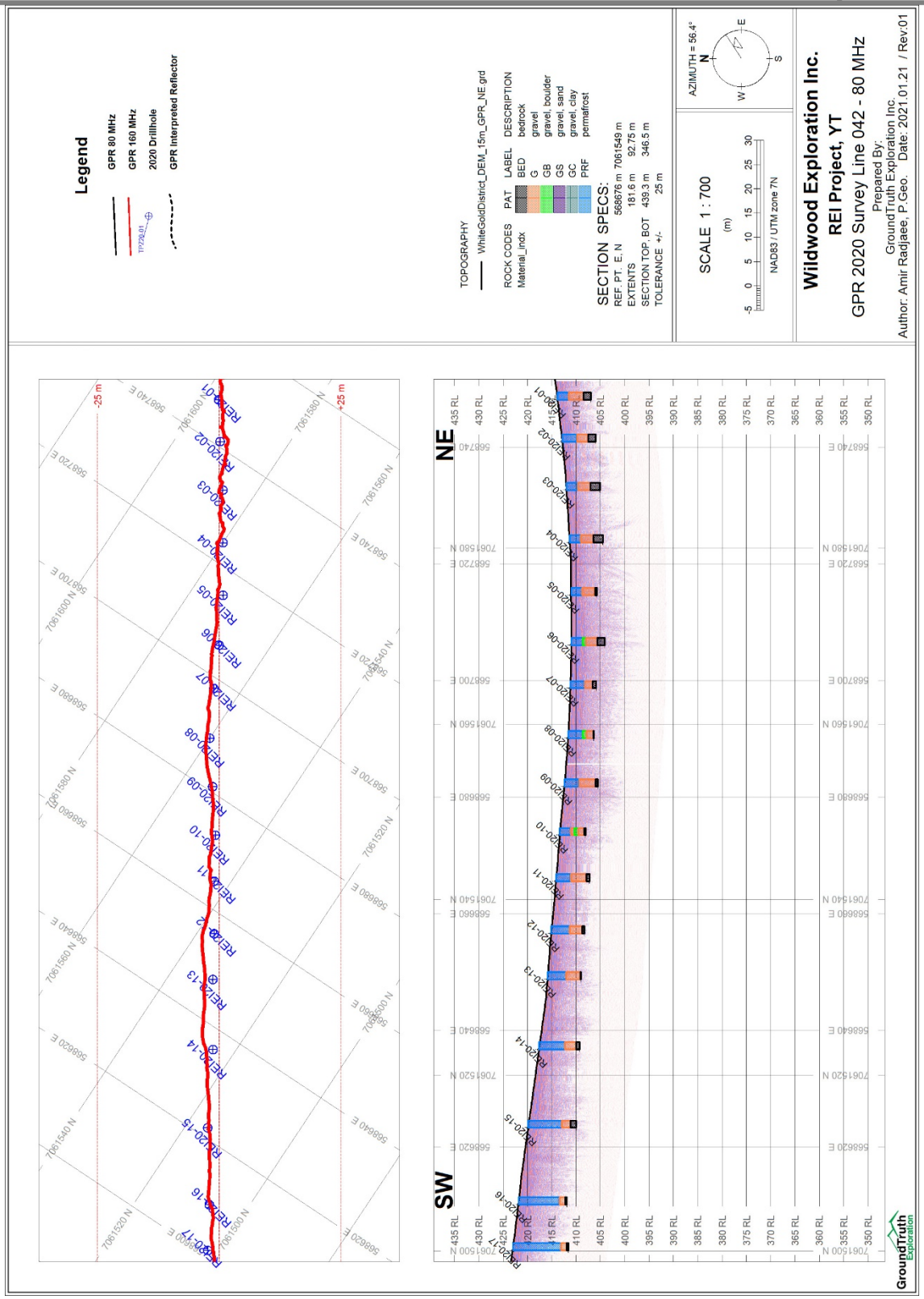

Figure 7: GPR Profile on Drill Holes REI20-01 to REI20-17, L42 N, 80 MHz

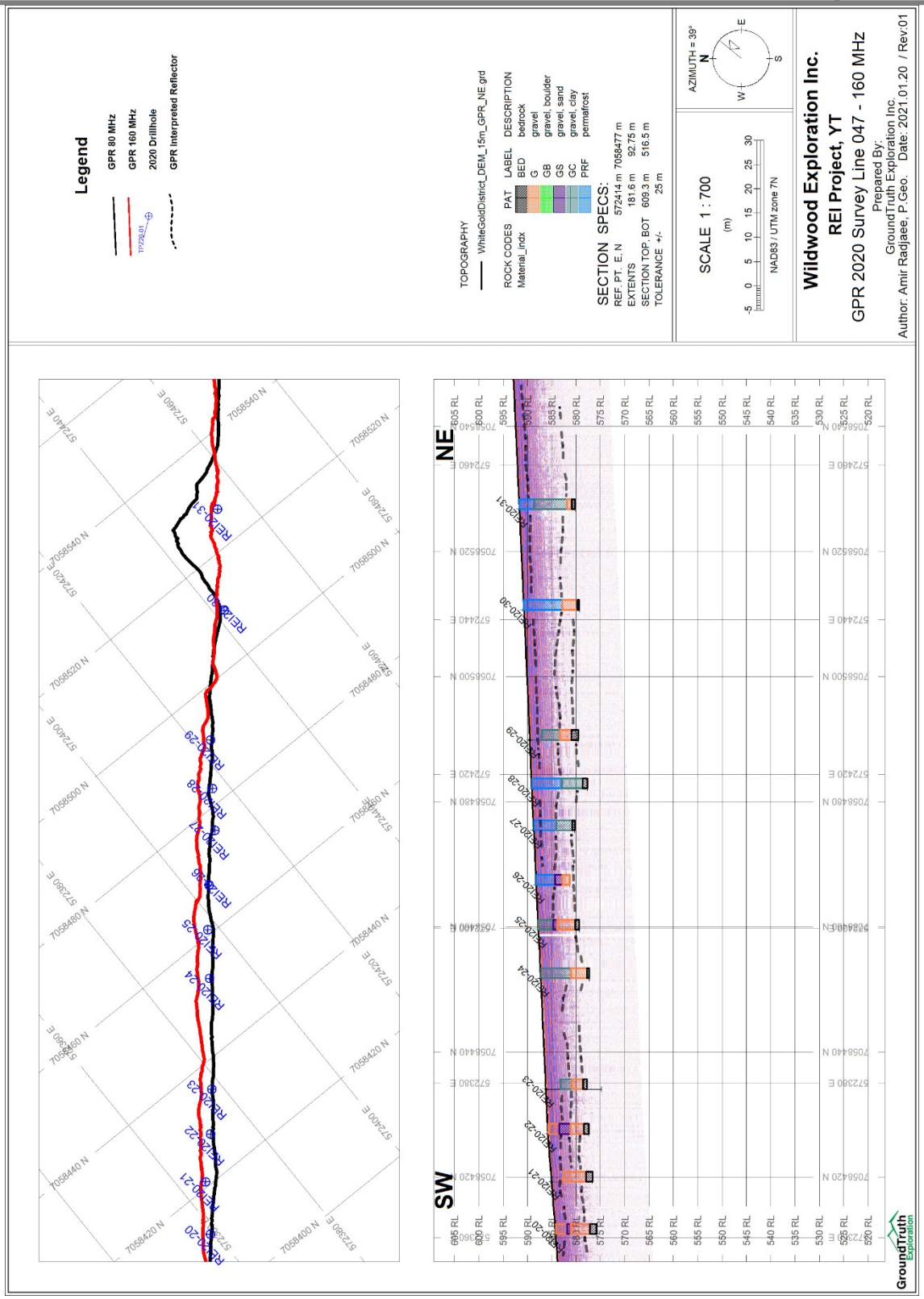

Figure 8: GPR Profile on Drill Holes REI20-20 to REI20-31, Line 47, 160 MHz

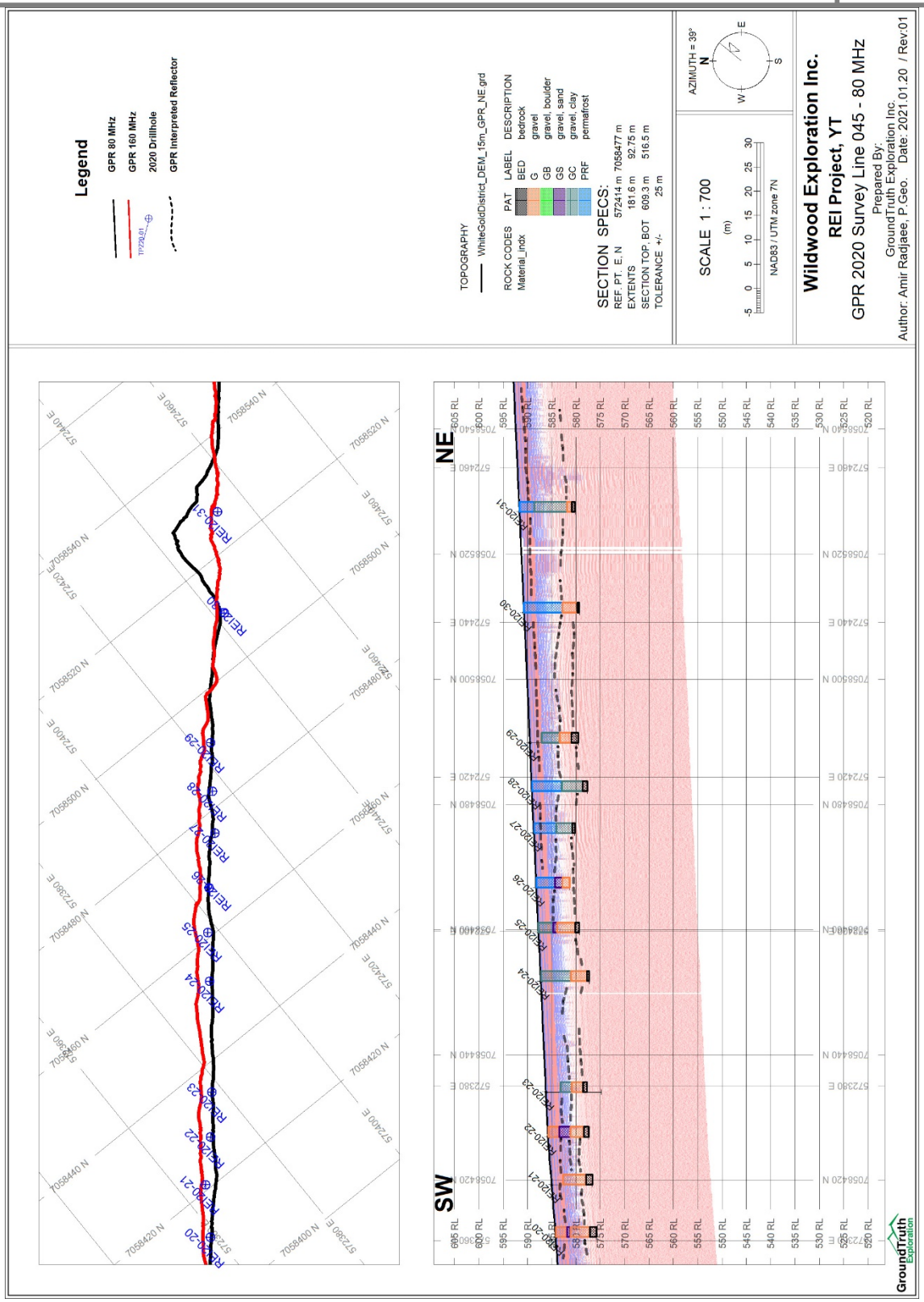

Figure 9: GPR Profile on Drill Holes REI20-20 to REI20-31, Line 45, 80 MHz

8 Discussion and Interpretation

The radar velocity is a function of subsurface material's dielectric permittivity and is related to the ice content. Sediments with low ice contents typically have low radar velocity value and sediments with a high ice content have a high radar velocity. Usually unfrozen wet sandy/silty sediments have a radar velocity of 0.065 m/ns whereas frozen saturated sandy/gravel sediments have a higher radar velocity of 0.10 m/ns.

The drill holes were plotted on the GPR depth sections, the interpretation was subject to error due to uncertainty of the estimated radar velocity for time to depth conversions using the radar wave velocity of 0.085 m/ns. With the combined GPR and drill data we were able to identify the contacts between the permafrost frozen and thawed zones, map the bedrock surface and determine the gravel “pay zone.” The radar images can be used to interpret the abrupt changes in stratigraphy throughout a drill line where drilling at closer intervals would be economically unfeasible. The reflectors showed both the frozen and unfrozen layers of permafrost, bedrock contact and gravel layers.

By using both the 80 MHz and 160 MHz systems we were able to conclude that the higher MHz has a better resolution than the lower MHz with a greater depth of investigation.

The drill data indicated that most areas had a significant amount of permafrost and low gold grades which would make mining the area impractical.

9 Recommendations

Further drilling in different areas is recommended to determine if placer gold is more abundant in other areas of the leases. Advanced GPR data processing including lateral stacking of the GPR traces and bandpass filtering are recommended by GroundTruth’s geophysicist.

10 Expenditures

