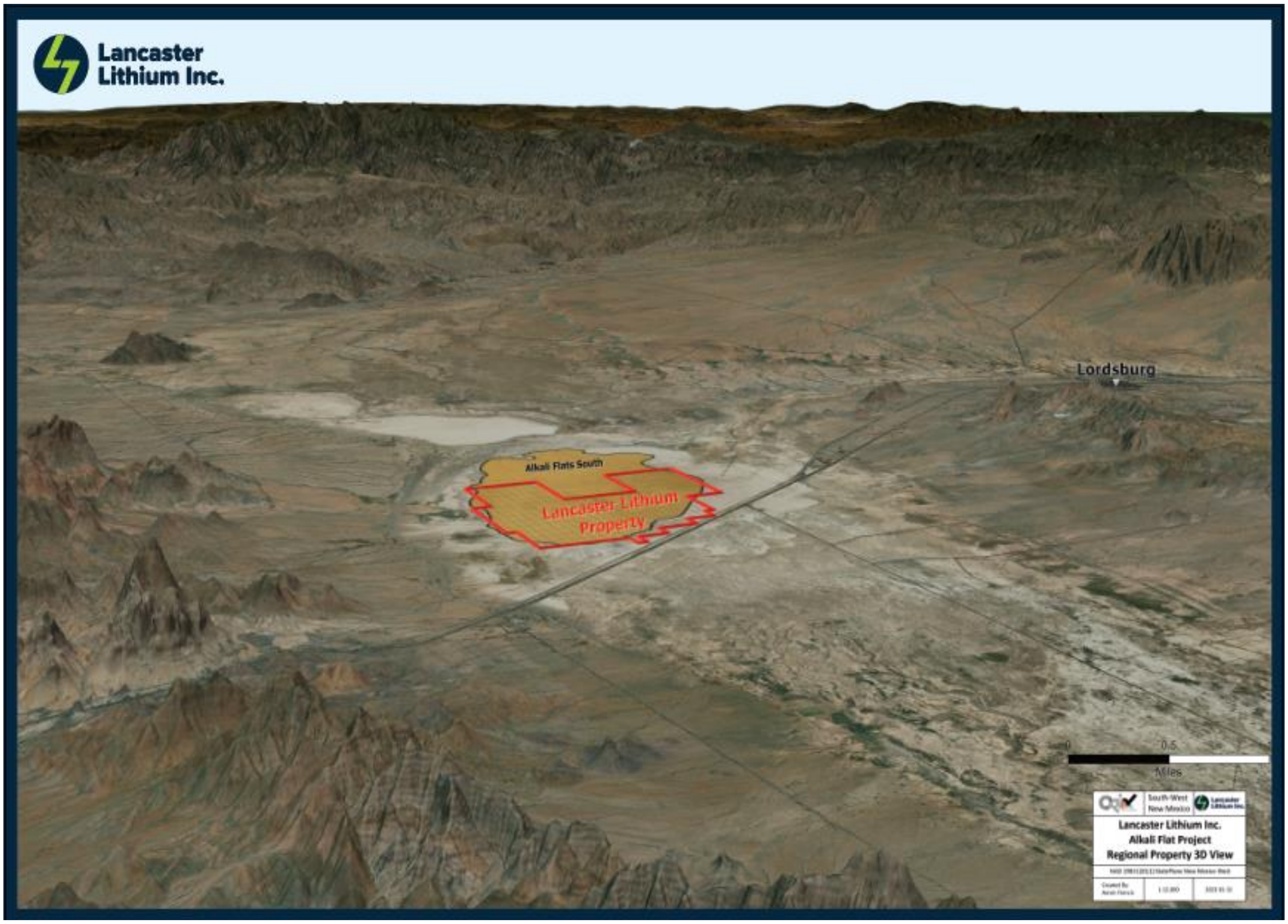
NI 43-101 Technical Report: Update on New Exploration at Alkali Flat Lithium Property,



Lordsburg, New Mexico, U.S.A.

696,894 E / 3,574,521 N (NAD 83, UTM Zone 12)

32.29016 N / -108.90912 E

Effective Date: May 19, 2023

Prepared for:

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1. SUMMARY

Mount Morgan Resources Ltd. ("the Consultant" or "Mount Morgan") was retained by Lancaster Lithium Inc. ("Lancaster Lithium" or the "Company") to prepare an updated Technical Report (the "Report") on the Alkali Flat Lithium Project claims (the "Property" or the "Alkali Flat Property" or the "Alkali Flat Lithium Project") located near Lordsburg, New Mexico, U.S.A. The Property is an early-stage lithium brine exploration property with minor previous exploration based on sediment sampling and analysis.

Dr. Mark Fedikow, P.Geo. C.P.G. (the "Author") is responsible for all sections of this Report. Dr. Fedikow visited the Property on January 4, 2023, and in completing the Report, the Author held discussions with management and reviewed data pertaining to the Property. The Author is a "Qualified Person" who is "independent" of Lancaster Lithium within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). The purpose of this report is to provide an update based on exploration undertaken on the property since the filing of the initial 43-101 report with an effective date of January 31, 2023. This update report has an effective date of May 19, 2023.

1.1 Property Location

The Alkali Flat Property is in Hidalgo County New Mexico west of the town of Lordsburg, New Mexico. The Property is centred at UTM coordinates 696,894E/3,574,521N (NAD 83, UTM Zone 12; 32.29016N/-108.90912E).

1.2 Property Ownership

On November 17, 2022 (the "Execution Date"), Majuba Mining Ltd., a Wyoming corporation (the "Optionor"), and Lancaster Lithium entered mineral property option agreement (the "Option Agreement"). The Optionor is the registered, legal, and beneficial owner of 233 mineral claims known as the Alkali Flat Lithium Project located near Lordsburg in Hidalgo County, New Mexico, USA (the "Property"). Pursuant to the Option Agreement, the Optionor granted the Optionee the exclusive right and option (the "Option") to acquire, subject to the reservation of a 1.5% net production royalty in favour of the Optionor (the “Royalty”), a 100% interest in the Property. A complete list of the claims comprising the Property is presented in Appendix 1.

1.2.1 Option Agreement

For the Company to exercise the Option and acquire a 100% interest in the Property, the Company must pay an aggregate of $2,975,000 to the Optionor as follows:

(a) $25,000 within 18 business days of the Execution Date.
(b) $50,000 within 90 calendar days of the Execution Date.
(c) $150,000 on or before the second anniversary of the Execution Date.
(d) $1,000,000 on or before the third anniversary of the Execution Date; and
(e) $1,750,000 on or before the fourth anniversary of the Execution Date.

On the Execution Date, the Optionor was the registered, legal, and beneficial owner of 67 of the 233 mineral claims noted above. However, the Option Agreement provided for the automatic addition of 144 claims to the Property upon the completion of certain activities (since completed), and a further 25 claims have been added to the Property under an “Area of Interest” provision.

1.2.2 Royalty

Upon the exercise of the Option and the transfer of title to the Property by the Optionor, the Optionor will reserve, retain, and hold the Royalty. Lancaster Lithium will have the right to purchase 100% of the Royalty from the Optionor at any time at a cost of $1,250,000. The Company’s obligation to complete any Royalty payments to the Optionor will be reduced by any amounts paid by the Company to exercise the Option.

1.3 Property Geology and Mineralization

The Alkali Flat playa occupies a structurally defined basin named the Lower Animas Basin (Flege, 1959) bounded by the Pyramid Mountains to the east and Piloncillo Mountains to the west. The predominant trend of the basin is north south, and the depth of the basin is suspected to be greater than 5,000 feet. Recent sediments infilling the basin include clays, silts, and suspected highly saline brines. Modern waters from the area are classified as sodium-chloride-sulfate waters with TDS values exceeding 1000 mg/L and local, active hot wells at the Bruce Levy geothermal power plant (formerly Lightning Dock geothermal area) are present along the eastern edge of the valley. This thermal feature has provided high regional heat flow to drive fluid movement. Basin structures provide the fluid pathways to potentially form brine pool traps in the host sediment-filled fault bound graben.

The arid climate of southern New Mexico is permissive of brine formation, and geological age relationships demonstrate that sufficient accumulation time was available in this long-lived basin to develop sustainable brine aquifers. Abundant felsic volcanic and intrusive lithologies that can be considered as potential sources of lithium are found in the Pyramid mountains surrounding the basin have been dated and geochemically analyzed however, those analyses do not include lithium. These lithologies through erosion and shedding of detritus into the basin are interpreted as the source of lithium.

The Alkali Flat Property is an early-stage exploration property and as such detailed geologic information on the subsurface characteristics are unavailable. Indirect methods of acquiring such information are recommended in the exploration recommendations portion of this report.

1.4 Exploration Recommendations

The Alkali Flat Property is bounded on its north flank by competitor’s claims and the general area of the Property has benefitted from historic research reflected in regional magnetic, and gravity geophysical surveys and geochemical surveys undertaken by the United States Geological Survey. The geochemical databases include sediment and water samples collected and analysed during the National Uranium Reconnaissance program (NURE) and additional recent soil sampling programs. Anomalous results from these geochemical surveys include a stream sediment sample and a water sample collected during the NURE program, respectively, and contained 124 ppm lithium and 4896 ppb lithium. These elevated and anomalous levels of lithium were from samples collected on the Alkali Flat Property and underscore its potential. The historic geophysical and geochemical databases provide a foundation for ongoing exploration programs on the Property. Interpretation, based on these surveys and from the understanding of the geological setting of the Property, has demonstrated the lithium prospectivity of the Property and has led to the characterization of the Alkali Flat Property as a distinct lithium brine target area.

The Author recommends geophysical and geochemical surveys for the initial phase of work on the Property. Details of these surveys and related costs are presented in **Table 1.4.1 (1)** for geophysical surveys and in **Table 1.4.3 (2)** for geochemical surveys. The description and partial results for new exploration initiatives are described in this update report.

Total cost for this initial exploration program based on geophysical and geochemical surveys will be approximately $130,683.00 USD.

1.4.1 Proposed Geophysical Surveys

The purpose of ground-based gravity and audio magneto-telluric and magneto-telluric surveys would be implemented to determine the characteristics of the basin-bounding structures, the depth to and the configuration of bedrock at depth and conductivity contrasts between the various sedimentary and other lithologic units in the basin. These surveys would be undertaken along a single 25,000-foot-long survey line in one of two locations depending on accessibility. An understanding and definition of the structural characteristics of the basin, the presence and geologic context of aquifers with high dissolved solids and their possible association with evaporite deposits are the goals for these surveys.

1.4.1.1 Gravity Survey

An initial gravity survey is proposed to cross the Alkali Flat Property to provide an estimate of basin structure. The gravity method is rapid and will estimate depth to basement, thicknesses of overburden, and provide an understanding of the structural framework in the study area. The individual gravity measurements will be collected along the proposed transect and modeled together to provide 2D cross-sections of the basin fill and underlying bedrock units.

Gravity measurements will be acquired from a 500-foot spacing along the approximately 25,000-foot-long profile. The profile would be extended on both ends to run between bedrock outcrops on either side of the basin to allow for closure in the modeling, using a coarser measurement spacing. Additional infill measurements would be collected to improve lateral resolution of any detected features (up to the number of measurements highlighted below for each survey line). The overall objective is to provide suitable lateral resolution for the subsequent 2D modeling.

Gravity Station Profiles	Approx. Profile Length (feet)	Planned Gravity Stations	Proposed Acquisition Days
1	25,000	50 (profile) + 30 (bedrock tie in) +20 (infill as needed) = **100 TOTAL**	6

A one-person field crew will acquire measurements across the survey area using an all-terrain vehicle. Approximately 15 to 20 stations will be collected each day. Gravity stations will be surveyed using an RTK GPS system to provide sub-meter accuracy. A gravity base station would be set up at an accessible location for the survey area and visited at least at the beginning and end of each survey day. The survey area will be tied into the gravity stations associated with the regional gravity data to allow the datasets to be combined.

1.4.1.2 Magneto-Telluric Survey

The gravity survey with be followed by a magneto-telluric (MT)/audio-frequency magneto-telluric (AMT), which can image depths over the range 1,000 to 5,000 feet below ground surface. The MT/AMT method provides a high-resolution one-dimensional (1D) sounding of the electrical properties of the subsurface with depth for each measurement location. Multiple soundings collected along a transect can then be combined and inverted to provide a two-dimensional (2D) cross section to provide more continuous information on the lateral variations in electrical properties.

AMT/MT soundings will be collected approximately every 1,000 feet (~600 meters) along the profile. At each station location the E_x and E_y electric dipole separation will be

250 feet (~76 meters). The imaging depth of the individual AMT/MT 1D soundings is a function of the conductivity of the subsurface materials but is typically up to 3,000 to 4,000 feet (~915 to 1,200 meters) based on the frequencies used.

Preliminary data processing and modeling will be undertaken daily to allow an assessment of results. The survey layout can then be updated in an iterative manner, to allow for updates in the survey design and additional in-fill soundings to be planned in areas of interest.

AMT/MT Station Profiles	Approx. Profile Length (feet)	Planned AMT/MT Stations	Proposed Acquisition Days
1	25,000	25 (profile) + 10 (infill as needed) = **35 TOTAL**	11

An initial testing phase will be conducted at the survey area to determine the imaging depth limits of the AMT method based on the anticipated conductive nature of the subsurface. If the AMT method is unable to image down to the desired imaging target depth based on the gravity survey results (i.e., the bedrock interface), a switch to the MT method would be implemented increasing the productivity of the survey due to increased data collection times. A four-person field crew, with data collection supported by ATV/UTV where road access is not available. Approximately between 3 and 4 AMT (or between 1 and 2 MT) soundings will be collected each day.

Total geophysical costs are $117,233.00 USD and are summarized in **Table 1.4.1 (1).** and **Table 1.4.3 (2).**

Table 1.4.1 (1): Estimated costs for gravity and audio-magneto telluric/magneto-telluric survey, Alkali Flat lithium project, Lordsburg area, New Mexico

Task #	Task Description	Estimate
1	**Gravity Survey - Mobilization/Demobilization** (Inclusive of labor for packing/preparation and travel, and equipment rental, transportation/shipping, and field consumables)	**$4,730**
2	**Gravity Survey – Data Collection & Analysis** (Inclusive of labor for data collection, daily QA, processing, and vehicle & equipment rental, daily per diem, and fuel)	**$22,164**
3	**Gravity Survey - Reporting** (Inclusive of labor for processing, modeling, visualization and interpretation, draft report, one round of comment information, and submittal of final report)	**$7,754**
	TOTAL – Gravity Survey	**$34,648**
4	**AMT Survey - Mobilization/Demobilization** (Inclusive of labor for packing/preparation and travel, and equipment rental, transportation/shipping, and field consumables)	**$7,306**
5	**AMT Survey– Data Collection & Analysis (based on 1,000-foot station spacing)**	**$65,373**

	(Inclusive of labor for data collection, daily QA, preliminary analysis, and vehicle & equipment rental, daily per diem, and fuel)	
6	**AMT Survey- Reporting** (Inclusive of labor for processing, modeling, visualization and interpretation, draft report, one round of comment information, and submittal of final report)	**$9,870**
7	**AMT Survey - Field Crew Change Over** (Inclusive of labor for packing and travel, and equipment rental and transportation)	**TBD**
	TOTAL – AMT/MT Surveys	**$82,549**

1.4.1.3 New Geophysical Surveys

In February 2022, Lancaster commissioned EarthEx Geophysical Solutions Inc. to perform a UAV-Borne Detailed Magnetometry survey, anticipated to cover 315 line-km. The survey employed a mix of 50m production lines with 500m tie-line spacing and 200m production lines with 1500m tie-line spacing over at the Alkali-flat project, near Lordsburg, NM.

The survey covered an area of approximately 27.5 km^2, extending across the basin in the area proximate to the I-10 highway. The survey results will be treated with 2D and 3D processing algorithms and then used to aid in definition of the bounding structures at the edges of the basin, estimating location and depth of the deepest parts of the basin, imaging structural features at depth which may contribute to fluid-flow pathways, and to help develop a 3D model of the Alkali Flat project.

The cost of the drone-borne magnetometer survey was CAD $66,113.82. The drone surveys were completed in March 2023, and results with interpretation are pending.

1.4.2 Proposed Geochemical Surveys

Geochemical surveys are recommended to assess the Property for signatures related to buried high total dissolved solids lithium-bearing aquifers and to assess potential lithium source rocks in the surrounding mountain ranges. Mobile Metal Ions Technology provides methodology to determine whether a surficial geochemical signature related to lithium-bearing brines at depth is present beneath overburden cover within the Property area. Sampling and analysis of felsic lithologies in the bounding mountain ranges will supplement the soil geochemical work with the goal of identifying prospective lithium-source rocks.

Total costs for the proposed geochemical surveys are $13,450.00 USD.

Table 1.4.3 (2): Summary of costs for geochemical orientation surveys.

