Trickle Research

Every raging river, every great lake, every deep blue sea starts … with a trickle

Initiating Research Coverage

Texas Mineral Resources Corp.

(OTC: TMRC)

Report Date: 02/19/20

12- 24 month Price Target: $1.80

Allocation: 4

Closing Stock Price at Initiation (Closing Px: 02/18/20): $.84

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Disclosure: Portions of this report are excerpted from Texas Mineral's filings, website(s), presentations or other public collateral. We have attempted to identify those excerpts by *italicizing* them in the text.

Company Overview

Texas Mineral Resources ("TMRC") is an exploration stage mining company with its flagship property, Round Top Mountain, near Sierra Blanca in Hudspeth County, Texas. The Texas Bureau of Economic Geology first recognized the unique geology of Round Top Mountain over 30 years ago and the project was initially drilled in 1984 and 1985. That "unique nature" of the project stems from the fact that it is believed to contain commercial concentrations and amounts of "rare earth elements" ("REE") sometimes also referred to "rare earth metals".

While we will elaborate on the importance of rare earth metals further in this report, "rare earth elements" is a term used to describe 15 separate metals that occur together on the periodic table of elements. (There are two additional elements that are often grouped into the "rare earths elements" category). Those elements are often also broken down into two additional subgroups known as "light" rare earth elements and "heavy" rare earth elements. "Heavy" rare earth elements are delineated from their "light" counterparts by their heavier atomic weights. Further, heavy REEs are generally less abundant and as such more valuable. However, a 1987 report on Round Top prepared by the Texas Bureau of Economic Geology indicates that heavy rare earth elements make up roughly 2/3rds of the total rare earth element content of the project making the resource perhaps even more unique.

Over the past two decades or so, REEs have become increasingly more valuable as they are integrated into a growing number of technologies that have emerged over the same time frame including rechargeable batteries, cell phones and a variety of others. Prior to the proliferation of these new technologies, there were limited markets for these elements, which explains in part how a small mining enterprise like TMRC could wind up controlling an asset that we think could ultimately be worth many times the current market capitalization of the Company. Moreover, while REE's are not necessarily as "rare" as the name implies, they most often occur in concentrations that make their exploitation economically prohibitive.

A recently completed Preliminary Economic Assessment ("PEA") of Round Top indicates that the resource is capable of yielding commercially viable quantities of a variety of REE's over a 20 year mine life and likely far beyond. Further, in December 2019*, TMRC and their funding partner USA Rare Earth announced commencement of a pilot process development facility in Colorado, to be operational within 90 days, with the goal to separate and purify rare earth and other tech metals leached from Round Top ore.* That is a cogent portion of the story, because being able to economically process a REE deposit is perhaps as important as having one in the first place. Further, USA Rare Earth LLC is TMRC's partner in the project, which we will also elaborate on further in this report.

As we noted, the demand for REEs has grown substantially over the past two or three decades, which has in turn impacted the supply side of the equation. Those dynamics are complicated by some additional cross currents. For instance, industry data suggest that the U.S. purchases over 90% of its REE's from China, which produces a large portion of the world's entire REE output. That fact is particularly disconcerting considering that while REEs are critical components in many consumer related technologies like cell phones, they are perhaps equally as critical for many technologies we rely on for our national defense. For instance, the Company's collateral notes that "*920 lbs. of rare earths are used in each F-35 Joint Strike Fighter jet, assembled by Lockheed Martin in Fort Worth Texas"*.

Clearly, the fact that the U.S. is dependent on what is becoming its main international rival on multiple fronts (China) for the supply of critical REEs required to produce key elements of its national defense is problematic. That view was underscored in December 2019 when the U.S. Army announced plans to fund construction of rare earths processing facilities in an effort to ultimately establish domestic sources of REEs. In conjunction with that announcement, Reuters noted that the Army's commitment in that regard represents *"the first financial investment by the U.S. military into commercial-scale rare earths production since World War Two's Manhattan Project built the first atomic bomb"*. (Just to clarify that bit of history, REE ores often occur naturally with uranium, which we think relates to the Manhattan project angle). Not surprisingly, that announcement created a marked catalyst

for TMRCs' stock price. While the shares remain markedly higher than they we prior to the Army's announcement, they have since retreated to levels that we view as attractive given some of the new data points regarding the critical optics that are forming around procurement of new REE resources.

Lastly, we have followed this story for some time now as TMRC presented at a conference we hosted *over 10 years ago* under a prior label. Back then the Company was called Standard Silver Corp. At the time, we invited them to present because we knew the Company's CEO and director, Dan Gorski. Mr. Gorski is a geologist by training, and we followed some mining related enterprises he was involved with prior to him introducing us to Silver Standard/TMRC. In short, at times in the past Mr. Gorski has been a trusted industry resource for us. We were intrigued by Round Top's potential as a REE resource back then and we have continued to keep the story on our radar ever since, especially as the REE supply dilemma has become more acute. We have always had coverage of the Company in the back of our minds but unfortunately, we did not see the U.S Army's announcement coming. Obviously, we wished we had treated that coverage *in the back of our minds* with a bit more urgency. Further, as a matter of additional disclosure, we have known the Company's Chairman, Mr. Anthony Marchese for many years as well. Here again, we have considerable admiration for Mr. Marchese as a financial industry professional. He has been a subscriber to Trickle's research from nearly its inception.

We view Texas Mineral Resources as a potentially unique opportunity to participate in a small pure play public enterprise in the Rare Earth Elements space. Moreover, we believe rare earth supply issues are likely to become more acute as we go forward. If we are correct about that view as well as our assessment that Round Top could in fact prove to be a viable and scalable REE resource, we think the Company could garner substantially higher valuations than the current market cap reflects.

Industry Overview

From the 10,000 foot view, Texas Mineral Resources Corp. is a junior mining company. However, as a largely pure play in the emerging Rare Earth Elements space, it has some unique attributes some of which are related to the REE space itself. We will try to delineate some of the uniqueness of REEs and by extension the TMRC story.

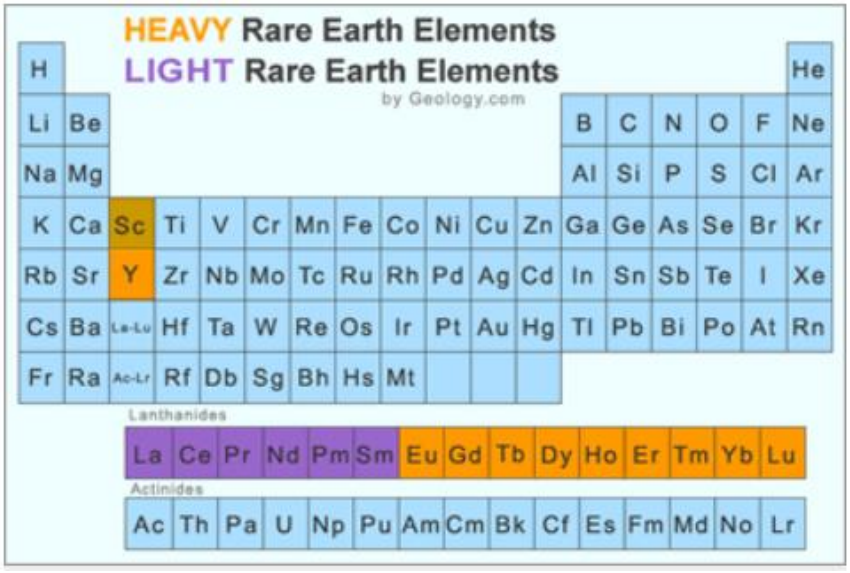
The U.S. Geological Survey describes Rare Earth Elements as follows:

> *"The REE group is composed of 15 elements that range in atomic number from 57 (lanthanum) to 71 (lutetium) on the periodic table of elements, and are officially referred to as the "lanthanoids," although they are commonly referred to as the "lanthanides." The rare-earth element promethium (atomic number 61) is not included in discussions of REE deposits because the element is rare and unstable in nature. Yttrium (atomic number 39) is commonly regarded as an REE because of its chemical and physical similarities and affinities with the lanthanoids, and yttrium typically occurs in the same deposits as REEs. Scandium (atomic number 21) is chemically similar to, and thus sometimes included with, the REEs, but it does not occur in economic concentrations in the same geological settings as the lanthanoids and yttrium…*
>
> *Traditionally, the REEs are divided into two groups on the basis of atomic weight: (1) the light REEs are lanthanum through gadolinium (atomic numbers 57 through 64); and (2) the heavy REEs comprise terbium through lutetium (atomic numbers 65 through 71). [Note: Some authorities include europium and gadolinium within the group of heavy REEs.] Yttrium, although light (atomic number 39), is included with the heavy REE group because of its similar chemical and physical properties.*

Most REEs are not as rare as the group's name suggests. They were named "rare-earth elements" because most were identified during the 18th and 19th centuries as "earths" (originally defined as materials that could not be changed further by heat) and in comparison to other "earths," such as lime or magnesia, they were relatively rare. Cerium is the most abundant REE and is more common in the Earth's crust than copper or lead. All of the REEs, except promethium, are more abundant on average in the Earth's crust than silver, gold, or platinum. However, concentrated and economically minable deposits of REEs are unusual.

