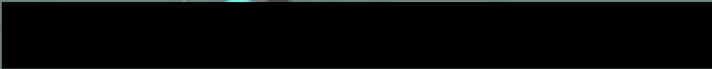


Use the following Link to go to Misty Mountain Online

<https://wall.page/oc1Ea6>

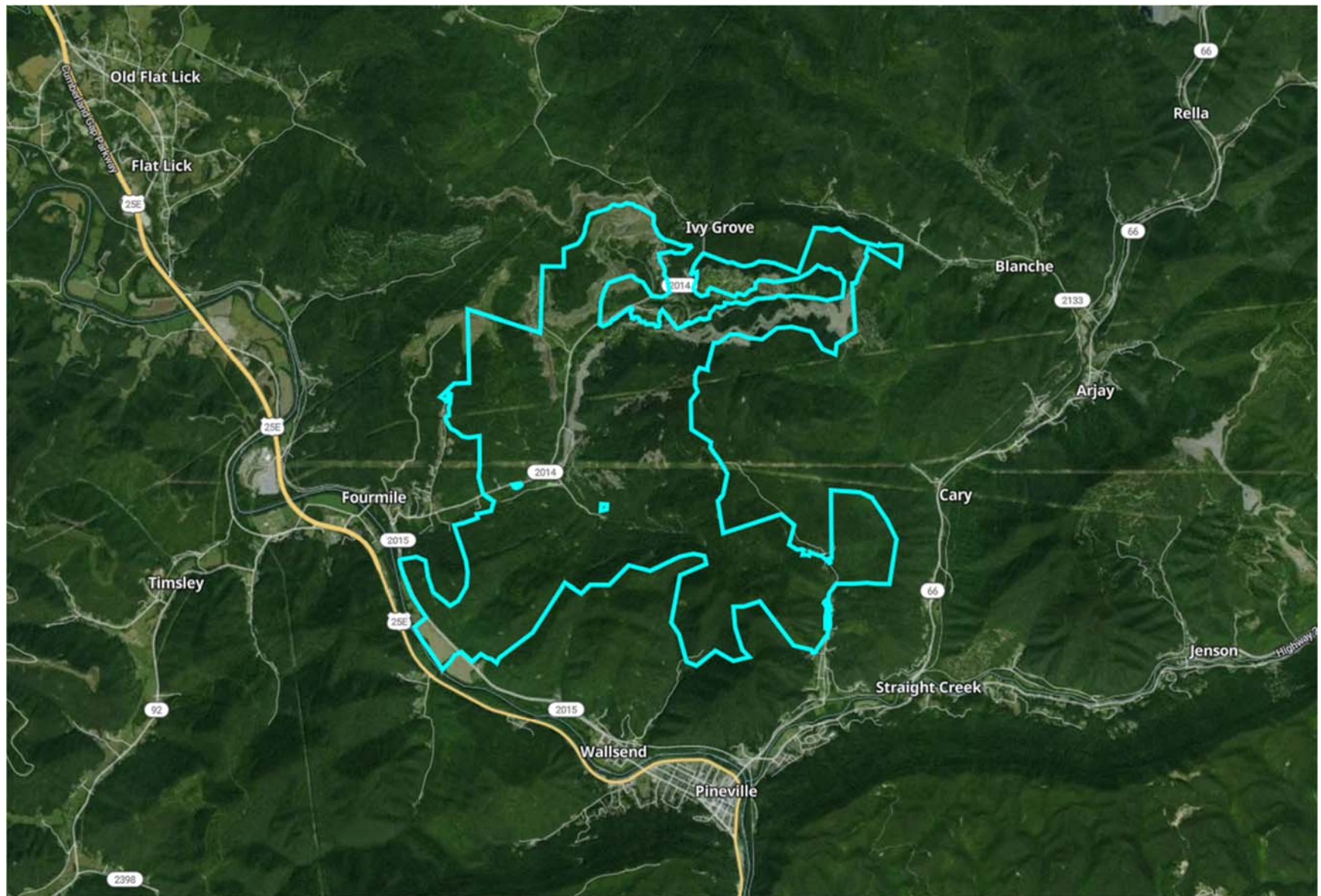
Misty Mountain Prospectus

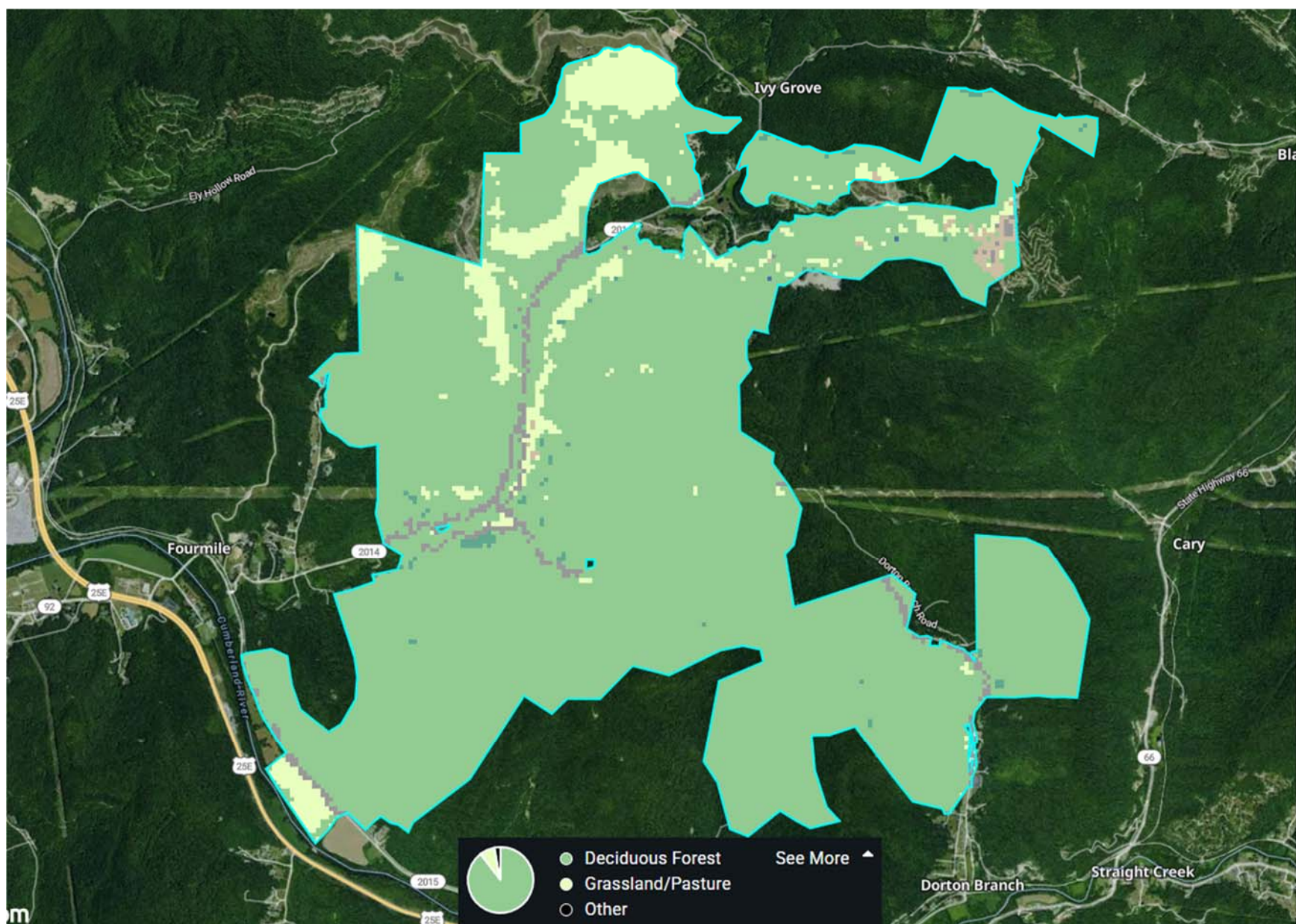
Explore the exclusive lifestyle and business opportunities at Misty Mountain, a mixed-use development in Pineville, Kentucky, offering stunning river views and abundant natural resources.



Introduction to Misty Mountain

Misty Mountain is a premier real estate development spanning 5,392 acres in Bell County, Kentucky. Position your life or business amidst breathtaking views and bountiful resources.







Welcome to Misty Mountain

Discover an exclusive haven where life and business flourish. Misty Mountain, nestled in Bell County, Kentucky, offers unmatched vistas and abundant resources. Whether you're considering a serene home or a vibrant business setting, Misty Mountain provides the perfect backdrop. Embrace the opportunity to thrive amidst nature's beauty and unparalleled amenities.

[Location Map](#)



Unveiling the Misty Mountain Lifestyle

Discover an unparalleled lifestyle at Misty Mountain, where nature and modernity coexist harmoniously. This exclusive community offers luxurious living options with panoramic river views, perfect for individuals and families seeking tranquility and comfort. Experience the balance of work and leisure with access to versatile business opportunities and an abundance of natural resources. Misty Mountain is more than a place to live; it's a place to thrive.

[Bell County Tourism](#)



[Who Are We? ▾](#) [Opportunities ▾](#) [Events](#) [Directory](#) [News](#) [Bell Theater](#) [Attractions](#) [Contact](#)



Local Business Directory

Capitalize on dynamic market opportunities in residential, commercial, and industrial sectors. Misty Mountain's rich resources and strategic location promise substantial returns.



Emerging Economic Opportunities

The strategic location of Misty Mountain opens doors to emerging economic opportunities across various sectors. Investors can explore growth in sustainable energy, tech startups, and eco-tourism, leveraging the region's abundant resources and market potential for remarkable financial gains. Boone's Ridge opening in 2026 with a workforce of over 300.

Boone's Ridge

Sustainable Development Initiatives

Embrace eco-friendly practices at Misty Mountain. Our initiatives prioritize green building technologies, renewable energy sources, and sustainable resource management. Join us in fostering an environmentally conscious community while ensuring economic growth.

Hydro Electric

Strategic Location Benefits

Misty Mountain offers unparalleled access to major transportation routes and proximity to Pineville's thriving economic centers. This strategic location ensures seamless connectivity for businesses, facilitating trade and logistics. Leverage Misty Mountain's prime position to maximize logistical efficiencies and capitalize on regional growth trends.

Railroad Access

Investment in the Future

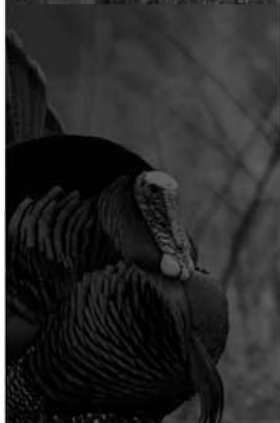
Discover the transformative experiences of investors at Misty Mountain. Strategic investments in residential, commercial, and industrial sectors have yielded remarkable growth. Hear firsthand how leveraging the region's unmatched natural resources and strategic location have transformed investments into substantial returns.

Boone's Ridge
Opening 2025/26
www.boonesridge.com



OUR WILDLIFE

Tucked away in Kentucky's Cumberland Mountains, Boone's Ridge will host over 1,000,000 visitors a year from across North America. Here, in addition to the many amenities, attractions, and dining options, the wildlife is abundant. Visitors will enjoy sightings of wild, free-ranging elk, over 260 species of birds, and other wildlife thriving in their natural habitat.




Boone's Ridge

[OVERVIEW](#)

[TAKE A LOOK](#)

[WILDLIFE](#)

[Elk](#)

[Birding](#)

[Black Bear](#)

[White-tailed Deer](#)

[Bobcat](#)

[EXPERIENCE](#)

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A Bright Energy Future for Southeastern Kentucky

STAY UP TO DATE

Receive the latest project updates.

[Sign Up Now](#)

Overview

The Lewis Ridge Pumped Storage Project will strengthen and stabilize the power grid by delivering 24/7 on-demand electricity from a proven, reliable technology. Located in Bell County, Kentucky at a former coal mine, the \$1.3 billion+ project will create 2,300 family-wage construction jobs and generate enough on-demand energy to power about 70,000 homes.

The most common and widespread form of energy storage, pumped storage hydro helps safeguard our electrical grid against blackouts, extreme weather events, and other potential crises that can disrupt the economy and our way of life.



Unparalleled Lifestyle Experiences

Discover the unmatched lifestyle experiences at Misty Mountain, where modern comfort meets natural elegance. With stunning river views and ample recreational options, residents enjoy a harmonious blend of relaxation and activity. Convenient access to Pineville's attractions ensures you're never far from exciting cultural events, dining, and shopping. Misty Mountain is perfect for families and professionals seeking a serene yet vibrant community.

[Explore Kentucky](#)

Thriving Business Environment

Misty Mountain is the perfect place for entrepreneurs looking to flourish. With its breathtaking natural scenery and strategic location, businesses can thrive while enjoying a serene backdrop. The development offers a hub for innovation and growth, with access to local talent and essential resources. Join a community where business and lifestyle blend seamlessly.

[Pineville Business Directory](#)

...

EXPLORE KENTUCKY'S REGIONS AND CITIES

Explore Kentucky's Bluegrass Beauty

From Paducah to Pikeville, you'll find lakes, rivers, waterfalls, caves, forests, mountains and rolling fields of bluegrass dotted with horse farms and bourbon distilleries. You'll also find exciting cities, rich culinary traditions and more outdoor adventures than you can possibly squeeze into one trip. Explore each of Kentucky's travel regions below and start building your Bluegrass bucket list.

[mainstreetpineville.com/directory/](#)



300 W Virginia Ave, P.O. Box 688 Pineville, KY 40977

[Who Are We? ▾](#)[Opportunities ▾](#)[Events](#)[Directory](#)[News](#)[Bell Theater](#)[Attractions](#)[Contact](#)

Local Business Directory

Unique Selling Points

+ New Brick

4 Visual

Discover unparalleled elevations with frontage over the Cumberland River. Enjoy hardwood forests, rare minerals, coal, gas, and oil leases, and solar capabilities, making Misty Mountain a sustainable paradise.



Stunning River Views

Embrace breathtaking vistas with frontage over the majestic Cumberland River at Misty Mountain. Revel in natural beauty, where each moment offers a serene escape and an idyllic setting for both leisure and business. This unparalleled location is your gateway to a harmonious blend of tranquility and opportunity.

...

Abundant Natural Resources

Misty Mountain is a haven for natural resource enthusiasts, offering lush hardwood forests, rare minerals, and rich coal deposits. With existing gas and oil leases and ample solar capabilities, this development provides an exceptional opportunity for eco-conscious investors and adventurers alike. Experience sustainability and profit hand in hand.

...

Exclusive Lifestyle Opportunities

Embrace the serenity of Misty Mountain. Experience luxurious living with breathtaking views of the Cumberland River. Delight in outdoor adventures, explore expansive hardwood forests, and harness the potential of rare minerals. Seize the opportunity to blend business with nature's bounty.

...

Prime Business Location

Capitalize on Misty Mountain's prime business location with unmatched views of the Cumberland River. Benefit from natural resources and energy opportunities to power your business sustainably. Experience a harmonious blend of nature and commerce in Pineville's most prestigious development.

Rare Earth Extraction

Economic Extraction, Recovery, and Upgrading of Rare Earth Elements from Coal-Based Resources



Michael L. Free, Prashant Sarswat, Landon Allen, Wei Liu, Kara Sorensen

Department of Metallurgical Engineering, University of Utah

Aaron Noble, Gerald Luttrell, Daejin Kim, Morgen Leake

Department of Mineral and Mining Engineering, Virginia Tech

Project Overview

The purpose of this project is to technically and economically evaluate new low cost technology to extract and recover an enriched mixed rare earth element (REE) oxide product from REE-bearing, coal-based resources.

This project's technology begins with selective separation of coal waste resources, followed by heap leaching using biooxidized and conditioned solution, and the resulting extracted rare earth elements are concentrated by solvent extraction and recovered by precipitation to produce a product with 2-8 % REE oxide.

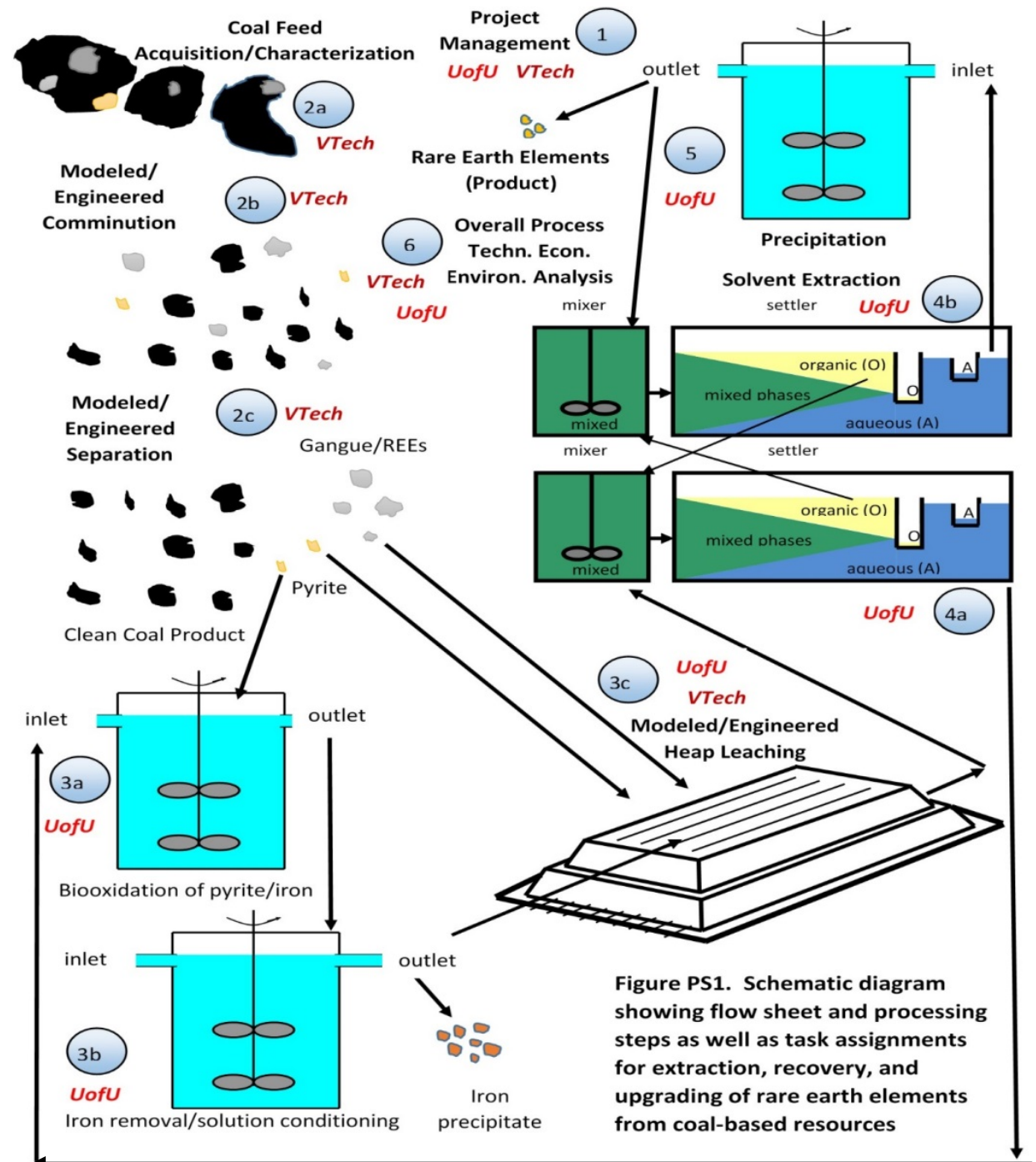


Figure PS1. Schematic diagram showing flow sheet and processing steps as well as task assignments for extraction, recovery, and upgrading of rare earth elements from coal-based resources

Project Update

- Project updates/accomplishments
 - Industrial participation resulting in 6 different coal waste samples with enriched REE content (total REEs > 190 ppm dry weight basis)
 - Evaluation of separation technologies for rare earth element enrichment in coal waste
 - Demonstration of separation technologies to enrich pyrite for biooxidation
 - Demonstration of heap leaching, combined with biooxidation for extraction of REEs
 - Demonstration of concentration of REEs by solvent extraction
 - Demonstration of iron removal and REEs recovery by precipitation
 - Demonstration of product with 2-8 % mixed REE oxide
 - Presentation of results at Extraction 2018, 2018 AIChE Annual Meeting, and 2019 SME Annual Meeting

Rare Earth Element Resources in Coal Waste Materials



Many coal waste materials contain economically recoverable levels of rare earth elements.

