



MPC

PROTECTING COMMUNITIES AND THE ENVIRONMENT

REPORT

No. 1

REGULATORY REFORM

# Six Mines, Six Mishaps

*Six Case Studies of What's Wrong with Federal and State  
Hardrock Mining Regulations, and Recommendations for Reform*

Mineral Policy Center

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September 1999

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## FOREWORD

Clean water. Pristine landscapes. Ecosystem integrity. The protection of communities and cultures. This is what is at stake today on public, state, and private land when a mining company comes to town. It is time for stronger environmental safeguards to protect these important resources.

Sometimes mining is done responsibly. There are companies that operate at a profit, meet environmental performance standards, and cleanup and reclaim mine sites. For example, this is what the Homestake Mining Company hopes to accomplish with their reclamation plan at the McLaughlin mine in California. Other companies do not exhibit the same level of responsibility.

Unfortunately, rather than voicing support for stronger environmental safeguards, there are many in the mining industry who have a knee-jerk reaction to the mere mention of the possibility. They claim that federal and state regulation and oversight is adequate. In addition, they often argue that environmental protection should be left up to the industry, on a voluntary basis.

Consider the recent fight over the application of the Toxic Release Inventory (TRI) to the mining industry. Previously, mining had been exempt from reporting its releases despite the fact that the industry produces more waste than all other industries and municipalities combined. The U.S. Environmental Protection Agency considers much of this waste potentially hazardous. Yet, industry trade associations fought the expansion of TRI. Why? Because, in their view, mining waste is different than that produced other waste-producing industries. Rather than allowing an educated public to make its own determination about the potential threat posed by mining waste, the industry fought to withhold this information from the public.

Similarly, some industry representatives have asserted that the Mining Law of 1872 does not need meaningful reform, despite the fact that this antiquated statute has almost no environmental protection provisions. What is worse, some industry representatives have promoted sham reform “initiatives,” which contain no environmental protection provisions. These proposals are nothing but a public relations smokescreen intended to confuse the public.

A similar industry-sponsored misstep is unfolding with regard to the tools that the U.S. Bureau of Land Management (BLM) uses to govern mining on our public lands. Long in need of modernization, the current regulations fail to offer adequate environmental protection and have led to what are likely to be multi-million dollar taxpayer funded cleanups of abandoned mines.

Since these BLM regulations were first written in the early 1980's, there has been a proliferation of massive mines that use cyanide and other processing chemicals. These mines have experienced scores of toxic spills and other mine mishaps. In partial response to these problems, many states have updated and improved aspects of their mining regulations. Yet BLM's regulations remain outdated and unchanged.

## MPC Report: *Six Mines, Six Mishaps*

Despite the fact that the BLM's regulations are in dire need of modernization, many in industry assert that they are already doing an adequate job of protecting the environment. We have evidence to the contrary and it is contained in this report.

*Six Mines, Six Mishaps*, demonstrates that there are still too many loopholes and gaps in BLM mining regulations. The results are troubling because today's mines are massive operations that use dangerous processing chemicals, and have the potential to become major pollution problems. When something goes wrong at one of these mines, it is the public's land, water, and wildlife resources that are impacted.

We must remember that environmental laws and safeguards should be written to protect against potential irresponsibility, against the potential bad actor. They should be written to prevent disasters and to create an incentive for good behavior. When it comes to protecting public lands, the public should not simply be expected to rely on the good will of a particular mining company.

We believe the industry needs to rethink its opposition to enhanced environmental protection on public lands, especially those companies that have committed their resources and their reputations to environmentally responsible and sustainable mining practices. Failure to strengthen these regulations today will result in more taxpayer-funded cleanups of mines tomorrow. In the public's mind, the reputation of all mining companies will suffer.

Without significant reform of our nation's mining laws and regulations there will be more messes like the Zortman-Landusky mine and the Summitville mine, which is likely to cost taxpayers over \$170 million.

Given its irresponsible position on environmental protection, is it any wonder that the mining industry is held in such low regard by the public? Today, the industry is wasting its money on a costly public relations effort, seeking to *greenwash* its reputation. The reputation of the industry will continue to suffer until fundamental change occurs and our nation's mining regulations and laws are modernized. Such reforms will allow responsible companies to get the credit that they deserve while penalizing bad actors. The result will be a healthier mining industry and environment.

Those in Congress interested in promoting and advancing a responsible mining industry in this country should question, rather than acquiesce to, industry efforts to delay reform. By standing up to the industry, they may actually be doing the industry a favor.



Stephen D'Esposito, President  
Mineral Policy Center  
Washington, D.C.

# MPC REPORT

## SIX MINES, SIX MISHAPS

### *Six Case Studies of What's Wrong with Federal and State Hardrock Mining Regulations, and Recommendations for Reform*

The following six mines are unfortunate examples of where federal and state regulations have failed to protect the environment from unnecessary degradation. This degradation could have been prevented if adequate environmental safeguards had been in place. These mines are not the *only* examples of where current regulations shortchange the environment and the taxpayer. Yet they illustrate the wide array of environmental problems that mining has created on our public lands.

For most of the mines in this report, problems that could have been prevented in the planning stage are now much more difficult to solve. Substantial reclamation costs and potential long-term environmental problems plague the mine sites. Unfortunately, due to weak federal and state environmental regulations, it is the taxpayer that is likely to get hit with the multi-million dollar cleanup bill at many of these mines.

How did we get here? Mining techniques have outpaced regulations that were written prior to the widespread use of modern technology, such as cyanide heap leach processing and large open pit mines. These new techniques impact the environment in ways that the old regulations, written nearly 20 years ago, did not address. Today's highly mechanized and chemical-intensive mining industry requires a new set of federal environmental regulations. In fact, it was anticipated that the decades-old regulations would need to be updated as the industry and technology changed. However, no such modernization has occurred. While some states have updated their regulations, no state has a comprehensive set of regulations that is adequate to protect federal public lands.

Some argue that there is no need to strengthen federal regulations because state programs are adequate. Given the flaws in most state regulations, this is a questionable assertion. Even where states regulations are strong, they are not a substitute for a comprehensive set of federal regulations to protect public lands.

While some states have improved their regulations, this does not replace the need for stronger federal regulations. A federal baseline regulatory standard is needed on which states can base their own regulations. This standard should explicitly prohibit practices that cause undue

## **MPC Report: *Six Mines, Six Mishaps***

degradation on public lands. As the trustees for public lands, federal and state agencies have a responsibility to protect our lands for future generations, not to leave a legacy of poisoned waterways and fragmented landscapes.

Over the past three years there has been significant debate about the need to modernize the BLM mining regulations. Three times the Senate has sought to use anti-environmental riders to delay the development of these new regulations. The delays have come despite growing evidence that mining waste is polluting our public land and waterways, such as those mines profiled in this report.

The question for those in Congress delaying reform is this: How much longer will you allow our public lands and waterways to be polluted by mines before taking the necessary actions to protect the environment and the taxpayers' pocketbook?

# ZORTMAN-LANDUSKY MINES

## A Poster Mine For Stronger Environmental Regulations

The now-defunct Zortman-Landusky (Z-L) mine in north central Montana may be the next Summitville, because the cleanup could take years and cost taxpayer millions of dollars. On January 16, 1998, Pegasus Gold Inc. declared bankruptcy. As a result, a substantial portion of the cleanup and reclamation effort needed at this gold mine is likely to be paid by taxpayers.

Approximately \$60 million in cleanup bonds were required for these mines – roughly \$30 million for reclamation, and another \$30 million for water treatment. While this bond may seem large, complete reclamation is expected to cost much more. Already state regulators estimate that the shortfall is likely to be at least \$8 million for the reclamation alone. However, local Native American tribes who live near the mine have commissioned an independent assessment that predicts the shortfall for complete reclamation could be as high as \$90 million.<sup>1</sup>

Therefore, the Z-L mine, like the Summitville mine, could become another poster child of financial and environmental disaster, illustrating how regulatory agencies and mechanisms failed to protect the environment and local community. Current federal regulations do not require a comprehensive and realistic assessment of the potential impacts of this type of large-scale cyanide heap leach mine, nor the potential reclamation costs. This inadequacy coupled with insufficient bonding requirements leaves the taxpayer at risk. Bonds are and should be used as a tool that allows regulators to guarantee that the mining company pays for reclamation and cleanup, rather than the taxpayer.

