



NORTH OF ▲ 60

# MINING

NEWS

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*A special supplement to Petroleum News*

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WEEK OF  
July 30, 2006

Petroleum  
news



• SOUTHEAST ALASKA

# Aggressive junior shops big ideas

Century Mining seeks joint venture partner or investor to help develop slew of gold properties in Southeast Alaska's Juneau Gold Belt

By ROSE RAGSDALE

For Mining News

When Margaret "Peggy" Kent corralled partners and a core staff in 2003 to launch Century Mining Co., it was a package of nine groups of promising mining claims near Juneau in Southeast Alaska that she waved in front of investors to incite a stampede of capital to the startup.

Kent knew properties such as the Treadwell Mine and surrounding claims in the historic Juneau Gold Belt had a venerable reputation for rich deposits of precious metals. The belt, after all, did produce 6.8 million ounces of gold and 3.1 million ounces of silver in the 20th Century, mainly from the Alaska-Juneau and Treadwell mines in Juneau.

"We got off the ground by putting together an Alaska land package because we were able to recognize the potential," said Kent in a July 18 interview. "We did a number of deals with some of the miners in the area who were getting elderly and no longer wanted to work on the mines."

Where there once was gold, Kent reasoned, there likely still is gold.

"We go where a lot of gold has been found, places like old gold camps," Kent said. "The Treadwell mine produced 3 million ounces of gold, and we believe it has another 1 million ounces sitting in the 200 feet of (rock) below the mined areas," she said.

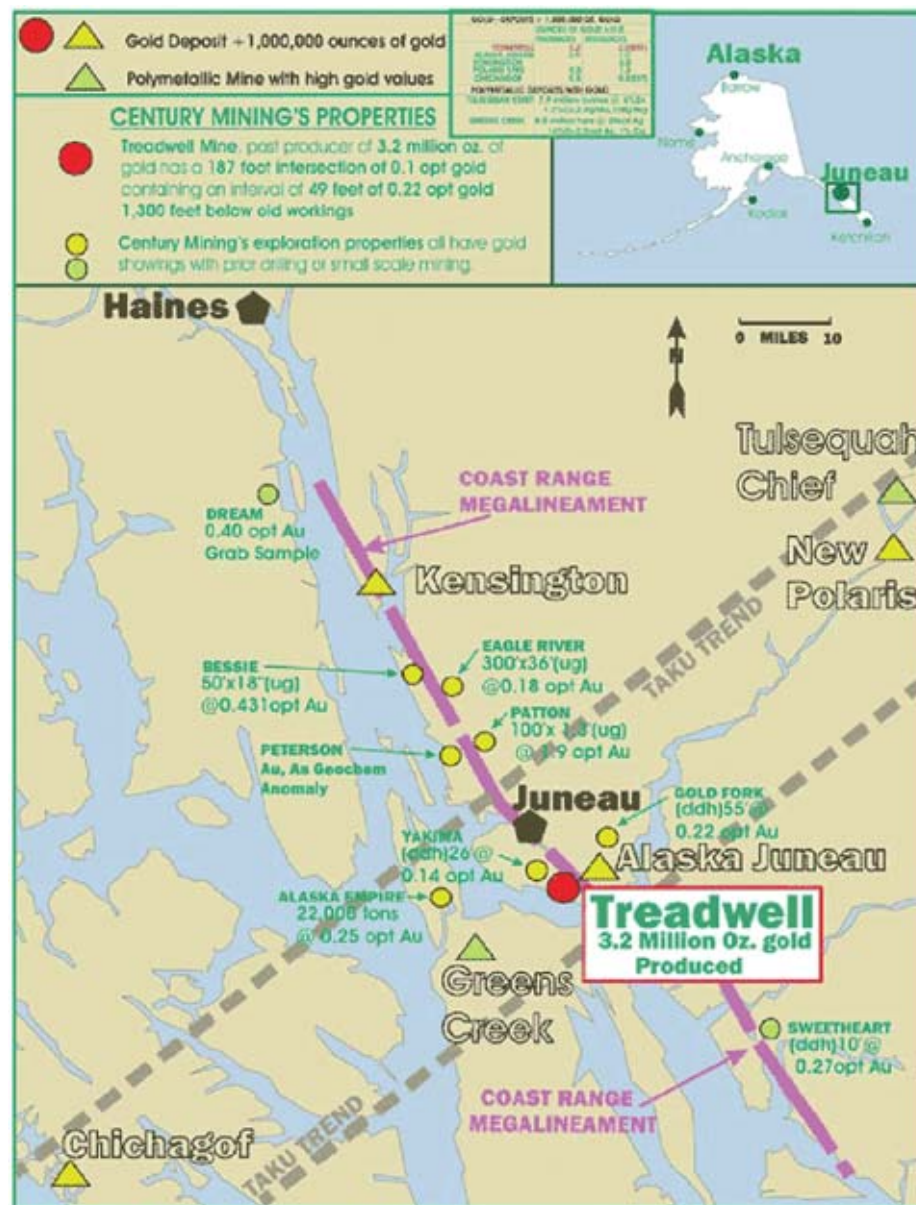
Kent's thinking has become the centerpiece of Century Mining's business strategy.

## Mining legend at helm

That's understandable when you consider that Kent is a legend in the Canadian mining industry. The first female CEO in the business, Kent for-



PEGGY KENT



merly was known as Peggy Witte. "Being a woman in the mining industry, I've never acted like a woman," observed Kent, who said she loves the diversity of career opportunities in the mining field.

Her tumultuous career spans the 30 years since she earned a master's degree in metallurgical engineering at the University of Nevada in 1976.

Century Mining is Kent's seventh time at bat, having founded, financed and operated two publicly traded mining companies and four private companies, including Neptune Mining and Royal

Oak.

Known as an aggressive, outspoken and tenacious executive, Kent completed a number of mergers and acquisitions and raised more than \$1 billion in the U.S. and Canadian public and private equity and debt markets to fund the acquisition and development of mining projects in Canada.

Both lauded and vilified over the years, Kent has even been the subject of a docudrama in Canada.

"A lot of things have been said about me, but one thing they have to say is, I've

## A look at the Juneau Gold Project

In October 2003, Century Mining acquired nine groups of mining claims in Alaska collectively known as the Juneau Gold Project. The properties were purchased from Kent Burns Group LLC for C\$300,000, plus 1,014,000 shares of Century Mining stock with an additional 986,000 shares provided to nine other parties in connection with the transaction.

- Treadwell/Douglas Beach Property, which consists of six state claims covering about 100 acres (40 hectares) at the south end of the town of Douglas, which is joined to downtown Juneau by a bridge over Gastineau Channel.

- Alaska Empire Mine is on Admiralty Island, about 20 miles (32 kilometers) west of Juneau and five miles (eight kilometers) from the Greens Creek Mine, along the same northeasterly lineament within the Taku terrain.

- Eagle River Mine is 20 miles (28 kilometers) north of Juneau.

- Bessie Property is one and a quarter miles (1.5 kilometers) west of the Eagle River Mine on the west side of the Coastal Range

see **LOOK** page 3

protected my shareholders," Kent observed.

## Other projects come first

But a funny thing has happened on the way to Alaska. Century Mining detoured to Quebec and Peru.

Just three years after startup, the Blaine, Wash.-based junior mining company is a mid-tier gold producer in Canada, mining 4 million ounces of resource in Val d'Or, Quebec, at the Sigma Mine, an open pit operation that aims to produce 90,000 ounces of gold in 2006 and at the Lamaque Mine, an underground project scheduled to begin production this year.

Century Mining is also close to becoming an overseas gold producer, working to extract 2 million ounces of known resource and explore substantial mineral claims held by San Juan Gold Mines in Peru. The company, which owns 60 percent interest in the project, plans to refurbish the mine and mill to restore production to 36,000 ounces of gold in 2006 and eventually expand the mine to produce 80,000 ounces of gold annually.

Century Mining also acquired the Carolin Mine in British Columbia, which produced 45,000 ounces of gold in the early 1980s. The mine closed when gold prices dropped and a socialist government in B.C. frowned on the developer's approach to the project.

Believing Carolin hosts another 1 million ounces of gold, Century Mining is pursuing a \$300,000 exploration program for this year.

"We picked up the property when gold prices were lower, and with new technology, a change of government in British Columbia, it's realistic to develop this

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• NORTH AMERICA

# No coal mine safety issues in Alaska

Lower 48 mine accidents, federal legislation likely will affect region's underground mines, future coal mines in Alaska

By ROSE RAGSDALE  
For Mining News

As coal mine safety leaped into the national spotlight this year, miners in Alaska and Canada thankfully have been left out of the loop. That's because Canada has only two underground coal mines and Alaska has none.

The only underground coal mine in Western Canada is on Vancouver Island and is a mostly mechanized operation with just 17 employees. Canada's other mine that fits the profile is located in Nova Scotia.

"It's primarily underground coal mining at issue, and we don't have any, right now," said Steve Borell, executive director of the Alaska Miners Association.

Alaska, however, is headed toward the development of underground coal mines in the future, Borell predicted.

Meanwhile, operators of underground hard-rock mines (Alaska has only two, the Greens Creek gold-silver-zinc-lead mine on Admiralty Island near Juneau and the Pogo gold mine near Delta Junction) are most likely watching the mine safety developments closely, Borell said.

Both mines are relatively new operations. "Every time you go underground, whether at Greens Creek or Delta Junction, safety is a concern" Borell said. "Every mine man-



Steve Borell, executive director of the Alaska Miners Association

ager knows the importance of proper safety equipment."

## Lower 48 deaths spark change

Sadly, much of the spotlight on the need for improved safety measures came after the deaths of 33 coal miners across the nation this year — 19 of those deaths in West Virginia.

The safety concerns emerged after an explosion at a coal mine in West Virginia in January and escalated after a similar blast in southeastern Kentucky in May.

The tragedies prompted the federal Mine Safety and Health Administration to toughen safety standards temporarily, as Congress prepared the first major overhaul of mine safety laws in nearly 30 years.

Borell said key concerns for miners who work underground include having enough emergency air supplies and having working equipment necessary to survive a disaster. These include the so-called self-rescuers, which enable miners to breath safely despite an atmosphere of carbon monoxide.

