Project Centroid: UTM 459774 m Easting, 3458162 m Northing, Zone 13N, NAD83

NI 43-101 TECHNICAL REPORT,

GEOLOGICAL INTRODUCTION TO TACTICAL RESOURCES CORP.'s PEAK RARE EARTH ELEMENT PROJECT, TEXAS, UNITED STATES

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1 Summary

1.1 Issuer and Purpose

This technical report has been prepared for the Issuer, Tactical Resources Corp. (Tactical Resources or the Company). In April-May 2022, Tactical Resources announced the finalization of an Offtake Agreement and Amending Agreement with Sierra Blanca Quarry LLC who operates the Sierra Blanca Quarry in west Texas and produces crushed rhyolite railway ballast for the Union Pacific Railroad Company. Tactical Resources has acquired the rights to the tailing's material produced at the Quarry (i.e., the less than three-quarter inch discarded fraction). The Company intends to assess, and potentially produce, rare earth elements from the tailing's material. Tactical Resources calls the project the Peak Rare Earth Element Project, or the Peak REE Project.

The intent of this technical report is to provide 1) a geological introduction to the Peak REE Project, 2) summarize the Tactical Resources 2021-2022 exploration work results, and 3) make recommendations for future work programs.

The technical report has been prepared in accordance with the Canadian Securities Administration's National Instrument 43-101 Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum "Best Practices and Reporting Guidelines" for disclosing mineral exploration.

1.2 Authors and Site Inspection

This technical report has been prepared by Mr. Roy Eccles M.Sc. P. Geol. of APEX Geoscience Ltd. in Edmonton, AB, and Mr. Norman Chow M.A.Sc. P. Eng. of Kemetco Research Inc. in Richmond, BC. The authors are Qualified Person as defined in National Instrument 43-101. Mr. Eccles is a Professional Geologist, has worked as a geologist for more than 35 years since his graduation from university, has experience that includes multi-commodity rare earth element evaluations in ultramafic rocks, polymetallic black shale, and other rock types, and is independent of Tactical Resources Corp., the Peak REE Project, and Sierra Blanca Quarry LLC and the Sierra Blanca Quarry. Apart from Section 13, Mr. Eccles takes responsibility for all other sections (Sections 1-12, 14, 23-27) of this technical report.

Mr. Chow is a Professional Engineer, has worked as a metallurgical engineer for more than 17 years since his graduation from university, and has expertise related to multi-commodity metallurgical test programs. Mr. Chow takes responsibility for Section 13 of this Technical Report and is independent of Tactical Resources Corp., the Peak REE Project, and Sierra Blanca Quarry LLC and the Sierra Blanca Quarry.

Mr. Eccles performed a personal site inspection at the Peak REE Project on June 11, 2022. As part of the site inspection, Mr. Eccles 1) observed the operating Sierra Blanca Quarry LLC mine site, current Quarry exploitation face workings, ballast processing infrastructure, and active daily tailings production and historical tailings stockpiles within

the Quarry, 2) evaluated the general geological characteristics of the Sierra Blanca Quarry and Sierra Blanca laccolith, and 3) validated the tailing's rare earth element mineralization (and other elements) through independent sampling and analytical work.

1.3 Property Location, Description and Access

The Sierra Blanca Quarry Property is defined by 3 Mining Leases (M-114769, M-120354, and M-120355) with a combined contiguous area of 2,680 acres. The leases are owned 100% by Sierra Blanca Quarry LLC. Mining Lease M-114769, which is the focus of this technical report and an Offtake Agreement between Tactical Resources and Sierra Blanca Quarry LLC, comprises 1,803 acres (or 67% of the overall property). The Peak REE Project focuses on the tailing's material produced within Mining Lease M-114769, and more specifically, the Sierra Blanca Quarry.

The Sierra Blanca Quarry is on the northeast corner of the Sierra Blanca laccolith and is approximately 5 miles (8 km) northwest of the Town of Sierra Blanca, Hudspeth County, Texas, and 68 miles (110 km) southeast of the City of El Paso, Texas.

Sierra Blanca Quarry LLC operates a railway ballast mine and crushing plant at the Sierra Blanca Quarry for the recovery of rhyolite, granite, and other similar igneous rocks. As part of the railway ballast production, Sierra Blanca Quarry LLC generates waste tailings that are stockpiled within Mining Lease M-114796.

The Peak REE Project is easily accessed via U.S. Interstate 10 (I-10), between El Paso and Sierra Blanca, from which the Quarry is approximately 4.3 miles (7 km) along a crush rhyolite access road. The ease of access and semi-arid climate in west Texas will enable Tactical Resources to assess the Peak REE project year-round.

1.4 Offtake and Amending Agreements

On July 30, 2021, and May 13, 2022, Tactical Resources and Sierra Blanca Quarry LLC executed a purchase and sale agreement (the Offtake Agreement) and an Amending Agreement, respectively, in which Tactical Resources acquired the right to purchase all mine tailings produced by Sierra Blanca Quarry LLC within Mining Lease M-114796 (historic and active tailings). The term of the Offtake Agreement is 15 years, renewable for so long as Sierra Blanca Quarry LLC is directly or indirectly the holder of the Mining Lease M-114796. The Amending Agreement stipulates 1) historical stockpiles of not less than 4 million short tons (3.63 million tonnes) of tailing's material on, about, or under the leased premises, 2) commencing in 2022, a delivery schedule in which Sierra Blanca Quarry LLC estimates the annual tailings production, and Tactical Resources and Sierra Blanca Quarry LLC execute purchase agreements on a calendar year basis, and 3) an exclusive one-time option to purchase all membership interest in Sierra Blanca Quarry, LLC.

The tailings price agreed upon by both parties in the Offtake Agreement is USD$0.011 per short ton of tailings. Sierra Blanca Quarry LLC shall transport the selected tailings

from the Sierra Blanca Quarry Property to any proposed future Tactical Resources' processing facility, according to an agreed delivery schedule, at a price per ton to be negotiated in good faith not to exceed USD$1.80 per ton of tailings. Upon each delivery, Tactical Resources will be the legal and beneficial owner of the tailings and Sierra Blanca Quarry LLC will have and will deliver to Tactical Resources, at such time, good, valid, and marketable title to such tailings, free and clear of all encumbrances.

1.5 Permits, Environmental Assessment and Royalties

Tactical Resources is responsible, at its own expense, for obtaining all permits in accordance with the laws of the State of Texas if the Company wishes to commercialize the tailings. Permitting would include, for example, air, storm water, potable water usage, petroleum storage, explosives, and hazardous waste permits (if necessary). If the Tactical Peak REE Project progresses to the developmental stages of an 'on-site' rare earth element-from-tailings extraction plant, a Phase 1 Environmental Site Assessment Report would be conducted for the Site and Processing facility.

Sierra Blanca Quarry LLC is responsible, at its own expense, for obtaining and maintaining any authorizations required to perform its obligations under the Offtake Agreement and Amending Agreement, including the sale and delivery of tailings to Tactical Resources.

Mining Lease agreements in the State of Texas are subject to production royalty payments corresponding to a minimum of 6.25% of the value of the leased minerals produced from the leased premises. Potential royalty payments associated with any future rare earth element production facility by Tactical Resources would include tonnage fees for the tailing's material, and mineral worth of the tailings (i.e., rare earth elements/ton). The mineral worth royalty payment would be negotiated between Tactical Resources and the Texas GLO.

1.6 Geology and Mineralization

Geologic units exposed in the Sierra Blanca area consist of Permian to Quaternary sedimentary units, and Tertiary igneous units. The Trans-Pecos Trend, also known as Texas Lineament Zone, is a northwest-trending structural zone where Laramide and Basin and Range faulting were active. Igneous units of the Sierra Blanca range were emplaced during the main phase of the Trans-Pecos alkaline magmatic province around 36 Ma, just before the beginning of the Rio Grande Rift extension.

The Sierra Blanca range in west Texas consists of a series of 5 separate igneous intrusions that form as peaks, or domes, or laccoliths, that pop up intermittently over an area of approximately 90 km^2. The laccoliths were emplaced in the western calc-alkalic side of the Trans-Pecos Magmatic Province and are composed of leucocratic, aphanitic to porphyritic rhyolite or rhyolite porphyry. Hence, the laccoliths form as topographic highs due to the resistive nature of the rhyolite.

The Peak REE Project (and Sierra Blanca Quarry) is located on the northwest side of the Sierra Blanca laccolith. The laccolith dome is composed primarily of a Tertiary rhyolite porphyry, along with less common dykes and sills, that collectively intruded a sequence of Cretaceous sedimentary rocks. The rhyolite can be described as an 'evolved rhyolite', or a late-stage magmatic rock with a long process/history of fractional crystallization.

Sierra Blanca Quarry LLC presently mines rhyolite and rhyolite porphyry that form the Sierra Blanca laccolith to produce railway ballast. The overall footprint of the mine is approximately 1.7 miles (2.75 km) east-west by 0.75 miles (1.25 km) north-south and is composed of 2 sub-areas that include 1) the active mine excavation and crushing area, and 2) a wash plant and railcar loading area, which also includes part of an historical quarry area that was focused on beryllium, which mostly occurs in contact metasomatic veins and replacements in limestone directly underlying the rhyolite laccolith.

The tailing's material at the Sierra Blanca Quarry is defined as discarded ballast rhyolite crush fragments of less than three-quarters of an inch (1.91 cm) in size. The tailings stockpile dumps are situated in organized stockpiles throughout the mine site and form either as topographic highs or infill in previously excavated areas.

Tactical Resources is interested in the rare earth element potential of the tailing's material derived from the Sierra Blanca Quarry ballast mining activity. Historical and current exploration conducted by Tactical Resources show that the tailing's material has elevated heavy rare earth elements, which may be of commercial interest because the elements have become vital to manufacturing numerous high-tech products.

1.7 Historical Exploration

The first documented minerals related exploration in the Sierra Blanca range area occurred in 1968 after the discovery of widespread fluoritization at the Sierra Blanca, Round Top, Little Blanca, and Little Round Top volcanic peaks. The fluorite occurrences were explored between 1971 and 1980 before being deemed unprofitable. However, the historical exploration revealed the potential for beryllium, uranium, tin, and zinc.

In January 1987, Cyprus Metals Company and Cabot Corporation formed a joint venture agreement in which the Sierra Blanca laccolith was subject to shallow drill holes that targeted vein and fault-controlled beryllium mineralization. Cyprus Metals Company reportedly excavated a pit to a depth of 200 feet (61 m) on the Sierra Blanca laccolith, which was then filled with tailings from the current Sierra Blanca Quarry mining activity. Cyprus terminated its beryllium exploration and mining programs at Sierra Blanca in 1993.

In 2007, Sierra Blanca Quarry LLC acquired the Sierra Blanca laccolith Property and has since excavated the rhyolite porphyry as a source of railway ballast for the Union Pacific Railroad Company.

In 2020, the Sortros Group of Companies conducted two small sampling programs – as permitted by Sierra Blanca Quarry LLC – that resulted in the collection of tailing's

material and rock samples at the Sierra Blanca Quarry. Six samples were analyzed for whole rock and trace element, including rare earth metals. The Sortros Group of Companies also commissioned a preliminary metallurgical study in which CVMR (a privately held, metal refining technology provider) proposed the conversion of rare earth oxides to chlorides and then applying vapor phase separation techniques to isolate the rare earth chlorides by temperature.

Due to the limited number of samples assayed, lack of information pertaining to the analytical procedure (in some instances), and the lack of Quality Assurance – Quality Control procedures, it is the Qualified Persons opinion that the historical geochemical analyses cannot be reasonably assessed. With respect to historical mineral processing, more work is required by Tactical Resources to assess rare earth element extraction technologies that are applicable to the Sierra Blanca rhyolite laccolith tailing's material.

1.8 Tactical Resources 2021 Exploration

In 2021, Tactical Resources commissioned Tigren Inc. of Sparks, NV, to conduct a sampling program at the Sierra Blanca Quarry. A total of 40 samples were collected at various tailing's locations within the Sierra Blanca Quarry. The samples were subjected to two analytical batch tests at American Assay Laboratories Inc. in Elko, NV, the first by Tigren Inc. and the second by Tactical Resources. The analytical work included lithium + rare earth elements (lab code ICP-5AREE), multi-elements (ICP-5AM48), whole rock (WD-XRF), and specific gravity measurements. The sampling program included blind Blank Samples and Sample Standards, the results of which, demonstrated good reproducibility of results and data quality.

Based on the geochemical analytical results derived from Tactical Resources 2021 exploration program, the Sierra Blanca laccolith tailing's material is rhyolite that is metaluminous-peraluminous, silica-rich, and alkali-calcic. Trace element distributions are representative of a within plate granite setting associated with ferroan, A-Type granites. The chondrite normalized rare earth element profiles show the tailing's material has elevated heavy rare earth elements and distinct, anomalous, negative Eu anomalies. The tailing's material is also enriched in high field strength and large-ion lithophile elements that include, for example, Li, Be, Nb, Rb, Y, and Zr.

Specific gravity measurements on 40 samples yield between 2.19 and 3.26 g/cm^3 with an average of 2.67 g/cm^3.

Tactical Resources initiated mineralogical investigations at the University of Texas to obtain a better understanding of the mineralogy and chemistry that constitutes the Peak REE Project tailing's material. Backscattered electron gigapan images and energy-dispersive X-ray spectra experiments were conducted on 4 samples that yielded common accessory minerals including cassiterite (SnO_2), columbite ($Fe^{2+}Nb_2O_6$), yttrofluorite ($Ca_{0.7}Y_{0.3}F_{2.3}$), yttrocerite (CaF_2^+ $(Y,Ce)F_3$), thorite ($(Th,U)SiO_4$), and zircon ($ZrSiO_4$).

In 2022, Tactical Resources commissioned Frank X. Spencer and Associates to conduct two unmanned aerial vehicles, or drone, surveys on the active tailings pile area at the Sierra Blanca Quarry. The first drone survey was intended to assess the volume of tailings in the active tailings pile of the Sierra Blanca Quarry. The second drone survey was intended to assess the monthly volume of tailings material being added to the active tailings pile. The surveys were prepared by State of Texas Registered Land Surveyors and yield valid information related to the position and lateral scale of the tailing's material stockpiles at the Sierra Blanca Quarry.

1.9 Tactical Resources 2022 Metallurgical Test Work

During June to August 2022, a metallurgical test program was completed on behalf of Tactical by Kemetco Research in Richmond, BC Canada to assess direct leach amenability, and maximum extraction potential of the rare earth elements and lithium. The 40 Tactical Resources field samples collected in 2021 were composited into 3 'Tails' samples for metallurgical testing. The head assay values of the composite Tail samples correlate well with the assay test work, which shows the metallurgical test samples were representative of the Sierra Blanca tailings material. Scoping bottle roll, agitated tank, acid tank and water leach tests, and extraction results, include:

1. 48-hour bottle roll extractions with 200 g/L sulfuric acid (ambient temperature) that extracted 93-97% yttrium (Y), 75-84% lanthanum (La), 79-88% neodymium (Nd), 75-85% cerium (Ce), 92-95% dysprosium (Dy), 88-93% ∑REE+Y, 79-87% LREE, 92-96% HREE+Y, and 27-28% lithium (Li).

2. 48-hour bottle roll extractions with 200 g/L hydrochloric acid (ambient temperature) that resulted in low ∑REE extractions, below 25.3% at 32 µm and 21.5% at 61 µm. Lithium extractions were below 28.8% at 32 µm and 26.7% at 61 µm.

3. 48-hour agitated tank extractions with 50 g/L sulfuric acid (90° C) that extracted 93-94% Y, 77-79% La, 76-80% Nd, 75-85% Ce, 89-90% Dy, 89-90% ∑REE+Y, 79-81% LREE, 92-93% HREE+Y, and 33-42% Li.

4. 48-hour agitated tank extractions with 50 g/L hydrochloric acid (90° C) that extracted 94-96% Y, 94-95% Nd, 93% Ce, 93-95% Dy, 95.6-96.1% ∑REE+Y, and 66.2% Li, 87.6% Li, and 86.3% Li for Tails 1, Tails 2, and Tails 3, respectively.

5. Acid bake (with sulfuric acid) followed by water extraction that extracted 54-77% Y, 68-74% Nd, 73-87% Ce, 41-70% Dy, and 90-96% Li. Reducing the acid bake temperature to from 325° C to 250° C resulted in 62% Y, 69% Nd, 76% Ce, 51% Dy, and similar lithium extractions (95%).

1.10 Conclusions and Uncertainties

Tactical Resources Peak REE Project is a co-product opportunity of merit. Points to support this contention include:

- The Sierra Blanca laccolith rhyolite, or rhyolite porphyry – and its associated tailing's waste material – can be defined as highly evolved magmatic rocks in which a silica-rich magmatic system has undergone a high-degree of late-stage magmatic fractional crystallization.

- The rhyolite contains mineral assemblages that represent precipitates of the evolved magmatic silicate melts, and as such, are uniquely elevated in rare earth elements (particularly heavy rare earth elements), lithium, beryllium, fluorine, niobium, rubidium, thorium, tin, uranium, yttrium, and zircon.

- Based on Tactical Resources 2021 geochemical analytical results, the Sierra Blanca Quarry tailing's material is chemically homogenous, which may suggest that the crystallization process was relatively rapid and occurred within an isolated magmatic system.

- The tailing's material is process-testing-ready in that the rhyolite material has already been mined from its original quarry benches, moved within the quarry site, crushed, conveyed, and finessed to individual tailing stockpiles.

- Tactical Resources has executed an Offtake Agreement and Amending Agreement with Sierra Blanca Quarry LLC in which Tactical Resources has acquired the tailing's material and is therefore free and clear of all encumbrances with respect to testing, and the potential commercialization, of rare earth element production associated with the tailings.

- The Company has access to potential rare earth element processing areas located within the quarry site, or to a rail line in which the Tactical Resources can transport the tailing's material to another processing site.

- The Sierra Blanca Quarry is easily accessible, has an associated rail spur and rail line network, there is a lot of space within the Mining Lease to build demonstration and/or processing plants, has power directly to the Quarry (although an upgrade would likely be required if any future processing plant was developed within the Mining Lease).

- Rare earth elements are critical minerals that represent an opportunity for the U.S. to enter an emerging and globally strategic market. Rare earth elements are required to manufacture high technology products, including high-powered magnets fuel cells, superconductors, clean energy, aerospace, automotive, defence, and many other industrial products. While rare earths are abundant geologically, they are economically recoverable in only a few mineral deposits.

This technical report summarizes Tactical Resources 2021-2022 exploration work, which includes geochemical sampling program and analyses, mineralogical investigations, and unmanned aerial vehicle surveys to better delineate the two-

dimensional spatial extent of the tailing's stockpiles. The QP has reviewed all exploration work conducted by Tactical Resources and concludes that:

1. The exploration work is relevant to the initial assessment of the early exploration stage Peak REE Project.

2. The work was conducted in a reasonable manner that is compliant with the Canadian Securities Administration's National Instrument 43-101 Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum "Best Practices and Reporting Guidelines" for disclosing mineral exploration.

3. The QP has reviewed the adequacy of the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data associated with Tactical Resources 2021 exploration program. The work conducted was completed using accepted standard sampling practices, QA-QC protocols, and analytical methods.

The analytical data were prepared by an independent laboratory, American Assay Laboratories Inc., and the analytical methods carried out by the laboratory are standard and routine in the field geochemical analytical work for the rock type and commodity type being evaluated by Tactical Resources.

Tactical Resources will attempt to reduce risk/uncertainty through effective project management, engaging technical experts and developing contingency plans. With respect to property-related potential risks and uncertainties, the QP notes that

1. Any forfeiture of Mining Lease M-114769 by Sierra Blanca Quarry LLC would imply an inability for Sierra Blanca Quarry LLC to supply continued tailing's material to Tactical Resources as per the Offtake Agreement.

2. The ability of Sierra Blanca Quarry LLC to provide Tactical Resources with ongoing tailing's material is dependant on the perpetuation of the ballast sales agreement between Sierra Blanca Quarry LLC and Union Pacific Railroad Company.

3. There is no guarantee that Tactical Resources will obtain all the necessary permits, environmental assessment approvals, and mine closure and rehabilitation plan approvals required to operate a REE processing facility from the Texas GLO.

Finally, there is no guarantee that Tactical Resources can successfully extract REE from the Sierra Blanca Quarry mine tailings in a commercial capacity. Mineral processing and metallurgical testing have yet to be performed by Tactical Resources. Ultimately, there is a risk that the scalability of any future initial bench-scale or pilot-scale mineral processing/metallurgical test work may not translate to a full-scale commercial operation.

1.11 Recommendations

It is the Qualified Persons opinion that with the appropriate level of tailing's material test work and metallurgical development, the Peak REE tailing's has reasonable prospects for the eventual economic extraction of critical elements. A 2-phase work program is recommended at an estimated total cost of CDN$1.634 million with a 10% contingency (Table 1.1).

Phase 1 recommendations include 1) a sonic drill program, 2) geophysical orientation surveys and follow-up surveying, 3) core sampling program with whole rock and trace element geochemical analyses (rare earth element add-on) and mineralogical QEMSCAN analysis, 4) bench- and columnar-scale metallurgical test work to extract the rare earth elements of interest from the tailing's material. The cost of the Phase 1 work is estimated at CDN$495,000 with a 10% contingency.

Implementation of the Phase 2 work program is contingent on positive results of the Phase 1 work. If warranted, Phase 2 includes 1) advanced metallurgical work to improve and expand the extraction technology and workflow, 2) work planning toward the development of a demonstration plant, 3) consideration of modifying factors including permitting, environmental studies, and community consultation, and 4) technical reporting in accordance with CIM definition standards and guidelines (2014, 2019) and NI 43-101 disclosure rules. The estimated cost of the Phase 2 work is CDN$1,138,500 with a 10% contingency.

Table 1.1 Work recommendations with estimated costs.

Phase	Description	Cost estimate (CDN$)	Sub-total (CDN$)	Cost estimate (USD$)	Sub-total (USD$)
Phase 1	Sonic drill program to determine the thickness of the tailing's material and obtain representative material for onging analytical and metallurgical work.	$180,000		$138,600	
	Geophysical orientation surveys (resistivity and seismic refraction) and follow-up surveying - in conjuction with drilling - to further characterize the geometry and volume of the tailings	$40,000		$30,800	
	Core sampling program with whole rock and trace element geochemical analyses (REE add-on), denisty analysis, and mineralogical QEMSCAN analysis.	$55,000		$42,350	
	Metallurgical studies to test applicable REE extraction processes.	$175,000	$450,000	$134,750	$346,500
Phase 2	Advanced metallurgical work to improve and expand the REE extraction technology and workflow	$450,000		$346,500	
	Demonstration plant development configuration and planning	$85,000		$65,450	
	Modifying factors, permitting, and environmental studies and community consultation	$250,000		$192,500	
	Tehcnical reporting including potential mineral resource/reserve estimations and economic assessment technical reporting.	$250,000	$1,035,000	$192,500	$796,950
		Estimate sub-total	$1,485,000		$1,143,450
		10% contingency	$148,500		$114,345
		Total estimate	**$1,633,500**		**$1,257,795**

Exchange rate: 1 CDN dollar equals 0.77 USD dollar (July 5, 2022).

2 Introduction

2.1 Issuer and Purpose

This technical report has been prepared for the Issuer, Tactical Resources Corp. (Tactical Resources or the Company). Tactical Resources is a mineral exploration and development company based in Vancouver, BC, Canada, that specializes in the acquisition and development of mineral assets in North America, with a primary focus on rare earth element (REE) assets. Tactical Resources projects include the Peak REE Project in Texas, Lac Ducharme REE Project in Quebec, and the SAM Gold Project in Saskatchewan. The Peak REE Project is the focus of this technical report.

During 2022 Tactical Resources announced an Offtake Agreement and an Amending Agreement with Sierra Blanca Quarry LLC who operates the Sierra Blanca Quarry and produces crushed rhyolite railway ballast for the Union Pacific Railroad Company (Tactical Resources Corp., 2022). Tactical Resources has acquired rights to the extract and sale REEs from the tailing's produced at the Sierra Blanca Quarry's Mining Lease M-114796 (1 of 3 Mining Leases owned by Sierra Blanca Quarry LLC). Note that:

1. Sierra Blanca Quarry LLC is the legal and beneficiary holder of the Sierra Blanca Quarry Property Mining Leases (n=3 leases), the source rhyolite porphyry rock, all infrastructure related to Quarry's ballast production, and all permits/licences associated with the production of railway ballast and other crush rock products.

2. Tactical Resources Sierra Blanca Quarry tailing's material is defined as rhyolite defined as discarded ballast crush fragments of less than ¾" (1.91 cm) in size.

3. Mining Lease M-114796 defines the entire, current, Sierra Blanca Quarry mine area (and historical and current tailing's stockpiles).

The Peak REE Project occurs within the Sierra Blanca Quarry on the northwest side of the Sierra Blanca laccolith, which is approximately 5 miles (8 km) northwest of the Town of Sierra Blanca in Hudspeth County, and 68 miles (110 km) southeast of the City of El Paso, western Texas, U.S. (Figure 2.1).

During 2022, Tactical Resources conducted exploration work intended to evaluate the REE potential of the Sierra Blanca Quarry tailings through a preliminary rock sampling and assaying program. Accordingly, the intent of this technical report is to provide 1) a geological introduction to the Peak REE Project, 2) summarize Tactical Resources 2022 exploration work results, and 3) make recommendations for future work programs.

The technical report has been prepared in accordance with the Canadian Securities Administration's (CSA's) National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Best Practices and Reporting Guidelines for disclosing mineral exploration projects.

Figure 2.1. General location of Tactical Resource's Peak REE Project.

2.2 Authors and Site Inspection

This technical report has been prepared by Mr. Roy Eccles M.Sc. P. Geol. of APEX Geoscience Ltd. in Edmonton, AB, and Mr. Norman Chow M.A.Sc. P. Eng. of Kemetco Research Inc. in Richmond, BC. Mr. Eccles is a Professional Geologist registered with the Alberta Association of Professional Geologists and Geophysicists (APEGA) and the Professional Engineers and Geoscientists Newfoundland and Labrador (PEGNL) and is a Qualified Person (QP) as defined in NI 43-101. Mr. Eccles has worked as a geologist for more than 35 years since his graduation from university. Mr. Eccles has been involved in all aspects of mineral exploration, mineral research, and mineral resource estimations for metallic, industrial, and specialty mineral projects and deposits, across Canada, United States, Europe, Australia, and other international destinations. Mr. Eccles experience includes multi-commodity REE evaluations in ultramafic rocks, polymetallic black shale, and other rock types. The QP is independent of Tactical Resources Corp. and the Peak REE Project. Apart from Section 13, Mr. Eccles takes responsibility for all other sections (Sections 1-12, 14, 23-27) of this technical report.

Mr. Chow is a Professional Engineer registered with the Engineers & Geoscientists of BC and is a QP as defined in NI 43-101. Mr. Chow has worked as a Professional Engineer for more than 17 years since his graduation from university. Mr. Chow takes responsibility for Section 13 of this Technical Report. The QP is independent of Tactical Resources Corp. and the Peak REE Project. With respect to expertise related to the mineralization that is the subject of this technical report, Mr. Chow's experience includes multi-commodity metallurgical test programs.

Mr. Eccles performed a personal site inspection at the Peak REE Project and Sierra Blanca Quarry, on June 11, 2022. As part of the site inspection, Mr. Eccles has reviewed the Offtake Agreement, the Amending Agreement, the Sierra Blanca Quarry LLC Mining Leases, observed active Sierra Blanca Quarry LLC mine site, workings, and ballast processing infrastructure, observed the Quarry's active daily tailings production and historical tailings stockpiles within Mining Lease M-114796, evaluated the general geological characteristics of the Sierra Blanca Quarry and Sierra Blanca volcanic dome, and validated the tailing's REE mineralization through independent sampling and analyses.

2.3 Sources of Information

The QP, in writing this technical report, used sources of information as listed in Section 27, References. The sources of geological background information and data for west Texas and the Sierra Blanca area are based on the compilation of publicly available information and data (e.g., Albritton Jr. and Smith, 1965; Wilson, 1971; McAnulty, 1980; Muehlberger, 1980; Dietrich et al., 1983; Henry and Price, 1984; Henry and McDowell, 1986; Henry et al., 1986; Price, 1986; Barker, 1987; Price et al., 1987; Rubin et al., 1987; Corry, 1988; Henry, 1989; Price et al., 1990; Dostal, 2017; Elliot, 2018). Company reports and News Releases include Cyprus Sierra Blanca, Inc. (1988), Hulse et al., (2013, 2019), and Tactical Resources Corp. (2022).

Historical geochemical analytical work was conducted at CVMR® in Toronto, ON and Precilab in Carrollton, Texas. CVMR is a privately held, ISO 9001 registered, TSSA Certified and Approved, metal refining technology provider that is also engaged in mining and refining of its own mineral resources in 18 different countries. Precilab is accredited for ISO/IEC 17025 by A2LA for testing and analysis of chemicals and materials produced and used in the semiconductor and high technology industry.

Tactical Resources laboratory work was conducted at American Assay Laboratories Inc. (AAL) in Sparks, Nevada, U.S.; the lab is accredited to ISO/IEC 17025 by the International Accreditation Service. Tactical Resources metallurgical test work was conducted at Kemetco Research in Richmond, BC. Kemetco Research is a member of the Canadian Association for Laboratory Accreditation and holds Certificates of Proficiency for several tests.

The QP has reviewed these the government, academia, miscellaneous scientific journal reports, and company technical reports and consider them to contain relevant geological information regarding the Peak REE Project. The information was prepared by geologists and engineers that are either professional or have advanced university degrees. The geochemical laboratories are independent of Tactical Resources and are accredited labs. Based on the QPs review of these documents and data, the QP has deemed that the reports, information, and data, to the best of his knowledge, are valid contributions to this technical report, and therefore take ownership of the ideas as they pertain to this geological introduction 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). As the Peak REE Project is in the United States, imperial and metric measurements are presented.

- ‘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 13 of the North American Datum (NAD) 1983.

- Currency is in Canadian dollars (CDN$), unless otherwise specified (e.g., U.S. dollars, US$; Euro, €).

3 Reliance of Other Experts

The senior author and QP is not qualified to provide an opinion or comment on issues related to legal, political, environmental or tax matters relevant to the Technical Report, and have relied upon representatives and information from Tactical Resources.

The QP relied upon information regarding the nature of the Offtake Agreement between Tactical Resources and Sierra Blanca Quarry LLC. A copy of the Offtake Agreement and Amending Agreement was provided to the QP by Tactical Resources management team on June 1st, 2022, and August 10, 2022. The QP relied entirely on this document to discuss the Offtake Agreement but does not have the appropriate background and training to completely validate the legal nature of the agreement. A summary of the conditions of the Offtake Agreement is presented in Section 4.3.

4 Property Description and Location

The Peak REE Project relates to the evaluation, and potential future extraction of REEs from tailings material situated within Sierra Blanco Quarry LLC's railway ballast rock quarry. Tactical Resources owns the tailing's material, only, and Sierra Blanco Quarry LLC owns the Mining Leases. This section presents 1) the description and location of the Peak REE Project, 2) a summary of Sierra Blanco Quarry LLC's Mining Leases, and 3) an overview of the Tactical Resources - Sierra Blanco Quarry LLC Offtake Agreement and Amending Agreement. In addition, the QP presents royalties and environmental liabilities, permitting, and significant factors if Tactical Resources was to advance the Peak REE Project to an advanced developmental stage.

4.1 Description and Location of the Peak REE Project

The Peak REE Project focuses on solely on the tailing's material within the Sierra Blanca Quarry. The in-operation Quarry – and associated Mining Leases – are owned 100% by Sierra Blanca Quarry LLC. The Quarry is on the northeast corner of the Sierra Blanca rhyolite laccolith and is approximately 5 miles (8 km) northwest of the Town of Sierra Blanca, Hudspeth County, Texas, and 68 miles (110 km) southeast of the City of El Paso, Texas (Figures 2.1 and 4.1). The Peak REE Project is approximately 4.3 miles (7 km) north of U.S. Interstate 10 (I-10), between El Paso and Sierra Blanca, from which the Quarry is accessible along a gravel access road.

The Sierra Blanca Quarry Property is defined by 3 Mining Leases (M-114769, M-120354, and M-120355) with a combined contiguous area of 2,680 acres (Table 4.1). The Mining Leases are listed as active at The Texas General Land Office's (GLO or Texas GLO) Land/Lease GIS Map Viewer at: https://gisweb.glo.texas.gov/glomapjs/index.html. The Sierra Blanca Quarry's mine site, workings, processing/crushing infrastructure, railway loading spur, and tailing's stockpiles are all located within Mining Lease M-114796, which encompasses 1,803 acres (or 67% of the overall property).

Figure 4.1. Sierra Blanca Quarry LLC's Mining Leases in Hudspeth County, Texas. Tactical Resources Peak REE Project is focused on the tailing's material within Mining Lease M-114769.

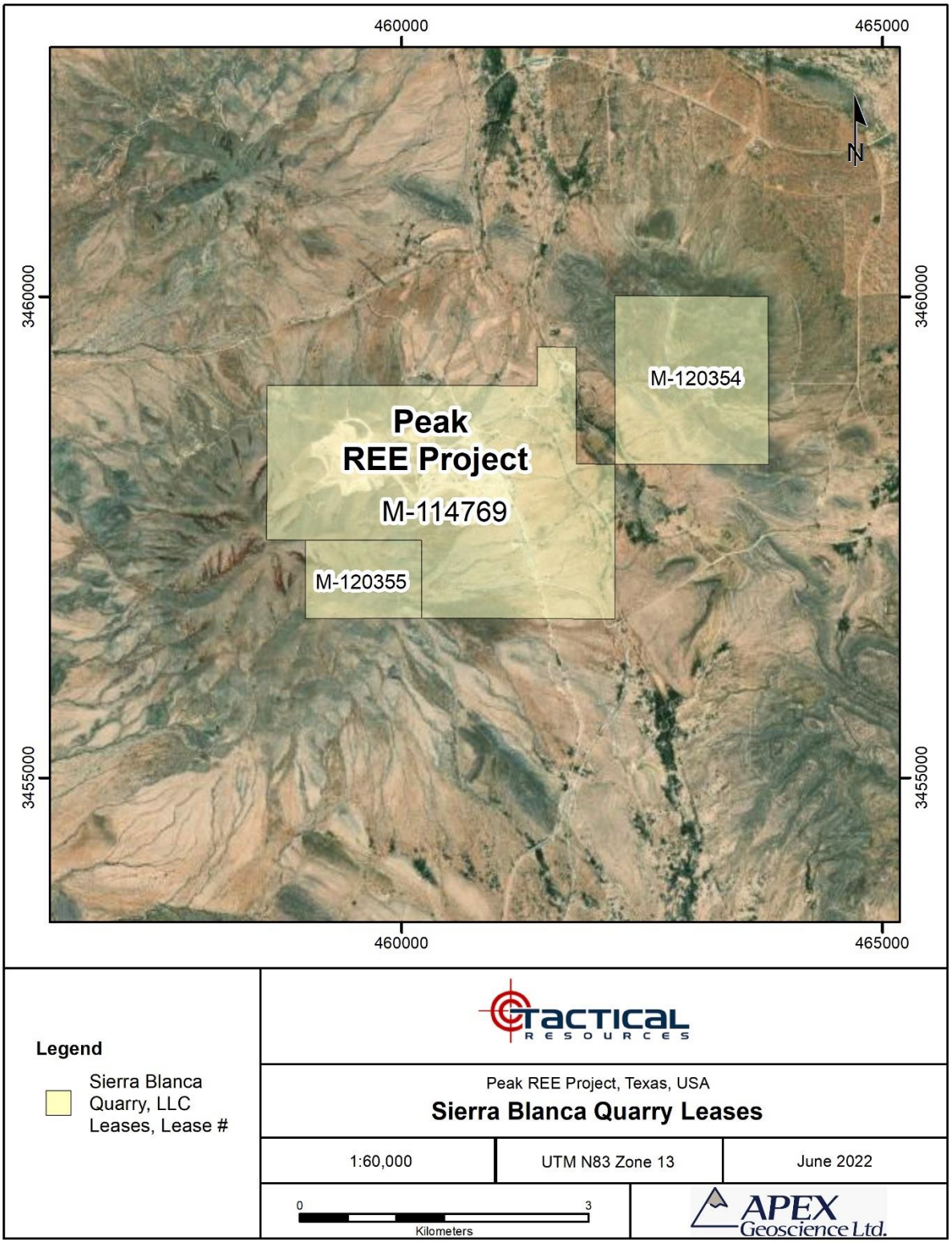


Table 4.1. Permit descriptions and status for Sierra Blanca Quarry LLC.

Lease No.	Lease Status	Lease Term	Designated Owner	Texas County	Size (acres)	Term Date	Expiry Date
M-114769	Producing	15 years	Sierra Blanca Quarry LLC	Hudspeth County	1,800	02/01/2013	02/01/2028
M-120354	Active	5 years	Sierra Blanca Quarry LLC	Hudspeth County	640	08/14/2020	08/14/2025
M-120355	Active	5 years	Sierra Blanca Quarry LLC	Hudspeth County	240	08/14/2020	08/14/2025
				Total size	**2,680**		

The Peak REE Project is within Universal Transverse Mercator (UTM) Zone 13N and North American Datum 83 (NAD83). The approximate centre of the Peak REE Project is in UTM coordinate system at 459774 m Easting, 3458162 m Northing and in the geodetic coordinate system at Latitude 31.2570° N, Longitude 105.4225° W.

4.2 Property Ownership Summary

The property covering the Sierra Blanca laccolith was first obtained by Cabot Corporation (Cabot) in 1984 for beryllium exploration. Cabot subsequently entered a joint venture agreement with Cyprus Metals Company (Cyprus) in 1987 to continue beryllium exploration (see Section 6.2). Throughout the 1990s, the property fell back under control of the Texas GLO, after Cyprus terminated its beryllium exploration programs. In 2007, Sierra Blanca Quarry LLC acquired the Sierra Blanca laccolith Property with the intent of excavating the rhyolite porphyry that constitutes most of the Sierra Blanca laccolith.

On February 1st 2013, Sierra Blanca Quarry LLC entered into a 15-year agreement with the State of Texas, valid through February 1st, 2028, for the acquisition of a mining lease covering the Sierra Blanca laccolith (see Section 4.3). Sierra Blanca Quarry LLC now operates a rhyolite-sourced railway ballast quarry and crushing plant, the Sierra Blanca Quarry. Sierra Blanca Quarry LLC owners include Ms. Becky Dean Walker and Mr. Dennis R. Walker. At the effective date of this Report, Sierra Blanca Quarry LLC is still the owner of the Sierra Blanca Quarry and associated Mining Leases described in the text that follows.

4.3 Sierra Blanco Quarry LLC Mining Leases with a Detailed Description of Mining Lease M-114769

Sierra Blanca Quarry LLC first entered into a 15-year agreement with the State of Texas, acting by and through the Commissioner of the GLO of the State of Texas on February 1st, 2013, in accordance with Chapter 53, Subchapter B, of the Texas Natural Resources Code for the grant of Mining Lease M-114769 (1,803 acres). The Mining Lease M-114769 covers the SW/4 and SW/4 of NE/4 and W/2 of SE/4 of Section 14, the S/2 of Section 15, the E/2 of SE/4 of Section 16, the E/2 of NE/4 of Section 21, the N/2 and E/2 of SE/4 of Section 22, and all of Section 23, Block 71, Township 7, T&P Ry. Co. in Hudspeth County, Texas. Subject to an extension, Mining Lease M-114769 expires in February 2028.

Sierra Blanca Quarry LLC subsequently entered into 5-year agreements with the State of Texas on August 14, 2020, for Mining Leases M-120354 (640 acres) and M-120355 (240 acres), which are contiguous to Mining Lease M-114769 (Figure 4.1). The 3 Mining Leases, collectively, encompass a total area of 2,680 acres and expire in August 2025 (Table 4.1).

Mining Lease M-114769 is subject to the agreement between Tactical Resources and Sierra Blanca Quarry LLC for the Peak REE Project tailings. The Mining Lease M-114769 is granted for the purpose of prospecting for, exploring for, producing, developing, mining, extracting, milling, removing, and marketing the following: Rhyolite, granite, and other similar igneous rocks, collectively referred as to the “named material”, and the rocks, minerals and mineral substances that are contained in or are necessarily and actually produced in conjunction with or incidental to the named material (the named material and the other rocks, minerals and mineral substances contained in them or produced are collectively referred to as the "leased minerals).

Mining Lease M-114769 provides Sierra Blanca Quarry LLC with all rights with respect to the surface and subsurface thereof for any, and all, purposes, together with the rights of ingress and egress and use of the property and its mineral lessees, for purposes of exploring for and producing the minerals which are not covered by the terms of the lease, but which may be located within the surface boundaries of the leased area.

With respect to maintenance, a bonus consideration of USD$10,000 was paid by Sierra Blanca Quarry LLC to the Texas GLO for the Mining Lease M-114769, which corresponds to USD$5.56 per acre on the 1800 acres covered by the Lease. Payments of USD$100,000 (corresponding to USD$55.56 per acre on 1800 acres) under the Mineral Lease M-114769 on Anniversary Date 2015-2017 represent rental and cover the privilege of deferring commencement of production of the named material in paying quantities for 1 year from the corresponding anniversary date.

4.4 Tactical Resources - Sierra Blanca Quarry LLC Agreements

On June 1, 2021, Peak 6891 LLC, a subsidiary of Sortros Group of Companies, and Sierra Blanca Quarry LLC entered into an agreement with respect to the purchase and sale of rare earth elements from existing tailings covered under Sierra Blanca Quarry LLC’s Mining Lease M-114796 (the “Original Offtake Agreement).

On July 14, 2021, Tactical Resources and Peak 6891 LLC executed and delivered an assignment and agreement pursuant to which Peak 6891 LLC agreed to sell to Tactical Resources and Tactical Resources agreed to purchase the right, title, and interest of Peak 6891 LLC in and to the Original Offtake Agreement. The Original Offtake Agreement provides among other things, that Sierra Blanca Quarry LLC shall subscribe for 10% of the issued shares of Peak 6891 LLC in consideration of the sum of USD$100.00, and Tactical Resources understands that Sierra Blanca Quarry LLC has made its own arrangements with Peak 6891 LLC with respect to the satisfaction of such condition.

On July 30, 2021, Tactical Resources and Sierra Blanca Quarry LLC executed a purchase and sale agreement (the Offtake Agreement) with respect to mine tailings covered under Sierra Blanca Quarry LLC's Mining Lease M-114796 and agreed to terminate the Original Offtake Agreement upon the execution and delivery of this Offtake Agreement. The term of the Offtake Agreement is 15 years, renewable for so long as Sierra Blanca Quarry LLC is directly or indirectly the holder of the Mining Lease M-114796 as well as all renewals, extensions and new leases of like kind and tenor in the same geographical location as the current Mining Lease.

On May 13, 2022, Tactical Resources and Sierra Blanca Quarry LLC executed an Amending Agreement that stipulates 1) historical stockpiles of not less than 4 million short tons (3.63 million tonnes) of tailing's material on, about, or under the leased premises, 2) commencing in 2022, a delivery schedule in which Sierra Blanca Quarry LLC estimates the annual tailings production, and Tactical Resources and Sierra Blanca Quarry LLC execute purchase agreements on a calendar year basis, and 3) an exclusive one-time option to purchase all membership interest in Sierra Blanca Quarry, LLC.

Sierra Blanca Quarry LLC operates a ballast mine and crushing plant at the Sierra Blanca Quarry for the recovery of rhyolite, granite, and other similar igneous rocks. During such operations, Sierra Blanca Quarry LLC generates waste tailings that are stockpiled within Mining Lease M-114796. Sierra Blanca Quarry LLC estimates that the plant currently generates approximately 2,000 short tons (1,814 metric tonnes) of tailings daily when the plant is operational (the "Additional Daily Tailings).

Sierra Blanca Quarry LLC has agreed to sell to Tactical Resources, and Tactical Resources has agreed to purchase from Sierra Blanca Quarry LLC, the tailings, in amounts selected by Tactical Resources, in its sole discretion, all on and subject to the terms and conditions of the Offtake Agreement and Amending Agreement. It is understood and agreed by both parties that most of the tailings from the leased premises shall be available for sale to Tactical Resources, should Tactical Resources so choose to purchase such tailings.

The tailings price agreed upon by both parties in the Offtake Agreement is USD$0.011 per short ton of tailings. Sierra Blanca Quarry LLC shall transport the selected tailings from the Sierra Blanca Quarry Property to Tactical Resources' proposed processing facility, according to an agreed delivery schedule, at a price per ton to be negotiated in good faith not to exceed USD$1.80 per ton of tailings. At each delivery, Tactical Resources will be the legal and beneficial owner of the tailings and Sierra Blanca Quarry LLC will have and will deliver to Tactical Resources, at such time, good, valid, and marketable title to such tailings, free and clear of all encumbrances.

