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COMMON GROUND

Keynote Address at Minerals Council of Australia 24th Annual Environmental Workshop and 4th International Conference Townsville, Queensland 11 October, 1999 by Dr. Terry Mudder

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It is customary for humans to use familiar periods as milestones for the purposes of reflecting upon the past and speculating about the future. The combination of the end of the 20th Century and the millennium has provided the grandfather of all milestones. At such a moment, it is difficult to find the words that no one will likely remember. A thousand millennia ago modern humans appeared by simply standing up. Scientists considered this act such an achievement and amazing event that new scientific classifications were created. The fossil record gave us examples throughout the world. These human variations are our common ancestors, which provide us footing on common ground.

Humans began making tools, weapons, and ornaments, from which came agriculture, hunting, art, and unfortunately war. The materials they used lay on the common ground at their feet. Humans had only scratched the surface of the Earth, but in a crude way were mining. Mining actually appeared about eight millennia ago, when copper was first smelted. By that time humans had invented the wheel and domesticated animals. About three to four millennia ago, the Iron Age started and metals were being mined in Britain. During this time, the alphabet was created, Stonehenge was erected, the Great Pyramid was build, and Chinese invented everything else. Humans had the means and motivation to advance and progress. We could extract metals from the Earth and *mold them into form with function*.

For the next several millennia, the history and vision of man were clouded by repetitive cycles of pestilence, starvation, natural disasters, crusades, and wars. These were the Dark Ages, medieval in nature. Humans were evolving rapidly into their present day form. I prefer to term this time as the Age of Mysticism. Then about a millennium ago, "zero" was formally introduced into mathematics. Humans had "nothing" to lose. One could now "count" on humans to expand on an unlimited basis on both sides of the

decimal point. From this point on humans began exploring and applying the underlying principles of nature, known as Science.

Humans discovered their common ancestry and destiny. Humans looked around the planet not across it and peered into the heavens. Soon humans were entering the Age of Reason and Enlightenment, also know as the Renaissance. While the metals were being forged at our mines, the foundations of science were being forged in our minds. For the next few centuries, we explored the world and expanded our knowledge. We discovered the elements, along with their chemical and physical properties. Using a combination of mining, metallurgy, and manufacturing, we began changing our world. We were gaining knowledge and wisdom. Keep in mind, there were only millions of humans on Earth. There was still unlimited room and resources. The last three centuries of this millennium I call the "Age of Tinkerers and Thinkers." The two humans that best illustrate this Age are Thomas Edison and Albert Einstein. These two humans exemplify the attributes of perspiration and perception, and the conflict between need and desire. The perspiration of Edison gave us the phonograph and light bulb. The perception of Einstein have us relativity and atomic power. Common to both, was mining and metallurgy.

This last century of the 1,000th millennium of modern man has been the best and worst of times. Our worst moments have been the wars and the detonation of the atomic bomb. Knowledge without wisdom can be dangerous. The dividing line between insanity and genius is far less than we think. Our greatest common achievement as humans was go to and return from the moon. This technological achievement required all of our most positive attributes as humans. For the first time, we left our ancestral home on Earth and ventured into the cosmos. For a moment, a thousand millennia paused, and humanity was united as one.



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PRESIDENT'S CORNER

Paul Jones, Royal Victoria Minerals Ltd.

CHALLENGES TO THE MINING INDUSTRY: A QUICK-AND-DIRTY OVERVIEW OF THE BAIJA MARE DAM

F. W. DeVries, Chem-Mining Consulting, Ltd.

The following is a guest article was written by a past NWMA Trustee and respected expert on cyanide chemistry. It is one of the few first hand reports by a mining person not associated with the project in question. While the conclusions are the author's and not the official position of NWMA, they certainly provide some food for thought.

When Australia's "60 Minutes" called on Feb. 19, inviting me to serve as a technical member of their crew to report on the dam-breach/cyanide spill in N.E. Romania, which had occurred late January 30th, I decided to go to provide cyanide background, mining-industry perspective, and possibly to perform a little damage control.

My time was limited to one calendar day at the site; no opportunity occurred to learn technical details of the operation, and the beleaguered Site Manager was under advice-of-counsel to provide few facts. Not being an expert on dams, the author's remarks must be taken as relatively untutored observations, subject to later exceptions as the full story becomes known.

It is said that the dam failed without warning* and released 100,000 cubic meters (3.5 million U.S. gallons), containing 100 Tonnes of cyanide. This calculates to 1 gram/liter, or 1000 ppm. The manager felt the bulk of the material was lost in the first rush, although additional leakage went on for 60 hours. The water flowed downhill along a roadway next to the impoundment, through a 20 to 30 meter breach, into either one or two small rivers that ultimately join the Tisza River, perhaps 30 km inside northeastern Hungary, flowing about 250 km to the southern border of Hungary, and about 100 km into Serbia, where the Tisza joins the Danube perhaps 70 km above Belgrade.

Numerous fish kills were reported, as were abnormally high cyanide levels in

the Tisza as far downstream as 50 km southeast of Budapest. The operators of the site have questioned whether the fish died as a result of cyanide exposure or from other, mainly weather-induced occurrences. First reports were that "all fish perished in the Tisza River." This author was able to put the cyanide concentrations reported into context for the reporting crew, including the unlikelihood of any mammalian deaths from cyanide after the first wave.

Indeed, although a river analysis of 1 mg/liter cyanide was reported as 10 times the potable water specification, a fatal dose for a human would have required the instantaneous ingestion of 100 liters – an unlikely gulp! Some bird deaths were reported, which will require further investigation, as U.S. experience indicates birds would be very comfortable swimming in such waters. HOWEVER, the concentrations at the outfall into the Tisza River may have been substantially higher, and the location of the dead birds was unclear**. Major public concerns are on restoration and will focus on heavy metals that may have accompanied the spill – everyone seems to know the cyanide is long gone! The Tisza River and a lake partway downstream are vacation/fishing sites for Hungarians.

This member of the reporting crew had to state that this event was an extreme embarrassment to the world of mining and was intolerable. Indeed, it behooves well-positioned members of the industry to echo these sentiments within a

reasonable time-frame. The restoration of confidence in ALL dams becomes a major challenge.

It is hoped that the mining world will intrude itself into the investigation of the incident, to determine why the dam failed. Then, some standards of design, construction, operation, and monitoring can be drawn up, and dams at mines around the world can be examined and given either a clean bill-of-health or an action plan for reassuring the general public that a recurrence of the Baia Mare breach is not going to happen in anyone else's back yard!

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*A sudden thaw, following severe winter ice/snow accumulation, was given as the overt cause. The water release was likened to a 35-year precipitation event. No contingency plan was described for removing excess accumulation of water from the impoundment. This was the first winter of a projected 7-year tailings rework project.

The impoundment of 94 hectares was to become the final site of old tailings that had accumulated in the center of the city over many decades of local mining for base and precious metals. It is reported to be 7 km from the rework leach, on the edge of town.

**Birds would be unaffected from eating fish that died of cyanide – cyanide doesn't propagate up the food chain.



Reserved Seat

by James Nelson

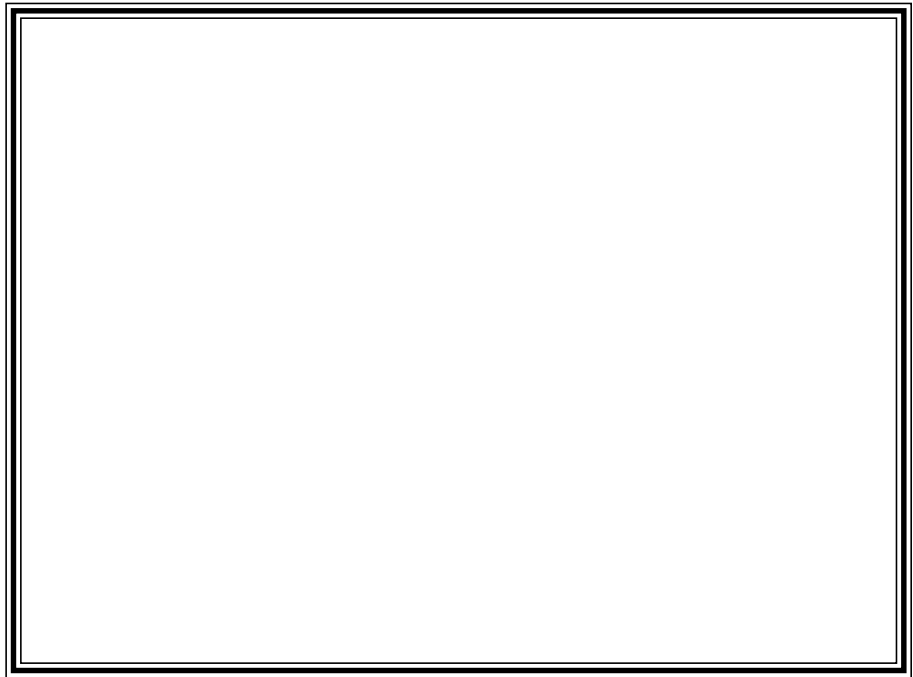
My grandfather's rocking chair was made of oak. It was straight-backed without arms and complete with a scruffy brown leather seat. On one side where the seat met the back, it was held together with bailing wire. This chair enjoyed a special place of honor in my grandfather and grandmother's home, a stately house with pillars on the porch and ivy stretching across the front.