The new legislation, signed by President Bush June 15, requires miners to have two hours' worth of oxygen on hand while they work, rather than the one hour required under the old rule.

Known as the MINER Act, the legislation was endorsed by the United Mine Workers of America and the industry-backed National Mining Association.

The law also requires operators to leave extra air packs at various points throughout mines. Routine checks on the packs are also mandated.

## New law poses challenge

Borell said one of the challenges for mine operators is where to store air supplies. "Underground coal mines are very spread out. If they have five or six entrances, some roads or passageways take in fresh air from outside, while others vent the underground air to the outside," he said. "These mines may cover many, many square miles, so where do you place the oxygen cylinders?"

Further, the new law requires operators to install new communications equipment in mines within three years to track lost miners. These devices must provide a minimum of one-way communication if a miner is trapped underground.

It also sets a deadline for development and deployment of two-way, wireless devices. Seals used to block off sections of mines are also addressed in the legislation. At West Virginia's Sago Mine, where 12 men died in January, seals made of lightweight fiberglass were used. These seals must be strengthened under the new law.

Also, the legislation requires rescue teams be within one hour's distance of mines instead of two hours, and it calls for timelier reporting of accidents.

The Congressional Budget Office has estimated that mine owners will spend up to \$128 million to meet the new standards. Almost half the money will go toward putting together 260 mine-rescue teams.

Undoubtedly, the new requirements will increase the cost of safety programs at Greens Creek and Pogo, Borell said.

Greens Creek and Pogo safety officials did not return telephone calls. ●

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## CENTURY

property now," Kent said.

### Wanted: Alaska partner

Work at Century Mining's Alaska project, meanwhile, is moving at a crawl

The Juneau Gold Belt is a 120-mile-long by 10-mile-wide strip along the Alaska Panhandle. It is home to several large mineral deposits, including Coeur d'Alene Mines Corp.'s Kensington Gold Property about 40 miles northeast of Juneau, which has reserves of 3.2 million ounces of gold.

"We had the vision three years ago. We'd like to joint venture these properties or find another company to work with us on them," she said. The company also would consider selling its Alaska proper-

ties, she added.

Developing the Juneau-area claims will present significant environmental challenges. For example, two of the mines are located in downtown Juneau, and some of the properties are next to the ocean. But Century Mining is ready to tackle these issues, provided it can find the right partner, Kent said.

"A small company can only do so much," she explained. "Being a junior and having all these properties is not easy."

Century Mining is currently entertaining offers for some of its exploration properties in the Juneau Gold Belt and one major company is doing due diligence on the past producers in the Alaska portfolio, Kent said.

Given gold prices today, there is a lot of interest by other companies in this package," she said. "We are very open for business in Alaska and doing deals on any

of the properties."

Century Mining expects new developments in Alaska within the next two months, Kent said.

"You should look for other announcements in the next few weeks and with respect to Alaska, something should happen in the next couple of months," she added. ●

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Several of the individuals listed above are independent contractors

continued from page 2

## LOOK

Megalineament.

- Peterson Property is nine miles (14.4 kilometers) north of Juneau and covers 206 acres (83.6 hectares).

- Sweetheart Property is 30 miles (48 kilometers) south of Juneau near Sweetheart Lake.

- Dream Property is on the west

shore of the Lynn Canal, 40 miles (64 kilometers) north of Juneau.

- Patton property is eight miles (12.8 kilometers) north of the Juneau airport and has three small adits.

- Yakima Property is three miles (4.8 kilometers) from Juneau and is near the former Treadwell Mine. The property is upslope from the Treadwell and has similar features.

—ROSE RAGSDALE

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## • NORTH AMERICA

# Appeals court rules against Teck Cominco

*Favors members of Confederated Tribes of the Colville Reservation in hazardous waste case, says suit against company can proceed*

By ROSE RAGSDALE

For Mining News

A U.S. appeals court ruled July 3 that a lawsuit can proceed against Canadian mining company Teck Cominco Metals Ltd. over the release of hazardous waste in Canada that reached the United States.

Teck Cominco, the world's biggest zinc producer, had argued the lawsuit should be dismissed because U.S. environmental laws don't apply to a Canadian company that dumped waste in Canada.

The lawsuit was filed by two members of the Confederated Tribes of the Colville Reservation in Washington state who claimed Teck should be responsible for waste that flowed into the U.S. along the Upper Columbia River in northeast Washington state from the company's smelter in Trail, British Columbia.

The San Francisco-based Court of Appeals rejected Vancouver-based Teck's claim that it wasn't responsible

for the cleanup because the release of hazardous waste in the U.S. is a domestic issue.

"The passive movement and migration of hazardous substances by mother nature is still a 'release'" under U.S. environmental laws, Circuit Judge Ronald M. Gould opined on behalf of the court.

"We reject Teck's argument that it is not liable under (federal regulation) § 9607(a)(3) because it did not arrange for disposal of hazardous substances 'by any other party or entity,'" Gould wrote.

## Teck will investigate contamination

In June Teck Cominco agreed with the U.S. Environmental Protection Agency to investigate contamination in the Upper Columbia River.

From that effort, Teck Cominco and the EPA aim to produce a science-based report on the ecological and human health conditions of the Columbia River from the

Canadian border to the Grand Coulee dam, an area encompassing Lake Roosevelt.

The investigation is also the initial step in the cleanup process, according to EPA officials.

Teck Cominco said at the time that it has always wanted to address the public's concerns about the level of hazardous waste in the river and in Lake Roosevelt.

A large portion of the zinc and lead concentrates treated in the past 15 years at Teck Cominco's Trail smelter comes from the Red Dog Mine in Northwest Alaska and the remainder comes from other mines in Canada, the United States and South America.

The lawsuit alleged the Trail smelter discharged as much as 145,000 tons of waste a year from 1906 to 1995 that polluted U.S. waters.

The case is Joseph A. Pakootas and Donald R. Michel of the Confederated Tribes of the Colville Reservation, State of Washington, v. Teck Cominco Metals Ltd., U.S. Court of Appeals for the Ninth Circuit. ●

## • SOUTHWEST ALASKA

# Northern Dynasty applies for water rights

*If the Pebble project is developed, water will not be used until June 2010, but applying now will give company legal standing*

By SARAH HURST

For Mining News

In its application for water rights for the Pebble project, Vancouver-based Northern Dynasty reveals details of its environmental baseline studies and proposed mine facilities. Northern Dynasty filed the application with the state of Alaska's Department of Natural Resources in mid-July, providing three hefty folders of information regarding the North Fork Koktuli, the South Fork Koktuli and the Upper Talarik Creek watersheds in the Bristol Bay area.

The state will likely request additional material from Northern Dynasty before taking a decision on whether to grant water rights, according to DNR. Alaska statutes require that the proposed use of water be beneficial and in the public interest. In determining the public interest, the DNR commissioner must consider factors such as the benefit to the applicant, the effect of the proposed economic activity, the effect on fish and game resources and public recreational opportunities, the effect on public health and the effect on access to navigable or public water.

Northern Dynasty's application states that the expected date for water use to begin is approximately June 2010, and the expected date for water use to be fully developed is approximately November 2012. Applying for water rights at this early stage of the mine development process — permit applications are not expected to be filed until January 2008 — is a standard practice for mining companies, according to Northern Dynasty. "Applying for water rights in advance of developing a final mine plan will provide Northern Dynasty engineers and environmental scientists

with the greatest flexibility to mitigate potential impacts on fish and fish habitat," the company said in a briefing note July 17.

## Some groundwater flow will be cut off

Development of the mine site will modify catchment hydrology, the water rights application says. Construction of the tailings dam will cut off groundwater flow from some areas, and development of the site will reduce interception and transpiration by vegetation, increasing runoff. Existing vegetation at the site is predominantly low shrubs, grasses and mosses. Northern Dynasty's goal is to continuously recycle water so that no process water is released to the downstream environment.

The tailings storage facility will cause increases to evaporation in the summer and wind-blown snow transport and sublimation in winter, resulting in a net increase to water loss from the catchment, the application says. Global warming over the next few decades will also increase evapotranspiration and sublimation rates in the area, and less precipitation will fall as snow. These effects suggest that water quantity at the site will reduce over the mine life, Northern Dynasty says.

If the Pebble project proceeds, development will require capture of surface and groundwater flows at the site. This water will be used for "beneficial mining uses," Northern Dynasty says, including mill operations and tailings slurry transport, providing potable water, ensuring that fluctuations in the tailings pond do not impact the mining process, and protecting downstream aquatic resources — for exam-

ple by submerging potentially reactive waste materials, and controlling sediment.

## Tailings storage for 500 million tons

The tailings storage facility has been designed to store approximately 500 million tons of tailings and potentially reactive waste rock, as well as mill process water and site runoff, the application says. The flotation process will create two separate tailings streams: a bulk tailings stream, accounting for around 97 percent of the total, and a pyritic tailings stream, accounting for the remaining 3 percent. The bulk tailings, which test work has shown to be non-reactive, will be discharged from delivery pipelines located along the embankment crests and adjacent high ground. The pyritic tailings, which will be potentially acid generating if allowed to oxidize, will be deposited below ponded water to prevent oxidation.

If DNR grants the water rights to Northern Dynasty, the company will have legal standing to assert the rights against conflicting water users who do not have water rights. The company will also have priority to use water over anyone who later files for water rights from the same source. The Pebble project is already facing strong opposition from local residents who engage in commercial, sport or subsistence fishing, as well as from environmental organizations. ●

*Note to readers: Rio Tinto agreed to purchase a 9.9-percent interest in Northern Dynasty in July. See story, "Rio Tinto gives Pebble project thumbs up," in Petroleum News, July 2, online at [www.PetroleumNews.com](http://www.PetroleumNews.com).*



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## ● GUEST COLUMN

# Mining news summary: Alaska mining industry running at over capacity

The annual running of the bulls in Pamplona can't hold a candle to the statewide frenzy that is going on right now across the length and breadth of Alaska. Measure it any way you like — meters drilled, helicopter hours used, geologists or engineers on the payroll, gallons of fuel burned or gallons of peanut butter consumed — it all comes out the same. The Alaska mineral industry is running at or over capacity and there is no sign that that will change any time soon.

