

BREWERY CREEK PROPERTY

Alexco Resource Corp.

Chief Executive Officer and President:
Clynton R. Nauman

Administrative office

Suite 1150, 200 Granville Street
Vancouver, British Columbia V6C 1S4

Phone (604) 633-4888
Fax (604) 633-4887
E-mail info@alexcoresource.com
Website www.alexcoresource.com

Whitehorse office

#2 Calcite Business Centre
151 Industrial Road
Whitehorse, Yukon Y1A 2V3

Phone (867) 633-4881
Fax (867) 633-4882

Stock symbol: AXR (Toronto Stock Exchange)

PROJECT STATUS

Past-producer; inactive



Location

57 km east of Dawson City

Ownership

Alexco Resource Corporation-Nova Gold maintains a back-in and joint venture option on the property

Commodity

Gold

Ore type

Formerly oxide; present exploration is focused on sulphide potential

Resources*

Indicated resource: 3.976 million tonnes grading 1.135 g/t Au (0.5 g/t Au cutoff)

Inferred resource: 2.214 million tonnes grading 2.01 g/t Au (0.5 g/t Au cutoff)

*Historical resource; report by R. Diment and R.G. Simpson, May, 2003

Former mining method

Open-pit heap leach, carbon adsorption/desorption/recovery

Stripping ratio

1.5:1

Recovery rate

60-70%

Historical production

1997: 72,387 oz. Au (2 251 500 g)

1998: 79,396 oz. Au (2 469 500 g)

1999: 48,164 oz. Au (1 498 100 g)

2000: 48,048 oz. Au (1 494 500 g)

2001: 18,542 oz. Au (576 720 g)

Cash operating costs per ounce

US\$250

Power

Previously powered by 2 MW, on-site diesel, close to power line constructed and energized in 2006.

