



September 20, 2011

Symbol: TSX:V-CKG  
NR3-2011

## **EXCELLENT PILOT PLANT SCALE METALLURGICAL TEST RESULTS ON METATES**

Chesapeake Gold Corp. (“Chesapeake”) is pleased to announce the results of feasibility level, pilot plant scale metallurgical test work recently completed on its 100% owned Metates gold-silver project located in Durango State, Mexico. Metates hosts one of the world’s largest undeveloped gold and silver deposits containing measured and indicated mineral resources of 17.2 million ounces gold, 466 million ounces silver and 3.4 billion pounds zinc and inferred resources of 2.6 million ounces gold, 62 million ounces silver and 360 million pounds zinc.

The metallurgical processing flowsheet at Metates involves the production of a bulk sulphide flotation concentrate followed by pressure oxidation of the concentrate in an autoclave to oxidize the sulphides prior to cyanidation to recover the gold and silver. Hazen Research of Golden, Colorado (“Hazen”) has undertaken extensive lab scale work on individual and composite metallurgical samples as well as a pilot scale sulphide flotation test. Sherritt Technologies of Fort Saskatchewan, Alberta (“Sherritt”) has conducted a series of batch pressure oxidation tests followed by a pilot scale continuous run on various concentrate samples. Current metallurgical testing results indicate overall recoveries based on the above flowsheet average about 90% for gold, ranging from 85% to 94%, 77% for silver, ranging from 71% to 84%, and 81% for zinc, ranging from 77% to 86%.

### **Sulphide Flotation Work**

- A feed sample of 3,292 kilograms were processed over four days of semi-continuous operation (34 hours total) to produce 555 kilograms of sulphide concentrate
- The composite sample tested represents about 1,650 meters of Chesapeake drill core and is comprised of approximately 60% intrusive hosted and 40% sediment hosted mineralization
- The average head grade of the sample was 0.70 g/t gold, 24.6 g/t silver and 0.25% zinc (similar grades and host rock types as expected to be mined during years 1-5 of the proposed 120,000 tpd operation)
- The bulk sulphide concentrate assayed 3.2 g/t gold, 112 g/t silver and 1.17% zinc representing recoveries of about 94.5% gold, 82.9% silver and 87.8% zinc
- More recent work indicates higher recoveries are consistently achieved from a coarser grind (P80-100 microns versus – 200 microns in pilot test) together with different flotation reagents

### **Pilot Scale Pressure Oxidation Work**

- Sherritt processed 442 kilograms of the concentrate from Hazen during 96 hours of continuous operation in an autoclave divided into different periods with varying temperature, retention time and oxygen pressure
- The flotation concentrate responded well to pressure oxidation with excellent gold and silver recoveries achieved within typical parameters employed in existing commercial pressure oxidation plants
- Sulphide oxidation was rapid and was over 99.5% at the conclusion of all tests
- The oxidized sulphide slurry from the autoclave was subject to a conditioning or hot cure step followed by a washing and solid/liquid separation step with some solids being subject to a lime boil step followed by batch cyanidation gold/silver recovery tests

- At the optimal pressure oxidation conditions, gold recovery from the oxidized solids was consistently in the range of 95% to 97% while silver recovery following lime boil averaged 87%, ranging from 85% to 90%
- Liquids were either partially neutralized with limestone to allow for zinc recovery or fully neutralized with limestone and lime and subjected to a solid/liquid separation step to simulate conditions suitable for discharge to the environment
- Based on initial results from ongoing test work it is expected that about 85% to 90% of the zinc in the concentrate can be recovered into zinc cathode following pressure oxidation using solvent extraction/electrowinning (“SX/EW”) methods

## **Discussion of Results**

Management is very pleased with the pilot scale metallurgical test results and believe the reported metal recoveries are a major milestone in de-risking the Metates project. The results provide broad validation of the assumed 85% overall, weighted metallurgical recoveries for the gold, silver and zinc as provided in the PEA (June 2010) and updated PEA (April 2011) technical reports on Metates.

