

ANNUAL INFORMATION FORM



ALEXCO

ALEXCO RESOURCE CORP.

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For the year ended December 31, 2012

Dated March 27, 2013

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PRELIMINARY NOTES

In this Annual Information Form ("AIF"), Alexco Resource Corp. is referred to as the "Corporation" or "Alexco". All information contained herein is as at and for the year ended December 31, 2012, unless otherwise specified. All dollar amounts in this AIF are expressed in Canadian dollars unless otherwise indicated.

Cautionary Statement Regarding Forward-Looking Statements

This AIF contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of applicable Canadian securities laws (together, "forward-looking statements") concerning the Corporation's business plans, including but not limited to anticipated results and developments in the Corporation's operations in future periods, planned exploration and development of its mineral properties, plans related to its business and other matters that may occur in the future, made as of the date of this AIF. 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, future mine construction and development activities, future mine operation and production, the timing of activities, 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. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as "expects", "anticipates", "plans", "estimates", "intends", "strategy", "goals", "objectives" or stating that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved, or the negative of any of these terms and similar expressions) are not statements of historical fact and may be "forward-looking statements".

Forward-looking statements are subject to a variety of known and unknown risks, uncertainties and other factors which could cause actual events or results to differ from those expressed or implied by the forward-looking statements. Such factors include, but are not limited to, risks related to actual results and timing of exploration and development activities; actual results and timing of mining activities; actual results and timing of environmental services operations; actual results and timing of remediation and reclamation activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of silver, gold, lead, zinc and other commodities; possible variations in mineable resources, grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry; First Nation rights and title; continued capitalization and commercial viability; global economic conditions; competition; and delays in obtaining governmental approvals or financing or in the completion of development activities. Furthermore, forward-looking statements are statements about the future and are inherently uncertain, and actual achievements of the Corporation or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including but not limited to those referred to in this AIF under the heading "Description of the Business – Risk Factors" and elsewhere.

Forward-looking statements are based on certain assumptions that management believes are reasonable at the time they are made. In making the forward-looking statements included in this AIF, the Corporation has applied several material assumptions, including, but not limited to, the assumption that: (1) the proposed development of its mineral projects will be viable operationally and economically and proceed as planned; (2) market fundamentals will result in sustained silver, gold, lead and zinc demand and prices, and such prices will be materially consistent with or more favourable than those anticipated in the Bellekeno Development Plan (as hereinafter defined); (3) the actual nature, size and grade of its mineral resources are materially consistent with the resource estimates reported in the supporting technical reports; and (4) any additional financing needed will be available on reasonable terms. Other material factors and assumptions are discussed throughout this AIF and, in particular, under the heading "Description of the Business – Risk Factors".

The Corporation's forward-looking statements are based on the beliefs, expectations and opinions of management on the date the statements are made and should not be relied on as representing the Corporation's views on any subsequent date. While the Corporation anticipates that subsequent events may cause its views to change, the Corporation specifically disclaims any intention or any obligation to update forward-looking statements if circumstances or management's beliefs, expectations or opinions should change, except as required by applicable law. For the reasons set forth above, investors should not place undue reliance on forward-looking statements.

Cautionary Note to U.S. Investors – Information Concerning Preparation of Resource Estimates

This AIF has been prepared in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of United States securities laws. Unless otherwise indicated, all resource and reserve estimates included in this AIF have been prepared in accordance with Canadian National Instrument 43-101 (“**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. NI 43-101 permits the disclosure of an historical estimate made prior to the adoption of NI 43-101 that does not otherwise comply with NI 43-101, using the historical terminology, if the disclosure: (a) identifies the source and date of the historical estimate; (b) comments on the relevance and reliability of the historical estimate; (c) to the extent known, provides the key assumptions, parameters and methods used to prepare the historical estimate; (d) states whether the historical estimate uses categories other than those prescribed by NI 43-101 and if so includes an explanation of the differences; (e) includes any more recent estimates or data available to the issuer; (f) comments on what work needs to be done to upgrade or verify the historical estimate as current mineral resources or mineral reserves; and (g) states with equal prominence that a qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves and that the issuer is not treating the historical estimate as current mineral resources or mineral reserves.

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**”) under the United States Securities Act of 1933, as amended, 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 do not define the terms and 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 Corporation 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.

Qualified Person Under NI 43-101

Except where specifically indicated otherwise, the disclosure in this AIF of scientific and technical information regarding exploration projects on Alexco's mineral properties has been reviewed and approved by Alan McOnie, FAusIMM, Vice President, Exploration, while that regarding mine development and operations has been reviewed and approved by Scott Smith, P.Eng., Bellekeno Mine Manager, both of whom are Qualified Persons as defined by NI 43-101.

GLOSSARY OF TECHNICAL TERMS

The following is a glossary of certain mining terms used in this AIF:

Acre	An area of 4,840 square yards or 43,560 square feet.
Ag	Silver.
Assay	In economic geology, to analyze the proportions of metal in a rock or overburden sample; to test an ore or mineral for composition, purity, weight or other properties of commercial interest.
Au	Gold.
CIM	Canadian Institute of Mining and Metallurgy.
Deposit	A mineralized body which has been physically delineated by sufficient drilling, trenching, and/or underground work, and found to contain a sufficient average grade of metal or metals to warrant further exploration and/or development expenditures; such a deposit does not qualify as a commercially mineable ore body or as containing ore reserves, until final legal, technical, and economic factors have been resolved.
Dip	The angle at which a stratum is inclined from the horizontal.
Fold	A bend in strata or any planar structure.
g/t Au	Grams per tonne gold.
Grade	The amount of valuable metal in each tonne of ore, expressed as grams per tonne (g/t) for precious metals, as percent (%) for copper, lead, zinc and nickel.
Hectare	An area equal to 100 meters by 100 meters.
km	Kilometers.
m	Meters.
Mineral Reserve, Proven Mineral Reserve, Probable Mineral Reserve	Under CIM standards, a Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by a preliminary feasibility study or feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

The terms "Mineral Reserve", "Proven Mineral Reserve" and "Probable Mineral Reserve" used in this AIF are mining terms defined under CIM standards and

used in accordance with NI 43-101. Mineral Reserves, Proven Mineral Reserves and Probable Mineral Reserves presented under CIM standards may not conform with the definitions of “reserves” or “proven reserves” or “probable reserves” under United States standards. See “Preliminary Notes – Cautionary Note to U.S. Investors – Information Concerning Preparation of Resource Estimates”.

Mineral Reserves under CIM standards are those parts of Mineral Resources which, after the application of all mining factors, result in an estimated tonnage and grade which, in the opinion of the qualified person(s) making the estimates, is the basis of an economically viable project after taking account of all relevant processing, metallurgical, economic, marketing, legal, environment, socio-economic and government factors. Mineral Reserves are inclusive of diluting material that will be mined in conjunction with the Mineral Reserves and delivered to the treatment plant or equivalent facility. The term ‘Mineral Reserve’ needs not necessarily signify that extraction facilities are in place or operative or that all governmental approvals have been received. It does signify that there are reasonable expectations of such approvals.

Under CIM standards, Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proven Mineral Reserves. A Probable Mineral Reserve has a lower level of confidence than a Proven Mineral Reserve.

Proven Mineral Reserve: A Proven Mineral Reserve is the economically mineable part of a Measured Mineral Resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that the economic extraction can be justified.

Probable Mineral Reserve: A Probable Mineral Reserve is the economically mineable part of an Indicated and, in some circumstances, a Measured Mineral Resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that the economic extraction can be justified.

**Mineral Resource,
Measured Mineral
Resource, Indicated
Mineral Resource,
Inferred Mineral
Resource**

Under CIM standards, Mineral Resource is a concentration or occurrence of natural, solid, inorganic or fossilized organic material in or on the earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

The terms “mineral resource”, “measured mineral resource”, “indicated mineral resource”, and “inferred mineral resource” used in this AIF are mining terms defined under CIM standards and used in accordance with NI 43-101. They are not defined terms under United States standards and generally may not be used in documents filed with the SEC by U.S. companies. See “Preliminary Notes – Cautionary Note to U.S. Investors – Information Concerning Preparation of Resource Estimates”.

A mineral resource estimate is based on information on the geology of the deposit and the continuity of mineralization. Assumptions concerning economic and operating parameters, including cut-off grades and economic mining widths, based on factors typical for the type of deposit, may be used if these factors have not been specifically established for the deposit at the time of the mineral

resource estimate. A mineral resource is categorized on the basis of the degree of confidence in the estimate of quantity and grade or quality of the deposit, as follows:

Inferred Mineral Resource: Under CIM standards, an Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

Indicated Mineral Resource: Under CIM standards, an Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Measured Mineral Resource: Under CIM standards, a Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

Mineralization	The concentration of metals and their chemical compounds within a body of rock.
Ore	A metal or mineral or a combination of these of sufficient value as to quality and quantity to enable it to be mined at a profit.
Ounce or oz	A troy ounce or twenty penny weights or 480 grains or 31.103 grams.
Outcrop	An exposure of bedrock at the surface.
Pb	Lead.
Quartz	A mineral composed of silicon dioxide.
Strike	Direction or trend of a geologic structure.
Ton	Also referred to as "short ton", a United States unit of weight equivalent to 2000 pounds.
Tonne	A metric unit of weight equivalent to volume multiplied by specific gravity; equivalent to 1.102 tons or 1,000 kilograms (2,204.6 pounds).
Vein	Thin sheet-like intrusion into a fissure or crack, commonly bearing quartz.
Zn	Zinc.

Metric Equivalents

The following table sets forth the factors for converting between Imperial measurements and metric equivalents:

To Convert From	To	Multiply By
Feet	Meters	0.305
Meters	Feet	3.281
Miles	Kilometers (“ km ”)	1.609
Kilometers	Miles	0.6214
Acres	Hectares (“ ha ”)	0.405
Hectares	Acres	2.471
Grams	Ounces (Troy)	0.03215
Grams/Tonnes	Ounces (Troy)/Short Ton	0.02917
Tonnes (metric)	Pounds	2,205
Tonnes (metric)	Short Tons	1.1023

CORPORATE STRUCTURE

The Corporation was incorporated under the *Business Corporations Act* (Yukon) on December 3, 2004 under the name “Alexco Resource Corp.” Effective December 28, 2007, it was continued under the *Business Corporations Act* (British Columbia).

The Corporation's head office is located at Suite 1150, 200 Granville Street, Vancouver, British Columbia, V6C 1S4, Canada, and its registered and records office is located at 10th Floor, 595 Howe Street, Vancouver, British Columbia, V6C 2T5, Canada.

At the end of its most recently completed financial year, the Corporation had the following wholly-owned subsidiaries:

- Alexco Keno Hill Mining Corp. (formerly Alexco Resource Canada Corp.), organized under the laws of British Columbia;
- Alexco Exploration Canada Corp., organized under the laws of British Columbia;
- Elsa Reclamation & Development Company Ltd., organized under the laws of Yukon (“**ERDC**”);
- Access Mining Consultants Ltd., organized under the laws of Yukon (“**Access**”);
- Alexco Resource U.S. Corp., organized under the laws of Colorado (“**Alexco US**”); and
- Alexco Financial Guaranty Corp., organized under the laws of Colorado.

Unless otherwise indicated or the context otherwise requires, reference to the term the “Corporation” or “Alexco” in this AIF includes Alexco Resource Corp. and its subsidiaries.

GENERAL DEVELOPMENT OF THE BUSINESS

Formation of the Corporation

In 2005, the Corporation completed a series of transactions pursuant to which it acquired a number of mineral property interests and rights to certain operating contracts in Yukon Territory and British Columbia, the most significant of which properties are located in Yukon Territory's Keno Hill Silver District.

Three Year History and Significant Acquisitions

In June 2005, the Corporation was selected as the preferred purchaser of the assets of United Keno Hill Mines Limited and UKH Minerals Limited (collectively, “**UKHM**”) by a court appointed interim receiver and receiver-manager of UKHM. In February 2006, following negotiation of a subsidiary agreement (the “**Subsidiary Agreement**”) between the Government of Canada, the Government of Yukon (collectively, “**Government**”) and the Corporation, the Supreme Court of Yukon conditionally approved the purchase of the assets of UKHM by Alexco through its wholly-owned subsidiary, ERDC, final closing of which acquisition was effected in December 2007. Under the terms of the Subsidiary Agreement, the Corporation is indemnified by the Government of Canada for all liabilities, including environmental liabilities, arising directly or indirectly as a result of the pre-existing condition of the Keno Hill mineral rights and other assets acquired from UKHM. The Subsidiary Agreement provides that ERDC may bring any mine into production on the UKHM Mineral Rights (as hereinafter defined) by designating a production unit from the mineral rights relevant to that purpose and then assuming responsibility for all costs of the production unit's water related care and maintenance and water related components of closure reclamation. The Subsidiary Agreement further requires ERDC to pay into a separate reclamation trust a 1.5% net smelter return royalty, up to an aggregate maximum of \$4 million for all production units, from any future production from the UKHM Mineral Rights, commencing once earnings from mining before interest, taxes and depreciation exceed actual exploration costs, up to a maximum of \$6.2 million, plus actual development and construction capital.

Also under the Subsidiary Agreement, ERDC is retained through Government as a paid contractor responsible on a continuing basis for the environmental care and maintenance and ultimate closure reclamation of the former UKHM Mineral Rights. The Subsidiary Agreement provides that ERDC is responsible for the development of the ultimate closure reclamation plan for fees of 65% of full negotiated contractor rates, and this plan development is currently ongoing. Upon acceptance and regulatory approval, the closure reclamation plan will be implemented by ERDC at agreed commercial contractor rates. During the period required to develop the plan, ERDC is also responsible for carrying out the environmental care and maintenance of the UKHM Mineral Rights for a reducing fixed annual fee adjusted each year for certain operating and inflationary factors.

Since 2006, the Corporation has carried out exploration activities on several of its properties within the Keno Hill District, with a significant component of that activity having been focused on the Bellekeno property. A development plan in respect of Bellekeno (the "**Bellekeno Development Plan**") was completed in November 2009 and supported by an NI 43-101 compliant technical report (see "Description of the Business – Bellekeno Mine Operations"), outlining a project with a pre-tax net present value to Alexco of \$31.9 million over an initial mine life of approximately four years. Development and construction of the Bellekeno mine was initiated immediately, and effective January 1, 2011, commercial production at Bellekeno was declared to have commenced.

On October 2, 2008 (with subsequent amendments on October 20, 2008, December 10, 2008, December 22, 2009, March 31, 2010 and January 15, 2013), the Corporation entered into a silver streaming interest agreement with Silver Wheaton Corp. ("**Silver Wheaton**") under which Silver Wheaton will receive 25% of the life of mine silver produced by the Corporation from its Keno Hill Silver District properties. The agreement anticipated that the initial silver deliveries would come from the Bellekeno property.

Under the agreement, the Corporation received up-front deposit payments from Silver Wheaton totaling US\$50 million, plus receives further payments of the lesser of US \$3.90 (increasing by 1% per annum after the third year of full production) and the prevailing market price for each ounce of payable silver delivered, if as and when delivered.

Other material properties within the Keno Hill District include Onek, Lucky Queen, Flame & Moth, Birmingham and the Elsa Tailings property. Resource estimates have been published on each of these properties variously between 2010 and 2013, with each such estimate supported by an NI 43-101 compliant technical report.

Further particulars relating to the Corporation's mineral property interests, including the above-referenced technical reports, are described below under "Description of the Business" with respect to "Bellekeno Mine Operations" and "Mineral Exploration and Development".

In addition to the mining business described above, the Corporation also operates an environmental services business through its Alexco Environmental Group division ("**AEG**"). Primarily through Access, Alexco US and ERDC, AEG provides a variety of mine related environmental services including management of the regulatory and environmental permitting process, environmental assessments and reclamation and closure planning. The AEG operations also include the care and maintenance and closure reclamation activities being conducted by the Corporation in the Keno Hill District under the Subsidiary Agreement. Alexco also owns certain patents (the "**Patents**") registered or in the process of being registered in the U.S., Canada and various other countries around the world, with terms that expire variously between 2015 and 2020. The Patents generally pertain to the in situ immobilization of metals, and are specifically suited to mine closure related remediation.

Further particulars relating to the business of AEG, including activities being conducted under the Subsidiary Agreement, are described below under "Description of the Business – Environmental Services".

DESCRIPTION OF THE BUSINESS

The Corporation operates two principal businesses: a mining business, comprised of mineral exploration and mine development and operation in Canada, primarily in Yukon Territory; and through AEG an environmental services business, providing environmental consulting, remediation solutions and project

management services in respect of environmental permitting and compliance and site remediation and reclamation, in Canada, the United States and elsewhere in the Americas.

At December 31, 2012, the Corporation had 243 permanent and seasonal employees. A total of 153 were employed in the Bellekeno mine and mill operations, and a further 18 were employed in mineral exploration and development activities. A total of 54 were employed in the environmental services business, with the remaining 16 employed in respect of executive management and administrative support. Significant aspects of both the mining business and the environmental services business require specialized skills and knowledge in areas that include geology, mining, metallurgy, engineering, environmental contamination treatment, permitting and regulatory compliance, as well as environmental and social policy issues. Skill shortages within the mining industry in general, and particularly within Yukon Territory, have made it more challenging to recruit and retain qualified employees in these fields. Alexco has generally been successful in recruiting and retaining the key personnel necessary to its operating needs, though recruitment of skilled mill operators was an ongoing challenge for Bellekeno mine operations through mid 2012. By the end of 2012, the mill work force complement had stabilized, but recruitment and retention of qualified employees in the mining sector remains a risk factor.

The Corporation's principal mining business activities are currently being carried out within the Keno Hill District in Yukon Territory. The Keno Hill District is a storied silver mining region in Canada, encompassing over 35 former mines that produced variously from approximately 1918 through 1988, with published information from the Yukon Government's Minfile database reporting more than 217 million ounces of silver produced at average grades of 40.5 ounces per ton silver, 5.6% lead and 3.1% zinc.

The Corporation's mineral property holdings within the District span a significant majority of the regional area, and most of the former mines. The Corporation currently has one mine in operation within the Keno Hill District, being the Bellekeno property. Resource estimates have also been prepared with respect to the Onek, Lucky Queen, Flame & Moth and Bermingham properties, as well as with respect to the Elsa Tailings property, and the Corporation is currently finalizing plans and permitting to bring Onek and Lucky Queen into production. The Corporation holds several other property interests within the District, including but not limited to the Silver King, Husky and McQuesten properties, which may potentially become material properties depending on the results of exploration programs the Corporation may carry out on them in the future. In aggregate, Alexco's various mineral properties within the Keno Hill District are comprised of mineral rights totaling approximately 716 surveyed quartz mining leases, 884 unsurveyed quartz mining claims and two crown grants, in addition to four fee simple lots and six surface leases. Of those, the mineral rights acquired from UKHM (the "**UKHM Mineral Rights**") and therefore subject to the capped 1.5% net smelter return royalty provided for under the Subsidiary Agreement (see "General Development of the Business – Three Year History and Significant Acquisitions") total 675 quartz mining leases, 121 quartz mining claims and two crown grants.

Other non-material mineral property interests of the Corporation include the Sprogge and Harlan properties in the Yukon, and certain net smelter return royalties in respect of the Brewery Creek and Ida-Oro (formerly Klondike) properties in the Yukon and the Telegraph Creek, Iskut River, Kiniskan Lake and Manson Creek properties in British Columbia.

On February 15, 2012, the Corporation entered into a sales and purchase agreement to sell 100% of its interest in the Brewery Creek property to an unrelated third party, Golden Predator Corp. (now Americas Bullion Royalty Corp.). Effective September 26, 2012, the sale was completed, for proceeds of \$3,205,000 cash plus 7,500,000 common shares of Americas Bullion Royalty Corp. and purchase warrants to acquire a further 3,750,000 common shares for a price of \$1.15 per share at any time until September 25, 2014, as well as a net smelter return royalty on gold production from Brewery Creek of between 2% and 2.75%.

The Corporation's mining business activities are divided into two reportable segments: the Bellekeno mine operations, and general mineral exploration and development.

Bellekeno Mine Operations

The Corporation's 100% owned Bellekeno property comprises 70 surveyed quartz mining leases and 14 unsurveyed quartz mining claims, most of which are UKHM Mineral Rights. The Bellekeno property has

been the subject of four technical reports, all filed on the SEDAR website at www.sedar.com and all NI 43-101 compliant. The most recent of these technical reports is the updated preliminary economic assessment dated December 2, 2009 and entitled "Bellekeno Project – Updated Preliminary Economic Assessment Technical Report" (the "**Bellekeno Technical Report**"), prepared by an integrated team of personnel from Alexco, Wardrop Engineering Inc. (now Tetra Tech, Inc.) ("**Wardrop**") and SRK Consulting (Canada) Inc. ("**SRK**") in support of the Bellekeno Development Plan.

Construction of the Bellekeno mine was initiated in November 2009 based on the Bellekeno Development Plan, and commercial production was declared to have been achieved as of January 1, 2011. Bellekeno is an underground mine, with mining and milling operations being carried out year-round. While winter operations generally have some seasonal impact on costs and production rates, the impact is not typically significant. Mining is being accomplished by a mining contractor, predominantly using mechanized and conventional cut-and-fill methods and, more latterly, long-hole mining methods of ore extraction.

Bellekeno produces a silver-lead concentrate and a zinc-silver concentrate, both readily marketable with no notable deleterious elements. Both concentrates are delivered via truck and barge to a smelter located in British Columbia under annually rolling off-take agreements with Glencore Ltd., Stamford, a branch of a wholly owned subsidiary of the Swiss-based international natural resources group Glencore International AG. All Bellekeno revenue is derived from sales to external unrelated parties.

The primary permits under which the Bellekeno mine operates in Yukon Territory are a Quartz Mining License and a Type A Water Use License. Bellekeno is currently in material compliance with the terms of these permits and with environmental regulations to which it is subject generally. These permits and regulations impose ongoing environmental protection and monitoring requirements on the mine operation, the impact of which on the capital expenditures, earnings and competitive position of Bellekeno are materially consistent with those anticipated under the Bellekeno Development Plan.