The chair sat in their living room close to a large black, pot-bellied wood burning heating stove. No one sat in this chair but grandpa. It was his and his alone. Sort of like a throne, humble in its simplicity, in honor of all the labor he had performed throughout his life - first as a farmer, then as a hard rock miner and ending up digging ditches for the local gas company. The only jobs he ever had in his 78 years were all associated with mother earth and a pick and shovel. Yet he always provided food, clothing and shelter for his wife and 12 children without complaint, often being away at the mines for months at a time. He never owned a car and had little except the simple pleasures of life, and the love and respect of his family.

Grandpa worked the mines in the Wallace and Kellogg area of Idaho. Two of these mines were the Starr and Galena mines. It was a physically demanding job and a rough place to live. Grandpa & Grandma and their 12 children lived in an extremely narrow canyon near the mines where Grandpa worked. The canyon was so narrow that when the daily train came into town, the stores along the main street had to pull up their store awnings. Years later I would see pictures and read stories about Burke Canyon in history books.

Mom said her job as a small girl was simple. When Grandpa got home from the mine all tired and dirty, she was given fifty cents and sent to the corner saloon to get him a tin bucket of cold beer. It was a nice walk and if she got home without spilling too much of the golden liquid, she got to keep the change - Mom said she never ran. She ended her story with, "Before the train went back down the canyon, Grandma would have to bring in the wash from the line, so it wouldn't be carried off when the train went by.

Another favorite story of mine was about the time Grandpa was in a mine cave-in. The cave-in broke his leg, which ended up in a cast. Grandma said Grandpa got so mad when he had to stay



Grandpa Robison center with wife and children circa 1932

home from work that he took a hammer and broke off the cast so he could get back to the mine. Grandpa would smile, saying, "I only did it because I wanted a cold bucket of beer after a hard day's work." Grandma told him to "Hush, there were grandkids listening."

I never ceased to wonder at the steel nerves of this man. The soft canvas hat he had worn in the mines would have offered him no protection in case of falling rock. The small carbide lantern attached on it's front would have produced very little light in the damp, dark tunnels in which he worked. These mementos and others became my playthings while I was growing up. As well as part of my fond memories of this man.

I remember so vividly as a child, watching him rocking in his chair at the end of the day, the only time he had to sit in it. In the evening, the twilight shadows would slowly creep across the living room's linoleum-covered floor eventually creating only a silhouette of this kindly man, while the flames inside the wood stove, reflecting through its tiny window, danced upon his weathered features. The crackling and popping of burning tamarack only added to his mystique as he slowly rocked back and forth, causing the gold nugget on his watch fob to glisten in the flickering firelight.

I always waited with anticipation for that slight squeak I knew would come

from the rocker's wired joint as he completed his backward motion. In my mind, it added character to his melodic rocking, wump-wump-squeak..

He never sat in his chair for long before Susie, his German shorthaired pointer, who never pointed at anything except her dog dish, would be at his side. She knew it would only be a matter of time before his hand would reach out and find her head with his soft touch. This dog, whom he often referred to as "that old pot hound" always looked up at him with adoration and wagging tail, knowing full well she would be sleeping by his bed that night.

This scene is etched in my memory forever, along with my love for him. Every child should have the opportunity to develop a bond with his or her grandfather. After all, he is an extension of his or her own life.

The only time his chair was moved was on Saturday night. He would take it to the front room and set it next to a small table radio, encased in a beautiful maple cabinet. There he would rock and laugh incessantly at the satirical humor of two of America's favorite comedy giants, Amos and Andy. I believe today's counterpart could best be described in the humor of characters in the comic strip, *Doonesbury*. The rest of the family would end up retreating to the living room so they wouldn't have to hear him say in his gruffest voice, "Shush now, I'm trying to listen."
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“Without mining, metallurgy, and materials science there would be no physical achievements, only those of the mind.”

We had reached a pinnacle of human development, but ironically with little space and time to spare. Central to the success of the early space program, was mining and metallurgy to produce the specialized elements and materials needed to handle the extremes of space. The concept that lying in the common ground at our feet were the individual elements that once recombined in a different manner could

take us to the moon is cosmically spiritual. The list of achievements and advancements in science, engineering, and medicine in this century is staggering. Without mining, metallurgy, and materials science there would be no physical achievements, only those of the mind. Some would say this is the true way to Enlightenment. Others would say that the many inventions have only made us softer and weaker. **Regardless of one’s outlook, our survival has and will always be dependent upon mining.** Our constant companions through evolution have been mining and metallurgy, their products finding application on both sides of good and evil. No matter our direction in the future, mining will be there. Metals and minerals will continue to be taken from the Earth. Like early humans, we have only scratched the surface. The quantity of metals and minerals taken from the Earth over time represent only a minute fraction of the total available. A common bond between humans and Earth was, is, and will always be mining. A few see the inspiration in this bond, while most see only the impacts.

No one seems to mind that we mine, but how, where, and why we mine are the issues. Mining is our ambassador to the Earth and our initial interface with our planet. The mine itself is the consulate. Some are offended by mining because of our reliance upon it and the minerals and metals taken by it. Some are offended because we must physically take the metals and minerals from the Earth. Some feel a strong spiritual bond with the Earth like mother and child. Mining is an affront to that bond and that relationship. However, it is irrelevant to attack mining

on the basis that it will be eliminated as an industry. We can and have altered the methods of mining, but we will not abolish it. Nevertheless, we have not set the best example of how to approach and communicate with the Earth. If civilized cultures and societies curtail mining due to environmental incompatibility, the resources will be obtained elsewhere at a much higher price, both environmentally and economically. We are becoming dependent upon sources of metals and minerals located in many diverse and sometimes unstable political and social situations.

We can and must have respect for each other. The lack of respect leads to mistrust. Once trust is lost all is lost. We must strive to view the Earth and our surroundings through the eyes of others. Human evolution has transitioned into the Human Race, and has remained so ever since. Due to our near-sightedness, transitional periods in our development are often marked by confusion, stress, and irrational behavior. Humans do not respond to change willingly. There is a natural tendency to resist science and knowledge in favor of mysticism and conjecture. How many times have you heard someone make the statement “it works like magic.” We are creatures of convenience and slaves to our modern rituals. Nature maintains the rational view. Man on the other hand is driven by emotion and by some hidden guilt to extreme compassion. **Nature is not compassionate or judgmental and does not recognize the individual.** It only recognizes the whole as a sum of bits and pieces. Nature itself is much more resilient than one might imagine based upon the recovery of Yellowstone Park a decade after fire destroyed 50% of the forest and Prince William Sound a decade after the Valdez went aground. It is very disheartening to have witnessed the demise and denouncing of science in many instances. **Science is often trivialized in many cases and reduced by policy decisions to a series of three-letter acronyms.** Science is the language by which humans communicate with nature. Science is universal and neutral. Its laws cannot be broken, although many seem “bent” on breaking them.

As we approach the new millennium, I sense a return to the Age of Mysticism. The world seems somehow smaller but

more dangerous because most humans do not want to understand scientific principles, and how they apply to and effect their daily lives. When asked the source of electricity, many point to the wall socket. **When asked the source of food, many point to the supermarket. The situation worsens with mining. The Achilles Heal of a free society is an uninformed public.** The only tool by which to fix this tendency is education. Sadly, the educational process in civilized cultures is moving away from the objective and toward the subjective. The evolutionary fulcrum point lies heavily on the side of the “feel” of the situation rather than the “facts” surrounding it. Science in many ways has become irrelevant. The demise of communism and the rise of computers have left a cultural vacuum that will be filled rapidly, but hopefully not by the hot air of politics. In the age of computers, silicon and electrons have replaced steel and elevators. We can measure parts per billion, move billions of bits of information in a billionth of a second, but we cannot grasp the big impacts of billions of people. Talk of sustainability becomes lost in the ever-demanding voices of overpopulation.

The original environmental movement provided the necessary momentum to bring about a consciousness about mining. Tremendous strides have been made in cleaning up and protecting the environment. I am thankful we found a common consensus and did not remain unconscious. The global mining community is responding to these sensitivities. The number of major hard rock mining projects placed into operation in the United States in this decade can be counted on less than one hand. The permitting process has become a stagnant cycle of studies, statements, and statutes. No level of environmental protection is enough. Humans are no longer relevant. More regulation, more review, and more rhetoric are sought. Mismanagement, fear, and lack of knowledge have contributed to the historical impacts of mining. Now fear has become more marketable than

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knowledge. The ability to implement appropriate corrective actions, standards, and criteria in the mining industry is not limited by technical knowledge. The recent focus on bird mortality and establishment of appropriate protection standards and strategies is an excellent example of industry response to an environmental problem. **The application of technical knowledge is limited primarily by the agenda of a few, and a bureaucracy driven more by politics and litigation than science and engineering.** The adversarial three-way relationship that has developed between industry, regulatory agencies, and environmental groups has circumvented the ability of scientists and engineers to practice the art of “problem solving.”

