Excalibur Announces Results of Mineralogical Study on Candelaria Dump Composite Sample: Gravity-Flotation Expected to Provide High Recovery of Gold and Silver

17.09.2013 | Marketwired

TORONTO, ONTARIO--(Marketwired - Sep 17, 2013) - **Excalibur Resources Ltd**. (CNSX:XBR) (OTCQX:EXCFF) (FRANKFURT:X9CN) ("Excalibur" or the "Company') is pleased to report the results of a mineralogical study on a composite sample from stockpiles of material obtained from old mine dumps produced during 19th century mining activities. Results of this study by Terra Mineralogical Services Inc., using similar methodology outlined in the 17th July, 2013 press release by Excalibur shows that the material is similar to samples processed from other veins, including San Gil and Camino and suggests that excellent gold and silver recoveries may be expected by gravity followed by flotation methods, the process route that is currently being established in the Catanava metallurgical plant.

In a separate study, very high recoveries were obtained in bottle-roll leaching tests performed by an independent Mexican laboratory, Metalurgia y Equipos, located in Guadalajara. Three samples of mill concentrate were submitted that gave recoveries ranging between 97.9 and 98.9% for gold and between 96.8 and 98.6% for silver. These results indicate that the concentrate produced by gravity would be easily amenable to cyanide leaching if such a process was eventually implemented to complement the plant flowsheet currently being adopted.

Mineralogical Study of Candelaria Dump Stockpile Sample

Over 85% of precious metal grains observed in the electron microscope occur as liberated grains, a fundamental condition for easy leaching by cyanide. The grind used to prepare the examined specimens is consistent with the grain size currently produced in the grinding mill at Catanava. It is therefore expected that the Candelaria material should liberate well. Overall, these precious metal particles can be best described as fine to very fine grained, with an overall equivalent particle diameter of 3.4um on average for gold minerals, and 5.1 um for silver particles; only a few coarse particles (> 30 um) were identified but these represent most of the gold (98%) and nearly half the silver (46%) in the samples. These grains will be efficiently recovered using gravity alone. However since only a single large gold grain was encountered, it is not possible to provide any conclusions regarding the proportion of gold that will likely be recovered by gravity. The gold is rarely present as coarse particles but when it is it can carry a large fraction of the gold in the material. This is also true for silver but to a lesser degree.

The sample collected from the Candelaria stockpile was submitted for assay at SGS-Lakefield Research and returned 2.29 g/t Au and 82.2 g/t Ag (Certificate CA02989-JUN13). This is consistent with an average grade of 1.75 g/t Au and 92.3 g/t Ag estimated by Bethlehem Steel Corporation in a historical report published in 1981, which carried out a systematic estimate of all the historic dumps in the Pinos District and estimated the Candelaria dump to contain 103,886 tons of material at the above grades. These estimates are evidently historic in nature and are not compliant with NI43-101 standards of disclosure. Insufficient work has been done on the dumps to permit an Independent Qualified Person to estimate a resource and Excalibur does not rely on these numbers except to indicate that the dump materials are mineralized and that there could be significant tonnage in these dumps that could eventually be processed effectively in the Catanava mill or even sold on the local market. Excalibur plans to undertake the systematic evaluation of all the dumps as part of the Catanava development plan.

Mr. Charles Beaudry, an independent director and QP for this press release is quoted as saying: "The results of this study, although significant, cannot necessarily be extrapolated to be representative of the entire Candelaria Dump. Nevertheless they are very encouraging and indicate that the Candelaria material may be amenable to processing at very low cost".

