



## DUNDEE CORPORATION DEVELOPS GREEN TECHNOLOGY

### FOR IMMEDIATE RELEASE

**Toronto, Ontario, December 17, 2012** - Dundee Corporation is pleased to report on the activities of its 75% subsidiary Nichromet Extraction Inc. (a private Quebec company) with regard to gold recoveries using Nichromet's patented chloride leach extraction process which extracts precious and base metals and produces tailings totally devoid of soluble toxic substances. In January 2012, the Quebec Government, through its Ministry of Economic Development, Innovation and Export Trade, granted Nichromet an amount of \$700,000 from its Green Technology Grant Program. The grant followed a thorough review and due diligence process of Nichromet's pilot plant program by a panel of experts. The grant is viewed as a strong endorsement of Nichromet's scientific advancements and technological progress towards commercialization of Nichromet's metallurgical process to replace cyanide as a necessary ingredient for gold recovery.

The gold extraction by Nichromet of a 5.5 tonne bulk sample taken from Creso Exploration Inc. ("Creso") Minto Property in Ontario, using its patented chloride leach process achieved better than 90% recovery. Extraction of gold using the traditional cyanide process on the same starting material was only 35% gold recovery.

Initial gold content from the Minto was 4.21 g/t. A flotation concentrate showing 60.4 g/t gold was obtained, which retained 93.3% of the initial gold.

Initial Gold Content (g/t)	Concentrate Gold Content (g/t)	Gold recovery from concentrate (% of initial gold)
4.21	60.4	93.3

This flotation concentrate was then oxidized and submitted to the Nichromet gold extraction circuit, for a 96.5% gold recovery, giving an overall extraction yield of 90%.

For purpose of comparison, a direct cyanidation of a sample from the starting ore was performed. The initial gold content of this sample was 4.20 g/t and the barren solid after cyanidation was at 2.73 g/t for an overall gold extraction yield of only 35%. These results are in agreement with previous direct cyanidation tests. Moreover, a mineralogical study performed by SGS Lakefield in 2011 concluded to the refractoriness of the gold in this deposit due to high dispersion of gold in the pyrite structure.

### CONCLUSIONS

- The results from the piloting and the lab tests have shown that a good flotation concentrate can be produced from the gold ore with an overall gold recuperation yield of 93.3% during flotation and a gold content of 60 g/t in the concentrate without the use of cyanide.



- The cyanide tests on the other hand showed less attractive extraction results (35%) and confirmed the refractory behavior of the gold in this deposit as predicted by the mineralogical studies performed by SGS Lakefield in 2011.
- The oxidation of the concentrate proved to be very efficient at the pilot scale with a sulphur removal efficiency of >99%.
- The gold extraction yield obtained through the chlorination of the oxidized material showed a gold extraction yield of 95%.
- Therefore, the overall extraction yield of the Nichromet process applied on the 5 tonnes sample submitted by Creso for the Minto deposit was 90% gold extraction from ore to metallic value.

### **ABOUT CYANIDE**

The use of cyanide has been important to the global gold mining industry. Due to its inherent dangers, it is an aspect that needs careful management. According to the World Gold Council, the management and disposal of cyanide solutions used to dissolve and extract gold from ore is an environmental concern. Cyanide is a well known poison; hydrogen cyanide is acutely toxic to humans in its gaseous state and can be fatal at exposure levels of 100 to 300 parts per million (ppm). Cyanide is also harmful to wildlife; mammals, birds and fish all have acute toxicity reactions to even low cyanide exposures.

The following countries have banned the use of cyanide for the extraction of gold:

- 1) In the USA: Montana and Wisconsin;
- 2) Czech Republic;
- 3) Hungary;
- 4) Argentina: Rio Negro & Chubut, Tucuman, La Pampa, Cordoba, San Luis & La Rioja
- 5) Costa Rica;
- 6) Germany (passed a decree in 2002 prohibiting mines from using cyanide leaching process); and
- 7) Turkey.

### **ABOUT NICHROMET**

Nichromet Extraction Inc. is a private Canadian company controlled by Dundee Corporation that has developed patented precious and base metal extraction processes that are environmentally friendly in that the residues of mining operations are totally void of contaminants such as sulfur, arsenic, etc. These new processes are based on chlorination and are particularly efficient for the treatment of polymetallic ores either in the form of sulfides, oxides, or arsenides. These chloride based patented processes are in fact a substitute to cyanidation which is commonly used in the mining industry. The environment-friendly characteristic of the processes earned Nichromet a grant of \$700,000 from the Quebec Government.