Under the Bellekeno Technical Report and with an effective date of November 9, 2009, an indicated resource was estimated at a total of 401,000 tonnes grading 921 grams per tonne silver, 9.4% lead and 6.5% zinc, reflecting a total of 11,870,000 contained ounces of silver, plus an inferred resource was estimated at 111,100 tonnes grading 320 grams per tonne silver, 3.1% lead and 17.9% zinc, reflecting a total of 1,143,000 contained ounces of silver. After deducting estimated subsequent depletion from mine production, indicated resources at Bellekeno as at December 31, 2012 are estimated by Alexco to total approximately 224,100 tonnes grading 913 grams per tonne silver, 7.3% lead and 7.1% zinc.

The detailed disclosure contained in the Bellekeno Technical Report is hereby incorporated by reference, and the summary section from that report is reproduced as follows.

Introduction

This Bellekeno Project Updated Preliminary Economic Assessment (PEA) Technical Report was prepared for Alexco Resource Corp. (Alexco) by Wardrop Engineering Inc. (Wardrop), and SRK Consulting (Canada) Inc. (SRK) to provide a more detailed overview of the economic potential of extracting and processing mineralized material from the Bellekeno polymetallic deposits.

Wardrop completed the metallurgical, mineral processing, and economic analysis sections of this report with input contributions from SRK and Alexco. SRK completed the underground mining and geotechnical sections of this report. Numerous Alexco personnel, particularly Tim Hall (Operations Manager) and Tom Fudge, P.Eng., (Alexco Independent Consultant), provided significant information and technical input into the report.

Location and Land Holdings

The Bellekeno deposit is located in the historic Keno Hill Mining District that envelopes the villages of Elsa and Keno City (63°55'N, 135°29'W) in central Yukon. The region has been mined intermittently for over 90 years. The closest town is Mayo, approximately 55 km to the south of the project via an all-weather road. Whitehorse is approximately 460 km south of Mayo.

The land controlled by Alexco, following the issuance of a Care and Maintenance Water License in late November 2007, comprises 713 surveyed quartz mining leases, 794 unsurveyed quartz mining claims, and two crown grants. The total area is approximately 23,350 ha. Mineral exploration at Keno Hill is permitted under the terms and conditions set out by the Yukon Government in a Class

IV Quartz Mining Land Use Permit – LQ-00240, issued in June 2008, which governs all exploration activities on the property including advanced underground exploration, for the Bellekeno deposit. The permit supersedes the earlier mining land use permits for the property. The mineral resources and the underground infrastructure of the Bellekeno Project reported herein are all located within six contiguous Quartz claims inside the large Keno Hill property.

The climate of the Bellekeno area is characterized by a sub-arctic continental climate with cold winters and warm summers. Average temperatures in the winter are between -15°C and -20°C while summer temperatures average around 15°C. Exploration and mining can be conducted year-round. The landscape around the Bellekeno project is characterized by rolling hills and mountains up to 1200 m in elevation. Vegetation is abundant.

Exploration

On June 19, 2008, Alexco announced it was granted a Class IV Quartz Mining Land Use Permit – LQ0024, allowing the development of an exploration decline in the central portion of the Bellekeno deposit. Procon Mining and Tunnelling Ltd. (Procon) was awarded a contract to drive approximately 650 m of decline and ancillary development that accessed old workings and established diamond drilling locations for a 9,300 m exploration and definition diamond drilling program. The underground exploration program comprised 140 holes drilled between February and August 2009. Prior to rehabilitating the historic working a Type B water license was secured by Alexco to allow for the dewatering of the Bellekeno Mine.

Metallurgy and Mineral Processing

Test results from three testing programs indicate that the mineralization of the Bellekeno deposit responds well to a lead and zinc differential flotation process using a cyanide-free zinc mineral suppression regime. Silver minerals are intimately associated with lead minerals and will be recovered as a silver-lead concentrate. A separate zinc concentrate will also be produced from the Bellekeno operation.

The design capacity of the process plant will be 408 t/d. Overall plant availability is estimated to be 92%. Run-of-mine (ROM) material from different mineralized zones is planned to be processed by conventional crushing, grinding, and flotation followed by concentrate and tailings dewatering. The tailings will be filtered and stored in a Dry Stack Tailings Facility (DSTF) located adjacent to the mill building. Two separate tailings products will be produced; a low pyrite and high pyrite tailings. 100% of the high pyrite will be transported to the underground mine for storage and 30 to 50% of the low pyrite tailings will also be transported underground for use as backfill material with the balance being stored on surface in the DSTF. Mill makeup water will be sourced from the Galkeno 900 treatment system. The estimated installed power requirement for the mill building and infrastructure is approximately 1.8 MW (at 408 t/d design). Electrical power for the mill will be provided by extending the main 69 kV electrical power line located approximately 1.6 km from the mill location.

Metallurgical performance estimated from test work and assumed for this report is based on test work completed by SGS Lakefield Research Ltd. in 2007 and by Process Research Associates Ltd. in 1996 and 2008/2009. Table 1.1 shows the projected metallurgical performance according to the updated mining plan, dated October 2009 used in this study.

Table 1.1 Summary of Projected Metallurgical Recoveries

Year	Product	Mass (%)	Grade				Recovery			
			Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Au (%)	Ag (%)	Pb (%)	Zn (%)
2010	Head	100.0	0.44	1,010	11.73	5.26	100.0	100.0	100.0	100.0
	Pb-Ag Conc	16.1	1.3	5,924	71.0	2.2	47.8	94.6	97.6	6.7
	Zn Conc	8.5	1.1	305	0.64	54.3	21.2	2.6	0.5	87.4
2011	Head	100.0	0.45	994	11.54	5.43	100.0	100.0	100.0	100.0
	Pb-Ag Conc	15.9	1.3	5,921	71.0	2.2	47.8	94.5	97.5	6.4
	Zn Conc	8.8	1.1	302	0.63	54.4	21.6	2.7	0.5	87.7
2012	Head	100.0	0.43	820	8.50	5.49	100.0	100.0	100.0	100.0
	Pb-Ag Conc	11.8	1.72	6,392	70.1	2.3	47.7	91.7	97.1	4.9
	Zn Conc	8.9	1.10	298	0.47	54.4	23.1	3.2	0.5	88.5
2013	Head	100.0	0.37	717	7.04	6.09	100.0	100.0	100.0	100.0
	Pb-Ag Conc	9.7	1.8	6,616	68.6	2.8	47.4	90.0	95.0	4.5
	Zn Conc	10.0	1.1	297	0.40	54.6	29.5	4.1	0.6	89.4
Average	Head	100.0	0.42	871	9.47	5.6	100.0	100.0	100.0	100.0
	Pb-Ag Conc	13.1	1.5	6,185	70.3	2.3	47.7	92.7	96.9	5.4
	Zn Conc	9.1	1.1	300	0.52	54.4	23.9	3.1	0.5	88.4

A separate lead and zinc concentrate will be produced. The concentrates will be transported from site to either the port of Skagway or Stewart, BC for transportation overseas or trucked directly to Trail, BC.

Resources

Table 1.2 provides a summary by zone of the Classified Mineral Resources for the Bellekeno project (October 2009).

The resource estimate was prepared under the supervision of Mr. Stanton Dodd (L.Geol.), Vice President of Exploration for Alexco. Mr. Dodd is a qualified person (QP) as defined in National Instrument 43-101 (NI 43-101). The mineral resources for the Bellekeno Project were estimated in conformity with generally accepted Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines and are reported in accordance with Canadian Securities Administrators' NI 43-101.

Table 1.2 Mineral Resource Statement, Bellekeno Project, Yukon – November 2009

	Tonnes	Ag (g/t)	Pb (%)	Zn (%)
Indicated				
SW All	215,800	997	12.6	7.2
East 48 Upper	16,900	1,001	3.7	10.0
East 48 Mid	59,600	571	3.9	7.4
East 49 All	17,000	699	4.2	2.4
99 All	91,700	995	7.5	4.2
Total Indicated	401,000	921	9.4	6.5
Inferred				
Total (East)	111,100	320	3.1	17.9

Notes:

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. Reported at a net smelter return cut-off of \$185/t.

Resources are reported based on a net smelter return (NSR) cut-off value of \$185/t. NSR values were calculated on an in-situ (undiluted) basis using the price and exchange rate inputs shown in Table 1.3.

Table 1.3 Metal Prices and Exchange Rate, Resource Statement

Zone	US\$:Cdn\$ Exchange	Ag US\$/oz	Pb US\$/lb	Zn US\$/lb
SW	0.90	15.25	0.675	0.80
99	0.90	15.25	0.675	0.80
East	0.90	14.50	0.600	0.90

Mining

The Bellekeno Project is comprised of one primary vein, the 48 vein, a subsidiary structure, the 49 vein and at least 9 other ancillary structures present in the Southwest, 99, and East zones. Most of the historical mining (totalling approximately 40,000 t) at Bellekeno occurred on the 48 vein in the 99 zone, intermittently between the 1950s and mid 1980s. The veins have variable dip, strike, and thickness. Dips range from 60° to 80° to the east or west. The average strike direction is approximately 030 azimuth. Vein thickness varies from a few centimetres to several metres in an apparent “shoot-like” configuration.

Based on the geotechnical and physical characteristics of the veins, a mining method review was conducted and cut-and-fill mining methods have been selected as the most appropriate for Bellekeno. Cut-and-fill and shrinkage stoping methods typically offer a high degree of selectivity that generally translates into high mineralization extraction and low waste dilution. Significant geotechnical study and design has been completed by SRK and a ground control management plan has been developed to address potential unstable ground conditions encountered in the vein material. Backfill of mined out stopes will be accomplished through cemented rock and tailings fill. Filtered tailings from the mill process will be backhauled underground and used as backfill.

Based on the current updated mineral resource estimate (Alexco, October 2009) the life-of-mine (LOM) production schedule is shown in Table 1.4. Mine production is planned to be 250 t/d using a mining contractor.

Table 1.4 Bellekeno Production Schedule

Bellekeno Production Schedule																			
Cut off \$230																			
SW Zone	Mineable Tonnes	NSR diluted	2010				2011				2012				2013				TOTAL
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
A	29,454	\$560		1600	4446	5000	3002	3000	3000	2000	3000	3000	1406						29454
B	71,223	\$560		1900	5700	5330	5700	5700	5700	5700	5000	5000	5178	5700	4247	3844	3516	3008	71223
C_Upper	44,139	\$618		1900	6700	6700	6700	6000	6700	6700	2739								44139
C_Lower	32,475	\$396									4000	4000	4000	4100	4100	4100	4100	4075	32475
D	32,226	\$388					1400	2800	2800	2800	2826	2800	2800	2800	2800	2800	2800	2800	32226
E	7,996	\$475												1999	1999	1999	1999	7996	
Sub-total SW	217,512	\$519	0	5400	16846	17030	16802	17500	18200	17200	17564	14800	13384	12600	13146	12743	12415	11882	217,512
99 Zone																			
B	5,683	\$377										1300	1300	1300	800	983			5683
C	4,627	\$508			2776	1851													4627
D	1,364	\$578									1364								1364
E	2,971	\$466							1486	1486									2971
F	5,396	\$854					2698	2698											5396
G	27,247	\$675		2100	2878	3619	3000	2302	2815	2616	2373	2137	1200	2207					27247
H	6,128	\$364										3064	3064						6128
J	4,795	\$295								1199	1199	1199	1199						4795
Sub-total 99	58,211	\$572	0	2100	5654	5470	5698	5000	4300	5300	4936	7700	6763	3507	800	983	0	0	58,211
East Zone																			
Upper 48	14,121	\$454											2354	2354	2354	2354	2354	2354	14121
East_Mid_U	20,086	\$345												4039	3,500	3,586	4,500	4,461	20086
East_Mid_L	12,010	\$271													2700	2834	3232	3245	12010
Sub-total East	46,218	\$359	0	0	0	0	0	0	0	0	0	0	2354	6393	8554	8774	10085	10059	46,218
TOTAL PRODUCTION		tonnes	0	7,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	21,941	321,941
Plant Feed:	TPD			250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	244
Au	gpt		0	0.44	0.44	0.44	0.46	0.45	0.44	0.43	0.44	0.41	0.42	0.43	0.38	0.38	0.36	0.36	0.42
Ag	gpt		0	1037	1002	1009	1060	1029	955	931	873	805	789	814	728	722	712	706	871
Pb	%		0	11.97	11.57	11.81	11.90	11.65	11.53	11.09	10.10	8.63	7.74	7.51	7.15	7.04	7.02	6.95	9.47
Z	%		0	5.54	5.14	5.29	5.52	5.57	5.38	5.27	5.62	5.08	5.39	5.85	5.99	5.96	6.18	6.19	5.60
NSR	\$/t			\$607	\$586	\$592	\$617	\$601	\$564	\$549	\$516	\$469	\$453	\$460	\$416	\$412	\$406	\$402	\$506

Financial Analysis

Mill, G&A, and mine operating costs are presented in Table 1.5, Table 1.6, and Table 1.7. The project operating costs were estimated from a number of sources including cost estimating guides, contractor and vendor quotes, previous studies, and experience.

Table 1.5 Process Operating Cost Summary

Description	Labour	Annual Cost (Cdn\$/a)	Unit Cost (Cdn\$/t ore)
Process Personnel			
Supervision	4	528,247	5.87
Operation	16	1,177,045	13.08
Maintenance	6	516,458	5.74
Sub-total	26	2,221,750	24.69
Supplies			
Operating Supplies		631,171	7.01
Maintenance Supplies		29,063	0.32
Power Supply		540,143	6.00
Mobile Equipment		204,451	2.27
Sub-total		1,404,827	15.61
Total	28	\$3,626,577	\$40.30

Table 1.6 G&A Operating Cost Summary

Description	Labour	Annual Cost (Cdn\$/a)	Unit Cost (Cdn\$/t ore)
Labour	19	1,820,542	20.23
Head Office		100,000	1.11
Insurance		100,000	1.11
Operating Supplies		742,000	8.24
Contracts		1,531,363	17.02
Total	19	\$4,293,905	\$47.71

Table 1.7 Mine Operating Cost Estimate by Function

Mine Function	LOM Cost (Cdn\$000)	Average Unit Cost (Cdn\$/t)
Alexco Mine Supervision	1,192	3.79
Contractor Overhead – Monthly	18,425	58.60
Contractor Lateral Development	8,138	25.88
Contractor Raising	856	2.72
Contractor Cut & Fill Stoping	13,395	42.60
Contractor Load Underground Trucks	0	0.00
Alexco Surface Truck Haulage	1,562	4.97
Contractor Backfilling	5,880	18.70
Contractor Mine Services	5,035	16.01
Alexco Surface Waste Pile Maintenance	163	0.52
Alexco Technical Services	3,548	11.28
Alexco Energy	4,917	15.64
Mine Operating Cost	63,110	200.70

Capital cost estimates for the project are shown in Table 1.8.

Table 1.8 Capital Cost Summary

Area Description	Total Cost (Cdn\$000)
Direct Costs	
Site Development	3,282
Underground Mining	6,310
Crushing	901
Fine Ore Storage	1,267
Mill Building	7,128
Tailings	1,681
Site Services	1,489
Ancillary Facilities	1,754
Plant Mobile Fleet	797
Temporary Services	754
Indirect Costs	
Project Indirects	4,574
Owner Costs	5,928
Contingency*	5,779
Total Project Costs	41,644

* refer to Table 19.36 for contingency allowances.

The pre-tax base case financial model was calculated using the following parameters:

- assumed current net smelter terms
- 3.8-year mine life
- royalties are 1.5% NSR after all initial capital plus \$6.2 M in exploration costs paid back through earnings before income taxes, depreciation, and amortization (EBITDA) and accumulated cash flow turns positive and capped at Cdn\$4 M, as per Alexco
- production schedule as outlined in this study
- operating costs as outlined in this study
- capital costs as outlined in this study
- the model was prepared on a pre-tax basis
- working capital distribution as per Alexco and is credit back end of mine life
- depreciation costs not calculated
- Silver Wheaton Corp. (Silver Wheaton) capital contribution and capital distribution as per Alexco.

The economic evaluation indicates a base case pre-tax net present value (NPV) of US\$29.4 M at a discount rate of 8.0% for the Bellekeno deposit. The summary of pricing scenarios and project economics is presented in Table 1.9 and Table 1.10.

Table 1.9 Economic Evaluation at Various Cases of Metal Prices

Scenario	NPV at 8% Discount Rate (US\$ M)
3-year Average	38.8
Alexco Base Case	29.4
Wardrop	28.7
Current	53.8

Table 1.10 Metal Prices used for LOM Base Case

	2010	2011	2012	2013
Silver (US\$/oz)	16.42	16.38	14.38	13.46
Lead (US\$/lb)	0.80	0.78	0.69	0.61
Zinc (US\$/lb)	0.82	0.91	0.86	0.82
Gold (US\$/oz)	1,067.00	1,092.00	942.00	883.00
Cdn\$/US\$	0.92	0.92	0.92	0.92

The payback period is defined as the time required after revenue is first received in Year 1 to achieve break-even cumulative cash flow. For this project, the payback period for the base case is approximately 0.5 years. The payback period is based on the annual un-discounted cash flows. There is no consideration for inflation, interest, or depreciation in this calculation.

Conclusions

The following conclusions have been made regarding the Bellekeno Project:

- The testwork results indicate that the tested mineralization responds well to conventional lead/zinc differential flotation process with a cyanide-free zinc mineral suppression regime.
- Silver and lead minerals associate intimately and will be recovered together to produce a silver-lead bulk concentrate, and zinc minerals will be concentrated into a separate zinc concentrate.
- The historic underground workings at the Bellekeno mine have been extensively examined and in general remain in very good condition.
- Based on the mining context of the deposit, a suitable mining method is mechanized overhand cut-and-fill in 3.5 m lifts.
- An efficient means of backfilling will be the use of a cemented blend of development waste rock and dry (filtered) tailings back hauled from the process plant. Both materials are available in abundant quantities to meet the mine backfill requirements.
- The deposit contains multi-metals and two metal concentrates will be produced on site. For this reason mine planning must be based on NSR values.
- Alexco will operate the mine on the basis of contractor mining. The planned mine operating schedule is two 11-h shifts per day, 7 d/wk.
- SRK concludes that the planned mine will achieve a production rate of 250 t/d over a 3.6-year mine life.
- Scheduling indicates the mine will be ready to start production at 250 t/d by late June 2010.
- The most significant mine related risks are geotechnical, related to weak and challenging conditions that may be locally encountered in stoping.
- The most significant mine opportunity is the potential to increase the mine life as a result of exploration and/or higher metal prices.
- Providing that the set out design criteria and assumptions are satisfied, there is a strong indication that the project is commercially viable.
- Structural and stratigraphic studies, as well as extensive drilling of the Bellekeno deposit has resulted in a number of resource expansion and exploration targets in areas within and immediately adjacent to the existing minable resource. It is recommended that these targets be ranked in order of priority and drilling of initial targets adjacent to existing or planned underground infrastructure in the SW, 99, and Upper East be coordinated with pre-production mine development work.

Mineral Exploration and Development

Lucky Queen Property

The Corporation's 100% owned Lucky Queen property is located in the Keno Hill District, approximately four kilometers north of Keno City, on Keno Hill itself. The property comprises 51 surveyed quartz mining leases and 6 unsurveyed quartz mining claims, most of which are UKHM Mineral Rights. The historical Lucky Queen underground mine, in operation from 1927 to 1932, produced approximately 11 million ounces of silver from 123,590 tons of ore at an average grade of 89.2 ounces of silver per ton. As reported in the news release dated July 27, 2011 entitled "Alexco Announces Initial Resource Estimates for Lucky Queen and Onek", a resource estimate for Lucky Queen has now been defined, comprising 124,000 tonnes of indicated resources grading 1,227 grams per tonne silver, 0.17 grams per tonne gold, 2.57% lead and 1.72% zinc, plus a further 150,000 tonnes of inferred resources grading 571 grams per tonne silver, 0.16 grams per tonne gold, 1.37% lead and 0.92% zinc. This resource estimate is supported by a technical report dated September 8, 2011 filed on the SEDAR website at www.sedar.com and entitled "Technical Report on the Lucky Queen Deposit, Lucky Queen Property, Keno Hill District, Yukon" (the "**Lucky Queen Technical Report**"). The estimate has been prepared by SRK under the responsibility of Gilles Arseneau, Ph.D., P.Geo., an Independent Qualified Person as defined by NI 43-101, in conformity with generally accepted CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. The resource estimate may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. The resource estimate may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

The detailed disclosure contained in the Lucky Queen Technical Report is hereby incorporated by reference, and the summary section from that report is reproduced as follows.

Executive Summary

The Lucky Queen prospect is one of several polymetallic silver-lead-zinc deposits occurring in the historic Keno Hill silver-lead district located near Mayo, Yukon Territory. A mineral resource model was constructed by SRK Consulting (Canada) Inc. ("SRK") during the first quarter of 2011 using a geostatistical block modeling approach, constrained by wireframes, provided by Alexco Resource Corp. ("Alexco"). Mineral resources are classified as Indicated and Inferred Mineral Resources following the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) guidelines.

This technical report documents the mineral resource estimate for the Lucky Queen prospect. It was prepared following the guidelines of the Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines".

Property Description, Location, Access and Physiography

The Lucky Queen property is located in the Mayo Mining District approximately 350 kilometres ("km") north of Whitehorse, Yukon Territory, within the Keno Hill mining district. Mayo is accessible from Whitehorse via a 460 km all weather road and by air via the Mayo airport. A gravel road connects Mayo to the Project area. Alexco currently maintains a land position at the Lucky Queen property comprising 51 surveyed quartz mining leases and six unsurveyed quartz mining claims. Mineral exploration at Keno Hill is permitted under the terms and conditions set out by the Yukon Government in the Class IV Quartz Mining Land Use Permit – LQ00240, issued on June 17, 2008 and is valid until June 16, 2018. The mineral resources for the Lucky Queen prospect reported herein are located on the Uncle Sam, Mayo, Lucky Queen and Mathole quartz mining leases.

Central Yukon is characterized by a sub-arctic continental climate with cold winters and warm summers. Average temperatures in the winter are between minus fifteen and minus twenty degrees Celsius while summer temperatures average around fifteen degrees Celsius. Exploration and mining work can be carried out year-round. The landscape around the Lucky Queen Project area is characterized by rolling hills and mountains with a relief of up to 1,600 metres ("m").