As one of the world's first large scale cyanide heap leach gold mines, the Z-L mine was the lowest grade gold mine in the United States and the largest gold mine in Montana when operations began in 1979.<sup>2</sup> However, the Z-L mine has a dubious record of numerous environmental violations, disregard for culturally significant sites, potential health problems related to the mine at the immediately adjacent Fort Belknap Reservation, and poorly reviewed amendments and expansions.

The Z-L mine has experienced a litany of cyanide solution leaks and spills, stability failures, acid mine drainage, surface and groundwater contamination, wildlife fatalities, and other problems. Failure of federal regulations and state laws to mandate testing procedures for acid mine drainage led Bureau of Land Management (BLM) to conduct only cursory tests indicating mining would take place in oxide ore. However, soon it became clear that the company was mining in substantial amounts of acid-generating sulfide ores. Today, half of all streams emanating from the mine area, have been seriously polluted with acid and heavy metals.<sup>3</sup> The BLM regulations have not been changed to address these problems.

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<sup>1</sup> James Kuipers, P.E. for the Ft. Belknap Tribes, based upon the report, *Alternative Final Reclamation and Closure Plan, Zortman and Landusky Mines, Montana*, Center for Science in Public Participation, January 1999

<sup>2</sup> The Denver Post, *Montana mine had nine cyanide leaks*, November 2, 1993

<sup>3</sup> Phone conversation, Montana Water Quality Bureau, September 1999

## **MPC Report: *Six Mines, Six Mishaps***

As the Assiniboine and Gros Ventre Tribes of Fort Belknap have a strong cultural and spiritual connection with the Little Rockies. The mining operation has destroyed or harmed several of the tribes' traditional sacred grounds. Spirit Mountain, for example, which was a mountain peak of cultural significance to the Assiniboine and Gros Ventre people, is essentially gone, replaced by a huge open pit. Current regulations fail to protect such culturally important sites.

Given its environmental, financial and cultural impacts, Zortman-Landusky has become a poster child for regulatory inadequacy, illustrating how existing regulatory agencies and mechanisms failed to protect the environment and local communities from irresponsible mining.

## **FAILURES OF FEDERAL AND STATE REGULATIONS**

**NO REQUIREMENT FOR CHARACTERIZING THE RISK OF ACID MINE DRAINAGE** - Failure of federal regulations and state laws to mandate testing procedures for acid mine drainage led the Bureau of Land Management (BLM) to conduct only cursory tests that indicated the Z-L mine would be mining in oxide ore. However, it soon became clear that the company was mining in substantial amounts of acid-generating sulfide ores. Today, over 50 per cent of the streams emanating from the mine area have been seriously polluted with acid and heavy metals.<sup>4</sup>

**NEED FOR STRONGER REGULATIONS ON CYANIDE MANAGEMENT** - Nearby communities are justifiably concerned about health impacts of the mine. Besides acid and heavy metals, Z-L has experienced multiple cyanide leaks into the environment since its operations began. In one incident, a ruptured pipe released 52,000 gallons of cyanide solution, contaminating a drinking water well and forcing the shutdown of a community water system.<sup>5</sup>

**LACK OF ENFORCEMENT OF EXISTING REGULATIONS/APPROVAL OF INCOMPLETE MANAGEMENT PLANS** - About half of the Z-L mine is located on BLM land, and the other half is located on patented private land. Until the last proposed expansion, which was approved but not implemented because of the bankruptcy of the operator, all of the approximately one dozen permit amendments and expansions that occurred in the mine's 19 year history were approved under the less comprehensive Environmental Analyses (EA) instead of a full Environmental Impact Statement (EIS). Lack of rigorous environmental analysis before each expansion approval most certainly led to worsening of the environmental problems at the mines.

**NO WELL-DEFINED OPERATING STANDARDS REFLECTING BEST AVAILABLE TECHNOLOGY** - Lack of specific standards on leach pad construction allowed the company to overload its leach pads, undermining their stability and leading to cyanide releases. State regulators actually amended the permit to allow a dangerous overload of the pad in excess of engineered capacity.<sup>6</sup>

Pegasus Gold was also allowed to reclaim waste rock piles at steep slopes that were dangerously unstable and prone to erosion. Soils from these unstable slopes are contaminated with metals, and are easily washed into streams during storm events, impacting aquatic organisms and jeopardizing the long-term success of reclamation.

**FAILURE TO CONSIDER PREVIOUS ACTIONS IN GRANTING APPROVAL OF NEW MANAGEMENT PLANS** - Almost immediately after the historic settlement, Pegasus was granted approval of its request to double the size of its current operation. This approval was given despite the many unresolved environmental problems at the Z-L mine. The decision was challenged on behalf of the Fort Belknap Community Council and Island Mountain Protectors by the Western Environmental Law Center, Montana Environmental Information Center, National Wildlife Federation, and the Indian Law Resource Center.<sup>7</sup>

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<sup>4</sup> Phone conversation, Montana Water Quality Bureau, September 1999

<sup>5</sup> DeRosa, Carlos, *Righting the Regs*, Mineral Policy Center, June 1997

<sup>6</sup> Ibid

<sup>7</sup> Great Falls Tribune, *\$37 millions mine deal draws praise*, July 23, 1996

## **MPC Report: Six Mines, Six Mishaps**

In an important decision in June 1997, the Interior Board of Land Appeals announced that it would not allow any expansion related activities to proceed at Z-L until the lawsuits challenging the pending expansion were resolved.<sup>8</sup> With its troubled history that has included multiple cyanide discharges, acid mine drainage, and violations of environmental quality standards, Z-L should have first demonstrated it could operate in a safe manner before expansions were approved.

**LACK OF ENFORCEMENT OF EXISTING REGULATIONS** - Montana Department of Environmental Quality and BLM share regulatory oversight for the Z-L mine. Responsibility for the poor track record at Z-L rests not only with Pegasus, but also with these regulatory agencies. Despite major environmental problems early on in its operations, Pegasus received only one fine - for \$15,000 - in the first 16 years of operation. With more stringent oversight and stronger regulations, many of these problems could have been addressed and perhaps prevented.

**NO REQUIREMENT FOR GUARANTEE FULL COST BONDING MECHANISMS FOR RECLAMATION** - The Montana Department of Environmental Quality estimates<sup>9</sup> that cleanup and permanent water treatment of the abandoned mine site will cost about \$70.5 million. After several lawsuits seeking bond money from Pegasus and its creditors, the state of Montana holds approximately \$62.5 million in bonds, leaving taxpayers to cover the \$8 million shortfall. Unfortunately, it is likely that taxpayers will be liable for much more. The Ft. Belknap Indian tribes, which border the mine site, commissioned an independent assessment of the reclamation needs and costs at Z-L.<sup>10</sup> According to this assessment, the total bill for treatment and cleanup of Z-L could cost an additional \$60 million. That is an additional \$60 million that the bankrupt Pegasus Gold certainly doesn't have and \$60 million that neither the state of Montana nor the Bureau of Land Management have budgeted for Z-L cleanup.

**LACK OF DISCRETION BY REGULATORS TO PROHIBIT MINING IN ENVIRONMENTALLY, OR CULTURALLY IMPORTANT AND FRAGILE AREAS** - Under current law, BLM regulators did not have the authority to prohibit or limit the operations in order to protect the cultural resources of the Assiniboine and Gros Ventre tribes. Already, Z-L's operations have harmed or destroyed several of the tribes' traditional sacred grounds. BLM also does not have the ability to protect other environmental, wildlife, and cultural values that may outweigh those of hardrock mining.

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<sup>8</sup> Great Falls Tribune, *State fails in bid to dismiss Zortman expansion lawsuit*, July 15, 1997

<sup>9</sup> Montana Department of Environmental Quality Permitting and Compliance Division, *Revised Reclamation Estimate for the Record of Decision, Zortman and Landusky Bond Files*, OP #00095.10 and #00096.10. June 16, 1998

<sup>10</sup> James Kuipers, P.E. for the Ft. Belknap Tribes, based upon the report "Alternative Final Reclamation and Closure Plan, Zortman and Landusky Mines, MT," Center for Science in Public Participation, January 1999.

