## REPORT PHASE 2 GEOPHYSICAL EXPLORATION POVERTY GULCH PROJECT GOLD POINT MINNING DISTRICT

## ESMERALDA COUNTY, NEVADA

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## 1.0 INTRODUCTION

This report presents the results of the Phase 2 geophysical exploration program completed by Advanced Geoscience, Inc. (AGI) on April 14 through 20, 2023 for the Poverty Gulch project. In accordance with our proposal dated March 20, 2023, AGI completed a magnetometer survey and additional seismic reflection and refraction surveys across the east part of the project area shown on the map in Figure 1. The seismic surveys were performed along a total of four survey line transects during the seven-day field program. The magnetometer survey was also performed during this seven-day program across the area encompassing the seismic survey lines shown in Figure 1. The seismic data were used to prepare subsurface seismic reflection and refraction velocity profiles to interpret the stratigraphy and structure of geologic units beneath the area. The magnetometer data was used to prepare a contour map of the earth's magnetic field variations caused by nearsurface geologic sources, such as magnetite-enriched, auriferous gravels.

The seismic survey data were recorded along four additional survey lines designated as Lines 4A, 8, 9, and 10 shown in Figure 1. A previous geophysical exploration program performed in December through January 2022, recorded seismic data along Lines 1 through 7 (Advanced Geoscience, Inc., 2022). The four additional survey lines were positioned by Mr. Charles Watson of Advanced Geologic Exploration, Inc. to focus subsurface exploration on the east part of the project area. Higher-resolution seismic recording procedures were used to prepare better reflection and refraction velocity profiles of the upper 200 feet to help locate where more desirable Tertiary gravel deposits could occur for mining exploration.

The following sections present our field survey procedures and methods of computer data processing, modeling, and display. The concluding section presents our current interpretation of subsurface geologic stratigraphy and structure of the eastern part of the project area, and our evaluation of the areas where Tertiary gravels occur for exploration of gold placer deposits.

### 2.0 GEOPHYSICAL SURVEY PROCEDURES

Advanced Geoscience mobilized a survey crew to the Poverty Gulch project area on April 14, 2023, to begin the geophysical surveys. On April 21, 2023, AGI completed the recording of the seismic and magnetic field data.

#### 2.1 Seismic Reflection and Refraction Surveys

Seismic survey Lines 8, 9, and 10 were positioned along mostly paralleling, northeast-tosouthwest traverses set up to the east and west of the existing survey Lines 2 and 3 (Figure 1). Line 4A was positioned was positioned as a repeat section on the north part of the existing Line 4 to provide overlapping data coverage to improve resolution of the upper 300 feet in this area. Each survey line was set up with stakes placed at 80-foot intervals to mark the ground surface stationing along the survey lines.

The seismic data were recorded first on Lines 8 and 9 which were positioned along more difficult terrain with varying topography. Lines 10 and 4A were recorded next along more evenly-sloping terrain. Line 8, 9, and 10 were set up with geophones spaced 8-feet apart. Line 4A was set up with geophones spaced 10-feet apart for slightly deeper resolution. The following length of geophone coverage was set up on each line.

Line 8- 2,344 feet Line 9- 1,240 feet Line 10- 1,096 feet Line 4A- 1,310 feet

The seismic data were recorded using a Seistronix, Ltd. EX-6, 150-channel data recording system. This recording system was connected to 132-channel geophone receiver arrays (spreads) set up along each survey line. The longer-length Line 8 was set up with multiple, overlapping 132-channel geophone spreads advanced along the line as the energy source point was moved past the middle of the active 132-channel spread. The shorter-length Lines 9, 10, and 4A required only one move-up of the 132-channel spread. Each geophone spread consisted of 40-Hertz (lower ramped cut-off frequency) geophones.

The seismic waves were transmitted into the ground at "source points" positioned along the lines at mostly 8 or 10-foot intervals between the geophones. These seismic wave vibrations were recorded by the EX-6 system from each 132-channel geophone spread.

A 60-pound, man portable weight drop was used as the energy source to generate the seismic waves. The weight drop was used to impact a thick steel plate placed on the ground. Several impacts were made at each source point and the recordings from each impact were summed together to increase the amplitude of reflections and attenuate random noise from background noise such as stronger wind gusts.

The first source point started off the first geophone position and then advanced down the survey line between the geophone positions. The last source point was positioned off the last geophone position.