Mobile Metal Ions Soil Geochemical Orientation Survey						
Sites	Samples	Analysis	Analysis	Collection Costs	Interpretive	TOTAL
		Per Sample	Cost	and Freight	Report	
25	100	$50.00	$5,000.00	$1,200.00	$1,500.00	$7,700.00
Rock Geochemical Surveys: Multielement Analysis by ICP-MS after Total Dissolution by Sodium Peroxide Fusion						
Sites	Samples	Analysis	Analysis	Collection Costs	Interpretive	TOTAL
		Per Sample	Cost	and Freight	Report	
25	25	$50.00	$1,250.00	$3,000.00	$1,500.00	$5,750.00

1.4.3 New Geochemical Surveys

Lancaster Lithium enlisted Gold Canyon Partners LLC to execute a sampling program of playa sediments to assess the distribution of lithium and related elements typically found in lithium brine deposits. A preliminary sediment sampling event occurred at Alkali Flat in May 2022. During that timeframe, 14 sediment samples were collected from the northern portion of the claim group. A new larger sediment sampling event occurred in February and March 2023. During the 2023 program a sample grid was established with a 1200 ft sample spacing, on E-W oriented lines spaced 2400 ft apart in the N-S direction. A total of 128 sediment samples were obtained, including ten samples from each of two sample pits where samples were obtained by channel sampling in 10 cm intervals to a depth of one metre.

As of the May 19, 2023, effective date of this report, analytical results for 47 of the 128 samples have been received from the laboratory. New geochemical data is presented in **Appendix 2**.

1.4.3.1 Preliminary Soil Geochemical Results

Results for lithium data received to date are illustrated in **Figure 1.4.3 (1)**. and document a range in lithium concentration of 69.6 to 147.9 ppm in 51 samples collected from the playa sediments. Based on approximately 50% of the analyses received to date, lithium concentrations tend to increase from the western to the eastern segments of the playa. The east side of the playa coincides with the structural position of the Lightning Dock KGRA geothermal area approximately 8 miles to the south. Basin-bounding faults on the east represent a potential source of hydrothermal fluids that may have contributed to the lithium content of deep aquifers and possible Li-clay formations at depth. Preliminary results suggest elevated lithium occurs in the vicinity of the basin bounding fault. Further observations can be made upon receipt of the analyses for the remainder of the sample analyses.

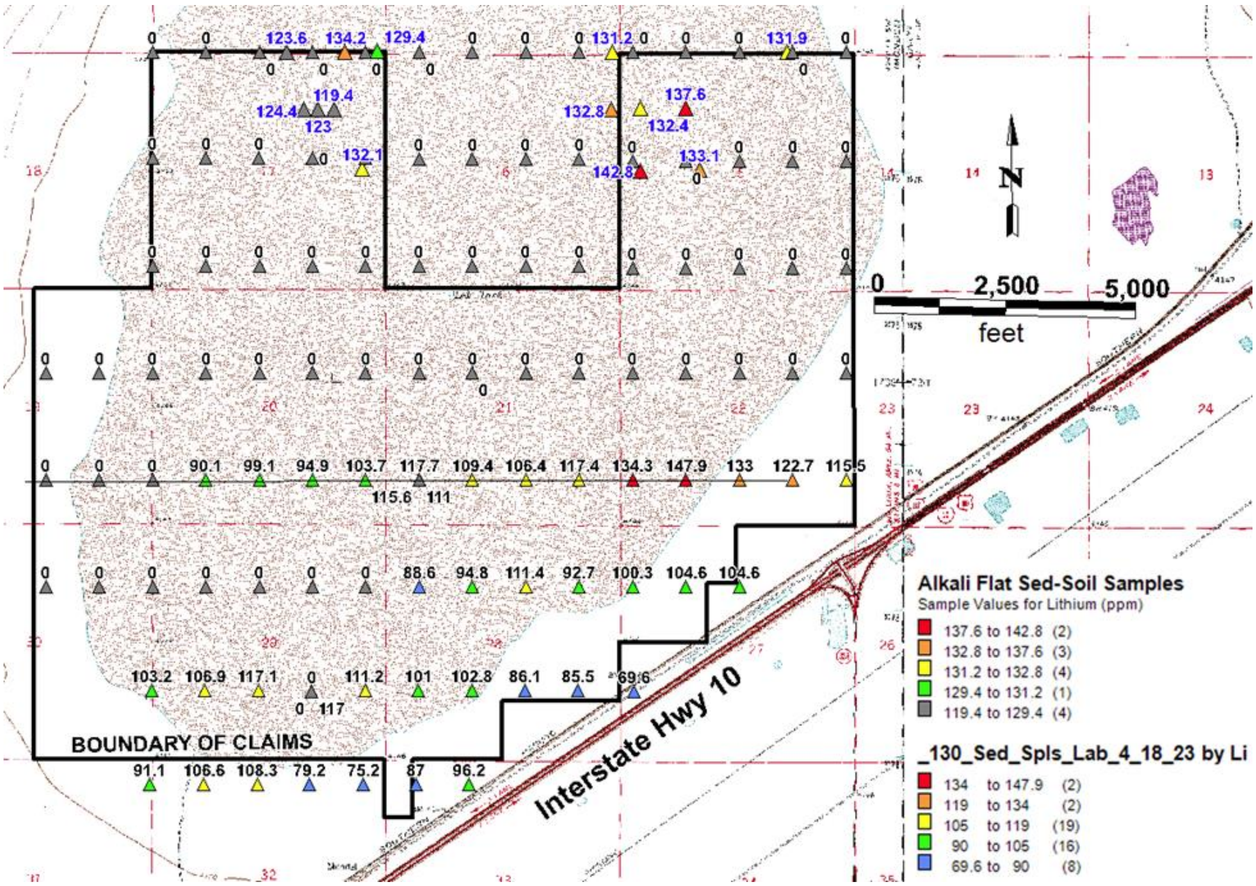

Figure 1.4.3 (1): Sample distribution and preliminary results of soil sampling (n=128) at the Alkali Flats property.

2. INTRODUCTION

Mount Morgan Resources Ltd. was retained by Lancaster Lithium, a private company located in British Columbia, Canada, to prepare an updated NI 43-101 Technical Report for the Alkali Flat Lithium Project in accordance with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101), NI 43-101 Form F1, and Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "Best Practices and Reporting Guidelines." The update incorporates a description of new exploration on the property and results to date. The Alkali Flat Lithium Project is in Hidalgo County New Mexico west of the town of Lordsburg, New Mexico. The Property is centred at UTM coordinates 696,894E/3,574,521N (NAD 83, UTM Zone 12; 32.29016N/-108.90912E). The Property consists of 233 federal placer claims of 20 acres each for a total area of 4660 acres (1885.8 hectares) in one contiguous grouping. The renewal cost is $165 USD per claim for a total cost of $38,445 USD. The renewal costs are due before 12 noon on September 1 of each year.

2.1. Qualifications of Author

The Qualified Person responsible for this Report is Dr. Mark Fedikow, P.Geo. (Engineers Geoscientists Manitoba member #4658; Certified Professional Geologist C.P.G. Colorado, U.S.A. member #11039). The author is registered in good standing with the respective professional organizations and is a Qualified Person as defined by NI 43-101. Dr. Fedikow is responsible for all sections of this Technical Report.

2.2. Qualified Person Site Visit

Dr. Fedikow undertook the Property visit on January 5, 2023. During this time, he conducted detailed surface observations across all historical points of interest on the Property.

2.3. Sources of Information Used in this Report.

The information, conclusions, opinions, and estimates contained herein are based on data, reports, maps, and other information supplied by Lancaster Lithium and its representatives, and other third-party sources as indicated in the text. Additional sources of information were derived from field observations during the site visit of the Qualified Person as outlined in Sections 2.2.

2.4. Units Used in this Report.

Units of measurement used in this Technical Report include both metric and imperial. Specific quotes from published references use the units discussed in the text of historic documents. Dollar amounts are specified in the text as either Canadian or U.S. currency. Coordinates used in the text of the report are in the UTM system, NAD 83, Zone 12N.

3. RELIANCE ON OTHER EXPERTS

For this report, the Author has relied solely on ownership information provided by Lancaster Lithium, particularly in respect of the Property acquisition, property deals, rights, property ownership and title. A complete list of claims has been included in **Appendix 1**.

The Author is relying entirely on Lancaster Lithium in matters of environmental opinions regarding the Property. As of the date of this technical report there are no known environmental liabilities associated with the Property. This information is believed to be complete and correct to the best of the Authors' knowledge and no information has been intentionally withheld that would affect the conclusions made in this report.

4. PROPERTY DESCRIPTION AND LOCATION

The Alkali Flat lithium brine project is in the Basin and Range Physiographic Province of southwest New Mexico within a fault-bounded playa located in the Animas Valley 10 miles west of the town of Lordsburg, Hidalgo County, 160 miles east of Tucson, Arizona and 175 miles west of El Paso, Texas (**Figures 4.1 (2), 4.2 (3) and 4.3 (4)**). Access to the Property is by Interstate highway 10, which traverses the southern portion of the Property. Existing all-weather gravel roads skirt the perimeter of the playa on the east and west sides, and unimproved dirt tracks lead to various parts of the playa from the east, west and north. Access is well suited to support an exploration program to assess lithium potential in brine and related lithium-bearing sediments.

The Property consists of 233 claims covering 4,660 acres (1,885.8 hectares) in one claim grouping. The Property is centred at UTM coordinates 696,894E/3,574,521N (NAD 83, UTM Zone 12) (32.29016N/-108.90912E). The renewal cost is $165 USD per claim for a total cost of $38,445 USD and must be paid prior to 12 noon on September 1 each year.

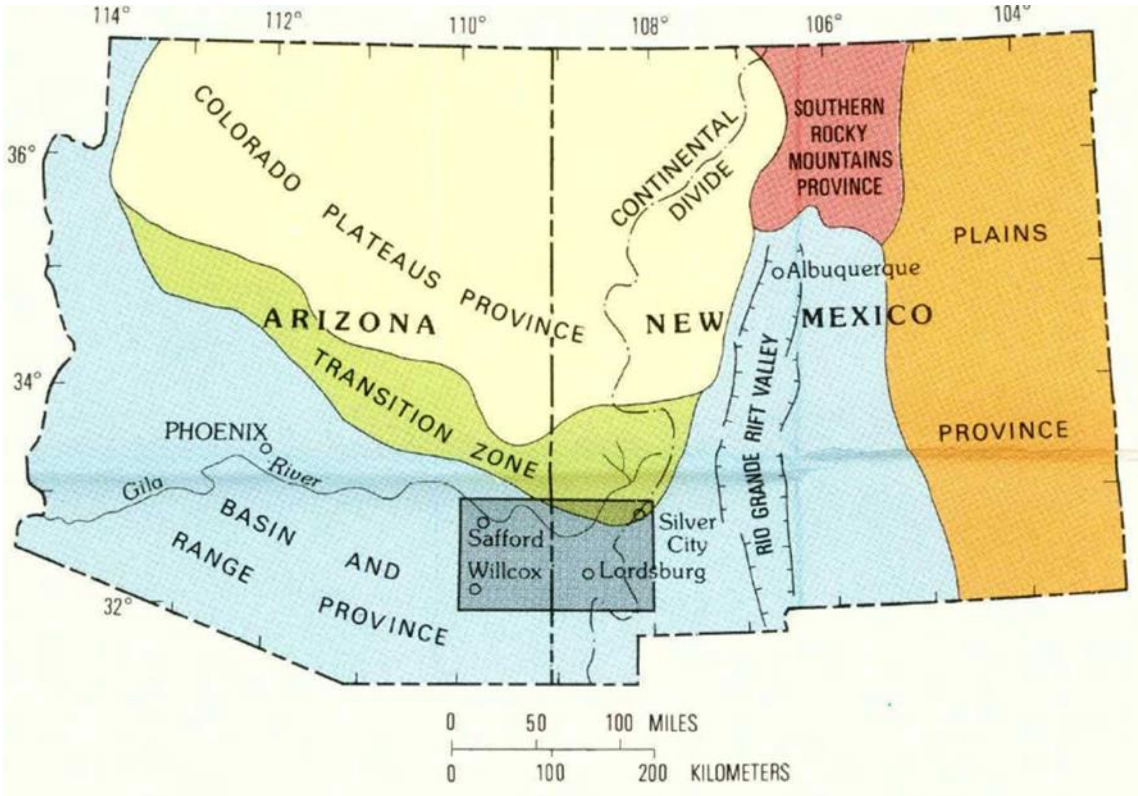

Figure 4.1 (2): Regional location map for the Alkali Flat Lithium Project, Hidalgo County, southwest New Mexico, U.S.A.

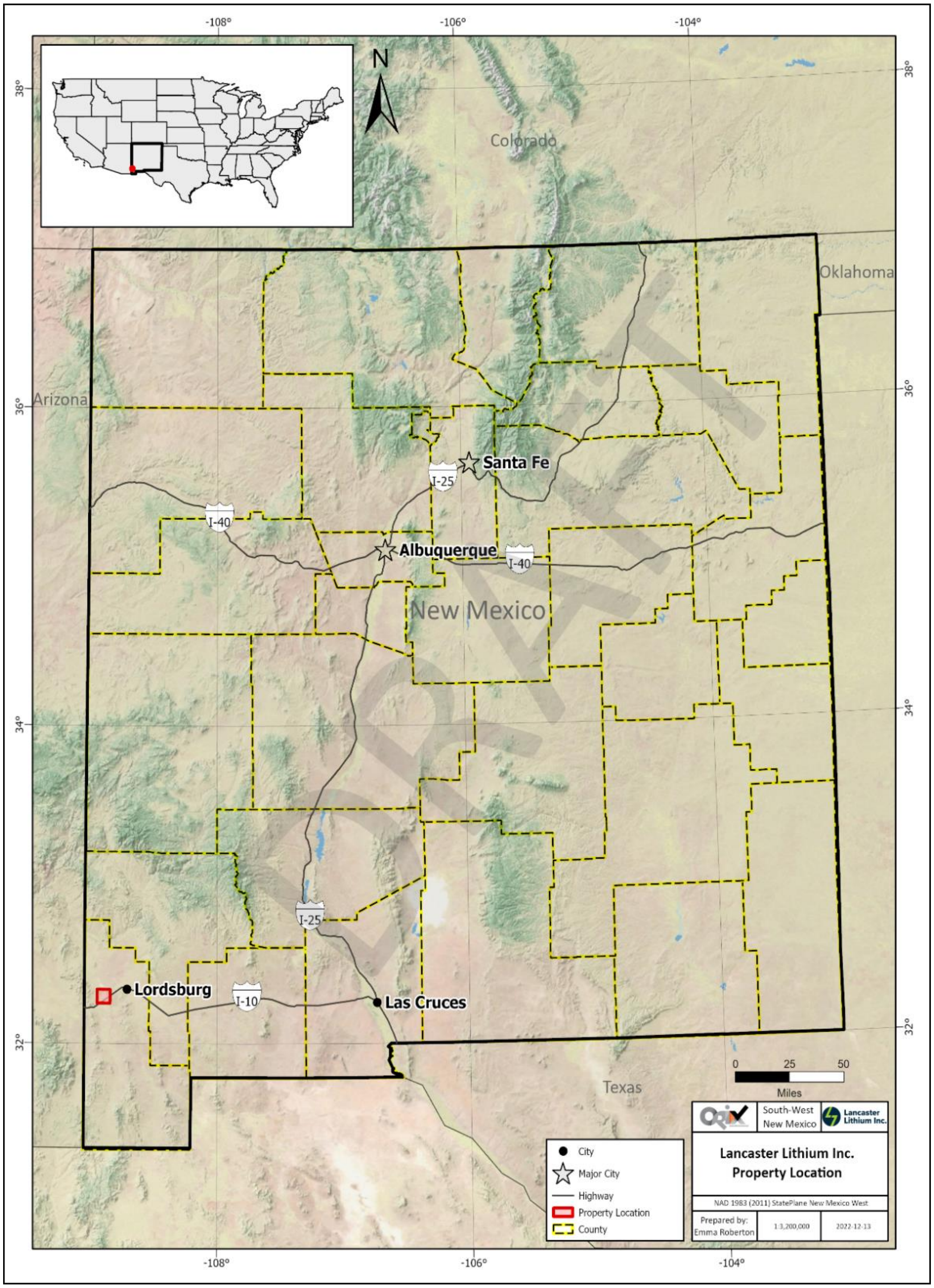

Figure 4.2 (3): Location map for the Alkali Flat Lithium Project, Hidalgo County, southwest New Mexico, U.S.A.

