NI 43-101 TECHNICAL REPORT, GEOLOGICAL INTRODUCTION AND INITIAL MINERAL RESOURCE ESTIMATIONS FOR THE ENERTOPIA CORP. WEST TONOPAH LITHIUM PROJECT IN ESMERALDA COUNTY, NEVADA, UNITED STATES

Prepared For: Enertopia Corp.
#18, 1873 Spall Road
Kelowna, BC V1Y 4R2 Canada

Prepared by: APEX Geoscience Ltd. [1]
100, 11450-160 ST NW
Edmonton AB T5M 3Y7 Canada

M.Plan International Limited [2]
Suite 601, 90 Eglington Ave. East
Toronto, ON M4P 2Y3 Canada

[1] D. Roy Eccles M.Sc., P. Geol. P. Geo.
[2] John Derbyshire, B.Sc. FSAIMM

Effective Date: 1 November 2023
Signing Date: 1 November 2023

Contents

APEX GEOSCIENCE

Tables

Figures

APEX GEOSCIENCE

1 Summary

1.1 Issuer and Purpose

This technical report has been prepared for Enertopia Corp. (Enertopia), a Canadian-based Nevada Incorporated company. The focus of this technical report is on Enertopia's West Tonopah Lithium Project in the Big Smoky Valley basin of Esmeralda County, southwest Nevada.

Enertopia is exploring the Miocene-aged Siebert Formation sedimentary and volcaniclastic rocks in the Big Smoky Valley basin for their lithium-claystone potential. During 2021-2023, Enertopia conducted 1) 2021 prospecting and a winkie drill program, and 2) 2022 and 2023 sonic drill programs that collectively drilled 22 holes to a total depth of 4,913.0 feet (1,497.5 m). The Enertopia exploration program results demonstrate the Siebert Formation is enriched in lithium and that portions of the West Tonopah Lithium Project have a lithium inventory with reasonable prospects of eventual economic extraction.

Accordingly, the intent and focus of this technical report is to 1) describe the West Tonopah Lithium Project's land position, geological setting, and lithium-claystone mineralisation, 2) prepare initial mineral resource models and estimations, and 3) make recommendations for future work programs. The technical report is prepared in accordance with the Canadian Institute of Mining, Metallurgy, and Petroleum definition standards and best practice guidelines, and the Canadian Securities Administration's Standards for Disclosure of Mineral Projects, National Instrument 43-101.

1.2 Authors and Site Inspection

This technical report has been prepared by Mr. Roy Eccles P. Geol. P. Geo. of APEX Geoscience Ltd. and Mr. John Derbyshire FSAIMM who is a metallurgical consultant of Ontario registered M.Plan International Ltd. The authors are independent of Enertopia, the West Tonopah Lithium Project and property, and are Qualified Persons as defined in National Instrument 43-101.

Mr. Eccles performed a personal site inspection at the West Tonopah Lithium Project on July 25-27, 2023. The inspection enabled the Qualified Person to verify the land position, access, geological setting, 2021-2023 exploration work, and independently validate the lithium-claystone mineralisation that is the subject of this technical report.

1.3 Property Location, Description and Access

The West Tonopah Lithium Project consists of 88 unpatented Lode Mining Claims that are 100% owned by Enertopia and encompass a contiguous land position of 735.79 hectares. The claims were acquired directly from the United States Department of the Interior, Bureau of Land Management.

The lithium-claystone project occurs within the Big Smoky Valley basin of Esmeralda County, NV, approximately 4 miles (6.4 km) west of the Unincorporated Town of Tonopah. The Property can be accessed via the United States Highway Route 6, a well-maintained paved highway that divides the property into southern and northern portions. Additional road access within the property is via a paved two-lane road that extends north from US 6 and numerous trails located throughout the property.

Enertopia has obtained surface authorization rights in the form of a Notice of Intent through the Bureau of Land Management Tonopah Field Office. There are no royalties applicable to the West Tonopah Lode Claims. If mineral extraction were to occur in the future on these claims, the State of Nevada would impose taxes.

1.4 Geology and Mineralisation

Tectonically, a prominent regional structural feature in the Tonopah area is defined by a diffuse zone of normal and strike-slip faults known as the Walker Lane fault system. The northwest-orientated dextral-slip tectonism occurred between 26 and 17 Ma and was accompanied by volcanism; these structures are cut by east-trending fractures that further control the distribution of volcanic centers. Tectonic extension, which began around 17 Ma, formed the Basin and Range Province physiography that is defined by alternating mountain ranges (horsts) and elongated valleys (grabens) attributed to crustal extension and faulting along the western margin of North America.

Valleys and low-lying grabens in the Basin and Range Province are filled with sedimentary rocks eroded from nearby mountains, or accumulated evaporite deposits from playa lakes formed within the topographical lows. The Big Smoky Valley represents a drainage divide landform within the Tonopah Basin that extends north south for approximately 100 miles (160 km) in length and has a watershed area of approximately 4,960 square miles (12,800 km^2).

The Miocene Siebert Formation (17-13 Ma) was derived from volcaniclastic fluvial and lacustrine deposits that include mudstone, siltstone, sandstone, and conglomerate with intercalated pyroclastic flows and tuff. Based on Enertopia's exploration work results, the Qualified Person advocates that an inferred north-south fault zone differentiates the property into two separate stratigraphic packages that may result in either upthrown or downthrown blocks of the Siebert Formation. Additional exploration work and stratigraphic studies are required to validate this hypothesis as other factors could also influence the Siebert Formation depositional environment. For example, 1) the Siebert Formation strata could be co-mingled with erosional and channel fill material along the uplifted valley flanks, 2) the margins of the basin could create depositional environments that favour the emplacement of coarser sedimentary material in comparison to central, deep, basinal mudstone, and/or 3) potential interaction with rock types other than Seibert Formation along valley flanks.

The mineralisation discussed in this technical report belongs to the lithium-claystone deposit type. The Siebert Formation, and particularly the mudstone dominant horizons, at the Western Tonopah Lithium Project are enriched in lithium. Of 754 sonic drill core samples logged and analyzed by Enertopia, the minimum and maximum lithium values range from below the minimum limit of detection (20 ppm Li) to 1,520 ppm Li with an average value of 583.1 ppm Li.

1.5 Historical Exploration and Adjacent Properties

Enertopia discovered lithium-claystone at the West Tonopah Lithium Project in 2021, and hence, there is no specific history of lithium exploration within the boundaries of the Company's project.

Rather, historical exploration references relate to adjacent property information including 1) the Silver Peak and Clayton Valley areas (approximately 45 km southwest of Enertopia's project), and 2) the area directly surrounding Enertopia's lithium-claystone project. Please note the Qualified Person has been unable to verify the adjacent property historical information, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.

The first known interest in lithium in the region occurred during the 1950s, when a potash-focused exploration company reported elevated potassium and lithium within formation water, or brine, in the Clayton Valley area near the unincorporated Community of Silver Peak, NV. Several companies, including the current operator Albemarle Corporation, have historically extracted lithium from Silver Peak Lithium Brine Operation by beneficiation of the brine to higher concentrations of lithium through a series of evaporation ponds.

In the 1970s, lithium-bearing claystone rocks were reported in Clayton Valley area by the United States Geological Survey including claystone bedrock situated adjacent to the Silver Peak lithium-brine operation. The mudstone is defined within the Esmeralda Formation, which is stratigraphically younger (Upper and Middle Miocene) than the Lower to Middle Miocene Siebert Formation.

Presently, the Big Smoky Valley basin west of Tonopah, NV, is being explored by numerous companies that are interested in modern critical metals (predominantly lithium) within lithium-claystone host rocks, and as a result, Enertopia's land position is encompassed by numerous explorers focused on the lithium-claystone deposit type.

1.6 Enertopia Exploration

In 2021, Enertopia geologists collected a grab sample of Siebert Formation sedimentary (mudstone) and volcaniclastic rocks from an outcrop in the northern part of the property. The sample yielded 570 ppm Li, and a follow-up sample had 630 ppm Li. A winkie drillhole, DH-1, was drilled at the discovery outcrop and intersected lithium-claystone at 2 to 14 feet (0.6-4.3 m) below surface that yielded between 690 and 860 ppm Li with an average of 750 ppm Li. The last 4 feet (1.2 m) of hole DH1 had 860 ppm Li.

A second outcrop and winkie drillhole DH-5, located approximately 490 m east-southeast of the discovery outcrop (and winkie drillhole DH-1), yielded lower lithium. The second outcrop samples had 290 ppm and 250 ppm Li. Claystone and siltstone material from DH-5 collared at the second outcrop yielded 230 ppm and 270 ppm over 6 feet and 2.5 feet (1.83 m and 1.07 m), respectively.

During 2022 and 2023, Enertopia conducted 2 separate sonic drill programs at the West Tonopah Lithium Project that collectively drilled 22 holes to a total depth of 4,913.0 feet (1,497.5 m). Siebert Formation core samples collected from these programs yielded lithium values of between 20 ppm and 1,520 ppm Li with an overall average of 583 ppm Li (n=754 samples).

A significant takeaway from Enertopia's drill programs, and subsequent analytical results, is that the Siebert Formation within the West Tonopah Lithium Project has elevated values of lithium. Within the Siebert Formation, lithium is highest within intercalated mudstone with volcaniclastic tuff/ash stratigraphic horizons. In comparison, lower lithium is recorded in the intercalated siltstone/sandstone with volcaniclastic tuff/ash and the ash-tuff-dominant horizons.

Consequently, the west part of the project area consists largely of mudstone with a higher modal abundance of lithium in comparison to the east part of the property which appears to comprise more siltstone and sandstone, and hence, lower lithium. With respect to comparisons between the lithium concentrations in the west and east parts of the West Tonopah Lithium Project property:

- In the west part of the property defined by 16 drillholes, 587 core samples yield between the minimum limit of detection (20 ppm Li) and 1,520 ppm Li with an average of 647 ppm Li. Of the 587 analyses, 519 samples had >300 ppm Li (88%), 382 samples had >500 ppm Li (65%), 250 samples had >700 ppm Li (43%), and 72 samples had >1,000 ppm Li (12%).

- In the east part of the property defined by 6 drillholes, 167 cores samples yield between the minimum limit of detection (20 ppm Li) and 800 ppm Li with an average of 359 ppm Li. Of the 167 analyses, 112 samples had >300 ppm Li (67%), 30 samples had >500 ppm Li (18%), 5 samples had >700 ppm Li (3%), and none of the samples had >1,000 ppm Li.

Based on lithological and lithium concentrations variations, there is evidence that the western and eastern parts of the West Tonopah Lithium Project property represent different stratigraphic sections. The Qualified Person hypothesizes that a north-south-trending fault divides the property into at least two stratigraphically succinct sections – both of which are comprised within the Siebert Formation – but likely represent either upthrown or downthrown blocks with different stratigraphic lithologies and depositional environments. The timing of localized faulting and its effect on the distribution of stratigraphic intervals has not been determined.

Based on Enertopia's exploration results, the Qualified Person concludes that the resource modelling and subsequent mineral resource estimations be conducted on the lithology- and lithium value-differentiated west and east resource areas.

Lastly, the lithium-claystone mineralisation is open at depth because the mineralisation extends beyond the current Enertopia drill depths. Numerous drillholes in 1) the north part of the west resource area (n=5 drillholes), 2) south part of the west and east resource areas (n=5 drillholes), and 3) an isolated hole in the uppermost northeast corner of the property terminated in some of the highest Li-claystone concentrations relative to the downhole geochemical profile of each hole. This demonstrates that the Li-claystone deposit could be targeted at depth as part of ongoing mineral exploration by Enertopia at the West Tonopah Lithium Project.

1.7 Mineral Processing

During 2022 and 2023, Enertopia conducted preliminary metallurgical test work at Base Metallurgical Laboratories Ltd, British Columbia on representative Siebert Formation samples from the West Tonopah Lithium Project.

Leach test work was carried out on unroasted and roasted material, utilising several acids. This early test work indicated that the un-roasted material, which had a head grade sample of 820 ppm Li, achieved higher extractions compared to the roasted material. The sulphuric acid leach appears to be enhanced by both elevated leach temperatures and extended residence times. Under the optimum sulphuric acid leaching conditions, it appears that lithium extractions of more than 80%, and possibly approaching 100%, may be expected of an unroasted sample.

With optimisation and additional test work, Enertopia has the potential to produce lithium extractions that can be further evaluated for battery grade lithium products. It is the Qualified Person's opinion, therefore, that Enertopia's preliminary mineral processing test work demonstrates reasonable prospects for eventual economic extraction.

1.8 Reasonable Prospects of Eventual Economic Extraction

The Qualified Person advocates that the West Tonopah Lithium Project represents a project of merit and has reasonable prospects for eventual economic extraction. This contention is based on 1) geological inferences from Enertopia's exploration work, 2) marketing considerations, and 3) Enertopia's initial, preliminary, leach extraction test work.

1.9 Mineral Resource Estimations

The lithium-claystone resources defined in this technical report are constrained 1) stratigraphically to the Siebert Formation sedimentary and pyroclastic rock strata, and 2) are spatially split into the west and east resource areas divided by a Qualified Person-interpreted north-south trending fault.

Critical steps in the determination of the lithium-claystone resource model and estimations included:

- Definition of the geology and geometry of the Siebert Formation sedimentary and pyroclastic rocks in the west and east resource areas utilizing a 10 m resolution Digital Elevation Model, and geological information from 5 winkie drillholes and 22 sonic drillholes.

- Lithium grade estimation of the Siebert Formation blocks utilizing 766 lithium assays including 12 and 754 assays from the winkie and Sonic drill programs, respectively. To ensure lithium metal grades were not overestimated, composites were capped to specified maximum values of 1,250 ppm and 670 ppm in the west and east resource areas.

- Based on the drillhole spacing and detail within the 3D geological model, a block model with a block size of 66 x 66 x 10 feet (or 20 m by 20 m in the horizontal directions and 3 m in the vertical direction was generated).

- The Ordinary Kriging (OK) technique was used to estimate the lithium at each parent block within the Siebert Formation wireframe. A two-pass method was employed that used two different search ellipses.

- A conceptual pit shell based on theoretical, but reasonable, parameters (such as a lithium recovery of 80%) demonstrated that blocks contained within the conceptual pit satisfy the test of reasonable prospects for eventual economic extraction.

- A nominal density of 1.70 g/cm^3 was applied to convert the Siebert Formation block volumes to tonnage based on analogous Tonopah- and Siebert Formation-based mineral resource studies.

In consideration of Canadian Institute of Mining, Metallurgy, and Petroleum definition standards, the west resource area is classified as indicated and inferred mineral resources and the east resource area is classified as an inferred mineral resource. Based on a cutoff of 400 ppm Li and on blocks contained within the conceptual pit shell, the West Tonopah Lithium Project's mineral resource estimations are summarized as follows:

- The west resource area has an indicated lithium-claystone resource estimate of 44,000 short tons (40,000 metric tonnes) of elemental Li (Table 1.1). The global (total) lithium carbonate equivalent (LCE) for the west indicated resource area, which is calculated by multiplying elemental lithium by a factor of 5.323, is 233,000 short tons (212,000 metric tonnes) LCE.

- The west resource area has an inferred lithium-claystone resource estimate of 87,000 short tons (79,000 metric tonnes) of elemental Li (Table 1.2). This translates to 463,000 short tons (420,000 metric tonnes) LCE.

- The east resource area has a lithium-claystone inferred resource estimate of 5,000 short tons (5,000 metric tonnes) of elemental Li (Table 1.2). This translates to 27,000 short tons (25,000 metric tonnes) LCE.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that most inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Table 1.1 West Tonopah Lithium Project west resource area indicated lithium-claystone resource estimate. The indicated mineral resource is reported for the Siebert Formation as a total (global) volume and tonnage using a lower cutoff of 400 ppm Li (bold font highlighted in grey).

West Resource Area Indicated Mineral Resource Estimate

	Rock Mass		Contained Metal				
			Metric tonnes (t)		Short tons (st)		
Li Cutoff (ppm)	Metric tonnes (t)	Short tons (st)	Li	LCE	Li	LCE	Average Li Grade (ppm)
300	80,428,000	88,657,000	45,000	240,000	50,000	265,000	561
400	**65,322,000**	**72,005,000**	**40,000**	**212,000**	**44,000**	**233,000**	**609**
500	46,476,000	51,231,000	31,000	166,000	34,000	184,000	673
600	30,221,000	33,313,000	22,000	119,000	25,000	131,000	739
800	7,646,000	8,428,000	7,000	35,000	7,000	39,000	859
1000	264,000	291,000	-	1,000	-	2,000	1061

Note 1: Mineral resources are not mineral reserves and do not have demonstrated economic viability.
Note 2: The weights are reported in United States short tons (2,000 lbs or 907.2 kg) and metric tonnes (1,000 kg or 2,204.6 lbs). The tonnage numbers are rounded to the nearest 1,000 unit, and therefore, may not add up.
Note 3: The density used to convert volume to tonnage is 1.70 g/cm^3 for the Siebert Formation and the overburden/pediment.
Note 4: The mineral resource is contained within a conceptual pit shell in which blocks meet the test of reasonable prospects for eventual economic extraction. The estimation assumes a lithium recovery factor of 80%.
Note 5: To describe the resource in terms of the industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li_2CO_3, or Lithium Carbonate Equivalent (LCE).

Table 1.2 West Tonopah Lithium Project west and east resource areas inferred lithium-claystone resource estimate. The inferred mineral resources are reported for the Siebert Formation as a total (global) volume and tonnage using a lower cutoff of 400 ppm Li (bold font highlighted in grey).

A) West Resource Area Inferred Mineral Resource Estimate

Li Cutoff (ppm)	Rock Mass: Metric tonnes (t)	Rock Mass: Short tons (st)	Contained Metal: Metric tonnes (t) Li	Contained Metal: Metric tonnes (t) LCE	Contained Metal: Short tons (st) Li	Contained Metal: Short tons (st) LCE	Average Li Grade (ppm)
300	119,801,000	132,058,000	83,000	440,000	91,000	485,000	690
400	**109,366,000**	**120,556,000**	**79,000**	**420,000**	**87,000**	**463,000**	**722**
500	95,516,000	105,288,000	73,000	387,000	80,000	427,000	762
600	80,725,000	88,985,000	65,000	344,000	71,000	379,000	801
800	37,191,000	40,996,000	34,000	178,000	37,000	197,000	902
1000	4,153,000	4,578,000	4,000	24,000	5,000	26,000	1063

B) East Resource Area Inferred Mineral Resource Estimate

Li Cutoff (ppm)	Rock Mass: Metric tonnes (t)	Rock Mass: Short tons (st)	Contained Metal: Metric tonnes (t) Li	Contained Metal: Metric tonnes (t) LCE	Contained Metal: Short tons (st) Li	Contained Metal: Short tons (st) LCE	Average Li Grade (ppm)
300	18,119,000	19,972,000	8,000	41,000	8,000	45,000	425
400	**9,314,000**	**10,267,000**	**5,000**	**25,000**	**5,000**	**27,000**	**499**
500	3,503,000	3,862,000	2,000	11,000	2,000	12,000	578
600	967,000	1,066,000	1,000	3,000	1,000	4,000	650
800	-	-	-	-	-	-	
1000	-	-	-	-	-	-	

Note 1: Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Note 2: The weights are reported in United States short tons (2,000 lbs or 907.2 kg) and metric tonnes (1,000 kg or 2,204.6 lbs). The tonnage numbers are rounded to the nearest 1,000 unit, and therefore, may not add up.

Note 3: The density used to convert volume to tonnage is 1.70 g/cm^3 for the Siebert Formation and the overburden/pediment.

Note 4: The mineral resource is contained within a conceptual pit shell in which blocks meet the test of reasonable prospects for eventual economic extraction. The estimation assumes a lithium recovery factor of 80%.

Note 5: To describe the resource in terms of the industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li_2CO_3, or Lithium Carbonate Equivalent (LCE).

Collectively, the West Tonopah Lithium Project is predicted to contain 1) an indicated mineral resource in the west resource area of 44,000 short tons (40,000 metric tonnes) of elemental lithium, and 2) combined inferred mineral resources in the west and east resource areas of 92,000 short tons (84,000 metric tonnes) of elemental lithium.

Because the west resource area extends to the western edge of the property, and the mineral resource would be mined using an open pit methodology, a substantial amount of Siebert Formation mineralized claystone remains unclassified within the conceptual pit shell based on a pit slope of 45°. The unclassified rock mass is 32.5 million short tons (29.5 million tonnes), in comparison to the combined mineral resource classified rock mass of 202.8 short tons (184.0 million metric tonnes).

The west and east mineral resource areas are overlain by 71.9 and 11.0 million short tons (65.2 and 10.0 million metric tonnes) of overburden-pediment waste material, respectively.

1.10 Conclusions

The Enertopia 2021-2023 exploration program results demonstrate the Siebert Formation is enriched in lithium and that portions of the West Tonopah Lithium Project have a lithium inventory with reasonable prospects of eventual economic extraction.

It is the Qualified Person's opinion that the exploration work conducted by Enertopia at the West Tonopah Lithium Project is reasonable and within the standard practices for the evaluation of lithium-claystone deposit type projects.

This contention is supported by the Qualified Person's 1) site inspection, which enabled the Qualified Person to understand the projects positive location and access, near-surface target unit geological setting, and independently validate the lithium mineralisation at West Tonopah Lithium Project, 2) positive review of Enertopia sample preparation, security, and analytical protocols, 3) review of the Quality Assurance-Quality Control methodologies employed, and the positive results of the Quality Assurance-Quality Control analytical work, and 4) review of the analytical results in conjunction with the independent and accredited laboratory certificates.

The Enertopia exploration work results provide additional geological and mineralogical information related to a lithium-claystone deposit potential of the Siebert Formation within the Big Smoky Valley near Tonopah, NV. The Qualified Person advocates that the information and data presented in this technical report forms a reasonable database for further exploration, mineral resource modelling, and mineral resource estimations. The data and subsequent interpretations support splitting the mineral resources into western and eastern resource areas based on definitive spatial variations in the Siebert Formation lithologies and the mudstone's lithium concentrations.

Based on a cutoff of 400 ppm Li and a focus on blocks contained within a conceptual pit shell, the West Tonopah Lithium Project is predicted to collectively contain 1) an indicated mineral resource in the west resource area of 44,000 short tons (40,000 metric tonnes) of elemental lithium, and 2) combined inferred mineral resources in the west and east resource areas of 92,000 short tons (84,000 metric tonnes) of elemental lithium.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

The west and east mineral resource areas are overlain by 71.9 and 11.0 million short tons (65.2 and 10.0 million metric tonnes) of overburden-pediment waste material, respectively.

1.11 Risks and Uncertainties

The mineral resource model and estimations are based on Enertopia's 2021-2023 exploration work at the West Tonopah Lithium Project. The lithium-claystone resources are subject to change as the project achieves higher levels of confidence in the geological setting, mineralisation, lithium recovery process development, and the implemented cutoff values. The current specific areas of uncertainty with the resource model include the inferred (speculated) fault zone that divides the west and resource areas, detailed stratigraphic modelling of specific Siebert Formation rock units, and the density used to calculate tonnage. The Qualified Person is not aware of any other significant material risks to the mineral resources other than the risks that are inherent to mineral exploration and development in general.

With respect to mineral processing, there is no guarantee that the Company can successfully extract lithium from claystone in a commercial capacity. The extraction technology is still at the developmental stage and while the Company has conducted preliminary indicative leach test work, the Qualified Person notes that no optimisation, variability, or reproducibility work has been undertaken at this stage of the study. This work is required prior to any solution impurity purification work. As the technology advances, there is the risk that the scalability of any initial mineral processing bench-scale and/or demonstration pilot test work may not translate to a full-scale commercial operation.

1.12 Recommendations

Enertopia's early-stage West Tonopah Lithium Project is a project of merit, and a two-phased program is recommended that continues to assess and advance the lithium-claystone potential at the property. The total estimated cost of the Phase 1 and Phase 2 exploration work, with a 10% contingency, is USD$2,777,500 (Table 1.3).

Phase 1 work to advance the subsurface stratigraphic and structural model of the Siebert Formation includes 1) relogging the 2022-2023 drill cores by a sedimentologist and a multi-sensor core logger, 2) create a detailed stratigraphic and structural model, 3) infill and exploratory drilling, and 4) conduct ongoing mineral processing test work. The total estimated cost of the recommended Phase 1 exploration work, with a 10% contingency, is USD$1,122,000.

The Phase 2 work is subject to the positive results of the Phase 1 work. Phase 2 work recommendations include 1) refinement of the lithium-claystone recovery process flowsheet toward the development and construction of a demonstration pilot plant, 2) implement studies in consideration of modifying factors, and 3) to conduct mineral resource modelling and estimations that include economic valuations. The total estimated cost of the recommended Phase 2 work, with a 10% contingency, is USD$1,655,500.

Table 1.3 Work recommendations.

Phase	Description	Cost estimate (USD$)	Sub-Total (USD$)	Cost estimate (CDN$) [1]	Sub-Total (CDN$) [1]
Phase 1	Relog the existing drill core using 1) a sedimentologist, and 2) a non-destructive multi-sensor core logger to advance the subsurface geological model and the confidence level and understanding of lithium-claystone enrichment at the project. This work could lead to the implementation of ground geophysical surveys to better delineate subsurface stratigraphy and structures.	$45,000		$61,200	
	In conjunction with the relogging exercise, conduct infill and exploratory drilling to advance and increase the confidence level of the stratigraphic setting and explore the potential to expand the mineral resources at the project.	$850,000		$1,156,000	
	Ongoing mineral processing test work to advance the beneficiation test work and to assess the potential to generate quality battery grade products.	$125,000	$1,020,000	$170,000	$1,387,200
Phase 2	Refinement of the lithium-claystone recovery process flowsheet toward the development and construction of a demonstration pilot plant.	$1,250,000		$1,700,000	
	Implement modifying factor studies including community consultation, environmental, marketing, and socio-economic factors.	$55,000		$74,800	
	Resource estimation updates (if necessary) and Preliminary Economic Assessment technical reporting.	$200,000	$1,505,000	$272,000	$2,046,800
	Sub-total		$2,525,000		$3,434,000
	10% contingency		$252,500		$343,400
	Total		**$2,777,500**		**$3,777,400**

[1] Currency conversion based on 1 USD equals 1.36 CDN (September 11, 2023).

2 Introduction

2.1 Issuer and Purpose

This technical report has been prepared for Enertopia Corp. (Enertopia), a Canadian-based Nevada Incorporated company. The focus of this technical report is on Enertopia's West Tonopah Lithium Project in southwest Nevada. The project consists of 88 contiguous Lode Mining Claims that are 100% owned by Enertopia and encompass 735.79 ha. The claims were acquired directly from the United States Department of the Interior, Bureau of Land Management (BLM).

The West Tonopah Lithium Project is situated within the Big Smoky Valley basin of Esmeralda County, NV approximately 4 miles (6.4 km) west of the Unincorporated Town of Tonopah, NV (Figure 2.1). Enertopia is exploring the Lower to Middle Miocene Siebert Formation sedimentary and volcaniclastic rocks for their lithium-claystone potential. During 2021-2023, Enertopia conducted 1) prospecting and a winkie drill program that defined a discovery outcrop with 570 and 620 ppm lithium (Li) from exposed Siebert Formation bedrock exposures, and 2) two separate Sonic drill programs that collectively drilled 22 holes to a total depth of 4,913.0 feet (1,497.5 m). Siebert Formation core samples yielded lithium values of between 20 and 1,520 ppm Li with an overall average of 583 ppm Li.

Accordingly, the intent and focus of this technical report is to 1) describe the West Tonopah Lithium Project's land position, geological setting, and lithium-claystone mineralisation, 2) prepare initial mineral resource models and estimations, and 3) make recommendations for future work programs.

The technical report was prepared in accordance with Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) definition standards and best practice guidelines for mineral resources and reserves (CIM, 2014, 2019) and the disclosure rule National Instrument 43-101 (NI 43-101).

2.2 Authors and Site Inspection

This technical report was prepared by Mr. Roy Eccles M.Sc. P. Geol. P. Geo. of APEX Geoscience Ltd. (APEX) in Edmonton, AB, and Mr. John Derbyshire FSAIMM of M.Plan International Limited in Toronto, ON. The authors are independent of Enertopia, the West Tonopah Lithium Project, and are Qualified Persons (QPs) as defined in NI 43-101.

Mr. Eccles takes QP responsibility for Sections 1.1 to 1.6, 1.8 to 1.12, 2 to 12, 14, 23, 24, 25.1, 25.3, 25.4, 26, and 27 of this technical report. Mr. Eccles is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and Professional Engineers and Geologists of Newfoundland and Labrador (PEGNL) and has worked as a geologist for more than 35 years since his graduation from university.

Figure 2.1. General location of Enertopia Corp.'s West Tonopah Lithium Project.

Mr. Eccles has been involved in all aspects of global mineral exploration and mineral resource estimations for metallic, industrial, and specialty mineral projects and deposits. Mr. Eccles technical experience with respect to lithium includes exploration and resource estimations in the Western Canada Sedimentary Basin, southeastern and southwestern United States, central Europe, and other international destinations.

Mr. Eccles performed a personal site inspection at the West Tonopah Lithium Project on July 25-27, 2023. The inspection enabled the QP to verify the West Tonopah property land position, access, geological setting, 2021-2023 exploration work, and independently validate the lithium-claystone mineralisation that is the subject of this technical report.

Mr. Derbyshire takes QP responsibility for the mineral processing test work conducted on representative claystone collected from the West Tonopah Lithium Project (Sections 1.7, 13, and 25.2). Mr. Derbyshire is a Fellow of the Southern African Institute of Mining and Metallurgy (SAIMM) and has worked as a managing or consulting metallurgist for more than 42 years since his graduation from university. Mr. Derbyshire has international process engineering, metallurgy, metallurgical test work, and flow sheet development experience with various critical commodities that include rare earth elements, lithium, graphite, vanadium, etc. Mr. Derbyshire has operational experience with sulphuric acid plants, acid leach operations and lithium extraction processes such as ion exchange and solvent extraction.

2.3 Sources of Information

The QP, in writing this technical report, used sources of information as listed in Section 27, References.

With respect to the Lode Claims documented in Section 4, the legal information regarding mineral claims has not been independently verified; however, the QP has reviewed the West Tonopah Lithium Project property claim status at the USA Department of the Interior, Bureau of Land Management, Mining Claims – Serial Registration Page at: BLM Reporting Application, and found the claims active and in good standing at the Effective Date of this technical report.

The QP acquired, reviewed, and validated publicly available information and data, and exploration information and data as supplied by the Issuer, Enertopia. Publicly available information and data included miscellaneous reports, government data, and scientific papers (e.g., Meinzer, 1917; Steward and Carlson, 1976; Silberman et al., 1978; Bonham and Garside, 1979a,b; Ekren and Byers, 1984; Davis, 1986; John et al., 1989; Asher-Bolinder, 1991; Whitebread and John, 1992; Thompson, 1999; Wesnousky, 2005; Munck et al., 2011; Carlson et al., 2013; Hofstra et al., 2013; Araoka et al., 2014; Nevada Bureau of Mines and Geology, 2015, 2018; Price et al., 2000; Castor and Henry, 2020; Coffey et al., 2021; and Mindat.org, 2023). The QP also reviewed and utilized information from Enertopia's publicly available News Releases (e.g., Enertopia Corp., 2021, 2022, 2023a,b).

Enertopia provided electronic, compiled rock and drill core sample location and analytical data along with the laboratory's Certificate of Analysis. The rock and core samples were analyzed by ALS Limited at ALS Vancouver, BC with sample preparation completed at ALS Global in Reno, NV (collectively, ALS). ALS is independent of Enertopia and represents an established, commercial, Canadian lab accredited to ISO/IEC 17025:2017 (general requirements for the competence of testing and calibration laboratories). The lithium extraction test work was completed at Base Metallurgical Laboratories Ltd. (Base Met Labs) in Kamloops, BC. by professional engineers that specialize in metallurgical test programs, flotation, elutriation, beneficiation, solid mineral separation, and mineral process optimization and comminution.

The QP has reviewed all government and miscellaneous reports, and Issuer-supplied analytical data. The QP has deemed that the information and data are, to the best of his knowledge, valid and reasonable contributions to this technical report. The QP therefore takes ownership of the ideas and values as presented in this technical report.

2.4 Units of Measure

With respect to units of measure, unless otherwise stated, this technical report uses:

- Abbreviated shorthand consistent with the International System of Units (International Bureau of Weights and Measures, 2006).
- 'Bulk' weight is presented in both United States short tons (tons; 2,000 lbs or 907.2 kg) and metric tonnes (tonnes; 1,000 kg or 2,204.6 lbs.).
- Geographic coordinates are projected in the Universal Transverse Mercator (UTM) system relative to Zone 11 of the North American Datum (NAD) 1983.
- Currency in USA (USD$) and Canadian (CDN$) dollars unless otherwise specified.

3 Reliance of Other Experts

The QP is not qualified to provide an opinion or comment on issues related to legal agreements, mineral titles, royalties, permitting and environmental matters. Accordingly, the QP disclaims portions of Section 4, Property Description and Location.

With respect to Enertopia's exploration approvals, the QP is entirely reliant on information provided from Enertopia management on August 1, 2023. More specifically, the QP was provided a copy of, the "*Bureau of Land Management Decision Notice NVN-101244*" (dated February 20, 2023).

Information related to the BLM Decision including the distinction as a Notice that involves exploration work spanning a surface disturbance area of 4.68 acres, and determination of required financial guarantee amount is discussed in Section 4.4, Permitting and Surface Rights.

4 Property Description and Location

4.1 Description and Location

During 2021, Enertopia applied for, and was granted by the United States Department of the Interior, Bureau of Land Management (BLM), a total of 88 unpatented Lode Claims that encompass a contiguous area of 735.79 ha in west-central Nevada (Table 4.1; Figure 4.1). According to Federal law (30 USC 612), the purpose of an unpatented mining claim is for mineral prospecting, mining, or processing operations, and uses reasonably related thereto, which would include erecting and maintaining the necessary structures, workings, machinery, and security measures. The Lode Claims are owned 100% by Enertopia.

The West Tonopah Lithium Project property is situated within the Big Smoky Valley of Esmeralda County, NV near its northeastern border with Nye County. Enertopia's West Tonopah Property is approximately 4 miles (6.4 km) west of the Unincorporated Town of Tonopah, NV (Figure 2.1). Tonopah is the county seat of, Nye County, Nevada, US and is located approximately half way between the cities of Las Vegas and Reno, NV, along United States Highway Route 95 (US 95). The centroid of the Property in Lambert Conformal projection is at Latitude 38.092867028 and Longitude -117.305668157, or in Universal Transverse Mercator projection at 473197 m Easting and 4216163 m Northing, Zone 11, North America Datum 83 (UTM, Z11, NAD83).

4.2 Maintenance

The maximum size of a lode claim is 1,500 feet (457.20 m) in length and 600 feet (182.88 m) in width (900,00 square feet or 8.36 hectares). The Lode Claims are located on BLM lands and are subject to the permitting rules and regulations imposed by the BLM. The 1872 Federal law requires a Lode Claim for "veins or lodes of quartz or other rock in place" (30 USC 26; 43 CFR 3841.1). A lode location gives the rights to any lodes, veins, or other minerals whose apex (or top) lies within the area of the claim (30 USC 26).

Current Federal law (30 USC 28f; 43 CFR 3833.1-5) requires an annual claim maintenance fee of USD$165 per claim be paid at the State Office of the Bureau of Land Management on or before September 1. Hence Enertopia's Lode Claims are:

- Valid only for a period of one-year from September 1 to August 31, which is equivalent to the US Federal fiscal year.

- Require an annual claim maintenance fee (or assessment work) of USD$14,520 to maintain all 88 Lode Claims in good standing (Table 4.1; subject to adjustments and assessment work as described in the text below).

During the initial assessment year (the year of location), the claim maintenance fee must be paid at the time the notice of location is filed with the BLM. Failure to pay the claim maintenance fee will void the claim.

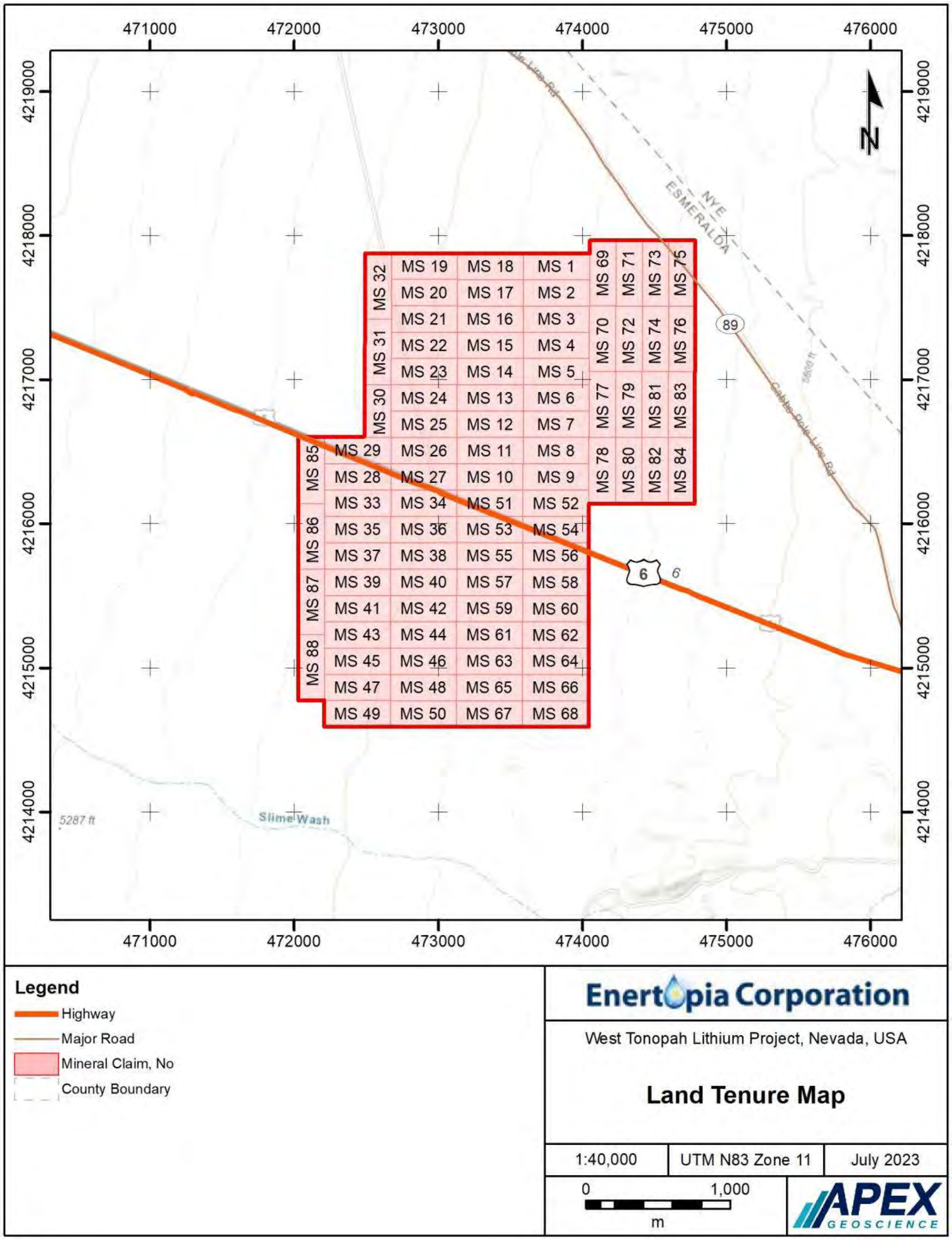
Table 4.1 Lode Claim descriptions.

Lode claim name	BLM File No.	Claimant (% ownership)	Disposition status	Disposition date	Required mainten-ance fee	Payment due (or expiry) date	Total area (ha)
MS 1	NV 105296951	Enertopia (100%)	Active	3/30/2022	$ 165.00	9/1/2024	8.36
MS 2	NV 105296952	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 3	NV 105296953	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 4	NV 105296954	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 5	NV 105296955	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 6	NV 105296956	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 7	NV 105296957	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 8	NV 105296958	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 9	NV 105296959	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 10	NV 105296960	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 11	NV 105296961	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 12	NV 105296962	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 13	NV 105296963	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 14	NV 105296964	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 15	NV 105296965	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 16	NV 105296966	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 17	NV 105296967	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 18	NV 105296968	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 19	NV 105296969	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 20	NV 105296970	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 21	NV 105296970	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 22	NV 105296972	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 23	NV 105296973	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 24	NV 105296974	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 25	NV 105296975	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 26	NV 105296976	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 27	NV 105296977	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 28	NV 105296978	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 29	NV 105296979	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 30	NV 105296980	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 31	NV 105296981	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 32	NV 105296982	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 33	NV 105296983	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 34	NV 105296984	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 35	NV 105296985	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 36	NV 105296986	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 37	NV 105296987	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 38	NV 105296988	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 39	NV 105296989	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 40	NV 105296990	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 41	NV 105296991	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 42	NV 105296992	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 43	NV 105296993	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 44	NV 105296994	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36

Table 4.1, Continued.

Lode claim name	BLM File No.	Claimant (% ownership)	Disposition status	Disposition date	Required mainten-ance fee	Payment due (or expiry) date	Total area (ha)
MS 45	NV 105296995	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 46	NV 105296996	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 47	NV 105296997	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 48	NV 105296998	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 49	NV 105296999	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 50	NV 105297000	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 51	NV 105297001	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 52	NV 105297002	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 53	NV 105297003	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 54	NV 105297004	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 55	NV 105297005	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 56	NV 105297006	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 57	NV 105297007	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 58	NV 105297008	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 59	NV 105297009	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 60	NV 105297010	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 61	NV 105297011	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 62	NV 105297012	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 63	NV 105297013	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 64	NV 105297014	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 65	NV 105297015	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 66	NV 105297016	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 67	NV 105297017	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 68	NV 105297018	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 69	NV 105297019	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 70	NV 105297020	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 71	NV 105297021	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 72	NV 105297022	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 73	NV 105297023	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
Ms 74	NV 105297024	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 75	NV 105297025	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 76	NV 105297026	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 77	NV 105297027	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 78	NV 105297028	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 79	NV 105297029	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 80	NV 105297031	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 81	NV 105297032	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 82	NV 105297033	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 83	NV 105297034	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 84	NV 105297035	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 85	NV 105297036	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 86	NV 105297037	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 87	NV 105297038	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
MS 88	NV 105297039	Enertopia (100%)	Active	3/31/2022	$ 165.00	9/1/2024	8.36
				Total sum (all 88 Lode Claims)	**$14,520.00**		**735.68**

Figure 4.1 Enertopia's Lode Claims spatial configuration.



The QP has reviewed the West Tonopah Lithium Project property claim status at the BLM, Mining Claims – Serial Registration Page at: BLM Reporting Application, and found the Enertopia registered claims are active and in good standing.

The claim maintenance fee is required to be adjusted every 5 years after the date of enactment (1993) by the Secretary of the Interior to reflect the Consumer Price Index published by the Bureau of Labor Statistics. The Secretary of the Interior may also make the adjustment more frequently if deemed reasonable to do so. However, all claim owners must be notified by the Secretary of the Interior no later than July 1 of the year of the adjustment (30 USC 28j).

Nevada law (NRS 517.230) requires that on or before November 1 of each year that the annual assessment work is not required, the claimant, or someone in their behalf, must make and have recorded with the County Recorder a notice of "intent to hold". The notice of intent to hold is proof that the claimant intends to hold the claim from 12 p.m. on September 1 of the year before the affidavit was made and recorded until 11:59 a.m. on September 1 of the year the affidavit was made and recorded.

Federal mining law (30 USC 28; 43 CFR 3851.1) requires that labor or improvement worth at least USD$165 be done annually for each unpatented lode or placer claim in which the claim owner has been exempted from paying the claim maintenance fee. If several claims are held as a group and are contiguous, the labor or improvement can be done on any of the claims or outside the group if the work benefits all the claims in the group; the total work must be equivalent to a least $155 for each claim. A contiguous group of claims are claims held by the same locator that lie side by side or end to end with common boundaries or overlap. Claims touching only at their corners are not contiguous.

Any labor or improvement that tends to benefit the claim or group of claims and discloses or develops valuable minerals will qualify as assessment work. Beneficial work could include the cost of sinking shafts, pits, or trenches; running adits or drifts; mining ore; drilling costs; purchase and installation of necessary machinery or buildings; dewatering workings; building roads; and geological, geochemical, and geophysical work conducted by qualified experts.

The assessment year starts at noon on September 1, and labor or improvements worth at least USD$165 must be made for each claim by noon on the following September 1 (43 CFR 3851.1a, b). Assessment work is not required in the assessment year in which the claim is located (43 CFR 3851.1b); however, the BLM requires a Notice of Intent to hold the claim if a small miner fee waiver is filed for the next assessment year. Annual assessment work is not cumulative and excess work done in one assessment year cannot be credited against the next year's requirement.

Nevada law (NRS 517.230) requires that an affidavit ("proof of labor") attesting to completion of the work be filed with the County Recorder on or before November 1 following the end of the assessment year. Federal regulations (43 USC 1744) require that a copy of the recorded affidavit of annual assessment work for a lode or placer claim or a notice of intent to hold a mill site or tunnel right be filed at the State Office of the Bureau of Land Management on or before December 30 of each year (starting the calendar year following the calendar year in which the claim was located).

Federal law (30 USC 29-38, 42; 43 USC 661) provides for the patenting of a mining claim. The patenting process is complicated and often expensive, and it is by no means certain that a patent will be issued. To patent a claim, it is usually necessary for it to be part of an operating, profitable mine. A mill site can also be patented (30 USC 42a). Once the claim is patented, the claimant has clear and absolute title to the claim, and neither the claim maintenance fee nor the annual expenditure for labor or improvement and affidavit attesting to this work is required. An unpatented claim is not subject to property taxes (NRS 361), but a patented claim is entered on the tax roll (NRS 362.010-362.240). Note: Beginning in 1994, United States Congress has annually imposed a moratorium on new patent applications.

4.3 Royalties and Agreements

There are no royalties applicable to the West Tonopah Lode Claims. However, if mineral extraction were to occur in the future on these claims, the State of Nevada imposes taxes. Nevada rate of tax operates on a sliding scale tax of between 2% and 5% of profits. The tax rate on the earnings from each extractive operation depends on the remaining amount after deducting expenses (net proceeds) from the total earnings (gross proceeds). The tax rates vary depending on the percentage of net proceeds to gross proceeds, as shown in Table 4.2.

