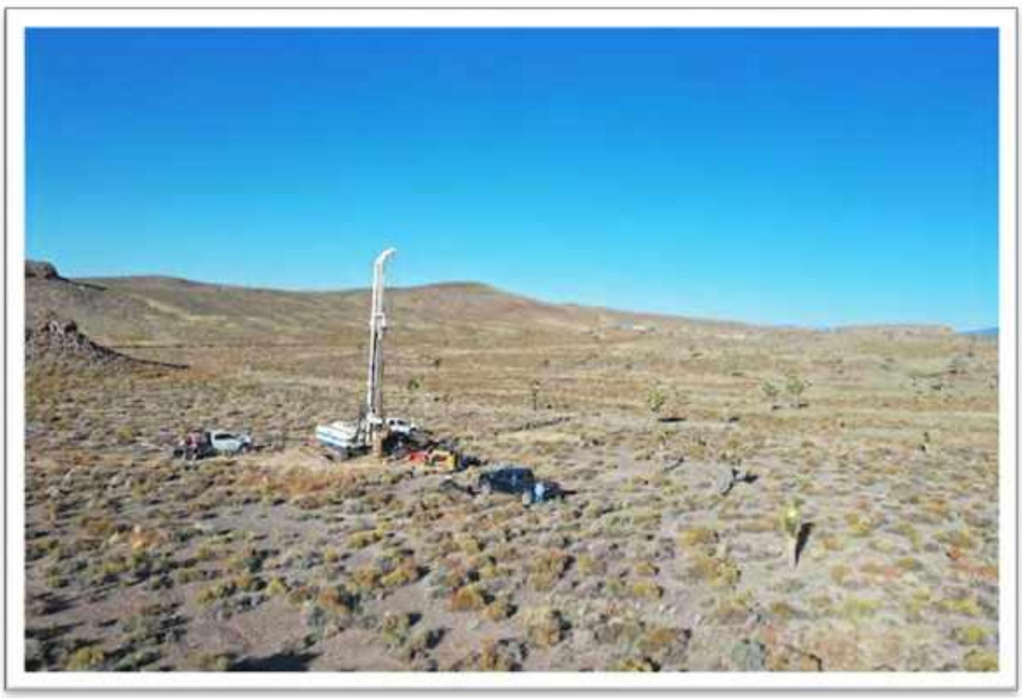
Technical Report

Economic Mineral Potential
Of the Late Tertiary Clastic Deposits
On Slate Ridge,
Poverty Gulch Project,
Gold Point Mining District,
Esmeralda County, Nevada



Prepared for
Carl Lane
Reno, NV

By
Advanced Geologic Exploration, Inc.
Chester, CA

March 27, 2024
Revised April 12, 2024

April 12, 2024

Carl Lane
6947 Windy Hill Way
Reno, NV 89511
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(530) 363-0360

RE: Technical Report: Economic Mineral Potential of the Late Tertiary Clastic Deposits on Eastern Slate Ridge, Poverty Gulch Project, Esmeralda County, Nevada.

Dear Mr. Lane,

Per your request, I am pleased to present the Technical Report outlining the Economic Mineral Potential of the Late Tertiary Clastic Deposits on Eastern Slate Ridge, Esmeralda County, Nevada. The Poverty Gulch placer claim block consists of three claim sets totaling 33 federal placer mining claims that secures about 660 areas of these deposits.

The Technical Report presents the Phase 1 and Phase 2 exploration activities that involved securing the mining claims, bulk sampling of the clastic sedimentary material, geologic mapping, geophysical surveying, drilling, and geochemical assessment. The findings indicate between 104 – 126 million tons of ore containing abundant rare-earth elements and transition metals that have a conservative economic mineral potential of between $15 - $19 billion. The findings did not find an economic abundance of precious or platinum group metals. Further work may shed light if precious metals can be added to the economic potential.

The report is separated into eight Parts, with Section 1 revisiting the background information, land status, project history, and permitting. Part 2 discusses the physical characterization of the property, including a detailed geologic overview of the deposits and the tectonics and the phase 1 and Phase 2 geophysical surveys, which included seismic surveys and a detailed property-wide magnetic survey. Part 3 discusses the 2022 Phase 1 exploration and bulk testing activity that led to a new exploration direction with rare-earth elements. Part 4 discusses the robust Phase 2 exploration drilling and sampling activity where the subsurface clastic sedimentary units that were sampled to 105 feet below the surface. Part 5 discusses the geochemical assessment of the multiple samples from three independent mineral assay laboratories. Part 6 is a discussion of the economic mineral potential of the property. Recommendations for additional exploration activities is presented in Part 7 to further the evaluation and verification of the mineral resource and Part 8 is a detailed reference list. Also included is an extensive appendix of the work and the background data.

Thank you for the opportunity to assist you on this project. If you have any questions or need further assistance, please feel free to contact me at your convenience.

Sincerely,
Advanced Geologic Exploration, Inc.

Charles P. Watson,
President and Chief Geologist

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"Any relation to the land, the habit of tilling it, or mining it, or even hunting on it, generates the feeling of patriotism. He who keeps a shop on it, or merely uses it as a support for his desk and ledger, or to his manufactory, values it less."

Ralph Waldo Emerson

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Report Certification.

Mr. Charles Prentiss Watson, Registered Professional Geologist

I, Charles Prentiss Watson, BSc., P.G., do hereby certify the following:

1. I am employed as the President and Chief Geologist with Advanced Geologic Exploration, Inc. located at 180 Main Street, P.O. Box 1956, Chester, CA.
2. I have a geologic field office at 115 North Main Street, Tonopah Nye County, Nevada. I have worked in Esmeralda County, Nevada, for over 37 years and have a substantial knowledge and library of the region's geology.
3. I graduated with a Bachelor of Science Degree in Geology from the Humboldt State University (1984, 2005).
4. I am a Registered Professional Geologist (P.G.) with the State of California License No. 7818. The State of Nevada, from where this project is located, does not have a registered professional geologic license practice.
5. I am a member of Society of Economic Geologists (No. 919358).
6. I am a member of Geological Society of Nevada.
7. I have worked as a geologist since my graduation 40 years ago. I have substantial experience with precious, base metals, and commercial mineral projects in the United States, including mineral resource Eetimations of said deposits.
8. I have extensive experience exploring for, testing, mining, and writing technical reports for placer deposits. I have managed several placer mining operations and have been instrumental in acquiring permits to conduct the aforementioned activities for my clients or my company.
9. This Technical Report is not intended to satisfy the Canadian National Instrument 43-101 ("NI 43-101") in any form or means.
10. I have visited the Poverty Gulch Project area on multiple occasions.
11. I know Mathew Moroney who sold the claims to Mr. Lane and provided geologic consulting services for his projects, including that at Poverty Gulch.
12. I knew TXO Resources, LLC who had the Poverty Gulch claims after Mathew Moroney and had provided geologic consulting services for his projects, including that at Poverty Gulch property. When TXO Resources defaulted on the Poverty Gulch claims, I assisted Moroney in reacquiring them and the eventual sale to Mr. Lane.

13. I have worked as a consulting geologist with Mr. Lane on various projects, including acquiring the Poverty Gulch claims and providing project oversight and management to the exploration and evaluation activities.
14. I am the author of the Technical Report titled: “Economic Mineral Potential of the Late Tertiary Clastic Deposits, Esmeralda County, Nevada (the “Technical Report”). I am responsible for all the sections of this Technical Report.
15. The information contained herein was prepared from information gleaned from direct work on the project, internet searches, and my corporate library.
16. As of the effective date and to the best of my knowledge, information, and belief, this Technical Report contains scientific and technical information that is required to be accurate and not misleading.
17. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication, including electronic publication in the public company filings on their websites accessible by the public.

Effective Date: April 12 2024.

DATED this 12th day of April, 2024.

Charles Prentiss Watson, BSc., CA P.G. 7118

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Technical Report

Economic Mineral Potential of the Late Tertiary Clastic Deposits on Eastern Slate Ridge, Poverty Gulch Project, Esmeralda County, Nevada

March 27, 2024

Revised: April 12, 2024

EXECUTIVE SUMMARY.

This Technical Report presents the Phase 1 and Phase 2 exploration activities the of Late Tertiary clastic deposits on Eastern Slate Ridge, Esmeralda County, Nevada. The Poverty Gulch placer claim block consists of three claim sets totaling 33 federal placer mining claims that secures about 660 areas of these deposits. The result of this investigation indicates that clastic sedimentary deposit within the claim block has between 104 – 126 million tons of ore with a conservative economic mineral potential of between $15 – $19 billion.

The clastic sediments consist of interbedded mudstones, fine- to coarse-grained sands, gravels, pebbles, and cobbles, with an occasional boulder. The clasts are semi- to well-rounded suggesting they came from a distal source. There is a high population of quartz sand and an abundant amount of black sand. The clastic sedimentary deposits are overlain by the Ammonia Tanks Tuff (11.45 Ma), and possibly the Rainier Mesa Tuff (11.6 Ma) which are members of the Timber Mountain Tuff. The base of the clastic deposits has not been seen in the project area. The clastic sediments may correlate to either the Titus Canyon (37 – 25.7 Ma) or Panuga (15.9 – 11.45 Ma) Formations, both of which have been identified about 50 miles south, of the Poverty Gulch property, or they are related to something completely different.

Bulk testing of the clastic sediments in 2022 was predicated on recovering enough gold to use those ore grades to foster a much large mining operation. Geologic mapping suggested a thick sequence of clastic deposits occurred over several hundred acres and if auriferous, would indicate a huge economic resource. Unfortunately, and after a Phase 1 bulk testing activity of

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>660 cubic yards of material, the recovered gold amounts were just not fruitful. However, what was present was a substantial amount of black sands (heavy minerals), so much so it gave the gold recovery activities fits. On a hunch, the black sands were assayed, and they were found to consist of large amounts of Rare-Earth Elements (REEs). Rough calculations of the amounts of black sand suggested a substantial REE deposit could exist within the hundreds of acres of the clastic sediments.

A Phase 2 exploration program was implemented and consisted of geologic mapping, geophysical surveying, drilling, and geochemical analyses of the clastic sedimentary material. The geophysical survey results were spectacular and showed the clastic sediments ranged from 0 - >240 feet thick and averaged about 180 feet thick. A specific area of the deposit was calculated to contain the average thickness of the deposit and the volume was then determined to be between 104 – 126 million tons.

The geophysical results also showed the area was within a prominent fault zone and that large tectonic displacements had impacted the site to such a degree that the entire deposit is likely to be fault bounded, and sediments would be highly fractured.

Augur drilling of the deposits reaffirmed the geology and geophysical data by showing the clastic sediments were indeed greater than 100 feet thick and had typical mudstone, sands, gravels, pebbles, and cobbles compositions. Drill samples were collected and sent to three different geochemical assay laboratories. Results confirmed the initial assays as a wide collection of REEs were identified, as well as other commercially viable elements, and several of them were in very high concentrations. Eight elements were chosen to represent the deposit's economic potential, Cerium, Lanthanum, Niobium, Neodymium, Yttrium, Rubidium, Titanium and Zirconium. Their average grade per element was calculated to estimate a conservative economic mineral potential of between $15 - $19 billion. If Rubidium can be produced and sold at today's price, these estimates double. The findings were inconclusive for precious or platinum group metals. Further work may shed light on these metals adding to the economic potential.

Without question concentrating the sample increases the product grade, which substantially increases the deposit value. Two clear benefactors of concentrating are Titanium and Zirconium that substantially increase their value with concentration and become 40.8% of the estimated mineral resource potential.

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Appendix.

Photo 2. View looking southeast at Phase 2 Exploration activities and the auger drilling of hole H-6 on the west end of Escarpment Ridge. Notice the white airfall volcanic tuff in the upper photo right. These overlie clastic sediment sequence of mudstones, sands, gravels, pebbles, and cobble that form the mineral-rich deposit on Slate Ridge. Notice the Esmeralda County Road extending up Poverty Gulch and where it cuts through the tuff to make a hairpin left turn to access the upper Slate Ridge plateau. The Poverty Gulch Project staging area is at the hairpin corner. The Southwest Ridge is south of the staging area and the Gold Range is on the horizon left with Mt. Magruder on the horizon right. The dozer cut in the foreground is from a previous claimant's exploration activities in the 1970s – 1980s.

PART 1 INTRODUCTION, LAND STATUS, AND PERMITTING.

Part 1 introduces the Poverty Gulch Project (PGP) by describing the timeline by which significant things happened, and the scope of the project. This section also provides a general framework of physiology, geology, and the site description. It concludes with a detailed description of the land status and the past and present permitting of exploration and testing activities.

1.1.0 Introduction.

The property consists of 33 ±20-acre unpatented federal placer mining claims that secure about 660 acres on the eastern extent of Slate Ridge in the Gold Point Mining District of southern Esmeralda County, Nevada (Figures 1 – 4; Appendix A). Mr. Carl Lane is the sole claimant and first acquired the initial block of claims on August 1, 2019. Subsequentially, additional claims were acquired in 2020, 2021, 2023, and 2024. The claims are current and valid for the 2024 mineral year. There are three principal and contiguous claim blocks:

Poverty Gulch #1 - #10 (10 claims)

First American #1- #3 (3 claims)

Poverty Gulch Extension PGE #1- #20 (20 claims)

1.2.0 General Timeline of Significant Events.

The following is a timeline of significant activities that has guided the project to the present,

1. August 2019 - Acquisition of the initial PGP placer mining claims: Poverty Gulch #1 – #4 and First American #1 – #3.
2. August 2019 - First Submittal of Notice of Intent to conduct bulk testing activities.
3. September 2021 - Securing of the Poverty Gulch #5 - #10.
4. November 2021 - Securing of the PGE #10 - #20.
5. March 2022 - Second submittal of Notice of Intent to conduct bulk testing activities.
6. April 2022 - Acceptance of Notice of Intent to conduct bulk testing activities.

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Poverty Gulch Project

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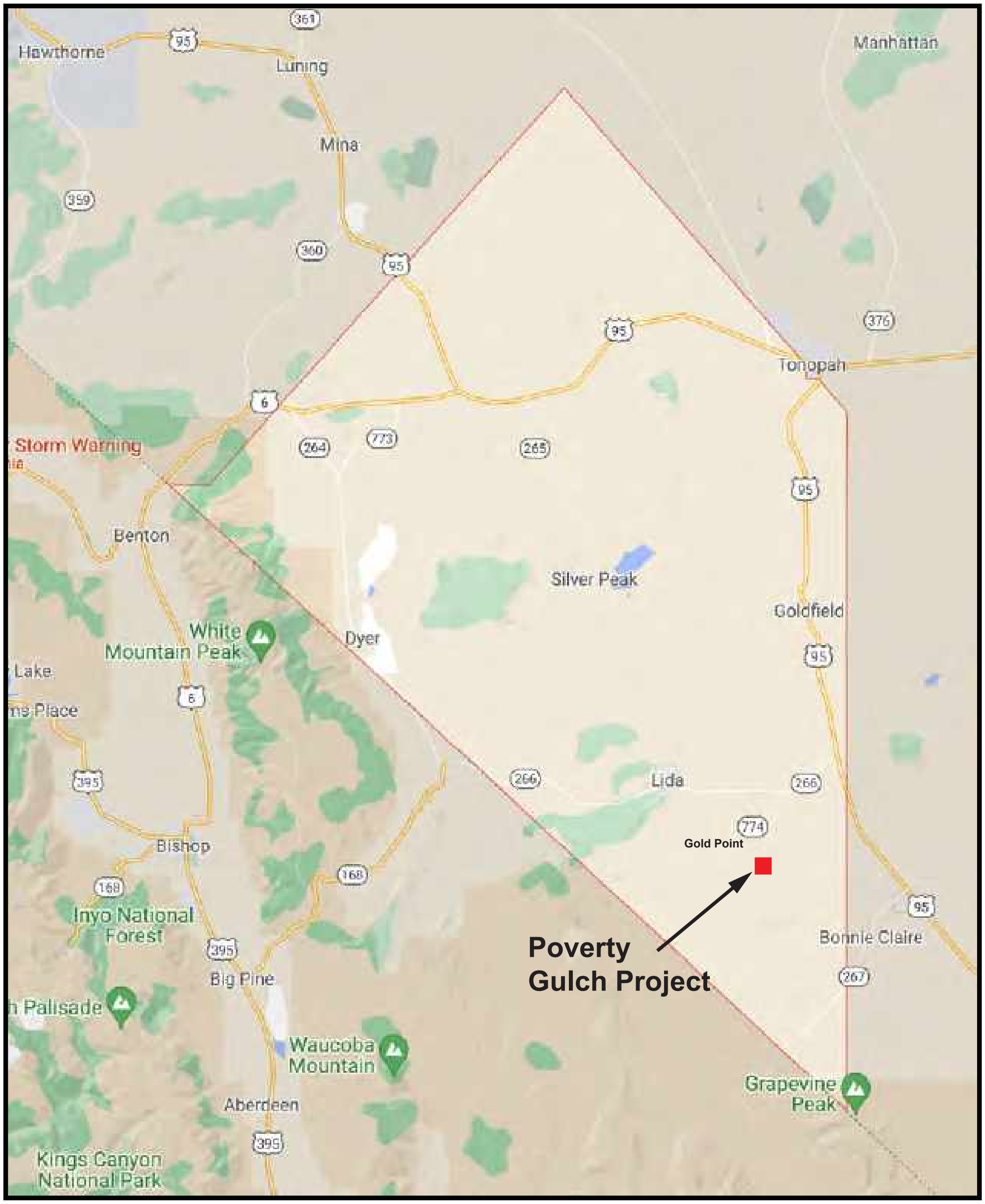
General Location Map

Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 1

Poverty Gulch Drilling Project



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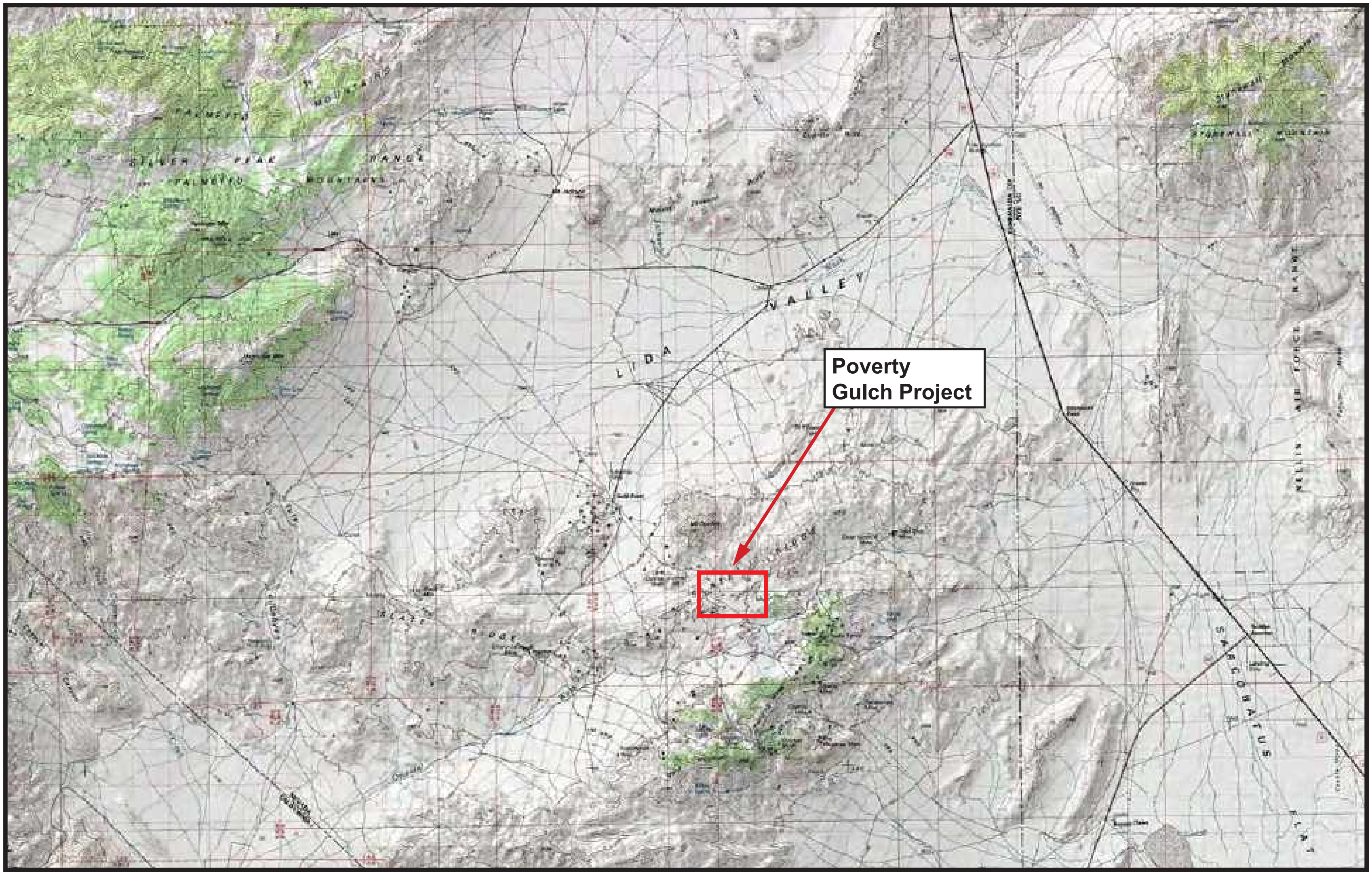
Esmeralda County Location Map

Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 2



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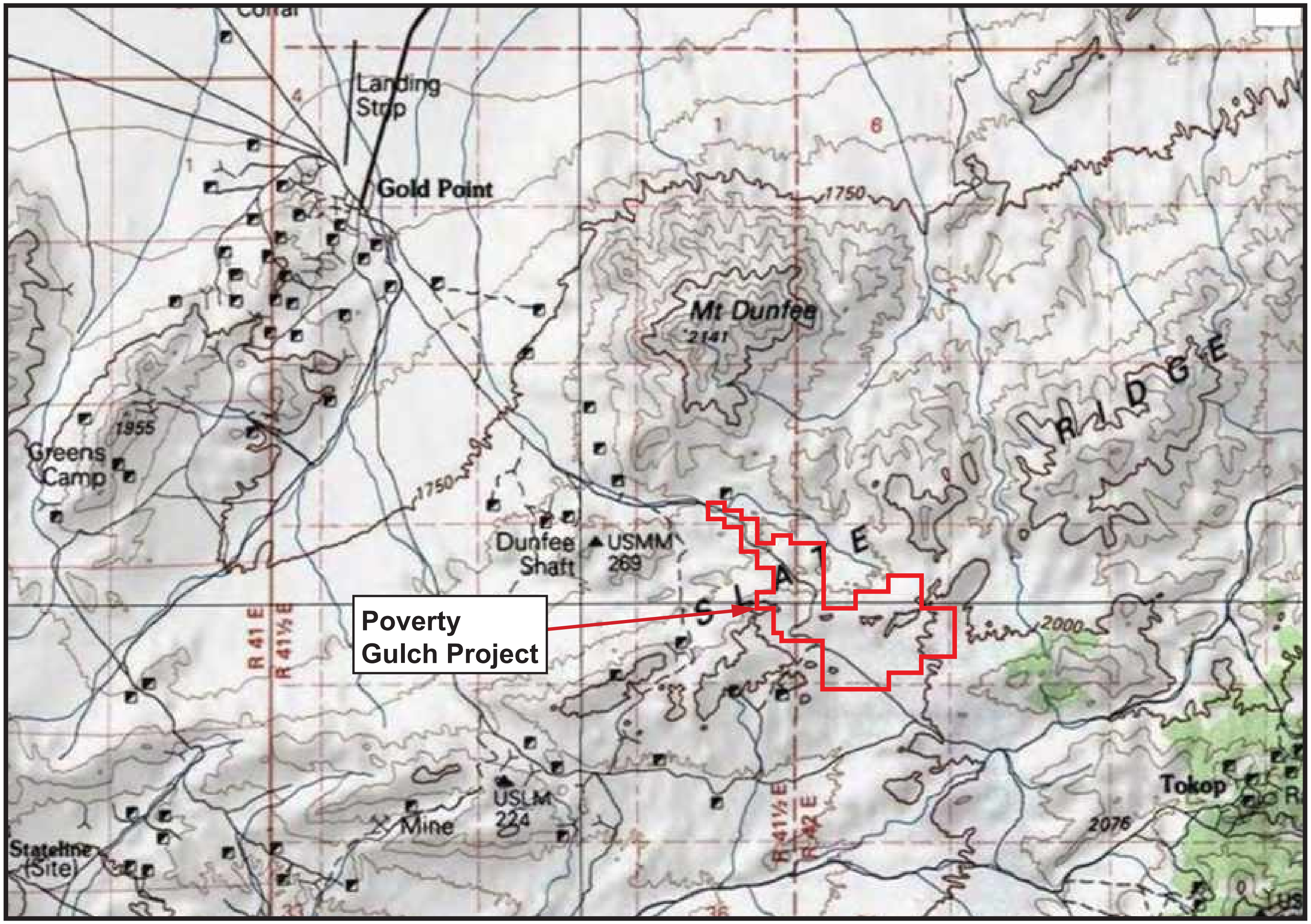
Poverty Gulch Project

Placer Mining Claims

Vacinity Topographic Map	
Gold Point Mining District	T. 7 S, R. 41.5 & 42 E. MDM
Esmeralda County, NV	Figure 3



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Poverty Gulch Project

Placer Mining Claims

General Topographic Map	
Gold Point Mining District	T. 7 S, R. 41.5 & 42 E. MDM
Esmeralda County, NV	Figure 4

7. July – October 2022 - Phase 1 bulk testing activities for gold.
8. September 2022 - Submittal of four black sand concentrate samples to Vesta Mineral Lab.
9. October 2022 - Results of four black sand concentrate samples from Vesta Mineral Lab.
10. November 2022 - Retention of Advanced Geosciences for Phase 1 Geophysical Surveys.
11. April 2023 - Retention of Advanced Geosciences for Phase 2 Geophysical Surveys.
12. May 2023 - Phase 2 Geophysical Report received from Advanced Geoscience.
13. June 2023 - Retention of Avant GeoSurveys to conduct a Phase 3 geophysical survey and detailed topographic maps.
14. July 2023. Phase - Geophysical Report received from Advanced Geoscience.
15. August 2023 - Phase 3 Geophysical Report received from Avant GeoSurveys.
16. September 2023 - Submittal and Acceptance of modified Notice of Intent to conduct exploration drilling.
17. September – October 2023 - Drilling activities.
18. October – November 2023. Preparation and submittal of samples for geochemical analysis to Vesta Minerals Lab.
19. December 2023 - Submittal of samples to American Assay Lab. For geochemical analysis.
20. January 2024 - Submittal of samples to ALS Labs for geochemical analysis.
21. February 2024 - Received geochemical results from American Assay Labs.
22. February 2024 - Reconnaissance of Tertiary gravels deposits.
23. March 2024 - Completion of the Preliminary Economic Mineral Assessment Report of the Poverty Gulch Property, Esmeralda County, Nevada.

1.3.0 Project Scope of Work.

The purpose of this report is to document the work efforts that went into the exploration and testing of the Poverty Gulch Property. The required tasks to complete this report included:

1. Review preliminary information regarding the mine and its mineralization potential.
2. Conduct a land status review of property position.
3. Acquire the permits to conduct various exploration and testing activities.

4. Hire contractors to perform specialized tasks.
5. Collect and submit samples to an independent mineral assay laboratory for analysis.
6. Review the data and prepare a technical report of the findings.

1.4.0 Location, Access, and Physiography.

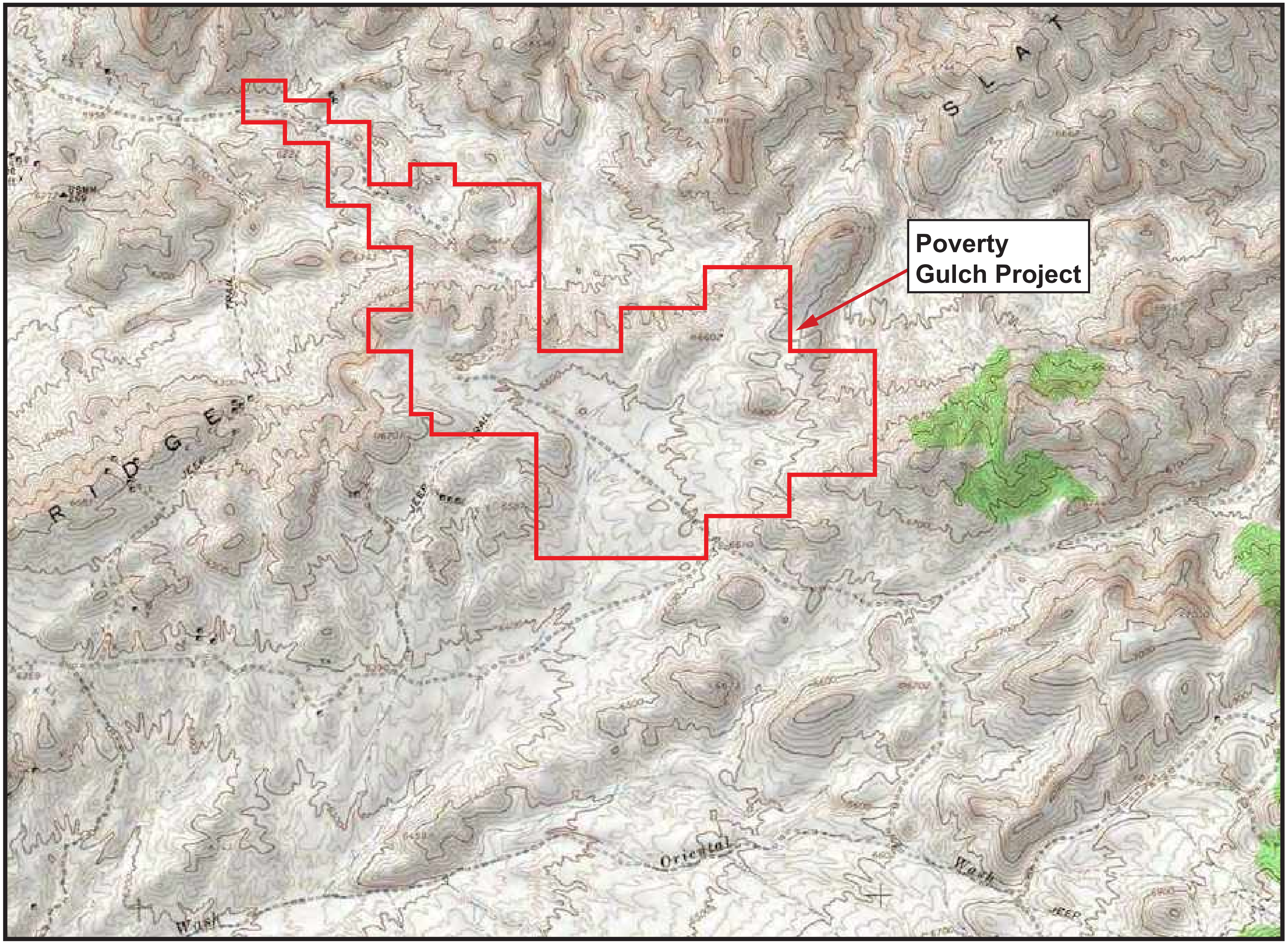
The mining claim group known as Poverty Gulch Project (PGP) is located in the Gold Point Mining District in southern Esmeralda County, Nevada (Township 7 South, Range 41.5 East, Sections 13 and 24 and Township 7 South, Range 42 East, Sections 18, 19, and 20,) (Figures 1 – 4). The claim block is located on the eastern extent of Slate Ridge.

Access to the site from downtown Las Vegas, Nevada: head northwest on Highway 95 for 158 miles to Lida Junction. Turn left (west) on NV Highway 266 and head 7.2 miles and turn left (south) on NV Highway 774 (a.k.a. the Gold Point Road). Drive 7.4 miles to downtown Gold Point. Turn left (east) on 2nd street and follow the improved dirt road (a.k.a. Gold Road) up the wash, bear left at the first “Y” and drive 4.2 miles up to the top of the pass to Slate Ridge. The road will travel up Poverty Gulch Wash and into the principal Poverty Gulch Canyon, whereupon the road will take the characteristic hairpin turn as it crests the ridge. The county road extends eastward across the gently south-facing slope. Two-track roads lead northward off the county road to access various portions of the PGP area. The north arm of the Oriental Wash crosses the county road about halfway across the site. A two-track road follows the wash and provides access to the eastern portion of the PGP area. This is an old access route that was established long before the PGP.

The site is sparsely vegetated with a variety of high-desert plants, consisting mostly of small varieties of sagebrush, ironwood, cacti, and limited grass. Joshua trees dot the landscape adding to the desert feel of the area. Animals in the area include range cattle[1], wild horse, burros, deer, rabbits, squirrels, birds, lizards, and snakes. Elevations range from 5,740’ to 6,660’.

Temperatures at Gold Point range from average high of 88˚F in the summer to an average low of 21˚F in the winter. It is an arid environment with average annual rainfall about 7.2 inches and average snowfall of 2.1 inches. Most of the precipitation happens during thunderstorms that

[1] Cattle grazing has dwindled since the draughts over the past decade or so.



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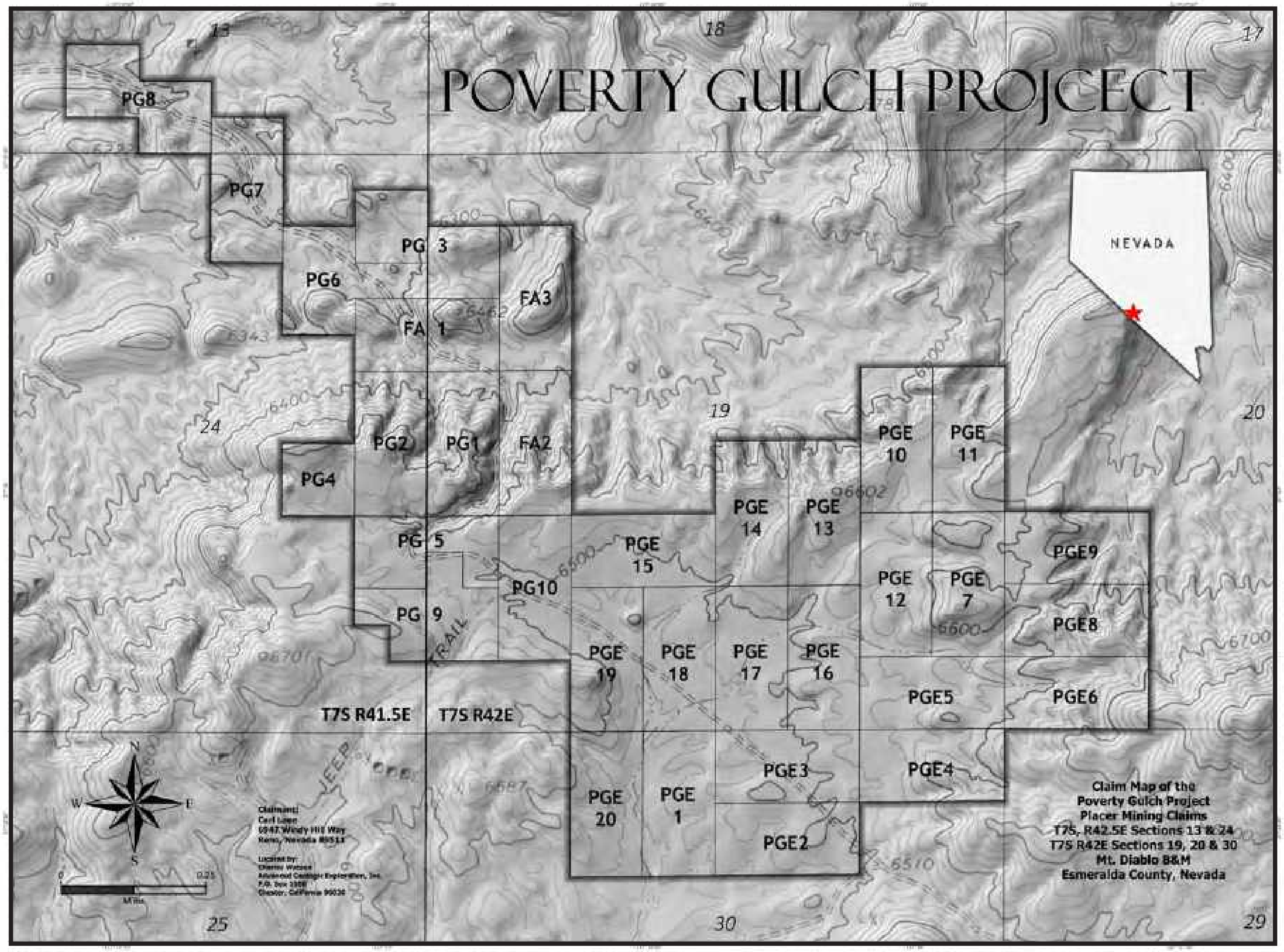
Poverty Gulch Project

Placer Mining Claims

Local Topographic Map	
Gold Point Mining District	T. 7 S, R. 41.5 & 42 E. MDM
Esmeralda County, NV	Figure 5



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Poverty Gulch Project

Claim Location Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 6

occur between July and September. Gusty winds occur nearly daily and often reach gale force in the mid to late afternoons.

Surface water is scarce in southern Esmeralda County, and none occurs in the Gold Point area and more particularly on Slate Ridge at the site of the Poverty Gulch Project. There are a few wells that have tapped the subsurface aquifers at Gold Point and are available for small commercial activities. The Nevada Department of Water Resources divides the Lida and Oriental Wash basin aquifers at Slate Ridge. Lida Valley has been the target of significant lithium exploration activities in recent years and groundwater rights to harvest the lithium-rich brines have reduced the available water rights. Oriental Wash does not have an identified economic lithium resource in the watershed and there are currently no active uses of the available water, hence, it is the most desirable target for water rights. To wit, a project has been advanced to assess the potential groundwater in Oriental Wash. A State Well Drilling Permit is required for tapping this resource.

1.5.0 Site Description.

Generally, the eastern extent of Slate Ridge tilts slightly to the south-southwest and is bordered on the north by a north-facing escarpment that forms Poverty Gulch, the east and west with steep hills and ridges, and an alluvial drainage extending to the south into the Oriental Wash. For local reference, we have named some of the topographic and physiographic features (Figure 7, Photo 3).

In general, the PGP is divided into three areas, the Western, Central and Eastern Provinces. The PGP staging area is located at the hairpin corner of the county road in the western province. There is a two-track road that leads northward from the hairpin corner up to the Northern Escarpment and continues to Dead Cow Pass. This access road does not extend all the way to the eastern portion of the property and stops at the north-south trending Dallas Ridge. The western province includes the Pimple Knoll and everything to the west, and from the Escarpment Road, across the county road and to the Southwest Ridge to the south. Much of the interior area between the Escarpment Road and the county road did not have preexisting access until this project pioneered the drill roads. It appears as though some access was made a few decades ago, likely in the Ralph Pray or Bruce Young claimant years.

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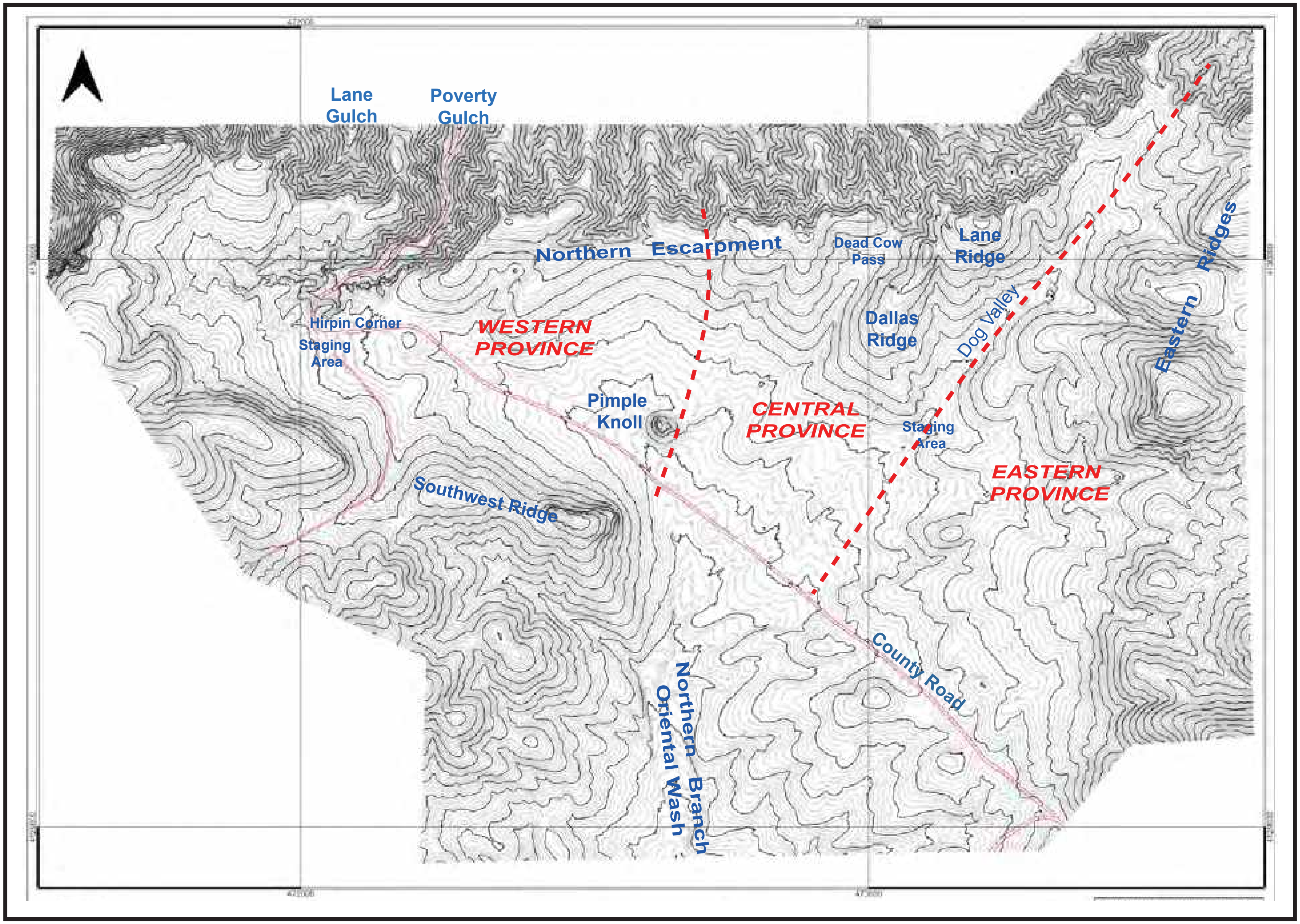

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Poverty Gulch Project

Placer Mining Claims

Place Name Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 7

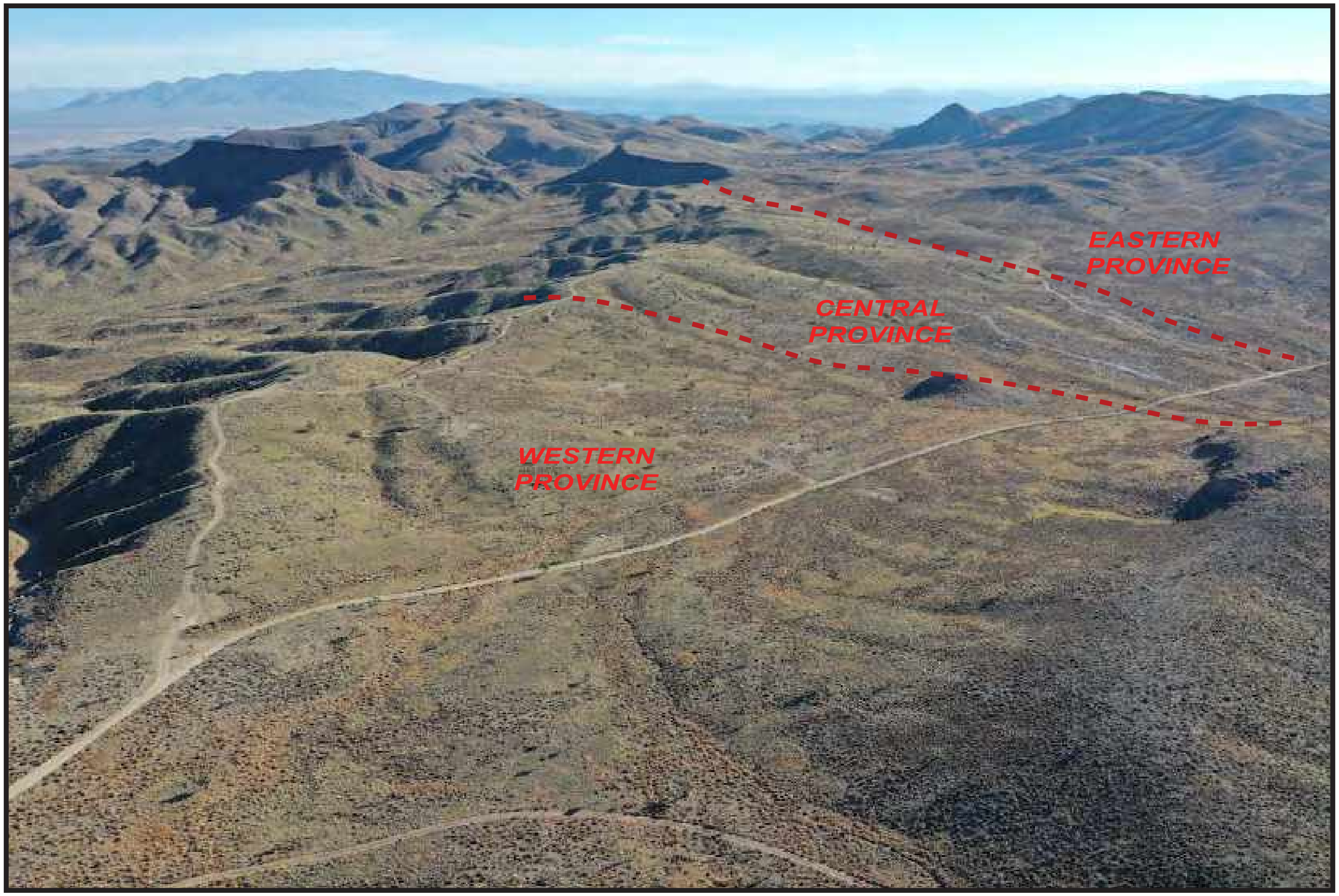

Photo 3. Drone overview of the PGP property. View is to the northeast from near the west stagging area. Notice the County Road extending from west to east across the site, the Northern Escarpment Road, and the Pimple Knoll. The Southwest Ridge is shown on the image lower right. A number of drill pads can be seen, as well as the Dog Valley Road. The Western Province is in the foreground until the Pimple Knoll, the Central Province in on the east side of the Pimple Knoll to Dog Valley, and the Eastern Province is east of Dog Valley.

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Poverty Gulch Project

Placer Mining Claims

Drone Overview of PGP Area

Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photo 3

The Central Province is referred to as the area between the knoll west of Dead Cow Pass and includes Dallas Ridge, Lane Ridge, and ridge crest west of Dog Valley. Access to Dallas Ridge and Lane Ridge are by two-track roads. There is no access along the ridge crest between Dallas and Lane Ridges to northern Dog Valley, but there are access roads that branch off to the west of the Dog Valley Road. Much of these cross-country access roads were improved during the 2023 drilling activity.

The Eastern Province is the area east of Dog Valley and north of the county road and includes the Eastern Ridges. The claim block extends east of the Eastern Ridges, but this area was not included in this evaluation. An old and overgrown two-track road accesses some of these eastern lands, but it has not been fully explored.

1.6.0 Geologic Setting.

The PGP lies at the western edge of the Great Basin physiographic province and within the southern extent of Esmeralda County (Figure 7). This area has had a tortious past, from a passive margin of the North American continent some 600 million years ago, to becoming an active plate margin where contraction and the burial that imposed a low-grade metamorphism of the sediments. It was intruded multiple times by igneous batholiths that were accompanied by precious and base metal ore mineralization, to being ripped apart by an extensional process that created intercontinental basins where sediments accumulated. In the Tertiary, the region was subjected to a prominent dislocating shear zone that produced episodic volcanic eruptions that blanketed the region, which included more precious and base metal mineralization. This was followed by more vertical and lateral tectonic activity which is ongoing today.

This project concentrates on Tertiary clastic sediments that infilled the intercontinental basins. In the PGP area, subaerial clastic rocks overlie the basement rocks. These sediments consist of alternating fine- to coarse-grained clastic sediments with varying amounts subrounded to well-rounded cobbles, pebbles, gravel, sands, silts, and clay that was initially believed to contain economic quantities of gold. After the exploration and testing activities, it was realized that while gold may still play a role in the economic potential of the property, the discovery of rare earth elements and other industrial and commercial metals dominate the financial rewards.

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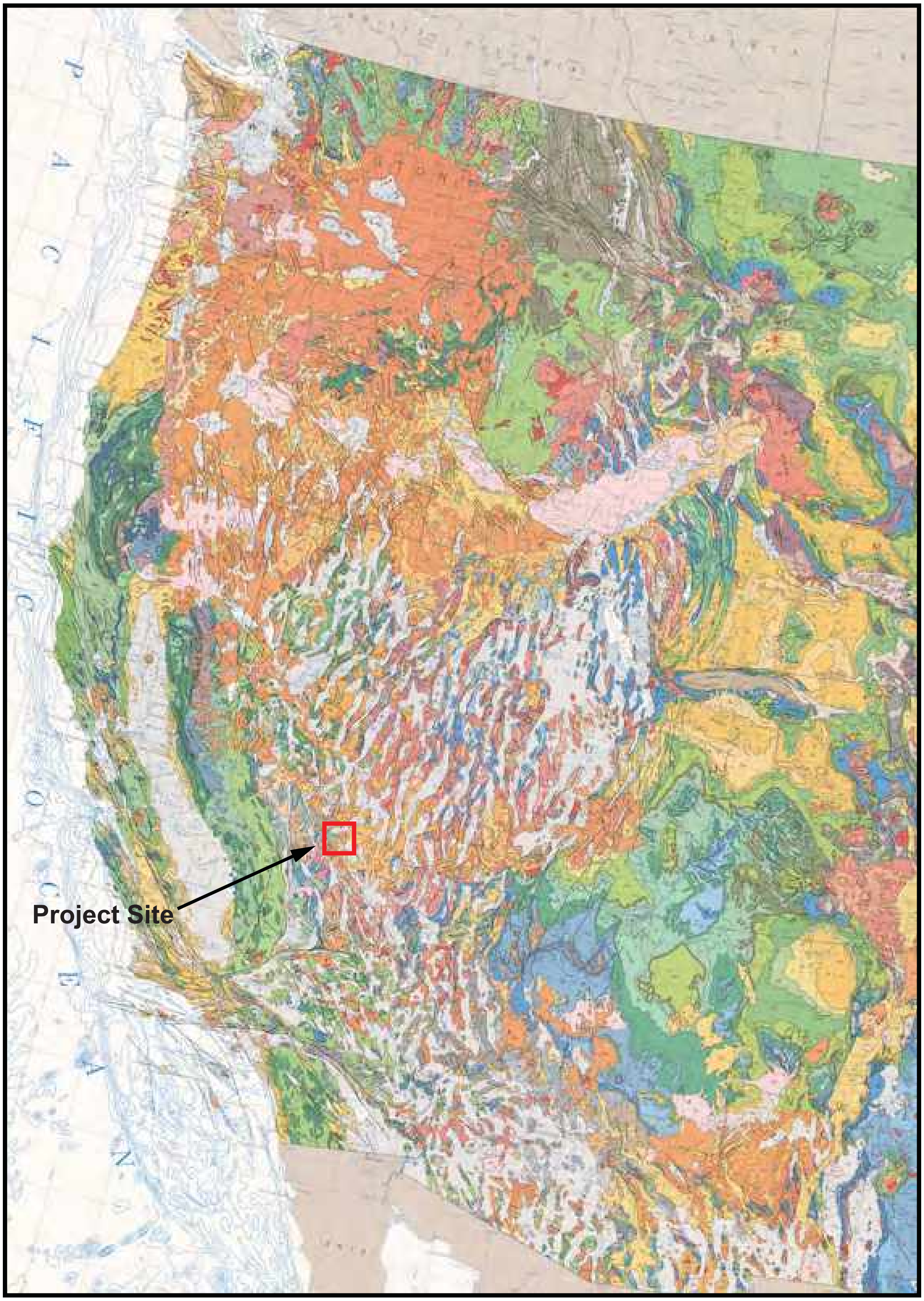
Poverty Gulch Project



Source: USGS US_Geologic Map_West Half_1974a_518942

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Geology of Western US	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 8

1.7.0 Historical Placer Production.

The Poverty Gulch and Tertiary gravel deposits of eastern Slate Ridge have had a long history of placer mining, but little data has yet to uncover exactly what happened prior to the 1980s. Johnson (1973) in the classic report, “Placer Deposits of Nevada, a catalog of locations, geology, and production with lists of annotated references pertaining to the placer deposits” discusses a number of placer deposits in Esmeralda County and subdivides them in to the various mining districts. The report briefly says that placers were discovered in 1946 in the Hornsilver District (formerly known as the Lime Point District and now known as the Gold Point District) and sampled in 1950 by a 45-foot shaft. Gold values reportedly increased in depth from $10.50 at the surface to $18.50 at the bottom of the shaft[2]. In 1956, it is also reported that 16 ounces of gold were produced. Unfortunately, the locations for these accounts are not well documented. Considering the known placer deposits in and around Gold Point, it is likely that these references were from Poverty Gulch.

One of the richest placer deposits in Esmeralda County was located about 14 miles west of Poverty Gulch in Tule Canyon (Figure 3). Johnson (1973) reports the Tule Canyon placers were discovered in 1876 but there is evidence that the deposits were mined by Mexicans earlier than 1848. It is also reported that the deposits were extensively mined by the Chinese and one account said they recovered more than $1 million in gold. The deposits were mined by several small-scaled miners throughout the early 20th century. A large operation mined the deposit in the mid 1930s and reportedly recovered more than 1,200 ounces. Since the Johnson (1973) report, another unknown large mining operation occurred in the mid 1980s and reportedly cleaned out much of the canyon, leaving a large freshwater pond that still exists today. Their reclamation activities were thorough as well. It is not known how much gold they recovered.

Albers and Stewart (1972) suggested that the Tule Canyon and Slate Ridge placer deposits were likely of the same origin. There are several lode gold mining districts in the Palmetto Mountains and at least some of the source areas of Tule Canyon may be from there. It was also speculated that the Tertiary deposits may have originated from the Sierra before the Basin and Range developed the topography of today.

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[2] Gold value in dollars per ton was $36 per ounce at the time of this publication.

1.8.0 Federal Mining Claim Land Status.

A record search at the Esmeralda County Recorder's Office and the Bureau of Land Management's MLRS online database showed that the 33 Poverty Gulch placer mining claims are in good standing with both agencies. All claims are valid for the 2024 mineral year. BLM Serial Record Pages (SRPs) for each claim is shown in Appendix A.

Claim Name	NMC Nos.	County Nos.	Acres
Poverty Gulch #1 – #10	NV101592252	2019-216512	~200
	NV101592253	2019-216514	
	NV101593217	2019-216516	
	NV101593218	2019-216518	
	NV101558240	2019-215286	
	NV102151244	2019-217696	
	NV102151245	2019-217698	
	NV102151246	2019-217700	
	NV101767907	2019-217796	
	NV101770127	2019-217734	
First American #1 – #3	NV101159250	2019-216508	~60
	NV101159251	2019-216510	
	NV101822321	2019-218080	
PGE #1 – #20	NV101768243	2019-217791	~400
	NV101768244	2019-217792	
	NV101768245	2019-217793	
	NV101768246	2019-217794	
	NV101768247	2019-217798	
	NV101768248	2019-217799	
	NV101768249	2019-217800	
	NV101768250	2019-217801	
	NV101768251	2019-217802	
	NV105282499	2021-228467	
	NV105282500	2021-228468	
	NV105282501	2021-228469	
	NV105282502	2021-228470	
	NV105282503	2021-228471	
	NV105282504	2021-228472	
	NV105282505	2021-228473	
	NV105282506	2021-228474	
	NV105282507	2021-228475	
	NV105282508	2021-228476	
	NV105282509	2021-228477	
Total			**~660**

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The Poverty Gulch property has one competitive claimant who has 10 placer mining claims in the middle of Escarpment Ridge and to the northeast. The Moro claim block has had some mining in the past, most of it was small and concentrated in the drainages and at the base of Escarpment Ridge. His operations included excavating the secondary alluvial fans and trucking the material to his processing faciality in Gold Point. It was said he made enough from the gold he recovered to provide for his livelihood.

1.9.0 Permitting.

Since these are federal mining claims, the principal permitting jurisdiction lies with the Bureau Land Management (BLM). Notices of Intent (NOI) are required for small-scale mineral exploration and testing, as well as extended overnight camping lasting more than 14 continuous days. Plans of Operations are required for any mining operations that cause disturbances over five acres. Federal regulations are stricter than State of Nevada laws and compliance can be cumbersome and time consuming. Fortunately, with numerous mining operations on BLM lands in Nevada successful mining permit applications are commonplace.

The State of Nevada has various regulations regarding large-scale mining activities. Typically, these are not required until a threshold of 36,500 tons-per-year (100 tons-per-day) is reached. The Nevada Department of Environmental Health regulates environmental impacts to the lands in the state and depending on the scope of the mining operation, will require compliance once they determine a “significant” threshold has been reached.

Esmeralda County does not have a permitting code; therefore, no county permits are required of any kind from them at any phase of a mining project. Private property, including those from a patented mining claim, are considered premier properties for conducting mining operations because the activities only need to comply with state regulations, which are more relaxed than federal regulations.

1.10.0 Previous Poverty Gulch Permitting.

It is not clear when permitted activities began at Poverty Gulch. It is believed that Ralph Pray was responsible for the numerous dozer cuts and possibly an augur hole, but this was at a time and, in an area, where claimants did what they pleased. It is understood that Bruce Young conducted activities with heavy equipment, but it is not certain if he had a permit to conduct those activities either. The Moro claim block claimant, Rodolfo Martinez, has a current Plan of Operations for his adjacent claim block. It is not clear when he was granted the permit; it is obvious he has not done any work on his claims in several years.

Mathew Moroney obtained a Plan of Operations on his Poverty Gulch #1 – #4 and First American #1 – #3 claims to conduct mineral exploration and testing from 2015 – 2017. He had a mill site claim in Gold Point to process the material. He also had a Nevada Department of Water Resources Special Use Permit to use water for processing. It is said he recovered enough gold from his activities to provide for a simple lifestyle.

TXO Resources, LLC acquired the claims from Moroney in 2017 and continued the exploration and testing of deposits. They had to obtain a new Plan of Operation to conduct their activities. They disturbed significantly more ground than their permit allowed and conducted only marginal reclamation activities. The BLM placed a cease-and-desist order on their activities until they came back into compliance. According to the BLM, they never fully complied with the order. Their claims were forfeited by the BLM on December 20, 2017, when they failed to file an Affidavit of Assessment. Global Resource Recovery, LLC, a sister company to TXO Resources, LLC hired Advanced Geologic to relocate the claims on April 10, 2018, and transferred them to Global Resource Recovery, LLC on June 1, 2018. The BLM issued Global Resource Recovery, LLC a Decision Letter requesting a corrected map to the Certificate of Location, which they never corrected and on May 5, the BLM forfeited the claims with a Failed to Cure a Defect decision[3]. At that point, their Plan of Operation permit expired.

1.11.0 Poverty Gulch Project Phase 1 Exploration and Testing Permitting.

In August 2019, an application for a Notice of Intent (NOI) permit to conduct a mineral exploration and testing activity on the PGP property was submitted to the Bureau of Land Management (BLM). Within this application was a short form Reclamation Bond Estimator (RCE) with a total of $8,866 for the reclamation bond[4]. For the next two months, the BLM

[3] Advanced Geologic had rescinded all representation with Global Resource Recovery, LLC in December 2018 due to non-payment of professional services. Hence, was not responsible for correcting the certificate defect. Advanced Geologic offered to relocate the claims if they paid the outstanding services and Global Resource Recovery, LLC declined.
[4] The short form RCE is used when projects are small and do not need elaborate and detailed calculations for a Plan of Operations permit.

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requested modifications and corrections to the NOI application[5]. Finally, in mid-October 2019, the BLM reviewed the NOI and responded that the short form was not the correct form to use since we were processing the placer deposits onsite using water. According to them, this created a level of oversite that the RCE long form was required. Moreover, they completed a RCE long form for the project and arrived at a reclamation bond amount of about $41,000.

On October 30, 2019, a conference call with the BLM-Tonopah office was held where the RCE bond amount was discussed in detail. The BLM insisted their bond amount was required and Advanced Geologic insisted that this was excessive, and an impasse developed. A number of permitting experts and attorneys were contacted as to options about the BLM's excessive requests. Several months passed and on August 6, 2020, and Decision Appeal letter was submitted to the BLM State Director to review the application. Per the appeal statutes, the Director has 21 days to respond to the appeal, and once that date had passed, the BLM was contacted again about the appeal. The BLM-Tonopah office said the appeal was in review but with the expiration of the 21-day review period, this created a serious situation.

A direct personal conversation with Acting State of Nevada Branch Chief for the Nevada BLM was initiated and on September 11, the appeal review process began[6]. After much back and forth, and on November 9, 2020, the Acting State BLM Director informed the Tonopah BLM office to revise its review process of all Notices of Intent level placer exploration and testing activities, especially the PGP, and devise a RCE short form application procedure. The Acting State BLM Director informed PGP that the initial NOI application had expired, and a new application was needed to further pursue any activities. On November 9, the Tonopah BLM office was informed that the PGP would be submitting a new NOI and to forward the revised RCE short form.

Now with a cooperative Tonopah BLM, preparation of a new and improved NOI and RCE short form bond calculator began in early January 2022[7]. Advanced Geologic hired Matt Duzenbury,

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[5] At this time, the Tonopah District Office for the BLM was going through some internal audit issues, and they were not issuing any permits. Instead, they requested clarification on text, map points, new RCE bond calculators, occupancy forms, or would not respond in a timely manner. This went on for several months and tensions were running high.
[6] Apparently, the internal troubles at the BLM had risen to the highest state office and the Director had stepped down and an Acting Director had been installed. In the confusion of things, the PGP NOI bond appeal had been misplaced.
[7] The Covid pandemic began in early 2020 and derailed numerous people's lives and business activities, including the PGP. Not much PGP permitting work was done in 2021.

an experienced mining and exploration permitter, to assist in the permitting of the PGP activities. After many changes and modifications, a revised NOI was submitted to the Tonopah BLM office on March 30.

On April 20, 2022, the PGP received a Notice of Intent (NOI) Permit No. N-101220 from the Bureau of Land Management (BLM) that allowed for 1.69 acres disturbances associated with their exploration and bulk sampling activities in 2022 (Appendix B). The reclamation bond amount was $21,548, half of what was determined in 2020, yet still excessive of what was standard for the industry. The reclamation bond was paid, and the activity began.

1.12.0 Poverty Gulch Project Phase 2 Exploration Drilling Project Permit.

In January 2023, the PGP wanted to move forward with collecting subsurface samples using an auger drill. Surface disturbances would be associated with this activity and a NOI would be necessary. Much of the disturbances associated with these 2022 activities was reclaimed and credited back to the permit. The 2022 permit was amended in 2023 to allow for the auger drilling program. The 2023 program required a reclamation bond of $21,413, which is slightly less than the $21,548 from the 2022 activity. Hence, no new reclamation bond money was required for the 2023 program. The amended permit is still active.

The 2023 drilling program had an estimated disturbance footprint of 4.90 acres as determined in the NOI permit. This is very close to the disturbed area limit of 5.0 acres allowed by the federal NOI permitting schedule. At the conclusion of the drilling activity, the total amount of disturbance was estimated to be about two-thirds of that what was allotted for in the NOI permit.

This could be a windfall for the planned bulk testing activity in 2024 because the project may still be able to remain under the 5.0-acre disturbance threshold if the BLM agrees with our preliminary disturbance assessment and appropriate planning is done for the upcoming project. Nevertheless, once the 5.0-acre disturbance threshold is crossed, a Plan of Operations permit is the next appropriate course of action.

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PART 2 PHYSICAL CHARACTERIZATION OF THE PROPERTY.

Part 2 discusses in detail the regional and local geology and proposes correlation of the clastic deposits, the sedimentary deposits that carry the PGP's mineralization, with known deposits within reasonable distances as to be correlative. This would aid in securing additional ground outside the PGO area. A detailed presentation of the structural geology shows just how much the roll of the tectonic activity has occurred in the PGP area and begins to show how dynamic this area has been for several tens of millions of years.

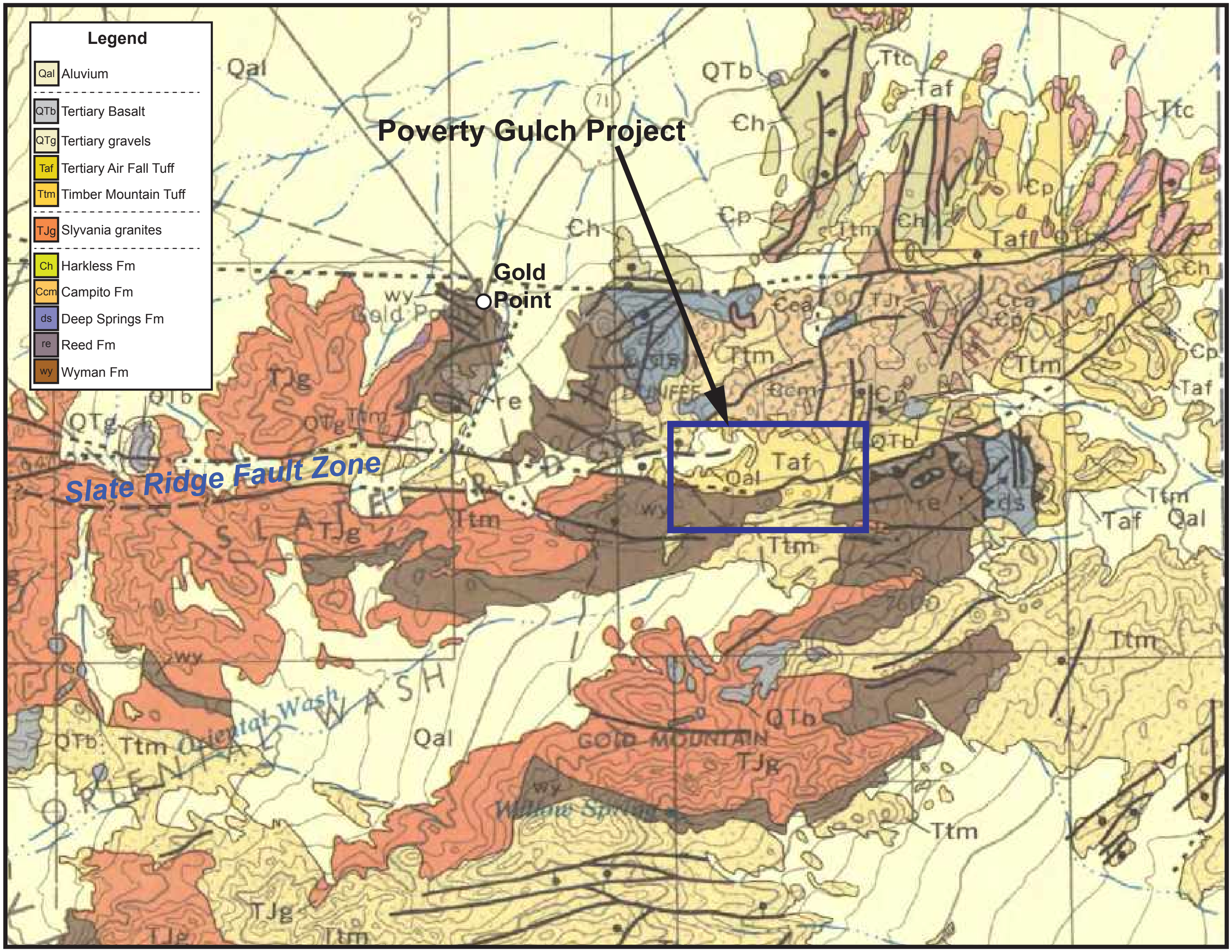
Since stratigraphic exposures of the deposits were restrictive, the PGP employed geophysical tools to look into the subsurface and potentially determine the thickness of the clastic deposits, how tectonics has influenced the property, and guide further exploration and testing activities towards identifying the potential economic mineral resource on the PGP property.

2.1.0 Geology.

The regional bedrock in the PGP area is composed of Upper Precambrian sedimentary rocks of low-grade metamorphosed shale, sandstones and limestones that have been intruded by the Sylvania quartz monzonite pluton (Albers and Stewart, 1972; Albers and Stewart, 1965; Stewart and Diamond, 1990) (Figures 9 and 10). The sedimentary rocks are principally of the Wyman Formation, with scattered outcrops outside the PGP area of the Reed Dolomite and the Deep Springs Formation. They were deposited along the passive western margin of North America approximately 540 - 800 Ma.

During late Paleozoic and Mesozoic orogenies, the region was shortened and subjected to low-grade metamorphism (Oldow et al., 1989; Oldow et al., 2009), and granitoids were emplaced at roughly 155 and 85 Ma. There are no Upper Jurassic, Cretaceous or early Tertiary rocks in Esmeralda County, suggesting the area has been above sea level since this time.

According to several authors, including Niemi, 2012, Tertiary strata in southern Esmeralda County and northern Nye County began in the late Eocene to early Oligocene (~38 Ma) and are comprised of three principal types: continental clastic sedimentary rocks, airfall ash and ash flow tuffs, and lava flows. The PGP deposits include the clastic sedimentary deposits of which there are three possible correlations, the Titus Canyon Formation, the Pangua Formation, or



Source: Albers and Stweart, 1972

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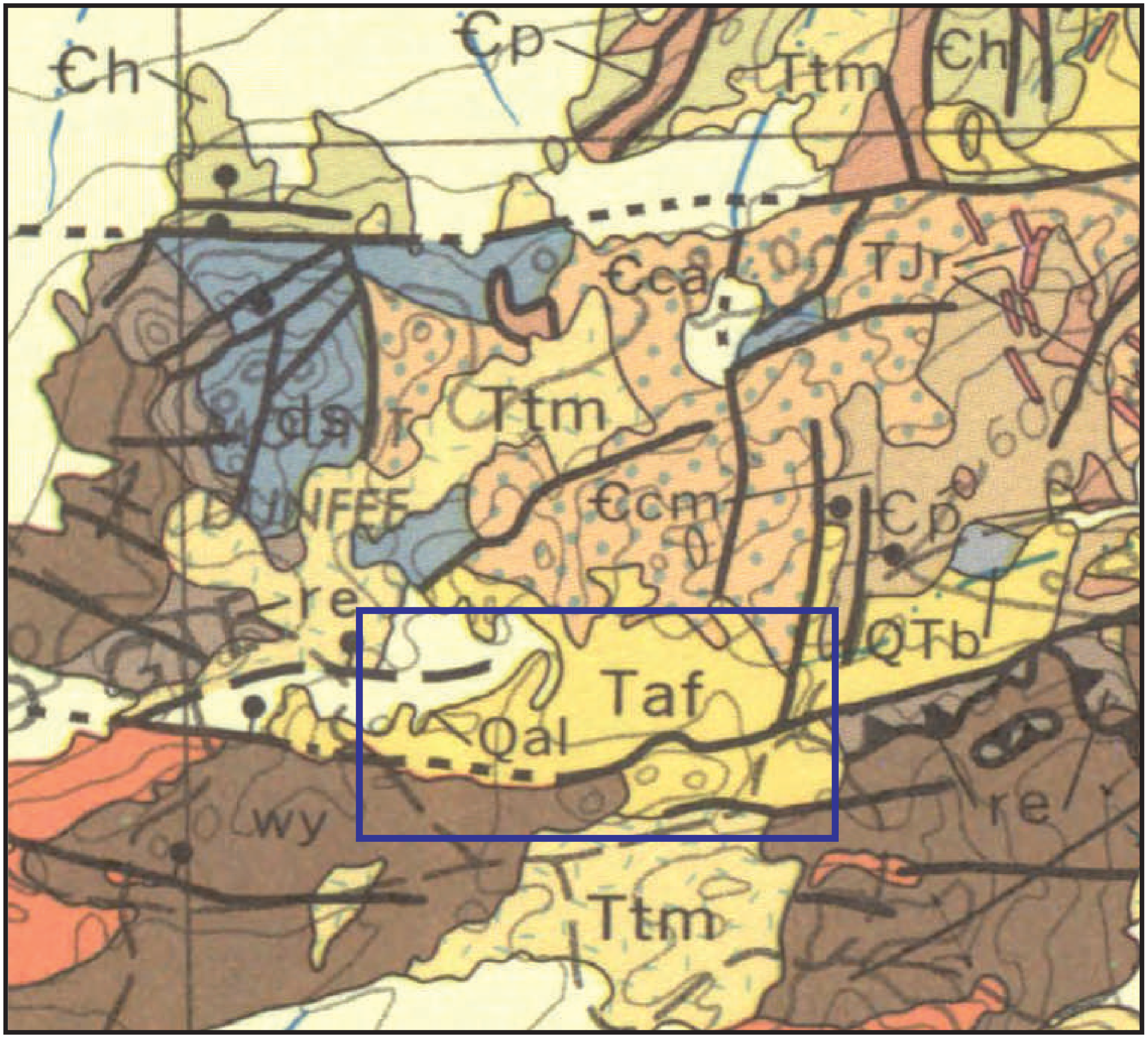
Poverty Gulch Project

Placer Mining Claims

Regional Geology Map	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Figure 9



Legend

- Qal Aluvium
- QTb Tertiary Basalt
- QTg Tertiary gravels
- Taf Tertiary Air Fall Tuff
- Ttm Timber Mountain Tuff
- TJg Slyvania granites
- Ch Harkless Fm
- Ccm Campito Fm
- ds Deep Springs Fm
- re Reed Fm
- wy Wyman Fm

The authors have miss-mapped the Tertiary clastic sediments as Tertiary Air Fall Ash (Taf). The structural geology is much more compli-cated than shown.

Source: Albers and Stweart, 1972

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Poverty Gulch Project

Placer Mining Opportunity

Local Geology Map	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Figure 10

something entirely of unknown origins. Overlying the clastic sediments is a volcanic sequence composed of airfall ash, welded and non-welded ash flows, and some outcrops of basalt (Albers and Stewart, 1972). The ash and welded tuff most likely belong to the 10.5 to 11.5 million years Ammonia Tank Member of the Timber Mountain Tuff whereas the basalt is likely from a separate volcanic eruption in the very late Tertiary or early Quaternary.

2.1.1 Bedrock Sediments.

The most common bedrock sedimentary unit is the Wyman Formation. These are the oldest rocks in Esmeralda County and are dated at Upper Precambrian (541 to ~800 million years). It is composed of phyllitic siltstones, phyllitic silty claystones, and minor amounts of limestone, dolomite, sandy limestones, limy siltstones and limy fine-grained sandstones. The Wyman Formation is many thousands of feet thick and individual layers range in thickness from tenths of an inch to 20 feet, and rarely thicker than 50 feet. Some of the limestones are oolitic or pisolitic, the latter of which may be associated algal mats – the first signs of life for this planet. The strata are somewhat metamorphosed to the phyllite and marble. The bedding generally strikes east – west and dips to the south-southeast.

The Precambrian Reed Dolomite is exposed in only a few locations, one east of the project area and the other to the north of the project area at Mount Dunfee. It is mostly a homogeneous sequence of white to medium gray, medium to coarsely crystalline dolomite. All internal structures and bedding have been obliterated by metamorphism and tectonic stress. In all observed locations the Reed Dolomite is in fault contact with the Wyman Formation, albeit Albers and Stewart (1972) show a conformable contact may exist at the Mount Dunfee exposure.

2.1.2 Intrusive Rocks.

The Middle Jurassic age Sylvania pluton is the largest intrusive mass in Esmeralda County. It occupies a total surface exposure of over 225 square miles (Reynolds, 1969; Albers and Stewart, 1972, Wright and Troxel, 1993). There are no intrusive outcrops in the PGP area and the nearest exposure is approximately a half mile to the west. Nevertheless, it is important to understand that it likely underlies all the PGP area.

The chemical composition is largely quartz monzonite with portions and pods of granodiorite and lesser amounts of diorite, monzonite, and syenite. Textures are either xenomorphic or hypidiomorphic granular. Plagioclase K-feldspar and quartz are the essential minerals, with varying amounts of biotite, hornblende, sphene, apatite and opaques. Biotite is more common than hornblende and commonly makes up 5 to 15% of the rock. There are occasional pegmatite zones within the pluton. There are numerous quartz veins of various sizes and compositions that are internal to the pluton, and some extend into the sedimentary rocks.

The pluton violently intruded the sedimentary rocks, and an alteration halo extends outward into the sedimentary rocks for up to two miles. All conformable contacts show pervasive hornfels alteration whereby intense boiling from contact thermal metamorphism had occurred. Argillic rocks commonly become silicified and/or gossanous whereas limey rocks are altered calcsilicate hornfels and/or skarn.

It is likely that some of the precious and base metal mineralization found in the eastern Slate Ridge was derived from the Sylvania pluton. It is further likely that the plutonic intrusion event was at tens of thousands of feet below the surface when it occurred.

2.1.3 Tertiary Volcanic Rocks.

Volcanism in southwestern Nevada started about 38 million years ago (Late Oligocene) (Albers and Stewart, 1972; Nikolas, et al., 2022; Miller et al, 2022). After a short hiatus, widespread volcanic activity effected nearly every part of the county, which accumulated thick sequences of flows, welded and non-welded tuffs, airfall ash, tuff flows, and tuff flow breccia with a variety of compositions but predominantly andesite, rhyolite, latite and rhyo-dacite. Volcanism has occurred at various times since then. Minor volcanism elsewhere in the county continues to this day. There are no known Tertiary intrusive rocks on Slate Ridge, however, multiple hydrothermal areoles could have been formed during this Tertiary volcanic period and was responsible for the gold and silver mineralization of the Silver Queen and Poker Game Mines located a few miles west of the PGP. It may be likely that mineralized basement rock could underlie the PGP property.

The Tertiary volcanic events of southern Esmeralda County blanket the older basement rock sedimentary and intrusive rocks with tens to several hundred feet of material. The majority of these volcanic deposits were from three sources, the Crater Flat Group, the Paintbrush Group,

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and the Timber Mountain Group, each of which have sources to the southeast and within the Nevada Nuclear Test Site with the Crater Flat Group located the furthest from the PGP area. Each of these volcanic centers are proximal enough and may have contributed volcanic strata in the PGP area. Each contains a number of sub-members that indicate specific large-scale volcanic eruptions.

The Crater Flat Group consists of the, from oldest to youngest, the Tram Tuff which has no absolute date but is constrained to between 13.55 Ma, the age of the overlying Bullfrog Tuff, and 13.5 Ma of the overlying Belted Range Group, and the Bullfrog Tuff (13.25 Ma; Sawyer et al., 1994). The Paintbrush Group has transitioned and indorsed by Snow and Lux (1999) to the Tiva Canyon Tuff and has an age date of 12.7 Ma (Sawyer et al, 1994). The Tram Tuff in a pale red pumiceous tuff with Paleozoic lithic fragments at the bottom and rhyolite and intermediate composition lavas at the top. This likely suggests a violent explosive event created the Tram Tuff. The Bullfrog Tuff is marked by a dark gray to black vitrophyre that is overlain by a brick-red to brownish-red welded tuff. Phenocrysts are predominately quartz, sanidine, and plagioclase, with trace biotite.

The Timber Mountain Group contains two members, the Rainier Mesa Tuff (11.6 Ma) and the Ammonia Tanks Tuff 11.45 Ma (Sawyer, et al., 1994). The Rainier Mesa Tuff is a single cooling unit that is moderately brown, pale red to salmon-colored, or light gray in color (Niemi, 2012). A partially welded zone at the base that gives way upward to a densely welded zone. Phenocrysts comprise ~20% of the tuff, with quartz being the most abundant, and including sanidine, plagioclase, and biotite. The Ammonia Tanks Member type location consists of a sequence of airfall tuff, nonwelded tuff flows, and tuff flow breccia (all referred to as the "tuff" unit), with a minor amount of welded tuff flows.

In the PGP area, the Tertiary volcanic sequence is welded ash overlying airfall tuff and nonwelded tuff flows, which are likely from multiple eruptive events. Most of the welded ash has been eroded, cropping out on the Southwest Ridge on the Pimple Knoll, on Dallas Ridge located in the north-central part of the property, and the East Ridge located on the eastern margin of the property. The welded tuff flows show a distinctive biotite quartz latite composition with crystals of quartz, sanidine, plagioclase, and biotite.

The Timber Mountain airfall tuff and nonwelded tuff flow deposits crop out throughout the PGP property. The thickness varies from a few feet to greater than 100 feet. It has a distinctive white

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appearance, and some layers can become gray. The principal volcanic unit is a volcanic tuff that was correlated to the Ammonia Tanks Member of the Timber Mountain Group (Albers and Stewart, 1972). Snow and Lux (1999) described this unit as airfall tuff and ash flow tuff that likely had multiple eruptive events. Niemi (2012) suggests its maximum thickness could be as much as 1000 meters. The age is 11.45 Ma (Sawyer, et al., 1994). Hand samples were obtained of the ash, but no efforts were made to describe its various attributes.

One pale salmon-colored layer below the white Ammonia Tanks Tuff was encountered in drill hole PG-H-18 at a depth of 80-100 feet. Snow and Lux (1999) described this unit and Niemi (2012) correlated it to the Rainier Mesa Tuff (Photos 4 – 6). The Rainier Mesa Tuff has many exposures in the Nevada Test Site area whereupon it is separated by a basalt flow. However, the basalt unit is absent in the Grapevine Hills and perhaps explains why it is absent at Slate Ridge. The age is 11.6 Ma (Sawyer, et al., 1994). Hand samples were obtained of the ash, but no efforts were made to describe its various attributes.

A basalt flow exists on a few ridges on Slate Ridge, but no outcrop occurs in the PGP area. From a distance, the welded ash can be confused with the basalt flow. As typical, the basalt is aphanitic with tiny plagioclase, olivine, pyroxene and hornblende crystals. One basaltic vent is located about a dozen miles southeast of Slate Ridge near Grapevine Canyon Road. It is not known if the basalt is Late Tertiary (Pliocene) or Quaternary.

2.1.4 Titus Canyon Formation.

The earliest known Tertiary clastic sedimentary deposits in the southern Basin and Range are the Titus Canyon Formation and according to Miller, et al., 2022, it is comprised of variable sequences of fluvial conglomerates and sandstones, sedimentary breccia (presumably landslide deposits), lacustrine sands, silts, and marls. Tuffaceous layers are scattered throughout the formation. The location of the Titus Canyon Formation lies about 34 miles southwest of the PGP area in the central Grapevine Mountains, along the Titus Canyon Road[8] (Figure 11). The range lies on the northeast margin of Death Valley and straddles the California-Nevada border.

[8] This is within the Death Valley National Park. Currently the Titus Canyon Road is closed to all pedestrian and vehicle access due to washouts from the August 2022 floods. Permits are required for all sample collections, which will likely not be available until after 2025 when the Park anticipates when the roads will be opened.

Photo 4 A. A pale salmon-colored layer was encountered below the white Ammonia Tanks Tuff in drill hole PG-H-18 at a depth of 80-100 feet. Snow and Lux (1999) described this unit and Niemi (2012) correlated it to the Rainier Mesa Tuff.

Photo 4 B. Ammonia Tanks Tuff.

Photo 4 C. Rainier Mesa Tuff.

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Poverty Gulch Project

Placer Mining Claims

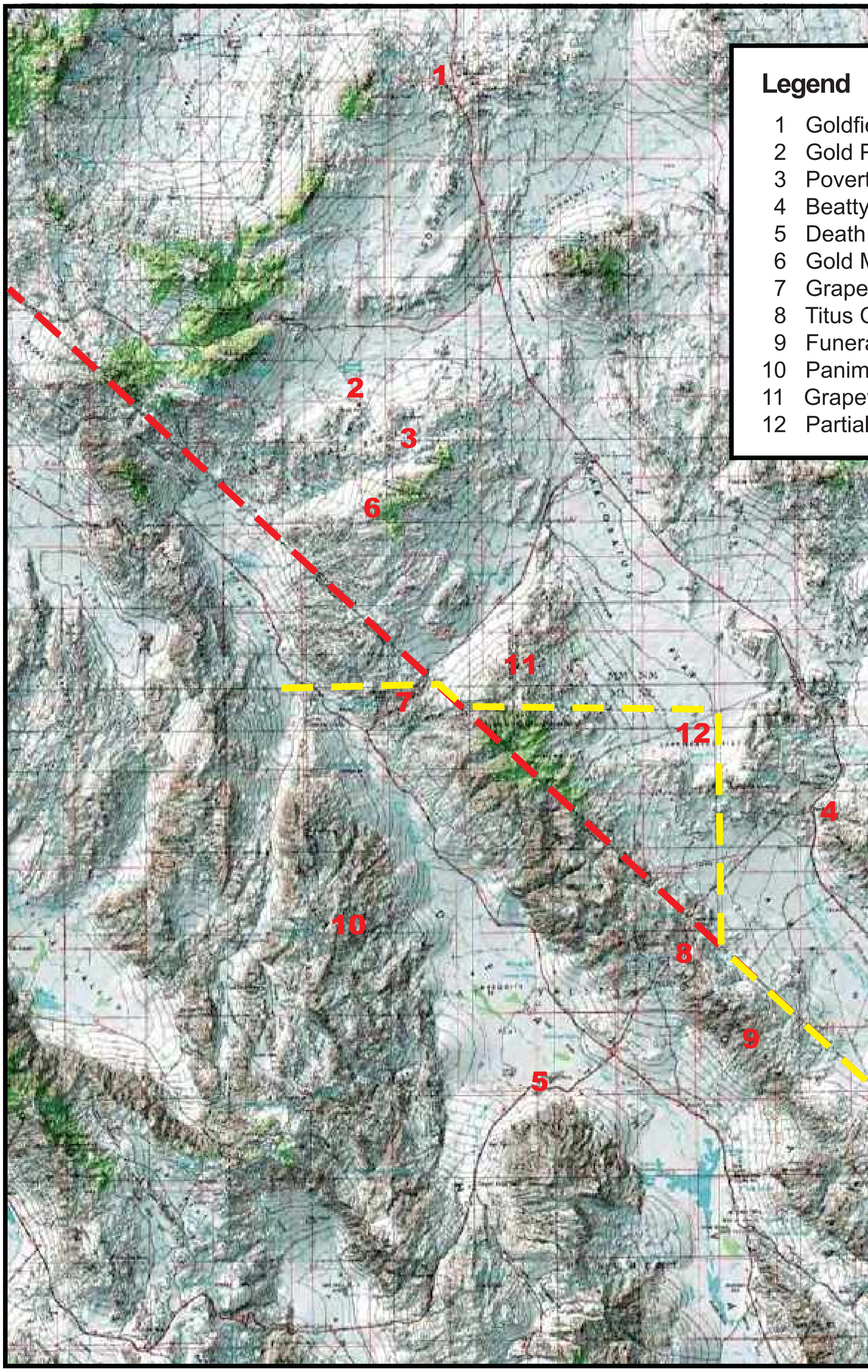
Ammonia Tanks & Rainier Mesa Tuffs	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photo 4

This location, as well as other Titus Canyon Formation sites, are fully contained within the Death Valley National Monument, where collecting samples is prohibited without a permit.

