



**ALEXCO**

**ALEXCO RESOURCE CORP.**

Building Canada's only primary silver mine

Corporate Report 2009

### **Building Canada's Only Primary Silver Mine**

Silver production targeted for Q3-2010 at what is expected to be the first in a string of Alexco silver mines in the high-grade Keno Hill Silver District. With unrivalled exploration upside, Alexco's next objective is to identify additional silver resources in one of the world's highest-grade silver districts.

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## Investor Highlights

### CANADA'S ONLY PRIMARY SILVER PRODUCER

- Silver production targeted for Q3-2010
  - 1.6 million ounces in 2010 and an average of 2.0 to 2.8 million ounces projected annually for at least four years
- More than \$20 million in annual free cash flow projected at Q1-2010 silver prices

### SUPERIOR SILVER ASSETS

- Owner of the entire Keno Hill Silver District, one of the world's highest-grade silver districts
- Identifying a pipeline of silver production opportunities through continued exploration success
  - 35 historic silver mines in district with more than 200 million ounces of historical production at 40 oz/ton average grade
  - Objective to identify 100 million ounces of silver resources for production pipeline

### UNIQUE BUSINESS MODEL

- Rapidly growing and profitable environmental business group generates revenue and provides a competitive edge in the resource sector

### EXPERIENCED TEAM

- Proven, experienced and seasoned management team consistently achieves value-adding objectives

### COMMITTED TO SUSTAINABILITY

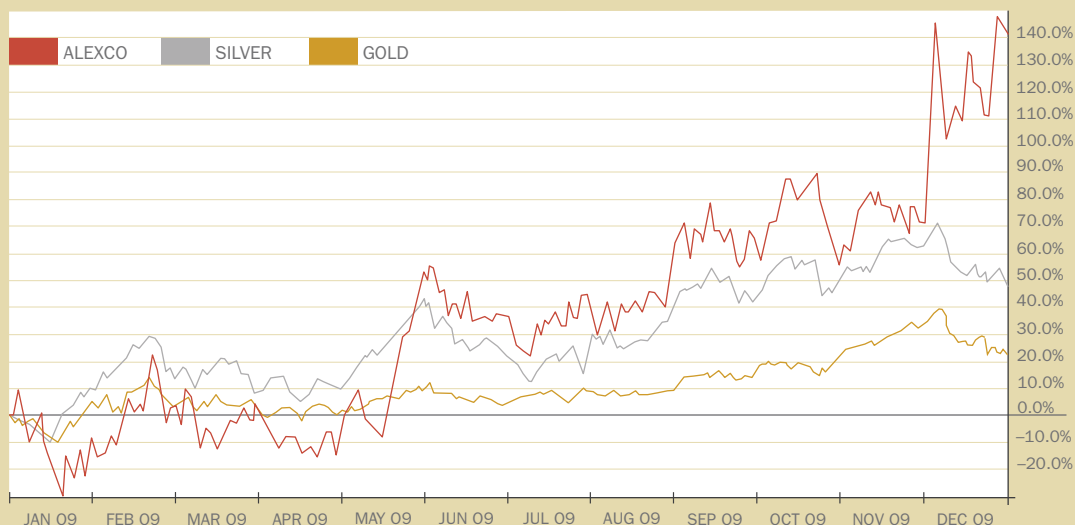
- Strong partnerships with First Nations partners and local communities
- Industry leader in identifying and remediating environmental risks
- Committed to open and honest communication with partners, shareholders and employees

### SENSIBLE BUSINESS PLAN AND CAPITAL STRUCTURE

- Silver purchase agreement with Silver Wheaton Corp. preserves tight capital structure and lowers future financial requirements for capacity expansion in the silver sector
- Positioned to take advantage of resource development and business opportunities
- Long-term debt free
- As at February 15, 2010:
  - 53.1 million shares outstanding
  - 13% of stock held by management

One-Year Performance Chart: Outperforming Gold & Silver

31 December 2008 – 31 December 2009



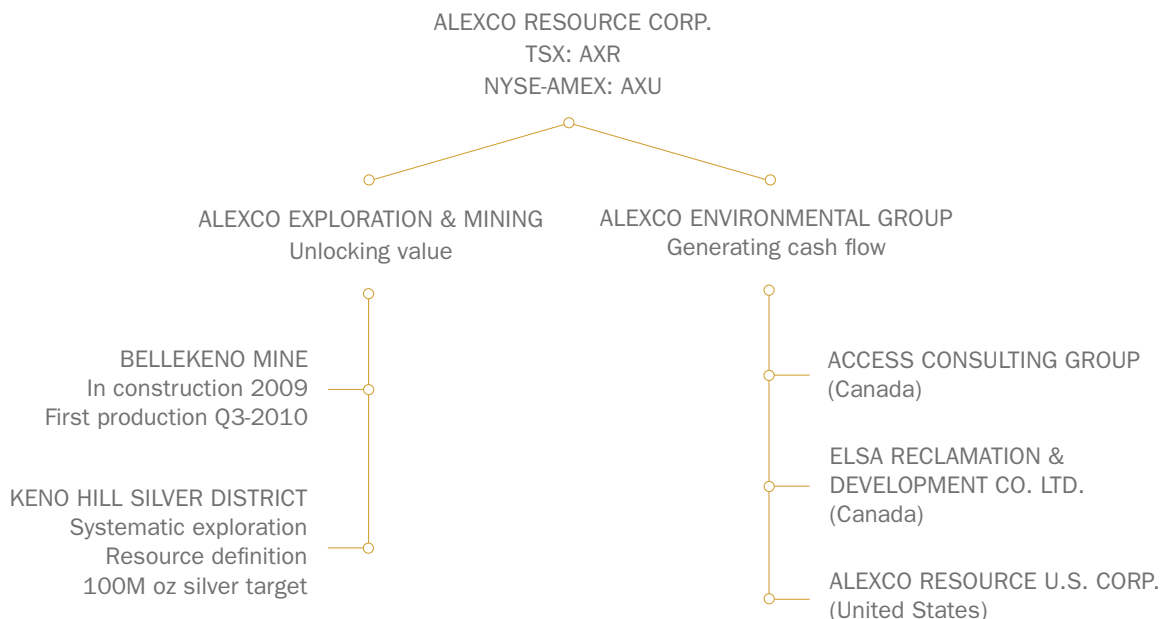
## Corporate Strategy

**Alexco's corporate strategy** is to steadily grow shareholder value. To accomplish this, the Company will achieve silver production from the Keno Hill Silver District in Q3-2010, with a near-term objective to identify additional resources for future production and discover additional high-grade silver deposits in the district. Alexco will also continue to enhance value by leveraging the Company's exposure to silver and continuing to develop and improve profitability from both its mining and environmental business. Using expertise from its mine site environmental remediation business, Alexco has positioned itself to take advantage of opportunities in the resource industry by acquiring properties with manageable remediation and regulatory risk that also host considerable exploration and property development potential. Alexco strives to be the top contender in this field, and will continue to forge business alliances to ensure the Company remains a technical and competitive leader.

