Bridging Arizona’s History to a Sustainable Future

Professor Towner’s Class – February 17, 2011

Presentation Organization

- Brief overview of project and status
- Present statements made by project opponents
- Give you summary information on project
- Find any additional information you might need on www.rosemontcopper.com or at www.rosemonteis.us

Arizona: The Copper State

Arizona’s history is intertwined with mining

Top Copper Producer Since 1910
More copper than 49 other states combined
Provides 65% of U.S. copper on one quarter of 1% of state land
2008 Economic Impact $10.4 Billion
62,800 jobs in 2008 from Copper,
In 1996 - 1 in 8 jobs depend on copper mines
Average mining wage $60,000
We all need copper every day
Copper is critical to the American economy

The average U.S. person uses 7 pounds of copper per year. The average Asian person uses 2 pounds of copper per year.

In 2008 the U.S. imported 35% of its copper needs.

Wind generation requires 12 times the amount of copper than a coal fired power plant to produce a kilowatt of power.

History and Ownership
Helvetia/Rosemont Mining District

Rosemont District mined 1870-1950
First mining claims 1879-1885
Congress recognizes Mining Districts – 1880's
Southern Arizona leads nation's copper production – 1900
First mining claims:
• Narragansett, 1879
• Eclipse, 1884
• Backbone, 1886
Recent History:
• Banner Mining Company, 1961
• Anaconda, 1973-1986
• Asarco, 1988-2004
• Rosemont Copper, 2005

Old Rosemont, Ca. 1900

Rosemont Hotel, ca. 1906
Design Philosophy

- Community Endowment
  - $25 million permanent endowment and $500,000 annual donation
- Sustainable Water Supply
  - Replace what we take and protect what is there
- Concurrent Reclamation / Scenic Value Recognition
  - Reclamation starts the first year of operation
  - Perimeter buttress and reduced footprint
- Sonoran Desert Protection Plan
  - Avoid biological core areas, protect Cienega Creek watershed
- Modern Technology
  - GPS high precision equipment and filtered tailings

Community Endowment

- Current community involvement program for local charities and activities.
- During operations, $25 million endowment plus annual donation of $500,000 run by a Board of Directors from community

- The Arizona Trail
- University of Arizona Athletics
- The University of Arizona College of Engineering
- Rocky Mountain Elk Foundation
- Tucson SME Chapter
- Chicanos Por La Causa
- Tucson Rough Riders
- SME Diggers & Duffers Golf Tournament
- Tucson Gem & Mineral Show
- Community Water Company
- Sahuarita Rage ASA
- Teachers Wish List
- Community Food Bank
- El Tour de Tucson
- Arizona Cattle Growers
- Tucson Hispanic Chamber
- Green Valley/Sahuarita Chamber of Commerce
- Arizona Mining Association
- Greater Green Valley Community Foundation
- Tucson Regional Economic Opportunities
- Green Valley Rotary
- Volunteer Center of So. Arizona
- Arizona-Mexico Commission
- AMIGOS
- Metropolitan Pima Alliance
- Arizona Geological Society
- Arizona Hydrogeological Society
- South Arizona Environmental Managers Society (SAEMS)
- Greater Tucson Leadership Council (GTL)
- Casa de Los Ninos
- Arizona Theater Company
- Tucson Rodeo
- Key to Employment 21st Century
- Boys and Girls Club
- Pima Community College
- Pima Community College Foundation
- Tucson Alliance for Autism
- Steele Children's Research Foundation
- Foster Care Review Board
- American Heart Association
- National Rifle Association
- Pima Community College
- El Rio Foundation
- Mining Foundation of the Southwest
- Amphi Foundation
- Reading Seed
- Girl Scouts
- Green Chamber of Commerce
- Perimeter Bicycling Association
- Gala Noche de Exitos
- 4-H Club
- Sahuarita Elks Lodge
- Angel Charities
- Southern Arizona Rescue Association
- Arizona Foundation for Resource Education
- Biosphere 2 Earth Day
- Salvation Army
- Knights of Columbus
- Women in Science and Engineering (WISE)
- Sonoran Astronomical Society
- Ann Strandling Foundation
- Glassman Foundation
- Santa Cruz County Fair and Rodeo Association
- Arizona Opera Company