Tactical Resources is responsible, at its own expense, for obtaining all permits required to be obtained to the laws of the State of Texas to purchase and further commercialize the tailings.

Sierra Blanca Quarry LLC is responsible, at its own expense, for obtaining and maintaining any authorizations required to perform its obligations under the Offtake Agreement, including the sale and delivery of tailings to Tactical Resources. Sierra Blanca Quarry LLC shall ensure that all activities in respect of the leased premises will be performed in compliance in all material respects with applicable laws, including any applicable laws relating to environmental matters and reclamation obligations or the corruption of public officials. Sierra Blanca Quarry LLC shall, and shall cause its subsidiaries to, use commercially reasonably efforts to cause each of the directors, officers, agents, employees, and other persons acting on behalf of it or any of its subsidiaries to comply with the provisions of the anti-corruption laws.

4.5 Royalties

Mining Lease agreements in the State of Texas are subject to production royalty payments corresponding to a minimum of 6.25% of the value of the leased minerals produced from the leased premises, in accordance with Chapter 53, Subchapter B, Section 53.018 of the Texas Natural Resources Code.

Sierra Blanca Quarry LLC's Mining Lease M-114769 is subject to a production royalty of:

- 11% of the market value of the first 350,000 short tons (317,515 metric tonnes) of leased minerals produced from the leased premises each year, and,

- 10% of the market value for all production more than the first short 350,000 tons (317,515 metric tonnes) of leased minerals produced from the leased premises each year.

The market value is defined as the higher of, at the option of the Texas GLO Commissioner: 1) gross proceeds received by Sierra Blanca Quarry LLC from the sale of the leased minerals and including any reimbursements for severance taxes and production related costs, or 2) highest price for materials or minerals produced from the leased premises or from other mines and that are comparable in quality to the produced leased minerals.

For purposes of computing and paying royalties under the Mining Lease M-114769, the market value is be presumed to be the gross proceeds received by Sierra Blanca Quarry LLC pursuant to a bona fide transaction entered at arms length with a non-affiliated party of adverse economic interests.

The royalty due may be adjusted at the discretion of the Texas GLO Commissioner if Sierra Blanca Quarry LLC incurs additional costs outside the performance of its duty to put the leased minerals into a make marketable condition. These additional costs may include post-mining costs such as the cost of upgrading, loading, handling, and transporting the leased minerals to a buyer away from the leased premises, if Sierra

Blanca Quarry LLC incurs these costs pursuant to a bona fide transaction entered at arm's length with a non-affiliated of adverse economic interests.

An initial minimum advance royalty of USD$10,000 is to be paid to the Texas GLO immediately upon commencement of production of the leased minerals from the premises leased under the Mining Lease M-114769. The same minimum advance royalty (USD$10,000) is to be paid to the Texas GLO in advance for each lease year (as determined by the anniversary date of the lease) in which the leased minerals are produced from the leased premises, regardless of the amount of actual production.

Potential royalty payments associated with any future REE production facility by Tactical Resources would include tonnage fees for the tailing's material, and mineral worth of the tailings (i.e., REE/ton). The mineral worth royalty payment would be negotiated between Tactical Resources and the Texas GLO.

4.6 Environmental Liabilities, Permitting and Significant Factors

Sierra Blanca Quarry LLC is the legal and beneficiary holder of the Sierra Blanca Quarry Property Mining Leases and the agreement between Sierra Blanca Quarry LLC and Tactical Resources for the Peak REE Project is solely related to the sale and purchase of tailings. Therefore, Tactical Resources is not bound by any environmental liabilities related to the Sierra Blanca Quarry mining activity at this time. That is,

1. The mine permits for the current Sierra Blanca Quarry operation, which include storm water runoff, air quality, and mine reclamation plans are granted to, and managed by, Sierra Blanca Quarry LLC.

2. Tactical Resources Peak REE Project is an early-stage exploration project, and the Company has yet to consider modifying factors and advanced scoping studies toward development of a REE processing facility, which could be developed on-site at the Sierra Blanca Quarry, or off-site.

Hence, the purpose of this sub-section is to provide a summary of critical mine permitting, Environmental Site Assessment (ESA) Report, and mine closure requirements that would be required 'if' Tactical Resources was to proceed to the developmental stages of an 'on-site' REE-from-tailings extraction plant.

4.6.1 Permit Summary

If the Tactical Peak REE Project progresses to the developmental stages of an 'on-site' REE-from-tailings extraction plant, the following permits – if required – would require consideration by the Company.

- Air permitting regulations and fees in accordance with the State Texas Commission on Environmental Quality (TCEQ), and federally, by the U.S. Environmental Protection Agency (EPA)

- Storm Water – General Construction Permit and Industrial Storm Water Multi-Sector General Permit (MSGP) as regulated by the State TCEQ.

- Public Water System Authorization including Potable Water Usage prior to use of non-municipal water as drinking water source, and Water Right Permit prior to using surface water or runoff as regulated by the State TCEQ.

- Storge of petroleum products on site as regulated by the State TCEQ and an Explosives Permit as regulated by the US Bureau of Alcohol, Tobacco, Firearms, and Explosives.

- Hazardous Waste Management Activity and Hazardous Waste Permit (RCRA), and Radioactive Material Licence as regulated by the State TCEQ.

4.6.2 Environmental Site Assessment

If the Tactical Peak REE Project progresses to the developmental stages of an 'on-site' REE-from-tailings extraction plant, a Phase 1 Environmental Site Assessment (ESA) Report would be conducted for the Site and Processing facility. Pertinent information in a potential ESA would include the following.

- Recognized Environmental Conditions (REC) in respect to the property:
    - Subject and adjacent property land-use history, including a search of city directories, topographic maps, Sanborn Fire Insurance maps, aerial photographs, and environmental liens.
    - Geographic setting.
    - Surface soil types and flooding potential.
    - Present land use and relationship to adjacent property with respect to potential impacts to the subject property.
    - Evidence of solid waste disposal activities.
    - Site topography and drainage characteristics.
    - Evidence of any underground or above ground storage tanks.

- Review of Federal Reports:
    - Active Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database-Hazardous waste sites.
    - Former CERCLIS-Hazardous waste sites.
    - CERCLIS National Priority List (NPL)-Hazardous waste cleanup NPL sites.
    - Delisted CERCLIS NPL-Hazardous waste cleanup NPL sites that have been removed from active status.
    - Resource Conservation and Recovery Act (RCRA) Transport, storage, or disposal facilities (TSDF) list.
    - RCRA-Hazardous waste generators.
    - RCRA-Corrective action sites.
    - Federal Response System (FRS)/Emergency Response Notification

System (ERNS).
    - Sites with institutional or engineering environmental controls (IC/EC).

- State and tribal (where appropriate) reports:
    - Equivalent NPL-State equivalent to the national priority list.
    - Voluntary Cleanup Program (VCP)/ Brownfields.
    - Solid waste facilities/landfill sites listing.
    - Leaking petroleum storage tanks (LPST).
    - Registered petroleum storage tanks (PST) (historic and current) listing.
    - Emergency response (ER) listing.

4.6.3 Mine Closure Requirements

If the Tactical Peak REE Project progresses to the developmental stages of an 'on-site' REE-from-tailings extraction plant, the following mine closure, salvage, revegetation, and monitoring studies would be considered by the Company.

- Mine Reclamation and Closure Plan: The Reclamation and Closure Plan evaluates the necessary reclamation measures that would be conducted on-site during and after mining to minimize impacts to the surrounding area and restore the area to a usable site. The mine Reclamation and Closure Plan will be conducted pursuant to the requirements of the BLM federal surface management regulations and to the Texas GLO under its state right of way rules. The site improvements such as buildings, roads and utilities would be the property of the State if the Company choses to lease the land.

- Plant Growth Medium Salvage (PGM) and Revegetation: To the extent practicable, up to approximately three inches of PGM would be salvaged from the mine site prior to mining for use as seed bedding material during reclamation. Cacti, succulents, and other sensitive vegetation growing in dry, rocky conditions would be transplanted for use during revegetation. Disturbed areas would be revegetated during Reclamation and Closure to prevent erosion and improve soil and slope stability. Disturbed areas to be reclaimed include but are not limited to the process facility yard and access roads. Water trucks would be used to spray disturbed areas during reclamation, minimizing the potential for wind erosion. Dust suppression would likely be a continuous need throughout reclamation due to the arid nature of the Project area. The mine site access and haul roads would be revegetated using native, high desert seed mix as discussed above.

- Monitoring and Maintenance: Revegetation progress, cover stability, and erosion control measures would be routinely inspected, and maintenance actions would be taken in areas appearing vulnerable to erosion and instability. Maintenance and monitoring actions would continue at the site until reclamation metrics are achieved as per BLM guidelines.

4.7 Property-Related Uncertainties

As with any development project there exists potential risks and uncertainties. Tactical Resources will attempt to reduce risk/uncertainty through effective project management, engaging technical experts and developing contingency plans.

With respect to property-related potential risks and uncertainties, the QP notes that

1. Any forfeiture of Mining Lease M-114769 by Sierra Blanca Quarry LLC would imply an inability for Sierra Blanca Quarry LLC to supply continued tailing's material to Tactical Resources as per the Offtake Agreement and Amending Agreement.

2. The ability of Sierra Blanca Quarry LLC to provide Tactical Resources with ongoing tailing's material is dependant on the perpetuation of the ballast sales agreement between Sierra Blanca Quarry LLC and Union Pacific Railroad Company.

3. There is no guarantee that Tactical Resources will obtain all the necessary permits, environmental assessment approvals, and mine closure and rehabilitation plan approvals required to operate a REE processing facility from the Texas GLO.

There is no guarantee that Tactical Resources can successfully extract REE from the Sierra Blanca Quarry mine tailings in a commercial capacity. Mineral processing and metallurgical testing have yet to be performed by Tactical Resources. Ultimately, there is a risk that the scalability of any future initial bench-scale or pilot-scale mineral processing/metallurgical test work may not translate to a full-scale commercial operation.

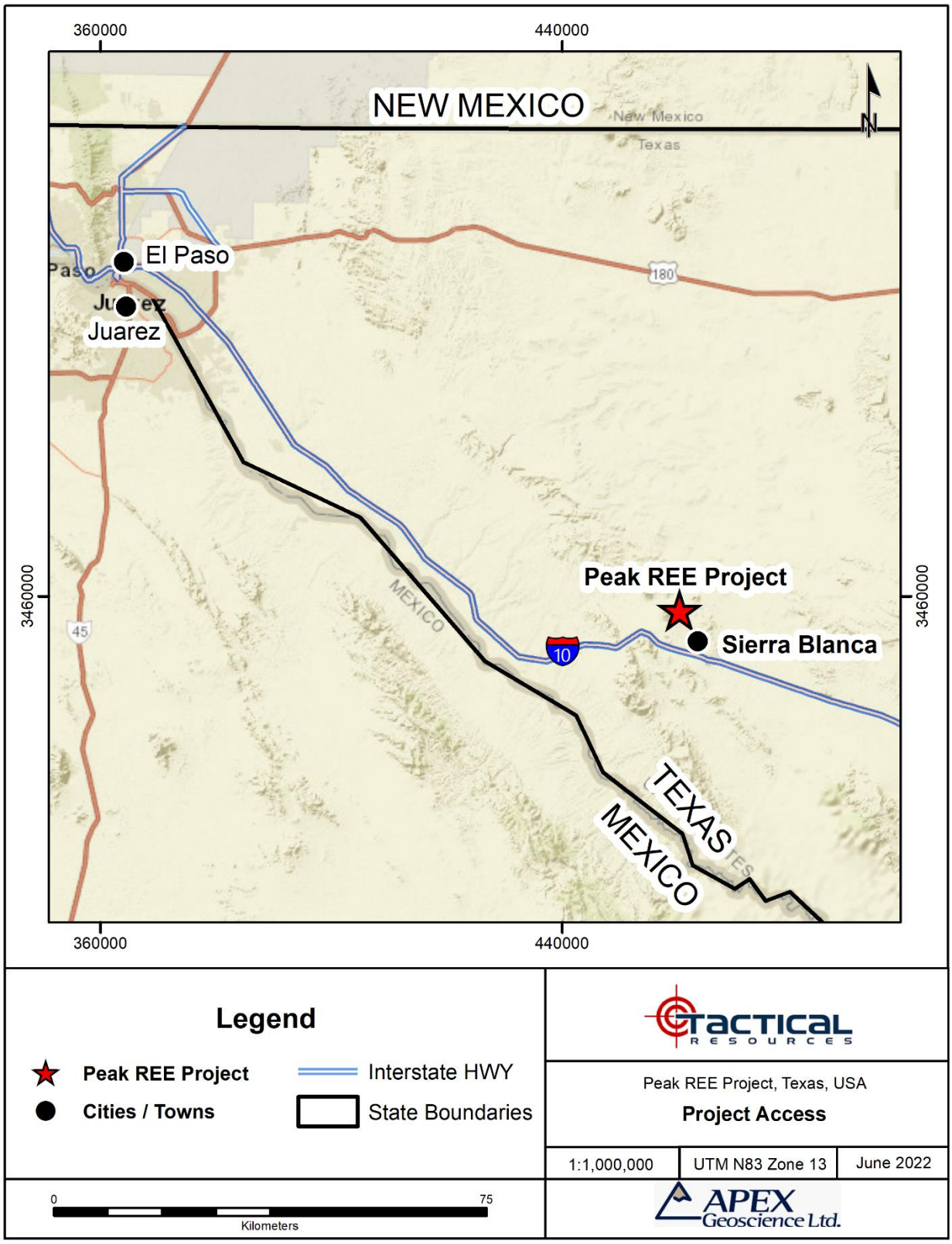
5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Peak REE Project is located within the Sierra Blanca Quarry, approximately 8 km northwest of the Town of Sierra Blanca, TX, and 110 km southeast of the City of El Paso, TX (Figure 5.1). The Project is approximately 7 km north of U.S. Interstate 10 (I-10), between El Paso and Sierra Blanca. The I-10 is the fourth-longest Interstate (approximately 2,460 miles or 3,960 km) in the U.S. from the Pacific coast in California to the Atlantic coast in Florida. Turning north off the I-10, the Quarry mine site it is accessible via a rhyolite crush material service road due north for about 6 miles (9.7 km).

The nearest major airport is the El Paso International Airport in El Paso, TX. A major rail line operated by the Union Pacific Railroad Company has a spur line that runs through the Sierra Blanca Quarry Mining Lease M-114769. Rail cars for ballast loading are owned by the Union Pacific Railroad Company. It is worth noting that the Union Pacific Railroad Company is a freight-hauling railroad that operates 8,300 locomotives over 51,500 km routes in 23 U.S. states west of Chicago and New Orleans.

Figure 5.1. Access to Tactical Resource's Peak REE Project.



To conclude, the access infrastructure related to the Peak REE Project is good and would allow for rail and/or truck transportation of the Sierra Blanca Quarry tailings – and/or potential products derived from the tailings – to any future defined points of the delivery as designated by Tactical Resources.

5.2 Site Topography, Elevation and Vegetation

The Sierra Blanca range begins approximately 2 miles (3.2 km) north of the Town of Sierra Blanca in south central Hudspeth County and extends for approximately 10 miles (16.1 km) in a northwest-trending direction (with ranges center at approximately 31°15' N, 105°26' W). The range has 3 distinctive conical, volcanic peaks:

- Sierra Blanca, the highest in the range, with an elevation of 6,891 feet (2,100 m) above sea level.
- Little Blanca Mountain, with an elevation of 6,178 feet (1,883 m) above sea level.
- Round Top, with an elevation of 5,732 feet (1,747 m) above sea level.

The regional surficial material is composed predominantly of clay and sandy loams. The substrate supports scrub brush, cactus, and grasses. Grass is mostly scattered on alluvial slopes. Century plant, sage, lechuguilla, greasewood, and yucca are common. Mesquite and willow are present along large arroyos.

5.3 Climate

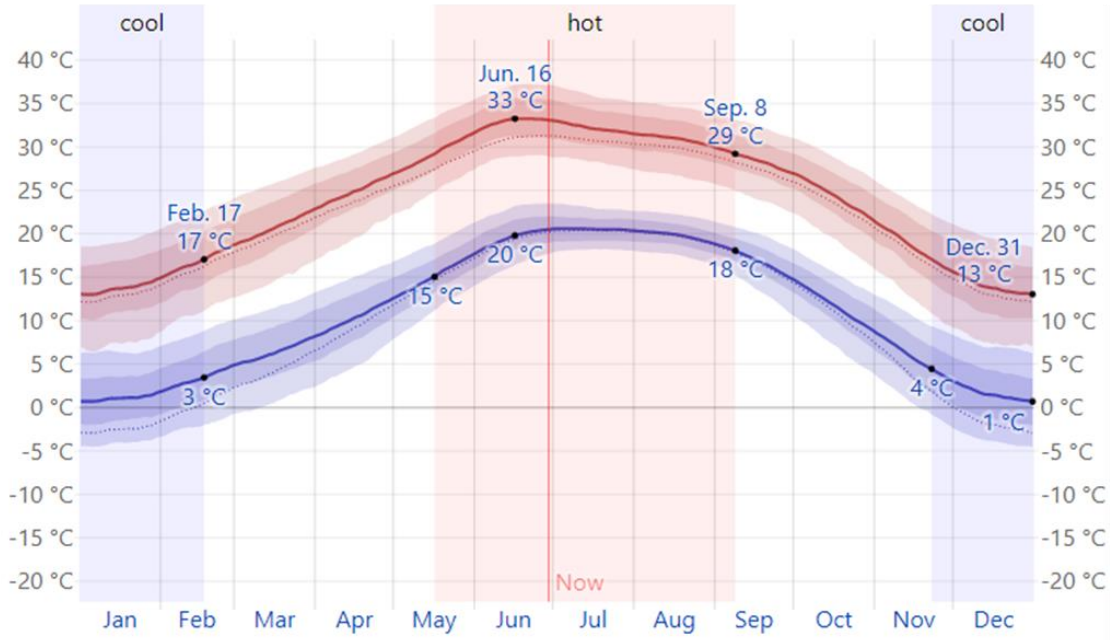
The Sierra Blanca area's climate is semi-arid. Summers are partly cloudy and hot with an average temperature of 77° F (25° C), and winters are mostly clear, snowy, and cold with an average temperature of 45° F (7°C). Throughout the year, the temperature typically varies from 34-91° F (1-33° C (Figure 5.2). Summers lasts about 3.7 months from mid May to early September. Winters are short and last about 2.8 months from late November to mid February.

The Sierra Blanca area received approximately 11 inches (28 cm) of rain and 1 inch (2.5 cm) of snow on average per year. The rainy period lasts from May to November, with August being the rainiest month with an average of 1.7 inches (4.2 cm) of rainfall (Figure 5.2). The least rainy month in Sierra Blanca is January.

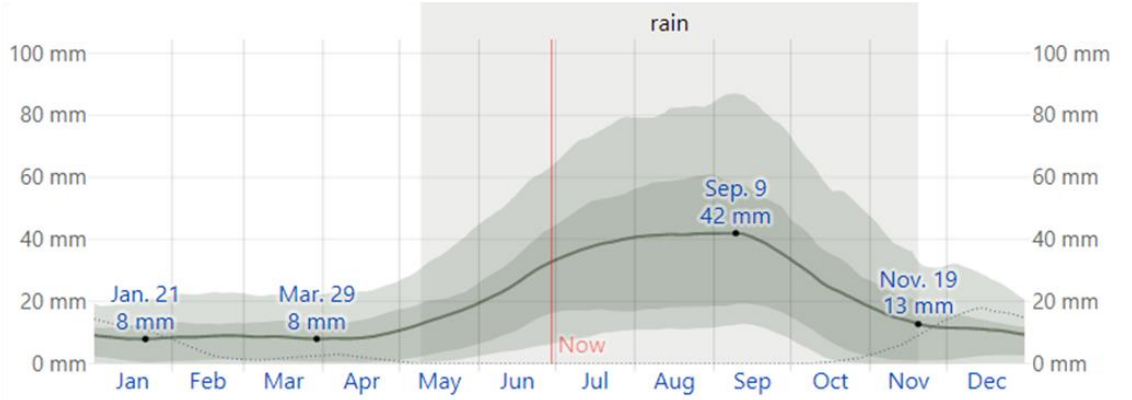
The average annual wind speed is approximately 9 miles/hr (15 km/hr), with the highest wind speeds in April (11 miles/hr, or18 km/h) and the lowest in August (7 miles/hr, or 11 km/h).

Figure 5.2 Average monthly temperatures and rainfall at Sierra Blanca, TX.

A) Average monthly high and low temperature in Sierra Blanca, TX.



B) Average monthly rainfall in Sierra Blanca, TX.



The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall	8.0mm	8.7mm	8.6mm	8.2mm	14.7mm	25.8mm	38.0mm	41.6mm	40.8mm	24.4mm	13.9mm	11.0mm

5.4 Local Resources and Infrastructure

As of 2020, the population in Hudspeth and El Paso counties was 3,202 and 867,657 individuals, respectively, including 832 persons in the Town of Sierra Blanca, TX. Skilled workers for the Peak REE Project processing facility could be obtained in Hudspeth County, El Paso County, or other surrounding cities if any future processing facility is opened at the Sierra Blanca Quarry mine site, or nearby.

Powerlines extend directly to the Sierra Blanca Quarry mine site with a voltage of 120/480 V. It is likely that the power would need to be upgraded to operate any future REE processing facility at the Quarry mine site.

Water to supply the Sierra Blanca Quarry mining activity and wash plant is pumped from a subsurface aquifer located at a depth of approximately 365 m (Mr. D. Walker, pers. comm., 2022). Hydrogeology Maps for the Bone Spring-Victoria Peak aquifers in northern Hudspeth County, which underlie the Sierra Blanca Quarry, are located at the Texas Water Development Board (https://www.twdb.texas.gov/groundwater/aquifer/).

To conclude, the Peak REE Project is located at an operational volcanic crush rock railway ballast quarry operated by Sierra Blanca Quarry LLC. Hence the Quarry area has excellent access and infrastructure. The semi-arid climate could enable Tactical Resources to conduct exploration, and/or any future development, activities year-round. At present, and depending on contracts, Sierra Blanca Quarry LLC operates a Quarry work schedule of 10 hours/day and the Quarry is operational from September to June (reduced work shifts and/or mine shutdown during the heat of summer).

6 History

The intent of this historical section is to discuss historical exploration activities at the Sierra Blanca Quarry Mining Leases owned and operated by Sierra Blanca Quarry LLC. In instances that the discussion relates to areas, or mineral properties, that occur outside of the Sierra Blanca Quarry Mining Leases, the reader should know that the QP has been unable to verify information pertaining to mineralization on these areas, and therefore, the information is not necessarily indicative to the mineralization at the Peak REE Project that is the subject of this technical report.

This disclaimer is applicable to sub-sections 6.1 and 6.2, which include:

- A historical summary of mineral deposits and occurrences in the general Sierra Blanca laccolith region (Section 6.1), and

- A historical summary of the initial exploration work within the current Peak REE Project; however, some of the exploration work was conducted in conjunction with regional programs that included 4 of the 5 volcanic peaks that make up the Sierra Blanca Mining District (i.e., Round Top, Little Round Top, Little Blanca Mountain, North Sierra Blanca, and South Sierra Blanca; Section 6.2).

6.1 Regional Historical Mineral Deposits and Occurrences

A belt of alkaline-igneous rocks – known as the Trans-Pecos Magmatic Province – extends along the eastern boundary of the Rocky Mountains and the Basin and Range geological province. These rocks, primarily Tertiary in age, contain known quantities of many critical minerals including REEs in the Trans-Pecos portion of West Texas and parts of southeastern New Mexico. Historical or current metallic and industrial mineral mines, and mineral deposits and occurrences near the Peak REE Project – as documented by the United States Geological Survey (USGS) – are presented in Figure 6.1 and summarized in the text that follows. The deposits and occurrences are relegated to 3 prominent mining districts that include the Sierra Blanca, Northern Quitman Mountains, and Cave Peak mining districts.

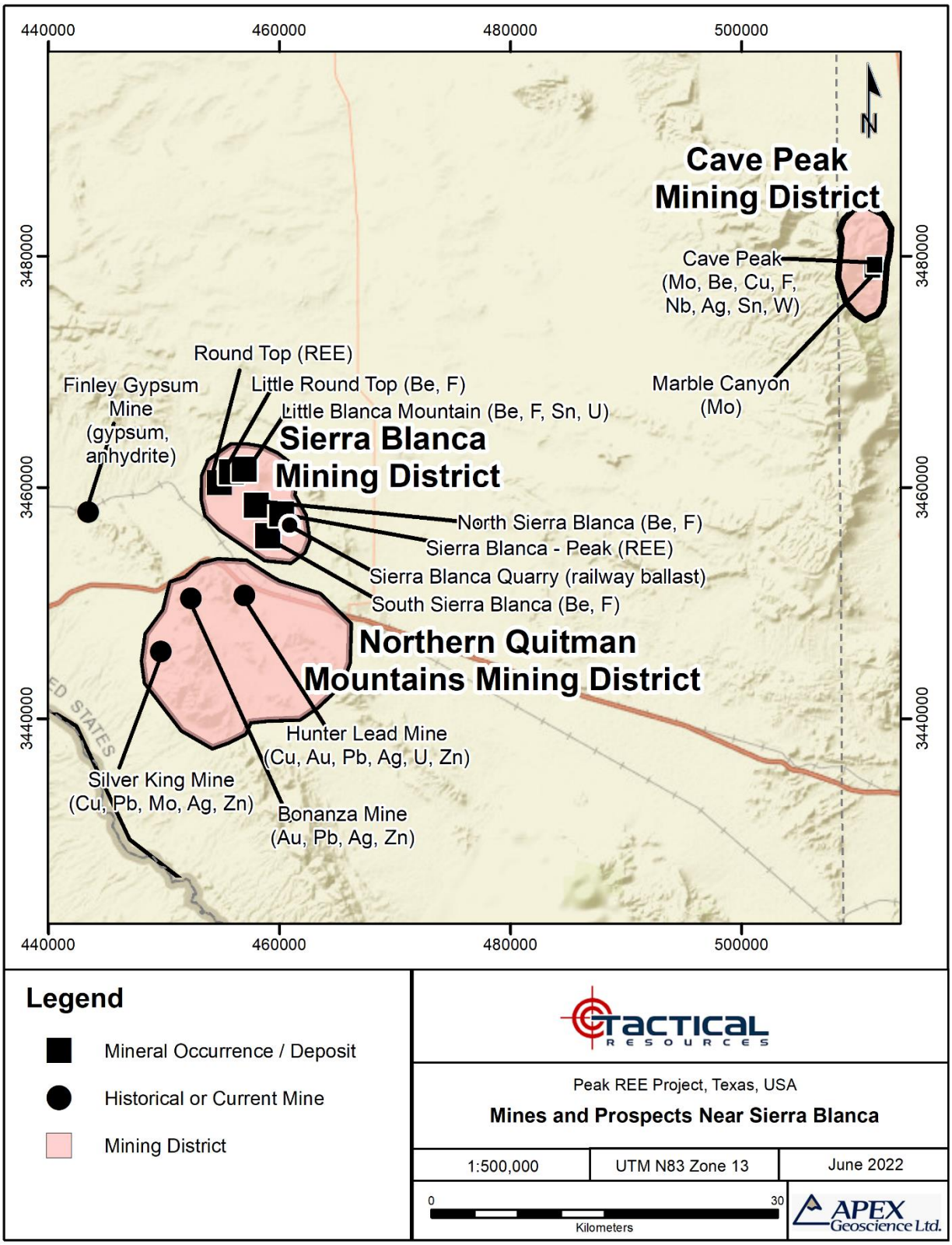
The Sierra Blanca Range consists of five mountain peaks within an area of about 1,300 ha and has generated mineral interest over several decades. The Sierra Blanca Mining District historically comprises 5 prospects: Round Top (beryllium and fluorine), Little Round Top (beryllium and fluorine), Little Blanca Mountain (beryllium, fluorine, tin and uranium), North Sierra Blanca (beryllium and fluorine), and South Sierra Blanca (beryllium and fluorine). In addition to beryllium and fluorine, other commodities of interest in the Sierra Blanca District include REE, aluminum, gallium, hafnium, iron, lithium, magnesium, manganese, niobium, potassium, scandium, sodium, tantalum, thorium, tin, uranium, yttrium, and zirconium.

The Northern Quitman Mountains Mining District includes several historical mines: the Bonanza Mine (gold, lead, silver and zinc), the Alice Ray Mine (lead, silver and zinc), the Silver King Mine (copper, lead, molybdenum, silver and zinc), the Hunter Lead Mine (lead, copper, gold, silver, uranium, and zinc), the Bona Lead Mine (lead, iron, nickel, and silver), the Stokes Lead Mine (lead, silver, and uranium), and Love Tank Mine (copper, lead, molybdenum, and tungsten).

Several prospects also occur in the Northern Quitman Mountains Mining District, such as: Queen Anne (lead, silver, and zinc), Love Pass (silver), Milby Peak (copper, lead, silver, and zinc), Tremble Hill (beryllium, copper, iron, and tin), Love Pasture (iron), Granite Hill (beryllium, iron, niobium, tin, and tungsten), Zimpleman (copper, iron, lead, molybdenum, silver, and zinc), Red Chief (lead and zinc), and Nickel Plate.

The Cave Peak Mining District historically comprises two prospects: Cave Peak (molybdenum, beryllium, copper, fluorine, niobium, silver, tin, and tungsten) and Marble Canyon (molybdenum). The Cave Peak deposit is located within the Cave Mountain intrusive igneous rocks and associated breccia in Sierra Diablo, Culberson County, Texas, with molybdenum, copper, niobium, tungsten, and tin commodities (Audétat, 2010).The Finley Gypsum Mine in the Finlay Mountains 22 km west-northwest of the Town of Sierra Blanca, mines the gypsum variety alabaster from the Permian Briggs Formation.

Figure 6.1 Historical mineral occurrences and deposits in the Sierra Blanca area.



6.2 Historical Exploration Work Conducted within Sierra Blanca Mining District

Mineral exploration in the Sierra Blanca range area was initiated by W.N. McAnulty in 1968, who was initially interested in fluorite deposits after the discovery of widespread fluoritization at 4 of the 5 Sierra Blanca laccoliths (apart from Triple Hill). This area would later form the “Sierra Blanca Mining District”.

Between 1971 and 1980, McAnulty conducted trenching and diamond drilling (22 holes) on the Round Top, Little Blanca, and Little Round Top volcanic peaks. The fluorite occurrences discovered by McAnulty were ultimately deemed unprofitable. However, McAnulty’s exploration and geochemical sampling revealed the potential for beryllium, uranium, tin, and zinc within the Sierra Blanca laccoliths. This resulted in further exploration interest in the area as summarized in McAnulty (1980).

In 1982, Cabot Corporation (Cabot), a chemicals and performance materials company, became interested in the Sierra Blanca area and initiated exploration for beryllium. In 1984, the mapping and sampling programs led to Cabot acquiring a land position that consisted of 11,400 ha and was obtained through private leases and state prospecting permits. Cabot initiated a reverse circulation rotary drilling program and between October 1984 and December 1985, 240 holes were drilled (21,230 m total) in the Sierra Blanca area, with 153 holes drilled at Round Top, 32 on the north side of the Sierra Blanca, 50 holes on the Little Blanca, and 5 holes on North Hills (a small hill north of Little Blanca).

In 1986, following the completion of the drill programs, Cabot historically estimated the beryllium reserve potential (Cyprus Sierra Blanca Inc.,1988) and the main area of focus turned on the northwest portion of Round Top West End Structure, a nearly vertical, brecciated, highly mineralized contact zone between rhyolite and limestone country rocks.

In January 1987, Cyprus Metals Company (Cyprus) entered a joint venture agreement with Cabot to continue Sierra Blanca’s beryllium exploration. Round Top and Sierra Blanca laccoliths (i.e., the Peak REE Project) were evaluated for their subsurface mineralization potential. The Sierra Blanca laccolith was subject to shallow drill holes targeting veins and fault-controlled beryllium mineralization.

By the end of November 1987, 44 surface reverse circulation holes (2,823 m total), 24 underground holes (812 m total) and two surface core holes (105 m total) were completed on the Sierra Blanca and Round Top volcanic peaks.

Cyprus reportedly excavated a pit to a depth of 200 feet (61 m) on the Sierra Blanca laccolith, which is presently filled with tailings from the Sierra Blanca Quarry mining activity (Mr. T. Michel, pers. comm., 2022).

The present-day Sierra Blanca Quarry mine plan and primary tailings stockpiles are presented in Figure 6.2. The location of mine tailings prior to 2007 (i.e., the Cyprus mine

discards), filled the open pit that is presently located in the eastern part of the mine plan and is labelled as “historical quarry” in Figure 6.2.

Additional underground drilling and exploration drift work was conducted by Cyprus in conjunction with American Mine Services, Inc., and resulted in a feasibility report for the “Sierra Blanca Beryllium Project” (Cyprus Sierra Blanca, Inc., 1988).

In 1993, Cyprus terminated its beryllium exploration and mining programs at Sierra Blanca.

During the exploration campaigns of Cabot and Cyprus, the Texas Bureau of Economic Geology (BEG) also conducted research within the Sierra Blanca range that resulted in the publication of the following reports:

- Rubin, et al. (1987) documented rare metals mineralization, including REE mineralization at the Sierra Blanca range.

- Rubin et al. (1988) focused on the beryllium mineralization at Round Top.

- Price et al. (1990) provided additional constraints on the mineralogy and petrogenesis of the Sierra Blanca range.

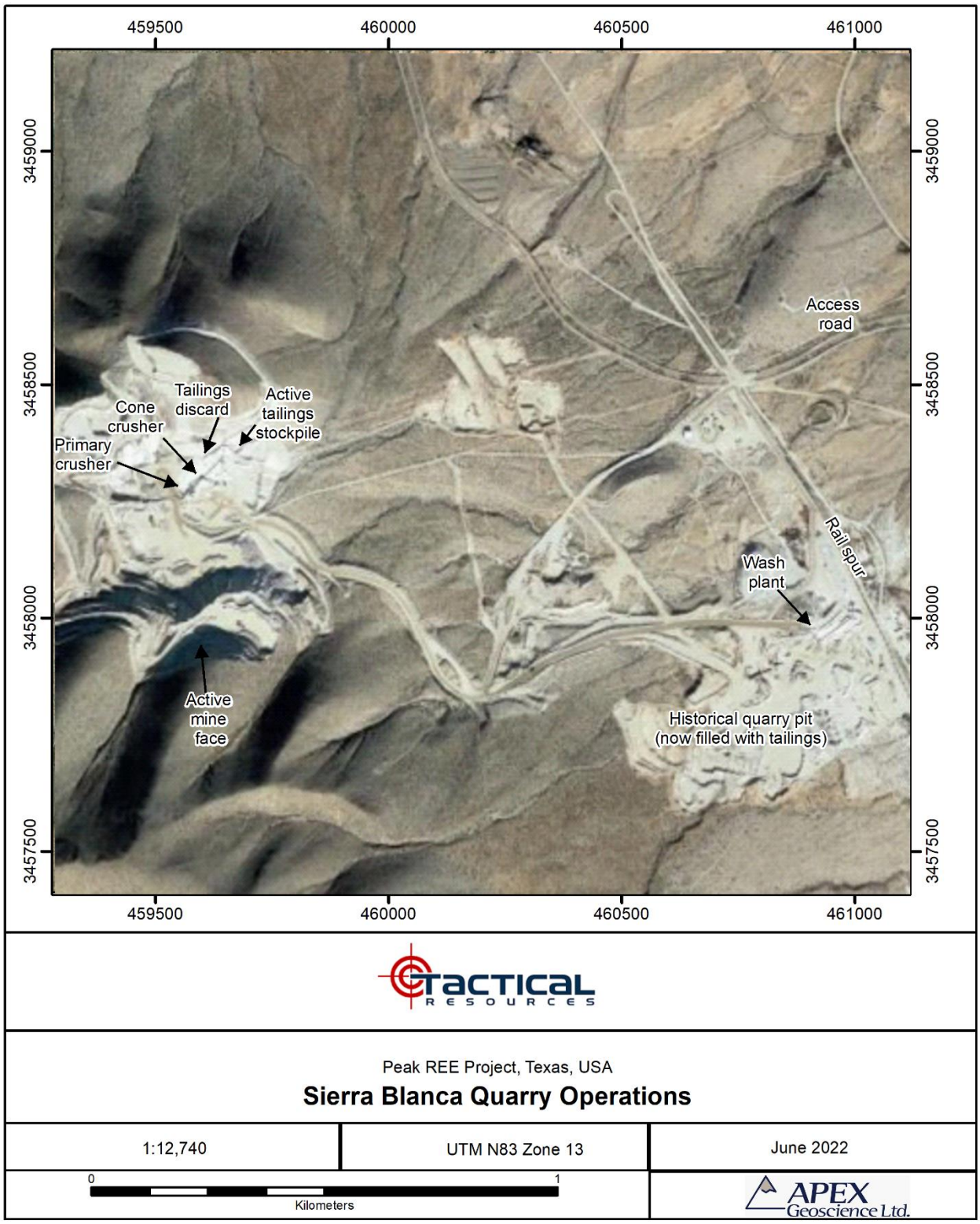
6.3 Historical Sampling Conducted by Sortros Group of Companies (Peak 6891 LLC)

In 2020, Sortros Group of Companies (Sortros) conducted two sampling programs – as permitted by Sierra Blanca Quarry LLC – that resulted in the collection of 7 rock samples from the Sierra Blanca Quarry. The sample locations of Sortros’ 2020 sampling campaign is presented in Figure 6.3. The sampling programs are documented as follows:

- The first program was intended to evaluate the active mine processing area in which the rhyolite bedrock is actively being used as railway ballast materials by Sierra Blanca Quarry LLIC. Two samples were collected for REE assay evaluation from below the active crushing operations on the mine site. Sample MH 6102020-FI was collected from the fines pile near the end of the conveyor. Sample MH 6102020-UC was collected from crushed rocks below the conveyor. The 2 samples were subsequently sent to Precilab for assay purposes.

- The second sampling program to assess REE concentrations was conducted in the Sierra Blanca Quarry active mine site area and in the active and historical tailings areas (Figure 6.3). Five samples were collected: 2 on the active mine face (SB 9520-1 and SB 9520-4), and 2 on active tailings piles (SB 9520-2, SB 9520-3), and 1 sample on the historical tailings pile (SB 9520-5). Four of the 5 samples (SB 9520-1, SB 9520-2, SB 9520-4, and SB 9520-5) were sent to CVMR® Corporation for assay analytical work.

Figure 6.2 Sierra Blanca Quarry general mine plan.



The two samples received by Precilab were analyzed for 1) their whole rock major element composition using a handheld Energy Dispersive X-ray Fluorescence (ED XRF), and 2) trace element (rare earth elements, hafnium, tantalum, and lithium) composition. The major element compositions are presented in Table 6.1, which represent an average of 3 separate analytical measurement runs. The ED-XRF spectrum is presented in Figure 6.4.

Table 6.1 Historical Precilab handheld XRF major element analytical result (presented as an average of 3 runs).

	MH 6102020-FI		MH 6102020-UC	
Element	**wt. %**	**stdev**	**wt. %**	**stdev**
Silicon	67.92	0.11	64.27	0.11
Calcium	12.73	0.04	14.24	0.04
Aluminum	10.78	0.12	10.93	0.12
Potassium	5.40	0.03	4.28	0.02
Iron	2.44	0.01	5.22	0.01
Rubidium	0.23	0.00	0.19	0.00
Titanium	0.13	0.00	0.16	0.00
Manganese	0.12	0.00	0.24	0.00
Strontium	0.07	0.00	0.12	0.00
Zinc	0.05	0.00	0.17	0.00
Zirconium	0.04	0.00	0.06	0.00
Niobium	0.01	0.00	0.02	0.00
Yttrium	0.08	0.00	0.09	0.00

Figure 6.4 Historical Precilab ED-XRF spectrum.

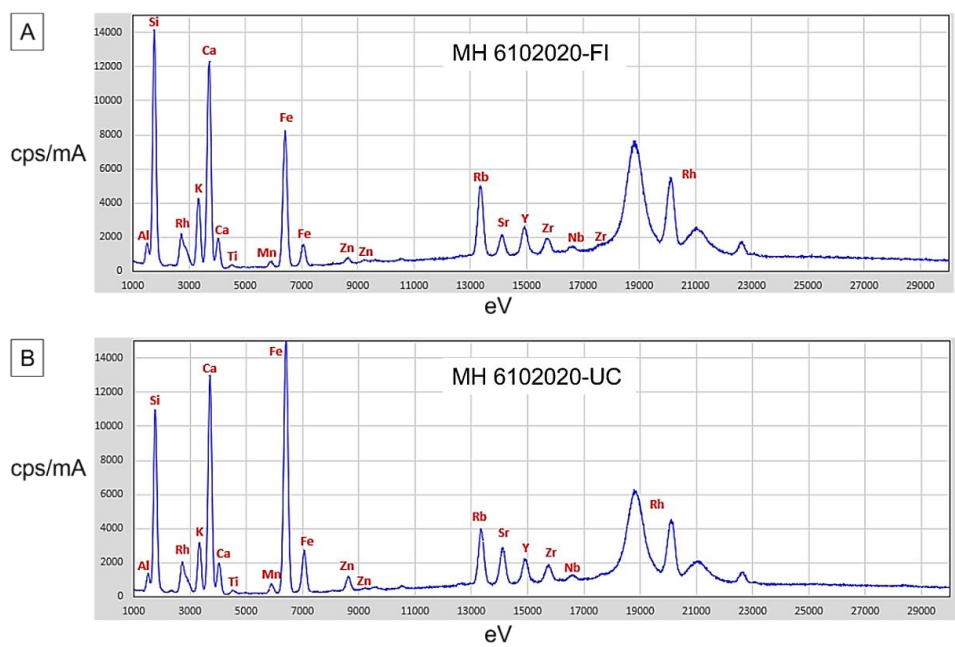
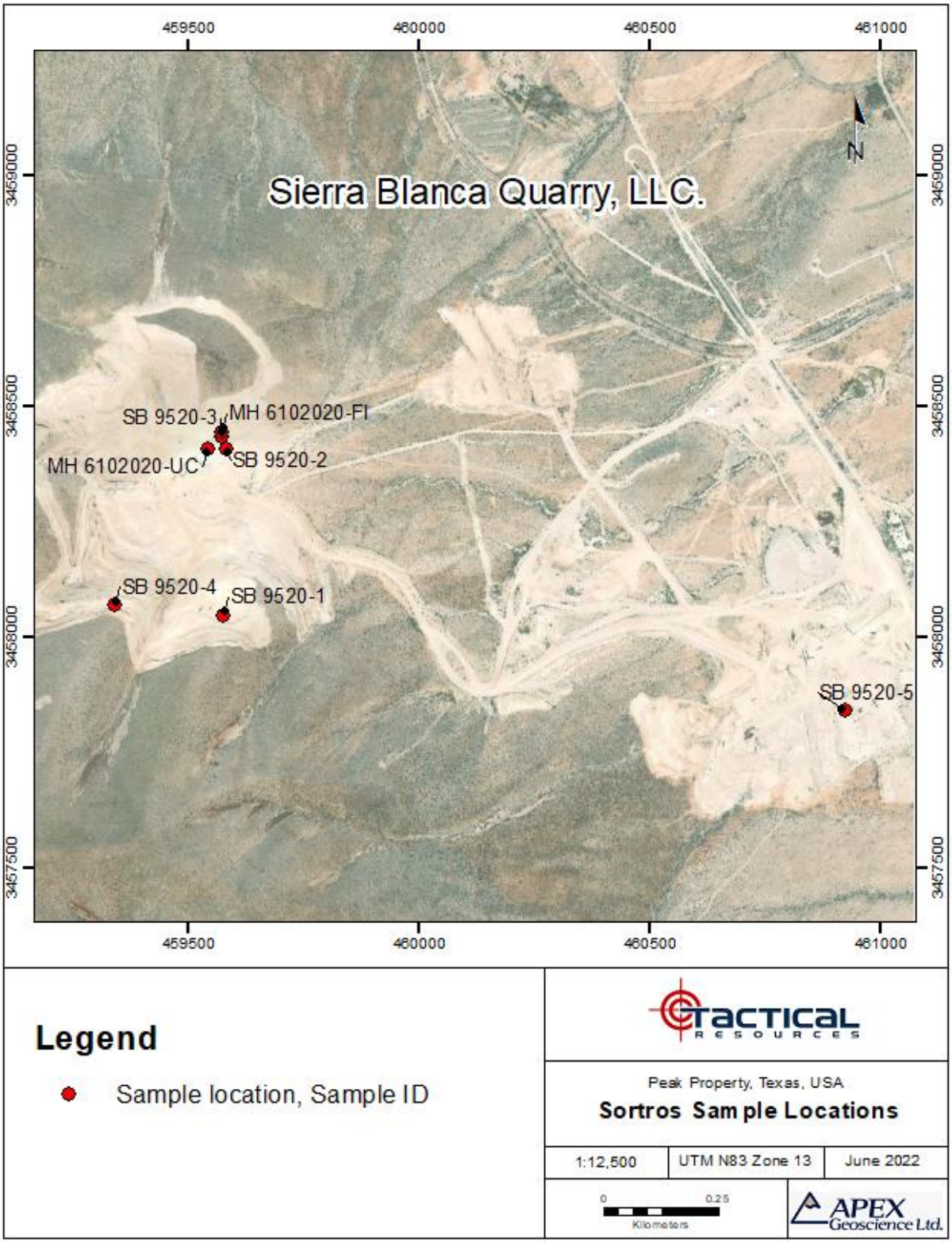


Figure 6.3 Location of the tailing's material sampled by Sortros Group of Companies in 2020.



