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**EURO-AMERICAN FINANCE NETWORK. INC.AND STEFANOVIC
FAMILY PLAN \$160,000,000.00 (ONE HUNDRED SIXTY MILLION DOLLARA)
TO INVEST IN EFUEL EFN CORPORATION PROJECTS.**

The family is increasing its holdings in EFUEL EFN CORPORATION. Our goal is to continue to purchase outstanding shares until our holdings reach approximately 90%. of outstanding.

Long term, short term and new investors, there are many persons posting negative and damaging lies about EFUEL on iHUB for what reason we do not know. Investors please review our six year history of our holdings, cash and reporting. Also does any investors think we are not serious about growing EFUEL while we are purchasing 90% of EFUEL outstanding shares? Slavoljub Stefanovic, CFO of EFUEL EFN COPORATION received \$35,000,000.00 loan approval, and he plan to invest in EFUEL EFN CORPORATION, wean stock rich \$0.20.

WILDWOOD, FLORIDA September 13 , 2017, press release. eFUEL EFN CORPORATION (OTC PINK EFLN) is a holding corporation with five business divisions:

1. Solar and Wind Energy Division:

The company working with inventors and patent holder to negotiating partnership in manufacturing constraints of conventional glass and frame encased solar panels.

2. Real Estate, Agricultural Land Division:

The company has 2,905 acres land and 21 gold mining properties in California. The company has scientific time conducting detail studies on gold mining claims. The management negotiating with Neck Philipello to purchase of 70,000 acres farm with minerals in NEW MEXICO and TEXAS.

3. Investment Divisions.

The company has Brokerage Account and buying stocks from the market.

4. Retail, Hospitality Division:

CHEROKEE TRADING POST, RETAIL STORES, AND PARTNER IN HOTEL.

5. Plans and Construction Division:

The company has plans for construction of four projects" CEROKEE TRADING MALLS ". One in state of Florida, one in Georgia, one in Indiana, one in Ohio, and potential partnership to build 160 condos in Leesburg, Florida 34748. The construction of this five projects will cost \$160,000,000.00.

The eFUEL EFN CORPORATION has announced that the company and Stefanovic family has elected to hold 1,600,000,000 (one billion and six hundred million) restricted shares of Common Stock at the fixed price of \$1.00 per share. Regulations required EFUEL to hold all restricted shares until stock reaches a market value of \$1.00. By increasing EFUEL's holding we are also increasing EFUEL's market value.

The company share structure will not changing. EFLN. 2,500,000,000 common shares, 1,000,000,000 Prefer "A" shares and 35,000,000 Prefer "B" shares with voting right according to company BY- LAWS.

We will continue to increase assets and grow our balance sheet. EFUEL EFN CORPORATION purchased property and liability insurance on corporation assets and company liability. The company negotiates a partnership with Atlantic Surveyors and Mappers LLC., on potential \$16,000,000 project. The company "EFLN" has several other business propositions that are in negotiating stages for purchase. The company has great investment and finance strategy to obtain money for projects.

The fixed conversion price of \$1, 00 per share represents a significant premium of 10,000 % to the Company's latest closing bid price of \$ 0.001 prior to the shareholding notice by the Stefanovic family. The Chief Financial Officer, Mr. Slavoljub Stefanovic, states "We are making tremendous progress. I remain fully confident with the long term growth of EFUEL... I am not concerned with the day to day, or short term fluctuations of the stock price.

Forward-Looking Statements:

Statements in this press release that are not statement of historical or current fact constitute "forward-looking statements." Such forward-looking statements involve known and unknown risks, uncertainties and other unknown factors that could cause the Company's actual operating results to be materially different from any historical results or from any future results expressed or implied by such forward - looking statements. In addition to statements that explicitly describe these risks and uncertainties, readers are urged to consider statements that contain terms such as "believes," "belief," "expects," "expect," "intends," "intend," "anticipate," "anticipates," "plans," "plan," to be uncertain and forward-looking. The forward- looking statements are also subject generally to other risks and uncertainties that are described from time to time in the Company's filings with the Securities and Exchange Commission.

EFUEL EFN CORPORATION
Mrs. Ljubica Stefanovic, President
WWW.EFUELEFNCORPORATION.COM
Ph. 352 399-6278 efuelefn@yahoo.com

Subject: Re: ***FOR YOUR UPDATE ***
From: Mr. Stephen Bird (info@citibank-online.eu)
To: slavostefanovic@yahoo.com;
Date: Monday, September 11, 2017 9:09 AM

ATTENTION: MR. SLAVOLJUB STEFANOVIC,

For more attention, your dormant account will be completed five years at the end of this month september 2017 since it has been deposited into your account here in cite bank.

I will advice you Slavoljub Stefanovic to contact Mr. Tenou Kossi that you both must make sure you activate this account which i have already advice him before your application to our office.

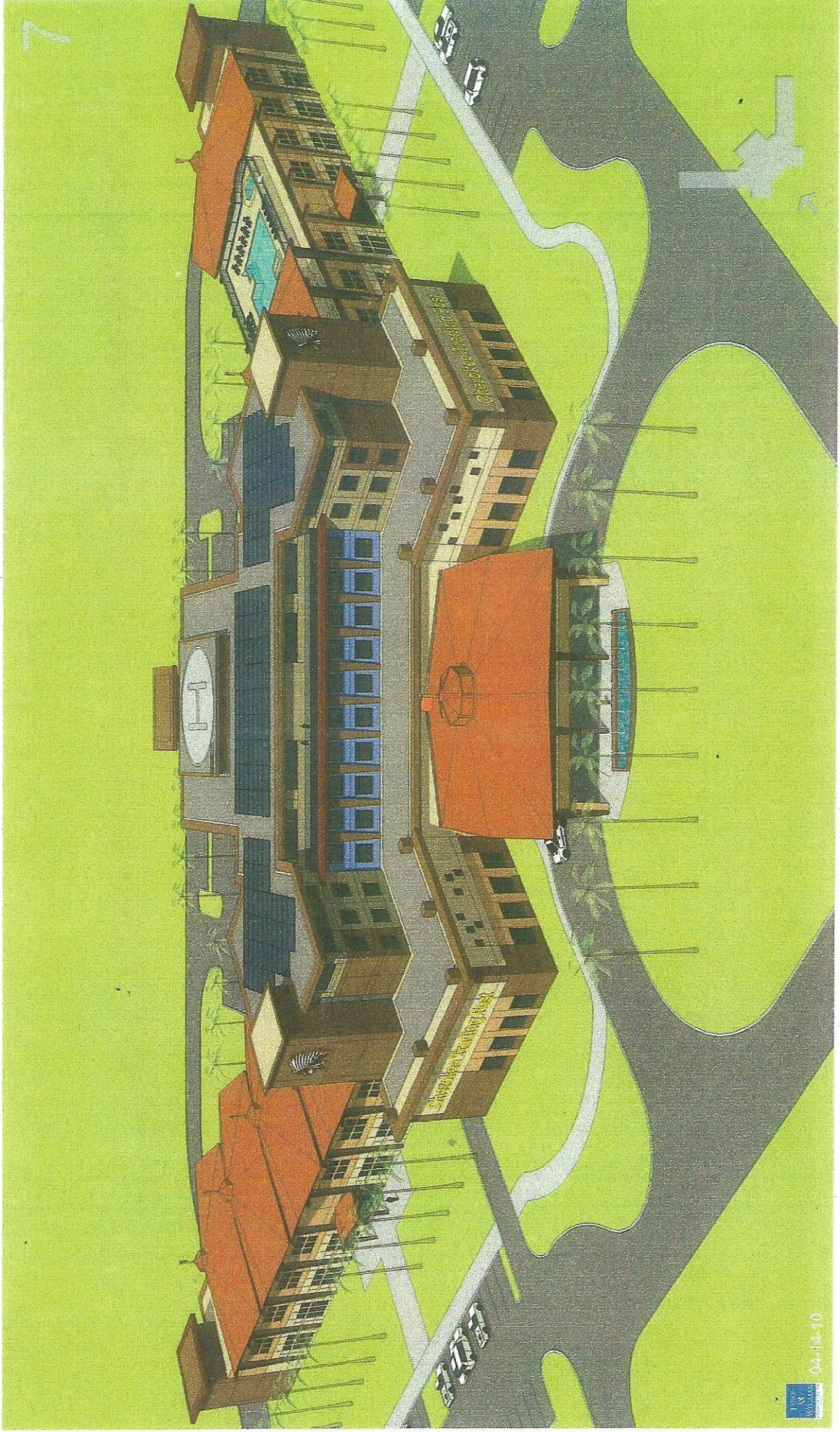
AFTER VIEWING AND GOING YOUR ATTACHMENT, IT IS VERY GOOD IDEAL TO INVEST INTO YOUR COMPANY, I WILL THINK ABOUT AND GET BACK TO YOU IF HAVE SOME ONE TO INVEST.

Your transfer will be complete after 24 hours activation has been done, and once your account is activated, you will receive the activation slip confirmation and transfer slip once the transfer into your account is completed transferred.