The current losers are the stockholders and stakeholders, while the future losers are our children. The manner in which to address the impacts of humans are not by trying to eliminate them from the landscape through legislation and litigation. **The ideological concepts of “zero discharge, zero impact, and zero risk” are naïve and unworkable, and will not eliminate the global impacts of humans.** Humans cannot and will not live and work in zero risk environments. We must consider as partners the stockholders and stakeholders. The stockholders who invest their hard-earned dollars in a copper instead of a computer company. These stockholders are our clients. The stakeholders are the local citizens in a mining community. We must win their hearts and minds before we can mine. The devastation of the rain forests, concerns of over global warming, the poaching of thousands of endangered animals each year are not the result of mining, but the result of human indulgences and extravagances. The Industrial Age has given way to the Information Age. Although science has become irrelevant, somehow it will save us. The Internet and the Web are perceived as the saviors of the new religion of information. Many equate speed with truth. Regurgitating outdated information at light speed will not improve its accuracy or move all the mineral deposits from the sensitive ecosystems to the dark side of the moon. In spite of the fact humans are not perfect and make mistakes, there are no substitutes for us. No computer can come close to the ability and speed of

the human mind to accept, process, and apply information in an integrated manner to form knowledge. There is no substitute for the human mind. I am suspect of many aspects of the information revolution. I am afraid we will drift further apart in the Silicon Sea, and become even more detached from one another in our faceless monitors. We will become more dependent upon computer speed and less dependent upon common sense. With each new method of communication, we create another barrier between ourselves.

In some respects, humans have given up on learning, because the quantity of information and knowledge seems involves letting others “handle it.” Learning is a process of finding information, identifying its source, and verifying its validity. Everyone wants the fast buck, the fast cars, the fast way to the top. The faster we communicate and move, the shorter our vision becomes. It is no longer a century its only a second. We demand bio-diversity but struggle to maintain our individualism as the world population expands by more than one hundred million humans per year. In the next century, humans will strive to define their relationship to one another and to again find some common ground and a common purpose. Many if most of the conflicts we encounter personally or globally relate to the desire to be recognized among the masses. In the next century, we will enter the Age of Reality, both virtual and actual. The availability and applicability of virtual reality will affect our lives to levels never thought possible. Politics will become somewhat passe due to the uncontrollable nature of the Internet. We will be overwhelmed by over population. We will cure the most dreaded medical illnesses, only to discover ignorance and apathy our greatest social diseases. China will become a Superpower. Our thirst for energy will nearly exhaust it and us. We will land humans on Mars. There will be more wars and natural disasters.

The next century will bring a continuous blending of global thinking and culture. Provincial and colloquial diversity will diminish among humans. However, the tensions of religion, race, and politics will persist due to the need to establish our individuality and maintain our identity. The reality for western culture and developed nations in the next century will be to keep their

life styles and maintain the aging infrastructure of the late 20th Century. In the emerging and developing countries, the reality will be to get a life style. Infrastructure and not the Internet will dictate our budget concerns. We are consumed with consuming. Yet, over one quarter of the world’s population will face severe water shortages in the next 25 years. Nearly a half a trillion dollars will be needed in the United States in the next century just to upgrade existing wastewater treatment facilities. Just to maintain basic infrastructure and our life styles will require all the additional capital available. The environmental movement has created the awareness needed and action followed.

“The average home is getting larger, not smaller. Yet, we must not cut down any more trees. We can no longer see the trees for the forest. The demand for metals and minerals goes up several per cent each year, and yet the majority of Americans say they are environmentalists”.

It is time to move on to more pressing and immediate global issues like overpopulation, disease, and starvation. Back to the basics and our common goals. We must again understand that we do stand on common ground. If additional advances in environmental protection are desired, then humans must make real personal sacrifices and must be willing to give up extravagances, like multiple vehicles and larger homes. In the United States, the average number of humans per vehicle in major metropolitan areas remains just over one. The average home is getting larger, not smaller. Yet, we must not cut down any more trees. We can no longer see the trees for the forest. The demand for metals and minerals goes up several per cent each year, and yet the majority of Americans say they are “environmentalists.” **Since development and progress are acceptable, but not the environmental impacts, the approach has been to take mining on the road to other countries. If this approach leads to exploitation, than the environmental hypocrisy is not justifiable.** We must look in the mirror and reflect upon these decisions.

The time has passed for rhetoric, now is the time for realism. We must understand that humans create things

Common Ground (Continued)

and in that process, we are unfortunately wasteful. Technology has limitations. The solution lies in the common ground of identifying and balancing the ecological and environmental factors into a sustainable “ecolibrum”. We must think globally and act locally as was said in conjunction with first Earth Day. It is unlikely we will eliminate our wants and waste, but we can learn to limit them through cooperation and communication, as we transition into the new global ecolibrum. Difficult decisions will have to be made by citizens in free societies. If a free society is to succeed, the electorate must be informed. In the Age of Information, ignorance is intolerable. With personal freedom comes a tremendous responsibility to be knowledgeable. Be informed, ask questions, taking nothing for granted. This is the message to our children. As citizens of planet Earth, we must take on personnel responsibility for educating and informing ourselves. We will be held accountable for our actions or inaction in one way or another. Humans have become arrogant as they have progressed. We want our cake and eat it too, although what we need is a little humble pie. If it were not for an errant lasted hundreds of millions of years. I wonder if humans can endure. There are inherent levels of risk in natural systems. We cannot eliminate them. In the complex cosmic interplay of destiny and free will, there is little that we have control over. It seems the more advanced we become, the less time we have and less freedom of choice we exercise. I sometimes wonder what is really meant by advancement and progress. If we lose the common bonds and ground that holds us together as humans, we will lose the shared dreams for a better future.

Australia is now a leader in the world with respect to environmental issues in mining. Many scientific advances in mining have originated in Australia. But with that leadership comes responsibility and accountability. The recent financial and social changes in Southeast Asia have demonstrated that clearly. Australia has changed in many ways during the last decade of this century. I sense a greater cohesiveness and sense of purpose amongst its people. For most of this century, the United States has been the actual if not the virtual leader in many areas, but no longer. In the next century that will

change and there will be many leaders. **The development of a philosophy like the Code for Environmental Management is critical to the global mining industry.** Without acceptance and implementation, it is only words. All of themes that I have discussed are found in the Code including responsibility and accountability, education and communication, ethics and integrity, and honesty and respect. However, if one of the signatories does not adhere to the Code in all countries and at all operations, then the entire process is meaningless. Verification is needed through monitoring and auditing of some form.

We have an ethical and professional responsibility to the stakeholders and stockholders as well. A project is far more important than the final report. I challenge individuals in and around the industry to embrace the principles of the Code. Keep in mind that this is a beginning and that we must learn to crawl before we walk and walk before we run. We must have patience but not become complacent. Nonetheless, what about mining in the new millennium? The mining industry must address some outstanding issues. These issues revolve around aesthetics, sustainability, environmentalism, communication, technology, and closure. Aesthetics has become an issue with the advent of surface and open pit mining, and concerns raised by native peoples. Active mining operations are not generally appealing from a visual standpoint and only limited approaches are available to make them so. Consequently, aesthetic concerns transcend operations to become a closure issue. The mantra of sustainability is constantly with us. The extractive industries do remove non-renewable resources. However, sustainability has as much to do with the pace of extraction as it does with the extent. We should focus on larger long-term deposits to maximize economics and to minimize the environmental impacts of operations and closures. As more and more countries reach developed status, the cyclic demand for metals and minerals will diminish. Profit margins will shrink and become more reflective of other industries. Geological deposits are where they are and are often in sensitive areas. If humans do not want to mine in sensitive areas, then the public must pay the price for exploration and



development of mines based upon marginal deposits. As more and more countries enter the development stage and population grows unchecked, sustainability transcends a discussion of resource extraction alone. The risks due to mining are acceptable when compared to its benefits. **We do not and cannot live in a risk free world. Timber, Energy, Agriculture, and Mining, are the core industries essential to our political, economic, societal foundations. Without these industries and their respective resources, modern societies cannot endure.** This is the message that those in opposition to progress will inevitably come to recognize as true.

For the mining industry itself, it is time to recognize that the tail wags the dog with respect to environmental issues. Environmental and process goals must merge into a seamless plan of operations and closure. Environmental concerns carry equal weight with process issues. It is time the industry recognizes these facts. The environmental professional at a mining operation is constantly torn between policy, politics, perception, and the public. It is a very difficult job balancing safety, environment, and production. Central to the environmental theme is communication and compromise. This industry must act as one. If we as an industry do not conduct ourselves in the appropriate manner, the public will demand that someone else do it for us. We know that scenario does not work when that someone else is the government or lawyers. I hope we can prove we have nothing up our sleeves before we lose our shirts. The mining industry has not conveyed the message to the public. We need to open our doors and hearts to the public. We must

Common Ground (Continued)

challenge the public to learn and provide them the means. The mining industry and other organizations have not provided the level of environmental and economic education necessary. Our community relations typically exist only as needed. We must reach out and bring the public to us. We must win their hearts and minds before we can mine.