Thirteen of the 17 REEs were analyzed by Precilab using Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES). The results are presented in Table 6.2 and include analytical results for lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), thulium (Tm), ytterbium (Yb), lutetium (Lu) and yttrium (Y).

Table 6.2 Historical Precilab Trace element concentrations analytical results. *Italicized text indicates data at or below the minimum limit of detection limits.*

		MH 6102020-FI			MH 6102020-UC			OREAS 905		
Element		Precilab Results	Recovery	DL	Precilab Results	Recovery	DL	Precilab Results	Recovery	DL
Lanthanum	La	12.2	57%	1.6	15.3	57%	1.6	30.5	77%	1.5
Cerium	Ce	3.4	/	1.1	*1.1*	/	1.1	66.6	84%	1.1
Praseodymium	Pr	10.6	109%	1.8	13.5	109%	1.7	17.2	/	1.7
Neodymium	Nd	18.6	33%	7.5	20.7	33%	7.4	25.4	83%	7.2
Samarium	Sm	9.6	144%	1.6	12.5	144%	1.6	19.2	/	1.5
Europium	Eu	*0.4*	73%	0.4	*0.4*	73%	0.4	0.7	79%	0.4
Gadolinium	Gd	11.4	/	2.2	11.8	/	2.2	3.0	84%	2.1
Terbium	Tb	1.6	12%	0.6	1.7	12%	0.6	*0.5*	123%	0.5
Dysprosium	Dy	11.3	69%	0.6	10.6	69%	0.6	*0.6*	35%	0.6
Thulium	Tm	7.3	/	0.1	3.8	/	0.1	0.7	/	0.1
Ytterbium	Yb	15.0	/	0.2	15.6	/	0.2	0.6	/	0.2
Lutetium	Lu	2.4	62%	0.2	2.6	62%	0.2	0.6	/	0.2
Hafnium	Hf	*3.2*	118%	3.2	*3.2*	118%	3.2	*3.1*	/	3.1
Tantalum	Ta	*1.9*	/	1.9	*1.8*	/	1.8	*1.8*	/	1.8
Lithium	Li	111.2	/	0.3	150.7	/	0.3	3.6	74%	0.0

Of the 4 tailings samples sent to CVMR, 11 of the 17 REEs were tested by CVMR in September 2020, and include Ce, Pr, Nd, europium (Eu), Gd, Tb, Dy, holmium (Ho), Tm, Yb, and Y. The results of the analysis performed by CVMR were provided as one set of data, which may indicate that the 4 samples were amalgamated into a single composite sample. The analytical results are presented in Table 6.3.

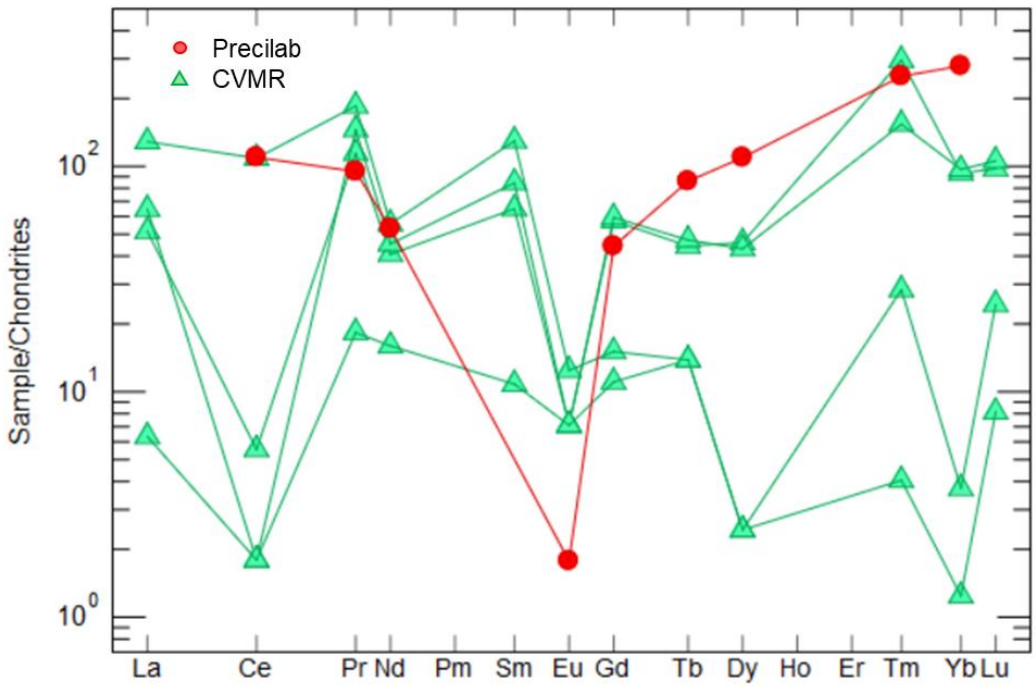
Table 6.3 Historical CVMR rare earth element analytical result (composite samples analyses from 4 original samples).

Element	Ce	Pr	Nd	Eu	Gd	Tb	Dy	Ho	Tm	Yb	Y
Result (ppm)	67.2	8.8	24.2	0.1	8.8	3.1	26.9	6.8	6.2	44.9	172.6

A summary of the normalized REE profiles using the chondrite values of McDonough and Sun (1995) is presented in Figure 6.5. The historical REE spider plot is generally chaotic. Some of the Precilab analyses, and the single CVMR analysis, portray negative Eu anomaly and elevated HREE (Gd to Lu) data – while other samples analyzed have negative Ce anomaly and significantly lower HREE values.

To end, the historical chondrite normalized spider plot does not display a homogenous profile, and hence, the QP can offer no real conclusions based on this dataset.

Figure 6.5 Summary of Sortros historical rare earth element profiles. Normalized to McDonough and Sun (1995).



7 Geological Setting and Mineralization

7.1 Regional Geology

The Sierra Blanca range in western Texas covers an area of approximately 945 square miles (2,450 km^2) within Hudspeth County and is situated across the boundary between the Basin and Range Province on the north and the Sierra Madre Oriental Province on the south. The Sierra Blanca range includes the Triple Hill, Finlay Mountains, and Sierra Blanca 15-minute quadrangles, and the parts of the Fort Quitman and McNary quadrangles within the United States (Albritton and Smith, 1965).

The regional geology of the area is presented in Figure 7.1. Geologic units exposed in the Sierra Blanca area consist of Permian to Quaternary sedimentary units, and Tertiary igneous units (Albritton and Smith, 1965; McAnulty, 1980). The geology of sedimentary units in the Sierra Blanca area has been described in detail by Albritton and Smith (1965) and McAnulty (1980) and the regional stratigraphy is summarized in Table 7.1.

Figure 7.1 Regional Geology of the Sierra Blanca area.

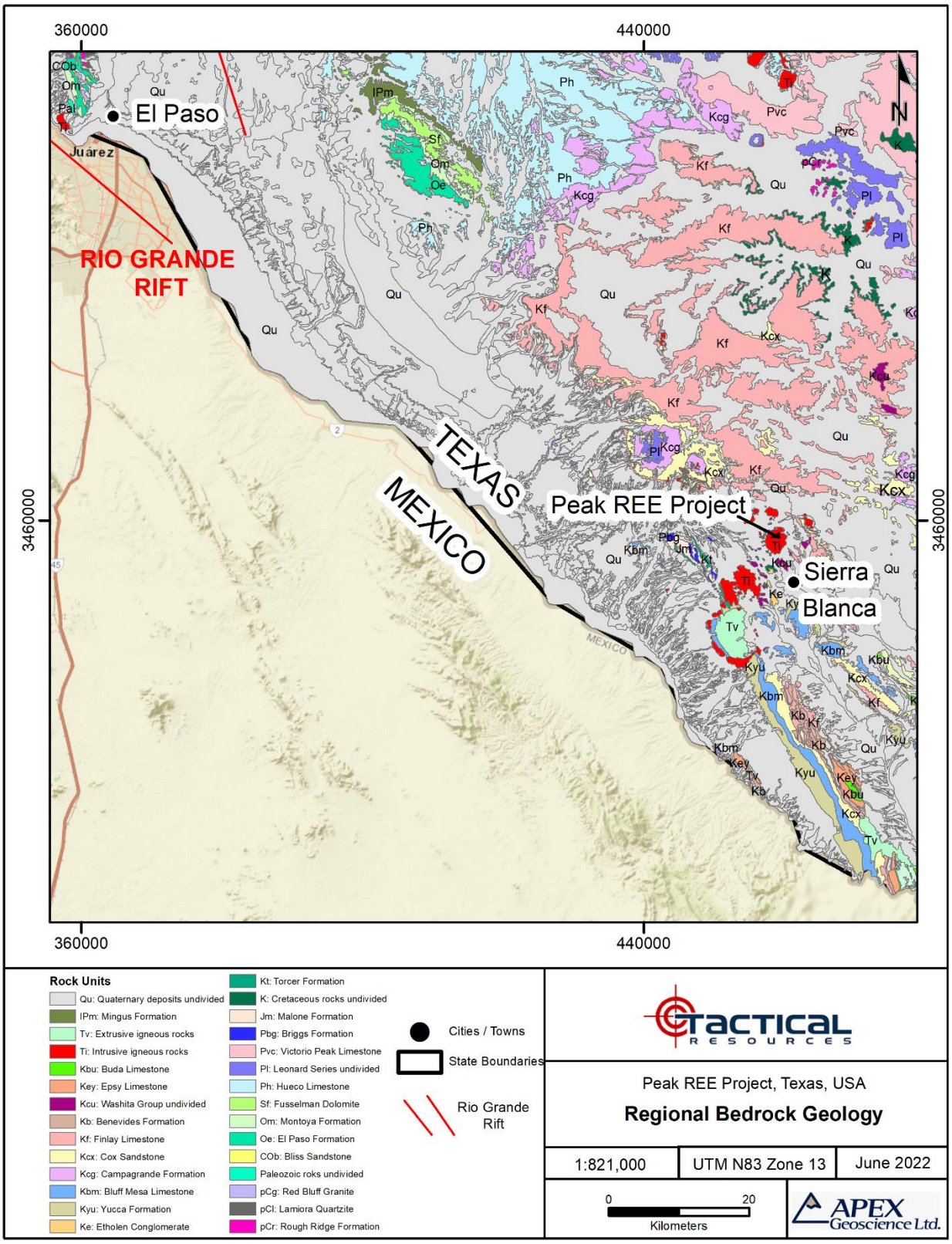


Table 7.1. Regional stratigraphy of the Sierra Blanca area.

Age	Group/Series	Formation	Lithology
Late Tertiary/Quaternary		Alluvium / Colluvium/ Windblown sand	Mixture of clay, silt and sand and larger angular fragments of the local bedrock (limestone, sandstone, igneous rocks) alluvium and colluvium, and sand dunes.
Cretaceous	Eagle Ford Group (Gulf Series)	Chispa Summit Formation	Flaggy limestone interbedded with shale and sandstone.
	Washita Group (Comanche Series)	Buda Limestone	Nodular limestone transitioning upwards to massive-bedded micritic limestone with thin shale partings.
		Del Rio Formation	Principally shale interbedded with micritic limestone.
		Espy Limestone	Fossiliferous limestone with interbedded fossiliferous marl and shale.
		Benevides Formation	Shale interbedded with quartz sandstone units and discontinuous lenses of nodular limestone.
	Fredericksburg Group (Comanche Series)	Finlay Limestone	Marl grading upward into fossiliferous limestone, with scattered sandstone lenses.
	--?--?--?--?--	Cox Sandstone	Orthoquartzite interbedded with laminated shale and siltstone units, grading upward into a sandy limestone.
		Campagrande Formation	Interbedded limestone, silt, sandy shale, sandstone, and conglomerate in the lower part, and limestone and marl in the upper part.
	Trinity	Bluff Mesa Limestone	Limestone, sandy limestone, sandstone, and shale.
		Yucca Formation	Heterogeneous mixture of sandstone, quartzite, limestone pebble conglomerate, limestone and shale.
		Etholen Cobglomerate	Coarse conglomerate with of limestone pebbles, cobbles, and boulders, and breccia.
		Torcer Formation	Quartzitic sandstone and siliceous pebbles at the base, and sandy limestone at the top.
Upper Jurassic		Malone Formation	Base: sandstone, siltstone and shale, limestone-pebble conglomerate, limestone, and discontinuous bodies of gypsiferous rock. Top: calcareous sandstone grading upwards to sandy limestone.
Lower Permian		Briggs Formation	Interbedded gypsum, limestone, and dolomite.
		Not named	Marlstone, limestone, and conglomerate.

7.1.1 Sedimentary Regional Geology – Introduction

Sedimentary units in the Sierra Blanca area consist of Permian to Quaternary age units (Albritton and Smith, 1965; McAnulty, 1980). The northern province of the Sierra Blanca area behaved as a rigid platform, whereas the southern province was mobile, which resulted in a structural boundary and different depositional histories (Albritton and Smith, 1965). The Permian to Cretaceous sedimentary rocks is not well exposed at the vicinity of the Sierra Blanca laccoliths, and most of the surface rocks are Quaternary colluvium and alluvium (McAnulty, 1980).

Early Permian series are the oldest sedimentary units encountered in the area. They were deposited in the southern province prior to an uplift and erosion episode that preceded a localized subsidence that subsequently formed the northern part of the

Mexican geosyncline. Late Jurassic and Cretaceous sediments were later deposited in the Mexican geosyncline (Albritton and Smith, 1965).

The Jurassic period is represented by marine rocks, predominantly clastic rocks, in the Malone Mountains and west of north end of the Quitman Mountains (Albritton and Smith, 1965).

The Cretaceous period in the Sierra Blanca area consists primarily of Neocomian Series units, dominantly clastic rocks. These units are overlain by a sedimentary wedge consisting of transgressive clastic rocks and neritic carbonates deposited on the southern margin of the Diablo Platform along the northern edge of the Chihuahua Trough and thins from the northern province to the southern province (Albritton and Smith, 1965; McAnulty, 1980).

During Early Cretaceous times, a regional subsidence occurred, resulting in the spread of the Mexican Sea in the Mexican geosyncline and up to the edge of the northern platform. The Mexican Sea had several episodes of advancement and retreat over the northern platform during part of Early and Late Cretaceous times, until the region was deformed, uplifted, and eroded, then intruded by Tertiary igneous rocks (Albritton and Smith, 1965).

7.1.2 Lower Permian units

The Leonard Series are 1,640 feet (500 m) thick and consist of marlstone, limestone, and conglomerate in the Finlay Mountains along the south edge of the northern province. The Briggs Formation in the Malone Mountains of the southern province may also be of Leonard age and consists of interbedded gypsum, limestone, and dolomite. The two sequences are separated by a major thrust fault, making their relationship obscure.

7.1.3 Upper Jurassic units

The Malone Formation is 197 to 985 feet (60 to 300 m) thick and consists dominantly of clastic materials. The base of the formation consists of thinly bedded sandstone, siltstone and shale, limestone- pebble conglomerate, and limestone. Irregular and discontinuous bodies of gypsiferous rock are also encountered. The top of the formation consists of calcareous sandstone grading upwards to sandy limestone.

The Malone Formation also contains driftwood, which suggests that it was deposited near shore. Ammonites indicate that the formation was deposited approximately in the Kimmeridgian and Tithonian (latest Jurassic).

7.1.4 Lower Cretaceous units

The Neocomian Series Torcer Formation is about 394 feet (120 m) thick and consists of quarzitic sandstone and siliceous pebbles at its base, and sandy limestone at its top. The Torcer Formation lies conformably on the Malone Formation.

The Neocomian Series Etholen Conglomerate is at least 656 feet (200 m) thick and consists of coarse conglomerate with limestone pebbles, cobbles, and boulders, and breccia. The Etholen Conglomerate outcrops only near the border of the northern and southern provinces and may be equivalent in part to the Torcer Formation.

The Neocomian Series Yucca Formation is more than 1600 m thick in the southern province and consists of a heterogeneous mixture of sandstone, quartzite, limestone pebble conglomerate, limestone, and shale.

The Bluff Mesa Limestone is 1,083 to 1,476 feet (330 to 450 m) thick and consists of gray sandy limestone, sandstone, and shale, and numerous massive limestone beds. Limestone beds are predominant and contain abundant marine fossils.

The Campagrande Formation is 328 to 787 feet (100 to 240 m) thick and consists of interbedded limestone, silt, sandy shale, sandstone, and conglomerate in the lower part, and limestone and marl in the upper 197 feet (60 m). The Campagrande Formation is believed to be the thinner near-shore equivalent of the Bluff Mesa Limestone in the northern province.

The Comanchean Series Fredericksburg Group is represented by the Cox Sandstone, the Finlay Limestone, and the Benevides Formation. The Cox Sandstone is 60 m thick and consists dominantly of orthoquartzite interbedded with laminated shale and siltstone units. In its upper 10 feet (3 m), the formation grades into a sandy limestone. The Finlay Limestone is 131 feet (40 m) thick and consists of marl grading upward into massive, coarsely crystalline fossiliferous limestone, with up to 20 feet (6 m) thick scattered sandstone lenses. The Finlay Limestone rests conformably on the Cox Sandstone. The Benevides Formation is 197 feet (60 m) thick and consists dominantly of light cream to olive-tan fissile shale, interbedded with up to 6 feet (15 cm) thick quartz sandstone units and up to 10 inches (25 cm) thick discontinuous lenses of nodular limestone. The Benevides Formation includes units described as the Kiamichi Formation by Albritton and Smith (1965) and overlying shale units previously considered to be in the Washita Group. The Benevides Formation conformably overlies the Finlay Limestone.

The Comanchean Series Washita Group is represented by the Espy Limestone, the Del Rio Formation, and the Buda Limestone. The Espy Limestone is 656 feet (200 m) thick and consists of gray, nodular, fossiliferous limestone with interbedded fossiliferous marl and shale. The Espy Limestone conformably overlies the Benevides Formation. The Del Rio Formation is 360 feet (110 m) thick and consists dominantly of olive brown to black fissile shale, interbedded with 0.75 to 3.9 inches (2 to 10 cm) thick micritic limestone. The top of the formation consists of a quartz sandstone unit overlain by a 33 feet (10 m) thick massive-bedded limestone unit. The Del Rio Formation rests disconformable on the Espy Limestone. The Buda Limestone is 164 feet (50 m) thick and consists of 26 feet (8 m) of nodular limestone at its base, transitioning to massive-bedded micritic limestone with thin shale partings.

7.1.5 Upper Cretaceous units

The Gulfian Series Eagle Ford Group in the Sierra Blanca area is represented by the Chispa Summit Formation. The Chispa Summit Formation is about 1000 m thick and consists of greenish-brown flaggy limestone interbedded with shale and sandstone intervals up to 10 m thick. The formation grades upward into a 2 m thick gray, nodular, fossiliferous limestone overlain by greenish-brown quartz sandstone.

7.1.6 Tertiary and Quaternary units

The Cenozoic sedimentary sequence in the Sierra Blanca area consists of diverse alluvial, colluvial, lacustrine, and eolian deposits ranging in age from late Tertiary to Recent ages. The late Tertiary deposits fill the Hueco Bolson trough and consist of clay, silt and sand and larger angular fragments of the local bedrock. They are covered by Pleistocene gravel and other Holocene sediments. The Recent sediments consist of stream alluvium, colluvium, and windblown sand.

7.1.7 Igneous units

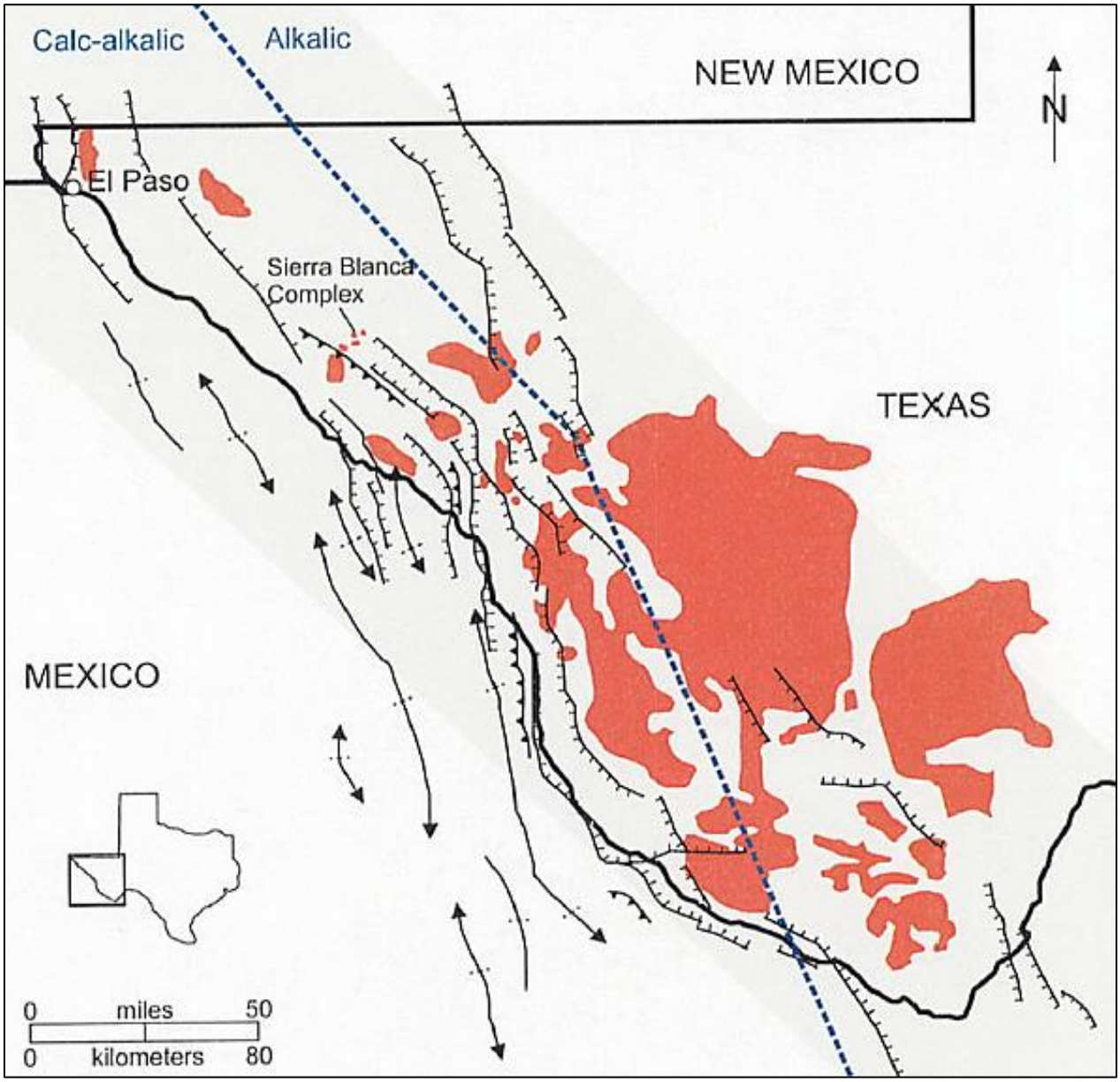
In the Sierra Blanca area, igneous rocks are Tertiary in age and are more abundant and voluminous in the central part of the Sierra Blanca area, in the northern part of the Quitman Mountains, and in the Sierra Blanca range. However, smaller igneous bodies also occur in other parts of the Sierra Blanca area. This magmatic province is referred to as the Trans-Pecos Magmatic Province, in reference to its location within the Trans-Pecos Trend. The Trans-Pecos Trend (Figure 7.2), also known as Texas Lineament Zone, is a northwest-trending structural zone where Laramide and Basin and Range faulting were active. The intrusive bodies of the northern part of the Quitman Mountains are discordant, whereas those of the Sierra Blanca range are largely concordant (Albritton and Smith,1965).

This magmatism in the Trans-Pecos region was subduction-related and was widespread in the middle Eocene to early Oligocene time from 48 to 32 Ma (Henry and McDowell, 1986; Price, 1990). The Trans-Pecos magmatism can be divided in two episodes:

1. An early episode (48-38 Ma) that generated small mafic to silicic intrusions, mafic lava flows, and two calderas, and

2. A late main episode (38-32 Ma) that resulted in voluminous volcanic rocks erupted from calderas and associated ash-tuff flows, and abundant mafic, intermediate, and silicic intrusions (Henry and Price, 1984; Henry and McDowell, 1986; Henry et al., 1989; Price, 1990; Elliot et al., 2017). This magmatism resulted in two distinct geochemical subregions in the Trans-Pecos Magmatic Province: a western alkalic-calcic region and an eastern alkalic region (Figure 7.2; Henry and Price, 1984; Barker, 1987; Price et al., 1987; Price, 1990).

Figure 7.2. Geology of the Trans-Pecos region showing the Trans-Pecos Magmatic Province (red polygons) and major geologic structures of the Trans-Pecos Trend or Texas Lineament Zone. The Trans-Pecos magmatism is divided in two geochemical regions: a western calc-alkalic region and an eastern alkalic region. Source: Elliot et al. (2017), adapted from Muehlberger (1980) and Price et al. (1990).



The diversity of igneous rocks, including alkaline-igneous rocks, and associated mineral deposits along this boundary suggests that this region is characterized by highly fractionated and differentiated, multiple pulses of mantle-derived magmas evolving to lower crustal magmas related to the subduction of the Farallon plate (McLemore, 2018).

Igneous units of the Sierra Blanca range and the Quitman Mountains were emplaced during the main phase of the Trans-Pecos magmatism around 36 Ma; just before the beginning of the Rio Grande Rift extension (approximately 36 Ma; Henry et al., 1986; Price, 1990; McLemore, 2018).

7.1.8 Tectonic setting

The tectonic history of the Sierra Blanca area consists of three main episodes: the Laramide deformation (thrusting and folding), subduction-related magmatism, and Basin and Range crustal extension (Albritton and Smith,1965; Price et al., 1986; Price et al., 1987; Price, 1990).

The Laramide deformation started in the Late Cretaceous, peaked in the Late Paleocene, and ended in the Early Eocene (Wilson, 1971; Price 1990). The Laramide deformation was compressional and resulted in the tilting, folding and thrusting of Cretaceous and older rocks of the southern province several kilometers northwestward against the northern province (Albritton and Smith,1965). The compression was east-west oriented and dominantly north-northwest -trending folds and thrusts were developed (Price, 1990). The sedimentary strata were broken into three blocks bounded by thrust faults that trend northwestward and dip southwestward. The three blocks consist of: 1) the Devil Ridge block, which is the northernmost block with homoclinal strata dipping southwestward, 2) the Red Hills block with intricately folded strata, and 3) the Quitman block, which is the southernmost block with strata mostly on the northeast limb of a single large anticline overturned toward the northeast (Albritton and Smith,1965). No magmatic activity was found in association with the Laramide deformation in the Trans-Pecos region.

Magmatic activity in the region was initiated in a continental arc environment in association with the subduction of the Farallon Plate beneath the North American Plate Henry and McDowell, 1986; Price, 1990; Elliot et al., 2017). This subduction-related magmatism was widespread in the middle Eocene to early Oligocene time from 48 to 32 Ma (Henry and McDowell, 1986; Price, 1990). Dikes and veins from this episode are dominantly east-northeast striking, indicating a weak state of deformation likely residual from the Laramide deformation (Price et al., 1984; Price, et al., 1987).

The Basin and Range extension postdates the emplacement of the Trans-Pecos igneous units. The still active Basin and Range crustal extension was preceded by a shift in stress orientations about 31 Ma (Henry and Price, 1986) and was initiated around 24 Ma by a regional normal faulting (Price, 1990).

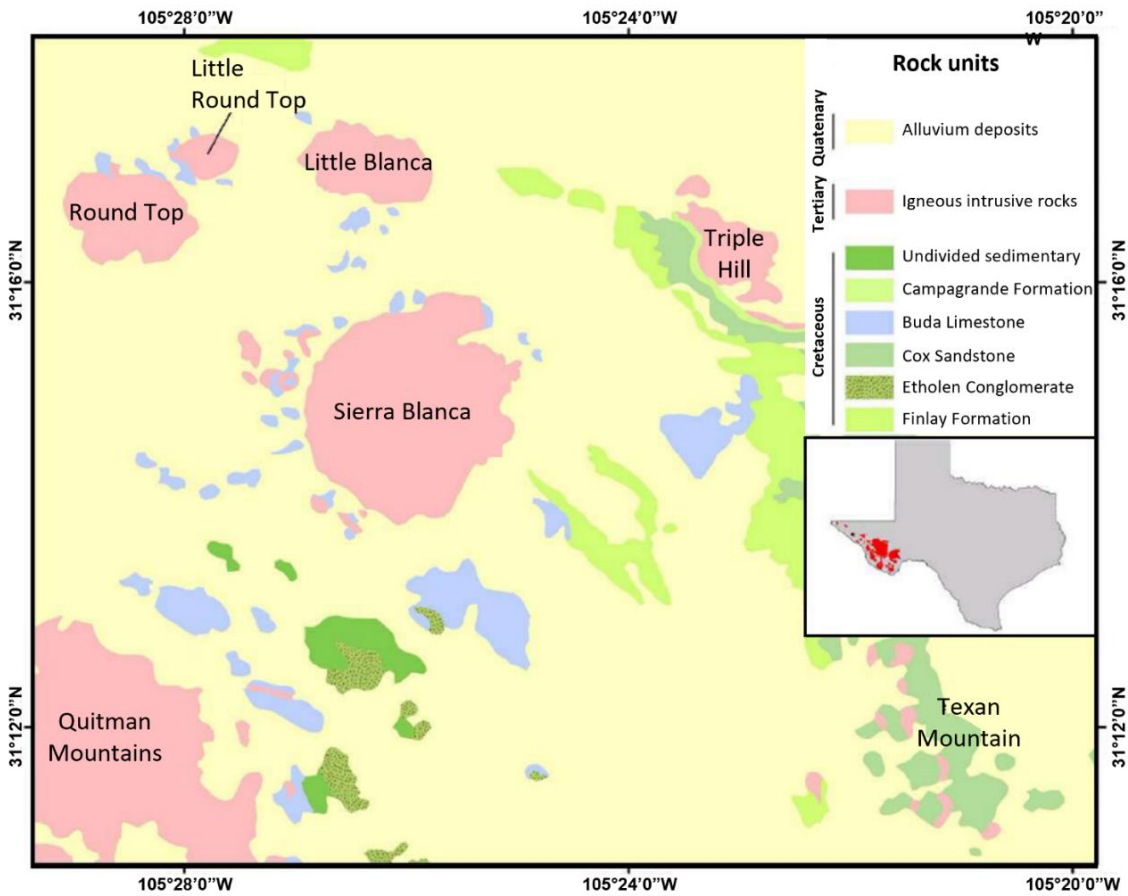
7.2 Local Geology

The Trans-Pecos Magmatic Province of western Texas hosts more than 100 laccoliths and laccolithic complexes emplaced in the Tertiary Period (McAnulty, 1980; Henry and McDowell, 1986; Corry, 1988; Elliot et al., 2017; Elliot et al., 2018), and forming two distinct geochemical regions in the Trans-Pecos Magmatic Province: a western alkalic-

calcic region and an eastern alkalic region (Figure 7.2; Henry and Price, 1984; Barker, 1987; Price et al., 1987; Price, 1990).

The Sierra Blanca range is a series of five volcanic peaks, or domes, of peraluminous rhyolite and rhyolite porphyry laccoliths emplaced in the western calc-alkalic side of the Trans-Pecos Magmatic Province (McAnulty, 1980; Rubin et al., 1987; Price et al.,1990). The five Sierra Blanca laccoliths are named: Round Top, Little Round Top, Sierra Blanca, Little Blanca, and Triple Hill (Figure 7.3; McAnulty, 1980; Price et al.,1990).

Figure 7.3. Geology of the Sierra Blanca range area. Source: Elliot et al. 2018, adapted from Dietrich et al., 1983.

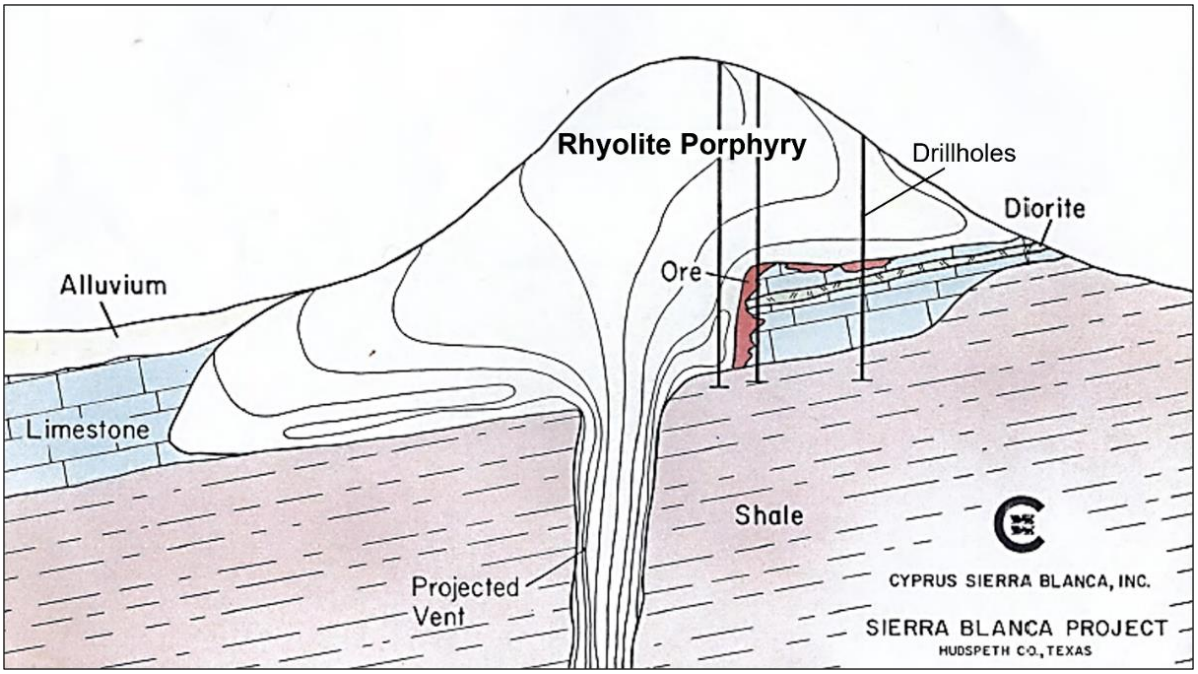


The laccoliths are all leucocratic, aphanitic to porphyritic, thus the "rhyolite" or "rhyolite porphyry" designation and extend over a 90 km^2 area (Henry and McDowell, 1986). Most of the Round Top, Sierra Blanca and Triple Hill peaks are porphyritic, with 0.4-1 mm quartz, potassium feldspar, and rare biotite phenocrysts in an aphanitic groundmass (Albritton and Smith, 1965; McAnulty, 1980). The Little Blanca and Little Round Top laccoliths are generally non-porphyritic (McAnulty, 1980).

A cross-Section of the Round Top Mountain is presented in Figure 7.4 as an example of the overall geometry of one of the Sierra Blanca laccoliths. The volcanic peaks are essentially peaks, or domes, in comparison to the regional topography because the rhyolitic laccolith form a resistant upper portion of the volcanic peaks. The Sierra Blanca rhyolite laccoliths are concordant with the sedimentary units they intruded (Albritton and Smith,1965; McAnulty, 1980). No feeders for the Sierra Blanca laccoliths were found either by surface mapping or drilling (McAnulty, 1980; Price, 1990).

Apart from colluvium, the Sierra Blanca rhyolite peaks are not covered with surficial material deposits.

Figure 7.4 Cross-Section of the Round Top Mountain via historical diamond drilling to show the geometry of the Sierra Blanca rhyolite laccoliths. Source: Cyprus Sierra Blanca, Inc. (1988). "Ore" in this figure indicates the general location of beryllium mineralization.



There is no evidence to suggest that the intrusions broke through the surface; however, there is evidence such as the fine grain size and the presence of vesicles on the upper part of the laccoliths that favor their emplacement occurred at a shallow depth (Price, 1990). Numerous exposures indicate that the sedimentary units were domed over the Sierra Blanca intrusions, and dips of the beds adjacent to the intrusive bodies suggest that the present slopes of the mountain peaks approximate the original contours of the Sierra Blanca intrusions (McAnulty, 1980). An emplacement age of 36.2 ± 0.6 Ma for the Sierra Blanca laccolith, the largest of the five Sierra Blanca laccoliths, was obtained by Potassium-Argon dating of biotite (Henry and McDowell, 1986). This age is the only age constraint for the Sierra Blanca range.

Drilling through Round Top, Little Round Top and Little Blanca revealed that the floors of these laccoliths extend inward for at least 100 m and that the floors can be undulating and are in contact with different Cretaceous formations at different places (McAnulty, 1980). Sedimentary units exposed around the Sierra Blanca laccoliths are Cretaceous marine deposits including the Campagrande Formation, and the Gulfian and Comanchean Series: The Cox Sandstone, Finlay Limestone, Benevides Formation, Espy Limestone, Del Rio Formation, Buda Limestone, and Chispa Summit Formation (Albritton and Smith, 1965; McAnulty, 1980).

Numerous dykes and sills, which cut across the Cretaceous sedimentary rocks, are exposed on the flanks of the Sierra Blanca laccoliths. The dykes and sills have variable compositions and include diorite (McAnulty, 1980), hornblende-diorite porphyry (Price et al., 1990), rhyolite porphyry, andesite, hornblende-andesite porphyry, and latite porphyry (Albritton and Smith, 1965). Titaniferous hornblende-diorite porphyry dykes were emplaced at 48 Ma (Potassium-Argon dating on hornblende; Henry et al., 1986) during the early stage of the Trans-Pecos magmatism (Henry et al., 1986; Price, 1990). The Sierra Blanca rhyolites intruded the Cretaceous sedimentary units along pre-existing diorite intrusions at many places (McAnulty, 1980). At these locations, diorite dykes are sometimes partially replaced and veined with fluorite (McAnulty, 1980). Although some dykes clearly predate the Sierra Blanca laccoliths, some of the dykes and sills observed around the peaks are probably apophyses of the laccoliths (Albritton and Smith, 1965).

7.3 Property Geology

The Peak REE Project is located on the northwest side of the Sierra volcanic peak within the Sierra Blanca Quarry. Sierra Blanca Quarry LLC presently mines rhyolite and rhyolite porphyry laccoliths that form the Sierra Blanca laccolith to produce railway ballast materials.

Igneous units in the project area consist of Tertiary rhyolite porphyry laccolith (the Sierra Blanca laccolith), along with less common dykes and sills, that intruded a sequence of Cretaceous sedimentary units. Cenozoic colluvium and alluvium occur at the top and around the Sierra Blanca laccolith (McAnulty, 1980).

7.3.1 Sedimentary units

A summary of the sedimentary units exposed in the project area is presented in Table 7.2. Sedimentary units are mostly the Cretaceous marine deposits of the Comanchean Series: The Cox Sandstone, Finlay Limestone, Benevides Formation, Espy Limestone, Del Rio Formation, and the Buda Limestone (Albritton and Smith, 1965; McAnulty, 1980). Cenozoic sedimentary units also occur in the property. They consist of late Tertiary to Recent colluvium and eolian deposits at the top and flanks of the Sierra Blanca laccolith, as well as alluvium, colluvium and eolian deposits around the mountain (Albritton and Smith, 1965; McAnulty, 1980).

Table 7.2. Sedimentary units in the Peak REE Project area (around the Sierra Blanca laccolith).

Age	Group/Series	Formation	Lithology
Late Tertiary / Quaternary		Alluvium / Colluvium	Mixture of clay, silt and sand and larger angular fragments of limestone, sandstone, and igneous rocks.
Cretaceous	Washita Group (Comanche Series)	Buda Limestone	Nodular limestone transitioning upwards to massive-bedded micritic limestone with thin shale partings.
		Del Rio Formation	Principally shale interbedded with micritic limestone.
		Espy Limestone	Fossiliferous limestone with interbedded fossiliferous marl and shale.
	Fredericksburg Group (Comanche Series)	Benevides Formation	Shale interbedded with quartz sandstone units and discontinuous lenses of nodular limestone.
		Finlay Limestone	Marl grading upward into fossiliferous limestone, with scattered sandstone lenses.
		Cox Sandstone	Orthoquartzite interbedded with laminated shale and siltstone units, grading upward into a sandy limestone.

7.3.2 Igneous units

Igneous units in the project area consist of Tertiary dykes, sills, and a rhyolite porphyry laccolith (the Sierra Blanca laccolith).

The Sierra Blanca laccolith is the largest and the most southerly of the five Sierra Blanca laccoliths (Figure 7.3). An emplacement age of 36.2 ± 0.6 Ma was obtained by Potassium-Argon dating on biotite (Henry and McDowell, 1986). The Sierra Blanca laccolith consists of a leucocratic rhyolite porphyry, pinkish gray or very pale orange in colour, with 0.4-1 mm quartz, potassium feldspar, and rare biotite phenocrysts in an aphanitic groundmass (Albritton and Smith, 1965; McAnulty, 1980). Quartz is the most abundant mineral and with a modal abundance of about 60%, feldspar (dominantly albite) constitutes about 35%, and biotite about 5% (McAnulty, 1980).

Trace minerals within the Sierra Blanca laccolith include magnetite, hematite, zircon, bastnaesite, cassiterite, columbite, priorite, xenotime, and yttrocerite-yttrofluorite (Rubin et al., 1987). Compositionally, the Sierra Blanca laccolith is a peraluminous rhyolite with 1.50 A/NK ($Al_2O_3/(Na_2O+K_2O)$), 1.43 A/CNK ($Al_2O_3/(CaO+Na_2O+K_2O)$), and 74.4 wt. % SiO_2 (Rubin et al., 1987). Representative whole-rock analysis of the Sierra Blanca laccolith is presented in Table 7.3.

Several dykes and sills with variable compositions intrude the sedimentary pile on the flanks of the Sierra Blanca laccolith, and some of them, such as the sills of rhyolite porphyry near the Sierra Blanca peak are probably apophyses of the Sierra Blanca rhyolite porphyry (Albritton and Smith, 1965).

Table 7.3. Representative whole-rock analysis of the Sierra Blanca rhyolite (Rubin et al., 1987; Price, 1990). Major elements are in weight percent (wt. %) and trace elements in parts per million (ppm).

Major elements (wt%)		Trace elements (ppm)			
SiO_2	74.4	La	20	Zn	140
TiO_2	0.02	Ce	54	Zr	100
Al_2O_3	14.1	Nd	26	Nb	72
FeO (total)	0.79	Sm	9.2	Pb	70
MnO	0.05	Eu	0.1	Th	60
MgO	0.01	Tb	2.4	Cs	30
CaO	0.45	Yb	24	Sn	20
Na_2O	5.06	Lu	3.6	Ba	16
K_2O	4.30	Y	200	Ta	14
P_2O_5	<0.01	Rb	1090	U	14
F	0.65	Sr	9	Mo	5.6
		Li	170	Be	4

7.3.3 Structural Geology

Laramide deformation consists of gentle folding or warping. Cretaceous sedimentary units intruded by the Sierra Blanca laccolith dip 5° to 10° northeast, in low hills between the Sierra Blanca laccolith and US Interstate 10 (McAnulty, 1980). The dominant structures on the slopes of the Sierra Blanca laccolith include slump and landslide faults. Large and small landslide blocks are present on the northwest and southwest flanks of the Sierra Blanca laccolith. These slumps and landslide blocks are characterized by repetition of beds, steep and divergent bedding attitudes, hummocky topography, local thrust faults, and overturned folds (McAnulty, 1980).

7.3.4 Sierra Blanca Quarry Operation and Tailings Material

The present Sierra Blanca Quarry mine activity consists of crushing rhyolite, granite, and other similar igneous rocks of the Sierra Blanca laccolith to produce railway ballast. The remnant product of the Sierra Blanca Quarry mining activity, the mine tailings, are the subject of this Technical Report. Therefore, the lithology of the tailings used for the Peak REE Project is dominantly defined by the Sierra Blanca rhyolite porphyry which constitutes “at least 2/3 of the mountain” (Mr. K. Walker, pers. comm., 2022).