Coal waste resources from many coal producers contain reasonable levels (200-400 ppm) of rare earth elements in large quantities (millions of tons).

The value of the rare earth elements in coal waste is often greater than \$0.05 per kilogram (\$45/ton) of coal waste.



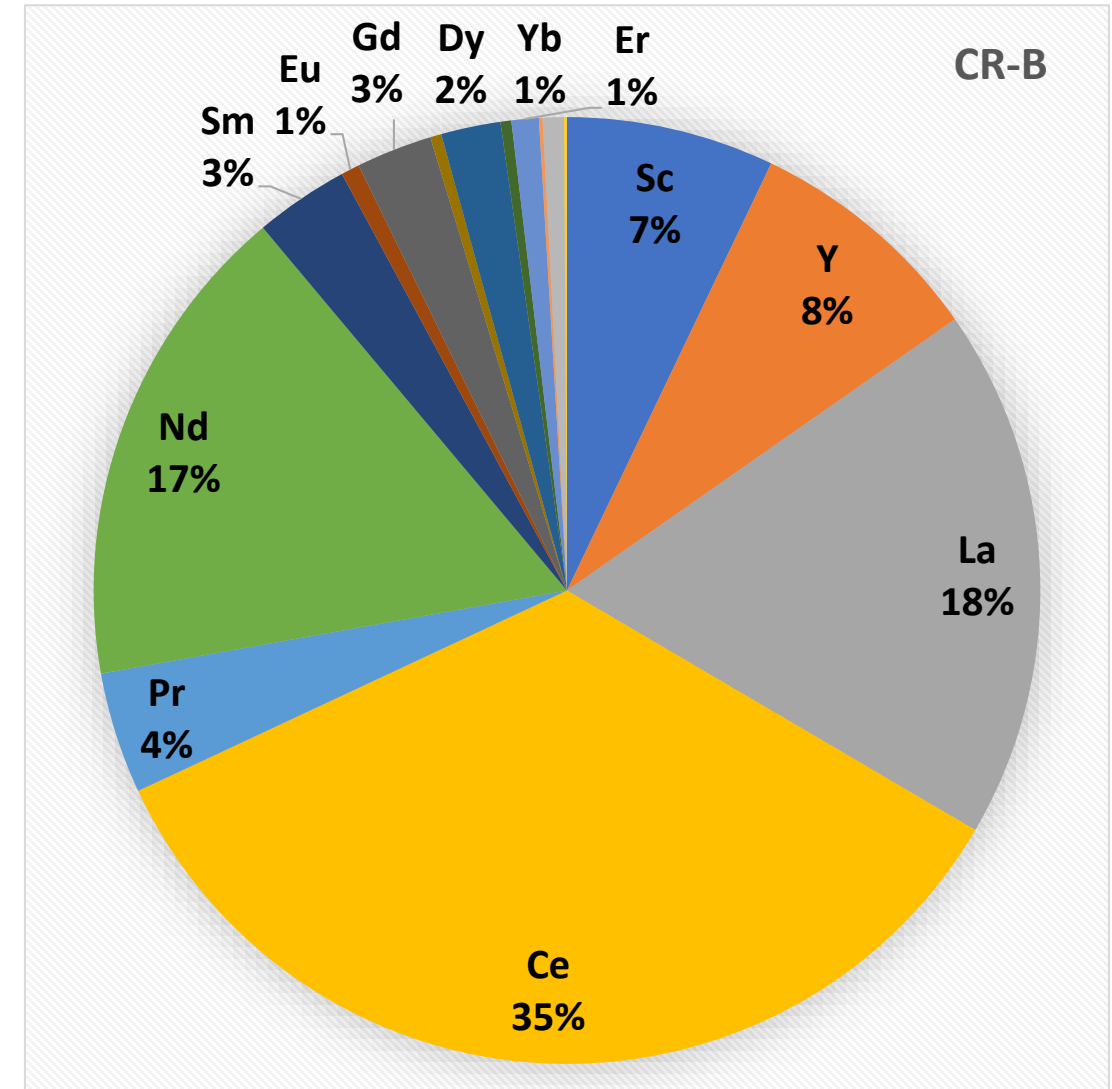
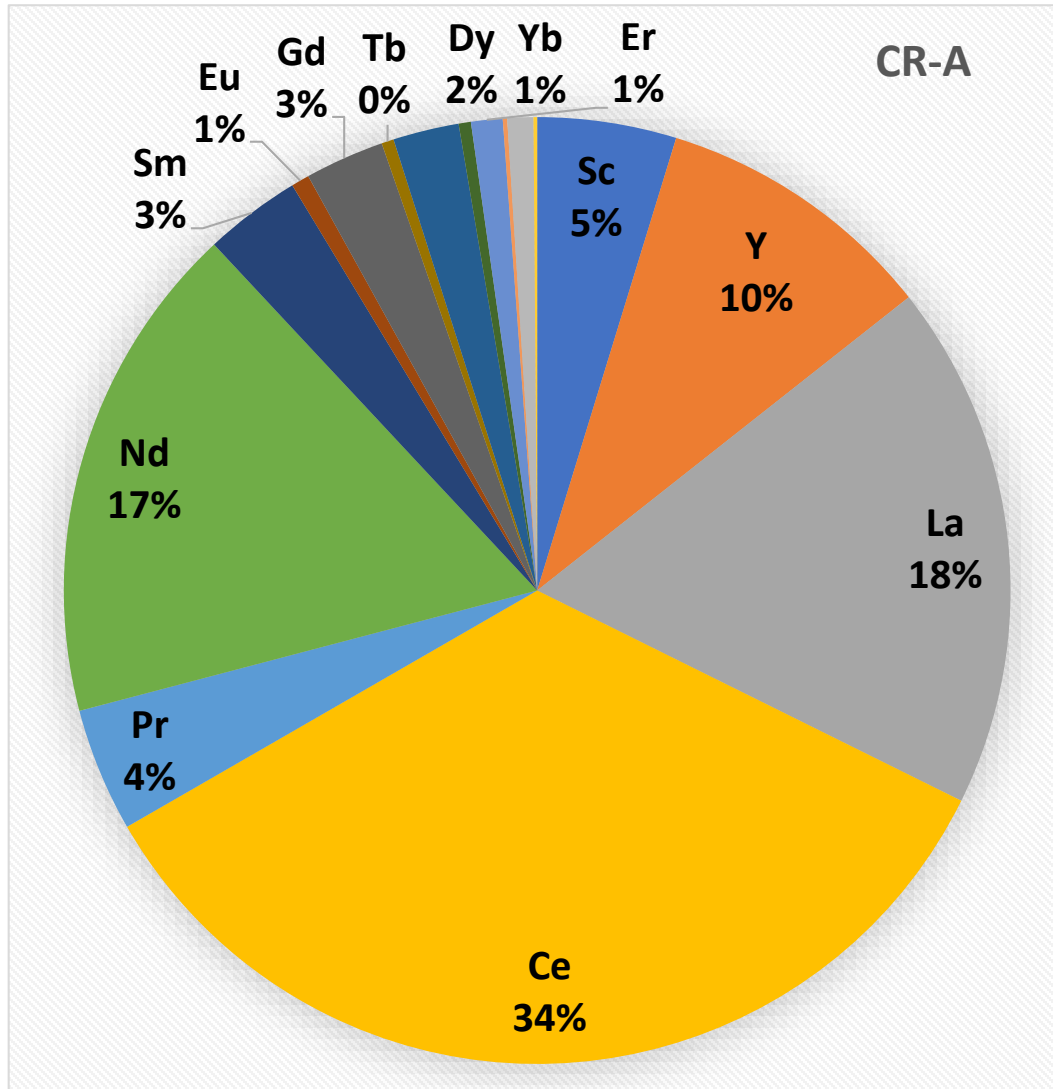
Sample Analysis and Value Estimate



	CR-A	CR-B	CR-C1	Cr-C2	Cr-D1	Cr-D2	Ave	\$/kg	Ave.\$/ton
Sc (ppm)	11.74	14.18	12.03	11.13	12.15	13.09	12.39	4200	52.02
Y (ppm)	23.80	16.37	21.06	21.46	23.03	23.92	21.61	6	0.13
La (ppm)	44.42	36.27	42.69	41.61	45.06	45.40	42.58	2	0.09
Ce (ppm)	84.96	69.12	79.85	78.11	84.33	84.47	80.14	2	0.16
Pr (ppm)	10.45	8.29	9.91	9.59	10.54	10.49	9.88	52	0.51
Nd (ppm)	42.38	33.38	40.20	39.31	43.18	43.79	40.37	42	1.70
Sm (ppm)	8.17	6.43	7.56	7.51	8.30	8.42	7.73	2	0.02
Eu (ppm)	1.53	1.26	1.40	1.37	1.52	1.55	1.44	150	0.22
Gd (ppm)	6.70	5.20	6.10	6.00	6.60	6.66	6.21	32	0.20
Tb (ppm)	1.04	0.76	0.91	0.91	1.00	1.02	0.94	400	0.38
Dy (ppm)	5.57	4.06	4.97	5.03	5.46	5.55	5.11	230	1.17
Er (ppm)	2.66	1.86	2.41	2.38	2.57	2.70	2.43	34	0.08
Totals	243.42	197.18	229.09	224.41	243.74	247.06	230.82		56.67

Analyses based on microwave digestion using 12 mL reverse aqua regia and 50 mg of solid - 80mesh sample. Digested for 20 min @ 185C ICP-MS (Agilent 7900 ICP-MS)

Typical Sample Analysis



Keys to our approach

Utilize low-cost technologies to enable larger resource utilization.

Utilize selective separation technologies to upgrade desired feedstock materials (REE and pyrite).

Utilize heap leaching technology for large-scale, low cost extraction.

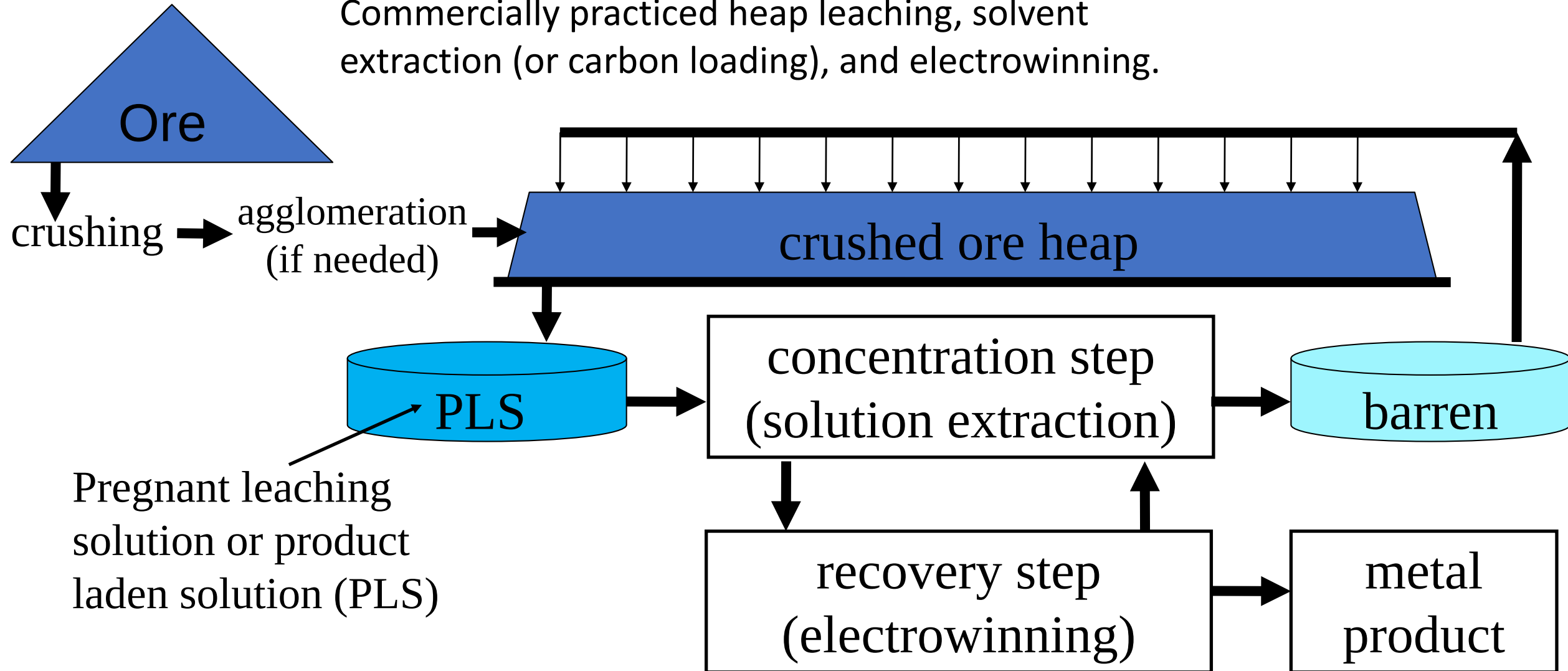
Utilize biooxidation and pyrite from the coal waste to provide low cost reagents and rapid leaching as well as to remove residual sulfides from future acid rock drainage.

Utilize solvent extraction and precipitation to concentrate and recover a mixed rare earth element rich product.

Perform a technoeconomic analysis to provide investment and commercialization guidance.

Copper and Gold Processing Scenario

Commercially practiced heap leaching, solvent extraction (or carbon loading), and electrowinning.



How much does it cost?

For Gold Processing, Bald Mountain Run-of-Mine Heap Leaching/Carbon Ads

Total Production (2017): 282,000 oz Au

Total Ore Processed: 34,000,000 tons

Gold value (\$1,250/oz) recovered per ton of ore processed: **\$10.36/ton**

https://s2.q4cdn.com/496390694/files/doc_presentations/2016/062916-Nevada-Mine-Tour-Presentation-FINAL-PRINTED.pdf

For Copper Processing, Safford Mine Heap Leaching/SX/EW

Total Production (2015): 202,000,000 lb Cu

Total Ore Processed: 36,500,000 tons

Copper value (\$2.50) recovered per ton of ore processed: **\$13.75/ton**

<https://miningdataonline.com/property/88/Safford-Mine.aspx>

These are values without considering profit (often >30 %) and mining costs (usually around 35 % of the total, but previously performed for coal waste).

Thus, heap leaching/SX/EW of premined material can be done for \$5/ton.

Differences to heap leach/SX/EW

No mining (already assumed for coal waste processing)

Additional processing to remove and concentrate pyrite (+\$0.5/ton)

Biooxidation using a separate reactor (+\$1/ton est. based on BIOX process)

(to generate consistent acid and ferric ions and avoid temperature control issues that arise with sulfide mineral heap leaching that can have large impacts on microbial populations, precipitation and leaching (sulfides are not commonly found in traditional gold and copper ore heap leach processing))

Separate reactor control of iron precipitation (+\$0.5/ton est. from ARD work)

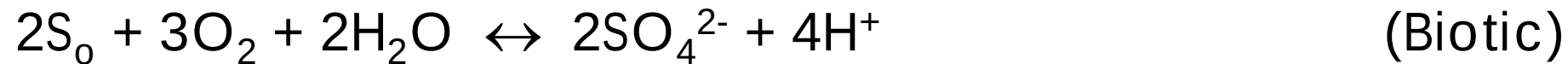
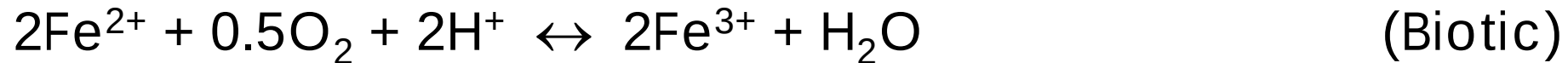
(which may otherwise occur in the heap and cause unwanted passivation and pore plugging. This can be effectively the same process as acid mine drainage treatment.)

