



## News Release

### Alexco Announces Initial Resource Estimates for Flame & Moth and Bermingham

**June 28, 2012 - Alexco Resource Corp. (TSX:AXR, NYSE-MKT:AXU)** today reports initial mineral resource estimates for the Flame & Moth and Bermingham deposits, located within the Keno Hill Silver District in Canada's Yukon Territory. Together, these new resources have resulted in a 52% increase in Alexco's combined indicated resources at its Keno Hill properties.

The resource estimates have been prepared by SRK Consulting (Canada) Inc. ("SRK"), and are summarized as follows:

Deposit	Class <sup>1,2,3</sup>	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag (Troy ounces)
Flame & Moth <sup>4</sup>	Indicated	759,000	453	0.39	1.73	6.97	11,054,000
	Inferred	387,000	312	0.26	1.18	4.06	3,882,000
Bermingham <sup>5</sup>	Indicated	257,000	460	0.06	2.00	2.10	3,800,000
	Inferred	102,000	372	0.09	1.12	1.83	1,220,000

Notes:

1. The effective date of these mineral resource estimates is June 27, 2012.
2. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All numbers have been rounded to reflect the relative accuracy of the estimates.
3. Reported at a contained metal value cut-off grade of CAD \$185.00/t (1 USD = 1 CAD) using consensus long term metal prices 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%).
4. Ag grades capped at 1,300 g/t; Pb capped at 10%; Zn capped at 18%; Au grades capped at 1.1 g/t.
5. Ag grades capped at 2,500 g/t for the Bermingham Vein and 2,000 g/t for the Bermingham Footwall Vein; Pb and Zn capped at 10% for both veins; Au grades capped at 0.25 g/t for both veins.

Alexco President and Chief Executive Officer Clynt Nauman said, "These initial resource estimations at Flame & Moth and Bermingham are based on drilling data collected prior to 2012, and continue to demonstrate the excellent exploration and resource potential of the Keno Hill Silver District. This is especially true at Flame & Moth where more than 11 million ounces of silver have been outlined in the indicated category with an additional 3.8 million ounces in the inferred category. The deposit remains open in all directions and drilling continues apace in 2012. It is our intention to further update these new resources towards the end of 2012 or early in 2013. In the meantime, the 2012 exploration program has been adjusted to focus additional effort on

Head Office

Alexco Resource Corp.  
200 Granville Street, Suite 1150  
Vancouver, BC V6C 1S4  
Canada

T. 604 633 4888

F. 604 633 4887



confirmation and expansion of mineralization at Flame & Moth while continuing systematic evaluation and expansion of the more structurally complex Birmingham resource.”

### **Flame & Moth**

The Flame & Moth resource model comprises a north-northeast striking, moderately south-east dipping Flame Vein that is divided into two segments by the northwest striking Mill Fault. The Flame Vein outlined in the hangingwall of the Mill Fault has been designated the Lightning zone, and the footwall portion termed the Christal zone. Alexco conducted surface diamond drilling programs at Flame & Moth in 2010 and 2011 initiating forty-five core holes, of which thirty-eight for a total of 10,875 meters were completed to target and used in the modeling and resource estimate. The structure hosting the Flame Vein mineralization is characterized by broad structural zones, ranging between 2 meters and 33 meters in true thickness. The mineralization comprises multiphase quartz and siderite veining up to 11.7 meters true width developed within the host fault structure, and contains locally massive galena, sphalerite, pyrite, and pyrrhotite with associated silver sulphosalts, arsenopyrite and chalcopyrite. Gold is locally present at grades up to 2.1 grams per tonne.

The Flame & Moth resource was estimated using 3-D Gemcom block modeling software in multiple passes in 5 by 5 by 3 meter blocks utilizing inverse distance squared. Grade estimates were based on capped one meter composited assay data. Capping levels were set to 1,300 grams per tonne for silver and 1.1 grams per tonne gold, while lead and zinc were capped at 10% and 18% respectively, for both portions of the Flame Vein. Blocks were classified as indicated mineral resources if at least two drill holes and six composites were found within a 60 by 60 meter search ellipse. All other interpolated blocks were classified as inferred mineral resources.