The Titus Canyon Formation was first described by Stock and Bode (1935) who performed preliminary stratigraphic measurements and thickness estimates. Reynolds (1969) significantly refined the stratigraphy and subdivided it into four units. Snow and Lux (1999) revisited the stratigraphy and subdivided the Titus Formation into three facies, a lower sedimentary breccia facies, variegated facies, and the brown conglomerate facies. Reynolds's top unit, a green conglomerate, was removed from the section and added to the overlying Panuga Formation. Each facies have distinct characteristics that separates themselves from the others. Fridrich and Thompson (2011) gave a regional and in-depth overview of the Cenozoic stratigraphy of the Death Valley and surrounding regions, including a review of the Titus Canyon Formation. Niemi (2012) once again revisited the Titus Canyon Formation stratigraphy using Snow and Lux's (1999) revised definitions and conducted detailed mapping and sampling, concentrating on the stratigraphy in various locations and comparing them to the previous authors.

Nikolas, et al (2022) conducted another detailed mapping and sampling of the Titus Canyon Formation, concentrating on the stratigraphy in various locations and comparing them to the previous authors. Their objective was to provide better age dating (chronostratigraphy) using radiometric dating of the zircons and biotite minerals found within specific layers of the Titus Canyon Formation. They found three distinct populations of zircon U-Pb ages with the oldest grain populations from 3.1 Ga to 400 Ma, another cluster at 2.7 Ga, 1.9–1.8 Ga, 1.5–1.4 Ga, and a third set at 1.1–1.0 Ga. These dates could correlate the Neoproterozoic rocks from three known areas, 1) Grenville origin (Wyoming), 2) the Mojave basement rocks in California, or 3) Yavapai basement rocks in west and central Arizona. Therefore, one source area would be from the north of the PGP area and two others would be from the south. They also found an intermediate age population forms a distinctive triple peak distribution of 105 Ma, 170 Ma, and 220 Ma. According to them, these represented source areas of the Sierra and the "Nevadaplano" – a highlands in northern Nevada in the late Mesozoic and early Cenozoic.

However, detrital zircons are extremely durable, therefore, are recyclable within sediments of younger age, and while age clustering could interpret source areas, their ages are not particularly reliable (personal communication, E. Miller, 2024). According to Miller, there are outcrops of Titus Canyon Formation in erosional contact with Precambrian rocks to the south.



Legend

1 Goldfield
2 Gold Point
3 Poverty Gulch
4 Beatty
5 Death Valley HQ
6 Gold Mountain
7 Grapevine Canyon
8 Titus Canyon
9 Funeral Mountains
10 Paniment Mountains
11 Grapevile Mountains
12 Partial DV Park Boundary

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Tertiary Deposit Place Name Map

Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 11

Nevertheless, this may suggest a dominant argument for a southern source area of the Tertiary clastic sediments.

The age of the Titus Canyon Formation has been discussed by several authors and rely dominantly on fossils and ash beds within the formation. A detailed description of the fossil locations and their positions was completed by Lander (2019) who assigned the earliest dates as late middle Eocene age (38 – 37 Ma). Further, two tuff beds in the upper most Lower Titus Formation yielded $^{40}Ar/^{39}Ar$ dates pf 30.0 and 34.3 Ma (Saylor and Hodges, 1994). One isotopic age date, of an unspecified type, of 27 Ma, was obtained from a tuff bed near the middle of the Titus Canyon Formation (Reynolds, 1974). Miller contributed new age dates as well, and Nikolas, et al (2022) reviewed these dates and reported some original ages. The consensus suggests the Titus Canyon Formation age is bracketed between 38 and ~25.7 Ma.

The reason that there is so much attention focused on the Titus Canyon Formation is because these clastic sediments document the initial stages of the opening of an intercontinental basin, and in essence the dawning of the extensional Basin and Range physiographic and tectonic province in western North America. These are the first clastic sediments observed since the late Cretaceous and early Paleocene.

2.1.5 Panuga Formation.

The Panuga Formation was defined by Snow and Lux (1999) for exposures in the Cottonwood Mountains, and described as a “heterogeneous succession of conglomerate, pebbly lithic wacke, and siltstone”. Distinguishing features of the Panuga Formation are the presence of intraclasts from the underlying Titus Canyon Formation, granite and volcanic clasts, tuff beds, and tuffaceous siltstone. The Panuga Formation is defined as the sequence of strata overlying the first major unconformity within the Tertiary sedimentary sequence between 25.7 – 15.9 Ma (Snow and Lux, 1999; Neimi, 2012; Miller et al, 2022; Midttun et al, 2022). Another characteristic is the green conglomerate facies, the variegated member, first described by Reynolds (1969) when it was included into his descriptions of the Titus Canyon Formation. Snow and Lux (1999) realized it was much younger than the Titus Canyon Formation and Midttun et al, 2022 dated a tuff within the section. Moreover, the Panuga Formation lies directly above the unconformity that separates the underlying Titus Canyon Formation.

Snow and Lux (1999) described the Panuga Formation with conglomerate beds up to 1.2 m thick that are interbedded with fine- to coarse-grained sandstone and pebbly sandstone. Clasts in the conglomerate are generally well rounded and are as large as cobble sized. The clasts are Paleozoic clastic and carbonate rocks, granite, and silicic volcanic rocks. A tuff within the Panuga Formation in the Grapevine Mountains has been correlated with the regionally expansive Tuff of Unconformity Hill (15.9 Ma; Snow and Lux, 1999), while tuffs in the upper part of Panuga Formation are tentatively correlated with the 13.5 Ma Crater Flats Tuff from the Southwest Nevada Volcanic Field (Niemi, 2012). This brackets the Panuga Formation between ~16 – 13 Ma.

2.1.6 Clastic Sediment Discussion.

Several authors have postulated to what the southwest coast of North America looked like prior to the formation of the Basin and Range and where the Titus Canyon and Panuga Formation's sediments came from (to name a few recent authors: Snow and Lux, 1999; Niemi, 2012; Lander (2019); Midtun et al, 2022; Schwartz, el al., 2022). Much of these discussions surround when the opening of the Basin and Range actually began. Recent studies focus on the clastic sediments of the Titus Canyon and Panuga Formations in southwestern Nevada and southeastern California (Death Valley region) and where their sediment came from. Both clastic sedimentary formations recorded the time when the pre-Tertiary rocks began the process of extensional tectonics and the formation of basins and ranges, and hence erosion of the ranges and clastic sediments were deposited in the basins. Three prominent sediment sources have been proposed 1) the Nevadaplano, 2) the Mojave-Yavapai Basement Plateaus, and 3) the Sierra Nevada.

Following a relatively quiet period in the early Paleocene, the Titus Canyon Formation is the first clastic sediment recorded in this area. Therefore, it appears as though extensional tectonics commenced at about 38 – 37 Ma. Early down dropped valleys created basins that were infilled with sediments. The Titus Canyon lasted until about 25.7 Ma when there was a hiatus in sedimentation in this particular area. To the south, the Armargosa Valley Formation was formed between 28.5 and 18.5 Ma. At about 16 – 13 Ma, the Panuga Formation was deposited, which indicated another basin-forming event, which would have been caused by more tectonic activity. This is also likely when the Walker Lane oroflex increased its activity, forming other basins elsewhere in northern Esmeralda County and the widespread Esmeralda Formation was

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deposited (Davis and Vine, 1979; Albers and Stewart, 1972; Kunasz, 1970; Zampero, 2005; Oldow et al., 2009).

Nearly all the sedimentary recorded post Panuga Formation was dominated by volcanic activity. Hiatuses in volcanic eruptions were likely accompanied by uplift, lateral faulting, and erosion as the Walker Lane oreflex progressed further. Slate Ridge has likely been emergent and exposed to erosion for the last 6 – 11 million years.

Based upon the current understanding of the literature, the deposits of the eastern Slate Range are more indicative of the Panuga Formation. This is based upon the stratigraphic relations of the Timber Mountain Tuff members (e.g the Ammonia Tank Tuff over the Rainier Mesa Tuff) that overlies a clastic sedimentary deposit per Albers and Stewart (1972). The Panuga Formation is dominated by well-rounded clasts from gravel to as large as cobble, which is the description of the PGO property sediments. More work will be needed to solidify this correlation, however, and until other information comes available indicating a Titus Canyon Formation correlation, or even another source area, the clastic sediments located in the eastern Slate Range are the Panuga Formation. Either way, it would be the furthest north outcrop of either formation. Figure 12 shows the regional stratigraphy that may occur in the PGP area.

2.1.7 Quaternary Deposits.

Slate Ridge has been exposed to weathering for millions of years and alluvium is abundant in the downslope canyons and washes. The Oriental Wash is located south and downslope from Slate Ridge and forms a prominent alluvial basin that is believed to be hundreds of feet thick. Oriental Wash extends southwestward across the California-Nevada state line and into Death Valley. There are a few gravity-siphon wells in the wash downslope from Slate Ridge that, at one time, provide water to the range cattle. A significant placer gold mining operation was active in the wash in the early 1980s.

Fingers of alluvium and colluvium extend outward from the hills and valleys on Slate Ridge. Most are relatively thin, perhaps a few feet thick, but some are as much as 10 – 15 feet thick. Dog Valley contains the thickest sequence of colluvium. All the alluvium that emanates from the PGP property travels down the North Branch of Oriental Wash. Gold has been found in these sediments, suggesting the source for the gold was the clastic sediments of the PGP property.

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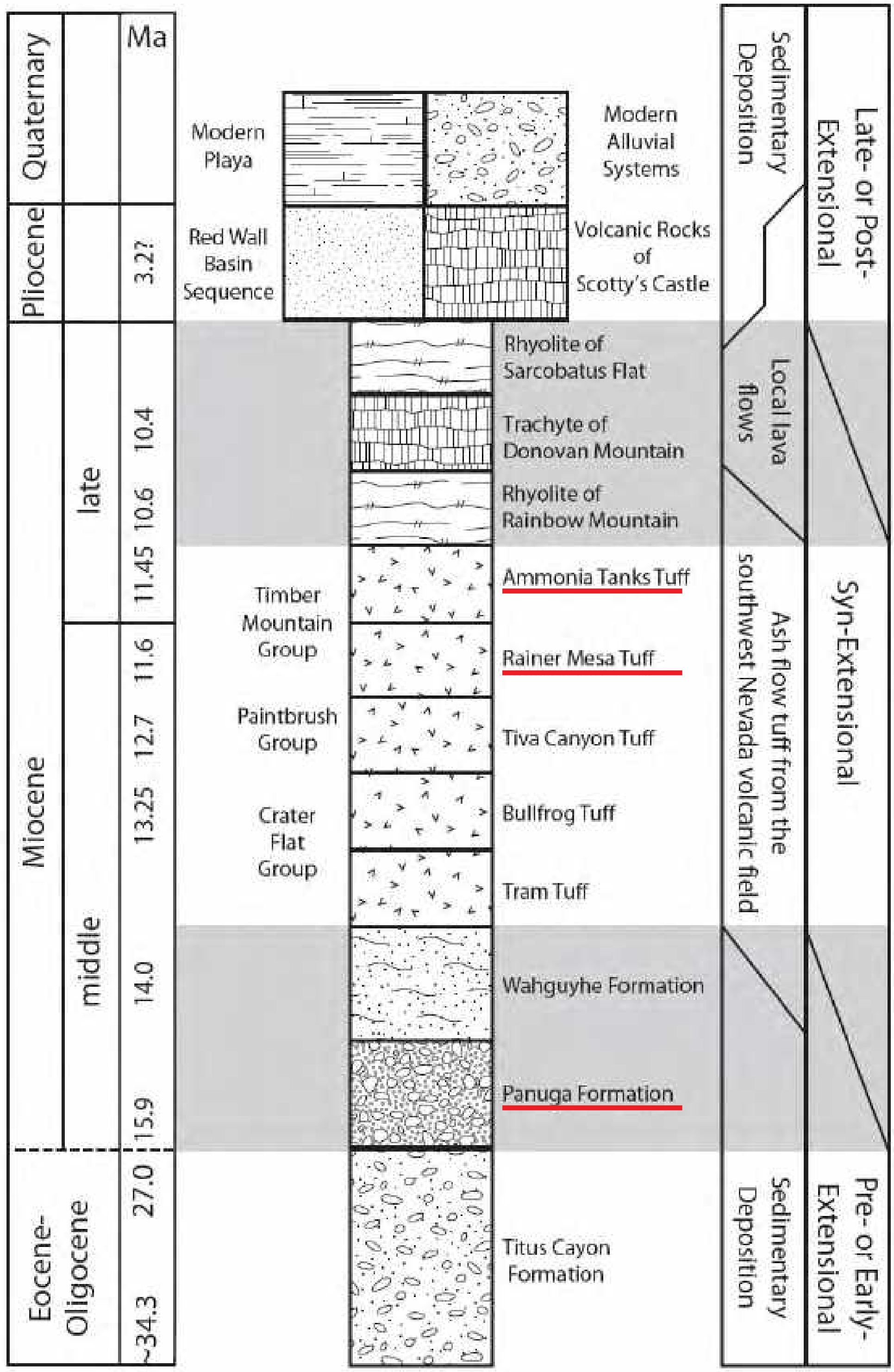

Source: Niemi, 2012

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Regional Tertiary Strata

Poverty Gulch Project	T. 24N, R.11E., S. 19, 30
Esmeralda County, NV	Figure 12

2.2.0 Regional Structural Geology.

Southern Esmeralda County lies within a zone of disrupted structures that are at least 300 miles long and 50 – 100 miles wide that forms a transition between the north-northwest-trending Sierra Nevada block to the west and the north-northeast-trending ranges of the Basin and Range province to the east. This zone is referred to as the Walker Lane Fault Zone and cuts through western Nevada, exhibiting large amounts of lateral-slip motion and creates a trans-extensional tectonic environment (Figure 13; Stewart and Diamond, 1990; Faulds and Henry, 2008; Oldow, 2009). Pre-Tertiary and Tertiary rocks are folded in a large mega- “oroflex”, whereupon the rocks change their strike from north 45° west to east - west to north 45° east, and eventually north – south (Albers, 1967; Albers and Stewart, 1972). Slate Ridge is located within the heart of the Walker Lane oroflex where the rocks and major structures trend essentially east – west. The authors refer to this as the “Silver Peak – Palmentto – Montezuma Range Fault System”.

The “bending” or folding of the oroflex has caused substantial deformation to the rocks and has created a diverse orientation of regional and localized faulting. Most of these faults are high angle having displacements ranging from a few feet to many miles. Most of the faulting is believed to have occurred prior to or contemporaneous with the initiation of the Basin and Range geologic province and is likely responsible for the Tertiary volcanism. It is also believed that this trans-extensional tectonic environment formed the Titus Canyon and Panuga sedimentary basins and records the tectonic paradigm from contraction to extension tectonics – a topic of considerable debate (Colgan and Henry, 2009; Henry and John, 2013; Snell et al., 2014; Smith et al., 2017; Cassel et al., 2018; Long, 2018; Best et al., 2016; Lund Snee and Miller, 2022; Miller et al., 2022; Midttun et al, 2022).

2.2.1 Local Structural Geology.

A large-scale presentation of the structural geology is shown in Albers and Stewart (1972) and shows that Slate Ridge is within the horizontal component of the Walker Lane oroflex. Here, the dominant structural grain is an east-west series of faults that have caused both horizontal and vertical displacements. These imbricated faults comprise are herein identified as the Slate Ridge Fault Zone (SRFZ). A myriad of minor faults also occurs between these prominent tectonic features and record the tortuous compressional and extensional forces have

Poverty Gulch Project

Figure 12. Present-day configuration of the Pacific – North American plate boundary including the short spreading centers and long, right-stepping dextral transform segments in the Gulf of California (Rivera triple junction to the Salton Trough [ST]); the relatively narrow San Andreas transform fault system (Salton Trough to the Mendocino triple junction with the left-jogging, transpressional "big bend" in southern California); and the broader Walker Lane – eastern California shear zone, which splays from the San Andreas just east of the big bend and shunts some relative plate motion east of the Sierra Nevada block. Slate Ridge is south of the Big Bend and shows substantial trans-extensional tectonic motions, including rotation of adjacent blocks. The Walker Lane terminates northwestward near the south end of the Cascade arc (inboard of the Mendocino triple junction) and against the clockwise-rotating Oregon block.

Midified from Faulds and Henry, 2008.

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Walker Lane Fault Zone	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 13

occurred between the larger faults (Figure 10 and Figure 14). There are eight specific faults or structural categories describe herein,

1. The Slate Ridge Fault Zone (SRFZ).
2. The Poverty Gulch Fault Zone
3. The Northeast Fault.
4. The Escarpment Fault Zone
5. Lane Ridge and Dallas Ridge Faults.
6. The Plateau Syncline.
7. Faults east of the Northeast Fault.
8. Numerous Minor Faults.

2.2.2 The Slate Ridge Fault Zone (SRFZ).

Mapping has confirmed the large-scale east-west-trending SRFZ shown by Albers and Stewart (1972) on the southern portion of the PGP area. The name is proposed herein this report. The authors show a pair of subparallel faults emanating from the McGruder Mountains, crossing Tule Canyon, and extending along the north range front where it enters the PGP area. The northern strand extends up Poverty Gulch and the southern strand nearly parallels the county road south of the Pimple Knoll and bifurcates into three specific strands as it extends away from the county road and eastward off the property. Recent mapping also postulates another east-west strand on the north side of the Pimple Knoll. The SRFZ and the Poverty Gulch Fault Zone are the north and south boundaries to the clastic sedimentary deposits. There is also another part of the fault system south of the PGP property. The faults appear to have normal fault motion, down to the north, with some left-lateral motion.

The authors indicate that these faults are a significant part of a Walker Lane oroflex structure with more than 4,000 feet of vertical offset between the Cambrian and Precambrian rocks in the Slate Ridge region. They indicate movement occurred both prior to and post deposition of the Timber Mountain Tuff. Recent alluvium does not appear to have any offsets.

2.2.3 The Poverty Gulch Fault Zone.

The Poverty Gulch Fault Zone is north of the Slate Ridge Fault Zone that extends from Mt. McGruder, across the southwestern extent of Lida Valley, and extends through Poverty Gulch

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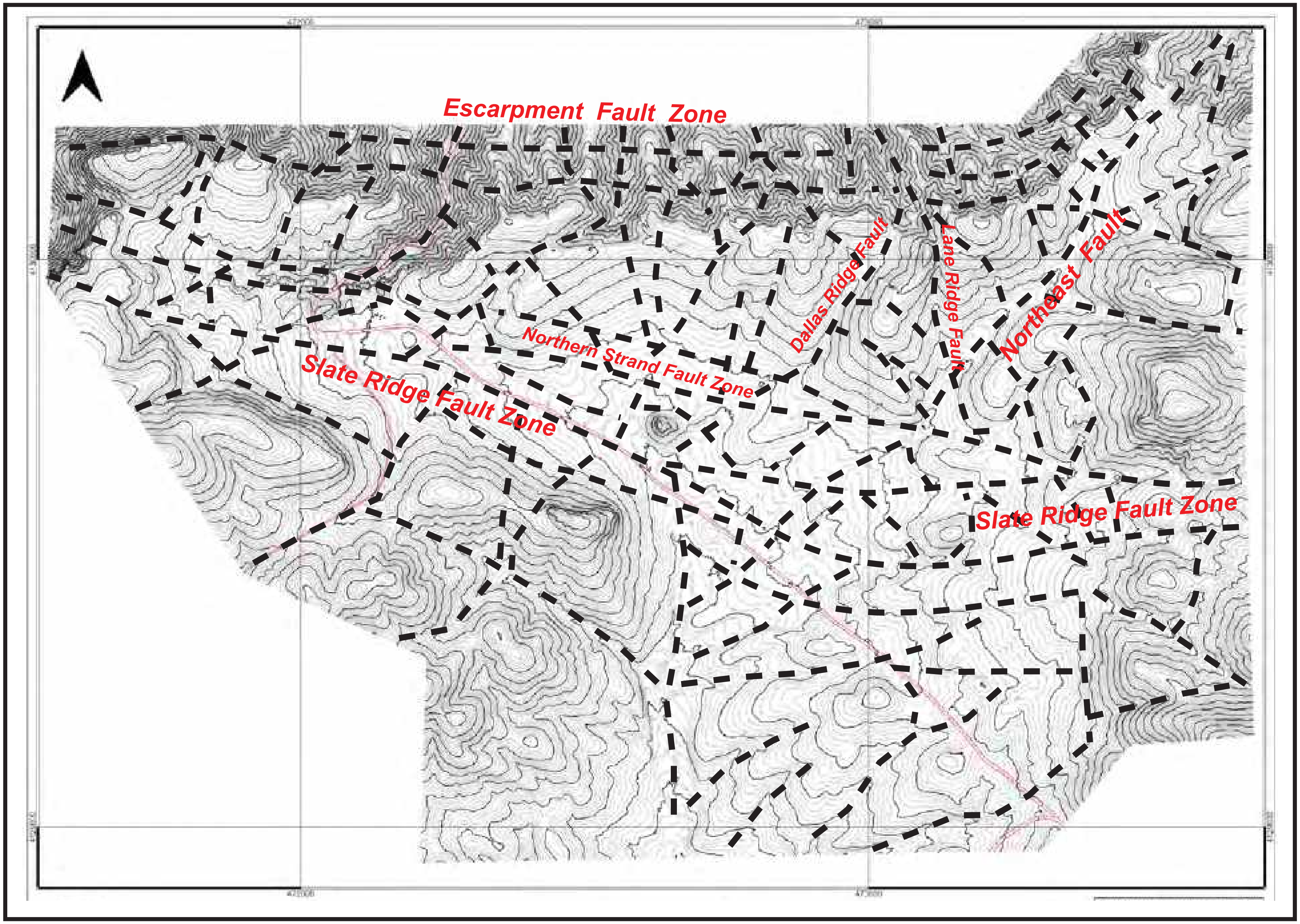

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Poverty Gulch Project

Placer Mining Claims

Local Structure & Lineament Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 14

(Figure 10). The fault bends northeastward through the easternmost portion of Slate Ridge. Albers and Stewart (1972) show that it displaces the Cambrian and Tertiary rocks and appears to truncate the Northeast Fault; however, syntectonic movement may have occurred. It appears to dip to the north and has a left lateral motion, as evident by the dislocation of Slate Ridge. It is likely the master fault to the Escarpment Fault Zone. It forms the northern boundary to the clastic sediments found in the PGP area.

2.2.4 The Northeast Fault.

Albers and Stewart (1972) show three prominent north-northeast – south-southwest trending faults that occur on the east side of PGP area and beyond to the east. Satellite imagery and field reconnaissance confirms these faults and denotes they form the boundaries between the western, central, and eastern PGP regions (Figure 14). The Northeast Fault is a prominent North 30° East structural feature that forms the boundary between the Eastern and Central regions. It appears truncated in the north by the Escarpment Fault Zone and the south by the multiple strands of the SRFZ. Motion appears to be dip-slip with down to the west and left lateral movement, creating folded and faulted Central sediments as though they were dragged northward with their movement. Some of the tectonic effects from the Northeast Fault are shown in Figure 15. Understanding just how the capping welded tuff has responded to these substantial tectonic forces aids in the reasoning behind all the other structural lineaments behind Figure 14.

2.2.5 The Lane Ridge and Dallas Ridge Faults.

There are two subparallel, north-south trending faults that form the boundary between the western and central regions, the Dillon and Lane Faults. These two faults have substantial displacements. The Dillion Fault is down to the west and appears to dip to the west, preserving a small outcropping Timber Mountain welded tuff over the airfall ash on the top of Dillon Ridge. The Lane Fault also appears to have down to the west motion; however, the welded tuff and ash units have been eroded, suggesting a complex faulting story. The faults extend northward through Escarpment Ridge, where they become faulted by the Escarpment Fault Zone and fully truncated by the Poverty Gulch Fault Zone. There appears to be syntectonic movements with the Escarpment Fault Zone.

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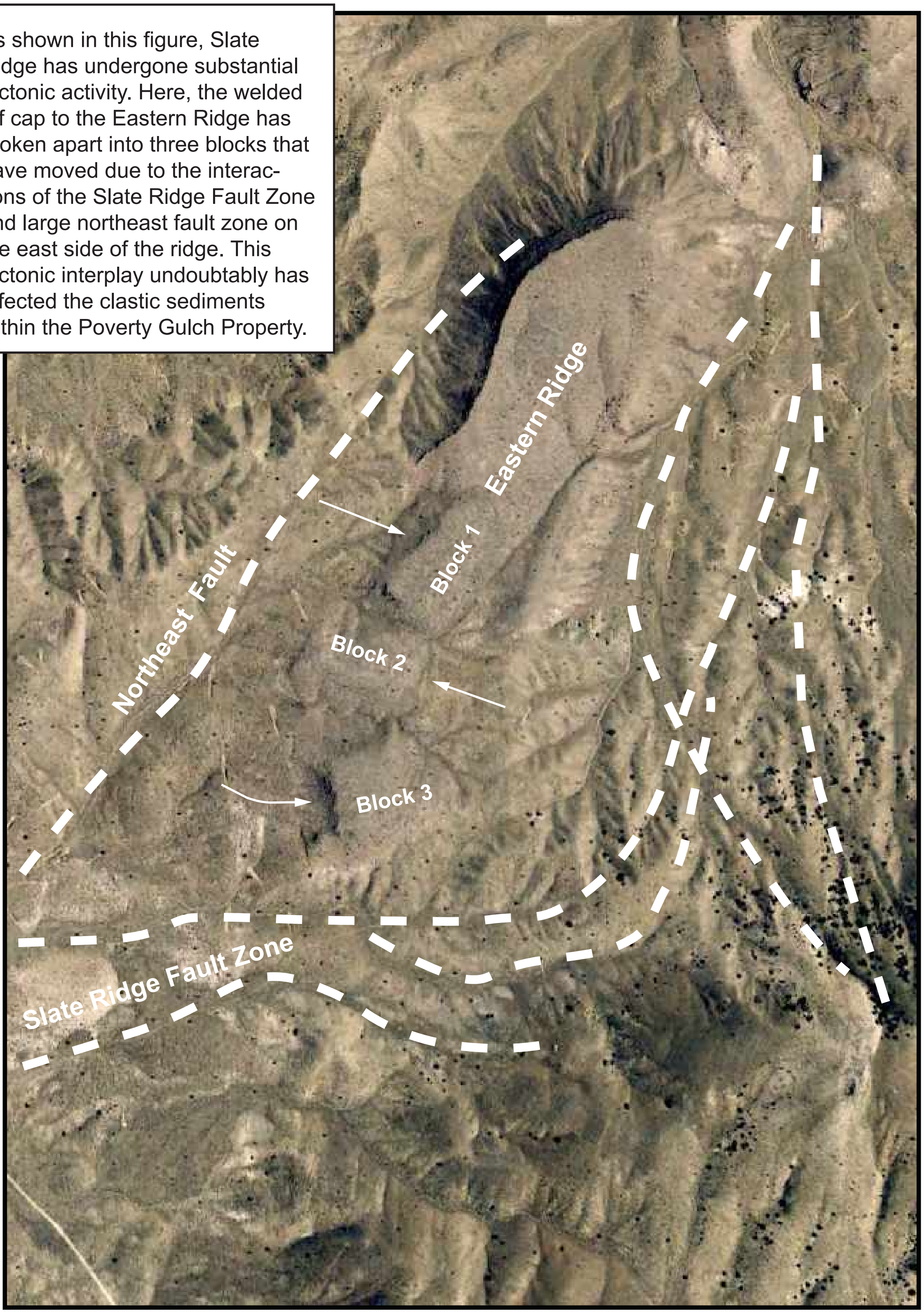
As shown in this figure, Slate Ridge has undergone substantial tectonic activity. Here, the welded tuf cap to the Eastern Ridge has broken apart into three blocks that have moved due to the interactions of the Slate Ridge Fault Zone and large northeast fault zone on the east side of the ridge. This tectonic interplay undoubtably has affected the clastic sediments within the Poverty Gulch Property.



Source: Google Earth, 2006

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Eastern Ridge Faulting	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 15

2.2.6 The Plateau Syncline.

Previous field observations of the north escarpment showed that the clastic sediments had a dip of about 20 – 30° south. However, subsequent observations showed that they were slightly less inclined and dipped about 10 – 20° south. Furthermore, sediments on the Southwest Ridge and on the Pimple Knoll dipped about 20° north, suggesting that the sediments were either folded into a shallow syncline or were rotated 40 – 50° vertically with respect to each other, or some combination of both. The eastern extent of the syncline is at Dallas Ridge and the western extent is at the county road. Field mapping also indicates that the western portion of the north escarpment has been horizontally compressed and imposed a southeastern plunge to the syncline. Internal fracturing of the plunging syncline has faulted the sediments like a radiating fan, some of which appear to have several tens to hundreds of feet of displacements. This has created several individual blocks within their displaced sedimentary packages.

2.2.7 Numerous Minor Faults.

Both Google Earth and field reconnaissance have observed a plethora of minor faults within the PGP area (Figure 14). Sometimes, erosion points to a structural discourse; however, this is not always the case. For example, one fault exposed on the east side of Dillon Ridge shows a clear normal fault with north side down that displaces gravels against tuff.

2.2.8 Summary of Structure.

The PGP is in an area that has been subjected to a significant amount of tectonic activity. The dominant structural features are associated with the Slate Ridge Fault Zone, a series of east-west trending faults that have had significant displacements, and therefore, have affected the preservation and the erosion of the clastic sediments. Although it is likely that when the sediments were deposited, they occurred as continuous laminar sediments that extended for some distance. Since then, however, much tectonic activity has occurred such that tracing any lateral continuity between individual sedimentary beds would be virtually impossible.

2.3.0 Geophysics.

2.3.1 Phase 1 Geophysical Surveys.

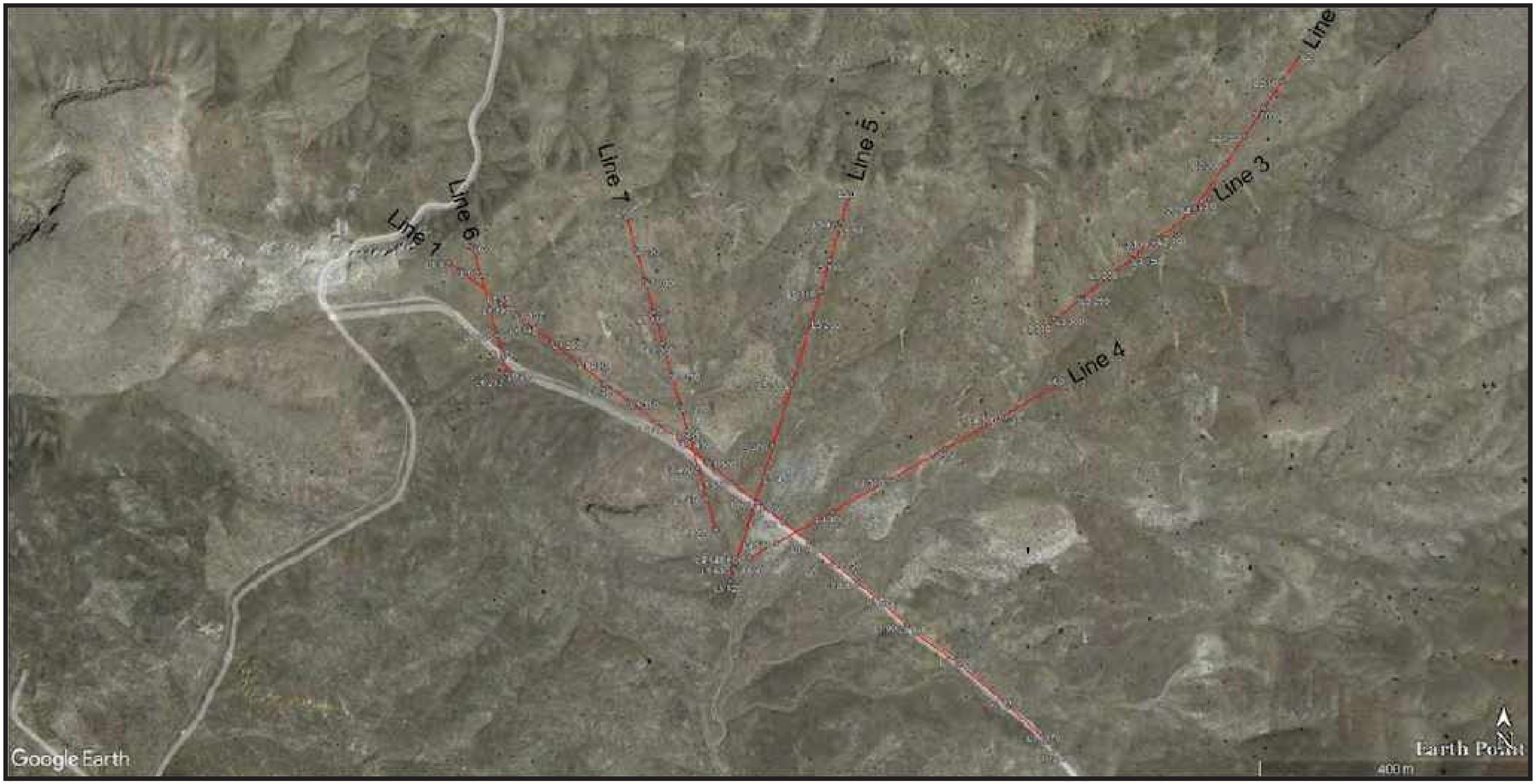
The stratigraphy of the clastic sedimentary deposit on Slate Ridge was not well understood and all that was known was what could be seen on the surface that included the following observations:

1. A thick section of gravel deposits was exposed along the north escarpment.
2. The aerial distribution of the deposit was huge, extending over a few hundred acres.
3. Side drainages into the escarpment, including the Poverty Gulch Wash, exposed various layers in the deposit, including cobbles, pebbles, gravel, sands, silts, and clays in various proportions. Some boulders +2 feet in diameter were observed, as well as fine- to course-grained sand layers that resembled dune deposits.
4. There was a mudstone unit that formed the base of the gravel deposit and it appeared to dip 20 – 30° to the south.
5. An airfall ash and tuff flow breccia appeared to cap the gravel deposit.

Advanced Geologic chose to use seismic reflection and refraction geophysical surveys to image the sediments on Slate Ridge. The purpose of these surveys was to determine if the depth to bedrock, or the thickness of the deposits could be determined. Equally important was to see if the methods could determine the thickness of the overlying volcanic tuff and if there was any faulting in the deposits. In order to image the property accordingly, a preliminary map was prepared for the locations of the geophysical surveys (Figure 16). Seven lines were proposed, then field checked for topography and access and then modified to facilitate the desired results.

2.3.2 Phase 1 Seismic Surveys.

Discussions with Advanced Geoscience, Inc. (AGI) of Reno, Nevada were held in the fall of 2021 and a service agreement was signed on November 22, 2021. AGI mobilized a survey crew to the PGP area to begin the seismic surveys on December 4, 2021. On December 14, the survey crew encountered heavy snow conditions which prevented access to the site, and the field work was postponed. On January 19, the survey crew returned to the site and completed the seismic surveys on January 23, 2022. AGI completed their report on July 8, 2022.



Source: Advanced Geoscience, Inc. 2022

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Poverty Gulch Project

Placer Mining Claims

Phase 1 Geophysical Survey Map	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Figure 16

The seismic reflection surveys were first started on Line 1 which was the longer-length northwest-to-southeast traverse, mostly following the county road through the PGP. The proposed northeast-to-southwest traverse along Lines 2, 3, and 4 had to be broken up and recorded in three survey lines due to terrain conditions. Lines 5, 6, and 7 extended down from the ridge line in less difficult terrain. Each survey line was set up with stakes placed at 100-meter (or less) intervals to mark the ground surface stationing along these lines. Advanced Geologic supervised the data collection.

The data recording and processing procedures for these seismic reflection surveys were set up to provide reflection imaging of the upper 800 to 1,000 feet with near-surface resolution. The refraction tomography data processing was used to prepare seismic velocity profiles of the upper 100 to 400 feet, depending on survey line length. The geologic evaluation of this seismic profiling incorporated data from geologic outcrops and regional mapping.

The seismic data was recorded using a Seistronix, Ltd. EX-6, 150-channel data recording system. This recording system was connected to various active-length geophone receiver arrays (spreads) set up along each survey line. The longer-length Lines 1, 4, and 5 were set up with multiple, overlapping 126-channel geophone spreads. The shorter-length Lines 2, 3, 6, and 7 were set up with single 54 to 126-channel geophone spreads. Each geophone spread consisted of 40-Hertz (lower ramped cut-off frequency) geophones spaced 4-meters apart. The total lengths (in meters) of geophone coverage set up along the survey lines are listed below.

Line 1 - 1,196 meters
Line 2 - 284 meters
Line 3 - 332 meters
Line 4 - 548 meters
Line 5 - 620 meters
Line 6 - 212 meters
Line 7 - 500 meters

The seismic waves were transmitted into the ground at “source points” positioned mostly at 4-meter intervals along the geophone spreads. These seismic wave vibrations were recorded by the EX-6 system from each channel on the geophone spreads.

A 200-pound accelerated weight drop (AWD) mounted on the rear of a 4WD truck was used to generate the seismic waves. The AWD used back pressure from a nitrogen gas cylinder to impact a metal plate held to the ground by the rear weight of the truck. 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 stronger wind gusts.

The first source point started off from 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.

On the longer Lines 1, 4, and 5, after the source points moved past the center of each 126-channel geophone spread, the first part of geophone array was picked up and shifted down the line in increments of 12 to 36 geophone channels. This shifting of geophone channels was made after the source points moved 20 to 25 geophone positions past the centerline of each 126-channel geophone spread.

These procedures were used to record reflection data sets with nominal 30 to 60-fold subsurface coverage with 2-meter common-midpoint (CMP) reflection spacing. The reflection surveys along all seven survey lines recorded a total of 764 field records. Each field record was recorded with a 2.0-second record length and 0.5-millisecond sampling rate with 24 bit analog-to-digital resolution.

After each reflection survey was completed, the UTM 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). A Google Earth *.KMZ file showing the locations of these GPS surveyed points was provided.

2.3.3 Phase 1 Seismic Surveys Interpretations.

AGI provided a draft report with interpretations and plates on April 12, 2022. Following a few discussions, the data and presentations were modified, and a final report was produced on July 8, 2022. A full description of the survey procedures, data processing, and the evaluation conclusion are presented in their report. Plates 1 – 6 for the seismic reflection and refraction depth profiles are provided in the discussions herein. Note the vertical scale on each plate as the depth of various units is important.

AGI imposed color-coded seismic refraction interpretations on the same plate with the seismic reflection data, thus correlation of methods could more easily be made. Remember, the scope of the project was investitive at first, giving the project insights as to how thick particular units are and where they could occur, which could be used for both future near-surface bulk sampling and deep drilling exercises. These interpretations herein deviate somewhat from AGI's, however, AGI's interpretations are consistent between the surveys, and each survey line is examined in detail. The results are then summarized below.

At the time of this report, little was understood about the subsurface interpretation of the PGP area. Our initial model was tuff overlying, clastic sediments, overlying mudstones, overlying welded rhyolite tuffs or flows, overlying a pre-Cambrian Wyman Formation. For a seismic refraction velocity profile, the harder or denser the units, the faster the velocity. Tuffs are less dense than conglomerates, hence, the seismic refraction velocities in the tuff are slower. The Wyman Formation would be extremely hard and seismic refraction velocities would be the fastest. AGI identified these geologic horizons by color:

Alluvium and tuff	Dark blue to light blue	<1,200 m/s
Clastic sediments	Light Green to dark green	1,200 – 1,600 m/s
Welded tuff or flows	Yellow to orange	1,600 – 1,800 m/s
Wyman Formation	Pink to red	>1,800 m/s

All the seismic profiles, except for Line 6, showed the dense Wyman Formation underlies the entire site at various depths. The Wyman Formation at Line 6 was imaged in Line 1, however, and the geophysicist indicated lack of depth imagery was likely due to the shortness in Line 6. The upper surface of the Wyman Formation undulates considerably where enough line length was able to image it more laterally (Lines 1, 4, 5, and 7). In general, the sediments on top of the Wyman Formation are thickest in the north and west and thinnest to the east and south. The undulation of the Wyman Formation top could be the result of erosion or faulting before, during or after the clastic sediments were laid down. It is preferable to think all three situations are likely.

Low velocity tuff was also well imaged and appeared as isolated outliers upon the medium velocity clastic sedimentary package. Geologic field observations do not agree with some of the velocity interpretations, such as the beginnings of Lines 5, 6, and 7 that suggest the low velocity tuff units crop out on the surface when they are clastic sedimentary units. This may have been due to human error in developing a model and trying to fit the geophysical results into the model. It raises questions about the clastic sedimentary and the basal volcanic contact, or even the basement Wyman Formation contact.

2.3.4 Seismic Line 1 Sedimentary Interpretation.

Seismic Line 1 extends roughly east – west and subparallel to the county road (Figure 16). The seismic line also extends subparallel to the southern splay of the Slate Ridge Fault Zone (SRFZ), likely crossing the fault at approximately mid-way on the seismic profile (Figure 17). This is evident where there is a distinct shallowing of the slow and intermediate velocity seismic waves (blues and green colors) on the eastern portion of the profile. As noted above, the intermediate velocity waves likely correlate to the clastic sedimentary package.

Subsurface stratigraphy was clearly shown as horizontal and laminar seismic reflections to a depth of 1,545 feet. Seismic refraction data principally viewed the surficial deposits to a maximum depth of 400 feet. Since we are more focused on surface mining, seismic refraction data is more useful. However, the seismic reflection data confirms all four sedimentary packages as denoted by AGI's red and blue horizontal lines, as well as showing deep seated tectonic structures.

The western profile portion shows a rapid thickening of the clastic sedimentary until Station 17 where it levels out at a thickness of about 125 feet, or a depth of 170 feet from the surface. The overlying low velocity material, which is likely the Timber Mountain Tuff, thickens and thins to about Station 80, whereupon the whole low and intermediate package thickens to a maximum depth of 250 feet below the surface. This likely suggests a down to the east fault, which is not shown on AGI's seismic reflection profile. At about Station 96, the intermediate velocity material abruptly shallows and levels out until Station 120. Because the topography becomes less, the overall thickness of the intermediate velocity package thins to about 90 feet thick or 130 feet below the surface. Seismic Line 7 crosses in this area and essentially confirms the depths from the surface and the intermediate velocity unit.

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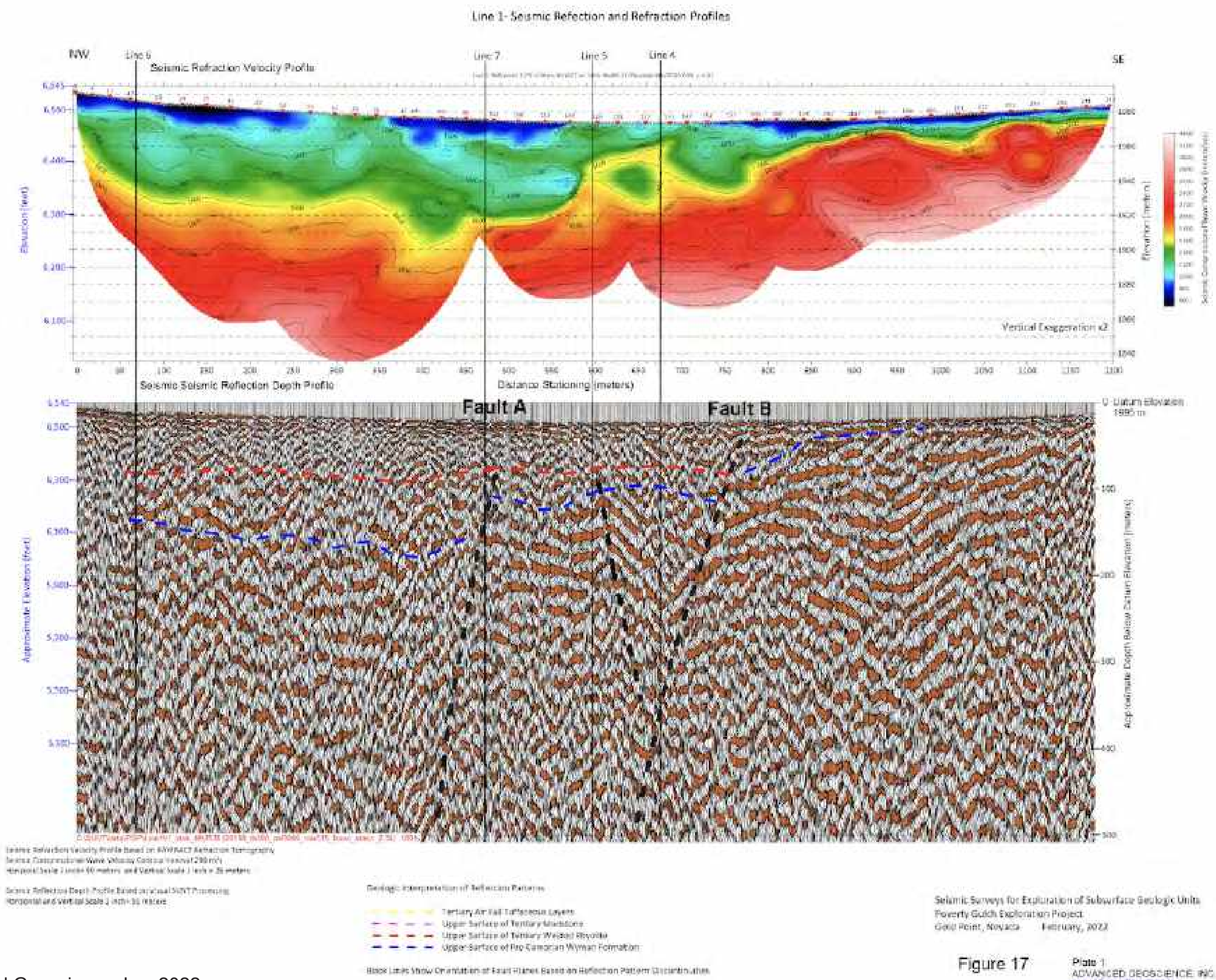

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Geophysical Survey Line 1	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Figure 17

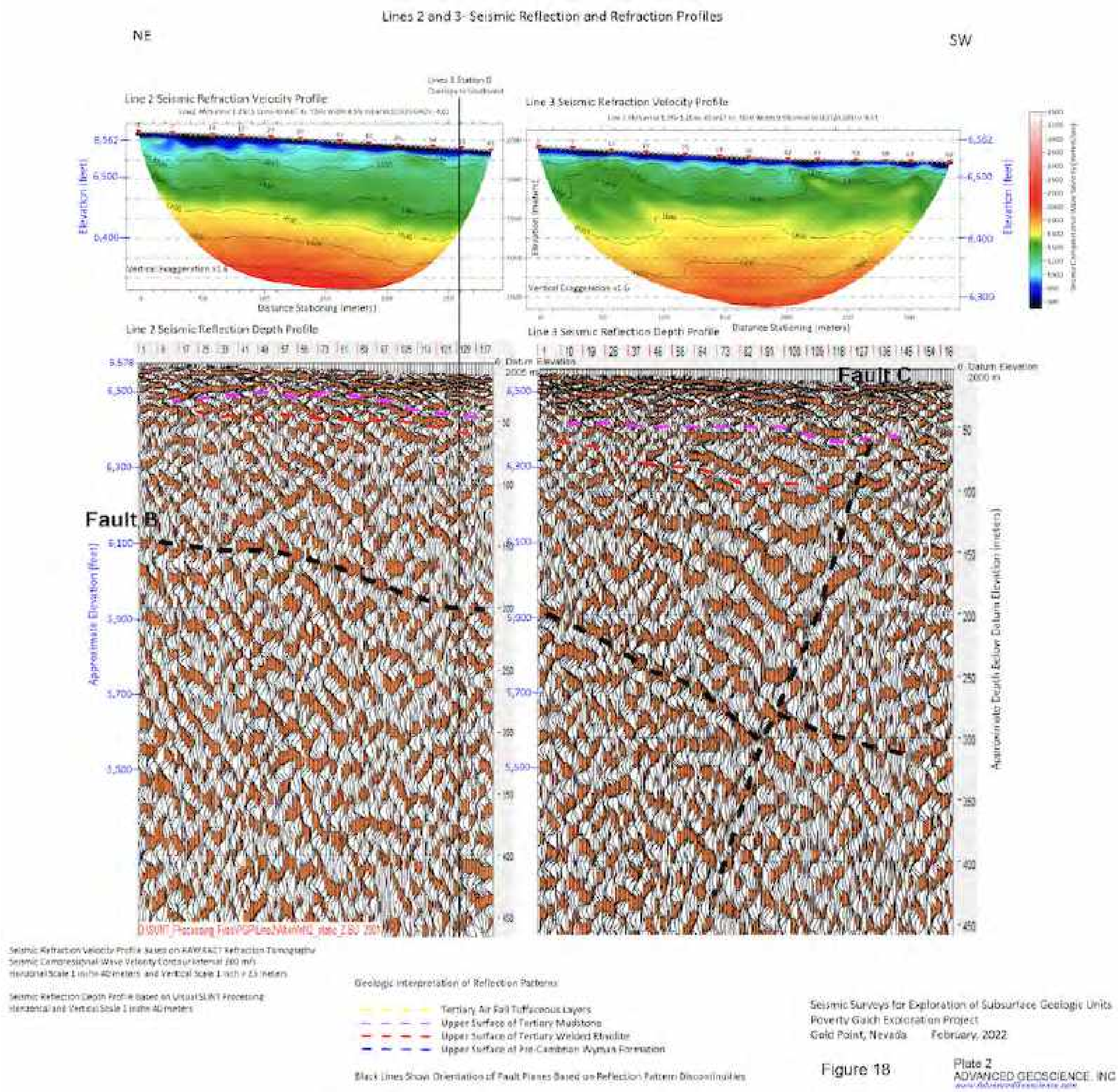
East of Station 120, the intermediate velocity package rises to 50 feet from the surface. Here, the low velocity material is absent, which means that the intermediate velocity package is at the surface. This was confirmed with reconnaissance. This is essentially where Seismic Line 5 crosses Seismic Line 1. The intermediate velocity package thins to about 15 feet at Station 140, which is where Seismic Line 5 crosses Seismic Line 1. Both of these Seismic Lines show a similar thinning of the intermediate velocity package and a rise of the high velocity packages. This seems to correlate to the Pimple Noll outcrop. An intermediate velocity “hole” is shown in the area, where a high velocity package overlies intermediate velocity package, that overlies a high velocity package. This could be an anomaly in the data or a curious feat of geologic wonder. Nevertheless, it is supported by the data in Seismic Lines 4 and 5.

Between Stations 143 and 160, is a thickening of the low and intermediate velocity packages to about 100 feet below the surface. The low velocity package varies in thickness from 10 – 30 feet over this station interval. From Station 160 to the east end of Seismic Line 1, the low and intermediate velocity packages thin dramatically between 10 – 30 feet deep.

In summary, Seismic line 1 shows a 70 – 125 feet thick section of the intermediate velocity package, which is interpretated as the desired clastic sedimentary deposit, to roughly the western half of the profile where it encounters the Slate Ridge Fault Zone. There is an abrupt thinning of the clastic sediments for about 50 feet, whereby there is a small thickening, which is immediately followed by a rapid thinning of the material. The low velocity package, which is interpreted as the Timber Mountain Tuff, thickens and thins across the profile from 0 – 40 feet thick. The eastern third of the seismic profile has between 0 – 30 feet of combined low and intermediate velocity material. It may suggest this is a low priority for mining the area.

2.3.5 Seismic Lines 2, 3 and 4 Sedimentary Interpretation.

Seismic Lines 2, 3 and 4, are located on the east portion of PGP area and extend from the county road and up through Dog Valley to the northeast portion of the site (Figure 16). Seismic Line 2 is the furthest north line whereas Seismic Line 4 is the furthest south line. There is an offset from Seismic Line 3 to Seismic Line 4 due to access problems. The geology in this area shows mostly gravels at the surface in the north and volcanic tuff in the south. The purpose of these seismic lines was to gauge how thick the gravels are to the north and how thick the volcanic tuff is to the south, and if there is any gravel under the tuff. The hope was to image the Slate Ridge Fault Zone and understand how it interfered with the sedimentary packages.



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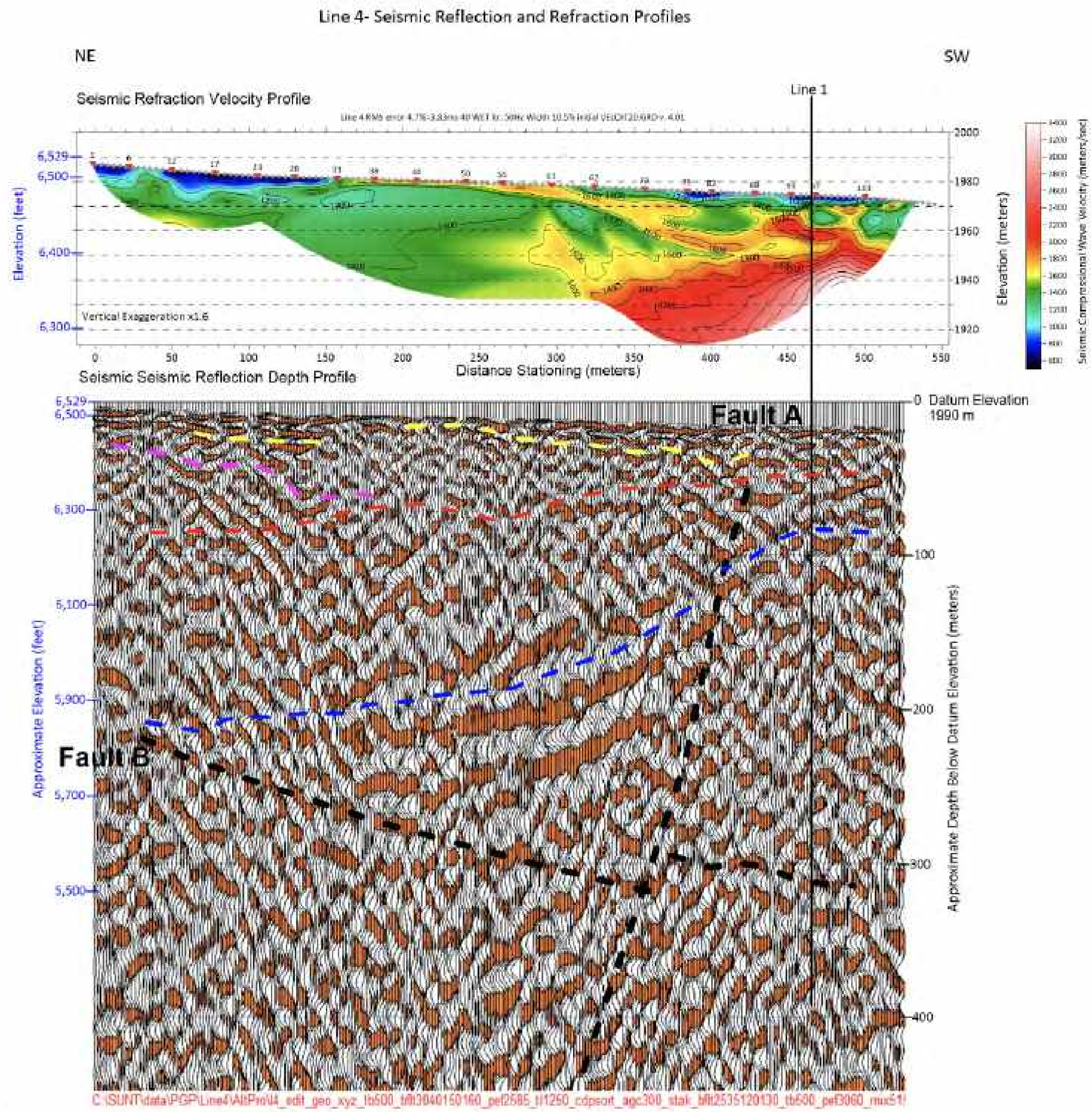
Geophysical Survey Lines 2 & 3	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 18



Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography
Seismic Compressional-Wave Velocity Contour Interval 200 m/s
Horizonal Scale 1 inch= 40 meters and Vertical Scale 1 inch = 25 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing
Horizontal and Vertical Scale 1 inch= 40 meters

Geologic Interpretation of Reflection Patterns

- Tertiary Air Fall Tuffaceous Layers
- Upper Surface of Tertiary Mudstone
- Upper Surface of Tertiary Welded Rhyolite
- Upper Surface of Pre-Cambrian Wyman Formation

Black Lines Show Orientation of Fault Planes Based on Reflection Pattern Discontinuities

Seismic Surveys for Exploration of Subsurface Geologic Units
Poverty Gulch Exploration Project
Gold Point, Nevada February, 2022

Figure 19

Plate 3
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Geophysical Survey Line 4	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 19

At 283 meters, Seismic Lines 2 and 3 were relatively short profile lines (Figures 18 and 19). Because of this short distance, the section imaged was not as deep and the lateral resolution on the ends were not as clear as other seismic lines (Figures 18 and 19). Nevertheless, good reflection and refraction data was recovered, showing a low velocity package overlying an intermediate velocity package, that overlies a high velocity package. The entire sedimentary package dips about 10 degrees to the south. On Seismic Line 2, a low velocity package varies in thickness from 10 – 30 feet in the north and thins to about 10 feet thick to the south. The intermediate velocity package thickens to the south, starting at 90 feet thick in the north and becoming about 165 feet thick in the south.

Seismic Line 3 has about 10 - 20 feet thick of a low velocity package on the surface and has an underlying 165 feet thick intermediate velocity package. While the low velocity package thickness extends through the end of the profile at approximately the same thicknesses, the intermediate velocity package thins in the middle from Stations 20 – 42 (~75 feet) to 80 – 90 feet thick. From Stations 42 – 69 (~90 feet) and the end of the seismic line, the intermediate velocity package thickens to about 140 feet. The depth of the low velocity package adds 10 – 30 feet to the maximum depth from the surface.

Seismic Line 4 developed some data acquisition problems and lost much of its reflection and refraction depth resolution. This may have been due to jumbled wave reactions from crossing the prominent Northeast Fault and/or other prominent cross faults. At the north end of the profile, total imaged depth for the seismic refraction data is cut off at about 105 feet from Station 1 – 28. The seismic refraction data becomes clearer from Station 28 to the south end of the profile whereby depth resolution increases to about 180 feet below the surface. From Station 28 – 60, the intermediate velocity package is nearly 180 feet thick, with only a thin surficial variation but extends below the resolution depth. This is the thick section of the intermediate package seen on the east end of the PGP area.

On Seismic Line 4 at about Station 60, the intermediate velocity package became interrupted by a south dipping moderately high velocity area (yellow color). This feature is considered a major fault that raises a high velocity package (red colored material) closer to the surface. A number of moderately high velocity layers are intermixed with intermediate velocity packages that form both vertical and sub-horizontal horizons or layers. These faults seem to correlate to the Slate Ridge Fault Zone, which could be carrying hydrothermal fluids enriched in carbonate or silica minerals that are flowing up the faults and into the coarse-grained intermediate velocity package sediments. Pooling hydrothermal fluids could create dense sediments that could extend outward from the feeder structures. The shallow depth of the high velocity package at the south end of Seismic Line 4 correlates with the east end of Seismic Line 1.

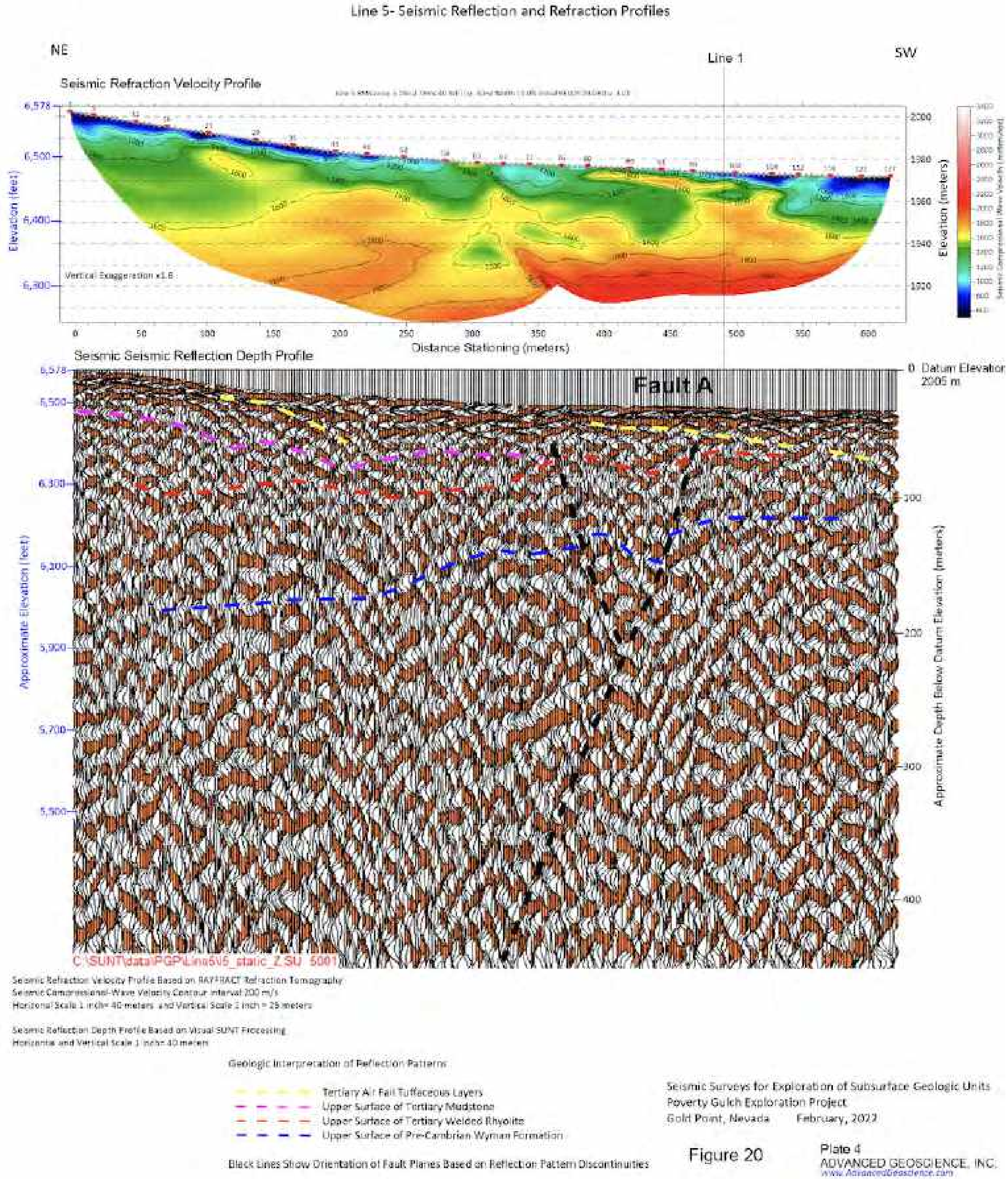
2.3.6 Seismic Line 5 Interpretations.

Seismic Lines 5, 6 and 7 are slope parallel profiles located on the western portion of the PGP area (Figure 16). Seismic Line 6 is the furthest west line and Seismic Line 5 is on the east, with Seismic Line 7 in the middle. The purpose of these profiles was to image the clastic sedimentary package as it dipped to the south and towards the Slate Ridge Fault Zone and see what kind of interactions occurred with this prominent tectonic structure. It was hoped that this would be some of the thickest sections of the clastic sedimentary package.

Seismic Line 5 is located on Escarpment Ridge west of Dillon Ridge. The first third of the line (Stations 0 – 48) starts out on an adjacent claimant's property[9] (Figure 20). As with the previous seismic profiles, reflection data shows the typical laminar sediments on the surface with an underlying jumble of clastic sediments overlying the Wyman Formation basement rocks (Figure 20). AGI identified some of the obvious faults (Fault A) yet there appears to be other faults shown in the seismic reflection profile as well. Moreover, Fault A on the refraction profile crops out around Station 63, whereas AGI placed it at Station 98 and near the county road. The seismic refraction profile is somewhat confusing with medium high velocity material (yellow and orange colors) showing up like wisps and ghosts in the profile, which doesn't match anything seen before. Although only a conjecture, the medium high velocity material could be course-grained sediments, such as pebbles and cobbles, which could thicken the clastic rock section.

Clearly the gently south dipping sedimentary structure expected from geologic reconnaissance of the property is not apparent. The thickest section of the intermediate velocity package (green) is about 140 feet thick and is entirely on the adjacent claimant's land. The intermediate velocity package thins to about 30 feet thick at the PGP claim boundary where it thickens to about 65 feet thick at Fault A (Station 63). The occurrence of a low velocity package south of Fault A may represent a down dropped section of volcanic tuff indicating a south dipping fault. However, this does not coincide with the shallower occurrence of the high velocity package (red color) also south of the fault. This northern Fault A occurrence could be the northern strand of the Slate

[9] Locating the seismic line on a portion of an adjacent claim's ground was done in part due to access and if at some time in the future, PGP would acquire the land.



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Geophysical Survey Line 5	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 20

Ridge Fault Zone as postulated by geologic mapping, but its motion appears to be complicated. Nevertheless, south of the fault strand there is a 90 feet thick section of intermediate velocity material that extends until Station 98 where the main strand of the Slate Ridge Fault Zone would likely cut across the profile. Here, medium high velocity rises on the south forming a 30 feet thick layer that starts at or near the surface. Interestingly, intermediate velocity material reappears south of the fault zone at Station 110 where it is about 50 feet thick. Also, at the end of the profile is a 30-foot-thick layer of low velocity material, which is likely volcanic ash.

2.3.7 Seismic Line 6 Interpretations.

At 696 feet, Seismic Line 6, is the shortest seismic line of the group. The northern end starts on Escarpment Ridge just above Poverty Gulch and extends southward to the county road. The southern point ends just north of the mapped location of the Slate Ridge Fault Zone (Fault A per AGI). Depth resolution and lateral continuity is not ideal, but the profile appears to show good data (Figure 21). The seismic reflection profile is pretty much useless but does show the laminar surficial sediments and possibly the Slate Ridge Fault Zone on the south. This would be where the northern strand bifurcates from the southern strand. The seismic refraction profile shows a thin low velocity package at the surface that thickens considerably to the south. This may imply a south dipping fault that would down drop and preserve the sediments. Quite apparent on Seismic Line 6 is the medium high velocity units in the middle of the profile. It is not clear what this could be, either coarse-grained conglomerates or perhaps mineralized fluids enriched in carbonate or silica. The intermediate velocity package is roughly 50 feet thick in the north, thins to 25 feet thick in the middle and above the medium high velocity package in the middle of the profile, and thickens to roughly 90 feet thick in the south.

2.3.8 Seismic Line 7 Interpretations.

Seismic Line 7 lies between Seismic Line 5 and 6 and extends southward from Escarpment Ridge to the county road and just beyond. It extends west of Pimple Noll. The seismic line is located entirely on the PGP property. AGI shows the location of Fault A or the Slate Ridge Fault Zone (Figure 22). AGI did not locate the northern strand of the Slate Ridge Fault Zone, but it is apparent within both the seismic reflection and refraction profiles. Most notable is that the refraction profile encountered a high velocity package (red color) under the entire line. Equally apparent is a 140 – 185-foot-thick section of medium velocity material that extends across nearly the entire refraction profile. Only where the profile crosses Seismic Profile Line 1 and on

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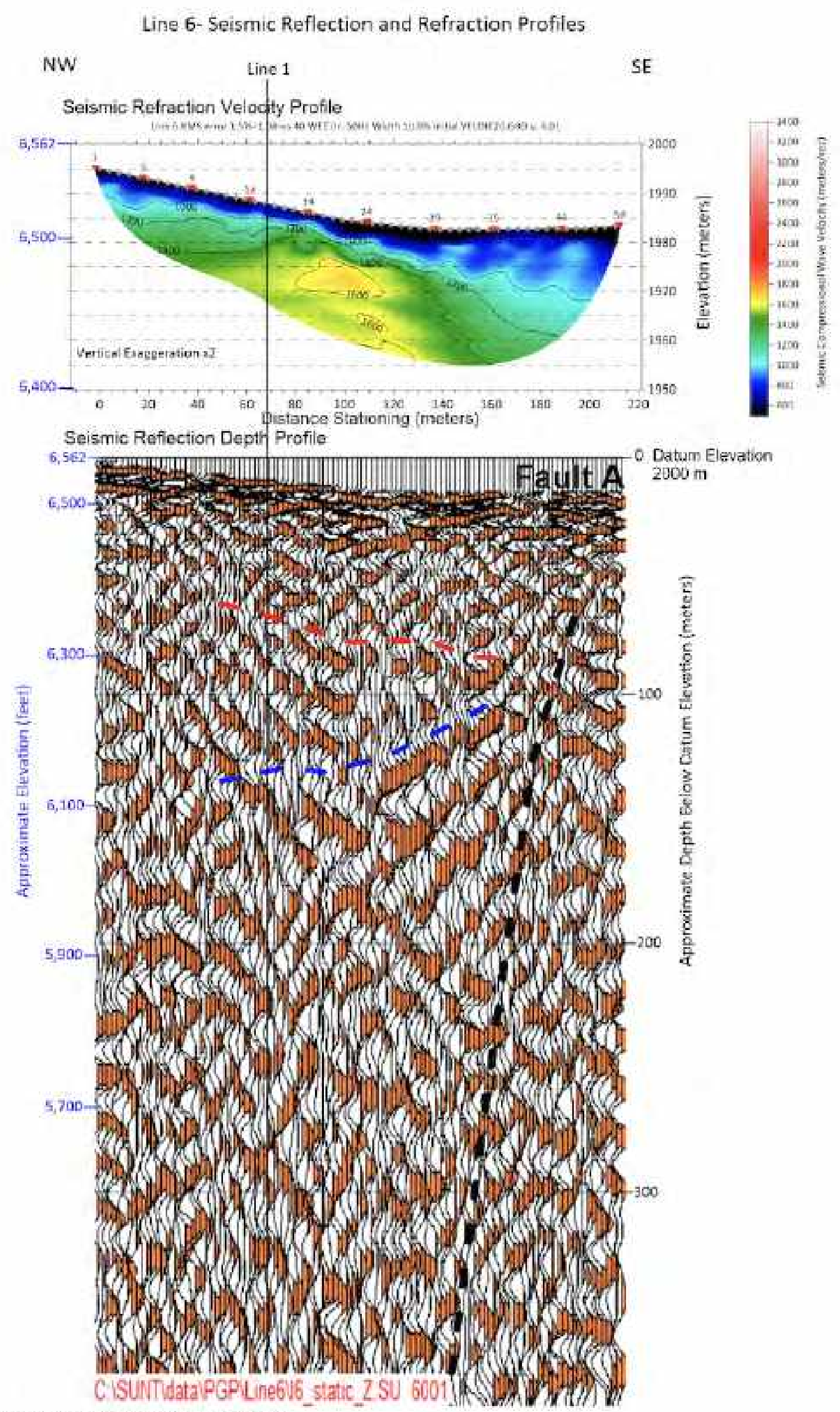

Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography
Seismic Compressional-Wave Velocity Contour Interval 200 m/s
Horizonal Scale 1 inch= 30 meters and Vertical Scale 1 inch = 15 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing
Horizontal and Vertical Scale 1 inch= 30 meters

Geologic Interpretation of Reflection Patterns

- Tertiary Air Fall Tuffaceous Layers
- Upper Surface of Tertiary Mudstone
- Upper Surface of Tertiary Welded Rhyolite
- Upper Surface of Pre-Cambrian Wyman Formation

Black Lines Show Orientation of Fault Planes Based on Reflection Pattern Discontinuities

Seismic Surveys for Exploration of Subsurface Geologic Units
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Figure 21

Plate 5
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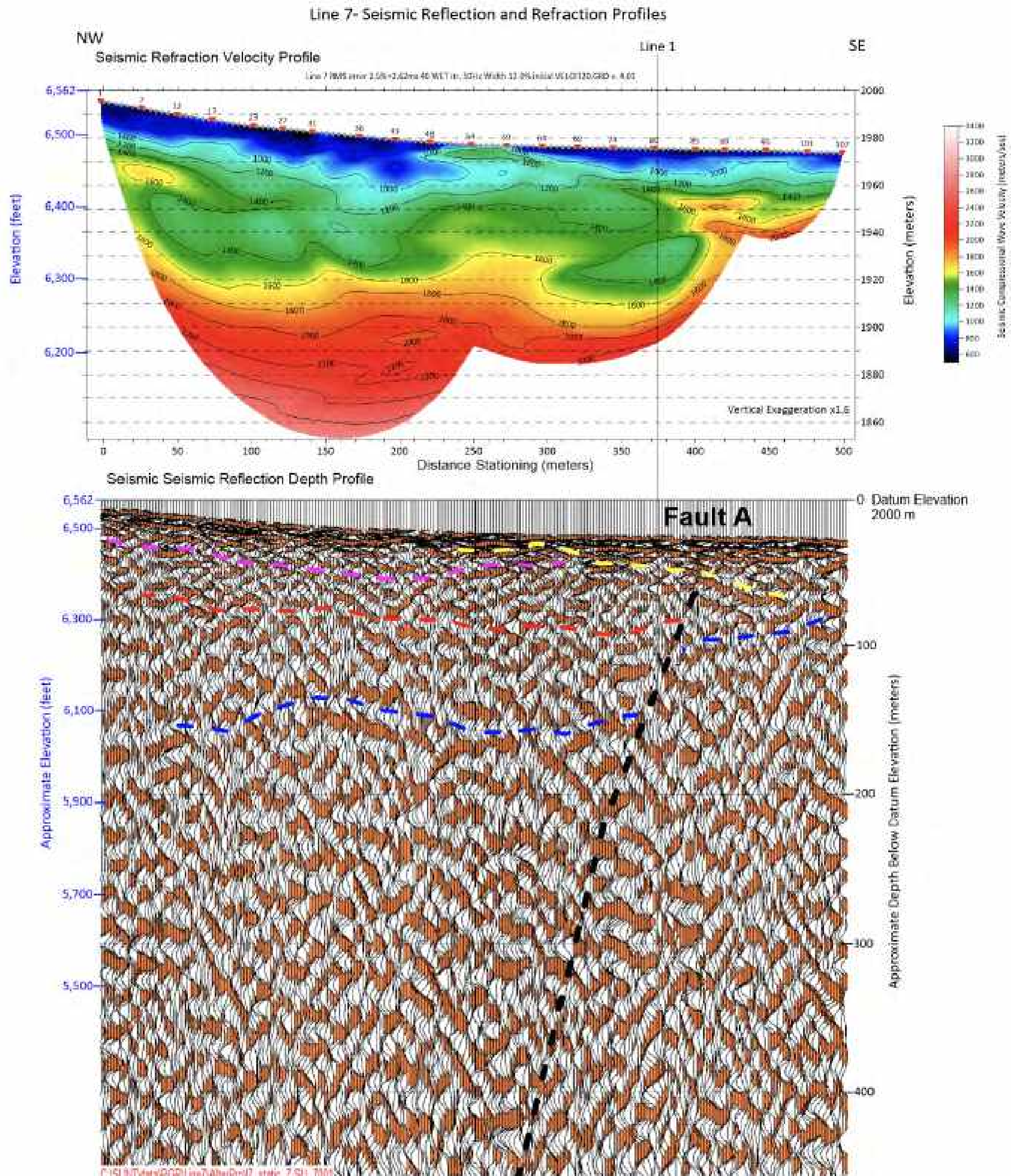
Geophysical Survey Line 6

Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 21



Seismic Refraction Velocity Profile Based on RAYFRACT Refraction Tomography
Seismic Compressional-Wave Velocity Contour Interval 200 m/s
Horizonal Scale 1 inch= 40 meters and Vertical Scale 1 inch = 25 meters

Seismic Reflection Depth Profile Based on Visual SUNT Processing
Horizontal and Vertical Scale 1 inch= 40 meters

Geologic Interpretation of Reflection Patterns

- Tertiary Air Fall Tuffaceous Layers
- Upper Surface of Tertiary Mudstone
- Upper Surface of Tertiary Welded Rhyolite
- Upper Surface of Pre-Cambrian Wyman Formation

Black Lines Show Orientation of Fault Planes Based on Reflection Pattern Discontinuities

Seismic Surveys for Exploration of Subsurface Geologic Units
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Figure 22

Plate 6
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Geophysical Survey Line 7	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 22

the south side of the county road does the high velocity material rise to within 65 feet of the surface. Clearly, there about a 60 foot-thick section of low velocity material on the west end, but still there is a thick section of medium velocity material underneath it. It may be that the northern strand of the Slate Ridge Fault Zone occurs at about Station 48 that uplifts the sediments on the south, or there is another fault at Station 66 that drops south-facing sediments. Clearly there is a large amount of medium velocity material in this section of the PGP property.

2.3.9 Summary of Phase 1 Geophysics.

The seismic reflection and refraction surveys imaged the subsurface with amazing results. The reflection surveys are meant for deep sediments and structures whereas the refraction surveys are better for near-surface strata and structure identification. Each showed excellent results that will aid in drill hole targeting for the best subsurface identification.

The goals of using these geophysical tools were 1) identification of the clastic sediments, 2) the depth and thickness of those sediments, and 3) the identification of prominent faults and offsets of the desired sediments. In most cases, the seismic profiles performed exceptionally well, yet some questions were left unanswered. In particular, it was assumed that the groupings of velocities represented certain types of sediments. This idea ran into problems when it was assumed that the intermediate velocity sediments (green colors) were intermixed with medium high velocity (yellow and orange colors). In some cases, it was postulated that the higher velocities were associated with faults and could represent hydrothermal alteration of the nearby sediments. In other cases, the higher velocities could represent coarse-grained sediments, such as thick pebble-cobble deposits. Drilling is the only way to determine what these conditions represent.

AGI also developed problems on Seismic Profile 4 that resulted in the basement rock not being identified on the north end of the line. This created a gap in determining the thickness of the intermediate velocity units, which are assumed to be the clastic sedimentary units. This will have to be resolved before volume calculations can be made.

It was also surprising how well the high velocity basement rocks were identified. This showed just how deep these older units were and where tectonic structures were located. It clearly showed the Slate Ridge Fault Zone is a prominent tectonic structure that has sustained substantial displacements, with north side down. Another encouraging result was that only a thin

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veneer of clastic sediments are located south of the Slate Ridge Fault Zone. However, the northern splay may show south side down, creating a thick trough or preserved sediments.

2.4.0 Phase 2 Seismic and Magnetic Surveys.

The Phase1 geophysical survey in 2022 provided an opportunity to conduct more geological reconnaissance of the PGP property than ever done before. Areas that looked promising from the surface was 1) the Central Provence, 2) Dog Valley, and 3) the Eastern Province. The surficial deposits consisted of widespread coarse-grained clastic sediments, including pebble and cobbles, some of which were basketball sized. For this reason, the area was considered the "Honey Hole". At the time of AGI's field survey work they were asked if access in this area would be problematic. The Eastern Province has a relatively hilly topography on the west that grades into ridges with steep slopes to the Eastern Ridges. AGI said the hilly parts on the west had good access, but the steep slopes did not.

They were also asked about performing a magnetometer survey to understand the magnetic properties of these sediments. The thought process was considering all the black sand recovered in the 2022 bulk sampling exercise that higher concentrations of magnetite would give higher magnetic readings. Hence, conducting multiple, parallel magnetometer surveys would identify anomalies that could be used for target near-surface bulk sampling tests.

Discussions with AGI regarding a Phase 2 geophysical exploration program were held in the winter of 2023 and a service agreement was signed on March 20, 2023. Advanced Geologic prepared a map that consisted of four seismic survey lines and an area to conduct the magnetometer survey (Figure 23). The purpose of the second round of geophysics was to provide better subsurface detail to the Eastern and Central Provinces with the following goals:

1. Improve the depth resolution of the Phase 1, Seismic Line 4 such that the basement rock could be imaged, and the thickness of the clastic sediments could be determined.
2. Extend Phase 1, Seismic Line 4 to image more of the Slate Ridge Fault Zone on the eastern side of the PGP area.
3. Provide insights into the coarse-grained clastic sediments in the Honey Hole, such as how deep and their lateral extent. Two lines were proposed that would be able to compare with Phase 1, Seismic Lines 2 and 3.

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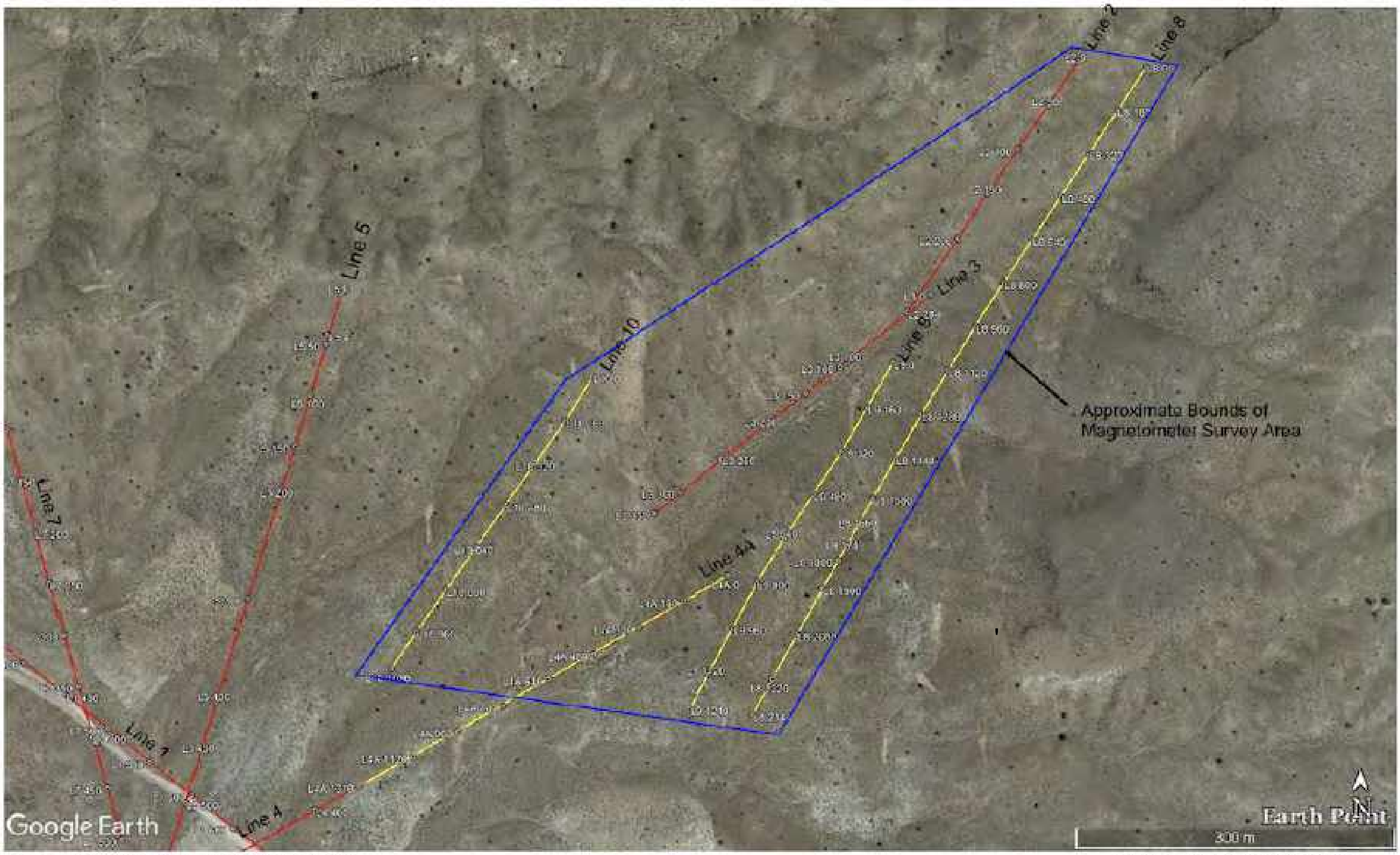

Distance stationing in meters for Lines 1-7 (shown by red lines)
Distance stationing in feet for Lines 4A, 8, 9, and 10 (shown by yellow lines)

Map Scale 1 inch= 200 feet or 60.96 meters

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

Figure 23

Figure 1
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Poverty Gulch Project

Placer Mining Claims

Phase 2 Geophysical Survey Map	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Figure 23

4. Conduct a seismic survey on Dillon Ridge to compare results with Phase 1, Seismic Line 5 and determine the sedimentary and structural context of the Dillion Ridge tectonic block.
5. Conduct a ground-based magnetometer survey along the boundary of the Central and Eastern Provinces to see if variations in the magnetic readings could be used to locate richer economic deposits.

2.4.1 Phase 2 Seismic Surveys Data.

AGI mobilized a survey crew to the PGP area on April 14th and completed the surveys on April 20. Higher-resolution seismic recordings were used to prepare better reflection and refraction velocity profiles of the upper 200 feet. Survey lines 8 and 9 were located in the foothills in the Eastern Provenance and west of Dog Valley Road. Survey line 10 was placed on Dillion Ridge and each of these survey lines had station spacings of 10 feet. Survey line 4A was placed along the same line as the Phase 1, Seismic Line 4, but this time with 10-foot station spacings for slightly deeper resolutions. The following shows the lengths of each survey line:

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

The seismic data was recorded using a Seistronix, Ltd. EX-6, 150-channel data recording system. This recording system was connected to various active-length 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. The shorter-length Lines 2, 3, 6, and 7 were set up with single 54 to 126-channel geophone spreads. Each geophone spread consisted of a 40-Hertz (lower ramped cut-off frequency) geophone spread.

The seismic waves were transmitted into the ground at “source points” positioned at 8 or 10-foot intervals between stations. These seismic wave vibrations were recorded by the EX-6 system from each 132-channel geophone spreads.

A 60-pound, man portable weight drop (sled hammer) was used to generate the seismic waves. The sled hammer 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 stronger wind gusts.