No electrowinning (-\$1/ton est. based on copper industry information)

General Estimated Cost ($\$5 + 0.5 + 1 + 0.5 - 1$) = \$6/ton of coal waste

Bioxidation

Produces acid from sulfide minerals:



Can eliminate future acid mine drainage by consuming pyrite in the ore

Provides ferric ion oxidant for leaching as well as to facilitate iron precipitation

Particle Separation Technology



Characterization

Density Based Separation

Flotation

Sorting Technology

Spiral Concentrator

Preliminary results show
sulfur upgrading to 6.9 %
is feasible for ore CR-B

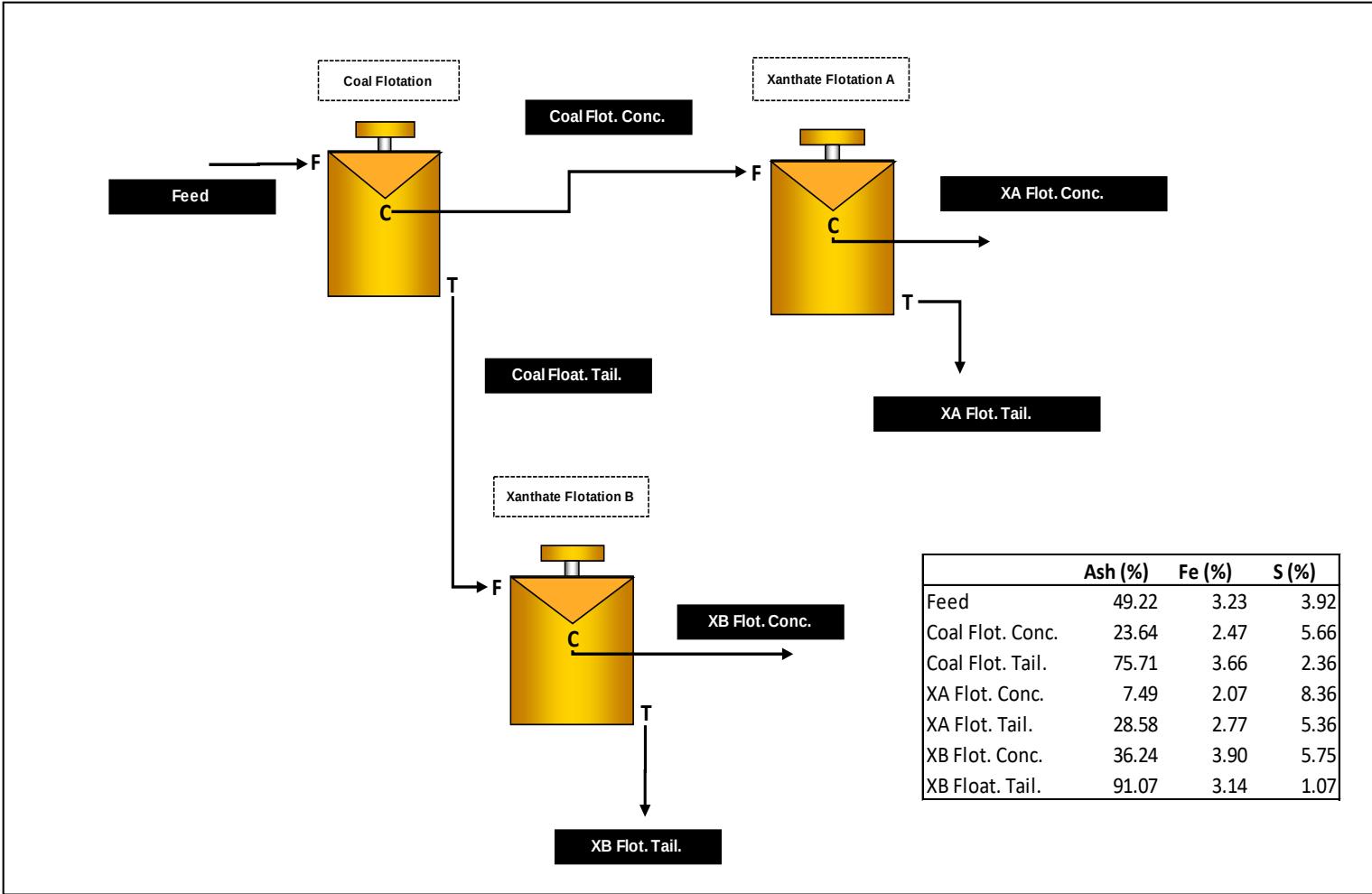
CR-B spiral concentration feed and product characterization

	Sulfur (%)	Iron (%)	Ash (%)
Feed	6.51	6.17	80.90
Conc.	6.87	6.71	84.24
Tail.	4.35	5.28	73.27

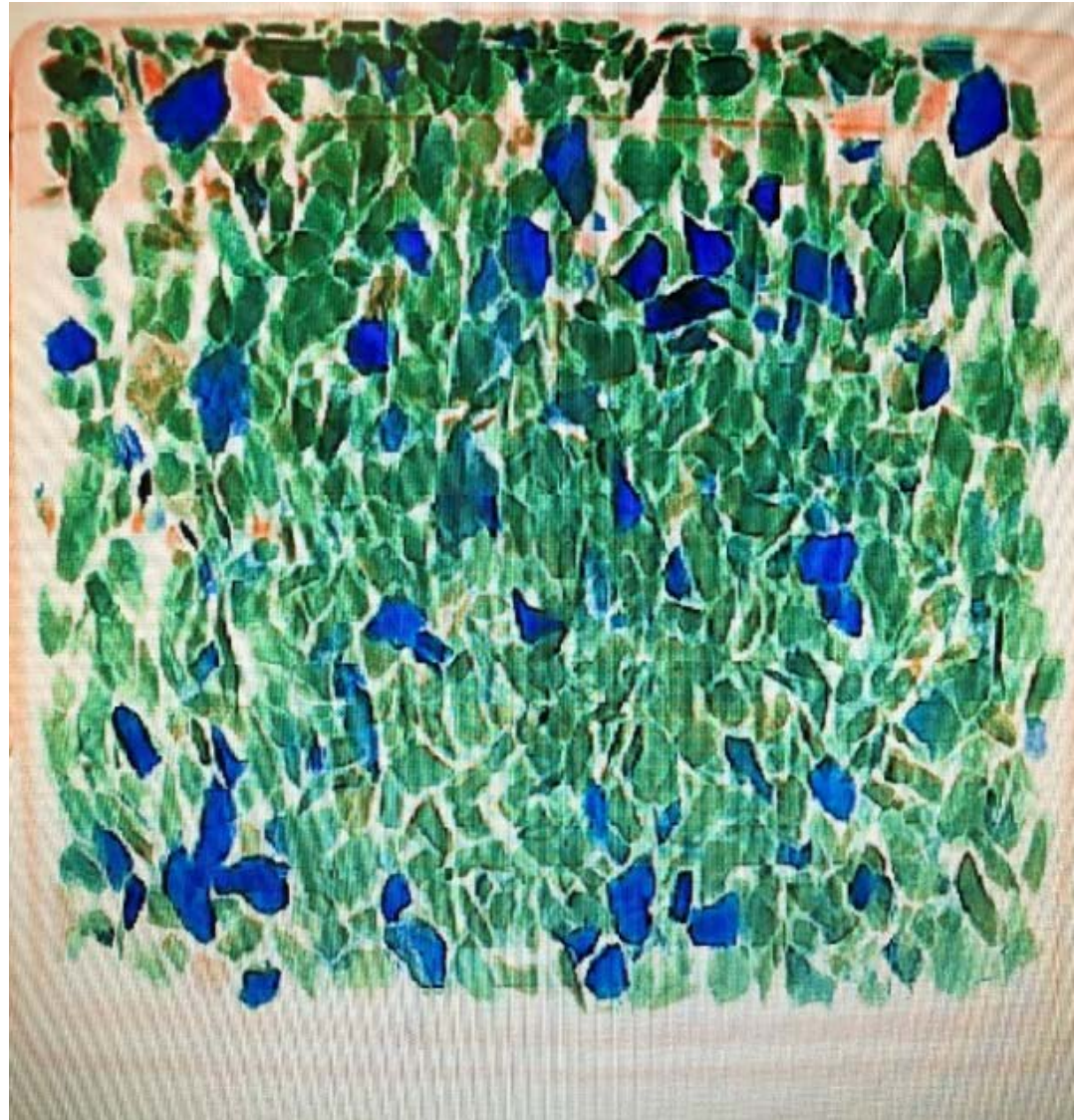


Flotation

Preliminary results show sulfur upgrading to 8.4 % is feasible for ore CR-B



X-Ray-Based Sorting



Blue color is higher density (generally high in iron), green is intermediate density (most of the material – coal waste), and orange is lower density (mostly cleaner coal).

	Sc	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Th	U
Sample	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
CR-B																		
Blue	8.84	13.80	19.99	44.74	5.54	21.85	5.00	1.00	4.38	0.59	3.11	0.55	1.38	0.19	1.10	0.16	6.55	1.68
Green	16.52	19.88	37.77	78.84	9.26	35.54	7.31	1.47	6.16	0.85	4.52	0.82	2.12	0.28	1.69	0.24	12.84	2.03
Orange	12.27	17.15	34.56	78.68	9.26	36.40	7.92	1.58	6.49	0.85	4.23	0.73	1.89	0.24	1.47	0.21	9.80	2.53
CR-C1																		
Blue	13.78	23.87	24.73	52.48	6.32	24.47	5.64	1.21	5.65	0.84	4.74	0.90	2.46	0.33	2.08	0.30	7.57	1.47
Green	14.26	23.78	44.52	90.21	10.88	41.11	8.18	1.55	6.70	0.93	5.10	0.95	2.50	0.33	2.04	0.29	12.46	1.91
Orange	12.52	20.51	33.32	69.07	8.13	30.87	6.42	1.26	5.51	0.78	4.37	0.79	2.17	0.30	1.86	0.26	11.24	2.46
CR-C2																		
Blue	14.77	26.24	32.38	68.25	8.16	31.96	6.88	1.42	6.50	0.92	5.23	0.99	2.69	0.36	2.34	0.35	8.48	1.41
Green	12.98	26.00	44.26	90.24	10.77	41.48	8.08	1.52	6.89	0.98	5.35	1.00	2.67	0.36	2.21	0.31	12.24	1.93
Orange	10.32	20.52	33.37	69.49	8.06	30.05	6.11	1.13	5.16	0.74	4.12	0.75	2.03	0.27	1.68	0.24	12.92	2.49
CR-D1																		
Blue	10.09	20.50	19.24	41.67	5.03	20.15	4.58	0.95	4.68	0.68	4.00	0.76	2.11	0.29	1.82	0.26	6.06	1.26
Green	13.02	23.21	46.19	94.71	11.34	43.40	8.17	1.51	6.60	0.91	4.97	0.90	2.43	0.33	1.95	0.28	11.98	1.82
Orange	9.69	18.04	28.32	58.87	6.69	24.31	5.02	0.96	4.44	0.66	3.81	0.71	1.79	0.25	1.49	0.21	16.74	4.11
CR-D2																		
Blue	13.28	26.22	23.25	50.81	5.98	23.72	5.46	1.13	5.62	0.84	5.04	0.96	2.72	0.38	2.38	0.35	7.21	1.62
Green	13.66	25.70	45.40	93.10	11.14	42.94	8.36	1.56	6.92	0.97	5.43	1.00	2.76	0.37	2.24	0.32	12.31	2.15
Orange	9.33	17.24	25.42	53.26	6.23	23.67	4.89	0.96	4.42	0.65	3.73	0.68	1.85	0.26	1.57	0.22	9.77	3.48

X-Ray-Based Sorting



Blue color is 15-20 % iron, green color is around 5 % iron. Hand sorting can give 20 % sulfur content in product



CR-B	3.88 %
2.5x0.5"	

CR-B Orange	4.89 %
2.5x0.5"	

CR-B Green	2.85 %
2.5x0.5"	

CR-B Blue	24.82 %
2.5x0.5"	

CR-B Blue	22.14 %
-0.15 mm	

CR-B Blue	20.17 %
(Mag.)	

(Average of 4 trials)

CR-B Blue	23.22 %
(Non Mag.)	

(Average of 4 trials)

Comminution (-3mm)

CR-B Blue	26.90 %
+1 mm	

CR-B Blue	25.97 %
1x0.6 mm	

CR-B Blue	23.41 %
0.6x0.15 mm	

CR-B Blue	28.97 %
1x0.15 mm	

2.95 SG Dense
Medium
Separation

CR-B Blue	37.93 %
1x0.15 mm	+2.95

2.4 SG Dense
Medium
Separation

CR-B Blue	17.74 %
1x0.15 mm	2.95x2.4

1.8 SG Dense
Medium
Separation

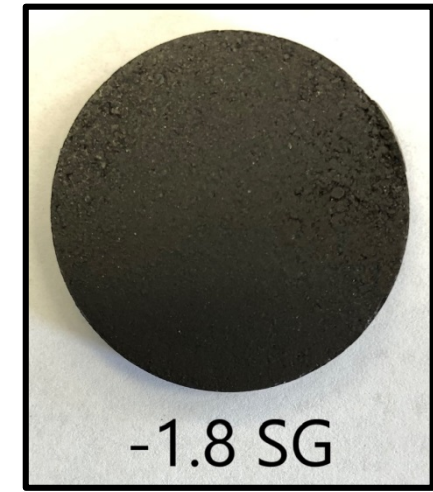
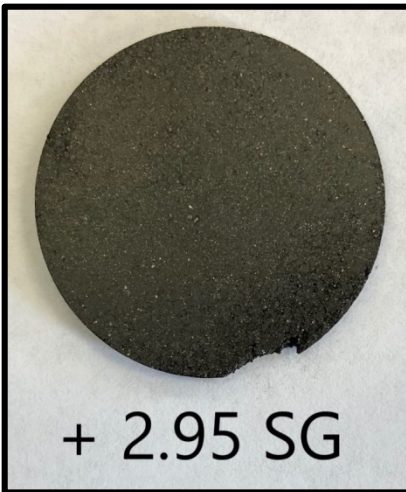
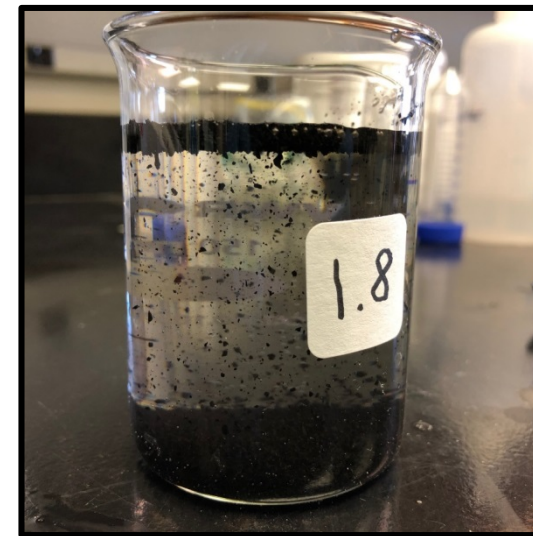
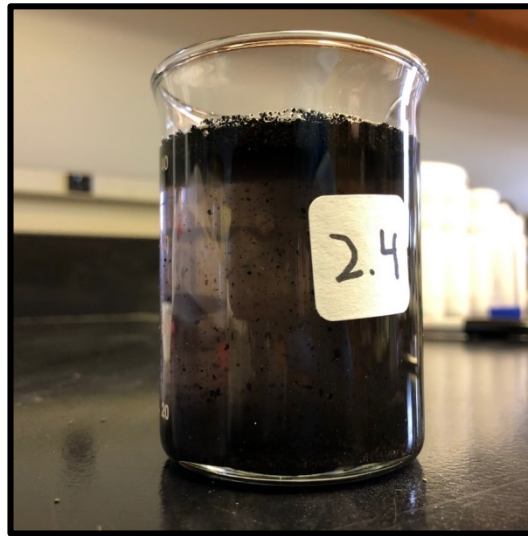
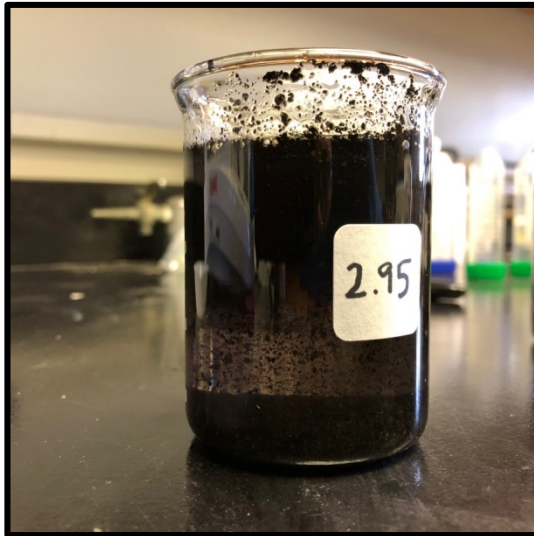
CR-B Blue	23.85 %
1x0.15 mm	2.4x1.8

CR-B Blue	18.53 %
1x0.15 mm	-1.8

Sample	S %
Size	S.G.



Float-Sink Test Procedure Images



Balanced Mass, Ash, and Sulfur

CR-B Blue 0.15x1 mm	Mass (g)	Ash (%)	S (%)
Feed	32.46	64.87	28.78
-1.8	2.31	25.87	18.53
1.8-2.4	3.88	56.79	23.85
2.4-2.95	9.79	75.15	17.74
+2.95	16.48	66.14	37.93

Balanced Sulfur Data

Dens. Class	Yield	S-Grade	S-Rec.
+2.95	50.77%	37.93%	66.92%
-2.95/+2.4	30.15%	17.74%	18.59%
-2.4/+1.8	11.95%	23.85%	9.91%
-1.8	7.13%	18.53%	4.59%

