

BHP Billiton Potash Initiative

by Ted Hannah

Saskatchewan has some of the highest quality, lowest production cost potash reserves in the world. Potash exploration and development activities have continued in recent years despite the volatility of potash prices since early 2007, as shown in the accompanying graph. Pricing has gone from a low of \$150 per tonne in early 2007 to a high of almost \$900 per tonne in the spring of 2009, a retreat to \$300 per tonne during the commodity collapse of 2009/10, and then a rebound to \$500 per tonne in August 2011. The long-term strategic value of potash as an important input to the agricultural industry has attracted attention around the globe, including that of BHP Billiton, one of the world's largest mining companies.

BHP Billiton began working on the Jansen potash property in central Saskatchewan in 2007. Following an initial exploration program and a preliminary project assessment, BHP Billiton announced in February 2011 that the Jansen Potash Project had progressed to the pre-feasibility study stage. In anticipation of corporate sanctioning of the project, the BHP Billiton Jansen Project team began site development in 2010. Early preparation for sinking the two main shafts required the drilling of freeze wells and construction of a refrigeration plant at the site.

The history of Norwest's involvement in this exciting project dates back to 2007 when BHP Billiton approached the Calgary-based field services team to see if we would be interested in helping to manage their potash exploration program in Central Saskatchewan. Building on our extensive experience in

exploration and development drilling programs in coal and oil sands, we came to an agreement with BHP Billiton to work on the program.

That initial work program proved to be an incredible opportunity for Norwest, not only from the perspective of adding potash to our portfolio of service offerings but, in addition, the experience enabled us to further refine our capabilities in health and safety management, procurement and cost management.

Norwest's team went on to manage the second exploration drilling program for BHP Billiton before getting involved in the mine development work on the Jansen Potash Project. Norwest was responsible for drilling the freeze wells associated with the two Jansen shafts. The project scope involved drilling a ring of 40 holes around the perimeter of each proposed shaft. Those wells, varying from 525 to 715 meters deep, were drilled to very tight tolerances over the full length of each well to ensure that there was equal spacing between the holes in the critical lithologies.

This ground freezing technique is used to facilitate the shaft sinking process by eliminating any water inflow during excavation. The freeze wells are connected to a refrigeration plant from which a minus 34° C brine solution is circulated through the system of wells, drawing heat from the ground, eventually freezing it and creating an impermeable wall of ice. The freezing process is expected to remain in place for about three years.

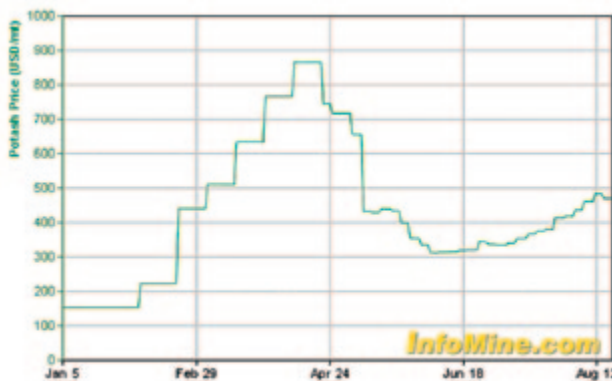


Aerial photograph of the BHP Billiton Jansen Project

During the freeze well drilling program, there were four oil field drill rigs, two from Akita Drilling and two from Nabors Drilling, on-site to drill over 55,000 meters in completing the freeze wells and monitoring wells required for the shafts. The site was turned over to the shaft sinking contractor in the fall of this year to commence the freezing process.

Jansen is expected to start producing saleable potash in 2015. The project is designed to ultimately produce approximately eight million tonnes per year of agricultural grade potash, with an estimated 70-year mine life.

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Potash pricing variations - Jan 2005 to Aug 2011

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Engineering for Success

President's Message by Robert L. Evans

It's up ... down... right...left... calm... chaotic. So what's up here: the stock market, an upcoming political election, or our collective blood pressure and state of mind?

