December 2021

Preliminary Economic Assessment Zeus Project

Esmeralda County, Nevada

Prepared For: Noram Lithium Corporation
Prepared By: ABH Engineering

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1 Executive Summary

1.1 Introduction

This Technical Report is prepared for Zeus Lithium Project, owned by Noram Lithium Corporation (Noram or the Company). Noram is a Canadian publicly traded corporation with offices in Vancouver, British Columbia. The company is listed on the Toronto Stock Exchange (TSX-V:NRM), Frankfurt Exchange (N7R) and in the United States (OTCQB:NRVTF).

The Zeus Lithium property is located in south-west Nevada, halfway between Reno and Las Vegas. Noram's property consists of 2,800 acres (1,133 hectares) of claims (placer and lode) on U.S. Government land. The claims are owned 100% by Noram and are not subject to any royalties or net smelter return (NSR) agreement.

Noram has conducted exploration for lithium rich clays on the property since the spring of 2016. Exploration to date has included metallurgical testing, three phases of sampling and five phases of core drilling. The full extent of Zeus claim block has not been completely tested. The property shows potential for expanding reserves in its northern section and at depth.

1.2 Property Description & Ownership

The Zeus lithium Project is located in Esmeralda County, Nevada. The site lies within township 2 south, and range 40 east, Mt Diablo Principal Meridian. The site is 220 miles southeast of Reno. The property is accessed by either Tonopah which is located 27 miles northeast of the site, or Silver Peak which is located 7 miles west.

Noram originally acquired land in the Clayton Valley of Nevada in 2016. The initial land holding has been trimmed to a core holding of 146 Zeus placer and 136 Zeus II lode claims. Both types of claims cover approximately the same area. Noram's claim perimeter is located within 1 mile (1.6 kilometers) of Albemarle Corporation's (Albemarle) Silver Peak lithium brine operations.

The Zeus Lithium project is 100% owned by Noram Lithium Corporation. Currently there are known significant factors or risks that may affect access, title, or the right or ability to perform work on the Noram property.

1.3 Geology and Mineralization

The Clayton Valley is a closed basin playa surrounded by mountains. Tectonically, the Clayton Valley occurs in the Basin and Range Province which is dominated by horst and graben faulting including some right lateral motion. The sediments deposited in the basin are primarily silt, sand, and gravel interbedded with illite, smectite, and kaolinite clays (Kunasz, 1970 and Zampirro, 2005) including a substantial component of volcaniclastics. Green and tan tuffaceous claystones and mudstones on the eastern margin above the current playa sediments have been the primary objective of Noram's exploration effort. These are considered by Kunasz (1979) and Munk (2011) to be the primary source of the lithium for the basin brines.

The focus of Noram's exploration has been the Tertiary Esmeralda Formation which is made up of fine grained sedimentary and tuffaceous units. These units generally dip to the northwest at low angles. The Esmeralda Formation has been described by Davis (1981) as being approximately 100 meters thick and by Kunasz (1974) as approximately 350 feet deep (107 meters). The base of the Esmeralda has not been penetrated with Noram's drilling. Most beds of the Esmeralda have been found to be tuffaceous, calcareous, and salty.

During Phase II through to Phase V drilling, the "reduced" clay units were encountered. These units normally have a distinctive blue or black coloration. It was noted that after exposing the black core to air that the reduced core quickly began to oxidize into the olive coloration seen in the oxidized sediments

The targeted mineralization investigated by Noram occurs at or near the surface in the form of sedimentary layers enhanced in lithium. The Zeus deposit is part of a section of ancient lakebed sediments that was raised above the current Clayton Valley playa by Basin and Range faulting, which is present throughout the region. The source of the lithium within the sediments is believed to be from the volcanic ash component deposited in the playa lakebed.

1.4 Project Status

The Zeus project has undergone preliminary metallurgical testing, 3 rounds of surface sampling, and 5 rounds of drilling. It is believed that additional drilling will continue to discover additional resources: both at depth and within adjacent areas of the claim block. Additional drilling is also likely to upgrade much of the inferred resources to indicated and measured mineral resources. Continued metallurgical testing is planned and expected to refine the flowsheet for the extraction of lithium from the claystones and mudstones.

1.5 Data Verification

The author has been able to confirm the accuracy of the locations of drill holes by checking them with his own handheld GPS unit. While visiting the property during the drilling programs, the author confirmed that the sampling was being conducted according to the protocols, and therefore, data collected on drill samples to date is accurate.

Assay data used in the mineral resource model were cross-checked against the original assay certificates after the data have been imported into the model. Assay values were also spot checked against those displayed in cross-sections. The volumetric measurements were checked by the cross-sectional method to verify the model's accuracy.

The author is of the opinion that there have been no limitations on the verification of any of the data presented in this report.

1.6 Metallurgy and Mineral Processing

Lithium occurs in a variety of deposits including brine, pegmatite, and sedimentary deposits. The Zeus Lithium deposit has major clay minerals including smectite and illite and is also composed of non-clay minerals including calcite, quartz, orthoclase, and chlorite. The lithium from this deposit can be recovered using a dilute sulfuric acid leach followed by solution purification to produce high grade lithium carbonate.

SGS Canada Inc., Lakefield, Ontario (SGS) in collaboration with ABH Engineering, Surrey, British Columbia (ABH) performed leaching tests in 2021. Preliminary XRD tests conducted by Actlabs Ltd., show both given samples consisted of ~50% clay and ~50% non-clay minerals.

In 2021, sulfuric acid leach tests with varying testing conditions were performed on a composite sample to identify effective leaching conditions. Tests conducted by SGS achieved 90% lithium recovery at acid concentration of 5% at 65°C with a 2-hour residence time. More detailed test work will be required to examine the individual lithologic units. Target acid consumption is 250 kg/tonne of ore leached.

1.7 Mineral Resources

The mineral resource estimate is defined by 70 core drill holes (CVZ-01 through CVZ-69, plus CVZ-49R and CVX-01), for a total of 3,342.7 meters of drilling and an average hole depth of 47.8 meters. A total of 1,666 lithium assay results from core were used for the model. The data for the mineral resource estimate was generated using the Rockworks 2021 program, sold by Rockware, Inc.

A cut-off grade of 400 ppm Li was calculated by using the estimated cost to produce a tonne of lithium carbonate using various lithium grades in the deposit and comparing those values against the projected lithium carbonate price, which was $12,000. Costs of production for refining lithium carbonate was derived by using costs generated by similar lithium clay projects.

Each block or voxel, of the model measured 50 by 50 meters horizontally and 5 meters vertically. The result was a square block of voxels in plan view comprised of 83 voxels in an east-west direction, 89 voxels in the north-south direction, and 37 voxels high for a total of 273,319 voxels. The detailed topography from a drone survey was used to constrain the model on its top. Horizontal constraints were primarily the limits of the Noram claim block. A plot of the 5-meter composited data gave a near normal distribution and indicated that no high-grade capping was necessary. An inverse distance squared algorithm was used to calculate the resource estimate, since the deposit is relatively simple without complex structure or nugget effect. Variography was used along with a classification algorithm to separate the resource into the inferred, indicated, and measured classifications using an iterative process. The Table 1-1 lists the results of the resource model.

Table 1-1: Final Tonnages and Grades of the Classes of Mineral Resources

Measured				
Li Cutoff (ppm)	**Tonnes X 1,000,000**	**Li Grade (ppm)**	**Contained Li (tonnes)**	**LCE (Tonnes)**
400	66.74	927	61,863	329,299
600	61.34	964	59,128	314,738
800	46.47	1051	48,840	259,975
1000	27.70	1150	31,854	169,558
Indicated				
Li Cutoff (ppm)	**Tonnes X 1,000,000**	**Li Grade (ppm)**	**Contained Li (tonnes)**	**LCE (Tonnes)**
400	296.42	922	272,297	1,454,762
600	279.66	947	264,837	1,409,728
800	221.64	1007	223,193	1,188,059
1000	103.76	1128	117,044	623,023
Measured + Indicated				
Li Cutoff (ppm)	**Tonnes X 1,000,000**	**Li Grade (ppm)**	**Contained Li (tonnes)**	**LCE (Tonnes)**
400	363.15	923	335,191	1,784,222
600	341.00	950	323,945	1,724,361
800	268.11	1014	271,865	1,447,135
1000	131.46	1133	148,945	792,836
Inferred				
Li Cutoff (ppm)	**Tonnes X 1,000,000**	**Li Grade (ppm)**	**Contained Li (tonnes)**	**LCE (Tonnes)**
400	827.22	884	731,261	3,892,501
600	715.91	942	674,383	3,589,743
800	546.48	1013	553,588	2,946,750
1000	265.47	1134	301,043	1,602,452

1.8 Mine Design

An ultimate pit was developed for the project that encompassed most of the property boundary. Using a normal daily production of 17,000 tpd of mill feed, the ultimate pit results in over 190 years of mining capacity. For the purpose of this study, the base case scenario would schedule the first 11 phases, which would represent the first 40 years of mining production.

Multiple types of surface mining methods were evaluated. Based on the operating cost and operability, a traditional truck and shovel operation is selected as the base case mining method. This base case utilizes four 90 tonne class haul trucks, one 12 m^3 hydraulic excavator, and one D8 class dozer as the primary mining production fleet. No drilling and blasting is anticipated to be required for this operation. The mine will operate 7 days a week, 52 weeks a year. Waste material will be hauled to a waste dump located on the property and a low-grade stockpile will be utilized to accelerate higher grade material to the earlier years of production. The overall strip ratio (waste: low grade + ore feed) over the first 11 phases is 0.07:1.

The project is located next to the Cypress Development's Clayton Valley Lithium Project and is accessible via the Silver Peak Road, a two-lane road that connects the Silver Peak with Highway 95 to the east. General site infrastructure includes administration, laboratory, warehouse, reagent, and fuel storage, mine shop, sulfuric acid plant, comminution plant, and lithium recovery plant. Tailings are to be conveyed to the tailings storage areas for final spreading and contouring by dozers.

1.9 Recovery Methods

The process plant is based on a daily throughput of 17,000 tonnes per day or 6.2 million tonnes per year, averaging 1,093 ppm lithium. The anticipated lithium recovery is 89% and expected to produce 5,971 tonnes per year of lithium. The preliminary process design is based on the lab metallurgical tests. The design process consists of basic operations including feed preparation; sulfuric acid leaching; filtration; lithium recovery; lithium carbonate production; tailings and utilities – sulfuric acid production, process water recycling, and reagents addition.

The plant will operate continuously with two 12 hour shifts per day, 365 days per year. The plant availability for feed preparation and lithium production plant is 92%. A summary of the potential flow sheet is described below:

The ore from the mine will be sized, screened, and transported to the leaching circuit. With the help of sulfuric acid in the leaching circuit, lithium is attacked and liberated from the clay. The slurry from the leaching circuit will be filtered and the lithium bearing solution will be sent for neutralization. The filter cake will be discarded as tailings and sent to the facility using conveyors. During neutralization the impurities are removed, and lithium is recovered in the final stage of filtration. Lithium carbonate with 99.5% purity is the target mineral.

1.10 Environmental Studies

The project will follow very similar requirements for environmental permitting as neighboring properties. A Plan of Operation will be submitted to the Bureau of Land Management which will oversee environmental baseline studies and produce an Environmental Assessment or Environmental Impact Statement dependent on the expected effect mining will have on the area of study.

Noram currently operates under a Notice of Intent with the Bureau of Land Management which permitted the most recent Phase V drill program.

1.11 Economic Analysis

Using the information and estimates in the report was used to prepare an after-tax discounted cash flow model. The model includes state, local and federal taxes.

The cost estimates constitute a Class 5 estimate while following the AACE guidelines. The initial capital costs shown in Table 1-2 for base case mining and processing scenario occurring during pre-production is $528 million. Total operating costs is estimated to be $97.4 million/year or $15.69/tonne.

Table 1-2: Capital Costs Summary

Area	$ x 1000
Facilities	6,349
Mine	37,467
Plant	330,507
Infrastructure	27,928
Owner's Cost	24,991
Contingency & Working Capital	100,762
Total Capital Cost	**528,004**

The mine production rate during full operation is set at 17,000 tpd. The production schedule uses ore from the first 11 phases, which results in 40-year mine life. The mine production schedule results in 245.4 million tonnes averaging 1,093 ppm Li.

The economic model is reported in terms of LCE using a lithium price of $9,500 per tonne. The only revenue stream considered is the sale of the lithium product.

Results of the project base case are:

- Operating cost of $3,355.3/tonne LCE.
- Gross Revenue $M 303.4.
- After-tax $1.299.9 billion NPV at 8% discount rate and IRR of 31%
- Payback period of 3.2 years
- Break-even price of $4016.6/tonne LCE

1.12 Conclusions and Recommendations

Economic modelling carried out for the PEA demonstrates that the Zeus Lithium Project is economically viable. Additional drilling, and metallurgical work will be required to optimize the mine plan and plant tonnage. The project has shown itself to contain a flat lying, easily mineable deposit with room for expansion and support a 40 year mine life at a production rate of 31,900 tonnes/annum. The average operating cost is estimated to be $4,016/tonne LCE. Metallurgical testing to date has been encouraging and the deposit appears to be in line for development as a major source of lithium for the ever growing electric vehicle market.

The recommendations to advance the project are:

- Additional drilling and metallurgical work for mine optimization.
- Begin environmental, hydrology and geotechnical studies
- Pre-feasibility level capital and operating cost estimates
- Geotechnical studies to evaluate required overall pit, dump, and tailings slope
- Mine plan optimization studies to evaluate potential of in-pit waste or tailings storage
- Studies to maximize NPV while optimizing plant tonnage.
- Moving forward with the Pre-Feasibility study at an estimated cost of $400,000.

2 Introduction

This National Instrument (NI) 43-101 report Preliminary Economic Assessment is prepared for Noram Lithium Corporation (Noram or the Company). Noram is a publicly traded Canadian corporation with corporate offices in Vancouver, BC, Canada. The company is listed on the TSX Venture Exchange (TSX-V: NRM), Frankfurt Exchange (N7R), and in the United States (OTCQB: NRVTF).

The Zeus property has been subjected to five previous technical reports which can be accessed on www.sedar.com:

- NI 43-101 Technical Report – Lithium Exploration Project: prepared for Noram dated October 24, 2016 (Peek, 2016)
- NI 43-101 Technical Report – Lithium Exploration Project: prepared for Alba Minerals Ltd. (previous owner of the property) dated January 13, 2017 (Peek, 2017)
- NI 43-101 Technical Report – Lithium Inferred Resource Estimate: prepared for Noram and Alba Minerals dated July 24, 2017 (Peek and Spanjers, 2017)
- NI 43-101 Technical Report – Updated Inferred Lithium Mineral Resource Estimate: prepared for Noram dated February 20, 2019 (Peek and Barrie, 2019)
- NI 43-101 Technical Report – Updated Lithium Mineral Resource Estimate: prepared for Noram dated August 16, 2021 (Peek, 2021)

The scope of work assumed by the authors was to prepare a PEA for the Zeus Lithium Project and provide recommendations on future work required to expand the project to the pre-feasibility study stage.

2.1 Qualifications and Experience

The Qualified Persons (QP) responsible for this report are:

- Brent Hilsher
- Bradley C. Peek
- Arphing Lee

Table 2-1 identifies the QP responsible for each section of this report.

Table 2-1: List of Contributing Authors

Section	Section Name	Qualified Person
1	Summary	All
2	Introduction	All
3	Reliance on Other Experts	All
4	Property Description and Location	Brent Hilscher
5	Accessibility, Climate, Local Resources, Infrastructure, and Physiography	Brent Hilscher
6	History	Bradley C. Peek
7	Geological Setting and Mineralization	Bradley C. Peek
8	Deposit Types	Bradley C. Peek
9	Exploration	Bradley C. Peek
10	Drilling	Bradley C. Peek
11	Sample Preparation, Analyses and Mineralization	Bradley C. Peek
12	Data Verification	Bradley C. Peek
13	Mineral Processing and Metallurgical Testing	Brent Hilscher
14	Mineral Resource Estimates	Bradley C. Peek
15	Mineral Reserve Estimates	Bradley C. Peek
16	Mining Methods	Arphing Lee
17	Recovery Methods	Brent Hilscher
18	Project Infrastructure	Brent Hilscher
19	Market Studies and Contracts	Brent Hilscher
20	Environmental Studies, Permitting and Social or Community Impact	Brent Hilscher
21	Capital and Operating Costs	Brent Hilscher
22	Economic Analysis	Brent Hilscher
23	Adjacent Properties	Brent Hilscher
24	Other Relevant Data and Information	All
25	Interpretation and Conclusions	All
26	Recommendations	All
27	References	All

2.2 Abbreviations and Units of Measure

BLM	U. S. Bureau of Land Management
clyst	Claystone
cm^3	Cubic centimeter
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
EA	Environmental Assessment
EIS	Environmental Impact Statement
g	Gram
gal	Gallons
H_2SO_4	Sulfuric Acid
hP	horsepower
HVAC	Heating, ventilation, and air conditioning
IRR	Internal Rate of Return
kg	Kilogram
km	Kilometres
LCE	Lithium Carbonate Equivalent
Li	Chemical symbol for lithium
Li_2CO_3	Lithium carbonate chemical formula
m^3	Cubic meters
mdst	Mudstone
Mg	Chemical symbol for magnesium
NI 43-101	National Instrument 43-101 Technical Report
NOI	Notice of Intent
NVC	Nevada Mining Claims
NVP	Net Present Value
ORP	Oxidation-Reduction Potential
PEA	Preliminary Economic Assessment
PFS	Preliminary Feasibility Study
PoO	Mine Plan of Operations
PPM	Parts per million
QA/QC	Quality Assurance/Quality Control
ROM	Run of Mine
RQD	Rock quality designation
sq. kms	Square kilometres
tpd	Tonnes per day
wt%	Weight Percentage
XRD	X-Ray Diffraction
yr	years

All dollar amounts are in U.S. dollars, unless stated otherwise.

All resource measurements are in metric units. Tonnages are in metric tonnes and grade is in parts per million (ppm) unless stated otherwise.

3 Reliance on Other Experts

Gavin Harrison of Harrison Land Services LLC, who is not a Qualified Person, supplied most of the information regarding the staking and locations of the placer and lode mining claims. Mr. Harrison has more than 15 years of experience staking and recording claims on BLM land in several states in the western U. S. The author verified the presence and location of many of the claim stakes and location documents on the ground. Harrison Land Services was also responsible for claim corner locations used in the claim location map in this report.

The author is not an expert in variography and geostatistics. Therefore, Damir Cukor, P.Geo. was engaged to assist with that portion of the Technical Report. Mr. Cukor is a Qualified Person and has extensive experience with geostatistics and modeling. Mr. Cukor worked with the solid model provided by the author, using SGS Genesis software to derive variograms and make decisions concerning the classifications of the Noram resource.

4 Property Description and Location

4.1 Location

The Zeus Lithium project is located in Esmeralda County, Nevada, halfway between Las Vegas and Reno. The project site is 220 miles southeast of Reno as shown in Figure 4-1. The regional town of Tonopah is 27 miles northeast of the project and the small town of Silver Peak is 7 miles west of the project. The site lies within township 2 south, and range 40 east, Mt. Diablo Principal Meridian.

Figure 4-1: Zeus Lithium Property Location Map

4.2 Mineral Rights & Tenures

The property position consists of a total of 146 unpatented placer claims and 136 unpatented lode claims. Both sets of claims cover approximately 2,800 acres (1,133 hectares) in size. The claims are stacked on the U.S. Government land administered by the U.S. Bureau of Land Management (BLM). Each claim covers an area of 20 acres (8.1 hectares). These claims lie in portions of sections 1, 2, 10, 11, 12, 13, 14, 22, 23 and 24. Lode claims are denoted in red and placer claims are denoted in blue in Figure 4-2.

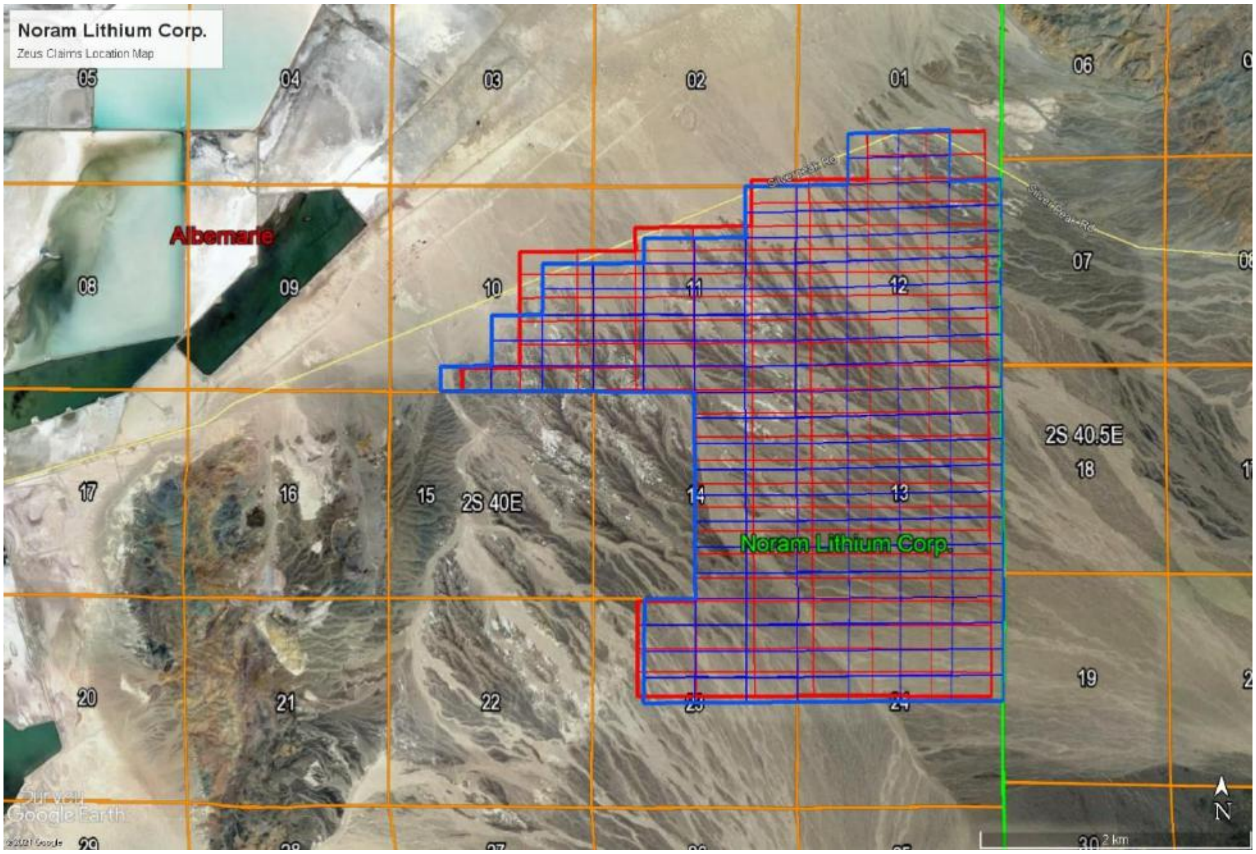


Figure 4-2: Overview of Noram Ventures' Claims in the Clayton Valley. Lode claims are in Red, and Placer Claims are in Blue

None of the information in Section 4 of the report regarding unpatented mining claims has substantially changed from the last NI 43-101 report with the effective date of August 16, 2021.

All claim corners and location monuments were located using Handheld Garmin GPS units (Gavin Harrison, personal communication, and in part, witnessed by the author).

The claim acquisitions were accomplished through claim staking for wholly owned subsidiary Green Energy Resources using Harrison Land Services LLC. The claims are owned 100% by Noram and are not subject to any royalties or net smelter return (NSR) agreement. Table 4-1 lists all the claim names and the BLM Nevada Mining Claim (NV) numbers each claim.

Table 4-1: Claims with BLM NVC numbers

Claim Type	**Claim No. From**	**Claim No. To**	**BLM No. From**	**BLM No. To**
Lode	Zeus II-001	Zeus II-013	NV101834582	NV101788865
Lode	Zeus II-018	Zeus II-140	NV101788870	NV101646350
Placer	Zeus-001	Zeus-50	NV101646836	NV101649505
Placer	Zeus-52	Zeus-52	NV101649507	NV101649507
Placer	Zeus-54	Zeus-54	NV101649509	NV101649509
Placer	Zeus-56	Zeus-56	NV101649511	NV101649511
Placer	Zeus-58	Zeus-150	NV101649513	NV101786045

All claims are located on the unencumbered public land managed by the BLM. Annual holding cost is $165 per claim per year, paid to the BLM. There is also a $4 per claim annual document fee, paid to Esmeralda County each year. There is no set expiration date of the claims if the payments are annually made.

Currently there are no known significant factors or risks that may affect access, title, or right/ability to perform work on the Noram property. The current land under claims contains no buildings or structures. There are no known mineralized zones on or below the surface of Noram's staked land other than those defined by the drilling presented in this report and the surface sampling published in previous technical reports. There are no environmental liabilities associated with the property position nor any mine workings or development of any sort to the author's knowledge.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Zeus Lithium Site can be accessed from Tonopah, Nevada, by driving 7 miles (11 km) south on US Highway 95 and then 20 miles (32 km) southwest on the Silver Peak gravel road. Both roads underwent upgrades during the summer of 2016 and 2020. It is now possible to drive to the edge of the property entirely on paved roads by driving 21 miles (34 km) south on Highway 95 and driving further 11 miles (18 km) west on the newly paved Silver Peak Road.

5.2 Climate

Clayton Valley has a semi-arid climate characterized by hot, dry summers and cold winters. This climate is influenced by the Sierra Nevada Mountains located to the west of the valley. July is the hottest month with an average high temperature of 88°F (31.1°C) and average low temperature of 59°F (15°C). December, the coldest month, has an average high temperature of 43°F (6.1°C) and average low temperature of 21°F (-6.1 °C). The nearest town of Goldfield receives an average annual precipitation of 6.4” (162.6 mm) precipitation, usually in the form of thunderstorms which can be strong and cause extreme flooding. Snowfall is a rare event and year-round low humidity aids in evaporation. Windstorms occur predominantly in the summer and fall but can be common all year round. Figure 5-1 gives a graphic representation of the Goldfield average temperatures and precipitation. (Climate Goldfield - Nevada, 2020) The mild climatic conditions allow the field work to continue throughout the year.

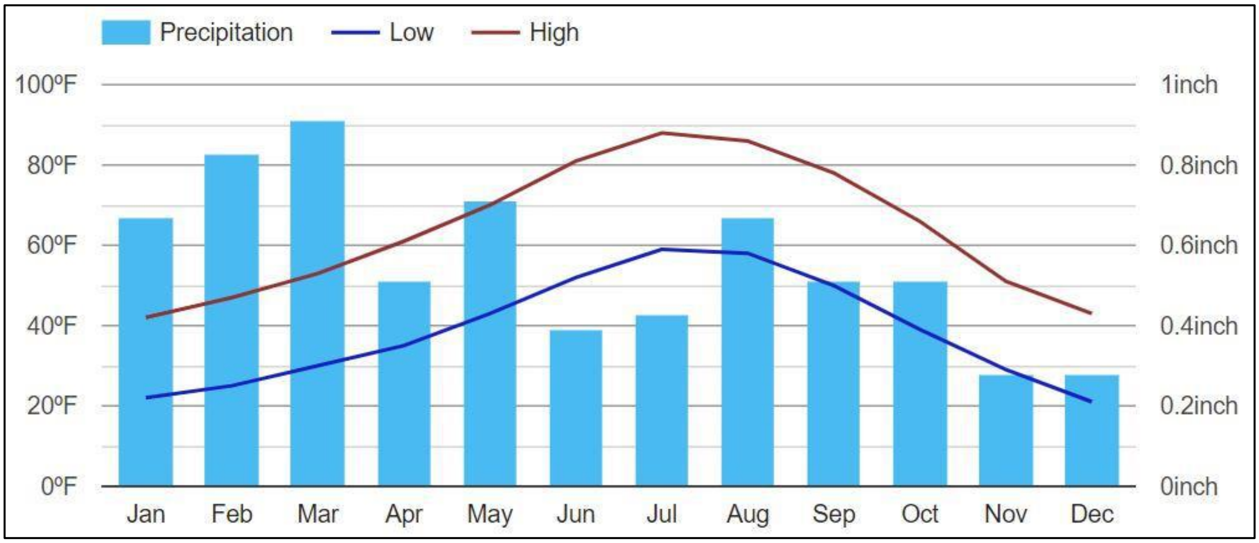


Figure 5-1: Daily High and Low Temperatures for Goldfield, Nevada

5.3 Local Resources

The Zeus property is located near the small mining towns of Tonopah, Silver Peak, and Goldfield. These towns are well positioned as sources of labor, equipment, services, and supplies necessary for mine and plant development. Tonopah with a population of 2,211 people, is the Nye County seat and the closest full-service town to the site. Services include grocery stores, restaurants, hotels/motels, banks, government offices, and gas stations. Employment in Tonopah consists of people working in the service industry, military, mining, and industrial jobs related to the nearby Crescent Dunes concentrating solar plant. (Data USA: Tonopah, NV, 2021)

Silver Peak is the closest census-designated settlement with a population of 115 during the 2018 census. (Data USA: Silver Peak, NV, 2021) The town mostly consists of housing and few other small services. The second closest place to the Zeus property is Goldfield (population 359); an Esmeralda County seat with a restaurant, motel, and government offices. (Data USA: Goldfield, NV, 2021) These towns might have a lower supply of amenities but offer mining related services, personnel, expertise, and are receptive to mining.

There are many mining operations, historical and active, within Esmeralda County and the surrounding counties. These include the Silver Peak Lithium Brine operations of Albemarle Corporation and the Mineral Ridge open-pit gold mine of Scorpio Resources.

5.4 Infrastructure

The mine site is connected to the nearby towns via a series of well-maintained state highways which further connect to the main road network in Nevada. Zeus property is linked to the southern part of Clayton Valley via county maintained paved and gravel roads. These roads connect the Zeus Project to the local town of Tonopah in the North and allows year-round access to the project site. The nearest rail system is in Hawthorne, Nevada, which is approximately 110.5 miles (177.8 km) by road to the north of the site. Power lines that supply electricity to the town of Silver Peak and the Albemarle lithium operations cross Noram's Zeus claim group.

5.5 Physiography

The Noram claims fall between elevations of 4,300 – 4,800 feet (1,311-1,463 meters) above sea level. The Clayton Valley lies in a complex zone of disrupted structure between the northwest trending Sierra Nevada Mountain range to the west and the north-south trending Basin and Range province to the northeast. The area lies in the eastern rain shadow of the Sierra Nevada Mountains and is considered high desert. The vegetation of the region is sparse, consisting of widely spaced low brush. There are no trees on the property. The topography has sloping basin margins of unconsolidated and poorly consolidated sediments. These sediments are cut by typical desert washes, which can be steep sided. There are few roads crossing the property, but the area can be traversed by 4-wheel drive vehicles, often with some difficulty.

6 History

The Albemarle Corporation operation within the Clayton Valley in Silver Peak, Nevada, is the site of the only lithium brine production in North America. Brines containing lithium are pumped from wells that penetrate the playa sediments. The brines are concentrated through a series of evaporation ponds and the resulting salts are processed to extract lithium at the plant at Silver Peak.

Following the lithium price rise in recent years, several exploration companies have become interested in the Clayton Valley area resulting in several thousand new claims being staked, surrounding the Albemarle land holdings. In early 2016, Harrison Land Service became aware of some unstaked land near the Albemarle land holdings. Harrison Land Services LLC connected with Noram, who eventually funded the staking program that resulted in their current claim position. Successful surface sampling for lithium and the resulting market's reaction provided the impetus to stake additional claims. At one point, the company held 888 placer claims that covered most of the eastern portion of the Clayton Valley. These holdings have recently been trimmed to the core Zeus placer and lode claims as described in Section 4 of this technical report.

The claims that comprise the property have been staked on U.S. Government land that was open to staking. There have been no previous owners, nor has there been previous production from the properties.

Noram has conducted exploration for lithium on the property since the spring of 2016. Exploration to date has included metallurgical testing, three phases of surface sampling, and five phases of core drilling. The maiden mineral resource for the property was reported in a technical report titled "Lithium Inferred Mineral Resource Estimate, Clayton Valley, Esmeralda County, Nevada, USA" with an effective date of July 24, 2017 (Peek and Spanjers, 2017). A substantial increase in the size of the inferred resource was reported in the technical report with the title of "Updated Inferred Lithium Mineral Resource Estimate, Zeus Project, Clayton Valley, Esmeralda County, Nevada" with an effective date of February 20, 2019 (Peek and Barrie, 2019). The latter report documented the drilling through Phase III.

Two more phases of drilling have been completed since the 2019 NI 43-101 report and are documented in Section 10 of the report, herein.

7 Geological Setting and Mineralization

The information in this section of the report does not vary significantly from Section 7 of the previous NI 43-101 report with an effective date of August 16, 2021 (Peek, 2021). To the author's awareness, no new geologic setting or mineralization information has been published regarding the Clayton Valley area.

The Clayton Valley is a closed basin playa surrounded by mountains. Figure 7.1 shows the physiographic features in the Clayton Valley area. (Davis and Vine, 1979)

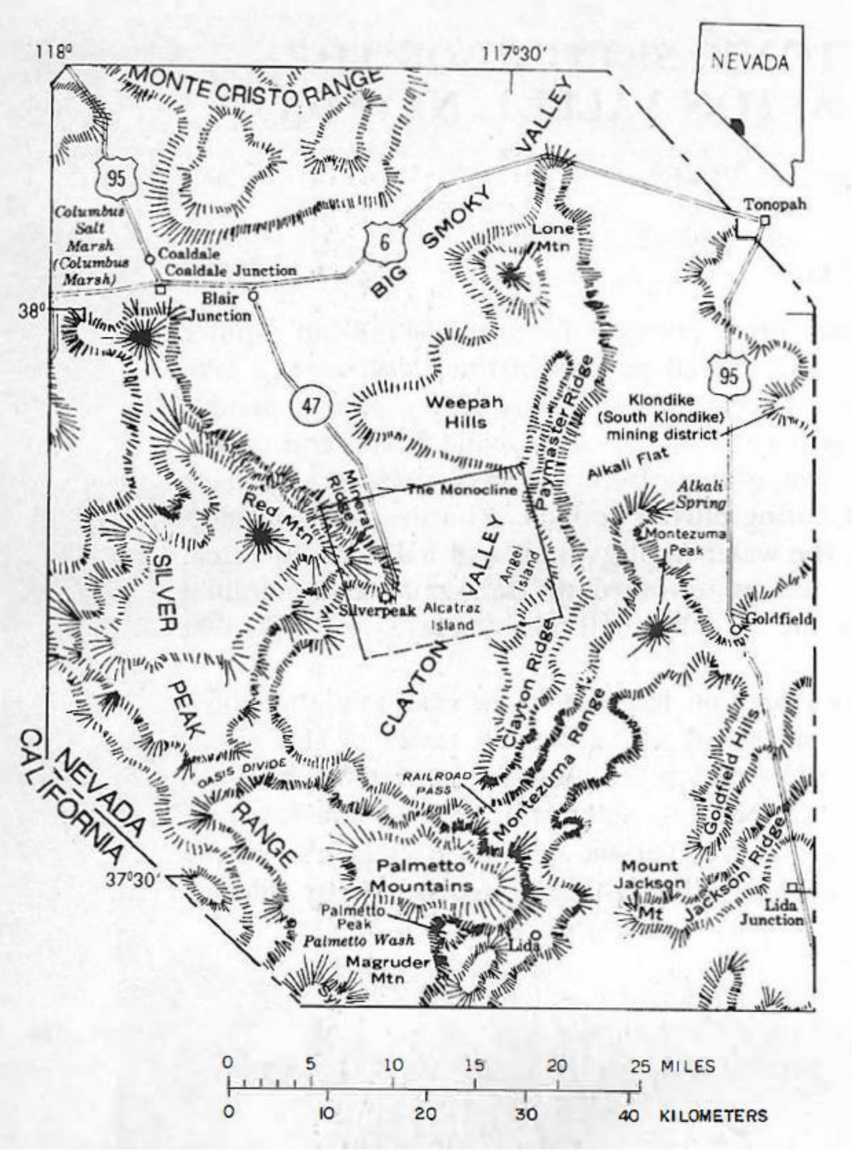


Figure 7-1: Physiographic features Surrounding Clayton Valley, Nevada

Clayton Valley is flanked on the north by the Weepah Hills, on the east by Clayton and Paymaster Ridges, on the west and south by the Silver Peak Range and the Palmetto Mountains. The playa floor is approximately 40 sq. miles (100 sq. kms). Altitudes in this area range from 4,265 feet (1300 meters) on the playa floor to 9,450 feet (2,880 meters) at Piper Peak (Davis and Vine, 1979).