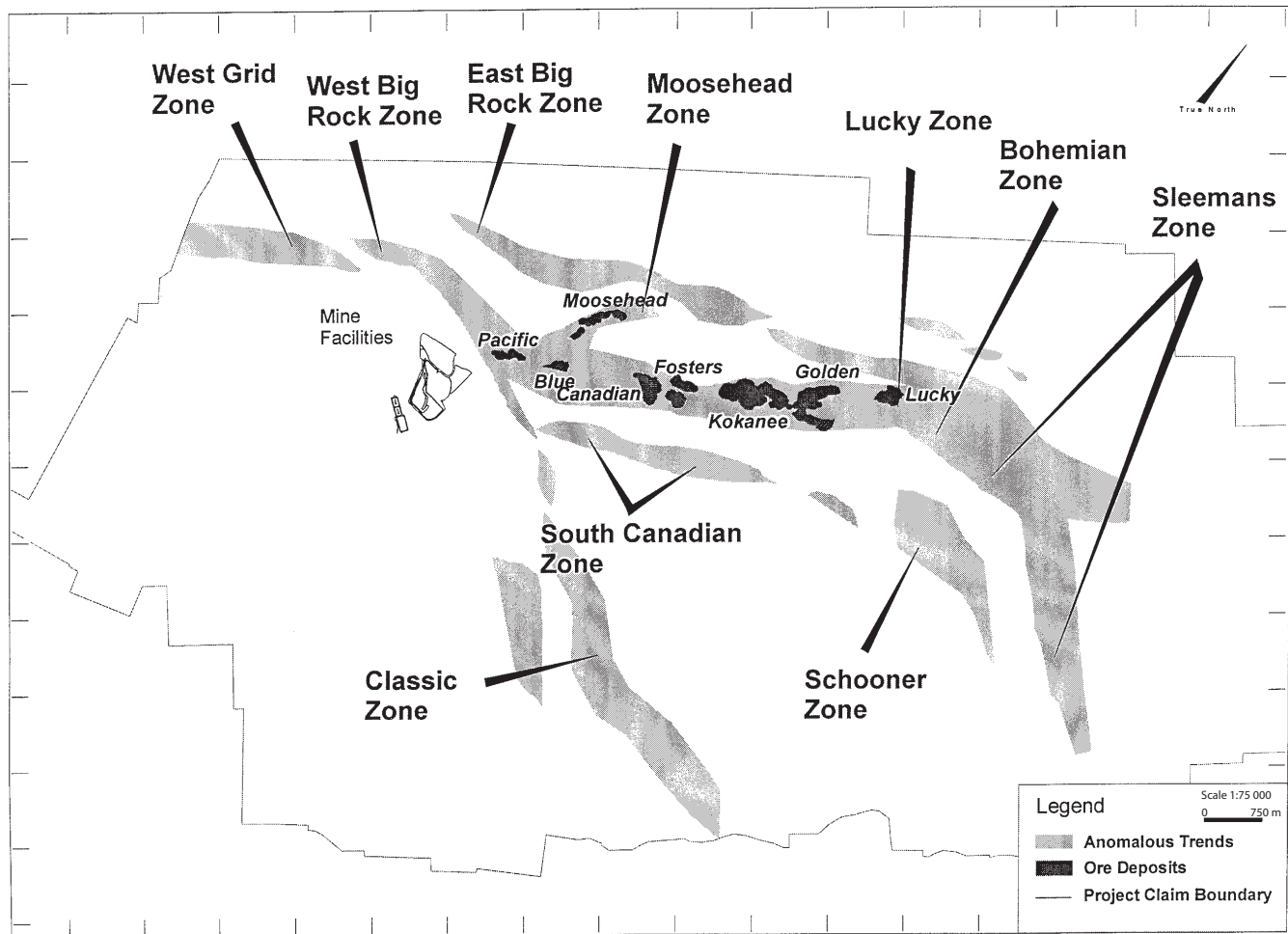
HISTORY

Gold mineralization in the Brewery Creek area was discovered in 1987 by Noranda Exploration after investigating a regional geochemical anomaly identified in a survey funded by the Canada-Yukon Mineral Development Agreement. Follow-up exploration work including extensive geochemical and geophysical surveys, mapping, prospecting and 9000 feet (3000 m) of reverse circulation and diamond drilling were carried out from 1988 to 1992. In June 1990, Loki Gold Corporation entered into an option agreement and earned a 49% interest in the property by August, 1991. In June, 1993, Loki purchased the remaining 51% interest in the property. In 1994, the core claims covering the deposit areas, mine facilities and heap leach pad area were surveyed and taken to lease. A total of \$17 million was spent on the property before the start of construction. Loki Gold's Class A Yukon Water License was signed

on August 9, 1995 and construction began immediately and was completed in November, 1996. In May, 1996, Loki amalgamated with Baja Gold Inc. to form a new company under the name VLB Resource Corporation and became a wholly owned subsidiary of Viceroy Resource Corporation. VLB Resource Corporation changed its name to Viceroy Minerals Corporation. The first bar of gold was poured on November 15, 1996, and the mine reached full production in May, 1997. The Brewery Creek mine is the largest lode gold mine ever constructed in the Yukon. Although seasonal mining was discontinued in 2001, trickle-down heap leaching continued. In 2002, Viceroy undertook and completed approximately 50% of the mine area reclamation related to recontouring and revegetation of pits and dumps and completed detoxification of the heap solution.

In May, 2003, Viceroy provided SpectrumGold Inc. an option to purchase the mineral properties comprising

Brewery Creek Mine Property Plan
Ore Deposits and Anomalous Gold Trend Zones



the Brewery Creek gold mine. In June, 2003, Viceroy merged with Quest Investment Corporation, Quest Management Corp. and Avatar Petroleum Inc. to form Quest Mortgage Corp. The new company would focus on the merchant banking business. In 2003, SpectrumGold Inc. completed a major geologic compilation of the property. The compilation study was designed to develop sulphide gold targets below existing oxide targets. In March, 2004, NovaGold Resources Inc. announced a plan of arrangement with SpectrumGold to acquire all of that company's publicly held common shares. On March 15, 2005, Alexco acquired the Brewery Creek mine assets and a \$2 500 000 payment from Quest to post replacement security under a related water license. The assets included mining assets and infrastructure/equipment located on the Brewery Creek property, all rights, title and interest to the 708 quartz mining claims and 93 mining leases on the Brewery Creek property. In exchange, the company issued to Viceroy 2 686 567 common shares of the company at a deemed price of \$0.67 per share and assumed all liabilities and obligations with respect to the Brewery Creek property. In April, 2005, primary elements of the final closure and decommissioning plan were adopted as water license amendments.