**Alexco's operating strategy** includes a commitment to employee health and safety, a commitment to restoring and sustaining the environment in which it works and an assurance of social responsibility to its First Nations partners and the communities in which it operates. By operating to the highest ethical standards and fulfilling its social and environmental responsibilities, Alexco is strategically positioning itself to expand its client base and acquire new opportunities on a preferred supplier basis.

**Alexco's financial strategy** is to maintain a strong balance sheet and capital structure, focus on cost controls and grow the Company's cash-generating mining and environmental business while continually focusing on maximizing shareholder value.

## Corporate Structure



## Corporate Scorecard

### 2008/2009 OBJECTIVES & ACCOMPLISHMENTS

**1 Continue underground development and definition of Bellekeno resource while advancing a permitting, engineering and construction plan.** Completed underground development and definition of mining resource. Released positive development decision and started Bellekeno Mine construction in November 2009.

**2 Obtain the necessary licenses and permits to construct Bellekeno infrastructure on an accelerated basis to meet a preliminary potential production schedule of early 2010.** Completed Federal environmental and socioeconomic assessment in Q2-2009 and received the Quartz Mining License in November 2009. Production targeted for Q3-2010.

**3 Identify further production opportunities in the Keno Hill Silver District through continued exploration, property consolidation and organic growth in the Bellekeno/Onek areas.** Drilled 32 surface exploration holes testing targets at past-producing mines, mineralized structural trends and extensions. The majority of results were positive with four of five areas tested in 2009 recommended for future work.

**4 Complete an NI 43-101 resource estimate for Onek deposit and update combined Bellekeno/Onek project economics.** Bellekeno updated preliminary economic analysis released in December 2009. Onek project on hold pending recovery of zinc prices.

**5 Maintain strong financial position with no debt.** Alexco has a consistent revenue stream, is fully financed to complete construction of the Bellekeno Mine, has a strong balance sheet and no long-term debt.

**6 Establish and communicate a strategy to expand the Environmental Services business to a \$20 million gross revenue operation with a diversified customer base in both Canada and the United States.** New projects initiated in the United States and South America. Finalization of Keno Hill closure plan on schedule. Appointed President to Alexco Environmental Group.

### 2010 OBJECTIVES

→ Complete construction and commissioning of the Bellekeno Mine and facilities on schedule and on budget.

→ Achieve consistent 250 tonnes per day throughput and 250,000 ounces of monthly silver production in Q4-2010.

→ Expand the underground Bellekeno resource via exploration to at least replace mined ounces.

→ Complete up to 25,000 meters of exploration and resource definition drilling on surface targets in the Keno Hill Silver District.

→ Continue to achieve permitting milestones so new discoveries and new projects can be developed on pace with exploration success.

→ Expand revenue in the environmental business by 20% to at least \$6.5 million in 2010, while maintaining margins and improving cash flow to Alexco.

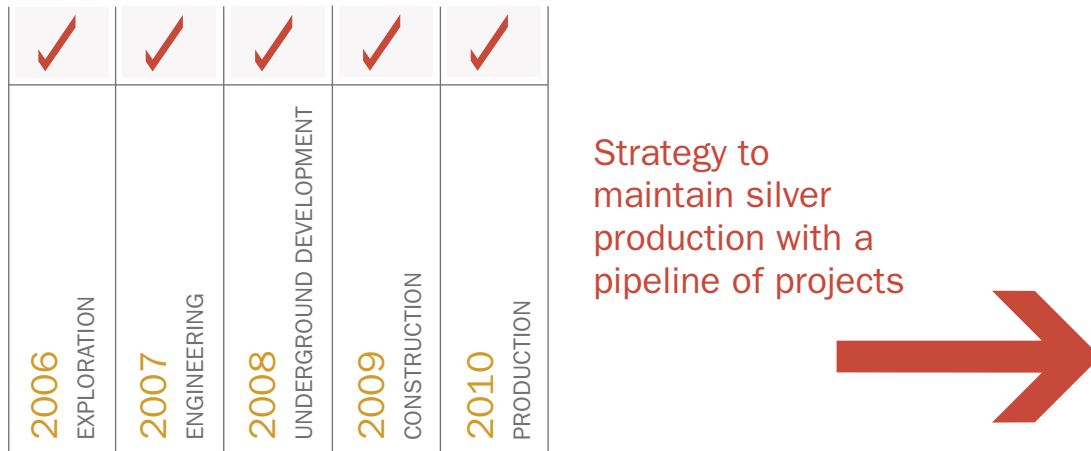
→ Continue to bring tangible benefits and support development opportunities for local communities, First Nations partners and Alexco employees.

## Track Record of Success

### Successful and Rapid Development

Since acquiring the high-grade Keno Hill Silver District in 2006, Alexco has systematically executed its business plan, completing the necessary silver resource definition, mine rehabilitation and engineering to construct and operate the first “new” mine in the historic Keno Hill Silver District.

With construction of the Bellekeno Mine underway and production targeted for Q3-2010, Alexco is executing the next step in its business plan to identify new production opportunities in the Keno Hill Silver District, creating a string of high-grade silver mines that will bring production and cash flow to the Company for decades to come.



2010	2011	2012	2013	2014
2010 – 2013 SILVER PRODUCTION from existing Bellekeno resource base				
	2011 – 2012 CONTINUED EXPLORATION in district, with particular focus on defining resources at Lucky Queen and Silver King and district exploration for new discoveries		2013 BRING AT LEAST TWO NEW MINES INTO PRODUCTION	2014 CONTINUE EXPLORATION, target new mines for production and identify a large new deposit

## President's Message

The completion of the Bellekeno development plan and subsequent approval of Bellekeno Mine construction in November 2009 was a defining event for Alexco. This achievement followed four years of systematic advancement and development of the district, a business strategy we intend to replicate as we continue to advance the district with the objective of bringing a new pipeline of high-grade silver mines into production in the Keno Hill Silver District.