The first source point started off from 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 reflection spacing. A total of 641 field records were obtained from all 4 survey lines. Once the surveys were completed, GPS measurements were obtained for each station.

After each reflection survey was completed, the UTM 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). A Google Earth *.KMZ file showing the locations of these GPS surveyed points was provided.

2.4.2 Magnetometer Survey Data.

The magnetometer survey was conducted on April 19th and 20th, and concurrently with the seismic surveys. The survey lines were recorded along northeast-southwest orientated survey lines that were generally parallel with the seismic survey lines. GPS control was used at each station along a total of 18 survey lines.

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.

2.4.3 Phase 2 Seismic Surveys Interpretations.

AGI provided a final report with interpretations and plates on May 26, 2023. A full description of the survey procedures, data processing, and the evaluation conclusion are presented in their report. Figures 1 and 2 as well as Plates 1 – 5 for the seismic reflection and refraction depth profiles are provided in the discussions herein (Figures 17 – 22). Note the vertical scale on each plate as the depth of various units is important. Plate 6 in their report presents the magnetic data map.

The basic stratigraphic model the subsurface remained the same as presented in AGI's Phase 1 Geophysical Report. Hence, AGI fit their interpretations into this model. AGI imposed color-coded seismic refraction interpretations on the same plate with the seismic refraction data, thus the correlation of methods could more easily be made. The scope of the project remained investigative, giving the project insights as to how thick induvial units are and where they occurred, which could be used for both future near-surface bulk sampling and drilling activities.

Our initial model was tuff overlying, clastic sediments, overlying mudstones, overlying welded rhyolite tuffs or flows, overlying a pre-Cambrian Wyman Formation. For a seismic refraction velocity profile, the harder or denser the units, the faster the velocity. Tuffs are less dense than conglomerates, hence, the seismic velocities in the tuff are slower. The Wyman Formation would be extremely hard and seismic velocities would be the fastest. AGI identified these geologic horizons by color:

Alluvium and tuff	Dark blue to light blue	<1,200 m/s
Clastic sediments	Light Green to dark green	1,200 – 1,600 m/s
Welded tuff or flows	Yellow to orange	1,600 – 1,800 m/s
Wyman Formation	Pink to red	>1,800 m/s

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To some extent and per the Phase 1 geophysical survey interpretations, the yellow-orange colors with velocities between 1,600 – 1,800 m/s may also indicate other dense units or materials, such as coarse-grained pebble conglomerates or hydrothermally altered sediments.

AGI provided general interpretations of their seismic data. Advanced Geologic's interpretations herein deviate somewhat from AGI's, however, AGI's interpretations are consistent between the surveys, and we look at each survey line in detail, then summarize the results in conclusion.

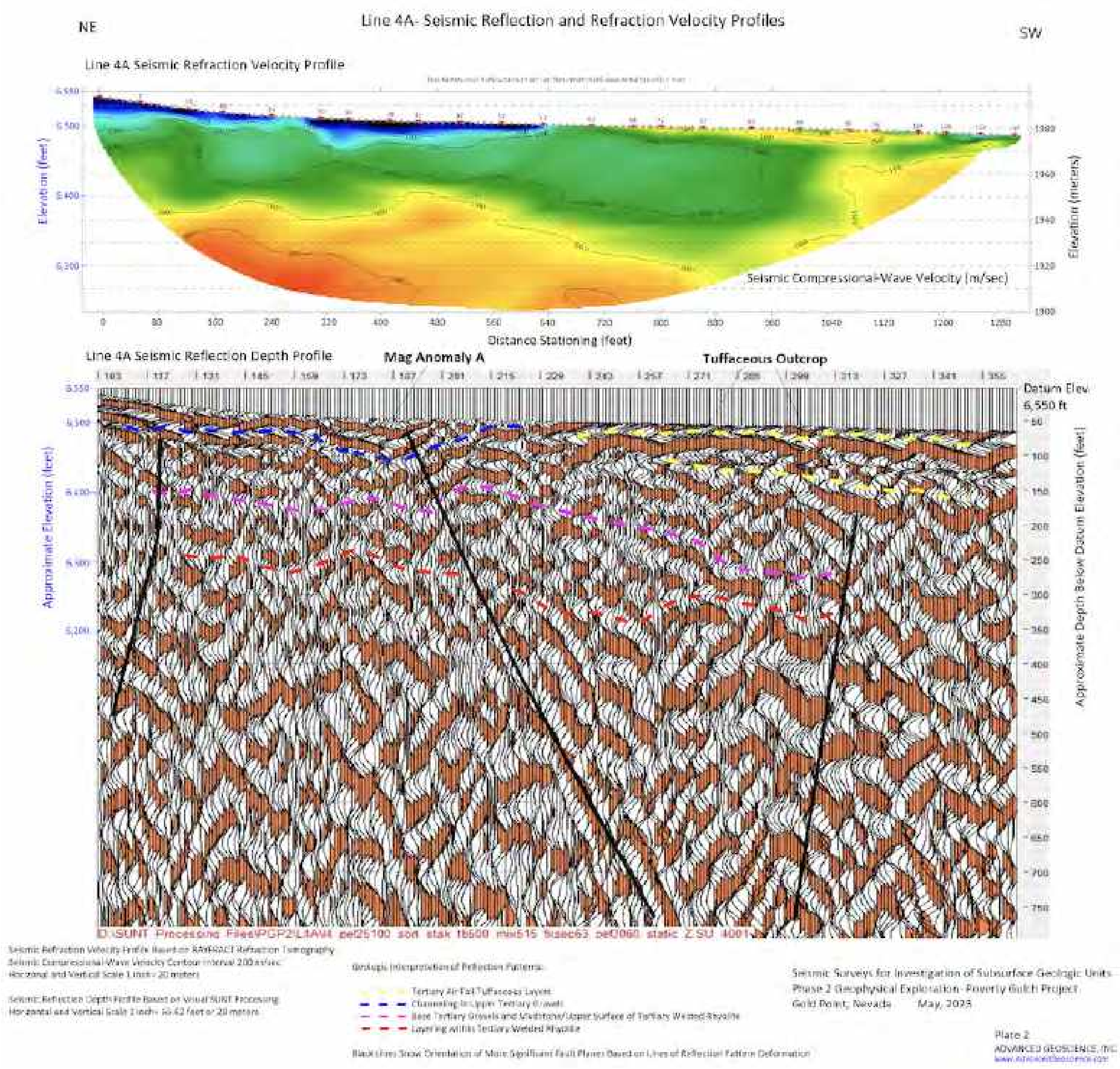
2.4.4 Seismic Line 4A Sedimentary Interpretation.

The purpose of resurveying Phase 1, Seismic Line 4 was to improve the depth resolution of Phase 1, Seismic Line 4 such that the basement rock could be imaged, and the thickness of the clastic sediments could be determined. In addition, it was desired to extend Phase 1, Seismic Line 4 to image more of the Slate Ridge Fault Zone on the eastern side of the PGP area.

Seismic Line 4A began on the east side of the NE Fault and crossed the northern strand of the Slate Ridge Fault Zone about mid-way along the profile line to the county road and Phase 1, Seismic line 1 (Figure 23). It also terminated very close to the end of Phase 1, Seismic Line 5. This would put the profile terminus close to the southern strand of the Slate Ridge Fault Zone (AGI's Fault A).

The Seismic Line 4A seismic reflection profile shows a series of broken laminar reflectors for the first 200 feet below the surface that is underlain by a chaotic assemblage of broken seismic reflectors that better resemble a shattered car windshield (Figure 24). To AGI's credit, they show three prominent fault structures, but the whole profile is substantially fractured and so many more faults could have been drawn. The profile is an excellent example of what a major shear zone looks like in the subsurface with these geophysical tools. There are few horizontal seismic reflectors below 200 feet that do not have any length longer than a few tens of feet. Nevertheless, our focus is on the top 200 feet which has several seismic reflectors that extend for many tens of feet.

Because of this intensely fractured basement rock, refraction velocities are expected to be reduced. Hence, the expected high velocity (red colors) as seen in other refraction profiles are



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Geophysical Survey Line 4A	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 24

not apparent (Figure 24). What can be trusted about the refraction profile for Seismic Line 4A are the low and intermediate velocities (blue and green), which correlate to volcanic tuff (blue) and clastic sediments (green). The profile shows a continuous intermediate velocity unit that extends from the beginning to almost the end of the profile (±1,000 feet). The overall unit is roughly 130 feet thick, thinning in the middle to about 65 feet and thickening in the south to as much as 250 feet thick. The southern ~200 feet of the profile show the moderately high velocity units rise to roughly 30 feet of the surface. This suggests a shallow bedrock in these areas, which agrees with the Phase 1, Seismic Lines 1 and 5 of shallow bedrock also in this area.

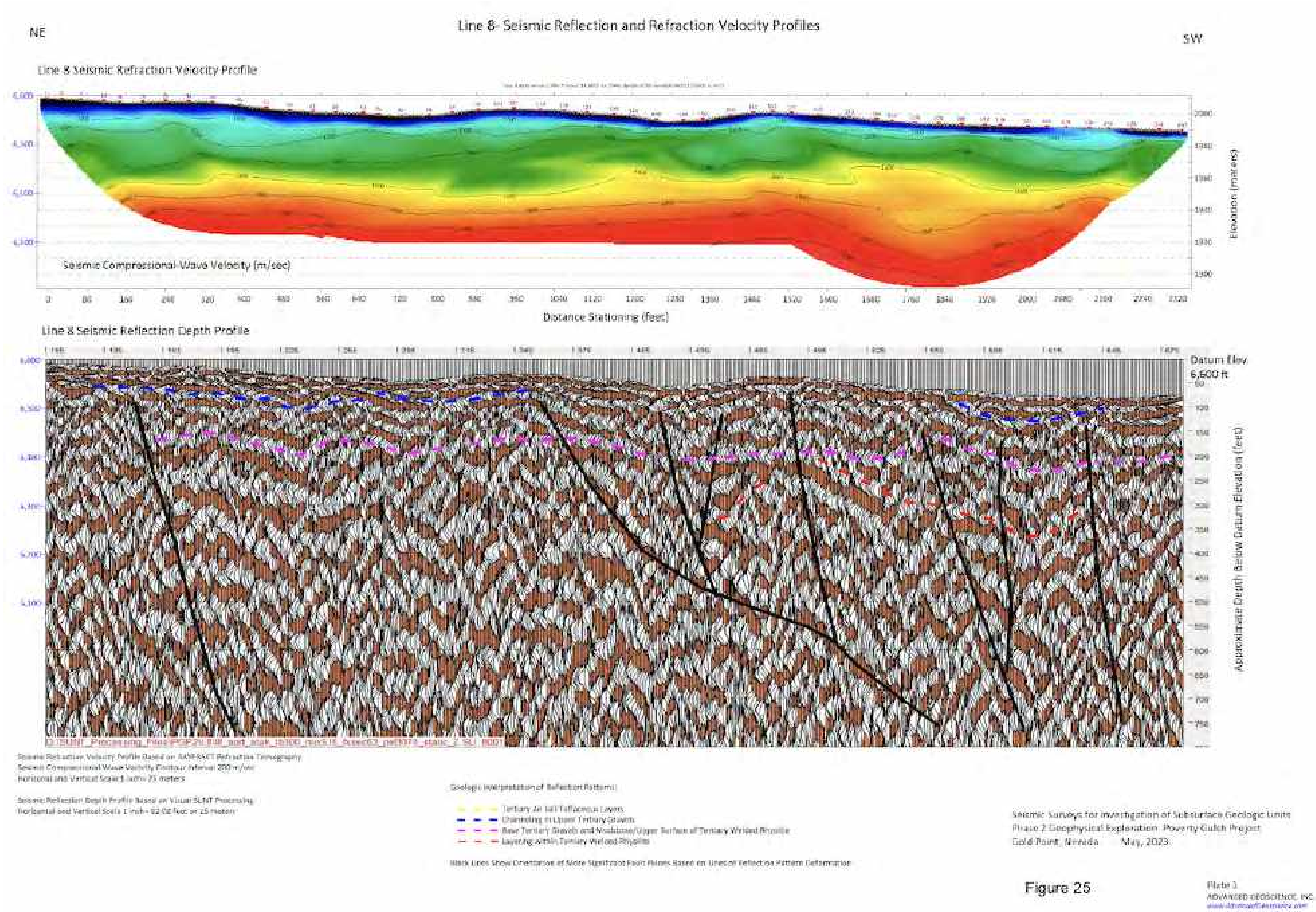
2.4.5 Seismic Line 8 and 9 Sedimentary Interpretation.

AGI provided Phase 1, Seismic Surveys 2 and 3 as comparisons for Phase 2, Seismic Surveys 8 and 9 (Figure 23). Both the Phase 1 and Phase 2 reflection profiles show well laminated surficial units overlying highly faulted basement rocks. While AGI added more faults in the Phase 2 reflection profiles as they determined in the Phase 1 profiles, more faults could be proposed such that the “broken windshield” appearance as seen in Seismic Line 4A can be extended northward into Seismic Lines 8 and 9 (Figures 25 and 26. However, the laminated units overlying the bedrock appear to have only a few breaks here and there. Again, these units are likely the clastic sediments, which are the focus of this investigation.

Both the Seismic Line 8 and 9 seismic refraction profiles show a consistently low, intermediate, and high velocity units laminarly extending across both profiles. Seismic Line 8 has more low velocity units (blue) in the north (20 – 30 feet thick) and thinning to ~ 10 feet thick to the south. The intermediate velocity units (green) in Seismic Line 8 are thinner to the north (60 – 70 feet thick) the south where it is about 130 feet thick. There is a prominent intermediately high (yellow) unit extending across the entire Seismic Line 8 profile, whereas in Seismic Line 9, there is more of a defuse appearance which suggests more faulting. Seismic Line 9 shows a consistent 10 – 15-foot-thick low velocity unit across the profile. The intermediate velocity units thin from 130 feet in the north to about 70 feet in the south.

2.4.6 Seismic Line 10 Sedimentary Interpretation.

Seismic Line 10 is located on the north – south trending Dillon Ridge (Figure 23). The purpose of this line was as a comparison to Phase 1, Seismic Line 5 and if the seismic tools could pick up on the Timber Mountain welded tuff and airfall tuff at the surface and any faulting that were



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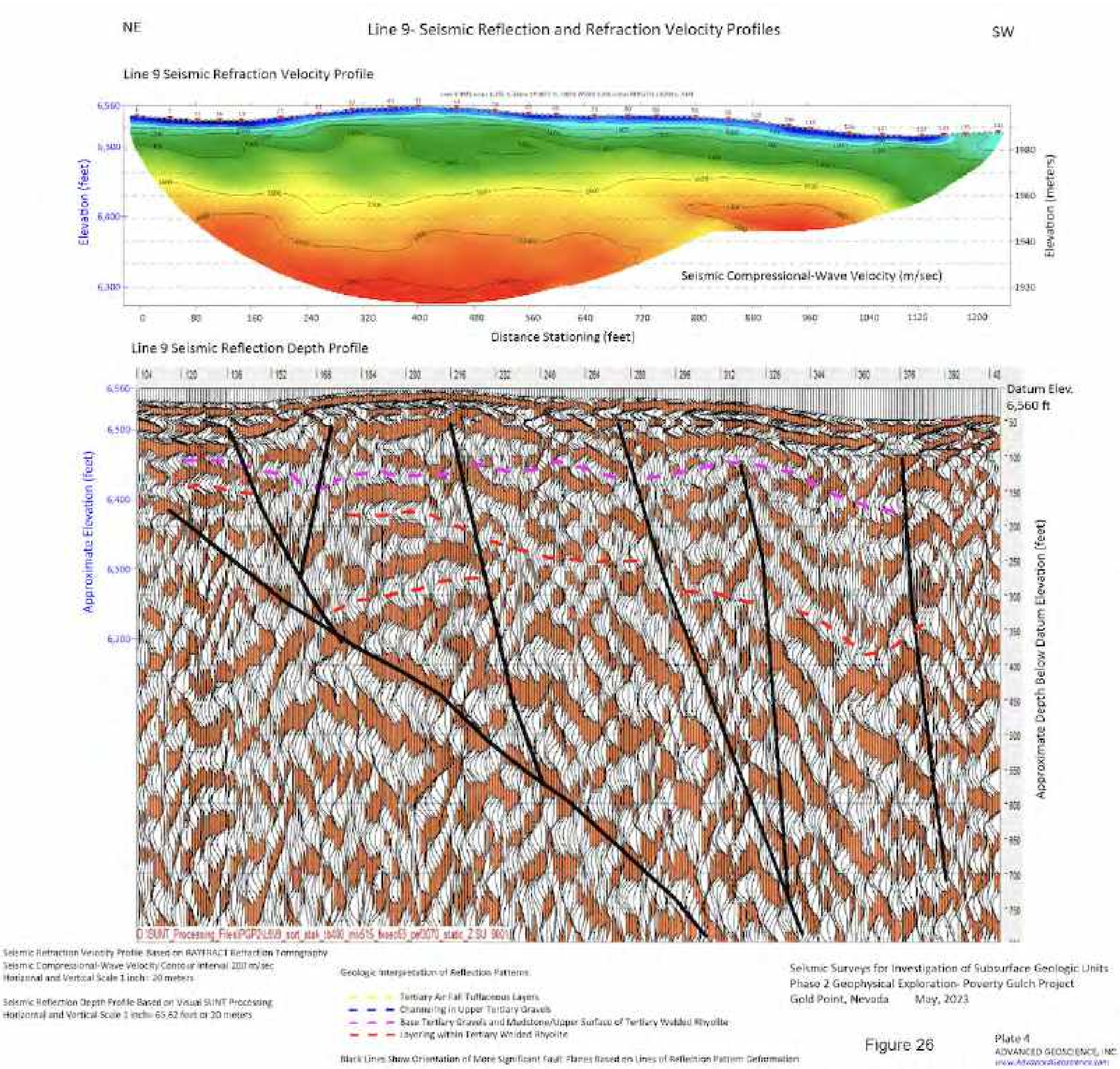
		Gold Point Mining District	T. 7S., R. 42 & 42.5E
		Esmeralda County, NV	Figure 25



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Geophysical Survey Line 9	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 26

seen on the reconnaissance excursions. Also observed were plenty of coarse-grained gravels at the surface, which would make good resource targets.

The seismic reflection profile shows substantially faulted basement rocks below 180 feet (Figure 27). AGI has placed some faults within the profile, but many more exist. Probably the most notable are the plethora of shears on the southern half of the profile (Stations 328 – 370). AGI placed a fault on the north side of this shear zone but did not continue the fault to the surface. Together they imply a prominent set of shears that occur at the base of Dillon Ridge, as well as all along Escarpment Ridge. Seismic reflectors from Stations 208 – 328 and below 180 feet are substantially sheared as well. AGI placed a red dashed sub-horizontal line that suggests the base of the Tertiary welded rhyolite[10], which suggests most of the faulting happened prior to its deposition.

Above 180 feet, Seismic Line 10 shows a number of prominent sub-horizontal seismic reflectors suggesting these are bedded deposits. The seismic refraction profile indicates the typical low velocity material, underlain by an intermediate velocity material, that is underlain by a high intermediate material. High velocity material, or bedrock, was not imaged in this profile. It is highly possible that the material from 10 – 180 feet is all clastic sedimentary deposits. Of specific note is the thickening of the intermediate velocity material at the south end of the profile.

2.4.7 Summary of Phase 2 Seismic Surveys.

The Phase 2 seismic surveys were a resounding success. The seismic surveys showed layered, intermediate velocity unit thicknesses from 65 – 200 feet throughout the areas tested, and in some locations as much as 250 feet thick. Therefore, an average thickness estimated within this area, and perhaps the entire site, would be 180 feet thick.

Bedrock, or high velocity material, was not well seen in Seismic Lines 4A and 10, but the seismic reflection data indicates the PGP area is located within a prominent shear zone with much of the tectonic activity occurring prior to the deposition of the overlying deposits. Because of the apparent offset surficial seismic reflectors, it is likely the tectonic activity is ongoing today.

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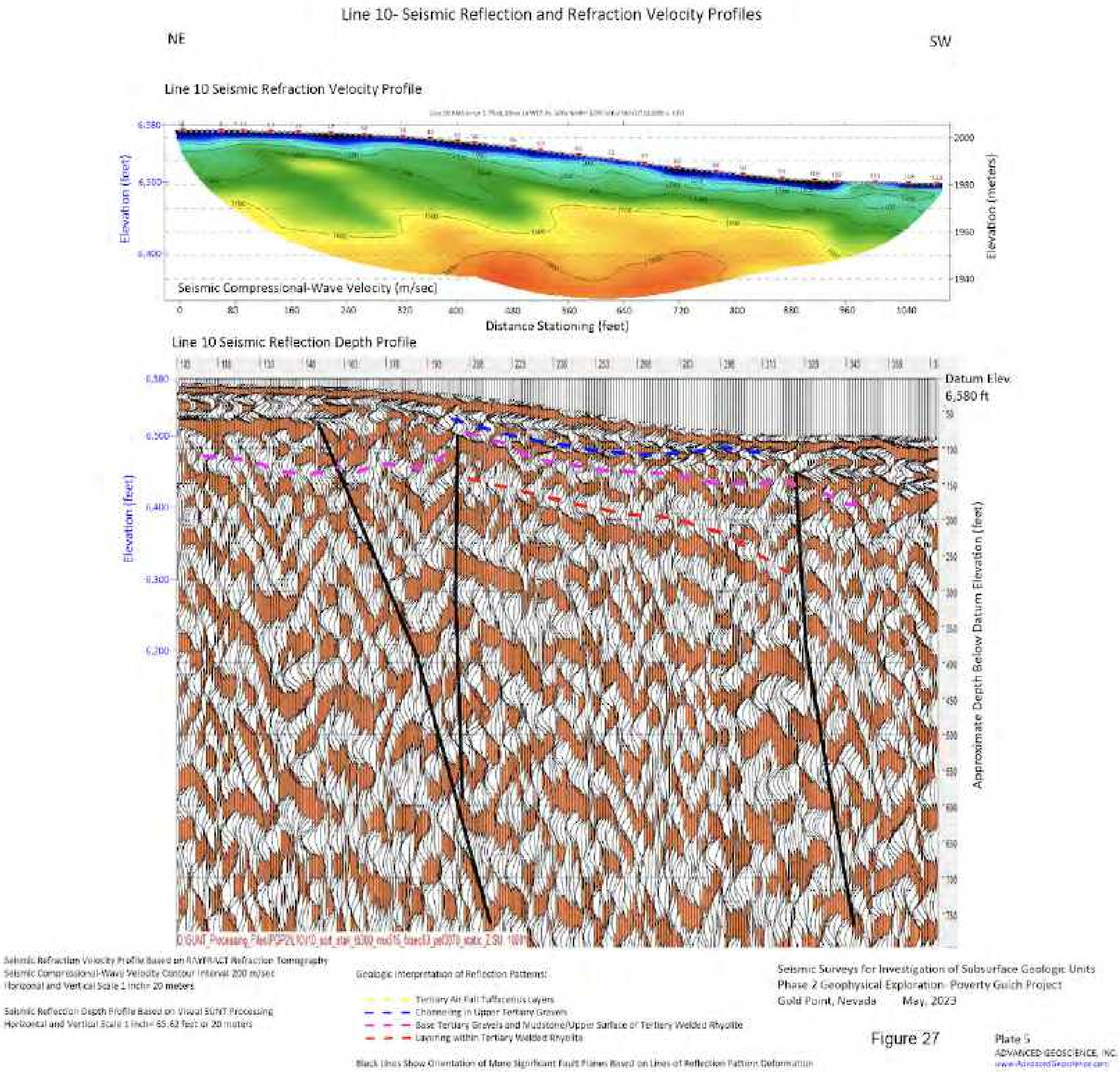
[10] It is not certain that this unit has the seismic characteristics of welded rhyolite.



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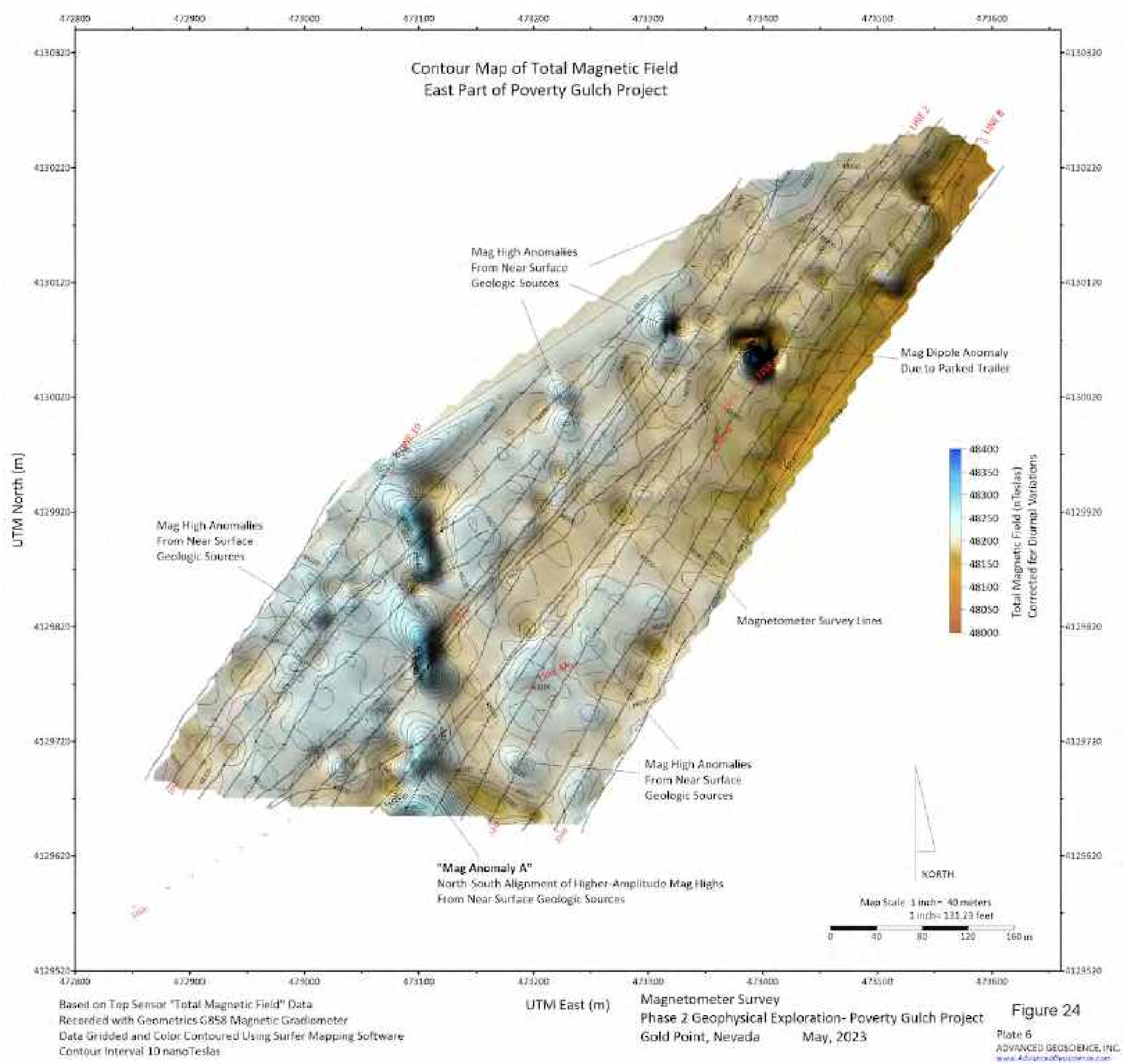
Geophysical Survey Line 10	
Gold Point Mining District	T. 7 S, R.41.5 & 42 E. MDM
Esmeralda County, NV	Figure 27

2.4.8 Magnetometer Survey Data Interpretations.

The area covered by the magnetometer is shown in Figure 23 and the contoured results are shown in Figure 24. Per AGI's interpretations, the total magnetic field data shows several patterns of smaller scale 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 potentially caused by concentrations of magnetite across these broader areas.

The data 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 located on Dillion Ridge. The contour patterns associated with this anomaly indicate magnetic highs in the range of 60 to 120 nanoteslas. AGI determined that Mag Anomaly A appears to be caused by an alignment of magnetized geologic sources in the upper 15 meters. Geologic reconnaissance shows the north portion of the anomaly is associated with outcrops of the Timber Mountain welded tuff and by association, the other magnetic high anomalies could also be associated with the welded tuff, just slightly buried. Seismic Line 10 is in the vicinity of Mag Anomaly A and shows an intermediately high velocity refraction anomalies at various station points along the profile that suggests this harder unit. The dislocation of the magnetic highs could be caused by faulting. There are a few other concentric magnetic high contour anomalies elsewhere in the survey area and these may also be remnant outliers of welded tuff as well.

There appears to be more magnetic high plateaus ranging from 48225 – 48275 nanoteslas (nT/m) (light to medium blue shading) in the southern half of the survey area than in the northern half. In addition, this slightly elevated magnetic high anomaly is found from Lane Ridge northward and along the ridge crest where coarse clastic sediments (gravels, pebbles, and cobbles) are exposed. If the slightly elevated magnetic highs on the ridge are indicative of these sediments, then the slightly elevated magnetic highs forming the plateaus in the southern half of the survey area could be near-surface coarse-grained clastic sediments as well. AGI suggests that they are could also be from near-surface sediments. The location in the southeast portion of



Advanced Geologic Exploration, Inc.	Contour Map of Total Magnetic Field	
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the survey area is associated with the “Honey Hole” location. The other Honey Hole plateaus could be near surface course clastic sediments as well.

Curiously, there are equally anomalous magnetic lows ranging from 48150 – 48200 nanoteslas along the east side of the Mag Anomaly A. It is not clear what these magnetic lows represent, but they are linear and may be related to faulting and therefore, there is a large north-south fault between Dillion Ridge and Lane Ridge.

The anomalous magnetic lows in the northern half of the survey area, and especially along the northeast side of the survey area and in the vicinity of Seismic Lines 8 and 9, stand out as anomalous compared to the rest of the site. In the northeast, the magnetic lows are as weak as 48000 nanoteslas – more than 350 nanoteslas and are elongated along the break in slope to the East Ridge. Perhaps, just as the linear low anomalies associated with the Mag Anomaly A could be a fault, maybe this northeast range front anomaly could be related to a prominent fault as well. Furthermore, the broad range of magnetic low plateaus in the north may suggest an area of intense faulting of the bedrock and the overlying clastic sediments as well.

2.4.9 Magnetometer Survey Data Summary.

Initially the magnetometer survey was deployed with the thought that high concentrations of magnetic minerals (magnetite) could be used to locate targets where there was abundance of coarse-grained clastic sediments that would have a high potential for economic values. However, the data was much much more informative. It appears that the magnetometer not only picked up near-surface magnetic signatures, but perhaps deep-seated magnetic fingerprints as well. The interpretations suggest:

1. Significantly elevated magnetic high anomalies likely represent the magnetic minerals within the Timber Mountain welded tuff.
2. Slightly elevated magnetic high anomalies that form broad plateaus likely represent areas of laminar coarse-grained clastic sediments.
3. Areas with significant magnetic low anomalies are likely faults.
4. Plateaus of magnetic low anomalies are likely areas of shattered basement rocks and clastic sediments.

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These results are encouraging, and more magnetic surveys would give a better description of the subsurface geology.

2.5.0 Phase 3 Aerial Magnetometer Survey.

Discussions with Advant Geosurveys (Advant) of Park City, Utah, began in June 2023 to conduct an aerial magnetometry survey over the entire PGP area using an UAV (unmanned aerial vehicle, e.g. "drone"). The results of the ground-based magnetometer survey conducted by AGI the previous year were very encouraging but in order to cover the entire site, an aerial approach was necessary. Advanced Geologic prepared a survey coverage map (Figure 29) and provided that to Advant, whereupon they prepared a service proposal. It was signed on June 14 and Advant mobilized to the site on July 6. The aerial survey took five days and flew a grid pattern over the project area, totaling about 66 linear miles. Advant compiled the data and presented their results in their report, "Data Acquisition UAV Magnetometry Technical Report on July 16, 2023[11]. Advanced Geologic supervised the acquisition of the field data and reviewed and provided comments to Advant's initial draft report.

Advant used a grid pattern to acquire the data from the DJI Matrice 600 Pro UAV, a hexacopter with excellent flight performance and good load capacity (Photos 5). The UAV uses a Flight Controller A3 system for navigation and a SF11 Laser Altimeter to maintain the proper altitude over the targeted area. The spacing between was 25 meters (east – west) and the spacing between the control lines was 250 meters (north – south) (Figure 30). The height of the sensor that was suspended from the UAV averaged about 25 meters but varied from 5 – 10 meters at various safety reasons or topography. To reduce the risk of collisions and maintain the best possible adherence to the natural terrain, a Shutter Radar Topography program was used in combination with a USGS flight planning software.

Advant presented several derivations of the data using various filters to enhance specific attributes[12]. For the purpose of this report, interpretations will rely mostly on the 1st Vertical Derivative because this filter enhances shallower anomalies and improves the resolution of

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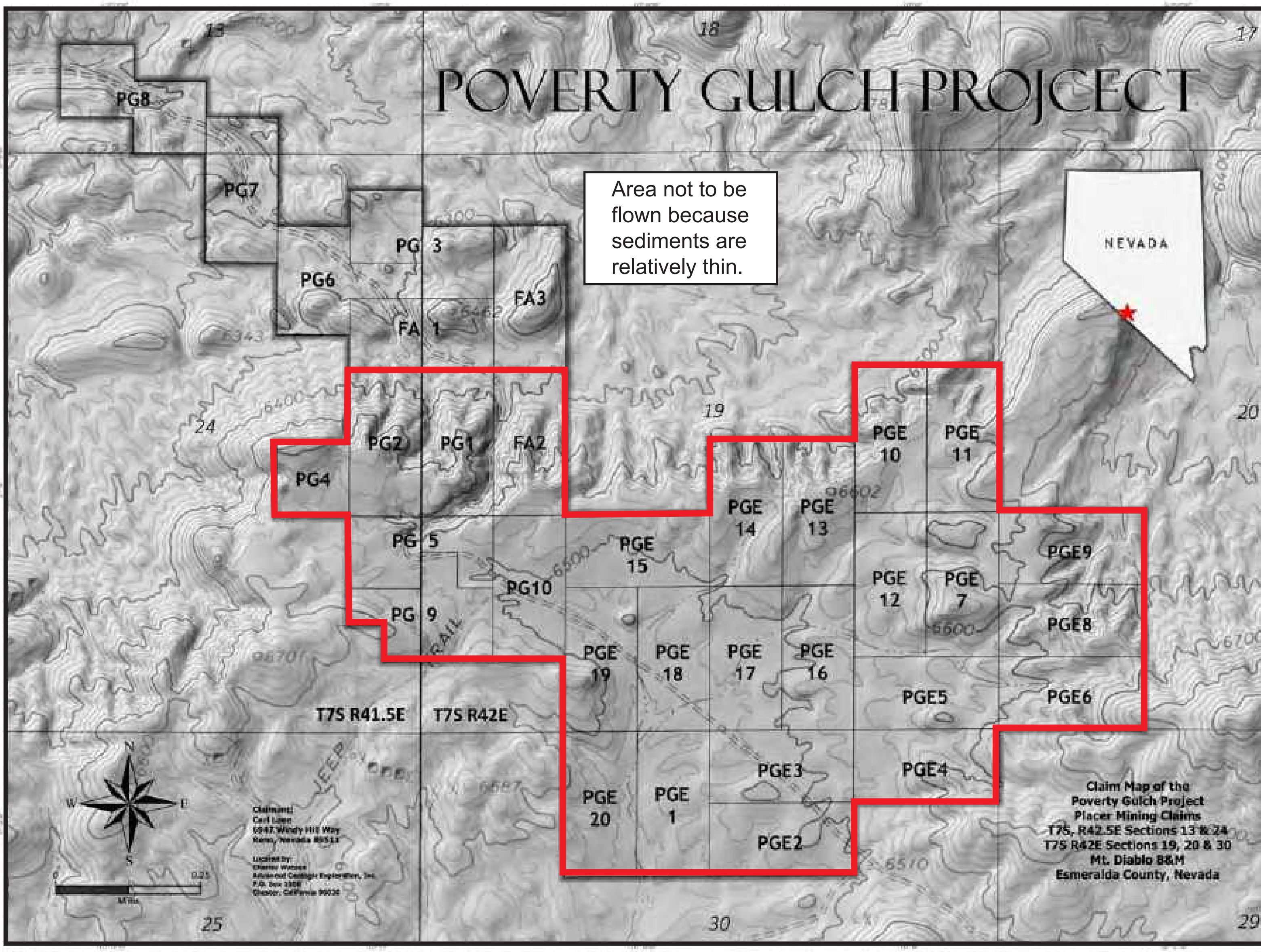
[11] A few modifications were necessary, and the final report was actually completed on August 3, 2023.
[12] Advant presented various maps using differing filtering techniques, including Total Magnetic Intensity (TMI), Stacked Profiles of the TMI, Reduced Pole TMI, Analytic Signal (AS), Stacked Profiles using AS, 1st Vertical Derivative, 2nd Vertical Derivative (B&W), Total Horizontal Derivative, Tilt Angle Derivative, Analytic Signal of the Vertical Integral, Total Horizontal Derivative of the Tilt Angle, and Tilt Angle of the Total Horizontal Derivative. As the data becomes clearer, these other filtered data will prove valuable.



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Poverty Gulch Project

Placer Mining Claims

Aerial Magnetic Survey Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 29

Photo 5 A. Advant used a grid pattern to acquire the data from the DJI Matrice 600 Pro UAV, a hexacopter with excellent flight performance and good load capacity. The UAV uses a Flight Controller A3 system for navigation and a SF11 Laser Altimeter to maintain the proper altitude over the targeted area.

Photo 5 B. Advant showing Mr. Lane the data collection process.

Photo 5 C. Advant's command center with battery charging station.

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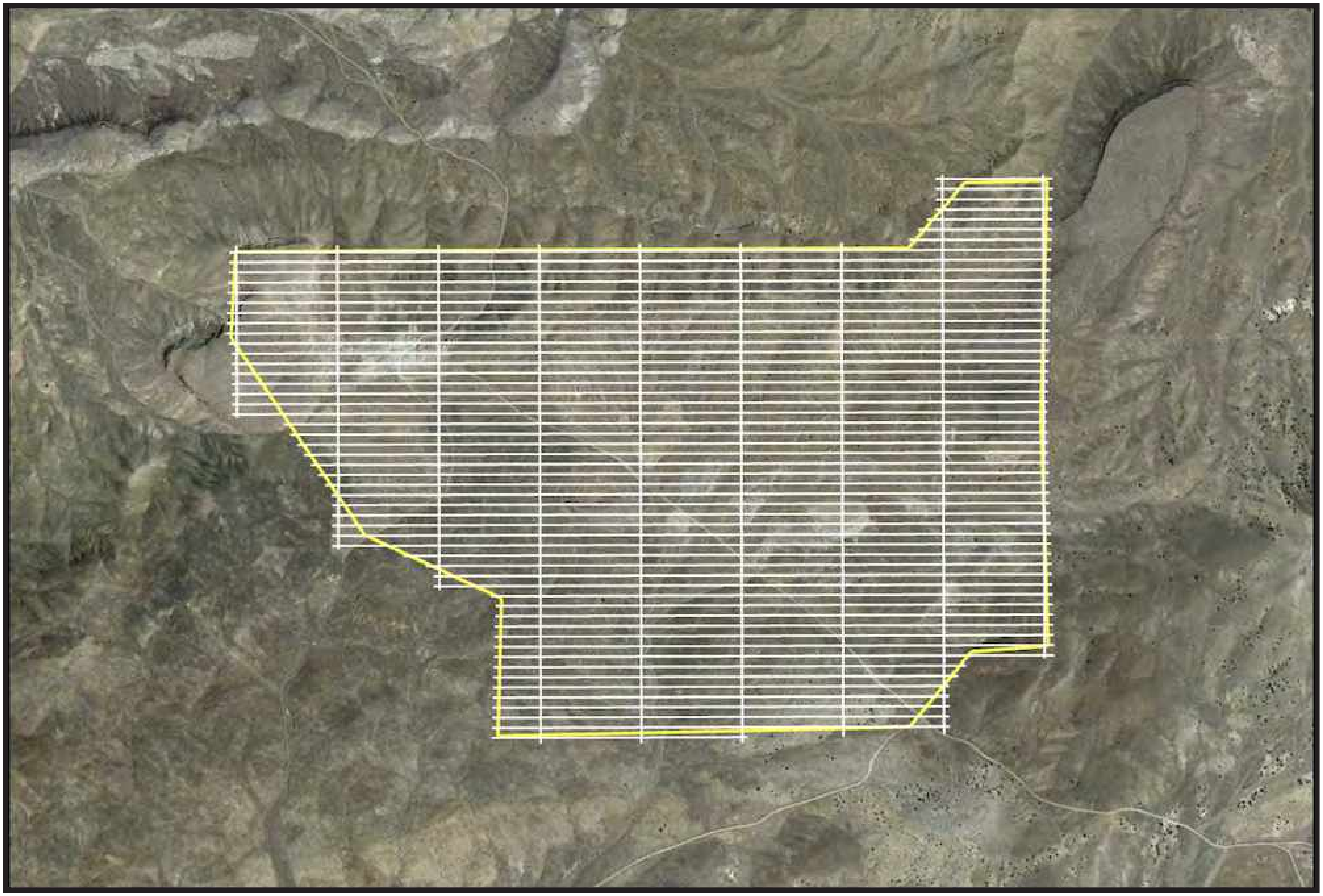
Poverty Gulch Project	Aerial Mag Survey Photos	
Placer Mining Claims	Gold Point Mining District	T. 7S., R. 42 & 42.5E
	Esmeralda County, NV	Photos 5



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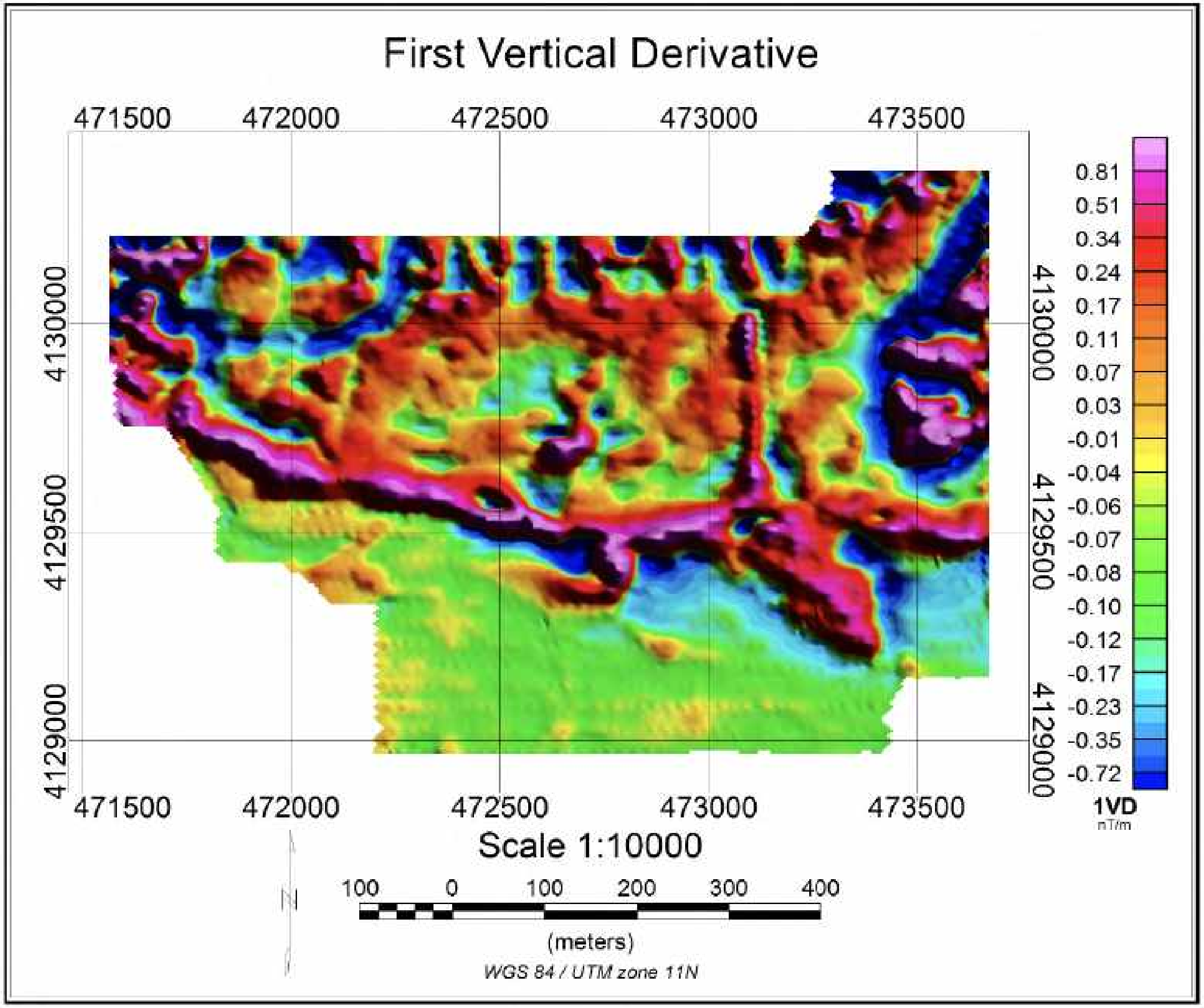
Aerial Mag Flight Line Survey Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 30



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First Vertical Derivative Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 31

closely spaced sources by sharpening and separating magnetic anomalies (Figure 31). Advant added color enhancements to positive and negative changes to the first vertical derivative, wherein positive changes are warm colors and negative changes are cooler colors.

2.5.1 Phase 3 Aerial Magnetometer Survey Interpretations.

What is dramatically apparent is a sub-horizontal anomalous feature that extends across the entire PGP site. These very high anomalous magnetic values precisely correlate with the location of the Slate Ridge Fault Zone. It starts out in the west and angles south-southeast to the center of the site whereupon it flattens out just before encountering a jumbled or disrupted zone of high-values between UTM 473000 – 473300 grid marks that seem to disrupt the fault zone's continuity. The anomality then extends horizontally off the survey area. To the south of the jumbled zone is a broad area of very high magnetic values with discrete boundaries, and to the north is a narrow north-south rod-shaped feature displaying equally very high magnetic values.

It is known from reconnaissance geologic mapping and the ground-based magnetometer survey that the northern end of the rod-shaped anomaly is associated with the Timber Mountain welded tuff, and it is likely that the middle and southern portions of the rod-shaped anomaly are also Timber Mountain welded tuff. The map also shows the "Pimple Knoll" as a high-value magnetic anomaly, as are the welded tuffs of the Eastern Ridge. However, it is not known what the large high-value magnetic anomalous mass is south of the State Ridge Fault Zone south of the rod-shaped anomaly. It was considered to represent mineralized basement rock.

In addition, it is unclear why the Slate Ridge Fault Zone has a distinct high-value magnetic anomaly signature. Interpretations from the Phase 2 seismic survey suggested that faults have low-value magnetic anomalies. It is possible that other factors could be at play, including magnetite concentrations could become elevated from groundwater precipitations along the fracture planes, or ascending hydrothermal fluids along these fracture planes precepted magnetite-rich minerals (Personal communications with M. Olsen of AGI, 2023).

The first vertical derivative map also shows moderately high-value magnetic anomalies (orange and light red colors) all along Escarpment Ridge and along the ridge in the Central Provence. Reconnaissance shows these areas have coarse-grained clastic sediments (gravels, pebbles cobbles) cropping out at the surface. Therefore, it seems as though these moderately high-

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value magnetic anomalies are picking up on the magnetic minerals within these sediments. Extrapolating this interpretation to other areas of similar colors would suggest similar sediments, and near-surface targets of opportunity.

It appears the slightly low-value magnetic anomalies (light greens to light blues) correlate to surface outcrops of the Timber Mountain tuff. Clearly, near-surface deposits south of the Slate Ridge likely lack any clastic sediments. Nevertheless, whisps of moderately elevated magnetic anomalies within this area may suggest clastic sediments could be just below the tuffs.

The Poverty Gulch Road as it cuts through Escarpment Ridge shows a very low-value magnetic anomaly (dark blue). It is likely this is a manmade artifact due to the distance from the ground to the drone increased rapidly, losing its ability to properly make accurate readings. It is believed this is why the north side of Escarpment Ridge also shows the very low-value magnetic anomaly (dark blue colors). These blue colored anomalies are also seen around the East Ridge. The drone was unable to adjust to the rapid change in topography, hence increasing the distance between the magnetometer and the ground, resulting in lower magnetic values.

There are some smaller anomalous features that are curious, such as the two low-value magnetic anomalies within the Slate Ridge Fault Zone that form eye-like features, or the very low-value magnetic anomalies around the Pimple Knoll, or the very low-value magnetic anomalies west of the Poverty Gulch Road.

In summary, the aerial magnetometer survey was very successful in locating anomalously magnetic features that were collaborated by geology and other geophysical tools. These magnetic anomalies are extremely valuable in locating near-surface drill targets and bulk sampling activities.

PART 3 PHASE 1 EXPLORATION AND BULK TESTING

3.0 The Premise to the Phase 1 Exploration and Bulk Testing Activity.

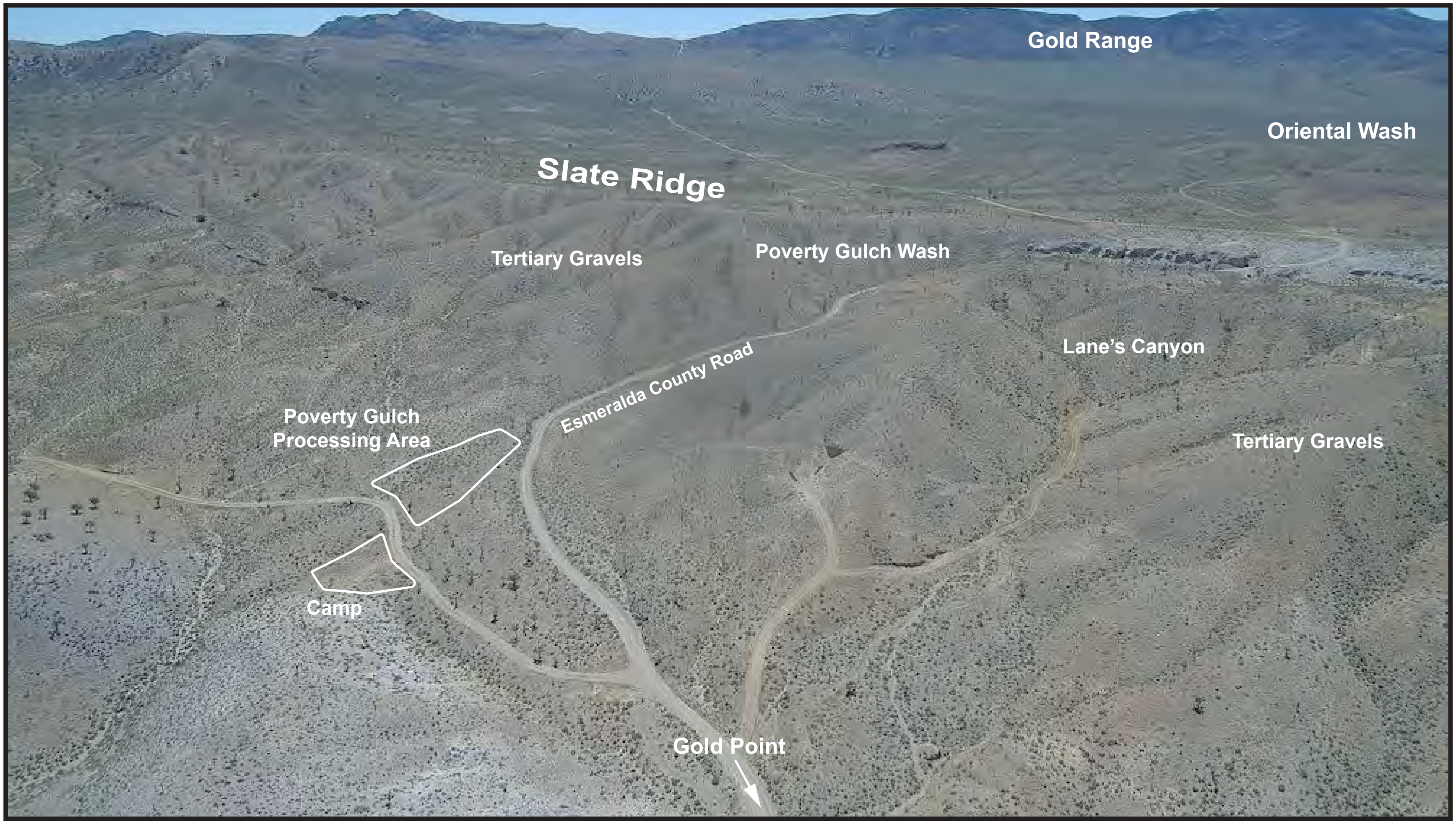
Phase 1 Exploration and Bulk Testing project was initiated with the premise to use conventional excavating and concentrating equipment to recover gold from the Tertiary gravel deposits. The field work ran from July 31 – October 25, 2022. Bulk samples were collected and concentrated to collect and catalog the gold. Most of the black sand concentrates were discarded; however, some were saved and later tested for valuable minerals. The results of four geochemical assays indicated substantial amounts of industrial metals and rare earth elements that warranted further exploration and testing activities.

3.1 The Purpose of the Phase 1 Exploration and Bulk Testing Activity.

The purpose of the Phase 1 Exploration and Bulk Testing Activity was to determine if the PGP property contained enough gold to be an economic mineral resource. Standard practices for assessing placer deposits were used, which included excavating the material and transporting it to a trommel-sluice box system for concentrating and recovering the gold. The volumes of raw material were logged and compared to the amount of gold recovered to obtain ore grade. Limited exposures did not provide much surface sampling of the gravel deposit, hence, the most likely sources with a reasonable chance of finding gold were in the alluvial fans at the base of washes and gullies that eroded from the deposit. These alluvial fans would have sorted and concentrated any gold that would have been eroded from the parent material.

3.2 Project Description.

The plan was to explore two canyons and their alluvial fans that have eroded into the Tertiary gravel deposits, both of which drain off the north side of Slate Ridge (Figure 32). The largest wash is the main Poverty Gulch Wash where the Esmeralda County Road accesses the top of the ridge and beyond. The previous claimant had conducted some exploration activities just off the road and along the canyon banks and reclaimed most of their disturbances. The other canyon, referred to as “Lane’s Canyon”, is located about 150 yards west of the Poverty Gulch Wash. Former claimants had created some disturbances in Lane’s Canyon as well, including putting in a two-track access road and digging a test trench, neither of which were reclaimed. The results of these previous claimants are unknown.



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Poverty Gulch Project

Poverty Gulch Bulk Testing Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 32

Mobilizing the excavating equipment began on July 31, 2022, and construction of the processing began shortly after that. Excavating equipment for this project included a CAT 240F backhoe loader, CAT 304E tracked mini excavator, and 938M wheeled loader. Sampling consisted of digging into the canyon banks and floors of the washes, transporting the material to the processing area, classifying the material through a free-standing grizzly, and creating a stockpile. Exploration activities began in the Poverty Gulch Wash. Topsoil and disturbed vegetation was stockpiled adjacent to digs for use in reclamation. Safety fencing was erected around the perimeter of any excavation left open overnight and around the processing area.

The processing plant for the Poverty Gulch Wash material was located on a remnant and elevated alluvial fan just downslope from the canyon's mouth (Photo 6). The processing area occupied an area of about 150 feet x 100 feet or roughly 15,000 square-feet (Photo 7). The processing area consisted of a stockpile area, a level pad for a trommel, and a series of four plastic-lined ponds, three that are approximately 20 feet x 40 feet x 8 feet deep and used as clarifying ponds and one that was used as a tailings pond that was approximately 20 feet x 25 feet x 8 feet deep. The ponds were lined with plastic sheeting and linked in series so that the water flowed from one and to the other, and so on, which is then recirculated. Water was brought in from a private source from Gold Point using a 2,000-gallon water truck.

The trommel was a Heckler 2410-V with a vibrating feed hopper and 8-foot x 2-foot barrel (Photo 8). It was an electric drive motor (230 single phase 60 Hz) that required 500 – 600 gallons-per-minute. The power plant was a Kobota GL11000 Lowboy II diesel engine generator. The sluicebox was a standard steel box construction measuring 8-feet long x 2-feet wide x 1-foot high that was originally outfitted with a carpet/moss with expanded metal riffle system. A 16-inch section of riffle bars were placed after the expanded metal. Several riffle designs and sluicebox modifications were tried during the course of the project.

The Heckler trommel arrived onsite on August 2, 2022. The previous few days were spent cutting a pad, leveling the site, and digging the ponds. It had rained the day before and the wet soil made for good compaction. This year saw many thunderstorms that often-produced torrential rainfall and flash floods. Many roads in Esmeralda County were closed due to flooding or washouts. Fortunately, access to the PGP area was spared the worst, yet still needs some care.

Photo 6. Drone overview of the Phase 1 Exploration and Bulk Testing activity in 2022. View is looking north at the processing area and the man camp. Truck is parked on the Esmeralda County Road. Trench 1 exploration site is to the left of the truck.

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Poverty Gulch Project

Placer Mining Claims

Phase 1, Staging & Processing Areas	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photo 6

Photo 7. Drone overview of the Phase 1 Exploration and Bulk Testing processing area. The processing area occupied an area of about 150 feet x 100 feet or roughly 15,000 square-feet. The processing area consisted of a stockpile area, a level pad for a trommel, and a series of four plastic-lined ponds, three that are approximately 20 feet x 40 feet x 8 feet deep and used as clarifying ponds and one that was used as a tailings pond that was approximately 20 feet x 25 feet x 8 feet deep. The ponds were lined with plastic sheeting and linked in series so that the water flowed from one and to the other, and so on and is clarified and recirculated.

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Poverty Gulch Project

Placer Mining Claims

Phase 1, Processing Area	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photo 7

Photo 8 A. Heckler 2410-V trommel arrives onsite on Aug. 2, 2022.

Photo 8 B. 4” electric pump.

Photo 8 C. Kobota GL11000 Lowboy II diesel engine generator.

Photo 8 D. Drone overview of the Phase 1

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Placer Mining Claims

Phase 1, Processing Equipment	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photo 8

3.3 Trench T-1 Excavation and Discussion.

Once the processing plant was set up and the settling ponds filled with water, excavation of the test sites could begin. The first site, T-1, was at the mouth of the Poverty Gulch main wash close to the processing area (Figure 33). It was anticipated that the thickness of the alluvial wash sediment would thicken as it left the mouth of the canyon. A trench was cut to the width of a backhoe loader bucket (7.49 feet)[13]. The alluvial fan thickness increased from 3 feet at the head of the trench to about 6 feet at the end of the trench, much shallower than expected (Photo 9). There was a 10" – 14" sandy vegetated cover over a sandy, gravely, pebbly conglomerate. There was no "V-notch" that is usually found at the base of an alluvial deposit as it leaves a valley, but a relatively smooth claystone hardpan. The alluvium/claystone contact was distinct, with occasional swales and humps, with a few scours. One section of the trench showed a crack (fault?) that had been infilled with alluvial material.

Sampling of Trench T-1 concentrated on obtaining a bulk sample from the lower-most portion of the alluvial material with about 4 – 6" of the claystone. The material was transported to the processing area and ran through the wash plant. Immediately it was noticed that there was an abundance of black sands, so much so, it clogged the riffle system and seemed to prevent the gold from settling in the sluice box. What was also observed was a smaller amount of gold than expected (Photo 10, Table 1).

3.4 Trench T-2 Excavation and Discussion.

Trench T-2 was the next site sampled. It was located on the west side of the county road just below Trench T-1 (Figure 33, Photo 11). The same claystone hardpan bedrock was encountered at 5 – 6 feet below the surface, the trench length was about 80 feet, and the width was the size of one backhoe bucket. There was a 12" – 18" sandy vegetated cover (eolian deposits?) over a sandy, gravely, pebbly conglomerate. Again, there was no "V-notch" relatively smooth claystone hardpan. The alluvium/claystone contact was distinct, with occasional swales and humps, with a few scours. One crack in the bedrock was specifically hand excavated to recover the gravel.

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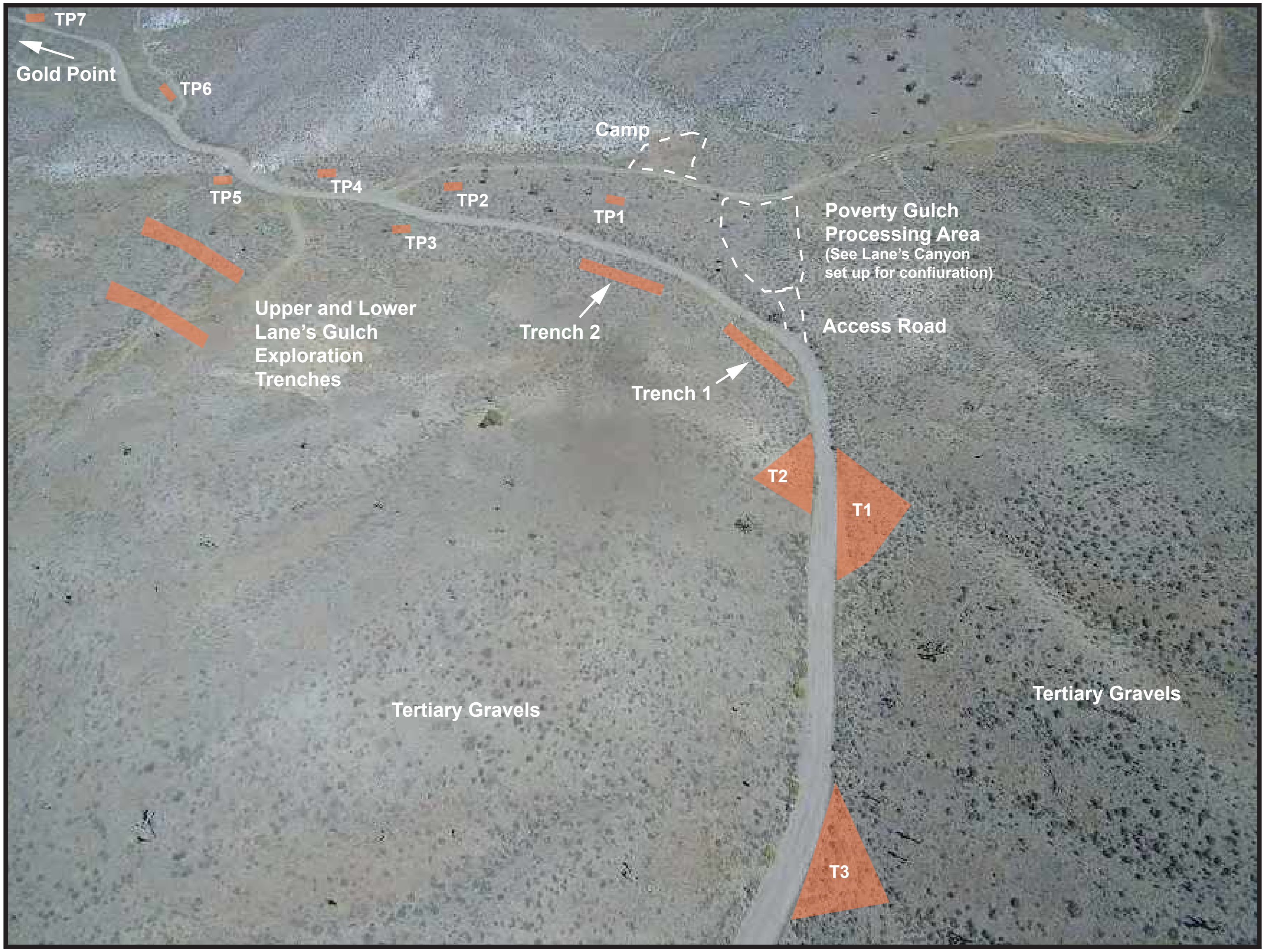
[13] Standard Cat 420F backhoe bucket width from O'leary Equipment website: https://www.olearysequipment.com/equipment/details/cat-420f-it



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Poverty Gulch Project

Poverty Gulch Lower Wash Test Sites	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 33

Photo 9A. Drone view of Trench T-1 as it was first opened.

Photo 8 B. View of Trench T-1.

Photo 9 C. View of Trench T-1 sidewall showing two layers before mudstone.

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Poverty Gulch Project
Placer Mining Claims

Phase 1, Trench T-1	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photo 9

Photos 10 A and B. Gold recovered from Trench T-1. Notice that most of the gold are crumbs and specks with no flakes or nuggets.

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Phase 1, Trench T-1 Gold Recovery

Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 10

Photo 11A. Trench T-2.

Photos 11 B Digging out a crack in Trench T-2.

Photos 11 C. Boulders recovered from from Trench T-2.

Photos 11 D. Abundant black sands from processing trench T-2.

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Phase 1, Trench 2	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 11

Trench T-2 concentrated on obtaining a bulk sample from the lower-most portion of the alluvial material and with about 4 – 6" of the claystone. The material was transported to the processing area and ran through the wash plant. Black sand again clogged the riffle system and as in Trench T-1, there was a smaller amount of gold than expected (Table 1).

Table 1
Poverty Gulch Project
2022 Exploration and Bulk Testing Project
Gold Recovery from Total Yards = Grade (Yards per Ounce)

Date	Location	Yards	Gold	Grams per Yard	Grade (yds/oz)
Aug 14	From Riffles	30	1.19	0.040	784.0
Aug 17	T-11 North	20	0.30	0.015	2073.3
Aug 21	From Clay	10	0.58	0.058	536.2
Sep 7	T-11 South Test #1	20-25	0.38	0.015	2096.3
Sep 9	Lane Gulch Trench East	20	0.08	0.004	7775.0
Sep 10	T-11 Run #2	30	0.62	0.021	1504.8
Sep 15	Test on Road	20	1.40	0.070	444.3
Sep 17	Lane Gulch East Side West	60	4.51	0.075	413.8
Sep 19	Lane Gulch Center	60	2.29	0.224	814.9
Sep 22	T-1	20	4.47	0.224	139.1
Oct 5	T-12 Upper	20	2.81	0.141	221.4
Oct 7	Lane Gulch Trench #2 West	20	1.27	0.041	489.8
Oct 10	Lane Gulch West Going N #3	20	1.39	0.447	447.5
Oct 12	T-11 South Re-Run	20	0.17	0.045	695.7
Oct 12	Lane Gulch West Side Headings	20	1.48	0.048	420.3
Oct 16	Lane Gulch Bulk Test #1	100	5.49	0.055	566.5
Oct 17	Lane Gulch Test #2	100	4.35	0.037	702.1
Oct 19	Lane Gulch	90	7.75	0.086	361.2
	Totals	**660**	**40.53**	**0.061**	**506.4**

Data source from Foster Scott. Compiled for this report by Advanced Geologic.

Several ideas were floated around as to why the deposits contained less gold than expected,

1. The deposit had already been mined out.
2. The black sand clogged the sluice box and prevented the gold from being collected.
3. The native deposit did not contain an economic amount of gold.

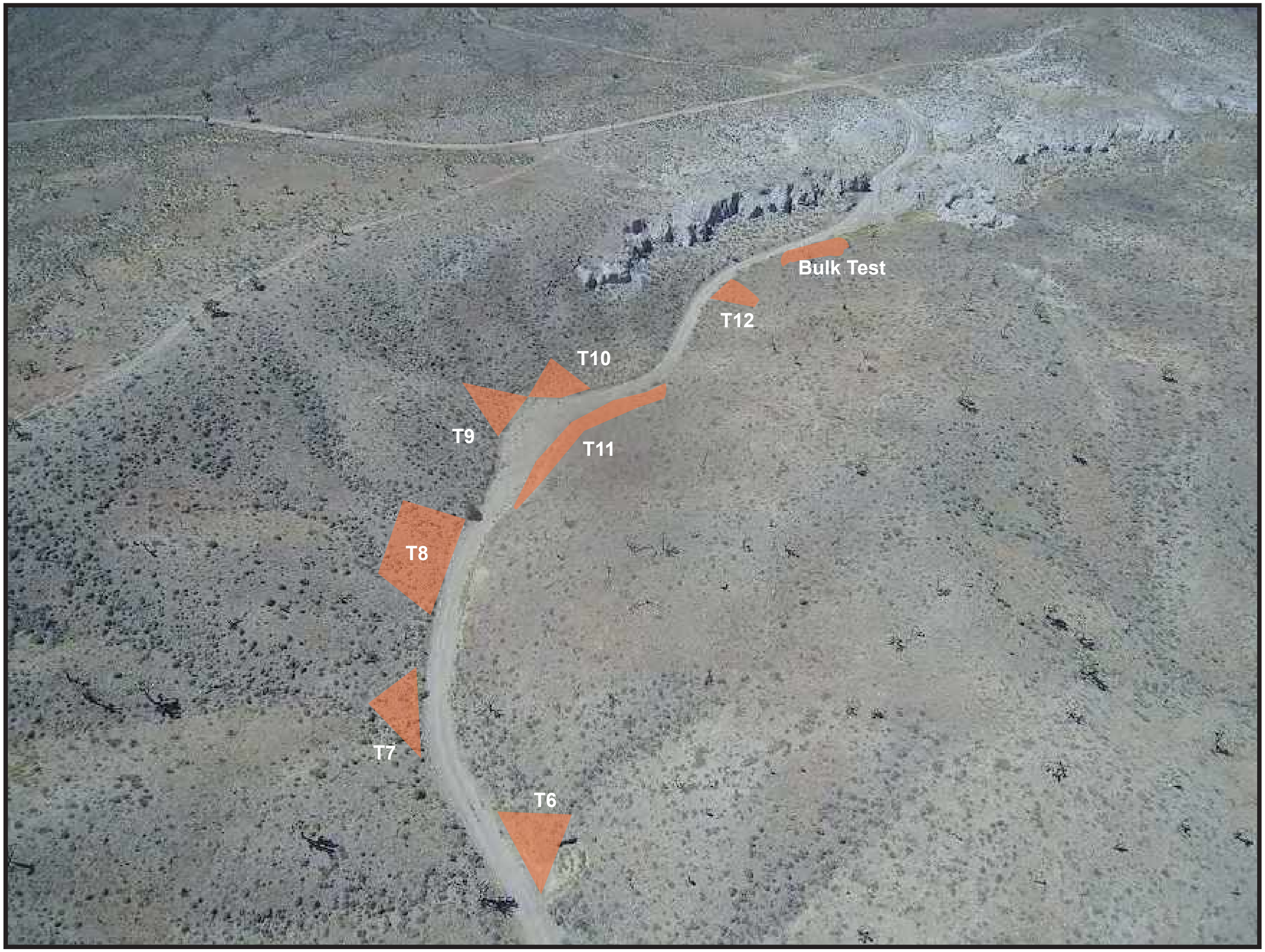
Several modifications to the sluice box were tried, in fact, it became an ongoing experiment throughout the course of the project. A decision was made to abandon and reclaim Trenches T-1 and T-2 and go up the Poverty Gulch Canyon and test two predetermined sites, Trenches T-11 and T-12.

3.5 Trench T-11 Excavation and Discussion.

Trench T-11 was located about two-thirds of the way up the Poverty Gulch canyon and on the west side of the county road (Figure 34, Photos 12 and 13). The side wall to the gulch was a previous exploration site and had reclaimed material piled against the wall. This was removed and a new clean face was exposed for about 160 feet. The vertical cut was between 8 – 12 feet tall.
The exposure showed shallow south dipping interbedded coarse sand and gravel-pebble conglomerates overlain by a 1 – 2.5-foot colluvial cap. The bedding was not continuous across the exposure and was likely caused by small-scale faulting. The gravel-pebble conglomerates showed scour-fill features of the underlying material. Most sand layers appeared lenticula and contained a few gravel-sized clasts. Individual beds were 0.5 – 4 feet thick, showing both quiet water and active stream environment-type depositions. The material was dry to slightly moist and no water seeps were observed. It was clear to see that this material was native, non-worked material.

Additional material was excavated from the exposure and stockpiled for processing. Divisions in the stockpiled material were made and ran separately through the wash plant. Sample runs consisted of between 20 – 25 yards. The results showed less than expected gold results from all the test runs, tallying between 1,500 and 3,700 yards-per-ounce.

Although the material resembled good gold-bearing gravels, it did not contain the expected values. In fact, they were very disappointing. Again, there was an abundance of black sand that consistently clogged the riffle system. More changes to the sluice box were made.



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Poverty Gulch Project

Poverty Gulch Upper Wash Test Sites	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 34

Photo 12 A. Upper end of Test Site T-11 South.

Photos 12 B. Upper end of Test Site T-11 North.

Photos 12 C. Lower end of Test Site T-11 South.

Photos 12 D. Upper end of Test Site T-11 North.

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Poverty Gulch Project

Placer Mining Claims

Phase 1, Test Site T-11 Excavation	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 12

Photo 13 A. Processing Test Site T-11.

Photos 13 B. Processing Test Site T-11.

Photos 13 C. Test Site T-11 produced abundant pebbles and cobbles.

Photos 13 D. Processing Test Site T-11.

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Poverty Gulch Project

Placer Mining Claims

Phase 1, Test Site T-11 Processing	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 13

3.6 Trench T-12 Excavation and Discussion.

Trench T-12 was located nearly at the top of the Poverty Gulch canyon and on the west side of the county road (Figure 34). The side wall to the gulch was exposed for about 75 feet. The vertical cut was between 5 – 7 feet tall. The exposure showed a gravel pebble conglomerate bed with overlying sandy gravels with the cut nearly parallel to the bedding strike. A 1 – 2.5-foot colluvial cap occurred at the top of the exposure. A few cobbles occurred within the conglomerate.

A 20-yard bulk sample was stockpiled and taken to the processing center. As with all the other tests, the abundant black sand concentrates continued to plague the recovery system. The results are shown in Table 1 and at 221 yards-per-ounce, it was one of the best results thus far; yet still not economically viable. However, tests did show there was gold in the native gravels. Hence, it could be concluded that either the processing system was losing gold because of the black sand build up or there was not enough gold in the native gravels.

3.7 Re-run of Trench T-11 Tailings.

It was decided to rerun the tailings to see if any gold was lost in the system. On October 12 a 20-yard re-run test of Trench T-11 was conducted. The results were definitive and showed very little gold was being lost in the recovery system (Table 1).

3.8 Upper Lane Gulch Excavation and Discussion.

The alluvial fan at the foot of Lane Gulch was explored for gold content from two sites, one directly below the mouth of the canyon and the other further down slope and closer to the county road (Figure 33). As with the T-1 and T-2 in Poverty Gulch, a claystone hardpan was encountered underneath a loosely consolidated zone of sandy gravel with many pebbles and some cobbles (Photos 14). While not conclusive, it appeared the claystone hardpan may have been an older alluvial fan deposit.

Several cubic yards of material were stockpiled and transported to the processing area. The sample areas were identified as “East” and “West” Lane Gulch. The first processing of Lane Gulch material occurred on September 9 and consisted of 20 yards. The results were horrible, showing only 0.08 grams in total or 7,775 yards-per-ounce gold (Table 1). Continued processing

Photo 14 A. Lane Gulch Test Site.

Photos 14 B. Notice recent alluvium covering older pebbly mudstone.

Photos 14 C. Sccour and fill feature was targeted.

Photos 14 D. Alluvium got thicker to the west.

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Placer Mining Claims

Phase 1, Lane Gulch Excavation	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 14

of Lane Gulch material showed better and better results; however, the operators were running more yards through the plant. Two 60-yard tests on September 17th and 19th recovered a combined total of 6.76 grams of gold; however, this still resulted in an average grade of 610 yards-per-ounce gold and still not economic.

3.9 Lower Lane Gulch Excavation and Discussion.

The lower portion of the Lane Gulch alluvial fan began the first week of October (Figure 33). The looser consolidated (younger) material still overlaid the claystone hardpan. Here, the contact between the two units was stark and showed multiple scouring and filling features (Photos 14). There was a semi laminar bedding that could be discerned from the overlying deposit. Although the overlying unit was the target of the exploration project, it was often difficult for the operators to know what and what not to sample. Therefore, some of the bulk samples were a mixture of both deposits.

As the trench excavation advanced from east to west, it was noticed that the overlying alluvium became thicker to the west. It appears there was a "V-notch" feature at the foot of Lane Gulch.

Two 20-yard tests were conducted on October 7th and 10th and the results were similar to all the other tests, showing a combined average grade of 468 yards-per-ounce gold. It was decided to run two 100-yard bulk tests to see of the results would change. The material was stockpiled and on October 16th through the 18th, the material was processed. While nearly 10 grams of gold was recovered, the average grade was still 634 yards-per-ounce, which is non-economic at current levels.

Black sand concentrates continued to overwhelm the sluicebox system, and the combined tests produced so much, it was believed that gold was being lost to the tailings pond.

3.10 Assaying of Phase 1 Black Sands.

Black sand concentrates were routinely discarded throughout the processing period. The black sand that was recovered in the sluicebox and later removed so the gold could be recovered was placed in a 55-gallon drum at the processing tent. Based upon previous knowledge, Foster Scott was given permission to send one sample to a lab to find out what was in the black sand. On September 13, Vesta Minerals (Vesta), Inc. of Las Vegas, Nevada received the sample and immediately ran it for a multi-element analysis using a Perkin Elmer NexION 2000 ICP-MS[14], including the first isotope for gold and silver. The results are shown in Appendix C.

The results showed a substantial amount of gold (5.39 ppm) but more importantly Au-1 (99.42 ppm). What was not expected was a significant amount of rare earth elements (REEs) (La, Ce, Nd, In, Sm, Gd, Dy, Yb, and Th), as well as a substantial amount of titanium (37,644.66 ppm). To make sure these results were not anomalous, Mr. Scott submitted another sample on September 16. The results showed similar and anomalously high amounts of gold, Au-1, REEs, and titanium.

These results showed that there could be a substantial economic mineral resource contained within the Tertiary gravels on Slate Ridge that wasn't directly tied to gold, but other valuable elements. It is important to remember that these were concentrate samples and their values are multiplied many times through the concentrating process. Nevertheless, these analyses sparked an ongoing effort to conduct more tests, do more exploration and determine to what extent these minerals are found on the PGP property.

3.11 Summary of Phase 1 Exploration and Testing Results.

The Phase 1 Exploration and Testing did not find an economical concentration of gold on the PGP property. In fact, it was a resounding failure. Not one bulk test from several locations, that also included alluvial fans that should have concentrated gold and native conglomerate beds, showed a reasonable amount of free gold. The deposit grade ranged from 139 – 7,775 yards-per-ounce gold. But what was abundant was the amount of black sand that washed through the processing system.

Then, and on a hunch, Mr. Foster Scott tested the black sand concentrates, and the results were not only surprising but clearly within the economical mineral resource range. Because of his foresight a Phase 2 exploration plan was discussed and implemented to realize the extent of these mineral resources.

[14] ICP-MS or Inductively couples mass spectrometry

PART 4 PHASE 2 EXPLORATION DRILLING AND SAMPLING.

4.0 Introduction.

In the early Spring of 2023, and on behalf of Carl Lane, Advanced Geologic circulated a Request for Proposal (RFP) amongst a number of local auger drilling companies. With no successful bidders by June, Advanced Geologic modified the RFP and circulated it to drilling companies in California. Again, the response was poor, and the RFP was modified a third time and circulated to as many drilling companies as possible located in the western United States. On August 16, Ludwig Drilling Company responded with a proposal to conduct the drilling and after a short negotiation period, a contract was signed on August 21. However, Ludwig's drilling license in Nevada had expired and the job was subcontracted to North American Drilling Company of Pennsylvania, and a parent company of Ludwig Drilling Company. A new contract with the same terms and conditions was circulated with Ludwig maintaining operational control and then signed on August 25. Ludwig mobilized the drill rig, its support equipment, and crew to the site on September 19 and drilling began on September 22. Drilling was completed on October 22, 31 days later. No drilling occurred seven of those days, three due to drillers scheduled time off and four due to an early winter storm that dropped a couple inches of snow in the area.

Meanwhile on August 25, 2023, Advanced Geologic submitted an addendum to the 2022 BLM Notice of Intent (NOI) that included the drilling project[15]. The BLM requested changes to the language and disturbance calculations and a revised NOI was submitted on September 8. The permit was accepted on September 21, the day before drilling was expected to begin. The final copy is presented in Appendix D.

4.1 Drilling Methods.

Ludwig deployed a Soilmec SR-30 hydraulic rotary augur drill rig capable of drilling to 127 feet. Per the RFP, Ludwig brought both 30-inch and 36-inch diameter auger drill bits with five-foot long augur flights. Ultimately, all the holes were drilled with the 30-inch bit. The rig was easily

[15] The Drill Hole Location Map plus the off-road travel routes were prepared and submitted without field verifications. Once the drilling commenced, it was clear that modifications were necessary to change the hole locations and access routes. Furthermore, and about halfway through the drilling activities, it was also apparent that the drill locations needed to be modified again to get better subsurface geologic information. This eventually increased the hole count.

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mobilized from hole to hole by lowering the boom to a horizontal position and driving cross country. Care was taken to keep the travel topography at a minimum. Drill pads were constructed at each hole and on inclined slopes, they had to be benched into the hill to ensure the rig was relatively level when the drilling began.

The Poverty Gulch Project drilled 52 – 30-inch diameter auger holes into the volcanic tuff and clastic sedimentary deposits (Figure 35). Hole depths ranged from 63 – 105 feet, totaling 4,902 feet. Table 2 shows the depths per hole and Table 3 shows the holes per geographic province. The drilling of these deposits was relatively easy and the auger would make quick work of

Table 2
Drill Hole Depths

Drill Hole	Termination Depth (feet)	Drill Hole	Termination Depth (feet)
H-1	76	H-25	42
H-1A	100	H-26A	100
H-2	63	H-28A	100
H-3	100	H-29	100
H-4A	100	H-30A	100
H-5	100	H-31	100
H-6	100	H-33A	100
H-7A	62	H-34A	80
H-8A	100	H-36	100
H-9A	100	H-36A	100
H-10A	87	H-37	100
H-11	100	H-38	100
H-14A	100	H-39	100
H-14B	95	H-40	100
H-15A	100	H-40A	100
H-15B	100	H-40B	100
H-16	100	H-41A	75
H-17	100	H-42A	105
H-18	100	H-42B	100
H-19	100	H-42C	85
H-20A	87	H-43	100
H-20B	100	H-43A	100
H-21	102	H-44	100
H-22	100	H-45	100
H-23	100	H-46	100
H-24	100	H-47	43

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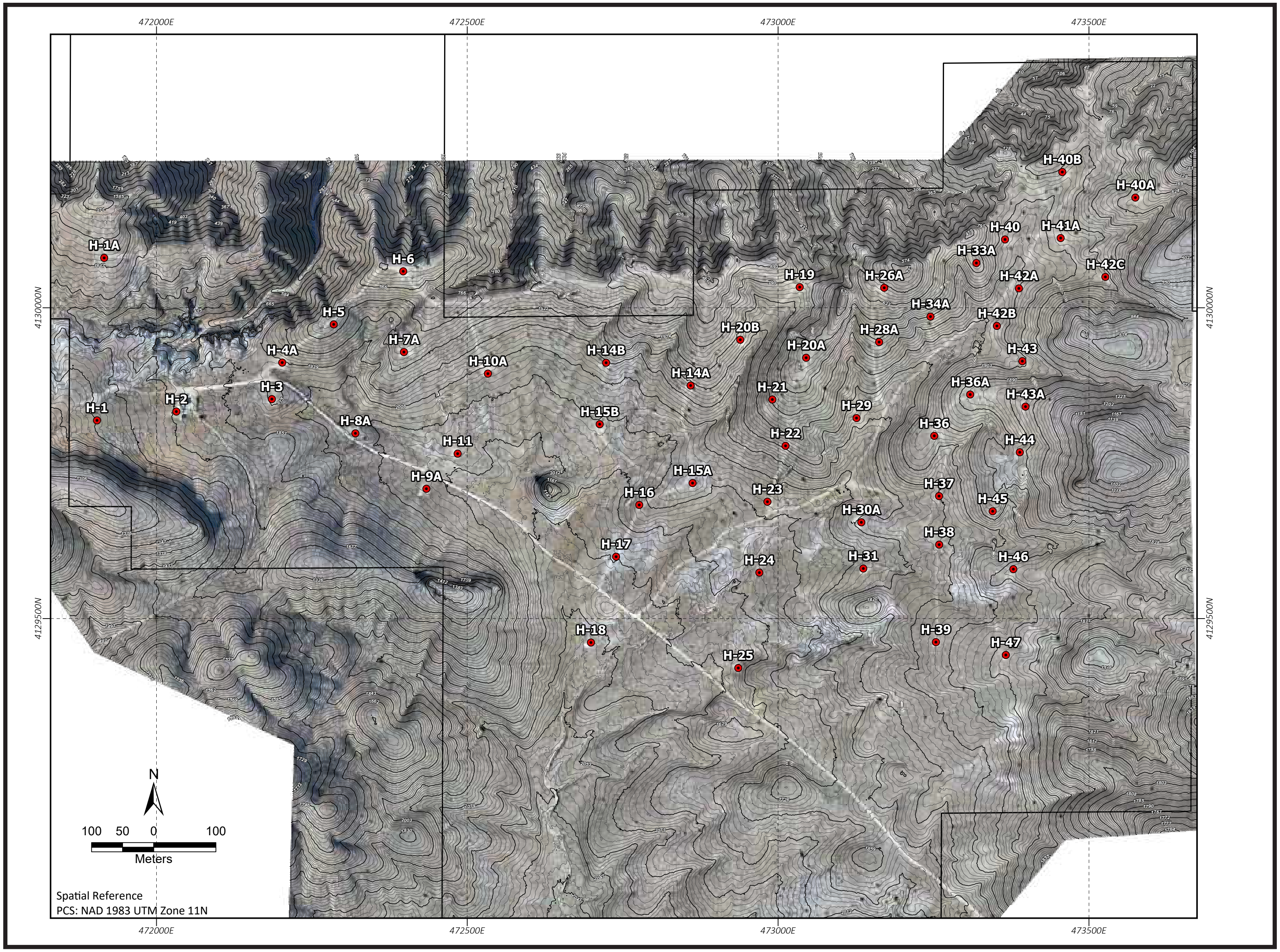

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Drill Holes Location Map

Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 35

Table 3

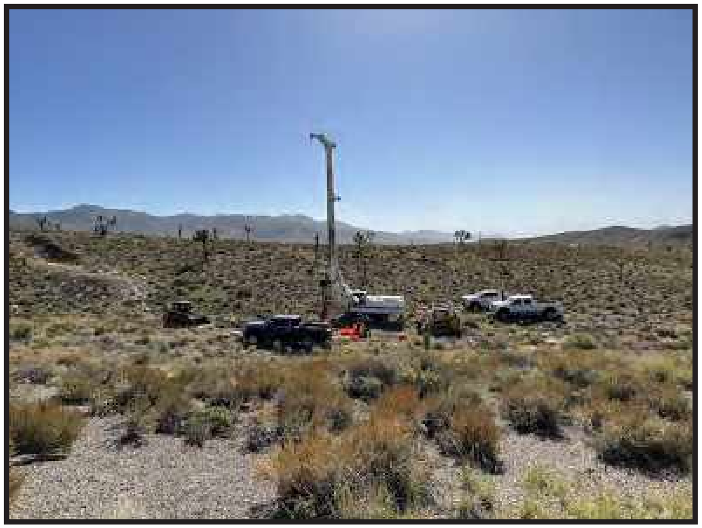
Drill Holes Per Physiographic Provence

Western Provence	Central Provence	Eastern Provence
H-1	H-20A	H-24
H-1A	H-21	H-25
H-2	H-22	H-30A
H-3	H-23	H-31
H-4A	H-26A	H-36
H-5	H-28A	H-36A
H-6	H-29	H-37
H-7A	H-33A	H-38
H-8A	H-34A	H-39
H-9A	H-40	H-40A
H-10A	H-40B	H-41A
H-11	H-41	H-42A
H-14A		H-42B
H-14B		H-42C
H-15A		H-43
H-15B		H-43A
H-19		H-44
H-20B		H-45
		H-46
		H-47

drilling the holes (Photos 15 and 16). As experience was gained in both drilling the material and collecting of the samples, drilling rates improved. The best drilling rates were +260 feet per day or roughly 2.5 holes per day.