Tectonically, the Clayton valley occurs in the Basin and Range province. Figure 7.2 is a generalized geologic map of the Clayton Valley area with the Noram land position superimposed Zampirro (2005). The province is dominated by horst and graben faulting and some right lateral motion since the Tertiary era, which continues to the present (Foy, 2011). The basement is made up of Neoproterozoic to Ordovician carbonate and clastic rocks deposited along the ancient western passive margin of North America. The basin is bounded to the east by a steep normal fault system toward which basin strata thicken (Munk, 2011). Structural and stratigraphic controls have divided the Playa into six economic, yet potentially interconnected, aquifer systems (Zampirro, 2005). The sediments deposited in the basin are primarily silt, sand, and gravel interbedded with illite, smectite and kaolinite clays (Kunasz, 1970; Zampirro, 2005). These sediments include a substantial component of volcaniclastics. Green and tan tuffaceous claystone and mudstones are located on the eastern margin and above the current playa sediments (Davis, 1981). These have been the primary objective of Noram’s exploration effort and are considered by Kunasz (1979) and Munk (2011) to be the primary source of the lithium for the basin brines.

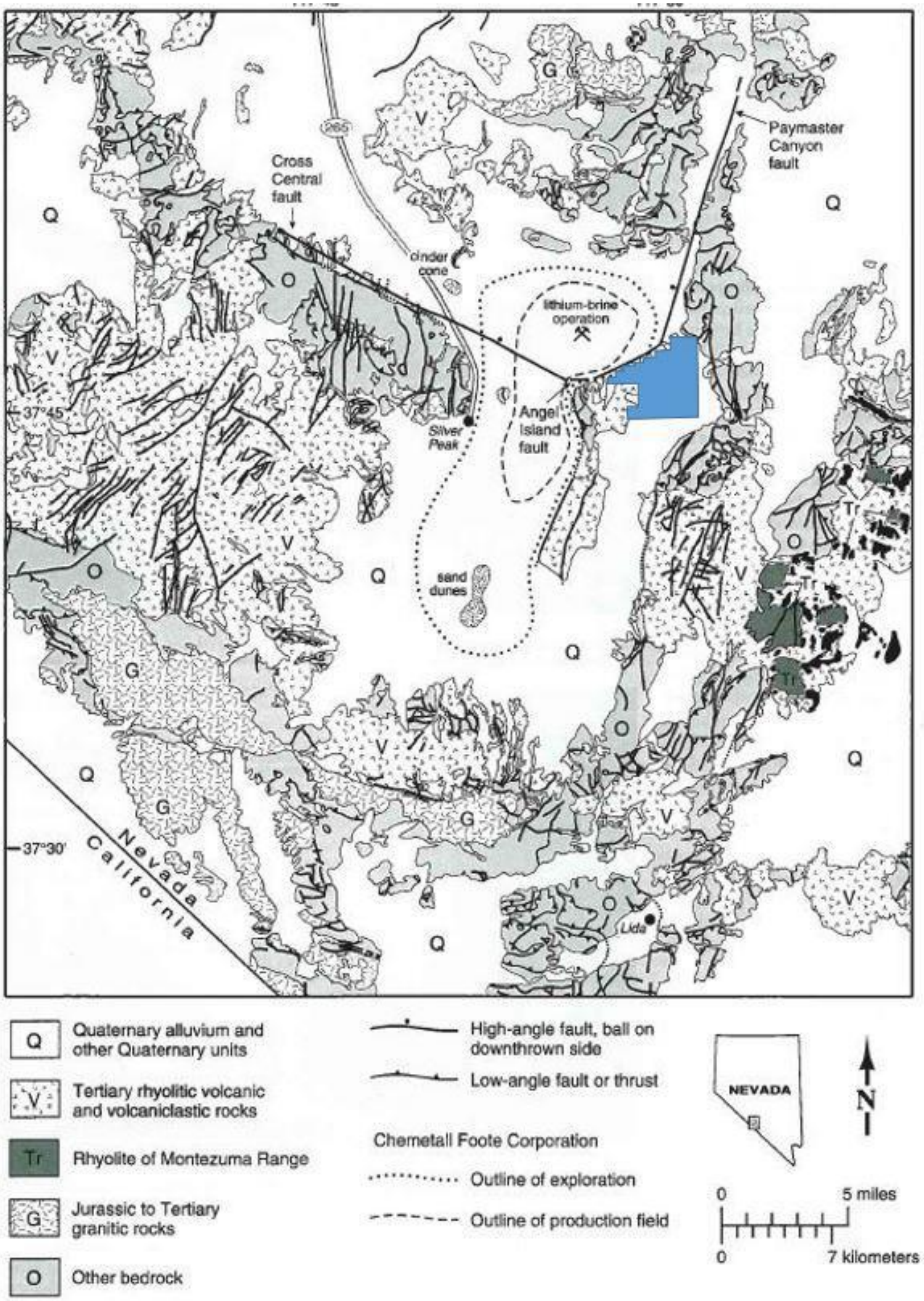


Figure 7-2: Generalized Geologic Map from Zampirro (2005) with Noram's Zeus Claim Outline (blue shaded area)

7.1 Geology – Zeus Claims

The Zeus claim block has been the focus of all 5 phases of Noram's drilling and covers a large area that gently slopes toward the northwest. The drainages, or washes, cut through the Tertiary Esmeralda Formation. The Esmeralda area is made up of fine grained sedimentary and tuffaceous units which generally dip to the northwest. The strike and dip can be quite varied locally but on average most of the sediments dip at less than 5°. Some bedding undulations were noted, possibly caused by differential compaction or local faulting.

Faulting was also noted in some zones, mostly in the northern regions of the claims. The faults appear to trend at N30°E to N45°E, approximately parallel to the edge of the playa in this part of the Clayton Valley. Faulting is difficult to trace on the surface due to the homogeneity and semi-consolidated nature of the sediments and was only possible to identify in select areas of the property. In addition to ancient faulting, recent faults are evident around the basin that have formed as a result of pumping brines from the aquifers over the past 50+ years to produce lithium.

In the areas of the claim block where the Esmeralda Formation outcrops, the resulting topographic configuration consists of long rounded "ridges" of Esmeralda separated by gravel filled washes. These ridges are generally 50 feet (15 meters) to 100 feet (30 meters) wide and have lengths of a few hundred to a few thousand feet, trending northwest. These geomorphic features have been described by Davis (1981) and Kunasz (1947) as a "badlands" type topography. Figure 7.3 is an example of such topography.

The thickness of the Esmeralda Foundation has not been absolutely determined since the base of the formation was not seen in any of the washes and was not found in any drilling to date. Davis (1981) measured this section at approximately 328 feet (100 meters) thick and Kunasz (1974 described it as being approximately 350 feet (107 meters) thick. The ridges are topped with weathered remnants of rock washed down from the surrounding mountainous areas; a weathering phenomenon typical of the desert terranes and sometimes called "desert pavement". In the southeastern portion of the claim block, the quaternary outwash gravel shed from the Clayton Ridge thickens toward the southeast and was found to be more than 100 meters thick in two drill holes.

Figure 7-3: Ridges and Washes encountered on the Zeus Claim Group

Within approximately 200 feet (60 meters) of surface, the main area of interest on the Zeus claims is mostly soft and crumbly siltstones, mudstones and claystones, containing several thin beds of harder, more consolidated sediments. Most of these mudstones and claystone are olive green, gray or tan. Most beds were tuffaceous, as evidenced by fine crystal shards. Nearly all the sediments are calcareous, indicating a lakebed deposition. Below 200 feet (60 meters), the sediments become more consolidated but are still relatively soft compared to most sedimentary rocks.

Several of the samples contained vugs or voids partially filled with a white, soft evaporite mineral, assumed to be gypsum (Figure 7.4).

Figure 7-4: Gypsum filled Vugs in a Tuffaceous, Calcareous Mudstone

Figure 7.5 shows a generalized fence diagram of the Zeus Project area with the main lithologic types displayed. The diagram was generated from the drilling and has a vertical exaggeration of 4X. The red and blue panels are vertical faults. The faults are not evident at the surface but showed offsets (down to the southeast) in the drill core.

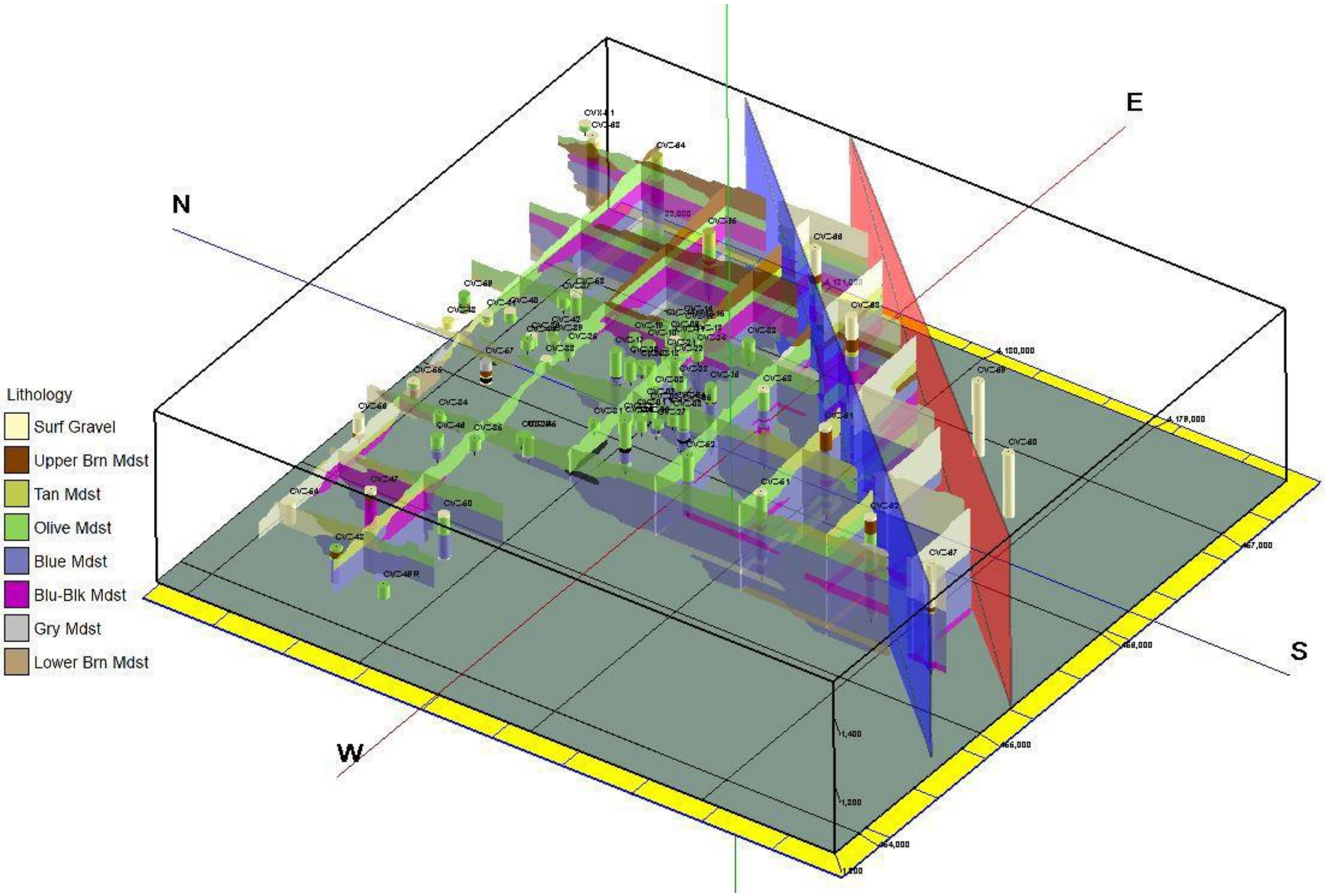


Figure 7-5: Lithology Fence Diagram looking Northeast. Vertical exaggeration is 4X

A further indication of lakebed sedimentation is evidenced by algal mats and digitate algal features (Figure 7.6)

Figure 7-6: Examples of Algal Features from the Esmeralda Formation on the Zeus Claims

During Phase II through Phase V the “reduced” clay units were encountered. These units normally have a distinctive blue or black coloration, although in some instances the blue fades into the olive, making it difficult to distinguish the two. It was noted that after exposing the black core to air that the reduced core quickly began to oxidize to the olive coloration seen in the oxidized sediments. Figure 7.7 is a photo of some reduced core that was originally black when it was extracted from the drill hole. This photo shows a core that was split approximately one week after drilling. The inner core remained black (reduced) while the outer rind of the core has turned olive (oxidized). The clays were apparently deposited under reducing (oxygen deprived) conditions in the bottom of the playa lakebed.

Figure 7-7: Split reduce core after about one week's exposure to air

7.2 Mineralization

The brine mineralization within the Clayton Valley has been documented by numerous studies spanning several decades. Brine targets have not yet been investigated on Noram's claims. No drill holes have penetrated to aquifers (if present) beneath the lithium rich clays nor to the Paleozoic basement rocks.

The targeted mineralization investigated by Noram occurs at or near the surface in the form of sedimentary layers enhanced in lithium to the extent that the lithium appears to be extractable from them economically, although this has not yet been demonstrated through in-depth economic analysis for the Zeus project. The relationship of these targeted lithium-bearing clay layers with respect to the basin brines is illustrated schematically in Figure 7.8 (Bradley, 2013). Noram's claim locations with respect to an existing evaporation-pond Li recovery operation is shown in Figure 4.2.

The targeted layers occur at surface primarily as olive green, interbedded tuffaceous mudstones, and claystone. The beds are nearly always calcareous and most often salty. The weathered mudstones are usually poorly consolidated, whereas the thin claystone beds can be well consolidated and commonly form chert nodules. The units contain sandy beds locally.

The units occur as lakebed sediments that have been mapped (Albers & Stewart, 1972; Davis, 1981) as Miocene or Pliocene Esmeralda Formation. Algal mats and digitate algal features have been noted locally, but these are generally not well preserved. The beds are gently dipping, usually to the northwest, but with local undulations. These units have been shown by Kunasz (1970) to be the probable source of lithium for the basin brines. Exploration for this mineralization, which confirmed the existence of anomalously high levels of lithium within sediments on Noram's claims, is documented in Section 9 below. The deposit that is the subject of this report is part of a section of ancient lakebed sediments that was raised above the current Clayton Valley playa by Basin and Range faulting, which is present throughout the region.

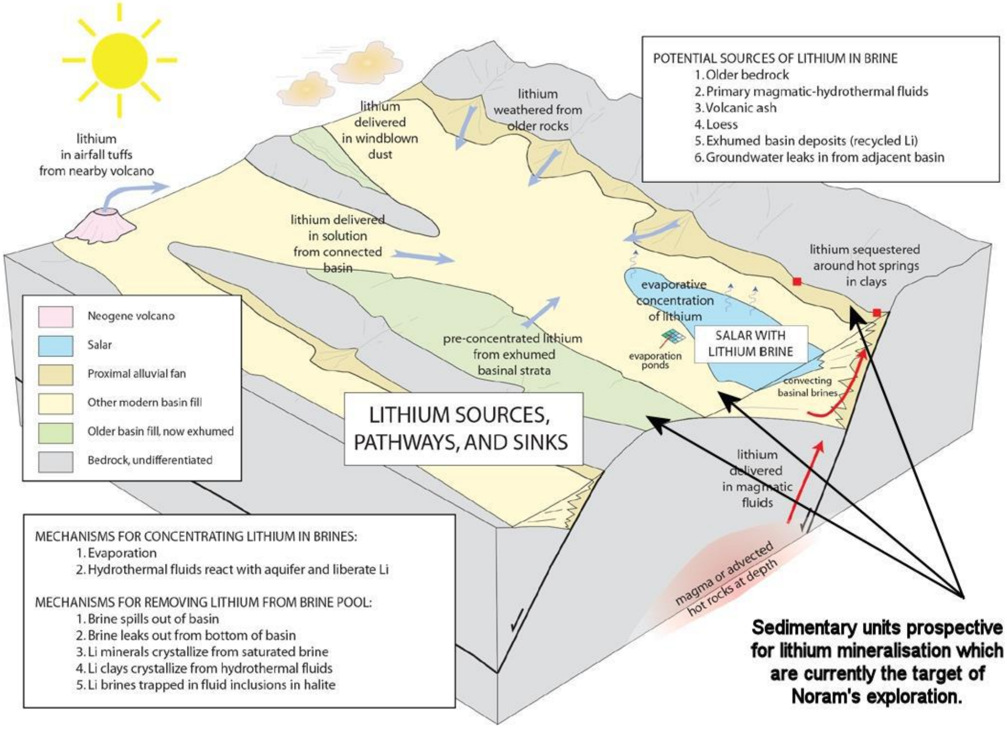


Figure 7-8: Schematic Deposit Model for Lithium Brines (Bradley, 2013)

8 Deposit Types

Noram's Clayton Valley claims offer two deposit types that are potential objects of exploration efforts. Type one is the most obvious, which involves drilling for brines in the deep basin like those being extracted by Albemarle at their operations at Silver Peak. The lithium brine potential of Noram's claims has not been investigated to date, and it is not known whether brines exist in the sediments beneath Noram's Zeus claims.

The second deposit type involves the production of lithium from playa lakebed sediments that have been raised to surface or near surface through block faulting. This process requires the development of new lithium extraction processes currently being investigated. Such processes are being tested by competitor companies and Noram has conducted initial testing on bulk samples from its Zeus claims (See Section 13). The processes being tested would extract lithium directly from lithium-rich mudstones and claystone, which occur at the surface over large portions of the Zeus claim group. To the authors' knowledge, globally there are no operations that currently produce lithium from clays on a commercial scale, although several companies are working toward that goal.

9 Exploration

Competitor companies are known to be active in the Clayton Valley. They are sampling, performing geophysical surveys and drilling, among other activities. Until the last 5 years, competitors were mostly searching for the deeper brine targets. Cypress Development Corporation, Spearmint Resources Inc. and Enertopia Corporation are the other companies in the Clayton Valley besides Noram. These companies are known to be investigating lithium-rich sediments occurring at or near surface as potential targets for lithium extraction. Albemarle is in process of expanding their operations to double their lithium production and are evaluating recovery of lithium from clays (Albemarle news release, 2021).

At this moment in time, exploration activity conducted by Noram on its claims has included:

1. Three phases of surface sampling with assaying of all surface samples.
2. Collection of bulk samples from surface deposits (oxidized material) and from sections of drill core (reduced material) for metallurgical testing.
3. Completion of 5 phases of drilling on its Zeus claim group.

The geological portion of the exploration work has been principally conducted by the author as a contractor, working alongside Harrison Land Services LLC. Harrison successfully completed all 5 phases of drilling. The objective of the exploration program has been to develop a resource of high lithium values in sediments over a large area of the Noram claims.

Details of the three phases of surface sampling and collection of two bulk samples were enumerated in two previous NI 43-101 reports for Noram Ventures Inc. (Peek 2016) and for Alba Minerals Ltd. (Peek 2017). Details of the Phase I drilling were described in the maiden NI 43-101 resource estimate with an effective date of July 24, 2017. To avoid redundancy, the descriptions of these previous programs will not be repeated herein, although the results of all 5 phases of drilling are incorporated into the mineral resource estimate discussed in Section 14.

10 Drilling

To date, there have been 5 phases of drilling encompassing 70 drill holes by Noram at its Clayton Valley Zeus project for a total of 3,342.7 meters and an average depth of 47.8 meters. All holes have been core drilling holes, varying in core diameters from BQ (36.4mm) to NQ (47.6mm) to HQ (63.5mm). Several of the holes were deepened in a subsequent drilling phase. All drilling was completed by Harrison Land Services of Moab, Utah. Table 10-1 is a listing of all the drill holes to date with coordinates (in UTM NAD83, Zone 11) and the drilling phases in which they were completed. Figure 10.1 is a plot of the drill holes color-coded for each phase.

Table 10-1: Drill Hole Coordinates and Drilling Phases

Drill Hole	Easting (UTM)	Northing (UTM)	Elevation (m)	Depth (m)	Drilling Phase
CVX-01	457246	4182108	1377.0	8.2	Phase I
CVZ-01	455520	4180581	1356.1	15.1	Phase I
CVZ-02	455570	4180543	1357.0	14.6	Phase I
CVZ-03	455585	4180422	1361.5	14.5	Phase I
CVZ-04	455652	4180445	1362.5	14.0	Phase I
CVZ-05	455617	4180385	1364.0	61.6	Phase I, Deepened in Phase II
CVZ-06	455844	4180386	1368.9	92.0	Phase I, Deepened in Phase II
CVZ-07	455615	4180595	1360.0	14.6	Phase I
CVZ-08	455694	4180604	1360.3	62.8	Phase I, Deepened in Phase II
CVZ-09	456075	4180778	1370.5	15.2	Phase I
CVZ-10	455973	4180837	1366.7	10.7	Phase I
CVZ-11	456051	4180737	1371.8	12.2	Phase I
CVZ-12	456143	4180742	1373.2	12.2	Phase I
CVZ-13	456091	4180658	1374.5	12.8	Phase I
CVZ-14	456131	4180846	1370.9	13.4	Phase I
CVZ-15	456191	4180711	1377.7	91.4	Phase I, Deepened in Phase II
CVZ-16	456197	4180790	1375.6	92.0	Phase I, Deepened in Phase II
CVZ-17	455865	4180954	1361.5	87.5	Phase I, Deepened in Phase II
CVZ-18	455861	4180750	1364.3	92.0	Phase I, Deepened in Phase II
CVZ-19	455972	4180918	1367.0	14.6	Phase I
CVZ-20	455838	4180852	1361.3	27.1	Phase I
CVZ-21	455962	4180720	1368.2	15.2	Phase I
CVZ-22	455932	4180656	1369.5	90.5	Phase I, Deepened in Phase II
CVZ-23	455837	4180786	1365.0	13.7	Phase I
CVZ-24	456031	4180595	1373.5	15.2	Phase I
CVZ-25	455781	4181171	1358.1	15.2	Phase I
CVZ-26	455479	4180533	1355.7	15.5	Phase I

Drill Hole	**Easting (UTM)**	**Northing (UTM)**	**Elevation (m)**	**Depth (m)**	**Drilling Phase**
CVZ-27	455504	4180453	1358.4	6.7	Phase I
CVZ-28	455814	4180544	1369.5	14.9	Phase I
CVZ-29	455130	4180985	1343.4	12.2	Phase I
CVZ-30	455431	4180595	1354.5	69.5	Phase I, Deepened in Phase II
CVZ-31	455373	4180734	1351.3	15.2	Phase I
CVZ-32	455455	4180614	1354.0	15.2	Phase I
CVZ-33	456206	4180419	1381.5	28.0	Phase I
CVZ-34	455104	4181446	1333.2	14.0	Phase I
CVZ-35	454999	4181167	1338.0	15.2	Phase I
CVZ-36	455782	4181387	1351.3	13.4	Phase I
CVZ-37	456086	4181416	1362.0	15.2	Phase I
CVZ-38	455674	4181225	1349.0	13.4	Phase I
CVZ-39	455802	4181267	1358.8	15.2	Phase I
CVZ-40	455878	4181578	1352.7	14.6	Phase I
CVZ-41	455821	4181673	1349.2	12.2	Phase I
CVZ-42	455859	4181320	1356.2	15.2	Phase I
CVZ-43	455707	4181821	1342.9	9.4	Phase I
CVZ-44	455718	4181367	1356.3	13.7	Phase I
CVZ-45	455144	4180957	1345.5	30.5	Phase III
CVZ-46	454947	4181350	1332.4	30.5	Phase III
CVZ-47	454425	4181369	1325.4	101.2	Phase III, Deepened in Phase IV
CVZ-48	453981	4181257	1313.1	49.4	Phase III, Deepened in Phase IV
CVZ-49R	453832	4180876	1323.4	18.3	Phase III
CVZ-50	454399	4180923	1337.4	64.6	Phase III, Deepened in Phase IV
CVZ-51	455248	4179673	1366.3	119.5	Phase III, Deepened in Phase IV
CVZ-52	455346	4180171	1357.7	79.9	Phase III, Deepened in Phase IV
CVZ-53	455916	4180129	1378.5	107.3	Phase III, Deepened in Phase IV
CVZ-54	454168	4181660	1325.0	30.5	Phase III
CVZ-55	455253	4181704	1331.2	30.5	Phase III
CVZ-56	454901	4181774	1325.5	30.5	Phase III
CVZ-57	455527	4181474	1342.9	30.5	Phase III
CVZ-58	456135	4181376	1363.1	30.5	Phase III
CVZ-59	455909	4181869	1346.4	24.4	Phase III
CVZ-60	456049	4178793	1401.9	92.0	Phase V
CVZ-61	455806	4179689	1385.8	137.1	Phase V
CVZ-62	455331	4179091	1383.6	155.4	Phase V
CVZ-63	457177	4182015	1377.0	98.1	Phase V
CVZ-64	457197	4181653	1381.2	138.6	Phase V
CVZ-65	456804	4181073	1385.8	100.5	Phase V
CVZ-66	456898	4180522	1404.0	150.8	Phase V

Drill Hole	Easting (UTM)	Northing (UTM)	Elevation (m)	Depth (m)	Drilling Phase
CVZ-67	455135	4178606	1392.6	163.0	Phase V
CVZ-68	456551	4180061	1402.1	164.2	Phase V
CVZ-69	456415	4179228	1409.3	107.3	Phase V

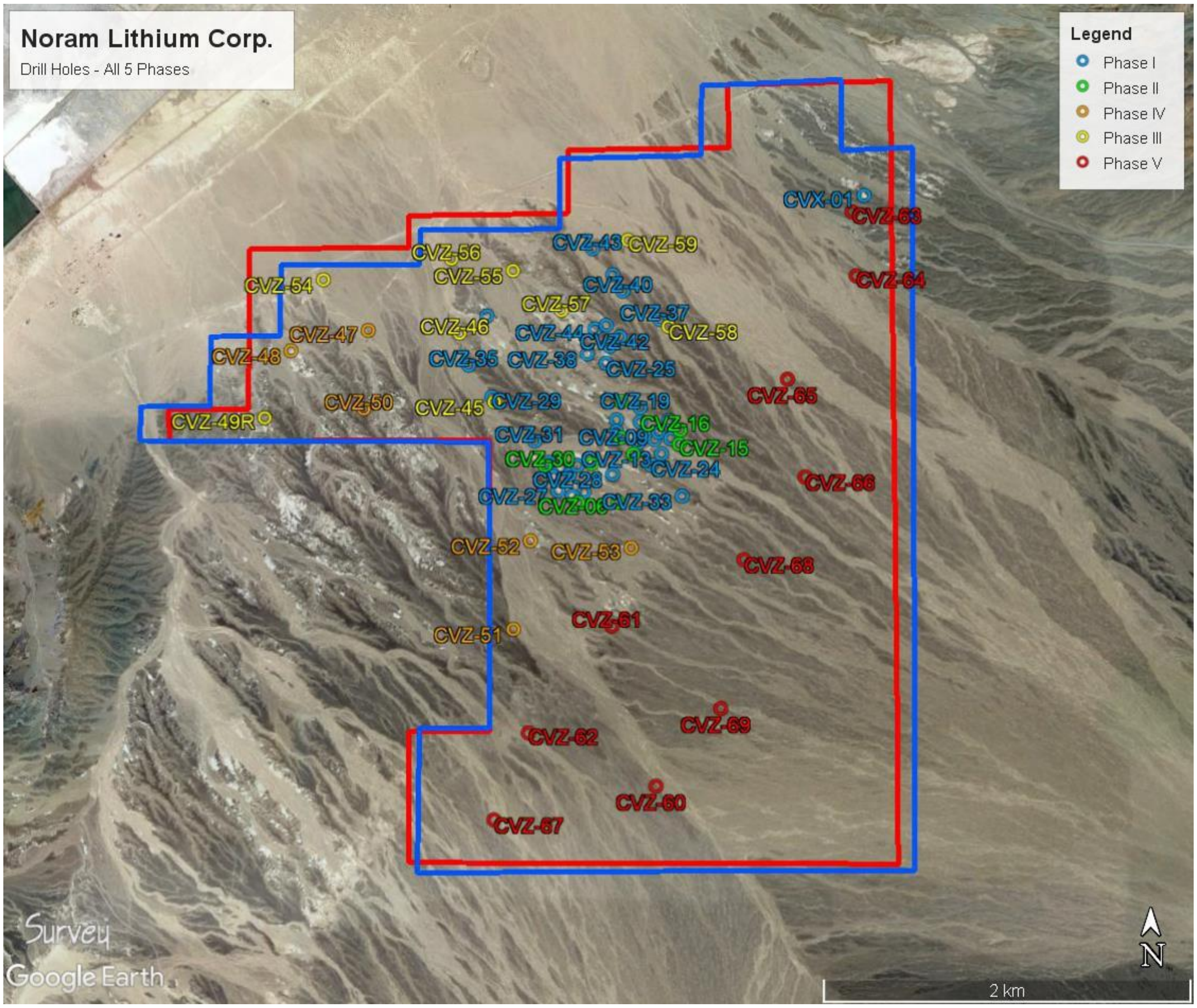


Figure 10-1: The 5 Phases of Drilling, Color-Coded by Phase. Red Outline = Lode Claims; Blue Outline = Placer Claims

10.1 Summary – First 3 Drilling Phases

The details of the 3 previous drilling campaigns have been described in the last two NI 43-101 reports: "Lithium Inferred Mineral Resource Estimate, Clayton Valley, Esmeralda County, Nevada, USA, effective date July 24, 2017 (Peek and Spanjers, 2017) and "Updated Inferred

Lithium Mineral Resource Estimate, Clayton Valley, Esmeralda County, Nevada, USA," effective date February 20, 2019 (Peek and Barrie, 2019). To avoid redundancy, those 3 phases are summarized below:

Phase I drilling occurred in December 2016 and January 2017. In all, 46 short holes were drilled using backpack-style rigs for a total footage of 2164 feet (659.6 meters). Most of the holes were between 30 and 50 feet (9.1 and 15.2 meters). The drilling resulted in an inferred resource of 17 million metric tonnes reported in the NI 43-101 report with the effective date of July 24, 2017.

Phase II drilling was completed in April and May 2018. It consisted of the deepening of 9 of the core holes drilled during Phase I. The previous holes were not re-entered but were drilled from surface for a total footage of 2,426 feet (739.4 meters). No updated resource was calculated following Phase II.

Phase III drilling commenced in November 2018 and was completed the following month. It consisted of 16 holes with an average depth of 95.8 feet (29.2 meters) for a total of 1,535 feet (467.9 meters). The objective of the program was to drill these shallow holes and later deepen the encouraging ones. The results from drilling Phases II and III provided the data to complete the third NI 43-101 report with an effective date of February 20, 2019 (Peek and Barrie, 2019). In that report the following table provided a sensitivity analysis of the inferred resource to that point in time:

Table 10-2: Sensitivity analysis of inferred resource (3rd Noram Ventures NI 43-101 report)

	Cut-off Grade		
	Inferred Resource @ 300 ppm	**Sensitivity @ 600 ppm**	**Sensitivity @ 900 ppm**
Tonnes (1000s)	331,000	252,000	145,000
Grade (ppm)	858	984	1145
Contained Li (Tonnes)	284,000	248,000	166,000

10.2 Phase IV Drilling

During the phase IV drilling, which was completed during October and November of 2019, six core holes were deepened. These holes had been drilled to approximately 100 feet (30 meters) as part of phase III with the idea that the most promising drill holes would be deepened in Phase IV. Table 10.3 lists the 6 drill holes deepened with their depths before and after Phase IV.

Table 10-3: Phase IV Drill Hole Depth Summary

Core Hole	Previous Depth (ft)	Phase IV Depth (ft)	Phase IV Depth (m)
CVZ-47	100	332	101.2
CVZ-48	100	162	49.4
CVZ-50	100	212	64.6
CVZ-51	100	392	119.5
CVZ-52	100	262	79.9
CVZ-53	100	352	107.3
Total	**600**	**1712**	**1154**

The results of the Phase IV drilling provided data for a substantial increase in the size of the mineral resource, especially in the southeasterly direction. An upgrade to the resource model was completed in early 2020. The results of the calculation showed that the resource was increased to approximately 213 million tonnes of indicated resources, and 194 million tonnes of inferred at a 300 ppm Li cut-off. This tonnage was not double the size of the previously announced NI 43-101 resource, so did not trigger the need for an additional NI 43-101 report.

10.3 Phase V Drilling

The Phase V drill program was intended to expand the previously defined resource to the southeast with widely spaced holes. These were the first holes to be drilled on the southeast side of a surface fault trace evident on aerial photos. It was found that the fault trace had very little vertical movement, but two other faults were discovered from the drilling results. These two faults were also north-easterly trending and showed considerable vertical offset of the lakebed sediments. The Phase V drilling was successful in discovering the thick sections of well mineralized lithium rich sediments.

