

Technical Study of the Murdock Mountain Phosphate Deposit, Elko County, Nevada

ON BEHALF OF

Silver Eagle Mines Inc.
Suite 480 – 150 24th Street
West Vancouver, British Columbia V7V 4G8.
Report for NI 43-101



**BY: Robert J. Johansing, M.Sc. Economic Geologist, QP
154 Romaine Dr.
Santa Barbara, CA 93105**

**July 1, 2018
Revised: March 10, 2022
Revised: October 1, 2022**

TABLE OF CONTENTS

	Page Number
1.0 Summary	5-6
2.0 Introduction	6-8
3.0 Reliance on Other Experts	8
4.0 Property Description and Location	8-13
4.1 Property Description	
4.2 Property Ownership	
4.3 Property Location	
5.0 Accessibility, Climate, Local Resources, Infrastructure, and Physiography	13-16
6.0 History	17-24
7.0 Geological Setting and Mineralization	24-29
7.1 Regional Geology	
7.2 Project Geology	
7.3 Mineralization	
8.0 Deposit Type	29-31
9.0 Exploration	31
10.0 Drilling	31
11.0 Sample Preparation, Analyses and Security	31
12.0 Data Verification	31-33
13.0 Mineral Processing and Metallurgical Testing	33
14.0 Mineral Resource Estimates	33
15.0 Mineral Reserve Estimates	33
16.0 Mining Methods	33
17.0 Recovery Methods	33
18.0 Project Infrastructure	33
19.0 Market Studies and Contracts	33
20.0 Environmental Studies, Permitting and Social or Community Impact	33-35
21.0 Capital and Operating Costs	35
22.0 Economic Analysis	35
23.0 Adjacent Properties	35
24.0 Other Relevant Data and Information	35-38
24.1 Trace Element Geochemistry	
24.2 Phosphorite Metallurgy	
24.3 Global Production and Sources	
24.4 Importance of Phosphorus and Phosphate	
25.0 Interpretation and Conclusions	38-39
26.0 Recommendations	39-40
27.0 References	41-42
28.0 Date and Signature Page	43-44

List of Illustrations

- Cover** Looking west toward Murdock Mtn. from Montello, Nevada.
- Figure 1.** Location of the Murdock Mountain Project, Elko County, Nevada.
- Figure 2.** Location map showing Murdock Mountain, project area and trace of the target phosphorite bed along with Montello, access roads and the Southern Pacific rail line.
- Figure 3.** Township-range covering the Murdock Mountain Project showing the location of the Prospector Permit applications, trace of the Phosphoria Formation, existing roads and trails, and proposed drillholes/trenches.
- Figure 4.** Ownership structure of the Murdock Mountain property.
- Figure 5.** Looking east from the phosphorite bed toward Montello. The foreground is considered to be Greater Sage Grouse habitat.
- Figure 6.** Photo of Montello Gas & Grocery which also owns/manages the only hotel in town (right of photo). Business provides a broad variety of services including Western Union, FedEx and Notary Public.
- Figure 7.** Looking southwest along the phosphorite trend on the southeast flank of Murdock Mountain. Low-lying forests are composed of pinon and juniper with patches of sage and native grasses.
- Figure 8.** Outcrop of the Rex chert typically seen above the principal phosphorite horizon. As scale, rattlesnake measures about 4 feet in length.
- Figure 9.** Generalized geologic map of the Murdock Mountain phosphate project.
- Figure 10.** Geologic sketch of the Murdock Mountain project area showing the trace of the principal phosphorite bed along with the historical trenches (from NEVAGRO, LLC, 2012).
- Figure 11.** Generalized stratigraphic diagram of the Permian sequence in the Murdock Mountain project area.
- Figure 12.** Schematic vertical section across continental platform, showing key lithologies and spatial relationship between phosphorites and other deposit types and hydrocarbons (from Simandl, et al, 2011).
- Figure 13.** Photo of Sample No. R8218 which is a finely laminated, fetid black (unoxidized) mudstone (Table 5) with 3.5% P₂O₅.
- Figure 14.** Isopach map of the Meade Peak Phosphatic Shale Member of the Phosphoria Formation in the Idaho, Nevada, Utah and Wyoming region. Isopachs are in meters. The Murdock Mountain area is shown in NE Nevada (from Fedewa, 1980 and Maughan, 1979).

List of Tables

- Table 1.** Average monthly temperature (°F) data for Montello, Nevada.
- Table 2A-D.** Stratigraphic Sections and P₂O₅ Analyses from Trenches M-1, -2, -3 & -5, Leach Mountains, Elko County, NV (from Fedewa, 1980).
- Table 3.** Summary of trench sampling results – thickness & phosphate content (Alderman, 1983).
- Table 4.** Analytical results for the 2011 sampling program conducted by NEVAGRO, LLC showing phosphorous and phosphate results along with sample descriptions.
- Table 5.** Sample locations, weights, type and descriptions for samples collected by the Author on June 27, 2018.
- Table 5.** Analytical results for the June 27, 2018 samples collected at the Murdock Mtn, phosphate project. Results are divided into: Phosphate Content along with Major, Minor and Trace Elements.
- Table 6.** Heavy Metal Rule to identify trace metal levels in inorganic phosphate fertilizers considered as ‘adulterated’ above which metal levels may be toxic.
- Table 7.** Trace element data for the 2011 samples (n = 27; Table 3) from the historic trenches cutting the Meade Peak phosphorite member.

List of Appendices

- Appendix A** Assay Certificate for Samples Collected on June 27, 2018 (this study)

1.0 Summary

The Murdock Mountain project area (Lapointe, et al, 1991) covers the southern part of Murdock Mountain west of the town of Montello, Elko County, Nevada (Figure 1). Access to the property is good and work can be conducted throughout the year. Since 2012, NEVAGRO, LLC has pursued a mineral lease from the BLM in order to better define the Meade Peak member of the Phosphoria formation which reportedly contains significant phosphate values. Although previous studies have confirmed moderate (10 -20% P₂O₅) grades, a resource has not been developed in the Murdock Project area.

The Issuer, Silver Eagle Mines Inc. (SEM), was incorporated pursuant to the Business Corporations Act (British Columbia) on May 28, 2018 under its present name and has two subsidiaries. SEM holds all of the issued and outstanding shares of Nevada Phosphate Inc. (“NVP”), which in turn holds all of the issued and outstanding shares of Nevagro, LLC (“Nevagro”), the claim holder.

The Murdock Property is comprised of 7 map staked claims under Prospecting Application and Permit NVN 90747, covering approximately 1,813 acres located in the Murdock Mountains approximately 10 miles west of the unincorporated community of Montello, Nevada.

The Meade Peak Phosphatic Shale Tongue of the Permian Phosphoria Formation extends into NE Nevada and occurs as a 28 to 40 m thick tongue within the Phosphoria Formation. Historical geologic mapping has identified that the Meade Peak unit is present along the east and south flank of Murdock Mountain and can be projected to depth. Historical trenching reveals that the phosphate bed within the Meade Peak unit averages 3.4 meters in thickness with the phosphate content of 14.9%.

A site visit has been conducted allowing the Author to confirm the surface extent of the phosphate mineralization, the emerging geologic model and the presence of potentially economically phosphate values. Prior to the definition of phosphate mineralization, initial activities (Phase 1) need to focus on the completion of the Environmental Assessment and receipt of the Exploration Permit with the anticipated expenditures of approximately US\$262,000. NEVAGRO LLC has submitted an exploration proposal to the Bureau of Land Management (BLM) consisting of 23 trenches, access roads and drill pads (29) allowing for 58 drill holes (RC and core); proposed drill hole depths are approximately 70 metres. The Phase 2 budget for trenching and drilling is US\$225,000 and will initiate the activities proposed in the Environmental Assessment.

Economic potential here lies in the knowledge that sedimentary phosphate deposits are stratiform or lens-shaped, measuring from less than 1 metre to tens of metres in thickness. They extend for tens to hundreds of kilometres in their longest dimension. Relative to precious metal deposits,

grade variability is much less of an issue in sedimentary phosphate deposits and high degrees of confidence can be achieved in well designed and managed exploration programs. Review of the limited data and a site inspection confirm that the target horizon is regional in extent and likely extends to depth from exposures observed at Murdock Mountain.



Figure 1. Location (red star) of the Murdock Mountain Project, Elko County, Nevada.

2.0 Introduction

Since the 1960s, there have been a few limited exploration programs to define the extent and grade of a phosphorite bed located in the Murdock Mountains about 5 kilometres west of the small community of Montello, Elko County, Nevada (Figure 2). This phosphate bed, up to several meters thick, is part of the Permian Phosphoria Formation which hosts nearly all of the active phosphate mines in the western U.S.

The Issuer, Silver Eagle Mines Inc. (SEM), was incorporated pursuant to the Business Corporations Act (British Columbia) on May 28, 2018 under its present name and has two subsidiaries. SEM holds all of the issued and outstanding shares of Nevada Phosphate Inc. (“NVP”), which in turn holds all of the issued and outstanding shares of Nevagro, LLC (“Nevagro”), the claim holder.

The Murdock Property is comprised of 7 map staked claims under Prospecting Application and Permit NVN 90747, covering approximately 1,813 acres located in the Murdock Mountains approximately 10 miles west of the unincorporated community of Montello, Nevada.

Extended periods of inactivity have punctuated the project's evolution and likely reflect conditions of force majeure brought on by Sage Grouse studies, the COVID 19 pandemic and market conditions. Most recently, NEVAGRO, LLC conducted a review of the available data and spent several days on site mapping and sampling the phosphorite-rich horizon. Their work confirmed the reported grades of 10 to 20% P₂O₅ over a few meters width and better defined the geochemistry of the phosphate horizon. Many of the problematic elements found in neighboring mines of the Phosphoria Formation appear to be absent at Murdock Mountain. The combination of this, the moderate grades and close proximity to the Southern Pacific railway in Montello, allows the property to be viewed as a source of direct shipping phosphorite.

The following report has been prepared for Silver Eagle Mines Inc. of West Vancouver, Canada to provide a review of the geologic model, exploration conducted to date and preliminary confirmation of reported historical grades. Owing to the early nature of the project, there is limited data with most of it being non-verified. Consequently, the Author has relied heavily of historical reports (Alderman, 1983) and a thesis that specifically studied the Murdock Mountain deposit (Fedewa, 1980).

The property was visited on June 27, 2018 with NEVAGRO's Manager, Marco Montecinos, and the following activities were completed:

- Visit to the project site including a several kilometer traverse along the phosphorite bed;
- Inspection of several historical trenches; and
- Collection of 5 chip samples from the historical trenches intended to confirm the reported elevated phosphate grades.

The following document will provide an historical framework upon which to present these most recent results.

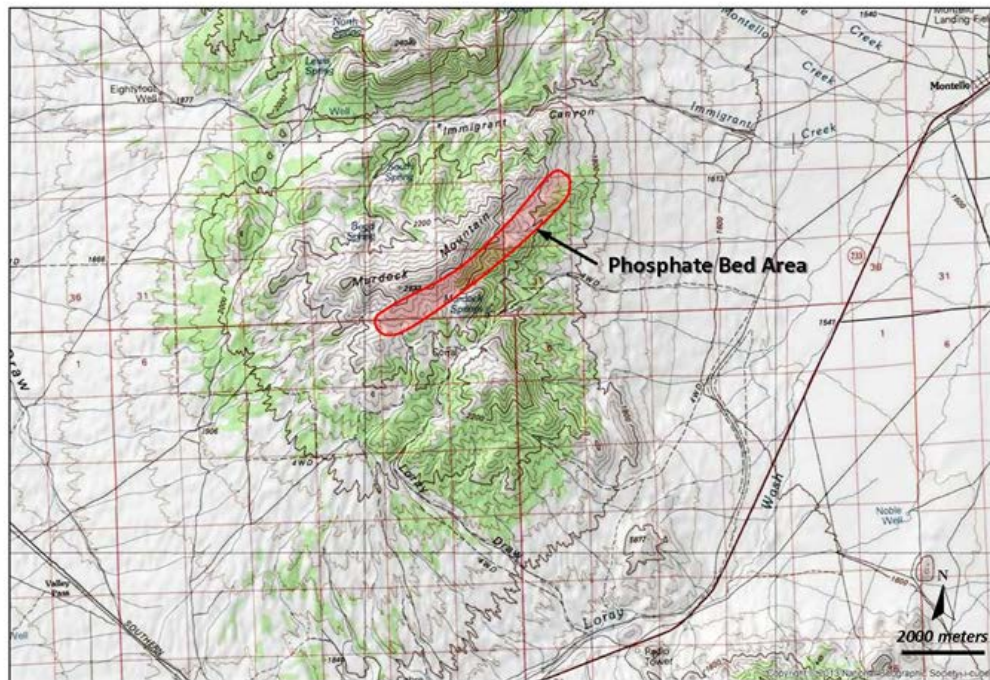


Figure 2. Location map showing Murdock Mountain and the target phosphate zone along with Montello, access roads and the Southern Pacific rail line.

3.0 Reliance on Other Experts

The Author has not relied upon experts for the preparation of this report. Specific references are provided in Section 27.0. The Author was accompanied by Marco Montecinos, NEVAGRO's Manager, to the Murdock Mountain project area for a technical overview and the collection of confirmation samples.

4.0 Property Description, Ownership and Location

4.1 Property Description

The Montello phosphate area (Lapointe, et al, 1991) covers the southern part of Murdock Mountain west of the town of Montello. The area includes Immigrant Canyon on the north and extends south to the northern boundary of the Loray district. The area falls within the eastern half of T39N, R67E (Figure 2).