History

The Keno Hill mining camp area has a rich history of exploration and mining. Silver was first found in 1901 but small-scale mining only began during 1913. High silver prices at the end of the First World War renewed interest in the district and ultimately success at the Keno Mine led to a staking rush, resulting in the discovery of a number of rich silver deposits. During the early 1920's the Treadwell Yukon Company Limited ("TYC") began its growing influence on the fate of the new mining district. The Lucky Queen deposit was mined from 1927 to 1932 when reserves were exhausted, producing 123,000 tons of ore at 97.8 ounces per tonne ("opt") Ag from two ore shoots.

The Second World War resulted in a sharp decline in activity in the Keno Hill camp until a new company, Keno Hill Mining Company Ltd., later United Keno Hill Mines Ltd. ("UKHM") purchased the TYC properties and started production. Very good results led to another staking rush and the formation of a large number of junior exploration companies, many of which were purchased by UKHM. The 1950's proved to be the most successful time of the mining camp. Starting in the early 1960's, new discoveries and additions to ore reserves lagged production. The Lucky Queen vein and strike extensions were explored intermittently by surface overburden drilling, trenching and soil sampling throughout the 1950's, 1960's, 1970's and early 1980's. An exploration drift, collared near the Black Cap prospect and totalling approximately 1,800 m, was developed by UKHM in 1985-1987. It was designed to come in underneath the historical Lucky Queen workings and attempt to raise into the No 2 Inclined shaft. Poor ground conditions around the shaft, combined with difficulty in locating the vein and an urgent need for miners elsewhere in the district caused the adit to be abandoned. UKHM closed permanently in early 1989. In June 2005, Alexco was selected as the preferred purchaser of the assets of UKHM by PricewaterhouseCoopers Inc., the court-appointed interim receiver and receiver-manager of Keno Hill. In February 2006, Alexco's purchase of UKHM's assets through Alexco's wholly-owned subsidiary, Elsa Reclamation & Development Company Ltd. ("ERDC"), was approved. Under the Keno Hill Subsidiary Agreement, ERDC is indemnified against all historical liability, has property access for exploration and future development and is not required to post security against pre-existing liabilities. ERDC received a water license from the Yukon territorial government in November 2007 giving Alexco free and clear title to surface and subsurface claims, leases, free-hold land, buildings and equipment at Keno Hill. Alexco embarked on an aggressive surface exploration program in 2006 with continued yearly exploration programs through 2010.

Regional and Local Geological Setting

The Keno Hill mining camp is located in the northwestern part of the Selwyn Basin in an area where the northwest-trending Robert Service Thrust Sheet and the Tombstone Thrust Sheet overlap. The area is underlain by Upper Proterozoic to Mississippian rocks that were deposited in a shelf environment during the formation of the northern Cordilleran continental margin. The area underwent regional compressive tectonic stresses during the Jurassic and the Cretaceous, producing thrusts, folds and penetrative fabrics of various scales.

The Robert Service Thrust Sheet in the south is composed of Late Proterozoic to Devonian clastic sandstone, minor limestone, siltstone, argillite, chert, and conglomerate. The Tombstone Thrust Sheet to the north consists of Devonian phyllite, felsic meta-tuffs and metaclastic rocks, overlain by Carboniferous quartzite which is the main host for the silver mineralization in the Keno Hill camp. Four intrusive suites intrude the layered rocks:

- Early Paleozoic diabase dikes and sills;
- Mid-Triassic gabbro to diorite pods;
- Early Cretaceous Tombstone granite to granodiorite suite; and
- Upper Cretaceous peraluminous porphyritic granite.

The local geology is characterized by three sedimentary rock units metamorphosed to greenschist facies assemblages during the Middle Cretaceous. The Lower Schist comprises Devonian to Mississippian graphitic, calcareous, and sericitic schists, quartzite and minor greenstone of Middle Triassic age. The lower contact of this unit has been cut off by the Tombstone Thrust Fault. The 700-metre thick Mississippian Central Quartzite (the Keno Hill Quartzite) consists of quartzite with minor schist, phyllite and greenstone horizons. It is the most important host to the silver mineralization at Keno Hill. The Upper Schists comprise Cambrian quartz-mica schist, quartzite,

graphitic schist and minor limestone. The Robert Service Thrust Fault separates the Upper Schist from the younger Central Quartzite.

The rock units are intruded by quartz-feldspar porphyritic sills, commonly in the Lower and Upper Schists. They are correlated with the ninety three million year old Roop Lake granite (Mayo Lake pluton).

Four sets of faults are important. The oldest fault set consists of south dipping foliation-parallel structures related with the Tombstone Thrust Fault. The second fault set ("longitudinal veins") comprises northeast to east-northeast trending, steeply dipping sinistral faults with offset locally reaching more than 150 m. These faults essentially carry all the silver mineralization that was mined in the Keno Hill district. The third fault set ("transverse faults") includes north-west striking and steep north dipping structures, generally barren but filled with quartz containing trace to minor arsenopyrite, pyrite and jamesonite. They may represent dilatational zones between "en echelon" longitudinal faults. Late north to northeast trending cross faults displace (dextral and sinistral) veins or longitudinal faults by up to 2,000 m.

Deposit Types and Mineralization

The Keno Hill District is a polymetallic silver-lead-zinc vein district with characteristics analogous to Kokanee Range (Slocan), British Columbia; Coeur d'Alene, Idaho; Freiberg and the Harz Mountains, Germany; and Příbram, Czech Republic. Common characteristics include the proximity to crustal-scale faults, affecting thick clastic metasedimentary rocks intruded by felsic rocks that may have acted as a heat source driving the hydrothermal system. At Keno Hill, the largest accumulation of silver, lead and zinc minerals occurred in structurally prepared competent rocks, such as the Central Quartzite.

In general, gangue minerals include manganiferous siderite, minor calcite, and quartz. Silver occurs in argentiferous galena and argentiferous tetrahedrite. In supergene assemblages, silver can be native or in polybasite, stephanite, and pyrargyrite. Lead occurs in galena and zinc in iron-rich sphalerite. Other sulphides include minor pyrite, arsenopyrite, and chalcopyrite.

At the district scale, the hydrothermal system exhibits sharp lateral mineralogical changes equivocally associated with temperature gradients around magmatic rocks. The hydrothermal veins also exhibit sharp vertical mineralogical zoning; historically interpreted to be lead-rich at the top to more zinc-rich at depth. The Lucky Queen vein structure has a strike length, defined by drilling, of approximately 650 m and is open along strike to both the northeast and southwest with reported thicknesses of a few centimetres to several metres.

Exploration

Most past exploration work in the Keno Hill district was conducted as support to the mining activities until the mines closed in 1989. This historic work involved surface and underground drilling designed to explore areas surrounding the main underground working areas.

The current exploration conducted by Alexco is the first comprehensive exploration effort in the district since 1997. Alexco conducted surface diamond drilling programs in the Lucky Queen prospect area between 2006 and 2010. Drilling included four drill holes totalling 875 m in 2006, three drill holes totalling 557 m in 2007, twelve drill holes totalling 2,999m in 2008, fourteen drill holes totalling 3,048m in 2009, and fourteen drill holes totalling 3,625 m in 2010.

Sampling Method, Approach and Analyses

Historical samples collected by previous project operators include underground chips, split core, reverse circulation and percussion drill cuttings. Sampling procedures are incompletely documented from project archives. Historical drill core samples were taken using procedures meeting industry best practices, reverse circulation and percussion drilling assay samples were taken from split recovered drill cuttings.

Information regarding historical assay procedures is limited. All assays were performed by the mine laboratory located in Elsa. SRK understands that gold and silver were determined by fire assay, while lead and zinc analyses were performed by atomic absorption or titration methods.

Alexco implemented industry best practice procedures for all aspects of the drilling, collar and downhole surveying, core description and sampling, sample preparation and assaying, and

database management. Assay samples were collected on half core sawed lengthwise with sampling intervals honouring geological boundaries. Sample intervals vary from 0.1 to 1 m in visibly mineralized core with up to 2m lengths used away from obviously mineralized material.

Alexco used industry best practices assaying protocols including the use of commercial certified control samples, sample blanks and duplicates at an adequate frequency to monitor the accuracy of laboratories ALS-Chemex, Eco Tech and AGAT, all of which are accredited under ISO-170025 Standards Council of Canada. Assay samples were dispatched for preparation and assaying using adequate security protocols. All samples were prepared using standard preparation protocols. Each sample was assayed for gold by fire assay and atomic absorption spectrometry on 30-gram sub-samples and for a suite of between twenty-seven and forty-eight elements (including silver, lead and zinc) by four acid digestions and either inductively coupled plasma atomic emission spectroscopy or mass spectroscopy on 0.5 gram sub-samples. Elements exceeding concentration limits were re-assayed using methods suitable for high concentrations.

Data Verifications

Alexco scanned and, where applicable, digitally captured historical data creating an extensive digital database. Data relating to the Lucky Queen resource area were verified by Alexco personnel.

Alexco verified the historical Lucky Queen chip sample data collected by Treadwell Yukon/UKHM for those levels occurring within the resource zones. Sampling was done mainly in the 1930's and -1980's at Lucky Queen. Documented sampling procedures are available for the 1980's programs but do not exist for the earlier campaigns. As the underground workings are currently inaccessible, no confirmation check sampling could be performed by Alexco. As a result all historical chip sampling occurring within the Lucky Queen resource area is not deemed reliable for inclusion in a reportable resource calculation. The data were used for select geostatistical analyses, mainly variography.

SRK reviewed the analytical quality control data produced by Alexco for the 2006 to 2010 core drilling at Lucky Queen and concluded that Alexco personnel used diligence in monitoring quality control data, investigating potential failures and taking appropriate corrective measures when required for the collected data. The quality control data collected by Alexco in between 2006 and 2010 are comprehensive and the assaying results delivered by ALS Chemex, Eco Tech and AGAT Labs are generally reliable for the purpose of resource estimation.

Mineral Processing and Metallurgical Testing

No specific testing has been carried out on the mineralization found at the Lucky Queen deposit. SRK assumed that the mineralization found within the deposit will have similar metallurgical characteristics to the Bellekeno deposit now being developed by Alexco.

Mineral Resource Estimate

The Lucky Queen resources were estimated using 3-D Gemcom block modeling software in multiple passes in 10 by 10 by 10 m blocks by inverse distance squared. Grade estimates were based on capped one meter composited assay data. Capping levels were set to 6,300 grams per tonne for silver, 2 grams per tonne for gold, 14.8% for lead and 7% for zinc. Blocks were classified as indicated mineral resources if at least two drill holes and four composites were found within a 50 by 50 m search ellipse. All other interpolated blocks were classified as inferred mineral resources.

Table i below summarizes the mineral resources estimated by SRK for the Lucky Queen deposit as of July 27, 2011.

Table i: Mineral Resource Statement* for the Lucky Queen Deposit, July 27, 2011.

Deposit	Class	Tonnes	Ag g/t	Au g/t	Pb %	Zn %
Lucky Queen	Indicated	124,000	1,227	0.17	2.57	1.72
	Inferred	150,000	571	0.16	1.37	0.92
<p>* 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.</p> <p>** Reported at an NSR cut-off of \$185 (1 US\$ = 1 CA\$)/tonne using long term metal prices (US\$) and recoveries developed for the nearby Bellekeno deposit (Ag US\$18.50/oz, recovery 96%; Pb US\$ 0.90/lb, recovery 97%; Zn US\$ 0.95/lb, recovery 88%; Au US\$ 1,100/oz, recovery 72%). Ag grades capped at 6,300 g/t; Pb capped at 14.8%, Zn capped at 7%, Au grades capped at 2 g/t.</p>						

Conclusions and Recommendations

Between 2006 and 2010, Alexco completed five drilling programs on its Lucky Queen property in the Keno Hill district located in Central Yukon Territory. These drilling programs confirmed the existence of moderate polymetallic silver mineralization in this area.

SRK recommends that Alexco continues to explore the Lucky Queen deposit to further evaluate the potential of the deposit in a two phased approach with the second phase contingent on positive results from the first phase. The first phase would include rehabilitation of the adit, establishment of drilling platforms and 1,500 m of drilling at a total cost of \$5.1M. The second phase would include bulk sampling of a drift on 100 m of the vein and detailed metallurgical testing of mineralization at a total cost of \$1.2M. The total cost for the two phases would be \$6.3M.

Onek Property

The Corporation's 100% owned Onek property is located in the Keno Hill District, approximately one kilometer northeast of Keno City. The property comprises 32 surveyed quartz mining leases and 5 unsurveyed quartz mining claims, most of which are UKHM Mineral Rights, and includes the historical Onek underground and open pit mine from which reported past production totaled 95,290 tons averaging 13.6 ounces per ton silver, 5.5% lead and 3.4% zinc. As reported in the news release dated July 27, 2011 entitled "Alexco Announces Initial Resource Estimates for Lucky Queen and Onek", a resource estimate for Onek has now been defined. The estimate comprises 585,000 tonnes of indicated resources grading 194 grams per tonne silver, 0.65 grams per tonne gold, 1.23% lead and 13.74% zinc, plus a further 236,000 tonnes of inferred resources grading 203 grams per tonne silver, 0.43 grams per tonne gold, 1.05% lead and 11.52% zinc, characterized by silver-galena rich zones within a wide and continuous zinc-rich vein system with higher silver-to-zinc ratios prevalent in the upper and southwest portion of the deposit. This resource estimate is supported by a technical report dated September 8, 2011 filed on the SEDAR website at www.sedar.com and entitled "Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon" (the "**Onek Technical Report**"). The estimate has been prepared by SRK under the responsibility of Gilles Arseneau, Ph.D., P.Geol., an Independent Qualified Person as defined by NI 43-101, in conformity with generally accepted CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. The resource estimate may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. The resource estimate may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

The detailed disclosure contained in the Onek Technical Report is hereby incorporated by reference, and the summary section from that report is reproduced as follows.

Executive Summary

The Onek prospect is one of several polymetallic silver-lead-zinc deposits occurring in the historic Keno Hill silver-lead district located near Mayo, Yukon Territory. A mineral resource model was constructed by SRK Consulting (Canada) Inc. ("SRK") during the first quarter of 2011 using a

geostatistical block modeling approach, constrained by wireframes, provided by Alexco Resource Corp. ("Alexco"). Mineral resources are classified as Indicated and Inferred, following the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) guidelines.

This technical report documents the mineral resource estimate for the Onek prospect. It was prepared following the guidelines of the Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines".

Property Description, Location, Access and Physiography

The Onek property is located in the Mayo Mining District, approximately 350 kilometres ("km") north of Whitehorse, Yukon Territory, within the Keno Hill mining district. Mayo is accessible from Whitehorse via a 460 km all weather road and by air via the Mayo airport. A gravel road connects Mayo to the Project area. Alexco currently maintains a land position at the Onek property comprising 32 surveyed quartz mining leases, and 5 unsurveyed quartz mining claims. Mineral exploration at Keno Hill is permitted under the terms and conditions set out by the Yukon Government in the Class IV Quartz Mining Land Use Permit – LQ00240, issued on June 17, 2008 and valid until June 16, 2018. The mineral resources for the Onek prospect reported herein are located on the Fisher, Lone Star, Eli and Galena Farm quartz mining leases.

Central Yukon is characterized by a sub-arctic continental climate with cold winters and warm summers. Average temperatures in the winter are between minus fifteen and minus twenty degrees Celsius while summer temperatures average around fifteen degrees Celsius. Exploration and mining work can be carried out year-round. The landscape around the Onek Project area is characterized by rolling hills and mountains with a relief of up to 1,600 metres ("m").

History

The Keno Hill mining camp area has a rich history of exploration and mining. Silver was first found in 1901 but small-scale mining only began during 1913. High silver prices at the end of the First World War led to renewed and ultimately successful exploration activity in the area. In 1922, the Onek Mining Company Ltd. was organized to explore the core Onek claims via a number of open cuts and shallow underground workings in two shafts. In 1950 to 1952, United Keno Hill Mines Ltd. ("UKHM") reopened the shafts and drove an adit in from the northwest to drift along the vein strike at the 400 Level for about 1300 feet, driving raises up into the historic workings along the way. The Onek Mine was revisited in the early 1960's with limited success. All mining at Onek ceased in 1965, until the late 1980's, when a 20 - 40 m deep open pit was developed over the length of the majority of the Onek workings around the historical shafts. Historical production from the Onek deposit totalled 95,290 imperial tonnes at 13.6 ounces per tonne ("oz/t") silver.

UKHM closed permanently in 1989. In June 2005, Alexco was selected as the preferred purchaser of the assets of UKHM by PricewaterhouseCoopers Inc., the court-appointed interim receiver and receiver-manager of Keno Hill. In February 2006, Alexco's purchase of UKHM's assets through a wholly-owned subsidiary, Elsa Reclamation & Development Company Ltd. ("ERDC"), was approved. Under the Keno Hill Subsidiary Agreement, ERDC is indemnified against all historical liability, has property access for exploration and future development, and is not required to post security against pre-existing liabilities. ERDC received a water license from the Yukon territorial government in November 2007, giving Alexco free and clear title to surface and subsurface claims, leases, free-hold land, buildings and equipment at Keno Hill. Alexco embarked on an aggressive surface exploration program in 2006 with continued yearly exploration programs through 2011.

Regional and Local Geological Setting

The Keno Hill mining camp is located in the northwestern part of the Selwyn Basin in an area where the northwest-trending Robert Service Thrust Sheet and the Tombstone Thrust Sheet overlap. The area is underlain by Upper Proterozoic to Mississippian rocks that were deposited in a shelf environment during the formation of the northern Cordilleran continental margin. The area underwent regional compressive tectonic stresses during the Jurassic and the Cretaceous, producing thrusts, folds and penetrative fabrics of various scales.

The Robert Service Thrust Sheet in the south is composed of Late Proterozoic to Devonian clastic sandstone, minor limestone, siltstone, argillite, chert, and conglomerate. The Tombstone Thrust Sheet to the north consists of Devonian phyllite, felsic meta-tuffs and metaclastic rocks, overlain by

Carboniferous quartzite, which is the main host for the silver mineralization in the Keno Hill camp. Four intrusive suites intrude the layered rocks:

- Early Paleozoic diabase dikes and sills;
- Mid-Triassic gabbro to diorite pods;
- Early Cretaceous Tombstone granite to granodiorite suite; and
- Upper Cretaceous peraluminous porphyritic granite.

The local geology is characterized by three sedimentary rock units metamorphosed to greenschist facies assemblages during the Middle Cretaceous. The Lower Schist comprises Devonian to Mississippian graphitic, calcareous, and sericitic schists, quartzite and minor greenstone of Middle Triassic age. The lower contact of this unit has been cut off by the Tombstone Thrust Fault. The 700-metre thick Mississippian Central Quartzite (the Keno Hill Quartzite) consists of quartzite with minor schist, phyllite and greenstone horizons. It is the most important host to the silver mineralization at Keno Hill. The Upper Schists comprise Cambrian quartz-mica schist, quartzite, graphitic schist and minor limestone. The Robert Service Thrust Fault separates the Upper Schist from the younger Central Quartzite.

The rock units are intruded by quartz-feldspar porphyritic sills, commonly in the Lower and Upper Schists. They are correlated with the ninety three million year old Roop Lake granite (Mayo Lake pluton).

Four sets of faults are important. The oldest fault set consists of south dipping foliation-parallel structures related with the Tombstone Thrust Fault. The second fault set ("longitudinal veins") comprises northeast to east-northeast trending, steeply dipping sinistral faults with offset locally reaching more than 150 m. These faults essentially carry all the silver mineralization that was mined in the Keno Hill district. The third fault set ("transverse faults") includes north-west striking and steep north dipping structures, generally barren but filled with quartz containing trace to minor arsenopyrite, pyrite and jamesonite. They may represent dilatational zones between "en echelon" longitudinal faults. Late north to northeast trending cross faults displace (dextral and sinistral) veins or longitudinal faults by up to 2,000 m.

Deposit Types and Mineralization

The Keno Hill District is a polymetallic silver-lead-zinc vein district with characteristics analogous to: Kokanee Range (Slocan), British Columbia; Coeur d'Alene, Idaho; Freiberg and the Harz Mountains, Germany; and Příbram, Czech Republic. Common characteristics include the proximity to crustal-scale faults, affecting thick clastic metasedimentary rocks, intruded by felsic rocks that may have acted as a heat source driving the hydrothermal system. At Keno Hill, the largest accumulation of silver, lead and zinc minerals occurred in structurally prepared competent rocks, such as the Central Quartzite.

In general, gangue minerals include manganiferous siderite, minor calcite, and quartz. Silver occurs in argentiferous galena and argentiferous tetrahedrite. In supergene assemblages, silver can be native or in polybasite, stephanite, and pyrargyrite. Lead occurs in galena and zinc in iron-rich sphalerite. Other sulphides include minor pyrite, arsenopyrite, and chalcopyrite.

At the district scale, the hydrothermal system exhibits sharp lateral mineralogical changes equivocally associated with temperature gradients around magmatic rocks. The hydrothermal veins also exhibit sharp vertical mineralogical zoning; historically interpreted to be lead-rich at the top to more zinc-rich at depth. The Onek vein system comprises at least three individual vein faults occurring within a broad northeast striking, southeast dipping structural zone with a strike length of approximately 600 m.

Exploration

Most past exploration work in the Keno Hill district was conducted as support to the mining activities until the mines closed in 1989. This historic work involved surface and underground drilling designed to explore areas surrounding the main underground working areas.

The current exploration conducted by Alexco is the first comprehensive exploration effort in the district since 1997. Alexco conducted surface diamond drilling programs in the Onek prospect area

between 2007 and 2011. Drilling included 13 surface core drill holes totalling 2,803m in 2007, 29 surface core drill holes totalling 5,127m in 2008, 25 surface core drill holes totalling 2,913m in 2010, and 12 drill holes totalling 1,138m in 2011.

Sampling Method, Approach and Analyses

Historical samples collected by previous project operators include underground chips, split core, reverse circulation and percussion drill cuttings. Sampling procedures are incompletely documented from project archives. Historical drill core samples were taken using procedures meeting industry best practices, reverse circulation and percussion drilling assay samples were taken from split recovered drill cuttings.