- Mass balancing of sulfur increased feed % and decreased +2.95 class %

Extraction, Concentration, Recovery



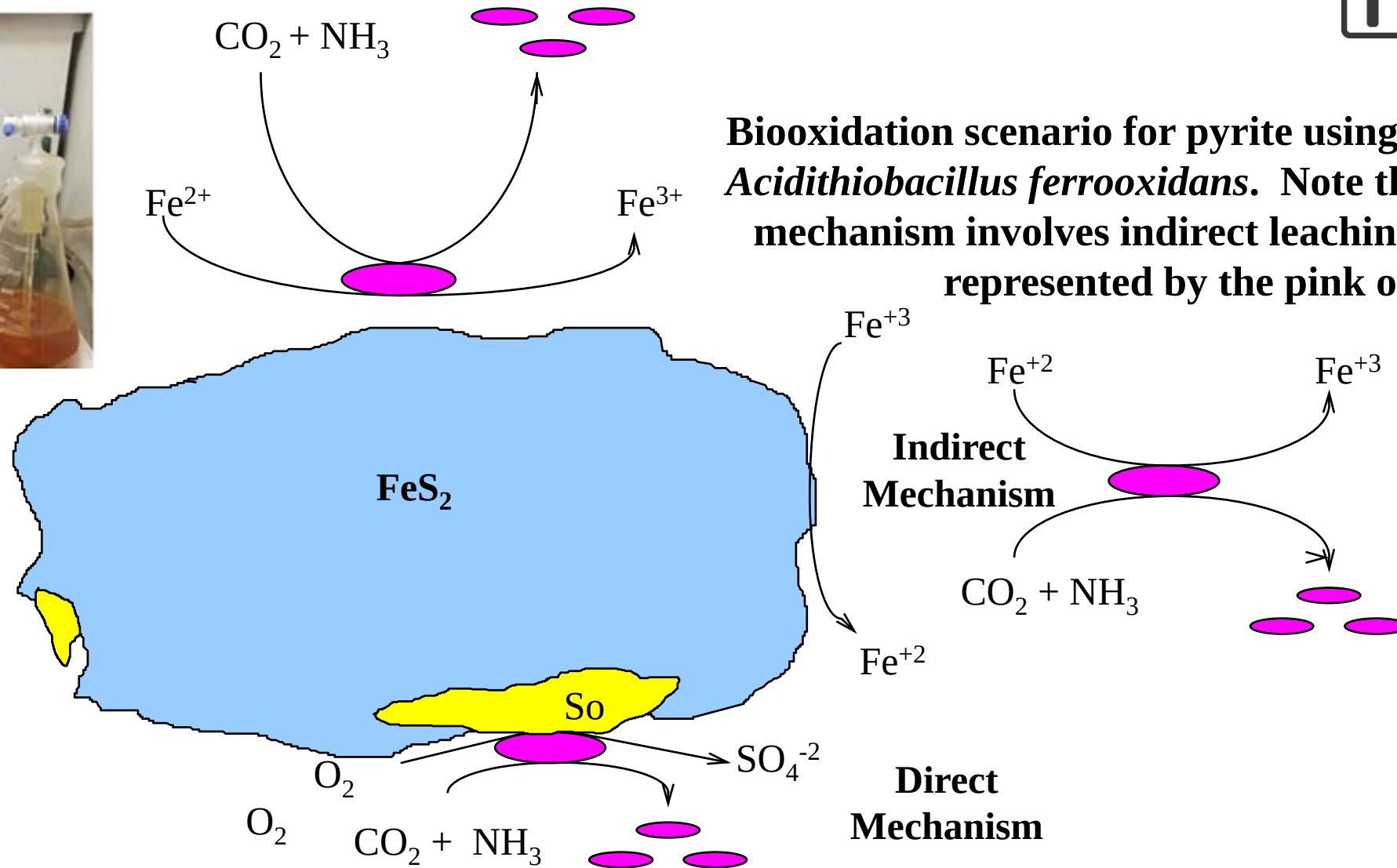
Biooxidation

Leaching

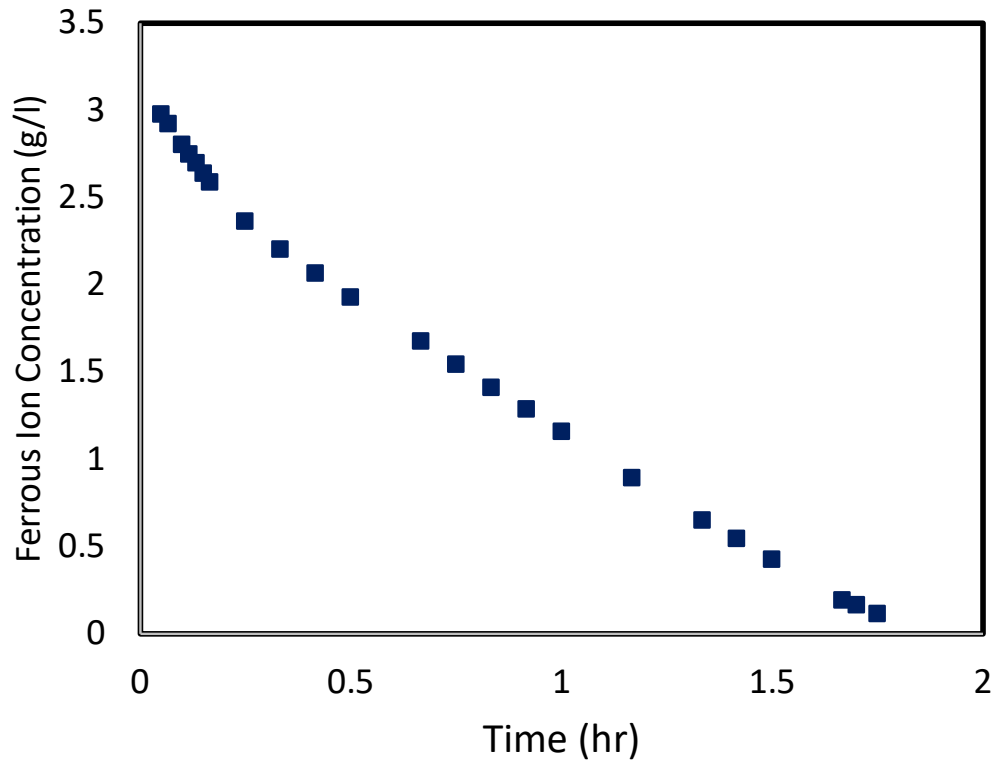
Solvent Extraction

Precipitation

Biooxidation



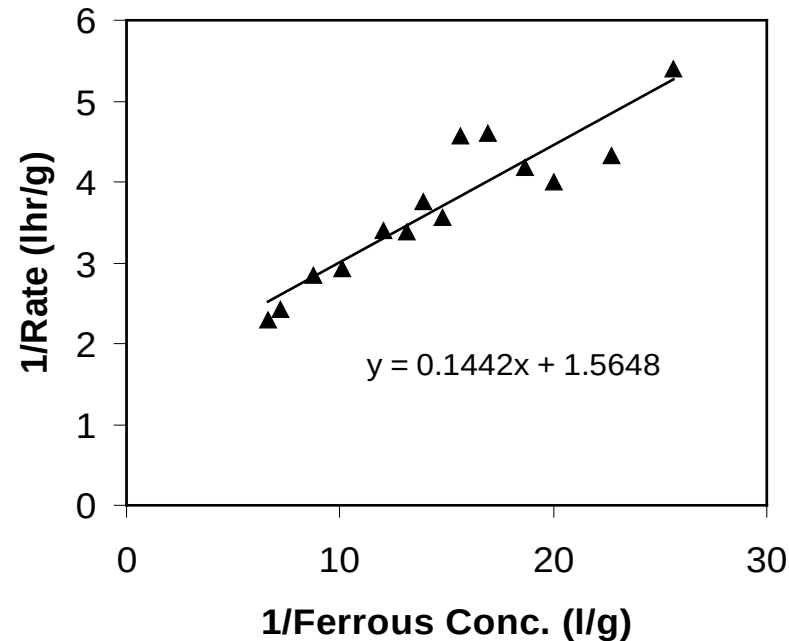
Rate of biooxidation



Rates are about 2 grams of ferrous iron oxidized per liter of solution per hour, which results in large reagent savings

$$R_{Fe+2ox.} = \frac{C_{cells} \mu_{max} C_{Fe+2}}{Y_c (C_{Fe+2} + K_m)}$$

$$\frac{1}{R_{Fe+2ox}} = \frac{Y_c K_m}{\mu_{max} C_{cells} C_{Fe+2}} + \frac{Y_c}{\mu_{max} C_{cells}}$$

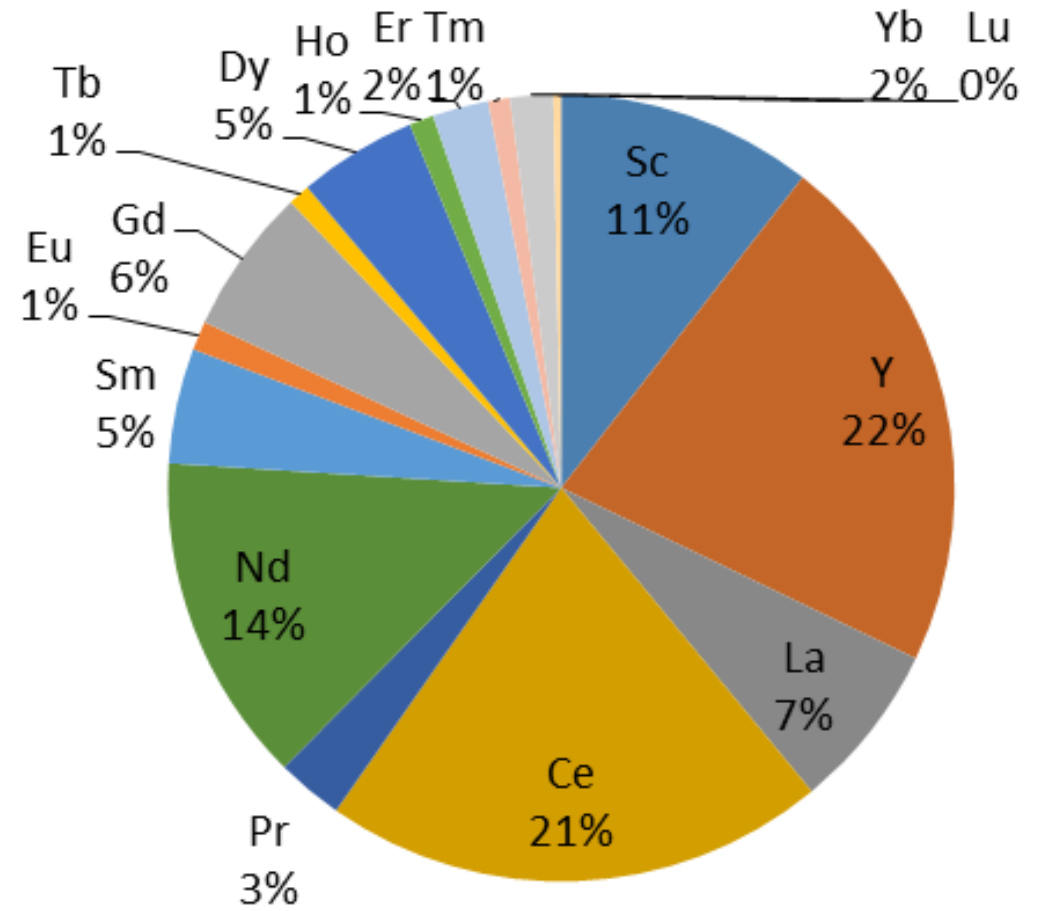


Michaelis-Menton kinetics analysis is performed to evaluate performance and equation constants.

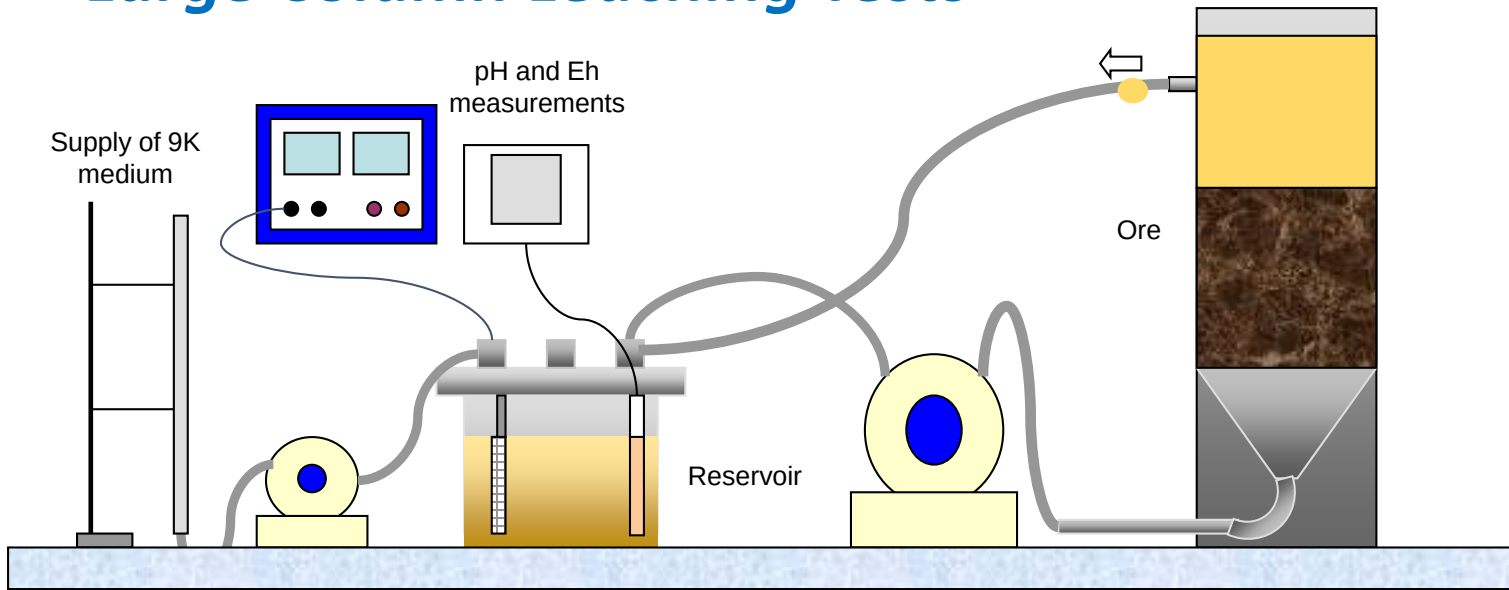
14-day small column leaching tests



Preliminary short-term small column leaching results show the anticipated extracted constituents of waste coal using biooxidation based leaching from one source (CR-A).



Large Column Leaching Tests



A schematic diagram showing leaching of coal waste using the large column; and picture of actual leaching solution that is being circulated in column. In few cases leaching solution is not continuously recycled through column. In these cases Eh of the solution is kept maintained and that solution is continuously fed in to the column from top and collected from the bottom.

Large columns are 5 ft. tall, 8 inches in diam. (right side of image). Each column was filled with ~ 60 kg of crushed coal waste sample. The bottom portion of the column was filled with glass spheres. The flow rate of leaching solution was ~ 500 ml/day. A fabric filter was also placed on top of the column to distribute the leaching solution.



Large Leaching Column Conditions

Column 1: Bacterial leaching solution prepared using 9k media is being circulated continuously. In this case similar solution is collected and sent back again for leaching.

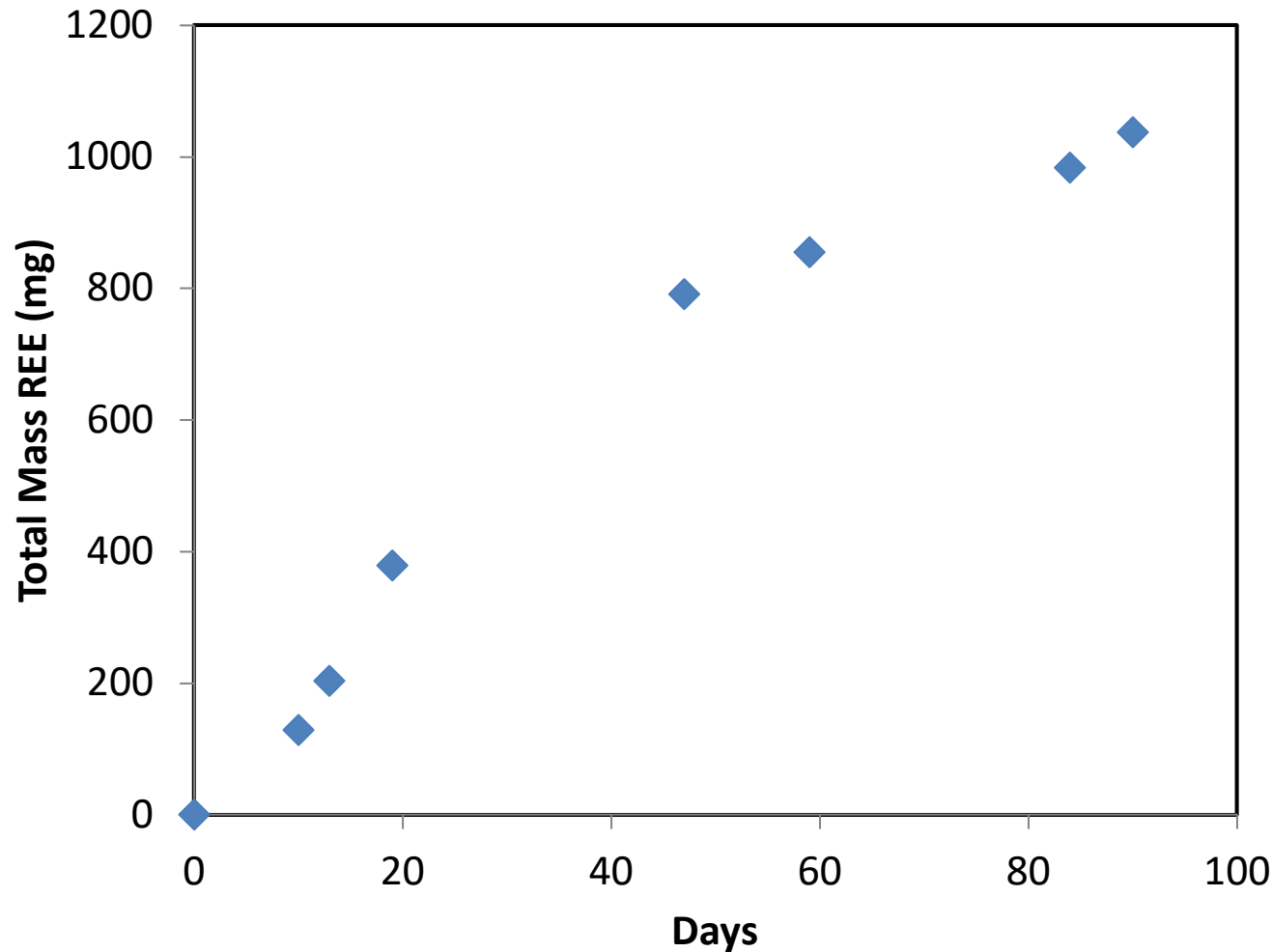
Column 2: In this column also, bacterial leaching solution prepared using 9k media is being circulated. However, in this case the solution is not recycled.

Column 3: In this column also, bacterial leaching solution was used, but pyrite blend nutrient was used. Here the details of such solution:

Name of the salt/species	Concentration
Potassium Sulfate	0.88 g/l
Ammonium Sulfate	0.9 g/l
Potassium Phosphate	0.25 g/l
Magnesium Sulfate	0.5 g/l
Pyrite from Mine sites	100 g/l
Sulfuric Acid	Added up to pH 1.5

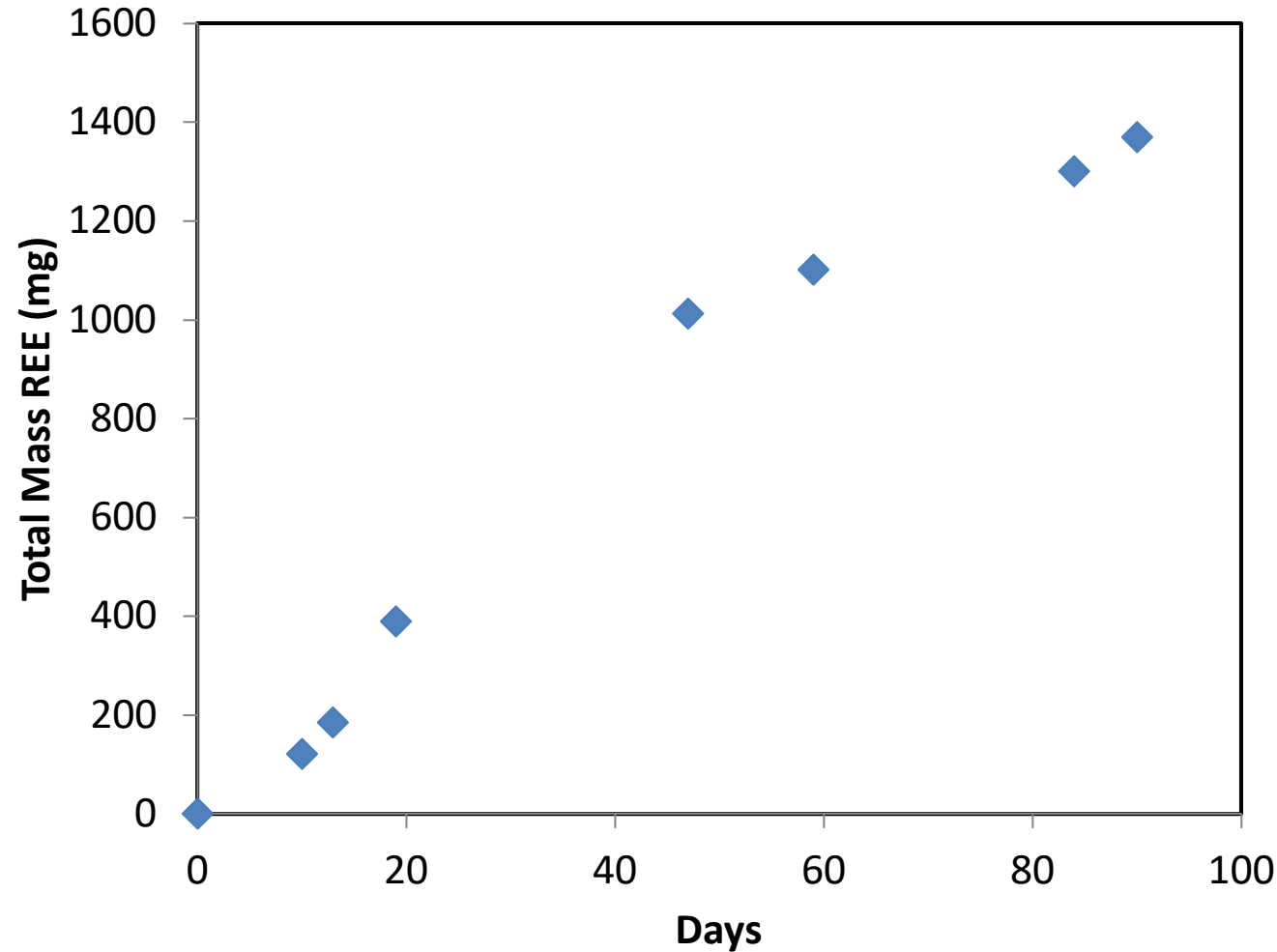
Column 4: In this column 20g/l ferric sulfate solution was recirculated. In this case no 9k media was used. In order to adjust Eh, hydrogen peroxide was used. Initial Eh was ~ 600 mV and pH was ~ 1.5. This is a control test for the chemical oxidation without bacteria.