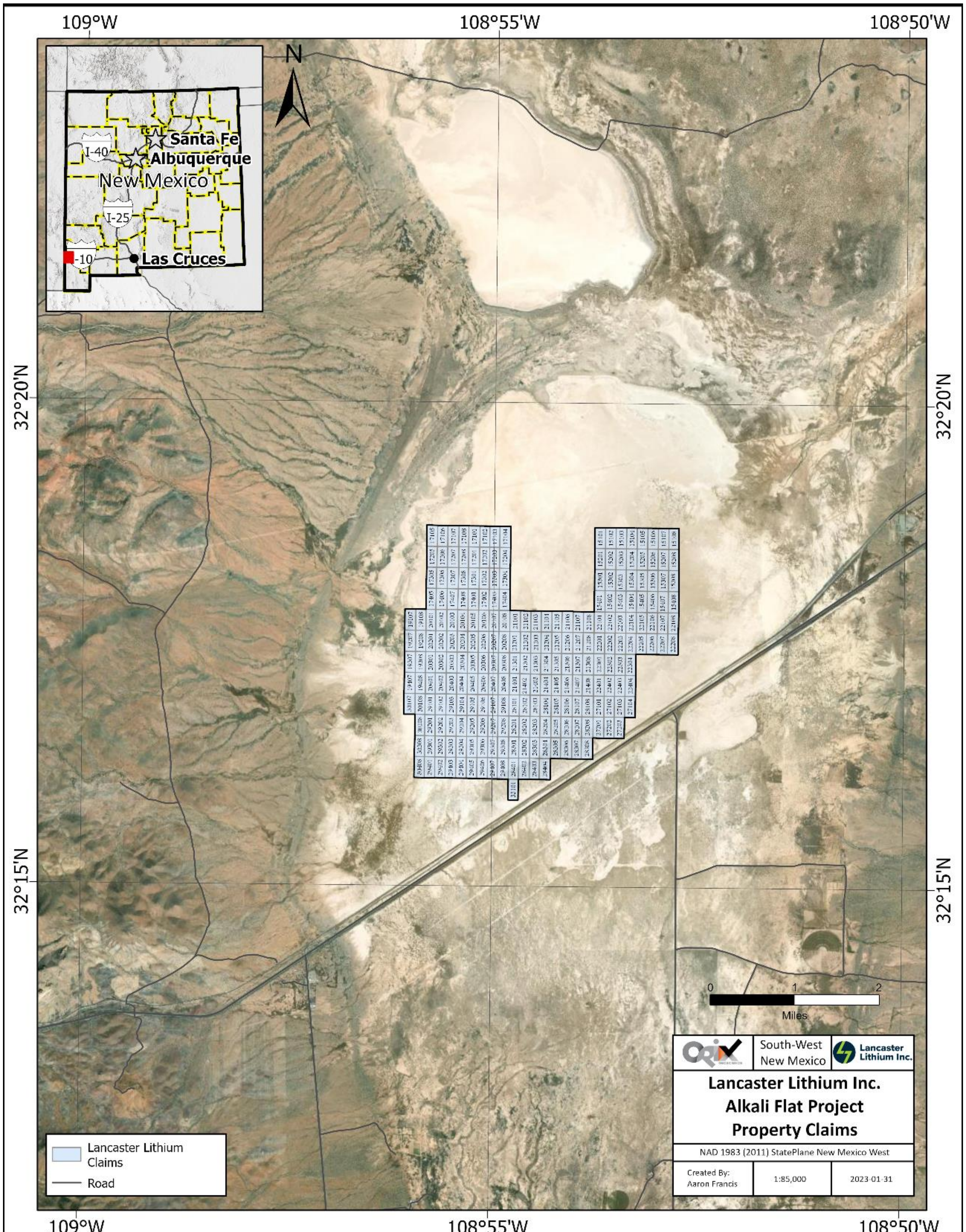

Figure 4.3 (4): Alkali Flat Lithium Project claims, Animas Valley, Hidalgo County, southwest New Mexico, U.S.A.

4.1. Required Permits

A permit application must be submitted to the State of New Mexico Energy, Minerals and Natural Resources Department detailing the area of exploration and whether there will be impacts on the area of the expected exploration. The application includes a review of the planned exploration in terms of its location and impact on the following:

- (i) The area of surface disturbance and the impact on wetlands, springs, perennial or intermittent streams, lakes, rivers, reservoirs, or riparian areas.
- (ii) Whether the exploration will be undertaken in designated critical habitat areas and result in adverse effects on endangered species or plants.
- (iii) If the exploration will take place in designated critical habitat areas, result in adverse effects on endangered species or plants.
- (iv) Whether exploration is in a Federal Wilderness area or wilderness study area, an area of critical environmental concern or an area within the National Wild and Scenic River system.
- (v) Whether exploration will take place in a known cemetery or burial ground.
- (vi) If exploration is in an area with cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties.
- (vii) Whether there will be any impact on groundwater with total dissolved solids of <10,000 mg/litre.
- (viii) If cyanide, mercury amalgam, heap leaching or dump leaching will be utilized on the project.
- (ix) Whether there will be the release of acid or other toxic substances.
- (x) Whether the project requires a variance from any part of the Mining Act rules.

After a review of responses to the above the application is then distributed to other State, Federal and Tribal agencies for technical review.

4.2. Environmental Liabilities

There are no environmental liabilities in the Alkali Flat Lithium claims area.

4.3. Surface Rights and Access

There are no known significant factors or risks that may affect access, title, or the right or ability to perform work on the Property.

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1. Access

The Property can be reached on Interstate Highway 10, which traverses the southern portion of the property, from either Phoenix or Tucson. The town of Lordsburg, ~22 miles east of the Arizona and New Mexico state border served as the base of operations for the Property visit (**Figure 5.1 (5))**. Local gravel access roads can be used to access the Property by foot or with trucks or ATV.

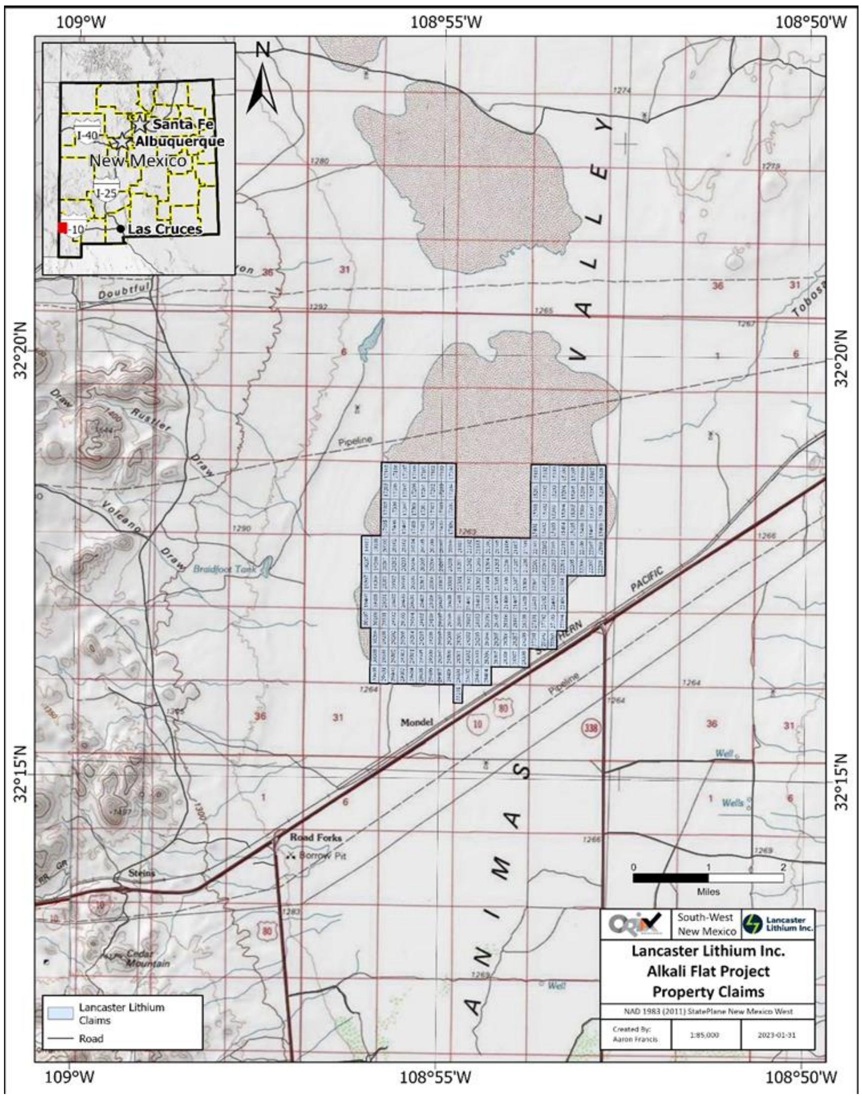

Figure 5.1 (5): Highway and railroad access to the Alkali Flat Property, southwest New Mexico, U.S.A.

5.2. Climate

The Alkali Flat Property has a semi-arid climate. Typically, the more southerly and lower elevations of the Intermountain West, summers are extremely hot during the daytime, with maxima above 90 F or 32.2 C for over four months on an average of 122 afternoons during a full year. 100 F or 37.8 C is exceeded on average for 30 afternoons each year, and the record high of 114 °F (45.6 C) was set during a southwestern heatwave on June 27, 1994. Humidity in early summer is very low, but increases in late summer due to the monsoon, which, between July and early October brings the majority of the year's limited precipitation. From October temperatures cool off rapidly, and by November most mornings are below 32 F or 0 C, but afternoons remain comfortable to warm all through the winter, with only 10.1 afternoons failing to reach 50 F or 10°C and only one afternoon every two years not topping freezing. Minima fall below freezing on an average of 108 mornings, but 0 F or −17.8 C has been reached only during two exceptional cold waves in January 1962 and December 1978, when the record low of −14°F or −25.6 C was reached on the 9th.

Except for the unusually wet December 1991 when 4.55 inches (115.6 mm) fell from a series of subtropical cyclones, monthly rainfalls above 4.00 inches or 101.6 millimetres are restricted to the monsoon season: the wettest month between 1971 and 2000 was July 1981 with 5.34 inches (135.6 mm). The wettest day has been June 28 of 1981 with 3.00 inches or 76.2 millimetres. Snowfall is very rare; the median for the year is zero and the mean only 3.5 inches or 0.09 metres; with the heaviest snowfall between 1971 and 2000 being of 11.0 inches or 0.28 metres during Christmas and Boxing Days, 1987. Climate data is summarized in **Table 5.2 (4).**

Table 5.2 (3): Climate data for Lordsburg 4 SE, New Mexico (1991 to 2020; extremes 1948 to 2001)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °F (°C)	80 (27)	85 (29)	93 (34)	100 (38)	106 (41)	114 (46)	110 (43)	109 (43)	104 (40)	98 (37)	86 (30)	76 (24)	114 (46)
Average high °F (°C)	60.5 (15.8)	65.5 (18.6)	73.3 (22.9)	82.2 (27.9)	90.8 (32.7)	99.5 (37.5)	98.6 (37.0)	96.2 (35.7)	91.4 (33.0)	82.4 (28.0)	70.2 (21.2)	59.0 (15.0)	80.8 (27.1)
Average low °F (°C)	25.2 (−3.8)	28.2 (−2.1)	32.8 (0.4)	37.9 (3.3)	47.8 (8.8)	58.1 (14.5)	65.1 (18.4)	63.2 (17.3)	56.1 (13.4)	43.4 (6.3)	30.7 (−0.7)	25.6 (−3.6)	42.8 (6.0)
Record low °F (°C)	−9 (−23)	3 (−16)	11 (−12)	12 (−11)	24 (−4)	35 (2)	49 (9)	42 (6)	36 (2)	19 (−7)	8 (−13)	−14 (−26)	−14 (−26)
Average rainfall inches (mm)	0.88 (22)	0.79 (20)	0.60 (15)	0.25 (6.4)	0.25 (6.4)	0.34 (8.6)	2.12 (54)	2.17 (55)	1.21 (31)	0.73 (19)	0.79 (20)	1.19 (30)	11.32 (287.4)
Average snowfall inches (cm)	1 (2.5)	1 (2.5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5.1)	4 (10.1)
Average rainy days (≥ 0.01 inch)	4.7	4.2	4.2	1.7	2.1	2.2	8.0	7.5	4.8	4.6	2.9	4.2	51.1
Source 1: National Oceanic and Atmospheric Administration													

There are no permanent lakes or streams in the Property area although water normally accumulates in shallow playas. Water can normally be obtained from depths as shallow as 15’ in the Lower Animas Basin. For irrigation purposes water can be drawn from depths between 150’ and 250’ in the Lordsburg area.

5.3. Physiography, Topography and Vegetation

The Alkali Flat Property forms part of the Lordsburg Playa Network 20 km southwest of Lordsburg, New Mexico, on a dry lakebed and approximately 8 km east of the Peloncillo Mountain range **(Figure 5.3 (6))**, 13 km west of the Pyramid Mountains, and north of Interstate 10, at an elevation of 1267 m above sea level.

The Property occurs within the Basin and Range Physiographic Province that has been subdivided into three topographic units known as the Lower Animas Valley on the west, the Lordsburg Valley on the east and the Pyramid Mountains that occur between the two valleys.

The Lower Animas Valley, host to the Alkali Flat Property, is bounded on the west by the Peloncillo Mountains and is a typical near-desert basin with detritus and fill contributed by the bounding mountain ranges. The Basin is flat but slopes gently towards the mountain ranges. The northern portion of the Valley is host to the 15 square mile Alkali Flat. The ancient pluvial Lake Animus is marked by beach ridges and strand lines developed as the Lake subsided. Lordsburg Valley occurs to the east of the Pyramid Mountains and has similarities to the Lower Animas Valley.

The Pyramid Mountains are a 22 mile long by 3-7-mile-wide linear north to south-trending mountain range covering approximately 90 square miles. The Range has been divided by two low passes into northern, middle, and southern portions. The northern portion consists of bare pyramidal shaped hills with maximum elevations of 5000' to 5100' and includes the Lordsburg and Pyramid Mining Districts. Drainage patterns are very irregular.

The topography of the middle portions of the Pyramid Mountains is controlled by the original depositional surfaces of Middle to Late Tertiary welded tuff and pyroclastic deposits and by dissected older basalt flows.

The southern Pyramid Mountains have the most highly dissected topography with both constructional and destructional landforms present.

The highest peaks in the Pyramid Range are volcanic necks of rhyolitic composition and attain maximum elevations of 6000’. Average relief in the range is about 500’. The Range is bordered on all sides by gently sloping pediments with bedrock present as low spurs separated by gravel-filled arroyos or as isolated remnants surrounded by alluvium.

Vegetation at the Lordsburg Playa site is extremely sparse. A few individual alkali sacaton (*Sporobolus airoides* (Torr.) Torr.) plants are present. In general, the Lordsburg district is sparsely vegetated but species typical of the southwest United States are present. Mesquite, greasewood, and numerous varieties of cactus are common, however, none of these occur on the playa surface area.

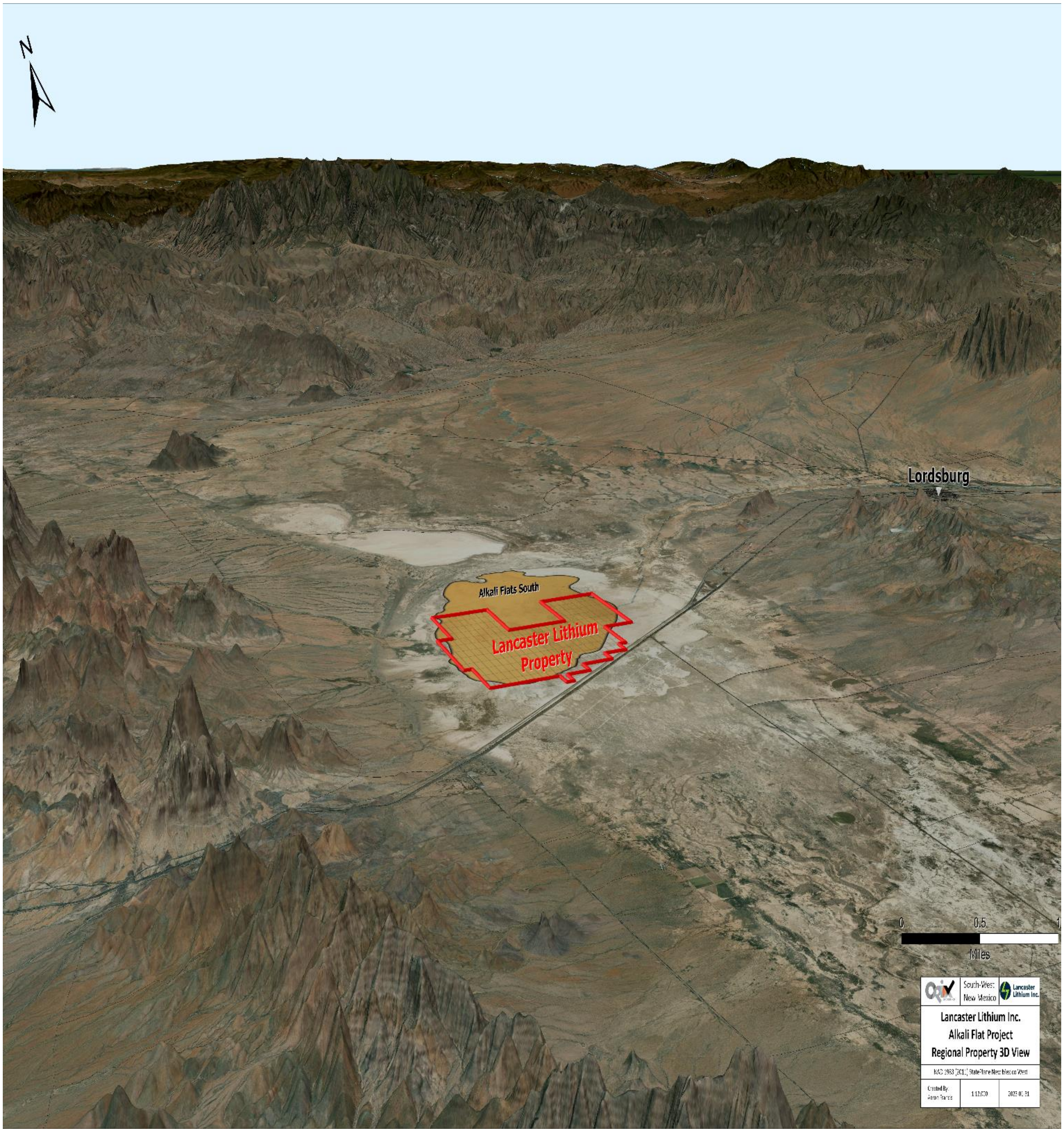

Figure 5.3 (6): Topography at the Alkali Flat Property, southwest New Mexico, U.S.A.