Drilling began around November 1, 2020 and ended around March 6, 2021. There were several time gaps between those two dates when no drilling was completed due to holiday breaks, a drill rig breakdown, and a period when the source of water for drilling was interrupted amongst others. In all, ten core holes were drilled for a total of 4,288 feet (1,307.1 meters) and an average depth of 429 feet (130.7 meters). Some of the interesting lithologic features that came to light from the Phase V holes are:

- Two of the holes on the southeast side of the drilled area did not reach the targeted claystone and were stopped in surficial gravels. The two holes, CVZ-60 and CVZ-69 were stopped in a thick section of surface gravel at 302 and 352 feet (92.0 and 107.3 meters), respectively. These two holes are interpreted to be on the downthrown southeast side of what has been interpreted as a northeast trending fault.
- The two new faults, labeled Fault 1 and Fault 2, are depicted as red and blue planes in Figure 7.5, respectively. The figure is a fence diagram of the project's lithologies. Fault 1 is the fault that is farthest to the southeast. Since the claystone units were not intersected in the holes on the downthrown side of the fault, the vertical throw on the fault is unknown, but appears to be at least 215 feet (65 meters). Fault 2 showed a vertical movement of approximately 180 feet (55 meters). Both interpreted faults were downthrown on the southeast side. Because of the uniformity of the sediments and the distance between drill holes, no lateral movement on the faults could be detected.
- The thickness of the lithium rich claystone increases significantly to the southeast.

11 Sample Preparation, Analyses and Security

Sample preparation, analyses, and security for the first 3 phases of drilling were addressed in previous NI 43-101 reports available at the sedar.com website, so to avoid repetition they will not be discussed here.

11.1 Sampling and Sample Handling

Core samples from the Phase IV drilling were collected from the drill sites by the author and then either transported to the staging area box trailer via ATV or delivered to the trailer by the drillers. At the trailer the core was photographed and then logged for RQD and lithology. The core was split and sampled by the author. For the Phase IV drilling, half of the core was retained in the core boxes for future viewing or sampling. The other half of the core was placed in consecutively numbered sample bags along with numbered sample tags, to be shipped to the ALS laboratory in Reno, Nevada. Samples from the Phase IV drill holes were almost entirely collected at 5-foot (1.52-meter) intervals.

For the Phase V drilling program, the sample intervals were increased to 10 feet. This was to match the lengths of the core being extracted from each drill run. It also reduced the number of samples to process. Nearly all the Phase V core was HQ-size core, so to reduce the sample sizes, it was determined that ¼ of the core was to be collected, unlike samples from the previous 4 drilling programs which collected ½ of the core. To find out if the smaller sample would influence the outcome of the assay, data collected from the 29 previous duplicate samples from Phases I through IV were used. The duplicate samples used ½ of the core for the original samples and ¼ of the core for the duplicates. A T-test was performed on the two sets of data to find out if the difference in the sets was statistically significant. The test gave a P-value of 0.22, indicating that the difference was not statistically significant and therefore the ¼-core samples could be relied upon to give results that are as accurate as the ½-core samples.

The core in the upper parts of the holes was relatively soft therefore, with some exceptions, the core could be split using a putty knife. Where hard layers or nodules were encountered, the core was split using a hammer and 3-inch-wide chisel. It is estimated that the hard layers or nodules constituted less than 2% of the core in the upper parts of the holes. Below approximately 200 feet (60 meters), the sediments became more difficult to split. In these zones a hammer was used with the putty knives for most of the splitting. All the logging and sampling of the Phase IV core was performed by the author.

The Phase IV core was only handled by the drillers and the author and otherwise was locked in the trailer when no one was onsite. Samples for assay were transported back to the author's hotel room where they were secured until shipment to the laboratory. Two shipments of Phase IV core were packaged in reinforced cardboard boxes and shipped via U. S. Postal Service to the ALS laboratory in Reno. One large shipment of samples, which constituted approximately half of the Phase IV samples, was collected at the end of the project and picked up in Tonopah by an ALS representative for transport back to the lab. The author supervised and assisted with the transfer of the samples to the ALS representative.

The Phase V samples were delivered to indoor logging and sampling facilities in Tonopah by the drillers at the end of each shift. They always remained either in the possession of the drillers or geologists or under lock and key. All the logging of the core was performed by the author. The author did some of the core splitting and sampling but most of this was done by geologist Michael Keller, who had assisted in the project during the Phase I drilling program.

The first shipment of Phase V samples was picked up by an ALS representative in Tonopah and taken to the ALS Reno lab. The remainder of the Phase V samples were placed in 5-gallon plastic pails for shipment along with the sample submittal sheets. As an additional security measure, two globe-type metal seals were inserted through the side and top of each pail and sealed. Duct tape was then used to cover the globe seals to prevent accidental damage to the seals during shipment. Figure 11.1 shows photographs of the sealed shipping containers. A message was taped to the top of each pail indicating that, if the seals were compromised, the lab personnel were to contact the author by phone or email. The Phase V pails were then shipped via FedEx to the ALS lab in North Vancouver, BC. There were no indications from the lab that any of the seals had been compromised.

Figure 11-1: Sealed Shipping Containers, Before and After Applying Duct Tape

11.2 Sample Processing

All samples were sent to ISO-17025 accredited ALS Laboratories in Reno, Nevada and North Vancouver, BC for analysis. ALS is a public company listed on the Australian stock exchange and is entirely independent of Noram. All samples were prepared using ALS' PREP-31 sample preparation process, which is presented in the ALS Fee Schedule as:

"Crush to 70% less than 2mm, riffle split off 250g, pulverize split to better than 85% passing 75 microns."

Each sample was then analyzed using ALS' ME-MS61 analytical method which uses a Four Acid Digestion and MS-ICP technologies. All samples were analyzed for 48 elements. Samples were kept secure until shipped to the ALS lab in Reno, picked up by the ALS lab in Reno or shipped via FedEx to ALS in North Vancouver.

11.3 QA/QC

For Phases IV and V, as well as for the first 3 drilling phases, four types of QA/QC samples were used and are listed in Table 11.1:

Table 11-1: QA/QC Samples used for Drilling Phases IV and V

Sample Type	Number of Samples
MEG-Li.10.13	12
MEG-Li.10.14	16
MEG-Blank.17.10	15
Duplicate samples	13

The MEG geochemical standards were purchased from Minerals Exploration & Environmental Geochemistry of Reno, Nevada, for all 5 drilling phases. Figures 11.2 and 11.3 show the distributions of the assay results for the MEG lithium standards assayed by Noram for all phases, since the results for Phases IV and V did not vary significantly from those from the first three phases.

All values fell within the high and low range values determined by MEG from MEG's 43 test samples for MEG-Li.10.13 and 40 test samples for MEG-Li.10.14. The MEG standards were processed for Minerals Exploration & Environmental Geochemistry by ALS Laboratories in Vancouver, BC using aqua regia digestion. The somewhat higher lithium values for the Noram analyses as opposed to the MEG values are believed to be due to the difference between the aqua regia digestion used by MEG and the four-acid digestion used by ALS for the Noram samples.

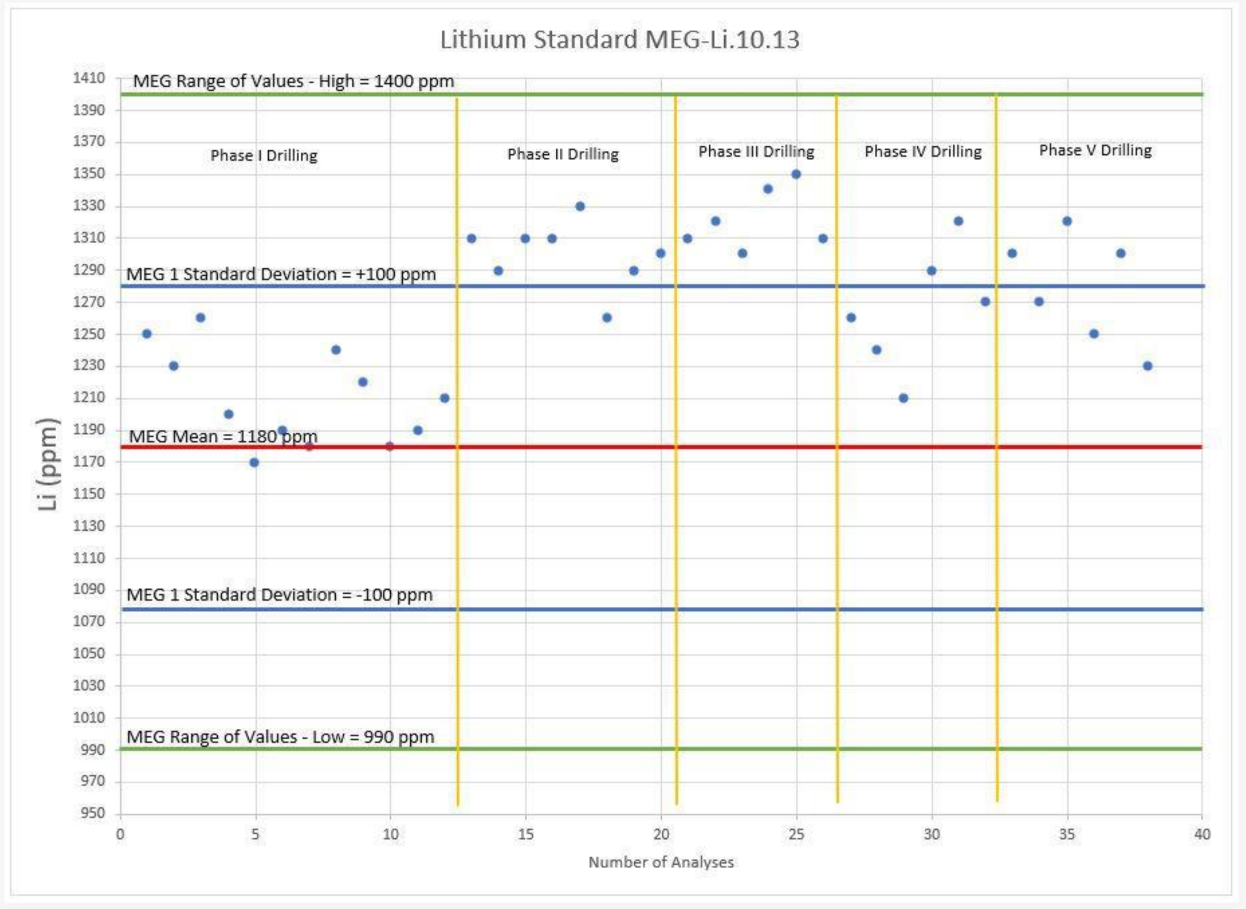


Figure 11-2: Range of Values for MEG-Li.10.13 for all 5 Drilling Phases

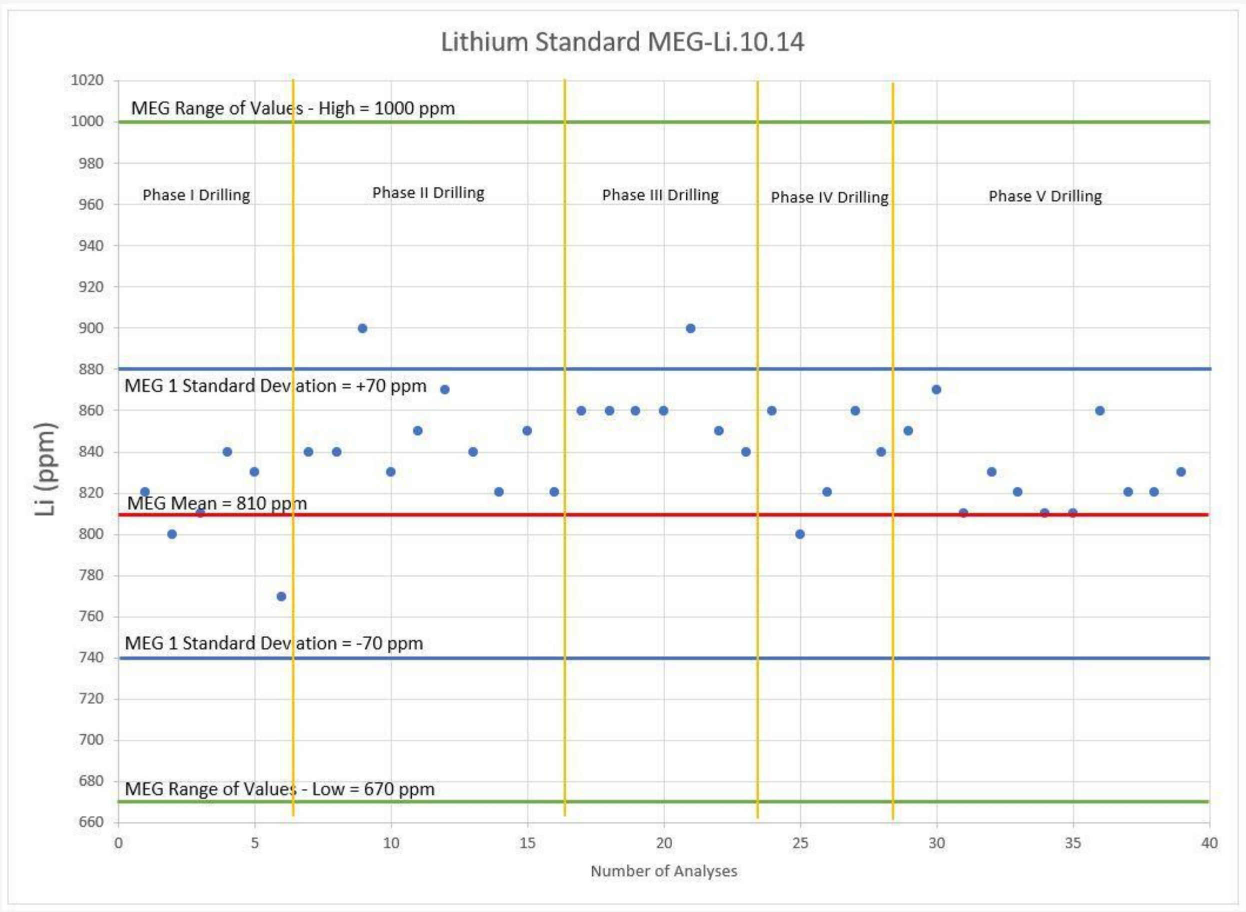


Figure 11-3: Range of Values for MEG-Li.10.14 for all 5 Drilling Phases

Forty-seven MEG Blank, batches 14.03 and 17.10, samples were also used as QA/QC samples during the 5 drilling programs. All Blank sample results were judged to be within an acceptable range. The distribution of lithium values from the blank sample results is shown in Figure 11.4.

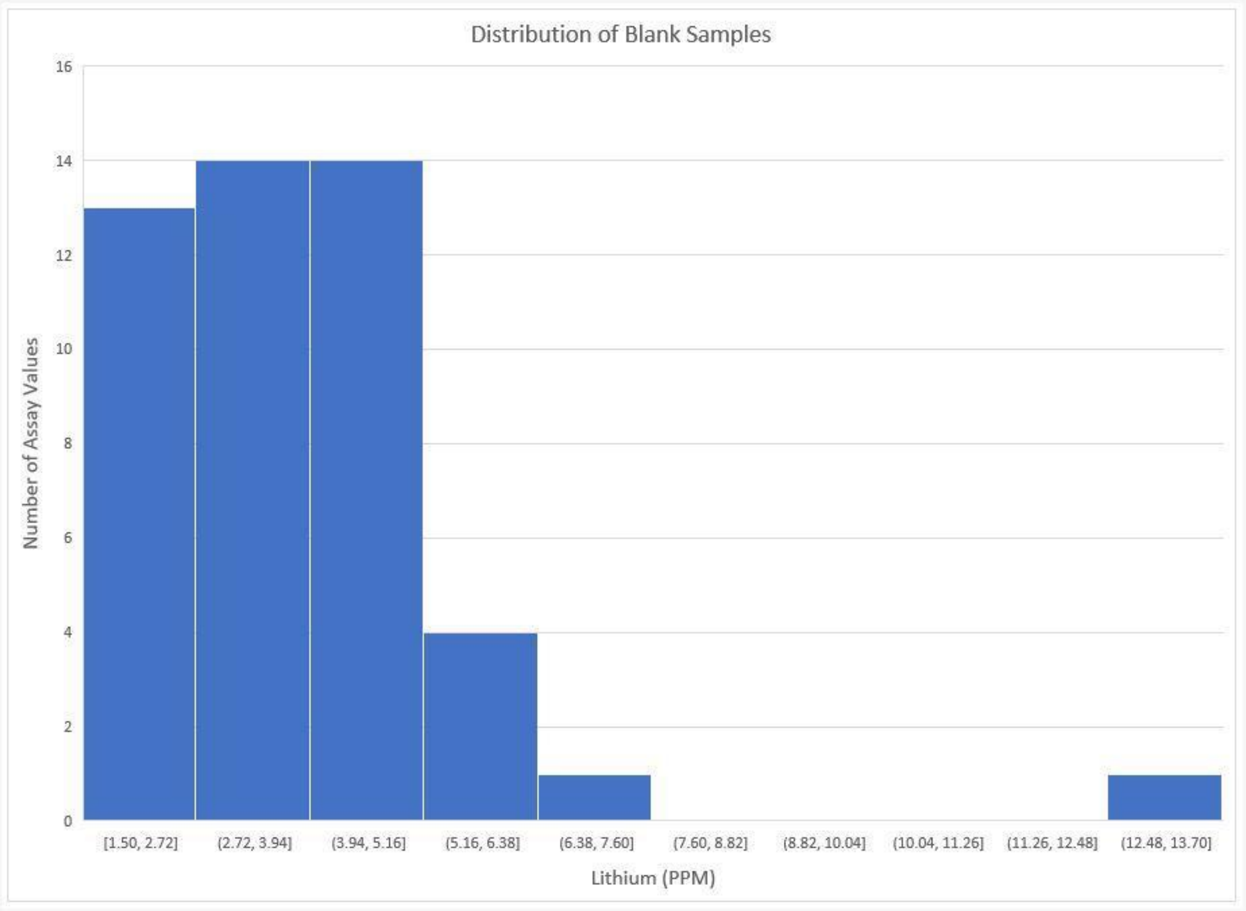


Figure 11-4:Distribution of all MEG Blank Standard Results

Duplicate samples for the Phase IV drilling were obtained by collecting ¼ of the core remaining after splitting the sample for assay. Most duplicate sample results were close to the original sample results. The largest variation was 11.8% between one sample pair. The next largest sample pair variation was 9.9%. Figure 11.5 is a graph showing the relationship between sample pairs.

All QA/QC sample results were judged to be within reasonable ranges and therefore acted as adequate checks on the laboratory results.

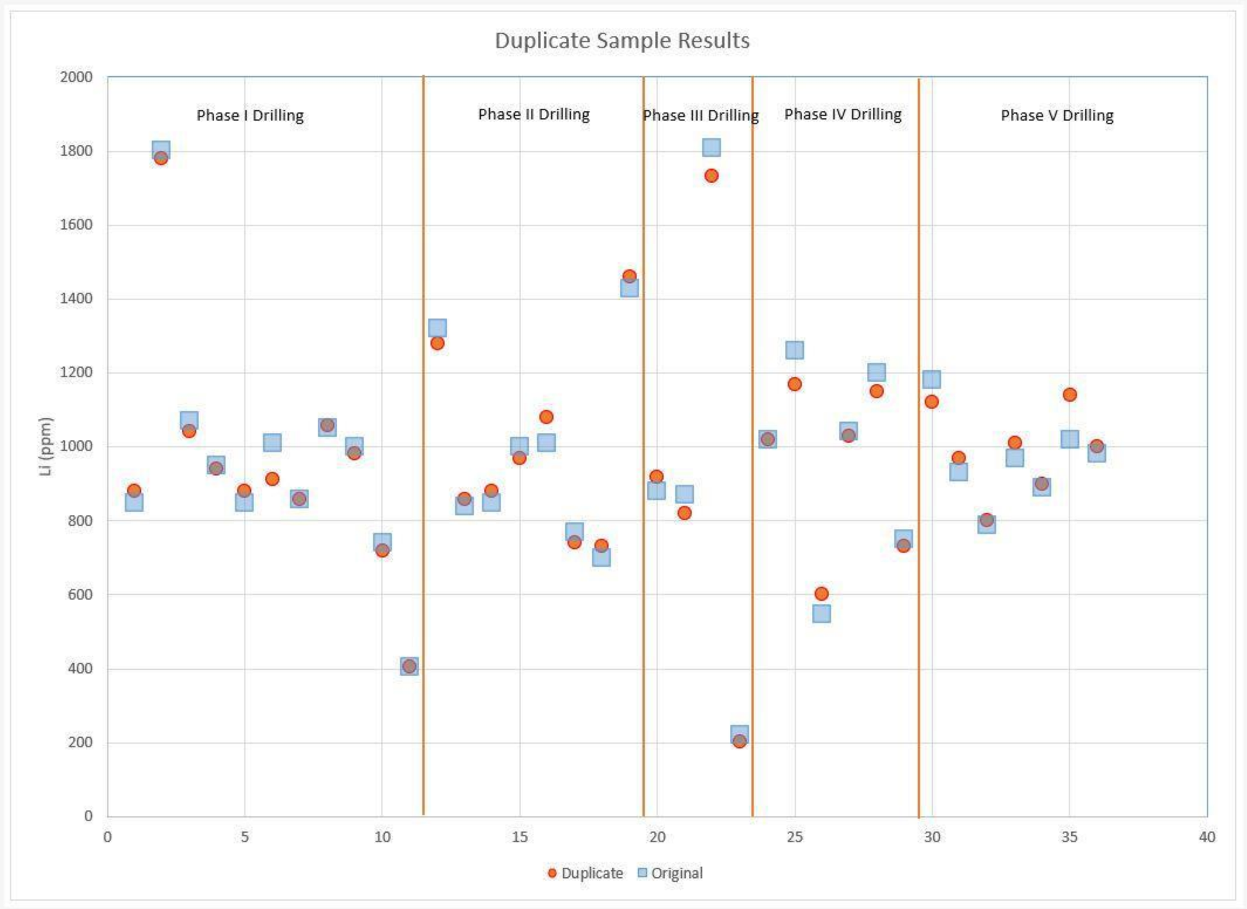


Figure 11-5: Comparison of Duplicate Sample Pairs

12 Data Verification

The author was able to confirm the accuracy of locations of drill holes by checking them with his own handheld GPS unit. During his visits to the property during the drilling programs, the author confirmed that sampling was being conducted according to the protocols described in Section 11. Therefore, data collected on drill samples to date is accurate.

Assay data used in the Mineral Resource model were cross-checked against the original assay certificates after the data had been imported into the model. Assay values were also spot checked against those displayed in cross sections. Cross sections of the model were generated, and volumetrics were checked by the cross-sectional method to verify the model's accuracy.

The author is of the opinion that there have been no limitations on their verification of any of the data presented in this report, except for not having verified the resources reported on a neighboring properties and similar clay-based lithium properties reported in the various news releases and NI 43-101 reports. The author is of the opinion that all data presented in this report are adequate for the purposes of this report and is presented so that it is not misleading.

13 Mineral Processing and Metallurgical Testing

Lithium is a highly reactive alkali metal with excellent electrical and heat conductivity. These properties are beneficial for manufacturing glass, high-temperature lubricants, chemicals, lithium-ion batteries for electric cars, and pharmaceuticals. Pure elemental lithium is not found in nature but is present as a constituent of salts and other compounds. Similarly, commercial lithium is present as either lithium carbonate or lithium hydroxide.

Lithium occurs in a variety of deposits, including brine, pegmatite, and sedimentary deposits. Lithium bearing spodumene mineral is present in pegmatite and clay-based lithium mineral is present in sedimentary deposits. The Zeus Lithium deposit is a claystone hosted lithium that can be recovered using a dilute sulfuric acid leach followed by solution purification to produce a high-grade lithium concentrate.

The objective of the metallurgical test program conducted on the Zeus Lithium deposit was to develop a viable process flowsheet to produce lithium carbonate. Information generated during the test program was used to define the process variables. Metallurgical testing began in 2018 at Actlabs Ltd., Ancaster, Ontario (Actlabs) and AuTec Innovative Extractive Solutions Ltd., Vancouver, British Columbia (AuTec). This PEA report includes metallurgical test work conducted by SGS Canada Inc., Lakefield, Ontario (SGS) in collaboration with ABH Engineering, Surrey, British Columbia (ABH).

13.1 Sample Selection

Fifty drill core (50) samples from eight drill holes, each weighing approximately 650 – 675 grams were collected by Michael Keller, an independent geologist, from the core storage warehouse in Tonopah, Nevada. These cores samples combined to produce a composite sample and was sent to SGS for testing. The samples were collected from May 17th to May 21st, 2021. The weighted average lithium grade calculated from the individual sample assays was 1151 ppm. The drill holes ids, intervals, lithium grades and weight for each sample is listed in Table 13-1.

Table 13-1: Samples Selected for Metallurgical Testing

Hole ID	Core Size	Original Sample No.	From (ft)	To (ft)	From (m)	To (m)	Original Li (ppm)	Sample Weight (g)
CVZ-61	HQ	1710114	157	167	47.9	50.9	1140	650
CVZ-61	HQ	1710116	177	187	53.9	57.0	1230	670
CVZ-61	HQ	1710118	197	207	60.0	63.1	1180	650
CVZ-61	HQ	1710125	257	267	78.3	81.4	1120	650
CVZ-61	HQ	1710126	267	277	81.4	84.4	1240	665
CVZ-61	HQ	1710128	287	297	87.5	90.5	1060	670
CVZ-61	HQ	1710132	327	337	99.7	102.7	1180	670
CVZ-61	HQ	1710134	347	357	105.8	108.8	1150	670
CVZ-62	HQ	1710157	137	147	41.8	44.8	1210	670
CVZ-62	HQ	1710166	217	227	66.1	69.2	1120	665
CVZ-62	HQ	1710173	257	267	78.3	81.4	1180	670
CVZ-62	HQ	1710174	267	277	81.4	84.4	1170	660
CVZ-62	HQ	1710177	297	307	90.5	93.6	1190	655
CVZ-62	HQ	1710178	307	317	93.6	96.6	1170	660
CVZ-62	HQ	1710185	377	387	114.9	118.0	1130	650
CVZ-62	HQ	1710186	387	397	118.0	121.0	1110	675
CVZ-62	HQ	1710188	407	417	124.1	127.1	1070	660
CVZ-62	HQ	1710189	417	427	127.1	130.1	1170	670
CVZ-63	HQ	1710196	32	42	9.8	12.8	1090	665
CVZ-63	HQ	1710203	102	112	31.1	34.1	1120	660
CVZ-64	HQ	1710245	122	132	37.2	40.2	1260	655
CVZ-64	HQ	1710247	142	152	43.3	46.3	1130	675
CVZ-64	HQ	1710248	152	162	46.3	49.4	1090	670
CVZ-64	HQ	1710250	172	182	52.4	55.5	1150	660
CVZ-64	HQ	1710259	252	262	76.8	79.9	1230	670
CVZ-65	HQ	1710287	92	102	28.0	31.1	1190	670
CVZ-65	HQ	1710289	112	122	34.1	37.2	1110	665
CVZ-65	HQ	1710293	152	162	46.3	49.4	1180	660
CVZ-65	HQ	1710297	192	202	58.5	61.6	1140	670
CVZ-65	HQ	1710304	252	262	76.8	79.9	1220	670
CVZ-66	NQ	1710320	212	222	64.6	67.7	1120	670
CVZ-66	NQ	1710332	322	332	98.1	101.2	1200	665
CVZ-66	NQ	1710333	332	342	101.2	104.2	1160	665
CVZ-66	NQ	1710334	342	352	104.2	107.3	1110	650
CVZ-66	NQ	1710335	352	362	107.3	110.3	1100	660

Hole ID	Core Size	Original Sample No.	From (ft)	To (ft)	From (m)	To (m)	Original Li (ppm)	Sample Weight (g)
CVZ-67	HQ	1710379	412	422	125.6	128.6	1120	670
CVZ-67	HQ	1710382	432	442	131.7	134.7	1190	660
CVZ-67	HQ	1710383	442	452	134.7	137.8	1170	670
CVZ-67	HQ	1710385	462	472	140.8	143.9	1100	655
CVZ-67	HQ	1710386	472	482	143.9	146.9	1240	650
CVZ-67	HQ	1710388	492	502	150.0	153.0	1220	670
CVZ-68	HQ	1710410	266	276	81.1	84.1	1100	650
CVZ-68	HQ	1710411	276	286	84.1	87.2	1220	650
CVZ-68	HQ	1710419	356	366	108.5	111.6	1170	650
CVZ-68	HQ	1710424	406	416	123.7	126.8	1060	660
CVZ-68	HQ	1710425	416	426	126.8	129.8	1060	650
CVZ-68	HQ	1710426	426	436	129.8	132.9	1080	660
CVZ-68	HQ	1710427	436	446	132.9	135.9	1120	675
CVZ-68	HQ	1710428	446	456	135.9	139.0	1180	650
CVZ-68	HQ	1710429	456	466	139.0	142.0	1120	650

13.2 Mineralogy

Initial mineralogical studies on Zeus Lithium clay deposit were conducted in 2018, by Actlabs and AuTec. The studies were conducted on two lithium samples, a relatively oxidized sample from the surface and a “reduced” material sample from a drill hole using X-ray diffraction (XRD).

The results, as listed in Table 13-2, indicated that both samples consisted of ~50% clay minerals. The major clay minerals included smectite, illite/muscovite, chlorite and a significant amount of amorphous matter believed to be poorly crystalline smectite and illite. The non-clay fraction included calcite, quartz, orthoclase/sanidine, and chlorite.

Table 13-2: Relative Properties of Clay Minerals

Mineral in wt.%	Lithium 1	Lithium 2
Smectite	53	36
Illite	45	62
Chlorite	2	2

In 2021, SGS conducted X-ray diffraction analysis using the Rietveld method for mineral identification. The mineralogical information generated from the XRD analysis will be reconciled with a whole rock analysis plus any other major elements contained in the sample.

Table 13-3 shows XRD results conducted on a representative head sample obtained from the composite sample.

Table 13-3: XRD Results on Head Sample

Mineral/Compound	Formula	Clay Head Sample (wt.%)
Quartz	SiO_2	4.5
Orthoclase	$KAlSi_3O_8$	43.5
Muscovite	$KAl_2(AlSi_3O_{10})\ (OH_2)$	19.1
Albite	$NaAlSi_3O_8$	7.3
Calcite	$CaCO_3$	12.8
Chlorite	$(Fe, (Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$	5.3
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$	4.6
Montmorillonite	$(Na, Ca)_{0.3}(Al,Mg)_2Si_4O_{10}(OH)_2.nH_2O$	3.0
Total		100.0

13.3 Leach Extraction Tests

The process design for the Zeus Lithium deposit was based on the metallurgical tests conducted by SGS Minerals Services. Acid leaching was utilized to extract lithium from the claystone ore. Since the overall processing cost is highly dependent on the leaching conditions, multiple tests were performed on the composite sample to identify the most effective leaching conditions.

13.3.1 Initial Leach Test

In 2018, Actlabs conducted leach tests on two samples from Zeus Lithium deposit. Sequential leach tests were performed at room temperature and at 80°C with 1 hour time increments, in an agitated vessel. Distilled water was used during the first hour, and sulfuric acid was progressively added. At 2 molar H_2SO_4, both samples achieved over 80% lithium extraction in 3 hours, as shown in Figure 13-1.

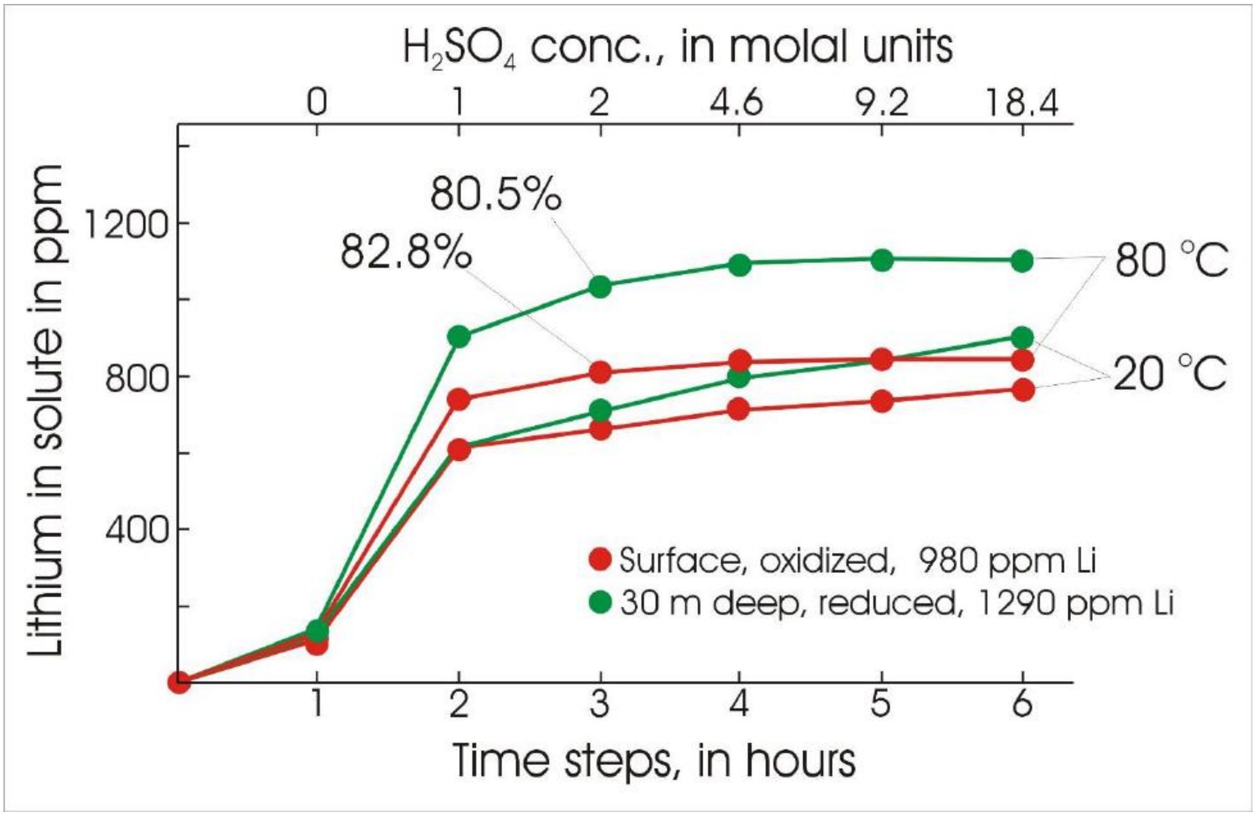


Figure 13-1: Results of Initial Leach Tests

13.3.2 2021 Leach Tests

The composite sample described in Section 13.1 was sent to SGS for metallurgical testing. A 250-gram subsample was split, prepared, and submitted for chemical analyses. Table 13-4 shows the head assay of the composite sample.

Table 13-4: Head Assay Results

Sample	Li	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	MnO	Cr_2O_3	V_2O_5	LOI	Sum
ID	g/t	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Head sample	1120	50.4	13.3	4.47	3.91	6.19	1.13	7.16	0.51	0.1	0.1	< 0.01	0.02	10.7	98

The composite sample was crushed to a P_{100} of ¼”, blended and split into 500 g subsamples for leaching tests. All leaching tests were conducted in a 4 L glass leach mantle equipped with mixer, pH probe, thermometer, and an oxidation-reduction potential (ORP) sensor. Electric heating mantle was used to provide heat. 5% concentrated H_2SO_4 solution (by weight) was used for all leaching tests. Six kinetic tests were performed on the crushed sample with a 6-hour residence time at 30% solids and ambient temperature, 65°C and 80°C. Leachate samples were taken at 1-, 2-, 4-, & 6- hour marks. Table 13-5 and Figure 13-2 show the sulfuric acid leach test results.