Helicopter Support Great Slave Helicopters Invoice: Various	$29,800.00
Drill Operation GroundTruth Drilling Inc. Invoice: 1069	$11,071.50
Drill Support GroundTruth Exploration Inc. Invoice: 10448 & 10449	$8,481.00
Project Geologist GroundTruth Exploration Inc. Invoice: 10484	$5,337.09
GPR Wages & Equipment Rental GroundTruth Exploration Inc. Invoice: 10494	$6,748.96
Daily Field Expenses	$6,800.00
Report Writing	$1,000.00
Grand Total	**$69,238.55**

11 Qualification

I, Allison Feduk with a business address in Dawson City, Yukon, and residential address in Carlyle, Saskatchewan, do herby certify that:

1. I graduated from the University of Regina in the fall of 2011 with a Bachelor of Science in Geology.

2. From 2012 to present I have been actively engaged in mining and mineral exploration in Alberta and the Yukon Territory.

3. I have been an employee of GroundTruth Exploration Inc. since July of 2018.

4. I am not aware of any material fact or material change with respect to the subject matter of this report, the omission to disclose which makes this report misleading.

Dated this 29th day of January, 2021

Respectfully submitted,

Allison Feduk

12 References

Regional Geology: Colpron, M., Israel, S., Murphy, D.C., Pigage, L.C., and Moynihan, D., 2016. Yukon Bedrock Geology Map. Yukon Geological Survey, Open File 2016-1.

Regional Geology: Yukon Mining Map Viewer, Mining Claims Database – http://mapservices.gov.yk.ca/Mining/Load.htm

Mineral Titles: Yukon Mining Recorder, Mining Claims Database – www.yukonminingrecorder.ca

Topographic data: Natural Resources Canada, The Atlas of Canada - Toporama- http://atlas.gc.ca/toporama/en/index.html

Colpron, M., Nelson, J. L., and Murphy, D. C., 2006. A techtonostratigraphic framework for the pericratonic terranes of the Norther Cordillera: Canadian and Alaskan Cordillera: Geologic Association of Canada, p. 1 – 23.

Mortensen, J.K. and Allan, M.M., 2012. Summary of the Tectonic and Magmatic Evolution of Western Yukon and Eastern Alaska. In Yukon Gold Project Final Technical Report, Edited by Allan, M.M., Hart, C.J.R., and Mortensen, J.K. Mineral Deposit Research Unit, University of British Columbia, p. 7 – 10.