If the total tax rate, including all applicable rates imposed by the State of Nevada, exceeds 2% for the property where the operation is located, the minimum tax rate for the operation will be set at the higher of the two tax rates: the total combined tax rate or the standard tax rate. If the net proceeds of an operation exceed USD$4,000,000 in a calendar year, the tax rate is set at 5%.

Table 4.2. Nevada Rate of Tax upon Net Proceeds.

Net proceeds as percentage of gross proceeds (%)	Rate of tax as percentage of net proceeds (%)
Less than 10	2
10 or more but less than 18	2.5
18 or more but less than 26	3
26 or more but less than 34	3.5
34 or more but less than 42	4
42 or more but less than 50	4.5
50 or more	5

4.4 Permitting and Surface Rights

An unpatented mining claim is a parcel of land for which the claimant has asserted a right of possession and the right to develop and extract a discovered, valuable, mineral deposit. This right does not include exclusive surface rights (see Public Law 84-167 and see the text below with respect to Enertopia's surface authorization rights).

In contrast to an unpatented mining claim, a patented mining claim is a claim where the Federal Government has passed its title of ownership to the claimant, giving him or her exclusive title to the locatable minerals and in most cases, the surface, and all resources. Hence, a patented mining claim is considered private property. Patented mining claims usually have surface rights, but not always. A patent that has separate surface and sub-surface rights would be considered a split estate.

The surface management regulations 43 Code of Federal Regulations subpart 3809 (43 CFR 3809) incorporates 3 levels of operation:

1. Casual use by operator who does negligible disturbance. No notice or plan required. Need not contact BLM. Does not include use of mechanized earth-moving equipment or explosives.

2. Notice - includes exploration activities that propose disturbance of 5 acres or less. A written notice, including a reclamation cost estimate, must be submitted to the appropriate BLM Field Office 15 days prior to starting operations. A sufficient financial guaranteed amount must be approved by and submitted to the BLM prior to the commencement of operations. Effective for 2 years. May be extended for additional 2 years with the submittal of a revised/updated reclamation cost estimate.

3. Plan of Operations - includes all mining and processing activities and exploration exceeding 5 acres of disturbance. BLM approves plan.

Enertopia has obtained surface authorization rights in the form of a Notice of Intent through the BLM Tonopah Field Office (Battle Mountain District Office) in accordance with the regulations outlined in 43 CFR 3809. The Notice NVN-101244 (February 20, 2023) determined that Enertopia's financial guarantee reclamation cost estimate of USD$13,990 was sufficient and that the operations as proposed do not cause unnecessary or undue degradation of public lands and resources.

The authorization does not grant Enertopia exclusive rights to the surface resources of the claims, but rather grants the right to use the surface for the purposes of exploration, mining, and mineral processing activities. The reclamation cost estimate must be developed as if the BLM were to contract with a third-party to reclaim the operations according to the reclamation plan. In this instance, reclamation conditions of the Notice involve re-contouring drill pads and roads and applying salt desert shrub seed mix at a specified rate per acre of disturbed ground.

The term of Notice NVN-101244 remains in effect for 2-years from the date of the decision (February 20, 2023), unless Enertopia notifies the BLM Office that operations have ceased, and reclamation is completed. If Enertopia wishes to conduct operations for another 2-years after the expiration date of the Notice, then the Company must notify the BLM office in writing on or before the expiration date as required by 43 CFR 3809.333.

Other State and Federal permits associated with an early exploration stage project include:

- In accordance with Nevada water law, the exploration company/individual must obtain a permit or waiver for the temporary use of water for mineral exploration prior to activities such as drilling. The acquisition of a water permit involves an application to the Nevada Division of Water Resources, which undergoes evaluation based on factors such as water availability, potential conflicts with existing rights, public interest, and impact on domestic wells (http://water.nv.gov).

- Plugging or exploration holes must usually begin within 30 days after data has been collected from the hole.

- Any mineral development or exploration activities conducted under the General Mining law of 1872 on National Forest System lands must be approved pursuant to the Surface management Regulations (36 CFR 228). An operator must provide information describing the proposed activity to the District Ranger (i.e., the approved Exploration Plan of Operations and bond).

- Road Use Permits and other Special Use Permits may be required for access and utilities.

If the Western Tonopah Lithium Project ever advances to the production stage, an updated Plan of Operations with all the construction and mining details needs to be submitted, and approved, by the BLM. A list of State and Federal permits and actions required during planning, development, construction, and before operation of Nevada mines and mills can take place has been summarized by the Nevada Bureau of Mines and Geology (2018).

4.5 Environmental Liabilities

With respect to environmental liabilities, the Company is subject to compliance with operating, reclamation, and monitoring measures outlined in the BLM's Notice NVN-101244, and the general and specific performance standards outlined in 43 CFR subpart 3809.420.

Of note, Crescent Dunes Solar Energy Plant, which is being developed by SolarReserve, is directly north of the West Tonopah Lithium Project on 1,600 acres of land leased from the BLM. The project employs 10,347 tracking mirrors (Heliostats) that direct continuous sunlight to a salt receiver, which in turn directs molten salt to a heat exchanger to produce superheated steam, drive a steam turbine, and generate electricity. The Energy Plant generates more than 500,000 megawatt hours of electricity per year powering over 75,000 homes. While the project poses no significant risk to Enertopia's land position it is worth noting 1) the positive mindset of the State government and the BLM in renewable energy, and 2) that the 1,600-acre site land position is tied up indefinitely.

4.6 Significant Factors

Enertopia's West Tonopah Lithium Project is an early-stage exploration project. To the best of the QPs knowledge, there are no other significant factors or risks, that may affect access, title, or the right or ability to perform exploration work at the Western Tonopah Lithium Project property.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

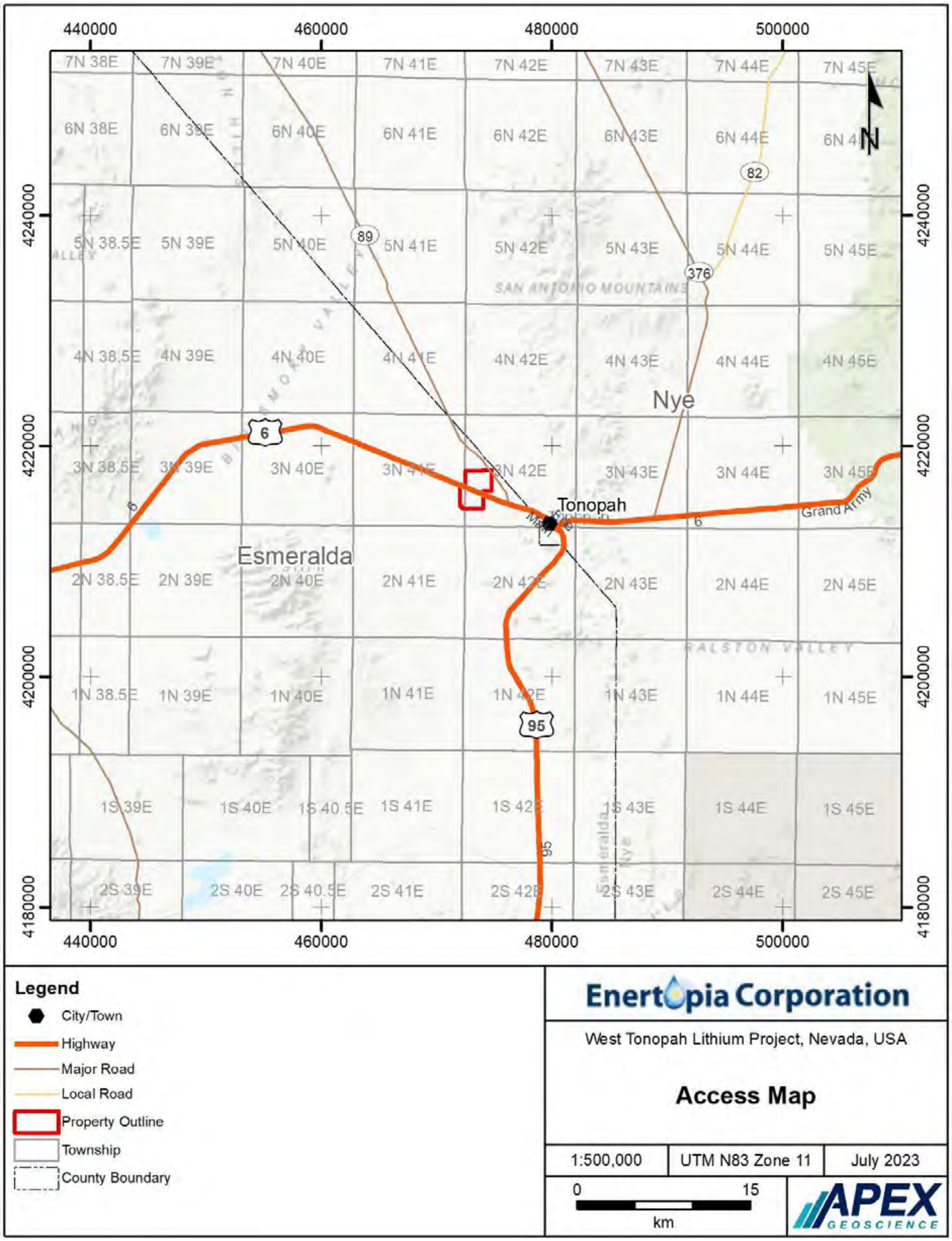
The property is situated in Nevada, USA, roughly 4 miles (6.4 km) west of the Unincorporated Town of Tonopah, NV. The Property can be accessed via the United States Highway Route 6 (US 6 or the Veterans Memorial Hwy), a well-maintained paved highway running directly through, and essentially dissecting, the property into southern and northern portions (Figure 5.1).

Off US 6, the southern portion of the property was easily accessed by numerous trails that divide the property into a series of north-south and east-west sections. The northern portion of the property was accessed by a paved two-lane road that extends from US 6 in a north-northeast direction to its intersection with Highway 89, and northwestward, to Pathfinder Development Corporation's Tonopah Hall Mine. Numerous trails were also observed in the northern portion of the property.

The Western Tonopah Lithium Project is centrally positioned between Reno and Las Vegas, and hence, in proximity to two significant population centers. Both cities serve as major transportation hubs, providing various transportation options, including international airports and major highway systems, which permit easy travel access to and from the property.

Enertopia's local storage space is proximal to the northern end of the property at Pathfinder Development Corporation's Hall Mine administrative offices where the Company stores equipment and archives its 2022 and 2023 drill cores.

Figure 5.1 General Access to Enertopia's West Tonopah Lithium Property.



5.2 Regional Topography, Elevation and Vegetation

The property is situated in the southern region of the Great Basin, specifically within the Big Smoky Valley drainage basin between the San Antonio Range (East) and Monte Cristo Range (West). The topography within the property is characterized by flat terrain with minimal variation in the elevation, which is approximately 5,400 ft (1,646 m) above sea level.

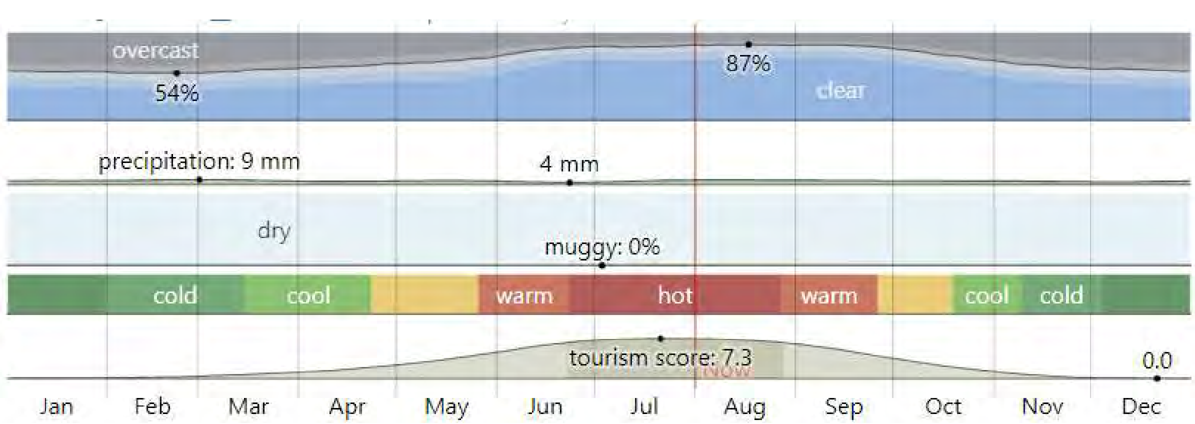
The regional vegetation is adapted to the arid desert climate, with arid land shrubs dominating the landscape. The vegetation composition is influenced by the region's aridity and daily/seasonal temperature fluctuations. Wildlife in the Tonopah region includes pronghorn antelope, wild horses, wild burros, big horn sheep, desert tortoise, mountain lions, coyotes, birds (e.g., eagles, mountain bluebird), reptiles (e.g., desert horned lizard, snakes), pica, jackrabbits, and fish (e.g., brown trout, cutthroat trout).

5.3 Climate

The climate in the area is characterized by a desert landscape, which contributes to significant daily temperature fluctuations. The region experiences cool to cold winters and warn to hot summers (Figure 5.2). The annual high temperature averages around 19.4º C (67.9º F), while the annual low temperature averages around 2.8º C (37.0º F).

The hot season lasts for 3.2 months, from June 7 to September 14, with an average daily high temperature above 26 °C (78.8 °F). The hottest month of the year in Tonopah is July, with an average high of 31 °C (87.8 °F) and low of 13 °C (55.4 °F). The cold season lasts for 3.2 months, from November 19 to February 25, with an average daily high temperature below 10 °C (50 °F). The coldest month of the year in Tonopah is December, with an average low of -7 °C (19.4 °F) and high of 6 °C (42.8 °F). The average annual precipitation is approximately 132.9 mm (5.24 inches), and the average annual snowfall amounts to around 40.64 cm (16 inches; US Climate Data, 2023).

Figure 5.2 Climate in Tonopah, NV. Source: www.WeatherSpark.com.



5.4 Local Resources and Infrastructure

There is a well-maintained highway and a transmission line that runs directly through the property, reducing the need for primary access, power, and infrastructure upgrades. Although there are no large surface water sources located within the property, an intermittent stream channel approximately 900 m south of the property could potentially be modified to retain runoff water and used as a potential local water source. Enertopia has yet to assess groundwater sources.

The unincorporated Town of Tonopah is the county seat of Nye County, Nevada, US. Examples of the services in Tonopah include accommodations, gas and vehicle repair shops, hardware stores, restaurants, and a United States Department of the Interior, Bureau of Land Management Office. Tonopah is nicknamed the Queen of the Silver Camps based on the town's rich, historical mining history. While Tonopah is currently a tourism-based resort town, the population of approximately 2,200 persons (2020 census) provides access to an experienced and knowledgeable metallic mineral mining workforce. Reno and Las Vegas, NV serve as viable population hubs for the Company to access mining personnel and supplies for exploration camp materials and services.

At this stage of Enertopia's project, no specific potential locations for tailings storage areas, waste disposal areas, or processing plant sites has been assessed.

5.5 Length of the Operating Season

Considering the property's location, accessibility, and climate, exploration activities at the West Tonopah Lithium Property can be carried out throughout the year although there may be occasional disruptions caused by extreme weather conditions such as snowfall or severe storms. The region generally permits year-round mining operations.

6 History

Enertopia discovered lithium-claystone at the West Tonopah Lithium Project in 2021, and hence, there is no specific history of lithium exploration within the boundaries of the Company's project.

Rather, A brief synopsis of the exploration/mining work is presented to provide the reader with a reference to regions historical metallic mineral relevance. The historical exploration references relate to adjacent property information in:

1. The Tonopah region.

2. The Silver Peak and Clayton Valley areas (approximately 45 km southwest of Enertopia's project).

3. The area directly surrounding Enertopia's lithium-claystone project.

Please note the Qualified Person has been unable to verify the adjacent property historical information, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.

The QP has added the appropriate disclaimer at the beginning of those sub-sections that reference historical work documented to have occurred outside of Enertopia's property.

6.1 Tonopah Metallic and Industrial Mineral Mining History

The Town of Tonopah, NV, and area has over a century of historical metallic and industrial mineral exploration and production. This work was conducted by company's other than Enertopia, and has occurred, largely, in areas other than the land position that defines the West Tonopah Lithium Project. Note that the QP has been unable to verify the historical information, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.

The Nevada silver district was discovered by James L. Butler in 1900, and silver production was initiated by the Tonopah Gold Mountain Mining Company. As a result of the discovery, numerous Tonopah region mines were developed and produced Ag-Pb-Cu-Au-W-As. Principal mines included Mizpah, West End Consolidated, Halifax Tonopah, Jim Butler Tonopah, MacNamara, Mizpah Extension, Montana - Tonopah, North Star, Rescue Eula, Tonopah Belmont, Tonopah Extension, and Tonopah Midway mines.

The most productive of the Tonopah mines were centered between Mount Oddie and Mt. Brougher, near the south end of the San Antonio Mountain Range. Some of the more productive mines were on the southwest flanks of Mount Oddie (MinDat.org, 2023). The deposits were hosted in volcanic rocks, including the Early Miocene Mizpah Trachyte, Miocene andesite of the Tonopah Formation, Tertiary West End Rhyolite, rhyolitic tuff, volcanic breccia (agglomerate), and tuffaceous sedimentary rocks (MinDat.org, 2023).

Structural controls on ore emplacement, as interpreted from localized breccia and gouge zones, included the Tonopah fault, the north-south-trending Halifax Fault Zone, the Merton Fault, and the Monarch-Pittsburg Fault.

The region produced metals between 1900 to 1947. Peak mine production occurred between 1900 and 1921; the record single year was 1913, when approximately $10 million in gold, silver, copper, and lead was mined (Town of Tonopah, 2023). Tonopah's mines maintained high yearly production until a slowdown occurred during the Great Depression (1929-1941). In 1947, the Tonopah and Goldfield Railroad was decommissioned, and the rails – which run through the southern portion of the West Tonopah Lithium Project – were removed.

In addition to metallic minerals, the Tonopah region also has a history of industrial minerals production, including clay, diatomite, and gypsum (Nevada Commission on Mineral Resources, 2018).

6.2 Historical Interest in Lithium in the Tonopah Region

Note that the QP has been unable to verify the historical information presented in this sub-section, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.

The first known interest in lithium in the region occurred during the 1950s, when a potash-focused exploration company reported elevated potassium and lithium within formation water, or brine, in the Clayton Valley area near the unincorporated Community of Silver Peak, NV. Several companies, including the current operator Albemarle Corporation, have historically extracted lithium from Silver Peak Lithium Brine Operation by beneficiation of the brine to higher concentrations of lithium through a series of evaporation ponds.

In the 1970s, lithium-bearing claystone rocks were reported in Clayton Valley area by the United States Geological Survey including claystone bedrock situated adjacent to the Silver Peak lithium-brine operation. The mudstone is defined within the Esmeralda Formation, which is stratigraphically younger (Upper and Middle Miocene) than the Lower to Middle Miocene Siebert Formation (Albers and Steward, 1972; Bonham and Garside, 1979a; Ingersoll, 2002).

Presently, the Big Smoky Valley basin west of Tonopah, NV, is being explored by numerous companies that are interested in modern critical metals (predominantly lithium) within lithium-claystone host rocks, and as a result, Enertopia's land position is encompassed by numerous explorers focused on the lithium-claystone deposit type. The reader is referred to Section 23 for additional Adjacent Property information.

6.3 Historical Exploration Conducted within the West Tonopah Lithium Project Property

Historical exploration conducted by companies other than Enertopia are evident within the boundaries of the West Tonopah Lithium Project property. The QP has been unable to verify the historical workings that occurred within the boundary of the West Tonopah Lithium Project, and therefore, states that the information may not necessarily be indicative of the mineralisation that is the subject of this technical report.

Exploration trails, and numerous shallow bulldozer/excavator trenches occur throughout the property. While these historical excavations were verified by the QP during a site inspection (see Section 12), to the best of the QPs knowledge, there is no historically recorded information known about the exploration program or the project owners that excavated the trenches within the boundaries of the West Tonopah Lithium Project.

The QP is aware that several companies evaluated, and/or continue to evaluate, the uranium potential of the region directly west of Tonopah, NV (e.g., Tigris Uranium Corp., 2012; Uranium Resources Corp., 2016; Alliance Mining Corp., 2018). In addition, the QP is also aware that several companies staked ground in the Tonopah region in search of lithium, gold, silver, molybdenum, and other metals including domestic clay (e.g., Columbus Gold Corp., IMV Nevada, Nevada Alaska Mining Company, West Kirkland Mining Inc., and Urania Resources Corp.; Nevada Bureau of Mines and Geology, 2015; Johansing, 2022).

6.4 Historical Well Data in the Tonopah Region (In Consideration of Potential Regional Lithium Indicators)

This section presents a brief overview of historical oil and gas wells, geothermal wells, and groundwater wells, including those that contain lithium geochemical results. The historical wells are located outside of the West Tonopah Lithium Project. Note that the QP has been unable to verify the adjacent property historical information, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.

The historical distribution of oil and gas wells in the Tonopah region, by well status and operator, is presented in Figure 6.1. The status of these wells is either abandoned wells or wells with uncertain status. The figure highlights the prominent operators and their contributions to the exploration and development of oil and gas resources in the area. To the best of the QPs knowledge, oil and gas wells in the figure area had no associated lithium-brine or -claystone concentrations recorded. There are no historical oil and gas well lithium geochemical assay data available for Enertopia's property.

Historical groundwater lithium geochemistry analytical results in the Tonopah region are presented in Figure 6.2. There are several elevated lithium concentration clusters throughout the region including at Albemarle Corporation's Silver Peak Lithium Operation (see Section 23). The average concentration of lithium in the groundwater samples shown in Figure 6.2 is 1.05 ppm Li, with concentrations of between 0 and 34 ppm Li. No historical groundwater lithium geochemical assay data is available for Enertopia's property.

Historical geothermal wells, thermal springs, and Specific Measurement Unit (SMU) gradient wells in the Tonopah region is presented in Figure 6.3. Geochemical samples from the thermal springs and wells yielded lithium concentrations of between 0 and 34 ppm. The average lithium concentration of the thermal springs and wells in the area shown in Figure 6.3 is 0.58 ppm Li, and 0.415 ppm Li excluding any samples with no (zero) Li. Geothermal and SMU wells had no associated lithium concentration data. There are no wells within Enertopia's property to indicate subsurface characteristics, or the potential presence, of lithium-enriched geothermal fluids.

Figure 6.1 Historical oil and gas wells in the Tonopah Region.

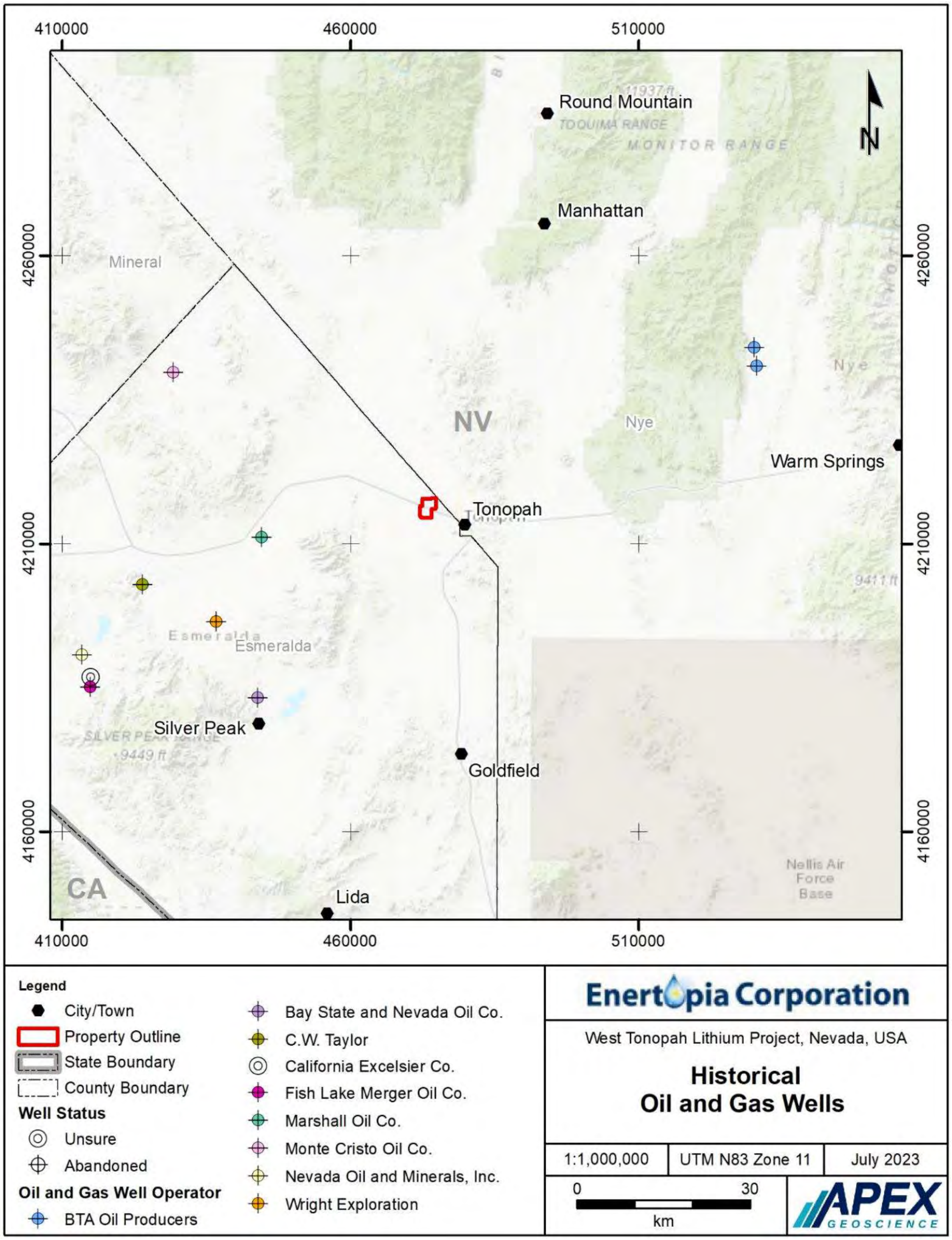


Figure 6.2 Historical groundwater lithium geochemistry in the Tonopah Region.

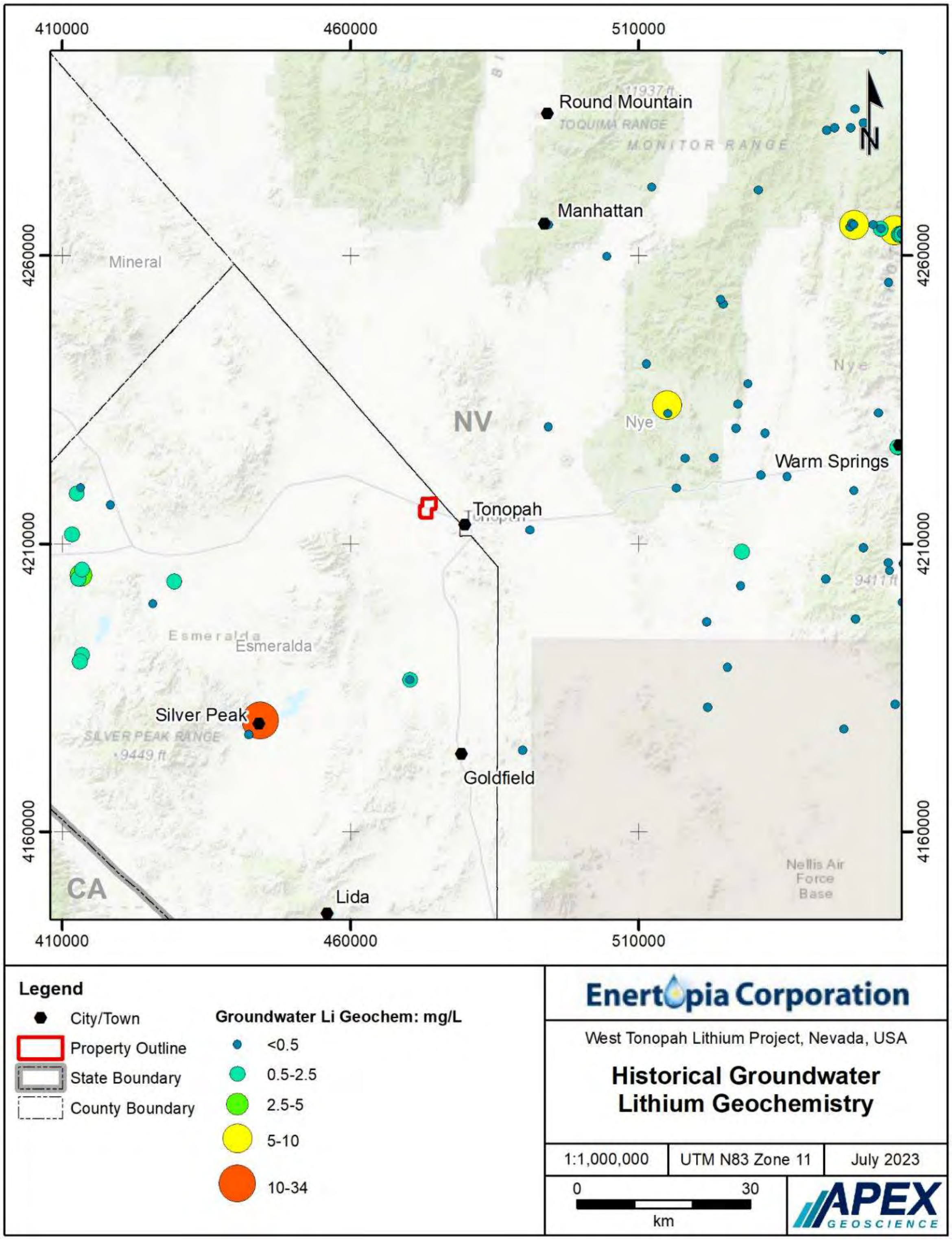
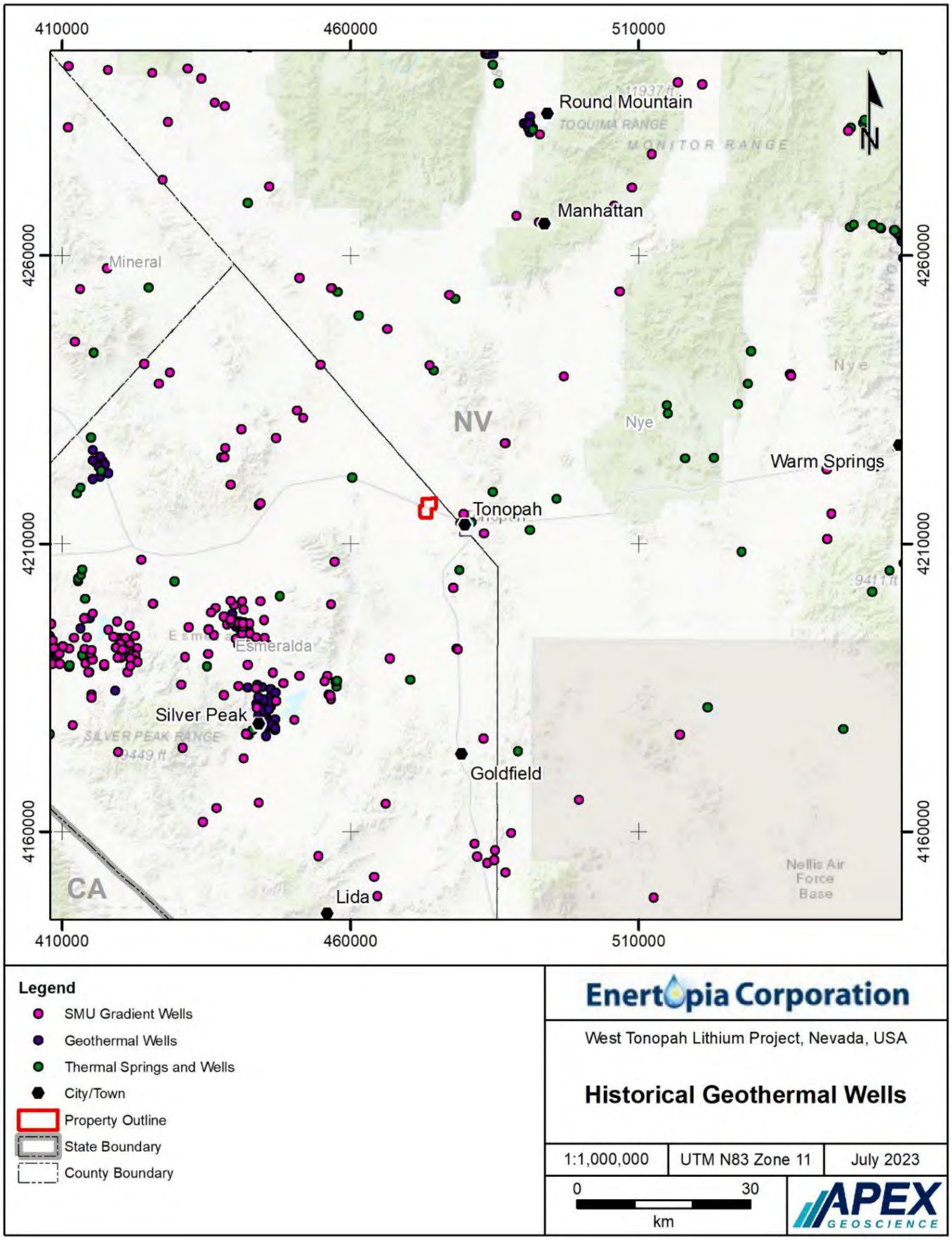


Figure 6.3 Historical geothermal wells in the Tonopah Region.



7 Geological Setting and Mineralisation

7.1 Regional Geology

The geology of Nevada began to form in the Proterozoic at the western margin of North America. During the Paleozoic and Mesozoic periods, terranes accreted to a marine-environment-defined continent. Over the past 66 million years, Farallon Plate and associated tectonic movement created intense volcanism and formed the Basin and Range Province. The prominent Walker Lane structural zone acts as a boundary separating the Sierra Nevada Mountain Range to the west from the Basin and Range province to the east. The formation of glaciers and valley lake watersheds continued to shape the current day landscape. These geological features are described in the text that follows.

7.1.1 Tectonic History

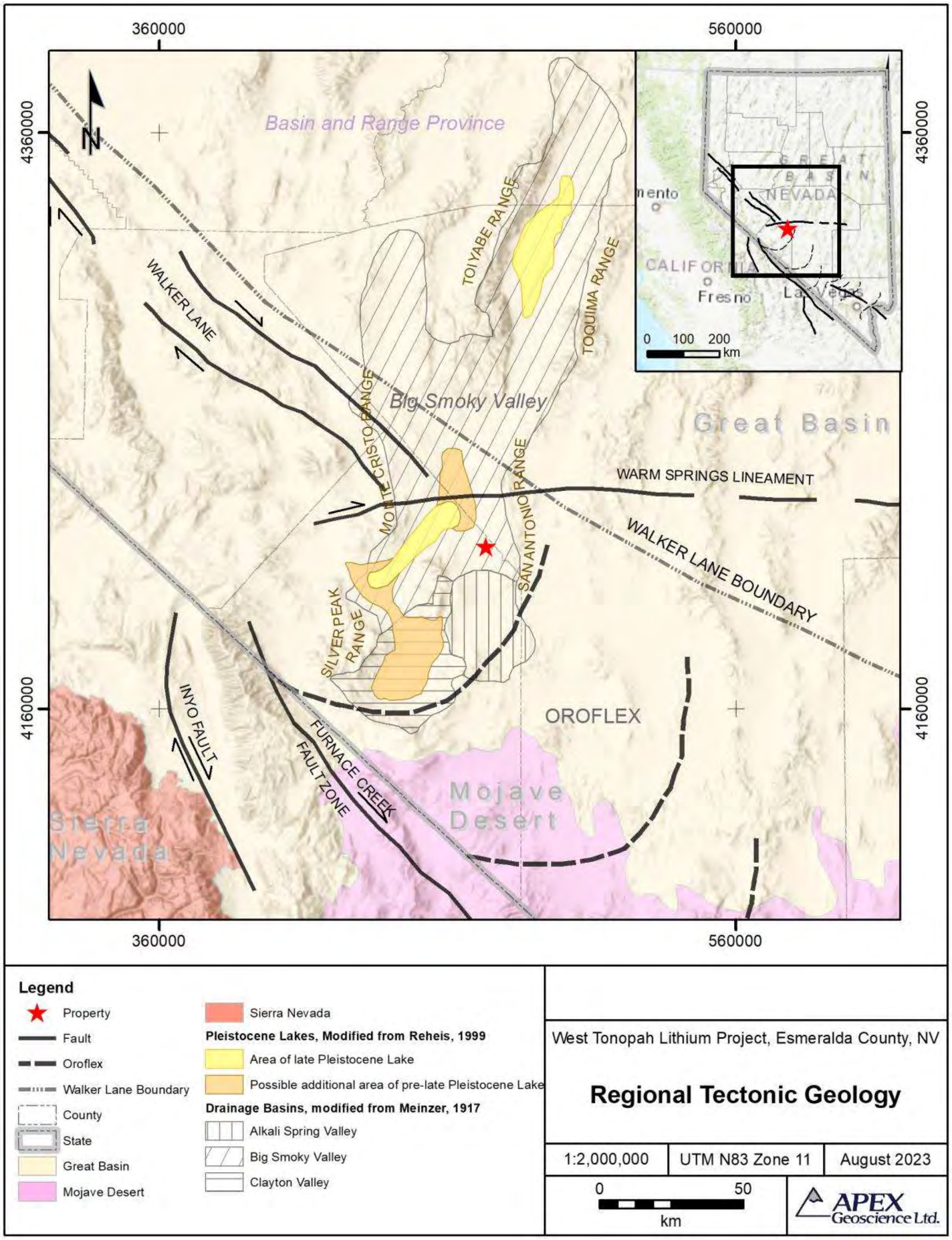
The oldest known tectonic event in western Nevada is associated with Late Devonian to Early Mississippian Antler Orogeny. This compressive event resulted in the upward thrusting of deep marine siliceous rocks eastward over shallow marine carbonate and shale. Plate convergence continued through the Mesozoic as the Farallon Plate transported terranes that subducted under North America developing numerous thrust faults due to compressional strain. The Late Cretaceous Sevier Orogeny generated large mountain ranges in eastern Nevada.

By the Cenozoic (roughly 60 million years ago; Ma), the downward angle of the Farallon Plate decreased, and the plate produced shear stress at the base of the North American Plate, driving the Laramide Orogeny, which created the Rocky Mountains. Due to conditions in the underlying crust, inferred to be a thinner section of the Farallon, intense volcanic activity began in the Eocene in northern Nevada around 43 Ma and continued until 7 Ma.

Relative right-lateral Pacific–North American transform motion across the western US is defined by the transpressional San Andreas and transtensional Walker Lane fault systems that separate the Sierra Nevada batholith from the Basin and Range province in the Great Basin of Nevada (Bonham and Garside, 1979aa). The Walker Lane system, which occurs directly east of the Western Tonopah Lithium Project (Figure 7.1), is defined as complex, discontinuous and broad system of strike-slip faults attributed to lower cumulative slip and an attendant extensional component of motion (Wesnousky, 2005). Offset Tertiary tuffs and lavas and older granites and volcaniclastic rocks are interpreted to indicate that the northwest-striking strike-slip faults of the Walker Lane block have taken up 48–60 km of right-lateral strike-slip (Ekren et al., 1980; Ekren and Byers, 1984).

Walker Lane northwest-orientated dextral-slip tectonism occurred in the Tonopah region from 26 to 17 Ma and was accompanied by some of the volcanism in the Tonopah area. (John et al., 1989). Walker Lane structures are cut by east-trending fractures and further controlled the distribution of volcanic centers (Bonham and Garside, 1979a).

Figure 7.1. Regional geology in the vicinity of Enertopia's West Tonopah Lithium Project.



7.1.2 Basin and Range

The tectonic changes formed the basis for development of the Basin and Range Province horst and graben terrain that was further developed by approximately 15 Ma normal faulting (John et al., 1989; Figure 7.1). The Basin and Range Province is a vast physiographic region covering much of the inland Western United States and northwestern Mexico. Abrupt changes in elevation, alternating between narrow faulted mountain chains and flat arid valleys or basins characterize the province.

The physiography of the province is the result of tectonic extension that began around 17 Ma in the early Miocene epoch. The distinctive topography of alternating mountain ranges (horsts) and elongated valleys (grabens) is attributed to crustal extension and faulting along the western margin of North America. As the crust thinned and stretched, volcanic activity resulted in the eruption of magma and formed various volcanic features (e.g., lava flows, volcanic fields, cinder cones, and layers of volcanic ash).

Thinning of the upper crust caused deeper, highly metamorphosed rock masses to rise to the surface, where it is overlain by younger faulted and domed rocks. There are more than 24 metamorphic core complexes in the Basin and Range Province as a whole. In some cases, faulted blocks have shifted more than 50 miles (80.5 km) from the apex of the dome. Along detachment surfaces, mylonite forms due to shear.

Basin and Range faulting in the Tonopah area is estimated to have started approximately 16 to 17 Ma, as indicated by the age of basinal deposits of the Siebert Formation, and the extrusion of olivine trachyandesite (Bonham and Garside, 1979a).

7.1.3 Volcanism

Intense volcanic activity began in the Eocene around 43 Ma and continued until 7 Ma (Stewart and Carlson, 1976). The volcanism ejected some 17,000 cubic miles (70,860 km^3) of material in 250 major eruptions and layering the landscape in tuff ash falls thousands of feet thick. Extinct calderas up to 35 miles wide are preserved in the mountains of south-central Nevada, particularly near the Tonopah range.

Additionally, the Walker Lane – an area of northwest trending right-lateral strike-slip faults formed 12 Ma – is associated with some of the most intense eruptions, such as the 16.0 to 6.5 Ma Southwest Nevada volcanic field.

During the last 10 million years, volcanic activity shifted to bimodal volcanism with basalt lava flows alternating with rhyolite domes. Some small cinder cones formed as recently as the Pleistocene and the Nye County Lunar Crater volcanic field was active only 15,000 years ago.

The Western Tonopah Lithium Project is directly west of the San Antonio Mountain Range, a Tertiary aged complex that underwent intermittent volcanism between 35 and 10 Ma (Bonham and Garside, 1979a).

7.1.4 Stratigraphic Sedimentary and Volcanic Rocks

The Tertiary stratigraphy of the Tonopah area consists of Oligocene and Miocene calc-alkaline to alkaline volcanic rocks (Carpenter et al., 1953). Tertiary rocks in the Tonopah area are presented in Figure 7.2 and described, from oldest to youngest, in the text that follows. Descriptions benefit from Thompson (1999) along with K-Ar age dates from Bonham and Garside (1979).

The Tonopah Formation (34.8 Ma to 24.3 Ma) is divided into two informal units. The lower unit is mainly welded, silicic ash-flow tuffs and epiclastic volcanic siltstone and sandstone. The upper unit is comprised of rhyolite domes and flows.

The Mizpah Andesite (20.6 Ma) is divided into 3 facies, 1) porphyritic lava flow and flow breccia vent material, 2) volcaniclastic composed of mudflows with minor lava flows, and 3) intrusive dacite to andesitic dykes.

The West End Rhyolite is a fine-grained, holocrystalline, weakly porphyritic rhyolite with abundant secondary pyrite.

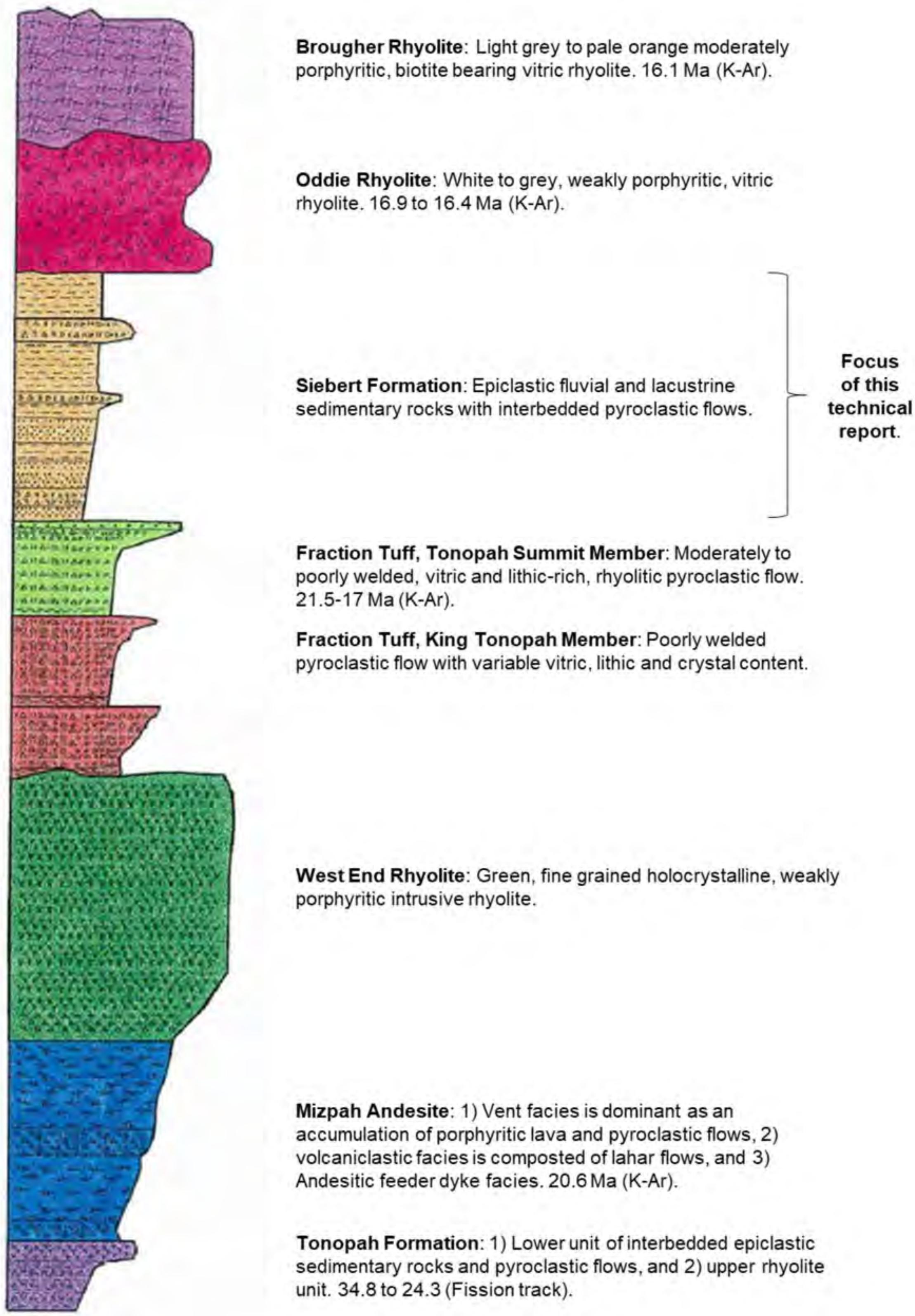
The Fraction Tuff is dominated by welded quartz latitic to rhyolitic tuff. The unit is defined by 6 separate members. The Tonopah Summit Member, which has been dated at 21.5 to 17 Ma, is comprised of moderately to poorly welded, crystal-rich, vitric, quartz latite to rhyolite heterolith tuff. The Tonopah Summit Member uppermost contract is defined by moderately to strongly welded hematitic autobreccia.

