

JUNE 13, 2007

A WICK COMMUNICATIONS SPECIAL REPORT



CHANGING TIMES IN ARIZONA

MINNES



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ARIZONA MINING

COPPER AT THE CROSSROADS

By Tim Hull
Wick News Service

Though the rumor of gold and silver brought many intrepid pioneers to Southern Arizona, it was copper that convinced them to stay.

This region's fate has been inextricably tied to that of the ore hidden in its dirt since at least 1854, when a few émigrés from San Francisco started up the Arizona Mining and Trading Co. in Ajo just after the Gadsden Purchase gave that dirt to the United States. But it took the coming of the railroad and the defeat of the Apaches in the late 1800s to really get the digging going.

By the 1920s, the young state of Arizona was among the world's top copper producers, already responsible for 46 percent of U.S. copper production. And it would stay that way as long as world wars and world-building and rebuilding kept up demand for the useful metal. A copper culture grew alongside the owners' bank accounts, and names like Phelps, Dodge, Asarco, and Anaconda became nearly synonymous with the basin and range territory. The copper mining giants built towns from the ground up, and employed several generations of Arizonans in relatively high-paying jobs.

But there were drawbacks. Endemic racism kept salaries unequal; if you were a Mexican or a Chinese miner, you made less than an Anglo miner, no questions asked. If you were loyal to a union, you were liable to get your skull cracked. Often times, especially in the early days,



MARIO AGUILAR | GREEN VALLEY NEWS

A FORMER tailings pond grows vegetation on the Twin Buttes property in Sahuarita.

you weren't paid in greenbacks but rather company script to be spent only at the company store.

And then there are the scars. Any economy based on the fickle price of one metal is going to get caught in an endless boom and bust cycle, and copper country has been through several turns. Towns came and went with the company—good times when copper prices were high, bad times when they were low.

Copper mining in Southern Arizona has been primarily of the porphyry variety, meaning the deposits are found in "highly disseminated, non-vein deposits with less than 3 percent copper," writes historian Charles K. Hyde in his 1998 book

"Copper for America." "The successful exploitation of low-grade porphyry deposits starting in the early 20th Century revolutionized copper mining throughout the West."

While low-grade copper in many ways made Arizona what it is today, it takes a mighty big hole to make money out of a 3 percent grade. As a result, huge tracts of Southern Arizona have a decidedly post-apocalyptic aesthetic—actually, several Hollywood movies depicting life after the collapse of society have been filmed at abandoned open-pit mines around the region.

The last 20 years or so of the 20th century and the first few years of the 21st weren't boom times for the cop-

per industry, and many of Southern Arizona's mines scaled back or shut down altogether. Lower demand and increased production from mines in Third World countries, mines often controlled by a government, put a skid on the good times. Around the same time, citizens began to question the balance of mining—was large scale, open-pit copper mining a good bet for the future of a region that was relying more and more on tourism, and hence its natural environment, to bolster its economy? What would become of the scarred land after the miners packed up for good?

It took a while, but eventually politicians on both sides of the aisle would catch up with the citizenry.

Oversight increased, and mines began to be held somewhat accountable for their impact on land, water, and air. Minds have changed, as was evidenced early this year when county supervisors, both Democrats and Republicans, from Pima and Santa Cruz counties made it known that they would like to limit new mining in their counties and reform the often vilified federal mining act of 1872. Such positions would have been unheard of 50 years ago.

Now, in 2007, the industry is again on the boom, and has been for several years, owing primarily to growth in China and other emerging nations. Mines long mothballed are starting up again throughout the state, and start-up firms, many of them from Canada, are eyeing the ore-filled hills of the state once again.

"Copper prices that averaged \$3.31 a pound in 2006 resulted in a record production value of \$5 billion for copper," according to the report "Arizona Metallic Resources, Trends and Opportunities, 2007" completed by the Arizona Department of Mines and Mineral Resources. "Anticipation of continued strong demand is driving acquisition, exploration, and development activity including the entry of a number of new companies."

Indeed, by most industry accounts, the rumors of king copper's decline have been greatly exaggerated. In 2005, Arizona accounted for 62 percent of the U.S. copper production, and the industry as a whole has a \$3.5 billion direct and indirect impact on the state's economy. Just one mine, the gargantuan Morenci Mine operated by Phelps Dodge, now Freeport McMoRan Copper and Gold, produced 815 million pounds of copper in 2006.

Preliminary numbers for the full-year 2006 indicate that U.S. copper production rose by 6 percent over the previous year, according to the U.S. Geological Survey's "Mineral Industry Survey" for December 2006. A weak U.S. housing market and high prices, which "encouraged destocking along the entire supply chain," sent U.S. consumption of refined copper down by 6 percent last year, according to the USGS; however, total world usage increased by 2.6 percent.

These numbers suggest that, despite the changes in public attitudes toward mining and an overall decline of the industry's scope, Southern Arizona is likely to remain copper country for years to come. But there will always be a price to pay for mining the metals we need. According to the group Westerners for Responsible Mining, of the 10 U.S. mines with the highest potential taxpayer liability (meaning the price it will cost to clean up the mess if a mining company defaults on its promises), five are in Arizona—Morenci Mine, \$934.1 million; Ray Mine, \$457.1 million; Mission Mine, \$414.9 million; Sierri Mine, \$404 million; San Manuel Mine (the only one on the list not currently in operation) \$343.1 million.

The question for Arizonans would seem to be, which numbers are more important?

Tim Hull is a freelance writer for the Green Valley News.



PHOTO COURTESY OF THE BISBEE MINING & HISTORICAL MUSEUM

DOWNTOWN BISBEE in 1905 was a hub of Arizona mining activity.

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PIMA COUNTY

FIERCE OPPOSITION SURFACES

Controversy over proposed Rosemont Mine illustrates new attitude toward mining

By Tim Vanderpool
Wick News Service

An elbow-to-elbow hearing room was the first hint of a seismic shift.

It was Jan. 16, and the Pima County Board of Supervisors was meeting to discuss a mine. This mine is planned for beautiful Rosemont Valley, in the Santa Rita Mountains south of Tucson. Stakes were high, and tensions ran thick.

A Tucson Weekly cover had trumpeted the risk to Rosemont posed by Augusta Resource Corp. The Canadian-based company was proposing an open-pit mine, and soaring copper prices were giving the company's plan extra heft.

At that meeting, mine boosters were wildly outnumbered by mine opponents and included the supervisors themselves. Before the day was done, they'd unanimously voted to oppose Augusta's project. Although county supervisors have little ability to actually stop the mine, their symbolic vote sent a forceful message to U.S. Forest Service officials. And the Forest Service can kill Augusta's mine, by denying use of surrounding federal lands.

Augusta's thorough thumping also reveals far-reaching changes in how mines are viewed across much of Arizona. Gone, it seems, are the days when copper was king.

Supervisor Ray Carroll, a Republican, led the charge against Augusta's mine, which would be in his District 4. He calls the board's vote a bellwether for growing concerns about the environment.

"It is something I've talked to a lot of my district's residents about," he says, "as well as a lot of people



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GREEN VALLEY residents protest the Rosemont Mine at a Pima County Supervisors meeting.

across Pima County. They all feel pretty much the same. The shift is a reflection of Pima County from when it was rural 50 years ago to today, when it is urban."

That's precisely reflected in economic trends, he says. "Listen, in 1977, about 15 percent of our property-tax base was mining-related. Today, it's less than one-half of 1 percent. Although mining was an economic engine of the past, now it doesn't seem appropriate for Pima County."

Numbers tell the story. For example, in recent years, Pima County's population has grown by about 20,000 annually. But during that time, resource-dependent industries — including mining — have drastically declined. In 1981, mining

ranked as Southern Arizona's third-largest employer, with about 21,000 workers. Today, it has dropped to No. 8, employing approximately 7,000 people.

Those numbers belie a larger societal shift, says Theresa Selfa, a sociologist at Kansas State University. Selfa has conducted extensive research into changing rural economies.

"You're seeing this in communities across the West," she says. "People are realizing they have some different ideas about what they want to do with their resources. And they're not so excited about having a corporate takeover or allocation of those resources."

That's particularly true for areas such as Southern Arizona, she says,

where tourism revenues — heavily dependent upon on scenic areas — are outpacing revenues from mining and agriculture.

Does that mean the West is headed for a showdown? "I think so," she says. "I think the tide is turning, even in some pretty conservative states that have been dominated by lobbying groups from the natural-resource industry."

Selling such projects to a skeptical public is also getting tougher. Case in point: Prior to presenting its plan to Pima County supervisors, Augusta hired Tucson PR firm Strongpoint LLC to package the idea. But following the county vote, Strongpoint seems to have beaten a firm retreat; several calls to company owner Mary Rowley were not returned.

Public attitudes are also reflected in changes to the Rosemont plan itself, says Jamie Sturgess, Augusta's vice president. "I think it's a challenge to make any kind of development, whether it's a mine or a highway or a subdivision—anything that is seen by some members of the public as changing their scenery or surroundings."

As a result, he says, his industry goes to far greater lengths than in the past to gain public acceptance. To woo Pima County, for instance, Augusta is pledging roughly \$100 million for social and environmental projects in areas that would be affected by the mine. Plans have also been revamped to make mine operations much less visible from roadways.

Sturgess calls such olive branches a sign of the times. "Mining companies are having to make more concessions, more thoughtful and creative designs, and (include) more consideration of other public values," he says.

He calls it a big shift "in mining as it's historically been done, compared to what we have to do in future." Projects now must start "with conservation of everything, in terms of water and energy and manpower and (the affected) surface area—in terms of everything possible."

But even all of those concessions don't change facts on the ground, says Roger Featherstone, a Southwest representative for the conservation group Earthworks. He says opposition to mining Rosemont Valley "is very vocal, and it isn't just from the enviros."

According to Featherstone, the Rosemont fight is also fueling a national drive to revisit the Mining Act of 1872. Meant to promote settlement in the West, that law continues providing mining companies almost free reign on public lands.

While the Rosemont mine is far from vanquished, "obviously, it seems to be translating into people finally saying, 'We've got to reform the law,'" he says. "Whether we're successful there, only time will tell."

Meanwhile, opposition continues—even against the backdrop of a highly lucrative copper market. "That is significant," Featherstone says. "Informed citizens—and you've got to think people fighting Rosemont are informed—are saying that, despite higher (copper) prices, it's still a no-go."

If Supervisor Carroll is a reliable barometer, such attitudes may be here to stay. "I know the kind of destruction these open-pit mines can leave," he says, "especially in what is a very scenic route along the highway to Sonoita."

He says most of his constituents agree. "Mines don't have a good reputation in the West at all. I think the entire Western United States is holding something like a \$70 billion cleanup tab" for old mines.

"In the end," he says, "it really comes down to preserving the environment, and preserving our quality of life."

Tim Vanderpool is a regular contributor to the Tucson Weekly.

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PIMA COUNTY Supervisor Ray Carroll led the opposition to the Rosemont Mine in the Santa Rita Mountains.