5.4. Air Transport

There are several municipal and international airports that provide access to the Alkali Flat Property area. These airports are listed in order of increasing distance form the Alkali Flat Property (**Table 5.4 (5)**).

Table 5.4 (4): Air transport to the Alkali Flat Property.

Airport	Distance from Lordsburg (miles/kilometers)
Grant County Municipal Airport	38 /61
Sierra Vista Municipal Airport	110/176
Tucson International Airport	132/212
El Paso International Airport	142/228

5.5 Rail

A major, double-track, transcontinental rail line runs parallel to Highway I-10 and passes immediately south of the Alkali Flat Property. Southern Pacific operates a freight service and passenger service is operated by Amtrak.

5.6 Power

Natural Gas is the primary fuel type in Hidalgo County and provides 66.89% of electricity production. Natural Gas with Geothermal (28.44%) and Distillate Fuel Oil (4.67%) account for 100.00% of the county's electricity generation. Hidalgo County has 3 power plants within its borders. Public Service Co of NM Lordsburg Generating Hidalgo 88 Natural gas Located in Southwestern, NM near Lordsburg; provides power to southwestern NM during high-use times. Tri-State G and T Assn Inc Pyramid Hidalgo 186 Natural gas Located 30 miles southeast of Lordsburg in southwestern New Mexico; Pyramid serves Tri-State’s southern system loads and provides backup generation when the G&T’s baseload, coal-fired Escalante Generating Station in northern New Mexico is unavailable.

Potential exists for solar and wind power to assist the needs of the proposed exploration program and particularly any future exploitation program at the Alkali Flat Lithium Project. The Property is a vast area of flat topography with no trees and no brush to inhibit solar radiation; the solar potential of the region is among the highest in the U.S. Solar power could be the main source of energy for future lithium production.

5.7 Water

Guidelines for the Animas underground water basin have been provided by the office of the New Mexico state engineer (Blaine, 2016). These guidelines are in support of water right applications and the orderly development of water resources.

6. HISTORY

The Alkali Flat Lithium Project is an early-stage exploration property in the Lordsburg area of New Mexico. Exploration on the project will be directed to the discovery of lithium-enriched brines from high total dissolved solids in aquifers using a combination of geophysical and geochemical surveys followed by drill testing of resultant targets.

6.1 Previous Lithium Exploration at Alkali Flat

A soil survey was undertaken in 2023 in which 14 sediment samples were collected by the operator from the northern portion of the Majuba/Lancaster claim group for analysis (Blakestad, 2023; **Figure 6.1 (7)**). The purpose of the sampling was to assess the geochemical variability of playa sediments for lithium and related elements for possible future evaluation and development.

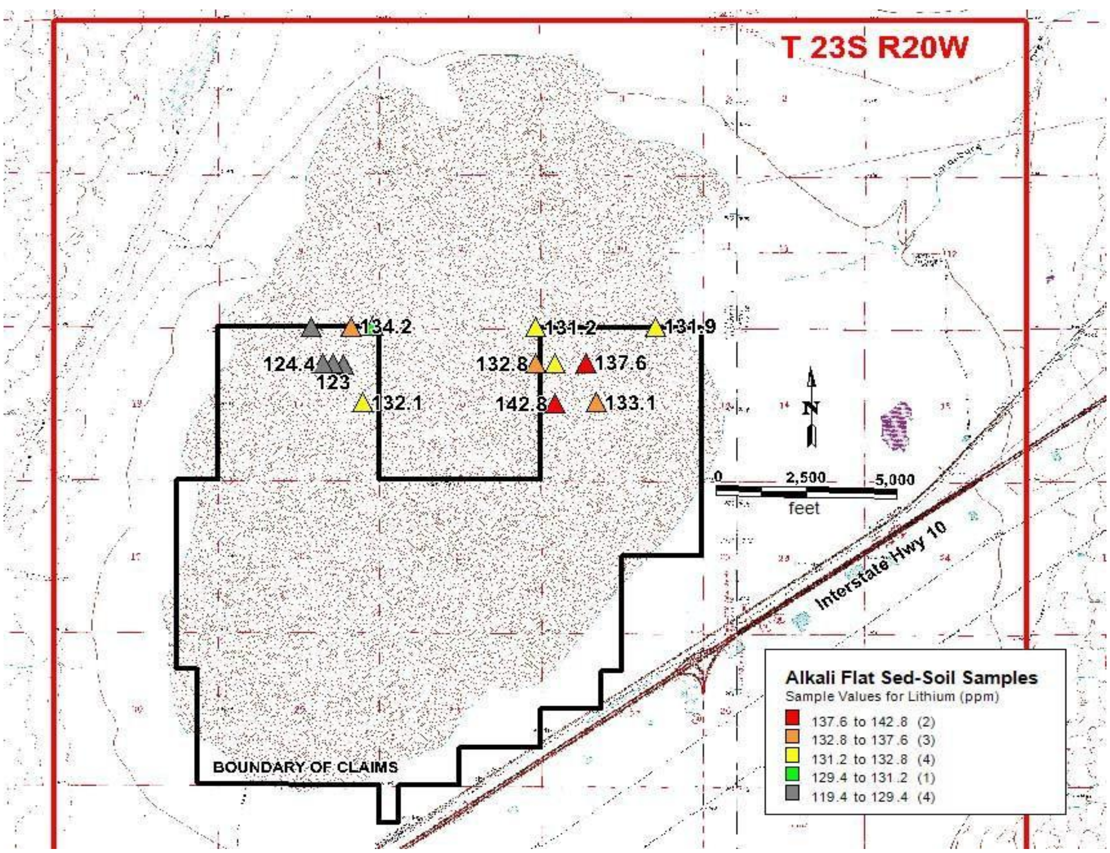

Figure 6.1 (7): Sediment samples collected from the northern portion of the Alkali Flat playa.

6.2 Description of the Playa Sediment Profile

Prior to this geochemical orientation survey, the playa sediments had been regarded as homogenous however results from the survey indicate that variations in element concentrations, including lithium, are present in the vertical soil profile. The unconsolidated sediment profile from which the sediment sample was collected had previously been interpreted as uniform. An organic-rich A-Horizon is not present at the playa and the playa surface is a duricrust of dry, moderately to weakly indurated sediment to a depth of approximately six inches. The duricrust is a cream-colored, fine-grained sediment, with amorphous gypsum as the binder for the sediment. Below the duricrust the playa sediments consists of compact, tan-colored, fine-grained silt and sandy silt, which is moderately moist. Widely dispersed clumps of reedy grass exist locally on the playa surface; in places where those grasses have died, they are partially replaced with gypsum, which renders the grass stems brittle.

6.3 Collection of Sediment Samples

All sediment samples were obtained from the playa using a hand-held, battery operated, hammer drill fitted with a three-inch diameter auger flight, on a 20-inch shaft. This sampling equipment was adequate for sediment sampling to a depth of 18 inches. Fourteen samples were obtained from the northern part of the claim area (**Figure 6.1 (8)**).

The upper ten inches of sediment was discarded, and the material from 10 inched to 18 inches was collected for analysis after a near-total four-acid digestion. Excess drilled material was used to in-fill the sample hole.

6.4 Analytical Results

Seven of the 47 elements analyzed from the 14 samples are reported in **Table 6.4 (5).** identified by sample number and accompanied by sample weights. Analyses are reported in per cent (%), except for lithium (Li) and arsenic (As), which are reported in mg/l (parts per million). The detection limit for each element is shown in bold in the header row.

Table 6.4 (5): Summary of select analyses for 14 sediment samples from the Alkali Flat playa.

SAMPLE#	Sample Wt.(g)	Li(ppm).1	Mg (%).01	As(ppm).5	S (%).05	Ca (%).01	Na (%).01	Sr(ppm)1
3108	709	133.1	1.75	13.5	-0.05	4.26	1.89	444
3109	413	142.8	1.75	17.1	-0.05	3.63	2.03	406
3110	571	137.6	1.74	10.3	-0.05	3.93	1.9	432
3111	393	134.2	1.76	8.3	-0.05	4.63	1.89	512
3112	400	129.4	1.69	6.8	-0.05	4.26	1.94	483
3113	426	123.6	1.64	7.1	-0.05	4.49	1.88	493
3114	403	119.4	1.56	6.5	-0.05	4.47	1.92	490
3115	591	123	1.67	11	0.06	4.98	1.98	547
3116	479	124.4	1.58	32.3	-0.05	4.61	1.81	505
3117	583	132.1	1.73	55.7	-0.05	4.92	1.85	516
3118	622	131.2	1.82	7.4	-0.05	4.4	2.09	469
3119	495	132.8	1.71	21.2	-0.05	4.26	1.96	453
3120	716	132.4	1.79	49.4	-0.05	4.39	2.03	461
3121	559	131.9	1.82	6.4	-0.05	4.18	1.98	445

6.5 Comparison of Data Sets

A valid comparison between the sediment samples permits observations to be drawn from a closely spaced set of samples collected over a portion of the playa. The range in concentration for lithium contents is between 119 ppm and 143 ppm and documents a somewhat restricted but elevated range in concentration for the playa samples. The difference between the playa samples and those collected from the NURE Silver City stream sediment data set and the NURE sediment samples for New Mexico indicates a marked difference in concentration exists between the lithium concentrations in these datasets (**Table 6.5 (6)**). A strongly elevated lithium analysis of 4696 parts per billion from a NURE water sample collected from the playa corresponds with the elevated lithium contents in the playa sediments. The statistical parameters for lithium in the 14 playa samples is calculated on a small number of samples (n=14) collected from a spatially restricted area and as such cannot be considered statistically rigorous. However, the marked, consistently elevated lithium in the playa samples is noted.

Table 6.5 (6): Comparison for lithium contents between the 2022 Alkali Flat sediment survey (n=14; Blakestad, 2022), NURE Silver City stream sediment samples (n=751; U.S. Geological Survey data base), and 3,487 NURE sediment samples for the state of New Mexico. The Alkali Flat dataset comprises 14 sediment samples.

	n=14	n=751	n=3487
Maximum	**142.8**	**174.5**	**218**
Arithmetic Mean	**130.6**	**32.6**	**29.5**
Standard Deviation (SD)	**6.2**	**14.2**	**11.4**
Mean+1SD	**136.8**	**46.8**	**40.9**
Mean+2SD	**143**	**61**	**52.3**

6.6 National Uranium Reconnaissance Program (NURE)

The National Uranium Resource Evaluation (NURE) program was initiated by the Atomic Energy Commission (AEC) in 1973 with a primary goal of identifying uranium resources in the United States. A compilation of NURE sediment and water sample data for New Mexico provides data that highlights samples with elevated lithium contents from the Lordsburg – Alkali Flat area. The distribution of NURE sediment samples (population n=736) for the Silver City map area is shown in **Figure 6.6.1 (8)**. A sediment sample with 124 ppm lithium was collected from the Alkali Flat Property.

The distribution of NURE water samples collected by the U.S. Geological Survey from the Silver City Quadrangle is presented in **Figure 6.6.2 (9)**. NURE water samples were collected from water wells, streams, springs, and ponds throughout the state of New Mexico. The sample population totalled 5871 samples. Blakestad (2022) describes the distribution of strongly elevated lithium concentrations in the database occur in the ancestral Animas Lake valley, and “up-stream” of ground water flow patterns determined by study of thermal water flows at the Bruce Levy KGRA (Lightning Dock). A water sample collected from a production well at the KGRA contained 865 ppb Li. A second water sample from a well 2.5 miles north of the KGRA contained 1173 ppb Li (**Figure 6.6.2 (9)**). The second highest lithium value in the New Mexico water data base (4696 ppb Li) was collected from a pond in the center of the Property.

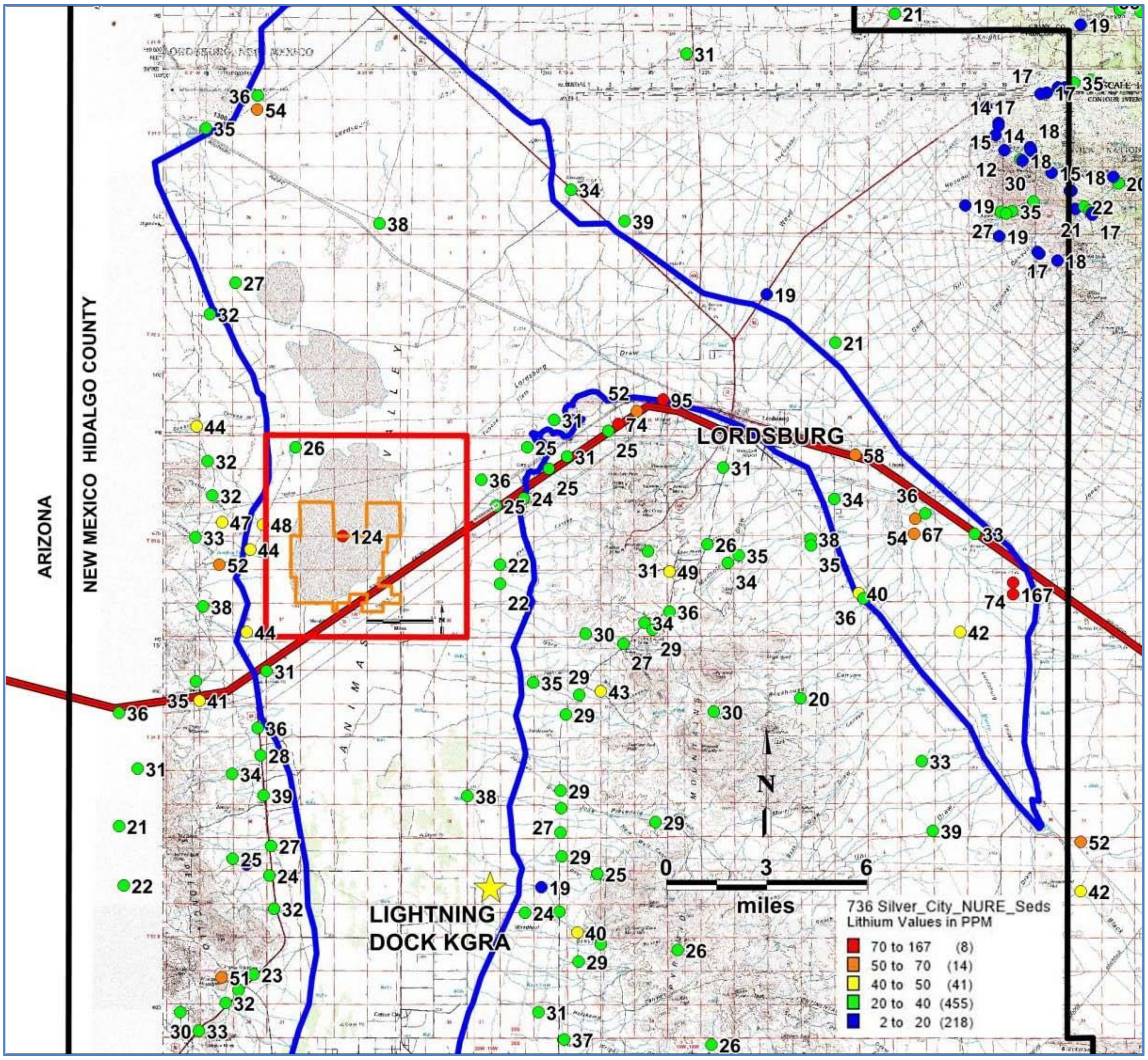

Figure 6.6.1 (8): Map showing distribution of NURE sediment samples with lithium concentrations in the Silver City quadrangle including the Alkali Flat Property outlined in orange. The boundary of ancestral Lake Animas (blue outline), Township 23 South Range 20 West (red square), claims group (orange out line), I-10 (red & black line), and Hidalgo County (black lines) are also shown.