Wait your acknowledgement ,

Yours Faithfully,
Mr, Stephen Bird
Executive Officer
E-mail: info@citibank-online.eu,

NOTE: FOR YOUR UPDATE TO MR. TENOU KOSSI.



CHEROKEE TRADING MALL

ESTIMATE OF THE INCOME/LOSS STATEMENT WHEN PROJECT IS COMPLEAT AND OPERATION FOR DAILY BUSINESS

1. The construction of the Cherokee Trading Mall should be completed in year 2016. In this document we estimate the income and expenses using our existing business model in the places of geographical demography, area growth statistic, state friendly approach to the business, (rules and regulations), and expectation of future business growth in the area.
2. The business analysis's with eFUEL EFN CORPORATION and feasibility's status on the area come with the following financial projection on profit and loss statement The statement is based on 100% occupancy, today's prices including inflation, amortization, climate changes and advertisement and marketing processes.
3. The same way that a 100% occupancy could be conservative, a 50% occupancy in That case would be half of that calculation for the income and expenses on the chart.
4. The following are calculations when the business is open to the public in May of 2016.

INCOME

Hotel Rooms	\$	4,420,000.00
Rental Retail Stores		1,680,000.00
Five Operative Stores of CTP		625,000.00
Banquet Rooms		22,000.00
Vending Machines, Restaurant and Bar		1,200,000.00
Total Annual Income		7,974,000.00

EXPENSES

Executive Official Salaries	200,000.00
Employees	1,100,000.00
Maintenance	100,000.00
Electric, Gas	360,000.00
Water and Utilities	36,000.00
Insurance	50,000.00
Employment Tax	25,000.00
Sales Tax	560,000.00

Supplies for Hotel	60,000.00
Hotel breakfast food	48,000.00
Advertisement	50,000.00
Miscellaneous	80,000.00
Banking	55,000.00
Total Annual Expenses	3,524,000.00
Total Income from Business Operation	7,974,000.00
Total Expenses for Business Operation	3,524,000.00
Total Net Income	4,423,000.00

Conclusion:

5. The annalist considered all existing facts, present economic situation end potential for the future economic development in the Wildwood area, the Sumter County of the State of Florida. We concluded that after completion of the Cherokee Trading Mall project there will be substantial improvements in the local area and great wealth to share holders of EFLN. The here holders of EFLN will have steady net income that will constantly produce growth of the corporation.
6. The Retail Stores have the potential to bring additional sales tax to the City, County and State, increase employment, and contribute to the economy's growth for the local community as well as for the state and national. This project will benefit everyone involved.

Projection is calculated for one year of operation. To have five year calculation Income shall increase annually 6% and Expenses 4% .

This projected calculation is estimated by research with economic development in the area. Also, eFUEL EFN, CORPORATION have developed their own studies on project.

eFUEL EFN, CORPORATION

GOLD FINDINGS ON THE EFUEL EFN CORPORATION , LIBERTY MINES, TCP PROPERTIES VALUES IN MULTI BILLIONS OF US. DOLLARS

Wildwood, Florida Sep. 6,2017 press release . The owners of the Liberty Mines TCP, and EFUEL EFN CORPORATION, have reached an agreement to co-finance further exploration and advanced fieldwork on this large group of gold mining properties. EFUEL EFN CORPORATION currently holds an exclusive rights on TCP 's nearly 3000 acres of multiple mines and prospects. This mining district has been one of the most productive in the entire state of California with past production of multi million ounces & multi billions of dollars in today market.

Physical recon, mineral examination, and other testing is ongoing in effort to define multiple target zones. Ground geo surveys and aerial electronic surveys will be conducted in order to better understand the structure and potential of this mesothermal type of deposit. A logistical and geo summary report will be finish by mid 2018.

A similar agreement has also been reached by both parties an another large block of mining properties located in SW Colorado. Preliminary tests indicate that these properties contain significant percentages of Rare Earth minerals. Exploration and testing is ongoing on this group.

TCP is a mineral lands acquisition holding company with mining interests in several Western States of the USA.

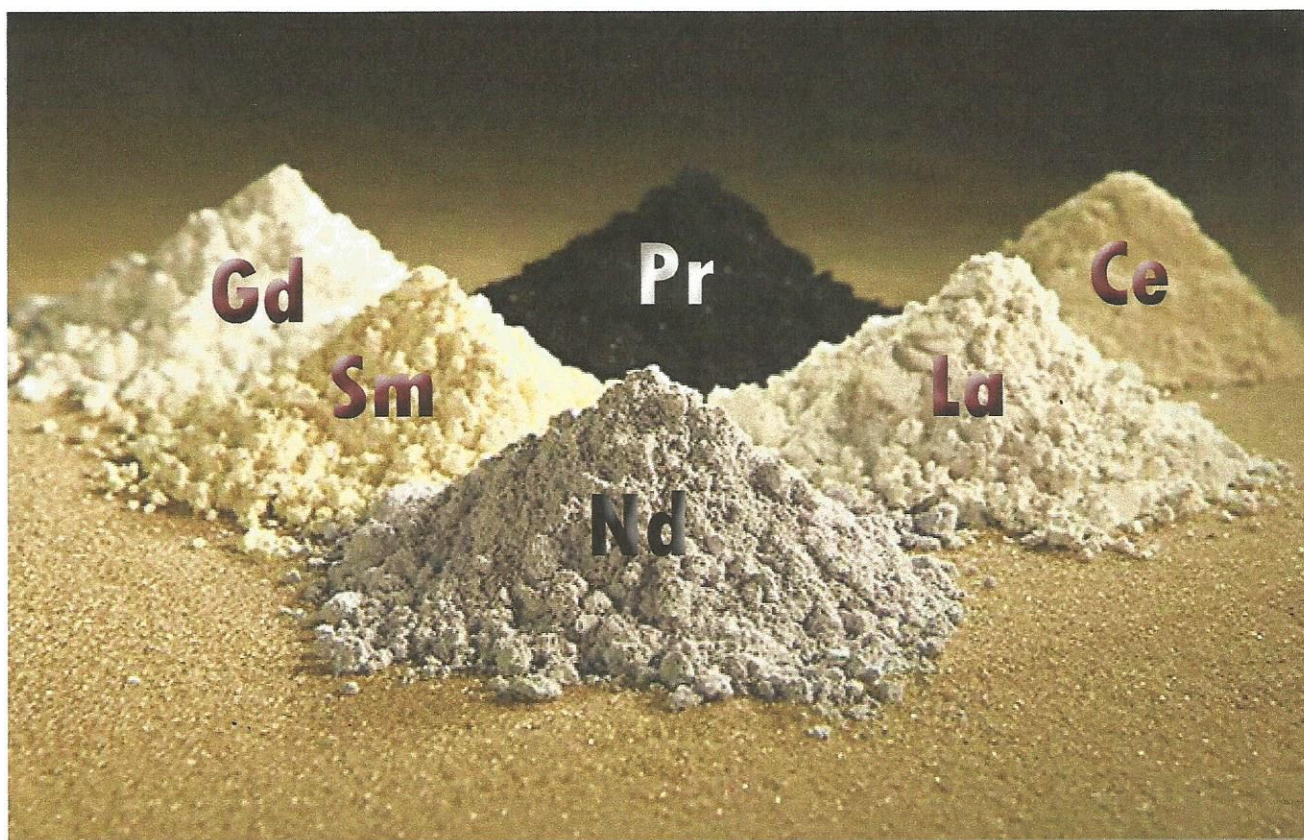
EFUEL EFN Corporation is a Commercial Land Development and Holding Company with multiple divisions.

FORWARD LOOKING STATEMENTS:

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EFUEL EFN CORPORATION
Ms. Ljubica Stefanovic , President
Ph. 352-399-6278

The Principal Rare Earth Elements Deposits of the United States—A Summary of Domestic Deposits and a Global Perspective



Scientific Investigations Report 2010–5220

U.S. Department of the Interior
KEN SALAZAR, Secretary

U.S. Geological Survey
Marcia K. McNutt, Director

U.S. Geological Survey, Reston, Virginia: 2010

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The Principal Rare Earth Element Deposits of the United States—A Summary of Domestic Deposits and a Global Perspective

By Keith R. Long,¹ Bradley S. Van Gosen,² Nora K. Foley,³ and Daniel Cordier³

Introduction and Background

The rare earth elements (REE) are fifteen elements with atomic numbers 57 through 71, from lanthanum to lutetium (“lanthanides”), plus yttrium (39), which is chemically similar to the lanthanide elements and thus typically included with the rare earth elements. Although industrial demand for these elements is relatively small in tonnage terms, they are essential for a diverse and expanding array of high-technology applications. REE-containing magnets, metal alloys for batteries and light-weight structures, and phosphors are essential for many current and emerging alternative energy technologies, such as electric vehicles, energy-efficient lighting, and wind power. REE are also critical for a number of key defense systems and other advanced materials.

