QUALIFIED PERSONS TECHNICAL REPORT

ON THE

THOMPSON VALLEY LITHIUM PROJECT

EXPLORATION TARGET

YAVAPAI COUNTY, ARIZONA

PREPARED ON BEHALF OF:

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Table of Contents

List of Tables

List of Figures

1. Summary

This Technical Report, prepared for Ameriwest Lithium Inc. (Ameriwest), documents the known technical and historical information available for the Thompson Valley lithium deposit located in west-central Arizona, U.S.A. Nearby property has been mined for hectorite, a lithium-bearing clay, since 1986. The report culminates with an assessment of the exploration target size and recommendations for further resource definition.

Lithium at the property is found in sedimentary rocks high in carbonate. The occurrence appears to be abundant enough to warrant further exploration and resource definition.

This report has been prepared as a “Qualified Persons Report” under the specific requirements of Canada’s National Instrument 43-101 (NI 43-101) as required by Canadian stock exchanges [1], and incorporates the standards developed by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) [2].

1.1. Background

Ameriwest Lithium Inc. is a public, junior, early-stage exploration company based in Vancouver, British Columbia, Canada, focused on exploring and qualifying lithium and battery metal mining assets. Ameriwest wholly owns Oakley Ventures USA Corp. (Oakley) which is registered in Nevada. Oakley is registered in Arizona as a foreign corporation and approved to conduct business in the state. The Thompson Valley property in Arizona is registered under Oakley, and is the only asset of Oakley and of Ameriwest in Arizona.

This report was authorized by Ameriwest Lithium Inc. with the objective to document the current state of the Thompson Valley project including results of recent surface sample analyses, to provide a lithium exploration target size range, and to present recommendations for continued exploration by drilling the property.

Because lithium is known to be present in the hectorite deposit of the Lyles Mine which is currently being mined in the immediate vicinity of the property, it is clear that the mineral has been discovered in the area. However, the extent of the previously known lithium was not known at the onset of Ameriwest’s work, and so this report presents new exploration discoveries.

1.2. Mineral Rights Ownership

Project mineral rights consist of a combination of State of Arizona (State) and U.S. Federal minerals as shown by Figure S-1, totaling 6,881.26 acres (ac) or 2,784.75 hectares (ha). Part of the lands, 91% or 6,262.79 ac (2,534.46 ha), are State Trust Lands where the surface and minerals are owned by the State.

Mineral rights for the balance of the property, 9% or 618.47 ac (250.29 ha), are owned by the U.S. Government under the jurisdiction of the Department of the Interior and managed by the Bureau of Land Management (BLM). Although the mineral rights on these Federal lands are controlled by the U.S. Government, they are of ‘split estate,’ meaning the surface is private and held separately from the minerals.

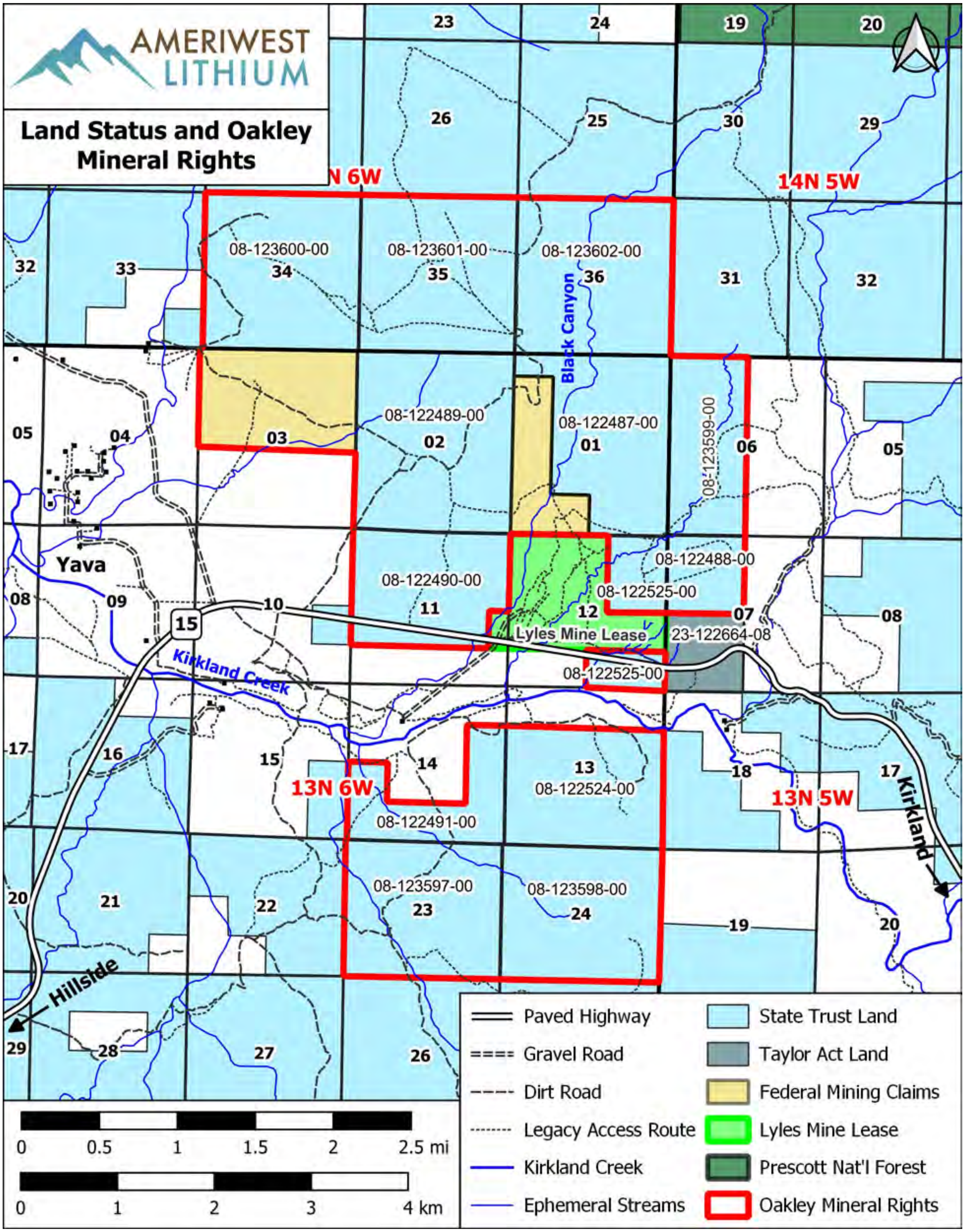

Figure S-1. Thompson Valley Land Status and Mineral Rights

1.3. Property Location and Access

The Thompson Valley Project is located in a rural area in west-central Arizona, U.S.A. in Yavapai County along the Kirkland Creek drainage between the towns of Kirkland to the southeast and Hillside to the southwest along County Road 15.

The terrain is semi-rugged with a sandy surface strewn with basalt boulders, and steep cliffs capped with a large basalt flow to the north. Vertical relief rises 800 ft (240 m) from Kirkland Creek at 3,600 ft (1,100 m) above mean sea level (AMSL) to 4,400 ft (1,340 m) AMSL at the top of the basalt-capped mesa.

The project has good access via roads and highways, and rail is convenient as well. The largest nearby city is Prescott, located about 36 miles (58 km) to the northeast. The lands are 51 mi (82 km) north of the city of Wickenburg and 120 mi (190 km) north of Phoenix, the largest population center. Phoenix is a major airline hub, and there are commercial flights to the regional airport in Prescott.

The Burlington Northern and Santa Fe Railway (BNSF) passes through both Kirkland and Hillside, and each has a rail siding. The BNSF travels south to Phoenix, and north to Williams, AZ located near Flagstaff, and also connects to the west coast and to the eastern U.S.

1.4. Local Resources and Infrastructure

Because mining is an important part of the economy in Yavapai County, there are several equipment, supply and excavation businesses located in Prescott area. Anything else required would be available out of the greater Phoenix metropolitan area.

There is presently limited infrastructure present to support the Thompson Valley project. The project is considered to be a 'Greenfield' exploration project because there is limited infrastructure to support the mining and processing facilities.

There currently exists a paved road for access to the property. The road is suitable for mobilization of drilling equipment and crews, as well as a mining operation. Three-phase electrical power near is located within 0.2 mi (0.3 km) from the property. Most of the Thompson Valley area has suitable cellphone reception.

Groundwater is likely present at the Thompson Valley property. As the majority of the property is owned by the State, water rights would need to be obtained from the State. Potable water may be purchased from an organization located 19 mi (30 km) from the property.

Labor to construct and operate a mine a Thompson Valley would likely mobilize from Prescott. Part of the workforce might also be available from the local communities or could be housed at those locations.

1.5. History

A deposit of white clay was first discovered in Thompson Valley by Joseph Lyles in the mid-1950's. The State of Arizona identified the deposit as the "White Hills Lithium Prospect" in 1957. Shallow sampling of the area was conducted by the USGS in 1960 and it was determined that the clay is a lithium-bearing bentonite clay known as "hectorite". Lithium contents of the samples were reported by the USGS 1965 which included two locations on the Oakley mineral rights area.

In 1981, Theodore (Ted) H. Eyde of Geoservices of Arizona (GSA) initiated surface exploration under the direction of R.T. Vanderbilt Company, Inc. In a Vanderbilt inter-office memorandum, it was reported that a surface sample taken near the current mine was a gray-green translucent smectite clay containing lithium.

GSA drilled and cored several holes in the area from 1983 to 1984. Six of the GSA drill sites were located on the current Oakley mineral exploration permit lands. Ameriwest acquired this drilling information from GSA in 2022.

In 1983, Ted Eyde applied for a Mineral Lease with the State and in 1985 GSA acquired a 15-ton bulk sample. Transfer of the Mineral Lease from Ted Eyde to Gadsden-Sonora Holdings, LLC (owned by Ted Eyde) occurred in 2001, and transfer to Vanderbilt Western Resources LLC took place in 2018. Over 36 years, State records indicate a total of 11,800 tons (10.7 kt) of clay product was sold by the Lyles Mine through 2012 with average annual sales of 340 tons (306 t).

1.6. Geologic Setting and Mineralization

Thompson Valley consists of Quaternary-Tertiary sediments covering the valley floor, with large basalt flows of the same age to the north and south. Precambrian granites and schists are exposed to the west and east. The valley floor sediments are volcanic ashes, tuffs and decomposed basalt and granitic sediments which have been hydrothermally altered in part.

As shown by the map of Figure S-1, there are two separate areas where Oakley has mineral rights: a North Area located to the north of Kirkland Creek, and South Area located south of the creek. The North Area is the main subject of this initial investigation, while the South Area has not yet been inspected in detail. The prospective lithium target within the North Area is south of the basalt-capped cliffs including the ridge where the Lyles hectorite mine is located.

Hydrothermal solutions locally altered the volcanic sediment and ash into various clays, zeolites and hectorite, with hectorite being the identified main geologic material bearing lithium within the Lyles Mine. Within the target area(s) where Oakley has mineral rights, excess silica is found in pods of common opal and chalcedony. Travertine deposits are also noted around these areas, providing further evidence of hot-spring (hydrothermal) activity.

There are three large scale faults that break up the area into a series of geologic blocks each with its own characteristics. The large-scale faults are defined here as:

Thompson Valley Fault located on the north side of the project area along the base of the northern cliffs trending northwest-southeast with an apparent vertical offset of at least 700 ft (200 m). The upside is on the north, where the capping basalts and underlying sediments are exposed. This is actually a fault zone, and considerable hydrothermal activity is observed in this zone.

Kirkland Fault located along Kirkland Creek in the eastern portion of the area and projected westward into the plutons at the contact between two major granitic units. The fault trends northwest-southeast with a vertical offset of at least 400 ft (120 m) with the upside on the south.

Black Canyon Fault located on the west side of the Lyles Mine area and within Black Canyon. This fault trends north-south with at least 150 ft (45 m) of vertical offset with the upside on the east. On the east side of the fault is a prominent ridge with a north-south orientation.

The Thompson Valley area has undergone an epithermal (<150°C) series of events. From the current exposures, the faults appear to have been the main sources of hydrothermal activity locally which altered the volcanic sediments and ashes into various clays and zeolites. Within the target area(s), silica replacement areas have been mapped where excess silica is found in pods of common opal and chalcedony within the clayey zones and may represent apparent caps to larger epithermal areas. Travertine deposits are also noted around these areas, providing further evidence of hot spring (epithermal) activity.

1.7. Thompson Valley Lithium Deposit Types

From the literature, there are four types of lithium deposits or enrichments that are recognized: pegmatites, brines, clay and greisenized granites. Greisenized granites were once the major source lithium, but are now only being mined in southeastern Russia. There are 34 producing pegmatite deposits around the world with 7 producing brine deposits.

Brine and clay deposits are becoming more important due the lower cost of extraction and processing compared to pegmatites. Another more strategic importance of these deposits is that they are located within the United States and not subject to supply chain issues.

At Thompson Valley area, there may be two different types of lithium occurrences, but they are both related in their origin, which is hydrothermal activity.

First, it is documented that the Lyles Mine is producing a hectorite-like clay. It has a few distinctions which make it different than the true hectorite clay found a Hector, California, including the lack of sodium as a replacement element and the Lyles clay instead has calcium. However, the clay is described in geologist logs as being waxy and translucent. Also, Vanderbilt is using the produced clay as a base material for their purposes as a viscosifier and in cosmetics.

Second, the original exploration work performed by GSA on behalf of Vanderbilt shows a great presence of carbonates in a majority of samples. It is not known whether the carbonates are in the form of calcite (calcium carbonate), or some combination of other carbonates, but it does contain lithium and fluorine in significant concentrations.

This new type of lithium occurrence has been recently noted in Nye County, Nevada. Here, rather than occurring as a clay, the lithium is noted to occur as a carbonate or salt-type deposit. The Thompson Valley project may host a similar type of lithium in a carbonate-rich lacustrine deposit.

Both forms of lithium appear to occur at Thompson Valley, a clay type and a carbonate form. Both of these types of material are likely the result of hydrothermal activity in the area.

There is evidence that the Thompson Valley deposit might have been a highly mineralized lake. The lake might have been fed by a mineralized hot spring, and as it cooled, various minerals precipitated out as carbonates. The lake deposits also included ash and tuff, which were altered to clay. Evidence for Thompson Valley being a highly mineralized lake is the observation of pisolites or oncolites at two locations along the Thompson Valley fault zone.

Thus, there appears to be two forms of lithium in the Thompson Valley area: 1) the hectorite-like white, waxy, translucent clay that is being mined with an elevated lithium content, and 2) the multi-colored clay-like sediment that is typically not white, waxy, nor translucent, and has a high carbonate content and little actual clay content.

1.8. Exploration

GSA explored the area by drilling and coring in 1983 and 1984. GSA drilled and cored 30 locations in Sec. 12 in the vicinity of Lyles Ridge including the area east of the ridge. Of significance to the subject report, GSA also drilled and cored 6 locations where Oakley has its State permits in Sec. 2 and 11. Ameriwest acquired the original drilling records including geologist logs, and those results are incorporated into the current work.

Exploration conducted by Ameriwest began in 2022 and consisted of description of surface features and mapping the property, analyzing surface samples acquired from the area and commissioning a satellite geophysical survey. Surface samples were acquired across the North Area below the cliffs during June to October. A total of 205 samples were acquired.

Each sample was assigned a rock type based on inspection and setting. Samples were scanned with a SciAps Z-903 LIBS unit (Laser Induced Breakdown Spectrometer) for preliminary lithium detection. Selected samples were shipped to ALS analytical facilities in Arizona or Vancouver for element analyses. Laboratory analyses were then performed in two parts:

1. Methods Test: To compare various rock digestion methods and analysis techniques so as to select the best laboratory method; then
2. Analyses: Using the best analytical method, 188 samples were submitted for analysis.

The method chosen was a 4-acid digestion followed by ICP-MS analysis, and the bulk of the samples were sent to ALS for multi-element analysis including one reference sample and one sample of hectorite from the Lyles pit.

Surface samples analyzed across the project area have lithium contents ranging from 2 to 1,295 ppm Li. Of these, 36% had lithium contents greater than 200 ppm, 14% were greater than 500 ppm, and 3% were greater than 1,000 ppm, with a mean of 227 ppm Li and standard deviation of 269 ppm Li. Most of the lithium-bearing samples are high in carbonate and reactive to acid.

The Silica Replacement, Volcanic Sediment and Hydrothermally Altered rock types held the highest lithium concentrations, with averages of 539, 194 and 166 ppm Li, respectively, and maximums of 1,295, 1,195 and 485 ppm Li, respectively.

Two lithium-bearing trends are confirmed by the highest lithium values, one along the northwest-southeast trending Thompson Valley fault zone near the base of the basalt-capped cliff, and another along a northeast-southwest trend running through the main portion of Ameriwest's State lands in Sections 2 and 11.

Ameriwest also commissioned Auracle Geospatial Sciences, Inc. to perform a study of the area using microwave Synthetic Aperture Radar (SAR) satellite data. Auracle's methodology uses specialized software and proprietary processes to build a subsurface 3D Radar Model.

For this project an initial series of resistivity profiles were produced. From these profiles, several features were found to be in agreement with the initial geology fieldwork:

- The silica replacement areas appear to be caps to suspected hydrothermal source areas.
- Faults and debris flow covers were clearly identified.

- In areas where the silica replacement and the debris flows were not present or stratigraphically thin, possible lithium bearing materials were indicated and confirmed in part from the limited sample analyses to date.
- Potential lithium bearing areas appeared to be present across the profiles.

Auracle also produced a plan view of the resistivities, and on this format, provided maps of structural features and perimeters of silica replacement areas.

1.9. Exploration Target Estimate

There is insufficient information available to estimate a mineral resource at this time. However, estimation of an 'exploration target' range of the deposit size and grade is appropriate for the geologic information available.

Six separate exploration target areas were identified for the Thompson Valley property. The exploration target areas include mineral rights controlled by the Company and which are south of the upper limit of the Thompson Valley Fault zone and north of County Road 15.

For each of the six exploration target areas the size, thickness and mass were estimated. Thicknesses were based on analysis of the GSA drillhole data and apparent deposit geometry. The masses of the deposits were calculated assuming a density of 2.3 tonne/m^3. The exploration target size is estimated to range from 200 to 400 million tonnes, potentially consisting of a continuous conceptual deposit.

Target grades were determined from the average lithium analyses of surface samples for each of the six areas, with overall grades ranging from 114 to 842 ppm Li. The expected grade of a surface leachable material should be considered to represent the lower potential grade of the target area. Further, the exploration target may not be contiguous, and once dilutant barren material is taken into account, the overall grade might be 20% of these values.

The exploration target presented here is based on a number of assumptions and limitations with the potential deposit size and grade being conceptual in nature. There has been insufficient exploration to estimate a mineral resource in accordance with the CIM Guide and it is uncertain if future exploration of the target discussed in this report will result in the estimation of a mineral resource.

1.10. Interpretation and Conclusions

The Thompson Valley property surrounds a currently producing lithium-bearing hectorite clay deposit. Whether or not the Oakley mineral rights contain economic reserves of lithium for today's market conditions remains to be determined, but is worthy of further evaluation.

It is clear that lithium is present on the controlled mineral holdings. This is verified by the extensive, but localized, showings of lithium observed from analyses of surface samples. Preliminary indications are that the lithium is present in the unusual form of a carbonate deposit and not necessarily as a lithium clay that other groups are exploring in the western U.S.

The exploration target size is estimated to range from 200 to 400 million tonnes, consisting of a continuous deposit with expected average grades ranging from 114 to 842 ppm Li. The overall deposit should not be expected to be contiguous and may occur in streaks, and perhaps only

20% will be found to have grades above a commercial cutoff value. However, there is no assurance that the exploration target can be converted into a mineral resource or reserve.

It is the authors' opinion that this project is worthy of additional exploration to better define the occurrence and grade of lithium-bearing deposits. Once a substantial lithium-bearing deposit has been positively identified, formulation of a scoping-level assessment of the economics for extraction of the lithium may be warranted as well as additional exploration activities.

1.11. Recommendations

Exploration for lithium in the project area to date has consisted of analyses of surface samples. It is significant that historical drilling records have shown continuous deposits of 'clay' to depths of 90 feet (27 m). Unfortunately, that data did not include lithium analyses. Also, as the drillholes terminated in clay, the depth to the basement rock, whether basalt or granite, is currently unknown in the exploration target areas.

It is recommended that additional work be completed in two phases:

1. Phase 1 for the Geophysics, Permitting and Access, then at the appropriate time,
2. Phase 2 for the Drilling and Sample Analyses once all preparations have been made.

Phase 1 – Geophysics, Permitting and Access:

Geophysical Tools: It is recommended to commission Resource Exploration Group, LLC (REG) to conduct its satellite-based service called Magnetic Resonance remote sensing for detection of lithium. Utilizing satellite imagery, REG's technology detects the frequency of the desired element as it emanates from the Earth's surface to identify the spatial location of the targeted element(s). This survey could be important in identifying the depth and lateral continuity of lithium deposits across the Thompson Valley area.

Permitting and Access: There are several tasks that must be accomplished prior to initiating a drilling program in the field. The right-of-way (ROW) must be finalized which includes a legal survey and conducting archaeological and native plant (A&NP) surveys, and these need to be approved by the State prior to construction.

Also, for the drill sites and access trails planned for the field work, a Geologic Field Operations Plan must be submitted to and approved by the State. Prior to construction activities, an A&NP study must be conducted for those areas and approved by the State.

Once the State approvals are in hand, access road, trail and drill site construction activities may begin. Because of the topography and soil conditions, timing of earthwork must occur during dry periods so as to avoid working during muddy conditions.

Budget: Estimated costs for Phase 1 are $129,000 (CAD$172,000).

Phase 2 – Drilling and Sample Analysis:

Core Drilling: Exploration core drilling should be performed across the target areas. The drilling should occur over a broad area so that continuity of the deposits may be understood, and to depths of at least 300 feet (90 m) or to basement.

It is recommended that 11 locations be cored with a sonic rig for the first part of the drilling program. Based on positive results from the first part, a second part with additional drilling to delineate the lateral extent of the lithium bearing area is a necessary follow-up program.

Core Sample Analysis: Cores should be inspected and processed to include: lithologic description, photography, LIBS scan and bulk density determination.

Based on the core descriptions and LIBS scans, appropriate portions of the core should be designated for analysis. Samples should be submitted for whole-rock analysis using 4-acid digestion with ICP-MS analysis. Also, as the presence of fluorine has been recognized as a potentially important coproduct, fluorine content by KOH fusion should be determined for a portion of the samples.

Minerology Study: The geologic materials (sediments and rocks) are apparently a mixture of clays and carbonates. The question arises as to whether the lithium is bound within a clay-type matrix or whether it is in the form of a carbonate mineral.

To identify the mineral form(s) of lithium in the various sediment types, experienced laboratories should be sought to identify suitable methods for analysis, such as X-Ray Diffraction (XRD).

Another method to learn more about the lithium forms is to employ wet-chemistry analyses. An analytical chemist or minerologist should characterize whether lithium, fluorine and other elements may be readily solubilized with water, and also with dilute acid.

Budget: Estimated costs for Phase 2 are $868,000 (CAD$1,157,000).

2. Introduction

2.1. Terms of Reference

This report prepared for Ameriwest Lithium Inc. (Ameriwest), documents the known technical and historical information available for the Thompson Valley lithium prospect located in west-central Arizona, U.S.A.

The report has been prepared as a "Qualified Persons Report" under the specific requirements of Canada's National Instrument 43-101 (NI 43-101) as required by Canadian stock exchanges [1], and incorporates the standards developed by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) [2].

The outline and organization of the present report has been taken from Form 43-101F1 which is cited as being the required format in Canada according to NI 43-101 [1].

2.2. Background

Ameriwest Lithium Inc. is a public, junior, early-stage exploration company based in Vancouver, British Columbia, Canada, focused on exploring and qualifying lithium and battery metal mining assets. Ameriwest is listed on stock exchanges in Canada (CSE: AWLI), the U.S. (OTC: AWLIF), and Germany (FSE: 5HV). Ameriwest wholly owns Oakley Ventures USA Corp. (Oakley) which is registered in Nevada. Oakley is registered in Arizona as a foreign corporation and approved to conduct business in the state. The Thompson Valley property in Arizona is registered under Oakley, and in Arizona, is the only asset of Oakley and of Ameriwest.

This report has been prepared by Gregory J. Bell, P.E., as the principal of Coal Gas Technology Co., a sole proprietorship based in Phoenix, Arizona, which is doing business as Senergy Engineering for mineral projects. As Mr. Bell has been awarded stock options in Ameriwest and is coauthor of this technical report, he is not a disinterested or independent party. Senergy Engineering also explores for other energy minerals including but not limited to graphite, cobalt, and manganese, both within the U.S. and internationally. Mr. Bell serves as the project manager under contract to Ameriwest.

This report has also been prepared by Brian A. Beck, P.G., as the principal of Brian Beck Consulting LLC, a sole proprietorship based in Dewey, Arizona. Due to his close involvement with the project, Mr. Beck is not a disinterested or independent party. Brian Beck's expertise is in mineral resources relating to exploration, mine permitting, design and permitting of drilling programs, mineral trend mapping and modeling for projects throughout the U.S. especially in the copper and gold sectors. Mr. Beck serves as the project geologist under contract to Ameriwest.

2.3. Objectives

This report was authorized by Ameriwest Lithium Inc. with the objective to document the current state of the Thompson Valley project including results of recent surface sample analyses, to provide a lithium exploration target size range, and to present recommendations for continued exploration. This report also summarizes the history of the property, geologic setting and other significant information relating to the property.

Because lithium is known to be present in the hectorite deposit of the Lyles Mine which is currently being mined in the immediate vicinity of the property, it is clear that the mineral has been discovered in the area. However, the extent of the previously known lithium was not known at the onset of Ameriwest's work, and so this report presents new exploration discoveries.

2.4. Sources of Information and Data

Complete, comprehensive references are provided at the end of this report in Section 19. Identification number of each reference is provided in square brackets ([x]) within the text. In general, the information presented in this report comes from a variety of sources, as follows:

- Project Location and Setting information was gleaned from internet searches.
- Property information taken from Senergy Engineering company files with verification from Arizona State Land Department (ASLD) and Bureau of Land Management (BLM) correspondence and on-line records.
- History acquired from internet searches for regional history and from files of previous explorer, Geoservices of Arizona, Inc. (GSA).
- Geology information comes from professional papers and publications including those by the U.S. Geological Survey (USGS) and by personal inspection of the property.
- Deposit Grade was from a USGS report, other investigators, and from new surface samples acquired from the property.
- Sample Analyses were reported by a third-party analytical laboratory for new surface samples acquired from the property.

Figures and maps presented in this report were produced from an in-house Geographic Information System (GIS) and other graphic and plotting software systems. Sources of data for the in-house GIS database include State of Arizona and USGS sources. When necessary, original hard-copy images were digitized and georeferenced into the in-house GIS system.

2.5. Scope of Personal Inspection by the Qualified Persons

Gregory J. Bell, P.E., is a coauthor of this technical report. He personally visited the property in December 2021 and March 2022 for inspecting the property, checking for the presence of fences and gates, and in June 2022 to meet with Brian Beck and the survey crew to initiate staking the mining claims. He is the Qualified Person that first identified this prospect and is responsible for all sections of this report. He is not independent from the issuer of this report, as he has been awarded stock options in Ameriwest Lithium.

Brian A. Beck, P.G., is a co-author of this technical report. He personally visited the property initially in March and April 2022 to conduct mapping and he recovered surface samples from the property from June to October 2022. More recently, Mr. Beck last visited the property on November 27, 2022, and collected additional rock specimens. He is the Qualified Person responsible for Sections 7 through 18 of this report. He is not independent from the issuer of this Technical Report due to his personal involvement with managing geologic aspects of the work.

2.6. Units

For this report, being authored in the U.S. for a U.S.-based project, units of measurement are presented primarily in U.S. customary units as defined by the U.S. National Institute of Standards and Technology (NIST). Being a technical report with an international audience, metric (System International or "SI") units are presented in parentheses following the U.S. customary units.

Conversion factors utilized in this report include:

1 inch (in) = 2.54 centimeters (cm) = 25.4 millimeters (mm);

1 foot (ft) = 0.3048 meters (m);

1 mile (mi) = 1.609 kilometers (km);

1 acre (ac) = 0.405 hectares (ha);

1 square mile = 2.59 square kilometers;

1 pound (lb) = 0.454 kilograms (kg);

1 short ton (ton) = 2,000 lb = 0.907 metric tons (tonne);

1 pound per square inch (psi) = 68.947 kilobar (kb); and

1 µg/g = 1 mg/kg = 1 g/metric tonne = 1 part per million (ppm)

1 g/cm^3 = 1 metric tonne/m^3 = 62.43 lb/ft^3 = 0.8428 ton/yd^3

(°F – 32) / 1.8 = °C .

Unless otherwise mentioned, all coordinates in this report are provided as UTM NAD83 Zone 12 projection data, which is generally consistent with WGS84 for the accuracies involved in this work.

Currency used in this report is provided in U.S. Dollars, unless stated otherwise.

2.7. Abbreviations

Abbreviations used in this report are as follows:

µg/g .... microgram per gram

µm .... micrometer

ac .... acre or acres

ALS .... ALS Canada Ltd. or ALS USA Inc., previously known as Australian Laboratory Services

Ameriwest .... Ameriwest Lithium Corp., a Canadian company

AMSL .... above mean sea level

ARPA .... Archaeological Resource Protection Act

ASLD................ Arizona State Land Department

Auracle .... Auracle Geospatial Science Inc., a Canadian company

AZ..................... State of Arizona

BGL .... below ground level

BLM.................. Bureau of Land Management of the U.S. Department of the Interior

BNSF................ Burlington Northern Santa Fe Railway

CIM .... Canadian Institute of Mining, Metallurgy and Petroleum
cm .... centimeter or centimeters
CFR .... U.S. Code of Federal Regulations
CRIS .... Cultural Resource Information System
CRM .... certified reference materials
E .... east
EM .... electromagnetic
EA .... Environmental Assessment
Federal .... Federal Government of the United States of America
ft .... foot or feet
g .... gram or grams
G&SR .... Gila & Salt River Meridian in Arizona
GIS .... Geographic Information System
GPS .... Global Positioning System
GSA .... Geoservices of Arizona, Inc., an inactive geologic exploration company previously registered in Arizona
H_2O .... water
ha .... hectare or hectares
ICP .... Inductively-Coupled Plasma
in .... inch or inches
IRL&C .... Indian Rock Land & Cattle, L.L.C., a company registered in Arizona
kb .... kilobar
kg .... kilogram or kilograms
km .... kilometer or kilometers
km/h .... kilometers per hour
kt .... thousand metric tonnes
Li .... lithium
m .... meter or meters
MEP .... Mineral Exploration Permit issued by ASLD
mph .... miles per hour
mm .... millimeter or millimeters
MS .... Mass Spectrometer or Mass Spectrometry
Mt .... million tonnes
m.y. .... million years ago
N .... north
NAD83 .... North American Datum 1983
NI 43-101 .... National Instrument 43-101
NIST .... U.S. National Institute of Standards and Technology

NOITL............... Notice of Intent to Locate a Lode Mining Claim

Oakley.............. Oakley Ventures USA Corp., a Nevada corporation wholly owned by Ameriwest Lithium Corp.

OES.................. Optical Emission Spectrometer

Paragon............ Paragon Geochemical Laboratories

P10................... value of a parameter at which 10% of the estimates are exceeded, i.e. high estimate

P50................... value of a parameter at which 50% of the estimates are exceeded, i.e. median estimate

P90................... value of a parameter at which 90% of the estimates are exceeded, i.e. low estimate

psi..................... pounds of force per square inch

Plan.................. Plan of Operations

ppm.................. parts per million by weight

Project.............. Thompson Valley Project

R....................... Range

S....................... south

Santini.............. Santini & Associates, Inc., a consulting company in Arizona

Sec, Twp, Rge.. Section, Township and Range, referenced to the Gila & Salt River Meridian in Arizona

SI...................... System International

SLUP................ Special Land Use Permit issued by ASLD

SME................. Society for Mining, Metallurgy, and Exploration, Inc.

SRHA............... Stock Raising Homestead Act of 1916

State................. State of Arizona

t........................ tonne, tonnes or metric ton

T....................... Township

t/m^3................... tonnes per cubic meter

U.S. .... United States of America

U.S.C................ U.S. Code

USGS............... U.S. Geological Survey

UTM................. Universal Transverse Mercator

W...................... west

wt %................. percent by weight

3. Reliance on Other Experts

This report has been prepared by Senergy Engineering and Brian Beck Consulting, LLC for Ameriwest Lithium Corp. The information, conclusions, opinions, and estimates contained herein are based on information available to Senergy Engineering and Brian Beck Consulting, LLC at the time of preparation of this report.

The Qualified Persons did not rely on a report, opinion or statement of another expert who is not a qualified person, or on information provided by the issuer, concerning legal, political, environmental, or tax matters relevant to the technical report.

4. Property Description and Location

4.1. Property Location

The Thompson Valley Project is located in west-central Arizona, U.S.A. as shown by Figure 1. More specifically, the property is situated in Yavapai County along the Kirkland Creek drainage between the towns of Kirkland to the southeast and Hillside to the southwest along County Road 15. The hamlet of Yava is located immediately to the west.