The lands subject to this Technical Report are covered by a Prospecting Application and Permit NVN90747 covering 1,813 acres (733.69 Hectares) and are contained in seven (7) polygons (Figure 3) technically described below:

Polygon 1: T38N, R67E, MDM, Nevada, Section 2, Lots 5-12, 333.0 acres (134.76Ha);

Polygon 2: T39N, R67E, MDM, Nevada, Section 24 E2/SE4; SW4/SE4; 120.0 acres (48.56 Ha);

Polygon 3: T39N, R67E, MDM, Nevada; Section 26 SE4; SE4/NE4; SE4/NW4; 240.0 acres (97.12 Ha);

Polygon 4: T39N, R67E, MDM, Nevada; Section 34 E2/SE4; 80.0 acres (32.37 Ha);

Polygon 5: T39N, R67E, MDM, Nevada; Section 36 NE4; SW4; W2/NW4 ; E2/SE4/NW4; NW4/SE4; 460.0 acres (186.16 Ha) ;

Polygon 6: T39N, R68E, MDM, Nevada; Section 20 SW4/SW4; (40 acres) excluding NE4/NE4/NE4/SW4/SW4 (0.625 acres); (39.375 acres) 40.0 acres (16.19 Ha); and

Polygon 7: T39N, R68E, MDM, Nevada; Section 30 E2; E2/W2; N2/NW4/NW4; N2/S2/NW4/NW4; S2/SW4/SW4; S2/N2/SW4/SW4; 540.0 acres (218.53 Ha).

The initial application for a Prospecting Permit was submitted to the BLM (Elko District) on June 12, 2012, revised on June 5, 2017 and amended on April 5, 2018. These revisions reflect the BLM's desire to remove specific areas deemed to be habitat for the Greater Sage Grouse. Figures 2 and 3 show the trace of the phosphorite bed along with the solicited areas for prospecting and general land status. NEVAGRO is moving forward with the exploration permitting process which will include an Environmental Assessment and may require about 12 months to complete upon financing.

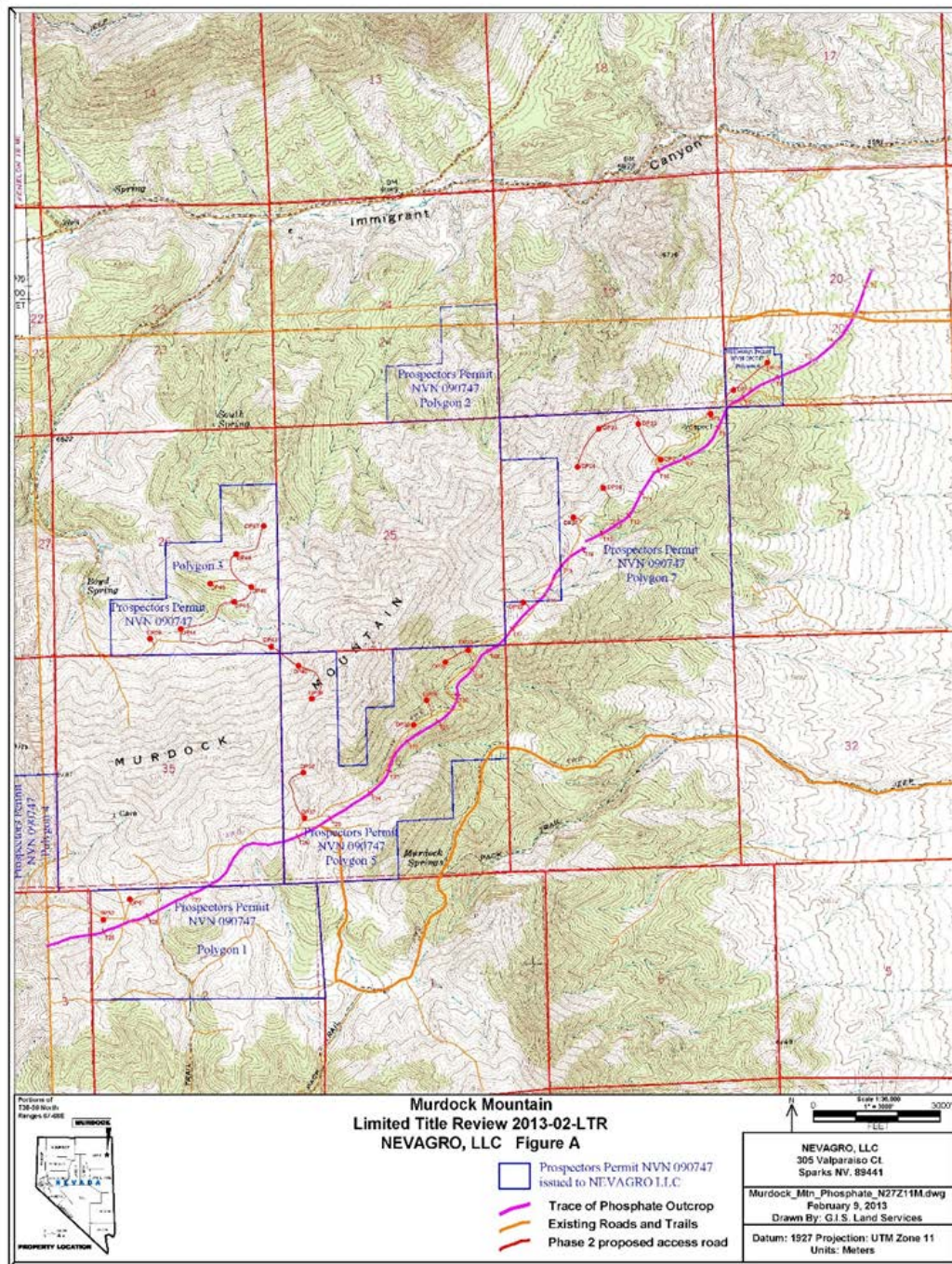


Figure 3. Township-range covering the Murdock Mountain Project showing the location of the Prospector Permit applications, trace of the phosphate bearing unit, existing roads and trails, and proposed drill holes/trenches.

4.2 Property Ownership

The property is held by the Issuer within a framework illustrated in Figure 4 which also shows the subsidiary's jurisdiction of incorporation and the percentage of votes attached to voting securities of the subsidiary controlled by the Issuer. The Issuer was incorporated on May 28, 2018.

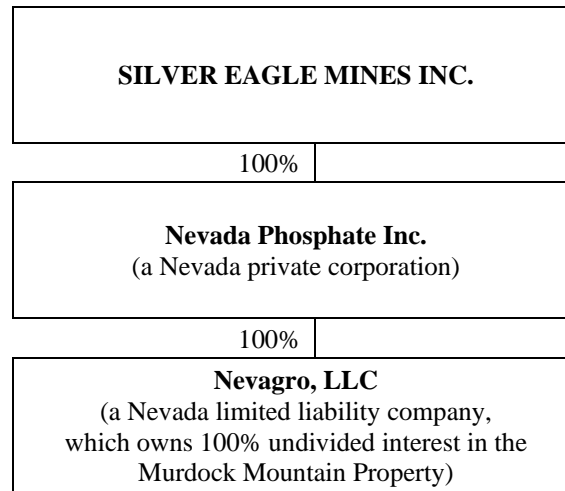


Figure 4. Ownership structure of the Murdock Mountain property.

On June 12, 2018, the Issuer acquired 100% of the issued and outstanding shares of Nevada Phosphate, Inc. (“NVP”) for the sum of \$1.00 (one dollar) from Pueblo Lithium Inc. (formerly Pueblo Potash Inc.) (“Pueblo”) pursuant to a Purchase Agreement dated June 12, 2018 between the Issuer and LKP Solutions Inc. (the parent company of Pueblo). NVP is a private company incorporated under the laws of the State of Nevada, USA, with a business address of 4785 Caughlin Parkway, Reno, Nevada 89519. NVP in turn holds 100% of the issued and outstanding shares of Nevagro. Nevagro is a private limited liability company incorporated under the laws of the State of Nevada, USA, with a business address of 305 Valparaiso Court, Sparks, Nevada 89441, and whose sole asset is a 100% interest in the Murdock Property (see “Mineral Properties”).

At the time of the Issuer’s acquisition of NVP, both NVP and Nevagro were inactive due to a ruling by the US Environmental Protection Agency in 2014, which halted all mining and energy exploration as well as certain ranching activity over 6 states in order to conduct a Sage Grouse study. In 2018, the EPA halted the study and ordered a return to status subject to the promulgation of new rules for exploration. These rules came into effect in late 2019, and, as a result, plans to explore and develop the Murdock Property were renewed.

On August 6, 2021, Nevagro received a letter from the Wells field office of the Nevada Bureau of Land Management (“BLM”), confirming that Nevagro’s current cost recovery

balance remained at US\$31,346.00 and noting that Nevagro had 60 days to update and provide its exploration programme. EM Strategies of Reno Nevada was engaged to prepare the exploration programme document, which was filed on September 20, 2021. As at the date hereof, there have been no further significant developments on the Murdoch Property, as the next part of Phase 1 is driven by the seasons, with the first work to start in the Spring of 2022.

Pueblo originally acquired all of the issued and outstanding shares of Nevagro (and thus the Murdoch Property) from the Montecinos Family Trust pursuant to an Amended Purchase Agreement dated September 10, 2012 between Pueblo and the Montecinos Family Trust. Under the agreement, Pueblo was required to provide the following consideration to the Montecinos Family Trust:

- (a) US\$75,000 and 1,000,000 common shares of Pueblo on the completion of Pueblo's transaction with a TSXV capital pool company resulting in a going public transaction (the "Qualifying Transaction") (paid);
- (b) US\$100,000 and 1,000,000 common shares of Pueblo on the date 15 months after the Qualifying Transaction (paid);
- (c) US\$150,000 and 1,000,000 common shares of Pueblo upon Nevagro obtaining a lease in respect of the Murdoch Property from the Nevada BLM (outstanding); it is not clear when this lease will be obtained and the payment due. Further, the required funds will have to be raised at that time. and
- (d) A 2% production royalty, of which Pueblo has the right to repurchase one-half or 1% of the royalty for US\$1,500,000.

Pueblo subsequently incorporated NVP as a wholly-owned subsidiary to hold Nevagro.

Pursuant to an agreement dated January 14, 2022 between the Issuer, Pueblo and the Montecinos Family Trust, the parties confirmed that the Issuer would assume the outstanding payments to the Montecinos Family Trust, which would be satisfied by US\$150,000 and 250,000 common shares of the Issuer, as well as confirmed the Issuer's assumption of the royalty obligation and option to repurchase one-half of the royalty.

4.3 Location

The project is located on portions of USGS 7.5 minute quadrangle maps Montello Canyon, Loray and Valley Pass and centered at latitude 40°13'30" North and longitude 114°19'30" West. Geographically, the property is situated within the Murdoch Mountains and is accessed from Highway I-80 and State Highway 233 to the town of Montello, Nevada. From Montello, access to the project site is gained via unimproved roads (Figures 2 and 4).

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Murdock Mountain project area is accessed from Highway I-80 and State Highway 233 to the town of Montello, Nevada. The subject phosphorite bed is located on the east slope of Murdock Mountain and is easily reached from Montello in about 15 minutes (10.5 kilometers to Trench 1; cover photo). Several unimproved gravel roads lead westerly into the Murdock Mountain area from Montello; one road was constructed close to the principal phosphorite bed to provide access for the initial sampling program in the 1960s (Figure 2) and roughly follows the bed for several kilometers to the southwest (Figure 4).

Montello is located in eastern Elko County along Nevada State Route 233, 37 kilometres northeast of Interstate 80 at Oasis and 18 kilometres southwest of the Utah border. Elko, the county seat, is 100 miles (160 km) to the west (Figure 1). The main transcontinental line of the Southern Pacific Railroad passes through Montello.



Figure 5. Looking east from the phosphorite bed toward Montello. The foreground is considered to be Greater Sage Grouse habitat.

Elevations in the project area range between 4908 feet ASL at Montello to 8312 feet ASL, the highest point, at Murdock Mtn. The phosphorite horizon outcrops between 6,000 and 7,000 feet ASL. Corresponding weather can only be approximated based upon weather data at Montello (Table 1). Average annual rainfall in Montello is 8.27 inches and is likely greater at Murdock Mountain to the west. Table 1 suggests that precipitation in December thru March is likely seen as

snow. Significant snow accumulations are probably rare and would likely not pose a major problem to any formal drilling and mining activities.

Table 1. Average monthly temperature (°F) data for Montello, Nevada.

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Average Monthly high (°F)	37°	42°	53°	62°	71°	82°	93°	91°	80°	65°	49°	38°
Average Monthly low (°F)	10°	14°	22°	26°	35°	42°	49°	46°	36°	26°	17°	9°

Montello, the closest population center to the Murdock Mountain project, is an unincorporated community and census-designated place (CDP) in Elko County, Nevada. It is home to Montello Elementary School, which is part of the Elko County School District. The population of Montello was 84 as of the 2010 census (Wikipedia, 2018). The business district (2018) is composed of two small bars and a market/motel selling fuel and sundries (Figure 6). Various cattle ranching operations surround the area.



Figure 6. Photo of Montello Gas & Grocery which also owns/manages the only hotel in town (right of photo). Business provides a broad variety of services including Western Union, FedEx and Notary Public.