Mining is truly a global endeavor. No other industry has operated longer on more continents, in more countries, in more cultures, and in more climates than mining. Miners are often the first foreign diplomats entering a country. We must take on that responsibility humbly and seriously. Obviously, we have been doing something wrong, based upon the poor perception of the industry. Progress is being made in addressing the legitimate environment concerns of the public. The perception of the mining industry is one of pirates, imperialists, capitalists, and opportunists. We earned that reputation with too many examples to mention. The process and mechanisms are in place to accommodate the future. The transition into the future is the issue. We as humans are failing again getting from the past to the future. The mining industry sees the caterpillar, while the public and the environmental community see the butterfly. None of us understands metamorphosis.

From a technical perspective, there are three issues. These issues relate to water management, waste rock disposal, and physical stability. If we cannot get these issues right, we will not be allowed to mine. Water management and water quality during operations and at closure is the central issue. Perpetual water treatment is not a suitable long-term alternative from either an environmental or an economic standpoint. A water balance means a water balance. **Central to the water quality issue is the characterization and control of acid generating materials. If we cannot legitimately dispose of these materials without long-term protection of water quality, then we should not mine.**

The generation of acid mine drainage is the number one environmental issue in this industry with respect to the public. Proper characterization and commitment to the management and disposal plan is critical. This approach should include those situations in which the government is willing to relax the standards considerably. Ethics should

take precedence over economics. Not every mineral deposit is amenable to mining. I hope that this statement does not come as a surprise to anyone. The geotechnical issues relate primarily to the integrity of natural and synthetic liners and the stability of embankments. We often hear that a particular dam failure was the result of out-dated design strategies. However, in recent years the only dams failing are modern ones. We cannot ensure that disasters of this kind will not occur because of human error. If we can get these three technical issues right, the level of risk is acceptable. There should be no tolerance for incompetence or mediocrity among the professional consulting industry. As an aside, I feel that this problem could be alleviated if the senior professionals re-established the relationship between Mentor and Apprentice.

The final item is closure because of its relationship with long term environmental and economic implications. Although we know how to close mines, we often close our minds to the costs. Although we have the knowledge to deal with the technical issues, can we find the wisdom to apply it. Closure requires innovation, integration, and implementation. The consultants must produce the innovative solutions. The governmental agencies must provide the regulatory flexibility to implement the solutions. The mining industry must pay for the integration of the solutions. The entire closure process relies upon these three entities to communicate, coordinate, and cooperate. Recognition of the problem and implementation of a solution are the issues. The mining industry is not judged by the promises it makes during permitting, or met during operations, but those maintained after closure. **We must view mining as a entire cycle of permitting, operations, and closure.** We must not and cannot condone the abandonment of mines with the result being the stakeholders and stockholders "holding the bag and picking up the tab".

We must address closure during the planning and permitting phases of a project. **In many instances a failed operation could have been successful and made a profit if closure had been considered at the beginning.** The most difficult aspect of closure is the transition from mining known as decommissioning. We must come to grips with

metamorphosis and come to see the caterpillar and the butterfly as one. In the final analysis, we cannot predict the future. All we know is that change will occur more rapidly and we will no longer have the luxury of anticipating it. Therefore, we must learn to adapt quickly in order to survive as an industry and as humans. The older I become the more I seek the refuge of the basics. **I will sail into the future with my heart as my compass, science as my tiller, and the truth as my map.**

Still, we must still find humor in being humans. I bet that laughter is our greatest single attribute. We really need to lighten up figuratively and figuratively. As you gaze around at the beautiful natural and man-made surroundings of this conference be aware that mining made it possible for us to safely and comfortably gather here. As we are listening to or delivering a presentation during the conference, let us take the information seriously, but not ourselves. Take the time to share ideas and thoughts. Remember we are all in this alone and we all walk around on common ground. Thank you.

Eight States Grant Tax Relief

Jennifer Leinart with Western Mine Engineering reports that eight mining states provided some form of tax relief, and none raised mining taxes in the last twelve months. "Typically, the states will go after industry profits when they are high, and then back off a bit when profits sag," observed Leinart, who just completed a survey of U.S. mine taxation.

States that lowered severance taxes included Arizona, Colorado, New Mexico and Wyoming. Property or income taxes were reduced in Colorado, Minnesota, and North Carolina. Assorted fees were adjusted downward in Missouri and Montana. Such adjustments indicate that state legislators recognize that local mining companies are not thriving in the current robust economic climate. **For more information contact Jennifer at 509/328-8023.**

Taking taxpayers to the cleaners

EPA Horror Story

Reprinted with permission from the April 3-9, 2000 issue of The Northern Miner

If the “cleanup” of the Summitville gold mine in Colorado speaks for the competence of the Environmental Protection Agency (EPA), then be afraid for the environment and your pocketbook. Be very afraid.

Terrified for years, we’ve devoted plenty of ink to the EPA’s shameless display of incompetence at Summitville. We’ve repeatedly criticized its wasteful spending and dubious remediation measures that exacerbated site conditions, as well as its arrogance in rejecting offers of assistance from the mining industry. Last year, we concluded that the agency had managed the job with about as much finesse as the Keystone Cops.

As it turns out, that was an understatement. The EPA’s handling of the Summitville fiasco was a horror story from start to finish, far worse than anything we had ever imagined. It’s so bizarre as to be almost unbelievable.

Newly released evidence undermines the EPA’s claim to be the hero of Summitville, as well as its long-standing claim that Robert Friedland — the founder of Galactic Resources, the company that built and operated the mine — was the sole villain responsible for an environmental apocalypse that (according to media reports) killed fish and polluted local rivers.

Although the EPA spent US\$130 million at Summitville, newly released court documents suggest that the firm contracted to do the “cleanup” extended the exercise to taxpayers’ wallets. The documents allege that as much as US\$75 million “was the result of outright fraud, bid-rigging, billing irregularities, overstatement and over-billing of costs, and manipulative contracting practices.” The firm, Environmental Chemical Corp. (ECC), is being investigated for irregularities at other cleanups across North America and in the Persian Gulf. A related company (owned by the same family) was convicted of felony bribery of EPA officials at another site in 1995, and was forever debarred from government contracting.

The EPA didn’t release this information willingly; it was obtained by Friedland’s lawyers after considerable effort. However, by this point it was common knowledge that ECC had caused considerable damage at the site, owing

to its egregious lack of technical competence. How it ever got the job in the first place remains a mystery.

In light of this damaging information, the U.S. government and the state of Colorado reduced their request to recover costs to US\$41.7 million from US\$130 million. They also decided to name seven additional companies as targets of cost recovery.

This sad story isn’t over yet. If the case ever goes to trial, the federal and state governments will have a tough time proving the validity and the necessity of the actions initiated by the EPA after it took over the site from a bankrupt Galactic in late 1992. In fact, a compelling case can be made that government incompetence turned what could have been a manageable environmental problem into a runaway disaster.

To set the stage, Summitville was not mining’s finest hour. Construction was hurried and bungled, there were major engineering mistakes and design flaws (including a critical water balance error), and it never made a dime. Summitville was a mine that should never have been built.

There is also no doubt that the mine degraded the water quality of nearby watersheds, but, because baseline studies were not required by state regulators before Summitville was permitted, no one knew what the proper water standards were, or should be, or how to take into account contamination from past mining and reactive geological features. Bureaucrats were deaf to pleas that the water standard, Class I fishery, was clearly inappropriate for waters downstream of the mine — water that, owing to past mining and natural contamination, was never of suitable for fishing.

The problem became a crisis when the state’s Water Quality Control Division (WQCD) refused to alter its unreasonable standard governing the quality of waters flowing from the site. Had it done so, Galactic would have been able to discharge excess water from its heap-leach pads after treatment to remove cyanide and metals. Instead, it had to treat the same water over and over again because it was unable to meet the effluent-dissolved silver limit set by the WQCD, which was more stringent than drinking water standards. It has since been suggested that the silver concentrations

could not have been accurately measured because of matrix interferences. In any event, **Galactic was pushed into bankruptcy after spending millions trying to meet water quality standards that nobody, including the EPA, has been able to meet.**

Aghast at what was happening, several mining companies and industry groups offered to help the cleanup effort at their own expense. However, the EPA wanted a sizable sum posted up-front as a bond against any environmental damage related to the volunteer effort. The companies were given thirty days to raise US\$20 million, which proved to be an impossible task.

The mining companies were even more aghast by the EPA’s initial remedies. **In the fall of 1994, the Colorado Mining Association publicly questioned the wisdom of plugging adits and putting waste rock into the mine pits (at fees three times the going rate), all of which exacerbated, not reduced, acid rock drainage.** It also pointed out that water that exceeded water-quality standards was being discharged from the site.