The Lower to Middle Miocene Siebert Formation (17-13 Ma) was derived from volcaniclastic fluvial and lacustrine deposits that include mudstone, siltstone, sandstone, conglomerate, and interbedded tuff. It has been divided, variably, depending on its spatial location. For example, Franey (1985) divided the formation into 8 members at Hasbrouk Mountain. As described by Thompson (1999), facies could include tuffaceous sandstone, lacustrine siltstone, interbedded tuff, and pyroclastic flow deposits.

The Siebert Formation outcrops throughout the San Antonio Mountains, Lone Mountain, and Crescent Dunes and typically forms low rounded hills. The Siebert Formation exposed in the San Antonio Range is primarily fluvial sandstone and slope accumulations of pyroclastic rocks. Lacustrine rocks outcrop further west (basinward). A similar trend is seen at Lone Mountain, where fluvial rocks are exposed on the mountain whereas lacustrine units occur east (basinward).

The Oddie Rhyolite (16.9-16.4 Ma) occurs as plugs, dykes, and flow domes. The Brougher Rhyolite (16.1 Ma) represents the non-mineralized equivalent of the Oddie Rhyolite, and therefore, the Oddie and Brougher rhyolites are assumed to be sourced from the same magma system.

Figure 7.2 Stratigraphic sketch of Tertiary rocks in the Tonopah region. Source: Thompson (1999). Age determinations from Bonham and Garside (1979).



APEX GEOSCIENCE

7.1.5 Big Smoky Valley Basin Watershed

Valleys and low-lying grabens in the Basin and Range were filled with sedimentary rocks eroded from nearby mountains or accumulated evaporite deposits from playa lakes formed within topographical lows. Figure 7.1 illustrates the boundaries of one such trough, the Big Smoky Valley.

The Big Smoky Valley is bordered on the northeast by the Toquima Range, on the northwest by the Toiyabe Range, on the east by the San Antonio Range, on the southwest by the Silver Peak Range, and on the west by the Monte Cristo Range. It represents a drainage divide landform within the Tonopah Basin that extends north-south through the counties of Esmeralda, Nye, and Lander, is about 100 miles (160 km) in length and has a watershed area of approximately 4,960 square miles (12,800 km^2; Figure 7.1).

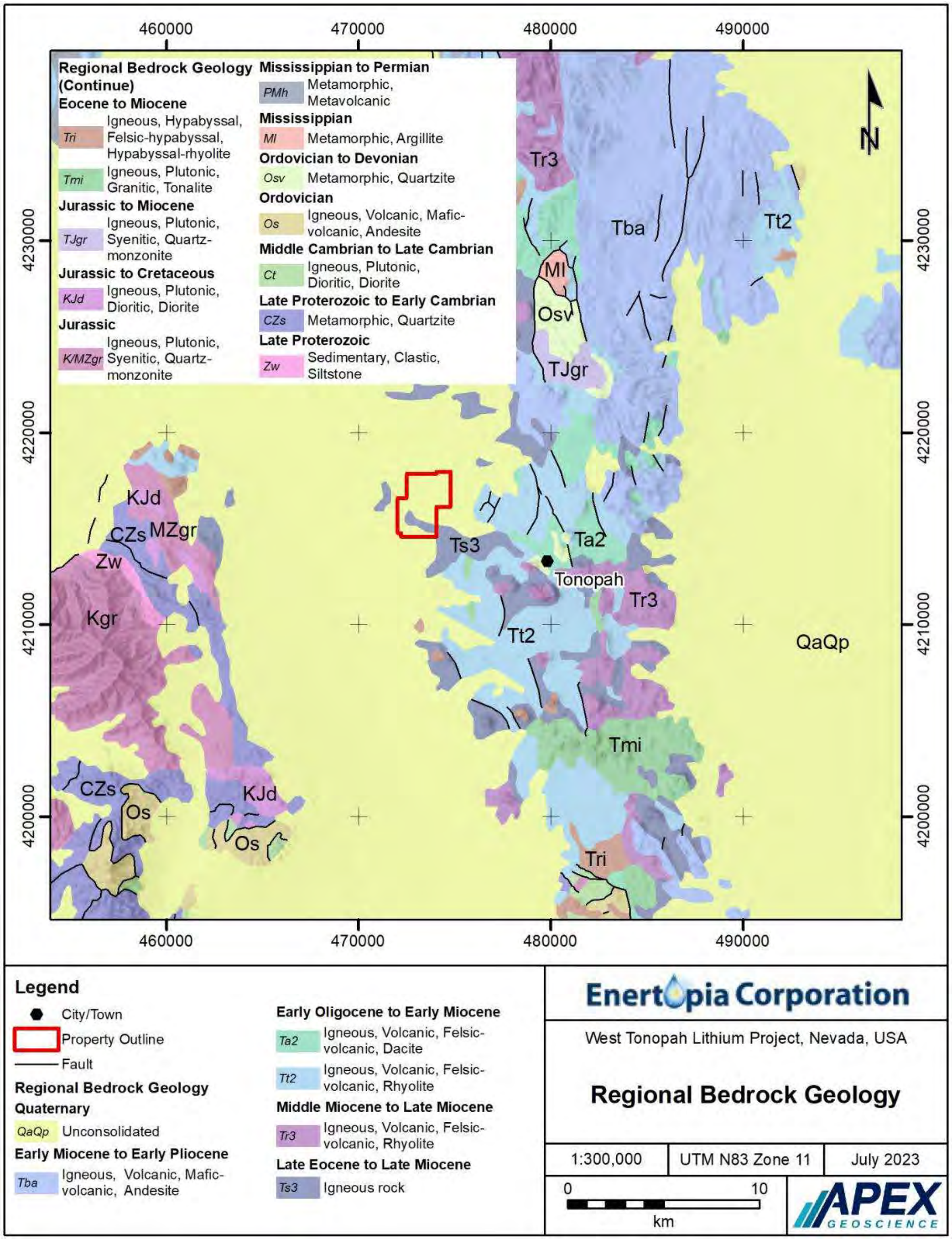
Historically, the Basin and Range formed valleys over time that are defined by various dimensions, water depths, and depositional environments due to basin-defining structural tectonics, paleoclimate patterns, erosional and depositional environments, etc. Based on the interpretation of regional gravity data by Fugro National Inc. (1980) that involved 1,386 gravity stations, the Big Smoky Valley is bound by major range-forming normal fault systems that extend the full length of the valley on both sides. The maximum depth calculated in the Big Smoky Valley is approximate 4,000 feet (1,219 m); however, this interpretation is subject to change because little is known about the actual density distribution in and around the valley. Basin-fill deposits within the valley reach combined thicknesses of about 3,000 feet (915 m; Rush and Schroer, 1970).

Presently, flood waters accumulate in valley lows. Because typical desert valleys are arid and have no drainage outlets, the waters are left to evaporate, leaving unique depositions of horizontal constructional flats, also called playas. Playa lakes, such as the two Pleistocene Lake bed areas shown in Figure 7.1, are shallow, ephemeral bodies of water that are fed by runoff from surrounding mountains during periods of rainfall or snowmelt. Within this region, the Smoky Valley Playa Complex serves as a catchment area for sediments eroded from the surrounding mountains. As water flows into the playa, it brings along fine-grained sediments and minerals, which settle and accumulate on the lakebed.

7.1.6 Quaternary Surficial Material

The regional bedrock map of the Tonopah area shows that bedrock is dominantly confined to the mountain ranges because of thrusting and uplift of tilted blocks of crust (Figure 7.3). The Western Tonopah Lithium Project property is generally covered by a thin veneer of Quaternary overburden and surficial pediment defined by a relatively flat surface of exposed alluvial soil, gravel, with fragments of resistant volcanic rocks.

Figure 7.3 Regional bedrock geology.



7.2 Property Geology

The bedrock geology within the Property area is presented in Figure 7.4 (Bonham and Garside, 1979b). Exposed surficial deposits and bedrock within the boundaries of the property include Quaternary fan and pediment deposits (Qfp on Figure 7.4) and discontinuous outcrops of the Siebert Formation volcaniclastic and tuffaceous sedimentary rocks (Ts on Figure 7.4). The lithium-bearing sedimentary-volcaniclastic rocks within the West Tonopah Lithium Project are defined as occurring within the Lower to Middle Miocene Siebert Formation.

The Siebert Formation has been age dated by K-Ar at 17-13 Ma (Bonham and Garside, 1979). The Siebert Formation, and associated volcanic-aged rocks, have been documented by several authors (e.g., Meinzer, 1917; Knopf, 1921; Stewart and Carlson, 1976; Silberman et al., 1978; Bonham and Garside, 1979a,b; Graney, 1985; Nash, 1985; Whitebreak and John, 1992; Thompson, 1999).

Inception of Basin and Range extensional faulting in the Tonopah area about 17 Ma ago initiated the deposition of fluvial and lacustrine sedimentary rocks of the Siebert Formation within a complex of fault block basins. Intercalated with these sedimentary rocks are subaerial and subaqueous deposited ash-fall and ash-flow tuffs that were erupted locally, from volcanic vents in the San Antonio Mountains that were later filled by lavas of the Brougher Rhyolite.

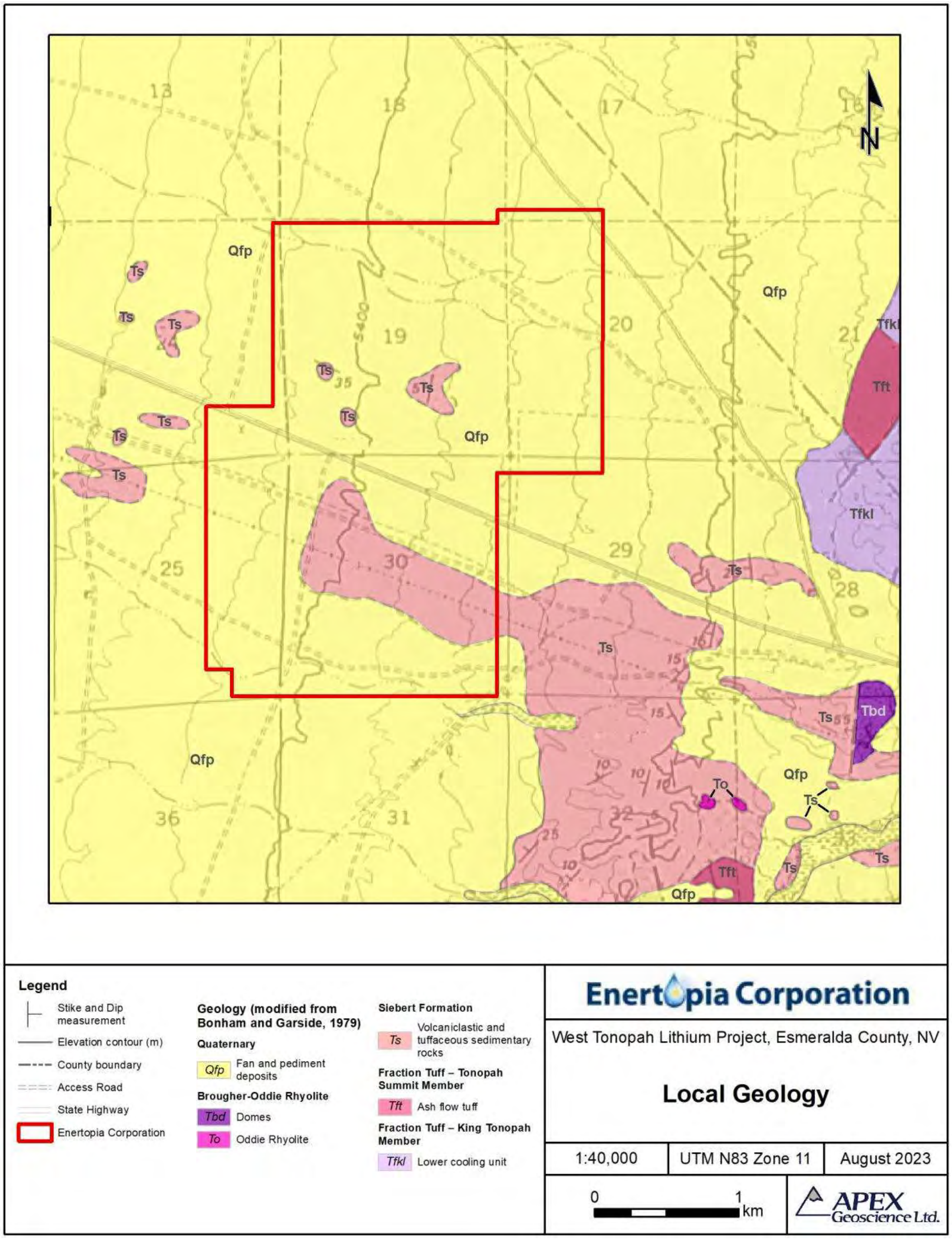
The Siebert Formation consists of a large suite of sedimentary and pyroclastic volcanic rocks, the bulk of which are derived from fluvial and lacustrine epiclastic volcanic conglomerate, sandstone, siltstone, and subaqueous/subaerial pelitic tuff deposits. The unit comprises a heterogenous mixture of fine- to coarse-grained sedimentary and pyroclastic rocks. At Enertopia's property, the Siebert is calcareous and locally contains dolomitic lacustrine sedimentary rocks.

The Siebert Formation reportedly contains an upper portion dominated by epiclastic sediments and a lower portion containing various lithic, crystal, and lapilli ash-flow units with interbedded epiclastic sediments. The Siebert Formation is unconformably underlain by the Fraction Tuff, which is exposed along the western edge of the three hills and to the north towards Tonopah.

The thickness of the Siebert Formation varies, roughly 300 to 450 m thick east of Crescent Dunes (west of Battle Mountain, NV), and 600 feet (180 m) thick on Seibert Mountain, southeast of Tonopah (e.g., Knopf, 1921).

The true thickness of the Siebert Formation lithium-bearing mudstone has yet to be determined at the West Tonopah Lithium Project. To date, Enertopia's deepest drillhole, DH-23-01, which was drilled in the uppermost northwest portion of the property, penetrated, and ended in, Siebert Formation to a depth of 400 feet (122 m).

Figure 7.4 Bedrock geology in the property area.



Siebert Formation outcrops were discovered by Enertopia at the Western Tonopah Lithium Project and have been exposed in shallow trenches. The Siebert outcrop is more common in the eastern part of the property in comparison to the west. This is validated by drill programs that show the overburden can extend to thicknesses of up to 70' (21 m) in the western portion of the property.

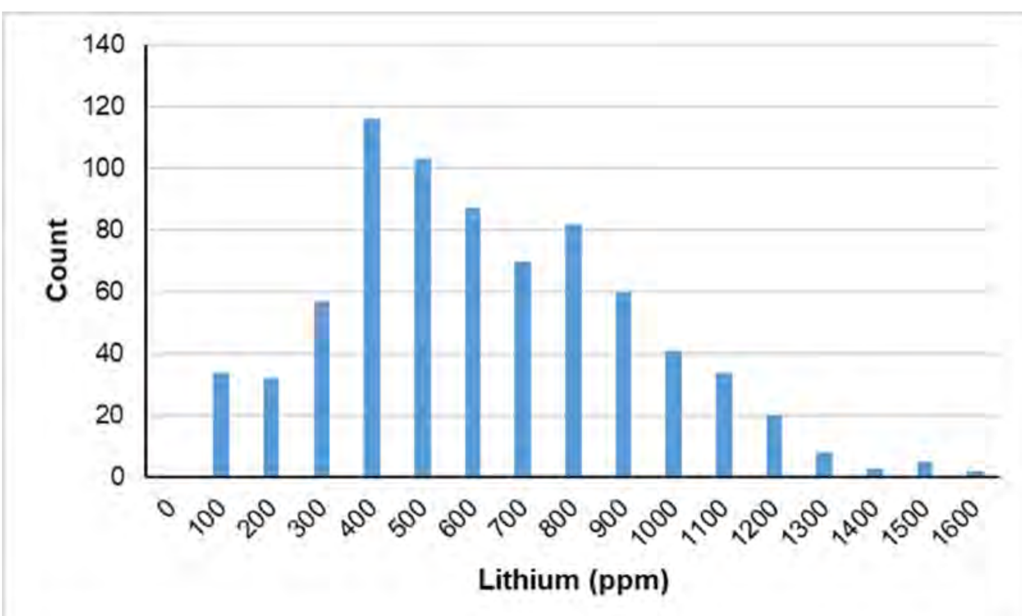
North-trending faults are interpreted Big Smoky Valley including in the American Lithium TLC Property which is directly north of the West Tonopah Lithium Project (Loveday and Turner, 2020). The faulting is interpreted to post-date lithium mineralisation and may down-drop stratigraphy to the west.

Hydrothermal alteration is widespread in the Divide District (Bonham and Garside, 1979). Tuffaceous rocks of the Siebert Formation commonly contain silica-rich streaks or fragments up to about 5 cm wide and generally less than a centimeter thick, which suggests that silica was mobilized – probably in association with hydrothermal activity – during Siebert Formation deposition. In the Divide District, the lower part of the Siebert is a strongly silicified, pale yellow-green, rhyolitic pyroclastic breccia.

7.3 Mineralisation

The Siebert Formation at the Western Tonopah Lithium Project is enriched in lithium. Of 754 core samples analyzed, and regardless of lithology, the minimum and maximum lithium values are 20 ppm and 1,520 ppm with an average value of 583.1 ppm Li. A histogram of the distribution is presented in Figure 7.5. These data form the assay database for the resource modelling and estimation process presented in Section 14.

Figure 7.5 Histogram of the drill core analytical results (n=754 analyses). The data are presented regardless of lithology sampled.



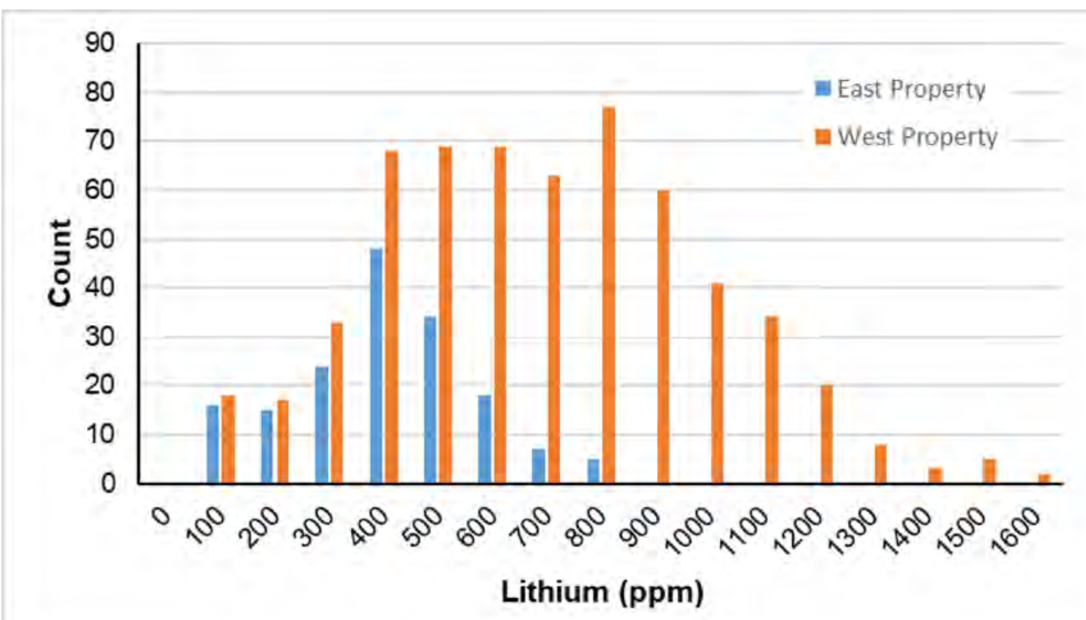
Volcaniclastic rocks are dominantly incorporated into the sedimentary rock package – and dominantly the mudstone lithological facies – as distinctly reworked pyroclasts, or epiclasts, and lithic tuff. Sections of the core with elevated lithium contents, seem to correspond with higher modal abundances of tuff clasts. These sections are often characterized by 'mottled', 'rubbly', and 'blocky' textures. It is possible that the tuff clasts are either 1) directly responsible for elevated lithium contents, or 2) increase the porosity of the claystone which may create accommodation space for lithium-enriched fluids to move through and accumulate in the strata. This hypothesis requires further validation.

The QP advocates that an inferred north-south fault zone differentiates the property into separate 'west' and 'east' stratigraphic blocks that may result in either upthrown or downthrown Siebert Formation blocks. This contention is supported by:

1. Preliminary outcrop and drill core observations by the QP suggest that the Siebert Formation in the eastern part of the property has a higher sand modal abundance in comparison to the western mudstone-dominated strata.

2. Evaluation of the Enertopia lithium assays shows that the western portion of the property contains higher lithium claystone in comparison to the east side of the property (Figure 7.6 and see Section 10).

Figure 7.6 Histogram of the drill core analytical results separating the assays into eastern (n=167 analyses) and western (n=587 analyses) groupings. The data are presented regardless of lithology sampled.



Additional exploration work and stratigraphic studies are required to validate this hypothesis because other factors could also influence the Siebert Formation depositional environment. For example, 1) the Siebert Formation strata could be co-mingled with erosional and channel fill material along the uplifted valley flanks, 2) the margins of the basin could create depositional environments that favour the emplacement of coarser sedimentary material in comparison to central, deep, basinal mudstone, and/or 3) potential interaction with rock types other than Seibert Formation along valley flanks.

In the interim, incorporation of an inferred north-south orientated fault zone is recommended in the initial resource modelling and estimations presented in this technical report.

To illustrate the lithium-bearing Seibert Formation lithologies in correlation with the lithium mineralisation, the QP presents a quick log and geochemical lithium profile of the deepest drillhole drilled to date, DH-23-01, which was drilled in the northern portion of the west resource area. The DH-23-01 drill core was logged by the QP during a 2023 site inspection, in conjunction with Enertopia drill logs. Five distinct lithological units within the Siebert Formation were interpreted as presented in Table 7.1 and Figure 7.7. The drillhole core is dominated by varying mudstone units easily distinguished by the colour of the mudstone. Within the hole, two separate upper grey mudstone and light grey mudstone units (42-216' or 12.8-65.8 m) are differentiated from a lower medium grey-green mudstone unit (240-400', or 73.2-121.9 m) by an ash-tuff horizon (216-240', or 65.8-73.2 m).

Table 7.1 Qualified Person quick log of drillhole DH-23-01 in the northern portion of the west resource area.

Unit length (ft)	Unit length (m)	Lithological description
0-42'	0-12.8	Overburden and pediment
42-114'	12.8-34.8	Grey mudstone ± intercalated tuff
114-216'	34.8-65.8	Light grey mudstone ± intercalated tuff
216-240'	65.8-73.2	White-tan ash tuff
240-400'	73.2-121.9	Medium grey-green mudstone ± intercalated tuff (EOH)

A downhole geochemical profile of lithium is included in Figure 7.7 and demonstrates that variations in lithium concentration correlate well with:

- Differentiating the upper grey and light grey mudstone units from the lower medium grey-green mudstone unit. The upper grey and light grey mudstone units (42-216' or 12.8-65.8 m) yield between 50 ppm and 1,200 ppm Li with un-weighted average of 771 ppm Li. The lower medium grey-green mudstone unit (240-400', or 73.2-

121.9 m) contains between 190 ppm to 1,520 ppm Li with an un-weighted average of 894 ppm Li.

- The ash-tuff unit has lower lithium values and separates the upper grey-light grey mudstone and lower medium grey-green mudstone sub-units. The ash-tuff horizon contains between 190 ppm and 360 ppm Li with an un-weighted average of 255 ppm Li.

Figure 7.7 Summary of the various Siebert Formation lithologies within drillhole DH-23-01.

8 Deposit Types

Lithium occurs in 3 main categories of deposit types:

1) Mineral deposits, in which lithium is primarily extracted from pegmatite deposits that are found globally and account for half of the lithium produced today (Benson et al., 2017). Spodumene is the most abundant lithium-bearing mineral found in economic deposits.

2) Brine deposits which can be separated into:

   a. Surface or near-subsurface continental deposits that occur in endorheic basins where inflowing surface and groundwater is moderately enriched in lithium (continental deposits currently account for all known global brine production), and

   b. Confined aquifer deposits that occur in deep, subsurface basial reservoirs in which the brine is pumped as a waste product of hydrocarbon production or within the geothermal production circuit.

3) Sediment-hosted deposits, which are better described as the lacustrine clay-lithium deposit type. The clay-lithium deposit type is the focus of this technical report. Lithium-clay deposits has developed recent, expanded interest because of their high Li content and therefore potential as new lithium resource type.

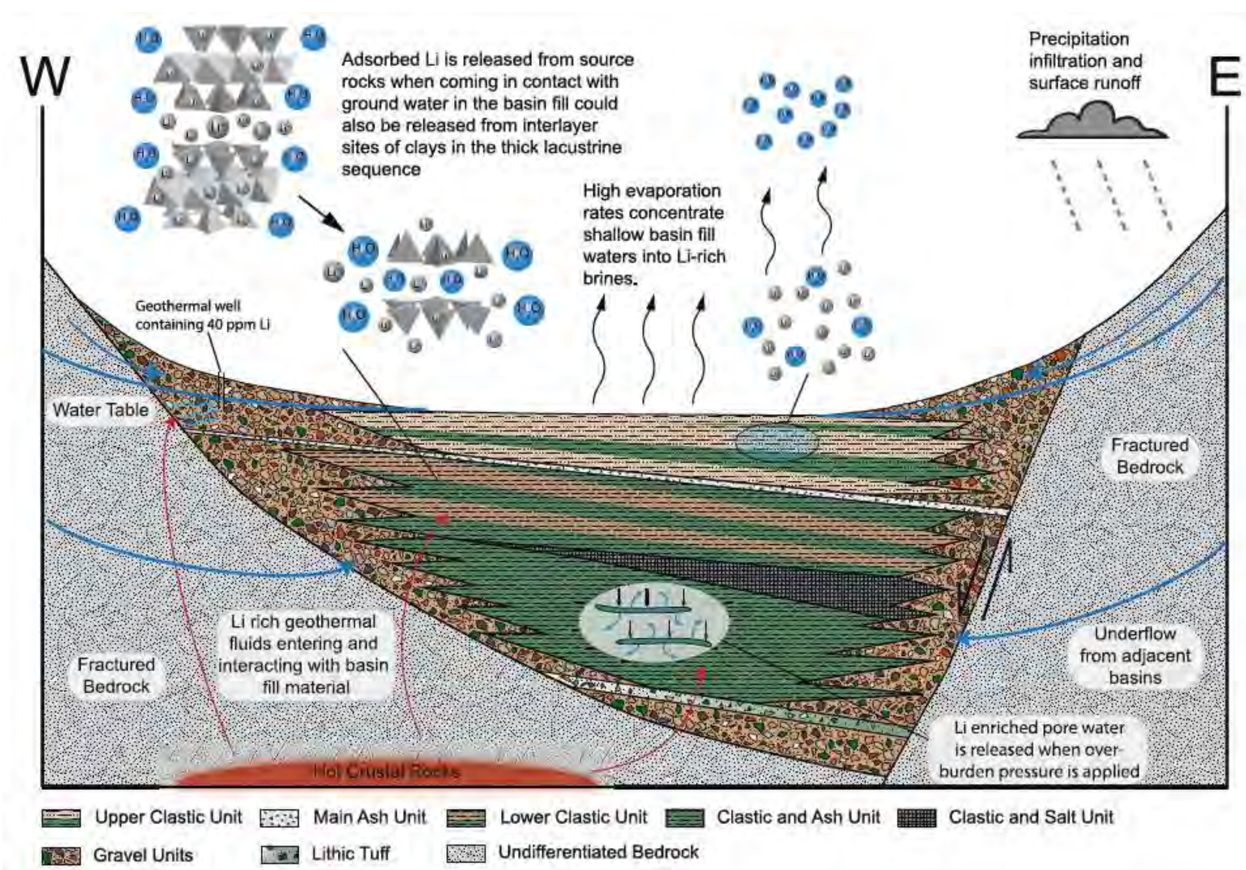
Studies on clay-lithium deposit type rocks determined that lithium could accumulate in the octahedral layer of the clay structure when the clay is subject to elevated concentrations of Li associated with formation solutions, temperature, and time (Decarreau et al., 2012). Examples of clay-lithium deposits include Clayton Valley and McDermitt Caldera in Nevada, USA (e.g., Castor and Henry, 2020; Coffey et al., 2022).

The source of lithium in clay-lithium deposits has been studied by several authors. Historical studies associate lithium sourced from, and being introduced to the claystone sedimentary stratum by, 1) surrounding tuffaceous rocks (Davis et al. (1986), 2) rhyolite lava flows and rhyolitic ash flow tuffs (Price et al., 2000), 3) melt inclusions in quartz phenocrysts from rhyolites (Hofstra et al., 2013), 4) geothermal waters that emanate as surficial geothermal springs (Munk et al., 2011), 5) Li-enriched hydrothermal fluids resulting from high temperature water-rock interaction (Araoka et al., 2014), and 6) a combination of hydrothermal activity and leaching from clays and volcanic ash found in the basin fill (Munk et al., 2016).

Recent source hypotheses for lithium-clays involve hydrothermal fluids in combination with 1) closed hydrologic system diagenesis and geothermal-meteoric hybrid diagenetic fluid (Castor and Henry, 2020), and 2) linear sequestration of Li from bulk sedimentary/volcaniclastic rocks via fluid interaction and compaction pressure (Figure 8.1; Coffey et al., 2022).

With respect to exploration, lithium-clay deposit areas can be delineated, initially, through geological compilation studies that, for example, target basinal areas with known geothermal affinities (e.g., hot springs, volcanism, rifting, etc.). Ground exploration involves prospecting and geochemical analysis of outcrops if present. Ultimately, drilling is required to substantiate the deposit to depth in the subsurface. Depending on the texture, consistency, diagenesis, alteration, and nature of the clay, drilling could employ auger, winkie, diamond, and/or Sonic drills. Geological confidence in basinal deposit settings can be advanced through geophysical surveys, such as seismic and magnetic/electromagnetic surveys, to delineate basin dimensions and detect faults and horsts/grabens. Short wave infrared (SWIR) hyperspectral mapping of drill cores could improve the understanding of the mineralogical alteration distribution around lithium-enriched and/or hydrothermal horizons/zones.

Figure 8.1 Conceptual model for the Clayton Valley basin brine aquifer system including the generalized stratigraphy, Li distribution in the lacustrine clay-rich basin fill sediments, and mechanisms for brine formation and migration. Source: Coffey et al. (2021).



APEX GEOSCIENCE

9 Exploration

9.1 Prospecting and Discovery

In 2021, Enertopia initiated a prospecting program at the West Tonopah Lithium Project. Several outcrops of Seibert Formation sedimentary and volcaniclastic rocks were discovered in the northern part of the property directly adjacent to Highway 89.

A grab rock sample of Siebert Formation was collected from a single exposed outcrop location, defined as the 'discovery outcrop' (Figure 9.1). The sample returned 570 ppm Li (Enertopia Corp., 2021). The discovery outcrop is composed "*primarily light greenish exposures of claystone, mudstone and volcaniclastic material forming part of a sequence of uplifted paleo-lake deposits on the flank of the basin*" (Enertopia Corp., 2021).

An additional 'secondary outcrop' was located and sampled by Enertopia approximately 475 m southeast of the discovery outcrop. Despite having the same general claystone lithology, the 'secondary outcrop' sample yielded lower lithium (290 ppm Li) in comparison to the discovery outcrop.

The discovery and secondary outcrops were resampled by Enertopia and yielded similar results of 630 ppm and 250 ppm Li, respectively.

Note: Both outcrops were sampled by the QP during a 2023 site inspection (see Section 12).

Based on the 2021 prospecting results, Enertopia tested the immediate subsurface in the vicinity of the discovery outcrops using a winkie (portable) drill, which is limited to depths of approximately 15 feet (4.6 m). A total of 5 winkie drillholes were completed (Figure 9.1). This information is presented in Section 10, Drilling.

9.2 Preliminary Bulk Density Measurements

During the site visit, the QP discovered that Enertopia had yet to conduct bulk density measurements. Hence, and in addition to samples collected for assaying, the QP collected 10 drill core samples to obtain bulk density measurements of various Siebert Formation lithologies including variably coloured claystone with intercalated volcanic tuff, volcanic tuff, and overburden/pediment. The bulk density samples were collected such that the QP could evaluate the densities to convert mineral resource volumes to tonnages.

The bulk density samples were couriered to ALS Vancouver and measured using ALS Code OA-GRA08b (specific gravity on pulps using pycnometer). The preliminary bulk density analytical results are presented in Table 9.1 and associated QP observations include:

- The overburden/pediment had a bulk density of 2.82 g/cm^3 (n=1 analysis; EWRT-BD004).

- The minimum, maximum, and average bulk density measurements of the Seibert Formation strata were 2.79 g/cm^3, 2.82 g/cm^3, and 2.81 g/cm^3, respectively (n=8 analyses).

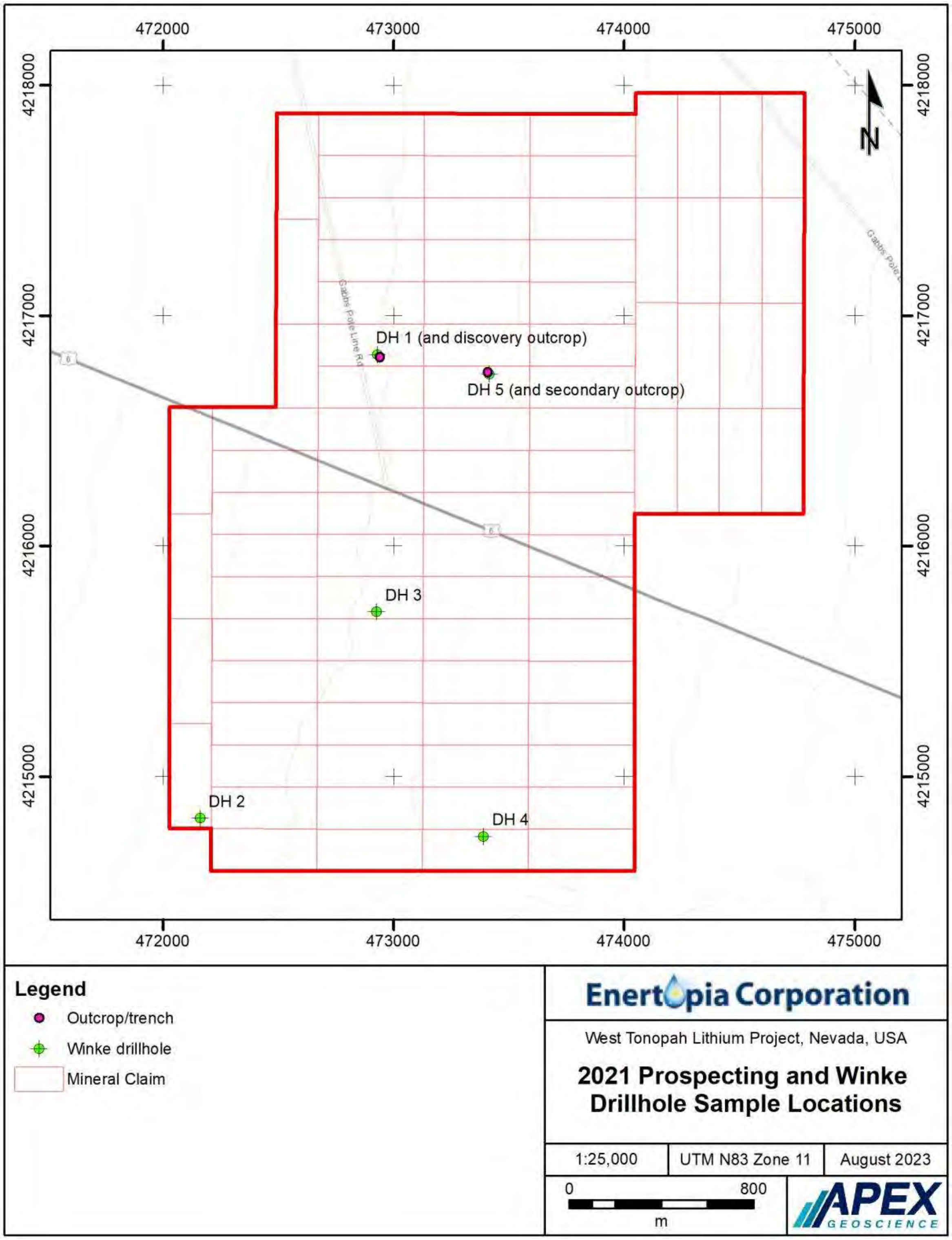
- The bulk density of the tuff/ash unit is 2.81 g/cm^3; n=1 analysis; EWRT-BD007).

Based on these analyses, the average Seibert Formation bulk density is 2.81 g/cm^3. The bulk density used to convert the mineral resource volume to tonnage is discussed further in Sections 14.6.1.

Table 9.1 Preliminary bulk density analytical results. Note: ALS Code OA-GRA08b initially measured specific gravity; the analytical methodology used fluid with density values close to that of water (1.0 g/cm^3), and hence, the resulting bulk density calculation is close to the specific gravity.

Sample ID	Sample media	Drillhole ID	From (ft)	To (ft)	From (m)	To (m)	Description	Specific gravity	Bulk density (g/cm^3)
EWRT-BD001	Drill core	DH 23-10	286	290	87.2	88.4	Medium-grey claystone with interbedded white tuff	2.82	2.81
EWRT-BD002	Drill core	DH 23-10	138	142	42.1	43.3	Light grey claystone with intercalated white tuff	2.83	2.82
EWRT-BD003	Drill core	DH 23-10	68	72	20.7	21.9	Light grey mottled claystone with tuff clasts	2.82	2.81
EWRT-BD004	Drill core	DH23-01	0	6	0.0	1.8	Overburden-pediment	2.83	2.82
EWRT-BD005	Drill core	DH 23-01	86	80	26.2	24.4	Medium-grey claystone (some Fe-oxidation) with tuff clasts	2.83	2.82
EWRT-BD006	Drill core	DH 23-01	134	136	40.8	41.5	Light grey, rubbly claystone with tuff clasts	2.80	2.79
EWRT-BD007	Drill core	DH 23-01	216	220	65.8	67.1	Buff tan to white ash-tuff	2.82	2.81
EWRT-BD008	Drill core	DH 23-01	348	352	106.1	107.3	Medium- grey claystone - abundant tuff clasts	2.80	2.79
EWRT-BD009	Drill core	DH 22-16	75	80	22.9	24.4	Grey-brown mudstone with minor tuff	2.81	2.80
EWRT-BD010	Drill core	DH 22-16	95	100	29.0	30.5	Buff tan to brown, Fe-oxidized siltstone/sandstone with minor tuff	2.82	2.81
							Minimum		2.79
							Maximum		2.82
							Average		2.81
							Standard deviation		0.01
							RSD%		0.40

Figure 9.1 Location of Siebert Formation outcrops/trenches and the winkie drillholes excavated/drilled by Enertopia in 2021.



10 Drilling

10.1 2021 winkie drill Program

During 2021, Enertopia drilled a total of 5 shallow surface holes at the West Tonopah Lithium Project using a winkie drill (see Figure 9.1). The winkie drillholes were drilled vertically (orientation of zero and dip of -90°) to a maximum depth of 17.5 feet (5.3 m).

Apart from drillhole DH2, which did not intersect bedrock, the drillhole material (clipping returns) from 4 of the 5 holes were sampled by Enertopia geologists and sent to ALS Chemex in Reno, NV for geochemical analysis using ALS Code ME-ICP61 (4 acid digestion with ICP-AES analysis for 33 elements).

Results of the winkie drill program yielded:

- Drillhole DH1 was drilled at the discovery outcrop exposure and intersected 12 feet (3.7 m) of lithium-claystone (from 2 to 14 feet below surface or 0.6-4.3 m). Analyses of the winkie drill return material yielded between 690 and 860 ppm Li with an average grade of 750 ppm Li. The last 4 feet (1.2 m) of the hole returned 860 ppm Li, which represents the highest lithium-claystone encountered in the winkie drill program (Table 10.1).

- Drillhole DH2 did not penetrate bedrock and yielded only overburden and pediment material.

- Drillhole DH3 was drilled approximately 3,600 feet (1.1 km) south from DH-1 and intersected lithium-claystone from the surface to a depth of 14 feet (4.3 m). Claystone from this hole yielded between 370 and 730 ppm Li with an average grade of 532 ppm Li. The highest-grade interval was from the surface to a depth of 4 feet (1.2 m) and returned 730 ppm Li (Table 10.1). The lithium concentrations decrease down the hole; perhaps because the Siebert Formation transitions from intercalated mudstone and tuffaceous material at the top (higher lithium) to higher modal abundances of siltstone at depth (lower lithium).

- Drillholes DH4 and DH 5 yielded lower lithium values of 200 to 270 ppm Li in comparison to the DH1 and DH3 holes. Hole DH-5 was collared adjacent to the second outcrop sampled by Enertopia, which also yielded lower lithium in comparison to the discovery outcrop (290 ppm and 250 ppm Li). An explanation for this is that the DH4 and DH5 drillholes were collared in the eastern part of the property where the Siebert Formation lithology is siltier in comparison to the claystone-dominated strata in the western part of the property as documented and sampled in drillholes DH1 and DH3.

- Note that a tuff/ash marker unit encountered in the near surface at drillholes DH1 and DH4 was not sampled by Enertopia.

Table 10.1 2021 winkie drill lithium analytical results. Source: Enertopia Corp. (2021).

Winke drillhole ID and interval depth (ft)	Easting (m) Z11, NAD83	Northing (m) Z11, NAD83	Lithology description	Composite sample ID	From (m)	To (m)	Total thickness (m)	Li (ppm)
DH1 0-2	472930	4216832	Tuff marker	/	/	/	/	/
DH1 2-4			Green claystone minor tuff	1	0.61	1.83	1.22	700
DH1 4-6			Green claystone minor tuff					
DH1 6-8			Green claystone minor tuff	2	1.83	3.05	1.22	690
DH1 8-10			Green claystone					
DH1 10-12			Green claystone	3	3.05	4.27	1.22	860
DH1 12-14			Green claystone					
DH2 0-10	472161	4214820	Overburden	/	/	/	/	/
DH3 0-2	472926	4215716	Tuff marker green claystone	4	0.00	1.22	1.22	730
DH3 2-4			Tuff marker green claystone					
DH3 4-6			Green claystone minor tuff?	5	1.22	2.44	1.22	580
DH3 6-8			Green claystone minor tuff?					
DH3 8-10			Green claystone	6	2.44	4.27	1.83	370
DH3 10-12			Green claystone					
DH3 12-14			Green claystone					
DH3 14-16			Green claystone	7	4.27	5.33	1.07	220
DH3 16-17.5			Green claystone					
DH4 0-2	473390	4214741	Tuff marker green claystone	/	/	/	/	/
DH4 2-4			Green claystone	8	0.61	2.44	1.83	220
DH4 4-6			Green claystone					
DH4 6-8			Green claystone					
DH4 8-10			Green claystone	9	2.44	3.66	1.22	200
DH4 10-12			Green claystone					
DH4 12-14			Green claystone	10	3.66	4.27	0.61	240
DH5 0-4	473414	4216746	Green claystone mix tuff, siltstone	11	0.00	1.83	1.83	230
DH5 4-6			Green claystone mix tuff, siltstone					
DH5 6-8			Green claystone	12	1.83	2.90	1.07	270
DH5 8-9.5			Siltstone					

10.2 2022-2023 Sonic drill Programs

10.2.1 Introduction

During 2022 and 2023, Enertopia conducted 2 separate Sonic drill programs at the West Tonopah Lithium Project that collectively drilled 22 holes to a total depth of 4,913.0 feet (1,497.5 m; Table 10.2, Figure 10.1). The programs included,

- A 2022 program that drilled 10 holes totalling 1,560.0 feet (475.5 m).

- A 2023 program that drilled 12 holes totalling 3,353.0 feet (1,022.0 m).

The drillhole descriptions are presented in Table 10.2, and in summary, all holes were drilled vertically at an orientation of Azimuth zero degrees and a dip of -90 degrees. Enertopia commissioned Gregory Drilling Inc. in Yuba, CA and Boart Longyear in Elko, NV to complete the 2022 and 2023 drilling, respectively. Both drilling companies used a track mounted Sonic drill rig and drilled 4-inch cores (101.6 mm).

The drill collars were surveyed by Enertopia geologists using a handheld GPS. The holes were drilled to end-of-hole depths of between 120 and 400 feet (40 and 122 m) with an average drillhole depth of 223 feet (68 m). The sonic rig and large diameter cores were implemented to maximize core recovery within the sedimentary and volcaniclastic strata. The target unit Seibert Formation core recovery in the 2022 and 2023 programs is estimated at 85% and >90%, respectively.

10.2.2 Lithium Analytical Results

All assay values described in this technical report are presented as core interval apparent widths. Downhole surveys were not completed, and therefore, true thicknesses are not known.

Enertopia logged and sampled the drill cores. The Company rented warehouse space for core storage at the historical Hall Mine, which approximately 13.5 miles (22 km) north of the West Tonopah Lithium Project. The decommissioned mine property and mine site infrastructure are currently owned by Pathfinder Development Corporation.

A total of 754 Siebert Formation sedimentary/volcaniclastic drill core samples were collected by Enertopia geologists for analysis. This included 221 and 533 samples/analyses during the 2022 and 2023 drill programs, respectively.

The minimum, maximum, and average lithium values on a hole-by-hole basis is presented in Table 10.2 and Figure 10.2. Lithium values ranged between 20 and 1,520 ppm Li with an overall average of 583.1 ppm Li. Lithium-clay concentrations are noticeably higher in the western portion of the West Tonopah Lithium Project property (see Section 7.3, Mineralisation).

Table 10.2 Drillhole descriptions and summary of lithium analytical results.