The first permanent settlement at Montello was made in 1869 (Wikipedia, 2010). The town of Montello was established in 1904 as a "division point" (operations base) for the Southern Pacific Railroad. Montello's development was prompted by the construction of the Lucin Cutoff across the Great Salt Lake in Utah, a line that bypassed the area's former division point town of Terrace,

Utah. Many of the original houses in Montello were moved there from Terrace and nearby Kelton, Utah. Montello was originally named "Bauvard" and received its current name in 1912. The word Montello is Italian for "little mountain" and was probably given by one of the early Italian settlers.

Montello was at its peak in the 1910s and early 1920s, with a population of perhaps 800. While the town's economic life was dominated by the railroad, it also served as a community center for local ranchers and as a supply point for the nearby mining camp of Delano. Montello began declining in the late 1920s, however; railroad employment began to lessen and a 1925 fire devastated the town's business district. The primary factor in Montello's decline was the railroad's shift from steam to diesel locomotives which took place in the 1940s and early 1950s. This rendered the servicing facilities at Montello obsolete, and they were removed by the Southern Pacific in the 1950s.

From the perspective of an exploration project, the combination of good access, short periods of snow accumulation in the winter or excessive heat in the summer, weather conditions should not be an issue to the potential exploration and development of the Murdock Mountain phosphorite. Regardless, in February 2017, Montello was flooded after a very wet winter. The Twenty One Mile earthen dam failed and, along with other factors, sections of State Route 30, State Route 223, and U.S. Highway 93 were washed out and rail traffic had to be re-routed (Wikipedia, 2018).

Vegetation across the project area consists dominantly of sage and native grasses (see Title Page) punctuated by low-lying forests composed of pinon and juniper (Figure 7). In the absence of site specific biological studies, the area is likely home to elk, deer, antelope, mountain lion and several smaller mammals. Along with small lizards, the area is known to host the Western Diamond Back (Figure 8).



Figure 7. Looking southwest along the phosphorite trend on the east flank of Murdock Mountain. Low-lying forests are composed of pinon and juniper with patches of sage and native grasses.



Figure 8. Outcrop of the Rex chert typically seen above the principal phosphorite horizon. As scale, rattlesnake measures about 4 feet in length.

6.0 History

Phosphate-bearing oolitic shales in the southern Murdock Mountains have been known since 1907 when W.F. Ferrier prospected the area for San Francisco Chemical Co. three miles west of Montello, Elko County, Nevada (Alderman, 1983). Studies by Fedewa (1980) describe trenches apparently cut by Midwest Oil Corp. in July, 1966 and described/sampled by Curtis J. Little. These historical samples were analyzed by Union Assay in Salt Lake City, Utah (see Table 2A-D).

The earliest physical work in the area appears to be the cutting of eight dozer trenches into the Meade Peak phosphatic shale member of the Phosphoria Fm. in 1966 (Alderman, 1983). According to Fedewa (1980), four of these trenches were dug as a result of a U.S. Government Prospecting Permit Nevada-065997, issued to E.R. Richardson of Midwest Oil Corporation. Terms defined in the prospecting permit required that Midwest Oil must supply the Conservation Division of the U.S. Geological Survey with the data from the four trenches. These data were considered proprietary until the expiration of the prospecting permit in November, 1971. As presented in Table 2A-D, Fedewa (1980) modified the lithologic descriptions provided by Midwest Oil and the original terminology was retained. In particular, the term “mudstone” refers to a deposit of an indefinite mixture of clay, silt and sand size particles.

The earliest documented exploration work was carried out by Alderman (1983) in 1974 and consisted of detailed geologic mapping, outcrop sampling, dozer trenches and the drilling of five shallow holes. A second stage of work was again conducted by Alderman in 1982 and consisted of detailed geologic mapping and sampling of the dozer trenches. Alderman’s work confirmed the continuity of the phosphate-bearing horizon (Permian Meade Peak Formation) over a distance of at least 8 kilometres.

Alderman (1983) cleaned and sampled five of the dozer trenches on sample intervals of one to two feet. The results of this sampling are shown below in Table 3. The weighted average for this work was 11 feet at 14.9% P₂O₅. Drilling was conducted during the first campaign and targeted a flat-lying phosphate bed near the crest of an anticline (Figure 8) and amenable to open pit techniques and low stripping ratios. It was determined that the grade and thickness of the phosphate bed rapidly decreased along the west limb of the anticline northeast of Trench #W-1. Two holes tested the crest of the anticline but did not reach bedrock owing to thicker than expected overburden precluding open pit mining.

Table 2A. Stratigraphic Section and P₂O₅ Analyses from Trench M-1, Leach Mountains, Elko County, NV (From: Fedewa, 1980).

Trench M-1 is located in the NW 1/4 NE 1/4 sec. 30, T.39 N., R.65 E. The trench cuts the Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation in a N35W direction for a distance of 63.4 meters. The trench averages 0.6 m in depth. The exposed strata strike N60E and dips 40 degrees to the west. The bulldozer trench was measured, described and sampled in July, 1966, Curtis J. Little for Midwest Oil Corporation, on government prospecting permit Nevada - 085997. P₂O₅ analyses were performed by the Union Assay Office, Inc., Salt Lake City, Utah, August, 1966.

Sample Number	Thickness (m)	Cumulative Thickness (m)	P ₂ O ₅ (%)	Description
M-1-1	3.5	3.5		CHERT, dolomitic, black, thin- to medium-bedded and black, siliceous dolomite. Chert grades to dolomite.
M-1-2	3.8	7.4		CHERT, black, thin- to medium-bedded with occasional laminated interbeds of black and brown MUDSTONE in lower half of interval
M-1-3	1.5	8.8		CHERT, black, thin-bedded with occasional thin interbeds of black, siliceous DOLOMITE
M-1-4	1.2	10.1		CHERT, black, hard, thin-bedded MUDSTONE. Mudstone in upper 15.2 cm of interval
M-1-5	0.9	11		CHERT, black, thin-bedded and brown, thin-bedded MUDSTONE. Mudstone in center of interval. Lower part of interval grades to black, thin-bedded, silty DOLOMITE
M-1-6	1.5	12.5		MUDSTONE, brown to black, thin-bedded. Brecciated in upper half of interval.
M-1-7	0.9	13.4		SILTSTONE, black, argillaceous, very dolomitic, laminated to thin-bedded and brown, thin-bedded MUDSTONE. Mudstone occurs near base of interval
M-1-8	1.2	14.6		MUDSTONE, brown and black, very thin-bedded, hard
M-1-9	0.5	15.1		MUDSTONE, black, thin-bedded, with disseminated phosphate oolites
M-1-10	0.6	15.7	12.09	MUDSTONE, brown to black, thin-bedded, oolitic, phosphatic and thin-bedded PHOSPHORITE
M-1-11	0.6	16.3	12.35	PHOSPHORITE, thin-bedded and brown to black, slightly oolitic MUDSTONE
M-1-12	0.6	17	17.71	PHOSPHORITE, thin-bedded and thin-bedded, brown, phosphatic MUDSTONE
M-1-13	0.6	17.6	16.38	PHOSPHORITE, brown to black, thin-bedded and brown MUDSTONE. Thin bed of black CHERT at base of interval
M-1-14	0.8	18.3	18.98	PHOSPHORITE, black, thin-bedded and thin-bedded, brown MUDSTONE
M-1-15	0.9	19.2	4.39	MUDSTONE, black, medium-bedded, containing abundant phosphate replaced gastropods and phosphatic oolites
M-1-16	0.9	20.2	1.78	MUDSTONE, brown, thin-bedded, fossiliferous and phosphatic oolites
M-1-17	0.9	21.3		MUDSTONE, black and brown, thin- to medium-bedded, silty
M-1-18	1.1	22.1		MUDSTONE, black and brown, laminated to thin-bedded
M-1-19	1.2	23.4		MUDSTONE, black, silty, hard, dolomitic and brown, thin-bedded soft MUDSTONE
M-1-20	1.2	24.6		MUDSTONE, black and brown, soft, very thin-bedded
M-1-21	1.5	26.1		MUDSTONE, black, medium-grained, hard; grading down to brown, carbonaceous MUDSTONE
M-1-22	1.7	27.8	1.07	MUDSTONE. Black and brown, medium-bedded. Power 0.3m of interval is slightly fossiliferous and oolitic
M-1-23	0.6	28.4		MUDSTONE, brown, thin- to medium-bedded. Thin-bedded, brown, fossiliferous, oolitic MUDSTONE at top of interval.
M-1-24	0.5	28.9		MUDSTONE, brown, very thin-bedded
M-1-25	1.2	30.1		MUDSTONE, black, thin- to medium-bedded, hard, very siliceous, dolomitic. Thin fossiliferous beds in center and base of interval
M-1-26	1.7	31.8	1.78	MUDSTONE, black, thin- to medium-bedded, hard, very siliceous, dolomitic. Lower 0.6m brown, thin- to medium-bedded soft mudstone. Medium-bedded fossiliferous MUDSTONE near top and in middle of interval.
M-1-27	1.5	33.4	1.84	MUDSTONE, black, thin-bedded, very siliceous, dolomitic. Thin- to medium-bedded, fossiliferous MUDSTONE throughout interval.
M-1-28	1.5	34.9	1.89	MUDSTONE, black, siliceous, dolomitic and brown CLAYSTONE. Thin- to medium-bedded, fossiliferous MUDSTONE near top and base of interval. Lower portion of interval is thin- to medium-bedded, brown MUDSTONE and black, dolomitic SILTSTONE.
M-1-29	1.8	36.6		MUDSTONE, brown and black, thin-bedded, hard, dolomitic. One thin fossiliferous bed (0.6m) below top interval.
M-1-30	0.9	37.5		MUDSTONE, brown and black, laminated to thin-bedded.
M-1-31	0.7	38.2	2.1	MUDSTONE, tan, laminated, soft. Slightly oolitic (0.3m) below top of interval.
M-1-32	0.4	38.6	26.9	PHOSPHORITE, black, thin-bedded
M-1-33	15.2			LIMESTONE and DOLOMITE, cherty. Top of Grandeur Fm.

Table 2B. Stratigraphic Section and P₂O₅ Analyses from Trench M-2, Leach Mountains, Elko County, NV (From: Fedewa, 1980).

Trench M-2 is located in the NW 1/4 SW 1/4 sec. 30, T. 39 N., R. 68 E. The trench cuts the Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation in an east-west direction for a distance of 57.0 meters. The trench averages 0.8 m in depth. The exposed strata strike N31E and dip 35 degrees westerly. The bulldozer trench was measured, described and sampled in July, 1966, Curtis J. Little for Midwest Oil Corporation, on government prospecting permit Nevada - 065997. P₂O₅ analyses were performed by the Union Assay Office, Inc., Salt Lake City, Utah, August, 1966.

Sample Number	Thickness (m)	Cumulative Thickness (m)	P ₂ O ₅ (%)	Description
M-2-1	1.8	1.8		CHERT, tan, thin-bedded, hard, highly fractured.
M-2-2	1.8	3.7		CHERT, gray, very thin-bedded and black, thin-bedded, hard, siliceous, dolomitic MUDSTONE
M-2-3	1.2	4.9		MUDSTONE, black, thin-bedded, siliceous, dolomitic, brown, soft
M-2-4	1.7	6.6		MUDSTONE, brown and black, very thin- to thin bedded, hard.
M-2-5	0.9	7.5	7.76	MUDSTONE, black to brown, thin-bedded. Very phosphatic in lower half of interval.
M-2-6	0.8	8.2	13.47	PHOSPHORITE, black, thin- to medium-bedded. Very thin bed of brown, phosphatic MUDSTONE at base of interval.
M-2-7	0.6	8.8	15.57	PHOSPHORITE, black, thin-bedded and brown MUDSTONE
M-2-8	0.6	9.4	19.44	PHOSPHORITE, black, thin-bedded and brown, phosphatic MUDSTONE
M-2-9	0.8	10.2	3.11	PHOSPHORITE, black, siliceous and brown, soft MUDSTONE
M-2-10	0.9	11.1	0.56	MUDSTONE, black, thin- to medium-bedded, hard, dolomitic
M-2-11	0.9	12	1.12	MUDSTONE, black, very siliceous, some tan and slightly phosphatic
M-2-12	0.9	13	0.64	MUDSTONE, black and tan, thin- to medium-bedded
M-2-13	1.2	14.2	0.61	MUDSTONE, brown, very thin- to thin-bedded, soft, carbonaceous
M-2-14	1.8	16	0.56	MUDSTONE, brown, very thin- to thin-bedded
M-2-15	1.2	17.2	4.08	MUDSTONE, brown, very thin-bedded. One medium-bedded mudstone at base of interval with abundant gastropod fossils
M-2-16	1.5	18.7	4.39	MUDSTONE, brown and black, thin- to medium-bedded, fossiliferous, phosphatic, siliceous
M-2-17	1.1	19.8	1.78	MUDSTONE, black to brown, thin-bedded. Upper 5.1cm of interval is black and phosphatic
M-2-18	1.2	21	1.1	MUDSTONE, black and brown, very thin-bedded, calcareous
M-2-19	1.2	22.2	1.94	MUDSTONE, brown and black, hard, siliceous, dolomitic. One medium bed of black, fossiliferous MUDSTONE in center of interval
M-2-20	1.2	23.4	1.12	MUDSTONE, brown, very thin- to thin-bedded and black, laminated, siliceous MUDSTONE. One medium bed and one thin bed of fossiliferous MUDSTONE in lower half of interval
M-2-21	1.2	24.6	0.87	MUDSTONE, brown, very thin-bedded, soft and black, laminated, hard, silty, dolomitic. Laminated, tan brown clay in lower half of interval
M-2-22	1.2	25.8	0.89	MUDSTONE, black and brown, very thin-bedded, silty, siliceous, dolomitic. One thin bed of fossiliferous MUDSTONE at top of interval
M-2-23	1.2	27.1	3.98	MUDSTONE, brown and black, very thin-bedded, silty. Lower 0.3m is PHOSPHORITE, fossiliferous
M-2-24	1.2	28.3	0.97	MUDSTONE, brown and black, thin-bedded. Thin bed of brown, phosphatic MUDSTONE in center of interval
M-2-25	1.2	29.5	0.92	MUDSTONE, black, very thin-bedded. One medium bed of brown MUDSTONE at base of interval
M-2-26	1.2	30.7	7.35	MUDSTONE, black, very thin-bedded, soft
M-2-27	1.4	32.1	3.88	MUDSTONE, tan, thin-bedded, soft. Oolitic near base of interval
M-2-28	0.4	32.5	26.64	PHOSPHORITE, black, thin-bedded
M-2-29	15.2	36.6		LIMESTONE and DOLOMITE, cherty. Top of Grandeur Fm.