The metal recoveries to the flotation concentrate appear to be dependent on both the host rock type, either intrusive or sediment hosted, and the head grades in the samples. Generally, the intrusive hosted mineralization gives slightly better metal recoveries than does sediment hosted mineralization. In addition, higher silver and zinc feed grades seem to result in higher recoveries to the concentrate, while gold recoveries seem to be largely independent of feed grade.

Follow-up lab scale flotation optimization work on blended work type composites similar to Hazen’s bulk sulphide concentrate has and continues to improve the metal recoveries which now range between 90% to 97% for gold, 83% to 93% for silver and 90% to 95% for zinc. The metal recoveries from the concentrate following pressure oxidation have consistently exceeded 95% for gold and 85% for silver. Based on these concentrate recoveries and the Sherritt pressure oxidation results, overall metal recoveries accounting for these two recovery components (flotation and pressure oxidation) currently average about 90% for gold, ranging from 85% to 94%, 77% for silver, ranging from 71% to 84%, and 81% for zinc, ranging from 77% to 86%.

Metallurgical studies continue to focus on defining and optimizing the grinding characteristics and reagents to achieve higher flotation recoveries in the upcoming pre-feasibility study (“PFS”).

## **Other Pre-Feasibility Study Developments**

To date, the 2011 core drill program has completed 50 holes totalling 21,834 meters for metallurgical samples, exploration and engineering investigations. Chesapeake has drilled 27 infill holes totalling 13,597 meters to convert Inferred class material to Measured class and 12 geo-technical holes totalling 3,219 meters to support pit slope recommendations. The results of these holes will be incorporated into a new resource estimate to be completed by Independent Mining Consultants of Tucson, Arizona before year end. The new resource will be the basis for the mine schedule and reserve estimate for the PFS. A step-out drill program has commenced to expand the resource by testing the mineralized extensions along strike to the northwest and southeast.

M3 Engineering & Technology of Tucson, Arizona (lead consultant) is moving forward with a wide range of project related activities and are currently focused on developing the general arrangement drawings and equipment lists in support of obtaining vendor quotations for major capital cost items. M3 is also working on the design and costing of an alternate shorter access road and concentrate pipeline route leading downhill from the Metates mine site to the Ranchito processing site in Sinaloa state.

Sherritt is conducting ongoing test work to evaluate the recovery of zinc via SX/EW methods as well as follow-up investigations to optimize gold and silver recovery options. Sherritt will also be developing the design and capital and operating cost estimates for the pressure oxidation circuit for the PFS as well as the zinc recovery plant.

Ausenco Vector of Denver, Colorado has completed their preliminary geotechnical investigations of the proposed plant sites and waste rock and tailings storage facilities at both the Metates and Ranchito sites and has concluded that the ground conditions at both sites will support the proposed facility locations. Vector have also determined that it is feasible to deposit both the concentrate flotation tailings and mine waste rock in a common storage facility at Metates. This development will result in a significant cost saving and lessen the long term environmental impact associated with a dedicated tailings facility.

The PFS will contain a mineral reserve and revised resource estimate, provide updated capital and operating cost estimates and revised project economics based on numerous reviewed technical inputs including trade –off studies for power and alternative crushing circuits. The PFS will be based on current long term forecasted metal prices that have risen compared with the US\$900 per ounce gold and US\$18 per ounce silver price assumptions that were used in the latest PEA. M3 and numerous other consultants working on the PFS anticipate that the results of the study will now be available in the first quarter of 2012.

Chesapeake currently has 39.8 million shares outstanding (47.5 million fully diluted) and \$18 million in cash and liquid investments.

Mr. Gary Parkison, CPG, Vice President Development and a Qualified Person as defined by NI 43-101 supervised the preparation of the technical information in this release. Sherritt has also reviewed the information contained in this release.

For more information on Chesapeake and its Metates Project, please visit our website at [www.chesapeakegold.com](http://www.chesapeakegold.com) or contact investor relations at 604-731-1094.

## **CHESAPEAKE GOLD CORP**

*“P. Randy Reifel”*

P. Randy Reifel  
President

The TSX Venture Exchange does not accept responsibility for the adequacy or accuracy of this news release.