# ZORTMAN-LANDUSKY MINE

## Mine Profile

**NAME:** Zortman-Landusky Mines

**LOCATION:** Little Rocky Mountains  
Adjacent to Fort Belknap Reservation, northern central Montana

**COMPANY:** Pegasus Gold Inc.

**MINERALS:** Gold and silver

**OPERATING STATUS:**  
1979-1998  
Currently in reclamation

**PRIMARY REGULATORY OVERSIGHT:**  
Montana Department of Environmental Quality  
Bureau of Land Management

**LAND OWNERSHIP:**  
Approximately fifty percent BLM land  
Approximately fifty percent patented private land

**TYPE OF OPERATION:**  
Open pit cyanide heap leach mine

**FOR MORE INFORMATION CONTACT:**  
Island Mountain Protectors: Gus Helgeson 406.673.3385  
Marble Law Offices: Don Marble 406.759.5104  
Mineral Policy Center: 202.887.1872

# GILT EDGE MINE

## A Mountain of Burden

The Gilt Edge, or Brohm, mine located in the Black Hills of South Dakota, is proving to be a mountain of burden to citizens of South Dakota. In July 1999, after 11 years of operation, Dakota Mining Company, the parent company of the operating company, Brohm Mining, declared bankruptcy,<sup>11</sup> leaving a cleanup bill currently estimated to be between \$12 – 15 million.<sup>12</sup> Since the reclamation bond was for only \$6 million, the burden of at least \$6 million is likely to fall on taxpayers.

The Gilt Edge mine is notorious for its environmental problems, violations, and lack of compliance with pollution limits. Since opening in 1988, the Gilt Edge mine has been a source of pollution to nearby waters. It has had cyanide spills and acid mine drainage problems since 1992. Despite all these environmental problems, in 1996 the Brohm Mining Company received approval from the state of South Dakota for an expansion.<sup>13</sup> The company also received approval from the U.S. Forest Service, as 37 acres of its Anchor Hill expansion would be in the Black Hills National Forest. The mine's expansion would have been the first onto federal land in South Dakota.<sup>14</sup>

The EIS for the mine expansion onto public land was completed in November 1997 and the U.S. Forest Service subsequently approved it.<sup>15</sup> However, in early 1998, the Spearfish Canyon Preservation Trust and ACTion for the Environment filed an administrative appeal of this expansion. In February 1998, the Forest Service responded to the appeal by rescinding its approval. This decision was based on the misuse of mining claims for dumping mine waste rock. Despite the outcome, state and federal regulators, given the troubled history of this operation should never have approved the mine expansion. It is now clear that both state and federal reclamation and bonding requirements were grossly inadequate.

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<sup>11</sup> PR Newswire, July 12, 1999

<sup>12</sup> Personal Conversation with Gary Heckenlabile, ACTion for the Environment, August 18, 1999

<sup>13</sup> Lawrence County Centennial, August 23, 1997

<sup>14</sup> Ibid

<sup>15</sup> Press Release, Earthlaw, Western Mining Action Project, and Spearfish Canyon Hills, January 5, 1998

## **FAILURES OF FEDERAL AND STATE REGULATIONS**

### **NO WELL-DEFINED OPERATING STANDARDS REFLECTING BEST AVAILABLE TECHNOLOGY –**

This critical oversight at the Gilt Edge mine has resulted in torn containment liners, poor mine design, and sloppy management practices. As a result, shortly after mining began, cyanide leaked into the groundwater and nearby Strawberry and Bear Butte Creeks.<sup>16</sup>

**NO REQUIREMENT FOR CHARACTERIZING THE RISK OF ACID MINE DRAINAGE–** The lack of adequate testing procedures allowed the Gilt Edge mine to become a source of acid mine drainage. In late 1992, the mine began generating acid, reaching an extreme point between October 1994 and May 1995, when it flowed offsite from the mine's waste piles into Ruby Gulch Creek. The waters of the creek were so dangerously acidic that its pH was measured as low as 2.1. The mine's acid drainage has left local streams unable to support a viable fish population and other aquatic life.<sup>17</sup>

### **NO REQUIREMENT FOR GUARANTEED FULL COST BONDING MECHANISMS FOR RECLAMATION -**

Since the abandonment of the Gilt Edge mine by the Brohm Mining Company and its parent, Dakota Mining Company, left limited financial resources for the site's cleanup and reclamation, the burden of the reclamation will rest with the taxpayer. The South Dakota Department of Environment and Natural Resources has determined that the Brohm Mining Company left \$6 million in cash bonds, less than half the expected cost for reclamation. Thus, the state does not hold enough in cash bonds to fund the cleanup and on-going treatment at the Gilt Edge mine. Will the Gilt Edge mine have the dubious distinction of joining other abandoned mine sites on the Superfund list, leaving a legacy of debt and environmental destruction for future generations?

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<sup>16</sup> Lawrence County Centennial, October, 21, 1994; Lawrence County Centennial, May 13, 1995

<sup>17</sup> Lawrence County Centennial, July 16, 1997; Lawrence County Centennial, June 7, 1995

# GILT EDGE MINE

## Mine Profile

**NAME:** Gilt Edge Mine, also know as the Brohm Mine

**LOCATION:** In the Black Hills, near Deadwood, South Dakota

**COMPANY:** Dakota Mining Company, which announced bankruptcy in July 1999

**MINERAL:** Gold and Silver

**OPERATING STATUS:**

Abandoned - No significant mining activity at this time  
1988-1999

**PRIMARY REGULATORY OVERSIGHT:**

Black Hills National Forest  
South Dakota Department of Environment and Natural Resources

**LAND OWNERSHIP:**

Private Holdings  
Expansion planned onto public lands

**TYPE OF OPERATION:**

Open pit cyanide heap-leach mine

**FOR MORE INFORMATION CONTACT:**

Spearfish Canyon Preservation Trust: Jack Cole 605.584.3778  
ACTion for the Environment: Gary Heckenlaible or Richard Fort  
605.341.4063  
Mineral Policy Center: 202.887.1872

# THOMPSON CREEK MINE

## Playing with Acid?

There was no provision for controlling or containing dangerous acid rock drainage when the Thompson Creek molybdenum mine's operating plan was drafted in 1980.<sup>18</sup> However, 10 years ago, the mine began to show signs of producing acid rock drainage. Now, almost 20 years since the operating plan was drafted, the mine faces potentially serious future problems with acid drainage.<sup>19</sup> Pit excavation is unearthing pyrite (iron sulfide) which mixes with water and air to create acid rock drainage. Acid drainage can kill fish and other aquatic life.

Currently, pyrite is being placed in the waste rock dumps and tailings impoundment, including the tailings dam. Although submerged, the chances of acid rock drainage reaching ground and surface waters are greatly increased.<sup>20</sup> It is likely that this mine will have to be monitored for potential acid pollution of water in perpetuity.

Acid rock drainage is not the only serious environmental threat from the mine. The tailings dam is one of the largest in the world, already holding over 100 million tons of tailings and expected to hold a total of 200 million tons. The embankment of the dam is 700 feet high, spelling certain disaster should the dam fail at any point in the future. Since the mine is only 30 miles from the epicenter of the 1983 Mt. Borah earthquake (measuring 7.3 on the Richter scale) and since the region is subject to harsh winters and intense summer storms, the threat of dam failure is real.<sup>21</sup>

The Thompson Creek mine provides about 8 per cent (18 million tons per year) of the world's supply of molybdenum, which is used to strengthen steel.<sup>22</sup> However, it is located 2,000 feet above and only 5 miles away from Salmon River, a prime recreational river in central Idaho that supports endangered chinook and sockeye salmon, steelhead trout and bull trout.

The state of Idaho, in anticipation of acid rock drainage problems increased the reclamation bond amount to \$2,500 per acre.<sup>23</sup> However, this amount is still insufficient. In case of default by the mining company, it does not protect against the potential cost of restoring water quality in the Salmon River from acid rock drainage. Given that hardrock mining accounts for less than one half of one per cent of Idaho's non-farm employment, some wonder if the risks associated with the mine are justified given the potential environmental impacts.<sup>24</sup>

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<sup>18</sup> Idaho Mountain Express, July 29, 1998

<sup>19</sup> Ibid

<sup>20</sup> Letter to Secretary of Interior, Bruce Babbitt from the Idaho Conservation League, Boulder-White Clouds Council, and other environmental organizations, February 18, 1997

<sup>21</sup> *The Salmon River's Future: It's Our Choice*, Idaho Conservation League, 1997

<sup>22</sup> Post Register, July 21, 1996

<sup>23</sup> Post Register, April 28, 1997

<sup>24</sup> Idaho Economic Forecast, Idaho Division of Financial Management, October 1996

## **FAILURES OF FEDERAL AND STATE REGULATIONS**

**APPROVAL OF CONTROVERSIAL AND INCOMPLETE MANAGEMENT PLANS** - In 1997, the U.S. Forest Service approved a controversial management plan that allowed the dumping of concentrated pyrite into the tailings dam, despite the environmental risks. The Boulder-White Clouds Council submitted a letter to the U.S. Forest Service stating that the plan was never subject to public review under NEPA.<sup>25</sup> The Thompson Creek mine is at risk of developing acid rock drainage because of the amount of pyrite being buried in the tailings dam and waste rock dump. Despite those risks, a new operating plan was approved in 1999 allowing the continued dumping of pyrite into the tailings facility.