Information regarding historical assay procedures is limited. All assays were performed by the mine laboratory located in Elsa. SRK understands that gold and silver were determined by fire assay, while lead and zinc analyses were performed by atomic absorption or titration methods.

Alexco implemented industry best practice procedures for all aspects of the drilling, collar and downhole surveying, core description and sampling, sample preparation and assaying, and database management. Assay samples were collected on half core sawed lengthwise with sampling intervals honouring geological boundaries. Sample intervals vary from 0.1 to 1 m in visibly mineralized core with up to 2m lengths used away from obviously mineralized material.

Alexco used industry best practices assaying protocols including the use of commercial certified control samples, sample blanks and duplicates at an adequate frequency to monitor the accuracy of laboratories; ALS-Chemex in Vancouver, Eco Tech Labs of Kamloops, BC and AGAT Laboratory of Mississauga, ON, all of which are accredited under ISO-170025 Standards Council of Canada. Assay samples were dispatched for preparation and assaying using adequate security protocols. All samples were prepared using standard preparation protocols. Each sample was assayed for gold by fire assay and atomic absorption spectrometry on 30-gram ("g") sub-samples, and for a suite of between 27 and 48 elements (including silver, lead and zinc) by four acid digestions and either inductively coupled plasma atomic emission spectroscopy or mass spectroscopy on 0.5 g sub-samples. Elements exceeding concentration limits were re-assayed using methods suitable for high concentrations.

Data Verifications

Alexco scanned and, where applicable, digitally captured historical data creating an extensive digital database. Data relating to the Onek resource area were verified by Alexco personnel.

Alexco verified the historical Onek chip sample data collected by UKHM for those levels occurring within the resource zones. Sampling was done mainly in the 1950's at Onek. Documented sampling procedures do not exist for these early campaigns. As the underground workings are currently inaccessible, no confirmation check sampling could be performed by Alexco. As a result, all historical chip sampling occurring within the Onek resource area is not deemed reliable for inclusion in a reportable resource calculation.

SRK reviewed the analytical quality control data produced by Alexco for the 2007 to 2011 core drilling at Onek and concluded that Alexco personnel used diligence in monitoring quality control data, investigating potential failures and taking appropriate corrective measures when required for the collected data. The quality control data collected by Alexco in between 2007 and 2011 are comprehensive and the assaying results delivered by ALS Chemex and AGAT Laboratories are generally reliable for the purpose of resource estimation.

Mineral Processing and Metallurgical Testing

No specific testing has been carried out on the mineralization found at the Onek deposit. SRK assumed that the mineralization found within these deposits will have similar metallurgical characteristics to the Bellekeno deposit now being developed by Alexco.

Mineral Resource Estimates

The Onek resources were estimated using 3D Gemcom Gems block modeling software in multiple passes in 5 by 5 by 3 m blocks by ordinary kriging. Grade estimates were based on capped 1 m composited assay data. Capping levels for silver were set to 3,000 grams per tonne ("g/t") for vein1 and 2,000 g/t for vein2. Lead and zinc were capped at 5% and 3% respectively for Vein 2.

Gold grades were capped at 5 g/t for vein1 and 2 g/t for vein2. Blocks were classified as Indicated mineral resources if at least two drill holes and five composites were found within a 60 m by 30 m search ellipse. All other interpolated blocks were classified as Inferred mineral resource.

Table i below summarises the mineral resources estimated by SRK for the Onek deposit as of July 27, 2011.

Table i: Mineral Resource Statement* for the Onek Deposit, July 27, 2011.

Class	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Indicated**	585,000	194	0.65	1.23	13.74
Inferred**	236,000	203	0.43	1.05	11.52

*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.

**Reported at an NSR cut-off of \$185 (1 USD = 1 CAD)/tonne using consensus long term metal prices (US\$) and recoveries developed for the nearby Bellekeno deposit (Ag US\$18.50/oz, recovery 96%; Pb US\$ 0.90/lb, recovery 97%; Zn US\$ 0.95/lb, recovery 88%; Au US\$ 1,100/oz, recovery 72%). Ag grades capped at 3,000 g/t for vein 1 and 2,000 g/t for vein 2; Pb and Zn capped at 5% and 3% respectively for Vein 2; Au grades capped at 5 g/t for vein 1 and 2 g/t for vein 2.

SRK observed that Vein 1 displays metal zonation with depth with a silver-rich upper zone and a zinc-dominated lower zone similar to the Bellekeno deposit. This zonation is not seen in Vein 2. Table ii displays Onek mineral resources for Vein 1 above and below the 930 m elevation.

Table ii: Mineral Resource for Vein 1 above and below 930 m elevation.

ZONE	Class	Zone	Tonnes	Ag g/t	Pb %	Zn %	Au g/t
Vein 1	Indicated	Above 930 m	405,000	234	1.54	15.09	0.68
		Below 930 m	131,000	77	0.34	11.77	0.67
		Total	536,000	195	1.25	14.27	0.67
	Inferred	Above 930 m	71,000	280	1.26	12.79	0.49
		Below 930 m	129,000	146	0.32	12.43	0.42
		Total	200,000	193	0.65	12.55	0.45

Conclusion and Recommendations

Between 2006 and June 2011, Alexco completed four drilling programs on its Onek property in the Keno Hill district located in Central Yukon Territory. These drilling programs confirmed the existence of significant polymetallic silver mineralization in this area.

SRK recommends a two phase exploration and development program for the Onek deposit with the second phase contingent on positive results from the first phase. The first phase would include development of a new underground access to collect a 7560 ton bulk sample by drifting 200 m on vein at an estimated cost of \$4.23 M, metallurgical testing of the bulk sample at a cost of \$120,000, and geotechnical analysis to be used in detailed mine design and economic analysis at a cost of \$120,000. Total cost of phase one is estimated at \$ 4.88 M. The second phase would include detailed mine design and economic analysis for preliminary economic assessment and the development of policies and procedures for rock mechanics, rock mechanics planning, ground support, and handling development in proximity of historical workings with a total estimated cost of \$360,000. The cost for the two phases would be \$5.24 M.

Flame & Moth Property

The Corporation's 100% owned Flame & Moth Property is located in the Keno Hill District. The property comprises 42 surveyed quartz mining leases and 14 unsurveyed quartz mining claims, most of which are

UKHM Mineral Rights. As reported in the news release January 31, 2013 entitled “ Alexco Expands Flame & Moth Indicated Resource to 22.9 Million Ounces of Silver; Resource Grade Increased, Deposit Remains Open”, an updated resource estimate for Flame & Moth has now been defined. The estimate comprises of 1,378,000 tonnes of indicated resources grading from 516 grams of silver, 0.42 grams per tonne gold, 1.72% lead and 5.7% zinc, plus a further 107,000 tonnes of inferred resources grading 313 grams per tonne silver, 0.27 per tonne gold, 0.86% lead and 4.21% zinc. This resource estimate is supported by a technical report dated March 15, 2013 filed on the SEDAR website at www.sedar.com and entitled “Updated Technical Report on the Flame & Moth Deposit, Flame & Moth Property, Keno Hill District, Yukon” (the “Flame & Moth Technical Report”). The estimate has been prepared by David Farrow, Pr.Sci.Nat, P.Geo., of GeoStrat Consulting Services Inc., and Alan McOnie, FAusIMM, Vice-President, Exploration for Alexco, both Qualified Persons as defined by NI 43-101, in conformity with generally accepted CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. The resource estimate may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. The resource estimate may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

The detailed disclosure contained in the Flame & Moth Technical Report is hereby incorporated by reference, and the summary section from that report is reproduced as follows.

Executive Summary

The Flame & Moth prospect is a silver-lead-zinc deposit in the historic Keno Hill silver-lead district located near Mayo, Yukon Territory. While historically explored to a shallow depth, exploration initiatives by Alexco Resource Corp (Alexco) have outlined an area of silver-lead-zinc mineralization with sufficient confidence to produce a geological interpretation and vein wireframes for a resource estimate. SRK Consulting (Canada) Inc. (SRK) initially constructed a mineral resource model during the second quarter of 2012 using a geostatistical block modeling approach. Mineral resources were classified as Indicated and Inferred, following the Canadian Institute of Mining & Metallurgy (CIM) Definition Standards for Mineral Resources and Mineral Reserves (December 2005) guidelines.

This technical report updates that mineral resource estimate for the Flame & Moth prospect based on new drilling results. It was prepared following the guidelines of the Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines”.

Property Description, Location, Access, and Physiography

The Flame & Moth property is located in the Mayo Mining District, approximately 350 kilometres (km) north of Whitehorse, Yukon Territory, within the Keno Hill mining district. Mayo is accessible from Whitehorse via a 460 km all weather road and by air via the Mayo airport. A gravel road connects Mayo to the project area. Alexco currently maintains a land position at the Flame & Moth property comprising 42 surveyed quartz mining leases and 14 un-surveyed quartz mining claims. Mineral exploration at Keno Hill is permitted under the terms and conditions set out by the Yukon Government in the Class IV Quartz Mining Land Use Permit – LQ00240, issued on June 17, 2008, and valid until June 16, 2018. The mineral resources for the Flame & Moth prospect reported herein are located on the Moth, Flame, Frances 5, and Frances 7 quartz mining leases and the Blue Claim.

Central Yukon is characterized by a sub-arctic continental climate with cold winters and warm summers. Average temperatures in the winter are between -15 and -20 degrees Celsius (°C) while summer temperatures average around 15°C. Exploration is limited to the summer months although mining work can be carried out year-round. The landscape around the Flame & Moth Project area is characterized by rolling hills with a local relief of up to 1,845 metres (m) on Keno Hill.

History

Claim staking and prospecting began at Flame & Moth in 1920, which was the start of a decade of commercial production in the Keno Hill district, and shallow workings identified some mineralized veining in the area.

Subsequent to this early work, little or nothing appears to have happened on the property until the acquisition by United Keno Hill Mines (UKHM) just prior to 1950. A 27.4 m inclined shaft was sunk along the footwall of what was likely the Moth vein zone, where quartz-carbonate vein hosted mineralization averaging 10 ounces per ton (opt) Ag, 1.6% Pb, and 5% Zn was encountered. Thirteen horizontal diamond drill holes totaling 193 m were drilled from the drift, but the core recovery was poor.

During 1954 and 1955, mineralization of pyrite and minor arsenopyrite was reported up to 240 m along strike to the north. This was explored by bulldozer trenching, soil sampling, and ground geophysics, but was unsuccessful because of the depth of gravel overburden.

UKHM returned to Flame & Moth in 1961 with a program of soil sampling and ground geophysics (self-potential, magnetics, Ronka EM), and drilled five surface diamond boreholes around the shaft to test the mineralization at depth. The soil samples and geophysics yielded little information, and no veining was intercepted in the drilling.

In the 1960's through the 1980's, multiple overburden drill campaigns were aimed at outlining an open pit resource around the historical workings and along strike. A small amount of mineralized material was sent to the Elsa mill in 1984 (406 tons @ 20.40 opt Ag, 1.39% Pb, and 0.72% Zn), perhaps coming from vein material exposed during stripping of overburden.

Total production at the Flame & Moth is listed as 1,590 tons grading 18.3 opt Ag, 1.1% Pb, and 0.9% Zn (Cathro 2006). It is assumed most of this came from the underground work of the 1950's.

UKHM operations closed permanently in 1989. In June 2005, Alexco was selected as the preferred purchaser of the assets of UKHM by PricewaterhouseCoopers Inc., the court-appointed interim receiver and receiver-manager of Keno Hill. In February 2006, Alexco's purchase of UKHM's assets through a wholly-owned subsidiary, Elsa Reclamation & Development Company Ltd. (ERDC), was approved. Under the Keno Hill Subsidiary Agreement, ERDC is indemnified against all historical liability, has property access for exploration and future development, and is not required to post security against pre-existing liabilities. ERDC received a water license from the Yukon territorial government in November 2007, giving Alexco free and clear title to surface and subsurface claims, leases, free-hold land, buildings, and equipment at Keno Hill. Alexco embarked on an aggressive surface exploration program in 2006 with continued yearly exploration programs through 2012.

Regional and Local Geological Setting

The Keno Hill mining camp is located in the northwestern part of the Selwyn Basin in an area where the northwest-trending Robert Service Thrust Sheet and the Tombstone Thrust Sheet overlap. The area is underlain by Upper Proterozoic to Mississippian rocks that were deposited in a shelf environment during the formation of the northern Cordilleran continental margin and underwent regional compressive tectonic stresses during the Jurassic and the Cretaceous, which produced thrusts, folds, and penetrative fabrics of various scales.

The Robert Service Thrust Sheet in the south is composed of Late Proterozoic to Devonian clastic sandstone, minor limestone, siltstone, argillite, chert, and conglomerate. The Tombstone Thrust Sheet to the north consists of Devonian phyllite, felsic meta-tuffs, and metaclastic rocks, overlain by Carboniferous quartzite, that are the main host for the silver mineralization in the Keno Hill district. Four intrusive suites intrude the layered rocks:

- Late Triassic gabbro to diorite sills;
- Early Cretaceous Tombstone granite to granodiorite;
- Upper Cretaceous peraluminous porphyritic granite; and
- Late Cretaceous diabase dikes and sills.

The mineralized Flame & Moth vein system occurs in the upper part of the Mississippian Keno Hill Quartzite, within the thick Basal Quartzite Member that is overlain by the Sourdough Hill Member. The sequence was metamorphosed to greenschist facies assemblages during the Cretaceous. The Basal Quartzite is up to 700 m thick and comprises quartzite interbedded with minor graphitic phyllite and is intruded by Triassic greenstone sills. The Basal Quartzite is the dominant host to the silver mineralization in the Keno Hill district. The overlying Sourdough Hill Member comprises

graphitic and sericitic phyllite, chloritic quartz augen phyllite, and thin limestone units. To the south, the Robert Service Thrust Fault separates the Keno Hill Quartzite from the overthrust Upper Proterozoic Hyland Group, which is comprised of predominantly meta-sedimentary chlorite and quartz rich schist. The Keno Hill Quartzite is intruded by quartz-feldspar aplite sills or dykes that are correlated with the Early Cretaceous intrusive suite found elsewhere in the district.

Three phases of folding are identified in the district. The two earliest phases consist of isoclinal folding with sub-horizontal, easterly or westerly trending fold axes. The later phase consists of a sub-vertical axial plane and moderate southeasterly trending and plunging fold axis. In the Keno Hill district, the first phases of folding formed three structurally dismembered isoclinal folds of which the Basal Quartzite Member outlines two synforms at Monument and Caribou Hills, while the Flame & Moth Prospect is located on the limb of the third dismembered syncline between Galena Hill and Sourdough Hill.

Within the district, up to four periods of faulting are recognized. The oldest fault set consists of south dipping foliation-parallel structures that developed contemporaneously with the first phase folding. The Robert Service Thrust Fault truncates the top of the Keno Hill Quartzite and sets the Precambrian schist of the Yusezyu Formation of the Hyland Group above the Mississippian Sourdough Hill Member of the Keno Hill Quartzite. The mineralization in the Keno Hill district is hosted by a series of northeast-trending pre- and syn- mineral "vein faults" that display apparent left lateral normal displacement. These are commonly offset by post-mineralization high angle cross faults, low angle faults, and bedding faults. Most commonly these comprise northwest striking cross faults that show apparent right-lateral displacement.

Deposit Types and Mineralization

The Keno Hill District is a polymetallic silver-lead-zinc vein district with characteristics analogous to: Kokanee Range (Slocan), British Columbia; Coeur d'Alene, Idaho; Freiberg and the Harz Mountains, Germany; and Příbram, Czech Republic. Common characteristics include the proximity to crustal-scale faults, affecting thick sequences of clastic metasedimentary rocks, intruded by felsic rocks that may have acted as a heat source driving the hydrothermal system. At Keno Hill, the largest accumulation of silver, lead, and zinc minerals occurred in structurally prepared competent rocks, such as the Basal Quartzite Member.

In general, gangue minerals include (manganiferous) siderite, minor calcite, and quartz. Silver most commonly occurs in argentiferous galena and argentiferous tetrahedrite. In supergene assemblages, silver can be native or in polybasite, stephanite, and pyrargyrite. Lead occurs in galena and zinc in iron-rich sphalerite. Other sulphides include pyrite, pyrrhotite, arsenopyrite, and chalcopyrite.

At the district scale, the mineral system exhibits sharp lateral mineralogical changes equivocally associated with temperature gradients around magmatic rocks. The hydrothermal veins also exhibit sharp vertical mineralogical zoning historically interpreted to be lead rich at the top to more zinc rich at depth. The Flame & Moth deposit is composed of two fault offset segments of the Flame vein where the most abundant minerals are pyrite, galena, sphalerite, arsenopyrite, pyrrhotite, quartz, and siderite.

Exploration

Most past exploration work in the Keno Hill district was conducted as support to the mining activities until the mines closed in 1989. This historical work involved surface and underground drilling designed to explore areas surrounding the main underground working areas.

The current exploration conducted by Alexco is the first comprehensive exploration effort in the district since 1997. The first holes were drilled in the Flame & Moth area in 2010, targeting the Flame & Moth veins at depth, below an area with a historical shallow open pit resource and minor historical production. Results of this drilling were sufficiently encouraging to continue exploration in 2011 and 2012.

Total surface core drilling by Alexco in the Flame & Moth resource area including some holes not completed totalled 14 drill holes (3,986.19 m) in 2010, 32 drill holes (7,149.17 m) in 2011, and most recently in 2012 a total of 43 holes (8,752.14 m), for a combined total of 89 drill holes (19,887.50 m).

Sampling Method, Approach and Analyses

Alexco implements industry best practice procedures for all aspects of the drilling, collar and down hole surveying, core description and sampling, sample preparation and assaying, and database management. Assay samples are collected from half core sawed lengthwise with sampling intervals honouring geological boundaries. Sample intervals vary from 0.1 to 1 m in visibly mineralized core with up to 3 m lengths used away from obviously mineralized material.

Alexco uses industry best-practice assaying protocols including the use of commercial certified control samples, sample blanks, and duplicates at an adequate frequency to monitor the accuracy of the laboratories: ALS in North Vancouver, BC, and AGAT Laboratory of Mississauga, ON, both of which are accredited under ISO-170025 by the Standards Council of Canada. Assay samples were dispatched for preparation and assaying using adequate security protocols. All samples were prepared using standard preparation protocols. Each sample was assayed for gold by fire assay and atomic absorption spectrometry on 30 gram (g) sub-samples and for a suite of between 27 and 48 elements (including silver, lead, and zinc) by four acid digestions and either inductively coupled plasma atomic emission spectroscopy or mass spectroscopy on 0.5 g sub-samples. Elements exceeding concentration limits were re-assayed using methods suitable for high concentrations.

Data Verifications

SRK (2012) reviewed the analytical quality control data produced by Alexco for the 2010 to 2011 core drilling at Flame & Moth deposit and concluded that Alexco personnel used diligence in monitoring quality control data, investigated potential failures, and took appropriate corrective measures when required for the collected data. The quality control data collected by Alexco in 2010 and 2011 was considered comprehensive and the final, in some cases replicated, assay results delivered by ALS and AGAT Labs were generally reliable for the purpose of resource estimation.

In 2012, exactly the same procedures and protocols were used.

Mineral Processing and Metallurgical Testing

Metallurgical testing is underway on the Flame & Moth deposit; however it has been assumed that the mineralization found within the deposit will have similar metallurgical characteristics to the Bellekeno deposit now being mined by Alexco.

Alexco's Keno Hill district mill located near Keno City currently processes output from the Bellekeno mine, and may in the future process output from other District mine sources. It is not currently determinable if resources mined from Flame & Moth would or even could be processed through the District Mill. Until metallurgical testing has been carried out, it is not determinable if the existing District Mill would be suitable for processing resources from Flame & Moth. Furthermore, until mining plans have been developed for Flame & Moth it is also not determinable if the District Mill will have sufficient capacity to process Flame & Moth mine output.

Mineral Resource Estimates

The Flame & Moth resources were estimated using Isatis block modelling software in multiple passes in 5 by 5 by 3 m blocks by inverse distance squared. Grade estimates were based on capped 1 m composited assay data. Capping levels for silver were set to 3,000 grams per tonne (g/t). Lead and zinc were capped at 15% and 20% respectively for both veins. Gold grades were not capped. Blocks were classified as Indicated mineral resources if at least two drill holes and six composites were found within a 60 m by 60 m search ellipse. All other interpolated blocks were classified as Inferred mineral resource.

Table i below summarizes the mineral resources estimated for the Flame & Moth deposit as of January 30, 2013.

Table i: Mineral Resource Statement* for the Flame & Moth deposit, January 30, 2013.

Class	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Indicated**	1,378,000	516	0.42	1.72	5.70
Inferred**	107,000	313	0.27	0.86	4.21

* 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.

** Reported at an NSR cut-off of \$185 (0.96 USD = 1 CAD)/tonne using consensus long term metal prices (US\$) and recoveries developed for the nearby Bellekeno deposit (Ag US\$24.00/oz, recovery 96%; Pb US\$ 0.85/lb, recovery 97%; Zn US\$ 0.95/lb, recovery 88%; Au US\$ 1,400/oz, recovery 72%). For all veins, Ag grades capped at 3,000 g/t; Pb and Zn capped at 15% and 20% respectively; Au grades not capped.

Conclusion and Recommendations

Between 2010 and 2012, Alexco conducted three drilling programs on its Flame & Moth property in the Keno Hill district, located in Central Yukon Territory. The drilling on the Flame & Moth deposit successfully outlined a significant polymetallic silver deposit in an area of limited historical exploration and production.

The mineralized Flame Vein system identified to date comprises two broadly north-northeast striking, southeast dipping vein segments - the Christal Zone and the Lightning Zone, offset by the northwest striking Mill Fault. The Christal Zone has a minimum drill defined strike length of 280 m with a depth of 300 m, while the Lightning Zone extends 280 m in length and up to 350 m in depth.

The mineral resources presented in this report represent an updated disclosure of the mineral resources initially disclosed by SRK on 15 June 2012 (SRK 2012) for the Flame & Moth deposit by Alexco.