The last month saw the start of multiple drilling programs in the Brooks Range, Seward Peninsula, Southwest, Southcentral and Interior Alaska; permit applications for Interior Alaska's newest heap leach gold project; and a major leap forward at Alaska's largest copper-gold deposit. Perhaps most satisfying and telling of all is the fact that thousands of e-mails and phone messages have gone unanswered because their intended recipients are in the nearly electron-free world of the Alaska bush!

## Western Alaska

**NORTHERN DYNASTY MINERALS LTD.** announced that **KENNECOTT CANADA EXPLORATION INC.** has acquired a 9.9 percent stock interest in Northern Dynasty. While the acquisition does not give Kennecott any rights to Northern Dynasty's Pebble copper-gold-molybdenum deposit, it does give Kennecott the right of first refusal to participate in up to 50 percent of future share placements by Northern Dynasty until Kennecott reaches 19.9 percent of Northern Dynasty's outstanding shares.

Kennecott also has the right to supply up to three technical advisors to complement Northern Dynasty's project management team. The agreement has been hailed as a very positive development in the industry due to Kennecott's worldwide expertise with deposits such as Pebble.

**TONOGOLD RESOURCES** and JV partner **CALISTA CORP.** announced initial assay results from its Nycac project. Of the 833 grid soil samples reported to date for the Cox Mountain, Saddle Mountain and Nugget Ridge prospects, 57 soil grid samples ranged from 0.10 parts-per-million gold to 2.9 parts-per-million gold. Of the 52 rock chip samples taken during grid sampling, 11 ranged from 0.10 parts-per-million gold to 132 parts-per-million gold. The best results in 2006 have been from Saddle Mountain. Core sample results are pending from the first four drill holes on the Bonanza Ridge.

**QUATERRA RESOURCES** said core drilling has begun on its Big Bar copper-lead-zinc project on the Seward Peninsula. The 1,500-foot drilling program is targeting a 4,000-foot long soil anomaly that contains up to 1,920 parts-per-million copper in felsic schist that corresponds to gravity and induced polarization geophysical anomalies. Gossans collected as float from the anomalous area contain up to 0.06 grams of gold per tonne, 49.8 grams of silver per tonne, 4,260 parts-per-million copper and 3,900 parts-per-million zinc. The previously un-drilled prospect was identified by Anaconda in the early 1980s during a stream sediment and soil geochemical reconnaissance survey.

**LINUX GOLD** announced approval of a 3,000-foot core drilling program at its Granite Mountain project on the Seward Peninsula. The drilling, with depths averaging 500 feet, is to commence during late July as part of the company's \$1.4 million 2006 exploration program.

**LIBERTY STAR GOLD** said it plans further geophysical and geochemical sampling at the Big Chunk copper-gold and Bonanza Hills gold projects for late August. At Big Chunk, field efforts will focus on the White Sox, Point Grey, Baltusrol, Bay Hill, and Silver Leaf copper prospects. In addition a large gold and indicator-element geochemical anomaly in the west portion of the Big Chunk Caldera, covering parts of the Augusta, Black Diamond and Bel Aire blocks, is recom-

mended for additional geochemical sampling and more geophysics prior to additional drilling. At Bonanza Hills, additional rock, soil and stream sediment sampling is planned prior to possible drilling later in the year.

## Eastern Interior

The biggest news of this month was from **KINROSS GOLD**.

The company said it has submitted initial draft permits to conduct a valley leach system as part of its overall operations at the Fort Knox mine near Fairbanks. The valley fill heap leach will be in the upper end of the Walter Creek drainage immediately upstream from the existing tailings impoundment. The heap leach system will cover approximately 310 acres and will have a total capacity for 160 million tons of rock. The pad is to be constructed in five stages using run-of-mine rock from the Fort Knox Pit and at least 29 million tons of ore from the Barnes Creek and Fish Creek stockpiles.

The ore is characterized by relatively high permeability that will promote efficient flow in the heap, rapid solution recovery and rapid rinsing at mine closure. In-heap storage of process solution and storm water will be accomplished behind an embankment in the downstream toe of the heap. The valley fill heap leach pad will be constructed with a 12-inch prepared subbase overlain by a high density geomembrane liner. Above

the geomembrane liner, there will be an overliner consisting of three feet of crushed rock containing a network of piping to promote rapid drainage. The overliner will provide liner protection during ore loading, promote leachate collection, and maintain a low pressure on the geomembrane liner.

The facility will utilize an in-heap storage pond for collection of pregnant solution. This storage area will possess sufficient capacity for pregnant solution as well as a 24-hour storm drain down plus the runoff from the 100-year/24-hour storm event.

Beneath the in-heap storage pond, a leachate collection and recovery system will be constructed between an overlying primary geomembrane liner and an underlying secondary geomembrane liner underlain by a 12-inch-thick layered prepared subbase.

Barren solution will be applied on the heap leach using drip emitters, or possibly sprinklers, during the warm months. Pregnant solution containing gold in solution will flow to the in-heap storage reservoir, which will have an operating capacity of about 68 million gallons. Pregnant solution will be pumped into the existing Fort Knox mill for recovery and refining.

The heap leach pad will be located immediately upstream of the existing zero discharge tailing impoundment which has been designed and will be maintained to contain the 100-year/24-hour storm event and the average 30-day spring breakup plus provide three feet of freeboard. The mill and heap leach process will recycle water from the tailings impoundment for reuse in the beneficiation process. Public comments on the proposed facility are due by July 31 and details relating to the project can be acquired at [www.dnr.state.ak.us/mlw/mining/largemine/fortknox](http://www.dnr.state.ak.us/mlw/mining/largemine/fortknox).

**TERYL RESOURCES CORP.** and JV operator **KINROSS GOLD** announced their intent to conduct drilling on the Gil project. The new gold target being explored was located by integrating geological and geochemical information with the recent geophysical data. A total of three drill holes initially is planned to test the most favorable geophysical targets.

**FREGOLD VENTURES LTD.** announced the discovery of new areas of veining and shearing to the south and along strike of the Cleary Hill mine on their Golden Summit project. Trenching commenced at the old

Beistline shaft, located 1,300 feet southeast of the Cleary Hill mine.

Chip channel samples by prior operators along the Beistline shaft walls graded 0.61 ounces of gold per ton over the 109 feet of the shaft, with the top 46 feet grading 1.25 ounces of gold per ton. Trenching followed a shear zone that hosts the gold mineralization at the Beistline shaft and continued in a northwesterly direction for more than 1,000 feet towards the Cleary Hill Mine.

The shear zone width expanded from 12 feet near the Beistline shaft to more than 25 feet halfway between the Beistline shaft and the Cleary Hill Mine. The 25-foot width of the shear exposed by a cross trench matches extremely well with results from the company's prior drill hole CHM96-01 which intercepted 0.16 ounces of gold per ton over 25 feet at a depth of 25 feet. An additional 900 feet of trenching was conducted approximately 1,000 feet south of the Cleary Hill Mine, where a new shear zone was discovered parallel to and 50 feet south of the Wackwitz vein which contained coarse stringers of gold to 12.0 ounces per ton.

Veins in the Beistline and Wackwitz zones have converging strikes and trenching in their apparent intersection revealed a 200-foot wide zone containing extensive alteration and quartz veining. Assays are pending.

**RIMFIRE MINERALS CORP.** said field work has begun on its large property position in the Goodpaster district. The 2006 field program will include reconnaissance silt geochemical surveys to explore a 110,000 acre claim package staked last winter. Additional work consisting of mapping and prospecting will be undertaken to examine high priority targets generated in previous programs.

## Alaska Range

**FULL METAL MINERALS** announced additional high grade result from its Lucky Shot gold project near Anchorage.

To date, 28 core holes have been completed over a 200 foot strike length in the Coleman Block of the Lucky Shot Shear Zone. Significant intervals include 4.53 meters true width averaging 51.5 grams of gold per tonne in hole C06-17, 1.20 meters true width averaging 134.5 grams of gold per tonne in hole C06-19, 2.51 meters true width averaging 60.3 grams of gold per tonne in hole C06-21, 1.90 meters true width averaging 21.3 grams of gold per tonne in hole C06-20, 3.48 meters true width averaging 32.8 grams of gold per tonne in hole C06-23 and 1.68 meters true width averaging 34.1 grams of gold per tonne in hole C06-27.

Mineralization is typified by quartz veins within a strongly sericite-carbonate altered shear zone, with disseminated visible gold, tellurides and minor sulfides occurring within multiple phases of quartz veining and cataclases. Continuity of the gold-bearing structure is excellent, with local minor offsets due to post-mineralization faulting.

## Northern Alaska

**LITTLE SQUAW GOLD MINING** said work has begun at its Little Squaw gold project in the southern Brooks Range.

Field activities to date have included collection of 235 soil samples and 15 rock samples while seven drill sites have been prepared on the Little Squaw quartz vein and four on the Rock Glacier quartz vein. Drilling was scheduled for a mid-July start-up.

**SILVERADO GOLD MINES** said alluvial gold recovery operations have begun at its Nolan gold project in the southern Brooks Range.

Last winter and spring saw the completion of 1,200 feet of underground development on the Swede Channel and extraction of approximately 40 percent of the resources outlined in the underground workings.

Underground work will begin after freezeup and will include the removal of the remaining gold bearing gravels which were blocked out this year. Underground work will also be conducted on gold bearing gravels which were discovered in prior years drilling. ●

## The author

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column July 20. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is [avalon@alaska.net](mailto:avalon@alaska.net) and his web site is [www.avalonalaska.com](http://www.avalonalaska.com).



CURT FREEMAN



## NORTHWEST ALASKA

### DEC working on Red Dog dust permit

The Alaska Department of Environmental Conservation is seeking public comment on its plans to issue an air quality control minor permit to Teck Cominco Alaska Inc. for the Red Dog Mine in northwest Alaska, according to a public notice published June 22.

Teck Cominco plans to install a 50,000 cubic feet per minute baghouse, or giant industrial filter, to control dust emissions that are escaping from the coarse ore storage building at the huge zinc and lead mine.

Teck Cominco has been monitoring the level of ore concentrate being deposited on the tundra immediately adjacent to the Red Dog Mine. In December 2004, the company notified regulators that the concentrate levels were elevated and appear to be related to fugitive dust emissions from the mining operation.