During the past several years mining companies and their stakeholders have experienced the whipsaw of volatile commodities pricing, skilled workforce shortages, and increasing regulatory pressures. Minerals and energy producers and their stakeholders are faced with making development, investment, and expansion decisions under these volatility pressures with long-term consequences. Just like you and me, producers and their investors favor predictability in the long term. How can the industry best cope with this situation?

Norwest is assisting many of our clients in facing this dilemma. A strong foundation based on the fundamentals of a strategically-

advantaged operation is the key. The first leg of this foundation is a sound geologic program focused on exploring, interpreting, and building a predictable model of the reserve base. Secondly, a well-engineered mine plan that optimizes the extraction method over the life of the mining operation is key. This foundation is then firmly secured with the third leg, the development of a quality management team focused on execution and evolution in response to both external and internal developments.

Norwest professionals are focused on assisting our clients in realizing their objectives and achieving world-class performance in the face of this volatility. Our clients tend to take long-term views on mining investment and operations even in the face of short-term volatility.



Robert L. Evans, Chairman/President

We believe value added, quality engineering, and geological services are the secret to taming volatility.

Cresson Project - A Competitive World Class Gold Operation in Colorado

by Cathy Begej



View West of the Cresson Gold Mine to Colorado's Collegiate Range

Cripple Creek & Victor Gold Mining Company is planning to submit its second Mine Life Extension permit application ("MLE2") to the Colorado Division of Reclamation Mining and Safety and Teller County in early 2012 for the Cresson Project. The Cresson Project, set amidst historic mining operations, will add a second valley leach facility and recovery plant, extend mining areas north and northeast of current operations, and add a high grade ore processing plant. The permit will result in the relocation of a section of state highway and several historic mining structures. Norwest is coordinating with mining personnel and their consultants to prepare the permit

application and county land use permit.

While most mining operations appreciate increasing values for their product, the price of gold fluctuates considerably, requiring long-term operations to keep their costs down to ensure continued profitability throughout the life of the operation. Capital improvements help drive that efficiency. Recent additions to

the Cresson operation include accelerated haul truck replacement, a modular mine fleet management system, the addition of a larger carbon column in the recovery process, enhancement of the valley leach facility management with a lime slaker, enhanced water injection for the valley leach facility, and a crusher sampling system.

The Cresson Project mined 64.7 million tons of material and 22.4 million tons of ore in 2010, from which 233,000 ounces of gold were produced. Operational efficiencies include a crusher which has the capacity to handle 61,440 tons of ore per day, and a



View West of the Main Cresson Mine

truck load out bin which fills a 300-ton truck in 56 seconds. The operation is on track to increase production by 13.7% in 2011 to 265,000 ounces of gold. The addition of the MLE2 project study area will add 1.4M ounces to the ore reserve and extend mining operations through 2024.



Haul trucks travelling from the South Cresson Mine to the Arequa Gulch Valley Leach Facility

Norwest Assists with New Elk Coal Company Mine Re-development

by Greg Gillian



Bates Mine Development, October 2011

Norwest has been assisting Cline Mining Corporation (Cline) at their New Elk Coal Company (NECC) Mine near Trinidad, Colorado, since April 2011. Since late 2010, NECC has been in the process of re-opening the property, with rehabilitation of the existing underground mine workings and surface facilities. Development and construction activities are continuing in parallel with the ramp-up to the full production capacity.

Cline is based in Toronto, Canada, and supplies the overall strategic direction to the operation. NECC supplies the local



Existing New Elk Coal Company wash plant exterior



New Elk Coal Company surface facilities looking South

management and operational expertise for the wash plant, surface operation, and underground mine. A contractor, TK Mining Services (TK), is conducting all mining and supervisory work for the day-to-day operations. Norwest engineers provide day-to-day engineering and operational

support for TK and NECC, as well as input to strategic planning initiatives by Cline. The table below outlines the relationship.

Underground engineers John Lewis, Tom Hurst, Kirk Nobis, and Mike Weigand are supporting the development of two portals; one for the refurbishment of the historic Allen

Mine and the other for the development of the new Bates Mine. These engineers are using their production and operational experience to assist in the daily planning operations and to provide timely support to TK, the mining contractor, and Cline, the mine owner.