A large copper mine is found near Bagdad, AZ 35 miles (56 km) to the northwest. The largest nearby city is Prescott, located about 39 miles (62 km) to the northeast. The lands are 120 miles (190 km) north of Phoenix, the capital of Arizona.

The property is located within Thompson Valley as denoted on USGS topographic maps. The terrain is semi-rugged with a sandy surface strewn with basalt boulders, and steep cliffs capped with a large basalt flow to the north. Vertical relief rises 800 ft (240 m) from Kirkland Creek at 3,600 ft (1,100 m) above mean sea level (AMSL) to 4,400 ft (1,340 m) AMSL at the top of the basalt-capped mesa.

Thompson Valley is located within the Mogollon Transition MLRA (Major Land Resource Area) between the Colorado Plateau and Sonoran Basin and Range MLRAs in central Arizona.

Photographs of Thompson Valley are shown by Figure 2 and Figure 3.

4.2. Land Ownership

Project mineral rights consist of a combination of State of Arizona (State) and U.S. Federal minerals as shown by Figure 4, totaling 6,881.26 acres (ac) or 2,784.75 hectares (ha). Part of the lands, 91% or 6,262.79 ac (2,534.46 ha), are State Trust Lands where the surface and minerals are owned by the State. Mineral rights for the balance of the property, 9% or 618.47 ac (250.29 ha), are owned by the U.S. Government under the jurisdiction of the Department of the Interior and managed by the Bureau of Land Management (BLM). Although the mineral rights on these Federal lands are controlled by the U.S. Government, they are of 'split estate,' meaning the surface is private and held separately from the minerals.

4.2.1. State Lands

Mineral Exploration Permits:

Rights to explore for minerals on State Trust Lands are obtained through a Mineral Exploration Permit (MEP). Oakley applied for and was awarded 13 MEPs by the Arizona State Land Department (ASLD) in 2021 and 2022 as listed in Table 1. Term of each MEP is for an initial duration of one year and is renewable for an additional four years, for a total MEP duration of five years. The MEPs provide Oakley with the exclusive right to convert the permits to Mineral Leases within that period upon discovery of a valuable mineral resource. Locations of the MEPs are shown on Figure 4.

Exploration conducted under State rules is different than the rules for private lands or for Federal lands. A Geologic Field Operations Plan (GFOP) must be applied for and approved by ASLD prior to conducting any work on the ground beyond inspection of the property.

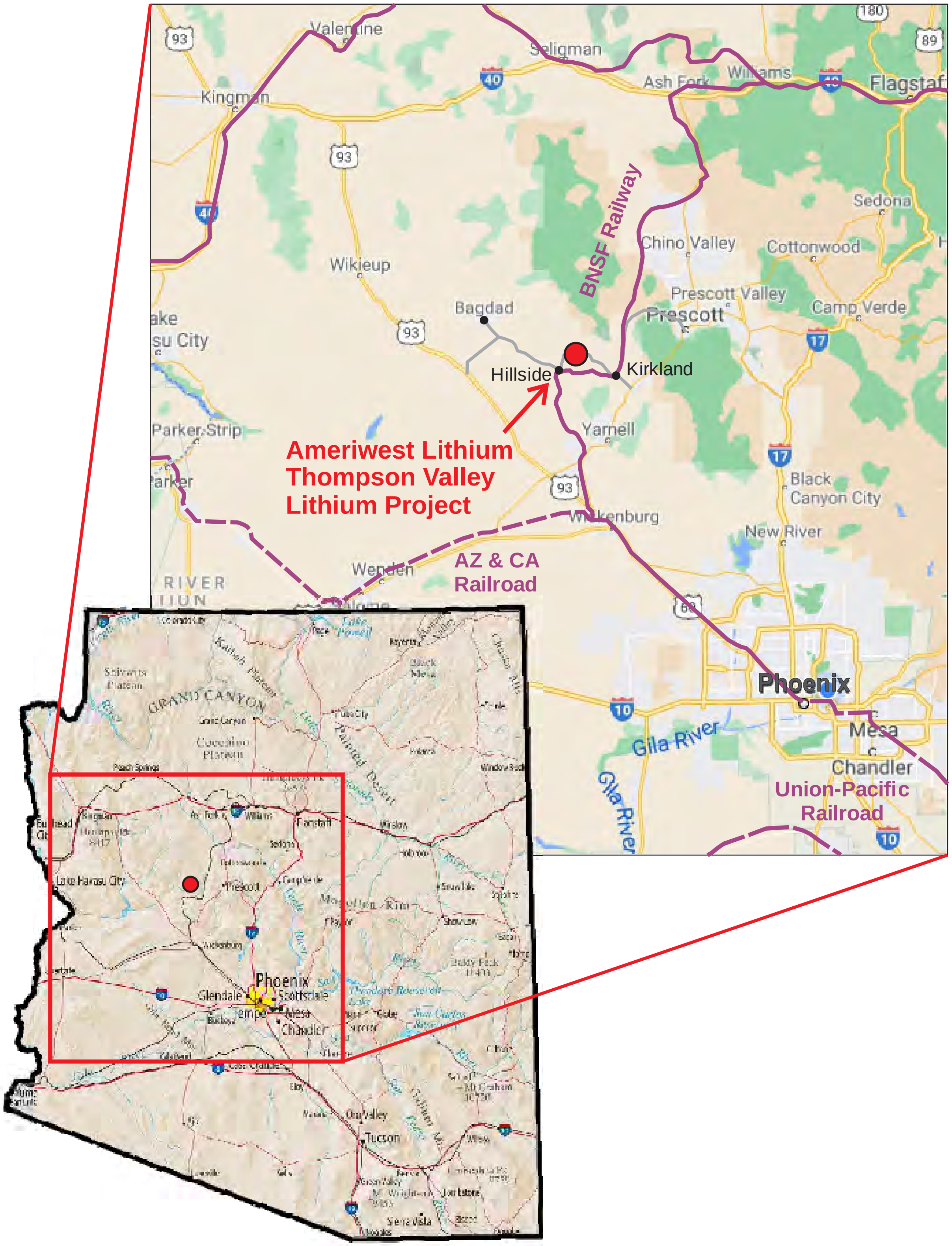

Figure 1. Project Location and Transportation Routes

Figure 2. Photograph of Thompson Valley Looking Southeast

Figure 3. Photograph of Thompson Valley from Top of Mesa

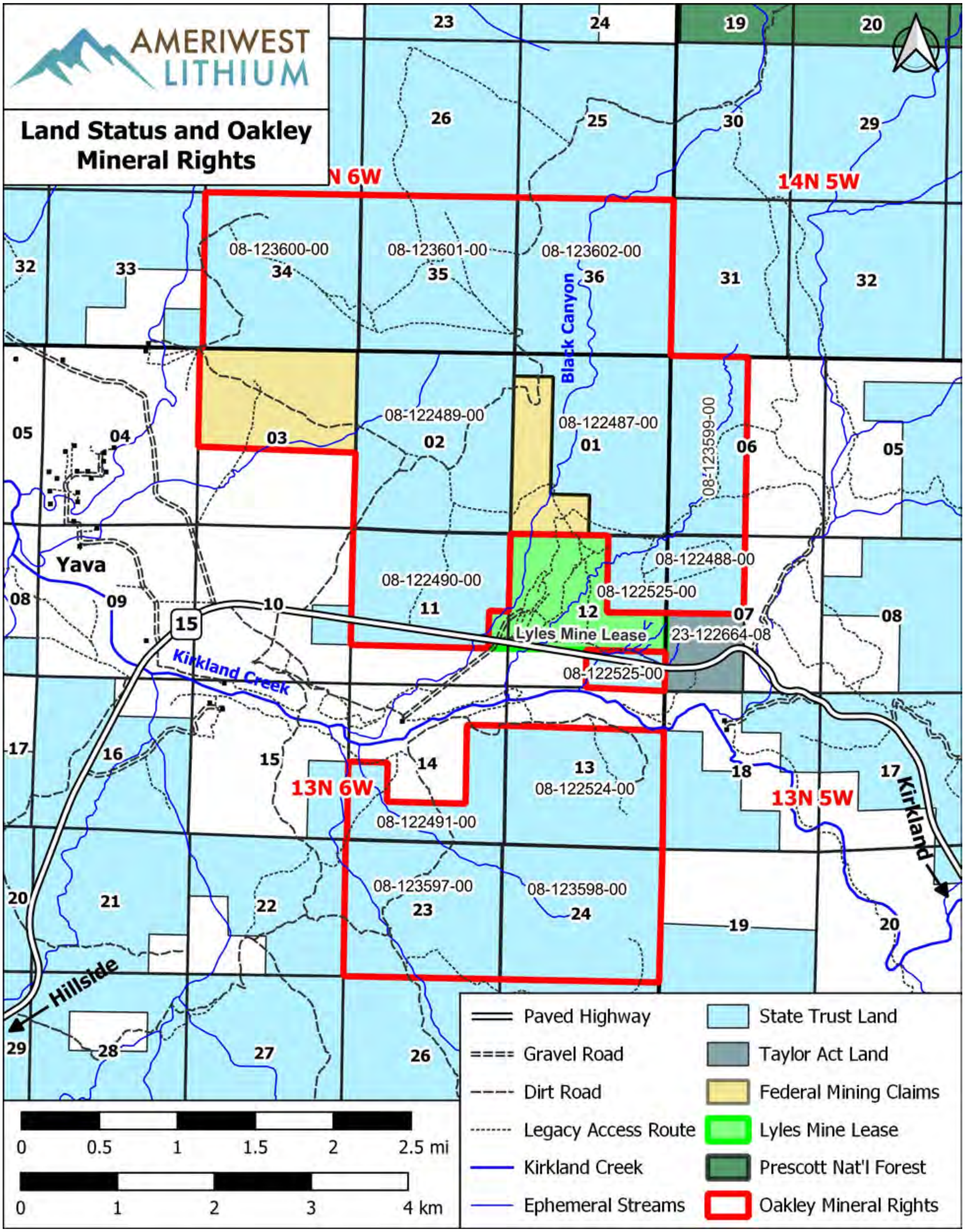

Figure 4. Land Status and Oakley Mineral Rights

Table 1. List of Arizona State Mineral Exploration Permits

Exploration Permit No.	Area (ac)	Date Approved	Sec	Twp	Rge
008-122487-00-100	538.66	9/24/2021	1	13N	6W
008-122488-00-100	159.01	9/24/2021	7	13N	5W
008-122489-00-100	741.35	9/24/2021	2	13N	6W
008-122490-00-100	460.00	9/24/2021	11	13N	6W
008-122491-00-100	280.00	9/24/2021	14	13N	6W
008-122524-00-100	480.00	9/24/2021	13	13N	6W
008-122525-00-100	199.95	9/24/2021	12	13N	6W
008-123597-00-100	556.88	8/12/2022	23	13N	6W
008-123598-00-100	563.57	8/12/2022	24	13N	6W
008-123599-00-100	363.37	8/12/2022	6	13N	5W
008-123600-00-100	640.00	8/12/2022	34	14N	6W
008-123601-00-100	640.00	8/12/2022	35	14N	6W
008-123602-00-100	640.00	8/12/2022	36	14N	6W
Total State MEPs	**6,262.79**	**= 2,534.46 ha**			

Section, Township and Range located relative to the Gila and Salt River Meridian (G&SR)

Prior to conducting any ground disturbance that exceeds one-foot depth, an archaeological survey must be conducted on the area to be disturbed and approved by the State. Also, a native plant survey must be conducted prior to disturbing any vegetation and the State must be compensated for the subject vegetation.

The State Trust Lands generally are fenced with barbed wire to control livestock on the lands. The public is allowed to access the lands with a recreation permit or other permits, but the public cannot drive off-road on State lands. Because the State lands are fenced, Oakley must establish access to its MEPs via a State-approved road or trail. As no such roads or trails currently exist for Oakley to access the MEPs, a Right of Way was applied for as discussed below.

<u>Special Land Use Permit</u>:

Oakley applied for and obtained a Special Land Use Permit (SLUP) from the State for a parcel in Sec. 7, T13N, R5W. Shown on Figure 4, the SLUP provides Oakley with the right to cross the surface of the State Trust Land and potentially explore for minerals. The surface rights to this parcel were awarded to the State by the Federal government under the Taylor Grazing Act of 1934 as amended in 1936, with the mineral rights reserved to the U.S. However, the Federal Government subsequently awarded the mineral rights to the Santa Fe Pacific Railroad (SFP RR) in 1989, and it appears that SFP RR or its successor retains title to the minerals today. If it is found that Oakley desires to explore and mine minerals on this parcel, it would need to execute a mineral lease with SFP RR or its successor. Until that time, the SLUP allows Oakley to use the land to access its other lands if necessary. The SLUP, State Permit No. 23-122664-08 for 158.95 ac (64.32 ha), commenced on 12/23/21 and is continuously renewable by paying an annual rental to the State.

<u>Existing Mineral Lease</u>:

There is an active State Mineral Lease located in the vicinity of and contiguous to the Oakley permits. This lease is referred to in this report as the "Lyles Mine Lease" or "Lyles Mineral Lease" and is shown on Figure 4. This Mineral Lease No. 11-086253 was originally obtained from the State by Ted H. Eyde in 1983, subsequently transferred to Mr. Eyde's company, Gadsden-Sonora Holdings, LLC, in 2001, and ultimately transferred to Vanderbilt Western Resources, LLC in 2018 [3]. Vanderbilt Western Resources, LLC is owned by Vanderbilt Chemicals, LLC. The Mineral Lease is for "Hectorite Clay" and initial production occurred in 1986.

<u>Right of Way</u>:

To be able to access its MEPs, Oakley applied for a Right-of-Way (ROW) to cross the Vanderbilt Mineral Lease in two locations. As shown on Figure 5, there is one ROW corridor on the east side and another one on the west. Two separate access points are required because Black Canyon wash is too steep to cross at the northern portion of the land and bisects the property.

The ASLD has provided preliminary approval for the ROW Application No. 018-123802-00-100. To finalize approval for the ROW, Oakley must have a surveyor provide a legal description and exhibit, archaeological and native plant surveys will be required, and liability insurance arrangements must be made among other things. Once finalized, Oakley will be able to initiate road construction activities.

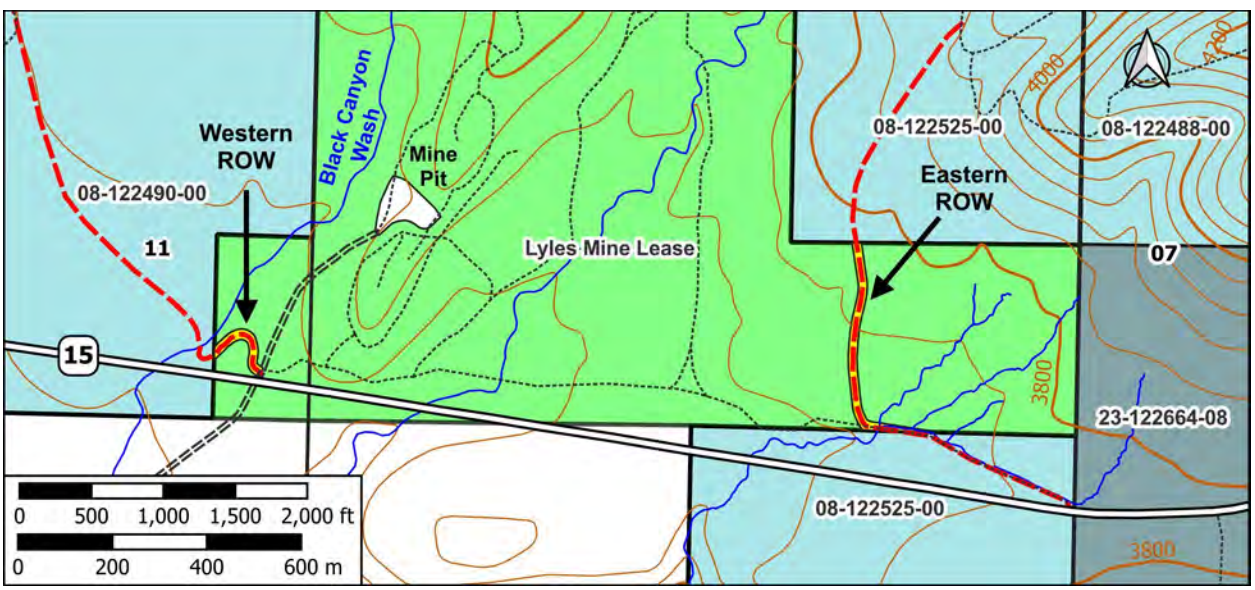

Figure 5. Right-of-Way Across Vanderbilt Lyles Mineral Lease

<u>Grazing Rights</u>:

Most of the State Trust Lands in the area have surface grazing leases owned by either the local rancher, Indian Rock Land & Cattle, L.L.C. (IRL&C) which is owned by Albert Lee Moore, III, or by the Albert Lee Moore, III Irrevocable Trust (Irrevocable Trust). The ranch grazes cattle on these lands including the Oakley MEPs and the Vanderbilt Chemicals Lyles Mineral Lease.

4.2.2. Federal Mining Claims

Rights to explore and mine 'locatable' Federal minerals are acquired by staking individual mining claims. A lode claim is for vein-type deposits and is restricted to a size no larger than 1500 feet (457 m) long and 600 feet (183 m) wide, for a maximum size of 20.66 ac (8.36 ha). Placer claims are for gravel-type deposits and are not considered here. A locatable mineral is a legal term and includes valuable minerals that are subject to the U.S. Mining Law of 1872, that are not leasable and not saleable. Lithium-bearing clays or other sediments are a locatable mineral lode on lands within Thompson Valley where the minerals are controlled by the U.S. government.

Within the project area, there are two parcels of land where the mineral rights were retained by the U.S. These lands are of split estate, where the surface is owned by IRL&C, the local ranch. Oakley located and staked 33 federal lode mining claims on these lands.

The mining claims were physically staked by Huitt-Zollars, Inc., registered lands surveyors located in Prescott, and recorded with Oakley Ventures USA Corp. as the claimant. Locations of these unpatented claims are shown by Figure 6 and Figure 7. Claim sizes, BLM Serial Numbers and location dates are listed in Table 2. With these claims, mineral control was established in a contiguous block with Oakley's State Mineral Exploration Permits. Total combined area of the 33 Federal lode mining claims is 618.47 ac (250.29 ha).

4.2.3. Surface Ownership

Within the vicinity of the project, the surface is owned either by private parties or by the State. Figure 4 shows the State-owned surface as either the blue areas, or the green "Lyles Mine Lease" or the gray "Taylor Grazing Act" parcel. The surface of all other lands shown on Figure 4 colored white or the yellow "Federal Mining Claims" are owned and controlled by private parties.

There is no BLM surface ownership in the project vicinity, although there is National Forest land to the northeast of the project.

"Taylor Grazing Act" parcel in Sec. 7, T13N, R5W is split estate land with State surface ownership, but the Federal minerals were transferred to the SFP RR and are now privately held.

The areas where Oakley staked Federal lode mining claims are also split estate. The surface of the lands in Sec. 1 and 3, T13N, R6W were originally acquired by a private party in 1926 under the Homestead Act of 1862, and the mineral rights were retained by the U.S. pursuant to the Stock Raising Homestead Act (SRHA) of 1916. Over the years, these surface rights were bought and sold multiple times, passing from private party to private party, and eventually being purchased by Mr. Moore as part of Indian Rock Lands and Cattle, L.L.C.

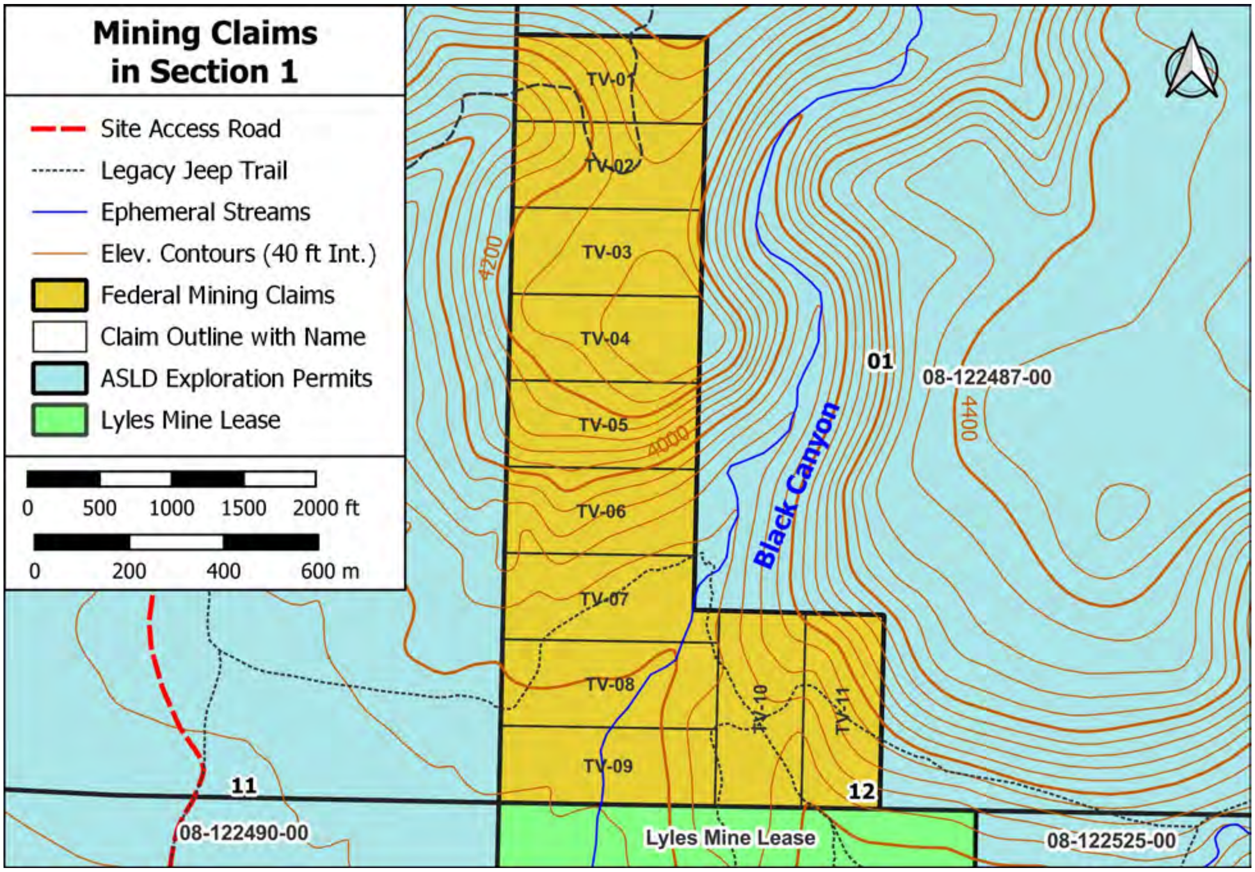

Figure 6. Federal Mining Claims Located in Section 1, T13N, R6W, G&SR

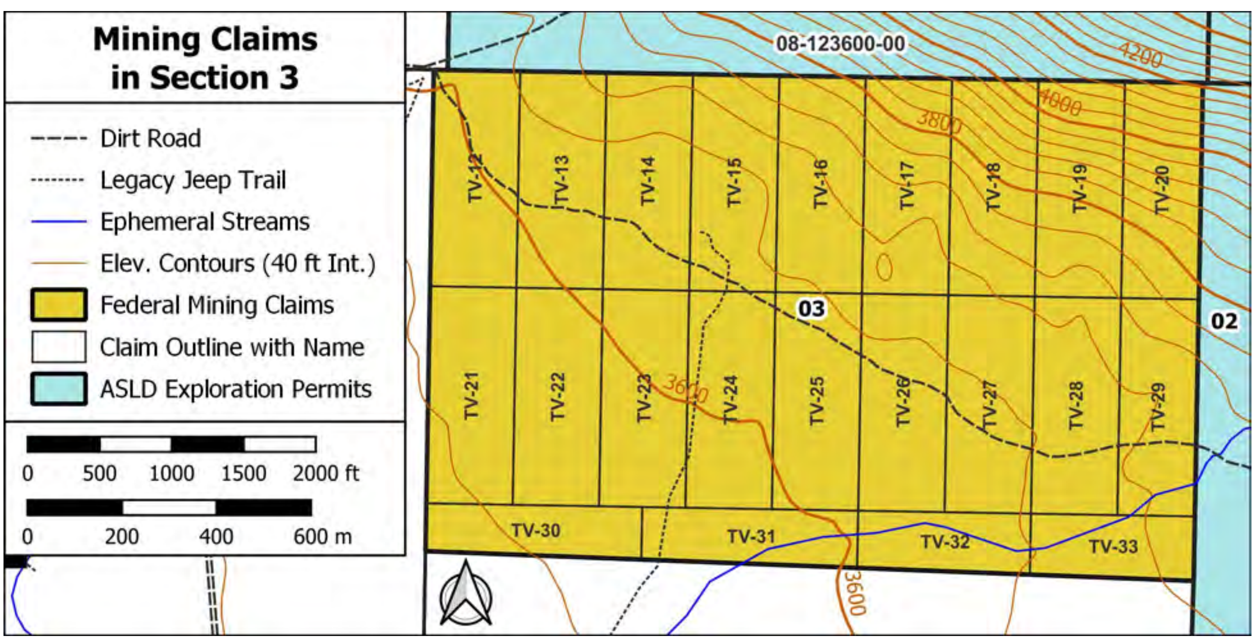

Figure 7. Federal Mining Claims Located in Section 3, T13N, R6W, G&SR

Table 2. List of Thompson Valley Federal Lode Mining Claims

Claim Name	BLM Serial No.	Area (ac)	Location Date	Sec	Twp	Rge
TV-01	**AZ105771822**	18.21	6/7/2022	1	13N	6W
TV-02	**AZ105771823**	18.21	6/7/2022	1	13N	6W
TV-03	**AZ105771824**	18.21	6/22/2022	1	13N	6W
TV-04	**AZ105771825**	18.20	6/22/2022	1	13N	6W
TV-05	**AZ105771826**	18.20	6/22/2022	1	13N	6W
TV-06	**AZ105771827**	18.20	6/7/2022	1	13N	6W
TV-07	**AZ105771828**	19.15	6/7/2022	1	13N	6W
TV-08	**AZ105771829**	20.66	6/7/2022	1	13N	6W
TV-09	**AZ105771830**	18.44	6/7/2022	1	13N	6W
TV-10	**AZ105771831**	18.68	6/22/2022	1	13N	6W
TV-11	**AZ105771832**	16.88	6/22/2022	1	13N	6W
TV-12	**AZ105771833**	20.66	6/24/2022	3	13N	6W
TV-13	**AZ105771834**	20.66	6/24/2022	3	13N	6W
TV-14	**AZ105771835**	20.66	6/24/2022	3	13N	6W
TV-15	**AZ105771836**	20.66	6/24/2022	3	13N	6W
TV-16	**AZ105771837**	20.66	6/24/2022	3	13N	6W
TV-17	**AZ105771838**	20.66	6/24/2022	3	13N	6W
TV-18	**AZ105771839**	20.66	6/24/2022	3	13N	6W
TV-19	**AZ105771840**	20.66	6/24/2022	3	13N	6W
TV-20	**AZ105771841**	18.61	6/24/2022	3	13N	6W
TV-21	**AZ105771842**	20.66	6/27/2022	3	13N	6W
TV-22	**AZ105771843**	20.66	6/27/2022	3	13N	6W
TV-23	**AZ105771844**	20.66	6/27/2022	3	13N	6W
TV-24	**AZ105771845**	20.66	6/27/2022	3	13N	6W
TV-25	**AZ105771846**	20.66	6/27/2022	3	13N	6W
TV-26	**AZ105771847**	20.66	6/27/2022	3	13N	6W
TV-27	**AZ105771848**	20.66	6/27/2022	3	13N	6W
TV-28	**AZ105771849**	20.66	6/27/2022	3	13N	6W
TV-29	**AZ105771850**	18.55	6/27/2022	3	13N	6W
TV-30	**AZ105771851**	11.98	6/30/2022	3	13N	6W
TV-31	**AZ105771852**	13.09	6/30/2022	3	13N	6W
TV-32	**AZ105771853**	11.28	6/30/2022	3	13N	6W
TV-33	**AZ105771854**	11.36	6/30/2022	3	13N	6W
	Total Fed. Claims	**618.47**	**= 250.29 ha**			

The Stock Raising Homestead Act (SRHA) of 1916 allowed a pioneer settler to claim up to 640 acres (259 hectares) of nonirrigable land for the purpose of raising livestock. The Act reserved to the United States "*all the coal and other minerals in the lands so entered and patented, together with the right to prospect for, mine, and remove the same pursuant to the provisions and limitations of the Act of December 29, 1916.*" This same wording is found on the original land patent for the lands where Oakley obtained Federal mining claims.

Because these split estate lands with Federal minerals have private surface ownership, special processes must be followed in order to legally explore the lands and stake mining claims. First, a Notice of Intent to Locate a Lode Mining Claim (NOITL) must be properly filed with the BLM with a copy sent to the landowner. Once the NOITL is approved for a SRHA-patented land block, the land is identified by the BLM as being 'segregated' so that only the applicant has access to the lands for this purpose for 90 days. At that point, location and staking of mining claims may proceed.

Oakley is currently attempting to negotiate with IRL&C and Mr. Moore for a surface use agreement. Once an agreement is made, Oakley will be able to explore, drill and mine the area of its mining claims with certain requirements under the agreement. If no agreement with IRL&C can be made, Oakley will establish exploration and mining authority under a Plan of Operations filed with and approved by the BLM.

4.2.4. Summary of Current Mineral Rights

Total land area for which Oakley Ventures USA Corp. currently has mineral rights, is summarized in Table 3. Total mineral-rights acreage in Thompson Valley is 6,881.26 ac (2,784.75 ha). State surface rights total 6,421.74 ac (2,598.79 ha).

Table 3. Summary of Mineral and Surface Rights

Property Name	Mineral Ownership	Surface Ownership	Size (acres)	Size (hectares)
State MEPs	State	State	6,262.79	2,784.75
Mining Claims	Federal	Private	618.47	250.29
TOTAL MINERAL RIGHTS			**6,881.26**	**2,784.75**
State SLUP	SFPRR	State	158.95	64.32
TOTAL STATE SURFACE RIGHTS			**6,421.74**	**2,598.79**

5. Project Setting

5.1. Access

The Thompson Valley project has good access via roads and highways, and rail is convenient as well.

As shown by Figure 1 and Figure 4, the Project is located along County Road 15 approximately 8 miles (13 km) northwest of the town of Kirkland and less than 3 mi (5 km) east of the hamlet of Yava. Further to the southwest is the town of Hillside, located 7 mi (11 km) from the property. All of these are unincorporated towns and only Kirkland has a post office.

From Hillside, State Highway 96 continues northwest to the city of Bagdad. Bagdad is located 28 mi (45 km) from the project area.

The largest nearby city is Prescott, located about 36 miles (58 km) to the northeast. The lands are 51 mi (82 km) north of the city of Wickenburg and 120 mi (190 km) north of Phoenix, the largest population center.

5.1.1. Highway Access

As shown by Figure 4, County Road 15 passes through the southern edge of the northern set of MEPs. The road, also known as the Bagdad Highway or Kirkland-Hillside Road, passes along the north side of Kirkland Creek. The southern set of MEPs is located south of the creek.

County Road 15 is an all-weather two-lane asphalt road. It passes east through the town of Kirkland and then joins State Highway 89 approximately 14 mi (23 km) from the project. From Highway 89, it is another 37 mi (59 km) south to Wickenburg.

The city of Prescott may be reached by traveling north on State Highway 89, but it is a fairly winding road. Prescott is most easily accessed from the project via County Road 10, also known as Iron Springs Road, from Kirkland. Total distance is the same for either route, 36 miles (58 km), but the travel time is a few minutes less, and safer, on Iron Springs Road.

Interstate Freeway 17 may be intersected east of Prescott, about 72 mi (115 km) from the project. To the south, Interstate 17 is encountered 91 mi (146 km) away just north of Phoenix.

5.1.2. Airline Access

There is a regional airport in Prescott, with commercial flights to Denver and Los Angeles twice per day. Wickenburg has a municipal airport, but does not have commercial traffic and only supports private and charter aircraft.

The largest nearby airport is in Phoenix, at Sky Harbor International Airport (PHX) with regular commercial flights on more than 20 airlines; PHX is the eighth busiest airport in the U.S.

5.1.3. Rail Access

As shown by Figure 1, The Burlington Northern and Santa Fe Railway (BNSF) passes through both Kirkland and Hillside, both located in close proximity to the project. The BNSF travels south to Phoenix, and north to Williams, AZ located near Flagstaff.

At Williams the BNSF splits and goes to the east through Albuquerque, NM to locations as far as Chicago, and goes west to Los Angeles and up to San Francisco.

In Stockton, CA near San Francisco, the BNSF meets up with the Union Pacific Railroad (UP) with which it has trackage rights. The UP operates North America's largest railroad enterprise, covering 23 states in the western two-thirds of the United States. The UP tracks go east through Reno, NV, Salt Lake City, UT, Denver, CO and beyond.