#### Dust from transferring, handling

Coarse ore storage is located in an existing enclosed building. Teck Cominco said the dust stems from the transferring and handling coarse ore via conveyors and heavy equipment. In addition to the baghouse, the company also plans to install a building fan.

Teck Cominco said the baghouse and fan will reduce emissions of particulate matter, while not increasing toxic emissions such as nitrogen oxide and sulfur dioxide.

DEC said it has classified the move as a de-bottlenecking action that requires a minor permit under state law.

DEC said it intends to incorporate these minor permit provisions into the U.S. Environmental Protection Agency Title V operating permit for the mine after that agency's 45 day review.

—MINING NEWS

## SOUTHCENTRAL ALASKA

### Seward weighs coal, other power sources

City officials in Seward are entertaining the idea of using coal to fuel an electricity generation plant in the Southcentral Alaska coastal town.

But Seward's city council is also investigating the merits of tidal waves and wind and other possible sources of power to replace all or part of the electricity Seward currently purchases from Chugach Electric Association, an Anchorage utility.

Chugach's power has proven to be unreliable when winter avalanches knock down power lines and cause blackouts. To address the problem, city council members have begun to investigate alternative-power projects.

#### Coal-fired plant proposed

Anchorage developer Marc Marlow has proposed to build a coal-fired power plant in the community of 2,600 people. Seward already hosts coal shipments from Usibelli Coal Mine in Healy, brought to town by rail and loaded onto barges bound for South Korea.

Marlow is redeveloping the decades-vacant MacKay Building, dubbed the "pink elephant," in Anchorage. He wants to lease five acres in Seward from the Alaska Railroad Corp. and build a 20-megawatt coal-fired power plant on the site, he told Seward officials. Seward would then purchase power from the plant.

Seward Mayor Vanta Shafer said July 19 that Marlow's idea "is one of many power generations options we're looking at."

"I'm going to a presentation on tidal energy tonight and other council members are getting information on several options, including wind generation," Shafer said. "Believe me when I say the council is nowhere near ready to make a decision on this."

—ROSE RAGSDALE

*But Seward's city council is also investigating the merits of tidal waves and wind and other possible sources of power to replace all or part of the electricity Seward currently purchases from Chugach Electric Association, an Anchorage utility.*

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## • YUKON

# Feasibility study supports Minto project

*Sherwood Copper aims to bring Yukon mine into production in 2007, shipping concentrates to Alaska's Skagway Ore Terminal*

By SARAH HURST

For Mining News

#### Mine fully permitted

Sherwood will use a larger mill and camp than ASARCO had envisaged, as well as increasing pre-stripping, all with the goal of accessing higher grade copper sooner. The mine is fully permitted and much of the large equipment has already been ordered, to ensure that it arrives on time and that costs are locked in. In terms of infrastructure, Sherwood is working with the Alaska Industrial Development and Export Authority to expedite improvements to Skagway Ore Terminal, and the company also hopes to tap into Yukon Energy's hydroelectric power grid.

A feasibility study published in July has confirmed that Vancouver-based Sherwood Copper's Minto copper-gold-silver project in the Yukon could be economic for at least six years. That is the initial projected mine life, but Sherwood is continuing its exploration program to expand the current resources. A key component of the project is the plan to retrofit Alaska's Skagway Ore Terminal to receive shipments of concentrate.

Sherwood acquired Minto from ASARCO last year and gave the open pit project a new lease of life, fast-tracking it towards production. "The original concept when we acquired the project was just to update the capital costs, bring the project current and then recommence production," Stephen Quin, Sherwood's president and CEO, said in a conference call with investors July 11. "However, we saw there were quite a number of opportunities to improve the project, to add resources, reserves, to increase the mill throughput, options for improving power and concentrate shipment," he added.

In most of these respects Sherwood has succeeded, according to the feasibility study. Based on approximately 231 drill holes, 99 percent of Minto's resource is now in the measured and indicated category, with 77 percent of that in the measured category, sufficient for six years of high grade production of 2,400 metric tons per day at 2.4 percent copper and 0.88 grams-per-ton gold. Lower grade material — less than 1 percent copper — will be stockpiled and processed at the end of the mine life.

Escalating fuel, labor and equipment costs over the past few years have pushed the total capital cost of the mine up to C\$90 million, and one of the biggest chunks of that will be an estimated C\$10-13 million for the tailings filter plant. The feasibility study assumes that a dry stack tailings method will have to be used in order to meet the requirements of Minto's Type A Water License. This is the same method that was required at Alaska's Pogo gold mine, which has also caused cost overruns as an additional filter had to be ordered after the mine went into production.

Sherwood is now looking into the option of a pressure filter system, which could be less expensive. Test work is under way and the results should be in by the end of July, according to Quin. A gravity circuit in the mill will improve gold recovery, he added. If all goes well, Minto should be in production in mid-2007.

Over the life of the mine Sherwood expects to produce 300 million pounds of copper, 122,000 ounces of gold and 1.8 million ounces of silver. ●

## NORTHWEST ALASKA

### BHP Billiton studying Arctic coal

Arctic Slope Regional Corp. and multinational BHP Billiton signed a series of agreements in July providing BHP Billiton an exclusive right to explore and possibly develop the coal-bearing land held by ASRC in northwestern Alaska. The Western Arctic region includes a number of known low-sulfur bituminous coal-bearing areas.

ASRC holds land and mineral rights in the region as a result of the Alaska Native Claims Settlement Act of 1971.

BHP Billiton will begin an exploration program on ASRC lands north of the Brooks Range in the Western Arctic, inland from the Inupiat communities of Point Lay and Point Hope, later this year. In addition to exploration, BHP Billiton is committing to continuation of ASRC's environmental studies of the area and establishing a community consultation process. Should exploration results prove positive, BHP Billiton will begin project concept studies to determine preliminary feasibility and possible mine development.

BHP Billiton brings extensive Arctic exploration and mining experience gained through development of the Ekati diamond mine in Canada's Northwest Territories. ASRC is one of the 12 Alaska-based regional corporations established by Congress under the Alaska Native Claims Settlement Act of 1971. It represents eight North Slope villages including Point Hope, Point Lay, Wainwright, Atkasuk, Barrow, Nuiqsut, Kaktovik and Anaktuvuk Pass. ASRC has nearly 9,000 shareholders and has paid nearly \$150 million in dividends since its inception. The corporation has investments in energy services, petroleum refining and marketing, technical services and engineering and construction.

*BHP Billiton will begin an exploration program on ASRC lands north of the Brooks Range in the Western Arctic, inland from the Inupiat communities of Point Lay and Point Hope, later this year.*

—SARAH HURST



• CANADA'S NORTH

# Diamonds restore shine to Far North economy

Canadian government analytical paper tracks effects mining precious gemstones had Northwest Territories, country

By ROSE RAGSDALE  
For Mining News

**D**iamond production in Canada's North is delivering more than vast profits to mining companies and millions of carats to eager consumers around the globe.

Since its first diamond was discovered in 1991, Canada's North has emerged as a world-class diamond producer. Three of the biggest diamond mines, all in the Northwest Territories, are expected to generate \$26 billion in gross domestic product over their lifetimes and provide around 125,000 person years of employment.

Diamond mining also has spawned a support industry of cutting and polishing factories in Yellowknife, further stimulating the far north economy.

Two mines, Ekati and Diavik, are currently in production in the Northwest Territories while a third, Jericho, began production earlier this year in Nunavut. Another operation, the Snap Lake Diamond Project in the Northwest Territories, is scheduled to begin production in 2007.

Extraction of the brilliant gemstones has had a profound effect on the local economy.

Per-capita gross domestic product of the Northwest Territories jumped dramatically in 1999 with the first diamond exports from the region and since has climbed at an annual average rate of 12.5 percent. This was nearly three times the average annual rate of national per-capita GDP growth of 4.2 percent.

These are among findings in "Diamonds: Still shining brightly for Canada's North," an analytical paper published by the Canadian government's international trade division in June.

The paper, prepared by Craig Byrd, examines the overall impact of diamonds on the Northwest Territories since 1999 and provides statistical data on production values from 2002 to 2005.

## Leading diamond producer

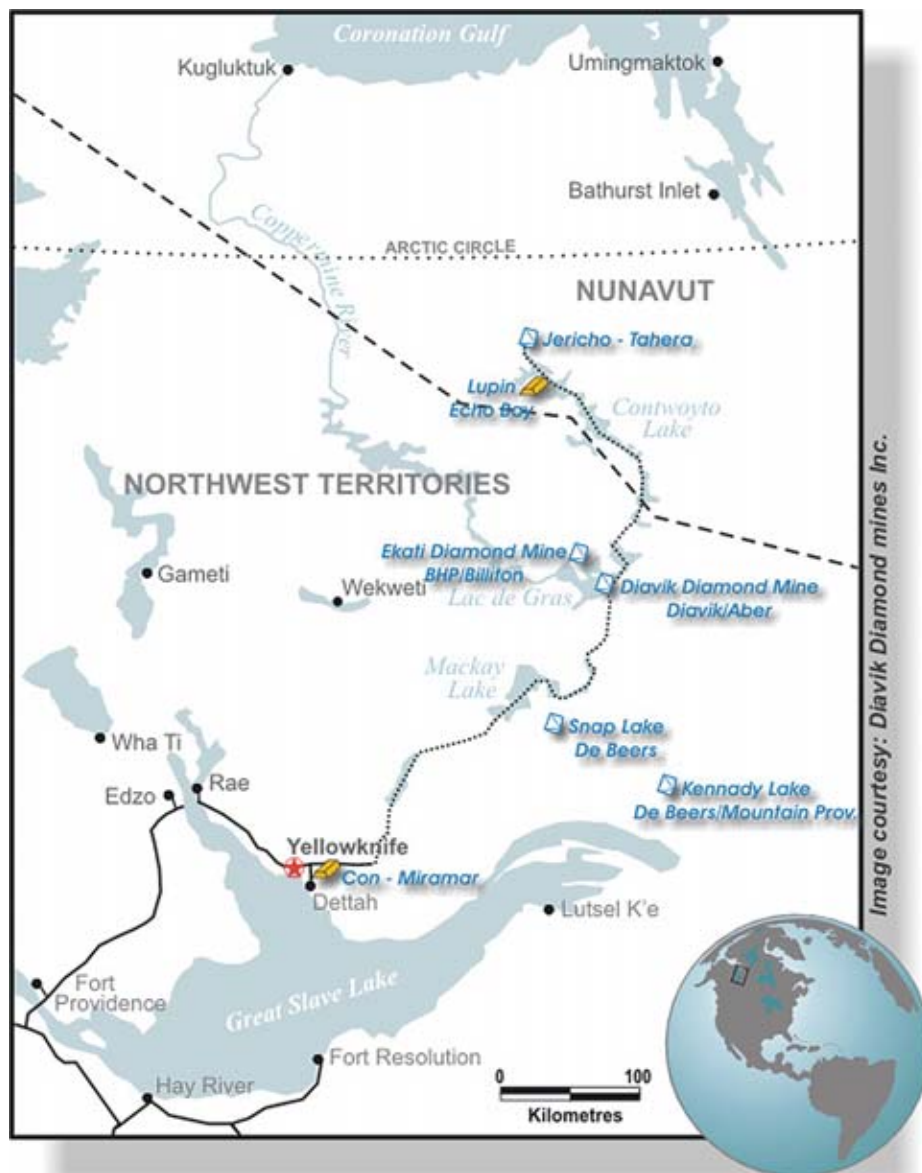
In just five years, the rapidly growing Northwest Territories industry propelled Canada to the forefront of global diamond markets, moving the country to third in the world in terms of output value and sixth in terms of volume by 2004.