Table 13-5: Sulfuric Acid Leach Test Results

Test ID	% Solids	H_2SO_4 kg/t Consumption	Temp (°C)	Lithium Extraction (%)	Li Concentration at 2 hours (mg/L)
AL-01	30%	195.3	Ambient	39.7	182
AL-02	30%	202.4	65	59.1	255
AL-03	30%	222.8	65	77.0	310
AL-04	30%	251.4	65	90.3	366
AL-05	30%	265.5	80	88.9	346
AL-06	25%	254.0	65	70.6	242

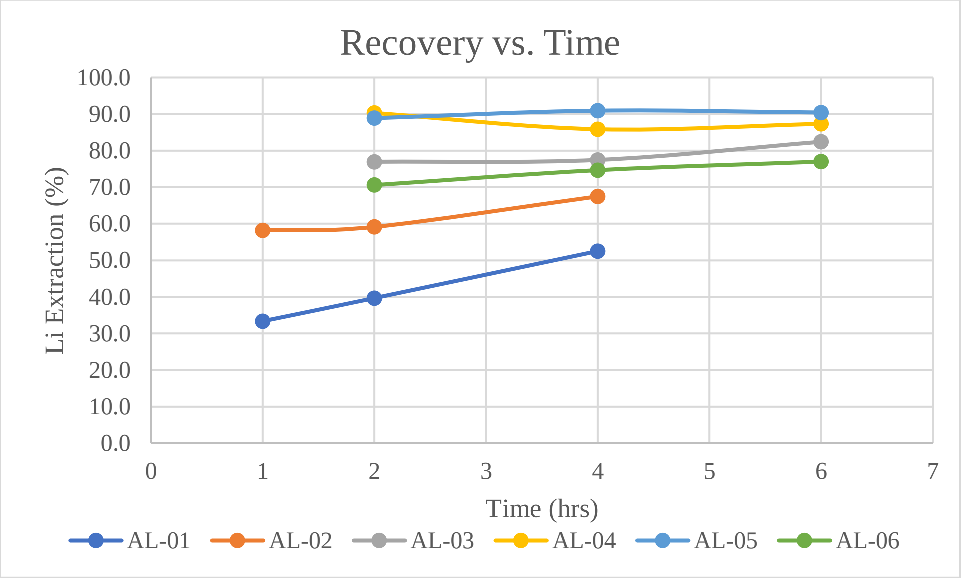


Figure 13-2: Lithium Extraction vs. Residence Time Results

As shown in Table 13-5, lithium extraction increased from 40% to 59% when the temperature was increased from ambient (AL-01) to 65°C (AL-02) at 200 kg/t of acid consumption. Increasing the acid consumption to 250 kg/t increased the lithium extraction 90% at 65°C (AL-04). No significant change was observed at 265 kg/t and 80°C (AL-05). Decreasing the solids content to 25% at 65°C reduced the lithium extraction to 70% (AL-06).

Figure 13-3 shows that the lithium extraction was increased when the acid consumption was increased from 200 to 250 kg/t at the 2-hour interval. All three tests were performed at 30% solids and 65°C temperature.

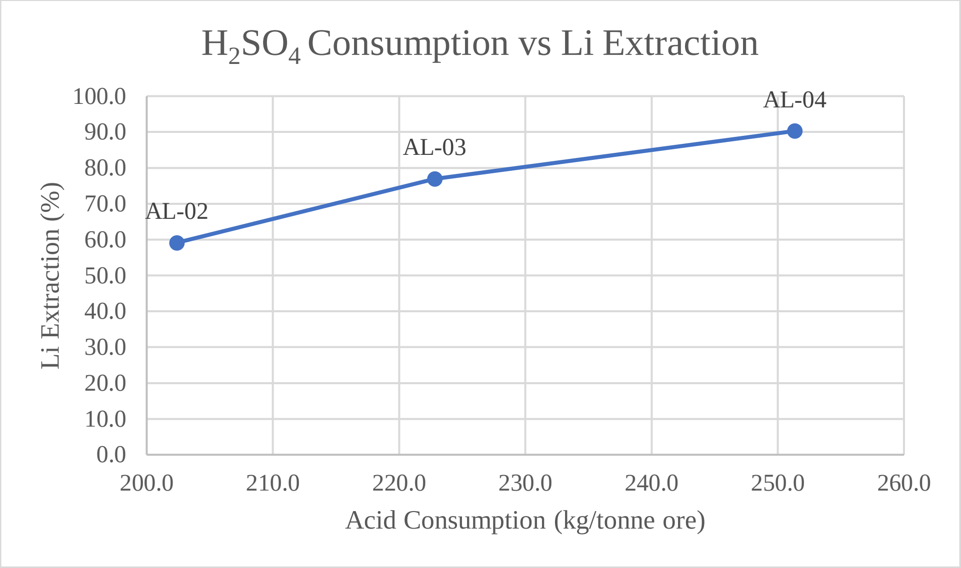


Figure 13-3: Sulfuric Acid Consumption vs. Lithium Extraction at 2-hour Interval

13.4 Conclusion and Interpretation

The following observations, conclusions and interpretations were obtained from the metallurgical test program:

- Zeus Lithium deposit ore is soft and disintegrates easily if agitated in water.
- Sulfuric acid solution effectively leaches lithium at high extraction.
- Test work achieved 90% lithium extraction at 65°C, 30% solids density and 2 hours residence time.
- Acid consumption is highly dependent on solids density, temperature, and leach duration. The target acid consumption is 250 kg/tonne ore leached.

14 Mineral Resource Estimates

14.1 General

This Mineral Resource estimate is intended to add to the previous inferred resource estimates with the effective date of July 24, 2017 (Peek and Spanjers, 2017) and February 20, 2019 (Peek and Barrie, 2019). While the economic factors listed in this report will be important to the possible viability of the deposit, the deposit has yet to undergo the much more rigorous testing that must be performed before a mining decision can be made. Mineral Resources are not Mineral Reserves, and as such, have not demonstrated economic viability.

The deposit is held by placer and lode mining claims staked on U. S. Government lands administered by the Bureau of Land Management. Therefore, the permitting process for any mining operation is well established and has been tested on many past projects on BLM administered property. There are no known unusual legal, environmental, socio-economic, title, taxation or permitting problems associated with the subject claims that would adversely affect the development of the property, other than the possible necessity to develop water rights for the extraction of the lithium (See discussion in Section 18.6).

The Inferred Mineral Resource estimate, herein, is defined by 70 core drill holes (CVZ-01 through CVZ-69, plus CVZ-49R and CVX-01), for a total of 3,342.7 meters of drilling and an average hole depth of 47.8 meters. A total of 1,666 lithium assay results from core, not including QA/QC samples, were used for the model.

The data for the Mineral Resource estimate were generated using the Rockworks 2021 program, sold by Rockware, Inc.

14.2 Cut-off Grade

The cut-off grade for the Noram deposit was calculated by using the cost to produce a tonne of lithium carbonate with various lithium grades in respect to the deposit and comparing those values against the projected lithium carbonate price. In this manner, a lithium value of 400 ppm Li was chosen for a cut-off grade. The calculations used for the 400-ppm cut-off are shown below (minor rounding errors may be present):

- Grade of Deposit Material = 400 ppm Li
- Lithium Metal per Tonne of Material @ 400 ppm = 0.4 kilograms

- Material Required to Produce 1 Tonne of Lithium Carbonate: $470\ tonnes = \frac{1}{0.4}/5.32 * 1000$
- Material Required to Produce 1 Tonne of Lithium Carbonate with 80% Recovery: $587\ tonnes = {}^{470}/_{0.8}$
- Mining Cost at \$2.00/tonne: $\$1{,}175 = 587 * \$2$
- Processing Cost (from Cypress Development PFS at \$14.27/tonne): $\$8{,}382 = 587 * \$14.27$=
- Total Mining + Processing Cost: $\$9{,}557 = \$1{,}175 + \$8{,}382$
- Total Mining + Processing + Other G & A Costs: $\$10{,}145 = \$9{,}557 + (\$1 * 587)$ (\$1/tonne estimated G & A costs from Cypress Development PFS, rounded)

Therefore, the total cost of producing a tonne of lithium carbonate from 400 ppm Li deposit material compares reasonably well with the projected price of lithium carbonate of $12,206.

14.3 Model Parameters

The model was constructed in Rockworks 2021. Each block, or voxel, measured 50 meters by 50 meters horizontally and 5 meters vertically. The result was a nearly square block of voxels in plan view comprised of 83 voxels in the east-west direction, 89 voxels in the north-south direction and 37 voxels in elevation for a total of 273,319 voxels.

A drone survey was flown on February 25, 2021, by Strix Imaging of Reno, Nevada. The resulting detailed topographic data were used to restrict the model on its top surface. The bottoms of the drill holes, with the 10-meter extensions discussed below, were used as a sub-surface. The model was restricted horizontally mostly by the boundaries of the Zeus claim block but was further bounded on the southeast side by a northeast-southwest trending fault that down-dropped the sediments on its southeast side.

It was noted that 55 of the 70 drill holes to be used in the model had average lithium assays in the bottom 10 meters of the holes that were greater than the 400 ppm Li cut-off grade. It was determined that it would be reasonable to add an additional 10 meters to the bottom of these holes. The grade of the additional 10 meters would be the average of the 10-meter interval at the bottom of each of the holes. Including the 10-meter intervals, the number of samples used in the model before compositing, was 1721.

The histogram of all the lithium values in all 5 phases of drilling (not composited) generated by Rockworks 2021 is shown in Figure 14.1. The statistics for the histogram are listed in Table 14.1.

For modelling, the data was composited into 5-meter intervals. The histogram and statistics for the composited data are in Figure 14.2 and Table 14.2, respectively.

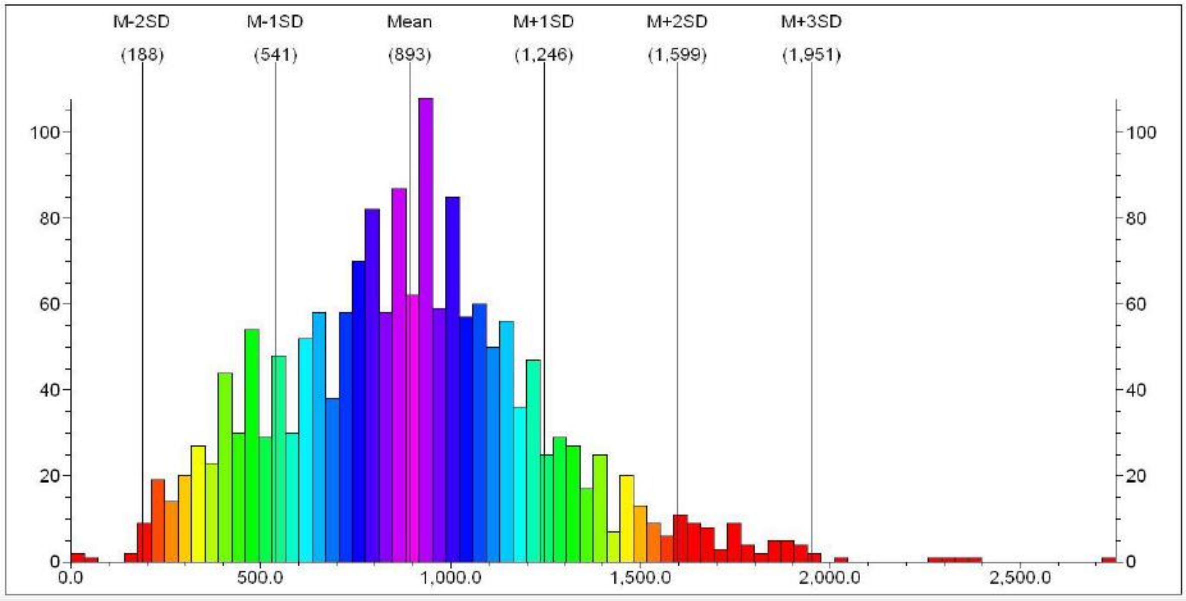
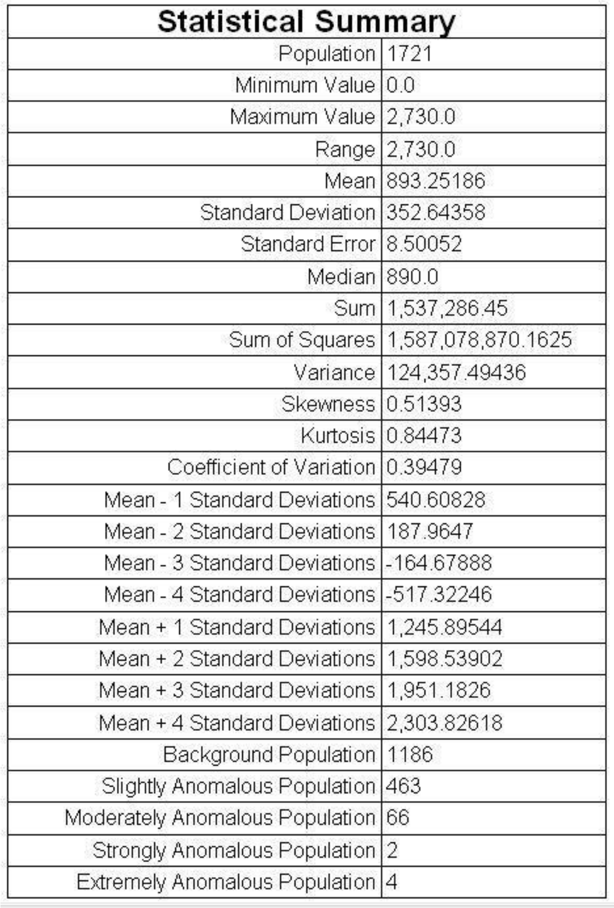


Figure 14-1: Histogram of the Raw Li Values in ppm used in Resource Model

Table 14-1: Statistics for the Raw Li Values in ppm from all Drill Holes used in the Model



Statistical Summary	
Population	1721
Minimum Value	0.0
Maximum Value	2,730.0
Range	2,730.0
Mean	893.25186
Standard Deviation	352.64358
Standard Error	8.50052
Median	890.0
Sum	1,537,286.45
Sum of Squares	1,587,078,870.1625
Variance	124,357.49436
Skewness	0.51393
Kurtosis	0.84473
Coefficient of Variation	0.39479
Mean - 1 Standard Deviations	540.60828
Mean - 2 Standard Deviations	187.9647
Mean - 3 Standard Deviations	-164.67888
Mean - 4 Standard Deviations	-517.32246
Mean + 1 Standard Deviations	1,245.89544
Mean + 2 Standard Deviations	1,598.53902
Mean + 3 Standard Deviations	1,951.1826
Mean + 4 Standard Deviations	2,303.82618
Background Population	1186
Slightly Anomalous Population	463
Moderately Anomalous Population	66
Strongly Anomalous Population	2
Extremely Anomalous Population	4

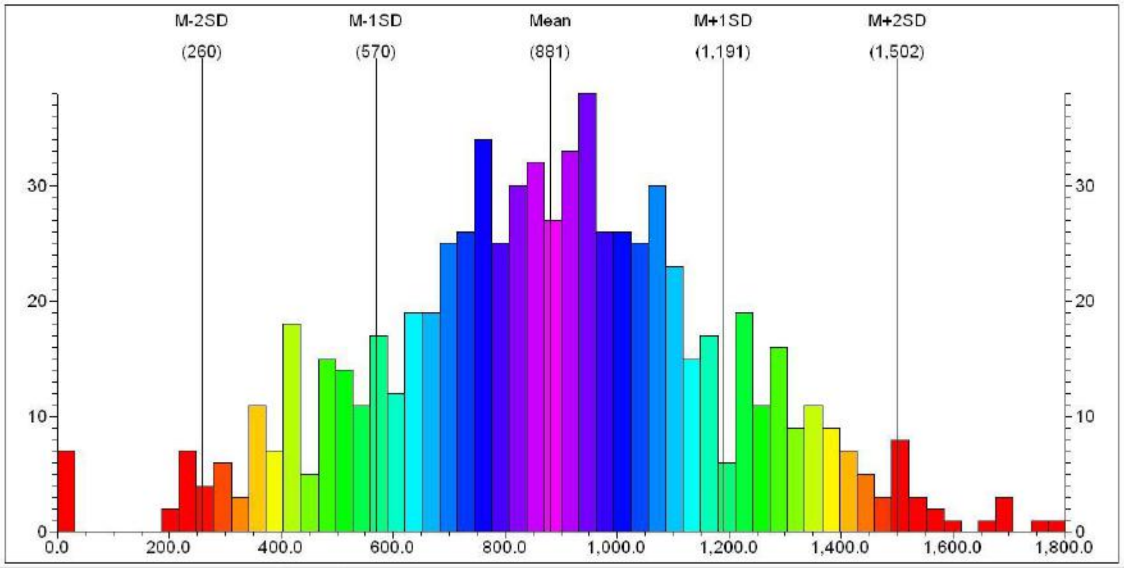
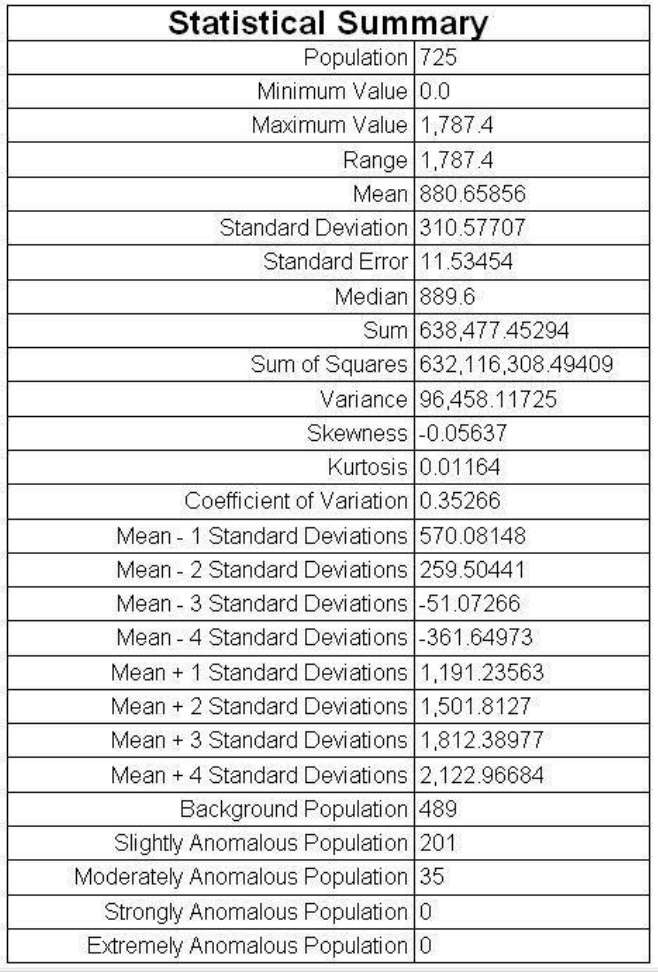


Figure 14-2: Histogram of the 5-m Li ppm Composites used in the Model

Table 14-2: Histogram Statistics for the 5-metre Composited Data



Statistical Summary

Population	725
Minimum Value	0.0
Maximum Value	1,787.4
Range	1,787.4
Mean	880.65856
Standard Deviation	310.57707
Standard Error	11.53454
Median	889.6
Sum	638,477.45294
Sum of Squares	632,116,308.49409
Variance	96,458.11725
Skewness	-0.05637
Kurtosis	0.01164
Coefficient of Variation	0.35266
Mean - 1 Standard Deviations	570.08148
Mean - 2 Standard Deviations	259.50441
Mean - 3 Standard Deviations	-51.07266
Mean - 4 Standard Deviations	-361.64973
Mean + 1 Standard Deviations	1,191.23563
Mean + 2 Standard Deviations	1,501.8127
Mean + 3 Standard Deviations	1,812.38977
Mean + 4 Standard Deviations	2,122.96684
Background Population	489
Slightly Anomalous Population	201
Moderately Anomalous Population	35
Strongly Anomalous Population	0
Extremely Anomalous Population	0

The data approach a normal distribution. Very few of the data points can be considered outliers with only 20 values occurring outside 2 standard deviations from the mean. From this statistical analysis it was determined that high grade capping was not necessary.

The lithology found in the Noram drilling prior to the Phase V drilling program appeared to be somewhat more variable than that reported for Cypress Development’s adjacent property (Cypress PFS, August 5, 2020, and NI 43-101 Technical Report (Marvin, 2018)). With the addition of Phase V data to the southeast of previous drilling, a lithologic picture more like that shown in Cypress’ drilling emerged. The sedimentary units were re-evaluated and mostly allocated to the 7 lithologies shown in the following table.

Statistics regarding the lithium values of each unit are also shown. The units with the higher-grade lithium results are the Olive, Blue, and Blue-Black Mudstones (or Claystone). Of these, the

Blue-Black Mudstone was significantly higher that any of the others. The Olive Mudstone and the Blue Mudstone were very similar in average grade and may be the same lithologic unit with slightly different colors and oxidation states.

Table 14-3:Lithologic Units and their Lithium Statistics in ppm

Unit	Sample Population	PPM Min	PPM Max	PPM Mean	PPM Median	Std Dev	Mean +1 Std Dev	Mean -1 Std Dev
Upper Bern Mudstone	23	65	1360	652	640	295	947	357
Tan Mudstone	14	530	1840	989	950	355	1344	634
Olive Mudstone	214	219	2380	884	855	361	1245	523
Blue Mudstone	216	225	1900	889	900	296	1185	593
Blu-Blk Mudstone	60	740	1820	1207	1195	255	1462	952
Grey Mudstone	15	225	1640	692	670	356	1048	336
Lower Bern Mudstone	17	235	970	563	500	234	797	329

Because of the variability of the grades within the lithologies, it was decided not to constrain the model by lithologies. The vertical thickness of the model was only constrained by the depth of the drill holes. As noted above, the assays from the bottom 10 meters of 55 of the 70 drill holes (79%) were used in the model assayed above the 400-ppm cut-off and should be deepened.

The model was constrained horizontally on most sides by the boundaries of the Zeus claim block. The model was constrained on the southeast side by a northeast-southwest trending fault that down-dropped the sediments on its southeast side. The two holes drilled on the down-dropped side of the fault did not reach the lithium clays. Figure 14.3 shows the 5 phases of drill holes, the outline of the Zeus claims in blue and the fault in pink.

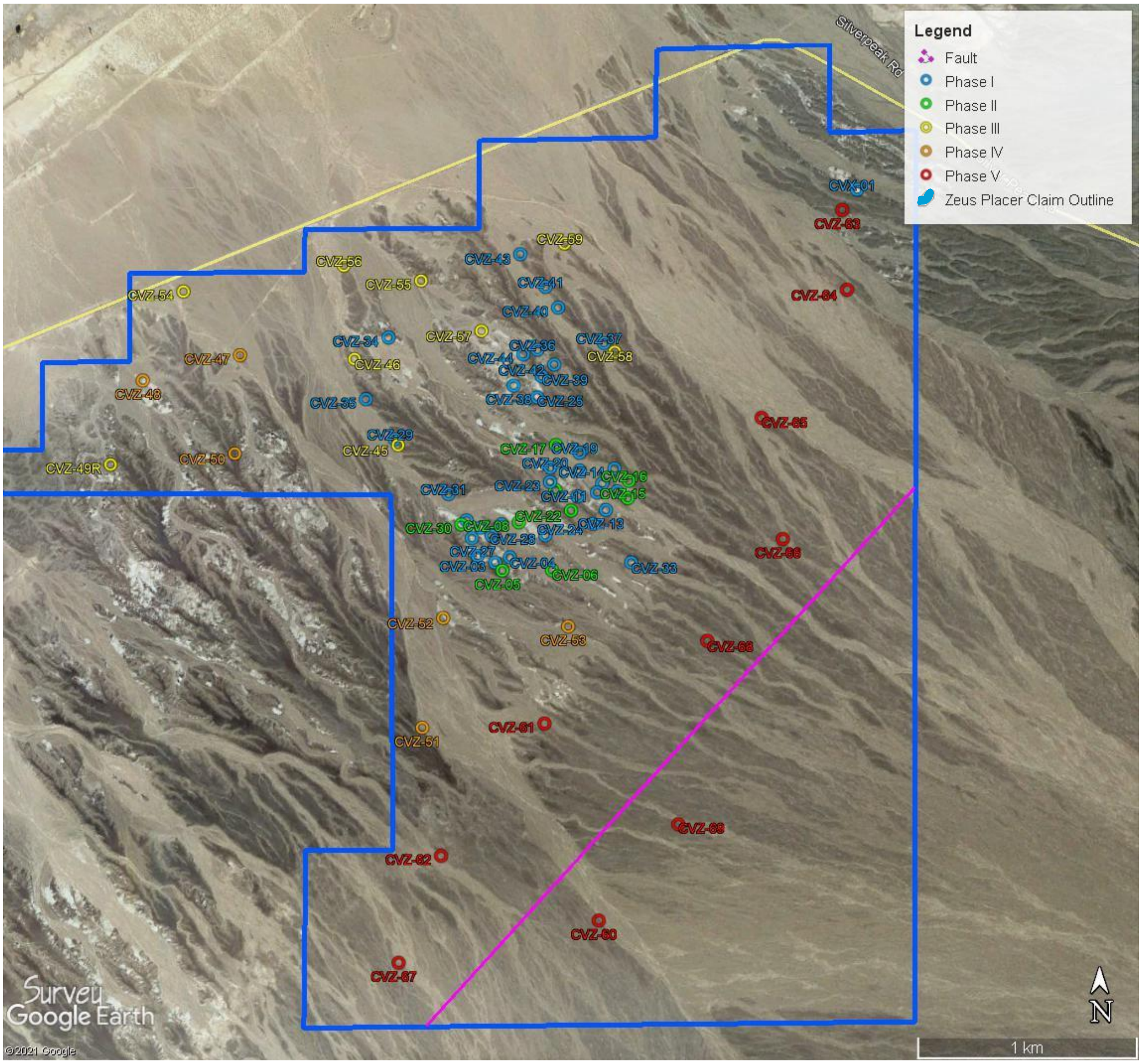


Figure 14-3: Location of the Zeus Claim Outline and the Fault with respect to the Drilling

Figure 14.4 is a fence diagram of the model showing the various lithium cut-off grades in 3D. The vertical exaggeration of the cross sections is 4X. Careful examination of detailed cross sections and profiles created at right angles were used to verify the accuracy of the model.

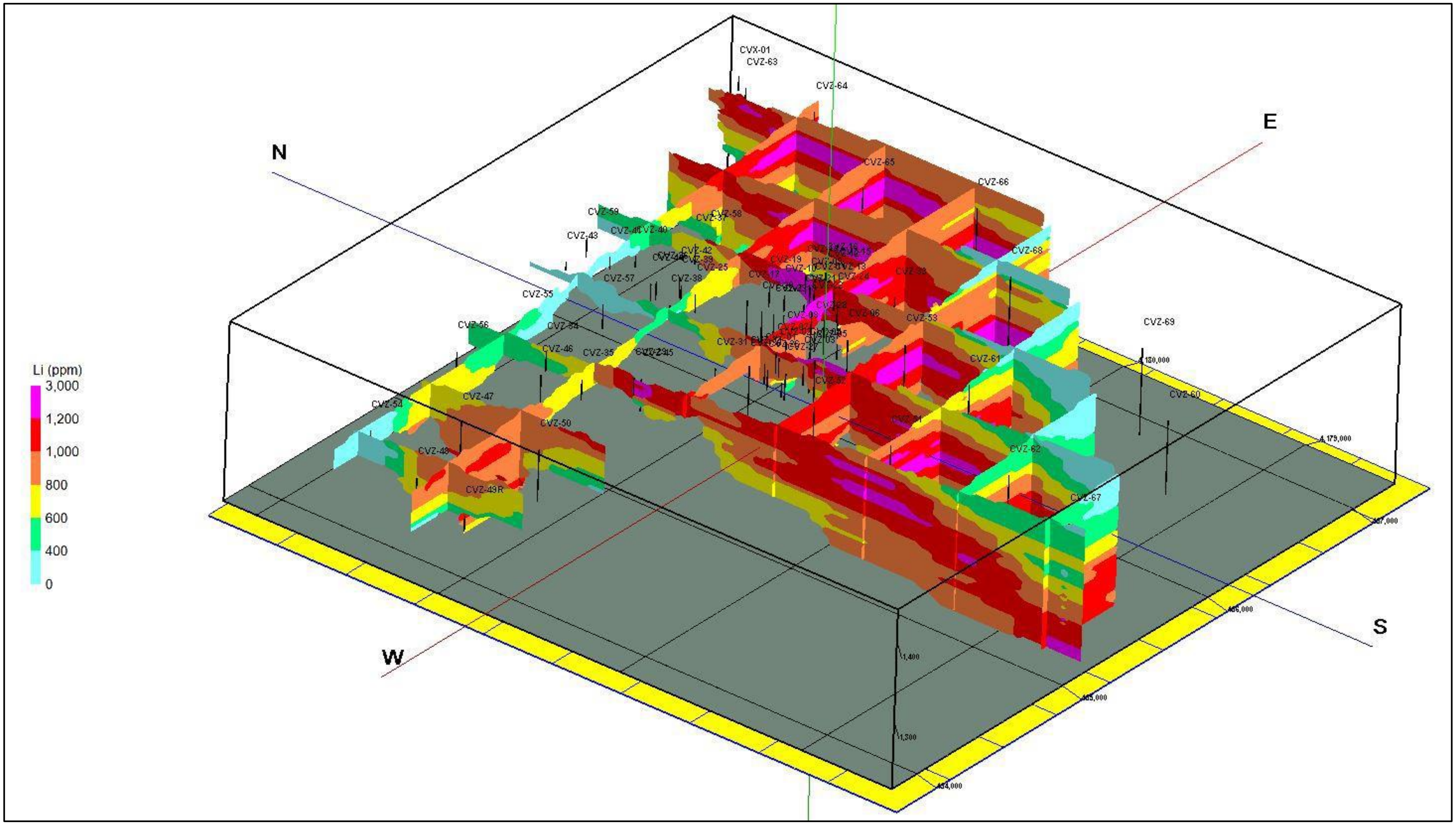


Figure 14-4: Fence Diagram Color coded by Lithium Cut-off Grade. Vertical Exaggeration is 4X

The inverse distance squared model was constructed using voxels with dimensions of 50m X 50m horizontally by 5m vertically, reflecting the relatively thin vertical component and large horizontal extent of the deposit.

Due to the relative simplicity of the deposit, i.e., not being complicated by complex structure or nugget effect, the model chosen was deemed to be adequate for the purposes of this mineral resource estimate.

14.4 Density Determination

Density determinations for Noram's maiden inferred resource estimate (Peek & Spanjers, 2017) were made by using density analyses by ALS Laboratories in Reno, Nevada, USA on 20 randomly selected pulps from core samples. The determinations used method OA-GRA08c which employs an automated gas displacement pycnometer to determine density by measuring the pressure change of helium within a calibrated volume. The average of the 20 samples resulted in a density of 2.66 tonnes/m^3, which was used for the density in the 2017 resource calculation. Although the above density measurements were based on sound scientific testing, it was found that the 2.66 tonnes/m^3 figure was too high.

For the Phase V drilling, 19 samples were collected from the cores and sent to ALS Laboratories in Reno, Nevada for density testing. The method used was the ALS method, OA-GRA09A. It involves coating the sample with paraffin prior to immersion in water and measuring the displacement to determine the specific gravity. The crumbly nature of the mudstone and claystone samples required the wax coating before immersion in water. As it was, 5 of the 19 samples submitted had crumbled before arriving at the lab and had to be discarded. So the14 remaining samples were used as density determinants. Table 14.4 lists the samples and their densities.

Table 14-4: Specific Gravity Measurements

Sample Number	Recd Wt. (kg)	OA-GRA09A (g/cm^3)	Hole ID	Depth (ft)	Depth (m)	Lithology Type	Li (ppm)
320509	0.34	Too Crumbled	CVZ-65	84	25.6	Tan Clyst	-
320510	0.52	1.88	CVZ-65	140	42.7	Blk & Blue Clyst	1820
320511	0.30	1.79	CVZ-65	233	71.0	Blue Clyst	890
320512	0.46	1.93	CVZ-65	281	85.6	Blue Clyst	900
320513	0.60	Too Crumbled	CVZ-68	150.5	45.9	Bern Mdst	-
320514	0.46	1.80	CVZ-68	236.5	72.1	Blue Clyst	980
320515	0.62	1.86	CVZ-68	333	101.5	Blk & Blue Clyst	1350
320516	0.50	1.91	CVZ-68	352	107.3	Blk Clyst	1380
320517	0.52	1.98	CVZ-68	487.5	148.6	Olive Clyst	380
1710312	0.32	Too Crumbled	CVZ-66	142.5	43.4	Tan Sdy Mdst	-
1710321	0.30	Too Crumbled	CVZ-66	214.0	65.2	Blue Clyst	-
1710337	0.26	Too Crumbled	CVZ-66	363.0	110.6	Blue Clyst	-
1710344	0.26	1.84	CVZ-66	430.0	131.1	Blue Clyst	1020
1710359	0.56	1.84	CVZ-67	246.5	75.1	Blue Clyst	540
1710368	0.58	1.83	CVZ-67	315.0	96.0	Blue Clyst	960
1710373	0.50	1.84	CVZ-67	355.5	108.4	Blue Clyst	860
1710380	0.54	1.90	CVZ-67	415.0	126.5	Blue Clyst	1120
1710389	0.56	1.88	CVZ-67	494.0	150.6	Blue Clyst	1200
Average	**0.46**	**1.87**					**1031**

14.5 Variography and Resource Classification

The author is not an expert in variography and geostatistics. Therefore, Damir Cukor, P.Geo. was engaged to assist with this portion of the technical report. Mr. Cukor is a Qualified Person and has extensive experience with geostatistics and modeling. He was supplied with the block model containing estimated grades, developed in Rockworks 2021 software. Damir imported the model into SGS Genesis software to perform variography, the goal of which was to be able to classify the blocks, or voxels, into the Measured, Indicated, and Inferred resource categories. The variogram developed from the block model at a 400-ppm Li cutoff is shown in Figure 14.5

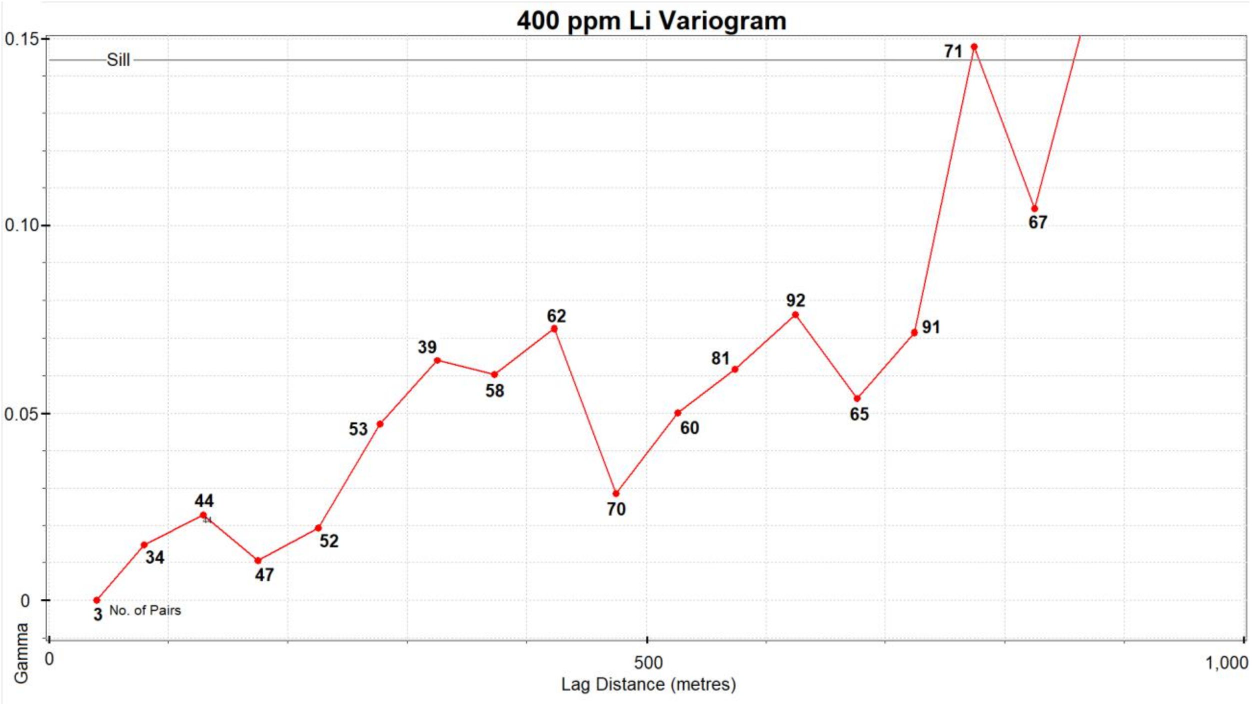


Figure 14-5: Variogram developed from all Composite Data at a 400-ppm Cut-Off

From the variogram, search distances of 250 meters for Measured, 500 meters for Indicated and 1000 meters for Inferred were selected for classification modelling search ellipsoid for both horizontal axes; the horizontal attitude was specified to match the attitude of variogram ellipsoids used in resource estimation performed in Rockworks. For the vertical height, 20 meters for Measured, 40 meters for Indicated and 80 meters for Inferred were selected. A reduction of 67% (an industry standard) for a fill factor allowed for a conservative result.