Drilling began with the predetermined holes as outlined in the NOI permit on the west side of the PGP area and was planned to progress in a numerical sequence when difficulties in the classifying equipment changed the plans. New equipment and parts had to be ordered and shipped. However, drilling needed to continue until the new parts arrived, therefore, it was imperative that the least amount of classifying be performed to preserve the rapidly deteriorating equipment. Some areas were known to have volcanic tuff overlying the gravels and the project was not concerned with taking tuff samples. Hence, hole locations were chosen where it was

Photo 15 A. Drilling through the volcanic air fall ash.



Photos 15 B. Drilling activities.

Photos 15 C. Sampling activities.

Photos 15 D. Sample bags per 5-foot interval.

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Drilling Activities 1	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 15

Photo 16 A. Busy sampling activities.

Photos 16 B. Drilling activities.

Photos 16 C. Drilling activities.

Photos 16 D. Drill rig leaving the road to the drill site.

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Drilling Activities 2	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 16

known that drilling would start in the tuff. This led to a hop-scotch pattern for the initial drilling sequence.

Once the subsurface geology was better understood, the drill hole locations were modified. The hole numbering scheme was also changed and reflected the original drill hole pattern. Modified hole locations were then numbered with an A, B or C suffix, such as PG-H-43A or PG-H-43B, to show they were in and around the original hole PG-H-43.

The drill rig would advance the hole about two feet at a time (Photos 17). Caving and sluffing would account for the balance of the five-foot drilling interval. As the bit was withdrawn from the hole, it was inevitable that some material would slide off the drill bit. Drilling progress was quickest in sands and slowest in mudstones; drilling in some of the lowest portions of the tuff deposits was equally slow. Groundwater was a problem in only a few holes whereby the samples would emerge very moist to wet; these were almost always in coarse-grained sediments. More often the dry sand layers would cause intense caving of the hole.

4.2 Geologic Discussion of Drill Results.

A professional geologist was onsite for nearly the entire time while the rig was actively drilling, and detailed logs of the sedimentary units were made (Appendix E). Each hole showed differing stratigraphy but typically it consisted of unconsolidated mudstone over various degrees of course to fine sands, over assorted quantities of gravels, pebbles, and cobbles. Most holes had a colluvium surface layer ranging in width from 5 – 25 feet thick, albeit some holes started out in gravels or volcanic tuff. The thickness of individual units ranged from a foot or less to over 30 feet. Some holes showed a preponderance of mudstone and sandy mudstone, such as in Drill Hole H-10A, whereas others showed greater amounts of gravels, pebbles, and cobbles, such as in Drill Hole 15A and 15B, both of which had no sandy mudstones or mudstones.

Coarse-grained clastic units were thought to be the most desirable, such as those referred to as the “Honey Hole”. This may have been a predisposed gold placer point of view, whereupon these types of sediments usually contain more gold (or heavy elements) than fine-grained deposits. Hence, for bulk testing purposes, near surface coarse-grained materials were seen as more desirable for higher economic potential. Table 4 shows holes have at least 15 feet of coarse-grained sediments within 10 feet of the surface per the individual provinces. These holes should be used to target near-surface bulk sample locations.

Table 4
Near Surface Coarse-Grained Sediments

Western Provence	Central Provence	Eastern Provence
H-1A	H-20A	H-36
H-5	H-20B	H-41A
H-6	H-22	H-42C
H-7A	H-26A	H-43
H-8A	H-28A	H-43A
H-10A	H-34	H-44
H-14A	H-40	H-45
H-14B	H-40B	
H-15A		
H-15B		
H-19		
H-20		

4.3 Bedrock.

The basement rocks were encountered in only three drill holes (H-2, H-25, and H-47). Bedrock units were mudstones, limestones, limey siltstones or other metasediments. Drill Hole H-46 encountered hydrothermally altered course- and fine-grained sands with some gravel but was not bedrock. It is assumed that the bedrock units were the Wyman Formation. In drill holes H-2 and H-25, the white volcanic tuff was directly on the bedrock. All the holes that encountered the basement rock were in the southern portion of the property. Drill hole H-9, located on the south side of the county road, was expected to hit bedrock but did not.

4.4 Ammonia Tanks Tuff.

The overlying white tuffaceous deposit is believed to correlate with the Ammonia Tanks Tuff and was encountered in 24 of the 52 drill holes[16]. It was often covered by a thin 5 – 15 feet of colluvium that in some locations was tuffaceous. The thickest tuff deposit was found on the

[16] The count includes drill hole H-3 because of the elevated amount of ash in the top 22 feet.

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Photo 17 A. Fine sands, coarse sands, pebbles, and cobbles.

Photos 17 B. Fine sands, coarse sands, and pebbles. No cobbles. .

Photos 17 C. Volcanic tuff.

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Drilling Activities 3	
Gold Point Mining District	T. 7S., R. 42 & 42.5E
Esmeralda County, NV	Photos 17

south side of the county road at H-18. Here, 75 feet (5 – 80 feet) of white airfall ash and ash flow tuff overlaid a light pink or salmon-colored air fall tuff, which occurred in the bottom 20 feet of the hole (80 – 100 feet). This salmon- or pale, pink-colored tuff likely correlates to the Rainier Mesa Tuff. The distribution of the volcanic tuff was relatively predictable with the majority of encounters occurring below Escarpment Ridge and in the lowlands and near the county road. Notable exceptions were H-19 on the east end of Escarpment Ridge and H-29 on the west side of Dog Valley and the Northeast Fault. Drill holes H-40A and H-40B also contained volcanic tuff, but they were located at the head of Dog Valley where the Timber Mountain air fall tuff – package is exposed on the East Hills, which suggests the deposit was progressing up-section towards the head of the valley. Tuff exposures east of the Northeast Fault are also understandable because they have similar stratigraphic positions.

4.5 Sampling Methods.

Grab samples were obtained from 2.5-foot intervals, screened to 3/8-inch[17], and loaded into 1-1/2 five-gallon buckets. These were then transferred to polypropylene sandbags labeled Hole Number, Interval and A, B and C. Bag B was filled only halfway. The drill would then advance another 2.5-foot interval and another 1-1/2 five-gallon bucket was collected and added. Half a bucket was added to the B bag and a third bag labeled C was filled[18]. Each bag weighed roughly 30-45 pounds. Some sample intervals were skipped, and many of these were predominantly from the mudstone units. Mudstones were difficult to screen and if moist, it was difficult to collect samples. Often only one or two bags were collected per five-foot interval. It is not known the exact number of sample bags that were collected; however, we estimate that it is in the range of 2,750 bags.

The bags were loaded on preconstructed 4-foot x 5-foot wooden pallets and then transported to the onsite staging area and wrapped with commercial-grade plastic wrap. At the end of the project, the pallets were transported to Mr. Lane's shop in Goldfield for safekeeping (Figure 18).

All the sampling was done under the direct supervision of a registered professional geologist and in accordance with acceptable industry standards.

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[17] Initially, samples were screened to 20 mesh, then changed to 1/8-inch, and finally screened to 3/8-inch.
[18] Initially, four sample bags were collected (A – D).

Photo 18 A. Sample bags placed on pallet and secured with plastic wrap.

Photos 18 B. Pallets were moved to the west staging area..

Photos 18 C. Pallets were transported to Goldfield.

Photos 18 D. Samples were sorted for geochemical assaying.

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Poverty Gulch Project	**Sample Bag Storage**	
Placer Mining Claims	Gold Point Mining District	T. 7S., R. 42 & 42.5E
	Esmeralda County, NV	Photos 18

Photo. 19. Near the last days of drilling, Desert Globemallow (*Sphaeralcea ambigua*) began to bloom and foretold of good things to come.

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PART 5 LABORATORY GEOCHEMICAL ANALYSIS.

5.0 Introduction.

To better guide the assaying program, which could be a monumental assessment program if all the samples were assayed, as well as a huge expense, a decision was made to select around 50 – 60 sample intervals from the representative sedimentary layers. After consulting the drill logs, 56 sample intervals were selected which included multiple samples from the sands, gravels, and mudstone units. Further along in the program, it was decided to cut this assaying program to less than 20 samples, whereupon 17 sample intervals were selected. Figure 36 shows the drill hole locations used in the initial assay tests. The final 17 final cut samples for assay were as follows:

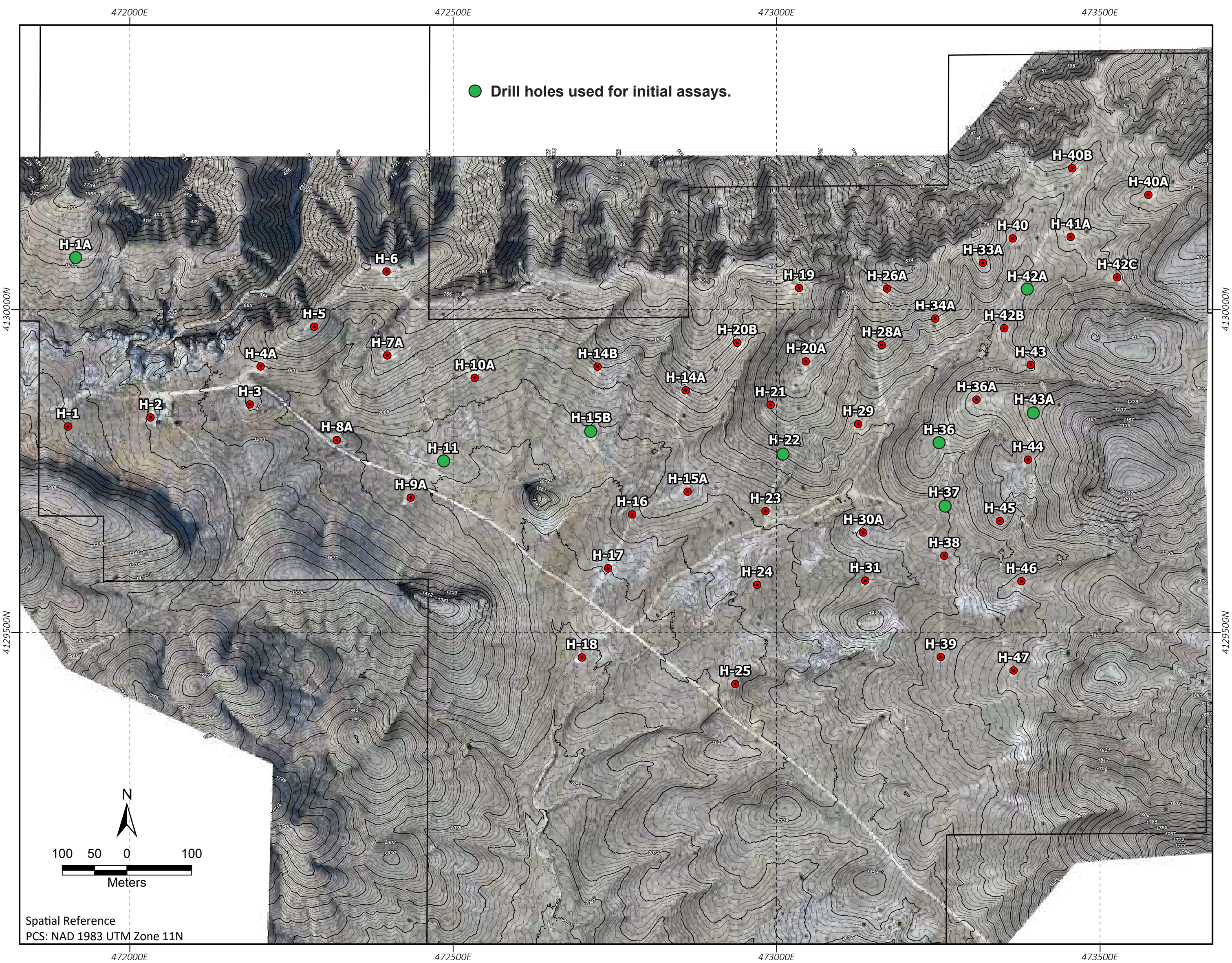
- 6 sands + gravels + pebbles + cobbles deposits.
- 8 sands + gravels + pebbles deposits.
- 3 samples of mudstone with some gravel.

Each of these sample intervals went through a concentrating process for magnetic and non-magnetic valuable minerals within three size ranges, magnetic sizes of 3/8" - 12 mesh, 12 - 20 mesh, and -20 mesh, and non-magnetics of –3/8". Hence, four samples were assayed for each sample interval, making a total of 68 samples that were assayed. These samples were then split into three sets, and one sent to Vesta Minerals Laboratory, another sent American Assay Laboratories, Inc., and third kept for storage. Currently, the storage sample is in the possession of Advanced Geologic.

5.1 Vesta Mineral Assay Results.

The purpose of the elemental assessment was to see if elevated levels of precious, Rare-Earth Elements (REEs), platinum group metals (PGMs), and industrial or commercial minerals occurred on the PGP property, and if so, were they at concentrations that are economic.

Four subsets of 17 samples, totaling 68 samples, from the Poverty Gulch Project (PGP) drill hole samples were submitted to Vesta Minerals, Inc. of Las Vegas, Nevada on November 17. Vesta prepared the samples and ran the first 50 on November 25. A second batch of 18 samples were prepared and ran on December 12. Prior to shipping, the samples were classified to minus 1/4 -inch, then were concentrated and separated by magnetics (+20 mesh, -20 mesh,



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Poverty Gulch Project

Placer Mining Claims

Drill Holes Used for Initial Assays Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 36

+ 12 mesh, and +20 mesh non-magnetics). Vesta used a Perkin Elmer NexION 2000 ICP-MS mass spectrometer to analyze gold, silver, six platinum group metals, and 16 rare earth elements, totaling 24 elements. Vesta did not run any blanks, standards, or duplicates to verify the results.

Table 5		
Assayed Samples per Sedimentary Type		
SAC + SAF + Gvl + Pebs + few Cobs	**SAC + SAF + Gvl + few Pebs**	**Sandy Mudstone + some GVL**
PG-H-1A 20-25	PG-H-11 40-45	PG-H-1A 40-45
PG-H-22 30-35	PG-H-15B 50-55	PG-H-22 15-20
PG-H-22 55-60	PG-H-15B 80-85	PG-H-42C 20-25
PG-H-36 20-25	PG-H-15B 70-75	
PG-H-36 80-85	PG-H-43A 40-45	
PG-H-43A 10-15	PG-H-43A 45-50	
	PG-H-37 40-45	
	PG-H-42A 65-70	

SAC = Coarse Sand, SAF = Fine Sand, Gvl = Gravel,
Pebs = Pebbles, Cobs = Cobbles

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Similar samples from similar intervals were sent to American Assay Laboratories, Inc., in Sparks, Nevada. They were not necessarily from the same sample bags or intervals; therefore, direct comparisons are not necessarily valid, but general comparisons are acceptable. A comparison of the lab results is discussed below.

Vesta preparation procedures included drying the samples, pulverizing them to -200 mesh, and then digesting per the specific assay suite required. The Vesta spreadsheet presentation showed the precious metals of Silver (Ag) and Gold (Au) first, which is followed by the Platinum Group Metals, then the rare earth elements (Appendix F). The Vesta's spreadsheet was then color-coded to highlight the non-magnetic sample rows in gray and anomalously elevated element results were highlighted in red[19].

There are six Platinum Group Metals (PGMs; Platinum (Pt), Palladium (Pd), Iridium (Ir), Osmium (Os), Rhodium (Rh), and Ruthenium (Ru). They can further be subdivided into the Iridium group (Ir, Os, and Ru) and the Platinum Group (Pt, Pd, and Rh) based upon their behavior in the geological environments. Vesta tested for all the PGMs.

Two samples may have had their sample number mixed up or switched, PG-H-15 D 70 – 75 -20 mesh and PG-H-22 15 – 20 C -20 mesh. Their results are anomalously high and seemed more akin to other non-magnetic samples. These sample ID numbers are highlighted in red on the spreadsheet. Sample PG-H-42A 65 – 70 -20 to 12 mesh also showed anomalously low results. It is suspected that a laboratory error of some sort must have occurred. There was also some curious gold, silver, and PGM assay results in the PG-H-42A 65-70 sample suite that look very anomalous and could be laboratory errors as well. It is also worth noting that the PG-H-42A 65-70 sample suite was the first sample batch ran on December 12 – the day after Vesta returned after the Thanksgiving Holiday break.

5.2 Vestas Results for the Lanthanide Group (REEs).

There are 15 metallic rare earth elements with the atomic numbers from 57 – 71 forming the Lanthanide Group, from lanthanum (La) to ytterbium (Yb). Scandium (21) and yttrium (39) are also considered Lanthanides, thus making 17 elements. These are considered the rare-earth

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[19] See the modified spreadsheet at the following link https://www.advancedgeologic.com/Pub/Poverty_Gulch/Assay_Data/AAL_Assays.Draft.xls The sample ID column has been locked for user convenience.

elements. Vesta tested for all the lanthanides except for Promethium. The following is a brief discussion of Vesta's assay results for the Lanthanide Group (REEs).

5.2.1 Lanthanum.

Lanthanum 57 (La) occurred in every sample and elevated results were recorded in multiple samples, with 21 of the 68 samples posting >1000 ppm ranging from 1057 – 4800 ppm. Background results were between 100 - 999 ppm, and only one sample reported <100 ppm. Lanthanum was most abundant in non-magnetic and -20 mesh samples. It is the lead rare-earth element in the Lanthanide series, and it usually occurs with cerium. It is not rare, mostly produced from monazite and bastnasite ores. Lanthanum compounds have numerous applications.

5.2.2 Cerium.

Cerium 58 (Ce) occurred in every sample and was elevated in multiple samples, with peak values >1,000 ppm in 31 samples with a range from 1118 – 8040 ppm. Numerous samples had results between 130 – 885 ppm, with a background at roughly 200 - 500 ppm. Elevated results occurred mostly in non-magnetic samples with a scattering in the -20-mesh size fraction. It is fairly abundant on the Earth and is easily extracted from ores. Cerium is used in a wide variety of commercial applications. It has a wide range of costs, which are based on the forms of oxides, carbonates, and metals, and the supplier.

5.2.3 Praseodymium.

Praseodymium 59 (Pr) was found in every sample. Elevated results >100 ppm occurred in 33 of the 68 samples with the highest registering 1124 ppm. Background sample results were <100 ppm and more commonly ranged from 30 – 70 ppm. They occurred in both the -20 mesh and non-magnetic samples, but mostly the latter. It is usually found with lanthanum, cerium and neodymium and is mostly produced from monazite and bastnasite ores. It is too reactive to be found in nature and forms a green oxide when exposed to air. It is valued for its magnetic, electrical, and optical properties. Praseodymium is an extremely valuable element.

5.2.4 Neodymium.

Neodymium 60 (Nd) occurred in every sample and elevated results were recorded in 12 samples, with peak values ranging from 1078 – 4380 ppm. Nearly all of the elevated samples were in the non-magnetic fraction. This is curious because Neodymium alloys are widely used for their strong magnetic properties. Background results were typically 100 – 500 ppm, with only a few posting results less than 100 ppm. It is not rare and easily mined.

5.2.5 Promethium.

Promethium 61 (Pm) was found in every sample and elevated results were recorded in 31 samples, with peak values ranging from 100 – 1124 ppm. Most of the elevated results were in the non-magnetic fraction but also occurred in other classified samples. Background results were typically <100 ppm. It is highly radioactive and is usually found in association with neodymium and samarium. It naturally and rapidly decays to Europium.

5.2.6 Samarium.

Samarium 62 (Sm) occurred in every sample and elevated results were only recorded in 13 samples, with peak values ranging from 124 – 325 ppm. All but one elevated result occurred in the non-magnetic classified fraction. Most samples tested at less than 50 ppm. It is a relatively common element and is often associated with antimony. The main commercial use is in Samarium-Cobalt magnetics, which have a permanent magnetization second only to neodymium magnets.

5.2.7 Europium.

Europium 63 (Eu) occurred in every sample analyzed with peak values ranging from 11 – 52 ppm. Background results were generally <7 ppm. Elevated results occurred mostly in non-magnetic classified sample fraction. Europium is usually found with other rare earth elements in monazite and bastnasite ores and is usually a byproduct of mining the other rare earth elements. It has some commercial applications.

5.2.8 Gadolinium.

Gadolinium 64 (Gd) was found in every sample. Elevated results are 110 – 300 ppm and all elevated results occurred in the non-magnetics classified fraction. Background results were generally <50 ppm. It has few commercial applications and some specialized applications. Above 68°F, it is the most paramagnetic element known. It has a variety of usages but most often as an anti-oxidation alloy to iron, chromium, and other related metals. Gadolinium is usually found with other rare earth elements in monazite and bastnasite ores and is usually a byproduct of mining the other rare earth elements.

5.2.9 Terbium.

Terbium 65 (Tb) results were rather low, with the highest value at 28.8 ppm. Many samples tested at less than 6 ppm. It was found in every sample just proportionally less than other REE elements. Higher values were mostly from non-magnetic samples. It is never found in nature as a free element. It is relatively rare, and costs are proportional. Most usages are as green phosphors used in florescent lamps.

5.2.10 Dysprosium.

Dysprosium 66 (Dy) was found in every sample with elevated results ranging between 66 – 141 ppm. Elevated results occurred nearly and exclusively in the classified non-magnetic samples. Background results typically ranged 10 – 30 ppm. It is usually found in association with Europium and Holmium, and sometimes Yttrium. It is usually found along with other rare earth elements in monazite, xenotime and euenite, the latter of which is the Yttrium mineral. It has few commercial applications because it can be replaced by other elements.

5.2.11 Holmium.

Holmium 67 (Ho) was not as common as other Lanthanides, with peak values ranging from 12.6 – 28.8 ppm. Elevated results occurred exclusively in the classified non-magnetic samples. Background results were <6 ppm. It is too reactive to occur naturally and usually produced as a byproduct of other rare earth elements from monazite and gadolinite ores. It has few commercial applications and some specialized applications.

5.2.12 Erbium.

Erbium 68 (Er) was found in every sample with elevated results ranging between 27 – 77 ppm and background results reporting 12 ppm. Elevated results occurred exclusively in the classified non-magnetic samples. Erbium is usually found with other rare earth elements in monazite and bastnasite ores and is usually a byproduct of mining the other rare earth elements. It has some commercial applications, mostly in the laser and medical fields.

5.2.13 Thulium.

Thulium 69 (Tm) results were rather low, with the highest value at 10.7 ppm. Many samples tested at less than 3 ppm. It was found in every sample just proportionally less than other REE elements. Higher values were mostly in the non-magnetic classified

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fraction. It is never found in nature, but it is found in small quantities in minerals that contain rare-earth elements. It is also found in association with gadolinium and yttrium. Currently, Thulium ores only occurs in China; however, other countries have occurrences but little to no commercial production.

5.2.14 Lutetium.

Lutetium 71 (Lu) results were low, with the highest value at 9.7 ppm, and the majority of results at <2 ppm. Higher results occurred in the non-magnetic classified fraction. It is the last element in the Lanthanide series and has properties like the transition elements as well. The isotope lutetium-176 is highly radioactive with a half-life of 38 billion years. Lutetium is found in association with Yttrium. It has some commercial applications.

5.2.15 Yttrium.

Yttrium 79 (Y) showed elevated results in multiple samples, with peak values ranging from 114 – 817 ppm. No samples assayed for <60 ppm. It was assayed in every non-magnetic sample and was found in other classified fractions as well. It is not found as a native element in nature, and always in combination with other elements. Because it is found with other rare-earth elements, it is a biproduct of the rare-earth development.

5.2.16 Ytterbium.

Ytterbium 70 (Yb) showed elevated results in multiple samples, with peak values ranging from 11 – 55 ppm. Background results were considerably less, with all registering in single-digit values. Elevated samples occurred in every non-magnetic sample and were found in a couple other classified fractions as well. It is found always in combination with other elements and most commonly in sands from monazite outcrops. Because it is found with other rare-earth elements, it is a biproduct of the rare-earth development.

5.3 Vestas Results for the Platinum Group Metals (PGMs).

5.3.0 The following are brief discussions of Vesta's assay results for the Platinum Group Metals (PGMs).

5.3.1 Palladium.

Palladium 46 (Pd) was detected in every sample with elevated results showing >10 ppm in 33 of the 68 samples. The highest assay was 31.3 ppm, which was in the PG-H-42A

65-70 assaying suite and may be a laboratory error. None of the samples assayed <3 ppm. These results seem rather suspicious considering the lack in other PGM assays.

5.3.2 Platinum.
Platinum 78 (Pt) was non-detect in nearly every sample with only a few hits here and there. However, two samples from the PG-H-42A 65-70 sample suite measured 1.597 and 2.56 ppm. This seems like a laboratory error.

5.3.3 Ruthenium.
Ruthenium 44 (Ru), all the results were either non-detect or had results <0.3 ppm.

5.3.4 Rhodium.
Rhodium 45 (Rh) was detected in nearly every sample, but most results were <0.25 ppm. Some samples measured between 1.1 – 2.2 ppm. This happened in the PG-H-42A 65-70 sample suite and could be a laboratory error.

5.3.5 Osmium.
Osmium 76 (Os) was detected in 11 samples with the highest measuring 7.2 ppm. Osmium is difficult to assay, and it is not surprising the results are scattered.

5.3.6 Iridium.
Iridium 77 (Ir) was detected in all but six samples. Four samples showed anomalously high values and three were from the PG-H-42A 65-70 sample suite suggesting they were laboratory errors. The fourth anomalously high value was the first sample to be assayed after the PG-H-42A 65-70 sample suite, which also suggested laboratory error.

5.4.0 Vestas Results for Gold and Silver.

The following are brief discussions of Vesta's assay results for gold and silver.

5.4.1 Gold.
Gold (Au) was detected in every sample with 16 samples showing >8 ppm, and 8 samples showed >30 ppm. The highest assay was 927 ppm, which is extraordinarily high. This anomalously high assay occurred in sample PG-H-15B 70 – 75 D which has been marked as a sample with potential lab errors. As expected, the higher values

mostly occurred in the non-magnetic samples, but other classified fractions contained gold values. Only five samples registered <1.0 ppm.

5.4.2 Silver.

Silver (Ag) was detected in every sample and in many results, they were extremely anomalous with 24 values showing in double digit figures. Fifteen samples had assays >30 ppm and the highest two measured 124 and 254 ppm, respectively. Only 5 samples registered <2.0 ppm. Nearly all the classified non-magnetic fractions showed elevated assay results. These results are suspicious because this concentration of silver in a placer deposit is rare.

5.5 Discussion of Vesta's Results.

In summary, the assay report by Vesta Minerals, Inc. indicates the initial 17 samples tested from the Poverty Gulch Project area that were concentrated in four size categories strongly suggests the presence of an economic mineral resource for gold, silver, palladium, and especially rare-earth elements. The data shows that most of the elevated assay results occurred within the classified non-magnetic fraction of the sample. This suggests that separating samples by magnetic properties may not be necessary. This is curious considering Niobium and Promethium have strong magnetic properties. This may be the result of the elements being tied up in a mineral composition that limits their magnetic properties. It did not appear to make a difference if the samples contained higher concentrations by size fraction.

It appears that Vesta had a few processing "snafus". The errors may have been from mixing up samples, to labeling issues, to problems with sample preparation, or analyzing the solution. Considering the large assaying expense for these tests, Vesta should be contacted to rerun these samples.

It is also curious that elevated palladium results occurred without the other PGM elements being elevated as well. Duplicate samples should be rerun by Vesta or compared with assay results from another lab.

5.6 American Assay Laboratories Mineral Assays.

The purpose of submitting a second sample set to another mineral assay laboratory was to:

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1. Compare and contrast the results obtained by Vesta Mineral, Inc. Some of Vesta's results had questionable results that looked like either sample preparation, cataloging, or procedural errors. Hence, it was necessary that the results be checked by an independent lab.
2. See if a commercial assay laboratory could perform similar analyses with comparable results for less costs.
3. Obtain a broader elements suite that includes commercial and industrial element applications. The sample analysis suite provided by Vesta was limited to only gold, silver, PGMs, and REEs for a total of 24 elements.

Advanced Geologic has enjoyed a business relationship for more than four decades with American Assay Laboratories, Inc. (AAL) located in Sparks, Nevada, and therefore, understands their procedures and trusts their work. Furthermore, AAL is an ISO 9001 and ISO/IEC17025-17025 accredited mineral assay laboratory and all analytical procedures are performed to industry standards that are overseen by a certified geochemist. Hence it was decided to submit the same samples that were submitted to Vesta.

Seventeen representative samples had been selected for an initial assay suite. Each sample had been classified to minus 1/4 -inch, then concentrated and separated by magnetics (+20 mesh, -20 mesh, + 12 mesh, and +20 mesh non-magnetics). This created four subsets of the initial 17 samples, totaling 68 samples. A split of these samples was submitted to AAL on October 9, 2022. Advanced Geologic and the head geochemist discussed the desired analyses, and he recommended the following methods. The laboratory analysis number is also shown:

1. Dry the samples and pulverize to -200 mesh using a Special Projects ball mill. (SB Ball Mill)
2. A 30-gram sample would undergo a fire fusion process that is finished with an ICP-MS analysis for Au, Pt and Pd. (IO-FAPGM30)
3. Digest a 30-gram sample in a 5-acid solution (HNO3, HF, HClO4, HCl and H3BO3) and finish with an ICP-MS analysis for a 61 multi element suite. (IM-4AB61)
4. Digest a 5-gram sample that would undergo a sodium peroxide fusion process in carbon crucible and finished with an ICP-MS analysis for PGM minus Pt and Pd. (NFS-ICP-MS)

AAL inserted blanks and standards and ran duplicate samples to standardize and verify the results. The AAL spreadsheet presentation showed the precious metals of Gold (Au), Palladium

(Pd), and Platinum (Pt) first, then all the elements are listed in alphabet order (Appendix G). There was no grouping of specific elemental association or grouping, such as for Lanthanides, Transition and Actinides elements, or Platinum Group Metals. The AAL spreadsheet was then color-coded to highlight the non-magnetic samples, blanks, and standards. Specific anomalous and elevated results were highlighted in red[20].

5.7 AAL Assay Results for Lanthanide Group (REEs).

There are 15 metallic rare earth elements with the atomic numbers from 57 – 71 forming the Lanthanide Group, from lanthanum (La) to ytterbium (Yb). Scandium (21) and yttrium (39) are also considered Lanthanides, thus making 17 elements. These are considered the rare-earth elements. AAL tested for all the lanthanides except for Promethium.

5.7.1 Lanthanum.

Lanthanum 57 (La), elevated results were recorded in multiple samples, with peak values ranging from 103 – 937 ppm. Background results were between 40 – 80 ppm. Duplicate samples were comparable to varied. Lanthanum was most abundant in non-magnetic and -20 mesh samples.

Vesta comparisons: Vesta's assays were roughly 1000% higher than AAL's assays. None of AAL's assays topped the 1000 ppm mark whereas Vesta recorded 21 of the 68 samples with more than 1000 ppm. Both labs determined that the highest concentrations occurred in the non-magnetic classified fraction.

5.7.2 Cerium.

Cerium 58 (Ce), elevated results were recorded in multiple samples, with peak values at <1,000 ppm in 12 samples and numerous samples between 100 – 300 ppm. Another seven samples showed results between 500 – 1,000 ppm. Elevated results occurred mostly in non-magnetic samples. Duplicate samples were roughly comparable.

[20] See the modified spreadsheet at the following link https://www.advancedgeologic.com/Pub/Poverty_Gulch/Assay_Data/AAL_Assays.Draft.xls The sample ID column has been locked for user convenience.

Vesta comparisons: Vesta's assays for Cerium were substantially higher than AAL's results and occurred in several more samples than reported by AAL. Both labs reported that most of the elevated results occurred in the non-magnetic classified fraction.

5.7.3 Praseodymium.

Praseodymium 59 (Pr), elevated results are between 107 – 405 ppm and occurred in both the -20 mesh and non-magnetic samples. Background levels were generally <30 ppm. Duplicate samples were comparable to variable.

Vesta comparisons: Vesta's assays for Praseodymium were substantially higher than AAL's results and occurred in several more samples than AAL. Background values were 2 – 3 times higher than AAL's results. Both labs reported that most of the elevated results occurred in both the -20 mesh and non-magnetic samples, but mostly the latter.

5.7.4 Neodymium.

Neodymium 60 (Nd) results were elevated in multiple samples, with peak values ranging from 161 – 561 ppm. Background results were typically <80 ppm. Elevated results occurred mostly in non-magnetic samples. Duplicate results were generally comparable.

Vesta comparisons: Vesta's assays for Neodymium were about 1000% higher than AAL's results, and elevated results occurred in several more samples than AAL. Background values were 2 – 3 times higher that AALs results as well. Both labs reported that most of the elevated results occurred in both the -20 mesh and non-magnetic samples, but mostly the latter.

5.7.5 Promethium.

Promethium 61 (Pm) was not tested by AAL.

Vesta comparisons: Vesta's reported assays for promethium. See Section 5.2 above.

5.7.6 Samarium.

Samarium 62 (Sm) elevated results >100 ppm was recorded in six samples, with the highest value at 148 ppm. Most samples tested at less than 30 ppm. Most of the elevated samples occurred in the non-magnetic classified fraction but occurred in other

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classified fractions as well. A few results were less than 1 ppm. Duplicate results varied considerably.

Vesta comparisons: Vesta's recorded more anomalously higher results in more samples than AALs. Background values were 2 – 3 times higher than AAL's results as well. Both labs reported that most of the elevated results occurred in both the -20 mesh and non-magnetic samples, but mostly the latter.

5.7.7 Europium.

Europium 63 (Eu) was not as common as other Lanthanides, with peak values ranging from 7 – 15 ppm, which occurred in multiple sample types. Background results were generally <3 ppm. Duplicate samples were comparable to variable.

Vesta comparisons: Vesta's assays for Europium were 2 – 3 times higher than AAL's results and occurred in several more samples than AAL. Background results were about twice as high as AAL. Both labs reported that most of the elevated results occurred in the non-magnetic classified fraction.

5.7.8 Gadolinium.

Gadolinium 64 (Gd) was recorded in every sample and elevated results occurred in multiple samples were between 23 – 97 ppm. Peak values mostly in non-magnetic samples, but a few occurred in other classified fractions. Background results were generally <10 ppm. Duplicate samples were comparable to variable.

Vesta comparisons: Vesta's assays for Gadolinium were 2 – 3 times higher than AAL's results and occurred in several more samples than AAL. Background results were about twice as high as AAL. Both labs reported that most of the elevated results occurred in the non-magnetic classified fraction.

5.7.9 Terbium.

Terbium 65 (Tb), results were rather low, with the highest value at 9.7 ppm. Many samples tested at less than 1 ppm. Higher values occurred mostly in the non-magnetic samples. Duplicate samples were comparable.

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Vesta comparisons: Vesta's assays for Terbium were twice as high as the AAL's results and occurred in several more samples than AAL. Background results were about twice as high as AAL. Both labs reported that most of the elevated results occurred in the non-magnetic classified fraction.

5.7.10 Dysprosium.

Dysprosium 66 (Dy), elevated results ranged between 19 – 49 ppm in multiple samples, most of which were from -20 mesh and non-magnetic samples, but also occurred in the +12 mesh samples. Background results typically were typically <10 ppm and a few results posted <1 ppm. Duplicate samples varied somewhat to considerable.

Vesta comparisons: Vesta's assays for Dysprosium were three times as high as the AAL's results and occurred in several more samples than AAL. Background results were about twice as high as AAL. Both labs reported that most of the elevated results occurred in the non-magnetic and -20 mesh classified fractions.

5.7.11 Holmium.

Holmium 67 (Ho), was not as common as other Lanthanides, with peak values ranging from 3.7 – 7.6 ppm, which occurred in multiple samples. Higher results occurred mostly in non-magnetic samples, but other sample types as well. Duplicate samples varied from somewhat to considerable.

Vesta comparisons: Vesta's assays for Holmium were 2 – 3 times higher than AAL's results and occurred in several more samples than AAL. Background results were about twice as high as AAL. Both labs reported that most of the elevated results occurred in the non-magnetic classified fraction.

5.7.12 Erbium.

Erbium 68 (Er), elevated results ranged between 10 – 42 ppm in multiple sample types, with background results usually less than 3 ppm. It was more abundant in non-magnetic samples and -20 mesh samples. Duplicate samples varied from somewhat to considerable.

Vesta comparisons: Vesta's assays for Erbium were two times higher than AAL's results and occurred in several more samples than AAL. Background results were about twice

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as high as AAL. Both labs reported that most of the elevated results occurred in the non-magnetic and -20 mesh classified fractions.

5.7.13 Thulium.

Thulium 69 (Tm) was not common in the any of the assays with peak values showing <3.5 ppm. Background assays were <1 ppm. The slightly elevated results exclusively occurred in the non-magnetic classified fraction. Duplicate samples varied somewhat to considerable.

Vesta comparisons: Vesta's assays for Thulium were 2 – 3 times higher than AAL's results and occurred in several more samples than AAL. Background results were about 10 times higher than AAL, but both labs showed very low concentrations. Both labs reported that the elevated results exclusively occurred in the non-magnetic classified fraction.

5.7.14 Yttrium.

Yttrium 70 (Y), elevated results were recorded in multiple samples, with peak values of 65 – 135 ppm. It was more abundant in non-magnetic samples. Duplicate samples varied somewhat to considerable.

Vesta comparisons: Vesta's assays for Yttrium were substantially higher than AA'Ls results, and in some cases 1000% higher. No assay result was comparable to AALs. Many elevated assays occurred in all the classified sample groups whereas AAL's samples were mostly confined to the non-magnetic fractions. Vesta's background samples were 2-5 times higher than AALs.

5.7.15 Ytterbium.

Ytterbium 70 (Yb) results were typically low with elevated samples falling between 6 – 12 ppm. Background results were typically <4 ppm. All the elevated samples exclusively occurred in the non-magnetic classified fraction. Duplicate samples varied somewhat to considerable.

Vesta comparisons: Vesta's assays for Ytterbium were 2 – 4 times higher than AAL's results and occurred in several more samples than AAL. Background results were as

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much as 10 times higher as AAL. Both labs reported that the elevated results exclusively occurred in the non-magnetic classified fraction.

5.7.16 Lutetium.

71 (Lu), all of results were low, with the highest value at 1.03 ppm, and the majority of the results at <0.5 ppm. Duplicate samples were relatively comparable.

Vesta comparisons: Vesta's assays for Lutetium were up to 10 times higher than the AAL's results and occurred in several more samples. Background results were as much as 10 times higher as AAL as well. Both labs reported that the elevated results exclusively occurred in the non-magnetic classified fraction.

5.8 Discussion of AAL's REE Assay Results.

AAL showed elevated results for nearly all the REEs; however, Vesta's results were anywhere from 2 – 10 times and as much as 1000% higher than AAL's results. It is understood that Vesta's ICP-MS machine is state-of-the-art and capable of superior analytical methods, however, the amount of separation between the two labs is extraordinary, which suggests something is wrong somewhere. At this point it is not clear what to do but to analyze the samples either at both labs and/or at a third independent lab.

Nevertheless, both labs showed elevated results for similar and commercially popular REEs, such as Lanthanum, Cerium, Praseodymium, Neodymium, Samarium, and Yttrium. Having these six elements at concentration and widely distributed throughout the deposit is indeed positive. Other REEs may be produced as byproducts to these elements and contribute to the economic resource of the mine.

5.9 AAL Assay Results for Platinum Group Metals (PGMs).

There are six Platinum Group Metals (PGMs; Platinum (Pt), Palladium (Pd), Iridium (Ir), Osmium (Os), Rhodium (Rh), and Ruthenium (Ru). They can further be subdivided into the iridium group (Ir, Os, and Ru) and the Platinum Group (Pt, Pd, and Rh) based upon their behavior in the geological environments. AAL tested for all the PGMs, except for Osmium.

5.9.1 Ruthenium.

Ruthenium 44 (Ru) results were mostly non-detect, with only three samples showing values. None were higher than 0.054 ppm.

Vesta comparisons: Vesta's had similar results except for three samples where they were between 1 – 2 ppm.

5.9.2 Rhodium.

Rhodium 45 (Rh) was detected in nearly every sample, but the results were poor and no samples topped 1 ppm.

Vesta comparisons: Vesta's had similar results except for three samples where they were between 1 – 2 ppm. This was discussed earlier.

5.9.3 Palladium.

Palladium 46 (Pd) was detected in every sample but one, but none topped 1 ppm.

Vesta comparisons: Vesta's and AAL's results for palladium are not even close to AALs. Vesta showed multiple samples with between 10 – 20 ppm and one as high as 31 ppm. The difference between the two labs is reason to be concerned about the assaying techniques.

5.9.4 Osmium.

Osmium 76 (Os) was not analyzed by AAL.

Vesta comparisons: Vesta's analyzed for Osmium. See above.

5.9.5 Iridium.

Iridium 77 (Ir) was detected in nearly every sample, but the results were poor and no sample result topped 1 ppm. The peak result was 0.271 ppm which occurred within sample PG-H-36 80-85 B non-mag duplicate analysis. Considering the initial assay from the same sample was 0.006 ppm, it shows a low confidence for results this low.

Vesta comparisons: Vesta's had similar results except for four samples where they were between 1 – 2 ppm. This was discussed earlier.

5.9.6 Platinum.

Platinum 78 (Pt) was non-detect in nearly every sample with only a few hits here and there, with the highest result being 0.807 ppm.

Vesta comparisons: Vesta's had similar results except for four samples where they were between 1 – 2 ppm. This was discussed earlier.

5.9.7 Discussion of AAL's PGM Assay Results.

The AAL results for the PGMs were poor to non-detect. This conflicts with the Vesta results that showed high levels of palladium and a scattering of elevated numbers with other PGMs. Considering the lack of comparative assays for the other PGMs in the Vesta data, it would seem that their data could be flawed. However, the best way to determine this would be to rerun the samples either at both labs and/or at a third independent lab.

5.10 AAL Assay Results for Transition and Actinide Metals.

There are +40 Transition and Actinides Metals, some of which are more valuable than others. Herein, six are discussed as potential economic resource minerals: Scandium (Sc), Titanium (Ti), Zirconium (Zr), Niobium (Nb), Hafnium (Hf), and Thorium (Th). Discussion of these other elements can be made later, if warranted.

5.10.1 Scandium.

Scandium 21 (Sc), was not as common as other Transition or Actinide metals, ranging from 6 – 21 ppm. Higher values tended to be in the non-magnetic samples. Duplicate samples were comparable throughout. It is not a particularly rare element, but natural commercial concentrations are few, which come from Scandinavia and Madagascar; however, the largest producers of Scandium are from Ukraine, China, and Russia. A new deposit of Titanium, Scandium and Niobium and other RREs has been discovered in southeast Nebraska and has an estimated resource valued at between 2.3 and $2.8 billion and may produce 95 tons/year. Most usages are as an alloy with aluminum. Global trade is relatively low, with only 15 – 20 tons/year, and is in the form of scandium–oxide.

5.10.2 Titanium.

Titanium 22 (Ti) results were elevated in multiple samples, with peak values at >10,000 ppm in nearly half of the samples[21]. Background samples ranged from 3,000 – 6,000 ppm, with only two samples resulting at <3,000 ppm. Duplicate samples varied somewhat to considerable. Elevated results occurred mostly in non-magnetic samples but were also seen in all the sample types. It is a transition metal and only found in nature as an oxide (TiO_2), or rutile. It is a common element and has a high weight to strength ratio. As a non-alloyed element, it is as strong as steel. It is most common in igneous rocks and sediments derived from them. China produces most of the titanium (110.00 mt/year).

5.10.3 Zirconium.

Zirconium 40 (Zr) showed elevated results of 647 – >1,000 ppm in multiple samples. They were most abundant in non-magnetic samples. Duplicate samples varied somewhat to considerable. It is a transition element similar to Hafnium, a lesser extent titanium. It is a biproduct element from titanium production, as well as tin mining.

5.10.4 Niobium.

Niobium 41 (Nb) showed elevated results in multiple samples, with peak values from 170 – 561 ppm. Background levels were consistently below 100 ppm. Highest values were predominantly in non-magnetic samples. Duplicate samples varied somewhat to considerable. Wide usage in various superconducting metals, usually with titanium. It is fairly common, but never as a free element in nature. Hence, it is usually found in combination with other elements. Large deposits exist in Canada and Brazil, and smaller ones in Africa.

5.10.5 Hafnium.

Hafnium 72 (Hf) showed elevated results of 26 – 199 ppm in multiple samples. It is a tetravalent transition metal. Duplicate samples varied somewhat to considerable. Elevated results occur mostly in non-magnetic samples, but others as well. It has few commercial applications and some specialized applications. It is too reactive to occur naturally. It is hazardous.

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[21] 10,000 ppm = 1% mineral content.

5.10.6 Thorium.

Thorium 90 (Th) showed elevated results of 123 – 583 ppm in multiple samples. Elevated samples occurred in both the non-magnetics and -20 mesh samples. Background levels of Thorium <40 ppm, which make the elevated levels stand out. Duplicate samples varied somewhat to considerable. All known isotopes are unstable and slightly to quite radioactive. Thorium is a primordial element belonging to the actinides group, that includes Uranium, Plutonium, Curium, and Berkelium. It has a radioactive half-life of 14 billion years. The most common source of Thorium is a rare-earth phosphate mineral, monzonite, which contains about 12% Thorium Phosphate, but 6-7% on average. Monzonite is found in igneous and other rocks, but the richest concentrations are in placer deposits, which have been concentrated by wave or current action with other heavy minerals. Thorium is still being used as an alloying element.

5.10.7 Discussion of AAL's Transition and Actinides Metals.

The AAL data also showed elevated results for some transition and actinides metals, including **Titanium, Niobium, Zirconium, Hafnium, and Thorium**. Elevated results in Titanium were recorded in multiple samples, with peak values at >10,000 ppm in nearly half of the samples, which was the upper limit of the analysis. Samples should be retested to understand their specific concentrations. The analysis for zirconium, hafnium, and niobium were also positive, as they too had anomalous elevated results. The elevated results for thorium were exciting but also concerning because it is a radioactive element that could present future mining, processing, and/or transporting problems. Typically, thorium occurs with the monazite minerals and could be contained within the mineral lattice until processing, thus providing environmental relief along the way.

5.11 AAL's Assay Results for Gold and Silver.

5.11.0 AAL tested for gold using a FAPGM30 method, which is usually used for PGMs elements. Unfortunately, the results are always underreported. Silver was tested using a five-acid digestive solution. Below is a brief discussion of the results.

5.11.1 Gold.

Gold (Au). Six samples returned elevated results for gold, with two around 5 ppm, three posting between 19 – 25 ppm, and one as large as 345 ppm. The remainder of the sample results were <1 ppm and usually <0.2 ppm. Standards and blanks were

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comparable and consistent. As expected, all the elevated values occurred in the non-magnetic samples.

Vesta comparisons: Vesta's assays for Gold were anywhere from 10 – 100 times higher than AAL's results and occurred in several more samples than AAL. Vesta detected gold in every sample and elevated over 8 ppm in 16 samples, and 8 samples showed >30 ppm. The highest assay value was 927 ppm. Vesta detected elevated levels of gold in every classified fraction but the highest were in the non-magnetics. Only five samples registered <1.0 ppm.

5.11.2 Silver.

Silver (Ag) was non-detect in nearly every sample, except three where they were 4.21 ppm, 6.52 ppm, and 0.005 ppm. The two highest results were in the non-magnetic classified fraction. Duplicate samples were comparable.

Vesta comparisons: Silver assays from the two labs couldn't be more different. Vesta detected Silver in every sample and in many results and was extremely anomalous with 24 values showing in double digit figures. Fifteen samples had assays >30 ppm and the highest two measured 124 and 254 ppm, respectively. Only 5 samples registered <2.0 ppm. Nearly all the classified non-magnetic fractions showed elevated assay results.

5.11.3 Discussion of AAL's Assay Results for Gold and Silver.

The AAL data showed minor amounts of gold detected in every sample, most were less than economic. It should be noted that assays for gold using AAL's IO-FAPGM30 method are underreported because this method is usually used for assaying PGM elements[22]. Therefore, direct correlations with Vesta's assays are not viable. It is recommended that continued testing for gold be conducted.

It is not surprising that nearly all the silver assay results by AAL were non-detect. Silver is a relatively light metal and could have easily been carried away during deposition. Moreover, even weak acidic solutions could have put the silver into solutions and been carried away from the deposition process. Vesta's assay results for silver are questionable. Silver at these concentrations is unlikely and, therefore, suspicious.

[22] See American Assay Laboratories Submittal Brochure.

5.12 AAL Assay Results for Other Elements.

5.12.0 Below is a brief discussion on a few popular commercial and industrial elements.

5.12.1 Antimony, Copper, Lead and Zinc.

Antimony (Sn), Copper (Cu), Lead, (Pb), Zinc (Zn) were at or below background assay values.

5.12.2 Barium .

Barium (Ba) was detected in every sample with 19 registering in the low triple-digit values. The highest result measured 2528 ppm and a duplicate sample was 2204 ppm. The lowest assay was 200 ppm. Elevated results occurred throughout the classified fractions.

5.12.3 Chromium.

Chromium (Cr) was detected in every sample with 18 registering in the low triple-digit values, three of which measured >150 ppm. No elevated chromium assays occurred in the non-magnetic classified fraction; moreover, the lowest assayed values were all from the non-magnetic fraction. Duplicate samples were comparable.

5.12.4 Lithium.

Lithium (Li) was detected in every sample at low background levels. The highest assay measured a scant 25 ppm. Duplicate samples were comparable.

5.12.5 Phosphorous.

Phosphorous (P) was detected in nearly every sample 1,000 – 5,000 ppm, with only six measuring <1,000 ppm. Nine samples measured >3,000 ppm. The highest elevated samples were always in the non-magnetic fraction. Elevated phosphorous could indicate a source area for these sediments.

5.12.6 Vanadium.

Vanadium (V) was recorded in every sample with five measuring >1,000 ppm. Metallic vanadium is rare in nature but occurs in more than 65 minerals.

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5.12.7 Uranium.

Uranium (U) was recorded in every sample with background levels in single digit values. Thirteen samples recorded >20 ppm, and three registered >50 ppm. Elevated samples were scattered throughout the classified fractions. Duplicate samples were comparable to variable.

5.13 American Assay Laboratories Mineral Assay Results.

In summary, the assay report by AAL indicates the initial 17 samples tested from the Poverty Gulch Project area that were concentrated in four size categories strongly suggests high concentrations of many rare-earth elements, transition and actinides metals, and some common industrial and commercial elements. Precious metals, including gold and silver, and the PGM elements were not specifically anomalous in the ALS data; however, this may be the result of the analysis method.

The data shows that most of the elevated assay results occurred within the classified non-magnetic fraction of the sample. This suggests that separating samples by magnetic properties may not be necessary. This is curious considering Niobium and Promethium have strong magnetic properties. This may be the result of the elements being tied up in a mineral composition that limits their magnetic properties. It did not appear to make a difference if the samples contained higher concentrations by size fraction.

The two samples analyzed by Vesta, PG-H-15 D 70 – 75 -20 mesh and PG-H-22 15 – 20 C -20 mesh, may have had their sample numbers mixed up or switched because their results were anomalously high and seemed more akin to other non-magnetic samples. The results also occurred in the AAL data set, suggesting the labeling error likely occurred during the PGP's classifying process and not at Vesta's lab.

Vesta also showed elevated gold results in 16 samples with >8 ppm and 8 of those samples showed more than 30 ppm. AAL showed four samples elevated with >10 ppm and one sample with 345 ppm. Three of the four elevated gold results occurred in the same Vesta results. It seems erroneous that 4 times the assay results occurred in the Vesta results over the AAL results.

There was also some curious gold, silver, and PGM assay results in the PG-H-42A 65-70 sample suite that look very anomalous and could be laboratory errors as well. It is also worth noting that the PG-H-42A 65-70 sample suite was the first sample batch that ran on December 12. AAL's results for this sample seem to correlate well with the other assays. This suggests there was a problem with the Vesta analytical procedures.

5.14 ALS Minerals Laboratories Assays.

The purpose of submitting a third sample set to another mineral assay laboratory was to:

1. Compare and contrast the results obtained by Vesta Mineral, Inc., and American Assay Laboratories.
2. Both the previous labs analyzed concentrated and classified samples, while these new samples were of the native material that were not concentrated.
3. To understand if elevated precious metals, REEs and PGMs are seen in their native formats or if concentrating is necessary.
4. Conduct the analysis across a broad element suite that included commercial and industrial elements as well.

Advanced Geologic has enjoyed a business relationship for more than four decades with ALS, Inc. (ALS) located in Sparks, Nevada, and therefore, understands their procedures and trusts their work. Furthermore, ALS is an ISO 9001 and ISO/IEC17025-17025 accredited mineral assay laboratory and all analytical procedures are performed to industry standards that are overseen by a certified geochemist.

Representative splits of the initial seventeen representative samples were submitted to ALS on January 27, 2024. Advanced Geologic and a geochemist discussed the desired analyses, and she recommended the following methods. The ALS analysis method number is also included.

1. Dry the samples and pulverize to -200 mesh (DRY-20, PREP-31B).
2. Digest a 30-gram sample in a 5-acid solution (HNO3, HF, HClO4, HCl and H3BO3) and finish with an ICP-MS analysis for a 45 multi-element suite. (ME-MS71L)
3. Digest a 30-gram sample to undergo a nickel sulfide process and finish with an ICP-MS analysis for PGM + gold. (PGM-MS25NS) (Gold is under reported with this method)
4. Gold and silver were requested but later dropped because it was included in the PGM-MS25NS suite.

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ALS did not use blanks or standards in their assay methods. The ALS spreadsheet presentation showed the multi-element list of elements in alphabetical order first, then the PGM elements, and followed lastly by gold (Au) (Appendix H[23]).

5.15 Discussion of ALS Minerals Laboratory Assays.

Below is a brief discussion of the ALS assay results with comparisons to the AAL's assay results:

5.15.1 ALS Assay Results for the REE.

REEs were measured in all 17 samples, however, and for most elements, at much less concentrations than those reported by AAL or Vesta. For these comparisons, only the AAL data is used. Most apparent was that the assay results per element remained relatively the same throughout the 17 samples. For example, Neodymium ranged from 23.4 – 38.0 ppm in the non-concentrated samples. In the concentrated samples, it varied 10.8 – 561 ppm with background results typically <80 ppm. Lanthanum was similar and ranged from 34.1 – 56.4 ppm in the non-concentrated assays but ranged from 2.4 - 937.4 in the concentrated samples. Even zirconium assays were consistent in the non-concentrated samples, ranging from 85.5 – 217 ppm, but the concentrated samples had 10 samples showing >1000 ppm.

Therefore, the conclusion is that concentrating efforts generally will increase the amount of the elements. It is not necessary to separate the magnetics during the concentration process, however. On an exploration scale, if elevated assays occur in the native material, one can be fairly certain that the REE content will greatly increase if concentrated.

Of note was that ALS reported elevated assays for Rubidium that were higher than those produced by AAL. This may suggest the Rubidium may be depleted in a concentration process.

[23] See the modified spreadsheet at the following link https://www.advancedgeologic.com/Pub/Poverty_Gulch/Assay_Data/ALS_Assays.Final.xls The sample ID column has been locked for user convenience.

5.15.2 ALS Assay Results for the PGMs.

ALS measured PGMs in parts per billion and the results were quite poor. Sample PG-H-42A 65-70 showed 4 ppb for Platinum and 5 ppb for Palladium and there was a scattering of results for Ruthenium in four samples. The rest of the results showed <1 ppb or it was not detectable. This suggests that Vesta's analytical results for Platinum and Palladium may not be accurate.

5.15.3 ALS Assay Results for Gold.

Gold was non-detect in every sample but one, which was only a trace amount of gold. This suggests that Vesta's analytical results for gold may not be accurate.

5.15.4 ALS Assay Results for the Other Elements.

Promising results were reported by ALS for Barium, Phosphorous, Strontium, and Zirconium.

5.16 Element Content per Sedimentary Unit.

The 17 initial samples show that a significant amount of REEs is contained within the Tertiary clastic deposits on Slate Ridge. The 17 samples were selected based, in part, on the sedimentary type, whether mudstones, sands, gravels, or pebble conglomerates. Table 5, which is repeated here, summarizes the sedimentary deposit types into three categories per the selected samples.

The ALS spreadsheet of the geochemical assays was color coded per the sedimentary type and a comparison was made to see if specific elements were found in greater abundance in one sedimentary type than another (Appendix H).

Table 5		
Assayed Samples per Sedimentary Type		
SAC + SAF + Gvl + Pebs + Few Cobs	**SAC + SAF + Gvl + Few Pebs**	**Sandy Mudstone + some GVL**
PG-H-1A 20-25	PG-H-11 40-45	PG-H-1A 40-45
PG-H-22 30-35	PG-H-15B 50-55	PG-H-22 15-20
PG-H-22 55-60	PG-H-15B 80-85	PG-H-42C 20-25
PG-H-36 20-25	PG-H-15B 70-75	
PG-H-36 80-85	PG-H-43A 40-45	
PG-H-43A 10-15	PG-H-43A 45-50	
	PG-H-37 40-45	
	PG-H-42A 65-70	

Analysis shows that there was no specific element concentration found in one sedimentary type over another. Specific elevated elements occurred in all three sedimentary types. It suggests that mining one sedimentary type over another would not be necessary. This analysis should be considered preliminary and more samples across greater sedimentary deposits should be evaluated before this is considered definitive.

5.17 Concentrated vs. Non-Concentrated.

Of the 17 samples tested for rare-earth elements, transitions and actinide metals, platinum group metals, precious metals, and commercial and/or industrial elements, eight elements emerged as having higher average concentrations than the others. Table 6 shows the eight elements and shows their combined average concentrations per AAL and ALS assay groups.

Table 6
Elements with Elevated Results

Element	AAL Concentrated ppm	ALS non-concentrated ppm	% Difference
Cesium (Ce)	1802.40	76.65	2351.47
Lanthanum (La)	205.40	43.69	470.13
Niobium (Nb)	52.90	14.61	362.08
Neodymium (Nd)	143.60	29.50	486.78
Rubidium (Rb)	106.80	150.03	-28.81
Yttrium (Y)	41.30	14.82	278.68
Titanium (Ti)	6756.20	0.30	2252067
Zirconium (Zr)	2031.70	130.17	1560.81

The data was generated by taking some of assay results per element and dividing them by the number of samples in the batch. Unfortunately, some of the element assays within the concentrated samples (AAL results) surpassed the laboratory's detection limits (cerium, lanthanum, titanium, and zirconium). In this case, the maximum detection limit was used to develop an average concentration. This will devaluate the element's contribution to the economic potential of the deposit.

Cerium, Lanthanum, Niobium, Neodymium and Yttrium are REEs and are Light Rare-Earth Elements (LREEs), whereas Rubidium is an alkali metal, and Titanium and Zirconium are transition metals. Gold, Silver and Palladium were elevated in the Vesta analyses but were not confirmed in either the AAL or ALS results and are not included in the table.

The data shows that concentrating the clastic sedimentary material greatly increases the amounts of elements that can be recovered. For example, Titanium and Zirconium are not abundant in the native clastic sediments but are easily concentrated to a very high level.

One exception is Rubidium, which showed a negative effect of concentrating efforts. This may be caused by Rubidium's negative affinity to water, and since the concentrating process used water, Rubidium may have been compromised and thus reduced in concentration.

Therefore, these eight elements make up the bulk of the potential mineral resource at PGP. It should be noted that elevated levels of Niobium and Praseodymium were measured but were much less than the aforementioned eight elements.

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PART 6 ECONOMICAL MINERAL RESOURCE POTENTIAL

6.0 Introduction.

The economic potential of any placer deposit is a series of volume and ore grade calculations. The actual ability to mine the property depends on the permitting requirements, local infrastructure, water, climate and topography, and the equipment available to excavate and process the gravel.

The economic mineral potential of a placer deposit is determined through a series of bulk sampling tests whereupon multiple tests reveal high and low concentrations, and an average ore grade can be calculated to represent the deposit. The volume of the deposit is determined by either drilling or geophysics, or a combination of both. Bedrock is the floor of the gravel deposit and is often the location of the highest ore grades. Once these two components are determined, the ore grade can be extrapolated through the deposit volume to give the economic mineral potential. The more tests, the more reliable the mineral potential estimate.

6.1 Method Parameters.

The PGP has used geology, geophysics, and chemical and physical evaluations to assist them in assessing the economic mineral potential of the clastic sediments on Slate Ridge. Geology has determined that clastic sediments are packages of mudstones, sands, gravels, pebbles, and cobbles within beds of varying thicknesses. Drilling and geophysics have shown that the clastic sedimentary package ranges from 0 to >220 feet and has an estimated average thickness of about 160 feet. Geology and geophysics show the area is within the prominent Slate Ridge Fault Zone that structurally controls the boundary of the clastic sediments and causes substantial deformation of the deposit itself. These parameters can now be used to determine the estimated volume of the deposit.

Using geology, geophysics, and the drill hole data, the general boundary of the clastic sedimentary rocks can be made (Figure 37). Below are descriptions of how the boundary was made:

6.1.1 Southern Boundary.

The southern boundary of the deposit is essentially the Slate Ridge Fault Zone, which generally parallels the county road. One exception to the southern boundary is drill hole H-9 which encountered clastic rocks under the volcanic tuff at a depth of 43 feet on the

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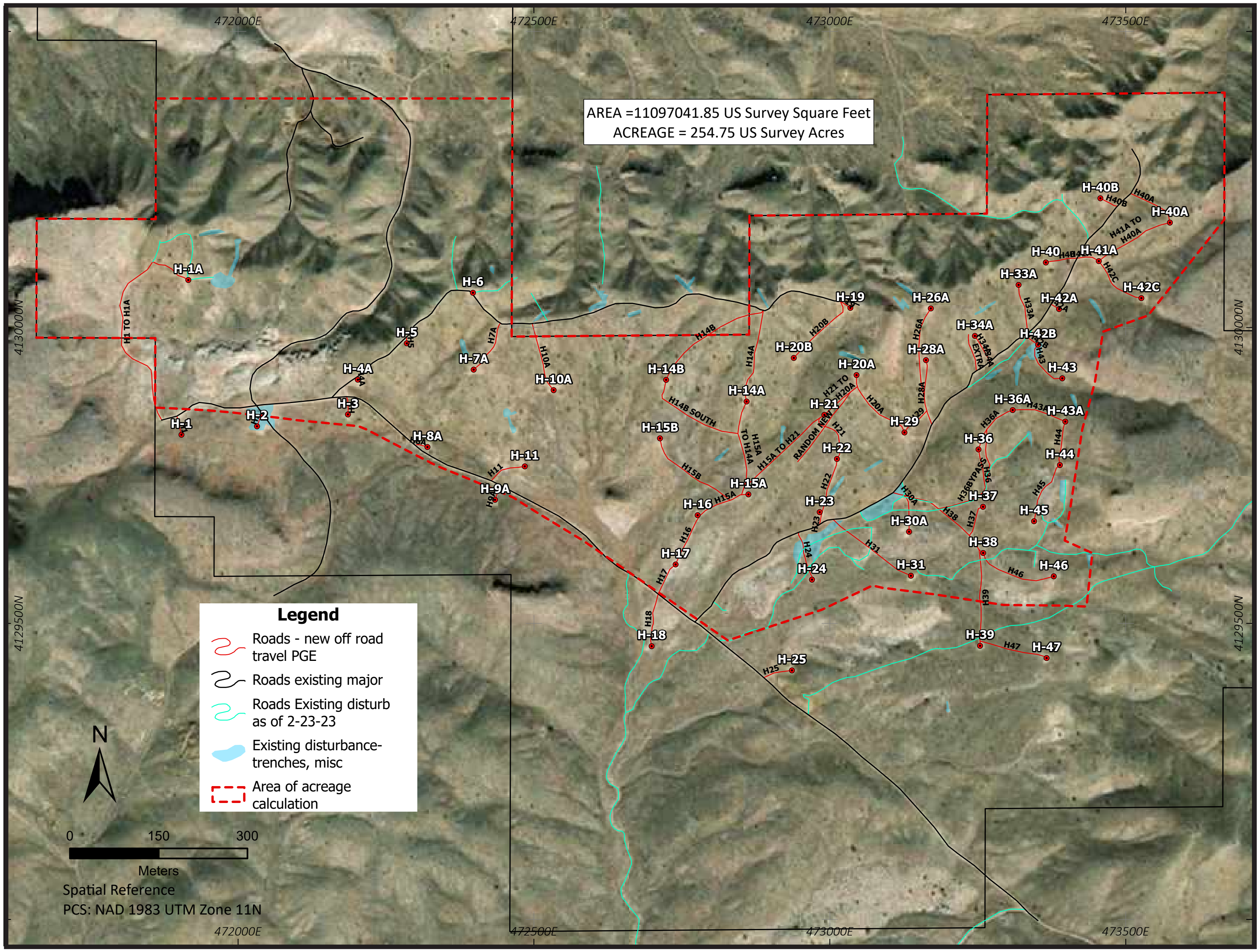

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Poverty Gulch Project

Placer Mining Claims

Deposit Boundary Map	
Gold Point Mining District	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Figure 37

south side of the county road. The magnetometer survey clearly identified the Slate Ridge Fault Zone and shows a local anomaly of medium velocity material within the fault zone in the location of drill hole H-19. Therefore, H-9 may just be a localized anomaly of clastic sedimentary material.

6.1.2 Western Boundary.
North of the Slate Ridge Fault Zone, the western boundary is governed by the PGP claim boundary. It is likely that clastic rock continues northward for a short distance and will be evaluated at a later date.

6.1.3 Northwestern Boundary.
The northwestern boundary follows the claim boundary until the base of Escarpment Ridge, whereupon it extends eastward along the northern boundary of Poverty Gulch 1, Poverty Gulch 2, and First American 2 claims to the Moro claim block.

6.1.4 Northern Boundary.
The PGP clastic deposit area boundary follows the Moro claim boundary to the northern boundaries of PGE 10 and PGE 11.

6.1.5 Eastern Boundary.
Here the clastic sedimentary deposit boundary deviates from the eastern boundary of PGE 11 and follows the base of the Eastern Ridge. The clastic deposits likely occur under the Eastern Ridge and occur on PGE 6, PGE 7, PGE 8, and PGE 9 but this was not evaluated on the Phase 2 activities and, therefore, is omitted from these calculations. The eastern boundary continues southward along the base of the East Ridge to the Slate Ridge Fault Zone (the prominent east-west drainage on the southern margin of the Eastern Ridge).

6.1.6 Southeast Boundary.
Drill Holes H-18, H-25, H-39, and H-47 did not encounter any clastic sediments. Volcanic ash covers the clastic sediments to depths between 40 – 65 feet, whereupon geophysics suggests the clastic sediments occur to depths of >200 feet. Therefore, the southeast boundary is drawn south of H-17, H-24, H-31, and H-46. It is understood that the Slate Ridge Fault Zone extends through this area and creates a complex structural situation. However, for these purposes this boundary location will suffice.

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JBA Works, Inc. used ArcGIS Pro to calculate the clastic sediments polygon area to be 254.75 acres, which translates to 11,097,041 ft^2.

6.2 Depth Estimates.

In the Summary of the Seismic Surveys (Section 2.4.7), the thickness of the clastic sediments is between 65 – 250 feet with an estimated average thickness of 180 feet. It is understood that many places on the property would have less thick deposits and that other areas may have thicker deposits. It is also understood that the volcanic ash overlies the clastic sediments in some places to 40 – 65 feet but this is only overburden, and the sediments continue to some depth below them. It is also understood that topography plays a role on whether the sediments are 180 feet thick, such as north of the Escarpment Ridge. However, at this stage of understanding, the average thickness of 180 feet is appropriate.

6.3 Volume and Tons Estimates.

Given the aforementioned clastic sedimentary boundary and their average thickness, the volume of the estimated potential mineral resources can be calculated as follows:

Area x Thickness = Volume

Area = 254.75 acres = 11,097,041 ft^2

Thickness = 180 ft.

11,097,041 ft^2 x 180 ft = 1,997,467,380 ft^3 or 73,980,273 yds^3

Average weight of clastic sediments: 1.4 – 1.7 tons per cubic yard (Calc Hub, 2024[24])

Weight minimum: 73,980,273 yds^3 x 1.4 = 103,572,382 tons
Weight maximum: 73,980,273 yds^3 x 1.7 = 125,766,465 tons

Therefore, the clastic sedimentary deposit at the Poverty Gulch Property contains between 104 – 126 million tons of ore.

[24] https://www.inchcalculator.com/gravel-calculator/

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6.4 Grade and Estimated Mineral Resource Calculations.

The multi-element assay suites showed that several elements have elevated results. Analysis has shown that any specific layer did not carry higher concentrations than another layer. Therefore, the entire deposit can be considered as one ore body.

Simply totaling the extracted and refined market value of each REE contained in a block of “ore” will not reflect its true resource value as it is extremely unlikely that all individual REE contained in the block can be extracted and refined at an economic profit (O’Keefe, 2023). The capital and operational costs invariably preclude production of all REE, particularly small volume demand products and elements, such as Thulium (Tm). Therefore, and given the scope of this report, eight elements have been selected for their elevated concentrations and commercially viable products on the market (Table 6). These elements are Cerium, Lanthanum, Niobium, Neodymium, Yttrium, Rubidium, Titanium and Zirconium. The average native material verse concentrated material grades of the elements are used in conjunction with the volume of the deposit to create the estimated metric tons that could be produced from the deposit (Tables 7 and 8).

The clastic deposit contains various layers of sedimentary types, including mudstones, sands, gravels, pebbles, and cobbles, each having different weights per cubic yard. Hence, the number of cubic yards to make up a metric ton could vary from 1.4 – 1.7 depending on its composition[25]. Thus, this could be expressed as a minimum and maximum weight per each unit containing the specific element. The market price of each element is multiplied by the estimated minimum and maximum weights to give an estimated value. These values are summed to formulate the estimated mineral resource potential of the clastic sedimentary deposits in both the native deposits (ALS assays) and the concentrated products (AAL assays).

Therefore, the estimated mineral resource potential of the Poverty Gulch Property is:

Native material is between **$24,919,464,292** and **$30,259,349,772.**

Concentrated material is between **$32,587,979,325** and **$39,571,118,111.**

[25] https://www.inchcalculator.com/gravel-calculator/

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Economical Mineral Potential of Poverty Gulch Property						
AAL Concentrated Samples						
Element	**Price per metric ton (USD)**	**AAL Concentrated ppm**	**Metric tonnes Min.**	**Metric tonnes Max.**	**Value of Deposit Min.**	**Value of Deposit Max.**
Cerium (Ce)	$ 959	1,802.40	186,678.86	226,681.48	$179,062,363.78	$217,432,872.27
Lanthanum (La)	$ 1,908	205.40	21,273.77	25,832.43	$40,579,711.05	$49,275,363.87
Niobium (Nb)	$ 45,000	52.90	5,478.98	6,653.05	$246,554,055.35	$299,387,069.93
Neodymium (Nd)	$ 94,000	143.60	14,872.99	18,060.06	$1,398,061,441.19	$1,697,646,051.16
Rubidium (Rb)	$ 1,550,000	106.80	11,061.53	13,431.86	$17,145,372,116.28	$20,819,380,616.10
Yittrium (y)	$ 46,400	41.30	4,277.54	5,194.16	$198,477,827.07	$241,008,792.21
Titanium (Ti)	$ 10,400	6,756.20	699,755.73	849,703.39	$7,277,459,563.59	$8,836,915,264.66
Zirconium (Zr)	$ 29,000	2,031.70	210,428.01	255,519.73	$6,102,412,246.77	$7,410,072,081.27
Total Value					**$32,587,979,325.09**	**$39,571,118,111.48**

Price Sources	
Cesium (Ce)	Aqua-Calc
Lanthanum (La)	Scrap Monster
Niobium (Nb)	Global Metals and Mining
Neodymium (Nd)	Stratgic Metals Invest
Rubidium (Rb)	Ex Works China
Yittrium (y)	Scrap Monster
Titanium (Ti)	Trading Ecomonics
Zirconium (Zr)	Statista

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Poverty Gulch Project

Placer Mining Claims

Estimated Mineral Resource Cons	
33 Claims, ~660 Acres	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Table 7

Economical Mineral Potential of Poverty Gulch Property						
ALS Native Samples						
Element	**Price per metric ton** USD	**ALS Non-Concentrated** ppm	**Metric tonnes Min.**	**Metric tonnes** Max.	**Value of Deposit Min.**	**Value of Deposit Max.**
Cerium (Ce)	$ 959	76.65	7,938.82	9,640.00	$7,614,919.10	$9,246,687.56
Lanthanum (La)	$ 1,908	43.69	4,525.08	5,494.74	$8,631,585.08	$10,481,210.55
Niobium (Nb)	$ 45,000	14.61	1,513.19	1,837.45	$68,093,662.55	$82,685,162.41
Neodymium (Nd)	$ 94,000	29.50	3,055.39	3,710.11	$287,206,215.29	$348,750,407.45
Rubidium (Rb)	$ 1,550,000	150.03	15,538.96	18,868.74	$24,085,394,930.76	$29,246,551,253.12
Yittrium (y)	$ 46,400	14.82	1,534.94	1,863.86	$71,221,341.34	$86,483,058.12
Titanium (Ti)	$ 10,400	0.30	31.07	37.73	$323,145.83	$392,391.37
Zirconium (Zr)	$ 29,000	130.17	13,482.02	16,371.02	$390,978,491.98	$474,759,601.72
Total Value					**$24,919,464,291.93**	**$30,259,349,772.31**

Price Sources	
Cesium (Ce)	Aqua-Calc
Lanthanum (La)	Scrap Monster
Niobium (Nb)	Global Metals and Mining
Neodymium (Nd)	Stratgic Metals Invest
Rubidium (Rb)	Ex Works China
Yittrium (y)	Scrap Monster
Titanium (Ti)	Trading Ecomonics
Zirconium (Zr)	Statista

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Poverty Gulch Project

Placer Mining Claims

Estimated Mineral Resource Native	
33 Claims, ~660 tAcres	T. 7S, R. 40 & 41.5E, MDM
Esmeralda County, NV	Table 8

Of note, Rubidium overwhelms both the native and concentrated estimates because of its cost of $1,550,000 per ton. In fact, sellers of Rubidium do not list ton prices and the price given here is extrapolated from the kilogram price. Moreover, it would be extraordinary if the mine produced the estimated 15,000 to 19,000 tons of Rubidium. If this is removed from the estimated mineral resource potential equation, this would be:

Native material is between **$834,069,361** and **$1,012,798,519.**

Concentrated material is between **$15,442,607,208 and $18,751,737,495.**

Without question concentrating the sample increases the deposit grade, which substantially increases the deposit value. Two clear benefactors of concentrating are Titanium and Zirconium that substantially increase their value with concentration and become 40.8% of the estimated mineral resource potential.

Several assumptions were made to result in these calculations. Nevertheless, they form a baseline from which continued exploration, research, and testing will undoubtably improve the value of the deposit.

PART 7 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

7.0 Summary and Conclusions.

This Technical Report presents the Phase 1 and Phase 2 exploration activities the of Late Tertiary clastic deposits on Eastern Slate Ridge, Esmeralda County, Nevada. The Poverty Gulch placer claim block consists of three claim sets totaling 33 federal placer mining claims that secure about 660 areas of these deposits. The result of this investigation indicates that clastic sedimentary deposits within the claim block has between 104 – 126 million tons of ore with a conservative economic mineral potential of between $15 – $19 billion.

The clastic sediments consist of interbedded mudstones, fine- to coarse-grained sands, gravels, pebbles, and cobbles, with an occasional boulder. The clasts are semi- to well-rounded suggesting they came from a distal source. There is a high population of quartz sand and an abundant amount of black sand. The clastic sedimentary deposits are overlain by the Ammonia Tanks Tuff (11.45 Ma), and possible the Rainier Mesa Tuff (11.6 Ma) which are members of the Timber Mountain Tuff. The base of the clastic deposits has not been seen in the project area. The clastic sediments may correlate to either the Titus Canyon (37 – 25.7 Ma) or Panuga (15.9 – 11.45 Ma) Formations, both of which have been identified about 50 miles south of the Poverty Gulch property, or they are related to something completely different.

Bulk testing of the clastic sediments in 2022 was predicated on recovering enough gold to use those ore grades to foster a much large mining operation. Geologic mapping suggested a thick sequence of clastic deposits occurred over several hundred acres and if auriferous, would indicate a huge economic resource. Unfortunately, and after a Phase 1 bulk testing activity of >660 cubic yards of material, the recovered gold amounts were just not fruitful. However, what was present was a substantial amount of black sands (heavy minerals), so much so it gave the gold recovery processes fits. On a hunch, the black sands were assayed, and they were found to consist of large amounts of Rare-Earth Elements (REEs). Rough calculations of the amounts of black sand suggested a substantial REE deposit could exist within the hundreds of acres of the clastic sediments.

A Phase 2 exploration program was implemented and consisted of geologic mapping, geophysical surveying, drilling, and geochemical analyses of the clastic sedimentary material. The geophysical survey results were spectacular and showed the clastic sediments ranged from 0 - >240 feet thick and averaged about 180 feet thick. A specific area of the deposit was calculated to contain the average thickness of the deposit and the volume was then determined to be between 104 – 126 million tons.

The geophysical results also showed the area was within a prominent fault zone and that large tectonic displacements had impacted the site to such a degree that the entire deposit is likely to be fault bounded, and sediments would be highly fractured.

Augur drilling of the deposits reaffirmed the geology and geophysical data by showing the clastic sediments were indeed greater than 100 feet thick and had typical mudstone, sands, gravels, pebbles, and cobbles compositions. Drill samples were collected and sent to three different geochemical assay laboratories. Results confirmed the initial assays as a wide collection of REEs were identified, as well as other commercially viable elements, and several of them were in very high concentrations. Eight elements were chosen to represent the deposit's economic potential, Cerium, Lanthanum, Niobium, Neodymium, Yttrium, Rubidium, Titanium and Zirconium. Their average grade per element was calculated to estimate a conservative economic mineral potential of between $15 - $19 billion. If Rubidium can be produced and sold at today's price, these estimates double. The findings were inconclusive for precious or platinum group metals. Further work may shed light on these metals adding to the economic potential.

Without question concentrating the sample increases the product grade, which substantially increases the deposit value. Two clear benefactors of concentrating are Titanium and Zirconium that substantially increase their value with concentration and become 40.8% of the estimated mineral resource potential.

It is understood that these initial evaluations are preliminary, yet remarkable in their findings. Typically, exploration programs looking for one mineral, which does not meet the expectations of an evaluation process, does not find a plethora of other elements in such a high concentration. It truly speaks volumes about not only how unique this deposit may be, but of the team of men and women who were engaged in every aspect of the evaluation process and facilitated these outcomes herein.

7.1 Recommendations.

Several assumptions were made to reach the economic conclusions about the deposit and additional work will be necessary to refine the physical and chemical aspects contained herein. The following are a few recommendations towards those goals:

1. Change the name of the mine. Clearly this is not a poverty gulch any longer.
2. Set up business corporations for holding the claims and conducting operations activities.
3. Conduct bulk sampling and processing activities to further the understanding of the mineral content of the deposit.
4. Conduct economic analysis of the sale of the REE and other lacerative elements commodity products and their prices.
5. Explore other nearby areas for more of the deposit, including east of East Ridge and to points further east and stake all clastic sedimentary deposits.
6. Make a positive identification of the Ammonia Tanks and Rainier Mesa Members of the Timber Mountain Tuff, locate other areas where they exist, explore for more clastic sediments underneath them, and if located, secure these with mining claims.
7. Using the Phase 1 and Phase 2 seismic reflection and refraction geophysical survey, locate the thickest or deepest areas and drill until the basement rocks are encountered.
8. Drill areas with the volcanic tuff south of the Slate Ridge Fault Zone until basement rock is encountered.
9. Drill the high magnetic anomaly along the Slate Ridge Fault Zone at the southeast portion of the property.
10. Locate and improve a viable water source for onsite processing. Water may be encountered at the clastic sediment/bedrock contact on the property.
11. Contact Vesta about their questionable assay results, including gold, silver, palladium, and other PGMs. Have them rerun the samples.
12. Conduct a thorough assessment of the mineral content of each sedimentary layer.
13. Perform various geochemical assessments of the concentrates to see if gold and other valuable elements can be gleaned from them.
14. Conduct a provenance determination for where these deposits came from. Additionally, look for other unusual aspects of the deposits that can assist in determining where they came from.
15. Conduct various processing tests whereby specific minerals can easily be collected, such as for titanium and zirconium.

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PART 8 LIMITATIONS AND REFERENCES

8.1 Limitations

Results and conclusions contained in this report are based upon field observations, standardized testing procedures, and our understanding of the project. The locations selected for testing and/or sampling are, in our opinion, representative of the typical deposits or mineralized conditions on the site. It is possible that variations in the deposits or mineralized conditions could exist between the points explored and, therefore, differing results could be achieved. If any conditions are encountered at the site that are different from those used in the preparation of this report, our firm should be contacted immediately so we may review the situation and make supplementary recommendations as needed. No other warranties, guarantees, recommendations or conclusions are expressed or implied except for those directly stated in this report.

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Photos 20. Sunset over Poverty Gulch.

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Appendix A

Bureau of Land Management
MLRS Online Database

Poverty Gulch Claims Holdings

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MINING CLAIMS

MINING CLAIM CUSTOMER INFORMATION

Admin State: NV
Geo State: NV
Claimant: XXXXXXXXXX
Street: XXXXXXXXXX
City: XXXXXXXXXX **State:** XX **Postal Code:** XXXXX-XXXX **Int Rel:** CLAIMANT

Serial Number	Lead File Number	Legacy Serial Number	Legacy Lead File Number	Claim Name	County	Case Disposition	Claim Type	Date Of Location	Meridian Township Range Section	Quadrant
NV101558240	NV101558240	NMC1188139	NMC1188139	POVERTY GULCH #5	ESMERALDA	ACTIVE	PLACER CLAIM	3/29/2019	21 0070S 0412E 024	SE
									21 0070S 0420E 019	SW
NV101592250	NV101592250	NMC1189211	NMC1189211	FIRST AMERICAN #1	ESMERALDA	ACTIVE	PLACER CLAIM	5/21/2019	21 0070S 0412E 024	NE
									21 0070S 0420E 019	NW
NV101592251	NV101592251	NMC1189212	NMC1189211	FIRST AMERICAN #2	ESMERALDA	ACTIVE	PLACER CLAIM	5/21/2019	21 0070S 0420E 019	NW
										SW
NV101592252	NV101592252	NMC1189213	NMC1189211	POVERTY GULCH #1	ESMERALDA	ACTIVE	PLACER CLAIM	5/21/2019	21 0070S 0420E 019	NW
										SW
NV101592253	NV101592253	NMC1189214	NMC1189211	POVERTY GULCH #2	ESMERALDA	ACTIVE	PLACER CLAIM	5/21/2019	21 0070S 0412E 024	NE
										SE
NV101593217	NV101593217	NMC1189215	NMC1189211	POVERTY GULCH #3	ESMERALDA	ACTIVE	PLACER CLAIM	5/21/2019	21 0070S 0412E 024	NE
NV101593218	NV101593218	NMC1189216	NMC1189211	POVERTY GULCH #4	ESMERALDA	ACTIVE	PLACER CLAIM	5/21/2019	21 0070S 0412E 024	SE
NV101767907	NV101767907	NMC1192476	NMC1192476	POVERTY GULCH #9	ESMERALDA	ACTIVE	PLACER CLAIM	9/20/2019	21 0070S 0412E 024	SE
									21 0070S 0420E 019	SW
NV101768243	NV101768243	NMC1192477	NMC1192476	PGE #1	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 030	NW
NV101768244	NV101768244	NMC1192478	NMC1192476	PGE #2	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 030	NE
NV101768245	NV101768245	NMC1192479	NMC1192476	PGE #3	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 030	NE
NV101768246	NV101768246	NMC1192480	NMC1192476	PGE #4	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 030	NE
NV101768247	NV101768247	NMC1192481	NMC1192476	PGE #5	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 019	SE

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MINING CLAIMS

Serial Number	Lead File Number	Legacy Serial Number	Legacy Lead File Number	Claim Name	County	Case Disposition	Claim Type	Date Of Location	Meridian Township Range Section	Quadrant
NV101768248	NV101768248	NMC1192482	NMC1192476	PGE #6	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 020	SW
NV101768249	NV101768249	NMC1192483	NMC1192476	PGE #7	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 019	SE
NV101768250	NV101768250	NMC1192484	NMC1192476	PGE #8	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 020	SW
NV101768251	NV101768251	NMC1192485	NMC1192476	PGE #9	ESMERALDA	ACTIVE	PLACER CLAIM	9/21/2019	21 0070S 0420E 020	SW
NV101770127	NV101770127	NMC1191621	NMC1191612	POVERTY GULCH #10	ESMERALDA	ACTIVE	PLACER CLAIM	9/20/2019	21 0070S 0420E 019	SW
NV101822321	NV101822321	NMC1193978	NMC1193978	FIRST AMERICAN #3	ESMERALDA	ACTIVE	PLACER CLAIM	9/2/2019	21 0070S 0420E 019	NW
NV102151244	NV102151244	NMC1193319	NMC1193319	POVERTY GULCH #6	ESMERALDA	ACTIVE	PLACER CLAIM	9/2/2019	21 0070S 0412E 024	NE
NV102151245	NV102151245	NMC1193320	NMC1193319	POVERTY GULCH #7	ESMERALDA	ACTIVE	PLACER CLAIM	9/2/2019	21 0070S 0412E 013	SE
									21 0070S 0412E 024	NE
NV102151246	NV102151246	NMC1193321	NMC1193319	POVERTY GULCH #8	ESMERALDA	ACTIVE	PLACER CLAIM	9/2/2019	21 0070S 0412E 013	SE SW
NV105282499	NV105282499			PGE #10	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	NE SE
NV105282500	NV105282499			PGE #11	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	NE SE
NV105282501	NV105282499			PGE #12	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SE
NV105282502	NV105282499			PGE #13	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SE
NV105282503	NV105282499			PGE #14	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MINING CLAIMS

Serial Number	Lead File Number	Legacy Serial Number	Legacy Lead File Number	Claim Name	County	Case Disposition	Claim Type	Date Of Location	Meridian Township Range Section	Quadrant
NV105282503	NV105282499			PGE #14		ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SE
NV105282504	NV105282499			PGE #15	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SW
NV105282505	NV105282499			PGE #16	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SE
NV105282506	NV105282499			PGE #17	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SE
NV105282507	NV105282499			PGE #18	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SW
NV105282508	NV105282499			PGE #19	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 019	SW
NV105282509	NV105282499			PGE #20	ESMERALDA	ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 030	
						ACTIVE	PLACER CLAIM	11/18/2021	21 0070S 0420E 030	NW

Appendix B

Bureau of Land Management

2022 Exploration and testing Notice of Intent (NOI) Approval

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Tonopah Field Office
P.O. Box 911 (1553 South Main Street)
Tonopah, Nevada 89049
Phone: 775-482-7800 Fax: 775-482-7810
https://www.blm.gov/nevada

In Reply Refer To:
NVN-101220
3809 (NVB0200)

SEP 20 2023

CERTIFIED MAIL – RETURN RECEIPT REQUESTED 7022 1670 0001 0416 5798

DECISION

Carl Lane	:	
6947 Windy Hill Way	:	43 CFR 3809 – Surface Management
Reno, NV 89511	:	Notice

Determination of Required Financial Guarantee Amount

Description of Notice – The submittal of an amendment to the Poverty Gulch Exploration Project was received in this office on September 8, 2023. The project area is located in Esmeralda County, Nevada in TWP. 7 S., RNG. 42 E., section 19, and TWP. 7 S., RNG. 41.5 E., section 24, Mount Diablo Meridian. The amendment proposes occupancy, 47 augur drill sites, and 18,842 feet of overland travel, totaling 3.03 acres of new disturbance. A field inspection conducted by BLM staff on September 13, 2023 confirmed that 1.87 acres of disturbance is currently present. This brings the existing and proposed disturbance on the project to 4.90 acres. The proposed operations were reviewed by various resource specialists who have determined that the operation, as proposed, will not cause unnecessary or undue degradation as defined under 43 CFR 3809.5. The Bureau of Land Management (BLM) casefile number for your notice is NVN-101220. Please refer to this number in any future communication concerning this notice.