A) 2022 Drillhole program lithium analytical summary

Drillhole ID	Latitude	Longitude	Orien-tation (Az °)	Dip (°)	Total depth (ft)	Total depth (m)	No of assays	Minimum Li (ppm)	Maximum Li (ppm)	Average Li (ppm) [1]	Standard deviation	RSD%
DH22-01	38.098890	-117.308564	0	-90	120.0	36.6	20	440	1,120	833.0	200.8	24.1
DH22-04	38.100290	-117.304600	0	-90	200.0	61.0	29	280	630	394.8	87.9	22.3
DH22-05	38.102674	-117.310320	0	-90	120.0	36.6	15	110	1,140	796.0	310.8	39.0
DH22-06	38.105260	-117.311100	0	-90	120.0	36.6	14	500	1,290	842.1	236.3	28.1
DH22-07	38.107500	-117.311640	0	-90	120.0	36.6	16	70	1,050	723.1	247.2	34.2
DH22-08	38.095680	-117.308150	0	-90	120.0	36.6	26	90	1,070	466.2	217.2	46.6
DH22-10	38.091270	-117.312840	0	-90	160.0	48.8	20	540	1,450	831.5	216.2	26.0
DH22-16	38.084410	-117.301700	0	-90	200.0	61.0	26	30	740	375.4	172.1	45.9
DH22-19	38.084000	-117.307610	0	-90	200.0	61.0	25	20	660	355.6	201.4	56.6
DH22-20	38.108040	-117.288600	0	-90	200.0	61.0	30	200	610	397.0	106.8	26.9
				Total (n=10 drillholes)	**1,560.0**	**475.5**	**221.0**					

B) 2023 Drillhole program lithium analytical summary

Drillhole ID	Latitude	Longitude	Orient ation	Dip	Total depth (ft)	Total depth (m)	No of assays	Minimum Li (ppm)	Maximum Li (ppm)	Average Li (ppm) [1]	Standard deviation	RSD%
DH23-01	38.107560	-117.310230	0	-90	400.0	121.9	72	50	1,520	797.4	300.0	37.6
DH23-02	38.107522	-117.307668	0	-90	251.0	76.5	40	110	1,510	813.3	337.7	41.5
DH23-03	38.100310	-117.309270	0	-90	300.0	91.4	55	20	750	404.2	180.3	44.6
DH23-04	38.093570	-117.310550	0	-90	286.0	87.2	34	150	1,100	485.6	224.2	46.2
DH23-05	38.089500	-117.311580	0	-90	352.0	107.3	43	80	1,030	543.5	219.0	40.3
DH23-06	38.089770	-117.308120	0	-90	137.0	41.8	25	50	490	309.2	125.4	40.6
DH23-07	38.086050	-117.312190	0	-90	181.0	55.2	29	30	760	467.6	170.4	36.4
DH23-08	38.082800	-117.312936	0	-90	247.0	75.3	43	20	890	435.8	237.1	54.4
DH23-09	38.083700	-117.316350	0	-90	317.0	96.6	44	200	1,170	641.4	269.5	42.0
DH23-10	38.092495	-117.316834	0	-90	304.0	92.7	49	130	1,410	828.6	236.3	28.5
DH23-11	38.089510	-117.314700	0	-90	341.0	103.9	54	190	1,270	764.3	267.0	34.9
DH23-12	38.081910	-117.310580	0	-90	237.0	72.2	45	20	800	340.2	210.1	61.8
				Total (n=12 drillholes)	**3,353.0**	**1,022.0**	**533.0**					
				Total (2022 and 2023 drill programs, n=22 drillholes)	**4,913.0**	**1,497.5**	**754.0**					

[1] Average Li presented as the arithmetic mean.

Figure 10.1 Location of Enertopia's 2022 and 2023 drillholes.

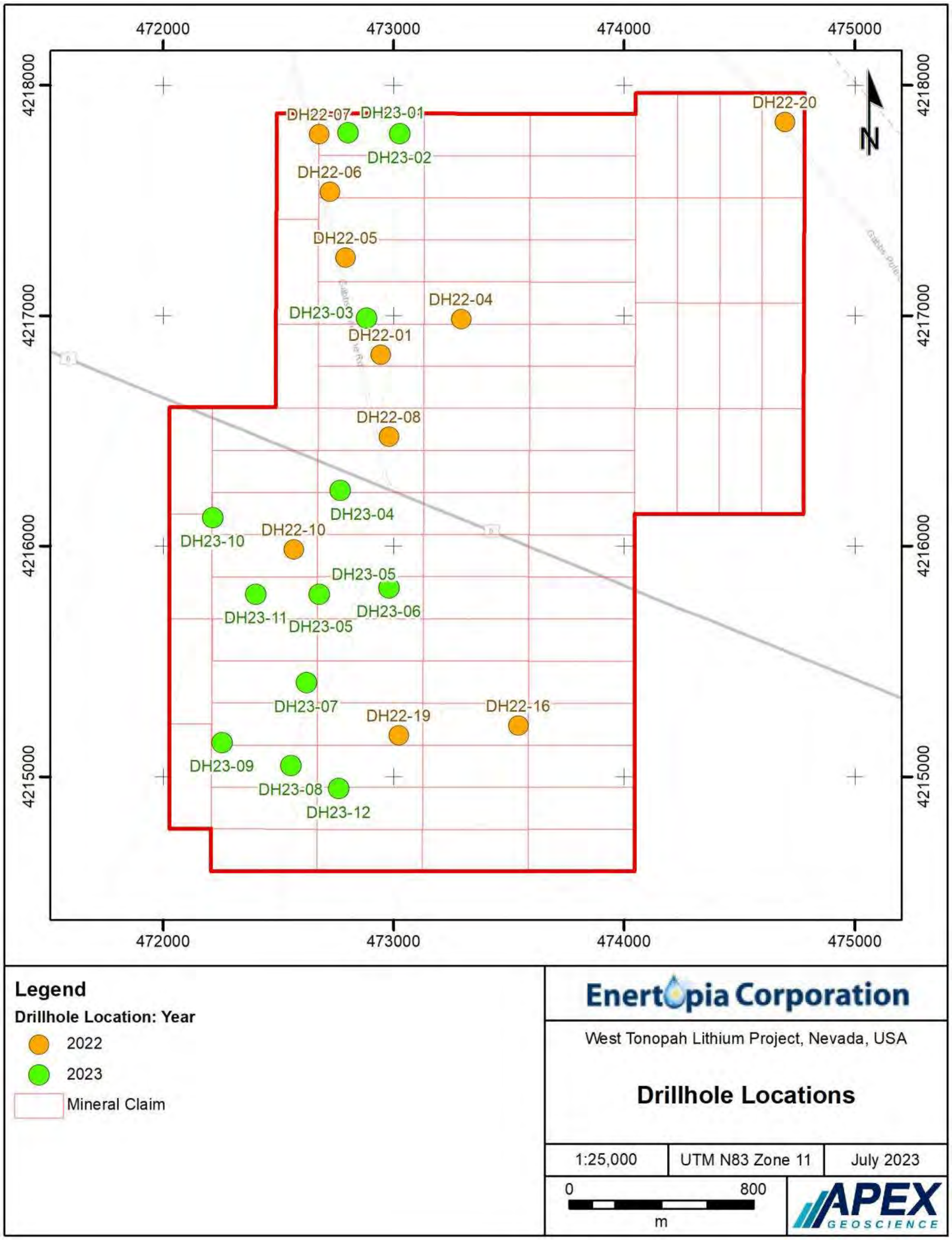
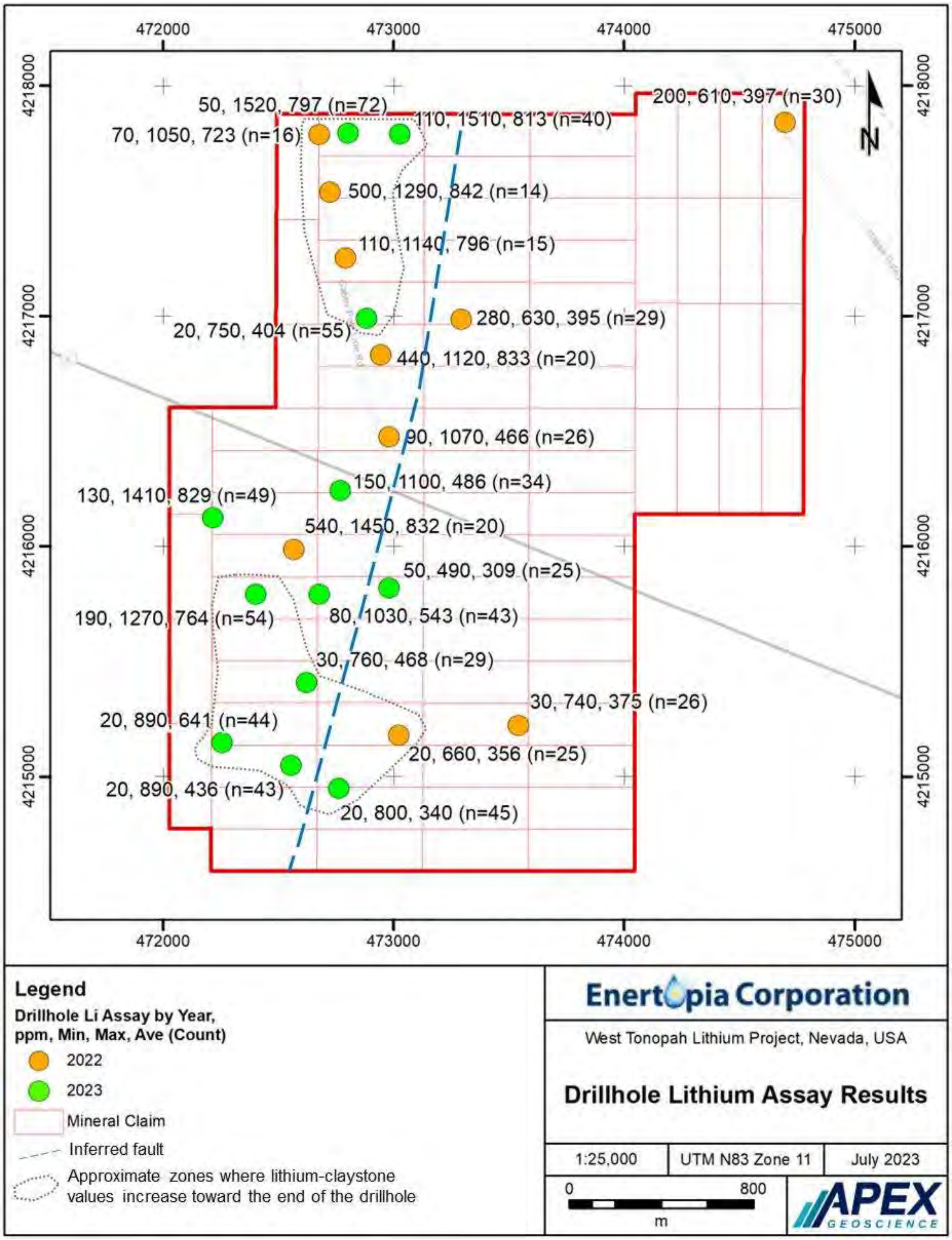


Figure 10.2 Minimum, maximum, and average (un-weighted) lithium analytical results for each drillhole. A north-south-trending inferred fault (blue dashed line) is hypothesized to divide the Siebert Formation into west and east mineral resource areas. Grey dashed polygons represent zones where the Li-claystone values increase toward the end of the drillhole (see Figures 10.3 and 10.4).



All 10 holes drilled in 2022 ended in claystone with lithium mineralisation including values that ranged from 330 ppm to 1,045 ppm Li. Observations of the drill cores suggests local normal faulting and structuring occurs in the area. Overburden varied from 13 feet to a maximum of 90 feet (4.0 to 27.4 m).

A summary of Enertopia’s 2022 drillhole results is presented in Table 10.3 and summarized as follows:

- Drillhole DH-22-10 had an average lithium grade of 831 ppm Li from 70 feet (21.3 m) to the end of hole at 170 feet (51.8 m), including 1,045 ppm Li in the holes last 10 feet (3.1 m).

- Drillhole DH-22-04 intersected a suspected lower claystone horizon with a thickness of 160 feet (48.8 m). The average lithium content in this hole was 395 ppm Li (n=29 analyses), and because of the lower lithium values, Enertopia postulated that the hole may have been drilled across a fault or within a different structural/stratigraphic block in comparison to higher lithium-bearing clays in the western part of the property (Enertopia Corp., 2022).

Table 10.3 Select 2022 drillhole lithium analytical results. Source Enertopia Corp. (2022).

Drillhole ID	From (feet)	To (feet)	From (m)	To (m)	Average Li (ppm)	Highest Li (ppm)	Claystone horizon description	Comments
DH22-04	30	190	9.1	57.9	408	630	Brown, Gray claystone	
Including	180	190	54.9	57.9	330			EOH
DH22-10	70	170	21.3	51.8	831	1,450	Green silty claystone	
Including	160	170	48.8	51.8	1,045			EOH
DH22-16	60	90	18.3	27.4	515	710	Green to black claystone	
	120	200	36.6	61.0	411	635		
Including	190	200	57.9	61.0	635		Black claystone	EOH
DH22-19	90	200	27.4	61.0	437	660	Green to black claystone	
Including	190	200	57.9	61.0	420			EOH
DH22-20	50	200	15.2	61.0	441	610	Green to black claystone	
Including	190	200	57.9	61.0	535		Black claystone	EOH
DH22-01	13	120	4.0	36.6	738	1,120	Light green claystone	
Including	100	120	30.5	36.6	905			EOH
DH22-05	32.5	120	9.9	36.6	799	1,140	Light green claystone	
Including	110	120	33.5	36.6	935			EOH
DH22-06	47.5	120	14.5	36.6	842	1,290	Light green claystone	
Including	112.5	120	34.3	36.6	880			EOH
DH22-07	40	120	12.2	36.6	772	1,050	Light green claystone	
DH22-07	110	120	33.5	36.6	785			EOH
DH22-08	20	120	6.1	36.6	740	1,070	Light green claystone	
Including	112	120	34.1	36.6	590			EOH

The 2023 drill program outlined a broad area of green claystone ranging from 15 feet to 130 feet below surface (4.6 to 39.6 m; Enertopia Corp., 2023a). The thickness of the green claystone horizon varies from 50 to 195 feet in thickness (15.2 to 59.4 m). All twelve holes ended in claystone. A summary of Enertopia's 2023 drillhole results is presented in Table 10.4 and summarized as follows:

- Drillhole DH23-02 yielded 184 feet (56.1 m) with 828 ppm Li with several intercepts of over 1,000 ppm Li.

- DH23-04 yielded 2 intercepts of over 1,000 ppm Li between 199 – 209 feet (60.7 to 63.7 m).

- DH23-05 yielded a 157-foot (47.9 m) interval averaging 637 ppm Li.

- DH23-06 was drilled to test for the eastern extent of the deposit and yielded lower lithium. The higher modal abundance of ash tuff could indicate a different depositional (e.g., lagoon margin) or a tectonically re-positioned block of strata that yields lower lithium values with respect to the western portion of the property.

- DH23-07 was drilled to a depth of 181 feet (55.2 m) and averaged 516 ppm Li between 50 feet (15.2 m) to the EOH.

- DH23-10 yielded 7 intercepts of over 1,000 ppm Li with intercepts of 843 ppm Li over 236 feet (71.9 m) and 1,410 ppm Li over 5 feet (1.5 m).

- DH23-11 intersected a thick lithium-clay zone of 248 feet (75.6 m) that averaged 844 ppm Li with 8 separate zones grading above 1,000 ppm Li (Enertopia Corp., 2023b).

10.2.3 Observations on the Spatial (Lateral and Subsurface) Distributions of Lithium

Within the boundaries of the property, Enertopia's exploration work has shown that the Siebert Formation in the western portion of the project area contains higher lithium values in comparison to the east. To support this contention:

- In the west part of the property defined by 16 drillholes, 587 core samples yield between the minimum limit of detection (20 ppm Li) and 1,520 ppm Li with an average of 646.9 ppm Li. Of the 587 analyses, 519 samples had >300 ppm Li (88%), 382 samples had >500 ppm Li (65%), 250 samples had >700 ppm Li (43%), and 72 samples had >1,000 ppm Li (12%).

- In the east part of the property defined by 6 drillholes, 167 cores samples yield between the minimum limit of detection (20 ppm Li) and 800 ppm Li with an average of 359.0 ppm Li. Of the 167 analyses, 112 samples had >300 ppm Li (67%), 30 samples had >500 ppm Li (18%), 5 samples had >700 ppm Li (3%), and none of the samples had >1,000 ppm Li.

Table 10.4 Select 2023 drillhole lithium analytical results. Source Enertopia Corp. (2023b).

Drillhole ID	From (feet)	To (feet)	From (m)	To (m)	Lithium (ppm)	Claystone horizon description	Comments
DH23-07	0	181	0.0	55.2			EOH
Interval	50	181	15.2	55.2	516	Light green, tan grey	
Interval	143	163			710	Green,grey	
DH23-05	0	352	0.0	107.3			EOH
Interval	150	180	45.7	54.9	456	Light green	
Interval	195	352	59.4	107.3	637	Light green	
Including	231	236	70.4	71.9	1,030	Light green	
DH23-04	0	284	0.0	86.6			EOH
Interval	124	139	37.8	42.4	406	Light green	
Interval	174	284	53.0	86.6	593	Light green, tan	
Including	199	209	60.7	63.7	1,055	Light green, grey	
DH23-6	0	138	0.0	42.1			EOH
Interval	55	80	16.8	24.4	412	Tan light green	
Interval	95	125	29.0	38.1	396	Green, dark green	
DH23-11	0	341	0.0	103.9			EOH
Interval	53	73	16.2	22.3	343	Light green	
Interval	93	341	28.3	103.9	844	Light green, tan, dark green	
Including	204	209	62.2	63.7	1,270	Tan light green	
Including	263	288	80.2	87.8	1,042	Tan light green	
DH23-10	0	304	0.0	92.7			EOH
Interval	68	304	20.7	92.7	843	Tan, green, dark green	
Including	128	143	39.0	43.6	1,210	Light green	
Including	265	290	80.8	88.4	1,002	Dark green	
DH23-02	0	251	0.0	76.5			EOH
Interval	67	251	20.4	76.5	828	Light green, dark green	
Including	132	152	40.2	46.3	1,150	Light green	
Including	237	251	72.2	76.5	1,113	Dark green	

This observation has led the QP to speculate that a hypothetical explanation for lithological and lithium concentration variations in the Siebert Formation strata between the west and east parts of the project area be differentiated from one another by implementing a north-south-trending inferred fault (see Figure 10.2).

Vertically, the sonic drillholes were drilled to depths of between 120 feet (37 m) and 400 feet (122 m). The 2022 sonic holes were drilled to a maximum depth of 200 feet (61 m). Collectively, the 2022-2023 sonic drillholes average depth is 223 feet (68 m; n=22 holes). With respect to the downhole lithium concentration distribution, several drillholes were terminated in some of the highest elevated Li-claystone concentrations. Figures 10.3 and 10.4 show the downhole lithium concentrations in the west and east resource areas, respectively.

Figure 10.3 Downhole lithium concentration profiles within drillholes in the west resource area.

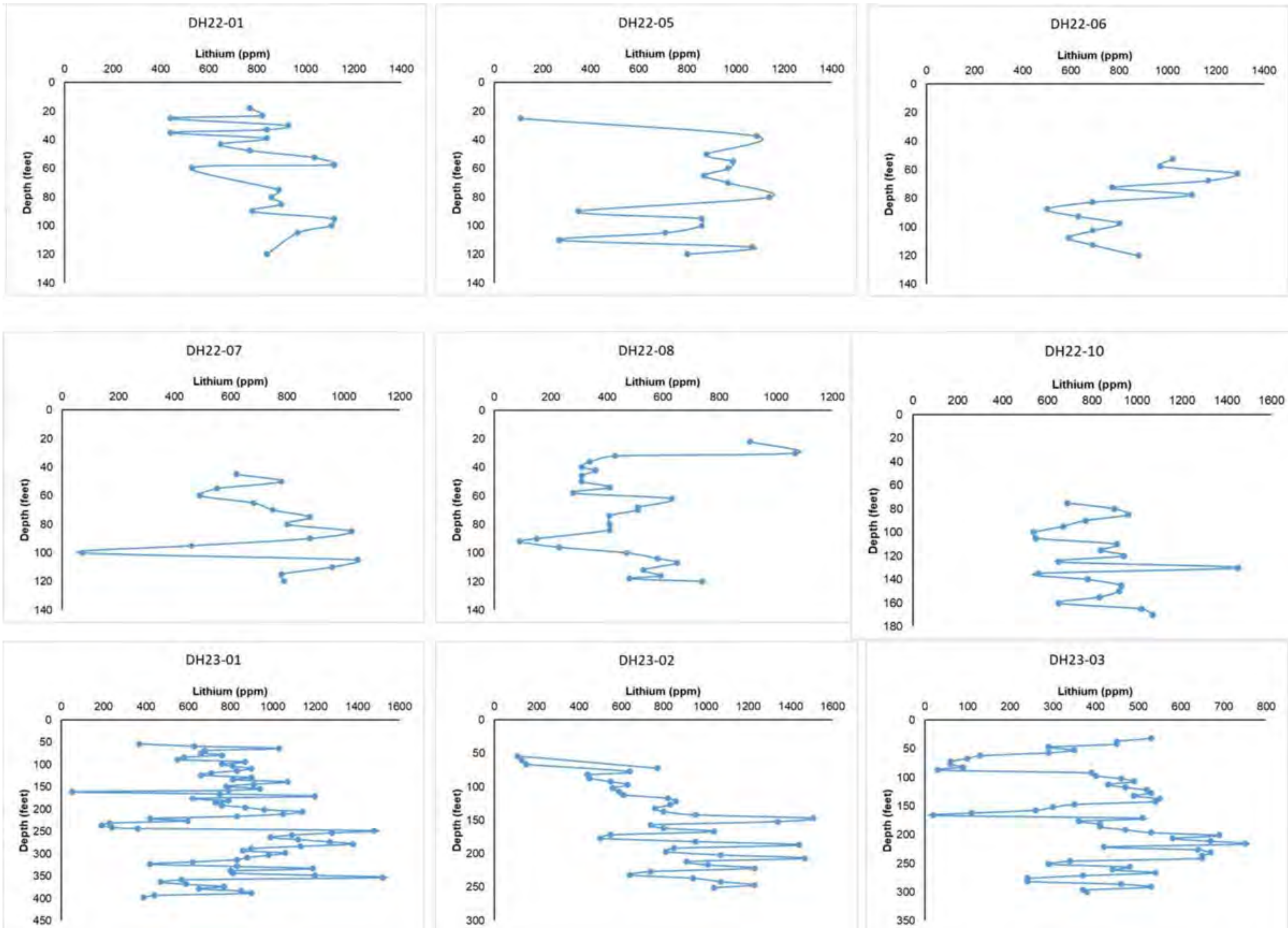


Figure 10.3, continued.

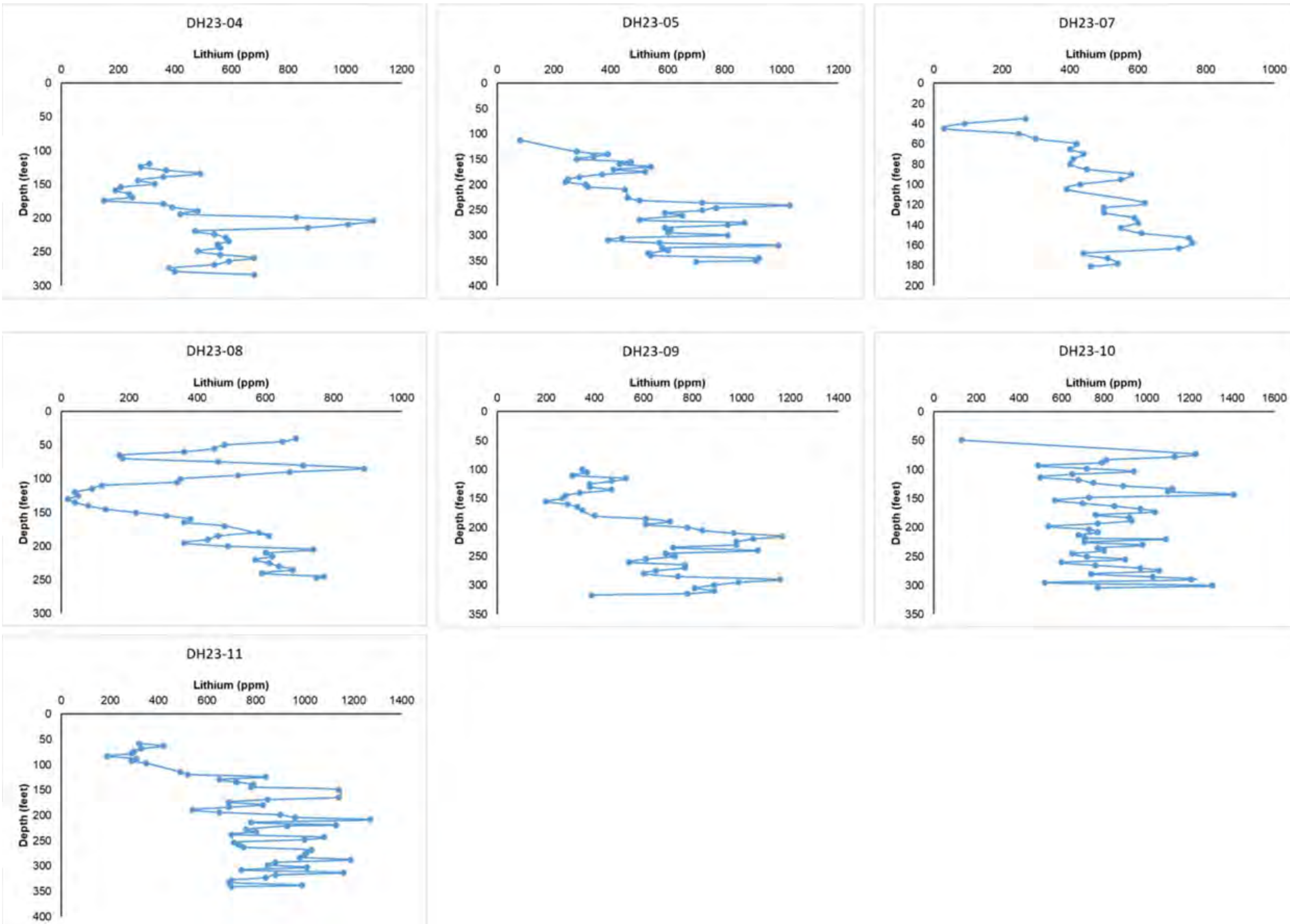
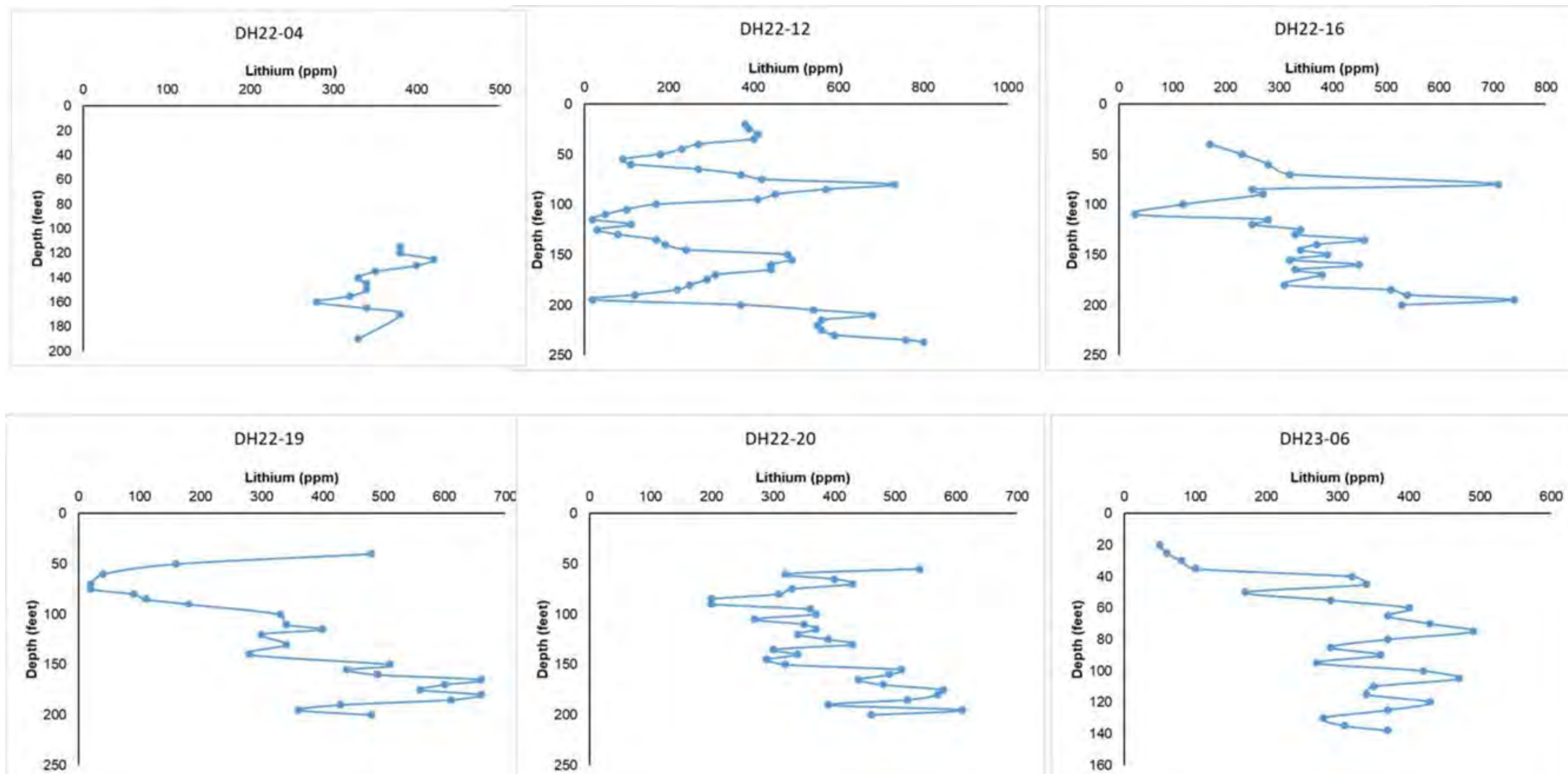


Figure 10.4 Downhole lithium concentration profiles within drillholes in the east resource area.



Downhole lithium geochemical observations include,

- In the northern part of the west resource area, several drillholes terminated in Siebert Formation strata that contained that hole's highest lithium values (e.g., drillholes DH22-05, DH22-07, DH23-01, DH23-02, and DH23-03; Figure 10.3).
- In the southern part of the west resource area, several drillholes terminated in Siebert Formation strata that contained that hole's highest lithium values (e.g., drillholes DH23-07, DH23-09, and DH23-011).
- Exponentially higher lithium concentrations were also encountered in bottom-drillhole strata in the southern part of the east resource area (drillholes DH22-19 and DH23-12) and in the far northeast corner of the property (drillhole DH22-20; Figure 10.4).

This observation is important because it demonstrates that the Li-claystone deposit remains open to depth and could be targeted as part of ongoing mineral exploration by Enertopia at the West Tonopah Lithium Project.

10.3 Drilling Summary

A significant takeaway from Enertopia's drill programs, and subsequent analytical results, is that the Siebert Formation within the West Tonopah Lithium Project has elevated values of lithium. Within the Siebert Formation, lithium is highest within intercalated mudstone with volcaniclastic tuff/ash stratigraphic horizons. In comparison, lower lithium is recorded in the intercalated siltstone/sandstone with volcaniclastic tuff/ash and ash-tuff-dominant horizons.

Consequently, the west part of the project area, which consists largely of mudstone, has a higher modal abundance of lithium in comparison to the east part of the property which currently comprises more siltstone and sandstone, and hence, lower lithium.

To conclude, Enertopia's 2022-2023 sonic drill programs were able to validate the initial outcrop and winkie drillhole observations (i.e., variations in lithium content exist between the high lithium discovery outcrop and the lower lithium secondary outcrop). Based on lithological and lithium variations observed in the subsequent sonic drill program cores, there is unequivocal evidence that the western and eastern parts of the West Tonopah Lithium Project property represent different stratigraphic sections, and as a result, dissimilar levels of lithium enrichment.

The QP hypothesizes that a north-south-trending fault divides the property into at least two stratigraphically succinct sections – both of which are comprised within the Siebert Formation – but likely represent either upthrown or downthrown blocks with different stratigraphic lithologies and depositional environments. The timing of localized faulting and its effect on the distribution of stratigraphic intervals has not been determined.

The Li-claystone mineralisation extends beyond the current drill depths. Numerous drillholes in 1) the north part of the west resource area (n=5 drillholes), 2) south part of the west and east resource areas (n=5 drillholes), and 3) an isolated hole in the uppermost northeast corner of the property terminated in some of the highest Li-claystone concentrations relative to the downhole geochemical profile of each hole. This demonstrates that the Li-claystone deposit remains open to depth and could be targeted as part of ongoing mineral exploration by Enertopia at the West Tonopah Lithium Project

is open for expansion at depth, especially in areas where drill depths from the 2022 drill program in the west were only drilled to 120' to 170' depth. And the deeper drillholes drilled in 2023 intercepted higher grade material below the shallow 2022 drilling program.

Based on Enertopia's exploration results, the Qualified Person concludes that the resource modelling and subsequent mineral resource estimations be conducted on the geological lithology- and lithium value-differentiated west and east resource areas.

11 Sample Preparation, Analyses and Security

11.1 Sample Collection, Preparation and Security

Enertopia geologists collected all samples at the West Tonopah Lithium Project. Outcrop, or near surface, samples were collected by prospecting outcrops, shallow (<2 m) excavated trenches, or by using a shallow winkie drill. Outcrop samples were collected as grab samples. The winkie drill samples were collected from 4- to 6-foot intervals (1.2 to 1.8 m). The drilling programs utilized a sonic drill rig to maximize sedimentary core retrieval. The 2022 and 2023 drill core samples (n=754 samples) were collected at intervals of between 1.0 and 20.0 feet (0.3 to 6.1 m) with a 2022 average of 5.3 feet (1.61 m) and a 2023 average of 5.0 feet (1.51 m).

The sonic drill cores were wrapped in elongated plastic bags as the cores were removed from the core barrel. Once in the core box, the bags were cut open and quick logged on site. The core was then transported to Enertopia's core archival facility located directly north of the West Tonopah Lithium Project. At the core facility, core samples were collected by selecting a representative sample material over the entire length of the core internal selected by Enertopia geologists.

The sample material was placed into plastic sample bags that were labelled using numerical sample identifiers and tied. The samples were placed into larger sample allotments and shipped by Enertopia geologists to ALS Reno for sample processing as part of ALS' analytical process.

Based on the QPs review of Enertopia's drillhole information (logs and sample intervals), Enertopia's sampling process focused on the Siebert Formation and none of the overlying overburden/pediment were sampled. The QP also observed some intervals where the tuff/ash unit was not sampled – likely due to its lower lithium content.

11.2 Analytical Procedures and Laboratory Accreditation

Analytical sample preparation at ALS Reno involved fine crushing the sample material to 70% at <2 mm, splitting the sample using a riffle splitter, and pulverizing the sample up to 250 g at 85% <75 µm. The pulverized split of the sample was analyzed at ALS Vancouver using ALS's Code ME-ICP61, a 33-element analysis that uses four-acid digestion followed by an ICP-AES finish. Bulk density samples (n=10 samples) were analyzed at ALS Vancouver and measured using ALS Code OA-GRA08b (specific gravity on pulps using pycnometer).

ALS Reno and ALS Vancouver are independent of Enertopia and accredited by the Standards Council of Canada to ISO/IEC 17025:2017 (general requirements for the competence of testing and calibration laboratories).

11.3 Quality Assurance – Quality Control

The QP assessed Enertopia's QA-QC dataset, which consisted of sample standards and duplicate analyses. Sample blanks were not used. The Company conducted all analytical work at ALS Vancouver and no check labs were commissioned. All QA-QC work was conducted on the Company's drill core samples. The analytical results of the duplicate pairs and standard samples are presented in the text that follows.

11.3.1 Duplicate Samples

A total of 9 duplicate pair samples were created by Enertopia as part of the 2023 drill program. A comparative summary of the duplicate samples is presented in Table 11.1 and Figure 11.1.

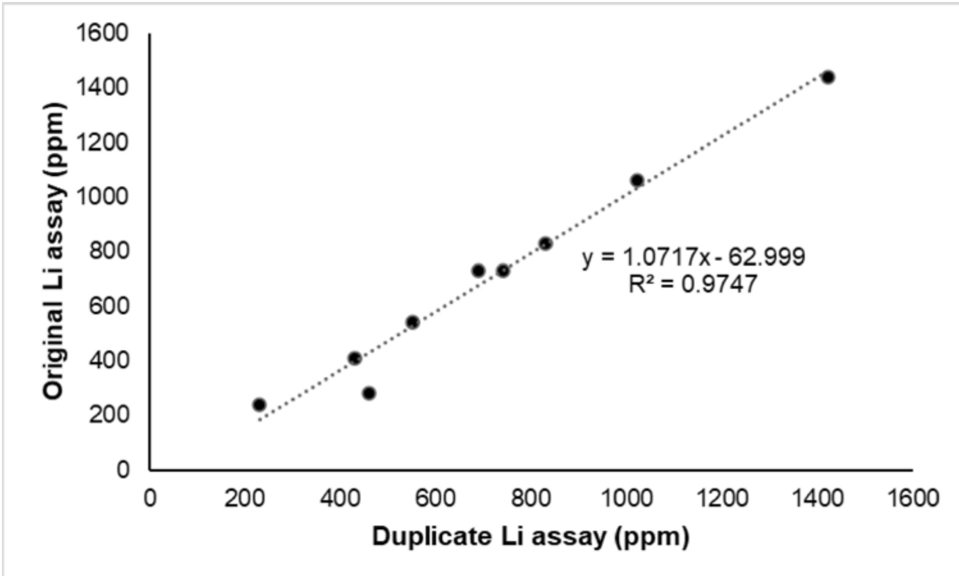
As an assessment of data quality and estimate of precision or reproducibility of the analytical results, the average percent relative standard deviation (also known as the % coefficient of variation), or average RSD% is calculated using the formula: *RSD% = standard deviation/mean x 100*. Average RSD% values below 30% are considered to indicate very good data quality; between 30 and 50%, moderate quality and over 50%, poor quality.

The RSD% of the duplicate pair's ranges from zero to 34.4%. If the single duplicate pair samples with 34.4 RSD% is removed, then the reproducibility improves significantly such that RSD% range is zero to 4%. The QP concludes that most of the duplicate samples exhibit very good data quality. The reason for the single duplicate pair with an RSD% of 34.4% is not known; the QP recommends that these samples are revisited by Enertopia to check sampled IDs and the Company's dataset. It is possible that the sample needs to be re-analyzed. Figure 11.1 shows the precision of the duplicate pairs with an R^2 values 0.9747; this would improve to a near 1:1 relationship if the 'outlier' duplicate pair described above was removed from the plot. It is the QPs opinion that the duplicate pair sample analysis shows excellent precision and reproducibility of analytical results.

Table 11.1 Statistical summary of duplicate pairs.

Sample ID	Drillhole ID	Interval (ft)	Al (%)	Ca (%)	K (%)	Li (ppm)	Mg (%)	Na (%)	Sr (ppm)
776424	DH23-10	270-275	5.95	5.20	4.07	1060	2.69	0.85	3090
776425	DH23-10	Duplicate	5.91	5.21	4.03	1020	2.57	0.86	3010
		Minimum	5.91	5.20	4.03	1020	2.57	0.85	3010
		Maximum	5.95	5.21	4.07	1060	2.69	0.86	3090
		Average	5.93	5.21	4.05	1040	2.63	0.86	3050
		Standard Deviation	0.0	0.0	0.0	28.3	0.1	0.0	56.6
		RSD%	0.5	0.1	0.7	2.7	3.2	0.8	1.9
845761	DH23-02	182-187	3.92	16.70	3.28	1440	2.94	0.60	2320
845762	DH23-02	Duplicate	4.19	15.25	3.48	1420	2.98	0.64	2100
		Minimum	3.92	15.25	3.28	1420	2.94	0.60	2100
		Maximum	4.19	16.70	3.48	1440	2.98	0.64	2320
		Average	4.06	15.98	3.38	1430	2.96	0.62	2210
		Standard Deviation	0.2	1.0	0.1	14.1	0.0	0.0	155.6
		RSD%	4.7	6.4	4.2	1.0	1.0	4.6	7.0
845268	DH23-01	109-114	5.73	4.89	2.40	830	1.78	1.02	2820
845269	DH23-01	Duplicate	5.57	4.92	2.36	830	1.77	0.98	2710
		Minimum	5.57	4.89	2.36	830	1.77	0.98	2710
		Maximum	5.73	4.92	2.40	830	1.78	1.02	2820
		Average	5.65	4.91	2.38	830	1.78	1.00	2765
		Standard Deviation	0.1	0.0	0.0	0.0	0.0	0.0	77.8
		RSD%	2.0	0.4	1.2	0.0	0.4	2.8	2.8
845382	DH23-03	261-266	6.62	4.79	4.41	540	2.25	1.90	664
845383	DH23-03	Duplicate	6.61	4.65	4.47	550	2.22	1.87	650
		Minimum	6.61	4.65	4.41	540	2.22	1.87	650
		Maximum	6.62	4.79	4.47	550	2.25	1.90	664
		Average	6.62	4.72	4.44	545	2.24	1.89	657
		Standard Deviation	0.0	0.1	0.0	7.1	0.0	0.0	9.9
		RSD%	0.1	2.1	1.0	1.3	0.9	1.1	1.5
845422	DH23-09	245-250	6.92	6.47	4.19	730	1.69	1.36	1790
845423	DH23-09	Duplicate	6.90	6.32	4.17	740	1.71	1.37	1845
		Minimum	6.90	6.32	4.17	730	1.69	1.36	1790
		Maximum	6.92	6.47	4.19	740	1.71	1.37	1845
		Average	6.91	6.40	4.18	735	1.70	1.37	1818
		Standard Deviation	0.0	0.1	0.0	7.1	0.0	0.0	38.9
		RSD%	0.2	1.7	0.3	1.0	0.8	0.5	2.1
845488	DH23-12	25-30	6.56	6.28	5.28	410	1.05	1.06	881
845489	DH23-12	Duplicate	6.55	6.01	5.23	430	1.09	1.05	884
		Minimum	6.55	6.01	5.23	410	1.05	1.05	881
		Maximum	6.56	6.28	5.28	430	1.09	1.06	884
		Average	6.56	6.15	5.26	420	1.07	1.06	883
		Standard Deviation	0.0	0.2	0.0	14.1	0.0	0.0	2.1
		RSD%	0.1	3.1	0.7	3.4	2.6	0.7	0.2
845569	DH23-05	145-150	6.43	6.24	2.43	280	1.08	1.65	792
845570	DH23-05	Duplicate	6.97	2.95	2.46	460	1.65	1.35	918
		Minimum	6.43	2.95	2.43	280	1.08	1.35	792
		Maximum	6.97	6.24	2.46	460	1.65	1.65	918
		Average	6.70	4.60	2.45	370	1.37	1.50	855
		Standard Deviation	0.4	2.3	0.0	127.3	0.4	0.2	89.1
		RSD%	5.7	50.6	0.9	34.4	29.5	14.1	10.4
845620	DH23-04	159-164	7.40	3.62	2.70	240	1.16	1.76	555
845621	DH23-04	Duplicate	7.18	3.50	2.61	230	1.11	1.74	535
		Minimum	7.18	3.50	2.61	230	1.11	1.74	535
		Maximum	7.40	3.62	2.70	240	1.16	1.76	555
		Average	7.29	3.56	2.66	235	1.14	1.75	545
		Standard Deviation	0.2	0.1	0.1	7.1	0.0	0.0	14.1
		RSD%	2.1	2.4	2.4	3.0	3.1	0.8	2.6
845711	DH23-11	253-258	6.45	7.46	5.08	730	1.81	1.07	2140
845712	DH23-11	Duplicate	6.47	7.29	5.26	690	1.74	1.09	2140
		Minimum	6.45	7.29	5.08	690	1.74	1.07	2140
		Maximum	6.47	7.46	5.26	730	1.81	1.09	2140
		Average	6.46	7.38	5.17	710	1.78	1.08	2140
		Standard Deviation	0.0	0.1	0.1	28.3	0.0	0.0	0.0
		RSD%	0.2	1.6	2.5	4.0	2.8	1.3	0.0

Figure 11.1 Original sample analysis versus its duplicate pair.



11.3.2 Standard Samples

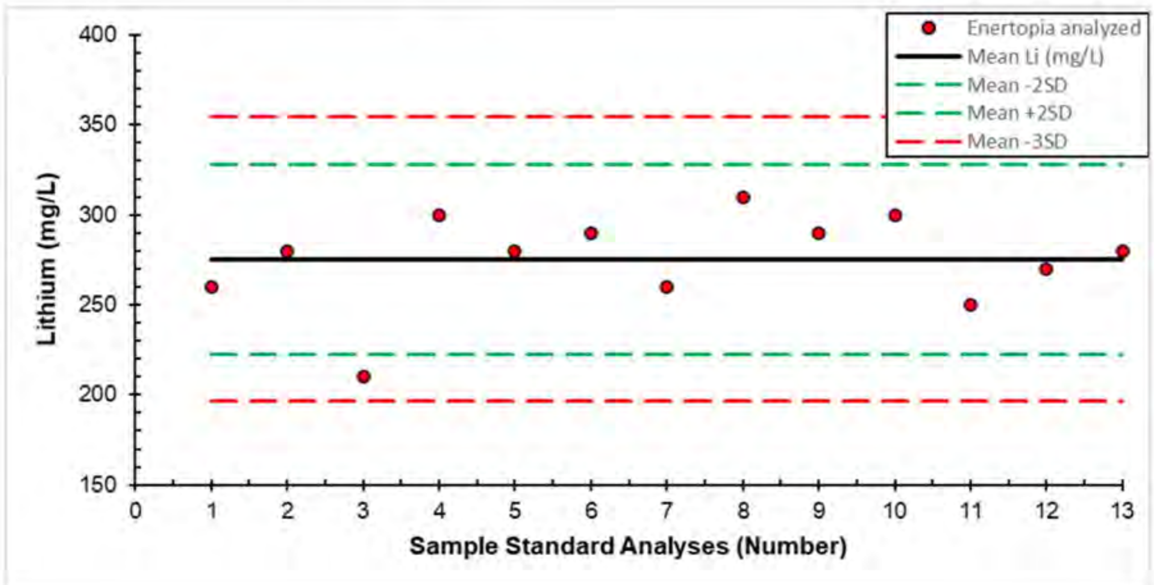
Certified Reference Material Standards were not used. Alternatively, Enertopia created separate internal company standard samples for the 2022 and 2023 drill programs. The Company's methodology involved the collection of individual 'grab' samples from outcrops that occur within the boundaries of the property. The 2022 and 2023 standard samples were collected for different outcrops. The samples were inserted randomly into the sample stream and recorded in the sample logs as "Standards".