The 2009 year was one of focused effort and decisive progress for Alexco. A team of engineering, geology and financial experts worked on the Bellekeno project to ensure all aspects of this future silver mine were properly evaluated. The results of these studies culminated in a development plan showing that the Bellekeno Mine will be a high-grade, low cost-per-ounce primary silver mine. With construction well underway and production targeted for Q3-2010, Bellekeno production will bring an estimated \$20 million in annual cash flow to the Company for at least four years, bringing value to shareholders and ensuring our financial ability to continue to explore and develop the region.

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“we continue to advance the district with the objective of bringing a pipeline of high-grade silver mines into production”

**Clynton R. Nauman**  
PRESIDENT, CHIEF EXECUTIVE  
OFFICER & DIRECTOR



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Our relationship with Silver Wheaton Corp. has brought many benefits to Alexco and its shareholders. Completion of a silver purchase agreement with Silver Wheaton in 2008 provided the capital necessary to substantially construct the Bellekeno Mine while allowing Alexco to maintain a sensible capital structure. We expect the 25% silver stream delivered to Silver Wheaton under the silver purchase agreement will represent less than 15% of the potential revenue stream from Bellekeno and future mines in the district. Silver Wheaton continues to be a partner and supporter of our efforts to reinvigorate mining activity at Keno Hill, and we look forward to a long and profitable relationship as we bring new mines online.

In an industry dominated by large miners producing silver as a by-product of either base metal or gold production, only about 25% of annual global silver production is derived from primary silver mines, placing Alexco in a select group with superior exposure to rising silver markets. This is certainly a good time to be producing silver, with silver prices approaching all-time highs in real terms and construction and operating costs coming down from their mid-2008 peaks. Despite price volatility, silver's average price in 2009 saw its eighth successive annual rise. Expanding economies and growing infrastructure in developing countries such as India and China should add to industrial silver demand and continue to support higher silver prices, as will increasing investor interest in owning silver as a hedge against an uncertain financial future.

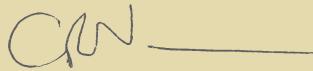


Alexco's geologists demonstrated continued exploration success during 2009, most notably at Lucky Queen and Silver King where we see the possibility of developing new high-grade silver resources, and at Keno 700 where we continue to uncover gold-rich zones within the silver mineralized systems. Importantly, we have completed the collation and review of decades of production and exploration data from the region, significantly advancing our understanding of the geological structure of the Keno Hill Silver District. Armed with this knowledge and the benefits of modern-day technology, Alexco has planned an aggressive exploration effort in 2010 with the objective of advancing at least one more deposit toward production and identifying a new large silver deposit.

Alexco's regulatory expertise and environmental knowledge helped expedite the permitting process at the Bellekeno Mine, and this team will be active in permitting additional mines in the Keno Hill Silver District. Our stand-alone environmental business performed well in 2009, gaining recognition for several successful projects in 2008 and 2009. Our client list has expanded geographically throughout northern Canada and the United States and into South America, providing a growing cash stream to help offset corporate overhead and fund exploration and development at our mining properties. With a strong reputation and experienced team, our objective is to establish annual cash flow of \$20 million from the environmental business within the next five years.

Following the volatility and value destruction in the equity markets in 2008, we have been steadily rebuilding share value. Our stock has achieved nearly 150% improvement in price from December 2008, significantly outperforming both silver and gold. Although we have moved in tandem with our peers in the market, I believe Alexco continues to hold a unique place in the sector. We offer value to investors from both near-term silver production and our cash-generating environmental business. And the Keno Hill Silver District offers unrivalled exploration potential, with a pipeline of deposits already identified and the potential to host a significant new silver deposit. Alexco's completion of two flow-through share financings and an equity financing in uncertain market conditions demonstrates the strength of our properties and business model. With our sensible business model, superior assets and experienced team, I am confident we will continue to move up the value curve in 2010 and beyond.

No message to our shareholders would be complete without recognition of Alexco's employees, who all exemplify the talent and diligence necessary to ensure the continued success of our enterprise. I thank the Alexco team for another year of hard work and innovation. And to you, our shareholders, we offer our thanks for your continued encouragement and support.



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Clynton R. Nauman  
PRESIDENT, CHIEF EXECUTIVE OFFICER & DIRECTOR  
*February 15, 2010*



## Building Canada's Only Primary Silver Mine

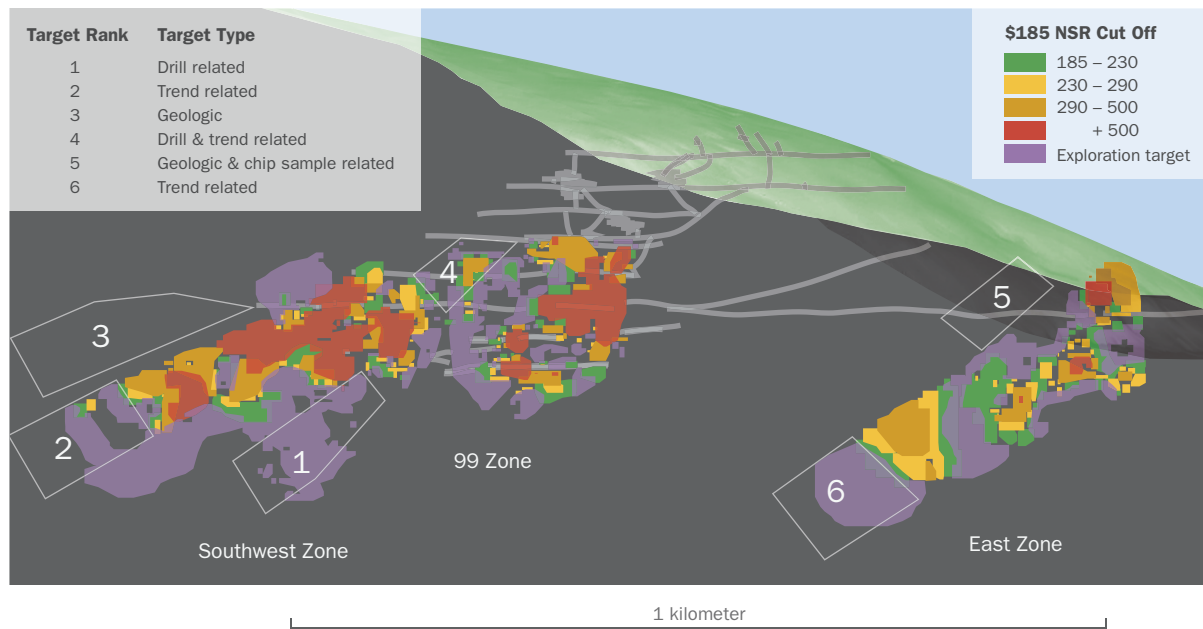
### 2010 Production from Bellekeno Mine

In November 2009, Alexco completed a positive development plan for its Bellekeno silver-lead-zinc mine and started construction, with first production targeted for Q3-2010. This achievement was the culmination of four years of community engagement, exploration, engineering and development to prepare the site for construction and production. Mine permitting was completed on an accelerated timeline largely because of Alexco's permitting expertise.

