Social acceptance through participatory co-design

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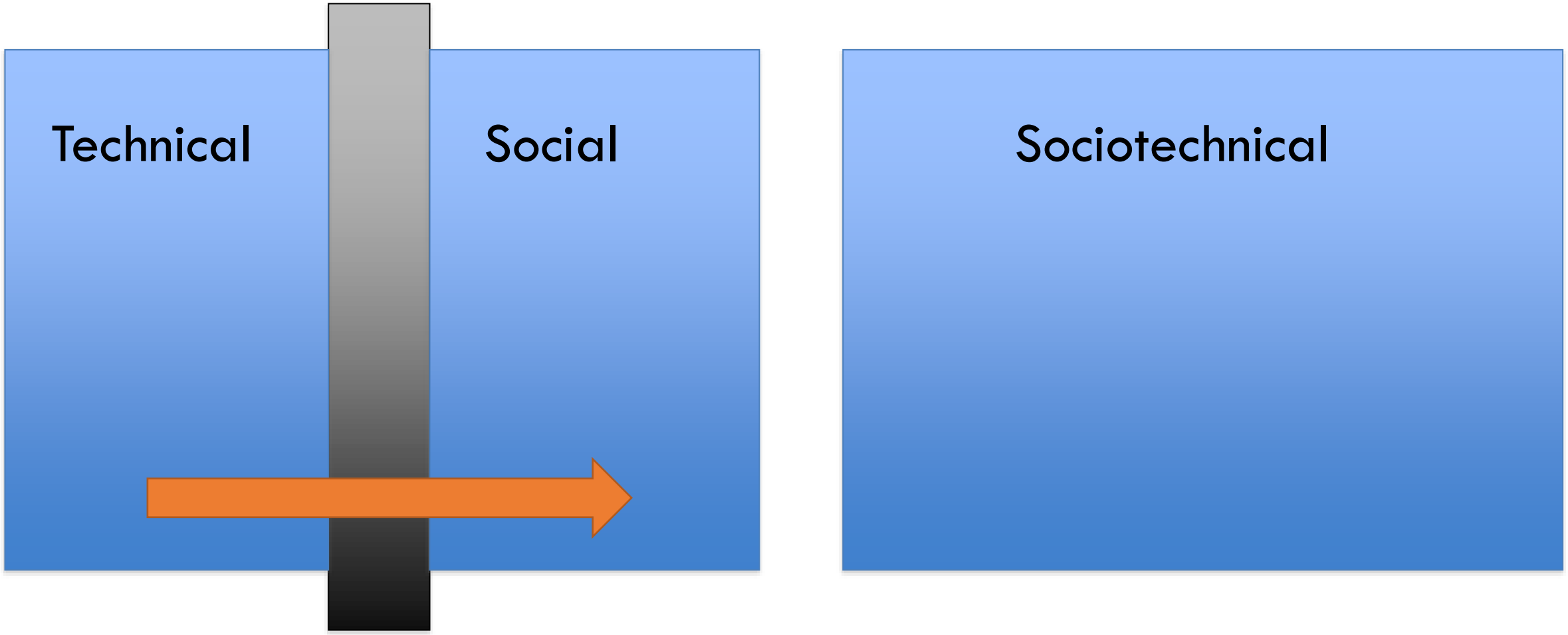
Humanitarian ENGINEERING