Section 843 of the National Defense Authorization Act for Fiscal Year 2010, Public Law 111-84, directs the Comptroller General to complete a report on REE materials in the defense supply chain. The Office of Industrial Policy, in collaboration with other U.S. Government agencies, has initiated (in addition to this report) a detailed study of REE. This latter study will assess the Department of Defense’s use of REE, as well as the status and security of domestic and global supply chains. That study will also address vulnerabilities in the supply chain and recommend ways to mitigate any potential risks of supply disruption. To help conduct this study, the Office of Industrial Policy asked the U.S. Geological Survey (USGS) to report on domestic REE reserves and resources in a global context. To this end, the enclosed report is the initial USGS contribution to assessing and summarizing the domestic REE resources in a global perspective.

In 2009, the Mineral Resources Program of the USGS organized a new project under the title Minerals at Risk and For Emerging Technologies in order to evaluate mineral resource and supply issues of rare metals that are of increasing

importance to the national economy. Leaders and members of this project, with the assistance of the USGS National Minerals Information Center, prepared the enclosed USGS report on domestic REE resources. The USGS Mineral Resources Program has investigated domestic and selected foreign REE resources for many decades, and this report summarizes what has been learned from this research. The USGS National Minerals Information Center (formerly Minerals Information Team) has monitored global production, trade, and resources for an equally long period and is the principal source of statistics used in this report.

The objective of this study is to provide a nontechnical overview of domestic reserves and resources of REE and possibilities for utilizing those resources. At the present time, the United States obtains its REE raw materials from foreign sources, almost exclusively from China. Import dependence upon a single country raises serious issues of supply security. In a global context, domestic REE resources are modest and of uncertain value; hence, available resources in traditional trading partners (such as Canada and Australia) are of great interest for diversifying sources of supply. This report restates basic geologic facts about REE relevant to assessing security of supply, followed by a review of current United States consumption and imports of REE, current knowledge of domestic resources, and possibilities for future domestic production. Further detail follows in a deposit-by-deposit review of the most significant domestic REE deposits (see index map). Necessary steps to develop domestic resources are discussed in a separate section, leading into a review of current domestic exploration and a discussion of the value of a future national mineral resource assessment of REE. The report also includes an overview of known global REE resources and discusses the reliability of alternative foreign sources of REE.

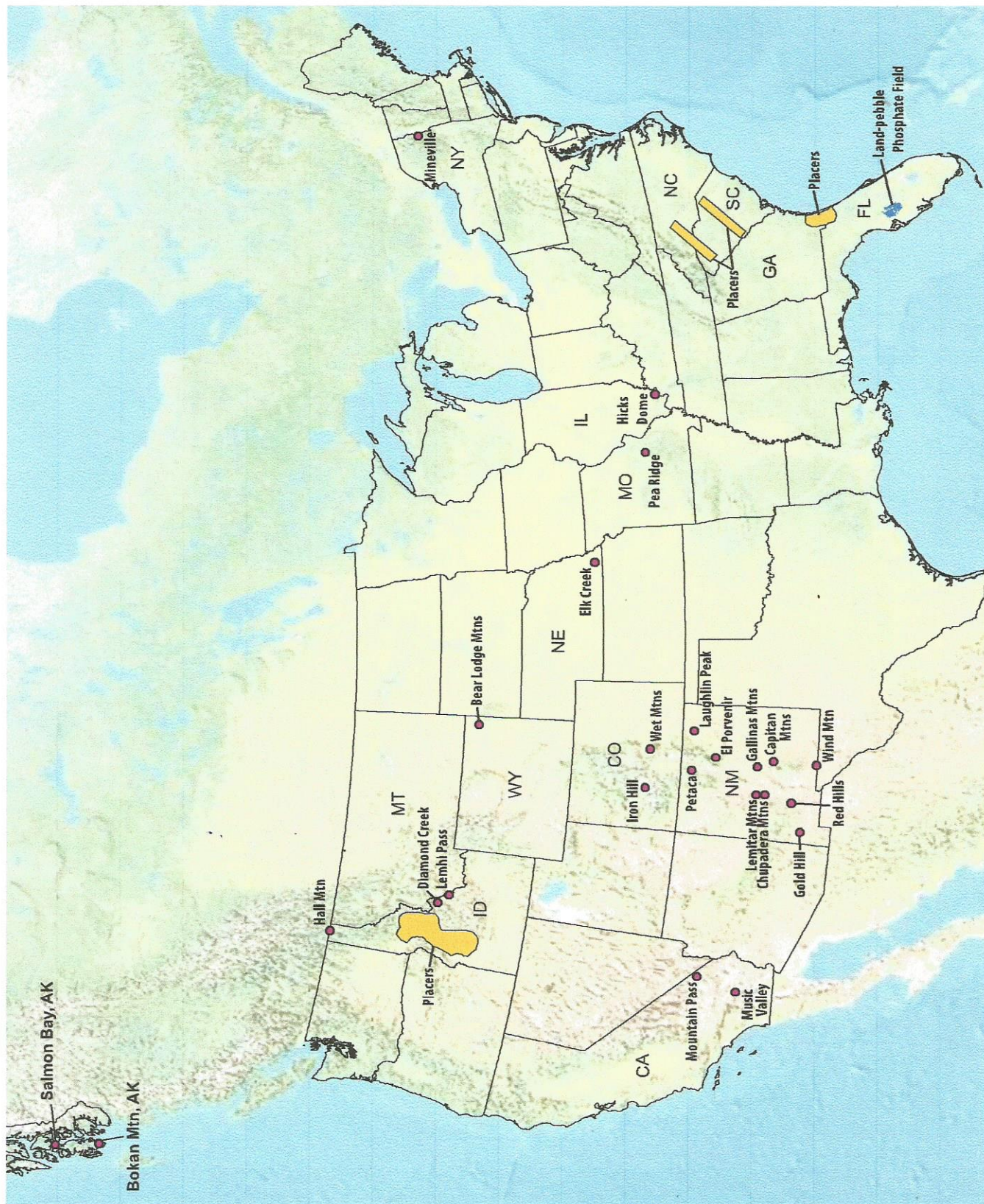
¹U.S. Geological Survey, Tucson, Arizona

²U.S. Geological Survey, Denver, Colorado

³U.S. Geological Survey, Reston, Virginia

Abbreviations Used in This Report

cm	centimeter
ft	foot
ft ³	cubic foot
g/cm ³	gram per cubic centimeter
in.	inch
km	kilometer
km ²	square kilometer
kt	thousand metric tons
lb	pound
m	meter
mi	mile
mi ²	square mile
mm	millimeter
ppm	parts per million
t	metric ton
HREE	heavy rare earth elements
LREE	light rare earth elements
REE	rare earth elements
U.S.	United States
USGS	United States Geological Survey
REO	rare earth oxide
TREO	total rare earth oxide
WGS84	World Geodetic System of 1984 (the reference coordinate system used by global positioning systems)



Principal rare earth elements districts in the United States, which are described in this report.

The Rare Earth Elements

The rare earth elements (REE) comprise 15 elements that range in atomic number from 57 (lanthanum) to 71 (lutetium) on the periodic table (fig. 1). These elements are also commonly referred to as “lanthanides.” Yttrium (atomic number = 39) is also included with the REE group, because it shares chemical and physical similarities with the lanthanides.

Traditionally, the REE are divided into two groups on the basis of atomic weight: the light rare earth elements are lanthanum through europium (atomic numbers = 57 through 63); and the heavy rare earth elements are gadolinium through lutetium (atomic numbers = 64 through 71). Yttrium (atomic number = 39), although light, is included with the heavy REE group because of its common chemical and physical affiliations with the heavy REE in nature.

Most of the REE 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 oxide components within seemingly rare minerals. Cerium is the most abundant REE, and it is actually more common in the Earth's crust than is copper or lead. All of the REE except promethium are more abundant than silver or mercury (Taylor and McLennan, 1985). The rare earth elements are commonly found together in the Earth's crust because they share a trivalent charge ($+3$) and similar ionic radii. Detailed information on the REE is described in Emsley (2001), and an overview of the geology, production, and economics of REE is provided by Castor and Hedrick (2006).

Basic Geology of Rare Earth Elements

Several geologic aspects of the natural occurrence of rare earth elements strongly influence the supply of rare-earth-elements raw materials. These geologic factors are presented as statements of facts followed by a detailed discussion. This section is placed before the balance of the report because an understanding of these facts is critical to the discussion that follows and should be read first.

Although rare earth elements are relatively abundant in the Earth's crust, they are rarely concentrated into mineable ore deposits.

The estimated average concentration of the rare earth elements in the Earth's crust, which ranges from around 150 to 220 parts per million (table 1), exceeds that of many other metals that are mined on an industrial scale, such as copper (55 parts per million) and zinc (70 parts per million). Unlike most commercially mined base and precious metals, however, rare earth elements are rarely concentrated into mineable ore deposits. The principal concentrations of rare earth elements are associated with uncommon varieties of igneous rocks, namely alkaline rocks and carbonatites. Potentially useful concentrations of REE-bearing minerals are also found in placer deposits, residual deposits formed from deep weathering of igneous rocks, pegmatites, iron-oxide copper-gold deposits, and marine phosphates (table 2).