### **Birmingham**

The Birmingham resource model is comprised of three veins, of which two have been included in the resource estimate (the Birmingham Vein and Birmingham Footwall Vein). All three veins occur in the hangingwall of the northwest trending post-mineral Mastiff Fault (termed the Etta zone), exposed in the larger of the historical Birmingham open pits. Alexco conducted surface diamond drilling programs at Birmingham between 2009 and 2011, with twenty-three holes drilled in the Etta zone totaling 6,442 meters. The drilling outlined the Birmingham Vein with a north-northeast strike and moderate southeast dip, converging to the northeast with the Birmingham Footwall Vein which has a northeast strike and dips moderately to steeply to the southeast. The Birmingham Vein and Birmingham Footwall Vein typically exist within a 5 to 10 meter wide structurally-damaged and complex zone containing discrete veins 0.5 to 2.5 meters wide, consisting predominantly of carbonate (dolomite, ankerite and siderite), quartz and calcite gangue with sulphides; sphalerite, galena, pyrite and arsenopyrite, and accessory chalcopyrite, argentian tetrahedrite, jamesonite, pyrargyrite and native silver.

The Birmingham resource was estimated using 3-D Gemcom block modeling software in multiple passes in 5 by 5 by 3 meter blocks by inverse distance squared. Grade estimates were based on capped one meter composited assay data. Capping levels were set to 2,500 grams per tonne for silver for the Birmingham Vein and 2,000 grams per tonne for the Birmingham Footwall Vein, and 0.25 grams per tonne gold for both the Birmingham Vein and the Birmingham Footwall Vein; and lead and zinc were both capped at 10% for both the Birmingham Vein and the Birmingham Footwall Vein. Blocks were classified as indicated mineral



resources if at least two drill holes and four composites were found within a 40 by 40 meter search ellipse for Bermingham Vein and a 40 by 60 meter search ellipse for Bermingham Footwall Vein. All other interpolated blocks were classified as inferred mineral resources.

### **2012 Advanced Exploration Plans**

The Flame & Moth estimated resource comprises newly-defined mineralization below and along strike of historical shallow workings and remains open in all directions. The Bermingham resource similarly was identified below and along strike of historical open pit and underground development. Both areas are the subject of ongoing aggressive exploration in 2012. With continued success in the current 2012 drilling program, adjustments have been made to roughly double the planned drilling about Flame & Moth to approximately 9,000 meters. The balance of the planned 22,500 meters of drilling in 2012 will be focused at Bermingham and significant targets on the Elsa-Husky trend. Other targets include the testing of gold mineralization on McQuesten, the westernmost property within Alexco's Keno Hill land holdings.

### **Qualified Persons**

SRK has prepared the mineral resource estimates for both the Flame & Moth and Bermingham deposits, and is independent of Alexco for purposes of National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101"). The resource estimates were completed by Dr. Gilles Arseneau, P.Geo., Associate Consultant (Resource Geology) with SRK and a Qualified Person as defined by NI 43-101. Dr. Arseneau has reviewed, verified and approved the contents of this news release relating to the mineral resource estimates for the Flame & Moth and Bermingham deposits. All mineral resources are classified following the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005), in accordance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines and with NI 43-101 guidelines. An NI 43-101 compliant technical report is in the process of being prepared in support of each of the Flame & Moth and Bermingham mineral resource estimates, which Alexco expects will be filed on SEDAR no later than 45 days from the date hereof.

The disclosure of all other scientific and technical information in this news release regarding projects on Alexco's mineral properties has been reviewed and approved by Alan McOnie, FAusIMM, Alexco's Vice President, Exploration and 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 consulting services, remediation technologies and reclamation and mine closure services to both government and industry clients through the Alexco Environmental Group, its wholly-owned consulting 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.

## **Contact**

Clynton R. Nauman, President and Chief Executive Officer

Phone: (604) 633-4888

Email: [info@alexcoresource.com](mailto:info@alexcoresource.com)

Please visit the Alexco website at [www.alexcoresource.com](http://www.alexcoresource.com)

*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.*