



**Stonehenge**  
METALS LTD

## ASX/Media release

5 October 2011



ASX: SHE

The Manager  
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### STONEHENGE METALS MARKET UPDATE

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- Commencement of pit optimisation modelling
  - Latest metallurgical test work delivers 90% Uranium & 68% Vanadium extraction
  - Environmental baseline monitoring commences
  - Senior Adviser appointed in Korea
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Stonehenge Metals Limited (**Stonehenge** or the **Company**) is pleased to provide shareholders the following market update with respect of the Company's activities.

#### **Geology**

Ongoing collation and translation of historical data. The existing data has been verified with new reports and new information has been added to an access database.

Ventilation of the Chubu Adit has been setup to allow for sampling and mapping. This will add to the understanding of the mineralogy and structural geology of the project. Monitoring of the adit is now in place for the health and safety of workers.

An in-house workshop was carried out to outline and focus on key projects. Targets and goals were set to move projects forward.

The collection of 2 bulk samples from the Chubu Adit dump were sent for metallurgical testing in Perth. Both of these samples are to be used for vanadium analysis.

## **Planned Work**

Historical Collars – Some of the drilling sites that were completed in the 1980's have been located. An accurate survey of the collars is planned during the autumn months.

Data Sharing - Stonehenge has been building relationships with key partners and will be working on data sharing and information agreements.

Pit Optimisation – Stonehenge has commissioned Optiro to undertake a preliminary pit optimisation to help identify key areas for resource upgrade.

The study will consider mining cost and uranium grade as the main parameters for this optimisation study. Based on the current operating cost study it has been assumed that 2.75Mtpa (million tonnes per annum) of ore is required to be delivered to the mill at an average head grade of 400ppm  $U_3O_8$  during the initial payback period for an annual production rate of 1,000 tpa  $U_3O_8$ . Multiple scenarios will be run in order to understand the sensitivities on mining operation to achieve an ore throughput of 2.75Mtpa.

## **Metallurgy**

Stonehenge metallurgical test program is focused on extracting the full potential value of Daejon ore and in particular uranium and vanadium.

Two potential flow sheet options are being evaluated. The first flow sheet option involves pressure acid leaching of whole ore to leach uranium, vanadium and any associated base metals sulphides. The second process option uses atmospheric acid leaching to extract uranium and then salt roast leach residue to liberate vanadium.

Fresh bulk samples from the Chubu exploration adit were delivered to ALS Amtec in June 2011 for metallurgical testing. Acid pressure leach tests are being performed to assess different operating conditions between the temperature range of 120°C-180°C to maximise vanadium extraction. Results from acid pressure leach tests have continued to confirm uranium is easily extracted. To-date all pressure leach tests have achieved greater than 90% uranium extraction.

Vanadium extraction results achieved to date in the current program have been as high as 68% extraction after 1 hour leach residence time at 180°C. Previous best vanadium extraction result using whole ore acid leaching was 50% at a leach temperature of 95°C. Pressure leach tests will continue over the next 3 months to optimise leach conditions and assess the economic viability of whole ore leaching. Stonehenge has also identified a large domestic supplier of concentrate sulphuric acid within 120km of the project area and within the vicinity of existing rail infrastructure.

Competitive tenders have been received for vanadium salt roasting program and proposals are currently being assessed for award in October. Stonehenge's target is to achieve 90% uranium and 75% vanadium extraction. Using the existing operating cost model, if 75% vanadium extraction is achieved then the net cash cost for production of both uranium and vanadium after by-product credits will be US\$14.00 / lb  $U_3O_8$ . A vanadium price assumption of US\$6.50 / lb  $V_2O_5$  flake was used with an annualised production of 1,000 tpa  $U_3O_8$  and 6,965 tpa  $V_2O_5$  flake.

## **Environmental**

Work has commenced on a regional hydrocensus, which includes a survey of private bores and identification of watercourses, springs, seeps and dams. Monitoring locations will be identified and a sampling program will commence in October 2011.

Commitment to best practices in environmental management and current international standards specific to the uranium exploration and mining will be made, including the acknowledgement of a recent change in the World Health Organisation's (WHO) safe drinking water guidelines for uranium from 0.015 to 0.030 mg/L.

Water quality data will also be measured against the Australia and New Zealand Environment Conservation Council (ANZECC) Guidelines (2000) for the Protection of Stockwater and Aquatic Ecosystems. A minimum of two year baseline data will be collected for preparation of an Environmental Impact Statement (EIS). As part of QA/QC, a qualified in-house hydrogeologist will carry out the initial water sampling program. Field personnel will be trained for future sampling.

Historical data show levels of uranium and radionuclide in groundwater downstream from the orebody, exceeding that of the WHO safe drinking water limit. Water quality monitoring data collected will be used as an important consultation tool in the early stages of community and stakeholder engagement.

