

Meeting #6

August 29, 2013 Meeting

MEETING SUMMARY

Meeting Attendees

Community Working Group members present:

Mark Siegwarth – Boyce Thompson Arboretum

George Martin – JF Ranch

Lynn Martin – JF Ranch

Nancy Vogler – LOST Trail & Superior Copper Alliance

Bill Vogler – LOST Trail & Superior Copper Alliance

Roy Chavez – Concerned Citizens and Retired Miners Association

Pam Rabago – Superior Chamber of Commerce

Cecil Fendley – Queen Valley Water Board

Matt Nelson – Arizona Trail Association

Community Working Group members not present:

Pam Bennett – Queen Valley HOA

Frank Stapleton – Cobre Valley Regional Medical Center

Leslie Bryant – Queen Valley business

Lynn Heglie – Superior business

Resolution Copper:

Vicky Peacey - senior manager of approvals, communities & environment

Bruce Richardson - manager of community & external relations

Ian Edgar – general manager, studies

Frank Deal – tailings manager

Melissa Rabago - community outreach coordinator

Guests:

Bruce Wittig, Queen Valley Water Board

Martin Navarrette, Superior Little League

Bob Cervantes, School Board member

Henry Munoz, miner and former Council member

Facilitators - Godec, Randall & Associates (GRA):

John Godec

Debra Duerr

Update on New Member Search & Open Discussion

John Godec said that there's increasing interest in the community about this group. Keeping in mind that a good, effective working group size is between 15 and 25, he asked how the group would like to proceed in identifying and inviting additional members. People said that new members are welcome, but criteria should include people who represent a group or entity. We should not have very disruptive people. It was noted that the town is a pretty important stakeholder.

Godec reported that he had talked with the high school to see if they are willing to ask a teacher and a student to join the group, and they are very interested in doing this. Everyone agreed this is a good idea, since young people will be affected most by this project.

Councilman Mike Alonzo is interested in this process, and would like to see if there's a way to link the group's work to the Town Council. He is willing to think about finding someone who can represent the town in the process.

Martin Navarrette, who represents the Superior Little League, is interested in joining the group. He is here tonight as a guest. Martin introduced himself, and said that he is an environmental engineer who works for Freeport. The group invited him to join as a member.

Presentation on Different Mining Methods

Presenter: Ian Edgar

Block Cave mining is a method that has been used for a long time, invented in Michigan in 1895 for iron mines. Edgar mentioned that there are cave mines on every continent, where it is appropriate for the ore body. He explained the cave concept of block undercutting the rock so it caves in on itself and is collected in funnels and loaded into conveyor vehicles. For this mine, the access shafts will be about 7,000 feet deep.

Underhand cut and fill is another method of mining that doesn't cause surface subsidence. Mining is done in strips or sections, which are filled with other material when the ore has been extracted. This method is used where the ore bodies are smaller. The cost is 5 to 10 times more than caving, and is about 5 to 10 times less efficient.

He explained the difference between narrow vein (like Magma) and porphyry (like Resolution) ore bodies, and how that affects the selection of a mining method. He talked about some of the constraints on mine design, including geometry and depth. This will be one of the deepest cave mines in the world at about 7,000 feet. There will be about 70 miles of total preproduction infrastructure required for the underground activities.

To address concerns about subsidence of Apache Leap, Resolution collects extensive geologic data to predict subsidence through models. The subsidence will be measured constantly as it is occurring, and these data help to develop better models. Mining will start at the farthest point from Apache Leap and take several decades to move toward it. If there is a problem, the ultimate cave area can and will be adjusted.

Questions and comments from the group are listed below followed with answers from Resolution representatives unless otherwise noted:

- Does Rio Tinto do anything other than cave mining?
 - They have open pits and underground coal, but no cut and fill.
- How much subsidence will there be?
 - An area about 500 to 1,000 feet deep and about a mile in diameter (cone of depression)
- How long will it be before subsidence begins?
 - About 3-5 years before you start to see an impact. It also spreads out in surface over time.
- You don't take surface soil and vegetation when you mine, so would the soil and wildlife be affected?
 - Yes, because drainage patterns and characteristics will be disrupted.
- How far from Apache Leap will the subsidence be?
 - 1,500 feet at the closest