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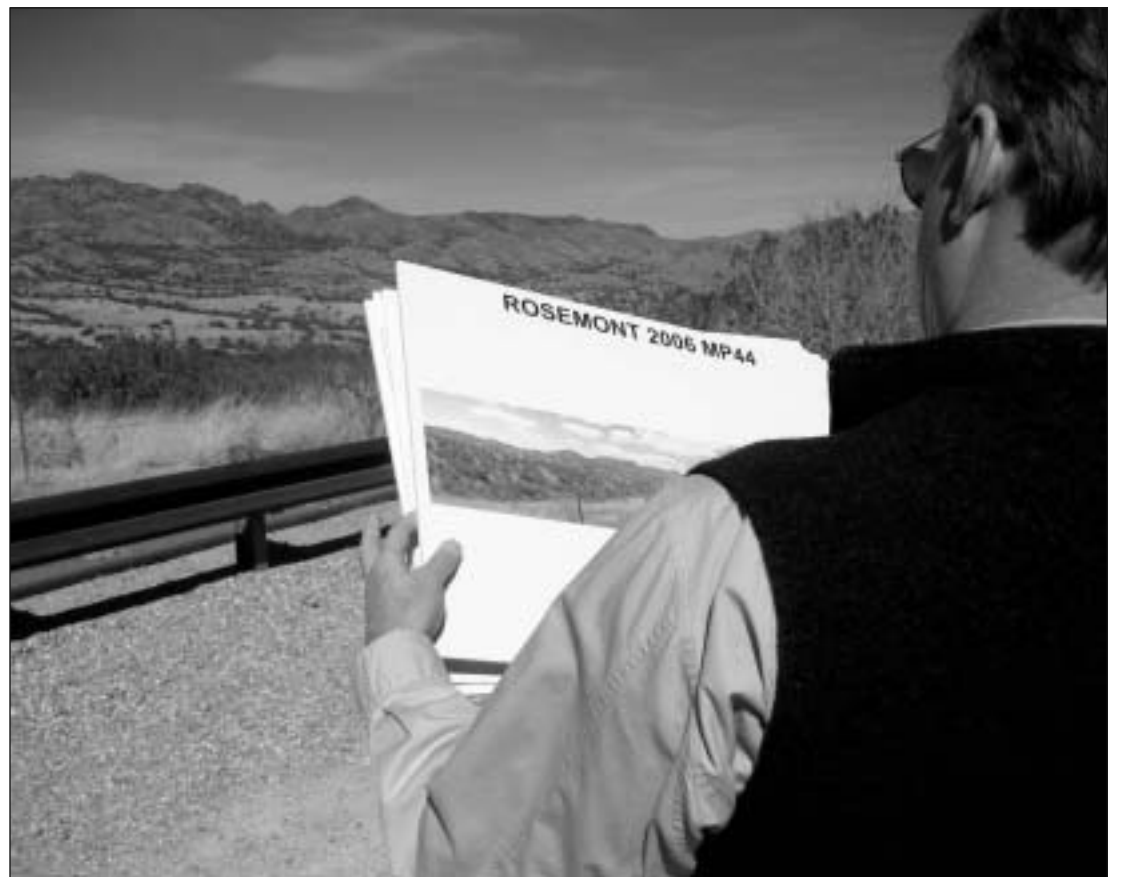
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ROSEMONT MINE

MODERN TECHNOLOGY CHANGES LANDSCAPE

Augusta says Rosemont Mine will be different

By David Hatfield
Wick News Service



TIM HATFIELD | INSIDE TUCSON BUSINESS

JAMIE STURGESS looks out over the mine site from State Route 83. The photo he holds shows what the mine will look like from the same vantage point.

A HISTORY OF COPPER MINING IN THE SANTA CRUZ VALLEY

Things have changed since the 1950s. The typical car didn't have any cup holders, much less were consumers worried over EPA mileage estimates. In the space race, the Soviet Union's Sputnik circled the moon, beating the United States. Alaska and Hawaii had just become states. So why is it people think copper mining hasn't changed in 50 years?

That's a question being asked by Jamie Sturgess, vice president of projects and environment for Augusta Resource Corp., which wants to start mining on about 4,000 of the 24,000 acres of the Rosemont Ranch on the east side of the Santa Rita Mountains, about 30 miles southeast of Tucson.

Sturgess says he was surprised when the staff of Pima County Administrator Chuck Huckelberry, whose background is in engineering, tried to graphically illustrate the visual impact of the mine by superimposing a photo of the Silverbell Mine over a picture of the Santa Ritas. Huckelberry showed the photo at a public hearing in February hosted by U.S. Rep. Raúl Grijalva, D-Ariz.

To Sturgess, the doctored photo was the equivalent of illustrating any state-of-the-art project with photos of 1959 Fords. The car may have named the "the world's most beautifully proportioned car" at the World's Fair in Brussels that year, but things have changed.

Sturgess said the entire tone of Pima County's presentation misrepresented facts.

"The Pima County document included an anti-mining group photo that was not to scale, was out of context, did not represent Augusta mine plans, and is clearly a misrepresentation of the modern mining methods and plans proposed for Rosemont," Sturgess said.

Except for Phelps Dodge's mine now under construction near Safford, the last major new copper mine opened in Southern Arizona was the Sierrita Mine near Green Valley in 1959. That was at the end of a decade that also saw the Mission Mine near Sahuarita open in 1956 and Silver Bell Mine near Marana open in 1954.

While Augusta's proposed Rosemont Mine would be an open-pit mine, Sturgess says newer mining techniques and regulations mean this mine won't have the same environmental impact. More importantly, in 20 years when extraction of the ore is finished at the Rosemont Mine, the area will be revegetated and useable once again for any num-

ber of other purposes.

"It wouldn't look exactly like it does now," Sturgess says. "But you could run livestock on it, or use it for recreational purposes. I suppose you could even develop it if you wanted to."

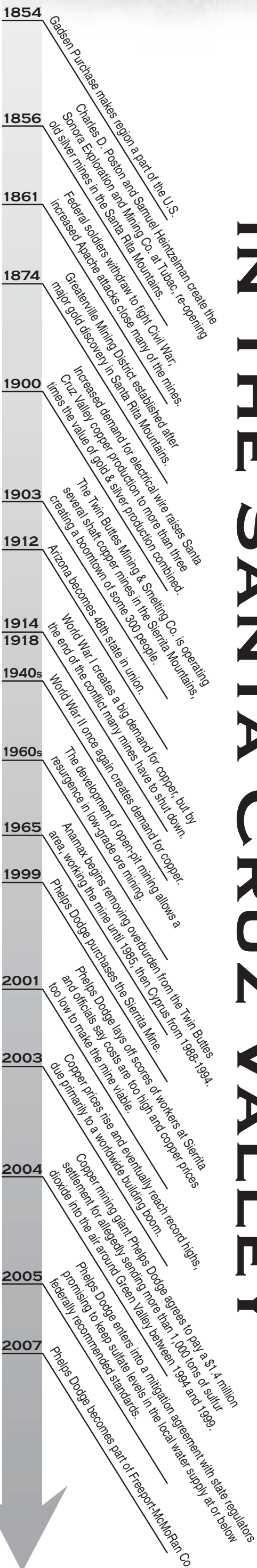
He says techniques Augusta plans to use at Rosemont have already been used at a mine in Alaska and one in Chile, though he says they will take steps beyond what has already been done elsewhere.

Augusta's plans call for digging out the open pit for a central point — exploratory hole No. 200 — and begin very early on doing continual remediation of the site. A berm would be built up east of the hole, which would mostly appear to be a continuation of an existing natural hill.

Sturgess said a passer-by along State Route 83 could stop at a pullout along the roadway and see the berm but it wouldn't be obvious to most motorists in moving vehicles.

Public access to much of the Forest Service land would be kept open during active mining, Sturgess said. He said Augusta wants to work with Arizona Trail. This year, Augusta worked with groups using the property for an annual endurance run and a horse riding event. He sees no reason why such events couldn't continue in future years, although the routing would change.

While some refer to the area in the Santa Ritas as pristine, abandoned mine shafts dot the area. Mining goes back to around 1850. A commercial mine was operating by 1880 and in the first half of the last century, there were at least two mines in the area and a smelter.



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SAHUARITA

A RECLAMATION SUCCESS STORY?

Park Corp. hopes former copper mine will someday welcome neighbors, golfers

By Tim Hull
Wick News Service

In Southern Arizona's Santa Cruz Valley, high-end dream homes, like the Calistoga wagons of a long-gone era, encircle lush green golf courses.

To the west and north loom mountains of hard-rock copper mining waste, overburden and tailing piles, with nothing but a few hundred acres of Sonoran scrub to separate the domain of retirees and young families from the nonstop world of the extraction industry.

And while by most accounts these very different valley tenants will remain neighbors for at least another 25 years until the ore runs out for the still-operating Sierrita and Mission mines, one company is hoping that, not too long from now, a few of those manmade mountains will themselves be covered with stuccoed mansions and Bermuda grass.

The Park Corp. has owned the 8,400-acre Twin Buttes property west of Sahuarita for 20 years. In that time, it has been rather quietly reforming the old mine site, breaking down buildings, cleaning up, and selling off the remains as scrap, all toward the end of reusing the land for business and residential development within about 10 years from now, according to Park Corp.'s 81-year-old chairman, Raymond Park.

Park accompanied reporters on a rare tour of the property early this spring in an attempt to counter a recent Environmental Protection Agency report calling the property a high priority site that may require further assessment and action under the state's Superfund program.

The property was mined for copper and molybdenum from 1965 through 1994 by various entities. For about five years in the early 1980s, a uranium plant was operated on the site, where workers packed yellow-cake into 55-gallon drums to be shipped off site for processing. The uranium plant was demolished in 1992, according to EPA documents.

With more than 50 drinking water wells serving a population of 40,000



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PARK CORP. executives Harold Metz, left, and Herschel McGriff look over the Twin Buttes property in Green Valley.

within four miles of the property, EPA officials believe the site should be reassessed. The report, according to the EPA, came about as a response to a local citizen's concern over radiation levels in water near the property as well as the agency's own concerns.

"There are several million tons of tailing on the site," the report says. "And observed releases of antimony, arsenic, beryllium, copper, cadmium, chromium, lead, manganese, molybdenum, nickel, selenium, uranium, and zinc have been established in groundwater monitoring wells down gradient of the site."

Park officials say there's nothing to the concerns. "We are in the process of preparing a response to the EPA," said Twin Buttes Properties Vice President Harold Metz in May.

The tailing impoundments were capped with two feet of soil about 20 years ago, and now the desert has taken over again. It is relatively common to see wildlife, including mountain lions and white tail, bounding across the property, Park said. Standing in the stomach-high brush on top of the tailing pile and looking east across the basin, it's easy to see why Park wants to build homes and golf courses here—it's one of the

best views in a region known for its view-shed premiums.

But will a public increasingly skeptical about the history and future of hard-rock mining be willing to spend big money for a home on the edge of tailing pile?

It's a bet Park is willing to make. After all, he explained, recycling troubled land is what the Park Corp. does best. The company reformed thousands of acres of river-front property in Pittsburgh that formerly held a U.S. Steel mill. Park bought the disused industrial wasteland several years ago, cleaned it up (while keeping the iconic smokestacks in place), and now it's a mixed-use destination with shops, light industry, and even condos.

"It's really the place to go in Pittsburgh," Park said.

The company did something similar in Cleveland, taking an old tank and airplane factory and turning it into one of the country's largest exhibition centers.

Whether or not Park can do the same for a Southwestern copper mine remains to be seen; however, if the company succeeds, Twin Buttes could become a model for the reclamation and reuse of mining land in the West.

But first the company has to shake the suspicions of contamination, and the only way to truly do that is to convince the EPA, and then potential buyers, that the land is clean.

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MARIO AGUILAR | GREEN VALLEY NEWS

CREWS HAVE been cleaning debris from the Twin Buttes site.



MARIO AGUILAR | GREEN VALLEY NEWS

MCGRIFF points out the mining pits.

SAHUARITA

WAGES, JOB PROSPECTS ON UPSWING IN SOUTHERN ARIZONA COPPER MINES

By Karen Walenga
Wick News Service

Ask any miner and he'll tell you that in this cyclical business, booms and busts come with the territory.

After some recent rough times earlier this decade, copper mining in the Santa Cruz Valley is alive and kicking at the Mission and Sierrita operations near Sahuarita.

These two large open-pit mining and processing facilities continue to turn out hundred of millions of pounds of copper annually and provide high-paying jobs to nearly 1,400 employees.

Mining traditionally has been one of the largest industries in Sahuarita. However, a 2006 work force survey by the town found that construction, mining, agriculture and trades accounted for just 5.19 percent of local jobs, according to survey responses.

After a healthy increase in copper prices over the past several years, both Phelps Dodge Mining Co. at Sierrita and Asarco Inc. at Mission were hiring workers this spring.

Phelps Dodge Mining, now part of Freeport-McMoRan Copper & Gold Inc., employed 941 workers at its Sierrita property as of the end of last year, up from 550 in 2003, says Ken Vaughn, manager of mining communications for Freeport-McMoRan

Copper & Gold.

Before Phelps Dodge's purchase of the operation in 1999, Vaughn notes, Sierrita was owned by Cyprus Amax Minerals.

"We are active in job fairs and continue to have openings. We could use more" employees, Vaughn said this spring, adding that the company is recruiting for its operations in Arizona, New Mexico and Colorado.

At Asarco Inc.'s Mission copper complex just west of Sahuarita, the work force this spring stood at 450, with plans to add 80 more people this year, according to John Low, Asarco's vice president of mining.

That number is less than half of a decade ago, when Mission, which is unionized, had 970 employees, but 30 percent more than in 1987, when the work force stood at 315.

Wages have risen from an average of \$11.49 per hour 20 years ago, to \$16.30 in 1997 and \$19.60 now, according to Low.

Copper prices are up, too, averaging \$2.70 per pound in the first quarter of 2007, compared with an average of \$1.04 in 1997 and 82 cents 10 years before that, Low said.

Last year, Vaughn pointed out, the average COMEX price for a pound of copper was \$3.09, up from 72 cents in 2002 and 81 cents in 2003.

Sierrita, which has an estimated 26 years of mine life remaining, pro-



TIM HULL | WICK NEWS SERVICE

EACH ONE of these haulers, tested nearby the Sierrita Mine at the Caterpillar Proving Ground, costs about \$3 million.

duced 161.6 million pounds of copper last year, its highest output in five years. That's up from 158.6 million pounds in 2005 and 151.2 million in 2003, according to Vaughn.