Norwest facilities design, wash plant engineering, and construction management is supported by the Surface Facilities Design group based in our Salt Lake City office. Craig Hawe, Andrew Maxwell, Kyle Krogen, and Gary Hamblin have provided engineering and on-site designs; the effort is led by Greg Gillian. Currently the group is assisting in the implementation of four surface conveyors of over 2,000 feet in total length and a wash plant upgrade to bring the design capacity to 800 tons per hour (tph) from approximately 450 tph. Phase one of the wash plant upgrade began in October 2011.

Norwest is proud to support the redevelopment of the Trinidad area and the progression of the New Elk Mine.

Current Project Involvement at NECC

Mining Group Projects	Facilities Group Projects
Underground conveyors and belting system designs	On-site engineering and construction management
Day-to-day engineering support	Wash plant conceptual design leading to implementation
Short-term mine planning	Conveyor design
Rock slope development	Underground slurry injection designs
Budgeting	Support facility concept and designs
Portal design	Washability and sampling programs
Procurement assistance	Vendor testing and trial programs
RFP support	Procurement assistance

Staff Recognitions

Kelly Bedell served on a panel discussing Lessons from Watershed Groups at the 2011 Sustaining Colorado Watersheds Conference October 4, 2011, in Avon Colorado. She discussed watershed planning in the Upper Yampa based on her experiences with Friends of the Yampa.

Paul Kos is now a Professional Engineer. P.Eng. licensed by APPEGA (Alberta) & APEGBC (British Columbia)

Jason Todd is now a Qualified Professional with the Mining & Metallurgical Society of America (SME).

Jake Maybach has been certified as a P. Eng. licensed by APPEGA (Alberta) & APEGBC (British Columbia) and APEGS (Saskatchewan)

Lyndsey Peterson is now a certified technician with the Association of Science and Engineering Technical Professionals of Alberta (ASET).

Sheryl-Lynn Francis is now a recognized professional geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA).



Interior of the preparation plant

First of its Kind in Mongolia

by John Trygstad

Norwest continues to assist Energy Resources (ER) with the startup operation of Mongolia's first modern, fully wetted coal preparation plant located at the Uhaa Khudag (UHG) Mine in the Gobi Desert. The 2,700 ton

per hour (tph) plant was built to process coking coal.

Norwest's relationship with ER dates back to the project beginnings in 2007 when a consortium of leading Mongolian business leaders began plans to develop a very large scale mining operation in the famed Tavan Tolgoi basin. Norwest, with nearly 20 years of experience in Mongolia, assisted ER with the first geological exploration programs, feasibility studies, mine planning, and of course, close involvement with the development of the coal handling and preparation plant.

Norwest's coal preparation group developed technical specifications for a robust plant designed to maximize the recovery of high value coking coal. The design challenges included the very cold winter climate operation and project remoteness. Norwest assisted ER with preparation of the bid documents, evaluation of the EPCM, proposals, and final selection of the designer and builder. During this same time period, Norwest developed and managed bulk washability studies of the seven principal coking seams.

Recently Norwest's Tony Toney and John Trygstad provided near continuous on-site startup coverage as ER coal processing representatives. From early May until the end of September 2011, they assisted with the plant commissioning and performance testing of the first 900 tph module. As the Owner's engineer, Norwest is establishing operating procedures, training ER's process engineers, developing analytical procedures, and ensuring that the facility is completed in accordance with the design.



(top) UHP coal handling and preparation plant Phase I construction • (middle) UHP Phase I (aqua), Phase II (orange) • (bottom) Dedication ceremony of Mongolia's first modern, fully wetted coal preparation plant.

Wasatch Back Ragnar Relay 2011

By James Sorensen

For the 5th consecutive year Norwest employees, family, and friends laced up their running shoes and took on the challenge of the Wasatch Back Ragnar Relay. For the 5th time we faced course changes; some changes made in advance; and others made the morning of the race. This grueling 12-person 190-mile relay began in Logan, Utah, and finished at Park City High School in Park City, Utah.