Local ginseng farmers were identified as one of the main stakeholders of the project. ANZECC Guidelines indicate a safe long term uranium limit of 0.01 mg/L for irrigation water. As much of the groundwater use is irrigation water for ginseng crops, health aspects of groundwater use will be addressed to the local farming associations as part of a community consultation process.

### **Corporate**

On 5 May 2011, Stonehenge announced to the ASX that it was in negotiation with a second party in regard to a potential acquisition. The potential acquisition resulted from a proposal to the Stonehenge Board by Tozai Holdings Inc. to acquire up to 51% of their uranium tenements in Korea, most notably Daejon 49.

A terms sheet was agreed upon, subject to the conditions being met in a Letter of Intent (LOI). A due diligence period of three months was granted in order to confirm the conditions outlined in the LOI. One of the key components of the due diligence was the agreed level of conversion from the prior KORES historic estimate of 23Mt of ore within Daejon 49 to a resource reported in accordance with the JORC Code.

Over the period that the terms of the LOI were being finalised, Stonehenge was advised by its independent resource consultant, Optiro, that based on available data supplied by KORES, an Inferred Resource of 17Mt @ 352 ppm U<sub>3</sub>O<sub>8</sub>, at a 200 ppm U<sub>3</sub>O<sub>8</sub> cut off, equating to 13.2M lbs U<sub>3</sub>O<sub>8</sub>, was calculated. When compared to the KORES resource evaluation of 23Mt @ 380 ppm U<sub>3</sub>O<sub>8</sub> equating to 19.3M lbs U<sub>3</sub>O<sub>8</sub>, this resulted in only 68% of the historic estimate being reported in accordance with the JORC Code.

Stonehenge advised Tozai of the Optiro results and, as this fundamentally changed the nature of the implied valuation in the Tozai proposal, Stonehenge formally withdrew from negotiations on 29 September 2011.

The two companies have since agreed to revisit the proposal when certain unspecified economic and business matters are clarified.

### **Management**

The Board of Stonehenge is pleased to announce that Mr Cheong-Hie Kim will join the company in Korea in the position of Senior Advisor.

Mr Kim was previously employed by BHP Billiton Korea. Co. Ltd from 2002 to 2008 as Senior Advisor and Representative Director. He had overall marketing responsibility of company products in Korea, including coal, iron ore, non-ferrous minerals, LNG/petroleum products, alloys etc. and his role

included management of customer relationship including POSCO, Korea power corporation groups, Korea gas corporation and Hyundai steel.

Prior to his position with BHP, Mr Kim was with the Samsung Group since 1978 in a variety of roles including 4 years with the Samsung Group in Sydney as Senior General Manager, Energy Department, and The Samsung Corp - International trading, 1998 to 2002 and General Manager, Export Department, Samsung America Inc. (New York)- 1987 to 1990.

From 1975 to Jan 1978 he was employed by Korea Resources Corp (KORES) as a Mining engineer-valuation of mine, expatriate to premier office, Republic of Korea.

Mr Kim is a graduate of The College of Engineering, the Yonsei University in Korea, the Delft University of Technology, Netherlands and the Seoul National University, Korea. He is also the technical advisor to the Korea Mining Industry Association.

### **Marketing**

Stonehenge metals will have an exhibition stand at the upcoming Mines & Money conference at Darling Harbour in Sydney on October 10th and 11th. The Managing Director, Richard Henning, and the Company's Chief Metallurgist, Dr Tony Chamberlain will be in attendance.

The Annual Report was submitted to the ASX and is available on the company website: [www.stonehengemetals.com.au](http://www.stonehengemetals.com.au)

Richard Henning, Managing Director, recently spent a prolonged period in Korea further establishing relations at political (central and local government) and business levels.

“There is no doubting that this project has the potential to deliver substantial economic benefits to Korea at both the strategic level and with regard to local employment and economic development. With our intent to form international collaborative agreements to ensure that this is one of the most exciting prospects for a Korea – Australia international partnership, we will continue to work towards the development of the first uranium mine in Korea, substantiated by best practice in mining and environmental regulations”.

As the world markets lament a Uranium sector which appears less than popular, the Korean President, Lee Myung-bak, at the recent UN conference in New York, re-affirmed Korean commitment to the Nuclear Generation era and confirmed that Seoul will host the G50 summit in March 2012 on Nuclear Power Safety.

### **Stonehenge Metals Limited**

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### **Competent Person Statement**

The information contained in this report that relates to Mineral Resources and exploration results is based on information compiled by Mr. Michael Andrew of Optiro Pty Ltd (ABN 63 131 922 739), which provides geological consulting services to Stonehenge Metals Limited. Mr. Andrew is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Andrew consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.