The mine site is composed of 2 mine areas that include 1) the active mine site, and 2) a wash plant and railcar loading area, which also includes part of an historically mined area. The overall footprint of the mine is approximately 1.7 miles (2.75 km) east-west by 0.75 miles (1.25 km) north-south. The mine process was designed by the operators and is summarized as follows:

- Rhyolite is extracted via a side access mining along the semi-vertical margins of the mountain by descaling the rhyolite using a conventional excavator.

- Large rhyolite boulders are further broken using either the excavator or a front-end loader. A front-end loader lifts the broken rhyolite into a heavy hauler that is hauled a short distance to the crusher.

- The crusher operation consists of a primary crusher and a cone crusher. A control centre is situated above crushers and includes an operator that maintains the crushing operation. Once loaded into the crushing line, the material is transported via a network of conveyor belts.

- Tailings (<1.9 cm) are extracted from the cone crusher while railway ballast size crush (1.9 to 5 cm) is conveyed to a wash plant.

- The ballast crush is washed, tailings are extracted a second time, and the railway ballast size crush is stockpiled for loading at the railway trunk line.

Prior to 2007, mine tailings were stored by past owners about 0.8 km to the east of the active tailings pile. Therefore, the tailing's material at the Sierra Blanca Quarry includes historical tailings piles in the lower section of the quarry, as well as an active tailings pile near the mine face and main crushing facility (Figure 7.5). The tailings piles form either topographic highs or infill in previously excavated areas (e.g., Cyprus quarry workings).

Notable tailings locations as observed by the QP are located on the eastern side of the current Sierra Blanca Quarry mine site, the historical quarry, and in the lower rail yard area adjacent to the wash plant.

7.4 Mineralization

The Sierra Blanca rhyolite is enriched in incompatible elements. For example, the work of Rubin et al. (1987) and Price (1990) has anomalous fluorite (0.65 wt. % or 6500 ppm), ∑REE (>240 ppm), lithium (170 ppm), zinc (140 ppm), zirconium (100 ppm), lead (70 ppm), niobium (72 ppm), thorium (60 ppm), and some cesium (30 ppm), tin (20 ppm), barium (16 ppm), tantalum (14 ppm), uranium (14 ppm), molybdenum (5.6 ppm), beryllium (4 ppm) and other elements (Table 7.3; and see Section 9, Exploration).

Potentially economic minerals identified in the Sierra Blanca laccolith include bastnaesite, yttrocerite, yttrofluorite, xenotime, priorate, cassiterite, columbite, magnetite, hematite, and zircon (Table 7.4; Rubin et al., 1987).

Figure 7.5 Prospective tailings stockpiles at Tactical Resources' Peak REE Project in the Sierra Blanca Quarry. The tailings piles form either as topographic highs or as infill associated with previously excavation. This image portrays topographical elevation difference between 1980 and 2018 as a mechanism to show the location of the tailing's stockpiles.

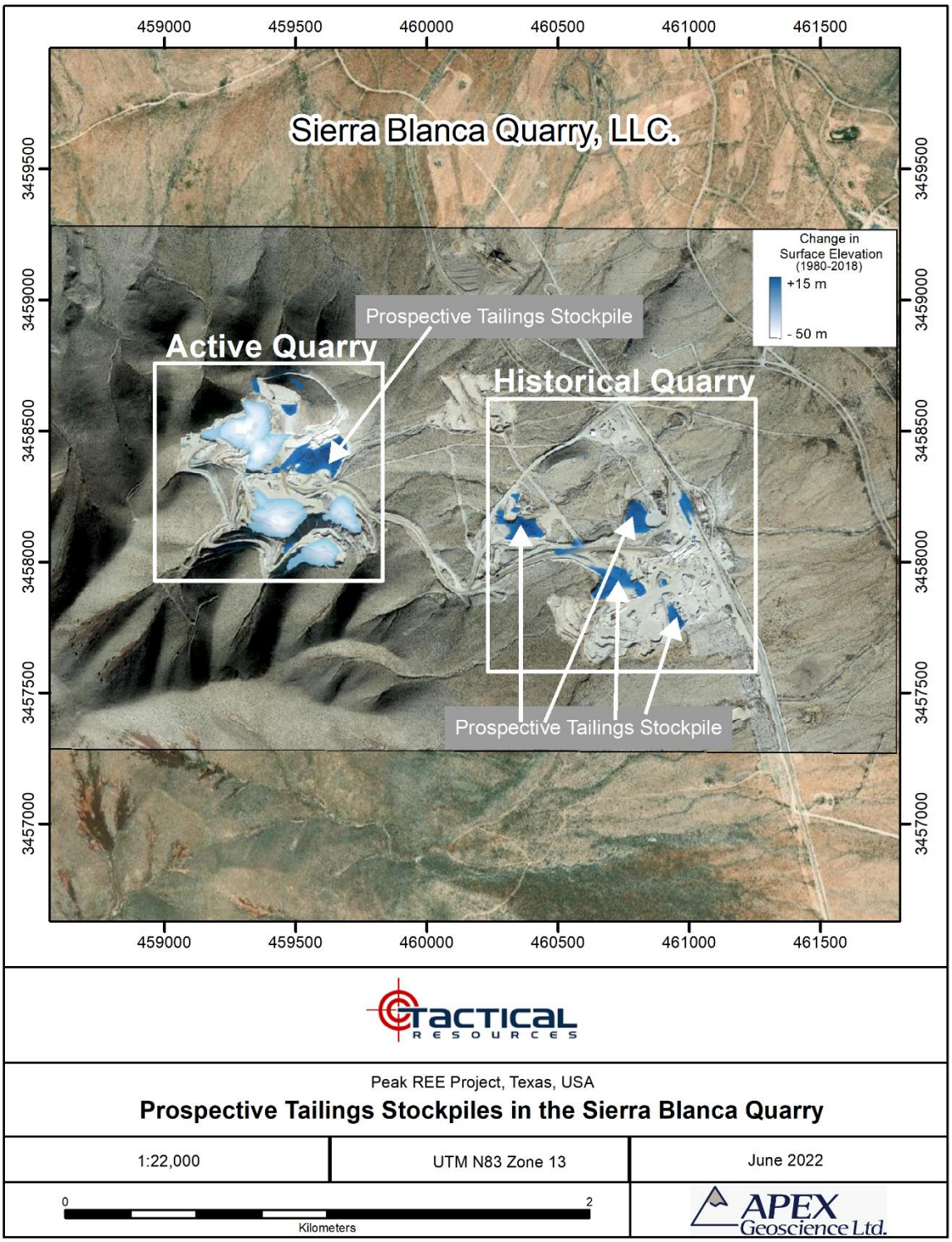


Table 7.4. Minerals identified in the Sierra Blanca laccolith (Rubin et al., 1987).

Mineral	General formula	REE-bearing
Bastnaesite	$(La, Ce, Y)CO_3F$	✓
Yttrocerite	$((Ca, Y, Ce, LREE, HREE)F_2)$	✓
Yttrofluorite	$((Ca, Y, HREE)F_2)$	✓
Xenotime	YPO_4	✓
Priorite	$(Y,Ca,Fe,Th)(Ti,Nb)_2(O,OH)_6$	✓
Cassiterite	SnO_2	
Columbite	$(Fe,Mn)Nb_2O_6$	
Magnetite	Fe_3O_4	
Hematite	Fe_2O_3	
Zircon	$ZrSiO_4$	

Most of these minerals occur as trace minerals and commonly occur as intergrowths in potassium feldspar (Rubin et al., 1987). Yttrofluorite occurrences however are widespread, with up to several meters thickness at the contact between the laccolith and the sedimentary units (McAnulty, 1980). At these contacts, sedimentary units (mostly shale and marl) are strongly fluoritized, showing evidence of hydrothermal alteration caused by fluids exsolved from the Sierra Blanca laccolith (McAnulty, 1980).

Rare earth elements comprise a group of 17 elements (scandium, yttrium and the 15 lanthanides), commonly classified in two subgroups, excluding scandium:

- Light Rare Earth Elements (LREE) are those with atomic numbers 57 to 62 (lanthanum to samarium), and

- Heavy Rare Earth Elements (HREE) consist of those with atomic numbers 63 and greater (europium to lutetium) and yttrium.

Tactical Resources is interested in REE hosted in the tailing's material from the Sierra Blanca Quarry mining activity. The Sierra Blanca laccolith is more enriched in HREE than in LREE (Rubin et al., 1987), and as presented in Section 9, Exploration.

8 Deposit Types

Rare earth elements include a group of 17 elements comprising scandium (atomic number Z=21), yttrium (Z=39) and the 15 lanthanides (Z=57 to Z=71). However, Earth scientists have traditionally set scandium aside because of its small ionic radius compared to the others, grouping either yttrium and the lanthanides or just the lanthanides into the REE family. REE are commonly classified in two subgroups: light rare earth elements (LREE) are those with atomic numbers 57 to 62 (lanthanum to samarium), and heavy rare earth elements (HREE) consist of those with atomic numbers 63 and greater (europium to lutetium). Yttrium, when included in the REE family, is grouped with the HREE because its ionic radius is like that of holmium (Z=67). The REE have a large

variety of industrial applications, including clean energy, batteries, automotive, aerospace, electronics, and defence.

The primary source of REE are carbonatite and alkaline intrusive rocks, and their weathering products (Long et al., 2010; Verplanck and Van Gosen, 2011). Carbonatite and alkaline intrusive rocks associated with REE deposits tend to occur within stable continental units and are generally associated with intracontinental rifting and faulting (Berger et al., 2009). Carbonatites are usually more enriched in light REE and alkaline intrusions in heavy REE (Verplanck and Van Gosen, 2011).

The mineralization at the Peak REE Project can be classified as an alkaline intrusion related REE deposit model (Verplanck and Van Gosen, 2011; McLemore, 2018). Rare earth element mineralization in alkaline igneous rocks can be magmatic in origin, hydrothermal, or a combination of both, where hydrothermal alteration overprints primary REE mineralization (e.g., Richardson et al., 1996; Verplanck and Van Gosen, 2011; Dostal, 2016; Dostal, 2017). The prolonged crystallization history of magmas allows their enrichment in REE and other incompatible elements during the late stages of fractional crystallization. These elements stay in the magma due their difficulty in entering cation sites of minerals crystallizing in the magma. They are characterized by their large ionic radius, or large-ion lithophile elements (LILE; Rb, Sr, Ba, Ce and K), or by large ionic valences, or high-field-strength elements (HFSE; REE, Zr, Pb, Th, U, Ta, Hf, and Nb).

Rhyolites can be produced as late-stage rocks after a long process of fractional crystallization and differentiation of a primary mantle-derived mafic magma (e.g., Hannappel and Reischmann, 2005). Such petrogenesis would result in significant enrichment in incompatible elements in the rhyolitic magma. Rhyolites can also be the product of melting of crustal sedimentary rocks only (Fisher and Schmincke, 2012), or the product of a mixing between fractionated mafic magma and assimilated crustal materials (e.g., McCurry et al., 2008). Therefore, different petrogenesis models of rhyolites would result in different degree of enrichment in incompatible elements, including REE. However, the parental magma for alkaline intrusive complexes that host REE mineralization is in general a highly fractionated magma, originally a mantle-derived mafic magma which is also the source of the REE (Verplanck and Van Gosen, 2011).

Explorers of REE deposits typically target intrusive rocks because of their spatial and genetic association with the other incompatible elements that usually accompany them. Gravity, magnetic, radiometric (gamma-ray), remote sensing, prospecting, and rock geochemical surveys have been successfully used in exploration for REE deposits. Gravity and magnetic surveys can be used to locate carbonatite and alkaline intrusive rock bodies that might host REE mineralization, because of their magnetic and density characteristics. Elements such as thorium and uranium usually found in association with REE can be detected by aerial radiometric surveys, measuring the gamma radiation they naturally emit. Indicator minerals from stream sediments, soil, and rock sampling programs, combined with various geochemical studies have also been successfully used for exploration of REE deposits.

9 Exploration

9.1 Tactical Resources 2021 Sampling Program

In 2021, Tactical Resources commissioned Tigren Inc., a consulting company based in Sparks, NV, to conduct a sampling program on the Sierra Blanca Quarry for the Peak REE Project. The sampling program was intended to serve as a basis for evaluation and confirmation of REE concentrations, as well as to provide a better understand the geology of the Project area and metallurgical processes needed.

The sampling program was conducted on June 10 and 11, 2021, by Tigren Inc.' President, Marco Montecinos, who has over 37 years of experience in mineral exploration and has held executive and consultant positions for several senior and junior companies.

A total of forty samples (labelled PK-01 to PK-40), each weighting 10 to 15 kg, were collected at various tailing's locations within the Sierra Blanca Quarry (Figure 9.1). The sample locations can be broken down into 2 areas, the Active Quarry, and the Historical Quarry as described below.

- The Active Quarry: A total of 30 samples were collected and consisted of 1) 18 fine-grained (approximately 0.4 cm, granule to pebble size) samples from the active tailings pile ("Main Tailings" in the Offtake Agreement), and 2) 12 coarser-grained (10-25 cm, cobble size) samples from the active mine/quarry face (Figure 9.2).

  Samples collected from the active tailings pile include PK-21 through PK-38, and samples collected from the active mine/quarry face include PK-01 through PK-05, PK-16 through PK-20, PK-39, and PK-40.

- The Historical Quarry: A total of 10 samples were collected and consisted of 1) 5 fine-grained (approximately 0.4-0.6 cm, granule to pebble size) samples from the historical mine/quarry pit's tailings pile, and 2) 5 coarser-grained (approximately 4 cm, pebble size) ballast materials (Figure 9.3).

  These locations outside of the Active Quarry were sampled so a global understanding of REE distribution and grade across the Sierra Blanca Quarry could be assessed, as material is being added to the active tailings pile from different locations across the Quarry.

  Samples collected from the historical tailings pile include PK-06 through PK-10, and samples collected from the historical ballast pile include PK-11 through PK-15.

A summary description of the samples collected by Tigren Inc. on behalf of Tactical Resources is presented in Table 9.1, and sampling procedure is described in Section 11.1. The QA-QC sampling is discussed in Section 11.3.

Figure 9.1. Sample locations for Tactical Resources' Peak REE Project 2021 tailings sampling program conducted by Tigren Inc.

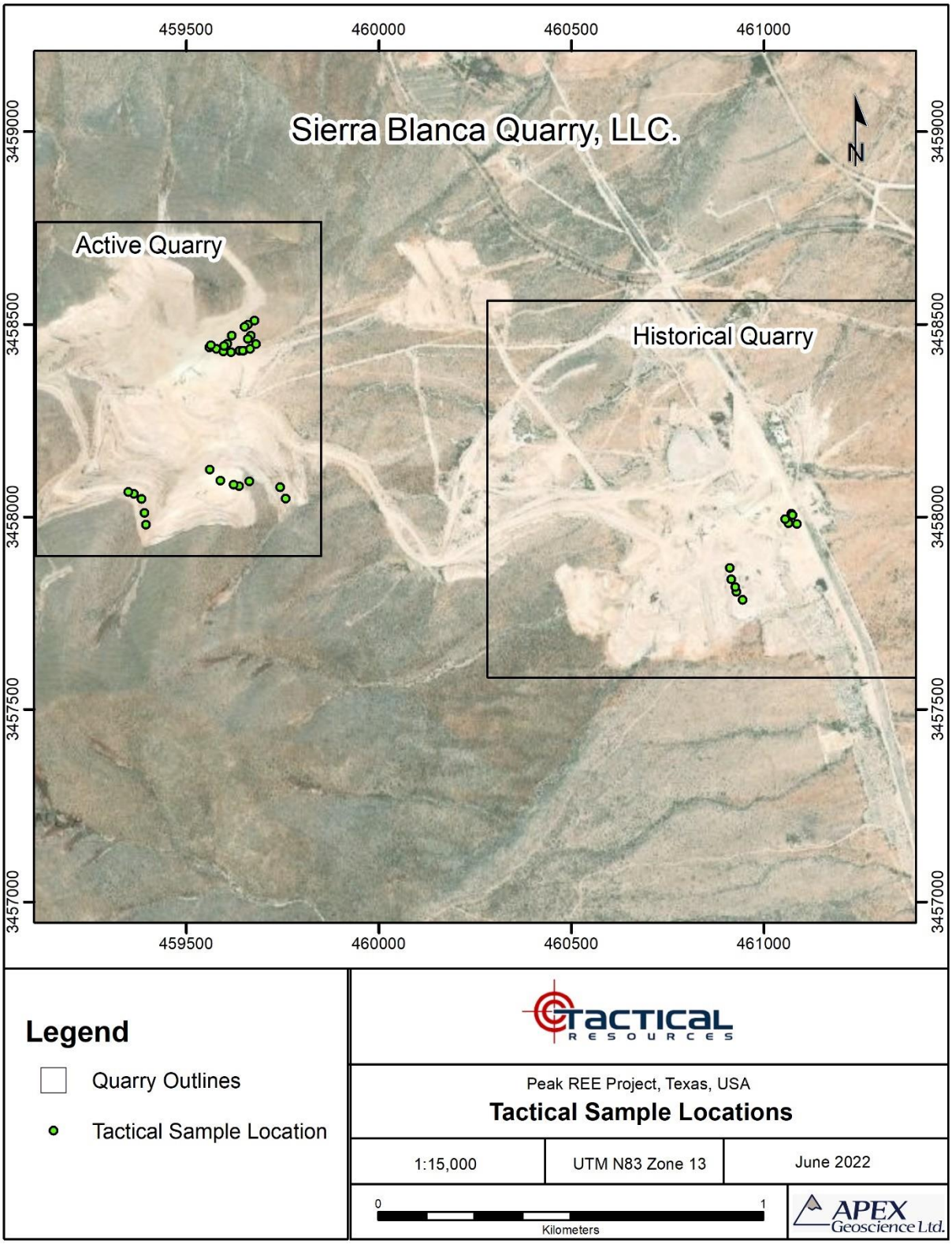


Figure 9.2. Tactical Resources' Peak REE Project 2021 sample location in the Active Quarry area. See area outline in Figure 9.1.

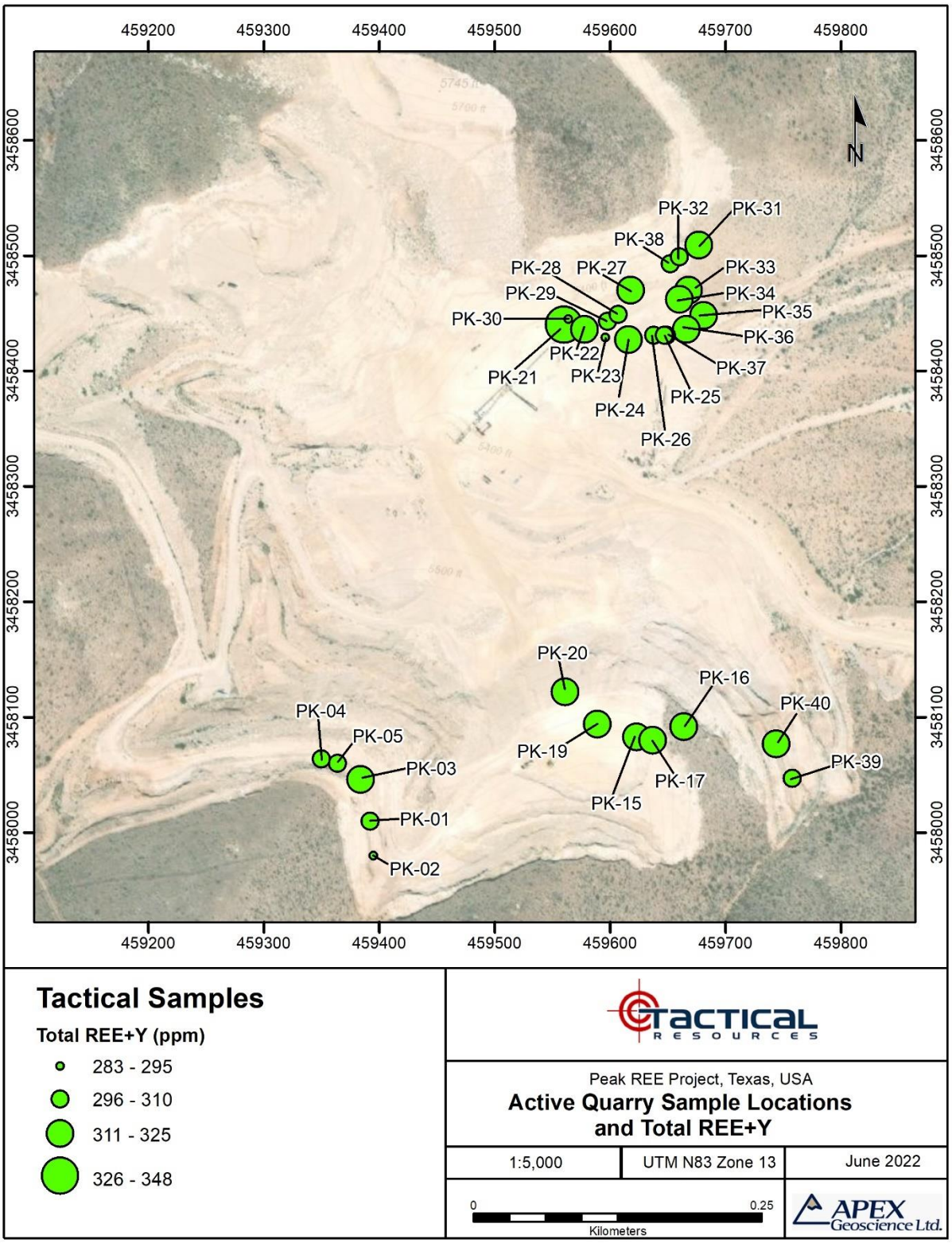


Figure 9.3. Tactical Resources' Peak REE Project 2021 sample location in the Historical Quarry area. See area outline in Figure 9.1.

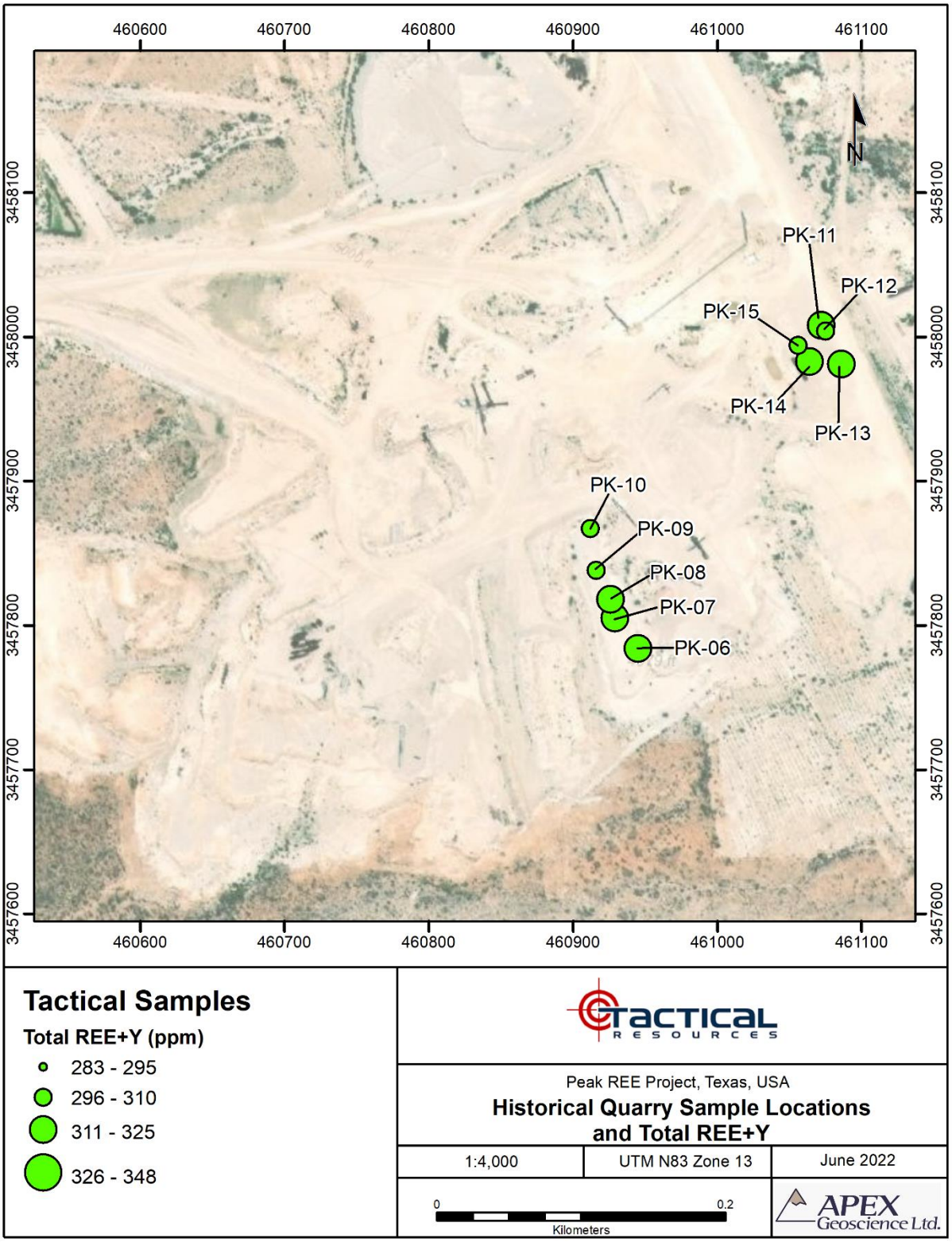


Table 9.1. Summary description of samples collected by Tigren Inc. in 2021 for Tactical Resources' Peak REE Project.

Sample name	Location	Easting N83 Z13 (m)	Northing N83 Z13(m)	Elevation (m)	Grain Size (cm)	Depth (cm)
PK-01	Active mine/quarry face	459392	3458010	1734	15	Surface
PK-02	Active mine/quarry face	459395	3457980	1746	10-15	Surface
PK-03	Active mine/quarry face	459384	3458046	1732	20-25	Surface
PK-04	Active mine/quarry face	459364	3458060	1732	15-25	Surface
PK-05	Active mine/quarry face	459350	3458064	1733	10-15	Surface
PK-06	Historical tailings pile	460945	3457784	1524	0.4-0.6	0-30
PK-07	Historical tailings pile	460929	3457805	1525	0.4-0.6	0-35
PK-08	Historical tailings pile	460926	3457818	1522	0.4-0.6	0-35
PK-09	Historical tailings pile	460916	3457838	1519	0.4-0.6	0-35
PK-10	Historical tailings pile	460912	3457867	1515	0.4-0.6	0-40
PK-11	Historical ballast pile	461072	3458008	1504	4	Surface
PK-12	Historical ballast pile	461075	3458004	1504	4	Surface
PK-13	Historical ballast pile	461086	3457981	1504	4	Surface
PK-14	Historical ballast pile	461064	3457983	1505	4	Surface
PK-15	Historical ballast pile	461056	3457994	1505	4	Surface
PK-16	Active mine/quarry face	459664	3458092	1686	10-15	Surface
PK-17	Active mine/quarry face	459637	3458080	1699	10-15	Surface
PK-18	Active mine/quarry face	459623	3458083	1681	10-15	Surface
PK-19	Active mine/quarry face	459589	3458094	1693	10-15	Surface
PK-20	Active mine/quarry face	459561	3458122	1687	10-15	Surface
PK-21	Active tailings pile	459560	3458440	1637	0.4	Surface
PK-22	Active tailings pile	459578	3458436	1635	0.4	Surface
PK-23	Active tailings pile	459596	3458429	1630	0.4	Surface
PK-24	Active tailings pile	459616	3458427	1628	0.4	Surface
PK-25	Active tailings pile	459638	3458431	1627	0.4	Surface
PK-26	Active tailings pile	459649	3458431	1633	0.4	Surface
PK-27	Active tailings pile	459618	3458470	1637	0.4	Surface
PK-28	Active tailings pile	459607	3458449	1635	0.4	Surface
PK-29	Active tailings pile	459598	3458443	1635	0.4	Surface
PK-30	Active tailings pile	459564	3458445	1633	0.4	Surface
PK-31	Active tailings pile	459677	3458509	1656	0.4	Surface
PK-32	Active tailings pile	459660	3458499	1633	0.4	Surface
PK-33	Active tailings pile	459668	3458470	1637	0.4	Surface
PK-34	Active tailings pile	459660	3458462	1630	0.4	Surface
PK-35	Active tailings pile	459681	3458448	1638	0.4	Surface
PK-36	Active tailings pile	459666	3458436	1616	0.4	Surface
PK-37	Active tailings pile	459647	3458431	1614	0.4	Surface
PK-38	Active tailings pile	459652	3458493	1646	0.4	Surface
PK-39	Active mine/quarry face	459758	3458047	1638	10-15	Surface
PK-40	Active mine/quarry face	459744	3458077	1623	10-15	Surface

9.2 Tactical Resources/Tigren Inc. 2021 Analytical Results

The 40 samples (PK-01 through PK-40) collected by Tigren Inc. for Tactical Resources went through two series of geochemical analysis, both of which were performed at American Assay Laboratories Inc.

The first analytical batch was initiated by Tigren Inc. on behalf of Tactical Resources. The second analytical batch was commissioned by Tactical Resources. Both sample analytical batches used the sample material originally collected by Tigren on June 10 and 11, 2021.

- The 40 samples were initially assayed as part of a due diligence process in July 2021. This first round of analysis was conducted under Tigren Inc.'s account. American Assay Laboratories Inc.' internal lab package used for this series of analysis was ICP-5AREE. Lithium (Li) and 14 REE were assayed, consisting of: lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), and lutetium (Lu). No blind blanks or standards were inserted. Selected analytical results of the "original" or non-QA-QC samples is presented in Table 9.2.

  In summary the samples contain 136 to 159 ppm total of the 14 REE and 193 to 230 ppm Li.

- The 40 samples were re-assayed for a more comprehensive geochemical package in October 2021, after the first results were obtained. American Assay Laboratories Inc.' internal lab package used for this series of analysis was ICP-5AM48. 15 REE were assayed, consisting of yttrium (Y) and the 14 REE previously assayed, as well as other elements. Blind blanks and standards were inserted alternating every 10th sample for QA-QC protocol. Selected REE and trace element analytical results of the original (i.e., non-QA-QC samples) is presented in Tables 9.3 and 9.4.

  In summary the samples are enriched in REE +Y (283 to 348 ppm) and in other elements such as Rb (864 to 1011 ppm), Li (185 to 227 ppm), Cr (103 to 251 ppm), Zn (92 to 213 ppm), Ti (85 to 257 ppm), Zr (50 to 105 ppm), Nb (60 to 75 ppm), and Pb (30 to 158 ppm).

  A subset of the samples (20 samples) was also run for whole rock analysis in November 2021, so the host lithology could be established and better understood. Blind blanks and standards were inserted alternating every 10th sample for QA-QC protocol. The analyses were performed using a Wavelength Dispersive X-Ray Fluorescence (WD-XRF) spectrometer on fused beads samples. Selected analytical results of the "original" or non-QA-QC samples is presented in Table 9.5.

The specific gravity of the 40 samples was also investigated at American Assay Laboratories Inc. in May 2022, Specific gravity intended to be used as an input for a drone survey that would calculate the volume of the active tailings pile at the Peak REE Project. The pycnometer method (lab internal method SG-PYC) was performed, utilizing 10 g of samples for each sample. Blind blanks and standards were inserted alternating every 10th sample for QA-QC protocol. The results of the specific gravity measurements are presented in Table 9.6.

Table 9.2. Geochemical results of Tigren's 2021 'analytical batch 1' assay results at the Peak REE Project. Analyses were ordered by Tigren Inc. on behalf of Tactical Resources. All values are in parts per million (ppm). Note that yttrium was not measured.

Sample ID	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Sum REE	Sum LREE	Sum HREE	Li
PK-01	11.7	33.6	6.5	20.2	9.3	0.1	6.5	1.4	13.8	3.8	8.1	2.7	27.2	3.2	148.1	81.3	66.8	212.3
PK-02	10.8	31.7	6.2	18.7	8.3	<0.1	6.0	0.9	12.8	3.6	7.4	2.6	24.2	3.0	136.2	75.7	60.5	227.4
PK-03	12.4	35.1	7.0	21.1	9.3	<0.1	6.5	1.2	14.1	4.0	8.3	2.8	27.6	3.3	152.7	84.9	67.8	204.7
PK-04	11.3	35.1	6.0	19.8	8.7	0.1	6.5	0.9	13.7	4.0	8.1	2.8	27.0	3.3	147.3	80.9	66.4	202.8
PK-05	11.5	35.1	6.1	20.2	9.2	<0.1	6.4	1.0	14.0	2.3	8.1	1.6	27.1	2.0	144.6	82.1	62.5	206.7
PK-06	12.7	39.6	6.6	21.8	9.5	0.1	6.6	1.3	14.4	4.1	8.3	2.9	27.6	3.4	158.9	90.2	68.7	197.0
PK-07	12.5	38.7	6.7	21.5	9.1	0.1	6.5	1.1	14.2	4.0	8.2	2.9	27.5	3.4	156.4	88.5	67.9	197.3
PK-08	13.1	39.4	6.8	21.7	9.4	0.1	6.7	1.2	14.2	3.9	8.2	2.8	27.5	3.3	158.3	90.4	67.9	199.1
PK-09	12.4	37.6	6.7	20.6	9.0	0.1	6.3	1.4	13.7	3.8	7.9	2.7	26.2	3.2	151.6	86.3	65.3	198.2
PK-10	12.1	37.1	6.6	20.4	8.7	0.1	6.2	0.7	13.4	3.7	7.8	2.7	26.0	3.2	148.7	84.9	63.8	193.1
PK-11	11.8	35.7	6.5	20.6	9.3	<0.1	6.4	1.1	13.6	3.9	8.0	2.8	26.9	3.2	149.8	83.9	65.9	210.0
PK-12	11.9	37.4	6.4	20.4	9.2	<0.1	6.4	0.7	13.4	3.7	7.8	2.6	26.6	3.1	149.6	85.3	64.3	210.2
PK-13	11.7	36.7	6.7	20.4	8.8	<0.1	6.1	0.9	13.3	3.8	7.8	2.7	26.3	3.2	148.4	84.3	64.1	205.0
PK-14	11.4	36.1	6.6	20.1	9.0	0.1	6.0	0.8	13.1	3.7	7.6	2.7	25.6	3.2	146.0	83.2	62.8	205.2
PK-15	11.7	36.9	6.7	20.1	8.8	0.1	6.1	0.7	13.1	3.7	7.7	2.7	26.4	3.1	147.8	84.2	63.6	202.8
PK-16	13.5	36.1	6.7	21.8	9.2	<0.1	6.4	1.6	14.2	3.7	8.1	2.7	27.6	3.2	154.8	87.3	67.5	221.6
PK-17	11.7	37.4	6.6	20.9	9.9	<0.1	6.7	1.1	14.3	4.0	8.4	2.9	28.5	3.4	155.8	86.5	69.3	221.5
PK-18	12.4	38.4	6.7	21.5	9.7	<0.1	6.6	0.9	14.7	4.0	8.5	2.8	28.6	3.4	158.2	88.7	69.5	228.7
PK-19	11.8	35.9	6.7	21.0	9.5	<0.1	6.4	0.9	13.8	4.0	8.1	2.8	27.2	3.4	151.5	84.9	66.6	201.5
PK-20	11.8	37.8	6.6	20.9	9.5	0.1	6.5	0.6	14.0	3.9	8.3	2.8	27.9	3.3	154.0	86.6	67.4	201.2
PK-21	11.9	36.7	6.8	20.8	9.3	0.1	6.4	0.8	13.8	3.8	8.1	2.8	27.2	3.3	151.8	85.5	66.3	202.3
PK-22	12.0	36.9	6.6	20.9	9.3	<0.1	6.4	0.9	13.8	4.0	8.2	2.9	27.6	3.4	152.9	85.7	67.2	200.8
PK-23	14.1	38.2	7.0	21.7	8.6	0.1	6.2	1.7	13.4	3.7	7.6	2.6	25.3	3.1	153.3	89.6	63.7	216.4
PK-24	12.2	36.5	6.7	20.7	9.4	<0.1	6.5	1.0	13.9	3.9	8.0	2.7	26.8	3.2	151.5	85.5	66.0	210.9
PK-25	12.4	35.2	6.5	20.3	8.6	<0.1	6.3	1.0	13.3	3.7	7.7	2.6	25.7	3.1	146.4	83.0	63.4	204.5
PK-26	12.6	34.8	6.3	20.5	8.7	<0.1	6.2	1.5	13.2	3.8	7.6	2.7	25.3	3.2	146.4	82.9	63.5	206.7
PK-27	12.8	37.4	6.7	21.0	8.9	0.1	6.3	1.1	13.5	3.8	7.9	2.7	26.1	3.1	151.4	86.8	64.6	213.1
PK-28	12.1	35.9	6.6	20.4	8.8	0.1	6.3	1.0	13.3	3.6	7.9	2.6	25.9	3.0	147.5	83.8	63.7	221.0
PK-29	12.8	36.8	7.0	21.2	9.1	<0.1	6.4	0.9	13.6	3.7	8.0	2.6	26.4	3.1	151.6	86.9	64.7	218.0
PK-30	13.2	36.6	6.7	20.8	8.4	0.1	6.1	1.6	12.9	3.5	7.5	2.5	24.7	2.9	147.5	85.7	61.8	207.1
PK-31	14.4	39.4	7.0	22.1	8.7	<0.1	6.5	1.6	14.3	3.7	7.7	2.7	25.7	3.1	156.9	91.6	65.3	216.2
PK-32	13.1	36.1	6.3	20.7	8.6	<0.1	6.2	1.4	13.4	3.7	7.6	2.7	25.1	3.1	148.0	84.8	63.2	207.8
PK-33	13.3	37.8	6.6	21.8	9.2	<0.1	6.5	1.6	14.1	3.8	8.0	2.7	26.4	3.1	154.9	88.7	66.2	214.0
PK-34	12.8	37.4	6.7	21.3	9.2	0.1	6.5	1.2	14.0	3.7	8.1	2.7	26.8	3.1	153.6	87.4	66.2	205.5
PK-35	12.2	37.4	6.4	21.0	9.5	<0.1	6.4	0.9	13.9	3.9	8.1	2.8	27.5	3.3	153.3	86.5	66.8	202.6
PK-36	13.7	38.7	6.9	22.1	9.0	<0.1	6.4	1.8	14.4	3.8	8.0	2.8	27.4	3.2	158.2	90.4	67.8	215.1
PK-37	13.0	34.9	6.5	20.0	8.2	0.1	5.8	1.5	12.8	3.6	7.3	2.6	24.3	3.0	143.6	82.6	61.0	229.5
PK-38	13.0	35.9	6.6	20.2	8.6	<0.1	6.1	1.7	12.8	3.6	7.3	2.5	24.2	2.9	145.4	84.3	61.1	223.6
PK-39	12.1	38.1	6.8	21.0	9.6	0.1	6.1	0.5	12.7	3.4	7.4	2.4	25.5	2.9	148.6	87.6	61.0	214.1
PK-40	11.3	38.0	6.8	20.5	9.2	<0.1	6.3	0.8	13.7	3.8	8.0	2.8	27.7	3.2	152.1	85.8	66.3	199.0
Count	40	40	40	40	40	18	40	40	40	40	40	40	40	40	40	40	40	40
Minimum	10.8	31.7	6.0	18.7	8.2	0.1	5.8	0.5	12.7	2.3	7.3	1.6	24.2	2.0	136.2	75.7	60.5	193.1
Maximum	14.4	39.6	7.0	22.1	9.9	0.1	6.7	1.8	14.7	4.1	8.5	2.9	28.6	3.4	158.9	91.6	69.5	229.5
Average	12.4	36.8	6.6	20.8	9.1	0.1	6.3	1.1	13.7	3.8	7.9	2.7	26.5	3.2	150.8	85.6	65.2	209.4
StDev	0.8	1.6	0.2	0.7	0.4	0.0	0.2	0.3	0.5	0.3	0.3	0.2	1.1	0.2	4.7	3.0	2.4	9.4
%RSD	6.4	4.4	3.5	3.3	4.4	0.0	3.2	30.5	3.7	7.5	3.8	7.8	4.3	7.4	3.1	3.5	3.7	4.5

Table 9.3. Rare earth element analytical results from Tactical Resources 2021 'analytical batch 2' assay results at the Peak REE Project. All values are in parts per million (ppm).

Sample ID	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	Sum REE + Y	Sum LREE	Sum HREE + Y
PK-01	10.78	30.8	4.9	18.8	6.9	<0.1	6.5	0.3	14.5	3.4	11.5	2.5	19.0	2.2	168.9	301.0	72.18	228.8
PK-02	10.36	29.6	4.7	18.2	6.8	<0.1	6.2	0.4	14.0	3.2	10.9	2.3	17.9	2.1	155.9	282.6	69.66	212.9
PK-03	12.07	33.0	5.3	20.2	7.3	<0.1	6.8	0.5	15.4	3.5	12.1	2.6	19.9	2.3	180.7	321.7	77.87	243.8
PK-04	10.98	32.3	4.9	19.1	7.0	<0.1	6.5	0.3	14.9	3.4	11.7	2.5	19.3	2.2	171.3	306.4	74.28	232.1
PK-05	10.74	32.1	5.0	19.3	7.2	<0.1	6.6	0.3	14.9	3.4	11.7	2.5	19.4	2.2	169.9	305.2	74.34	230.9
PK-06	12.21	37.6	5.6	21.5	7.7	<0.1	6.9	0.4	15.4	3.5	12.1	2.6	20.1	2.3	174.0	321.9	84.61	237.3
PK-07	12.19	36.9	5.5	21.1	7.7	<0.1	6.9	0.5	15.5	3.5	12.2	2.6	20.3	2.3	175.6	322.8	83.39	239.4
PK-08	12.30	36.0	5.4	20.7	7.4	<0.1	6.7	0.5	14.8	3.4	11.7	2.5	19.5	2.2	168.9	312.0	81.80	230.2
PK-09	11.67	35.3	5.2	20.0	7.1	<0.1	6.5	0.7	14.4	3.3	11.3	2.4	19.1	2.2	161.3	300.5	79.27	221.2
PK-10	11.48	35.0	5.2	20.2	7.3	<0.1	6.5	0.4	14.4	3.3	11.4	2.4	19.0	2.2	161.2	300.0	79.18	220.8
PK-11	11.57	34.0	5.3	20.3	7.3	<0.1	6.7	0.4	15.1	3.4	11.9	2.5	19.7	2.3	170.8	311.3	78.47	232.8
PK-12	11.42	34.9	5.4	20.8	7.5	<0.1	6.7	0.3	15.1	3.4	11.9	2.6	20.3	2.3	167.3	309.9	80.02	229.9
PK-13	11.57	34.8	5.4	21.0	7.5	<0.1	6.8	0.4	15.1	3.5	12.0	2.6	20.4	2.3	167.8	311.2	80.27	230.9
PK-14	11.36	35.2	5.5	21.0	7.6	<0.1	6.9	0.4	15.3	3.5	12.0	2.5	20.4	2.3	167.3	311.3	80.66	230.6
PK-15	11.18	34.1	5.3	20.3	7.5	<0.1	6.7	0.4	14.9	3.4	11.7	2.5	20.0	2.3	165.3	305.6	78.38	227.2
PK-16	12.59	34.8	5.6	21.2	7.7	<0.1	7.0	0.6	15.5	3.5	12.3	2.6	20.7	2.4	175.2	321.7	81.89	239.8
PK-17	11.13	35.6	5.4	20.6	7.7	<0.1	7.0	0.5	15.7	3.6	12.4	2.7	20.8	2.4	176.7	322.2	80.43	241.8
PK-18	11.74	36.3	5.4	20.6	7.6	<0.1	6.9	0.3	15.5	3.6	12.3	2.6	20.5	2.4	177.2	322.9	81.64	241.3
PK-19	11.58	35.4	5.4	20.8	7.6	<0.1	6.9	0.5	15.4	3.5	12.1	2.6	20.2	2.3	175.4	319.7	80.78	238.9
PK-20	11.50	36.8	5.5	21.2	7.7	<0.1	7.0	0.3	15.6	3.6	12.4	2.6	20.7	2.4	176.1	323.4	82.70	240.7
PK-21	12.48	52.6	7.7	27.9	8.4	0.3	7.3	0.2	15.3	3.5	12.0	2.6	20.0	2.3	175.4	348.0	109.08	238.9
PK-22	11.84	36.4	5.6	21.2	7.6	<0.1	7.0	0.4	15.4	3.5	12.2	2.6	20.5	2.3	174.2	320.7	82.64	238.1
PK-23	12.33	36.0	5.3	20.3	7.0	0.1	6.3	0.6	13.5	3.1	10.6	2.3	17.7	2.0	149.3	286.4	80.93	205.5
PK-24	11.56	34.3	5.1	19.9	7.3	<0.1	6.7	0.4	15.0	3.4	11.8	2.5	19.5	2.2	170.4	310.1	78.16	231.9
PK-25	11.83	34.1	5.2	20.0	7.1	<0.1	6.7	0.4	14.9	3.4	11.7	2.5	19.3	2.2	168.8	308.1	78.23	229.9
PK-26	11.72	33.8	5.1	19.7	7.2	<0.1	6.5	0.5	14.6	3.4	11.5	2.4	19.0	2.2	165.1	302.7	77.52	225.2
PK-27	12.22	35.0	5.3	20.5	7.4	<0.1	6.7	0.7	15.0	3.4	11.7	2.5	19.6	2.2	169.2	311.4	80.42	231.0
PK-28	11.48	33.4	5.1	19.9	7.3	<0.1	6.6	0.5	14.7	3.4	11.5	2.5	19.2	2.1	167.9	305.6	77.18	228.4
PK-29	12.00	34.4	5.2	20.1	7.3	<0.1	6.7	0.8	14.9	3.4	11.7	2.5	19.4	2.2	167.6	308.2	79.00	229.2
PK-30	12.03	34.4	5.1	19.7	6.8	0.1	6.2	0.7	13.7	3.1	10.7	2.2	17.7	2.0	151.0	285.4	78.03	207.4
PK-31	13.51	39.4	5.7	21.7	7.5	<0.1	6.8	0.5	14.9	3.4	11.7	2.5	19.2	2.2	166.5	315.5	87.81	227.7
PK-32	12.11	35.7	5.4	20.6	7.2	<0.1	6.7	0.5	14.7	3.4	11.5	2.4	19.0	2.2	162.9	304.3	81.01	223.3
PK-33	12.93	37.3	5.6	21.6	7.7	<0.1	7.0	0.5	15.5	3.6	12.2	2.6	20.4	2.3	174.5	323.7	85.13	238.6
PK-34	12.01	35.4	5.3	20.4	7.4	<0.1	6.8	0.5	15.2	3.5	11.9	2.6	19.9	2.3	172.2	315.4	80.51	234.9
PK-35	12.06	35.5	5.4	20.8	7.6	<0.1	6.9	0.4	15.5	3.5	12.3	2.6	20.4	2.3	177.3	322.6	81.36	241.2
PK-36	12.71	36.2	5.4	20.8	7.4	<0.1	6.7	0.5	14.9	3.4	11.9	2.5	19.6	2.2	168.9	313.1	82.51	230.6
PK-37	12.15	34.6	5.3	20.3	7.1	<0.1	6.5	0.4	14.5	3.3	11.4	2.4	19.0	2.2	162.6	301.8	79.45	222.3
PK-38	12.46	35.8	5.3	20.5	7.2	<0.1	6.6	0.5	14.7	3.4	11.4	2.4	18.8	2.1	164.2	305.4	81.26	224.1
PK-39	12.00	33.8	5.4	20.9	7.4	<0.1	6.5	<0.1	14.2	3.2	11.1	2.4	19.2	2.2	159.6	297.9	79.50	218.4
PK-40	11.30	33.8	5.2	20.1	7.3	<0.1	6.7	0.2	15.1	3.5	12.0	2.6	20.6	2.3	174.5	315.2	77.70	237.5
Count	40	40	40	40	40	3	40	39	40	40	40	40	40	40	40	40	40	40
Minimum	10.4	29.6	4.7	18.2	6.8	0.1	6.2	0.2	13.5	3.1	10.6	2.2	17.7	2.0	149.3	282.6	69.7	205.5
Maximum	13.5	52.6	7.7	27.9	8.4	0.3	7.3	0.8	15.7	3.6	12.4	2.7	20.8	2.4	180.7	348.0	109.1	243.8
Average	11.8	35.3	5.4	20.6	7.4	0.2	6.7	0.5	14.9	3.4	11.8	2.5	19.6	2.2	168.7	310.9	80.5	230.4
StDev	0.6	3.3	0.4	1.4	0.3	0.1	0.2	0.1	0.5	0.1	0.4	0.1	0.8	0.1	7.0	12.1	5.7	9.1
%RSD	5.2	9.4	8.1	6.8	4.1	69.3	3.4	29.6	3.4	3.5	3.7	4.2	4.1	4.3	4.2	3.9	7.1	3.9

Table 9.4. Select trace element analytical results from Tactical Resources 2021 sampling program at the Peak REE Project. All values are in parts per million (ppm).