These procedures were used to record reflection data sets with nominal 30 to 60-fold subsurface coverage with 4 and 5-foot common-midpoint (CMP) reflection spacing.

The reflection surveys along all four survey lines recorded a total of 641 field records. Each field record was recorded with a 0.8-second record length and 0.5-millisecond sampling rate with 24 bit analog-to-digital resolution.

After each seismic survey line was completed the UTM Zone 11S coordinates and elevations of the distance stationing set up along survey line were measured. This location data was recorded by AGI using a survey grade, NAVCOM Starfire global positioning system (GPS). These coordinate points were used in Earth Point and Google Earth to map the positioning of each survey line shown in Figure 1.

#### 2.2 Magnetometer Survey

The magnetometer survey was performed on April 19 and 20 concurrently with the seismic surveys. The approximate bounds of the magnetometer survey are shown in Figure 1.

The magnetometer measurements were recorded along northeast-southwest orientated survey lines that were generally parallel to seismic Lines 8, 9, and 10. These measurements started on the east side of the survey area and proceeded to the west. Navigation control for the survey lines was provided by the distance stationing set up on seismic Lines 8, 9, and 10 and lines of flagging offset to the east and west of these lines. Additional navigation control was based a lead man with a smart phone compass walking ahead of the magnetometer. A total of 18 survey lines were used to record the magnetometer measurements across the area. These survey lines are shown on the map in Figure 2.

A Geometrics G858 magnetometer was used to measure the earth's total magnetic field intensity along each survey line. This magnetometer was set up in the vertical gradiometer mode with two sensors vertically separated 0.8 meters apart. The measurements were recorded in each sensor at 1-second time intervals as the instrument was walked along the survey lines. The latitude and longitude of each measurement point was also recorded by a global positioning system (GPS) configured with the magnetometer recording system. Prior to starting the data recording the instrument was checked out and appeared to be recording data from both sensors along with the GPS positioning data.

During this data recording the normal daily diurnal variations in the local magnetic field were also measured to correct the total magnetic field readings for these variations. At the beginning of the day a base station measurement was recorded at a designated point in the center of the survey area. Additional base station measurements were then recorded at this point within 30 to 40 minutes after the measurements were recorded along each survey line. These base station measurements were used to prepare a separate file with corrections for the diurnal magnetic field variations.

### 3.0 DATA PROCESSING AND DISPLAY

#### 3.1 Seismic Reflection and Refraction Data

The seismic field records from selected source points, spaced 32 to 60-feet apart along the survey lines, were first input into the RAYFRACT seismic refraction tomography software developed by Intelligent Resources, Inc. (www.rayfract.com). RAYFRACT was used to generate 2D seismic compressional-wave velocity profiles of the upper 200 to 250 feet (61 to 76 meters). These refraction velocity profiles were used to help evaluate lithologic conditions and also prepare velocity-time profiles for converting the seismic reflection travel time profiles to depth profiles.

The field records were input into RAYFRACT to graphically pick first arrival times ("first breaks") for refracted waves traveling through the surface layer and into deeper highervelocity layers. These time-distance data were used together with geophone station coordinates and elevations to conduct refraction tomography imaging of seismic velocity layering. RAYFRACT first generated an initial velocity-depth model using the Delta TV turning ray method. This initial model was then refined to produce a closer fit to the arrival time data using the Wavepath Eikonal Traveltime tomographic inversion method with 40 to 60 iterations. The best-fit velocity-depth model was then gridded and color contoured with SURFER (written by Golden Software, Inc.) to show estimated vertical and lateral velocity variations along each survey line.

The Visual SUNT seismic reflection processing software developed by W Geosoft (www.wgeosoft.ch) was used to prepare seismic reflection profiles for each survey line. The complete set of field records from each survey line were input into this computer program together with the measured geophone coordinates and elevations to perform a specialized sequence of data editing, digital filtering, trace sorting, normal-moveout velocity corrections, and trace summation procedures to prepare CMP-stacked, reflection time and depth profiles. Several sequences of data processing were performed and evaluated and modified until a set of processing parameters was arrived at that provided the clearest images of geologic structure and stratigraphy.

The variations in ground surface elevation along the survey lines were accounted for in the reflection data processing by applying "elevation statics" corrections. After the CMPstack, the CMP traces were shifted to horizontal datum elevations which were slightly above the highest points on these survey lines. The time shifts introduced by this step were calculated using a replacement velocity of 700 m/sec for the material between the ground surface and horizontal datum. This step effectively reduced the reference time  $(t=0)$  on the reflection time profiles to these horizontal datum elevations.