Alkaline igneous rocks form from cooling of magmas derived by small degrees of partial melting of rocks in the Earth's mantle. The formation of alkaline rocks is complex and not fully understood but can be thought of as a geologic process that extracts and concentrates those elements that do not fit into the structure of the common rock-forming minerals. The resulting alkaline magmas are rare and unusually enriched in elements such as zirconium, niobium, strontium, barium, lithium, and the rare earth elements. When these magmas ascend into the Earth's crust, their chemical composition undergoes further changes in response to variations in pressure, temperature, and composition of surrounding rocks. The result is an astonishing diversity of rock types that are variably enriched in economic elements, including the rare earth elements. The mineral deposits associated with these rocks are likewise quite diverse and awkward to classify, in that the distinctive features of these deposits and their rarity can result in classifications that have only one or a few known examples.

Classification of ores related to alkaline rocks is also controversial. Table 2 presents a relatively simple classification that follows analogous categories for deposits related to nonalkaline igneous rocks. Some of the more unusual alkaline rocks that host, or are related to, REE ores are carbonatite and phoscorite, igneous rocks composed principally of carbonate and phosphate minerals, respectively. Carbonatites, and especially phoscorites, are relatively uncommon, as there are only 527 known carbonatites in the world (Woolley and Kjarsgaard, 2008). Economic concentrations of REE-bearing minerals occur in some alkaline rocks, skarns and carbonate-replacement deposits associated with alkaline intrusions, veins and dikes cutting alkaline igneous complexes and surrounding rocks, and soils and other weathering products of alkaline rocks.

Weathering of all types of rocks yields sediments that are deposited in a wide variety of environments, such as streams and rivers, shorelines, alluvial fans, and deltas. The process of erosion concentrates denser minerals, most notably gold, into deposits known as placers. Depending on the source of the erosion products, certain rare earth elements-bearing minerals, such as monazite and xenotime, can be concentrated along with other heavy minerals. The source need not be an alkaline igneous rock or a related rare-earth deposit. Many common igneous, metamorphic, and even older sedimentary rocks contain enough monazite to produce a monazite-bearing placer. As a result, monazite is almost always found in any placer deposit. However, the types of placers with the greatest concentrations of monazite are typically ilmenite-heavy mineral placers, which have been mined for titanium oxide pigments, and cassiterite placers, which are mined for tin.

In tropical environments, rocks are deeply weathered to form a unique soil profile consisting of laterite, an iron- and aluminum-rich soil, as much as many tens of meters thick. The processes of soil formation commonly concentrate heavy minerals as residual deposits, resulting in an enriched-metal layer over the underlying, unweathered bedrock. When a rare-earth deposit undergoes such weathering, it may be enriched in rare earth elements in concentrations of economic interest.

Summary

CBS's "60 Minutes" did a story on China's monopoly of rare earth elements.

The story was an eye-opener for many viewers.

The story goes deeper, and I point out a couple of things that 60 Minutes didn't cover that people need to know.

The investment implications could be dramatic, and as investors, we need to consider the impact of a politically motivated shortage of rare earth elements - it has happened before.

Overview

On Sunday evening, CBS's *60 Minutes* [did a story](#) "Modern Life's Devices Under China's Grip," which exposed China's monopoly of the mining and processing of rare earth elements ("REEs") and its widespread impact.

Those of us who are familiar with the sector didn't learn anything new, and my interest in watching the piece was based more in my interest in how *60 Minutes* would present the story. After all, 60 Minutes reaches a far broader audience than [Technology Metals Research](#) or [Rare Earth Investing News](#).

Those who saw the REE special learned that REE production took off in the US in the 1960s as manufacturers learned that they could use europium to create a life-like red color in newly developed color TV sets. Production came from the Mountain Pass Mine in California, which is now owned and operated by Molycorp (MCP). The Mountain Pass Mine operated until it was shut down for environmental reasons in 1998.

Meanwhile, the Chinese had begun to develop its own REE industry and began strategically expanding its production in China - thereby lowering costs and making mining projects outside of China uneconomical. It also moved to secure a technological advantage, and it in fact did so at the expense of US ingenuity through, for instance, the acquisition of Magnequench - an Indiana-based REE magnet producer.

Having secured an effective monopoly on the REE space, the Chinese hold incredible power given the widespread applications of REEs. *60 Minutes* pointed out how in 2010, the Chinese stopped exports of REEs to Japan after a territorial dispute between the two nations. Without REEs, Japan or any other nation for that matter, cannot make innumerable high-tech gadgets, especially those which have been miniaturized over the past couple of decades such as phones and computers.

Included on this list are weapons and weaponized vehicles that are crucial for America's national defense. With that in mind, 60 Minutes interviewed Dan McGroarty who was a White House advisor and who currently holds a position on the advisory board of Texas Rare Earth Resources (OTCQX:TRER) who effectively told the world that China's monopoly in the REE industry is a national security threat, if unchecked.

While the story is certainly a simplification, it will inevitably prompt some people to investigate further. With that in mind, I decided to highlight 2 points that *60 Minutes* missed but which I think are crucial to understanding the industry and the ramifications of China's monopoly.

1. Not All REEs are Created Equal

The *60 Minutes* piece discussed a couple of the applications of individual REEs but it hardly made a dent or got into the fact that despite the fact that Mountain Pass is an operational mine that it doesn't produce many of the most essential REEs.

Mountain Pass primarily produces cerium and lanthanum, which are part of the "Light REE" subclass. These two metals may be lanthanides but these are markets that are actually oversupplied. Meanwhile it doesn't produce some of the most essential REEs such as dysprosium and terbium (two of the "Heavy REEs"), and it hardly produces any neodymium. Neodymium is essential for the production of permanent magnets, specifically neodymium-iron-boron magnets. Dysprosium and terbium are essential additives to neodymium-iron-boron magnets since they increase their potency (making the size of the magnets smaller) while enabling them to operate at higher temperatures.

With this in mind, readers should be familiar with the most essential REEs, or the "critical" REEs, which industry expert [Jack Lifton](#) says includes neodymium, dysprosium, terbium, europium and yttrium. These metals - particularly dysprosium - have far more favorable demand drivers going forward, and the inability to procure them is a very real risk that could have devastating repercussions.

China's market dominance for these metals is far greater than it is for REEs as a whole since Mountain Pass can only supply a small amount of neodymium and europium. The other major REE mine outside of China - Mount Weld (owned by Lynas Corp. (OTCQX:[LYSDY](#))) produces some neodymium and europium. As for yttrium, dysprosium and terbium, there is no production outside of China, and there won't be for years to come.

2. Separating Individual REEs From One Another Is a Challenge

The *60 Minutes* piece briefly showed the beginning stages of the ore processing for Mountain Pass ore but it didn't touch on a crucial point. REE elements may have different industrial applications and different supply/demand drivers but they are very similar to one another chemically. This makes separating out the individual REEs extremely difficult.

The prevailing process that is used today is called solvent extraction. Very simply put, in solvent extraction, you start with a solution containing REE ions dissolved in water and you bring it into contact with an organic solution. This organic solution will have a slightly greater affinity for one of the REE ions over the others, and some of the ions of this REE will be separated out. Through many iterations of this process, you can separate out most of the ions of the REE in question. Since there are 15 REEs (17 if you count promethium, which doesn't occur naturally except in minute quantities, and scandium, which isn't typically found in REE-rich ores) the process has to be completed 14 more times. The entire process takes up an enormous amount of space, uses caustic and environmentally unfriendly materials such as kerosene, and is labor intensive. Furthermore, it requires that the ore that is fed into the process is consistent. If the ore's consistency changes, the solvent extraction plant needs to change as well. This can be problematic for mines with variegated ore deposits, and it adds financial and operational risk to the mining company.

The Chinese have been using this process for decades whereas outside of China, companies have only just begun to restart REE separation after a long hiatus, and the impact of this is visible.

Molycorp currently uses solvent extraction and it is having trouble making a profit doing so. Part of the problem is the value of the REEs that it is trying to separate, but part of it is that this process is extremely complex. Lynas also uses solvent extraction and it has had trouble meeting its production guidance and turning a profit. It has also faced scrutiny from locals and environmentalists given the environmental issues endemic to solvent extraction.

Given this, of the three companies with advanced stage projects in the United States - Ucore's (OTCQX:[UURAF](#)) Bokan Project, Rare Element Resources' (NYSEMKT:[REE](#)) Bear Lodge Project, and Texas Rare Earth Resources' Round Top - only Texas Rare Earth Resources has done the preliminary engineering assessments in its preliminary economic assessment ("PEA") for a solvent extraction facility.