The classification algorithm chosen was based on the centroids of individual 5-meter composites with grades and was run as an iterative process: all individual blocks were designated as unclassified prior to three passes, with selective overwriting of individual blocks matching search and fill criteria. The first pass was the Inferred classification, with a 1000m horizontal radius and 160m high search ellipsoid; a total of two composites with grades located in separate holes, were required to be located within this search ellipsoid. The second pass was Indicated classification, with a 500m horizontal radius and 80m height; three composites with grades was a requirement of this classification. The third pass was Measured, with the search ellipsoid restricted to a 250m horizontal radius and a 40m height; three composites with grades was a requirement of this classification. Figure 14.6 shows graphically how the volumes of each classification were selected.

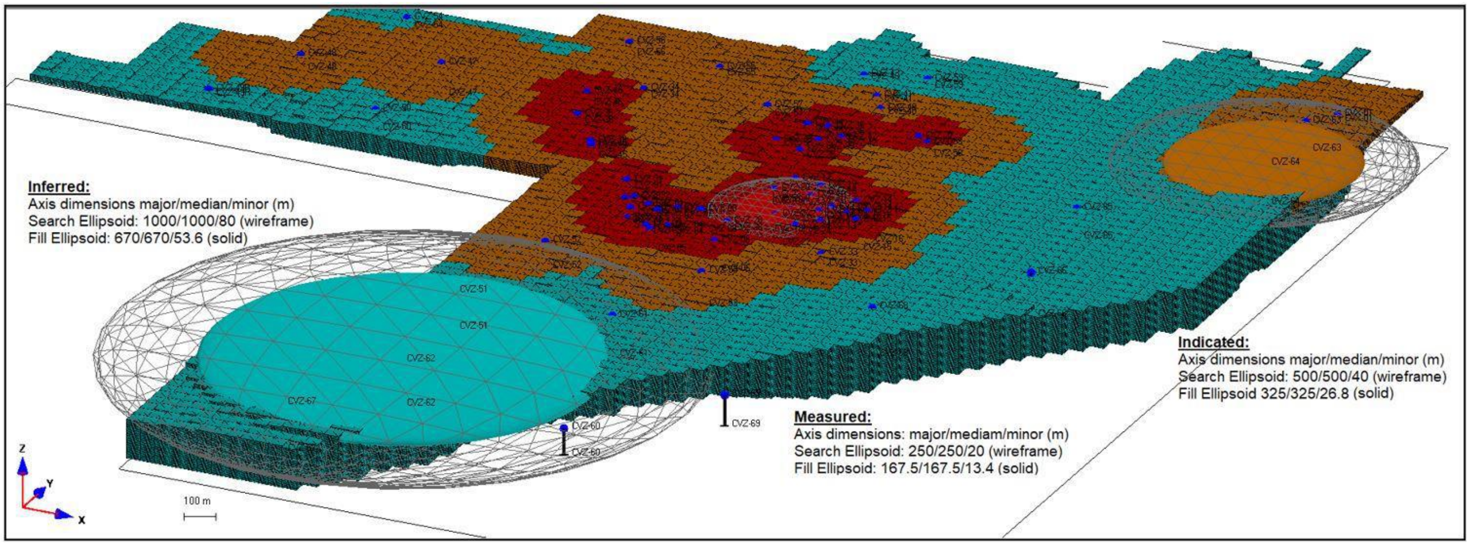


Figure 14-6: Graphic demonstrating the resource classification process

Figure 14.7 is a plan view generated in SGS Genesis displaying the resource classifications at a 400 ppm Li cut off.

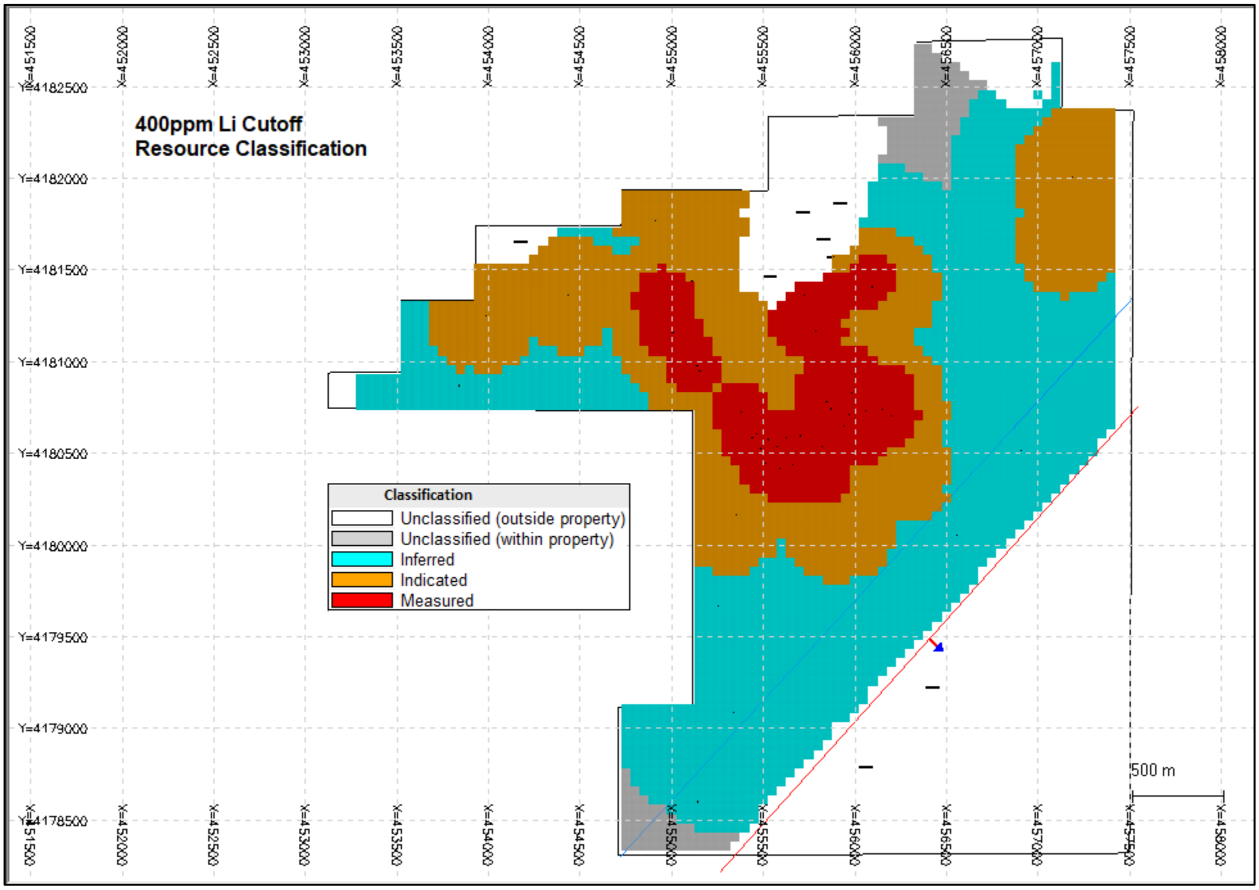


Figure 14-7: Plan View of the Resource Classifications at the 400-ppm Cut-Off

14.6 Model Results

The deposit being defined is for a Mineral Resource and does not include any of the classifications of a Mineral Reserve. The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling. Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors which include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social, and governmental factors (Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards).

CIM states that “Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.”

The CIM definition of an Inferred Mineral Resource includes the statements "Geological evidence is sufficient to imply but not verify geological and grade or quality continuity" and "It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration."

An Indicated Mineral Resource is "that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit."

CIM defines a Measured Mineral Resource as "part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit."

Table 14.5 lists the final tonnages and grades of the classes of Mineral Resources for the Zeus deposit. The base case is calculated at the 400 ppm Li cut off (bolded). Sensitivity calculations at 600, 800 and 1000 ppm are also presented. These values are reasonable estimates for the deposit and have been checked using other computer-generated and manual methods.

Table 14-5: Final Tonnages and Grades of the Classes of Mineral Resources

Measured				
Li Cutoff (ppm)	Tonnes x 1,000,000	Li Grade (ppm)	Contained Li (tonnes)	LCE (tonnes)
400	**66.74**	**927**	**61,863**	**329,299**
600	61.34	964	59,128	314,738
800	46.47	1051	48,840	259,975
1000	27.70	1150	31,854	169,558
Indicated				
Li Cutoff (ppm)	Tonnes x 1,000,000	Li Grade (ppm)	Contained Li (tonnes)	LCE (tonnes)
400	**296.42**	**922**	**272,297**	**1,454,762**
600	279.66	947	264,837	1,409,728
800	221.64	1007	223,193	1,188,059
1000	103.76	1128	117,044	623,023
Measured + Indicated				
Li Cutoff (ppm)	Tonnes x 1,000,000	Li Grade (ppm)	Contained Li (tonnes)	LCE (tonnes)
400	**363.15**	**923**	**335,191**	**1,784,222**
600	341.00	950	323,945	1,724,361
800	268.11	1014	271,865	1,447,135
1000	131.46	1133	148,945	792,836
Inferred				
Li Cutoff (ppm)	Tonnes x 1,000,000	Li Grade (ppm)	Contained Li (tonnes)	LCE (tonnes)
400	**827.22**	**884**	**731,261**	**3,892,501**
600	715.91	942	674,383	3,589,743
800	546.48	1013	553,588	2,946,750
1000	265.47	1134	301,043	1,602,452

Figures 14.8 through 14.12 are a set of plan views showing the grade distribution of the deposit at 400, 600, 800, and 1000 ppm Li cut offs, respectively. These figures were generated with the SGS Genesis software package.

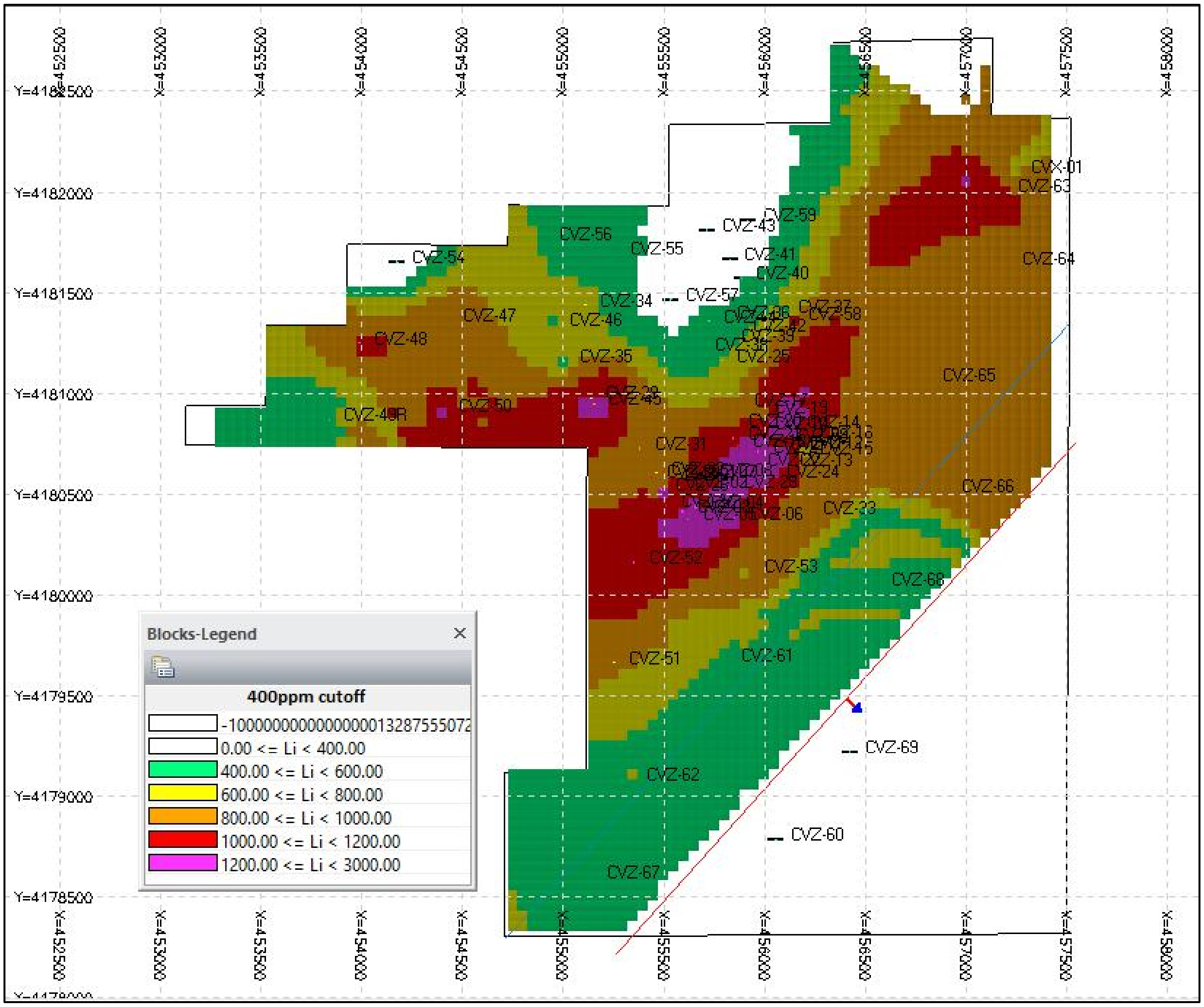


Figure 14-8: Plan View of Lithium Grades at the 400 ppm Li Cut-Off

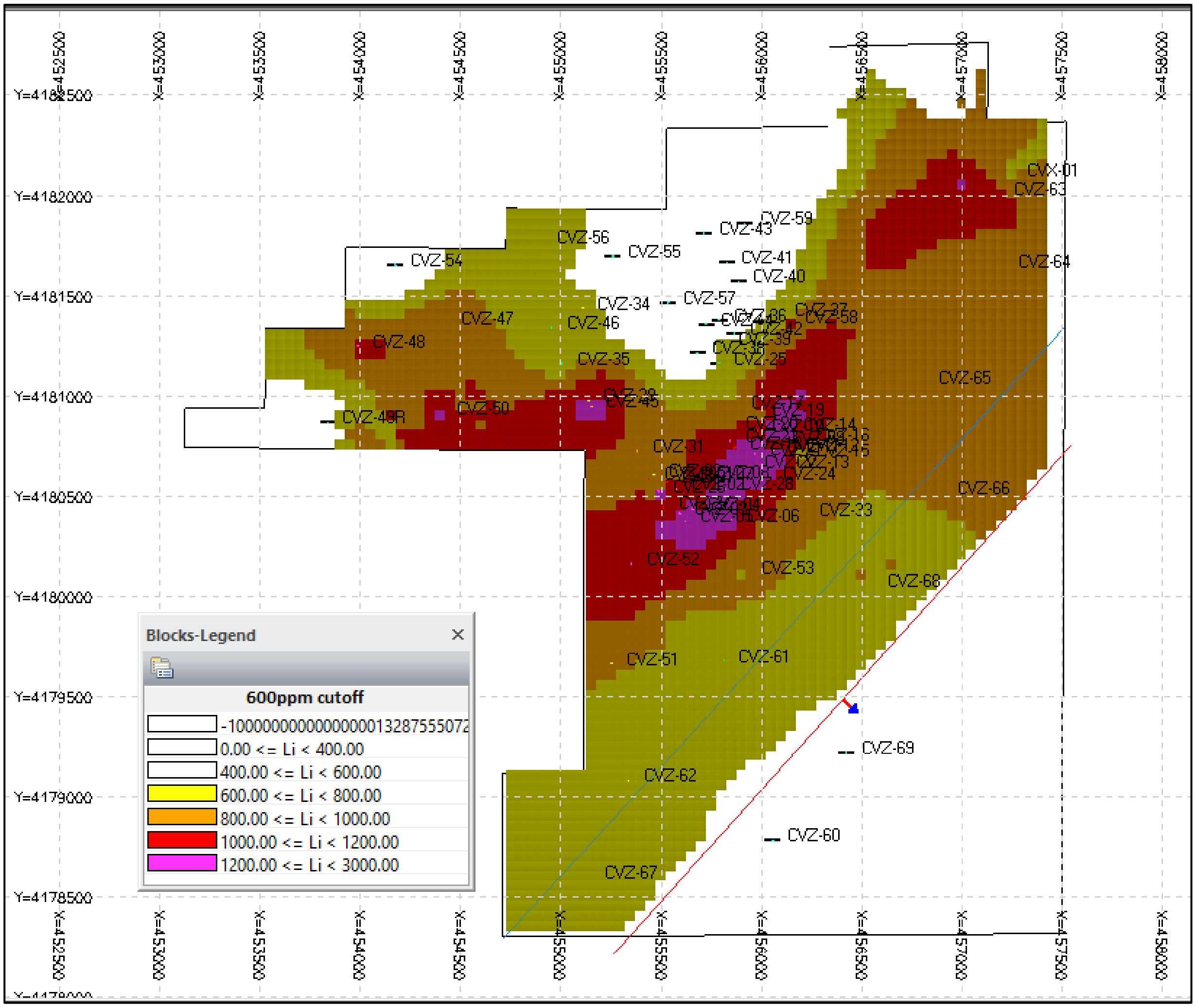


Figure 14-9:Plan View of Lithium Grades at the 600-ppm Cut-Off

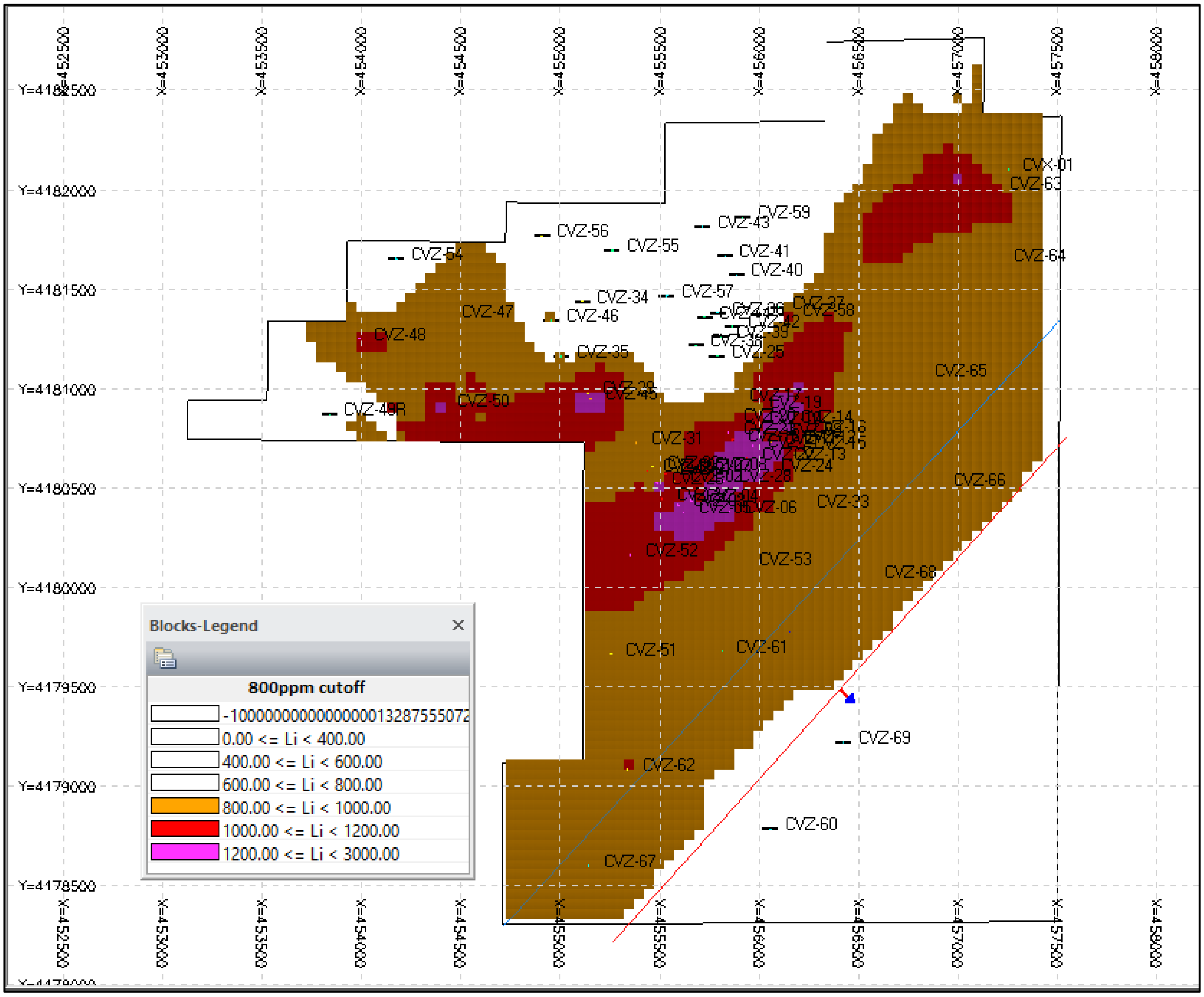


Figure 14-10: Plan View of Lithium Grades at 800-ppm Cut-Off

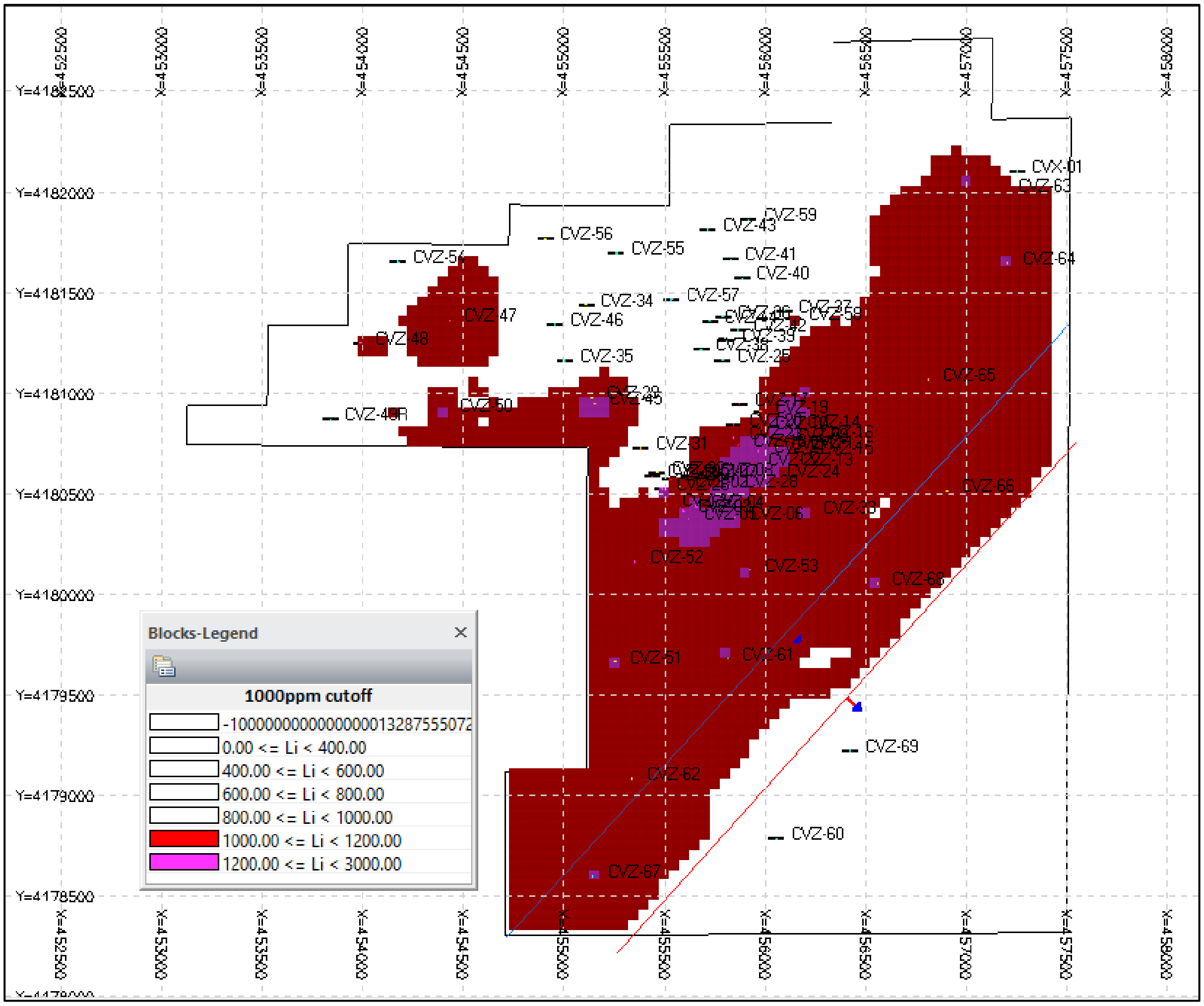


Figure 14-11: Plan View of Lithium Grades at the 1000-ppm Cut-Off

15 Mineral Reserve Estimates

No mineral reserves have been defined at this point.

16 Mining Methods

16.1 Introduction

Due to the low stripping ratio and low selectivity required while mining, several mining methods are suitable for the Zeus Lithium project. No drilling and blasting is expected to be required.

16.1.1 Dozer and Scraper

The low precipitation, dry climate, and relatively short hauls allow for large scrapers (657 dual engines) to be used in conjunction with a D10 class dozer. Each 657 scraper has a heaped capacity of 56 m^3 and 5 scrapers are expected to achieve productivity of 1,200 tph. This is deemed sufficient for the 17,000 tpd mill feed and associated waste and low-grade stockpile movement. The dozer will prepare the ground to maximize scraper productivity by levelling and ripping the ground where necessary.

16.1.2 In-Pit Breaker and Loader

The in-pit breaker and loader option rely on a centralized overland conveyor that is fed by a series of mobile jump conveyors. At the end of each series of jump conveyors, a single mobile feeder breaker is placed which will be fed by a large front-end wheeler loader with a 20 m^3 bucket capacity. Based on the geometry and sequence of the pit, the pit requires up to a single 1.6 km, 30” wide overland conveyor, and up to 45, 42” wide jump conveyors throughout the life of the mine. A backup excavator and 2 articulated trucks will be used for waste and low-grade stockpile management.

16.1.3 Truck and Shovel

A conventional truck and shovel operation will be used by pairing a 6020B (12 m^3) hydraulic excavator with four 90 tonnes class haul trucks. The hydraulic excavator will be capable of free digging the claystone without blasting or ripping with a dozer. A D8 class dozer will be sufficient to support the excavator. This option has been selected based on the lowest total capital costs.

16.2 Mine Option Selection

An ultimate pit (Figure 16-1) of processable material will be created, consuming most of the property area. The ultimate pit has been divided into phases of which the first 11 contain enough resources for 40 years of production at a 17,000 tpd production rate. Resources contained within the entire ultimate pit limits provide enough ore for over 190 years of production at 17,000 tpd. All resources regardless of the material classification are treated equally for the purpose of this study.

An optimized cut-off grade of 850 ppm was used to schedule the processed feed, compared to the economic cut-off grade of 400 ppm. Low-grade ore with grades between the economic cut-off of 400 ppm and optimized cut-off of 850 ppm are scheduled to be deposited in the low-grade ore stockpile. This is done to initially increase the average processed ore grade and improve the overall economics of the project by accelerating higher grade material to earlier years. Table 16-1 shows a comparison of mining method equipment cost.

Table 16-1: Mining Methods Equipment Cost Comparison

	Capital	Operating
Dozer and Scraper	$29,234,800	$551,791,407
Truck and Shovel	$27,756,680	$547,615,347
Breaker and Conveyors	$38,034,500	$534,503,395

The economic model evaluated each of the above three mining methods. All options appear to be viable with similar total capital and operating costs. The truck and shovel option is selected as the optimal mining method due to its marginally lower capital costs and its flexibility in moving between different areas within the pit when compared to the breaker and conveyors option. All further references to the “base case” in this document are referring to the truck and shovel option.

Figure 16-1: Zeus Lithium Project – Ultimate Pit Plan View

16.3 Mine Plan

An ultimate pit plan (Figure 16-1) of processable material is created, consuming most of the property area. The ultimate pit has been divided into multiple phases, of which the first 11 phases contain enough resources for 40 years of production at 17,000 tpd production rates.

Resources are reported for the first 11 phases by phase number, using the optimized cut-off of 850 ppm for processed ore grade. Resources with ore grades between the economic cut-off of 400 ppm and optimized cut-off of 850 ppm are transferred to a low-grade ore stockpile. Total tonnes of processable material, waste, kilograms of lithium, and grade are reported and summarized in Table 16-3. All resources regardless of material classification, whether inferred, indicated, or measured, are treated equally for the purpose of this study.

16.4 Mine Scheduling

The total resource tonnes and average grade for each phase is used to produce the preliminary mining schedule for the base case pit mineral resource estimate. The following assumptions in Table 16-2 were used to generate the production schedule:

Table 16-2: Assumptions made to Generate Production Schedule

Item	Unit	Value
Mine Production Rate	Dry tonnes/day (tpd)	17000
Mine Operating Days	Days/Week	7
Mine Operating Weeks	Weeks/Year	52
Mine Operating Shifts	Shifts/Day	2
Mine Operating Hours	Hours/Shift	10

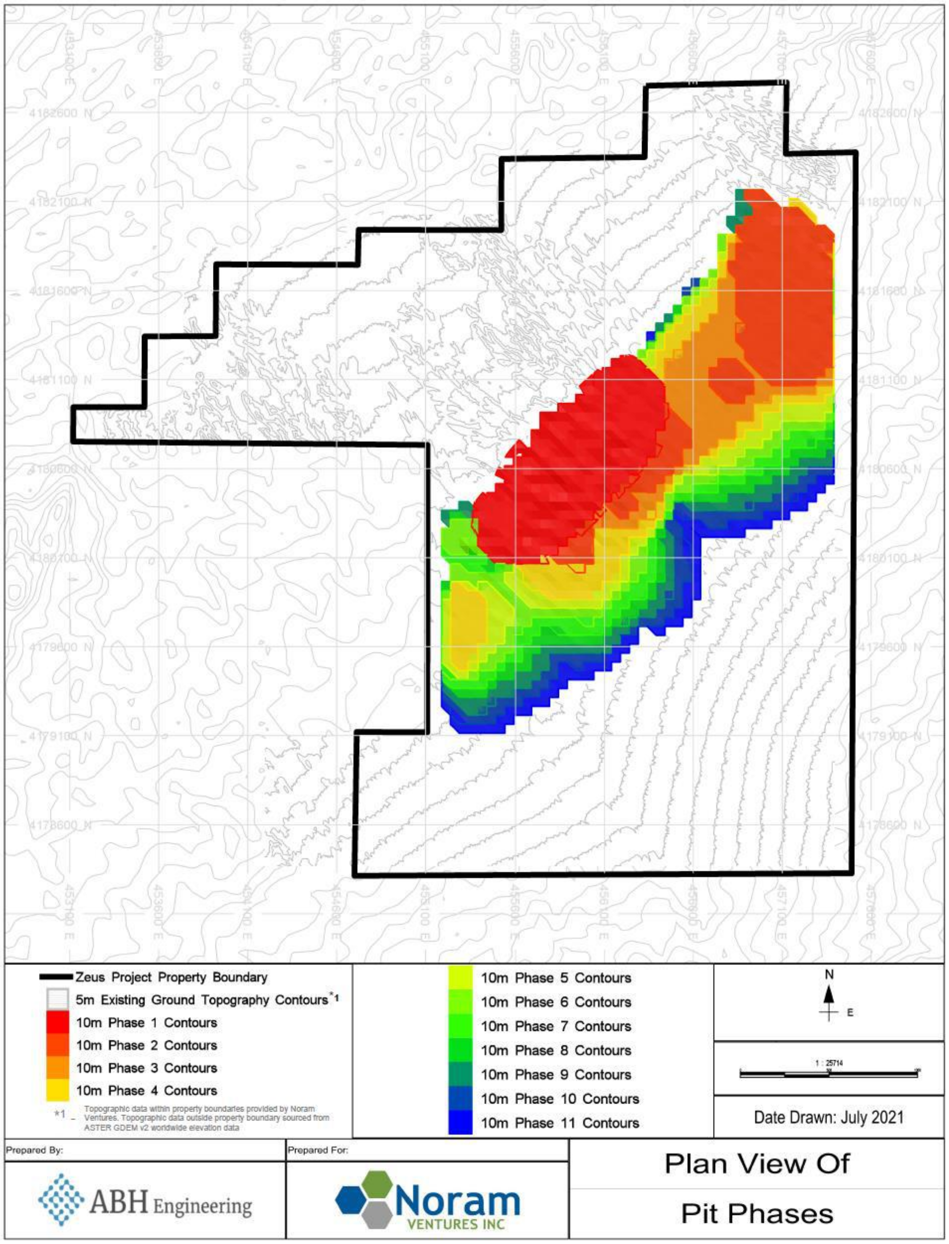


Figure 16-2: Zeus Lithium Project Mining Phases

Phase 1 contains enough resources for approximately 7 years of production while subsequent phases contain resources for 4-5 years of production each, both at a production rate of 17,000 tpd. Phase 1 is estimated to have an average ROM grade of 1,126 ppm lithium while the total Phase 1 to Phase 11 average ROM grade is expected to be 1,093 ppm lithium. Total resource summary by pit phase is summarized in Table 16-3.

