GEOPHYSICAL REPORT

on the

Big Creek Property (Oz3)

Dawson Mining District

Map 115P

DATE OF REPORT
January 31, 2024

REPORT PREPARED BY
Nicholas Gust

CENTER OF WORK
Lat. 63°51'51.012"N , Long. 136°56'33.271"W

Table of Contents

Introduction

Between the dates of August 2-4, a detailed geophysical survey was carried out on the Big Creek placer claim situated in the Yukon Territory, Canada, within the confines of the Dawson regional district. The survey's principal aim was to delineate the bedrock and understand the subsurface stratigraphy essential for evaluating the placer gold potential of the region.

The Big Creek claim is nestled in the geologically diverse Clear Creek – McQuesten River region, bordered by the prominent 'West Ridge' range to the south and dissected by the meandering Big Creek. The terrain is marked by stark elevation changes that span from 3200 to 5500 feet. The vegetative landscape is dominated by evergreen and deciduous forests sprawling across the slopes, transitioning to sparse vegetation with buck brush clusters atop the elevated mountainous areas. The treeline is situated between 4100 and 4500 feet, with rock outcrop visibility diminishing at reduced elevations.

Mining history in the Big Creek claim has been sporadic, with the rush of placer gold exploration in neighboring locales such as Clear Creek following the Klondike gold rush. The initial discovery of placer gold in Josephine Creek in 1901 instigated a substantial influx of prospectors, as reported by The Province Newspaper on September 26, 1901. Despite these historic rushes, documentation of early 1900s placer activities directly within the Big Creek claim remains minimal.

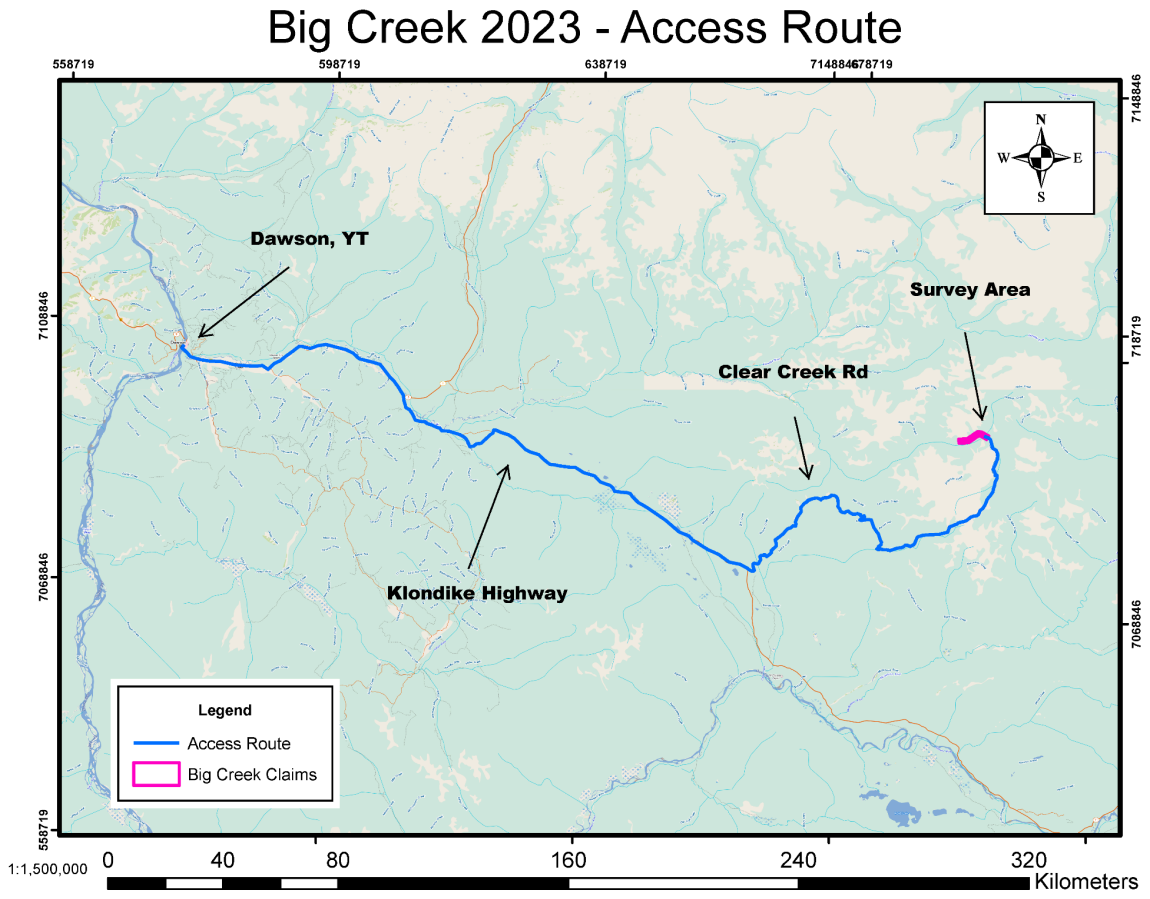
The survey utilized the passive seismic HVSR method to record the earth's natural seismic vibrations, providing an innovative approach to traditional survey techniques that often rely on controlled seismic sources. This methodology is especially suited to delineating subsurface geological features and estimating the thickness of overburden material, critical in placer mining scenarios.

The survey was conducted by a three-person team led by Nicholas Gust, who is trained in the application and interpretation of this technique.

Location and Access

The Big Creek placer claim is located in the Yukon Territory, Canada, in the Dawson regional district. The property claim is located approximately 500 kilometers northeast of Whitehorse, YT.

To reach Big Creek, start from Dawson City and head south on the Klondike Highway. Drive for about 110 km until you reach Clear Creek Road. Follow Clear Creek Road for 42 km until you arrive at the Harpers mine, located at the top of the left fork of the creek. There is an unnamed road which provides access to the claim.

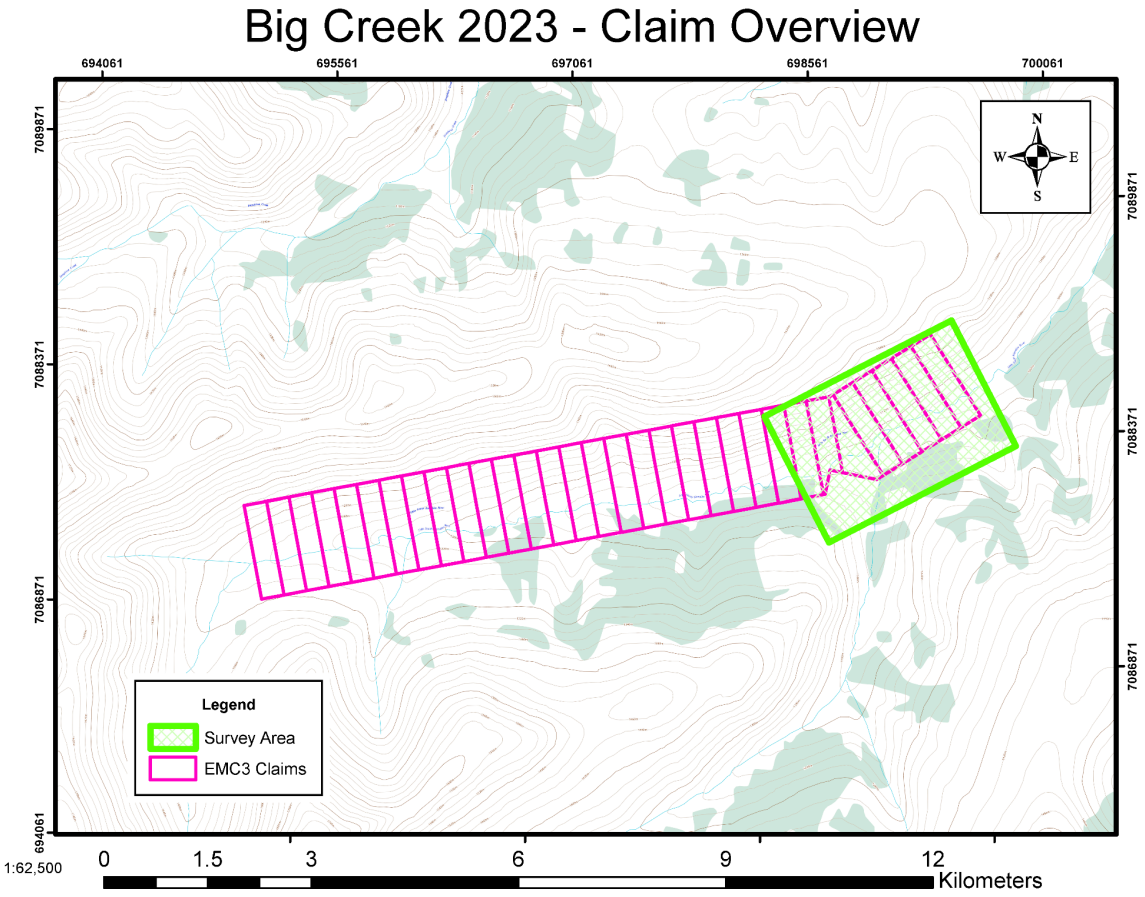


Property Description

The Big Creek property consists of 32 placer claims staked by EMC3 Mining Inc. The claims were originally staked in 2021.