The value of Canadian diamond production trails that of long-time leader, Botswana, and is rapidly catching Russia.

The value of diamond exports from the Northwest Territories surged to more than \$1.6 billion in 2005, nearly twice the level in 2002, and more than three times the value exported during the first year of production.

Since 1999, diamond exports have risen at an annual average rate of 29 percent in value. In addition, growth in actual volume of diamond exports mushroomed nearly six-fold. Mining companies exported 12 million carats of diamonds from the Northwest Territories in 2005, up 141 percent from nearly 5 million carats in 2002 and up 476 percent from 2.1 million carats in 1999.

Today, diamond mining and related activities are the driving force behind an economic turnaround that is transforming Canada's North. The discovery of, and resulting boom in, diamond mining coincided with a scaling back of gold produc-



## Union members ratify first agreement with Ekati diamond mine

Ekati Diamond Mine reported June 30 reaching a tentative bargaining agreement with its union members that effectively ended a nearly three-month-long strike by the workers.

The collective agreement, reached on June 21, was ratified by a majority of the 375 members of Diamond Workers UNW Local X3050 of the Public Service Alliance of Canada, who walked off the job April 7 at the Northwest Territories mine, which is about 186 miles northeast of Yellowknife and about 124 miles south of the Arctic Circle.

The agreement comes after the union rejected several earlier company offers. Ekati workers voted 66 percent in favor of the one-year contract, which contains a full grievance procedure to protect workers from arbitrary and unfair treatment, wage increases, a signing bonus, more vacation days and other improvements, according to Jean-François Des Lauriers, PSAC executive vice president-north.

"This has been a tough strike but our members are going back to work with significant improvements in their workplace as a result of their determination," Des Lauriers said. "And we will be back at the bargaining table on our members' behalf next year."

Richard Morland, vice president operations Ekati Diamond Mine, said the collective agreement represents the first of its kind, with world-class compensation

see AGREEMENT page 9

tion in the Northwest Territories, thus further magnifying its effect.

## Remarkable turnaround

Manufacturing shipments, employment and income per capita as well as GDP have all seen remarkable reversals since the onset of diamond production, according to Byrd.

Between 1999 and 2005, manufacturing shipments in the Northwest Territories also climbed at an average annual rate of 38 percent, compared with minus 12.5 percent during the previous five years.

By contrast, Canada's annual average manufacturing shipments grew at a rate of 2.8 percent during the latter period,

down sharply from 7.5 percent annual growth between 1993 and 1998.

Unlike the robust 12.5 percent growth in GDP in recent years, per-capita GDP in the Northwest Territories fell well below the national average to 1.7 percent prior to the start of diamond production, about half the national average of 3.3 percent.

With growth in GDP has come substantial jobs creation. Employment in Canada's diamond mining industry has experienced strong growth. From 2001 to 2003, both production employment and total hours worked in the diamond mining industry more than doubled.

The number of production workers increased to 992 in 2003 from just 84 in 1999. Jobs growth has continued. Today,

the Ekati mine, operated by BHP Billiton, employs nearly 2,000 people, about 1,300 of whom are production workers. The Diavik mine, which began production in 2003, employs about 700 workers. It is operated by Diavik Diamond Mines Inc., a subsidiary of London-based Rio Tinto plc.

## Wages strong and steady

Average wages for miners, however, fell from \$70,000 in 1999 to about \$61,000 in 2001 and since have remained virtually unchanged.

Prior to diamond production, personal income per capita in the Northwest Territories languished well below the Canadian average. Growth in annual per-capita personal income was just eight-tenths of 1 percent from 1993 to 1998, while the national average exceeded 2 percent. But by 2004, annual growth in per-capita personal income had accelerated in the Northwest Territories to 4.8 percent, well above the national average of 2.8 percent.

Another closely related measure of the economic impact of diamonds is retail sales. The average annual rate of growth in retail sales between 1999 and 2005 was virtually unchanged in the rest of Canada from the pre-diamond period between 1993 and 1998. In the Northwest Territories, however, retail sales per capita increased sharply.

Between 1993 and 1998, the territory registered a 4.5 percent annual increase in retail sales, just below the national average of 4.8 percent. From 1999 to 2005, the territory's retail sales grew at an annual average rate of 8.2 percent, compared with the national average of 5.1 percent.

Retail workers in the Northwest Territories also saw their earnings increase at a faster rate from 1999 to 2004. In addition, the annual increase in average weekly earnings in the territory was much higher than in the rest of Canada in the six-year period since diamond production began.

Between 1993 and 1998, the annual increase in average weekly earnings in the territory was just six-tenths of 1 percent, less than half the national average of 1.4 percent for the same period.

But this trend completely reversed itself by 2005, when the annual increase in average weekly earnings in the territory accelerated to 3 percent, a full percentage point higher than the national average of 2 percent for the period.

## Indirect benefits

While diamond mining is not itself a manufacturing industry, it requires a significant amount of goods and materials to get plants and mine operations under way, some of which is manufactured in the Northwest Territories. As a result, manufacturing shipments can be used to gauge the impact of diamond-related spin-offs in the territory's economy, according to Byrd.

During the pre-diamond period 1993 to 1998, manufacturing shipments in the NWT fared quite poorly, declining at an average annual rate of 12.5 percent. In contrast, manufacturing shipments in the rest of Canada rose at an annual rate of 7.5 percent.

After the start of diamond production in 1999, the 38 percent average annual

see DIAMONDS page 9



• BRITISH COLUMBIA

# NovaGold seeks permits for Galore Creek

Aggressive junior mining company takes important step in advancing huge B.C. copper-gold project toward 2010 startup

By ROSE RAGSDALE

For Mining News

The British Columbia Environmental Assessment Office is seeking public comment on an application for an environmental assessment certificate filed by NovaGold Canada Inc. in May.

The Vancouver, B.C.-based junior mining company proposes to construct and operate a \$1.1 billion open-pit mine operation at its Galore Creek Project in northwestern British Columbia east of the Alaska Panhandle.

NovaGold Canada is 100 percent owned by NovaGold Resources Inc, which is also developing the Donlin Creek and Rock Creek mining projects in Alaska.

Located within the historic Stikine Gold Belt, Galore Creek is in Tahltan Traditional Territory near the communities of Dease Lake, Iskut and Telegraph Creek. The 214,000-acre (86,600 hectare) property is about 43 miles (70 kilometers) west of Highway 37 and 90 miles (150 kilometers) northeast of Stewart, B.C., which has a year-round deepwater port available for shipping ore concentrates.

Situated in the rugged Coast Mountain Range, Galore Creek is expected to produce 5.9 billion pounds of copper, 3.7 million ounces of gold and 40 million ounces of silver over the 20-year life of the project. The property's total measured and indicated resource is 12 billion pounds of copper, 13.7 million ounces of gold and 156 million ounces of silver.

## Pact with Tahltan Nation

B.C.'s EAO called for public comment during a 60-day period, beginning July 10 and ending Sept. 8.

The project is subject to review under B.C. environmental regulations and Canada's Canadian Environmental Assessment Act. NovaGold also applied for provincial authorizations under the Forest Range and Practices Act, Land Act, Water Act, Environmental Management Act, Drinking Water Protection Act, Transportation Act and Health Act to be reviewed concurrently with the application, the B.C. regulators said.

NovaGold said it has worked since 2003 in cooperation with the Tahltan Nation to develop "Out of Respect," a document that outlines a strategy and program for use by the mining industry to advance Tahltan well-being. The strategy became a foundation for a socio-economic impact assessment and the NovaGold-Tahltan Participation Agreement, ratified by the Tahltan Nation and signed on Feb. 10.

"NovaGold intends the Galore Creek Project to be a showcase of sustainable



mining practices. The company commits to make every reasonable effort to minimize long-term environmental impacts while generating substantial income and various ancillary opportunities for shareholders, the Tahltan Nation, employees and the broader community," NovaGold told B.C. regulators.

The promise includes giving preferential hiring and contracting opportunities to members of the Tahltan Nation during construction and ongoing operations phases of the project.

NovaGold expects to employ up to 1,000 people during two years of construction and about 553 permanent workers when the mine project begins full production.

## Slurry pipeline proposed

In addition to a mill and processing facilities at the project site, NovaGold also plans to build an 86-mile (140-kilometer) underground pipeline to transport concentrate slurry to a filter plant near Highway 37. A large pump will move concentrate slurry through the pipeline at a rate of 90 tonnes per hour, the company said. Corrosion protection, insulation for sections that cross waterways, five monitoring stations along the route and an emergency drain point are all features of the pipeline, the company told B.C. regulators.

**NovaGold's timeline for Galore Creek is to submit permit applications in the first half of 2006, complete the final feasibility study in the third quarter, obtain key construction permits in early 2007, start construction in mid-2007 and start commercial production in 2010-11.**

A smaller pipeline will be installed adjacent to the concentrate slurry line with similar protections to haul diesel fuel to the site for power generation, NovaGold said.