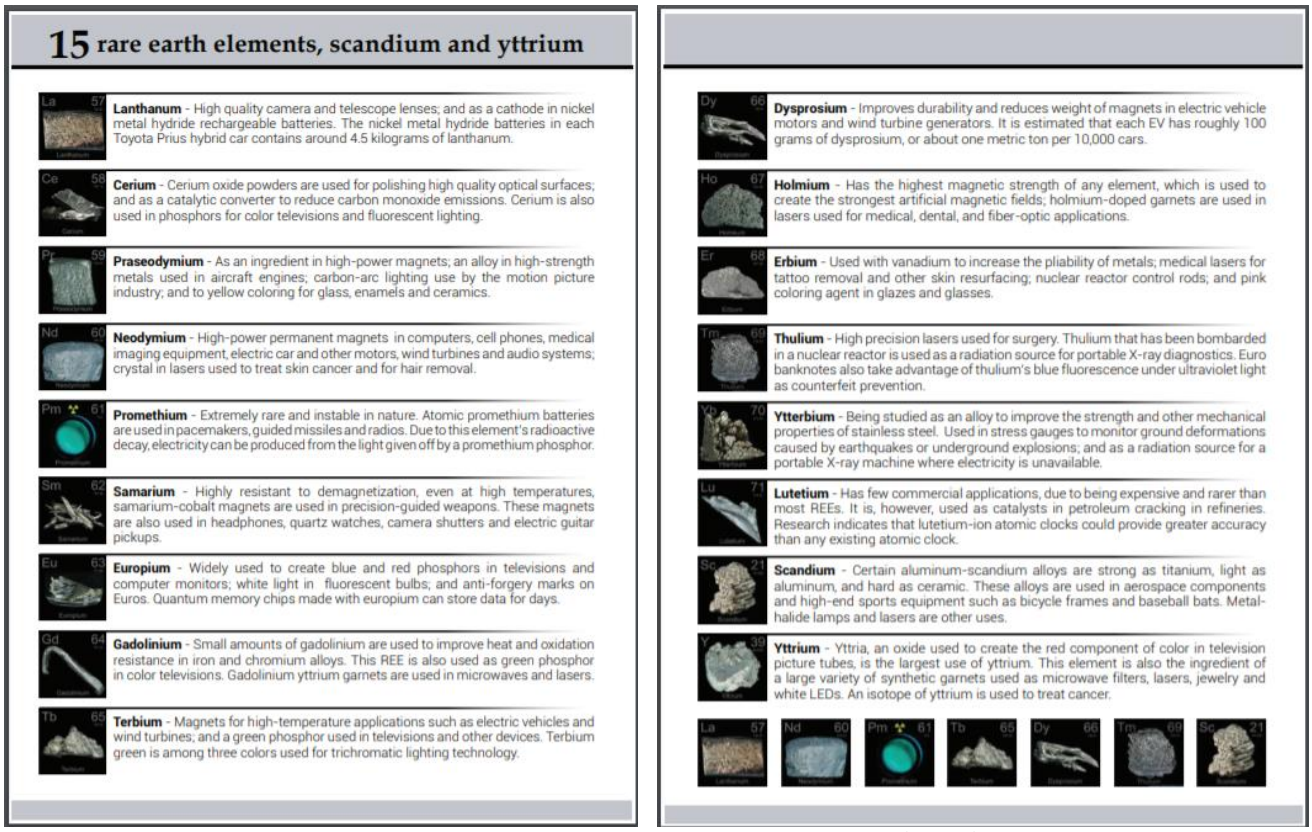
The REEs are commonly found together in the Earth's crust because they share a trivalent charge (+3) and similar ionic radii. In nature, REEs do not exist individually, like gold or copper often do, but instead occur in minerals as either minor or major constituents. In general, these minerals tend to be dominated by either light or heavy REEs, although each can be present. In igneous (magmatic) systems, the large sizes of the REE ions impede their ability to fit into the structure of common rock-forming minerals. As a result, when common silicate minerals crystallize—such as feldspars, pyroxenes, olivine, and amphiboles—most REEs tend to remain in the coexisting magma. Successive generations of this process increase REE concentrations in the residual magma until individual REE minerals crystalize. The REEs can substitute for one another in crystal structures, and multiple REEs typically occur within a single mineral".

The periodic table below highlights both the Heavy and the light REEs:



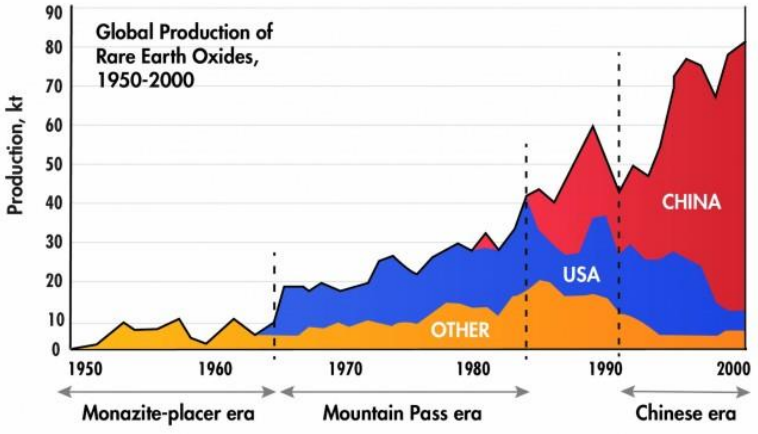
To reiterate, while REEs are not necessarily "rare" they do tend to occur naturally in small concentrations, which makes their economic exploitation difficult. That notion is perhaps even more acute with the "heavy" REEs. On the other hand, collectively (although some more than others) REEs have characteristics such as strength, weight, durability and others that make them ideal for particular applications and the number and breadth of those applications seem to be growing with the advance of a number of emerging technologies. For instance, many of the new "green technologies" utilize REEs. (Incidentally, management believes that about 60% of Round Top's production will be used in green technologies).

Succinctly, the applications of REEs are expanding across a wide swatch of industries:



https://www.miningnewsnorth.com/story/2019/12/13/news/army-probes-rare-earth-facility-funding/6103.html

While REEs have been "known" since the 18th century, there were limited commercial applications for them until the second half of the 20th Century. The emergence of color television in the mid-1960s, drove demand for europium, which was essential for producing color images. As a result of that demand, the U.S. became a major producer of REEs through the mid-1990s primarily via MolyCorp's Mountain Pass Rare Earth Mine in California. However, in the mid-1980s the Chinese began to exploit domestic rare earth sources and ultimately became the dominant player in REEs worldwide as illustrated in the all-too-familiar chart below.



https://www.army.mil/article/227715/an_elemental_issue

China's dominance of the REE market from the early 1990s on was the result of a handful of factors. First, the emergence of their own technology manufacturing drove domestic demand for REEs. Further, their comparative advantages in terms of the usual suspects; low wages, sparse regulation etc., provided an opening for REE production to both feed their own domestic demand, but also to arrest growing portions of international market share as those comparative advantages made them a low cost producer. As "perfect storms" go, those advantages happened to coincide with free trade agreements through the same period. Those factors in part ultimately led to the demise of MolyCorp and ostensibly the U.S. REE industry. Moreover, China has worked to further solidify its control of the worldwide REE market. For instance, the U.S. Army notes that: "*Chinese efforts to monopolize rare earth do not end with domestic sources. China has aggressively pursued rare-earth mines in Africa, often exchanging infrastructure development or the sale of excess defense articles for exclusive mining rights. In the Democratic Republic of the Congo, China gained rights to the country's lithium, cobalt and coltan mines... In exchange, China agreed to build much-needed projects such as urban roads, highways and hospitals… Kenya is another Chinese target. The East African nation has huge mineral potential, and its exploration efforts have picked up in the last five years with the awarding of commercial licenses in prospecting for oil, gold, coal, geothermal minerals and rare earths…*

As a result of the aforementioned, industry sources estimate that China currently controls approximately 90% of the worldwide REE supply. That fact has been alarming to many industry observers for some number of years now but has become even more acute with recent USA/China trade disputes. By some calculations, China's near monopoly in REE's carries potentially catastrophic implications for a variety of emerging industries (green technologies) as well as for several strategic aerospace and defense applications.