**HOLES IN REGULATORY PATCHWORK** – The EPA’s Region 10 office ranked the draft SEIS for the Thompson Creek mine an EO-2 (Environmental Objections – Insufficient Information). Then EPA reiterated many of its prior concerns in written comments on the final SEIS since it believed the U.S. Forest Service had not adequately addressed the concerns.<sup>26</sup>

Consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service was not completed before the Record of Decisions was issued. The USFWS disagreed with the U.S. Forest Service’s Biological Assessment on the effects of the mine on several key species such as the bull trout, the Canada lynx and the bald eagle. The USFWS also requested additional information, indicating a lack of cooperation and communication between the federal agencies.<sup>27</sup>

**LACK OF DISCRETION BY REGULATORS TO PROHIBIT MINING IN ENVIRONMENTALLY OR CULTURALLY IMPORTANT AND FRAGILE AREAS** - The mining company, Thompson Creek Mining, has a pending patent application to acquire public lands within the project area. An EIS is being prepared to amend the permit to address potential major acid mine drainage problems. However, there is great potential to cause serious damage to the nearby streams and tributaries of the Salmon River, a critical habitat for salmon and other wildlife. The risks of acid mine drainage and the potential for a tailings dam failure, especially given the high earthquake potential, and subsequent devastation downstream, should require regulators to seriously reconsider whether it is prudent to mining in the area at all. Current regulations do not allow a mine to be blocked due to its potential adverse impacts on other natural and cultural resources.

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<sup>25</sup> Letter to the Supervisor of Salmon and Challis National Forests signed by Roger Flynn, Esq., Western Mining Action Project, July 1, 1997

<sup>26</sup> Letter to Michael Dombeck, Chief, U.S. Forest Service, from the Idaho Conservation League, April 29, 1999

<sup>27</sup> Ibid

# THOMPSON CREEK MINE

## Mine Profile

**NAME:** Thompson Creek Molybdenum Mine

**LOCATION:** Central Idaho near Clayton, Idaho  
Located on Thompson Creek drainage

**COMPANY:** Thompson Creek Mining

**MINERAL:** Molybdenum

**OPERATING STATUS:**

1983-Present

A new one-year *interim* operating plan approved spring 1999

Permanent operating plan expected after final consultation on Endangered Species Act-listed fish

**PRIMARY REGULATORY OVERSIGHT:**

Challis National Forest

Idaho Department of Environmental Quality

**LAND OWNERSHIP:**

Salmon - Challis National Forest

Bureau of Land Management

Private holdings

**TYPE OF OPERATION:**

Open pit mining

**FOR MORE INFORMATION CONTACT:**

Idaho Conservation League: Scott Brown 208.345.6933

Boulder-White Clouds Council: Lynne Stone 208.726.1065

Mineral Policy Center: 202.887.1872

# GROUSE CREEK MINE

## 1001 Sins of the Past

In 1994, then-Idaho Governor Cecil Andrus reacted to complaints about the Grouse Creek mine, an open pit gold mine opened one year earlier and described as a state-of-the-art mining operation<sup>28</sup> by proclaiming, “*I can show you a thousand sins of the past that we need to clean up, but modern-day mining is a plus. The salmon problem isn’t with mining in Idaho; it’s with those eight blocks of concrete [i.e. Hydro-dams] downstream.*”<sup>29</sup> Next to the largest wilderness complex in the lower 48 states, the Frank Church-River of No Return Wilderness, the defunct Grouse Creek mine, is now the “one thousandth and one” sin of the past. Cyanide is currently leaking from the mine and contaminating nearby Jordan Creek at levels harmful to fish and other aquatic species.

Grouse Creek mine failed not only to be a state-of-the-art mining operation, but also did not produce the predicted amount of gold. It has turned into a potential environmental nightmare. The mine has been plagued with mishaps in its short operation – from a major landslide in 1994, which buried Jordan Creek, to numerous cyanide leaks and spills. One cyanide spill occurred just as adult salmon were migrating into the area to spawn.

In 1996, the EPA fined Hecla \$85,000 for violating the mine’s wastewater discharge permit.<sup>30</sup> Cyanide and mercury discharges exceeded the limits by more than five times the allowed levels over a period of 13 months. Other violations were more than twice the permitted levels. The mine also was cited for excessive sediment leaving the project site and impacting Jordan Creek waters. In 1997, Hecla agreed to make \$1.5 million in pollution control improvements, including building a water quality treatment plant.<sup>31</sup>

In April 1999, Idaho State environmental officials reported cyanide leaking into a stream, which is habitat for endangered chinook salmon, steelhead and bull trout.<sup>32</sup> As of September 7, 1999 the mine is still leaking cyanide into the Jordan Creek despite Hecla’s efforts to stem the flow.<sup>33</sup> The cyanide levels are the same as measured in April and are over twelve times the concentration at which chronic exposure negatively affects fish and other aquatic organisms.<sup>34</sup>

At 7,300 feet elevation, the Grouse Creek mine perches in steep terrain above Jordan Creek. The creek is a tributary to the Yankee Fork, which is in turn a major tributary to Idaho’s famous Salmon River. The Pinyon Lake Tailings Impoundment now holds 450 million gallons of cyanide-laced water. Additionally, there are 4.3 million tons of heavy metals laying at the

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<sup>28</sup> Times-News, *Closed mine still leaks cyanide*, September 7, 1999

<sup>29</sup> The Idaho Statesman, *Mine is golden for economy, but does it tarnish the land?*, September 4, 1994

<sup>30</sup> Wood River Valley News, *EPA Fines Mining Company*, August 28, 1996

<sup>31</sup> Times-News, June 6, 1999

<sup>32</sup> Ibid

<sup>33</sup> Times-News, *Closed mine still leaks cyanide*, September 7, 1999

<sup>34</sup> Ibid

## **MPC Report: *Six Mines, Six Mishaps***

bottom of the dam, which, if exposed to air, could cause acid mine drainage.<sup>35</sup> Oversight agencies are only now working with Hecla on a reclamation plan.

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<sup>35</sup> Conversation with Lynne Stone and Scott Brown, September 1999

## FAILURES OF FEDERAL AND STATE REGULATIONS

**HOLES IN THE REGULATORY PATCHWORK**— Before the project was approved, there was “total opposition to the project because the U.S. Fish and Wildlife Service (USFWS) didn’t think [they] were getting resolution through the Forest Service process.”<sup>36</sup> The USFWS and the Idaho Fish & Game Department both expressed their opposition to the Grouse Creek mine but felt the U.S. Forest Service had “signed off” on the project.<sup>37</sup>

In addition, the National Marine Fisheries Service (NMFS) voiced several concerns on the Draft Supplemental Environmental Impact Statement including water quality and quantity problems and their impacts on the aquatic life, the high potential for acid generation and run-off, and the naturally high rate of erosion at the mine site. NMFS warned there was a “significantly greater potential for acid run-off impacts for a mine of the magnitude of the proposed [Grouse Creek] project.”<sup>38</sup>

Environmental regulations should not allow federal and state agencies to dismiss significant environmental issues, raised by other responsible agencies, such as these.

**NEED FOR STRONGER REGULATIONS ON CYANIDE MANAGEMENT** - The U.S. Forest Service, in its Final Supplemental Environmental Impact Statement, approved the use of cyanide vat leaching and treating the washed cyanide-laced ore for the Grouse Creek mine. The ore, the U.S. Forest Service stated, could then be disposed of without drainage controls.<sup>39</sup> Regulations should require stronger cyanide management techniques.