Amount of Financial Guarantee – A member of the Tonopah Field Office staff has reviewed your reclamation cost estimate and determined that a financial guarantee of $21,413.00 is sufficient to complete reclamation of the existing and proposed disturbance. The amount of the reclamation cost estimate is based on operator compliance with all applicable operating and reclamation requirements.

All line items contained in the reclamation cost estimate are not to be considered as the limits of financial guarantee expenditures in that respective category or task should forfeiture of the financial guarantee become necessary. The line items listed are solely for the purpose of arriving at a total amount for the financial guarantee. This total amount may be spent however the BLM deems necessary to implement the approved reclamation plan and does not represent a reclamation cost limit or constraint.

The BLM's review of your proposed operations, determination that your notice filing is complete, determination that your operations as proposed will not cause unnecessary or undue degradation and decision concerning the amount of the required financial guarantee does not relieve you, the operator, of your responsibility to be in compliance with all applicable Federal, State and local laws and regulations, and to obtain all applicable Federal, State and local authorizations and permits. You are responsible for preventing any unnecessary or undue degradation of public lands and resources, and for reclaiming all lands disturbed by your operations.

Required Financial Guarantee - A financial guarantee in the amount of **$21,413.00** must be filed and accepted within 60 days by the Bureau of Land Management, Branch of Minerals Adjudication, 1340 Financial Blvd., Reno, Nevada 89502. You must receive written notification from that office accepting and obligating your financial guarantee before you may begin any surface disturbing operations.

The types of financial instruments that are acceptable to the BLM are found at 43 CFR 3809.555. Please contact the Branch of Minerals Adjudication at 775 861-6400 for further information on the adjudication of financial guarantees.

This decision does not constitute certification of ownership to any entity named in the notice; recognition of the validity of associated mining claims; or recognition of the economic feasibility of the proposed operations.

Term of Notice - Your notice will remain in effect for two years from the date of this decision, unless you notify this office beforehand that operations have ceased and reclamation is complete. If you wish to conduct operations for another two years after the expiration date of your notice, you must notify this office in writing on or before the expiration date as required by 43 CFR 3809.333.

Reclamation - After re-contouring dill pads and roads, the salt desert shrub and sagebrush seed mixes shall be applied at the specified rate per acre of disturbed ground. The seeding rate is for drill seeding. The seed rate should be doubled for broadcast seeding and the seed covered after application by raking or other means.

Appeal of the Decision

If you are adversely affected by this decision, you may request that the BLM Nevada State Director review this decision. If you request a State Director Review, the request must be received in the BLM Nevada State Office at 1340 Financial Blvd., Reno, Nevada 89502, no later than 30 calendar days after you receive or have been notified of this decision. The request for State Director Review must be filed in accordance with the provisions in 43 CFR 3809.805. This decision will remain in effect while the State Director Review is pending, unless a stay (suspension) is granted by the State Director. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

If the State Director does not make a decision on your request for review of this decision within 21 days of receipt of the request, you should consider the request declined and you may appeal this decision to the Interior Board of Land Appeals (IBLA). You may contact the BLM Nevada State Office to determine when the BLM received the request for State Director Review. You have 30 days from the end of the 21-day period in which to file your Notice of Appeal with this office at P.O. Box 911, 1553 S. Main St, Tonopah, NV 89049, which we will forward to IBLA.

If you wish to bypass a State Director Review, this decision may be appealed directly to the IBLA in accordance with the regulations at 43 CFR 3809.801(a) (1). Your Notice of Appeal must be filed in this office at P.O. Box 911, 1553 S. Main St, Tonopah, NV 89049, within 30 days from receipt of this decision. As the appellant you have the burden of showing that the decision appealed from is in error. Enclosed is BLM Form 1842-1 that contains information on taking appeals to the IBLA.

This decision will remain in effect while the IBLA reviews the case, unless a stay is granted by the IBLA. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Request for a Stay

If you wish to file a petition (request) pursuant to regulations 43 CFR 4.21 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by IBLA, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of this notice of appeal and petition for a stay must also be submitted to each party named in the decision and to the IBLA and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal must show sufficient justification based on the following standards:

1. The relative harm to parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

If you have any questions, please contact Kristin Reid, Environmental Protection Specialist, at (775) 482-7800, or at k1reid@blm.gov.

Jerry B. Wickham
Field Manager

Enclosures: Form 1842-001, Resource Recommendations, Notice Guidelines

cc: BLM Nevada, Branch of Minerals Adjudication
ec: Charles Watson, cwatson@advancedgeologic.com, Carl Lane, chlane@me.com

NVN 101220 — Poverty Gulch

Resource Recommendations

Carl Lane (the Operator) is informed that a Bureau of Land Management (BLM) Tonopah Field Office (TFO) archaeologist has conducted a records review of the location of NVN-101220. Disturbance outside of the areas depicted in the notice map may cause unnecessary or undue degradation to a historic property and in accordance with 43 CFR 3809.421, the Operator is legally required to prevent unnecessary or undue degradation to historic properties. If the Operator knowingly causes unnecessary or undue degradation to historic properties, the Operator is subject to penalties under 43 CFR 3809.604, 43 CFR 3809.605, 43 CFR 3809.700, and the Archaeological Resources Protection Act (ARPA). The Operator is informed that the following conditions for cultural resources—including the procedures in place in the event cultural resources are encountered during the course of project activities—apply.

Cultural Resources

- The project area has not been inventoried for cultural resources. The area has been previously impacted by mineral exploration. Proponent shall follow the guidelines at 43 CFR 3809.420(b)(8).

If historic or prehistoric artifacts or features are discovered during project activities, operations in the immediate area shall cease, and the resources shall be left intact. The Operator shall take measures to protect the discovered artifacts from further disturbance by employees or contractors. Additionally, the Operator shall notify the Tonopah Field Manager at (775) 482-7800 so that the resource may be evaluated. The BLM will, as appropriate, evaluate the significance of the find within 10 working days. The Operator shall not proceed with potentially disturbing activities until authorized to do so by the BLM.

Pursuant to 43 CFR 10.4(g), the holder of this Notice must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, and/or sacred objects of cultural patrimony (as identified at 43 CFR 10.2). Furthermore, pursuant to 43 CFR 10.4(c) and (d), the Operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

Paleontological Resources

- The southern portion of the project lies within a PFYC 3 indicating a moderate potential for significant paleontological resources. Proponent shall follow the guidelines at 43 CFR 3809.420(b)(8).

Paleontological resources constitute a fragile and non-renewable scientific record of the history of life on earth. Although no paleontological resources are known or identified in the immediate area, this project may have an unintended adverse effect on such resources. The Operator should note that fossils are not part of the mineral estate. Paleontological resources are protected by the Paleontological Resources Protection Act (OPLA-PRP: Omnibus Public Land Management Act of 2009 Paleontological Resources Preservation Subtitle 123 Stat. 1172, 16 U.S.C. 470aaa et seq.) which establishes criminal and civil penalties. The Operator should also be aware that if paleontological resources are found in direct association with cultural resources, then such occurrences are subject to Archaeological Resource Protection Act (ARPA: 43 CFR 7.4, 7.14, 7.15, 7.16) provisions. OPLA-PRP requires that the nature and location of paleontological resources on public lands be kept confidential. If paleontological resources are discovered, the Operator must cease operations in the vicinity of the discovery and ensure adequate protection to the discovery, then notify the BLM immediately, by telephone, with written confirmation to follow. Notification should be made to Tonopah Field Office Manager, Tonopah Field Office, 1553 South Main Street, Tonopah, NV, 89049, (775-482-7800). No activity in the vicinity of the discovery should resume until the Operator has been issued a Notice to Proceed by the Authorized Officer.

Wildlife and Migratory Birds

- Avoid land clearing activities during the migratory bird season, and if unavoidable ensure clearance surveys are conducted. Ensure construction of pits are in a fashion that will prevent the consumption of toxic fluids by wildlife and allow for safe egress/ingress (3:1 H: V ration). Any drill holes not immediately plugged should be temporarily capped or otherwise covered to prevent entry by wildlife until such time they can be permanently plugged.

Range

- Grazing can occur near the project area during wet years like 2023. In dry years grazing does not occur near the project area.
- No known noxious weed infestations in the project area. Sagebrush seed mix recommended for 36 proposed augur sites to the east and Salt desert shrub seed mix is recommended for 11 proposed augur sites to the west. Alternatively, a site visit by BLM range staff can determine if one of these recommended seed mixes is suitable for the entire project.

Minerals

- Any drill holes left open should be visibly marked and temporarily capped to prevent hazards to humans and wildlife until such time they can be permanently plugged.

Wild Horse and Burros

- This project is within the Gold Mountain HMA.

September 20, 2023

Notice Level Exploration Reclamation Cost Model
From SRCE Cost Data with Acreage Calculators

SRCE 2023 Cost Data Version 3.2

Poverty Gulch Amendment N-101220 - Sept. 2023 kr

Linear Feet of Road On a Side Slope	Linear Feet	Item	Labor Cost	Manpower	Equipment	Materials	Cost/Linear Foot	Road Reclamation
<30%	940	Recontouring Cost <30%	$102	$0.11	$0.19	$0.00	$0.30	$277
>30%		Recontouring Cost >30%	$0	$0.43	$0.75	$0.00	$1.18	$0
Drill Sites and Sumps	Number			Manpower	Equipment	Materials	Cost each	Pad& Sump Reclamation
Drill Sites < 30% slopes		Recontouring Cost	$0	$29.00	$49.80	$0.00	$78.80	$0
Drill Sites > 30% slopes		Recontouring Cost	$0	$173.80	$298.80	$0.00	$472.60	$0
Drill Sites Cross Country		Ripping Cost	$0	$14.20	$35.60	$0.00	$49.80	$0
Sumps	0	Recontouring Cost	$0	$19.33	$33.20	$0.00	$52.53	$0
	Linear Feet			Manpower	Equipment	Materials	Cost/Linear Foot	Reclamation
Trenches	1,000	Recontouring Cost	$1,190	$1.19	$2.62	$0.00	$3.81	$3,813
Cross Country Travel	28,842	Ripping Cost	$410	$0.01	$0.04	$0.00	$0.05	$1,436
Revegetation	Slope Acres			Manpower	Equipment	Materials	Cost/Acre	
Total Revegetation Acres	4.91	Revegetation Cost	$860	$175.00	$100.00	$332.75	$607.75	$2,985
				Manpower	Equipment		Mob+Demob	
150 miles Mobilization		Mobilization Cost-excavator	$844	$843.64	$990.36		$1,834	$1,834
150 miles Mobilization		Mobilization Cost-dozer	$572	$572.48	$790.54		$1,363	$1,363
Drill Holes Open	#/Feet			Manpower	Equipment	Materials	Cost/Foot	Drill Hole Plugging
Feet of Open Holes - Wet		Plugging Cost - Wet	$0	$0.65	$0.89	$0.52	$1.66	$0
Feet of Open Holes - Dry	4000	Plugging Cost - Dry	$2,992	$0.75	$0.32	$0.01	$1.08	$4,320
Feet of Casing to Pull		Pulling Casing	$0	$0.88	$0.97	$0.00	$1.85	$0
				Manpower	Equipment		Mob+Demob	
150 miles Mobilization		Mobilization Cost - Wet	$0	$610.92	$1,086.08		$1,697	$0
150 miles Mobilization		Mobilization Cost - Dry	$917	$917.15	$493.85		$1,411	$1,411

Disturbance Type	Total Acres	Total Linear Feet	Slope Acres
Roads	0.38	940	0.39
Drill Sites	0.00		0.00
Sumps	0.00		0.00
Trenches	0.55	1,000	0.55
Cross Country	3.97	28,842	3.97
total Notice acres	4.90	total slope acres	4.91

Total Reclamation Cost: $17,440

Total Labor: $7,886

green cells with blue font is for user input
yellow cells are unit costs
black font cannot be changed
red font are calculated values with formulas
that can not be changed

Indirect Costs		
Contingency*	10% Total Reclamation Cost	$0
Insurance	1.5% Labor Cost	$118
Perf. And Payment Bonds*	3% Total Reclamation Cost	$0
Contractor Profit	10% Total Reclamation Cost	$1,744
Contract Administration	10% Total Reclamation Cost	$1,744
Indirect Costs	21% of Contract Administration Cost	$366

* Contingency and Performance and payment Bonds required only if total reclamation cost > $100,000

Total Administration Cost: $3,973

Cost per acre: $4,366

Financial Guarantee Amount: $21,413

Notes:
Amendment proposes occupancy, 940' constructed rd for augur sites, 18,842' overland travel = 3.03 acre (bond amt = $15,201). 4,000' of open hole added above in lieu of equipment removal.
Unreleased disturbance from original notice includes trenching and surface disturbance associated with processing and equipment storage equaling 1.86 acres (bond already in place = $21,548).
1,000' trenching added above to account for previous road, trench, & bulk sampling area disturbances that still need earthwork (0.55 acre).
Extra 10,000' x-c travel added above to account for previously backfilled trenches and processing/laydown areas that still need ripping and/or revegetation (1.31 acre).

Bureau of Land Management Notice Level Reclamation Cost Estimation Worksheet

Costs for this Notice Level Reclamation Cost Estimator are based on values and assumptions used in the Standardized Reclamation Cost Estimator (SRCE) Version 1.4.1.
Cost Data are from August 1, 2023. This worksheet is simpler than the SRCE and does not allow the flexibility of entering project specific information in some situations.
The model will generate approximately the same reclamation costs as the SRCE model if the same inputs and assumptions are applied.
Below are the methods and assumptions used by this model to generate a Financial Guarantee Amount.

1. There are two side hill slope categories used for all calculations in this worksheet. All slopes under 30%(<30%) are assumed to have a slope of 20%.
   All slopes over 30% (>30%) are assumed to have a slope of 40% and include an additional 50% of volume for double-handling.
2. All Roads in this worksheet are assumed to have a 14 foot wide dimension across the flat "driveable" part of the road without any safety berms.
3. All Drill Sites in this worksheet are assumed to be 30 feet wide. For Drill Sites on slopes <30% they are 70 feet long. For Drill Sites on slopes >30% they are 83 feet long.
4. All Road and Drill Sites cut banks are assumed to have a 60 degree slope.
5. All Road and Drill Sites fill slopes are assumed to have an angle of repose of 1.4H:1V or about 70% slope equal to a 35 degree angle.
6. Roads are linear features and the units required for input to this worksheet are in linear feet.
7. Recontouring for reclamation of Roads, Drill Sites, and Sumps is done with a track excavator of a Cat 320C size with a 1.57 CY bucket and productivity of 167 CY per hour.
8. Equipment operator Manpower cost is based on Davis-Bacon wage rates for Northern Nevada.
   Area pay= $0.00 per hour, FICA = 7.65%, Unemployment = 3% and Workmen's Comp= 12.0%
9. Laborer cost is based on Davis-Bacon wage rates for Northern Nevada with FICA = 7.65%, Unemployment = 3% and Workmen's Comp= 13.5%
10. Revegetation cost is based on the cost of use of a quad/ATV which spreads and drags the seed in on one pass.
11. Revegetation costs are based on a per acre basis for slope acres.
12. Drill Sites recontouring cost is based on a standard pad width and length.
    Drill Sites on slopes <30%and Cross Country Drill Sites are 30 feet wide by 70 feet long.
    Drill Sites on slopes >30% are 30 feet wide by 83 feet long.
    On Cross Country Drill Sites, the disturbed area is ripped by a Cat D7 size dozer.
13. One Sump is assumed for each Drill Site. The assumed dimensions are 10 feet wide, 20 feet long and 6.75 feet deep. (50 CY)
    On Drill Sites <30% slopes they are assumed to be outside the Drill Site.
    On Drill Sites >30% slopes sumps are assumed to lie within the 30 foot * 83 foot dimension of the Drill Site.
14. Trenches are assumed to be 14 feet wide by 5 feet deep with 10 feet extra width for the spoils pile. A D6 is used for recontour at 208 CY/ hour productivity.
15. Recontouring earthwork for Roads Drill Sites and Sumps has an assumed swell factor of 20%. Trenches swell factor is 30%.
16. Cross Country travel is assumed to have a disturbance of 6 feet wide by the linear feet of travel on slopes under 10%.
    Revegetation costs for all Cross Country disturbance is based on a 12 foot wide seeding width on one pass.
17. Mobilization and Demobilization are based on 150 miles one way to project and are based on the 2023 Mob/DeMob worksheet.
    Travel times are assumed to be 2.73 hours one way to the project.
18. Mobilization for a Cat 320C excavator will be charged for regrading of Roads, Drill Sites only.
    If there are any Trenches or Cross Country disturbance; a D6 dozer will be mobilized also.
19. All projects that propose drilling will require a minimum Drill Holes Open abandonment cost.
    If a drill hole will not penetrate the static water level it may be abandoned as an Open Hole - Dry.
    If a drill hole is drilled deeper than the static water level it is considered a wet hole and must be abandoned as an Open Hole - Wet.
20. Mobilization for Drill Holes - Open for Open Hole - Wet will include one drill rig plus crew and support equipment.
21. Mobilization for Drill Holes - Open for Open Hole - Dry will include one backhoe and operator, and one general laborer.

Nevada BLM, August 1, 2023

Form 1842-1
(September 2020)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,

AND

2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL..........................	A person who wishes to appeal to the Interior Board of Land Appeals must file in the office of the officer who made the decision (not the Interior Board of Land Appeals) a notice that he wishes to appeal. A person served with the decision being appealed must transmit the *Notice of Appeal* in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a *Notice of Appeal* in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).
2. WHERE TO FILE NOTICE OF APPEAL	Bureau of Land Management, Tonopah Field Office, P.O. Box 911, 1553 S. Main Street, Tonopah, NV 89049-0911
WITH COPY TO SOLICITOR	Office of the Regional Solicitor, 2800 Cottage Way, Room E-1712, Sacramento, CA 95825
3. STATEMENT OF REASONS WITH COPY TO SOLICITOR	Within 30 days after filing the *Notice of Appeal*, file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the *Notice of Appeal*, no additional statement is necessary (43 CFR 4.412 and 4.413).
4. SERVICE OF DOCUMENTS	A party that files any document under 43 CFR Subpart 4, must serve a copy of it concurrently on the appropriate official of the Office of the Solicitor under 43 CFR 4.413(c) and 4.413(d). For a notice of appeal and statement of reasons, a copy must be served on each person named in the decision under appeal and for all other documents, a copy must be served on each party to the appeal (including intervenors). Service on a person or party known to be represented by counsel or other designated representative must be made on the representative. Service must be made at the last address of record of the person or party (if unrepresented) or the representative, unless the person, party or representative has notified the serving party of a subsequent change of address.
5. METHOD OF SERVICE....	If the document being served is a notice of appeal, service may be made by (a) Personal delivery; (b) Registered or certified mail, return receipt requested; (c) Delivery service, delivery receipt requested, if the last address of record is not a post office box; or (d) Electronic means such as electronic mail or facsimile, if the person to be served has previously consented to that means in writing. All other documents may be served by (a) Personal delivery; (b) Mail; (c) Delivery service, if the last address of record is not a post office box; or (d) Electronic means, such as electronic mail or facsimile, if the person to be served has previously consented to that means in writing.
6. REQUEST FOR STAY.............	Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a Notice of Appeal (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your Notice of Appeal (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the Notice of Appeal and Petition for a Stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. Standards for Obtaining a Stay. Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay.

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that all communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, Subpart B for general rules relating to procedures and practice involving appeals.

(Continued on page 2)

Appendix C

Vesta Minerals, Inc.

Black Sands Assay

Vesta Minerals Inc. Quantitative Analysis

3863 South Valley View Blvd. #11 Las Vegas, Nevada 89103

Telephone (702) 716-0534

Sample ID: TEST #2

Sample Date/Time: Friday, September 16, 2022 17:33:03
Report Date/Time: Friday, September 16, 2022 17:38:23
Autosampler Position: 309
Sample Description: **NOTE: Negative numbers are not an indication of a parts per million (ppm) calculation but an inaction with the element.**
Batch ID: 091620222
Sample File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Sample\VESTA09162022.sam
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\qa #2007 full spectrum minor 2 iso au, ag, pgms, rees background.mth Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\TEST #2.1570

Analytical Results - PerkinElmer ICP-MS

Analyte	Isotope Mass	Conc. Mean	Report Unit
Ag	107	8.95	ppm
Ag-1	109	9.55	ppm
Au	197	12.78	ppm
Au-1	199	103.05	ppm
Pd	106	1.45	ppm
Pt	195	0.09	ppm
Rh	103	-0.01	ppm
Ir	193	-0.03	ppm
Ru	102	0.04	ppm
Os	192	-0.78	ppm
La	139	433.15	ppm
Ce	140	769.20	ppm
Pr	141	70.76	ppm
Nd	142	229.44	ppm
Pm	141	70.76	ppm
Sm	152	27.10	ppm
Eu	153	2.62	ppm
Gd	158	27.69	ppm
Tb	159	2.23	ppm
Dy	164	9.27	ppm
Ho	165	1.44	ppm
Er	166	4.54	ppm
Tm	169	0.51	ppm
Lu	175	0.48	ppm
Sc	45	24.41	ppm
Th	232	219.12	ppm
Y	89	37.89	ppm
Yb	172	3.40	ppm
Ti	48	37758.64	ppm
V	51	1542.42	ppm
Rb	85	11.24	ppm

Cs	133	0.42	ppm
Re	187	-0.03	ppm
Al	27	8315.53	ppm
As	75	-52.47	ppm
Ba	138	115.94	ppm
Be	9	0.51	ppm
Bi	209	0.26	ppm
Ca	43	2668.11	ppm
Cd	111	0.42	ppm
Co	59	128.39	ppm
Cr	52	585.99	ppm
Cu	63	8.33	ppm
In	115	0.19	ppm
K	39	1306.35	ppm
Li	7	5.80	ppm
Mg	24	4294.15	ppm
Mn	55	4763.78	ppm
Pb	208	26.67	ppm
Se	82	-2.33	ppm
Sr	88	86.38	ppm
Tl	205	0.15	ppm
Zn	64	323.63	ppm
Hf	180	3.28	ppm
Sb	121	2.59	ppm
Sn	118	13.63	ppm
Te	130	0.01	ppm
B	11	-37.86	ppm
Ge	74	3.82	ppm
Mo	98	338.79	ppm
Nb	93	75.94	ppm
P	31	1891.65	ppm
Si	28	34116.66	ppm
Ta	181	7.22	ppm
W	184	113.37	ppm
Zr	90	85.30	ppm
S	32	-3390.16	ppm
Hg	202	104.37	ppm
Ni	58	3742.89	ppm
Ga	69	57.56	ppm
Fe	56	S	ppm

Appendix D

Amended BLM Exploration and Testing Notice of Intent (NOI) Approved

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Tonopah Field Office
P.O. Box 911 (1553 South Main Street)
Tonopah, Nevada 89049
Phone: 775-482-7800 Fax: 775-482-7810
https://www.blm.gov/nevada

In Reply Refer To:
N-101220
3809 (NVB0200)

APR 20 2022

CERTIFIED MAIL – RETURN RECEIPT REQUESTED 7020 0090 0001 5184 7390

DECISION

Carl Lane
6947 Windy Hill Way
Reno, NV 89511

: 43 CFR 3809 – Surface Management
: Notice

Determination of Required Financial Guarantee Amount

Description of Notice – The submittal of a notice for Poverty Gulch Exploration Project was received in this office on March 22, 2022. BLM requested and received additional information on April 6, 2022. The project area is located in Esmeralda County, Nevada in Section 24, Township 7 South (T7S), Range 41.5 East (R40E), and Section 19, T7S, R42E, Mount Diablo Meridian. The notice proposes sampling, trenching, ore processing, and occupancy totaling 1.69 acres of disturbance. The proposed operations were reviewed by various resource specialists who have determined that the operation, as proposed, will not cause unnecessary or undue degradation as defined under 43 CFR 3809.5. The Bureau of Land Management (BLM) casefile number for your notice is N-101220. Please refer to this number in any future communication concerning this notice.

Amount of Financial Guarantee – A member of the Tonopah Field Office staff has reviewed your reclamation cost estimate and determined that a financial guarantee of $21,548 is sufficient to complete reclamation of the proposed disturbance. The amount of the reclamation cost estimate is based on operator compliance with all applicable operating and reclamation requirements.

All line items contained in the reclamation cost estimate are not to be considered as the limits of financial guarantee expenditures in that respective category or task should forfeiture of the financial guarantee become necessary. The line items listed are solely for the purpose of arriving at a total amount for the financial guarantee. This total amount may be spent however the BLM deems necessary to implement the approved reclamation plan and does not represent a reclamation cost limit or constraint.

The BLM's review of your proposed operations, determination that your notice filing is complete, determination that your operations as proposed will not cause unnecessary or undue degradation and decision concerning the amount of the required financial guarantee does not relieve you, the operator, of your responsibility to be in compliance with all applicable Federal, State and local laws and regulations, and to obtain all applicable Federal, State and local authorizations and permits. You are responsible for preventing any unnecessary or undue degradation of public lands and resources, and for reclaiming all lands disturbed by your operations.

Required Financial Guarantee - A financial guarantee in the amount of **$21,548** must be filed and accepted within 60 days by the Bureau of Land Management, Branch of Minerals Adjudication, 1340 Financial Blvd., Reno, Nevada 89502. You must receive written notification from that office accepting and obligating your financial guarantee before you may begin any surface disturbing operations.

The types of financial instruments that are acceptable to the BLM are found at 43 CFR 3809.555. Please contact the Branch of Minerals Adjudication at 775 861-6400 for further information on the adjudication of financial guarantees.

This decision does not constitute certification of ownership to any entity named in the notice; recognition of the validity of associated mining claims; or recognition of the economic feasibility of the proposed operations.

Term of Notice - Your notice will remain in effect for two years from the date of this decision, unless you notify this office beforehand that operations have ceased and reclamation is complete. If you wish to conduct operations for another two years after the expiration date of your notice, you must notify this office in writing on or before the expiration date as required by 43 CFR 3809.333.

Reclamation - After re-contouring dill pads and roads, the salt desert shrub seed mix shall be applied at the specified rate per acre of disturbed ground. The seeding rate is for drill seeding. The seed rate should be doubled for broadcast seeding and the seed covered after application by raking or other means.

Appeal of the Decision
If you are adversely affected by this decision, you may request that the BLM Nevada State Director review this decision. If you request a State Director Review, the request must be received in the BLM Nevada State Office at 1340 Financial Blvd., Reno, Nevada 89502, no later than 30 calendar days after you receive or have been notified of this decision. The request for State Director Review must be filed in accordance with the provisions in 43 CFR 3809.805. This decision will remain in effect while the State Director Review is pending, unless a stay (suspension) is granted by the State Director. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

If the State Director does not make a decision on your request for review of this decision within 21 days of receipt of the request, you should consider the request declined and you may appeal this decision to the Interior Board of Land Appeals (IBLA). You may contact the BLM Nevada State Office to determine when the BLM received the request for State Director Review. You have 30 days from the end of the 21-day period in which to file your Notice of Appeal with this office at P.O. Box 911, 1553 S. Main St, Tonopah, NV 89049, which we will forward to IBLA.

If you wish to bypass a State Director Review, this decision may be appealed directly to the IBLA in accordance with the regulations at 43 CFR 3809.801(a) (1). Your Notice of Appeal must be filed in this office at P.O. Box 911, 1553 S. Main St, Tonopah, NV 89049, within 30 days from receipt of this decision. As the appellant you have the burden of showing that the decision appealed from is in error. Enclosed is BLM Form 1842-1 that contains information on taking appeals to the IBLA.

This decision will remain in effect while the IBLA reviews the case, unless a stay is granted by the IBLA. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Request for a Stay
If you wish to file a petition (request) pursuant to regulations 43 CFR 4.21 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by IBLA, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of this notice of appeal and petition for a stay must also be submitted to each party named in the decision and to the IBLA and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay
Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal must show sufficient justification based on the following standards:

1. The relative harm to parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

If you have any questions, please contact Jonah Blustain, Assistant Field Manager, Non-Renewable Resources, at (775) 482-7800.

Perry B. Wickham
Field Manager

Enclosures

cc: BLM Nevada, Branch of Minerals Adjudication

Enter Data Below in Green and Blue Spaces

STANDARDIZED RECLAMATION COST ESTIMATOR

Version 1.4.1
Build 017b (Revised 16 May 2019)

Approved for use in Nevada, August 1, 2012

COST DATA FILE INFORMATION

File Name:	20220414.PovertyGulchNotice.RCE.xlsm
Cost Data File:	SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Data Date:	August 1, 2021
Cost Data Basis:	User Data — Data Cost Units: Imperial
Author/Source:	Nevada Division of Environmental Protection (NDEP) & NV BLM

PROJECT INFORMATION

Property/Mine Name:	Poverty Gulch — Property Code:
Project Name:	Poverty Gulch
Date of Submittal:	April 2022 — Average Altitude: 6400 ft.
Select One:	(•) Notice or Sm Exploration Plan ( ) Lg Exploration Plan ( ) Mine Operation
Select One:	( ) Private Land (•) Public or Public/Private
Cost Estimate Type:	Surety
Cost Basis Category:	S. Nevada Notice Level
	Clark, Esmeralda, Lincoln and Nye Counties
Cost Basis Description:	

Project Name: Poverty Gulch
Project Date: April 2022
Model Version: Version 1.4.1
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Data Cost File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Basis: S. Nevada Notice Level

A. Earthwork/Recontouring	Labor [1]	Equipment [2]	Materials	Total
Exploration	$0	$0	$0	$0
Exploration Roads & Drill Pads	$0	$0	$0	$0
Roads	$0	$0	$0	$0
Well Abandonment	$0	$0	$0	$0
Pits	$0	$0	N/A	$0
Quarries & Borrow Areas	$0	$0	$0	$0
Underground Openings	$0	$0	$0	$0
Process Ponds	$591	$606	$0	$1,197
Heaps	$0	$0	$0	$0
Waste Rock Dumps	$0	$0	$0	$0
Landfills	$0	$0	$0	$0
Tailings	$0	$0	$0	$0
Foundation & Buildings Areas	$0	$0	$0	$0
Yards, Etc.	$979	$1,859	$0	$2,838
Drainage & Sediment Control	$0	$0	$0	$0
Generic Material Hauling	$304	$583	$0	$887
Other User Costs (from Other User sheet)	$0	$0	$0	$0
Other**				$0
Subtotal	$1,874	$3,048	$0	$4,922
Mob/Demob (included in Other User sheet)	$0	$0	$0	$0
Mob/Demob		$7,984		$7,984
Subtotal "A"	**$1,874**	**$11,032**	**$0**	**$12,906**

B. Revegetation/Stabilization	Labor [1]	Equipment [2]	Materials	Total
Exploration	$0	$0	$0	$0
Exploration Roads & Drill Pads	$0	$0	$0	$0
Roads	$0	$0	$0	$0
Well Abandonment				N/A
Pits	$0	$0	$0	$0
Quarries & Borrow Areas	$0	$0	$0	$0
Underground Openings				N/A
Process Ponds	$0	$0	$0	$0
Heaps	$0	$0	$0	$0
Waste Rock Dumps	$0	$0	$0	$0
Landfills	$0	$0	$0	$0
Tailings	$0	$0	$0	$0
Foundation & Buildings Areas	$0	$0	$0	$0
Yards, Etc.	$159	$84	$429	$672
Drainage & Sediment Control	$0	$0	$0	$0
Generic Material Hauling	$0	$0	$0	$0
Other User Costs (from Other User sheet)	$0	$0	$0	$0
Other**				$0
Subtotal "B"	**$159**	**$84**	**$429**	**$672**

C. Detoxification/Water Treatment/Disposal of Wastes**	Labor [1]	Equipment [2]	Materials	Total
Process Ponds/Sludge				$0
Heaps				$0
Dumps (Waste & Landfill)				$0
Tailings				$0
Surface Water Disposal				$0
Monitoring				$0
Miscellaneous				$0
Solid Waste - On Site	$1,325	$2,702	N/A	$4,027
Solid Waste - Off Site				$0
Hazardous Materials				$0
Hydrocarbon Contaminated Soils	$0	$0	$0	$0
Other User Costs (from Other User sheet)	$0	$0	$0	$0
Other**				$0
Subtotal "C"	**$1,325**	**$2,702**	**$0**	**$4,027**

4/14/2022

Project Name: Poverty Gulch
Project Date: April 2022
Model Version: Version 1.4.1
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Data Cost File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Basis: S. Nevada Notice Level

D. Structure, Equipment and Facility Removal, and Misc.	Labor (1)	Equipment (2)	Materials	Total
Foundation & Buildings Areas	$0	$0	$0	$0
Other Demolition	$0	$0	$0	$0
Equipment Removal	$0	$0	$0	$0
Fence Removal	$0	$0		$0
Fence Installation	$0	$0	$0	$0
Culvert Removal	$0	$0	N/A	$0
Pipe Removal	$0	$0	N/A	$0
Powerline Removal	$0			$0
Transformer Removal	$0			$0
Rip-rap, rock lining, gabions	$0	$0	$0	$0
Other Misc. Costs	$0	$0	$0	$0
Other User Costs (from Other User sheet)	$0	$0	$0	$0
Other**				$0
Subtotal "D"	**$0**	**$0**	**$0**	**$0**

E. Monitoring	Labor (1)	Equipment (2)	Materials	Total
Reclamation Monitoring and Maintenance	$0	$0	$0	$0
Ground and Surface Water Monitoring	$0	$0	$0	$0
Other User Costs (from Other User sheet)	$0	$0	$0	$0
Subtotal "E"	**$0**	**$0**	**$0**	**$0**

F. Construction Management & Support	Labor	Equipment (2)	Materials	Total
Construction Management	$0	$0	N/A	$0
Construction Support	$0	$0	$0	$0
Road Maintenance	$0	$0	$0	$0
Other User Costs (from Other User sheet)	$0	$0	$0	$0
Other**				$0
Subtotal "F"	**$0**	**$0**	**$0**	**$0**

Subtotal Operational & Maintenance Costs	Labor (1)	Equipment (2)	Materials (3)	Total
Subtotal A through F	**$3,379**	**$13,796**	**$430**	**$17,605**

** Other Operator supplied costs - additional documentation required

Indirect Costs		Include?	Total
1. Engineering, Design and Construction (ED&C) Plan (7)			N/A
2. Contingency (8)			N/A
3. Insurance (9)	$51		$51
4. Performance Bond (10)			N/A
5. Contractor Profit (11)			$1,761
6. Contract Administration (12)			$1,761
7. Government Indirect Cost (13)			$370
Subtotal Add-On Costs			**$3,943**
Total Indirect Costs as % of Direct Cost			22%
GRAND TOTAL			**$21,548**

4/14/2022

Closure Cost Estimate
Reclamation Quantities

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Data Cost File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety   **Cost Basis:** S. Nevada Notice Level

Reclamation Quantity Summary

	Description	Total Regrade or Haul Volume cy	Total Regrade or Haul Cost $	Total Cover Volume cy	Cover Placement Cost $	Total Growth Media Volume cy	Growth Media Placement Cost $	Total Surface Area acres	Total Scarify Cost $	Total Revegetation Cost $	TOTALS $	Unit Costs: Regrade Unit Cost $/CY	Material Haul or Backfill Unit Cost $/CY	Cover Unit Cost $/CY	Growth Media Unit Cost $/CY	Scarify Unit Cost $/CY	Area Unit Cost $/acre
1	Waste Rock Dumps		$ -		$ -		$ -		$ -	$ -	$ -		N/A				
2	Tailings Impoundments		$ -		$ -		$ -		$ -	$ -	$ -		N/A				
3	Heap Leach Pads		$ -		$ -		$ -		$ -	$ -	$ -		N/A				
5	Open Pits		$ -							$ -	$ -		N/A				
4	Quarries & Borrow Pits		$ -		$ -		$ -		$ -	$ -	$ -		N/A				
6	Roads		$ -				$ -		$ -	$ -	$ -		N/A				
7	Landfills		$ -		$ -		$ -		$ -	$ -	$ -		N/A				
8	Buildings				$ -		$ -		$ -	$ -	$ -		N/A				
9	Yards	1,941	$ 2,388		$ -		$ -	1.32	$ 240	$ 672	$ 3,310	$2.34	N/A			$186.05	$2,565.88
10	Ponds	297	$ 720				$ -	0.3		$ -	$ 720	N/A	$2.42				$2,400.00
11	Exploration Roads		$ -				$ -		$ -	$ -	$ -		N/A				
12	Exploration Trenches		$ -							$ -	$ -		N/A				
13	Diversion Ditches		$ -							$ -	$ -		N/A				
14	Sediment Ponds		$ -				$ -		$ -	$ -	$ -						
15	Generic Haulage/Backfill	455	$ 967		$ -		$ -	0.1	$ -	$ -	$ 967	N/A	$1.48			$0.00	$9,670.00
16	Adit/Decline Backfilling		$ -								$ -	N/A					
17	Shaft Backfilling		$ -								$ -	N/A					
	TOTALS	2,804	$ 4,105	-	$ -	-	$ -	1.69	$ 240	$ 672	$ 5,017						
	Average Costs	per CY	$2.05	per CY		per CY		per acre	$142.01	$2.80	$2,969	per acre					

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
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Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety **Cost Basis:** 9. Nevada Notice Level

Generic Material Hauling - Cost Summary	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	$304	$693	N/A	$997
Cover Placement Cost	$0	$0	N/A	$0
Topsoil Placement Cost	$0	$0	N/A	$0
Ripping/Scarifying Cost	$0	$0	N/A	$0
Subtotal (earthworks)	$304	$693	$0	$997
Revegetation Cost	$0	$0	$0	$0
TOTALS	$304	$693	$0	$997

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Generic Material Hauling - User Input

	Facility Description			Physical		Hauled Material			Crushing & Screening					Cover			Growth Media		
	Description (required)	ID Code	Type	Pad Surface Area acres	Average Ripping Distance ft	Material Volume Required cy	Distance from Borrow Source (1) ft	Slope to Borrow Source % grade	Crush Material	Screen Material	Loss to Crushing/ Screening %	Distance to Placement Location (2) ft	Slope to Placement % grade	Cover Thickness in	Distance to Cover Borrow ft	Slope to Borrow % grade	Growth Media Thickness in	Distance to Growth Material Stockpile ft	Slope to Stockpile % grade
1	Haulback		Stockpile			484	300	8.0	No	No									

Notes:
1. Input distance to crusher if material to be crushed
2. Input distance from crusher to placement if material to be crushed
3. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Generic Material Hauling - User Input (cont.)

		Hauling Material				Cover			Growth Media			Revegetation				
	Description (required)	Haul Material Type (select)	Material Hauling Fleet (select)	Each Fleet Size (from/to crusher) (user override)	Compact After Placement?	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch Type (select)	Fertilizer Type (select)	Scarify/ Rip? (select)	Scarifying/ Ripping Fleet (select)
1	Haulback	Alluvium	Small Truck		No											

Closure Cost Estimate
Haul Material

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Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety **Cost Basis:** S. Nevada Notice Level

Generic Material Hauling - Cost Summary	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	$304	$683	N/A	$987
Cover Placement Cost	$0	$0	N/A	$0
Topsoil Placement Cost	$0	$0	N/A	$0
Ripping/Scarifying Cost	$0	$0	N/A	$0
Subtotal Earthworks	$304	$683	$0	$987
Revegetation Cost	$0	$0	$0	$0
TOTALS	$304	$683	$0	$987

Generic Material Hauling - Load, Haul, Place and Grade

		Material Haulage								Crush and/or Compact			
	Description (required)	Material Volume to Crusher cy	Final Material Volume cy	Material Haulage Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Hauling Labor Cost $	Hauling Equipment Cost $	Total Crush/ Screen Cost $	Compact Labor Cost $	Compact Equipment Cost $	Total Load/Haul/ Place Cost $
1	Haulback	666	666	725/855/D7R	456	2	1	$304	$683	$0	$0	$0	$987
		666	666				1	$304	$683	$0	$0	$0	$987

Notes: Final Material Volume includes allowance for additional material hauled to crushing/screening plant based on Loss to Crushing/Screening input above.

Generic Material Hauling - Cover and Growth Media Costs

		Cover Placement								Growth Media Placement							
	Description (required)	Cover Volume cy	Cover Placement Fleet	Cover Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost $	Total Equipment Cost $	Total Cover Placement Cost $	Growth Media Volume cy	Growth Media Placement Fleet	Growth Media Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost $	Total Equipment Cost $	Total Growth Media Cost $
1	Haulback						$0	$0	$0	0					$0	$0	$0
							$0	$0	$0						$0	$0	$0

Generic Material Hauling - Scarifying/Revegetation Costs

	Description (required)	Total Surface Area acres	Ripping/ Scarifying Fleet	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Cost $	Scarifying/ Ripping Equipment Cost $	Total Scarifying/ Ripping Cost $	Revegetation Labor Cost $	Revegetation Equipment Cost $	Revegetation Material Cost $	Total Revegetation Cost $
1	Haulback	0.10	Select Fleet		$0	$0	$0	$0	$0	$0	$0
		0.10			$0	$0	$0	$0	$0	$0	$0

Closure Cost Estimate
Process Ponds

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety **Cost Basis:** S. Nevada Notice Level

Process Ponds - Cost Summary

	Labor	Equipment	Materials	Totals
Backfilling Costs	$267	$453	N/A	$720
Growth Media Placement Costs	$0	$0	N/A	$0
Liner Cutting & Folding Costs	$324	$153	N/A	$477
Subtotal Earthworks	$591	$606	$0	$1,197
Revegetation Costs	$0	$0	$0	$0
TOTALS	$591	$606	$0	$1,197

Process Ponds - User Input

You must fill in ALL green cells and relevant blue cells in this section for each pond

	Facility Description		Pond Dimensions (1)					Backfill - (if trucks are used) (1)				Growth Media		
	Description (required)	ID Code	Pond Length ft	Pond Width ft	Pond Depth ft	Pond Sideslope Angle _H:1V	Disturbed Area (if calculated elsewhere) acres	Percent Backfill (100% if blank)	Distance from Backfill Borrow ft	Slope from Facility to Borrow Area % grade	Pond Volume (if calculated elsewhere) cy	Growth Media Thickness in	Distance from Growth Media Stockpile ft	Slope from Facility to Stockpile % grade
1	Pond 1		20	40	10.0	2.0			40	0%				
2	Pond 2		20	40	10.0	2.0			40	0%				
3	Pond 3		20	40	10.0	2.0			40	0%				

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
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Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety **Cost Basis:** S. Nevada Notice Level

Process Ponds - Cost Summary

	Labor	Equipment	Materials	Totals
Backfilling Costs	$267	$453	N/A	$720
Growth Media Placement Costs	$0	$0	N/A	$0
Liner Cutting & Folding Costs	$324	$153	N/A	$477
Subtotal Earthworks	$591	$606	$0	$1,197
Revegetation Costs	$0	$0	$0	$0
TOTALS	$591	$606	$0	$1,197

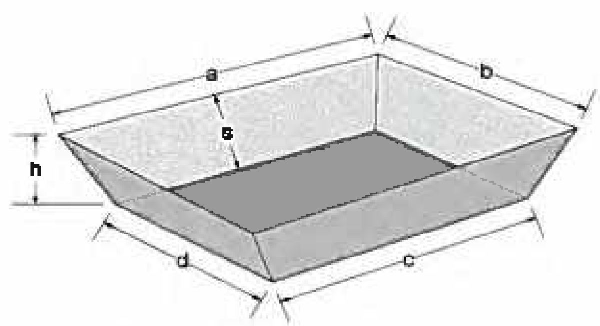
Process Ponds - User Input (cont.)

		Liner	Backfill			Growth Media			Revegetation		
	Description (required)	Crew Cut & Fold Time (2) hrs	Backfill Material Type (select)	Backfill Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)
1	Pond 1	0.5	Alluvium	Small Dozer							
2	Pond 2	0.5	Alluvium	Small Dozer							
3	Pond 3	0.5	Alluvium	Small Dozer							

Notes:
1 Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
(2) Pond liner removal crew (2Clab + excavator) = 2 General Laborers + 325C Excavator

Process Ponds - Calculations

Pond Volume Calculation



Area and Volume of the Frustrum of a Pyramid

$$\text{Surface Area} = ab + cd + (a+b+c+d) \times \frac{s}{2}$$

$$\text{Volume} = \frac{h\,(ab + cd + \sqrt{abcd}\,)}{3}$$

Revegetation Calculations

Minimum 1 acre revegetation crew time per area

Closure Cost Estimate
Process Ponds

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Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_13_[illegible]_2021.xlsm
Cost Estimate Type: Surety   Cost Basis: S. Nevada Notice Level

Process Ponds - Cost Summary

	Labor	Equipment	Materials	Totals
Backfilling Costs	[illegible]	[illegible]	N/A	[illegible]
Growth Media Placement Costs	$0	$0	N/A	$0
Liner Cutting & Folding Costs	[illegible]	$113	N/A	[illegible]
Subtotal Earthwork	[illegible]	[illegible]	$0	$1,[illegible]
Revegetation Costs	$0	$0	$0	$0
TOTALS	[illegible]	[illegible]	$0	$1,[illegible]

Process Ponds - Liner Cutting and Folding

	Description (required)	Crew Hours hrs	Total Labor Cost $	Total Equipment Cost $	Total Liner Removal Cost $
1	Pond 1	1	[illegible]	[illegible]	[illegible]
2	Pond 2	1	[illegible]	[illegible]	[illegible]
3	Pond 3	1	[illegible]	[illegible]	[illegible]
		3	[illegible]	[illegible]	[illegible]

Process Ponds - Backfill and Growth Media Costs

		Pond Backfill								Growth Media							
	Description (required)	Backfill Volume cy	Backfill Fleet	Fleet Productivity LCY/hr	Number of Trucks/Scrapers	Total Fleet Hours hrs	Total Labor Cost $	Total Equipment Cost $	Total Backfill Cost $	Growth Media Volume cy	Growth Media Fleet	Fleet Productivity LCY/hr	Number of Trucks/Scrapers	Total Fleet Hours	Total Labor Cost $	Total Equipment Cost $	Total Growth Media Cost $
1	Pond 1	[illegible]	O/A	300		1	[illegible]	$151	[illegible]						$0	$0	$0
2	Pond 2	[illegible]	O/A	300		1	[illegible]	$151	[illegible]						$0	$0	$0
3	Pond 3	[illegible]	O/A	300		1	[illegible]	$151	[illegible]						$0	$0	$0
		[illegible]				3	[illegible]	[illegible]	[illegible]						$0	$0	$0

Process Ponds - Revegetation Costs

	Description (required)	Surface Area acres	Revegetation Labor Cost $	Revegetation Equipment Cost $	Revegetation Materials Cost $	Total Revegetation Cost $
1	Pond 1	0.10	$0	$0	$0	$0
2	Pond 2	0.10	$0	$0	$0	$0
3	Pond 3	0.10	$0	$0	$0	$0
		0.30	$0	$0	$0	$0

Closure Cost Estimate
Yards, Etc.

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety **Cost Basis: S. Nevada Notice Level**

Yards, Etc. - Cost Summary

	Labor	Equipment	Materials	Totals
Regrading Cost	[illegible]	[illegible]	N/A	[illegible]
Cover Placement Cost	$0	$0	N/A	$0
Growth Media Placement Cost	$0	$0	N/A	$0
Ripping/Scarifying Cost	$89	$151	N/A	$240
Subtotal Earthworks	[illegible]	[illegible]		[illegible]
Revegetation Cost	$178	$64	$429	[illegible]
TOTALS	[illegible]	[illegible]	[illegible]	[illegible]

Yards, Etc. - User Input — You must fill in ALL green cells and relevant blue cells in this section for each building or facility

	Facility Description			Physical			Cover			Growth Media		
	Description (required)	ID Code	Type	Area acres	Average Flat Area Long Dimension (ripping distance) ft	Regrade Volume (calculated elsewhere) cy	Cover Thickness in	Distance from Cover Borrow Area ft	Slope from Facility to Borrow Area % grade	Growth Media Thickness in	Distance from Growth Media Stockpile ft	Slope from Facility to Stockpile % grade
1	Working areas		Yard	1.29	300	1,041						

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Yards, Etc. - User Input (cont.) — You must fill in ALL green cells and relevant blue cells in this section for each building or facility

		Grading			Cover			Growth Media			Revegetation				
	Description (required)	Regrading Material Condition (select)	Regrading Material Type (select)	Regrading Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)
1	Working areas	1	Alluvium	Small							Mix 2	None	None	Yes	Small Dozer

Closure Cost Estimate
Yards, Etc.

Project Name: Poverty Gulch- Notice of Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety **Cost Basis:** S. Nevada Notice Level

Yards, Etc. - Cost Summary

	Labor	Equipment	Materials	Totals
Regrading Cost	$890	$1,508	N/A	$2,398
Cover Placement Cost	$0	$0	N/A	$0
Growth Media Placement Cost	$0	$0	N/A	$0
Ripping/Scarifying Cost	$89	$151	N/A	$240
Subtotal Earthworks	$979	$1,659		$2,638
Revegetation Cost	$179	$64	$429	$672
TOTALS	$1,158	$1,723	$429	$3,310

Yards, Etc. - Regrading Costs

Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side)

	Description (required)	Regrading Volume cy	Dozing Distance (see above) ft	Regrading Fleet	Unrestricted Dozer Productivity cy/hr	Grade Correction	Dozing Material	Density Correction	Total Hourly Productivity cy/hr	Total Dozer Hours hr	Total Labor Cost $	Total Equipment Cost $	Total Regrading Cost $
1	Working areas	1,841	400	D7R	213	1.0	1.0	0.74	185	10	$890	$1,508	$2,398
		1,841								10	$890	$1,508	$2,398

Yards, Etc. - Cover and Growth Media Costs

		Cover								Growth Media							
	Description (required)	Cover Volume cy	Topsoil Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost $	Total Equipment Cost $	Total Cover Cost $	Growth Media Volume cy	Growth Media Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost $	Total Equipment Cost $	Total Growth Media Cost $
1	Working areas						$0	$0	$0						$0	$0	$0
							$0	$0	$0						$0	$0	$0

Yards, Etc. - Scarifying/Revegetation Costs

	Description (required)	Surface Area acres	Area Long Dimension ft	Ripping/ Scarifying Fleet	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs $	Scarifying/ Ripping Equipment Cost $	Total Scarifying/ Ripping Costs $	Revegetation Labor Cost $	Revegetation Equipment Cost $	Revegetation Material Cost $	Total Revegetation Cost $
1	Working areas	1.29	300	D7R	1	$89	$151	$240	$179	$64	$429	$672
		1.29			1	$89	$151	$240	$179	$64	$429	$672

Closure Cost Estimate
Waste Disposal

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety   Cost Basis: S. Nevada Notice Level

Waste Disposal - Cost Summary

	Labor	Equipment	Fees	Totals
Solid Waste - On Site	$1,325	$2,702	N/A	$4,027
Solid Waste - Off Site				$0
Hazardous Materials				$0
Hydrocarbon Contaminated Soils	$0	$0	$0	$0
TOTALS	$1,325	$2,702	$0	$4,027

Waste Disposal - User Input - Solid Waste

						Landfill (Bulk) Disposal			Dumpster
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy	Distance to Landfill ft	Slope to Landfill % grade	Number of Trucks (user override)	Months Dumpster Rental months
1	Trommel Disposal		Waste Mgmt & Disposal	Landfill (bulk)	16	192720	0.0		
2	Camp trailer		Waste Mgmt & Disposal	Landfill (bulk)	20	192720	0.0		
3	Pond liner		Waste Mgmt & Disposal	Landfill (bulk)	4	192720	0.0		

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Closure Cost Estimate
Waste Disposal

Project Name: Poverty Gulch- Notice or Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety   **Cost Basis:** S. Nevada Notice Level

Waste Disposal - Cost Summary

	Labor	Equipment	Fees	Totals
Solid Waste - On Site	$1,325	$2,702	N/A	$4,027
Solid Waste - Off Site				$0
Hazardous Materials				$0
Hydrocarbon Contaminated Soils	$0	$0	$0	$0
TOTALS	$1,325	$2,702	$0	$4,027

Waste Disposal - Solid Waste Disposal

	Description (required)	Waste Volume cy	Number of Off Site Dumpster Loads	Landfill Fleet Equipment	Landfill Fleet Productivity LCY/hr	Number of Trucks	Total Fleet Hours	Total Dumpster Cost $	Total Labor Cost $	Total Equipment Cost $	Total Waste Disposal Cost $
1	Trommel Disposal	16		725/966G/D7R	8	1	2	$0	$482	$983	$1,465
2	Camp trailer	20		725/966G/D7R	8	1	3	$0	$602	$1,228	$1,830
3	Pond liner	4		725/966G/D7R	8	1	1	$0	$241	$491	$732
		40					6	$0	$1,325	$2,702	$4,027

Project Name: Poverty Gulch- Notice of Exploration
Date of Submittal: April 2022
File Name: 20220414.PovertyGulchNotice.RCE.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_Data_File_1_12_Std_2021.xlsm
Cost Estimate Type: Surety   Cost Basis: S. Nevada Notice Level

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS

Cost Basis/Project Region	S. Nevada Notice Level	Clark, Esmeralda, Lincoln and Nye Counties
Power Equipment Operators	>50 miles	$0.00
Truck Drivers	>70 miles	$0.00
Laborers	>35 miles	$0.00

INDIRECT COSTS

Unemployment (%)	5.00%
Retirement/SS/Medicare (%)	7.65%
Workmen's Compensation (%)	12.20%
Other Indirects	
State Payroll Tax (13),(15),(17)	
Total Other Indirects	0.00%

HOURLY LABOR RATE TABLE

EQUIPMENT TYPE (1) OR JOB DESCRIPTION	Labor Group	Base Rate ($/hr)	Zone Adjustment ($/hr)	Hourly Wage ($/hr)	Fringe ($/hr)	Retirement/ Medicare ($/hr)	Unemployment Insurance ($/hr)	Workmen's Compensation ($/hr)	Other Indirect Costs ($/hr)	Total ($/hr)
Equipment Operators ($/hr) (2)										
Bulldozers										
D6R	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
D6R w/ Winch					$26.65					
D7R	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
D8R	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
D9R	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
D10R	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
D11R	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
Wheeled Dozers										
824G					$26.65					
834G					$26.65					
844					$26.65					
854G					$26.65					
Motor Graders										
12H	Group 10	$50.87	$0.00	$50.87	$26.65	$1.53	$3.90	$6.12	$0.00	$89.19
140H	Group 10	$50.87	$0.00	$50.87	$26.65	$1.53	$3.90	$6.12	$0.00	$89.19
160H	Group 10	$50.87	$0.00	$50.87	$26.65	$1.53	$3.90	$6.12	$0.00	$89.19
24H					$26.65					
Track Excavators										
312C	Group 12A	$51.14	$0.00	$51.14	$26.65	$1.53	$3.91	$6.14	$0.00	$89.37
320C	Group 12A	$51.14	$0.00	$51.14	$26.65	$1.53	$3.91	$6.14	$0.00	$89.37
325C	Group 12A	$51.14	$0.00	$51.14	$26.65	$1.53	$3.91	$6.14	$0.00	$89.37
330C	Group 12A	$51.14	$0.00	$51.14	$26.65	$1.53	$3.91	$6.14	$0.00	$89.37
345B	Group 12A	$51.14	$0.00	$51.14	$26.65	$1.53	$3.91	$6.14	$0.00	$89.37
365BL					$26.65					
385B	Group 12A	$51.14	$0.00	$51.14	$26.65	$1.53	$3.91	$6.14	$0.00	$89.37
Scrapers										
621G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
631G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
Wheeled Loaders										
924G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
938G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
950G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
966G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
972G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
980G	Group 8A	$50.85	$0.00	$50.85	$26.65	$1.53	$3.60	$6.18	$0.00	$89.02
988G	Group 10	$50.87	$0.00	$50.87	$26.65	$1.53	$3.90	$6.12	$0.00	[illegible]
990					$26.65					
992G	Group 10	$50.87	$0.00	$50.87	$26.65	$1.53	$3.90	$6.12	$0.00	$89.19
994D					$26.65					
L350					$26.65					

2021 MOB/DEMOB using R.S. MEANS and SRCE equipment and DAVIS-BACON wages

blue font is for project specific user input

Poverty Gulch Exploration Project

Miles from Washoe County Courthouse to project, one way	289
Miles from equipment rental yard to project, one way (9)	203
Hours travel time @ 55 MPH	3.63

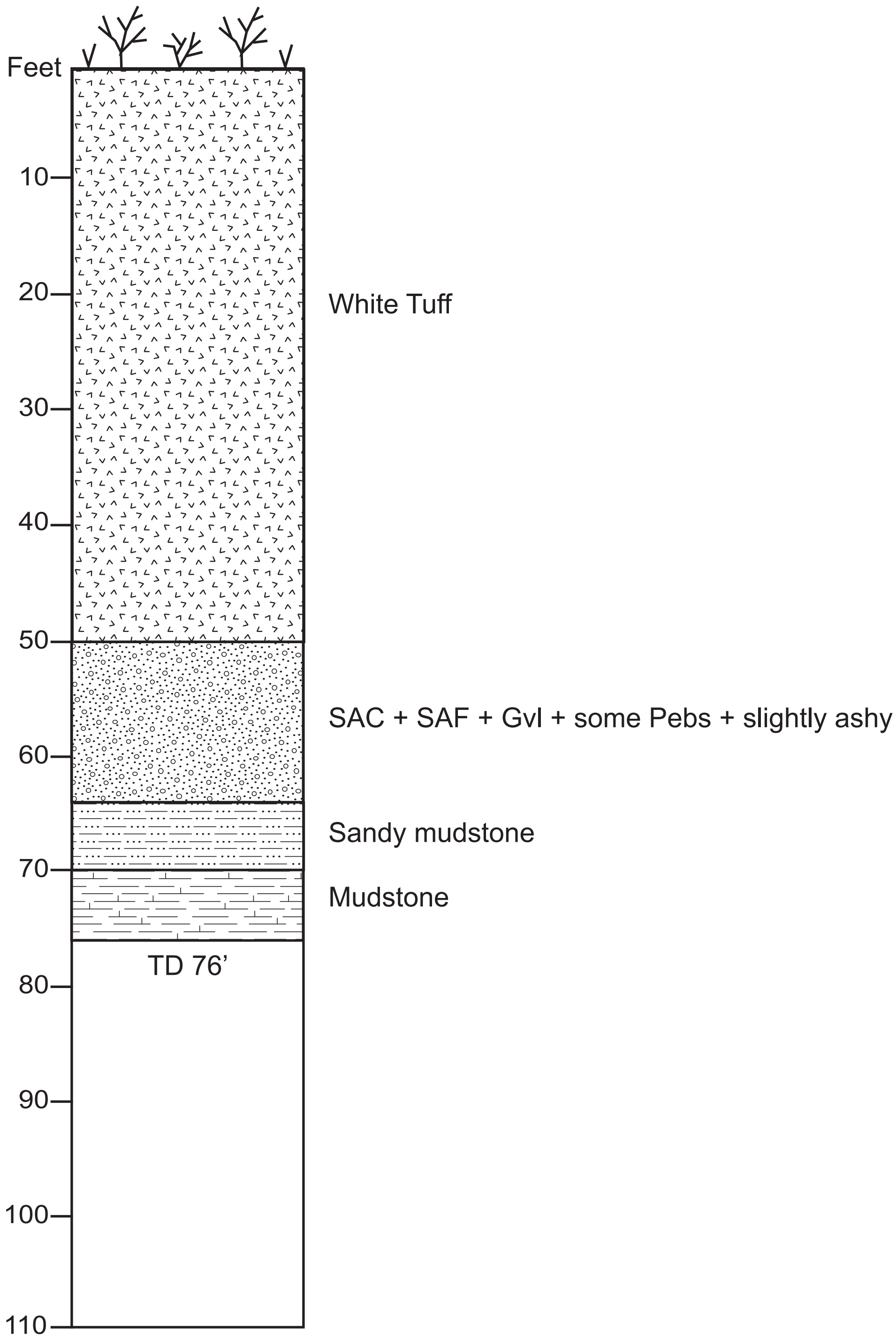
Equipment	Mobilization $/hour (1)	$ Haul Rate load & unload (2)	$/hour Deadhead (empty return cost) (3)	Disassembly and assembly (4)	Permit cost $ (5)	Pilot car costs	# of units	One Way Mob Cost	Total Mob and Demob Cost
Bulldozers									
D6R	$ 100	$ 100	$ 100	$ -	$ -	$ -	1	$ 836	$ 1,672
D7R	$ 133	$ 133	$ 133	$ -	$ 25	$ 376		$ -	$ -
D8R	$ 156	$ 156	$ 156	$ -	$ 25	$ 752		$ -	$ -
D9R	$ 156	$ 156	$ 156	$ -	$ 25	$ 752		$ -	$ -
D10R	$ 156	$ 156	$ 156	$ 67,200	$ 25	$ 1,120		$ -	$ -
D11R (two transports) (7)	$ 156	$ 156	$ 156	$ 139,200	$ 25	$ 752		$ -	$ -
Motor Graders									
14G/H	$ 103	$ 103	$ 103	$ -	$ -	$ -		$ -	$ -
16G/H	$ 133	$ 133	$ 133	$ -	$ 25	$ 376		$ -	$ -
Track Excavators									
320C	$ 133	$ 133	$ 133	$ -	$ -	$ -		$ -	$ -
325C	$ 133	$ 133	$ 133	$ -	$ -	$ -	1	$ 1,118	$ 2,236
345B	$ 156	$ 156	$ 156	$ -	$ 25	$ 752		$ -	$ -
385BL	$ 156	$ 156	$ 156	$ 49,200	$ 25	$ 752		$ -	$ -
Scrapers									
631G	$ 156	$ 156	$ 156	$ -	$ 25	$ 752		$ -	$ -
637G PP	$ 168	$ 168	$ 168	$ -	$ 25	$ 752		$ -	$ -
Wheeled Loaders									
928G	$ 103	$ 103	$ 103	$ -	$ -	$ -		$ -	$ -
950G	$ 103	$ 103	$ 103	$ -	$ -	$ -	1	$ 867	$ 1,734
972G	$ 133	$ 133	$ 133	$ -	$ -	$ -		$ -	$ -
988G	$ 133	$ 133	$ 133	$ -	$ 25	$ 376		$ -	$ -
992G (two transports) (7)	$ 156	$ 156	$ 156	$ 78,800	$ 25	$ 752		$ -	$ -
Hydraulic Hammers									
H-120 (fits 325) no charge, mobilize with mac[hine]	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -
H-160 (fits 345) no charge, mobilize with mac[hine]	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -
H-180 (fits 365/385) no charge, mobilize with [machine]	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -
Other Equipment									
420D 4WD Backhoe	$ 103	$ 103	$ 103	$ -	$ -	$ -		$ -	$ -
CS563E Vibratory Roller	$ 103	$ 103	$ 103	$ -	$ -	$ -		$ -	$ -
Light Truck - 1.5 Ton	$ 74	$ 74	$ -	$ -	$ -	$ -		$ -	$ -
Supervisor's Truck	$ 78	$ 78	$ -	$ -	$ -	$ -	1	$ 394	$ 788
Air Compressor + tools	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
Welding Equipment	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
Heavy Duty Drill Rig	$ 268	$ 268	$ -	$ -	$ -	$ -		$ -	$ -
Pump (plugging) Drill Rig	$ 271	$ 271	$ -	$ -	$ -	$ -		$ -	$ -
Concrete Pump	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
Gas Engine Vibrator	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
Generator 5KW	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
HDEP Welder (pipe or liner)	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
5 Ton Crane Truck	$ 123	$ 123	$ -	$ -	$ -	$ -		$ -	$ -
25 Ton Crane	$ 146	$ 146	$ -	$ -	$ -	$ -		$ -	$ -
Trucks									
725	$ 103	$ 103	$ 103	$ -	$ -	$ -	1	$ 867	$ 1,734
740	$ 133	$ 133	$ 133	$ -	$ 25	$ 376		$ -	$ -
769D	$ 133	$ 133	$ 133	$ -	$ 25	$ 752		$ -	$ -
777D (two transports) (8)	$ 156	$ 156	$ 156	$ 74,400	$ 25	$ 1,120		$ -	$ -
613E (5,000 gal) Water Wagon	$ 156	$ 156	$ 156	$ -	$ -	$ -		$ -	$ -
621E (8,000 gal) Water Wagon	$ 156	$ 156	$ 156	$ -	$ 25	$ 752		$ -	$ -
Dump Truck (10-12 yd³)	$ 116	$ 116	$ 116	$ -	$ -	$ -		$ -	$ -
Miscellaneous									
Equipment for dry hole abandonment (420D 4WD	$ 103	$ 103	$ 103	$ -	$ -	$ -		$ -	$ -
Pilot car (Light Truck)	$ 77	$ 77	$ 77	$ -	$ -	$ -		$ -	$ -
Truck Tractor + Lowbed Trailer 75 ton	$ 156	$ 156	$ 156	$ -	$ -	$ -		$ -	$ -
Truck Tractor + Flatbed Trailer 40 ton	$ 133	$ 133	$ 133	$ -	$ -	$ -		$ -	$ -
Light Truck + Flatbed Trailer 25 ton	$ 67	$ 67	$ 67	$ -	$ -	$ -		$ -	$ -
							5		$ 8,164

Footnotes and explanations of assumptions

(1) The sum of the cost of equipment from either the SRCE or RSM equipment tab plus Davis-Bacon labor tab
(2) Assumes minimum of 30 minutes load and secure and 30 minutes unsecure and unload machine
(3) No "Deadhead" (empty) charge for Mob up to 30 miles. More than 30 miles the cost of deadhead same rate as loaded miles.
(4) Only large equipment requires disassembly for transport. Includes cost of mechanic + mechanic's truck + crane operator + crane.
(5) Nevada Dept. of Transportation overdimensional permits are $25 per trip or $50 per year
(6) Sum of mobilization plus all ancillary costs for one way loaded and return empty.
(7) Two transports are required but the second transport does not need pilot cars or permits or a heavy duty trailer
(8) Two transports required with both requiring full complement of pilot cars and permits.
(9) For large mining operations, mobilization may be required from more than one location. For example, the Elko yard may not have four 631 scrapers. Additional equipment may need to mobilize from Reno, Las Vegas, or Salt Lake City. Input the farther distance here
(10) Pilot Car costs based on SRCE light truck costs and Davis-Bacon wages
(11) SRCE costs based on July 2021 vendor quotes.
(12) RS Means costs based on R.S. Means Heavy Construction Cost Data, 2021 Q2
(13) Davis Bacon wages based on 2021 determination.

Appendix E

Phase 2 2023 Drill Logs



*First day of drilling. Sedimentary identification was very basic and not standardized.

**A basal mudstone was previously considered to be the bottom of the deposit and this this hole was terminated upon encountering the initial mudstone. This was later proved not be the case.

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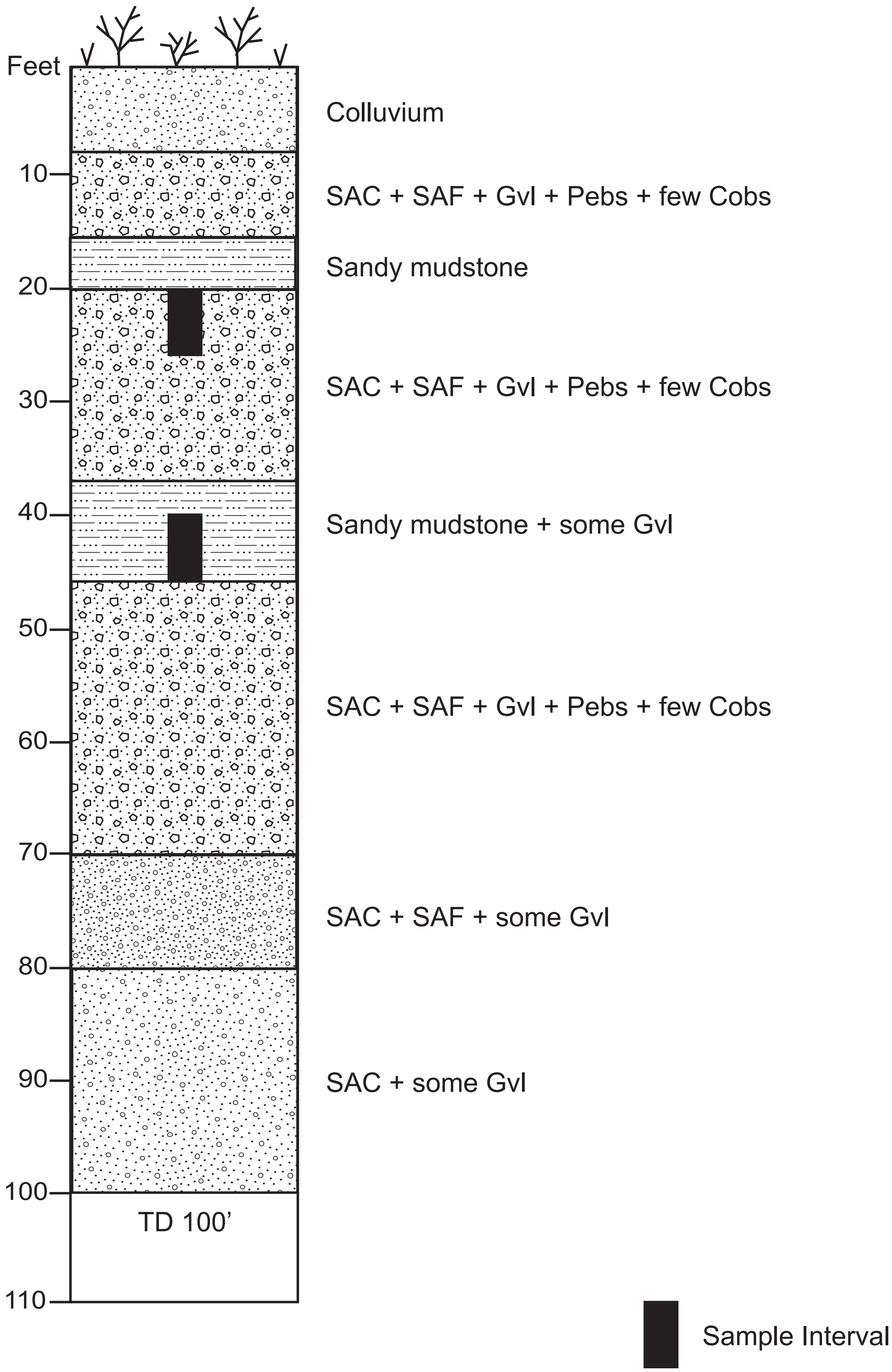
Drill Log H-1	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-1



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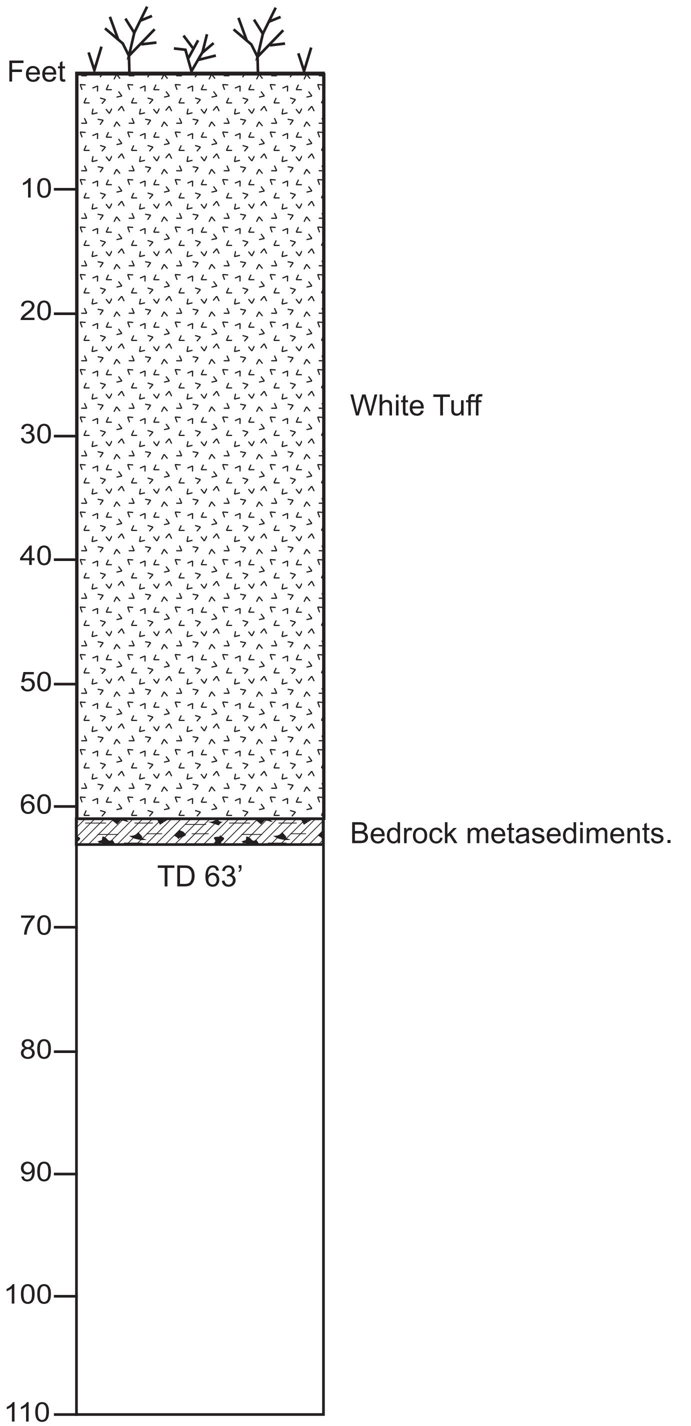
Drill Log H-1A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-1A



*First day of drilling. Sedimentary identification very basic and not standardized.

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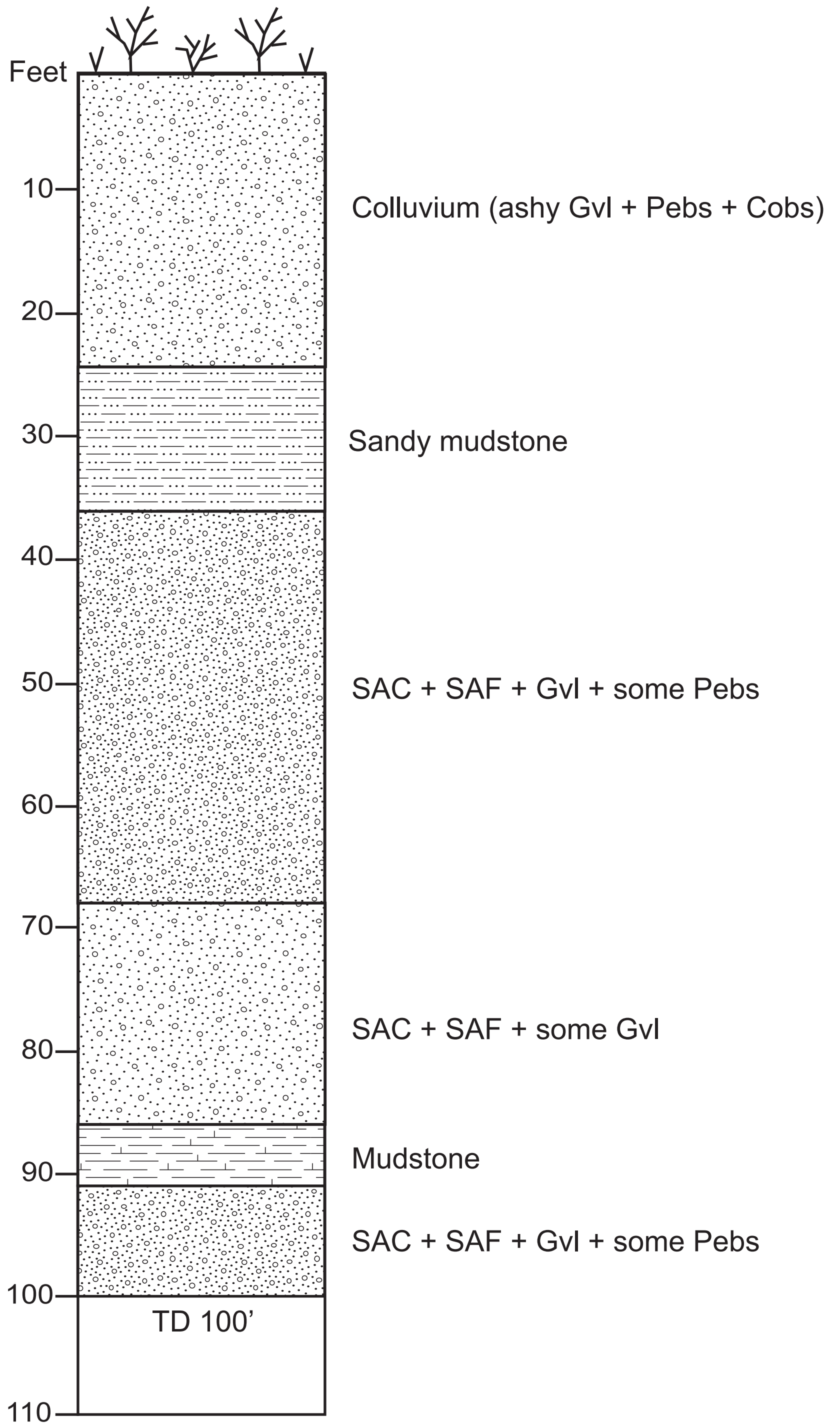
Drill Log H-2

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL- H-2



*First day of drilling. Sedimentary identification very basic and not standardized.