Ucore used an unproven and now scrapped approach called solid phase extraction in its PEA. It is currently working on a different technology called molecular recognition technology. Rare Element Resources doesn't plan on separating the REEs at all. Rather it plans on selling the REEs as a single

product to a company that specializes in solvent extraction, and it will pay a lot for this service. Even Texas Rare Earth Resources is pursuing a technology called continuous ion exchange/continuous ion chromatography in spite of the fact that it has shown that it can profitably separate out the individual REEs using solvent extraction.

In effect, there is no easy solution to the separation problem. Either companies are using a very complicated, expensive process, they're paying somebody to carry out this process for them, or they are trying to figure out a new way of doing it.

Implications For Investors

The *60 Minutes* piece didn't touch on implications for investors, but since Seeking Alpha is an investing website, I thought I'd touch on the investment implications of the story.

As the *60 Minutes* piece revealed REEs are found in virtually every high-tech gadget from computers to cell phones to fighter planes. Furthermore, several REE are produced exclusively in China, which has proven that it is willing to use its REE monopoly as a tool of economic warfare vis-a-vis Japan. With this in mind, the investment implications could be dramatic if we start to consider what happens if the supply of REEs is cut off.

Companies that make the aforementioned products could be in serious trouble because they might not be able to access critical elements needed to make magnets, lasers, phosphors, or a variety of other components. Even the largest Fortune 500 companies are at risk, and this is a problem that money cannot solve because substitutes for many REEs are nonexistent or notably inferior alternatives.

To illustrate this point, I did an [in-depth analysis](#) of Apple's (NASDAQ:[AAPL](#)) dependence on REEs, including those produced exclusively in China. Apple's dependency - along with General Electric's (NYSE:[GE](#)) and General Motors' (NYSE:[GM](#)) - were highlighted in the *60 Minutes* piece, but the list doesn't end with these three companies. Virtually every high-tech hardware producer, every defense contractor, and every automobile manufacturer is vulnerable. Companies that make seemingly ordinary industrial products or even medical devices are likely consumers of REEs, and China's monopoly could be hypothetically used against all of them.

Life in the 21st century wouldn't be the same without rare earth metals. Cell phones, iPads, laptops, televisions, hybrid cars, wind turbines, solar cells and many more products depend on rare earth metals to function. Will there be enough for us to continue our high-tech lifestyle and transition to a renewable energy economy? Do we need to turn to deep seabed or asteroid mining to meet future demand?

"To provide most of our power through renewables would take hundreds of times the amount of rare earth metals that we are mining today," said Thomas Graedel, Clifton R. Musser Professor of Industrial Ecology and professor of geology and geophysics at the Yale School of Forestry & Environmental Studies.

There is no firm definition of rare earth metals, but the term generally refers to metals used in small quantities. Rare earth metals include: rare earth elements—17 elements in the periodic table, the 15 lanthanides plus scandium and yttrium; six platinum group elements; and other byproduct metals that occur in copper, gold, uranium, phosphates, iron or zinc ores. While many rare earth metals are actually quite common, they are seldom found in sufficient amounts to be extracted economically.

According to a recent Congressional Research Service report, world demand for rare earth metals is estimated to be 136,000 tons per year, and projected to rise to at least 185,000 tons annually by 2015. With continued global growth of the middle class, especially in China, India and Africa, demand will continue to grow. High-tech products and renewable energy technology cannot function without rare earth metals. Neodymium, terbium and dysprosium are essential ingredients in the magnets of wind turbines and computer hard drives; a number of rare earth metals are used in nickel-metal-hydride rechargeable batteries that power electric vehicles and many other products; yttrium is necessary for color TVs, fuel cells and fluorescent lamps; europium is a component of compact fluorescent bulbs and TV and iPhone screens; cerium and lanthanum are used in catalytic converters; platinum group metals are needed as catalysts in fuel cell technology;

Photo: Scott*

and other rare earth metals are essential for solar cells, cell phones, computer chips, medical imaging, jet engines, defense technology, and much more.

Wind power has grown around 7 percent a year, increasing by a factor of 10 over the last decade, noted Peter Kelemen, Arthur D. Storke Memorial Professor of Geochemistry at the Earth Institute's Lamont-Doherty Earth Observatory. "Every megawatt of electricity needs 200 kilograms of neodymium—or 20 percent of one ton," he said. "So if every big wind turbine produces one megawatt, five turbines will require one ton of neodymium. If wind is going to play a major part in replacing fossil fuels, we will need to increase our supply of neodymium."

A recent MIT study projected that neodymium demand could grow by as much as 700 percent over the next 25 years; demand for dysprosium, also needed for wind turbines, could increase by 2,600 percent.

Rare earth metals mine in Xinjiang, China. Photo: opalpeterliu

China currently supplies 97 percent of global rare earth metal demand, and 100 percent of heavy rare earth metals such as terbium and dysprosium, used in wind turbines. In 2005, it began restricting exports to preserve resources and protect the environment, causing prices to soar. Today, the United States is 100 percent dependent on imports for rare earth metals. From the mid-1960s through the 1980s, however, Molycorp's Mountain Pass mine in California was the

world's main source of rare earth metals. As the U.S. share of rare earth metal production declined, China used government support, research and development, training programs, cheap labor and low prices to develop its supply chain, increasing its share of rare earth metal production from 27 percent in 1990 to 97 percent in 2011. In March, the U.S., Japan and the European Union lodged a complaint with the World Trade Organization over China's limits on rare earth exports. In response, China announced that it will export 30,996 more metric tons of rare earth metals in 2012 than it did in 2011.

The U.S., South Africa, Canada, Australia, Brazil, India, Russia, South Africa, Malaysia, and Malawi also have deposits of rare earth metals, and while the U.S. Geological Survey expects that global reserves and as yet undiscovered deposits of rare earth metals will be able to meet future demand, new mines may take up to 10 years to develop, and resources in remote areas will likely be much more difficult to extract.

Kelemen is confident that ongoing global exploration for neodymium, for which there is no known substitute in low-weight magnets for electric motors and generators, will be successful and boost short-term supplies. On the other hand, the heavy rare earth metal dysprosium, used to increase the longevity of magnets in wind turbines and electric cars, is harder to find. "Ninety-nine percent of the current supply comes from clay deposits that can be easily mined with a shovel in Jiangxi, China," Kelemen said. "Other known deposits of dysprosium in Canada and Greenland will be much harder to mine."

Molycorp's Mountain Pass mine

To ease the bottleneck of rare earth metals, mines being developed in Australia, Brazil, Canada and Vietnam could be in production within five years. The Molycorp mine in Mountain Pass has reopened and expects to be operating at full capacity this year.

More mining of rare earth metals, however, will mean more environmental degradation and human health hazards. All rare earth metals contain radioactive elements such as uranium and thorium, which can contaminate air, water, soil and groundwater. Metals such as arsenic, barium, copper, aluminum, lead and beryllium may be released during mining into the air or water, and can be toxic to human health. Moreover, the refinement process for rare earth metals uses toxic acids and results in polluted wastewater that must be properly disposed of. The Chinese Society of Rare Earths estimated that the refinement of one ton of rare earth metals results in 75 cubic meters of acidic wastewater and one ton of radioactive residue. The 1998 leak of hundreds of thousands of gallons of radioactive wastewater into a nearby lake was a contributing factor to Molycorp's shutdown in 2002. Many new mines, including Molycorp, are now developing more environmentally friendly mining techniques.

Nevertheless, we are mining poorer and poorer ores all the time, and it takes more and more energy to extract the same amount of metal, according to Graedel. "I'm not worried that we'll run out of rare earth metals, but will we have enough energy at a reasonable price to extract it?" he asked.

The Apple Store in Shanghai

The high performance of our products depends on the specific rare earth metals they utilize; unless there are technological breakthroughs, doing without those materials would force products to revert to old performance standards. "I'm worried that things will become so scarce and expensive that we can't routinely use them as part of modern industrial design," said Graedel. There could come a point when the cost of extracting rare earth metals is simply not economically justifiable, no matter how high their prices rise.

Because of rising prices, there is now renewed interest in seabed mining for rare earth metals.

Since the 1960s, scientists have known about the existence of manganese nodules, rocks abundant in water 4,000 to 5,000 meters deep that contain nickel, copper, cobalt, manganese and rare earth metals, but in the past, mining them never made economic sense. In 2011, a Japanese team found huge deposits of rare earth metals, including terbium and dysprosium, in sea mud 3,500 to 6,000 meters deep in the Pacific Ocean. One square kilometer (0.4 square mile) of deposits will be able to provide one-fifth of the current global annual consumption, according to Yasuhiro Kato, an associate professor of earth science at the University of Tokyo.

The New York Times recently reported the discovery of deposits of gold, silver, copper, cobalt, lead and zinc in the sulfurous mounds that gush hot water from fissures near active volcanic areas on the ocean floor. Seabed mining, however, could cause great damage to fisheries and marine ecosystems, so environmentalists are pushing for more research and mitigation planning before it begins.

As global warming accelerates the melting of the Arctic ice cap, rare earth metal deposits are becoming accessible and a number of countries are positioning themselves to exploit them.