SOCIAL JUSTICE COMMUNITY SUSTAINABILITY

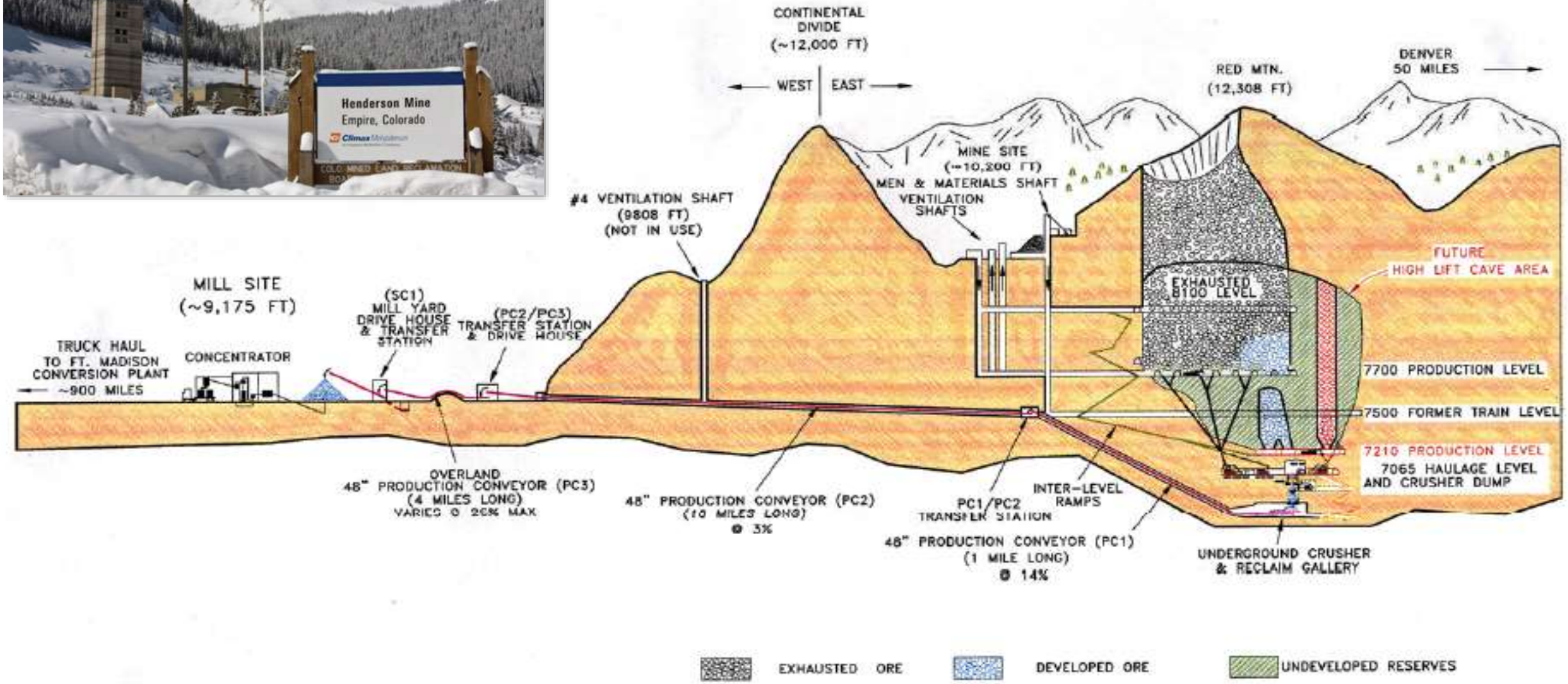
COLORADO SCHOOL OF MINES

“You can’t talk your way out of a problem that you engineered yourself into.”


Technical
Social
Sociotechnical

Molybdenum

“Experiment in Ecology”



Colorado success translated to Minnesota expansion

INTERNATIONAL FALLS DAILY JOURNAL
November 6, 1975

AMAX will work with state, environmentalists

By ARLIN ALBRECHT
Publisher

Second of two articles

BABBITT — When Gov. Wendell Anderson stands up to say good things about a mining company, it's safe to assume that the company is doing something right.

Standing near the site of a pioneer copper-nickel shaft, Anderson said AMAX Exploration, Inc., has "played very fairly with the state." He said the firm, one of the giants in the mining industry, has

tually find their way to the Boundary Waters Canoe Area, some 20 miles distant.

As part of the stipulation, the league and the Sierra Club

commended AMAX "for its good faith, complete openness and cooperation, and for the water monitoring already done and the extensive monitoring in progress and projected." The groups also expressed

DULUTH HERALD FRIDAY, JUNE 13, 1975

AMAX gets yes on test project

BY JIM BLUMAUGH
Of the Herald Staff

A proposed exploratory copper-nickel test shaft near Babbitt would cause little—if any—pollution and should be constructed with research in mind, a hearing officer for the Minnesota Pollution Control Agency (PCA), said today.

lings that AMAX's environmental safeguards were inadequate. They said sealing of the waste rock pad and settling basins would be necessary to prevent pollution of lakes and streams.

But Wozniak said AMAX's program "is the most complete and sophisticated monitoring program undertaken in the

city of the state to develop meaningful and rational criteria under which possible commercial operations would be required to operate."