Mortensen, J. K., and Hart, C. J. R., 2010. Late and Post-Accretionary Magmatism and Metallogeny in the Norther Cordillera, Yukon and Eastern Alaska. Geological Society of America Annual Meeting, Denver, 31 October to 3 November 2010.

Nelson, J., Colpron, M., and Israel, S., 2013. The Cordillera of British Columbia, Yukon and Alaska: tectonics and metallogeny. In: Colpron, M., Bissig, T., Rusk, B., and Thompson, J.F.H., (Editors), Tectonics, Metallogeny, and Discovery - the North American Cordillera and similar accretionary settings. Society of Economic Geologists, Special Publication 17: 53-109.

Roots, C., Nelson, J., Mihalynuk, M. G., Harms, T. A., De Keijzer, M., and Simard, R. L., 2004. Bedrock Geology of Dorsey Lake, Yukon Territory. Yukon Geological Survey, Geological Survey of Canada, Open File 4630.

Ryan, J. J., Zagorevski, A., Williams, S. P., Roots, C., Ciolkiewicz, W., Hayward, N., and Chapman, J. B., 2013. Geology of Stevenson Ridge (northeastern part), Yukon; Geological Survey of Canada, Canadian Geoscience Map 116 and 117.

13 Appendices

Appendix A: Drill Results

Date	HoleID	X	Y	TD_m	TD_m	TD_ft	BR_ft	Au_mg
2020-09-27	REI20-01	568748	7061597	6.858	5.334	22.5	17.5	0.1
2020-09-27	REI20-02	568741	7061592	6.858	5.334	22.5	17.5	0
2020-09-28	REI20-03	568733	7061586	6.858	4.8768	22.5	16	0.1
2020-09-28	REI20-04	568724	7061580	6.858	4.8768	22.5	16	2.3
2020-09-28	REI20-05	568715	7061574	5.334	4.8768	17.5	16	0
2020-09-28	REI20-06	568706	7061569	6.858	5.334	22.5	17.5	0.1
2020-09-28	REI20-07	568698	7061565	5.334	4.572	17.5	15	0
2020-09-29	REI20-08	568689	7061560	5.334	5.1816	17.5	17	0
2020-09-29	REI20-09	568681	7061554	6.858	6.4008	22.5	21	0
2020-09-29	REI20-10	568673	7061548	5.334	5.0292	17.5	16.5	0
2020-09-29	REI20-11	568665	7061543	6.858	6.2484	22.5	20.5	0
2020-09-29	REI20-12	568656	7061537	6.858	6.4008	22.5	21	0
2020-09-30	REI20-13	568648	7061532	6.858	6.7056	22.5	22	0
2020-09-30	REI20-14	568636	7061524	8.382	7.62	27.5	25	0
2020-09-30	REI20-15	568622	7061516	9.906	8.6868	32.5	28.5	0
2020-09-30	REI20-16	568609	7061507	9.906	9.6012	32.5	31.5	0
2020-10-01	REI20-17	568601	7061502	11.43	10.9728	37.5	36	0
2020-10-01	REI20-18	572347	7058396	6.858	5.6388	22.5	18.5	0.1
2020-10-02	REI20-19	572353	7058405	6.858	5.9436	22.5	19.5	0
2020-10-02	REI20-20	572359	7058412	8.382	7.0104	27.5	23	0.1
2020-10-02	REI20-21	572365	7058421	8.382	7.0104	27.5	23	0.1
2020-10-02	REI20-22	572372	7058428	8.382	7.3152	27.5	24	0.2
2020-10-02	REI20-23	572378	7058435	11.43	7.62	37.5	25	0
2020-10-02	REI20-24	572392	7058453	9.906	9.4488	32.5	31	0
2020-10-03	REI20-25	572398	7058461	8.382	7.4676	27.5	24.5	0.2
2020-10-03	REI20-26	572404	7058468	6.858	6.858	22.5	22.5	0
2020-10-03	REI20-27	572412	7058476	8.382	7.9248	27.5	26	0
2020-10-03	REI20-28	572417	7058483	11.43	10.3632	37.5	34	0
2020-10-04	REI20-29	572423	7058491	9.906	8.5344	32.5	28	0
2020-10-04	REI20-30	572442	7058510	11.43	10.9728	37.5	36	0
2020-10-05	REI20-31	572454	7058527	11.43	10.668	37.5	35	0
2020-10-05	REI20-32	572479	7058558	14.478	clay	47.5	clay	0

HoleID	From_ft	To_ft	From_m	To_m	Material	Color
REI20-01	0	7.5	0	2.286	permafrost, 5% gravel	dk brown
	7.5	17.5	2.286	5.334	gravel	grey/brown
	17.5	22.5	5.334	6.858	bedrock	grey/brown
REI20-02	0	7.5	0	2.286	permafrost	dk brown
	7.5	10	2.286	3.048	permafrost, 20% gravel	dk brown
	10	17.5	3.048	5.334	gravel	grey/brown
	17.5	22.5	5.334	6.858	decomposed bedrock	grey/brown
REI20-03	0	7.5	0	2.286	permafrost, 30% gravel	dk brown
	7.5	16	2.286	4.8768	gravel	grey/brown
	16	22.5	4.8768	6.858	bedrock	grey/brown
REI20-04	0	7.5	0	2.286	gravel, 20% permafrost	dk brown, grey/brown
	7.5	16	2.286	4.8768	gravel	grey/brown
	16	22.5	4.8768	6.858	bedrock	grey/brown
REI20-05	0	7.5	0	2.286	permafrost, 30% gravel	dk brown
	7.5	16	2.286	4.8768	gravel	grey/brown
	16	17.5	4.8768	5.334	bedrock	grey/brown
REI20-06	0	7.5	0	2.286	permafrost, 20% gravel	dk brown
	7.5	10	2.286	3.048	gravel, boulder	grey/brown
	10	17.5	3.048	5.334	gravel	grey/brown
	17.5	22.5	5.334	6.858	bedrock	grey/brown
REI20-07	0	7.5	0	2.286	permafrost	dk brown
	7.5	10	2.286	3.048	permafrost, 40% gravel	dk brown, brown
	10	15	3.048	4.572	gravel	grey/brown
	15	17.5	4.572	5.334	bedrock	grey/brown
REI20-08	0	7.5	0	2.286	permafrost	dk brown
	7.5	10	2.286	3.048	permafrost, 30% gravel	grey/brown
	10	12.5	3.048	3.81	gravel, boulder	grey/brown
	12.5	17	3.81	5.1816	gravel	grey/brown
	17	17.5	5.1816	5.334	bedrock	grey/brown
REI20-09	0	10	0	3.048	permafrost	dk brown
	10	21	3.048	6.4008	gravel	grey/brown
	21	22.5	6.4008	6.858	bedrock	grey/brown
REI20-10	0	7.5	0	2.286	permafrost	dk brown
	7.5	10	2.286	3.048	gravel	grey/brown
	10	12.5	3.048	3.81	gravel, boulder	grey/brown
	12.5	16.5	3.81	5.0292	gravel	grey/brown
	16.5	17.5	5.0292	5.334	bedrock	grey/brown