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<sup>36</sup> The Idaho Statesman, *Mine is golden for economy, but does it tarnish the land?*, September 4, 1994

<sup>37</sup> Ibid

<sup>38</sup> Letter to Greg Johnson, District Ranger of the Yankee Fork Ranger District from Merritt Tuttle, Division Chief of NMFS, on the Draft Supplemental Environmental Impact Statement

<sup>39</sup> Grouse Creek Project, Final Supplemental Environmental Impact Statement – Volume 2, Appendices, May 1992

# GROUSE CREEK MINE

## Mine Profile

**NAME:** Grouse Creek Mine

**LOCATION:** North central Idaho  
15 miles northeast of Stanley

**COMPANY:** Hecla Mining Company

**MINERAL:** Gold

**OPERATING STATUS:**  
1994 - 1997  
The mine closed 5 years earlier than expected

**PRIMARY REGULATORY OVERSIGHT:**  
Salmon and Challis National Forest  
Idaho Department of Environmental Quality

**LAND OWNERSHIP:**  
Salmon and Challis National Forest  
Private holdings

**TYPE OF OPERATION:**  
Cyanide vat leaching

**FOR MORE INFORMATION CONTACT:**  
Idaho Conservation League: Scott Brown 208.345.6933  
Boulder-White Clouds Council: Lynne Stone 208.726.1065  
Mineral Policy Center: 202.887.1872

# MOLYCORP MINE

## From Blue-Ribbon Fishery to Dead River

At least eight miles of the Red River in northern New Mexico are biologically dead.<sup>40</sup> Over the last 30 years, widespread acid mine drainage and heavy metal contamination has leached out of the waste rock piles at the Molycorp molybdenum mine and contaminated the Red River, located within the Río Grande watershed. In addition, there were over 100 documented slurry spills into the Red River<sup>41</sup> between 1986 and 1991 alone, and numerous fines levied against the mining company, Molycorp, for point source pollution involving broken tailings pipes.<sup>42</sup> Even the U.S. District Judge James Parker noted that the once blue-ribbon trout fishery has now been reduced to a biologically dead waterway.<sup>43</sup>

Since this large-scale operations began, the small town of Questa, New Mexico has seen the Red River, just below the mine, turn milky blue in color from aluminum coating the riverbed. Many other toxic metals including copper, zinc, lead, cadmium and silver, have been detected at chronic and acute levels along the twenty-mile stretch of the Red River below the mine.<sup>44</sup> In addition to water contamination, dust containing lead and other pollutants from enormous molybdenum tailings storage ponds blows over the town of Questa. A state High School baseball championship was cancelled due to a dust storm blowing from the tailings piles.<sup>45</sup> Molycorp eventually paid to have the High School relocated. However, after the Junior High School was condemned, it was moved into the abandoned High School.

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<sup>40</sup> 1994 Report on Water Quality and Water Pollution Control in New Mexico. Report Prepared Pursuant to Section 305b of the Federal Water Pollution Control Act. New Mexico Water Quality Control Commission Report, p. 176-177

<sup>41</sup> 1991 Molycorp Inc. Spills Summary Sheet. New Mexico Environment Department

<sup>42</sup> An April 1986 tailings slurry spill contaminated a Questa Acequia Association irrigation ditch designated a watercourse to the Red River. New Mexico Environmental Improvement Division, Letter to LeRoy Apodaca, Molycorp Inc. - Questa Division, April 24, 1986, p.1.

<sup>43</sup> Written opinion of U.S. District Judge James Parker on Amigos Bravos/NMCCAW lawsuit. "I have concerns about the alleged contamination of the Red River downstream from the defendant's (Molycorp) operations. That stretch of the Red River once was an excellent trout fishery. For whatever reason, it no longer is." September 1997

<sup>44</sup> 1998-2000 State of New Mexico 303d List for Assessed Stream and River Reaches

<sup>45</sup> Taos News, 1981

## FAILURES OF FEDERAL AND STATE REGULATIONS

**HOLES IN THE REGULATORY PATCHWORK** - For over a decade, the New Mexico Environment Department (NMED) and other federal and state agencies have documented water quality violations, which have degraded the Red River. For instance, Molycorp violated its federal Clean Water Act permit 12 times between 1978 and 1981, "admit[ted]" to these dozen violations agreed to pay fines as assessed, and to repair its tailings pipelines.<sup>46</sup>

However, Molycorp has continued to pollute ground waters. In November 1998, the NMED notified Molycorp that its mine was in violation of the New Mexico Water Quality Act and Water Quality Control Commission Regulations for illegally discharged pollutants.<sup>47</sup> Molycorp, facing fines up to \$15,000 per day, challenged the NMED's authority to regulate the mine but lost in an unanimous vote before the New Mexico Water Quality Control Commission the following January.

Due in part to pressure from local activists, the EPA in preparation for renewing Molycorp's National Pollution Discharge Elimination System (NPDES) permit in 1998, began its own investigation. In February 1998 the EPA confirmed that Molycorp has been in violation of the Clean Water Act for over 30 years. The EPA released a report stating the waste rock piles at the Molycorp mine are a "point source" (as defined in NPDES regulations, 40 CFR 122.2) for pollution into seeps that drain into the Red River.<sup>48</sup> Although there are some contributions from natural erosional scars, the waste rock piles are contaminating the groundwater with elevated levels of metals and sulfates. In addition, the tailings ponds were shown to contaminate groundwater supplies as well.

Despite this critical report, Molycorp, in the 1998 NPDES permit application, not only does not acknowledge pollution from the waste rock piles but claims that, "the Questa mine has not harmed, and may have improved the condition of the Red River." Still writing the permit, the EPA is being encouraged by environmental organizations and local citizens to acknowledge the waste rock piles as "point source" pollution, as noted in the EPA's own report in February 1998.

**LACK OF ENFORCEMENT OF EXISTING REGULATIONS** - In over 30 years of operation, Molycorp has never had an EPA permit for these discharges. Despite their own condemning report in February 1998, the EPA has taken no regulatory action on this issue by either requiring Molycorp to comply with water quality protection permits or prohibiting the illegal discharge pollution. Since Molycorp continues to operate, violating the Clean Water Act, the Western Environmental Law Center, on behalf of Amigos Bravos and the New Mexico Citizens for Clean Air and Water, filed a lawsuit in March 1999 alleging that the EPA is not fulfilling its regulatory duty. Environmental regulations should penalize repeat offender by revoking permits and banning them from operating new mines and expansion until they have cleaned-up their act.

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<sup>46</sup> United States District Court, New Mexico District, *United States v. Molycorp, Inc.*, No. 81-785-M Civil, Memorandum Opinion and Order, Albuquerque, New Mexico, entered March 26, 1984

<sup>47</sup> 1999 New Mexico Environment Department comments on DP-1055, groundwater discharge permit for waste rock area

<sup>48</sup> Report on Hydrological Connection Associated with Molycorp Mining Activity, Questa, New Mexico. USEPA, Region 6, NPDES Permits Branch (6WQ-P). Prepared by David Abshire. February 13, 1998

# MOLYCORP MINE

## Mine Profile

**NAME:** Molycorp Molybdenum Mine

**LOCATION:** Near the Red River  
Above Questa, New Mexico

**COMPANY:** Molycorp  
A subsidiary of Unocal (formerly Union Oil of California).

**MINERAL:** Molybdenum

**OPERATING STATUS:**

Currently operating underground  
Large scale open pit operations began in 1964  
Small scale mining since the 1920s

**PRIMARY REGULATORY OVERSIGHT:**

New Mexico state agencies

**LAND OWNERSHIP:**

Formerly federal lands  
Acquired by Molycorp through federal land patenting

**TYPE OF OPERATION:**

Underground

**FOR MORE INFORMATION CONTACT:**

Amigos Bravos/Molycorp Watch Project: Ernie Atencio 505.758.3874  
Concerned Citizens for Questa: Roberto Vigil 505.586.0202  
Mineral Policy Center: 202.887.1872

# MIDNITE MINE

## Taken for a Midnite ride?

The Midnite mine, a currently inactive open-pit uranium mine located on the Spokane Indian Reservation in Washington State, has had numerous problems with contamination. In April 1998, the EPA conducted an Expanded Site Inspection (ESI) at the Midnite mine. Elevated levels of metals and radionuclides were detected in numerous on-site sources as well as in ground water seeps that flow into the nearby surface water drainages including nearby Blue Creek. Wetlands at the site have chromium levels above the Ambient Water Quality Criteria.<sup>49</sup>

The operating company, Dawn Mining Company, also owns the nearby uranium millsite facility, which is located on the border of the Spokane Indian Reservation. It is situated next to a tributary of the Columbia River and directly underneath the site is the Walker's Prairie Aquifer. The aquifer has already been polluted by the old uranium mine and is being pumped out to remove radionuclides and sulfates. Expected to last twenty years, this operation uses 100 acres of plastic-lined pools for evaporation.