Then there is the sci-fi-sounding mission of Planetary Resources, a company backed by filmmaker James Cameron and investors Larry Page and Eric Schmidt from Google. It aims to mine the "easily accessible" 1,500 asteroids orbiting Earth, which contain metals such as iron, nickel, cobalt and the platinum group metals used in microprocessors, catalytic converters and renewable energy systems. The company contends that platinum group metals can be found in much higher concentrations on some asteroids than in Earth's richest mines.

Kelemen believes it will take more than a decade, at least, before there is commercially significant extraction of rare earth metals from seabed manganese nodules or asteroid mining, and that sulfurous mound mining would not alleviate the neodymium shortage. So what other solutions exist?

"I would like to see more exploration and research to make sure we know what's there and what the challenges are of going after it," said Graedel. "I don't think we know if we'll have the resources to meet future demand." He also wants material scientists to aim their product design and lab investigations at the most common elements, rather than the scarcer ones. Some companies, including GE, Toyota and Ford, are trying to use less rare earth metals in their products, limit waste and/or develop substitute metals.

E-waste recycling in Ann Arbor, MI. Photo: George Hotelling

Though recycling e-waste cannot satisfy the rapidly growing demand for rare earth metals, it is one way to help alleviate the shortage. Recycling and reusing materials also saves the energy used in mining and processing, conserves resources, and reduces pollution and greenhouse gas emissions. The U.S. Environmental Protection Agency reports that in 2009, 2.37 million tons of electronics were discarded, but only 25 percent was recycled. The European Union recently enacted new e-waste recycling rules requiring member states to recycle 45 percent of all electronic equipment sold starting in 2016, rising to 65 percent by 2019. (Find out where you can recycle your e-waste.)

Ironically, as prices for electronic products come down, people tend to buy more and more of them, so demand for rare earth metals keeps rising.

"In the 21st century, we are facing a lot of resource issues—energy, water, food and metals," said Graedel. "Ultimately each individual consumer is driving the whole rate of expansion of resource use...do we really need all this stuff?"



Gold Mining Methods

Last Modified: 4th November 2014

Summary

Historically, the majority of gold was mined from "**placer deposits**", where gold has settled out of an existing or ancient waterway downstream of where nuggets had eroded out of rock outcrops. Some early miners also used an early form of hardrock mining, digging solid veins of gold out of rock, where mineralized water had deposited it over thousands of years.

Today, gold is extracted in hardrock mines that directly mine the source rock, or "lode" of gold, where it was originally deposited by geochemical processes. Most ore accessed this way today contains only microscopic grains of gold, and it takes tons of rock to produce ounces of gold. Hardrock mines can be either underground mines or strip mines, and are usually more environmentally destructive than placer mining.

There are strange things done in the midnight sun

By the men who toil for gold...

-Robert Service (1907)

Placer Mining

The stereotypical grizzled gold-rush prospector panning for gold was searching for "placer gold", or gold deposited in a waterway. Placer mining **takes a variety of forms**, including panning, "sluice-boxing", hydraulic mining, and dredging. All of these techniques use gravity and water to separate the dense gold from the lighter sand and gravel. Some modern commercial placer operations are quite large and utilize heavy equipment and river diversions.

Placer mining targets "native" gold that isn't chemically bound up within the rock itself. The sources of all placer gold are "lodes", or veins of gold naturally formed within the rock. Ongoing weathering and erosion of rock outcrops continuously exposes new fragments of gold that wash downstream. Because gold is far denser than most rock (19.3 g/cc as opposed to about 2.7 g/cc) it settles into little pockets between large rocks or into bedrock fissures. Gold accumulates in such places while other rock and sediment is washed further downstream.

Modern Placer Mining



Near Nome, AK in 2006
source: Copyright held by photographer

Mine pit at Fort Knox hardrock gold mine



Fort Knox hardrock gold mine pit
source: Copyright held by photographer

Hardrock (Lode) Mining

The vast majority of current gold production comes from commercial hardrock mining operations. In these mines, the gold is extracted from the rock where it was originally deposited.

Some hardrock mines are **underground mines**. A tunnel is drilled or blasted to the source of the ore, which is transported out for processing often by truck or rail. A variety of specific techniques can be used for mining the ore, depending on the geology of the area - such as **block caving**, which allows massive strip-mine scale underground excavation, or the more stereotypical **cut-and-fill and drift-and-fill** techniques, where miners dig out in long horizontal tunnels.

Other hardrock mines are large strip mines that remove the surface dirt and rock and then extract the ore from the resulting open pit. Removal of ore is often accomplished explosives, enormous **power shovels**, and massive trucks, **some capable** of carrying 500 tons of rock in one load.

In both kinds of hardrock mining, the ore is then processed in some manner to remove the gold. Usually this entails crushing the rock into powder and using some combination of gravity, centrifugation, and "**froth flotation**" to perform an initial separation of gold from rock. In many cases this is followed by some form of **cyanide treatment** to precipitate out the remaining gold. The remaining ore mud waste is known as "**tailings**", the disposal of which is one of the largest challenges facing a hardrock mine.

Impacts

Because placer mining doesn't crush rock and doesn't usually use chemicals to extract gold, the environmental impacts are generally less than those of hardrock mining. The primary impacts of placer mining are habitat destruction and sediment release. Habitat destruction occurs as a result of river diversions, and the disruption of riverbanks and river bottoms. These activities also release large amounts of silt and sediment into downstream waterways, which can severely impact water quality. Modern commercial operations tend to use settling ponds to prevent this discharge.

Hardrock mines have a much larger environmental footprint than placer mining, by virtue of their size, the chemistry of the ore deposits, the generation of extremely large volumes of hazardous waste material, and the use of toxic chemicals. Modern commercial hardrock mines are massive operations, in some cases displacing and processing over 200,000 tons of gold-bearing ore per day. In addition to the direct ecological disruption of mining on this scale, much of the gold mined this way is found in sulfur-bearing rocks. These rocks, when disrupted by mining, can produce **acid mine drainage**, a problem that often needs **active treatment forever**. In addition, many small mines use mercury for

Reconsidering the Value of Gold

READ ESSAY

...Gold is both highly valuable, and relatively useless. The vast majority of gold mined throughout history is now jewelry, or stored in vaults as an investment...

...This means that governments are in effect lowering the cost of environmentally destructive mining, contributing to demand by hoarding large reserves, and then directly paying for the costs of mine cleanup. All this in return for no material benefit to taxpayers...

The Claim Post ...the most trusted name in gold property listings.

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A World-Class Gold Mining Property Listing

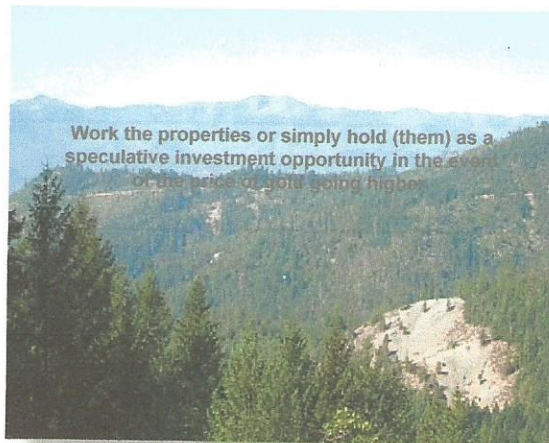
The Liberty Mines Group

21 unpatented mining claims - approx. 2,900 acres

Located On The Historic Billion Dollar Black Bear & Eddy Gulch Trends

Liberty Mining District, Siskiyou County, CA

Located in the heart of one of the richest gold producing trends in the Western United States.



Located On The Billion Dollar Black Bear & Eddy Gulch Trends.

Extraordinary 2,900-ac. collection consisting of 21 gold mining claims located in the heart of one of the richest gold producing trends in the Western United States. This collection is not only saturated with historic gold production, but surrounded on all sides by a multi-billion dollar gold deposit. It is our opinion that this group represents an incredible opportunity to recover mass quantities of gold within a proven gold producing trend.

- Highest concentration of prospects in the richest gulch/most proven area in the Liberty District.
- Prx. 30-mines never exploited at depth/Area production over 1M oz. Au.
- Geo. rpts. of adj. props. indicates 1M oz. Au remaining./50 OPT av.

View: [Photos](#) | [Mines Maps](#) | [Close x](#)

Text

Introduction

This is pocket-gold country! Enjoy looking for sources of gold. Possibly life-altering gold values. [This region gold photos](#)



If you're looking for an extraordinary group of gold properties located off the beaten path but not too far from operational provisions... an exceptional collection of gold claims that offers more than the usual area to prospect for gold in a region that's well known for its big gold history and present-day gold discoveries, then this is a listing you might want to consider.

A gold property collection that is prime for gold-finding exploration.