The combination of China's stranglehold on worldwide supply of REEs in the face of growing demand, especially in terms of strategic initiatives (military and defense applications) is, to say the least, disconcerting.

Again, from the U.S. Army (https://www.army.mil/article/227715/an_elemental_issue) :

> *The U.S. military is facing a potential crisis at the very bottom of its supply chain. Rare-earth elements have become the new oil, playing a major role in the technological advancements made in the last 50 years. Everything from GPS navigation capability, cell phones, fiber optics, computers, automobiles and missiles relies heavily on rare-earth elements for development and production. For example, according to a 2013 report from the Congressional Research Service, each F-35 Lightning II aircraft requires 920 pounds of rare-earth materials. Rare earths, including yttrium and terbium, are used for laser targeting and weapons in combat vehicles. Rare earths are a critical part of laser and precision-guided missile technology. Lockheed Martin Corp. is working on a small, high-power laser weapon, heavily reliant on the rare earths erbium and neodymium, that the U.S. Air Force Research Laboratory wants to test in a tactical fighter aircraft by 2021.*
>
> *As rare-earth elements grow in importance, they have become both carrot and stick for international political trade negotiations. In the past 20 years, according to the U.S. Geological Survey, China has emerged as the biggest player, controlling approximately 90 percent of the world's rare earth either through territorial control or exclusive mining rights. Additionally, China is less burdened with environmental or labor regulatory requirements that can greatly increase costs incurred in mining and manufacturing rare-earth products.*
>
> *The rare-earth supply problem will have no easy solutions. According to the U.S. Government Accountability Office, it would take 15 years to overhaul the defense supply chain, meaning that any changes to it need considerable lead time. The American Mineral Security Act, passed in 2015, is meant to determine which minerals are critical and diversify the supply chain, according to the NATO Association of Canada. Currently, switching from present suppliers (e.g., China) would cause major disruptions to supply chains.*

The U.S. military supply chain is highly vulnerable to any Chinese efforts to limit access to rare earths. The Chinese have already used rare-earth minerals as a weapon. The result of the resumption of rare-earth trade was a global collapse in prices, which eliminated the incentive for private industry to perform any additional rare-earth exploration or to establish new plants for processing.

As a result of its growing recognition of the acuity of the China/REE problem, the U.S. government has set into motion a number of initiatives/strategies to address the problem. For instance, the Round Top PEA includes the following recent pronouncement from U.S. Defense Department:

34 APPENDIX F: MEMORANDUM FOR THE SECRETARY OF DEFENSE

Federal Register / Vol. 84, No. 143 / Thursday, July 25, 2019 / Presidential Documents 35969

Presidential Documents

Presidential Determination No. 2019–17 of July 22, 2019

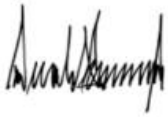
Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as Amended

Memorandum for the Secretary of Defense

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 303 of the Defense Production Act of 1950, as amended (the "Act") (50 U.S.C. 4533), I hereby determine, pursuant to section 303(a)(5) of the Act, that the domestic production capability for separation and processing of Light Rare Earth Elements is essential to the national defense.

Without Presidential action under section 303 of the Act, United States industry cannot reasonably be expected to provide the production capability for separation and processing of Light Rare Earth Elements adequately and in a timely manner. Further, purchases, purchase commitments, or other action pursuant to section 303 of the Act are the most cost-effective, expedient, and practical alternative method for meeting the need for this critical capability.

You are authorized and directed to publish this memorandum in the *Federal Register*.



In addition to the above, On December 10 2019, Reuters reported that according to a government document they obtained, *"the U.S. Army plans to fund construction of rare earths processing facilities, as part of an urgent push by Washington to secure domestic supply of the minerals used to make military weapons and electronics….The move would mark the first financial investment by the U.S. military into commercial-scale rare earths production since World War Two's Manhattan Project built the first atomic bomb. It comes after President Donald Trump earlier this year ordered the military to update its supply chain for the niche materials, warning that reliance on other nations for the strategic minerals could hamper U.S. defenses. The Army division overseeing munitions last month asked miners for proposals on the cost of a pilot plant to produce so-called heavy rare earths, a less-common type of the specialized minerals that are highly sought after for use in weaponry, according*

to the document... The Army said it will fund up to two-thirds of a refiner's cost and that it would fund at least one project and potentially more. Applicants must provide a detailed business plan and specify where they will source their ore, among other factors. This latest move by the Army, a division of the Pentagon, comes after a military study earlier this year on the state of the U.S. rare earths supply chain. The request does not give a specific financial amount the Army could fund, though it is derived in part from the Defense Production Act (DPA), a 1950s-era U.S. law that gives the Pentagon wide financial latitude to procure equipment necessary for the national defense.

Obviously, TMRC/USA Rare Earth is involved in that proposal. We would add, not surprisingly, the above announcement has corresponded with a dramatic increase in TMRC's share price:

Project Overview

Round Top is a 950 acre rare earths project in Hudspeth County, Texas. The property is located 85 miles east of El Paso, Texas. As the photo herein illustrates, the area includes little population density and sparse vegetation, however, it is supported by both power and rail accessibility in close proximity. *Round Top is a small mountain, one of a group of five that comprise the Sierra Blanca. It is approximately 1,250 feet high and 1 mile in diameter.* Studies reflect that Round Top includes *364 million tonnes measured & indicated resources amenable to heap leach extraction and its rhyolite cap is almost continuously mineralized with relatively consistent grade. The project hosts a large range of critical Rare Earth Elements, lithium, high-tech metals Uranium and Beryllium, most of which are critical elements required by the United States; both for national defense and industry*. The Company and its partners believe the project has the potential to become one of the lowest-cost REE projects in the world. We will revisit that notion further in this report.

The general area is owned in part privately with the balance owned by the Texas General Land Office ("GLO"). One of the GLO's primary functions is the management of land and mineral rights to 13 million state owned lands throughout Texas as well as "submerged" areas along the Gulf Coast. In 1850, following the Mexican War, the

U.S. government offered the state of Texas $10 million in exchange for western lands (today New Mexico) that Texas had effectively annexed. That transaction became known as the "Compromise of 1850". Those funds allowed Texas to retire debt it had accumulated but left them with a $2 million surplus. In 1854, the state legislature appropriated that $2 million to the establishment of the Texas Permanent School Fund ("PSF"), which was created *"expressly for the benefit of the public schools of Texas".* Further, *"the Constitution of 1876 stipulated that certain lands and all proceeds from the sale of these lands should also constitute the PSF. Additional acts later gave more public domain land and rights to the PSF".* The PSF remains a critical funding source of Texas' public primary and secondary education and the fund's fiscal 2019 report (August 31, 2019) reflects a fund balance of $46.5 billion.

Company collateral notes that *"the occurrence of fluorite mineralization has been known in the area since the 1950's".* Documented exploration work was done at Round Top and the Sierra Blanca's over a decade starting in the early 1970's, which again revealed fluoride deposits as well as "*the type of rocks associated with it".* That work and additional exploration led to the discovery of beryllium deposits as well. Historic records note that *"throughout the 1980s, several companies held interest in the mountain, including the Cabot Corporation and the Cyprus Metals Company. A 1988 feasibility study found the mountain to contain approximately 298,000 tons of ore with a prediction of yielding 11,000,000 lbs. of beryllium".*

As a result of some of the prior exploration work in the area, in November 2007, the Company (which at that time was Standard Silver) purchased prospecting permits to particular sections of the area, which included Round Top. These permits allowed the Company to *"conduct preliminary surface examination and guaranteed them the exclusive right to negotiate a mineral lease agreement with the Texas General Land Office".* Following additional exploration work, in 2010 the Company changed its name from Standard Silver to Texas Rare Earth Resources (which later became Texas Mineral Resource Corp.). While their initial interest in the project was largely focused on aforementioned beryllium discoveries, the name change obviously reflected their belief that the project contained promising REE resource potential. As a result, in September 2011 TMRC executed two 11 year leases with the GLO covering Round Top (950 acres) as well as another 9,345 adjacent acres. Since the initial procurement of those original Round Top leases, the Company has marked a handful of additional milestones with respect to advancing the project. Here are a few of those (chronological) events excerpted from company filings:

- ***In March 2013****, we purchased the 54,990 acre surface lease at the Round Top Project, known as the West Lease, from the Southwest Wildlife and Range Foundation (the "Foundation") for $500,000 and the issuance of 1,063,830 shares of our Common Stock. We also agreed to support the Foundation through an annual payment of $45,000 for ten years to support conservation efforts within the Rio Grande Basin and in particular engaging in stewardship of Lake Amistad, a large and well-known fishing lake near Del Rio, Texas. The West Lease provides unrestricted surface access for the potential development and mining of our Round Top Project.*
- ***In October 2014****, we executed agreements with the GLO securing the option to purchase the surface rights covering the potential Round Top Project mine and plant areas and, separately, a lease to develop the water necessary for the potential Round Top Project mine operations. The option to purchase the surface rights covers approximately 5,670 acres over the mining lease and the additional acreage adequate to site all potential heap leaching and processing operations as currently anticipated by the Company.*
- ***In March 2015****, we conducted a trial mining test during which we mined 500 tonnes of rhyolite, transported and crushed the ore to 80% passing an approximate one inch screen. This rock is now stockpiled and is expected to be used in our contemplated pilot plant development.*
- ***During 2017*** *TMRC in association with Penn State University, REE Tech and Inventure Renewables of Tuscaloosa, Alabama, jointly applied for a Department of Energy grant to evaluate the economic potential of rare earth elements associated with Appalachian coal deposits. Our group was awarded the first phase of this grant on October 19, 2017. The work consisted of our identification of a resource,*

developing the physical metallurgy to concentrate the minerals (Penn State) and developing the CIX/CIC process to separate the individual rare earth elements and to separate and refine various other elements including iron and aluminum.

- ***In August 2018**, we executed a joint venture agreement with Morzev PTY LTD, doing business as USA Rare Earth ("Morzev" or "USA Rare Earth"), to develop the Round Top Project. Terms of the agreement require Morzev to expend up to $10 million to produce a bankable feasibility study. The funds will be allocated in two tranches, the first of $2.5 million to optimize and finalize the metallurgical processing, and the remaining $7.5 million to be used to fund the engineering, design, geotechnical work, and permitting necessary for a bankable feasibility study. Upon completion of these funding milestones, Morzev will earn and own 70% of the Round Top Project and will have a six-month option to purchase an additional 10% (bringing its ownership in the Round Top Project to 80%) for a purchase price of $3 million. In August 2019, Morzev assigned its ownership right to USA Rare Earth LLC.*
- ***In August 2019**, we published a Preliminary Economic Assessment ("PEA") prepared in accordance with Canadian NI 43-101 specifications. The PEA calls for a 20,000 tonnes per day heap leach operation producing three basic revenue streams, one a REE stream, second a tech metal stream that includes lithium and uranium, and a third consisting of a variety of industrial and fertilizer sulfate products.* That PEA is the basis for much of our valuation/target assessments. A copy of this PEA is available at: http://usarareearth.com/ .

We will address some of these events briefly here and will expand upon those and others in the Operating Overview of this report.

The 2013-2014 events were largely centered on acquiring additional land and leases (surface/water for example) around Round Top that would ultimately be necessary if they were anticipating the future commercialization of the property.

The 2015 test was topical because it provided support for the notion that the property could be conventionally mined and the resource could be crushed/treated to specifications amenable to the processing/extraction technologies the company was contemplating/developing.

The 2017 announcement requires some delineation because we think it is a source of some confusion around the story as it sits today. The Department of Energy Grant was originally contemplated to be in 2 phases. The Company was successful in securing the first phase of that grant, which we believe was $1 million. Recognize, this was a grant from the **Department of Energy** (not the **Department of Defense** which has been more topical in recent company announcements). As we understand it, this grant/program was originally established by the DOE to find alternative uses for Appalachian coal deposits. We suspect the goal was to find an alternative use for coal that was more environmentally palatable that burning it. Conceptually, that alternative use might include extracting valuable rare earth elements that are often found in coal deposits. Since REEs are used in a number of "green" technologies (rechargeable electric car batteries for instance), a process of that nature could be transformative for the coal industry and those who depend on it. This grant had little to do with Round Top, and more to do with the work that the Company was doing to develop technologies to cost effectively process and refine REEs from various sources. Again, as we understand it this phase was successful in the sense that they did in fact process/separate REEs from coal, but the specific approach was not particularly economical. That said, we do not anticipate that the Company will be receiving the second phase of this project (originally slated to be $20 million) in whole or in part any time soon, or at all. However, what *is* topical about this project, is that we believe this research likely provided the basis for some of the continuous ion exchange/continuous ion chromatography ("CIX/CIC") processing technology processing technology the Company has developed to economically extract REEs from their Round Top resource.

We think the 2018 announcement was a milestone for the Company. Those familiar with the junior mining/resource space will likely submit that finding partners to fund portions of development projects like Round

Top is difficult and generally onerous. That may be particularly true in instances where the resource and its relevant markets are perhaps less understood and/or more complex than typical commodity markets (rare earth elements for instance). That said, we think this may be another portion of the story that may not be fully understood and thus may benefit from some color. While this deal will ultimately allow USA Rare Earth to acquire as much as 80% of the Round Top project, that does not make them a "JV Partner"…yet. Just to edify, in order for USA Rare Earth to own 70% of Round Top, they must first get the project through a bankable feasibility. We think that is a distinction worth noting because USA Rare Earth is responsible for funding the R&D to complete the processing portion of the equation (we will address that further later), as well as the remaining elements necessary to get the project to bankable feasibility (here again we will address that issue further in the Operating Overview). Putting that into perspective, the portion of the story that controls the checkbook has a considerable incentive to move the project along through bankable feasibility as quickly as possible so they can earn/acquire the 70% (and potentially the additional 10%) of the project they are spending money on today. We think that arrangement elegantly aligns the source of the money (USA Rare Earth) with the source of the resource (TMRC). We also think that notion is supported by the 2019 announcement above.

We view the PEA as another milestone for the Company and USA Rare Earth. The PEA is an extensive study prepared to Canadian 43-101 standards and it is the basis for the Company's valuation assessments of the project. By extension, it is the basis of our valuation and target assessments as well. We will provide some of the minutia of the PEA in the Operating Overview of this report, but to our original point, its completion and conclusions provide the technical and economic justification to advance the project toward a bankable feasibility study. While the assessment includes models and other assumptions that may or may not prove to be largely accurate (the price of REEs 5 years from now for example), project visibility with this PEA is far greater than it would be without it. Again, we view the completion and conclusions of this document as a highly positive milestone for TMRC and USA Rare Earth.

The next step in the project's advancement is the pilot processing plant the Company is constructing in Wheat Ridge, Colorado. The plant will provide the basis for evaluating the Company's CIX/CIC technology and associated processes enabling the *"full separation and purification of rare earth and other tech metals and critical minerals, leached from ore from Round Top"*. The plant is currently being constructed. Succinctly, the ability to economically separate and process REE's has been a challenge for rare earth projects in the past. We think that has been a function of a variety of factors, which include not just the processing protocols/technology, but also the concentrations, consistency and other geological attributes of the resource(s). For instance, Round Top's favorable grade and amenability to scalable, cost effective and standard heap leaching is a key advantage of the project. In our experience evaluating junior mining enterprises, metallurgy is sometimes one of the lesser understood but critical components to the success of a project. It is often underestimated or overlooked as a project risk, which can ultimately be a critical error. Metallurgy matters, and it is probably even more acute when it comes to projects that are further from mainstream commodity metals like lead, zinc, copper or even silver and gold. We think rare earths certainly fit in that category. The pilot plant's ability to demonstrate successful levels of recovery and separation of REEs as well as the scalability of the same, will be paramount to the success and further advance of the project.

Lastly, the PEA contains a considerable amount of minutia regarding the resource, the anticipated processing approach around it and the potential commercialization of the project including assessments around finished goods pricing, operating costs, required capital expenditures and other associated variables. That said, here are some data points to help frame the opportunity as reflected by the PEA:

Initial Mine life *of 20 years.* While the PEA and resulting NPV and IRR conclusions are based on a 20 year mine life, the PEA also suggests that the resource base at Round Top could support a considerably longer mine life. Further to that point, the PEA also assumes "*No salvage value provisions at end of life",* which means that they are assuming the project operates for 20 years and then has no value thereafter. While certainly cash flows beyond 20 years, have less and less impact on NPV calculations, we would argue that a *no salvage value* approach on a resource capable of producing far beyond 20 years is likely understated. To be clear, we understand the approach,

but conceptually, especially in the low interest rate environment we are in and supposing it continues, (which would again conceptually suggest lower overall discount rates for all projects), the 20 year mine life may represent a conservative approach to the overall valuation of the project.