The Dawn Mining Company has attempted to turn this millsite area into a commercial radioactive waste dump rather than fulfill its cleanup obligations. The company's first plan for the importation of radioactive waste drew fierce opposition from local communities, businesses and the state of Washington itself, which in 1991 denied the company's request for the dump. Pressure from the company to permit the dump was so strong as to be called "blackmail" by the head of the Department of Health's (DOH), Division of Radiation Protection.<sup>50</sup> Then in 1995, a new administration and state Secretary of Health permitted the commercial radioactive waste dump, even though the state's policy limits the amount of imported radioactive waste.<sup>51</sup> The fact that this proposal received approval by regulators is evidence of the shortcoming of the regulatory framework.

In a September 10, 1999 Spokesman-Review article, Dawn Mining Company claims to have abandoned its plan to use its old uranium milling pit as a commercial radioactive waste dump, promising instead to use clean fill for reclamation of the site.<sup>52</sup> Despite the apparent abandonment of the unpopular plan, Dawn's true intentions may be revealed in a September 9 letter from the president of Dawn Mining Company to Washington State's DOH, Division of Radiation Protection.<sup>53</sup> The letter indicates that Dawn intends to dispose of radioactive source

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<sup>49</sup> Direct quote from EPA News Release, *EPA Proposes Midnite Mine (Stevens County) For Inclusion on National Priorities List*, February 16, 1999

<sup>50</sup> Letter to Bob Nichols from T.R. Strong, head of Washington State Department of Health, Division of Radiation Protection on Draft Briefing Paper: Dawn/NORM, April 27, 1993

<sup>51</sup> Letter to Eric Slagle and Dan Silver from T. R. Strong, head of Washington State Department of Health, Environmental Health Programs, Division of Radiation Protection, on the history of Washington State's policy on Radioactive Waste, November 17, 1992

<sup>52</sup> The Spokesman-Review, *Dawn Mining dumps plan to haul in waste*, September 10, 1999

<sup>53</sup> Letter to Gary Robertson, Washington State Department of Health, Division of Radiation Protection, from David Delcour, President of Dawn Mining Company, September 9, 1999

## **MPC Report: *Six Mines, Six Mishaps***

material from their Midnite mine in the dump, instead of just using clean fill, as implied in the newspaper article. Contaminated soils, sludge and mill remains would be dumped with clean fill only acting to “fill the remainder” of the pit and cover the dump site.<sup>54</sup>

Dawn’s letter also explains how a number of “unnecessary and expensive design elements” for the reclamation cover design of the tailings disposal areas will be “eliminated.” These protective measures are discarded by Dawn while simultaneously Dawn states that it wants to continue to look for commercial radioactive waste elsewhere.

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<sup>54</sup> Letter to Gary Robertson, Washington State Department of Health, Division of Radiation Protection, from David Delcour, President of Dawn Mining Company, September 9, 1999

## FAILURES OF FEDERAL AND STATE REGULATIONS

**NO REQUIREMENT FOR GUARANTEED FULL COST BONDING MECHANISMS FOR RECLAMATION** - Newmont Mining Company, the wealthy parent of Dawn Mining Company, claims that it is not financially responsible for reclamation of the mine site.<sup>55</sup> The Department of Interior previously notified Dawn that when the lease was terminated, it, and potentially other agencies, would seek to hold Dawn and the Newmont Mining Company (as Dawn's then 51% owner) liable for any costs incurred as a result of Dawn's failure to comply with the lease and applicable regulations.<sup>56</sup> Despite the fact that Dawn was required to post a \$9 million bond for the mine, there is speculation that this has never been posted. If this is true, then why was Dawn accepted as a contractor in good standing with the federal government and allowed to bid on Formerly Utilized Sites Remedial Action Program (FUSRAP) contracts for commercial radioactive waste while delinquent in providing the bond?<sup>57</sup>

**LACK OF REGULATION TO ENSURE COMPLETE RECLAMATION** - The disposal of imported radioactive dirt or source materials from the Midnite mine site could set a dangerous precedent for other mining companies who would promote similar disposal schemes instead of proper and complete reclamation. Full reclamation of the Midnite mine without the use of funds generated by importing and dumping radioactive dump is possible, but so far has not been considered as an option by either the Dawn Mining Company or the Newmont Mining Company.

In February 1999, the EPA proposed that the Midnite mine be included on the National Priorities List (NPL) in order “to prevent further environmental harm from mine waste, contaminated ground water and surface water runoff from the mine.”<sup>58</sup> If added to the NPL, the site will be eligible for clean up under the federal Superfund program.

Recent considerations by the U.S. Nuclear Regulatory Commission to expand the Dawn low-level radioactive waste dump into an industrial waste dump have additional concerns. Disposing of wastes other than 11e.(2) byproduct material can only compound the potential for pollution, and complicate necessary monitoring and cleanup from additional toxic pollutants with potentially unknown or poorly understood synergistic effects.<sup>59</sup>

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<sup>55</sup> U.S. Securities and Exchange Commission, Newmont Mining Company, Form 10-Q, CIK Code 71824, August 16, 1999

<sup>56</sup> Ibid

<sup>57</sup> Personal Communication, Owen Berio, September 6, 1999

<sup>58</sup> EPA News Release, *EPA Proposes Midnite Mine (Stevens County) For Inclusion on National Priorities List*, February 16, 1999

<sup>59</sup> Letter to the U.S. Nuclear Regulatory Commission's Commissioners, from W.D. Travers, Director of the USNRC's Office of Nuclear Material Safety & Safeguards. SECY-99-012, April 8, 1999

# MIDNITE MINE

## Mine Profile

**NAME:** Midnite Uranium Mine

**LOCATION:** Spokane Indian Reservation  
Approximately eight miles from Wellpinit, northeastern Washington

**COMPANY:** Dawn Mining Company (DMC), a subsidiary of Midnite Mines  
Majority interest in DMC held by Newmont Mining Corporation

**MINERAL:** Uranium

**OPERATING STATUS:**  
Late 1950s to 1981

**PRIMARY REGULATORY OVERSIGHT:**  
U.S. Department of Interior  
Bureau of Indian Affairs  
Bureau of Land Management  
EPA

**LAND OWNERSHIP:**  
Spokane Indian Reservation

**FOR MORE INFORMATION CONTACT:**  
Dawn Watch: Owen Berio 509.937.2093 [www.dawnwatch.org](http://www.dawnwatch.org)  
Mineral Policy Center: 202.887.1872

## THE WAY FORWARD

The federal government has a legal obligation to prevent unnecessary and undue degradation of our public lands. Lands of pristine beauty and rugged natural settings. Lands of abundant wildlife and majestic vistas.

Today, rather than being protected, our public lands are threatened by the mining of gold, copper, silver, and other hardrock minerals. Open pits and waste rock piles have scarred the landscape. Toxic waste from active and abandoned mine sites has contaminated our surface and groundwaters - threatening wildlife habitat as well as local drinking water supplies.

How could this happen? The answer is inadequate environmental regulation. From the antiquated Mining Law of 1872 and a weak patchwork of state regulatory programs, to the vague hardrock mining regulations utilized by the Bureau of Land Management, current laws and regulations fail to provide the necessary oversight of hardrock mining on public lands. Consequently, irresponsible mining has devastated the landscape, as exemplified by the mines described in this report. It doesn't have to be this way.

The Department of the Interior's Bureau of Land Management (BLM) is the manager of the largest share of publicly owned land in the United States. The government's authority to regulate mining's environmental impacts on BLM land is found in the Federal Land Policy and Management Act of 1976 (FLPMA). Under FLPMA, the Secretary of the Interior is directed to "take any action necessary, by regulation or otherwise, to prevent unnecessary or undue degradation on the federal lands." In carrying out this mandate, however, the Secretary must adhere to the weak hardrock mining regulations contained in Section 3809 of the Code of Federal Regulations (43 CFR 3809). Published in 1981 when James Watt headed the Department of Interior, these regulations are outdated and ineffective. In fact, when first published, it was expected that these regulations would need to be updated to keep pace with future technology and practices.

Frustrated by this ineffective regulatory instrument, Secretary of the Interior Bruce Babbitt initiated a process in January 1997 to update and revise the "3809" regulations. Despite exhaustive public comment and involvement from all stakeholders, industry advocates in Congress have blocked or delayed the rule making process at every opportunity.