The Liberty Mines Group is immersed in a historically rich gold bearing trend, as stated and released by state and federal agencies, historians, geologists, scientists, and gold mining experts regarding this region. This collection is not only saturated with historic gold production, but surrounded on all sides by a multi-billion dollar gold deposit. It is our opinion that the Liberty Mines Group represents an incredible opportunity to recover mass quantities of gold within a proven trend which boasts a phenomenal record of gold production unlike any in the U.S..

The Liberty Gold Mining Properties are located in Siskiyou County, California, USA. The group spans an area running approximately four miles in width; east to west, and approximately two and one-half miles north to south on the north slope of the Salmon Mountains at an elevation range of 3,600 feet to 4,800 feet above mean sea level. The group is comprised of 21 properties in all - Approximately 2,900 combined acres in total. Approximately thirty mines are encompassed within this group, including The Madrone, Jumbo, Hickey, Cleaver, and Wilson mines. Approximately 20 shafts have been found overall, including numerous additional prospects. All properties surround and/or follow in a northeastern trend from the historically rich Eddy Gulch and Black Bear mines; the most noted and richest placer and lode mines in Siskiyou County. Accumulative past documented gold production figures within this immediate area is approximately \$7.1 M, when gold was priced at \$16-\$20 per ounce, equating to billions at today's price.

Scientists and geologists have conducted many detailed studies of this region and have numerous reports concerning the mineral deposits and trends. For over 100 years, geologists have been reporting their finds concerning the gold deposit in the vicinity of Whites Gulch and Eddy Gulch. It has been stated multiple times that the deposit stretches for miles and is most likely much deeper than mining operations of past generations discovered.

The 1925 California State Mineralogist's report states that the placer mines in the North Fork of the Salmon River from Sawyers Bar (Eddy Gulch) to Forks of Salmon, 12 miles down river, produced \$25,000,000 in gold. Most of that production occurred when gold was about \$12 per ounce, so it represents about 2 million ounces. Based on mine production, the Black Bear Mine and the lode mines across the head of Eddy Gulch are the greatest source of gold for this stretch of river. There is no evidence that the deposits in this area will stop yielding gold values with depth.

Numbers

Included: Twenty-one (21) unpatented placer mining claims
 Name: The Liberty Mines Group
 Apprx. acreage: 2,900 combined acres
 Location: Liberty Mining District - Siskiyou County, CA
 CAMC Numbers: Liberty 1 thru 16; CAMC#0291902, 0291903, 0291904, 0291905, 0291906, 0291907, 0291908, 0291909, 0291910, 0292114, 0292153, 0292154, 0292155, 0292156, 0292157, 0292158, MADRONE MINE CAMC#0290618, WILSON MINE CAMC#0292115, CLEAVER MINE CAMC#0290621, HICKEY MINE CAMC#0290620, JUMBO MINE CAMC#0291911
 Township: 39N
 Range: 11W
 Sections: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 34, 35
 Meridian: MDM

Directions [view](#)

From Interstate 5 at Yreka, take Highway 3 for approximately 29 miles traveling southwest to the town of Etna. From Etna it's another 25 miles continuing southwest, up and over the pass (Etna Pass) onto the North Fork of the Salmon River. While traveling along the North Fork, just before entering the town of Sawyers Bar, you will come to Whites Gulch Forest Service Road # 40N61 and Eddy Gulch Forest Service Road # 39N27. These all-weather gravel roads lead overall and throughout the Liberty Gold Mining Properties. Streams provide year round running water adequate for mining and milling needs. The winters bring snow, but not more than can be easily removed.

Roads and Access [view](#)

Access routes within gold bearing areas which can support mining operations are typically a major concern for mining companies. There is a great amount of time and cost involved in creating access routes to operation sites. One of the very valuable assets of the Liberty Mines Group is the existence of an excellent network of roads. Another key benefit that must be considered is that these roads are expertly maintained by the National Forest Service and Siskiyou County. The existence of roads (and their maintenance program) is a key feature of the Liberty Mines Group, and one that increases not only the value of the collection, but the ability to recover the minerals with a higher margin of profit.

The 30 Gold Mines Within The Liberty Gold Mines Group [view](#)

The gold mines of Whites Gulch and Eddy Gulch recovered an estimated 1.2 million ounces of gold. Today, that same gold would be valued at over 1.8 Billion Dollars
 The 30 gold mines listed below reside directly within the Liberty Mines Group.
 Every mine listed below has been formally recorded by the USGS and has been assigned an MRDS ID number

	and a MAS/MILS ID number	
JUMBO MINE	THE JUMBO MINE	-123.077790, 41.279010
JUMBO MINE	RUBY BASIN MINE	-123.076720, 41.279040
CLEAVER MINE	NEAVER MINE WITHIN	-123.085370, 41.255390
CLEAVER MINE	BROWN BEAR MINE	-123.08537, 41.255390
CLEAVER MINE	GOLDEN & EVELETH	-123.08537, 41.255390
CLEAVER MINE	KEATON MINE	-123.087790, 41.256510
HICKEY MINE	HICKEY MINE	-123.089450, 41.256510
WILSON MINE	THE WILSON MINE	-123.120520, 41.264240
WILSON MINE	THE ROBERTS MINE	-123.120560, 41.264280
WILSON MINE	HIBERNIA MINE	-123.118340, 41.264560
WILSON MINE	LIBERTY MINE	-123.121120, 41.260950
WILSON MINE	LIVE YANKEE MINE	-123.121920, 41.259040
WILSON MINE	SNOWFLAKE (BEAR DEN)	-123.119220, 41.258140
WILSON MINE	ORIENTAL QUARTZ MINE	-123.120010, 41.257340
WILSON MINE	MADRONE MINE	-123.096120, 41.282640
WILSON MINE	NEILON & PUTNAM	-123.096120, 41.282640
L-4	SHEFFIELD MINE	-123.096400, 41.284010
L-4	STEVENS & HUGHES MINE	-123.098900, 41.265670
L-8	CLAUS PETERS MINE	-123.091950, 41.264280
L-6	KEATON MINE	-123.088320, 41.269240
L-6	CAPTAIN SMITH MINE	-123.085560, 41.268170
L-6	PETERS MINE	-123.085840, 41.265400
L-6	OSCEOLA MINE	-123.086920, 41.265640
L-6	FRANKS & MONETON MINE	-123.087790, 41.264280
L-8	LEWIS MINE	-123.086950, 41.264280
L-6	OSCEOLA MINE	-123.087790, 41.264280
L-8	DEER LODGE MINE	-123.082230, 41.262900
L-8	WHITE ELEPHANT MINE	-123.082790, 41.261510
L-8	SCOTT BAR MINES, INC.	-123.082790, 41.261510
L-13	PAYMASTER MINE	-123.133020, 41.268740

CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 21, NO. 4, P. 447
 CA JOUR MN/GEOL V 31, NO 3, 1935, P 290, 321
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 12, P. 279
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 21, NO. 4, P. 436-437
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 21, NO. 4, P. 426-437
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, V. 31, NO. 3, P. 291
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 21, NO. 4, P. 443
 CA JOUR MN/GEOL V 31, NO 3, 1935, P 329
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL 12-13, P. 422
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 12, P. 284
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 13, P. 412
 CA JOUR MN/GEOL V 31, NO 3, 1935, P 322
 CA JOUR MN/GEOL V 31, NO 3, 1935, P 327
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 1900 REG. OF MINES AND MINERALS. A.S. COOPER
 USGS CRIB LIST, NOV. 4 1961
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 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 13, P. 420
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 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 31, P. 319
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 13, P. 412
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 35, NO.3, P. 319-325
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 13, P. 366-367
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 13, P. 431
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 43, P. 449
 CALIFORNIA JOURNAL OF MINES AND GEOLOGY, VOL. 31, NO.3, P. 326

The Mines Listed Below Are Less Than 1-Mile From The Liberty Mines Group [view production](#)

Black Bear Mine	Klamath Mine	Humpback Mine	Big Fish Mine
Union/Consolidated Mine	Star of the West Mine	Ninety Mine	Aromas Mine
Black Bass Mine	Mt. Laurel Mine/Laurel Mine	Smith & Meyers Mine	Saturn Mine
Carl & Shaw Mine	Smith & Marion Mine	Slim Jim Mine	Peters Mine
Metropolitan Mine	Bonanza Group Mine	Skillen Mine	White Bear Mine
Lanky Bob Mine	Frank & Muctions Mine	Brown & George Mine	Uncle Sam Mine
California Consolidated Mine	Anna Johnson Mine	Ball Quartz Mine	Fraizer Mine
		Whites Gulch Mine	many more...

Development - Mining Potential

Similar to the Eddy Gulch Mines, the Black Bear Mine, the Uncle Sam Mine, and others in this region, the ore deposit throughout this district is mesothermal. This factor eliminates the problem of limited ore depths associated with epithermal and steeply dipping ore deposits. The old timers only mined down dip on ore bodies that broke surface. No attempt was made to systematically explore the huge vein areas further into the mountain. This large block of properties contains several past producing mines and hundreds of old prospects that were only modestly explored by the old timers. In essence, the surface deposits were all that were exploited leaving untold values at depth.