It may be lower cost to go west along the Arizona and California Railroad (AZ & CA). However, this is a class III short line railroad 205-mi (330-km) in length, and it may be difficult to switch between rail lines.

There is a rail siding on the BNSF nearby at Kirkland and also at Hillside. It was reported in 2011 that copper concentrate from the mine at Bagdad was trucked down State Highway 96 to Hillside and loaded onto the BNSF at that point [4]. As the Hillside station is shown on the current BNSF network map [5], this rail loading point may continue to be in operation.

5.2. Local Resources

Thompson Valley is a rural area in Yavapai County. There are limited resources in the immediate area. Following are resources available per community beginning with the closest location:

- Yava, 3 mi (5 km) away – Populated area that has about a dozen ranch houses and no services.
- Hillside, 7 mi (11 km) away – Populated area that has perhaps two or three dozen houses and no services. It has a church, grade school and blacksmith shop. There is a rail spur with a loadout on the BNSF Railway.
- Kirkland, 8 miles (13 km) away – Small town with a reported population in 2000 of 1,637 which is spread amongst ranch houses. It has a post office, grade school and RV park. Kirkland has a bar and grill with a few motel rooms, but it is currently listed for sale and might not be open for business at present [6].

  BNSF is building substation rail yard in Kirkland for support of the planned Bagdad mine and concentrator expansion. Freeport-McMoRan has planned a new housing area for the Bagdad mine personnel at Kirkland [7].
- Bagdad, 28 mi (45 km) away – Company town owned by Freeport-McMoRan. In 2010 its population was 1,876, up 200 from 2000. Freeport-McMoRan, the world’s largest molybdenum producer and a major copper and gold miner, operates a large open-pit copper and molybdenum mine and concentration facility outside of Bagdad.

  Bagdad has a grocery store, gas station, motel, 2 restaurants, community center, health center, fire & rescue, library, town hall, justice of peace, golf course, multiple churches and a parttime manned sheriff’s substation.
- Prescott, 36 miles (58 km) away – Largest nearby city with full services. Its population including the sister city of Prescott Valley was estimated to be about 95,000 in 2021. Because of its elevation of 5,367 ft (1,636 m) AMSL, it has a cooler climate than Phoenix and has pine and pinion tree cover.

Prescott is a tourist and retirement area with a rich old-West history. The city has the following resources:

- City Police and Fire departments, County Sheriff's office;
- Yavapai Regional Medical Center, West and East Campuses, with 24-hour emergency services;
- Primary, Middle and High Schools;
- Private and community colleges;
- U.S. Forest Service district offices;
- Many restaurants, bars, hotels, hardware stores and many other services such as tire shops, mechanics, etc.

Because mining is an important part of the economy in Yavapai County, there are several equipment, supply and excavation businesses located in Prescott area. Anything else required would be available out of the greater Phoenix metropolitan area.

5.3. Infrastructure

There is presently limited infrastructure present to support the Thompson Valley project. The project is considered to be a 'Greenfield' exploration project because there is limited infrastructure to support the mining and processing facilities. Nevertheless, the elements for developing a commercial operation are present as explained below.

The surface rights are sufficient for mining operations, as the majority of the Oakley mineral rights are on State lands, and surface use of the lands would be included in a Mineral Lease when awarded by the State upon discovery of a valuable mineral deposit. A State Mineral Lease confers as much of the surface as required for purposes incident to mining, such as for milling and processing plant sites, potential tailings storage areas, potential waste disposal areas, etc.

The availability, suitability and sources of surface access, power, water, communications and mining personnel are described in the following subsections.

5.3.1. Road Infrastructure

As discussed above, there currently exists a paved road for access to the property. The road is suitable for mobilization of drilling equipment and crews, as well as to support a mining and processing operation.

5.3.2. Electric Power Infrastructure

There is currently three-phase electrical power near the property. The area is serviced by Arizona Public Service (APS), the largest electric utility in Arizona. The powerlines have been traced to come from Kirkland and end at Hillside, passing within 0.2 mi (0.3 km) from the property.

5.3.3. Water Infrastructure

Groundwater is present at the Thompson Valley property as demonstrated by previous drilling in the area. Also, there are several springs located along the base of the cliff and one of these feeds a pond on the property which is used for livestock. As the majority of the property is owned by the State, water rights would need to be obtained from the State.

Potable water may be purchased from Walden Meadows Community Co-op, an organization located at the town of Wilhoit located 19 mi (30 km) from the property.

5.3.4. Communication Infrastructure

Most of the Thompson Valley area has suitable cellphone reception. Hardwire telephone and internet service to the communities of Kirkland and Hillside are unknown. Verizon currently has 4G coverage at the project area and a new Verizon cell repeater tower is under construction in the area.

5.3.5. Workforce

Labor to construct and operate a mine a Thompson Valley would likely mobilize from Prescott. Part of the workforce might also be available from the local communities or could be housed at those locations.

There is recent news that Freeport-McMoRan, along with their planned mine expansion at Bagdad, is driving a proposal for a master-planned residential and commercial project in Kirkland which is still in the early stages of review by Yavapai County. A letter of intent to the county referred to plans for as many as 2,800 homes, along with water and wastewater systems, a gas station and grocery store, and recreation facilities [7].

5.4. Climate

Climate data is not available for Thompson Valley, but information for Kirkland weather is a close surrogate. Table 4 presents 10-year averaged climate data for Kirkland [8].

Average temperature for Kirkland for the past ten years is 58°F (14°C). Figure 8 presents the 10-year average of monthly temperatures. December to February are the coldest months with average temperatures ranging from 31°F to 53°F (-1°C to 12°C) and June to August are the warmest, ranging from 59°F to 88°F (15°C to 31°C).

The overall average wind speed is 7 mph (11 kph) and fairly constant throughout the year.

Annual precipitation has averaged 38 inches (96 cm) for the past ten years. Figure 8 shows that the driest months are April to June averaging 0.7 inches (17 mm) per month, and the wettest are July and August, averaging 10.3 inches (262 mm) per month. Thunderstorms are prominent during the wettest months of the monsoon rains. Snow and fog are rare in Kirkland.

Weather at Thompson Valley will tend to track the weather in Kirkland. Elevation in Kirkland is 3,930 ft (1,200 m) AMSL, whereas the Thompson Valley project area is at 3,600 to 4,400 ft (1,100 to 1,340 m) AMSL and so the project will generally be a bit warmer.

Table 4. Ten-Year Average Climate Data by Month for Kirkland, AZ

Month	Avg. High Temperature, °F (°C)	Avg. Low Temperature, °F (°C)	Average Wind Speed, mph (kph)	Average Precipitation, in. (mm)	Average Humidity	Average Cloud Cover	Average Baro. Press., mm Hg	Average Dry Days	Average Precip. Days	Average Snow Days	Average Fog Days	Average UV Index	Average Hours of Sun
January	51 (11)	31 (-1)	6 (10)	2.4 (61)	55%	21%	765	25	2	4	1	3	281
February	53 (12)	32 (0)	7 (11)	2.0 (51)	51%	20%	762	23	2	4	0	2	259
March	60 (16)	38 (3)	8 (13)	1.5 (38)	42%	18%	762	27	2	2	0	4	300
April	67 (19)	43 (6)	9 (14)	0.6 (15)	31%	14%	759	28	2	1	0	5	303
May	75 (24)	49 (9)	9 (14)	0.8 (20)	29%	9%	757	29	2	0	0	6	339
June	87 (31)	59 (15)	8 (13)	0.6 (15)	23%	8%	757	29	1	0	0	6	338
July	88 (31)	65 (18)	6 (10)	11.0 (279)	41%	7%	759	21	10	0	0	6	311
August	86 (30)	65 (18)	5 (8)	9.6 (244)	45%	14%	759	22	9	0	0	6	337
September	82 (28)	60 (16)	6 (10)	4.0 (102)	41%	10%	759	26	5	0	0	6	327
October	71 (22)	48 (9)	6 (10)	1.6 (41)	41%	10%	759	29	2	0	0	4	336
November	60 (16)	38 (3)	6 (10)	1.3 (33)	45%	15%	762	28	1	1	0	3	308
December	50 (10)	31 (-1)	6 (10)	2.3 (58)	57%	25%	765	23	3	5	2	2	268
Monthly Average	**69 (21)**	**47 (8)**	**7 (11)**	**3.1 (80)**	**42%**	**14%**	**761**	**25.8**	**3.4**	**1.42**	**0.25**	**4.4**	**309**
Annual Total				**38 (958)**				**310**	**41**	**17**	**3**		

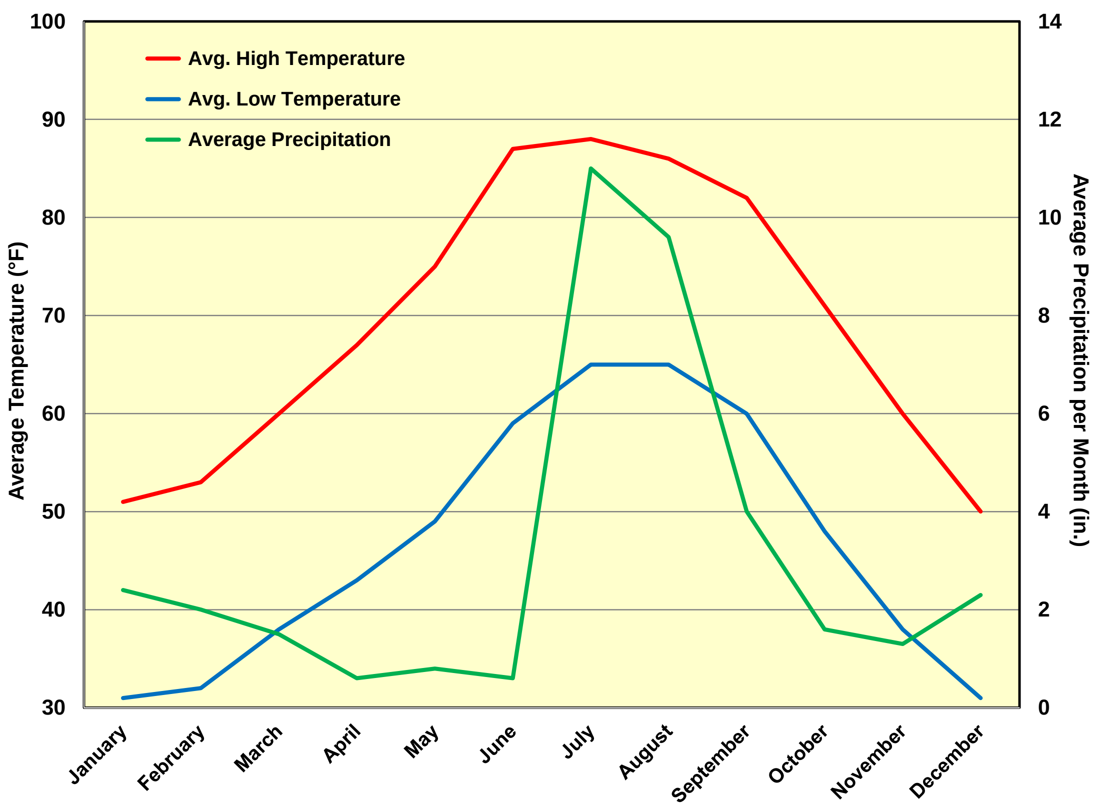

Figure 8. Ten-Year Average Climate Data for Kirkland, AZ

5.5. Physiography

Thompson Valley is a fairly flat area with basalt outcrops and mesas to the north and south. The terrain is somewhat rugged with a sandy surface strewn with basalt boulders. To the north are steep basalt-capped cliffs; to the south are a series of basalt layer outcrops.

As shown by Figure 4, the valley is bisected north-south by the westward flowing Kirkland Creek. The valley is also bisected east-west by the south trending Black Canyon wash and a prominent ridge or hill on the east side of the wash. There are multiple gullies incised in a southwest direction into the surface caused by erosion of the sandy surface soils.

Vertical relief rises 800 ft (240 m) from Kirkland Creek at 3,600 ft (1,100 m) AMSL to 4,400 ft (1,340 m) AMSL at the top of the basalt-capped mesa.

Thompson Valley is located within the Mogollon Transition Geomorphic Province, which is a diagonal northwest-by-southeast region across central Arizona. The region is a transition from the higher-elevation Colorado Plateau in northeast Arizona and the Sonoran Basin and Range region of lower-elevation deserts in the southwest and south.

The Thompson Valley area is characterized as Interior Chaparral with Semidesert Grassland in the lower sections of the area [9]. Riparian vegetative communities are found in the interior of the Black Canyon and along Kirkland Creek. The Interior Chaparral species are seen on the slopes and ridges, but grade into the Semidesert Grasslands. Common species are Sonoran Scrub Oak (*Quercus turbinella*), hollyleaf redberry (*Rhamnus inlicifolia*) Stansbury cliffrose (*Purshia Stansburiana*), broom snakeweed (*Gutierrezia sarothrae*), velvet mesquite (*Prosopis velutine*) and catclaw acacia (*Senegalia greggii*). Within the areas of hydrothermal alterations, Mormon Tea (*Ephedra viridis*) is the dominate plant. Observations show the presence of prickly-pear cactus (*Opuntia*), cholla cactus (*Cylindropuntia*) and yucca (*Yucca Agavoideae*).

There are no riparian areas within the project area. The few streams shown on Figure 4 are ephemeral with flowing water only during or for a short duration after precipitation events.

The soil temperature regime is thermic and the soil moisture regime is ustic aridic. Soils in the project area are generally poor and rocky. These soils are moderately deep to deep (30-60 inches; 75-150 cm) and dark colored in the surface (6-12 inches; 15-30 cm). They are clayey textured, gravelly and well drained. They have formed in alluvium and colluvium from a variety of parent materials. Soil surfaces are well covered by gravels, cobbles and/or stones. The erosion hazard is moderate due to gravel, cobble and rock covers and clayey textures.

This area has been under grassland grazing leases from the ASLD and the BLM for more than 100 years. The project area has several range fences along the various grazing lease boundaries. There are no reported proposed or designated critical habitats with the project area.

This site is suitable for grazing year-round and is easily traversed by livestock. Livestock grazing use is concentrated on south slopes and ridgetops. The site is susceptible to erosion in overgrazed areas like bed-grounds, livestock trails and lower slopes adjacent to water.

The site has good habitat diversity for a variety of desert wildlife species. It is home mainly to small mammals and birds and their associated predators. It is a foraging area for larger mammals like deer and javalina. Spring-fed ponds are important to both livestock and wildlife.

6. History

6.1. Regional Mining History

Yavapai County is one of the four original Arizona counties formed in 1864, one year after the Arizona Territory was established. The County was named after the Yavapai Tribe, whose name means the "people of the sun" [10]

Prescott was the territorial capital of Arizona, and the "Laws and Resolutions" of the first mining district formed the basis of the territorial government [11]. Thus, Yavapai County and Arizona can be said to have been born from the mining industry.

There are currently 6,769 active mining claims in Yavapai County, and these are typically for gold, copper, silver, lead and zinc [12]. There are 252 mines listed in the county.

At Bagdad, copper was first mined in 1882. The property changed ownership numerous times through first half of the 20th century. The first milling began operation in 1928 to process ore from the underground mine, and a transition to open-pit mining began in 1945. Now owned by Freeport-McMoRan, Bagdad production totaled 184 million pounds (84 kt) of copper and 9 million pounds (4 kt) of molybdenum in 2021 with a concentrator design capacity of 77 kt of ore per day. Freeport-McMoRan is planning to double its concentrator capacity [13].

A pozzolan mine is in operation in the Kirkland tuff deposit located approximately 1.5 mi (2.4 km) northeast of Kirkland. The Kirkland tuff deposit has been prospected since the late 1800s, and new mining claims have existed since 2014. Kirkland Mining Company, a family-owned Arizona corporation, obtained necessary approvals to mine the natural pozzolan deposit after a review by the BLM in 2017 to rule that the deposit is an uncommon 'locatable' mineral under the 1872 Mining Law [14]. The deposit is currently being mined and product is sold through Eco Material Technologies as a cement additive [15].

There are other lithium clay exploration projects currently ongoing in northwestern Arizona, including Bradda Head's Basin (or Burro Creek) and Wikieup projects and Arizona Lithium Limited's Big Sandy Lithium project, also located in the Wikieup area. These projects are located 30 to 50 mi (50 to 80 km) northwest of Thompson Valley.

6.2. Discovery and Early Exploration in Thompson Valley

A deposit of white clay was discovered in Thompson Valley by Joseph Lyles in the mid-1950's. A Field Engineer's Report by the Department of Mineral Resources of the State of Arizona identified the deposit as the "White Hills Lithium Prospect" in 1957 with Mr. Lyles as the owner [16]. The report also stated: "*The lithium deposit is a flat-lying bed of bentonitic tuff carrying from 0.4% to 1.0% Lithium oxide as an easily (diluted acid)-soluble carbonate, along with a quantity of chalcedony nodules.*" This reported lithium concentration is equivalent to 1,900 to 4,600 ppm Li. The report also stated that the deposit was over 40-feet thick, however this early information only applies to the currently producing Lyles Mine vicinity and not the area of Oakley investigations.

Upon further examination, testing and exploration, it was determined that the clay is a lithium-bearing bentonite clay known as "hectorite" with a Li_2O content ranging from about 0.3% to 0.5% (1,400 to 2,300 ppm Li) as reported by J. J. Norton in a USGS Professional Paper in 1965 [17].

In 1967, the James Stewart Company, a mineral speculator, began applying for Mineral Prospecting Permits with the ASLD. These permits were for the current Oakley MEP in Sec. 11* and also for Sec. 12*. However, it appears that until 1981 they never conducted any exploration of the area and were merely holding the permits through a method known as 'top filing' [18]. The company finally consummated the permits in 1981 and drilled some shallow holes and analyzed the cuttings for lithium, although no results are reported.

* Note that all Section Nos. in this subsection of the report refer to T13N, R6W, G&SR Meridian.

Also in 1981, Theodore (Ted) H. Eyde of Geoservices of Arizona (GSA) initiated surface exploration in Sec. 11 and 12 under the direction of R.T. Vanderbilt Company, Inc. [18]. In a Vanderbilt inter-office memorandum, it was reported that a surface sample taken near the current mine was a gray-green translucent smectite clay with 10% carbonate and 0.67% Li_2O (3,100 ppm Li) which was high in calcium and magnesium.

In late 1982, Mr. Eyde appears to have made a deal on behalf of Vanderbilt to acquire the James Stewart Company permits, agreeing to bonus, exploration commitment, and a $5/ton royalty on the clay [18].

GSA drilled two shallow holes in Sec. 2 with a reverse-circulation rig in early 1983, and later cored 17 holes in Sec. 12 along the ridge where the current Lyles Mine is located. GSA also cored 4 holes along the border between Sec. 2 and 11. By late 1983, GSA reported to ASLD that Sec. 2 does not appear prospective for their desired clay [18].

In 1983, Ted Eyde applied for a Mineral Lease with the State. Continuing with the exploration, GSA cored two holes in central Sec. 11 plus 8 holes in eastern Sec. 12 in 1984 and GSA acquired a 15-ton bulk sample in 1985.

<u>Note that the historical reports of lithium concentrations cited above are anecdotal and may not be relied upon as accurate deposit grades. Also, these reported values would be particular to the Lyles Mineral Lease and cannot be inferred to indicate the presence of lithium resources on the subject Ameriwest property.</u>

6.3. Previous Mining in Thompson Valley

The State Mineral Lease was approved for Ted Eyde in 1983. Transfer of the Mineral Lease from Ted Eyde to Gadsden-Sonora Holdings, LLC (owned by Ted Eyde) occurred in 2001, and transfer to Vanderbilt Western Resources LLC took place in 2018. The current lease expires in 2028, but is renewable as an operating mine.

In 1987 it was reported that the hectorite is used as a viscosifier in liquids, primarily cosmetics and pharmaceuticals. The previous year's production was 137 tons at an as-mined value of around $30 per ton, and shipped out of state to Nevada for processing into final products. At that time, the mine was operated intermittently only when shipments were requested by the buyer, Vanderbilt Minerals. Ore was loaded, as is, into 20-ton trucks and shipped to Beaty, NV, for screening and then sent to Kentucky for final processing [16].

The Eyde/Gadsden-Sonora State Mineral Lease was eventually transferred to Vanderbilt Minerals Corp. According to the most recent data available, the Lyles Mine is listed as active in 2022 as an open-pit clay mine operated by Vanderbilt Minerals Corp. [19].

Over the course of some 36 years, State records indicate a total of 11,800 tons (10.7 kt) of clay product was sold by the Lyles Mine through 2012 with an average of about 340 tons (306 t) in annual sales. More recent production data is not available.

7. Geologic Setting and Mineralization

Thompson Valley is located between the Hillside and Kirkland Mining Districts. Hillside Mining District is related to the outer ring mineralization of the Bagdad coppery porphyry system. The Kirkland Mining District has volcanic massive sulfide zones with extensive pozzolan in the volcanic ash beds.

The subject area is located in a north-south trending volcanic belt between these mineral districts.

7.1. Regional Geology

Thompson Valley and surrounding area geology are shown by Figure 9, which is modified from the Yavapai County geologic map [20]. Quaternary-Tertiary sediments cover the valley floor and there are large basalt flows of the same age to the north and south. Precambrian granites and schists are exposed to the west and east.

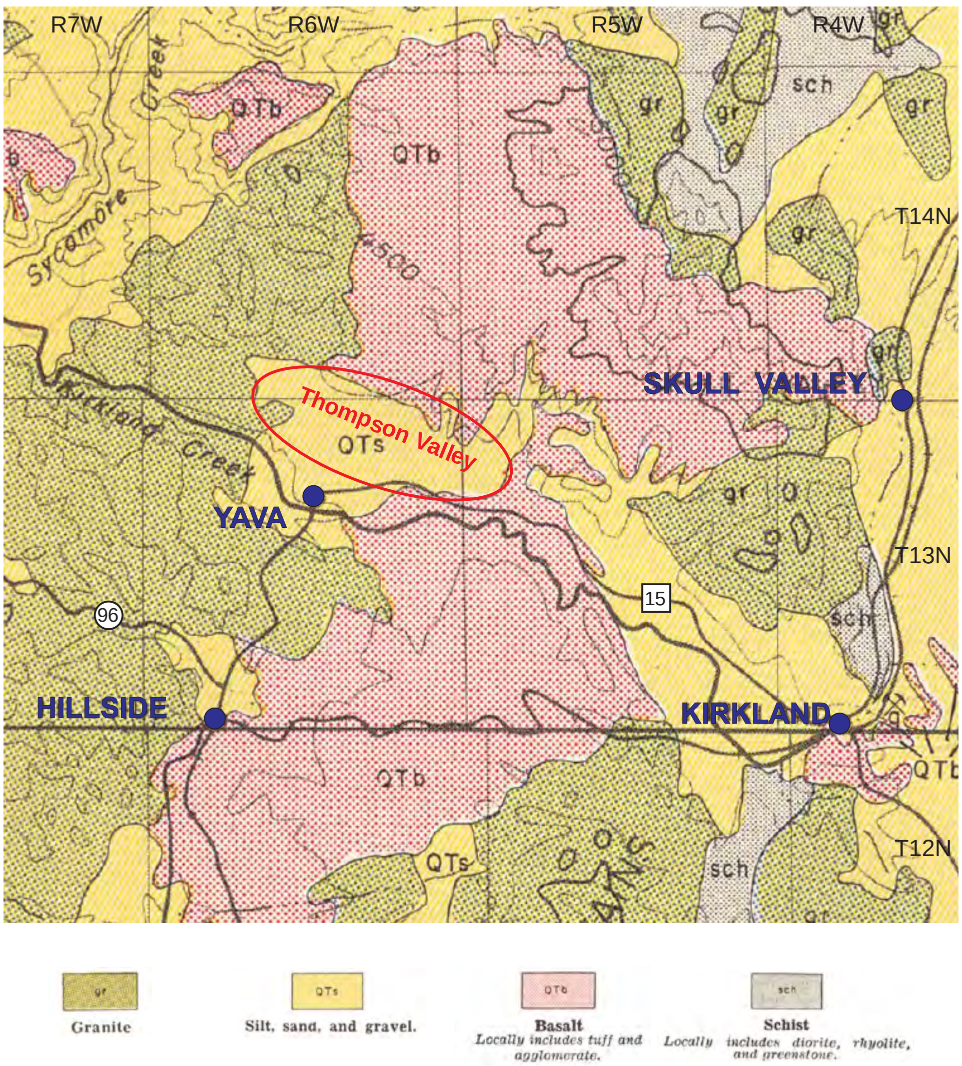

Figure 9. Regional Geologic Map

Ed DeWitt of the Arizona Geological Survey (now USGS) in 1987 conducted an initial geological survey of the region. This survey and other unpublished works were combined into the 2008 USGS map of Prescott National Forest and vicinity [21]. The Thompson Valley area is located at the extreme southwestern edge of the map as shown by Figure 10. From the DeWitt work, a basic outline of the geology of the region was described.

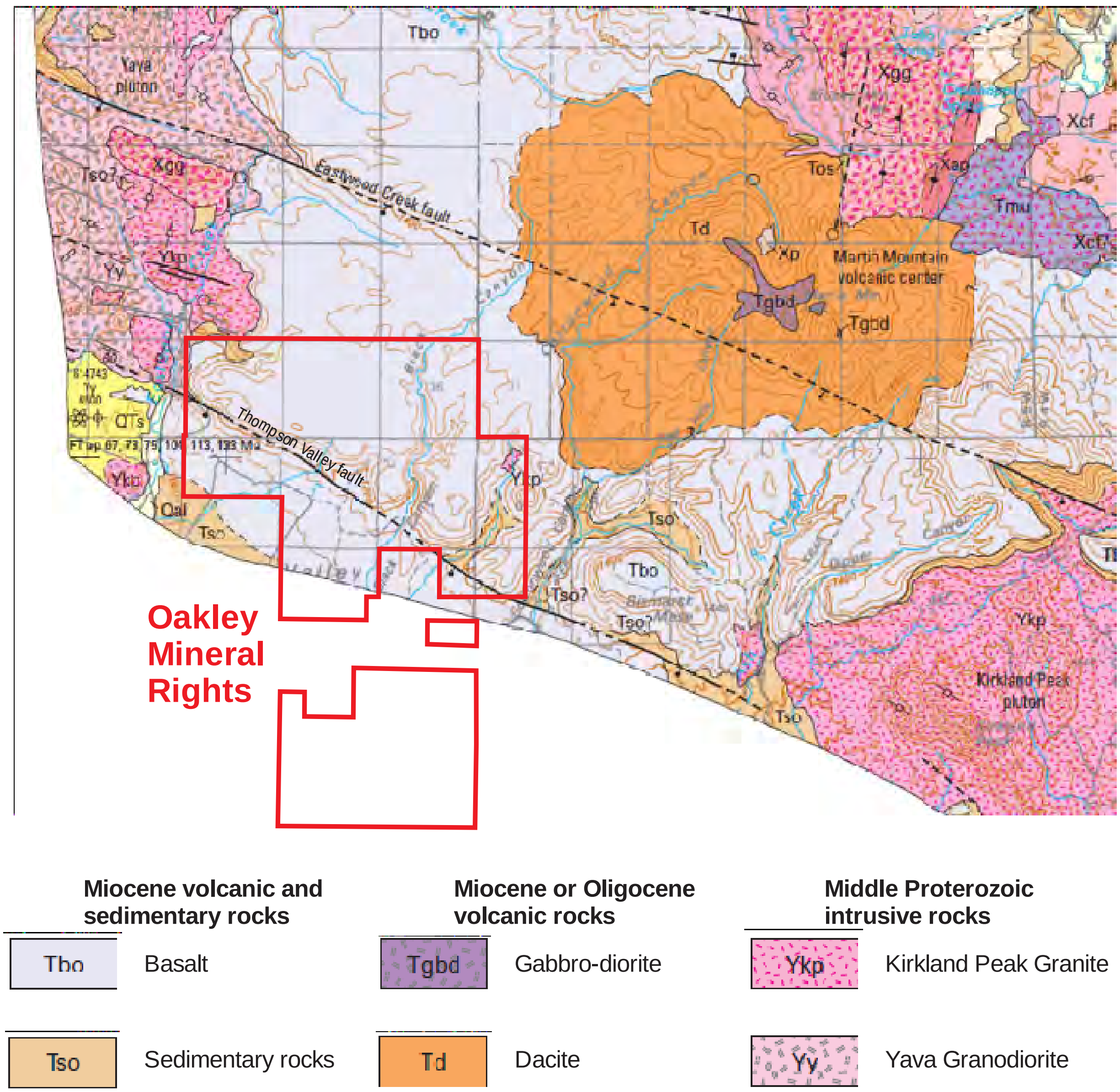

Figure 10. DeWitt Geologic Map of Region Near Thompson Valley

Following are notes from the DeWitt report [21]:

Tbo – Basalt flows west of Kirkland and west of Martin Mountain are undated and range in composition from basalt to andesitic basalt, are sodic to average in K/Na ratio, and are very Mg rich to very Fe rich.

Tso – Volcanic and sedimentary rocks of undetermined age (Miocene? and Oligocene?) consisting of basalt, andesite, dacite, and interbedded sedimentary rocks. Chemistry undetermined.

Tgbd – Gabbro-diorite (Miocene?)—Fine-grained, equigranular, irregularly shaped intrusive body that cuts dacitic shield volcano at Martin Mountain. Chemically is alkali-calcic, metaluminous, and Mg rich, and has average K/Na ratio. Composition similar to that of basalt flows (unit Tbo) north and west of Martin Mountain.

Td – Dacite flows near a large volcanic edifice at Martin Mountain. Body at Martin Mountain is dacite that is sodic and very Mg rich.

Ykp – Granite of Kirkland Peak, an undeformed, medium- to fine-grained, strongly jointed, equigranular muscovite-bearing alkali granite. Informally named herein for exposures on Kirkland Peak, southwest of Skull Valley. Cuts granodiorite of Yava (unit Yy). Chemically is alkali-calcic, mildly peraluminous, very sodic, and very Fe rich. Presumed to be Middle Proterozoic.

Yy – Granodiorite of Yava, an undeformed, coarse-grained, strongly porphyritic biotite granodiorite containing phenocrysts of microcline. Informally named herein for exposures at and north of Yava, just south of Thompson Valley. Forms large pluton southwest of map area. Ranges from granodiorite to granite and is metaluminous to mildly peraluminous, average to potassic, and average in Fe/Mg ratio. Texture and chemistry suggest this body is northern equivalent of granite of Grayback Mountain to the southwest, where the U-Pb zircon age of granite of Grayback Mountain is 1,415 Ma.

7.2. Local Geology

Published information for the region does not reflect current geologic structure of the project area. Based on inspection and mapping of the project area, Figure 11 presents a section view of the geologic structure of the project area and Figure 12 is a surface structure map which will be referenced in this discussion.

As shown by the map of Figure 13, there are two (2) separate areas where Oakley has mineral rights: a North Area located to the north of Kirkland Creek, and South Area located south of the creek. The North Area is the main subject of this initial investigation, while the South Area has not yet been inspected in detail. These two project areas are described further as follows:

North Area:

The North Area is located north of Kirkland Creek and mostly north of County Road 15 within Sections 1, 2, 3, 11 & 12, T13N, R6W and Sections 34, 35 & 36, T14N, R6W and Sections 6 & 7, T13N, R5W covering an area of 5,000.81 acres (2,023.76 hectares), including ASLD Exploration Permits and Federal mining claims. Elevations range from 3,580 to 4,450 feet (1,091 to 1,356 m) above mean sea level (AMSL). Access to this area is from County Road 15. See Figure 11 for a surface profile of the area and Figure 13 for the North Area boundaries.