Van No. 1 was in Logan at the starting line bright and early as James S. (El Capitán) led off the team, a change of pace for him after running the Ragnar leg the previous four years. Next up was Sherry who consistently beat her projected times, providing everyone with a challenge to do the same. Charles, our first time Ragnar runner, had no problem running the race with a smile and joking along the way. Tony then took the baton and pushed over and down any hills that he came across. Craig came out of retirement for the race; he ran through his legs without missing a stride – including a friendly game of tag with another runner. James N. ran some difficult and long sections, but he ran without any complaint and passed the baton to Van No. 2 always knocking time off the pace clock.

Van No. 2 this year was an all-girls van, a first for our team. Leah took her handoff from Van No. 1 and was off and running with a smile. Tara took the baton from Leah, running hard and finishing strong on each of her stages. Krista ran with ease, even when she wasn't informed that one of her routes had a mile added to it, making it 10 miles. Helene, our seasoned pro, enjoyed the race and provided encouragement to everyone. Donette was a great asset to the team, conquering each of her legs of the race and cheering on her teammates. Finally, Aleta pushed through her routes, even as exhaustion set in; she brought the team through for a strong finish.

Thank you to all of the volunteers, family, supporters, and runners for making this another fun and memorable race. Sadly, we will not be running the Wasatch Back in 2012 as the race is already full...we're looking for another relay. Who's up for the challenge?



The Norwest Miners not Whiners Team
(back) Donette, Helene, Aleta, Sherry, James, Krista
(front) Leah, Tony, Tara (absent) Charles, Craig, and James N.

Personnel Announcement "Gana" By Alister Horn



The Norwest Salt Lake City office is pleased to announce our first four-legged employee, who has been trotting up and down the halls since

June 2011. "Gana" is now a 10-month old black Labrador/Golden Retriever mix puppy. She comes to us from the non-profit Canine Companions for Independence (CCI); the largest assistance dog organization in the world. She is currently interning under the strict supervision of Alister Horn and his wife, Laura. She is being adopted by the Horns for an 18-month period until she is old enough to enroll at the CCI college, in Oceanside, CA, where she will be trained to

perform services including opening doors, picking up keys, pulling a wheelchair, or just hanging out and being a buddy. CCI will then match Gana to a disabled adult or child, and the pair will be trained to work together. We hope that Gana will eventually join the army of other CCI dogs who provide confidence, independence and even social support to enhance the lives of people across the country with physical disabilities. Gana's office will be located in a small kennel in the corner of Alister's office, where she will be working on a large, peanut-butter-filled Kong. Drop by and say "hi".

In all seriousness, this is our third year of being volunteer puppy raisers for CCI, and it has been an incredible and rewarding experience. CCI is always looking for puppy raisers, so if you think you'd like to help out and want to know more please contact Alister Horn.

BHP Billiton (cont'd from page 1)

Jansen is expected to make a long-term contribution to both local communities and the Province of Saskatchewan.

The demand for potash products is growing around the world, and potash is currently being used in 150 countries. Its recognized value in the agricultural community is second to none and, with the global demand for food on the rise, the future of potash would appear secure. Developing projects like Jansen in an environment of volatile commodity prices requires a long-term perspective and confidence in the inherent value of the commodity. BHP Billiton has a long history of success in the mining industry built on these principles.

We view our client relationships in a similar manner – our focus is on building and maintaining long-term, mutually beneficial relationships with clients who share that same perspective.

Field Program Fundraising

By Aleesha Peters



SARCAN Recycling Site Visit (Aleesha Peters is fifth from the right)

I am part of the Norwest Corporation team working in Saskatchewan in support of the BHP Billiton exploration and development activities in the area. The town of Lanigan had started to feel like home to me. I had been working there for over a year and was raised in a small community in Nova Scotia, much like the town of Lanigan. Well-paying jobs are limited in the small communities, so many people resort to the local food bank to feed their families. During the 2010 Christmas season, individuals working on the Jansen Project raised \$2,400 in support of the Lanigan and District Food Bank. The gratitude was overwhelming and left me wanting to do more.