Note: The individual samples collected for the 2022 and 2023 standard samples were not homogenized to create a single standard sample and then subjected to a laboratory round robin. Hence, every standard sample represents a unique sample albeit coming from the same outcrop.

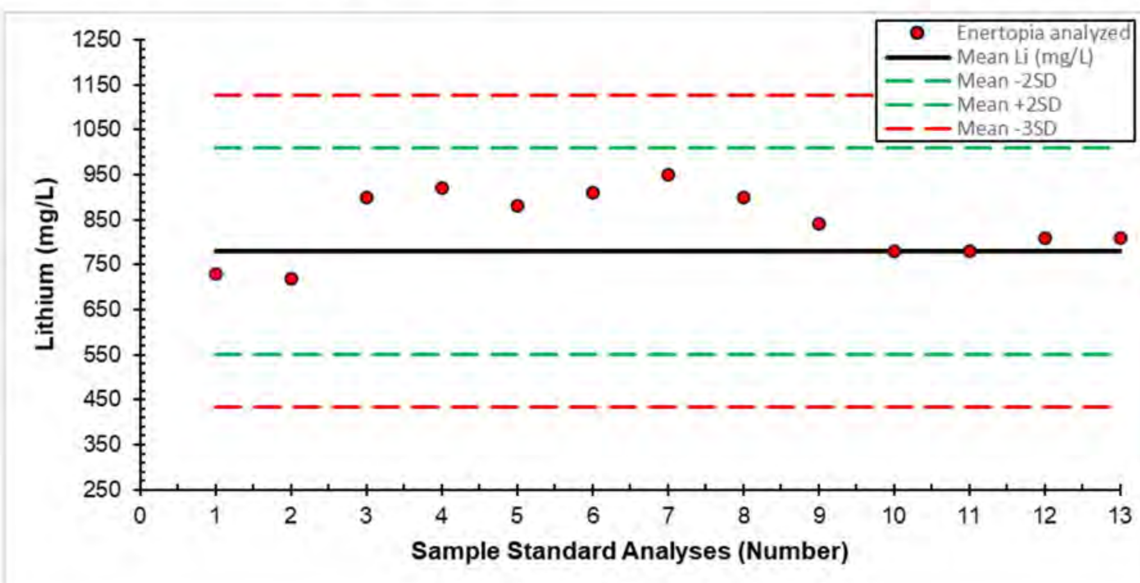
Enertopia submitted 36 standard samples for analysis including 13 and 23 during the 2022 and 2023 drill campaigns. Analytical time plots of the standard sample analysis including trendlines of the mean and the 2nd and 3rd standard deviations of the mean are presented in Figure 11.2. Except for a single analysis, 97% of the standard samples fall within 2-standard deviations of the mean. The outlier is still within 3-standard deviations. Based on the 36 standard sample analyses, there was no evidence of systematic contamination nor is there any bias of the average concentrations of standard samples.

Figure 11.2 Graphical evaluation of the standard sample analytical results.

A) 2022 Enertopia-created sample standards



B) 2023 Enertopia-created sample standards



11.4 Adequacy of Sample Collection, Preparation, Security, and Analytical Procedures

The QP has reviewed the adequacy of the sample preparation, security, and analytical procedures conducted by Enertopia and found no significant issues or inconsistencies that would cause one to question the validity of the data. A reasonable practical level of sample security from the field to the analytical laboratories is maintained by Enertopia.

The QPs review of the QA-QC results provides the opinion that the data is of reasonable quality, minimal contamination occurred during sample preparation and at the laboratories, and the analytical results are repeatable with good precision and accuracy. The QP is therefore satisfied with the adequacy of the sample preparation, security, and analytical procedures as implemented by Enertopia. The resulting exploration and drillhole assay databases are reasonable and sufficient for ongoing exploration activities and target generation. The core logging and drill core assay database is of reasonable quality to formulate three-dimensional models, define the geometry of mineralized zones, and for use in mineral resource estimations. It is recommended that Enertopia bolster its QA-QC protocols in the future by considering the addition of Certified Reference Materials, sample blanks, and a secondary check laboratory.

12 Data Verification

Enertopia's West Tonopah Lithium Project is an early-stage exploration project. The primary datasets evaluated by the QP in the preparation of this technical report included an evaluation of the Issuer's exploration information; particularly, drill collar locations, drill logs, and drill core analytical results associated with Enertopia's 2022 and 2023 drill programs.

The QP completed a site inspection at Enertopia's West Tonopah Lithium Project property on July 25-27, 2023. Observations, GPS measurements, and QP analytical results associated with the site inspection form a large part of the QPs data verification process and are discussed in the text that follows. The QP also acquired laboratory Certificate of Analysis to validate the assay datasets.

12.1 Validation of Enertopia Drill Collars

The QP visited numerous Enertopia drill collars during the site inspection. Note: All Enertopia collar locations were reclaimed in accordance with the BLM exploration permitting requirements. The general area of the drill collar could be observed because 1) all drillholes occurred in brush cleared areas adjacent to trails, and 2) there were minor surface disturbances such as core cuttings and fines around the hole location.

The QP documented the location of 8 collar locations using a handheld GPS. A summary of QPs collar location coordinates versus the collar locations provided to the QP by Enertopia, is presented in Table 12.1. The comparison shows minor variation between the QP and Enertopia generated collar locations; between 1 and 6 m and zero to 9 m in the easting and northing directions, respectively.

Based on this comparison, the QP is satisfied with the collar locations and concludes that the Enertopia drillhole collar locations are reasonable and sufficient for use in the mineral resource modelling and estimations.

12.2 Validation of the Drill Logs

During the site inspection, the QP reviewed core from 3 separate drillholes that were drilled by Enertopia in the west, north, and east portions of the property (drillholes 23-10, 23-01, and 22-16, respectively). As the deepest drillhole drilled by Enertopia to date, the QP laid out the entire section of core from drillhole 23-01 to validate the lithological contacts documented in the original Enertopia drill logs.

With the entire core visible, the QP designated 5 distinct contacts that included the overburden/pediment – Siebert Formation contact along with distinct lithological breaks within the Siebert Formation (e.g., various coloured claystone units and a distinct white tuff/ash unit). The QP log was then compared with the Enertopia drill log. While there were slight discrepancies in the location of the contacts, the QP concludes that there were no major lithological discrepancies observed.

The lithological detail in the Enertopia drill logs was reasonable and sufficient to use toward the development of a 3D geological model. This statement is supported by knowledge that 1) the drillholes only intersected 2 predominant geological units, overburden/pediment, and the Siebert Formation, and 2) every drillhole ended in Seibert Formation strata. Hence, the main contact used in modelling the mineral resource is the overburden-Seibert Formation contact – and this contact was easily distinguishable in the drill core observed by the QP.

12.3 Validation of Lithium Analytical Results

The QP validated the assay data files provided by Enertopia by comparing their lithium concentrations against the original laboratory Certificate of Analysis. Several lab certificates were missing and the QP made several subsequent requests to the Issuer – all of which were provided. Hence, the QP was able to validate all Enertopia lithium values in direct comparison with values presented in the respective lab certificates.

12.4 Validation of Lithium Mineralisation

During the site inspection, the QP collected 2 Siebert Formation samples from outcrop/trenches and 9 Seibert Formation core samples from 3 drillholes – all of which are located within the boundaries of the property (Table 12.2, Figure 12.1). The 11 rock/core samples were collected so that the QP could independently collect, analyze, and validate the lithium mineralisation that is the subject of the technical report.

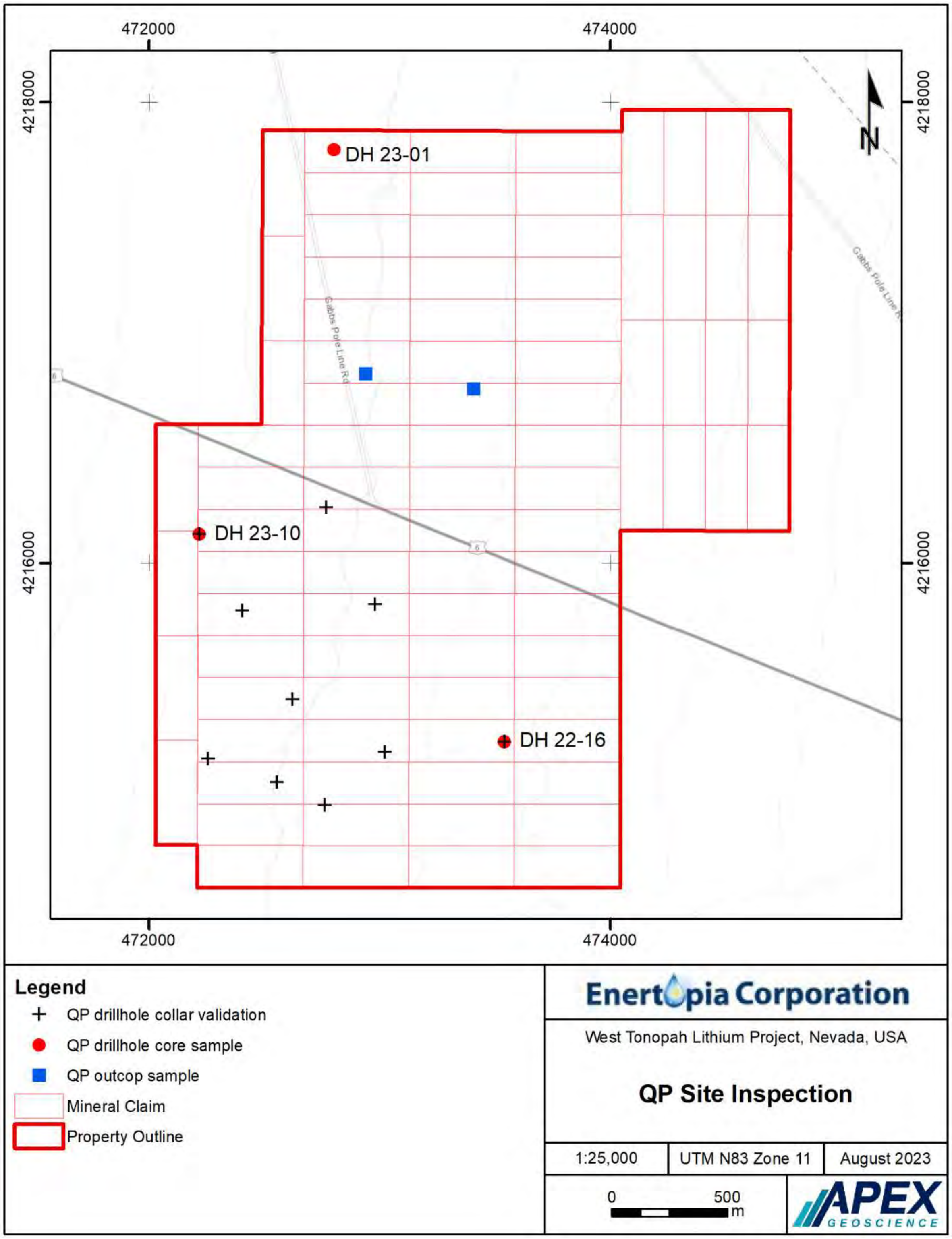
Table 12.1 Validation of drill collars.

Drillhole ID	QP GPS Coordinates Easting (m) Z11, NAD83	QP GPS Coordinates Northing (m) Z11, NAD83	Enertopia GPS Coordinates Latitude	Enertopia GPS Coordinates Longitude	Enertopia Coordinates (converted to UTM) Easting (m) Z11, NAD83	Enertopia Coordinates (converted to UTM) Northing (m) Z11, NAD83	Difference (m) Easting	Difference (m) Northing
DH 23-04	472765	4216240	38.093570	-117.310550	472769	4216242	-4.0	-2.0
DH 23-12	472765	4214947	38.081910	-117.310580	472762	4214949	3.0	-2.0
DH 23-09	472253	4215144	38.083700	-117.316350	472257	4215149	-4.0	-5.0
DH 23-08	472550	4215043	38.082800	-117.312936	472556	4215048	-6.0	-5.0
DH 23-07	472620	4215402	38.086050	-117.312190	472623	4215409	-3.0	-7.0
DH 23-10	472219	4216125	38.092495	-117.316834	472218	4216125	1.0	0.0
DH 23-11	472405	4215784	38.089510	-117.314700	472404	4215793	1.0	-9.0
DH 23-06	472984	4215818	38.089770	-117.308120	472981	4215820	3.0	-2.0

Table 12.2 Qualified Person sample descriptions.

Sample ID	Sample media	Drillhole ID	Easting (m) Z11, NAD83	Northing (m) Z11, NAD83	From (ft)	To (ft)	From (m)	To (m)	Description
RE23-EC-WT001	Drill core	DH 23-10	472219	4216125	286	290	87.2	88.4	Medium-grey claystone with interbedded white tuff
RE23-EC-WT002	Drill core	DH 23-10	472219	4216125	138	142	42.1	43.3	Light grey claystone with intercalated white tuff
RE23-EC-WT003	Drill core	DH 23-10	472219	4216125	68	72	20.7	21.9	Light grey mottled claystone with tuff clasts
RE23-EC-WT004	Drill core	DH 23-01	472802	4217795	86	80	26.2	24.4	Medium-grey claystone (some Fe-oxidation) with tuff clasts
RE23-EC-WT005	Drill core	DH 23-01	472802	4217795	134	136	40.8	41.5	Light grey, rubbly claystone with tuff clasts
RE23-EC-WT006	Drill core	DH 23-01	472802	4217795	216	220	65.8	67.1	Buff tan to white tuff
RE23-EC-WT007	Drill core	DH 23-01	472802	4217795	348	352	106.1	107.3	Medium- grey claystone - abundant tuff clasts
RE23-EC-WT008	Drill core	DH 22-16	473542	4215224	75	80	22.9	24.4	Grey-brown mudstone with minor tuff
RE23-EC-WT009	Drill core	DH 22-16	473542	4215224	95	100	29.0	30.5	Buff tan to brown, Fe-oxidized siltstone/sandstone with minor tuff
RE23-EC-WT010	Trench	/	472940	4216822	Discovery outcrop and trench				Medium-grey claystone
RE23-EC-WT011	Trench	/	473408	4216756	Trench 2				Medium-grey claystone

Figure 12.1 QP site inspection location of collar validations (crosses), and drill core (red dots) and outcrop/trench (blue squares) sample sites.



The QP collected, labeled, sealed, and maintained chain-of-custody of the assay samples from the field (during the site inspection) through to couriering the samples via 2 sealed sample pails. The samples were couriered by the QP on July 27, 2023, from Las Vegas Fed-Ex directly to ALS Geochemistry Vancouver for analysis.

The analytical techniques employed by ALS Vancouver, as directed by the QP, includes a complete characterization package (ALS Code CCP-PKG05), which includes:

- ALS Code ME-ICP06 – whole rock analysis.
- ALS Code ME-IR08 – total carbon-sulfur by induction furnace/IR.
- ALS Code ME-MS81 multi-element lithium borate fusion prior to acid dissolution with ICP-MS/ICP-AES finish.
- ALS Code ME-MS42 – single elements by aqua regia and ICP-MS finish.
- ALS Code ME-MS61 - four acid multi-element with ICP-MS finish (lithium range is 2 to 5,000 ppm).

The QP sample analytical results are presented in Table 12.3 and Figures 12.2 and 12.3, and include the following QP observations:

- Apart from sample RE23-EC-WT011, the light grey, medium grey, and grey-brown mudstone samples (n=8) have elevated lithium values of between 678 ppm to 1,610 ppm Li (Table 12.3). Five of the 8 samples had >1,070 ppm Li. Sample RE23-ED-WT011 is a medium-grey mudstone sample with 258 ppm Li. Elemental differences between this low-lithium mudstone sample and the QP mudstone samples that were enriched in lithium include sample RE23-ED-WT011 having lower magnesium (MgO), strontium (Sr), carbon (C), and higher silica (SiO_2), aluminum (Al_2O_3), titanium (TiO_2), light REEs (cerium, lanthanum, praseodymium, neodymium; Ce, La, Pr, Nd), and base metals (e.g., cobalt, copper, lead, and zinc; Co, Cu, Pb, Zn).

- The light grey mudstone samples contain distinctly higher calcium in comparison to the medium-grey mudstone samples.

- The highest lithium samples, RE23-EC-WT007 (1,610 ppm Li) and RE23-EC-WT001 (1,285 ppm Li) had high sulfur (S) values of 1.03% and 0.48% S. Sample RE23-EC-WT007 had the highest bismuth (0.61 ppm Bi).

- The West Tonopah Lithium Project QP samples display positive correlations between Li and calcium (CaO), MgO, C, uranium (U), tellurium (Te), and selenium (Se).

- The West Tonopah Lithium Project QP samples display negative correlations with SiO_2, Al_2O_3, niobium (Nb), and the light REE (Ce, La, Nd, and Pr; (Figures 12.2 and 12.3).

- The light grey mudstone appears to be associated with higher calcium and carbon in comparison to the other lithologies.

- A single tan-white ash/tuff sample has 526 ppm Li. This value is at the higher of the lithium spectrum when compared to Enertopia's ash/tuff sample analysis (see Figure 14.2a).

- The lowest lithium value was related to a siltstone/sandstone sample collected from drillhole DH 22-16 in the eastern part of the West Tonopah Lithium Project property.

Observations on the QP sample geochemical analytical results are consistent with the Simmons et al. (2018) study on Nevada-Utah hot spring and produced waters. This study derived formation waters derived from hot springs (37-83° C) and oil and gas production well reservoirs showed that geothermal waters contained elevated concentrations of Li, Se, Te, gallium (Ga), germanium (Ge), and scandium (Sc), and low concentrations of light REEs (Simmons et al., 2018). These authors concluded that the concentrations of these elements in hot spring and produced waters appear to be partly controlled by 1) hot water interaction with lithophile-dominant host rocks (e.g., Li and granitic/gneissic basement rocks), 2) reservoir temperature (e.g., positive correlation with Li and Ge), and 3) concentrations of total dissolved salts (e.g., positive correlation with Li, Se, Te, and Sc). Furthermore, Se and Te commonly occur in association with hydrothermal waters in epithermal gold-silver deposits with temperatures of 200-250° C (Goldfarb et al., 2017).

The QP concludes that the West Tonopah Lithium Project Siebert Formation is enriched in lithium, and therefore, provides independent validation of the lithium mineralisation that is the subject of this technical report. In addition, the QP validates the lithium composition of the outcrop and drill core samples that were analyzed by Enertopia's during the Company's 2021-2023 exploration programs. Based on the QPs review of the QP sample geochemical results, the sedimentary/volcaniclastic rocks at the project appear to be chemically modified by geothermal fluids that may be partially modified through their interaction with Paleozoic-Mesozoic sedimentary rocks.

Table 12.3 Qualified Person outcrop and core sample analytical results. Lithology colours correlate to bi-variate plots in Figures 12.2 and 12.3.

Sample_ID	Description	Li (ppm)	SiO_2 (%)	Al_2O_3 (%)	CaO (%)	MgO (%)	C (%)	S (%)	Se (ppm)	Te (ppm)	ΣLa-Pr (ppm)	Nb (ppm)
RE23-EC-WT001	Medium-grey claystone with interbedded white tuff	1285	51.1	9.65	8.96	4.48	2.47	0.48	0.5	0.06	97.73	10.05
RE23-EC-WT002	Light grey claystone with intercalated white tuff	1140	47.6	10.85	11.55	4.14	2.17	0.02	<0.2	0.03	109.9	9.11
RE23-EC-WT003	Light grey mottled claystone with tuff clasts	1275	41.6	9.41	15.55	4.9	3.25	0.02	0.3	0.06	89.72	8.61
RE23-EC-WT004	Medium-grey claystone (some Fe-oxidation) with tuff clasts	678	55.2	13.55	5.66	2.62	1	0.01	<0.2	0.02	135.41	13.5
RE23-EC-WT005	Light grey, rubbly claystone with tuff clasts	1070	47.6	9.78	12.75	3.35	2.64	0.01	<0.2	0.01	122.87	13.65
RE23-EC-WT006	Buff tan to white tuff	526	63.4	11.7	4.26	1.64	0.84	0.01	0.2	0.01	150.03	18.65
RE23-EC-WT007	Medium- grey claystone - abundant tuff clasts	1610	51.6	9.96	5.45	7.51	2.36	1.03	0.6	0.07	119	14.9
RE23-EC-WT008	Grey-brown mudstone with minor tuff	980	53.7	11.55	4.66	5.97	0.91	0.02	0.3	0.05	120.04	11.8
RE23-EC-WT009	Buff tan to brown, Fe-oxidized siltstone/sandstone with minor tuff	45.6	66.2	11.9	2.13	0.94	0.03	0.01	<0.2	0.01	141.47	19.15
RE23-EC-WT010	Medium-grey claystone	747	55.8	11.6	6.4	2.04	1.16	0.1	<0.2	0.02	99.03	11.4
RE23-EC-WT011	Medium-grey claystone	258	56.7	13.6	5.08	2.13	0.87	0.03	0.3	0.03	141.12	13.85

Figure 12.2 Select positive elemental correlations with lithium.

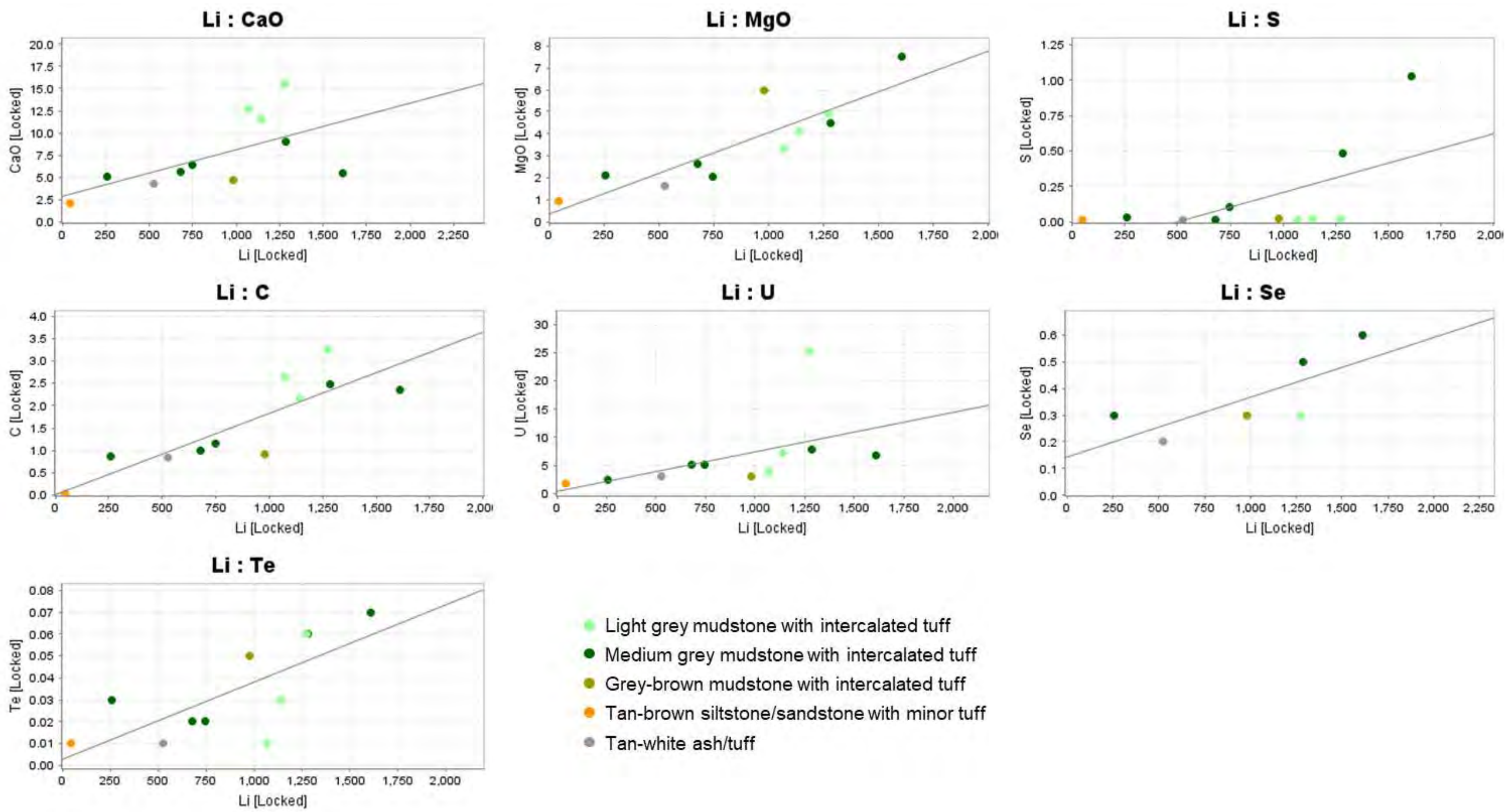
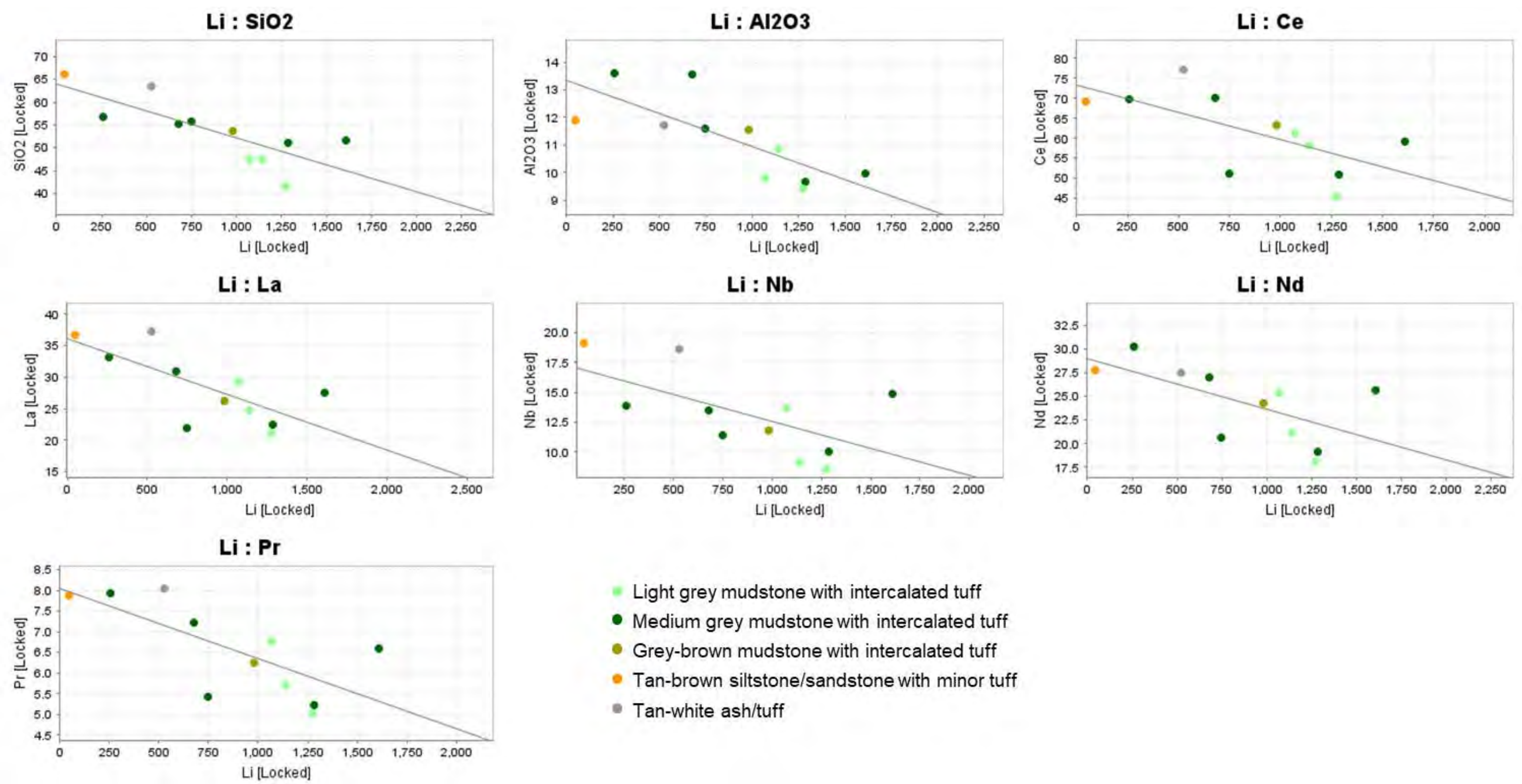


Figure 12.3 Select negative elemental correlations with lithium.



12.5 Validation Limitations

The 2022 drill logs contain sufficient information including thorough lithological descriptions. Hence, the QP was able to make comparisons between the 2022 drill core lithium assay data and the 2022 drillhole lithologies. The 2023 drill logs, however, contained limited lithological observations; and this hindered the QPs investigation of lithology versus lithium assays, and ultimately, the methodology used to construct the mineral resource estimation (see discussion in Section 14.4).

The QP recommends that the West Tonopah Lithium Project drill cores (particularly the 2023 cores) be re-logged in concert with non-destructive qualitative handheld instruments such as an XRF analyzer and a short-wave infrared hyperspectral imaging system. The goal of the re-logging exercise is to attempt to correlate specific Siebert Formation stratigraphic units across the West Tonopah Lithium Project area. This work could, for example, advance the geological knowledge and confidence level of the Seibert Formation, and potentially enable future resource modellers to formulate additional estimation domains.

Enertopia's bulk density measurements (n=10) are preliminary; the measurements do not match those densities published for the Seibert Formation within other company technical reports (see discussion and QP resolution in Section 14.6.1). Additional bulk density analytical work is required.

12.6 Adequacy of the Data

The QP has reviewed the adequacy of Enertopia's exploration information, including drill collars, drill logs, and outcrop and drill core assay data, and found no significant issues or inconsistencies that would cause one to question the validity of the data. The QP is satisfied to include the exploration data within the context of this technical report and the formulation of initial mineral resources.

13 Mineral Processing and Metallurgical Testing

13.1 Sample Selection

Material from the Siebert Formation Li-claystone that was used for the mineral processing test work was collected in 2021 by Enertopia from a shallow, 2 m deep trench that had been historically excavated at the discovery outcrop (near drillhole DH22-01; see Sections 9 and 10). A total of 5.5 kg was collected by Enertopia. The sample was crushed and divided into 1kg samples that were further crushed to produce fine crushed material suitable for metallurgical test work.

One sample of the finely crushed material, WT2201, was unroasted of which 600 g were bagged. A second sample, WT2202, was roasted to a temp of 800º C of which 660 g were bagged. Both roasted and unroasted samples were delivered to Base Metallurgical Laboratories Ltd, BC (Base Met Labs) on October 28, 2022. The samples were analyzed by ALS Limited at ALS Vancouver, BC with sample preparation completed at ALS Global in Reno, NV (collectively, ALS).

To determine the representative head grade, a split of the roasted and unroasted samples weighing 0.03 kg/sample was submitted to ALS and analyzed using ALS Code ME-ICP61 (4-acid digestion followed by ICP-AES analysis). The head analyses for the major elements are reported in Table 13.1. The roasted sample WT2202 and unroasted sample WT2201 head grade samples yielded 840 ppm and 820 ppm Li, respectively.

Table 13.1: Head Assays of the unroasted and roasted samples.

Sample		Al	Ca	Fe	K	Li	Mg	Na
		%	%	%	%	ppm	%	%
WT2201	Unroasted	6.58	7.38	2.39	5.27	820	1.44	1.26
WT2202	Roasted	6.84	7.37	2.57	5.36	840	1.54	1.33

The QP concludes the test samples analyzed at Base Met Labs are representative of the Seibert Formation claystone unit at the West Tonopah Lithium Project. To demonstrate this, a direct comparison between the ALS head feed analyses and an independent, senior author and QP collected sample from the same discovery outcrop/trench is presented in Table 13.2. The comparison shows select elements correlate well with RSD% values of between 5% and 25% (6% for Li). Average RSD% values below 30% are considered to indicate good correlation.

Table 13.2 Geochemical comparison using selected elements to demonstrate the representative nature of the Siebert Formation samples submitted for mineral processing test work.

Sample_ID	Siebert Formation claystone sample description	Li (ppm)	Al_2O_3 (%)	CaO (%)	K_2O (%)	MgO (%)	Na_2O (%)	Sr (ppm)
RE23-EC-WT010	QP sample from discovery outcrop and trench	747	11.6	6.4	4.13	2.04	2.55	1,550
WT2201	Base Met Labs unroasted sample from discovery outcrop trench	820	12.4	10.3	6.35	2.39	1.70	1,315
WT2202	Base Met Labs roasted sample from discovery outcrop trench	840	12.9	10.3	6.46	2.55	1.80	1,475
	Count	3	3	3	3	3	3	3
	Minimum	747	11.6	6.4	4.13	2.04	1.70	1,315
	Maximum	840	12.9	10.3	6.46	2.55	2.55	1,550
	Un-weighted average	802.3	12.3	9.0	5.65	2.33	2.02	1,447
	Standard deviation	49.0	0.7	2.3	1.3	0.3	0.5	120.0
	RSD%	6.1	5.3	25.0	23.3	11.2	23.0	8.3

13.2 Leach Extraction Tests

The metallurgical test work was performed by Base Met Labs. Base Met Labs is not an accredited laboratory. However, the test work was conducted by professional engineers and M.Plan contacted Base Met Labs to discuss the analytical methodology and results. Hence, the QP deems that the testing and results are reasonable and suitable for the preliminary nature of the leach work that was undertaken at this stage of the study.

All sample analyses were performed by ALS (see 13.1). ALS is independent of Enertopia and represents an established, commercial, Canadian lab accredited to ISO/IEC 17025:2017 (general requirements for the competence of testing and calibration laboratories). The lithium extraction test work was completed at Base Metallurgical Laboratories Ltd. (Base Met Labs) in Kamloops, BC.

The preliminary indicative leach test work was undertaken as comparative leaches performed on the unroasted WT2201 and roasted WT2202 samples. All leaches were conducted with a relatively low initial solid liquids ratio of 10% and encompassed comparative leaching of the two samples with various leaching agents which included deionised water, hydrochloric acid, sulphuric acid, and aqua regia. The solids were agitated with the required solution volumes for 10 minutes before leaching for 1 hour.

In the case of the acid leaches a 20% acid solution was used as the solution component. A basic evaluation of the effects of leach temperature at 50º C and 75º C was also undertaken on the deionised water option.

The leach slurries were filtered, and the filtered leach solution samples were submitted to ALS for analysis using ALS Code ME-ICP61 (4-acid digestion followed by ICP-AES analysis).

Following the initial 5 pairs of tests it was noted that the deionised water leach showed poor lithium extractions as compared to the acid options. Of the acid leach options it was determined that the most prospective leaching option was with sulphuric acid. Subsequently a further three tests were performed to repeat the initial unroasted HCl leach test, to extend the unroasted sulphuric acid leach pH range and to evaluate the effect of increased residence time and leach temperature for the sulphuric leach. The final three tests were carried out on an increased initial mass of 50 g. In total 13 leach tests were performed.

The solution assay results for the major elements of interest from the 13 leaches are presented in Table 13.3.

The extraction results based on the head and solution assays for the major elements of interest are presented below in Table 13.4.

Table 13.3: Comparative leach solution assays.

Sample			Temp	Time	pH	Al	Ca	Fe	K	Li	Mg	Na
No.	Extraction		(°C)	hr		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	Deionized water	Unroasted	50	1hr	9.5	36.5	46.5	45.9	32.5	2.43	43.6	129
2			75	1hr	9.6	7.27	13.8	6.31	7.75	0.424	5.29	164
3	Deionized water	Roasted	50	1hr	10.5	0.754	23.7	0.467	60.5	3.74	0.73	727
4			75	1hr	10.6	6.77	29,.1	4.38	88.4	5.14	3.22	894
5	HCl	Unroasted	50	1hr		865	8,020	1,100	573	49.4	984	583
6	HCl	Roasted	50	1hr	0.4	1,450	7,020	1,320	1,050	41.7	882	311
7	H_2SO_4	Unroasted	50	1hr	0.5	1,370	524	1,760	971	72.5	1,410	570
8	H_2SO_4	Roasted	50	1hr	6	1,900	785	2,020	1,400	60.0	1,460	341
9	Aqua	Unroasted	50	1hr	0.5	871	7,210	1,120	615	43.8	1,020	562
10	Regia	Roasted	50	1hr	0.8	1,480	8,200	1,290	1,170	45.3	916	345
11	HCl	Unroasted	50	1hr	0.4	629	7,090	675	347	27.5	585	593
12	H_2SO_4		50	1hr	0.7	931	249	1,245	654	55.9	1,010	545
13	H_2SO_4		90	2hr	0.8	2,230	140.5	2,520	1,340	94.1	1,625	641

Table 13.4: Comparative leach elemental extractions.

Sample			Temp	Clay	Solution	Al	Ca	Fe	K	Li	Mg	Na
No.	Extraction		(°C)	gm	ml	%	%	%	%	%	%	%
1	Deionized water	Unroasted	50	10	90	0.5	0.57	1.73	0.56	2.67	2.73	9.21
2			75	10	90	0.1	0.17	0.24	0.13	0.47	0.33	11.71
3	Deionized water	Roasted	50	10	90	0.01	0.29	0.02	1.03	4.01	0.05	5.19
4			75	10	90	0.09	0.36	0.15	1.48	5.51	0.19	6.05
5	HCl	Unroasted	50	10	90	11.83	97.8	41.42	9.79	54.22	61.5	41.64
6	HCl	Roasted	50	10	90	19.08	85.73	46.23	17.63	44.68	51.55	21.05
7	H_2SO_4	Unroasted	50	10	90	18.74	6.39	66.28	16.58	79.57	88.13	40.71
8	H_2SO_4	Roasted	50	10	90	25	9.59	70.74	23.51	64.29	85.32	23.08
9	Aqua	Unroasted	50	10	90	11.91	87.93	42.18	10.5	48.07	63.75	40.14
10	Regia	Roasted	50	10	90	19.47	100.14	45.18	19.65	48.54	53.53	23.35
11	HCl	Unroasted	50	50	450	8.6	86.46	25.42	5.93	30.18	36.56	42.36
12	H_2SO_4		50	50	450	12.73	3.04	46.88	11.17	61.35	63.13	38.93
13	H_2SO_4		90	50	450	30.5	1.71	94.9	22.88	103.28	101.56	45.79

The test work results for the preliminary leach work indicate the following:

- The West Tonopah material appears to be more responsive to direct acid leaching without prior roasting.
- The extractions of all elements for the deionised water leaches were too low to be of further interest, even as a preliminary impurity removal process.
- The acid leaches showed varying degrees of lithium extraction with sulphuric acid showing improved extraction compared to hydrochloric acid and aqua regia showing slightly lower lithium extraction compared to hydrochloric acid.
- The lithium extraction in the sulphuric acid leach appears to be enhanced by both elevated leach temperatures and extended residence times.
- Under the optimum sulphuric acid leaching conditions, it would appear that lithium extractions in excess of 80% and possibly approaching 100% may be expected of an unroasted sample.
- All of the acid leach tests resulted in significant solution tenors of Al, Ca, Fe, K, Mg and Na, relative to the Li tenor.
- The sulphuric acid leaches largely suppressed the extraction of Ca whilst promoting the extraction of lithium and all other impurities.
- Some extraction of the minor elements was also evident.

13.3 Qualified Person Opinion, Risks and Uncertainties, and Recommendations

During 2022 and 2023, Enertopia conducted a limited metallurgical test work program at Base Met Labs to define a preferred leach extraction route for the lithium claystone mineralisation prevalent at west resource area of the West Tonopah Lithium Project. The program encompassed the comparative bench scale leaching of roasted and unroasted samples with various leaching agents.

A total of 13 leaches were performed. Mineral Processing test work results showed that the sulphuric acid leach route appears to provide the most promise in terms of lithium extraction. With optimisation and additional test work, Enertopia has the potential to produce lithium extractions that can be further evaluated for battery grade lithium products. Based on the initial leach results a preliminary block diagram indicating a potential recovery flow sheet is indicated in Figure 13.1 below.

The substantial co leaching of impurity elements, particularly Al, Fe, K, Mg, Na would require that these be removed from the leach solutions prior to the recovery of a commercially viable lithium product. At the relative tenors achieved some of the impurities contained might be recoverable as a saleable by product stream, although this remains to be determined.

It is the QPs opinion, therefore, that Enertopia's preliminary mineral processing test work demonstrates reasonable prospects for eventual economic extraction.

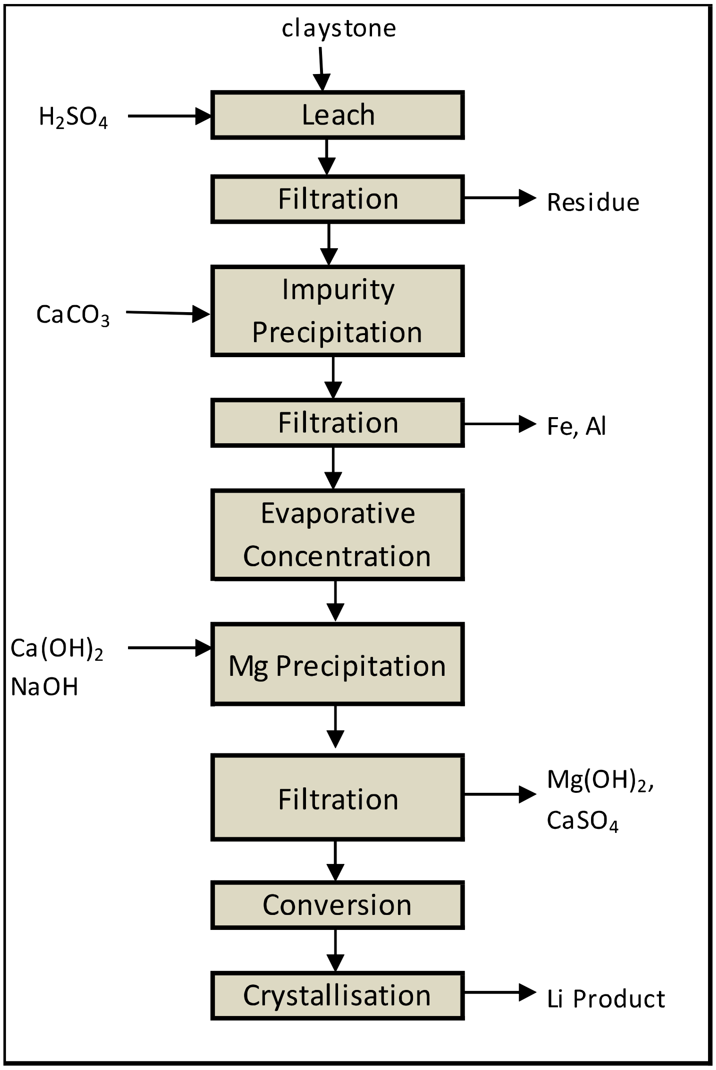
With respect to risks and uncertainties, the West Tonopah Lithium Project is an early-stage exploration project. While the Company has conducted preliminary indicative leach test work, the QP notes that no optimisation, variability, or reproducibility work has been undertaken at this stage of the study. This work is required prior to any solution impurity purification work.

In addition, there is no guarantee that Enertopia can successfully extract lithium from claystone in a commercial capacity. The extraction technology is still at the developmental stage. As the technology advances, there is the risk that the scalability of any initial mineral processing bench-scale and/or demonstration pilot test work may not translate to a full-scale commercial operation.

It is recommended that further bench work is required to further define this process and outline the impurity precipitation and solution purification regime required to produce a commercially acceptable lithium product. This test work might include the following operations inter alia:

- The use of elevated leach solid liquid ratios and possible leach solution recycles to improve pregnant solution tenors.
- The leach kinetic response for both lithium and major impurities with a view to limiting impurity dissolution.
- The effect of temperature on elemental leach kinetics.
- The effect of leach pH (acid concentration) and multistage counter current leaching.
- Sequential Impurity precipitation work.
- Filtration characterisation of residues and precipitates including washing efficiencies.
- Solution purification work.
- Evaporative concentration.
- Lithium conversion and crystallisation.

Figure 13.1: Prospective Block flow diagram.



14 Mineral Resource Estimates

14.1 Introduction

Enertopia's West Tonopah Lithium Project is an early-stage exploration project. The mineral resources, or lithium-claystone resources, defined in this technical report is constrained stratigraphically to the Miocene Siebert Formation sedimentary and pyroclastic rocks. Through the QPs review of the lithium-claystone concentrations and Siebert Formation lithologies, and structural knowledge in the Tonopah area, the West Tonopah Lithium Project mineral resources were spatially split into 2 resource domains defined as the west and east resource areas.

The west and east resource areas are divided by a speculative, QP interpreted, north-south trending fault (Figure 14.1). Further exploration work is required to validate the fault zone, and potentially, other faulted and upthrown/downthrown blocks of Siebert Formation in the West Tonopah Lithium Project property. Other factors could also influence the Siebert Formation depositional environment. For example, 1) the Siebert Formation strata could be co-mingled with erosional and channel fill material along the uplifted valley flanks, 2) the margins of the basin could create depositional environments that favour the emplacement of coarser sedimentary material in comparison to central, deep, basinal mudstone, and/or 3) potential interaction with rock types other than Seibert Formation along valley flanks.