Working Toward Higher Education

- University of Arizona
  - Dept of Natural Resources – 5 yr $537,000 reclamation study
  - Arizona Science Foundation grants to benefit scholarships at the School of Mining
  - Women in Science & Engineering
  - Scholarship programs
  - SBS College Magellan sponsor of anthropology and archaeology students
  - Arizona Assurance Program - $100,000 over 4 years

- Pima College
  - Launched programs focused on science and engineering with an emphasis on mining
  - 10 scholarships totaling $20,000 in first year
  - Local students who will be first in family to attend college
  - Pima College to administer scholarship program
**Sonoran Desert Protection**

**Mine Plan of Operations**

Rosemont submitted plan to U.S. Forest Service July 11, 2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Exploration</th>
<th>Feasibility</th>
<th>Design</th>
<th>Permits</th>
<th>Construction</th>
<th>Operation</th>
<th>Reclamation/Closure</th>
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**Environmental Impact Statement**
Impact of Public Comment

Permitting Timeframes

Things to Remember

- Rosemont MUST get all environmental permits before operations start
- All commitments made by Rosemont are binding and are incorporated into the permits
- Permits go with the project
- Significant penalties for non-compliance
From the Opposition:
Who is Rosemont Copper?

- Rosemont is a Flim-Flam Company
- Canadians are here to take our copper
- Scam artists here to make a buck
- Company with no mining experience
- Promoters

Rosemont Team

Opposition Statements:
On Land Use

- The mine will be visible from Green Valley
- Rosemont will take down the ridge
- You will drive down State Route 83 and look into the pit just like in Bisbee
- The mine will be a wasteland with no regard for reclamation
- You can’t grow anything on waste rock or tailings
- Rosemont is going to bury a “ball court” archaeological site
Rosemont Copper Project

- 30 miles southeast of Tucson
- Approximately 4,400 acres
  - 3,300 acres Federal
  - 900 acres Private
  - 200 acres State
- 30,000-acre working cattle ranch

Cross Section
Geology and DDH's *Looking North*

- Older DDH (Mostly Aragonite)
- Augusta DDH (Phase I/Phase II)

Project Layout

- Open Pit
- Plant site
- Perimeter buffer

Looking East/West

Backbone Fault

QLP Project Layout
Viewshed Protection
Reclamation with Mature Vegetation

Mile Marker 44 Pull Out – at closure

Mile Marker 46.5 Near Roadside Table – at closure

Viewshed Protection
Smaller Footprint – Concurrent Reclamation

Reclamation Plan

- Rosemont Reclamation philosophy – “Start with the end in mind”
- Reclamation starts in the first year of operation
- Material will be placed at 3:1 slopes (18°) or less
- Patterns to mimic natural terrain and minimize erosion
- University of Arizona - $500,000+ grant program
- On site test plots to determine best soils and native vegetation
Year 5 of Production

U of A Reclamation Test Plots

April Vegetation
Archaeological Sites
- Forest Service consulting with Native American Tribes
- Determination on mitigation for archaeological sites will be determined in consultation
- Rosemont plans consistently avoid ball court site and arranged to avoid other identified important locations

Again from the Opposition
On Water
- Rosemont has no rights to the water in the Santa Cruz Basin and will suck the aquifer dry
- Rosemont will dry up the entire area east of the Santa Rita Ridge as a result of the pit
- The pit will be one big toxic lake

Water Supply
Pipeline and Recharge
- Rosemont will pump water approximately 22 miles to the operations site
- Rosemont has permits to annually withdraw 6,000 ac-ft of water for 20 years
- Rosemont will recharge the water used and already has recharged 45,000 ac-ft of water to the Tucson Active Management Aquifer
- Agreement in place with local well-owners for pump and well insurance and well replacement
Water Comparison Chart