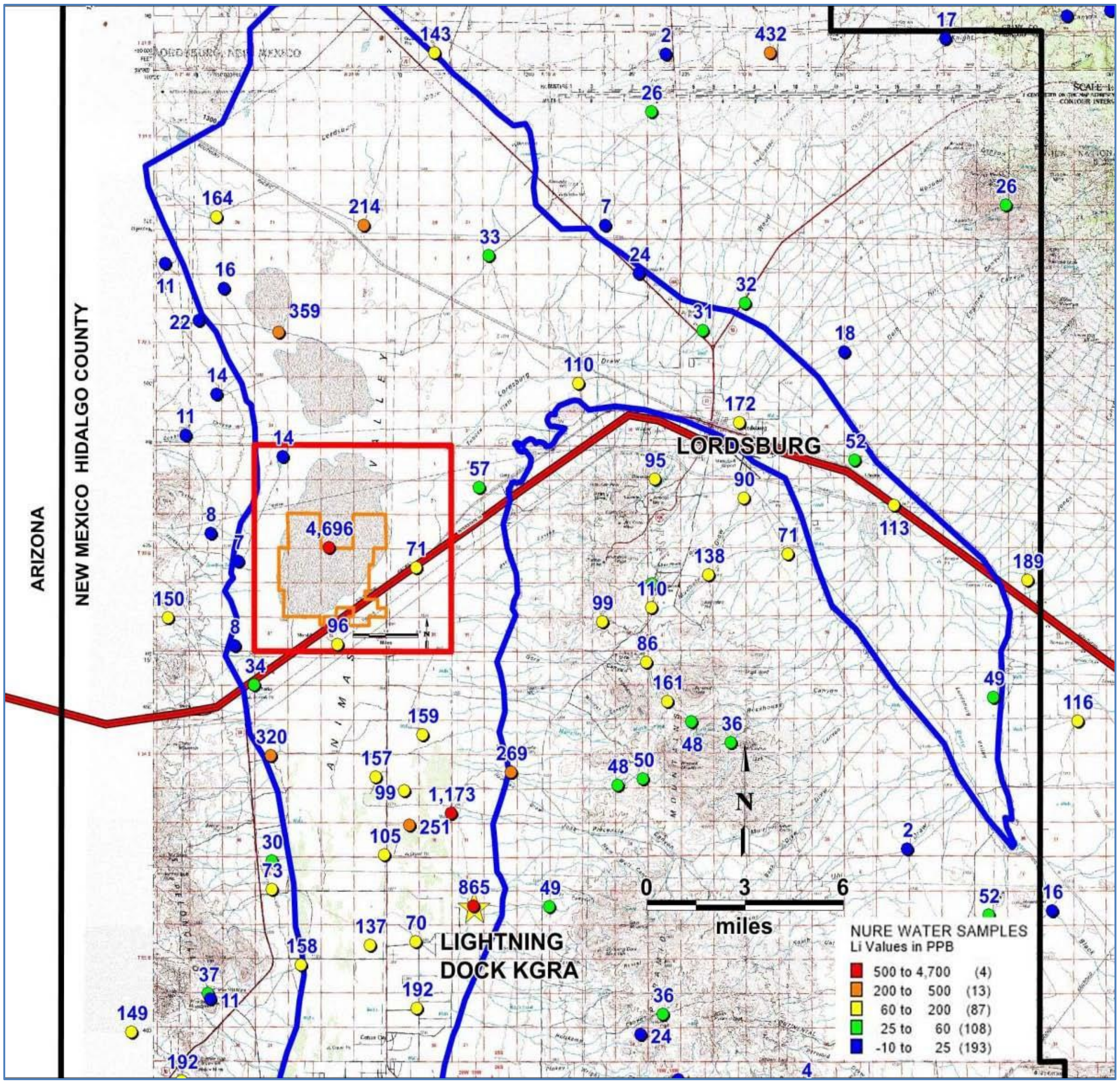

Figure 6.6.2 (9): Map showing distribution of NURE water samples for the Silver City quadrangle labeled by Li concentration. Figure labelling conventions as in Figure 6.6.1 (8).

6.7 Base, Precious and Industrial Mineral Exploration

Historically, there has been abundant base and precious metal exploration and development from the Lordsburg copper and Pyramid silver mining districts both of which were in the northern portion of the Pyramid Mountains. Gold, lead, and zinc were also mined from fault-hosted vein systems in Cretaceous basalt and granodiorite in these districts, however most of the mining operations have been closed since the earl 1930s.

Commercial deposits of perlite were developed and produced intermittently in the Lordsburg district and several mines in the Pyramid district exploited Cretaceous basalt-hosted fluorspar deposits. Agate was also extracted on a small scale from shallow pits in Tertiary pyroxene andesite.

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1. Geological Setting (Figures 7.5.1 (10) and 7.5.2 (11))

The geological setting of the Animas Valley and the Alkali Flat Property is dominated by the Pyramid Mountains however the Valley and the immediate area of the Property is marked by a lack of indurated sedimentary rocks. Outside of the general area Paleozoic and Mesozoic sedimentary rocks are interpreted to be present at depth along the entire extent of the Pyramid Mountains. The Alkali Flat Property is flanked on the east, west and south by unconsolidated piedmont alluvial deposits and alluvium and on the north by eolian deposits.

7.2 Quaternary Geology

The Quaternary geology of ancestral Lake Animas has been defined by Fleischhauer, Jr., and Stone (1982). They defined stages of development for the Lake based on an analysis of the presence of physical features mapped over the extent of the Lake. Its highest stage of development was between 4,190'-4,195' and at this level was approximately 17 miles long, 8 miles wide and 50' deep and covered an area of over 150 square miles. The shorelines of the Lake are marked by the development of homogenous sand and gravel beaches. Limited archeological work and soil morphology indicates a Holocene age for the beaches and the age of the soil and additional material of the high shore ridge is Pleistocene.

Quaternary surficial materials of the Animas Valley have been divided into piedmont and valley-floor deposits (Elston et al, 1983). Piedmont deposits consist of coalescing Holocene and Pleistocene alluvial fans and pediment deposits. Modern or active wash sediment, which originated within the interior of the Pyramid Mountains and was deposited on the piedmont surface, is included. the piedmont deposits are estimated to be no more than 25 m (82 ft) thick. Valley-floor deposits are composed of fluvio-deltaic deposits associated with the ancient Lake Animas, as well as modern eolian deposits (coppice dunes and sand blankets) and active sheetwash deposits. The valley floor deposits are much thicker than the piedmont deposits, but the thickness of the former is unknown. The Quaternary piedmont deposits have been displaced by the Animas Valley fault, probably during the late Pleistocene or early Holocene.

7.3 Animas Valley Pre-Tertiary and Tertiary Lithologies

The Animas Valley encapsulates rocks unique to the area that cannot be correlated to any unit in the Pyramid Mountains. These include fusulinid-bearing Pennsylvanian limestone and Tertiary quartz and sanidine-bearing rhyolite. Distinct rock types in the Animas Valley include a succession of rhyolite ash-flow-tuff units and a zone of bedded pumiceous tuff. Welding of the ash-flow tuffs varies from poor to intense; vitrophyre occurs above the bedded tuff zone. Quartz, plagioclase and sanidine phenocrysts and sparse biotite occur in the lowest unit whereas higher units contain sphene, clinopyroxene, and/or hornblende. Compressed pumice lenses are conspicuous.

Flanking the Alkali Flat Property to the east and west are successions of volcanic and intrusive lithologies of intermediate to silicic composition. These include Tertiary and Tertiary-Cretaceous andesitic to dacitic lavas, pyroclastic breccias and Lower to Middle Tertiary rhyolitic to dacitic pyroclastic rocks.

7.4 Mid-Tertiary Lithologies

Mid-Tertiary geologic events in southwestern New Mexico were dominated by volcanism, and by the eruption of voluminous ash-flow tuff (ignimbrites) from very large calderas (Elston, 1978; Deal and others, 1978). These calderas have been deeply eroded with only a few remnants of deeply eroded caldera structures remain. The southern two-thirds of the Pyramid Mountains are interpreted as a segment of an Oligocene ash-flow-tuff cauldron, elongated to the northwest. Hydrothermal alteration is widespread in the Pyramid Mountain section near the Bruce Levy (formerly Lightning Dock) Geothermal anomaly but is probably related to caldera formation, not to the modern geothermal anomaly that is responsible for driving convective fluid movement in the Valley.

Mid-Tertiary structures are dominated by the Muir cauldron, which is an elongated structure with its long axis striking northwest, roughly parallel to the regional trend of pre-Tertiary basement structures. The volcanic complex at the Muir caldera formed in two stages, separated by an interval of caldera collapse and alteration. First-stage eruptions of the Muir cauldron began with rhyolite lavas and small amounts of rhyolite tuff. The eruptions culminated with the eruption of a rhyolite ash-flow tuff, both of which are pervasively altered. Caldera collapse, during eruption of the rhyolite ash flow tuff, was accompanied by widespread slumping of the caldera walls and formation of megabreccia. This was followed by a period of hydrothermal alteration, which in turn was followed by renewed eruptions. This second stage of eruptions began with eruption of an ash-flow tuff. The limited outcrop area of this tuff is surrounded by two belts of felsic flows, domes, associated tuffs, and andesite flows. The earlier and inner belt consists of rhyolite of Pyramid Peak and associated tuff. Successive outer bands of ring fracture domes of the Muir caldera include latite and rhyolite.

7.5 Mineralization

Mineralization veins of several ages occur in the Pyramid Mountains including northeast- and west-trending veins of the Pyramid subdistrict of the Lordsburg mining district, which have yielded between $550,000 and $600,000 in silver and copper (Elston, 1965). Mineralization may be related to the Lordsburg granodiorite porphyry stock. A second period of mineralization is associated with the formation of the Oligocene Muir cauldron. Mineral production has been negligible. Widespread pyritization in in rhyolite and in tuff is common and veins with pyrite and stibnite are also present. A third period of mineralization after, or concurrent with, later stages of basin-and-range faulting resulted in northwest- or north-trending veins hosting fluorite, psilomelane and black and white calcite. Within the general area the veins have been developed on a small scale for fluorspar.

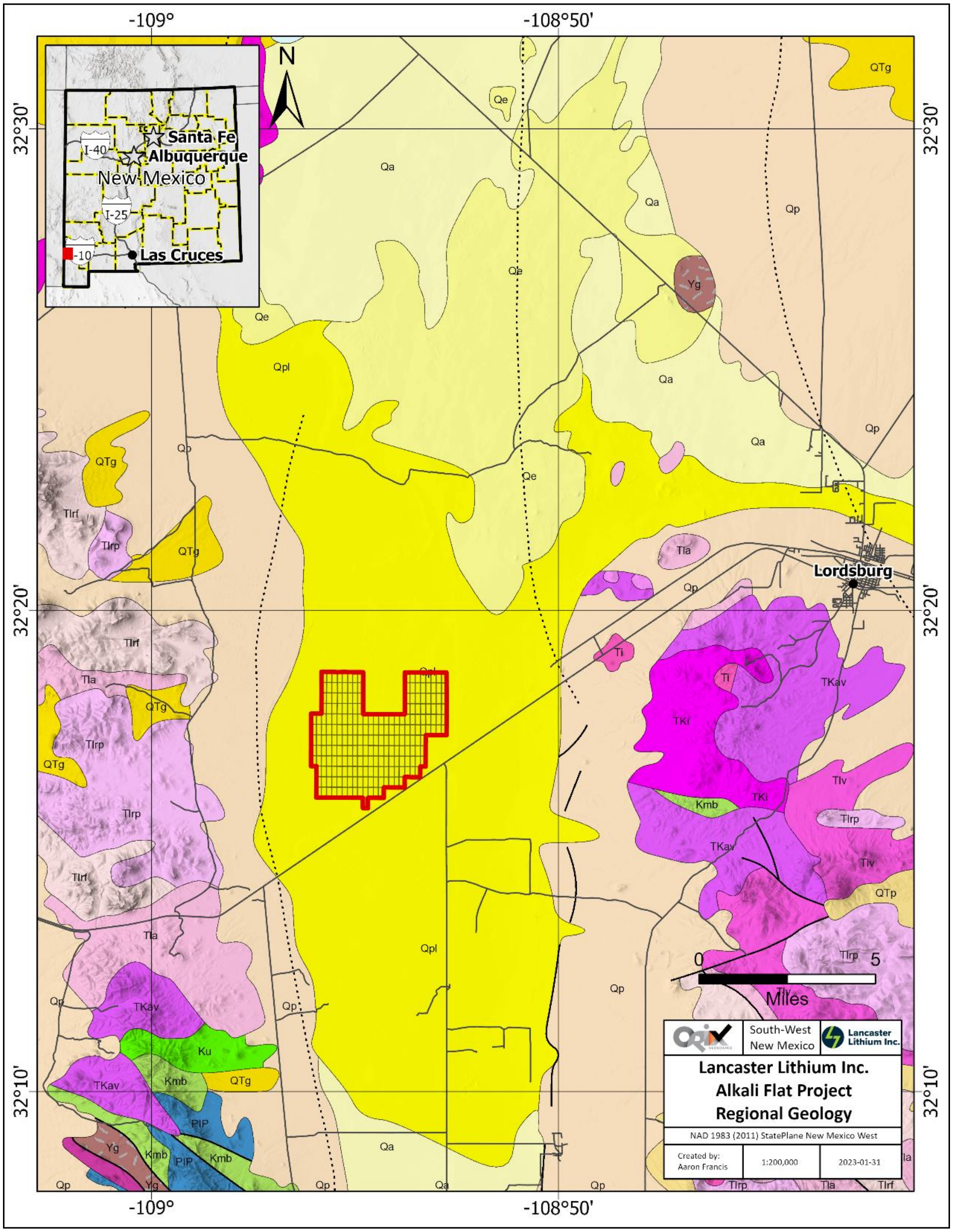

Figure 7.5.1 (10): Regional geological setting of the Alkali Flat lithium project. Adapted from the Geologic Map of New Mexico, New Mexico Bureau of Geology and Mineral Resources, 2003, Scale 1:500 000.

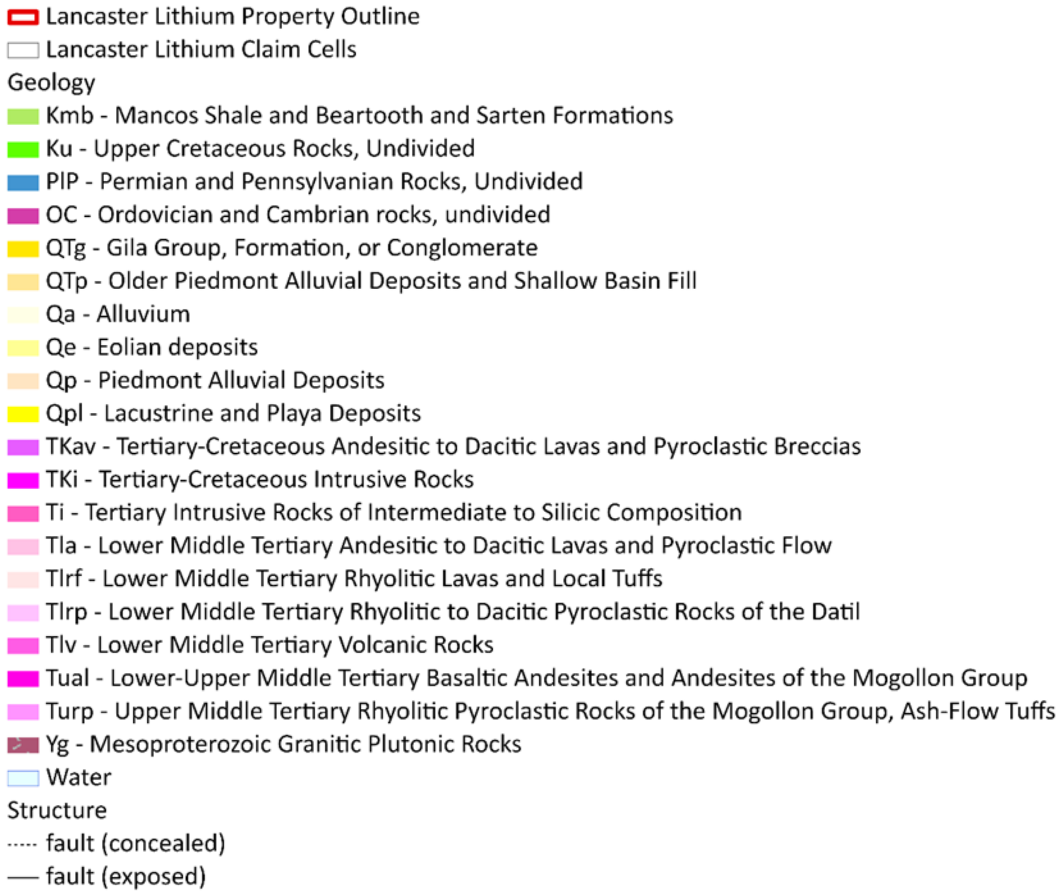

Figure 7.5.2. (11): Geological Legend for Figure 7.5.1 (10).

7.6 Regional Geophysics

Regional magnetic and gravity surveys have been conducted by various entities over southwest New Mexico and adjacent southeastern Arizona. When regional gravity and magnetic survey data are overlain on the geology and topographic maps of the Alkali Flat Property area it becomes apparent that a high degree of correlation exists between the geophysical survey results and the interpreted distribution of the playa basin (**Figure 7.6 (12)**).

A major gravity low partially overlies the Alkali Flat Property. It is two miles wide and approximately five miles long and extends southward from the I-10 highway for an additional three miles. The absence of magnetic minerals in the basin sediments produces a magnetic low. The magnetic lows indicated by blue and light blue shades in

Figure 6.1 (7) coincide with the gravity low, in the central portion of the Property.