Effective September 16, 2005, the company entered into a letter agreement granting NovaGold Canada a back-in right to acquire a 70% interest in the sulphide project and a 30% interest in the oxide project once Alexco has incurred a minimum of \$750 000 in expenditures on the property. The back-in right will be exercisable by NovaGold Canada by paying \$500 000 to the company over a four-year period and incurring \$1 750 000 in expenditures on the property over a five year period.

By September 2006, Alexco had expended approximately \$700 000 on the property and by the end of 2007, the company had completely reclaimed the property.

PROJECT SUMMARY

The Brewery Creek mine consists of 801 claims and leases covering 16 160 hectares located between 540 m and 1225 m elevation, 55 km east of Dawson City, Yukon. It was a year-round heap leach operation with seasonal open-pit mining of 11 000 tonnes of ore/day – 2 000 000 tonnes between April and October each year. Heap leaching of the ore took place throughout the year and most gold production took place during the third and fourth quarters. The work force was 90% to

100% Yukon-based. A socio-economic agreement was signed with the Tr'ondëk Hwëch'in First Nation which provided for employment, a scholarship fund, finder's fees and a framework for exploration and joint-venture activities on other First Nations' land. It also provided for First Nations' representation at technical, operational and environmental management meetings.

Geology and mineralogy

gold mineralization is structurally controlled and primarily contained in sedimentary and intrusive rocks in the hanging wall of reactivated thrust faults. The host rocks include Cretaceous porphyritic quartz monzonite, hornblende monzonite, interbedded Devonian-Mississippian sandstones and greywackes, and fine-grained ash tuffs and pyroclastic rocks. Gold primarily occurs as submicron-size particles with arsenopyrite and pyrite as growth bands around larger sulphide grains.

A total of eight main oxide deposits were originally delineated at Brewery Creek. From east to west these are the Lucky, Golden, Kokanee, Fosters, Canadian, Moosehead, Blue and Pacific deposits. Collectively, these deposits are referred to as the Reserve trend. Each of these deposits has been mined to some extent, with additional reserves available in most of the pits at higher gold prices.

Ore characteristics

Gold production at the Brewery Creek mine was largely from run-of-mine oxide ore and minor amounts of transition (mixed oxide/sulphide) ore. Since most of the gold is concentrated in the outer rim, limited oxidation is required to liberate it from the sulphide minerals.

It was found in 1999 that sedimentary-hosted oxide ore has a longer-than-estimated leach cycle than the intrusive-hosted ore; this led to the eventual closure and reclamation of the property.

Sulphide mineralization, the current exploration target, is generally down-dip from known oxide reserves and is refractory. Initial work indicates that the sulphide ore may be amenable to bio-oxidation, with gold recoveries in the range of 90%.

Former infrastructure

The mine facility formerly consisted of a large permanent heap leach pad, an adsorption, desorption and gold recovery (ADR) plant, process and overflow ponds and ancillary facilities, including a power plant, water supply

systems, mine service buildings and an assay laboratory. Mine service buildings included a two-bay maintenance shop, mine offices, warehouse and cold storage, and ambulance garage.

The leach pad was divided into seven discrete cells, each nominally 83 m wide and 462 m long, with total capacity of 11.7 million tonnes of ore. The permitted and ultimate pad layout provided space to accommodate 18 million tonnes of stacked, run-of-mine ore. The pad capacity was expandable. The design of the pregnant solution ponds was conventional. A total of \$6.2 million was spent at Brewery Creek in 1999 to expand the heap leach pad by 80 000 m² and extend the haul road to the Lucky Zone.