Table 16-3: Total Resource Summary by Pit Phase

Total Resources								
Pit Phase	**Ore Tonnes (millions)**	**Low Grade Tonnes (millions)**	**Waste Tonnes (millions)**	**Ore Li Contained (millions kg)**	**Low Grade Contained (millions kg)**	**Ore Li Grade (ppm)**	**Low Grade Li Tonnes (ppm)**	**Stripping Ratio (W: LG+O)**
Ph1	38.8	0.61	1.73	43.6	0.48	1,126	782	0.04
Ph2	24.4	0.14	1.04	24.9	0.11	1,020	758	0.04
Ph3	26.7	0.28	0.70	27.7	0.24	1,038	863	0.03
Ph4	24.4	2.27	0.89	27.0	1.94	1,108	855	0.03
Ph5	24.3	2.70	1.17	28.1	2.15	1,154	797	0.04
Ph6	22.5	3.71	1.37	25.3	2.86	1,120	772	0.05
Ph7	20.7	5.56	1.98	23.1	4.15	1,112	746	0.08
Ph8	18.9	6.39	2.34	20.6	4.71	1,093	737	0.09
Ph9	15.7	8.67	3.20	16.9	6.21	1,076	716	0.13
Ph10	15.8	9.03	3.06	17.0	6.43	1,073	713	0.12
Ph11	13.1	10.80	4.27	14.1	7.55	1,075	699	0.18
Total	245.4	50.1	21.7	268.3	36.8	1,093	734	0.07

Due to the low stripping ratio in the first 3 phases, pre-stripping is not expected. For all the phases, waste is scheduled to be mined over the same period as the processed material.

The ultimate pit shell (Figure 16-1) includes all processable pit-constrained resources of 1,212 million tonnes (841.2 million tonnes inferred, 303.9 million tonnes indicated, and 67.0 million tonnes measured). The ultimate pit shell will result in a mine life of over 190 years. For this PEA only the first 11 phases are scheduled (Figure 16-2), which are collectively referred to as the “Initial Pit”. These phases represent a total processable pit-constrained resource of 295.5 million tonnes (175.8 million tonnes inferred, 90.2 million tonnes indicated, and 29.5 million tonnes measured) and represent 40 years of production.

Figure 16-3 summarizes the mining schedule derived from the initial pit. Future mine planning exercise is recommended to smooth the total movement in later years.

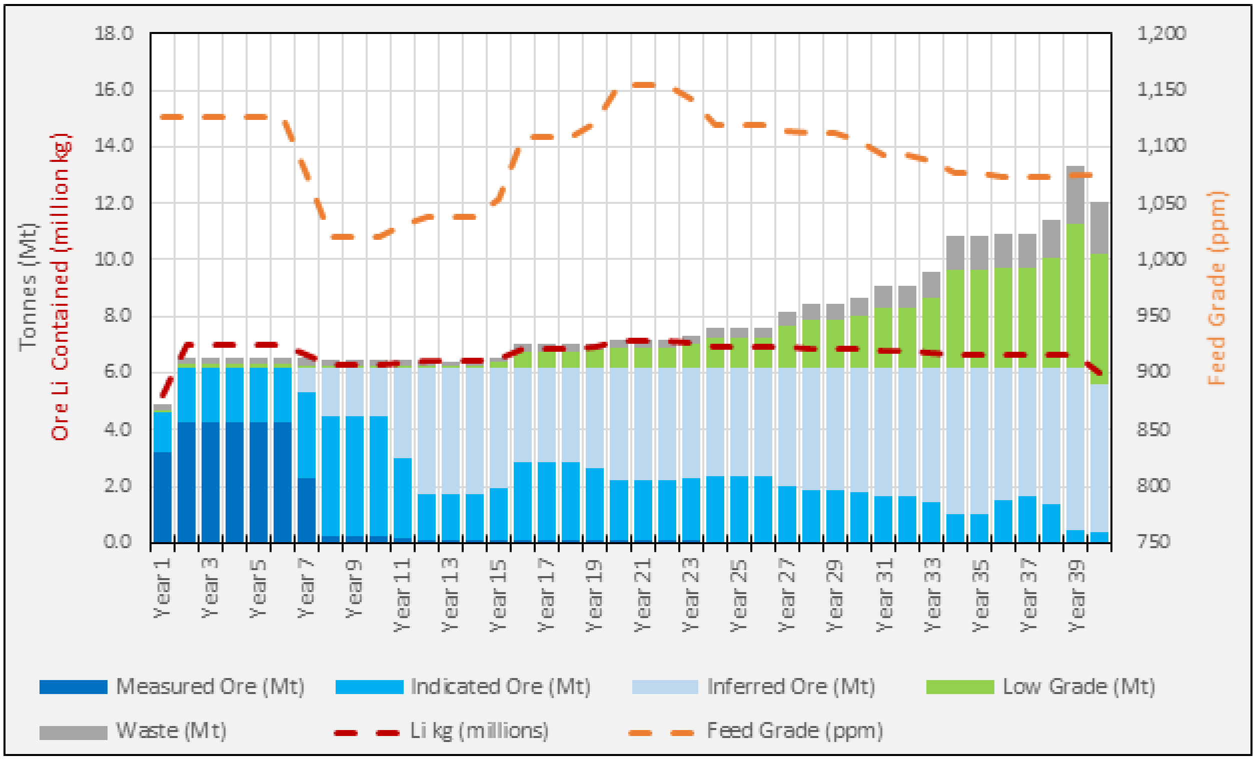


Figure 16-3: Zeus Lithium Project Production Schedule

16.5 Mine Operation and Layout

Figure 16-4 illustrates a conceptual Zeus Lithium project site layout. This includes initial pit contours, waste storage area, tailing locations, low-grade ore stockpile location, and site facilities. Site facilities will include all general infrastructure and ore processing facilities. Site facilities location are determined based on the topography and proximity to the early pit phases.

Processable ore above the 850 ppm optimized cut-off grade will be sent to the site facilities location for processing. All ore between the economic cut-off grade of 400 ppm and 850 ppm will be transported to the low-grade stockpile. Waste material below 400 ppm will be stored in the waste storage facility.

A constant overall pit slope of 30° is used. It is expected that the maximum road grade of in-pit ramps does not exceed a 10% grade. A complete pit slope analysis is required to determine the required slope in localized areas and the overall project slope stability.

Access roads expected to accommodate proposed production fleet are to be designed for two-way traffic with a running surface width of 19.5 m. A total road surface measuring 28.0 m will be required to accommodate berms and ditches. Maximum road gradient of these roads is 8%.

Tailing areas, low grade stockpiles, and waste storage area are expected to maintain an interim slope of 3H:1V with overall slopes of 3.5H:1V to accommodate for ramps and berms. A 25% swell and 10% compaction factor were used for the expected waste and low-grade stockpile material placement volumes. Further studies are required to determine appropriate compaction density and required overall slope for the tailings area, low grade stockpile and waste storage area. Two separate tailings areas: initial and secondary are available. The initial tailings area will be used in the early stages of the mine life due to its proximity to the site facilities. Transitioning from the initial to secondary tailings area will begin as capacity in the primary tailings area is reached.

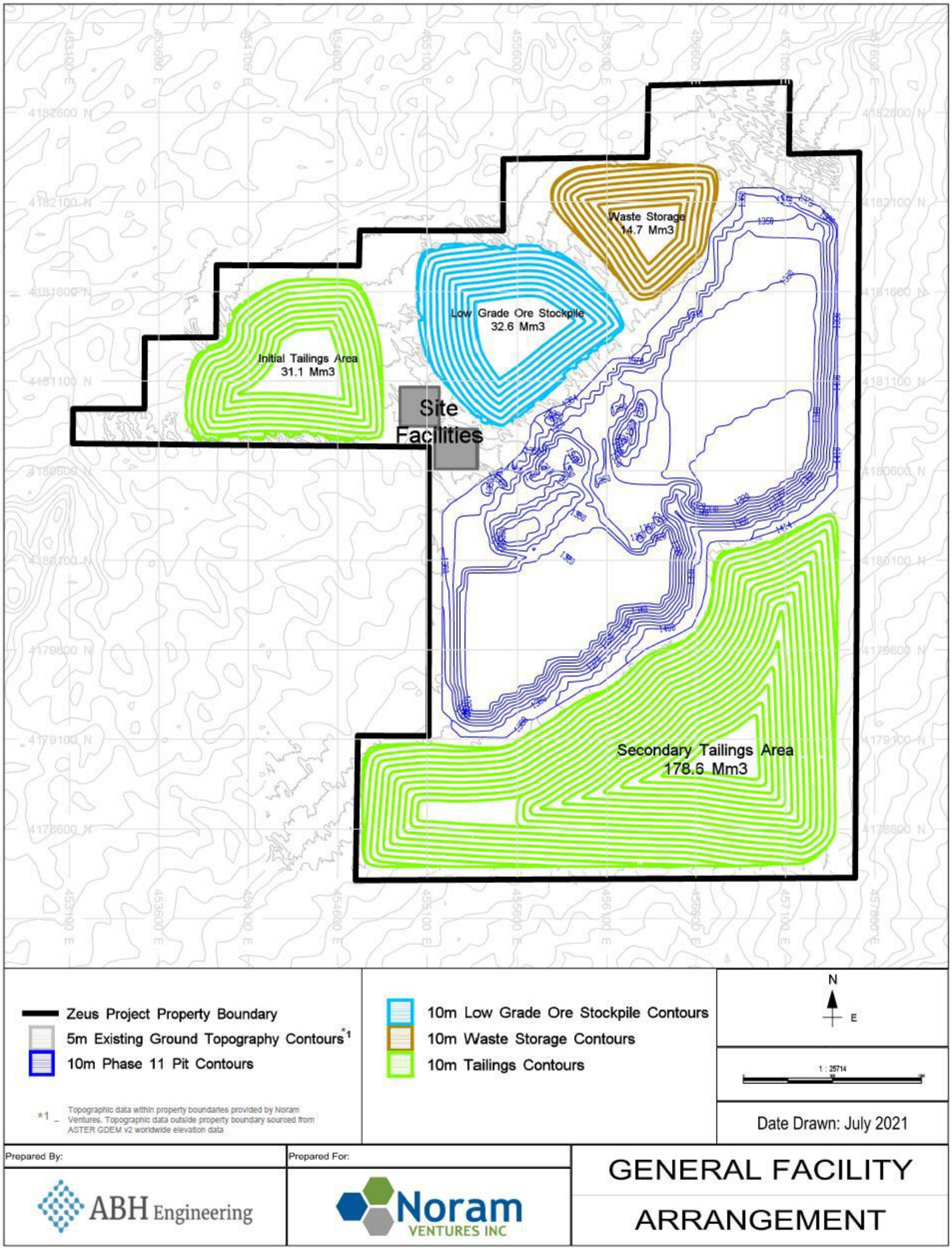


Figure 16-4: Zeus Lithium Project Conceptual Site Layout

17 Recovery Methods

This section focuses on the recovery method of lithium as lithium carbonate (99.5% purity) from the claystone material hosted within the Zeus Lithium deposit. The process has been developed based on industry-standard, commercially proven operations derived from prevailing leaching and recovery circuits. The flowsheet is used to estimate the capital and operating costs provided in subsequent sections of the PEA.

The process plant is based on a daily throughput of 17,000 tonnes per day (6.2 million tonnes per year), averaging 1,093 ppm lithium. The anticipated lithium recovery is 89% and is expected to produce 5,971 tonnes per year of lithium carbonate equivalent (LCE) or 31,941 tonnes of lithium carbonate. Table 17-1 shows the design criteria for the process.

Table 17-1: Process Design Criteria

Item	Units	Value
Annual throughput	Mtpa	6.2
Daily throughput	tpd	17,000
Plant availability	%	92
Nominal throughout	tph	770
Design factor	-	1.2
Design throughout	tph	924
Average lithium grade	% Li	0.1093
Solids density for leaching	%	30%
Overall Lithium recovery	%	89
Lithium carbonate production	tpy	32,201

The preliminary lab metallurgical work has been completed. The flowsheet in Figure 17.1 represents a typical lithium production pathway producing lithium carbonate. The process is divided into basic unit operations including:

- Feed Preparation
- Leaching
- Filtration
- Lithium Recovery

- Lithium Carbonate Production
- Tailings
- Utilities – acid production, water recycle, reagents etc.

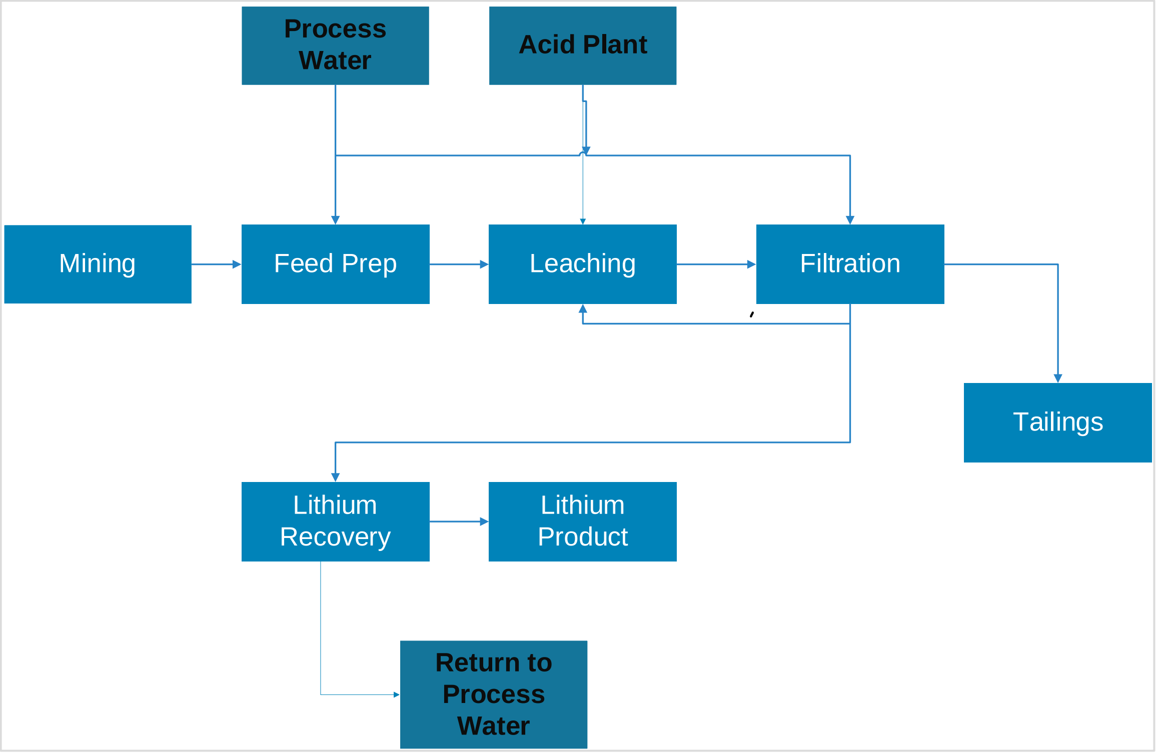


Figure 17-1: Generalized Process Diagram

17.1 Mine to ROM stockpile

Run of mine feed would be dumped into a ROM stockpile. A loader will feed a static grizzly (300 mm) from the ROM stockpile. Grizzly oversized rejects will be broken using a mobile rock breaker. A series of jump- and mainline- mobile conveyors will transport the grizzly undersize from the mine pit face to the ROM stockpile near the processing plant. Stockpile will have a live capacity of 25,000 tonnes.

17.2 Feed Preparation

A comminution/repulping circuit and a slurry transfer system are the two main components designed for the feed preparation circuit. The objective is to utilize a semi-mobile system that allows ROM material to be processed in the active mining area and then pumped to the processing facilities.

A linear reclaimer will be used to feed the material from the ROM stockpile to the plant, where it will be discharged into a two-way splitter. The material will be passed through a pair of roll crushers with 125-mm openings and stored in two 400-tonne fine ore bins. Using variable speed conveyors, material from the bins will be fed into stainless steel rotary attritors where the clay will disaggregate and reclaim water. Slurry from the attritor is discharged on to a scalping screen. The oversize material is removed using the scalping screen and sent to the waste pile. Undersize slurry from the attritor is fed into feed tanks where additional water is added to adjust the percent solids in the slurry. Figure 17-2 identifies the comminution flowsheet for the process.

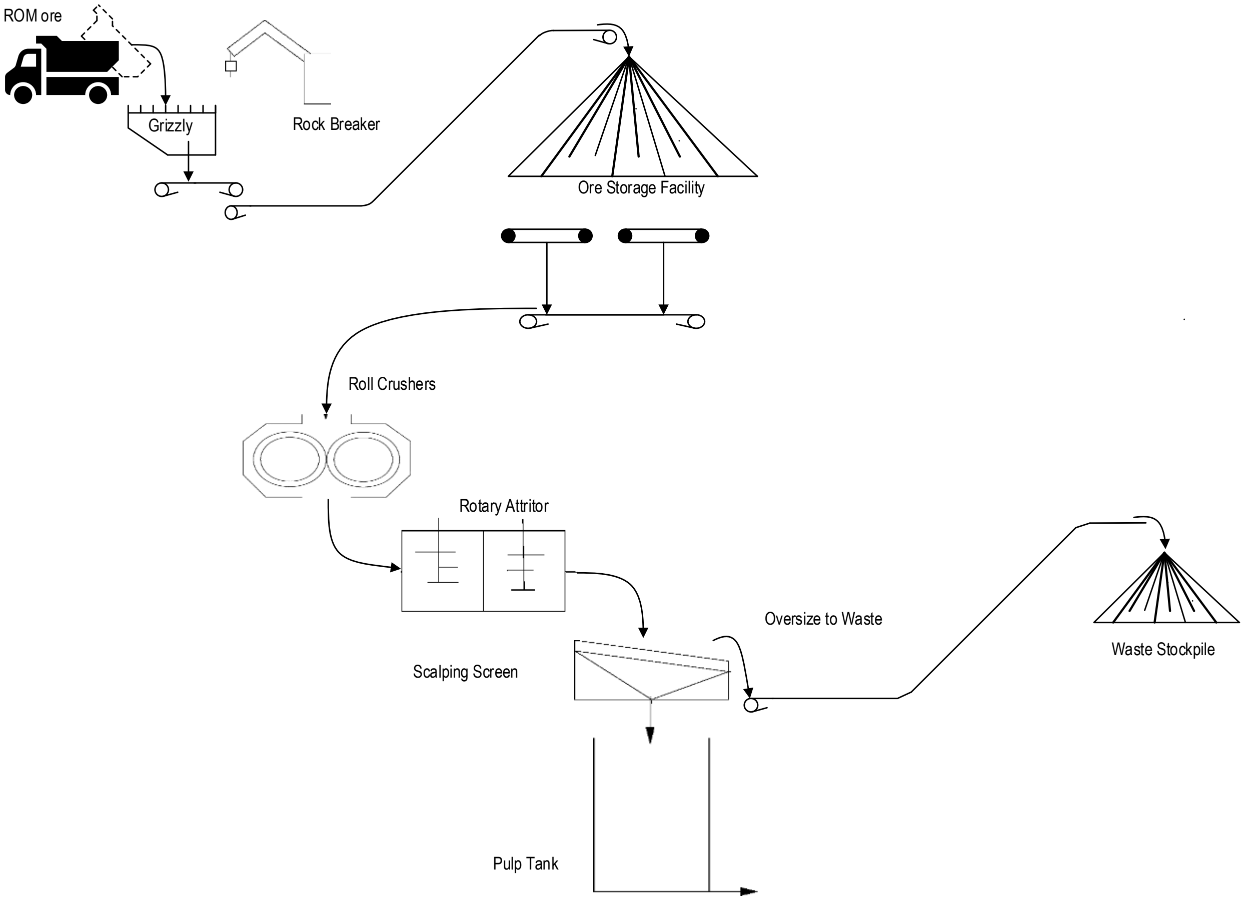


Figure 17-2: Feed Preparation Flowsheet

17.3 Leaching and Filtration

The non-acidified slurry from the feed tanks is pumped into one of four leach trains using a four-way splitter. Each train consist of two 10-meter diameter by 12-meter-high stainless-steel tanks. The tanks will be insulated and covered to prevent evaporation and heat loss and equipped with mechanical agitators. Sulfuric acid will be added to the first tank of each train to achieve an acid concentration to 5-10% by weight. The first tank is also equipped with steam coils to raise the temperature of the slurry to 60-70°C. The slurry from the first tank is passed to the second tank co-currently. Each tank has a 2 hour retention time. The leaching and filtration flowsheet is shown in Figure 17-3.

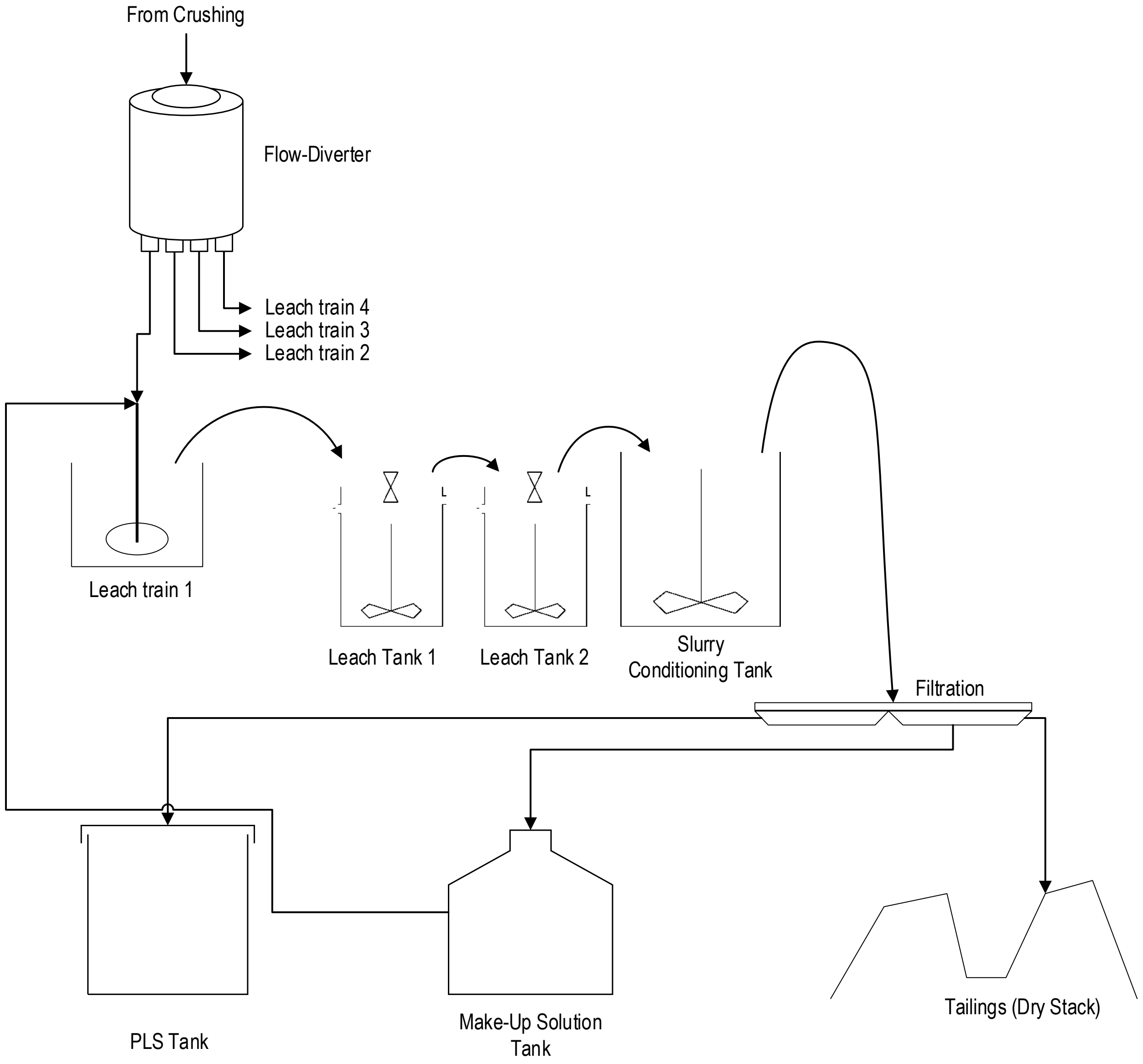


Figure 17-3: Leaching and Filtration Flowsheet

Discharge from each train will be fed into a slurry conditioning tank and then divided into filtration units. Here, the slurry will be drained of its pregnant leach solution (PLS) and then water washed and drained the second time. The drained solution will be pumped to storage tanks located in the lithium recovery plant. The washed water will be stored in reclaim water tanks for additional use. The drained filter cake will be transported to the tailings facility using conveyors.

17.4 Lithium Recovery Plant & Production

The PLS from the storage tanks will be fed to a precipitation circuit where the temperature will be increased to 65°C. This process will remove magnesium, calcium, and other elements to a separate bleed stream prior to evaporation. Purified lithium carbonate is recovered in the final stage of filtration. Sulfuric acid and water will be recovered and returned to the leaching circuit. The lithium carbonate crystals will be washed, dried, and bagged for shipping. Lithium carbonate with 99.5% purity is the target mineral. Figure 17-4 showcases the lithium carbonate recovery flowsheet.

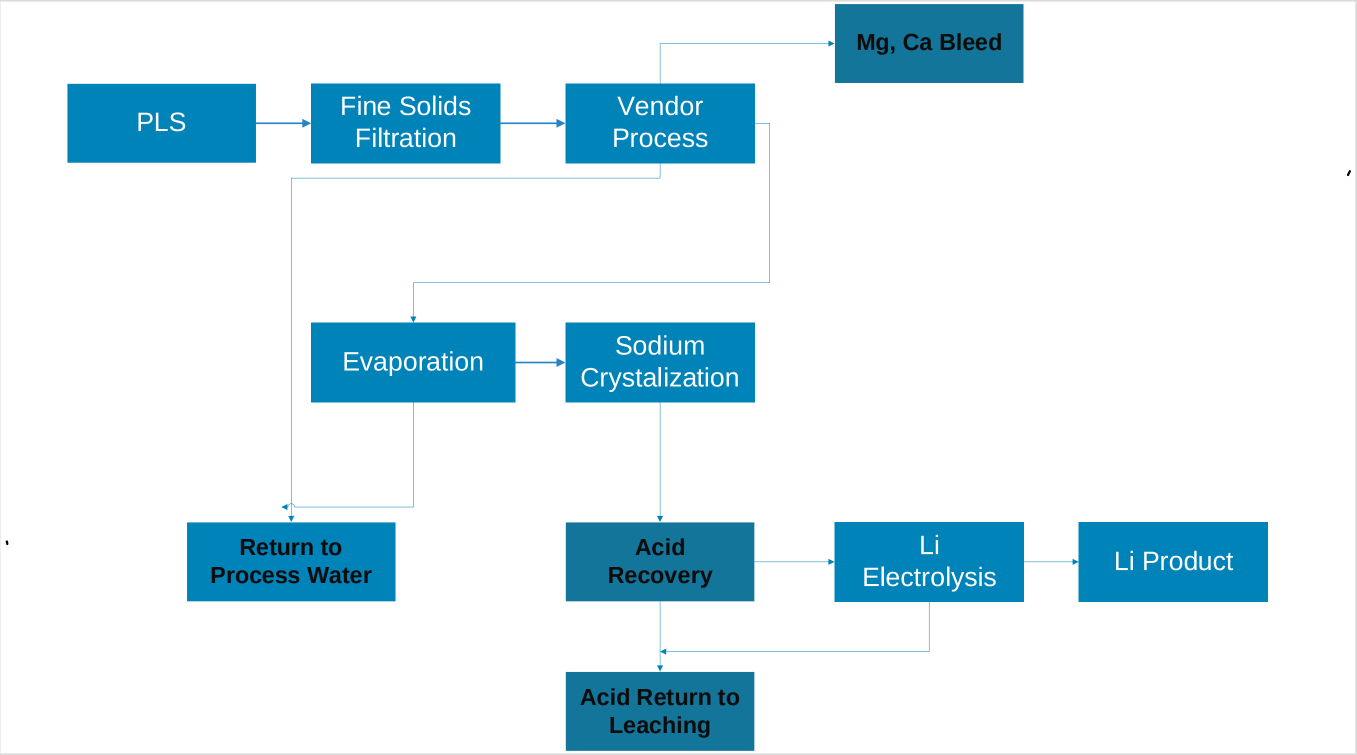


Figure 17-4: Lithium Recovery Process Diagram

18 Project Infrastructure

18.1 General Arrangements

The project is located next to the Clayton Valley Lithium Project within township 2 south, range 40 east and township 2 south, range 40.5 east, Mt. Diablo Meridian. The project is accessible via the Silver Peak Road: a two-lane road that connects Silver Peak with US Highway 95 to the east. The location of the processing plant will be selected based upon the proximity to the mine site, topography, access to Silver Peak Road, power, and geotechnically stable subsurface for plant construction.

18.2 Access Roads

Primary access to the plant will be via a road developed south from Silver Peak Road to the proposed plant site. This road will be accessible by semi-truck traffic. Additional access roads will be constructed for passing of heavy equipment vehicles between the mine and plant site internally. Use of mine haul roads will be minimal, as material will be transported using conveyors instead of truck haulage.

18.3 Buildings and Yards

Structures and facilities to be installed on site include administration, laboratory, warehouse, reagent storage, fuel storage, sulfuric acid plant, comminution plant, lithium recovery plant, and mine shop. The access roads to the site will include a parking area accessible to the administration buildings. The processing areas and other site access points will be fenced and gated.

Administration will be accommodated in a building sized structure and will include supervision, accounting, safety, and technical personnel. The site will be connected using local phone, radios, and internet services for communication.

The laboratory will have equipment for sample preparation and analytical tests to handle the daily requirements of the mine and processing plant. The mill workshop and warehouse building will be located adjacent to the processing plant and have the provision of storing parts, reagents, and supplies. A contained tanker will be used to store acid, recycled water, and liquid chemicals.

The crushing, leaching, and filtration processes will be conducted in open-air enclosures. The process building will house the lithium recovery plant, product manufacturing equipment, and maintenance worker areas. The building will be supported with offices, an overhead crane, compressed air, tool rooms, lubrication amenities, and storage for conveyor and other repair parts. Fuel and lube storage will be contained in an open-air area that will service the mine and plant mobile equipment. Diesel fuel will be delivered in tanker trucks and stored in tanks.

18.4 Sulfuric Acid Plant

The sulfuric acid plant will be an industry standard plant with full energy recovery. The plant will be able to produce 2,500 tonnes per day of sulfuric acid by burning elemental sulfur. The process generates a large amount of heat which is captured as steam to heat leach tanks and other processes in the plant.

The plant will be equipped to meet National Ambient Air Quality Standard emission limits following the state of Nevada Implementation Plan. Elemental sulfur in the dry form will be delivered to the site by truck.

Sulfuric acid will be stored on-site in tanks that are located adjacent to the leach plant. The tank storage area will include a loading option for shipping and sales of excess acid.

The acid plant can meet 100% of the power requirements at the mine site with the supply of surplus power generated. For the distribution of power, the main substation will be placed adjacent to the sulfuric acid plant. The substation will be connected to the regional power grid and have the capability to send surplus generated power for off-site sales. Cooling for the acid plant is provided with a closed indirect water circulation loop redirected by the turbine condenser.

18.5 Power Supply

On site, power will primarily be provided by the sulfuric acid plant. Secondary power will be supplied by a connection to the regional power grid, which will be connected by two transmission lines, one of which is located just north of the project near Silver Peak Road.

Deliberations with NV Energy (a local utility company) have been carried out, which conclude the use of existing lines for the required power to the project. Upgradation of the power line will assure start-up and operation of the project while the acid plant is not operating and will be included in the capital cost.

On-site power will be distributed from the main substations, which will be present near the sulfuric acid plant. Power supply to the plant and mine will be through both overhead and buried lines and reduced to appropriate voltages.

There is a potential source of additional power available from Cypress, which holds a geothermal lease five miles north of the project.

18.6 Water Supply

A water balance model was proposed based on the water requirements at the mine site by accounting for the water loss through vaporization and tailings. Ground water will be the primary water source used to support the project and will require water permits secured from the Nevada Division of Water Resources. Currently the most accessible water source is the Clayton valley basin which is being used by several existing projects and local communities as a primary source of water. If water rights in the Clayton Valley basin are fully allocated, an alternate groundwater option or procurement of water rights from existing permit holders will need to be considered. This project will have a committed water arrangement system to deliver fire protection to all areas of the processing plant and office.

18.7 Waste Management

The project has an arrangement to discharge the effluent to the site septic system, but no water will be discharged to the environment. Sufficient arrangements will be made for lavatory and wash facilities throughout the project site. Sanitary waste from lavatories will flow into septic tanks by gravity for treatment and disposal. Each of the septic tanks and drain fields are sized for building occupancy.

Dumpsters and other appropriate containers will be used for disposing of solid waste which will be transported off-site. Hazardous waste will be handled by a licensed contractor and be placed in appropriate containers for transport.

18.8 Storm Water Handling

The mine site is at the base of an alluvial fan as shown in Figure 18-1. The fan is supplied by the canyon towards the east of the project and covers an area of several square miles. Minor fans emit from the canyons north and south and contribute to surface run-off. The surface run-off flows mostly north to the playa across Silver Peak Road, or south around the southern tip of Angel Island.