The Bellekeno Mine has been designed as a year-round operation processing 250 tonnes per day over an initial mine life of approximately four years. From the existing indicated resource base of 11.9 million ounces of silver, 83 million pounds of lead and 57 million pounds of zinc, the mine is expected to produce 1.6 million ounces of silver in 2010, increasing to 2.0 to 2.8 million ounces per year for the next three years. Average metal recoveries are estimated at 95.8% silver, 96.9% lead and 88.4% zinc, for estimated life-of-mine metal production of 8.6 million ounces of silver, 65.2 million pounds of lead and 35.2 million pounds of zinc.

The development plan outlines a project with a pre-tax net present value (8%) to Alexco of \$31.9 million using approximately \$15.00/ounce silver prices, or \$57.7 million using current prices of \$17.39/ounce silver. Average life-of-mine operating costs are estimated at \$287 per tonne mined, with average silver production costs on a net-of-by-products basis of US\$3.79/ounce using current prices. Each of these economic analyses reflects 25% of silver production being sold to Silver Wheaton at US\$3.90/ounce. As of the end of November 2009, total construction and development capital to achieve commercial production has been estimated at \$41.6 million, of which US\$35 million will be funded by Silver Wheaton under its silver purchase agreement with Alexco.

### BELLEKENO MINE UNDERGROUND EXPLORATION & RESOURCE EXPANSION



\$20M

Average annual cash flow

First production  
Q3-2010

The current Bellekeno production plan is based only on existing indicated resources and does not include inferred resources. Approximately 111,100 tonnes of zinc-rich inferred resources in the lower East zone, containing 1.1 million ounces of silver, represent a potential opportunity to expand the mineable resource base. In addition, a number of resource expansion and exploration targets have been identified in areas within and immediately adjacent to the existing mineable resource.

Mining will be carried out by a contractor using predominantly cut-and-fill mining methods augmented with some minor shrink stoping to optimize high-grade mineralization extraction and minimize dilution. The ore will be processed using a conventional lead-silver and zinc-silver differential flotation process incorporating dry stack tailings technology. The newly constructed concentrator will produce lead-silver and zinc-silver concentrates that will be shipped to smelters for treatment and metal refining.

#### **Silver Purchase Agreement**

In October 2008, Alexco entered into a silver purchase agreement with Silver Wheaton Corp. under which Silver Wheaton will purchase 25% of the life-of-mine silver produced by Alexco in the Keno Hill Silver District. The silver delivered to Silver Wheaton under this agreement represents less than 15% of the potential revenue stream from the Bellekeno Mine.

Alexco received an up-front deposit payment from Silver Wheaton of US\$15 million in December 2008, with an additional US\$35 million to be drawn down monthly as construction proceeds in 2010. In addition, Alexco will receive payment of the lesser of US\$3.90 (increasing by 1% per annum after the third year of full production) or the prevailing market price for each ounce of silver delivered.

The Silver Wheaton partnership has provided significant benefits to Alexco. Silver Wheaton's initial financing allowed for redevelopment of the Bellekeno Mine with minimal dilution to shareholders. Alexco is fully financed to achieve production in 2010, and having a new processing facility in place will reduce the cost to bring future projects online. With the Silver Wheaton silver purchase agreement in place, Alexco has a lower financial hurdle to achieve capacity expansion through additional exploration and development programs in the Keno Hill Silver District.



### First Nations Partnership

In May 2008, Alexco and the First Nation of Na-Cho Nyak Dun (“FNNND”) entered into a Cooperation Agreement relating to the activities of Alexco and its subsidiaries in the Keno Hill Silver District. The Agreement outlines FNNND’s support in principle for current activities in the district, providing project certainty for development of the Keno Hill Silver District, and establishes the framework for wide-ranging collaboration as Alexco continues its exploration and environmental activities in the area and advances the Bellekeno deposit toward production.

The Cooperation Agreement also establishes the foundation on which future comprehensive cooperation and benefits agreements will be reached between Alexco and FNNND as new district projects advance and key milestones are achieved. The Cooperation Agreement crystallizes the social and environmental responsibilities of Alexco and FNNND, clearly identifying obligations and assigning responsibilities for straightforward implementation. The agreement ensures the participation of FNNND in all aspects of care and maintenance, reclamation, exploration and redevelopment of the Keno Hill property. The agreement provides for jobs, business and contracting opportunities for FNNND members, and scholarships and direct employment-related training will ensure a pool of qualified employees for the project. Alexco has made significant progress recruiting employees from the nearby communities to assist with exploration, reclamation and care and maintenance tasks.

As the Bellekeno Mine moves through construction and into production, Alexco anticipates employing more than 100 people in a variety of capacities. Many Keno Hill employees are from local communities. Alexco is also offering many different training programs, including sponsoring a major underground mine training program in conjunction with the Yukon Mine Training Association.