Sample ID	Ba	Be	Cr	Hf	Li	Mo	Nb	Ni	Pb	Rb	Sr	Ta	Th	Ti	U	V	W	Zn	Zr
PK-01	35	6.76	227.9	4.81	209.8	1.9	73.01	4.3	30	920	19	17.26	39.8	113	4.2	3	5.2	98	49.9
PK-02	37	5.35	172	4.96	226.4	1.2	74.81	3.3	36	919	14	17.37	40.1	111	5.1	6	4.6	108	54.8
PK-03	14	5.88	188.5	4.54	198	1.3	75.4	4.4	41	933	14	17.03	42.6	105	5.3	8	4.6	100	52.9
PK-04	23	5.35	209.3	4.75	195.6	1.4	71.88	4.4	43	922	10	16.47	44.7	102	3.8	7	4.5	111	50.3
PK-05	18	7.47	176.3	5.01	197.3	1.5	72.99	4.4	61	926	10	16.96	43.3	103	4.2	8	4.8	131	52.3
PK-06	28	22.21	162.1	5.67	194.4	1.5	70	6.4	71	958	36	16.35	43.5	220	9.4	8	4.7	131	63
PK-07	17	14.87	166.3	5.59	189.7	1.6	68.92	5.2	70	943	28	16.17	42.9	156	8.8	8	4.7	127	61.9
PK-08	30	16.64	171.1	5.83	190	1.4	69.61	6.5	70	931	39	17.48	43	257	8.5	10	4.8	125	67.6
PK-09	27	13.59	150.8	5.58	185.2	1.7	66.46	4.8	90	935	39	16.07	42	188	9.2	8	12.7	122	67.4
PK-10	31	13.79	205.1	6.42	186.6	1.6	65.57	4.7	63	943	36	16.45	41.4	185	8.3	7	4.7	124	68.9
PK-11	15	8.99	159.9	5.74	207.8	1.4	71.31	4.2	42	963	15	16.83	42.2	96	5.5	5	5.9	106	63.5
PK-12	15	11.44	205.2	7.75	208	1.7	68.75	4.4	45	1011	20	19.35	40.9	92	7.1	5	5	119	86.5
PK-13	14	11.27	184.1	7.29	206.8	1.3	67.84	4.3	47	984	23	18.33	42.1	91	7.8	5	4.9	124	88.2
PK-14	16	12.86	149.6	7.59	204.7	1.4	67.99	4	49	993	24	18.42	41	90	7.4	5	4.9	124	86.2
PK-15	14	11.72	183.1	7.14	203.1	1.7	67.76	4.9	48	966	23	18.53	40.7	91	7.5	5	4.8	125	86.8
PK-16	8	8.24	163.9	4.7	217.7	1.3	68.32	4.7	73	998	97	17.83	38.8	87	12.2	7	4.6	114	55.1
PK-17	7	20.31	175.5	5.05	219.4	1.3	71.41	4.2	53	993	13	18	43.9	90	5.6	5	5.7	139	47.5
PK-18	6	11.25	149.6	4.64	222.5	1.7	71.27	2.9	150	988	11	18.33	43.6	90	6.8	4	5	112	47.9
PK-19	8	10.89	102.9	4.35	202.3	2.1	69.74	3.3	66	991	25	16.94	40.1	94	5.8	8	4.7	118	50.9
PK-20	14	11.1	189.2	4.63	201.8	1.2	69.98	4.1	55	1002	10	17.8	42.3	92	4.5	7	4.8	104	49.8
PK-21	11	11.83	147.2	4.99	199.2	1.6	71.08	6.6	58	965	16	17.52	45.8	99	5.3	7	5	119	51.1
PK-22	8	12.06	156.2	4.76	201.9	1.7	71.81	3.8	60	984	14	18.02	42.7	93	5.5	7	5.1	115	50.4
PK-23	71	9.3	157.2	4.57	212.3	2	61.92	5.9	82	854	97	15.75	40.8	196	9.2	17	4.9	173	54.4
PK-24	21	12.84	195.6	4.41	208.8	1.8	70.84	4.8	89	917	26	16.48	41.9	102	7.7	8	5	115	50.6
PK-25	30	10.34	222	4.07	205.1	1.8	67.96	5	65	900	41	15.11	42.3	117	6.5	10	4.8	127	44.4
PK-26	34	10.55	177	4.02	207.7	1.4	67.18	3.7	66	896	44	14.77	41.5	128	6.5	11	4.8	125	42.9
PK-27	31	11.19	196.2	4.95	214.3	1.4	67.05	5.1	65	889	42	16.38	43.8	143	7.5	10	4.7	126	60.5
PK-28	23	12.9	194.9	4.98	213.6	1.6	71.12	4.5	46	923	27	16.91	41	118	6.1	8	4.8	103	58.2
PK-29	29	11.8	111.5	4.77	211.7	1.7	69.16	3.3	53	913	36	16.68	43.1	133	6.7	10	4.8	112	52.9
PK-30	58	8.91	158.6	4.21	210.7	1.8	66.87	5.3	62	860	60	16.1	40.8	216	7.1	11	4.9	166	55.4
PK-31	45	12.07	152.9	4.7	218.1	2.6	66.53	5.2	158	907	64	15.81	45.5	134	12.9	14	8.4	213	53.5
PK-32	47	10.12	199.1	4.1	211.5	2.2	63.52	6.5	82	897	68	14.71	43.3	156	8.4	12	5.5	172	46.1
PK-33	27	10.94	251.1	5.12	216.8	2	67.21	5.5	122	921	56	17.28	44.5	117	11.7	13	6.1	169	54.5
PK-34	17	12.6	198	5.47	201.7	1.6	67.57	3.8	78	948	39	17.06	42	98	8	9	5.4	137	50.5
PK-35	11	13.8	162.3	4.7	204.2	1.5	70.23	4.2	68	985	23	17.34	42.3	93	6.7	8	5.2	120	50.9
PK-36	19	10.62	177.1	5.05	214.4	1.8	65.13	4.6	99	936	80	17.28	44.5	107	12	14	5.3	176	56.2
PK-37	57	12.43	170.8	4.41	226.7	1.5	60.22	5.3	78	904	136	16.01	40.7	120	11.2	13	4.7	162	51.5
PK-38	50	9.69	189.3	4.13	221.4	1.9	65.5	6.4	80	890	66	15.08	42.8	177	7.9	13	4.8	154	49.5
PK-39	15	18.2	222	9.19	209.6	1.8	68.93	4.7	37	1002	27	20.35	40.4	88	10.8	4	4.8	92	106.6
PK-40	8	11.07	219.4	9.08	200.3	1.3	67.85	4.5	58	996	24	18.53	41.2	85	7.7	5	4.6	129	105
Count	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Minimum	6.0	5.4	102.9	4.0	185.2	1.2	60.2	2.9	30.0	854.0	10.0	14.7	38.8	85.0	3.8	3.0	4.5	92.0	42.9
Maximum	71.0	22.2	251.1	9.2	226.7	2.6	75.4	6.6	158.0	1011.0	136.0	20.4	45.8	257.0	12.9	17.0	12.7	213.0	106.6
Average	24.7	11.6	178.8	5.3	206.9	1.6	68.8	4.7	67.7	942.7	37.3	17.0	42.2	124.3	7.6	8.3	5.2	129.2	59.9
StDev	15.6	3.5	29.8	1.3	10.3	0.3	3.1	0.9	27.3	41.7	27.9	1.2	1.6	43.3	2.3	3.2	1.4	25.5	15.8
%RSD	63.3	30.4	16.7	24.1	5.0	18.1	4.6	19.7	40.3	4.4	74.9	7.1	3.8	34.8	30.6	38.7	26.3	19.8	26.3

Table 9.5. Select whole rock major element analytical results from Tactical Resources 2021 sampling program at the Peak REE Project. All data are in weight percent (wt %).

Sample ID	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	V_2O_5
PK-03	13.68	<0.01	0.63	0.03	0.96	4.11	0.03	0.06	4.79	<0.01	74.26	<0.01	0.01	<0.01
PK-05	13.60	<0.01	0.54	0.03	1.10	4.12	0.03	0.06	4.79	<0.01	74.20	<0.01	0.01	<0.01
PK-06	13.80	<0.01	0.76	0.02	1.15	4.03	0.12	0.07	4.76	<0.01	73.23	<0.01	0.03	<0.01
PK-08	13.82	<0.01	0.97	0.02	1.18	4.02	0.15	0.07	4.69	<0.01	73.30	<0.01	0.04	<0.01
PK-10	13.58	<0.01	0.97	0.04	1.14	4.01	0.10	0.07	4.70	<0.01	73.33	<0.01	0.03	<0.01
PK-12	13.74	<0.01	0.55	0.03	0.99	4.16	0.04	0.05	4.71	<0.01	74.08	<0.01	0.01	<0.01
PK-13	13.76	<0.01	0.72	0.03	0.97	4.14	0.04	0.06	4.74	<0.01	73.93	<0.01	0.01	<0.01
PK-15	13.77	<0.01	0.63	0.03	0.98	4.15	0.04	0.06	4.76	<0.01	74.04	<0.01	<0.01	<0.01
PK-18	13.73	<0.01	0.44	0.03	0.93	4.18	<0.01	0.08	4.86	<0.01	74.47	<0.01	0.02	<0.01
PK-21	13.78	<0.01	0.49	0.02	0.98	4.14	0.02	0.06	4.90	<0.01	74.43	<0.01	0.01	<0.01
PK-45	10.69	0.14	1.88	0.08	50.20	0.14	1.77	0.17	<0.01	1.36	26.91	0.12	3.16	0.07
PK-22	13.76	<0.01	0.47	0.02	1.02	4.12	0.02	0.06	4.88	<0.01	74.02	<0.01	0.01	<0.01
PK-23	13.11	<0.01	2.99	0.02	1.23	3.74	0.49	0.08	4.37	<0.01	69.93	0.01	0.03	<0.01
PK-26	13.36	<0.01	1.67	0.03	1.09	3.95	0.24	0.06	4.56	<0.01	72.24	<0.01	0.02	<0.01
PK-27	13.49	<0.01	1.41	0.03	1.09	3.98	0.17	0.06	4.60	<0.01	72.82	<0.01	0.03	<0.01
PK-30	13.20	<0.01	2.16	0.02	1.23	3.84	0.34	0.06	4.44	<0.01	71.61	<0.01	0.04	<0.01
PK-31	13.29	<0.01	2.58	0.02	1.30	3.82	0.28	0.12	4.43	<0.01	70.59	<0.01	0.02	<0.01
PK-32	13.20	<0.01	2.20	0.03	1.19	3.87	0.33	0.08	4.46	<0.01	71.38	<0.01	0.03	<0.01
PK-33	13.47	<0.01	1.81	0.04	1.29	3.91	0.21	0.08	4.55	<0.01	71.64	<0.01	0.02	<0.01
PK-36	13.69	<0.01	1.81	0.03	1.21	3.88	0.19	0.08	4.57	<0.01	71.48	0.01	0.02	<0.01
PK-40	13.88	<0.01	0.50	0.03	1.11	4.22	0.04	0.07	4.68	<0.01	74.06	<0.01	0.01	<0.01
Count	21	1	21	21	21	21	20	21	20	1	21	3	20	1
Minimum	10.7	0.1	0.4	0.0	0.9	0.1	0.0	0.1	4.4	1.4	26.9	0.0	0.0	0.1
Maximum	13.9	0.1	3.0	0.1	50.2	4.2	1.8	0.2	4.9	1.4	74.5	0.1	3.2	0.1
Average	13.4	0.1	1.2	0.0	3.4	3.8	0.2	0.1	4.7	1.4	70.8	0.0	0.2	0.1
StDev	0.7	/	0.8	0.0	10.7	0.9	0.4	0.0	0.2	/	10.1	0.1	0.7	/
%RSD	5.0	/	63.7	43.5	311.0	22.4	165.6	35.5	3.4	/	14.3	136.1	394.4	/

Table 9.6. Specific gravity measurements from Tactical Resources 2021 sampling program at the Peak REE Project.

Sample ID	SG (g/cm^3)	Sample ID	SG (g/cm^3)	Sample ID	SG (g/cm^3)	Sample ID	SG (g/cm^3)
PK-01	2.62	PK-11	2.62	PK-21	3.00	PK-31	2.19
PK-02	2.62	PK-12	2.63	PK-22	2.64	PK-32	2.72
PK-03	2.60	PK-13	2.64	PK-23	2.97	PK-33	2.71
PK-04	2.60	PK-14	2.61	PK-24	2.94	PK-34	2.40
PK-05	2.63	PK-15	2.45	PK-25	2.48	PK-35	2.35
PK-06	2.62	PK-16	2.68	PK-26	2.59	PK-36	3.26
PK-07	2.61	PK-17	2.62	PK-27	3.14	PK-37	3.01
PK-08	2.63	PK-18	2.61	PK-28	2.58	PK-38	2.53
PK-09	2.63	PK-19	2.60	PK-29	2.78	PK-39	2.63
PK-10	2.60	PK-20	2.91	PK-30	2.49	PK-40	3.02

Count	40
Minimum	2.19
Maximum	3.26
Average	2.67
StDev	0.21
%RSD	7.95

A summary of whole rock and trace element rock type and tectonomagmatic discrimination diagrams using the Tactical Resources (analytical batch 2) data are presented in Figures 9.4, 9.5 and 9.6. A summary of the Tigren (analytical batch 1) and Tactical Resources (analytical batch 2) chondrite normalized REE profiles is presented in Figure 9.7. The diagrams and analytical results are discussed in the text that follows.

- The Sierra Blanca rhyolite laccolith tailing's material 1) classifies as a rhyolite rock type on the total alkalis versus silica diagram (Figure 9.4a), 2) is metaluminous-peraluminous (Figure 9.4b), and 3) is silica-rich, alkali-calcic, and representative of ferroan, A-Type granites (Figure 9.5).

- The tailing's material has trace element contents that are representative of a within plate granite setting that is associated with A-Type granites (Figure 9.6).

- The Tigren analytical batch 1 sample results yield total REE, or ∑REE (lanthanum to lutetium; and yttrium was not analyzed) of between 136.2 and 158.9 ppm ∑REE with an average of 150.8 ppm ∑REE (n=40 analyses; Figure 9.7).

- The Tigren analytical batch 1 sample results yield HREE (europium to lutetium; and yttrium was not analyzed) of between 60.5 and 69.5 ppm HREE with an average of 65.2 ppm HREE (n=40 analyses).

- The Tactical Resources analytical batch 2 sample results yield ∑REE+Y (lanthanum to lutetium plus yttrium) of between 282.6 and 348.0 ppm ∑REE+Y with an average of 310.9 ppm ∑REE+Y (n=40 analyses; Figure 9.7).

- The Tactical Resources analytical batch 2 sample results yield HREE+Y (lanthanum to lutetium plus yttrium) of between 205.5 and 243.8 ppm HREE+Y with an average of 230.4 ppm HREE+Y (n=40 analyses).

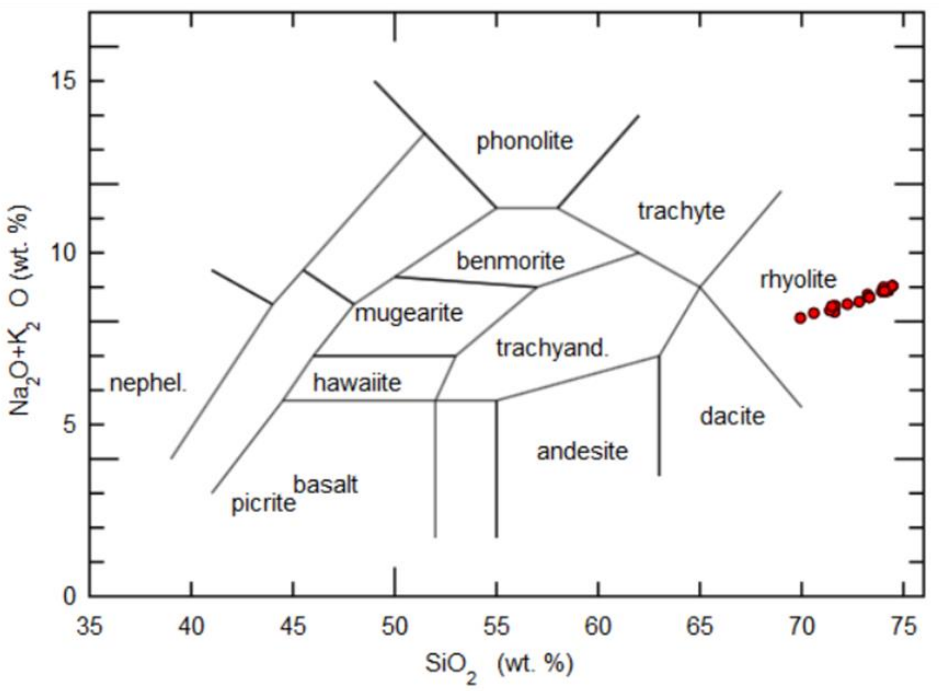
- Based on the average percent relative standard deviation (also known as the % coefficient of variation), or average RSD%, the Tigren and Tactical REE analyses have a high degree of precision or reproducibility of the analytical results. In the QPs opinion, average RSD% values below 30% are considered to indicate very good data quality; between 30 and 50%, moderate quality and over 50%, poor quality. The RSD% of the Tigren and Tactical REE analyses (n=40 analyses) are typically <10% (particularly for the HREE).

- The chondrite normalized REE profiles have elevated HREE concentrations with a strongly negative Eu-anomaly, which implies differentiation involving feldspar fractional crystallization, and less distinctive negative Tb anomaly, which could relate to evolved tectonic setting or is an artifact of the analyses (Note: the QP analytical results does not have a negative Tb anomaly; see Section 12.2.3).

- The specific gravity measurements on 40 samples yield between 2.19 and 3.26 g/cm^3 with an average of 2.67 g/cm^3 (Figure 9.8).

Figure 9.4 Geochemical classification of the Sierra Blanca rhyolite tailing's material based on based the total alkalis versus SiO_2 and Aluminum Saturation Index versus the Alkalinity Index.

A) Total alkalis (Na_2O+K_2O) versus SiO_2 diagram of Cox et al. (1979).



B) Aluminum Saturation Index versus the Alkalinity Index and SiO_2 (inset) as an assessment alumina content.

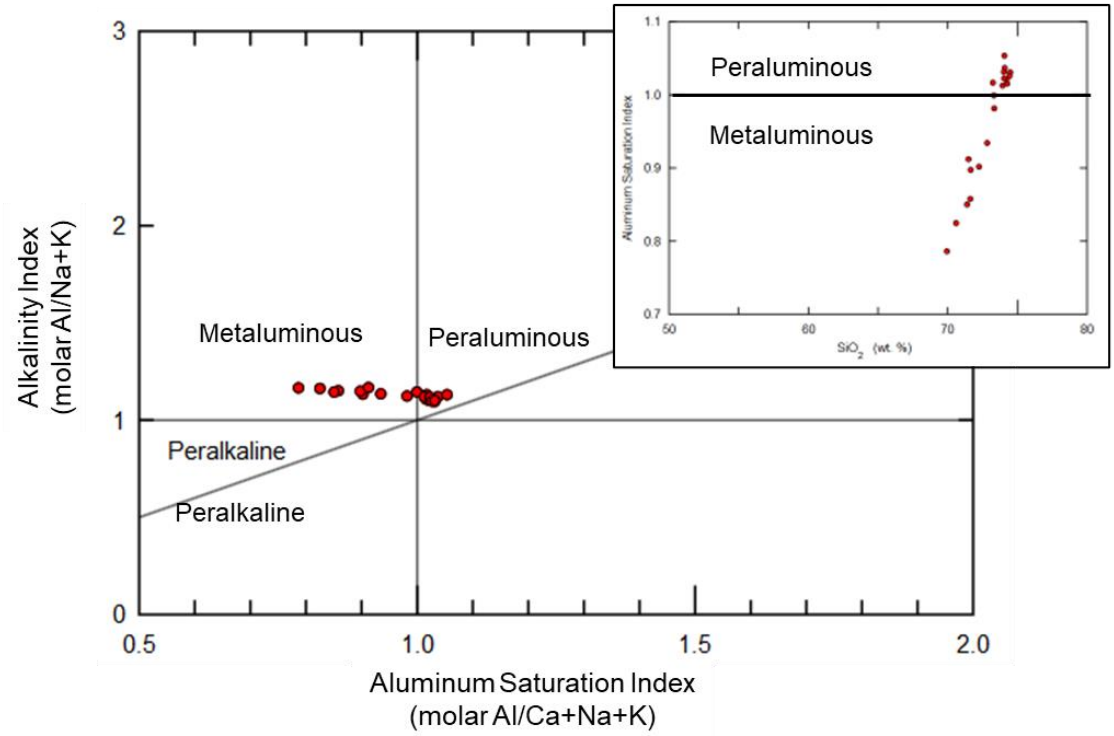
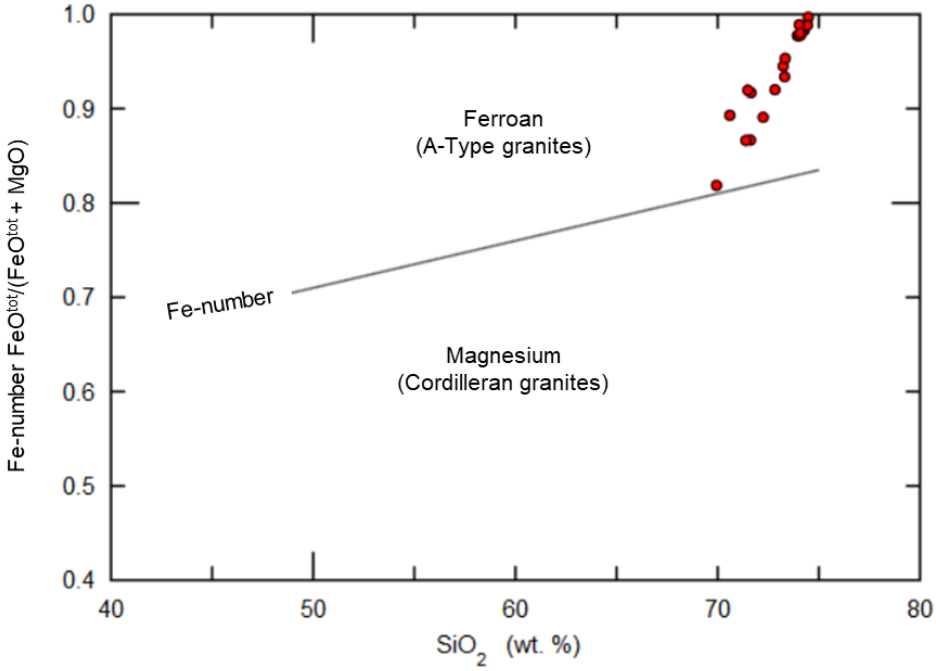


Figure 9.5 Geochemical classification of the Sierra Blanca rhyolite tailing's material Fe-number, or $FeO^{tot}/(FeO^{tot} + MgO)$, and the modified alkali–lime index, or $Na_2O + K_2O - CaO$, of Frost et al. (2001).

A) FeO/(FeO + MgO) vs weight per cent SiO_2 diagram using the Fe-number of Miyashiro (1970) to distinguish between ferroan and magnesian plutons.



B) $Na_2O + K_2O - CaO$ against SiO_2 with the alkalic, alkali–calcic, calc-alkalic, and calcic rock series of Frost et al., (2001).

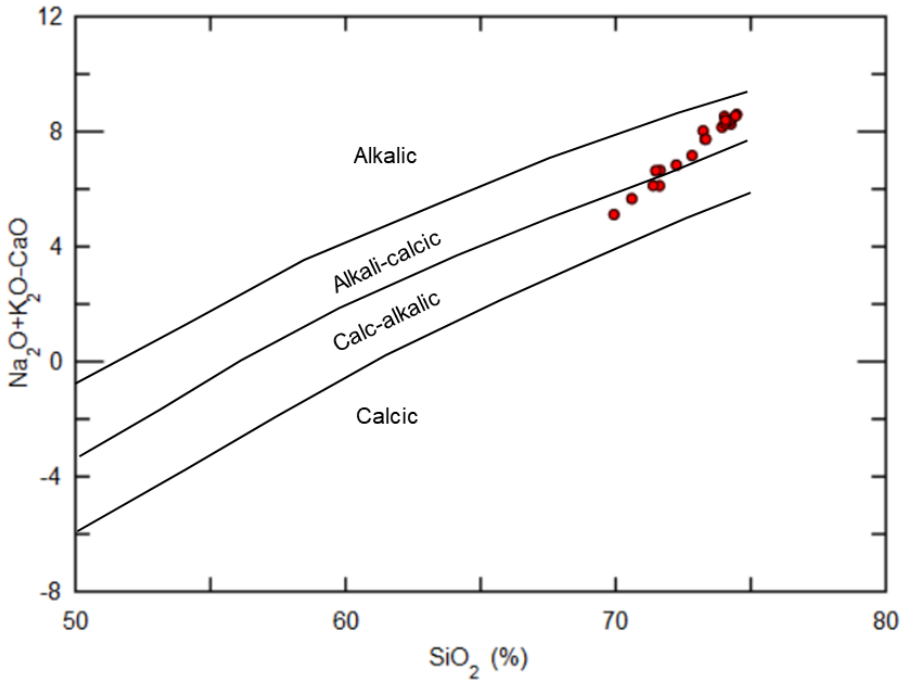
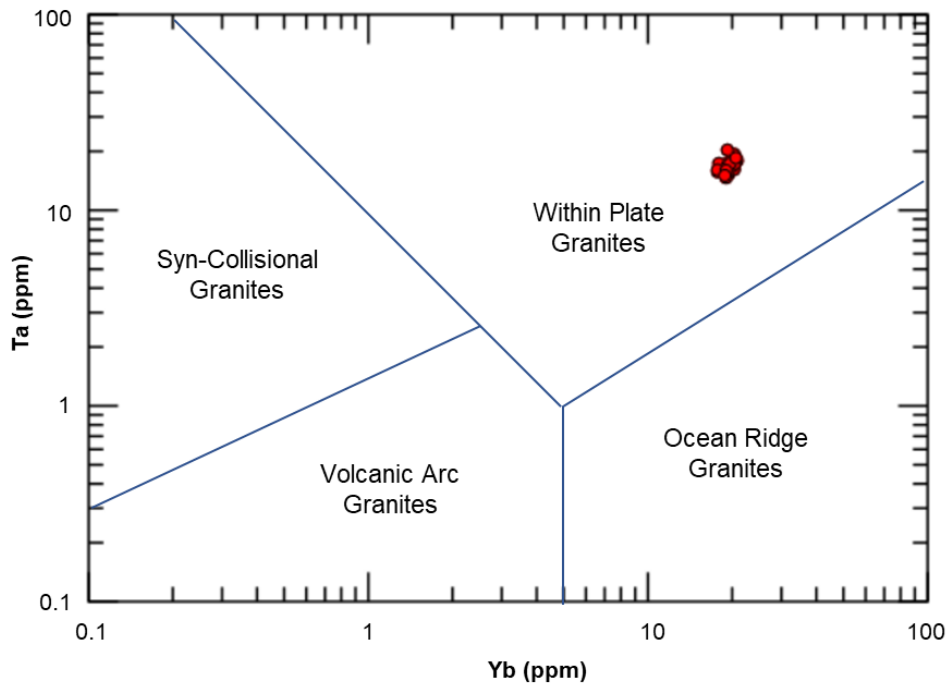


Figure 9.6 Tectonomagmatic discrimination diagrams Yb versus Ta and Y+Nb versus Rb using the fields of Pearce et al. (1984).

A) Yb-Ta bivariate plot of Pearce et al. (1984)



B) Rb versus Y+Yb diagram of Pearce et al. (1984).

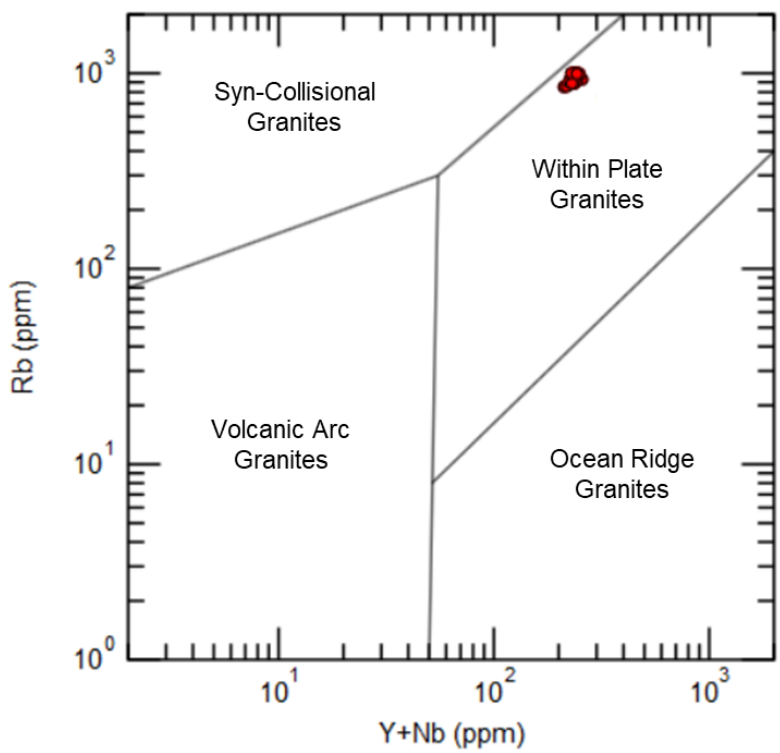
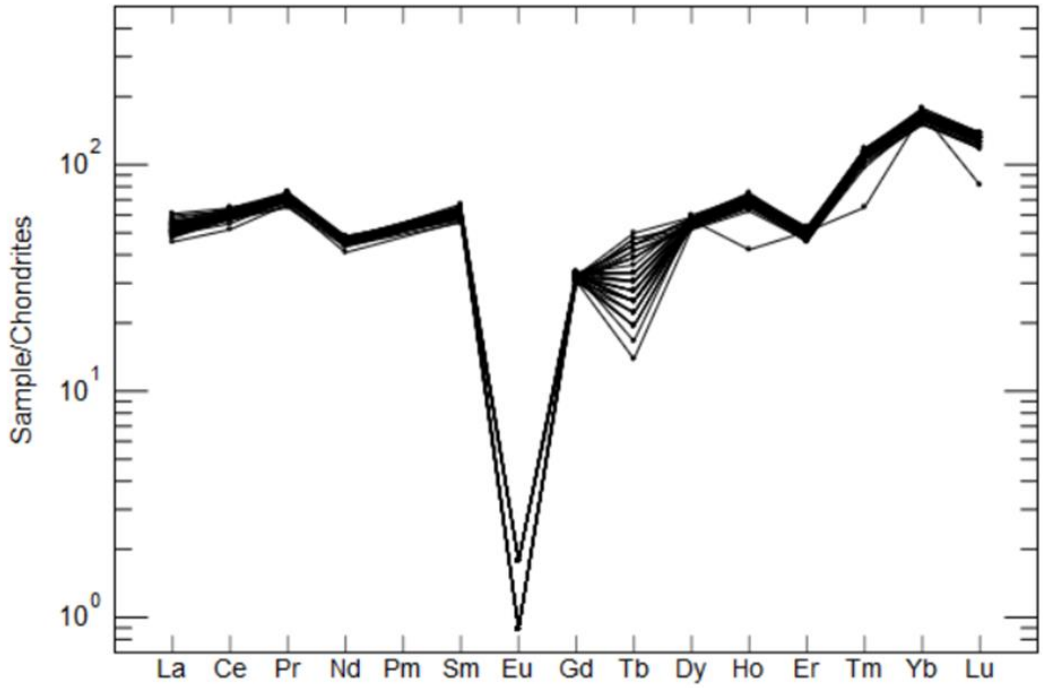


Figure 9.7 Chondrite normalized rare earth element profiles of Tactical Resources 2021 Sierra Blanca tailing's material samples. Normalized using chondrite values from McDonough and Sun (1995).

A) Tigren chondrite normalized REE profile



B) Tactical chondrite normalized REE profile

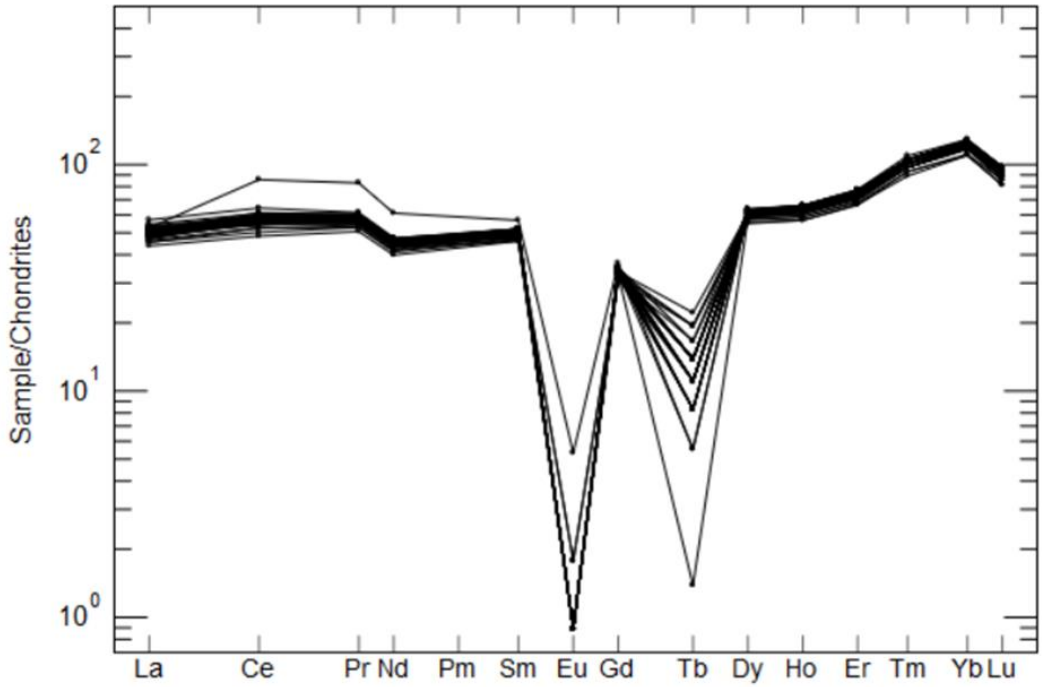
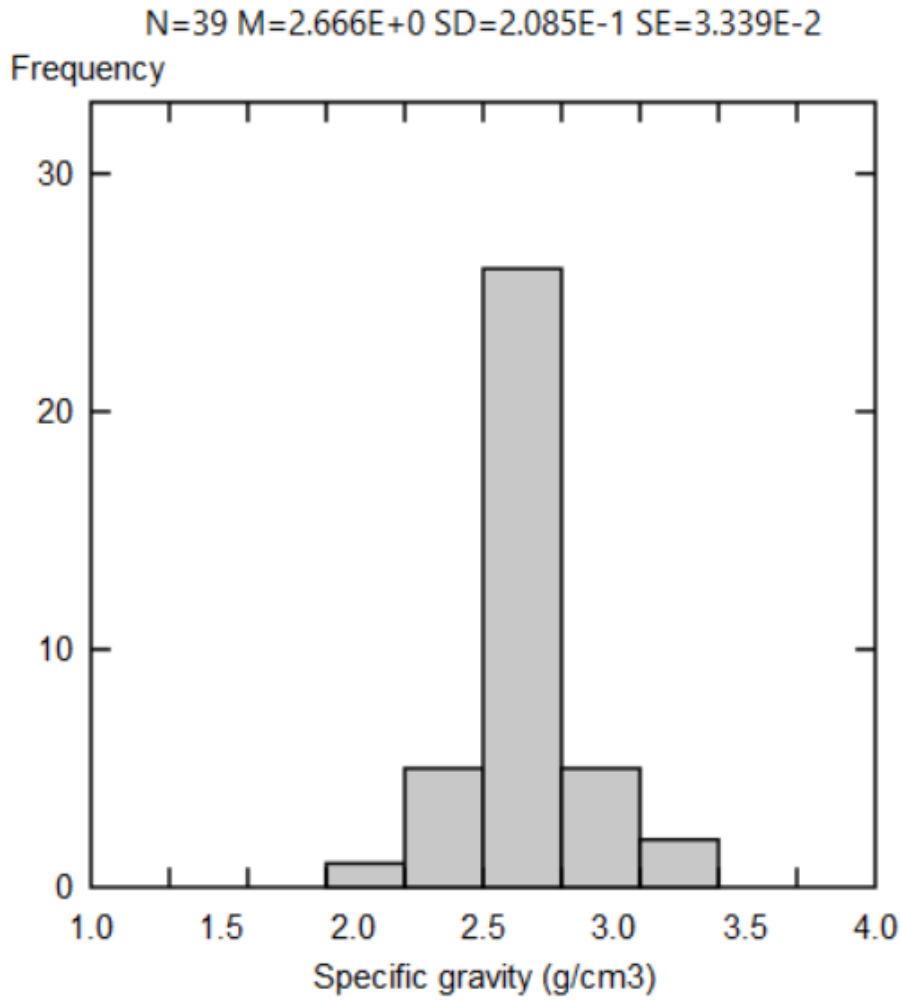


Figure 9.8 Histogram of specific gravity measurements (g/cm^3).



In addition, the tailing's material is enriched in HFSE and LILE's that include, for example, and based on the Tactical Resources analytical batch 2 results:

- Lithium (185.2-226.7 ppm Li with an average of 206.9 ppm Li),
- Beryllium (5.4-22.2 ppm Be with an average of 11.6 ppm Be),
- Niobium (60.2-75.4 ppm Nb with an average of 68.8 ppm Nb),
- Rubidium (854-1,011 ppm Rb with an average of 943 ppm Rb),
- Yttrium (149.3-180.7 ppm Y with an average of 168.7 ppm Y, and
- Zircon (42.9-106.6 ppm Zr with an average of 59.9 ppm Zr).

9.3 Tactical Resources 2022 Mineralogy Investigation

Tactical Resources initiated mineralogical investigations at the University of Texas to obtain a better understanding of the mineralogy and chemistry that constitutes the Peak REE Project tailing's material. Four samples (PK-23, PK26, PK-30, and PK-36) were collected by Tigren, on behalf of Tactical Resources, and were used for the mineralogical investigation. Scanning electron microscopy (SEM) coupled with energy dispersive spectroscopy (EDS) were used for mineralogy characterization.

The samples were mounted in epoxy, trimmed to 2.54 cm diameter, and ground and polished down to 0.25-micron grit. Backscattered electron (BSE) gigapan images of the samples (Figure 9.9) were obtained on a JEOL 6490 Low-Vacuum Scanning Electron Microscope. Energy-dispersive X-ray (EDS) spectra were subsequently collected from areas of interest in the BSE gigapan images.

Mineral identification is the result of the interpretation of the EDS spectra. Selected BSE images and EDS spectra are presented in Figures 9.10 and 9.11.

A summary of the mineralogical observations is as follows.

- The most common accessory minerals include:
  - Cassiterite (SnO_2).
  - Columbite ($Fe^{2+}Nb_2O_6$).
  - yttrofluorite ($Ca_{0.7}Y_{0.3}F_{2.3}$).
  - yttrocerite (CaF_2+$(Y,Ce)F_3$).
  - Thorite ($(Th,U)SiO_4$).
  - zircon ($ZrSiO_4$; Figure 9.11).

- The minerals usually occur all together in very close proximity (if not adjacent) and often in the presence of or included in large biotite grains (Figure 9.10).

- Thorite is often found as an inclusion within zircon.

- Columbite can be found as inclusions within iron oxide grains as well as within yttrofluorite grains.

- Cassiterite can be found both as inclusions within yttrofluorite as well as free grains within the matrix.

- Yttrium-free fluorite was also encountered as a single mm-scale clast and had none of the accessory minerals described in the previous text. Therefore, it is possible that different generations of fluorite may occur.

Figure 9.9 Backscattered electron gigapan images of samples PK-23, PK26, PK-30, and PK-36 mounted in epoxy.