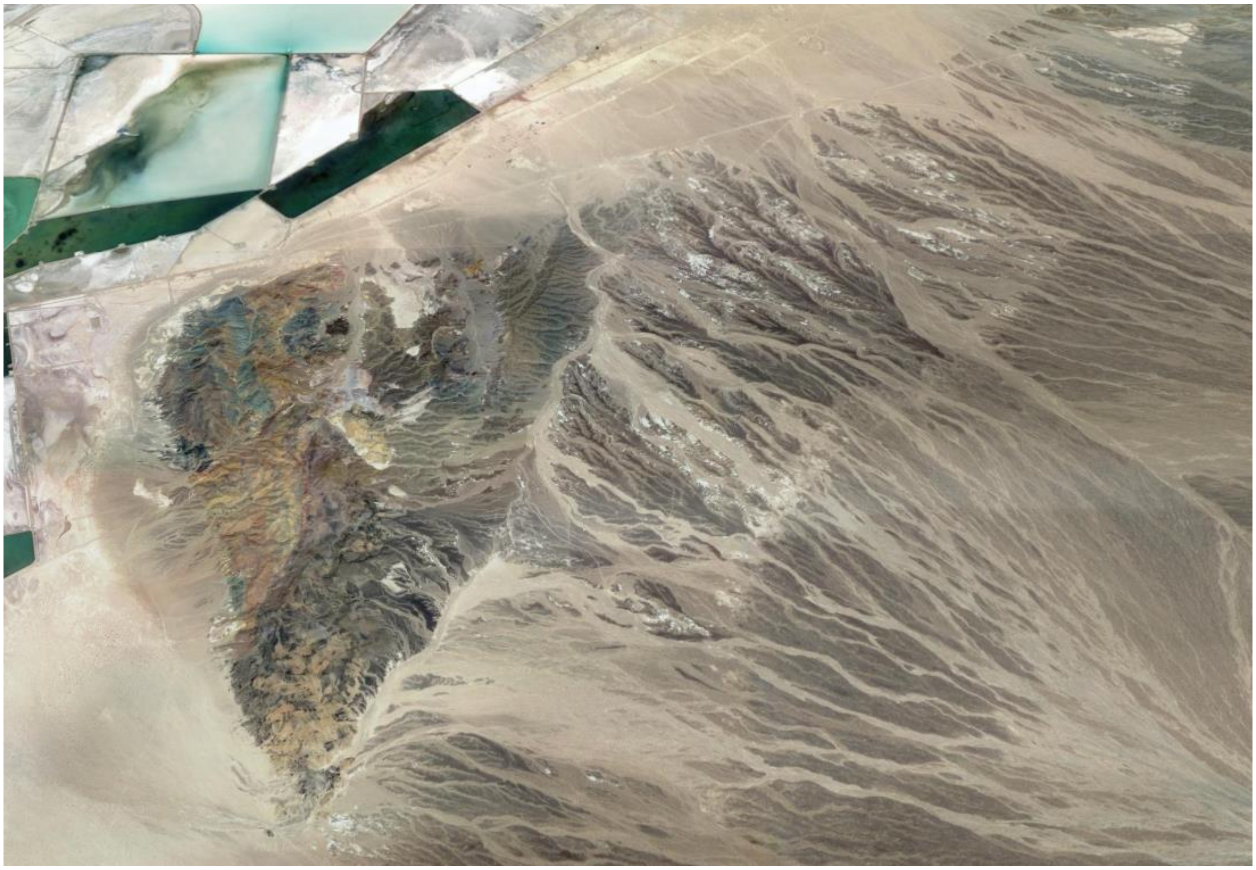


Figure 18-1: Location of Mine Site at the Base of an Alluvial Fan

Stormwater flowing over the alluvial fan will be diverted around the eastern perimeter of the mine area, leaving the surface flows unchanged from their present course.

The plant site will be located on the east slope of Angel Island, unaffected by surface runoff. The access road to the plant will follow a minor depression avoiding the major outflow point which is presently the north access route onto the property.

Stormwater in and around the plant area will be diverted to settling ponds. Stormwater within containment areas will be treated accordingly before discharge.

19 Market Studies and Contracts

The following information has been reported to the best of the author's knowledge with regards to the Zeus Lithium project, as of the date of writing this PEA report:

- Noram Ventures Inc. currently holds no known agreements or royalty contracts for the sale of lithium products in addition to the purchase or sale of any other commodities, resources, or supplies.
- Noram Ventures Inc. does not hold any known material contracts related to property development, inclusive of mining, concentrating, smelting, refining, transportation, handling, sales and hedging, and forward sale contracts or arrangements.
- There have been no market studies or analyses conducted by Noram Ventures Inc.

A review of the lithium carbonate market for the Zeus Lithium project, using information publicly available at the time of writing this technical report, has been conducted for Noram Lithium Corp. The definite list of sources for the information used in this section can be found in Section 27, under References.

19.1 Lithium Supply and Demand

A significant driver of the global lithium supply chain is the ever-growing lithium-ion battery market. Lithium is a key component in rechargeable batteries for electric vehicles, electronics, as well as used in glass and ceramics. (Royal Society of Chemistry, 2021) A summary of lithium consumption and distribution by end-product can be found in Figure 19-4 and Figure 19-5. Global demand for lithium has been steadily rising over the last few years and is expected to increase as the market for electric vehicles continues to evolve. (Fact.MR, 2020) The potential global lithium demand forecasted till 2030 is described in Figure 19-1 and 19-2. Lithium production is commonly traded worldwide in two forms – Lithium Hydroxide (LiOH) and Lithium Carbonate (Li_2CO_3). With relevancy for this project, the lithium market that will be studied is Lithium Carbonate with 99.5% concentration.

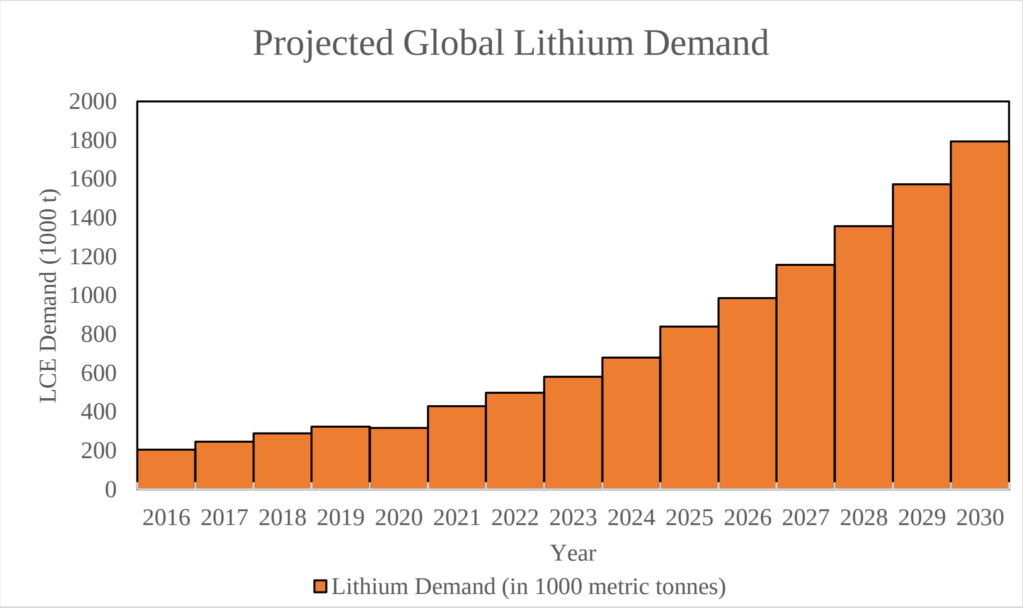


Figure 19-1: Projected Global Demand for Lithium Carbonate (Garside, M., 2020)

The global lithium carbonate market is dominated by three major firms who provide over 70% of the global lithium carbonate supply. These firms are Sociedad Química y Minera (SQM), Albemarle Corporation, and Livent Corporation. Other contributors include Orocobre Limited, Ganfeng Lithium, and Leverton-Clarke Specialty Chemicals. (Fact.MR, 2020)

East Asia held the greatest share in the global lithium carbonate market in 2020 and is expected to continue in the same manner in the future. Europe held approximately 15% of the market share, supported by its growing automotive industry. North America backed by increasing lithium carbonate consumption in its automotive industry, reported being the fastest growing market according to historical trends (Fact.MR, 2020). The distribution of lithium production by country for 2020 can be found in Figure 19-3.

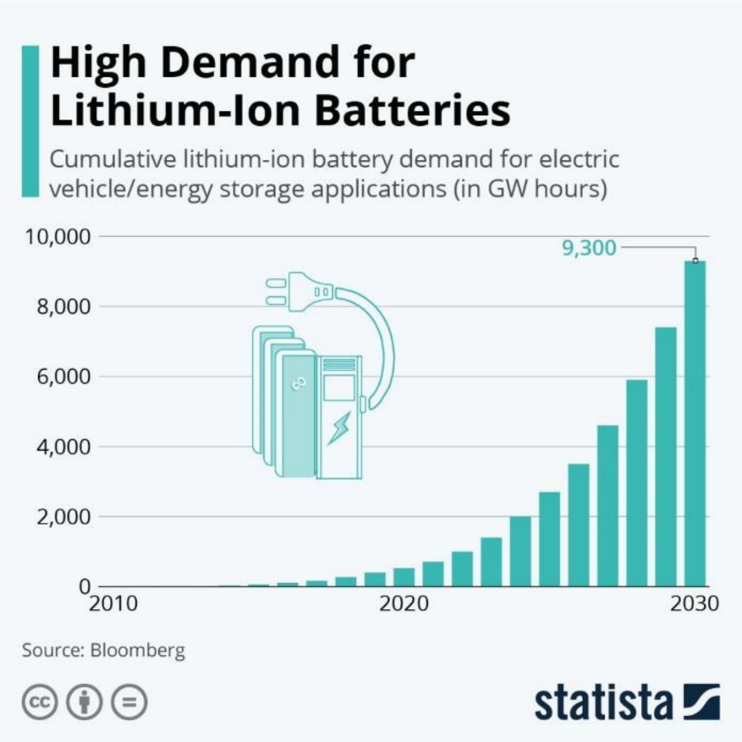


Figure 19-2: Lithium-Ion Batteries Demand (Statista, 2020)

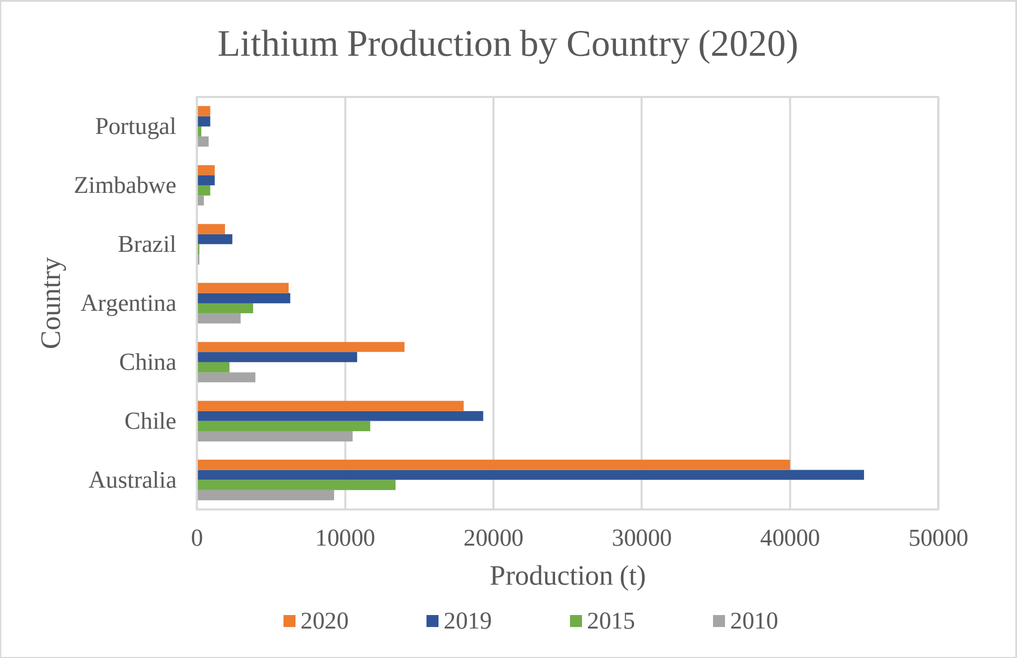


Figure 19-3: Global Lithium Producing Countries (Garside, M., 2021)

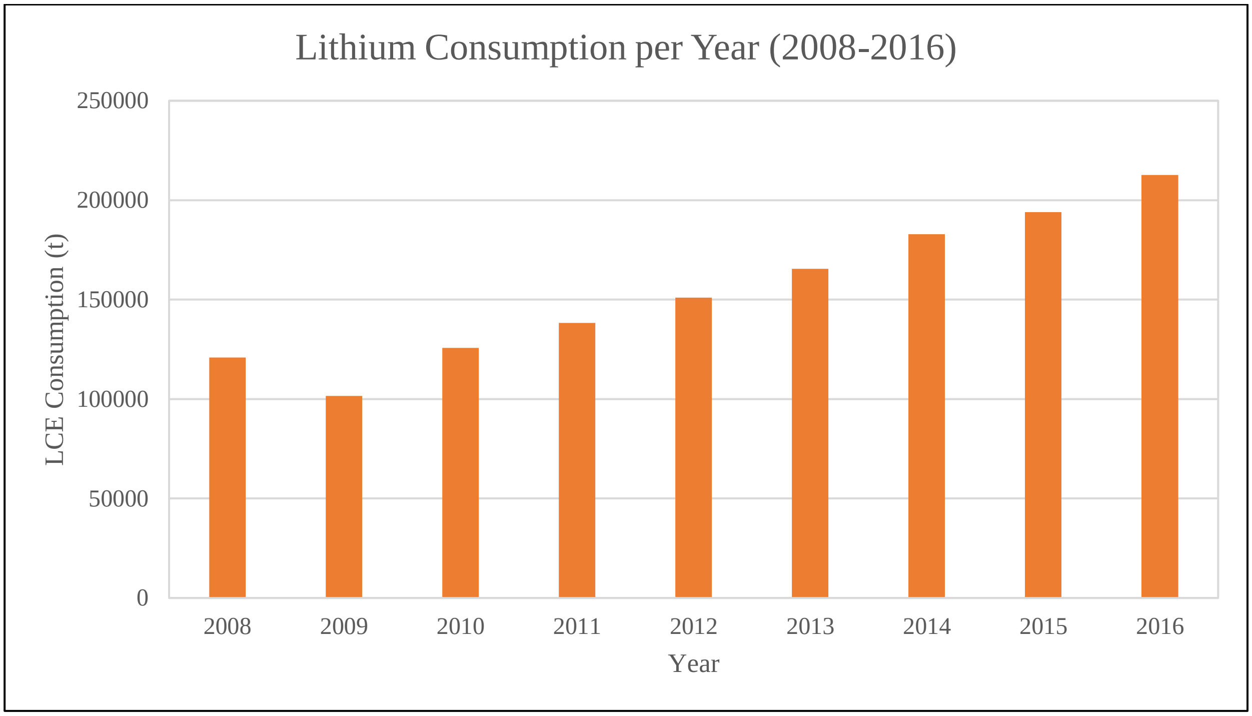


Figure 19-4: Total Lithium Consumption (2016) (Garside, M., 2017)

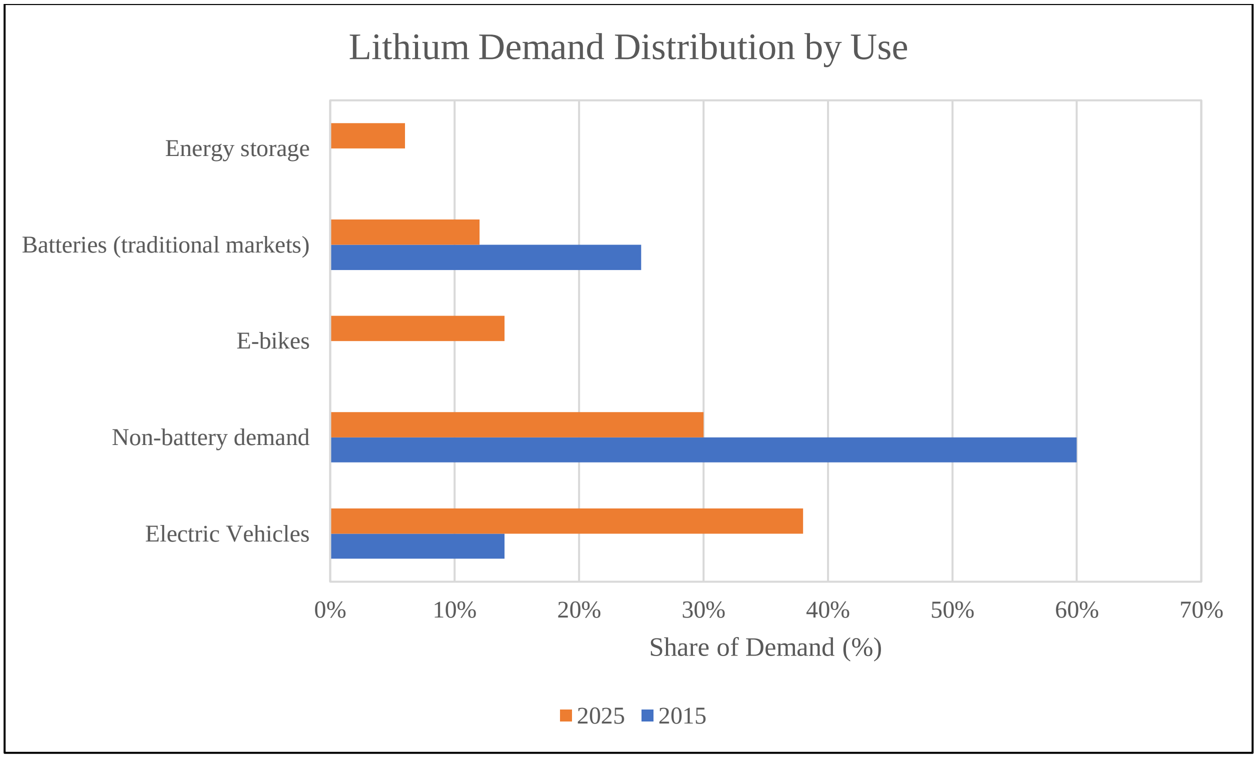


Figure 19-5: Lithium Demand Distribution by 2025 (Garside, M., 2017)

19.2 Supply Chain

Lithium is predominantly found in three forms: lithium brine deposits, pegmatite lithium deposits and sedimentary lithium deposits. Projected production costs for lithium brine and pegmatite deposits are compared in Figure 19-6. Several processes are needed to convert the naturally occurring lithium forms to commercially salable lithium forms. A step-by-step description of the lithium supply chain is described as follows: (Tarry & Martinez-Smith, 2020):

- Lithium mining and extraction: For this project, sedimentary lithium is mined in clay deposits as smectite mineral. This mineral is rich in both magnesium and lithium. Since the deposit is soft rock, the ore is shoveled and hauled without blasting and sent to the process plant where lithium is extracted using sulfuric acid leaching.
- Processing of extracted lithium: After sulfuric acid leaching, lithium concentrate is processed using electrolysis to produce lithium carbonate. This product is commercially used as a component in batteries for electric vehicles.
- Battery Manufacturing: Refined lithium carbonate is purified into battery precursors which are used by cathode active material and electrolyte manufacturers. Battery packs, electronics, power grids are among the few products manufactured using refined lithium carbonate.

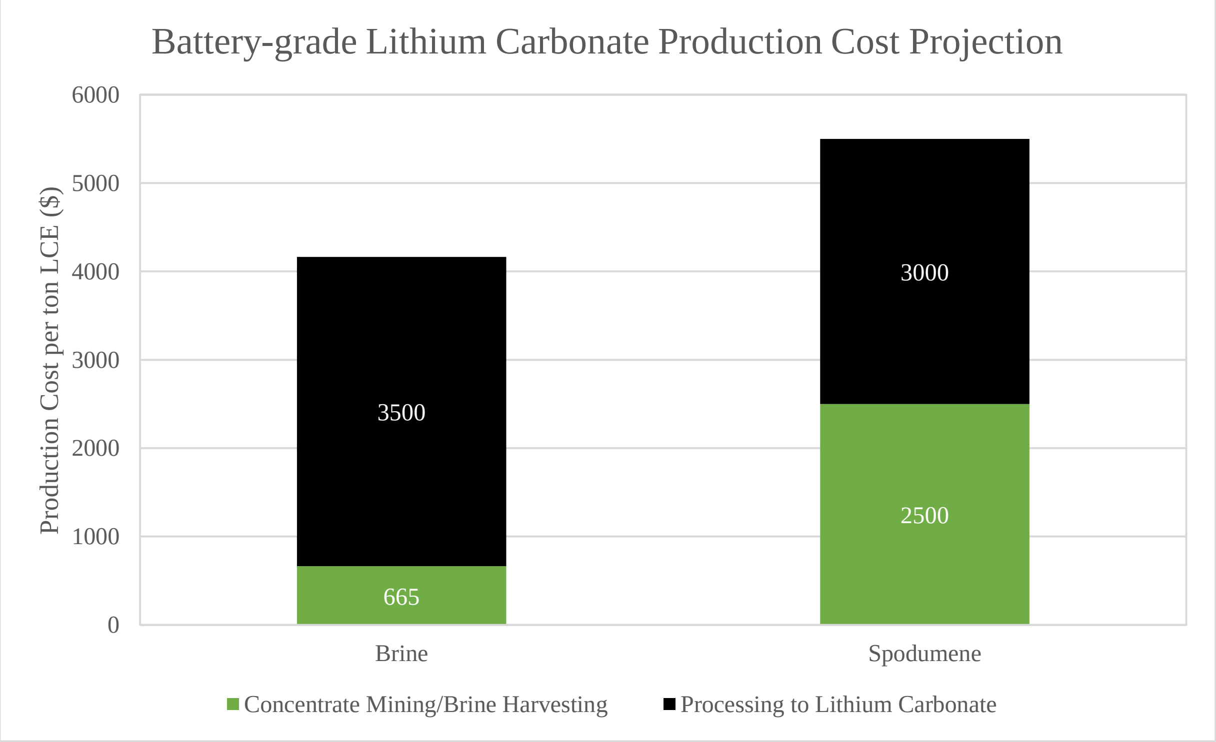


Figure 19-6: Battery Grade Lithium Production Cost (Garside, M., 2019)

19.3 Lithium Price Review

Lithium supply is predicted to get depleted by 2025. (Lithium South Development Corp.; Emerging Markets Consulting, LLC., 2021) Battery grade lithium carbonate accounts for over 75% of the global lithium market. As electric vehicles continue to hold more of the market share, the demand for lithium-ion batteries will increase accordingly. It has been estimated that the price of manufacturing electric vehicles will match that of regular gas-operated vehicles by 2024 (Jolly, 2020). High purity grade lithium carbonate represents 1/5th of the global lithium carbonate market. It is also used in manufacturing glass, cement, and aluminum. (Fact.MR, 2020)

COVID-19 pandemic slowed lithium battery production in 2020, resulting in a bottleneck year for the lithium market. Policies from the Chinese government diminished subsidies on the electric vehicle market which resulted in a decrease of the global lithium demand by approximately 50%. COVID-19 predominantly impacted the global economy by disturbing lithium supply chains, which affected the global supply and demand, consequently influencing financial markets. The lithium carbonate market has seen a compounded annual growth rate of 11.1% over 5 years leading up to 2020. Global demand is forecasted to reach prior levels by mid-2021: with a compound annual growth rate of 11% between 2020-2030 (Fact.MR, 2020).

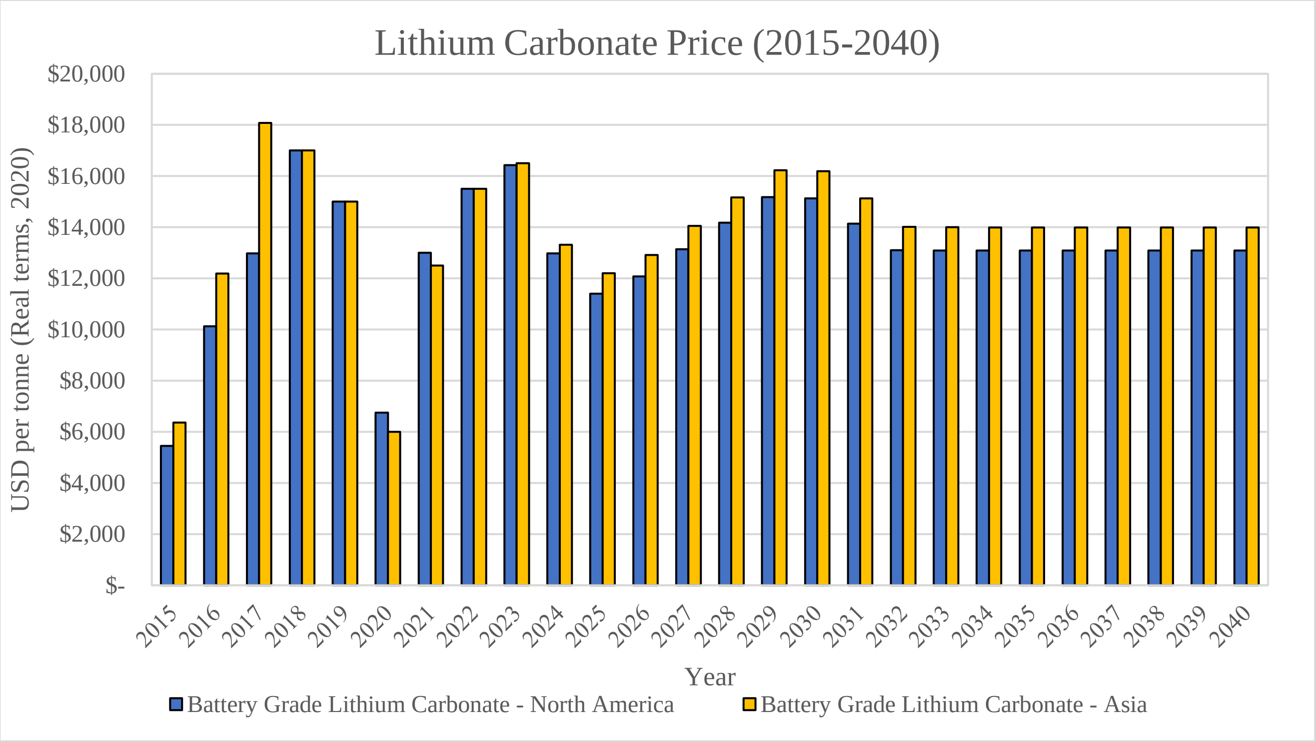


Figure 19-7: Lithium Carbonate Price (2015-2040) (Lane, T.; Harvey, J. T.; Fayram, T.; Samari, H.; Brown, J. J.;, 2018)

Lithium carbonate price reduced by 10.9% during 2020 due to the decrease in demand for electric vehicles, along with disturbances in supply due to COVID-19. Suppliers faced increased inventories with decreased electric vehicles sales. However, the 2nd half of 2020 saw a revival in lithium sales in China. The combination of government incentives, green deals, and subsidies drove up the demand for electric vehicles: particularly in Europe. However, this is expected to decrease as government grants reduce over time. France has already announced to decrease these subsidies for 2021. (Barrera, 2021) Projected lithium carbonate prices till 2040 are described in Figure 19-7.

Delayed expansion plans and project suspensions impacted the global lithium supply. As companies try to secure increased financing post COVID-19, delays and suspensions are expected to decrease, thereby improving lithium prices. Production cutbacks imposed on mining operations over the previous 18 months are expected to be lifted, allowing a balance of supply and demand over the course of 2022 (Barrera, 2021). Lithium price trends across 2020 are described in Figure 19-8.

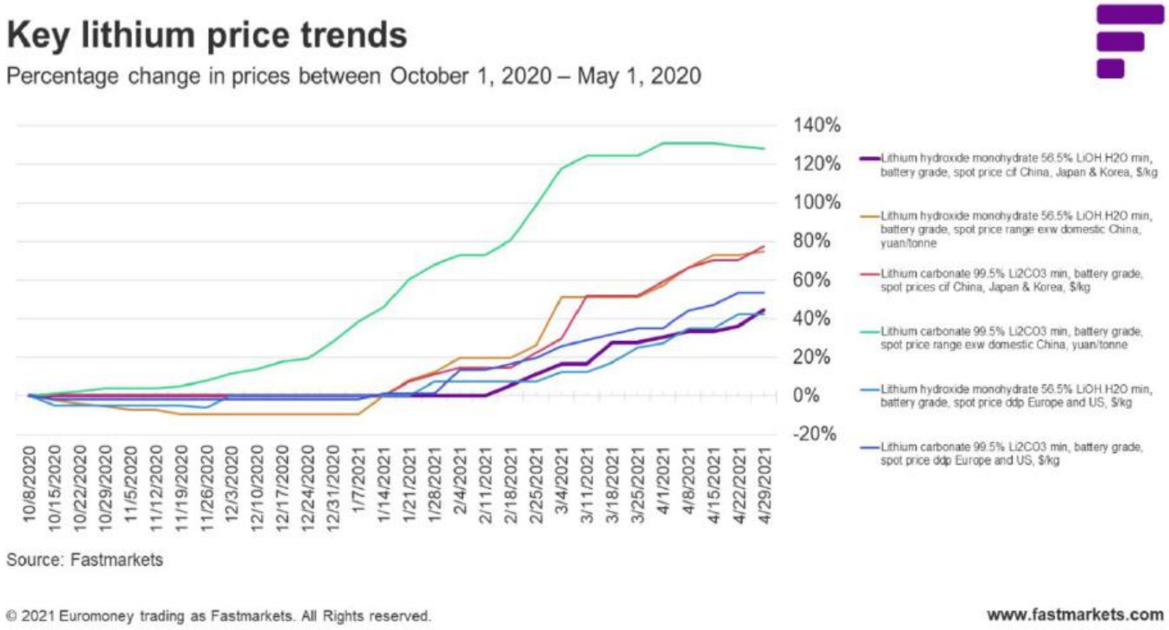


Figure 19-8: Lithium Price Trends (Fastmarkets staff, 2021)

20 Environmental Studies, Permitting and Social or Community Impact

The proposed mine has location and ownership of the property. Therefore, the mine will be responsible for attaining all required permits to operate as per the laws and regulations set forth by Esmeralda County, the State of Nevada, and the US federal departments. Noram has currently not completed any studies with respect to environmental, social, or community impacts. All work, past and present inclusive, done on the Zeus property is compliant with all requirements set forth by the relevant regulatory bodies.

20.1 Mining Permits and Regulations

Noram is currently operating under a Notice of Intent (NOI) with the Bureau of Land Management (BLM). The latest drill program (Phase V) concluded in March 2021 and was completed in compliance with the proposal of work agreed upon between Noram and the Tonopah Field Office of the BLM.

To meet and maintain regulatory compliance, various permits will be required going forth. Permits will cover a range of common mining items in the State of Nevada, such as land management, hazardous materials, storm water control, local organisms, waste management, tailings disposal, reclamation, and water rights. Plans and permits are expected to include the following:

- Mine Plan of Operations (PoO) – US Bureau of Land Management
- Explosives Permit – US Bureau of Alcohol, Tobacco, Firearms, and Explosives
- Hazardous Wastes – US Environmental Protection Agency
- Environmental Assessment or
- Environmental Impact Statement – US Bureau of Land Management
- Nevada Mine Registry – Nevada Division of Minerals
- Surface Area Disturbance Permit - Nevada Division of Environmental Protection
- Groundwater Access Permit – State of Nevada Division of Water Resources
- Water Pollution Control Permit – Nevada Division of Environmental Protection
- Air Quality Operating Permit – Nevada Division of Environmental Protection
- General Storm Water Discharge – Nevada Division of Environmental Protection
- Drinking Water Regulations – US Environmental Protection Agency

20.2 Environmental Studies

An Environmental Assessment (EA) is prepared by BLM if a proposed action will result in substantial land disturbance, but unlikely to have any significant environmental impact. An Environmental Impact Statement (EIS) will be required by BLM if it is determined that mining operations will have a significant effect on the local environment beyond the scope of an EA. Noram will work closely with BLM to ensure that a baseline study is conducted. All operations present and future, will be compliant with all environmental standards.

In 2019, BLM produced an Environmental Assessment titled *September 2019 Competitive Geothermal Lease Sale EA*. The Zeus claims fall within the parcels managed by the Tonopah Field Office outlined within the 2019 EA. The report’s documents detail the potential cumulative effects of the Zeus project to a multitude of environmental aspects: such as air quality, soils and vegetation, water resources, wildlife resources, Native American cultural concerns, and socioeconomic values. All aspects of mining that could potentially contribute to a significant impact on the local environment will be carefully considered in both design and execution.

20.3 Social and Community Impact

The Zeus project is in early stages of development and has yet to assess the social impact it will have on local communities. Noram will work closely with authorities of Nevada to attain a mutually beneficial relationship between the company and the nearby communities.

21 Capital and Operating Costs

21.1 Basis of Estimate

The capital and operating cost estimate is prepared with an expected accuracy range of +50%/-45% while following the AACE Class 5 guidelines. Base pricing is in the third quarter of 2021 US dollars with no allowances for inflation or escalation beyond that time.

The estimate includes direct and indirect costs (such as engineering, procurement construction and start-up costs of facilities), owners' costs, contingency, and sustaining capital associated with mine and process facilities, and on & off-site infrastructure. The following areas are included in the estimate:

- Mining (mine development and equipment)
- Process plant
- On-site Infrastructure
- Off-site Infrastructure

21.2 Capital Costs

The total initial capital cost estimate as seen in Table 21.1 is $528 million distributed over two years of pre-production. Vendor quotes, internal data, and public information published by neighboring mines were used in the estimates. Factors for construction and installation of fixed and supporting equipment were applied to the processing plant and to facilities-related items. Indirect costs include Engineering, Procurement, and Construction Management (EPCM), freight, sales, and owner's costs; applied prior to contingency and sustaining costs.

Table 21-1: Capital Costs Summary

Area	$ x 1000
Facilities	6,349
Mine	37,467
Plant	330,507
Infrastructure	27,928
Owner's Cost	24,991
Contingency & Working Capital	100,762
Total Capital Cost	**528,004**

21.2.1 Direct Costs

• Site Development and Facilities

Total site development and facilities projected cost breakdown as seen in Table 21.2 is as follows:

- Budgetary estimates were used for earthwork required for the buildings. These include the main office building, mill, mine maintenance shop, warehouse, metallurgy laboratory, and safety/first aid building.
- Facilities estimates include office furnishing, HVAC, septic, communications, fire protection, security systems, laboratory equipment, and shop equipment.
- Administration and Processing Plant mobile equipment costs including pickups, ambulance, forklifts, cranes, front end loaders, and flatbed trucks.