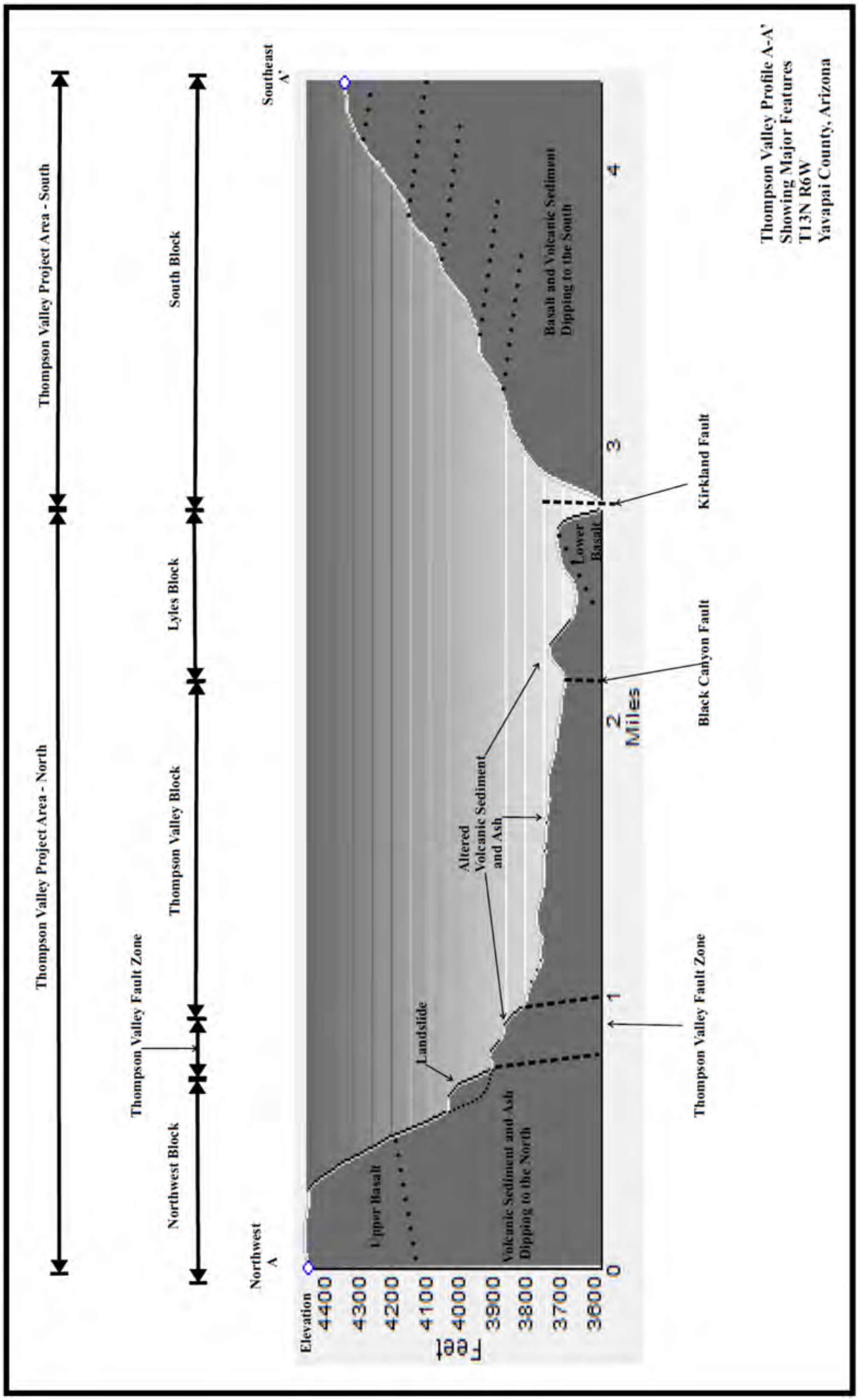

Figure 11. Thompson Valley Profile A-A' Showing Major Features

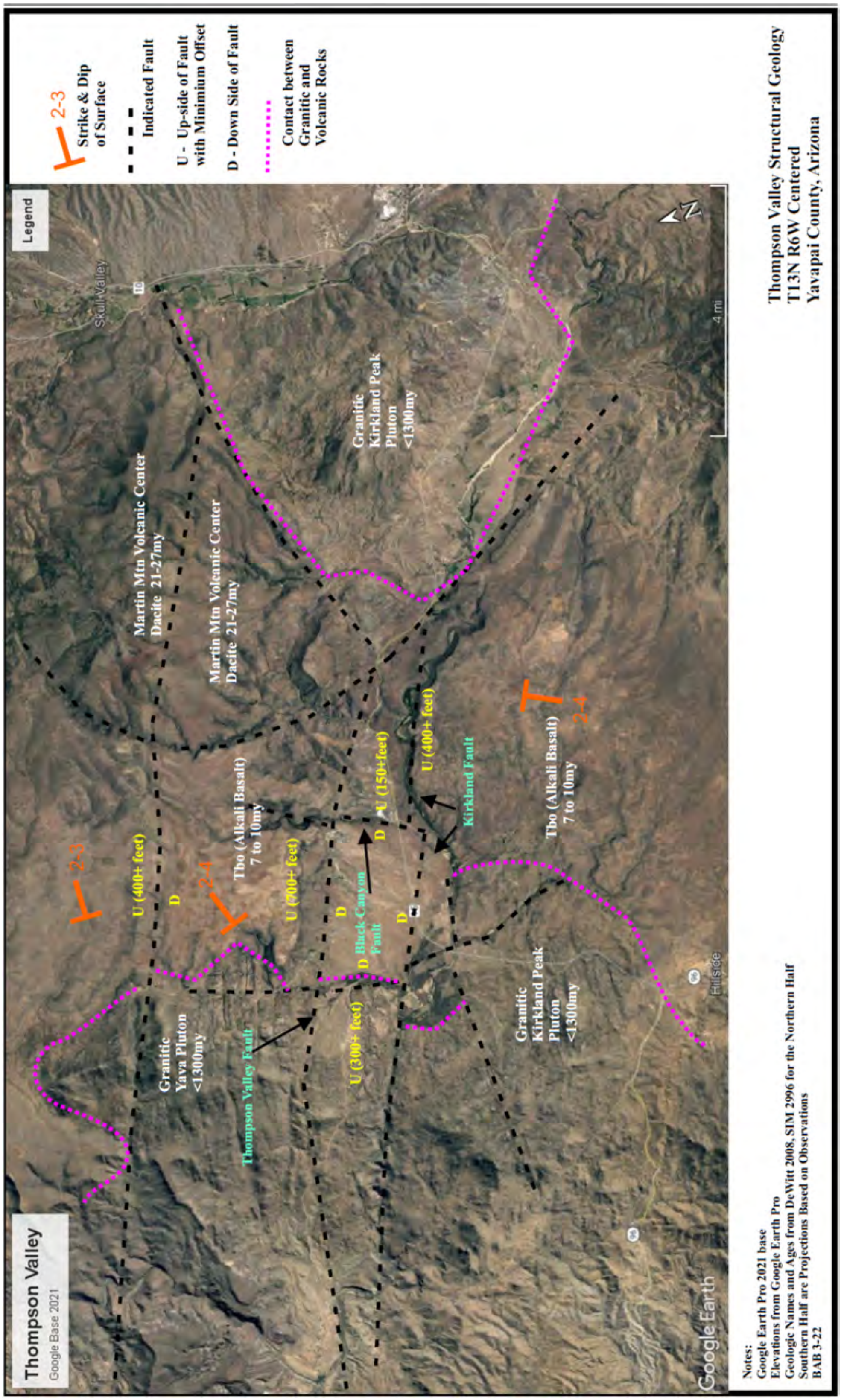

Figure 12. Thompson Valley Structural Geology

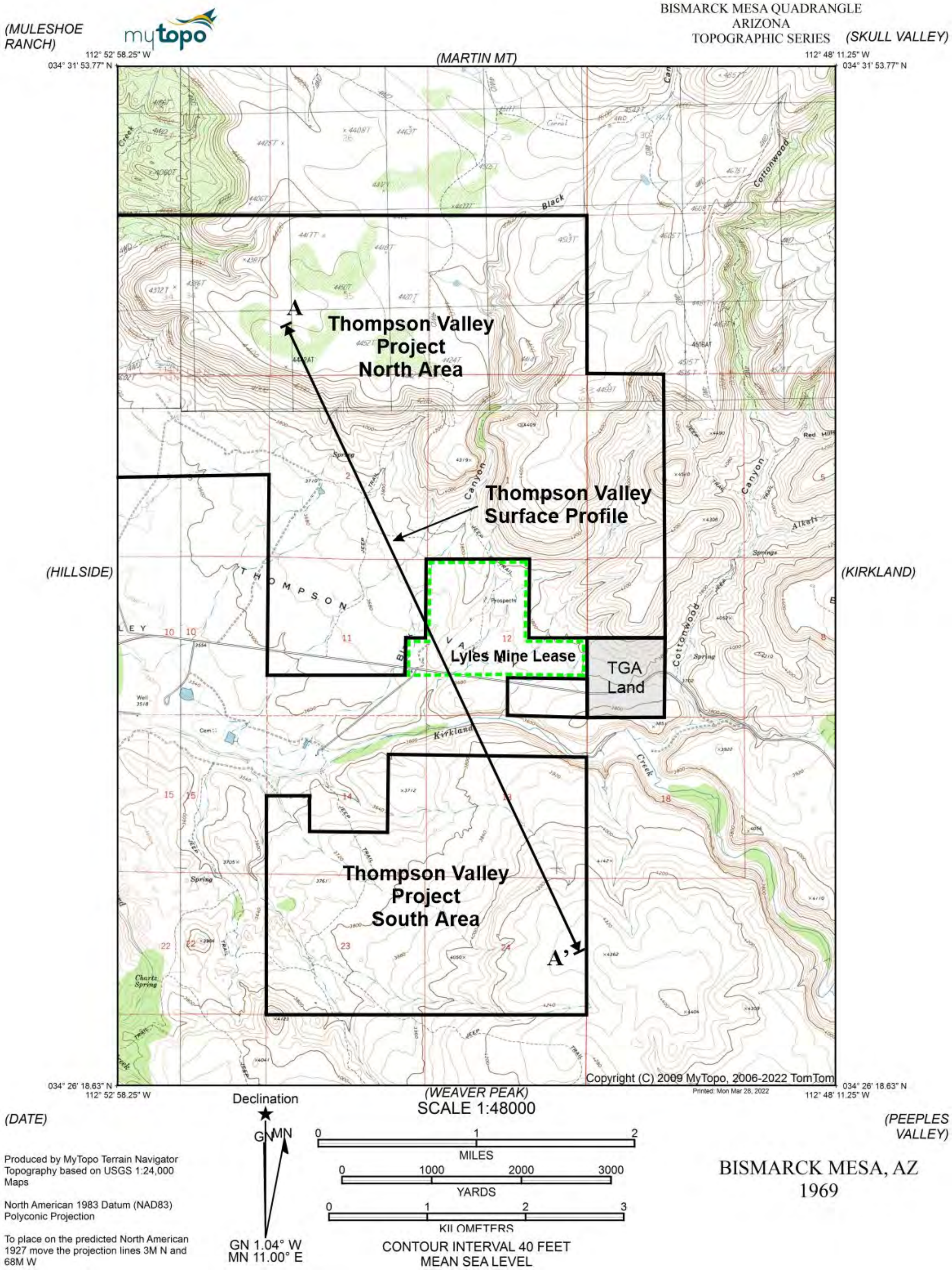

Figure 13. Thompson Valley Project Areas with Profile A-A' Location

The prospective lithium target within the North Area is in Sections 1, 2, 11 and 12 to the south of the cliffs including Lyles Ridge and specifically the Lyles Mine. Not all of this target area is controlled by Oakley, as the majority of Sec. 12 is held under the Lyles Mineral Lease including the mine. Approximately 3.7 miles (5.9 km) of exposed cliffs containing the target geologic unit(s) is found within the current North Area. However, the known Li-bearing area is less than 0.5 miles (0.8 km) wide along Lyles Ridge with an apparent north-south running fault structure on its west side, the Black Canyon fault.

Hydrothermal solutions locally altered the volcanic sediment and ash into various clays, zeolites and hectorite. Hectorite being the identified main geologic material bearing lithium within the Lyles Mine. Within the target area(s) where Oakley has mineral rights, excess silica is found in pods of common opal and chalcedony in Sec. 2 and 11. Travertine deposits are also noted around these areas, providing further evidence of hot spring (hydrothermal) activity.

South Area:

The South Area is located south of Kirkland Creek in Sections 13, 14, 23 and 24, T13N R6W covering an area of 1,880.45 acres (760.99 hectares) of ASLD MEPs with elevations ranging from 3,580 to 4,170 ft (1,091 to 1,271 m) AMSL. Access to this area is limited to ATV trails from the west across approximately 3.5 miles (5.6 km).

The South Area is similar to the North Area with a series of retreating erosional cliffs with the cliffs ranging in height of 110 feet (lower) to 260 feet (upper). These cliffs consist of basalt capping units with ash units forming the cliffs and the pediments. See Figure 11 for a surface profile of the area and Figure 13 for the South Area boundaries.

7.2.1. Lyles Mine Area

The one significant report on the geology of the area around Lyles Mine was a USGS Professional Paper authored by Norton in 1965 [17]. Norton acquired samples from the area around the ridge in 1960 and presented results of analyses in the paper. Figure 14 is a reproduction of the USGS map showing 10 sampling locations.

Table 5 presents descriptions and lithium analysis results for the sample location shown on the figure. Samples with a Li_2O content greater than 0.29% are highlighted gray. Inspection of the analyses shows that the near-surface samples have less lithium content, and that there is considerable lithium to the east (Samples E and F) and in the wall of the gully or arroyo to the west (Sample D on the edge of Sec. 11). The northern samples near the basalt cliff (Samples H, I and J) have less lithium, however the depths of the samples are not indicated; the hard white caprock and sandy material has less lithium, perhaps leached out.

The authors concur with Norton in his observation that the bedded nature of the clay in the Lyles area indicates that it formed originally as a lake sediment. Norton further observed that the abundance of lithium, fluorine, and strontium suggests that the conversion of the sediment to bentonite was at least in part by hydrothermal alteration, and the authors present further information to support this observation based on direct evidence of both a lake deposit and hydrothermal activity.

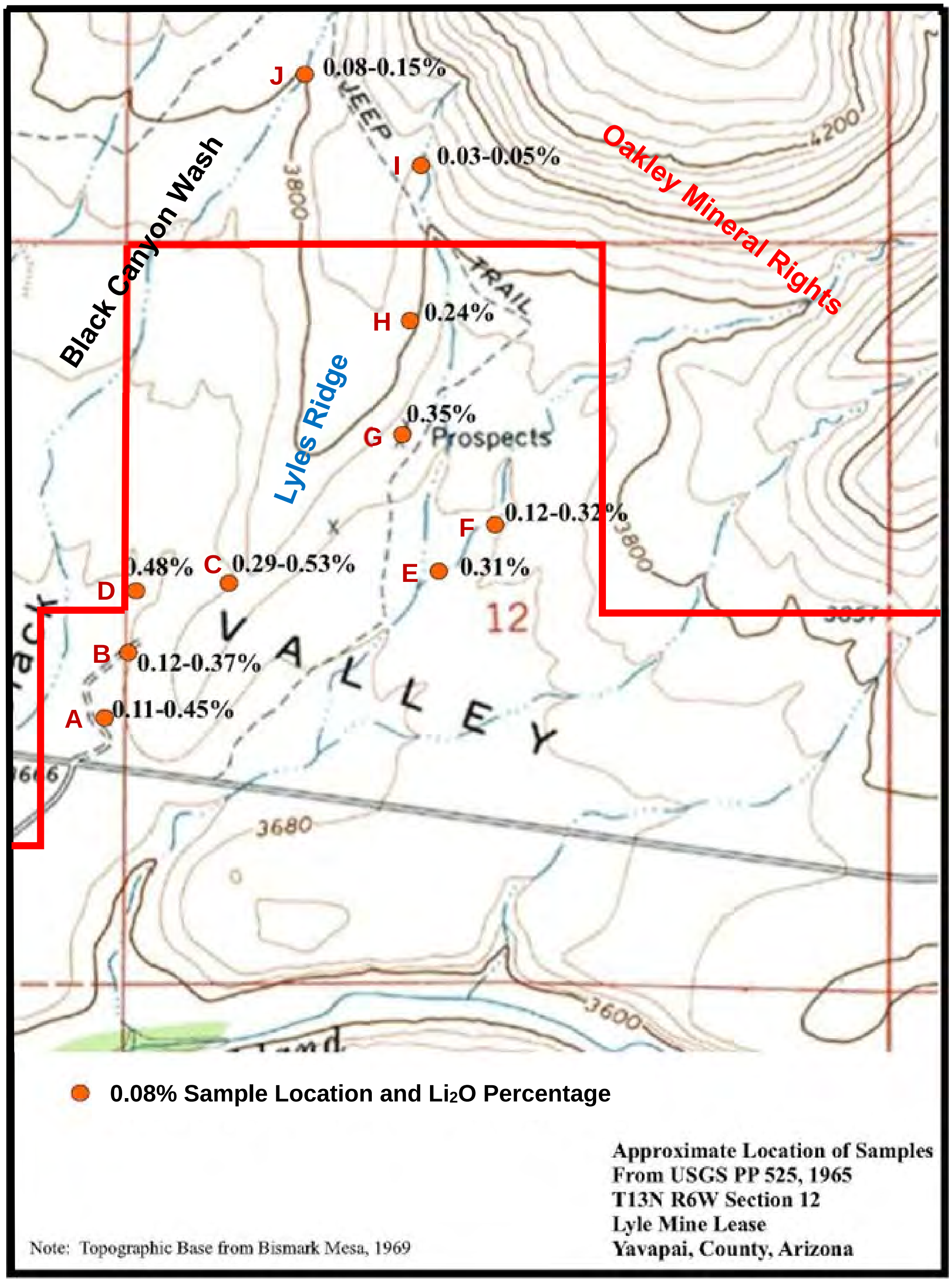

Figure 14. 1960 USGS Lithium Sampling Near Lyles Ridge

Table 5. 1960 USGS Lithium Sample Analyses near Lyles Ridge

Location	Description	Average Li_2O (%)	Average Li (ppm)
A. Bulldozer trench	Surficial material, hard white caprock	0.10	460
	4" to 12" below surface	0.34	1,580
	1.5' below surface	0.44	2,040
B. Drillhole	Cuttings, sandy	0.11	510
	Deeper?	0.37	1,720
C. Open Pit	East part of pit	0.51	2,370
	North side	0.47	2,180
	South side, uppermost bed	0.48	2,230
	South side, intermediate bed	0.29	1.350
	South side, lowermost bed	0.41	1,900
D. Gully	Wall	0.45	2,090
E. Drillhole	Cuttings	0.30	1,390
F. Drillhole	Surficial material, hard white caprock	0.14	650
	Cuttings	0.30	1,390
G. Drillhole	Cuttings	0.34	1,580
H. Prospect pit		0.22	1,020
I. Drillhole	Cuttings from drillhole, sandy	0.05	230
	Prospect pit, sandy	0.03	140
J. Outcrop near spring		0.15	700
		0.08	370

Gray rows have lithium oxide contents greater than 0.29%.
Lithium oxide to lithium element conversion factor is 1% Li_2O = 4,645 ppm Li

The presence of lithium at the Lyles area is historical data, it has not been verified by the authors of the report and does not necessarily indicate the presence of lithium resources for the Oakley property. Lithium analyses for the Oakley lands are presented in Section 9 of the present report.

7.2.2. Identified Fault-Separated Geologic Blocks

The published information for the region does not reflect the geologic structure of the project area. Figure 12 presences the geologic structure of the project area and Figure 15 is a surface geologic map which will be referenced in this discussion. There are three large scale faults that break up the area into a series of geologic blocks, described below. The large scales faults are defined here as:

Thompson Valley Fault – This fault is located on the north side of the project area along the base of the northern cliffs. This fault trends northwest-southeast and appears to have a vertical offset of at least 700 ft (200 m). The upside is on the north, where the capping basalts and underlying sediments are exposed. This fault was mapped by DeWitt and is shown on Figure 10. On the surface, the Thompson Valley Fault has the appearance of a zone that is 50 to 300 ft (15 to 90 m) wide. Within this zone the sediments are rotated to the south with a dip up to 33°.

There is a landside within the fault zone, and it is located between Sec. 1 and 2. This landslide is developed within the altered sediments. The dislodged section of the landside is 560 ft (170 m) wide and 850 ft (260 m) long. The landslide out-flow is over 1,300 ft (400 m) long onto the adjacent Thompson Valley Block.

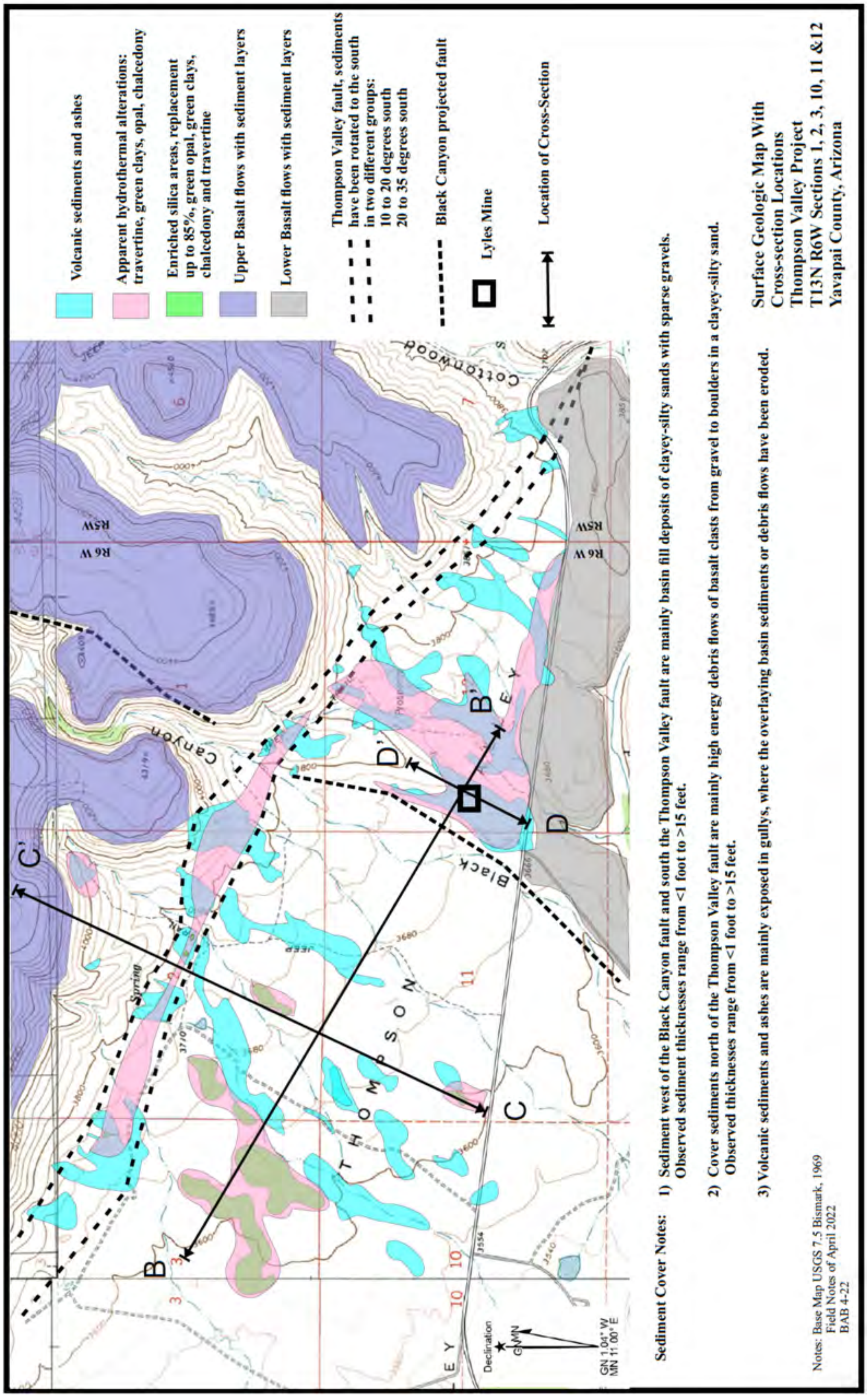

Figure 15. Surface Geologic Map with Cross-Section Locations

Kirkland Fault – This fault is located along Kirkland Creek in the eastern portion of the area and is projected to the west into the granitic plutons at the contact between the two major granitic units. The fault trends northwest-southeast with a vertical offset of at least 400 ft (120 m) with the upside on the south.

Black Canyon Fault – This fault is located on the west side of the Lyles Mine area and within Black Canyon. This fault trends north-south with at least 150 ft (45 m) of vertical offset with the upside on the east. On the east side of the fault is a prominent ridge, referred to here informally as “Lyles Ridge” with a north-south orientation.

Using this description of faulting, the project is divided into five (5) structural elements, as follows:

South Block – Located south of the Kirkland Fault this block has a series of retreating erosional cliffs with the cliffs ranging in height from 110 ft (35 m) for the lower cliff to 260 ft (80 m) for the upper cliff. These cliffs consist of basalt capping units with ash units forming the cliffs and the pediments.

These basalts appear to rest directly on the Kirkland Peak Pluton granite. The contact between the granite and the basalt is exposed on the west side of the area and this contact shows a dip to the east of 8°. Locally, the basalt platform of the South Block appears to be dipping to the south at 2° to 4°. See Figure 16 for a cross-section of the South Block.

Northwest Block – Defined here as the area north of the Thompson Valley Fault and west of the Black Canyon Fault. The area can be described as retreating erosional cliff sequences composed mainly of flood basalts (mesa capping unit) and underlying volcanic ashes and sediments (cliff and pediment). The capping basalt units range in thickness from 150 to 375 ft (45 to 115 m) with the underlying cliff forming sediment units having a thickness of at least 350 ft (105 m). This block appears to have a regional dip of 2° to 4° to the northeast.

There appears to be a dislocated section of the mesa adjacent to the Thompson Valley Fault and west of the Black Canyon Fault in the southeast corner of the Northwest Block. This dislocation block is approximately 3,000 ft (900 m) long and 2,000 ft (600 m) wide and may be a gravity slide block with at least a 160 ft (50 m) drop from the main mesa.

Another dislocation block is seen to the northeast of the first block adjacent to the Black Canyon Fault. This block is approximately 1,500 by 1,500 ft (500 m by 500 m) with a drop of 90 ft (30 m). This block most likely is related to the movement of the Black Canyon Fault and may be another gravity slide block.

A landslide is seen mid-Section 2, just above the spring. This landslide is 2,000 ft (600 m) wide and 1,000 ft (300 m) long.

Northeast Block – This area is north of the Thompson Valley Fault and east of the Black Canyon Fault. The area is similar to the Northwest Block with a retreating erosional cliff sequence composed mainly of flood basalts (mesa capping unit) and underlying volcanic ash units. The capping basalt units range in thickness from 100 to 250 ft (30 to 75 m) with the underlying cliff forming volcanic sediments having a thickness of at least thickness 300 ft (90 m). This block appears to have a regional dip of 2° to 4° to the north-northeast.

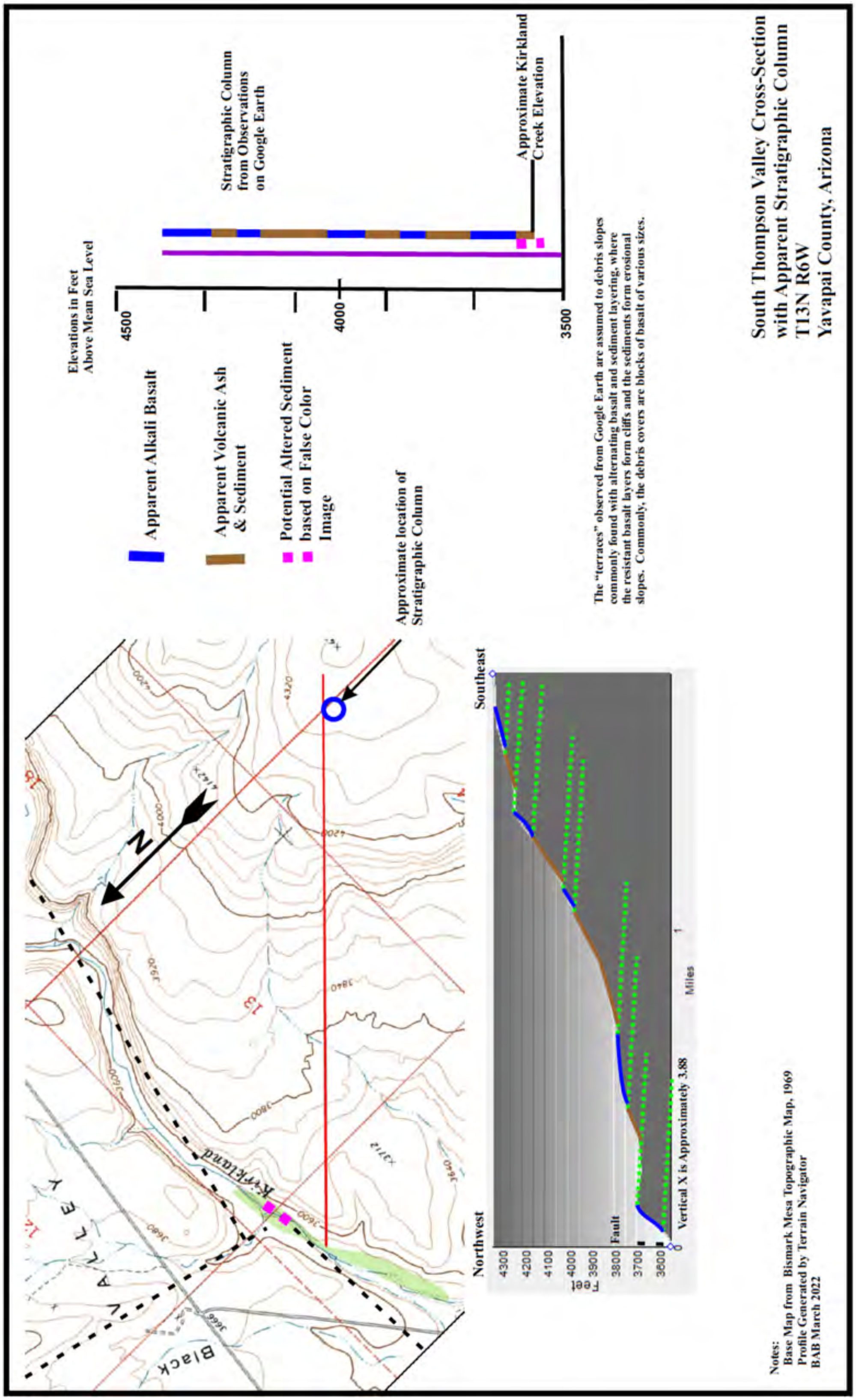

Figure 16. South Thompson Valley Cross-Section with Apparent Stratigraphic Column

Thompson Valley Block – This is the area between Kirkland Fault, Thompson Valley Fault, west of the Black Canyon Fault and east of another fault which might be present further to the west at the contact between the granitic plutons and the valley. This block is the topographic low of the region being the downside of all of the faulting. This block can be called a graben, forming a dropped-down basin. There appears to be a general tilt of less than 5° to the south-southwest of the valley surface.

Lyles Block – This is the area of the previously reported lithium (Li) occurrence as a hectorite clay. This block is defined here as the area between Kirkland Fault, Thompson Valley Fault and east of the Black Canyon Fault. This block also appears to be a graben, but is elevated above Thompson Valley by at least 150 ft (45 m). This block appears to be more of a stripped, low dip (south) exposure of hydrothermally altered sediment.

7.2.3. Geologic Block Descriptions

An initial surface structure map of the key areas is provided as Figure 12 with surface geology shown by Figure 15 and cross-sections of the area presented as Figure 19 and Figure 20. Note that the South Block, which is the same as the South Area, has not been geologically inspected at the time of this report and, therefore, is not included in the following discussion.

Northwest Block:

The Northwest Block, as previously described, is a retreating erosional cliff sequence composed mainly of flood basalts and underlying volcanic sediments. Most of the slopes are very steep, up to 45°, and have a debris cover of basalt clasts (gravel to boulders) in a clayey-silty sand. The thickness of the debris cover ranges from less than 1 ft (0.3 m) to more than 15 ft (5 m). There are two areas exposed in gullies where underlying volcanic sediments may be seen.

The sediment exposure in the northeast portion of Sec. 2 has thick travertine layers, sparse chalcedony and opal in a red, clayey-silty sand. Travertine layers are 1 to 3 ft (0.3 to 1 m) thick. This exposure is approximately 300 ft (100 m) long and 500 ft (150 m) wide at an elevation between 3,750 and 4,050 ft (1,150 and 1,250 m) AMSL. The apparent exposed ash layers are less than 2 ft (0.6 m) thick and are partly converted to a clay. Figure 17 shows a satellite view of the travertine exposures, and Figure 18 provides a closer view of the travertine layer.