Earlier this year, we sponsored the "MoOoney for Meat" campaign to assist the food bank with providing meat for food hampers distributed to over 700 people within the small communities. Although it may have been our idea to raise

the money, nothing would have happened without the help of co-workers, BHP Billiton and the service companies that stepped forward, raising a total of \$14,556 for the project.

We are now hosting the "Caps Off" recycling program in Melville. Bottles are collected on-site, and are handled and sorted by a group of adults with disabilities employed by Rail City Industries at the SARCAN Recycling Depot. The proceeds from this

recycling effort are donated back to the Rail City Program in support of acquiring a new Handi-bus to transport the employees to and from work. In addition, a silent auction and fundraiser dinner are in the works to further assist with the Handi-bus acquisition.

Thanks to all those that support making a difference in other people's lives!



SARCAN employees recycling milk cartons: Kelly Gawel, Bill Loveridge, Michael Duchek, and Kristen Schick

"It Was A Life Changing Event..."

By Sheryl-Lynn Francis

"It was a life changing event," stated Sean Simpson as he finished his first lap of the "24 Hours of Adrenalin" epic cross-country mountain bike event on July 23, 2011. The team circled around him, laughing and sharing the moment, as Sean recounted his grueling lap... "It was the hardest thing I've ever done in my life...I'm a changed man!"



(l - r) Sheryl-Lynn Francis, Matt Zelin, Tim Davies, & Nick Ponto listening to Sean Simpson describe his first lap of the "24 Hours of Adrenalin" race.

The "24 Hours of Adrenalin" is one of the most popular events in North America, with more than 5,000 spectators and 1,500 participants competing in this year's 24-hour race. The course was 17.34km winding around the Canmore Nordic Centre, with a mixture of painful climbs, fun technical single track, and fast downhill, and a total elevation gain of 484 meters. Norwest's corporate team, the Norwest BedRockers, comprised of Sean

Simpson, Nick Ponto, Scott Braithwaite, Rob Moloney and his brother Pat Moloney, Tim Davies and his friend Matt Zelin, Sean Ennis, Karen Thomas (Teck), and Sheryl-Lynn Francis. Scott Braithwaite was our fastest rider, impressively completing three laps, with his final lap being the fastest at 1:16:49.

With little training and without pre-riding the course, the Norwest BedRockers ranked 159th overall out of the 255 teams competing. They placed 27th out of the 48 team category ranking, missing a top 15 finish by only one lap.

Planning has already begun for 2012. Norwest is registered with a few spots remaining on the team. If you enjoy mountain biking and "life changing events"...join us!



Rob Moloney, Sean Simpson, Scott Braithwaite, and Karen Thomas fixing Tim Davies' chain at the midway point.

Health Safety & Environmental Program Article "Norwest Corporation Receives UMA Safety Award"

The Utah Mining Association presented safety awards to member companies at their 96th Annual Convention on August 25, 2011, in Park City, Utah. This year they expanded their safety awards program to include all worthy member companies in the coal, hard rock and industrial mining, as well as service-related companies. The companies were awarded for superior and outstanding performances and advancements in safety. Robert L. Evans, Chairman and President of Norwest Corporation, was honored to accept this safety award from Todd Bingham, President of Utah Mining Association on behalf of Norwest's Salt Lake City based business unit.



Many Utah mining and service companies have, and continue to invest in the development of safety innovations that exceed industry and regulatory standards. Lost-time incident rates in the state have been better than the overall industry average for years. Utah Mining Association is proud of its members and the successes that have been achieved through ongoing concerted efforts and significant investments.

The 2011 UMA service company awards were presented to: Norwest Corporation, Ames Construction, Terra Engineering and Construction, Joy Mining Machinery, and Brahma Group. The 2011 UMA mining company service awards were presented to: Rio Tinto/Kennecott, Graymont, Materion Natural Resources, Denison Mines, Arch Coal Company, and Simplot Phosphates.

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