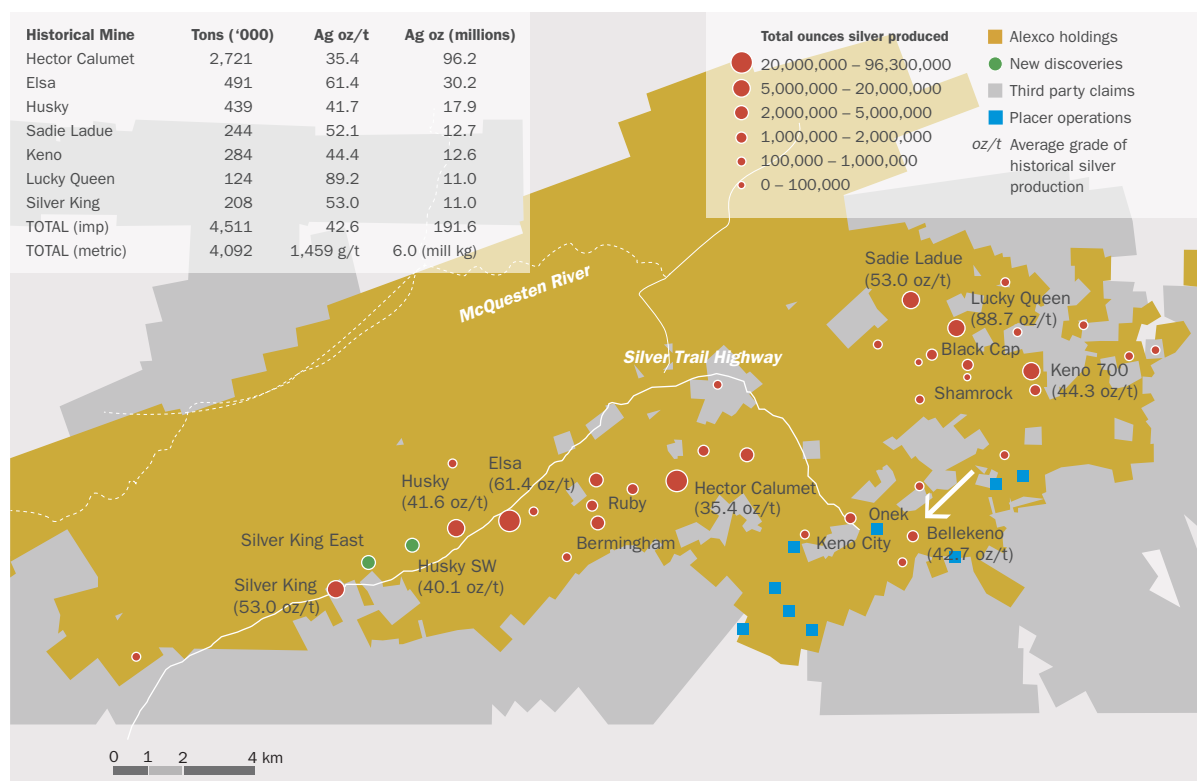
## Establishing a Pipeline of Silver Production Projects

### Alexco's Keno Hill Silver District

Historically one of the world's highest-grade silver districts, the Keno Hill Silver District is located in Yukon, Canada, approximately 330 kilometers north of Whitehorse, and lies within the traditional territory of the First Nation of Na-Cho Nyak Dun. The district comprises approximately 23,350 hectares (233.5 square kilometers) of mining leases, quartz claims and crown grants and has numerous mineral occurrences, deposits and prospects, including 35 mines with a history of silver production.

The Yukon Government's published Minfile database states that between 1913 and 1989, the Keno Hill Silver District produced more than 217 million ounces of silver from approximately 5.37 million tons of ore with average grades of 40.52 ounces per ton (oz/ton) silver, 5.62% lead and 3.14% zinc, making it the second-largest historical silver producer in Canada. Metals prices fell and environmental standards increased in the 1980s and United Keno Hill Mines Limited terminated production in 1989. Forced into government receivership and burdened by environmental liabilities, the majority of the district sat abandoned for nearly 20 years, though significant resources remained at grades far in excess of most of the world's primary silver producers. The historical producing grades would rank Keno Hill in the top 3% of today's global silver producers.

### LAND PACKAGE, HISTORICAL MINE PRODUCTION



### **Pipeline of Projects**

With the Bellekeno Mine on track to achieve production in Q3-2010, Alexco is turning its focus toward identifying existing and new deposits that will ensure silver production well into the next decade. Remaining historical resources in the Keno Hill Silver District are estimated to exceed 1 million tons (not NI 43-101 compliant) with grades averaging 31.5 oz/ton silver, 3% lead and 2.2% zinc. But those estimates were made without the benefit of modern technology. Alexco has spent four years collating and reviewing data collected from decades of exploration and production at Keno Hill. With a database full of geologic information and a sophisticated 3D model of the region, Alexco's geologists are ready to embark on the next phase of exploration.

The majority of Keno Hill's producing mines were initially discovered prior to the Second World War, and production continued on extensions of the historical deposits until the mines shut down in 1989 for economic and other reasons (silver dipped below \$5/oz). The mines were not exhausted of ore, however, leaving Alexco positioned to not only rejuvenate production at some of these past producers, but also discover new deposits using modern exploration techniques. Structural mapping and geophysical analysis of the region shows a regionally extensive mineralized system. Alexco will continue to assess the potential in the area of each of the 35 past-producing mines in the district with the objective of developing a pipeline of silver mines that can be advanced to production. Rehabilitating historical projects to resume silver production will bring consistent cash flow to the Company and facilitate continued exploration in the region.

Alexco's longer term objective, however, is to identify a new large silver deposit with a scale and grade that demonstrates the true world-class nature of the Keno Hill Silver District. Of the nearly 200 million ounces of historical silver production, almost 100 million came from the Hector Calumet mine, located roughly 8 kilometers west of Bellekeno. The region is certainly capable of hosting another 100 million ounces of silver resources, and less than 5% of the area has been explored using modern-day technology. Alexco's geologists are planning an aggressive exploration program to test new areas in the district with the goal of finding the next 100-million ounce deposit, a discovery that will catapult Alexco into the realm of senior silver producer and bring significant value to shareholders.

### **Exploration Success**

Since initiating exploration in the Keno Hill Silver District in June 2006, Alexco has drilled 253 surface and underground holes totaling approximately 59,700 meters, has flown 2,016 line kilometers of airborne geophysics and has compiled approximately 35,000 historical documents into a 300 gigabyte digital database/library of geologic information. To date, Alexco has drill tested at various levels 14 of the approximately 35 known historical mine areas in the district.

Alexco completed nearly 7,950 meters of surface drilling in 2009 to complement the 7,700-meter Bellekeno underground drill program. Surface exploration work focused on Silver King, Keno 700 and Lucky Queen to expand and extend known mineralization, and tested several targets in the hanging wall and along strike of the Bellekeno "48" vein where several parallel mineralized structures are known to exist. In addition to systematic district-wide exploration work, the Company initiated a new phase of district exploration to define "blind" targets using its new database of production and geologic information.

# 100Moz

**Objective to identify 100 million ounces of silver resources**

One of the world's  
highest-grade  
silver districts

### *Silver King*

Drilling at the Silver King #5 vein intersected 2.55 meters of 1,932 grams per tonne (g/t) (56.4 oz/ton) silver lower in the geologic section than previously tested, identifying significant mineralization that remains open both along strike to the northeast and down dip to the southeast. The majority of the historical Silver King resource, totaling approximately 5 million ounces of silver, is present within the #5 vein system, which is well accessed by historical underground development. Silver King was the initial silver discovery at Keno Hill, producing approximately 11 million ounces of silver at an average grade of 1,817 g/t (53 oz/ton) silver. Given the tenor of the Alexco-drilled intercepts and historical estimates showing significant, high-grade silver resources remaining at the mine, Alexco has selected the Silver King area as a target for short-term definition drilling and possible future development.

