

Marchese of Texas Mineral Resources on the 'extremely lucrative returns' to extract scandium from coal

August 11, 2016 – *Texas Mineral Resources Corp. (OTCQX: 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 some 25 years ago. But few uses existed then for the rare earth elements found in the mountain. Now times have changed and one example of the grave security importance of rare earth elements is the 920lbs of rare earths used in each F-35 Joint Strike Fighter jet.*

In recent developments, Texas Mineral Resources Corp. has announced

- That it has successfully completed a demonstration-of-concept project to separate and refine specific high-purity rare earth elements for the United States Defense Logistics Agency's Strategic Materials Division in conjunction with its joint venture partner K-Technologies, Inc.
- That it had signed a memorandum of understanding with a well-established privately-held Pennsylvania coal company. The MOU gives TMRC a six-month period of time to further evaluate the potential to finance, recover and produce scandium and other rare earth byproducts from their properties.

In this interview with InvestorIntel reporter Fred Cowans, Texas Mineral Resources Chairman Anthony Marchese discusses:

- His company's new strategies.
- How the plan to extract scandium from the overburden of a coal project, as well as the fly ash after the coal is burned, could provide extremely lucrative returns.
- How Round Top Mountain offers the lowest capex rare earths project in the world.
- Why a big mistake is being made by the U.S. in not developing own rare earth supply. (He believes such development is only a question of time.)

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Texas Rare Earth Resources targets lower than \$100 Million CAPEX at Round Top Heavy Rare Earths project

Texas Rare Earth Resources Corp. ('TRER', OTCQX: TRER) has updated its operational strategy earlier this week in order to reduce operational costs, potentially lowering the initial CAPEX for the Round Top heavy rare earth project to USD\$ 60-90 Million. The improved project economics rely on shifting the focus on the production of "a selected group of separated REE products in the range of 350-450 tonnes/year," based on a mining rate of 2,500-3,500 tons of ore/day. The remaining rare earth elements that will not be separated immediately, according to the scalability based strategy, would be stored on site as a mixed REE product for future separation, based on demand. The idea is to allow the market to absorb the lower

initial production rate and to establish TRER as a credible and alternative supplier to critical US industry sectors such as defense where reliable supply chains are essential.



TRER has targeted CAPEX costs ever since the publication of the Preliminary Economic Assessment (PEA) for Round Top. In late 2013, the Company announced that it revised CAPEX from \$2.1 billion to under \$300 million for its NI 43-101-compliant resource with a net present value (NPV) of over \$1 billion and a speculative mine life for Texas Rare Earths is 100-plus years for the sole Round Top Mountain (TRER's flagship project in Hudspeth, Texas; TRER also has three other mountains, which have not yet been fully developed). One of the reasons for the low CAPEX, apart from production scalability strategies, is that the host rock at Round Top is yttrifluorite, which yields yttrium and high rare earths content. TRER may be the only known deposit in based on yttrifluorite host rock. This has processing advantages, because TRER will be able to use sulfuric acid to heap leach the deposit. Heap leaching is among the lowest cost processing methods available and they have been used widely in China for processing its famous clay deposits. Not all deposits are amenable to heap leaching, but the fineness and evenness of the materials in the Round Top deposit lend themselves to this method.

TRER's resource is consists largely of what is now referred to as "critical" rare earths such as dysprosium and holmium along with related critical elements such as yttrium (which is not technically a rare earth). While dysprosium and neodymium have received much market attention lately due to their magnetic properties, holmium is one of the more interesting rare elements. TRER has the largest deposit potential resource for holmium in the US and probably the world. Holmium is an interesting element; it is used to generate the most intense artificial magnetic fields and thanks to its ability to absorb

neutrons produced by nuclear fission, is also used to make control rods for nuclear reactors. Holmium is also needed to make microwave lasers, which have found important applications in medicine. Holmium lasers are used as an endoscopic technique to remove prostatic adenomas, avoiding any skin incisions. Holmium is also being investigated as a material to build magnetic databases for quantum computers. Certainly, the US federal government has an interest in what TRER is doing.

TRER also presents non-mineral advantages, the main one of which is that the resource is located in Texas. Texas legislation is mining friendly and because the State makes money only if the mine reaches production stage, it has a stake in seeing projects through to completion. TRER's deposit is based exclusively on non-federal property, which means it is not subject to Bureau of Land Management (BLM) or Forest Service management. TRER's lower projected CAPEX render it one of the contenders to become a major US domestic rare earths supplier. It has a world class deposit (including beryllium and a 70% heavy rare earth concentration) with outstanding infrastructure. TRER's deposit presents a clear mineralogical pattern which lends itself to heap leaching. As a result, TRER is working on a special metallurgical process to deliver looking for a strategic partner in its next phase of development. TRER's focus on lowering CAPEX aims at maximizing profitability, boosted by the fact that it can offer products based on at least 25 elements, 15 of which rare earths along with thorium and uranium. TRER can also capitalize on its beryllium (298,000 ton historical resource estimate) and niobium resources.