Capital costs *of $ 602.4 million, with initial capital costs of $350.4 million and sustaining capital over the life of the mine ("LoM") of $252 million.*

Operating costs *$15.61/t-RoM*. As the table below (22-4) indicates, the PEA estimates operating costs of $15.61 per tonne ("p/t"), and average ("Base Case") revenue p/t of $54.14.

Table 22-4 Operating Margins, Base Case

	Base Case
Average Annual Revenue ($/yr)	395.5 million
Average Revenue Per ($/T)	$ 54.18
Average Operating Cost ($/T)	$ 15.61
Average Operating Margin ($/T)	$ 38.58
Operating Margin	71%
Pre-Tax Project NPV 10%	$ 1.56 billion
IRR	70%
Payback (years)	1.4

The above revenues p/t are based on product price assumptions in the table below (22-2). In combination, the PEA anticipates average revenue p/t of $54.18.(the table above; 22-4). We would note two things from the table below. First, recognize that while TMRC is positioned as a REE play, largely focused on the heavy REEs, the resource also includes a number of high value tech metals as well as other commodities of value. That may be an important notion when assessing the project's risk in terms of future REE pricing. The non-REE "credits" are a measurable portion of the economic assessment. Second, the pricing assumptions below on the left provide a good reference point for the high value of some of these elements/compounds. The table on the right reflects the preponderant REE's featured at Round Top:

Table 22-2: Products considered in Economic Analysis

	Product	Base Case Price Assumption	
Rare Earth Oxides (&Relatives)	Yttrium Oxide	$ 3.60	$/Kg
	Praseodymium Oxide	$ 54.50	$/Kg
	Neodymium Oxide	$ 44.00	$/Kg
	Samarium Oxide	$ 1.83	$/Kg
	Europium Oxide	$ -	$/Kg
	Gadolinium Oxide	$ -	$/Kg
	Terbium Oxide	$ 575.50	$/Kg
	Dysprosium Oxide	$ 270.50	$/Kg
	Thulium Oxide	$ -	$/Kg
	Ytterbium Oxide	$ -	$/Kg
	Lutetium Oxide	$ 618.63	$/Kg
	Scandium Oxide	$ 1,040.76	$/Kg
Tech Metals	Uranium Oxide	$ 56.10	$/Kg
	Thorium Oxide	$ -	$/Kg
	Lithium Carbonate	$ 13.75	$/Kg
	Zirconium Oxide	$ 15.12	$/Kg
	Hafnium Oxide	$ 864.00	$/Kg
	Beryllium Hydroxide	$ 220.00	$/Kg
	Gallium Oxide	$ 162.00	$/Kg
Sulfates	Aluminum Sulfate	$ 0.21	$/Kg
	Iron Sulfate	$ 0.10	$/Kg
	Magnesium Sulfate	$ 0.13	$/Kg
	Manganese Sulfate	$ 1.19	$/Kg
	Potassium Sulfate	$ 0.43	$/Kg
	Sodium Sulfate	$ 0.20	$/Kg

It is assumed that the final rare earth oxide will be a saleable product and therefore will not be sent to a smelter for further refining. All oxides are to be sold at the plant and will not incur additional shipping charges.

Symbol	Name	Heavy/ Light?	Selected Uses	Contained at Round Top?
Sc	Scandium	H	Aerospace Components, Lighting	✔
Y	Yttrium	H	Computer Monitors, Phone Screens, Camera Lenses, Energy-Efficient Lighting, Lasers	✔
La	Lanthanum	L		✔
Ce	Cerium	L		✔
Pr	Praseodymium	L	Principal Magnet Metal used in Motors, Generators, Wind Turbines and Electric Vehicles	✔
Nd	Neodymium	L	Principal Magnet Metal – also Laser Range-Finders, Guidance Systems, Communications	✔
Sm	Samarium	L	Optical Lasers, Infrared-Absorbing Glass, Nuclear Reactors	✔
Gd	Gadolinium	H		✔
Tb	Terbium	H	High-Temperature Magnets, X-Rays, Lasers	✔
Dy	Dysprosium	H	High-Temperature Magnets	✔
Ho	Holmium	H		✔
Er	Erbium	H		✔
Tm	Thulium	H		✔
Yb	Ytterbium	H		✔
Lu	Lutetium	H	Petrochemical Industry, PET Scan Equipment, Cancer Treatment	✔

There was one additional data point that jumped out at us as we were reviewing the PEA. The operating assumptions include a 6.5% royalty on all revenues to the aforementioned Texas GLO/PSF. That would suggest that the Round Top project would generate about $529 million in royalty payments over the 20 year mine life to the state under the base case scenario of the PEA. That may be advantageous when it comes the permitting and other associated processes that will be part of the ultimate feasibility study.

Operating Overview

This section of our research typically covers our understanding and projections of the operations of our subject companies. That is, we generally cover our expectations for revenues, margins, grow rates and other associated metrics. That approach is not applicable here. We will provide a brief assessment of their ongoing operating issues, but as we alluded to above, we will use this section to review some of the detail of the Preliminary Economic Assessment ("PEA").

To reiterate, we have provided a link above to the PEA, however, below is a summation of what we view as the more germane points especially with respect to the project's potential valuation and by extension, TMRC's share of the same.

As the 2018 announcement regarding the formation of TMRC's funding partnership with Morzev/USA Rare Earth LLC suggests, the first $2.5 million tranche of USA Rare Earth's funding commitment will be to construct and develop the pilot processing facility in Colorado. That phase is currently under development. We believe their expectations are that the plant will allow them to optimally refine and separate the various REE and other elements at/from Round Top and then create a plan around those pilot results that they can move to Texas and scale to handle the output from a 20 tonne per day heap leach facility. The remaining $7.5 million of the $10 million funding arrangement will be required to complete the *engineering, design, geotechnical work, and permitting necessary for a bankable feasibility study.* That budget from the PEA is as follows:

Table 26-1 Proposed Budget through Feasibility Stage

Task	Budget
Geotechnical Studies	$400,000
Environmental Studies	$2,000,000
Metallurgy & Process Design	
Bench Scale Testing & Optimization	$2,000,000
Pilot Plant	$2,000,000
Metallurgy and Process Engineering	$500,000
Heap Leach Contractor Design	$400,000
Ground Water Wells / Hydrology	$500,000
Power Evaluation / Power Line Upgrade	$1,500,000
Pre-Feasibility Study	$500,000
Feasibility Study	$1,200,000
Subtotal	$11,000,000
Project personnel	$1,450,000
General and Administrative (project only)	$800,000
Subtotal	$13,250,000
Contingency 25%	$3,300,000
Total (with contingency)	**$16,550,000**

There are a few topical points to the budget above that are topical to TMRC's responsibilities and requirements. First, obviously, the budget above is for $16.55 million, which is $6.55 million greater than the USA Rare Earth funding arrangement. $3.3 million of that overage is for "contingencies", which is the general Murphy's Law

catch-all that most budgets contain. Additionally, the funding agreement with USA Rare Earth calls for the two parties to contribute equally any amounts beyond the initial $10 million funding tranche. However, the funding agreement also provides USA Rare Earth with a 6 month option (following the completion of the Feasibility Study) to purchase an additional 10% of the project for $3 million. Presumably, if the economic feasibility is as expected, USA Rare Earth would exercise that option providing TMRC an additional $3 million to address their portion of $6.55 million of the above overage. To translate, under the above budget and assuming the further purchase of the additional 10% by USA Rare Earth, TMRC would not be required to raise additional cash to get through the Feasibility Study. That would be positive for TMRC in the sense that they would then likely not have to further dilute the public entity to address its share of overages, at least up to the $16 million budget.