The CMA also questioned why most of the contractors used by the EPA had “little expertise in mining,” and why the EPA wasn’t doing proper studies and following its own rules. The EPA defended its early work at Summitville as “an emergency response” to the situation. However, this defense was challenged even by environmental groups monitoring the cleanup. The EPA ignored warnings by the U.S. Geological Survey and plugged old tunnels and adits, with disastrous consequences. Instead of a ‘point source’ of acid mine drainage (the case before plugging), there are now many non-point sources of toxic water that are difficult or impossible to identify, collect and treat.

The real tragedy of Summitville is that so few lessons have been learned, including chilling ones about human arrogance and incompetence. This sad saga has few heroes, least of all the EPA and Colorado’s WQCD.

The press also failed to serve the public well, repeating rumors attributing the loss of aquatic life to cyanide contamination. The evidence shows that the

Continued on page 11



Reserved Seat (Continued)

Before I was tall enough to reach the top of their back gate I would stand there looking through the wire, watching for him to come home from work. I could see him coming blocks away, walking briskly, his worn, shiny lunch box under his arm. I eagerly waited his arrival as we had this little game we always played. I knew he had saved his dessert from lunch for me, and as he came through the gate, I would ask, "Did you save anything for me?" He would grin, look down at my outstretched arms and hand me the lunch box saying, "I don't know. You will have to look inside." I would open the lid slowly, knowing full well the dessert would be there and it always was. I learned later in life that Grandpa packed two desserts in his lunch when I visited. So he wouldn't go without.

The deer-hunting trip that sticks in my mind the most was a four-day affair with Dad, Grandpa, two uncles and me. Grandpa was in charge of bringing all the food and planning the meals. Our first night at camp he placed a big plate of bread and beans before us. The next morning at breakfast we also had beans and bread. By this time we were all wondering what he would provide for dinner that night. Sure enough, it was beans and bread. Finally my Dad asked, "Are beans and bread all we're going to get on this four-day hunt?" Grandpa looked at him sternly and said, "We didn't come up here to eat. We came up here to hunt." Nothing more was said.

In the summer he always wore a full brimmed straw hat, that came to a pointy peak on top of his head. The green eyeshade sewn in front of the brim would cast a soft green hue over his eyes giving him a grandfather's gentle look, as we toiled together in his small garden.

Most of all, I'm fortunate to have to memory of Grandpa gently rocking in his chair with Susie at his side. **He was gruff, yet gentle, and in his rocker, represented so much more to me than just a grandpa. He stood for hard work and sacrifice for his family, not to mention the great role model he presented to all of us.** These thoughts are always accompanied by a warm feeling whenever I see an old, straight-backed armless rocker with a brown scruffy seat. I really hope some day to find one with baling wire holding one of its back joints together. It will happen. We didn't have many years together - he left us when I was 12. But all of them were packed with adventure and learning. We went on hunting and fishing trips, and took long walks and had long talks. Most were filled with grandfatherly wisdom and advice. It's unfortunate so many children grow up today without a grandfather's strong influence.

Yes, I always puff up a little with pride as I remember the man I have always striven to be like. My namesake, Grandpa Jim.

Hazel Hoefft Departs

Hazel Hoefft has left the association after 21 years of loyal service to NWMA members. She is pursuing a new career in providing services to dental and medical offices. Hazel helped NWMA grow from a relatively small regional organization, to a nationally recognized and respected mining industry leader.

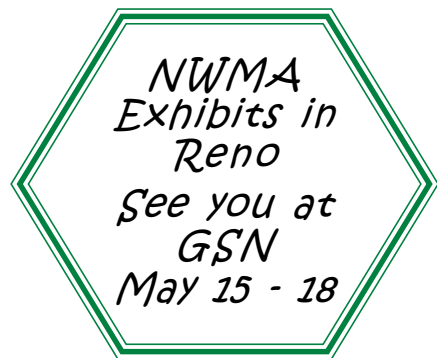
"I will miss talking with all the members I have come to know over the years," she said, "But I won't miss working the convention!" However, **Hazel has promised to visit the annual meeting and reminisce with all her friends in the mining community.** Everyone at the Association wishes Hazel the best in her new endeavors.



Kellie Bjurman Arrives

Members calling the NWMA office will now be hearing the voice of Kellie Bjurman, our newest staff member. Originally from Ohio, she found her way to Spokane thanks to a rich uncle. Kellie is an Air Force veteran, where she was an ordinance expert. She served in Germany, Turkey, and Saudi Arabia supporting missions over Iraq and elsewhere, prior to being returned stateside. Her husband Kevin is currently stationed at Fairchild AFB. This background apparently

gave her the ability to handle the fast-paced situation that is the norm at the Association offices without showing the least sign of stress. In addition to acting as our receptionist, her duties at NWMA include database management and administrative support. We welcome Kellie to our ranks.



MEMBERS ON THE MOVE (literally)

* **Caterpillar** pulled the advertising coup of the year (we are still trying to avoid the which-century-are-we-in debate) by getting Car & Driver magazine to "road test" their new 797 haul truck. The results? Zero to 30 in 27.1 seconds, 400 ton capacity and a 40 mph top speed, thanks to a motor putting out over 3,400 horsepower, plus a surprisingly (to them) comfortable ride.

* The **Doe Run Company** was named supplier of the year for 1999 by Federal-Mogul Corporation, a major supplier of parts to the auto industry based in Detroit.

Abuse of Power - Management of Public Lands by Executive Fiat

The Shameful Legacy of Bruce Babbitt/John Leshy

Secretary of Interior Bruce Babbitt and his scoff-law solicitor, John Leshy, have turned our Constitution upside down. They clearly have different views about the role of the executive branch, especially unelected bureaucrats, than the framers of our Constitution. A defining principle of our government is separation of powers. Congress, as the elected representatives of the people, make the laws and set public policy, and the executive branch is to administer the laws in accordance with Congressional intent. Unfortunately, for the American people, especially those of us who live in the public land states of the West, this administration is deliberately ignoring this principle with an “end justifies the means” approach to governing.

In 1999, Secretary Babbitt was quoted in the National Journal: “We’ve switched the rules, we are not trying to do anything legislatively.” **Secretary Babbitt’s approach to public land management is that of a king or dictator and threatens the very foundation of our freedoms.** The author, judge, jury and executioner of Secretary Babbitt’s policies is Solicitor John Leshy, who is using executive fiat, solicitor opinions and rulemakings to arbitrarily and capriciously make fundamental changes in the Mining Law and public land management. His abuse of power is unprecedented. **He has “crossed the line” between lawful and unlawful behavior. Solicitor Leshy needs to be reminded that he is a hired attorney and legislating and setting public policy are not his jobs.**

This administration seems to have a single-minded determination to end the domestic mining industry and turn our public lands, which Congress has mandated be managed for multiple-use, into lands of no use, museum dioramas, with the people on the outside looking in.

Here are a few of the most recent examples:

1. The November 7, 1997 mill site opinion, which arbitrarily and capriciously changes 125 years of interpretation and practice of the Mining Law. The retroactive application of this opinion to Battle Mountain Gold’s Crown Jewel Project was so outrageous that Congress passed a law prohibiting Interior from applying the opinion to the project and ordering the ROD reinstated and the Plan of

Operations approved. In his zeal to make the Mining Law unworkable, the Solicitor mischaracterized the results of a survey of state BLM offices in testimony before a Senate subcommittee. The mischaracterization was so egregious that US Senator Larry Craig, during floor debate on November 19, 1999, accused the Solicitor of committing perjury before his Senate committee, and then documented it by cross referencing the Solicitor’s testimony with the surveys from the state offices. The Solicitor’s opinion means no new mines; and, if applied retroactively, means the end of hardrock mining on the federal public lands.

2. The 43 CFR 3809 bonding rule that was declared invalid in *Northwest Mining Association v. Babbitt*, was the subject of two Congressional Oversight Hearings and resulted in the House Resources Committee publishing a report entitled “Abuse of Power: The Hardrock Bonding Rule.” Documents subpoenaed from Interior indicate that one of Secretary Babbitt’s appointees, David Alberswerth (formerly with the National Wildlife Federation), ordered BLM staff to publish a final bonding rule that mirrored NFW comments from 1992 that he had signed. This order came after BLM staff advised that the final rule was so different from the proposal that the APA required a new notice and comment period and the Regulatory Flexibility Act required an analysis of the impacts on small businesses.

3. The 43 CFR 3809 rulemaking, a/k/a “back door mining law reform,” which has attracted more Congressional oversight and involvement than any DOI rulemaking ever. It has generated unanimous opposition by the Western Governors’ Association and 5 amendments to appropriation bills to force Interior to include the Western states, good science and the people in the process. Yet the Solicitor’s arrogance seems to know no bounds as he issues a December 8, 1999 memorandum telling the BLM that they are not bound by the National Academy of Sciences’ findings when they promulgate a final rule despite Congressional language requiring that final rules be “not inconsistent with” the NAS recommendations.