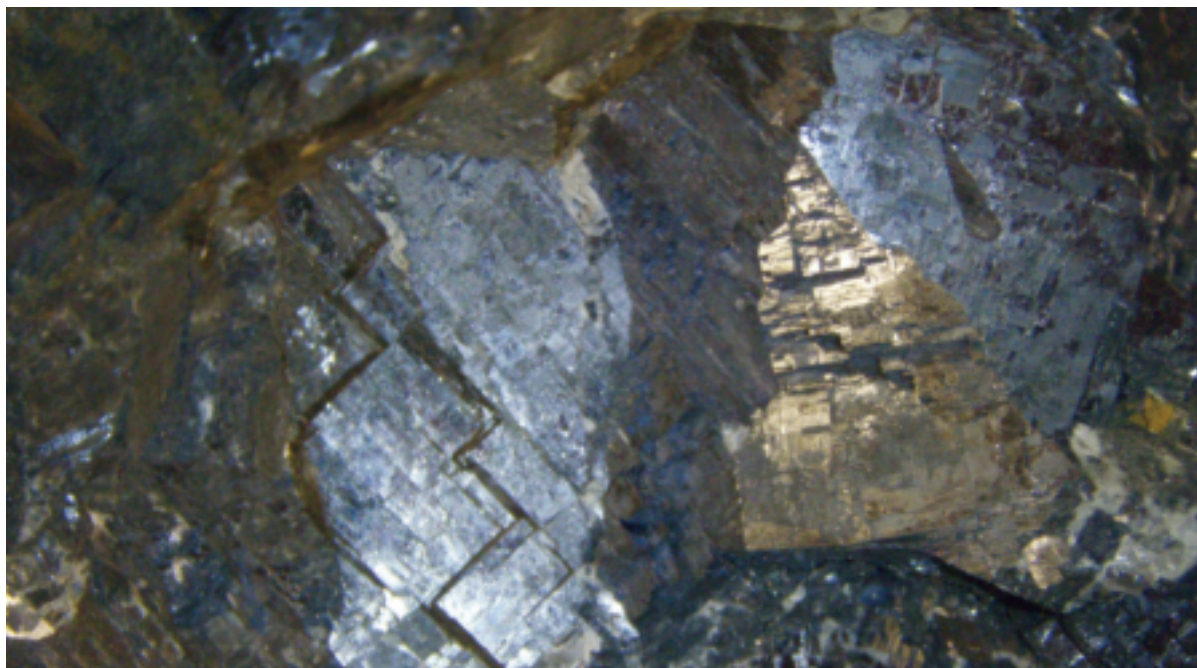
### *Lucky Queen*

Building on Alexco's previous work, 2009 drilling at Lucky Queen continued to intersect native silver-rich mineralization, confirming the presence and continuity of relatively narrow, very high-grade silver zones below and southwest of the historical workings. Lucky Queen mine was the highest-grade silver producer in the Keno Hill district, producing approximately 11 million ounces of silver from 123,500 tons of ore at an average recovered production grade of 3,041 g/t (88.7 oz/ton) silver. Drilling results in 2009 included 6,935 g/t (202.3 oz/ton) silver, 1.30 g/t (0.04 oz/ton) gold, 30.4% lead and 11.4% zinc over 1.35 meters. Notably, the furthest down-plunge hole intersected 4.23 meters of 2,120 g/t (61.8 oz/ton) silver in what appears to be a southwest-plunging chute of mineralization that remains open down plunge.

### *Keno 700*

Located approximately 3 kilometers northeast of Bellekeno, 2008 drilling at Keno 700 intersected high-grade gold mineralization along strike of the historical silver-rich Keno 700 mine, where reported past production totaled 283,762 tons averaging 1,522 g/t (44.4 oz/ton) silver, 10.7% lead and 3.7% zinc. Mineralization in the Keno 700 area is hosted in two sets of veins: easterly trending gold/silver-enriched longitudinal veins and northeast-trending, silver/base metal-enriched transverse veins. The Keno 700 #6 vein/fault is a major through-going structure with a known strike length in excess of 2.5 kilometers. Three 2009 holes, located approximately 450 meters southwest from the historic Keno 700 mine, were designed to test the extension of the Keno 700 #6 vein/fault. Holes were drilled in a fence from a single location and intersected a broad structural zone up to 20 meters wide. The deepest of the three holes contained the best intercept of 18.48 g/t (0.54 oz/ton) gold, 200.3 g/t (5.8 oz/ton) silver, 2.79% lead and 3.92% zinc over 1.03 meters, where mineralization remains open at depth and along strike.





#### *Historical Tailings*

In addition to the numerous lode silver and base metal targets located throughout the Keno Hill property, the Company is also evaluating select historical mine dumps and tailings deposits for mineral potential. According to historical records, a total of approximately 4.6 million tons of tailings containing residual silver from the Elsa concentrator were deposited in the Elsa tailings facility. Alexco drilled 283 holes in 2009 using a sonic drill to sample the historical tailings and completed a testing program to assess the metallurgical characteristics of the silver-bearing tailings. Results from this work will be available in Q2-2010.

#### *Other Keno Hill Deposits*

In addition to the 2009 exploration program targeting expansion and extension of known high-grade silver mineralization related to historical mines, a regional exploration program was undertaken to identify new structural targets with the potential to host significant silver deposits. This effort was initiated in the area of the historic Birmingham mine, located approximately 1.5 kilometers southwest of the historic Hector Calumet mine, which produced nearly half of the silver from the Keno Hill Silver District. The Birmingham mine itself produced in excess of 3.5 million ounces of silver. Based on favorable geology and 2009 drilling that encountered a structural zone up to 20 meters wide with local intercepts including 783 g/t (22.8 oz/ton) silver, 2.75% lead and 4.2% zinc over 2.87 meters, the Birmingham area will be the focus of further exploration in 2010.

## Alexco Environmental Group

Reclamation and closure services, environmental remediation and environmental management services are a key component of Alexco's business model. With revenues of \$5.7 million in 2008 and again in 2009, but with expanded margins, Alexco's environmental services business provides a steady and growing cash stream to the Company that offsets corporate overhead and helps fund exploration and development at mining properties. Operating generally as separate stand-alone units, Elsa Reclamation & Development Company, Access Consulting Group and Alexco Resource U.S. Corp. have created a successful environmental services business with clients across northern Canada and the United States and into South America.