The mineral resource for the Flame & Moth deposit, at a net smelter return (NSR) cut-off of \$185/tonne includes 1,378,000 tonnes at an average grade of 516 g/t silver classified as Indicated mineral resources and 107,000 tonnes at an average grade of 313 g/t silver classified as Inferred mineral resources.

It is recommended that Alexco continues exploration of the Flame Vein beyond the resource areas. It is also recommended that Alexco continues ongoing geotechnical, mineralogical and metallurgical data collection and baseline environmental studies in preparation for a preliminary economic assessment. The total cost for the recommended exploration and development program is estimated at \$1.26 M.

Bermingham Property

The Corporation's 100% owned Bermingham Property is located in the Keno Hill District near May, Yukon Territory. The property comprises 42 surveyed quartz mining leases, all of which are UKHM Mineral Rights. As reported in the news release dated June 28, 2012 entitled "Alexco Announces Initial Resource Estimates for Flame & Moth and Bermingham", a resource estimate for Bermingham has now been defined. The estimate comprises of 257,000 tonnes of indicated resources grading from 460 grams of silver, 0.06 grams per tonne gold, 2.0% lead and 2.1% zinc, plus a further 102,000 tonnes of inferred resources grading 372 grams per tonne silver, 0.09 per tonne gold, 1.12% lead and 1.83% zinc. This resource estimate is supported by a technical report dated August 8, 2012 filed on the SEDAR website at www.sedar.com and entitled "Technical Report on the Bermingham Deposit, Bermingham Property, Keno Hill District, Yukon" (the "**Bermingham Technical Report**"). The estimate has been prepared by SRK under the responsibility of Gilles Arseneau, Ph.D., P.Geol., an Independent Qualified Person as defined by NI 43-101, in conformity with generally accepted CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. The resource estimate may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. The

resource estimate may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

The detailed disclosure contained in the Bermingham Technical Report is hereby incorporated by reference, and the summary section from that report is reproduced as follows.

Executive Summary

The Bermingham prospect is a silver deposit in the historic Keno Hill silver-lead district located near Mayo, Yukon Territory. While successfully mined in the past to a shallow depth, renewed exploration by Alexco Resource Corp (Alexco) has outlined a new area of silver-lead-zinc mineralization with sufficient confidence to produce a geological interpretation and vein wireframes for a resource estimate. SRK Consulting (Canada) Inc. (SRK) constructed a mineral resource model during the second quarter of 2012 using a geostatistical block modeling approach. Mineral resources are classified as Indicated and Inferred, following the Canadian Institute of Mining & Metallurgy (CIM) Definition Standards for Mineral Resources and Mineral Reserves (December 2005) guidelines.

This technical report documents the mineral resource estimate for the Bermingham prospect. It was prepared following the guidelines of the Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines".

Property Description, Location, Access, and Physiography

The Bermingham property is located in the Mayo Mining District, approximately 350 kilometres (km) north of Whitehorse, Yukon Territory, within the Keno Hill mining district. Mayo is accessible from Whitehorse via a 460 km all weather road and by air via the Mayo airport. A gravel road connects Mayo to the project area. Alexco currently maintains a land position at the Bermingham property comprising of 42 surveyed quartz mining leases. Mineral exploration at Keno Hill is permitted under the terms and conditions set out by the Yukon Government in the Class IV Quartz Mining Land Use Permit – LQ00240, issued on June 17, 2008 and valid until June 16, 2018. The mineral resources for the Bermingham prospect reported herein are located on the Atlantic, Arctic, Etta, and Mastiff quartz mining leases.

Central Yukon is characterized by a sub-arctic continental climate with cold winters and warm summers. Average temperatures in the winter are between –15 and –20 degrees Celsius (°C) while summer temperatures average around 15°C. Exploration is limited to the summer months although mining work can be carried out year-round. The landscape around the Bermingham Project area is characterized by rolling hills with a relief of up to 1,425 metres (m).

History

The first claims in the Bermingham area were staked in 1921, within a decade of commercial production starting in the Keno Hill district. Shallow underground workings were initiated in 1923 with the discovery of vein float and limited production of high grade silver and lead from the Bermingham Vein ensued. The Treadwell Yukon Company optioned the ground in 1928, and completed additional underground workings and identified a fault offset vein portion, but dropped the lease in 1930 due to low silver prices and a lack of ore grade material. United Keno Hill Mines (UKHM) purchased the property as part of the district consolidation, and between 1948 and 1951 drove an adit and drift about 30 foot (ft) below the Treadwell workings where considerable milling ore appeared available. In 1952, many of the old Treadwell workings were surveyed and sampled, but the adit level was subsequently abandoned in 1954 after very little ore grade material was realized. During this time, UKHM milled 5165 ton of ore at 47.3 oz/ton (opt) Ag, 8% Pb, and 1.3% Zn, of which all but 60 ton was recovered from the old dumps.

Between 1965 and 1982, 874 overburden drill-holes totalling 65,390 ft (19,931 m), and 27 core holes totalling 7898 ft (2407 m) were drilled in the Bermingham area, a small portion of which occurred in the present resource area. Poor ground conditions prevented many of these holes from adequately penetrating the vein zone, however they outlined an open pit resource and stripping began in 1977. The mine produced 91,104 ton at 16.7 opt Ag.

The southwest extension of the Bermingham Vein, as offset by the Mastiff Fault, was tested by several historic shafts sunk by the Treadwell Yukon Company Ltd. The vein was reported to be 8 ft (2.44 m) wide and to consist mainly of siderite with small bunches of galena, although no mineable

ore was encountered. A small open pit was operated on this segment of the vein by UKHM in the mid-1980s. A further 150 m along strike to the southwest, an intended second pit with an estimate resource of 274,000 oz silver was stripped to bedrock in 1983. The historical mineral resource estimate does not use mineral resource categories stipulated by NI43-101. SRK is not aware of the parameters and assumptions used in preparing this estimate. The historical estimate should not be relied upon; it is only stated here for historical completeness. Although drilling indicated shallow mineralization exists, the exposed veins appeared weak and unmineralised, and the pit was never initiated. In total, the Birmingham property produced 186,266 ton at 20.3 opt Ag, 4.2% Pb, and 0.6% zinc, or, 3,777,932 oz of silver (Cathro, 2006).

UKHM operations closed permanently in 1989. In June 2005, Alexco was selected as the preferred purchaser of the assets of UKHM by PricewaterhouseCoopers Inc., the court-appointed interim receiver and receiver-manager of Keno Hill. In February 2006, Alexco's purchase of UKHM's assets through a wholly owned subsidiary, Elsa Reclamation & Development Company Ltd. (ERDC), was approved. Under the Keno Hill Subsidiary Agreement, ERDC is indemnified against all historical liability, has property access for exploration and future development, and is not required to post security against pre-existing liabilities. ERDC received a water license from the Yukon territorial government in November 2007, giving Alexco free and clear title to surface and subsurface claims, leases, free-hold land, buildings, and equipment at Keno Hill. Alexco embarked on an aggressive surface exploration program in 2006 with continued yearly exploration programs through 2012.

Regional and Local Geological Setting

The Keno Hill mining camp is located in the northwestern part of the Selwyn Basin in an area where the northwest-trending Robert Service Thrust Sheet and the Tombstone Thrust Sheet overlap. The area is underlain by Upper Proterozoic to Mississippian rocks that were deposited in a shelf environment during the formation of the northern Cordilleran continental margin and underwent regional compressive tectonic stresses during the Jurassic and the Cretaceous, producing thrusts, folds, and penetrative fabrics of various scales.

The Robert Service Thrust Sheet in the south is composed of Late Proterozoic to Devonian clastic sandstone, minor limestone, siltstone, argillite, chert, and conglomerate. The Tombstone Thrust Sheet to the north consists of Devonian phyllite, felsic meta-tuffs, and metaclastic rocks, overlain by Carboniferous quartzite, that are the main host for the silver mineralization in the Keno Hill camp. Four suites of igneous rock intrude the sedimentary sequence:

- Late Triassic gabbro to diorite sills;
- Early Cretaceous Tombstone granite to granodiorite;
- Upper Cretaceous peraluminous porphyritic granite; and
- Late Cretaceous diabase dikes and sills.

The local (Birmingham) geology is characterized by the upper part of the Mississippian Keno Hill Quartzite, where the thick Basal Quartzite Member is overlain by the Sourdough Hill Member. The sequence was metamorphosed to greenschist facies assemblages during the Cretaceous. The Basal Quartzite is up to 700 m thick and comprises quartzite interbedded with minor graphitic phyllite, and is intruded by Triassic greenstone sills. The Basal Quartzite is the dominant host to the silver mineralization in the Keno Hill district. The overlying Sourdough Hill Member comprises graphitic and sericitic phyllite, chloritic quartz augen phyllite, and thin limestone. To the south, the Robert Service Thrust Fault separates the Keno Hill Quartzite from the overthrust Upper Proterozoic Hyland Group comprising predominantly meta-sedimentary chlorite and quartz rich schist. The Keno Hill Quartzite is intruded by quartz-feldspar aplite sills or dykes that are correlated with the early Cretaceous intrusive suite found elsewhere in the district.

Three phases of folding are identified in the district. The two earliest phases consist of isoclinal folding with sub-horizontal, easterly or westerly trending fold axes. The latter phase consists of a sub-vertical axial plane, and moderate southeasterly trending and plunging fold axis. In the Keno Hill district the first phases of folding formed three structurally dismembered isoclinal folds of which the Basal Quartzite Member outlines two synforms at Monument and Caribou Hills, while the Birmingham Prospect is located on the third dismembered syncline on Galena Hill.

Within the district up to four periods of faulting are recognized. The oldest fault set consists of south dipping foliation-parallel structures that developed contemporaneously with the first phase folding. The Robert Service Thrust Fault truncates the top of the Keno Hill Quartzite and sets the Precambrian schist of the Yusezyu Formation of the Hyland Group above the Mississippian Sourdough Hill Member of the Keno Hill Quartzite. The mineralization in the Keno Hill district is hosted by a series of northeast trending pre- and syn- mineral "vein faults" that display apparent left lateral normal displacement. These are commonly offset by high angle cross faults, low angle faults, and bedding faults. Most commonly these comprise northwest striking cross faults that show apparent right-lateral displacement.

Deposit Types and Mineralization

The Keno Hill District is a polymetallic silver-lead-zinc vein district with characteristics analogous to: Kokanee Range (Slocan), British Columbia; Coeur d'Alene, Idaho; Freiberg and the Harz Mountains, Germany; and Příbram, Czech Republic. Common characteristics include the proximity to crustal- scale faults affecting thick sequences of clastic metasedimentary rocks intruded by felsic rocks that may have acted as a heat source driving the hydrothermal system. At Keno Hill, the largest accumulation of silver, lead, and zinc minerals occurred in structurally prepared competent rocks, such as the Basal Quartzite Member.

In general, gangue minerals include (manganiferous) siderite, minor calcite, and quartz. Silver most commonly occurs in argentiferous galena and argentiferous tetrahedrite. In supergene assemblages, silver can be native or in polybasite, stephanite, and pyrargyrite. Lead occurs in galena and zinc in iron-rich sphalerite. Other sulphides include minor pyrite, arsenopyrite, and chalcopyrite.

At the district scale, the mineral system exhibits sharp lateral mineralogical changes equivocally associated with temperature gradients around magmatic rocks. The hydrothermal veins also appear to exhibit sharp vertical mineralogical zoning, historically interpreted to be lead rich at the top, to more zinc rich at depth. The Birmingham prospect is composed of three intersecting veins with differing mineralogical characteristics, either a quartz dominant vein with minor sulphides (in descending order of abundance - arsenopyrite, pyrite, galena, and sphalerite), or carbonate dominant veins (dolomite, ankerite, and siderite) with quartz, calcite gangue, and sulphides; sphalerite, galena, pyrite, and arsenopyrite, with accessory, chalcopyrite, argentian tetrahedrite, jamesonite, ruby silver, and native silver.

Exploration

Most past exploration work in the Keno Hill district was conducted as support to the mining activities until the mines closed in 1989. This historical work involved surface and underground drilling designed to explore areas surrounding the main underground working areas.

The current exploration conducted by Alexco is the first comprehensive exploration effort in the district since 1997. The first holes were drilled in the Birmingham area in 2009, targeting the Birmingham Vein at depth in the hangingwall of the Mastiff Fault below an area with a historic shallow open pit resource. Results of this drilling were sufficiently encouraging to continue exploration in 2010 and 2011.

Alexco drilled two core holes in 2009, for a total of 523 m followed by eight core holes totalling 2588 m drilled in 2010 and an expanded 2011 drill program of 25 holes for a total of 6889 m. Of the 36 holes drilled in the area, 23 are used in the resource estimate, for a total of 6442 m.

Sampling Method, Approach and Analyses

Alexco implemented industry best practice procedures for all aspects of the drilling, collar and down hole surveying, core description and sampling, sample preparation and assaying, and database management. Assay samples were collected from half core sawed lengthwise with sampling intervals honouring geological boundaries. Sample intervals vary from 0.1 to 1 m in visibly mineralized core with up to 2 m lengths used away from obviously mineralized material. Alexco used industry best practices assaying protocols including the use of commercial certified control samples, sample blanks, and duplicates at an adequate frequency to monitor the accuracy of laboratories: ALS in North Vancouver, BC, Eco Tech Labs of Kamloops, BC and AGAT Laboratory of Mississauga, ON, all of which are accredited under ISO-170025 by the Standards Council of Canada. Assay samples were dispatched for preparation and assaying using adequate security protocols. All samples were prepared using standard preparation protocols. Each sample was

assayed for gold by fire assay and atomic absorption spectrometry on 30 g sub-samples, and for a suite of between 27 and 48 elements (including silver, lead, and zinc) by four acid digestions and either inductively coupled plasma atomic emission spectroscopy or mass spectroscopy on 0.5 g sub-samples. Elements exceeding concentration limits were re-assayed using methods suitable for high concentrations.

Data Verifications

SRK reviewed the analytical quality control data produced by Alexco for the 2009 to 2011 core drilling at Bermingham and concluded that Alexco personnel used diligence in monitoring quality control data, investigating potential failures, and taking appropriate corrective measures when required for the collected data. The quality control data collected by Alexco between 2009 and 2011 are comprehensive and the final, in some cases replicated, assaying results delivered by Eco Tech, ALS, and AGAT Laboratories are generally reliable for the purpose of resource estimation.

Mineral Processing and Metallurgical Testing

No metallurgical testing was performed on the Bermingham deposit; however, SRK has assumed that the mineralization found within the deposit will have similar metallurgical characteristics to the Bellekeno deposit now being mined by Alexco.

Alexco's Keno Hill district mill located near Keno City currently processes output from the Bellekeno mine, and may in the future process output from other District mine sources as well. It is not currently determinable if resources mined from Bermingham would or even could be processed through the District Mill. Until metallurgical testing has been carried out, it is not determinable if the existing District Mill would be suitable for processing resources from Bermingham. Furthermore, until mining plans have been developed for Bermingham it is also not determinable if the District Mill will have sufficient capacity to process Bermingham mine output.

Mineral Resource Estimates

The Bermingham resources were estimated using Gemcom's GEMS™ (GEMS) 3D block modeling software in multiple passes in 5 by 3 by 5 m blocks by inverse distance squared. Grade estimates were based on capped 1 m composited assay data. Capping levels for silver were set to 1,500 g/t for the Bermingham Main Vein and 1,000 g/t for the Bermingham Footwall Vein. Lead and zinc were capped at 10% for both veins. Gold grades were capped at 0.20 g/t for both veins. Blocks were classified as Indicated mineral resources if at least two drill holes and four composites were found within a 40 by 40 m search ellipse for the Bermingham Vein and a 40 by 60 m search ellipse for the Bermingham Footwall Vein. All other interpolated blocks were classified as Inferred mineral resource.

Table i below summarises the mineral resources estimated by SRK for the Bermingham deposit as of June 27, 2012.

Table i: Mineral Resource Statement* for the Bermingham Deposit, June 27 2012

Class	Tonne	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
Indicated**	257,000	460	0.06	2.00	2.10
Inferred**	102,000	372	0.09	1.12	1.83

* 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.

** Reported at an NSR cut-off of \$185 (1 USD = 1 CAD)/t using consensus long-term metal prices (US\$) and recoveries developed for the nearby Bellekeno deposit (Ag US\$23.00/oz, recovery 96%; Pb US\$ 0.95/lb, recovery 97%; Zn US\$ 0.95/lb, recovery 88%; Au US\$ 1,350/oz, recovery 72%). For the Bermingham Vein, Ag grades capped at 1,500 g/t and at 1,000 g/t for the Bermingham Footwall Vein; Pb and Zn capped at 10%; Au grades capped at 0.2 g/t for both veins.

Conclusion and Recommendations

Between 2009 and 2011, Alexco completed three drilling programs on its Bermingham property in the Keno Hill district, located in Central Yukon Territory. The drilling on the Bermingham deposit

was successful in confirming the extension of significant silver mineralization beyond historically mined zones in this area

SRK recommends that Alexco continues exploration on the Bermingham deposit along strike to the southwest and at depth on the Etta Zone to expand the current resource, acquire extended geotechnical data, and obtain additional understanding of the mineralized structures to assist in possible mine planning. Metallurgical studies should be initiated to better understand the nature of the mineralization.

SRK also recommends that Alexco continue exploration in the Arctic Zone, in the footwall of the Mastiff fault, where preliminary drilling has identified the offset portion of the Bermingham Veins.

Baseline environmental studies should also be initiated in anticipation of preliminary economic assessment and permitting requirements. The total cost for the recommended exploration and development program is estimated at \$1.58M.

Elsa Tailings Property

The Corporation's 100% owned Elsa Tailings property comprises 8 surveyed quartz mining leases in the Keno Hill District, all of which are UKHM Mineral Rights. Located approximately 400 meters northwest of the Elsa town site and the former UKHM mill, the property encompasses the historical impounded tailings which extend over an area of approximately 100 hectares and are contained behind a series of low level dam structures. Historical milling operations at Elsa, which started in the 1930's and operated almost continuously until 1988, produced a lead concentrate, and periodically a zinc concentrate. The tailings consist of unconsolidated fine sand to silty grained material, with sieve analyses indicating that the material is all finer than 250 microns with as much as 40 percent being less than 74 microns (200 mesh). The dominant minerals making up the tailings fragments are quartz and siderite (80 percent), with the balance composed of muscovite, other silicate minerals and pyrite. As reported in the news release dated May 6, 2010 entitled "Alexco Announces Initial Elsa Tailings Resource Estimate, Keno Hill", an indicated resource for the Elsa Tailings has so far been defined estimated at 2,490,000 tonnes grading 119 grams per tonne silver, 0.12 grams per tonne gold, 0.99% lead and 0.70% zinc. This resource estimate is supported by a technical report dated June 16, 2010 filed on the SEDAR website at www.sedar.com and entitled "Mineral Resource Estimation, Elsa Tailings Project, Yukon, Canada" (the "**Elsa Tailings Technical Report**"). The estimate was prepared by SRK under the responsibility of G. David Keller, P.Geo., an Independent Qualified Person as defined by NI 43-101, in conformity with generally accepted CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. The resource estimate may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. The resource estimate may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

The detailed disclosure contained in the Elsa Tailings Technical Report is hereby incorporated by reference, and the summary section from that report is reproduced as follows.

Executive Summary

Introduction

The Elsa Tailings Project is an advanced project exploring the mineral potential of historical tailings from the former United Keno Hill Mines ("UKHM") mill located in the town of Elsa, Yukon. The Elsa tailings are impounded on the south-eastern slopes of the McQuesten River valley approximately 400 metres from the UKHM mill.

Milling operations at Elsa started in the 1930s and continued almost without interruption until 1988. Historical production records indicate that approximately 4,050,000 tons of tailings were deposited at the Elsa site. Historical resource estimates on the Elsa Tailings Project were made by UKHM in 1970 and 1988.

On June 29, 2009 SRK Consulting (Canada) Inc. ("SRK") was commissioned by Alexco Resource Corporation ("Alexco") to prepare a mineral resource estimate for the Elsa Tailings Project. The resource herein represents a first resource estimate for the deposit prepared for Alexco.

This technical report documents the resource model constructed by SRK. It was prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines."

Property Description and Agreements

The land under the control of Alexco comprises 717 surveyed quartz mining leases, 864 unsurveyed quartz mining claims, and two crown grants. The total area approximates 24,300 hectares. Certain UKHM claims may be subject to unknown or unregistered royalties and/or agreements.

Quartz mining leases provide mineral title to the area occupied by the tailings and are part of a large land package controlled by Alexco through its subsidiaries, Elsa Reclamation and Development Co. ("ERDC") and Alexco Keno Hill Mining Corp. The tailings are located on Quartz Leases: Orchid 1, 3, 15, 26, 31 & 37; Betty and Mud.

Alexco's rights to much of the Keno Hill property are held through the ERDC, a wholly owned subsidiary. In June 2005, PriceWaterhouseCoopers LLP ("PWC"), a court appointed interim receiver and receiver-manager of United Keno Hill Mines Limited and UKH Minerals Limited (collectively "UKHM"), selected Alexco as the preferred purchaser of the assets of UKHM. In February 2006, following negotiation of a Subsidiary Agreement between the Government of Canada, the Government of Yukon, and Alexco, the Supreme Court of Yukon approved the purchase of the assets of UKHM by Alexco through its wholly owned subsidiary, ERDC. The UKHM assets comprised two Crown Grants, 674 mining leases, 289 mineral claims, an ore concentration plant, various buildings and equipment, as well as partial ownership interest in three mining leases, 36 mineral claims, in addition to a leasehold interest in one mineral claim. PWC and Alexco entered into an agreement (the "Purchase Agreement") dated August 4, 2005, as amended on November 2, 2005 and January 31, 2006. Alexco assigned the Purchase Agreement to its wholly owned subsidiary ERDC on February 6, 2006. "Interim Closing" of the UKHM transaction was completed on April 18, 2006. Alexco assumed responsibility for care and maintenance operations at the UKHM property. On November 30, 2006, Alexco terminated a contract with a local contractor and started conducting operations utilizing its own employees and equipment. Title to all UKHM assets was transferred to Alexco ("Final Closing") in November 2007, following the approval of a "Type B" Water License by the Yukon Water Board.