The Big Creek area, located in the Clear Creek – McQuesten River region, is characterized by its high-relief terrain. The area is framed by the ‘West Ridge’ range to the south and is prominently incised by Big Creek itself. Elevations in this region vary, ranging from 3200 ft to 5500 ft.

Vegetation in the area primarily consists of evergreen and deciduous forests, which are prevalent on the slopes. The mountain tops, due to their high elevations, are mostly barren with patches of buck brush. The treeline in this region is found between 4100 ft and 4500 ft. While the mountain tops offer fair outcrop exposure, this becomes considerably limited at lower elevations.



Grant Number	Claim Name	Owner	Date Staked
P 522996	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 522997	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 522998	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 522999	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523000	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523001	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523002	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523003	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523004	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523005	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523006	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523007	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523008	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523009	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523010	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523011	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523012	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523013	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523014	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523015	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523016	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523017	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523018	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523019	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523020	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523021	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523022	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523023	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523024	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523025	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523026	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14
P 523027	Oz3	EMC3 Mining Inc - 50%, Gold Pan Corp. - 50%	2021-09-14

Previous Work

The mining history of the Big Creek claim area is pretty sparse. Placer gold was first discovered in nearby areas such as Clear Creek soon after the Klondike gold rush.

Placer gold was discovered on Josephine Creek in 1901. The Province Newspaper reported on Sept 26, 1901:

> *A rich strike on the Josephine Creek, seventy miles above the Klondike, has been made, according to the present advices from Dawson. Up to September 18, more than one hundred people had joined the stampede to the new diggings. The miners went by the overland route with pack animals and with their supplies on their backs in a wild race to reach the discovery first. Josephine Creek is thirty-five miles beyond Gold Run, which is now the farthest stream out from Dawson that produces in any quantity.*

Hobo Creek was discovered by Captian H. S. Back in 1915. (Juneau Empire Nov 3, 1916). There aren't any records of placer exploration and mining on Big Creek in the early 1900s.

Hard rock gold was discovered in the area around Josephine Creek and Lewis Gulch in 1902 where several shallow adits were driven. Very little is written about exploration in this area. There have been sporadic placer workings on Hobo Creek and parts of Big Creek but no major efforts had been made to explore and mine the area prior to the claims being staked by Yukon Exploration Green Gold Inc.

Queenstake Resources Ltd conducted a program of drilling, seismic, and backhoe pit sampling program on Big Creek in 1980 and 198. The results showed reserves in the order of 7 million cubic yards of gold bearing gravel, suggested that although it is not a viable dredge prospect, the property, depending on metal prices and further testing, could support a bulldozer/sluice operation.

Schmidt Mining optioned a portion of the Big Creek claims from Yukon Exploration Green Gold Inc in 2015 and began full-scale exploration and test mining. Schmidt Mining began mining on Big Creek in 2019 as well as Josephine Creek. Schmidt hired Northern Sonic to drill 241 sonic drill holes over the property with the goal of tracking the pay streak down the valley and determining overburden thickness and bedrock depth.

Schmidt continued to mine both Big Creek and Josephine Creek between 2019 and 2022. At the time of this report, mining activities had transitioned to reclamation.

The claims covered by the survey area in this report, owned by Yukon Exploration Green Gold Inc, have seen limited exploration including small excavator test pits and small scale sampling.

Regional Geology

Located in central Yukon within the Tintina gold belt, the Big Creek property is set in a geologically rich area. In 1993, Murphy and Heon conducted a geological survey, identifying an extensive presence of Hyland Group formations. These formations include a variety of rock types such as quartzo-feldspathic psammite, micaceous psammite, and muscovite-chlorite phyllite, along with other formations like gritty psammite, metamorphic pebble conglomerate, marble, and calc-silicate rocks. To the north, younger and unmetamorphosed stratigraphic outcrops are present, including Lower Paleozoic carbonate (Rabbitkettle Formation), Road River Group shale and siltstone, and Earn Group conglomerate, shale, and sandstone.

The region has been significantly influenced by the intrusion of the Cretaceous (92 Ma) Tombstone Plutonic Suite, which includes sills and stocks. These have penetrated both sedimentary and metasedimentary rocks.

In 2001, Stephens and Weekes identified four primary types of gold mineralization in the Clear Creek area. These include auriferous quartz sulfide veins in east to east-southeast directions within larger Tombstone Plutonic Suite stocks, silicified fault zones in south to southeast and east to east-southeast directions, intrusive breccias with quartz-sulfide veins and stockwork patterns, and calc-silicate rocks with skarn-style mineralization.

Regarding the local geomorphology, as detailed in the 2015-2017 Placer industry report, Big Creek flows eastward from West Ridge, turning north toward the Little South Klondike River. The area features a mix of glaciated and unglaciated terrain. The valley of Big Creek experienced glaciation during the Pleistocene, with ice accumulation in cirques at West Ridge's headwater. During different glaciations, the ice extent varied, with the McConnell glaciation being relatively limited. The valley's history also includes a complex fluvial history with evidence of early Pleistocene alpine till.

The placer gold found in Big Creek is believed to originate from both pre-glacial deposits and from gold released during Pleistocene glacial erosion. Various zones of placer gold enrichment have been identified, including relatively shallow surfaces and a deeper channel discovered in 2017.

Survey Method and Theory

The passive seismic HVSR method consists of recording ambient or natural seismic energy vibrations using a seismometer. The seismometer must be able to record ground motion in three axes (XYZ), over a broad range of frequencies (0-128 Hz), and over a long time period (1 min to 60 min, usually 20 min).

Traditional seismic surveys use an energy source such as dynamite, or a dropped weight. The HVSR method is very different in that it utilizes ambient vibrations in the surface of the earth. These are considered noise in traditional surveys but in this case, provides the source vibrations.

The ambient signal consists primarily of surface Rayleigh and Love waves, which are generated from natural sources. Sources of ambient vibration are ongoing crustal microtremors, rain, and wind. In more populated areas sources can come from human activities such as traffic movement, construction and factories.

The ambient seismic energy creates seismic resonance within the near-surface strata and regolith. This resonance is a function of the thickness and the shear-wave velocity of the subsurface layers, and is particularly amplified when layers have a strong and sharp acoustic impedance contrast boundary. Acoustic impedance is a function of the density multiplied by the shear wave velocity of a layer. That impedance is how we can identify different layers and their depth.

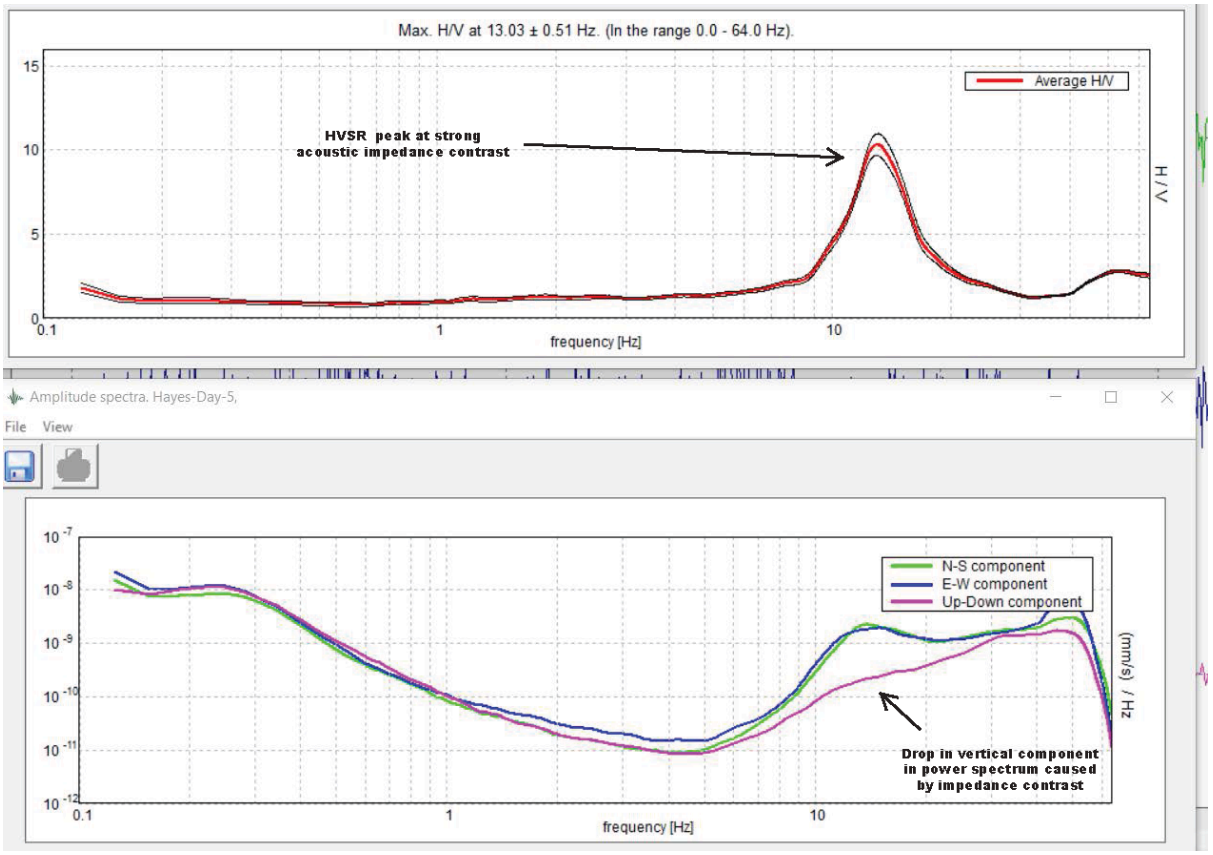
In processing with proprietary software the recorded time-series data (X, Y and Z) is converted to the frequency domain using a Fast Fourier Transform (FFT), and the two components are displayed as a power spectrum.