Alexco's expertise in environmental and technical management allows the Company to better manage and reduce risk at remediation and development projects, and provides a competitive advantage for property and business development opportunities that fit the Company's business model. The Company provides a number of environmental and technical support services to the mining industry, with clients ranging from junior exploration and development companies to major global mining firms.

Alexco continued to grow its environmental services business in 2009 by expanding its marketing programs and securing new consulting and remediation projects. Access Consulting Group provides environmental services to government and industry clients throughout Yukon, where resource activity is rapidly expanding. Similarly, the Company expects its environmental services activities will continue to expand in northern Canada and the United States based on Alexco's growing reputation, increasing brand recognition and industry-recognized expertise with environmental, permitting and management projects.

Alexco's five-year objective is to achieve \$20 million in annual revenue from its Environmental Group, a plan that can be achieved by continued expansion of work at Keno Hill, expansion of its client base in Canada and the United States, and by achieving success in South America with Alexco's patented technologies.

### **Permitting & Regulatory Management**

Alexco's team of professionals provides permitting and regulatory management services to clients across a number of sectors, including mining and oil and gas. Access Consulting Group has demonstrated success in permitting development projects in the north and has become synonymous with effective integration of permitting, consultation and regulatory management. Services provided include obtaining a wide variety of regulatory authorizations, from water and production licenses to fisheries and operating permits. In addition, Alexco's team provides First Nations liaison and consultation, as well as regulatory management services.

### **Environmental Consulting Services**

Alexco Environmental Group provides a broad range of environmental consulting services to clients in all sectors, including mining, oil and gas, transportation, government and First Nations. The Company's services range from extensive environmental impact and risk assessments to baseline environmental studies, environmental training and strategic planning from an environmental perspective. Alexco's team has also completed numerous land management and evaluation projects for both industry and government.



## Creating property and business development opportunities

### Mine Reclamation & Closure Planning and Execution

Alexco has demonstrated its ability to unlock value in the field of mine reclamation and closure through innovative and value-added services, including marketing of residual assets, dismantling process plants and construction and commissioning of these facilities at other operations. Alexco is the only mine reclamation and closure business that provides full-cycle closure services, including technical closure studies, plan development, permitting, regulatory management, field execution and long-term monitoring.

Alexco is continuing as a contractor for the Yukon Government to provide environmental care and maintenance for the Keno Hill property. Approximately 55% of the Company's revenues in fiscal 2009 were generated from environmental services provided in the Keno Hill district, including care and maintenance services, capital improvement projects related to water treatment facilities, physical hazards reduction and closure planning studies.

The Company's senior management team has been recognized for its award-winning reclamation and closure performance at many sites in North America, including: Department of Indian Affairs and Northern Development Robert E. Leckie Award for Outstanding Reclamation Practices, 1999 and 2002, Brewery Creek mine; State of Wyoming Outstanding Reclamation of the Year – non-coal property, 2000, Sweetwater uranium mine; and American Academy of Environmental Engineering E3 Honors Award for Best Small Project of the Year, 2006, Gilt Edge mine.

### Environmental Remediation Technologies

Alexco owns six patents and has additional patents pending with applications in the environmental remediation business. As the industry leader for pit lake and underground mine pool treatment, Alexco's management and technologies have successfully treated billion-gallon pit lakes for numerous contaminants, unlocking property value and development opportunity that was previously restrained by environmental liability.

Alexco offers leading-edge technology for sites with complicated soil and groundwater impacts from metals and other contaminants, and is currently working on several sites with large impacted groundwater zones, including the Hanford Nuclear Reservation in Washington State. Alexco recently remediated the Barite Hill pit lake, a facility managed by the U.S. Environmental Protection Agency. Alexco also successfully treated sludge accumulated from decades of water treatment operations at a Colorado mine, greatly improving the mine pool water quality. These in situ water quality improvements have only been achieved where Alexco technologies have been employed.

## Committed to Sustainability

Alexco has established a reputation in the Canadian mining industry as the contractor of choice for environmental remediation services. The expertise of our environmental services team and our commitment as a Company to sustainability permeates every decision we make. Alexco intends to be an industry leader for sustainability, both as a service provider for environmental remediation and as a silver miner that minimizes environmental impact and brings lasting, tangible benefits to local communities.

Alexco will use its in-house expertise to minimize its environmental impact and improve environmental conditions at Keno Hill as we rejuvenate commercial mining in the district. We continue as contractor to the Government of Canada to clean up and restore areas with historical mining activity, and will apply those practices to our own projects as we explore the district and bring new deposits into production.

Sustainability involves more than just environmental protection, however. Sustainability includes financial responsibilities, social responsibilities, open and honest communication, and a commitment to health and safety.

By building a profitable, financially stable company we ensure our ability to create value for shareholders, fulfill our environmental obligations and bring lasting economic benefits to local communities. Alexco has demonstrated its commitment to financial responsibility, both to shareholders and local communities. We hire locally as much as possible and have created a market for local businesses, reinvigorating local communities and helping to build skills and create opportunities for community members. And we continue to focus on creating long-term opportunities for Alexco that will allow the Company to thrive for decades to come.

We recognize our social responsibilities and have worked closely with the First Nation of Na-Cho Nyak Dun since we acquired the Keno Hill property. We will continue our practice of open communication and collaboration as we advance the Keno Hill Silver District, and look forward to a long and mutually beneficial partnership.

Our commitment to social responsibility includes a focus on health and safety both for local communities and for our employees and contractors. Through our practice of intensive safety training at site and the understanding that safety is everybody's responsibility, we have completed more than 150,000 hours of work at Keno Hill with no lost-time incidents and intend to extend that record into 2010. The well-being of our employees includes providing opportunities for people to expand their knowledge and skills. In 2009 we spent \$500,000 on training and education and will continue to provide development opportunities to ensure our employees can achieve a sense of personal satisfaction and engagement through their work at Alexco.



## Share Structure

Alexco's shares are listed on the TSX under the symbol AXR and on the NYSE-AMEX under the symbol AXU.