Many critics of the Department of the Interior's proposal to revise the "3809" regulations argue that the states adequately regulate the environmental impacts of hardrock mining on federal land. Thus, these critics argue that the federal government should defer to the states in regulating mining's impacts on these lands.

However, state regulatory programs mirror many of the worst flaws of federal regulations. State laws are riddled with exemptions for small-scale mining, provide inadequate systems of inspection and monitoring, and fail to require mines to do baselines studies or characterize environmental risks before they begin mining. Few states mandate that mining operations on

federal land follow proven "best available technology standards" for operating and reclaiming mined land.

The lack of consistency among state programs is an additional risk to public lands. Most states, including Arizona, Montana, New Mexico, Nevada, and Alaska have inadequate reclamation laws. However some states are more progressive on certain issues. California and Nevada require operators of proposed mining projects to analyze the acid generating potential of their wastes, and Arizona imposes some "best available demonstrated control technology" operating standards at its mines.

In the end though, the inconsistent level of environmental protection provided by state programs is not an adequate substitute for a strong federal regulatory program that sets a clear standard for environmental protection of our federal lands. The level of environmental protection accorded to public land should not depend on state boundaries. Rather, the American public should be assured that regulation of mining activities on any public lands would conform to a consistent set of high standards. Federal authorities, through appropriate regulations, must therefore establish a high level of performance and operating standards that all states must meet. Certainly protection of federal lands must rest squarely with federal authorities, for they alone are entrusted with a duty to all Americans to "prevent unnecessary or undue degradation" on our public lands.

Although many industry actors are indeed well intentioned, regulations are not written for the good actor. They are written for those who have mishandled the spill, walked away from the cleanup, showed disregard for community impacts, or polluted the streams.

*6 Mines, 6 Mishaps* is a case-study examination of the costly environmental impacts caused by the current state and federal regulatory patchwork, and the irresponsible actors that slip through its holes. *6 Mines* is by no means an exhaustive study of the problem mines and environmental degradation caused by hardrock mining. Rather, it provides an overview of the types of problems that have occurred at specific mines due to weak laws and regulations. (For Mineral Policy Center's *Essential Elements of Regulatory Reform*, see the chart on page 30-31) In the process, it demonstrates that no matter the good intentions of responsible elements of industry, no matter the commendable elements of various state regulatory regimes, the current system does not work.

## ESSENTIAL ELEMENTS OF HARDROCK

### *HOW TO PREVENT "UNNECESSARY AND UNDUE*

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#### PROTECT WATER QUALITY

Baseline hydrological data must be required using sound sampling methods. Pre-mining water quality must be determined prior to the proposed disturbance. Ongoing water monitoring should be required.

Guidelines must be specified for identifying and managing potentially acid-generating materials.

In order to protect water resources, all mine applications that require significant long-term water treatment after mine closure, should be denied. The operator must guarantee that water treatment after closure will have the desired result within a specific period of time. Perpetual treatment of water should not be allowed.

Reclamation bonds should cover the full cost of complying with water quality standards.

#### FINANCIAL GUARANTEES

Bonding must be adequate, liquid, and independently guaranteed. No corporate guarantees or self-bonding should be allowed as a substitute.

Bonds must cover the full cost of complete reclamation and closure. Bonds should be required for all long-term water treatment and returned only when the need for water treatment ceases.

All NEPA alternatives should include a full and detailed analysis of the form and amount of bonding. Additionally, the public should have the right to comment on the adequacy of financial guarantees and whether bonds should be released.

Bonds should not be released until it can be established that a mine will meet all water quality standards in perpetuity.

#### CITIZEN INVOLVEMENT

There are a number of steps to mine approval including exploration and data collection, permitting, bond calculation, operation, reclamation and bond release. The public has a genuine interest in each of these stages. Public input should be allowed and encouraged at each step.

Citizens often have information, insights, skills and energy that can assist the Bureau of Land Management (BLM) in carrying out its mandate to prevent unnecessary or undue degradation. Furthermore, by soliciting public input on mining operations on public lands, BLM can avoid and defuse controversies.

# MINING REGULATORY REFORM

## *DEGRADATION” OF PUBLIC LANDS*

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### NOTICE MINES

The ability to avoid submitting plans of operations and participating in the NEPA process via the “Notice Mine” exemption should be eliminated. Small mines under the “Notice Mine” provisions, and mines that do not cause "significant disturbance" under the U.S. Forest Service alternative, escape the NEPA process. However, both types have the potential to create unnecessary or undue degradation, and both are abused today with regulatory acquiescence.

### INSPECTION AND ENFORCEMENT

The Secretary of the Interior should take the enforcement authority that he has under the Federal Land Policy and Management Act (FLPMA) and bring it to life under new BLM 3809 regulations. This should include using civil and criminal penalties for those who violate the new regulations. BLM should be required to issue cessation orders and revoke permits when certain infractions or violations occur.

Citizens should have the right to petition for inspection and enforcement in order to spur the BLM into fully implementing its FLPMA obligations.

“Bad actors”, and their corporate affiliates, must be blocked from operating on public lands.

### TECHNOLOGY AND RECLAMATION STANDARDS

A standard must be established that will drive the industry to use the most efficient and successful technology available to protect the environment. In other regulatory arenas, setting technology standards has driven improvements in environmental performance without causing significant losses of productivity. Mineral Policy Center recommends that BLM use, at a minimum, a Best Technology Standard to improve environmental performance at modern mine sites.

At a minimum, standards for the health of public lands must address: (1) watershed function; (2) nutrient cycling and energy flow; (3) water quality and quantity; (4) habitat for endangered, threatened, or special-status species; and (5) habitat quality for native plant and animal populations and communities.

## APPENDIX A: CONTRIBUTORS (IN ALPHABETICAL ORDER)

Ernie Atencio  
Amigos Bravos  
Questa, New Mexico  
*Molycorp Mine*

Owen Berio  
Dawn Watch  
Springdale, Washington  
*Midnite Mine*

Scott Brown  
Idaho Conservation League  
Boise, Idaho  
*Thompson Creek Mine, Grouse Creek Mine*

David Chambers  
Center for Science in Public Participation  
Boulder, Montana  
*Zortman-Landusky Mine*

Gary Heckenlaible and Dick Fort  
ACTion for the Environment  
Rapid City, South Dakota  
*Gilt Edge Mine*

Jim Kuipers  
Center for Science in Public Participation  
Boulder, Montana  
*Zortman-Landusky Mine*

Lynne Stone  
Boulder-White Clouds Council  
Ketchum, Idaho  
*Thompson Creek Mine, Grouse Creek Mine*

## **APPENDIX B: PRESS ARTICLES**

- 1.) Billings, Erin P., *State Bonding: Miners offer assets to pay reclamation*, Billings Gazette, August 31, 1999
- 2.) Editorial, *Miners offer regulators some hard lessons*, Missoulian, August 29, 1999



## ▼ STATE BONDING

# Miners offer assets to pay reclamation

By ERIN P. BILLINGS  
Gazette State Bureau

HELENA — The owners of a closed gold mine near Lewistown have offered the state thousands of acres in mineral claims instead of cash to cover increases in pollution cleanup costs at the site.

CR Kendall Corp. of Golden, Colo., owned by Canyon Resources Corp., has proposed putting up some of its 900,000 acres in surface and mineral rights across the state as collateral to cover increases on the reclamation bond at its Kendall gold mine. The company said it decided to offer up assets because of tight cash flow.

"At this point the gold business is very tight," said Conrad Parrish, environmental manager of the Kendall mine. "We have to look for ways to fulfill obligations that aren't necessarily the traditional ways."

The Montana Department of Environmental Quality now is reviewing the existing \$1.9 million bond for reclamation at Kendall and trying to determine how much more will be needed to complete cleanup work. Officials have estimated that as much as \$3.7 million more might be needed to reclaim the mine site and cover long-term water treatment.

The Kendall mine was a cyanide heap-leach operation that ceased operating in 1995.

Jan Sensibaugh, administrator of the department's Permitting and Compliance Division, said the state hopes by next month to have determined how much more money will be needed for the reclamation bond. Also, it is reviewing the value of CR Kendall's mineral rights to determine whether they would be a valuable enough asset to replace cash.

Reclamation bonds are held as an assurance mine cleanup gets completed. The bond is rarely tapped unless a company goes belly up or cannot complete the reclamation itself and the state needs the money to do the work.