4. The Proposed Rule on Locating, Recording and Maintaining Mining Claims. While purporting to be an

insignificant rulemaking to bring the rules into compliance with the 3 year extension of the claim maintenance and filing fees and a change in the small miner waiver, the rule would **codify the mill site opinion** and make significant changes in longstanding interpretation and administration of the Mining Law. We have been told that the mill site language and the comparative value language was added by the “Secretary’s office” after the required Executive Order and Regulatory Flexibility Act analysis were conducted. The net effect would be to give BLM the right to say no when Congress has said yes.

5. The December 27, 1999 Solicitor’s Opinion purporting to give the BLM the authority to deny a Plan of Operations for Glamis Gold’s Imperial Project if BLM agrees with an Advisory Council on Historic Preservation finding that the proposed mine would “unduly degrade” religious, cultural and educational values important to the Quechan Tribe. This finding was arrived at even though the mine footprint is not on tribal or reservation land, and is in an area that was declared open for multiple use and mineral exploration and development following the California Desert Conservation Area review in the early 1990s. The “values that the proposed mine would degrade are not physical in nature, but impacts on “religious view sheds” caused by mine dumps and the impact of the mine on the “setting and feeling” of the area. Taking this opinion to its logical conclusion, there is not one single square foot of land in the West that is not vulnerable to being declared “sacred” by a tribal member, and thus, no mining would be allowed. Again the Solicitor seeks to give BLM the discretion to say no where Congress has said yes. One might argue that this opinion raises serious Establishment Clause issues.

6. The Solicitor’s Opinion issued April 16, 1999, interpreting the National Park Organic Act to give the Secretary power to regulate activities outside park boundaries that “derogate the values and purposes” of the affected park. More tortured reasoning from Mr. Leshy. This opinion was issued specifically to give the Secretary the authority to stop Doe Run Mining Company from prospecting on acquired lands in the Mark Twain National Forest,

Abuse of power (Continued)

in the heart of the Missouri lead belt. However, the language of the opinion is much broader and we likely have seen the last of it.

7. The creation of more than 2.5 million acres of new National Monuments in Utah, Arizona and California under the Antiquities Act since 1996, along with the withdrawal of more 2.3 million acres from mineral entry in 1999, all without meaningful public, state or congressional input. Using the management proposal for the Grand Staircase-Escalante National Monument (no mining, no oil and gas exploration, no motorized recreation, no roads) as a template for the future, you have a clear pattern of turning our public lands into museum dioramas and monuments without visitors.

8. The Secretary's decision to review the IBLA decision in the *U.S. v. United Mining Corp.* case to **determine if the comparative value standard under the Building Stone Act applies to the discovery of a valuable mineral deposit under the Mining Law.** In other words, more administrative mining law reform by giving the BLM the ability to say no where Congress has said yes.

9. The Excess Reserves opinion which is being used to invalidate mining claims associated with industrial mineral production on the grounds that there is no present market for reserves beyond 40 years. Thus, the mining claimant fails to meet the marketability test for a discovery.

10. Companies entitled to receive patents under the continuing moratoria must sue the Secretary to force the issuance of a patent.

Unfortunately, it is likely to get worse before it gets better. Secretary Babbitt has threatened to recommend more monuments if Congress doesn't give him what he wants.

We the people, especially people living in western rural resource dependent communities are suffering the consequences of the most lawless administration in the history of our country. It is time for us to unite and tell Congress to stand up and say "Stop! Legislating and determining public policy is our job." In addition, we must make better use of the third branch of government—the judicial branch. If we don't, we will have no one to blame but ourselves for the loss of our freedoms.

Mining in Your State

The National Mining Association has produced a series of brochures called *Mining in Your State*.

As the name suggests, the brochure is a great tool to inform the public about the impact mining has on the economy in mining states. They are available in quantity for a modest charge by calling Jacquelyn Bradshaw at 202/463-2603.

Geophysical Data Available on CD-ROM

The National Geophysical Data Center in Asheville, North Carolina has released an updated list of geophysical titles available on compact disc. Many were new releases in 1999. Costs of individual titles start at \$50, with most being in the \$100 to \$245 range. If you need the NURE Aeromagnetic Data set, it will set you back \$1,125. However, a \$270 discount is available on that title, along with comparable savings on all offerings, if you order through the Online Store. The URL is www.ngdc.noaa.gov/store.

EPA horror story (Continued)

quantities of cyanide released, even under the worst of circumstances, were small, and most of that was gassed-off by acidic waters at the mine, with the remainder diluted to non-toxic levels. The probable cause of the aquatic damage was found to be high copper discharged from an old adit that was not covered by the mine's discharge permit at the time.

Furthermore, **when the EPA took over Summitville, cyanide was not leaving the site, and neither were metals, and there was no danger of a spill until spring. There was time to do things right, but it is now obvious that the EPA's main contractor had other priorities, and that the perceived crisis served it well.**

Miracle on C Street NW

Without fanfare, without a court order, Interior Secretary Bruce Babbitt signed 15 mineral patents for Newmont Mining Corp. This culminated a lengthy process that began prior to the Congressional moratorium on patenting. The claims are located at their Twin Creeks mine in northern Nevada. All told, 22 lode claims and 202 millsite claims were approved. Congratulations to all involved.

Does Mining Really Matter?

The Clinton/Gore Administration seems to have a single-minded determination to end the domestic mining industry and turn our public lands, which Congress has mandated be managed for multiple-use, into lands of no use, museum dioramas, with the people on the outside looking in. Why are this administration, the Department of Interior and the United States Forest Service conducting an all-out war against the U.S. mining industry? Why are they implementing policy after policy that is destroying the very fabric of rural America? They act as if mining is an evil pursuit driven by corporate greed that results in environmental damage, and, therefore, must be stopped. The Clinton/Gore Administration and opponents of mining cling to the somewhat naïve notion that mining in the United States is not necessary. Our industry tends to counter with statistics about the number of jobs that will be created, taxes paid, and overall economic benefits to the local economy. All of these are very important to be sure, but they fail to convey to our society why mining must be encouraged if our Nation is to succeed. All past successful societies have encouraged mining, as will all future successful societies.

Modern civilization began from humble agrarian origins. Over time, a few clever people were soon able to discover the basic principles of first copper, then bronze metallurgy. It was not long before these processes were used to develop tools that began transforming society. But unlike today, the people of years past never lost sight of the fact that they were all dependent on what came from the earth for their continued survival, as well as their newly found wealth. These fundamental concepts are as valid today as they were in ancient times, even though our civilization has grown so complex that it is easy to lose sight of them.

Continued on page 12



Does Mining Matter (Continued)

The basic fact is that we mine minerals because our society demands that we do so. Mining makes everything else happen. Mining provides the strategic metals and minerals that are essential for agriculture, construction and manufacturing. Minerals are essential in order to satisfy the basic requirements of an individual's well-being — food, clothing and shelter. Mining makes civilization, our high living standards and today's sophisticated technologies possible. Without mining there is no Internet, no computer industry, no airplanes, no cars, no houses, no highways, no bicycles and no golf. In fact, without mining there is no civilization, pure and simple — no art, no science, no temples. Unfortunately, our society and our government are filled with people who do not understand these basic fundamentals.

According to the National Research Council, one of the primary advantages the United States possesses over its strongest industrial competitors, Japan and Western Europe, is its domestic resource base. The U.S. mining industry provides about 50% of the metals used by U.S. manufacturing companies. During most of the 1990's, while global mineral exploration trends were strong, U.S. mineral exploration was on the decline, with more and more public lands being withdrawn from mineral entry. Unless this trend is reversed, significant declines in domestic mineral production will occur as present reserves are exhausted, and investment capital, jobs and tax revenues will find a home outside of the U.S.

Less than 0.01% of the earth's crust contains economically viable mineral deposits. Thus, there are very few places where mines can be located. In the United States, most of the economically viable mineral deposits are located on federal public lands in the West. Some of these same areas also are valued for aesthetic and cultural reasons, generating conflict between competing societal values. If there is going to be a viable domestic mining industry in the future, then our federal public lands must remain open to mining, and society must make some hard choices.

Society's demand for mineral products is increasing at an increasing rate. Meeting that demand is an international business — one in which the United States must remain competitive

with other nations for scarce investment capital. As a society we have three choices:

- We can choose not to meet the increasing demand for mineral products. The result will be a lower standard of living for ourselves and future generations as scarcity of mineral supplies force prices to skyrocket and inflation to once again run rampant. The net result will be a lower standard of living and an increase in poverty in the U.S.


- We could meet the demand for increasing mineral products by mining those minerals outside of the United States. This choice has adverse economic and ecological consequences for our country. Poverty is the worst polluter, for without economic health there can be no ecological health. As a society, can we truly afford to become dependent on other countries to supply our basic mineral requirements? Can we afford to do without the wealth creating investment dollars, jobs, and taxes? A decline in U.S. mineral production will increase reliance on foreign sources of minerals for our national defense, increase our national trade deficit, and eliminate thousands of high paying skilled jobs in America. If we allow this to happen, how long can our nation remain the world's great economic engine? If we do not encourage and allow mining in our country, are we willing to send our sons and daughters to another country to defend our supply of the minerals we consume?