HoleID	From_ft	To_ft	From_m	To_m	Material	Color
REI20-11	0	10	0	3.048	permafrost	dk brown
	10	20.5	3.048	6.2484	gravel	grey/brown
	20.5	22.5	6.2484	6.858	bedrock	grey/brown
REI20-12	0	12.5	0	3.81	permafrost	dk brown
	12.5	21	3.81	6.4008	gravel	grey/brown
	21	22.5	6.4008	6.858	bedrock	grey/brown
REI20-13	0	10	0	3.048	permafrost	dk brown
	10	12.5	3.048	3.81	permafrost, 40% gravel	grey/brown
	12.5	22	3.81	6.7056	gravel	grey/brown
	22	22.5	6.7056	6.858	bedrock	grey/brown
REI20-14	0	15	0	4.572	permafrost	dk brown
	15	17.5	4.572	5.334	permafrost, 30% gravel	dk brown
	17.5	25	5.334	7.62	gravel	grey/brown
	25	27.5	7.62	8.382	bedrock	grey/brown
REI20-15	0	22.5	0	6.858	permafrost	dk brown
	22.5	28.5	6.858	8.6868	gravel	grey/brown
	28.5	32.5	8.6868	9.906	bedrock	grey/brown
REI20-16	0	27.5	0	8.382	permafrost	dk brown
	27.5	31.5	8.382	9.6012	gravel	grey/brown
	31.5	32.5	9.6012	9.906	bedrock	grey/brown
REI20-17	0	22.5	0	6.858	permafrost	dk brown
	22.5	32.5	6.858	9.906	permafrost, sandy	lt brown
	32.5	36	9.906	10.9728	gravel	grey/brown
	36	37.5	10.9728	11.43	bedrock	grey/brown
REI20-18	0	12.5	0	3.81	gravel, sandy	grey/lt brown
	12.5	18.5	3.81	5.6388	gravel	grey/brown
	18.5	22.5	5.6388	6.858	bedrock	grey/brown
REI20-19	0	7.5	0	2.286	gravel	grey/brown
	7.5	10	2.286	3.048	gravel, boulder	grey/brown
	10	19.5	3.048	5.9436	gravel	grey/brown
	19.5	22.5	5.9436	6.858	bedrock	grey/brown
REI20-20	0	7.5	0	2.286	gravel	grey/brown
	7.5	10	2.286	3.048	gravel, sandy	grey/lt brown
	10	23	3.048	7.0104	gravel	grey/brown
	23	27.5	7.0104	8.382	bedrock	grey/brown
REI20-21	0	7.5	0	2.286	moss, gravel	brown
	7.5	23	2.286	7.0104	gravel	grey/brown
	23	27.5	7.0104	8.382	bedrock	grey/brown

HoleID	From_ft	To_ft	From_m	To_m	Material	Color
REI20-22	0	7.5	0	2.286	gravel	grey/brown
	7.5	15	2.286	4.572	gravel, sandy	grey/lt brown
	15	24	4.572	7.3152	gravel	grey/brown
	24	27.5	7.3152	8.382	bedrock	grey/brown
REI20-23	0	10	0	3.048	overburden, 5% gravel	dk brown
	10	17.5	3.048	5.334	gravel, 30% clay, 20% sand	grey/lt brown
	17.5	25	5.334	7.62	gravel	grey/brown
	25	27.5	7.62	8.382	bedrock	grey/brown
REI20-24	0	20	0	6.096	gravel, 30% clay	grey/lt brown
	20	31	6.096	9.4488	gravel	grey/brown
	31	32.5	9.4488	9.906	bedrock	grey/brown
REI20-25	0	10	0	3.048	gravel, 20% clay	grey/lt brown
	10	12.5	3.048	3.81	gravel, sandy	grey/lt brown
	12.5	24.5	3.81	7.4676	gravel	grey/brown
	24.5	27.5	7.4676	8.382	bedrock	grey/brown
REI20-26	0	12.5	0	3.81	permafrost	dk brown
	12.5	17.5	3.81	5.334	gravel, sandy	grey/lt brown
	17.5	22.5	5.334	6.858	gravel	grey/brown
	22.5	22.5	6.858	6.858	bedrock	grey/brown
REI20-27	0	15	0	4.572	permafrost	dk brown
	15	20	4.572	6.096	clay, 20% gravel	lt brown
	20	26	6.096	7.9248	gravel, 30% clay	grey/lt brown
	26	27.5	7.9248	8.382	bedrock	grey/brown
REI20-28	0	20	0	6.096	permafrost	dk brown
	20	34	6.096	10.3632	gravel, 30% clay	grey/lt brown
	34	37.5	10.3632	11.43	bedrock	grey/brown
REI20-29	0	7.5	0	2.286	no sample	n/a
	7.5	20	2.286	6.096	clay, 20% gravel	lt brown
	20	28	6.096	8.5344	gravel	grey/brown
	28	32.5	8.5344	9.906	bedrock	grey/brown
REI20-30	0	26	0	7.9248	permafrost, clayey	dk brown
	26	36	7.9248	10.9728	gravel	grey/brown
	36	37.5	10.9728	11.43	bedrock	grey/brown
REI20-31	0	10	0	3.048	permafrost	dk brown
	10	32	3.048	9.7536	gravel, 40% clay, sandy	grey/lt brown
	32	35	9.7536	10.668	gravel	grey/brown
	35	37.5	10.668	11.43	bedrock	grey/brown
REI20-32	0	30	0	9.144	clay, 5% gravel	grey/lt brown
	30	47.5	9.144	14.478	clay, 15% gravel, no BR	grey/lt brown

Appendix B: Ground Penetrating Radar Report

Wildwood Exploration Inc.

Reindeer (REI) Project, YT

Geophysical studies

Ground Penetration Radar (GPR)

Prepared By:

GroundTruth Exploration Inc.

Dawson City, YT

Report #: WW-REI-GPR20-Rev0 Jan. 20, 2025

Author: Amir Radjaee, P.Geo.

Outline:

- Introduction
- Data processing and Results
- Conclusion and recommendations
- Deliverables
- References

Introduction:

- GroundTruth Exploration has completed GPR surveys on the Reindeer (REI) placer exploration property. The field work was performed from October 5, 2020. Total coverage of the survey amounted to 1,175 line-meter along 4 survey lines, including 585 line-meter with 80 MHz and 590 line-meter with 160 MHz GPR systems. This presentation report describes the survey, results and examples for preliminary interpretation of GPR depth sections.
- Although GPR has been attempted historically at various placer sites, newly developed measurement techniques such as HDR (High Dynamic Range) have enabled greater utilization of GPR by collecting precise and high-resolution data. This study aims to evaluate the feasibility of different GPR systems and frequencies in placer gold exploration sites. By correlating the radar reflectors to known geological features detected by boreholes, GPR has been used for a preliminary exploration of complex paleochannel systems.
- GPR is an obvious candidate for alluvial gold and diamond resource exploration in aggregate-filled paleochannels. GPR works based on transmitting an electromagnetic pulse in the radar frequencies range (between 10 MHz and 3 GHz) into the ground and recording the travel-time of reflections caused by contrasts in dielectric properties stratigraphic boundaries or diffracted by discrete objects like boulders. Previous studies have shown that GPR data reliably identifies the contacts between frozen and thawed zones in permafrost regions as well as mapping the bedrock surface and sedimentary stratigraphy of placer deposits.

Introduction:

- Attenuation of the radar signal and resolution of the GPR section are the main challenges in GPR surveys. Attenuation defines the continuous loss of amplitude that a wave experiences as it propagates through a particular medium. The rate at which the amplitude decreases is referred to as the attenuation constant, which depends on the physical properties of the media such as electrical conductivity. The attenuation increases with the increase of frequency. The vertical resolution is usually considered to be approximately one-quarter of the wavelength of the radar wave. The vertical resolution also increases by increasing antenna frequency. Therefore, there is an inherent tradeoff between vertical resolution and penetration, and depending on the application and survey objectives, the desired antenna frequency must be selected accordingly. So, a direct comparison between 80 MHz and 160 MHz GPR antennas is made in this study.
- Data were acquired using two different GPR systems supplemented by different antenna frequencies. The GPR systems applied (Figure 1) are described as follows:
    1. MALA GX HDR system developed by ABEM with 80 MHz, 160 MHz shielded antennas and an integrated DGPS for more accurate positioning. The GPR data were processed using the RadExplorer GPR processing software.
    2. PulseEKKO PRO and Ultra systems developed Sensors and Software with 50, 100 and 200 MHz central frequency antennas. Radar signals were processed and analyzed by the EKKO view deluxe software.