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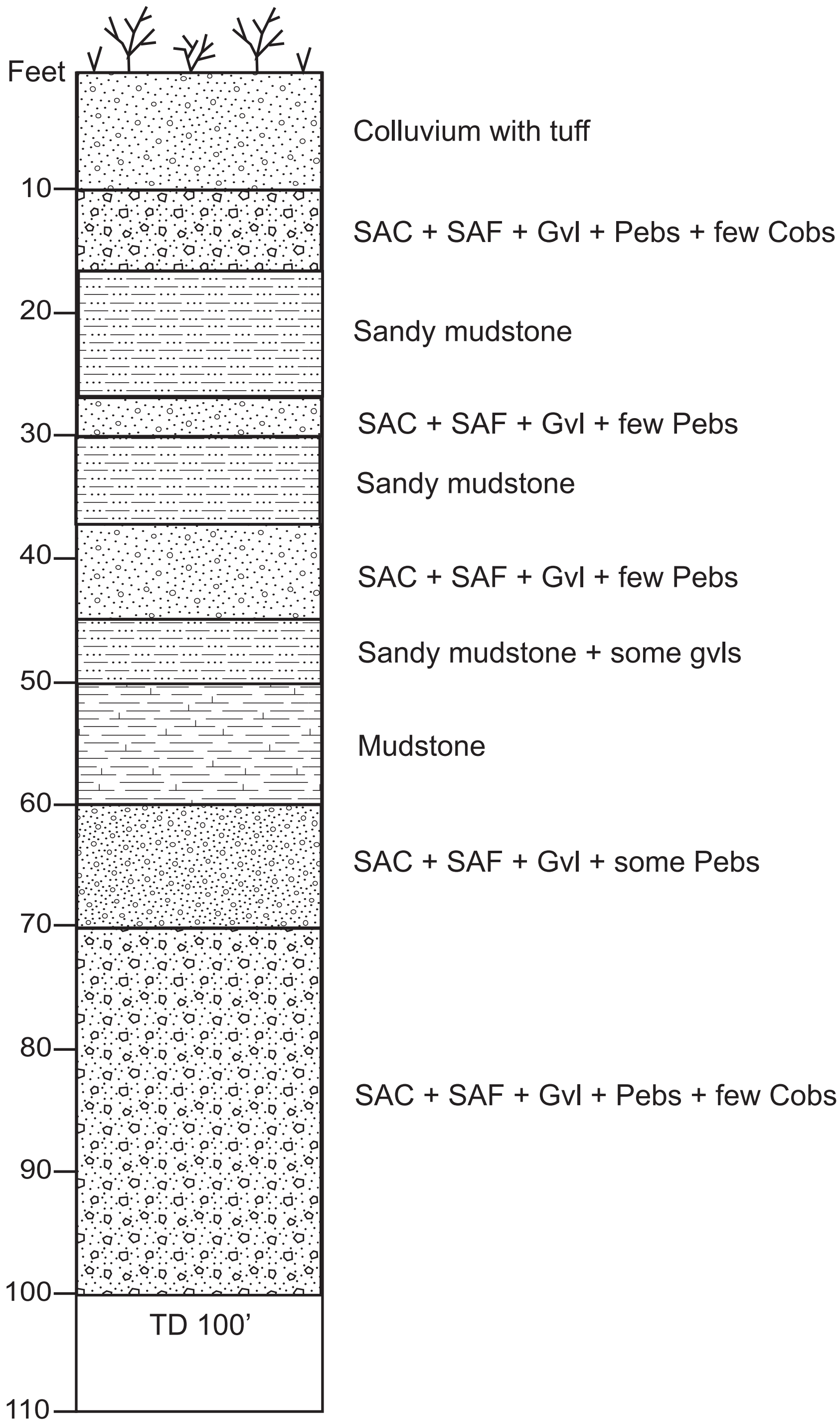
Drill Log H-3	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-3



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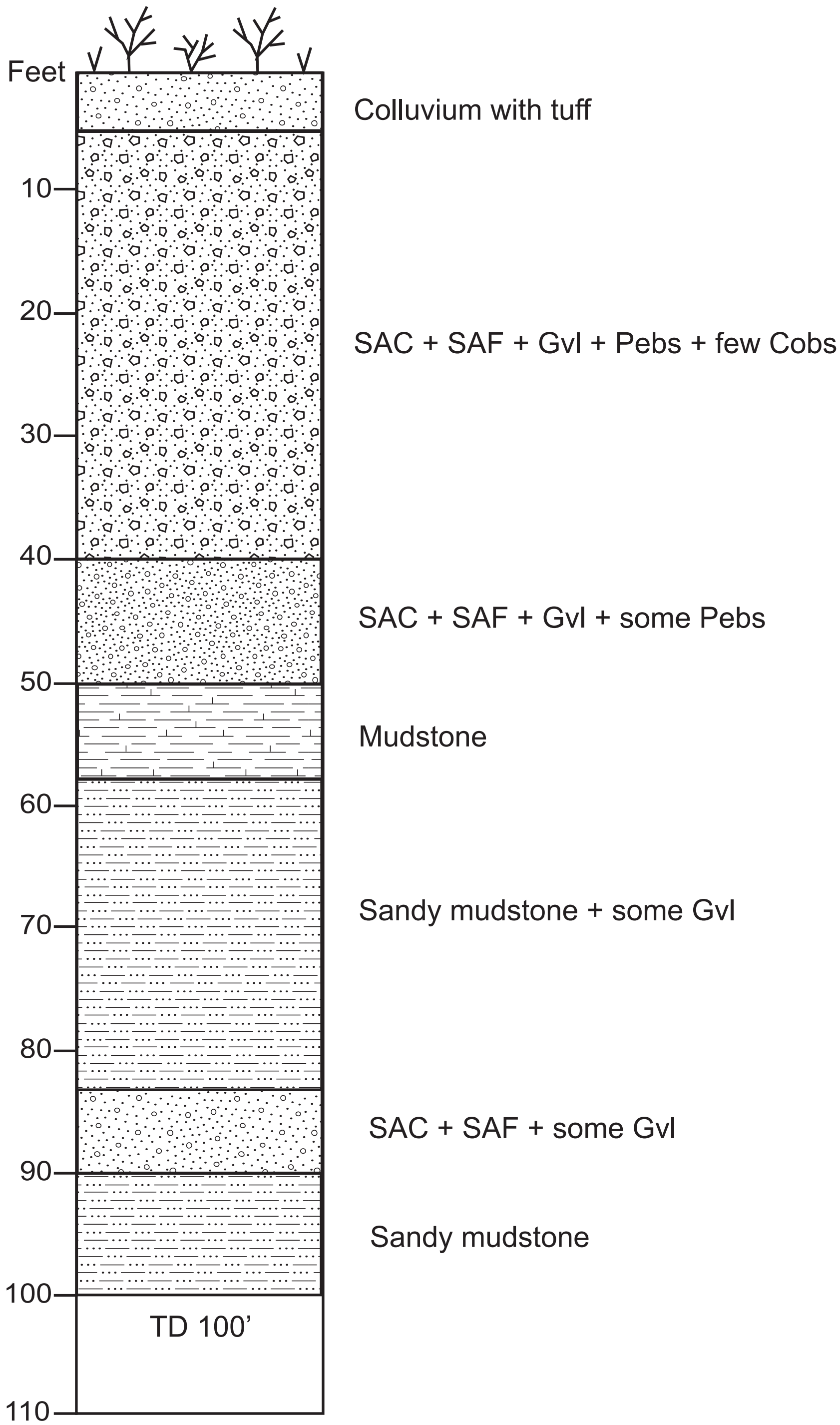
Drill Log H-4A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-4A



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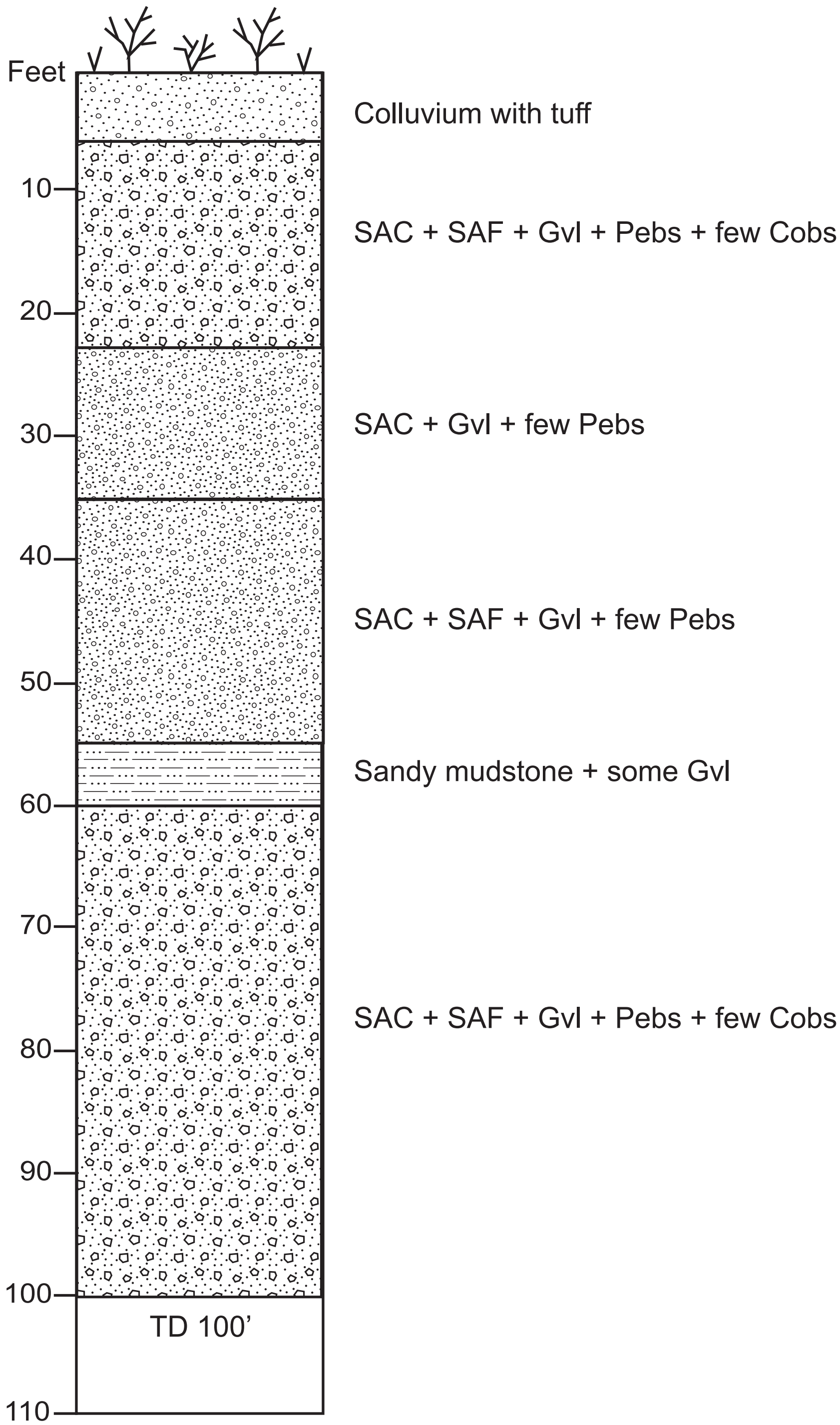
Drill Log H-5	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH - H-5



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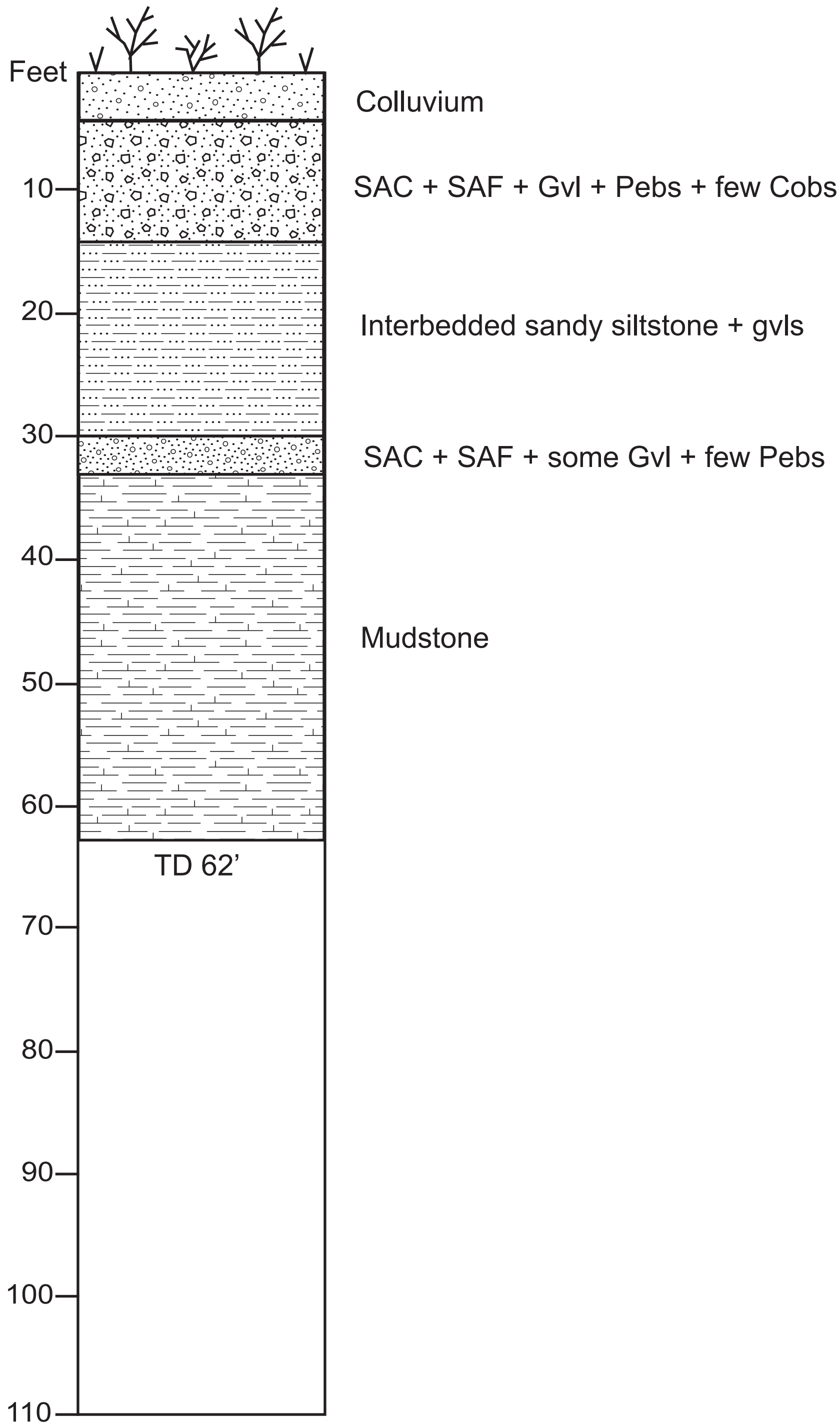
Drill Log H-6	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-6



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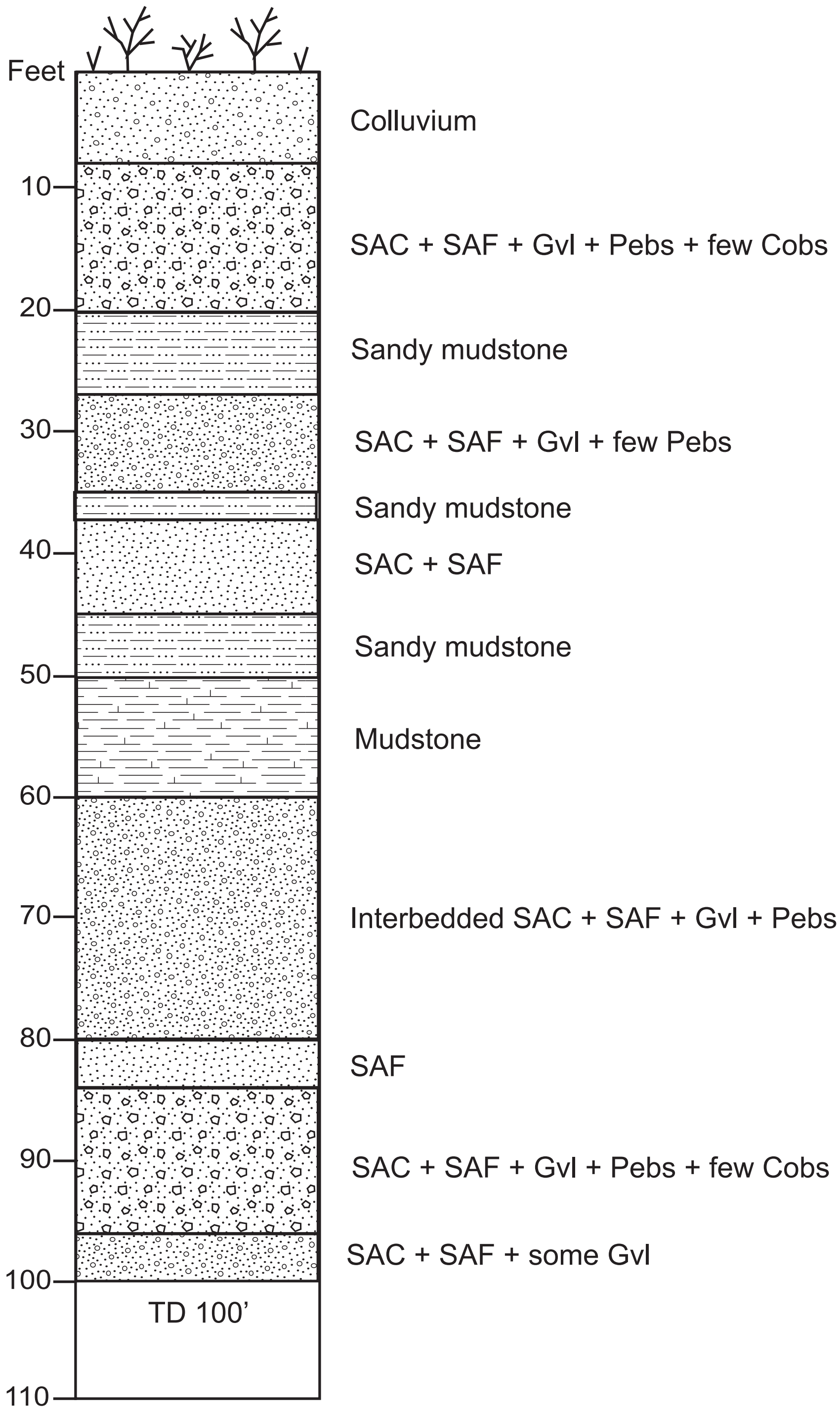
Drill Log H-7A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-7A



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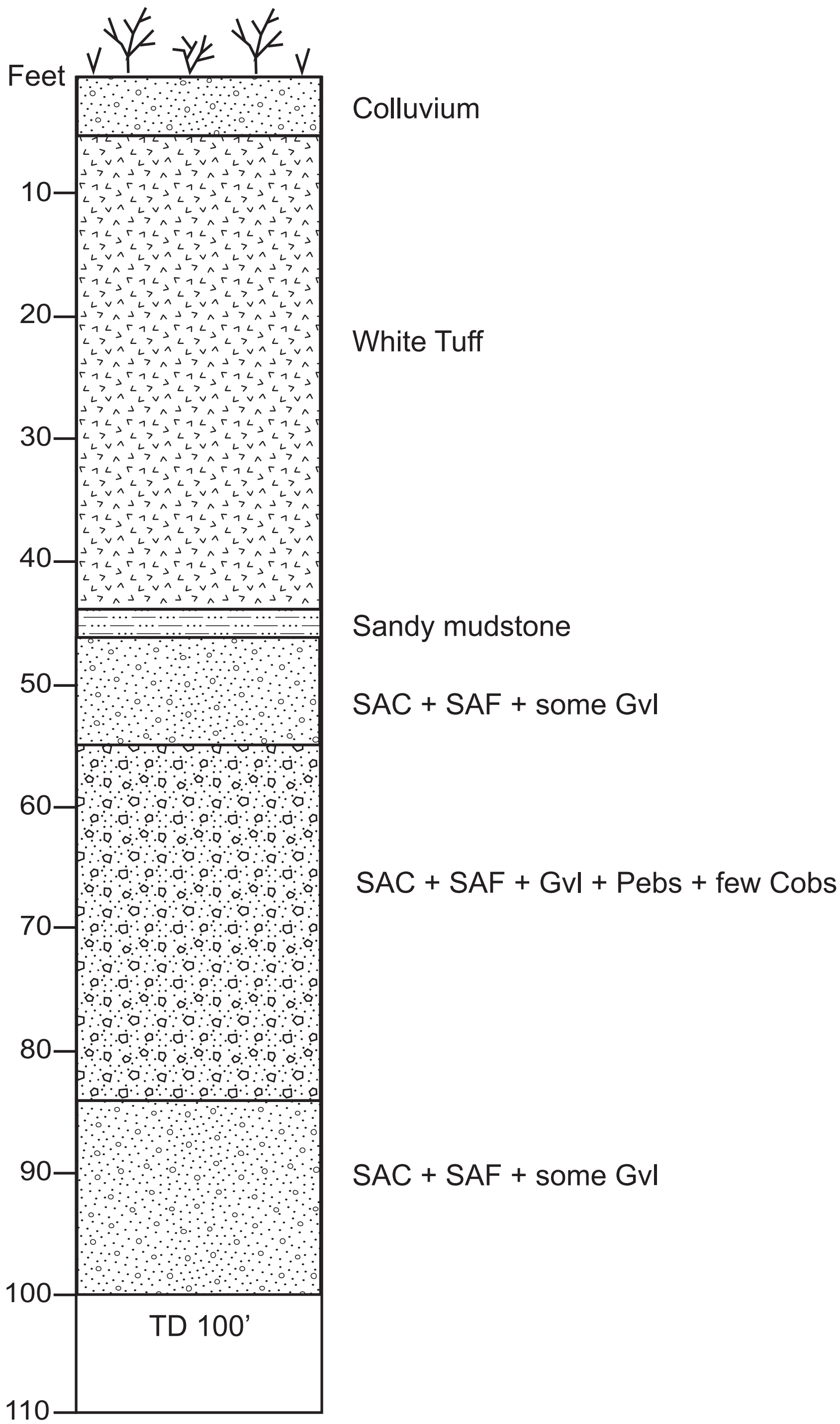
Drill Log H-8A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-8A



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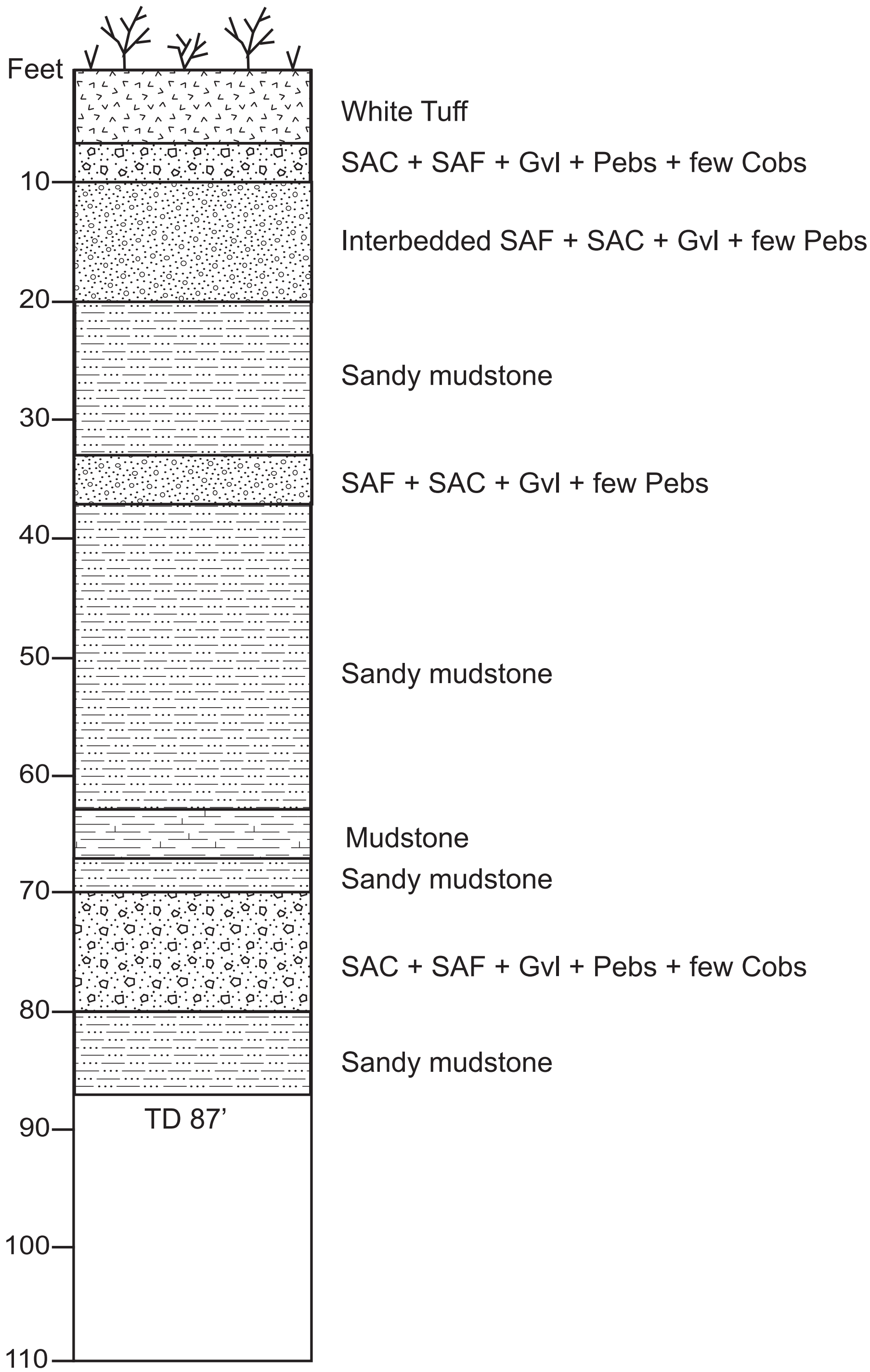
Drill Log H-9A

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-9A



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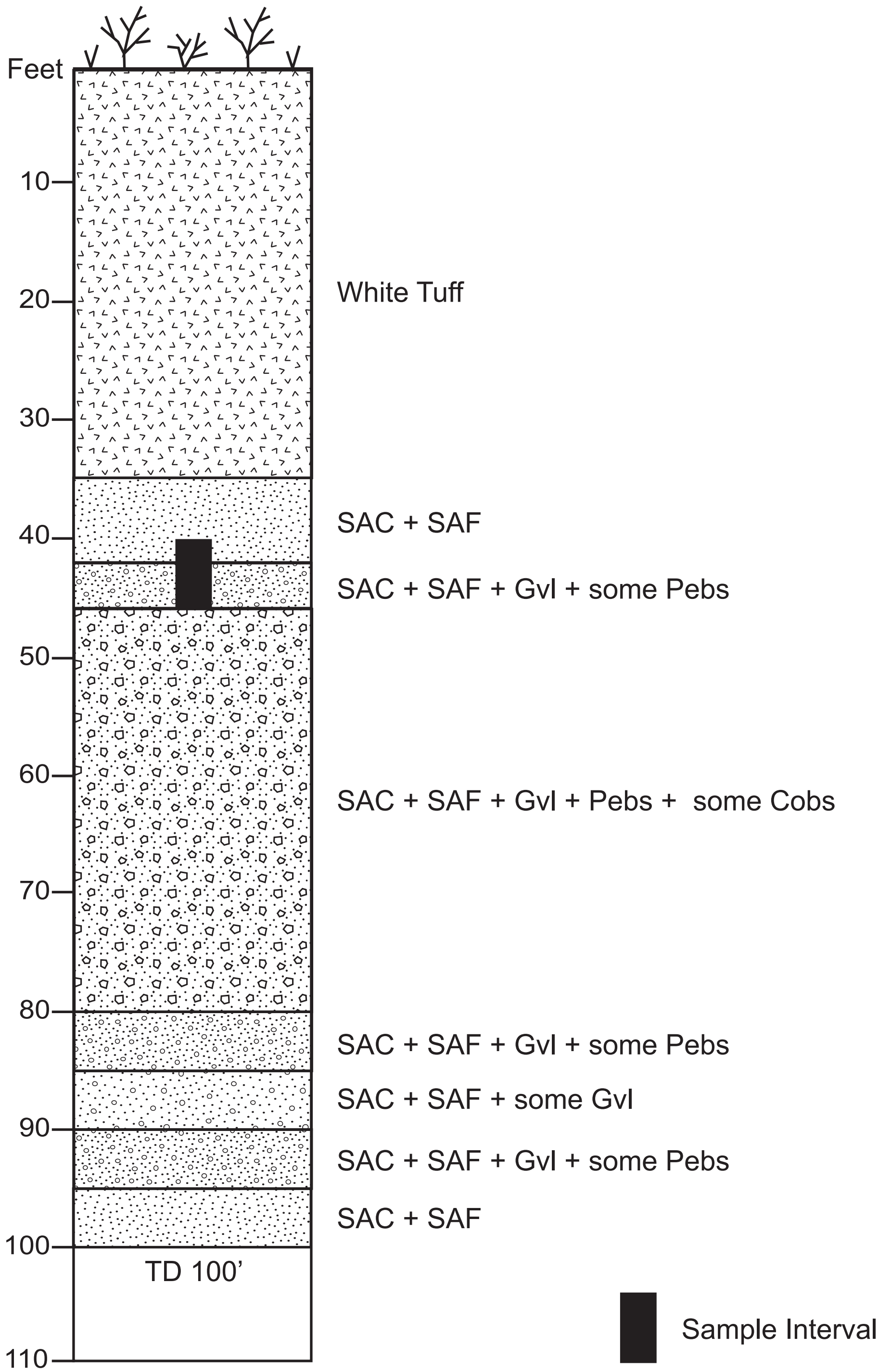
Drill Log H-10A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-10A



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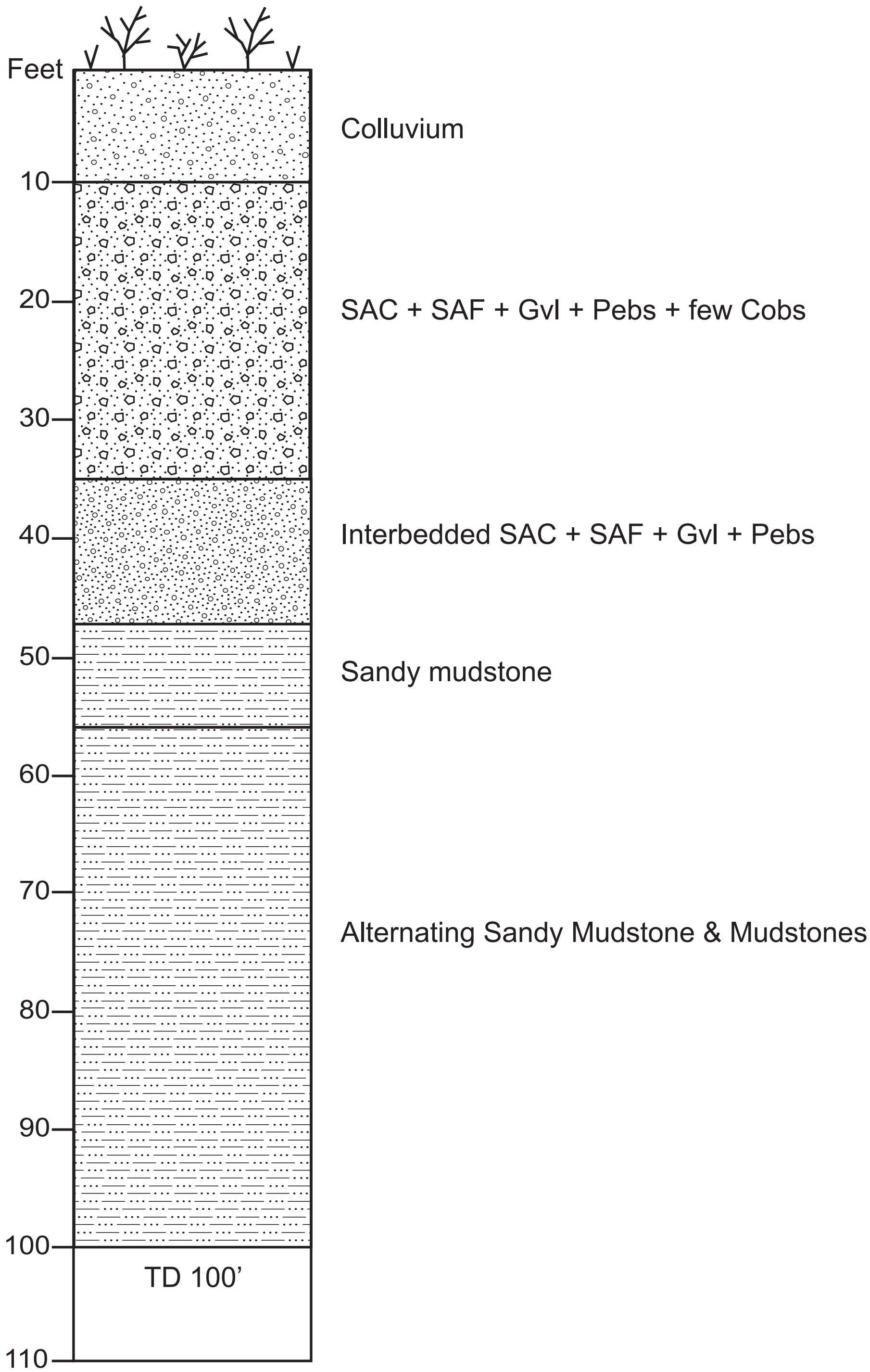
Drill Log H-11	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-11



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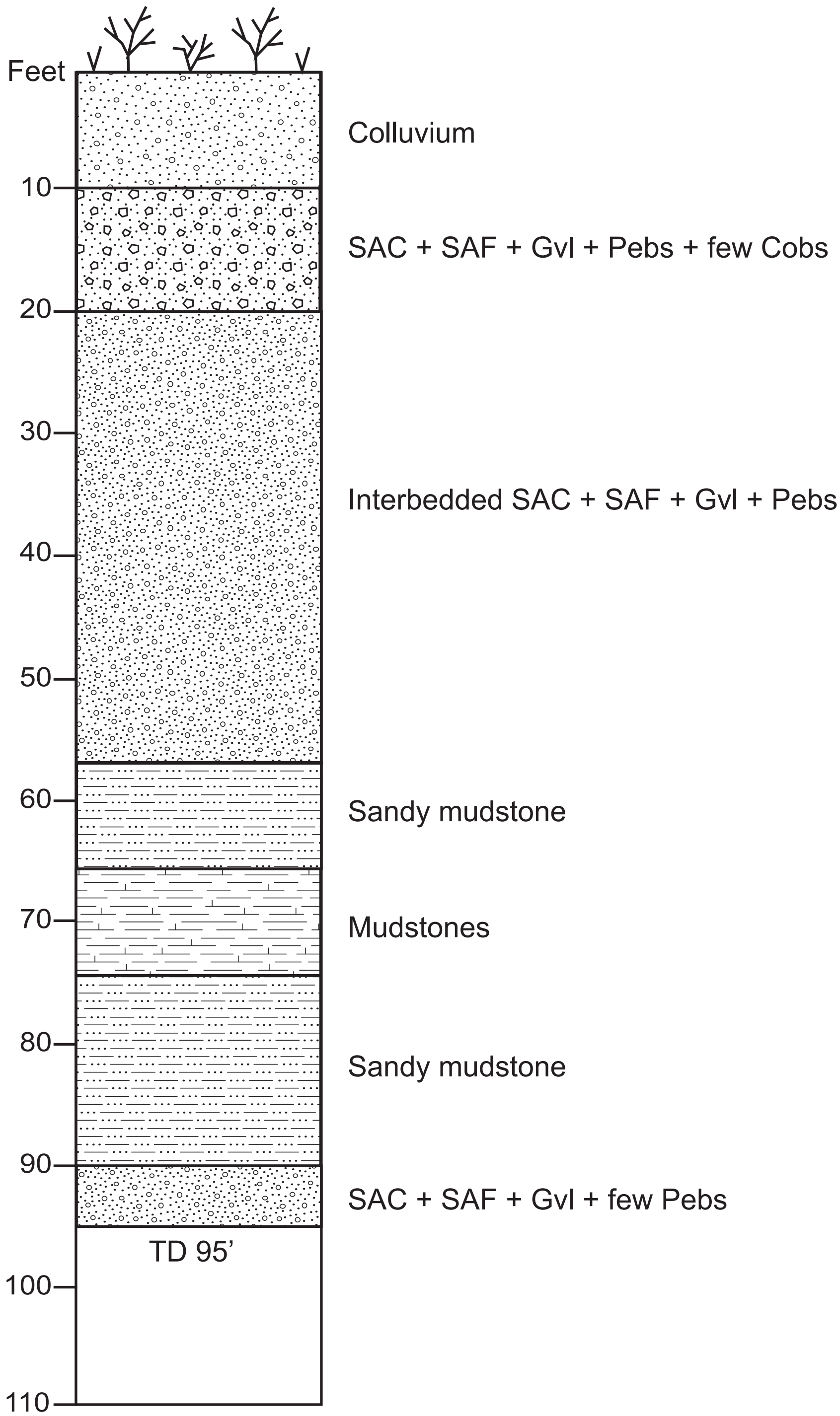
Drill Log H-14A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-14A



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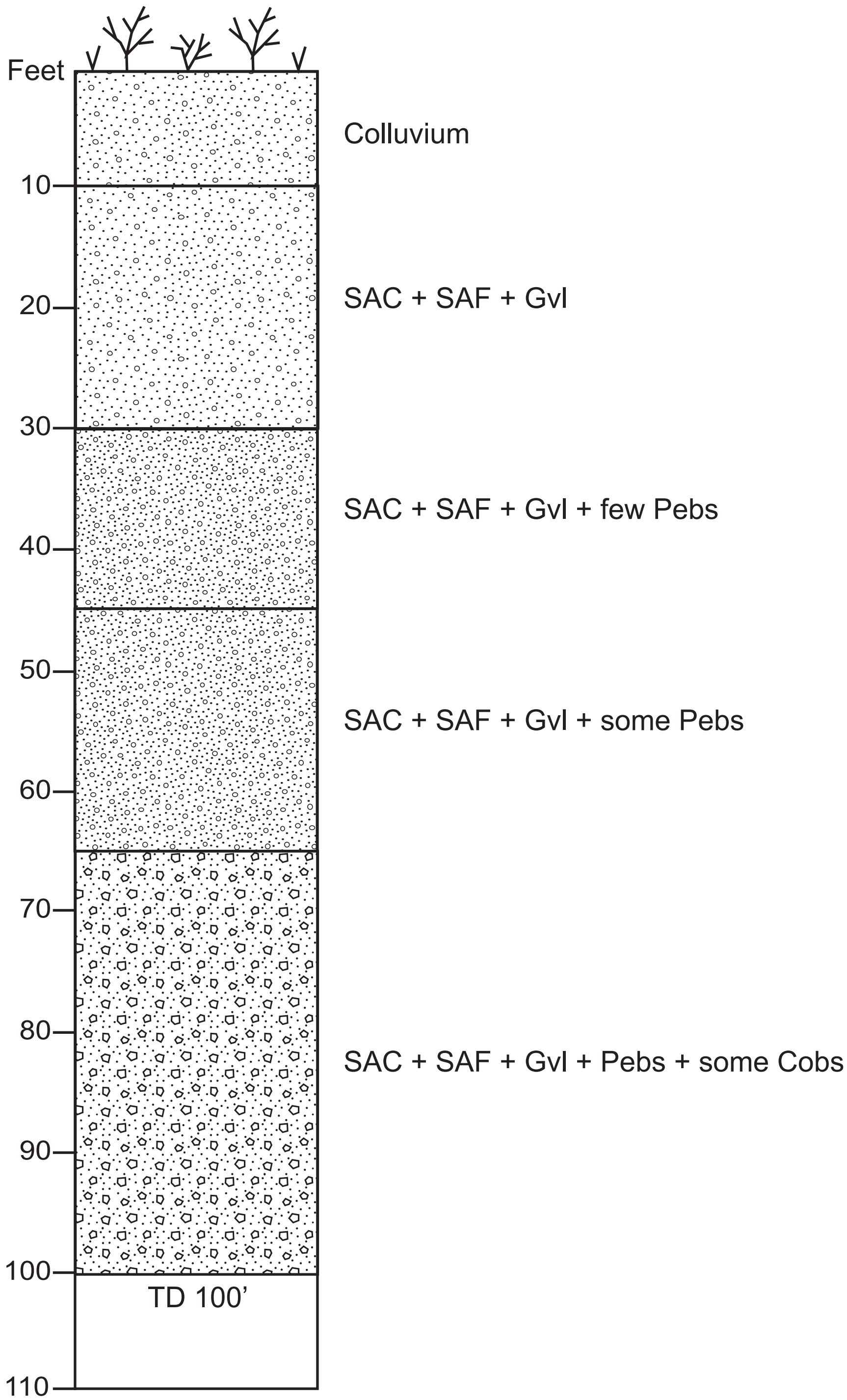
Drill Log H-14B	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-14B



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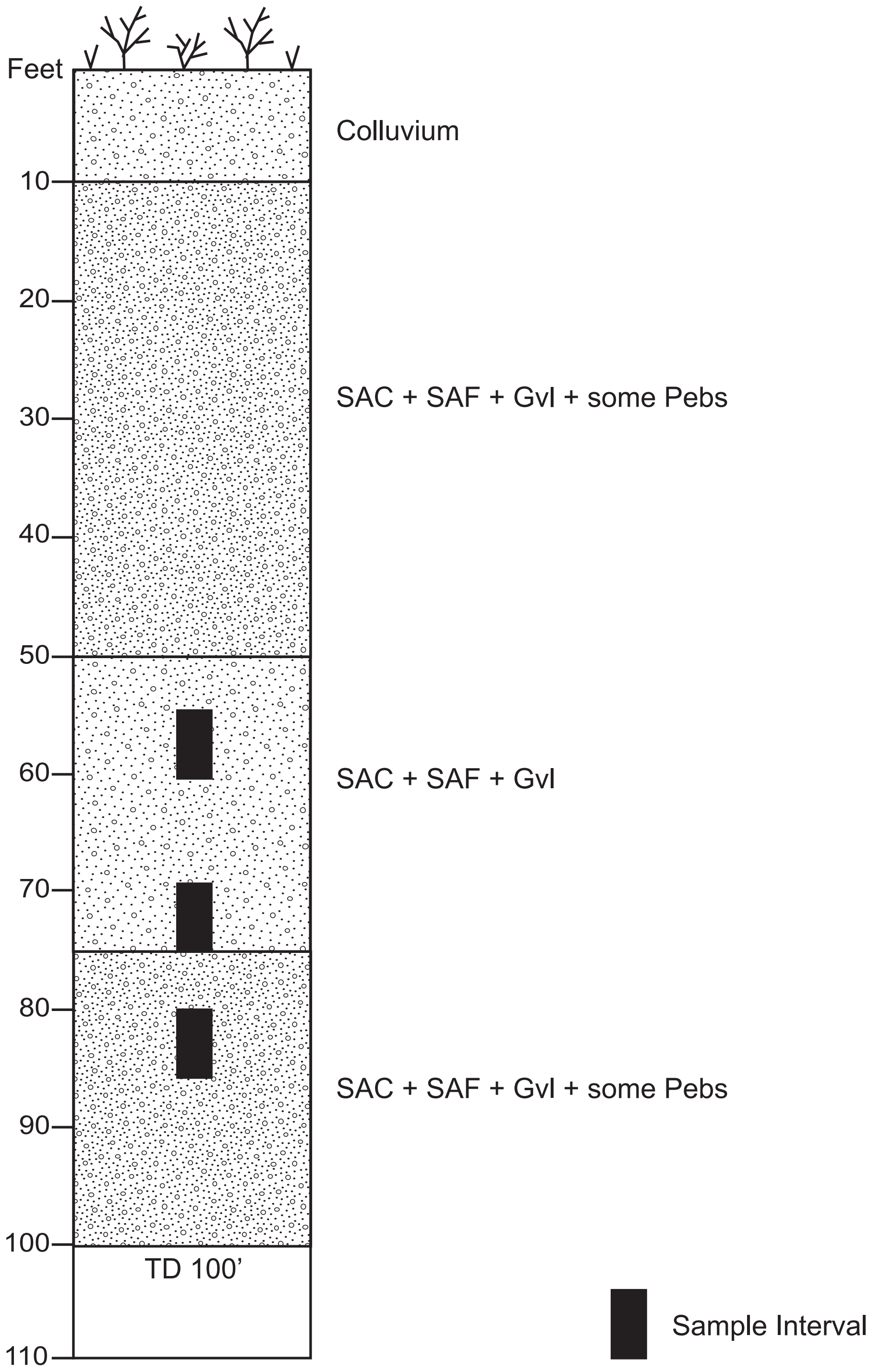
Drill Log H-15A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-15A



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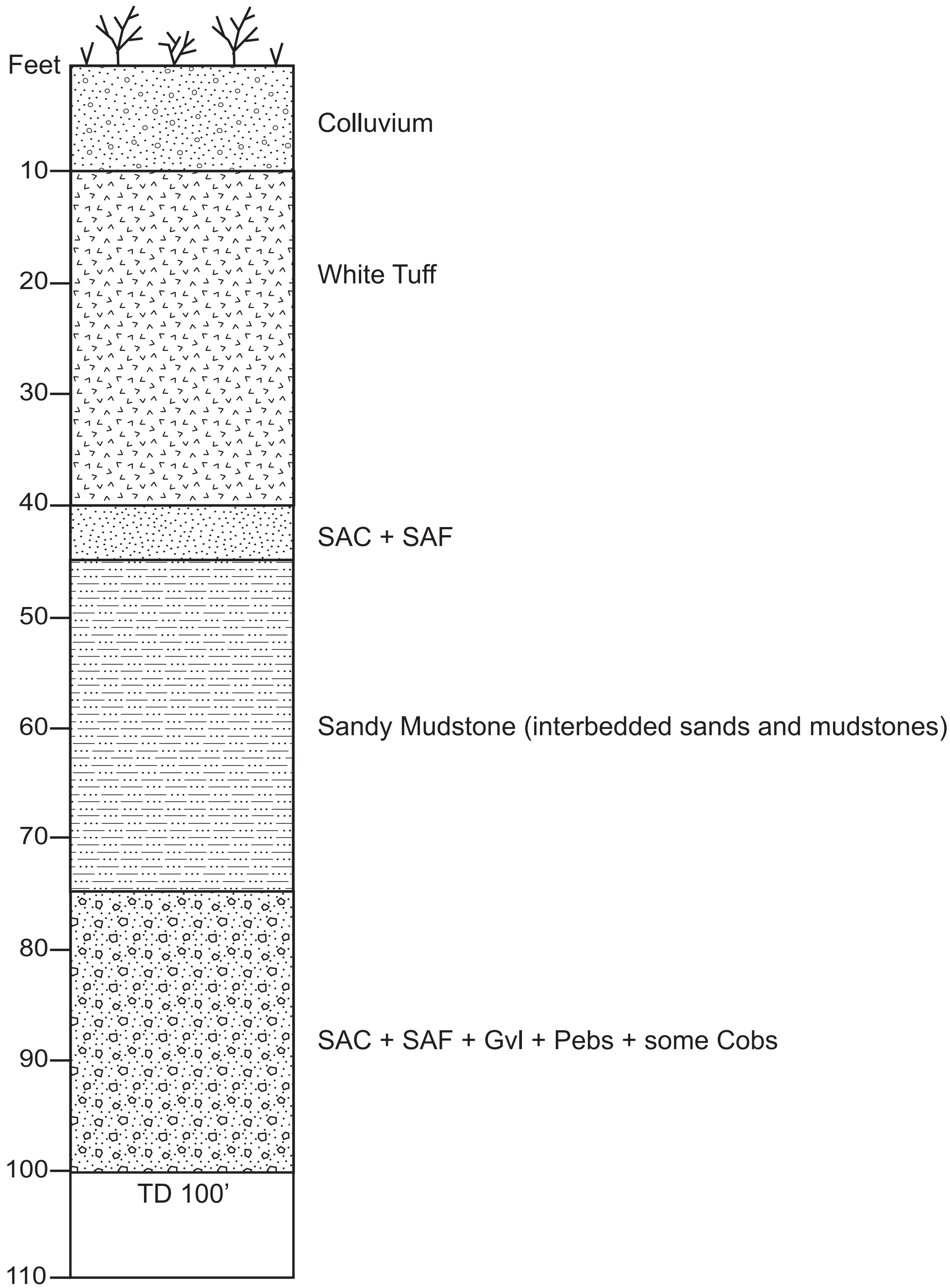
Drill Log H-15B	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-15B



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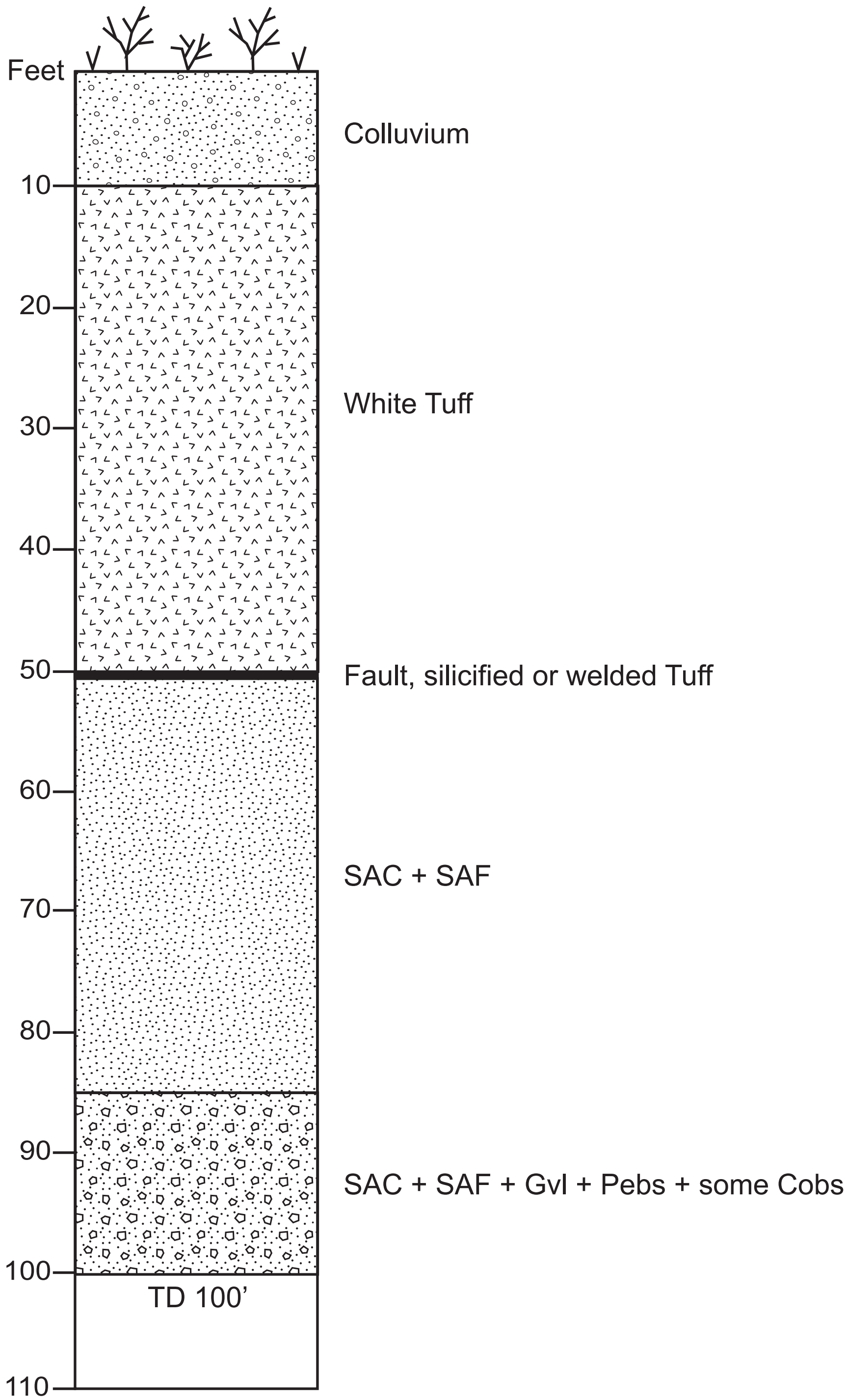
Drill Log H-16	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-16



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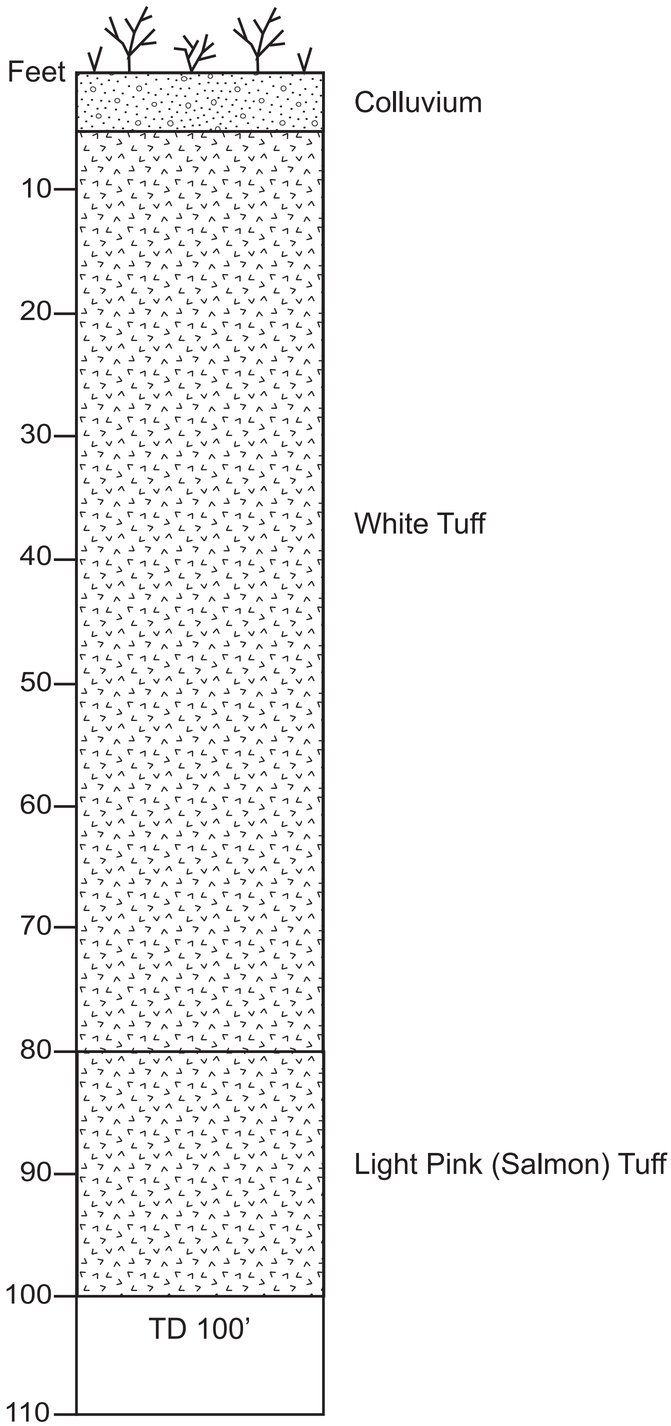
Drill Log H-17

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-17



Drill Log H-18

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-18

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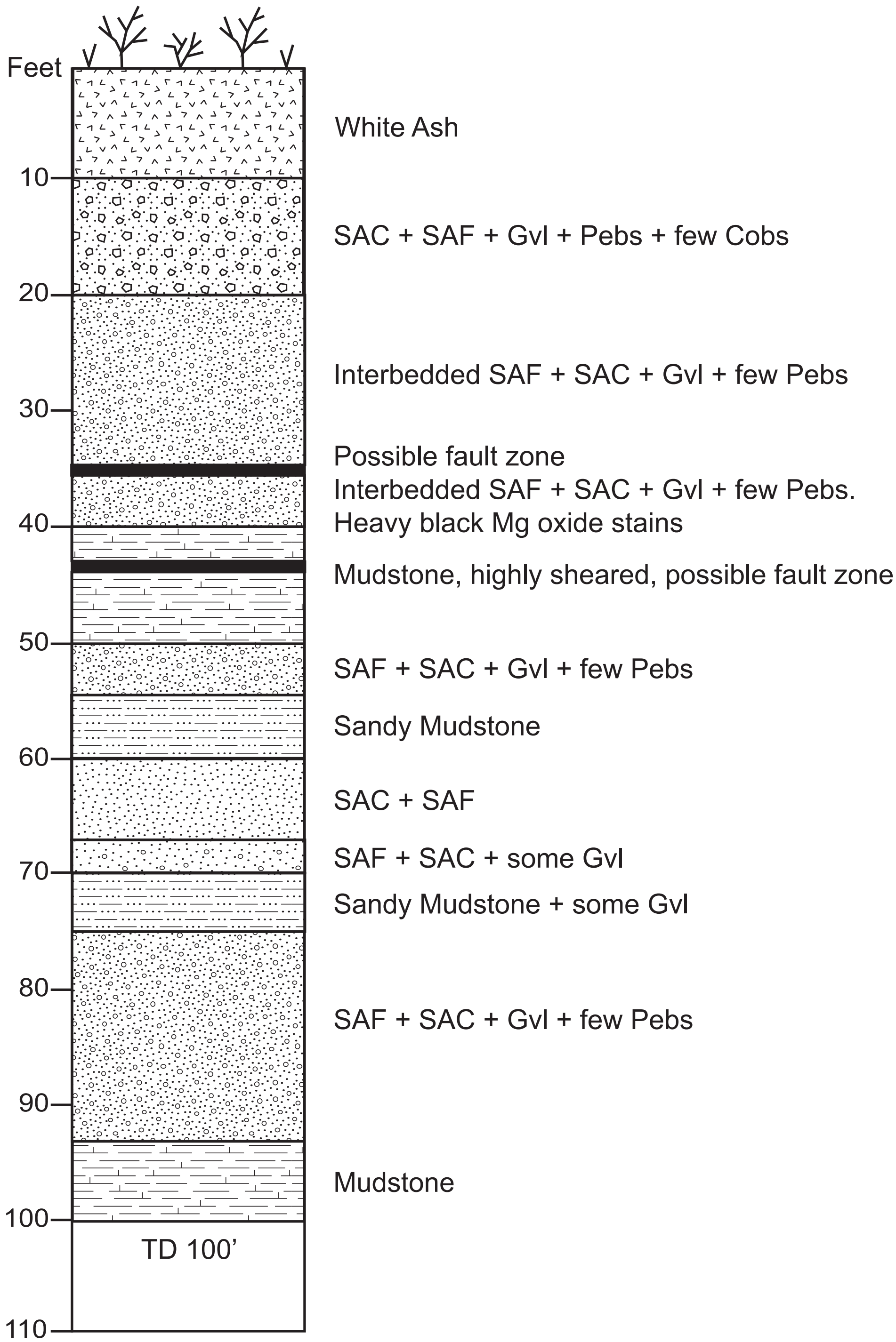

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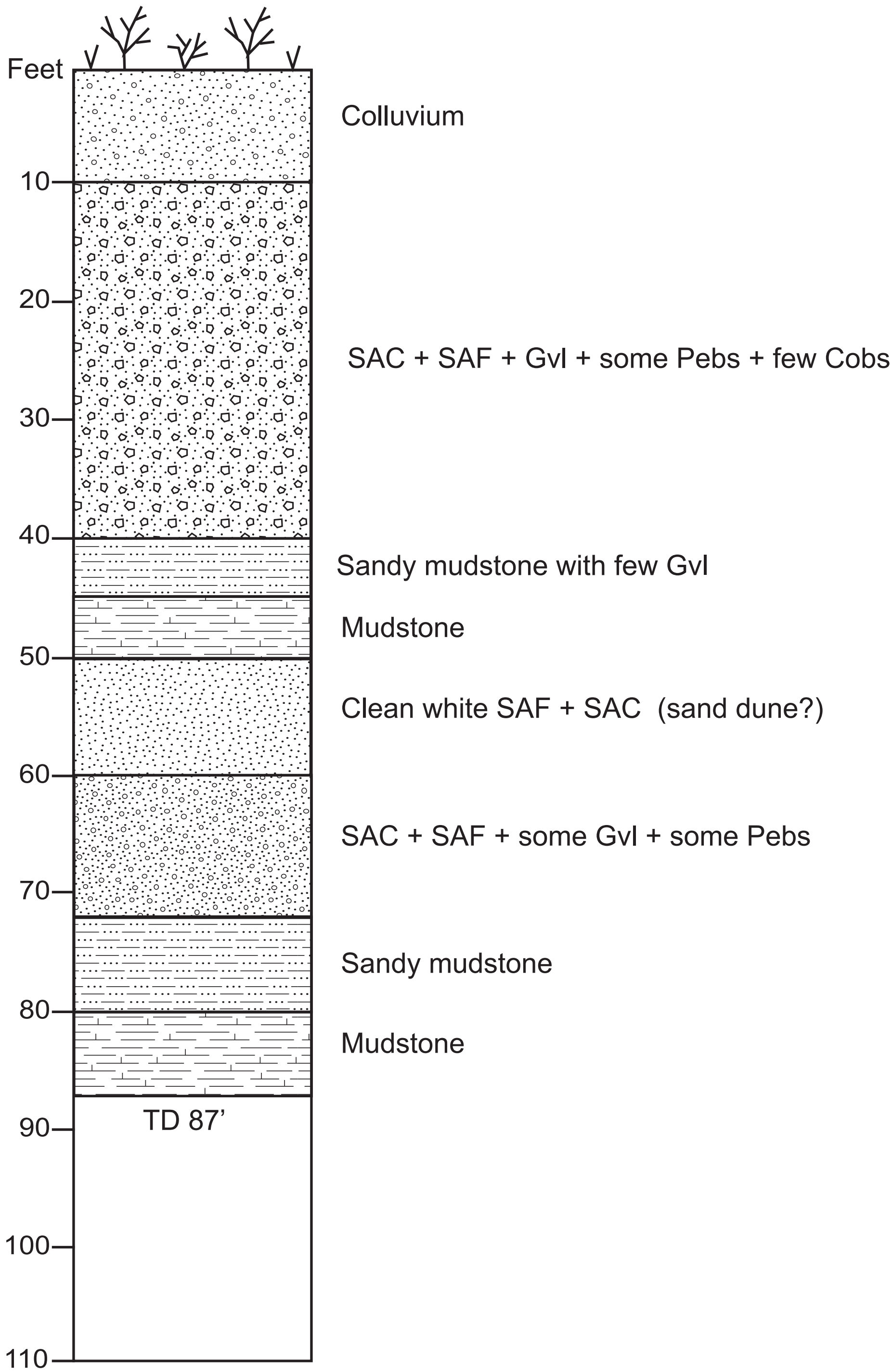
Drill Log H-19	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-19



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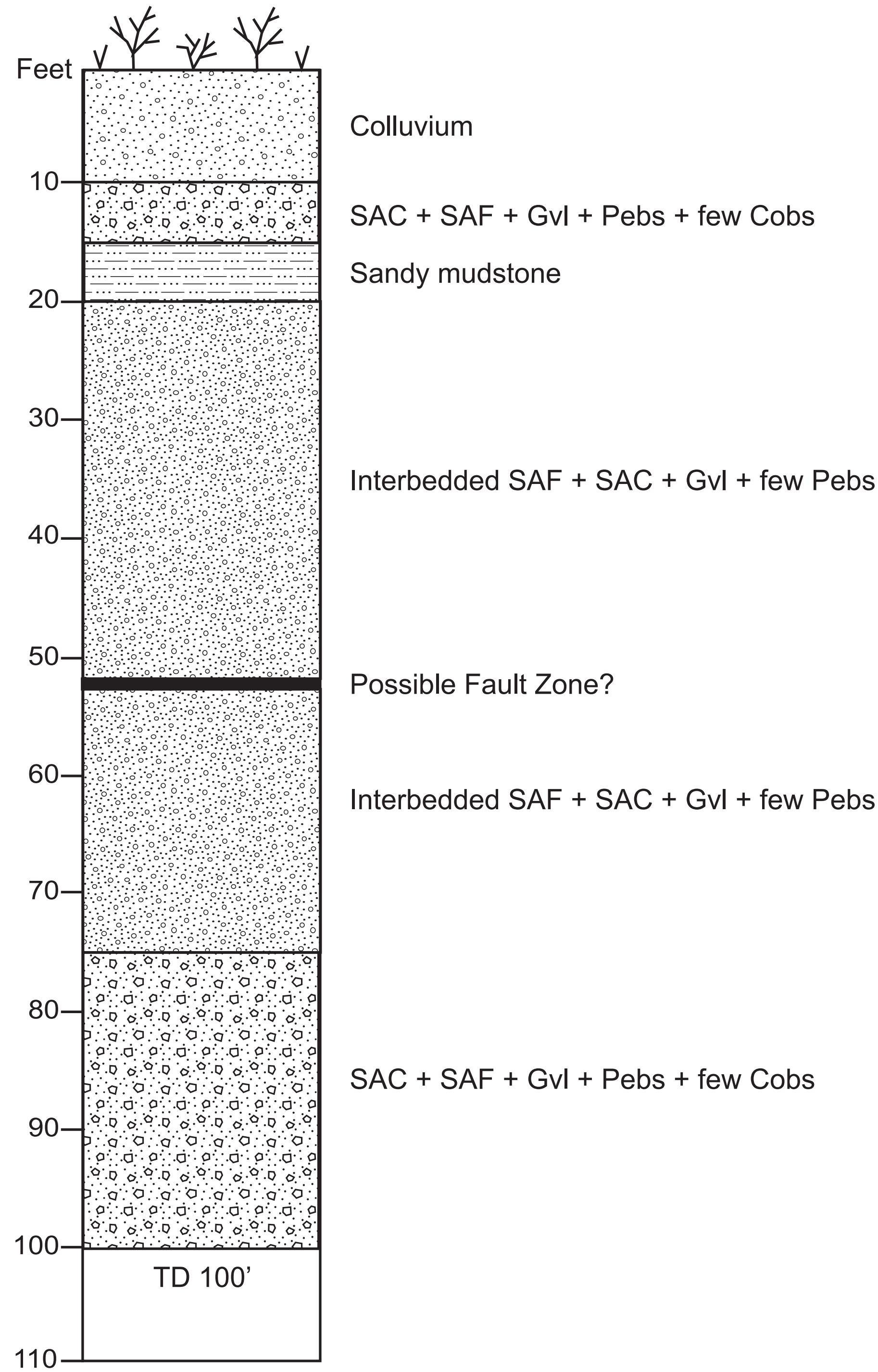
Drill Log H-20A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-20A



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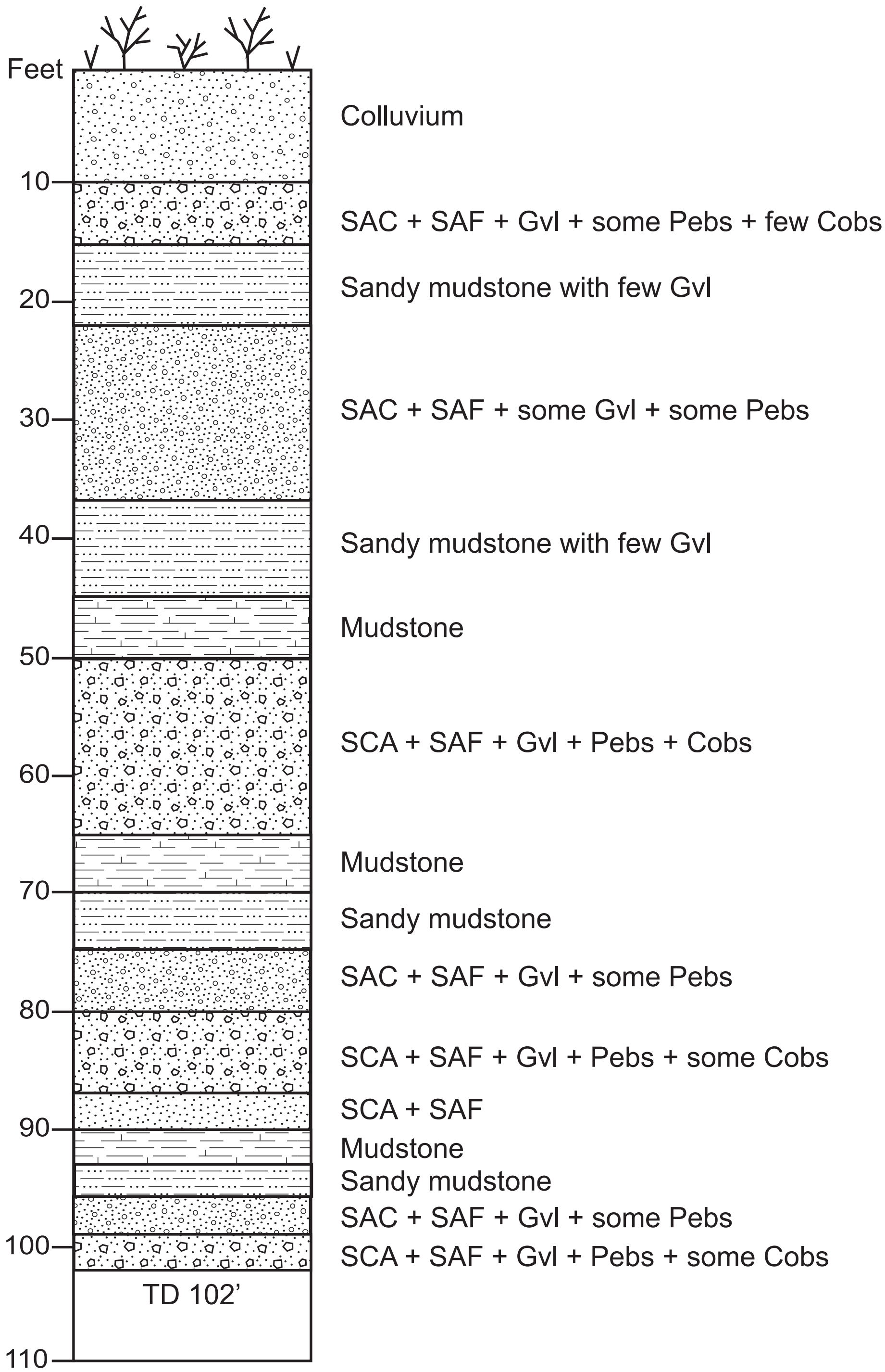
Drill Log H-20B

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-20B



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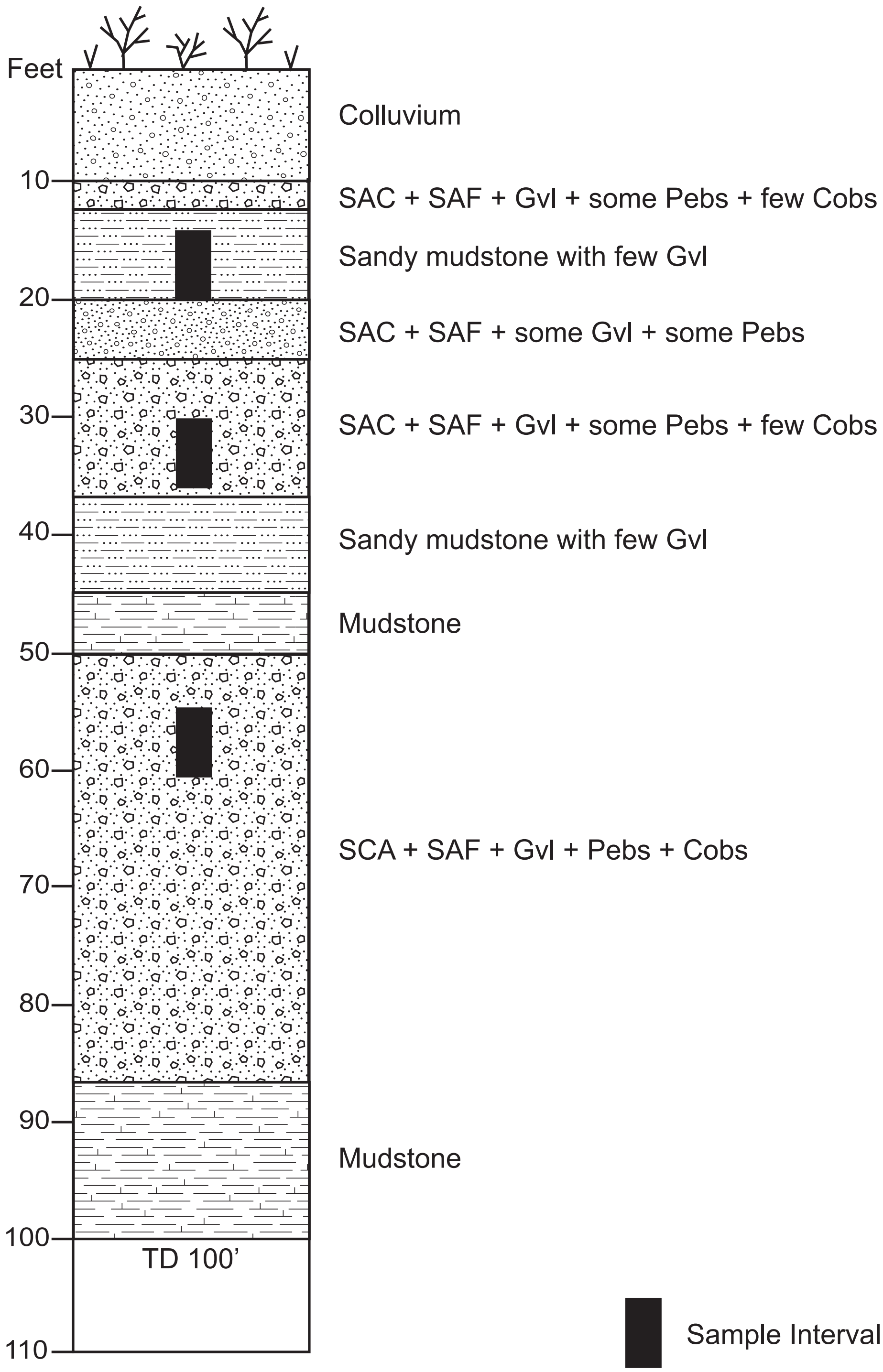
Drill Log H-21

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-21



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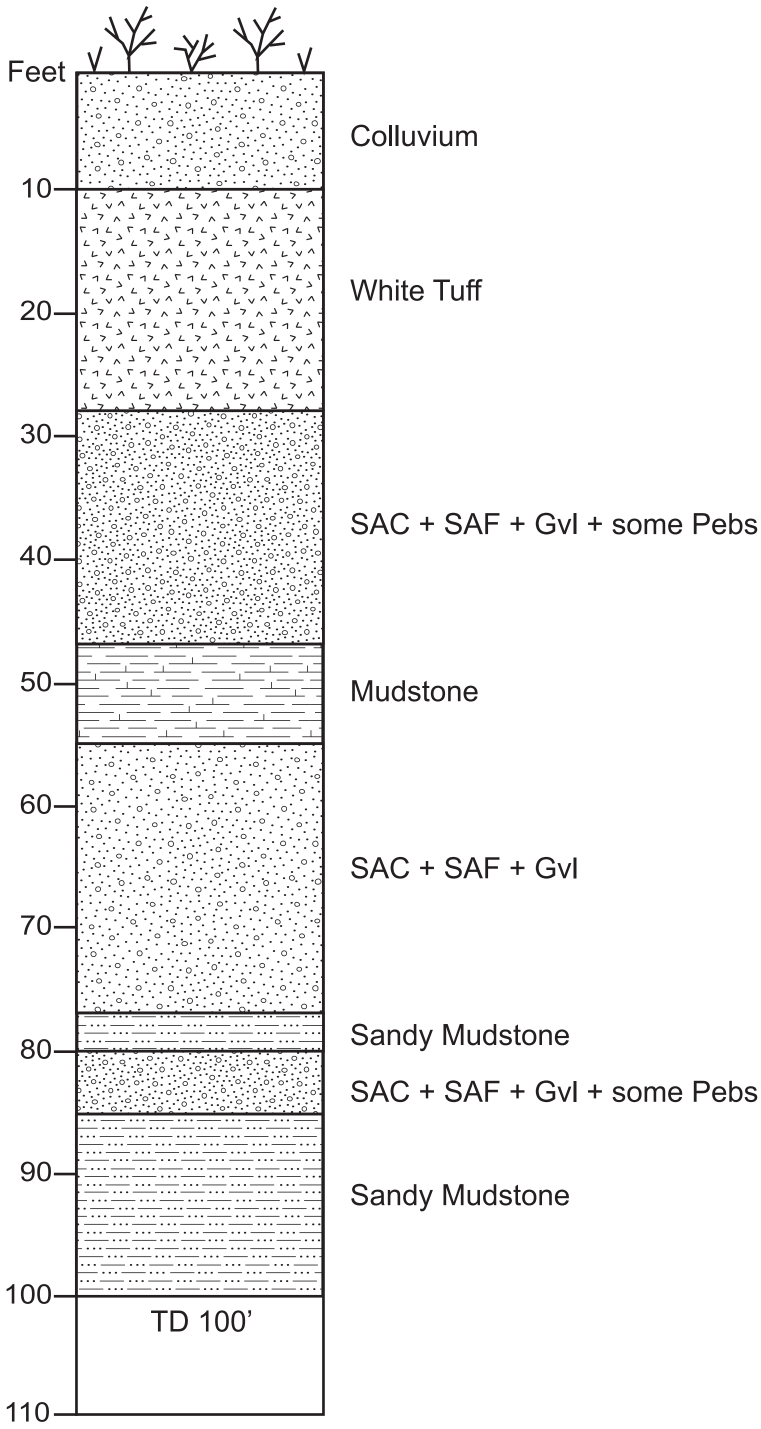
Drill Log H-22

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-22



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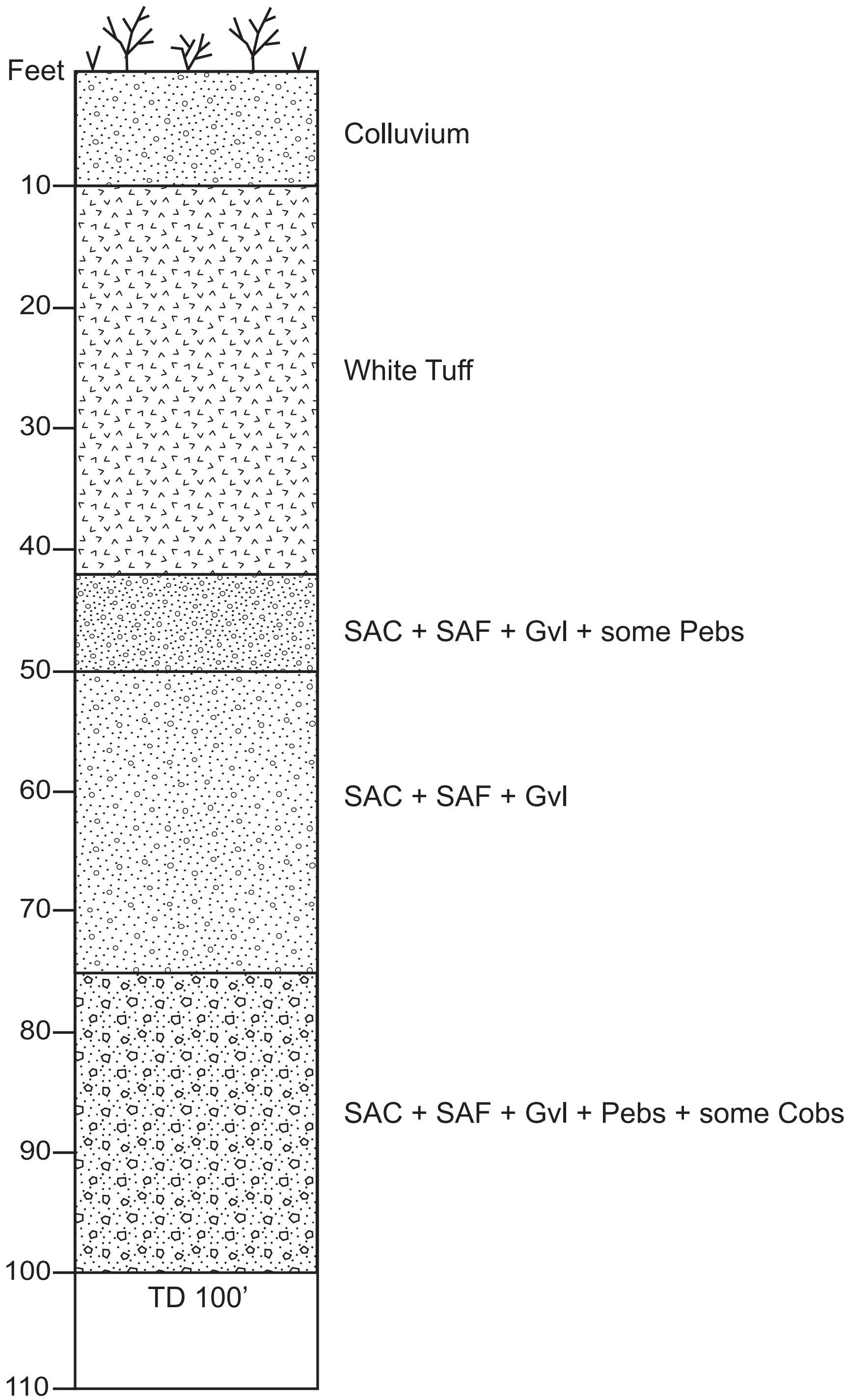
Drill Log H-23

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-23



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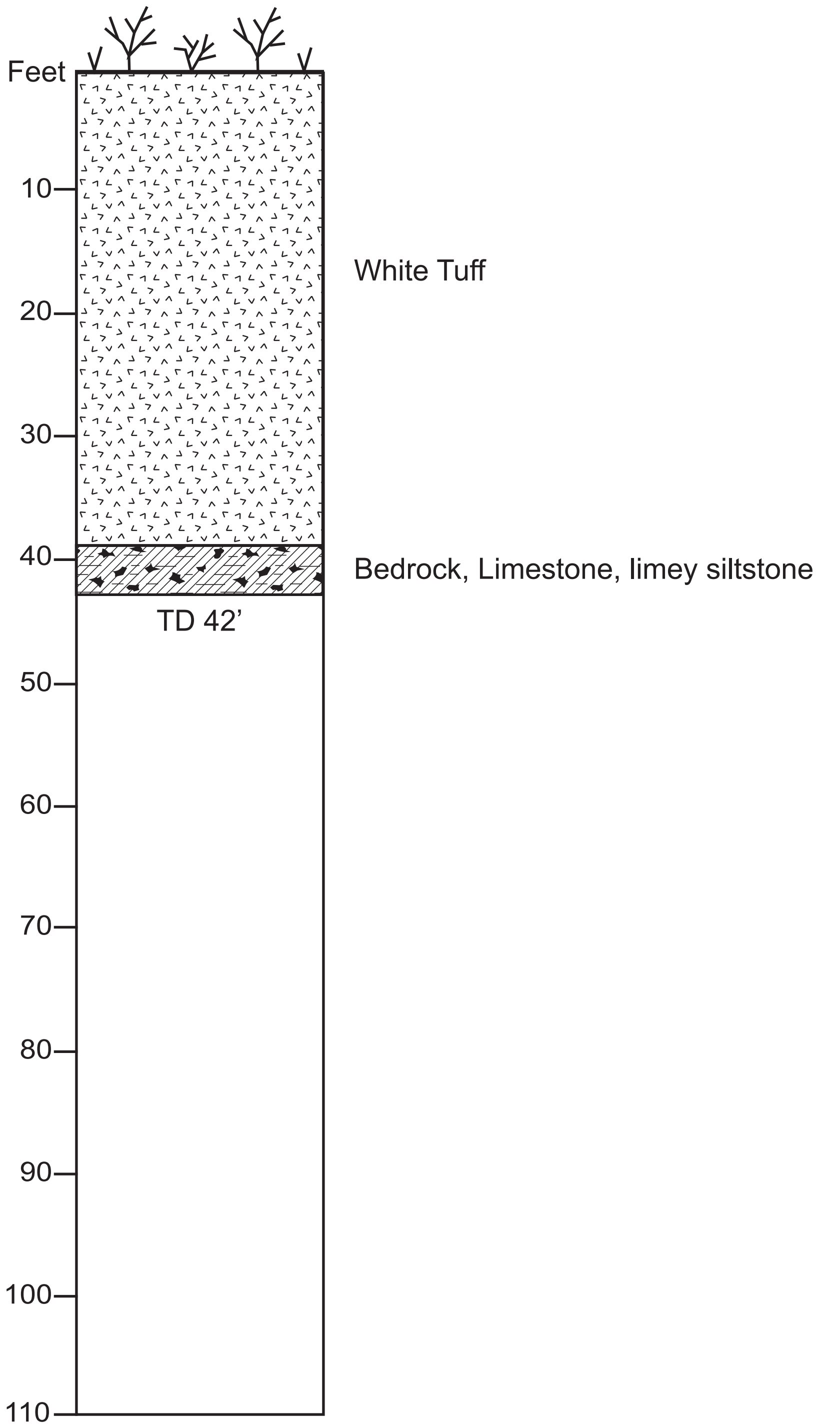
Drill Log H-24	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-24



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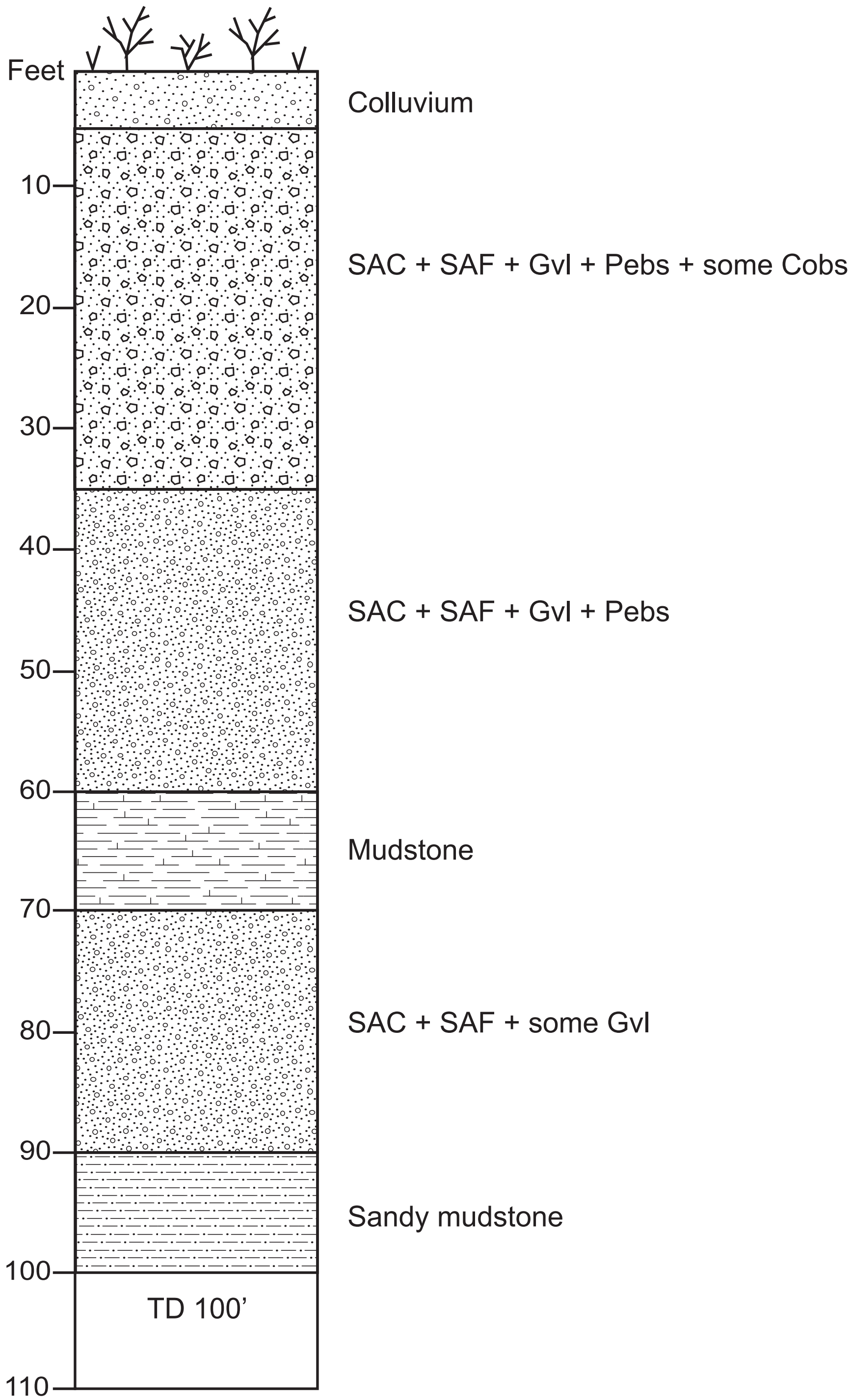
Drill Log H-25	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL H-25



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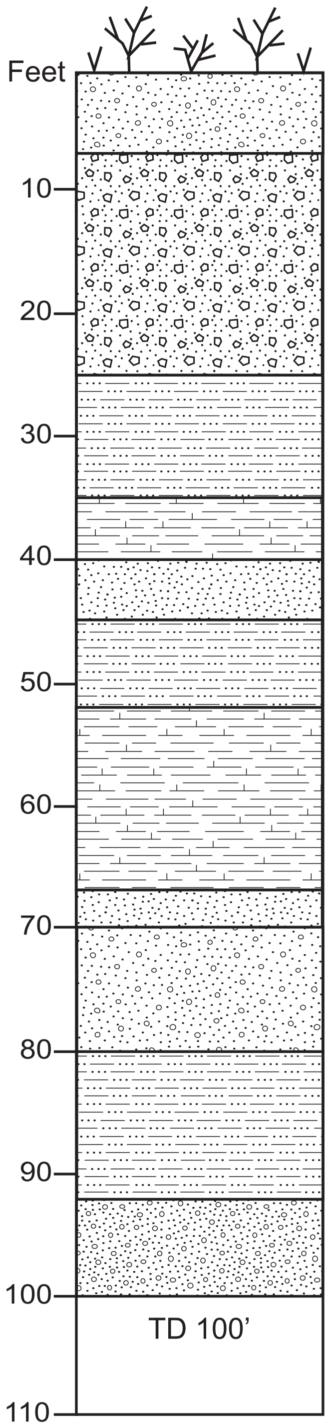
Drill Log H-26A

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-26A



Colluvium

SAC + SAF + Gvl + some Pebs + few Cobs

Sandy mudstone with few Gvl + few Pebs

Mudstone

Clean white SAC + SAF (sand dune?)

Sandy mudstone with few Gvl

Mudstone

Clean white SAF + SAC (sand dune?)