Table 2C. Stratigraphic Section and P₂O₅ Analyses from Trench M-3, Leach Mountains, Elko County, NV (from Fedewa, 1980).

Trench M-3 is located in the SW 1/4 NE 1/4 sec. 36, T.39 N., R.67 E. The trench cuts the Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation in a N56W direction for a distance of 52.7 meters. The trench averages 0.9 m in depth. The exposed strata strike N47E and dip 31 degrees westerly to the northwest. The bulldozer trench was measured, described and sampled in July, 1966, Curtis J. Little for Midwest Oil Corporation, on government prospecting permit Nevada - 065997. P₂O₅ analyses were performed by the Union Assay Office, Inc., Salt Lake City, Utah, August, 1966.

Sample Number	Thickness (m)	Cumulative Thickness (m)	P ₂ O ₅ (%)	Description
M-3-1	1.2	1.2		MUDSTONE, black, thin-bedded, very siliceous
M-3-2	1.2	2.4		MUDSTONE, black, thin-bedded, very siliceous
M-3-3	1.2	3.7		MUDSTONE, black, thin-bedded, very siliceous
M-3-4	1.2	4.9		MUDSTONE, black, thin-bedded, very siliceous, dolomitic
M-3-5	1.5	6.4		MUDSTONE, black, thin-bedded, very siliceous, dolomitic. Lower 0.6m soft, thin-bedded, brown
M-3-6	1.4	7.8		MUDSTONE, black, siliceous, very hard and brown, thin-bedded
M-3-7	0.9	8.7		MUDSTONE, brown and black, thin-bedded, soft
M-3-8	1.2	9.9	4.39	MUDSTONE, black, very thin-bedded, hard
M-3-9	0.9	10.8	12.25	PHOSPHORITE, black, thin-bedded and brown, slightly phosphatic MUDSTONE
M-3-10	0.6	11.4	12.76	PHOSPHORITE, black, thin-bedded and brown MUDSTONE
M-3-11	0.6	12	18.12	PHOSPHORITE, black, thin-bedded and brown, soft, slightly phosphatic MUDSTONE
M-3-12	0.6	12.6	21.18	PHOSPHORITE, black, thin- to medium-bedded and brown, thin- to medium-bedded mudstone. Thin fossiliferous bed of phosphatic MUDSTONE at base of interval
M-3-13	0.6	13.3	9.44	MUDSTONE, black, laminated, hard and fossiliferous
M-3-14	0.9	14.2	19.95	PHOSPHORITE, black and brown, hard, fossiliferous MUDSTONE
M-3-15	0.9	15.1	3.62	MUDSTONE, brown and black and tan, thin-bedded, very fossiliferous
M-3-16	1.2	16.3	2.04	MUDSTONE, brown, thin-bedded, hard, very fossiliferous, silty, dolomitic
M-3-17	1.5	17.8	0.87	MUDSTONE, black, silty, siliceous, dolomitic, hard, brittle. Fault of minor displacement striking north-south occurs 50.8 cm below top of interval. Below fault is brown, thin-bedded, soft, fossiliferous MUDSTONE
M-3-18	0.9	18.8	2.4	MUDSTONE, brown, laminated, soft and black, fossiliferous, medium bedded. Gastropod fossils and phosphatic oolites at top of interval
M-3-19	1.7	20.4	4.64	MUDSTONE, brown and black, hard, fossiliferous and thin bed of black PHOSPHORITE. Minor fault at base of interval
M-3-20	0.9	21.3	2.19	MUDSTONE, brown, soft, fossiliferous. Minor fault at base of interval
M-3-21	1.5	22.9	1.94	MUDSTONE, black and brown, thin-bedded, hard. Black, fossiliferous MUDSTONE in center of interval
M-3-22	0.9	23.8	2.19	MUDSTONE, brown and black, thin- to medium-bedded, fossiliferous
M-3-23	1.5	25.3	2.81	MUDSTONE, brown and black, very thin- to thin bedded, fossiliferous, siliceous
M-3-24	0.9	26.2	1.12	MUDSTONE, brown and black, thin-bedded, fossiliferous
M-3-25	1.5	27.7	1.38	SILTSTONE, black, thin-bedded, fossiliferous, dolomitic and brown thin- to medium-bedded, fossiliferous, silty, dolomitic MUDSTONE
M-3-26	1.5	29.3	2.35	MUDSTONE, brown and black, thin-bedded, fossiliferous, silty and brown and black, very phosphatic, fossiliferous MUDSTONE. Phosphatic mudstone 20.3cm above base of interval
M-3-27	1.7	31	1.12	MUDSTONE, brown and black, thin-bedded, very dolomitic, silty. Thin bed of black, very fossiliferous MUDSTONE at base of interval
M-3-28	1.5	32.5	0.61	MUDSTONE, brown, laminated to thin-bedded, silty, dolomitic
M-3-29	1.5	34		MUDSTONE, brown and black, laminated to thin-bedded
M-3-30	1.8	36.1	3.88	MUDSTONE, brown and black, laminated to thin-bedded, soft, siliceous
M-3-31	0.9	36.7		MUDSTONE, brown to tan, laminated to thin-bedded, soft
M-3-32	0.6	37.3	27.15	PHOSPHORITE, black, thick bed
M-3-33	15.2			LIMESTONE and DOLOMITE, cherty. Top of Grandeur Fm.

Table 2D. Stratigraphic Section and P₂O₅ Analyses from Trench M-5, Leach Mountains, Elko County, NV (from Fedewa, 1980).

Trench M-5 is located in the NE 1/4 NW 1/4 sec. 2, T.38N., R.67 E. The trench cuts the Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation in a N55W direction for a distance of 62.5 meters. The trench averages 0.9 m in depth. The exposed strata strike N37E and dip 40 degrees westerly to the northwest. The bulldozer trench was measured, described and sampled in July, 1966, Curtis J. Little for Midwest Oil Corporation, on government prospecting permit Nevada - 065997. P₂O₅ analyses were performed by the Union Assay Office, Inc., Salt Lake City, Utah, August, 1966.

Sample Number	Thickness (m)	Cumulative Thickness (m)	P ₂ O ₅ (%)	Description
M-5-1	1.1	1.1		CHERT, black, thin-bedded and brown to black, laminated, siliceous MUDSTONE
M-5-2	0.8	1.9		MUDSTONE, black, very siliceous some brown, thin-bedded, soft, dolomitic
M-5-3	1	2.9		MUDSTONE, black, laminated to thin-bedded, very siliceous, dolomitic, hard, some brown, laminated, soft
M-5-4	1.1	4		MUDSTONE, brown and black, thin-bedded, siliceous
M-5-5	0.9	4.9		MUDSTONE, black, thin-bedded, siliceous, dolomitic, some brown, laminated, soft
M-5-6	0.6	5.5		MUDSTONE, black, very thin-bedded, siliceous
M-5-7	0.6	6.1	8.01	MUDSTONE, dark brown, very thin-bedded. Disseminated phosphate oolites in lower part of interval
M-5-8	0.6	6.7	14.29	PHOSPHORITE, black, thin-bedded and brown and black, thin- to medium-bedded MUDSTONE
M-5-9	0.7	7.4	13.63	MUDSTONE, brown, soft, with phosphate oolites and thin-bedded PHOSPHORITE
M-5-10	0.8	8.2	24.09	PHOSPHORITE, black, thin- to medium-bedded and brown, thin- to medium-bedded MUDSTONE
M-5-11	0.6	8.8	7.91	DOLOMITE, brown, thin- to medium-bedded, sucrosic, hard, and thin-bedded, fossiliferous MUDSTONE
M-5-12	0.9	9.7		DOLOMITE, brown, argillaceous, fossiliferous and thin-bedded, fossiliferous MUDSTONE
M-5-13	1.8	11.5		MUDSTONE, brown to black, thin- to medium-bedded, silty, fossiliferous, dolomitic, hard. At base of interval dip flattens and reverses without faulting
M-5-14	1.2	12.7		MUDSTONE, tan, soft and black, laminated to thin-bedded, dolomitic, fossiliferous SANDSTONE
M-5-15	1.2	13.9		MUDSTONE, black, thin- to medium-bedded, siliceous. Medium bed of soft, brown MUDSTONE at top of interval and a medium bed of tan MUDSTONE at base of interval
M-5-16	1.5	15.4		MUDSTONE, brown and tan, laminated to thin-bedded, very dolomitic, some black, thin-bedded, siliceous
M-5-17	2.1	17.5		DOLOMITE, brown sucrosic and tan and brown MUDSTONE. Vertical fault at base of interval
M-5-18	1.7	19.2		MUDSTONE, brown, laminated to thin-bedded, siliceous
M-5-19	2.1	21.3		MUDSTONE, brown and black, thin-bedded, hard
M-5-20	3.4	24.7		MUDSTONE, brown and black, thin-bedded, siliceous
M-5-21	2.4	27.1		MUDSTONE, black to brown, thin-bedded
M-5-22	0.6	27.7		MUDSTONE, brown and tan, very thin- to thin-bedded, with phosphatic oolites
M-5-23	0.7	27.9		PHOSPHORITE, black, pelloidal
M-5-24	15.2			LIMESTONE and DOLOMITE, cherty. Top of Grandeur Fm.

Table 3. Summary of trench sampling – thickness & phosphate content (Alderman, 1983).

Trench	Thickness (ft.)	P ₂ O ₅ (%)
W-1	7.7'	13.1
W-2	9.0'	12.8
W-4	12.0'	17.9
W-5	15.3'	14.6

In 2012, NEVAGRO, LLC conducted a confirmation study over the Murdock Mountain project area described above. This work is summarized by Montecinos (2018) and consisted of sampling of the seven historic trenches (27 samples) and confirmation of the geologic model (Figure 9). The sample results are presented in Table 3 while the model is shown in Figure 10. This work was originally submitted to the BLM (Wells Field Office, Elko District) on June 12, 2012 in the solicitation of a Prospecting Permit, revised on June 5, 2017 and amended on April 8, 2018.

Table 4. Analytical results for the 2011 sampling program conducted by NEVAGRO, LLC showing phosphorous and phosphate results along with sample descriptions.

Sample Number	Weight (kg)	ME-ICP41a		Trench Number	Thickness (meters)	Sample Description
		P (ppm)	P ₂ O ₅ (%)			
27,263	1.84	4,800	1.1	T-7	1.00	Black oolitic shale; trends N27E/33NW
27,264	1.72	3,290	0.75		0.80	Black, fetid, thinly bedded shale
27,265	2.02	5,720	1.31		0.70	Dolomitic limestone
27,266	1.64	22,700	5.21		0.70	Thinly laminated, black, oolitic shale; oolites to 0.5cm
27,267	1.76	4,820	1.11		1.20	Black, weakly fetid limestone; trends NS/38W
27,268	1.92	7,040	1.61	T-6	1.20	Black limestone, mod. Fetid
27,269	2.10	9,960	2.28		0.70	As above
27,270	1.92	3,140	0.72		0.70	Black, laminated limestone w/ calcite vnlt
27,271	1.88	2,370	0.54		0.80	Black, fetid, thinly bedded shale
27,272	1.80	3,360	0.77	T-5	1.50	Oolitic shale, massive, cliff-forming, w/ cal vnlt
27,273	2.14	6,700	1.54		1.20	Black calc, cherty, fetid shale
27,274	2.02	6,560	1.50		1.00	As above, FeOx/cal on fractures
27,275	1.66	2,430	0.56		0.30	Laminated, cherty shale w/ chalc vnlt
27,276	2.10	5,990	1.37		0.60	Fetid, black limestone
27,277	1.96	>50000	13.87	T-4	1.50	Fetid, black shale; trends N42E/37NW
27,278	1.80	5,810	1.33		1.00	Oolitic shale, N42E/37NW, anticline limb, tr cal vnlt
27,279	2.04	8,470	1.94		0.70	Black, calc shale-slst, mod fetid
27,280	2.16	3,350	0.77		1.00	Black, laminated, calc, mod fetid shale
27,281	1.94	6,140	1.41	T-3	0.75	As above
27,282	2.06	3,870	0.89		1.00	Black, fetid limestone
27,283	1.68	12,750	2.92	OC	0.80	Fossiliferous, strongly fetid oolitic shale; N48E,31NW
27,284	2.04	1,420	0.32	OC	Grab	Strly fetid, black, oolitic shale
27,285	2.10	>50000	12.25	T-2	1.20	Strly fetid, black, oolitic shale
27,286	2.22	2,540	0.58		0.65	Strly fetid, laminated shale
27,287	2.00	4,430	1.02	T-1	1.60	Mod fetid black shale; crest of anticline
27,288	1.94	47,400	10.85		1.20	West limb of anticline, open cut
27,289	1.92	48,600	11.15		1.70	As above, oolitic