Wozniak noted that the water resource systems in the area upstream of the AMAX site are already affected by ongoing mining and commercial operations. He said the PCA proposes to pro-

Throughout Phase I public officials from all governmental levels have been frequent visitors, observing exploration activities and environmental studies. Senator Rudy Boschwitz is pictured above with Jack Malcolm, Project Manager.

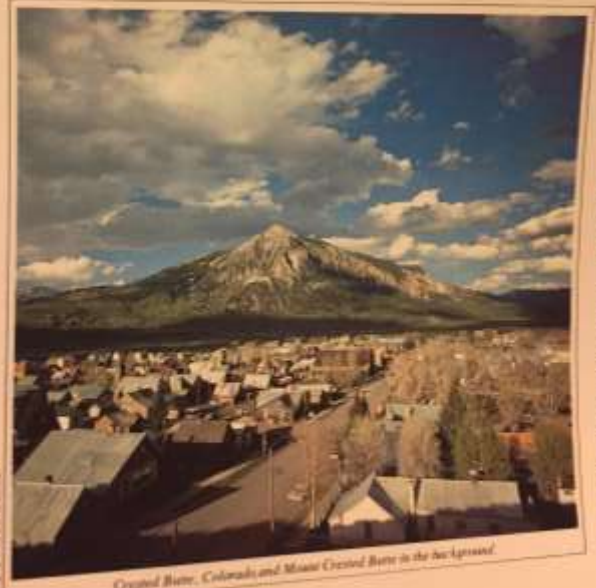
Early, proactive, open planning

- Sierra Club & Izaak Walton League originally halted digging the first shaft
- Later endorsed the testing and commended AMAX for "good faith, complete openness and cooperation and for the water quality monitoring already done."

A Mining Company (1978 Gross Sales: $1.75 Billion) Confronts a Small Town (Population: 1200)