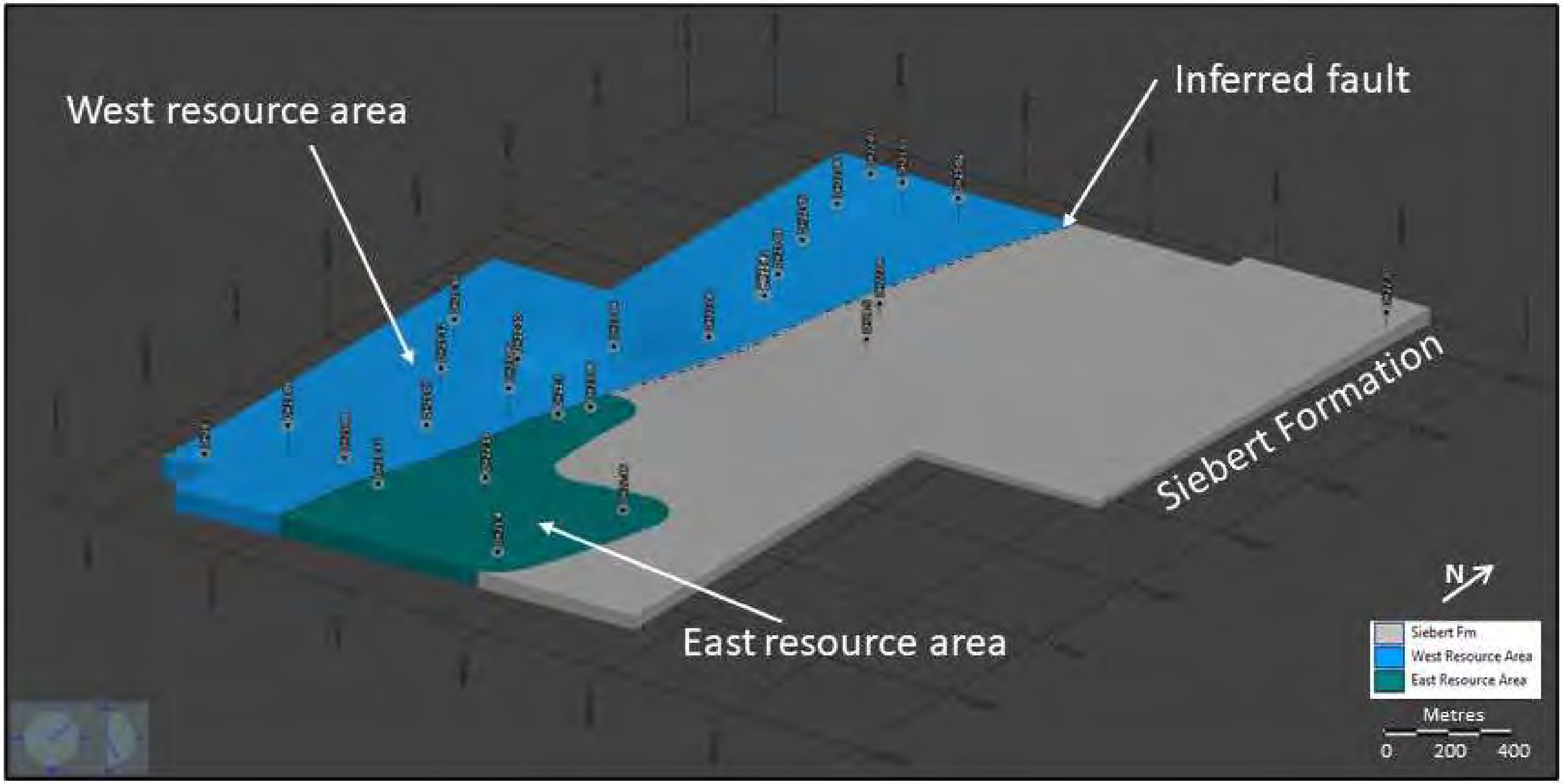
In the interim, incorporation of an inferred north-south orientated fault zone is recommended in the initial resource modelling and estimations presented in this technical report.

The statistical analysis, 3D modelling, and resource estimations were prepared by Ms. Celine McEachern P. Geo. and Mr. Warren Black P. Geo. of APEX in direct collaboration and supervision of the QP who takes responsibility for the resource estimations presented in this technical report.

The workflow implemented for the calculation of the West Tonopah Lithium Project lithium-claystone resource estimations were completed using: the commercial mine planning software MicroMine (v 23.5). Critical steps in the determination of the lithium-claystone resource model and estimations included:

- Definition of the geology and geometry of the Siebert Formation sedimentary and pyroclastic rocks in the west and east resource areas.
- Determination of the lithium concentration of the Siebert Formation.
- Development and validation of a block model and conceptual pit shell to assess reasonable prospects of eventual economic extraction.

Figure 14.1 Spatial definition of the west and east mineral resource areas at the West Tonopah Lithium Project.



The West Tonopah Lithium Project mineral resource estimations are reported in accordance with CIM definition standards and best practice guidelines (2014, 2019) and the disclosure rule NI 43-101. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The Effective Date of Enertopia's West Tonopah Lithium Project lithium-claystone resource estimations is 1 November 2023.

14.2 Data

The QP used the following datasets to create and calculate the West Tonopah Lithium Project resource model and estimations:

1. Digital Elevation Model (DEM surface grid): Uses the 1/3rd arc-second, bare surface, DEM from the 3D Elevation Program (3DEP) provided by the US Geological Survey, Science Data Catalogue (USGS, 2022). Resolution is approximately 10 m, and the data are distributed in UTM NAD83.

2. Drillhole collars and lithologies: From a total of 27 drillholes totalling 4,968 feet (1,514.3 m) that included:
    a. 5 winkie drillholes drilled in 2021 to a total depth of 55 feet (16.8 m).
    b. 10 sonic drillholes drilled in 2022 to a total depth of 1,560.0 feet (475.5 m).
    c. 12 sonic drillholes drilled in 2023 to a total depth of 3,353.0 feet (1,022 m).

3. Lithium assays: From a total of 766 drill core assays that included:
    a. 12 chip assays from the 2021 winkie drill program.
    b. 221 core assays from the 2021 sonic drill program.
    c. 533 core samples from the 2023 sonic drill program.

14.3 Quality Assurance – Quality Control

The Enertopia collar location coordinates were validated in the field by the QP during the July 25-27, 2023, site inspection at the West Tonopah Lithium Project property. In addition, the Enertopia sonic drill collar elevations were compared to the DEM surface (USGS, 2022) as a de facto surface – and the collar elevations were adjusted as necessary (Table 14.1). The per cent difference between the Enertopia-generated sonic collar elevations and the DEM were between -1.5% and 0.8% (average of 0.1%).

The 2022 drillhole lithological logs provided the QP with an excellent amount of rock type and rock characteristics information. Unfortunately, the 2021 Winkie drill logs and the 2023 drill logs contained minimal lithological information and, therefore, imposed some constraints on the QP to make decisions on the geological model and the stratigraphic estimation domain (see Section 14.4).

The Enertopia lithium assay data were validated by the QP by comparing the individual lithium assay values against the original laboratory certificates. No issues were detected by the QP.

Table 14.1 Comparison of Enertopia sonic drill collars versus the DEM surface grid.

Drill ID	Resource	Enertopia measured collar elevations (Feet)	Enertopia measured collar elevations (m)	Collar elevation on DEM surface (m)	Elevation difference (%)
DH22-01	West	5,357	1,633	1,645	0.8
DH22-04	East	5,405	1,647	1,653	0.4
DH22-05	West	5,371	1,637	1,640	0.2
DH22-06	West	5,363	1,635	1,640	0.3
DH22-07	West	5,362	1,634	1,637	0.2
DH22-08	West	5,410	1,649	1,647	-0.1
DH22-10	West	5,387	1,642	1,640	-0.1
DH22-16	East	5,465	1,666	1,667	0.1
DH22-19	East	5,413	1,650	1,654	0.3
DH22-20	East	5,527	1,685	1,683	-0.1
DH23-01	West	5,392	1,643	1,640	-0.2
DH23-02	West	5,386	1,642	1,646	0.3
DH23-03	West	5,449	1,661	1,644	-1.0
DH23-04	West	5,467	1,666	1,642	-1.5
DH23-05	West	5,351	1,631	1,642	0.7
DH23-06	East	5,401	1,646	1,648	0.1
DH23-07	West	5,374	1,638	1,644	0.3
DH23-08	West	5,380	1,640	1,646	0.4
DH23-09	West	5,359	1,633	1,639	0.3
DH23-10	West	5,345	1,629	1,632	0.2
DH23-11	West	5,355	1,632	1,637	0.3
DH23-12	East	5,393	1,644	1,650	0.4

14.4 Assessment of Data for Geological Modelling

In this technical report, the QP models the extents of the sedimentary/volcaniclastic Siebert Formation as the estimation domain. To wireframe the Siebert Formation estimation domain, the modellers used the uppermost contact of the Siebert with overburden/pediment and the end of each drillhole, which terminated within Siebert strata in all drillholes.

Within the Seibert Formation estimation domain, a block model based on lithium assay data was then used to evaluate and calculate the mineral resources for the west and east resource areas.

In adopting this geological modelling methodology, the QP first evaluated the projects lithium analytical results in the context of Siebert Formation lithologies. To do this, the QP was limited to using the 2022 drill logs because of the rock characteristics detail included in the 2022 logs was better in comparison to the lithological descriptions in Enertopia's 2021 Winkie drill logs and 2023 Sonic drill logs.

To assess the probability distributions of the Siebert Formation lithologies in comparison to lithium, the QP amalgamated the Enertopia 2022 drill log lithological descriptions into the following 4 facies:

1. Intercalated mudstone ± volcaniclastic tuff/ash.
2. Intercalated siltstone ± volcaniclastic tuff/ash.
3. Intercalated siltstone/sandstone ± volcaniclastic tuff/ash.
4. Ash/tuff.

The lithological and lithium data are presented and evaluated using violin plots (a hybrid of a box plot and a kernel density plot) and quantile-quantile (QQ) plots in Figure 14.2 and discussed in the text that follows.

14.5 Mineral Resource Areas and Estimation Domain Definition

14.5.1 Designation of West and East Resource Areas

Evaluation of the Enertopia lithium assays shows that the western portion of the West Tonopah Lithium Project property contains higher lithium values within the lithium-claystone rock type in comparison to the western portion of the property (see Figure 10.2 and Figure 14.2). Based on Figure 14.2, along with the QPs observations of select drill cores during the site inspection, the project areas eastern subsurface geology has a higher modal abundance of siltstone and sandstone in comparison to the mudstone-dominated strata in western portion of the property.

The QP hypothesizes that a north-south fault zone differentiates the property into two separate stratigraphic packages that may result in either upthrown or downthrown Siebert Formation blocks. Additional exploration work and stratigraphic studies are required to validate this hypothesis.

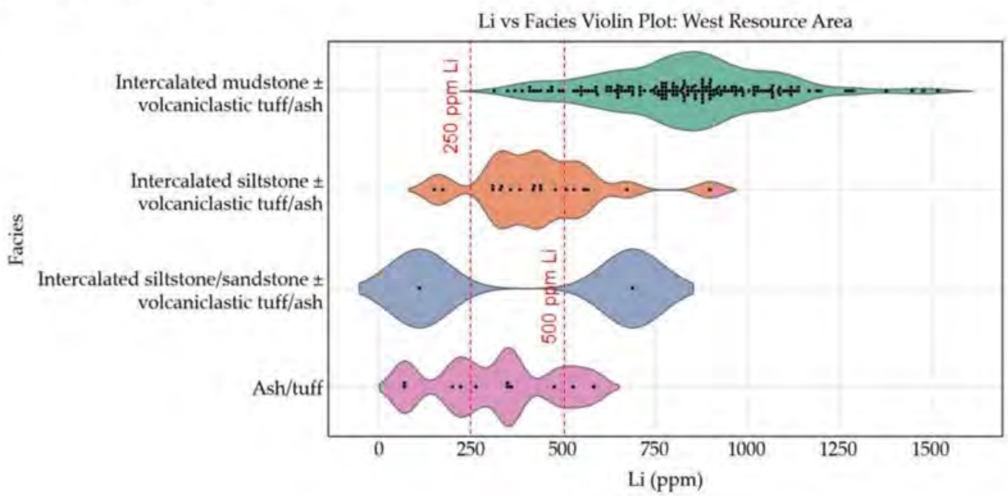
In the interim, incorporation of an inferred north-south orientated fault zone is recommended in the initial resource modelling and estimation process presented in this technical report. Hence, the QP has divided the mineral resources into west and east resource areas.

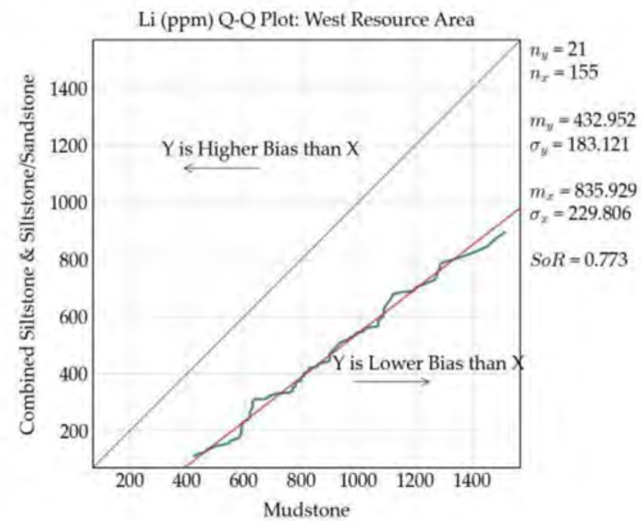
14.5.2 Siebert Formation Estimation Domain Definition

Figure 14.2 shows that lithium is heavily weighted toward the intercalated mudstone ± volcaniclastic tuff/ash (in comparison to siltstone, siltstone-sandstone, and ash/tuff rock types). This observation is particularly true for the west resource area, which has higher lithium values in comparison to the east resource area.

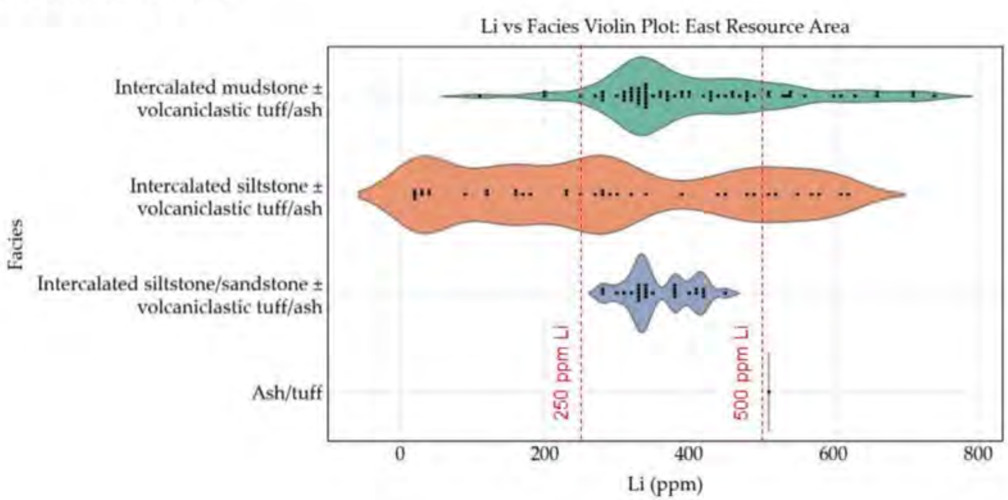
Figure 14.2 Evaluation of 2022 drillhole lithologies versus lithium analytical results.

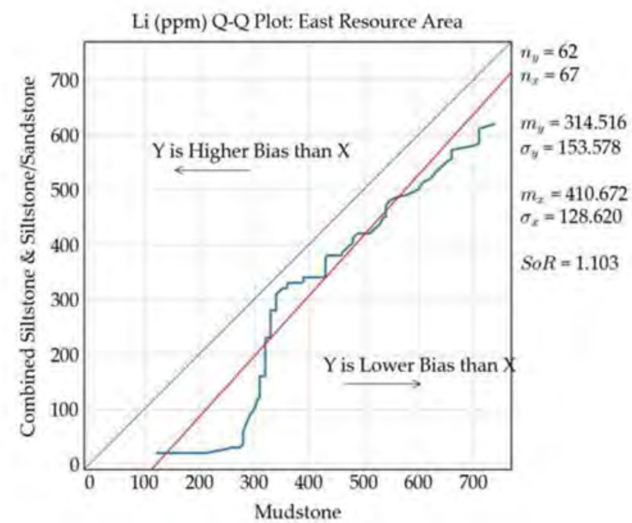
A) West resource area





B) East resource area





Based on Figure 14.2 and the 2022 drilling program lithological/lithium datasets, there is potential to wireframe a single estimation domain for the intercalated mudstone ± volcaniclastic tuff/ash. There are, however, several issues with this approach including:

- The general lack of lithological detail in the 2021 winkie drill logs and the 2023 drill logs, together with knowledge that the QP is not confident in assigning 2023 core lithologies based on, for example, the lithium analytical results (i.e., using observations from the 2022 drill logs and assay data comparison where lower lithium values typically correlate with siltier Siebert Formation facies).

- The QP can only speculate at the structural complexity within boundaries of the property – and additional exploration work is required to increase the confidence level of assigning fault zones and structurally re-orientated blocks of strata.

- In the QPs opinion, additional exploration work and relogging is required to corelate the individual Siebert Formation facies between drillholes.

14.5.3 Geological Model

The Siebert Formation was wireframed by using 1) the interpreted overburden/pediment – top of Siebert Formation contact as defined in the Enertopia drill logs, and 2) the lowermost end-of-hole depth because all drillholes were terminated in Siebert Formation. Once wireframed, the Siebert Formation boundaries were converted to a solid block polygon. The solid block was clipped to 1) the boundaries of the property, 2) the DEM surface grid, and 3) the outline of the west and east resource areas as depicted by the inferred north-south trending fault zone.

Observations of the Siebert Formation within the 3D geological model and in the west and east resource areas are presented in Table 14.2 and include:

- The west resource area is generally flat lying, and dips slightly to the west. It is overlain by overburden/pediment with an average thickness of 14.6 m.

- The west resource area has a minimum, maximum, and average thickness of 16.7 m, 109.5, and 57.6 m, respectively.

- The east resource area is generally flat lying, and dips slightly to the west. It is overlain by overburden/pediment with an average thickness of 7.0 m.

- The east resource area has a minimum, maximum, and average thickness of 27.7, 71.0, 54.3 m, respectively.

- Surface outcropping of the Siebert Formation on the property is rare due to the pervasive pediment cover and the general lack of topographic variation in the area.

Table 14.2 Thickness of the measured Siebert Formation in the west and east resource areas of the geological model.

	West resource area thickness			East resource area thickness		
Estimation domain	Minimum (m)	Maximum (m)	Average (m)	Minimum (m)	Maximum (m)	Average (m)
Siebert Formation	16.7	109.5	57.6	27.7	71.0	54.3

14.6 Exploratory Data Analysis

14.6.1 Bulk Density

The bulk density measurements reported in Section 9.2 are considered to represent preliminary results and further work is required. There is potentially an analytical oversight in the preliminary results because,

1. The average bulk density measured in this study is 2.81 g/cm^3 (n=10 samples) is significantly higher than the bulk density used in other Tonopah-region, Li-claystone technical reports that vary between 1.51 and 1.87 g/cm^3 with an average of 1.71 g/cm^3 (n=data from 6 studies; Fayram et al., 2020; Loveday and Turner, 2020; Cukor et al., 2022; Roth et al., 2022; RESPEC, 2023; Riordan et al., 2023).

   In addition, a Siebert Formation bulk density value of 1.70 g/cm^3 was used by American Lithium Corporation for the TLC Property which is directly north of Enertopia's project (e.g., Riordan et al., 2023).

2. The bulk density study samples collected by Enertopia included various lithologies: overburden/pediment, and Siebert Formation claystone, siltstone, and ash-tuff. Despite the variety of rock types, the analytical results yielded similar bulk density measurements of between 2.79 and 2.82 g/cm^3 with an RSD% of 0.4% (n=10 analyses).

Consequently, the QP advocates that a conservative bulk density value of 1.70 g/cm^3 is used to convert the mineral resource volumes reported in this technical report to tonnage. This value is analogous to similar Tonopah- and Siebert Formation-based mineral resource studies. In addition, the implementation of a new density value of 2.81 g/cm^3 in the West Tonopah Lithium Project's initial mineral resource is not warranted at this stage of the project to avoid a potential over-estimation of the resource tonnages. Further bulk density work is required on Siebert Formation strata at the West Tonopah Lithium Project to validate the bulk density value(s).

14.6.2 Raw Analytical Data

Constrained assays with the west and east resource area Siebert Formation wireframes were back coded in the assay database with rock codes that were derived from intersections of the mineralisation solids and drillholes. The basic statistics of mineralisation wireframe constrained assays are presented in Table 14.3.

Table 14.3 Raw lithium statistics in the west and east resource areas (in ppm).

Description	West	East
Count	600	129
Mean	628	337
Standard Deviation	318	187
Coefficient of Variation	0.51	0.56
Minimum	1	1
10 Percentile	410	220
50 Percentile (Median)	630	340
90 Percentile	840	450
Maximum	1520	800

14.6.3 Composting

The composited samples were used for all sample statistics, capping, estimation input file and validation comparisons.

Downhole sample width analysis shows that the drillhole samples range from 1.0 to 186.0 feet (0.3 to 56.7 m) with a dominant sample length of 5.0 feet (1.52 m; Figure 14.3). Subsequently, a composite length of 5.0 feet (1.52 m) was selected as it provides adequate resolution for potential mining purposes and is equal to, or larger in length, than 93.9% of the drillhole samples (Figure 14.4).

Length weighted composites are calculated for all assay samples within the Siebert Formation. The compositing process starts from the first point of intersection between the drillhole and the Siebert Formation wireframe and is stopped upon intersection with the end of the hole (the basal contact of the Siebert Formation was not encountered in the drill programs conducted to date). A balanced composite length approach is used. Each continuous section of a drillhole that intersects an estimation domain is examined. The composite length used for each section is adjusted to be uniform, aiming to match a target length and prevents the creation of small, "orphan" composites that standard compositing often produces. In a balanced compositing approach, the goal is for final composite lengths to be within +/- 25% of the target length. All composites generated are within this range. A histogram of the composited lithium analyses is presented in Figure 14.5.

Figure 14.3 Distribution of raw auger interval lengths within the west and east resource areas.

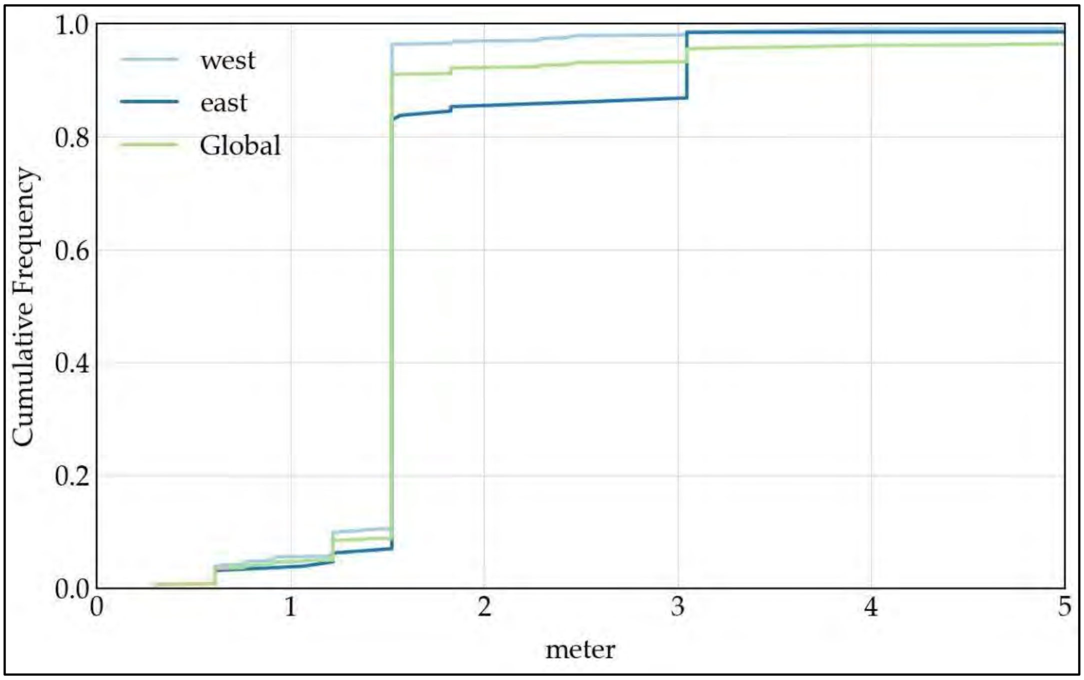


Figure 14.4 Distribution of composited auger data within the west and east resource areas.

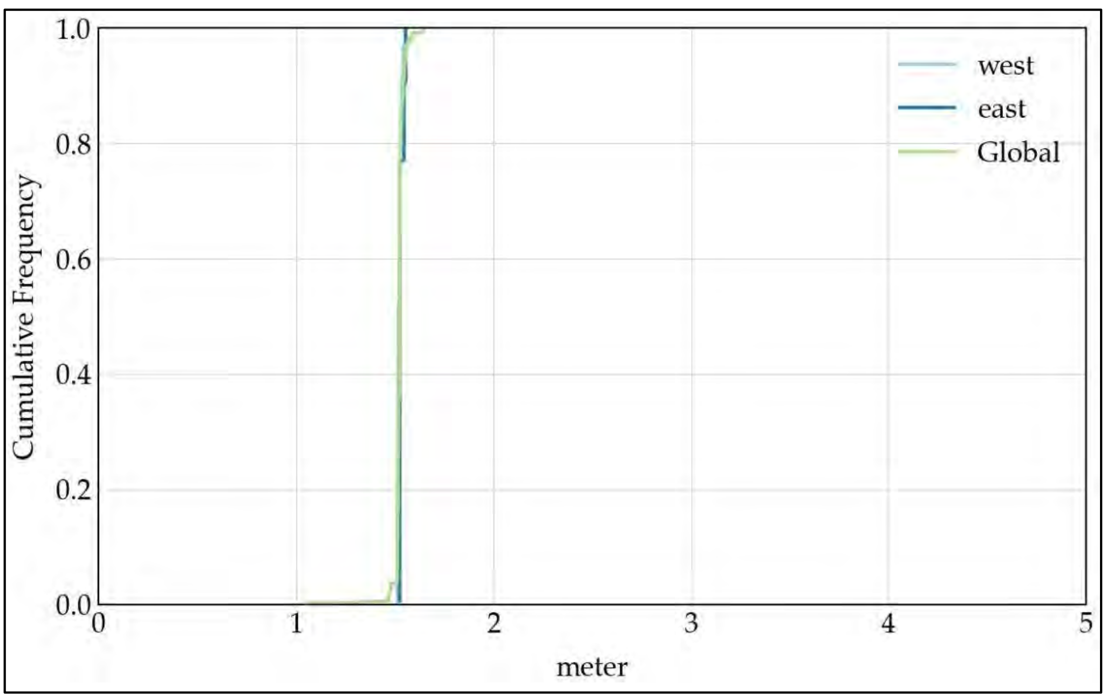
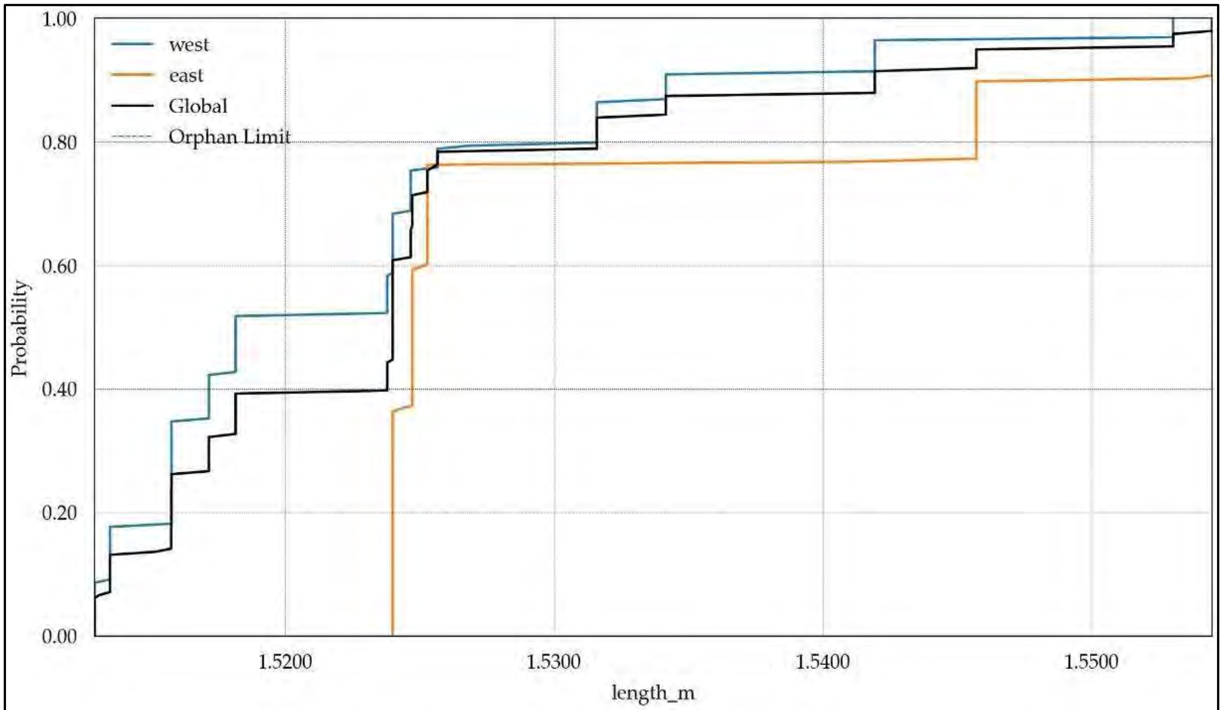


Figure 14.5 Distribution and table of composited auger data in the Siebert Formation within the west and east resource areas.



	Global	west	east
count	832	631	201
mean	1.52	1.52	1.53
stdev	0.01	0.01	0.01
cv	0.01	0.01	0.01
min	1.51	1.51	1.52
P10	1.51	1.51	1.52
P50	1.52	1.52	1.52
P90	1.54	1.53	1.55
max	1.55	1.55	1.55

14.6.4 Grade Capping

To ensure lithium metal grades are not overestimated by including outlier values during estimation, composites are capped to a specified maximum value. Probability plots illustrating each composite's values are used to identify outlier values that appear greater than expected relative to each estimation domain's gold and silver distribution. Composites identified as potential outliers on the log-probability plots are evaluated in 3D to determine if they are part of a high-grade trend or not. If identified, outliers are deemed part of a high-grade trend that still requires a grade capping level, the grade capping level used on them may not be as aggressive as the grade capping level used to control isolated high-grade outliers.

Grade capping was completed by assessing each mineral resource area using log-probability plots (Figure 14.6). Table 14.4 shows the log-probability plots determined grade capping levels. Visual inspection of the potential outliers revealed they have no spatial continuity with each other. Therefore, the grade capping levels detailed in Table 14.4 are applied to all composites used to calculate the mineral resource estimates.

Table 14.4 Capping levels applied to composites.

Mineral Resource Area	Li Capping Level (ppm)	No. of Composites	No. of Capped Composites
West	1250	631	8
East	670	201	5

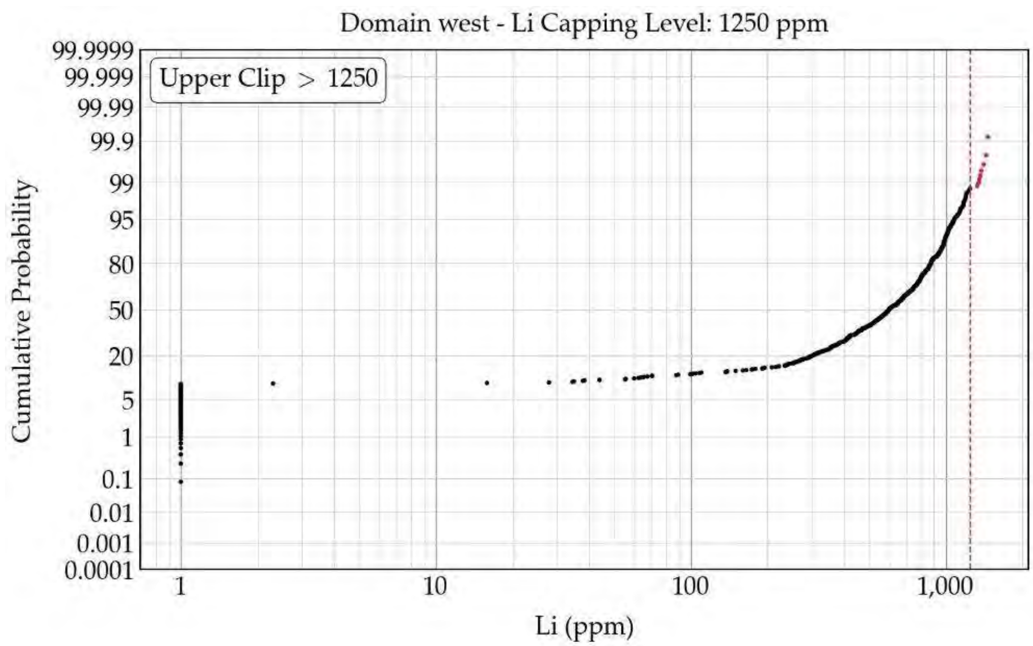
1.1.1 Declustering

It is typical to collect data in a manner that preferentially samples high-value areas over low-value areas. This preferential sampling is an acceptable practice; however, it produces closely spaced data that are likely statistically redundant, which results in under-represented sparse data compared to the over-represented closer-spaced data. Therefore, it is desirable to have spatially representative (i.e., declustered) statistics for global mineral resource assessments and to check estimated grade models. Declustering techniques calculate a weight for each datum that results in sparse data having a higher weight than closely spaced data. The calculated declustering weights allow spatially repetitive summary statistics to be calculated, such as a declustered mean.

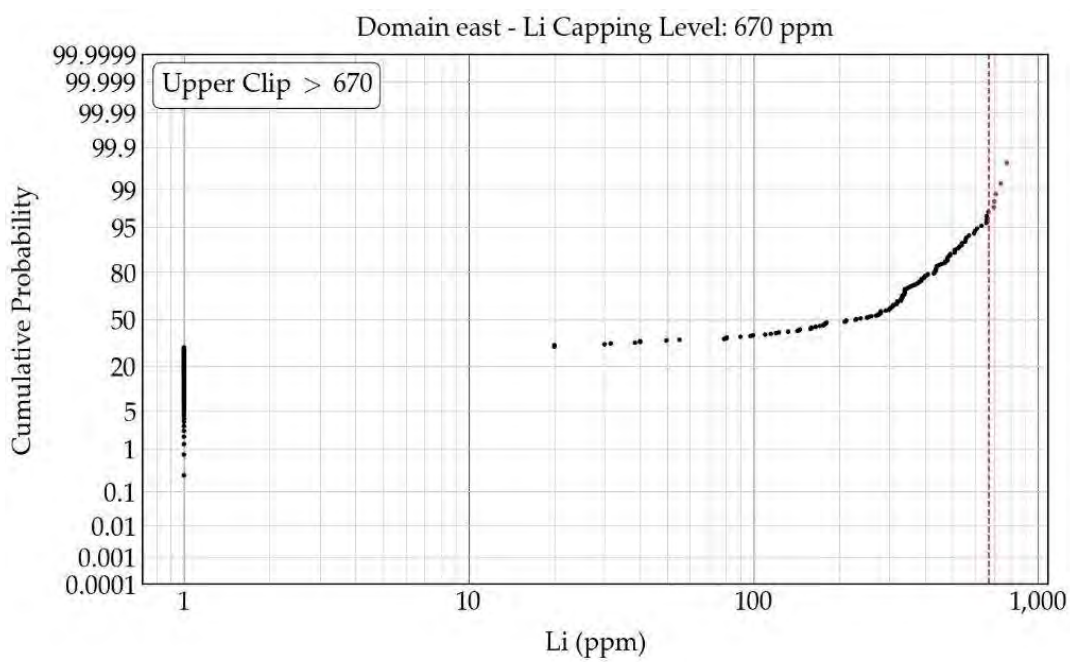
Cell declustering is performed globally on all composites within the grade estimation domains, which calculates a declustering weight for each composite. Cell declustering works by discretizing a 3D volume into cells that are the same size. The sum of the weights of all the composites within the cell must equal 1. Therefore, the weight assigned to each composite is proportional to the number of composites within each cell. For example, if there are four composites within a cell, they are all assigned a declustering weight of 0.25.

Figure 14.6 Log-Probability plots used to determine capping levels.

A) West resource area



B) East resource area



As a rule of thumb, the cell size used to calculate declustering weights will ideally contain one composite per cell in the sparsely sampled areas. Visual evaluation of the sparsely sampled areas in a 3D visualization software gives a rough idea of this size. Additionally, the high-resolution block model was populated using the distance to the individual blocks nearest composite to help guide the declustering of the cell size. The 90-percentile of the distance block model, with a cell size much lower than the final declustering cell size, approximates the optimal cell size.

Finally, plotting a series of declustered means for a range of declustering cell sizes will help determine the optimal cell size. The optimal cell size will likely be when the declustered mean in the plot is locally low or high at a cell size that is very close to the two potential cell sizes that were determined from the visual review and calculated 90-percentile distance. Preferential sampling in high-grade zones results in a declustered mean that is likely within a local minimum. In contrast, preferential sampling in low-grade zones results in a declustered mean that is expected within a local maximum.

Calculated declustering weights for the grade estimation domain were constructed. Visual evaluation of the sparsely sampled areas suggests similar cell sizes as the 90-percentiles from the distance block model for each grade estimation domain. Plots comprised of a series of declustered means for a range of declustering cell sizes were utilized to inform the final cell sizes. A cell size of 310 m is used, which is close to the size determined through visual evaluation and in the distance block model.

14.6.5 Final Composite Statistics

Summary statistics for the declustered and capped composites contained within the interpreted grade estimation domains, are presented in Table 14.5. The lithium grades within the estimation domain generally exhibit a single coherent statistical population.

Table 14.5 Composite lithium statistics for the west and east resource areas (in ppm).

Description	West	East
Count	631	201
Mean	579	239
Standard Deviation	321	210
Coefficient of Variation	0.55	0.88
Min.	1	1
10 Percentile	358	1
50 Percentile (Median)	586	258
90 Percentile	815	389
Max.	1,250	670

14.6.6 Variography and Grade Continuity

Experimental semi-variograms for each domain are calculated along the major, minor, and vertical principal directions of continuity that are defined by three Euler angles. Euler angles describe the orientation of anisotropy as a series of rotations (using a left-hand rule) that are as follows:

1. Angle 1: A rotation about the Z-axis (azimuth) with positive angles being clockwise rotation and negative representing counterclockwise rotation.

2. Angle 2: A rotation about the X-axis (dip) with positive angles being counterclockwise rotation and negative representing clockwise rotation.

3. Angle 3: A rotation about the Y-axis (tilt) with positive angles being clockwise rotation and negative representing counterclockwise rotation.

Parameters of the modeled variograms are documented in Table 14.6 and the calculated semi-variogram and models are illustrated in Figure 14.7.

Multiple sources of uncertainty in the variography are present. Source of uncertainty are as follows:

- Drilling is preferentially completed along a direction of 006°-186°. Variography shows this to be the most continuous direction, establishing it as the major axis. However, the preferential drilling direction makes it challenging to assess alternative directions.

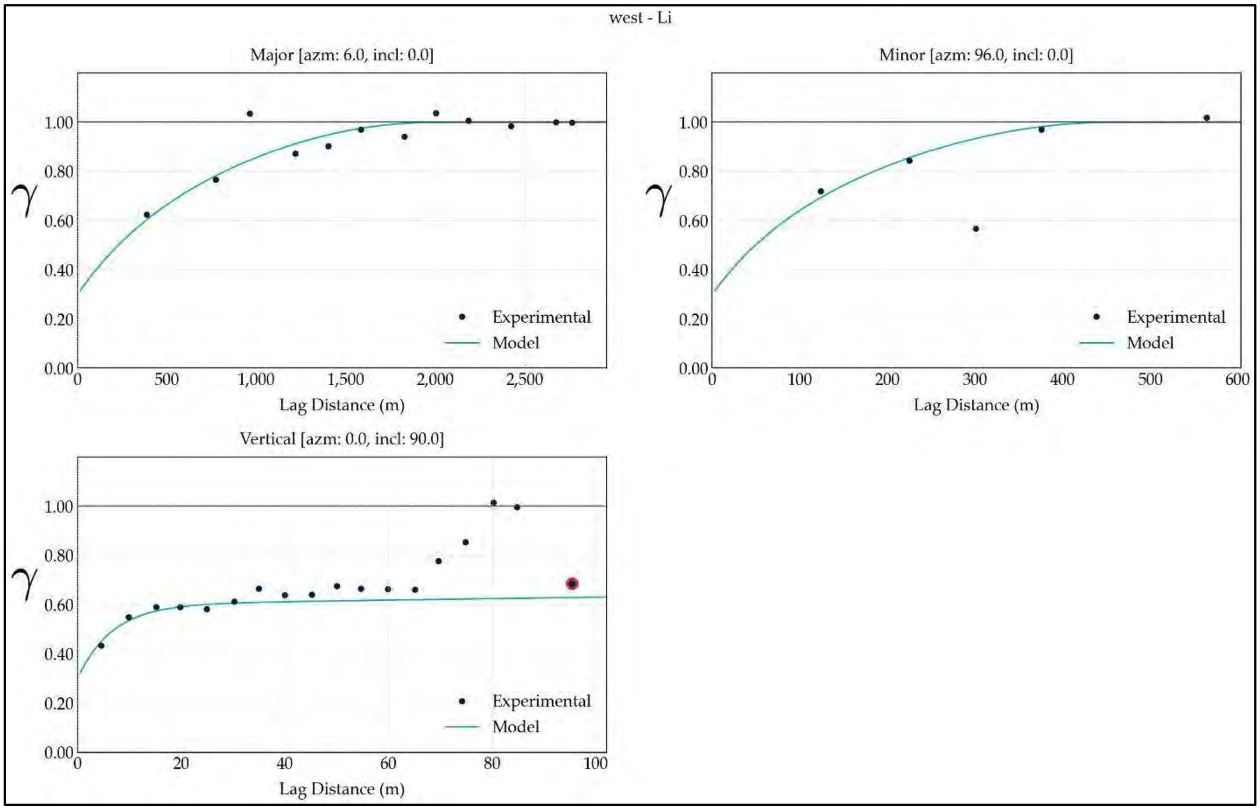
- There is not enough information in the east resource area to establish robust variography. Therefore, the variogram calculated in the west resource area is used for estimation.

- In the vertical direction, drilling ceases before reaching the base of the Seibert Formation, leading to observed zonal anisotropy. To accurately define the correlation range in this direction, more data is needed. However, the issue is constrained since the modeled Seibert Formation thickness is defined by the drilling depth.

Table 14.6 Variogram model parameters. Abbreviations: C0 - nugget effect; C1 - covariance contribution of structure 1; C2 - covariance contribution of structure 2; sph - spherical, exp - exponential.

Resource Area	Sill	C0	Structure 1					Structure 2				
			Type	C1	Ranges (m)			Type	C2	Ranges (m)		
					Major	Minor	Vertical			Major	Minor	Vertical
West	1	0.3	Exp	0.3	1200	250	20	Sph	0.4	1950	450	2000

Figure 14.7 Calculated and modeled semi-variograms for the west resource area.



14.7 Block Model Definition and Volumetric Checks

A block model was created to fully encapsulate the drill-validated Siebert Formation along with its overlying overburden/pediment cover. When determining block model parameters, data spacing is the primary consideration in addition to ensuring the volume of the 3D geological models are adequately captured.

Within the west and east resource area's the distance between the drillholes ranges from 50.2 to 1,660 feet (15.3 to 505.9 m; Figure 14.8). Based on this and the detail of the 3D geological models, a block model with a block size of 66 x 66 x 10 feet (or 20 m by 20 m in the horizontal directions and 3 m in the vertical direction) was generated. The final block model, or the block model centroids that contains all geology (i.e., both the Seibert Formation and the overlying overburden/pediment) is 11,417 feet (3,480 m) long in the north-south direction, 9,383 feet (2,860 m) long in the east-west direction, and 620 feet (189 m) deep (Table 14.7).

A comparison of wireframe volume versus block model volume is performed to ensure there is no considerable over- or under-stating of tonnages (Table 14.8). The sub-blocked block model effectively represents the volume of the modeled wireframe volumes.

Figure 14.8 Plot of cumulative frequency of drillhole distances within the west and east resource areas (utilizing sonic drillholes within the resource areas).

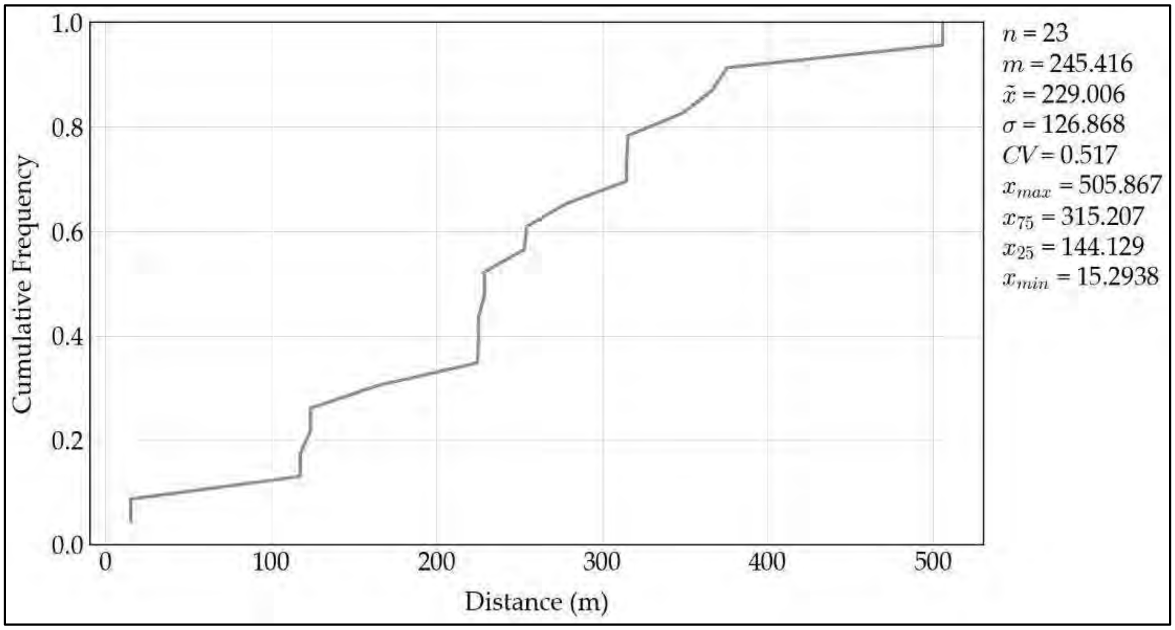


Table 14.7 Block model size and extent.