- American society's third choice is to produce the minerals we need to maintain our high standard of living in the United States in an environmentally responsible manner. The U.S. has the most stringent environmental regulations and the most intensive governmental oversight in the World. The domestic mining industry has the best environmental track record in the World. The U.S. mining industry produces "green" minerals. It is environmental hypocrisy for the World's leading consumer of mineral products to enjoy the standard of living mineral products provide, while exporting the environmental impacts to countries that are not prepared to handle those impacts. The recent cyanide spill in Romania is a prime example. The good news is that

the U.S. mining industry provides jobs, economic growth, and a clean, healthy environment.

I believe the choice is obvious, but before long-term investments of hundreds of millions of dollars are going to be directed toward the U.S. mining industry, lands must be open to mineral entry, investors must see a predictable legal system and a government that operates by the rule of law. Investors must know that our government will uphold property rights as their investments prove successful. They will not risk instant losses to "surprise" decisions by unelected bureaucrats.

Laura Skaer
Executive Director
Northwest Mining Association



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PROVINCIAL AND STATE REPORTS

COLORADO

Anti-Mining Ballot Initiative Appealed

The Colorado Mining Association (CMA) and others have appealed to the Colorado Supreme Court the State Title Board's decision to approve an anti-mining initiative for placement on the November election ballot. At a hearing on March 1, the Title Board heard industry objections to I.P. 215, a measure that would ban surface mining operations for gold and silver that use cyanide to extract precious metals from ore.

A representative of the national polling firm buttressed industry arguments that the measure was impermissibly vague, testifying that in a random telephone poll most respondents did not understand the meaning of several terms used in the proposed ballot initiative. In addition, CMA objected to the failure of the proposal to disclose that it is aimed at a single mining operation and countered arguments made by its proponents that they did not seek to the closure of this operation. The industry pointed out that the prohibition on the expansion of existing operations was misleading, as it could also preclude the company from obtaining permits needed to maintain the current mining operation or to increase the production levels from existing mine areas. CMA also argued that the fiscal impact statement drastically understated the effects and loss of revenue that would result from the closure of the state's only gold mining operation – the Cresson Mine near Victor, Colorado.

The Title Board made numerous changes to the measure, granting the CMA and the industry partial relief, but nonetheless allowed the initiative to move forward. The Supreme Court is expected to rule expeditiously on CMA's appeal.

MONTANA

Eminent Domain Hearings Held

The **Montana Coal Council** reports that the state Environmental Quality Council held hearings on eminent domain laws in March. This was part of a process to develop recommendations to the legislature for possible changes to those laws. Most people know that governments have the authority to take private property for public uses, subject to fair compensation and due process. However, in many states this right is can also be exercised by some private projects. In Montana such activities currently include power lines, hardrock mines, railroad tracks and pipelines. Among the suggestions offered to the EQC was taking hardrock mines off the list, as well as redefining what constitutes public use. It appears that the effort is continuing to put a stop to all hardrock mining in Montana.

Canyon Resources Files I-137 Lawsuit

Canyon Resources Corporation filed a lawsuit in State District Court on April 11, 2000 against the State of Montana in an effort to overturn Initiative 137, the anti-mining measure that passed November 1998. Failing that, Canyon and Seven-Up Pete Joint Venture, its wholly owned subsidiary, along with 10 other plaintiffs, will seek to obtain a damage award in excess of one-half billion U.S. dollars. A similar lawsuit was filed earlier in the United States District Court for Montana, but Canyon will ask for a stay of that action until resolution of the case in

the state court. Canyon's president, Richard De Voto, has made clear that the objective of the McDonald Gold Project always has been, and continues to be, to develop and operate an environmentally safe mine.

NUNAVUT

Echo Bay Reopens Gold Mine

The Lupin Mine is reopening and the first gold production was expected soon, if it has not already happened. **Echo Bay Mines Ltd.** placed the mine on care and maintenance early in 1998. The current mine plan projects operations to continue through 2004.

WASHINGTON

Chair: Dan Robertson, Battle Mountain Gold, 503/476-3144

New Forest Supervisor for Colville

The USFS has appointed Rolando Ortegon as acting forest supervisor for the Colville National Forest, which is North of Spokane. The area still has a fair number of active mining claims. Mr. Ortegon is a forester and has received national recognition for his skills in Wilderness management. He replaces Robert Vaught who accepted a forest supervisor position on the Humboldt-Tioyabe Forest in Nevada. Vaught, in turn, replaced Gloria Flora, who resigned in disgrace last year due to her inability to work constructively with local communities.

CHINA

China Beckons NWMA Members

Fujian Provincial Coal Industry Company has extended an invitation to all NWMA members to visit them in China. FPCIC has been a corporate member for five years and has attended the Annual Meeting on three occasions. They are a progressive state owned company at the forefront of the economic reforms now underway in that country. They are capably led by Mr. Zheng Song-yan, president and general manager of FPCIC.

NWMA Special Projects Director Ivan Urnovitz visited FPCIC as their guest last September to become better acquainted with their business interests. As it turns out, coal mining is just a part of their many ventures. This translates into a wide variety of business opportunities for NWMA members. Among their enterprises are a gourmet food farm, button factory, furniture factory with a very wide array of cabinet lines, co-generation plant supplying steam and electricity to a dye making district, and a chain of high quality hotels catering to business people and tourists. A large project currently under construction is a waterfront theme park in Xiamen.

Of course, they are always happy to welcome potential investment partners, but FPCIC is also seeking expert counsel on certain business and technical matters. They would welcome a visit by small group of NWMA members in the early Fall of this year. That time of year is suggest in order to avoid the Summer heat of their semi-tropical climate. Members interested in learning more about FPCIC should contact **Ivan Urnovitz** at the NWMA office.



COMMITTEE REPORTS

ABANDONED MINE LANDS

Chair: Llee Chapman, Barraick Goldstrike Mines, Inc
775/778-8196

Reclaimed Sleeper Mine Benefits Wildlife

Pay Dirt reports that the reclaimed site of the Sleeper mine outside of Winnemucca, Nevada is successfully providing habitat beneficial to area wildlife. Reclaimed pits offer 210 acres of previously unavailable safe fresh water for waterfowl, deer, and other animals. In a desert environment, this represents an improvement over pre-mining habitat conditions. The final stages of work are underway at the mine site to meet the post-mining goals of providing agricultural and recreational opportunities, as well as wildlife habitat.

This serves as a reminder to all that the modern mining industry has both the ability and the desire to leave former mine sites in a condition as good, if not better, than before operations began. When people talk about sustainable mining, this is what it should be all about. It also demonstrates what could be accomplished if meaningful "good Samaritan" amendments were made to federal statutes, such as the Clean Water Act.

Convention Energizers Committee Appointed

NWMA President **Paul Jones** recently named **Otto Schumacher**, a past president, as chair of the new committee, the Convention Energizers. This committee is charged with keeping the Annual Meeting and Exposition the exciting and topical event our members have come to expect. One area of emphasis is boosting overall attendance during this challenging era, with another being to make sure that all our exhibitors are in the limelight. Among the program suggestions to date are to broaden the base of talks related to international mining activities and place more emphasis on talks and events of interest to both junior companies and investors. Any member interested in participating in this very dynamic and free-wheeling group should call Otto at 509/328-8023.

HEALTH & SAFETY

Dale Avery, NIOSH Spokane Research Laboratory, 509/354-8071

SQID Tested

The U.S. Department of Energy is funding a three year program to the feasibility of using low frequency radio waves for communication in underground mines. The equipment is known as a "superconducting quantum interference device" or SQID. It is being evaluated at the **Lucky Friday mine** in Idaho's Silver Valley, as well as six other sites. David Reagor with the Los Alamos National Laboratory, a DOE facility, is managing the project. The program represents one of the tangible benefits of the mining industry partnership with DOE, *Industries of the Future*. This is just one of several projects that **Hecla Mining Company** is a cooperator with federal agencies. They have had a long and fruitful relationship with the NIOSH Spokane Research Lab, formerly part of the Bureau of Mines.

The project is important because conventional communications equipment suffer from serious limitations in the underground mining environment. Such limitations may be a nuisance during day to day operations, but can mean life and death during an emergency. Clyde Peppin, chief engineer at the mine, hopes that SQID will prove successful, as it would increase operating efficiency, as well as safety.

NIOSH Listserv Available

NIOSH has announced the creation of a "listserv" as part of their ongoing efforts to quickly disseminate information to stakeholders. Now, monthly notices of conferences, other announcements, and new publications can easily be sent out. It will also provide information on funding opportunities, and NORA, the National Occupational Research Agenda. For example, A Compendium of NIOSH Mining Research 2000 is available at www.cdc.gov/niosh/mining/pdfs/comp2000.pdf.

PUBLIC OUTREACH & EDUCATION

Hands Across the Border

The **Boundary Mining Association** in Grand Forks, British Columbia, asked NWMA to brief them on our mineral education programs. In response, staff member **Ken Assmus** gave a talk at one of their meeting earlier this year. He informed them about availability of materials and other resources available to help teach students and the public. They were also advised on how to develop partnerships with other organizations to expand the size of the audience. Among those in attendance were the local superintendent of schools, the museum society, and **Sean Longanecker** with the **Okanogan Mining Association**, who are on the U.S. side of the border. Marilyn Tabor with **Battle Mountain Gold's** Crown Jewel Project also took part.