All quartz mining leases have been legally surveyed whereas the quartz mining claims have not. In addition, in 2006 and 2007, 650399 BC Ltd., a wholly owned Alexco subsidiary, staked 673 mineral claims (full size and fractional) adjacent to and contiguous with the UKHM property and purchased 36 quartz claims and 37 quartz mining leases from a third party. In 2008 and 2009, Alexco took four existing claims to lease, acquired an additional 18 claims from a third party, and amalgamated 55 additional existing bordering claims into the holdings. Mineral exploration at Keno Hill was initially permitted under the terms and conditions set out by the Yukon Government in the Class III Quartz Mining Land Use Permit – LQ00186, issued on July 5, 2006 and valid until July 4, 2011. Alexco subsequently obtained a Class IV Quartz Mining Land Use Permit – LQ00240 on June 17, 2008. The two permits were amalgamated on December 8, 2008 under #LQ00240 which is valid until December 16, 2018.

Under the terms of a legal agreement with the Government of Canada and the Government of Yukon, Alexco is indemnified from any and all environmental liability that may be presented by the historic tailings. However, if Alexco were to nominate any part of the tailings as a production unit under the above agreement, responsibility for addressing water-related environmental liabilities would fall to Alexco.

Location Access and Physiography

The Elsa Tailings Project is included within the historic Keno Hill mining camp, located in central Yukon. The closest town is Mayo, located on the Stewart River, about 45 kilometres to the south. Mayo is accessible from Whitehorse via a 407 kilometre all weather road; the town is also serviced by Mayo airport, which is located just to the north. A gravel all-weather road leads from Mayo to the project areas. Historically, the mining camp was linked by river route to the outside world; since 1950, the all-weather highway, which was also used for transporting the ore, has been the main link.

The Keno Hill area is characterized by rolling hills and mountains with relief up to 1200 metres. Slopes are generally gentle with steeper slopes on the north sides of Keno Hill and Sourdough Hill. The Elsa Tailings are located on the south slope of the McQuesten valley centred along the Flat and Porcupine Creek drainages.

History

Milling operations at Elsa started in the 1930s, operating almost continuously until 1988. A lead concentrate with a periodic zinc concentrate was produced from milling operations. A cyanide leach circuit was added in 1958 and operated periodically to 1981 depending on prevailing economics.

It is estimated that in total approximately 4,050,000 tons of tailings were deposited at the Elsa site. Most of this material was allowed to run out onto the flank of the adjacent valley without engineered impoundment. The original ground surface was covered with small trees, brush and a vegetative mat of moss, all of which was eventually covered by the tailings.

The northern portion of the tailings was drilled by UKHM in 1970 and in a second drilling campaign from 1987 to 1988 covering the rest of the tailings area at that time. Metallurgical testing of the tailings was undertaken in 1988 and 1995 by UKHM and a joint venture between UKHM and government agencies.

Regional and Local Geology

The tailings lie on the south slope of the McQuesten valley. The rounded out shape of the valley can be attributed to at least one episode of glaciation followed by the deposition of glaciofluvial sands and gravels related to kame terraces. The glaciofluvial sands and gravels were deposited at higher valley elevations with till deposited at lower valley sides and valley bottoms. During the retreat of glacial ice the McQuesten valley bottom was covered by a shallow lake resulting in the deposition of lacustrine silt. The lacustrine silt became increasingly organic and transitioned to peat as the glacial lake became in filled with sediments.

The Elsa Tailings cover an irregular area of approximately 130 hectares and range from 0.1 to over 4 metres in thickness. While the valley flank on which the tailings have been deposited is relatively smooth topographically, points of higher elevation occur as uncovered "islands" within the body of the tailings. The earliest site of tailings deposition appears to have been directly into Porcupine Creek with the material being mostly flushed downstream into Flat Creek. Beginning in 1946, tailings were directed away from the creeks producing small terraced accumulations immediately below the mill. Somewhat later a pipeline was constructed that discharged tailings further into the valley in the area between Porcupine and Flat Creek. Ten major mines supplied feed to the Elsa Mill during its operation in the 1930s through 1950s. From the 1960s to 1980s ore was processed by the mill underwent a transition from high grade mineralization to lower grade mineralization from small open pits and underground operations.

Deposit Type and Mineralization

The tailings consist of generally unconsolidated silty fine grained sand with minor medium sand grained material, of a variable grey to light brown colour characterized by thin beds to laminae. Detailed mineralogical examination shows that the sand grains are angular and locally aggregated and cemented by limonite. The dominant minerals are quartz and siderite (80 percent) with the balance composed of muscovite and other silicate minerals along with pyrite. Occasional grains contain lead and zinc sulphides and trace amounts of lead and zinc oxide minerals have been identified.

Drilling

UKHM initially carried out a percussion drilling program targeting the thicker northern portion of the tailings in 1970. A total of 114 vertical drill holes were drilled to an average depth of three metres. Drill hole spacing was reported at approximately 60 metres. From 1987 to 1988 a second drilling program was completed by UKHM using a rotary drill for a total of 379 vertical holes (1,770 metres). Alexco and SRK examined historical data and methodologies associated with these programs and conclude that UKHM drilling data were too unreliable to be used for resource evaluation and classification according to CIM best practice guidelines.

Alexco drilled 283 vertical sonic drill holes over the deposit in 2009 for a total of 910 drilled metres. The Alexco drilling campaign consisted of drill holes spaced at 50 metres with lines orientated at an azimuth of 45 degrees. Average thickness of the tailings is 2.3 metres ranging from a maximum thickness of 7.5 metres to a minimum of 0.2 metres.

Tailings core material is inherently difficult to handle as it is unconsolidated and, in some cases, is saturated with water. Because of the nature of the core material some challenges in core recovery, logging and sample collection exist. SRK is of the opinion that the drilling and sampling performed by Alexco was conducted with care and that the location and handling of the core yielded reasonable samples.

Sampling Method, Approach and Analyses

Drill core was sampled generally at each run length of 1.5 metres or to the lower tailings contact. The entire core was sampled to provide a known volume for density measurements. Sampled core intervals were placed in polyethylene bags secured with "zip ties."

All samples were analyzed by the ISO 9001 accredited ALS Chemex laboratory in North Vancouver, British Columbia. Upon receipt, samples were placed under ovens for high temperature drying and weighed when dry. Following splitting and pulverization samples were analyzed using inductively coupled plasma-atomic emission spectrometry using a four acid digestion. Thirty three elements including silver, lead and zinc were analyzed using this method. Gold assays were analyzed using fire assay with atomic absorption spectrometry.

Quality control samples were placed systematically into the sample stream. Every 20 samples contained at least one blank sample, one standard of known value, and one request for a duplicate assay of the previous sample.

The dry density for each of the 2009 sonic drill samples was determined for each of the assayed cores. Dry density was calculated using the dry weight of the sample from the assay laboratory divided by the drilled interval volume which was based on sampled interval length and the inside diameter of the core tube.

Data Verification

SRK compared 10 percent of the drill hole data assays to original assay certificates. No errors were found in the drill hole assay data base. During the site visit, SRK examined three pits and briefly logged the pit walls of three trenches. SRK also reviewed drill core photos for the sampling program.

Mineral Resource Estimation

Resources were estimated based on 283 drill holes from the 2009 Alexco sonic drilling program. The data set comprises 546 sampled intervals with silver, lead, zinc and gold assays.

A wireframe model of the tailings body was generated by Alexco using high resolution topographic surveys and tailings/sub-surface contacts from the drilling program.

Based on tailings assays the tailings area was subdivided into five domains: A low grade silver-lead, low grade gold, high grade silver-lead, high grade gold, and a zinc-specific gravity domain. A sixth separate domain was created for an isolated area away from the main tailings impoundment.

All tailings drill holes were composited to 1.5 metre intervals from top to bottom with a minimum composite length of 0.20 metres to allow for thin portions of the tailings impoundment. A review of composite statistics and cumulative frequency plots for the metal assays domains indicates that it is not necessary to cap high grade values within the drill hole composites.

Specific gravity composites average 1.7 with a significant dispersion of values ranging from 0.4 to 4.6. Specific gravity composites were capped at a high value of 4.0 and low value of 0.75 for resource estimation.

Variography was undertaken to characterize the spatial continuity of the metal grade data within each resource domain and to determine appropriate grade interpolation ranges. Variograms were developed for four domains including gold, silver, lead, zinc and specific gravity composites. Two structure variograms were developed for each variable in the X and Y directions only. The

relatively narrow depth of the tailings precluded development of variograms in the Z direction. Variograms for the high domains with insufficient composites to determine variogram models were assumed to be the same as for low grade domains. Datamine Studio 3 was used to develop a sub-blocked model for the deposit.

Metal grades and specific gravity were estimated in the block model using ordinary kriging for each of the separate domains and estimate variables. Only one estimation pass was made.

Estimation was verified by visual comparison of composited drill holes, cross-validation and estimation of resources using inverse distance squared and nearest neighbour routines at no cut-off.

While drilling and sampling procedures, tightly spaced drilling, and assay results provide a high level of confidence, the inherent challenges related to drilling and sampling unconsolidated material are reflected in significant outliers in specific gravity determinations. These outliers could not be fully explained by expected specific gravity ranges or measurable sampling errors. For this reason SRK is of the opinion that it is appropriate to classify the Elsa Tailings resource blocks as Indicated. This is because the estimates are based on detailed and reliable exploration and testing information gathered through appropriate techniques that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Mineral Resources Statement

Mineral Resources for the Elsa Tailings Project have been estimated at 2.49 million tonnes at 119 grams of silver per tonne (“gpt silver”) , 0.12 gpt gold, 0.99 percent lead, and 0.70 percent zinc at a 50 gpt silver cut-off grade. The Mineral Resource Statement for the Elsa Tailings deposit is tabulated in **Table i**.

Table i. Mineral Resource Statement* for the Elsa Tailings Project, SRK Consulting, May 6, 2010.

Category	Quantity	Grade				Contained Metal	
	[Tonnes]	Ag [gpt]	Au [gpt]	Pb [%]	Zn [%]	Ag [oz]	Au [oz]
Indicated	2,490,000	119.0	0.12	0.99	0.70	9,526,000	9,600

* 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. Includes all blocks in the block model and effectively reported at a 50 gpt silver cut-off grade assuming metal prices of US\$17 per troy ounce silver and US\$1,000 per troy ounce gold, silver recovery of 85% and gold recovery of 35%. Lead and zinc values are not considered.

Mineral Resources for the Elsa Tailings Project have been classified according to the “CIM Standards on Mineral Resources and Reserves: Definition and Guidelines” (December, 2005) by Mr. G. David Keller, P. Geo (#1235) an “Independent Qualified Person” as defined by National Instrument 43-101.

Interpretation and Conclusions

Six domains were generated by SRK to separate high grade zones for silver, lead and gold. An additional domain was generated for a geographically distinct tailings area that is physically separate from the main tailings. Metal grades were estimated separately for each domain using ordinary kriging. Capping was not applied to metal assays or composites. Dry specific gravity composites were capped using a lowest and highest capping value.

After validation and classification, SRK used silver and gold grades to determine “reasonable prospects for economic extraction.” The basis of this determination was metal grades, heap leach recoveries and estimated mining and processing costs from comparable projects.

The mineral resource statement prepared by SRK is reported at silver cut-off grades of 50 gpt, which are based on the likely extraction scenario. All material in the resource estimate is above this grade.

Recommendations

It is SRK's opinion that resources for the Elsa Tailings Project have been defined to sufficient accuracy to support the preparation of a Preliminary Economic Assessment ("PEA"). Alexco has embarked on extensive metallurgical test work to document the metallurgical properties of the tailings material and evaluate appropriate processing options. This aspect is critical for the PEA study. Untested areas containing additional tailings are known to occur peripherally to the current resource area. These zones offer potential to increase the current resource and are recommended for exploration sampling. Estimated costs for the recommended programs are summarized in **Table ii**.

Table ii. Estimated Costs of Recommended Programs.

Program	Cost [CD\$]
Preliminary Economic Assessment	\$200,000
Drilling Program	\$50,000
Total	\$250,000

Environmental Services

General

The Corporation's environmental services division, AEG, is in the business of managing risk and unlocking value at mature, closed or abandoned sites through integration and implementation of the Corporation's core competencies, which include management of environmental services, implementation of innovative treatment technologies, execution of site reclamation and closure operations, and, if appropriate, rejuvenation of exploration and development activity. The Corporation's principal markets for these services are in Canada, the United States and the Americas, with the Canadian market serviced primarily through Access and ERDC, the U.S. market through Alexco US, and the balance of the Americas through either Access or Alexco US. The Corporation provides its services to a range of industrial sectors, but with a particular focus on current and former mine sites.

The Corporation offers its clients a unique combination of environmental remediation expertise in the area of site reclamation and closure, an ability to manage complex permitting and regulatory programs on a turnkey basis, and strong operations management. In addition, the Corporation seeks to strategically leverage off its environmental services group, accessing opportunities to enhance asset value through effective liability risk management and efficient site operations. This is accomplished through unlocking potential exploration and development opportunities at contaminated or abandoned sites through cost effective and responsible environmental remediation and liability transfer.

The Corporation executes its environmental services business plan by using and applying the intellectual property assets, including the Patents, and the specialized skill sets and knowledge it maintains in-house. While there are a significant number of firms providing environmental services in North America, these assets, skill sets and knowledge provide Alexco with a strong competitive advantage. Consolidated revenue from environmental services for the year ended December 31, 2012 totaled \$7,983,000, compared to \$3,876,000 in the six month transitional fiscal year ended December 31, 2011, all of which was derived from sales to external unrelated parties. During the year ended December 31, 2012, the Corporation recorded revenues from two customers representing 10% or more of total environmental services revenue, in the amounts of \$1,686,000 and \$1,558,000. During the six month transitional fiscal year ended December 31, 2011, AEG had one customer representing 10% or more of total revenue, in the amount of \$1,775,000. AEG's largest single customer is Government, with a substantial component of Government revenues earned from the Government of Canada's Aboriginal Affairs and Northern Development Canada.

Keno Hill Project

As described above (see "General Development of the Business – Three Year History and Significant Acquisitions"), under the Subsidiary Agreement, Alexco's subsidiary ERDC is retained through

Government as a paid contractor responsible on a continuing basis for the environmental care and maintenance and ultimate closure reclamation of the former UKHM Mineral Rights.

The Subsidiary Agreement provides that ERDC is responsible for the development of the ultimate closure reclamation plan for fees of 65% of agreed scheduled rates, and this plan development is currently ongoing. Upon acceptance and regulatory approval, the closure reclamation plan will be implemented by ERDC at agreed commercial contractor rates. During the period required to develop the plan, ERDC is responsible for carrying out the environmental care and maintenance at various sites within the UKHM Mineral Rights, for a fixed annual fee adjusted each year for certain operating and inflationary factors and determined on a site-by-site basis. The portion of the annual fee amount so determined which is billable by ERDC in respect of each site will reduce by 15% each year until all site-specific care and maintenance activities have been replaced by closure reclamation activities; provided however that should a closure reclamation plan be prepared but not accepted and approved, the portion of annual fees billable by ERDC will revert to 85% until the Subsidiary Agreement is either amended or terminated. ERDC receives agreed commercial contractor rates when retained by Government to provide environmental services in the Keno Hill District outside the scope of the Subsidiary Agreement.

The Corporation records a contract loss provision to reflect the aggregate future losses estimated to be realized with respect to the care and maintenance phase under the Subsidiary Agreement, and during the year ended December 31, 2012, it increased this provision by a net \$333,000 due primarily to the extension by approximately 9 months of the estimated date by which the care and maintenance phase will end. During the year ended December 31, 2012, the loss provision was reduced by \$518,000 due to current period loss realization. Discussions with Government are currently ongoing to mitigate the impact to Alexco of care and maintenance phase extensions resulting from delays in the time required to obtain acceptance and regulatory approval of the closure reclamation plan, as well as the impact of plan development activities. If such mitigative amendments to the Subsidiary Agreement can be implemented, it is possible that all or a substantial component of the outstanding contract loss provision would be reversed. However, there can be no certainty as to if or when such amendments will be agreed, and accordingly no impact from such possible amendments has been taken into account in determining the current provision.

Social and Environmental Policies

The Corporation maintains a written Code of Business Conduct and Ethics (the “**Code**”), compliance with which is mandatory for all directors, officers and employees, and the full text of which may be viewed at the Corporation’s web site. Included within the Code is a requirement that all directors, officers and employees comply with all laws and governmental regulations applicable to Alexco’s activities, including but not limited to maintaining a safe and healthy work environment, promoting a workplace that is free from discrimination or harassment and conducting all activities in full compliance with all applicable environmental laws. All directors, officers and employees are required to certify in writing their acknowledgement of and compliance with the Code, at the time of hiring and at least annually thereafter. A senior executive of the Corporation is formally appointed the role of Company Ethics Officer, responsible for ensuring adherence to the Code, investigating any reported violations, and ensuring appropriate responses, including corrective action and preventative measures, are taken when required.

Risk Factors

The following are major risk factors management has identified which relate to the Corporation’s business activities. Such risk factors could materially affect the Corporation’s future financial results, and could cause events to differ materially from those described in forward-looking statements relating to the Corporation. Though the following are major risk factors identified by management, they do not comprise a definitive list of all risk factors related to the Corporation’s business and operations. Other specific risk factors are discussed elsewhere in this AIF, as well as in the Corporation’s consolidated financial statements (under the headings “Description of Business and Nature of Operations”, “Significant Accounting Policies” and “Financial Instruments” and elsewhere within that document) and in management’s discussion and analysis (under the headings “Critical Accounting Estimates” and “Risk Factors” and elsewhere within that document) for its most recently completed financial year, being the year ended December 31, 2012, and its other disclosure documents, all as filed on the SEDAR website at www.sedar.com.

Exploration, Evaluation and Development

Mineral exploration, evaluation and development involves a high degree of risk and few properties which are explored are ultimately developed into producing mines. With respect to the Corporation's properties, should any ore reserves exist, substantial expenditures will be required to confirm ore reserves which are sufficient to commercially mine, and to obtain the required environmental approvals and permitting required to commence commercial operations. Should any mineral resource be defined on such properties there can be no assurance that the mineral resource on such properties can be commercially mined or that the metallurgical processing will produce economically viable and saleable products. The decision as to whether a property contains a commercial mineral deposit and should be brought into production will depend upon the results of exploration programs and/or technical studies, and the recommendations of duly qualified engineers and/or geologists, all of which involves significant expense. This decision will involve consideration and evaluation of several significant factors including, but not limited to: (1) costs of bringing a property into production, including exploration and development work, preparation of appropriate technical studies and construction of production facilities; (2) availability and costs of financing; (3) ongoing costs of production; (4) market prices for the minerals to be produced; (5) environmental compliance regulations and restraints (including potential environmental liabilities associated with historical exploration activities); and (6) political climate and/or governmental regulation and control.

The ability of the Corporation to sell, and profit from the sale of any eventual production from any of the Corporation's properties will be subject to the prevailing conditions in the marketplace at the time of sale. Many of these factors are beyond the control of the Corporation and therefore represent a market risk which could impact the long term viability of the Corporation and its operations.

Figures for the Corporation's Resources are Estimates Based on Interpretation and Assumptions and May Yield Less Mineral Production Under Actual Conditions than is Currently Estimated

In making determinations about whether to advance any of its projects to development, the Corporation must rely upon estimated calculations as to the mineral resources and grades of mineralization on its properties. Until ore is actually mined and processed, mineral resources and grades of mineralization must be considered as estimates only. Mineral resource estimates are imprecise and depend upon geological interpretation and statistical inferences drawn from drilling and sampling which may prove to be unreliable. Alexco cannot be certain that:

- reserve, resource or other mineralization estimates will be accurate; or
- mineralization can be mined or processed profitably.

Any material changes in mineral resource estimates and grades of mineralization will affect the economic viability of placing a property into production and a property's return on capital. The Corporation's resource estimates have been determined and valued based on assumed future prices, cut-off grades and operating costs that may prove to be inaccurate. Extended declines in market prices for silver, gold, lead, zinc and other commodities may render portions of the Corporation's mineralization uneconomic and result in reduced reported mineral resources.

Keno Hill District

While the Corporation has conducted exploration activities in the Keno Hill District, other than with respect to the Bellekeno property, further review of historical records and additional exploration and geological testing will be required to determine whether any of the mineral deposits it contains are economically recoverable. There is no assurance that such exploration and testing will result in favourable results. The history of the Keno Hill District has been one of fluctuating fortunes, with new technologies and concepts reviving the District numerous times from probable closure until 1989, when it did ultimately close down for a variety of economic and technical reasons. Many or all of these economic and technical issues will need to be addressed prior to the commencement of any future production on the Keno Hill properties.

Under the terms of the Subsidiary Agreement, ERDC is responsible for carrying out environmental care and maintenance activities at various sites in the Keno Hill District during the period required to develop and obtain acceptance and regulatory approval for the Keno Hill District closure reclamation plan, for annual fees based on an annually-determined fixed fee benchmark adjusted each year for certain operating and inflationary factors and determined on a site-by-site basis. The portion of the annually-determined fee benchmark which is billable each year by ERDC in respect of each site will reduce by 15% each year until all site-specific care and maintenance activities have been replaced by closure reclamation activities. The Corporation could incur significant costs over the period it undertakes such care and maintenance activities, particularly if acceptance and approval of the closure reclamation plan and commencement of reclamation activities should be significantly delayed.

Mining Operations

Decisions by the Corporation to proceed with the construction and development of mines, including Bellekeno, are based on development plans which include estimates for metal production and capital and operating costs. Until completely mined and processed, no assurance can be given that such estimates will be achieved. Failure to achieve such production and capital and operating cost estimates or material increases in costs could have an adverse impact on the Corporation's future cash flows, profitability, results of operations and financial condition. The Corporation's actual production and capital and operating costs may vary from estimates for a variety of reasons, including: actual resources mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors relating to the mineable resources, such as the need for sequential development of resource bodies and the processing of new or different resource grades; revisions to mine plans; risks and hazards associated with mining; natural phenomena, such as inclement weather conditions, water availability, floods and earthquakes; and unexpected labour shortages or strikes. Costs of production may also be affected by a variety of factors, including changing waste ratios, metallurgical recoveries, labour costs, commodity costs, general inflationary pressures and currency rates. In addition, the risks arising from these factors are further increased while any such mine is progressing through the ramp-up phase of its operations and has not yet established a consistent production track record.