After the inversion, the horizontal components are usually very similar unless there is strong anisotropy in the near-surface. The Vertical component dips where resonance occurs from trapping by underlying layers. Where the vertical component deviates from the two horizontal components a H/V peak is interpreted. The frequency at which the peak occurs can be used to calculate the depth from surface.

This resonant frequency is related to the thickness and shear wave velocity of the resonant layer by the following equation from Nakamura (2000):

$f_0 = Vs/4h$

where f_0 = peak resonant frequency (Hz), Vs = shear wave velocity (m/s), and h = layer thickness (m). In a two-layered earth model, resonance frequency (f_0) can be used in estimating the overburden thickness (h) using the equation



From processing the data we know the peak resonant frequency but there are still two unknowns. Vs and the thickness (h). In order to accurately calculate the thickness for each location, we need to know the shear wave velocity of the overburden layers. That can be acquired by running a test station at an area of known depth such as a drill hole. Once the velocity is known it is simple to calculate the thickness.

Equipment

The Tromino 3G BLU Seismograph, manufactured by MoHo Science & Technology from Italy was used on this survey. The Tromino works on the HVSR principle, is a very light and portable instrument that records seismic noise in the frequency range of 0.1 to 1024 Hz.

The Tromino is a small (1 dm3, < 1 kg) all-in-one instrument, equipped with:

- 3 velocimetric channels (adjustable dynamic range)
- 3 accelerometric channels
- 1 analog channel
- GPS receiver

The Tromino does not require cables or a source and acts as a standalone geophysical instrument.

A Reach RS2 multi-band RTK GNSS receiver, manufactured by Emlid was used to record spatial information for computer mapping. Some of the specs are here below:

- Dimensions: 126x126x142 mm
- Weight: 950 gram
- Ingress protection: IP67
- Corrections: NTRIP, VRS, RTCM3
- Position output: NMEA, LLH/XYZ
- Positioning kinematic horizontal: 7 mm + 1 ppm
- Positioning kinematic vertical: 14 mm + 1 ppm
- GNSS signals tracked: GPS/QZSS L1C/A, L2C, GLONASS L1OF, L2OF, BeiDou B1I, B2I, Galileo E1-B/C, E5b

Number of channels: 184

Survey Procedure

Station spacing was set at 30m for the survey lines. A 30m rope was used to layout the survey lines using two people. Line locations were chosen in advance in GIS software and layed out in the field using a handheld GPS. Each station was marked with a pin flag and recorded on the GPS for processing.

Each reading takes 20 minutes, which allows for sufficient data collection to be modeled in the interpretation software. It is important for the seismometer to have good contact with the ground. At most stations, it was necessary to remove the vegetative mat and expose soil/subsoil that the instrument can be planted into.

The seismometer used in this survey is extremely sensitive since it's designed for picking up faint, ambient energy in the earth. The trade-off is that it is also sensitive to sources of noise.

Station data is stored on the device and downloaded each day to check for data quality. Initial processing was completed in the evening each day. To estimate the shear wave velocities seismic data was recorded at several of the drill hole locations that were completed in previous years. Those velocities were used to satisfy the equation above and calculate the layer thicknesses.

Several stations were recorded outside of the claim area. These had no effect on the associated costs since the work was billed at a day rate.

Processing and Interpretation

Each station is processed independently using proprietary software that utilizes the HVSR method described above. Each trace is analyzed for quality and if necessary noisy sections can be removed using a windowing technique. There were two stations that had too much noise and had to be repeated but most were below the noise threshold or able to be cleaned up.

The coordinates and calculated bedrock depth are populated into a CSV file to be gridded. Surfer software was used for gridding the data and the resulting vector data can be used in GIS software such as ArcMap. The final data is presented as a topographical map showing the difference between surface and bedrock elevations.

Interpretation

Cross Sections

Line 1 runs in a NW-SE direction on the northeast (downstream) side of the survey area. The line ran across the valley covering the valley bottom and both sides. There were no anomalous deep zones that would indicate a paleochannel. The deepest part was at station 2. The average depth in the valley bottom was about 16 meters.

Line 2 lies upstream from line 1 covering both sides of the valley. This line showed a very deep section at station 10 (16m deep). The deep area is followed by a bedrock high at station 11. This deep section is consistent with a paleochannel, however we didn't see a continuation of the profile on other lines.

Line 3 lies upstream from line 2. Also covering both sides of the valley. Bedrock was a bit shallower in the valley bottom (averaging 8 meters from surface). There was a ridge in the bedrock at station 7, not anomalous deep zones though.

Line 4 showed an interesting cross-section. The average bedrock depth was about 16 meters but there was an anomalous deep section at station 9 (18m). This line only covered part of the hillside on the north end (60m).

Line 5 showed a trend very similar to line 3. Bedrock depth in the valley bottom was about 8m. No anomalies in bedrock depth.

Line 6 had a pretty consistent bedrock depth (around 8 meters). The bedrock sloped evenly to the NW, with the deepest point at station 12. Its interesting that the bedrock slopes under the hillside on this line.

Conclusion

The seismic survey executed over the Big Creek placer claim has furnished us with a quantitatively enhanced understanding of the subsurface strata. While the explicit detection of a paleochannel eluded us, with only Line 2 indicating a partial structure, the survey's results were nonetheless informative. The differentiation of overburden depths across the survey lines has elucidated the bedrock's topography, which is vital for appraising the placer gold prospects of the territory.

The HVSR method, a less intrusive alternative to traditional seismic survey techniques, has proven effective in delineating sub-surface geological features while preserving the area's ecological integrity. The method's efficacy in mapping the variability of overburden thickness contributes significantly to our geological model of the Big Creek claim, enhancing the accuracy of our gold deposition predictions.

Notwithstanding the absence of a definitive paleochannel, the survey has been successful in identifying areas of potential placer gold enrichment, particularly in locations where deeper overburden is present. These findings are anticipated to focus future exploratory efforts and mining operations more effectively.

In sum, the seismic survey has provided a detailed assessment of the Big Creek claim's geological framework, advancing our understanding of its placer gold potential. The data acquired serves as a critical tool for future exploratory endeavors and for the strategic development of the claim.

References

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Yukon Minfile 115P011 (2004): Josephine, Yukon Geological Survey.

Yukon Minfile 115P023 (2004): Lewis, Yukon Geological Survey.

Yukon Minfile 115P061 (2004): Big, Yukon Geological Survey.

Statement of Qualifications

I, Nicholas Gust, of the city of Mission, in the province of British Columbia do hereby certify that:

1. I am a graduate of the University of Calgary with a B.Sc.in Geophysics. I am also a graduate of the Southern Alberta Institute of Technology and hold a diploma in Exploration Technology.

2. I have received training from the manufacturer of the instrument used in this survey in the application of field techniques and interpretation.