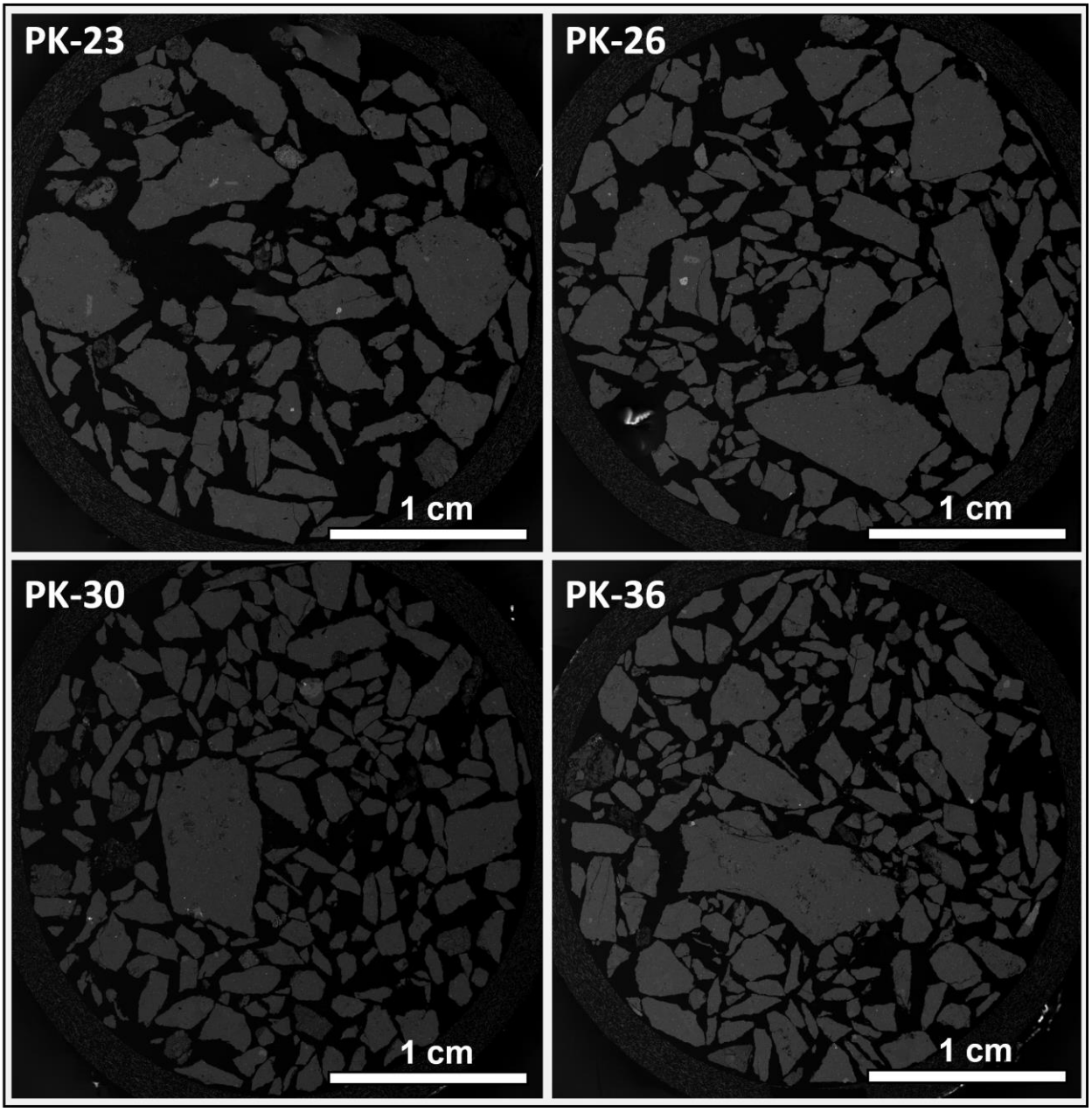


Figure 9.10 Selected BSE image and EDS spectra of sample PK-36 showing iron oxide (spectrum 87), cassiterite (spectrum 88), biotite (spectrum 89), and yttrocerite (spectrum 91).

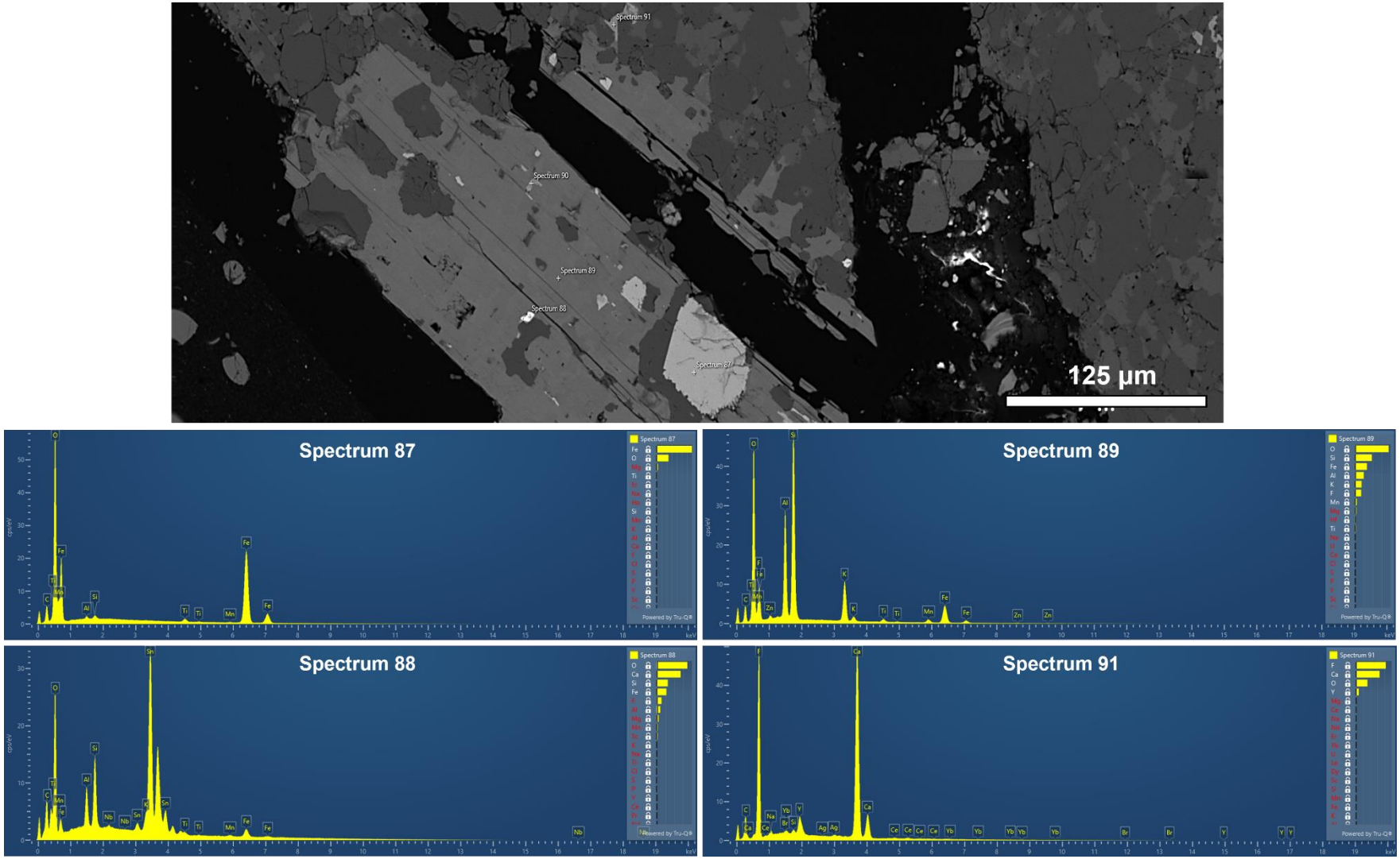


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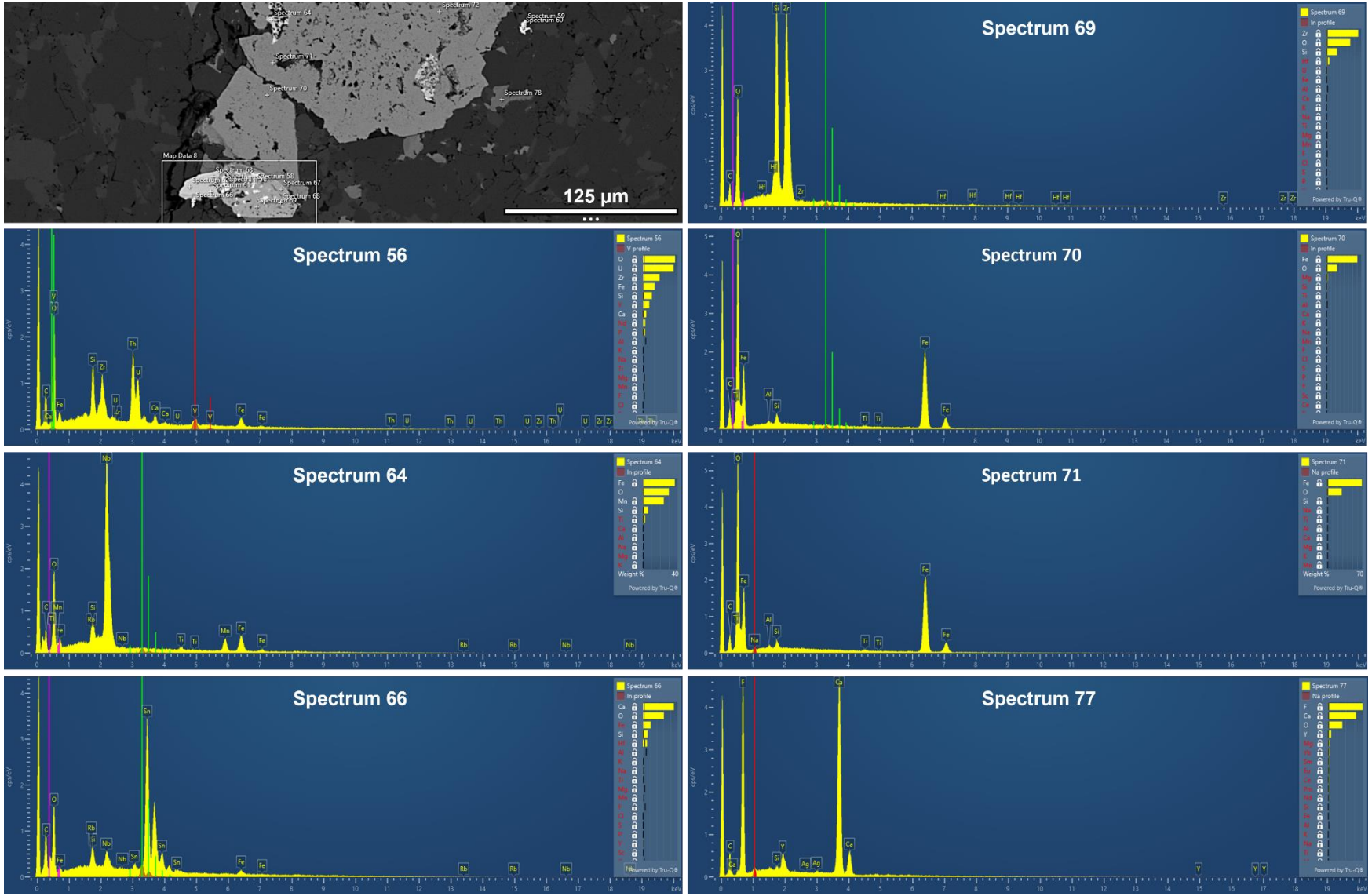
Figure 9.11 Selected BSE image and EDS spectra of sample PK-23 showing thorite (spectrum 56), columbite (spectrum 64), cassiterite (spectrum 66), zircon (spectrum 69), iron oxide (spectra 70 and 71), and yttrofluorite (spectrum 77).



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9.4 Tactical Resources 2022 Volumetric Drone Survey

In 2022, Tactical Resources commissioned Frank X. Spencer and Associates (FXSA) to conduct two unmanned aerial vehicles (UAV), or drone, surveys on the active tailings pile area at the Sierra Blanca Quarry.

FXSA is a full-service civil engineering and survey company, founded in 1979, and based in El Paso, Texas. FXSA team includes Professional Engineers and Professional Land Surveyors licensed in several U.S. states, including Texas.

The first drone survey was intended to assess the actual volume of tailings in the active tailings pile of the Sierra Blanca Quarry. The second drone survey was intended to assess the monthly volume of tailings material being added to the active tailings pile. Therefore, the second survey was scheduled to take place 1 month after the first survey.

9.4.1 First drone survey

The first drone survey of the Peak REE Project's active tailing's pile took place on April 22, 2022. Two flights were planned for redundancy and for securing the best data collected: the first flight was set up as a one single grid north to south and the second one as a double grid north to south – east to west. The survey area and the first flight path are presented in Figure 9.12.

Four control points and five check points were established in the survey area, along with the target positions set at 3 meters intervals (Figure 9.12). The flight target positions were established by acquiring GPS (Global Positioning System) positions and by the VRS (Virtual Reference System) network in Sierra Blanca. Both flights were handled by FXSA company drone and certified 107-pilot, along with a visual observer. The drone used was a Phantom 4 RTK with a D-RTK mobile base station. Air temperature, wind speed, visibility and clear cover were all considered. During the survey, the drone collected orthoimages (for photogrammetry) and Digital Elevation Model (DEM) data. All orthoimages were collected as per "ASPRS Positional Accuracy Standards for Digital Geospatial Data". Both flights were completed as planned, and a post-flight check was performed.

The challenge for this survey was that FXSA did not have an initial starting surface or base surface to determine the tailings infill volumes. Therefore, FXSA did a preliminary work consisting of obtaining a base surface from historical topographic maps of the area. The map that was most suitable for this work was the "Gunsight Hills South, Tex., 1979" topographic map, that has a National Geodetic Vertical Datum of 1929 (NGVD 29). The elevation contours on this map were deemed appropriate to represent the base surface of the Property. Due to the difference between NGVD 29 Datum and the new NAVD 88 Datum used for the survey, FXSA made a conversion shift of 0.52 m upward to match the NAVD-88 Datum. This information was attained by using software tools provided by the U.S. National Geodetic Survey (NGS) and using the computer program VERTCON to obtain the height difference. The results of this topography investigation are presented in

Figure 9.13. FXSA first generated a map displaying the original elevation contours as shown on “Gunsight Hills South, Tex., 1979” topographic map (Figure 9.13A), then a map displaying the elevation contours in the subject area as of April 22, 2022 (Figure 9.13B). The difference in elevation between the surface as of April 22, 2022, and the base surface was subsequently assessed (Figure 9.13C).

Using the difference in elevation between the two surfaces (Figure 9.13C) and the average-end-area method, with a compaction factor of 1.0, FXSA estimated the total volume of the active tailings pile, as of April 22, 2022, to be 427,174 cubic yards (approximately 326,598 m^3) of tailings.

Figure 9.12 FXSA drone survey area and drone flight path at the active tailings pile of Tactical Resources’ Peak REE Project, Sierra Blanca Quarry. The red filled circles represent target positions and constitute altogether the flight path. The blue crosses represent control points and check points.

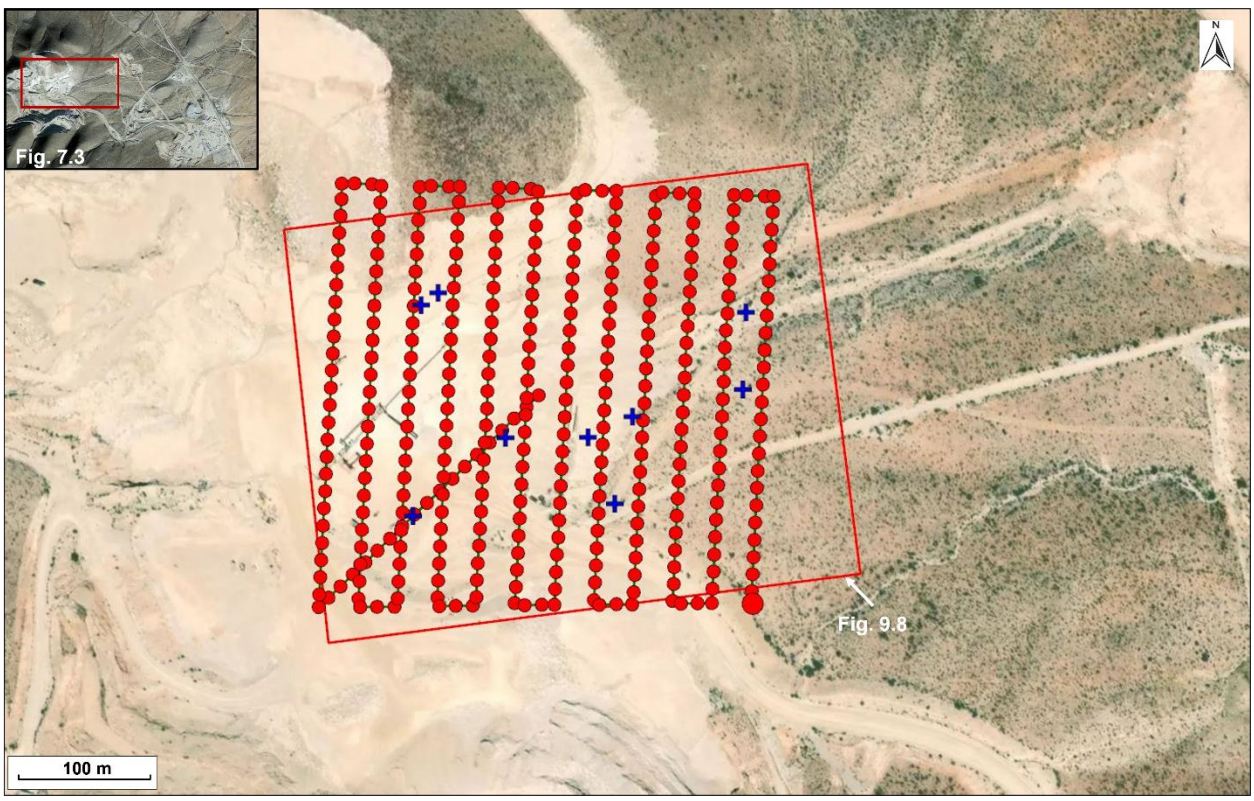
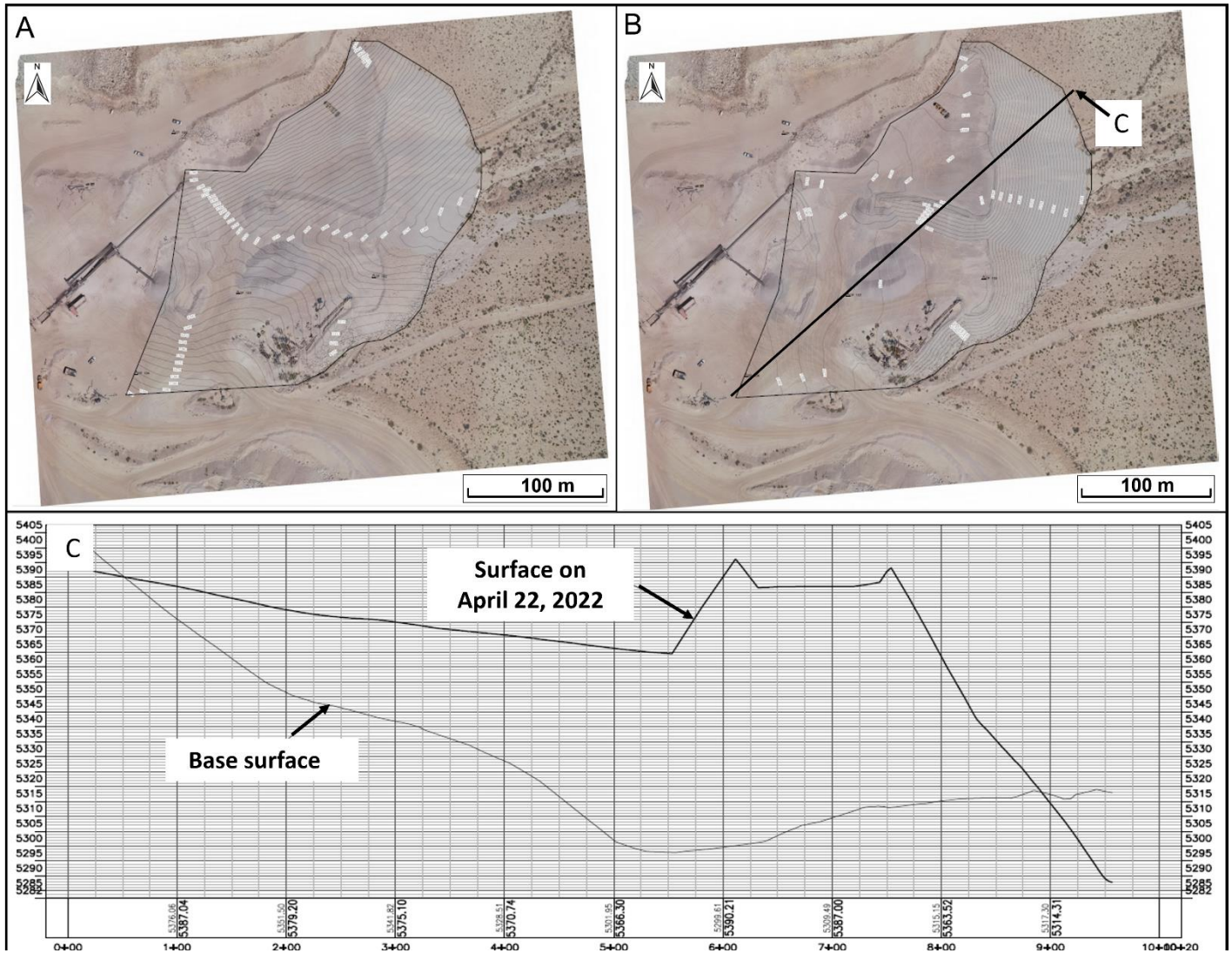


Figure 9.13 FXSA topography investigation results. A/ Original contours created by FXSA and as shown on "Gunsight Hills South, Tex., 1979" topographic map; the black outline represents the general limits of the active tailings pile. B/ Topographic map of the subject area as of April 22, 2022, processed and generated by FXSA. C/ Surface comparison. Elevation in feet. Map location shown on Figure 9.12.



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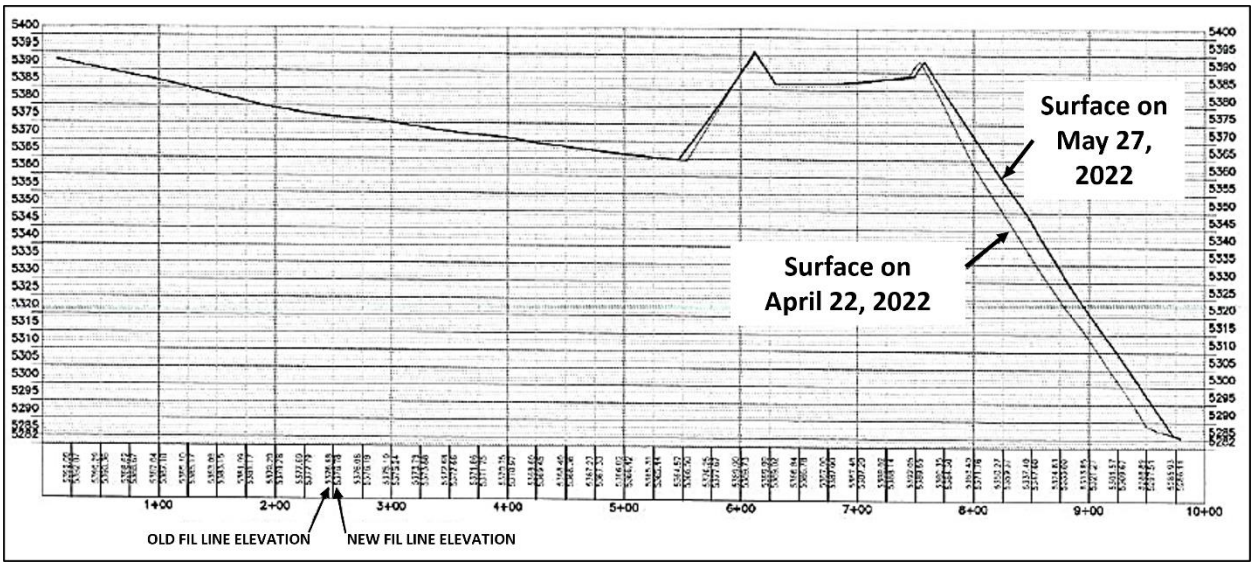
9.4.2 Second drone survey

The second drone survey of the Peak REE Project's active tailings pile took place on May 27, 2022. This survey was intended to assess the monthly volume of tailings material being added to the active tailings pile. Therefore, it took place approximately 1 month after the first survey.

Following the same process as for the first survey, elevation contours as of May 27, 2022, were created by FXSA, and the difference in elevation between the surface as of May 27, 2022, and the surface as of April 22, 2022, was subsequently assessed (Figure 9.14). Using the difference in elevation between the two surfaces and the average-end-area method, with a compaction factor of 1.0, FXSA estimated the total volume of tailings added to the active tailings pile between April 22, 2022, and May 27, 2022, to be 14,780.67 cubic yards (approximately 11,300 m^3).

Figure 9.14 Active tailings pile surface comparison: April 22, 2022, versus May 27, 2022.



10 Drilling

The Issuer, Tactical Resources, has yet to conduct drilling at the Company's Peak REE Project.

Historical drilling within the Sierra Blanca laccolith was completed between 1984 and 1986 by Cabot Corporation (Cabot) and Cyprus Metals Company (Cyprus), initially interested in beryllium mineralization in the Sierra Blanca area (see Section 6.1). Between 1984 and 1985, Cabot conducted 32 reverse circulation rotary drill holes on the north side of the Sierra Blanca laccolith. In 1987, Cyprus, which had entered a joint venture agreement with Cabot, conducted additional drilling programs on the Sierra Blanca

laccolith, targeting shallow veins and fault-controlled beryllium mineralization. However, due to the steep nature of the mountain, the shallow drilling did not adequately test the surface mineralization. Collar locations and assay results for each drill holes were note disclosed by Cabot/Cyprus in the feasibility report prepared by Cyprus in May 1988 for the “Sierra Blanca Beryllium Project” (Cyprus Sierra Blanca, Inc., 1988).

11 Sample Preparation, Analyses and Security

11.1 Sample Collection, Preparation and Security

In 2020, Sortros conducted two sampling programs that resulted in the collection of 7 rock samples from the Sierra Blanca Quarry. The senior author is not aware of the sample collection, preparation, and security procedures used by Sortros.

On June 10 and 11, 2021, Tigren Inc. collected 40 samples (PK-01 through PK-40) on behalf of Tactical Resources. The 40 samples, each weighting 10 to 15 kg, were collected at various locations within the Sierra Blanca Quarry, at the Active Quarry and the Historical Quarry.

The Quarry site and general sample locations were navigated using a handheld Android GPS tablet and samples were collected using a geological hammer and/or a shovel. Fine-grained samples from the historical tailings pile were collected using a shovel at approximately 0–15-inch (0-40 cm) depth, and the other samples were surface samples collected using a geological hammer and/or a shovel.

At each sample location the following information was collected: UTM coordinates and zone, elevation, sample number, sample description, sample approximate grain size, sample depth, and sample picture. All sampling data was recorded in AplineQuest application on an Android GPS tablet. At the end of each sampling day, the samples were laid out and sample numbers were confirmed using the digital tablet data. The samples were then put in rice bags and were driven by the sampler to American Assay Laboratories Inc. in Reno, Nevada, at the end of the sampling program.

During June to August 2022, a metallurgical test program was completed on behalf of Tactical by Kemetco Research in Richmond, BC Canada to assess direct leach amenability, and maximum extraction potential of the rare earth elements and lithium. The 40 Tactical field samples collected in 2021 were composited into 3 ‘Tails’ samples for metallurgical testing.

11.2 Laboratory Accreditations

CVMR and Precilab were independent of Sortros. CVMR is a privately held, metal refining technology provider established in 1986 and based in Toronto, Canada. CVMR is ISO 9001 registered. Precilab is a laboratory founded in 2001 and based in Texas, U.S., that provides chemical analytical services for diverse industries. Precilab is

accredited for ISO/IEC 17025 by A2LA for testing and analysis of chemicals and materials produced and used in the semiconductor and high technology industry.

American Assay Laboratories Inc. (AAL) is independent of Tactical Resources and is a reputable geochemical analytical testing laboratory that was first incorporated in Elko, Nevada in 1987. AAL has thenceforth opened several laboratories in the U.S., Mexico, Uruguay, and Argentina. Its main office is based in Sparks, Nevada, U.S. AAL is accredited to ISO/IEC 17025 by the International Accreditation Service (IAS).

Kemetco Research is a private sector integrated science, technology and innovation company that provides scientific expertise in the fields of specialty analytical chemistry, chemical process, and extractive metallurgy. Kemetco is a member of the Canadian Association for Laboratory Accreditation (CALA) and holds Certificates of Proficiency for several tests.

11.3 Analytical Procedures

11.3.1 Sortros Analytical Procedures

The major element compositions analyzed at Precilab were done by using a handheld Energy Dispersive X-ray Fluorescence (ED XRF).

With respect to Precilab trace element compositions, the 2 samples were powdered, then dissolved following the Aqua Regia Digest method which consists of digesting samples with HNO_3 and HCl, then heating the solution in a water bath for 1.5 hours at 85°C. The solutions were then cooled and analyzed by Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES). A blank and reference material (OREAS 905) were also analyzed for quality assurance-quality control. The results are presented in Section 6, History.

Sample preparation and analytical methods were not disclosed in the report provided by CVMR. It is possible that CVMR did a composite of the 4 samples received from Sortros and performed a single analysis on the resulting single composite sample.

11.3.2 Tactical Resources Analytical Procedures

Tactical Resources' 2021 samples were sent to AAL for four sets of analysis to be performed: due diligence lithium + rare earth elements under the ICP-5AREE internal lab package, multi-elements under the ICP-5AM48 internal lab package, whole rock WD-XRF analysis, and specific gravity.

- For the ICP-5AREE and ICP-5AM48 lab packages (analysis of the REE and other trace elements), the "5 acid digestion ICP-OES+ICP-MS" method was used. In this method, samples are digested with 5 acids (HNO_3, HF, $HClO_4$, HCl and H_3BO_3), then analyzed by Inductively coupled plasma (ICP) - optical emission spectrometry

(OES) or - mass spectrometry (MS). The instruments used to run the analyses are Agilent 700/Agilent5110/Agilent7900/AJ-PQElite+.

Reported elements for the ICP-5AREE analysis include lithium, and the REE lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium.

Reported elements for the ICP-5AM48 analysis include the REE yttrium, lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium, and silver, aluminium, arsenic, barium, beryllium, bismuth, calcium, cadmium, cerium, cobalt, chromium, cesium, iron, gallium, germanium, hafnium, indium, potassium, lithium, magnesium, manganese, molybdenum, sodium, niobium, nickel, phosphorous, lead, rubidium, rhenium, sulfur, antimony, scandium, selenium, tin, strontium, tantalum, tellurium, thorium, titanium, thallium, uranium, vanadium, tungsten, zinc, and zirconium.

- For the Wavelength Dispersive X-Ray Fluorescence (WD-XRF) analysis, samples are prepared as fused beads. To obtain fused beads samples are mixed with lithium borate ($Li_2B_4O_7$) / lithium nitrate ($LiNO_3$) flux in an automatic fusion equipment, then fused in a platinum/gold crucible at 1050 °C and finally poured into platinum/gold mold. The fused beads are then analyzed with a Zetium WD-XRF spectrometer. Reported elements for the whole-rock WD-XRF analysis include: Al_2O_3, BaO, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, SiO_2, SrO, TiO_2, V_2O_5, C and S.

- The specific gravity of samples was investigated using a pycnometer (lab internal method SG-PYC). The specific gravity is the ratio of the mass of unit volume of a sample to the mass of the same volume of water at a stated temperature. In the pycnometer method, a pycnometer (laboratory glass flask/container) is used to make the mass measurements.

  G = [M2-M1] / [(M2-M1) – (M3-M4)],

  where:

  G = Specific Gravity
  M1 = Mass of empty pycnometer
  M2 = Mass of pycnometer r + dry sample
  M3 = Mass of pycnometer + dry sample + water
  M4 = Mass of pycnometer + water

11.3.3 Kemetco Research Analytical Procedures

Samples of Tails 1, Tails 2, and Tails 3 were submitted to Actlabs in Thunderbay, ON, Canada for major elements and REE by whole rock analysis by lithium

metaborate/tetraborate fusion followed by ICP-OES and ICP-MS finish, and for fluoride by ion-selective electrode (ISE). Lithium analysis was conducted by Kemetco Research by aqua-regia digestions followed by ICP-OES. Semi-quantitative x-ray diffraction (XRD) was conducted by the University of British Columbia (UBC), Department of Earth, Ocean and Atmospheric Sciences in Vancouver, BC, Canada.

11.4 Quality Assurance – Quality Control

The QA-QC protocol from Tactical Resources' Peak REE Project 2021 exploration campaign included:

a. For the set of geochemical analyses commissioned by Tigren Inc. on behalf of Tactical Resources
   - Original samples: 40 samples (PK-01 through PK-40).
   - Duplicate samples: 5 samples (PK-09-X, PK-14-X, PK-19-X, PK-29-X, and PK-40-X).
   - Lab blank samples: 2 samples.
   - Lab standard samples: 2 samples (OREAS 905 and OREAS 600b).

b. For the set of geochemical analyses commissioned by Tactical Resources
   - Original samples: 40 samples (PK-01 through PK-40).
   - Duplicate samples: 7 samples (PK-05-X, PK-13-X, PK-15 dup, PK-19-X, PK-27-X, PK-34-X, and PK-38-X).
   - Blind blank samples: 2 samples (PK-41 and PK-43, corresponding to OREAS Silica Blanks).
   - Blind standard samples: 1 sample (PK-42, corresponding to OREAS 461)
   - Lab blank samples: 2 samples.
   - Lab standard samples: 3 samples (OREAS 905, OREAS 600b, and OREAS 602b).

c. For the set of whole-rock WD-XRF analyses commissioned by Tactical Resources
   - Original samples: 20 samples.
   - Duplicate samples: 4 samples (PK-03-X, PK-08 dup, PK-26-X, and PK-30-X).
   - Blind blank samples: 2 samples (PK-44 and PK-46, corresponding to OREAS Silica Blanks).
   - Blind standard samples: 1 sample (PK-45, corresponding to OREAS 463)
   - Lab blank samples: 1 sample.
   - Lab standard samples: 4 samples (OREAS 906, OREAS 907, OREAS 62, and NBM-1).

d. For the specific gravity analyses commissioned by Tactical Resources
   - Original samples: 40 samples (PK-01 through PK-40).
   - Duplicate samples: 1 sample (PK-15 dup).
   - Blind blank samples: 2 samples (PK-41 and PK-43, corresponding to OREAS Silica Blanks).

- Blind standard samples: 1 sample (PK-42, corresponding to OREAS 461).

Blind blanks and blind standards were inserted alternating every 10th original sample. Lab blanks and standards were randomly inserted in the sample stream.

11.4.1 Results of Duplicate Samples

A total of 17 duplicate samples were analyzed at AAL: 5 samples for the due diligence geochemical analyses, 7 samples for the second set of geochemical analyses, 4 samples for whole-rock WD-XRF analyses, and 1 sample for the specific gravity analysis.

The analytical results for the:

- Duplicate pairs are presented in Table 11.1 (due diligence geochemical analyses),
- Second set of geochemical analyses (Table 11.2).
- Whole-rock WD-XRF analyses (Table 11.3).
- Specific gravity analysis (Table 11.4).

There is good data quality as depicted by the low relative standard deviation (RSD) percentage values that mostly range between 0 and 4%, 0 and 2.5%, 0 and 1%, and 9.9% respectively.

11.4.2 Results of Blind Blank Samples

4 blind blank samples were analyzed at AAL for QA-QC protocol related to trace/major element geochemical analyses. These blank samples, composed of nearly pure silica sand (OREAS Coarse Silica Blank Material), were inserted as blind samples into the sample stream, and yielded 98.1 and 98.4 weight% SiO_2 for PK-44 and PK-46 respectively which is an accurate result, and trace elements concentrations for PK-41 and PK-43 in accordance with the certified values (Table 11.5).

11.4.3 Results of Blind Standard Samples

Two blind standard samples were analyzed at AAL for QA-QC protocol related to trace/major element geochemical analyses. These standard samples consisted of sample PK-42 corresponding to the certified reference material OREAS 461, and sample PK-45 corresponding to the certified reference material OREAS 463. The RSD of the standard sample analysis and the certified OREAS result is between 0.1 and 7.4% (Table 11.6) and between 0.3 and 8.9% (Table 11.7) respectively. The analytical results of samples PK-42 and PK-45 mostly plot within 2 standard deviations of the OREAS certified results (Figures 11.1 and 11.2), indicative of good data quality.

Table 11.1. Comparison of duplicate samples from Tigren Inc./Tactical Resources' 2021 geochemical analysis. Element concentrations in ppm.

Sample ID	Sample Type	Lab	Li	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
PK-09	Original	AAL	198.2	12.4	37.6	6.7	20.6	9	0.1	6.3	1.4	13.7	3.8	7.9	2.7	26.2	3.2
PK-09-X	Duplicate	AAL	191.2	12.4	37.6	6.3	20.3	8.9	0.1	6.1	1.3	13.4	3.7	7.6	2.6	25.7	3.1
		Average	194.7	12.4	37.6	6.5	20.5	9.0	0.1	6.2	1.4	13.6	3.8	7.8	2.7	26.0	3.2
	Standard deviation		4.9	0.0	0.0	0.3	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.4	0.1
		RSD%	2.5	0.0	0.0	4.4	1.0	0.8	0.0	2.3	5.2	1.6	1.9	2.7	2.7	1.4	2.2
PK-14	Original	AAL	205.2	11.4	36.1	6.6	20.1	9	0.1	6	0.8	13.1	3.7	7.6	2.7	25.6	3.2
PK-14-X	Duplicate	AAL	207.2	11.9	37.1	6.5	20.4	9.2	<0.1	6.3	1	13.3	3.7	7.7	2.7	26.6	3.1
		Average	206.2	11.7	36.6	6.6	20.3	9.1	N/A	6.2	0.9	13.2	3.7	7.7	2.7	26.1	3.2
	Standard deviation		1.4	0.4	0.7	0.1	0.2	0.1	N/A	0.2	0.1	0.1	0.0	0.1	0.0	0.7	0.1
		RSD%	0.7	3.0	1.9	1.1	1.0	1.6	N/A	3.4	15.7	1.1	0.0	0.9	0.0	2.7	2.2
PK-19	Original	AAL	201.5	11.8	35.9	6.7	21	9.5	<0.1	6.4	0.9	13.8	4	8.1	2.8	27.2	3.4
PK-19-X	Duplicate	AAL	203.7	11.9	36.5	6.8	20.8	9.3	<0.1	6.5	1	13.8	4	8.1	2.8	27.6	3.4
		Average	202.6	11.9	36.2	6.8	20.9	9.4	N/A	6.5	1.0	13.8	4.0	8.1	2.8	27.4	3.4
	Standard deviation		1.6	0.1	0.4	0.1	0.1	0.1	N/A	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.0
		RSD%	0.8	0.6	1.2	1.0	0.7	1.5	N/A	1.1	7.4	0.0	0.0	0.0	0.0	1.0	0.0
PK-29	Original	AAL	218	12.8	36.8	7	21.2	9.1	<0.1	6.4	0.9	13.6	3.7	8	2.6	26.4	3.1
PK-29-X	Duplicate	AAL	216	12.6	36.4	6.9	20.8	9.1	0.1	6.2	1.2	13.5	3.7	7.9	2.6	26.1	3.1
		Average	217.0	12.7	36.6	7.0	21.0	9.1	N/A	6.3	1.1	13.6	3.7	8.0	2.6	26.3	3.1
	Standard deviation		1.4	0.1	0.3	0.1	0.3	0.0	N/A	0.1	0.2	0.1	0.0	0.1	0.0	0.2	0.0
		RSD%	0.7	1.1	0.8	1.0	1.3	0.0	N/A	2.2	20.2	0.5	0.0	0.9	0.0	0.8	0.0
PK-40	Original	AAL	199	11.3	38	6.8	20.5	9.2	<0.1	6.3	0.8	13.7	3.8	8	2.8	27.7	3.2
PK-40-X	Duplicate	AAL	201.3	11.6	38.6	6.9	20.6	9.3	<0.1	6.4	0.8	13.9	3.7	8	2.7	28	3.1
		Average	200.2	11.5	38.3	6.9	20.6	9.3	N/A	6.4	0.8	13.8	3.8	8.0	2.8	27.9	3.2
	Standard deviation		1.6	0.2	0.4	0.1	0.1	0.1	N/A	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.1
		RSD%	0.8	1.9	1.1	1.0	0.3	0.8	N/A	1.1	0.0	1.0	1.9	0.0	2.6	0.8	2.2

Table 11.2. Comparison of duplicate samples from Tactical Resources' 2021 geochemical analysis. Element concentrations in ppm.

Sample ID	Sample Type	Lab	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
PK-05	Original	AAL	169.90	10.74	32.10	5.00	19.30	7.20	<0.1	6.60	0.30	14.90	3.40	11.70	2.50	19.40	2.20
PK-05 - X	Duplicate	AAL	171.20	10.95	32.40	5.00	19.30	7.20	<0.1	6.60	0.40	15.00	3.50	11.80	2.50	19.50	2.20
		Average	170.6	10.8	32.3	5.0	19.3	7.2	N/A	6.6	0.4	15.0	3.5	11.8	2.5	19.5	2.2
		Standard deviation	0.9	0.1	0.2	0.0	0.0	0.0	N/A	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0
		RSD%	0.54	1.37	0.66	0.00	0.00	0.00	N/A	0.00	20.20	0.47	2.05	0.60	0.00	0.36	0.00
PK-13	Original	AAL	167.80	11.57	34.80	5.40	21.00	7.50	<0.1	6.80	0.40	15.10	3.50	12.00	2.60	20.40	2.30
PK-13-X	Duplicate	AAL	168.20	11.47	34.80	5.40	20.70	7.50	<0.1	6.80	0.40	15.10	3.40	11.90	2.60	20.10	2.30
		Average	168.0	11.5	34.8	5.4	20.9	7.5	N/A	6.8	0.4	15.1	3.5	12.0	2.6	20.3	2.3
		Standard deviation	0.3	0.1	0.0	0.0	0.2	0.0	N/A	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.0
		RSD%	0.17	0.61	0.00	0.00	1.02	0.00	N/A	0.00	0.00	0.00	2.05	0.59	0.00	1.05	0.00
PK-15	Original	AAL	165.30	11.18	34.10	5.30	20.30	7.50	<0.1	6.70	0.40	14.90	3.40	11.70	2.50	20.00	2.30
PK-15 dup	Duplicate	AAL	167.80	11.58	34.70	5.40	20.70	7.50	<0.1	6.80	0.30	15.10	3.50	11.80	2.50	20.10	2.30
		Average	166.6	11.4	34.4	5.4	20.5	7.5	N/A	6.8	0.4	15.0	3.5	11.8	2.5	20.1	2.3
		Standard deviation	1.8	0.3	0.4	0.1	0.3	0.0	N/A	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0
		RSD%	1.1	2.5	1.2	1.3	1.4	0.0	N/A	1.0	20.2	0.9	2.0	0.6	0.0	0.4	0.0
PK-19	Original	AAL	175.40	11.58	35.40	5.40	20.80	7.60	<0.1	6.90	0.50	15.40	3.50	12.10	2.60	20.20	2.30
PK-19-X	Duplicate	AAL	174.00	11.68	35.30	5.40	20.70	7.60	<0.1	6.90	0.50	15.20	3.50	12.10	2.60	20.20	2.30
		Average	174.7	11.6	35.4	5.4	20.8	7.6	N/A	6.9	0.5	15.3	3.5	12.1	2.6	20.2	2.3
		Standard deviation	1.0	0.1	0.1	0.0	0.1	0.0	N/A	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
		RSD%	0.6	0.6	0.2	0.0	0.3	0.0	N/A	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
PK-27	Original	AAL	169.20	12.22	35.00	5.30	20.50	7.40	<0.1	6.70	0.70	15.00	3.40	11.70	2.50	19.60	2.20
PK-27-X	Duplicate	AAL	168.70	12.25	34.80	5.20	20.20	7.30	<0.1	6.60	0.50	14.80	3.40	11.60	2.50	19.30	2.20
		Average	169.0	12.2	34.9	5.3	20.4	7.4	N/A	6.7	0.6	14.9	3.4	11.7	2.5	19.5	2.2
		Standard deviation	0.4	0.0	0.1	0.1	0.2	0.1	N/A	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.0
		RSD%	0.2	0.2	0.4	1.3	1.0	1.0	N/A	1.1	23.6	0.9	0.0	0.6	0.0	1.1	0.0
PK-34	Original	AAL	172.20	12.01	35.40	5.30	20.40	7.40	<0.1	6.80	0.50	15.20	3.50	11.90	2.60	19.90	2.30
PK-34-X	Duplicate	AAL	173.50	12.11	35.50	5.40	20.80	7.40	<0.1	6.80	0.40	15.10	3.50	12.00	2.60	20.10	2.30
		Average	172.9	12.1	35.5	5.4	20.6	7.4	N/A	6.8	0.5	15.2	3.5	12.0	2.6	20.0	2.3
		Standard deviation	0.9	0.1	0.1	0.1	0.3	0.0	N/A	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0
		RSD%	0.5	0.6	0.2	1.3	1.4	0.0	N/A	0.0	15.7	0.5	0.0	0.6	0.0	0.7	0.0
PK-38	Original	AAL	164.20	12.46	35.80	5.30	20.50	7.20	<0.1	6.60	0.50	14.70	3.40	11.40	2.40	18.80	2.10
PK-38-X	Duplicate	AAL	164.40	12.50	35.80	5.40	20.70	7.40	<0.1	6.70	0.70	14.70	3.30	11.40	2.40	18.80	2.10
		Average	164.3	12.5	35.8	5.4	20.6	7.3	N/A	6.7	0.6	14.7	3.4	11.4	2.4	18.8	2.1
		Standard deviation	0.1	0.0	0.0	0.1	0.1	0.1	N/A	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
		RSD%	0.09	0.23	0.00	1.32	0.69	1.94	N/A	1.06	23.57	0.00	2.11	0.00	0.00	0.00	0.00

Table 11.3. Comparison of duplicate samples from Tactical Resources' 2021 whole-rock WD-XRF analysis. Oxide concentrations in wt. %.