Axis	Number of Blocks	Block size (m)	Minimum extent (m)	Maximum extent (m)
X (Easting)	143	20	471988	474848
Y (Northing)	174	20	4214548	4218028
Z (Elevation)	63	3	1511	1700

Table 14.8 Wireframe versus block-model volume comparison.

Resource area	Wireframe volume (m3)	Blocks volume (m3)	Volume difference (%)
West	151,513,289	151,686,750	-0.11%
East	45,952,348	45,990,650	-0.08%

14.8 Estimation Methodology

The Ordinary Kriging (OK) technique was used to estimate the lithium at each parent block within the Siebert Formation wireframe. A two-pass method is utilized that uses two different search ellipses. The first pass estimates block grades based on the variogram's first structure range, as specified in Section 14.6.3. The second pass focuses on blocks not covered in the first pass, retaining the same orientation but extending the search ellipse to the ranges defined by the variogram's second structure (Table 14.9).

Both the west and east resource areas use a search ellipsoid set by Euler angles: Angle 1 is 006, Angle 2 and Angle 3 are both 0. A block discretization of 5 (X) by 5 (Y) by 5 (Z) was applied to all blocks during estimation. Only those composites located within the Siebert Formation wireframe are considered during grade estimation of each block located with that wireframe.

Volume-variance corrections are enforced by 1) restricting the maximum number of conditioning data to 30; 2) restricting the maximum number of conditioning data from each drillhole by 2; and 3) limiting the ellipsoids size in the vertical direction to 20 m. These restrictions were applied to each estimation run and are implemented to ensure the estimated models are not over-smoothed, which would lead to inaccurate estimation of global tonnage and grade. These corrections cause local conditional bias but ensure the global estimate of grade and tonnes is accurately estimated.

Table 14.9 Block model lithium interpolation parameters

Pass	Search Ranges (m)			No. of Ellipse Sectors	Min No. of Comps	Max No. of Comps	Max No. of Comps per Hole
	Major	Minor	Vertical				
1	1200	250	20	1	1	30	2
2	1950	450	20	1	1	30	2

14.9 Block Model Validation

14.9.1 Visual Validation

The blocks are visually validated in plan view and in cross-section to compare the estimated block sizes versus the sample composite sizes. Example cross-sections of the visual validation process for the geological wireframing (Siebert Formation and overburden/pediment) and the composited and estimated OK section are presented in Figure 14.9 and Figure 14.10.

Overall, the model compares well with the sample data that was used to complete the estimation. There is some local over and under estimation observed. Due to the limited number of sample points available for the estimation this is an expected result. It is concluded that overall, the estimated block sizes compare well with the composite sizes.

Figure 14.9 Cross-section looking west along 010/190° in the west resource area to show an example of the Siebert Formation and overburden-pediment wireframes that were created in the three-dimensional model (vertical exaggeration of 5). The indicated and inferred resource areas are shown in red and yellow, respectively.

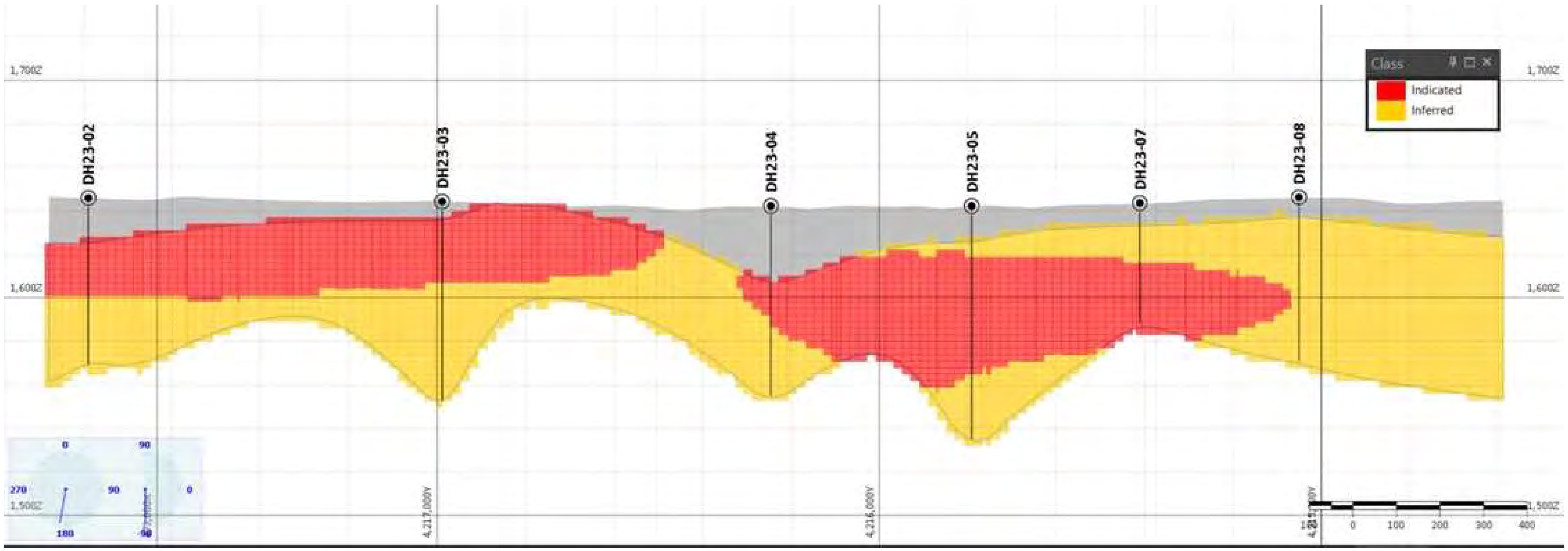
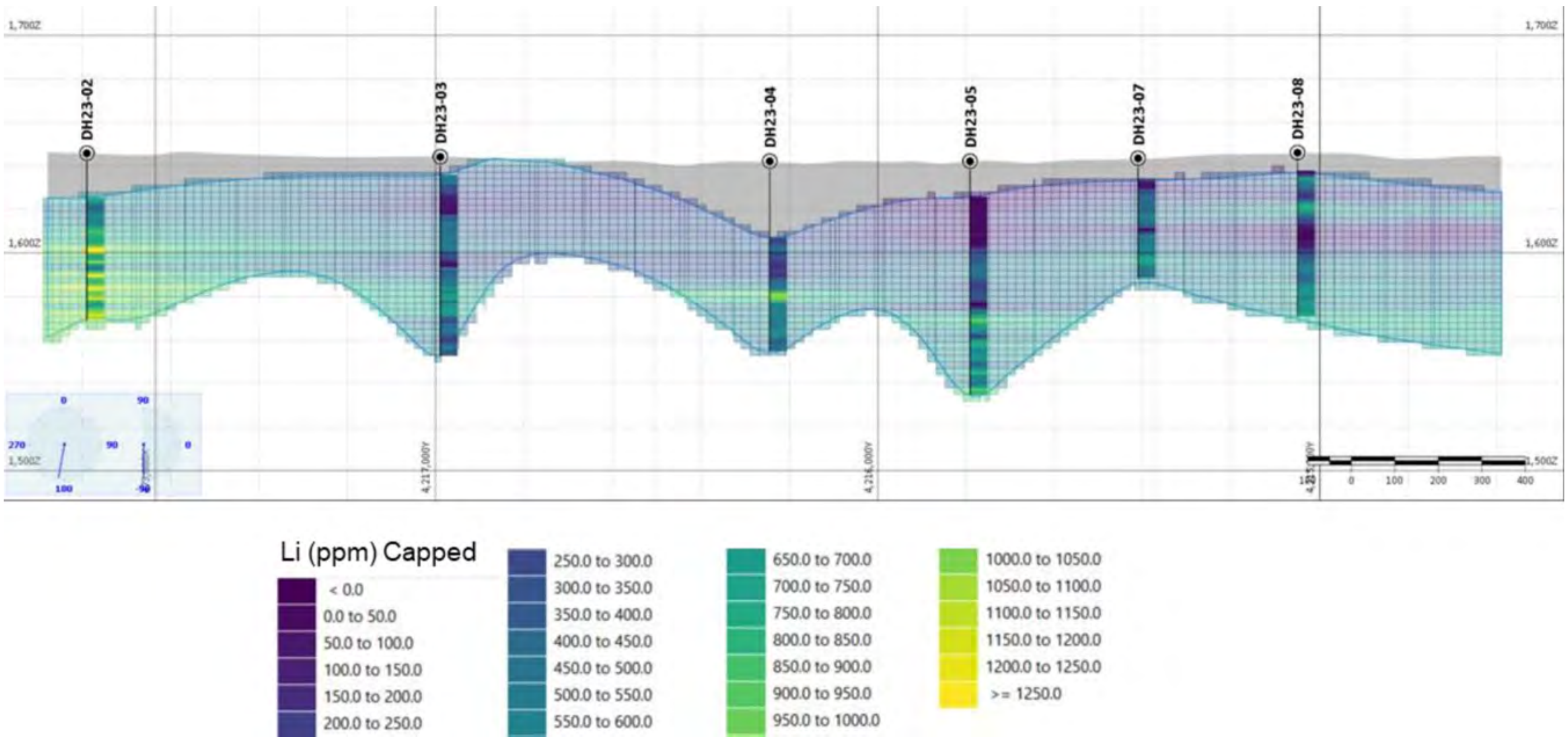


Figure 14.10 Cross-section looking west along 010/190° in the west resource area to show an example of the capped composites and estimated lithium grades within the individual blocks (vertical exaggeration of 5).



14.9.2 Statistical Direction Trend Analysis Validation

Swath plots are used to verify that directional trends are honoured in the estimated model and identify potential areas of over- or under-estimation. They are generated by calculating the average lithium between the composites and estimated models within east-west, north-south, and vertical slices. The averages are calculated within directional slices: a window of 100 m is used in the east-west slices (Figure 14.11), 300 m in the north-south slices (Figure 14.12), and 30 m for the vertical slices (Figure 14.13).

14.9.3 Statistical Volume Variance Analysis Validation

Smoothing is an intrinsic property of kriging, and volume-variance corrections are used to help reduce its effects. To verify that the correct level of smoothing is achieved, theoretical histograms that indicate each estimated metal's anticipated variance and distribution at the selected block model size are calculated. The scaled composite histograms are used to calculate expected tonnages and expected grades above a series of cut-off grades. Comparing the curves of the expected versus estimated values helps ensure the correct volume of mineral resource above varying cut-offs is being estimated. Overall, the estimated grades within each resource area illustrate the desired amount of smoothing. Figure 14.14 and Figure 14.15. Lithium estimation demonstrates adequate smoothing at the desired cut-off, additional modifications to the search strategy would introduce excessive bias.

14.10 Mineral Resource Estimations

14.10.1 Definition of Mineral Resource

The West Tonopah Lithium Project lithium-claystone mineral resources discussed in this Technical Report has been classified in accordance with guidelines established by the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines dated November 29, 2019, and CIM Definition Standards for Mineral Resources and Mineral Reserves dated May 14, 2014.

> "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. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve."

Figure 14.11 East-west swath plots comparing composite versus estimated lithium.

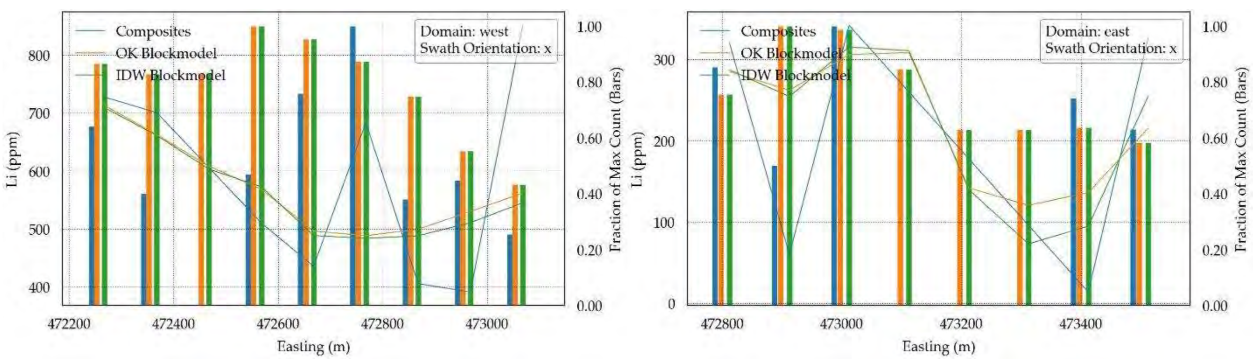


Figure 14.12 North-south swath plots comparing composite versus estimated lithium.

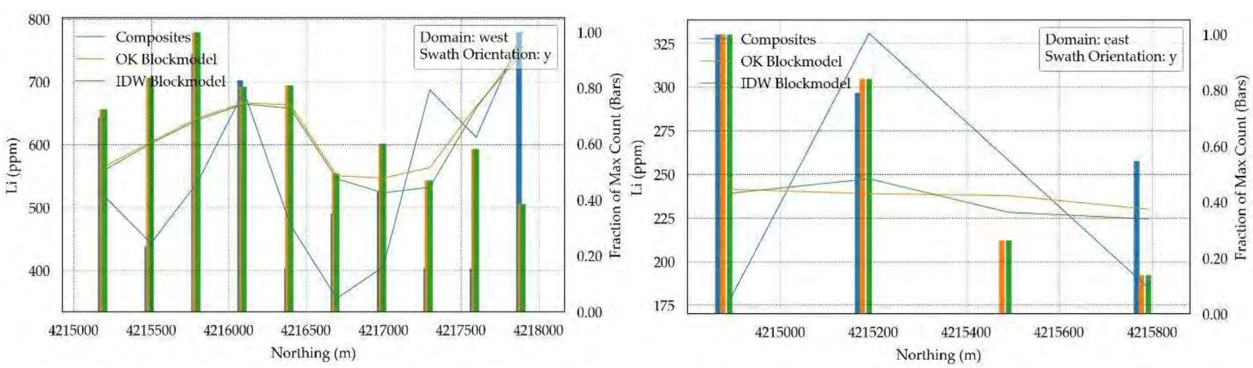


Figure 14.13 Vertical swath plots comparing composite versus estimated lithium.

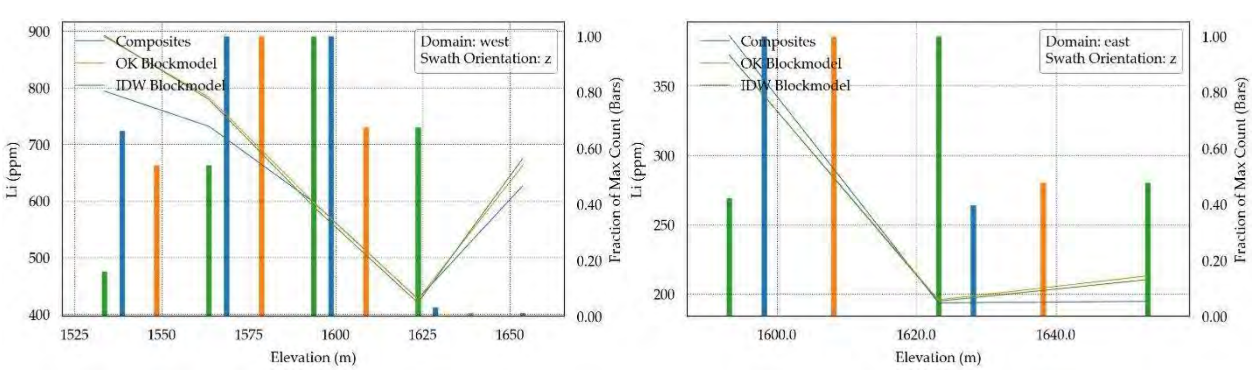


Figure 14.14 Volume variance analysis for the west resource area.

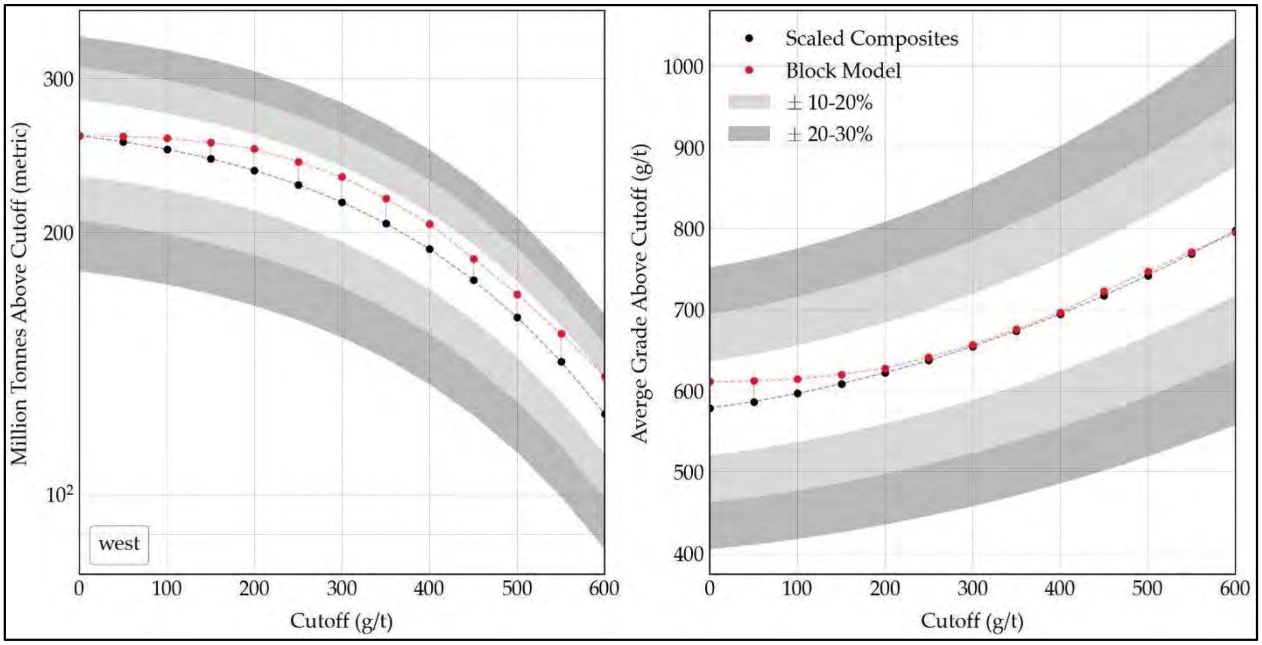
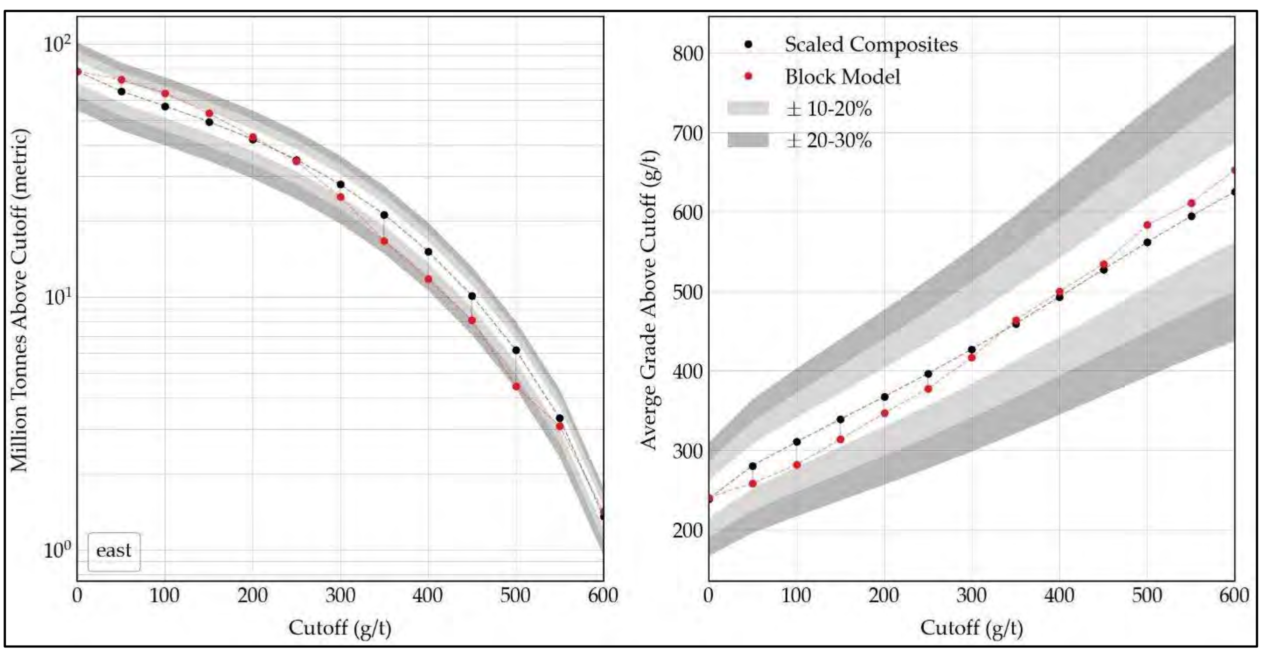


Figure 14.15 Volume variance analysis for the east resource area.



"An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An inferred mineral resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration."

14.10.2 Classification Methodology

The West Tonopah Lithium Project mineral resources are classified as inferred and indicated mineral resources according to the CIM definition standards (2014). Based on the limited lithological detail, it is not possible to correlate specific Siebert Formation sub-horizons within the 3D geological model of the west or east resource areas. Hence, the resource areas are modelled using the entire Siebert Formation, which is valid because the strata are enriched in lithium throughout the entire unit (or at least to the depths that have drilled to date by Enertopia).

The classification of the indicated and inferred mineral resources is based on geological confidence, data quality, and grade continuity of the data. The most relevant factors used in the classification process include 1) density of conditioning data, 2) level of confidence in drilling results and spatial collar locations, 3) level of confidence in the geological interpretation, 4) continuity of mineralisation, 5) level of confidence in the assigned densities, and 5) knowledge that Enertopia has conducted a limited amount of mineral processing test work to remove lithium from the lithium-claystone (see Section 13).

In this context, the QPs resource classification criteria define indicated mineral resources within these initial resource estimations as those areas that include information derived from 3 holes that are within 1,476 feet (450 m) of one another. Inferred resources are designated outside of the indicated resources and in areas where there is applicable drillhole information. Unclassified areas include those areas that are not drill tested and where there are only isolated sonic drillholes such as in the west-central portion of the property (sonic drillhole DH22-04; east of the proposed or inferred fault) and in the far northeast corner of the property (sonic drillhole DH22-20).

Further evaluation of current drill cores, exploration work, and metallurgical recovery test work is required to advance the project to increased volumes of indicated mineral resources and/or establishment of a measured mineral resource classification. This work is required to advance the quantity, grade, densities, and physical characteristics of the lithium-claystone deposit to enable the application of Modifying Factors to support mine planning and evaluation of economic viability.

Mineral resource classification was determined using a multiple-pass strategy that consists of a sequence of runs that flag each block with the run number a block first meets a set of search restrictions. With each subsequent pass, the search restrictions decrease, representing a decrease in confidence and classification from the previous run. For each run, a search ellipsoid is centred on each block and orientated in the same way described in Section 14.8.

Table 14.10 details the range of the search ellipsoids and the number of composites that must be found within the ellipse for a block to be flagged with that run number. The runs are executed in sequence from run 1 to run 2. Classification is then determined by relating the run number that each block is flagged as to indicated (run 1) or inferred (run 2). This process is completed separately from grade estimation. Composites calculated from missing intervals that were inserted with a nominal waste value are not considered for classification. Figure 14.16 illustrates the classification used in the mineral resource estimations.

Table 14.10 Search restrictions applied during each run of the multiple-pass classification strategy.

Classification	Minimum Number of Drillholes	Maximum Drillholes per Octant	Ranges (m)		
			Major	Minor	Vertical
Indicated	3	1	450	450	9
Inferred	2	-	1950	70450	9

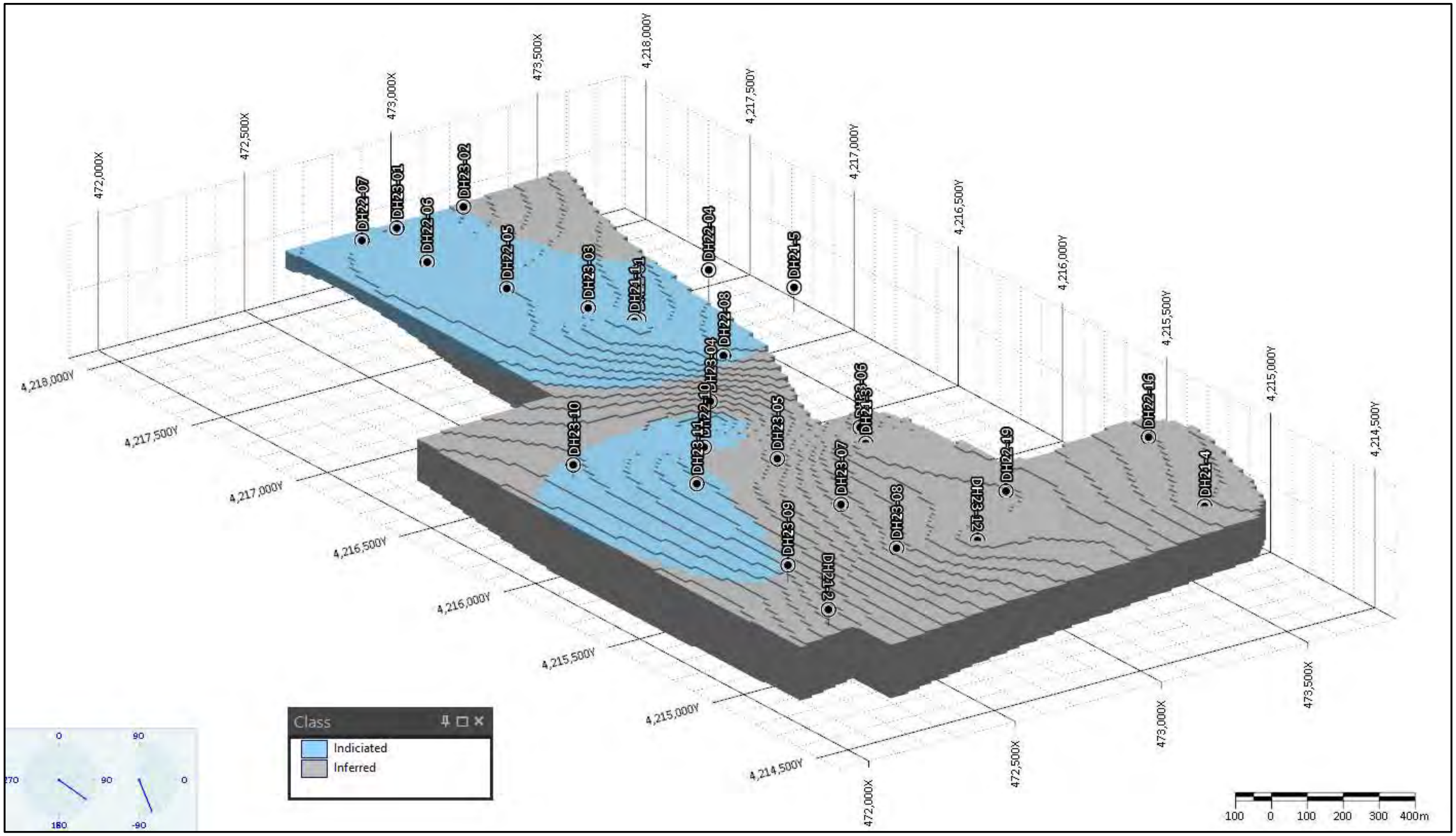
14.10.3 Evaluation of Reasonable Prospects for Economic Extraction

The West Tonopah Lithium Project is a project of merit in that there is a concentration or occurrence of lithium-claystone in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. This phrase implies judgement by the QP; direct evidence and testing to support this contention include:

- The sonic drilling and subsequent core logging and geochemical analysis demonstrate near-surface, geological, and lithium grade continuity, particularly within mudstone dominant horizons of the Siebert Formation host rock in the western portion of the West Tonopah Lithium Project.

- Lithium prices hit all-time highs in 2022 (e.g., 605,000 yuan a metric tonne by November 2022) but tumbled in January 2023 after China curbed Electric Vehicle (EV) subsidies (Onstad et al., 2023). Experts remain confident, however, in the long-term outlook for the battery metal because of ongoing/increasing demand in EVs, stricter emissions standards, relative stability in lithium chemical prices globally, and a narrowing gap between carbonate prices and hydroxide prices (Barrera, 2023). Demand, including government stimulus, batteries for energy storage, and a destocked market, also support a continuing positive trend in lithium pricing.

Figure 14.16 Orthogonal view of resource classification.



Currently, Fastmarkets (2023) lithium pricing is:

- Lithium carbonate, 99.5% Li_2CO_3 min, battery grade, spot price range domestic China was 230,000-250,000 yuan per metric tonne.
- Lithium hydroxide monohydrate, $LiOH.H_2O$ 56.5% LiOH min, battery grade, spot price range domestic China was 220,000-240,000 yuan per metric tonne.

The QP has conducted a conceptual analysis of the technical and economic factors to support reasonable prospects of eventual economic extraction and in the development of a conceptual pit shell. In doing so, the QP reviewed several lithium-claystone early- and advanced-stage projects in Nevada, including in the Tonopah region, and compiled conceptual pit shell parameters that were discussed or employed in the respective technical reports (Fayram et al., 2020; Loveday and Turner, 2020; Cukor et al., 2022; Roth et al., 2022; RESPEC, 2023; Riordan et al., 2023).

As an early-stage project, the QP considered and utilized the following theoretical parameters to design a conceptual pit shell at the West Tonopah Lithium Project:

- Current lithium carbonate price: USD$29,833/metric tonne (August 24, 2023; www.dailymetalprice.com).

- 3-year average lithium carbonate price: USD$26,500/tonne (www.statista.com).

- Mining and processing costs: USD$3.33/tonne and USD$31.56/tonne.

- Recovery: 80%.

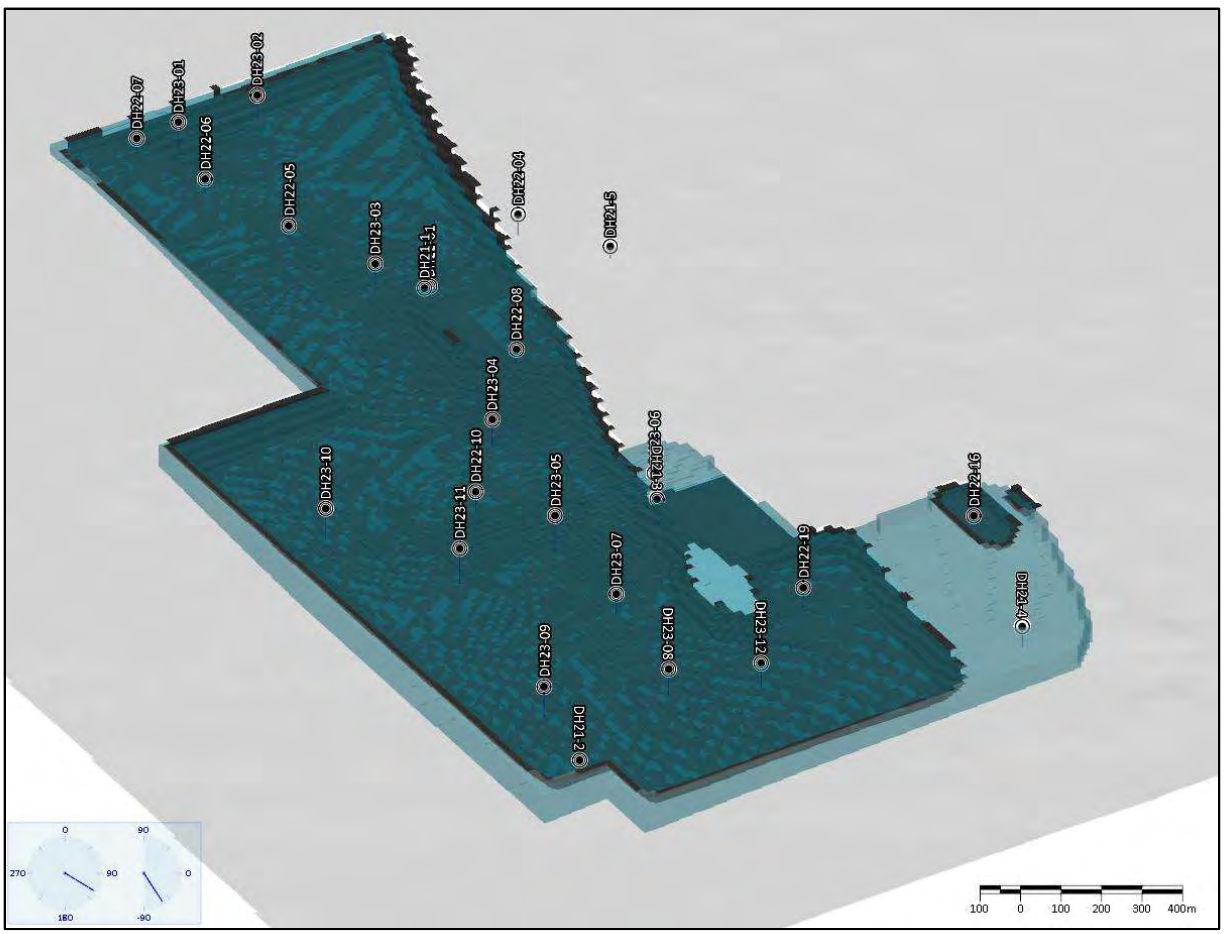
The parameters are considered approximate and reasonable based on publicly available comparative information. Uncertainties and risks include mining and processing costs and lithium carbonate prices, both of which could influence the cutoff grade. The lithium carbonate price was constructed using a 3-year average. The QP is aware that lithium carbonate pricing has fluctuated in recent years due, in part, to political/government incentives to reduce emissions (e.g., electric vehicle interest and sales). The selected average lithium carbonate price of USD$26,500 is considered reasonable because 1) it does not rely on average 2022 LCE prices of USD$37,000, which represent the highest price recorded for battery-grade lithium carbonate, and 2) the price represents a conservative price in consideration of lithium carbonate prices used in similar 2020-2023 lithium-claystone, Nevada-based, technical reports.

Other assumptions include mining and processing operational costs and the lithium recovery value used in the conceptual pit shell. The QP notes that these values are justified in the context of this early-stage project and in consideration of an initial mineral resource because the values are consistent with what other QPs and companies are using currently for the identical deposit type and in the state of Nevada.

A conceptual pit shell was constructed assuming a near-surface, open pit mining operation with an onsite lithium processing facility to extract lithium (toward a lithium carbonate product) from the Siebert Formation using an acid digestion method. Within the conceptual pit shell, Li (ppm) was converted to LCE (ppm) and the LCE grade was used to calculate the block values. The value of each block above cutoff is based on conservative parameters that include mining costs ($3.33/tonne rock) plus processing costs ($31.56/tonne rock). This is then subtracted from the block revenue which is LCE recovered tonnes (using total recovery of 80%) and the LCE price ($28,600/tonne of LCE). Any block where the total mining plus processing costs is higher than the revenue is flagged as a waste block (with a mining cost value of $3.33/tonne rock).

An image of the conceptual pit shell, which uses a constant slope of 45 degrees, is presented in Figure 14.17. Using the attributes described in the text above, the West Tonopah Lithium Project is amenable to development because the blocks contained within the conceptual pit shell satisfy the test of reasonable prospects for eventual economic extraction. To conclude, and based on geological information, marketing considerations, and comparative lithium-carbonate technical studies, the QP advocates that the West Tonopah Lithium Project represents a project of merit and has reasonable prospects for eventual economic extraction.

Figure 14.17 Oblique view of a conceptual pit shell to assess reasonable prospects for eventual economic extraction.



APEX GEOSCIENCE

14.10.4 Mineral Resource Reporting

The mineral resources within the West Tonopah Lithium Project are reported in accordance with the CSA NI 43-101 rules for disclosure and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019, and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10, 2014. The effective date of the Mineral Resource is May 11, 2022.

The resource is estimated within a 3D geological model of the Siebert Formation. The upper contact of Siebert Formation is associated with a distinct contact between the sedimentary/volcaniclastic rocks and the overlying overburden/pediment. All drillholes were terminated within the Seibert Formation. The Siebert Formation wireframe was clipped to the topographic surface DEM and the boundaries of the property. Hence the resource estimation domain is constrained within the Siebert Formation, and to a depth of 410.4 feet (125.1 m) below surface.

The resources were calculated within the west and east resource areas using a block model with a size of 20 by 20 m in the horizontal directions and 3 m in the vertical direction. The lithium is estimated at each parent block using Ordinary Kriging. A nominal density of 1.70 g/cm^3 was applied to convert the Siebert Formation block volumes to tonnage. The West Tonopah Lithium Project estimations were completed and reported using a lower cutoff of 400 ppm Li.

The West Tonopah Lithium Project's inferred mineral resources are divided into west and east resource areas.

- The west resource area has an indicated lithium-claystone resource estimate of 44,000 short tons (40,000 metric tonnes) of elemental Li (Table 14.11). The global (total) lithium carbonate equivalent (LCE) for the west indicated resource area, which is calculated by multiplying elemental lithium by a factor of 5.323, is 233,000 short tons (212,000 metric tonnes) LCE.

- The west resource area has an inferred lithium-claystone resource estimate of 87,000 short tons (79,000 metric tonnes) of elemental Li (Table 14.12a). This translates to 463,000 short tons (420,000 metric tonnes) LCE.

- The east resource area has a lithium-claystone inferred resource estimate of 5,000 short tons (5,000 metric tonnes) of elemental Li (Table 14.12b). This translates to 27,000 short tons (25,000 metric tonnes) LCE.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

Table 14.11 West Tonopah Lithium Project west resource area indicated lithium-claystone resource estimate. The indicated mineral resource is reported for the Siebert Formation as a total (global) volume and tonnage using a lower cutoff of 400 ppm Li (bold font highlighted in grey).

West Resource Area Indicated Mineral Resource Estimate

	Rock Mass		Contained Metal				
			Metric tonnes (t)		Short tons (st)		
Li Cutoff (ppm)	Metric tonnes (t)	Short tons (st)	Li	LCE	Li	LCE	Average Li Grade (ppm)
300	80,428,000	88,657,000	45,000	240,000	50,000	265,000	561
400	**65,322,000**	**72,005,000**	**40,000**	**212,000**	**44,000**	**233,000**	**609**
500	46,476,000	51,231,000	31,000	166,000	34,000	184,000	673
600	30,221,000	33,313,000	22,000	119,000	25,000	131,000	739
800	7,646,000	8,428,000	7,000	35,000	7,000	39,000	859
1000	264,000	291,000	-	1,000	-	2,000	1061

Note 1: Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Note 2: The weights are reported in United States short tons (2,000 lbs or 907.2 kg) and metric tonnes (1,000 kg or 2,204.6 lbs). The tonnage numbers are rounded to the nearest 1,000 unit, and therefore, may not add up.

Note 3: The density used to convert volume to tonnage is 1.70 g/cm^3 for the Siebert Formation and the overburden/pediment.

Note 4: The mineral resource is contained within a pit shell in which blocks meet the test of reasonable prospects for eventual economic extraction.

Note 5: To describe the resource in terms of the industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li_2CO_3, or Lithium Carbonate Equivalent (LCE).

Table 14.12 West Tonopah Lithium Project west and east resource areas inferred lithium-claystone resource estimate. The inferred mineral resources are reported for the Siebert Formation as a total (global) volume and tonnage using a lower cutoff of 400 ppm Li (bold font highlighted in grey).

A) West Resource Area Inferred Mineral Resource Estimate

	Rock Mass		Contained Metal				
			Metric tonnes (t)		Short tons (st)		
Li Cutoff (ppm)	Metric tonnes (t)	Short tons (st)	Li	LCE	Li	LCE	Average Li Grade (ppm)
300	119,801,000	132,058,000	83,000	440,000	91,000	485,000	690
400	**109,366,000**	**120,556,000**	**79,000**	**420,000**	**87,000**	**463,000**	**722**
500	95,516,000	105,288,000	73,000	387,000	80,000	427,000	762
600	80,725,000	88,985,000	65,000	344,000	71,000	379,000	801
800	37,191,000	40,996,000	34,000	178,000	37,000	197,000	902
1000	4,153,000	4,578,000	4,000	24,000	5,000	26,000	1063

B) East Resource Area Inferred Mineral Resource Estimate

	Rock Mass		Contained Metal				
			Metric tonnes (t)		Short tons (st)		
Li Cutoff (ppm)	Metric tonnes (t)	Short tons (st)	Li	LCE	Li	LCE	Average Li Grade (ppm)
300	18,119,000	19,972,000	8,000	41,000	8,000	45,000	425
400	**9,314,000**	**10,267,000**	**5,000**	**25,000**	**5,000**	**27,000**	**499**
500	3,503,000	3,862,000	2,000	11,000	2,000	12,000	578
600	967,000	1,066,000	1,000	3,000	1,000	4,000	650
800	-	-	-	-	-	-	
1000	-	-	-	-	-	-	

Note 1: Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Note 2: The weights are reported in United States short tons (2,000 lbs or 907.2 kg) and metric tonnes (1,000 kg or 2,204.6 lbs). The tonnage numbers are rounded to the nearest 1,000 unit, and therefore, may not add up.

Note 3: The density used to convert volume to tonnage is 1.70 g/cm^3 for the Siebert Formation and the overburden/pediment.

Note 4: The mineral resource is contained within a pit shell in which blocks meet the test of reasonable prospects for eventual economic extraction.

Note 5: To describe the resource in terms of the industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li_2CO_3, or Lithium Carbonate Equivalent (LCE).

An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that most inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Collectively, the West Tonopah Lithium Project is predicted to contain 1) an indicated mineral resource in the west resource area of 44,000 short tons (40,000 metric tonnes) of elemental lithium, and 2) combined inferred mineral resources in the west and east resource areas of 92,000 short tons (84,000 metric tonnes) of elemental lithium.

The west and east mineral resource areas are overlain by 71.9 and 11.0 million short tons (65.2 and 10.0 million metric tonnes) of overburden-pediment waste material, respectively.

Because the west resource area extends to the western edge of the property, and the mineral resource would likely be mined using an open pit methodology, a substantial amount of Siebert Formation mineralized claystone remains unclassified within the pit shell based on the implementation of a pit slope of 45°. The unclassified rock mass is 32.5 million short tons (29.5 million tonnes), in comparison to the combined mineral resource classified rock mass of 202.8 short tons (184.0 million metric tonnes).

Also in the west resource area, the indicated mineral resources within deep, isolated, drill-defined zones transitions from indicated to inferred mineral resources. This is because of 1) the sparse density of deeply drilled holes at the property, and 2) the QPs resource classification criteria in which indicated mineral resources are defined by information derived from 3 holes that are within 1,476 feet (450 m) of one another.

14.10.5 Sensitivity Analysis

Sensitivity analysis estimates are included within the mineral resource tables to demonstrate the sensitivity of the mineral resources to changes in the lithium cutoff grade (see Table 14.11 and Table 14.12).

It is important to point out that the base case cutoff of 400 ppm Li is used to define the total (global) mineral resources presented in this technical report (see values highlighted in bold on Table 14.11 and Table 14.12).

Please note that other cutoff values presented within the sensitivity analysis do not represent the QPs estimate of the mineral resources for the West Tonopah Lithium Project. That is, additional cutoff grades other than 400 ppm Li implied within the sensitivity analysis may not meet the test of reasonable prospects for eventual economic extraction. Estimates resulting from any cut-off grade other than the highlighted base case cutoff of 400 ppm Li must be evaluated, and meet, the test of reasonable prospect of economic extraction.

****** NI 43-101 Items 15-22 are not included for an early-stage exploration project ******

23 Adjacent Properties

Note that the QP has been unable to verify the information presented in this adjacent property section, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.

23.1 Lithium Companies in the Big Smoky Valley

Lithium focused exploration work and production has historically and currently occurred in west-central Nevada and in the vicinity of the Western Tonopah Lithium Project. At present, Enertopia's project is surrounded by lithium companies including American Battery Technology Company, American Lithium Corp., Astro Resources NL, Blackrock Silvert Corp. – Tearlach Resources, Black Rock Silver Corp., Pan America Energy Corp., POWR Lithium Corp., Reed Lagoon Corporation Limited and Refined Metals Corp. (Figure 23.1). Of these companies, the QP has selected to discuss a lithium-brine and three lithium-claystone projects in this section. These projects include:

- Albemarle Corporation's Silver Peak Lithium Operations and Century Lithium Corp.'s Clayton Valley Lithium Project, which are located 45 km southwest of Enertopia's West Tonopah Lithium Property, and

- American Battery Technology Company's Tonopah Flats Lithium Project and American Lithium Corp.'s Tonopah Lithium Claim (TLC) properties, which are located directly west and 5 km north, respectively, of Enertopia's West Tonopah Lithium Property (Figure 23.2).

23.1.1 Albemarle Corporation Silver Peak Lithium Operations

Located in the Clayton Valley, Albemarle Corporation's 100% owned Silver Peak Lithium Mine represents the sole operating lithium-brine mine in North America and produces technical-grade lithium carbonate and lithium hydroxide from a lithium-brine deposit type. Aggregate lithium metal production between 2020 and 2022 is 2,000 metric tonnes per year and a summary of the Silver Peak facility's lithium mineral resources, exclusive of reserves, and reserves can be viewed at Albemarle Corporation (2022).

The unique closed-basin geology of Clayton Valley plays a crucial role in the abundance of lithium resources in the area, where high geothermal gradients enhance lithium leaching and subsurface geochemical interactions between water and lacustrine sedimentary rocks to contribute to the formation of lithium-enriched brine (Coffey et.al., 2021). The lithium-brine production facility at Silver Peak has extracted lithium from brine for more than 50 years from 6 distinct aquifer systems. The processing facilities at Silver Peak consist of extraction wells, evaporation and concentration ponds, a lithium carbonate plant, a lithium anhydrous plant, a lithium hydroxide plant, a liming plant, and maintenance and administrative offices.

Figure 23.1 Adjacent properties.