Total production of byproduct molybdenum at Sierrita last year was 19.97 million pounds, Vaughn said.

That's up from 14.99 million pounds in 2002, but a bit lower than in 2004, when Sierrita turned out 22.04 million pounds of this steel-hardening metal.

Average annual prices shot up from \$3.77 a pound in 2002 to \$31.73 in 2005 and \$24.75 last year, according to fig-

ures from Platts Metals Week.

This year, the Mission mine is set to produce nearly 136.7 million pounds of copper, compared with 252.3 million pounds a decade ago and 117.3 million pounds in 1987.

Silver production should be nearly 1.2 million troy ounces this year, down from almost 2.2 million in 1997. In 1987, Mission turned out almost 863,000 ounces of silver.

The mining operation this year also will produce 520,000 pounds of molybdenum. No moly was produced at Mission in 1987 or 1997.

According to Vaughn, Phelps Dodge

"ramped up employment and production over the past several years as the copper and molybdenum markets improved.

"The higher demand for copper and moly has been driven by an improving economy in many part of the world—especially by strong demand from China," Vaughn says, adding that market fundamentals remain strong today.

Karen Walenga is the Editor of the Sahuarita Sun.

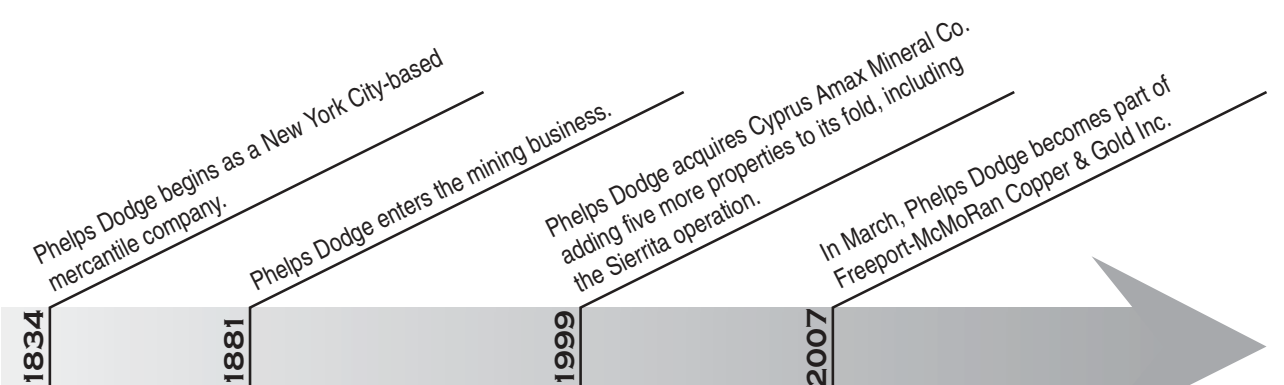
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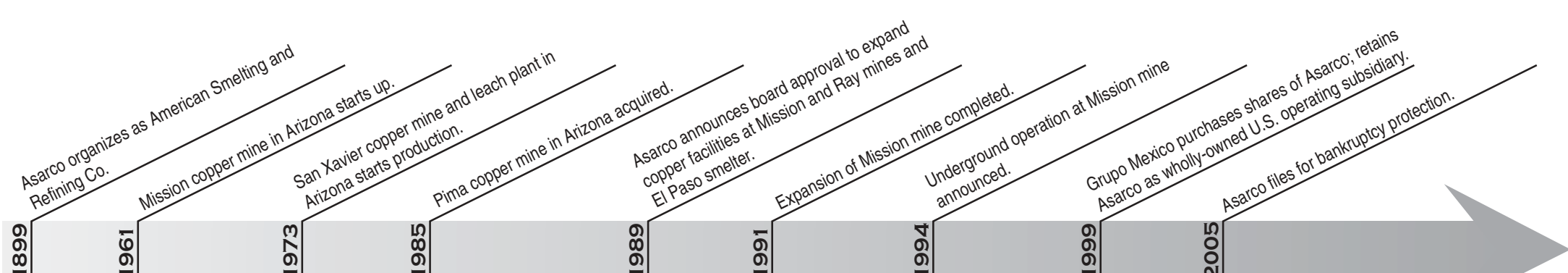
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THE MINE'S TRUCKS are hauling ore from the pit 24 hours a day, seven days a week

PHELPS DODGE HISTORY



ASARCO HISTORY



PATAGONIA

BALANCING ACT IN SMALL TOWN

Mining companies strike economic nerve as community weighs its options

By JB Miller
Wick News Service

Off to the side of a meandering road on the outskirts of Patagonia, a shiny SUV has been parked in a haphazard manner — its doors left wide open. The license plate reads, “Tweet.”

Nearby, an oddly clad group of birders anxiously “glass” a canopy of Fremont Cottonwoods that stands along the embankment of the Nature Conservancy’s Patagonia-Sonoita Creek Preserve, one of the few places in the United States where Grey Hawks nest. The binoculars that they are looking through are manufactured by Swarovski and start at around \$1,500 — a cost that is considered a mere drop in the bucket for an enthused twitcher, many of whom are prepared to pay whatever it takes (including lodging, food, guides, etc.) in order to add another species to their “life list.”

It’s this kind of loose change which visitors have been willing to spend over the last decade that has spurred shopkeepers, bed and breakfast owners, and other local merchants to promote the natural beauty of Patagonia and its surroundings. From bird watchers to hunters, bicyclists to dudes, tourism has increasingly becoming the beans and rice of this town’s economy.

That’s why in February, when the Patagonia Town Council verified a news story printed in The Weekly Bulletin that mining operations were under way in the Patagonia Mountains, merchants and other locals who depend on tourism for their income were some of the first to voice concern.

“As community members we’re opposed to mining because of the contamination of the water, the pollution, the noise, the dust, and of course the ruining of our scenic beauty in this area,” said Nancy McCoy, who was then president of the Patagonia Area Business Association. “As business owners we’re also opposed to it because our businesses are directly and indirectly affected.”

Jim Cosby, manager of the Circle Z Ranch, the oldest dude ranch in Arizona, bolstered McCoy’s comments. “Having been in the tourism industry for the last 81 years and

being one of the largest employers in Patagonia, I would just like to go on record voicing our opposition to mining and the negative effects it would have.”

Voted by Outside Magazine in 2004 as one of the best small towns to live in, Patagonia, pop. 881, remains a laid-back hamlet insulated by the Patagonia and Santa Rita Mountains as well as the Coronado National Forest. It is an eclectic place made up of ranchers, artists, health nuts and retirees — some of whom are mining veterans.

It was this melting pot of folks that spilled into the old railroad depot where the Patagonia Town Council meets twice a month. Up until the night of Feb. 14, the largest controversy that year had been the placement of a sign downtown advertising the logo of a well-known real estate company (the first franchise anyone could ever remember). Suddenly though, the stakes had been raised as folks learned that mining activity was being approved just outside their back door. The council confirmed that there were four plans of operation going down. Three of these operations were in the exploratory phase while the fourth, which had already been approved, was a small turquoise mine.

The news was a wake-up call for many who thought that mining was something of the past — its ghost trapped in the dozen or so historic photographs that adorn the walls of Town Hall.

Interspersed with colorful quotes, the sepia-toned images delineate a very important part of Patagonia’s past. Like many places in the West, mining in the Patagonia Mountains became prevalent in the 19th and early part of the 20th century. Towns outside of Patagonia such as Mowry, Harshaw, Washington Camp, and Duquesne boomed as mining companies tapped into rich ore bodies and extracted large quantities of copper, lead, silver, and zinc among other minerals. But by 1960 the last ore had been shipped out leaving behind a boom and bust economy, ghost towns, and one heck of a mess.

From 2006-07 a number of deserted sites in the Patagonia Mountains were cleaned-up following an Engi-



PHOTO COURTESY OF PIMERIA ALTA HISTORICAL SOCIETY

OVER THE YEARS both mining and scenic beauty have influenced Patagonia’s economy.

neering Evaluation/Cost Analysis (EECA) of the Alum Gulch-Flux Canyon Watershed. The report said that there were approximately 24,000 cubic yards of waste rock and tailings containing metals and sulfides located adjacent to drainages at the defunct World’s Fair Mine and Chief Mine Group, which were eroding and leaching acidic surface water discharge.

Eli Curiel, an engineer with the Coronado National Forest, explained that people back in the old days weren’t necessarily concerned about leaving waste rock material in the stream or on adjacent slopes. The waste, namely pyrite, eventually bled into the watershed producing acids, hence the name “acid mine drainage,” a term that continues to haunt more than a few area residents each time they turn on their faucets.

While environmental laws have forced mining companies to clean-up their act, the potential threat to water quality still lingers and was one of the chief concerns that influenced a unanimous decision by the Patagonia Town council to prepare a resolution opposing mining. Shortly before the vote, Council member Meredith Aronson, said, “Even though mining will take place outside Patagonia, the

issues of water quality, the effect on eco-tourism, roads, etc. will impact us greatly.” The Town Council also sent a letter to the Santa Cruz County Board of Supervisors encouraging it to do whatever they could to get Santa Cruz County included in efforts by Rep. Raul M. Grijalva (D-Ariz.) to say no to mining.

With two of the proposed mines located just east of Nogales, the Santa Cruz County Board of Supervisors jumped on the bandwagon. Passed unanimously, Resolution 2007-03 requested the permanent withdrawal of mining exploration and extraction from all federal lands within the U.S. Coronado National Forest in Eastern Santa Cruz County.

“I am very grateful for the mines, but this is another era,” said District 2 Supervisor Robert Damon who before his career in politics went through an apprenticeship in the mines, and as a result became a journeyman electrician.

However, not everyone agrees with the Santa Cruz County resolution. Earl Hardy, a local rancher who lives down the road from the old mining town of Harshaw, said he supports the recent mining activity that is taking place in the mountains near his home. Hardy, who owns a mining claim as well as deeded homestead land, said that if the Santa Cruz County Board of Supervisors is going to oppose mining and take away one of his property rights, some-

body ought to compensate him for it. Hardy also pointed out that tourism is more closely connected with businesses located in town than with the rural economy of the surrounding area. “We don’t get a lot of tourists. The biggest activity we have out here is drug running and illegals. I don’t think that’s called tourism,” he said.

Hardy said that people should be reminded that the National Forest is billed as a land of many uses, which are not exclusive to recreational activities. “I don’t think you can say you can have bird watching and hunting, but you can’t have cattle grazing and mining,” he said. Hardy added that he understands that people don’t want an open pit mine, but at the same time he wonders why people are against any activity that could potentially provide jobs.

Pete Brady, a visitor to Patagonia, recently watched as a survey helicopter veered toward the Patagonia Mountains towing what looked like an enormous dream catcher used for detecting deposits of copper-ore. He shook his head in disgust “I’m spending a lot of money here because there is no mining, no logging, no development. They need to hype what they got here, which is peace and quiet and clean air and blue skies,” he yelled over the WHOP! WHOP! WHOP! of chopper blades.

JB Miller is a writer for The Weekly Bulletin and The Nogales International.



JB MILLER | NOGALES INTERNATIONAL

THE SCENIC beauty surrounding Patagonia has long been a draw for tourism in the area.

GILA VALLEY

NEW MINE BRINGS GROWTH Phelps Dodge mining interests come to fruition

By Diane Saunders
Wick News Service

Dos Pobres — Spanish for two paupers — seems an unlikely name for an ore deposit in the Gila Valley owned by the wealthy company started in the early 1800s by millionaires Anson Phelps and William Dodge.

In the Valley, hidden in the gray rocks of the desert near Safford, however, are traces of the red metal known as copper.

The construction and anticipated opening of the Dos Pobres copper mine north of Safford has brought unprecedented economic growth to predominantly agricultural Graham County.

When Robert Metcalfe discovered the rich copper ore deposits at Morenci in 1870, the U.S. Cavalry had already alerted U.S. Secretary of the Treasury Salmon P. Chase to the minerals that abounded at nearby Eagle Creek in what is now Greenlee County.

In Graham County, finding copper deposits would come later. Since 1920, about \$1 billion has been spent by several copper companies, including Phelps Dodge and Freeport-McMoRan Copper & Gold, for exploration of what was to become the new Safford mine site, said Kimball Han-

sen, Phelps Dodge spokesman.

The Safford mining district in the foothills of the Gila Mountains is roughly 12 miles long and 3 miles wide and encompasses about 20,000 acres, according to the book "Vision & Enterprise" by Carlos Schwantes. The acreage includes four ore bodies — Lone Star, San Juan, Sanchez and Dos Pobres.