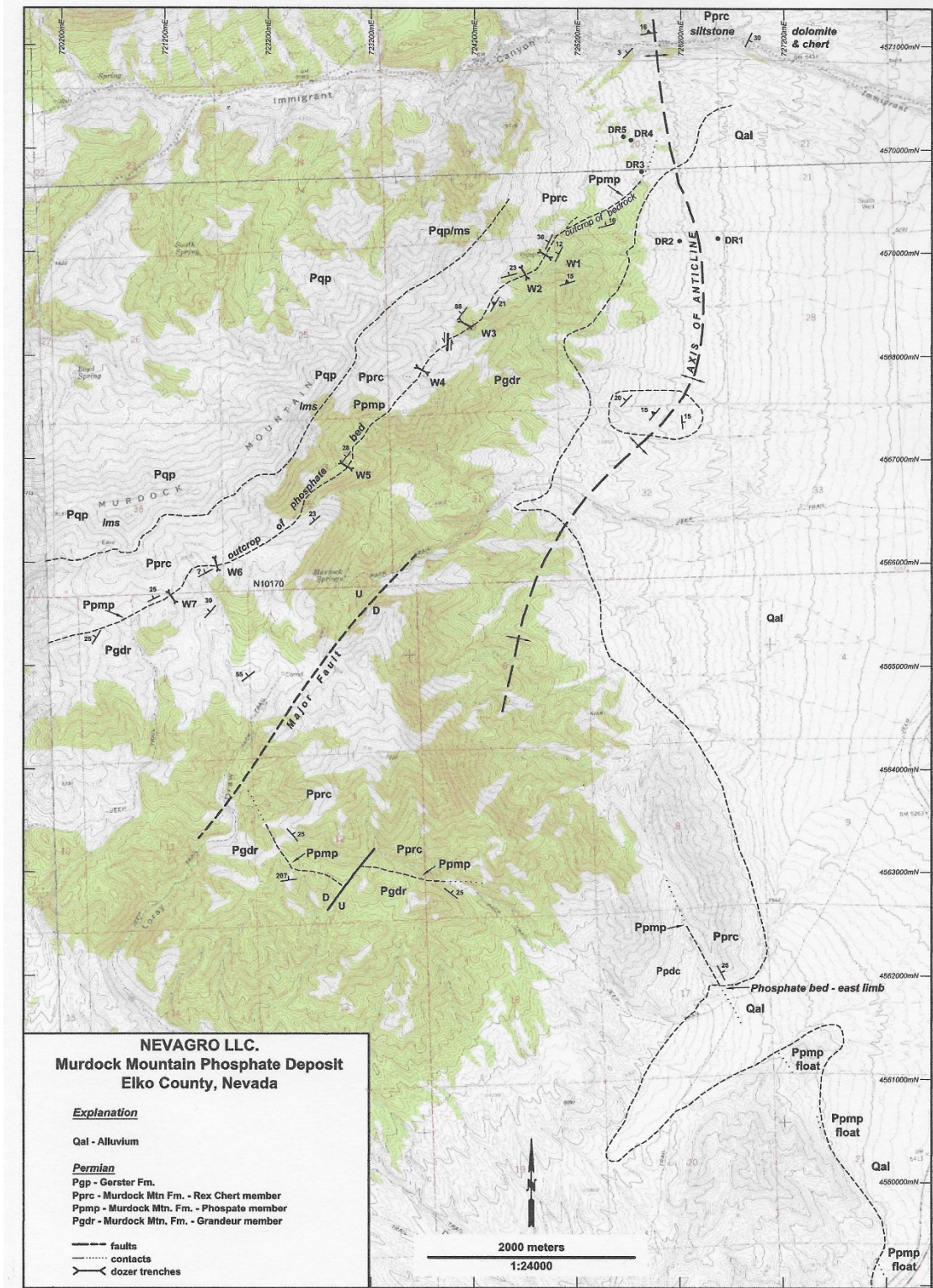


Figure 9. Generalized geologic map of the Murdock Mountain phosphate project.

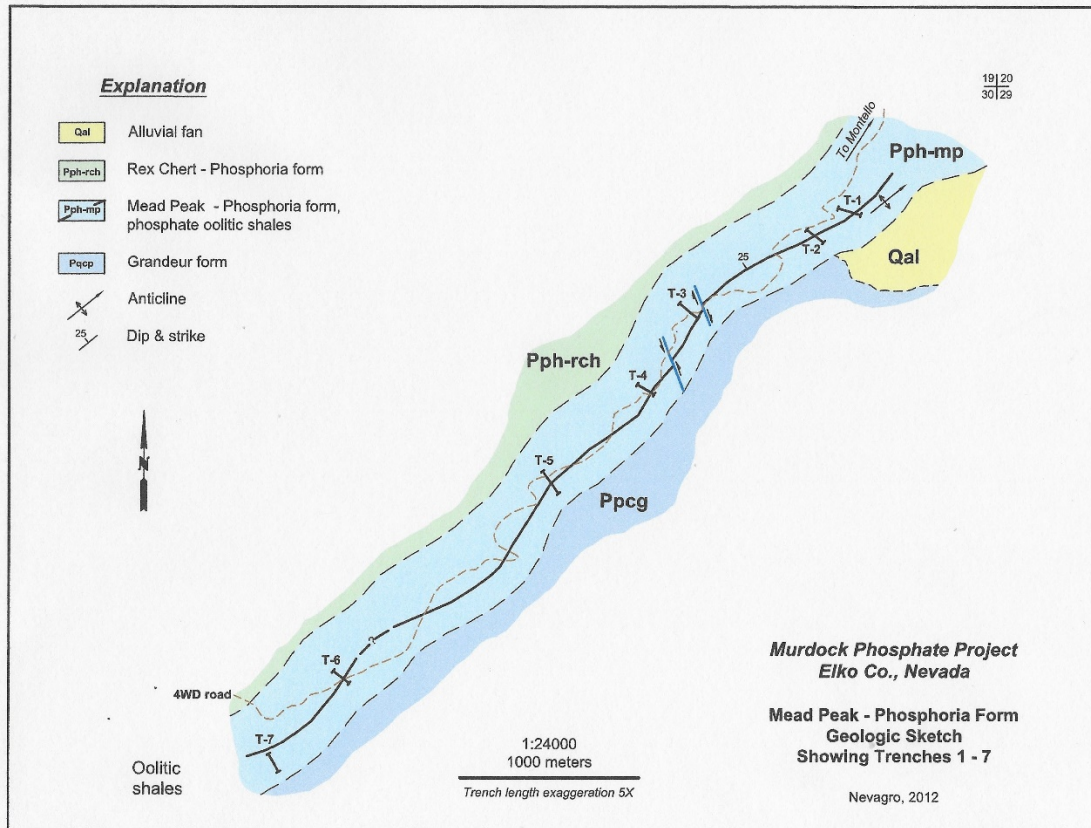


Figure 10. Geologic sketch of the Murdock Mountain project area showing the trace of the principal phosphorite bed along with the historical trenches (from NEVAGRO, LLC, 2012)

7.0 Geological Setting and Mineralization

7.1 Regional Geology

The Murdock Mountain area, located in the southern Leach Mountains, is composed of Permian and Triassic sedimentary rocks forming a sequence at least 2,300 meters thick (Fedewa, 1980). The Permian section in the area is represented by the Leonardian Grandeur Formation (?), the Leonardian Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation, the very early Guadalupian Murdock Mountain Formation, and the early Guadalupian Gerster Limestone. The Grandeur Formation (?) consists of 698 m of thin- to thick-bedded dolomite with subordinate thin- to medium-bedded limestone and chert. The Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation is composed of 28 to 40 m of phosphatic siltstone and phosphorite, and the Murdock Mountain Formation consists of 460 m of thin- to thick-bedded, dolomitic chert and dolomite, with subordinate sandstone, siltstone, and limestone. The Gerster Limestone is 514 m thick and consists of laminated to thick-bedded, bioclastic limestone with subordinate dolomitic chert, medium-

bedded and nodular chert, and dolomite (Fedewa, 1980). Detailed stratigraphic sections of each formation are provided by Fedewa (1980) and summarized below in Figure 11.

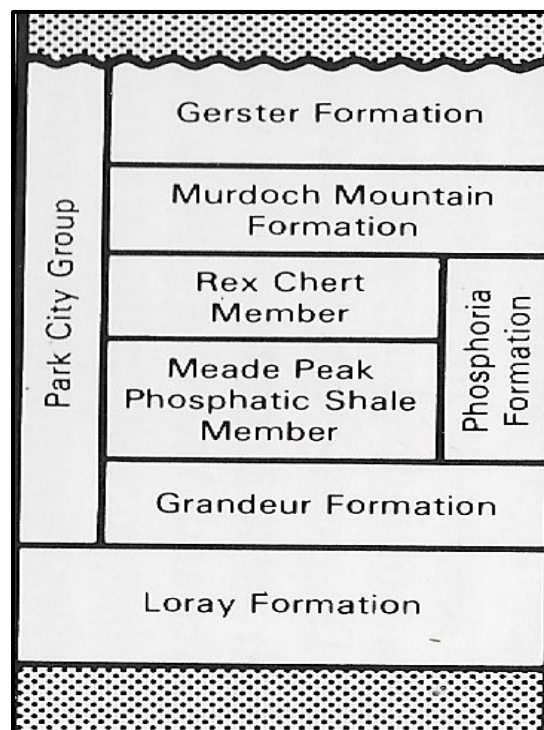


Figure 11. Generalized stratigraphic diagram of the Permian sequence in the Murdock Mountain project area (from Coats, 1987).

The Triassic is represented by an undifferentiated sequence of calcareous siltstone and limestone that disconformably overlies the Gerster Limestone (Figure 11). This undifferentiated sequence is at least 610 m thick and consists of poorly exposed calcareous siltstone in the lower part and resistant limestone in the middle and upper parts.

Throughout its extent in Nevada, the Phosphoria Sea was shallow, deepening only at its western extremity in western Nevada. Typical strata of the Phosphoria Sea in Nevada are conglomerate, quartz- and chert-sandstone, siltstone, limestone, dolomite, gypsiferous beds, spicule chert and phosphorite. Testifying to shallow conditions are conglomerate, crossbedding in sandstone, scours, ooids, dolomite, and gypsum. Across its entire extent, it had a fauna similar to that of the type Phosphoria Formation. Phosphate particles, such as pellets, nucleated pellets, concentrically laminated pellets, compound pellets, and phosphatic fossil fragments, are generally similar to those of the type Phosphoria (Ketner, K.B., 2009).

7.2 Project Geology

The Meade Peak member of the Permian Phosphoria formation crops out along the east, south and west flanks of the Murdock Mountain range and hosts significant phosphate occurrences (Figure 10). This phosphate-rich unit, which ranges in width from 28 to 40 meters, consists of black oolitic shale located in the mid-section of the Mead Peak member. The phosphatic unit is overlain by the Rex Chert member of the Phosphoria formation.

Several deformation episodes have been recorded by Fedewa (1980) in the Murdock Mountain area. The earliest structural episode interrupted the depositional patterns of the Cordilleran miogeosyncline and resulted in the development of an unconformity between the Lower Permian Gerster Limestone and the overlying Triassic unit. A second deformational episode began in the late Triassic-Early Jurassic and may have continued into the Tertiary. This episode is defined by an unconformity, folding, and thrust faulting as described below.

Fedewa (1980) has mapped several small folds in the Murdock Mountain area. Figure 8 reveals a definite fold axis trending N25-35°E to the east and north of the Meade Peak phosphorite bed. This fold, along with some smaller folds, is nearly symmetrical with slightly steeper dips on the eastern limb. The location of this fold along the eastern dome-like pattern of the sedimentary rocks, i.e. Murdock Mountain, suggest that folding was regional in extent.

Fedewa (1980) describes two generations of faults in the Murdock Mountain area. Most importantly, a thrust fault and associated tear faults are the dominant structural features. This tectonic event probably occurred during the Mesozoic and resulted in the eastward movement of the Grandeur Formation over undifferentiated Triassic limestone. High-angle normal faults are present throughout the Murdock Mountain area cutting both the Paleozoic and Mesozoic rocks. The majority of the normal faults, which probably formed during the Tertiary, display displacements between 10 and 50 meters.

Fedewa (1980) has mapped a thrust in the immediate footwall of the Meade Peak phosphorite bed and closely follows the trace of the bed over its entire strike length at Murdock Mountain (see Plate 1, Fedewa, 1980). The hanging wall is composed of Permian Gerster Limestone while the footwall is composed of undifferentiated Triassic rocks. An exposure of this fault was visited and is clearly defined by contrasting lithologies, brecciated rocks and calcite veinlets and breccia cement. Careful consideration needs to be given to this fault owing to its relatively close proximity to the phosphorite bed. Flattening of the fault could produce significant offsets in the down-dip continuity of the phosphate deposit.

7.3 Mineralization

The phosphate occurs as pellets, peloids, oolites (<2mm in diameter), whole fossils, fossil fragments (larger than 2 mm in diameter), and cement. Individual phosphate particles are hard and nearly black. Weathering of this material produces a characteristic bluish-white, net-like coating referred to as “Phosphate Bloom”, which aids in the recognition of phosphatic material. The phosphate mineral is a variety of apatite called carbonate fluorapatite ($\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2$; Fedewa, 1980).