<b>As at February 15, 2010</b>		
Shares issued & outstanding	53.1 million	
Options	3.9 million	
Total shares, fully diluted	57.0 million	
<b>2009 trading history</b>		
	NYSE-AMEX	TSX
High (December)	US\$3.98	C\$4.45
Low (January)	US\$0.96	C\$1.16
Average	US\$2.32	C\$2.51
Average daily volume	141,500	56,000
<b>Trading symbols: TSX: AXR   NYSE-AMEX: AXU</b>		

### BELLEKENO RESOURCE BASE

Resource Category	Zone	Tonnage (tonnes)	Silver (grams/tonne)	Lead (%)	Zinc (%)	Contained Silver (ozs)
<b>Indicated</b>	Southwest	215,800	997	12.6	7.2	6,917,000
	99	91,700	995	7.5	4.2	2,933,00
	East	93,500	672	3.9	6.9	2,020,000
<b>Total Indicated</b>		<b>401,000</b>	<b>921</b>	<b>9.4</b>	<b>6.5</b>	<b>11,870,000</b>
<b>Inferred</b>	East	<b>111,100</b>	<b>320</b>	<b>3.1</b>	<b>17.9</b>	<b>1,143,000</b>

#### NOTES:

1. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Inferred resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. See "Cautionary Note Concerning Resource Estimates".
2. Based on an NSR cut-off of US\$185/tonne silver, calculated on an in-situ (undiluted) basis. Metallurgical recoveries are applied.
3. The Bellekeno resource estimate is based on a technical report titled "Bellekeno Project – Updated Preliminary Economic Assessment Technical Report" dated December 2, 2009, a copy of which is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on EDGAR at [www.sec.gov](http://www.sec.gov).

## Senior Management

**Clynton Nauman, BSc (Hons)**

*Position: President and Chief Executive Officer*

**Brad Thrall, BSc, MBA**

*Position: Chief Operating Officer*

**David Whittle, CA**

*Position: Chief Financial Officer*

**Stanton Dodd, MSc**

*Position: Vice President, Exploration*

**Thomas Fudge, BSMG, P.E.**

*Position: Vice President, Development & Engineering*

**Rob McIntyre, R.E.T., CCEP**

*Position: Vice President, Corporate Affairs & Communication*

**James Harrington, MSc**

*Position: President, Alexco Environmental Group*

**Joe Harrington, BSc**

*Position: Vice President, Technology & Strategic Development, Alexco Resource U.S. Corp.*

**Tim Hall, BSc**

*Position: General Manager, Keno Hill Mine Operations*

## Board of Directors

George Brack

Terry Krepiakovich

Clynton Nauman

David Searle

Rick Van Nieuwenhuyse

Michael Winn

Auditors

**PricewaterhouseCoopers LLP**

*Vancouver, British Columbia*

Legal Counsel

**Fasken Martineau DuMoulin LLP**

*Vancouver, British Columbia*

Registrar and Transfer Agent

**Computershare Investor Services Inc.**

*Vancouver, British Columbia*

### **Qualified Persons**

Except where specifically indicated otherwise, scientific and technical information included in this report regarding Alexco's mineral properties has been prepared by or under the supervision of Stanton Dodd, LG (Washington), Vice President, Exploration for Alexco and a Qualified Person as defined by the Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"). All material scientific and technical information included herein has previously been disclosed by Alexco, and the reader is particularly directed to the news release of November 11, 2009, titled "Alexco Completes Positive Bellekeno Mine Development Plan, Silver Wheaton Concurs – Initiation of Construction Approved" which is available on SEDAR at [www.sedar.com](http://www.sedar.com), the technical report titled "Bellekeno Project – Updated Preliminary Economic Assessment Technical Report" which is available on SEDAR at [www.sedar.com](http://www.sedar.com), and the Company's most recently filed Annual Information Form and U.S. Form 40-F, as well as the remaining filings completing Alexco's continuous disclosure record.

### **Cautionary Note Concerning Resource Estimates**

Unless otherwise indicated, all resource and reserve estimates included in this report have been prepared in accordance with NI 43-101 and the Canadian Institute of Mining and Metallurgy Classification System. NI 43-101 is a rule developed by the Canadian Securities Administrators which establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects.

Included in this report are historical resource estimates concerning certain of the Company's Keno Hill district properties. As required under NI-43-101, the Company advises that these historical resource estimates are based on determinations made by the previous property owner's staff in 1997, adjusted by the Company only to determine silver equivalent based on contemporary metal prices as described below. Although believed by Alexco management to be relevant and reliable, these historical resource estimates pre-date NI 43-101 and are not compliant with NI 43-101 resource categories.

Canadian standards, including NI 43-101, differ significantly from the requirements of Industry Guide 7 promulgated by the United States Securities and Exchange Commission ("SEC"), and resource and reserve information contained herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, the term "resource" does not equate to the term "reserves". Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. The SEC's disclosure standards under Industry Guide 7 normally do not permit the inclusion of information concerning "measured mineral resources", "indicated mineral resources" or "inferred mineral resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by U.S. standards in documents filed with the SEC. U.S. Investors should also understand that "inferred mineral resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an "inferred mineral resource" will ever be upgraded to a higher category. Under Canadian rules, estimated "inferred mineral resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. Investors are cautioned not to assume that all or any part of an "inferred mineral resource" exists or is economically or legally mineable.

Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade without reference to unit measures. The requirements of NI 43-101 for identification of "reserves" are also not the same as those of the SEC's Industry Guide 7, and reserves reported by the Company in compliance with NI 43-101 may not qualify as "reserves" under Industry Guide 7 standards. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.

### **Cautionary Note Regarding Forward-Looking Statements**

This report contains "forward-looking statements". These forward-looking statements are made as of the date of this report, and the Company does not intend and does not assume any obligation to update these forward-looking statements.

Forward-looking statements may include, but are not limited to, statements with respect to future remediation and reclamation activities, future mineral exploration, the estimation of mineral reserves and mineral resources, the realization of mineral reserve and mineral resource estimates, the timing of activities and the amount of estimated revenues and expenses, the success of exploration activities, permitting time lines, requirements for additional capital and sources and uses of funds.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, risks related to actual results of exploration activities; actual results of remediation and reclamation activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of silver and other commodities; possible variations in ore reserves, grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labor disputes and other risks of the mining industry; and delays in obtaining government approvals or financing or in the completion of development activities.

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SHARE LISTING INFORMATION

TSX: **AXR** NYSE-AMEX: **AXU**



The Alexco 2009 Corporate Report is printed on 100% post-consumer recycled paper. By choosing 100% post-consumer recycled material for this report, and by printing significantly fewer copies than in previous years, 6 trees were preserved for the future, 2,353 gallons of wastewater flow were saved, 3,922,240 BTUs of energy were conserved, 16 lbs of waterborne waste and 260 lbs of solid waste were not created and 773 lbs net greenhouse gases were prevented.