Arbor Day Activities

Students will learn about mine reclamation as part of an Arbor Day celebration hosted by **Echo Bay Minerals** in Republic, Washington. **Marv Walker**, general manager of the Kettle River operation, has invited NWMA to participate again this year. The Boundary Mining Association will also take part in the event.

SME GEM Awards

The Columbia and Coeur d'Alene Sections of the Society for Mining Metallurgy and Exploration (SME) were recognized for their mineral education efforts. They received the National GEM Education Award at the SME annual meeting held in Salt Lake City during early March. **Elaine Cullen**, NIOSH Spokane Research Laboratory, accepted the award on behalf of all the section members who volunteered their time and talents. NWMA's Ken Assmus is a very active participant in these activities, as are members **Dale Avery** and **Jennifer Leinart**.

National Minerals Education Conference

As a "reward" for winning the SME education award, the GEM Committees of the SME the Columbia and Coeur d'Alene Sections of SME will organize and host the 9th Annual Minerals Education Conference. NWMA will help co-host the event, scheduled for July 17-20 of this year in Spokane, Washington. The conference program is very comprehensive. Details are available on the NWMA website at www.nwma.org.



COMMITTEE REPORTS

PUBLIC LANDS

Chair: Bill Prince, Dorsey & Whitney LLP, 801/350-3581

Customer Satisfaction

The BLM provided the Association with its latest Customer Satisfaction Report. The report indicates that BLM customers are not happy campers, as the ratings declined in 3 out of 5 categories; right-of-way, oil & gas, and recreation. It is interesting to note that the BLM didn't try to find out how well it satisfied its locatable minerals customers, or at least didn't bother to publicize what certainly would have been unfavorable results. Of course, the BLM is basically just the messenger, as illustrated by the next item.

Leshy Lawlessness Continues

Interior Solicitor John Leshy continues to thumb his nose at Congress and ignore established legal principals and precedents. The latest abuse is yet another so-called opinion that instantly creates a new standard for mining projects in the California Desert Conservation Area (CDCA) called "undue impairment." The term is very loosely defined and highly subjective, but apparently applies to any mining project Leshy wants to stop.

The unfortunate victim is the Imperial Project of **Glamis Gold Ltd.** Pete Babin, chair of the **California Mining Association's** Lands and Minerals committee, responded to the news by stating, "It's an extraordinarily arrogant slap in the face of the western Congressional delegation, which has several times criticized the Interior Department for attempting to circumvent the law of our country." Glamis firmly believes that there is absolutely no legal grounds for this new standard and that they will prevail in federal court. They filed suit on April 14 against BLM and the Interior Department in the U.S. District court in Reno, Nevada.

NMA Files Suit Challenging ACHP Regulations

On February 15, 2000, the **National Mining Association** filed a lawsuit challenging the final regulations of the Advisory Council on Historic Preservation (ACHP). (For background material see the article "ACHP is Out of Control" in the January-February edition of the Bulletin).

In the suit, NMA challenges ACHP's: (1) attempt to transform itself from an advisory to a regulatory body; (2) application of its rules to undertakings without limiting them as required by § 106 of the National Historic Preservation Act; (3) application of the process to properties that are neither on the National Register nor formally determined eligible for the National Register; (4) expansion of the role of Indian Tribes and affected Indian property; (5) use of vague and over-broad terms that cause a lack of adequate notice of the standards that will be applied; (6) violation of the Appointment's Clause to the U.S. Constitution; and (7) lack of response to NMA's comments and failure to re-promulgate their rules for comment following the substantial changes that were made to the ACHP's 1996 proposal. The ACHP has 60 days to file an answer or other responsive pleading.

NWMA agrees with the NMA that the ACHP has far exceeded its statutory authority when it promulgated final regulations in May 1999. Subsequently, an ACHP opinion letter and recommendation form the basis of yet another attempt by our rogue Solicitor, John Leshy, to administratively re-write the laws of Congress to enable the Bureau of Land Management to say no to Glamis Gold's Imperial Project (see related article on this page). NWMA congratulates NMA for the filing of this action. If you would like a copy of the complaint, please contact Kathy at the NWMA office.

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Spokane, Washington

*for more information, contact NWMA
Phone 509/624-1158
Fax 509/623-1241*

Web site www.nwma.org



CALENDAR

California Mining Association – “California Mining Association Annual Meeting.” May 8-12, 2000, Palm Springs Riviera, Palm Springs, CA. Contact CMA at (916) 447-1977.

Geological Society of Nevada – “Geology & Ore Deposits 2000: The Great Basin & Beyond.” May 15-18, 2000, John Ascuaga’s Nugget, Reno/Sparks, NV. Contact GSN at (775) 323-4569 or fax (775) 323-3599.

5th International Acid Rock Drainage Conference, May 21-24, 2000, Colorado Convention Center, Denver, CO. For information contact SME at (303) 973-9550.

“GEOCANADA 2000, Joint Meeting of Canada’s Major Geoscience Societies.” May 29-June 2, 2000, Calgary, AB. Contact Grant Mossop at (403) 292-7049, or fax (403) 292-5377.

SWEMP – “6th International Symposium on Environmental Issues and Waste Management in Energy and Mineral Production.” May 30-June 2, 2000, Calgary AB. Contact Raj Singhal, fax (403) 241-9460 or singhal@teluplanet.net.

New York Investment in Mining Conference, May 31-June 1, 2000, New York, NY. Contact Martin Rothman (305) 669-1963 or fax (305) 669-7350.

Health and Safety Training for Managers and Supervisors Course, June 5-6, 2000, Hamilton, ON. Contact Irene Brelsforth at (905) 572-2981, ext. 4467 or (800) 668-4284.

UGOL & Mining 2000 International Trade Fair, June 6-9, 2000, Novokuznezk Russia and September 25-29, 2000, Donezk Ukraine. Contact Norbert Schmidt at +49 (0) 211 45 60-791 or visit www.messe-dusseldorf.de.

American Society of Surface Mining and Reclamation 17th Annual Meeting, June 11-15, 2000, Tampa, FL. Contact Steven Richardson at (941) 534-7160 for details.

Elko Expo, June 15-17, 2000, Elko Convention Center, Elko Nevada. For information call (800) 248-3556.

96th Regular Meeting and Annual Convention of the Rocky Mountain Coal Mining Institute, June 25-27, 2000, Durango, CO. Contact Doris Finnie, RMCMI (303) 238-9099 or fax (303) 238-0509.

West African International Mining Exhibition and Conference, June 27-30, 2000, Accra, Ghana. Contact CAMESE at (905) 513-1834 (Canada).

113th Annual General Meeting of the Mining Society of Nova Scotia, June 28-July 1, 2000, Ingonish Beach, NS. Contact David Forrester at (902) 567-2147 (phone/fax).

9th Annual National Mineral Education Conference, July 17-20, 2000, Spokane, WA. For information contact Ken Assmus at NWMA (509) 624-1158 or visit www.nwma.org.

31st International Geological Congress, August 6-17, 2000, RIOCENTRO Convention Center, Rio de Janeiro, Brazil. For information contact the Secretariat at +55 (21) 295-5847 or www.31igc.org.

AML Reclamation 2000-National Association of AML Programs Annual Conference, September 24-27, 2000, Sheraton Steamboat Springs, Steamboat Springs, CO. For information call (303) 866-4097 or visit www.onenet.net/~naamp/conf2000.htm.

Copper Hydromet Roundtable 2000, September 26-29 2000, Westin Paloma Resort, Tucson, AZ. For more information call (303) 526-1626 or visit www.randol.com.

MINexpo International 2000, October 9-12, 2000, Las Vegas convention Center, Las Vegas, NV. Contact Kendy Allen with National Mining Association at (202) 463-2611 or visit www.mineexpo.com for details.

Randol at Vancouver-Global Mining Opportunities, November 13-15, 2000, Robson Square Conference Centre, Vancouver, British Columbia Canada. For information call (303) 526-1626 or visit www.randol.com.

NWMA Annual Meeting & Exposition, December 4-8, 2000, Spokane Convention and Agricultural Trade Centers, Spokane, Washington. Contact NWMA at (509) 624-1158 fax (509) 623-1241, e-mail nwma.nwma.org or visit www.nwma.org for details.

Mexico Mining 2001, February 14-16, 2001, Westin Regina Resort, Puerto Vallarta, Mexico. For information call (303) 526-1626 or visit www.randol.com.

6th Southern Hemisphere Meeting on Minerals Technology, May 27-31, 2001, Rio De Janeiro, Brazil. For details contact Roberto Emery Trindade at Centro de Tecnologia Mineral at +55 (021) 560-7222 ext. 201 or visit www.cetem.gov.br/shmmt.html.

If you have additions to our calendar please call NWMA (509) 612-1158 or fax your announcement (509) 623-1241