According to Schwantes, Phelps Dodge's interest in copper in the Safford area dates back to 1957. The mining company conducted exploratory drilling and exercised its option to purchase claims in 1960. In November 1968, Phelps Dodge began sinking an 1,875-foot shaft into a deeply buried sulfide ore body known as the Dos Pobres ore body.

The mining project at Dos Pobres proved to be a disappointment to Phelps Dodge, which lost \$85 million on the venture, according to Schwantes. Although Phelps Dodge shelved the mining project, company officials apparently believed the Safford area had potential for successful copper mining and bought the Lone Star, San Juan and Sanchez copper deposits over the next several years. During Phelps Dodge's corporate cutbacks of the mid-1980s there was doubt that there was any future for copper mines in Safford, according to Schwantes.



PHELPS DODGE PHOTO

AN AERIAL view of the Dos Pobres copper mine at Safford.

By the 1990s, Phelps Dodge revisited the idea of a copper mine in Safford. In 1993, planning began for open pit mining in the Dos Pobres and San Juan ore bodies.

In July 2004, the mining company and the federal Bureau of Land Management announced a land swap that was crucial to the development of Dos Pobres/San Juan. The trade transferred 3,867 acres of environmentally sensitive land to the BLM in exchange for 16,297 acres situated next to the Phelps Dodge mine property.

Although several groups, including the San Carlos Apache Tribe, the Sierra Club and the Center for Biological Diversity, protested the land deal, the U.S. Department of the Interior gave final approval of the land exchange and Phelps Dodge could forge ahead with its plan to develop an open pit mine at Safford.

Phelps Dodge allocated \$550 million for development of the new mine. The plan called for mining to actually begin in late 2007 or early 2008, and a work force of 1,000 construction workers to develop the site followed by about 400 full-time mine employees when copper mining begins.

"This mine will have state-of-the-art facilities — the very latest in mining technology," Hansen told the Eastern Arizona Courier in April 2005. "This technology will make it the most efficient, most environmentally friendly mine. People from all over the world will visit this mine to see the technology."

Phelps Dodge, however, had other hurdles to jump over before it could start development of the mine site — an aquifer protection permit and an air quality permit from the Arizona Department of Environmental Quality.

ADEQ issued the aquifer protection

permit in May 2006 and two months later issued the air quality permit to Phelps Dodge. Construction began and to date is on track for mining to begin in early 2008.

ADEQ Director Steve Owens said on May 7, the agency pushed the mine permits through as quickly as possible because officials wanted to support economic growth in rural areas of Arizona.

Two years ago, only one building permit for new home construction was issued in Safford, but the city is expecting between 150 and 200 residential building permits to be issued this year, said Community Development Director Pete Stasiak.

"That's not all. Stasiak said recently that Safford had not had a subdivision developed in seven years, but there are 19 on the books this year.

Stasiak said the top economic need in Safford and the surrounding area is affordable housing. He predicted that residential and economic growth will be dramatic in the next three to five years.

Homes are only part of the equation, Safford Utilities Director Jay Howe said. The city must also have the infrastructure to support the development, such as water and sewer lines.

To prepare for the anticipated surge in new housing, the city recently obtained low-interest loans from Arizona's Water Infrastructure Finance Authority. Safford borrowed \$8.3 million — \$6.4 million to improve its drinking water service and \$1.9 million to fund expansion of its wastewater treatment facility.

According to April 15 statistics — the most recent available from Graham County — 768 proposed homes and 229 apartment units, hotel rooms or recreational vehicle spaces in Safford have reached the final plat stage

in the development approval process. The 570 homes and 104 apartment units, hotel rooms or RV spaces have reached the final plat stage in Thatcher and 19 homes are ready for final plat in Pima.

In addition, 139 homes are ready for final plat in the unincorporated areas of the county, the statistics show.

Other proposed developments are in different stages of the approval process, such as preliminary plat, zoning/conceptual plans or discussion only. All told, there are a total of 13,588 housing units either approved or conceptualized in Graham County.

As the proposed housing and lodging plans wind their way through the approval process, contract workers at the Safford mine need shelter. There are few homes to rent and fewer apartments or RV spaces, said Sheldon Miller, director of the Graham County Chamber of Commerce.

"The housing is very tight. Lodging is extremely tight, and RV spaces are in high demand," Miller said. With no temporary housing available, mine contractors have taken up residence in local hotels and motels, resulting in few to no rooms for visitors.

"We've had instances where there have been travelers at 5 p.m. asking us to help them find lodging," Miller said.

The Chamber of Commerce refers travelers to the Apache Gold Resort in Gila County or to motels in Willcox in Cochise County.

Miller said this situation is temporary because new motels are under construction in the area. A new 80-space RV park, Golf Course Road RV, is scheduled to open this month. "There are other lodging facilities on the drawing boards in our community," he said.



PHELPS DODGE PHOTO

THE STONE CRUSHER, an integral part of copper mining, is under construction at the Dos Pobres mine.

Miller believes the economy is strong and more growth is on the horizon. "As the community grows, other commercial ventures will follow," Miller said.

As plans for the new mine progressed Phelps Dodge built its Central Analytical Service Center on East Highway 70 in Safford. The \$15 million center, built on a 10-acre site, employs 50 people to provide analytical results to six Phelps Dodge mines in Arizona and New Mexico.

"Safford is centrally located to our Arizona and New Mexico mines," Hansen said.

The facility, which opened in the fall of 2005, operates 24 hours a day, 365 days a year. Robots are used in its laboratory to prepare ore samples from blast holes for analysis. The analytical process lets geologists know what minerals are present in the samples and the quality of copper.

Hansen said all Phelps Dodge mines had their own analytical centers until the company decided to centralize this part of the mining operation. The use of robots allows the lab to analyze up to 1,000 samples a day.

"It's done quickly; it's done accurately; it's done consistently," Hansen said.

The analysis process includes using four electron microscopes to reveal the components of each rock sampling.

"That helps us to better understand those rocks — to be able to

process copper and other metals," Hansen said.

In addition to analyzing ore samples, the Central Analytical Service Center tests cathodes — the copper plates that are the final product of the copper mines.

Hansen said each of the plates should be made of 99.999 percent copper, or in mining lingo, "five-nine copper."

The cathodes are shipped and

melted into bars at rod plants in Miami/Globe, El Paso, Chicago and Norwich, Conn, he said.

Less than a year after the Central Analytical Service Center opened, Phelps Dodge joined forces with Eastern Arizona College to open the Occupational Training Center in Thatcher with a copper rod-cutting ceremony in October 2006.

"The purpose of the training center is to provide workers for our

mines, particularly Morenci," Hansen said.

The first year saw 60 students enroll in the program, put together by college and Phelps Dodge officials. A total of 44 completed the program. The training center offers three courses of study — diesel technician, instrumentation and electrical technician and industrial plant technician.

"We're actually hoping for two cohorts for each of those disciplines

(in the fall)," Hansen said. This would bring the enrollment up to 120 students.

Students receive classroom and hands-on training, which includes a 20-hour per week paid internship at the Morenci mine.

While the new mine was under construction, Phelps Dodge became part of Freeport-McMoRan Copper & Gold, creating the world's largest publicly traded copper company. The \$2.9 billion cash and stock deal was completed in March 2007.

The merger went virtually unnoticed at the mine construction site. Hansen said the Phelps Dodge mines in New Mexico and Arizona would retain the Phelps Dodge name and there would be no impact on the construction of the Dos Pobres/San Juan site.

"This does not mean any significant changes to our plans to continue building and eventually operating our Safford mine," Hansen said then.

Although the Phelps Dodge name was retained in Arizona and New Mexico, the merger ended the PD stock name on the New York Stock Exchange. The stock is now traded under the new name, FCX.

Company officials said the combined company is one of the most geographically diversified operations in the copper mining industry.

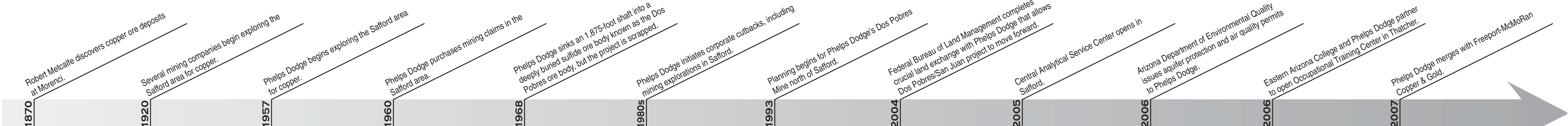
Diane Saunders is a reporter for the Eastern Arizona Courier.



AMEE STATEN / EASTERN ARIZONA COURIER

THIS WORKER from Aker Kvaerner, a construction contractor at the new Phelps Dodge mine, places a wooden brace at the construction site.

HISTORY OF MINING IN THE GILA VALLEY



BISBEE/DOUGLAS

‘IT WAS JUST DEVASTATING’



PHOTO COURTESY OF THE BISBEE MINING & HISTORICAL MUSEUM

PART OF THE creation of the Lavender Pit in Bisbee. Date unknown.



MARK LEVY | SIERRA VISTA HERALD

THE LAVENDER PIT with Phelps Dodge Junction operation buildings in the background.

Two Southeastern Arizona towns left to pick up the pieces after mining goes away

By Shar Porier and Larry Blaskey
Wick News Service

It happens to all mines eventually. The accessible ore runs out, closing off the fuel line to economic engines that have made fortunes and built towns.

In 1975, the fuel level hit “E” on the gauge, and layoffs hit the mines of Phelps Dodge in Bisbee for a second time.

According to Phelps Dodge reports, it’s been more than 50 years since any major copper mining operations have occurred in the town that made copper history. In more than 100 years of operation, the mines in Bisbee produced 7.7 billion pounds of copper, 355 million pounds of zinc, 324 million pounds of lead, 11 million pounds of manganese, 100 million ounces of silver and 2.7 million ounces of gold.

At many locations around town, the remnants of a copper industry that made Phelps Dodge the biggest copper corporation of its time stand in rust and ruin — reminders of a time when copper was king in Bisbee and hundreds of miners worked shifts in the maze of underground tunnels that spread beneath the Mule Mountains and the city.

As mining shut down, so did the doors of many businesses, including the Phelps Dodge Mercantile — the one-stop shop for goods.

By the late 1970s, many of the old miners’ shacks hung on the cliff-sides in states of disrepair, according to many local residents.

Bisbee was down, but not out.

New people moved into the area and snapped up those little shacks and dilapidated downtown businesses. The city saw a new lifestyle take hold, grow and prosper. The shacks turned from eyesores to quaint little homes. Downtown businesses were renovated and kept with the historic feel of the city. Artists and craftsman took advantage of the low-priced real estate, and so did retirees, notes historical documents.

Tourism became the new economic engine and has been chugging along ever since, according to state statistics.

The Copper Queen Mine now provides an income for the city and its population via tourists who come to take train rides into the tunnels of the historic mine, said Doug Graeme, mine tour manager.

The Copper Queen Hotel, the main-

stay of the town, still does a thriving business, as do many of the merchants who sell uniquely Bisbee art, antiques and collector’s pieces, according to the city’s Visitor’s Bureau. Brewery Gulch still has its nightlife, though without the violent and raucous color of the old days.

Mining operations today are done through a different process, said Tom Weiskopf, environmental engineer for Phelps Dodge. There’s no explosions, no drilling. At the Co-chise ore-body, that lies east of the Lavender Pit, Phelps Dodge began an extraction process combining solvents, leaching and electrowinning to get copper out of low grade ore.

There are changes afoot, though. Freeport-McMoRan Copper & Gold Inc. now owns Phelps Dodge and all its holdings. Surveys are currently being done to determine if there’s enough copper ore across from the Lavender Pit to start mining again, said Ken Vaughn, manager of mining communications with Freeport.

A new mining gang may be in town by the end of the year. Teryl Resources Corp., a mining company out of Vancouver, British Columbia, has been testing certain sites on Gold Hill in the Warren Mining District for the possibility of striking it rich again, said John Robertson, the company’s president.

Could a new boom in Bisbee be afoot?

DOUGLAS SMELTER CLOSES

“It was just devastating.”

That is the message over and over from longtime Douglas residents about the closure of the Phelps Dodge Copper Smelter in Douglas, which was originally built in the early 1900s to service copper from Bisbee and later a mine in Mexico.

While there had been some paring back of the work force in 1978 when the Phelps Dodge offices moved, Phelps Dodge was still providing more than 500 jobs to the Douglas community.

That all changed in 1987 when the smelter closed its gates for good and left a financial, social and leadership void in Douglas at least until 1994 when the peso devalued.

“At that time (1994), unemployment was at 20 percent, the devaluation of the peso devastated stores in Douglas, but it also brought the community together. Everyone began working for a common goal for the community,” said City Manager Mike Ortega, who grew up in Douglas.