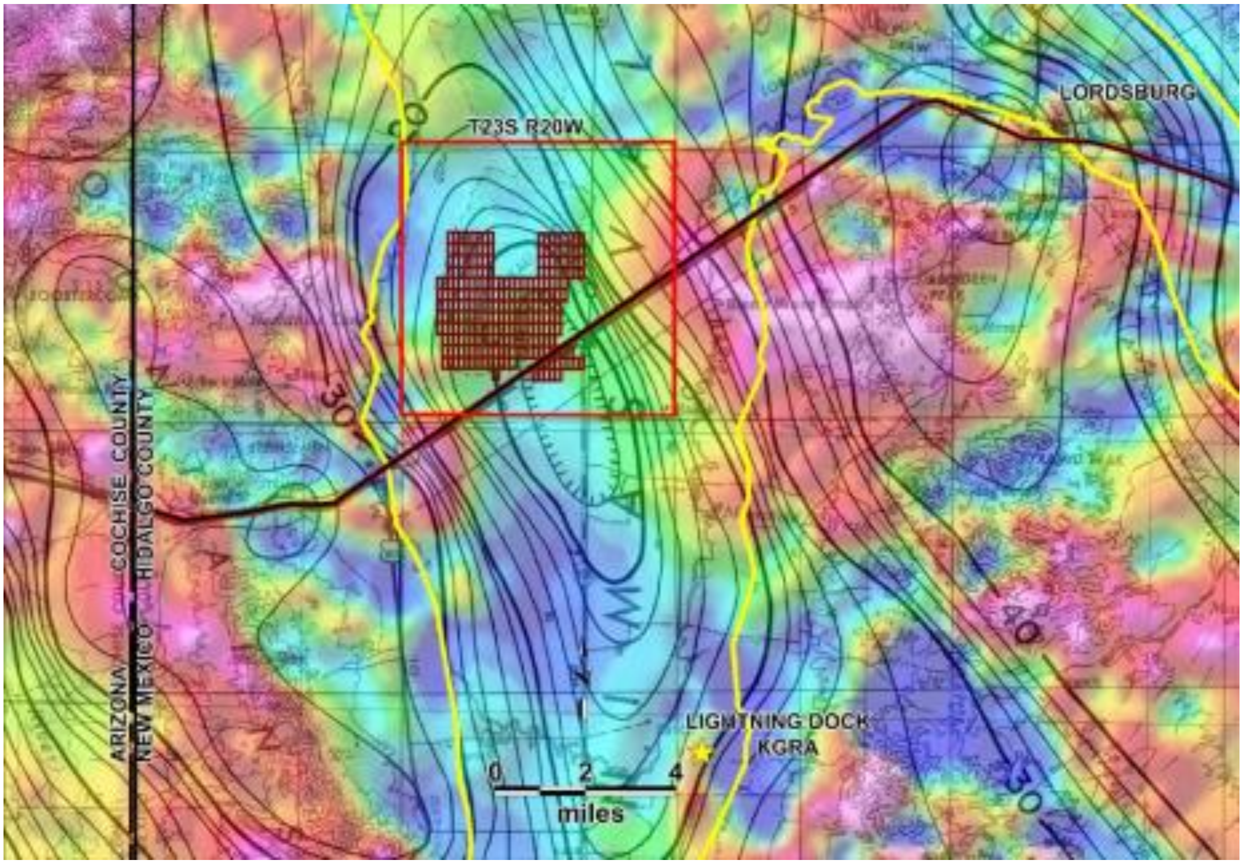

Figure 7.6 (12): Aeromagnetic intensity response map colored from red (high), to yellow (moderately high), to green (moderately low), to blue (low), to light blue (exceptionally low) as an overlay on the Bouguer gravity map of the Animas Valley and surrounding region. The hatched line in the center of the map is indicative of a major gravity low.

The structural interpretations of the regional geophysical data indicate the presence of major basin-bounding faults on both sides of the Alkali Flat Property, forming the Animas Valley graben within the Basin and Range tectonic setting. The length, width, and intensity of the geophysical responses corresponds well with similar basins elsewhere in Arizona where drill logs from oil wells document basin depths of greater than 5000 ft (+1524 m). Salt beds have also been recognized in the lower strata of many of the eastern Arizona basins and document periods of intense evaporation during basin formation.

8. DEPOSIT TYPES

Globally, there are three main types of economic lithium deposits and include: 1) peralkaline and peraluminous pegmatites and associated metasomatic rocks, 2) volcanic clays, generally containing lithium-rich hectorite, and 3) brine and hydrothermal (geothermal) deposits, including salar evaporates, continental playa lakes, and oil field and geothermal brines (Kesler et al., 2012; Bowell et al., 2020). The Alkali Flat lithium project is focused on the exploration of a suspected lithium brine deposit in a playa lake setting.

Historically, most lithium in the world, including in New Mexico, was mined from and, currently, lithium production from pegmatites accounts for approximately one fourth of the world's lithium production (Bradley et al., 2017). Currently, Australia exports most pegmatite-sourced lithium (Goonan, 2012; Bradley et al., 2017). Economic pegmatite deposits typically contain 110-943 kilotons of 0.5-1.2% Li (Bowell et al., 2020). The average concentration of lithium in the earth's crust is approximately 20 ppm (Bradley and Jaskula, 2019). Most of the economic pegmatites are classified as lithium-cesium-tantalum (LCT) pegmatites (Brady et al., 2017).

Currently most lithium production comes from solars, subsurface brines, and playa lakes located in closed-basins, where lithium exists primarily as soluble lithium chloride (Asher-Bolinder, 1991; Goonan, 2012). In arid regions, subsurface brines are pumped into a series of surface ponds, where water evaporates, concentrating lithium chloride (Bradley et al., 2017b). The lithium chloride is then treated with sodium carbonate to form lithium carbonate (Li_2CO_3) (Goonan, 2012). Economic brine deposits typically contain 41-6,300 kilotons of 0.01-0.2% Li and economic Li-clay deposits typically contain 209-845 kilotons of 0.17-.024% Li (Bowell et al., 2020). Nearby rhyolites are suspected sources of lithium (Bradley et al., 2017).

Closed-basin brine deposits contain an estimated 58% of the world's lithium resources (Bradley et al., 2017b). Countries that export significant amounts of lithium from brines or playa lakes are Chile, Argentina, China, and Australia (Goonan, 2012). The only location of lithium production currently active in the United States is a brine operation at

Clayton, Nevada (Jaskula, 2019). Geothermal waters and oilfield brines also are known to contain locally high concentrations of lithium (Bradley et al., 2017) but are not currently exploited. Lithium also occurs in clay minerals, such as hectorite, a member of the smectite clay mineral family (Bradley et al., 2017). **Figure 8.1 (13)** provides a landscape-based review of potential sources for lithium in brine, pathways for the formation of these brines and the role of a heat source driving convective fluid flow.

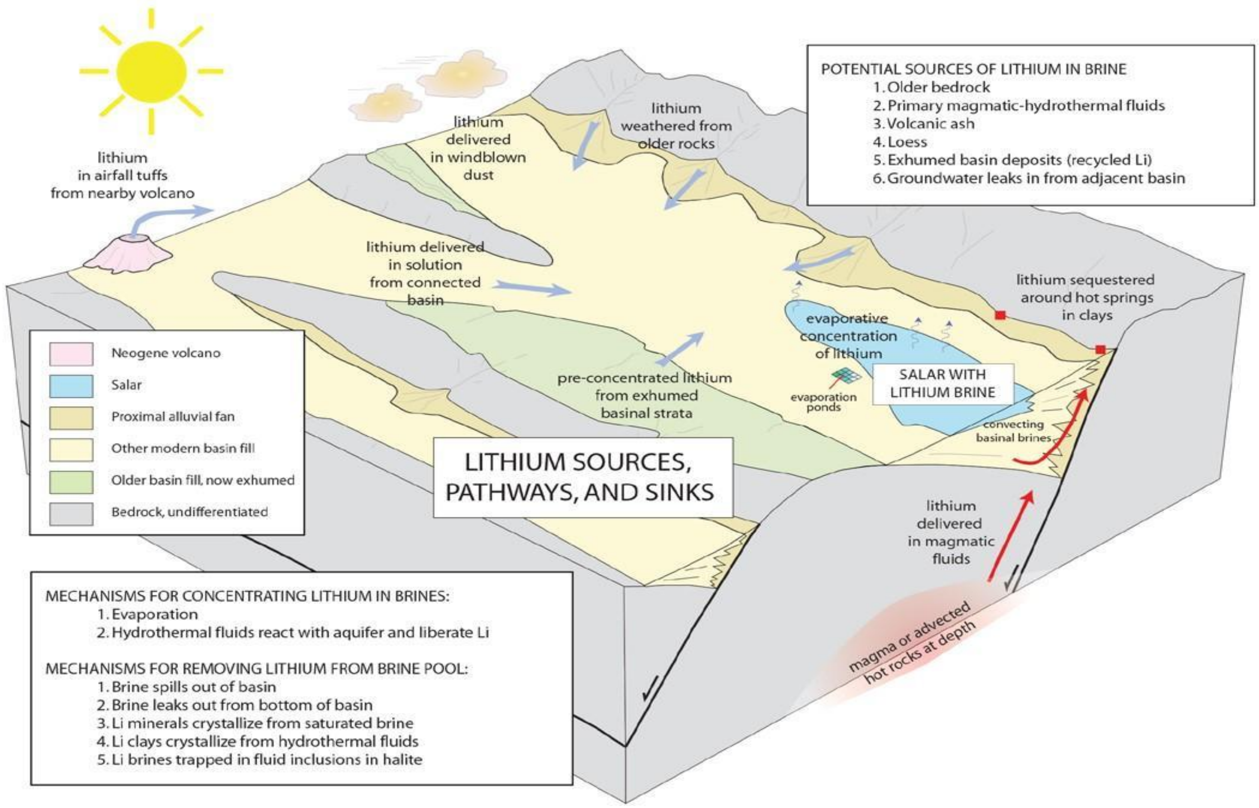

Figure 8.1 (13). Model for lithium sources, pathways and sinks in formation of a lithium brine including the role of a hat source for convective fluid flow (Bradley et al, 2013).

9. EXPLORATION

Previous exploration on the Alkali Flat Property was limited to a geochemical survey based on the collection and analysis of 14 sediment samples by Majuba Mining in May 2022 (Blakestad, 2023). Ongoing exploration in February and March 2023 included the collection of a further 128 sediment samples from the playa of which analyses for 47 samples have been received with the remainder pending. A UAV-borne magnetic survey was undertaken to assess the definition of the bounding structures at the edges of the basin, estimating location and depth of the deepest parts of the basin, imaging structural features at depth which may contribute to fluid-flow pathways, and to help develop a 3D model of the Alkali Flat project. The results and interpretation of the geochemical and geophysical data are pending.

10. DRILLING

There has been no recorded drilling undertaken on the Alkali Flat Property. Several water wells and geothermal wells have been drilled in the general area of the Property area and their locations are recorded with the State Engineer of New Mexico. A review of water wells in the vicinity of Lordsburg indicates most wells in the south playa exceed 500 feet in depth.

11. SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sampling by the Author

No samples were collected by the author during the property visit.

11.2 Recent Sample Collection

Lancaster Lithium enlisted Gold Canyon Partners LLC to execute a sampling program of playa sediments to assess the distribution of lithium and related elements typically found in lithium brine deposits. A preliminary sediment sampling event occurred at Alkali Flat in May 2022. During that timeframe, 14 sediment samples were collected from the northern portion of the claim group. A larger sediment sampling event occurred in February and March 2023. During the 2023 program a sample grid was established with a 1200 ft sample spacing, on E-W oriented lines spaced 2400 ft apart in the N-S direction. A total of 128 sediment samples were obtained, including ten samples from each of two sample pits where samples were obtained by channel sampling in 10 cm intervals to a depth of one metre.

Sediment samples were collected from the auger flight of the drill between the depth interval 10 to 22 inches below surface. That interval produced samples weighing between 2.15 lbs (975 gm) and 2.8 lbs (1280 gm) per sample. Sediment material was bagged in 8x8 inch cloth sample bags. The bags were numbered, and the locations recorded by hand-held Garmin GPS. Four duplicate samples were obtained in the filed by drilling a second sample adjacent to a primary sample location. Additional samples were duplicated under the Quality Assurance/Quality Control protocols at the laboratory.

Samples were secured in a locked truck cab during the field portion of the program and transported to Tucson for safe storage prior to delivery to Skyline Assayers & Laboratories in Tucson, AZ. Skyline analyses were for 47 elements by multi-acid digestion and ICP-OES/ICP-MS under protocol TE-5.

12. DATA VERIFICATION

The Author obtained data in reports available from various historic publications and technical reports for the preparation of this report. The author has not attempted to verify data from any of these reports as direct verification of historical results and data was not possible. It is the opinion of the Author that the data presented in this technical report is adequate for the purposes of this report. No new data was generated from the visit to the Alkali Flat Property.

Analytical data, including quality assurance and quality control information, from a recent playa sediment geochemical survey undertaken in February and March of 2023 are pending.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

Mineral processing and metallurgical testing have not been undertaken on the Alkali Flat Property.

14. MINERAL RESOURCE ESTIMATES

Mineral resource estimates have not been undertaken on the Alkali Flat Property.

15-22. NOT APPLICABLE

Sections 15 through 22 are not applicable to an early-stage exploration project as per Form 43-101F1.

23. ADJACENT PROPERTIES

23.1 Arizona Lithium's Lordsburg Brine Project

Arizona Lithium's Lordsburg Brine Project (AZ) is 15 km northwest of the town of Lordsburg within the playa lake system at the northernmost end of the Animas Valley. It is located close to the 15-megawatt Cyrq Energy owned Bruce Levy (formerly Lightning Dock) geothermal power plant and key interstate highways. The basin targeted for exploration is an elongated sediment filled graben surrounded by Tertiary volcanic rocks, a similar setting to the Clayton Valley, host to the only producing lithium project in the US. The property abuts the subject claims on the north **(Figure 23.1.1 (14)).**

Recently the company has doubled its land position at the project by acquiring an additional 96 Bureau of Land Management claims in the northern portion of the larger playa thereby doubling the size of the property to 192 claims, or about 15.5 sq km.

Exploration has included surface sampling that returned values of up to 114.5 parts per million lithium across the playa **(Figure 23.1.2 (15))**. The company has also undertaken a magneto telluric electromagnetics survey and has commenced discussions for zero-carbon renewable power energy requirements at Lordsburg.

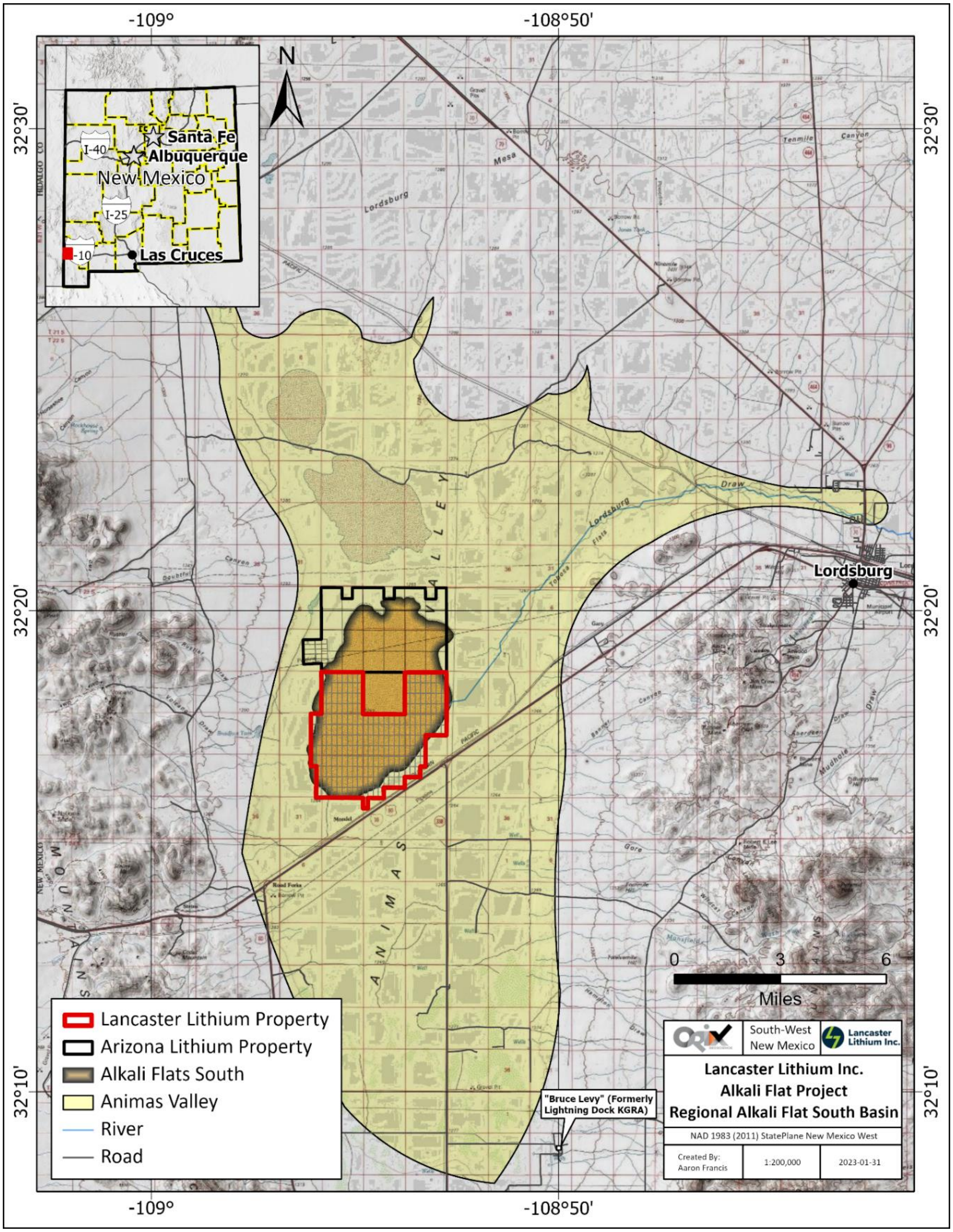

Figure 23.1.1 (14): The location of the early-stage Alkali Flat Lithium Project and the adjacent Arizona Lithium project on its northern border.