The reflection time profiles for each survey line were then converted to approximate reflection depth profiles using a seismic velocity-time grid generated from a smoothed version of the refraction velocity profiles and estimates of deeper velocities from the reflection processing. In making this conversion the interval summation calculation Dij=Vij x Tij was performed on each sample of each trace with the replacement velocity 700 m/sec used for the time window associated with the elevation statics.

The resulting seismic refraction and reflection profiles for Lines 2, 3, 4A, 8, 9, and 10 are shown in Plates 1 through 5. The profiles for Lines 2 and 3 were re-displayed for revised interpretation. The refraction velocity profiles and reflection depth profiles are displayed at the same horizontal and vertical scale and horizontal positioning. For the longer-length Line 8 the horizontal and vertical scale is 1 inch= 25 meters (82.02 feet). For all other lines the horizontal and vertical scale is 1 inch= 20 meters (65.62 feet).

The velocity contours shown on the refraction profiles are all in units of m/sec to be consistent with the previous surveys' interpretation of seismic velocity ranges.

It is also noted that the distance stationing shown on the seismic profiles for Lines 4A, 8, 9, and 10 had to be in feet because the geophone spacing along these lines was in feet.

#### 3.2 Magnetometer Data

The magnetic field measurements stored in the G858 were downloaded to a computer to undergo data processing to prepare contour maps showing variations in the total magnetic field and vertical magnetic gradient. The program Magmap 2000 (written by Geometrics) was used to first review the magnetic data profile along each survey. After reviewing these profiles we discovered the G858 recording system for the bottom sensor stopped recording reliable magnetic field data. However, the data recorded for the top sensor was accurately recorded. Therefore, only the top sensor data could be used to process and map "total magnetic field" variations across the survey area.

The top sensor total magnetic field data was used to build a spreadsheet data file with the UTM coordinates for the measurement points. These magnetic field measurements also underwent additional spreadsheet processing to remove the diurnal magnetic field variations caused by the earth's rotation in the magnetosphere. The resulting spreadsheet file generated from this processing was then gridded and contoured using the program Surfer (written by Golden Software) to prepare a color-amplitude enhanced, contour map of the corrected total magnetic field variations across the survey area shown in Plate 6.

Our initial review of this total magnetic field map showed that the magnetic contour patterns were largely dominated by sharper, smaller-scale magnetic field variations from near-surface geologic sources of magnetization. Larger-scale magnetic field variations from deeper geologic structure were also visible; however, these contour patterns did not obscure the contour patterns from the near-surface source magnetic variations.

## 4.0 EVALUATION OF GEOLOGIC CONDITIONS

#### 4.1 Subsurface Stratigraphy and Structure Based on Seismic Profiles

The additional seismic survey lines recorded across the eastern part of the Poverty Gulch project were positioned to provide a better evaluation of the stratigraphy and structure of the upper 200 to 300 feet, with emphasis on the thickness of the auriferous Tertiary gravels which were the primary exploration target. These survey lines were positioned mostly on surface outcrops of Tertiary tuffaceous and gravel deposits. The non-welded, airfall tuffaceous deposits were visible on the south part of Line 4A (shown Plate 2) and displayed on the regional-scale geologic map of the area prepared by Albers and Stewart (1965). The auriferous Tertiary gravels were visible in the hilly areas where Lines 8, 9, and 10 were positioned. Beneath these Tertiary tuffaceous and gravel deposits the stratigraphic column of the area prepared by Mr. Watson (displayed below) shows a sequence of older Tertiary units consisting of mudstone, and welded rhyolite.



Both the previous and current seismic surveys show that the target Tertiary gravels in the subsurface appear to have a seismic velocity in the range of 1,200 to 1,600 m/sec (3,937 to 5,249 ft/sec). This interpretation is supported by the seismic refraction velocity profiles for Lines 4 and 4A which show a layer 1,200 to 1,600 ft/sec velocity stratigraphically beneath the airfall tuffaceous unit. The deeper structure in this area shown on the refraction profile for Line 4A (Plate 2) also strongly suggests the deeper 1,600 ft/sec (5,249 ft/sec) velocity horizon could be associated with the upper surface of the welded Rhyolite. The thin mudstone unit at the base of the gravel layer does not appear to be associated with a higher velocity horizon and would most likely not be distinguishable from the gravels.