“A lot of people thought the town was going to die,” added Chuck Ebner, another city employee who was born and raised in Douglas. Ebner is now the community development director.

Hundreds of people lost their jobs, and the population dropped by more than a thousand. Community growth stagnated until 2000.

And this came on top of the 1983

strike by Phelps Dodge employees at all mines in Arizona.

Some workers had started pulling themselves out of the hole the strike created when word came down that the mine was shutting down.

The state prison opened in 1988, and many believe it’s the main reason why the city survived. While the prisons did not pay as much as the mines, it provided jobs to those who wanted them.

“It wasn’t only the loss of jobs, but the loss in leadership. Phelps Dodge directed their managers to be active in the community and they were,” Ebner said. “They had been active in the city council and school board and numerous civic and social groups. When Phelps Dodge left Douglas, it left a real leadership void throughout the area.”

In addition to losing jobs and leadership, the city also lost its clinic/hospital, which was operated by Phelps Dodge in what now is the DARC building, and Phelps Dodge Mercantile, located on the corner of 10th Street and G Avenue.

“I don’t know anyone that lived here when I did that didn’t work for Phelps Dodge Mercantile at least for the summer. It was a big part of many people’s lives,” Ebner said.

Douglas was also much different then.

The population of neighboring Agua Prieta, Sonora, was less than 20,000. While the Mexican shopper

had an impact in Douglas, it wasn’t as great an impact as it is in Douglas now. There was also a great deal of purchasing being done in Agua Prieta from the United States, especially for gas, milk and produce.

The shut down of the smelter was no quick decision. Town meetings were held in the middle part of the 1980s. There also was concern over the sulphur the smelter’s smoke stacks were spewing against the loss of jobs any closure would create.

The proceedings could get quite contentious, with about 70 percent of the public in favor of having the smelter remain, according to past editions of the Douglas newspaper The Daily Dispatch.

Those against it were young people and the elderly, whose health was being impacted by the smoke.

“But at that time, it was all being pushed by an environmental group and the EPA,” said Ivan Huish, current councilman and former electrical superintendent for the Phelps Dodge Douglas smelter. He retired when the smelter closed in 1987.

“It was just so frustrating,” he said. “We were operating just fine with the restrictions placed on us until then-Arizona Gov. Bruce Babbitt decided to run for president and court the environmental vote. So many restrictions were placed on mining in Arizona that Phelps Dodge Douglas eventually moved its operation to Playas, New Mexico, and about 100 of those workers followed the mine to New Mexico.”

The restriction in place prior to Babbitt’s moves included cutting back on production at some times and reparations.

He said that when the wind came from the south and began impacting the farmers, they would cut back on production, and that there was an entire department dedicated to monitoring the impact the smoke had on farming.

“If the crops had been damaged by the smoke or sulphur, then Phelps Dodge would pay for the loss,” Huish said. “We were taking all precautions to meet the restrictions placed on us. I felt that if it hadn’t been for Babbitt’s attempt to appease the environmentalists, this plant could still be in operation, especially in light of current copper prices.”

Reporter **Shar Porier** writes for the Sierra Vista Herald/Bisbee Daily Review. Publisher and Editor **Larry Blaskey** writes for The Daily Dispatch in Douglas.



MARK LEVY | HERALD/REVIEW

PHELPS DODGE Copper Queen site manager Tom Weiskopf stands on the #7 leach stockpile which is currently being irrigated. The water will filter and dissolve the copper which will be removed in the process plant.

BISBEE/DOUGLAS

MINING DEFINES TOWN EVEN TODAY

More than memories left behind as Bisbee capitalizes on its past

By Shar Porier
Wick News Service

Brightly painted homes dot the hillsides high above Bisbee, which is now known for its quirky character.

Recently renovated shops draw big and small spenders alike. The Queen Mine Tour, the Bisbee Mining & Historical Museum and the historic Copper Queen Hotel draw tourists from across the Southwest and the nation.

It's a city that never gave up when the days of mining operations of Phelps Dodge ended a way of life that had gone on for more than 100 years.

Rusting metal structures now stand like odd sculptures on red, scoured cliff sides. Sparse vegetation sprouts a bit of green here and there along giant mounds of rock debris. A 900-foot-deep hole sprawls like a gigantic wound out of place in the peaceful beauty of the Mule Mountains.

While mining may have provided

wealth to a few and well-paid jobs for many, when the tunnels went dark for good and the last whistle blew, the city and its people were caught in a battle for survival.

Those who stayed behind found themselves in a different world. Copper was no longer king, and men who had worked, just as their fathers and grandfathers had, knew they had to take their futures in their hands and start anew.

The city struggled for years after the closing of the Phelps Dodge Copper Queen Mine and the Lavender Pit. Businesses closed, and many families were forced to leave for greener pastures.

"It was devastating," said Dan Vucurevich, former general plant foreman for Phelps Dodge. "About 1,800 people found themselves out of work at the mines alone. Woolworth's, J.C. Penney Co., pharmacies, dry cleaners, and grocers all went out of business. The employees who weren't picked up to go to other Phelps Dodge sites were on their own. It was a ter-

rible time. Hard on families."

The population in the city dropped from around 9,000 in 1974 to less than 4,500 in a few short years.

During that stressed time, word of the cheap real estate in Bisbee was making the circuit around the nation and "snowbirds" — people escaping harsh winters from the north — were buying up Phelps Dodge houses for as little as \$6,000 and the land the houses sat on up to a depth of 40 feet for another \$1,000 or so. The company held rights to mine the underground depths.

Artists, musicians and poets also came. Many were highly talented and professional. Bisbee started to build a new name for itself in the world of art shops and tourism.

Vucurevich was one of the lucky ones. He kept his job and worked with the leaching operations that were producing minor amounts of copper. From 1978 to 1983, Phelps Dodge reopened the Shadduck Mine and managed to get a bit more gold and silver up out of the ground, but

all that mining was done through contractors. The contractors paid the miners, many of whom were former Phelps Dodge employees. It was less expensive for Phelps Dodge. The company did not have to pay union prices and benefits, he said.

"There were about 150 of us left in 1975. Ten years later when I retired, there were only maybe 25, and most of those were security. Now, I believe it's down to about 11," Vucurevich noted.

Terry Maddux, the Bisbee plant supervisor, said there are currently 17 employees in Bisbee.

For some men, once a miner always a miner.

Julian Castillo, after 18 1/2 years with Phelps Dodge in the maze of

underground tunnels of the famous Copper Queen mine, took his hard hat and miner's lamp in search of another mining job. He found a job at the Superior Mine, which is 200 miles away from Bisbee in Superior and is owned by BHP Billiton, and kept doing what he loved for another 14.

He's now back in his beloved Copper Queen Mine tunnels where he mined for ore. He still wearing his miner's hat, but these days he's on a different mission — reliving the old days with tourists on a mining car ride through the mountain with Queen Mine Tours.

"I'm still here," he said.

Reporter Shar Porier writes for the Sierra Vista Herald/Bisbee Daily Review.



MARK LEVY | SIERRA VISTA HERALD

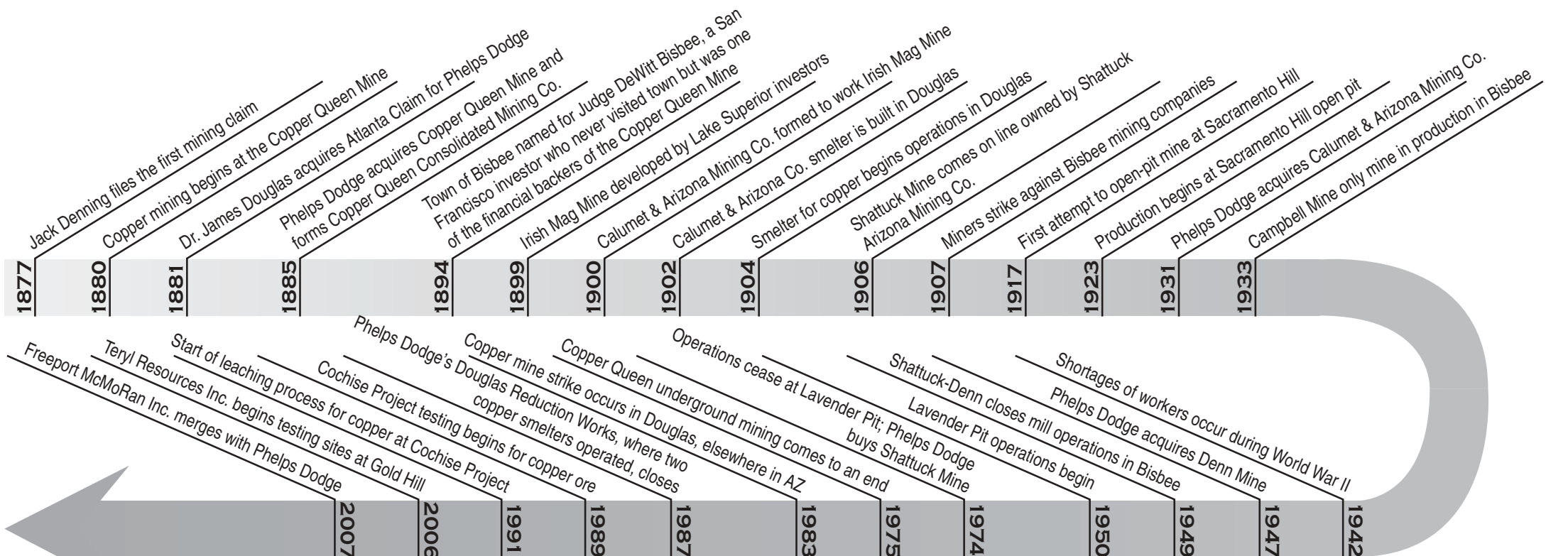
QUEEN MINE tour guide Ron McGinnis speaks with a group of visitors in an ore pocket about one mile into the mountain on Jan. 27, 2006 in Bisbee.



MARK LEVY | SIERRA VISTA HERALD

JUANITA BOSTICK-ANDRE of Patagonia searches for turquoise at the Oct. 6, 2006, hunt. Bostick-Andre comes from a long line of miners dating back from her great-grandfather to herself.

MINING IN BISBEE/DOUGLAS



DRAGOON

A DIFFERENT KIND OF MINING

By Carol Broeder
Wick News Service

The Dagoon Marble Quarry could be called a mine of a different color, and for more reasons than one.

Mines, in which metals, such as copper, silver, or gold are excavated, can be either underground or above ground. A quarry, on the other hand, is an extraction site for aggregates and minerals above ground.

Alpha Calcit, the German-based company which now owns the quarry, has been trying to get its project off the ground since 1999, bogged down in the permitting process.

This is not the first time in the old quarry's history that work has been delayed.

Phoenix stonemason Leon Remy Ligier first started the quarry in 1908, according to Ted H. Eyde, consulting geologist for Alpha-Calcit.

The French sculptor first heard about the legendary marble mountain from a stagecoach station operator.

Located in the Northern Dragoons, the mountain Ligier found was indeed almost pure marble, made up of almost every known color and texture.

Ligier filed his first claims, and then controversy over ownership developed, Eyde said.

After 20 years of litigation, the courts finally granted ownership to Ligier's five sons. Their father had died in 1922 in the midst of the controversy.

At that time, the world was in the throes of the Great Depression, and marble mining in Arizona did not begin in earnest until 1946.

Brothers DeForest and Wilford Ligier mined the Dagoon quarry for many years, producing decorative marble as well as terrazzo chips used for floors and roofs.

Eventually, the brothers sold the quarry, but "the company that bought it didn't do very well," Eyde said.

The quarry's remote location was a factor.

Alpha-Calcit acquired the marble quarry in 1998, drilling its first hole in 1999, he said.

A spike in mining proposals at that time alarmed residents in the Dagoon area.

One resident called it a siege — first the threat of a marble mine in 2000, and then landowners received letters from Australian-based mining and petroleum giant BHP Billiton informing them of its intentions to

conduct surface explorations of their land for porphyry copper.

Members of the Dagoon Conservation Alliance believe that mining companies are taking advantage of the Stock Raising Homestead Act of 1916, which was designed to promote westward expansion by giving homesteaders surface rights for cattle grazing while Congress retained the mineral rights.

"No one ever anticipated that people would come here to live and retire," says Rick Bishop, chairman of the alliance.

But Eyde believes that the marble quarry will have much less impact on the Dagoon area than some of its neighboring mines.

"The Johnson Camp (Mine) does in three days what we would do in one year at this mine," said Eyde, adding that Alpha Calcit's operation "will produce 50,000 tons per year of calcium carbonate product ground to minus two microns."

While many people may have never heard of calcium carbonate, they have nonetheless seen it in use as coating and filling for paper.

The company's product, known as Calcilit Extra, is a "fine particle size filter produced from snow-white natural calcium carbonate by a special multistage process."