The PEA has provided a handful of scenarios based on differing primary data points to develop a handful of potential outcomes. Obviously, there are many potential outcomes here. The "base case" scenario is that which is deemed to perhaps be the most likely. We have prepared the table below by combining two tables listed in the PEA. The "Base Case" scenario is highlighted in the table:

	Enhanced Li Extraction	Base Case	Reduced Lu/Yt Revenue	Reduced Li Price	2 year Delayed Start	2 year Delay & Reduced Prices
Average Annual Revenue	$435 million	$396 million	$379 Million	$352 million	$396 million	$335 million
Average Revenue /T	$ 59.57	$ 54.18	$ 51.94	$ 48.18	$ 54.18	$ 45.58
Average Operating Cost /T	$ 15.61	$ 15.61	$ 15.61	$ 15.61	$ 15.61	$ 15.61
Average Operating Profit /T	$ 43.96	$ 38.58	$ 36.33	$ 32.57	$ 38.57	$ 29.97
Operating Margin	74%	71%	70%	68%	71%	66%
Pre-Tax Project NPV @10%	$1.7 billion	$1.56 billion	$1.45 billion	$1.26 billion	$1.29 billion	$947 milloin
Internal Rate of Return (IRR)	80%	70%	65%	59%	54%	40%
Payback (years)	1.2	1.4	1.5	1.7	1.4	1.8

Again, given the large handful of variables; assumed operating costs, finished goods prices, construction delays etc. there are countless potential outcomes here, but the point of the above table is to provide some sense of the ranges of those potential outcomes as well as perhaps the sensitivity of those outcomes to particular and/or more heavily weighted variables. The PEA includes some additional sensitivity analysis that we have not included here but here are a few other specific items to consider in terms of "potential outcomes".

We think the Round Top project may be considerably more open-ended than the PEA NPV/IRR conclusions derive. For instance, as we alluded to, the PEA is built on a 20 year mine life and no salvage value, but we believe the resource is capable of supporting production well beyond that constraint. To that point, we also believe that given appropriate demand, the facility could certainly be scaled beyond the proposed 20 tonnes per day threshold. All other things remaining equal, imputing higher production numbers is not part of the PEA, but leads to substantially higher NPV/IRR assessments. Secondly, one of the scenarios contemplated by the PEA is "enhanced Li (lithium) extraction". To edify, the base case of the PEA assumes Li recoveries in the 50% range, whereas we think the Company believes these recoveries could approach 80%. As the table suggests, higher recoveries of products like lithium (electric batteries) have a markedly positive influence on NPV/IRR conclusions. Frankly, there are a handful of other aspects of the project that could lead to higher assumed valuations as well.

The NPV and IRR conclusions in the PEA assume an equity method of financing the project. That notion has implications for the discount rates associated with the NPV analysis in terms of relative costs of capital for owners of the project. Succinctly, some enterprises have lower costs of capital than others. Further, on a more rudimentary level, the assumptions therefore do not include for instance debt service that would be applicable to financing some portion of the project with debt. The point is, the manner in which the project is financed and the associated "costs" therein, impact both NPV and IRR conclusions.

In terms of timelines. as we understand it, the expectation is for the Colorado pilot processing plant to be completed through (2020) or perhaps into Q1-21. We think that completion will allow them to establish the workflow and other processes necessary to scale an onsite facility. Further, much of the other detail of the Feasibility Study, permitting for instance, are also underway. While we don't think the Company has officially released an expected completion date for the Feasibility Study, nor by extension a production date, if we model around the NPV/IRR data points in the PEA, it looks to us like they are expecting a 2023 production start. Keep in mind, as large mining projects go, this one is relatively simple in terms of infrastructure and associated pieces required to get into production so we don't expect significant complications of delays in that respect (although notice the PEA does provide a scenario for that contingency). No underground working or large open pits per se, rather, they are going to set up a large heap leaching facility and essentially blast the mountain apart and haul it to the leaching facility, then process those feeds via their ion exchange facility. In most cases, the processed products will be ready for sale and will require no additional smelting or other processing, which again makes the project unique.

As both the PEA and some of our additional color suggests, there are a myriad of valuation variables around the project, which in varying combinations create a wide array of outcomes and variance in terms of valuation. In our view, future demand and pricing for the project's products (especially heavy REEs) will drive much of Round Top's ultimate value. That said, if the Company is in fact able to provide these products at the cost/t they are suggesting, we believe they will be highly competitive in terms of what look like prevailing costs of production around the world. However, we submit, China produces the vast majority of these products and we are not sure anyone but the Chinese actually know what their costs are and we certainly do not believe that whatever that number is, it is what they are telling the rest of the world.

Risks and Caveats

Junior mining companies involve a myriad of inherent risks. These include access to capital, permitting, future markets/prices for the commodities they produce and a host of others. We believe TMRC has mitigated a number of these. For instance, their funding agreement with USA Rare Earth, which includes considerable technical and associated support is a clear risk mitigator in our view. Further, the uniqueness of the project as well as the uniqueness of the industry including the apparent support of the U.S. government in terms of the development of domestic sources of REEs is mitigating as well. Nonetheless, many of the risks associated with junior mining companies remain intact.

In conjunction with the prior paragraph, while TMRC management has extensive knowledge and history with the project, we view their alliance with USA Rare Earth as highly important to the success of the deal. We would view the loss of that relationship for one reason or another as largely negative. On the flip side, the nature of their agreement provides for USA Rare Earth to excerpt considerable influence on the trajectory of the project, including perhaps the ultimate sale of the project if that proves to be topical.

While the developers of Round Top collectively believe that the pilot they are building will lead to processes that will allow for the efficient and economic processing of the Round Top resource, that scenario is not a foregone conclusion. Further, the PEA contemplates time frames associated with the completion of the Feasibility Study and ultimately to commercialization of the project that might prove optimistic. As the PEA illustrates, project delays will negatively impact NPV/IRR assumptions of the project.

As we have noted in the Industry Overview, there are several reasons to believe that demand for REEs is going to increase and perhaps dramatically. While that is positive on the face, it may carry other competitive elements that could prove challenging. For instance, there is worldwide recognition of the China/REE supply dilemma and that recognition has spurred interest in potential new REE projects around the world. While we believe Round Top will be highly competitive on a cost of production basis, those advantages may or may not come to pass if some of the cost assumptions of the PEA prove aggressive. Further, the addition of future supply could result in product pricing below those assumed in the PEA scenarios. Obviously, lower future pricing would have a negative impact

on the project's assumptions (all other things remaining equal). As an extension to the pricing notion, we also think the precarious issues surround REE supply and pricing has led REE users to seek substitutes for these elements. Their success in that regard could certainly impact future demand/pricing as well.

Aside from the financing of the initial processing pilot, as the PEA notes there will be a considerable capital investment that will be required to finance the commercialization of Round Top. That capital outlay could require additional capital from TMRC. In that case, the Company may need to dilute the common shareholders in order to meet that obligation. Further, there is no assurance that capital will be available at all, especially if capital markets or even the general world economy was to deteriorate.

Some portion of the positive outlook of domestic production of REEs is centered on the position of the current administration. That support may or may not be as robust in future administrations. Frankly, that notion may apply to other attributes of the project as well including but not limited to attitudes about domestic resource exploitation in general. As we have noted, there are certainly positive environmental attributes associated with REEs via their contributions to "green technologies", those could conceivably be overruled by laws aimed at lesser domestic exploitation of natural resources in general. Succinctly, we view the specter of changing political winds as a risk to the project.

TMRC is a small OTC stock and as such it is thinly traded and subject to considerable volatility. We do not expect that to change any time soon.

These are just a few of the more apparent risks we see in TMRC. There are likely others we have missed and/or are not apparent at this time.

Valuation Models

To reiterate, our coverage generally includes a projected Operating Model, but in this case, TMRC's operations are relatively limited, in part because their funding partner USA Rare Earth is in charge of advancing the project through feasibility. In place of the projected operating model we are providing a number of valuation iterations built around the NPV scenarios presented in the PEA. From a practical standpoint that approach is not dissimilar from our typical approach in that each utilizes a Discounted Cash Flow/Net Present Value framework to arrive at what we believe to be defensible valuation assessments. Again, our approach here includes a number of iterations based on some differing approaches that collectively we believe support our valuation and target conclusions. We have provided some brief narrative to help describe each approach. We would note, we have attempted to duplicate the models that generated the NPV/IRR conclusions of the PEA. In that regard, we don't know all of the assumptions they made in terms of the timing of cash flows and other variables. As such, some of our NPV/IRR conclusions differ from the exact conclusions of the PEA. They are however reasonably close to those conclusions so we have used those as a basis for developing the following matrices.

The table below reflects the six scenarios provided in the PEA (again in the context of the models we built around those assumptions). The table has been adjusted to reflect what we ultimately believe will be TRMC's 20% share of the project and we have divided that number by what we estimate will be the fully outstanding share counts assuming the (cashless) exercise of the current outstanding options and warrants. That assumed number is reflected in the table as well. Lastly, we have highlighted what we believe to be the most reasonable valuation for TMRC based on these particular variables. Succinctly, our assessment in this case is that since we are not assuming visibility regarding financing of the project either internally or via an added partner, our approach is to address that lack of visibility by applying higher discounts rates to NPV assessments. This is an approach we typically use with our own DCF analysis, and discounts rates of 20% are quite common for us in that regard. As the table notes, there are marked differences in the resulting assumed valuations given 5% changes in discount rates. so then to

translate, using the Base Case scenario and a 20% discount rate yields a target valuation of TMRC share of $1.43 per share.