AMAX Comes to Crested Butte

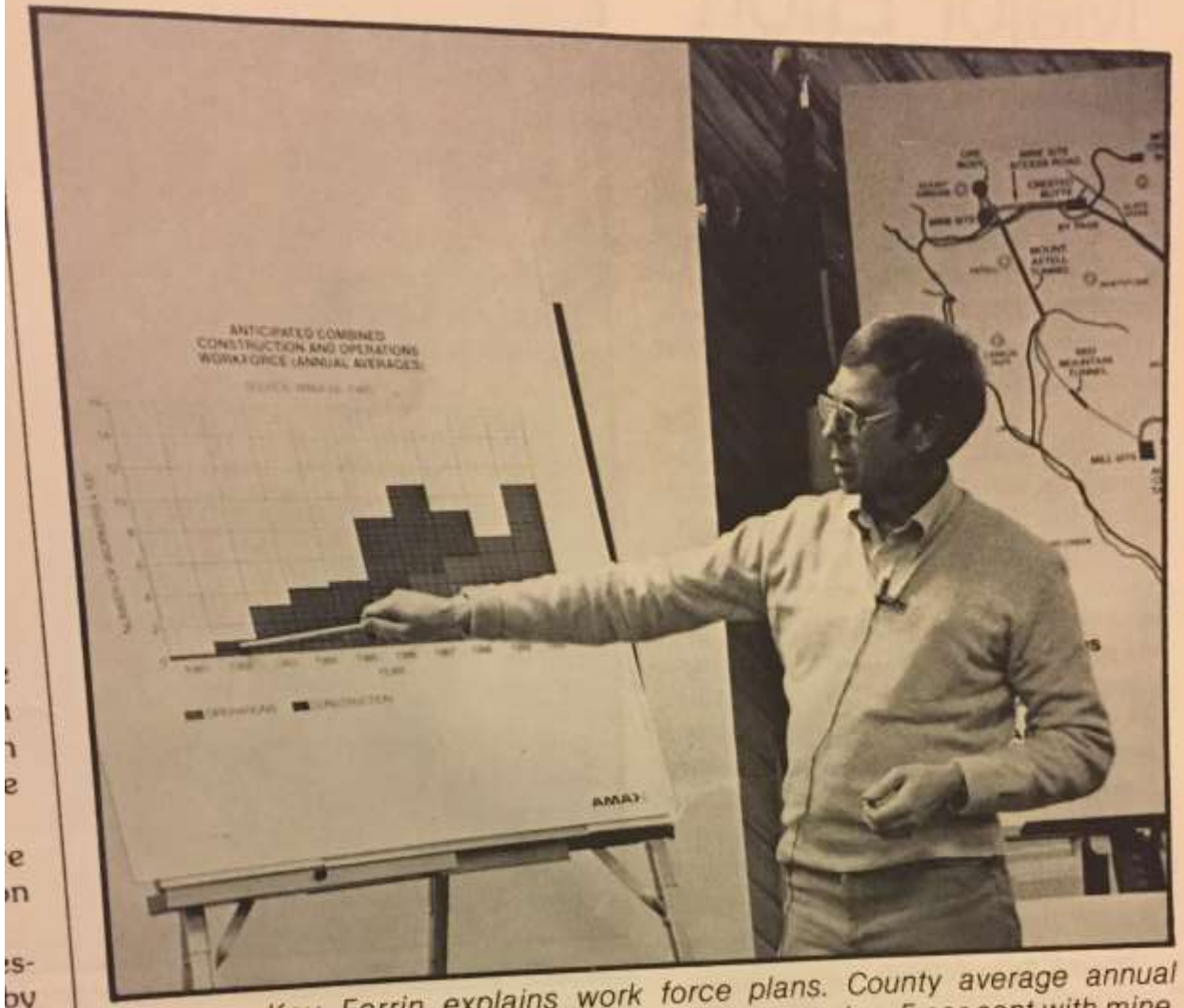
DAVID SUMNER



Crested Butte, Colorado, and Mount Crested Butte in the background.

"If we want agencies and the public to hear about and understand the benefits of our projects, we must be willing to seriously listen to them and to involve them in the planning and programs which are designed to address their objectives and concerns."

– *Art Biddle, AMAX engineer/lawyer and External Affairs Project Manager*



Engineer Kay Ferrin explains work force plans. County average annual growth rate is expected to be 2.5 per cent without mine, 5 per cent with mine.

Alkali Basin was selected over more

The Gunnison Country Times

Vol. 97, No. 35

Gunnison, Colo. 81230, May 2, 1977

One Section, 15 Cents

AMAX tells Crested Butte

'We won't mine unless you want us here'

By KIM McMILLEN

"We're not going to mine here if the community doesn't want us to," was AMAX Exploration president Tony Barker's promise to the Crested Butte community this weekend. He and other officials of AMAX Exploration and U.S. Energy Corp. met with Crested Butte officials and the press following broadcasts and newspaper reports that a major molybdenum "moly" operation was beginning west of Crested Butte.

Jack Larsen, President of U.S. Energy Corp, whose subsidiary, Crested Butte Silver Mining Inc. has leased 18 unpatented and three patented claims to AMAX for exploratory drilling for "moly" told the group that the recent article in the Crested Butte

producing 10,000 tons of ore a day and will reach a capacity of 30,000 tons per day in 1980 at which time apoximately $500 million in expenditures will have been made on the mine. $50 to $60 million of that has been on environmental protection and restoration work, he said.

Despite the fact that AMAX has spent "a couple of million dollars" on the exploration on Mt. Emmons to date, Barker assured the group "We're not going to mine here if the community doesn't want us to. We are going to keep you informed as we go along. We want you to ask questions. We plan to keep your County Commissioners and the people of Gunnison informed as well. We want to develop some

while he couldn't begin to speculate on the size of an operation here, if one should come to be, AMAX would not pursue an operation of minimal size..."it won't be small." The Henderson Mine employs 1300 miners.

Town Planner Myles Rademan told the mining executives, "I think many would like to see mining return here. It would certainly broaden the economic base. I don't think you'll see opposition to mining per se".

But concerns were expressed about the environmental impacts that go hand in hand with mining. Barker responded by saying, "The quality of life in this country is