<table>
<thead>
<tr>
<th>Source</th>
<th>ac-ft/yr</th>
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<tbody>
<tr>
<td>Agriculture</td>
<td>32,256</td>
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<tr>
<td>FMI - Skerrita</td>
<td>20,171</td>
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<tr>
<td>Municipal*</td>
<td>19,807</td>
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<tr>
<td>Asarco</td>
<td>7,237</td>
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<tr>
<td>Rosemont (permits)</td>
<td>6,000</td>
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</tbody>
</table>

Average annual pumping 2001–2006
Municipal includes Twin Buttes

Groundwater Modeling

- Period show is 100 years after mining
- Natural water fluctuation in area is between 5 and 25 feet (well dependent)
- Pit lake geochemistry is groundwater quality dependent

Dry Stack TSF Seepage Analysis

- For comparison, the following tailings disposal methods and associated expected seepage rates are:
  - Slurry Tailings (no liner) 6.4 gpm/acre
  - Slurry Tailings (with liner) 0.06 gpm/acre
  - Paste and Thickened tailings 0.4 gpm/acre
  - Dry Stack TSF 0.007 gpm/acre
Opposition Statements:
On Mining and Geology

- There isn't an orebody here, this is just an investment scam
- The economics of this project are over-stated
- If this mine reduces the area tourism by 1%, that will outweigh the economic benefits
- How can they possibly develop a mine in this economy?
- When copper prices fall, this mine will fold up
- There will be no local benefit and will hurt tourism and housing prices

Rosemont Mineral Reserves:
Proven, Probable and Peer-Reviewed

<table>
<thead>
<tr>
<th>Classification</th>
<th>Sulfide Reserves</th>
<th>Oxide Reserves</th>
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<tbody>
<tr>
<td></td>
<td>Short Tons (thousands)</td>
<td>% Cu</td>
</tr>
<tr>
<td>Proven</td>
<td>141,999</td>
<td>0.48</td>
</tr>
<tr>
<td>Probable</td>
<td>404,339</td>
<td>0.45</td>
</tr>
<tr>
<td>Total</td>
<td>546,338</td>
<td>0.45</td>
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</table>

Proven reserves: ore in place for which the tonnage, grade and shape have been computed from dimensions revealed in outcrops, trenches, underground workings or drill holes. The grade is then calculated from results of adequate sampling to a high degree of confidence.

Probable reserves: ore in place for which tonnage and grade are calculated partly from specific measurements, samples or production data and partly from projection for a reasonable distance on geological evidence and for which the sites available for inspection, measurement and sampling are too widely or otherwise inappropriately spaced to outline the orebody completely or establish its grade/tonnage.

Reserves are updated from the Feasibility Study issued January 2009.

Industry Technology Trends and Copper Grade, Price, and Production

[Graph showing trends in copper grade, price, and production]
Why Rosemont?

- Large
  - 7.7 billion lbs copper; 190 million lbs molybdenum; 80 million oz silver
  - Third largest copper producer in the US, 10% of Nation’s production

- Robust economics
  - $1.85 cu, 18% IRR, 5 Yr Payback
  - $2.47 cu, 28% IRR, 3 Yr Payback

- High quality
  - 32% clean copper concentrates

- Low cost
  - $0.62 per pound

- Low risk
  - Excellent infrastructure near Tucson
  - Not dependent upon disposable income

