

Superior West Project

Bronco Creek Exploration/Kennecott
Exploration Joint Venture

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Superior Community Working Group
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Agenda

- History of Bronco Creek Exploration (BCE)
- Provide context regarding the mineral **exploration** process
- Overview of planned exploration at the Superior West project
- Examples of BCE drill site reclamation
- Discussion and questions



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Who We Are?

- Bronco Creek Exploration Inc. (BCE) is an Arizona corporation, founded in Tucson in 2002
- Business model is to locate prospective mineral ground and apply geologic expertise to advance properties through early stage mineral exploration
- BCE prides itself on responsible exploration and stewardship
- BCE partners exploration projects with major mining companies such as Newmont, Freeport-McMoRan, and Rio Tinto

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Early work at Superior West

- Several historic exploration drill holes: late 1960's-1970's
- KEX drilled 6 relatively deep core holes: mid-1990's, about the same time that Magma Copper made the discovery of Resolution
- BCE reconnaissance work in district: early 2000's
- First claim staking by BCE at Superior West: 2006

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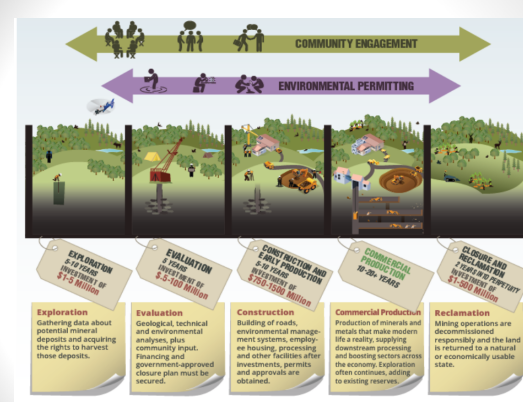
The 5 C's of Arizona

- Why we have chosen to work here?
- The "Laramide" copper belt is one of top 5 porphyry belts in the world.
- We are all consumers of natural resources...
- You don't get to pick where Copper deposits occur within the earth. Once located, it is **our collective obligation** to determine if they can be developed responsibly
- Locally produced resources are invaluable to our economy; hence the reason that metals such as Copper are deemed "Strategic minerals" for the USA



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COMMUNITY ENGAGEMENT

ENVIRONMENTAL PERMITTING

EXPLORATION
Gathering data about potential mineral deposits and acquiring the rights to harvest these deposits.
Timeline: 1-2 years, investment of \$1-5 million

EVALUATION
Geological, technical and environmental analysis, plus community input. Financing and government-approved closure plan must be secured.
Timeline: 1-2 years, investment of \$1-5 million

CONSTRUCTION AND EARLY PRODUCTION
Building of roads, environmental management systems, employee housing, processing and leaching facilities after investments, permits and approvals are obtained.
Timeline: 1-2 years, investment of \$15-50 million

COMMERCIAL PRODUCTION
Production of minerals and metals that make modern life a reality: supplying downstream processing and leaching sectors across the economy. Exploration often continues, adding to existing reserves.
Timeline: 10-40+ years

CLOSURE AND RECLAMATION
Mining operations are decommissioned responsibly and the land is returned to a natural or economically usable state.
Timeline: 1-2 years, investment of \$1-5 million

<http://www.emx-corp.com/content/mining/Miner101.asp>

30+ YEARS

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Target testing

Primary question: What is the nature and abundance of minerals in the target area?



- Preliminary subsurface evaluation of geological prospects through drilling
- All ground disturbance adheres to all applicable laws and regulations, and to an environmental management plan to ensure best practice
- About 1 in 1,000 of these projects is ultimately successful
- About 1 in 30 may advance to see further work
- Our work is closely regulated by multiple governmental agencies such as: USFS, AZ Dept. of Water Resources, AZ Game and Fish
- Due to the limited odds of success in mineral exploration we strive to limit our footprint of disturbance
 - BCE goes above and beyond what is required by law for site rehabilitation

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What's involved in target testing

Involves

- Limited drilling

Time required

- Seasonal work; a few months.