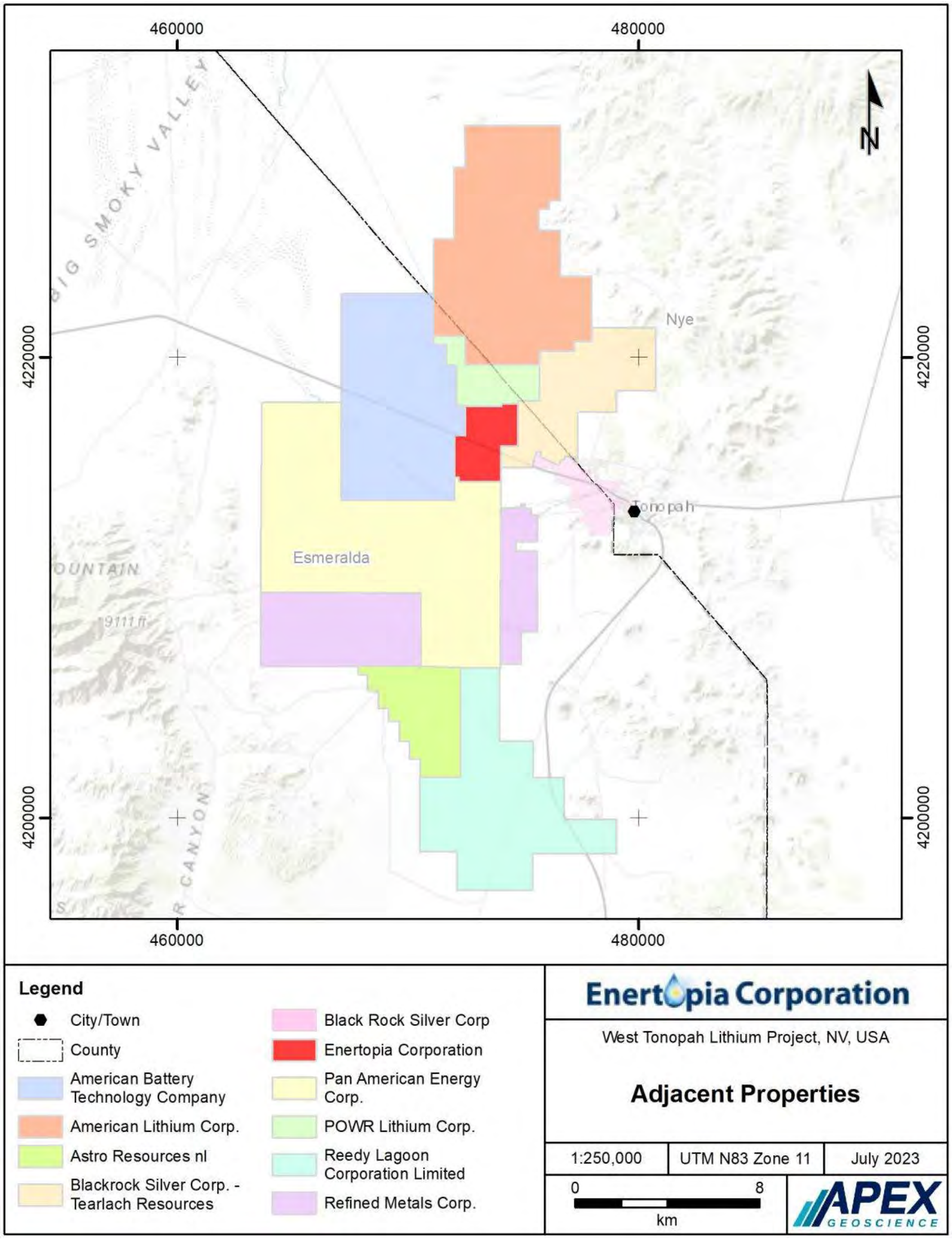
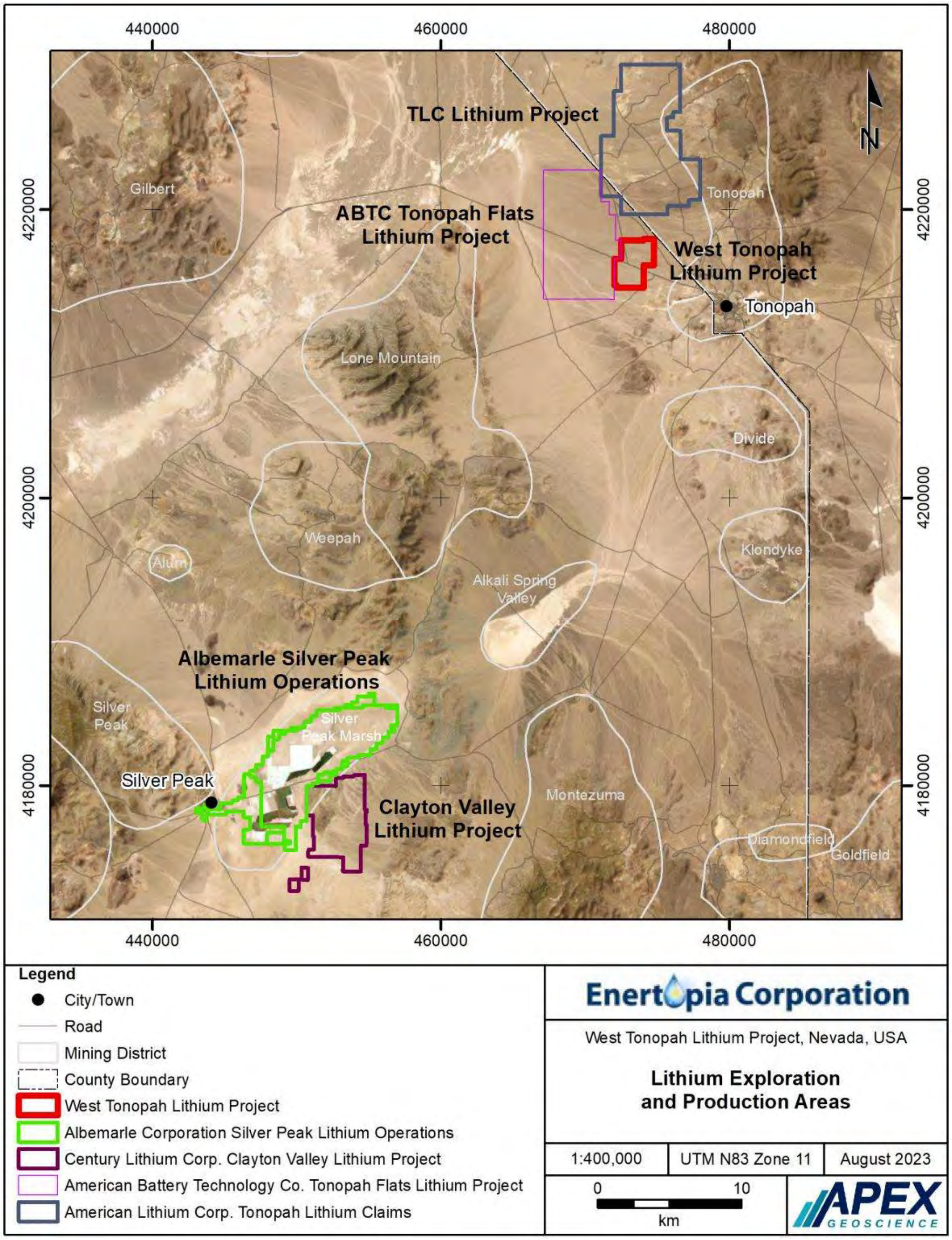


Figure 23.2 Selected lithium exploration and production areas proximal to the West Tonopah Lithium Project. The QP has been unable to verify the adjacent property historical information, and therefore, states that the information may not necessarily be indicative of the mineralisation on Enertopia's West Tonopah Lithium Project that is the subject of this technical report.



23.1.2 Century Lithium Corp. Clayton Valley Lithium Project

Century Lithium Corp. owns 100% of the Clayton Valley Lithium Project, which is defined as lithium-bearing claystone that occurs directly adjacent to a lithium brine basin (Albemarle's Silver Peak lithium-brine project). The lithium resource is exposed at surface within mudstone rocks of the Upper to Middle Miocene Esmeralda Formation (which are younger than the Lower to Middle Miocene Siebert Formation strata; Albers and Steward, 1972; Bonham and Garside, 1979a; Ingersoll, 2002).

At present, the Century Lithium Corp. is actively processing material from its lithium-bearing claystone deposit at its lithium extraction facility (Pilot Plant or Plant) in Amargosa Valley, NV. Century Lithium Corp. has disclosed that the lithium can be extracted from the claystone through conventional tank leaching and counter current decantation, resulting in low acid consumption and high lithium recovery of over 85% of total lithium.

Century Lithium Corp.'s current Pre-Feasibility Study technical report has an effective date of August 5, 2020. The technical report was prepared by Fayram et al. (2020) and can be accessed at https://www.centurylithium.com/. The company reported they had repeated the production of a high-purity lithium carbonate (Li_2CO_3) grading 99.87% from representative Li-claystone at the project and is preparing a Feasibility Study (Century Lithium Corp., 2023).

23.1.3 American Battery Technology Company Tonopah Flats Lithium Project

The American Battery Technology Company (ABTC) Tonopah Flats Lithium Project is located directly west of Enertopia's property. The lithium mineralisation occurs within a thick sequence of Siebert Formation lacustrine lithium-claystone. The identified claystone thickness in the project area exceeds 800 feet (278 m) and appears to thicken toward the sedimentary basin to the west (RESPEC, 2023). Elevated Li-claystone horizons are localized to semi-continuous and generally contained within a 4,000- to 5,000-foot-wide (1,219-1,524 m) corridor in multiple stratigraphic horizons from 20 to 115 feet (6 to 35 m) in thickness, running north to south through the central portion of the Tonopah Flats Lithium Project property.

ABTC has collected surface samples and drilled 21 vertically drilled, reverse-circulation and air core drillholes totalling 12,000 feet (3,658 m). The holes were spaced 200 to 2,500 feet apart (61 to 762 m) and penetrated depths of between 400 and 885 feet (122 to 270m).

ABTC's current mineral resource technical report is effectively dated November 8, 2022, and was prepared in accordance with U.S. Securities and Exchange Commission Regulation S-K 1300. The technical report was prepared by RESPEC (2023) and can be accessed at https://americanbatterytechnology.com.

23.1.4 American Lithium Corp. Tonopah Lithium Claims (TLC)

The Tonopah Lithium Claims (TLC) Project is located 6 miles (9.7 km) northwest of Tonopah in Big Smoky Valley. The TLC project is separated from Enertopia's West Tonopah Lithium Project by the Crescent Dunes Solar Energy Plant, which is situated on 1,600 acres of land leased from the BLM.

The TLC lithium mineralisation is hosted within fines-dominant sedimentary rocks and lithic tuffs of the Miocene-age Siebert Formation, which has been divided into upper and lower lithium claystone zones separated by a narrow tuffaceous sedimentary unit (basal tuff marker bed). The TLC Property is separated into 10 fault blocks that are split by north-south trending high-angle normal faults and to a lesser extent west-east trending normal faults that likely have some strike-slip movement.

American Lithium Corp.'s current Preliminary Economic Assessment technical report has an Effective Date of January 31, 2023, and was prepared in accordance with CIM definition standards and best practice guidelines (2014, 2019) and the disclosure rule NI 43-101. The technical report was prepared by Riordan et al. (2023) can be accessed at https://americanlithiumcorp.com/.

24 Other Relevant Data and Information

None to report.

25 Interpretations and Conclusions

25.1 Enertopia 2021-2023 Exploration Programs

During 2021-2023, Enertopia:

- Conducted a 2021 prospecting program that discovered an outcrop of Siebert Formation with 2 bedrock grab samples yielding 570 and 620 ppm Li. A shallow, near surface winkie drillhole (DH-1) adjacent to the discovery outcrop yielded 3 samples of 700 ppm, 690 ppm, and 860 ppm Li within 4-foot (1.22 m) sample intervals at depths of between 2 and 14 feet (0.6-4.3 m) below surface.

- Also discovered a second Siebert Formation outcrop, approximately 490 m east-southeast of the discovery outcrop, and drilled the adjacent Winkie drillhole DH-5. The bedrock grab samples yielded lower lithium values in comparison to the discovery outcrop (290 ppm and 250 ppm Li), and similarly, the winkie drill clippings contained 230 ppm and 270 ppm Li over 6 feet and 2.5 feet (1.83 and 1.07 m) intervals, respectively.

- Completed 2022 and 2023 sonic drill programs that collectively drilled 22 holes to a total depth of 4,913.0 feet (1,497.5 m). Siebert Formation core samples collected from these programs yielded lithium values of between the minimum limit of detection (20 ppm Li) and 1,520 ppm Li with an overall core sample average of 583 ppm Li (n=754 samples).

- Variations in the 2022-2023 drill log lithologies and core lithium assay results necessitated a Company and QP decision to separate the property into western and eastern resource areas. It is interpreted that a north-south-trending fault zone extends through the property and results in two stratigraphic blocks with distinctly different lithologies and lithium concentrations.

- The western resource area is defined by 16 drillholes, 587 core samples, and has the highest modal abundance of Siebert Formation intercalated mudstone with volcaniclastic tuff/ash stratigraphic horizons. Of the 587 core sample analyses, 519 samples had >300 ppm Li (88%), 382 samples had >500 ppm Li (65%), 250 samples had >700 ppm Li (43%), and 72 samples had >1,000 ppm Li (12%). The highest lithium core sample had 1,520 ppm Li.

- The eastern resource area is defined by 6 drillholes, 167 cores samples, and as the highest modal abundance of Siebert Formation intercalated siltstone/sandstone with volcaniclastic tuff/ash and ash-tuff-dominant horizons. Of the 167 core sample analyses, 112 samples had >300 ppm Li (67%), 30 samples had >500 ppm Li (18%), 5 samples had >700 ppm Li (3%), and none of the samples had >1,000 ppm Li. The highest lithium core sample had 800 ppm Li.

The lithium-claystone mineralisation extends beyond the current Enertopia drill depths. Numerous drillholes in 1) the north part of the west resource area (n=5 drillholes), 2) south part of the west and east resource areas (n=5 drillholes), and 3) an isolated hole in the uppermost northeast corner of the property terminated in some of the highest Li-claystone concentrations relative to the downhole geochemical profile of each hole. This demonstrates that the Li-claystone deposit remains open to depth and could be targeted as part of ongoing mineral exploration by Enertopia at the West Tonopah Lithium Project

To conclude, the Enertopia 2021-2023 exploration program results demonstrate the Siebert Formation is enriched in lithium and that portions of the West Tonopah Lithium Project have a lithium inventory with reasonable prospects of eventual economic extraction.

It is the QP's opinion that the exploration work conducted by Enertopia at the West Tonopah Lithium Project is reasonable and within the standard practices for the evaluation of lithium-claystone deposit type projects. This contention is supported by the QPs 1) site inspection, which enabled the QP to understand the projects positive location and access, near-surface target unit geological setting, and independently validate the lithium mineralisation at West Tonopah Lithium Project, 2) positive review of Enertopia sample preparation, security, and analytical protocols, 3) review of the QA-QC methodologies employed, and the positive results of the QA-QC analytical work, and 4) review of the analytical results in conjunction with the independent and accredited laboratory certificates.

The Enertopia exploration work results provide additional geological and mineralogical information related to a lithium-claystone deposit potential of the Siebert Formation within the Big Smoky Valley near Tonopah, NV. The QP advocates that the information and data presented in this technical report forms a reasonable database for further exploration, mineral resource modelling, and mineral resource estimations. The data and subsequent interpretations support splitting the mineral resources into western and eastern resource areas based on definitive spatial variations in the Siebert Formation lithologies and the mudstone's lithium concentrations.

25.2 Mineral Processing

During 2022 and 2023, Enertopia conducted a limited metallurgical test work program at Base Met Labs to define a preferred leach extraction route for the lithium claystone mineralisation prevalent at west resource area of the West Tonopah Lithium Project. The program encompassed the comparative bench scale leaching of roasted and unroasted samples with various leaching agents. A total of 13 leaches were performed, with the following observations and outcomes:

- Other than for the low extraction deionised water leaches, better lithium extractions were achieved for the unroasted sample than for the roasted sample.
- The increasing order of lithium extraction efficiency was deionised water < aqua regia < hydrochloric acid < sulphuric acid.
- The sulphuric leach option showed positive lithium recovery response to increased leaching time and temperature.
- The sulphuric leach indicated that lithium extractions in excess of 80% and possibly approaching 100% were achievable if leach conditions were to be optimised.
- Significant co extraction of other elements present in significant concentrations in the head sample, particularly Al, Fe, K, Mg and Na, occurred across all the tests but were more prevalent in the roasted tests. These would need to be removed from solution prior to any recovery of a lithium product.
- Some extraction of minor elements within the head sample tests also occurred, the removal of which may require additional processing steps in the final flowsheet.
- No repeatability, variability or optimisation work was attempted during the preliminary leach work.

Based on the preliminary work, it is concluded that the unroasted sulphuric acid leach route showed most promise for optimum lithium extraction. The sulphuric acid leach appears to be enhanced by both elevated leach temperatures and extended residence times. Under the optimum sulphuric acid leaching conditions, it appears that lithium extractions of more than 80%, and possibly approaching 100%, may be expected of an unroasted sample.

With optimisation and additional test work, Enertopia has the potential to produce lithium extractions that can be further evaluated for battery grade lithium products. It is the QPs opinion, therefore, that Enertopia's preliminary mineral processing test work demonstrates reasonable prospects for eventual economic extraction.

25.3 Mineral Resource Estimations

The West Tonopah Lithium Project's mineral resources are classified in consideration of CIM definition standards (2014). The west resource area is classified with indicated and inferred mineral resources and the east resource area is classified as an inferred mineral resource.

Based on a cutoff of 400 ppm Li and a focus on blocks contained within a conceptual pit shell, the West Tonopah Lithium Project's mineral resource estimations are summarized as follows:

- The west resource area has an indicated lithium-claystone resource estimate of 44,000 short tons (40,000 metric tonnes) of elemental Li (see Table 14.11). The global (total) lithium carbonate equivalent (LCE) for the west indicated resource area is 233,000 short tons (212,000 metric tonnes) LCE.

- The west resource area has an inferred lithium-claystone resource estimate of 87,000 short tons (79,000 metric tonnes) of elemental Li (see Table 14.12). This translates to 463,000 short tons (420,000 metric tonnes) LCE.

- The east resource area has a lithium-claystone inferred resource estimate of 5,000 short tons (5,000 metric tonnes) of elemental Li (see Table 14.12). This translates to 27,000 short tons (25,000 metric tonnes) LCE.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that most inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Collectively, the West Tonopah Lithium Project is predicted to contain 1) an indicated mineral resource in the west resource area of 44,000 short tons (40,000 metric tonnes) of elemental lithium, and 2) combined inferred mineral resources in the west and east resource areas of 92,000 short tons (84,000 metric tonnes) of elemental lithium.

The west and east mineral resource areas are overlain by 71.9 and 11.0 million short tons (65.2 and 10.0 million metric tonnes) of overburden-pediment waste material, respectively.

25.4 Risks and Uncertainties

The mineral resource model and estimations are based on Enertopia's 2021-2023 exploration work at the West Tonopah Lithium Project. The resource estimates are subject to change as the project achieves higher levels of confidence in the geological setting, mineralisation, lithium recovery process development, and the implemented cutoff values. The current specific areas of uncertainty with the resource model presented in this technical report include the inferred (speculated) fault zone that divides the west and resource areas, detailed stratigraphic modelling of specific Siebert Formation rock units, and the density used to calculate tonnage. More specifically,

- The West Tonopah Lithium Project mineral resource areas are separated by a proposed (inferred) north-south-trending fault. Similar orientated primary faults with measured displacements have been physically documented at American Lithium Corp.'s TLC Project directly north of the West Tonopah Lithium Project. However, the inferred fault within the Enertopia's property has not been physically validated and further work is required to determine the faults orientation and the direction and degree of stratigraphic displacement. Other factors could also influence the Siebert Formation depositional environment. For example, 1) the Siebert Formation strata could be co-mingled with erosional and channel fill material along the uplifted valley flanks, 2) the margins of the basin could create depositional environments that favour the emplacement of coarser sedimentary material in comparison to central, deep, basinal mudstone, and/or 3) potential interaction with rock types other than Seibert Formation along valley flanks.

- Stratigraphically, the QP has block modelled the entire Siebert Formation using the block model, lithium values, and the cutoff to guide the mineral resource calculations. It is possible that future resource models wireframe specific high lithium mudstone horizons within the Siebert Formation as part of advanced modelling due to, for example, economics or technological recovery parameters.

- The initial West Tonopah Lithium Project mineral resource tonnages are reported using a QP-designated bulk density value of 1.70 g/cm^3 which is intended to simulate what other companies have used in Seibert Formation Li-claystone mineral resources (see Section 14.6.1). The QP recommends that Enertopia conduct additional bulk density measurements. The reader is reminded that fluctuations in bulk density will change the resource tonnages predicted in this technical report because density is used to convert resource volumes to tonnage.

The QP is not aware of any other significant material risks to the mineral resources other than the risks that are inherent to mineral exploration and development in general. The QP is not aware of any specific environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that might materially affect the results of this mineral resource estimate. Apart from the evolving rapid lithium extraction technology and its potential for success at the commercial scale, there appears to be no obvious impediments to developing the mineral resources at the West Tonopah Lithium Project.

Lastly and with respect to mineral processing, there is no guarantee that the Company can successfully extract lithium from claystone in a commercial capacity. The extraction technology is still at the developmental stage. As the technology advances, the Company and future QPs should monitor the lithium recovery values in consideration of refining the lower cutoff value in the mineral resource estimation process. There is also the risk that the scalability of any initial mineral processing bench-scale and/or demonstration pilot test work may not translate to a full-scale commercial operation.

26 Recommendations

In the opinion of the QP, Enertopia's early-stage West Tonopah Lithium Project is a project of merit. A two-phased program is recommended that continues to assess and advance the lithium-claystone potential at the property to increase the confidence level of the data and extraction test work toward updated mineral resource estimation(s), mineral resource classifications, and possibly economic analysis. The total estimated cost of the recommended Phase 1 and Phase 2 exploration work, with a 10% contingency, is USD$1,122,000 and USD$1,655,500.

The Phase 2 work is subject to the positive results of the Phase 1 work.

The total estimated cost of the recommended Phase 1 and Phase 2 exploration work, with a 10% contingency, is USD$2,777,500 (Table 26.1).

Phase 1 work recommendations include the following activities intended to advance the mineral resource potential of the property and continue to refine the DLE mineral processing technology:

- Enertopia has collected Siebert Formation sedimentary, volcanic, and intercalated sedimentary-volcaniclastic rock unit cores within 22 sonic drillholes. The core is currently archived at Enertopia's core storage facility located directly north of the property. The QP recommends that the core be relogged utilizing 1) a sedimentologist, and 2) multi-sensor core logger. The latter instrumentation is suggested because the unit can provide continuous, high-resolution, and non-destructive measurement of the physical and chemical properties of the sediment cores (e.g., X-ray fluorescence, colour spectrophotometry, visible and near-infrared spectrometry, magnetic susceptibility, and core imaging). The purpose of the relogging exercise is to advance the subsurface stratigraphic model of the Siebert Formation and develop a better understanding of lithium-claystone enrichment with respect to the stratigraphic model. The estimated cost of the relogging and interpretation of the core measurements is approximately USD$45,000.

Note: The objective of this work recommendation is to advance the geological model using newly interpreted and detailed stratigraphic and structural information. It is possible that this work could lead to the implementation of ground geophysical surveys (such as 2D or 3D seismic) to better delineate subsurface stratigraphy and structures (which would increase the estimated cost of this work).

- In concert with the relogging program, Enertopia should conduct infill and exploratory drilling to 1) advance and increase the confidence level of the stratigraphic setting and geological model in places of moderate to sparse drilling, 2) drill deep holes in the west resource area to validate a higher level of mineral resource classification at depth, and 3) explore the potential to expand the eastern resource area and/or advance areas that are not currently classified as mineral resources. It is recommended that Enertopia drill approximately 10 to 15 sonic drillholes (totalling approximately 2,000 m) targeting Siebert Formation claystone horizons with samples collected for assay testing and mineral processing test work.

  The grey dashed polygons in Figure 10.2 illustrate zones where the Li-claystone values increase toward the end of the drillhole. It is recommended that Enertopia drill deep drillholes to test the lithium mineralisation at depth in these zones. Additional deep drillholes throughout the west resource area could be drilled to extend the mineral resources at depth and to develop some parameters on mineralisation within the conceptual pit shell models.

  The all-in cost of this work, including sonic drill rigs and drillers, geologists, sampling, and analysis, is estimated at USD$850,000.

- It is recommended that Enertopia conduct ongoing mineral processing test work as documented in Section 13 and includes 1) adjustments to the initial benchtop extraction processes, 2) develop additional confidence in the development of lithium concentrates, and 3) conduct solution purification, evaporative concentration, and lithium conversion and crystallization test work to evaluate the viability of battery grade products. The mineral processing work should be conducted at accredited commercial and/or private laboratories that are knowledgeable in Direct Lithium Extraction techniques. The estimated cost of this phase of mineral processing test work is approximately USD$125,000.

The Phase 2 work recommendations are subject to the positive results of the Phase 1 work initiatives. Phase 2 work recommendations include the following activities intended to refine the elemental recovery processes and to conduct mineral resource modelling and estimations that include economic valuations:

- Refinement of the lithium-claystone recovery process flowsheet toward the development and construction of a demonstration pilot plant. The work should include discussion of proposed mining methods, geotechnical models relevant to mine plans, proposed mineral processing methods, equipment characteristics and specifications, infrastructure, and plant design. The cost of this work is estimated at USD$1,250,000.

- Implement studies in consideration of modifying factors that must be applied to the mineral resource estimate as part of the preparation of advanced technical reports as outlined in the CIM Definition Standards (2014). In addition to mining and processing/metallurgical studies, Enertopia should consider community consultation, environmental, marketing, and socio-economic factors. It is recommended that Enertopia talk with community leaders and take part in educational sessions to the public. The Company should also be aware of sensitive species restrictions in the West Tonopah Lithium Project area and follow the guidelines if any work causes ground disturbance. The estimated cost of this stage of modifying factors work is approximately USD$55,000.

- Preparation of technical reporting and disclosure that is prepared in accordance with CIM definition standards and best practice guidelines (2014, 2019) and the disclosure rule NI 43-101. The estimated cost for an updated mineral resource estimation and possibly a Preliminary Economic Assessment technical report is approximately USD$200,000.

Table 26.1 Work recommendations and estimated costs. The Phase 2 work recommendations are subject to the positive results of the Phase 1 work initiatives.

Phase	Description	Cost estimate (USD$)	Sub-Total (USD$)	Cost estimate (CDN$) [1]	Sub-Total (CDN$) [1]
Phase 1	Relog the existing drill core using 1) a sedimentologist, and 2) a non-destructive multi-sensor core logger to advance the subsurface geological model and the confidence level and understanding of lithium-claystone enrichment at the project. This work could lead to the implementation of ground geophysical surveys to better delineate subsurface stratigraphy and structures.	$45,000		$61,200	
	In conjunction with the relogging exercise, conduct infill and exploratory drilling to advance and increase the confidence level of the stratigraphic setting and explore the potential to expand the mineral resources at the project.	$850,000		$1,156,000	
	Ongoing mineral processing test work to advance the beneficiation test work and to assess the potential to generate quality battery grade products.	$125,000	$1,020,000	$170,000	$1,387,200
Phase 2	Refinement of the lithium-claystone recovery process flowsheet toward the development and construction of a demonstration pilot plant.	$1,250,000		$1,700,000	
	Implement modifying factor studies including community consultation, environmental, marketing, and socio-economic factors.	$55,000		$74,800	
	Resource estimation updates (if necessary) and Preliminary Economic Assessment technical reporting.	$200,000	$1,505,000	$272,000	$2,046,800
		Sub-total	$2,525,000		$3,434,000
		10% contingency	$252,500		$343,400
		Total	**$2,777,500**		**$3,777,400**

[1] Currency conversion based on 1 USD equals 1.36 CDN (September 11, 2023).

27 References

Albemarle Corporation (2022): Form 10-K for the year ended December 31, 2022, 43 p., < Available on August 1, 2023 at: https://s201.q4cdn.com/960975307/files/doc_financials/2022/ar/30639fbb-0251-46c1-be72-848ccd3b4198.pdf >.

Albers, J. P., and Stewart, J. H., 1972, Geology and mineral deposits of Esmeralda County, Nevada: Nevada Bureau of Mines and Geology Bulletin 78, 80 p.

Alliance Mining Corp. (2018): Alliance Mining Signs LOI to Acquire 100% of a New Potential World Class Uranium Discovery in Central Nevada, < Available on August 1, 2023 at: https://resourceworld.com/alliance-mining-signs-loi-to-acquire-100-of-a-new-potential-world-class-uranium-discovery-in-central-nevada/ >.

Araoka, D., Kawahata, H., Takagi, T., Watanabe, Y., Nishimura, K., and Nishio, Y. (2014): Lithium and strontium isotopic systematics in playas in Nevada, USA: Constraints on the origin of lithium. Mineralium Deposita, v. 49, p. 371–379.

Asher-Bolinder, S. (1991): Descriptive Model of Lithium in Smectites of Closed Basins. [ed.] G.J. Orris and J.D. Bliss. Some Industrial Minerals Deposit Models, Descriptive Deposit Models, USGS Open File Report 91-11A. 1991, pp. 11-12.

Barrera, P. (2023): Lithium Market Update: Q2 2023 in Review; Investing News Network, Lithium Investing, < Available on August 22, 2023, at: https://investingnews.com/daily/resource-investing/battery-metals-investing/lithium-investing/lithium-forecast/ >.

Bonham H.F. and Garside L.J. (1979a): Geology of the Tonopah, Lone Mountain, Klondike, and Northern Mud Lake Quadrangles, Nevada. Nevada Bureau of Mines and Geology, Bulletin 92. 142 p.

Bonham H.F. and Garside L.J. (1979b): Geological map of the Tonopah, Lone Mountain, Klondike, and Northern Mud Lake quadrangles, Nevada, Nevada Bureau of Mines and Geology, Bulletin 92, Plate 1, Scale 1:48 000.

Carlson, Chad W., Christopher J. Pluhar, Jonathan M.G. Glen, Michael J. Farner (2013): Kinematics of the west-central Walker Lane: Spatially and temporally variable rotations evident in the Late Miocene Stanislaus Group. Geosphere 2013; 9 (6): 1530–1551. doi: https://doi.org/10.1130/GES00955.1

Castor, S.B and Henry, C.D. (2020): Lithium-rich claystone in the McDermitt Caldera, Nevada, USA: Geologic, mineralogical, and geochemical characteristics and possible origin; Minerals 2020, v. 10, 38 p.

Century Lithium Corp. (2023): Century Lithium reconfirms production of battery grade purity lithium carbonate and provides update on Feasibility Study; News Release dated May 25, 2023, < Available on October 17, 2023 at: https://www.centurylithium.com/news/2023/century-lithium-reconfirms-production-of--battery-grade-purity-lithium-carbonate--and-provides-update-on-feasibility-study >.

Coffey, D. M., Munk, L. A., Ibarra, D. E., Butler, K. L., Boutt, D. F., & Jenckes, J. (2021): Lithium storage and release from lacustrine sediments: Implications for lithium enrichment and sustainability in continental brines. Geochemistry, Geophysics, Geosystems, 22, e2021GC009916. https://doi.org/10.1029/2021GC009916.

Cukor, D., Hilscher, B. (2022): Updated resource estimate, Zeus Lithium Project, Esmeralda County, NV; Prepared for Noram Lithium Corporation by ABH Engineering Inc., Effective Date December 1, 2022, 97 p.

Davis, J. R., Friedman, I., and Gleason, J. D. (1986): In Origin of the lithium-rich brine, Clayton Valley, Nevada. USA Geological Survey Bulletin, v. 1622, p. 131–138.

DRA Pacific. (2023): Tonopah Lithium Claims Project NI 43-101 Technical Report - Preliminary Economic Assessment; Prepared for American Lithium Corp. Report Date: 17 March 2023. Effective Date: 31 January 2023. Project No: GUSPPR6424. GUS6424-000-REP-PM-001.

Ekren, E.B. and Byers Jr., F.M. (1984): The Gabbs Valley Range—a well exposed segment of the Walker Lane in west-central Nevada. In: Lintz, J. (Ed.), Geological Society of America, Guidebook, Annual Meeting Western Geologic Excursions, Reno, Nevada, 4, p. 203–215.

Ekren, E.B., Byers Jr., F.M., Hardyman, R.F., Marvin, R.F., and Silberman, M.L. (1980): Stratigraphy, preliminary petrology, and some structural features of Tertiary volcanic rocks in the Gabbs Valley and Gillis Ranges. US Geological Survey Bulletin 1464, p. 1–54.

Enertopia Corp. (2021): Enertopia Announces a 10x Increase in Lithium Lode Claim Acreage; News Release dated March 1, 2021.

Enertopia Corp. (2022): Enertopia Corp. Reports Drilling Has Intersected Extensive Lithium Deposit; News Release dated August 18, 2022.

Enertopia Corp. (2023a): Enertopia announces completion of drilling program – awaiting assays; News Release dated April 20, 2023.

Enertopia Corp. (2023b): Enertopia reports two high grade Li zones for advancement; News Release dated May 15, 2023.

Fastmarkets (2023): Chinese lithium prices extend downtrend on muted demand; other markets follow; Fastmarkets, August 15, 2023, < Accessed on August 22, 2023 at: https://www.fastmarkets.com/insights/chinese-lithium-prices-extend-downtrend-on-muted-demand >.

Fayram, T.S., Lane, T.A., and Brown, J.J. (2020): NI 43-101 technical report, Feasability Study Clayton Valley Lithium Project; prepared for Cypress Development Corp. by Global Resource Engineering, Effective Date August 5, 2020, 181 p.

Fugro National Inc. (1980): MX Siting Investigation, Gravity Survey – Big Smoky Valley, Nevada; Report prepared by Fugro National Inc. for U.S. Department of the Air Force, 54 p., < Available on October 16, 2023 at: https://apps.dtic.mil/sti/pdfs/ADA112202.pdf >.

Goldfarb, R.J., Berger, B.R., George, M.W., and Seal, R.R., II (2017): Tellurium; In: Chapter R of Schulz, K.J., DeYoung, J.H., Jr., Seal, R.R., II, and Bradley, D.C. (eds.), Critical mineral resources of the United States—Economic and environmental geology and prospects for future supply: U.S. Geological Survey Professional Paper 1802, p. R1–R27.

Graney, J.R. (1985): Geology, alteration, and mineralisation at Hasbrouck Mountain, Divide District, Esmeralda County; M.Sc. Thesis, University of Nevada, 117 p.

Hofstra, A. H., Todorov, T. I., Mercer, C. N., Adams, D. T., and Marsh, E. E. (2013): Silicate melt inclusion evidence for extreme pre-eruptive enrichment and post-eruptive depletion of lithium in silicic volcanic rocks of the Western United States: Implications for the origin of lithium-rich brines; Economic Geology, v. 106, p. 1691–1701.

Ingersoll, R. (2002): Structural and sedimentologic evolution of a Miocene supradetachment basin, Silver Peak Range and adjacent areas, west-central Nevada; International Geology Review, v. 44, p. 588-623.

John, D.A., Thomason, R.E., and McKee, E.H. (1989): Geology and K-Ar geochronology of the Paradise Peak Mine and the relationship of pre-basin and range extension to Early Miocene precious metal mineralisation in west-central Nevada; Economic Geology, v. 84, p. 631-649.

Johansing, R.J. (2022): The Eli Sediment-Hosted Lithium Deposit, Eureka & Nye Counties, Nevada; Technical Report prepared for Clear Sky Lithium, Effective Date January 4, 2022, 31 p.

Knopf, A. (1921): The Divide silver district, Nevada; *In:* Contributions to economic geology, 1920; Part 1, Metals and nonmetals except fuels, USA Geological Survey Bulletin, 715, p. 147-170.

Loveday, D., (2020). NI 43-101 Technical Report, TLC Property, Nye County, Nevada, USA; Prepared for American Lithium Corp. by Stantec Consulting Ltd., Effective date April 15, 2020, 105 p.

Meinzer, O. E. (1917): Geology and Water Resources of Big Smoky, Clayton, and Alkali Spring Valleys, Nevada; USGS Water-Supply Paper 423, Washington Government Printing Office.

Mindat.org (2023): Tonopah Mining District, San Antonio Mountains, Nye County, Nevada, USA, < Available on August 1, 2023 at: https://www.mindat.org/loc-26993.html#:~:text=Principal%20mines%20include%20the%20Mizpah,between%20Mount%20Oddie%20and%20Mt >.

Munk, L. A., Jochens, H., Jennings, M., Bradley, D., Hynek, S., and Godfrey, L. (2011): Geochemistry of lithium-rich brines in Clayton Valley, Nevada, USA. In Proceedings, 11th SGA Biennial Meeting, p. 217–219.

Munk, L. A., Hynek, S. A., Bradley, D. C., Boutt, D., Labay, K., and Jochens, H. (2016): Lithium brines: A global perspective. Reviews in Economic Geology, v. 18, p. 339–365.

Nash, J.T., Siems, D.F., and Budge, S. (1985): Geochemical signature of the Divide Silver-Gold District, Esmeralda County, Nevada, United States Department of the Interior, Geological Survey, Open File Report 85-535, 30 p.

Nevada Bureau of Mines and Geology (2015): The Nevada Mining Industry 2015; Special Publication MI-2015, 190 p.

Nevada Bureau of Mines and Geology (2018): State and Federal permits required in Nevada before mining or milling can begin; Special Publication L-6, 11 p., < Available on August 1, 2023 at: https://ndep.nv.gov/uploads/documents/201806_SPL6.pdf >.

Nevada Commission on Mineral Resources (2018): Major mines of Nevada 2018; Nevada Commission on Mineral Resources, Division of Minerals, 35 p.

Onstad, E., Liu, S. and Nguyen, M. (2023): Lithium prices bounce after big plunge, but surpluses loom; Reuters, < Available on August 22, 2023 at: https://www.reuters.com/markets/commodities/lithium-prices-bounce-after-big-plunge-surpluses-loom-2023-04-28/ >.

Price, J. G., Lechler, P. J., Lear, M. B., and Giles, T. F. (2000): Possible volcanic source of lithium in brines in Clayton Valley, Nevada. *In:* J. K. Cluer, J. G. Price, E. M. Struhsacker, R. F. Hardyman, & C. L. Morris (eds.), Geology and ore deposits 2000: The Great Basin and beyond: Geological society of Nevada symposium Proceedings, p. 241–248.

RESPEC (2023): SK 1300 technical report summary fo the Tonopah Flats Lithium Project, Esmeralda and Nye Counties, Nevada, USA; prepared for American Battery Technology Company by Respec, Effective Date November 8, 2022, 96 p.

Riordan, J.J., Coetzee, V.E., Loveday, D.J., Pandher, S., Kester, J.C., and Ennis, S. (2023): Tonopah lithium claims project NI 43-101 technical report - Preliminary Economic Assessment; Prepared for American Lithium Corp. by Stantec Consulting Ltd., Effective date April 15, 2020, 281 p.

Roth, D., Tahija, L., Iasillo, E., Martina, K., Chow, B., Mutler, W., Bahe, K., Kaplan, P., Cluff, T., and Shannon, B. (2022): Feasibility Study NI 43-101 technical report for the Thacker Pass Project, Humbolt County, Nevada, USA; Prepared for Lithium Americas by M3 Engineering & Technology Coproation, Effective date November 2, 2022, 335 p.

Rush, F. E., and Schroer, C. V. (1979): Water resources of Big Smoky Valley, Landu, Nye and Esmeralda counties, Nevada: Nevada Department of Conservation and Natural Resources Bulletin No. 41, 84 p.

Silberman, M.L., Bonham, H.F., Garside, L.J., and Ashley, R.P. (1978): Radiometric ages of volcanic and plutonic rocks and hydrothermal alteration-mineralisation in the Tonopah mining district and vicinity, Nye and Esmeralda counties, Nevada; United States Department of the Interior, Geological Survey, Open File Report 78-841, 48 p.

Simmons, S.F., Kirby, S., Verplanck, P., and Kelley, K. (2018): Strategic and Critical Elements in Produced Geothermal Fluids from Nevada and Utah; Proceedings of the 43rd Workshop on Geothermal Reservoir Engineering Stanford University, Stanford, California, February 12-14, 2018, SGP-TR-213, 12 p.

SRK Consulting (USA), Inc. (2023): Albemarle Corporation - SEC Technical Report Summary, Pre-Feasibility Study, Silver Peak Lithium Operation, Nevada, USA; SEC Technical Report, SRK Project Number: USPR000574.

Steward, J.H. and Carlson, J.E. (1976): Cenozoic rocks of Nevada - four maps and brief description of distribution, lithology, age, and centers of volcanism; Nevada Bureau of Mines and Geology, Map 52.

Tigris Uranium Corp. (2016): Tigris Uranium and Wolfpack Gold Announce Reverse Takeover Transaction; News Rlease dated December 7, 2012.

Thompson, R.K. (1999): Mineralisation associated with rhyolitic volcanic events in the Tonopah area, Esmeralda and Nyd Counties, Nevada; M.Sc. Thesis, Colorado School of Mines, 120 p.

Town of Tonopah (2023): Tonopah's History, < Available on August 1, 2023 at: https://www.tonopahnevada.com/history/#:~:text=Tonopah%27s%20mines%20maintained%20very%20high,copper%20and%20lead%20was%20mined >.

Uranium Resources Corp. (2016): Uranium Resources, Inc. Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2016, 101 p.

US Climate Data. (2023): Weather Averages Tonopah, Nevada; Temperature - Precipitation - Sunshine - Snowfall, < Available on June 27, 2023 at: www.usclimatedata.com/climate/tonopah/nevada/united-states/usnv0091 >.

USGS (2022): 1/3rd arc-second Digital Elevation Models (DEMs) - USGS National Map 3DEP Downloadable Data Collection; U.S. Geological Survey, National Geospatial Technical Operations Center, Science Data Catalog, Metadata Date: 2023-05-31, < Available on August 22, 2023 at: https://data.usgs.gov/datacatalog/data/USGS:3a81321b-c153-416f-98b7-cc8e5f0e17c3 >.

Wesnousky, S.G. (2005): The San Andreas and Walker Lane fault systems, western North America: transpression, transtension, cumulative slip and the structural evolution of a major transform plate boundary; Journal of Structural Geology, v. 27, p. 1505–1512.

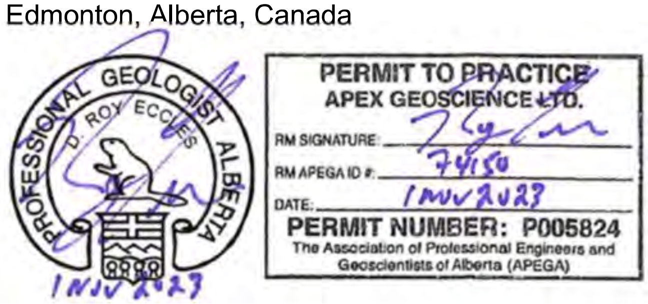
Whitebread, D.H. and John, D.A. (1992): Geologic map of the Tonopah 1 degree by 2 degrees Quadrangle, central Nevada; USGS, Miscellaneous Field Studies Map, Numbered Series 1877, Scale 1: 25 000.

28 Certificate of Author

I, **D. Roy Eccles**, P. Geol. P. Geo., do hereby certify that:

1. I am a Senior Consulting Geologist and Chief Operations Officer of APEX Geoscience Ltd., 100 11450-160 Street, Edmonton, Alberta, Canada, T5M 3Y7.
2. I graduated with a B.Sc. in Geology from the University of Manitoba in Winnipeg, Manitoba in 1986 and with a M.Sc. in Geology from the University of Alberta in Edmonton, Alberta in 2004.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA, Membership Number 74150) since 2003, and Newfoundland and Labrador Professional Engineers and Geoscientists (PEGNL, Membership Number 08287) since 2015.
4. I have worked as a geologist for more than 35 years since my graduation from university and have been involved in all aspects of mineral exploration, mineral research, and mineral resource estimations for metallic, industrial, specialty, and rare-earth element mineral projects and deposits.
5. I have read the definition of "Qualified Person", as set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). By reason of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. My technical experience includes exploration and preparation of mineral resource estimates for lithium projects in western Canada, southeastern and southwestern United States, central Europe, and other global destinations.
6. I prepared, and accept, responsibility for Items 1.1 to 1.6, 1.8 to 1.12, 2 to 12, 14, 23, 24, 25.1, 25.3, 25.4, 26, and 27 in *NI 43-101 Technical Report, Geological introduction and initial mineral resource estimations for the Enertopia Corp. West Tonopah Lithium Project in Esmeralda County, Nevada, United States*, with an effective date of 1 November 2023 (the "Technical Report"). I performed a site inspection at the West Tonopah Lithium Project and property on July 25-27, 2023, and verified the land position, access, geological setting, 2022-2023 exploration work, and the lithium-claystone mineralisation.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of Enertopia Corp., applying to all tests in section 1.5 of Companion Policy 43-101CP.
10. I have not had any prior involvement with West Tonopah Lithium property that is the subject of the Technical Report.

Effective Date: 1 November 2023
Signing Date: 1 November 2023
Edmonton, Alberta, Canada



D. Roy Eccles, M.Sc., P. Geol. P. Geo.

I, **John Derbyshire**, Pr. Eng. FSAIMM, do hereby certify that:

1. I am a consulting metallurgist with M.Plan International Limited, Suite 601, 90 Eglington Ave. East, Toronto, Ontario, Canada, M4P 2Y3.
2. I graduated with a B.Sc. Chemical Engineering from the University of Witwatersrand, Johannesburg in 1981.
3. I am registered as a Fellow of the South African Institute of Mining and Metallurgy (Registration number 703524F) since 2007 and I am a member of the South African Mine Metallurgical Managers Association since 1986.
4. I have worked as an extractive metallurgical Engineer for more than 42 years since my graduation from university and have international process engineering, metallurgy, metallurgical test work, and flowsheet development experience with various critical commodities that include rare earth elements, lithium, graphite, vanadium, etc.
5. I have read the definition of "Qualified Person", as set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). By reason of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. My technical experience includes operational experience with sulphuric acid plants and acid leach, and lithium extraction processes such as ion exchange and solvent extraction.
6. I prepared, and accept responsibility, for Sections 1.7, 13, and 25.2 related to mineral processing and metallurgy, in *NI 43-101 Technical Report, Geological introduction and initial mineral resource estimations for the Enertopia Corp. West Tonopah Lithium Project in Esmeralda County, Nevada, United States*, with an effective date of 1 November 2023 (the "Technical Report"). I have not performed a site inspection at the *West Tonopah* property.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of Enertopia Corp., applying to all tests in section 1.5 of Companion Policy 43-101CP.
10. I have not had any prior involvement with West Tonopah Lithium property that is the subject of the Technical Report.

Effective Date: 1 November 2023
Signing Date: 1 November 2023
Edmonton, Alberta, Canada

John Derbyshire, B.Sc. FSAIMM