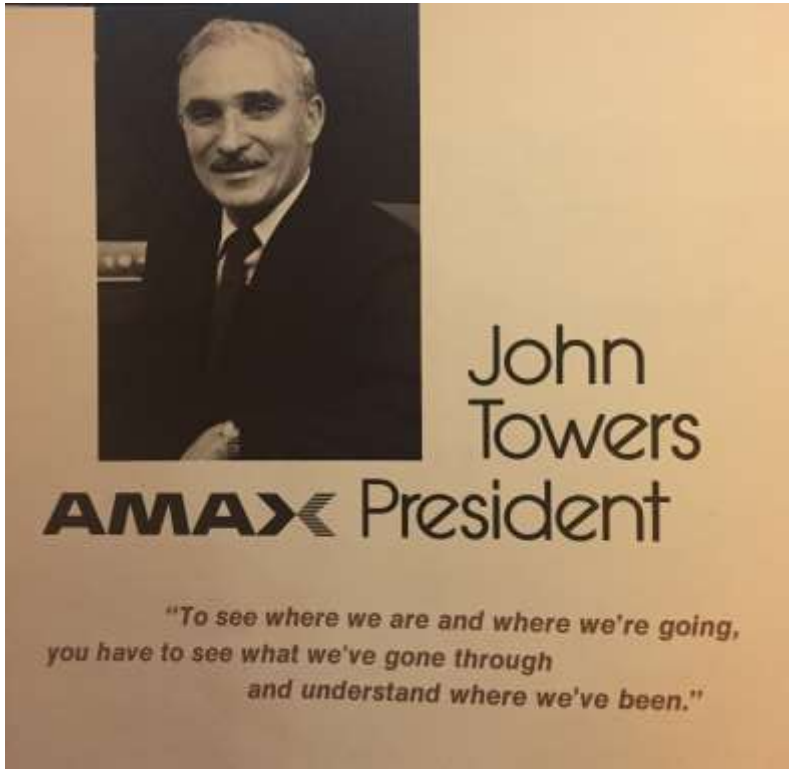
into fertile soil immediately. But we're not about to sa 'oh let's just dump tailings here and to hell with the re of the world.'"

On a lighter note Rademan suggested the tailings mi be shipped to Gunnison "to raise the elevation."

Barker admitted they were always looking for new for tailings.

Mayor Tom Glass concluded the meeting saying, certainly thank you for coming to dispell the rumor more importantly, you have continued to provide formation about what you're doing. I hope there w co-ordinated, orderly review process should you

Integrate "CSR" concepts into company DNA



Public relations, public affairs and environmental affairs are key management functions and involve every member of management on every level… A company's reputation determines its community acceptance and positively or negatively affects its ability to do business. Social responsibility – the concept that business must comply with the ground rules society sets and be a constructive force in society – is a fact of life. Our reputation rests on how we fulfill our social obligations.

Successful strategies for achieving permits

- Proactive, early and strategic engagement of stakeholders in open planning process
- *Listening* rather than sharing information
- Integration of "CSR" concepts into the DNA of the company throughout its top management and its onsite operations personnel and activities.


Wind Energy

Public perception varies, even in the US

- Rural Minnesotans who had a "productive" view of nature were supportive of large-scale wind energy as a way to forestall increased fossil fuel development in North Dakota
- Michigan residents preferred small-scale development as way to protect their ability to "get away" from cities
- Massachusetts residents valued places they considered undisturbed by humans and were opposed to "top down" development
- Wyoming residents who viewed nature as productive rather than as wilderness were supportive of wind energy

Phadke, R. (2013). Public Deliberation and the Geographies of Wind Justice. *Science as Culture*, *22*(2), 247–255. https://doi.org/10.1080/09505431.2013.786997

Landscape symposium

Goal: Create a list of agreed upon recommendations for planning officials, regarding acceptable sites, designs and mitigation techniques for wind energy development at the county or regional scale.

Photo: Dan Hayward

Fig. 3 was among the **most** *popular of eleven images shown to participants during the breakout session.*

Fig. 4 was among the **least** *popular of eleven images shown to participants during the breakout session.*

Photo: Dan Hayward

Photo: Courtesy of Quiet Revolution

d tree" installed at the COP21 climate talks in Paris. Each tree produces enough energy to light 71 g spaces (or power one average American home for four months). Courtesy New Wind

Decide
Announce
Defend

"Educate" the public

Consult
Consider
Modify
Proceed

Learn from the public

Bell, D., Gray, T. and Haggett, C. (2005) The social gap in wind farm siting decisions, Environmental Politics, 14(4), pp. 460–477.

"Building strong relationships begins with being transparent about what benefits to the community can be expected and by of course listening closely to what our communities are telling us. What are their values? What are their priorities? What's their vision for the future? What are their expectations for participation in the development?

…I think it's time that we start to think about issues like this around CSR issues as an investment just like confirmatory drilling or early test work in labs. Early spending on sustainability issues is just good long-term business… Especially as engineers, we have to talk less, listen more, listen to our communities."

--CEO of a transnational uranium mining company

Thank you

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