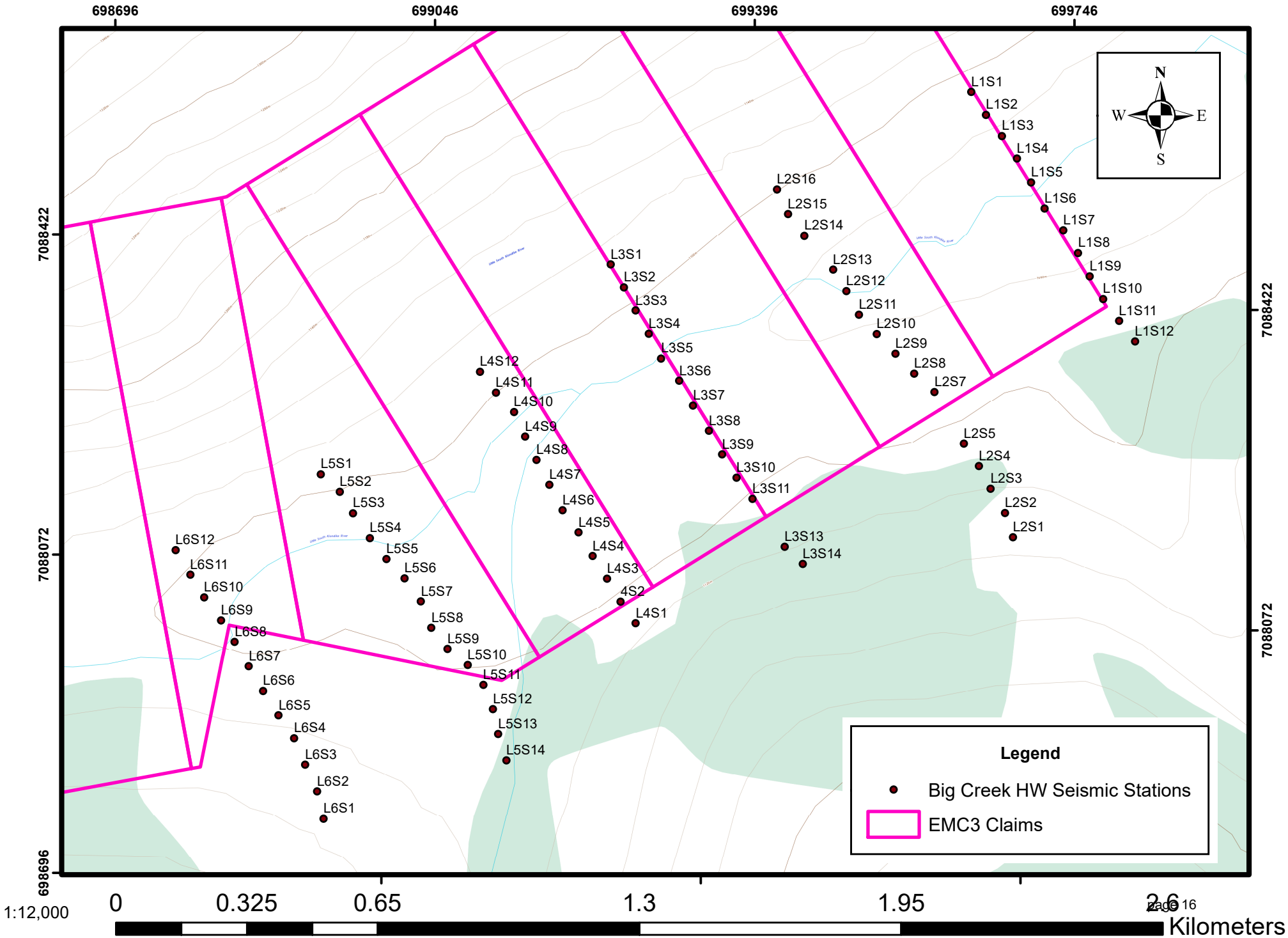
3. I have worked in the exploration industry and have been conducting geophysical surveys since 2008.

4. This report is compiled and interpreted from data obtained from a passive seismic survey carried out under my field supervision.

5. I have based the conclusions and recommendations contained in this report on my knowledge of geophysics, my previous experience, and the results of the field work conducted on the property.

Appendix I:
Maps and Data

Big Creek 2023 - Seismic Stations



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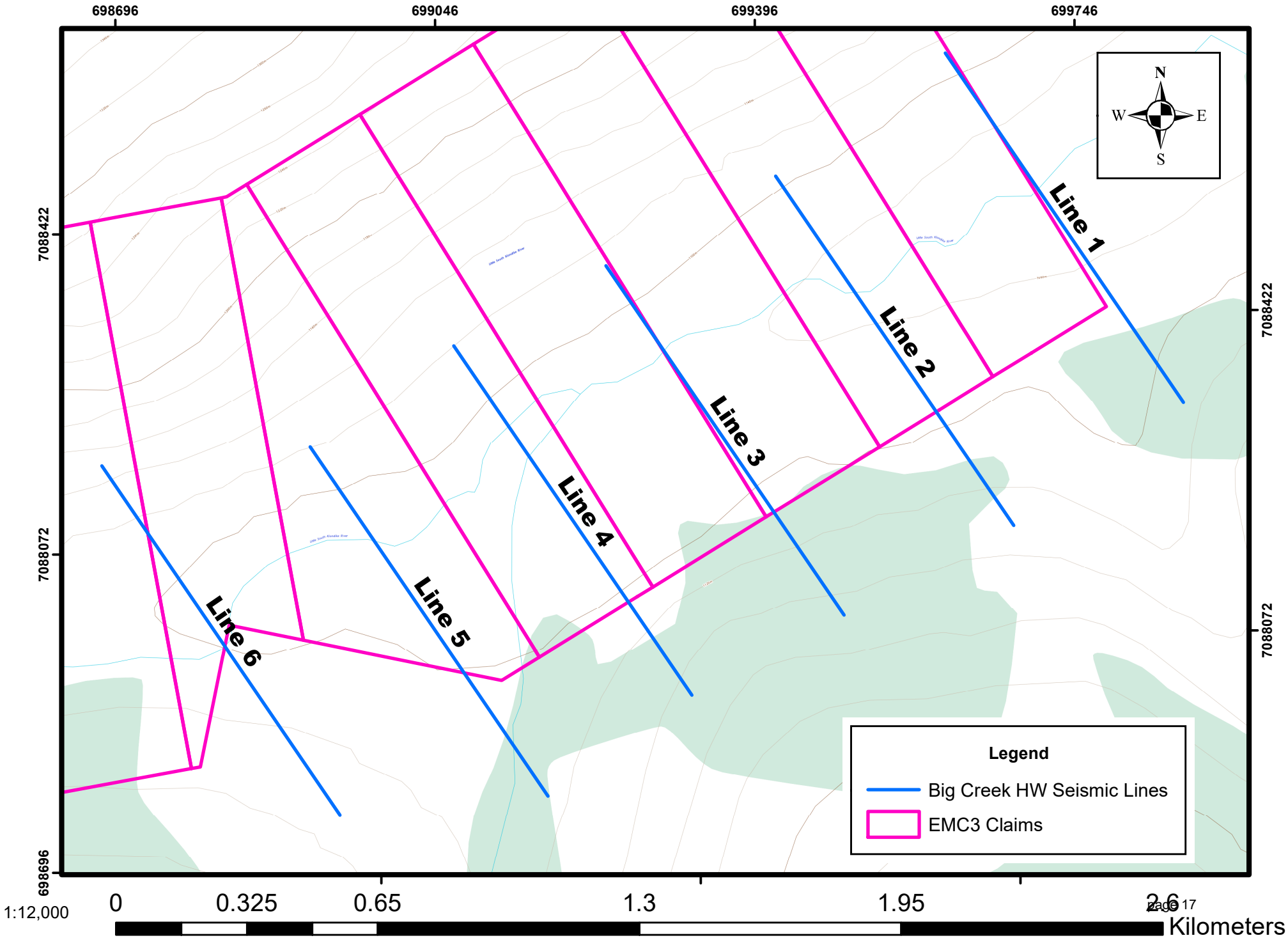
Big Creek 2023 - Seismic Stations