Figure 17. Northwest Block Travertine Exposure from Google Earth

Figure 18. Northwest Block Travertine Layer Exposure

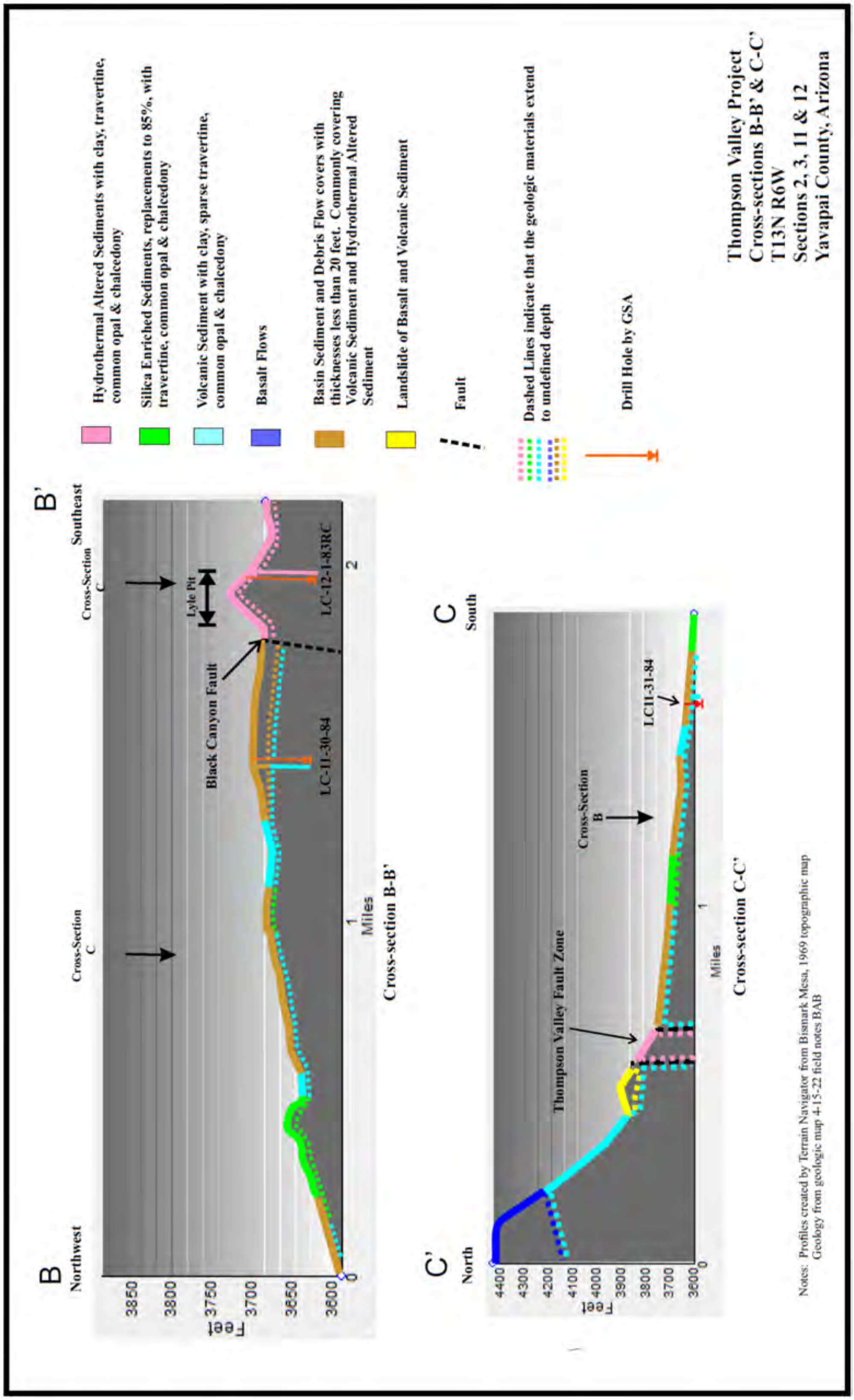

Figure 19. Thompson Valley Project Cross-Sections B-B' and C-C'

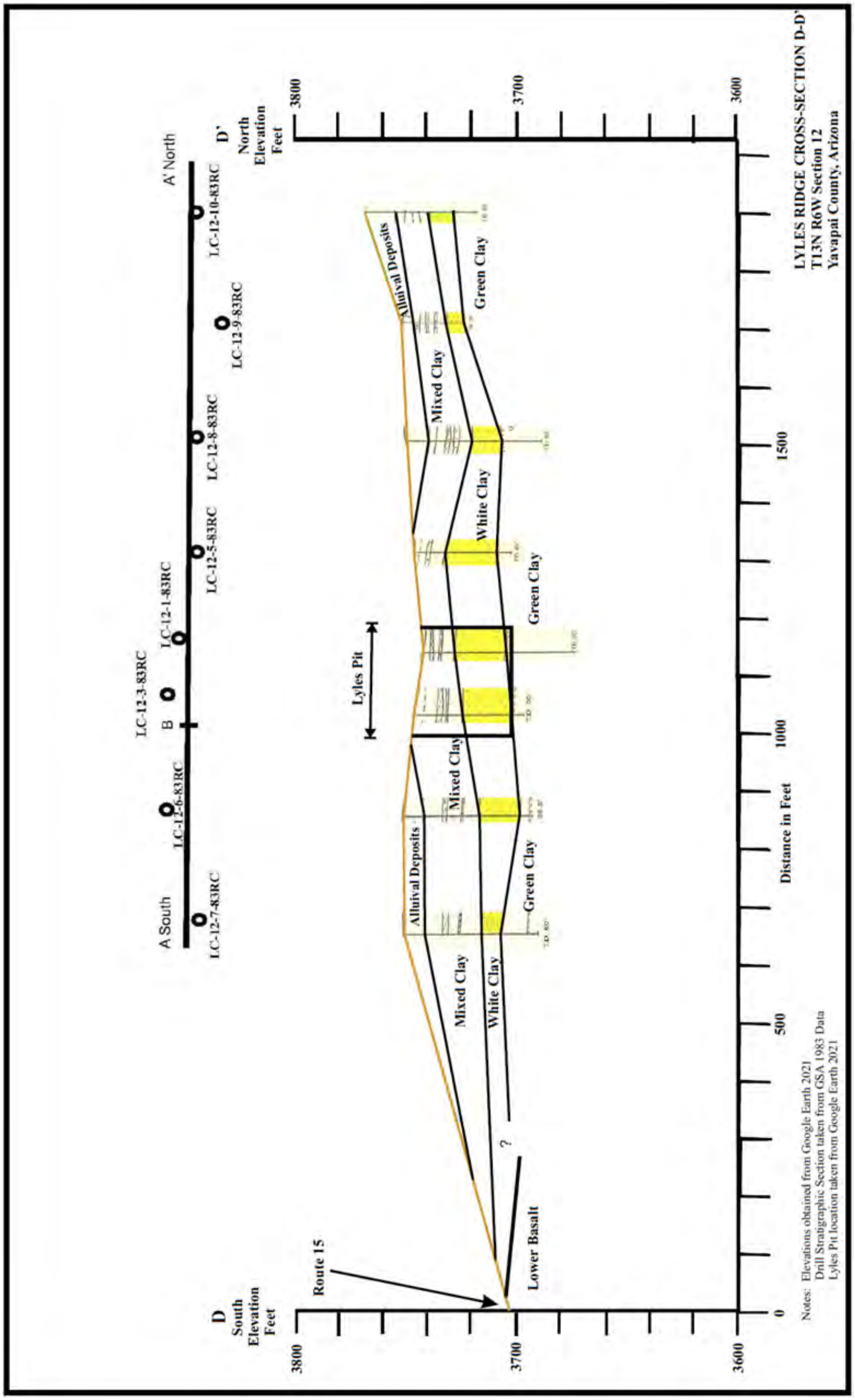

Figure 20. Lyles Ridge Cross-Section D-D'

Northeast Block:

The Northeast Block is a retreating erosional cliff sequence composed mainly of flood basalts and underlying volcanic sediments. Most of the slopes are very steep, up to 45°, and have a debris flow cover of basalt clasts (gravel to boulders) in a clayey-silty sand.

There are very few exposures of the sediment in this block. The few exposures of the sediment were different from those seen in the Northwest Block. Most of the apparent sediment was coarse gravelly sand with welded tuff units. Gravel layers were found that were cemented with caliche.

Views of the cemented gravels and welded tuff are shown in Figure 21 and Figure 22.

Figure 21. Northeast Block Cemented Gravels

Figure 22. Northeast Block Welded Tuff and Gravels

Thompson Valley Block:

The Thompson Valley Block has the lowest elevations of the area and ranges from 3,565 ft (1,085 m) at Kirkland Creek to 3,804 ft (1,160 m) at the Thompson Valley Fault. Being the lowest area the region, the area is a basin that receives sediment from everywhere. Within this block there were no exposures of basalts or granitic rocks (basement) except at the far western end of the Oakley mining claims in Sec. 3.

From field measurements of the exposed volcanic sediments, the sediments are dipping S78°W to S81°E at less than 5° to mid-Sec. 11. The basin sediments to the west from mid-Sec. 11 are a shallow cover of less than 10 ft (3 m). From mid-Sec. 11 eastward to the Black Canyon Fault, the sediments appear to be rotated to the east (S66°E) with an increase in the dip to near 15°. There appears to be a zone of down warping or fault drag to the south along Black Canyon Fault. Given the apparent displacement of the Black Canyon Fault and the rotation dip increasing to the south along the fault, there could be a wedge of basin sediment with a thickness of 30 ft (9 m) over the volcanic sediments, see Figure 19.

Over the top of the volcanic sediments, there are two different types of cover sediments (see Figure 23 and Figure 24):

1) The upper most sediment observed were basalt clast (gravel to boulders) debris flows in a silty-clayey sand. These debris flows were found across the upper part of the area, mainly within 2,000 ft (600 m) of the cliffs. These layers were thin, usually less than 3 ft (1 m) thick.

2) Under these debris flows and exposed over most of the area is a fine to medium grained, clayey-silty sand with sparse gravel. This sediment is massive to weakly layered with general dips to the south less than 5°. This sediment appears to be thickest, greater than 15 ft (5 m), near the Black Canyon Fault and thins to less than 1 ft (0.3 m) to the west.

Figure 23. Thompson Valley Block Basin Sediment and Debris Cover

Figure 24. Thompson Valley Block Basin Sediment Nearly Flat Lying

Exposed in the gullies of the area under the basin sediments, volcanic sediments and ashes are found. Ash layers over 4 ft (1.2 m) thick are common with clay conversions up to 70% in places. This sediment is mainly a clayey sand and ranges in color from a reddish brown to light green. Thin travertine layers are common, along with sparse chalcedony and opal (see Figure 25 and Figure 26).

Figure 25. Thompson Valley Block Exposed White Ash Layer

Figure 26. Thompson Valley Block Exposed Ash Layer and Green Sediment

Within Thompson Valley, there are exposures of enriched silica (up to 85%) of the volcanic sediment. These are mainly in the southeast part of Sec. 3 and southwest portion of Sec 2 (see Figure 15). These enriched silica exposures are mainly common green opal and have no to very little sediment cover. Some travertine and chalcedony are found here. These exposures are 3 to 18 ft (1 to 6 m) in elevation above the surrounding ground (see Figure 27 and Figure 28). Cross-sections of Thompson Valley are presented in Figure 19.

Figure 27. Thompson Valley Block Enriched Silica Area

Figure 28. Thompson Valley Block Opal Replacements

Fragments of the enriched silica rock, travertine and chalcedony are found around these areas in clayey, fine gravelly sand. These fine gravelly sands appear to be direct weathering/conversion of the sediment to mostly rocky clayey soil. The silica enrichment is mainly common opal (dull green), see Figure 27 and Figure 28. The chalcedony is in globs up to 8 inches (20 cm) across, but mainly less than 2 inches (5 cm).

These enriched silica areas have a high density of Mormon Tea, 2 to 8 ft (0.6 to 2.4 m) tall as shown by Figure 27. These plants are common to areas with relatively high magnesium and sulfur soil.

Lyles Block:

Soil covers in this block are mainly the basalt clasts (gravel to boulders) debris flows in a silty-clayey sand. These debris flows were found across the area and are thin, usually less than 3 ft (1 m) thick. This soil cover thickness increases to the north toward the Thompson Valley Fault.

This block appears to be more of a stripped, low dip (less than 8° to the south) exposure of reddish-brown volcanic sediment (Figure 29). This volcanic sediment appears to be resting on a basalt bedrock with an apparent sediment thickness of at least 210 ft (64 m), see Figure 15 and Figure 20. Travertine layers with sparse chalcedony and opal are found in the southern portion of the block along County Road 15. These travertine layers are up to 12 ft (4 m) thick (Figure 30).

Figure 29. Lyles Block Sediment Exposure

Figure 30. Lyles Block Travertine Layer

The Lyles Block is the area of the reported lithium occurrence at the Lyles Mine hectorite clay. A plot of the lithium sampling by the USGS in 1960 was present in Figure 14. The exposures in the pit are white ash with a clay content of 50% to 80% and a series of thin volcanic layers over the main clay layer as described in the Santini report [22]. This stratigraphic sequence shown by Figure 31 and Figure 32 does not appear beyond the north-south bearing Lyles Ridge. See Figure 20 for a cross-section along Lyles Ridge through the Lyles Mine.

Figure 31. Lyles Mine Pit North Face

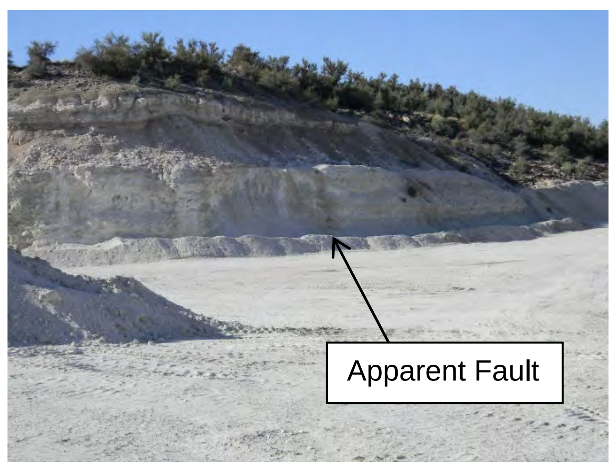

Figure 32. Lyles Mine Pit Southeast Face

The north wall of the Lyles Pit (Figure 31) shows the stratigraphic sequence as described in the Santini report [22]. He lists the following stratigraphy from top of the drill holes to the bottom;

Alluvium
Light colored tuff/clay beds
Green clays
Pink marker tuff/clay beds
Green - brown clays
Brown marker clay/tuff beds
Upper clay zone
White clay zone (target horizon) [hectorite]
Lower clay zone
Underlying green clay beds

The southeast exposure shows a disruption of the lower layers, where the volcanic sediment appears to have been faulted, then covered with other volcanic sediments (Figure 32).

The Lyles Ridge and most of the Lyles Block have high densities of Mormon Tea over the apparent altered sediment areas. The Mormon Tea can be seen in Figure 32.

<u>Thompson Valley Fault Zone</u>:

Located along the northern extent of the Thompson Valley Block and the Lyles Block, it is observed within the Thompson Fault Zone that most of the exposed volcanic sediments are converted partly to completely to a clay with various layering of travertine and opal. The rotation of the sediment in the zone is consistently to the south. The zone itself can be divided into several different rotations based on the dips of the sediments. The northern sections are dipping between 20° and 33° and the southern portions have dips of 10° to 20° (see Figure 33). The sediments outside of the zone to the south are nearly flat lying (dips less than 5°).

Figure 34 shows the lower (southern) side of the Thompson Valley Fault zone. The green sediment has travertine filling in various fractures. The upper white ash is 40% to 80% clay with sparse chalcedony.

Figure 35 shows the upper rotation of the volcanic sediment to 29° to the south. The volcanic sediment layers vary in clay content and sparse chalcedony and travertine.

Figure 36 shows a folded green opal layer in a green, clayey sand. This photo was taken at or near the southern part of the Thompson Valley Fault near the fault boundary.

The Thompson Valley Fault zone has various high densities of Mormon Tea along Sections 1, 2 and 3. Figure 35 shows the Mormon Tea vegetation occurs mostly in the areas of highest apparent altered sediment.

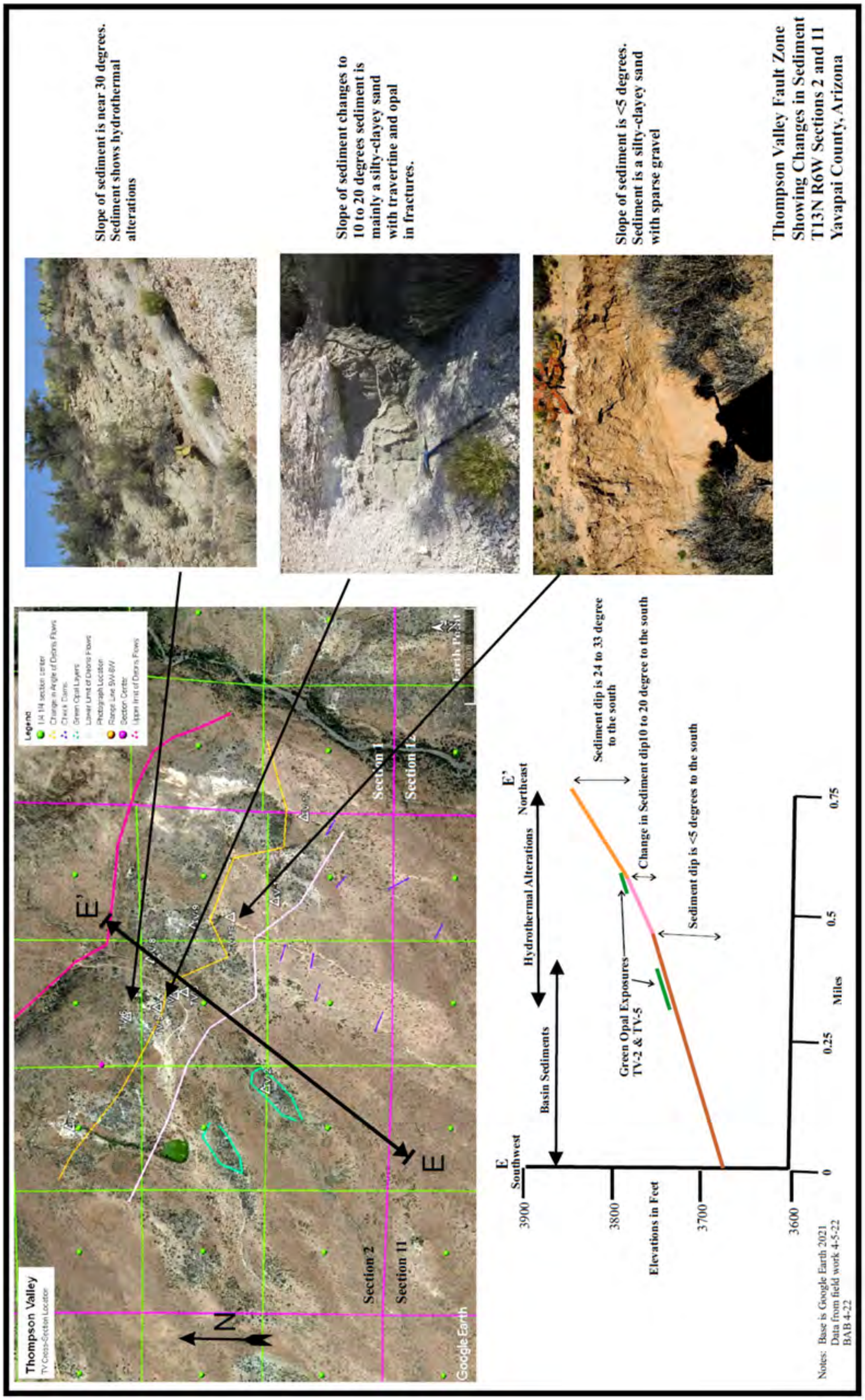

Figure 33. Thompson Valley Fault Zone Showing Changes in Sediment

Figure 34. Thompson Valley Fault Zone Lower Sediment Change

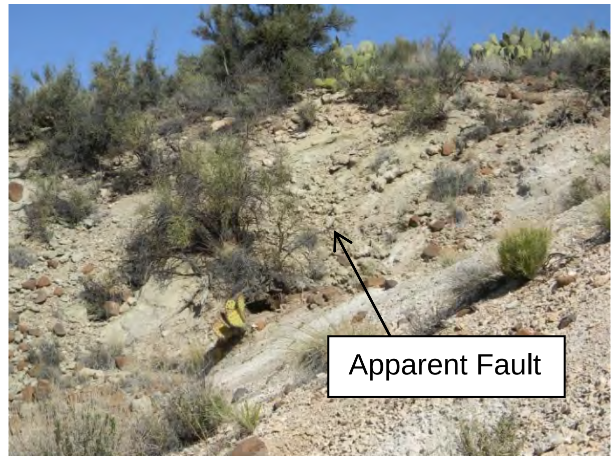

Figure 35. Thompson Valley Fault Zone Upper Sediment Dip of 29°

Figure 36. Thompson Valley Fault Zone Green Opals and Volcanic Ash

7.3. Epithermal Alteration

The Thompson Valley area has undergone an epithermal (<150°C) series of events. From the current exposures, the Thompson Valley and Black Canyon faults appear to have been the main sources of hydrothermal activity locally which altered the volcanic sediments and ashes into various clays and zeolites. Within the target area(s), excess silica is found in pods of common opal and chalcedony within the clayey zones and may represent apparent caps to larger epithermal areas. Travertine deposits are also noted around these areas, providing further evidence of hot spring (epithermal) activity. The Lyles Mine is located within the reported main clay zone in a hydrothermally altered area.

There appear to be four (4) different areas of epithermal alteration, as shown by Figure 15:

Northwest Block:

The Northwest Block, as previously described, is a retreating erosional cliff sequence composed mainly of capping flood basalts and underlying volcanic sediments. On the slopes where the volcanic sediments exist, there is a general debris cover that ranges from less than 1 ft (0.3 m) to more than 15 ft (5 m). Limited exposures of volcanic sediment in this block show the presence of epithermal activity with distinct travertine and chalcedony outcrops. Surface sample analyses found the presence of lithium: however, the exposures are very limited. The extent of lithium presence under the extensive basalt caps cannot be determined at this time.

Lyles Mine Area:

Lyles Ridge appears to be an elevation fault block that has exposed an area of volcanic sediment that has undergone extensive epithermal activity. The section exposed and explored by GSA indicates an altered thickness of at least 70 ft (20 m) of clay that is reported to have lithium present in part.

Thompson Valley Fault:

Over a length of 2 miles (3 km), the faulted sediments show epithermal alterations with travertine, opal, chalcedony and clay development in the volcanic sediments. Sample analyses found lithium from 300 ppm to over 1,000 ppm as discussed in Section 9.2.3. Sediment thickness within the exposed sediment is estimated at greater than 75 feet.

Thompson Valley Block:

Within Thompson Valley Block south of the fault zone, there are eight (8) separate silica replacement areas that appear to be the caps to separate epithermal areas. These exposed silica replacement areas are 0.1 to 25 acres in size. Surface sampling analysis found Li ranging from 21 ppm to 1,295 ppm.

Between and around these silica replacement areas are bedded volcanic sediments with numerous ash layers. Most of the ash units have been converted partly to clay. The surrounding sediment also has a clay content. Samples obtained from the gully exposures found lithium ranging from 2 ppm to 1,195 ppm.

In the central and southeastern portion of Sec. 11 in Thompson Valley, there are volcanic basin sediments covering the bedded volcanic sediments and the replacement silica areas. Samples obtained from the gully exposures found lithium ranging from 40 ppm to 107 ppm.

8. Deposit Types

8.1. Known Lithium Deposit Types

From the literature, there are four types of lithium deposits or enrichments that are recognized: pegmatites, brines, clay and greisenized granites [23]. There are 34 producing pegmatite deposits around the world [23] with 7 producing brine deposits [24]. Greisenized granites were once the major source lithium, but are now only being mined in southeastern Russia.

Pegmatite deposits are igneous intrusions and are of two types: zoned and unzoned. A typical pegmatite contains 20% spodumene, 41% feldspar, 32% quartz, 6% muscovite and 1% trace minerals. As spodumene has a theoretical Li_2O content of 8.03% (37,300 ppm), pegmatites would typically run less than 1.6% (7,500 ppm) lithium. Most of these deposits are contained within older craton margins [23].

Brine deposits are typically found in closed basins with high evaporation rates, where lithium can be concentrated through chemical weathering. Most of these deposits are found in Tertiary to Holocene age basins. Recent investigations have shown that some of these brine deposits were formed through hydrothermal actions. Lithium-bearing brines are also associated with oil production or geothermal operations in some regions [25].

Clay deposits are now being developed in the U.S., mostly in Nevada with some in Arizona, California and Utah plus there is a project in Mexico. The source of lithium is from epithermal activities, such as, hot springs. Most of the currently identified clay deposits are Miocene to Holocene age and are typically associated with lithium brine deposits [26], [27].

Brine and clay deposits are becoming more important due the lower cost of extraction and processing. Another more strategic importance of these deposits is that they are located within the United States and not subject to supply chain issues.

A new type of lithium occurrence has been recently noted at the Bonnie Claire Lithium Project in Nye County, Nevada [28]. Located in Sacrobatus Flat, the authors state that: "*The lithium in the sediments occurs as lithium carbonate or lithium salts. The overall mineralized sedimentary package is laterally and vertically extensive, containing roughly tabular zones of fine-grained sediments grading down to claystone.*"

They also state: "*Bonnie Claire appears to be a new type of deposit that has lithium compounds like lithium carbonate and lithium salts deposited within the fine grain clay, silt, and sand pore space. Although most of the sediment hosted lithium in the literature occurs in clays, it does not at Bonnie Claire.*"

The Thompson Valley project may host a lithium deposit similar to that at Sacrobatus Flat.

8.2. Thompson Valley Lithium Deposits

The Thompson Valley occurrence is suggested to be in Pliocene to Miocene age (6 to 21 million years ago). From the site investigation, the source of the lithium in Thompson Valley is epithermal – hot springs.

There may be two different types of lithium occurrences in the Thompson Valley area, but they are both related in their origin.

First, it is documented that the Lyles Mine is producing a hectorite-like clay [17]. It has a few distinctions which make it different than the true hectorite clay found a Hector, California, including the lack of sodium as a replacement element and the Lyles clay instead has calcium. However, the clay is described in geologist logs as being waxy and translucent. Also, Vanderbilt is using the produced clay as a base material for their purposes as a viscosifier and in cosmetics [16].

As will be discussed in Section 9.1, the original exploration work performed by GSA on behalf of Vanderbilt shows a great presence of carbonates in a majority of samples. It is not known whether the carbonates are in the form of calcite (calcium carbonate), natron (sodium carbonate), magnesite (magnesium carbonate) or even as zabuyelite (lithium carbonate).

Therefore, it appears that there may be another form of lithium at Thompson Valley that is in carbonate form distinctly different from the clay material being mined. Both of these types of material are likely the result of hydrothermal activity in the area.

There is evidence that the Thompson Valley deposit might have been a highly mineralized lake. The lake might have been fed by a mineralized hot spring, and as it cooled, various minerals precipitated out as carbonates. Whether the carbonates included lithium as part of their original makeup is not known – it is possible. Otherwise, the lake deposits which included ash and tuff, were altered to clay and the carbonates entered as a secondary deposit.

The evidence for Thompson Valley being a highly mineralized lake is the observation of pisolites or oncolites at two locations in central and southeastern Sec. 2 within the Thompson Valley fault zone. A pisolite is a concretion formed around a grain, whereas with an oncolite, the oncoid grains have an algal center similar to a stromatolite but spheroidal in habit.

Figure 37 shows a photograph of pisolites from Thompson Valley. A pisoid is similar to an ooid, but has a size larger than 2 mm diameter. As shown by the photo, the spheres are about 2 mm in size with some up to 3 mm and some smaller. Their formation usually requires repeated rotation of grains to allow the formation of concentric coatings. A suitable environment for pisoid formation is a lacustrine beach where surficial grains are kept in daily motion. Abnormal salinities or temperatures can favor their formation by inhibiting organism growth and enhancing rates of carbonate precipitation [29]. The pisoids eventually conglomerate and become cemented together with the same precipitate and become pisolites, and the pisolites maintain their rounded shape due to the continued gentle wave action.

As will be discussed in Section 9.1, the high carbonate content has been verified for some samples of ‘clay’ from Thompson Valley, with the use of single quotation marks is to indicate that the material is not a true clay, but it is a mixture of carbonates and quartz and feldspar grains. The material has clay-like properties, as it slimes when wetted. But unlike a bentonite clay, which is the classification of hectorite, it does not swell in the presence of water – but it does disintegrate.

Thus, there appears to be two forms of lithium in the Thompson Valley area: 1) the hectorite-like white, waxy, translucent clay that is being mined with an elevated lithium content, and 2) the clay-like sediment that is typically not white, waxy, nor translucent, and has a high carbonate content and little actual clay content.

Figure 37. Photograph of Pisolites from Thompson Valley Fault Zone

9. Exploration

9.1. Previous Exploration

There were two exploration programs conducted for Thompson Valley, one in the 1950's to 1960 and another in the 1980's. Results of those programs are presented here.

9.1.1. Early Exploration

As discussed in Section 7.2.1, Norton presented information on the Lyles Mine area in a USGS Professional Paper in 1965 [17]. Norton described the early discovery of hectorite clay and acquired samples from the area around the ridge with E. T. Turley.

As a result of the Norton and Turley work, the map of Lyles Ridge shown by Figure 14 was prepared. The USGS performed the initial laboratory testing on samples, and found that montmorillonite was the dominant clay mineral, and that two of the samples were especially rich in Li_2O, being 0.54% and 0.90% (2,500 and 4,200 ppm Li).

The Norton paper presented analytical results for the samples collected by Turley. Table 5 presented the lithium results, which were averages of three separate analyses for each sample. The Norton paper presented semiquantitative results for 26 other elements and cited that 41 additional elements were not detected.

Norton showed that fluorine content was high in the clay-rich samples, ranging from 0.88% to 1.36% F. This was a ratio of fluorine to lithium ranging from 4.8 to 7.8 F/Li and averaging 6.5 F/Li.

Strontium levels were also high for some samples, ranging from 0.12% to 1.6%, and the strontium to lithium ratio ranged from 0.6 to 13 Sr/Li and averaged 2.8 Sr/Li. These could be valuable coproducts from a lithium extraction operation.

The Norton paper showed that the magnesium and calcium contents were high, ranging from 3% to greater than 10%, and the aluminum and sodium contents were relatively low, ranging from 0.3% to 3%.

The important point of this early exploration work conducted by the USGS was the identification of the lithium prospect and its significance. The initial interest of Ameriwest was based on this paper, as two locations were sampled on the current Oakley mineral holdings.

<u>The presence of lithium at the Lyles area is historical data, it has not been verified by the authors of the report and does not necessarily indicate the presence of lithium resources for the Oakley property.</u>

9.1.2. Pre-Lyles Mine Development Exploration by GSA

The Norton USGS paper also prompted R.T. Vanderbilt Company's consultant, David Fanning of Galli Mineral Associates, to become interested in the Lyles area, and the company engaged Ted Eyde of Geoservices of Arizona to visit the property in late 1981 [18].

Exploration work conducted by GSA is documented in Section 6.2 on the history of the area. GSA drilled and cored 30 locations in Sec. 12 in the vicinity of Lyles Ridge including the area east of the ridge. A cross-section of those results along the ridge area is presented as Figure 20.

Of significance to the subject report, GSA also drilled and cored 6 locations where Oakley has its State MEPs in Sec. 2 and 11, and those results are presented here. Figure 38 shows a map of the GSA drill hole locations [3].

Location data for the six drill holes in Sec. 2 and 11 are presented in Table 6, and a transcription of geologist logs for the holes are provided in Table 7. Details of the other drill holes located within the Lyles Mine Lease in Sec. 12 are not generally relevant to the present discussion and are not provided at this time.