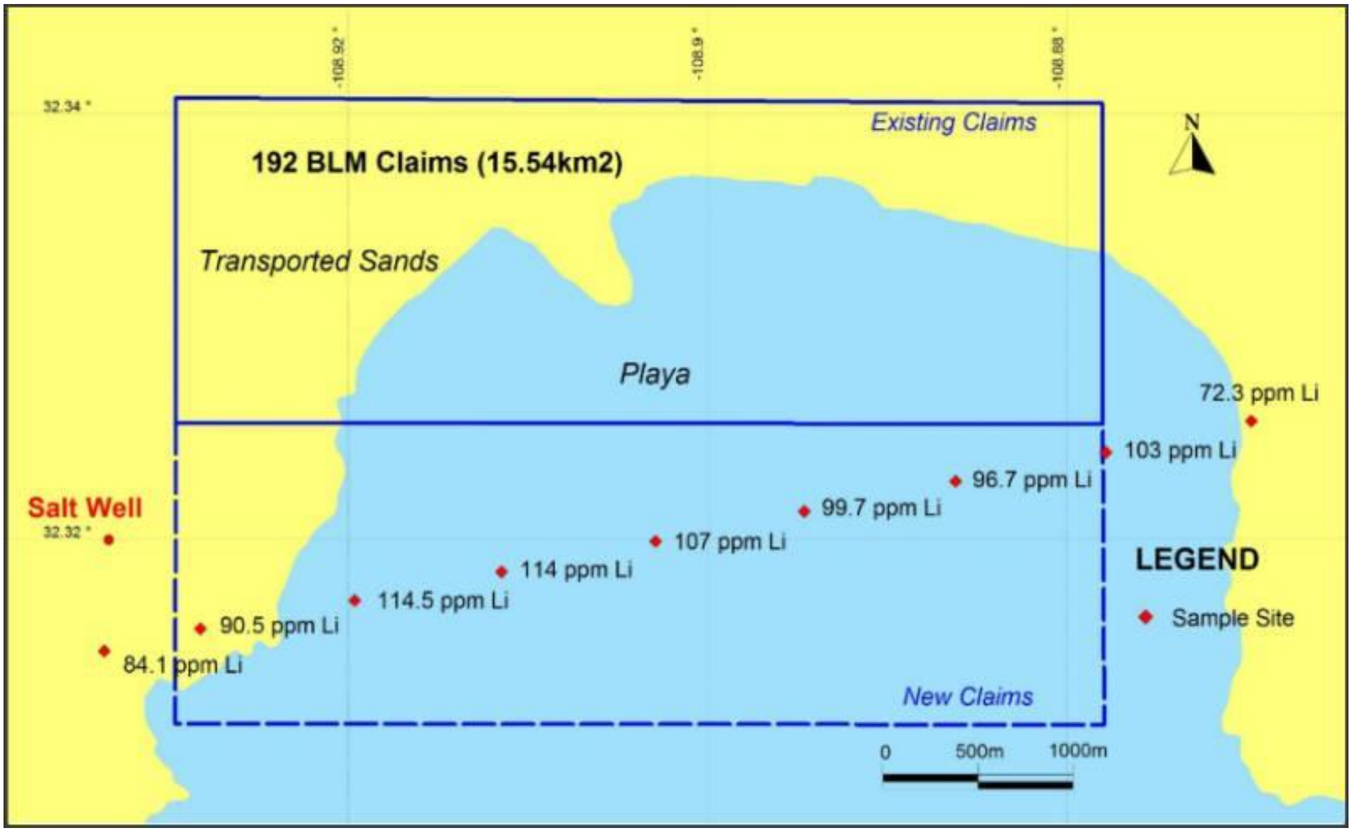

Figure 23.1.2. (15): Historical results of surface sampling by Arizona Lithium on its Lordsburg brine project, Lordsburg area, New Mexico.

23.2 American Copper Development Corporation's (ACDC) Lordsburg Property

The Lordsburg property is underlain by a Cretaceous sequence of epiclastic, and andesitic volcanic rocks intruded by a plagioclase porphyry pluton. Hydrothermal alteration with potassic and propylitic assemblages overprints these lithologies. A 134 line-km Titan 160 DCIP and MT survey was completed in January of 2023 over the ACDC's flagship Lordsburg property in southwest New Mexico. The survey included a 3dimensional Titan 160 DC resistivity induced polarization (DCIP) and magneto-tellurics (MT) survey. The survey was completed across 16 lines, 13 of which were oriented north south and 3 were oriented east west. Quantec Geoscience undertook the survey which was designed to provide property-wide deep chargeability, resistivity, and magneto-telluric information with the goal of identifying porphyry and/or skarn mineralization targets. The DCIP provides information to depths of 700m and greater with the MT resistivity providing information to depths of up to 2km. Preliminary chargeability results define significant anomalies along-strike and proximal to historic underground mine workings. A distinct circular shaped chargeability low in the centre of the survey area has been defined and is potentially related to the presence of a sulphide mineral halo surrounding a porphyry stock. The interpreted central porphyry is associated with a chargeability anomaly low, accordingly other low chargeability responses observed within the survey area may also be associated with porphyry intrusions. Some chargeability anomalies are aligned along regional NE-SW structural corridors, consistent with mapped geologic structures and lineaments throughout the property. The deepest historic mine workings appear to be within the upper part of the central interpreted porphyry stock, and beneath or within the chargeability halo. The data correlates well with mapped geology and with distinct radiometric potassium anomalies across the property. Interpretation based on 3D inversion modelling will evaluate the significance of individual anomalous responses. Interpretation will also be supplemented with results from geologic mapping, compilation of historic underground mining, drilling, magnetic, radiometric LIDAR surveys. A 5000-meter drill program to test the anomalous responses is planned.

The Lordsburg property is underlain by a sequence of Cretaceous epiclastic, and andesitic volcanic rocks intruded by a plagioclase porphyry pluton. Hydrothermal alteration with potassic and propylitic assemblages overprints these lithologies. A 134 line-km Titan 160 DCIP and MT survey was completed in January of 2023 over the ACDC's flagship Lordsburg property in southwest New Mexico (**Figure 23.2 (16))**. The survey included a 3Dimensional Titan 160 DC resistivity induced polarization (DCIP) and magneto-tellurics (MT) survey. The survey was completed across 16 lines, 13 of which were oriented north south and 3 were oriented east west. Quantec Geoscience undertook the survey which was designed to provide property-wide deep chargeability, resistivity, and magneto-telluric information with the goal of identifying porphyry and/or skarn mineralization targets. The DCIP provides information to depths of 700m and greater with the MT resistivity providing information to depths of up to 2km. Preliminary chargeability results define significant anomalies along-strike and proximal to historic underground mine workings. A distinct circular shaped chargeability low in the centre of the survey area has been defined and is potentially related to the presence of a sulphide mineral halo surrounding a porphyry stock. The interpreted central porphyry is associated with a chargeability anomaly low, accordingly other low chargeability responses observed within the survey area may also be associated with porphyry intrusions. Some chargeability anomalies are aligned along regional NE-SW structural corridors, consistent with mapped geologic structures and lineaments throughout the property. The deepest historic mine workings appear to be within the upper part of the central interpreted porphyry stock, and beneath or within the chargeability halo. The data correlates well with mapped geology and with distinct radiometric potassium anomalies across the property. Interpretation based on 3D inversion modelling will evaluate the significance of individual anomalous responses. Interpretation will also be supplemented with results from geologic mapping, compilation of historic underground mining, drilling, magnetic, radiometric LIDAR surveys. A 5000-meter drill program to test the anomalous responses is planned.

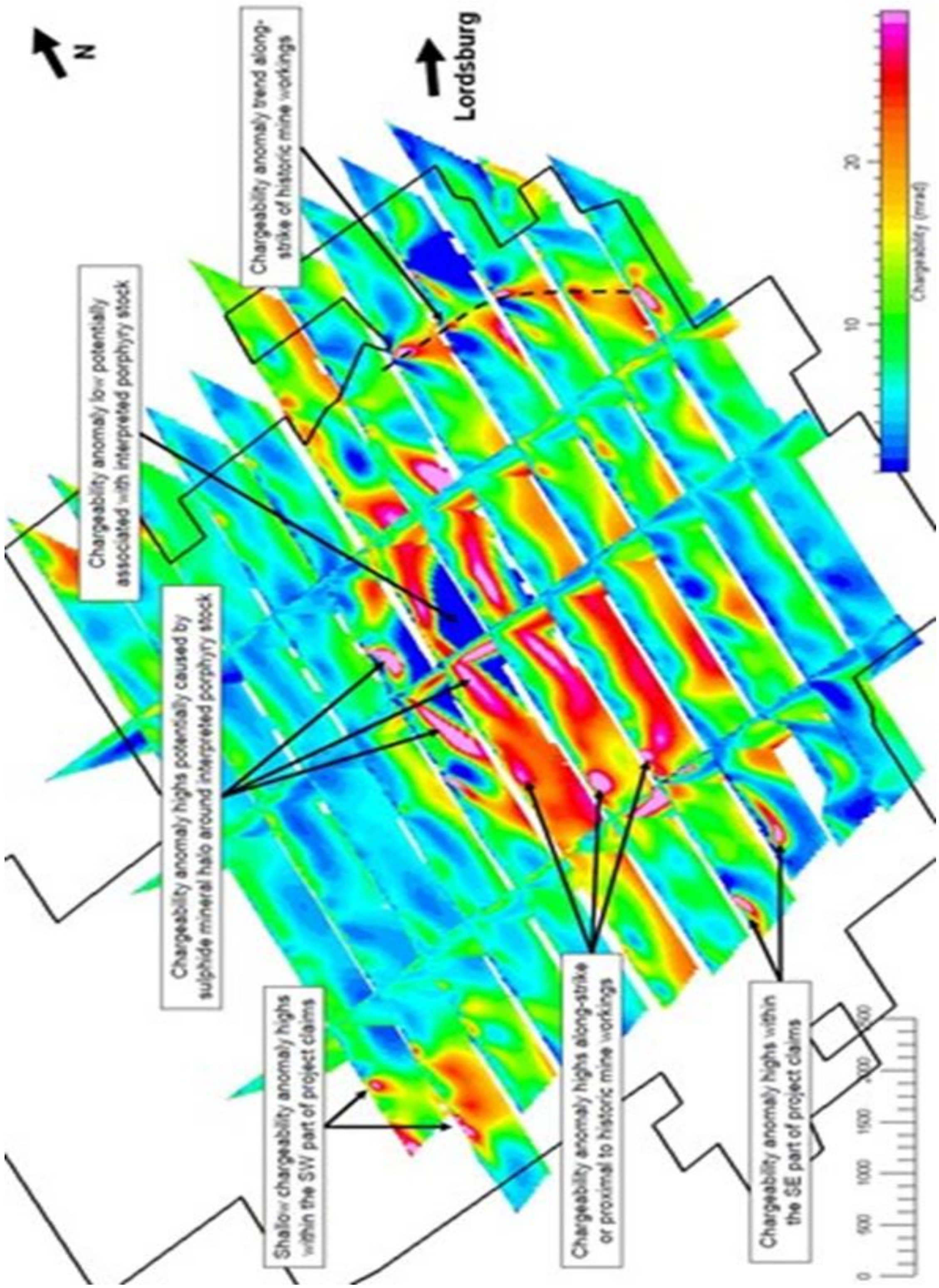

Figure 23.2 (16): 3D view of the 2D chargeability models from the DCIP survey shown as fence diagrams, ACDC Lordsburg property.

23.3 Parkway Minerals New Mexico Lithium Project (NMLP)

Parkway Minerals New Mexico Lithium Project (NMLP) is located approximately 10km north of the Cyrq Energy owned Bruce Levy (formerly Lightning Dock) geothermal power plant. A drill program is planned to test their 40 km^2 property centered on a playa at the low point of a 6,000 km^2 drainage basin. The basin is interpreted to host a significant lithium resource derived from leaching of lithium from source rocks and volcanic ash deposits by heated regional water flow. Lithium is postulated to have been extracted and then trapped in aquifers characterized by high total dissolved solids. The expectation is that any trapped lithium brines would be relatively warm, enabling direct processing with Parkway's proprietary brine processing technology, therefore eliminating the requirement for evaporation ponds.

24. OTHER RELEVANT DATA AND INFORMATION

24.1 Bruce Levy (Lightning Dock KGRA) Geothermal Area

The Lightning Dock KGRA covers a large area to the south of the Alkali Flat Property. **Figure 24.1 (17).** illustrates the boundary of the area known to have geothermal potential in relation to the Property and the extent of ancestral Lake Animas. The area of the KGRA comprises State land or private land and as such lithium exploration opportunities are s limited. Nevertheless, the presence of geothermal heat sources and affiliated fault structures are recognized globally as a potential primary source of lithium for brines and sediments in playa basins.

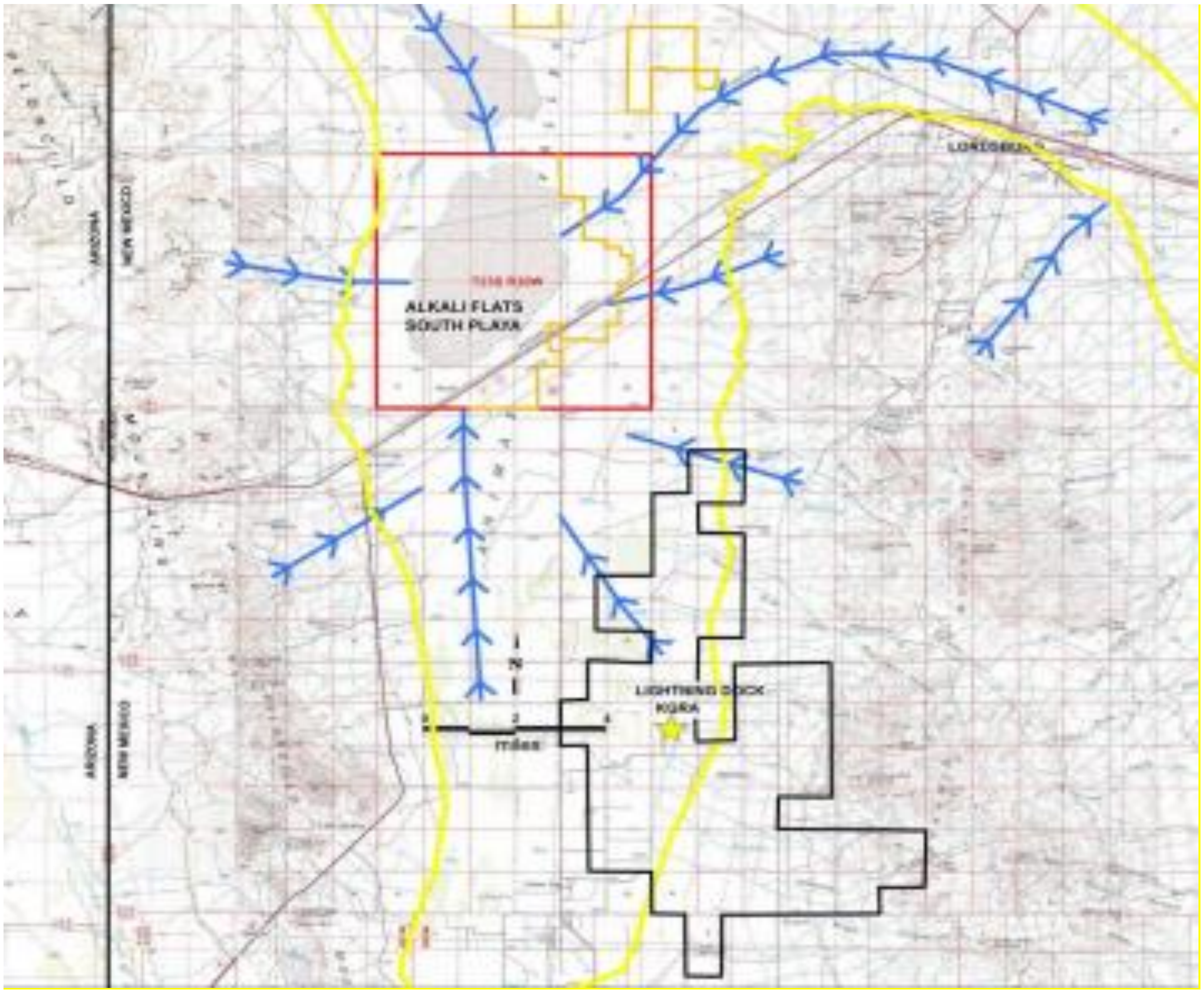

Figure 24.1 (17). Topographic map of the Alkali Flat Project area (red box) showing the boundary of the Bruce Levy (Lightning Dock KGRA) geothermal area (black outline) and the extent of ancestral Lake Animas (yellow lines). Blue arrowhead lines indicate direction of surface and groundwater flow toward Alkali Flat.