Our current geologic interpretation of the seismic reflection patterns shown on the reflection profiles for Lines 2, 3, 4A, 8, 9, and 10 (in Plates 1 through 5) is intended to help evaluate the depth and thickness of the possible gold-bearing Tertiary gravels deposited above the mudstone and welded rhyolite. The profiles for Lines 2 and 3 (from the previous seismic surveys) were re-displayed and included in this revised interpretation. Currently, this interpretation is based on seismic reflection character, stratigraphic positioning, seismic refraction velocity range, and associations with the geologic outcrops. No subsurface geologic data is available from exploratory drill holes in the project area to tie these reflection patterns to known lithologic units in the subsurface.

The seismic reflection profiles in Plates 1 through 5 therefore show our current interpretation of the stratigraphy and structure of the upper 200 to 300 feet in the eastern part of the project area. This interpretation shows reflection patterns associated with the following geologic horizons:

- 1) Tertiary airfall tuffaceous layers
- 2) Channeling in the upper Tertiary gravels
- 3) Base of Tertiary gravels and mudstone/ upper surface of Tertiary welded rhyolite
- 4) Layering within the Tertiary welded rhyolite

Each of these geologic horizons are identified by the colored-highlighted reflection patterns shown in Plates 1 through 5. Where these survey lines are close to one another these geologic horizons are tied to similar reflection patterns at approximately the same elevations.

The following comments are provided concerning our interpretation of these reflection patterns.

- The deeper, red-highlighted reflection patterns show layering or interfaces within the Tertiary welded rhyolite that are partially-imaged and discontinuous. This is most likely due to the extensive episodes of faulting beneath this area, not all of which is shown on the reflection profiles.
- The magenta-highlighted reflection patterns, showing the base of the Tertiary gravels and mudstone and upper surface of Tertiary welded rhyolite, are closely associated with the elevation profile of the deeper 1,600 m/sec (5,250 ft/sec) velocity contour line on all the refraction profiles. The structure of these 1,600 m/sec velocity contour lines also indicates the start of a deeper geologic unit which is most likely the Tertiary welded rhyolite.
- The stronger-amplitude, yellow-highlighted reflection patterns on the south end Line 4A occur where the airfall Tuffaceous unit outcrops on the ground surface. The refraction profile in this area also shows a higher 1,600 m/sec velocity layer near the surface associated with this tuffaceous unit.

• Near the surface on Lines 2, 3, 4A, 8, and 10 the blue-highlighted reflections, interpreted as areas of possible channeling within the upper gravels, occur where the refraction velocity profiles also indicate a deepening of the 1,000 to 1,200 m/sec  $(3,280 \text{ to } 3,937 \text{ ft/sec})$  contour lines.

Borehole data will be needed to help confirm this stratigraphic interpretation. However, based on this current interpretation of the seismic reflection and refraction profiles the following observations can be made concerning the location and thickness of the potentially gold-bearing Tertiary gravels.

- The 1,200 to 1,600 m/sec velocity layering is shown on all five refraction profiles in this area. This suggests that Tertiary gravels associated with this velocity range probably occur beneath this entire eastern part of the project area.
- Line 4A shows the greatest thickness of Tertiary gravels to occur on the south half of this line beneath the Tertiary airfall Tuffaceous unit outcropping on the ground surface. Between distance stations 720 to 960 feet, the gravels beneath this area appear to be 50 meters (164 feet) in thickness.
- Lines 2, 3, 8, and 9 generally show deposits of Tertiary gravel 20 to 30 meters (66 to 98 feet) in thickness. This thickness of gravels appears to continue to the north beneath Lines 2 and 8. However, beneath the south end of Line 2 the gravels could reach 40 meters in thickness.
- Line 10 shows that the Tertiary gravels are less than 20 meters in thickness between stations 440 and 880 feet. However, north of the fault at station 400 feet the gravels are greater than 20 meters in thickness.

The seismic reflection profiles in Plates 1 through 5 also show our interpretation of some of the more significant fault planes beneath the area. These fault planes were interpreted based on lines of reflection pattern deformation and what appear to be deeper fault plane reflections. The map in Figure 2 shows our mapping of the near-surface projection of these fault trends across the seismic lines.