Sample ID	Sample Type	Lab	Al_2O_3	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	SiO_2	TiO_2
PK-03	Original	AAL	13.68	0.63	0.03	0.96	4.11	0.03	0.06	4.79	74.26	0.01
PK-03-X	Duplicate	AAL	13.63	0.62	0.03	1.08	4.11	0.03	0.06	4.79	74.2	0.02
		Average	13.7	0.6	0.0	1.0	4.1	0.0	0.1	4.8	74.2	0.0
	Standard deviation		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
		RSD%	0.3	1.1	0.0	8.3	0.0	0.0	0.0	0.0	0.1	47.1
PK-08	Original	AAL	13.82	0.97	0.02	1.18	4.02	0.15	0.07	4.69	73.3	0.04
PK-08dup	Duplicate	AAL	13.78	0.97	0.02	1.18	4.03	0.16	0.07	4.7	73.03	0.04
		Average	13.8	1.0	0.0	1.2	4.0	0.2	0.1	4.7	73.2	0.0
	Standard deviation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
		RSD%	0.2	0.0	0.0	0.0	0.2	4.6	0.0	0.2	0.3	0.0
PK-26	Original	AAL	13.36	1.67	0.03	1.09	3.95	0.24	0.06	4.56	72.24	0.02
PK-26-X	Duplicate	AAL	13.33	1.67	0.03	1.09	3.96	0.24	0.06	4.58	72.48	0.02
		Average	13.3	1.7	0.0	1.1	4.0	0.2	0.1	4.6	72.4	0.0
	Standard deviation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
		RSD%	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.2	0.0
PK-30	Original	AAL	13.2	2.16	0.02	1.23	3.84	0.34	0.06	4.44	71.61	0.04
PK-30-X	Duplicate	AAL	13.21	2.15	0.02	1.17	3.84	0.34	0.06	4.47	71.61	0.03
		Average	13.2	2.2	0.0	1.2	3.8	0.3	0.1	4.5	71.6	0.0
	Standard deviation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		RSD%	0.1	0.3	0.0	3.5	0.0	0.0	0.0	0.5	0.0	20.2

Table 11.4. Comparison of duplicate samples from Tactical Resources' 2021 specific gravity analysis.

Sample ID	Sample Type	Lab	Specific Gravity (g/cm^3)
PK-15	Original	AAL	2.45
PK-15 dup	Duplicate	AAL	2.13
		Average	2.3
		Standard deviation	0.2
		RSD%	9.9

Table 11.5. Results of blind blank samples selected trace elements concentration (in ppm) and comparison with certified values.

Sample ID	Lab	Ag	As	Ba	Be	Cr	Mo	Ni	P	Pb	Sb	Sc
PK-41	AAL	0.06	1.00	30.00	0.12	2.60	0.10	3.10	43.00	4.00	0.21	0.48
PK-43	AAL	0.06	0.60	15.00	0.08	2.50	0.10	3.60	29.00	4.00	0.29	0.27
	OREAS Certified Upper Limit	**1.00**	**5.00**	**50.00**	**2.50**	**5.00**	**5.00**	**5.00**	**50.00**	**10.00**	**10.00**	**5.00**

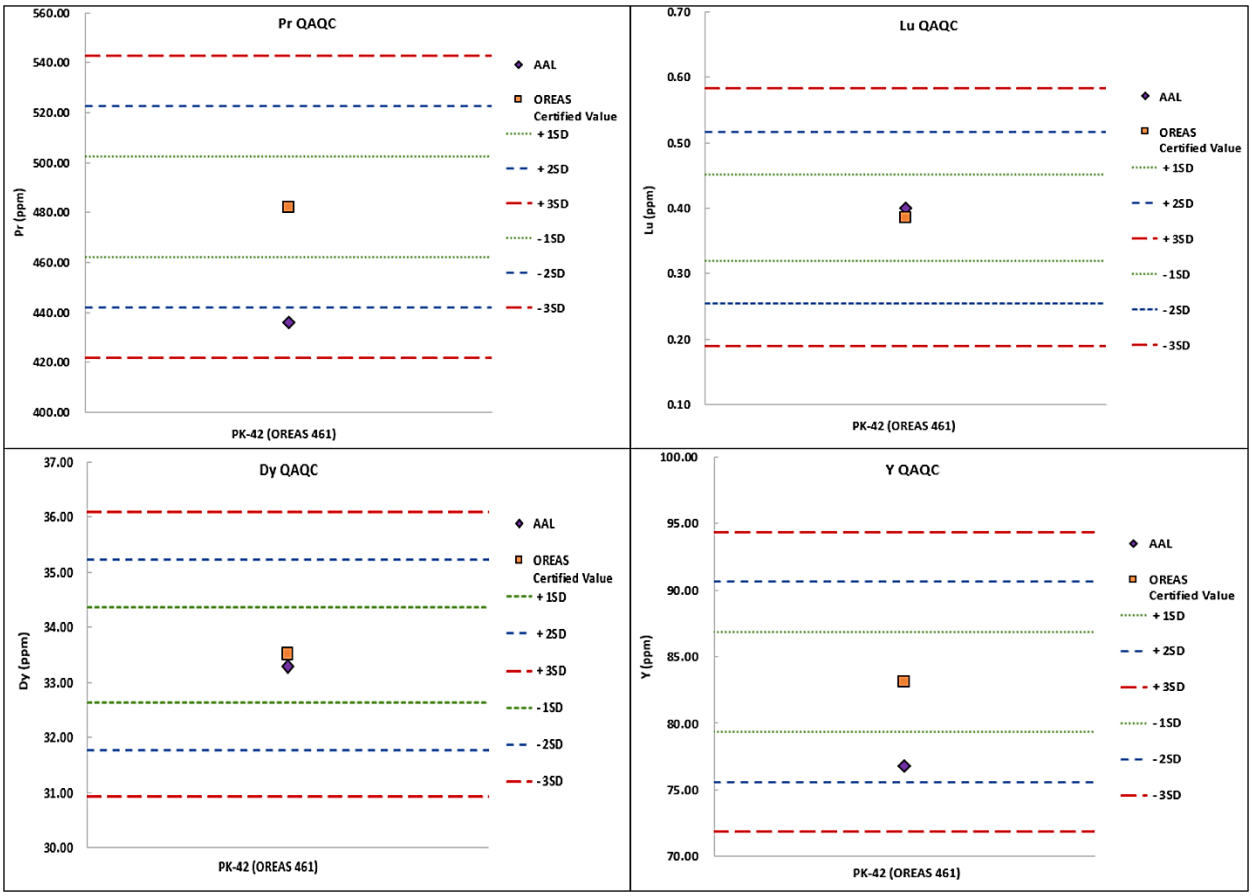
Table 11.6. Analytical results for blind standard PK-42 (OREAS 461) and comparison with certified results.

Sample ID	Sample type	Standard ID	Lab	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
PK-42	Blind Standard	OREAS 461	AAL	76.8	>1000	>1000	436.1	>1000	192.9	42.9	98.5	9.5	33.3	4.1	7.4	0.7	3.2	0.4
			Oreas 461 Certified Value	83.1	2,476.5	3,508.5	482.3	1,623.5	208.2	47.6	97.6	9.1	33.5	4.1	7.5	0.7	3.1	0.4
			Average	79.9	2,476.5	3,508.5	459.2	1,623.5	200.6	45.3	98.0	9.3	33.4	4.1	7.4	0.7	3.1	0.4
			Standard deviation	4.5	N/A	N/A	32.7	N/A	10.8	3.4	0.6	0.3	0.1	0.0	0.0	0.0	0.1	0.0
			RSD%	5.6	N/A	N/A	7.1	N/A	5.4	7.4	0.7	3.1	0.4	0.7	0.6	0.1	3.1	2.5

Table 11.7. Analytical results for blind standard PK-45 (OREAS 463) and comparison with certified results.

Sample ID	Sample type	Standard ID	Lab	Al_2O_3	BaO	CaO	Cr_2O_3	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5	SiO_2	SrO	TiO_2	V_2O_5
PK-45	Blind Standard	OREAS 463	AAL	10.69	0.14	1.88	0.08	50.2	0.14	1.77	0.17	<0.01	1.36	26.91	0.12	3.16	0.07
			Oreas 463 Certified Value	10.64	0.12	1.71	0.08	49.29	0.14	1.70	0.16	0.23	1.45	27.50	0.11	3.21	0.06
			Average	10.7	0.1	1.8	0.1	49.7	0.1	1.7	0.2	0.2	1.4	27.2	0.1	3.2	0.1
			Standard deviation	0.0	0.0	0.1	0.0	0.6	0.0	0.0	0.0	N/A	0.1	0.4	0.0	0.0	0.0
			RSD%	0.3	8.9	6.7	3.3	1.3	1.5	2.9	6.1	N/A	4.5	1.5	3.9	1.1	6.0

Figure 11.1. Selected analytical results for blind standard PK-42 (OREAS 461).

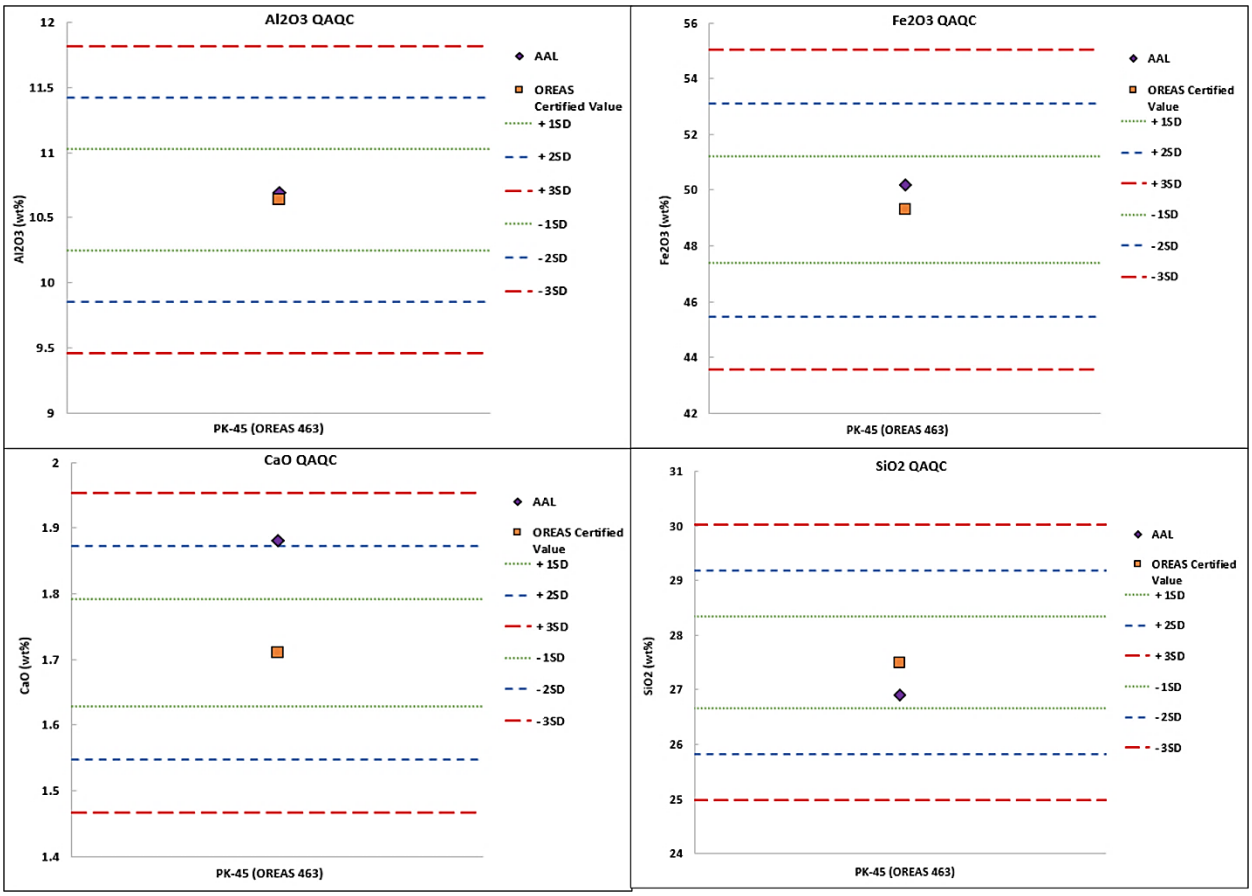


11.4.4 Adequacy of Sample Collection, Preparation, Security and Analytical Procedures

Due to the limited number of historical samples collected by Sortros and analyzed at Precilab and CVMR, it is the QP's opinion that the data cannot be reasonably assessed due to the lack of information pertaining to the analytical procedure and the potential use of QA-QC procedures.

With respect to the Tactical Resources 2021 exploration program, the QP has reviewed the adequacy of the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data. The work conducted was completed using an independent, accredited laboratory and reasonable REE standard sampling practices, QA-QC protocols, and analytical methods. The QA-QC results of the subsequent are of good quality. The QP is therefore satisfied with the adequacy of the sample preparation, security, and analytical procedures as implemented by Tactical Resources and American Assay Laboratories Inc.

Figure 11.2. Selected analytical results for blind standard PK-45 (OREAS 463).



12 Data Verification

12.1 Data Verification Procedures

Tactical Resources Peak REE Project is an early-stage exploration project, and the intent of this technical report is to present a geological introduction to the project. The primary datasets involve 1) historical and current tailing's sample collection and analytical/mineralogical work, and 2) current UAV drone aerial surveys as a preliminary step in defining the tailing's material stockpiles. The current work was conducted by Tactical Resources during 2021 and 2022.

12.1.1 Historical Datasets

The QP received a copy of historical (2020) Sortros analytical work from Tactical Resources management team during the onset of report preparation (May 2022). The historical geochemical analytical work includes a limited number of historical samples that were collected by Sortros and analyzed at Precilab and CVMR laboratories. Apart from sample locations, the QP cites a general lack of information related to the sample

collection, sample preparation, security, and analytical procedures as part of the historical Sortros work. For example,

- The QP reviewed a “REE preliminary test result” report that was prepared by CVMR. It is evident within the report that CVMR received 4 separate samples from Sortros; however, CVMR reports only a single analytical sample result, and it is not clear on whether the 4 samples were amalgamated, or how they were amalgamated, into a single composite sample.

- The CVMR samples were reportedly tested to gauge their reaction to various reagents (chemical) and physical factors such as heat, pressure, and length of residency time in the Floatation Columns; however, the detail of the test work, including None of the ICP MS, XRD, SEM data, are not presented in the CVMR report (see Section 13).

- The CVMR report is essentially a proposal for further work.

- With respect to the Precilab data, the QP reviewed Excel spreadsheets in which REE analytical results were reported by ICP-OES using an aqua regia digest. The minimum limits of detection for each element are provided. Laboratory Certificates were not provided for the Precilab analytical work.

- The CVMR and Precilab REE data yield a sporadic chondrite normalized spider plot, in which the QP notes that there are few similarities in the resulting REE profiles from the CVMR and Precilab datasets.

- The Precilab whole rock data utilized a handheld XRF, and the analytical results are therefore considered semi-quantitative analytical results by the QP.

- The locations of the tailing’s material samples collected by Sortros were culled from a memorandum with figures that was prepared by Peak 6891 (i.e., Sortros) and presented to Tactical Resources as a Sierra Blanca Tailings Pile Evaluation memorandum.

Due to the limited number of historical samples collected by Sortros, lack of metadata, lack of QA-QC work, lack of data REE analytical results compatibility, it is the QP’s opinion that the Precilab and CVMR analyzed data cannot be reasonably assessed due to the lack of information pertaining to the analytical procedure and the inhomogeneous nature of the analytical results. These data should not be utilized as part of future work conducted by Tactical Resources, including any potential mineral resource estimations.

12.1.2 Tactical Resources Datasets

The QP received a detailed sampling procedure Word file from Tactical Resources management team during the onset of report preparation (May 2022). At each sample location the following information was collected and recorded including UTM location and

elevation, sample ID, description of the sample, approximate grain size of sample, depth of sample, and a picture of sample. QA-QC work included blind blanks and standards that were inserted every 10th sample.

The analytical work was also detailed, and Tactical Resource presented Laboratory Certificates and Excel electronic copies of the data to the QP. This information level was included for both the Tigren analytical batch 1 analytical work and the Tactical Resources analytical batch 2 analytical work.

The QP reviewed the 40-sample analytical data results by comparing Excel data spreadsheets in conjunction with the Laboratory Certificates. There were no errors in the electronic datasets.

To conclude, the QP has reviewed the adequacy of the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data. The work conducted was completed using an independent, accredited laboratory and reasonable REE standard sampling practices, QA-QC protocols, and analytical methods.

The QP has added confidence in the current analytical datasets based on the review of the adequacy of the sample preparation, security, and analytical procedures as implemented by Tactical Resources and American Assay Laboratories Inc. It is the QPs opinion that the Tactical Resources datasets were adequately validated, and that the data are reasonable for presentation within this geological introduction technical report, and any future mineral resource modelling and estimations.

With respect to mineralogical work, the QP received emails, backscattered electron image montages, EDS spectra data, and elemental map data via Dr. Omero Felipe Orlandini, Director of DGS Geomaterials Characterization, and Imaging Facility (GeoMatCI) Jackson School of Geosciences, UT Austin in May 2022. The QP has reviewed the information and concludes that the BSE gigapan imaging and EDS spectra were produced in a university laboratory by staff with post-secondary degrees and therefore represent reasonable results that were prepared using standard approaches to mineralogical determination studies.

Copies of the UAV surveys prepared by Frank X. Spencer & Associates Inc. were presented to the QP by the Tactical Resources management team in May and June 2022. The Orthoimage and DEM (Digital Elevation Model) studies utilized Quadrangle maps that were converted from the NGVD-29 Datum to the vertical NAVD-88 Datum to predict initial surfaces in the Quarry area. The flight crew procedure established 4 control points and 5 check points. The QP has reviewed the UAV surveys, which were prepared by State of Texas Registered Land Surveyors and concludes that the surveys provide valid information related to the position and lateral scale of the tailing's material stockpiles at the Sierra Blanca Quarry. The information can be used in any potential future mineral resource modelling exercise subject to vertical confirmation of the tailing's piles by drill programs carried out by Tactical Resources.

12.2 Qualified Person Site Inspection

On June 11, 2022, Roy Eccles P. Geol. visited the Peak REE Project in Sierra Blanca, Texas on behalf of Tactical Resources. The intent of the visit was to conduct a QP site inspection of Sierra Blanca Quarry and associated tailing's material stockpiles in accordance with NI 43-101.

12.2.1 Validation of Active Workings at the Sierra Blanca Quarry and Peak Property

The mine site is situated on the Sierra Blanca upland domal feature that forms a topographic high because of the resistive nature of the rhyolite in comparison to the surrounding stratigraphy. The active mine site area is on the northeast corner of the upland dome and encompasses an area of approximately 0.4 miles (0.65 km) by 0.45 miles (0.75 km). The crush rock railway ballast mine process was designed by the operators (Sierra Blanca Quarry LLC) and is summarized as follows:

- The rhyolite is extracted via a side access mining along the semi-vertical margins of the rhyolite dome by descaling the rhyolite using a conventional excavator.

- Large rhyolite boulders are further broken using either the excavator or a front-end loader. A front-end loader loads the broken rhyolite into a heavy hauler that is hauled a short distance to the primary crusher.

- The crusher operation consists of a primary crusher and a cone crusher. A control centre is situated above crushers and includes an operator that maintains the crushing operation. Once loaded into the crushing line, the material is transported via a network of conveyor belts.

- Tailings fines are extracted from the cone crusher while railway ballast size crush is conveyed to a wash plant.

- The crush is washed, tailings fines are extracted a second time, and the railway ballast size crush is stockpiled for loading at the railway trunk line.

During the QP site inspection, Mr. K. Walker of Sierra Blanca Quarry LLC toured the QP to critical mine sites from excavation through to rail loading. The operation was running smoothly at all inspection points and the QP observed the stated normal production volumes of 350 tons/hour (Mr. K. Walker, pers. comm, 2022). These volumes are reasonable given the ease of the mining operation. Tailings material was actively being generated at most of the inspection points, including:

- At the mine face because of the brittle nature of the rhyolite.

- As undersized crusher material is separated within the cone crusher.

- As undersized material is separated within the wash plant.

12.2.2 Geological Characteristics

The Sierra Blanca Quarry rhyolite unit vastly encompasses the Sierra Blanca dome at the mine site and is composed of leucocratic, aphanitic to porphyritic rhyolite. The surface of the rhyolite is either pinkish grey to grey, or pale orange, in colour with minor to moderately iron oxidized alteration occurring on some fracture surfaces. The rhyolites brittle nature is accentuated by the unit's blocky texture and irregular and conchoidal fracture surfaces; possibly a function of the evolved nature of the rhyolite and Laramide deformation (thrusting and folding).

Inspection of rhyolite hand samples by the QP show that quartz is the most abundant mineral and constitutes approximately 60% of the rhyolite, followed by approximately 35% feldspar (dominantly albite) and about 5% biotite. Previously documented trace minerals in the Sierra Blanca laccolith include magnetite, hematite, zircon, bastnaesite, cassiterite, columbite, priorite, xenotime, and yttrocerite-yttrofluorite (Rubin et al., 1987).

The tailings stockpile dumps are situated throughout the mine area and form as either topographic highs or infill in previously mined out areas (e.g., Cyprus Mining quarry workings). Notable tailings locations as observed by the QP are located on the eastern side of the current Sierra Blanca Quarry mine site (Figure 12.1), the old Cyprus Mining quarry workings, and in the lower rail yard area adjacent to the wash plant.

Figure 12.1 Tailings pile on the eastern side of the Sierra Blanca Quarry mine site.

Depending on the location of the tailing pile within the mine site, the tailings consist of uniformly less than ¾" chips of 'coarse' discard material (e.g., tailings off the cone crusher) through to powdered or muddy slurry's (e.g., beneath the wash plant tailings). The QP notes that regardless of the generation age of the tailings, the rhyolite maintains its original physical appearance (i.e., does not further oxidize or alter with time). This non-alteration observation is likely a function of the hot, dry climate at Sierra Blanca.

12.2.3 Validation of Mineralization

To verify the REE mineralization in the tailing's material at the Sierra Blanca Quarry, the QP independently collected a total of 8 samples. The location and description of the QP samples are presented in Table 12.1 and Figure 12.2.

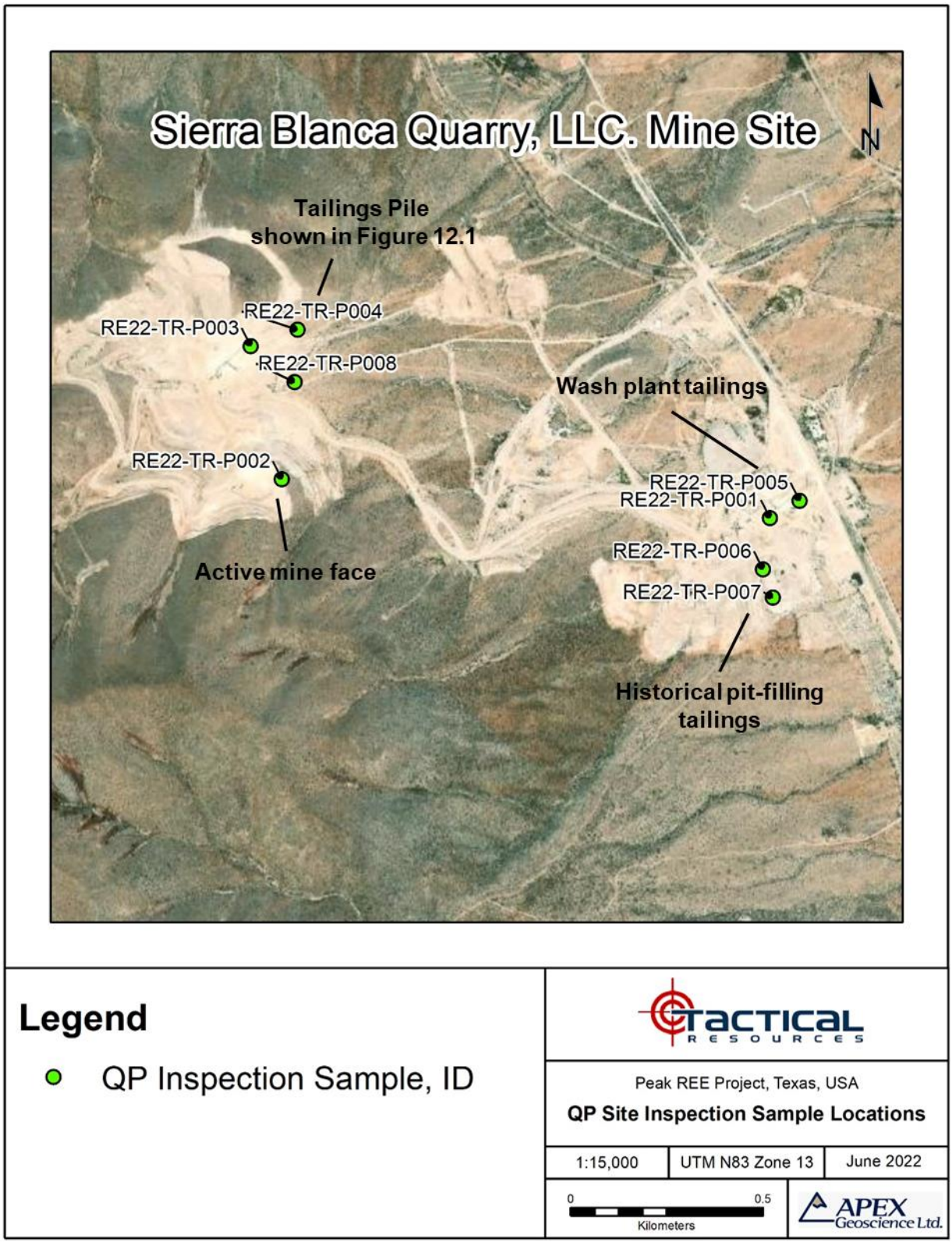
Table 12.1 Description of the Qualified Person sample locations.

Sample ID	Sample media	Easting	Northing	General description
RE22-TR-P001	Tailings	460924	3457981	Wash plant tailing chip samples
RE22-TR-P002	Rhyolite	459655	3458082	Active mine face brittle, grey rhyolite; various sized rock fragments
RE22-TR-P003	Tailings	459574	3458428	Cone crusher tailing chip samples
RE22-TR-P004	Tailings	459696	3458471	Tailing chips from the top of the large eastern stockpile
RE22-TR-P005	Tailings	461001	3458026	Fine sludge tailings from under the wash plant
RE22-TR-P006	Tailings	460906	3457848	Original tailings (pre-2007) from Cypress Mining Company
RE22-TR-P007	Tailings	460931	3457775	Original tailings (pre-2007) from Cypress Mining Company
RE22-TR-P008	Tailings	459688	3458335	Powdery tailings taken from base of large eastern stockpile

The QP couriered the samples to ALS Geochemistry Reno on June 11, 2022 (who then couriered the samples to ALS Vancouver, BC for analysis). The samples were analyzed using ALS's combined analytical package (ALS Code CCP-PKG01) which includes: 1) ICP-ASE whole rock (ME-ICP06); 2) ICP-MS by Lithium Borate Fusion (ME-MS81); 3) ICP-MS by Aqua Regia for Volatile Trace Elements (ME-MS42); 4) ICP-AES Base Metals by 4-Acid Digestion (ME-4ACD81); and 5) LECO Total Carbon and Sulphur by Combustion Analysis (C-IR07 and S-IR08).

It is the QPs opinion that the ICP-MS by Lithium Borate Fusion (ME-MS81) package provides the most quantitative analytical approach for the REE suite of elements.

Figure 12.2 Location of the Qualified Person sample locations at the Sierra Blanca Quarry.



The geochemical analytical results of the QP samples are presented in Tables 12.2 (complete analyses) and 12.3 (select results). Pertinent observations include:

- The 8 QP samples have high HREE,Y in comparison to LREE. The HREE,Y range between 178.9 and 260.7 ppm with an average of 236.9 ppm. In comparison, the LREE range between 78.6 and 108.2 ppm with an average of 95.2 ppm. Hence, the HREE,Y/LREE ratio of the average values is 2.9 (Tables 12.2 and 12.3).

- A comparison of the REE data between the QP analytical results and the Tactical 2021 results is presented in Table 12.3. The results are similar; for example, the average LREE and HREE,Y of the QP samples is 95.2 ppm and 236.9 ppm with a HREE,Y/LREE ratio of 2.5. In comparison, the average LREE and HREE,Y of the Tactical 2021 samples is 80.5 ppm and 230.4 ppm with a HREE,Y/LREE ratio of 2.9 (Table 12.3).

- Like the Tactical (and Tigren) 2021 geochemical analytical results of the Sierra Blanca rhyolite tailing's material, the QP samples are also enriched in elements such as lithium, niobium, rubidium, yttrium, and zircon (Table 12.3).

- The chondrite normalized REE plot of the QP samples is presented in Figure 12.3a. Like the Tigren and Tactical 2021 REE, the REE profile shows a significant Eu anomaly and HREE contents that are elevated above the LREE. However, the comparison between the chondrite normalized REE profiles of the QP samples versus the Tigren and Tactical 2021 samples shows that the ICP-MS by Lithium Borate Fusion (ME-MS81) analytical package performed by ALS Vancouver on the QP samples does not have the same negative terbium (Tb) anomaly as those REE data from Tigren and Tactical REE (Figure 12.3b).

To conclude and apart from Tb, the QP was able to independently validate the HREE mineralization (and other elements) that are the subject of the Peak Property and this technical report. The QPs HREEs flat to upward trending profile between Gd and Lu is believed to more representative of the REE profile than the Tactical results (i.e., distinctly negative Eu anomaly but without a negative Tb anomaly.

Table 12.3 Select elemental comparison between the QP and Tactical 2021 samples analysis.

	QP Samples (n=8 samples)			Tactical (n=40 samples)		
	Minimum (ppm)	Maximum (ppm)	Average (ppm)	Minimum (ppm)	Maximum (ppm)	Average (ppm)
∑REE,Y	257.5	364.0	332.1	282.6	348.0	310.9
LREE	78.6	108.2	95.2	69.7	109.1	80.5
HREE,Y	178.9	260.7	236.9	205.5	243.8	230.4
HREE,Y/LREE	2.3	2.4	2.5	3.0	2.2	2.9
Lithium	210.0	250.0	225.0	185.2	226.7	206.9
Niobium	66.1	75.5	72.4	60.2	75.4	68.8
Rubidium	812.0	974.0	916.1	854.0	1011.0	942.7
Yttrium	127.5	184.5	167.8	149.3	180.7	168.7
Zircon	118.0	159.0	130.9	42.9	106.6	59.9

Table 12.2 Geochemical analytical results of the independently analyzed QP samples.

A) ICP-AES Whole Rock Package

Sample ID	SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	Na_2O	K_2O	Cr_2O3	TiO_2	MnO	P_2O_5	SrO	BaO	LOI	Total
Unit	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
RE22-TR-P001	70.10	13.05	1.75	2.07	0.24	4.47	3.94	<0.002	0.03	0.08	0.01	0.01	<0.01	2.52	98.27
RE22-TR-P002	74.60	13.90	1.46	1.19	0.13	4.50	4.06	<0.002	0.01	0.06	<0.01	<0.01	<0.01	1.86	101.77
RE22-TR-P003	76.20	13.95	1.24	0.58	0.04	4.86	4.17	<0.002	0.02	0.06	<0.01	<0.01	<0.01	0.55	101.67
RE22-TR-P004	74.00	13.75	1.34	1.60	0.19	4.60	3.96	<0.002	0.02	0.09	<0.01	0.01	<0.01	1.95	101.51
RE22-TR-P005	68.80	12.70	1.58	4.64	0.50	4.00	3.57	<0.002	0.06	0.08	0.02	0.02	0.01	5.07	101.05
RE22-TR-P006	72.30	13.10	1.06	3.12	0.19	4.39	3.92	<0.002	0.03	0.05	0.02	0.01	0.02	3.11	101.32
RE22-TR-P007	73.90	13.50	1.60	1.57	0.32	4.56	3.94	<0.002	0.08	0.08	0.02	0.01	0.01	1.83	101.42
RE22-TR-P008	70.60	13.50	1.63	3.54	0.44	4.17	3.63	0.00	0.03	0.10	0.01	0.02	0.01	4.15	101.83
Detection limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01

B) ICP-MS by Lithium Borate Fusion

Sample ID	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Gd	Ge	Hf	Ho	La	Lu	Nb	Nd	Pr
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RE22-TR-P001	32.10	49.40	10.00	17.65	16.20	13.60	0.13	47.60	9.59	3.40	11.50	3.88	16.70	3.31	72.80	26.50	6.62
RE22-TR-P002	12.20	39.10	6.00	15.25	16.65	14.80	0.07	42.00	9.28	3.50	11.75	4.18	13.60	3.48	73.50	25.20	6.10
RE22-TR-P003	9.30	40.00	12.00	17.15	17.00	14.55	0.08	43.20	8.81	3.70	12.20	4.13	13.30	3.54	74.20	23.50	5.77
RE22-TR-P004	22.30	42.70	9.00	17.10	16.00	14.25	0.08	42.30	9.15	3.30	11.25	4.02	14.40	3.45	73.60	25.50	5.95
RE22-TR-P005	113.00	45.50	9.00	16.95	14.20	12.25	0.14	37.00	8.23	3.30	11.50	3.50	15.50	2.72	70.40	23.90	6.17
RE22-TR-P006	182.50	35.00	8.00	19.05	12.15	9.52	0.13	39.20	6.65	3.20	10.50	2.73	11.90	2.25	75.50	19.90	5.04
RE22-TR-P007	62.90	41.60	14.00	18.85	15.95	13.35	0.16	39.40	8.57	3.50	11.85	3.80	14.40	3.24	72.70	25.00	5.83
RE22-TR-P008	54.40	45.30	19.00	16.75	15.85	13.45	0.09	39.60	8.75	3.40	10.80	3.82	15.80	3.06	66.10	25.10	6.39
Detection limit	0.50	0.10	5.00	0.01	0.05	0.03	0.02	0.10	0.05	0.50	0.05	0.01	0.10	0.01	0.05	0.10	0.02

Sample ID	Rb	Sm	Sn	Sr	Ta	Tb	Th	Tm	U	V	W	Y	Yb	Zr	∑REE,Y	LREE	HREE,Y
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RE22-TR-P001	974.00	8.95	45.80	105.00	20.40	2.13	52.00	2.95	15.00	21.00	5.60	182.50	21.50	137.00	363.96	108.17	255.79
RE22-TR-P002	958.00	8.31	47.80	38.30	22.40	2.32	46.60	2.89	11.90	10.00	5.60	184.50	22.50	123.00	352.98	92.31	260.67
RE22-TR-P003	960.00	8.62	47.30	22.90	22.70	2.23	45.70	2.85	7.11	12.00	5.40	182.00	21.80	121.00	348.18	91.19	256.99
RE22-TR-P004	935.00	8.14	52.20	62.80	22.50	2.20	45.20	2.80	10.85	14.00	5.80	176.00	22.10	121.00	346.74	96.69	250.05
RE22-TR-P005	812.00	8.15	42.00	158.00	19.90	1.98	47.10	2.38	12.45	30.00	5.90	151.50	17.40	159.00	313.52	99.22	214.30
RE22-TR-P006	930.00	6.71	47.80	89.50	21.60	1.55	37.40	1.97	4.06	10.00	5.40	127.50	14.45	118.00	257.45	78.55	178.90
RE22-TR-P007	889.00	7.91	43.60	74.60	20.90	2.11	45.20	2.65	9.30	18.00	5.20	166.00	20.60	141.00	331.17	94.74	236.43
RE22-TR-P008	871.00	8.10	43.50	146.50	19.80	2.14	51.20	2.67	16.80	28.00	5.70	172.50	19.80	127.00	342.82	100.69	242.13
Detection limit	0.20	0.03	0.50	0.10	0.10	0.01	0.05	0.01	0.05	5.00	0.50	0.10	0.03	1.00			

∑REE,Y - Total rare earth elements and yttrium

LREE - Light rare earth elements (lanthanum to samarium)

HREE - Heavy rare earth elements (europium to lutetium, and yttrium)

C) ICP-MS by Aqua Regia for Volatile Trace Elements

Sample ID	As	Bi	Hg	In	Re	Sb	Se	Te	Tl
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RE22-TR-P001	5.90	1.80	<0.005	0.11	0.00	0.37	<0.2	0.01	0.67
RE22-TR-P002	4.70	0.87	<0.005	0.10	0.00	0.23	<0.2	<0.01	0.49
RE22-TR-P003	2.00	0.96	<0.005	0.08	0.00	0.26	<0.2	0.01	0.45
RE22-TR-P004	4.20	1.14	<0.005	0.09	0.00	0.28	<0.2	<0.01	0.50
RE22-TR-P005	6.10	1.36	0.01	0.08	0.00	0.37	0.20	0.01	0.47
RE22-TR-P006	1.70	0.64	<0.005	0.07	0.00	0.28	0.20	0.01	0.41
RE22-TR-P007	2.30	1.03	<0.005	0.08	0.00	0.22	<0.2	0.01	0.47
RE22-TR-P008	9.10	1.80	0.01	0.11	0.00	0.40	<0.2	0.01	0.71
Detection limit	0.10	0.01	0.01	0.01	0.00	0.05	0.20	0.01	0.02

D) ICP-AES Base Metals by 4-Acid Digestion

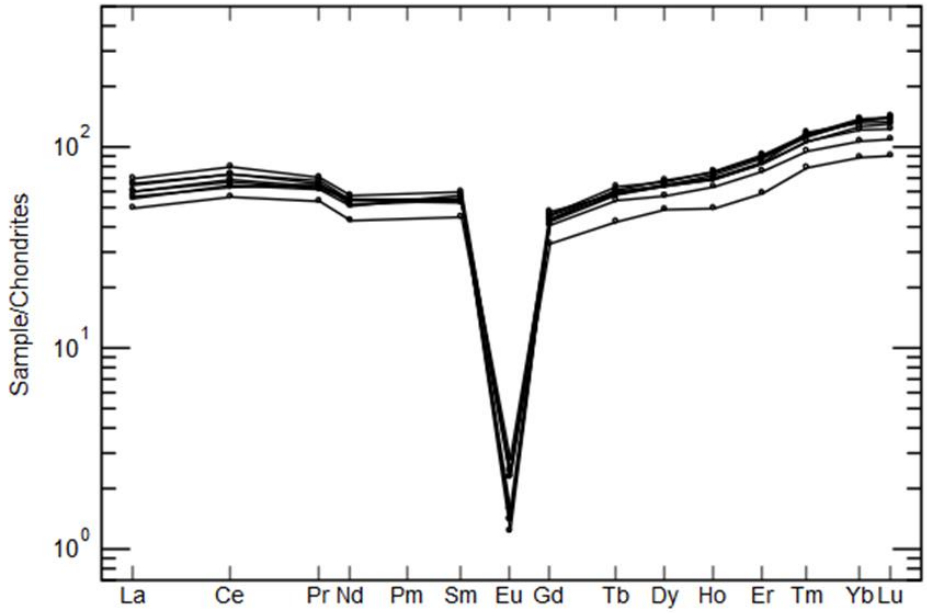
Sample ID	Ag	Cd	Co	Cu	Li	Mo	Ni	Pb	Sc	Zn
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RE22-TR-P001	<0.5	<0.5	<1	1.00	240.00	2.00	3.00	103.00	<1	243.00
RE22-TR-P002	<0.5	<0.5	<1	<1	250.00	2.00	<1	76.00	<1	281.00
RE22-TR-P003	<0.5	<0.5	<1	<1	210.00	2.00	<1	64.00	<1	142.00
RE22-TR-P004	<0.5	<0.5	<1	<1	230.00	2.00	<1	87.00	<1	199.00
RE22-TR-P005	<0.5	<0.5	1.00	6.00	220.00	3.00	2.00	107.00	1.00	220.00
RE22-TR-P006	<0.5	<0.5	1.00	1.00	210.00	1.00	2.00	47.00	<1	117.00
RE22-TR-P007	<0.5	<0.5	2.00	2.00	210.00	2.00	5.00	90.00	1.00	155.00
RE22-TR-P008	<0.5	<0.5	<1	1.00	230.00	3.00	2.00	142.00	1.00	276.00
Detection limit	0.50	0.50	1.00	1.00	10.00	1.00	1.00	2.00	1.00	2.00

E) LECO Total Carbon and Sulphur

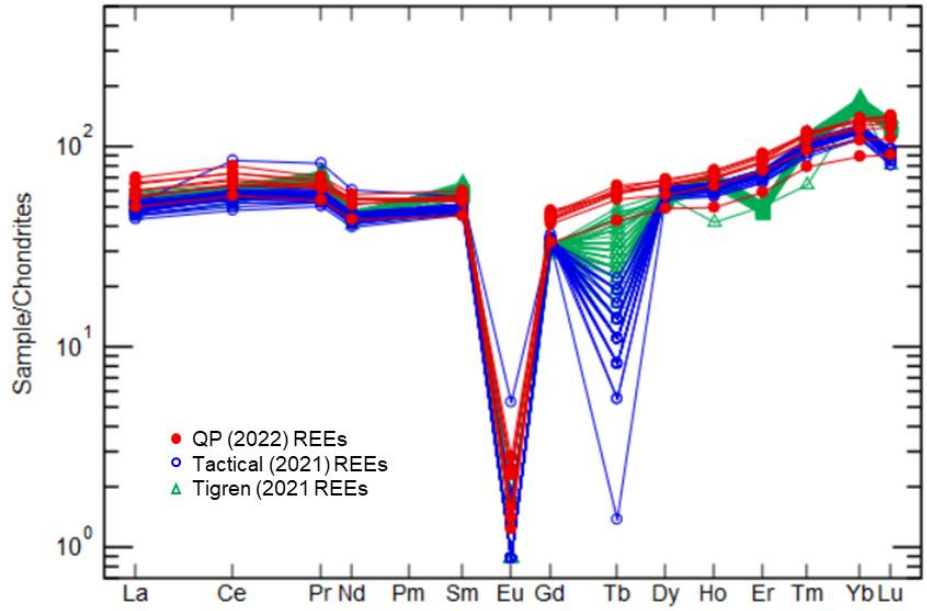
Sample ID	C	S
Unit	%	%
RE22-TR-P001	0.20	0.02
RE22-TR-P002	0.05	0.01
RE22-TR-P003	0.03	0.01
RE22-TR-P004	0.15	0.01
RE22-TR-P005	0.81	0.04
RE22-TR-P006	0.59	0.01
RE22-TR-P007	0.18	0.01
RE22-TR-P008	0.42	0.03
Detection limit	0.01	0.01

Figure 12.3 Chondrite normalized rare earth element profiles of Sierra Blanca tailing's samples independently collected and analyzed by the Qualified Person (QP). A) QP analytical results. B) Comparison between the QP analytical results and those of Tigren and Tactical (2021). Normalized using chondrite values from McDonough and Sun (1995).

A) Qualified Person 2022 independently analyzed chondrite-normalized rare earth element plot.



B) Comparison between the Qualified Person (QP) and the Tigren and Tactical rare earth element datasets.



12.3 Adequacy of the Data

To conclude, it is the QPs opinion that the adequacy of the current Tactical Resources geochemical studies is reasonable and represent valid contributions to this geological introduction technical report. More specifically,

- The QP has reviewed the adequacy of the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data. The analytical work was conducted through an independent, accredited laboratory.

- The QP reviewed the mineralogical determination studies and concludes that the BSE gigapan imaging and EDS spectra were produced in a university laboratory by staff with post-secondary degrees and represent reasonable results that were prepared using standard scanning approaches.

- The UAV surveys were prepared by State of Texas Registered Land Surveyors and the QP concludes that the surveys yield valid information related to the position and lateral scale of the tailing's material stockpiles at the Sierra Blanca Quarry. The information can be used in any potential future mineral resource modelling exercise subject to vertical confirmation of the tailing's piles by drill programs carried out by Tactical Resources.