Sensibaugh said the state has yet to accept a company's mineral rights as collateral for a metal mine reclamation bond, but has some leeway in doing so.

"As far as I understand it, the DEQ has the flexibility to accept anything as a bond," Sensibaugh said. "We have in some cases, not under the Metal Mine Reclamation Act but under the Open Cut Act, accepted vacant property or a house, things like that."

"The problem is assessing the actual value of what is offered as a bond when it isn't cash."

But Bonnie Gestring, community organizer for the Montana Environmental Information Center, said CR Kendall's offer could be the "fleece of Montana." She said not only should the state stay out of the real estate business, but she questions whether it is even legal to accept the mineral claims in lieu of cash.

"It's MEIC's position that state law prohibits the DEQ from accepting assets that devalue over time and with good reason — to protect the Montana taxpayer," Gestring said. "Clearly

## Mine

From Page 1A

mineral rights and surface rights fall under this category with the continuing plummeting price of gold."

The Montana Environmental Information Center has filed a formal intent to sue the state if it doesn't review and increase the Kendall mine reclamation bond in a timely manner.

The state now is analyzing CR Kendall's offer and trying to determine whether the mineral rights could be sold. The mineral rights would only be marketed, however, if Kendall couldn't finish the reclamation work itself.

"We don't want to take something that has a theoretical value and then can't pay the guy on the bulldozer," Sensibaugh said. "We're being careful to ensure this is what it's exactly worth and we aren't

going to take anything we don't feel we could sell if we needed to."

Parrish said the idea would be to get the mineral claims back with the rest of the bond after the company completes reclamation at the mine. About two-thirds of the work at the site has been reclaimed, he said.

He said under the deal, the state likely would pick and choose what claims it would hold on to, rather than the entire 900,000 acres worth.

"We're not proposing that the state hold the entire lot as collateral," Parrish said. "We'll settle on a bond amount, settle on the valuation and then settle on which lands from among that package the state would hold for collateral bonding purposes."

Gestring, however, said if the mining company is looking for creative ways to fulfill their pollution cleanup obligations, it should simply sell its mineral and surface rights and give the state the cash.

# A6

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 MIKE MCINALLY ..... EDITOR  
 STEVE WOODRUFF ..... EDITORIAL PAGE EDITOR  
 SHELLE NELSON ..... ASSISTANT NEWS EDITOR  
 MEA ANDREWS ..... ASSOCIATE EDITOR

# Opinion

■ The Missoulian strives to present to readers a wide range of ideas from a diverse array of writers. Missoulian Editorials express the views of the newspaper's Editorial Board. Signed commentary, columns, letters and editorial cartoons represent the independent views of the authors. Comments and suggestions always are welcome.

## MISSOULIAN EDITORIAL

# Miners offer regulators some hard lessons

In a matter of months, the contractor appointed to maintain water-treatment facilities at the defunct Zortman-Landusky gold mine south of Malta completed the annual budget for the work. For now, the state of Montana has taken over, and taxpayers are footing the bill for work needed to control water pollution.

### SUMMARY:

Reclamation laws were supposed to usher hard-rock mining into a new, more responsible era. But reclamation isn't exactly assured.

Lawyers for the state got another \$1 million for reclamation from the bankruptcy court overseeing reorganization of Pegasus. Optimists at the Department of Environmental Quality hope the money will stretch far enough. You should hope they're right: You and your neighbors will make up

any shortfall. All in all, the state is counting on nearly \$80 million worth of bonds to ensure cleanup at five Pegasus mines.

Pegasus' bankruptcy has been an eye-opening experience for state regulators. Among the lessons learned:

■ It's a mistake to assume the companies that develop mines will stay around — or even exist — when it comes time to clean the mines up.

■ Reclamation plans that presume miners will reclaim their own mines understate the actual cost when miners go out of business or skip out.

Everything becomes more expensive when the state has to hire contractors for the work.

■ Reclamation bonds required to ensure cleanup may not be worth as much as expected. At least some of the insurance companies that issue reclamation bonds would rather fight than pay, forcing the state to rack up legal expenses or accept lesser settlements.

Case in point: Safeco Insurance went to federal court in June to cancel a \$500,000 bond for reclamation at the Diamond Hill mine near Townsend. The state went to court to prevent the company from canceling the bond; the company wound up paying the \$500,000 — but has since sued the state to get the money back.

Bonds are supposed to guarantee money for reclamation if a mining company fails to honor its

commitments. But regulators say they're learning that, with large sums of money at stake, at least some companies that issue bonds will exploit any possible opportunity to avoid paying. As a result, DEQ has adopted a no-nonsense, see-you-in-court approach in dealing with bond companies.

State laws enacted more than 20 years ago to better regulate the mining industry were supposed to usher hard-rock mining into a new, more responsible era. But as the first mines developed under the new laws start to play out, reclamation is turning out to be anything but assured. Look hard around the state, and you won't find a single example of a large-scale hard-rock mine successfully reclaimed.

"Unfortunately, we're not at the point where you can show the citizens of Montana that everything works the way it's supposed to," says DEQ Director Mark Simonich.

Earlier this year, DEQ battled the mining industry and persuaded the Legislature to make a key change in the administration of reclamation bonds. Regulators now will review the adequacy of bonds at least annually; previously, bonds were subject to review once every five years.

Simonich says various state agencies also are trying to do a better job of coordinating different aspects of mine regulation.

"We have learned a great deal," he says.

Unfortunately, those lessons have been learned the hard way.

Taxpayers and the environment aren't the only losers when reclamation plans go awry. Miners haven't done their industry any favors, either. Mining is controversial enough, even when people focus on jobs and profits. Leaving citizens of the state with big messes and big bills to pay after the mines play out is a good way to wear out your welcome.

In this regard, hard-rock miners would do well to emulate their coal-mining brethren.

Thirty years ago, coal mining was hugely controversial in Montana. Ranchers, environmentalists and others feared that strip mining on a massive scale would leave areas of eastern Montana looking like West Virginia.

You don't hear a lot of discouraging words about coal mining today, though. That's largely because coal miners have done a splendid job of reclaiming strip mines. Coal miners have established a track record of which they are proud, and the public is satisfied.

The story is completely different when it comes to hard-rock mining. The record of hard-rock mine reclamation in Montana is one of broken commitments and public disappointments. Until this changes, hard-rock miners will find themselves embroiled in constant controversy.



# SIX MINES, SIX MISHAPS

## *Six Case Studies of What's Wrong with Federal and State Hardrock Mining Regulations, and Recommendations for Reform*

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Today's highly mechanized and chemical-intensive mining industry requires a new set of federal environmental regulations. Mining techniques have outpaced regulations that were written prior to the widespread use of modern technology, such as cyanide heap leach processing and large open pit mines. These new techniques have led to environmental impacts that the old regulations, written nearly 20 years ago, were not meant to address. While some states have updated their regulations, no state has a comprehensive set of regulations that is adequate to protect federal public lands.

Over the past three years there has been significant debate about the need to modernize the Bureau of Land Management's mining regulations. What is needed is a federal baseline regulatory standard, on which states can base their own regulations. This standard should explicitly prohibit practices that cause undue degradation on public lands. As the trustees for the public lands, the federal and state agencies have a responsibility to protect our lands for future generations, not leave a legacy of poisoned waterways and fragmented landscapes.

*6 Mines, 6 Mishaps*, is a case study analysis of six mines from around the United States, anecdotally demonstrating where existing regulations have failed to protect the environment and communities from unnecessary degradation. The report outlines what essential elements are needed for comprehensive hardrock mining regulatory reform.

## MINERAL POLICY CENTER

Mineral Policy Center (MPC) is a non-profit environmental organization dedicated to protecting communities and the environment from the impacts of irresponsible mining. The Center programs and activities include mining-related research; public outreach; regulatory and legislative reform of mining laws; initiatives to improve company practice; and technical assistance and community organizing. MPC is supported by membership and foundation grants. Join MPC and help protect the land, water, wildlife, and natural resources for future generations. Donations are tax deductible. Mineral Policy Center, 1612 K Street, NW, Suite 808, Washington, D.C., 20006 Tel: 202.887.1872 Fax: 202.887.1875 E-mail: [mpc@mineralpolicy.org](mailto:mpc@mineralpolicy.org) Web address: [www.mineralpolicy.org](http://www.mineralpolicy.org). MPC also has two regional offices in Durango, Colorado and Bozeman, Montana.

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