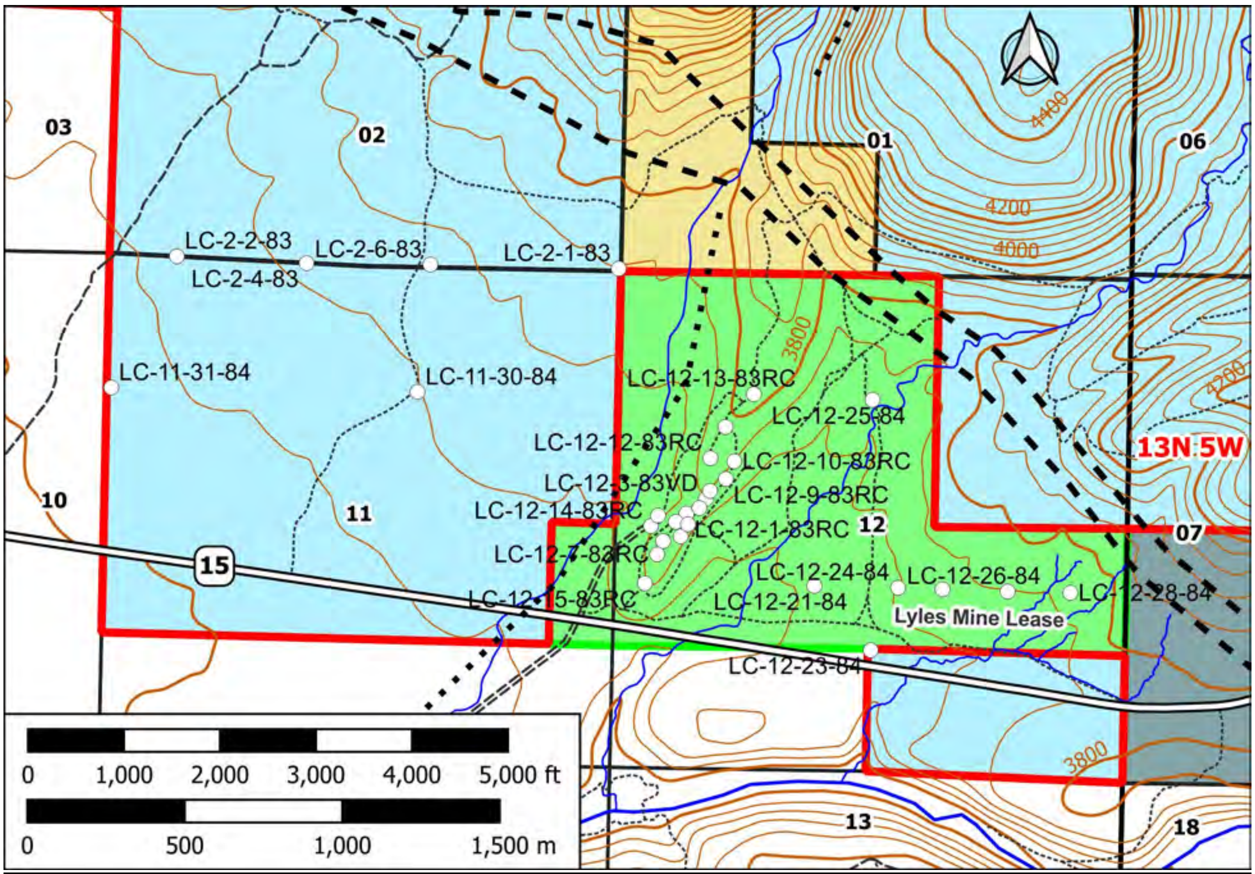

Figure 38. Map of GSA Drill Hole Locations

Table 6. Location Data for GSA Drill Holes in Sec. 2 & 11

DH ID	Spud Date	UTM (NAD83 12N)		Elevation AMSL		Depth BGL	
		Easting	Northing	(feet)	(meters)	(feet)	(meters)
LC-2-1-83	1/27/1983	330,269	3,817,658	3,755.2	1,144.6	75	75
LC-2-2-83	2/15/1983	328,866	3,817,697	3,648.3	1,112.0	90	90
LC-2-4-83	2/15/1983	329,278	3,817,675	3,685.7	1,123.4	60	60
LC-2-6-83	2/15/1983	329,671	3,817,671	3,706.4	1,129.7	58	58
LC-11-30-84	3/30/1984	329,630	3,817,267	3,679.5	1,121.5	58	58
LC-11-31-84	3/30/1984	328,658	3,817,281	3,624.7	1,104.8	75	75

Table 7. Geologist Logs for GSA Drill Holes in Sec. 2 & 11

DH ID	Depth (ft BGL)		Lithology
	Top	Bottom	
LC-2-1-83	0.0	25.0	Surficial Brown Clay, sandy, basalt cobbles and boulders
LC-2-1-83	25.0	30.0	Lt Brown Clay, hit some water
LC-2-1-83	30.0	50.0	Lt Brown Clay to Green Clay with depth
LC-2-1-83	50.0	52.0	Tan Colored Material
LC-2-1-83	52.0	75.0	Green-Blue Clay, water produced at 1 gpm all the way
LC-2-2-83	0.0	15.0	Sand and Gravel
LC-2-2-83	15.0	25.0	Gry-Green Clay
LC-2-2-83	25.0	26.0	Sand Lenses
LC-2-2-83	26.0	45.0	Gry-Green Clay
LC-2-2-83	45.0	49.0	White Ash
LC-2-2-83	49.0	50.0	Brown Clay
LC-2-2-83	50.0	60.0	Gry-Green Clay, very damp
LC-2-2-83	60.0	65.0	Brown Clay
LC-2-2-83	65.0	90.0	Green Clay, some selenite, water at TD
LC-2-4-83	0.0	15.0	Gravel
LC-2-4-83	15.0	24.0	Gry-Green Clay
LC-2-4-83	24.0	25.0	Sandy Layer
LC-2-4-83	25.0	45.0	Gry-Green Clay
LC-2-4-83	45.0	48.0	White Ash, fine, unaltered
LC-2-4-83	48.0	60.0	Gry-Green Clay
LC-2-6-83	0.0	5.0	Brown Clay, basalt frags
LC-2-6-83	5.0	10.0	Brown Clay
LC-2-6-83	10.0	12.5	Basalt Boulder
LC-2-6-83	12.5	15.0	Gry-White Caliche
LC-2-6-83	15.0	40.0	Gry-Green Clay
LC-2-6-83	40.0	40.5	Sand Lens
LC-2-6-83	40.5	45.0	Gry-Green Clay
LC-2-6-83	45.0	47.0	Gry-Green Rock, hard
LC-2-6-83	47.0	58.0	Blu-Green Clay, damp, water at TD

Table 7. Geologist Logs for GSA Drill Holes in Sec. 2 & 11 (Continued)

DH ID	Depth (ft BGL)		Lithology
	Top	Bottom	
LC-11-30-84	0.0	17.0	Basalt Cobbles 1/2" to >6"
LC-11-30-84	17.0	28.0	Drk Green Clay, sticky, waxy
LC-11-30-84	28.0	30.0	Yel-Green Dust coating the frags
LC-11-30-84	30.0	48.0	Blu-Grn Gray Clay, sticky
LC-11-30-84	48.0	49.0	Light-Colored Clay, waxy
LC-11-30-84	49.0	58.0	Blu-Grn Gray Clay, sticky
LC-11-31-84	0.0	18.0	Basalt Gravel, hard
LC-11-31-84	18.0	25.0	Lt- to Med-Green Clay, similar to LC-11-30-84
LC-11-31-84	25.0	32.0	Med-Green Clay
LC-11-31-84	32.0	34.0	V Bright Yel-Green cuttings, fine, gritty
LC-11-31-84	34.0	37.0	Med-Green Clay
LC-11-31-84	37.0	39.0	Bright Yel-White cuttings, fine, large frags clay
LC-11-31-84	39.0	43.0	Gray Clay
LC-11-31-84	43.0	50.0	Brown Clay
LC-11-31-84	50.0	54.0	Lt Brn-White Clay
LC-11-31-84	54.0	60.0	Lt Brn-White Clay to Green Clay to Lt Brn-White Clay
LC-11-31-84	60.0	65.0	Lt Brn-White Clay to Green Clay
LC-11-31-84	65.0	70.0	Green Clay to Lt Brn-White Clay
LC-11-31-84	70.0	75.0	Lt Brn-White Clay

Note that the geologist logs are fairly simple with only basic descriptive information. The data was used to attempt correlations of the strata and prepare a three-dimensional view of the drill hole stratigraphy. Figure 39 shows this simple correlation along with calculated dips of contacts between holes. Based on the correlations, a 3-point calculation shows the clays appear to strike S22°E with a dip of 1.3°SW in the eastern portion of the area.

Figure 40 shows a 3-D view of the holes located in Sec. 12 and inspection indicates there little to no correlation across the Black Canyon fault from Sec. 12 to Sec. 2 to the west.

As GSA was focused on exploring for a specific type of clay, there are almost no chemical analyses available for the recovered samples. They did perform X-ray Diffraction (XRD) analysis on several drillhole samples, but all samples were located in Sec. 12 in proximity to the ridge [3].

One sample, located in the vicinity of the mine and selected for its high clay content (90%) and low calcite content (10%), was chemically analyzed by Vanderbilt. The sample was described as a gray-green translucent clay below a zeolite bed or vitric tuff bed. It showed 21.4% MgO, 8.01% CaO, 1.13% Al_2O_3, 0.67% Li_2O, 0.48% Fe_2O_3, 0.08% Na_2O and 0.04% K_2O. This lithium content is equivalent to 0.31% Li (3,100 ppm Li).

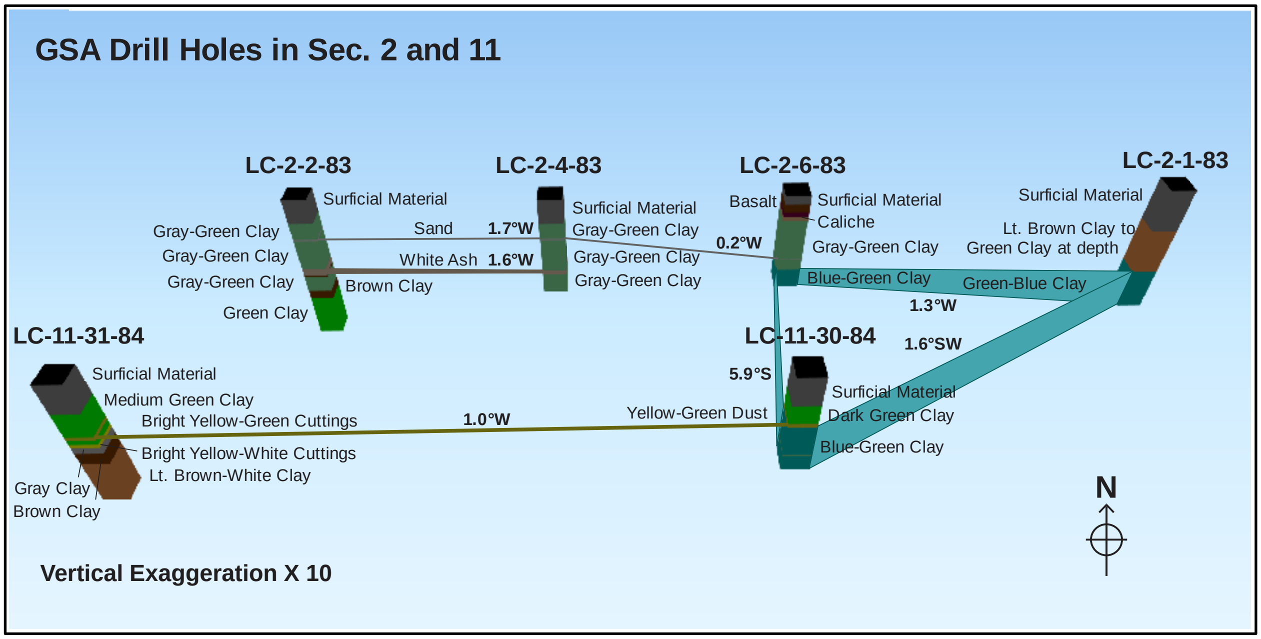

Figure 39. 3-D View and Correlation of GSA Drill Holes in Sec. 2 & 11

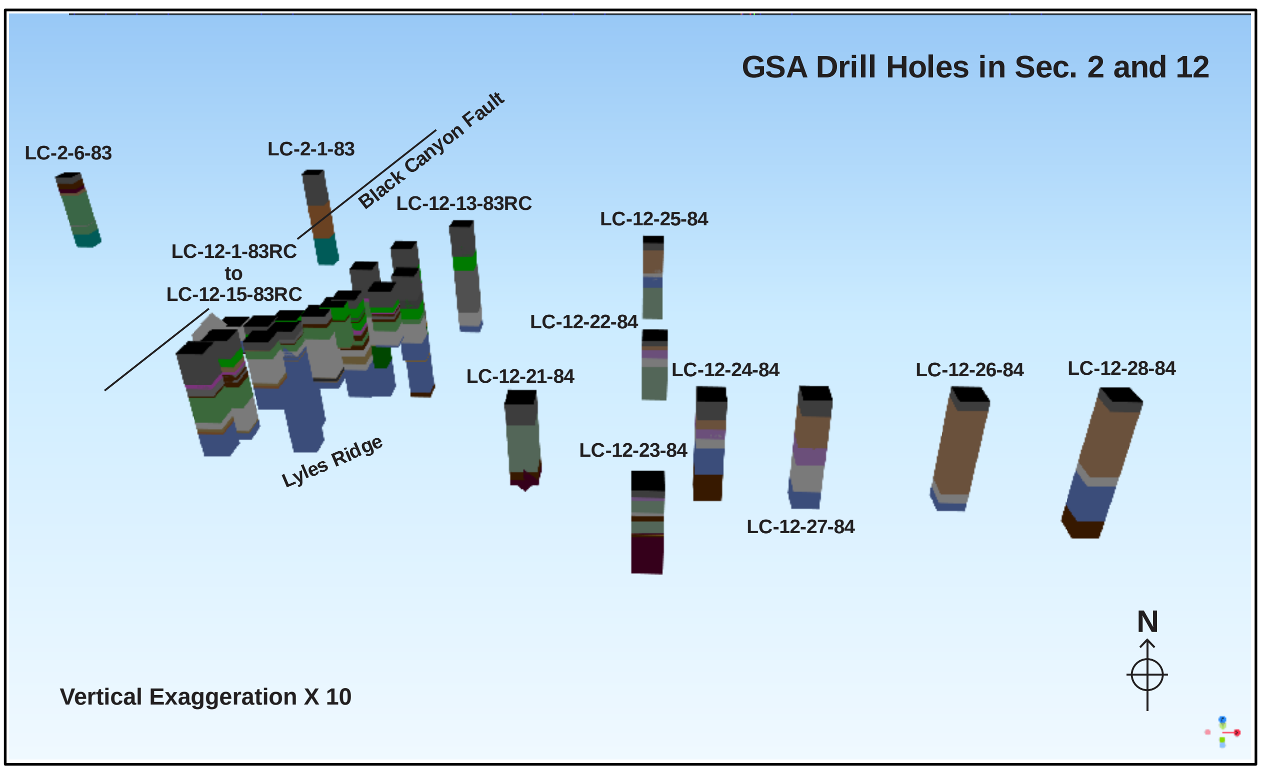

Figure 40. 3-D View of GSA Drill Holes in Sec. 2 & 12

In 1982 during an early stage of exploration prior to drilling, GSA acquired several surface samples, ten of which were located in Sec. 2. They performed XRD analysis on these samples, which were mostly described as being ‘green clay’ with two samples described as ‘zeolitic tuff’ for the Sec. 2 samples.

The semiquantitative XRD results for the Sec. 2 surface samples showed orthoclase (potassium feldspar), quartz, calcite and illite with traces of zeolite. This is somewhat different from what was found at Sec. 12 which included Mg smectite, phillipsite (part of the zeolite group), and dolomite.

Three additional surface samples were acquired by Dan Eyde in 1984 and submitted to Vanderbilt for XRD analysis [3]. One sample located at the south end of the ridge just within Sec. 11 showed major Mg smectite, moderate calcite, some quartz and a trace of dolomite. Another sample located northwest of the ridge and close to Black Canyon fault in Sec. 12 showed major calcite, moderate Mg smectite, some quartz and possible phillipsite.

Significant results of the GSA exploration work regarding the Oakley lands are as follows:

- GSA drilled and cored six locations in Sec. 2 and 11 within the main part of the Oakley MEPs.
- Lithology of the material encountered in these six holes was predominantly described as ‘clay’ of various colors, but predominantly of a green hue.
- Correlation of some distinct intervals is possible between some sets of the six holes.
- Based on the correlations, a 3-point calculation shows the clays appear to strike S22°E with a dip of 1.3°SW in the eastern portion of the area.
- The holes all terminated in ‘clay’ and the basement was not encountered to depths of 58 to 90 feet (18 to 27 m) BGL. Based on the dip of the layers, the elevation difference is calculated to be 128 feet (39.5 m) across the area. Assuming that the layers were originally horizontal and then tilted, this would result in a total thickness of at least 90+128 ft = 218 ft (66 m)
- There was no correlation apparent across the Black Canyon fault between Sec. 2 & 11 versus Sec. 12.
- Mg smectite and dolomite were found in the vicinity of Lyles Ridge, but samples located in Sec. 2 did not show smectite and instead showed illite and calcite. Therefore, the source and deposition of sediments in Sec. 2 may be different from that in the vicinity of the ridge.
- A gray-green clay at Lyles Ridge was determined to have a lithium content of 3,100 ppm Li. This sample had the same hue as samples recovered from drillholes in Sec. 2.

<u>Note that this is historical data and the presence of lithium at Lyles Ridge in Sec. 12 does not necessarily indicate similar lithium contents on the Ameriwest property. The presence of lithium on the subject lands can only be determined by analyzing samples recovered from the area.</u>

9.2. New Exploration

Exploration conducted by Ameriwest consisted of description of surface features and mapping the property, analyzing surface samples acquired from the area and commissioning a satellite-based geophysical survey. Results of the surface inspection and mapping were provided previously in Section 7.2, Local Geology. Results of the surface sampling and analyses are provided below, followed by a review of the geophysical survey and results.

9.2.1. LIBS Tool

It was decided up front by the investigators to try using a modern hand-held Laser Induced Breakdown Spectroscopy (LIBS) tool to aid in quickly detecting presence of lithium in the sediments. A LIBS unit is a relatively new form of analysis that uses a high-energy laser beam pulsed onto a given material surface to create a plasma. Energy released from the plasma is in the optical range and is detected by a spectral detector. The wavelengths detected are compared to a library to identify specific elements. The Z-903 unit chosen for this work is manufactured by SciAps, Inc. with an extended spectrometer range from 190 nm out to 950 nm providing the ability to detect and quantitatively analyze for every element on the periodic table, including lithium.

The Z-903 unit allows for rapid identification of lithium-bearing materials and provides an initial assessment of the relative concentrations. The laser beam analysis area (<100-µm wide) is considered to be non-destructive and only sufficient to establish a relative concentration of any one element within a given sample at that specific location.

The Z-903 is used globally, especially for mineral exploration including lithium in both hard rock and brines. It is also used in forensics, authentication, archeology and oil/gas exploration due to the wide elemental range.

After experimenting with the LIBS unit, it was found that application to ‘new’ rock types such as those found at Thompson Valley (carbonates) cannot be directly analyzed using the SciAps-supplied algorithms for ‘geochem’ or ‘lithium clay’ and requires a calibration specific to the Thompson Valley materials.

The project geologist, Brian Beck, continues to work with the LIBS unit to develop calibration curves with the assistance of SciAps. In the meantime, it has been found that the LIBS can be used only as a screening tool if the calibrations are not available. Demonstration of the Z-903 to perform adequately as a screening tool was confirmed by plotting lithium trends for the Thompson Valley property with the LIBS results, and observing that the trends were quite similar to those of the analytical analysis results.

9.2.2. Surface Sampling

As required by the State, a Geologic Field Operations Plan (GFOP) was submitted and approved for a two-phase surface sampling program. The sampling phases included: 1) Utilize the LIBS to scan various locations to identify the most prospective areas, then 2) For the most prospective locations, excavate samples for return to the geologist’s facility for further examination and packaging to send to an analytical laboratory.

It was intended to find suitable sample locations at outcrops of strata including locations within ravines and gullies that pierce the debris field. These locations were selected to represent a spread across the project area, however, the samples are not necessarily representative of average lithium resources or grades.

The GFOP was approved by ASLD for up to 300 excavated samples. The excavations were limited to depths less than 1 foot (0.3 m) or else archaeological clearance would be required and approved. Also, no native plants could be disturbed without a survey.

Initial field sampling occurred during June 2022, and addition sampling occurred during August to October. Samples were acquired at the locations shown on Figure 41.

Each sample was assigned a rock type based on inspection and setting. Samples were all taken from the project area by Brian Beck, sealed in plastic bags, labeled with location, and transported to his facility in Dewey, Arizona. Selected samples were shipped to ALS analytical facilities in Arizona or Vancouver for analysis as described in the next section. The author is satisfied that proper security and chain-of-custody protocols were followed.

9.2.3. Whole-Rock Elemental Analysis

The 205 surface samples collected from the Thompson Valley area were subjected to an initial screening for lithium content with a Z-903 SciAps LIBS tool. Laboratory analyses were then performed in two parts:

1. Methods Test: After review of the various dissolution and analysis methods available, it was decided to compare techniques so as to select the best laboratory method; then
2. Analyses: Using the best analytical method, 188 samples were submitted for analysis.

Methods Test:

All laboratory analysis methods for rock samples have two parts: digestion of the rock to put the various elements into solution, followed by quantitative analysis of the element concentrations. There are two basic digestion methods: 4-acid and aqua regia, and variations of these methods. Also, there is a fusion method that does not involve acids. For the quantitative analysis part, there are two modern methods: mass spectroscopy (MS) and atomic emission spectroscopy (AES), and both use the inductively-coupled plasma (ICP) introduction to the spectrometer.

From on-line research, there were several concerns over the possible loss of analytes in the various geologic materials:

- The sedimentary materials are high in carbonate and initial digestion could lose some analytes through excessive acid reactions.
- There was also a suggestion that some digestion methods could volatilize some of the lithium, it being one of the lightest elements, and part of it might be lost during acid digestion of the rock samples.

For this reason, it was decided to test the various methods available to make a knowledgeable comparison of results for the different rock types. To conduct the "Methods Test," a set of 11 samples were selected to assess the four apparent geologic materials (basic rock types) across Thompson Valley that were suspected to have Li content as seen from the initial LIBS screening.

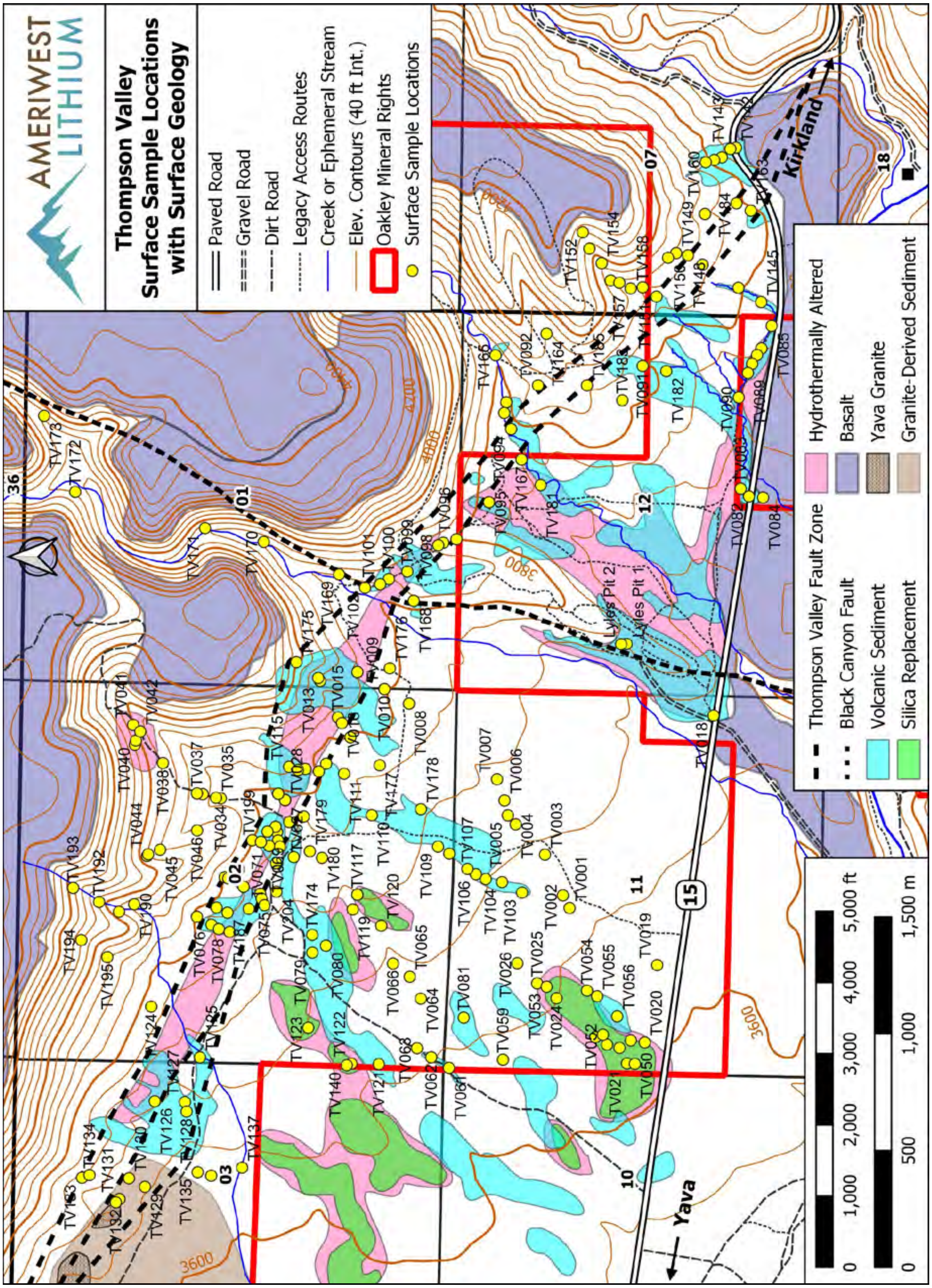

Figure 41. Map of Surface Samples Locations with Surface Geology

The analytical laboratory selected to perform this work was ALS Canada Ltd., operating in the U.S. as ALS USA Inc., and previously known as Australian Laboratory Services (ALS).

Results of the Methods Test lithium contents are listed in Table 8 and presented graphically by Figure 42. The 4-Acid digestion with ICP-MS analysis method provided the greatest lithium contents while the pre-roast improved values in only half of the cases. As the pre-roast significantly increases the cost without a clear benefit, the ME-MS61 method without RST-21 was chosen as the best technique. The various methods tested are described in Section 11.2.

As part of the Methods Test, two other laboratory analyses were tested, one for fluorine and another for carbon. The purpose of the fluorine test was to see whether the high fluorine content observed by Norton during his examination of the Lyles area (see Section 9.1.1) could be verified, as it is a potentially valuable coproduct. The multi-element ME-MS61 cannot quantify fluorine content because of the 4-acid digestion method.

Of all elements, fluorine was found to have the highest statistical correlation with lithium content, with a correlation coefficient of 0.935 (1 = perfect fit). Fluorine for the 11 samples used for the Methods Test ranged from 570 to 6,910 ppm F with an average of 3,446 ppm. This is a ratio of 4.7 to 20 times greater than the lithium content with an average of 9.7 times greater.

There were weaker, but significant, correlations (correlation > 0.7) for the elements: cesium, potassium, rubidium, thallium and vanadium.

Table 8. Methods Test Comparison of Lithium Analytical Results

Rock Type	Sample No.	ALS No.	ME-MS61	RST-21 ME-MS61	ME-ICP61	ME-MS41	Li-OG63	ME-ICP82
Digestion			4-Acid	Pre-Roast 4-Acid	4-Acid	Aqua Regia	Special 4-Acid	Na_2O_2 Fusion
Analysis			ICP-MS (ppm)	ICP-MS (ppm)	ICP-AES (ppm)	ICP-MS (ppm)	ICP-AES (ppm)	ICP-AES (ppm)
Silica Replacement	TV071	13	1285	1320	1240	1220	1210	1200
Silica Replacement	TV068	14	1160	1155	1070	1090	1030	1020
Silica Replacement	TV066	38	721	710	710	593	690	670
Silica Replacement	TV121	32	361	355	330	328	320	320
Volcanic Sediment	TV125	8	272	276	260	253	250	250
Volcanic Sediment	TV099	21	168.5	170	150	146.5	140	150
Volcanic Sediment	TV119	25	42.4	43.6	40	33.8	<50	50
Hydro. Altered Ash	TV018	46	952	927	910	870	860	830
Hydro. Altered Ash	TV073	12	453	448	430	418	420	410
Hydro. Altered Ash	TV063	34	33.8	35	30	27.6	<50	40
Lyles Pit Hectorite	TV301	50	1710	1740	1590	1555	1450	1380
Average Li			**651**	**653**	**615**	**594**	**584**	**575**

Yellow	Highest Lithium value	Pink	Lithium < 95% of ME-MS61 value
White	Lithium value within 5% of highest value	Green	Lithium value anomously high

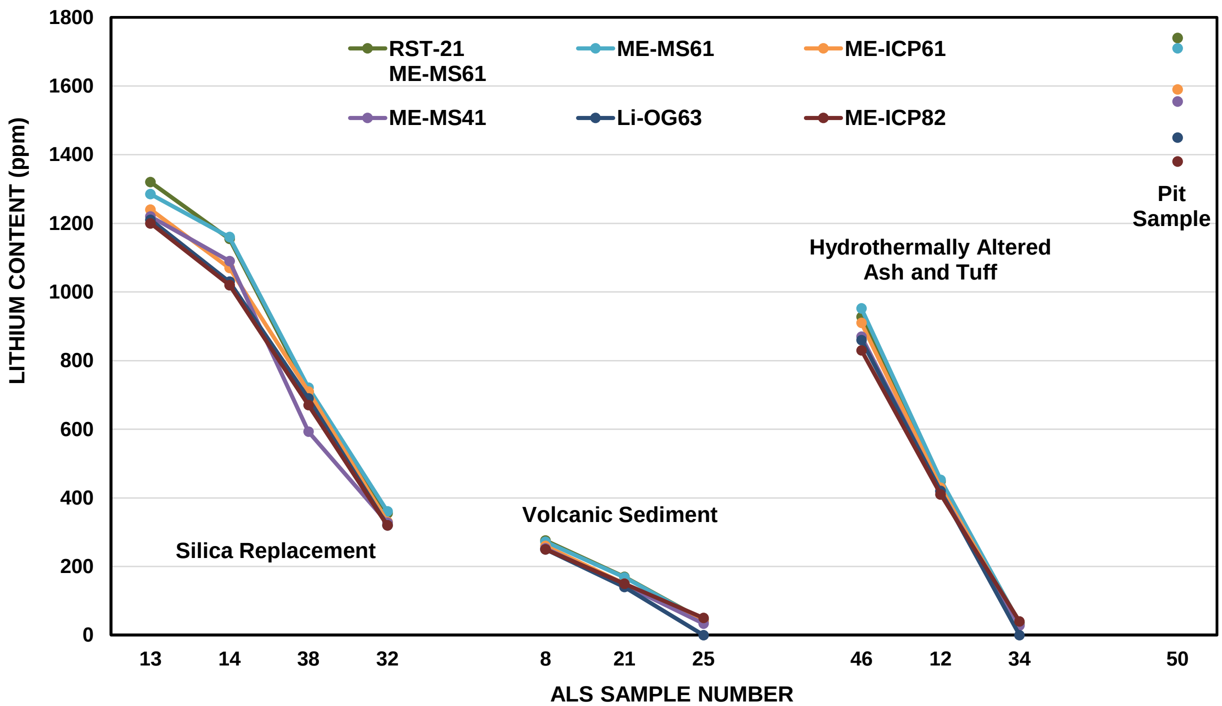

Figure 42. Methods Test Comparison of Lithium Analytical Results

The test for total carbon was to see whether the amount of carbonate could be detected and quantified. There was a negative correlation between carbon content and lithium (correlation < -0.7). There was also a significant negative correlation for calcium (correlation < -0.7) indicating that lithium content increases as calcium content decreases. Consequently, there is a near perfect correlation between calcium and carbon (correlation = 0.994). This will need to be examined further to determine whether the calcium is predominantly in the form of calcite (calcium carbonate).

<u>Analyses</u>: Once the dissolution and testing method was selected, then 188 surface samples were sent to ALS for multi-element analysis using ME-MS61 including one sample of hectorite from the Lyles pit plus one certified reference sample. Distribution of lithium contents across the Thompson Valley area is shown by Figure 43.

Surface samples analyzed across the project area have lithium contents ranging from 2 to 1,295 ppm Li. Of these, 36% had lithium contents greater than 200 ppm, 14% had lithium contents greater than 500 ppm, and 3% were greater than 1,000 ppm, with a mean of 227 ppm Li and standard deviation of 269 ppm Li. Most of the lithium-bearing samples are high in carbonate and reactive to acid.

The Silica Replacement, Volcanic Sediment and Hydrothermally Altered rock types held the highest lithium concentrations, with averages of 539, 194 and 166 ppm Li, respectively, and maximums of 1,295, 1,195 and 485 ppm Li, respectively.

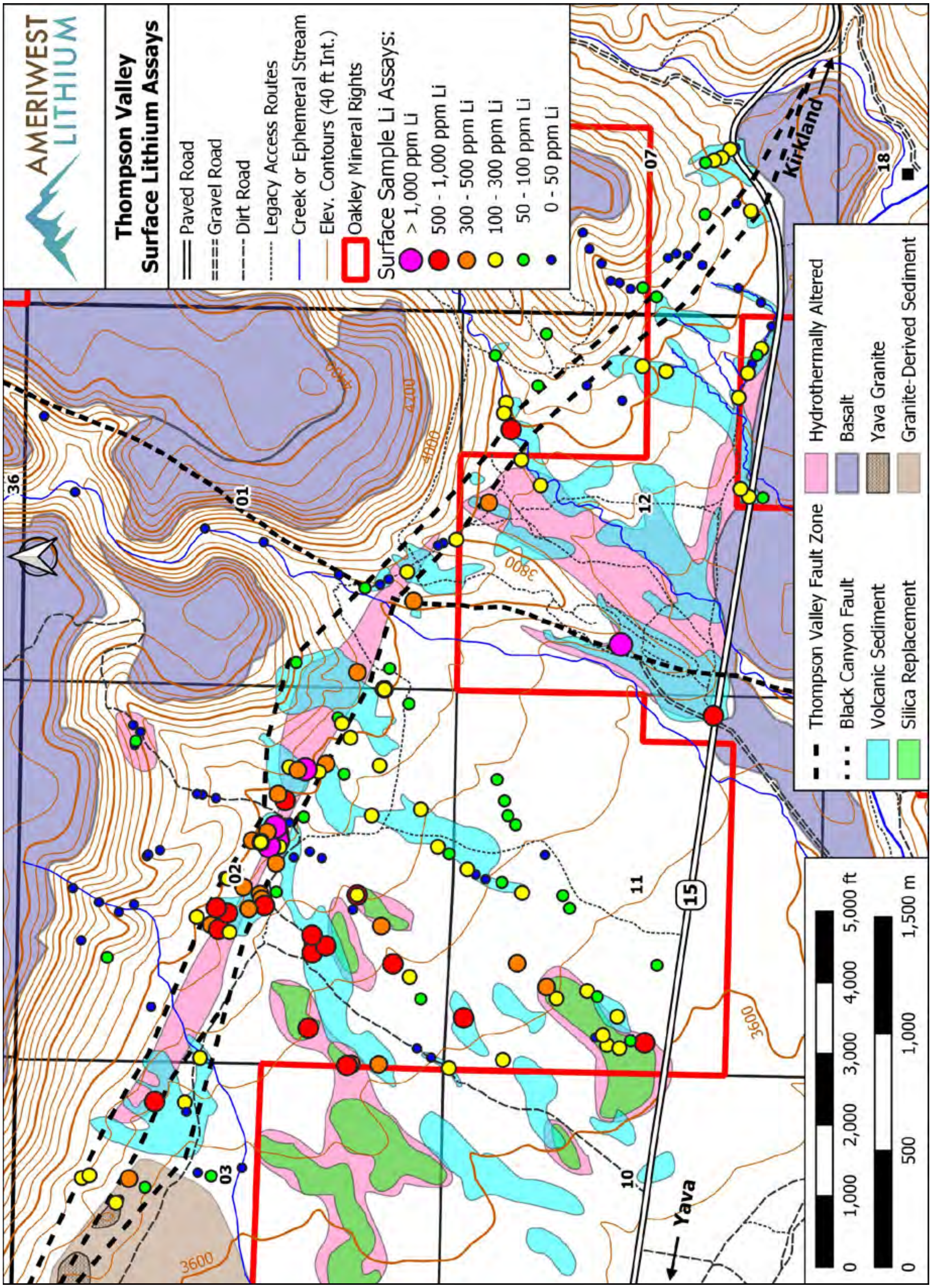

Figure 43. Map of Surface Sample Lithium Content Distribution

As shown by Figure 43, two lithium-bearing trends are confirmed by the highest lithium values, one along the northwest-southeast trending Thompson Valley fault zone near the base of the basalt-capped cliff, and another along a northeast-southwest trend running through the main western portion of Ameriwest's State lands in Sections 2 and 11.