SAC + some Gvl

Sandy mudstone

SAC + SAF + Gvl

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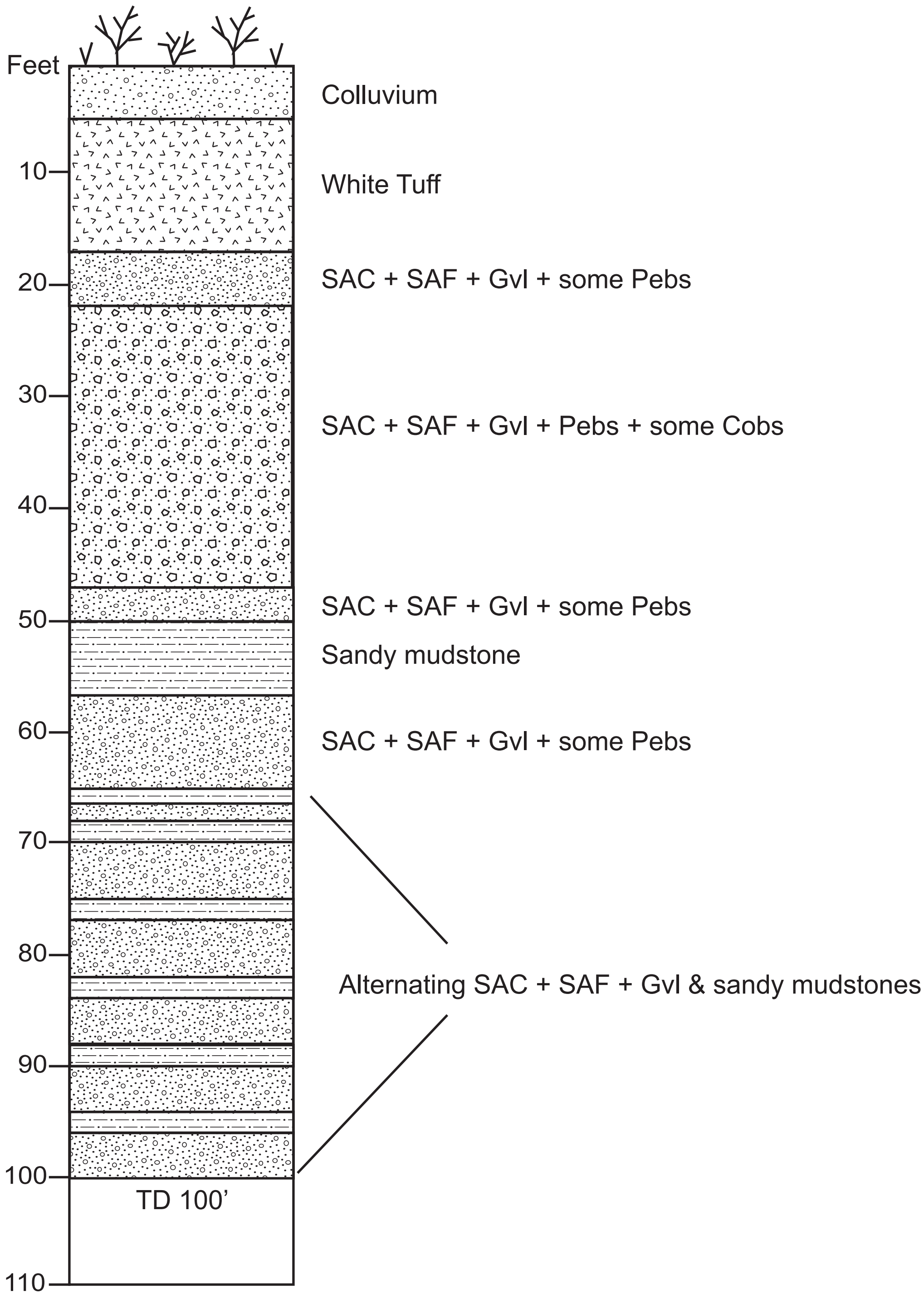
Drill Log H-28A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DH-H-28A



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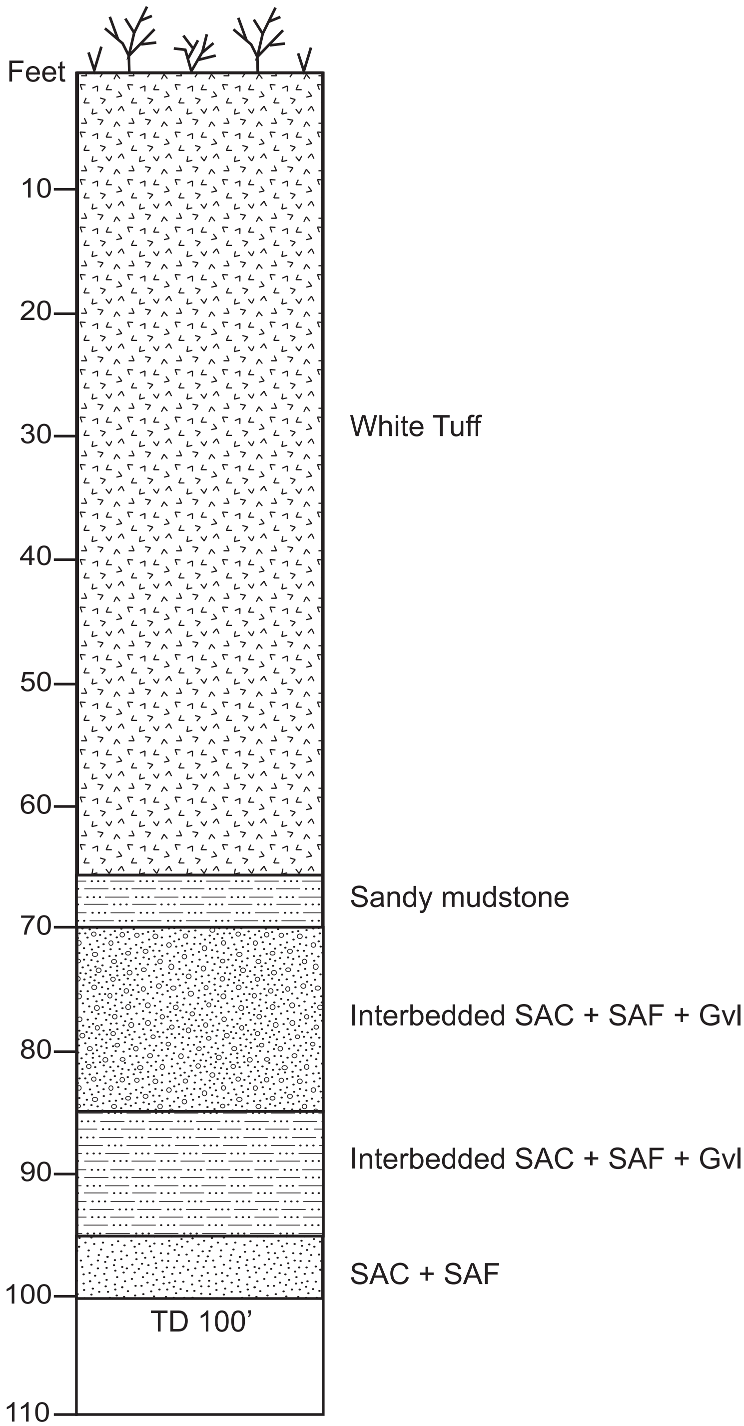
Drill Log H-29

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-29



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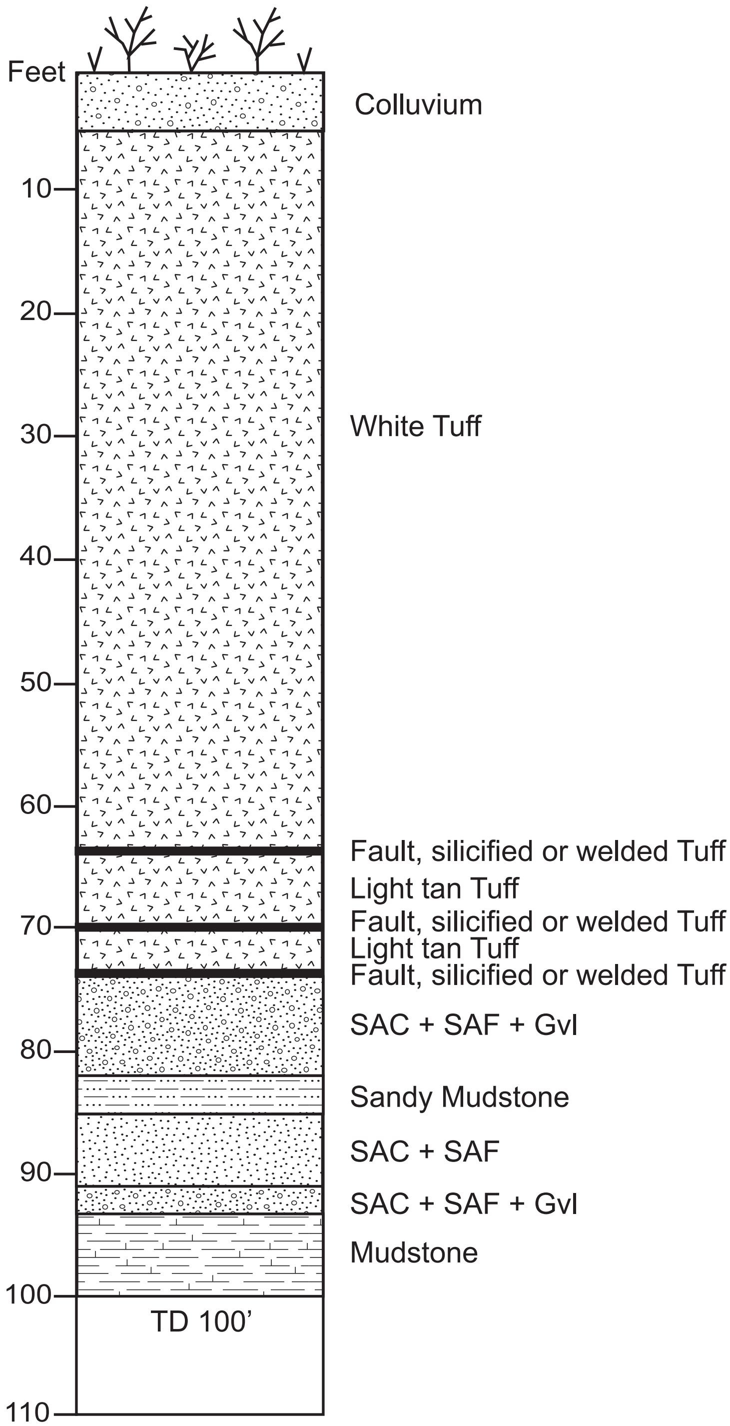
Drill Log H-30A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-30A



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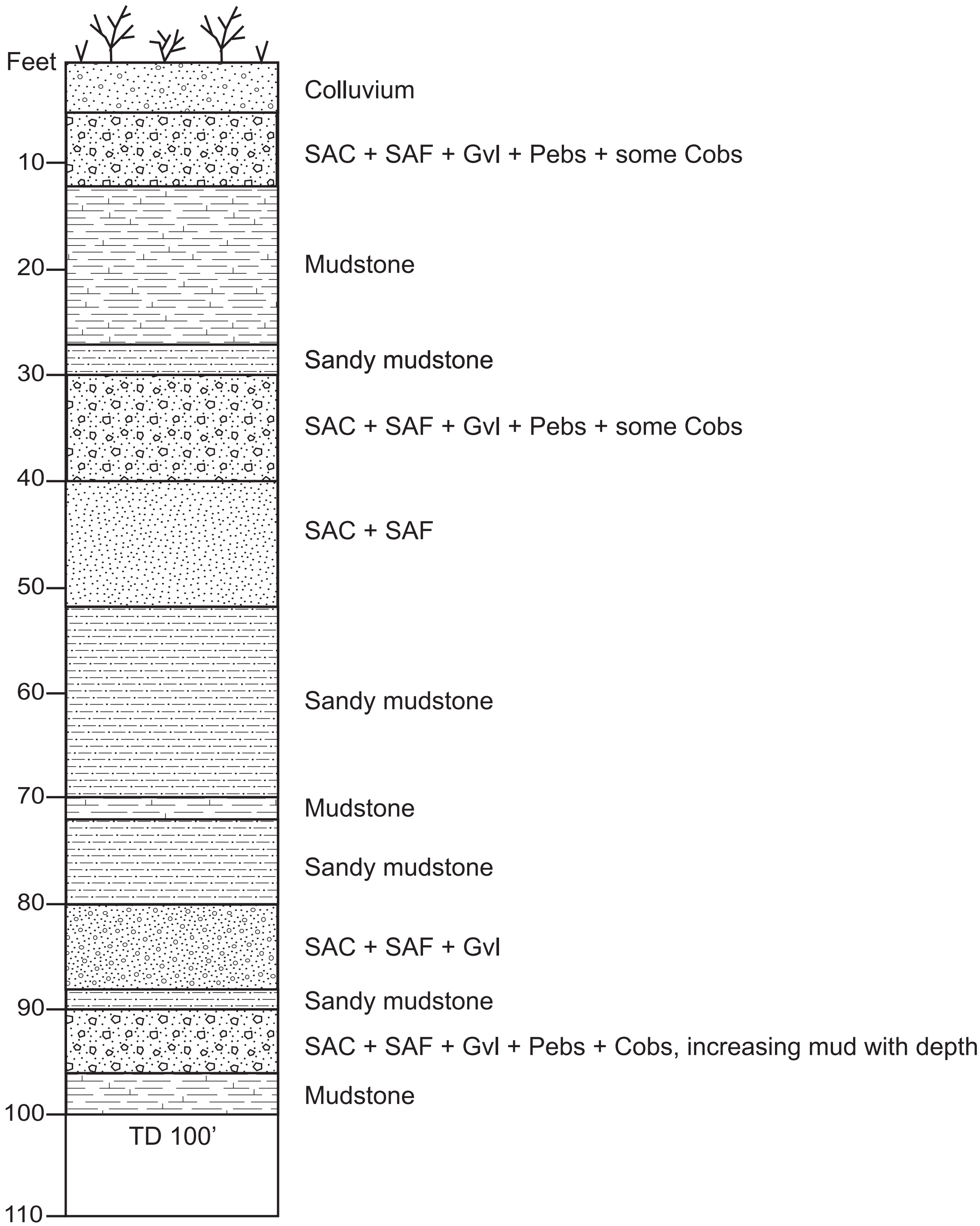
Drill Log H-31

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-31



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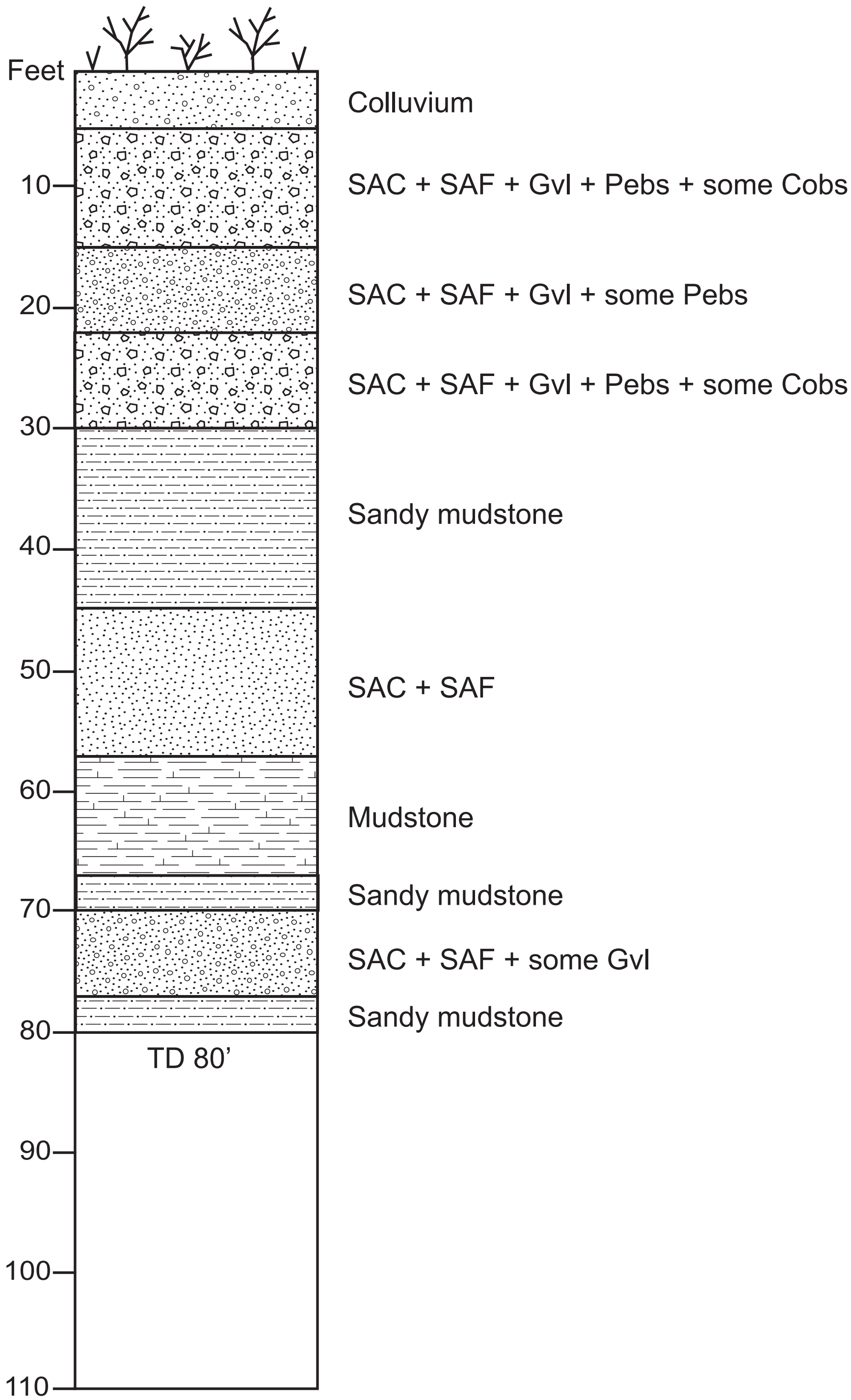
Drill Log H-33A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-33A



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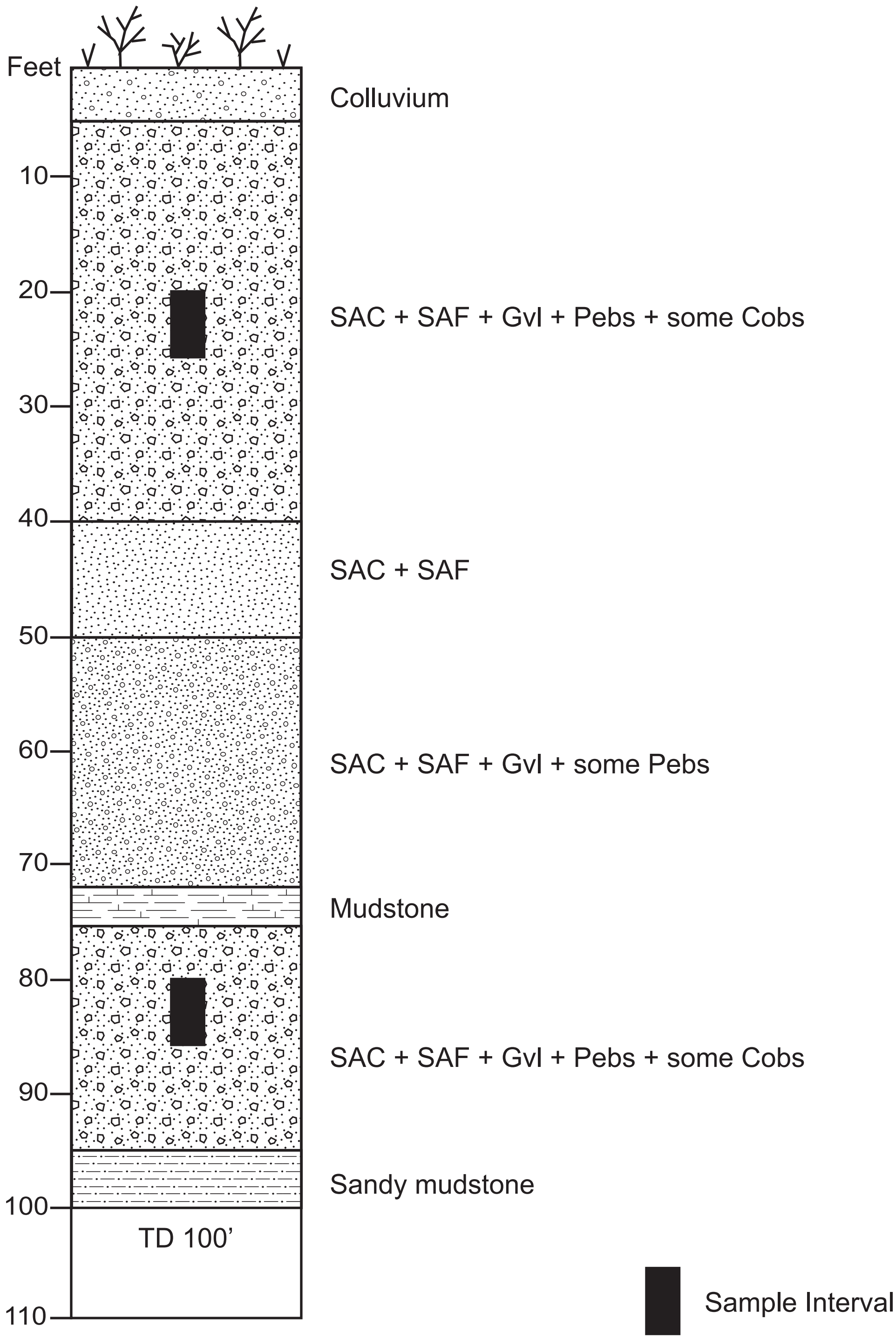
Drill Log H-34A

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-34A



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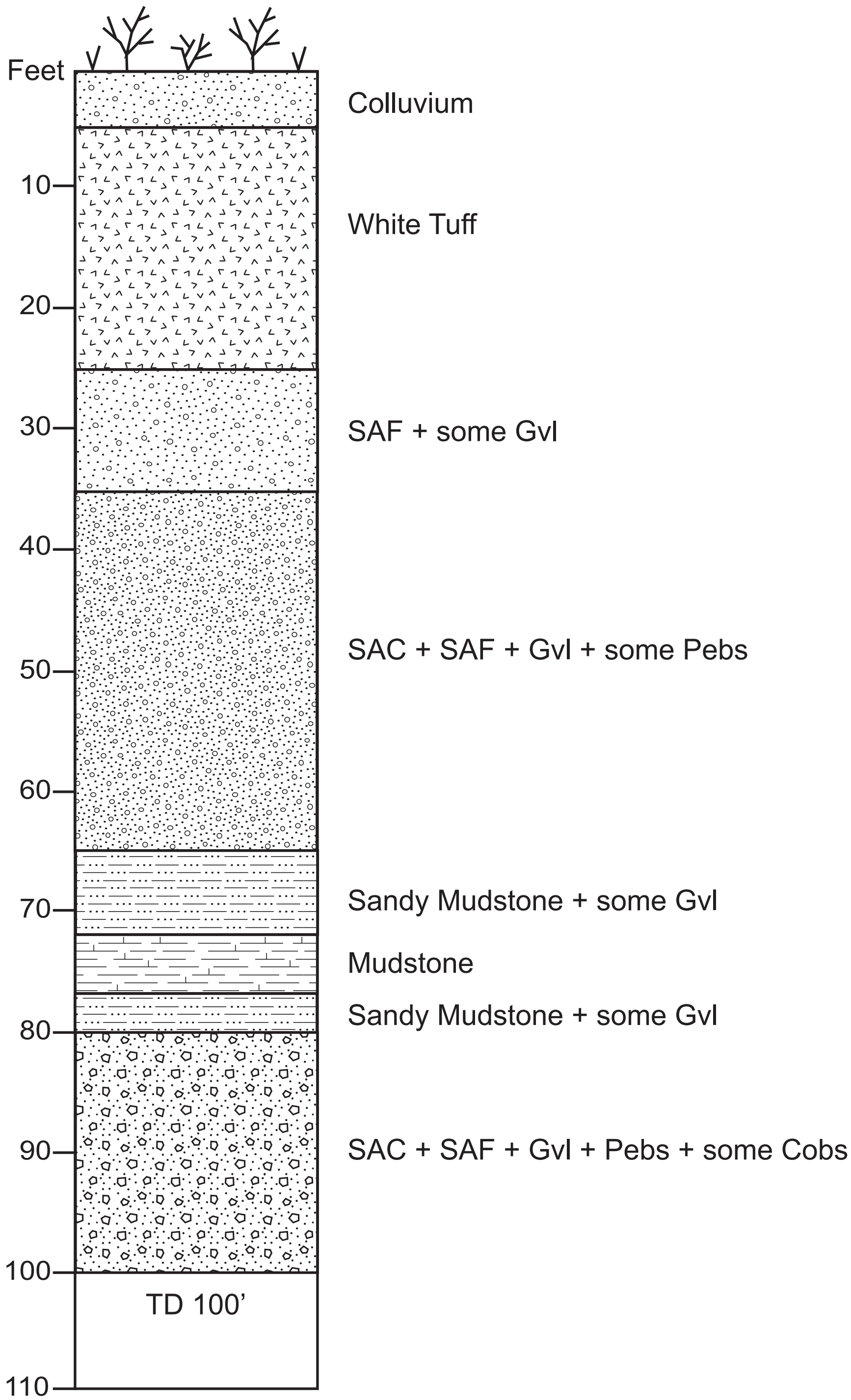
Drill Log H-36	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-36



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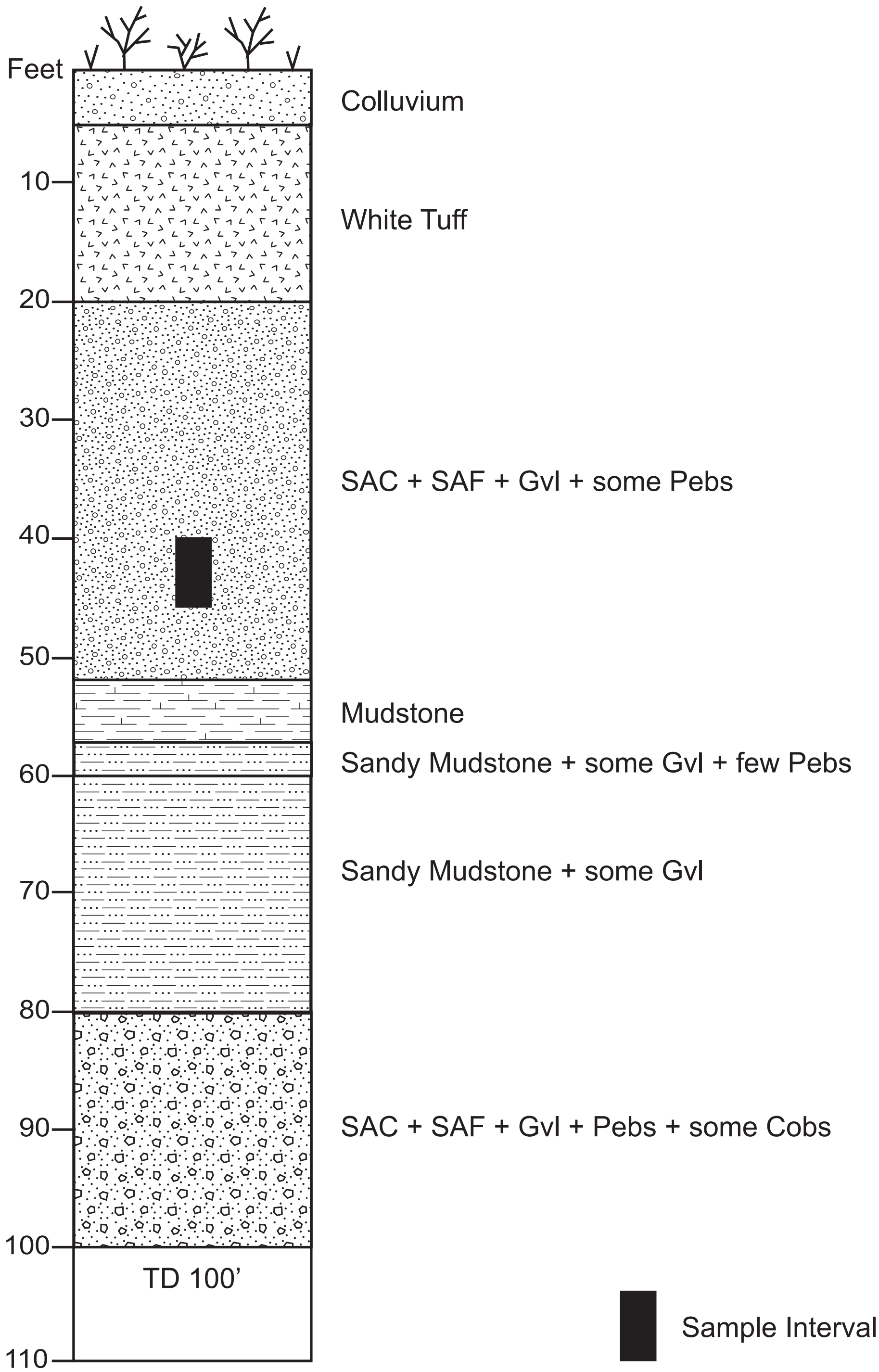
Drill Log H-36A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-36A



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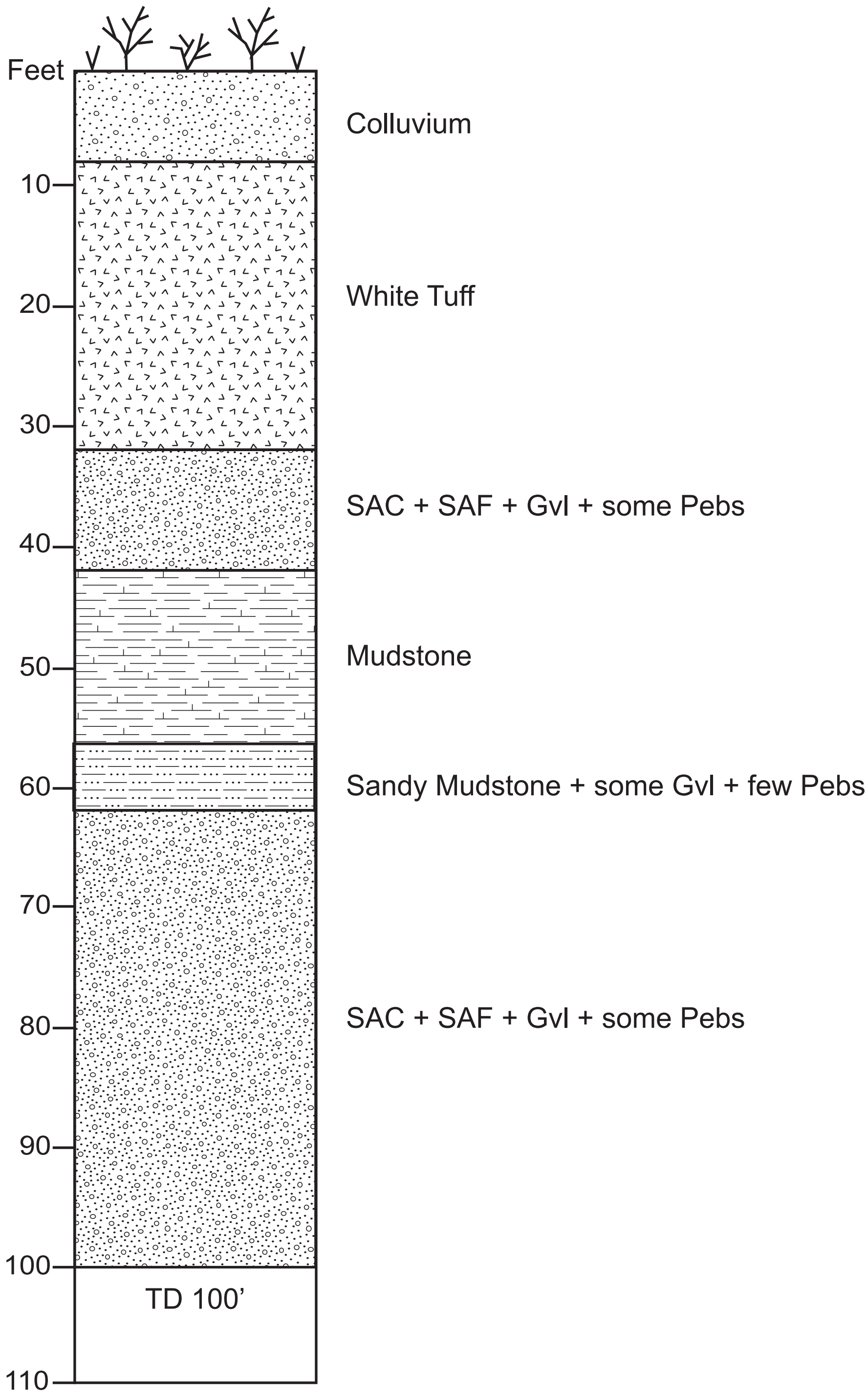
Drill Log H-37	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-37



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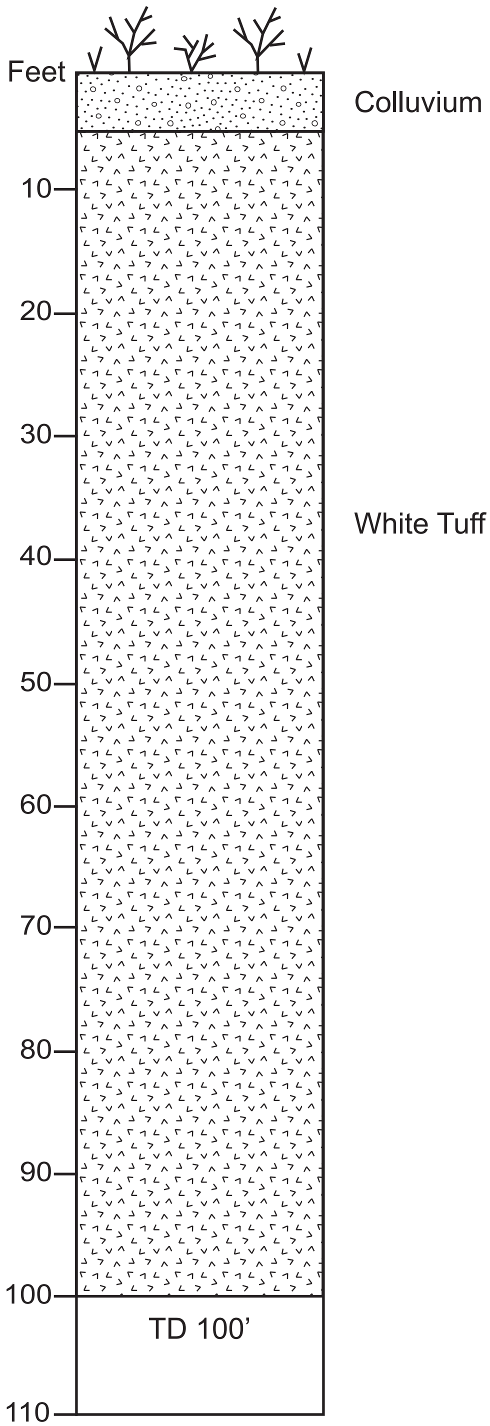
Drill Log H-38

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-38



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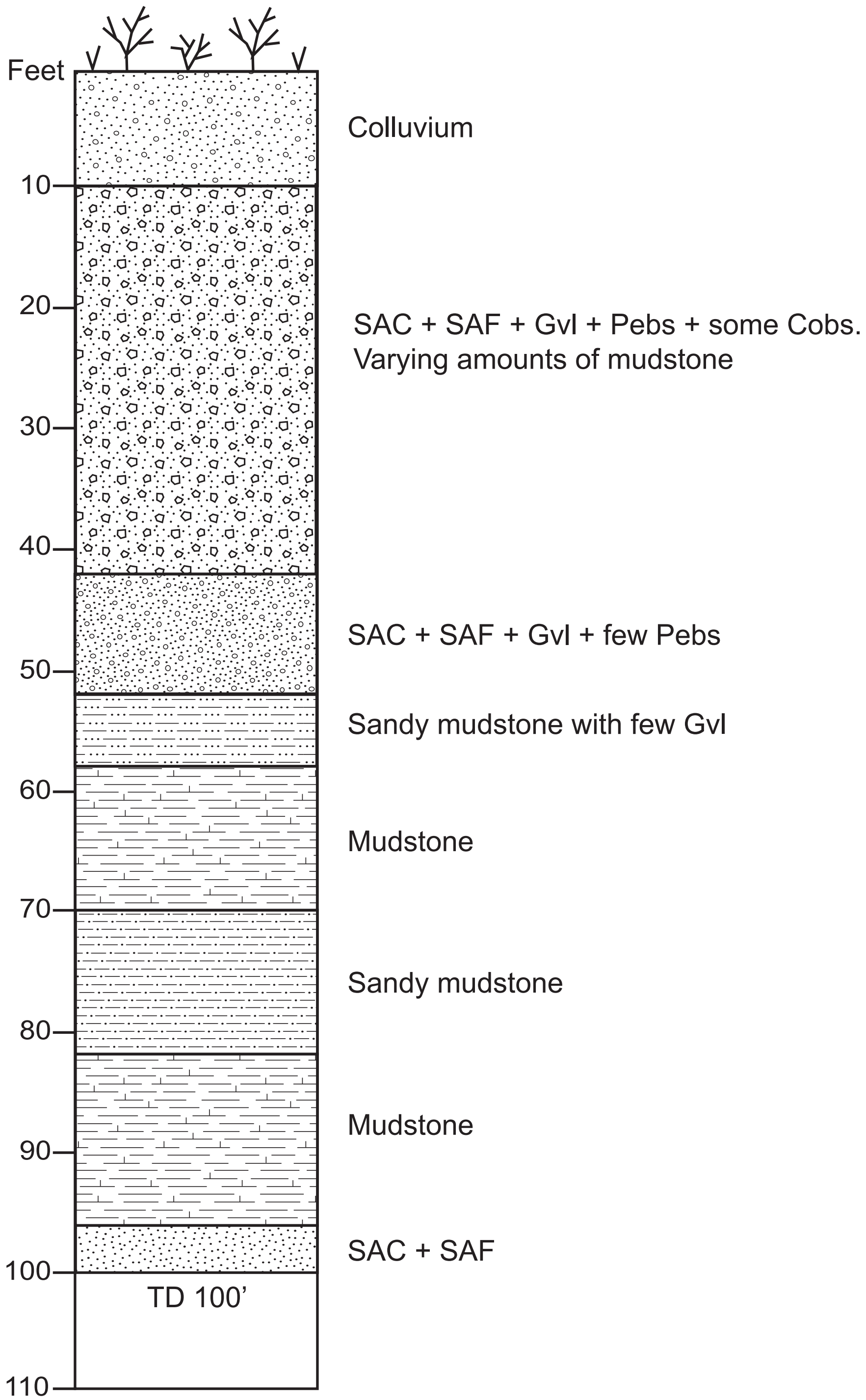
Drill Log H-39

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-39



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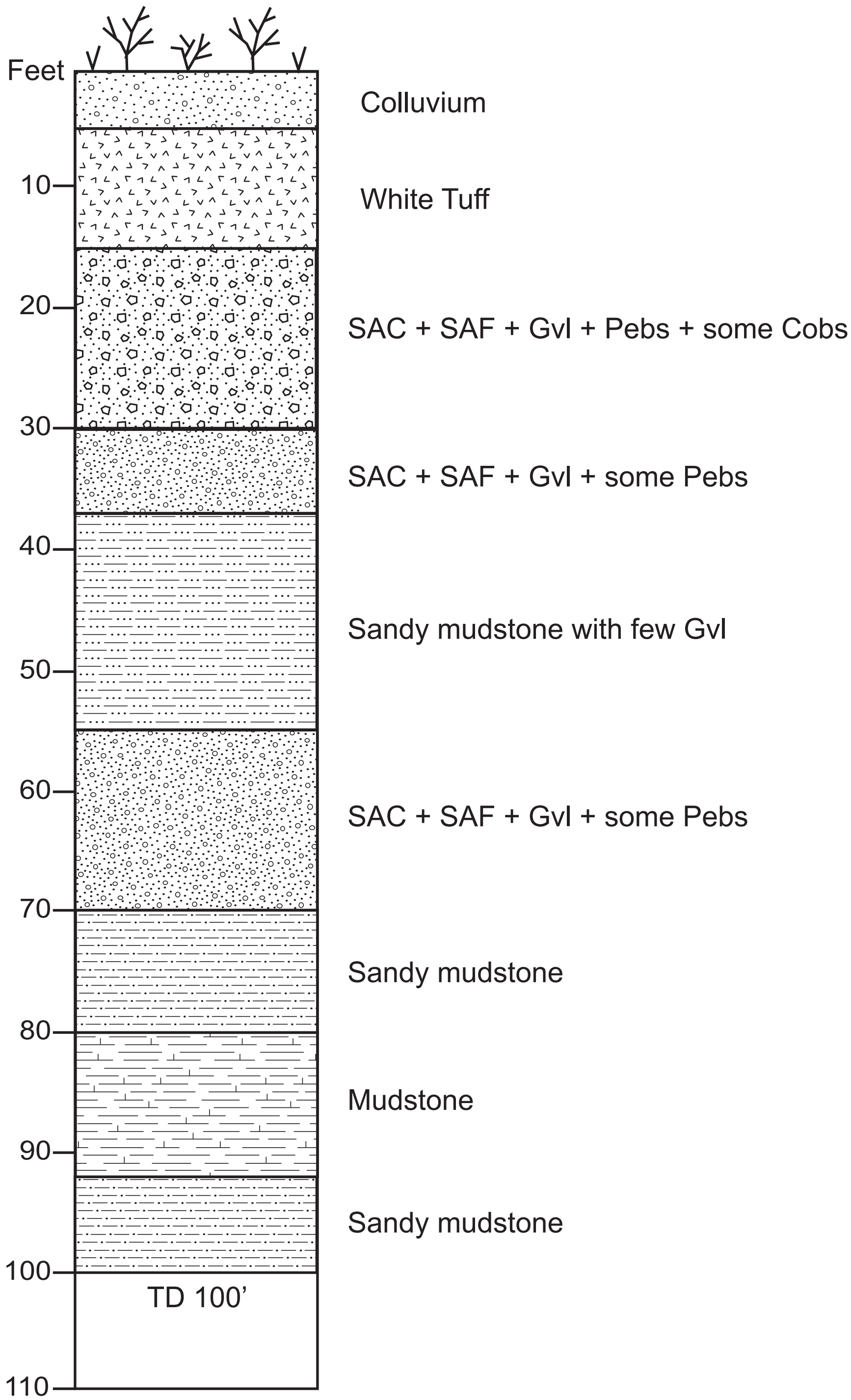
Drill Log H-40	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-40



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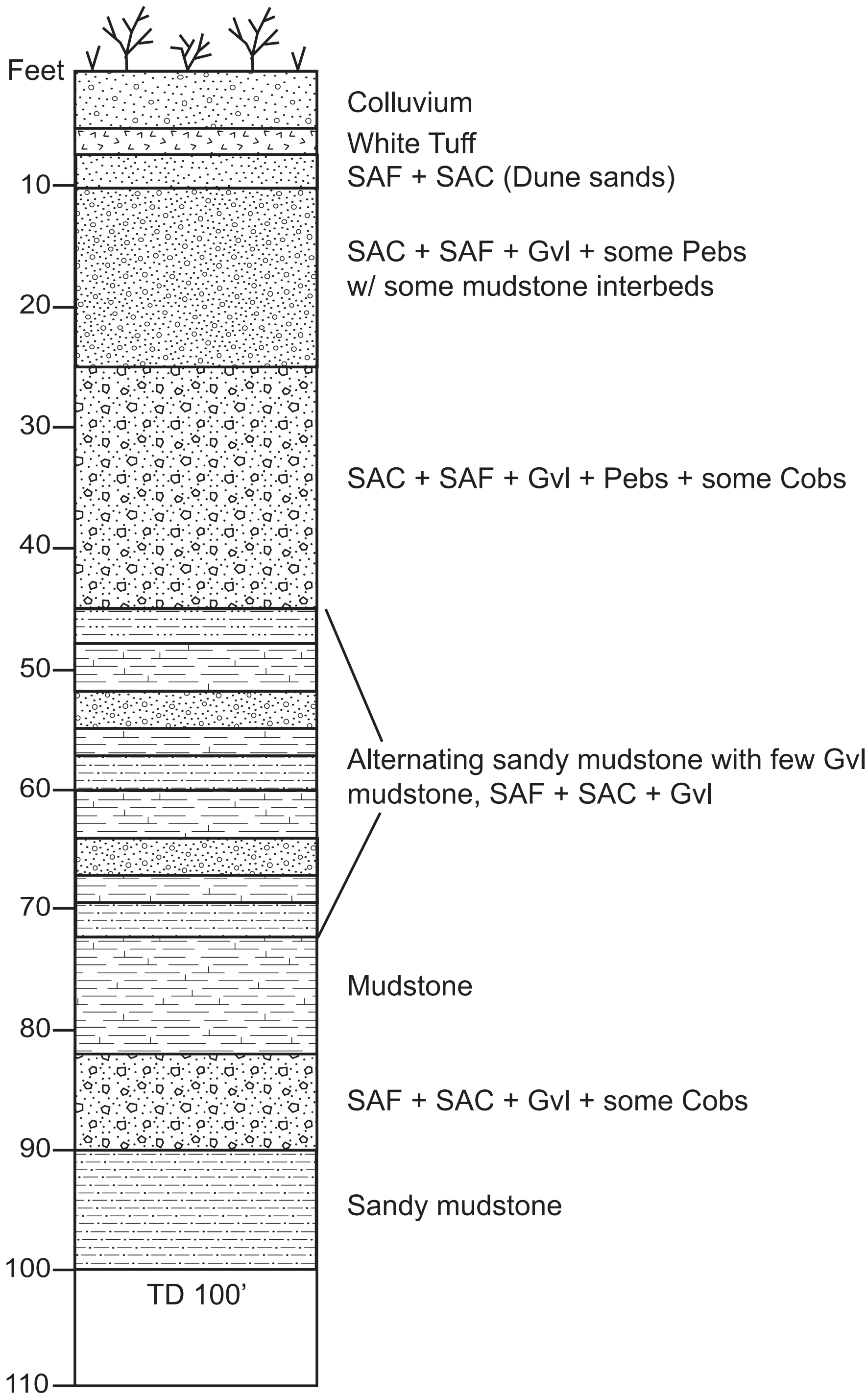
Drill Log H-40A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-40A



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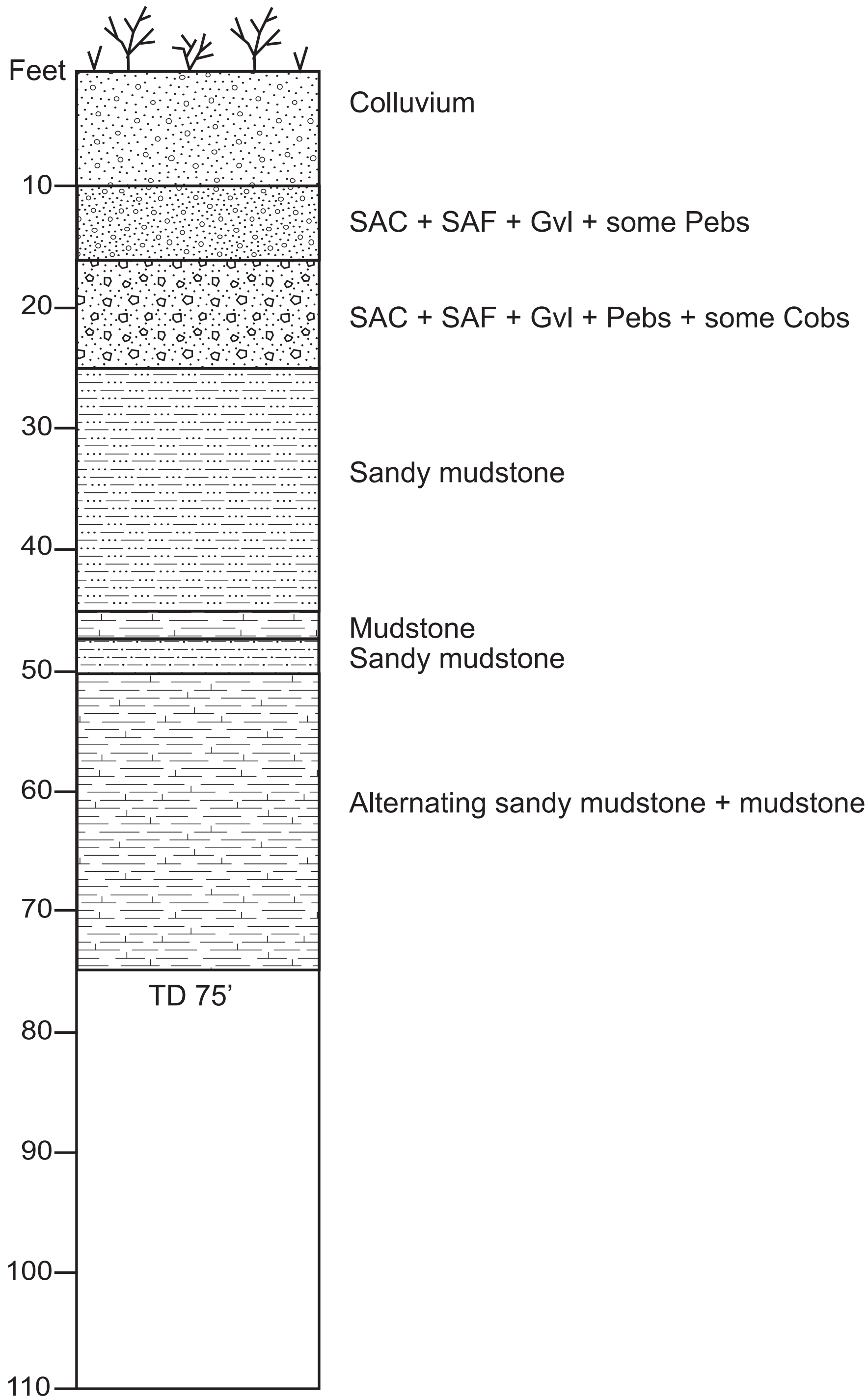
Drill Log H-40B	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-40B



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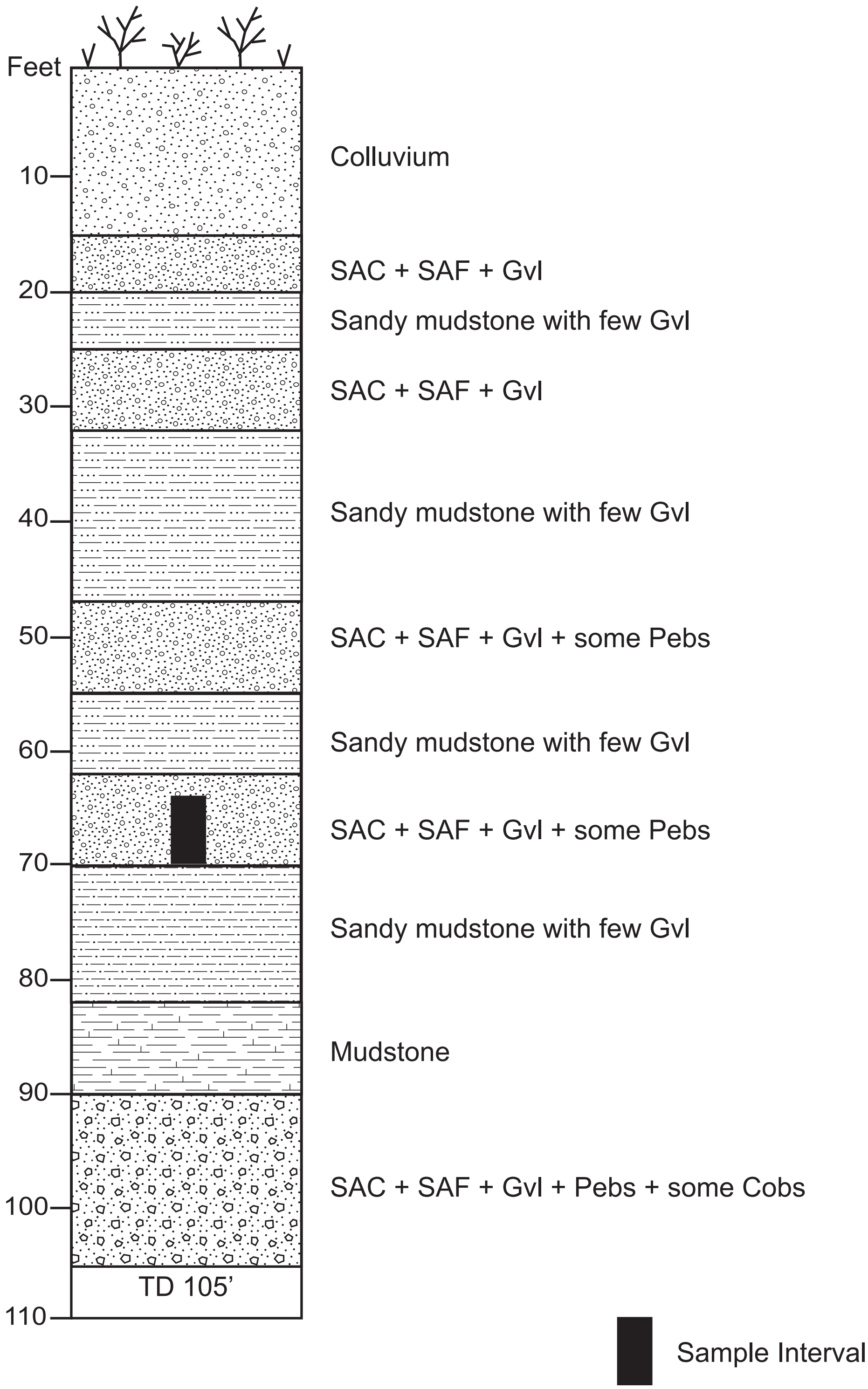
Drill Log H-41A	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-41A



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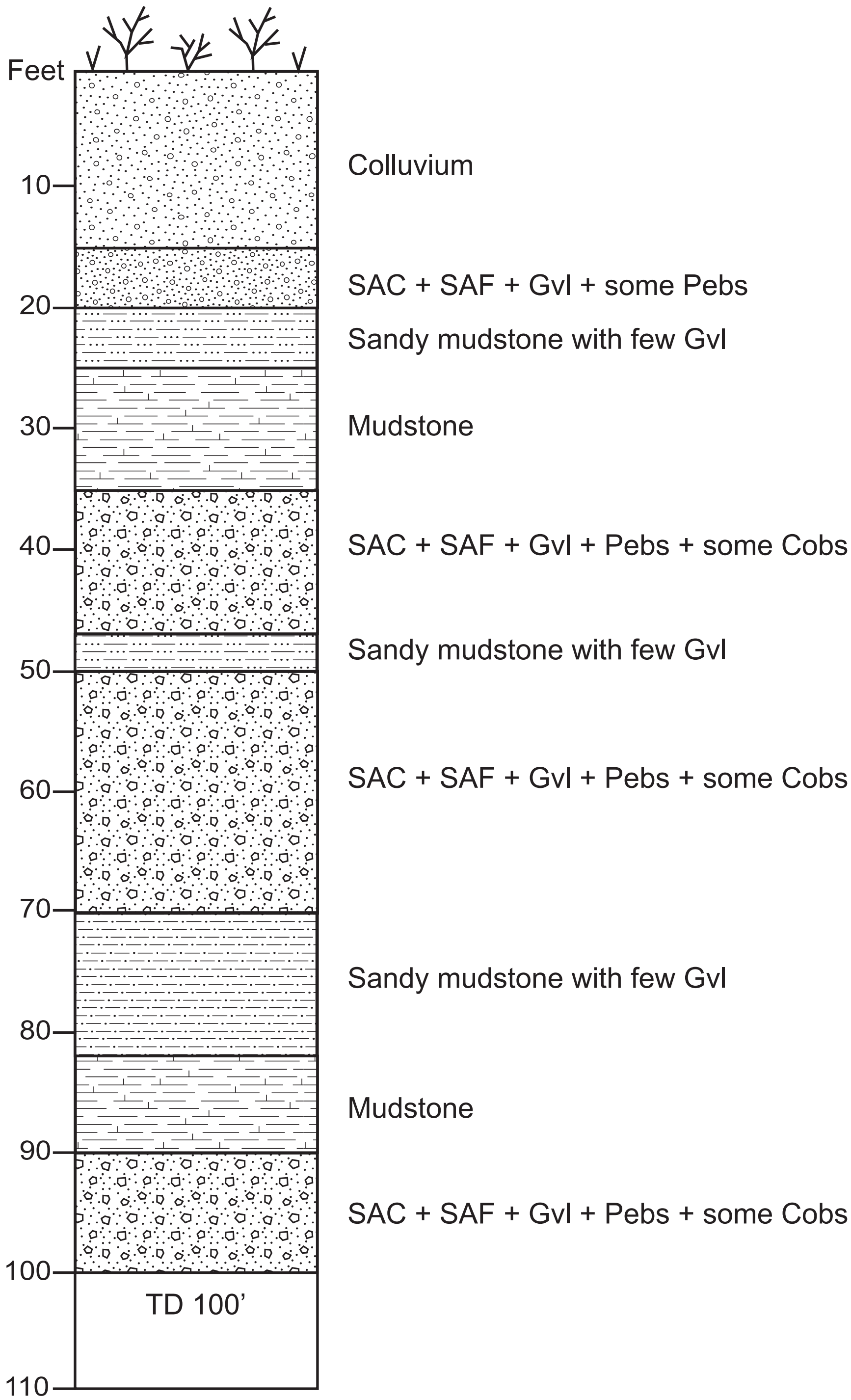
Drill Log H-42A

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-42A



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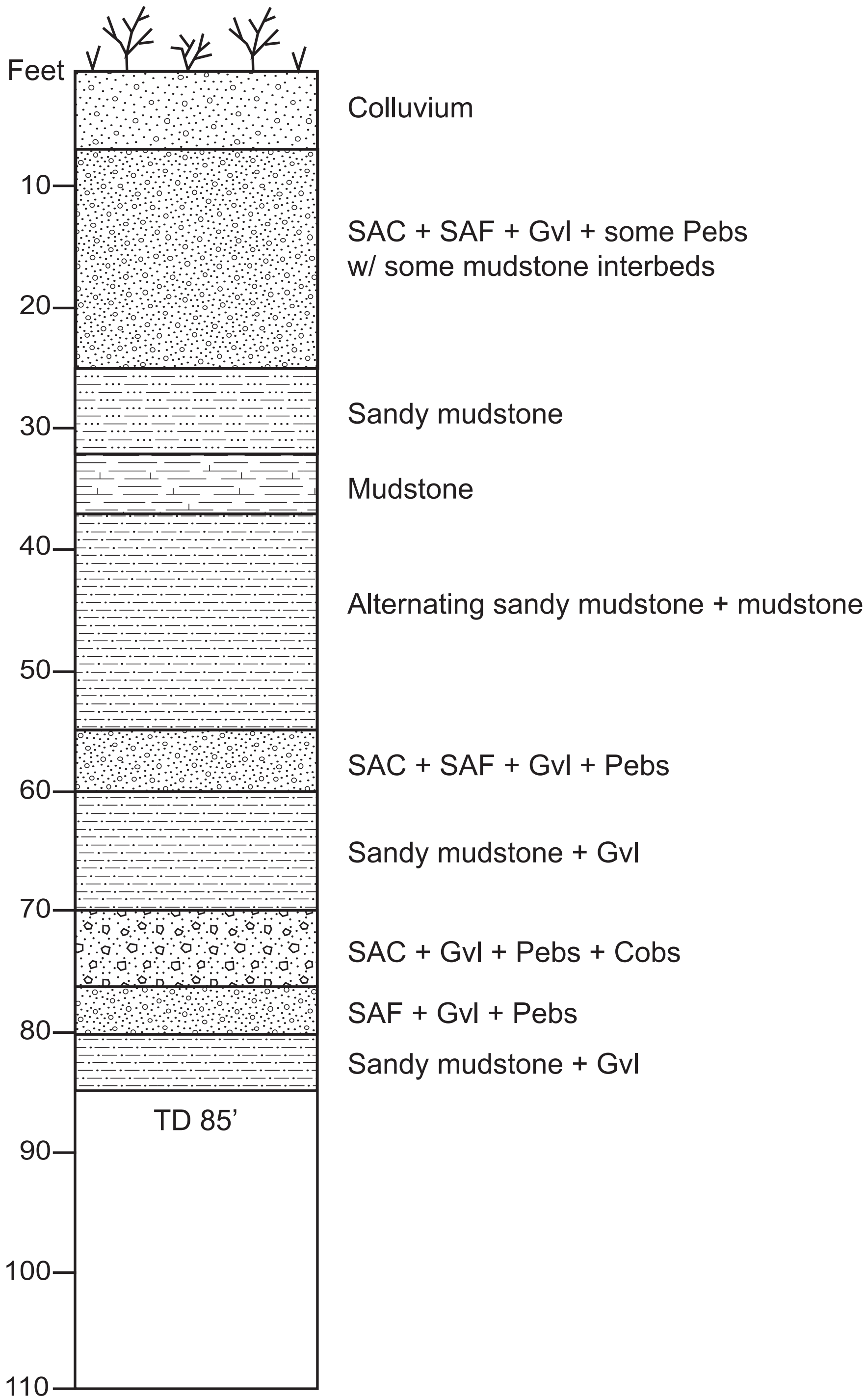
Drill Log H-42B

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-42B



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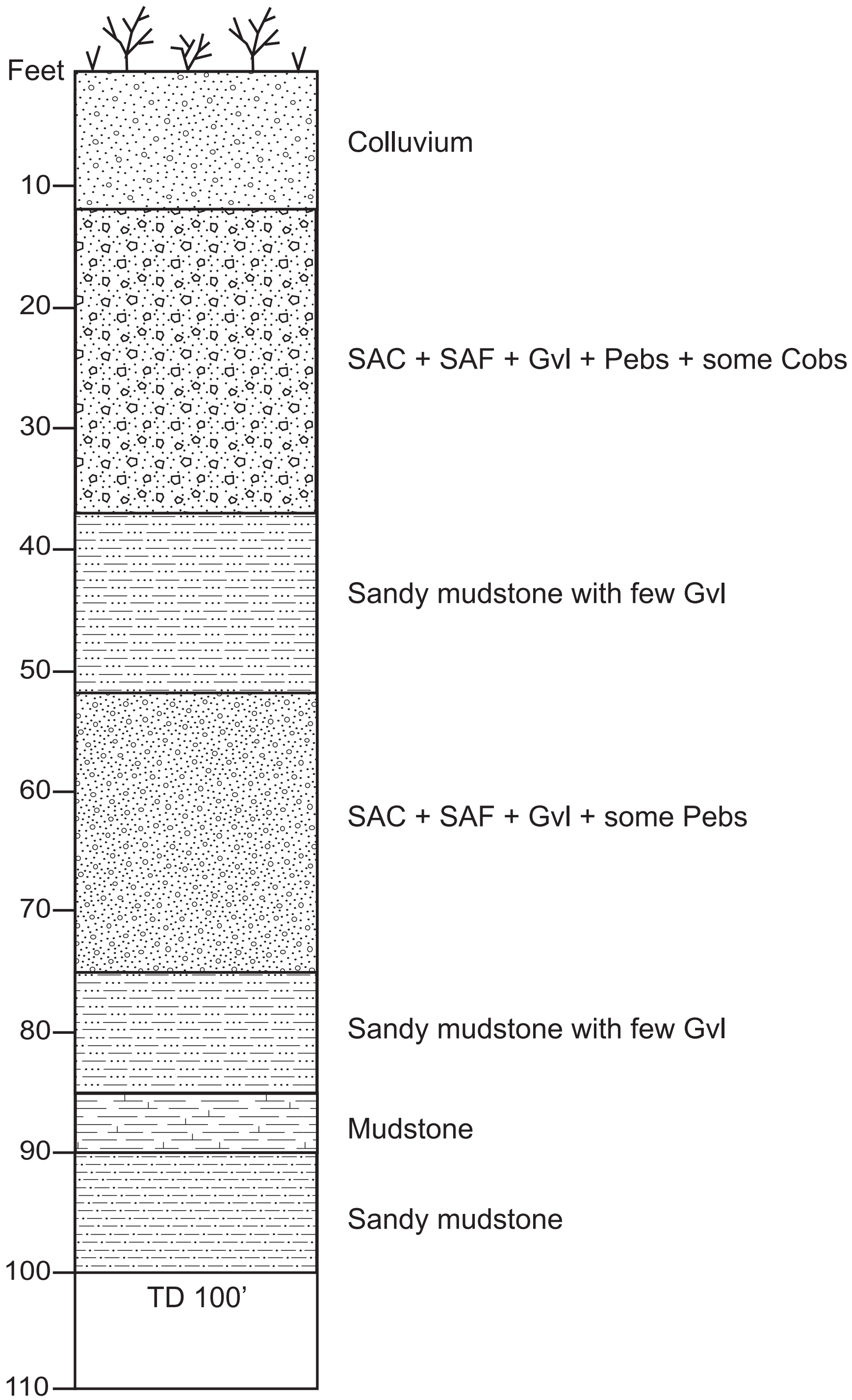
Drill Log H-42C	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-42C



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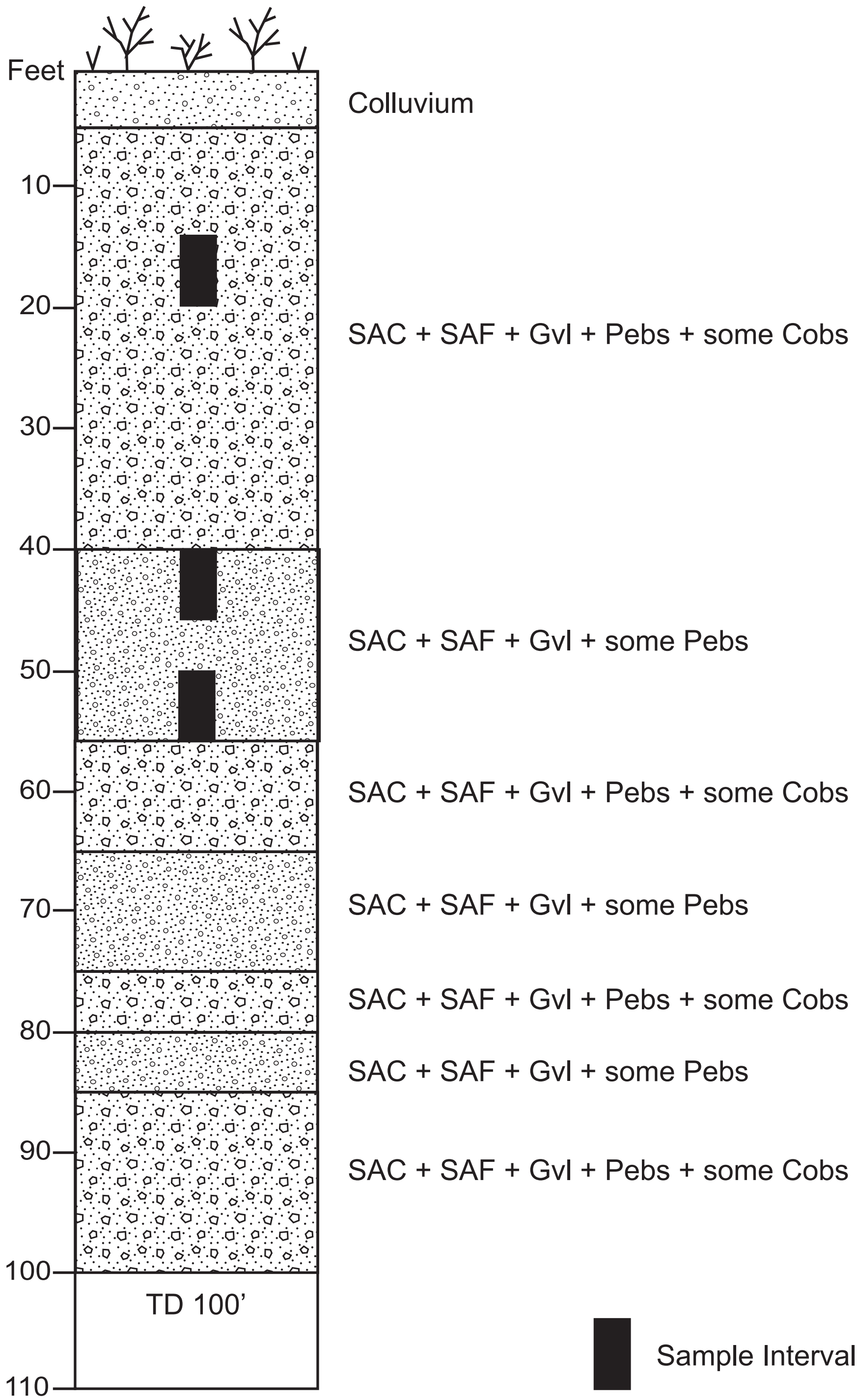
Drill Log H-43

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-43



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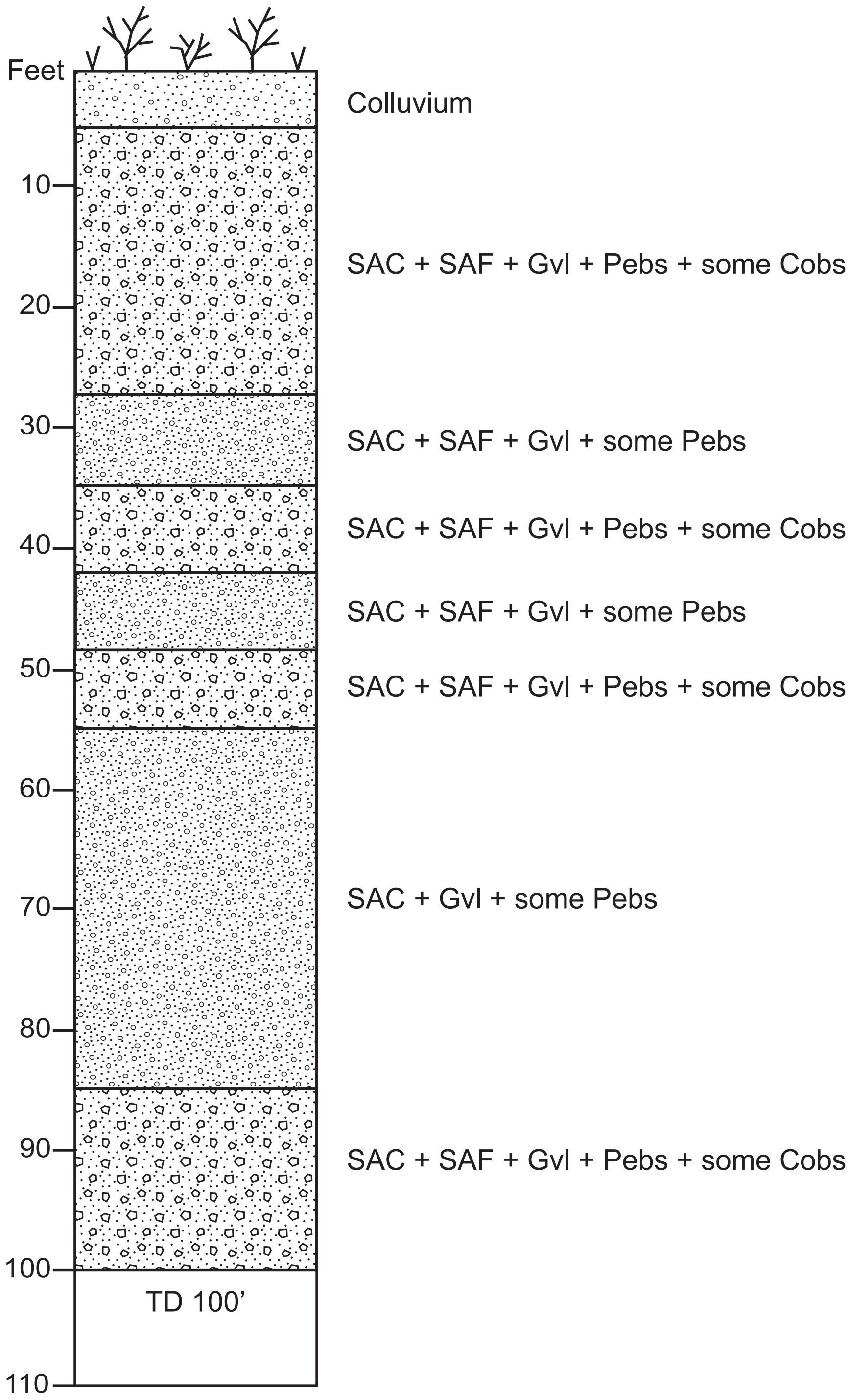
Drill Log H-43A

Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-43A



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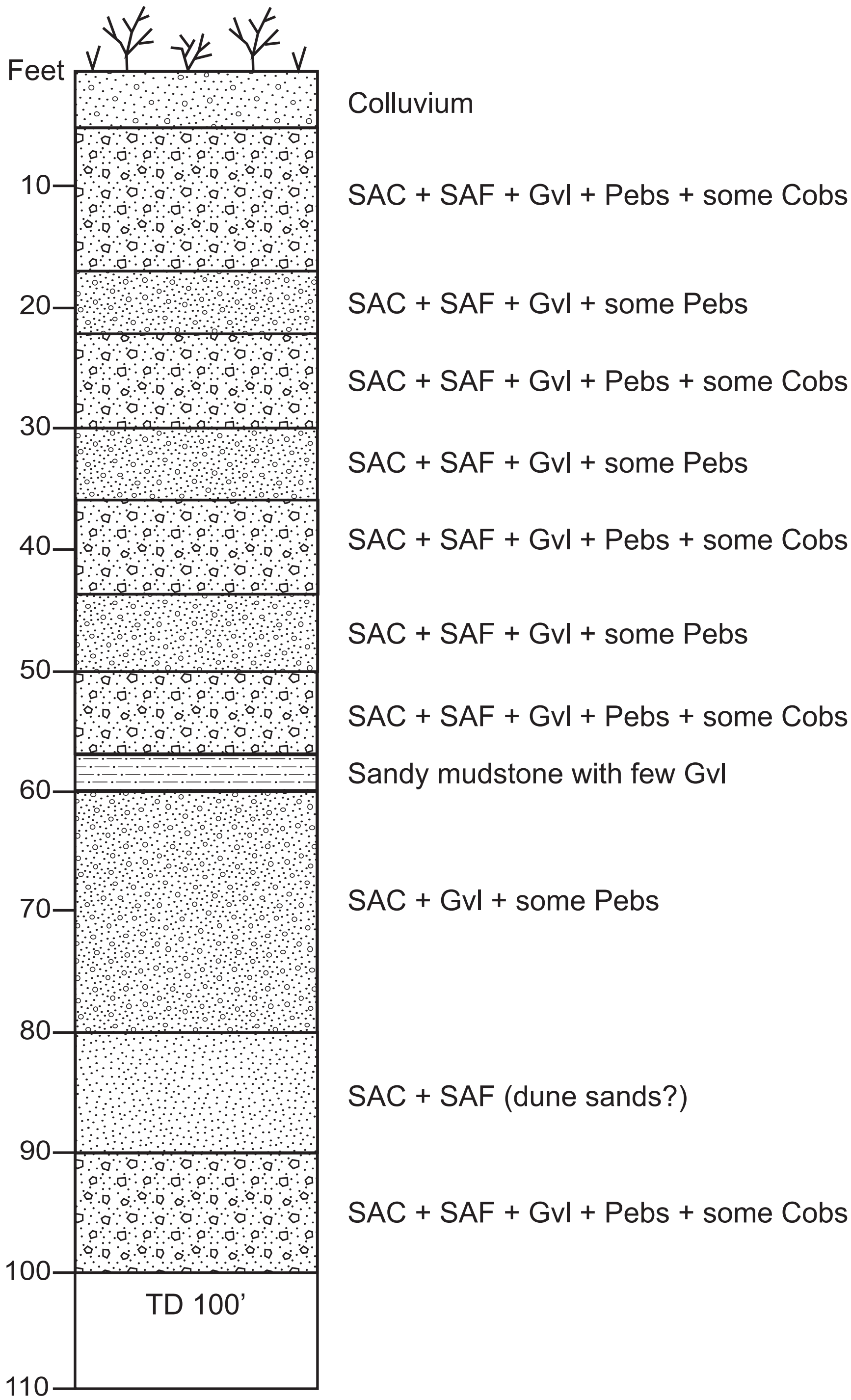
Drill Log H-44	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-44



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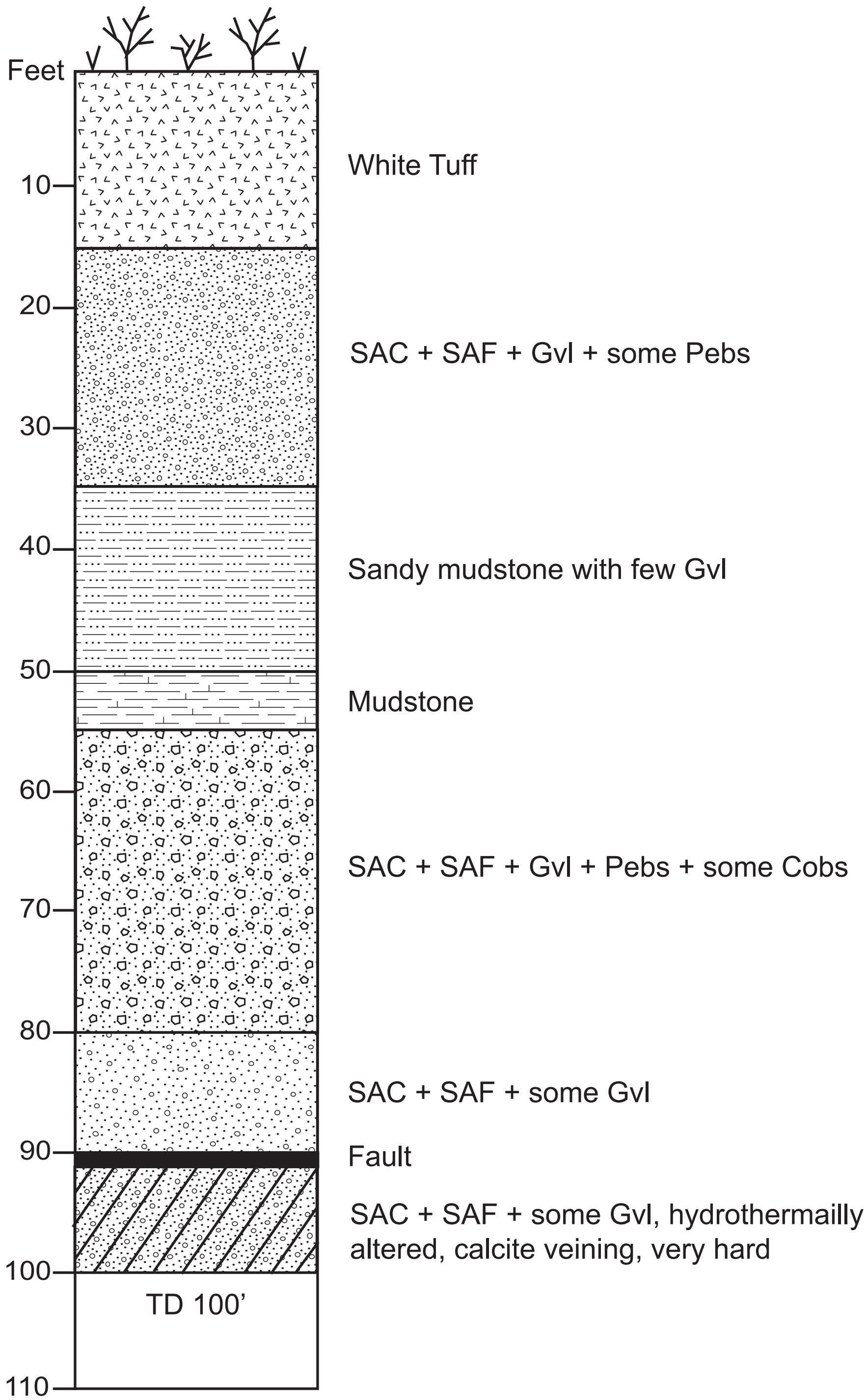
Drill Log H-45	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H-45



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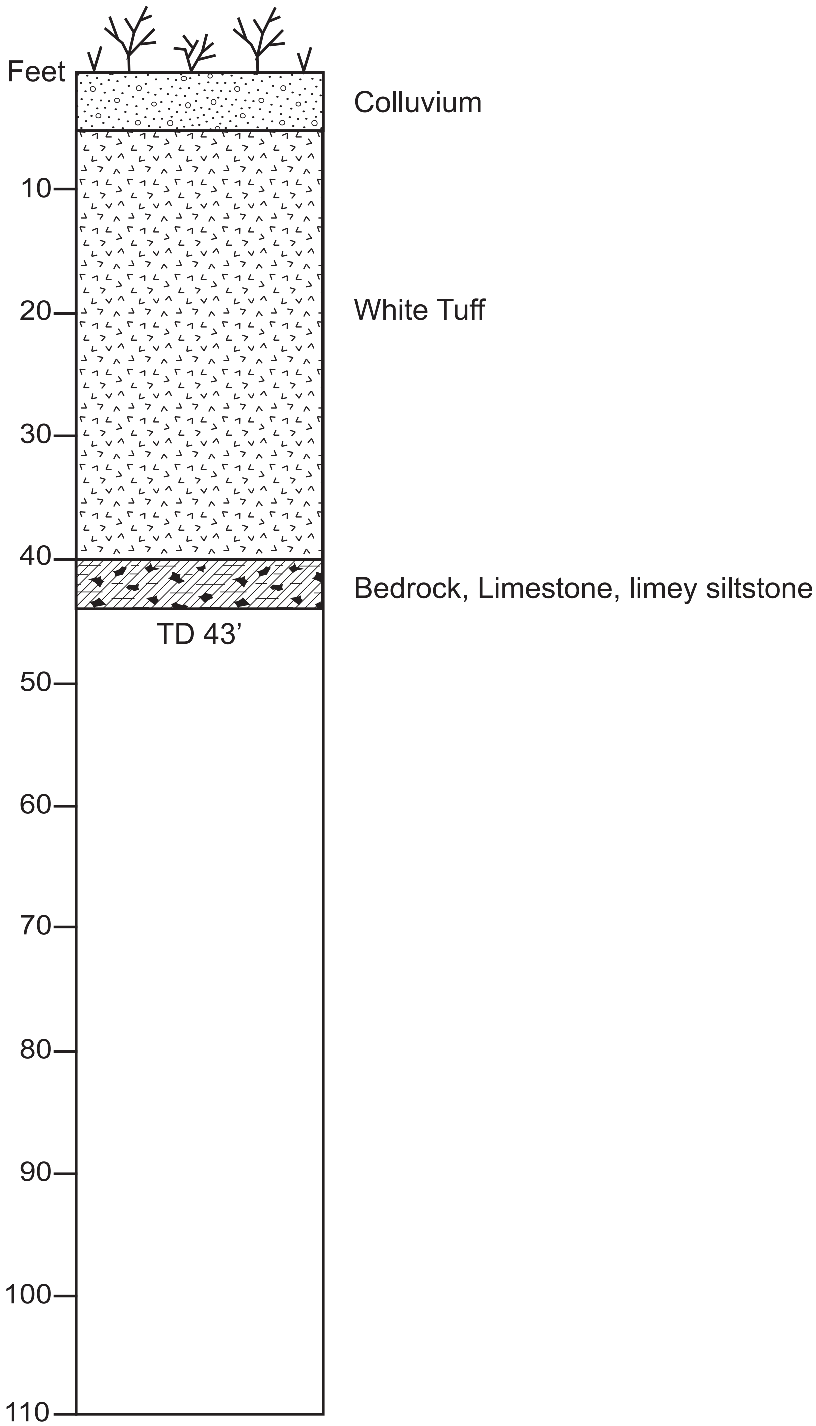
Drill Log H-46	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL-H46



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Drill Log H-47	
Poverty Gulch Project	Soilmec SR-30 Auger Rig
Esmeralda County, NV	Figure DL H-47