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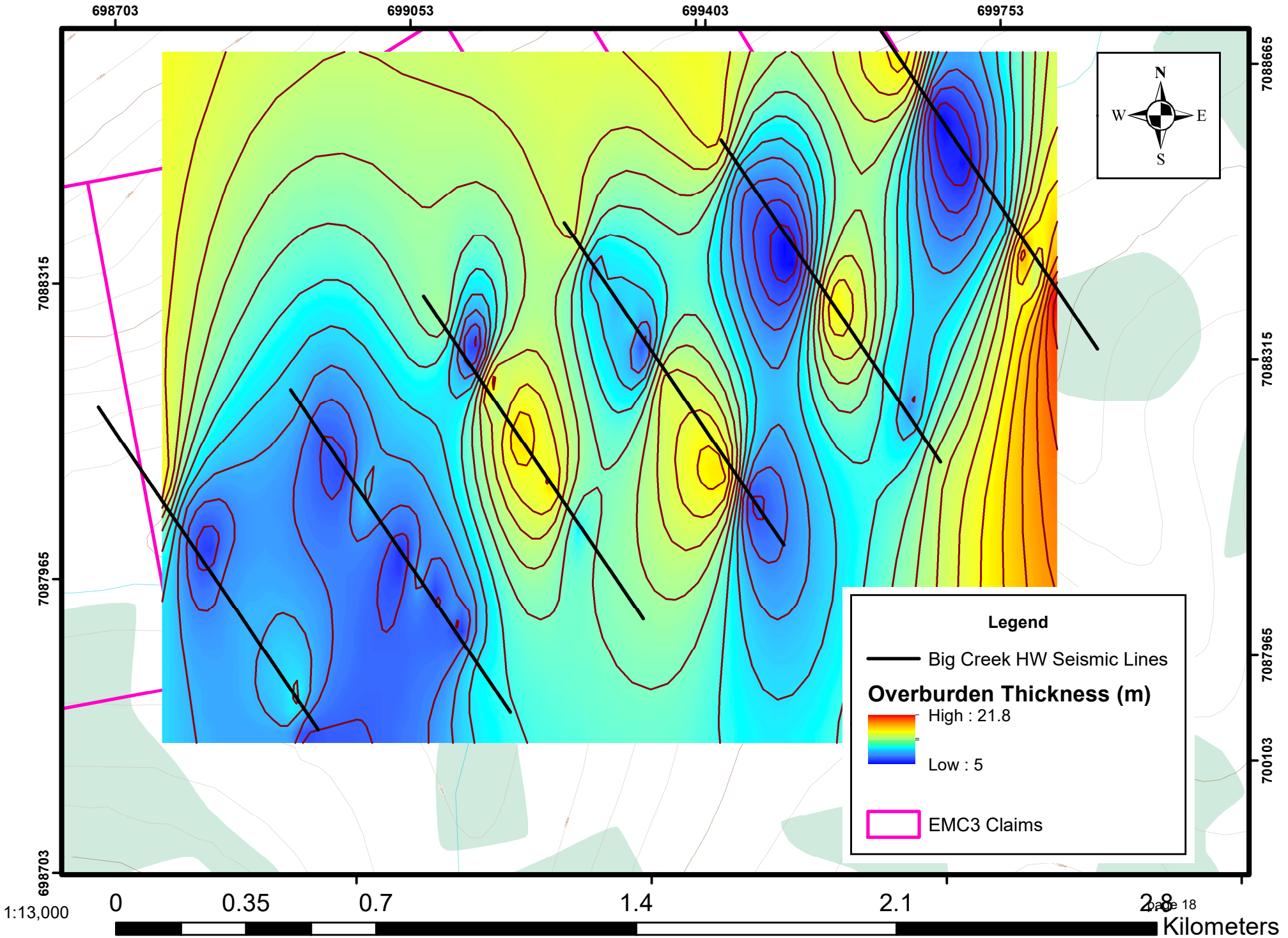
Big Creek 2023 - Overbruden Thickness



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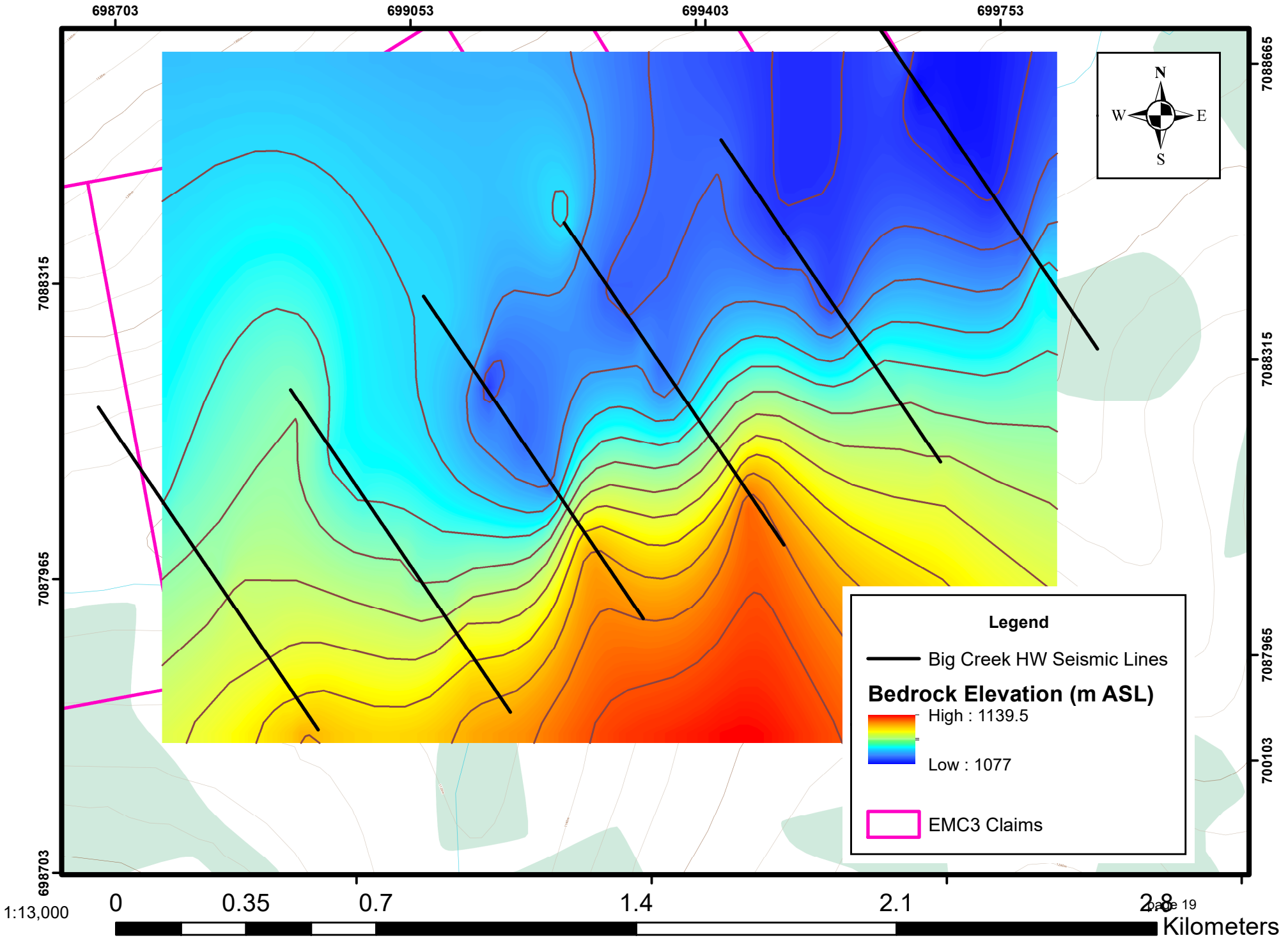
Big Creek 2023 - Bedrock Elevation



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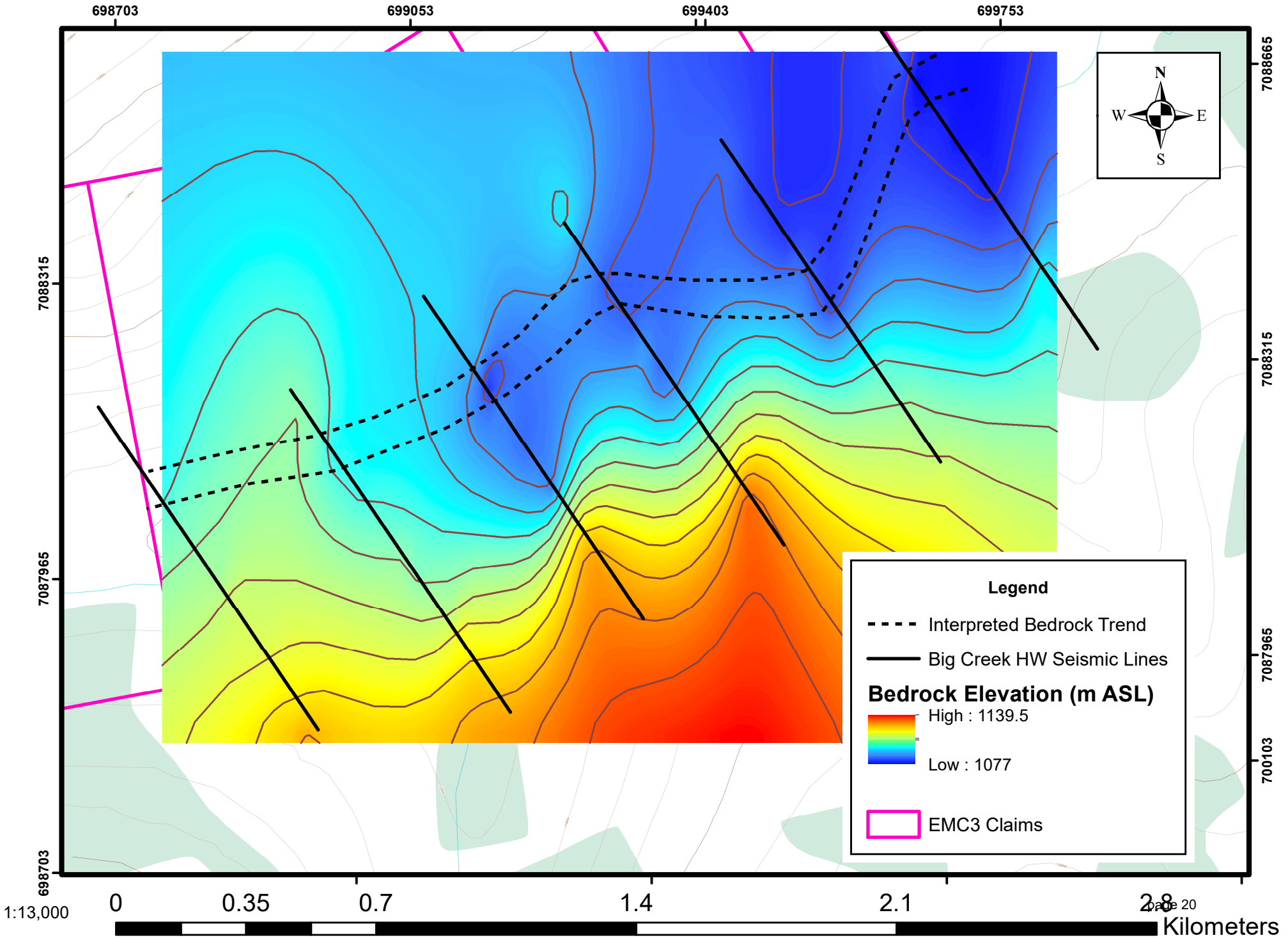
Big Creek 2023 - Interpretation