Concentrate removed from the slurry solution at the filter plant will be hauled by trucks to the port at Stewart, while cleaned and treated water will be discharged into the Iskut River, NovaGold said.

At the mine site, water used in processing the ore will come from wells dug on site, and residual materials will be removed and placed in a tailings pond. The water will remain in the concentrate slurry, the company said.

NovaGold also aims to use the nearby Grace property as part of a tailings disposal facility for Galore Creek. NovaGold is seeking to acquire the Grace property's owner, Pioneer Metals, in a hostile

Located within the historic Stikine Gold Belt, Galore Creek is in Tahltan Traditional Territory near the communities of Dease Lake, Iskut and Telegraph Creek. The 214,000-acre (86,600 hectare) property is about 43 miles (70 kilometers) west of Highway 37 and 90 miles (150 kilometers) northeast of Stewart, B.C., which has a year-round deepwater port available for shipping ore concentrates.

takeover. The plan resulted in two companies becoming embroiled in litigation.

NovaGold, meanwhile, has become the target of a hostile takeover bid by its partner in the Donlin Creek Project, Barrick Gold Corp.

NovaGold plans to process 65,000 tonnes per day of ore and waste rock, according to a pre-feasibility study published in October. Annual production in the first six years would average over 300,000 ounces of gold, 2.31 million ounces of silver and 370 million pounds of copper.

The study, which was prepared by independent engineering services company Hatch Ltd., estimates that after-tax annual cash flow would total more than \$200 million, using long-term average metal prices and over \$350 million at current metal prices for the first six years.

## Permitting focus of 2006 spending

In its second-quarter financial report, NovaGold said the majority of its spending at Galore Creek in 2006 will relate to finalizing environmental and engineering work for the environmental assessment report application and paying for an independent feasibility study scheduled for completion later this year.

NovaGold plans to spend about \$40 million on programs that are planned to lead to completion of the feasibility study in the second half of 2006 and to assist permit completion in 2007. Included in the budget are about 18,000 meters of infill and exploration drilling, continuation of detailed design, particularly of the road access, continued metallurgical testing, monitoring and community projects as well as a \$7.5 million property payment due in October. The company is also reviewing activities and the ordering of long-lead time equipment that may be carried out prior to obtaining development permits to assist with the construction timeline of the project.

NovaGold said its board of directors has approved up to \$49 million in additional expenditures at Galore Creek in 2006 as the permitting process advances.

NovaGold's timeline for Galore Creek is to submit permit applications in the first half of 2006, complete the final feasibility study in the third quarter, obtain key construction permits in early 2007, start construction in mid-2007 and start commercial production in 2010-11.

Send comments by midnight Sept. 8, to: Anne Currie, Project Assessment Director, Environmental Assessment Office, P.O. Box 9426, Stn Prov Govt, Victoria, BC V8W 9V1; or fax them to: (250) 356-6448. Comments also may be sent by e-mail to [eaoinfo@gov.bc.ca](mailto:eaoinfo@gov.bc.ca). •

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• NORTH AMERICA

# Barrick makes move on NovaGold

Heavyweight wades in to break up feud between two Vancouver-based juniors, eyeing Alaska and British Columbia properties

By SARAH HURST

For Mining News

In a significant, but not altogether surprising move, Toronto-based Barrick Gold has made a hostile takeover bid for Vancouver-based NovaGold Resources, the owner of several assets in Alaska and British Columbia. At the same time, Barrick and Vancouver-based Pioneer Metals announced an agreement for Barrick, the world's largest gold producer, to acquire Pioneer. The deals are all related because NovaGold was in the midst of a hostile takeover bid for Pioneer. Pioneer owns claims that could be crucial to the development of NovaGold's Galore Creek project.

The offer from Barrick was somewhat predictable as the company had already moved into Alaska late last year when it acquired Vancouver-based Placer Dome, which was developing the Donlin Creek gold project. Donlin Creek, located in Alaska's historic Kuskokwim Gold Belt, is a joint venture with NovaGold, which owns a 70 percent interest in the property. Barrick was set to earn an additional 40 percent interest in NovaGold if it produced a bankable feasibility study by November 2007.

Barrick's offer of US\$14.50 per NovaGold share, which it announced July 24, represents a premium of 24 percent over the July 21 closing price of the company's shares on the AMEX. The transaction is valued at US\$1.29 billion (or \$1.53 billion on a fully diluted basis), according to Barrick. The major also offered C\$1.00 per share for Pioneer, in a transaction valued at C\$60.1 million (or C\$64.7 million on a fully diluted basis). This topped NovaGold's hostile bid of C\$0.57 per share, which Pioneer had been fighting vigorously. Pioneer announced that its directors, officers and largest shareholders had agreed to accept Barrick's offer.

## NovaGold permitting projects

NovaGold recently submitted permit applications for its Rock Creek gold project near Nome and its Galore Creek copper-gold-silver project in northwestern British Columbia. The Galore Creek project was being hindered by a dispute between NovaGold and Pioneer that flared up when Pioneer sued NovaGold last year. NovaGold was hoping to use Pioneer's Grace property as part of its tailings facility for Galore Creek, after completing condemnation drilling that showed there was no significant mineralization on the claims. Pioneer refused to agree with that assessment, and as a consequence, NovaGold made its bid for Pioneer in June.

The possibility of NovaGold taking over Pioneer served as a catalyst for Barrick to act immediately, according to the company's president and CEO, Greg Wilkins. Barrick's management had previously held



COURTESY NOVAGOLD

The offer from Barrick was somewhat predictable as the company had already moved into Alaska late last year when it acquired Vancouver-based Placer Dome, which was developing the Donlin Creek gold project. Donlin Creek, located in Alaska's historic Kuskokwim Gold Belt, is a joint venture with NovaGold, which owns a 70 percent interest in the property.

talks with NovaGold about opportunities for more joint projects, but nothing that was discussed seemed satisfactory to Barrick. The major gave NovaGold no prior warning about its bid, but Barrick was obviously well-prepared, with a Web cast and a presentation going up on its Web site on the day of the bid.

The integration of Placer Dome into Barrick has been very successful, Wilkins said in an interview with Bloomberg News. "Our strategy is really to build a portfolio of long-life assets, and so we sort of looked around at various opportunities, we actually did a small deal in Pakistan back in March, and we just looked at Nova's assets and the two projects that they had were very attractive to us," Wilkins said. The two projects he was referring to were Galore Creek and Donlin Creek. Barrick is giving no indications yet about what it might do with Rock Creek or NovaGold's Ambler exploration project, also in Alaska.

## Wilkins: more work needed at Donlin Creek

Wilkins gave few details about current activities at Donlin Creek in the Web cast, during which he answered questions from investors. He did say that "significant" exploration is taking place there and that

Placer Dome's original timeline for the development of Donlin Creek was "on the optimistic side." A lot more work will be needed to take Donlin Creek to the pre-feasibility stage, Wilkins added.

Barrick's Eskay Creek mine is very close to Galore Creek and is not expected to be in operation much longer. As Eskay Creek winds down, manpower and expertise will be available for Galore Creek, Wilkins told investors. It is also useful that Barrick has experience dealing with the government of British Columbia and with the First Nations in the region, he said. On the whole, North America is an attractive place for mining for geopolitical reasons, too, Wilkins said. Donlin Creek and Galore Creek play to Barrick's strengths in the spheres of permitting and development, and there should be a "minimal integration risk", according to Wilkins, since Barrick already manages Donlin Creek.

While gold is volatile and there is momentum in the market, it makes sense for Barrick to increase its exposure to gold through the NovaGold transaction, Wilkins said. If the bid is successful, Barrick will "have an unrivaled pipeline of reserve replacement and growth potential in the industry," he added.

see BARRICK page 11

continued from page 7

## AGREEMENT

and benefits, continued protection and safety for the mine's work force and provisions that allow Ekati to honor its "Impact Benefit Agreements and Socio-Economic Agreement."

"On behalf of Ekati, I'd like to thank the Northern and Aboriginal communities for their ongoing support and continued commitment during this difficult time," Morland said. "We look forward to bringing the entire team back together and making Ekati an even better place to work."

## Union: Workers had hoped for more

Todd Parsons, president of the Union of Northern Workers component of PSAC, which represents Local X3050, said the vote results indicate it was a difficult decision for members to go back to work.

"Ekati workers clearly had hoped to achieve more in this round of bargaining

continued from page 7

## DIAMONDS

jump in manufacturing shipments in the territory far outpaced comparable shipments nationwide, which had fallen to just 2.8 percent a year.

## Favorable outlook

The outlook for the economy of Canada's North is also bright with two more diamond mining projects entering the picture.

The Jericho mine, Nunavut's first diamond mine, came on line with production in early 2006. Developed by

but facing a multinational employer who makes \$7.5 billion in annual profits and just getting a first contract with the terms and conditions we won is quite an accomplishment," Parsons said. "Our union is now in place and we can build on this suc-

Tahera Diamond Corp. of Ontario, Jericho is located about 250 miles northeast of Yellowknife. The mine is expected to produce more than 500,000 carats of diamond annually and employ 125 to 175 workers.

The Snap Lake Project about 136 miles northeast of Yellowknife will be the Northwest Territories' third diamond mine and Canada's first fully underground diamond mine. Developed by DeBeers, it is expected to employ about 500 workers and produce 1.5 million carats per year when in full production. Production is set to start at the mine in October 2007. ●

cess in the next round of negotiations."

Ekati is owned by BHP Billiton, one of the world's largest mining companies. The mine employs up to 2,000 workers and staff, including the 375 union members.

Ekati officials said they would develop

a return-to-work plan to ensure the returning employees had a safe, timely transition as they resumed their duties at the mine. The union members were expected to come back to work in a staggered manner, starting in mid-July, which gave them time to wrap up personal affairs and ensure their return to shift rotation was smooth, mine officials said.

The tentative agreement announced June 23 was reached with the assistance and direction of the Canada Industrial Relations Board.

Ekati is Canada's first diamond mine. It produces 6 percent of the world's diamond supply by value, or 4 percent by weight, and yields 3 million to 5 million carats annually.

Parsons said PSAC's Dirty Diamonds campaign urging an international boycott of Ekati-produced Aurias™ and CanadaMark™ diamonds is now over, and the union will instead encourage consumers to buy union-produced diamonds.