Environmental impacts

- Minor water usage
- Road access
- Possible dust and noise – though we are happy to work to keep these limited
- Clearing of drill sites (rehabilitated afterwards)

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Exploration: our view

- This stage of exploration has minimal environmental impact, is closely regulated, and has a positive economic impact.
- Our goal is to work respectfully and transparently with residents of the area.
- Exploration activity has been going on in this area for 150 years.
- However, there are enormous leaps to get from early exploration to discovery to mining.
- After discovery, it takes years of study to determine what a mine might look like, if it can even be economically developed
 - At this stage we have not completed early stage exploration, much less made a discovery.
- **We strongly believe that in this early stage, we can work respectfully, protect the environment, and provide economic benefit.**

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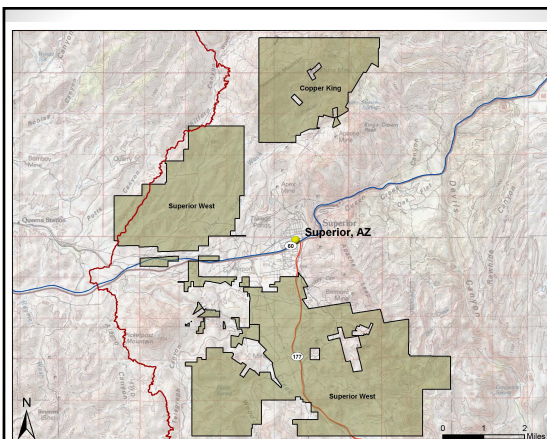
Superior West Timeline

- KEX drilled 6 relatively deep core holes: mid-1990's, about the same time that Magma Copper made the discovery of Resolution
- First claim staking by BCE at Superior West: 2006
- Partnered with FMI: 2009
- FMI drill program: 2012
- Partnered with KEX: 2015
- KEX/BCE PoO initially filed with Tonto National Forest: 2015...
- Learned of RUG trail system plans: 2019



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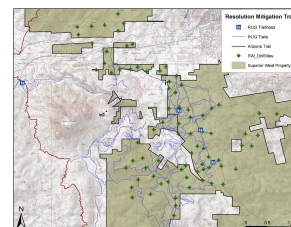


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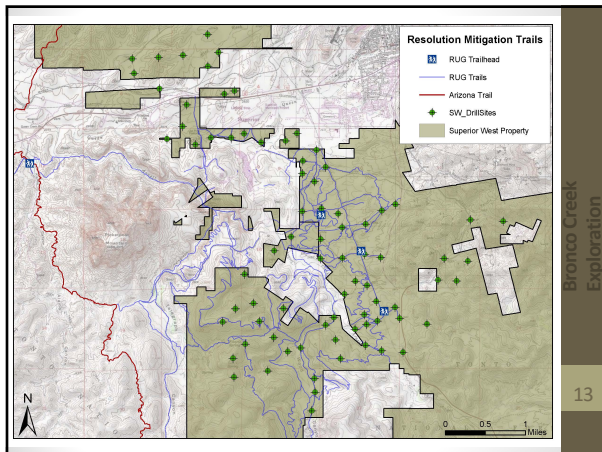
Proposed Exploration Program

- Exploratory drill holes are currently being planned
- **2 to 4 holes** initially anticipated
- Average anticipated hole depth is 3,500' to 5,000' but could reach a maximum of 6,500'
 - Deeper core drill holes take ~1-2 months to drill
- Data acquired from drilling will inform if further drilling or other work is required



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Drill Site Reclamation Photos