Introduction:

- For the MALA GX, the survey was performed in two measuring modes, continuous readings at constant time intervals of 0.3sec, and separate readings at constant distance intervals of 10cm using an odometer wheel.
- For the PulseEKKO system, measurements were conducted using the Common Mid-Point (CMP) method for velocity profile estimation of radar waves for depth conversion. Due to GPS malfunction issues, no line survey was performed.
- The survey parameters and measuring modes are summarized in Table 1. The outline of the survey area and layout of lines for the northern and southern lines of the REI project is shown in Figure 2.

Table 1: REI project, survey parameters for GPR survey lines.

Date	Line	Survay Area	Target	IP Line	Drill Line	GPR System	Survey Mode
201005	42	REI	Reindeer	REIIP19-03	Y 2020 finish line	MALA GX 160 MHz	Wheel @10cm readings
201005	43 NO GPS	REI	Reindeer	REIIP19-03	Y 2020 finish line	MALA GX 80 MHz	Wheel @10cm readings
201005	45	REI	Reindeer	REIIP19-01	Y Currently Drilling	MALA GX 80 MHz	Wheel @10cm readings
201005	47	REI	Reindeer	REIIP19-01	Y Currently Drilling	MALA GX 160 MHz	Wheel @10cm readings

Figure 1: Field survey of 2020 GPR project, left is MALA GX system with 160 MHz shielded antenna, right is PulseEKKO with 200 MHz antenna.

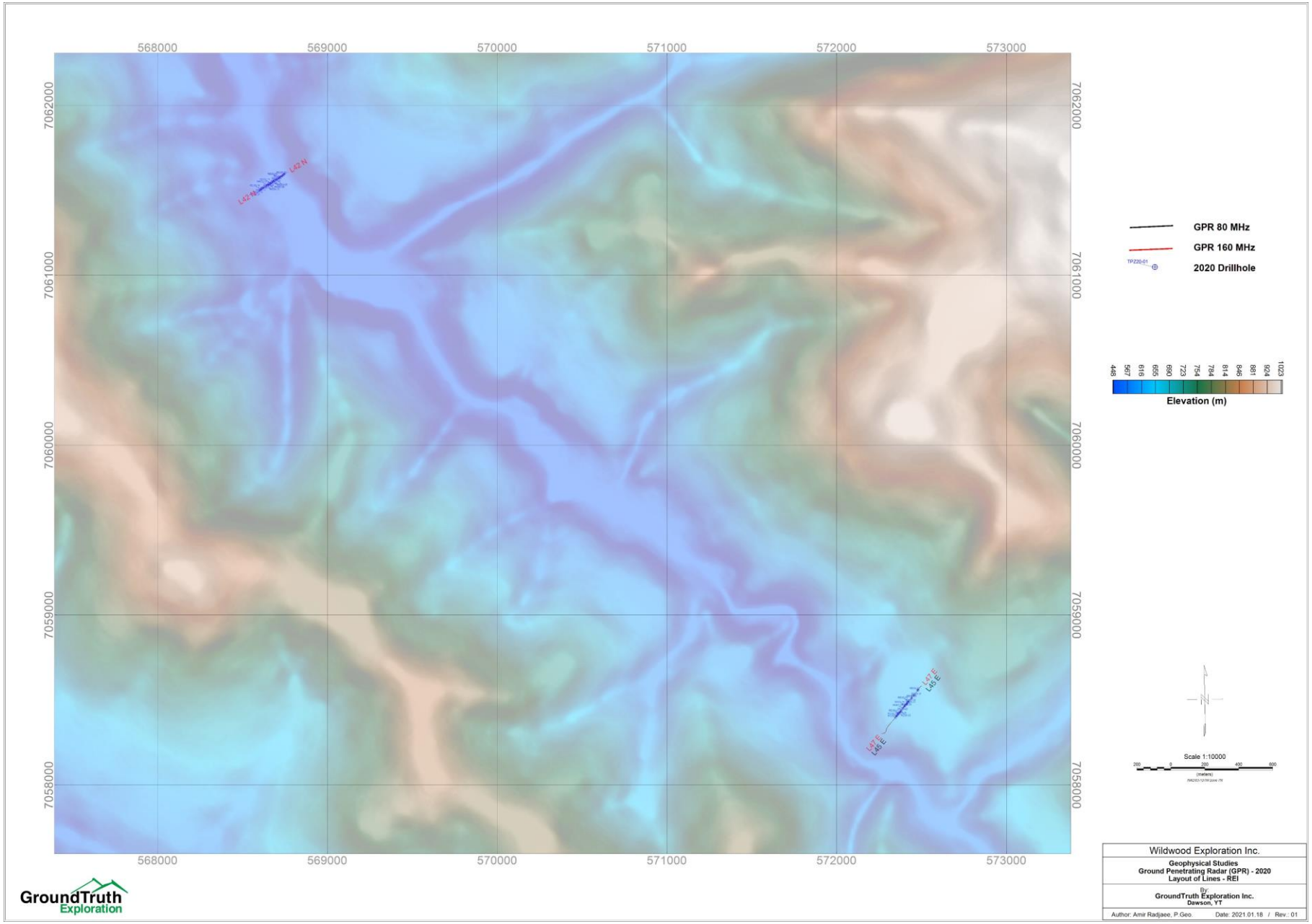

Figure 2: REI project, layout of GPR northern lines.

GroundTruth Exploration

Data processing and Results:

- All raw data are converted to SEG-Y format and imported to Geosoft for georeferencing and further processing. After QC/QA, the continuous measurement mode data are decimated to achieve 10cm spacing intervals.
- Velocity analysis (semblance velocity) performed on Common Mid-Point (CMP) datasets collected by PulseEKKO systems. The CMP velocity analysis for one selected test location measured using a 100 MHz antenna is presented in Figure 3.
- GPR depth sections are processed by conversion of time sections and assuming a constant radar velocity. Radar velocity is a function of dielectric permittivity of subsurface materials and is related to the ice content. Sediments with low ice contents typically have low radar velocity value and vice versa (i.e. 0.065 m/ns for unfrozen wet sandy/silty sediments and 0.10 for frozen saturated sandy/gravel sediments). The radar wave velocity of 0.085 m/ns is selected from the velocity spectrum of CMP data for time to depth conversion.
- The GPR depth sections along 2 drill lines are plotted with downhole geology logs. Figure 4 to Figure 6 represents GPR sections with a primary interpretation. The reflectors were mapped by a quick visual evaluation of phases on the GPR time section first, then on the depth section. This interpretation of radar reflectors is subject to levels of errors and uncertainty associated with the estimated radar velocity for time to depth conversion of GPR data.