The Dagoon area was found to have "nice looking white marble deposits," Eyde said. "It's all good, very fine grain marble. This is a unique deposit. It's the best one we know of in Arizona."

"The technology for making paper has changed over the years," he told the Range News. "The Kraft process is an acid process. At one time, all paper was made by the Kraft process. But the pages had a tendency to turn brown, get brittle and break."

"Alpha Calcit started using chalk from Dover in the 1920s, but after the war there was no access to chalk," he said.

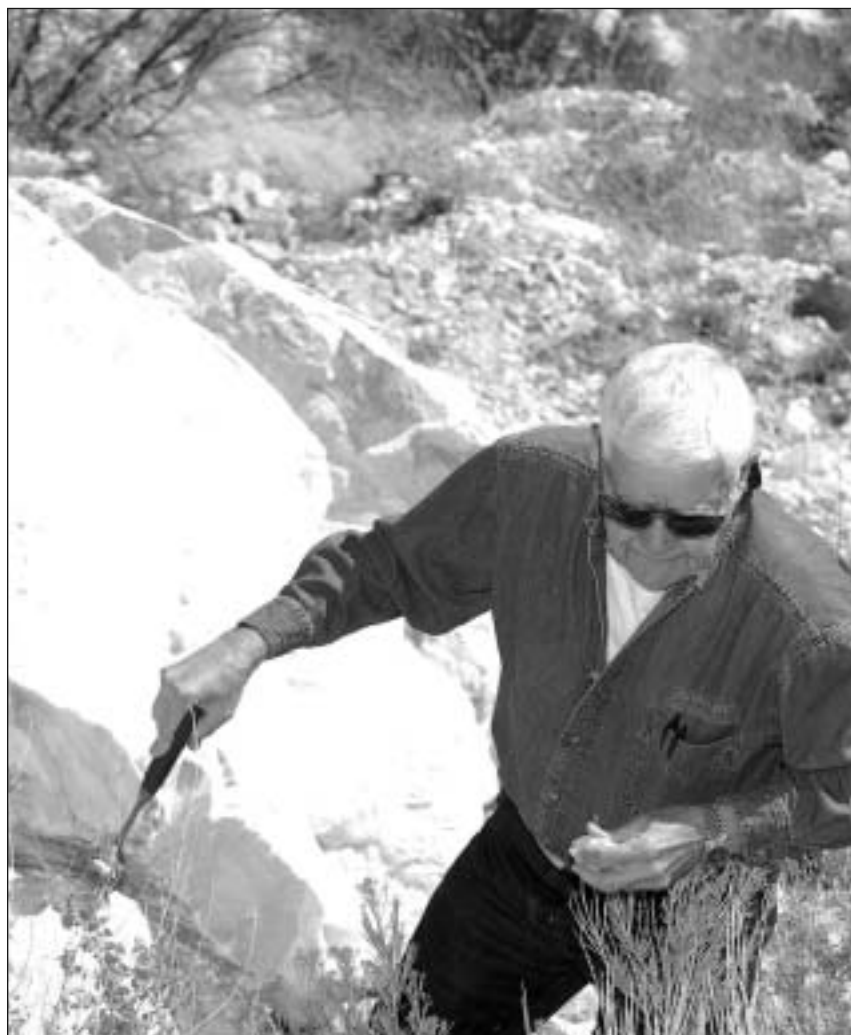
Years ago, a finish company that made paper, known as English China Glaze, went on strike.

The paper companies, who were in a bind at the time, wondered if ground white marble could be used to coat paper, he said.

They found that the paper was whiter, and that it didn't turn brown with age.

Ground calcium carbonate turned out to be a better coating.

"There is a tremendous demand for it in the paper industry," said Eyde, adding that the coating is used in magazines such as National Geographic.



DAVID BROWN | ARIZONA RANGE NEWS

CONSULTING GEOLOGIST Ted H. Eyde, with Gadsden Sonora Holdings, LLC, of Tucson, breaks off a small piece of white marble from the Dagoon Marble Quarry.

Alpha Calcit owns quarries in Turkey and Italy, and currently has a plant in Cologne at the Rhine River to use water transportation, he said.

The company is building a new plant in Amsterdam, so that it no longer has to ship the product to Cologne, Eyde said.

Alpha Calcit plans to do some percussion drilling at the Dagoon quarry in the near future.

"We need more information, especially about the north end of it," said Eyde, referring to the quarry that is 2,000 feet from one end to the other.

With percussion drilling, some holes can be 25, 50 or 75 feet, he said. "Anything under 100 feet, we don't need a permit from the water department," Eyde said.

"We're going to drill on the road, so as not to disturb anything. Then we have to fill in the hole."

Eyde said the Coronado National Forest "can't get us a date (to drill) before July 28."

"Cross Spear Marble began operation in 1999. Their Bowie Mountain quarry and plant are on private land," he said. "The Dagoon Marble quarry and plant have been trying to

left behind," because the company sells off as much as it can, he said.

For example, the off-color marble "is stacked up separately and sold to a power plant, like AEPSCO, that uses it in its scrubbers," Eyde said.

Alpha Calcit already plans to use the chunks of marble left behind from the Ligiers and other previous operations.

Eyde said that dust suppression techniques are used when drilling for blasting, so "there is some dust, but not a lot."

"We don't want to use a lot of water," Eyde said regarding concerns about water usage. "The one-hour round trip to haul water is expensive, so you don't want to pour a lot down the hole."

Water is used to keep the drill cool, and also to wash the cuttings, he said.

Asked if there is anti-mining sentiment in the Dagoon area, Eyde replied, "Life is very short. As a geologist, I look at time in a different way."

"Older people often times don't want things to change," he said. "And I don't know what to do about the radical environmentalists who take a very biased and stupid view of the world."

"It's also a NIMBY (Not in My Backyard) issue," Eyde added. "It's like the people who want cell phones, but not the repeaters, and then complain about bad reception."

Eyde believes that the Alpha Calcit operation will have a good financial impact on the area.

"The capital investment to build the plant and open the quarry is estimated at more than \$4 million," he said. "The construction will employ about 20 skilled workers. The plant will provide 15 full-time jobs. Most of the employees will live in Willcox. That will increase your tax base."

Bishop and the alliance contend that their concern is the 1872 Mining Law, which needs to be changed.

At that time, the law was needed to spur development in the West.

"The main reason for encouraging mining on public lands was to seek and develop rare mineral resources, like gold and silver. Lawmakers saw Arizona as a place for mining and cattle grazing. They could not anticipate Arizona as a destination for tourists, retirees, and city commuters."

(Editor's Note: Some information in this report was obtained from Sky Island Alliance and Dagoon Conservation Alliance.)

Carol Broeder is a reporter for the Arizona Range News.



DAVID BROWN | ARIZONA RANGE NEWS

THESE LARGE chunks of white marble are remnants from when brothers DeForest C. and Wilford C. Ligier owned and operated the Dagoon quarry in the 1940s and 50s. Eyde said that Alpha-Calcit would be able to put this leftover marble to use.



DAVID BROWN | ARIZONA RANGE NEWS

A CHUTE, used in the past for loading trucks with marble, looks almost ready to begin a new era.

WILL COX/BENSON

TALK OF NEW MINING EFFORT FRUSTRATES RESIDENTS

By Ainslee Wittig
and Chris Dabovich
Wick News Service

Not long ago, the copper mining industry was king in communities throughout Southern Arizona. They were dependant on the "Big C" and welcomed any such activity. Twenty years ago, any thought of potential mining brought hopes of prosperity to many. With mining came jobs - well-paying ones. Cities flourished, and local economies reaped every benefit.

But that was then, and this is now. The mere mention of the word "mining" draws immediate ire, sending normally tranquil people into an angered frenzy.

Take for example in early January 2006. Copper-mining giant BHP Billiton mailed letters to landowners in the Dragoon Mountains, between Willcox and Benson, announcing the company's intent to explore the surface of their properties for evidence of mineralization, to begin a month later.

Imagine the landowners' surprise.

Sue Bishop, wife of Rick Bishop, chairman of the Dragoon Conservation Alliance, said the property owners were frustrated and angry.

"They basically told us, we're going on your property, and there's nothing you can do about it. You're home is not your castle," she said. "And now we want to change the mining laws that allowed this to happen."

BHPB had staked claims to the mineral rights with help from the 1916 Stock Raising Homestead Act, which provided free land to homesteaders raising livestock, but it didn't give the landowner the mineral rights.

BHPB's mining-exploration partner, General Minerals Corp., had also filed claims on about five square miles of federal land, adjacent to private land, in the Dragoon Mountains.

These were staked on both Bureau of Land Management and Coronado National Forest properties under the Federal 1872 Mining Act.

By February 2006, meetings between Dragoon residents and BHPB's Jeff Parker, director of environmental and community affairs, and Brock Riedell, a company geologist, were heated at best.

"I know you don't want us here; we got that," said Parker at the meeting with about 130 people jammed into the Dragoon Women's Club to air their concerns and to show their disdain for the possibility of copper mining in the Dragoon Mountains.

Residents said they were concerned that a mining operation would cause property values to plummet. They were also worried about potential safety and environmental issues along with protecting the area's water.

The discussion at the meeting at times was "scary", Bishop said.

"Bring the rigs, bring them on my property and bring your own body bags," said one irate man, who added, "These people (residents) want these people to get the hell out of Dra-



AINSLEE WITTIG | ARIZONA RANGE NEWS

RICK MacDONALD, recruiter for Phelps Dodge Corp., prepares for a career fair in Willcox in February to gain employees for a new mine headed for Safford. MacDonald said the company needs skilled workers, mechanics, equipment operators, laborers, truck drivers and more.

gold and nickel here. We don't intend to explore on private land and we only filed those Homesteading claims for a buffer to the east of town and to prevent another company from coming in adjacent to our interests. But the odds of there ever being a mine are very small."

In April 2006, the results came in, and General Minerals Corp. announced the termination of its agreement with BHP Billiton on the Dragoon property.

A notice on GMC's website said, that "after completing the initial drill program consisting of three diamond drill holes on the property, BHP Billiton has elected not to proceed with the project."

"The three holes were drilled to test bedrock below very thick overburden of up to 481 meters. BHP Billiton has informed the Company

that weakly anomalous copper and molybdenum values were obtained from the diamond core samples. The results provided insufficient incentive for BHP Billiton to continue with the project," the April 21, 2006 statement read.

In May 2007, Parker gave an update of BHPB's activity in the area.

"We brought in an exploration group over a year ago and did reconnaissance in the area. We drilled several (three) explorative drill holes."

"The results were that there was nothing of economic importance for BHP Billiton, and we abandoned the drill holes," he said.

Since that time, the company has reclaimed the drill pads, which were about one-fourth of an acre in size (about 1,000 square feet), by filling and back-filling the holes, reseeding and inspecting periodically to be sure the vegetation has established itself, Parker said.

"We retain the (mineral rights) claims for one year, and after that one of three things will happen. An assessment will determine whether we keep the claim, turn it over to a different entity or let it lapse," he said.

Claims for lands under the Homestead Act lapse in 60 days.

"The interest in the area is essentially over. There is no current activity and I don't foresee any activity in the future," Parker said.

He added that two other sites in Southern Arizona have recently met the same end, one south of Tucson and the other northeast of Tucson.

Despite BHPB's current status and Parker saying that drill holes have no impact on groundwater, some residents still are wary.

Sue Bishop said she doesn't really know what they can or can't come back and do.

"The drilling makes us very nervous. They could crack our aquifer and drain all the water out. We don't know. An earthquake in the 1880s caused a free-running spring (a former stop on the Butterfield Stage trail) to dry up and the mines in Tombstone flooded."

In a Sky Island Alliance publication, Rick Bishop said the law pertaining to mineral rights "needs to be changed."

The publication points out that mining companies are taking advantage of the Stock Raising Homestead Act, and there are no environmental provisions, which leaves the taxpayers to clean up the mess mining companies leave behind.