—ROSE RAGSDALE



• SOUTHCENTRAL ALASKA

# Chuitna coal permitting process fires up

It's the second EIS to be prepared, but still the first time for development of coal resources in Alaska's Cook Inlet area

By SARAH HURST

For Mining News

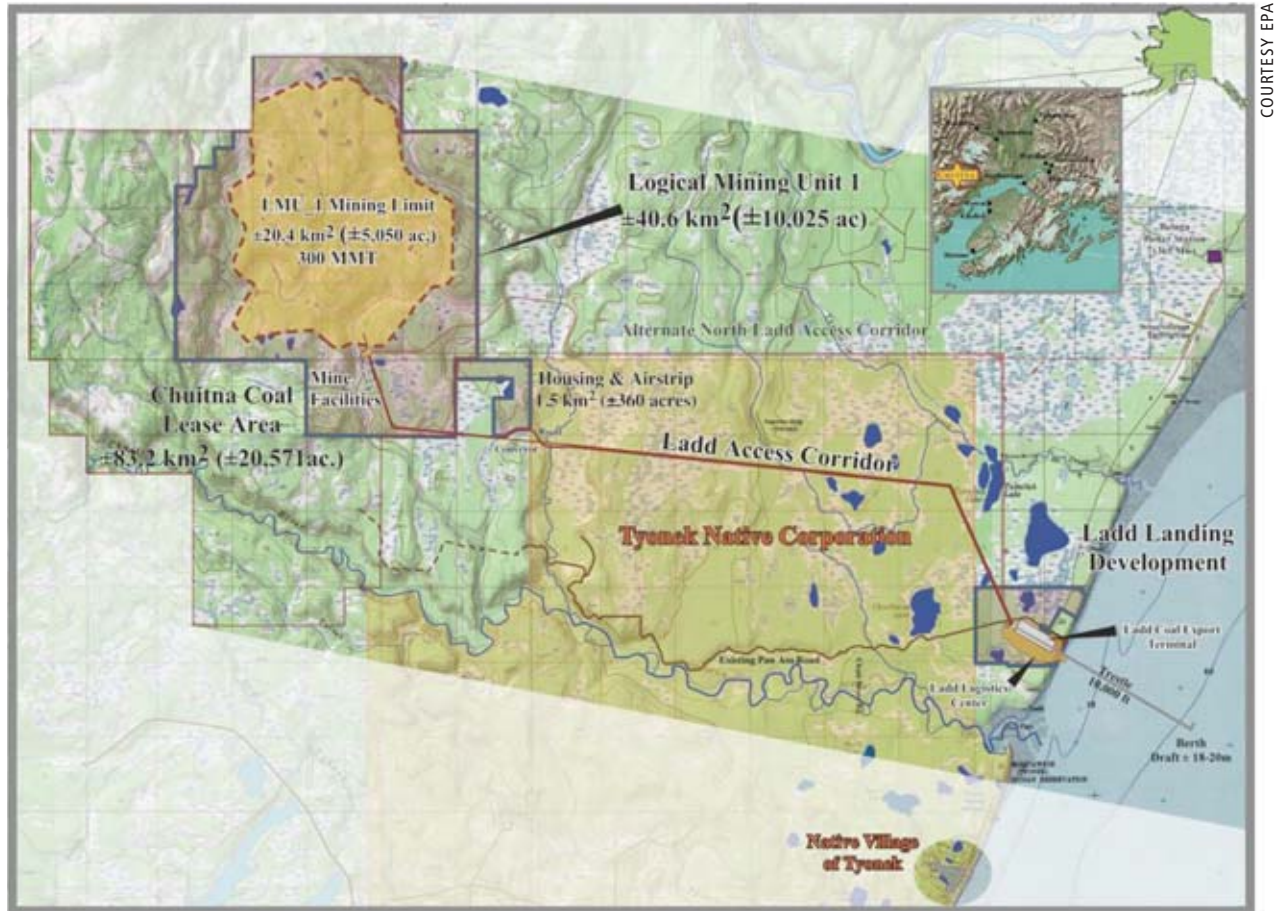
Alaskans are taking their first look at proposals to develop the coal resources in the Cook Inlet area, as project developers attempt to complete the NEPA process for the second time. A previous design for the Chuitna coal project was evaluated in an environmental impact statement and permitted in the early 1990s, but it never got off the drawing board. Since then there have been substantive changes in the project design and in the regulatory requirements, so a new EIS will be prepared.

Public scoping meetings to discuss the project took place in Anchorage, Soldotna and the village of Tyonek in July. As expected, environmentalists expressed their opposition, and set netters also raised concerns about impacts on the fishing in Cook Inlet. The Chuitna project is in the Beluga coal field, about 45 miles west of Anchorage. The project includes a surface coal mine, 12-mile mine access road, coal transport conveyor, employee housing for 200-250 people, airstrip facility, logistics center and a coal export terminal. The coal export terminal would include a 10,000-foot trestle constructed into Cook Inlet to load ocean-going ships.

The developer, PacRim Coal, predicts a minimum 25-year mine life, according to scoping documents published by the U.S. Environmental Protection Agency. The Beluga field contains about 1 billion metric tons of sub-bituminous coal. No coal has been produced in the region before, and except for the Beluga power plant, owned and operated by Chugach Electric Association, there is no existing supporting infrastructure. A 4.5-mile-long 138-kilovolt power line would be constructed to connect the power plant to the mine access corridor.

## Two road corridors being considered

Two road corridors are currently being considered for the project, the North Ladd access corridor and the Ladd access corridor. The coal transport conveyor would have an annual throughput capacity of 15 million metric tons. The conveyor belt would be covered on the top and one side with a weather hood to protect the coal from mois-



ture and wind. The open side would permit visual inspection of and access to the rollers for maintenance. Whenever the conveyor crosses streams, it would be partially enclosed on the underside to prevent coal or dust from entering the stream.

The coal stockyard would have the capacity to store 100,000 to 500,000 metric tons. It would be contained within a graded foundation and surface water collection ditches. Surface water would be routed to two sediment ponds, where suspended solids would be removed to meet discharge limitations before being discharged to Cook Inlet.

One issue that is likely to figure prominently in the permitting process for the Chuitna project is the status of

the estimated 326 beluga whales in Cook Inlet. Conservation groups are calling for the whales to be listed under the Endangered Species Act, and if this occurred, all industrial development in the area would be subject to additional restrictions.

## EPA selects contractor for Chuitna's EIS

The U.S. Environmental Protection Agency has selected ENSR as the third-party contractor for preparation of the supplemental environmental impact statement for the Chuitna coal project. ENSR is a global provider of environmental and energy development services to industry and government with 1,700 employees and 70 worldwide locations, operating in Alaska since 1977. ●

• GUEST COLUMN

# Confused about clean water? Tell it to the judge

By J.P. TANGEN

Guest Columnist

Alaska's placer mining industry has been almost wiped out by the Clean Water Act. In addition, every surface and subsurface lode mining operation has been forced to go through the dreaded process of getting a "404" dredge and fill permit from the Army Corps of Engineers. From Kensington to Pogo, access roads have been engineered and redesigned at great cost to minimize the impact on Alaska's "wetlands," even where the road is miles away from any water body.

Since 1972, when the Federal Water Pollution Control Act Amendments were passed, Americans have been laboring to reconcile themselves, frequently unsuccessfully, to the action-forcing provisions of this unprecedented ingérence into the sanctity of property rights. Millions of dollars have been paid in criminal and civil fines. While no one criticizes the benefits of clean water or the progress that has been made in making "navigable waters" (defined as "the waters of the United States") more swimmable and fishable, the human cost in achieving these objectives has been monumental. The way the Clean Water Act is written, if you were to brush your teeth in a mountain stream, you literally would be at risk of a severe penalty.

## What constitutes navigable waters?

A significant part of the Clean Water Act problem relates to the question of what constitutes navigable

waters. Under the statute, the Army Corps of Engineers has the responsibility for permitting the disposal of dredged or fill material into the navigable waters. The Corps has interpreted this mandate to include wetlands (i.e., swamps, bogs, muskegs, permafrost and the like); and wetlands are whatever the Corps says they are. Because of the presence of permafrost, over half of the state of Alaska comes within the definition.

Until recently, there was no requirement that the water from wetlands flow into any other body of water; it just had to be within about 20 miles of water that does flow into other water to bring it within the scope of the Corps' perception of its jurisdiction.

For a while, the Corps took the position that even isolated water bodies were navigable waters if migratory waterfowl landed on them. The United States Supreme Court drew the line at that, but the question of where the limits were with regard to wetlands remained open.

On June 19 of this year, the Supreme Court of the United States handed down a decision (*Rapanos v. United States*) that addressed this question. In a split decision, the court remanded to the Sixth Circuit for further consideration two cases upholding the imposition of civil and criminal penalties on individuals who had filled wetlands on their private property in further-

## Mining & the law

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J.P. TANGEN

ance of developments to be placed thereon.

## No consensus from Supreme Court; case remanded

Five of the court's nine Justices filed opinions. No single opinion garnered the majority of the court, but there was a majority in favor of sending the cases back to the Sixth Circuit. Notably, Justice Scalia entered a detailed opinion in which Justices Thomas, Roberts and Alioto joined. Scalia detailed the burdens and inequities of the Corps' broad brush approach to

regulation, rightly noting that its perception of its jurisdiction seemingly knows no bounds. Scalia was of the view that in order to be navigable waters, wetlands must have at least some surface connection to a river or stream, etc. and that a hydrological or intermittent connection was not sufficient.

Justice Kennedy, who concurred with the Scalia result, took the position that a surface connection was not required under the statute, but that a "significant nexus" was; therefore, he carved out a standard somewhat less restrictive for the Corps to follow, but agreed that the Corps' interpretation of its own jurisdiction had gone too far.

Chief Justice Roberts opined that the failure of the plurality to give a clear direction to the lower courts

see TANGEN page 11



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**BARRICK**

**NovaGold: 'disappointed'**

NovaGold's president and CEO, Rick Van Nieuwenhuysse, responded that he was "disappointed" by Barrick's offer. "NovaGold management believes that the offer proposed by Barrick dramatically

undervalues NovaGold's world-class portfolio of gold and copper assets and would not adequately compensate NovaGold's shareholders for the loss of opportunity to participate in the future growth in the value of the company's assets as they continue to move toward production," the company said in a release July 25.