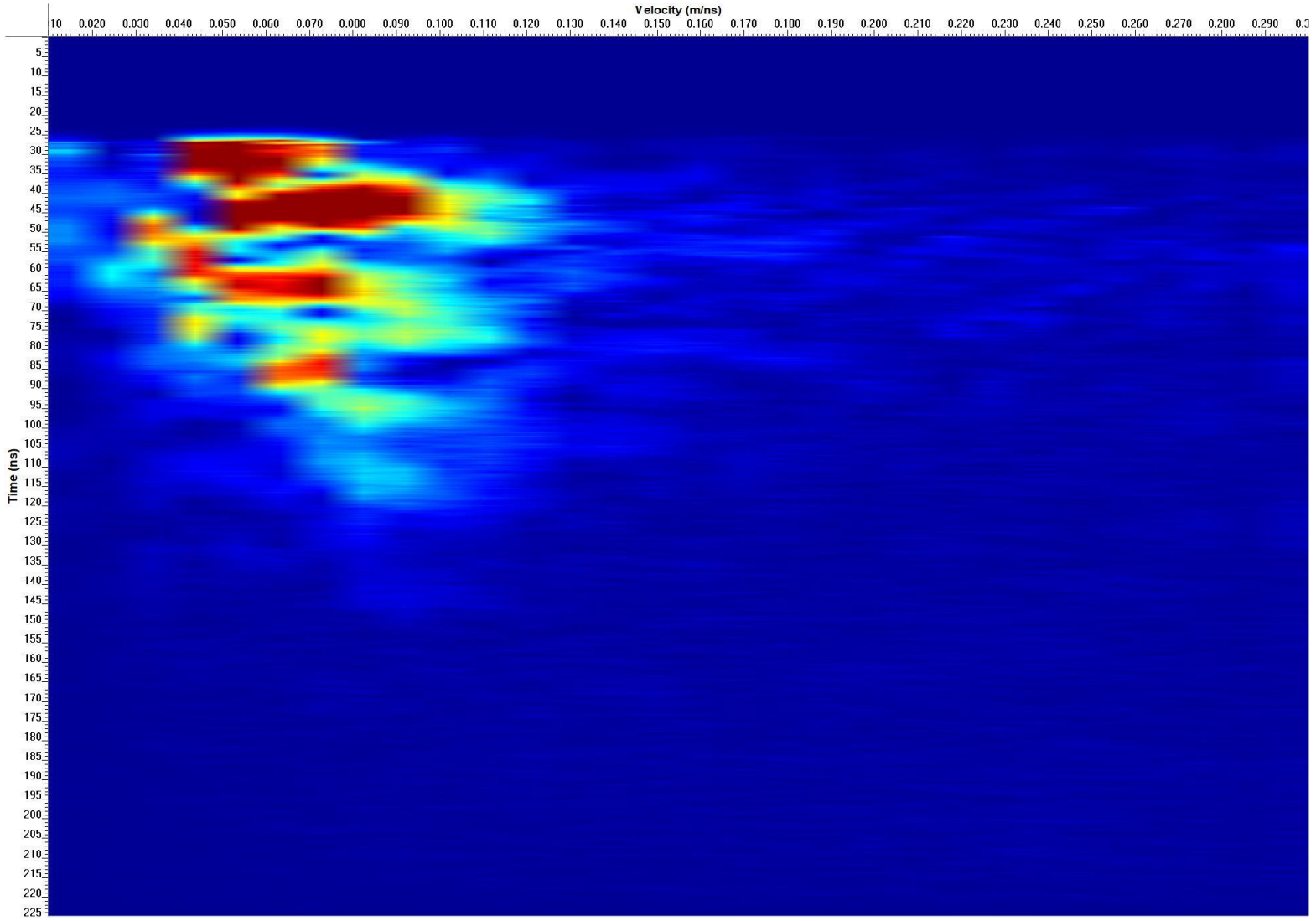

Figure 3: Velocity analysis (semblance velocity) performed on CMP data collected by PulseEKKO systems using a 100 MHz antenna.

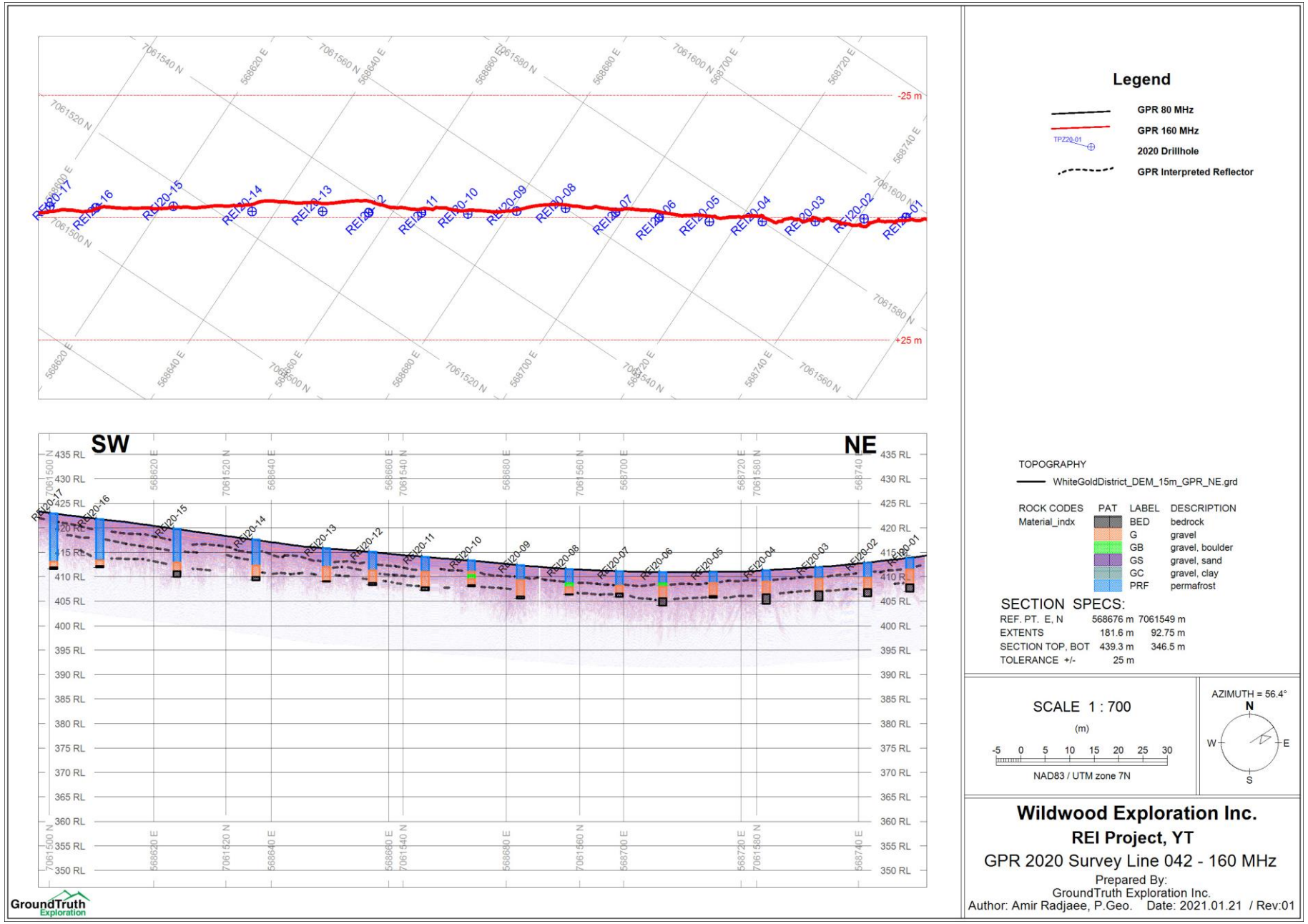

Figure 4: REI 2020 GPR survey, section for line 42 with 160 MHz antenna.