Table 21-2: Site Facilities Summary

Area	$ x 1000
Offices & Shops	4,806
Mobile Equipment	862
Total Direct	**5,668**
Indirect	681
Total	**6,349**

• Mining

The following mining production and support equipment is used for the initial capital cost estimate as seen in Table 21.3:

- Production Equipment
    - One CAT6020B 12 m^3 hydraulic excavator
    - Four CAT777G 90 tonne class haul trucks
    - One D8 class dozer
- Support Equipment
    - One D10 Class Dozer
    - One D8 Class Dozer
    - One CAT 834B 450hp Rubber Tire Dozer
    - One 992k Loader
    - One CAT 16m Grader
    - One 5,000-gal Water Truck
    - One 650-gal Fuel/Lube Truck
    - Submersible Pumps

  - Light Plants
  - Pick Up Trucks
- Mine development includes 4 km of haul road construction, site clearing, access road construction, and site leveling

Table 21-3: Mine Capital Summary

Area	$ x 1000
Development	4,730
Production Equipment	22,500
Support Equipment	4,199
Other Mining	638
Total Direct Cost	**32,067**
Indirect	5,400
Total	**37,467**

- Processing Plant

The processing plant capital costs as shown in Table 21.4 includes equipment and supplies needed for:

Feed Preparation; Leaching; Filtration; Li Recovery; Tailings Handling; Acid Plant and Storage; Direct Construction Costs

Table 21-4: Processing Capital Summary

Area	$ x 1000
Feed Preparation	11,568
Leaching	15,478
Filtration	34,723
Tailings Handling	3,589
Lithium Recovery	48,434
Acid Plant	110,586
Construction Directs	61,292
Total Direct Cost	**285,670**
Indirect	44,837
Total	**330,507**

- Infrastructure

The infrastructure estimated cost breakdown as seen in Table 21.5 accounts for:

- Infrastructure costs include electrical and water supply as well as the tailings facility. Estimates are made from the data published by neighboring mine sites.
- Electrical supply costs include the main substation, switch gears, and power distribution to buildings and working areas.
- Water supply costs include pipeline and water tank construction as well as pumps to distribute water to the plant and buildings. The cost of obtaining water rights is excluded from this estimate.
- Tailing facilities cost account for conveyors transporting filtered material and monitoring wells.

Table 21-5: Infrastructure Capital Summary

Area	$ x 1000
Power	15,733
Water Supply	6,150
Tailings	2,800
Total Direct Cost	**24,683**
Indirect	3,245
Total	**27,928**

21.2.2 Indirect Costs

- Other Capital

EPCM, freight, and sales tax were calculated on a percentage basis. Freight costs were assumed at 3% of the direct equipment costs assuming most of the equipment is purchased in North America. EPCM costs are assumed at 8% of total direct costs for each sub-estimate, in accordance with standard industry practice. Nevada has a sales tax of 6.85% on the direct costs of equipment which was added to the overall capital cost.

Sustaining capital is included in the cash flow model and varies between $1.5 to $8.5 million/year. This capital includes mine sustaining capital as well as the cost of maintaining a reclamation bond. Total cost of the reclamation bond based on neighboring projects in Nevada is assumed at $15 million. It is assumed that in the first year 15% of the bond amount will be paid and then 2.5% will be paid annually after. 10% of mine production and support equipment is included under mine sustaining capital. An allowance of 21% above the direct and indirect costs is accounted for as contingency for project changes incurred during construction.

- Owner's Cost

Owner's cost are allowances made for pre-production items including project management, and insurance, technical studies, and further testing, permitting, recruitment and training, spare equipment, and royalty buy-down. The breakdown of these costs can be seen in Table 21.6.

Table 21-6: Owner's Cost Summary

Area	$ x 1000
Project Management & Insurance	6,000
Feasibility Study	5,250
Start-up	6,700
Permitting & Bond	4,750
Royalty Buy-Down	2,000
Freight & Tax	291
Total	**24,991**

21.3 Operating Costs

The operation of the mine and plant are sized for a nominal production rate of 17,000 tpd. The operating costs include estimates of operation and maintenance, labor, supplies, power, water, and fuel. The total operating costs is estimated to be $97.4 million/year or $15.69/t. Cost distribution is summarized in Table 21.7.

Table 21-7: Operating Costs Summary

Area	Average Annual $ x 1000	Mill Feed $/t
Mining	10,625	1.71
Processing	83,113	13.39
G&A	3,649	0.59
Total	**97,386**	**15.69**

Operation costs in Table 21.8 and Figure 21.1 are broken down as follows:

- Mining operating costs are estimated based on individual equipment availability and utilization assumptions, yearly tonnage of ore mined, and the number of pieces of equipment required in accordance with the amount of operating days in a year.

- The plant operating hours are assumed to be 24 hours/day, 7 days/week and 52 weeks/year.
- The laboratory operating hours are expected to have 8 hour shifts, 2 shifts per day, and operate 365 days/year.
- Reagents and supplies like sodium carbonate, calcium hydroxide, flocculants, filters, and antiscalant are estimated from metallurgical test work and author's experience.
- Mine workers and process plant operators include salaried and hourly-rate employees. The number of plant operators required are dependent on the quantities of equipment required and number of personnel required per equipment defined by the manufacturer. Quantity of personnel will also vary based on the amount of shifts/day. A burden factor of 0.4 was added to all labor which includes insurances, sick days, and vacations amongst others.
- G&A costs include subscriptions, travel site insurance, miscellaneous equipment rentals, property maintenance, site safety, environmental services, and sanitary services. Federal and state taxes are not included in the G&A costs but are later included in the cash flow analysis.

Table 21-8: Distribution Summary of Operating Costs

Area	$/yr x 1000	Mill Feed $/t
Mining		
Production Equipment	5,673.46	0.91
Support Equipment	458.15	0.07
Mine Labor	4,493.00	0.72
Total	**10,624.61**	**1.71**
Processing		
Reagents & Consumables	72,356.82	11.66
Power	730.88	0.12
Plant Labor	10,025.00	1.62
Total	**83,112.70**	**13.39**
G&A		
Services & Supplies	1,364.73	0.22
G&A Labor	2,284.00	0.37
Total	**3,648.73**	**0.59**
Total	**97,386.04**	**15.69**

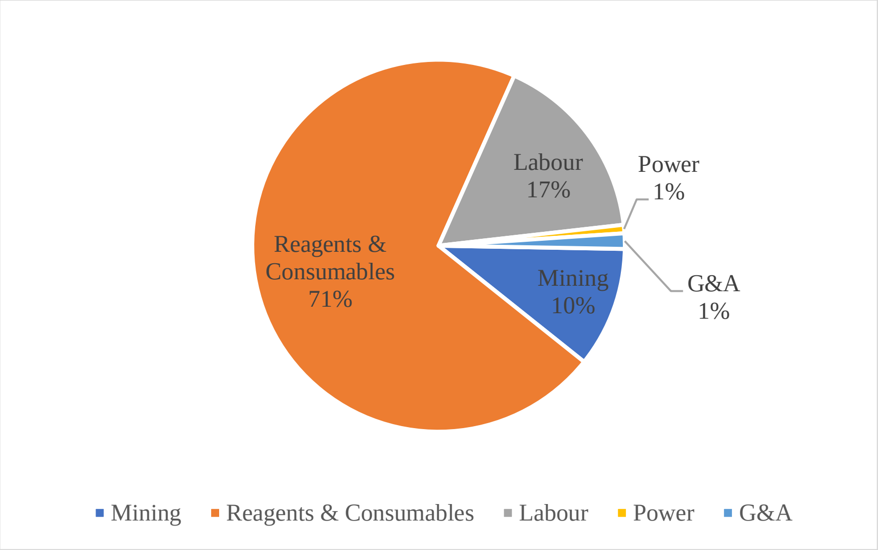


Figure 21-1: Operating Cost Distribution

22 Economic Analysis

22.1 Cautionary Statement

This technical report is preliminary in nature. It includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them; that would enable them to be categorized as Mineral Reserves. There is no certainty that the preliminary economic assessment will be realized.

Mineral Resources are not Mineral Reserves and do not have the demonstrated economic viability.

22.2 Introduction

The PEA-level technical economic model for Noram's Zeus Lithium project is developed using information and estimates from the previous chapters of the report. The model includes the property, state, and federal taxes based on the state of Nevada.

22.3 Model Assumptions

The key inputs to the economic analysis are shown in Table 22.1.

Table 22-1: Key Inputs for Economic Analysis

Category	Units	Value
Mill Feed	Million tonnes	245.4
Payable Li_2CO_3 Produced	Million kg	1,277
Lithium Carbonate Price	USD$/tonne	9,500

The economic analysis for Noram's Zeus Lithium project was conducted at the lithium carbonate price of $9,500/tonne. In the mine production schedule, the lithium grade varies between 1,020-1,154 ppm. Based on the metallurgical test results, recovery is set to 89% of the lithium tonnes processed. The ore contains 268.3 million kg of lithium, of which 238.8 million kg is recovered lithium, and 1,277.4 million kg is recovered lithium carbonate equivalent. At a processing rate of 17,000 tpd, the economic analysis of project mine life is truncated at the end of pit phase 11 at 40 years. On average, 31.9 million kg of lithium carbonate is expected to be produced every year.

For the economic analysis, all the material between 400 to 850 ppm lithium is expected to be placed in the low-grade stockpile, while the material below 400 ppm lithium is considered waste. The mine production schedule results in 245.4 million tonnes averaging 1,093 ppm Li.

All production is given in terms of lithium carbonate equivalent (LCE). The base price for lithium is $9,500/tonne of LCE. This price is assumed based on the variations expected over time. Further market study information is available in Section 19.

22.4 Economics

The total economic analysis breakdown for the Zeus project can be seen in Table 22.2.

Table 22-2: Economic Analysis for Zeus Lithium Project

Category	Units	Value
Gross Revenue	$M	303.4
Operating Cost	$/tonne LCE	3,355.3
Capital Cost	$M	528.0
Property tax	% of Capex	1.05%
State Tax	%	Up to 5%
Federal Tax	% of net income	21%
Discount Rate	%	8%
Pre-Tax NPV (8%)	$M	1,675.1
After-Tax NPV (8%)	$M	1,299.9
Pre-Tax IRR	%	36%
After-Tax IRR	%	31%
Payback Period	years	3.23
Break-even Price (0% IRR)	$/tonne LCE	4,016.6

- A discount rate of 8% is used to report the Net Present Value.
- Depreciation of 15% is applied on the book value of the capital per year.
- The depletion is calculated from the lesser values between 15% of net profit after operating costs and 50% of the net profits after depreciation.
- 1.05% property tax is applied on the book value of the capital.
- Up to 5% state tax is applied on the net profits after depreciation and depletion. The tax rate depends on the percentage ratio of net proceeds to gross yield.
- Federal income tax of 21% is applied on net profit after deductions for depletion, depreciation, state taxes, and local taxes.

- The model is on a 100% equity basis with no debt leveraging.

22.5 Sensitivity Analysis

Using the base case, a sensitivity analysis (See Table 22.3) is conducted on post-tax NPV and IRR using the following variables: lithium price, discount rate, total capital cost, and operating cost. The base price used for Lithium Carbonate is $9,500/tonne LCE based on the market study conducted.

Table 22-3: Sensitivity Assessment

Variation	**50%**	**75%**	**Base Case**	**125%**	**150%**
Lithium Price $/t LCE	$4,750	$7,125	$9,500	$11,875	$14,250
NPV-8%	-$ 79 Million	$ 619 Million	$ 1.299 Billion	$ 1.979 Billion	$ 2.665 Billion
IRR	7%	19%	31%	41%	52%
Discount Rate	4%	6%	8%	10%	12%
NPV	$ 2.552 Billion	$ 1.794 Billion	$ 1.299 Billion	$ 962 Million	$ 724 Million
IRR	31%	31%	31%	31%	31%
Capital Cost	$ 264 Million	$ 396 Million	$ 528 Million	$ 660 Million	$ 792 Million
NPV-8%	$ 1.522 Billion	$ 1.411 Billion	$ 1.299 Billion	$ 1.189 Billion	$ 1.077 Billion
IRR	58%	40%	31%	25%	21%
Operating Cost	$1,677.64	$2,516.46	$3,355.28	$4,194.10	$5,032.92
NPV-8%	$1.757 Billion	$ 1.528 Billion	$ 1.299 Billion	$ 1.071 Billion	$ 843 Million
IRR	38%	34%	31%	27%	23%

Note: NPV (net present value) and IRR (internal rate of return) are both shown after-tax

Table 22-3 indicates NPV and IRR using alternative cases. The cash flow model is most sensitive to varying lithium prices and least sensitive to changes in capital costs. From 50% to 150% of the base lithium prices, the NPV ranges between -$79 million and $2.665 billion with the IRR ranging between 7% and 52%. At 50% of the base capital cost, the NPV is $1.522 billion. Whereas at 150% of the base capital cost, the NPV is $1.077 billion. The NPV is moderately sensitive to different operating costs. The IRR ranged between 38% and 23%, while NPV ranged between $1.757 billion and $843 million. A spider chart of the sensitivity analysis shows the sensitivity of each variable in Figure 22.1.

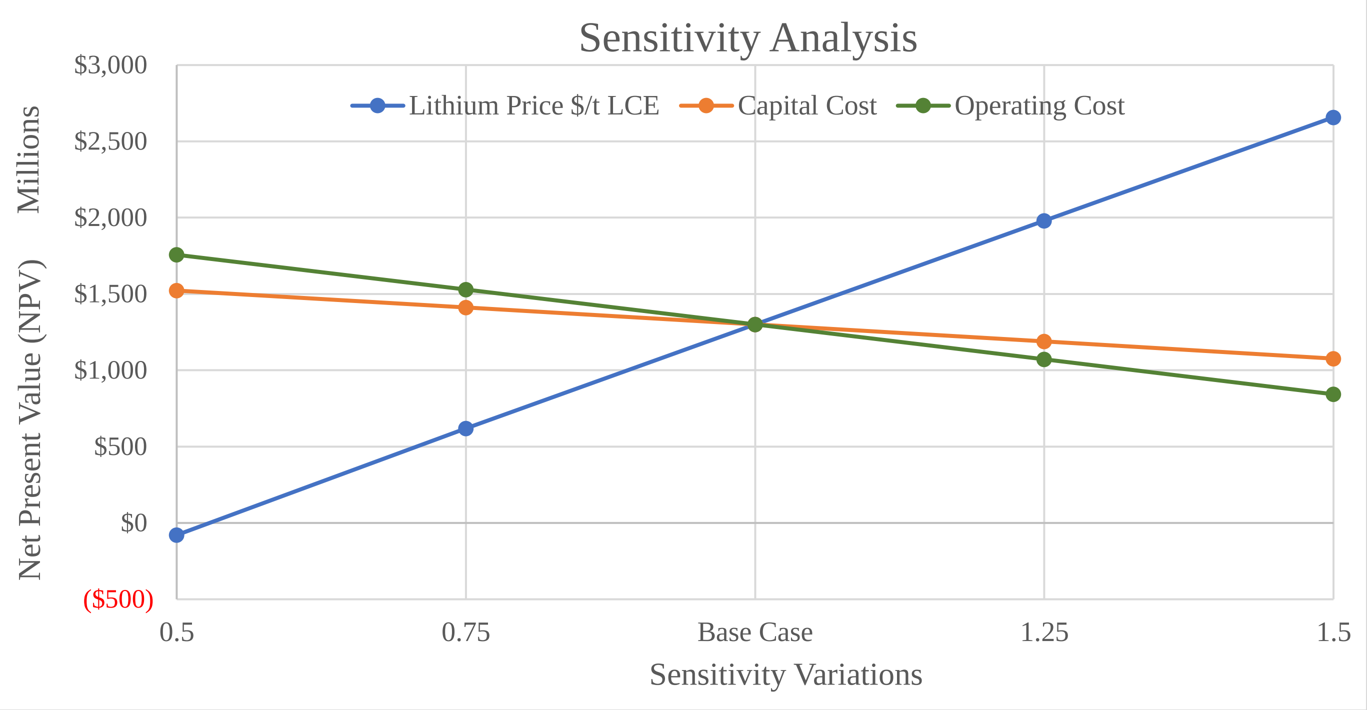


Figure 22-1: Sensitivity Analysis at 8% NPV with Varying Conditions

23 Adjacent Properties

23.1 Lithium in Brine

- Albemarle Corporation's (Albemarle) Silver Peak lithium brine operation is the only producing lithium mine in North America and located within 1 mile (1.6 kilometers) of Noram's claims. Lithium at Albemarle's plant is produced from deep wells that pump brine from the basin beneath the Clayton Valley playa (Kunasz , Ihor A., 1970); (Zampirro , 2005); (Munk & Chamberlain, 2011)Albemarle is currently in process of expanding their operations to double their lithium production and are evaluating recovery of lithium from clays (Albemarle Corporation, 2021)
- Pure Energy Minerals Ltd.'s (Pure Energy) Clayton Valley South Project lies between Albemarle's operation and Noram's land claims. According to Pure Energy's revised Preliminary Economic Assessment (PEA) dated March 23, 2018, an inferred resource of 200,000 metric tonnes of lithium hydroxide monohydrate is expected to be extracted by their operation over a 20-year period (Molnar, et al, 2018). In 2019, Pure Energy formed a partnership with Schlumberger Ltd., and announced plans to develop a lithium extraction technology which will greatly reduce production time (Pure Energy Minerals Ltd, 2021).

23.2 Lithium in Sediments

- East of Pure Energy's claims and adjacent to the west of Noram's holdings, Cypress Development completed a PFS dated August 05, 2020, and amended March 15, 2021. The economic analysis from the PFS reports 1.304 billion tonnes of indicated mineral resources at a grade of 904.7 ppm Li and 236.4 million tonnes of inferred resources at a grade 759.6 ppm Li. They reported a 231.3 million tonnes of probable reserve at 1129 ppm grade to be mined in 11 stages. The current mine plan calls for the first 8 stages to be mined over a 40-year mine life at a production rate of 15,000 tonnes/day.
- Enertopia Corporation which holds a smaller land position that borders both Cypress Development and Noram, produced a maiden resource estimate from the results of 4 drill holes and 1 metallurgical hole on March 30, 2020 (Peek, 2020). At a 400-ppm

cut-off, the indicated mineral resource is 91.7 million tonnes with a grade of 1,121 ppm and an inferred resource of 20.5 million tonnes at a grade of 1,131 ppm Li.

24 Other Relevant Data and Information

Chapter 27 provides a list of documents that were consulted in support of the PEA. No further data or information is necessary, in the opinion of the authors to make the report understanding and not misleading.

25 Interpretation & Conclusions

This report supports the economic viability of the massive lithium bearing claystone deposit. Lithium mineralization has been shown to be amenable to acid leaching, achieving high lithium recovery values during metallurgical testwork. Though the mine life extends well past 40 years, the project has shown itself to contain a very large, flat lying, easily mineable deposit with room for possible expansion both at depth and in peripheral zones.

Mining strip ratios are very low, averaging 0.07:1 (waste: low grade + ore) for the first 11 phases. Mining consists of truck and shovel method, with blasting being unnecessary due to the ore softness. Soft ore leads to significant operating and maintenance cost savings compared to hard rock mining operations.

The 40 year mine plan is structured to process the high grade zones first with stockpiling low-grade ore. Daily processing rate is 17,000 tonnes/day. Total capital costs are $528 million with most costs going to the construction of acid plant and processing facilities. Increasing the processing rate from 17,000 tpd, would have a large benefit to the project NPV at the expense of moderately higher capital costs. Proximity to existing roads and utilities reduced the required infrastructure capital costs. Lithium is produced at a rate of 31,900 tonnes/annum. Total operating costs are $15.69/tonne or $4,016.6/tonne LCE.

Economic calculations use a LCE price of $9,500/tonne leading to an after tax NPV of $1.299 billion and IRR of 31%. Recent prices have been over $20,000/tonne. Sensitivity analysis used a maximum price of $14,250/tonne LCE leading to an after tax NPV of $2.66 billion and IRR of 52%.

Metallurgical testing to date by Noram has been encouraging, as has testing by other nearby companies with similar lithium claystone deposits. The Zeus deposit appears to be in line for development as a major source of lithium for the rapidly evolving electric vehicle and energy storage market.

26 Recommendations (including costs)

ABH recommends the following work to advance the Zeus Lithium project:

- More drilling needs to be undertaken primarily to upgrade large portions of the inferred and indicated resources into the measured classifications
- Obtain permits from the BLM to add more holes, a modification of the current Notice of Intent and a new Plan of Operations permit will be required.
- Further lab work to optimize acid consumption, residence time, temperature, and filtration.
- Lab work to demonstrate the production of battery grade final product.
- Mine plan optimization studies to evaluate the potential of either in-pit waste or tailings storage.
- Geotechnical studies to evaluate the overall required pit, dump, and tailings slopes.
- Prefeasibility level capital and operating cost estimates.
- Optimize plant tonnage to maximize NPV.
- Investigate water recycling technologies to improve water recycle rates.
- Investigate potential to use tailings to produce useful byproduct materials.
- Begin environmental, hydrology and geotechnical studies.
- Based on the economic work to date, ABH recommends moving forward with a Prefeasibility Study at an estimated cost of $400,000.

27 References

Aiken, Stephen R; Gowans, Richard; Hawton, Kevin E; Christopher, Jacobs; Ing, Eur; Pilcher, Bruce; Spooner, Jane; Trueman, David L. (2016). *NI 43-101 Technical Report on the Preliminary Economic Assessment of Lithium hydroxide Production, Separation Rapids Lithium Project, Kenora, Ontario, 262p.*

Albemarle Corporation. (2021, January). *Albemarle Announces Expansion of Nevada Site to Increase Domestic Production of Lithium* . Retrieved from Cision PR Newswire: https://www.prnewswire.com/news-releases/albemarle-announces-expansion-of-nevada-site-to-increase-domestic-production-of-lithium-301202569.html

Albers, John P; Stewart, John H;. (1965). *Preliminary Geologic Map of Esmeralda County, Nevada: U. S. Geol. Sery. Field Studies Map MF-298.*

Albers, John P; Stewart, John H;. (1972). *Geology and Mineral Deposits of Esmeralda County, Nevada: Nevada Bureau of Mines and Geology Bulletin 78, 80p.*

Ausenco Services;. (n.d.). *Technical report on the Feasibility Study for the Sonora Lithium Project, Mexico, Bacanora Minerals Ltd., 261 p.*

Baron, J. (2017). *Summary of Process Bench testing Reports by MDS: Confidential Internal Report.* AuTec Innovative Extractive Solutions.

Barrera, P. (2021, January 7). Lithium Outlook 2021: Analysts Positive on Pricing, More Balanced Market Ahead. *Investing News Network.*

Barrie, C T. (2018). The Inter-relationship between lithium brines and clays in the playa lake environment 1 p. *Resources for Future Generations Conference, Vancouver, B.C.*

Barrie, C. T.; Whittaker, P.;. (2018). Lithium Clay deposits of the Zeus Property, Eastern Clayton Valley, Nevada. *American Geophysical Union Fall Meeting*, (p. Abstract & Poster; 4). Washington, D.C.

Blois, Michael D.S.; Weber, Daniel S.; Sawyer, Valerie;. (2017). *Preliminary Economic Assessment of the Clayton Valley Lithium Project, Esmeralda County, Nevada.* Behalf of Pure Energy Minerals Ltd.

Bradley , Dwight; Munk, LeeAnn; Jochens, Hilary; Hynek, Scott; Labay, Keith;. (2013). *A Preliminary Deposit model for Lithium Brines.* U.S. Geological Survey Open-File 2013-1006 6 p.

Burga, Ernest; Burga, David; Rosko, Mike; King, Mark; Abbey, Darron; Sanford, Tony;. (2017). *Updated Feasibility Study, Reserve Estimation and Lithium Carbonate Production at Cauchari-Olaroz Salars, Jujuy Province, Argenita.* NI 43-101 Technical Report.

Climate Goldfield - Nevada. (2020). Retrieved from U.S. Climate Date: https://www.usclimatedata.com/climate/goldfield/nevada/united-states/usnv0036

Data USA: Goldfield, NV. (2021). Retrieved from Data USA: https://datausa.io/profile/geo/goldfield-nv

Data USA: Silver Peak, NV. (2021). Retrieved from Data USA: https://datausa.io/profile/geo/silver-peak-nv#about

Data USA: Tonopah, NV. (2021). Retrieved from Data USA: https://datausa.io/profile/geo/tonopah-nv

Davis, J. R., & Vine, J. D. (1979). Stratigraphic and Tectonic Setting of the Lithium Brine Field, Clayton valley, Nevada. *RMAG-UGA 1979 Basin and Range Symposium*, (pp. 421-430).

Davis, J. R.;. (1981). *Late Cenozoic Geology of Clayton Valley, Nevada and the Genesis of a Lithium-Enriched Brine.* Ph.D Dissertation, University of Texas, Austin.

Ehsani, R.; Fourie, L.; Hutson, A.; Peldiak, D.; Spiering, R.; Young, J.; Armstrong, K.;. (2018). *Pre-Feasibility Study for the Thacker Pass Project, Humboldt County, Nevada, for Lithium Americas.* Adbisan Worley Parsons Group.

Fact.MR. (2020, July). *Lithium Carbonate Market*. Retrieved from Fact.MR: https://www.factmr.com/report/3791/lithium-carbonate-market

Fastmarkets staff. (2021, May 19). *Fastmarkets*. Retrieved from How the lithium market is moving forward: https://www.fastmarkets.com/article/3989723/how-the-lithium-market-is-moving-forward

Fayram, Todd S.; Lane, Terre A.; Brown, J. J.;. (Effective date August 5, 2020, Amended March 15, 2021). *Prefeasibility Study, Clayton Valley Lithium Project, Esmeralda County, Nevada, Prepared for Cypress Development Corp.*

Fluor Enterprises Inc., Primary Contractor. (2020). *Definitive Feasibility Study of the Rhyolite Ridge Project, Esmeralda County, Nevada, prepared for Ioneer Limited.* Summary Report.

Foy, T. A. (2011). *Quaternary Faluting in Clayton Valley, Nevada: Implications for Distributed Deformation in the Eastern California Shear Zone - Walker Lane.* Master's Thesis, Georgia Institue of Technology.

Garside, M. (2017, November). *Distribution of lithium demand worldwide in 2015 and 2025 by end use*. Retrieved from Statista: https://www.statista.com/statistics/215263/current-and-projected-global-demand-of-lithium-carbonate/

Garside, M. (2017, April). *Total global consumption of lithium from 2008 to 2016*. Retrieved from Statista: https://www.statista.com/statistics/451999/global-total-consumption-of-lithium/

Garside, M. (2019, August). *Forecast cost to produce battery-grade lithium carbonate by feedstock in 2025*. Retrieved from Statista: https://www.statista.com/statistics/1081022/battery-grade-lithium-carbonate-production-cost-by-feedstock/

Garside, M. (2020, August). *Projection of total worldwide lithium demand from 2016 to 2030*. Retrieved from Statista: https://www.statista.com/statistics/452025/projected-total-demand-for-lithium-globally/

Garside, M. (2021, February). *Major countries in worldwide lithium mine production from 2010 to 2020*. Retrieved from Statista: https://www.statista.com/statistics/268789/countries-with-the-largest-production-output-of-lithium/

Hamilton, D. (2011; 2021). *Scoping Study, Water for Exploration and Development within the Clayton Valley Basin: Internal Noram ventures company report.*

Henry, C. (2018). Li-rich clastone in the McDermitt Caldera, NV: Characteristics and possible origin (abstract). *American Geophsyical Union Fall Meeting.* Washington D.C. .

Jolly, J. (2020, October 21). Electric cars 'as cheap to manufacture' as regular models by 2024. *The Guardian*.

Kunasz , Ihor A. (1970). *Geology and Geochemistry of the Lithium Deposit in Clayton Valley, Esmeralda County, Nevada.* Ph.D. Thesis, University of Pennsylvania.

Kunasz, I. A. (1974). Lithium Occurrence in the Brines of Clayton Valley, Esmeralda County, Nevada. *Fourth Symposium on Salt - Northern Ohio Geological Society*.

Lane, T.; Harvey, J. T.; Fayram, T.; Samari, H.; Brown, J. J.;. (2018). *Preliminary Economic Assessment Technical Report Clayton Valley Lithium Projecy, Esmeralda County, Nevada, Prepared for Cypress Development Corp.*

Lithium South Development Corp.; Emerging Markets Consulting, LLC. (2021). *Emerging Markets Report: Lithium Could Run out by 2025.* GlobeNewswire. Retrieved from https://www.globenewswire.com/news-release/2021/04/14/2209842/0/en/Emerging-Markets-Report-Lithium-Could-Run-out-by-2025.html#:~:text=April%2014%2C%202021%2007%3A07,Source%3A%20Lithium%20South%20Development%20Corp.

Loveday, Derek; Turner, William A.;. (2020). *Technical Report, TLC Property, Nye County, Nevada, Prepared for American Lithium Corporation.* NI 43-101.

Molnar, Ron; Weber, Daniel S.; Burga, Ernie; Sawyer, Valerie; Spanjers, Raymond P.; Jaacks, Jeffrey A.;. (2018). *Preliminary Economic Assessment of the Clayton Valley Lithium Project, Esmeralda County, Nevada, prepared for Pure Energy Minerals.* NI 43-101 Technical Report (Rev. 1).

Munk, L., & Chamberlain, C. P. (2011). *Final Technical Report: G10AP00056 - Lithium Brine Resources: A Predictive Exploration Model.* USGS Mineral Resources External Research Program.

Peek, B. C. (2016). *Lithium Exploration Project, Clayton Valley, Esmeralda County, Nevada, prepared for Noram ventures, Inc.* NI 43-101 Technical Report.

Peek, B. C. (2017). *Lithium Exploration Project, Clayton Valley, Esmeralda County, Nevada, prepared for Alba Minerals Ltd.* NI 43-101 Technical Report.

Peek, B. C. (2021). *Updated Lithium Mineral resource Estimate, Clayton Valley, Esmeralday County, Nevada, prepared for Noram ventures Inc.* NI 43-101 Technical Report.

Peek, B. C. (n.d.). *Lithium Claystone Mineral Resource Estimate, Clayton Valley, Nevada prepared for Enertopia Corporation.* NI 43-101 Technical Report.

Peek, B. C., & Barrie, C. T. (2019). *Updated Inferred Mineral Resource Estimate, Zeus Project, Clayton Valley, Nevada, prepared for Noram Ventures Inc.* NI 43-101 Technical Report.

Peek, B., & Spanjers, R. P. (2017). *Lithium Inferred Mineral Resource Estimate, Clayton Valley, Emeralday County, Nevada, prepared for Noram Ventures Inc. and Alba Minerals Ltd.* NI 43-101 Technical Report.

Royal Society of Chemistry. (2021). *Lithium - Element information, properties and uses*. Retrieved from Royal Society of Chemistry: https://www.rsc.org/periodic-table/element/3/lithium#:~:text=The%20most%20important%20use%20of,heart%20pacemakers%2C%20toys%20and%20clocks.

Statista. (2020, December 18). *High Demand for Lithium-Ion Batteries*. Retrieved from Statista: https://www.statista.com/chart/23808/lithium-ion-battery-demand/

Tarry, C., & Martinez-Smith, F. (2020, June 11). *Supply Chain for Lithium and Critical Minerals Is... Critical*. Retrieved from ClearPath: https://clearpath.org/tech-101/supply-chain-for-lithium-and-critical-minerals-is-critical/

Zampirro , D. (2005). Hydrogeology of Clayton Valley Brine Deposits, Esmeralda County, Nevada. *The Professional Geologists, 42*(3), 46-54.

Certificate of Qualified Person

I, B. M. Hilsher of 2978 147A Street, Surrey, British Columbia, do hereby certify that:

1) I am a Vice President of Mineral Processing with ABH Engineering 2630 Croydon Drive, Surrey, British Columbia.
2) I am a graduate of the University of British Columbia in 1999 with a B.A. Sc in Mining and Mineral Processing.
3) I have practiced my profession continuously since 2000. I have had over 21 years of combined experience in process operations, engineering, and design.
4) I am a member of good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
6) This report titled "**NI 43-101** Preliminary Economic Assessment Study of the Zeus Lithium Property, Clayton Valley, Nevada" dated December 08, 2021, is based on a study of the data and literature available on the Zeus Lithium Property. I am responsible for Chapters 4, 5, 13, 17, 18, 19, 20, 21, and 22.
7) I have not visited the property.
8) As of the date of this certificate, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
9) I am independent of the issuer applying all the tests in section 1.5 of National Instrument 43-101.
10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this day of December 08, 2021

Brent Hilsher
Principal Engineer

ABH Engineering
B. M. Hilsher, P.Eng. BASc.

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37465

B Hilscher
Dec 8 2021

Certificate Qualified Person

I, Bradley C. Peek, MSc., CPG do hereby certify that:

1) I am currently employed as a Consulting Geologist at 438 Stagecoach Lane, New Castle, Colorado 81647, USA
2) This certificate applies to the Technical Report titled "NI 43-101 Preliminary Economic Assessment Study of the Zeus Lithium Property, Clayton Valley, Nevada" dated October 30, 2021 (the "Technical Report").
3) I graduated in 1970 from the University of Nebraska with Bachelor of Science degree in Geology and in 1975 from the University of Alaska with Master of Science degree in Geology.
4) I am a member in good standing with the Society of Economic Geologists and the American Institute of Professional Geologists (Certified Professional Geologist #11299).
5) I have continuously practiced my profession for 51 years in the areas of mineral exploration and geology. I have explored for copper, lead, zinc, silver and gold in 10 states of the USA and 8 foreign countries. I have spent most of 2016 through 2021 exploring for lithium deposits in the Clayton Valley, Nevada, and other areas of the USA. I have more than 5 years' experience generating open pit resource estimates for approximately 20 mineral deposits, primarily for gold and base metals using GEMCOM and Rockworks software.
6) I visited the Noram Clayton Valley Lithium property on May 5-7, 2016, July 21-25, 2016, August 3-6, 2016, December 12-22, 2016, January 8-27, 2017, April 22-May 15, 2018, November 17-December 12, 2018, and most of the period between November 1, 2020, and March 8, 2021.
7) I supervised the preparation of the report entitled "NI 43-101 Preliminary Economic Assessment Study of the Zeus Lithium Property, Clayton Valley, Nevada" dated December 08, 2021, including the conclusions reached and the recommendations made, with the exception of those portions indicated under the heading, "Reliance on Other Experts".
8) I am independent of Noram Lithium Corp. applying all the tests in Section 5.1.1, Part 1.5 of NI 43-101.
9) I have had no prior involvement with the property that is the subject of the Technical Report other than that which is stated in this report and previous Noram and Alba NI 43-101 reports.
10) 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, professional affiliation, and past relevant work experience, I fulfill the requirement to be an independent qualified person for the purposes of this NI 43-101 report.

11) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12) 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.

Dated this day of December 08, 2021

Bradley C Peek

Bradley C. Peek
CPG

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Certificate of Qualified Person

I, A. Lee of 907 Beach Avenue, Vancouver, British Columbia, do hereby certify that:

1) I am a Senior Mining with ABH Engineering 2630 Croydon Drive, Surrey, British Columbia.
2) I am a graduate of the University of British Columbia in 2014 with a B.A Sc. in Mining and Mineral Processing.
3) I have practiced my profession continuously since 2014. I have had over 8 years of combined experience in mining operations, planning, engineering, and design.
4) I am a member of good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence, and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
6) This report titled "**NI 43-101** Preliminary Economic Assessment Study of the Zeus Lithium Property, Clayton Valley, Nevada" dated December 08, 2021, is based on a study of the data and literature available on the Zeus Lithium Property. I am responsible for Chapter 16.
7) I have not visited the property.
8) As of the date of this certificate, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
9) I am independent of the issuer applying all the tests in section 1.5 of National Instrument 43-101.
10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this day of December 08, 2021

Arphing Lee
Senior Mining Engineer

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Dec. 8, 2021