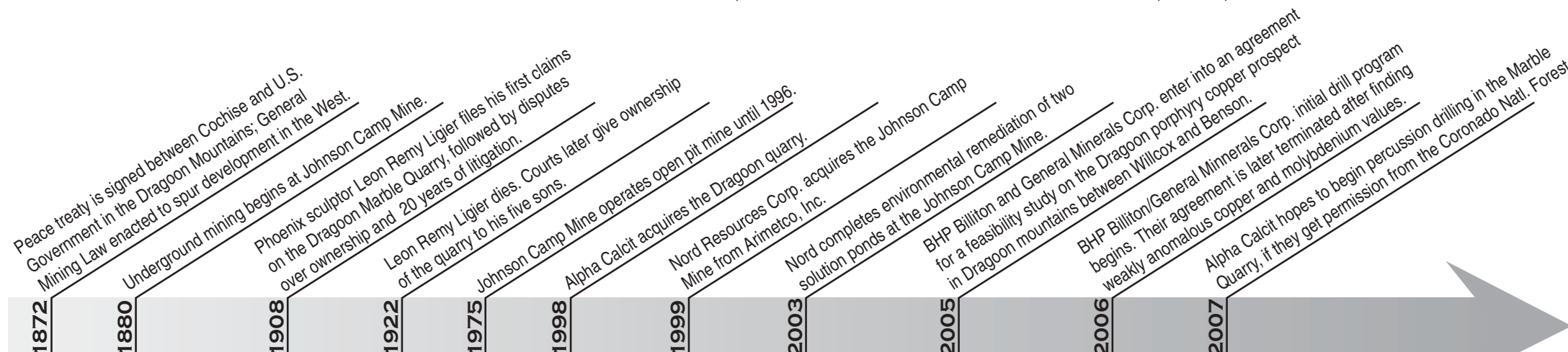
To reform mining laws to preserve the Draagoons and other lands, contact U.S. Sen. John McCain at <http://mccain.senate.gov>; Sen. Jon Kyl at <http://kyl.senate.gov>; and Rep. Gabrielle Giffords at <http://giffords.house.gov>.

Get more information at www.savedraagoon-mountains.com.

Ainslee Wittig is Managing Editor at the Arizona Range News in Willcox.

Chris Dabovich is Managing Editor of the San Pedro Valley News-Sun and the Vail Sun.

MINING NEAR WILLCOX



MORENCI

THE COPPER STRIKE OF 1983

By Walter Mares
Wick News Service

The Morenci Copper Strike of 1983 is something that most would probably prefer to forget. Sharp bitterness has lost its edge, and most who were directly involved have gone on with their lives.

Despite local reluctance to speak about the strike, it is an important part of Greenlee County and Arizona history. It had a tremendous impact not only locally and statewide, but also nationally.

It drew attention from around the world. It was tainted with violence on both sides of the picket line. Brother was pitted against brother, and siblings or other relatives remained estranged more than two decades later.

Strikes by local unions in Morenci and Clifton were nothing new. Every three years, the unions went on strike, and it was a matter of a few months before Phelps Dodge Corp. and the unions settled their differences. Many saw strikes as an extended vacation. Few figured on even the remotest possibility that a settlement would not be reached.

Most did not expect things to be much different when they walked off the job to begin the strike of July 1, 1983. Evidence of that was that some left their personal belongings in the lockers in the change rooms. They figured they would be back to start up where they left off. That was not the case.

By August, it became evident that Phelps Dodge and the unions would be in for a battle royale. The events that ensued sent a shock wave through the very social and economic fabric of local copper mining communities. PD made it clear it was going to stand fast and announced plans to replace strikers with non-union labor. It was first seen as a threat, but soon became a reality. Striking workers were incensed, and a storm of anger followed.

A crowd of strikers and supporters, estimated at 2,000, gathered in front of the main gate to the Morenci mine to make it known they would not tolerate the use of replacement workers by Phelps Dodge. Many in the crowd carried chains, sticks or bats to show that they were serious about their stand.

A former union official said he was sure that protesters would storm the gates as they had threatened and physically remove the replacement hires. The official credits former Morenci mine manager John Bolles for defusing the highly volatile moment. Bolles appeared at the gate with the union bosses, who the former official said would probably not have been able to control the crowd. "It came very, very close to totally getting out of hand."

The event became known as



AP PHOTO | REED SAXON

A NON-STRIKING worker is waved through the front gate of the Phelps Dodge copper mill by an Arizona police officer as the plant was successfully reopened Aug. 20, 1983, after a 10 day shutdown and weeks of labor strife in Morenci.

"Bat and Chain Day." Soon after, Arizona Gov. Bruce Babbitt ordered a cooling off period and flew to Morenci to meet with company and union officials. The company reopened the mine in mid-August, using non-union employees, including some union members who chose to cross the picket line.

Tension remained high and on Aug. 21, Arizona National Guard troops were sent to Morenci to beef up the 100 or more Department of Public Safety officers already in the area. Officers from other county sheriff's departments were also sent in.

As storms brewed and passed on the picket lines and in the streets of Morenci and Clifton, the unions and Phelps Dodge remained deadlocked. When they did meet, usually in Phoenix, little or no progress resulted. Each side leveled charges against the other of being uncooperative in negotiations.

Phelps Dodge said it had to have wage and benefits concessions from the unions to keep operating. PD officials pointed to a depressed copper market as one of many key reasons for needing to cut production and labor costs. The company also cited cut-rate competition from foreign copper producers who were glutting the world copper market.

At one point, Phelps Dodge spokesman Matthew "Pat" Scanlon said union workers had to be willing to accept wage and benefit cuts and have job security or face an uncertain future with the company, which could be forced to lay off more workers or shut down operations.

PD had already begun laying off workers in the late 1970s when the copper market started its initial slide.

The unions said they weren't buying PD's argument for concessions. Labor leaders leveled charges of unfair labor practices against the



PHELPS DODGE PHOTO

THE MORENCI MINE is located in Greenlee County in Southeastern Arizona.

company and said PD's strategy was clear. It simply wanted to break the unions. The company denied the charges. The unions filed charges with the National Labor Relations Board, which ruled in favor of union decertification.

The strike officially ended in February 1986, but some contend it isn't over yet. At least not in their hearts. Lawsuits against DPS and Phelps Dodge were filed by some union members following their arrests in a major confrontation between demonstrators and hundreds of DPS officers on June 30, 1983. The suits are still in litigation in federal court.

NOTHING BUT PAWNS

"We were all like pawns in a big chess game," a retired copper miner and Clifton resident said as he assessed the aftermath of the bitter copper Strike of 1983.

The man, who requested anonymity, made his comments in 1986, after it was clear unions no longer had a place at the Phelps Dodge copper mine in Morenci. He said he would comment only under the condition of anonymity because he did want "anything coming back at me or mine."

That is the stand a great many people take, even today, 21 years after the strike ended. Most people have little to say about the strike to anyone they do not know well. The more time that passes, people seem to become more reluctant to revisit those tumultuous times.

Many of the key figures in the strike long ago went on to other things. Some did return to the company after the strike and are headed into retirement. Others left Greenlee County and found good lives elsewhere. They return occasionally, but will probably

never move back.

A great many of the miners presently working at the Morenci mine have deep roots here, but were not born until after the strike. On a personal level, there is no before or after regarding the strike. They can only go by what their parents and grandparents tell them and that depends on which side of the line they stood.

The news media, (newspapers, radio, and television) from Tucson and Phoenix became familiar faces to Clifton and Morenci residents throughout the strike. Whenever a major event was scheduled — or even rumored — such as a rally by striking copper miners, local motels immediately began receiving calls for reservations. Most reporters stayed in Clifton as DPS officers had the motel in Morenci pretty well booked up during major events. There is

only one motel in each town.

The metro-area reporters were seen in a different light, depending on which side of the strike a person sympathized with. It often depended on how a reporter depicted each side of the issue. Reporters were referred to as anything from "vultures" to "the only one telling the truth."

Then there were reporters from the Socialist Party, who openly sided with the strikers. The reporters proclaimed their support and loyalty to "the cause," but like the reporters from the major news mediums in the state, they rarely came to the area except when something big was brewing.

Reporters came from as far away as Norway to cover the story for "Dagbladet" or from Sweden's "Aftonbladet." Both are major European newspapers.

Rock-and-roll superstar Bruce Springsteen even got involved. Part of an Arizona concert he put on went to help the People's Clinic in Clifton, a medical facility run by Dr. Jorge O'Leary, a physician who worked for Phelps Dodge up until the strike. He was a strong advocate of the labor movement and supporter of striking copper workers. O'Leary was interviewed by numerous periodicals and television stations.

The strike was featured on a major television news magazine on NBC. Major news mediums were in constant touch with local officials whenever the strike was hot and heavy news.

Once tensions began subsiding, some of the major mediums said they were only interested in the possibility of violence erupting, as it did during a 1984 Cinco de Mayo celebration and again on June 30 of the same year.

One of the last times reporters swarmed the area was in December 1985, when Phelps Dodge announced it would shut down the smelter at Morenci and again in January when it actually closed the smelter. Strike supporters gathered along the highway to protest and jeer at the workers who passed Clifton.

Phelps Dodge had sent employees a memorandum in November 1984 saying rumors the smelter would be laying off workers was not true. However, in December, PD sent out a memo advising workers it would be permanently shutting down the smelter on Jan. 1, 1985.

As smelter workers passed through Clifton on the last day of the smelter's operation, pro-union demonstrators lined up on one side of the highway pitched pennies onto the roadway and shouted, "Here you go, Judas! How many pieces of copper did they pay you?"

Walter Mares is Managing Editor of the Copper Era in Clifton.

ARIZONA MINING

ANALYSIS: MINING REFORM OPTIONS

By Dick Kamp
Wick News Service

Proposals for mining reform in Arizona center around three main concerns: environmental-natural resource impacts, property rights and values assigned to land that may be mined.

Property rights concern public and privately owned land. State and federal reforms would be very different.

An Arizona state law allowing counties to make mining permitting decisions could open up a new regulatory arena.

Federal public lands are a hot topic: Witness the Rosemont mining controversy.

Exploration in the San Rafael Valley, Santa Ritas or the Dragons bring out ranchers, suburban housewives, ex-miners, retirees and tree huggers armed with the moral rectitude of preserving land versus the antiquated 1872 Federal Mining Act and the 1916 Stock Raising Homestead Act that define mining as the highest use of the land-including some private land.

The latest attempt to reform "1872," H.R. 2262, was introduced in the House by Rep. Nick Rahall, D-W. Va., and will face a rough ride in the Senate.

H.R. 2262 includes provisions for higher royalties, to provide federal land managers with discretion to deny a mine, much stronger environmental permitting requirements, enforcement and application of the National Environmental Policy Act, more transparency and public participation.

Freeport/Phelps Dodge President Tim Snider said in a recent inter-



Snider



Napolitano



Grijalva



Giffords

view that some reform is needed but worries that, "one person will have power to stop a mine."

U.S. Rep. Raul Grijalva, D-Ariz., heads the House Public Lands subcommittee. He also is focusing on reforming energy exploitation on public land as well as working on one or two bills withdrawing public lands from new mining in Southern Arizona ("our finger in the dike legislation"). He is working in concert with the support of colleague Gabrielle Giffords, D-Ariz.

Gov. Janet Napolitano's staff committed to establish a more transparent process surrounding permitting Arizona Trust Land for mining, but little seems to be happening.

Currently, Arizona water rights for mines are exempt from state pumping limitations applied by the Arizona Department of Water Resources. The Environmental Quality Act is limited in its capacity to provide environmental protection — particularly under the Aquifer Protection Permit program to protect groundwater and in terms of adequate financial responsibility for closure and reclamation.

There is no proposed legislation on the table to reform these areas of pollution protection and overpumping. "We don't hear much about that

subject," Snider said.

Tucson Earthworks mining activist Roger Featherstone added: "In Arizona, sometimes bad legislation is worse than none; there is no movement right now to reform state mining laws."

In the early 90s, New Mexico took on some of the complex questions — minus overpumping — with all players at the table signing off on the New Mexico Mining Act of 1993. Unlike Arizona, which regulates discharges and groundwater only beyond the property boundaries, New Mexico has a diverse mining commission with legal authority to oversee the act. It puts regulatory authority within two agencies for different aspects — Department of Energy Minerals and Natural Resources Department and the New Mexico Environmental Division — to enforce environmental law.

For existing mines, New Mexico operators must provide for post-mining use land use compatible as a "self-sustaining ecosystem." Come drought, flood or Acts of God, groundwater quality must be protected from mining discharges — whether on or off the mine — property for a reasonably foreseeable future meaning hundreds of years.

Practically, mines may have to pump and treat water for centuries, regrade and cover tailings, extensively (sustainably) revegetate to stop tailings dust and more groundwater pollution. This can cost, but, says Snider said, "We're committed to doing it properly wherever we may be."

Bonds have been in excess of 300 million at the Tyrone and Santa Rita, N.M., mines; a large chunk of that must be liquid assets. Arizona's Phelps Dodge-Sierrita mine has a bond of less than 19 million, although more could be required under the current APP.

New mines in New Mexico must meet more stringent requirements that protect social and economic impacts for decades to come and prove that they will not pollute.

Evaluating social impacts of new mining in New Mexico can mean neighbors of a proposed mine weighing in to the mining commission on their own values for their neighborhood versus those of a mining company. New Mexico law could be consistent with a new federal "1872," giving more leeway to a land manager, such as a forest supervisor, to decide that mining is inappropriate for certain public lands.