Project Financing – Sources & Uses

<table>
<thead>
<tr>
<th>Sources of funds</th>
<th>US $ millions</th>
<th>% of total</th>
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<tbody>
<tr>
<td>Equity (including LGI/KORES)*</td>
<td>$256</td>
<td>26%</td>
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<tr>
<td>Silver Wheaton (equity)</td>
<td>$230</td>
<td>23%</td>
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<tr>
<td>Equipment financing (capital leases)</td>
<td>$300</td>
<td>10%</td>
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<tr>
<td>Export credit agency financing and off-take agreements</td>
<td>$404</td>
<td>41%</td>
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<tr>
<td>Senior secured debt</td>
<td>$0</td>
<td>0%</td>
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<tr>
<td>Total</td>
<td>$890</td>
<td>100%</td>
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<table>
<thead>
<tr>
<th>Uses of funds</th>
<th>US $ millions</th>
<th>% of total</th>
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<tr>
<td>Oxide plant</td>
<td>$68</td>
<td>7%</td>
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<tr>
<td>Sulfide plant</td>
<td>$391</td>
<td>40%</td>
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<tr>
<td>Mine equipment</td>
<td>$222</td>
<td>22%</td>
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<tr>
<td>Spares parts and working capital</td>
<td>$17</td>
<td>2%</td>
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<tr>
<td>Sub total (including 7%MM revenue, contingency)</td>
<td>$897</td>
<td>91%</td>
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<tr>
<td>Pre-production capital</td>
<td>$14</td>
<td>1%</td>
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<tr>
<td>Pre-production expenses</td>
<td>$34</td>
<td>3%</td>
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<tr>
<td>Reclamation bond fee</td>
<td>$19</td>
<td>2%</td>
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<tr>
<td>Interest during construction</td>
<td>$21</td>
<td>3%</td>
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<tr>
<td>Total</td>
<td>$990</td>
<td>100%</td>
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</tbody>
</table>

* ~US$80m in equity already invested

Major Economic Engine

- Jobs during production – 20 years
  - 2,100 annual direct and indirect jobs local
  - 2,900 annual direct and indirect jobs state
  - 4,200 annual direct and indirect jobs nation

- Annual Taxes for Arizona
  - $ 19 million to local governments
  - $ 32 million to state governments
  - $128 million to federal governments

- Annual Economic Impact
  - $701 million for 20 years to local counties.
  - $900 million for 20 years to the state.
  - $1.3 billion to the nation for 20 years

## Made in Arizona

Rosemont already contracts with many local firms employing hundreds of people.

<table>
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<tr>
<th>Engineering</th>
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<th>Public Relations</th>
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<tr>
<td>• Advanced Resources</td>
<td>• Allegro Printing</td>
<td>• Apparel Plus</td>
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<tr>
<td>• Kelly Tech</td>
<td>• Arnold Hatfield</td>
<td>• Partex Plus</td>
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<td>• M.E. Engineering</td>
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<td>• Peripheral Systems Laboratory</td>
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<td>• Cahill Road Sales</td>
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<td>• Bartlett Engineering</td>
<td>• Cape Air and Space Museum</td>
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<td>• Applied Environmental Consulting</td>
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<td>• Enterprise and Bus Services</td>
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<td>• E.C. Megagnoni and Associates</td>
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<td>• Envirotech Consultants, Inc.</td>
<td>• Bartlett Environmental Survey</td>
<td>• Sepia Barn</td>
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<td>• G.S. Bolte</td>
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<td>• Sonoran High School</td>
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<td>• Southern Steel Imports Tour</td>
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<td>• Bartlett Engineering</td>
<td>• Terrific / ALT / AYN</td>
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<td>• All States</td>
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<td>• Water Reuse</td>
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<td>• Environmental Planning Group</td>
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<td>• Southwest Exploration Services</td>
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<td>• Schonengerger Water Services</td>
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<td>• Turner Laboratories</td>
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<td>• One/Two Southwest</td>
<td>• Environmental Planning Group</td>
<td>• Xenoco Laboratories</td>
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<td>• Cloud Environmental Lab</td>
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### Community Support

Associations representing over 2000 businesses and their employees:

- Arizona Builders’ Alliance
- Southern Arizona Contractors’ Association
- Southern Arizona Economic Development Group
- Tucson Underground Contractors Association
- Alliance of Construction Trades
- Arizona Contractors Association
- AMIGOS

- Benson City Council
- Benson/San Pedro Chamber of Commerce
- Northern Pima County Chamber of Commerce
- Tucson Metropolitan Chamber of Commerce
- Marana Chamber of Commerce
- United Steelworkers of America
- Over 12,000 individual supporters

### Questions?

For more information visit www.rosemontcopper.com