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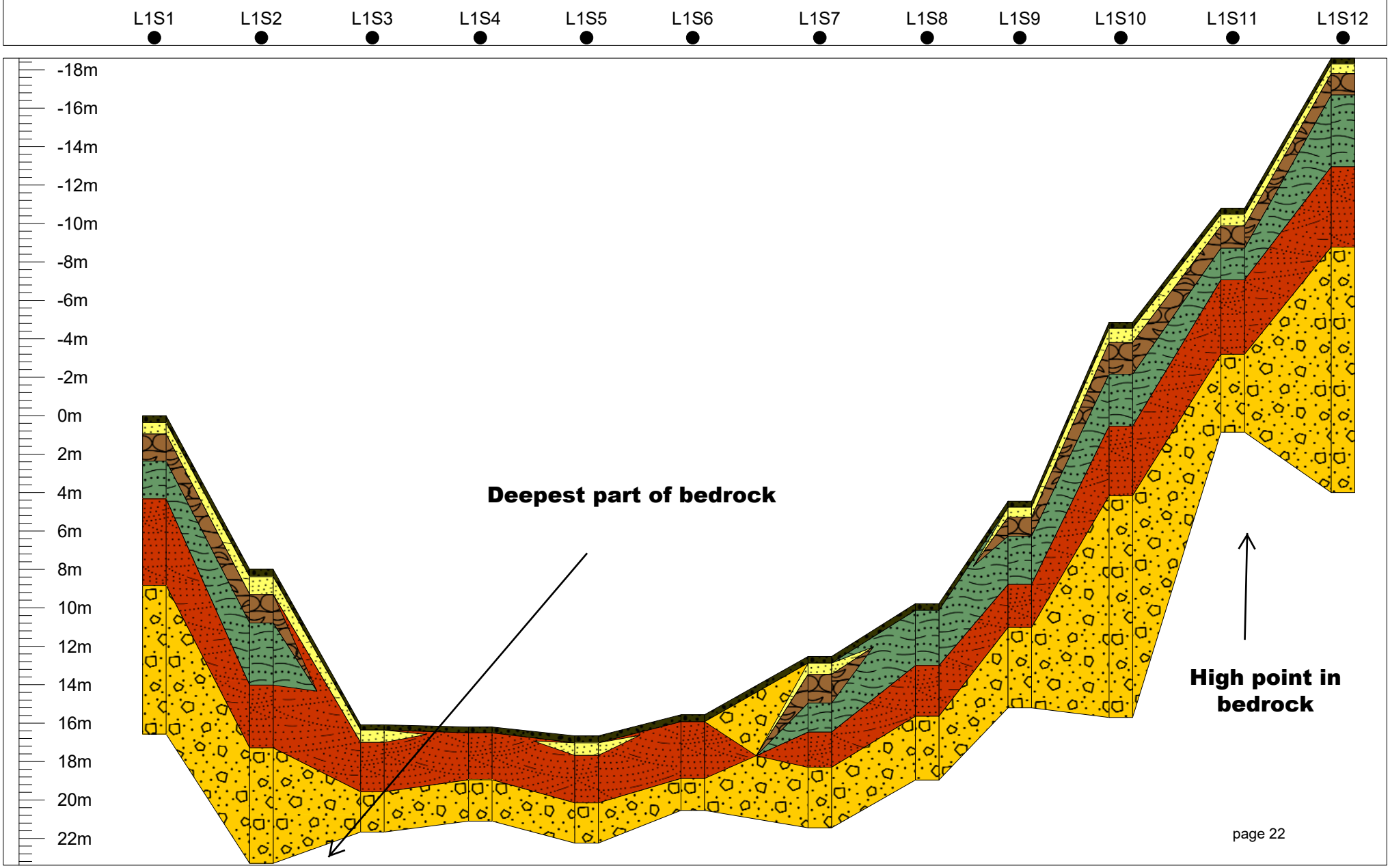
Appendix II:
Cross Sections