The map shows that the highest lithium concentrations are located along the Silica Replacement rock type which are generally located within the Hydrothermally Altered areas. Moderately high lithium values are also found in the Volcanic Sediment areas, however, some of the Volcanic Sediment areas have more modest lithium contents.

Based on the observed trends, it appears that the pattern of lithium occurrence is related to the presence of the Thompson Valley fault zone. One hypothesis is that ash layers were laid down, either prior to or after the basalt flows, and then hot fluid emanated from the fault and hydrothermally altered the ash material. The observation of a pisolite layer confirms that there was mineral-laden water present at surface at one time, but whether this lacustrine environment occurred during or after the ash fall is not currently known.

The hydrothermal alteration might have persisted after the lake disappeared and resulted in silica replacement of the ash layers at the upper-most limits as part of a mineral precipitation sequence. The observation of Silica Replacement rock types oriented in a northeast-southwest direction coming down slope from the fault zone matches the lineament pattern from the geophysical study (see Section 9.2.4) This supports the idea of continued hydrothermal alteration of material deposited away from the fault zone.

It is noted that outcrops were not present in the diagonal southeast portion of Sec. 11, and therefore that area could not be sampled. For this reason, the potential of that area to host lithium is not known and can only be determined by drilling and analyzing samples.

It is suspected that the Black Canyon fault was the main source of hydrothermal alteration of the Lyles Ridge area and the area to the east of the ridge. This fault could also be a source of hydrothermal fluids to alter materials to the west of the ridge.

9.2.4. Satellite-Based SAR Geophysical Survey

Auracle Geospatial Sciences, Inc. (Auracle) is a firm that uses some of the newest advances in remote sensing and geospatial sciences to provide information on consolidated and unconsolidated ground cover using microwave Synthetic Aperture Radar (SAR) satellite data. This type of satellite data is not affected by weather conditions and is useful in detecting textural, electrical and density qualities. Auracle's methodology uses specialized software and proprietary processes to convert raw signals into ortho-correct and derivative radar data which is needed to build the subsurface 3D Radar Model.

For this project, customized satellite mission-tasking was arranged by Auracle to acquire new satellite data. Specifications include: Ultrafine C-Band microwave-type Synthetic Aperture data sets were tasked and collected from 5 temporal periods; Processing was conducted on TITAN Multi-processor, multi-GPU super-computer systems and served on quadruple redundant offsite SUN secure storage arrays; The five Ultrafine RadarSat C Band data were supplier geocoded in high density format data; The data were ingested, georeferenced and projected to WGS 84 and UTM zone 12N projected coordinate systems.

For this project an initial series of resistivity profiles were requested by the authors at the locations shown by Figure 44**Error! Reference source not found.**. These profiles were produced by Auracle and then combined by the authors with consistent scales to provide a unique view of the geologic structures observed rock types as presented by Figure 45 and Figure 46. In general, from these profiles, four different features were found to be in agreement with the initial geology fieldwork:

1. The Silica Replacement areas appear to be caps to suspected hydrothermal source areas, as seen in Profiles A and B.
2. Faults and debris flow covers were clearly identified.
3. In areas where the Silica Replacement and the debris flows were not present or stratigraphically thin, possible lithium bearing materials (red to yellow colorations) were indicated and confirmed in part from the limited sample analyses to date.
4. Other potential lithium bearing areas (red to yellow colorations) appeared to be present across the profiles but have not been confirmed.

Auracle also produced a plan view of the resistivities, and on this format, maps are provided of structural features (Figure 47) and perimeters of Silica Replacement areas (Figure 48). As discussed with Auracle, the features were generated using an iterative approach which incorporates artificial intelligence (AI) methods. Using this iterative procedure, the authors provided queries and initial estimates of the fault locations and Silica Replacement areas to Auracle and then the AI engine sought out those features from the voluminous data set in three dimensions. Locations of the features are not necessarily apparent in a 2-D view, but can be observed in 3-D when the view is rotated.

The Structural Map (Figure 47) shows the location of the Thompson Valley fault zone, Black Canyon fault and two Displacements. An additional Displacement was added manually by the current coauthors.

The Silica Replacement Areas map (Figure 48) shows the AI-generated perimeters of the Silica Replacement areas superimposed on the areas found by ground inspection. The agreement is quite good.

The coauthors are satisfied that the products of Auracle Geospatial Sciences, Inc. are reasonable, represent a unique satellite view of the geology of the property, and support the author’s direct investigations and interpretations.

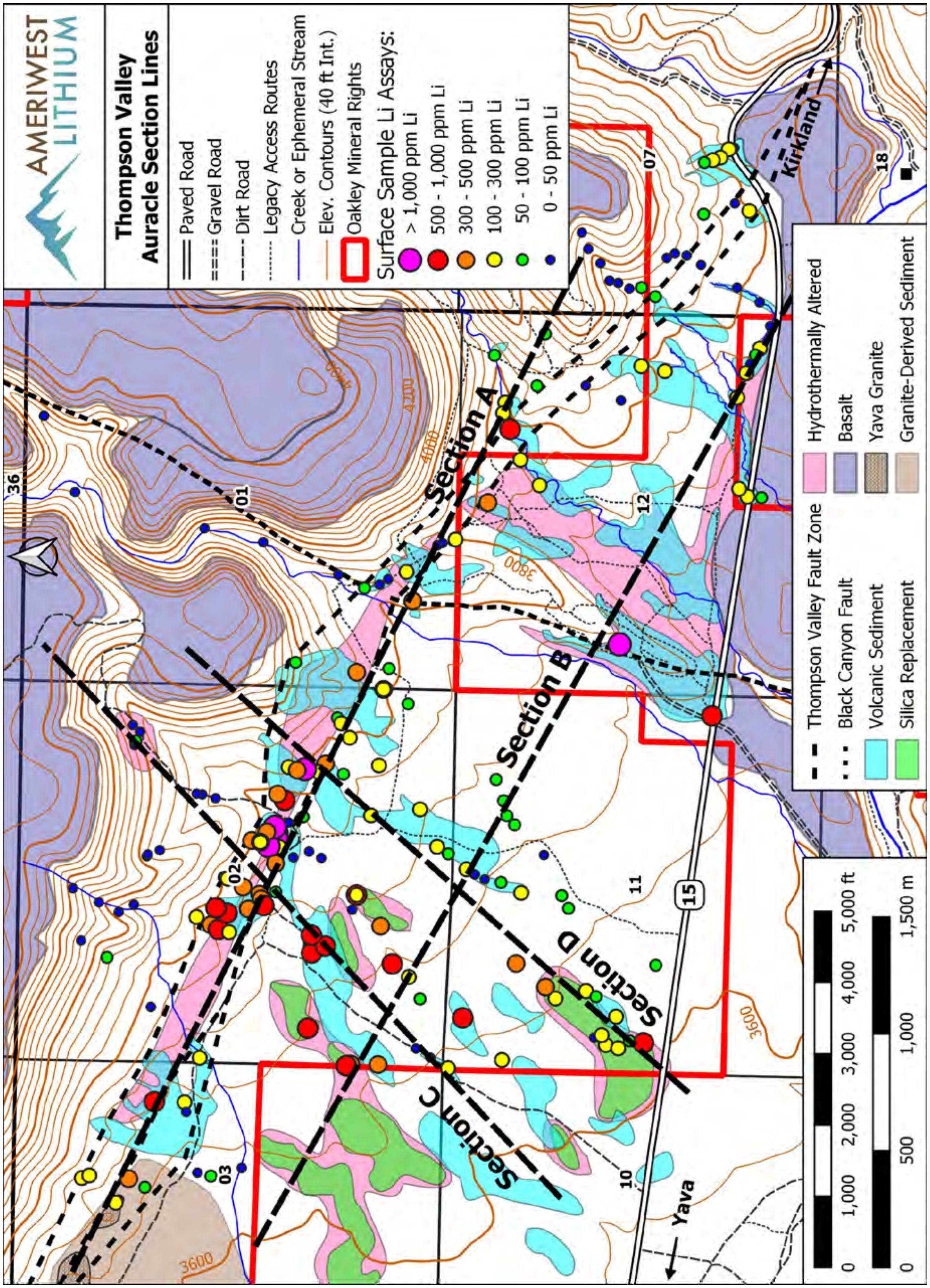

Figure 44. Location of Auracle Resistivity Sections

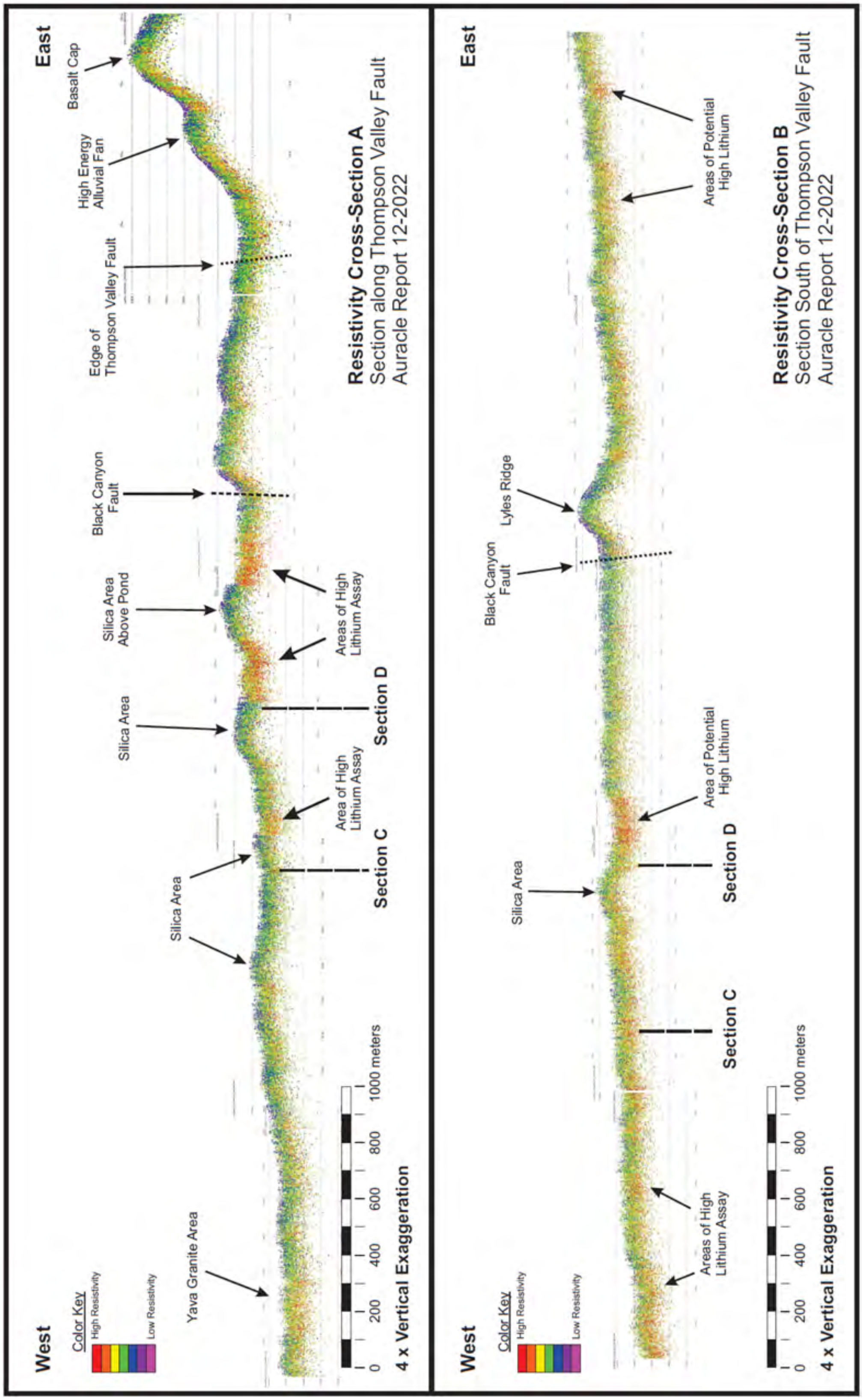

Figure 45. Auracle Resistivity Cross-Sections A and B

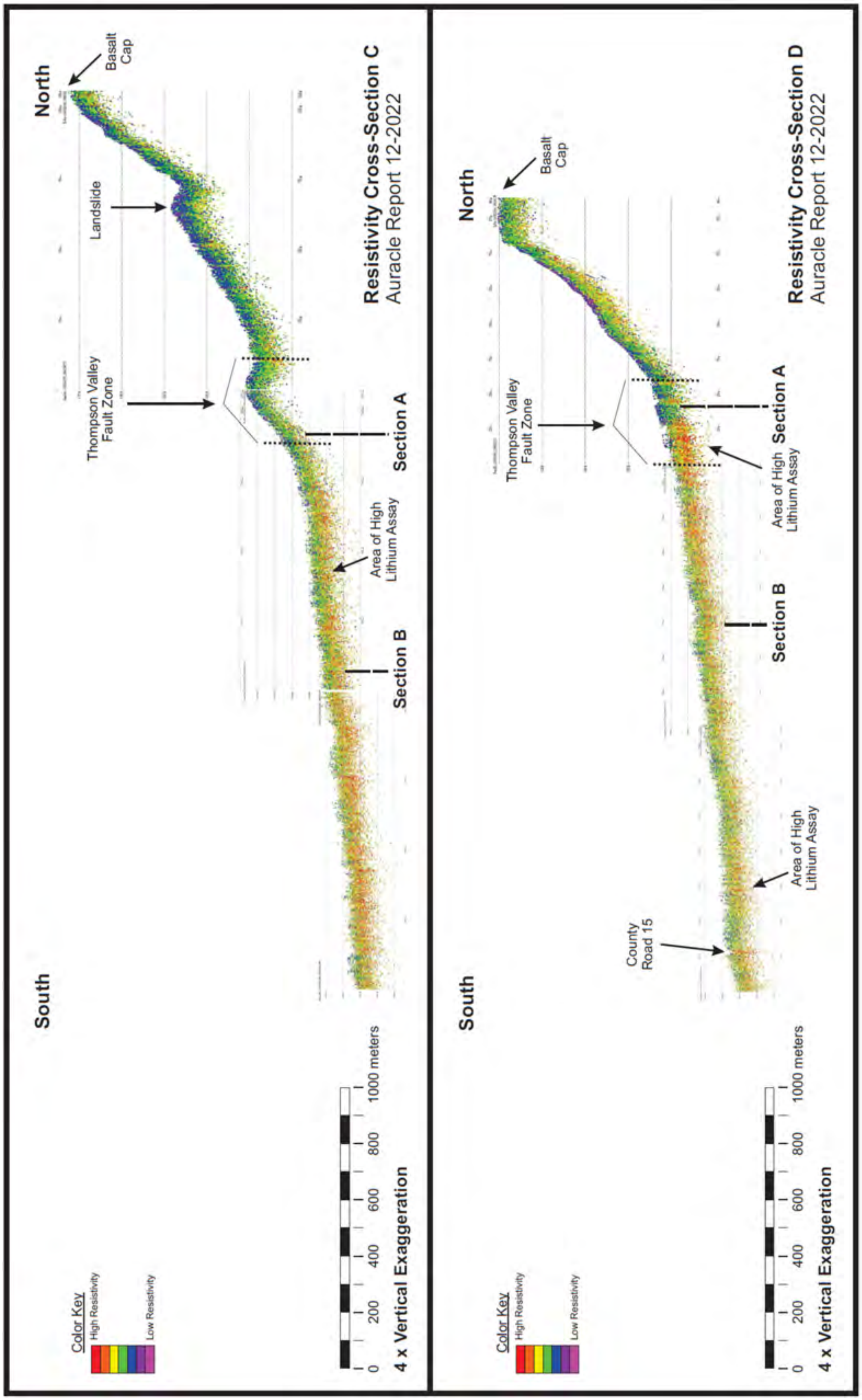

Figure 46. Auracle Resistivity Cross-Sections C and D

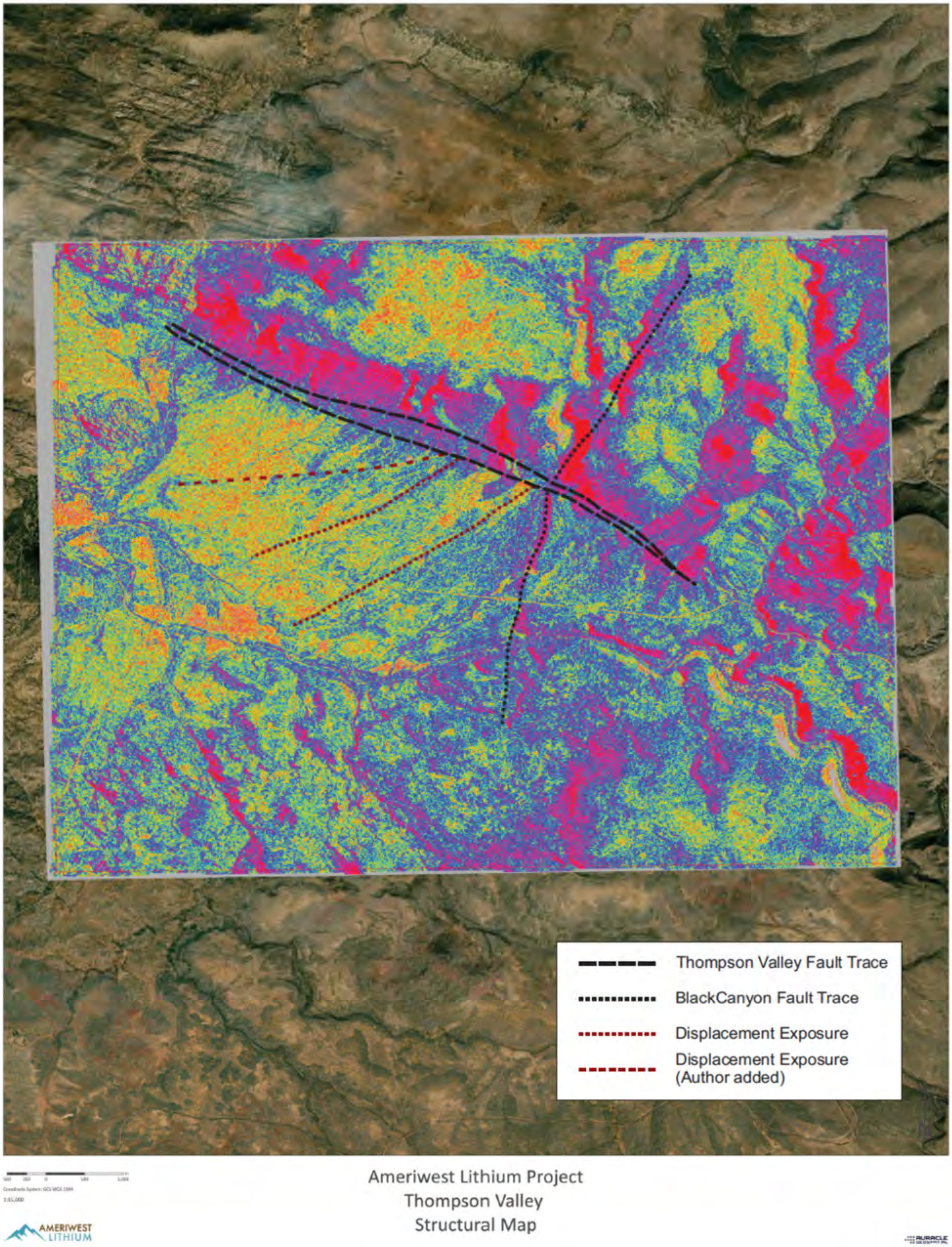

Figure 47. Auracle Structure Map

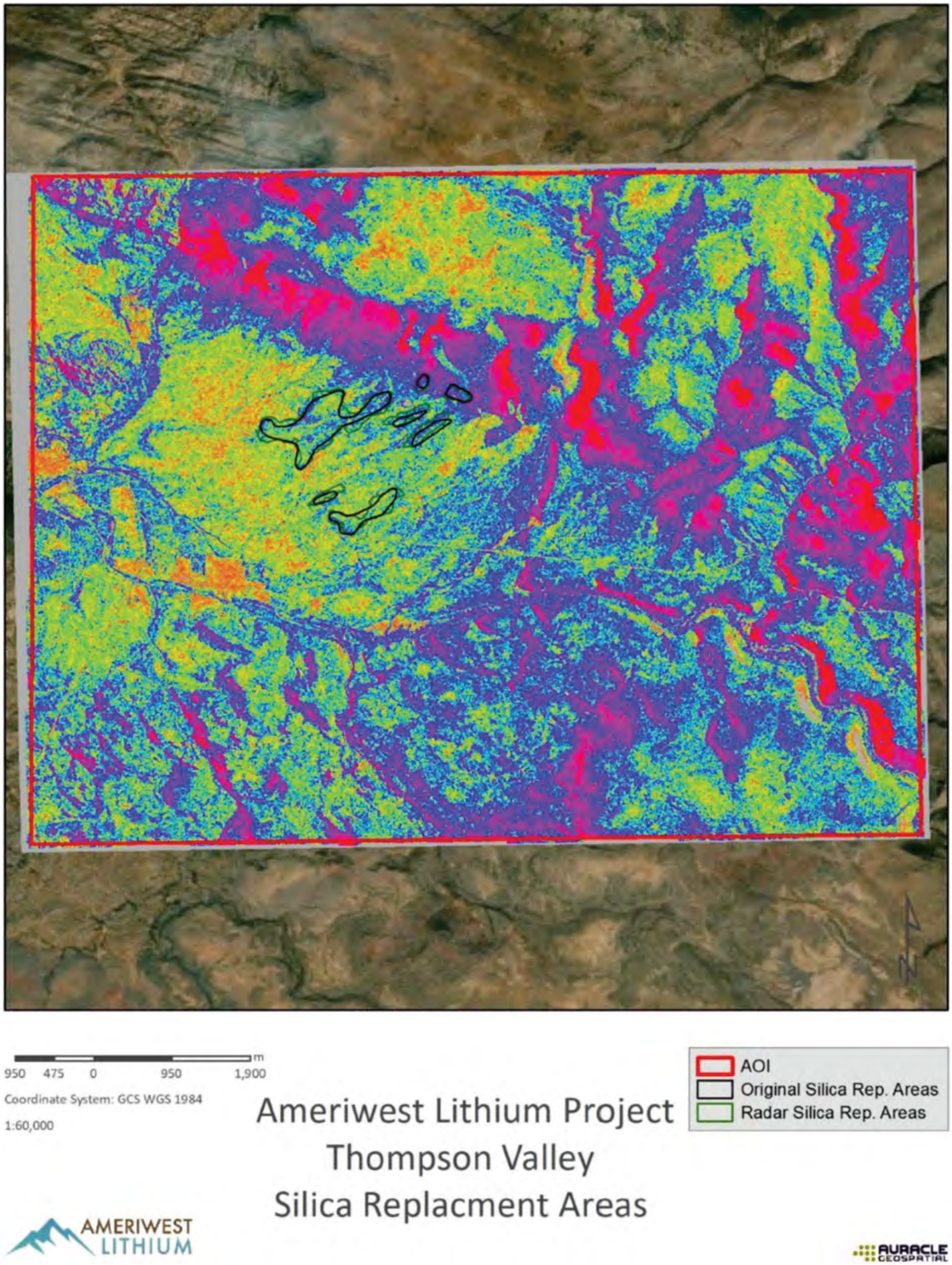

Figure 48. Auracle Silica Replacement Areas

10. Drilling

The property is at an early stage and no drilling has taken place beyond historical drilling as discussed in 9.1.2.

11. Sample Preparation, Analyses and Security

Samples gathered in 2022 were collected by Brian A. Beck, PG, CPG, of Brian Beck Consulting, LLC and was responsible for securing the samples and submitting them to ALS for analyses. All samples were transported to his facility for storage and further inspection and description. Certain samples were ultimately selected and shipped by commercial courier to the analysis laboratory or preparation facility.

11.1. Sample Preparation

Brian Beck prepared approximately 200 g of each sample by hand selection from the field-acquired surface samples. Samples were sealed in plastic bags and labeled with sample identification number. Samples were secured in 5-gallon pails and shipped to the ALS sample preparation facility in Tucson, AZ.

At ALS's Tucson facility, the samples were first crushed to better than 70% less than 2 mm, then reduced to better than 85% passing 75 micron (200 mesh), and then an appropriately sized aliquot was split out and repackaged. These prepared samples were shipped to the ALS geochemistry analytical laboratory in North Vancouver, BC. Remaining pulps were returned to Brian Beck.

11.2. Sample Analysis Methods

As discussed in Section 9.2.3, the coauthors reviewed the analytical offerings of ALS, and identified the following six methods to conduct a Methods Test. Following are the methods tested:

1. ME-MS61: 4-Acid digestion followed by multi-element ICP-MS analysis
2. RST-21 + ME-MS61: Pre-Roast followed by 4-Acid digestion followed by multi-element ICP-MS analysis
3. ME-ICP61: 4-Acid digestion followed by multi-element ICP-AES analysis
4. ME-MS41: Aqua Regia digestion followed by multi-element ICP-MS analysis
5. Li-OG63: Special 4-Acid digestion followed by single-element ICP-AES analysis
6. ME-ICP82: Na_2O_2 Fusion followed by single-element ICP-AES analysis

Lithium in various sedimentary minerals is readily dissolved in acid digestions. In many cases, aqua regia digestions provide better recovery of Li than four-acid digestions, due to complex chemical reactions which may precipitate varying amounts of insoluble Li salts in the presence of fluoride. Roasting samples prior to four acid digestion, particularly hectorite samples, may mitigate this effect. ALS recommends testing both methods to determine the best option for the deposit, and then staying with the same method for consistency in the data set.

Following are descriptions of the benefits of each test along with the methodology:

ME-MS61: 4-Acid digestion followed by multi-element ICP-MS analysis

Use: Multi-element package by four acid digestion and ICP-MS analysis, for early Li exploration in sedimentary deposits.

Range: Li 0.2 ppm to 1%, Method precision is 10%.

Method of Analysis: Multi-Element Ultra Trace method combining a four-acid digestion with ICP-MS instrumentation. A Four Acid "near" Total digestion (HF-HNO3-HClO4) is performed to quantitatively dissolve most geological materials. A 0.25 g prepared sample is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is leached with dilute hydrochloric acid and diluted to volume. The resulting solution is analyzed by a combination of ICP-AES & ICP-MS. This method is not appropriate for mineralized (pegmatite) samples.

RST-21 + ME-MS61: Pre-Roast followed by 4-Acid digestion followed by multi-element ICP-MS analysis

Use: Roasting hectorite samples prior to analysis may increase Li recovery due to excess water content promoting insoluble salt formation. Pre-roasting is followed by the regular ME-MS61 multi-element package by four acid digestion and ICP-MS analysis.

Range: Li 0.2 ppm to 1%, Method precision is 10%.

Method of Analysis: Same as ME-MS61, but preceded by roasting. A 0.25 g prepared sample is roasted in an oven then digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is leached with dilute hydrochloric acid and diluted to volume. The resulting solution is analyzed by a combination of ICP-AES & ICP-MS. This method is not appropriate for mineralized (pegmatite) samples.

ME-ICP61: 4-Acid digestion followed by multi-element ICP-AES analysis

Use: Intermediate level Li analysis suitable for exploration of Li-bearing carbonates and evaporites. Multi-element package by four acid digestion and ICP-AES finish. The AES method is lower cost than the MS method.

Range: Li 10 ppm to 1%, Method precision is 10%.

Method of Analysis: A 0.25 g prepared sample is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is leached with dilute hydrochloric acid and diluted to volume. The resulting solution is analyzed by ICP-AES. This method is not appropriate for mineralized (pegmatite) samples.

ME-MS41: Aqua Regia digestion followed by multi-element ICP-MS analysis

Use: Multi-element package by aqua regia digestion and ICP-MS analysis, for early Li exploration in sedimentary deposits. Aqua regia digestion is lower cost than 4-acid digestion.

Range: Li 0.1 ppm to 1%, Method precision is 10%.

Method of Analysis: A 0.5 g sample is digested in aqua regia (nitric and hydrochloric acids at a 1:3 ratio) in a graphite heating block. After cooling, the resulting solution is diluted with deionized water, mixed and analyzed by ICP-MS + ICP-AES. Major rock forming and resistive elements only partially dissolved.

<u>Li-OG63</u>: Special 4-Acid digestion followed by single-element ICP-AES analysis

Use: Ore grade Li by specialized four-acid digestion and ICP-AES finish, with Li-specific CRMs. Best suited to Li-bearing silicate sediments.

Range: Li 0.005% to 10%, Method precision is 5%.

Method of Analysis: Basically the same as ME-ICP61 but using an open beaker at lower temperatures for digestion. Single-Element method combining a four-acid digestion with ICP-AES instrumentation. A 0.4 g prepared sample is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is leached with dilute hydrochloric acid and diluted to volume. The resulting solution is analyzed by ICP-AES.

<u>ME-ICP82</u>: Na_2O_2 Fusion followed by single-element ICP-AES analysis

Use: Ore grade Li and B by Na_2O_2 fusion and ICP-AES analysis. Ideal for jadarite and Li/B-bearing pegmatites.

Range: Li 10 ppm to 10%, Method precision is 5%.

Method of Analysis: Basically the same as ME-ICP61 but first fusing with sodium peroxide. Single-Element method uses a 0.2 g prepared sample for the Na_2O_2 fusion. The fused product is analyzed by ICP-AES.

In addition to the multi-element analyses cited above, two other methods were tested: IC881 for fluorine and chlorine content and IR07 for total carbon content. These methods are as follows:

<u>F-IC881 and Cl-IC881</u>: KOH Fusion followed by ion chromatography analysis

Use: Elemental analysis of the halide minerals containing chlorine and fluorine generally require fusions that will retain the elements in solution, as well as specific instrumentation for analysis.

Range: F 20 ppm to 2%, Cl 50 ppm to 2%, Method precision is 10%.

Method of Analysis: A 0.2 g prepared sample is fused with potassium hydroxide in a nickel crucible over a flame. The resulting melt is dissolved in hot E-pure deionized water and topped up to 100 ml. The solution is subsequently diluted before running on the ion chromatography instrument.

<u>C-IR07</u>: Total Carbon by induction furnace with Infrared Spectroscopy

Use: Carbon has important metallurgical and environmental implications for many types of mineral deposits. Carbonates may consume acid, impacting leach process design and mine waste remediation.

Range: C 0.01% to 50%, Method precision is 5%.

Method of Analysis: The 0.1 g sample is analyzed for total carbon using an infrared spectroscopy analyzer. While a stream of oxygen passes through a prepared sample, it is heated in a furnace to approximately 1350°C. Carbon dioxide released from the sample is measured by an infrared detection system and the total carbon result is provided.

11.3. Quality Control Procedures and Results

The analyses for lithium contents by ALS have been verified with three data sets for quality control and assurance:

1. External submission of Certified Reference Material (CRM) submitted with the surface samples;
2. Internal ALS reference material; and
3. Internal ALS duplicate analyses.

External Reference Material Comparison

A single CRM was submitted by Brian Beck with the surface samples. The CRM, supplied by Shea Clark Smith / MEG, Inc. as their item MEG-Li.10.14, is reported to have a mean value of 826 ppm Li, with a 95% Confidence interval of 753.8 to 898.2 ppm Li.