CHEROKEE TRADING POST

FIREWORKS



MOCCASINS



Indian Post

AMERICAN SPIRIT



GASOLINE

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CITY CLERKS OFFICE
City Of Wildwood
100 N. Main Street
Wildwood, FL 34785

2016 - 2017

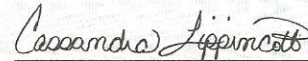
Website: www.wildwood-fl.gov

Receipt #: 16-01557
Effective Date: 10/01/16
License Type: GASOLINE FILLING STATION

Issued Date: 09/15/16
Expiration Date: 09/30/17

Business Name: CHEROKEE TRADING POST
Business Location: 1212 SOUTH MAIN STREET

CHEROKEE TRADING POST
EFUEL EFN CORPORATION
1212 SOUTH MAIN STREET
WILDWOOD, FL 34785



Authorized Signature:

POST IN A CONSPICUOUS LOCATION, IN VIEW OF CUSTOMERS

Receipt#: 16-01557
Effective Date: 10/01/16
License Type: GASOLINE FILLING STATION

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2016-2017

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1212 SOUTH MAIN STREET
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CITY OF WILDWOOD - BUSINESS REGISTRATION

CITY CLERKS OFFICE
CITY OF WILDWOOD
100 NORTH MAIN STREET
WILDWOOD, FL 34785

2016 - 2017

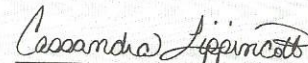
Website: www.wildwood-fl.gov

Receipt #: 16-01558
Effective Date: 10/01/16
License Type: MERCHANTS-STORES,ETC.

Issued Date: 09/15/16
Expiration Date: 09/30/17

Business Name: CHEROKEE TRADING POST
Business Location: 1212 SOUTH MAIN STREET

CHEROKEE TRADING POST
EFUEL EFN CORPORATION
1212 SOUTH MAIN STREET
WILDWOOD, FL 34785


Authorized Signature

POST IN A CONSPICUOUS LOCATION, IN VIEW OF CUSTOMERS

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WILDWOOD, FL 34785

2016 - 2017

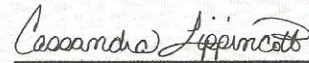
Website: www.wildwood-fl.gov

Receipt #: 16-01560
Effective Date: 10/01/16
License Type: MERCHANTS-STORES,ETC.

Issued Date: 09/15/16
Expiration Date: 09/30/17

Business Name: ORANGE SHOP, THE
Business Location: 1212 S MAIN STREET

ORANGE SHOP, THE
EFUEL EFN CORPORATION
1212 S MAIN STREET STE-C
WILDWOOD, FL 34785



Authorized Signature

POST IN A CONSPICUOUS LOCATION, IN VIEW OF CUSTOMERS

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FILE COPY

ATTORNEY/CLIENT AGREEMENT AND REPRESENTATION OF NO CONFLICT

This agreement is hereby executed by and between Mark E. Pena, of the Law Office of Mark E. Pena, P.A. 4230 South MacDill Ave. Tampa, FL 33611 (attorney) and eFUEL EFN Corporation, a Florida corporation with its principal address of 1212 S. Main St, Wildwood, FL 34785 (the client) and concerns the following:

1. **Scope/Purpose:** This representation is specifically limited to the following:

Drafting Attorney letter with respect to public information to OTC Markets LLC Trading Platform on client's behalf for symbol "EFLN." Even though the attorney opinion letter is written as a third party letter per OTC Markets regulations, upon completion, attorney will forward the signed letter to client's President. Client will be responsible for posting the letter on the OTC Markets LLC (Pinksheets) website.

This representation does not include any filings with the Securities & Exchange Commission, OTC Markets LLC, litigation or appeals.

2. **Duration:** This representation shall continue until the OTC Markets approves the opinion letter under the opinion letter regulations. This representation DOES NOT include correcting any filings or any matters rejected by the SEC or OTC Markets LLC. Attorney will review the financial statements posted by clients but will give no accounting or CPA advice. Should client terminate attorney, the client shall remain financially obligated to pay attorney any and all earned retainers are non-refundable, and outstanding fees and costs due at the time of termination. Client acknowledges that any and all work product, contracts, agreements, notes, files, pleadings, filings and contacts remain the proprietary property of attorney and attorney can retain possession and withhold transferring any of this property to any third party or new attorney until and unless all fees and costs billed by attorney to client have been fully paid.

3. **Compensation:** In consideration of the services performed and to be performed by the attorneys, and outside firms, if any, Client does hereby agree to compensate attorneys in the following manner:

Earned Flat Fee in advance: \$ 1500

Costs: All additional costs are to be paid by the client, including any filing fees and contract labor required to complete this representation. Client will not be charged for postage, fax and telephone. Client will deposit, in Trust, with the attorney, the sum of 0 as a cost deposit. Attorney shall expend these funds as he reasonably perceives in the best interests of the client and will notify client of expenditures on a monthly basis.

4. **IT IS FURTHER UNDERSTOOD** that the above-referenced compensation is for the matter described above and no additional matters. The above-referenced compensation is exclusive of travel costs.

5. **CLIENT DOES FURTHER AGREE** that if the client fails to compensate attorney pursuant to the terms set forth above, the attorney shall immediately discontinue and terminate all further work on behalf of client and shall immediately withdraw from representation of client. In the event that a balance is due to the attorney upon completion of the case, or after withdrawal by the attorney, client specifically agrees to the placement of a lien on client's file. Client also agrees that any outstanding balance which is 30 days past due will carry an interest charge of 12% per year. Client further agrees that client will be liable for any costs and attorney's fees the attorney expends in collecting the fees, should client fail to pay them.

6. **THE ATTORNEY AGREES** that he will diligently represent the client's interests and promptly communicate with client and designees.

7. **CLIENT UNDERSTANDS THAT** the attorney-client relationship shall begin at the time the payment is made. This representation shall continue until the opinion letter is accepted by OTC Markets, NOT if and when the OTC Markets LLC removes the yield sign. Any litigation or other action by the attorney, including an Appeal, are beyond the scope of this Contract, and additional compensation must be paid and a further Contract must be entered into for purposes of continuing Post-Trial representation.

8. **CLIENT specifically acknowledges** that the attorney has given no guarantee regarding the outcome of the opinion letter or any subsequent filing, registration or other matter stated herein, and that all expressions by the attorney relative to the case are only matters of his opinion in good faith. Client expressly understands that the nature of this representation relies on many outside market and governmental forces outside the attorney's control. Specifically, client acknowledges that the OTC Markets LLC underwriting process may result in EFLN not being returned to a full pink status. Client has discussed and reviewed attorney's experience in these matters, which is in excess of twenty years and includes counsel of record in over 1600 litigation cases, including jury trials before the Federal and State Courts, including Appeals filed in the Second and Fourth District Courts of Appeal in Florida and the 11th Federal Circuit Court, Atlanta, Georgia, and the trial Courts of the Middle District of Florida, Tampa and Oriando, Florida. Attorney's experience also includes criminal and civil representation before the Securities & Exchange Commission of the United States, OTC Markets, LLC, as well as the Florida Department of Financial Regulation. Attorney's experience also includes serving on the Boards of Directors on four public companies and serving as corporate general counsel for over 50 private and public corporations. Attorney has authored hundreds of opinion letters for securities transactions and has never had an opinion letter rejected or questioned by any regulatory agency or body, nor has attorney ever been suspended, banned, disbarred or had any administrative action filed against him by and securities related agency, including OTC Markets, FINRA or the SEC. Client has independently


researched attorney's experience as well as his disciplinary history with the Florida and Federal Bars and is satisfied of attorney's experience and capabilities.

9. Client has, before signing this Contract, read this Client Contract and understand the contents thereof. Client has initialed each paragraph and understands same.

10. CLIENT FURTHER UNDERSTANDS THAT this Contract may be canceled by written notification to the attorney at any time within three (3) business days of the date the contract was signed, as shown below, and if canceled, client shall not be obligated to pay the fees to the attorney for the work performed during that time. If the attorney has advanced funds to others in representation of client, the attorney will be entitled to be reimbursed for such amounts as they have reasonably advanced on client's behalf.

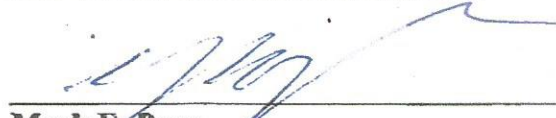
11. Attorney has advised client of his prior representation of Joseph Cillo and Spoon Cillo. Attorney has further advised clients that he cannot accept this or any other representation of clients if there is any conflict between clients and Mr. and Mrs. Cillo for any reason whatsoever. Attorney warrants that he has advised the Cillos of this agreement, and they have no objection with attorney completing this opinion letter for clients.

CLIENT

 7-25-2017.
By Ljubica Stefanovic, President date

Dated: 7-25-2017.

Law Offices of Mark E. Pena, P.A.


Mark E. Pena

Dated: 7/24/17