24.2 KGRA Relevance to the Alkali Flat Property

Significant exploration expenditures have been made to acquire information to assist the understanding the geothermal potential of the KGRA and some of the acquired database is relevant to the Property. Interpretation of the gravity and magnetic surveys and resistivity soundings have detailed the presence and location of faults throughout the KGRA. Seismic surveys have detected faults extending to depths of 12,000 to 14,000 feet (3650-4260 m) for the basin bounding faults and 15,000 to 16,000 feet

(4570-4870 m) into deep layers of bedrock below the basin fill sediments (Cunniff and Bowers, 2005). Deep faults such as these can be prime structures for channeling lithium bearing solutions to shallower depths within the basin.

The character of the underlying bedrock sequence compiled from diamond drilling was used to develop a conceptual model for the eastern portion of the KGRA (**Figure 24.2 (18)**). The conceptual interpretation has application to the model for lithium brine source mobilisation on the Alkali Flat Property that occurs approximately 10 miles (16 km) to the north of the KGRA.

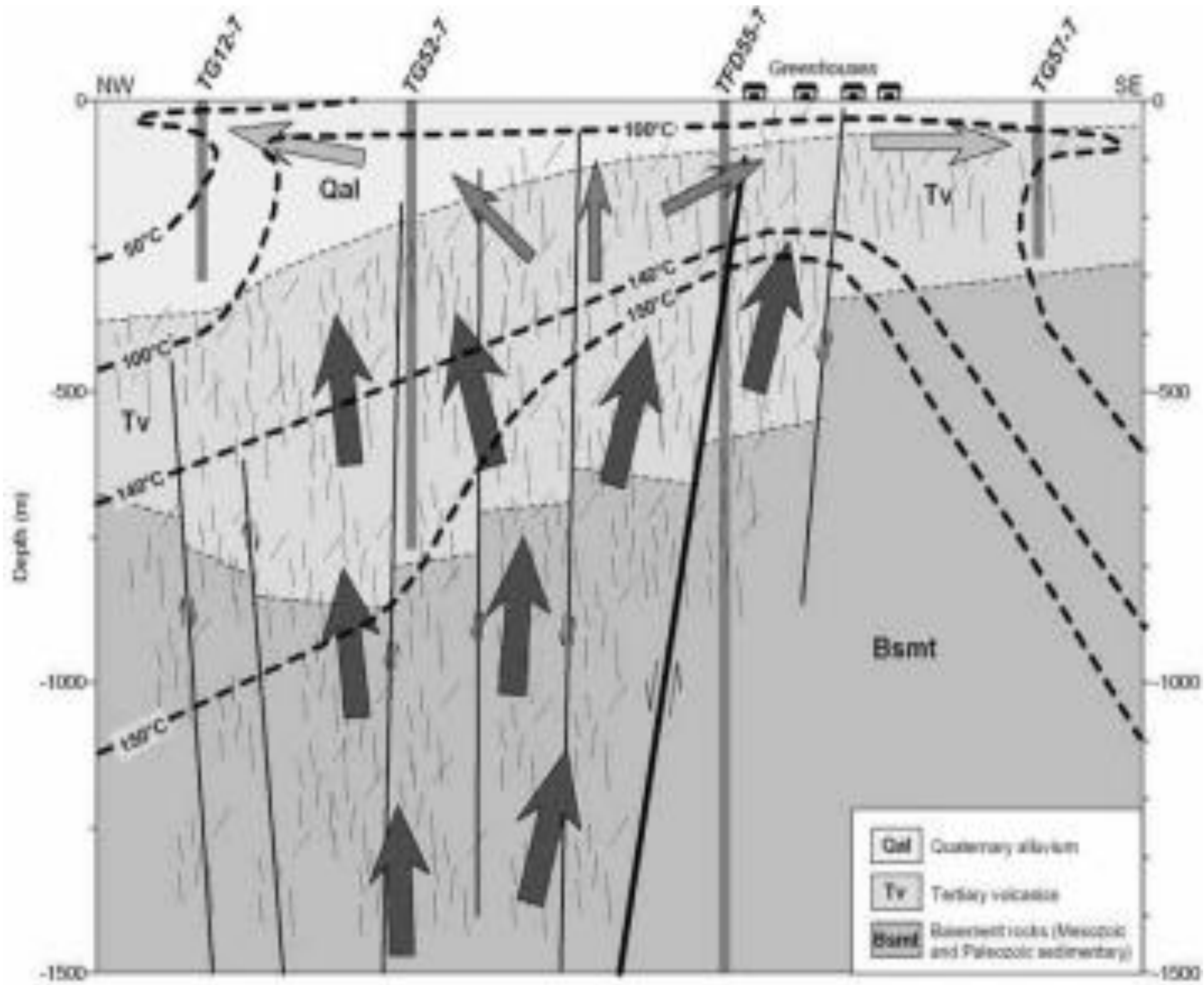

Figure 24.2 (18): Diagram of the conceptual model for geothermal plumes at the Bruce Levy (Lightning Dock) KGRA based on detailed geophysical surveys and exploration drilling (Cunniff and Bowers, 2005).

25. INTERPRETATION AND CONCLUSIONS

25.1 Review of Geological Setting and Exploration Supportive Surveys

Mount Morgan Resources has compiled and assembled a Technical Report and an updated Technical Report to describe Lancaster Lithium's Alkali Flat lithium brine property in western New Mexico. Lancaster has acquired the Property to explore for lithium -bearing brine and to assess the potential for lithium production from their Alkali Flat Lithium Project within the Animas Basin.

Lancaster Lithium has recently commenced exploration work in February and March (2023) at the Alkali Flat Property including new sediment geochemical surveys and a drone-borne magnetometer survey. The results of these new surveys are pending with only small amounts of data available. Available geochemical data indicates a spatial association between elevated lithium contents in playa sediment samples collected from the east side of the playa. This elevated lithium response on the east side of the playa coincides with the structural position of the Lightning Dock KGRA geothermal area about 8 miles to the south. Basin-bounding faults on the east represent a logical source of hydrothermal fluids that may have contributed to the lithium content of deep aquifers and possible Li-clay formations at depth.

Historically, Lancaster Lithium has relied on this technical review of the geological characteristics of the Property and surrounding areas and historical brine geochemical data from water and sediment surveys to focus their program of geophysical and geochemical orientation surveys and subsequent drill program. The intent and purpose of this updated Technical Report is to provide a geological introduction to the Alkali Flat lithium brine property and to present new exploration-supportive data.

Regionally, the Animas Basin is marked by a pronounced magnetic and gravity low which encapsulates the Alkali Flat Property and the surrounding area. The Basin is bounded by mountain ranges characterized by lithologies that historically have been regarded as the source for erosional detritus shed into the Animas Basin. Some of these lithologies are felsic in composition and although lithium analysis of these lithologies has not been undertaken during historic mapping projects it is plausible the felsic lithologies are sources for an ongoing supply of lithium into the Basin. The leaching of these lithologies by meteoric and hydrothermal fluids represents a mechanism for lithium concentration in erosional detritus.

The proximity of a near surface hot water convection system or geothermal anomaly at the Bruce Levy (formerly Lightning Dock) power plant adjacent to the Animas Basin provides a heat engine for driving fluid flow. Historic drilling in 1948 on the eastern side of the Basin intersected boiling water and a lithology described as "hot rhyolite". This observation provides a potential lithium source from a felsic lithology and a thermal gradient to drive fluid flow. The internal drainage in the Animas Basin leads to the playa lakes upon which the Alkali Flat Property has been established.

The compilation of historical work during the National Uranium Reconnaissance program has provided clear indications of elevated lithium contents in water and sediment samples from the immediate and general area of the Property. Of note is a highly anomalous response of 4696 parts per billion lithium in a water sample collected directly over the Alkali Flat Property. A stream sediment sample also collected from the immediate area of the Property gave an elevated analysis of 124 parts per million lithium. These data provide an indirect indication that is suggestive of lithium brine potential. Work completed by Arizona Lithium on their property that bounds the Alkali Flat Property on the north also provides indications of lithium-enriched soil over the playa.

The Animas Basin is bounded by mountain ranges and calderas characterized by lithologies that historically have been regarded as the source for erosional detritus shed into the Animas Basin. Many of these lithologies are felsic in composition and although lithium analysis of these lithologies has not been undertaken during historic government mapping projects it is plausible the felsic lithologies are sources for an ongoing supply of lithium into the Basin.

25.2 Conclusion

The assessment of available geological literature indicates numerous supportive observations of potential and plausible mechanisms to provide lithium-enriched detritus to a closed structurally prepared basin. Based on the foregoing discussion the presence of an appropriate structurally prepared collection site for lithium at the Alkali Flat Property indicates the potential for high total dissolved solids aquifers in the subsurface. As such the Alkali Flat Property is interpreted as a significant lithium brine exploration target. Recently acquired geochemical data from playa sediments has suggested a spatial association exists between elevated lithium contents and the east side of the playa. This area of the playa coincides with the structural position of the Lightning Dock KGRA about 8 miles to the south. Basin-bounding faults on the east represent a potential source of hydrothermal fluids that may have contributed to the lithium content of deep aquifers and possible Li-clay formations at depth.

25.3 Risks

Information included in this Technical Report relies primarily upon historical information describing the geological setting, geophysical and geochemical surveys and government research and exploration supportive publications since the 1930s. With respect to reported lithium measurements in sediment, stream sediment and waters no effort has been undertaken to confirm the analytical approach or the result of lithium analyses. The details of sample collection and analytical protocols for these data are not known. This technical report does include lithium data from the United States Geological Survey's National Uranium Reconnaissance program (NURE). The U.S.G.S. has historically provided quality geochemical survey work over an extended period and as such their database is interpreted to be reliable until such time as it can be compared with new modern geochemical determinations for lithium and related elements during exploration at the Alkali Flat Property. New geochemical surveys based on the collection of playa sediments have been initiated but complete data is pending. This new sampling and analytical program will provide sampling and analytical protocols for geologic materials in support of exploration on the Alkali Flat Property enabling Lancaster Lithium to verify the historical analytical data and implications.

Lancaster Lithium’s Alkali Flat lithium brine project is an early-stage mineral exploration project. Currently, short- and long-term risks and uncertainties with regards to the project's potential economic viability or continued viability involve successful permitting, the definition and successful drill testing of targets determined from exploration surveys and recovery of lithium and other elements of potential interest from the brine. It includes cooperation with State regulators regarding the position of the State of New Mexico on lithium brine production. Currently, there is no known lithium, production from brine in New Mexico.

Beneficiation of a lithium brine for higher levels of lithium in the original brine by traditional solar evaporation is uncertain in New Mexico. The arid New Mexico climate would be supportive of the brine pool evaporative approach. A potential alternative approach to the extraction of lithium from brine is lithium-specific rapid extraction technology. This technology is designed to minimize the use of solar evaporation ponds and is currently in technological development stages.

26. RECOMMENDATIONS

Geophysical exploration techniques are routinely used to characterize the depth and lateral extent of brine aquifers in lithium projects. Specifically, gravity and magnetic surveys are used to define the depth and lateral distribution of basin sediments. These techniques are effective and based on the differing density and magnetic properties between basin fill sediments and adjacent bedrock areas and basement rocks below the basin-fill. Seismic refraction surveys are widely used to define structure and beds of different density and reflection contrast. Seismic surveys are particularly useful to identify faults and other structures and the location and attitude of coarse sediments that would commonly host brine waters at depth. Brine waters are highly conductive compared to fresh water and water saturated sediments; accordingly, various electrical resistivity and natural potential geophysical techniques are widely used to identify brine environments in lakebed sediments. A recent drone-borne geophysical survey has been completed on the property and results and interpretation is pending. The integration of the drone survey magnetics with additional geoscientific databases is required.

Geochemical surveys that target the labile elements in a high total dissolved solids aquifer can assist in defining drill targets within a broader geophysical target area.

The Author recommends the following exploration-supportive course of action for the Alkali Flat Lithium Project.

26.1 Ground Acquisition

The acquisition of additional claims to expand ownership of the Alkali Flat playa may be warranted after geophysical and geochemical orientation surveys on the 233-claim group are complete. Security of tenure of the asset is considered of prime importance to the successful exploration of the Property.

26.2. Geophysical Surveys

Phase 1 of the program will involve a combination of geophysical and geochemical orientation surveys. The geophysical surveys would be undertaken to delineate:

1. The structure of the bounding faults that confine the basin;
2. The depth to-, and configuration of-, bedrock at depth, and along the bounding faults; and
3. Lithologic, density, and electrical conductivity contrasts of the various sedimentary units filling the basin including high total dissolved aquifers.

To this end ground geophysical surveys should entail gravity and audio magneto-telluric/magneto-telluric surveys undertaken from an approximate 25,000-foot survey line parallel to the I-10 highway on the south side of the Property. If this location is not opportune, then a second location is suggested on the east side of the Property. The east side geophysical survey line, oriented north south, would have the advantage of being undertaken in the vicinity of a known fluid flow direction rom north to south into the playa. Overall, the task at hand will be to define the internal subsurface stratigraphy and structure and the presence of aquifers with high total dissolved solids. Integration of drone-borne magnetic survey data will also provide internal structural parameters for interpretation.

26.3 Geochemical Surveys

A soil sampling survey line parallel or coincident with the geophysical survey line should be established for the collection of soil samples with subsequent analysis by Mobile Metal Ions Technology. The MMI Technology will target labile ions moving from source to surface from a buried lithium source such as a high total dissolved solids lithium-enriched aquifer. Survey parameters such as sample spacing along the transect can be coincident with geophysical survey stations. The soil geochemical orientation survey line will establish the optimum sample depth and potentially unique sample spacing for a future exploration survey over the Property. The purpose of this geochemical approach will be to ascertain whether there is a geochemical expression in soil samples of lithium-bearing aquifer-hosted brine at depth.

In the absence of historic rock geochemical analyses reported in the geoscientific literature a second beneficial geochemical survey could be undertaken in the adjacent mountain ranges that border the Property. Felsic lithologic units, potentially source rocks for lithium, could be sampled to provide valuable information for determining the provenance of lithium-bearing erosional detritus shed into the Basin.

Total cost for the recommended geophysical and geochemical surveys on the Alkali Flat Property is approximately $130,683.00 USD.

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27. CERTIFICATE OF QUALIFIED PERSON

Certificate of Qualified Person - Mark Fedikow, Ph.D. P.Geo. C.P.G.

I, Dr. Mark Fedikow, with an address at 1207 Sunset Drive, Salt Spring Island, British Columbia, Canada V8K 1E3 hereby certify that:

- I am a geologist affiliated with Mount Morgan Resources Ltd., with a business address at 1207 Sunset Drive, Salt Spring Island, British Columbia, Canada V8K 1E3. The Report to which this certificate applies is entitled: "NI 43-101 Technical Report: Update on New Exploration on the Alkali Flat Lithium Property, Lordsburg, New Mexico" The effective date of this report is May 19, 2023.

- I am a graduate of the School of Applied Geology, University of New South Wales (Sydney, Australia) with a Doctor of Philosophy degree, Department of Geology, University of Windsor with a Master of Science degree (Geophysics and Geochemistry) and a Bachelor of Science degree (Honours Geology). I am a member in good standing and registered Professional Geologist (P.Geo.) with Engineers Geoscientists Manitoba (EGM) (certificate #4658) and registered as a Certified Professional Geologist (C.P.G.) with the American Institute of Professional Geologists (AIPG).

- I have relevant experience pertaining to lithium-bearing mineralization and I have worked globally in mineral exploration for various commodities including lithium, uranium, base and precious metals, and diamonds, throughout Canada, United States, South and Central America, Portugal, Israel, and Africa for the past 47 years.

  I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional organization (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

  I am the author of the original NI43-101 technical report entitled "**NI 43-101 Technical Report: Akali Flats Lithium Property, Lordsburg, New Mexico, U.S.A."** with an effective date of January 5, 2023.

- I am responsible for all sections of the Technical Report ".**NI 43-101 Technical Report: Update on New Exploration at Alkali Flat Lithium Property,**

Lordsburg, New Mexico, U.S.A." The technical report has an effective date of May 19, 2023.

- I am independent of Lancaster Lithium as defined by all tests Section 1.5 of the National Instrument 43-101. For greater clarity, I do not hold, nor do I expect to receive, any securities of any other interest in any corporate entity, private or public, with interests in the Property that is the subject of this report or in the Property itself, nor do I have any business relationship with any such entity apart from a professional consulting relationship, nor do I, hold any securities in any corporate entity within a two (2) kilometre distance of any part of the Project.

  As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report that I am responsible for contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

- Dr. Fedikow undertook the property visit on January 2, 2023. During this time, he conducted detailed surface observations across all historical points of interest on the Property.

Signed and dated this 19th day of May 2023 at Salt Spring Island, British Columbia, Canada.

PROVINCE OF MANITOBA
M.A.F. FEDIKOW
REGISTERED PROFESSIONAL GEOSCIENTIST

Dr. Mark Fedikow, P.Geo. C.P.G.

Professional Geologist (EGM #4658; AIPG #11039)

AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS
CERTIFICATE NUMBER 11039
AIPG
MARK A. FEDIKOW
CERTIFIED PROFESSIONAL GEOLOGIST

Appendix 1: List of Claims, Alkali Flat Lithium Project

Appendix 2: New Geochemical Data