New Mexico is weaker on its acceptable level of sulfates; however radionuclides and uranium mining have been high priorities under the act. Radioactivity is one problem with New Mexico hardrock mining, as well as a priority of EPA Region 9 as they look at Arizona copper mines.

It seems that strengthening the power of ADEQ to regulate groundwater from mining in Arizona may only be resolved when conjectural

problems become serious.

Right now, Arizona does not presume that mines should pay a bond in the event that underground mine workings may permanently contaminate groundwater. The state takes a "wait-and-see attitude" to the couple of thousand miles of tunnels filling up below Bisbee-Naco at 10 feet per year for perhaps another 20 years.

The Superior underground mine works were filling up contaminated in the 1990s until mining began again and levels and contamination of groundwater dropped.

What will happen a few decades hence when mining stops. Or at BHP Billiton's San Manuel mine?

If groundwater fills up in a mine and is never exposed to oxygen, there may be no problem for a few decades. But if somebody builds a housing development or opens a mine in 2100 and pumps water nearby, and the groundwater enters a fractured zone (from earthquakes or mining), then acid leaching may draw many pollutants into the water. Or if the groundwater fills up and encounters fractured earth on its own, the pollutants can enter the water.

Unlike New Mexico, Arizona laws do not address these potential problems, nor depletion from overpumping water, nor the rights of counties to protect landowners.

It will take some intelligent and gutsy legislators to do in Arizona as well as a committed Congress and president to pass revisions to "1872." Meanwhile, we'll have faith in our mining industry.

Dick Kamp is Environmental Liaison for Wick News Service.

Q+A WITH FREEPORT McMoRAN PRESIDENT TIM SNIDER

By Dick Kamp
Wick News Service

In March, Freeport-McMoRan acquired Phelps Dodge, made it a mining division and turned Phelps Dodge's Phoenix office into corporate headquarters.

Freeport President and Chief Operating Officer Tim Snider talked about the merged company's economic and environmental future in a recent interview with Wick Communications.

Snider grew up in Bisbee Junction, began working for Phelps Dodge in Bisbee in 1970, worked through managerial positions to become president and COO from 2003 until the Freeport takeover.

Snider, third in command but new to Freeport's corporate culture and to its historical operations, will be the field boss of all domestic and international operations.

Q: In a recent speech, Freeport CEO Richard Adkerson joked, "Everything is for sale." How secure are Freeport/Phelps Dodge mines and environmental commitments in Arizona and New Mexico? Phelps Dodge employees have expressed uncertainty and a Silver City environmental group said, "We're worried they'll pull an Asarco, go bankrupt, and leave the state with the bill for reclamation."

A: There's been no discussion of selling any facilities in either New Mexico or Arizona. The market is outstanding, and we think it will be for a long time. Freeport bought PD for our copper producing facilities, and there's no logic in sell-

ing them. I guess everything's for sale, however unlikely; my car's for sale, if you want to pay enough for it. In New Mexico, we're committed to those operations and to the reclamation plans we have in place; they shouldn't be worried about that.

Q: Will there be an increase in Bisbee mining activities?

A: I don't know. There's still ore and there could be major investments in the future. However, these types of investments take a lot of study; it's not anything we're pursuing right now.

Q: The Arizona Department of Environmental Quality and Phelps Dodge have estimated the Bisbee mine has 2,300 miles of tunnels, extending south of the border with groundwater rising at about 10 feet per year. In 2001, it was estimated that groundwater would fill tunnels and the pit around 2028. Once the groundwater fills tunnels and enters the pit, we don't know whether heavy pumping for new developments nearby, or water in contact with fractured rocks from mining or other causes, could cause widespread groundwater pollution. Do you think FMC should take action to avoid potential problems: monitor wherever there were tunnels or set aside financial assurance?

A: We are close to receiving our Aquifer Protection Permit, which will address those concerns. I'll tell you that PD-Freeport will stand up for its environmental obligations and liabilities and that will be one of them. We can speculate all day long how the groundwater

might act, but only time will tell.

Q: Do you believe that Arizona's environmental/natural resource regulation of mining should be strengthened; perhaps equivalent to New Mexico Mining Act requirements for financial assurance, groundwater protection, and treating new mines more stringently than old? Should drought-stricken Arizona restrict the amount of groundwater that a mine can pump or require such technologies as dry tailings impoundments?

A: We have three New Mexico mines, one not operating, and no prospects on new mines.

New Mexico was fairly early in developing water laws and discharge permits and they have a system that's somewhat dated. Is it perfect, no? We have been working hard with the state with legacy (past mining) issues. We have arguments on specifics, but we're doing a lot of reclamation and have detailed plans going forward to remediate historic stuff, and I think we're working well with them. I'm really involved and too far into the weeds to make general comments.

The purpose of financial assurances (much higher in New Mexico) is to ensure that the resources are there whether we have assurance regulations or not. FMC has the financial resources to meet all of our responsibilities. We don't know what will happen in Arizona legislatively, and we don't see indications that Arizona will come up with the same types of assurance requirements as New Mexico.

We don't think it's appropriate to re-

strict water pumping. (Older) mines developed water resources and pumping systems used by nearby communities. We should work on all water conservation options possible.

At Morenci, several years ago, we began putting solutions into our extraction processes using sprinklers which reduced evaporation tremendously. We minimize freestanding water at all operations and our water consumption is pretty efficient everywhere. Dry tailings is an emerging technology but hasn't been proven viable economically; we don't know how stable they will be over the long term. We're watching it closely.

Q: Reform of the 1872 Mining Law is on the congressional agenda this year. What are your opinions on reforming the rights of land managers to potentially deny a mine on federal public lands and paying higher royalties?

A: We recognize a need for clarity on both sides in 1872 reform, and it makes good business and environmental management sense to have a set of objective rules that are certain. It took us 13 years to complete the land exchange at Safford in spite of community and state support. Obviously for a mining law to be passed, there will have to be mining exclusions. For us to support a mining law, we need a viable business possibility and the public needs a path to force industry to be responsible environmentally and in other ways. Royalties generally should be reformed and obviously are a part of an overall package. Saying locals don't benefit economically is wrong, though.

Q: Has FMC have any potential mines pending on public lands? Currently there are concerns over exploration in the San Rafael Valley.

A: Quite frankly, for competitive reasons, we don't ordinarily discuss information that grows out of exploration on public lands.

Q: We hear complaints over tailings dust pollution at Bisbee, Green Valley and Morenci. What is FMC doing to control the problem and can you reclaim tailings while a mine is still in operation?

A: We are trying to do all we can at active and inactive mines. The difficulty is depositing tailings on the surface and then depositing more on top. We're doing dust control at Sierrita with new chemicals that appear to work quite well. At Sierrita and Morenci, we've done quite a bit of reclamation on side slopes while keeping operations going. We have a reclamation trust fund, but we're paying expenses out of current cash flows. Our intent is to go around to each inactive operation and get them reclaimed.

Q: At our Clifton paper, we hear that some miners want to unionize. What is the state of unions at FMC mines, and what is your opinion of them?

A: Steelworkers are at the Chino mine in New Mexico. We don't dictate to our workers about representation. I think we treat them in a fashion that's healthy. Obviously I'm more comfortable dealing with employees directly.

Dick Kamp is Environmental Liaison for Wick News Service.

OUR COMMITMENT to making life in Arizona better



Richard C. Adkerson
CEO, Freeport-McMoRan
Copper & Gold Inc.



June 2007

Dear Neighbors and Associates,

Phelps Dodge copper mines and processing facilities in Arizona are now part of Freeport-McMoRan Copper & Gold Inc., the world's largest publicly traded copper producer. We have operations around the globe, but Arizona remains important to our future.

We have relocated Freeport-McMoRan's headquarters to Phoenix. We are operating mines in Morenci, Green Valley and Bagdad at increased production to meet worldwide demand. Our smelter and our rod mill at Miami are going strong. We're making excellent progress on construction of a major new mine at Safford. The first copper production there is planned by early next year.

Given today's strong copper market, we have an objective of expanding our operations, which would involve significant new capital investment and would generate employment. No decisions have been made. We pledge to keep you informed.

We acknowledge our obligation to address the environmental legacy from past eras. Standards, practices and knowledge about impacts were not the same as they are today. Our Reclamation Services unit is busy at various sites around the state and the southwest region restoring lands, protecting groundwater and creating wildlife habitat.

Since our merger was completed in March, I have heard many comments from within the company and from outside about how smoothly things have gone. I believe it is because all our employees share the commitment of our management to assuring we all come home safely to our families ... to implementing the best practices of modern mining ... and to being good neighbors in our communities.

We look forward to growing with Arizona as we supply our nation and the world with a product that is essential to modern life.

Richard C. Adkerson
Chief Executive Officer

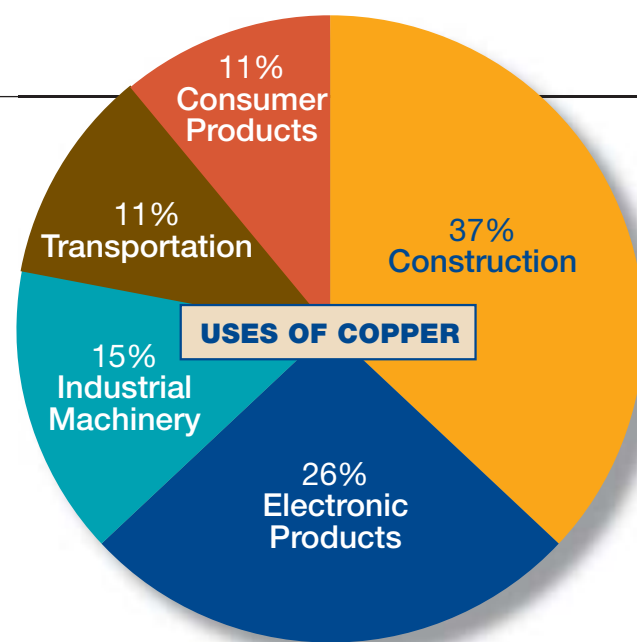
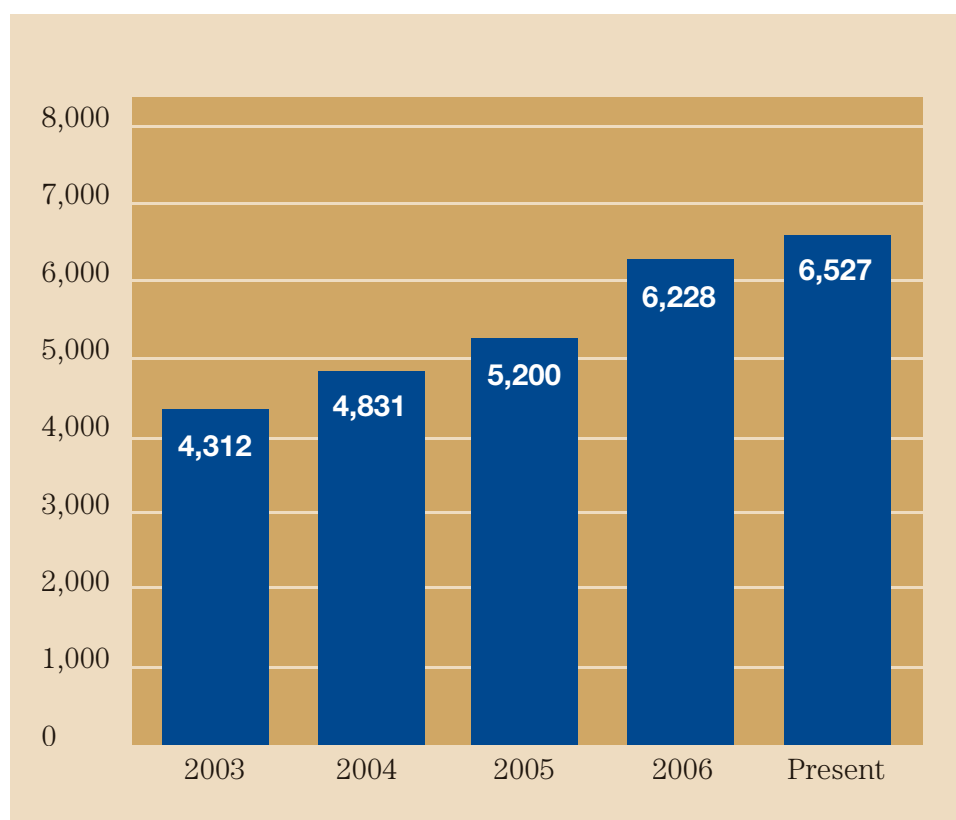


Our trucks and shovels are busy not only mining copper, but restoring lands from past eras.



Arizona produces more copper than any other state.

Employment in Arizona Freeport-McMoRan/Phelps Dodge



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