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MW 6

Before / After

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MW 3

Before / After

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MM 1

Before / After

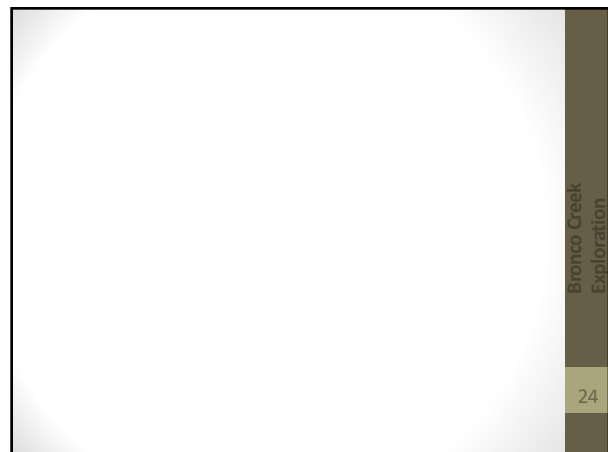
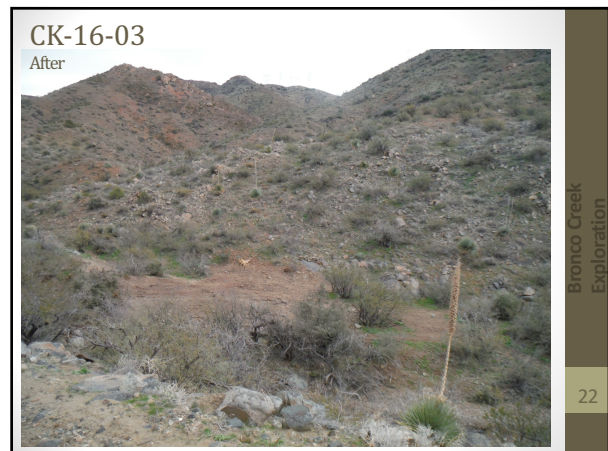
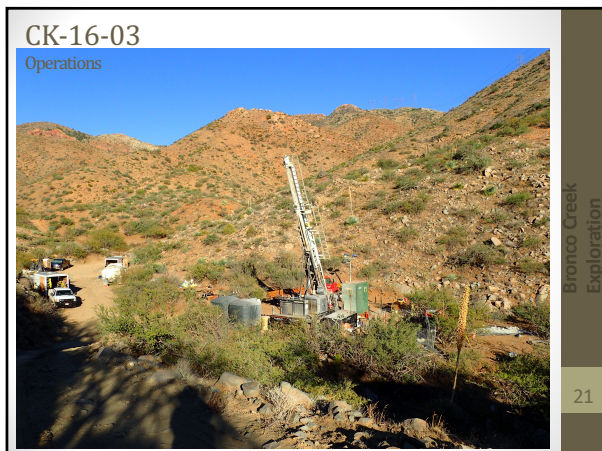
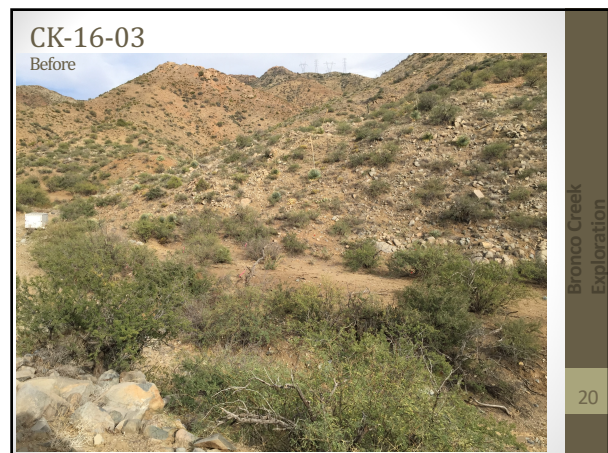
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MM 1

1/7/2011 5/17/2011

4/26/2011 5/17/2011

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Rotary Drilling

Rotary drilling relies on the continuous rotation of a drill bit to bore down through rock. As cuttings are created, they are circulated out of the borehole with either air or drilling fluids. Cuttings are disposed of in a sump (shallow pit). Rig is operated only during the day.



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Diamond Core Drilling

- Uses a diamond impregnated bit that rotates at a high rpm to cut out a continuous core sample.
- Drilling rates vary but generally will average from 95 to 150 ft per day (24 hours)
- Water is mixed with drilling additives and circulated in the hole to cool the bit and return cuttings to the surface
- Cuttings are filtered from the fluid with a centrifuge and the fluids are re-circulated in the hole
- Cuttings are sealed and buried on site in a sump



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Typical Drill Site Layout



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Drilling & Hole Abandonment

- Water used for drilling is purchased from *an agricultural source nearby???*
- Water consumption during drilling will average from <0.5 to 5 gal/min on this project.
- Additives used for drilling are polymer based and are the same type of additives used to drill water wells
- Upon completion the rods are pulled out of the hole and bit removed
- Rods are re-inserted into the bottom portion of the hole and abandonment mud is pumped into the hole as required by the ADWR & USFS
- Rods are gradually pulled back out of the hole and abandonment mud is pumped in the hole during this process until the entire hole is filled
- The mud then gels up thereby preventing aquifers from mixing in the hole

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Exploration permitting

- From the Arizona State Land Department (ASLD): "An exploration permit is NOT a right to mine. If discovery of a valuable mineral deposit is made, the permittee must apply for a mineral lease before actual mining activities can begin."
- "An Exploration Plan of Operation must be submitted annually and approved by the ASLD prior to startup of exploration activities. No exploration work can proceed without the express and written approval of the Exploration Plan of Operation by the ASLD. This approval includes the clearance of required archaeological and native plant surveys by the ASLD staff. This also includes consideration of possible environmental impacts. Any work conducted on the Permit without this approval will not be accepted as a qualified expenditure and will result in the cancellation of the Permit."
- If water is needed for exploration activities, the Permittee must supply the water. If the Permittee would like to use an existing onsite well, they are required to get the ASLD's approval prior to the use.

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