Large Column Leaching Results



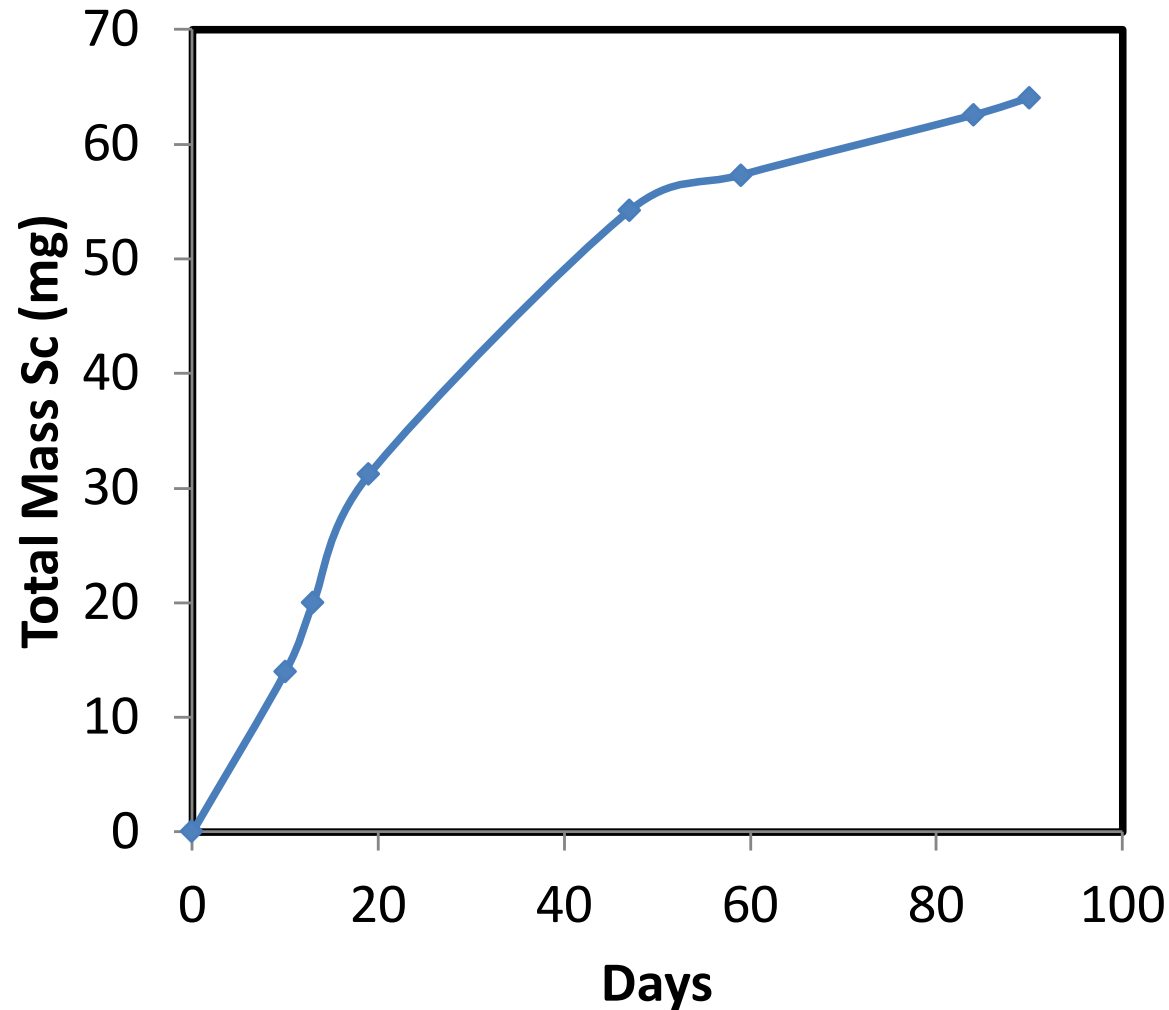
Leaching extraction for large column (60kg coal waste) fed by biooxidation reactor (35°C) fed using 9K medium with air sparging.

Large Column Leaching Results



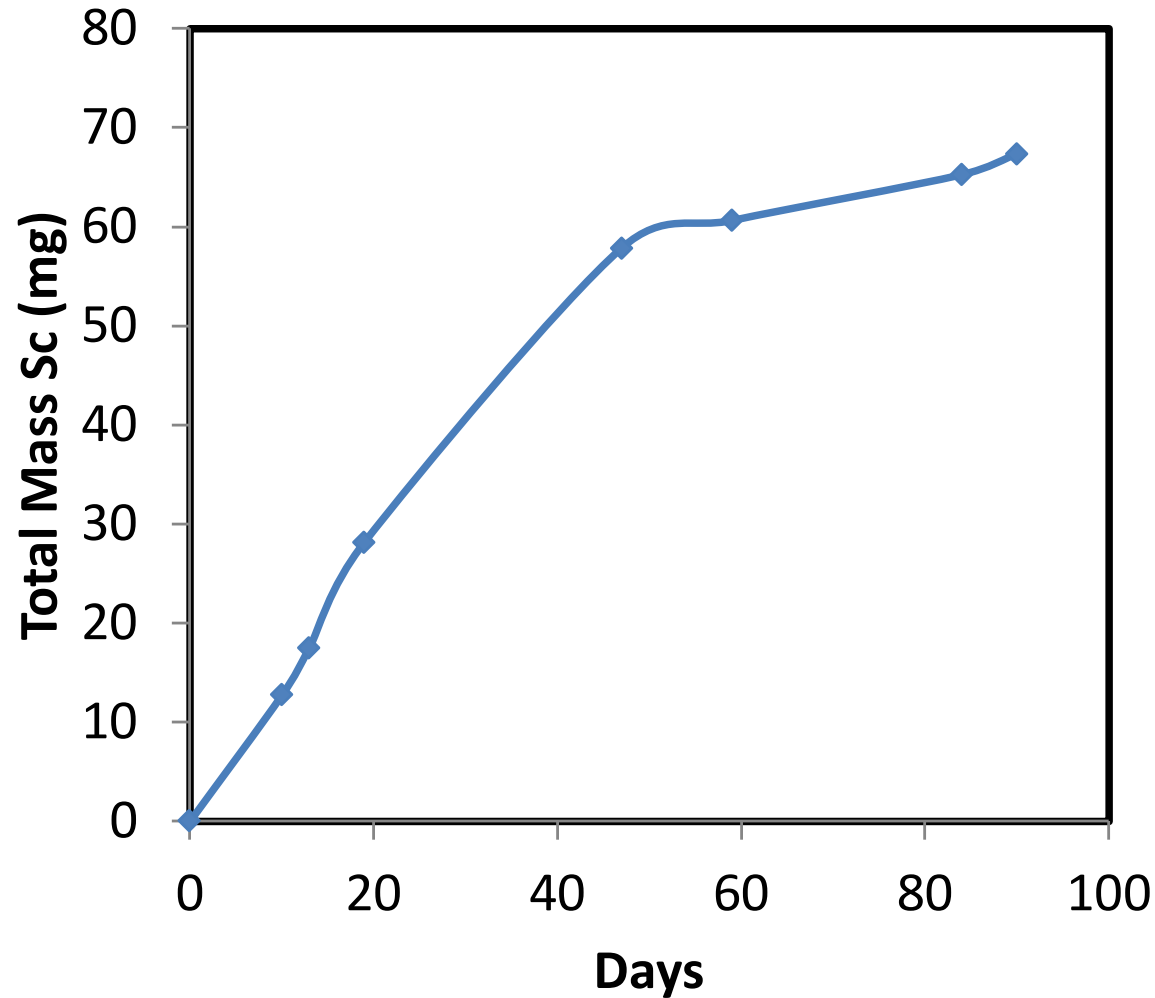
Leaching extraction for large column (60kg coal waste) fed by biooxidation reactor (35°C) fed using pyrite enriched (7 % pyrite) coal waste with air sparging.

Large Column Leaching Results



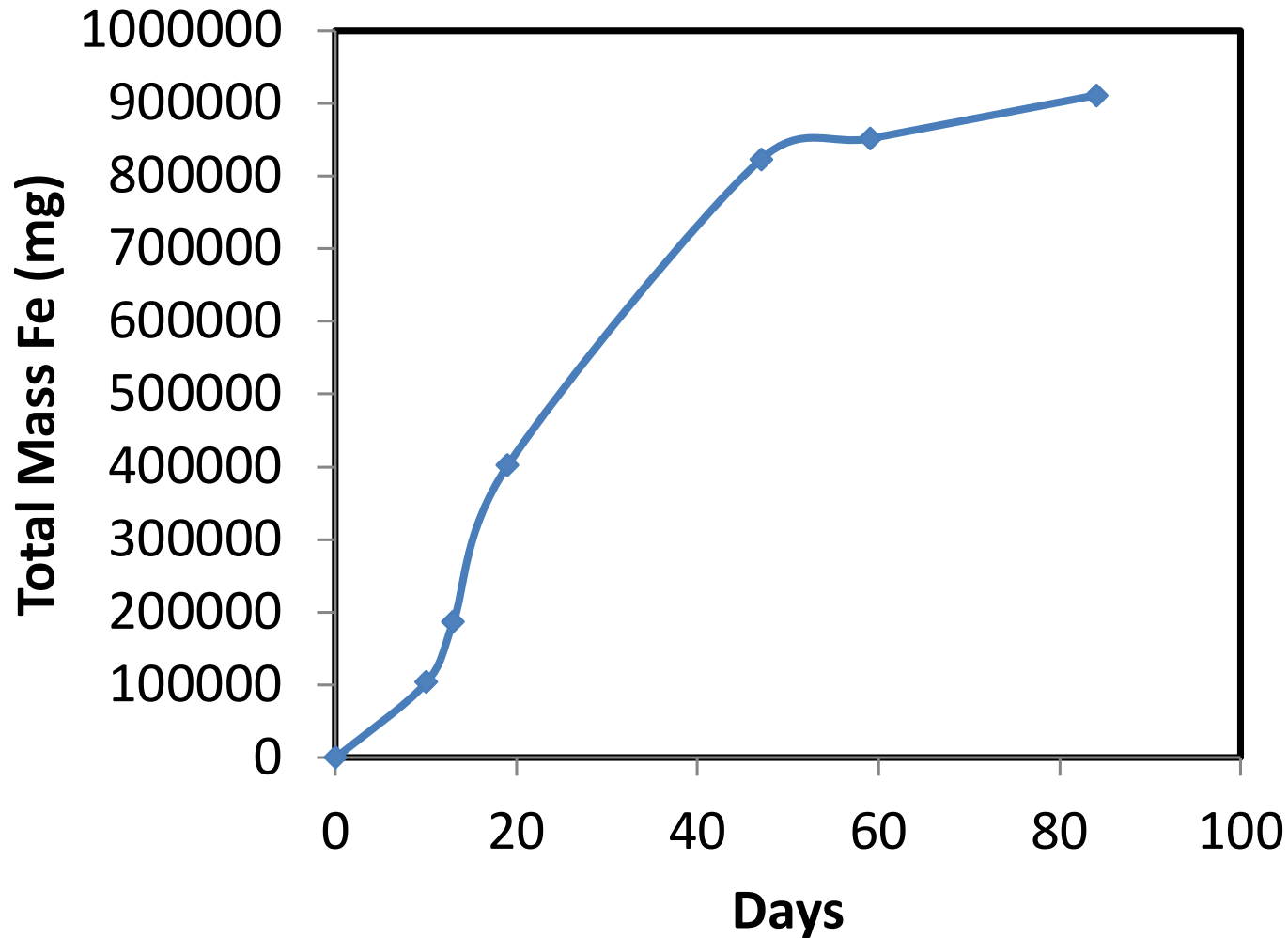
Leaching
extraction for large
column (60kg coal
waste) fed by
biooxidation
reactor (35°C) fed
using 9K medium
with air sparging

Large Column Leaching Results



Leaching extraction for large column (60kg coal waste) fed by biooxidation reactor (35°C) fed using pyrite enriched (7 % pyrite) coal waste with air sparging.

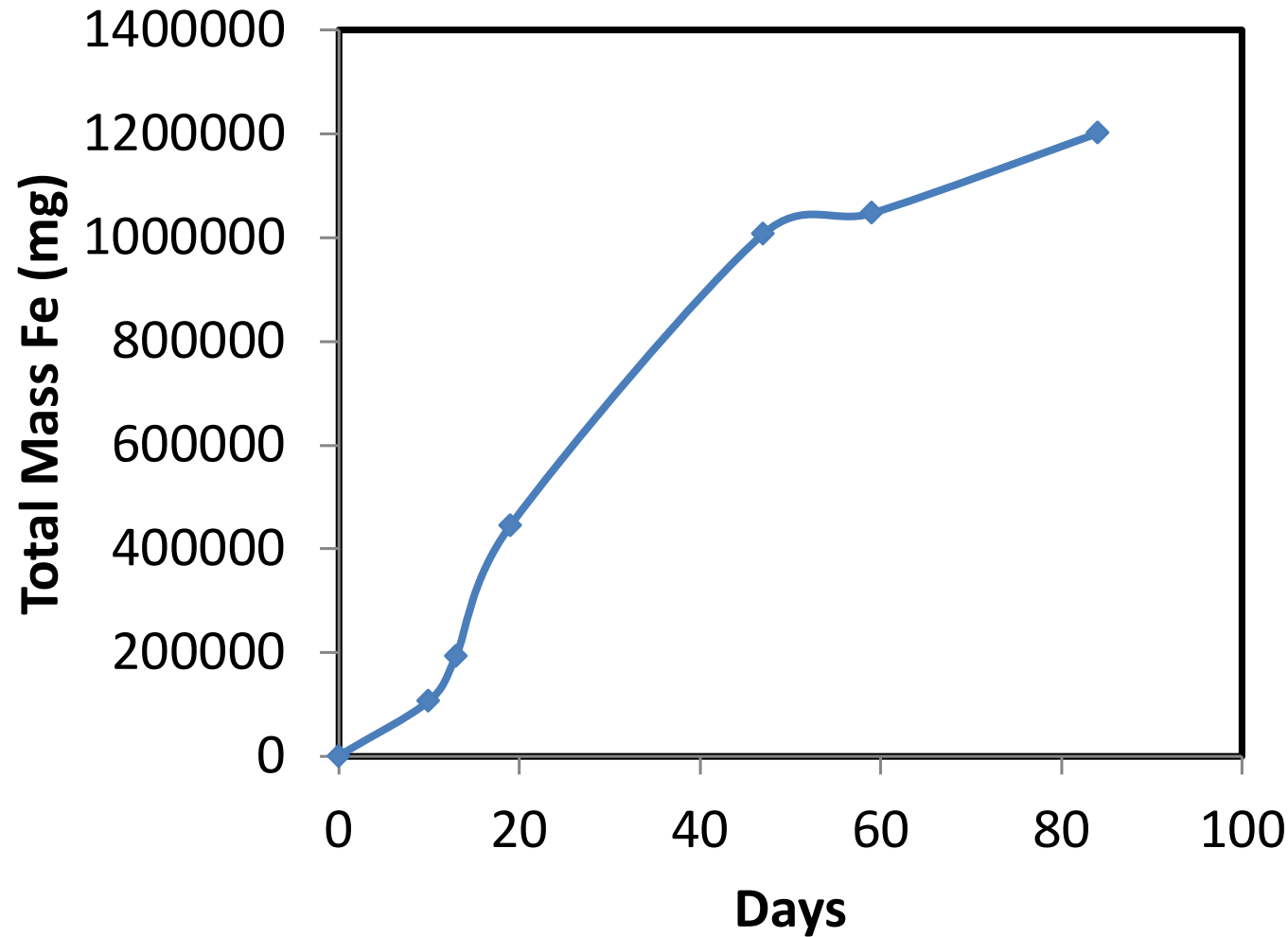
Large Column Leaching Results



Leaching extraction for large column (60kg coal waste) fed by biooxidation reactor (35°C) fed using 9K medium with air sparging.

Approximately 5 % of the total iron came from the feed solution. The rest came from pyrite dissolution.

Large Column Leaching Results

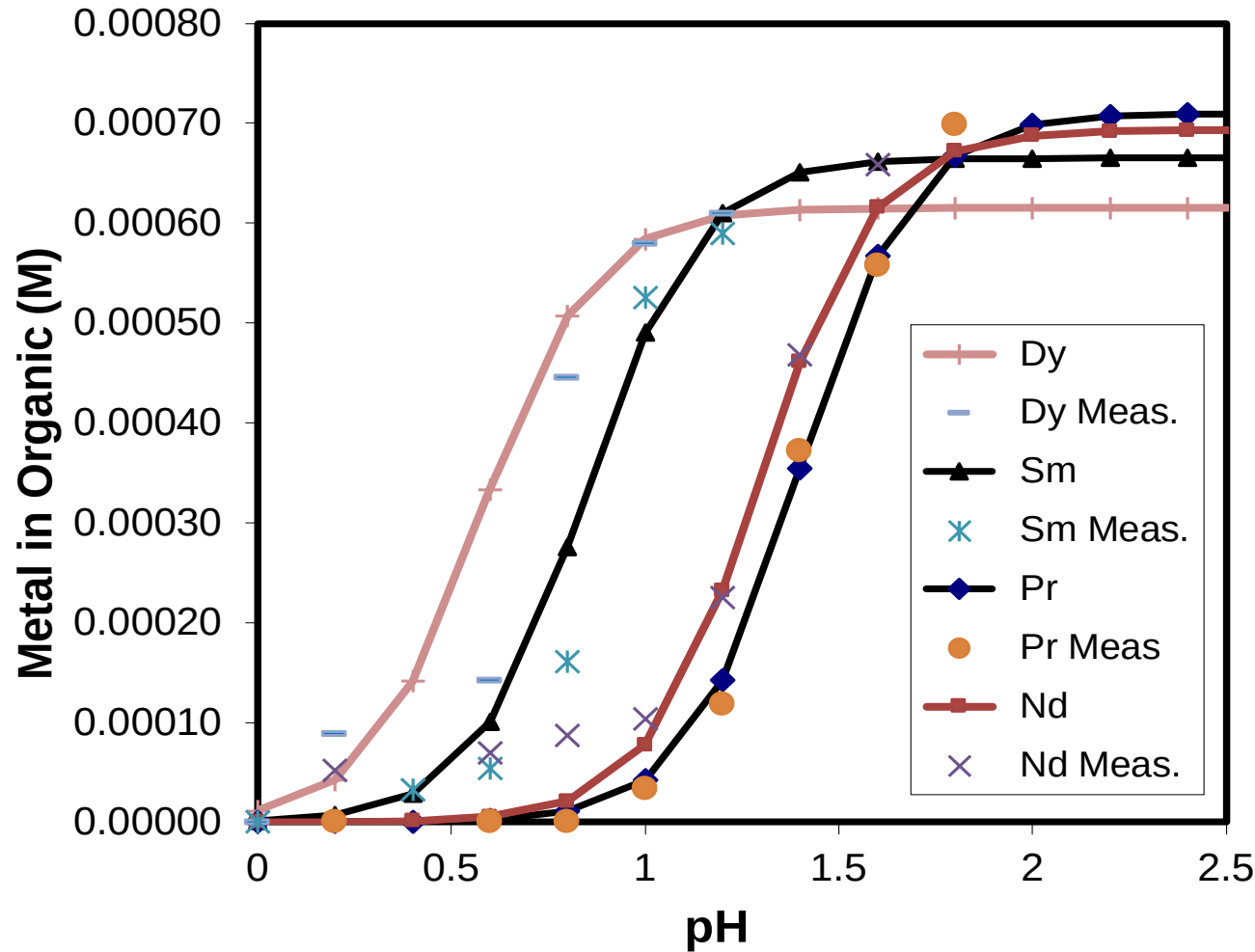


Leaching extraction for large column (60kg coal waste) fed by biooxidation reactor (35°C) fed using pyrite enriched (7 % pyrite) coal waste with air sparging. Approximately 30 % of the total iron came from the feed solution. The rest came from pyrite dissolution.