Fedewa (1980) has described the lithologies of the high- and low-grade phosphate units of the Meade Peak Tongue of the Murdock Mountain area. The high-grade phosphate units (>10% P_2O_5) occur at the base and middle of the section. Surrounding low grade (<10% P_2O_5) or waste zones occur above both high grade zones (see Appendices B thru E).

The lower phosphatic zone consists of 0.4 to 1.1 m of dense, medium- to dark-gray, peloidal phosphorite and is often exposed. In areas of poor exposure, the ‘phosphate bloom’ is commonly present. The upper phosphatic zone (>10% P_2O_5) is poorly exposed. The zone ranges from 3.4 to 7.6 m in thickness and consists of grayish-black, thin- to medium-bedded phosphatic siltstone and olive-gray and medium-gray, thin-bedded phosphorite. The phosphatic siltstone has abundant phosphatic peloids, phosphatic oolites, phosphatic intraclasts, phosphatized fossils and phosphatic pisolites. The phosphorite is dominated by phosphatic oolites and phosphatic peloids with minor amounts of phosphatic intraclasts and pisolites (Fedewa, 1980). A photo of this unit is given in Figure 12.



Figure 12. Photo of Sample No. R8218 which is a finely laminated, fetid black (unoxidized) mudstone (Table 5) with 3.5% P₂O₅.

During the evaluation of the Permian Park City Group as a petroleum source, Maughan (1979) stated that the Meade Peak Member was deposited in the Sublett Basin and thins radially from a central area located between Soda Springs, Idaho and Ogden, Utah where his isopach map indicates thicknesses greater than 50 meters (Figure 13). This depositional basin was generally surrounded (except to the northwest) by carbonate and terrigenous shelves. Upwelling currents entered the Sublett Basin from the northwest producing an area of maximum organic carbon and maximum phosphate concentration in the central part of the basin. Figure 13 reveals that the Murdock Mountain area lies within a southwest oriented inlet and as such is referred to by Fedewa (1980) as the Meade Peak Phosphatic Shale Tongue of the Permian Phosphoria Formation.

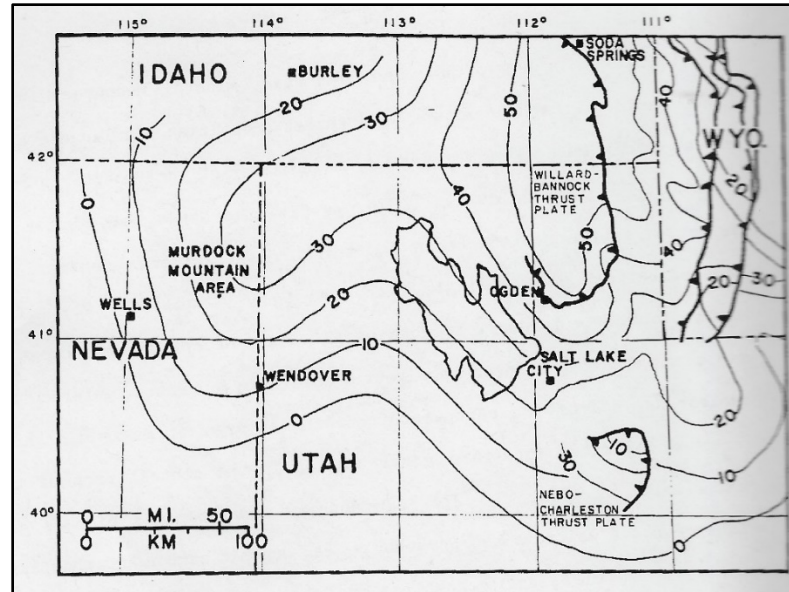


Figure 13. Isopach map of the Meade Peak Phosphatic Shale Member of the Phophoria Formation in the Idaho, Nevada, Utah and Wyoming region. Isopachs are in meters. The Murdock Mountain area is shown in NE Nevada (from Fedewa, 1980 and Maughan, 1979).

8.0 Deposit Types

Sedimentary phosphate deposits (Simandl, 2011) are stratiform or lens-shaped, measuring from less than 1 meter to tens of meters in thickness. They extend for tens to hundreds of kilometers in their longest dimension. Mineralized zones consist of bedded phosphorites ($\geq 18\%$ P_2O_5) or phosphate rocks ($< 18\%$ P_2O_5) which may be primary or reworked (secondary). The main ore mineral is microcrystalline francolite, commonly in form of laminae, pellets, oolites, nodules and fragments of bones or shells but may be also present within the rock matrix.

Deposition usually occurred in areas of warm paleoclimate, mostly between the 40th parallels. The most common depositional environment for sedimentary phosphate deposits is a marine sedimentary basin with a good connection to the open sea (commonly west-facing at the time of phosphate deposition), and upwelling areas with high plankton productivity.

Associated rock types are typically sedimentary rocks including marl, black shale, chert, limestone, dolostone, and in some cases lava flows, tuffs and diatomite-bearing rocks. Figure 14 shows conceptual vertical section of the platform perpendicular to the shoreline (Simandl, 2011).

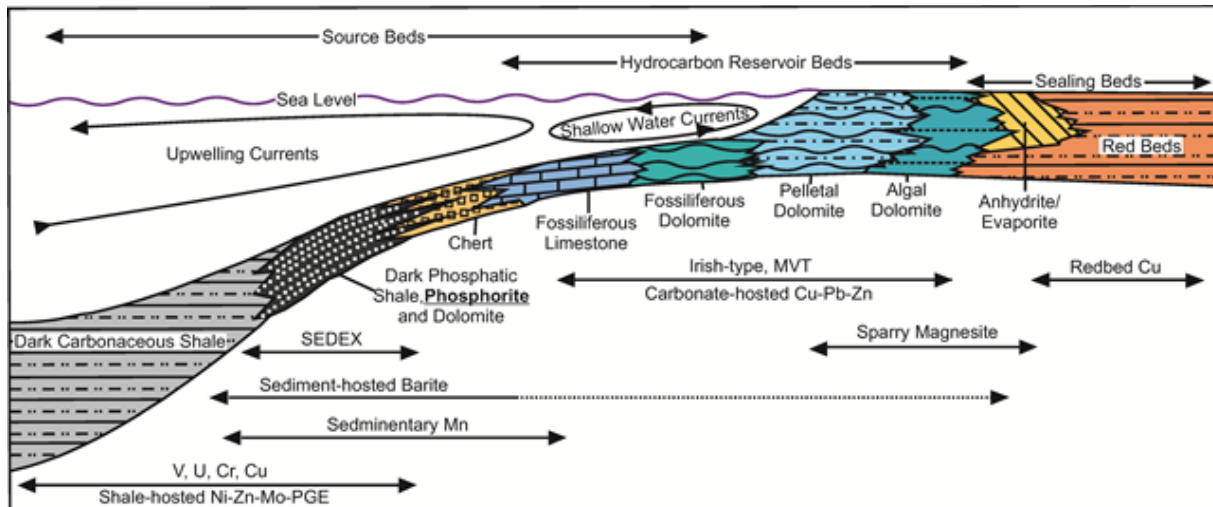


Figure 14. Schematic vertical section across continental platform, showing key lithologies and spatial relationship between phosphorites and other deposit types and hydrocarbons (from Simandl, et al, 2011).

The thickest deposits are amalgamated/condensed beds (tabular units) reflecting variations in upwelling intensity and storm frequency through time. Individual phosphorite deposits delimited by drilling may measure from a few hundreds of meters to tens of kilometers in their longest dimension. Phosphorite deposits commonly occur in belts.

Phosphorites are stratigraphically and spatially linked to paleo-depositional environments favorable for phosphogenesis (high bio-productivity and phosphorus flux, stratification within water/unconsolidated sediment column, and a moderate to low supply of allogenic sediment). Economic deposits are spatially related to multiple cycles of regression-transgression. Phosphate facies commonly rest on, or are associated with, erosional surfaces (unconformities) and/or start with phosphatic lag concentrates. Entrapment basins (zones) characterized by a low influx of continent-derived sediments are required for the deposition of phosphorites.

Seawater averages 0.071 ppm phosphorous (Redfield, 1958) and may contain as much as 0.372 ppm phosphorus (Gulbradsen and Robertson, 1973). Warm surface waters typically contain less than 0.0033 ppm phosphorus (McKelvey, 1973). Phosphate rocks and primary phosphorites form in or laterally adjacent to organic-rich sediments beneath regions where upwelling, nutrient-rich, cold waters interact with a warm sunlit surface seawater layer, creating favorable conditions for intense algal bloom. Algae die, or are eaten by other life forms, then accumulate on the seafloor as fecal pellets and/or organic debris beneath sites of active coastal upwelling.

Decomposition of organic debris in an oxygen-deprived environment by bacteria and dissolution of fish bones and scales are linked to precipitation of phosphate minerals (phosphogenesis) near the sediment-water interface. Precipitation of apatite within intergranular spaces during diagenesis

and through non-biological chemical processes may also contribute to formation of phosphate rocks.

9.0 Exploration

The original exploration work conducted within the Murdock Mountain project area was done in the 1960s and 1970s and consisted of seven dozer trenches, geologic mapping and sampling along with five (5) shallow drill holes targeting the oolitic shales (see Section 6.0).

Since this early prospecting program conducted in the sixties and seventies, there has not been any reported phosphate exploration activity in the Murdock Mountain area. The preliminary exploration program conducted by NEVAGRO LLC served to confirm the early reports of potentially economic widths and grades of phosphate.

10.0 Drilling

Aside from reports of 5 holes drilled in the sixties and seventies, there is no drilling information to be considered at this time.

11.0 Sampling Preparation, Analyses and Security

Owing to the time that has passed since NEVAGRO's initial sampling at Murdock Mountain (2012), the results are viewed as historical evidence of phosphate mineralization (see Section 6.0).

12.0 Data Verification

The property was visited by the Author on June 27, 2018 along with NEVAGRO's representative, Marco Montecinos, and the following activities were completed:

- Visit to the project site including a several kilometer traverse of the phosphorite bed;
- Inspection of several historical trenches; and
- Collection of 5 chip samples from the historical trenches intended to confirm the reported elevated phosphate grades.

Sample locations, weights, sample types and rock descriptions are presented in Table 4. All samples were collected, located, photographed and delivered to the ALS Laboratory in Reno, Nevada on June 28, 2018 by the Author. The analytical results are summarized in Table 5 while the Assay Certificate is given in Appendix A.

The results in Table 5 reveal a broad range of phosphate (P_2O_5) values from less than one percent to greater than 11.5% which is the upper limit for the analytical method employed. The low percentage of high phosphate values in this work reflects the visual similarity between low and high phosphate contents in the black mudstones. Regardless, these results confirm the presence of moderate phosphate grades in the Meade Peak phosphate bed. This observation, in conjunction with the 1966 trench program (Appendices B thru E), Fedewa's (1980) studies on the deposit and Nevagro's program in 2012 confirm the presence of moderate phosphate grades (10-20% P_2O_5).

Table 4. Sample locations, weights, type and descriptions for samples collected by the Author on June 27, 2018.

Sample Number	Coordinates		Elevation	Sample Weight	Sample Type	Sample Description
	North	East				
R8218	4,569,036	724,601	1,933	1.69	Chip	T-1: Fnlly lam'd, blk mudstone; fetid
R8219	4,569,031	724,603	1,933	2.27	Chip	T-1: Brn-blk, fossil.,oolitic, calc mudstone
R8220	4,567,068	722,826	2,182	1.37	Chip	T-5: Fnlly lam'd, blk, calc. mudstone; fetid
R8221	4,569,158	724,678	1,914	2.06	Sub-crop	Blk., med-bd'd, calc. mudstone
R8222	4,569,176	724,727	1,914	2.16	Sub-crop	T-?: Fnlly lam'd, blk-brn mudstone; oxid'd

Table 5. Analytical results for the June 27, 2018 samples collected at the Murdock Mtn, phosphate project. Results are divided into: Phosphate Content along with Major, Minor and Trace Elements.

Sample Number	Phosphate Content (%)		Major Elements (%)							Minor Elements (ppm)							Trace Elements (ppm)							
	P	P_2O_5	Ca	Mg	Al	Na	K	Fe	S	Ba	Sr	Ni	Cr	Cu	Pb	Zn	As	Cd	Hg	Mo	Sb	Se	U	V
R8218	1.53	3.5	11.6	0.67	0.76	0.09	0.33	0.85	0.14	100	237	74	353	24	10	260	<10	5	<5	7	20	<50	<50	68
R8219	4.11	9.42	27.2	4.14	0.3	0.15	0.1	0.46	0.22	160	769	30	116	9	10	130	10	<5	<5	6	20	<50	<50	35
R8220	0.985	2.26	12.05	0.26	0.61	0.06	0.27	0.77	0.12	120	160	60	252	21	10	180	10	5	<5	<5	<10	<50	<50	49
R8221	0.261	0.6	32.4	1.41	0.14	<0.05	<0.05	0.2	<0.05	100	694	12	127	8	10	50	<10	<5	<5	<5	10	<50	<50	41
R8222	>5	>11.5	13.55	0.11	0.98	0.13	0.44	0.93	0.14	80	258	26	682	13	10	140	<10	<5	<5	5	20	<50	<50	44

It should be noted that the trenches were previously sampled by Midwest Oil Corp. in the 1960s (Appendices B thru E) and by NEVAGRO in 2012 (Tables 3 and 7). The results from this study cannot be correlated to any of the historical samples owing to the small area sampled and limited outcrop owing to sloughing along the trenches.