### 4.2 Magnetite-Enriched Tertiary Gravels Based on Magnetometer Survey

The contour map of the total magnetic field in Plate 6 shows several patterns of smallerscale magnetic field variations (anomalies) that appear to be due to near-surface geologic sources. The width of these sharper, higher-amplitude, magnetic "high" anomalies is generally in the range of 30 meters or less which indicates the magnetized geologic sources are in the depth range of 15 meters (50 feet) or less. Other much larger-scale magnetic field variations on this map are due to variations in deeper geologic structure. However, the broader, lower-amplitude, magnetic high anomalies shown by the bluish-color contour patterns may also indicate more diffuse magnetization caused by concentrations of magnetite across these broader areas.

The map in Plate 6 shows several areas where these sharper magnetic high anomalies are identified. The north-south alignment of higher-amplitude magnetic highs labeled "Mag Anomaly A" is of particular interest. Mag Anomaly A appears to be caused by an alignment of magnetized geologic sources in the upper 15 meters. This anomaly is crossed by seismic Line 4A and does not appear to be associated with the near-surface fault trends shown in Figure 2. However, this mag anomaly does appear to be associated with the sharper channeling into the upper part of the Tertiary gravels shown on the Line 4A refraction and reflection profiles. Evidence of deeper ancient channeling also follows the alignment of Mag Anomaly A and is visible on the ground surface by the drain course extending downward from the north of Line 10.

Based on this evidence, Mag Anomaly A could be caused by higher-concentrations of magnetite in the Tertiary gravels at the base of this north-south, subsurface channeling. The contour patterns associated with Mag Anomaly A indicate magnetic highs in the range of 60 to 120 nanoTeslas. Based on our experience and the experience of others such as Schwarz and Wright (2006), higher concentrations of magnetite grains in the alluvium can create magnetic field anomalies in this 10 to 60 nTeslas range. Therefore, Mag Anomaly could be associated with a narrow accumulation of concentrated magnetite at the base of this channel.

As mentioned above, evidence of broader areas of magnetite-enriched gravels are also shown by the bluish-color contour patterns in Plate 6. However, there is no clear correlation between where these bluish-color contour patterns occur and the structure of the upper Tertiary gravels.

An exploration drilling program of the upper 200 to 250 feet is recommended to further investigate the geologic stratigraphy and structure of this area, and the occurrence of areas with higher concentrations of magnetite-enriched Tertiary gravels.

### 5.0 REFERENCES

Advanced Geoscience, Inc., 2022, Geophysical Exploration Poverty Gulch Exploration Project Gold Point Mining District, Esmeralda County, Nevada, July 8, 2022.

Albers and Stewart, 1965, Geologic Map of Esmeralda County, Nevada, in Nevada Bureau of Mines and Geology Bulletin 78, Plate 1.

Schwarz and Wright, 2006, The Detection of Buried Placer Deposits by Ground Magnetic Survey, Geophysical Prospecting, Vol 36, April, 2006.



Distance stationing in meters for Lines 1-7 (shown by red lines)<br>Distance stationing in feet for Lines 4A, 8, 9, and 10 (shown by yellow lines)

Map of East Part of Poverty Gulch Project Area Showing Addtional Seismic Survey Lines 4A, 8, 9, 10, and Magnetometer Survey Area<br>Gold Point Minning District Esmeralda County, Nevada May, 2023

Map Scale 1 inch= 200 feet or 60.96 meters

Figure 1 ADVANCED GEOSCIENCE, INC. www.AdvancedGeoscience.com



Distance stationing in meters for Lines 1-7 (shown by red lines)<br>Distance stationing in feet for Lines 4A, 8, 9, and 10 (shown by yellow lines)

Map of East Part of Poverty Gulch Project Area<br>Showing Interpretation of Near-Surface Fault Trends Crossing Seismic Lines<br>Gold Point Minning District Esmeralda County, Nevada May, 2023



Shows fault plane trend near ground surface<br>with tick line indicating direction of fault plane dip

Map Scale 1 inch= 200 feet or 60.96 meters

Figure 2 ADVANCED GEOSCIENCE, INC. www.AdvancedGeoscience.com





Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography Seismic Compressional-Wave Velocity Contour Interval 200 m/sec Horizonal and Vertical Scale 1 inch= 20 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing Horizontal and Vertical Scale 1 inch= 20 meters or 65.62 feet

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# Lines 2 and 3- Seismic Reflection and Refraction Velocity Profiles (Re-Displayed and Interpreted From Previous Seismic Surveys)