- Will this avoid the “concentrated” fault?
 - Yes, but there are other faults up there.
- What is the post-closure plan for the subsidence?
 - Resolution will fence the area off.
- How long will it continue to subside or compact after mining is done?
 - This is a good question, and we don’t know the answer yet.
- How does this affect water resources?
 - Rain water will fall into the cave area, not onto the watershed, and so will be diverted from its pre-mining condition. Resolution is running models now to use in the Environmental Impact Statement to evaluate drawdown and effects on surface resources.
- How much material will be mined?
 - 120,000 tons per day
- How many more shafts will be needed?
 - 4 more shafts will be drilled, for a total of 6. They will all be at a depth of 7,000 feet
- Do you need these many shafts because of the amount of material?
 - Yes, and also for air circulation, with 3 shafts bringing cool air in and 3 bringing hot air out.
- A group member mentioned an open pit in Salt Lake City that had a slide, to illustrate that sometimes these things are unpredictable; he feels that controllability and predictability are critical.
- The Phoenix Active Management Area (for groundwater) hooks around Oak Flat.
 - The whole project is within this AMA. Resolution will need to work within Arizona Department of Water Resources guidelines and obtain any necessary permits.
 - Mr. Fendley suggested contacting an engineer he knows at ADWR. We will ask him for information on that person.
- What is it about cut and fill mining that makes it so much more expensive?

- Mining narrow areas, with associated infrastructure, equipment, ventilation, and time, makes it uneconomic to extract lower-percentage copper ore at 7,000 feet by cut and fill methods. (This ore is about 3% copper.)
- Is cut and fill more labor intensive than caving?
 - Yes. But even though there are fewer labor jobs with caving, it's worthwhile noting that if Resolution couldn't afford to mine the ore, there would be no jobs.
- Cut and fill would use less water, cause less environmental damage, and create more jobs. So, could you afford to do this project using cut and fill?
 - No
- A CWG member said he believes that this mining method is predetermined because Rio Tinto is a block cave mining company, and so that's what they do.
- A member questioned why this group is even meeting, then, if there is no alternative, and it's a 'done deal' with political and corporate backing.
- Someone commented that the Conservation and Jobs Act is a misnomer.
- A member is skeptical about Resolution's economic objectives, arguments, and analyses.
- Will the mine plan of operations have alternative mining methods in it?
 - No, it will include block cave operations. But the Forest Service can require an assessment of other methods.
- When will the mine plan of operations be done – this year? Will it reveal the tailings location?
 - Yes, Resolution will be submitting the plan this year, and this group is looking at tailings sites for possible inclusion in it.
- A guest mentioned that he has heard that Resolution doesn't want to do a NEPA analysis before the land exchange, and after they get the land exchange they won't need to do environmental compliance.

- No, this isn't true. An environmental assessment will be completed on the entire project including on the exchange land, if that is approved.
- Another person said he doesn't think there's a federal nexus to trigger NEPA.
 - Yes, there will be, either through federal land effects (Tonto National Forest) or federal permitting (Corps of Engineers).
- A member expressed his belief that the land exchange should not be allowed until an environmental assessment is completed.
 - Vicky Peacey noted that Resolution owns 70% of mining claims under the area they're asking to exchange, so are mainly seeking to get control of surface access. The question of how the exchange will take place is up to Congress, but Resolution will do environmental work beforehand if required. They will need to do it in any event.

Review and Discussion of Community Comments and Ideas on Tailings Siting Criteria (from 8/14 Community Forum & Chamber of Commerce)

A summary of comments from these sources was included in the meeting package, but was not specifically discussed at this meeting. It is expected that this discussion will take place at a later meeting.

Next Steps on Tailings Site & Mine Plan of Operations

Peacey asked the group if there's a 'least objectionable' tailings site that they would suggest to include in the mine plan of operations to start the NEPA process. Submission of the mine plan will trigger the Forest Service's NEPA review.

Mr. Chavez said, for the record, that he will not agree with anything that's suggested here.

Discussion of the alternative sites included a report that the Chamber of Commerce members like the Far West site best, but Happy Camp (option 3) seems feasible; however, the Far West site should be kept in as an option. There was discussion about various sites, and the group decided to 'vote' on the sites to see where the group stands.

In a brief exercise crafted by the facilitators, everyone who voted (9 people of 10 attending) chose Far West as the best option. For second choice options, 5 people selected Lower West **blue outline**, 3 selected Silver King, and 1 selected Telegraph.

Godec asked if anyone has a strong objection to the Lower West blue site as the site to be included in the mine plan of operations. A member suggested that we should look at the renderings again before deciding, which we did. One person speculated that the Forest Service will not like this site because of proximity to Queen Creek.

Matt Nelson said that, for the record, due to the proximity of Lower West blue to the Arizona Trail, the Arizona Trail Association cannot support this alternative, and prefers Silver King; however, mitigation can be discussed in the future.

Public Comments

There were no additional comments from members of the public.

Next Meeting Agenda

At the next meeting, the group would like to invite a neutral representative from the Forest Service to talk about the National Environmental Policy Act. We will also review the other community comments that we didn't get around to discussing today.

Future meeting topics that were previously suggested include:

- Water issues, including
 - the possibility of inviting independent experts
 - assurances from Resolution that waterways won't be polluted
 - agreements and mitigation measures
- What's the next step, if a tailings site is picked to go into the mine plan, and the timeline for that?

Please submit any clarifications and additions to:

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