Appendix F

Vesta Minerals, Inc. Initial 17 Samples Assay Results

Sample Id	Ag 107 (ppm)	Au 197 (ppm)	Pd 106 (ppm)	Pt 195 (ppm)	Rh 103 (ppm)	Ir 193 (ppm)	Ru 102 (ppm)	Os 192 (ppm)	La 139 (ppm)	Ce 140 (ppm)	Pr 141 (ppm)	Nd 142 (ppm)	Pm 141 (ppm)	Sm 152 (ppm)	Eu 153 (ppm)	Gd 158 (ppm)	Tb 159 (ppm)	Dy 164 (ppm)	Ho 165 (ppm)	Er 166 (ppm)	Tm 169 (ppm)	Lu 175 (ppm)	Y 89 (ppm)	Yb 174 (ppm)
1-PG-H-1A 20 – 25' B -20	92.165	11.882	20.165	0.027	0.132	0.233	0.219	-8.986	335.680	715.832	64.326	183.081	64.326	22.841	4.629	21.542	3.035	10.500	2.540	5.436	0.992	0.842	58.949	4.351
2-PG-H-1A 20 – 25' B -20 TO +12	63.580	4.831	19.157	-0.016	0.133	0.255	0.194	-10.224	181.380	320.216	44.008	132.657	44.008	18.911	5.313	17.119	2.819	10.429	2.573	5.808	1.001	0.957	66.561	4.652
3-PG-H-1A 20 – 25' B +12	32.001	4.025	16.520	-0.009	0.126	0.275	0.209	-9.280	178.219	294.890	39.984	121.507	39.984	18.233	5.320	16.759	2.764	10.264	2.627	5.734	1.006	0.915	66.143	4.525
4-PG-H-1A 20 – 25' B Non Mags	24.880	92.627	20.019	0.123	0.156	0.555	-0.029	-1.991	2336.650	3135.533	471.483	1786.562	471.483	170.036	34.414	149.459	21.538	72.797	16.570	36.566	6.100	5.192	412.940	28.461
5-PG-H-1A 40 – 45 C -20	124.374	6.584	16.178	0.020	0.133	0.264	0.208	-0.563	488.896	1028.167	86.013	238.330	86.013	32.978	8.235	31.882	4.737	17.261	4.124	9.004	1.529	1.417	101.113	7.185
6-PG-H-1A 40 – 45 C -20 TO +12	51.885	3.403	14.748	0.112	0.191	0.568	0.185	-3.336	657.373	870.397	93.543	250.794	93.543	30.733	8.756	29.676	4.368	15.454	3.729	8.318	1.397	1.265	94.924	6.492
7-PG-H-1A 40 – 45 C +12	7.491	2.553	13.807	-0.045	0.135	0.180	0.207	-5.378	225.924	404.857	60.238	185.291	60.238	25.357	7.391	23.763	3.817	14.495	3.633	7.628	1.360	1.220	89.315	6.284
8-PG-H-1A 40 – 45 C Non Mags	8.388	5.942	18.322	0.191	0.141	0.510	-0.126	4.212	3283.622	5713.700	801.778	3044.955	801.778	239.837	42.282	222.887	29.435	95.461	21.354	47.783	7.878	6.940	515.927	37.831
9-PG-H-11 40 – 45 C -20	5.032	2.387	12.474	-0.011	0.101	0.202	0.057	-0.412	662.795	1282.434	122.518	330.768	122.518	36.514	5.778	36.572	4.843	16.355	3.838	8.270	1.334	1.282	91.496	6.558
10-PG-H-11 40 – 45 C -20 TO +12	39.833	1.615	9.787	-0.070	0.129	0.127	0.163	-1.531	191.573	328.654	40.530	124.052	40.530	19.429	5.879	17.799	3.001	10.983	2.775	5.999	1.030	0.990	69.996	4.928
11-PG-H-11 40 – 45 C +12	6.847	2.015	12.506	0.049	0.177	0.417	0.222	-4.433	173.751	310.972	41.233	127.349	41.233	19.841	5.929	18.474	3.091	11.510	2.887	6.379	1.142	1.049	74.509	5.331
12-PG-H-11 40 – 45 C Non Mags	14.894	83.979	18.171	0.052	0.127	0.269	-0.071	5.346	3168.657	5258.984	720.815	2678.076	720.815	192.597	29.920	181.221	22.533	72.019	16.107	37.181	6.158	5.900	368.536	30.598
13-PG-H-15 B 50 – 55 A -20	7.134	31.198	9.462	0.013	0.144	0.205	0.138	-1.463	317.449	652.786	68.888	202.199	68.888	31.091	7.098	29.732	4.877	18.978	4.867	11.251	1.993	1.809	115.986	9.436
14-PG-H-15 B 50 – 55 A -20 TO +12	4.571	4.170	9.358	0.025	0.143	0.177	0.200	-8.509	235.954	382.457	47.885	139.138	47.885	19.346	5.574	18.864	3.082	12.100	3.052	6.813	1.203	1.158	81.154	5.765
15-PG-H-15 B 50 – 55 A +12	4.326	1.791	9.073	0.038	0.157	0.239	0.134	-7.176	204.621	332.075	54.172	167.079	54.172	23.929	6.803	23.074	4.175	15.458	4.230	9.076	1.824	1.610	102.209	7.396
16-PG-H-15 B 50 – 55 A Non Mags	3.296	1.856	7.381	-0.011	0.144	0.128	0.184	-3.209	156.632	316.286	40.933	122.028	40.933	15.550	4.473	14.616	2.214	7.870	1.913	4.209	0.739	0.630	47.097	3.478
17-PG-H-15 B 70 – 75 D -20	15.528	926.739	14.380	-0.002	0.113	0.156	-0.246	10.266	4800.214	8040.065	1124.549	4235.495	1124.549	325.717	50.646	296.548	38.047	119.952	26.432	60.298	9.862	8.809	629.175	46.827
18-PG-H-15 B 70 – 75 D -20 TO 12	2.811	28.517	6.402	-0.076	0.125	0.148	0.141	-5.694	215.619	352.309	44.302	131.880	44.302	20.590	6.090	18.644	3.066	11.087	2.777	6.075	1.044	1.024	68.337	5.007
19-PG-H-15 B 70 – 75 D +12	4.192	8.243	9.481	-0.043	0.108	0.173	0.144	-4.923	204.368	338.877	47.003	148.667	47.003	24.145	7.616	21.193	3.497	13.355	3.261	6.995	1.229	1.140	80.844	5.694
20-PG-H-15 B 70 – 75 D Non Mags	4.025	3.256	5.283	-0.018	0.087	0.182	0.136	-5.508	552.348	1118.979	103.126	284.914	103.126	35.454	5.145	32.344	4.655	14.520	3.507	7.149	1.326	1.258	66.995	5.291
21-PG-H-15 B 80 – 85 C -20	4.358	2.880	8.552	0.002	0.093	0.134	0.050	0.455	660.913	1212.920	113.091	309.143	113.091	37.167	5.183	36.254	4.957	15.986	3.762	8.413	1.443	1.334	91.272	6.617
22-PG-H-15 B 80 – 85 C -20 TO 12	2.992	1.551	5.341	-0.038	0.111	0.060	0.099	-5.877	628.190	979.161	101.683	275.275	101.683	35.615	8.676	33.161	4.718	16.592	3.868	8.488	1.472	1.352	93.181	6.686
23-PG-H-15 B 80 – 85 C +12	8.544	1.797	9.418	0.047	0.164	0.199	0.181	-4.422	313.339	473.492	64.587	193.885	64.587	30.458	8.964	27.542	4.457	16.119	3.997	8.568	1.493	1.355	95.726	6.937
24-PG-H-15 B 80 – 85 C Non Mags	3.722	1.511	10.847	0.045	0.152	0.218	-0.049	-0.216	2533.406	4208.506	599.803	2259.295	599.803	184.852	32.611	168.904	22.438	72.476	16.311	36.611	5.984	5.394	386.122	28.481
25-PG-H-22 30 – 35 C -20	5.528	1.742	9.771	-0.002	0.108	0.163	0.112	-6.516	383.832	882.604	83.363	248.924	83.363	33.622	5.762	30.557	4.447	15.384	3.685	7.766	1.322	1.178	71.157	5.892
26-PG-H-22 30 – 35 C -20 TO 12	4.879	3.526	13.570	-0.002	0.158	0.117	0.144	-1.388	827.231	1258.071	129.880	352.920	129.880	46.079	11.005	42.081	6.169	20.745	5.016	10.955	1.927	1.719	118.430	8.452
27-PG-H-22 30 – 35 C +12	22.297	1.186	12.991	-0.058	0.150	0.087	0.145	-4.848	1317.736	1946.259	176.517	452.376	176.517	54.403	12.070	52.105	7.151	24.465	5.831	12.920	2.186	1.930	138.042	10.238
28-PG-H-22 30 – 35 C Non Mags	4.363	1.603	12.600	0.013	0.143	0.265	0.154	-6.591	431.254	838.431	84.258	242.248	84.258	35.021	7.975	32.104	4.995	17.952	4.196	9.008	1.590	1.483	98.182	7.495
29-PG-H-22 15 – 20 C -20	13.441	1.656	13.942	0.027	0.157	0.313	0.016	-3.392	2488.617	4225.995	602.247	2268.017	602.247	186.648	33.194	169.893	22.298	71.788	16.252	36.744	6.002	5.369	385.716	28.748
30-PG-H-22 15 – 20 C -20 TO 12	6.761	0.903	11.167	-0.067	0.141	0.160	0.111	-3.872	279.012	485.635	58.209	176.295	58.209	28.217	7.943	26.264	4.270	15.600	3.780	8.128	1.411	1.282	91.830	6.715
31-PG-H-22 15 – 20 C +12	4.640	0.974	13.074	-0.047	0.172	-0.009	0.224	-3.863	252.419	430.803	57.765	185.857	57.765	29.445	9.284	26.830	4.577	17.040	4.243	9.006	1.579	1.478	101.361	7.530
32-PG-H-22 15 – 20 C Non Mags	31.047	75.981	12.667	-0.045	0.152	0.034	0.004	0.214	2570.180	4396.784	640.119	2437.711	640.119	209.878	38.133	187.955	25.897	83.660	19.129	42.031	6.910	6.226	453.327	33.275
33-PG-H-22 55 – 60 A -20	4.703	3.732	9.466	-0.079	0.120	0.077	0.101	-7.081	602.770	1080.614	104.028	290.023	104.028	36.139	5.518	33.721	4.725	15.586	3.653	7.925	1.290	1.201	83.459	6.184
34-PG-H-22 55 – 60 A -20 TO 12	17.461	0.985	7.809	-0.049	0.103	0.047	0.127	-4.891	681.632	1128.126	119.421	333.520	119.421	44.916	10.381	39.714	5.859	20.907	4.755	10.453	1.777	1.520	114.630	8.195
35-PG-H-22 55 – 60 A +12	3.793	0.736	8.267	-0.137	0.107	-0.033	0.121	-6.335	208.264	386.015	46.328	145.006	46.328	23.554	7.447	20.586	3.399	12.382	3.000	6.584	1.145	1.039	72.447	5.388
36-PG-H-22 55 – 60 A Non Mags	19.526	20.772	11.057	-0.092	0.141	0.068	0.001	-1.889	1863.504	3165.932	458.610	1755.317	458.610	154.986	29.930	137.325	19.265	62.913	14.340	32.017	5.350	4.624	338.924	24.770
37-PG-H-36 20 – 25' B -20	48.287	1.517	9.898	-0.119	0.076	-0.010	0.088	-3.624	733.455	1438.733	129.545	367.320	129.545	47.010	7.331	43.941	6.158	20.534	4.658	10.298	1.678	1.456	108.525	7.607
38-PG-H-36 20 – 25' B -20 TO 12	3.851	0.630	10.477	-0.103	0.120	-0.009	0.163	-3.700	1149.256	1722.578	167.075	439.000	167.075	54.748	11.679	50.401	6.953	23.497	5.348	11.810	2.056	1.781	129.430	9.288
39-PG-H-36 20 – 25' B +12	3.362	0.677	10.896	-0.070	0.129	0.003	0.129	-3.861	241.985	409.281	53.290	167.053	53.290	26.957	8.353	23.907	3.993	15.046	3.676	7.824	1.357	1.246	88.364	6.383
40-PG-H-36 20 – 25' B Non Mags	88.258	10.334	12.757	0.011	0.131	0.054	-0.094	6.006	2749.550	4622.617	660.490	2497.146	660.490	220.901	41.375	199.395	27.443	92.263	21.059	46.737	7.695	6.743	490.138	36.242
41-PG-H-36 80 – 85 B -20	6.961	4.313	10.460	-0.123	0.131	0.022	0.112	-3.603	728.963	1352.935	117.638	328.258	117.638	42.085	8.521	39.850	5.604	19.102	4.490	9.781	1.723	1.426	98.841	7.455
42-PG-H-36 80 – 85 B -20 TO 12	3.581	1.171	8.382	-0.130	0.188	-0.038	0.154	-5.901	235.779	417.772	51.312	155.134	51.312	24.217	6.850	21.412	3.466	12.959	3.028	6.519	1.128	1.114	72.626	5.475
43-PG-H-36 80 – 85 B +12	4.674	1.012	9.659	-0.081	0.136	-0.055	0.170	-1.477	219.186	377.968	50.639	159.778	50.639	26.407	7.775	23.574	3.977	14.833	3.632	7.749	1.396	1.289	84.594	6.290
44-PG-H-36 80 – 85 B Non Mags	45.289	1.669	12.961	0.032	0.149	0.036	-0.156	4.444	3737.518	6415.368	926.512	3501.517	926.512	295.873	52.554	267.165	36.631	119.244	26.852	60.672	9.992	8.871	614.839	46.732
45-PG-H-37 40 – 45 C -20	9.741	1.370	8.191	-0.031	0.137	-0.021	0.104	-7.308	1258.388	1789.258	159.723	409.797	159.723	49.707	11.298	48.825	6.810	23.599	5.570	12.376	2.049	1.874	129.649	9.799
46-PG-H-37 40 – 45 C -20 TO 12	253.782	1.079	9.226	-0.097	0.150	0.008	0.204	-5.597	312.462	496.316	54.523	157.831	54.523	23.926	7.274	22.334	3.531	13.208	3.194	7.027	1.274	1.192	75.127	6.100
47-PG-H-37 40 – 45 C +12	4.283	1.257	10.283	-0.009	0.171	0.131	0.220	-2.754	269.496	459.122	53.243	162.002	53.243	25.514	7.614	22.326	3.567	12.727	3.062	6.633	1.227	1.065	71.807	5.685
48-PG-H-37 40 – 45 C Non Mags	3.644	3.093	9.931	0.025	0.121	0.033	-0.009	-7.596	1909.286	3261.912	469.417	1793.119	469.417	163.854	31.376	146.871	20.634	69.154	15.819	34.446	5.808	5.222	368.256	27.462
49-PG-H-42A 65 – 70 -20	3.819	0.846	9.879	-0.092	0.135	0.064	0.181	-3.288	538.264	952.647	102.385	301.814	102.385	44.522	11.718	39.053	6.050	21.172	5.064	11.244	1.906	1.727	117.387	8.846
50-PG-H-42A 65 – 70 +12	78.866	46.081	31.536	2.56	2.226	5.689	0.269	1.835	134.391	240.834	31.998	90.584	31.998	13.791	5.899	11.968	3.682	10.04	3.416	6.012	2.238	2.283	53.629	5.33
51-PG-H-42A 65 – 70 -20 TO 12	37.22	16.893	15.572	1.597	1.834	3.886	-0.465	-3.98	38.49	87.955	13.56	40.205	13.56	7.703	3.846	6.5	2.851	7.11	2.814	4.66	2.144	2.162	26.739	4.495
52-PG-H-42A 65 – 70 Non Mags	4.934	9.788	10.563	0.972	1.149	2.544	-0.801	-3.8	894.32	1600.471	173.312	477.432	173.312	53.838	13.462	47.412	8.44	31.612	6.866	16.229	3.126	2.912	176.596	13.514
53-PG-H-42C 20 – 25 B -20	2.822	9.096	10.683	0.267	0.242	1.641	-1.426	-1.814	1291.801	1952.936	187.384	486.009	187.384	50.194	11.518	46.352	6.879	27.495	5.234	14.067	2.048	1.873	152.927	10.955
54-PG-H-42C 20 – 25 B +12	65.16	6.651	8.248	0.155	0.247	0.72	-1.457	-1.23	149.557	311.155	35.665	106.548	35.665	14.987	4.431	13.251	2.366	10.207	2.178	5.414	0.889	0.855	59.827	4.581
55-PG-H-42C 20 – 25 B -20 TO 12	22.858	115.924	7.365	0.069	0.211	0.546	-1.496	-3.731	148.5	286.954	35.894	104.122	35.894	14.436	4.263	12.23	2.264	9.504	1.992	5.256	0.841	0.773	56.115	4.297
56-PG-H-42C 20 – 25 B Non Mags	9.736	5.082	8.242	0.088	0.117	0.389	-1.641	4.177	1845.763	3056.123	461.303	1779.04	461.303	124.757	26.126	114.174	16.891	66.465	12.653	33.953	4.601	4.121	353.292	26.365
57-PG-H-43A 10 – 15 C -20	2.904	4.242	10.301	0.006	0.115	0.329	-1.555	1.235	1814.282	2872.785	408.004	1575.816	408.004	98.131	18.84	92.408	13.106	51.724	9.83	27.191	3.702	3.331	277.729	21.371
58-PG-H-43A 10 – 15 C +12	4.003	3.346	9.113	-0.045	0.125	0.183	-1.503	3.183	211.667	350.095	50.918	160.08	50.918	22.041	7.144	19.842	3.641	15.836	3.228	8.346	1.204	1.167	92.31	6.942
59-PG-H-43A 10 – 15 C -20 TO 12	1.064	2.963	5.833	-0.065	0.115	0.144	-1.505	-0.502	662.323	885.454	81.801	201.309	81.801	21.346	5.977	20.499	3.054	12.435	2.555	6.811	0.983	0.928	72.798	5.565
60-PG-H-43A 10 – 15 C Non Mags	19.609	62.724	13.067	0.079	0.116	0.183	-1.839	7.175	4437.757	7452.247	1140.126	4380.308	1140.126	296.963	54.57	274.756	39.839	154.777	28.818	77.823	10.693	9.733	817.13	62.027
61-PG-H-43A 40 – 45A -20	30.938	3.766	7.138	-0.05	0.06	0.126	-1.694	2.791	1360.728	2205.211	210.646	540.276	210.646	59.042	13.947	56.178	8.35	34.405	6.539	17.876	2.436	2.216	174.823	13.759
62-PG-H-43A 40 – 45A +12	8.604	3.399	4.321	-0.094	0.065	0.133	-1.602	-2.462	170.521	313.103	38.368	116	38.368	16.647	5.396	15.251	2.772	12.507	2.562	6.841	1.006	0.892	69.267	5.525
63-PG-H-43A 40 – 45A -20 TO 12	-0.069	3.114	3.456	-0.079	0.067	0.076	-1.614	-1.698	178.417	316.889	39.922	118.828	39.922	16.694	5.503	15.022	2.716	11.706	2.49	6.362	0.924	0.909	66.063	5.622
64-PG-H-43A 40 – 45A Non Mags	1.028	3.514	8.799	0.006	0.051	0.154	-1.939	5.869	3478.139	6006.023	941.255	3660.635	941.255	264.749	50.66	243.131	36.186	141.159	26.509	70.372	9.642	8.78	690.301	55.497
65-PG-H-43A 45 – 50A -20	3.319	2.615	5.855	-0.073	0.1	0.058	-1.504	-1.727	1057.872	1756.963	181.249	488.373	181.249	53.64	12.485	48.953	7.545	30.192	5.759	15.318	2.086	1.9	159.965	12.129
66-PG-H-43A 45 – 50A +12	2.69	1.695	3.901	-0.099	0.095	0.037	-1.534	-1.59	138.105	271.856	33.771	104.478	33.771	15.129	5.229	13.359	2.425	10.773	2.232	5.96	0.821	0.838	61.762	5.043
67-PG-H-43A 45 – 50A -20 TO 12	0.282	1.432	3.001	-0.069	0.064	0.038	-1.564	0.36	161.455	280.251	36.323	110.348	36.323	15.501	4.95	13.642	2.454	10.379	2.101	5.571	0.835	0.79	60.568	4.791
68-PG-H-43A 45 – 50A Non Mags	1.409	1.352	4.297	-0.045	0.065	0.014	-1.679	3.604	1406.877	1747.408	281.693	1078.539	281.693	91.04	20.416	79.965	12.526	51.467	9.549	25.42	3.59	3.164	221.303	20.538

Appendix G

American Assay Laboratories, Inc.

Initial 17 Samples Assay Results (All Elements)

Initial 17 Samples Assay Results (Ore Grade)

SP0148618
FINAL REPORT

CLIENT : Advanced Geologic Explorations, Inc.
PROJECT : Poverty Gulch
REFERENCE : PG-H-1A 20-25 A -20 to PG-H-43A 45-50 A Non-mag
REPORTED : ##

		Au	Pd	Pt	Ag	Al	As	Ba
		IO-FAPGM30	IO-FAPGM30	IO-FAPGM30	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61
		0.003	0.003	0.005	0.05	300	0.5	2
SAMPLES		ppm	ppm	ppm	ppm	ppm	ppm	ppm
PG-H-1A 20-25 A -20		0.228	0.036	0.112	<0.05	33276	13.0	537
PG-H-1A 20-25 A +20		0.174	0.008	0.065	<0.05	61836	10.3	974
PG-H-1A 20-25 A +12		0.114	0.031	0.103	<0.05	65366	10.7	926
PG-H-1A 20-25 A Non-mag		0.101	0.006	0.147	<0.05	60458	6.8	844
PG-H-1A 40-45 C -20		0.103	0.030	0.122	<0.05	46545	18.7	652
PG-H-1A 40-45 C +20		0.103	0.051	0.057	<0.05	63812	17.5	1061
PG-H-1A 40-45 C +12		0.085	0.018	0.160	<0.05	66761	16.8	1020
PG-H-1A 40-45 C Non-mag		0.089	0.070	0.130	<0.05	40311	22.3	299
PG-H-11 40-45 A -20		0.095	0.022	0.106	<0.05	27004	43.1	330
BLANK		0.111	0.055	0.067	<0.05	1596	8.2	5
PG-H-11 40-45 A +20		0.083	0.038	0.055	<0.05	63943	<0.5	985
PG-H-11 40-45 A +12		0.049	0.033	0.108	<0.05	65304	2.4	1065
PG-H-11 40-45 A Non-mag		345.000	0.033	0.050	<0.05	46292	9.7	509
PG-H-15B 50-55 A -20		0.274	0.019	0.092	<0.05	56906	3.8	968
PG-H-15B 50-55 A +20		0.136	0.033	0.053	<0.05	62580	5.7	1183
PG-H-15B 50-55 A +12		0.107	<0.003	0.100	<0.05	61426	2.7	1074
PG-H-15B 50-55 A +12-X		0.052	<0.003	<0.005	<0.05	60897	<0.5	1087
PG-H-15B 50-55 A Non-mag		0.097	0.025	<0.005	<0.05	61185	0.6	1023
PG-H-15B 70-75 D -20		0.062	0.055	0.105	<0.05	19331	4.0	411
PG-H-15B 70-75 D +20		0.101	0.017	0.139	<0.05	59771	9.4	964
STD - OREAS 905								
STD - OREAS 600b		1.180	6.050	1.540	22.84	70976	98.5	3384

STD - CDN-PGMS-22								
PG-H-15B 70-75 D +12		0.106	0.050	0.107	<0.05	67511	11.7	1376
PG-H-15B 70-75 D Non-mag		24.500	0.017	0.124	<0.05	36252	39.7	359
PG-H-15B 80-85 C -20		0.107	0.036	0.052	<0.05	17746	6.6	254
PG-H-15B 80-85 C +20		0.099	0.035	0.058	<0.05	60596	7.5	950
PG-H-15B 80-85 C +12		0.070	0.048	0.022	<0.05	68863	15.7	1242
PG-H-15B 80-85 C Non-mag		0.104	0.014	0.067	<0.05	57228	19.4	606
PG-H-22 15-20 C -20		0.088	0.069	0.103	<0.05	57226	25.8	535
PG-H-22 15-20 C +20		0.083	0.033	0.066	<0.05	66965	1.2	1118
PG-H-22 15-20 C +12		0.075	0.013	0.055	<0.05	72005	3.8	1058
PG-H-22 15-20 C Non-mag		20.300	0.120	0.280	<0.05	68270	13.7	2528
PG-H-22 15-20 C Non-mag-X					<0.05	66718	1.0	2204
PG-H-22 30-35 C -20		0.134	0.015	0.088	<0.05	24344	19.0	288
PG-H-22 30-35 C +20		0.071	0.020	0.059	<0.05	60651	5.0	908
PG-H-22 30-35 C +12		0.044	0.036	0.149	<0.05	69159	17.7	1218
PG-H-22 30-35 C Non-mag		5.010	0.032	0.111	<0.05	54453	6.8	587
STD - OREAS 600b								
STD - OREAS 552					0.09	18257	3.2	218
STD - OREAS 682		0.183	0.433	0.895				
PG-H-22 55-60 A -20		0.107	0.030	0.048	<0.05	18454	6.0	200
PG-H-22 55-60 A +20		0.083	0.033	0.092	<0.05	55609	2.8	860
PG-H-22 55-60 A +12		0.043	0.029	0.066	<0.05	63913	20.6	1089
PG-H-22 55-60 A Non-mag		0.094	0.051	0.071	<0.05	59449	8.4	717
PG-H-36 20-25 B -20		0.049	0.047	0.022	<0.05	20224	4.1	242
PG-H-36 20-25 B +20		0.065	0.039	0.058	<0.05	58623	11.9	960
PG-H-36 20-25 B +12		0.077	0.028	0.121	<0.05	67878	21.7	1064
PG-H-36 20-25 B Non-mag		0.094	0.028	<0.005	<0.05	55668	2.3	638
PG-H-36 80-85 B -20		0.081	0.067	0.079	<0.05	47610	3.7	760
PG-H-36 80-85 B +20		0.123	0.056	0.116	<0.05	59684	5.5	995
STD - OREAS 602b								
STD - OREAS 751					<0.05	76326	11.5	443
STD - OREAS 684		0.311	1.680	3.560				
PG-H-36 80-85 B +12		0.089	0.057	0.132	<0.05	69921	8.8	1146

PG-H-36 80-85 B Non-mag		19.900	0.016	0.062	<0.05	53887	21.8	437
PG-H-36 80-85 B Non-mag-X					<0.05	53434	1.4	412
PG-H-37 40-45 C -20		0.134	0.004	0.084	<0.05	41975	6.4	575
PG-H-37 40-45 C +20		0.075	0.021	0.066	<0.05	57963	5.8	944
PG-H-37 40-45 C +12		0.048	0.035	0.088	<0.05	65148	12.6	1164
PG-H-37 40-45 C Non-mag		0.090	0.024	0.065	4.21	57922	8.2	737
BLANK		0.077	0.047	0.061	<0.05	1820	<0.5	6
PG-H-42A 65-70 C -20		0.043	0.023	0.113	<0.05	62445	2.2	879
PG-H-42A 65-70 C +20		0.093	0.044	0.148	<0.05	61928	<0.5	918
PG-H-42A 65-70 C +12		0.052	0.041	0.105	<0.05	62197	7.2	1195
PG-H-42A 65-70 C Non-mag		0.070	0.018	0.086	<0.05	59845	2.1	761
PG-H-42C 20-25 B -20		0.087	0.017	0.092	<0.05	52955	14.7	778
PG-H-42C 20-25 B -20-X					<0.05	52379	1.4	782
PG-H-42C 20-25 B +20		0.041	0.046	0.102	<0.05	57143	4.8	932
PG-H-42C 20-25 B +12		0.083	0.014	0.105	<0.05	62517	12.2	1193
PG-H-42C 20-25 B Non-mag		0.074	0.023	0.097	<0.05	51559	9.3	590
PG-H-43A 10-15 C -20		0.052	0.037	0.099	<0.05	56133	3.6	775
PG-H-43A 10-15 C +20		0.104	0.026	0.135	<0.05	59221	14.2	967
PG-H-43A 10-15 C +12		0.098	0.039	0.081	0.05	71481	0.6	1111
PG-H-43A 10-15 C Non-mag		0.067	0.026	0.098	<0.05	53731	10.3	659
PG-H-43A 40-45 A -20		0.142	0.056	0.081	<0.05	59576	12.8	851
PG-H-43A 40-45 A +20		0.101	0.048	0.094	<0.05	57647	20.2	960
PG-H-43A 40-45 A +12		0.178	0.090	0.171	<0.05	59426	6.9	959
PG-H-43A 40-45 A Non-mag		5.310	0.061	0.106	6.52	52381	<0.5	447
BLANK		0.192	0.056	0.146	<0.05	1616	12.8	5
PG-H-43A 45-50 A -20		0.134	0.055	0.192	<0.05	58867	10.1	963
PG-H-43A 45-50 A +20		0.107	0.074	0.135	<0.05	59938	5.8	1066
PG-H-43A 45-50 A +12		0.095	0.049	0.162	<0.05	64588	9.3	1372
STD - PGMS22		1.310	6.280	1.640	<0.05	80060	<0.5	386
PG-H-43A 45-50 A Non-mag		0.313	0.088	0.155	<0.05	61011	5.0	735
STD - OREAS 682		0.185	0.494	0.955				

Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy
IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61
0.02	0.02	300	0.02	0.2	0.2	0.2	0.2	0.5	0.05
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
2.79	3.77	11035	0.59	173.7	82.6	211.0	3.1	19.9	4.71
1.67	<0.02	34072	0.64	117.0	23.6	82.1	5.3	28.0	5.10
2.45	<0.02	48346	0.62	81.5	13.9	65.9	3.4	16.0	3.64
1.96	<0.02	54799	0.47	>1000	29.3	52.6	2.3	7.8	28.94
1.99	1.84	16355	0.78	272.2	91.4	120.2	3.9	28.6	6.83
2.18	<0.02	17837	0.64	102.7	14.6	80.9	3.4	21.9	6.39
2.62	<0.02	23296	0.61	92.3	12.1	81.4	4.7	18.5	4.09
2.62	0.73	53121	0.38	>1000	70.7	56.7	2.6	10.7	4.65
<0.02	3.79	13390	0.38	317.7	73.3	128.9	1.9	7.8	38.81
2.36	4.00	<300	0.51	4.4	<0.2	1.8	7.0	<0.5	5.97
3.11	<0.02	28768	0.60	85.0	13.2	84.1	<0.2	11.4	0.36
1.70	<0.02	26939	0.34	78.1	12.8	85.4	8.2	10.2	4.07
1.99	<0.02	39576	0.55	>1000	36.6	44.0	9.1	<0.5	3.83
2.04	0.87	24502	0.64	194.1	25.9	117.4	4.8	13.6	36.16
1.73	<0.02	22042	0.59	71.9	7.8	58.3	13.2	5.3	7.14
2.44	<0.02	20706	0.58	67.0	7.8	46.9	5.9	7.6	3.82
1.59	<0.02	20295	0.63	66.7	7.7	48.1	6.3	8.4	4.56
0.89	0.97	14114	0.52	71.4	4.0	17.5	6.3	5.6	2.86
4.21	4.76	9306	0.54	303.6	93.6	141.0	1.8	11.7	5.99
1.67	<0.02	16428	0.46	60.7	12.8	39.4	3.9	18.5	3.95
2.89	4.97	12741	2.35	92.1	2.7	23.1	7.2	462.9	3.59

1.42	<0.02	29480	0.42	73.2	20.1	108.0	2.5	17.6	4.02
<0.02	<0.02	50208	0.65	>1000	52.1	52.8	3.7	4.7	48.65
5.86	4.78	8022	0.38	241.4	103.8	139.6	1.1	6.4	5.78
1.63	<0.02	19134	0.40	206.8	14.1	48.1	2.8	12.3	5.75
1.83	<0.02	26537	0.33	94.9	16.2	102.3	3.0	17.5	4.00
2.38	<0.02	41563	0.46	>1000	22.4	28.0	2.1	9.0	3.81
3.08	1.85	18079	0.48	166.5	42.0	110.1	1.7	11.6	23.41
2.30	<0.02	29834	0.31	262.0	18.6	78.9	4.0	10.2	5.81
2.50	<0.02	45842	0.40	94.4	18.8	175.8	5.0	15.9	6.57
2.28	<0.02	48404	0.90	910.5	23.3	45.4	5.5	<0.5	5.43
0.22	<0.02	46144	0.83	783.2	21.5	42.0	1.4	<0.5	4.25
3.19	3.77	9696	0.51	244.4	112.7	167.9	0.9	11.7	4.96
1.85	<0.02	17141	0.55	227.4	12.9	49.3	3.1	13.9	5.09
1.00	<0.02	19057	0.76	87.9	13.3	71.5	2.3	15.5	4.44
1.83	<0.02	35935	0.36	>1000	24.9	31.5	2.7	4.3	20.60
0.80	4.97	94239	0.10	20.9	3984.8	21.1	3.9	>25000	2.23
5.03	4.77	7557	0.39	228.3	80.2	128.9	2.9	14.3	5.18
1.33	<0.02	14684	0.39	249.8	15.2	36.2	3.8	9.2	5.34
2.50	<0.02	17590	0.61	91.5	13.8	74.3	2.2	13.0	3.56
2.41	<0.02	38088	0.51	852.4	19.7	31.3	2.7	3.7	19.51
3.50	5.75	8888	0.47	311.6	108.6	136.8	1.8	5.6	5.60
1.51	<0.02	15400	0.54	163.0	30.8	41.5	3.0	7.5	4.72
1.99	<0.02	27700	0.54	92.8	17.9	108.5	2.8	15.1	4.18
1.30	<0.02	50403	0.42	>1000	26.8	36.7	2.9	3.3	29.65
1.72	1.86	15393	0.31	238.9	44.8	111.1	1.3	9.0	27.06
1.66	<0.02	16755	0.49	83.1	11.4	155.6	3.6	10.9	5.49
1.15	1.94	7801	1.44	19.8	4.1	34.5	2.7	21.2	3.86
115.10	<0.02	25702	0.39	88.0	15.8	104.6	51.8	15.1	2.59

1.33	<0.02	61150	1.08	950.4	47.5	69.3	1.7	8.5	4.11
0.39	<0.02	60371	0.94	>1000	46.1	69.9	1.3	<0.5	40.12
1.43	2.84	13305	0.70	196.8	61.5	98.2	3.0	9.5	4.55
1.73	<0.02	19385	0.63	99.7	11.1	56.4	2.8	7.2	4.28
1.77	<0.02	23943	0.32	70.6	11.3	76.1	2.2	10.0	3.05
2.32	<0.02	44198	0.39	>1000	26.4	35.4	2.3	5.0	24.97
3.42	4.00	<300	0.49	6.3	<0.2	1.9	0.3	<0.5	0.41
1.73	<0.02	18459	0.53	198.1	17.8	34.8	6.3	7.3	5.10
2.24	<0.02	14678	0.53	56.4	9.0	24.7	2.9	8.1	2.84
2.41	<0.02	14534	0.45	64.6	8.3	39.9	2.6	6.5	2.22
1.41	<0.02	27569	0.37	410.0	8.9	20.5	2.6	1.1	10.07
0.74	<0.02	16475	0.83	556.5	22.7	49.5	2.5	9.3	8.89
1.96	<0.02	16394	0.92	543.5	22.2	48.2	2.9	8.0	2.80
2.25	<0.02	11154	0.48	102.0	9.8	28.5	2.7	8.6	2.43
2.67	0.96	10019	0.50	63.3	7.9	25.3	1.8	8.8	25.38
1.08	<0.02	46127	0.68	>1000	24.3	34.5	2.8	2.9	11.42
1.34	0.86	26622	0.69	741.3	38.4	60.9	2.0	10.3	3.79
1.74	<0.02	22335	0.54	113.2	12.4	65.4	2.0	10.5	4.40
1.64	<0.02	36166	0.52	84.7	17.7	146.6	2.1	17.8	36.29
1.63	<0.02	60690	0.52	>1000	28.4	33.6	2.6	<0.5	7.39
1.73	<0.02	20347	0.32	582.8	24.3	47.3	2.4	11.3	3.23
1.72	<0.02	14226	0.64	83.3	11.4	33.1	1.4	7.8	3.45
3.75	<0.02	24695	0.75	74.6	15.4	90.4	3.0	12.3	41.80
2.84	<0.02	60727	0.50	>1000	32.9	41.4	0.4	4.0	0.45
1.93	4.00	301	0.58	4.1	<0.2	1.8	3.7	<0.5	6.55
2.62	<0.02	16789	0.59	281.0	15.8	38.8	2.8	8.2	3.23
2.77	0.96	12896	0.66	68.2	8.8	31.2	12.4	10.5	2.96
2.15	<0.02	18188	0.62	63.4	15.6	61.4	3.2	7.3	2.97
0.66	<0.02	65266	0.46	31.0	48.4	593.1	4.3	237.6	2.88
2.00	<0.02	32593	0.71	605.8	12.3	21.8	1.8	4.1	14.28

Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	In
IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61
0.05	0.05	300	0.05	0.05	0.02	0.03	0.01	0.05	0.008
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
2.80	1.56	>250000	27.97	7.28	<0.02	21.84	<0.01	0.92	0.177
2.84	1.79	50517	16.68	6.62	1.79	10.04	<0.01	0.93	0.018
2.22	1.37	35994	15.24	5.37	1.61	6.67	<0.01	0.80	<0.008
14.63	10.53	96030	21.48	51.19	3.29	89.87	<0.01	5.15	0.145
3.52	2.24	230802	24.48	10.00	1.99	18.82	<0.01	1.28	0.075
3.47	2.09	42396	23.32	9.10	2.54	17.19	<0.01	1.25	0.042
2.42	1.66	41593	16.06	6.13	2.66	7.60	<0.01	0.84	<0.008
2.41	1.52	194691	15.19	6.11	1.78	5.78	<0.01	0.83	0.013
19.59	13.13	>250000	23.62	74.49	3.49	128.63	<0.01	6.73	0.195
3.29	1.67	389	35.52	9.95	3.29	23.34	0.11	1.14	0.156
0.22	0.08	37943	4.45	0.54	2.39	1.78	<0.01	0.07	<0.008
2.36	1.50	34585	13.18	5.68	2.16	6.15	<0.01	0.81	<0.008
2.21	1.32	118020	14.35	5.16	1.55	4.94	<0.01	0.76	0.016
19.13	10.76	125001	22.78	75.66	3.94	199.63	<0.01	6.34	0.184
4.18	1.94	30275	21.36	9.51	3.67	14.64	<0.01	1.42	0.042
2.39	1.33	30421	14.62	5.36	2.88	5.23	<0.01	0.83	<0.008
2.55	1.28	28997	14.50	4.92	2.11	4.76	<0.01	0.94	<0.008
1.53	1.07	11126	14.69	4.05	2.53	3.22	0.07	0.52	0.010
3.31	1.56	>250000	37.70	10.71	2.22	28.15	<0.01	1.12	0.171
1.96	1.29	35430	16.25	4.73	3.57	5.10	<0.01	0.69	<0.008
1.13	1.49	24089	20.06	6.27	3.24	7.44	0.06	0.52	0.545

2.15	1.67	41388	15.19	5.38	2.22	4.28	<0.01	0.71	<0.008
24.81	15.49	162088	25.96	97.53	5.46	125.88	<0.01	8.83	0.267
3.33	1.43	>250000	37.32	9.95	4.62	31.24	0.11	1.14	0.221
3.30	2.07	49016	18.16	8.67	4.38	9.82	<0.01	1.12	<0.008
1.97	1.55	44534	16.49	5.07	2.78	6.04	<0.01	0.71	<0.008
2.19	1.63	59817	17.09	5.48	3.03	6.13	<0.01	0.71	0.016
12.54	8.09	187743	20.10	43.37	3.87	45.78	<0.01	4.26	0.081
3.13	1.70	44614	25.98	8.17	3.66	20.60	<0.01	1.13	0.535
3.66	2.32	52269	18.41	10.04	3.19	9.90	<0.01	1.29	0.023
3.09	2.14	73753	18.27	7.05	3.11	6.13	<0.01	1.11	0.096
2.10	1.31	64889	5.54	7.05	2.33	14.10	<0.01	0.73	<0.008
2.73	1.40	>250000	32.83	8.73	2.94	22.69	<0.01	0.98	0.114
2.87	1.83	45868	17.14	7.19	3.71	8.11	0.05	0.92	0.036
2.46	1.60	34013	16.13	5.71	3.12	5.45	<0.01	0.84	<0.008
10.92	7.11	62591	19.57	37.69	4.11	61.41	<0.01	3.71	0.096
1.22	0.47	7406	7.17	2.75	2.85	2.51	<0.01	0.44	0.117
2.86	1.34	>250000	33.10	7.98	3.28	28.83	<0.01	0.98	0.166
2.89	2.16	57346	16.88	8.42	4.80	10.66	<0.01	1.03	<0.008
1.88	1.43	37451	15.52	4.59	3.04	5.64	<0.01	0.66	<0.008
10.45	7.06	43912	18.41	33.02	5.14	26.99	<0.01	3.71	0.091
3.23	1.46	>250000	36.79	9.13	4.69	27.21	0.18	1.03	0.161
2.45	1.65	48578	18.06	6.86	4.85	8.81	0.15	0.84	<0.008
2.39	1.60	43908	17.10	5.58	3.17	5.74	<0.01	0.88	<0.008
15.46	10.44	75263	21.57	54.26	8.07	56.93	<0.01	5.42	0.065
14.36	9.16	187088	21.24	49.85	6.79	55.15	<0.01	4.84	0.100
3.13	1.93	38179	22.43	8.49	4.07	15.17	<0.01	1.03	0.086
2.14	1.45	16059	15.04	5.12	3.24	6.55	<0.01	0.73	0.125
1.29	0.56	41160	17.30	2.95	5.79	4.16	<0.01	0.47	0.706

2.10	1.60	162131	16.69	5.34	3.68	5.10	0.30	0.77	<0.008
22.00	13.11	160279	24.77	71.34	6.99	158.72	<0.01	7.33	0.290
2.82	1.38	>250000	25.97	7.94	4.02	18.70	<0.01	0.92	0.083
2.36	1.64	38721	15.24	5.77	4.40	7.12	<0.01	0.84	<0.008
1.72	1.23	32458	14.52	4.32	3.62	4.68	<0.01	0.65	0.034
13.02	8.09	66929	20.85	45.52	5.34	57.25	<0.01	4.61	0.109
0.27	0.13	341	3.68	0.54	3.94	1.60	<0.01	0.07	<0.008
2.70	1.90	43161	14.64	7.54	3.81	8.08	<0.01	0.92	<0.008
1.46	1.00	27791	14.54	3.99	3.47	5.55	<0.01	0.54	<0.008
1.27	1.00	24141	13.50	3.47	3.36	3.92	<0.01	0.48	<0.008
5.36	3.72	25135	16.52	15.64	3.66	19.57	<0.01	1.94	<0.008
4.83	3.41	94031	16.82	15.50	4.33	15.82	<0.01	1.66	0.060
1.68	1.06	91260	13.71	4.32	4.33	6.70	<0.01	0.56	<0.008
1.35	0.87	31043	13.51	2.97	3.26	4.43	<0.01	0.48	<0.008
13.46	8.91	21814	19.26	41.98	4.47	46.75	<0.01	4.67	0.171
6.29	3.93	76083	19.38	19.23	4.62	15.73	<0.01	2.21	0.086
2.16	1.58	96974	14.24	5.99	3.60	5.93	<0.01	0.78	<0.008
2.60	1.82	36779	16.52	6.51	3.48	5.54	<0.01	0.89	<0.008
19.68	12.36	52997	23.61	68.93	5.96	131.88	<0.01	6.77	0.364
4.32	3.03	79947	16.82	13.79	4.52	13.54	<0.01	1.51	0.039
1.65	1.27	70503	13.35	4.27	3.42	5.49	<0.01	0.60	<0.008
1.89	1.34	27485	13.31	4.40	4.13	5.17	<0.01	0.62	0.055
22.77	13.87	41570	20.91	73.16	4.51	190.33	<0.01	7.59	0.205
0.30	0.14	103735	3.67	0.68	2.98	2.49	<0.01	0.10	0.151
3.41	2.39	344	14.11	10.09	2.87	10.85	0.18	1.20	0.010
1.82	1.10	55631	14.09	4.18	3.52	5.37	<0.01	0.59	<0.008
1.61	1.20	26995	14.50	3.81	2.29	4.45	<0.01	0.58	<0.008
1.52	1.13	28001	13.71	3.75	2.30	4.09	0.10	0.53	<0.008
1.73	1.18	64612	15.95	3.67	3.17	2.03	<0.01	0.58	<0.008
7.46	5.63	31490	17.29	23.30	4.44	28.45	<0.01	2.69	0.042

K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd
IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61
100	0.1	2	0.05	100	5	0.2	100	0.03	0.05
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
9008	72.0	20	0.23	6027	4216	9.8	6669	21.61	54.94
24449	63.1	21	0.25	6434	844	19.6	17726	19.89	54.10
25173	45.9	21	0.21	7427	668	10.0	20584	14.05	40.80
14409	590.2	12	0.65	4516	1891	15.0	17941	146.29	448.08
15931	106.0	17	0.28	6850	3844	7.2	11618	24.50	77.33
26664	59.8	19	0.33	5981	453	6.8	20133	16.98	48.94
23902	53.5	17	0.07	7013	461	4.1	22946	15.01	48.67
7950	695.4	9	0.22	3705	3236	12.9	7678	181.94	482.95
8070	157.3	11	0.72	7168	4548	3.5	5273	21.77	86.73
632	2.4	<2	0.45	<100	<5	<0.2	<100	2.87	1.49
24694	43.2	18	<0.05	10038	536	3.4	20606	13.63	41.63
25428	40.4	21	0.23	9523	498	4.3	21965	13.54	37.96
13283	874.4	11	0.08	3962	3564	6.2	12810	222.55	515.31
18901	95.8	21	0.91	8205	3054	4.7	18454	26.55	70.95
26252	42.6	13	0.31	5784	842	6.0	21562	11.83	35.88
24824	39.4	16	0.23	5720	824	6.1	21811	14.48	39.17
24448	38.6	16	0.28	5602	794	5.9	21707	14.50	37.61
27619	38.5	12	0.21	2382	776	7.7	21302	13.75	28.29
5516	142.9	8	0.35	5644	5601	5.7	3254	25.71	95.72
27334	36.1	14	0.23	4127	429	5.2	20031	12.11	34.93
28129	42.4	26	0.19	1189	300	4.4	27295	17.99	39.53

25119	40.0	23	0.16	10896	513	3.9	21885	12.35	41.08
7685	684.4	9	0.69	3254	4133	10.0	6611	245.85	514.41
5851	114.1	7	0.39	4802	4658	4.4	3023	25.05	79.37
25865	112.3	18	0.27	5668	717	3.5	20353	25.80	76.03
24666	46.2	15	0.27	8711	729	3.6	24463	14.09	43.91
18119	589.9	9	0.28	2596	1492	6.5	17798	111.39	375.50
14027	75.6	22	0.57	7463	2309	3.5	17609	26.37	60.04
22089	144.0	22	0.33	8020	1018	3.9	21164	28.86	86.11
20271	46.9	25	0.39	16274	707	5.0	24125	12.00	47.82
17008	427.1	12	0.30	4114	2630	9.1	15127	164.92	352.88
16483	359.7	11	0.22	3933	2311	7.8	14693	159.03	309.09
7832	112.6	9	0.28	6528	4183	3.2	4589	13.48	73.74
25750	131.5	16	0.32	4661	546	2.7	21808	20.35	79.03
28467	45.6	16	0.27	5937	620	3.6	26224	15.43	45.62
17873	551.9	11	0.48	3793	1598	5.8	16263	106.04	333.63
5926	10.1	47	0.17	64787	792	2.9	167	2.55	11.41
7474	123.2	8	<0.05	4243	4093	5.4	3341	22.57	72.96
27267	139.3	15	0.30	3478	723	6.0	18442	27.95	83.96
28095	42.9	13	0.31	4638	647	5.0	21731	14.61	39.23
20370	430.7	11	0.48	2115	1203	7.7	18056	97.35	298.35
7473	149.1	9	0.34	5883	4893	5.6	3574	27.15	91.73
27073	92.8	14	0.26	4021	613	4.6	20763	25.49	64.35
24525	47.2	19	0.24	9125	691	4.5	23556	13.64	45.19
15970	937.4	10	0.63	2576	2121	10.2	15975	158.25	561.37
20005	124.6	14	0.64	5393	2091	5.2	14332	21.64	76.75
28526	45.3	16	0.23	4876	408	5.7	19407	13.58	41.48
23404	10.8	4665	0.20	2834	679	3.1	25299	39.23	10.25
25759	46.3	15	0.16	8823	537	5.0	23738	15.79	43.57

11389	404.8	11	0.26	2965	4127	16.4	8952	281.29	407.83
11377	510.9	11	1.03	2889	4138	16.4	8821	282.17	478.99
16133	91.5	21	0.27	5076	3666	5.8	11974	23.14	63.51
26123	47.0	14	0.25	4962	470	5.2	19583	21.23	48.40
28174	37.4	15	0.24	7235	482	5.0	21821	13.21	35.68
18027	823.3	12	0.57	2417	2517	12.5	17666	137.90	495.77
716	3.3	<2	0.06	<100	<5	<0.2	<100	2.64	2.66
27541	103.8	20	0.24	5978	698	3.9	17567	26.15	70.05
28006	28.6	20	0.11	5600	423	4.8	16373	12.82	28.19
30950	35.9	15	0.12	3957	295	6.4	18847	11.60	29.36
23496	199.5	11	0.25	2371	494	6.5	19453	52.52	153.87
24264	314.4	16	0.19	4023	1182	6.6	15002	57.76	170.49
24215	308.7	16	0.17	4010	1137	6.4	14872	55.38	170.15
29999	54.0	13	0.12	2748	379	10.0	19308	15.92	37.73
33759	27.9	13	0.50	2065	400	6.7	21598	13.76	27.63
17515	643.0	10	0.32	2074	1885	9.8	12960	135.52	418.42
21286	416.3	18	0.20	8315	2643	4.6	18436	76.45	216.53
25331	55.8	15	0.17	7179	521	5.1	20128	17.88	51.08
23888	45.8	22	0.69	14399	681	3.4	22752	13.52	46.54
12577	654.0	10	0.25	3096	2395	6.6	14684	182.26	495.22
23599	337.4	19	0.08	5588	1357	4.9	20161	50.71	170.08
27127	43.1	13	0.10	3386	438	8.7	20059	14.51	37.23
21409	36.2	14	0.91	8021	543	4.5	20039	13.84	38.06
11933	552.4	10	0.10	3110	2673	8.9	14159	206.42	470.52
648	2.4	<2	0.24	<100	<5	<0.2	<100	2.98	1.70
26056	156.2	17	0.22	4145	787	5.5	21324	32.95	96.44
30190	35.0	12	0.15	2957	430	8.1	21183	15.80	33.05
28058	31.3	15	0.21	5282	624	7.1	24686	10.77	30.16
12048	15.1	11	0.21	47542	1086	0.9	15885	4.77	18.60
21351	294.6	10	0.33	2121	759	7.2	21890	85.82	224.53

Ni	P	Pb	Pr	Rb	Re	S	Sb	Sc	Se
IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61
0.5	20	3	0.05	0.8	0.003	30	0.05	0.05	0.05
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
79.0	1260	67	19.61	55.4	0.025	75	<0.05	8.67	<0.05
26.9	1361	148	14.34	135.8	0.057	104	16.17	7.53	0.43
21.3	1181	33	10.34	115.2	0.014	<30	<0.05	7.73	0.90
17.7	4980	32	155.31	67.6	0.034	120	8.26	14.86	<0.05
91.6	1775	36	21.38	79.9	0.013	38	<0.05	9.20	<0.05
24.7	1413	24	22.96	79.3	0.030	<30	<0.05	7.58	3.06
27.1	1721	27	12.76	139.9	<0.003	<30	<0.05	8.58	7.25
48.4	3341	38	11.74	100.2	<0.003	<30	6.93	13.16	2.37
40.9	1781	17	291.34	38.2	0.023	75	<0.05	11.17	<0.05
<0.5	<20	5	28.50	115.0	<0.003	<30	0.77	0.25	0.12
28.6	1437	21	0.44	2.7	<0.003	<30	0.57	10.71	1.19
31.4	1447	23	10.56	120.2	<0.003	<30	<0.05	9.39	2.24
18.6	1936	24	9.60	149.9	0.006	<30	9.66	17.11	0.33
38.3	1591	24	325.74	79.6	0.004	70	2.18	10.46	0.23
18.9	1180	23	18.14	120.6	<0.003	<30	0.12	7.12	<0.05
17.9	1192	24	9.68	125.7	<0.003	<30	<0.05	6.47	<0.05
17.2	1164	24	9.38	122.2	<0.003	<30	<0.05	6.34	<0.05
9.6	354	22	10.05	141.4	<0.003	<30	2.10	3.67	0.24
50.7	1963	20	35.69	33.5	<0.003	69	<0.05	10.41	<0.05
18.7	1124	30	8.54	142.0	0.016	76	<0.05	5.42	<0.05
4.8	309	117	10.32	143.6	<0.003	3129	10.37	4.43	3.27

40.7	1758	25	9.84	99.7	<0.003	<30	<0.05	8.85	3.88
31.6	4334	35	405.45	42.8	0.004	110	9.07	16.50	2.28
45.2	1683	9	28.72	32.8	<0.003	68	<0.05	8.91	<0.05
21.0	1581	24	22.85	134.3	<0.003	<30	<0.05	6.98	0.64
35.6	1695	22	10.88	104.8	<0.003	<30	<0.05	9.06	4.27
16.0	3597	20	11.35	113.9	<0.003	56	3.68	9.63	7.04
39.0	1330	18	160.16	85.6	0.006	109	3.60	10.86	1.21
26.0	1384	21	16.96	94.3	<0.003	117	<0.05	10.18	<0.05
52.9	2029	22	29.35	119.3	<0.003	<30	<0.05	15.46	0.22
17.5	3166	30	13.87	113.6	<0.003	644	0.21	14.56	<0.05
15.5	3083	29	26.24	25.5	<0.003	554	35.54	13.92	<0.05
68.5	1969	8	26.40	40.0	<0.003	42	<0.05	9.17	<0.05
18.2	1672	21	20.64	123.3	<0.003	35	<0.05	6.30	<0.05
21.8	1549	21	10.78	115.1	<0.003	<30	<0.05	8.09	7.25
14.6	2591	18	141.00	89.3	<0.003	75	2.44	10.93	<0.05
15.7	355	9	3.57	47.5	0.027	12118	1.13	4.56	6.96
38.7	1547	<3	24.81	48.8	0.083	59	<0.05	7.85	0.93
14.9	1398	23	30.08	143.5	<0.003	<30	<0.05	5.02	<0.05
24.5	1372	21	9.84	110.8	<0.003	<30	<0.05	6.07	2.33
10.0	2682	17	107.60	100.2	0.110	48	3.84	8.17	1.46
53.3	2133	9	27.47	39.2	<0.003	64	<0.05	10.36	<0.05
15.5	1388	23	17.91	151.1	<0.003	<30	<0.05	5.26	0.44
39.8	1814	26	11.74	107.0	<0.003	<30	<0.05	8.90	0.39
11.8	3976	19	196.33	83.1	<0.003	85	8.09	12.40	<0.05
35.2	1571	19	182.34	67.1	0.011	<30	<0.05	8.15	4.79
20.4	1163	25	21.08	129.2	<0.003	<30	<0.05	6.19	<0.05
13.4	1319	18	10.00	137.3	<0.003	623	0.26	3.65	<0.05
32.1	1645	28	3.68	518.8	<0.003	<30	<0.05	8.37	<0.05

21.9	4729	40	10.70	99.7	<0.003	31	19.24	21.66	<0.05
20.5	4858	39	267.65	48.5	0.029	<30	15.67	21.36	<0.05
41.7	1468	15	17.25	82.3	<0.003	62	1.46	8.32	<0.05
17.6	1275	23	11.75	132.8	<0.003	<30	<0.05	6.00	<0.05
26.0	1345	23	9.08	115.6	<0.003	<30	<0.05	7.72	<0.05
14.8	2804	19	168.60	89.9	0.027	63	5.77	11.65	<0.05
<0.5	<20	6	<0.05	4.8	<0.003	<30	0.90	0.28	1.63
17.0	1093	23	20.90	175.7	<0.003	<30	<0.05	6.46	2.85
13.6	674	21	7.27	160.0	<0.003	<30	<0.05	5.21	<0.05
12.7	779	22	7.58	134.2	<0.003	<30	<0.05	4.62	<0.05
7.2	1695	13	46.63	113.5	<0.003	114	0.59	5.50	<0.05
19.5	1852	27	58.79	118.8	0.006	<30	<0.05	7.30	1.05
18.3	1899	23	9.22	147.8	0.014	<30	<0.05	7.15	5.25
10.2	793	20	6.68	148.4	0.007	<30	<0.05	3.74	<0.05
9.6	662	22	146.83	85.6	0.027	<30	0.58	2.83	<0.05
11.8	3624	18	73.02	107.2	<0.003	30	4.92	10.69	<0.05
40.8	2173	18	13.79	125.4	<0.003	37	1.91	12.64	<0.05
23.5	1226	21	11.49	105.1	<0.003	<30	<0.05	7.89	2.02
56.8	2070	22	261.11	63.5	<0.003	<30	<0.05	12.33	0.57
18.1	4406	19	45.78	109.5	<0.003	126	5.44	13.53	2.48
24.2	1921	21	9.45	134.5	<0.003	<30	<0.05	8.70	5.27
12.1	900	21	8.82	84.4	<0.003	<30	<0.05	4.58	<0.05
33.8	1637	23	251.36	65.7	0.016	<30	<0.05	8.15	<0.05
15.3	5065	22	<0.05	5.4	<0.003	113	9.11	16.69	<0.05
<0.5	<20	5	30.66	138.6	<0.003	<30	0.64	0.30	1.33
16.5	1592	23	8.52	151.1	<0.003	31	<0.05	5.97	0.84
11.5	874	21	7.69	113.7	<0.003	<30	<0.05	3.72	<0.05
22.3	1098	19	7.20	110.0	<0.003	<30	<0.05	5.51	<0.05
560.7	1292	9	4.59	75.6	<0.003	1128	<0.05	24.75	0.27
7.4	2987	19	68.92	98.3	<0.003	45	2.76	7.14	<0.05

Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm
IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61
0.05	0.05	5	0.03	0.2	0.03	0.08	30	0.008	0.05
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
9.71	4.45	238	3.13	2.0	0.23	21.46	>10000	0.394	0.39
8.68	2.64	488	1.59	0.8	0.23	10.99	5759	0.600	0.40
6.70	1.39	536	4.86	0.7	<0.03	8.16	4262	0.404	0.31
72.97	7.02	562	12.37	4.5	0.23	155.30	>10000	0.292	2.07
11.97	2.70	346	2.10	1.6	<0.03	31.61	>10000	0.673	0.54
11.86	0.92	575	5.92	0.7	<0.03	24.41	>10000	0.570	0.49
8.24	1.26	617	1.31	0.8	<0.03	9.72	4781	0.461	0.36
7.90	7.30	354	1.51	4.0	0.47	9.78	4896	0.378	0.35
111.84	6.02	213	17.70	2.1	0.47	566.87	>10000	0.473	2.69
14.60	0.57	<5	3.62	<0.2	<0.03	62.15	>10000	0.651	0.49
0.38	1.27	619	1.04	0.7	<0.03	2.49	301	<0.008	<0.05
7.22	1.73	605	1.49	0.6	0.23	8.47	4191	0.459	0.33
6.24	1.60	377	1.30	3.7	<0.03	8.82	3868	0.563	0.35
120.25	0.42	503	20.01	1.1	<0.03	387.18	>10000	0.601	2.78
13.10	0.94	561	1.68	0.5	<0.03	35.10	>10000	2.953	0.64
6.01	1.17	540	1.37	0.6	<0.03	10.66	3298	1.170	0.34
6.70	2.09	529	0.88	0.6	<0.03	8.87	3109	1.060	0.41
5.00	1.20	471	1.74	0.3	0.23	7.12	2443	1.195	0.24
15.06	6.58	166	3.48	2.8	<0.03	33.79	>10000	0.153	0.45
5.91	1.75	486	1.74	0.5	0.47	7.95	3050	0.538	0.28
8.11	4.09	222	1.72	<0.2	2.82	12.42	1234	0.934	0.11

7.05	2.18	805	1.71	0.7	0.23	6.06	4481	0.323	0.27
148.73	10.82	307	29.13	4.1	1.17	583.66	>10000	0.199	3.44
14.67	6.38	160	2.03	2.5	<0.03	65.60	>10000	0.156	0.50
11.33	2.73	493	3.11	1.0	0.23	20.38	6366	0.469	0.48
7.16	1.03	699	0.66	0.9	<0.03	8.74	5134	0.404	0.32
6.94	5.61	484	0.80	3.8	0.23	8.19	5081	0.405	0.29
63.15	3.66	377	9.08	1.8	0.23	129.51	>10000	0.304	1.67
10.74	1.22	564	78.15	1.0	<0.03	24.13	>10000	0.385	0.47
13.19	1.82	766	3.46	1.0	<0.03	17.90	7702	0.408	0.56
9.58	9.29	737	1.01	6.1	<0.03	9.06	5891	0.282	0.41
10.21	8.19	690	2.60	5.8	0.47	23.06	4818	0.087	0.29
11.60	5.93	200	3.21	2.5	0.47	23.22	>10000	0.094	0.40
10.49	2.84	472	7.12	0.7	0.47	30.30	5879	0.392	0.37
7.26	0.93	555	1.71	0.8	<0.03	9.92	4267	0.396	0.35
54.31	4.59	440	11.99	3.7	0.23	197.09	>10000	0.328	1.57
3.44	0.75	73	0.51	<0.2	<0.03	8.76	1440	0.174	0.17
11.33	8.69	158	2.00	2.5	0.47	30.06	>10000	0.121	0.42
12.60	1.92	428	2.49	0.9	<0.03	27.89	7455	0.505	0.39
5.83	0.93	608	0.84	0.7	0.23	8.10	4307	0.375	0.27
47.44	5.13	483	8.60	4.0	<0.03	123.85	>10000	0.348	1.43
12.53	6.47	167	6.05	2.8	<0.03	43.22	>10000	0.151	0.45
9.25	0.91	463	1.63	0.8	0.23	15.23	5495	0.528	0.36
8.09	<0.05	707	1.12	0.7	0.23	8.41	5090	0.358	0.37
80.44	7.92	459	15.42	4.5	<0.03	225.67	>10000	0.163	2.11
73.50	3.98	378	14.24	1.0	<0.03	209.81	>10000	0.137	1.86
11.64	1.39	514	2.92	0.5	<0.03	30.11	>10000	0.428	0.47
6.64	48.49	89	2.08	<0.2	<0.03	10.47	3810	0.493	0.29
2.74	1.37	722	28.49	0.7	<0.03	6.82	1501	2.733	0.17

6.42	16.45	466	1.65	9.7	<0.03	8.37	4626	0.306	0.32
104.41	12.12	454	31.14	8.6	<0.03	364.89	>10000	0.098	3.13
10.22	3.54	314	2.63	1.9	0.23	31.72	>10000	0.265	0.38
7.32	1.04	520	1.86	0.8	<0.03	11.38	4170	0.416	0.37
5.22	0.70	641	0.59	0.6	<0.03	8.11	3665	0.340	0.24
67.13	6.38	478	11.64	4.3	<0.03	157.27	>10000	0.410	1.93
0.94	0.10	<5	0.15	<0.2	<0.03	3.51	306	<0.008	<0.05
10.11	2.29	412	2.59	0.9	<0.03	17.72	5834	0.775	0.40
4.64	0.62	398	2.70	0.3	0.23	8.69	2845	0.568	0.21
4.19	<0.05	478	1.25	0.3	0.23	8.84	2836	0.485	0.20
22.40	2.55	464	4.04	2.2	<0.03	38.55	9913	0.507	0.73
22.68	3.99	362	4.83	1.6	<0.03	50.04	>10000	0.415	0.66
5.44	4.23	360	1.11	1.6	<0.03	13.16	3002	0.528	0.24
4.19	0.83	411	7.70	0.4	<0.03	6.71	2358	0.524	0.20
60.97	1.30	503	19.19	0.3	0.47	238.25	>10000	0.330	1.84
28.33	7.38	425	7.10	4.1	<0.03	61.89	>10000	0.390	0.85
7.62	3.36	449	2.14	2.0	0.23	14.72	4385	0.376	0.30
7.75	1.73	532	1.29	0.7	<0.03	9.17	5286	0.271	0.35
104.57	1.24	787	21.11	1.0	<0.03	274.57	>10000	0.176	2.75
19.40	10.08	510	4.74	5.3	<0.03	42.35	>10000	0.359	0.63
5.74	2.15	429	1.57	1.5	0.47	11.66	3463	0.464	0.25
5.70	1.53	461	1.04	0.4	<0.03	7.59	4496	0.225	0.28
108.30	<0.05	628	17.70	0.6	0.70	337.25	>10000	0.153	3.34
0.86	1.14	457	1.36	5.0	<0.03	4.00	309	0.028	0.05
13.73	0.80	<5	2.74	<0.2	<0.03	26.66	7877	0.391	0.47
5.45	1.90	462	2.43	1.1	<0.03	8.14	3105	0.470	0.26
4.95	1.53	496	72.69	0.3	0.23	8.13	3346	0.391	0.23
4.35	1.86	640	1.27	0.4	<0.03	8.08	3284	0.381	0.23
4.00	1.66	456	0.56	0.8	<0.03	5.15	5075	0.059	0.26
33.93	1.32	505	7.30	3.1	<0.03	75.10	>10000	0.281	1.08

U	V	W	Y	Yb	Zn	Zr	Ir	Rh	Ru
IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	IM-4AB61	NF5-ICP-MS	NF5-ICP-MS	NF5-ICP-MS
0.05	3	0.07	0.05	0.05	3	0.3	0.001	0.001	0.001
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
4.99	960	17.64	16.96	3.38	394	692.8	0.090	0.032	0.054
3.95	127	100.63	24.68	1.89	73	308.3	0.039	0.034	<0.001
3.02	93	45.23	21.05	1.89	56	206.3	0.023	0.023	<0.001
27.88	246	87.97	117.81	7.98	62	>1000	0.183	0.018	<0.001
6.07	622	39.80	28.69	3.71	247	580.3	0.035	0.014	<0.001
5.58	108	49.46	21.86	1.88	60	546.6	0.060	0.020	<0.001
3.20	108	11.63	22.71	2.02	69	243.5	0.033	0.020	<0.001
2.69	429	26.63	111.97	10.16	110	179.8	0.008	0.009	0.014
72.01	966	16.57	22.08	4.35	590	>1000	0.268	0.007	<0.001
5.34	<3	1.18	0.71	<0.05	<3	769.6	0.049	0.016	<0.001
0.41	104	12.41	21.98	1.78	55	65.9	<0.001	0.077	<0.001
2.76	89	14.74	20.38	1.85	54	183.3	0.013	0.043	<0.001
2.44	259	28.50	102.85	7.72	107	147.8	0.005	0.014	<0.001
65.72	327	19.05	35.87	3.52	186	>1000	0.420	0.007	<0.001
5.63	76	21.05	22.45	1.33	44	441.3	0.014	0.018	<0.001
2.83	70	19.63	27.80	2.02	52	163.1	0.015	0.011	<0.001
2.96	67	17.15	26.18	2.15	49	150.3	0.014	0.011	<0.001
1.94	28	26.38	12.75	0.80	23	101.8	0.003	0.009	<0.001
6.24	1116	17.67	22.84	4.33	695	900.1	0.051	0.014	<0.001
2.64	69	20.25	19.36	1.70	53	156.7	0.009	0.011	<0.001
6.34	5	5.93	15.52	0.60	409	231.7	0.022	0.018	<0.001

2.07	108	85.93	21.02	1.84	71	146.3	0.006	0.016	<0.001
83.03	347	24.05	113.75	8.96	142	>1000	0.305	0.014	<0.001
5.39	1115	11.30	20.54	4.70	625	996.2	0.059	0.020	<0.001
4.18	118	8.95	27.69	2.57	70	291.5	0.020	0.005	<0.001
2.62	127	12.28	19.45	1.56	63	191.9	0.013	0.005	<0.001
2.62	143	18.64	89.78	6.71	62	194.2	0.008	0.016	<0.001
20.85	499	17.43	23.44	3.04	302	>1000	0.091	0.009	<0.001
5.27	115	11.86	31.33	2.48	67	648.3	0.045	0.014	<0.001
4.20	154	21.81	23.29	2.06	109	313.2	0.028	<0.001	<0.001
2.93	193	37.72	91.12	6.63	80	191.1	0.013	0.014	<0.001
3.48	175	34.38	89.68	6.90	75	478.0	0.013	0.009	<0.001
4.41	1133	12.88	19.06	4.02	533	721.4	0.054	0.011	<0.001
5.64	117	8.02	24.88	2.19	60	242.7	0.014	0.011	<0.001
2.47	102	11.18	23.14	1.94	48	166.3	0.008	0.014	<0.001
29.31	159	23.78	81.33	6.00	59	>1000	0.134	0.014	<0.001
19.85	56	3.70	10.46	1.05	26	73.1	0.001	0.005	<0.001
4.68	1061	80.90	18.65	4.46	588	905.6	0.039	0.014	<0.001
4.49	136	29.30	25.01	2.26	66	324.9	0.020	0.014	<0.001
2.42	107	15.57	17.21	1.38	50	172.3	0.012	0.020	<0.001
25.83	114	55.75	85.21	6.96	48	877.8	0.054	0.014	<0.001
6.75	1194	20.47	23.32	4.60	699	857.4	0.064	0.018	<0.001
3.56	127	202.21	24.19	2.11	74	276.8	0.017	0.009	<0.001
2.69	133	38.69	22.01	1.99	74	182.2	0.002	0.011	<0.001
34.81	193	42.72	122.05	9.81	78	>1000	0.058	0.030	<0.001
37.66	474	34.28	25.85	3.07	278	>1000	0.047	0.030	<0.001
4.43	95	23.06	20.02	1.54	48	471.4	0.022	0.009	<0.001
3.01	23	8.09	6.48	0.45	99	189.8	0.009	0.047	<0.001
7.38	110	41.42	20.87	1.84	56	94.3	0.006	0.007	<0.001

2.69	405	85.27	106.60	9.35	141	165.8	0.006	0.005	<0.001
71.57	400	64.86	123.04	12.48	143	>1000	0.271	0.015	<0.001
4.05	638	30.69	19.84	2.50	398	583.3	0.024	0.011	<0.001
2.99	100	20.28	24.28	2.11	49	205.3	0.008	0.011	<0.001
2.14	87	19.36	17.04	1.52	46	137.4	0.005	0.009	<0.001
25.43	158	51.69	110.21	9.42	73	>1000	0.102	0.009	<0.001
0.44	<3	1.27	0.87	<0.05	<3	47.7	0.002	0.007	<0.001
4.58	103	35.11	24.34	1.61	60	253.0	0.015	0.009	<0.001
2.54	58	14.10	13.51	1.18	46	166.4	0.005	0.005	<0.001
2.16	58	22.99	12.62	0.94	41	117.1	<0.001	0.005	<0.001
7.06	70	25.37	45.50	3.34	29	647.3	0.034	0.011	<0.001
7.14	224	28.83	42.23	3.93	96	477.7	0.034	0.005	<0.001
2.46	216	26.57	42.14	3.92	94	198.5	0.003	0.007	<0.001
2.06	70	43.35	16.05	1.46	41	134.2	0.001	0.016	<0.001
52.24	50	26.64	13.33	1.09	31	>1000	0.097	0.029	<0.001
6.27	184	32.50	104.95	8.82	64	484.2	0.026	0.002	<0.001
2.63	242	19.27	52.71	4.77	143	178.8	0.008	0.005	<0.001
2.18	97	19.78	21.20	1.37	50	176.1	0.006	0.009	0.014
43.30	144	14.25	25.46	2.25	73	>1000	0.286	0.005	<0.001
5.16	211	20.90	135.92	11.85	80	408.9	0.022	0.016	<0.001
2.50	169	16.33	40.06	3.47	90	162.4	0.005	0.011	<0.001
2.06	72	40.53	16.36	1.06	35	161.7	0.011	0.005	<0.001
58.54	111	17.57	19.10	1.36	56	>1000	0.369	0.007	<0.001
0.56	253	24.27	131.78	10.47	89	80.6	<0.001	0.002	<0.001
4.83	<3	1.27	0.93	<0.05	<3	339.3	0.022	0.016	<0.001
2.61	134	21.10	29.78	2.56	73	165.9	0.006	0.007	<0.001
2.61	65	28.70	16.62	1.43	36	135.4	0.004	0.014	<0.001
2.56	72	71.65	15.71	1.42	41	132.2	0.009	0.007	<0.001
1.30	201	5.88	14.91	1.76	71	61.9	0.019	0.110	0.068
13.40	89	26.59	65.89	5.29	37	>1000	0.063	0.009	<0.001
							0.087	0.257	0.571

SAMPLES	Ce IM-4AB61 0.2 ppm	Eu IM-4AB61 0.05 ppm	Hf IM-4AB61 0.03 ppm	La IM-4AB61 0.1 ppm	Nb IM-4AB61 0.03 ppm	Nd IM-4AB61 0.05 ppm	Pr IM-4AB61 0.05 ppm
PG-H-1A 20-25 A -20	173.7	1.56	21.84	72.0	21.61	54.94	19.61
PG-H-1A 20-25 A +20	117.0	1.79	10.04	63.1	19.89	54.10	14.34
PG-H-1A 20-25 A +12	81.5	1.37	6.67	45.9	14.05	40.80	10.34
PG-H-1A 20-25 A Non-mag	10000	10.53	89.87	590.2	146.29	448.08	155.31
PG-H-1A 40-45 C -20	272.2	2.24	18.82	106.0	24.50	77.33	21.38
PG-H-1A 40-45 C +20	102.7	2.09	17.19	59.8	16.98	48.94	22.96
PG-H-1A 40-45 C +12	92.3	1.66	7.60	53.5	15.01	48.67	12.76
PG-H-1A 40-45 C Non-mag	10000	1.52	5.78	695.4	181.94	482.95	11.74
PG-H-11 40-45 A -20	317.7	13.13	128.63	157.3	21.77	86.73	291.34
PG-H-11 40-45 A +20	85.0	0.08	1.78	43.2	13.63	41.63	0.44
PG-H-11 40-45 A +12	78.1	1.50	6.15	40.4	13.54	37.96	10.56
PG-H-11 40-45 A Non-mag	10000	1.32	4.94	874.4	222.55	515.31	9.60
PG-H-15B 50-55 A -20	194.1	10.76	199.63	95.8	26.55	70.95	325.74
PG-H-15B 50-55 A +20	71.9	1.94	14.64	42.6	11.83	35.88	18.14
PG-H-15B 50-55 A +12	67.0	1.33	5.23	39.4	14.48	39.17	9.68
PG-H-15B 50-55 A Non-mag	71.4	1.07	3.22	38.5	13.75	28.29	10.05
PG-H-15B 70-75 D -20	303.6	1.56	28.15	142.9	25.71	95.72	35.69
PG-H-15B 70-75 D +20	60.7	1.29	5.10	36.1	12.11	34.93	8.54
PG-H-15B 70-75 D +12	73.2	1.67	4.28	40.0	12.35	41.08	9.84
PG-H-15B 70-75 D Non-mag	10000	15.49	125.88	684.4	245.85	514.41	405.45
PG-H-15B 80-85 C -20	241.4	1.43	31.24	114.1	25.05	79.37	28.72
PG-H-15B 80-85 C +20	206.8	2.07	9.82	112.3	25.80	76.03	22.85
PG-H-15B 80-85 C +12	94.9	1.55	6.04	46.2	14.09	43.91	10.88
PG-H-15B 80-85 C Non-mag	10000	1.63	6.13	589.9	111.39	375.50	11.35
PG-H-22 15-20 C -20	166.5	8.09	45.78	75.6	26.37	60.04	160.16
PG-H-22 15-20 C +20	262.0	1.70	20.60	144.0	28.86	86.11	16.96
PG-H-22 15-20 C +12	94.4	2.32	9.90	46.9	12.00	47.82	29.35
PG-H-22 15-20 C Non-mag	910.5	2.14	6.13	427.1	164.92	352.88	13.87

PG-H-22 30-35 C -20	244.4	1.40	22.69	112.6	13.48	73.74	26.40
PG-H-22 30-35 C +20	227.4	1.83	8.11	131.5	20.35	79.03	20.64
PG-H-22 30-35 C +12	87.9	1.60	5.45	45.6	15.43	45.62	10.78
PG-H-22 30-35 C Non-mag	10000	7.11	61.41	551.9	106.04	333.63	141.00
PG-H-22 55-60 A -20	228.3	1.34	28.83	123.2	22.57	72.96	24.81
PG-H-22 55-60 A +20	249.8	2.16	10.66	139.3	27.95	83.96	30.08
PG-H-22 55-60 A +12	91.5	1.43	5.64	42.9	14.61	39.23	9.84
PG-H-22 55-60 A Non-mag	852.4	7.06	26.99	430.7	97.35	298.35	107.60
PG-H-36 20-25 B -20	311.6	1.46	27.21	149.1	27.15	91.73	27.47
PG-H-36 20-25 B +20	163.0	1.65	8.81	92.8	25.49	64.35	17.91
PG-H-36 20-25 B +12	92.8	1.60	5.74	47.2	13.64	45.19	11.74
PG-H-36 20-25 B Non-mag	10000	10.44	56.93	937.4	158.25	561.37	196.33
PG-H-36 80-85 B -20	238.9	9.16	55.15	124.6	21.64	76.75	182.34
PG-H-36 80-85 B +20	83.1	1.93	15.17	45.3	13.58	41.48	21.08
PG-H-36 80-85 B +12	88.0	0.56	4.16	46.3	15.79	43.57	3.68
PG-H-36 80-85 B Non-mag	950.4	1.60	5.10	404.8	281.29	407.83	10.70
PG-H-37 40-45 C -20	196.8	1.38	18.70	91.5	23.14	63.51	17.25
PG-H-37 40-45 C +20	99.7	1.64	7.12	47.0	21.23	48.40	11.75
PG-H-37 40-45 C +12	70.6	1.23	4.68	37.4	13.21	35.68	9.08
PG-H-37 40-45 C Non-mag	10000	8.09	57.25	823.3	137.90	495.77	168.60
PG-H-42A 65-70 C -20	198.1	1.90	8.08	103.8	26.15	70.05	20.90
PG-H-42A 65-70 C +20	56.4	1.00	5.55	28.6	12.82	28.19	7.27
PG-H-42A 65-70 C +12	64.6	1.00	3.92	35.9	11.60	29.36	7.58
PG-H-42A 65-70 C Non-mag	410.0	3.72	19.57	199.5	52.52	153.87	46.63
PG-H-42C 20-25 B -20	556.5	3.41	15.82	314.4	57.76	170.49	58.79
PG-H-42C 20-25 B +20	102.0	0.87	4.43	54.0	15.92	37.73	6.68
PG-H-42C 20-25 B +12	63.3	8.91	46.75	27.9	13.76	27.63	146.83
PG-H-42C 20-25 B Non-mag	10000	3.93	15.73	643.0	135.52	418.42	73.02
PG-H-43A 10-15 C -20	741.3	1.58	5.93	416.3	76.45	216.53	13.79
PG-H-43A 10-15 C +20	113.2	1.82	5.54	55.8	17.88	51.08	11.49
PG-H-43A 10-15 C +12	84.7	12.36	131.88	45.8	13.52	46.54	261.11
PG-H-43A 10-15 C Non-mag	10000	3.03	13.54	654.0	182.26	495.22	45.78
PG-H-43A 40-45 A -20	582.8	1.27	5.49	337.4	50.71	170.08	9.45

PG-H-43A 40-45 A +20	83.3	1.34	5.17	43.1	14.51	37.23	8.82
PG-H-43A 40-45 A +12	74.6	13.87	190.33	36.2	13.84	38.06	251.36
PG-H-43A 40-45 A Non-mag	10000	0.14	2.49	552.4	206.42	470.52	<0.05
PG-H-43A 45-50 A -20	281.0	1.10	5.37	156.2	32.95	96.44	8.52
PG-H-43A 45-50 A +20	68.2	1.20	4.45	35.0	15.80	33.05	7.69
PG-H-43A 45-50 A +12	63.4	1.13	4.09	31.3	10.77	30.16	7.20
PG-H-43A 45-50 A Non-mag	605.8	5.63	28.45	294.6	85.82	224.53	68.92
	1802.4	**3.4**	**26.5**	**205.4**	**52.9**	**143.6**	**56.0**

Rb IM-4AB61 0.8 ppm	Sc IM-4AB61 0.05 ppm	Sm IM-4AB61 0.05 ppm	Tb IM-4AB61 0.2 ppm	Th IM-4AB61 0.08 ppm	Ti IM-4AB61 30 ppm	Y IM-4AB61 0.05 ppm	Zr IM-4AB61 0.3 ppm
55.4	8.67	9.71	2.0	21.46	10000	16.96	692.8
135.8	7.53	8.68	0.8	10.99	5759	24.68	308.3
115.2	7.73	6.70	0.7	8.16	4262	21.05	206.3
67.6	14.86	72.97	4.5	155.30	10000	117.81	10000
79.9	9.20	11.97	1.6	31.61	10000	28.69	580.3
79.3	7.58	11.86	0.7	24.41	10000	21.86	546.6
139.9	8.58	8.24	0.8	9.72	4781	22.71	243.5
100.2	13.16	7.90	4.0	9.78	4896	111.97	179.8
38.2	11.17	111.84	2.1	566.87	10000	22.08	10000
2.7	10.71	0.38	0.7	2.49	301	21.98	65.9
120.2	9.39	7.22	0.6	8.47	4191	20.38	183.3
149.9	17.11	6.24	3.7	8.82	3868	102.85	147.8
79.6	10.46	120.25	1.1	387.18	10000	35.87	10000
120.6	7.12	13.10	0.5	35.10	10000	22.45	441.3
125.7	6.47	6.01	0.6	10.66	3298	27.80	163.1
141.4	3.67	5.00	0.3	7.12	2443	12.75	101.8
33.5	10.41	15.06	2.8	33.79	10000	22.84	900.1
142.0	5.42	5.91	0.5	7.95	3050	19.36	156.7
99.7	8.85	7.05	0.7	6.06	4481	21.02	146.3
42.8	16.50	148.73	4.1	583.66	10000	113.75	>1000
32.8	8.91	14.67	2.5	65.60	10000	20.54	996.2
134.3	6.98	11.33	1.0	20.38	6366	27.69	291.5
104.8	9.06	7.16	0.9	8.74	5134	19.45	191.9
113.9	9.63	6.94	3.8	8.19	5081	89.78	194.2
85.6	10.86	63.15	1.8	129.51	10000	23.44	10000
94.3	10.18	10.74	1.0	24.13	10000	31.33	648.3
119.3	15.46	13.19	1.0	17.90	7702	23.29	313.2
113.6	14.56	9.58	6.1	9.06	5891	91.12	191.1

40.0	9.17	11.60	2.5	23.22	10000	19.06	721.4
123.3	6.30	10.49	0.7	30.30	5879	24.88	242.7
115.1	8.09	7.26	0.8	9.92	4267	23.14	166.3
89.3	10.93	54.31	3.7	197.09	10000	81.33	10000
48.8	7.85	11.33	2.5	30.06	10000	18.65	905.6
143.5	5.02	12.60	0.9	27.89	7455	25.01	324.9
110.8	6.07	5.83	0.7	8.10	4307	17.21	172.3
100.2	8.17	47.44	4.0	123.85	10000	85.21	877.8
39.2	10.36	12.53	2.8	43.22	10000	23.32	857.4
151.1	5.26	9.25	0.8	15.23	5495	24.19	276.8
107.0	8.90	8.09	0.7	8.41	5090	22.01	182.2
83.1	12.40	80.44	4.5	225.67	10000	122.05	10000
67.1	8.15	73.50	1.0	209.81	10000	25.85	10000
129.2	6.19	11.64	0.5	30.11	10000	20.02	471.4
518.8	8.37	2.74	0.7	6.82	1501	20.87	94.3
99.7	21.66	6.42	9.7	8.37	4626	106.60	165.8
82.3	8.32	10.22	1.9	31.72	10000	19.84	583.3
132.8	6.00	7.32	0.8	11.38	4170	24.28	205.3
115.6	7.72	5.22	0.6	8.11	3665	17.04	137.4
89.9	11.65	67.13	4.3	157.27	10000	110.21	10000
175.7	6.46	10.11	0.9	17.72	5834	24.34	253.0
160.0	5.21	4.64	0.3	8.69	2845	13.51	166.4
134.2	4.62	4.19	0.3	8.84	2836	12.62	117.1
113.5	5.50	22.40	2.2	38.55	9913	45.50	647.3
118.8	7.30	22.68	1.6	50.04	10000	42.23	477.7
148.4	3.74	4.19	0.4	6.71	2358	16.05	134.2
85.6	2.83	60.97	0.3	238.25	10000	13.33	10000
107.2	10.69	28.33	4.1	61.89	10000	104.95	484.2
125.4	12.64	7.62	2.0	14.72	4385	52.71	178.8
105.1	7.89	7.75	0.7	9.17	5286	21.20	176.1
63.5	12.33	104.57	1.0	274.57	10000	25.46	10000
109.5	13.53	19.40	5.3	42.35	10000	135.92	408.9
134.5	8.70	5.74	1.5	11.66	3463	40.06	162.4

84.4	4.58	5.70	0.4	7.59	4496	16.36	161.7
65.7	8.15	108.30	0.6	337.25	10000	19.10	10000
5.4	16.69	0.86	5.0	4.00	309	131.78	80.6
151.1	5.97	5.45	1.1	8.14	3105	29.78	165.9
113.7	3.72	4.95	0.3	8.13	3346	16.62	135.4
110.0	5.51	4.35	0.4	8.08	3284	15.71	132.2
98.3	7.14	33.93	3.1	75.10	10000	65.89	10000
106.8	**9.0**	**24.2**	**1.9**	**68.4**	**6756.2**	**41.3**	**2031.7**

Appendix H

ALS Laboratory, Inc.

Initial 17 Samples Assay Results (All Elements)

RE24015545 - Finalized
CLIENT : ADVGEO - Advanced Geologic Exploration

	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L
SAMPLE	Ce	Cs	Dy	Er	Eu	Gd	Hf	Ho	La	Nb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
PG-H-1A 20-25	91.80	5.38	3.65	1.93	1.21	4.45	4.30	0.68	49.00	18.15
PG-H-1A 40-45	73.20	3.78	2.73	1.43	0.98	3.41	2.47	0.51	40.50	12.90
PG-H-11 40-45	97.50	9.33	3.00	1.63	0.91	3.71	2.93	0.57	56.40	16.60
PG-H-15B 50-55	60.70	16.30	2.80	1.62	0.80	3.16	3.30	0.55	34.10	13.55
PG-H-15B 70-75	82.00	4.18	3.01	1.62	0.99	3.77	3.01	0.57	47.70	14.00
PG-H-15B 80-85	65.30	2.52	2.40	1.28	0.83	2.94	2.91	0.45	38.50	11.40
PG-H-22 15-20	92.40	6.34	4.45	2.43	1.33	5.08	5.90	0.85	50.50	23.80
PG-H-22 30-35	60.70	2.25	2.11	1.13	0.75	2.60	2.22	0.40	37.10	11.30
PG-H-22 55-60	81.10	2.65	2.48	1.26	1.02	3.42	2.67	0.45	46.50	17.70
PG-H-36 20-25	65.60	2.53	2.42	1.29	0.84	2.99	3.14	0.46	39.10	12.20
PG-H-36 80-85	69.30	2.92	2.55	1.38	0.87	3.15	3.56	0.48	38.10	12.65
PG-H-37 40-45	73.70	2.72	2.54	1.35	0.84	3.11	2.73	0.48	44.30	12.30
PG-H-42A 65-70	63.90	3.03	2.67	1.41	0.95	3.17	3.43	0.49	34.30	12.45
PG-H-42C 20-25	98.90	2.78	3.06	1.63	1.04	3.89	4.83	0.57	57.00	17.00
PG-H-43A 10-15	80.50	2.68	2.86	1.60	0.96	3.60	4.31	0.56	46.40	13.85
PG-H-43A 40-45	76.90	2.75	2.71	1.46	0.93	3.43	4.13	0.51	43.50	14.45
PG-H-43A 45-50	69.50	2.81	2.39	1.26	0.90	3.09	3.41	0.45	39.80	14.00
	76.65	**4.41**	**2.81**	**1.51**	**0.95**	**3.47**	**3.49**	**0.53**	**43.69**	**14.61**

ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L	ME-MS71L
Nd	Pr	Rb	Sc	Sm	Ta	Tb	Th	Ti	Y	Zr
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
35.90	9.69	143.50	8.87	5.92	1.22	0.61	14.65	0.45	18.90	157.50
28.60	7.81	144.00	6.96	4.67	0.95	0.46	10.25	0.30	14.40	89.40
34.20	9.85	161.50	6.07	5.24	1.19	0.50	13.10	0.32	16.20	102.00
24.00	6.58	197.00	5.71	3.98	0.98	0.44	9.04	0.24	16.00	119.00
31.20	8.66	158.00	6.33	4.94	1.03	0.50	11.25	0.31	15.65	110.00
25.60	7.06	146.50	5.41	4.11	0.80	0.40	10.15	0.23	12.50	107.50
38.00	10.10	160.50	10.30	6.51	1.39	0.72	16.85	0.51	23.30	217.00
23.40	6.51	143.00	4.61	3.72	0.79	0.35	8.07	0.24	11.10	85.50
31.20	8.78	148.00	4.82	4.86	0.87	0.44	10.10	0.25	12.45	100.00
26.00	7.20	142.00	5.82	4.13	0.91	0.41	10.85	0.25	12.65	118.50
26.80	7.36	151.00	6.04	4.37	0.87	0.43	10.10	0.27	13.65	134.00
27.70	7.75	146.50	5.54	4.26	0.86	0.42	10.55	0.25	13.15	109.00
26.00	6.92	138.50	6.28	4.24	0.89	0.43	9.59	0.29	13.30	130.50
35.50	10.40	136.50	6.66	5.46	1.11	0.52	16.95	0.36	16.10	178.50
30.00	8.39	146.00	6.45	4.84	0.91	0.49	11.30	0.31	16.15	169.00
29.70	8.26	144.50	5.83	4.73	0.98	0.46	12.20	0.31	13.95	158.50
27.70	7.54	143.50	4.76	4.42	0.94	0.41	10.40	0.26	12.45	127.00
29.50	**8.17**	**150.03**	**6.26**	**4.73**	**0.98**	**0.47**	**11.49**	**0.30**	**14.82**	**130.17**