A multiple-layer liner system was installed under the heap to collect process solution and direct it to the recovery plant, as well as prevent leakage to the environment. The possible loss of solution to the ponds and subsequent freezing of the drip-emitter system during an equipment failure was of prime concern because of the severe winter conditions. Temperatures have dipped to as low as -43.5°C. The following features were incorporated into the design to prevent this freezing.

- Emitters were placed into the surface to act as an insulator.
- All outside piping was insulated and heat-traced.
- Waste heat from the diesel generator engines was used to heat the outgoing barren solutions.
- A waste-oil-fired heat exchanger was used to heat circulating solutions.

Ore processing employed a sodium-cyanide heap leach on run-of-mine gold ore. Gold recovery from pregnant leach solutions was by activated carbon adsorption and pressurized caustic solution desorption, followed by electrowinning onto steel wool and on-site smelting to gold bullion.

A new, intermediate leach circuit, which doubled the solution handling capacity, was completed during the third quarter of 1998. By the end of 2007 the property was completely reclaimed.

Environmental considerations and reclamation

A full environmental review, including baseline studies, heritage and archaeological investigations and an estimate of socio-economic impacts was carried out at Brewery Creek prior to mining.

The following environmental design considerations were included:

- layout of the plant, facilities and roads to minimize adverse visual impacts;
- significant disposal of mine waste in the spent pits;
- a multi-layer liner system, installed under the leach pad to prevent leakage to the environment and to direct collected process solution to the recovery plant;
- a leak-detection system to act as a further safeguard against leakage;
- double lining of process ponds with polyethylene, including two overflow solutions, one pregnant and one barren; and
- equipping process ponds with internal leak detection systems.

Monitoring of wildlife and air and water quality was ongoing during mine operations.

In 1997, Viceroy Resource Corporation was named the environmental leader of the Canadian mining industry by the Social Investment Organization of Canada.

In 1999 and again in 2002, Viceroy Resource Corporation received the Robert E. Leckie Award for outstanding Reclamation Practices from the Department of Indian and Northern Affairs.

Post-mining reclamation was extensive. In 2002, Viceroy completed the detoxification and drain-down of the heap inventory solution. A majority of the mine and reclamation activities related to revegetation of pits, dump and mine site roads has been completed. The facilities and mine were placed on care and maintenance in the winter of 2002-2003.

As reclamation work progresses, work is continuing on completing the Brewery Creek Trust and Drawdown Agreements with the Government of Canada to ensure future recovery of the reclamation cash security deposit of \$8.1 million.

Alexco completed reclamation of the property at the end of 2007.

Current exploration

In 2004, NovaGold Canada Inc. completed a major geologic compilation of the property, designed to develop sulphide gold targets below existing oxide targets.

In 2006, Alexco drilled 1184 m in nine holes targeting the Bohemian, Classic and Blue zones.

Bohemian Zone

In 2006, drilling on the Bohemian Zone cut 9.01 g/t Au over 13.74 m including 14.47 g/t Au over 7.90 m in hole DDH BC06-126. DDH BC06-127 cut 5.14 g/t Au over 34.88 m including 8.50 g/t Au over 15.90 m; and DDH BC06-128 cut 6.79 g/t Au over 15.32 m.

Classic Zone

In 2006, drilling on the Classic Zone cut 0.52 g/t Au over 34.75 m from 12.19 to 46.94 m in DDH BC06-129. Additionally, DDH BC06-129 intersected 1.02 g/t Au over 9.74 m from 82.00 to 91.74 m and DDH BC06-131 returned values of 0.99 g/t Au over 19.88 m from 80.12 to 100.00 m.

New and historic mine data is being compiled into a three-dimensional structural and fluid chemistry working model in a effort to guide upcoming field work. Efforts are on-going and will focus on the higher grade gold zones in the Bohemian-Sleeman trend and as well as in the Classic lower grade gold oxide zone.