"By making an offer for NovaGold, Barrick has clearly acknowledged the

quality and caliber of the NovaGold assets," Van Nieuwenhuysse said. "We have assembled one of the best teams in the industry and are confident in our ability to turn these projects into world class producing mines and thereby add shareholder value over the next few years."

NovaGold drew attention to Barrick's statement that acquiring NovaGold would expand Barrick's North American meas-

ured and indicated resources by 54 percent and its inferred resources by 89 percent. NovaGold has appointed a special committee to deal with the takeover bid, and has retained RBC Dominion Securities as a financial advisor and Blake, Cassels & Graydon LLP as a legal advisor. The company recently adopted a shareholder rights plan which is designed to protect the interest of all shareholders. ●

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**TANGEN**

would lead to further uncertainty and litigation, especially if the Corps did not develop clear regulations defining its jurisdictional reach.

Justice Stevens filed a dissent in which Justices Breyer, Ginsberg and Souter joined. Stevens pointed out that the Corps, in contrast to the Congress or the Courts, possesses unique technical expertise to determine what constitutes wetlands and whether pollutants located at a given site would derogate from the quality of the waters of the United States.

Stevens cleaved to the view that executive agencies are entitled to substantial deference in interpreting the statutes they are charged with enforcing, and that so long as their interpretation is rational, it should be upheld. Stevens further concluded that the lower courts, in interpreting this ménage, should rule in favor of the Corps if either

of the standards articulated by the plurality (surface connection of substantial nexus) were met. Justice Breyer filed a separate dissenting opinion stressing the objective of the Clean Water Act in cleaning up the environment.

**What does the law require?**

The upshot of this opinion is to leave miners, developers and litigators alike in a state of confusion as to what the law requires. It seems self-evident that in order for a person to comply with the requirements of any law, the meaning of that law should be readily understandable. The Army Corps of Engineers, however, reserves the right to make that judgment on a case-by-case basis. It is as if the State

Troopers reserved the right to determine what the speed limit should be for each individual car that passes by.

The Corps should promulgate broad, generally applicable and readily understandable rules that anyone can follow when developing a mine or other private property. Going to the government for ad-


*Since 1972, when the Federal Water Pollution Control Act Amendments were passed, Americans have been laboring to reconcile themselves, frequently unsuccessfully, to the action-forcing provisions of this unprecedented ingérence into the sanctity of property rights.*

hoc decision-making is an unjustifiable burden.

When the Corps was previously criticized by the U.S. Supreme Court for its attempt to regulate isolated water bodies, it had the chance to avoid further backlash by amending its regulations. It elected not to do so. Now the Corps has been hauled before the Supreme Court for further instruction. This opinion is an even clearer

mandate in for the Corps to revisit its practices and policies. ●

*J.P. Tangen has been practicing mining law in Alaska since 1975. He can be reached at [jpt@jptangen.com](mailto:jpt@jptangen.com) or visit his Web site at [www.jptangen.com](http://www.jptangen.com). His opinions do not necessarily reflect those of the publishers of Mining News and Petroleum News.*




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• INTERIOR ALASKA

# Fort Knox gold recovery permit in draft

Federal, state agencies seek public comment on Fairbanks Gold Mining proposal to build 50,000-ton-per-day heap leach facility

By ROSE RAGSDALE  
For Mining News

**F**airbanks Gold Mining Inc. is moving ahead with plans to build a heap leach facility at the Fort Knox gold mine that could reduce its gold ore processing costs by as much as two-thirds.

The U.S. Army Corps of Engineers and Alaska departments of Natural Resources and Environmental Conservation released applications, draft permit, public notice and decisions June 29, relating to Fort Knox and the proposal for a 30-day public review and comment period.

Fairbanks Gold is a subsidiary of Kinross Gold Corp.

Fort Knox is an open-pit gold mine 26 miles northeast of Fairbanks. Fairbanks Gold wants to add a heap leach gold recovery facility in the Walter Creek drainage and is updating various existing permits and authorizations. The mine was originally permitted in 1994, and currently produces more than 400,000 ounces of gold annually. The mine site is located primarily on state-owned and Mental Health Trust lands. The mine and mill employs 400-425 employees and operates two shifts, year around.

The valley-fill heap leach is part of \$170 million in capital expansions budgeted for Fort Knox in 2006. It will be in the upper end of the Walter Creek drainage immediately upstream from the tailing impoundment. Excluding the haul road and access roads, the heap leach pad with the in-heap storage embankment and base platform will cover about 310 acres and will have a total capacity for 160 million tons. It will be constructed in five stages. The haul road to the pad will cover another 40 acres.

### Construction could begin in 2006

Clearing of brush and trees, initial earthwork in preparation of liner construction, the site access road, the portion of the in-heap embankment outside the pad limit, and establishment of drainage control will occur over the entire 319 acres at the beginning of the project. That work could begin later this year, and the project could get under way in 2007.

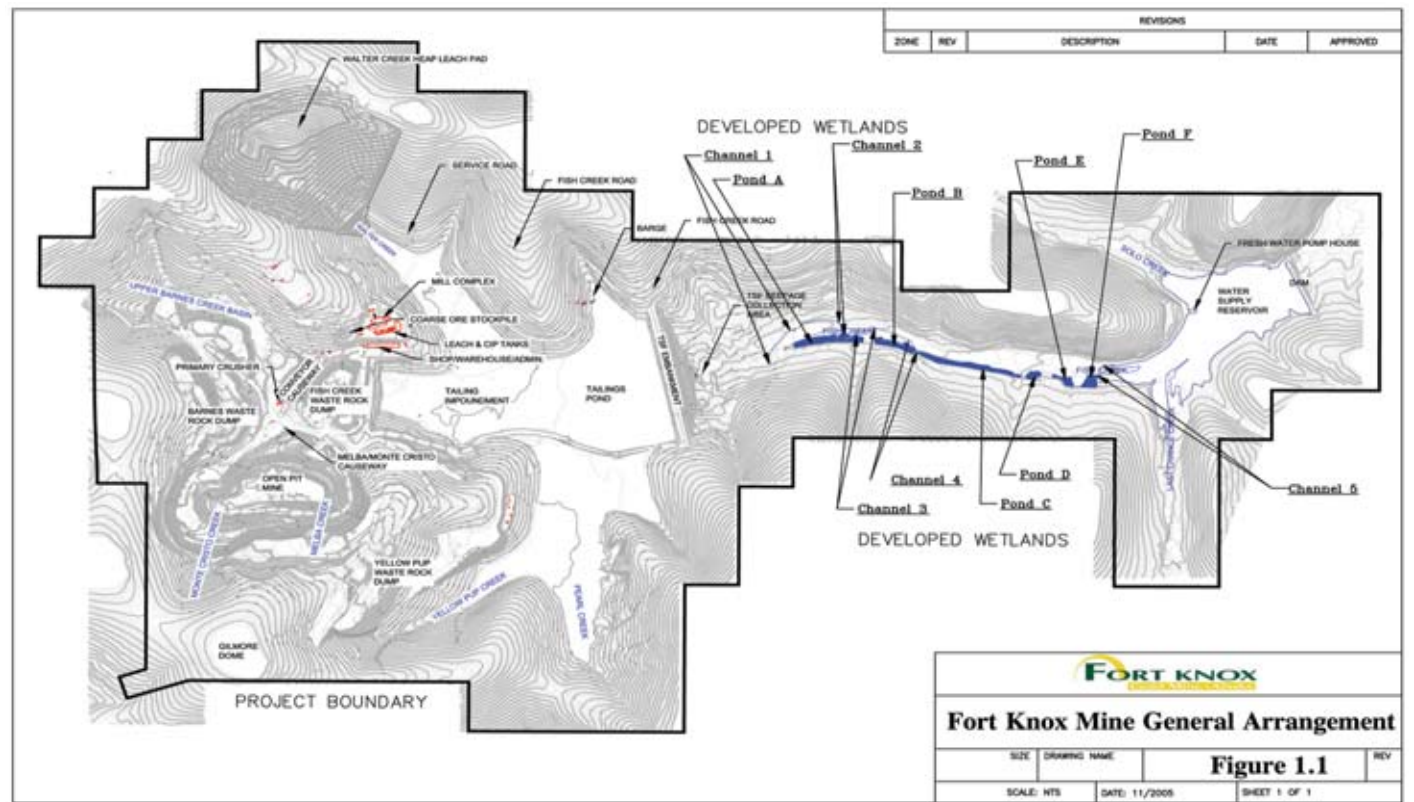
DNR prepared a draft plan of operations amendment approval (including a draft reclamation plan approval) and a draft addendum to Fort Knox's mill site lease.

DEC prepared a draft waste management permit for disposal of tailings, mined material to be placed on a heap leach facility, and inert solid wastes at the Fort Knox Mine. DEC also anticipated that it will issue a certification of the 404 permit to be prepared by Army Corps authorizing the placement of fill in wetlands.

The permit covers disposal of 50,000 tons per day, as a monthly average, of tailing deposited in the mine's storage area. Relatively low-grade ore mined from the Fort Knox Pit will be crushed and placed in gravity separation cyanide-leaching in a carbon in-pulp circuit. Once separate, the gold will be fashioned into 1,000-ounce gold doré on site.

### Heap leaching could reduce costs

From work done by engineering consultant Knight Piésold and Co., Fairbanks Gold defined costs and developed a construction schedule for the proposed proj-



ect. As designed, operating costs for the pad will be about one-third of the mine's mill operating costs. The lower cost would allow the mine operator to process gold at a greatly reduced rate.

To meet the conditions of the permit, tailings from the heap leach facility must undergo a cyanide destruct process prior to discharge to the storage area.

The permit also covers disposal of 161 million tons of run-of-mine material, mined from the Fort Knox pit to the Walter Creek Valley Heap Leach facility. Drip or sprinkler emitters will apply cyanide containing solution to the material placed on the heap. The solution will be collected and processed for gold recovery in carbon in-pulp columns in the mine's mill facility.

A spokeswoman for the Army Corps of Engineers said the agency had received two comments in support of Fairbanks Gold's permit application and none in opposition to it as of July 18.

Other government agencies are expected to submit comments by a July 31 deadline. ●



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