With respect to limitations, the QP notes that the historical geochemical data is characterized by a limited number of historical samples, and a lack of associated metadata, QA-QC work, and REE analytical results compatibility. It is the QP's opinion, therefore, that the historical geochemical data should not be utilized as part of future work conducted by Tactical Resources, including any potential mineral resource estimations.

13 Mineral Processing and Metallurgical Testing

During June to August 2022, a metallurgical test program was completed on behalf of Tactical by Kemetco Research in Richmond, BC Canada to assess direct leach amenability, and maximum extraction potential of REE and lithium.

13.1 Sample Characterization

Tactical Resources is investigating a REE project at the Sierra Blanca Quarry LLC's Mining Leases in Hudspeth County, Texas. The initial focus is within Mining Lease M-114769, with other areas in the quarry of interest. Tactical resources had collected 40 field samples from various locations across the property and provided these samples to American Assay Laboratories (AAL) in Sparks, NV, USA for preliminary assay work. The coarse crushed assay splits from AAL were shipped to Kemetco Research in June 2022 to conduct initial metallurgical testing to assess the extraction of REE and Li from select samples. The 40 field samples, all similar in composition, were combined based on spatial criteria to generate 6 composite samples labelled: Tails 1, Tails 2, Tails 3, Ballast, Old

Tails, and Active Face. Tails 1, Tails 2, and Tails 3 were used for metallurgical testing, while Ballast, Old Tails, and Active Face were stored for potential future work.

Samples of Tails 1, Tails 2, and Tails 3 were submitted to Actlabs in Thunderbay, ON, Canada for major elements and REE by whole rock analysis by lithium metaborate/tetraborate fusion followed by ICP-OES and ICP-MS finish, and for fluoride by ion-selective electrode (ISE). Lithium analysis was conducted by Kemetco Research by aqua-regia digestions followed by ICP-OES. Semi-quantitative x-ray diffraction (XRD) was conducted by the University of British Columbia (UBC), Department of Earth, Ocean and Atmospheric Sciences in Vancouver, BC, Canada.

A summary of the head assays of select elements and calculated total rare earth oxides (TREO), LREE and HREE are provided in Table 13.1, and XRD analysis in Table 13.2.

TREO are calculated as the sum of the following rare earth oxides: Dy_2O_3, Lu_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Tb_2O_3, Gd_2O_3, La_2O_3, Ce_2O_3, Er_2O_3, Yb_2O_3, and Y_2O_3. LREE are the sum of the following elements: Pr, Nd, Sm, Gd, La, and Ce. HREE are the sum of the following elements: Dy, Lu, Tb, Yb and Y. Note that Y is a light rare-earth element but has properties like a heavy rare-earth element and as such is often reported along with the HREE.

According to the analytical results summarized in Tables 13.1 and 13.2, all three samples (Tails 1, Tails 2, and Tails 3 were similar in grade and mineralogy. The TREO varied between 358 mg/kg and 366 mg/kg, averaging 362 mg/kg. Yttrium values in the head sample varied from 149 mg/kg to 158 mg/kg (189 and 200 ppm as Y_2O_3), with an average of 153 mg/kg. Dysprosium values were between 14.8 mg/kg to 15.10 mg/kg (17.0 mg/kg and 17.3 mg/kg as Dy_2O_3). Neodymium, Cerium and Lanthanum values in the head averaged 21.3 mg/kg, 39.7 mg/kg and 13.7 mg/kg respectively. Lithium content was similar in all three samples, averaging 190 mg/kg.

The main gangue minerals were quartz, plagioclase, and potassium feldspar. The silicon content in the head samples were between 33.72 wt. % and 34.38 wt. %. Aluminum, potassium, and sodium were on average 7.06 wt. %, 3.3 wt. %, and 3.2 wt. % respectively.

13.2 Extraction Tests

Scoping leach tests involved 1) 48-hour bottle roll extractions with 200 g/L sulfuric acid (ambient temperature), 2) 48-hour bottle roll extractions with 200 g/L hydrochloric acid (ambient temperature), 3) 48-hour agitated tank extractions with 50 g/L sulfuric acid (90° C), 4) 48-hour agitated tank extractions with 50 g/L hydrochloric acid (90° C), and 5) acid bake (with sulfuric acid) followed by water extraction.

Table 13.1 Selected head assay values.

Element	Unit	Tail 1	Tail 2	Tail 3
Si	%	33.84	34.38	33.72
Al	%	7.08	7.1	6.99
Fe	%	0.78	0.78	1.08
Mn	%	0.05	0.05	0.06
Mg	%	0.14	0.11	0.16
Ca	%	1.21	0.96	1.32
Na	%	3.23	3.27	3.17
K	%	3.32	3.35	3.28
Li	mg/kg	189	188	193
F	%	0.54	0.43	0.51
Dy	mg/kg	14.8	14.9	15.1
Lu	mg/kg	2.94	2.93	3.03
Hf	mg/kg	10.2	10.1	10
Pr	mg/kg	5.5	5.44	5.71
Nd	mg/kg	21.1	20.8	21.9
Sm	mg/kg	7.6	7.3	7.8
Tb	mg/kg	1.9	1.9	2
Y	mg/kg	158	152	149
U	mg/kg	8.6	7.2	8.4
Gd	mg/kg	7.5	7.7	7.8
Nb	mg/kg	53	57	55
Cs	mg/kg	15.6	15.6	16
La	mg/kg	13.5	13.3	14.4
Ce	mg/kg	38.9	38.8	41.3
Er	mg/kg	12.4	12.5	12.6
Yb	mg/kg	18.8	18.7	19.5
Rb	mg/kg	955	968	984
TREO + Y	mg/kg	366.43	358.03	362.07
LREE	mg/kg	94.1	93.34	98.91
HREE + Y	mg/kg	196.44	190.43	188.63

Table 13.2 XRD analysis of composite samples used for the scoping leach study.

Mineral	Tails 1 (%)	Tails 2 (%)	Tails 3 (%)
Calcite	1.7	1.4	2.2
Fluorite	1.2	0.9	1.1
Hematite	0.3	0.3	0.3
Illite/Muscovite	1.7	1.1	1.7
Kaolinite	0.3	0.5	0.6
K-feldspar	26	25.8	25.4
Lepidolite	0.6	1	0.6
Plagioclase	39.6	39.7	38.8
Quartz	28.4	29.3	29.2
Total	100	100	100

13.3 48-Hour Bottle Roll in Ambient Temperature Sulfuric Acid

The 48-hour bottle roll tests in sulfuric acid were carried out at ambient temperature and two grind sizes (P_{80} 61 µm and P_{80} 32 µm). Samples Tails 1, Tails 2, and Tails 3 were tested at each grind sized for a total of 6 tests. The weight of the test charges ranged between 600 g to 700 g of dry solids with 200 g/L sulfuric acid solution added to reach 40% pulp density (weight of dry solids / weight of leach slurry).

The results of the 48-hour bottle roll tests in sulfuric acid using 61 µm grind samples for 48 hours with 200 g/L sulfuric acid resulted in the following:

- Yttrium extraction ranged from 93% to 97%.
- The Lanthanum extraction ranged from 75 to 84%.
- Neodymium, Cerium and Dysprosium extractions were 79-88%, 77-85% and 92-95%.
- Kinetic samples collected at 1, 6, 24 and 48 hours revealed that the extraction was substantially completed after 24 hours.
- ∑REE + Y extractions ranged from 88% to 93%; LREE extraction was in the 79% to 87% range; HREE+Y extraction was 92-96%.
- The lithium extraction was limited to 27-28%.
- Aluminum, potassium, and sodium extractions were low: 5-6% for Al, 4-5% for K, and 3% for Na; iron extraction ranged between 20 and 25%; calcium extraction was between 22 and 43%.

- More than 96% of magnesium extracted during the bottle roll tests.

Reducing the particle size from 61 µm to 32 µm did not appear to improve the extraction of the metals of interest.

13.4 48-Hour Bottle Roll in Ambient Temperature Hydrochloric Acid

The 48-hour bottle roll tests in hydrochloric acid were carried out at ambient temperature and two grind sizes (P_{80} 61 µm and P_{80} 32 µm). Samples Tails 1, Tails 2, and Tails 3 were tested at each grind sized for a total of 6 tests. The weight of the test charges ranged between 600 g to 700 g of dry solids with 200 g/L hydrochloric acid solution added to reach 40% pulp density.

The bottle roll tests performed using hydrochloric acid resulted in low ∑REE extractions, below 25.3% at 32 µm and 21.5% at 61 µm. Lithium extractions were below 28.8% at 32 µm and 26.7% at 61 µm.

13.5 48-Hour Agitated Tank Leach in Heated Sulfuric Acid

The 48-hour agitated tank leach tests in sulfuric acid were carried out at 90° C and P_{80} 32 µm grind sizes. Samples Tails 1, Tails 2, and Tails 3 were tested for a total of 3 tests. The weight of the test charges ranged between 300 g to 350 g of dry solids with 200 g/L sulfuric acid solution added to reach 40% pulp density and heated to the target temperature. The summary of results are as follows:

- Yttrium extraction ranged from 93 to 94%.
- The Lanthanum extraction ranged from 77 to 79%.
- Neodymium, Cerium and Dysprosium extractions were 76-80%, 77-85% and 89-90%.
- Kinetic samples collected at 1, 6, 24 and 48 hours revealed that the extraction was substantially completed after 24 hours.
- ∑REE+Y extractions ranged from 89% to 90%; LREE extraction was in the 79% to 81% range; HREE+Y extraction was 92-93%
- The lithium extraction was limited to 33-42%.

13.6 48-Hour Agitated Tank Leach in Heated Hydrochloric Acid

The 48-hour agitated tank leach tests in hydrochloric acid were carried out at 90° C an P_{80} 32 µm grind size. Samples Tails 1, Tails 2, and Tails 3 were tested for a total of 3

tests. The weight of the test charges ranged between 300 g to 350 g of dry solids with 200 g/L hydrochloric acid solution added to reach 40% pulp density and heated to the target temperature.

The summary of results for the main REE and Li are as follows:

- The agitated leach tests, using 50 g/L HCl, at 90° C, for 48 hours improved the extractions of REE and Li.
- ∑REE+Y extractions ranged from 95.6% to 96.1%
- For main REE, Yttrium and Dysprosium extractions were 94 to 96% and 93 to 95%, while Cerium and Neodymium extractions were 93% and 94 to 95%.
- Li extraction were 66.2%, 87.6%, and 86.3% for Tails 1, Tails 2, and Tails 3 respectively.

13.7 Acid Bake and Water Leach

The acid bake and water leach tests were conducted by mixing 150 g of dry sample with 37.5 g of concentrated (98 wt. %) sulfuric acid. The crucible is then placed in a furnace pre-heated to 150° C and temperature increased to the target bake temperature (350° C for three tests conducted on sample Tails 1, Tails 2 and Tails 3 and 250° C for one test conducted on Tails 3). Once the target temperature is reached, the charge is held at the target temperature for 4 hours, then removed from the furnace and cooled to 60° C at ambient conditions. The baked material is then removed from the crucible and leached in a 1L agitated reactor with water heated to 90° C. A target leach time of 24 hours and pulp density of 29 wt. % (weight of dry solids prior to baking / weight of leach slurry) were used for the tests.

A summary of the acid bake and water leach tests are as follows:

- The 4-hour acid bake at 325° C followed by a hot water leach improved dramatically the lithium extraction to 90-96%.
- However, other elements of interest such as Yttrium and Dysprosium exhibited lower extractions of 54-77% and 41-70%, respectively.
- Cerium extraction ranged between 73 and 87%, while Neodymium extraction was 68-74%.

Reducing the acid bake temperature to 250° C resulted in:

- Similar lithium extractions (95%).

- Yttrium and Dysprosium extractions were 62% and 51%.
- Cerium and Neodymium extractions were 76% and 69%.

13.8 Opinion of the Qualified Person and Recommendations

In the opinion of the QP, the methodology and the metallurgical test work completed by Tactical on the extraction potential of REE from an evolved rhyolite rock type are reasonable and standard within the REE industry. The experimental work was completed on Sierra Blanca rhyolite tailings material collected from the Peak Property, and are therefore, representative of the rock type and mineralization that is the subject of this technical report.

As with any early-stage project potential risks and uncertainties exist, and with respect metallurgy, potential uncertainties include:

- Methodology of producing saleable products.
- Reagent consumption.
- Separation of impurities.
- Handling of by-products and waste materials.
- Water balance.
- Mineral variability.

Tactical will attempt to reduce risk/uncertainty through effective project management, engaging technical experts, and developing contingency plans. In addition, further metallurgical testing is recommended to understand the potential metallurgical performances with potential mineral processing upgrading prior to leaching, more detailed leaching tests, and processing of leach solutions to develop potential flowsheets. Variability testing from other areas of the Peak Property and strategies to recover both Li and REE should be investigated further.

14 Mineral Resource Estimates

The Issuer, Tactical Resources, has yet to conduct mineral resource estimation work at the Company's Peak REE Project.

****** Items 15 to 22 not included ******
****** The Peak REE Project is an early-stage exploration project ******

23 Adjacent Properties

An adjacent property means a property: 1) in which the issuer does not have an interest; 2) that has a boundary reasonably proximate to the property being reported on; and 3) that has geological characteristics like those of the property being reported on.

Please note the QP has been unable to verify the information reported in this section, and therefore, the information is not necessarily indicative of the mineralization on the Property that is the subject of this technical report.

Presently, there are 3 Mining Leases adjacent to the Sierra Blanca Quarry Property that have been identified in the Hard Minerals database of the Texas GLO (https://www.glo.texas.gov/land/land-management/gis/index.html). Two adjacent property Mining Leases (M-113117 and M-113629) are owned by Texas Mineral Resources Corp., for the Round Top project, which is located approximately 1.9 miles (3 km) northwest of the Peak REE Project at another volcanic peak. The other adjacent property Mining Lease (M-120322) is owned by Jobe Materials L.P. and is approximately 1.9 miles (3 km) southwest of the Peak REE Project (Figure 23.1). A summary of the adjacent properties is presented in the text that follows.

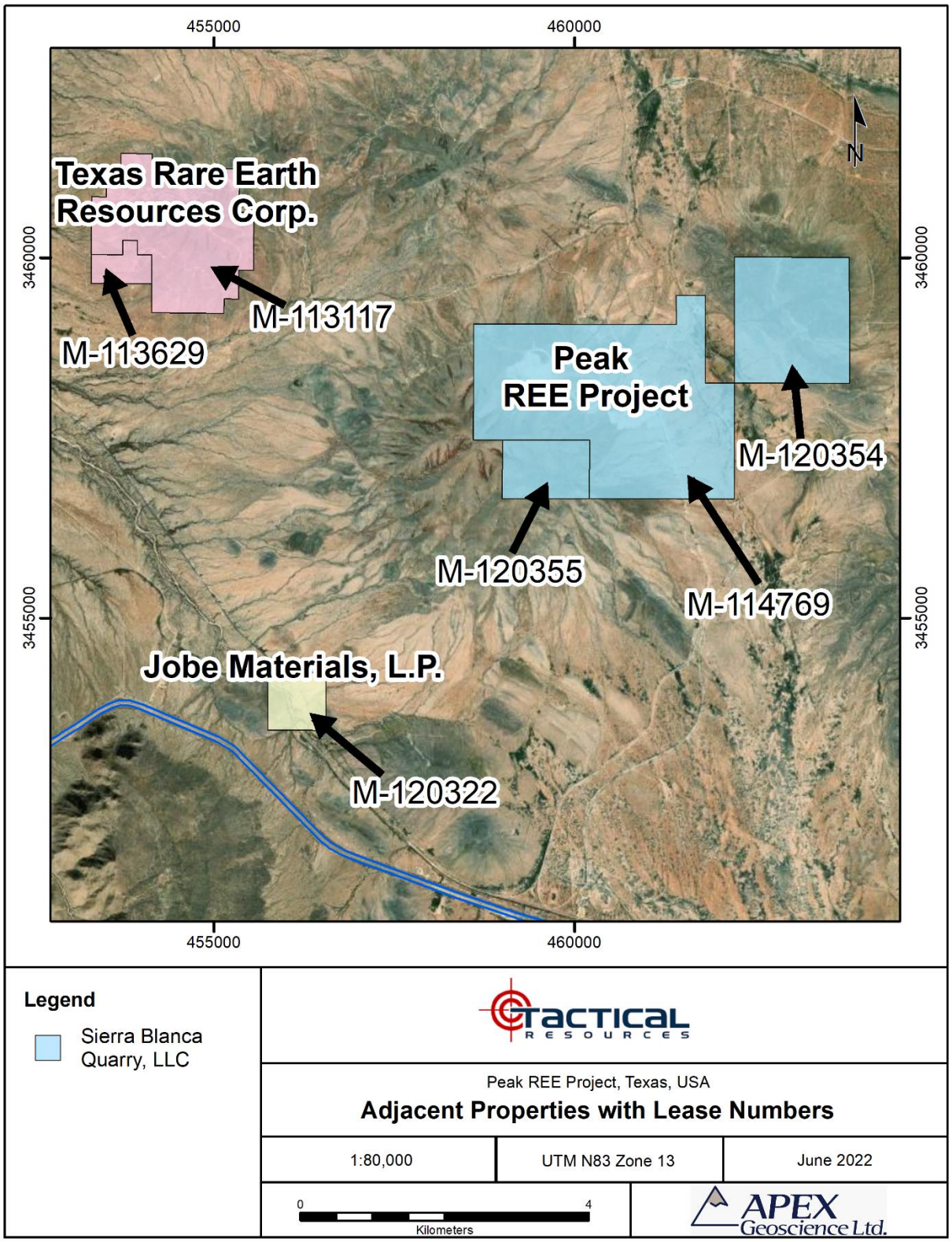
The two Texas Mineral Resources Corp. Mining Leases are contiguous and comprise a total of 950 acres. The Company is focused on the exploration and development of rare earth elements, technology metals and industrial minerals at the company's flagship Round Top project. Texas Mineral Resources Corp. holds 19-year renewable leases from the State of Texas on 950 acres encompassing Round Top and additional prospecting permits on adjacent areas covering an additional 9,345 acres (Texas Mineral Resources Corp., 2022a). The Round Top project is one of five rhyolite laccoliths known as the Sierra Blanca Peaks that lie within the Texas Lineament Zone or Trans-Pecos trend.

A Preliminary Economic Assessment (PEA) of the Round Top REE Project was completed by Gustavson Associates and effectively dated November 30, 2013 (Hulse et al., 2013). The report is available at Texas Mineral Resources Corp. (2022b).

In November 2018, USA Rare Earth LLC entered into an option and development agreement with Texas Mineral Resources Corp.to acquire up to 80% interest in the Round Top Project, subject to project milestones, certain minimum expenditures, and conditions. U.S. Rare Earth LLC is the operator under the project agreement.

In 2019, Gustavson Associates were commissioned to prepare an updated Round Top REE Project PEA for USA Rare Earth LLC and Texas Mineral Resources Corp., after 157 samples were reanalyzed from 34 drill holes. The updated PEA report is effectively dated July 1, 2019 (Hulse et al., 2019).

Figure 23.1 Adjacent properties to the Peak REE Project, Sierra Blanca Quarry.



In April 2022, USA Rare Earth LLC announced a joint venture partnership with Texas Mineral Resources Corp. in which USA Rare Earth LLC becomes the operator and 80% owner of the Round Top “HREE, lithium and critical minerals project” (Texas Mineral Resources Corp., 2022c).

The partners subsequently announced plans for a $100 million rare earth metal and sintered neo-magnet manufacturing facility in Stillwater, Oklahoma (Texas Mineral Resources Corp., 2022d; USA Rare Earth LLC, 2022).

To the best of the senior authors knowledge, Round Top is still being investigated by U.S. Rare Earth LLC and Texas Mineral Resources Corp. as a potential low-grade, bulk-tonnage, HREE deposit.

Jobe Materials L.P. supplies ready mixed concrete, construction aggregates, asphalt, precast/prestressed concrete products, concrete girders, transloading services, and landscaping materials for the west Texas and southern New Mexico region (Jobe Materials L.P., 2022). Their single Mining Lease covers 160 acres of land. While their website does not disclose specific project locations, the site does say the company’s plant facilities and quarries are strategically located within the El Paso region to service customers needs on any size project.

24 Other Relevant Data and Information

None to report at the Effective Date of this technical report.

25 Interpretation and Conclusions

Tactical Resources has no mineral tenure in the Project area. Tactical Resources finalized an Offtake Agreement and an Amending Agreement with Sierra Blanca Quarry LLC and acquired the right to purchase all mine tailings (historic or active) produced by Sierra Blanca Quarry LLC within Mining Lease M-114796. Since 2007, Sierra Blanca Quarry LLC has produced railway ballast from the Sierra Blanca rhyolite laccolith for the Union Pacific Railroad Company. The railway ballast dimensions are standardized at three-quarters of an inch to 2 inches (1.9 to 5.1 cm) and hence the tailing’s material available to Tactical Resources includes all undersized ‘waste’ rock. Presently, the tailings constitute approximately 30% to 50% (average 40%) of the Run of Mine (ROM; Mr. K. Walker, pers. comm., 2022). In addition, tailing’s stockpiles exist within both the active quarry area and the historical quarry portions of Mining Lease M-114796.

25.1 Exploration Results

This technical report summarizes Tactical Resources 2021-2022 exploration work, which includes a geochemical sampling program and assay testing, mineralogical investigations, specific gravity measurements, and unmanned aerial vehicle surveys to better delineate the two-dimensional spatial extent of the tailing’s stockpiles.

A total of 40 tailing's material samples were collected and analyzed for whole rock and trace element analysis at an independent and accredited laboratory. The sampling program included blind Blank Samples and Sample Standards, the results of which, demonstrated good reproducibility of results and data quality.

Based on the geochemical analytical results derived from Tactical Resources 2021 exploration program, the Sierra Blanca laccolith tailing's material is classified as rhyolite. The rhyolite is metaluminous-peraluminous, silica-rich, alkali-calcic, and the trace element distributions are representative of a within plate granite setting associated with ferroan, A-Type granites.

The chondrite normalized REE profiles show the tailing's material has HREE that are greater than the LREE; for example, the HREE+Y are 2.2-3.2 times (average 2.9 times) more abundant than LREE in the Tactical Resources analytical batch 2 results (albeit this observation includes yttrium). The REE profiles have a distinct, anomalous, negative Eu anomaly that's associated with early feldspar crystallization. The Tigren and Tactical (2021) REE profiles also show a unique, slightly negative Tb anomaly, which requires verification and further evaluation from a petrogenetic perspective. Note: the QP results, which used a lithium borate fusion analytical methodology, does not exhibit a chondrite normalized negative Tb anomaly (see Section 12.2.3).

In addition, the tailing's material is enriched in HFSE and LILE's that include, for example, and based on the Tactical Resources analytical batch 2 results:

- Lithium (185.2-226.7 ppm Li with an average of 206.9 ppm Li),
- Beryllium (5.4-22.2 ppm Be with an average of 11.6 ppm Be),
- Niobium (60.2-75.4 ppm Nb with an average of 68.8 ppm Nb),
- Rubidium (854-1,011 ppm Rb with an average of 943 ppm Rb),
- Yttrium (149.3-180.7 ppm Y with an average of 168.7 ppm Y, and
- Zircon (42.9-106.6 ppm Zr with an average of 59.9 ppm Zr).

Forty samples were measured for specific gravity and the results yielded a narrow range of values, between 2.19 and 3.26 g/cm^3 with an average of 2.67 g/cm^3.

Tactical Resources initiated mineralogical investigations at the University of Texas to obtain a better understanding of the mineralogy and chemistry that constitutes the Peak REE Project tailing's material. Backscattered electron gigapan images and energy-dispersive X-ray spectra analyses were conducted on 4 samples that yielded accessory minerals that include cassiterite (SnO_2), columbite ($Fe^{2+}Nb_2O_6$), yttrofluorite ($Ca_{0.7}Y_{0.3}F_{2.3}$), yttrocerite (CaF_2^+ $(Y,Ce)F_3$), thorite ($(Th,U)SiO_4$), and zircon ($ZrSiO_4$).

The minerals usually occur together in proximity (if not adjacent) and often in the presence of, or included in, large biotite grains. Cassiterite can be found both as inclusions within yttrofluorite as well as free grains within the matrix. Columbite can be found as inclusions within iron oxide grains as well as within yttrofluorite grains. Thorite is often found as an inclusion within zircon. Yttrium-enriched, and yttrium-free fluorite was encountered, and it is possible, therefore, that different generations of fluorite may occur.

Based on these analytical results and observations, and the geochemical petrogenetic study of Elliot (2021), the QP concludes that the Sierra Blanca rhyolite laccolith chemical composition (including HREE enrichment) are indicative of highly evolved magmatic rocks in which a silica-rich magmatic system has undergone a high-degree of late-stage magmatic fractional crystallization. The discrimination diagrams and chondrite normalized REE profiles show Sierra Blanca rhyolite is chemically homogenous, which may suggest that the crystallization process was relatively rapid and took place within an isolated magmatic system.

Finally, Tactical Resources commissioned two unmanned aerial vehicle surveys to better delineate the two-dimensional spatial extent of the tailing's stockpiles.

The QP has reviewed all exploration work conducted by Tactical Resources and concludes that:

1. The exploration work is relevant to the initial assessment of the early exploration stage Peak REE Project.

2. The work was conducted in a reasonable manner that is compliant with the Canadian Securities Administration's National Instrument 43-101 Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum "Best Practices and Reporting Guidelines" for disclosing mineral exploration.

3. The QP has reviewed the adequacy of the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data associated with Tactical Resources 2021 exploration program. The work conducted was completed using accepted standard sampling practices, QA-QC protocols, and analytical methods.

4. The analytical data were prepared by an independent laboratory, American Assay Laboratories Inc., and the analytical methods carried out by the laboratory are standard and routine in the field geochemical analytical work for the rock type and commodity type being evaluated by Tactical Resources.

5. As part of a personal site inspection at the Peak REE Project on June 11, 2022, the QP 1) observed the operating Sierra Blanca Quarry LLC mine site, current Quarry exploitation face workings, ballast processing infrastructure, and active daily tailings production and historical tailings stockpiles within the Quarry, 2)

evaluated the general geological characteristics of the Sierra Blanca Quarry and Sierra Blanca laccolith, and 3) validated the tailing's REE mineralization (and other elements) through independent sampling and analytical work.

25.2 Tactical Resources 2022 Metallurgical Test Work

During June to August 2022, a metallurgical test program was completed on behalf of Tactical by Kemetco Research in Richmond, BC Canada to assess direct leach amenability, and maximum extraction potential of the rare earth elements and lithium. The 40 Tactical Resources field samples collected in 2021 were composited into 3 'Tails' samples for metallurgical testing. The head assay values of the composite Tail samples correlate well with the assay test work, which shows the metallurgical test samples were representative of the Sierra Blanca tailings material. Scoping bottle roll, agitated tank, acid tank and water leach tests, and extraction results, include:

1. 48-hour bottle roll extractions with 200 g/L sulfuric acid (ambient temperature) that extracted 93-97% yttrium (Y), 75-84% lanthanum (La), 79-88% neodymium (Nd), 75-85% cerium (Ce), 92-95% dysprosium (Dy), 88-93% ∑REE+Y, 79-87% LREE, 92-96% HREE+Y, and 27-28% lithium (Li).

2. 48-hour bottle roll extractions with 200 g/L hydrochloric acid (ambient temperature) that resulted in low ∑REE extractions, below 25.3% at 32 µm and 21.5% at 61 µm. Lithium extractions were below 28.8% at 32 µm and 26.7% at 61 µm.

3. 48-hour agitated tank extractions with 50 g/L sulfuric acid (90° C) that extracted 93-94% Y, 77-79% La, 76-80% Nd, 75-85% Ce, 89-90% Dy, 89-90% ∑REE+Y, 79-81% LREE, 92-93% HREE+Y, and 33-42% Li.

4. 48-hour agitated tank extractions with 50 g/L hydrochloric acid (90° C) that extracted 94-96% Y, 94-95% Nd, 93% Ce, 93-95% Dy, 95.6-96.1% ∑REE+Y, and 66.2% Li, 87.6% Li, and 86.3% Li for Tails 1, Tails 2, and Tails 3, respectively.

5. Acid bake (with sulfuric acid) followed by water extraction that extracted 54-77% Y, 68-74% Nd, 73-87% Ce, 41-70% Dy, and 90-96% Li. Reducing the acid bake temperature to from 325° C to 250° C resulted in 62% Y, 69% Nd, 76% Ce, 51% Dy, and similar lithium extractions (95%).

25.3 Merit of the Peak REE Project

Tactical Resources Peak REE Project is a co-product opportunity of merit. Points to support this contention include:

- The Sierra Blanca rhyolite, or rhyolite porphyry – and its associated tailing's waste material – can be defined as highly evolved magmatic rocks in which a silica-rich magmatic system has undergone a high-degree of late-stage magmatic fractional crystallization.

- The rhyolite contains mineral assemblages that represent precipitates of the evolved magmatic silicate melts, and as such, are uniquely elevated in rare earth elements (particularly heavy rare earth elements), lithium, beryllium, fluorine, niobium, rubidium, thorium, tin, uranium, yttrium, and zircon.

- Based on Tactical Resources 2021 geochemical analytical results, the Sierra Blanca Quarry tailing's material is chemically homogenous, which may suggest that the crystallization process was relatively rapid and occurred within an isolated magmatic system.

- The tailing's material is process-testing-ready in that the rhyolite laccolith material has already been mined from its original quarry benches, moved within the quarry site, crushed, conveyed, and finessed to individual tailing stockpiles.

- Tactical Resources has executed an Offtake Agreement and and Amending Agreement with Sierra Blanca Quarry LLC in which Tactical Resources has acquired the tailing's material and is therefore free and clear of all encumbrances with respect to testing, and the potential commercialization, of rare earth element production associated with the tailings.

- The Company has access to potential rare earth element processing areas located within the quarry site, or to a rail line in which the Tactical Resources can transport the tailing's material to another processing site.

- The Sierra Blanca Quarry is easily accessible, has an associated rail spur and rail line network, there is a lot of space within the Mining Lease to build demonstration and/or processing plants, has power directly to the Quarry (although an upgrade would likely be required if any future processing plant was developed within the Mining Lease).

- Rare earth elements are critical minerals that represent an opportunity for the U.S. to enter an emerging and globally strategic market. Rare earth elements are required to manufacture high technology products, including high-powered magnets fuel cells, superconductors, clean energy, aerospace, automotive, defence, and many other industrial products. While rare earths are abundant geologically, they are economically recoverable in only a few mineral deposits.

25.4 Risks and Uncertainties

Tactical Resources will attempt to reduce risk/uncertainty through effective project management, engaging technical experts and developing contingency plans.

Historical work conducted on the Sierra Blanca Quarry mine tailings by companies other than Tactical Resources include geochemical analysis (whole rock composition and REE assay), and a preliminary mineral processing and metallurgical test work. This

historic work was conducted on 6 samples, 4 of which were used for mineral processing testing. Due to the limited number of samples assayed, and in some instances the lack of information pertaining to the analytical procedure and the potential use of QA-QC procedures, it is the QPs opinion that the historical geochemical analyses cannot be reasonably assessed. With respect to historical mineral processing, more work is required by Tactical Resources to assess REE extraction technologies that are applicable to the Sierra Blanca rhyolite laccolith tailing's material.

With respect to property-related potential risks and uncertainties, the QP notes that

1. Any forfeiture of Mining Lease M-114769 by Sierra Blanca Quarry LLC would imply an inability for Sierra Blanca Quarry LLC to supply continued tailing's material to Tactical Resources as per the Offtake Agreement and Amending Agreement.

2. The ability of Sierra Blanca Quarry LLC to provide Tactical Resources with ongoing tailing's material is dependant on the perpetuation of the ballast sales agreement between Sierra Blanca Quarry LLC and Union Pacific Railroad Company.

3. There is no guarantee that Tactical Resources will obtain all the necessary permits, environmental assessment approvals, and mine closure and rehabilitation plan approvals required to operate a REE processing facility from the Texas GLO.

Finally, there is no guarantee that Tactical Resources can successfully extract REE from the Sierra Blanca Quarry mine tailings in a commercial capacity. Mineral processing and metallurgical testing have yet to be performed by Tactical Resources. Ultimately, there is a risk that the scalability of any future initial bench-scale or pilot-scale mineral processing/metallurgical test work may not translate to a full-scale commercial operation. With respect metallurgy, potential uncertainties at this stage of the project include methodology of producing saleable products, reagent consumption, separation of impurities, handling of by-products and waste materials, water balance, and mineral variability.

26 Recommendations

It is the QP's opinion that with the appropriate level of tailing's material test work and metallurgical development, the Peak REE tailing's has reasonable prospects for the eventual economic extraction of critical elements.

A 2-phase work program is recommended at an estimated total cost of CDN$1.634 million with a 10% contingency (Table 26.1). Phase 1 recommendations include 1) a sonic drill program, 2) geophysical orientation surveys and follow-up surveying, 3) core sampling program with whole rock and trace element geochemical analyses (REE add-on) and mineralogical QEMSCAN analysis, 4) bench- and columnar-scale metallurgical test work to extract the REEs of interest from the tailing's material. The cost of the Phase 1 work is estimated at CDN$495,000 with a 10% contingency.

Table 26.1 Work recommendations with estimated costs.

Phase	Description	Cost estimate (CDN$)	Sub-total (CDN$)	Cost estimate (USD$)	Sub-total (USD$)
Phase 1	Sonic drill program to determine the thickness of the tailing's material and obtain representative material for onging analytical and metallurgical work.	$180,000		$138,600	
	Geophysical orientation surveys (resistivity and seismic refraction) and follow-up surveying - in conjuction with drilling - to further characterize the geometry and volume of the tailings	$40,000		$30,800	
	Core sampling program with whole rock and trace element geochemical analyses (REE add-on), denisty analysis, and mineralogical QEMSCAN analysis.	$55,000		$42,350	
	Metallurgical studies to test applicable REE extraction processes.	$175,000	$450,000	$134,750	$346,500
Phase 2	Advanced metallurgical work to improve and expand the REE extraction technology and workflow	$450,000		$346,500	
	Demonstration plant development configuration and planning	$85,000		$65,450	
	Modifying factors, permitting, and environmental studies and community consultation	$250,000		$192,500	
	Tehcnical reporting including potential mineral resource/reserve estimations and economic assessment technical reporting.	$250,000	$1,035,000	$192,500	$796,950
		Estimate sub-total	$1,485,000		$1,143,450
		10% contingency	$148,500		$114,345
		Total estimate	**$1,633,500**		**$1,257,795**

Exchange rate: 1 CDN dollar equals 0.77 USD dollar (July 5, 2022).

Phase 2 is dependent on the positive results of the Phase 1 work program. If warranted, Phase 2 includes 1) advanced metallurgical work to improve and expand the extraction technology and workflow, 2) work planning toward the development of a demonstration plant, 3) consideration of modifying factors including permitting, environmental studies, and community consultation, and 4) technical reporting in accordance with CIM definition standards and guidelines (2014, 2019) and NI 43-101 disclosure rules. The estimated cost of the Phase 2 work is CDN$1,138,500 with a 10% contingency.

26.1 Phase 1 Work Program

In 2022, Tactical Resources commissioned Frank X. Spencer and Associates to conduct two unmanned aerial vehicles, or drone, surveys on the active tailings pile area at the Sierra Blanca Quarry. The first drone survey was intended to assess the volume of tailings in the active tailings pile of the Sierra Blanca Quarry. The second drone survey was intended to assess the monthly volume of tailings material being added to the active tailings pile. The surveys were prepared by State of Texas Registered Land Surveyors and yield valid information related to the position and lateral scale of the tailing's material stockpiles at the Sierra Blanca Quarry (i.e., a two-dimensional survey).

To conduct a three-dimensional survey of the tailing's material, the QP recommends that Tactical Resources conducts a sonic drill program to verify the thickness of tailings of both the active tailings area and the historical tailings area. The active tailings area forms a topographic high. The historical tailings area reportedly fills an historical excavation pit created by Cyprus Metals Company during historical beryllium mining. The sonic drill program is intended to compliment the UAV aerial volumetric work but to better assess the thickness and quality of the tailing's material at depth.

A minimum 12-hole sonic drill program is recommended to assess the tailing's stockpiles thickness and to collect representative tailing's material for 1) analytical work to assess the quality of the tailing's material to depth (e.g., HREE mineralization), and 2) representative Run-of-Mine (ROM) samples for metallurgical test work. A sonic drill rig that utilizes a high frequency, rotary vibratory drill to provide continuous core samples without the use of drilling fluids is recommended to maximize retrieval of the tailing's material. Based on the information that historical beryllium excavation pit was up to 200 feet (60 m) in depth, and is now filled with tailings material, it is estimated that an average drill depth of 100 feet (30 m) is required to account for variable tailings stockpile thicknesses. Hence, the 12 100-foot holes would penetrate to depths of approximately 1,150 feet (350 m). At an estimated daily rate of CDN$15,000 per day, the cost of the drill program including drill mob/de-mob, drillers, drill rig, equipment, and supplies, is estimated at CDN$180,000.

In conjunction with drill program, it is recommended that Tactical Resources conducts a ground-based geophysical survey to 1) test the applicability of a secondary tool, beyond drilling, to characterize the thickness of the tailings, and 2) potentially reduce the amount of drilling if the geophysical survey tailings depths correlate well with the first series of

drillholes. Because the crushed rhyolite tailings could be sitting on top of rhyolite bedrock, and the tailings could be compacted over time, the QP recommends that a geophysical orientation survey is required to test the electrical and velocity contrasts of the tailings versus bedrock.

The orientation survey should consist of a line of resistivity (e.g., electrical resistivity tomography/induced polarization) and a line of seismic refraction (e.g., 12 channel seismic refraction). Both orientation survey lines should utilize information from the initial drillholes and the outward edges of the tailings stockpile as control points.

Depending on the orientation results, the appropriate technique can be used to survey all tailings material at the Sierra Blanca Quarry. It is also possible that separate geophysical techniques be used for the different tailing's stockpiles. I.e., the historical pit-filling tailings may have different geophysical properties in comparison to the active, topographic high, tailings. The cost of the geophysical orientation survey, and extended geophysical survey, is estimated at CDN$40,000.

Also, in conjunction with the drill program, it is recommended that Tactical Resources conduct a core sampling program in consideration of analytical assay work to characterize the quality of the tailing's material at depth, and to acquire representative ROM material for metallurgical study test work. The analytical and metallurgical sample program should consider 2 separate sample streams:

1. Interval sampling in all drillholes in which representative and continuous channel samples are collected from the core over 5-foot (1.5 m) intervals. These samples will be analyzed for trace element chemistry with an REE add-on package. At approximately CDN$55/sample – and assuming an 85% recovery rate – the interval sampling geochemical work is estimated to cost CDN$10,000.

2. Composite sampling is recommended in 6 of the 12 drill cores in which representative core material is collected over the entire length of the tailings. These samples will be dried, riffle-split, and sieved to form 1) representative bulk Run-of-Mine samples, and 2) sieved composites with approximately 8 particle grain size distribution fractions. Individual fractions will be analyzed for whole rock and trace element chemistry with an REE add-on package. The geochemical work is estimated to cost CDN$30,000. Note: These samples will also be utilized in metallurgical test work (see below).

The geochemical program should include QA-QC protocols that include sample duplicates, blanks, and certified sample standards. The QP also recommends analyzing a minimum of 50 samples for bulk density (separated between the tailings stockpiles) at an estimated cost of CDN$5,000. An additional CDN$10,000 has been allocated for mineralogical QEMSCAN analysis; this work would be conducted after the geochemical analyses is completed to investigate, for example, anomalies in the analytical results and in support of the metallurgical test work. Hence the overall geochemical and mineralogical program is estimated at approximately CDN$55,000.

Of note, an assessment of volatiles, and particularly fluorine, would be interesting because these elements allow an extension of crystallization temperatures and a further concentration of incompatible elements in magmas until the last stages of crystallization (Markl et al., 2001; Halter and Webster, 2004). The high fluorine content of the Sierra Blanca laccolith is therefore possibly associated with high concentrations of incompatible elements.

Finally, the Phase 1 work program should include metallurgical studies to explore, and advance, the REE extraction technologies and workflow. It is recommended that Tactical Resources contract a minimum of 2 chemical engineering companies to conduct this work. The estimated cost of the bench- and columnar-scale metallurgical studies is estimated to cost CDN$175,000.

26.2 Phase 2 Work Program

Implementation of the Phase 2 work program is contingent on positive results of the Phase 1 work, which are intended to validate the overall volume and quality of the tailing's material and to conduct preliminary metallurgical tests to extract REEs from the tailings in a manner that is suitable to produce marketable products.

Critical to Phase 2 work recommendations, the QP recommends that Tactical Resources continues with metallurgical test work to improve upon and expand the REE extraction technology and workflow. In conjunction with this work, the Company's commissioned engineering firms should develop plans toward the implementation of a demonstration plant – either at the quarry site, or at a location offsite. The estimated cost of this work is CDN$450,000 and CDN$85,000, respectively.

The QP recommends that Tactical Resources consider CIM Modifying Factors that would include the following proposed work activities:

- Permitting and licencing, Environmental Site Assessment, and mine closing and reclamation studies as outlined in Section 6.
- Market analyses that include an assessment of the market size, product demand, market concentration, and market volume of a variety of REE products.
- Product distribution studies for product storage, transport, and distribution.
- Groundwater monitoring – if necessary, within the Closure Plan – that will include ongoing hydrogeological studies and pump tests to assess groundwater conditions.
- Social and local community engagement.

The estimated cost of the combined Modifying Factor programs is estimated at CDN$250,000.

As the Peak REE Project evolves, the Company should consider timely disclosure of material changes, which could include report triggers such as mineral resource/reserve estimations and economic assessment disclosure that would involve technical reporting in accordance with CIM definition standards and guidelines (2014, 2019) and within NI 43-101 disclosure rules. The technical reporting is estimated at CDN$250,000. The QP advises that the Company should also include adequate disclosure of the increased uncertainty and the specific economic and technical risks of failure associated with any future production decisions.

27 References

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28 Certificate of Authors

I, **D. Roy Eccles**, P. Geol., 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 T5M 3Y7.
2. I graduated with a B.Sc. in Geology from the University of Manitoba in Winnipeg, Manitoba in 1986 and 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, 74150) since 2003, and Newfoundland and Labrador Professional Engineers and Geoscientists (PEGNL, 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, and specialty mineral projects and deposits across Canada, United States, Europe, Australia, and other international destinations.
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 experience includes multi-commodity rare earth element evaluations in ultramafic rocks, polymetallic black shale, and other rock types.
6. Apart from Section 13 I prepared and accept responsibility for all other sections (Sections 1-12, 14, 23-27) of this technical report, ***Geological introduction to Tactical Resources Corp.'s Peak Rare Earth Element Project, Texas, United States***, with an effective date of 15 September 2022 (the Technical Report). I visited the Peak REE Project on June 11, 2022, and can verify the Sierra Blanca Quarry site and infrastructure, bedrock geology, tailing's stockpiles, and mineralization at the Peak REE Project that is the subject of the Technical Report.
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 Tactical Resources Corp. and the Peak REE Project, and Sierra Blanca Quarry LLC and their Mining Leases, applying all the tests in section 1.5 of NI 43-101 and Companion Policy 43-101CP.
10. I have not had any prior involvement with the Peak REE Project that is the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Effective Date: 15 September 2022
Signing Date: 15 September 2022
Edmonton, Alberta, Canada

PROFESSIONAL GEOLOGIST ALBERTA
D. ROY ECCLES
15 SEP 2022

PERMIT TO PRACTICE
APEX GEOSCIENCE LTD.
RM SIGNATURE:
RM APEGA ID #: 74150
DATE: 15 SEP 2022
PERMIT NUMBER: P005824
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

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

I, Norman Chow, P.Eng., do hereby certify that:

1. I am President of Kemetco Research Inc., #150 – 13260 Delf Place, Richmond, BC V6V 2A2 Canada.
2. I graduated with a B.A.Sc. in Metals and Materials Engineering from the University of British Columbia in 1991 and an M.A.Sc. in Metals and Materials Engineering from the University of British Columbia in 1997.
3. I am and have been registered as a Professional Engineer with the Engineers & Geoscientists of BC (#29340) since 2005.
4. I have worked as a professional engineer for more than 17 years since my graduation from university.
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). and certify that 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 experience includes multi-commodity metallurgical test programs.
6. I prepared, and accept responsibility for, Item 13 of the ***Geological introduction to Tactical Resources Corp.'s Peak Rare Earth Element Project, Texas, United States***, with an effective date of 15 September 2022 (the Technical Report). (the "Technical Report"). I have not visited the Peak 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 Tactical Resources Corp. and the Peak REE Project, and Sierra Blanca Quarry LLC and their Mining Leases, applying all the tests in section 1.5 of NI 43-101 and Companion Policy 43-101CP.
10. I have not had any prior involvement with the Peak REE Project that is the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Effective date: 15 September 2022
Signing date: 15 September 2022
Vancouver, BC, Canada

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