Large Column Leaching Results

Leaching of REEs from coal waste is slow in heaps using biooxidation. It may take one year to reach 30 % recovery (\$17 value/ton) under current test conditions, *which have not been optimized*. We believe we can increase the extraction rates and recoveries significantly. Note that finer particles will dramatically increase rates and recoveries, but much finer particles will also make the heaps mechanically unstable, and therefore be more feasible in stirred tank reactors.

Solvent Extraction



$$\ln R_3 = \frac{\ln_{Total} K \frac{[RH]^3}{[H^+]^3}}{1 + K \frac{[RH]^3}{[H^+]^3}}$$

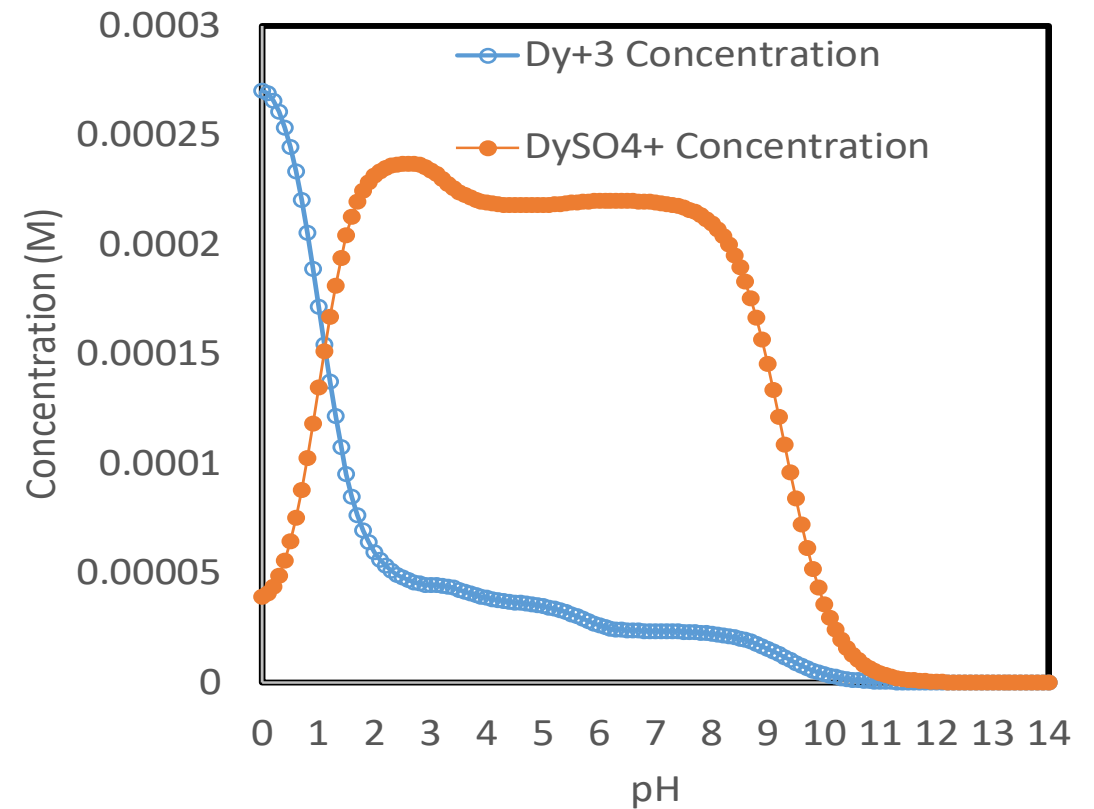
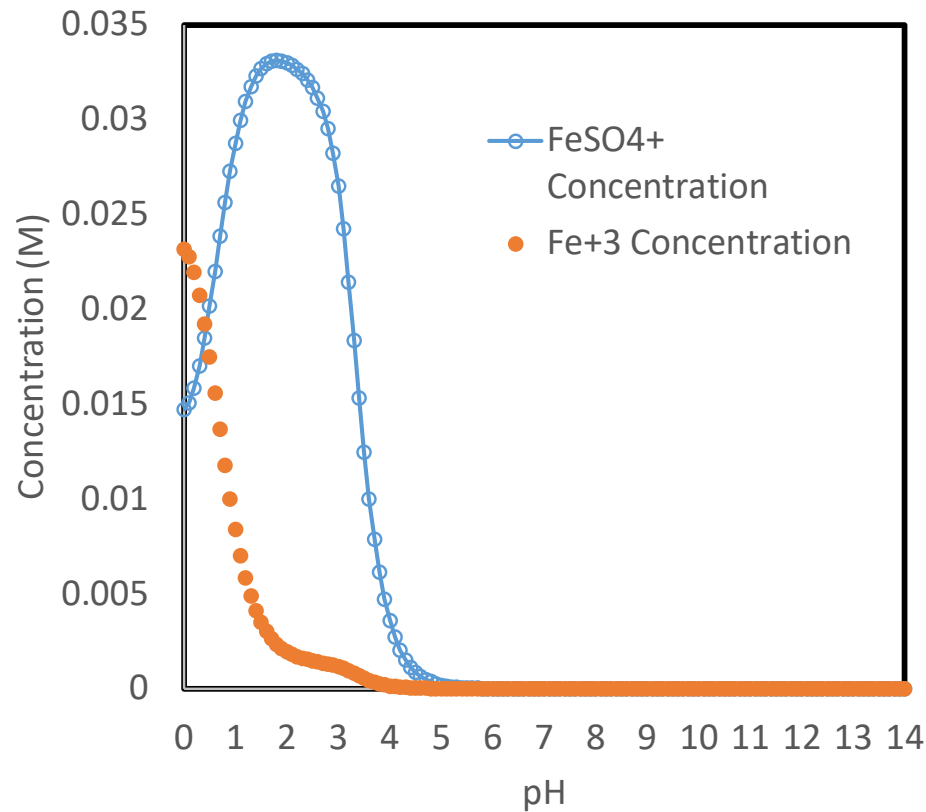
100 ppm Rare
Earth Elements,
using D2EPHA.

The primary soluble species with significant concentration levels at pH 0 are metal ions and metal sulfate ions (Fe^{3+} , FeSO_4^+ , Dy^{3+} , DySO_4^+ , La^{3+} , LaSO_4^+). As the pH rises, the reducing concentration of H^+ ions, makes sulfate more available to complex with the metal ions as indicated in Equation 1:



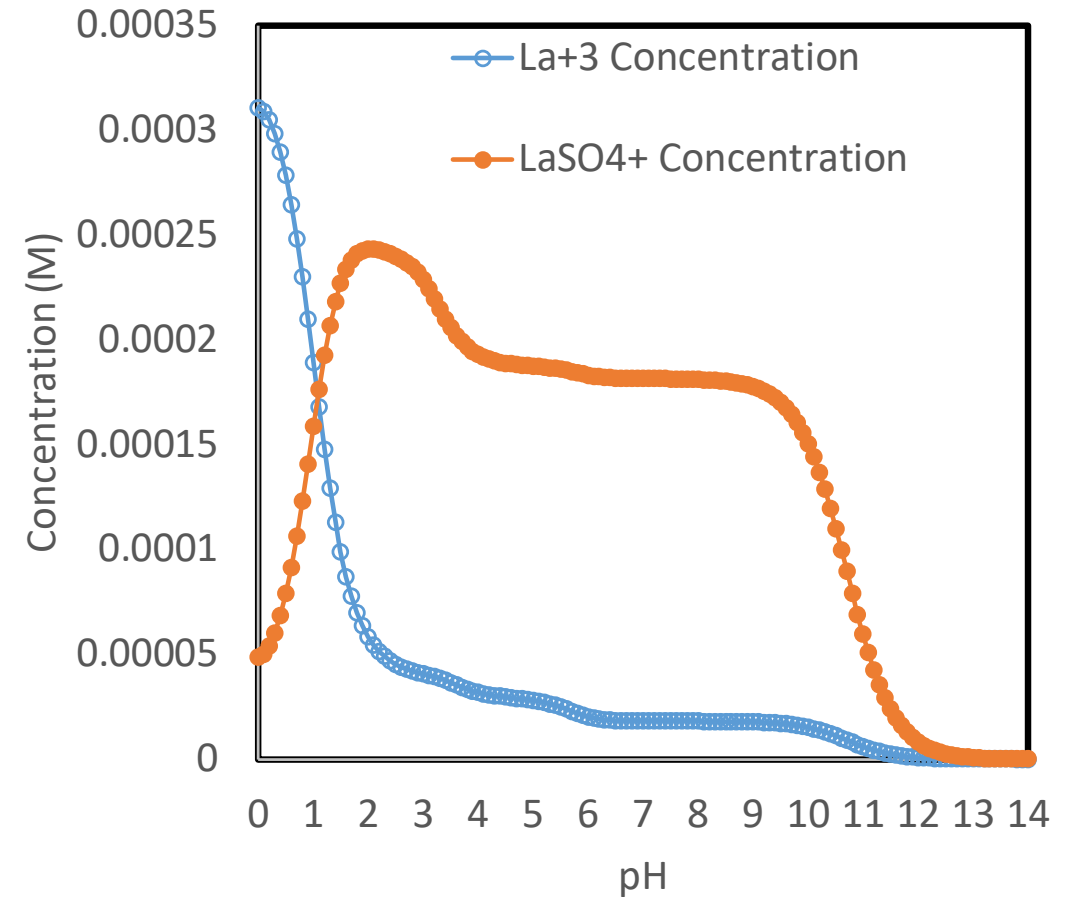
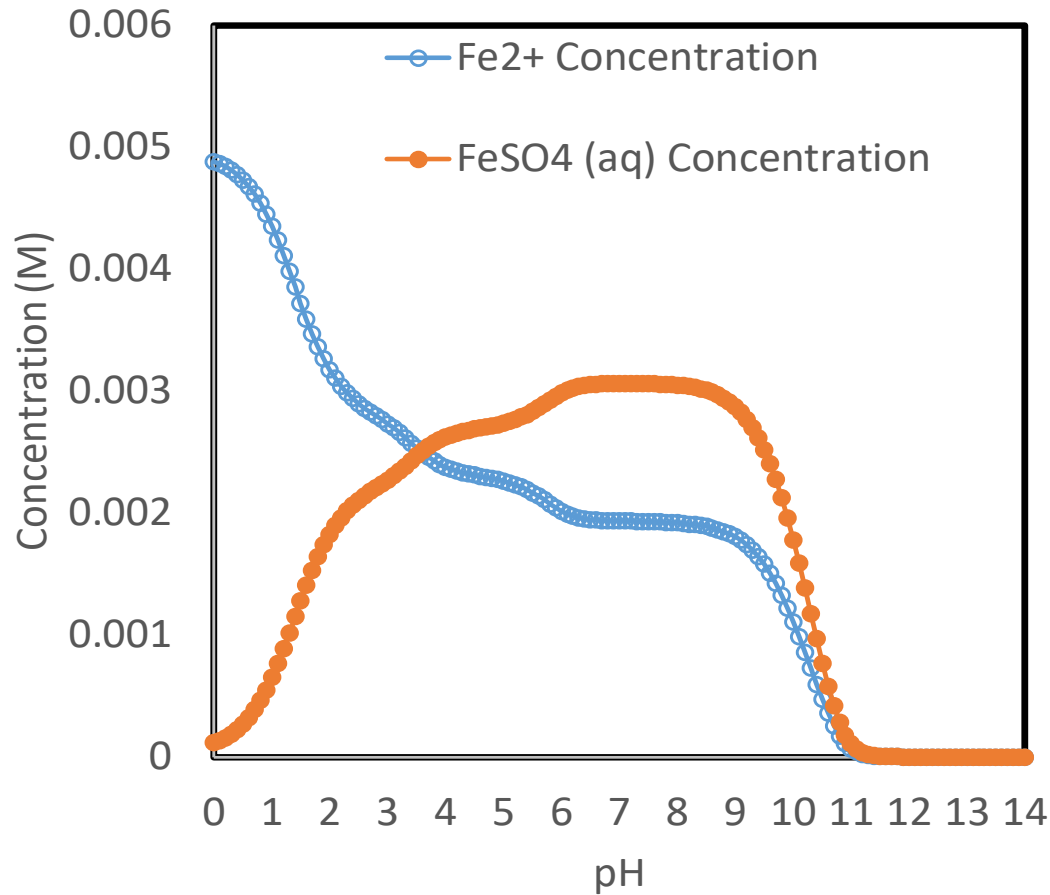
Precipitation

50 ppm Rare Earth Elements, 2000 ppm Fe.
Visual Minteq 3.1 Simulation



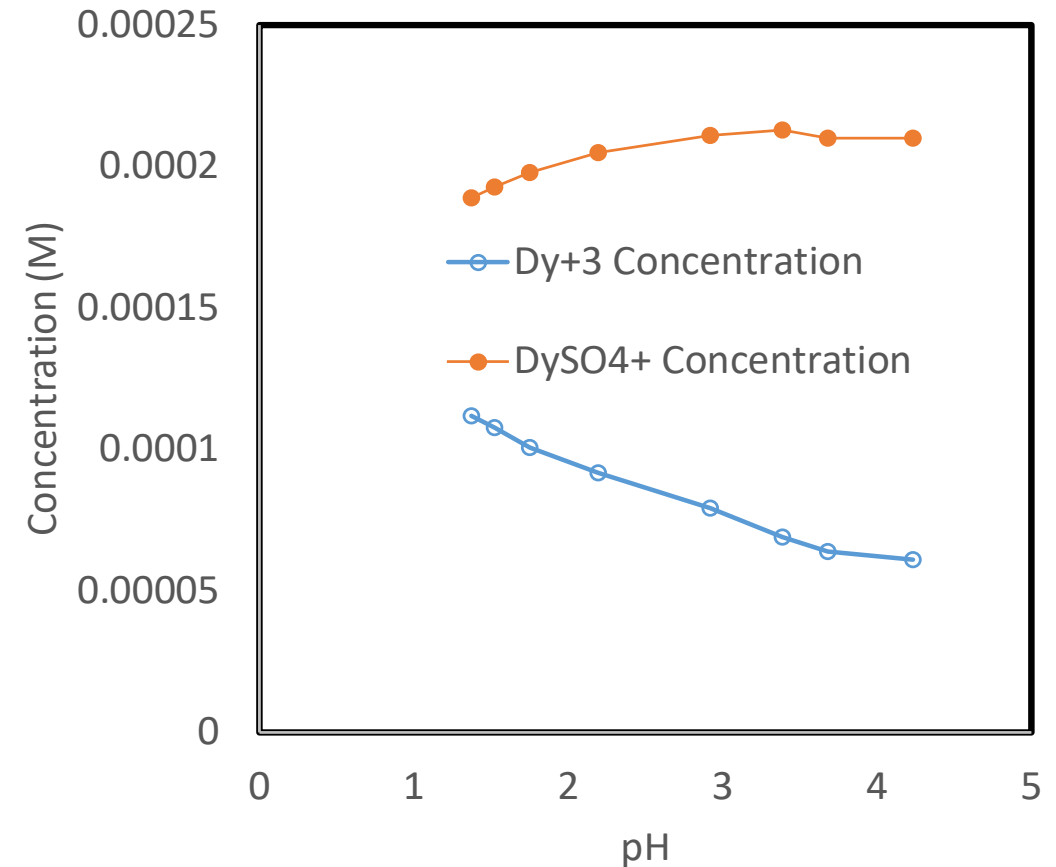
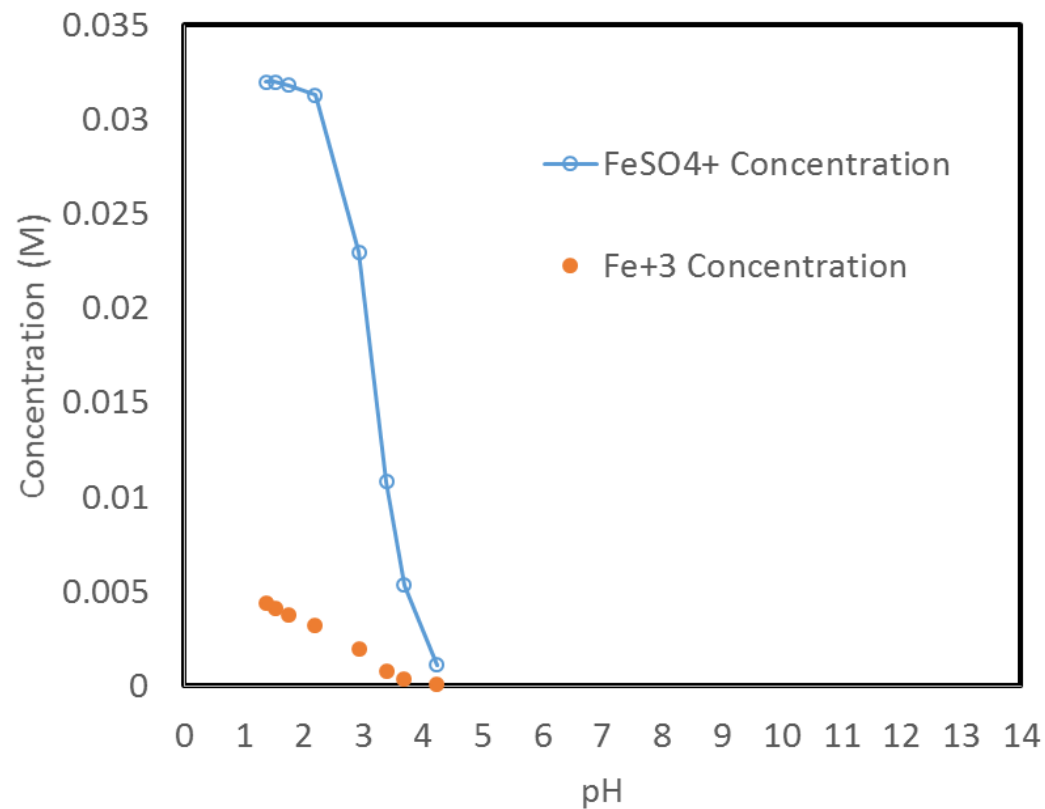
Precipitation

