



News Release

Alexco Expands 2012 Surface and Underground Exploration Plans For Keno Hill Silver District

March 5, 2012 - Alexco Resource Corp. (TSX:AXR, NYSE-AMEX:AXU) today announces plans to increase exploration spending by 50% to \$12 million in 2012. The Company will expand its efforts in both surface and underground exploration in the Keno Hill Silver District, Yukon, where its Bellekeno mine continues to ramp up silver production to an estimated 2.2 to 2.5 million ounces of silver in 2012.

Alexco conducted a highly successful exploration program in 2011. Especially notable were the new and expanded discoveries at the Flame & Moth and Birmingham properties, both of which were recently reported with additional positive drilling results. Alexco plans over 29,000 meters of drilling in the District during 2012, including approximately 4,500 meters of drilling underground at the Bellekeno mine, approximately 2,000 meters underground at the Lucky Queen project, and a minimum of 23,000 meters of surface exploration and definition drilling at various locations throughout the District.

2012 Keno Hill Exploration Highlights

Underground Exploration

- At Bellekeno, mine extension targets that are down dip and down plunge of the high grade Southwest Zone will be tested beginning this month, including offset mineralization (approximately 150 meters offset) where initial surface discovery holes have identified up to 2,729 grams per tonne silver (79.6 ounces per ton) over 0.4 meters in a structural setting similar to the main Bellekeno silver deposit.¹
- At Lucky Queen, where underground development is currently underway, an indicated resource of approximately 124,000 tonnes of 1,227 grams per tonne silver (approximately 36 ounces per ton silver) has been outlined, and remains open both down dip and down plunge.² Drilling for underground definition, resource expansion and exploration is planned at this very high grade deposit later in 2012.
- At Onek, underground development in the silver rich southwest zone of the deposit is scheduled for 2012, with underground exploration beyond the existing resource model scheduled for 2013. The Onek deposit contains indicated resources of 585,000 tonnes of 13.7% zinc with 194 grams per tonne silver.³



Surface Exploration

- Exploration at the newly outlined Flame & Moth discovery will be accelerated and expanded to at least 4,000 meters of infill and extension drilling. Results to date at Flame & Moth have returned average grades of 16 to 21 ounces per ton silver over 5.5 meters true width, within a structure traced with confidence along a 500 meter strike length to a depth of 350 meters below surface.⁴ It is anticipated that two drills will begin work in this area, close to the Keno District mill, within the next month. Resource modeling is currently underway at Flame & Moth with an aim of publishing an initial resource estimate in the second quarter 2012, though the 2012 exploration program is also being designed to enable a possible update to that initial resource estimate by the end of the year.
- At Birmingham, infill and extension drilling will start later in April and likely continue all season to further delineate and expand this blind discovery where zones of silver mineralization up to 26 meters true thickness have been outlined including narrower intervals such as 1,634 grams per tonne silver (47.65 ounces per ton) over 1.8 meters.⁵ Resource modeling, where drill density permits, is also underway at Birmingham, with initial results anticipated in the second quarter of 2012. Further blind target concepts in the vicinity of Birmingham and adjacent to the nearby historical Hector Calumet mine (past production of over 90 million ounces of silver) will also be tested later in 2012.
- A systematic exploration drilling program will be conducted in the area of the historical Elsa mine (past production of 30 million ounces of silver) and the fault-related historical Husky mine (past production of 13 million ounces of silver), where there is high potential for development of as yet undiscovered mineralization related to either historical deposit.
- As well, Alexco will commence a grass roots gold exploration program approximately 9 kilometers west of Elsa at the McQuesten gold prospect, where previous explorers have identified up to 3.23 grams per tonne gold over 21.3 meters developed in or adjacent to intrusive rocks.⁶

From June 2006 through calendar 2011, Alexco has drilled 331 diamond drill holes totaling approximately 73,400 meters in the Keno Hill Silver District, as well as another 344 holes and 37,600 meters drilled from surface and underground specifically in the Bellekeno mine area. Alexco has also completed 34 reverse circulation drill holes totaling 1,150 meters in areas of deep alluvial cover and 283 sonic drill holes totaling approximately 910 meters in the area of the historical Elsa tailings. Over this period, the Company has additionally flown 2,016 line kilometers of airborne geophysics, and has compiled approximately 35,000 historical production and exploration documents into a 300 gigabyte digital database.

To date, only 18 of the approximately 35 known historical silver mines within Alexco's Keno Hill Silver District land holdings have been drill tested. In addition, and apart from the historical silver mines, work



on known gold occurrences at McQuesten and Keno Hill has generally been deferred in prior year programs, a situation which will change in 2012.

References

Pursuant to National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101"), supporting documents referenced for scientific and technical information disclosed in this news release are listed as follows:

1. News release dated November 30, 2010 entitled "Alexco Discovers Extension of Bellekeno Deposit, Further Underground Drilling Planned".
2. Technical report filed on SEDAR dated September 8, 2011 entitled "Technical Report on the Lucky Queen Deposit, Lucky Queen Property, Keno Hill District, Yukon".
3. Technical report filed on SEDAR dated September 8, 2011 entitled "Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon".
4. News release dated February 14, 2012 entitled "Alexco Drills 8.9 Meters of 20.2 Ounces Per Ton Silver At Flame & Moth, Continues to Confirm and Expand Mineralization".
5. News release dated February 22, 2012 entitled "Alexco Intersects Silver Mineralization to 26 Meters True Thickness at Bermingham Including Narrower Intervals to 47.6 Ounces Per Ton Over 1.88 Meters".
6. Technical report filed on SEDAR dated November 7, 2005 entitled "Technical Report on the McQuesten Property, Mayo Mining District, Yukon Territory, Canada".

Qualified Person

The disclosure in this news release 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 for Alexco, a Qualified Person as defined by NI 43-101.

About Alexco

Alexco Resource Corp. owns and operates the Bellekeno silver mine, one of several mineral properties held by Alexco which encompass substantially all of the historical Keno Hill Silver District located in Canada's Yukon Territory. Bellekeno, which commenced commercial production at the beginning of calendar year 2011, is Canada's only operating primary silver mine. Alexco's primary near-term exploration objective is to unlock value in the silver-rich Keno Hill District, and is focused on growth by advancing its promising District properties to development decisions. The Company's goal is to produce 7 million to 10 million ounces of silver annually within the next decade. Employing a unique business



model, Alexco also provides mine-related environmental services, remediation technologies and reclamation and mine closure services to both government and industry clients through the Alexco Environmental Group, its wholly-owned environmental services division.

Keno Hill Silver District History

Between 1921 and 1988, the Keno Hill Silver District was a world-class silver producer, with 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 (Yukon Government's Minfile database). These historical production grades would rank Keno Hill in the top 3% by grade of today's global silver producers.

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Some statements ("forward-looking statements") in this news release contain forward-looking information concerning the Company's anticipated results and developments in the Company's operations in future periods, planned exploration and development of its properties, plans related to its business and other matters that may occur in the future, made as of the date of this news release. 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 and reports, the amount of estimated revenues and expenses, the success of exploration activities, permitting time lines, requirements for additional capital and sources and uses of funds. Forward-looking statements 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, among others, risks related to actual results of exploration and development activities; actual results of mining activities; actual results of consulting activities; actual results of remediation and reclamation activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of silver, 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. 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 news release, the Company has applied several material assumptions, including, but not limited to, the assumption that market fundamentals will result in sustained silver, gold, lead and zinc demand and prices. There can be no assurance that forward-looking statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. The Company expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as otherwise required by applicable securities legislation.