The Author has not returned to the property since the initial site visit in 2018 owing to force majeure conditions. Due to a ruling by the US Environmental Protection Agency in 2014, all mining and energy exploration as well as certain ranching activity over 6 states were halted in order to conduct a Sage Grouse study. In 2018, the EPA halted the Murdock Mtn. environmental study and ordered a return to status subject to the promulgation of new rules for exploration. These rules came into effect in late 2019, and, as a result, plans to explore the Murdock Property were renewed. Immediately following this state of Force Majeure, the COVID 19 pandemic prohibited

the advancement of studies at Murdock Mtn. until late 2021. Visits by consultants engaged in the permitting process over the past two years have not observed any mineral exploration or development activity in the Murdock Mtn. project area.

13.0 Mineral Processing and Metallurgical Testing

Aside from preliminary studies conducted by Alderman (1983; Section 6.0), there has not been any mineral processing or metallurgical testing analyses carried out on the Murdock Mountain phosphorite.

14.0 Mineral Resource Estimates

There is no compliant resource on the Murdock Mountain property.

15.0 Mineral Reserve Estimates

There is no compliant reserve on the Murdock Mountain property.

16.0 Mining Methods

Mining methods have not been considered for the Murdock Mountain property.

17.0 Recovery Methods

Following from Section 13.0, recovery methods have not been considered for the Murdock Mountain property.

18.0 Project Infrastructure

There is no infrastructure within the Murdock Mountain project area.

19.0 Market Studies and Contracts

Market studies have not been conducted for phosphate-rich rock from the Murdock Mountain project area nor have contracts been considered.

20.0 Environmental Studies, Permitting and Social or Community Impact

The BLM leases certain solid minerals, such as phosphate, on public and other Federal lands. The BLM may also lease these minerals on certain private lands, provided the mineral rights are owned

by the Federal government. The leasing process is initiated with the granting of prospecting permits, under 43 CFR 3505, in areas where a mineral deposit is suspected to exist. A prospecting permit provides the exclusive right to prospect and explore for leasable mineral deposits; phosphates can only be removed to demonstrate the existence of economic concentrations.

If during the term of the prospecting permit, the permittee demonstrates the existence of an economic phosphate deposit, the BLM may issue a preference right lease to the permittee without competition. In addition, preference right leases have other requirements as outlined under the regulations at 43 CFR 3500.

NEVAGRO LLC commenced the permitting process on June 12, 2012, when it submitted a Plan of Operations for exploration at Murdock Mountain. The plan was returned to NEVAGRO about 5 years later and re-submitted on June 5, 2017 and amended on April 5, 2018. The reasons for this extended period are twofold: first, a depressed phosphate market did not motivate NEVAGRO to pursue the prospecting permit and second, there was environmental push-back owing to the encroachment of the permit area onto habitat of the Greater Sage Grouse. The following provides a brief background (see Wikipedia - Greater Sage Grouse) on this important issue.

In the late nineties, it was observed that Sage Grouse habitat, native sagebrush, was being damaged and destroyed due to the lack of management of grazing on public lands. This motivated a petition to list the Greater Sage Grouse under the Endangered Species Act.

In 2010, after a second review, the Department of the Interior assigned the Greater Sage-Grouse a status known as "warranted but precluded", essentially putting it on a waiting list (behind more critically threatened species) for federal protection. Since half of all remaining sage grouse habitat is on private lands, the USDA's Natural Resources Conservation Service launched the Sage Grouse Initiative, a partnership-based, science-driven, Farm Bill-funded effort that uses voluntary incentives to proactively conserve America's western rangelands, wildlife, and rural way of life. The Sage Grouse Initiative has partnered with 1,500+ ranchers across 11 states since 2010, conserving 5.5 million acres of sage grouse habitat (twice the size of Yellowstone National Park).

In April 2014, the Sage-Grouse and Endangered Species Conservation and Protection Act (H.R.4419) was introduced in the U.S. House of Representatives to prohibit the federal government from listing sage grouse under the Endangered Species Act for 10 years, as long as states prepare and carry out plans to protect the species within their borders.

Facing a court-ordered deadline of October 2015, the Department of the Interior on September 22, 2015, was forced by the US Congress to not list the bird as threatened or endangered under the Endangered Species Act (ESA). The language in the 2015 bill,

"Prohibits funds from being used to write or issue rules pursuant to the Endangered Species Act of 1973 and related to the sage-grouse."

As rationale for its decision, the Department said it would rely on a new land-management plan to protect the sage grouse's habitat of 165 million acres across eleven Western states. The designation under the ESA would likely have led to land-use and other restrictions that critics feared would have economic impacts, possibly restricting oil and gas development and homebuilding. In issuing its finding, the FWS stated that:

"A status review conducted by the Service has found that the Greater Sage Grouse remains relatively abundant and well-distributed across the species' 173-million acre range and does not face the risk of extinction now or in the foreseeable future.

The Service's decision follows an unprecedented conservation partnership across the western United States that has significantly reduced threats to the greater sage-grouse across 90% of the species' breeding habitat. The Service has determined that protection for the greater sage-grouse under the Endangered Species Act is no longer warranted and is withdrawing the species from the candidate species list."

This measure was repeated in the 2016 appropriations bill. For the 2017 bill, the Columbia Basin population was added — Sec. 114: For the 2018 appropriations bill, over the objections of conservationists and the Democratic party, Congress applied similar measures to two other species: the gray wolf and the lesser prairie chicken.

On June 5, 2017, NEVAGRO, LLC revised the exploration plan and amended the document of April 5, 2018 by excluding parts of the original permit area that were deemed by the BLM to consist of grouse habitat. The BLM has requested of NEVAGRO the preparation of an Environmental Assessment prior to the granting of the exploration permits. It is estimated that this study will require up to a year to complete.

During the June 27 visit to the Murdock Mountain project area, evidence of economic activity in and around the project area, aside from grazing, was not observed. The several roads crossing the project area are likely used for local recreation and hunting. Following the visit to Montello on that day, it is difficult not to envision a positive economic impact via phosphate development on this small community.

21.0 Capital and Operating Costs

Capital and operating costs have not been determined for the Murdock Mountain project.

22.0 Economic Analysis

The economics of the Murdock Mountain project have not been studied nor analyzed.

23.0 Adjacent Properties

Although the Murdock Mountain phosphorite bed is contained within a regionally distributed phosphate horizon (Meade Peak Member of the Phosphoria Formation), with significant phosphate mines in SE Idaho, SW Wyoming and NW Utah, there are no phosphate projects or mines within a distance of 100 kilometers of Murdock Mountain.

24.0 Other Relevant Data and Information

24.1 Trace Element Geochemistry

The high trace element content of some phosphorites may limit their suitability for agricultural applications. Repetitive fertilizing of agricultural fields over several decades may result in unacceptable concentrations of potentially harmful elements in soils. For example, elevated concentrations of uranium, thorium, lead, cadmium, selenium and chromium in fertilizer are not desirable (Simandl, et al, 2011).

The Author has not been able to locate specific limits placed on the trace element contents of inorganic fertilizers including phosphate-bearing rock. The Association of American Plant Food Control (AAPFCO; <http://www.aapfco.org/rules>) has established the “Heavy Metal Rule” to identify trace metal levels considered as ‘adulterated’ (for purposes of micro-nutrients). Federal, state and industry sponsored risk-based assessments demonstrate that metals in fertilizer generally do not pose harm to human health or the environment. However, fertilizers that guaranteed amounts of phosphates and/or micronutrients are adulterated when they contain metals in amounts greater than the levels of metals established in the following table:

Table 6. Heavy Metal Rule to identify trace metal levels considered as ‘adulterated’ above which metal levels are considered toxic.

Metals	PPM per 1% P ₂ O ₅	Limit (ppm) for 15% P ₂ O ₅
Arsenic (As)	13	195
Cadmium (Cd)	10	150
Cobalt (Co)	136	2040
Lead (Pb)	61	915
Mercury (Hg)	1	15
Molybdenum (Mo)	42	630
Nickel (Ni)	250	3750
Selenium (Se)	26	390
Zinc (Zn)	420	6300

Inspection of Table 7 (2012 data) and Table 5 (June, 2018 samples) reveals that minor and trace elements values for the limited Murdock Mountain samples are an order-of-magnitude lower than thresholds established by the AAPFCO.

Table 7. Trace element data for the 2012 samples (n = 27; Table 3) from the historic trenches cutting the Meade Peak phosphorite member.

Element (ppm)	Max Value	Lower Limit	Mean (n=27)	Comments
Ag	1	<1	<1	
As	30	<10	<10	3 samples > 10ppm
Ba	380	<50	146	<50 set to 25 ppm
Be	<5	<5	<5	
Bi	10	<10	<10	1 sample at 10ppm
Ca (%)	28.3	ND	13.92	
Cd	<5	<5	<5	
Co	<5	<5	<5	
Cr	356	ND	125.6	
Cu	35	<5	<5	8 samples > 5ppm
Fe (%)	0.69	<0.02	0.41	
Ga	<50	<50	<50	
Hg	5	<5	<5	1 sample at 5ppm
La	120	<50	<50	
Mg (%)	6.98	ND	2.01	
Mn	110	<30	55.5	
Mo	<5	<5	<5	
Ni	55	<5	14.7	<5 set to 2.5
Pb	20	<10	<10	
S (%)	0.3	<0.05	<0.05	
Sb	10	<10	<10	9 samples at 10ppm
Th	<100	<100	<100	
Ti	<0.05	<0.05	<0.05	
U	<50	<50	<50	
V	85	<5	24.3	<5 set to 2.5
W	<50	<50	<50	
Zn	170	<10	64.6	<10 set to 5

24.2 Phosphorite Metallurgy

High concentrations of certain elements other than P can cause problems during processing. High CaO/P₂O₅ ratios result in an increase in sulfuric acid consumption during phosphoric acid production; high concentrations of Mg and SiO₂ cause filtration problems; high concentrations of Na and K results in scaling; organic matter causes foaming during production of phosphoric acid; high Cl concentrations cause premature corrosion. High

levels of relatively toxic elements (e.g. Cd, Se and As) may make a phosphorite unsuitable for fertilizer production.

24.3 Global Production and Sources

World phosphate production for 2011 is estimated at 176 million tonnes. Sedimentary phosphate deposits account for 80% of the world phosphate production. Morocco and the Western Sahara (administered by Morocco) accounted for 50 million tonnes. Other North African countries, China, U.S.A. and Russia are also major producers (Jasinski, 2011). Other sources of phosphorus include apatite concentrate produced from some carbonatite deposits and peralkaline intrusions (Brazil, Canada, Russia and South Africa), guano deposits (small and only of local importance) and also apatite produced as a by-product of iron extraction from some of iron oxide copper gold (IOCG) deposits.

24.4 Importance of Phosphorus and Phosphate

Phosphorus is an essential element for plant and animal life. There are no substitutes for phosphorus in agricultural applications. Elemental phosphorus is used in production of variety of intermediate products that are consumed in the manufacturing of detergents, matches, fireworks, pesticides, toothpastes and explosives. Phosphorus compounds may also be used as gasoline additives, in some plastics, fire retardants, etc. The recovery of phosphate from waste waters is technically possible; however, the economics of the process remain challenging at current prices of phosphate fertilizers (Parson and Smith, 2008).

25.0 Interpretation and Conclusions

The limited work to date at the Murdock Mountain phosphate deposit has confirmed:

- The Meade Peak Phosphatic Shale Tongue of the Permian Phosphoria Formation extends into NE Nevada and occurs as a 28 to 40 m thick tongue within the Phosphoria Formation;
- The phosphate occurs as pellets, peloids, oolites (<2mm in diameter), whole fossils, fossil fragments (larger than 2 mm in diameter), and cement;
- Geologic mapping (not confirmed) has identified that the Meade Peak unit is present along the east and south flank of Murdock Mountain and is projected to depth below the mountain; and
- Historical trenching reveals that the phosphate bed averages 3.4 metres in thickness with the phosphate content of 14.9%; and
- The site visit conducted by the Author in 2018 consisted of 5 samples from different sites and confirmed high phosphate values but did not confirm values identified in the historical studies.

The above observations concur with the geologic model set forth in the above, “Sedimentary phosphate deposits (Simandl, 2011) are stratiform or lens-shaped, measuring from less than 1 metre to tens of metres in thickness. They extend for tens to hundreds of kilometres in their longest dimension”. Review of the limited data and a site inspection confirm that the target horizon is regional in extent and likely extends to depth from exposures observed at Murdock Mountain.

The following is not understood and will need to be the focus of the future exploration work:

- The distribution of phosphate grades and corresponding thicknesses over the accessible extent of the Meade Peak horizon;
- Structural features that will impact the deposit’s continuity in the development of geologic and resource models;
- Major, minor and trace element geochemistry of the deposit allowing for detailed metallurgical and marketing studies; and
- Careful study of the ‘organic’ fertilizer market including desired P₂O₅ contents, micro-nutrients, trace element content, packaging, transport and identified markets.

26.0 Recommendations

It has been established that an Environmental Assessment will need to be completed over the project area as a requirement for the Exploration Permit. NEVAGRO, LLC estimates that this study and permit application will cost approximately US\$262,000 (Phase 1) and will require about one year to complete owing to baseline-data gathering.