Bottle-Roll Cyanide Leach Tests on Mill Concentrate Samples

As part of the ongoing evaluation of the metallurgical behavior of mined mineralized materials in the Catanava plant three samples of concentrate were submitted to ME Metalurgia y Equipos of Guadalajara, Mexico for bottle-roll cyanide leach testing. Results were received by Excalibur around mid-August and are reported here. Results for three samples of concentrate collected at the end of the plant process are as follows:

Concentrate No. 01. METALLURGICAL BOTTLE TEST				
	Au g/t	Ag g/t	Au recovery %	Ag Recovery %
Head Grade	357.0	5,439.0	98.86	98.57
Final Tailings	4.1	78.0		
Concentrate No. 02. METALLURGICAL BOTTLE TEST				
	Au g/t	Ag g/t	Au recovery %	Ag Recovery %
Head Grade	225.0	1,631.0	98.52	96.82
Final Tailings	3.2	52.0		
Concentrate No. 03. METALLURGICAL BOTTLE TEST				
	Au g/t	Ag g/t	Au recovery %	Ag Recovery %
Head Grade	166.0	2,166.0	97.89	98.08
Final Tailings	3.5	41.0		

These results show that the concentrate produced at Catanava is easily leachable and may provide for very high recoveries using cyanidation, a process not currently in use at Catanava. More testing will be undertaken as the current re-organization of the plant is being implemented and commissioned.

Sampling Program Description and QA/QC

Sampling of the stockpile was carried out on site by Terra Mineralogical Services Inc. with the assistance of Excalibur geologists. Polished thin sections were prepared and the entire surface of each section was scanned to identify gold-bearing minerals and associated gangue phases. These results are based on firm data but remain predictions that need to be followed and confirmed by metallurgical testing.

Candelaria Dump stockpile material sitting near the Catanava mill were sampled on April 15 and 16, 2013 by Mr. Charles Beaudry, Mr. Hector Gonzalez and Giovanni DiPrisco. A conscientious effort was made to collect blocks of predominately mineralized vein material. Blocks were coarsely crushed with a hammer near the stockpile and approximately 80 kg of material was collected. After careful homogenization and size reduction, three composite samples of approximately 3 kg each were prepared and one composite sample was forwarded to the attention of Terra Mineralogical Services Inc. for mineralogical investigation. The received composite sample was further homogenized, reduced in size and divided into two fractions at the laboratories of SGS Lakefield in Canada. One sub-sample reduced to a size of 100% passing 150 Mesh (106 um) was submitted for gold and silver analysis by fire assays, whereas a second sub-fraction (also 100% passing 106 um) was riffled out to prepare a series of five polished sections. The entire surface of each polished section was then scanned using a high resolution SEM-EDS to identify gold and silver-bearing minerals.

The SEM scans were performed using the ASPEX eXplorer Scanning Electron Microscope fitted with automated stage movement and the Automated Feature Analysis (AFA) software set to recognize precious metal grains. The automated SEM-EDS scans were programmed to identify native gold and silver, electrum, precious metal tellurides, and miscellaneous gold and silver-bearing particles. The physical dimensions of the precious metal occurrences were measured. The SEM-EDX recognition software collected a series of physical parameters, in particular the maximum width and length of gold/ silver particles and the total area of each precious metal grain. In addition, manual SEM-EDS scans were also performed on selected areas and additional very fine grained particles might have been detected and measured. In these instances, a normalized width and length was collected for each grain. For irregularly shaped grains, a "best fit" width and length was attributed to calculate the area of the grains. Using the area of each identified gold and silver carrying particle, a standardized diameter was then re-calculated.

Bottle-roll tests were carried out on approximately 1 kilogram of -100 mesh ground material with 2 litres of sodium cyanide solution of variable concentration. The tests ran for 72 hours, at the end of which the residue

was washed and analysed to determine the recovery and consumption of sodium cyanide and lime was calculated.

Charles Beaudry, P.Geo. is a "Qualified Person" for the purpose of National Instrument 43-101, and has reviewed and approved the technical contents of this news release.

Excalibur Resources Ltd. is a junior exploration mining company focused on the discovery, development and mining of economically viable precious metal mineral resources.

On behalf of the Board of Directors:

Tim Gallagher, **Chairman & CEO**

Neither the Canadian National Stock Exchange nor its Regulation Services Provider accepts responsibility for the adequacy or accuracy of this release.

Contact

Excalibur Resources Ltd.
Tim Gallagher
Chairman & CEO
416-987-0298
info@excaliburresources.ca
www.excaliburresources.ca