50 ppm Rare Earth Elements, 2000 ppm Fe.
Visual Minteq 3.1 Simulation



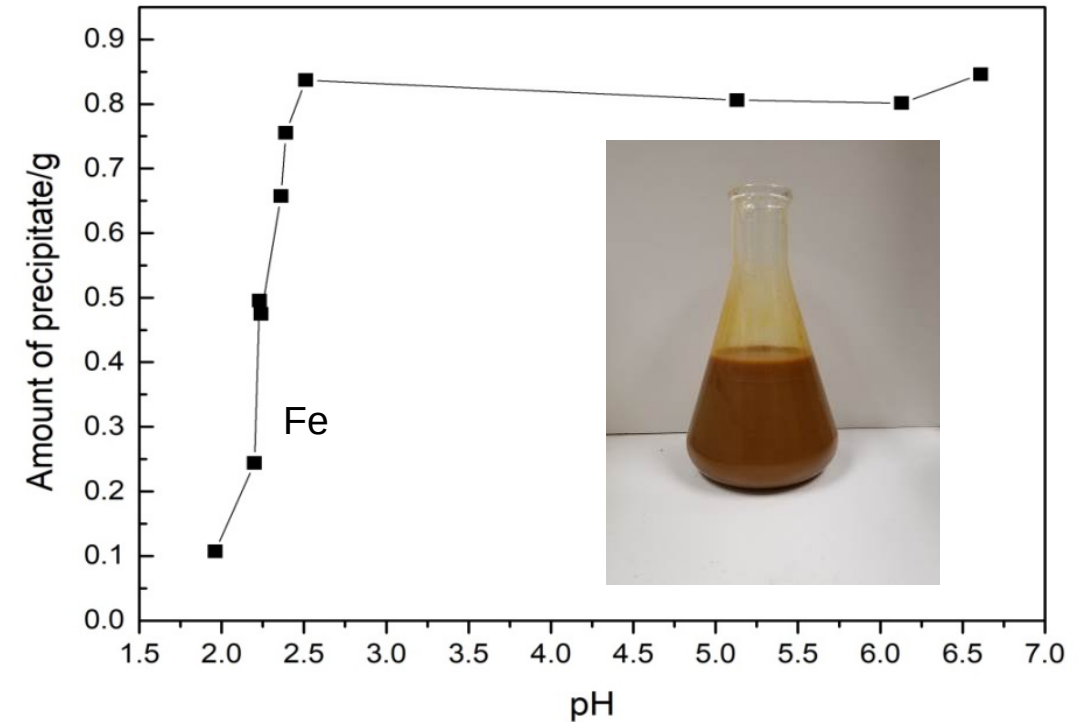
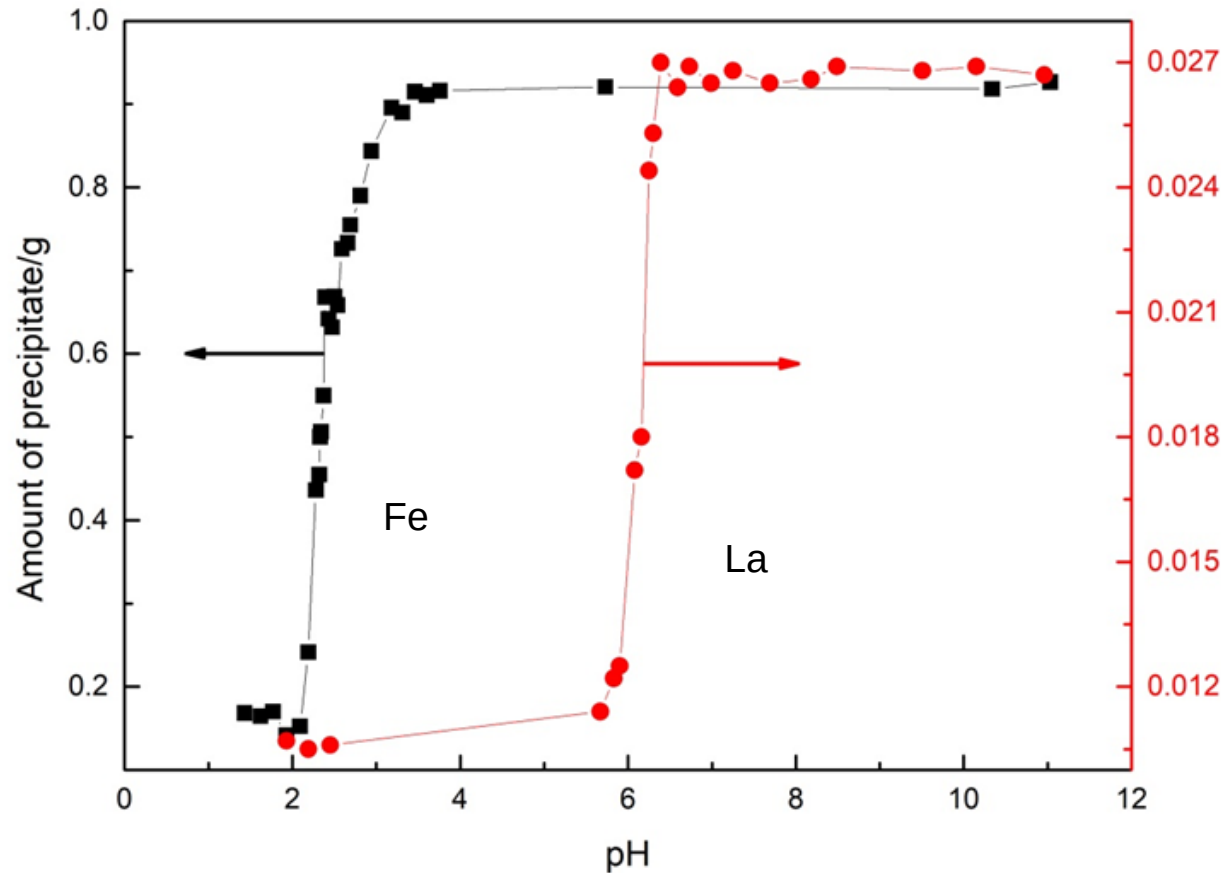
Precipitation

50 ppm Rare Earth Elements, 2000 ppm Fe.
Visual Minteq 3.1 Simulation using MgCO_3



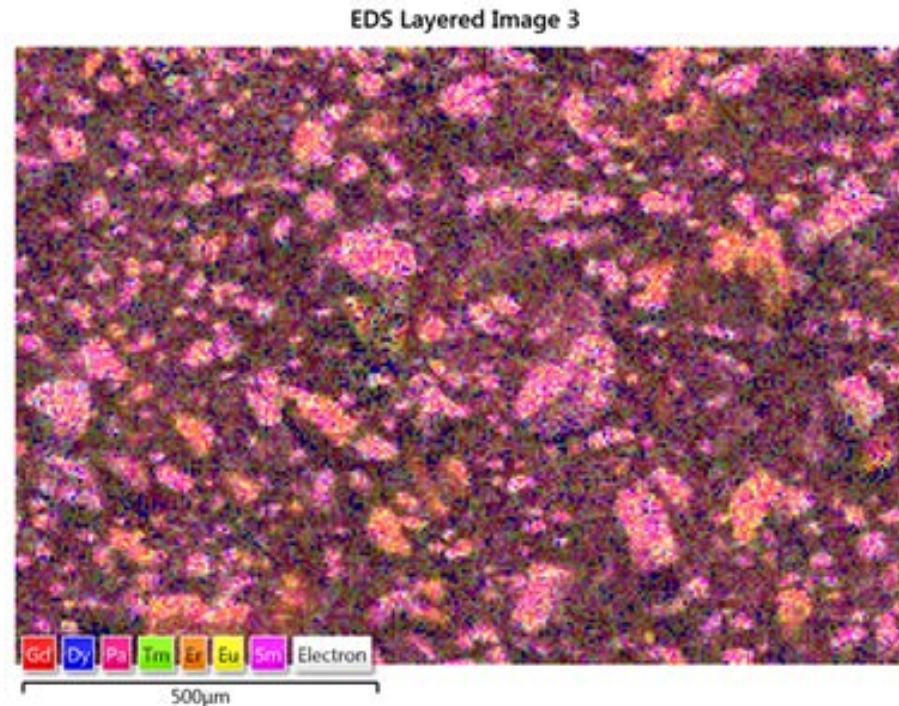
Precipitation

50 ppm Rare Earth Elements, 2000 ppm Fe. Measured data using ferric sulfate and 100 ppm lanthanum sulfate with titration using NaOH (left) MgCO_3 below

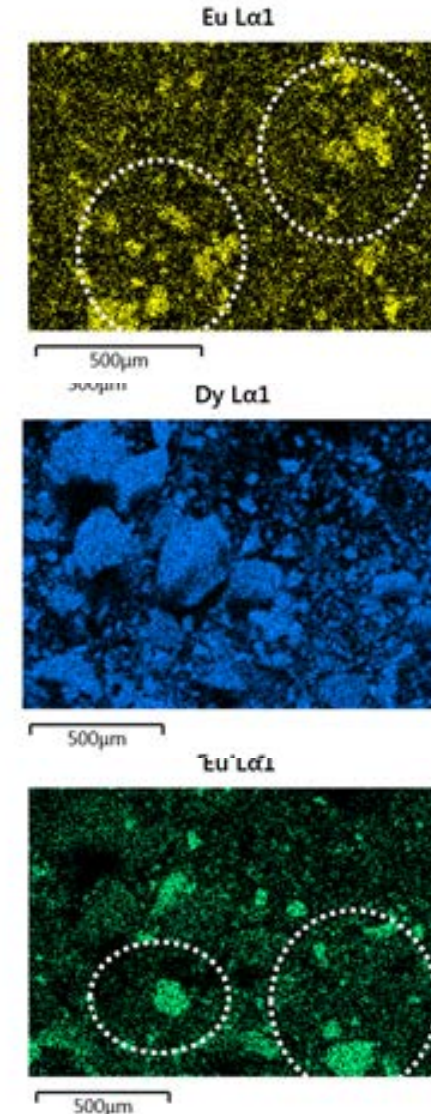


Precipitation

Initial precipitate
after removing
iron shows
enriched rare
earth elements.



More than half of the rare earth elements can be
recovered by precipitation without solvent extraction.



Rare earth elements can be recovered in significant quantities from coal waste using low cost technologies that are commercially used on large scales in the gold and copper industries.

Additional testing and analyses are being performed to estimate economic and technical viability, but preliminary results show significant potential.

Market Benefits/Assessment

- This project addresses low cost technologies to extract and recover REEs from coal-based resources with modest levels of REEs
- This program could lead to large scale production of REEs from REE-enriched coal-based resources, which are estimated to be in the hundreds of millions of tons.

Technology-to-Market Path

- Additional testing at a pilot-scale should be performed to refine the process and obtain a more precise estimate of the cost of the process in order to encourage large-scale demonstration and future, widespread industrial utilization
- The next technological challenge is to design the lowest cost flow sheet and scale-up.
- New research includes using this technology to reprocess tailings.
- Although we have involved industry for samples, partners are needed for scale-up.

Misty Mountain

Salient Details

Residential Home Lots Proforma

Coal Income Proforma

Timber Opinion

Solar Pro forma

Residential & Commercial Pro formas

Demographics

Misty Mountain
5,392 Acre
Multi Use - Residential – Commercial – Data Center - Rare Earth Mining Site

Salient Details

Location: Situated above the town of Pineville, Kentucky at the North side of US Route 25E @ State Highway 66.
Pineville is a home rule-class city in Bell County, Kentucky, United States.
Pineville is the county seat. It is located on a small strip of land between the Cumberland River and Pine Mountain

Land: 5,392 Acres Parcel# 059-00-00-002.00 (Bell County – Fourmile, Kentucky 40939)

Deed: Master Commissioner Deed

Roads: Habitable roads already in place all through the property at every elevation from coal mining

Home sites: Level home sites as a result of mountaintop surface mining

Utilities: All utilities available

Views: Sites with stunning panoramic views of the Cumberland River and overlooking valleys

Railroads: CSX Railroad boarders' property line on US Route 25

Airport: McGee-Tyson International Airport (TYS) aka Knoxville Airport (Alcoa, TN) 1 ½ hours

Existing Revenue Streams

58 Gas & Oil Leases held by Dara Energy \$2. Per acre annually \$35,000 per year
Free Oil & Gas to 1 homestead for life
Coal Lease – Wheelage – 100,000 tons per month \$.50 per ton or 2% of gross sales whichever is higher
Nash & Hamilton \$3.00 per ton or 8% of gross sales (if we buy coal rights back) See Coal Income Pro forma

Potential Revenue Sources

Rare Earth Minerals – can be extracted from existing coal mining overburden = \$1 billion+
Timber – Hardwood Trees – Estimated Value over \$5 million = 10 year rotation = \$500,000 annually
Solar – 400 acres = 120 megawatts = \$26 million
Residential Development: Thousands of potential home site - Single Family Homes – All price points, condos/townhomes & apartments (Note: City of Pineville will guarantee loans for affordable housing)
Commercial Development: Hotels & Resorts, Office & Industrial - Data Centers
Hunting & Wildlife
Farming of all types

Misty Mountain
Coal Income Pro forma

Tonnage	670,000/year
Value (x \$45/ton)	\$ 30,150,000/year
Cost	- 0 -

<u>Income</u>	<u>Wheelage (2%)</u>	<u>Full Take (8%)</u>
	\$ 603,000/year	\$ 2,412,000/year
	\$ 50,250/month	\$ 201,000/month

Don Coleman

Land, Timber, & Investments, LLC

Delta Wood Products, LLC

13894 Hwy 35 N

Kosciusko, MS 39090

662-571-1386

don@thelandcompanyllc.net

March 12, 2025

Kevin Loughery

Bell County KY Timber

Dear Kevin,

Thank you for your hospitality while visiting your property in Kentucky. The property is absolutely breathtaking especially from higher elevations and the overlooks while observing nature's beauty in those mountains.

After taking several plots and calculating what I saw there, along with current and rising timber prices, it is my 40-year professional opinion in buying and selling timber, that there is at least \$5 million in hardwood timber on these 5392 acres. With the escalating price of hardwood, especially white oak, and without a full timber cruise, I feel very safe in stating this figure after looking at the property. With a cruise I would be able to give you a more specific number rather than a range and there could possibly be more once you calculate every nook and cranny that I was unable to see from just a ride through the property. I look forward to working with you on this tract and any others in the future.

Kindest Regards,



Project Size (MW)	40	ITC %	30%
Project Cost/W	\$ 1.20	ITC Amount	\$ 14,400,000
Total Project Cost	\$ 48,000,000		
PPA Price	\$ 0.0500	Deprec. Basis	\$ 40,800,000
PPA Escalation	0.00%	Tax Rate	24.00% \$ 9,792,000
PPA Length	20 Years		

Year 1 Generation	86,598,061
Year 1 Revenue	\$ 4,329,903

Year 1 Panel Degre	1.50%	
Year 2+ Degredatio	0.33%	\$ 83,001,742

PPA Year	Month	Date	Delivered Energy kWhrs	PPA Rate	PPA Revenues	Annual Revenues
1	1	9/1/2026	6,017,336	\$ 0.0500	\$ 300,867	
1	2	10/1/2026	5,929,724	\$ 0.0500	\$ 296,486	
1	3	11/1/2026	7,401,311	\$ 0.0500	\$ 370,066	
1	4	12/1/2026	7,913,798	\$ 0.0500	\$ 395,690	
1	5	1/1/2027	8,617,837	\$ 0.0500	\$ 430,892	
1	6	2/1/2027	7,569,471	\$ 0.0500	\$ 378,474	
1	7	3/1/2027	8,197,248	\$ 0.0500	\$ 409,862	
1	8	4/1/2027	7,922,486	\$ 0.0500	\$ 396,124	
1	9	5/1/2027	7,659,767	\$ 0.0500	\$ 382,988	
1	10	6/1/2027	7,406,351	\$ 0.0500	\$ 370,318	
1	11	7/1/2027	6,302,562	\$ 0.0500	\$ 315,128	
1	12	8/1/2027	5,660,169	\$ 0.0500	\$ 283,008	\$ 4,329,903
2	13	9/1/2027	5,927,076	\$ 0.0500	\$ 296,354	
2	14	10/1/2027	5,840,778	\$ 0.0500	\$ 292,039	
2	15	11/1/2027	7,290,291	\$ 0.0500	\$ 364,515	
2	16	12/1/2027	7,795,091	\$ 0.0500	\$ 389,755	
2	17	1/1/2028	8,488,569	\$ 0.0500	\$ 424,428	
2	18	2/1/2028	7,455,929	\$ 0.0500	\$ 372,796	
2	19	3/1/2028	8,074,290	\$ 0.0500	\$ 403,714	
2	20	4/1/2028	7,803,648	\$ 0.0500	\$ 390,182	
2	21	5/1/2028	7,544,871	\$ 0.0500	\$ 377,244	
2	22	6/1/2028	7,295,256	\$ 0.0500	\$ 364,763	
2	23	7/1/2028	6,208,024	\$ 0.0500	\$ 310,401	
2	24	8/1/2028	5,575,266	\$ 0.0500	\$ 278,763	\$ 4,264,954
3	25	9/1/2028	5,907,517	\$ 0.0500	\$ 295,376	
3	26	10/1/2028	5,821,504	\$ 0.0500	\$ 291,075	
3	27	11/1/2028	7,266,233	\$ 0.0500	\$ 363,312	
3	28	12/1/2028	7,769,368	\$ 0.0500	\$ 388,468	
3	29	1/1/2029	8,460,557	\$ 0.0500	\$ 423,028	
3	30	2/1/2029	7,431,324	\$ 0.0500	\$ 371,566	
3	31	3/1/2029	8,047,644	\$ 0.0500	\$ 402,382	
3	32	4/1/2029	7,777,896	\$ 0.0500	\$ 388,895	
3	33	5/1/2029	7,519,973	\$ 0.0500	\$ 375,999	
3	34	6/1/2029	7,271,181	\$ 0.0500	\$ 363,559	
3	35	7/1/2029	6,187,538	\$ 0.0500	\$ 309,377	
3	36	8/1/2029	5,556,868	\$ 0.0500	\$ 277,843	\$ 4,250,880
4	37	9/1/2029	5,888,022	\$ 0.0500	\$ 294,401	
4	38	10/1/2029	5,802,293	\$ 0.0500	\$ 290,115	