Employee Recruitment and Retention

Recruitment and retention of skilled and experienced employees is a challenge facing the mining sector as a whole. During the late 1990s and early 2000s, with unprecedented growth in the technology sector and an extended cyclical downturn in the mining sector, the number of new workers entering the mining sector was depressed and significant number of existing workers departed, leading to a so-called "generational gap" within the industry. Since the mid 2000s, this factor was exacerbated by competitive pressures as the mining sector experienced an extended cyclical upturn. Additional exacerbating factors specific to Alexco include competitive pressures in labour force demand from the oil sands sector in northern Alberta and the mining and oil & gas sectors in British Columbia, and the fact that Alexco's Keno Hill District is a fly-in/fly-out operation. Alexco has experienced employee recruitment and retention challenges, particularly with respect to mill operators in 2011 and through the first three quarters of 2012. There can be no assurance that such challenges won't continue or resurface, not only with respect to the mill but in other District operational areas as well including mining and exploration.

Permitting and Environmental Risks and Other Regulatory Requirements

The current or future operations of the Corporation, including development activities, commencement of production on its properties and activities associated with the Corporation's mine reclamation and remediation business, require permits or licenses from various federal, territorial and other governmental authorities, and such operations are and will be governed by laws, regulations and agreements governing prospecting, development, mining, production, taxes, labour standards, occupational health, waste disposal, toxic substances, land use, environmental protection, mine safety and other matters. Companies engaged in the development and operation of mines and related facilities and in mine reclamation and remediation activities generally experience increased costs and delays as a result of the need to comply with the applicable laws, regulations and permits. There can be no assurance that all permits and permit modifications which the Corporation may require for the conduct of its operations will be obtainable on reasonable terms or that such laws and regulations would not have an adverse effect on

any project which the Corporation might undertake, including but not limited to the Bellekeno mine project.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions. Parties engaged in mining operations or in mine reclamation and remediation activities may be required to compensate those suffering loss or damage by reason of such activities and may have civil or criminal fines or penalties imposed upon them for violation of applicable laws or regulations.

Amendments to current laws, regulations and permits governing operations and activities of mining companies and mine reclamation and remediation activities could have a material adverse impact on the Corporation. As well, policy changes and political pressures within and on federal, territorial and First Nation governments having jurisdiction over or dealings with the Corporation could change the implementation and interpretation of such laws, regulations and permits, also having a material adverse impact on the Corporation. Such impacts could result in one or more of increases in capital expenditures or production costs, reductions in levels of production at producing properties or abandonment or delays in the development of new mining properties.

Environmental Services

A material decline in the level of activity or reduction in industry willingness to spend capital on mine reclamation, remediation or environmental services could adversely affect demand for AEG's environmental services. Likewise, a material change in mining product commodity prices, the ability of mining companies to raise capital or changes in domestic or international political, regulatory and economic conditions could adversely affect demand for AEG's services.

Two of AEG's customers accounted for 22% and 20% of environmental services revenue for the year ended December 31, 2012. The loss of, or a significant reduction in the volume of business conducted with, this customer could have a significant detrimental effect on the Corporation's environmental services business.

The patents which the Corporation owns or has access to or other proprietary technology may not prevent AEG's competitors from developing substantially similar technology, which may reduce AEG's competitive advantage. Similarly, the loss of access to any of such patents or other proprietary technology or claims from third parties that such patents or other proprietary technology infringe upon proprietary rights which they may claim or hold would be detrimental to AEG's reclamation and remediation business.

The Corporation may not be able to keep pace with continual and rapid technological developments that characterize the market for AEG's environmental services, and the Corporation's failure to do so may result in a loss of its market share. Similarly, changes in existing regulations relating to mine reclamation and remediation activities could require the Corporation to change the way it conducts its business.

Potential Profitability Of Mineral Properties Depends Upon Factors Beyond the Control of the Corporation

The potential profitability of mineral properties is dependent upon many factors beyond the Corporation's control. For instance, world prices of and markets for gold, silver, lead and zinc are unpredictable, highly volatile, potentially subject to governmental fixing, pegging and/or controls and respond to changes in domestic, international, political, social and economic environments. Another factor is that rates of recovery of mined ore may vary from the rate experienced in tests and a reduction in the recovery rate will adversely affect profitability and, possibly, the economic viability of a property. Profitability also depends on the costs of operations, including costs of labour, materials, equipment, electricity, environmental compliance or other production inputs. Such costs will fluctuate in ways the Corporation cannot predict and are beyond the Corporation's control, and such fluctuations will impact on profitability and may eliminate profitability altogether. Additionally, due to worldwide economic uncertainty, the availability and

cost of funds for development and other costs have become increasingly difficult, if not impossible, to project. These changes and events may materially affect the financial performance of the Corporation.

First Nation Rights and Title

The nature and extent of First Nation rights and title remains the subject of active debate, claims and litigation in Canada, including in the Yukon and including with respect to intergovernmental relations between First Nation authorities and federal, provincial and territorial authorities. There can be no guarantee that such claims will not cause permitting delays, unexpected interruptions or additional costs for the Corporation's projects.

Title to Mineral Properties

The acquisition of title to mineral properties is a complicated and uncertain process. The properties may be subject to prior unregistered agreements of transfer or land claims, and title may be affected by undetected defects. The Corporation has taken steps, in accordance with industry standards, to verify mineral properties in which it has an interest. Although the Corporation has made efforts to ensure that legal title to its properties is properly recorded in the name of the Corporation, there can be no assurance that such title will ultimately be secured.

Capitalization and Commercial Viability

The Corporation will require additional funds to further explore, develop and mine its properties. The Corporation has limited financial resources, and there is no assurance that additional funding will be available to the Corporation to carry out the completion of all proposed activities, for additional exploration or for the substantial capital that is typically required in order to place a property into commercial production. Although the Corporation has been successful in the past in obtaining financing through the sale of equity securities, there can be no assurance that the Corporation will be able to obtain adequate financing in the future or that the terms of such financing will be favourable. Failure to obtain such additional financing could result in the delay or indefinite postponement of further exploration and development of its properties.

General Economic Conditions May Adversely Affect the Corporation's Growth and Profitability

The unprecedented events in global financial markets since 2008 have had a profound impact on the global economy and led to increased levels of volatility. Many industries, including the mining industry, are impacted by these market conditions. Some of the impacts of the current financial market turmoil include contraction in credit markets resulting in a widening of credit risk, devaluations and high volatility in global equity, commodity, foreign currency exchange and precious metal markets, and a lack of market liquidity. If the current turmoil and volatility levels continue they may adversely affect the Corporation's growth and profitability. Specifically:

- a global credit/liquidity or foreign currency exchange crisis could impact the cost and availability of financing and the Corporation's overall liquidity;
- the volatility of silver and other commodity prices would impact the Corporation's revenues, profits, losses and cash flow;
- volatile energy prices, commodity and consumables prices and currency exchange rates would impact the Corporation's operating costs; and
- the devaluation and volatility of global stock markets could impact the valuation of the Corporation's equity and other securities.

These factors could have a material adverse effect on Alexco's financial condition and results of operations.

Operating Hazards and Risks

In the course of exploration, development and production of mineral properties, certain risks, particularly including but not limited to unexpected or unusual geological operating conditions including rock bursts, cave-ins, fires, flooding and earthquakes, may occur. It is not always possible to fully insure against such risks and the Corporation may decide not to insure against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the securities of the Corporation.

Adverse weather conditions could also disrupt the Corporation's environmental services business and/or reduce demand for the Corporation's services.

Competition

Significant and increasing competition exists for mining opportunities internationally. There are a number of large established mining companies with substantial capabilities and far greater financial and technical resources than the Corporation. The Corporation may be unable to acquire additional attractive mining properties on terms it considers acceptable and there can be no assurance that the Corporation's exploration and acquisition programs will yield any new reserves or result in any commercial mining operation.

Certain of the Corporation's Directors and Officers are Involved with Other Natural Resource Companies, Which May Create Conflicts of Interest from Time to Time

Some of the Corporation's directors and officers are directors or officers of other natural resource or mining-related companies. These associations may give rise to conflicts of interest from time to time. As a result of these conflicts of interest, the Corporation may miss the opportunity to participate in certain transactions.

The Corporation May Fail to Maintain Adequate Internal Control Over Financial Reporting Pursuant to the Requirements of the Sarbanes-Oxley Act.

Section 404 of the Sarbanes-Oxley Act ("**SOX**") requires an annual assessment by management of the effectiveness of the Corporation's internal control over financial reporting. The Corporation may fail to maintain the adequacy of its internal control over financial reporting as such standards are modified, supplemented or amended from time to time, and the Corporation may not be able to ensure that it can conclude, on an ongoing basis, that it has effective internal control over financial reporting in accordance with Section 404 of SOX. The Corporation's failure to satisfy the requirements of Section 404 of SOX on an ongoing, timely basis could result in the loss of investor confidence in the reliability of its financial statements, which in turn could harm the Corporation's business and negatively impact the trading price or the market value of its securities. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm the Corporation's operating results or cause it to fail to meet its reporting obligations. Future acquisitions of companies, if any, may provide the Corporation with challenges in implementing the required processes, procedures and controls in its acquired operations. No evaluation can provide complete assurance that the Corporation's internal control over financial reporting will detect or uncover all failures of persons within the Corporation to disclose material information otherwise required to be reported. The effectiveness of the Corporation's processes, procedures and controls could also be limited by simple errors or faulty judgments. Although the Corporation intends to expend substantial time and incur substantial costs, as necessary, to ensure ongoing compliance, there is no certainty that it will be successful in complying with Section 404 of SOX.

DIVIDENDS

The Corporation has not paid any dividends on its common shares since its incorporation. Any decision to pay dividends on common shares in the future will be made by the board of directors on the basis of the earnings, financial requirements and other conditions existing at such time.

DESCRIPTION OF CAPITAL STRUCTURE

The authorized capital of the Corporation consists of an unlimited number of common shares, without par value.

There are no special rights or restrictions of any nature attached to any of the common shares, which all rank equally as to all benefits which might accrue to the holders of the common shares.

MARKET FOR SECURITIES

Trading Price and Volume

The common shares of the Corporation are listed and posted for trading on the Toronto Stock Exchange (the "TSX") under the symbol "AXR", and on the NYSE MKT Equities Exchange (the "NYSE MKT") under the symbol "AXU". The following tables set forth the market price range and trading volumes of the Corporation's common shares on each of the TSX and NYSE MKT for the periods indicated.

TSX

Period	Volume	High (C\$)	Low (C\$)
December 2012	1,275,800	\$3.95	\$3.40
November 2012	1,454,600	\$4.22	\$3.51
October 2012	1,802,900	\$4.40	\$3.69
September 2012	2,299,800	\$4.60	\$3.49
August 2012	2,150,800	\$4.36	\$3.19
July 2012	1,004,300	\$4.98	\$3.96
June 2012	1,134,600	\$5.79	\$4.24
May 2012	2,167,000	\$6.50	\$4.27
April 2012	1,458,800	\$7.33	\$5.82
March 2012	1,877,400	\$8.05	\$6.69
February 2012	1,448,200	\$8.39	\$6.98
January 2012	1,295,100	\$7.85	\$6.34

NYSE MKT

Period	Volume	High (US\$)	Low (US\$)
December 2012	4,622,100	\$4.02	\$3.41
November 2012	4,567,300	\$4.22	\$3.50
October 2012	5,606,400	\$4.48	\$3.72
September 2012	8,267,000	\$4.73	\$3.53
August 2012	8,318,500	\$4.40	\$3.21
July 2012	3,860,900	\$4.79	\$3.87
June 2012	5,796,000	\$5.58	\$4.10
May 2012	8,769,500	\$6.61	\$4.23
April 2012	6,103,000	\$7.40	\$5.83.
March 2012	6,809,600	\$8.17	\$6.68
February 2012	6,433,500	\$8.48	\$6.96
January 2012	7,488,400	\$7.85	\$6.24

Securities Not Listed or Quoted

The only classes of securities of the Corporation that are not listed or quoted on a marketplace are stock options and broker warrants. During the year ended December 31, 2012, 906,750 stock options and nil warrants were issued.

DIRECTORS AND OFFICERS

Name, Occupation and Security Holding

The name, province or state, country of residence, position or office held with the Corporation and principal occupation during the past five years of each director and executive officer of the Corporation as at December 31, 2012 and as at the date hereof are described as follows:

Name and Address⁽¹⁾	Office or Position Held	Principal Occupation During the Past Five Years	Previous Service as a Director
Clynton R. Nauman Washington, USA	President, Chief Executive Officer and Director ⁽⁴⁾	President and Chief Executive Officer of the Corporation, since December 2004.	Since December 3, 2004
George Brack British Columbia, Canada	Chairman and Director ⁽²⁾⁽³⁾⁽⁵⁾⁽⁶⁾	Member of the Board of Directors of several publicly-listed companies since January 2009; Managing Director and Industry Head – Mining with Scotia Capital Inc., from December 2006 to January 2009.	Since December 11, 2007
Michael Winn California, USA	Director ⁽²⁾⁽³⁾⁽⁵⁾⁽⁶⁾	President of Seabord Capital Corp., providing investment analysis and financial services to companies in the oil & gas, mining and energy sectors, since January 2013; President of Terrasearch Inc., a consulting company providing analysis on mining and energy companies, from 1997 through 2012.	Since January 11, 2005
Rick Van Nieuwenhuysen British Columbia, Canada	Director ⁽³⁾⁽⁴⁾	President and Chief Executive Officer of NovaCopper Inc., a spin-out from NovaGold Resources Inc., engaged in the business of mineral exploration and development, since November 2011; President and Chief Executive Officer of NovaGold Resources Inc., a company engaged in the business of mineral exploration and development, from May 1999 to November 2011.	Since January 11, 2005
David Searle British Columbia, Canada	Director ⁽⁴⁾⁽⁵⁾	Lawyer with Fasken Martineau DuMoulin LLP, October 2001 to August 2006.	Since May 12, 2006
Terry Krepiakovich British Columbia, Canada	Director ⁽²⁾	Member of the Board of Directors of several publicly-listed and private companies since July 2011; Chief Financial Officer of SouthGobi Resources Ltd., a mining company, from June 2006 to July 2011.	Since July 22, 2009
Richard N. Zimmer British Columbia, Canada	Director ⁽⁴⁾	Member of the Board of Directors of several publicly-listed and private companies since June 2011; President and Chief Executive Officer of Far West Mining Ltd., a company engaged in the business of mining, from 2008 to June 2011.	Since May 2, 2012
Bradley Thrall Washington, USA	Executive Vice President and Chief Operating Officer	Chief Operating Officer of the Corporation, since December 2004.	N/A
David Whittle British Columbia, Canada	Senior Vice President, Chief Financial Officer and Company Ethics Officer	Chief Financial Officer of the Corporation, since October 2007.	N/A
Alan McOnie Bay of Plenty, New Zealand	Vice President, Exploration	Vice President, Exploration of the Corporation, since December 2010; consulting geologist from 2002 to December 2010.	N/A
Jim Harrington Colorado, USA	President, Alexco Environmental Group	President of the Corporation's AEG division since January 2010 and Vice President of Alexco US since February 2007.	N/A
Robert McIntyre Yukon, Canada	Vice President, Corporate Affairs and Communications	Vice President of the Corporation since December 2011; Vice President of the Corporation from June 2006 to January 2011; President of Access Mining Consultants Ltd., from March 1999 to February 2008.	N/A

- (1) The information as to the jurisdiction of residence and principal occupation, not being within the knowledge of the Corporation, has been furnished by the respective individuals individually.
- (2) Member of the Audit Committee.
- (3) Member of the Nominating & Corporate Governance Committee.
- (4) Member of the Environmental, Health, Safety & Technical Committee.
- (5) Member of the Compensation Committee.
- (6) Mr. Brack succeeded Mr. Winn as Chairman of the Corporation's board of directors on May 12, 2010.

Each of the Corporation's directors is elected by the Corporation's shareholders at an annual meeting to serve until the next annual meeting of shareholders or until a successor is elected or appointed. The board of directors appoints the Corporation's executive officers annually after each annual meeting, to serve at the discretion of the board of directors.

Based on information provided by such persons, as at the date hereof the directors and executive officers of the Corporation as a group beneficially owned, directly or indirectly, or exercised control or direction over, an aggregate of 4,702,824 common shares of the Corporation (including 1,940,299 shares owned by ALM Investments ULC (formerly Asset Liability Management Group ULC), a company controlled by Mr. Nauman), representing approximately 8% of the issued and outstanding common shares of the Corporation. In addition, the directors and executive officers of the Corporation as a group held stock options for the purchase of an aggregate of 3,048,000 common shares in the capital of the Corporation, representing approximately 58% of all outstanding options.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

To the knowledge of the Corporation, none of the Corporation's directors or executive officers is, as at the date of this AIF, or has been, within ten years before the date of this AIF, a director, chief executive officer or chief financial officer of any Corporation (including the Corporation) that:

- (a) was subject to an Order (as defined below) that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or
- (b) was subject to an Order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer;

"Order" means a cease trade order, an order similar to a cease trade order, or an order that denied the relevant Corporation access to any exemption under securities legislation and, in each case, that was in effect for a period of more than 30 consecutive days.

Other than as disclosed below, none of the Corporation's directors or executive officers or, to the Corporation's knowledge, any shareholder holding a sufficient number of securities of the Corporation to affect materially the control of the Corporation:

- (a) is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director or executive officer of any Corporation (including the Corporation) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
- (b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director; or
- (c) has been subject to:
 - (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
 - (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

From 1998 through 2001, Clynton Nauman was CEO and a director of Viceroy Resource Corp. ("**Viceroy**"). Viceroy Australia Pty Ltd. and Bounty (Victoria) Pty Ltd., Australian subsidiaries of Viceroy,

were placed under voluntary administration in 2001. Final creditor settlement agreements were reached by approximately 2003, and the two companies were ultimately dissolved in 2006.

From 2004 to 2007, David Whittle was a director of Image Innovations Holdings, Inc. ("**Image**"), a company incorporated in the United States. Image and its subsidiaries filed voluntary petitions for relief under Chapter 11, Title 11 of the United States Code on July 6, 2006. Image's Joint Chapter 11 Liquidating Plan was confirmed by the Bankruptcy Court on August 21, 2007, and the Final Decree closing the Chapter 11 cases was entered August 28, 2008.

Conflicts of Interest

The directors of the Corporation are required by law to act honestly and in good faith with a view to the best interest of the Corporation and to disclose any interests which they may have in any project or opportunity of the Corporation. If a conflict of interest arises at a meeting of the board of directors, any director in a conflict will disclose his interest and abstain from voting on such matter. In determining whether or not the Corporation will participate in any project or opportunity, that director will primarily consider the degree of risk to which the Corporation may be exposed and its financial position at that time.

To the best of the Corporation's knowledge, there are no known existing or potential conflicts of interest among the Corporation, its promoters, directors, officers or other members of management of the Corporation as a result of their outside business interests except that certain of the directors, officers, promoters and other members of management serve as directors, officers, promoters and members of management of other public companies, and therefore it is possible that a conflict may arise between their duties as a director, officer, promoter or member of management of such other companies.

The directors and officers of the Corporation are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosures by directors of conflicts of interest and the Corporation relies upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers. Such directors or officers in accordance with the *Business Corporations Act* (British Columbia) are required to disclose all such conflicts and to govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law.

AUDIT COMMITTEE INFORMATION

Audit Committee Charter

The following is the text of the Audit Committee's Charter:

GENERAL

The primary function of the Audit Committee, under the supervision of the Board, is to assist the Board in fulfilling its oversight responsibilities regarding the integrity of the Company's accounting and financial reporting processes and provision of financial information to the shareholders and others, the systems of internal controls and disclosure controls, the Company's internal and external audit process, the Company's policies with regard to ethics and business practices, and monitoring compliance with the Company's legal and regulatory requirements with respect to its financial statements.

The Audit Committee is accountable to the Board. In the course of fulfilling its specific responsibilities hereunder, the Audit Committee is expected to maintain open communications between the Company's external auditor, senior management and the Board.

The Audit Committee does not plan or perform audits or warrant or attest to the accuracy or completeness of the Company's financial statements or financial disclosure or compliance with generally accepted accounting procedures as these are the responsibilities of management and the external auditor.

COMPOSITION

The Audit Committee shall be comprised of at least three directors, who generally shall be appointed or confirmed by the Board annually. The Chair of the Audit Committee shall be appointed by the Board, failing which the members of the Audit Committee may designate a Chair by a majority vote of the full Audit Committee membership. All members of the Audit Committee shall be directors and shall meet the independence, financial literacy and experience requirements under applicable laws, rules and regulations binding on the Company from time to time, including without limitation the applicable rules of any stock exchanges upon which the Company's shares are listed and the requirements for independence and financial literacy under National Instrument 52-110 *Audit Committees* ("NI 52-110") in Canada, Section 803A of the NYSE Amex Company Guide and Rule 10A-3 of the United States Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). Furthermore, at least one member of the Audit Committee shall qualify as a "financial expert" as such term is defined in Item 407 of Regulation S-K under the Exchange Act.

PROCEDURAL MATTERS

The Audit Committee:

- (a) Shall meet at least four times per year on a quarterly basis, either by telephone conference or in person. Any member of the Audit Committee may call such a meeting. A majority of the members appointed to the Audit Committee shall constitute a quorum. For clarity, quorum may be reached in person, or by telephone, video conference, or other communication facilities acceptable to the Board. Matters decided by the Audit Committee shall be decided by majority votes, and the Chair of the Audit Committee shall only have an ordinary vote with no additional tie-breaking powers.
- (b) May invite the Company's external auditor, the CFO, and such other persons as deemed appropriate by the Audit Committee to attend meetings of the Audit Committee. As part of its mandate to foster open communication, the Audit Committee shall meet at least annually with the CFO and the external auditor in separate sessions, and to that end the Audit Committee generally shall have as a standing agenda item an in-camera meeting with the external auditors for any meeting at which they attend.
- (c) Shall report material decisions and actions of the Audit Committee to the Board, together with such recommendations as the Audit Committee may deem appropriate, at the next Board meeting.
- (d) Shall review the performance of the Audit Committee on an annual basis and report the results of such review to the Nominating & Corporate Governance Committee.
- (e) Shall review and assess this Charter for the Audit Committee at least annually and submit any proposed revisions to the Board for approval.
- (f) Has the power to conduct or authorize investigations into any matter within the scope of its responsibilities. The Audit Committee has the right to engage independent counsel and other advisors as it determines necessary to carry out its duties, and the right to set and pay, without restriction, the compensation for any such counsel or advisors engaged by the Audit Committee.
- (g) Has the right to communicate directly with the CFO and other members of management who have responsibility for the audit process ("**Internal Audit Management**"), as well as directly with the external auditor.
- (h) Has the right to require payment of (i) compensation to any external auditor engaged for the purpose of preparing or issuing an audit report or performing audit, review or attest services for the Company and (ii) all ordinary expenses of the Audit Committee that are necessary or appropriate in carrying out its duties.