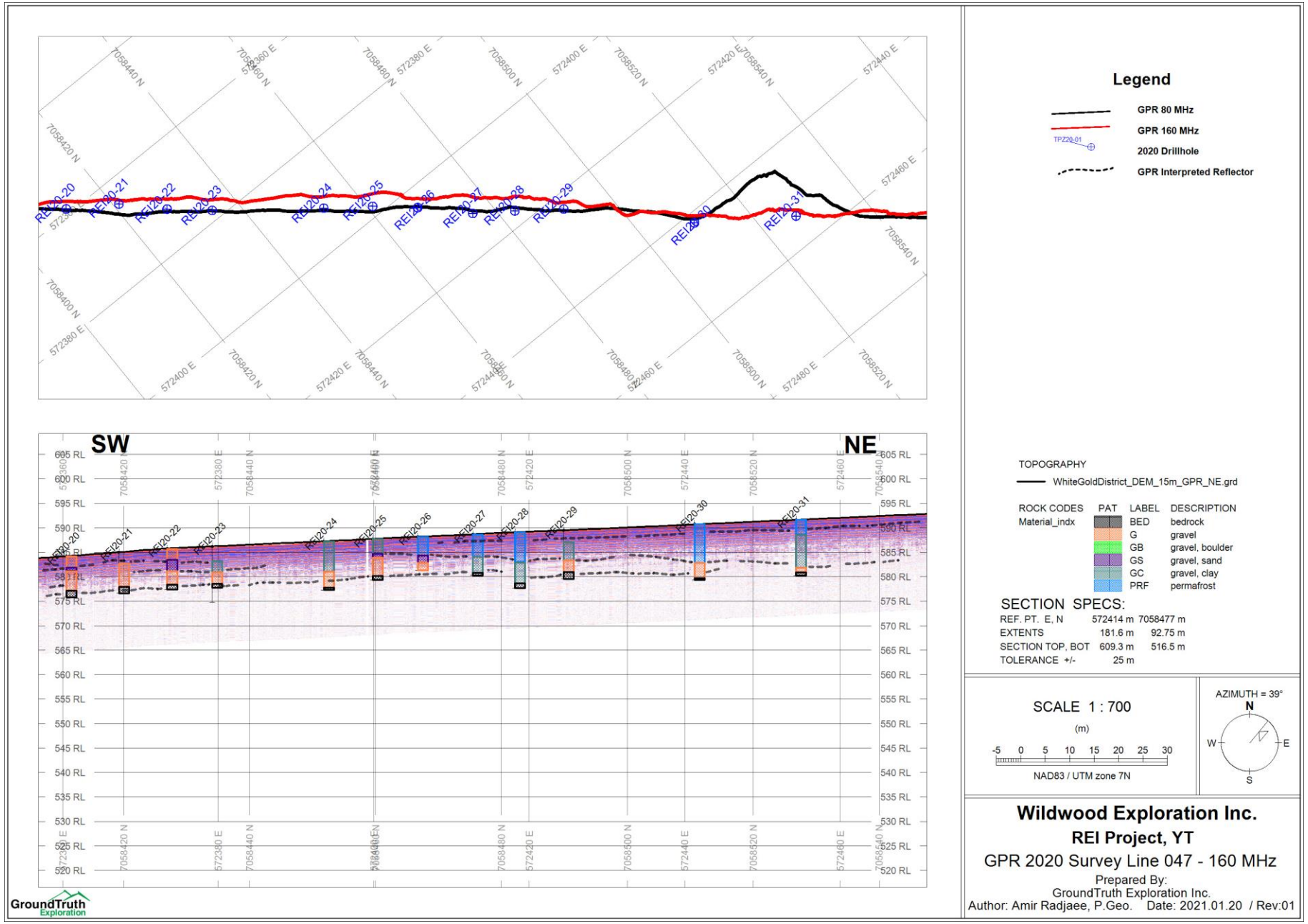

Figure 5: REI 2020 GPR survey, section for line 47 with 160 MHz antenna.

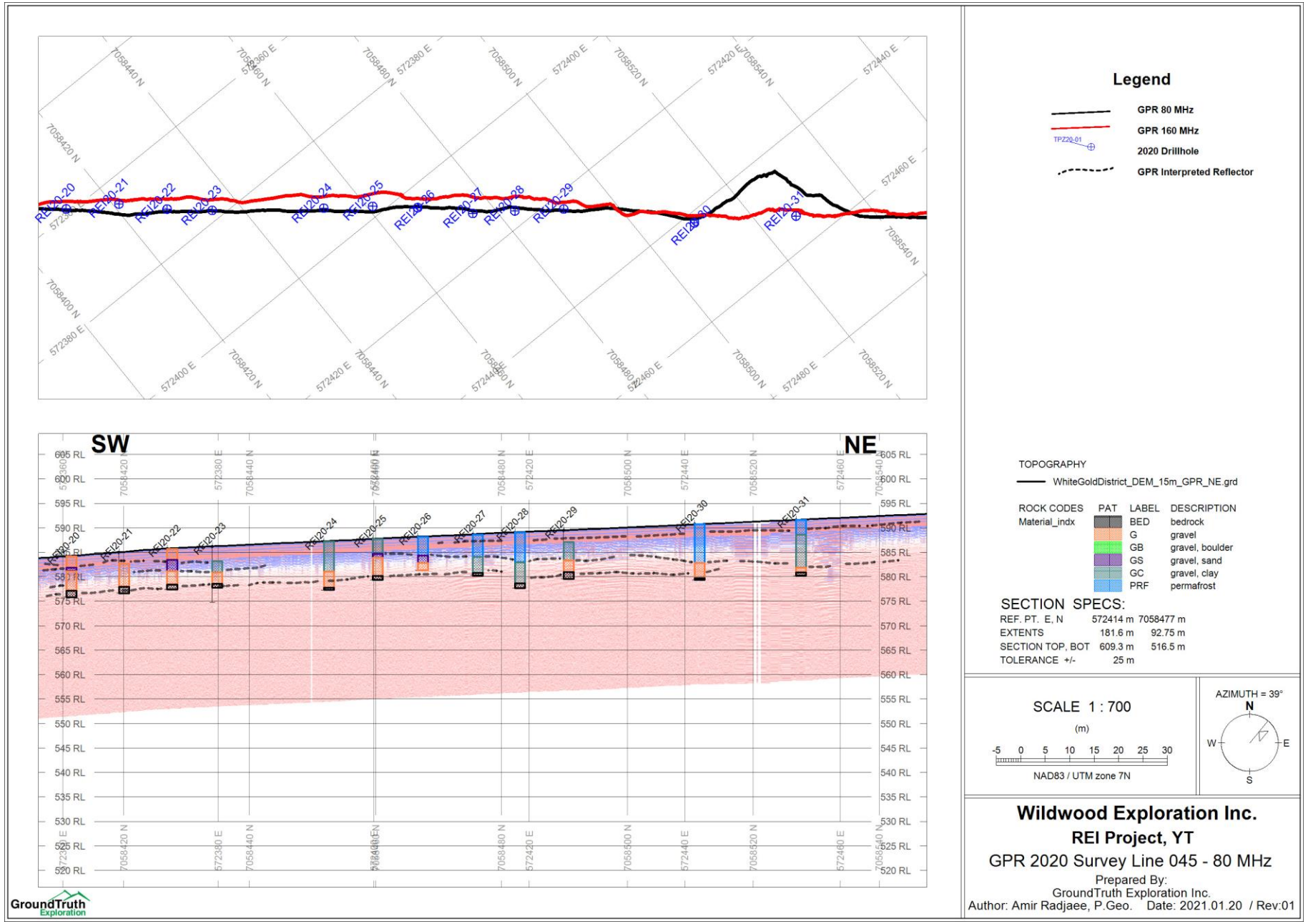

Figure 6: REI 2020 GPR survey, section for the central parts of line 45 with 80 MHz antenna.

Conclusion and recommendations:

- GPR technology is used to identify the contacts between frozen and thawed zones in permafrost, and mapping the bedrock surface and sedimentary stratigraphy of placer deposits. The method is gaining acceptance as standard practice for reconnaissance alluvial gold exploration.
- A variety of sediment structures such as channel fills and bedrock surfaces are commonly identified. In the survey area, penetration with the radar is generally moderate and frequently exceeds 10 m using an 80 MHz system. A high-resolution section acquired using a 160 MHz system with proper depth of penetration.
- One of the most successful applications for the GPR method in this study is the ability to image the details of subsurface stratigraphy features continuously. Radar images have shown that the layering boundaries are surprisingly comparable with borehole logs in most lines. These abrupt changes in horizon elevations are generally undetectable by drilling at any economic spacing.
- Some advanced data processing steps, such as lateral stacking of GPR traces and bandpass filtering, are recommended as further works.

Deliverables:

- Maps and sections in jpg format
- Layout of lines in shapefile format
- Raw instrument data files
- Presentation report

References:

- De Pascale J.P., Pollard W.H., Williams K.K., 2008, Geophysical mapping of ground ice using a combination of capacitive coupled resistivity and ground-penetrating radar, Northwest Territories Canada, JGR, 113, F02S90 1-15.
- Francke J., Yelf R., Applications of GPR for surface mining, Advanced Ground Penetrating Radar, 2003. Proceedings of the 2nd International Workshop.
- Kulyandin G.A., Fedorova L.L., Savvin D.V., Prudetskii N.D., 2016, GPR mapping of bedrock of alluvial gold deposits in permafrost, 16th International Conference of Ground Penetration Radar (GPR).