**Geologic Interpretation of Reflection Patterns:** 

- $\longrightarrow$   $\longrightarrow$  Tertiary Air Fall Tuffaceous Layers
- - Channeling in Upper Tertiary Gravels
- - Base Tertiary Gravels and Mudstone/Upper Surface of Tertiary Welded Rhyolite  $\rightarrow$   $\rightarrow$  Layering within Tertiary Welded Rhyolite

Black Lines Show Orientation of More Significant Fault Planes Based on Lines of Reflection Pattern Deformation

Seismic Surveys for Investigation of Subsurface Geologic Units Phase 2 Geophysical Exploration- Poverty Gulch Project Gold Point, Nevada May, 2023



Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography Seismic Compressional-Wave Velocity Contour Interval 200 m/sec Horizonal and Vertical Scale 1 inch= 20 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing Horizontal and Vertical Scale 1 inch= 65.62 feet or 20 meters

**Geologic Interpretation of Reflection Patterns:** 

- Tertiary Air Fall Tuffaceous Layers Channeling in Upper Tertiary Gravels
	- Layering within Tertiary Welded Rhyolite

Black Lines Show Orientation of More Significant Fault Planes Based on Lines of Reflection Pattern Deformation

# Line 4A- Seismic Reflection and Refraction Velocity Profiles

Base Tertiary Gravels and Mudstone/Upper Surface of Tertiary Welded Rhyolite

Seismic Surveys for Investigation of Subsurface Geologic Units Phase 2 Geophysical Exploration- Poverty Gulch Project Gold Point, Nevada May, 2023





Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography Seismic Compressional-Wave Velocity Contour Interval 200 m/sec Horizonal and Vertical Scale 1 inch= 25 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing Horizontal and Vertical Scale 1 inch= 82.02 feet or 25 meters

## Line 8- Seismic Reflection and Refraction Velocity Profiles

**Geologic Interpretation of Reflection Patterns:** 

- Tertiary Air Fall Tuffaceous Layers
- Channeling in Upper Tertiary Gravels
- Base Tertiary Gravels and Mudstone/Upper Surface of Tertiary Welded Rhyolite
- Layering within Tertiary Welded Rhyolite  $\blacksquare$

Black Lines Show Orientation of More Significant Fault Planes Based on Lines of Reflection Pattern Deformation

Seismic Surveys for Investigation of Subsurface Geologic Units Phase 2 Geophysical Exploration- Poverty Gulch Project Gold Point, Nevada May, 2023



Line 9 Seismic Refraction Velocity Profile

Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography Seismic Compressional-Wave Velocity Contour Interval 200 m/sec Horizonal and Vertical Scale 1 inch= 20 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing Horizontal and Vertical Scale 1 inch= 65.62 feet or 20 meters

**Geologic Interpretation of Reflection Patterns:** 

- - **Tertiary Air Fall Tuffaceous Layers** Channeling in Upper Tertiary Gravels
	-
	-
	- Layering within Tertiary Welded Rhyolite

## Line 9- Seismic Reflection and Refraction Velocity Profiles

Seismic Surveys for Investigation of Subsurface Geologic Units Phase 2 Geophysical Exploration- Poverty Gulch Project Gold Point, Nevada May, 2023

Base Tertiary Gravels and Mudstone/Upper Surface of Tertiary Welded Rhyolite

Black Lines Show Orientation of More Significant Fault Planes Based on Lines of Reflection Pattern Deformation





Line 10 Seismic Refraction Velocity Profile

Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography Seismic Compressional-Wave Velocity Contour Interval 200 m/sec Horizonal and Vertical Scale 1 inch= 20 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing Horizontal and Vertical Scale 1 inch= 65.62 feet or 20 meters

**Geologic Interpretation of Reflection Patterns:** 

Tertiary Air Fall Tuffaceous Layers Channeling in Upper Tertiary Gravels Base Tertiary Gravels and Mudstone/Upper Surface of Tertiary Welded Rhyolite - Layering within Tertiary Welded Rhyolite

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## Line 10- Seismic Reflection and Refraction Velocity Profiles

Seismic Surveys for Investigation of Subsurface Geologic Units Phase 2 Geophysical Exploration- Poverty Gulch Project Gold Point, Nevada May, 2023

![](_page_17_Picture_17.jpeg)

![](_page_18_Figure_0.jpeg)

Contour Interval 10 nanoTeslas