Big Creek Headwaters

Passive Seismic 2023

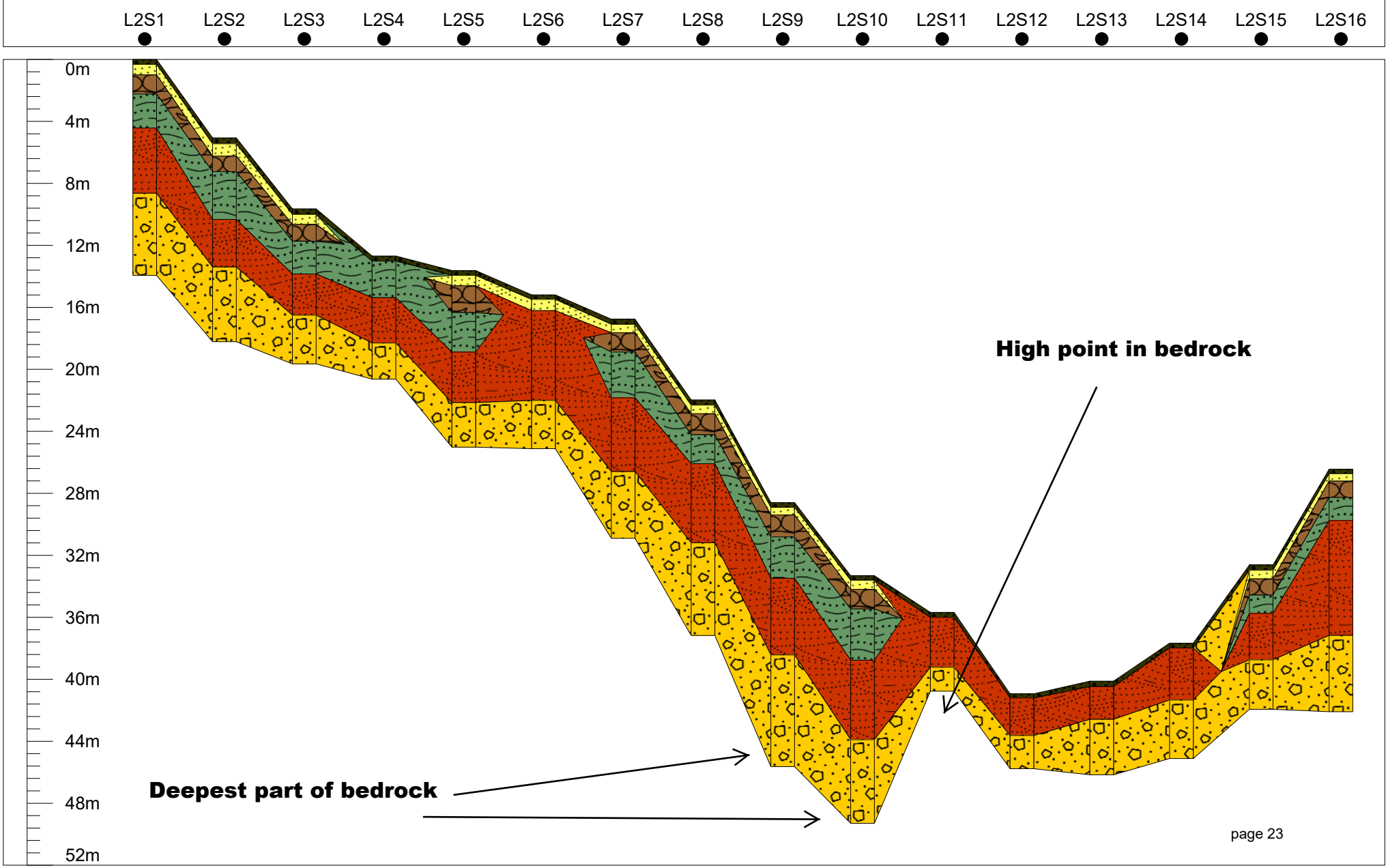
Line 1



Big Creek Headwaters

Passive Seismic 2023

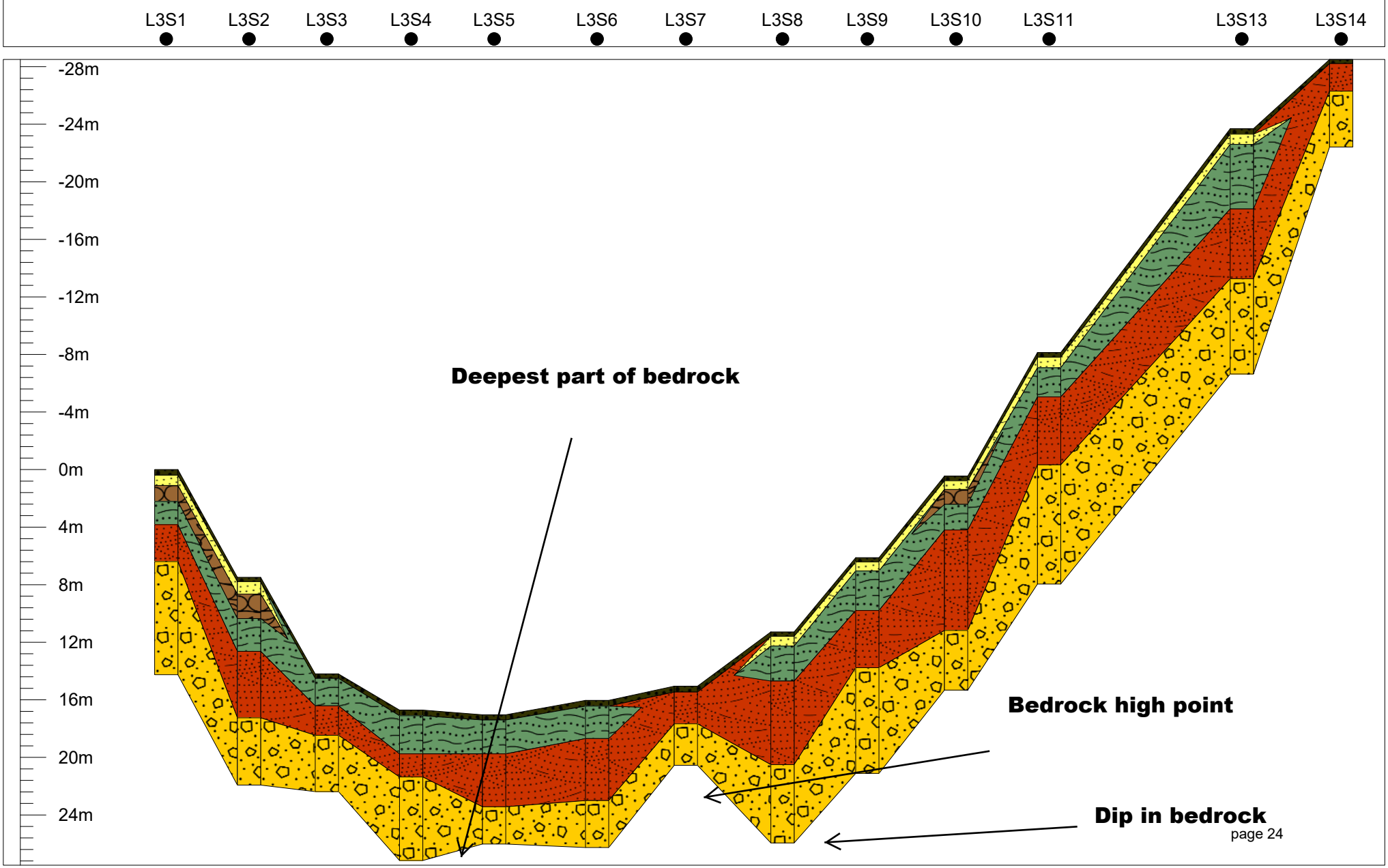
Line 2



Big Creek Headwaters

Passive Seismic 2023

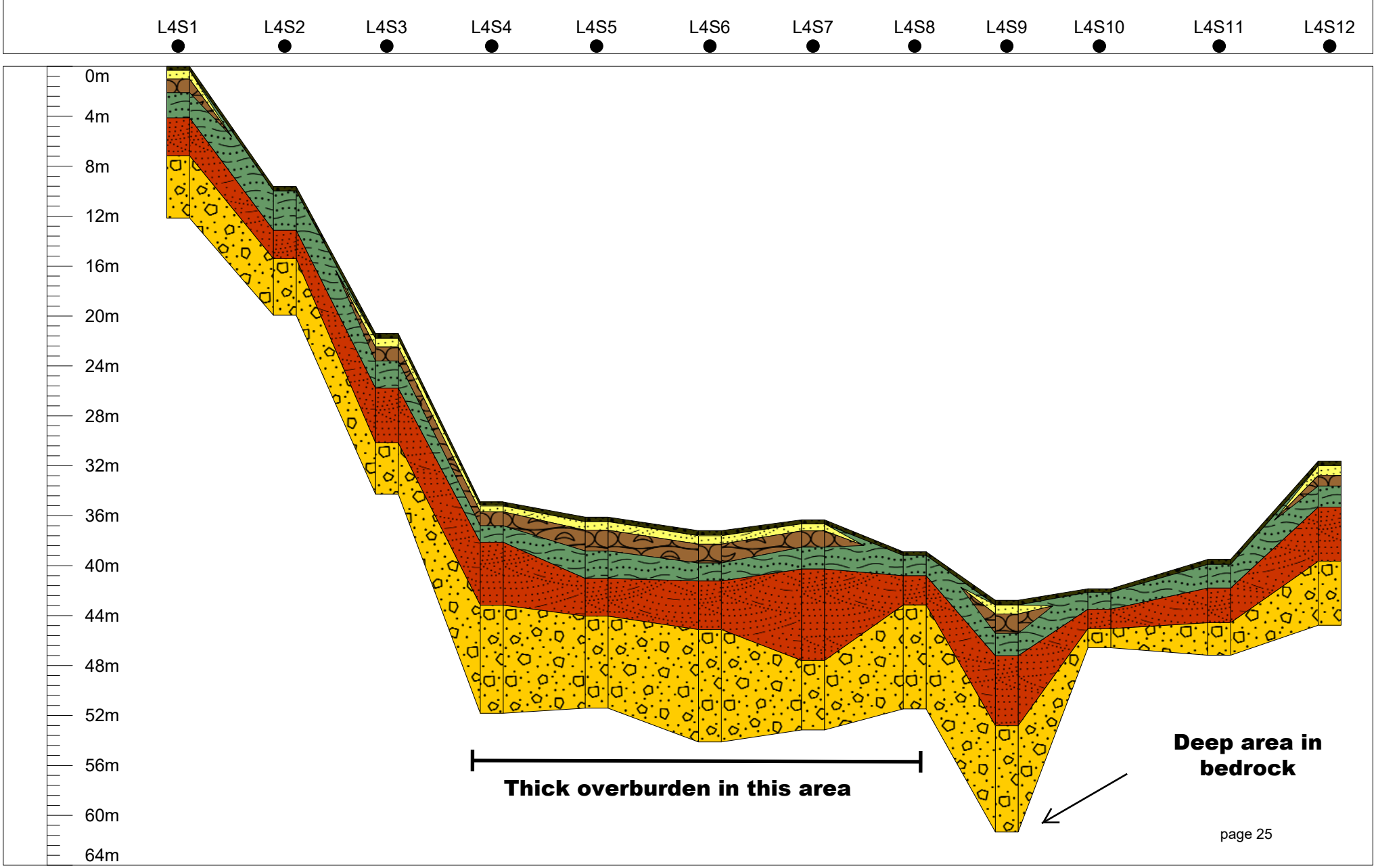
Line 3



Big Creek Headwaters

Passive Seismic 2023

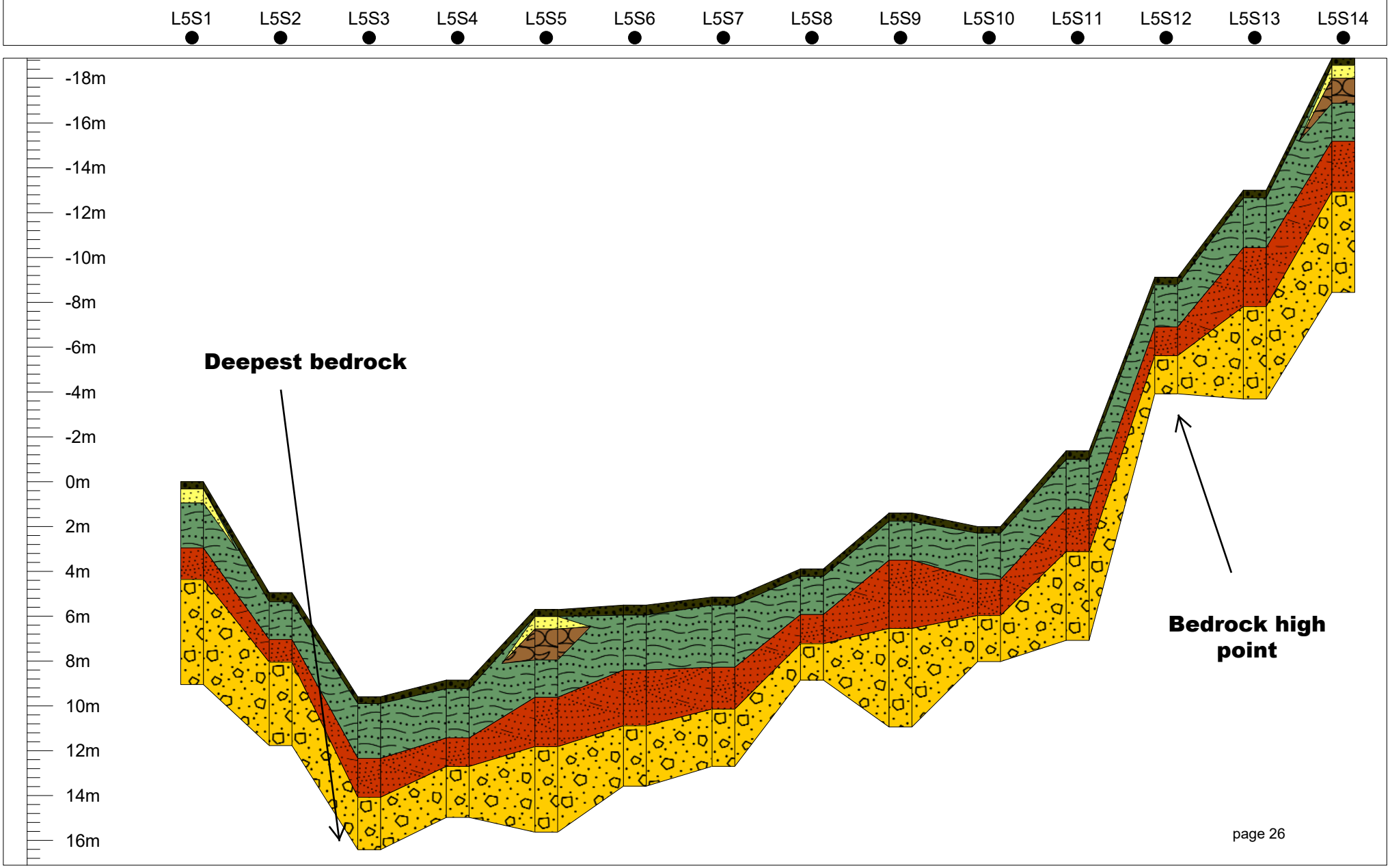
Line 4



Big Creek Headwaters

Passive Seismic 2023

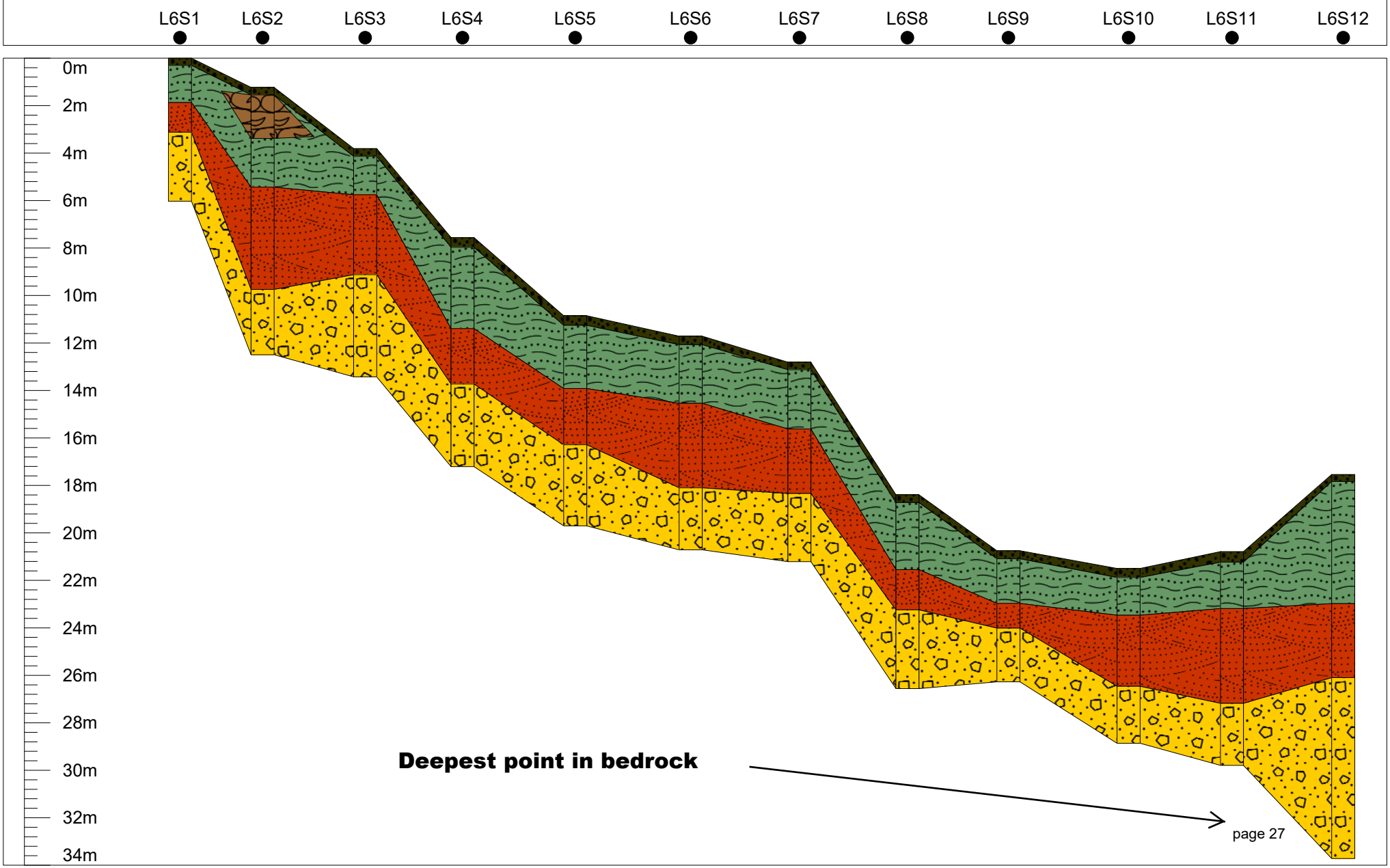
Line 5



Big Creek Headwaters

Passive Seismic 2023

Line 6



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Appendix III:

Invoice

INVOICE

WCP West Coast Placer LTD.
32612 Mitchell Ave
Mission, BC V4S 1M3
Phone: 778-255-0289

DATE	2023-08-15
Invoice #	WCP-642
CUSTOMER ID	YEG-001

CUSTOMER

Yukon Exploration Green Gold Mining Inc
17 Rabbit Creek Rd
Dawson City, YT
Y0B 1G0

DESCRIPTION	Unit Price	QTY	AMOUNT
Seismic Survey on Big Creek Headwaters Claim			
Placer Bedrock Survey - Rates based on 10 hr day			
Geophysical Technician	$900.00	3	$2,700.00
Equipment Costs	$600.00	3	$1,800.00
Survey Technician #1	$500.00	3	$1,500.00
Survey Technician #2	$500.00	3	$1,500.00
Survey Planning	$900.00	1	$900.00
Data Processing and Interpretation	$800.00	1	$800.00
Report Writing	$350.00	1	$350.00
Mob/Demob Costs, travel, etc	$475.00	1	$475.00
Accommodation	$280.00	3	$840.00
		Subtotal	$ 10,865.00
		Other	
		TOTAL	**$ 10,865.00**

Thank You For Your Business!