NPV @ 20% of the Project and Current Share Count - 72,094,317 Shares Outstanding (Table: VAL#1)	Enhanced Li Extraction	Base Case	Reduced Lu/Yt Rev.	Reduced Li Price	2-Yr. Delayed Start	2-Yr. Delay & Reduced Price
NPV 10	$ 4.63	$ 3.95	$ 3.67	$ 3.20	$ 3.41	$ 2.49
NPV 12	$ 3.72	$ 3.17	$ 2.93	$ 2.55	$ 2.66	$ 1.92
NPV 15	$ 2.74	$ 2.31	$ 2.14	$ 1.84	$ 1.86	$ 1.31
NPV 20	$ 1.71	$ 1.43	$ 1.31	$ 1.11	$ 1.05	$ 0.71
NPV 25	$ 1.12	$ 0.92	$ 0.83	$ 0.69	$ 0.61	$ 0.39
IRR	79%	70%	67%	60%	53%	44%

The next table (VAL#2), uses most of the same variables as VAL#1 above, however, the one difference is that this tables assumes that TMRC/USA Rare Earth will advance the project themselves, which would presumably mean that TMRC would have to come up with 20% of the capex reflected in the PEA. This table assumes that they do so based on stock sales that we have assumed at various prices/discounts/times. The resulting assumed shares outstanding are listed on the table(s). Table VAL#2 assumes that the project is financed with 100% equity, while the next table (VAL#3) assumes that 30% of the project could be financed with debt. (We tend to think that number could be higher, which would enhance the conclusions of VAL#3). *Further, in conjunction with this iteration, as we alluded to above, we think it is entirely plausible that the U.S. government could be involved in the financing of this project, which would likely improve the financing assessments and ultimate valuation assumptions*. In the case of these two tables, we have lowered the discount rates to reflect financing visibility (or at least its impact). Thus, while the relative valuations are lower due to higher share counts, they are also higher because of lower assumed discounts rates. Here again, the assumed discount rate is telling, but we think a discount rate in the 12% to 15% range are reflective of additional risks associated with the base case scenario, which includes some of the risks imputed in the other iterations. Put another way, notice the assumed valuation using a 12% discount rate is similar to that of the PV10 valuations associated with the less aggressive scenarios. Specifically, the PV12 valuation of the base case ($1.68) is basically the same as the PV10 value of the Reduce Li Price scenario. (Similar variations are reflected in table VAL#3). Incidentally, if we blend the highlighted portions of these three tables, we will arrive at a share valuation/price target of something around $1.54 per share.

Assumed Outstanding Shares @ 20% equity funding of Capex - 135,903,639 Shares Outstanding (Table: VAL#2)	Enhanced Li Extraction	Base Case	Reduced Lu/Yt Rev.	Reduced Li Price	2-Yr. Delayed Start	2-Yr. Delay & Reduced Price
NPV 10	$ 2.46	$ 2.10	$ 1.95	$ 1.70	$ 1.81	$ 1.32
NPV 12	$ 1.97	$ 1.68	$ 1.56	$ 1.35	$ 1.41	$ 1.02
NPV 15	$ 1.45	$ 1.23	$ 1.13	$ 0.98	$ 0.98	$ 0.70
NPV 20	$ 0.91	$ 0.76	$ 0.69	$ 0.59	$ 0.56	$ 0.38
NPV 25	$ 0.59	$ 0.49	$ 0.44	$ 0.37	$ 0.33	$ 0.21
IRR	79%	70%	67%	60%	53%	44%

Assumed Outstanding Shares @ 20% equity funding of Capex and 30% debt financing - 116,760,842 Shares Outstanding (Table: VAL#3)	Enhanced Li Extraction	Base Case	Reduced Lu/Yt Rev.	Reduced Li Price	2-Yr. Delayed Start	2-Yr. Delay & Reduced Price
NPV 10	$ 2.86	$ 2.44	$ 2.27	$ 1.98	$ 2.11	$ 1.54
NPV 12	$ 2.30	$ 1.95	$ 1.81	$ 1.57	$ 1.64	$ 1.18
NPV 15	$ 1.69	$ 1.43	$ 1.32	$ 1.14	$ 1.15	$ 0.81
NPV 20	$ 1.06	$ 0.88	$ 0.81	$ 0.69	$ 0.65	$ 0.44
NPV 25	$ 0.69	$ 0.57	$ 0.51	$ 0.43	$ 0.38	$ 0.24
IRR	79%	70%	67%	60%	53%	44%

As an adjunct to the above, Table VAL#4 below reflects an additional element that we addressed above and both TMRC and USA Rare Earth management(s) are quick to point out. Round Top likely carries a resource that could support a mine like well beyond 20 years. *Our approach* to imputing that variable is to apply a terminal value to the project at the end of the 20 year mine assumptions of the PEA. In this case, we have assumed a terminal value equal to 20 year PV10 value of the Base Case scenario. Table VAL#4 illustrates the valuations of Table VAL#1 above, but includes a terminal value as just noted. *In our view, this is a more relevant approach to the project given the potential of the asset beyond 20 years of mine life.* Those assumptions yield the following:

NPV @ 20% of the Project and Current Share Count (With Terminal Value) - (Table VAL#4)	72,094,317 Shares Outstanding Enhanced Li Extraction	Base Case	Reduced Lu/Yt Rev.	Reduced Li Price	2-Yr. Delayed Start	2-Yr. Delay & Reduced Price
NPV 10	$ 5.06	$ 4.32	$ 4.01	$ 3.50	$ 4.93	$ 3.63
NPV 12	$ 3.99	$ 3.40	$ 3.15	$ 2.74	$ 2.86	$ 2.06
NPV 15	$ 2.88	$ 2.43	$ 2.25	$ 1.94	$ 1.96	$ 1.39
NPV 20	$ 1.76	$ 1.47	$ 1.35	$ 1.15	$ 1.09	$ 0.74
NPV 25	$ 1.13	$ 0.93	$ 0.85	$ 0.71	$ 0.63	$ 0.40
IRR	79%	70%	67%	60%	53%	44%

The above noted, we have another approach that we think might be defensible in valuing TMRC's share of the project. This approach may require some color that may provide some additional insights as well. As most who are familiar with the junior mining space will likely attest, the "end game" for junior players is typically to develop a project to the point where a major producer may want to come in and purchase it or at least provide some sort of funding and operating joint venture arrangement to advance it. A bankable feasibility study is sometimes the basis for that type of arrangement/transaction. Frankly, our sense in talking with TMRC management as well as principals from USA Rare Earth is that, while they will not rule that scenario out, they are currently focused on taking the project to production. We think that view may be supported by the relative simplicity of the project and the reasonable capex requirements (although still substantial). However, we think assuming a sale of the project around acceptable IRR scenarios of a buyer may be a viable approach to arriving at reasonable valuation assumptions as well. The tables below are reflective of that approach. Our methodology here is to assume a purchase by a buyer at a particular price (reflected in the individual tables) and then applying that purchase price to the associated IRR. To edify, the purchase price in conjunction with the required capex would have the impact of lowering the buyers IRR by imputing the purchase price. Note, the tables reflect the price of TMRC shares (at diluted share counts) as 20% of the purchase price.

Base Case NPV (PV10) assuming various purchase prices and a resulting adjust IRR - (Table VAL#5)	72,094,317 Shares Outstanding Base Case Value $300 million Purchase Price	Base Case Value $400 million Purchase Price	Base Case Value $500 million Purchase Price	Base Case Value $600 million Purchase Price	Base Case Value $700 million Purchase Price
TMRC Price per Share of Assumed Buyout Value	$ 0.83	$ 1.11	$ 1.39	$ 1.66	$ 1.94
IRR Including Buyer's Purchase Price	38%	33%	29%	26%	23.60%

We have highlighted two boxes above as those we view as the most defensible in our view. (We tend to think that most mining project IRR thresholds are likely comfortably above 20%). This approach effectively includes the purchase price in the IRR calculation. Clearly, projects with higher IRR's are generally more attractive than those with lower IRRs. On the other hand, there are certainly other considerations with respect to that notion that go beyond IRR. For instance, we would argue that a U.S. based project, especially one that appears to be gathering support directly from the U.S. government, might be more attractive than a project in a part of the world where sovereign risks are more acute even if it carries a lower IRR.