Appendix C: Invoices

Invoice

GROUND TRUTH DRILLING INC.
COMMITMENT TO RESPONSIBLE DRILLING
Drones to Drills ™

Box 70, Dawson, YT Y0B 1G
Phone (867) 993-5612
Fax: (867) 993-5617

Date	Invoice #
27-Oct-20	1069
Due	**Terms**
10-Nov-20	Net 14

Invoice To:
Wildwood Exploration Inc.
Box 213, Dawson City
YT Y0B 1G0

Description		Proj	Total Amount
RAB Driller	Sept 13 to October 15	JPP-HEN	10,587.50
RAB Driller Assistant	Sept 13 to October 15	JPP-HEN	6,741.19
			$ 17,328.69
RAB Driller	Sept 13 to October 15	JPP-REI	6,655.00
RAB Driller Assistant	Sept 13 to October 15	JPP-REI	4,416.50
			$ 11,071.50

See attached for breakdown detail

Totals		**$ 28,400.19**
	GST 5%	**$ 1,420.01**
GST # **720427525**	**Deposit Applied**	**$ -**
	Total Due	**$ 29,820.20**

Thank you for your business!

Invoice

GroundTruth Exploration
Box 70, Dawson, YT Y0B 1G0
Phone (867) 993-2499
Fax: (867) 993-5201

Date	Invoice #
31-Oct-20	10448
Due	**Terms**
14-Nov-20	Net 14

Invoice To:
Wildwood Exploration Inc.
Box 213
Dawson City, YT, Y0B1G0
ATTN: Accounting
agaudet@groundtruthexploration.com

Shawn Ryan
sryan@ryanwoodexploration.com

Description	Support & Logistics Aug 16 2020 to Sept 30 2020	Proj	Total Amount
	RAB Drilling		
Camp		BLV	12,969.00
Line Cutting and support		BLV	18,645.00
		BLV	**$ 31,614.00**
	RAB Drilling		
Line Cutting and support		JPP-HEN	3,465.00
		JPP-HEN	**$ 3,465.00**
	RAB Drilling		
Line Cutting and support		JPP-REI	4,686.00
		JPP-REI	**$ 4,686.00**

See attached for breakdown detail

Totals		**$ 39,765.00**
	GST 5%	**$ 1,988.25**
GST # 811084268 RT0001	**Deposit Applied**	**$ -**
	Total Due	**$ 41,753.25**

Thank you for your business!

GroundTruth Exploration
Box 70, Dawson, YT Y0B 1G0
Phone (867) 993-2499
Fax: (867) 993-5201

Invoice

Date	Invoice #
31-Oct-20	10449
Due	**Terms**
14-Nov-20	Net 14

Invoice To:
Wildwood Exploration Inc.
Box 213
Dawson City, YT, Y0B1G0
ATTN: Accounting
agaudet@groundtruthexploration.com

Shawn Ryan
sryan@ryanwoodexploration.com

Description	Support & Logistics Oct 1 2020 to Oct 31 2020	Proj	Total Amount
	RAB Drilling		
Camp		JPP-HEN	4,897.75
Line Cutting and support		JPP-HEN	6,072.00
		JPP-HEN	**$ 10,969.75**
Camp		JPP-REI	429.00
Line Cutting and support		JPP-REI	3,795.00
		JPP-REI	**$ 4,224.00**

See attached for breakdown detail

Totals		**$ 15,193.75**
	GST 5%	**$ 759.69**
GST # 811084268 RT0001	**Deposit Applied**	**$ -**
	Total Due	**$ 15,953.44**

Thank you for your business!

GroundTruth Exploration
Box 70, Dawson, YT Y0B 1G0
Phone (867) 993-2499
Fax: (867) 993-5201

Invoice

Date	Invoice #
31-Dec-20	10494
Due	**Terms**
28-Jan-21	Net 14

Invoice To:
Wildwood Exploration Inc.
Box 213
Dawson City, YT, Y0B1G0

Description	Proj	Total Amount
GPR Ground Services - Labour	JPP	$ 6,481.54
GPR Data Processing - Labour	JPP	4,005.23
GPR Logistics Support - Labour	JPP	770.62
GPR Planning and Admin Support - Labour	JPP	624.22
		$ 11,881.62
Equipment	JPP	18,267.56
GPR Camp	JPP	261.96
		$ 30,411.14
GPR Ground Services - Labour	JPP-REI	$ 1,450.91
GPR Data Processing - Labour	JPP-REI	896.58
GPR Logistics Support - Labour	JPP-REI	172.51
GPR Planning and Admin Support - Labour	JPP-REI	139.73
		$ 2,659.73
Equipment	JPP-REI	4,089.23
GPR Camp	JPP-REI	58.64
		$ 6,807.60
GPR Ground Services - Labour	TWM	$ 727.31
GPR Data Processing - Labour	TWM	449.43
GPR Logistics Support - Labour	TWM	86.47
GPR Planning and Admin Support - Labour	TWM	70.05
		$ 1,333.26
Equipment	TWM	2,049.84
GPR Camp	TWM	29.40
		$ 3,412.49

See attached for breakdown detail

Totals		**$ 40,631.22**
	GST 5%	**$ 2,031.56**
GST # 811084268 RT0001	**Deposit Applied**	**$ -**
	Total Due	**$ 42,662.78**

Thank you for your business!

Invoice

GroundTruth Exploration
Box 70, Dawson, YT Y0B 1G0
Phone (867) 993-2499
Fax: (867) 993-5201

Date	Invoice #
31-Dec-20	10484
Due	**Terms**
28-Jan-21	Net 14

Invoice To:
Wildwood Exploration Inc.
Box 213
Dawson City, YT, Y0B1G0

Description	Support & Logistics	Proj	Total Amount
Project Geologist	Exploration - A Feduk	BLV	$ 14,510.93
Project Geologist	Exploration - A Feduk	JPP HEN	7,066.62
Project Geologist	Exploration - A Feduk	JPP REI	5,337.09

See attached for breakdown detail

Totals			**$ 26,914.64**
		GST 5%	**$ 1,345.73**
GST # 811084268 RT0001		**Deposit Applied**	**$ -**
		Total Due	**$ 28,260.37**

Thank you for your business!

Date	Invoice	Source Name	Property	Amount
9/25/2020	IN003065	Great Slave Helicopters 2018 Ltd.	RDP	$1,800.00
9/26/2020	IN003066	Great Slave Helicopters 2018 Ltd.	RDP	$1,650.00
9/27/2020	IN003067	Great Slave Helicopters 2018 Ltd.	RDP	$7,200.00
9/28/2020	IN003068	Great Slave Helicopters 2018 Ltd.	RDP	$1,950.00
9/29/2020	IN003069	Great Slave Helicopters 2018 Ltd.	RDP	$750.00
9/29/2020	IN003082	Great Slave Helicopters 2018 Ltd.	RDP	$1,200.00
9/30/2020	IN003083	Great Slave Helicopters 2018 Ltd.	RDP	$1,800.00
10/1/2020	IN003097	Great Slave Helicopters 2018 Ltd.	RDP	$4,500.00
10/2/2020	IN003106	Great Slave Helicopters 2018 Ltd.	RDP	$1,200.00
10/3/2020	IN003107	Great Slave Helicopters 2018 Ltd.	RDP	$1,950.00
10/4/2020	IN003109	Great Slave Helicopters 2018 Ltd.	RDP	$1,500.00
10/5/2020	IN003119	Great Slave Helicopters 2018 Ltd.	RDP	$1,950.00
10/5/2020	IN003119	Great Slave Helicopters 2018 Ltd.	RDP	$1,350.00
10/4/2020	IN003117	Great Slave Helicopters 2018 Ltd	RDP	$1,000.00
			Grand Total	$29,800.00