The lithium concentration reported by ALS for this sample was 842 ppm Li**Error! Reference source not found.**. This measurement was 1.9% greater than the value reported for the CRM, and is well within the CRM 95% Confidence interval. This is positive verification of the ALS analyses.

Internal Reference Material Comparison

ALS independently ran several internal standards to check its results. Table 9 presents the blank and reference standard results performed internally by ALS.

All ALS results are within their reported target range. This is positive verification of the ALS analyses.

Internal Duplicate Analyses

ALS independently ran several duplicates to check its results. Table 10 presents the duplicate results performed internally by ALS.

All ALS results are within their reported target range. This is positive verification of the ALS analyses.

The Methods Test provides good assurance that the analytical methods chosen for the samples provides the best sensitivities for these particular samples.

In the author's opinion, the sample preparation, security, and analytical procedures employed are wholly adequate for these samples acquired from the project area.

Table 9. ALS Internal Reference Standard Results

Sequence	Reference	ALS Result Li (ppm)	Target Range Lower Bound (ppm)	Target Range Upper Bound (ppm)
001	Blank01	< 0.2	< 0.2	0.4
001	Blank02	< 0.2	< 0.2	0.4
001	Blank03	< 0.2	< 0.2	0.4
001	Blank04	< 0.2	< 0.2	0.4
001	Blank05	< 0.2	< 0.2	0.4
001	Blank06	< 0.2	< 0.2	0.4
040	St01:EMOG-17	28.1	23.9	29.7
040	St02:EMOG-17	27.4	23.9	29.7
040	St03:EMOG-17	26.5	23.9	29.7
040	St04:MRGeo08	35.3	29.5	36.5
040	St05:MRGeo08	34.7	29.5	36.5
040	St06:MRGeo08	34.2	29.5	36.5
006	St07:OREAS 906	20.5	17.2	21.4
008	St08:OREAS 906	19.6	17.2	21.4
030	St09:OREAS 906	20.6	17.2	21.4
016	St10:OREAS 920	29.3	26.0	32.2
029	St11:OREAS 920	30.0	26.0	32.2
032	St12:OREAS 920	30.1	26.0	32.2

Table 10. ALS Internal Duplicate Results

Sequence	Sample ID	ALS Initial Result Li (ppm)	ALS Duplicate Result Li (ppm)	Target Range Lower Bound (ppm)	Target Range Upper Bound (ppm)
029	TV-037	13.0	13.8	12.5	14.3
065	TV-076	358	354	338	374
101	TV-112	438	428	411	455
137	TV-148	46.8	46.8	44.3	49.3
173	TV-184	24.8	24.1	23.0	25.9

12. Data Verification

The data presented in this report has been verified by the authors through the following steps:

- Information on mineral rights and land holdings were taken directly from Oakley Ventures USA Corp. files and confirmed by comparison to original documents provided by the State of Arizona or BLM, as appropriate;
- Sources of published geologic information, such as reports and maps, were verified to have been published by reputable organizations;
- Analytical results produced by ALS were acquired in digital form and did not require transcription. The data was plotted and statistically analyzed by the authors to verify its consistency and to search for correlations between elements to aid in verification of data consistency. Further, authors acquired the ALS internal quality control data to verify the integrity of reported results.
- Original data files provided by Geoservices of Arizona, Inc. were acquired directly from the company and personally transported to Senergy Engineering's office for inspection and digital scanning. The acquired information was organized, reviewed for consistency, assimilated and reformatted into the forms presented in this report, and the significance of the results were derived by the authors;
- Both authors reviewed the satellite geophysical results and discussed the analysis methodology with the principal of Auracle Geospatial Sciences, Inc. The authors are satisfied that the products of Auracle are reasonable and fairly represent a unique view of the geology of the property; and
- The coauthors worked as a team to review and check each other's work, including development of the tables, plots and text generated for this report.

13. Mineral Processing and Metallurgical Testing

There has been no mineral processing or metallurgical testing to date.

14. Exploration Target Estimate

There is insufficient information available to estimate a mineral resource at this time. However, estimation of an 'exploration target' range of the deposit size and grade is appropriate for the geologic information available.

The basic calculation for the size of a planar or tabular mineral body is:

Deposit Size (tonnes) = Area (m^2) x Thickness (m) x Density (tonnes/m^3) .

Following is a discussion of the range of input parameters for estimating the exploration target, including evidence of known values as well as assumptions for how these values are distributed between estimated minimum and maximum values.

Figure 49 shows the outlines of six separate exploration target areas identified for the Thompson Valley property. The exploration target areas include mineral rights controlled by the Company and which are south of the upper limit of the Thompson Valley Fault zone and north of County Road 15. All areas are referenced to T13N, R6W, G&SRM.

The six target areas are described as follows:

- TV Fault Zone Main (TVFZ Main): Main portion of State lands within the Thompson Valley fault zone in central Sec. 2 where silica replacement, hydrothermally altered and volcanic sediment materials have been observed; Surface sample analyses were highest in this area;
- TV Northwest (TV NW): Main portion of State lands south of the TV fault zone and in the western parts of Sec. 2 and 11 where silica replacement, hydrothermally altered and volcanic sediment materials have been observed; Surface sample analyses were moderately high in the area;
- TV Southeast (TV SE): Main portion of State lands south of the TV fault zone and in the eastern parts of Sec. 2 and 11 where volcanic sediment has been observed; Although silica replacement and hydrothermally altered materials were not observed in this area, there was a general lack of outcrops available which might have prevented such observation; Surface sample analyses were moderately low in the area;
- TV Fault Zone East (TVFZ East): Eastern portion of State lands within the Thompson Valley fault zone in eastern Sec. 12 and including an area extending down slope; Includes some volcanic sediment; Surface sample analyses were moderately high to moderately low in this area;
- TV Fault Zone Central & Lyles Ridge (TV Cent. & Ridge): Portion of Federal minerals south of the TV fault zone and in the southwestern part of Sec. 1 where volcanic sediment and hydrothermally altered materials have been observed; Also includes the northern extent of Lyles Ridge which could be an extension of materials observed in the mine area; Surface sample analyses were moderate in the area; and
- TV Fault Zone West & Yava Granite (TVFZ West): Portion of Federal minerals south of the TV fault zone and in the east-central part of Sec. 3 where volcanic sediment and hydrothermally altered materials have been observed; Also includes the eastern extent of the Yava Granite and granite-derived sediments; Surface sample analyses were moderately high to moderately low in the area.

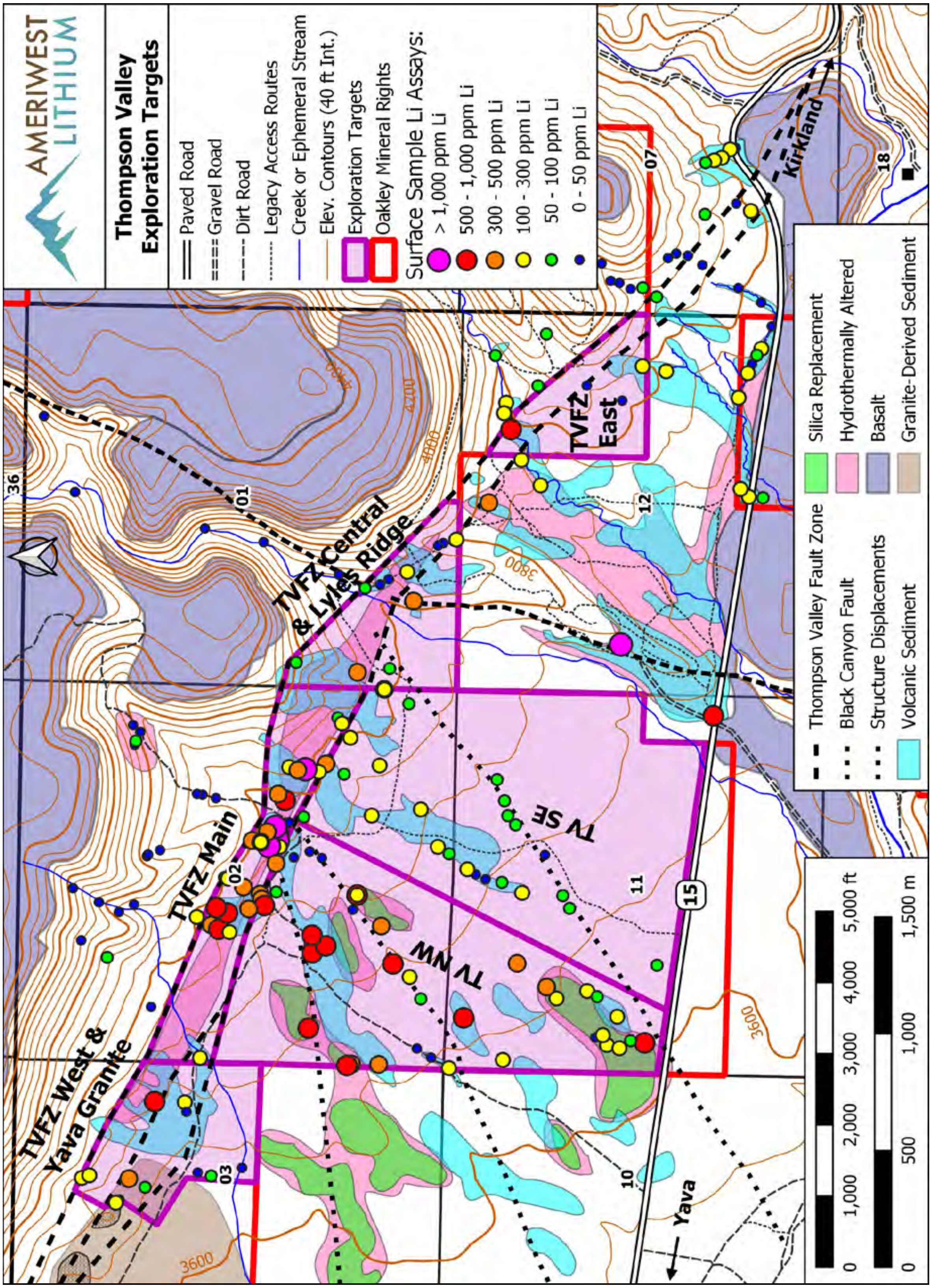

Figure 49. Thompson Valley Exploration Target Areas

Other areas not identified at this time include:

- The small area of State lands south of County Road 15 in Sec. 11; it might have potential resources, but it is stranded from the main property by the road;
- The State lands in the southeast part of Sec. 12 which are bisected by County Road 15; this area likely is very thin, as the underlying basalt outcrops south of the road;
- State lands north and east of the Thompson Valley fault zone due to ruggedness and lack of lithium showing in surface samples.
- Further north of the Thompson Valley Fault, the property is covered by a basalt flow. It is unknown whether lithium bearing clays occur below this basalt cap and drilling will be necessary to determine this.

14.1. Deposit Area and Thickness

Sizes and tonnages of the six exploration target areas are listed in Table 11. The table lists the surface areas and assumed thickness of the deposits for each. Based on area and thickness, the mass of the deposits is calculated assuming a density of 2.3 tonne/m^3. The table also shows the section location and mineral owner.

Table 11. Thompson Valley Exploration Target Areas and Deposit Size Ranges

Area ID	Section	Mineral Owner	Area Size		Thickness		Area Mass,* Mt
			acres	hectares	feet	meters	
TV Fault Zone Main	2	State	94	38	75	23	20
TV Northwest	2 & 11	State	311	126	75	23	66
TV Southeast	2 & 11	State	374	151	75	23	79
TV Fault Zone East	12	State	62	25	75	23	13
TV FZ Cent. & Ridge	1	Federal	86	35	75	23	18
TV Fault Zone West	3	Federal	92	37	38	11	10
Total - Low Limit			**1,018**	**412**			**207**

* Assumes density of 2.3 g/cc (tonne/m3)

Area ID	Section	Mineral Owner	Area Size		Thickness		Area Mass,* Mt
			acres	hectares	feet	meters	
TV Fault Zone Main	2	State	94	38	150	46	40
TV Northwest	2 & 11	State	311	126	150	46	132
TV Southeast	2 & 11	State	374	151	150	46	159
TV Fault Zone East	12	State	62	25	150	46	26
TV FZ Cent. & Ridge	1	Federal	86	35	150	46	37
TV Fault Zone West	3	Federal	92	37	75	23	19
Total - High Limit			**1,018**	**412**			**414**

* Assumes density of 2.3 g/cc (tonne/m3)

The total exploration target area has a size of 1,018 acres (412 hectares). Using the deposit thickness ranges shown in the table, total deposit mass of the exploration target is estimated to range from 207 to 414 million tonnes (Mt).

There are two parts to Table 11: the upper part uses a deposit thickness of 75 ft (23 m) as the 'Low Limit' base case, and the lower part uses double the thickness for a 'High Limit' base case of 150 ft (46 m).

The Low Limit was taken from the GSA drillhole data for the area, where, as shown by Table 7, LC-2-2-83 had a total depth of 90 ft (27 m) but the top 15 ft (5 m) were sand and gravel, for a net pay thickness of 75-ft (23-m).

The High Limit was taken as double the Low Limit case. This is justified because there is a 130 ft (40 m) difference in elevations between the GSA hole elevations indicating a surface slope from east to west of 1.3°. This slope agrees with the dip of correlated intervals of the GSA drillholes ranging from 0.2° to 1.7° west. Assuming that the layers were originally horizontal and then tilted, this would result in an additional thickness of at least 128 ft (39.5 m) For a more conservative High Limit thickness, the added thickness was limited to an additional 75 ft (23 m).

For the TV Fault Zone West area, thickness is assumed to be half of the base case thickness because the Yava Granite is known to outcrop in the vicinity to the west.

14.2. Exploration Target Grade

The 'grade' of the deposit is the lithium content of the host rock. Values for surface sample lithium analyses were thoroughly discussed in Section 9.2.3. The expected grade of a surface leachable material should be considered to represent the lower potential grade of the target area.

Surface sample analyses within the overall exploration target area range from 12 to 1,295 ppm Li. From the 123 samples within the overall target area, 47% had lithium contents greater than 200 ppm, 19% had lithium contents greater than 500 ppm, and 4% were greater than 1,000 ppm, with a mean of 286 ppm Li and standard deviation of 287 ppm Li.

Average surface sample analyses are tallied in Table 12. The table also shows values for the average plus one standard deviation and the maximum analysis values for each area.

Table 12. Thompson Valley Exploration Target Area Lithium Grades

Area ID	Section	Mineral Owner	No. of Samples	Area Lithium Content, ppm		
				Average	+ 1 s.d.	Maximum
TV Fault Zone Main	2	State	32	495	842	1,295
TV Northwest	2 & 11	State	39	312	577	992
TV Southeast	2 & 11	State	24	134	243	438
TV Fault Zone East	12	State	4	188	394	533
TV FZ Cent. & Ridge	1	Federal	12	114	235	421
TV Fault Zone West	3	Federal	12	156	327	632
Overall Values			**123**	**286**	**574**	**1,295**

s.d. = standard deviation

TV Fault Zone Main in central Sec. 2 has the highest average analysis at 495 ppm Li, and the value at one standard deviation is 842 ppm, with a maximum of 1,295 ppm.

TV Northwest in the western part of Sec. 2 and 11 is the most significant target area, as it has an average analysis at 312 ppm Li, one standard deviation is 577 ppm, and a maximum of 992 ppm. Even though its average analysis is 37% lower than that of TV Fault Zone Main, its deposit size is 3.3 times greater, and so its contained lithium content is estimated to be about twice as great.

The expected grade of a surface leachable material should be considered to represent the lower potential grade of the target area. However, there is no assurance that the lithium content of these areas is continuous with depth and breadth. It may be found that the lithium occurrence occurs in streaks of lithium-rich material resulting from hydrothermal alteration, with areas devoid of lithium. For this reason, it is prudent to reduce the estimated deposit grades to perhaps 20% of the values shown in Table 12.

14.3. Exploration Target Summary

The exploration target presented here is based on a number of assumptions and limitations with the potential deposit size and grade being conceptual in nature. There has been insufficient exploration to estimate a mineral resource in accordance with the CIM Guide [2] and it is uncertain if future exploration of the target discussed in this report will result in the estimation of a mineral resource.

The exploration target is estimated to range from 200 to 400 million tonnes, potentially consisting of a continuous conceptual deposit with overall grades ranging from 114 to 842 ppm Li. The exploration target may not be contiguous, and once dilutant barren material is taken into account, the overall grade might be 20% of these values. However, there is no assurance that the exploration target can be converted into a mineral resource or reserve as stated above.

15. Adjacent Properties

There is one property which is adjacent to the subject project, the Lyles Mineral Lease operated by Vanderbilt Chemicals, LLC. It is currently producing small volumes of a hectorite clay product.

Location of the adjacent property is shown on Figure 4 as the Lyles Mine Lease. The Lyles Mineral Lease was thoroughly discussed previously in Sections 4.2.1, 6.2, 6.3 and 9.1.2 and that information is not repeated here.

16. Other Relevant Data and Information

There are no other relevant data and information provided at this time.

17. Interpretation and Conclusions

The Thompson Valley property surrounds a currently producing lithium-bearing hectorite clay deposit. Whether or not the Oakley mineral rights contain economic reserves of lithium for today's market conditions remains to be determined, but is worthy of further evaluation.

It is clear that lithium is present on the controlled mineral holdings. This is verified by the extensive, but localized, showings of lithium observed from analyses of surface samples. Preliminary indications are that the lithium is present in the unusual form of a carbonate deposit and not necessarily as a lithium clay as for which other groups are exploring in Arizona and Nevada sedimentary deposits.

The exploration target size is estimated to range from 200 to 400 million tonnes, consisting of a deposit with expected average grades ranging from 114 to 842 ppm Li. The overall deposit should not be expected to be contiguous and may occur in streaks, and perhaps only 20% will be found to have grades above a commercial cutoff value. However, there is no assurance that the exploration target can be converted into a mineral resource or reserve.

When the lithium exploration target size and grade are viewed, it appears that there is a significant opportunity for commercial lithium production at the Thompson Valley project, however economic extraction of the lithium target has not been addressed. <u>It is uncertain if future exploration of the target discussed in this report will result in identification of a mineral resource or future commercial exploitation.</u>

It is the authors' opinion that this project is worthy of additional exploration to better define the occurrence and grade of lithium-bearing deposits. Once a substantial lithium-bearing deposit has been positively identified, formulation of a scoping-level assessment of the economics for extraction of the lithium may be warranted as well as additional exploration activities.

18. Recommendations

Past exploration for lithium in the project area mostly consisted of surface samples analyses. It is significant that the Company was able to secure records from historical drilling in the area, and this has shown fairly continuous deposits of 'clay' to depths of 90 feet (27 m). Unfortunately, that historical data did not include analyses for lithium or other indicator elements. Also, as the historical drillholes terminated in clay, the depth to the basement rock, whether basalt or granite, is currently unknown in the target areas.

It is recommended that a new geophysical tool be deployed up front in an attempt to delineate the presence of lithium-bearing sediments at depth. If successful, this will provide guidance for proper location of drilling locations.

Further, it is recommended that exploration core drilling be performed across the target areas, and the core analyzed for lithium and other elements. The drilling should occur over a broad area so that continuity of the deposits may be understood, and to depths of at least 300 feet (90 m) or to basement. Drilling locations should be guided by results from the geophysical study.

The geologic materials (sediments and rocks) are apparently a mixture of clays and carbonates. The question arises as to whether the lithium is bound within a clay-type matrix or whether it is in the form of a carbonate mineral. If it is bound within the matrix or lattice structure, methods must be found to release it. But, if it is found to be in the form of a carbonate, it must be learned as to how best to dissolve the mineral and understand what other elements are simultaneously released. Identification of the mineral form(s) of lithium in the sediment is the first step in addressing commercial processing of ores.

It is recommended that additional work be completed in two phases:

1. Phase 1 for the Geophysics, Permitting and Access, then at the appropriate time,
2. Phase 2 for the Drilling and Sample Analyses once all preparations have been made.

18.1. Phase 1 – Geophysics, Permitting and Access

18.1.1. Geophysical Tools

Ameriwest commissioned a geophysical survey by Auracle Geospatial to conduct a satellite-based geophysical survey of Thompson Valley using its proprietary space-based Stereo Synthetic Aperture Radar (SAR) satellite imagery plus custom processing as discussed in Section 9.2.4.

There is another type of advanced satellite technology that should also be utilized. Resource Exploration Group, LLC (REG), previously operating as Radiant Exploration, Inc., offers a satellite-based service called Magnetic Resonance remote sensing for detection of a target element, including lithium. The details of the method are held as a trade secret, but it is achieved using physical properties that occur at the subatomic level of physics - Magnetic Resonance (MR). All elements have a distinct and unique MR signature and resonant harmonic frequencies. This MR technology is an advancement of the same technology used in MRIs for medical uses.

Utilizing satellite imagery, REG's technology detects the frequency of the target element as it emanates from the Earth's surface. A proprietary system of mathematical algorithms is then applied and an analysis and graphic presentation of the location of the targeted element is developed. This includes the spatial location, as well as the depth of the targeted element.

In comparison to other geophysical datums, such as Gravity Anomalies, Electrical Conductivity-Resistivity, Tellurics or Magnetic Anomalies, REG's MR technology results in more refined results with the ability to search any area for any and all resource elements at a fraction of the cost.

Use of REG's MR technology is fairly new in the arena of exploration but has had significant success in precious metals and oil and gas exploration. The principal of REG provided the Company with a demonstration of its use for finding lithium in the western U.S. with success.

A cost estimate has been obtained from the company to survey 4 square miles (10 km^2) of the Thompson Valley area. A successful MR survey of the area should provide the project with a better idea as to the depths of lithium-bearing sediments and their distribution across the exploration target area, and this will help guide a drilling program.

18.1.2. Permitting and Access

There are several tasks that must be accomplished prior to initiating a drilling program in the field. The right-of-way (ROW) must be finalized as discussed in Section 4.2.1 which includes a legal survey and conducting archaeological and native plant (A&NP) surveys, and these need to be approved by the State prior to construction.

Also, for the drill site and access trails planned for the field work, a Geologic Field Operations Plan must be submitted to and approved by the State. Prior to construction activities, an A&NP study must be conducted for those areas and approved by the State. It is most efficient to conduct the A&NP surveys for all three parts (ROW, trails and drill sites) in one batch.

Once the State approvals are in hand, access road, trail and drill site construction activities may begin. Because of the topography and soil conditions, timing of earthwork must occur during dry periods so as to avoid working during muddy conditions. Once the roads, trails and drill sites are ready, then the drilling and sampling activities may proceed.

18.1.3. Phase 1 Budget

Estimated costs for Phase 1 are $129,000 (CAD$172,000) as shown by Table 13.

Table 13. Phase 1 Budget for Geophysics, Permitting and Access

Phase	Description	Cost
1	**Geophysics, Permitting and Access**	
	REG Satellite Magnetic Resonance Survey	$ 14,000
	AZ State Right of Way (ROW)	$ 19,200
	Geologic Field Operation Plan	$ 14,400
	ROW Archaeological and Native Plant Survey	$ 7,400
	Trail and Drill Site Archae & Native Plant Survey	$ 22,200
	ROW and Initial Trail and Drill Site Construction	$ 51,800
Total Phase 1		**$ 129,000**

18.2. Phase 2 – Drilling and Sample Analyses

18.2.1. Core Drilling and Sampling

As discussed at several points in this report, recovery of core samples at depth from several locations across the property is required for delineating a lithium resource. It is recommended that 10 to 12 locations be cored to a depth of 300 ft (90 m) or basement, whichever comes first. The objective is to determine the extent of lithium-bearing sediments with a broad spread of drilling locations.

Drilling locations should include the Thompson Valley fault zone and the surface-observed areas of higher-lithium trends in the northwest portion of the main valley; these are shown on Figure 49 as target areas TVFZ Main and TV NW, respectively. Also, the southeast portion of the main valley, TV SE, should be drilled and sampled. Drilling locations will be guided by results of the MR geophysical survey. Other designated target areas do not need to be drilled at this time, and can wait for a later phase of the program depending on results of the initial drilling phase.

The proper drilling and coring method has been studied to choose the most dependable technique. It has been observed that the surface samples will slime and disintegrate when contacted with water, and so drilling or coring with water may result in core loss and hole collapse. The materials do not appear to be bentonitic clays in the main valley; if they were bentonites, their swelling properties could be controlled with a clay-stabilized drilling fluid. But the surface materials do not exhibit a swelling property, and so a different approach should be considered.

One method, which worked fairly well for the GSA drilling program in 1983-1984 was to core with air [3]. Discussions with drillers in Arizona and other experienced people showed concern with using an air-coring approach because of issues with bit cooling, cuttings carrying capacity, core etching, and dust control at the surface and the protection of workers. Also, the two drilling companies consulted did have experience with rotary-air drilling and air-hammer drilling, but not rotary-air coring. They were willing to attempt coring with air, but there were no assurances that the objectives could be met.

A different approach is to use sonic coring with no air or water. Sonic drilling equipment and experience has greatly advanced over the years, and the sonic driller contacted for this work feels confident that they can penetrate the cover material which is strewn with basalt boulders and cobbles. With sonic coring, an inner 4" (10 cm) nominal core rod is driven into the ground using sonic vibrations to liquify the earth and allow rod penetration. Once the full length of the inner rod has been driven down, then 6" (15 cm) nominal casing is sonically driven down to encompass and protect the inner rod. The inner rod is withdrawn from the hole and the core is pushed out and placed into core boxes. Once total depth has been reached, the casing is driven out of the hole and the hole is abandoned per State regulations.

Sonic drilling is typically slower than rotary coring because it uses conventional tripping for each core run and might require twice as much time to complete the program. Costs are comparable between the two methods.

It is recommended that 11 locations be cored with a sonic rig for the first part of the drilling program. Based on positive results from the first part, a second part with additional drilling to delineate the lateral extent of the lithium bearing area is a necessary follow-up program. The follow-up drilling program will be designed based on initial results.

18.2.2. Core Sample Analysis

For analysis, first the recovered core samples will need to be transported to the geologist's facility for inspection and sub-sampling for whole-rock analysis. Core inspection should include: lithologic description, photography, LIBS scan and bulk density determination.

Based on the core descriptions and LIBS scans, appropriate portions of the core will be designated for analysis. The analysis samples should be split lengthwise by diamond sawing and then half sent to the analysis laboratory.

The laboratory preparation facility will be instructed to crush each sample, blend and split out a portion for pulverization. Pulverized portions will be submitted for whole-rock analysis using the same method as selected previously according to Section 9.2.3, 4-acid digestion with ICP-MS analysis. Also, as the presence of fluorine has been recognized as a potentially important coproduct, fluorine analysis by KOH fusion is recommended for a portion of the samples.

18.2.3. Minerology Study

It is recommended that identification of the mineral form(s) of lithium in the various sediment types be determined. Experienced laboratories should be sought out to identify suitable methods for analysis. One method is by X-Ray Diffraction (XRD) and there are a few laboratories that can do this work.

Another method to learn more about the lithium forms is to employ wet-chemistry analyses. An analytical chemist or minerologist should characterize whether lithium, fluorine and other elements may be readily solubilized with water, and also with dilute acid, and conduct these studies on multiple samples of each of the various rock types. If the elements are solubilized with water or weak acid, this could be an indication that the elements are held as a carbonate, rather than as part of a rock matrix, whether clay, feldspar, quartz or other matrices present.

18.2.4. Phase 2 Budget

Estimated costs for Phase 2 are $868,000 (CAD$1,157,000) as shown by Table 14.

Table 14. Phase 2 Budget for Drilling and Sample Analyses

Phase	Description	Cost
2	**Drilling and Sample Analyses**	
	Sonic Coring 11 Holes to 300 ft (90 m)	$ 542,600
	Supervision and Geologic Field Work	$ 95,700
	Geologic Core Shack Work	$ 86,900
	Laboratory Analyses, 30 samples per hole	$ 59,000
	Minerology Studies	$ 32,800
	Technical Report	$ 51,000
Total Phase 2		**$ 868,000**

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[38] S. Traxler, "Certificate of Analysis TU22314955," ALS Canada Ltd., North Vancouver, BC, November 22, 2022.

20. Date and Signature Page

This report titled "Qualified Persons Technical Report on the Thompson Valley Lithium Project Exploration Target, Yavapai County, Arizona" and dated January 31, 2023 was prepared and signed by the following authors:

(Signed & Sealed) "Gregory J. Bell"

Dated at Phoenix, AZ, U.S.A.

January 31, 2023

Gregory J. Bell, M.Sc., P.E.

Senior Engineer, Senergy Engineer

Brian Beck Consulting, LLC. (BBC) can offer no assurances and assumes no responsibility for site conditions or activities outside of this report or operational conditions conducted after the date of the field work. It should be understood by all parties that this report has relied on the accuracy of documents, oral information, and other materials, services, and information provided by state or federal sources, Arizona State Land Department (ASLD), Bureau of Land Management (BLM) and other associated parties. Any subsequent modification, revision or verification of the report must be provided in writing by BBC.

(Signed & Sealed) "Brian A. Beck"

Dated at Dewey, AZ, U.S.A.

January 31, 2023

Brian A. Beck, M.S., PG, CPG
Senior Geologist, Brian Beck Consulting, LLC

21. Certificates of Qualified Persons

Qualified Persons Certificates are found on the following pages for Mr. Bell and Mr. Beck.

Qualified Person (QP) Certificate

GREGORY J. BELL, MS, PE, CGWP
CONSULTING ENGINEER
4202 E. Osborn Road
Phoenix, AZ 85018 U.S.A.
Telephone: 801-209-2197 Email: greg@coalgastech.com

CERTIFICATE of AUTHOR

I, **Gregory J. Bell**, do hereby certify that:

1. I am the President and Senior Engineer with Coal Gas Technology Co.;
2. I am a graduate of the University of Colorado, Boulder, Colorado, U.S.A. in 1977 with a Bachelor of Science degree in Chemical Engineering, and the University of Wyoming, Laramie, Wyoming, U.S.A., in 1982 with a Master of Science degree in Chemical Engineering with studies in Mineral Engineering and Petroleum Engineering;
3. I am registered as a Professional Engineer (Petroleum) in the State of Utah since 2006 (Certificate #4872976-2202) and in the State of Arizona since 2016 (Certificate #61937). I am registered as a Certified Groundwater Professional since 2017 (Certificate #3205718);
4. I have worked in geologic science and technology for 40 years since graduation. During that time, I have reviewed, participated in and reported on numerous mineral exploration projects and oil & gas assessments and designs including resource appraisals which incorporate geophysical studies. I have been working in the lithium exploration sector since 2017, having participated in multiple lithium projects in Canada and the U.S. as engineer, project advisor or project manager;
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101;
6. I have visited the Property in December 2021 and March and June 2022;
7. I am responsible for the preparation of all parts of the report titled “NI 43-101 Technical Report for the Thompson Valley Lithium Project Exploration Target, Yavapai County, Arizona” , with the exception of those portions indicated under the heading, “Reliance on Other Experts”;
8. At the effective date of the Technical Report, 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 not independent of Ameriwest Lithium Inc. according to the criteria stated in Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them of the Technical Report for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.
12. The effective date of this report is January 17, 2023.

Dated this 31st day of January 2023

“Gregory J. Bell”

(Signed and sealed)

Gregory J. Bell

Qualified Person (QP) Certificate

BRIAN A. BECK, M.S., PG, CPG
CONSULTING GEOLOGIST
17775 E. Rocking J Lane
Dewey, Arizona 86327 U.S.A.
Telephone: 928-525-6563 Email: babmineral62@gmail.com

CERTIFICATE of AUTHOR

I, **Brian A. Beck**, do hereby certify that:

1. I am the President and Senior Geologist with Brian Beck Consulting, LLC;
2. I graduated in 1976 from the California State University at San Diego with Bachelor of Science degree in Geology and in 1984 from the California State University at Long Beach with Master of Science degree in Geology;
3. I am a member in good standing with the State of Arizona as a Professional Geologist (1987) and the American Institute of Professional Geologists (Certified Professional Geologist #7011);
4. I have continuously practiced my profession for 44 years in the areas of environmental, mineral exploration and geology. I began working in the lithium sector in 2021 and spent most of 2022 exploring for lithium deposits in the Thompson Valley, Arizona and other areas of the USA;
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101;
6. I have visited the Property in March, April, June and August to November 2022;
7. I am responsible for the preparation of Sections 7 through 18 of the report titled "NI 43-101 Technical Report for the Thompson Valley Lithium Project Exploration Target, Yavapai County, Arizona" including the conclusions reached and the recommendations made, with the exception of those portions indicated under the heading, "Reliance on Other Experts";
8. At the effective date of the Technical Report, 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 not independent of Ameriwest Lithium Inc. according to the criteria stated in Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them of the Technical Report for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.
12. The effective date of this report is January 17, 2023.

Dated this 31st day of January 2023

REGISTERED GEOLOGIST CERTIFICATE NO. 21053 BRIAN A. BECK Date Signed 1-31-23 ARIZONA, U.S.A.

AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS CERTIFIED PROFESSIONAL GEOLOGICAL SCIENTIST 7011 AIPG BRIAN A. BECK

Brian A. Beck