As the above tables suggests and as we have noted throughout this report, there are many potential outcomes here and there is considerable valuation variance amongst those assumptions. Further, throughout these tables we have made the argument that applying higher discount rates to the valuation matrices are a reasonable approach to

trying to mitigate the general lack of visibility and associated risks. However, recognize, the PEA, in addition to providing various iterations, has also assumed some considerable contingencies associated with the production and capex pricing. To translate, the PEA has already "discounted" some of the assumptions by applying those contingencies. While we have not provided iterations void of those contingencies, if we were to provide those, the resulting valuations would be markedly higher. From that perspective, we would argue that all of these assumptions include some redundancy in terms discounting.

Lastly, just to reiterate the point, this project is likely quite open-ended beyond the assumptions of the PEA and our associated models. We have discussed several of those (a longer mine life, higher potential production beyond the assumed 20 t/d, higher resource recoveries, positive intervention in the markets by the U.S government and several others). The above noted, there is one element to this story that may be the most germane issue to all of this, which is the price of REE's going forward. The PEA has addressed this, although frankly, more from the perspective that they may be lower than their assumptions. That could be, but recall, the current optic around REEs is that future supply may be compromised and that seems especially true for the heavy REEs that Round Top features. Higher potential REE prices are certainly one of the "open-ended" elements to this story. We assume that most looking at investing in the space are largely doing so because they have already concluded that higher prices may be more likely than lower ones. If we assume higher future REE prices, our valuation assessments will increase accordingly. Again, there are multiple potential data points and/or combinations therein that could result in valuations well beyond our assessments here.

Summary and Conclusion

The precarious nature of REE supplies is not a new concern. Some industry experts have been warning about it for some time now and concerns about other strategic metals have been debated for several decades now. Incidentally, this might be a good place for us to reiterate that Round Top is not only producing REEs but also several other strategic minerals. For instance, as the PEA notes, lithium production is a considerable portion of this story. To that point, a recent Financial Times article notes that *"Volkswagen expects global demand for lithium to double by 2023"*. Recognize that both lithium and beryllium (which was the target of the *original* exploration and development at Round Top) are both on the U.S. government's List of Critical Resources.

We submit, as we learned with "Peak Oil" and the subsequent boom of domestic oil production, supply concerns among commodities don't always play out as the experts predict. That is, REE and other strategic mineral supply issues may not lead to dramatically higher prices for either. On the other hand, as we argued above, provided Round Top's competitive production cost profile proves reasonably accurate, they should be a formidable player regardless of where those prices end up. Don't misunderstand, we still recognize that in terms of higher valuations for TMRC/Round Top, higher prices will prove considerably more favorable than lower ones.

Certainly, success at the project's Colorado processing facility will be critical to the cost issue we just alluded to, and to its success overall. As we noted, it appears that processing has been one of the industry's bugaboos. In that regard, keep in mind that through a prior Department of Defense ("DoD") grant, the Company used their CIX/CIC technology to produce 99.999% purity heavy rare earths from the Round Top resource. Clearly, while they still need to determine how to best scale the processing, we think the technical side of the process is perhaps beyond the "proof of concept" phase.

While the acute posture of REE supply has been well recognized and well documented, recent posturing by the U.S. government suggests that narrative may be quickly evolving from concept to reality. That paradigm may prove transformative for Round Top and perhaps other domestic REE projects.

Round Top has another favorable attribute that we did not mention above but we think is certainly worth noting. In Q4-19, TMRC added two new board members both executives of the Navajo Transitional Energy Company

("NTEC"). The release also notes that each of these individuals have "deep mining experience". To expand on this from their collateral:

> *Navajo Transitional Energy Company, LLC, is a wholly owned limited liability company of the Navajo Nation that was authorized by the Navajo Nation to purchase Navajo Mine in 2013. Navajo Mine is located on the Navajo Nation, south of Farmington, New Mexico. The Navajo Mine currently supplies coal to the Four Corners Power Plant. Navajo Mine has provided coal to the Four Corners Power Plant for 50 years. Bisti Fuels Company, LLC, a subsidiary of North American Coal Corporation currently operates Navajo Mine on behalf of NTEC… Our mission is to be a reliable, safe producer of coal,* ***while diversifying the Nation's energy resources to create economic and environmental sustainability for the Navajo people and to develop and operate an energy company that values the Navajo Nation, its people, its resources, now and in the future****".*

The NTEC is a major (20%) shareholder of TMRC, and part of their goal in that regard is to increase their exposure to green energy technologies. Recall, as we noted above, 60% of Round Top's production is related to demand for "green technologies." We won't belabor this point, but we have had some experience with respect to the influence of Native American affiliations on political, environmental and commercial issues around the country. They have considerable influence in areas where they have sovereign rights. The fact that the NTEC is aligned with TMRC in terms of Round Top both financially and at the board level, is in our view a marked advantage for the project and TMRC on multiple levels.

Lastly, while the focus of this research has been on REEs and TMRC activities therein, we would note that the Company also owns a subsidiary called American Mineral Reclamation. While perhaps not as topical as REEs these days, mineral reclamation and cleaning up industrial messes in nonetheless a growing issue. The Company has not provided a great deal of color on this piece of the business, but we understand that they may begin to provide mor of hat in the future, as they believe it provides an additional leg to the story. We will look for additional color regarding this piece of the business.

As we noted above, we have followed this story for a very long time and have always believed that at some point it would "have its day". Our regret at this point is that we did not act sooner on our enthusiasm, but in retrospect, we did not see the U.S. Army announcement coming, and that (along with some other seemingly associated events) have represented a marked catalyst in the "concept to reality" idea we just alluded to. That said, in spite of the recent move in the stock, as we have attempted to argue above, we believe the stock likely remains undervalued at current levels. As a result, we are initiating our coverage of Texas Mineral Resource Corp. With an allocation of 4 and a 12-24 month price target of $1.80, which reflects a sort of midline assessment of the combined valuation matrices we developed above. We suspect the next twelves months could provide a number of both macro and micro data points in the stock. To that end, we would reiterate that we view the project as potentially open-ended and those new catalysts could prove telling in that regard. We will revisit our conclusions here if/when those further data points emerge.

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Rating System Overview:

There are no letters in the rating system (Buy, Sell Hold), only numbers. The numbers range from 1 to 10, with 1 representing 1 "investment unit" (for my performance purposes, 1 "investment unit" equals $250) and 10 representing 10 investment units or $2,500. Obviously, a rating of 10 would suggest that I favor the stock (at respective/current levels) more than a stock with a rating of 1. As a guideline, here is a suggestion on how to use the allocation system.

Our belief at Trickle is that the best way to participate in the micro-cap/small cap space is by employing a diversified strategy. In simple terms, that means you are generally best off owning a number of issues rather than just two or three. To that point, our goal is to have at least 20 companies under coverage at any point in time, so let's use that as a guideline. Hypothetically, if you think you would like to commit $25,000 to buying micro-cap stocks, that would assume an investment of $1000 per stock (using the diversification approach we just mentioned, and the 20-stock coverage list we suggested and leaving some room to add to positions around allocation upgrades. We generally start initial coverage stocks with an allocation of 4. Thus, at $1000 invested per stock and a typical starting allocation of 4, your "investment unit" would be the same $250 we used in the example above. Thus, if we initiate a stock at a 4, you might consider putting $1000 into the position ($250 * 4). If we later raise the allocation to 6, you might consider adding two additional units or $500 to the position. If we then reduce the allocation from 6 to 4 you might consider selling whatever number of shares you purchased with 2 of the original 4 investment units. Again, this is just a suggestion as to how you might be able to use the allocation system to manage your portfolio.

For those attached to more traditional rating systems (Buy, Sell, Hold) we would submit the following guidelines.

A Trickle rating of 1 thru 3 would best correspond to a "Speculative Buy" although we would caution that a rating in that range should not assume that the stock is necessarily riskier than a stock with a higher rating. It may carry a lower rating because the stock is trading closer to a price target we are unwilling to raise at that point. This by the way applies to all of our ratings.

A Trickle rating of 4 thru 6 might best (although not perfectly) correspond to a standard "Buy" rating.

A Trickle rating of 7 thru 10 would best correspond to a "Strong Buy" however, ratings at the higher end of that range would indicate something that we deem as quite extraordinary..... an "Extreme Buy" if you will. You will not see a lot of these.