4	39	11/1/2029	7,242,254	\$	0.0500	\$	362,113	
4	40	12/1/2029	7,743,729	\$	0.0500	\$	387,186	
4	41	1/1/2030	8,432,637	\$	0.0500	\$	421,632	
4	42	2/1/2030	7,406,801	\$	0.0500	\$	370,340	
4	43	3/1/2030	8,021,087	\$	0.0500	\$	401,054	
4	44	4/1/2030	7,752,229	\$	0.0500	\$	387,611	
4	45	5/1/2030	7,495,157	\$	0.0500	\$	374,758	
4	46	6/1/2030	7,247,186	\$	0.0500	\$	362,359	
4	47	7/1/2030	6,167,119	\$	0.0500	\$	308,356	
4	48	8/1/2030	5,538,530	\$	0.0500	\$	276,927	\$ 4,236,852
5	49	9/1/2030	5,868,591	\$	0.0500	\$	293,430	
5	50	10/1/2030	5,783,145	\$	0.0500	\$	289,157	
5	51	11/1/2030	7,218,355	\$	0.0500	\$	360,918	
5	52	12/1/2030	7,718,174	\$	0.0500	\$	385,909	
5	53	1/1/2031	8,404,810	\$	0.0500	\$	420,240	
5	54	2/1/2031	7,382,359	\$	0.0500	\$	369,118	
5	55	3/1/2031	7,994,618	\$	0.0500	\$	399,731	
5	56	4/1/2031	7,726,647	\$	0.0500	\$	386,332	
5	57	5/1/2031	7,470,423	\$	0.0500	\$	373,521	
5	58	6/1/2031	7,223,271	\$	0.0500	\$	361,164	
5	59	7/1/2031	6,146,767	\$	0.0500	\$	307,338	
5	60	8/1/2031	5,520,253	\$	0.0500	\$	276,013	\$ 4,222,871
6	61	9/1/2031	5,849,225	\$	0.0500	\$	292,461	
6	62	10/1/2031	5,764,061	\$	0.0500	\$	288,203	
6	63	11/1/2031	7,194,534	\$	0.0500	\$	359,727	
6	64	12/1/2031	7,692,704	\$	0.0500	\$	384,635	
6	65	1/1/2032	8,377,074	\$	0.0500	\$	418,854	
6	66	2/1/2032	7,357,997	\$	0.0500	\$	367,900	
6	67	3/1/2032	7,968,235	\$	0.0500	\$	398,412	
6	68	4/1/2032	7,701,149	\$	0.0500	\$	385,057	
6	69	5/1/2032	7,445,770	\$	0.0500	\$	372,289	
6	70	6/1/2032	7,199,434	\$	0.0500	\$	359,972	
6	71	7/1/2032	6,126,483	\$	0.0500	\$	306,324	
6	72	8/1/2032	5,502,036	\$	0.0500	\$	275,102	\$ 4,208,935
7	73	9/1/2032	5,829,923	\$	0.0500	\$	291,496	
7	74	10/1/2032	5,745,040	\$	0.0500	\$	287,252	
7	75	11/1/2032	7,170,793	\$	0.0500	\$	358,540	
7	76	12/1/2032	7,667,319	\$	0.0500	\$	383,366	
7	77	1/1/2033	8,349,429	\$	0.0500	\$	417,471	
7	78	2/1/2033	7,333,715	\$	0.0500	\$	366,686	
7	79	3/1/2033	7,941,940	\$	0.0500	\$	397,097	
7	80	4/1/2033	7,675,735	\$	0.0500	\$	383,787	
7	81	5/1/2033	7,421,199	\$	0.0500	\$	371,060	
7	82	6/1/2033	7,175,676	\$	0.0500	\$	358,784	
7	83	7/1/2033	6,106,265	\$	0.0500	\$	305,313	
7	84	8/1/2033	5,483,879	\$	0.0500	\$	274,194	\$ 4,195,046
8	85	9/1/2033	5,810,684	\$	0.0500	\$	290,534	
8	86	10/1/2033	5,726,081	\$	0.0500	\$	286,304	
8	87	11/1/2033	7,147,129	\$	0.0500	\$	357,356	
8	88	12/1/2033	7,642,016	\$	0.0500	\$	382,101	
8	89	1/1/2034	8,321,876	\$	0.0500	\$	416,094	
8	90	2/1/2034	7,309,514	\$	0.0500	\$	365,476	
8	91	3/1/2034	7,915,732	\$	0.0500	\$	395,787	
8	92	4/1/2034	7,650,405	\$	0.0500	\$	382,520	
8	93	5/1/2034	7,396,709	\$	0.0500	\$	369,835	

8	94	6/1/2034	7,151,996	\$	0.0500	\$	357,600	
8	95	7/1/2034	6,086,115	\$	0.0500	\$	304,306	
8	96	8/1/2034	5,465,782	\$	0.0500	\$	273,289	\$ 4,181,202
9	97	9/1/2034	5,791,509	\$	0.0500	\$	289,575	
9	98	10/1/2034	5,707,185	\$	0.0500	\$	285,359	
9	99	11/1/2034	7,123,543	\$	0.0500	\$	356,177	
9	100	12/1/2034	7,616,798	\$	0.0500	\$	380,840	
9	101	1/1/2035	8,294,414	\$	0.0500	\$	414,721	
9	102	2/1/2035	7,285,393	\$	0.0500	\$	364,270	
9	103	3/1/2035	7,889,610	\$	0.0500	\$	394,480	
9	104	4/1/2035	7,625,159	\$	0.0500	\$	381,258	
9	105	5/1/2035	7,372,300	\$	0.0500	\$	368,615	
9	106	6/1/2035	7,128,394	\$	0.0500	\$	356,420	
9	107	7/1/2035	6,066,031	\$	0.0500	\$	303,302	
9	108	8/1/2035	5,447,745	\$	0.0500	\$	272,387	\$ 4,167,404
10	109	9/1/2035	5,772,397	\$	0.0500	\$	288,620	
10	110	10/1/2035	5,688,351	\$	0.0500	\$	284,418	
10	111	11/1/2035	7,100,036	\$	0.0500	\$	355,002	
10	112	12/1/2035	7,591,662	\$	0.0500	\$	379,583	
10	113	1/1/2036	8,267,043	\$	0.0500	\$	413,352	
10	114	2/1/2036	7,261,351	\$	0.0500	\$	363,068	
10	115	3/1/2036	7,863,574	\$	0.0500	\$	393,179	
10	116	4/1/2036	7,599,996	\$	0.0500	\$	380,000	
10	117	5/1/2036	7,347,972	\$	0.0500	\$	367,399	
10	118	6/1/2036	7,104,871	\$	0.0500	\$	355,244	
10	119	7/1/2036	6,046,013	\$	0.0500	\$	302,301	
10	120	8/1/2036	5,429,768	\$	0.0500	\$	271,488	\$ 4,153,652
11	121	9/1/2036	5,753,348	\$	0.0500	\$	287,667	
11	122	10/1/2036	5,669,580	\$	0.0500	\$	283,479	
11	123	11/1/2036	7,076,606	\$	0.0500	\$	353,830	
11	124	12/1/2036	7,566,610	\$	0.0500	\$	378,330	
11	125	1/1/2037	8,239,761	\$	0.0500	\$	411,988	
11	126	2/1/2037	7,237,389	\$	0.0500	\$	361,869	
11	127	3/1/2037	7,837,624	\$	0.0500	\$	391,881	
11	128	4/1/2037	7,574,916	\$	0.0500	\$	378,746	
11	129	5/1/2037	7,323,723	\$	0.0500	\$	366,186	
11	130	6/1/2037	7,081,425	\$	0.0500	\$	354,071	
11	131	7/1/2037	6,026,061	\$	0.0500	\$	301,303	
11	132	8/1/2037	5,411,850	\$	0.0500	\$	270,592	\$ 4,139,945
12	133	9/1/2037	5,734,362	\$	0.0500	\$	286,718	
12	134	10/1/2037	5,650,870	\$	0.0500	\$	282,543	
12	135	11/1/2037	7,053,253	\$	0.0500	\$	352,663	
12	136	12/1/2037	7,541,640	\$	0.0500	\$	377,082	
12	137	1/1/2038	8,212,570	\$	0.0500	\$	410,629	
12	138	2/1/2038	7,213,505	\$	0.0500	\$	360,675	
12	139	3/1/2038	7,811,760	\$	0.0500	\$	390,588	
12	140	4/1/2038	7,549,919	\$	0.0500	\$	377,496	
12	141	5/1/2038	7,299,555	\$	0.0500	\$	364,978	
12	142	6/1/2038	7,058,056	\$	0.0500	\$	352,903	
12	143	7/1/2038	6,006,175	\$	0.0500	\$	300,309	
12	144	8/1/2038	5,393,991	\$	0.0500	\$	269,700	\$ 4,126,283
13	145	9/1/2038	5,715,438	\$	0.0500	\$	285,772	
13	146	10/1/2038	5,632,222	\$	0.0500	\$	281,611	
13	147	11/1/2038	7,029,977	\$	0.0500	\$	351,499	
13	148	12/1/2038	7,516,753	\$	0.0500	\$	375,838	

13	149	1/1/2039	8,185,469	\$	0.0500	\$	409,273	
13	150	2/1/2039	7,189,701	\$	0.0500	\$	359,485	
13	151	3/1/2039	7,785,981	\$	0.0500	\$	389,299	
13	152	4/1/2039	7,525,004	\$	0.0500	\$	376,250	
13	153	5/1/2039	7,275,466	\$	0.0500	\$	363,773	
13	154	6/1/2039	7,034,764	\$	0.0500	\$	351,738	
13	155	7/1/2039	5,986,354	\$	0.0500	\$	299,318	
13	156	8/1/2039	5,376,190	\$	0.0500	\$	268,810	\$ 4,112,666
14	157	9/1/2039	5,696,577	\$	0.0500	\$	284,829	
14	158	10/1/2039	5,613,636	\$	0.0500	\$	280,682	
14	159	11/1/2039	7,006,778	\$	0.0500	\$	350,339	
14	160	12/1/2039	7,491,947	\$	0.0500	\$	374,597	
14	161	1/1/2040	8,158,457	\$	0.0500	\$	407,923	
14	162	2/1/2040	7,165,975	\$	0.0500	\$	358,299	
14	163	3/1/2040	7,760,288	\$	0.0500	\$	388,014	
14	164	4/1/2040	7,500,171	\$	0.0500	\$	375,009	
14	165	5/1/2040	7,251,457	\$	0.0500	\$	362,573	
14	166	6/1/2040	7,011,550	\$	0.0500	\$	350,577	
14	167	7/1/2040	5,966,599	\$	0.0500	\$	298,330	
14	168	8/1/2040	5,358,449	\$	0.0500	\$	267,922	\$ 4,099,094
15	169	9/1/2040	5,677,779	\$	0.0500	\$	283,889	
15	170	10/1/2040	5,595,111	\$	0.0500	\$	279,756	
15	171	11/1/2040	6,983,656	\$	0.0500	\$	349,183	
15	172	12/1/2040	7,467,224	\$	0.0500	\$	373,361	
15	173	1/1/2041	8,131,534	\$	0.0500	\$	406,577	
15	174	2/1/2041	7,142,327	\$	0.0500	\$	357,116	
15	175	3/1/2041	7,734,679	\$	0.0500	\$	386,734	
15	176	4/1/2041	7,475,421	\$	0.0500	\$	373,771	
15	177	5/1/2041	7,227,528	\$	0.0500	\$	361,376	
15	178	6/1/2041	6,988,412	\$	0.0500	\$	349,421	
15	179	7/1/2041	5,946,910	\$	0.0500	\$	297,345	
15	180	8/1/2041	5,340,766	\$	0.0500	\$	267,038	\$ 4,085,567
16	181	9/1/2041	5,659,042	\$	0.0500	\$	282,952	
16	182	10/1/2041	5,576,647	\$	0.0500	\$	278,832	
16	183	11/1/2041	6,960,610	\$	0.0500	\$	348,030	
16	184	12/1/2041	7,442,582	\$	0.0500	\$	372,129	
16	185	1/1/2042	8,104,700	\$	0.0500	\$	405,235	
16	186	2/1/2042	7,118,757	\$	0.0500	\$	355,938	
16	187	3/1/2042	7,709,154	\$	0.0500	\$	385,458	
16	188	4/1/2042	7,450,752	\$	0.0500	\$	372,538	
16	189	5/1/2042	7,203,677	\$	0.0500	\$	360,184	
16	190	6/1/2042	6,965,350	\$	0.0500	\$	348,267	
16	191	7/1/2042	5,927,285	\$	0.0500	\$	296,364	
16	192	8/1/2042	5,323,142	\$	0.0500	\$	266,157	\$ 4,072,085
17	193	9/1/2042	5,640,367	\$	0.0500	\$	282,018	
17	194	10/1/2042	5,558,244	\$	0.0500	\$	277,912	
17	195	11/1/2042	6,937,640	\$	0.0500	\$	346,882	
17	196	12/1/2042	7,418,022	\$	0.0500	\$	370,901	
17	197	1/1/2043	8,077,954	\$	0.0500	\$	403,898	
17	198	2/1/2043	7,095,265	\$	0.0500	\$	354,763	
17	199	3/1/2043	7,683,714	\$	0.0500	\$	384,186	
17	200	4/1/2043	7,426,165	\$	0.0500	\$	371,308	
17	201	5/1/2043	7,179,905	\$	0.0500	\$	358,995	
17	202	6/1/2043	6,942,364	\$	0.0500	\$	347,118	
17	203	7/1/2043	5,907,725	\$	0.0500	\$	295,386	

17	204	8/1/2043	5,305,575	\$	0.0500	\$	265,279	\$ 4,058,647
18	205	9/1/2043	5,621,754	\$	0.0500	\$	281,088	
18	206	10/1/2043	5,539,902	\$	0.0500	\$	276,995	
18	207	11/1/2043	6,914,745	\$	0.0500	\$	345,737	
18	208	12/1/2043	7,393,542	\$	0.0500	\$	369,677	
18	209	1/1/2044	8,051,297	\$	0.0500	\$	402,565	
18	210	2/1/2044	7,071,851	\$	0.0500	\$	353,593	
18	211	3/1/2044	7,658,358	\$	0.0500	\$	382,918	
18	212	4/1/2044	7,401,658	\$	0.0500	\$	370,083	
18	213	5/1/2044	7,156,211	\$	0.0500	\$	357,811	
18	214	6/1/2044	6,919,454	\$	0.0500	\$	345,973	
18	215	7/1/2044	5,888,229	\$	0.0500	\$	294,411	
18	216	8/1/2044	5,288,067	\$	0.0500	\$	264,403	\$ 4,045,253
19	217	9/1/2044	5,603,202	\$	0.0500	\$	280,160	
19	218	10/1/2044	5,521,620	\$	0.0500	\$	276,081	
19	219	11/1/2044	6,891,927	\$	0.0500	\$	344,596	
19	220	12/1/2044	7,369,143	\$	0.0500	\$	368,457	
19	221	1/1/2045	8,024,728	\$	0.0500	\$	401,236	
19	222	2/1/2045	7,048,514	\$	0.0500	\$	352,426	
19	223	3/1/2045	7,633,085	\$	0.0500	\$	381,654	
19	224	4/1/2045	7,377,233	\$	0.0500	\$	368,862	
19	225	5/1/2045	7,132,595	\$	0.0500	\$	356,630	
19	226	6/1/2045	6,896,620	\$	0.0500	\$	344,831	
19	227	7/1/2045	5,868,798	\$	0.0500	\$	293,440	
19	228	8/1/2045	5,270,616	\$	0.0500	\$	263,531	\$ 4,031,904
20	229	9/1/2045	5,584,712	\$	0.0500	\$	279,236	
20	230	10/1/2045	5,503,399	\$	0.0500	\$	275,170	
20	231	11/1/2045	6,869,183	\$	0.0500	\$	343,459	
20	232	12/1/2045	7,344,825	\$	0.0500	\$	367,241	
20	233	1/1/2046	7,998,246	\$	0.0500	\$	399,912	
20	234	2/1/2046	7,025,254	\$	0.0500	\$	351,263	
20	235	3/1/2046	7,607,896	\$	0.0500	\$	380,395	
20	236	4/1/2046	7,352,888	\$	0.0500	\$	367,644	
20	237	5/1/2046	7,109,058	\$	0.0500	\$	355,453	
20	238	6/1/2046	6,873,861	\$	0.0500	\$	343,693	
20	239	7/1/2046	5,849,431	\$	0.0500	\$	292,472	
20	240	8/1/2046	5,253,223	\$	0.0500	\$	262,661	\$ 4,018,599

Misty Mountain

Residential & Commercial Income Pro forma

<u>Residential</u>	<u>Lots</u>				
Luxury	100	@	\$ 1,000,000	\$	100,000,000
	100	@	\$ 500,000	\$	50,000,000
Midscale	100	@	\$ 250,000	\$	25,000,000
	100	@	\$ 150,000	\$	15,000,000
Economy	100	@	\$ 100,000	\$	10,000,000
	100	@	\$ 75,000	\$	7,500,000
<i>(only 600 of potential 2,400 lots)</i>					

<u>Commercial</u>	<u>Sites</u>		
Data Centers		\$	8,000,000
Aparment - Community Focused Living Sites		\$	12,000,000

Mining

Rare Earth/Sand/Granite	\$	50,000,000
Coal/Gas/Oil	\$	12,000,000

Gross Income	\$	289,500,000
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Expenses

Real Estate Fees	\$	2,775,000
Taxes	\$	876,000
Insurance	\$	58,000
Common Area	\$	1,400,000

Net Income	\$	284,391,000
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Total Development Costs	\$	43,635,000
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Profit Before Taxes	\$	240,756,000
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Misty Mountain Residential & Commercial Cost Pro forma

Hard Costs

Land Acquisition - 5,392 acres	\$	5,500,000
Infrastructure Construction (600 lots)	\$	30,000,000
Off Site Construction	\$	2,300,000
Amenities	\$	1,200,000
Total Hard Costs	\$	39,000,000

Soft Costs

Engineering/Surveying	\$	850,000
Legal	\$	250,000
Permitting	\$	75,000
Interest	\$	2,300,000
Taxes	\$	160,000
Misc - Administrative	\$	1,000,000
Total Soft Costs	\$	4,635,000
Total Development Costs	\$	43,635,000

Misty Mountain Development Pro forma

Hard Costs

Land Acquisition - 5,392 acres	\$ 5,500,000.00
Road Construction	\$ 155,000,000.00
Total Hard Costs	\$ 160,500,000.00

Soft Costs

Engineering	\$ 1,500,000.00
Legal	\$ 75,000.00
Survey	\$ 450,000.00
Insurance	\$ 56,000.00
Marketing	\$ 24,000.00
Misc - Administrative	\$ 1,000,000.00
Total Soft Costs	\$ 3,105,000.00

Total Development Costs	\$ 163,605,000.00
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Total Income	\$ 333,000,000.00
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Profit	\$ 169,395,000.00
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Misty Mountain Income Pro forma

Income

Residential	Lots			
Luxury	100	@	\$1,000,000.00	\$ 100,000,000.00
Midscale	1,500	@	\$100,000.00	\$ 150,000,000.00
Economy	1,500	@	\$50,000.00	\$ 75,000,000.00
Aparment - Community Focused Living Sites				\$ 8,000,000.00
Total Income				\$ 333,000,000.00