

# Delineation drilling program at Bakyrchik



The CIL tank at the Bakyrchik Gold project.

**A** DELINEATION drilling program of 40,000 metres is being carried out at Ivanhoe Mines' Bakyrchik Gold Project on the highly prospective Kyzyl Shear in Kazakhstan.

The program is due to be completed in January 2010 and will form part of a feasibility study which is scheduled to be completed in February 2011.

Bakyrchik and the nearby Bolshevik project are operated by Altynalmas Gold, in which Ivanhoe has a 49% stake.

In October last year, Ivanhoe, which held a 70% interest in the Bakyrchik project, closed an agreement with several Kazakh strategic partners to consolidate 100% ownership of the project, and other gold-mining assets in Kazakhstan, in a new company called Altynalmas Gold.

Altynalmas is initially focusing on the development of the highly prospective Kyzyl Shear assets.

The Bakyrchik mine is in north-east Kazakhstan, about 1100km north-east of the former capital of Almaty, 160km southeast of Semipalatinsk and 100km west of Ust-Kamenogorsk.

The mine is within the village of Auezov which provides services and has a population of about 7000.

Mining operations began at Bakyrchik in 1957 with the excavation of an initial shaft and underground production began in 1963.

During the Soviet era, the mine produced sulphide mineralization and concentrates, which were sold as flux to copper smelters in Armenia, Uzbekistan and Kazakhstan.

Operations continued until 1998 when low gold prices made the mine uneconomical to operate and it was placed on care and maintenance status.

Exploration of the Bolshevik deposit began in 1956 and intermittent mining of the deposit has taken place since 1960.

A gravity and flotation concentrator plant, designed to annually process 100,000 tonnes of sulphide material from



Checking crushed ore at the Bakyrchik Gold project in Kazakhstan.

the open pit, was constructed and commissioned in December 2002 and operated through 2003.

In 2004, the Bolshevik operations were placed on care and maintenance.

For the past few years, Ivanhoe has been investigating and testing a variety of metallurgical processes in an effort to more efficiently process the sulphide ore deposits at Bakyrchik.

Construction of a 100,000 tonne/year rotary kiln (pilot roaster) began in September 2007 and was completed in December 2008.

The purpose of the plant is to assess the viability of roasting, using a rotary kiln.

On April 18, 2009, a decision was made to shut down the pilot roaster until further modifications to the ore preparation and rotary kiln are made at a capital cost of about \$500,000.

The pilot roaster has not achieved designed gold recoveries due to poor oxidation of carbon and sulphides.

The roaster has a single oxidative roasting process, which Ivanhoe says explains the unsatisfactory relative performance of the facility.

Laboratory bench-scale, fluid-bed-roasting tests have shown that high gold recoveries can be achieved for a whole-ore roast with a reducing first stage, followed by a highly oxidizing second stage.

This is the basis of the feasibility study for the commercial process that is being carried out for Altynalmas Gold's operations.

# Dalabai mining to start in 2010

**C**ENTRAL Asia Resources will be the first Australian company producing gold in Kazakhstan when the Dalabai Project begins operating in 2010.

The company is on target to begin mining early in the year and start pouring gold in the middle of the year.

It has signed an agreement with Steelstruct Engineering Group to design, fabricate, construct and commission a heap leach facility at Dalabai annually processing 500,000 tonnes of ore.

This work is being carried out by Weldtec International, an associated company based in Thailand. Weldtec has directed considerable expertise to the project and has fast-tracked the process in the past two months, ready to begin earthworks in the fourth quarter of 2009.

A 102kg sample collected from fresh diamond drill core between 25 and 60 metres below surface has been subjected to a battery of tests including 2.1 metres high column tests to further validate the viability of heap leaching methods on Dalabai ore.

Head grade of the sample was 2.21 grams/tonne gold and 18.74 grams/tonne silver, and the gold recovery from ore crushed to 15mm and column leached for 28 days was 77%. Tests showed low lime and moderate cyanide consumption while no agglomeration of ore was required.

Central Asia's managing director Jason Stirbinskis says, "We are extremely pleased with the results – strong recoveries, fast reaction kinetics, low reagent consumption and no need for the additional complexity and cost of agglomeration."

He says Central Asia is dedicated to the effective management, mitigation and minimization of project risk and has incorporated risk mitigation strategies into its production plan, including:

- Engaging Weldtec as experienced, quality providers of high-end processing equipment to reduce technical or process risk.

- Developing Dalabai – a low capex opportunity that has a history of production, existing infrastructure and is ideally located near major transport, a town and similar infrastructure to minimize total capital requirements and construction complexity.

- Transferring funding requirements and a large portion of capital risk to Weldtec and tying their reward entirely to efficient production of gold.

- Developing Dalabai ahead of the Alyntas project which is a much larger project requiring significantly greater upfront capital commitment.

Alyntas is the company's second intended production site and a resource estimate for 25% of the area of interest shows total indicated and inferred resources of 6.913 million tonnes @ 2.27 grams/tonne gold for 504,000 ounces.

The company has budgeted \$1 million for further exploration of Alyntas until the end of 2010 and it is expected the resource will improve significantly. The company is targeting production at Alyntas in 2012.

An integrated production strategy has been developed which means once Dalabai has been mined, equipment can be utilized for Alyntas.



The plain on which Alyntas is situated.