The actual design and cost of the proposed exploration program must await the granting of the exploration permit which will contain guidelines for the program. Consequently, initial activities (Phase 1) need to focus on the completion of the Environmental Assessment and receipt of the Exploration Permit with the anticipated expenditures as follows:

Activity	Anticipated Cost	Anticipated Time Frame
Phase 1: Complete environmental assessment and file with BLM		
Cultural Study	US\$140,000	Q3 2022
Biological Study	US\$82,000	Q3 2022
Complete environmental assessment & file with BLM	US\$30,000	Q4 2022
Finalize exploration plan and obtain exploration/ reclamation permit from BLM ⁽¹⁾	US\$10,000	Q2 2023
Sub-total Phase 1	US\$262,000	
Phase 2: Trenching & drilling ⁽²⁾	US\$225,000	Q4 2023

Note: (1) Upon issue of the exploration permit, the Nevada BLM will require annual fees and payments which are to be assessed at that time and will be paid from general working capital. (2) Dynamic fuel and labor costs will impact the amount of trenching, road work and drilling.

Once the exploration permit for the Murdock Mountain area is obtained from the BLM, NEVAGRO, LLC should initiate their exploration program (Phase 2) as defined in their June 12, 2012 proposal (Montecinos, 2018) to the BLM (Figure 3) which consists mostly of trenching and drilling for a total estimated cost of US\$225,000.

As the trenching program proceeds, the resulting data needs to be entered immediately into the data base and utilized in the design of the proposed drill holes. Drill data, including multi-element geochemical data, needs to be modelled within a mining software package in order to arrive at a compliant resource estimate.

In addition to the critical work proposed above, potential markets for phosphate need to be considered. The results of these studies will define required phosphate grades which will, in turn, define mining techniques and metallurgical procedures. These studies, based upon compliant data, will allow NEVAGRO to determine the potential feasibility of this project.

27.0 References

Alderman, Jr., S.S., 1983, Application for the Preference Right Phosphate Lease Murdock Mountain Phosphate Deposit, Elko County, Nevada – Phosphate Prospecting Permit N-10170: received by BLM, Reno office, July 22, 1983.

Ketner, K.B., 2009, Mid-Permian Phosphoria Sea in Nevada and the Upwelling Model; U.S. Geological Survey Professional Paper 1764, 21 pages.

Coats, R.R., 1987, Geology of Elko County, Nevada: Nevada Bur. Mines and Geology, Bulletin 101, 112 pp.

Fedewa, W.T., 1980, Stratigraphy and Phosphate Resources of the Murdock Mountain Area, Elko County, Nevada: M.Sc. Thesis, San Jose State University, CA, 98 p.

Gulbradsen, R.A. and Roberson, C.E., 1973, Inorganic phosphorous in seawater: in Griffith, E.J., Beeton, A., Spencer, J.M., and Mitchell, D.T. (eds.), Environmental Phosphorous Handbook; John Wiley & Sons, New York, pp. 117-140.

Jasinski, S.M., 2011, Phosphate rock – Commodity Summaries, U.S. Geological Survey, pp. 118-119.

Ketner, K.B., 2009, Mid-Permian Phosphoria Sea in Nevada and the Upwelling Model; U.S. Geological Survey Professional Paper 1764, 21 pages.

Lapointe, D.D., Tingley, J.V., and Jones, R.B., 1991, Mineral Resources of Elko County, Nevada: Nevada Bur. Mines and Geology, Bull. 106, 236pp.

Maughan, E.K., 1979, Petroleum source rock evaluation of the Permian Park City Group in the northeastern Great Basin, Utah, Nevada and Idaho, in Newman, G. W., and Goode, H.D., eds.: Basin and Range Symposium: Rocky Mountain Association of Geologists and Utah Geological Association, p. 523-530.

McKelvey, V.E., 1973, Abundance and distribution of phosphorous in the lithosphere: in Griffith, E.J., Beeton, A., Spencer, J.M., and Mitchell, D.T. (eds.), Environmental Phosphorous Handbook; John Wiley & Sons, New York, pp. 13 - 31.

Mosier, D.L., 1992, Descriptive model of upwelling type phosphate deposits; Mineral Deposit Models; in Cox, D.P. and Singer, D.A., Mineral Deposit Models, U.S. Geological Survey, Bull. 1693, pages 234 – 236.

Parsons, S.A. and Smith, J.A., 2008, Phosphorous removal and recovery from municipal wastewaters: Elements, Volume 4, pp. 109-112.

Simandl, G.J., Paradis, S., and Fajber, R., 2011, Sedimentary Phosphate Deposits – Mineral Deposit Profile F07: Geologic Fieldwork 2011, Paper 2012-1, British Columbia Geological Survey, Victoria, BC, pp. 217-222.

Zhang, P., Weigel, R. and El-Shall, H., 2006, Phosphate rock, in Industrial Minerals and Rocks; Commodities, Markets and Uses, Kogel, J.E., Trivedi, N.C., Baker, J.M. and Krukowski, S.T., eds., Society for Mining, Metallurgy, and Exploration, Inc. (SME), Littleton, Colorado, U.S.A., pp. 703-722.

28.0 Date and Signature Page**CERTIFICATE of AUTHOR**

I, Robert J. Johansing, do hereby certify that:

1. I am a Principal of:
 Johansing & Associates
 154 Romaine Dr.
 Santa Barbara, CA 93105

2. I graduated with a Bachelor of Science (1976) degree in Geology from Fort Lewis College, Durango, Colorado and a Masters of Science (1982) degree in Economic Geology from Colorado State University, Fort Collins, Colorado.

3. I am a Qualified Professional Member (#01520QP) of the Mining and Metallurgical Society of America.

4. I have practiced my profession in excess of forty-five years.

5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education and past relevant work experience, I fulfill with requirements to be a “qualified person” for the purposes of NI 43-101. This report is based on my personal review of information provided by the Issuer and on discussions with the Issuer’s representatives. My relevant experience for the purpose of this report is:

1975	Mine Geologist, Sunnyside Mine (Vein: Au, Ag, Cu, Pb, Zn), Silverton, Colorado.
1976-1978	Senior Mine Geologist, Sherman Mine (CRD, Ag), Leadville, Colorado.
1979-1982	Applied research and exploration, Leadville, Colorado.
1982	VMS exploration in Puebla, Mexico
1982-1986	Consulting Geologist, London Mine (veins; Au), Park Co., Colorado.
1987-1990	Consulting Geologist, Leadville, Colorado.
1990-1993	Applied research, Kennecott Exploration, veins & CRDs in Mexico & Colorado.
1993-2002	Exploration and resource definition of the El Dorado district (Au), El Salvador (Kinross El Salvador).
2002-2015	Mineral exploration, project management, resource definition and in-house training for natural resources in Latin America, Johansing & Associates.
2015-2020	Identification and exploration of natural resources in the Southwest U.S. focused on precious metals, lithium and fertilizers.

2020-2022 Conducted exploration and definition of claystone-hosted lithium and phosphorite deposits in Nevada and authored three Technical Reports that are in the final review stages. Work includes mapping and sampling of early-stage projects and the definition of permitting and exploration programs.

6. I am responsible for the preparation of the technical report Technical Report of the Murdock Mountain Phosphate Deposit and dated July 1, 2018 (the Technical Report) and updated March 10, 2022 and October 1, 2022. I visited the property on June 27, 2018.

7. I have not had prior involvement with the properties that are the subject of the Technical Report.

8. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

9. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated the 1st day of October, 2022.

Signature of Robert J. Johansing, Geologist

Seal or Stamp

Robert J. Johansing
Johansing & Associates
154 Romaine Dr.
Santa Barbara, California 93105
Tel: 805-455-4775
Email: rjohansing@gmail.com

APPENDIX A

ASSAY CERTIFICATE FOR SAMPLES COLLECTED ON JUNE 27, 2018

BY: ALS USA INC.
JOB NO.: RE 18153422



ALS USA Inc.
 4977 Energy Way
 Reno NV 89502
 Phone: +1 775 356 5395 Fax: +1 775 355 0179
 www.alsglobal.com/geochemistry

To: TIGREN, INC.
 9732 PYRAMID WAY PMB 138
 SPARKS NV 89411

Page: 1
 Total # Pages: 2 (A - C)
 Plus Appendix Pages
 Finalized Date: 16-JUL-2018
 This copy reported on
 15-AUG-2018
 Account: INTIGRE

CERTIFICATE RE18153422

Project: MUROCK

This report is for 5 Rock samples submitted to our lab in Reno, NV, USA on 28-JUN-2018.

The following have access to data associated with this certificate:
 MARCO MONTECINOS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
SND-ALS	Send samples to internal laboratory
CRU-QC	Crushing QC Test

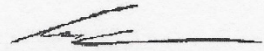
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP41a	High Grade Aqua Regia ICP-AES	ICP-AES

The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him/her and based on an evaluation of all engineering data which is available concerning any proposed project. Statement required by Nevada State Law NRS 519

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



ALS USA Inc.
 4977 Energy Way
 Reno NV 89502
 Phone: +1 775 356 5395 Fax: +1 775 355 0179
 www.alsglobal.com/geochemistry

To: TIGREN, INC.
 9732 PYRAMID WAY PMB 138
 SPARKS NV 89411

Page: 2 - A
 Total # Pages: 2 (A - C)
 Plus Appendix Pages
 Finalized Date: 16-JUL-2018
 Account: INTIGRE

Project: MUROCK

CERTIFICATE OF ANALYSIS RE18153422

Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a
		Rec'd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	
R8218		1.89	1	0.76	<10	100	<5	<10	11.60	5	<5	353	24	0.85	<50	<5	
R8219		2.27	<1	0.30	10	190	<5	<10	27.2	<5	<5	116	9	0.46	<50	<5	
R8220		1.37	1	0.61	10	120	<5	<10	12.05	5	<5	252	21	0.77	<50	<5	
R8221		2.06	<1	0.14	<10	100	<5	10	32.4	<5	<5	127	8	0.20	<50	<5	
R8222		2.16	<1	0.98	<10	80	<5	10	13.55	<5	<5	682	13	0.93	<50	<5	

***** See Appendix Page for comments regarding this certificate *****



ALS USA Inc.
 4977 Energy Way
 Reno NV 89502
 Phone: +1 775 356 5395 Fax: +1 775 355 0179
 www.alsglobal.com/geochemistry

To: TIGREN, INC.
 9732 PYRAMID WAY PMB 138
 SPARKS NV 89411

Page: 2 - B
 Total # Pages: 2 (A - C)
 Plus Appendix Pages
 Finalized Date: 16-JUL-2018
 Account: INTIGRE

Project: MUROCK

CERTIFICATE OF ANALYSIS RE18153422

Sample Description	Method Analyte Units LOD	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a
		K % 0.05	La ppm 50	Mg % 0.05	Mn ppm 30	Mo ppm 5	Na % 0.05	Ni ppm 5	P ppm 50	P2O5 ppm 100	Pb ppm 10	S % 0.05	Sb ppm 10	Sc ppm 5	Se ppm 50	Sr ppm 5	Th ppm 5
R8218		0.33	<50	0.67	70	7	0.09	74	15300	35000	10	0.14	20	<5	<50	237	
R8219		0.10	60	4.14	80	6	0.15	30	41100	94200	10	0.22	20	<5	<50	769	
R8220		0.27	<50	0.26	60	<5	0.06	60	9850	22600	10	0.12	<10	<5	<50	160	
R8221		<0.05	<50	1.41	120	<5	<0.05	12	2610	6000	10	<0.05	10	<5	<50	694	
R8222		0.44	80	0.11	<30	6	0.13	26	>50000	>115000	10	0.14	20	<5	<50	258	

***** See Appendix Page for comments regarding this certificate *****



ALS USA Inc.
 4977 Energy Way
 Reno NV 89502
 Phone: +1 775 356 5395 Fax: +1 775 355 0179
 www.alsglobal.com/geochemistry

To: TIGREN, INC.
 9732 PYRAMID WAY PMB 138
 SPARKS NV 89411

Page: 2 - C
 Total # Pages: 2 (A - C)
 Plus Appendix Pages
 Finalized Date: 16-JUL-2018
 Account: INTIGRE

Project: MUROCK

CERTIFICATE OF ANALYSIS RE18153422

Sample Description	Method Analyte Units LOD	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a	ME-ICP41a
		Th ppm	Ti %	Ti ppm	U ppm	V ppm	W ppm	Zn ppm
R8218		<100	<0.05	<50	<50	68	<50	260
R8219		<100	<0.05	<50	<50	35	<50	130
R8220		<100	<0.05	<50	<50	49	<50	180
R8221		<100	<0.05	<50	<50	41	<50	50
R8222		<100	<0.05	<50	<50	44	<50	140

***** See Appendix Page for comments regarding this certificate *****



ALS USA Inc.
 4977 Energy Way
 Reno NV 89502
 Phone: +1 775 356 5395 Fax: +1 775 355 0179
 www.alsglobal.com/geochemistry

To: TIGREN, INC.
 9732 PYRAMID WAY PMB 138
 SPARKS NV 89411

Page: Appendix 1
 Total # Appendix Pages: 1
 Finalized Date: 16-JUL-2018
 Account: INTIGRE

Project: MUROCK

CERTIFICATE OF ANALYSIS RE18153422

CERTIFICATE COMMENTS	
	LABORATORY ADDRESSES
Applies to Method:	Processed at ALS Reno located at 4977 Energy Way, Reno, NV, USA. CRU-31 SND-ALS CRU-QC SPL-21 LOG-22 WEI-21 PUL-31
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. ME-ICP41 a