RESPONSIBILITIES

Subject to the powers and duties of the Board, the Board hereby delegates to the Audit Committee the following powers and duties to be performed by the Audit Committee on behalf of and for the Board.

Financial Reporting, Accounting and Financial Management

The Audit Committee has primary responsibility for overseeing the actions of management in all aspects of financial management and reporting. The Audit Committee shall:

- (a) Review and recommend to the Board for approval the Company's annual and interim financial statements, annual and interim Management's Discussion and Analysis, Annual Information Form, annual report filed pursuant to the Exchange Act on Form 40-F (or such other form as may apply), future-oriented financial information or pro-forma information, and other financial disclosure in continuous disclosure documents, including within any annual or interim profit or loss press releases, and any certification, report, opinion or review rendered by the external auditor, before the Company publicly discloses such information. (See also "*Interim Financial Statements*" below.)
- (b) Ensure that it is satisfied that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements (other than public disclosure referred to in subsection (a) immediately above) and periodically assess the adequacy of those procedures as necessary.
- (c) Review material financial risks with management, the plan that management has implemented to monitor and deal with such risks, and the success of management in following the plan.
- (d) Consult annually and otherwise as required with the Company's CEO and CFO respecting the adequacy of the internal controls and review any breaches or deficiencies.
- (e) Review as necessary the process with regard to certifications, and ensure certifications by the CEO and CFO attesting to disclosure controls and procedures and internal control over financial reporting are obtained and filed as required under National Instrument 52-109 *Certification of Disclosure In Issuers' Annual and Interim Filings* and the Exchange Act in connection with the Company's annual and interim financial reporting filings.
- (f) Review management's response to significant written reports and recommendations issued by the external auditor and the extent to which such recommendations have been implemented by management. Review such responses with the external auditor as necessary.
- (g) Review with management the Company's compliance with applicable laws and regulations respecting financial matters.
- (h) Review with management proposed regulatory changes and their impact on the Company.
- (i) Review with management and approve public disclosure of the Audit Committee Charter.

External Auditor

The Audit Committee has primary responsibility for the selection, appointment, dismissal, compensation and oversight of the external auditor, subject to the overall approval of the Board. For this purpose, the Audit Committee may consult with management, but the external auditor shall report directly to the Audit Committee. The specific responsibilities of the Audit Committee with regard to the external auditor are to:

- (a) Recommend to the Board annually:
 - (i) the external auditor to be nominated (whether the current external auditor or a suitable alternative) for the purpose of preparing or issuing an auditor's report or performing other audit, review, or attest services for the Company; and
 - (ii) the compensation of the external auditor.
- (b) Oversee the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company.
- (c) Resolve disagreements, if any, between management and the external auditor regarding financial reporting. To resolve such disagreements, the Audit Committee shall query management and the external auditor and take other steps as necessary. The Audit Committee shall provide the Board with such recommendations and reports with respect to the financial statements of the Company as it deems advisable.
- (d) Take reasonable steps to confirm the independence of the external auditor, including but not limited to ensuring receipt from the external auditor of a formal written statement delineating all relationships between the external auditor and the Company, actively engaging in a dialogue with the auditor with respect to any disclosed relationship or services and pre-approving any non-audit related services provided by the external auditor to the Company or the Company's subsidiaries, if any, with a view to ensuring independence of the auditor. If necessary, recommend to the Board to take appropriate corrective action to ensure the independence of the external auditor.
- (e) Review and pre-approve all audit and audit-related services and the fees related thereto, provided by the Company's external auditor.
- (f) Review and pre-approve all non-audit services to be performed by the Company's external auditor in accordance with any applicable regulatory requirements, including but not limited to NI 52-110, the Exchange Act and the requirements of any stock exchange upon which the Company's shares are listed. The Audit Committee may delegate pre-approval authority for non-audit services to one or more independent members of the Audit Committee provided that any such pre-approval decisions must be presented to the full Audit Committee at its next meeting thereafter. The Audit Committee may also satisfy this pre-approval requirement if it first adopts specific policies and procedures respecting same in accordance with NI 52-110 such that the pre-approval policies and procedures are detailed as to the particular service, the Audit Committee is informed of each such non-audit service, and the procedures do not include delegation of the Audit Committee's responsibilities to management.
- (g) Obtain from the external auditor confirmation that the external auditor is a 'participating audit' firm for the purpose of National Instrument 52-108 *Auditor Oversight* and is registered with the Public Company Accounting Oversight Board in the United States, and is otherwise in compliance with all applicable governing regulations.
- (h) Review and evaluate the performance of the external auditor.
- (i) Review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the Company's present and former external auditors.

Audit and Financial Reporting Process

The Audit Committee has a duty to receive, review and make any inquiry regarding the completeness, accuracy and presentation of the Company's financial statements to ensure that the financial statements fairly present the financial position and risks of the organization and are prepared in accordance with the applicable generally accepted accounting principles. To accomplish this, the Audit Committee shall:

- (a) Review at least annually the Company's internal system of audit and financial controls, internal audit procedures and results of such audits, and receive regular, generally quarterly, updates from management on such controls, procedures and audit activities.

- (b) Prior to the annual audit by the external auditor, consider the scope and general extent of the external auditor's review, including its engagement letter. Review with management the external auditor's audit plan and intended template for financial statements.
- (c) Ensure the external auditor has full, unrestricted access to required information and has the cooperation of management.
- (d) Review with the external auditor, in advance of the audit, the audit process and standards, as well as regulatory or Company-initiated changes in accounting practices and policies and the financial impact thereof, and selection or application of appropriate accounting principles.
- (e) Review with the external auditor and, if necessary, legal counsel, any litigation, claim or contingency, including tax assessments, or significant judgments made by management that could have a material effect upon the financial position of the Company and the manner in which these matters are being disclosed in the financial statements. Review the appropriateness and disclosure of any off-balance sheet matters. Review disclosure of any related-party transactions.
- (f) Receive and review with the external auditor, the external auditor's audit report and the audited financial statements. Make recommendations to the Board respecting approval of the audited financial statements.
- (g) Review annually the integrity of the Company's internal and external financial reporting and accounting principles, including the clarity, completeness and accuracy of financial disclosure and the degree of conservatism or aggressiveness of the accounting policies and estimates, performance of Internal Audit Management, any significant disagreements or difficulties in obtaining information, adequacy of internal controls over financial reporting and the degree of compliance of the Company with prior recommendations of the external auditor. The Audit Committee shall direct management to implement such changes as the Audit Committee considers appropriate, subject to any required approvals of the Board arising out of the review.
- (h) Meet at least annually with the external auditor, independent of management, consider external auditor's judgments about the quality and appropriateness of the Company's accounting principles and practices, and report to the Board on such meetings.

Interim Financial Statements

Pursuant to its mandate, the Board shall generally approve the Company's annual and interim financial statements. Notwithstanding the foregoing, on an exceptions basis the Board may from time to time delegate to the Audit Committee the power to approve the Company's interim financial statements.

The Audit Committee shall:

- (a) Review on an annual basis the Company's practice with respect to review of interim financial statements by the external auditor.
- (b) Review the interim financial statements with the external auditor if the external auditor conducts a review of the interim financial statements.
- (c) Conduct all such reviews and discussions with the external auditor and management as the Audit Committee deems appropriate.
- (d) Review and, if such authority has been delegated to the Audit Committee by the Board, approve the interim financial statements.
- (e) If authority to approve the interim financial statements has not been delegated to the Audit Committee, make appropriate recommendation to the Board respecting approval of the interim financial statements.

Code of Ethics

The Audit Committee has primary responsibility for overseeing the application of, and compliance with, the Company's Code of Business Conduct and Ethics (the "**Code**"). The Audit Committee shall review at least annually:

- (a) the Code,
- (b) management's approach to business ethics and corporate conduct; and
- (c) programs used by management to monitor compliance with the Code.

COMPLAINTS UNDER WHISTLEBLOWER POLICY

To ensure that the Company has adequate procedures in place for the confidential and anonymous (where permitted by law) receipt, retention, and treatment of complaints received by the Company regarding (a) accounting, internal accounting controls, or auditing matters, and (b) compliance with the Code and all applicable government laws, rules and regulations, the Committee has recommended and the Board has adopted a Company Whistleblower Policy. All such complaints shall be dealt with under the terms of that Policy.

Composition of the Audit Committee

As at December 31, 2012 and the date of this AIF, the members of the Audit Committee are Terry Krepiakevich, George Brack and Michael Winn, with Mr. Krepiakevich serving as the Chair of the Audit Committee. All of these members are financially literate and independent for the purposes of National Instrument 52-110 ("**NI 52-110**").

Mr. Krepiakevich qualifies as a financial expert and is financially sophisticated, in that he has an understanding of generally accepted accounting principles and financial statements; is able to assess the general application of accounting principles in connection with the accounting for estimates, accruals and reserves; has experience analyzing or evaluating financial statements that entail accounting issues of equal complexity to the Corporation's financial statements (or actively supervising another person who did so); and has a general understanding of internal controls and procedures for financial reporting and an understanding of audit committee functions.

Mr. Krepiakevich is a member of the Board of Directors of several publicly-listed and private companies since July 2011. From June 2006 to July 2011, Mr. Krepiakevich was the Chief Financial Officer of SouthGobi Resources Ltd., a publicly-listed mining company focused on exploring and developing coal deposits in Mongolia's South Gobi Region. Previously, Mr. Krepiakevich was Chief Financial Officer for Extreme CCTV Inc., a publicly traded company on the TSX involved in manufacturing high tech surveillance equipment, and Vice-President Finance and Chief Financial Officer of Maynards Industries Ltd., a private firm specializing in retailing, auctioneering, liquidating, and mergers and acquisition services. Prior to his position with Maynards, Mr. Krepiakevich was a senior officer in a number of private and public issuers. He is a Canadian qualified Chartered Accountant and was employed with the international accounting firm Peat Marwick Thorne (KPMG), where he worked with a number of companies in mining and related industries.

Mr. Brack is a member of the Board of Directors of several publicly-listed companies since January 2009. Previously, Mr. Brack was Managing Director and Industry Head – Mining of Scotia Capital Inc. from December 2006 to January 2009. Prior to joining Scotia Capital, he held the position of President of Macquarie North America Ltd., an investment banking firm specializing in mergers and acquisitions as well as other advisory functions for North American resource companies. Mr. Brack has also held positions with Placer Dome as Vice President Corporate Development and with CIBC Wood Gundy where he was Vice President of the Investment Banking Group, and worked in Rio Algom's corporate development department. Mr. Brack holds an MBA from York University, a BSc in Geological Engineering from the University of Toronto and the CFA designation. Mr. Brack is financially literate, possessing extensive experience in corporate finance and investment banking, particularly with respect to the mining sector.

Mr. Winn is currently President of Seaboard Capital Corp., and was previously President of Terrasearch Inc., both consulting companies providing investment analysis and financial services to companies in the oil & gas, mining and energy sectors. He is also a member of the Board of Directors of several publicly-listed companies, serving for certain of which as a member of the audit committee. Mr. Winn has worked in the oil and gas industry since 1983 and the mining industry since 1992. He completed graduate course work in accounting and finance and received a BSc in geology from the University of Southern California. Mr. Winn is financially literate, possessing extensive senior management experience within the natural resource sectors including experience as a public company audit committee member.

Reliance on Certain Exemptions

At no time since the commencement of the Corporation's most recently completed financial year has the Corporation relied on the exemption in Section 2.4 of NI 52-110 (De Minimis Non-audit Services), Section 3.2 of NI 52-110 (Initial Public Offerings), Section 3.3(2) of NI 52-110 (Controlled Companies), Section 3.4 of NI 52-110 (Events Outside Control of Member), Section 3.5 of NI 52-110 (Death, Disability or Resignation of Audit Committee Member), Section 3.6 of NI 52-110 (Temporary Exemption for Limited and Exceptional Circumstances) or Section 3.8 of NI 52-110 (Acquisition of Financial Literacy), or an exemption from NI 52-110, in whole or in part, granted under Part 8 of NI 52-110 (Exemptions).

Audit Committee Oversight

At no time since the commencement of the Corporation's most recently completed financial year was a recommendation of the Committee to nominate or compensate an external auditor not adopted by the board of directors.

Pre-Approval Policies and Procedures

The Audit Committee nominates and engages the independent auditors to audit the financial statements, and approves all audit, audit-related services, tax services and other services provided by the Corporation's independent auditors, PricewaterhouseCoopers LLP, Chartered Accountants. Any services provided by PricewaterhouseCoopers LLP that are not specifically included within the scope of the audit must be pre-approved by the audit committee prior to any engagement. The audit committee is permitted to approve certain fees for audit-related services, tax services and other services pursuant to a de minimus exception before the completion of the engagement. No fees paid to PricewaterhouseCoopers LLP in either of the fiscal years ended June 30, 2011 or 2010 were approved pursuant to the de minimus exception.

External Auditor Service Fees (By Category)

PricewaterhouseCoopers LLP, Chartered Accountants, serve as the independent auditors for the Corporation and have acted as the Corporation's independent auditor for the year ended December 31, 2012 and the six month transitional fiscal year ended December 31, 2011. The chart below sets forth the total amount billed the Corporation by PricewaterhouseCoopers LLP for services performed in these periods and breaks down these amounts by category of service (for audit fees, audit-related fees, tax fees and all other fees):

External Auditor Service Fees (By Category)

Financial Period	Audit Fees	Audit Related Fees	Tax Fees	All Other Fees
Year ended December 31, 2012	\$395,000	\$81,000	\$Nil	\$Nil
Six month transitional fiscal year ended December 31, 2011	\$306,000	\$78,000	\$Nil	\$Nil

"Audit Fees" are the aggregate fees billed by PricewaterhouseCoopers LLP for the audits of the Corporation's consolidated annual financial statements and internal control over financial reporting that are provided in connection with statutory and regulatory filings or engagements.

“Audit-Related Fees” are fees charged by PricewaterhouseCoopers LLP for assurance and related services that are reasonably related to the performance of the audit or review of the Corporation’s financial statements and are not reported under “Audit Fees”. This category includes but is not limited to fees billed for independent accountant review of the interim financial statements, advisory services associated with the Corporation’s financial reporting and fees charged for services rendered in connection with registration statements and other securities offering documents.

“Tax Fees” are fees for professional services rendered by PricewaterhouseCoopers LLP for tax compliance, tax advice on actual or contemplated transactions.

“All Other Fees” include all fees charged by PricewaterhouseCoopers LLP for products or services other than those charged for “Audit Fees”, “Audit-Related Fees” and “Tax Fees”.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

The Corporation is not a party to any legal proceedings or regulatory actions and is not aware of any such proceedings or actions known to be contemplated.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

The directors, executive officers and principal shareholders of the Corporation or any associate or affiliate of the foregoing have had no material interest, direct or indirect, in any transactions in which the Corporation has participated within the three most recently completed financial periods prior to the date of this AIF or in the current financial year, and do not have any material interest in any proposed transaction, which has materially affected or is reasonably expected to materially affect the Corporation, except as set out elsewhere in this AIF or as follows:

Certain directors and/or officers of the Corporation have subscribed for common shares of the Corporation pursuant to the public and private placement financings of the Corporation.

During the year ended December 31, 2012, the Corporation rented certain office space under an agreement with Access Field Services, a company owned by certain individuals who were at certain times executive officers of the Corporation and its subsidiary Access. On May 31, 2012, the Corporation purchased the rental office space from Access Field Services for its appraised fair market value of \$1,205,000. During period from January 1, 2012 to May 31, 2012, the Corporation incurred rent expenses of \$57,127.

TRANSFER AGENTS AND REGISTRARS

The registrar and transfer agent for the common shares of the Corporation in British Columbia and Ontario is Computershare Investor Services Inc., Vancouver, British Columbia.

MATERIAL CONTRACTS

The only material contracts entered into by the Corporation within the year ended June 30, 2010 or before such time that are still in effect, other than in the ordinary course of business, are as follows:

1. The Silver Wheaton silver streaming interest agreement, as amended, described under “General Development of the Business – Three Year History and Significant Acquisitions” in this AIF.

The agreement and subsequent amendments are available on the SEDAR website at www.sedar.com under the Corporation’s profile.

INTERESTS OF EXPERTS

Names of Experts

The following are the named persons responsible for the preparation of the Bellekeno Technical Report (see “Description of Business – Bellekeno Mine Operations”), and at the date of that report were “qualified persons”, and where indicated were independent, as then defined in NI 43-101:

Independent

G. David Keller, P.Geo. (formerly of SRK Consulting (Canada) Inc.)
Ken Reipas, P.Eng., of SRK Consulting (Canada) Inc.
Bruce Murphy, FSAIMM, of SRK Consulting (Canada) Inc.
Hassan Ghaffari, P.Eng., of Wardrop Engineering Inc. (now Tetra Tech, Inc.)

Non-Independent

Stanton Dodd, L.Geo., Vice President, Exploration, Alexco (no longer employed with Alexco)
Robert Vincent Scartozzi, L.Geo., Chief Mine Geologist, Alexco (no longer employed with Alexco)

The named person responsible for the preparation of the Lucky Queen Technical Report, the Onek Technical Report and the Bermingham Technical Report (see "Description of Business – Mineral Exploration and Development" with respect to the "Lucky Queen Property", the "Onek Property" and the "Bermingham Property") is Gilles Arseneau, Ph.D., P.Geo., of SRK Consulting (Canada) Inc., who at the date of each report was both independent and a "qualified person" as then defined in NI 43-101.

The following are the named persons responsible for the preparation of the Flame & Moth Technical Report (see "Description of Business – Mineral Exploration and Development – Flame & Moth Property"), and at the date of that report were "qualified persons", and with respect to Mr. Farrow "independent", as then defined in NI 43-101:

David Farrow, Pr.Sci.Nat, P.Geo., of GeoStrat Consulting Services Inc.
Alan McOnie, FAusIMM, Vice-President, Exploration, Alexco

The following are the named persons responsible for the preparation of the Elsa Tailings Technical Report (see "Description of Business – Mineral Exploration and Development – Elsa Tailings Property"), and at the date of that report were both independent and "qualified persons" as then defined in NI 43-101:

G. David Keller, P.Geo., of SRK Consulting (Canada) Inc.
Lars Weiershäuser, Ph.D, P.Geo., of SRK Consulting (Canada) Inc.

The Corporation's current Vice President, Exploration is, and has been through its most recently completed financial year, Alan McOnie, FAusIMM, a "qualified person" as defined in NI 43-101. Through its most recently completed financial year and until August 2012, the Corporation's Senior Vice President, Engineering and Corporate Development was Thomas Fudge, P.E., P.Eng., a "qualified person" as defined in NI 43-101. The Corporation's Bellekeno Mine Manager is, and has been since August 2012, Scott Smith, P. Eng., a "qualified person" as defined in NI 43-101. Except where specifically indicated otherwise, during its most recently completed financial year and through the date hereof, disclosures by the Corporation of scientific and technical information regarding exploration projects on Alexco's mineral properties have been approved by Alan McOnie, while those regarding mine development and operations have been approved by either Thomas Fudge or Scott Smith.

The audited financial statements of the Corporation have been subject to audit by PricewaterhouseCoopers LLP, Chartered Accountants.

Interests of Experts

Based on information provided by the other experts named above, other than with respect to Stanton Dodd, Robert Scartozzi, Alan McOnie, Thomas Fudge and Scott Smith as described below, none of the experts named under "Names of Experts", when or after they prepared the statement, report or valuation, has received any registered or beneficial interests, direct or indirect, in any securities or other property of the Corporation or of one of the Corporation's associates or affiliates (based on information provided to the Corporation by the experts) or is or is expected to be elected, appointed or employed as a director, officer or employee of the Corporation or of any associate or affiliate of the Corporation.

At the time of the preparation of the Bellekeno Technical Report, Stanton Dodd was the Corporation's Vice President, Exploration, and Robert Scartozzi was the Corporation's Chief Mine Geologist, and

accordingly neither was considered independent as defined in NI 43-101. Neither Stanton Dodd nor Robert Scartozzi remained in the employment of the Corporation as of January 2011. Through its most recently completed financial year and until August 2012 when his employment ceased, Thomas Fudge was an executive officer of the Corporation as described above. Alan McOnie is currently an executive officer and Scott Smith is currently the Bellekeno Mine Manager of the Corporation as described above. All of Stanton Dodd, Robert Scartozzi, Alan McOnie, Thomas Fudge and Scott Smith have been granted stock options of the Corporation through the course of their respective employments; however, the individual interests held by each of them throughout their respective employment terms at all times represented less than one percent of the issued and outstanding common shares of the Corporation.

PricewaterhouseCoopers LLP, Chartered Accountants, as auditors of the Corporation, report that they are independent with respect to the Corporation within the meaning of the Rules of Professional Conduct of the Institute of Chartered Accountants of British Columbia, Canada. PricewaterhouseCoopers LLP is registered with the Public Company Accounting Oversight Board.

ADDITIONAL INFORMATION

Additional information relating to the Corporation may be found on SEDAR at www.sedar.com, as well as at the Corporation's web site at www.alexcoresource.com.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Corporation's securities, and securities authorized for issuance under equity compensation plans, where applicable, is contained in the Corporation's information circular for its most recent annual general meeting of securityholders that involved the election of directors.

Additional financial information is provided in the Corporation's consolidated financial statements and management's discussion and analysis for its most recently completed financial period, being the year ended December 31, 2012.