12 November 2007

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Company Announcements Office Australian Stock Exchange Limited Exchange Centre Level 4, 20 Bridge Street Sydney NSW 2000

Via electronic lodgement

Dear Sir/Madam,

Please find the following announcement for immediate release to the market. This announcement is made on behalf of the Bigrlyi Joint Venture partners being Energy Metals Limited with 53.3%, Valhalla Uranium Limited (a subsidiary of Paladin Resources Limited) with 41.7% and Southern Cross Exploration NL with 5%.

Yours faithfully,

-Of personal use only

LINDSAY DUDFIELD

Director.

12 November 2007

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Via electronic lodgment (4 pages)

# POSITIVE SCOPING STUDY FOR BIGRLYI PROJECT

Energy Metals, as manager of the Bigrlyi Joint Venture ("BJV"), is pleased to advise the results of an Initial Scoping Study in respect of the Bigrlyi Uranium and Vanadium Project ("Project"), demonstrating attractive economics and the potential to produce 8.43 million pounds (lbs) of  $\rm U_3O_8$  and 6.97 million lbs of  $\rm V_2O_5$  over a mine life of 8 years. The high grade uranium and vanadium Project is located 350 kilometres northwest of Alice Springs, in the Northern Territory, a jurisdiction which supports the development of new uranium mines.

Energy Metals is delighted with the results of the Initial Scoping Study and, subject to BJV approval, looks forward to fast tracking Prefeasibility Studies at Bigrlyi.

The Initial Scoping Study is based on a resource announced 2 March 2007 (4.53 Mt @ 0.14%  $U_3O_8$  & 0.16%  $V_2O_5$  at 0.5kg/t  $U_3O_8$  cut off). This resource does not include any results from drilling undertaken during the 2007 (ongoing) field season in which an extensional drilling program of some 315 holes, drilled outside of current resource envelopes is nearing completion. The 2007 drilling program has seen uranium mineralisation intersected in the majority of holes. Energy Metals believes that a material increase in the Bigrlyi resource will result from this drilling program, with further positive implications for the economics of the Bigrlyi Project.

Highlights of the Scoping Study include:

- Production of 8.43Mlb of U<sub>3</sub>O<sub>8</sub> and 6.97Mlb of V<sub>2</sub>O<sub>5</sub> over 8 year Mine Life from 2.73Mt ROM ore
- Conventional acid leach and solvent extraction
- 2007 drilling program expected to augment resource and enhance
   Project economics significantly
- Project economics still positive at lower uranium prices



### Introduction

An Initial Scoping Study has been completed into the potential economic development of the Bigrlyi Project by independent consultants Peter O'Bryan & Associates (POB). Michael Neubauer (principal mining engineer, POB) managed the mining and financial studies and Peter Banovich (principal metallurgist) of Metallurgical Project Consultants Pty Ltd (MPC) generated the treatment flow sheet, capital and operating costs estimates for the project.

Assumptions used for the Initial Scoping Study include a uranyl peroxide ( $U_3O_8$ ) price of US\$100 per lb (the current long term price is US\$95 per lb), a vanadium pentoxide ( $V_2O_5$ ) price of US\$4 per lb (currently US\$7.50 per lb) and an Australian dollar rate of US\$0.83 (currently US\$0.90). Other key assumptions include a treatment rate of 0.5 Mt per annum and  $U_3O_8$  and  $V_2O_5$  metallurgical recoveries of 95% and 70% respectively.

### Resources

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On 2 March 2007 Energy Metals announced Indicated and Inferred Resources for the Bigrlyi Project as summarised below:

**Indicated and Inferred Resources** 

Cut Off	Tonnes	U3O8	V <sub>2</sub> O <sub>5</sub>	U3O8	V <sub>2</sub> O <sub>5</sub>
(%)		(%)	(%)	(Kt)	(Kt)
0.05	4,530,000	0.14	0.16	6.50	7.41

The resources, which are contained in five deposits (A2, A3, A4, A7 & A15), were estimated using ordinary kriging by Hellman & Schofield Pty Ltd (H&S) and are shown at the 0.05% cut-off grade.

#### **Open Pit Mining**

Eight optimal pit shells were identified for pit design and associated physicals estimation. Scheduled ROM tonnages are estimated assuming dilution and recovery of 5% and 95% respectively. Due to the relatively narrow width of resource lenses a high degree of mining selectivity is envisaged in order to minimise dilution.

In summary the consolidated open pits deliver total ROM ore of 2.08Mt @ 1,598ppm  $U_3O_8$  and 1,658ppm  $V_2O_5$ , containing 7.33Mlb of  $U_3O_8$  and 7.60Mlb of  $V_2O_5$ .

## **Underground Mining**

The Initial Scoping Study assessed resource exploitation below conceptual pit designs using conventional decline access and stoping methodologies. The principal stoping methods chosen for Bigrlyi is Bench and Uphole Retreat stoping. A minimum mining width of 4m is nominated.

Consolidated underground physicals for underground operations include: ROM ore hoist 648kt @ 1,078ppm  $U_3O_8$  and 1,642ppm  $V_2O_5$ ; and contained  $U_3O_8$  and  $V_2O_5$  of 1.54Mlb and 2.35Mlb.



### Mine Scheduling

Indicative mine scheduling based on likely mining fleet capacity and target mill throughput suggests a mine life of 8 years. Key features of this schedule include:

- Life-of-Mine ROM ore production of 2.73Mt @ 1,474ppm U<sub>3</sub>0<sub>8</sub> and 1,654ppm V<sub>2</sub>0<sub>5</sub>, of which 76% is sourced from open pit operations;
- Achievement of treatment plant name plate throughput in the second year of mine operations; and,
- Commencement of underground development and completion of open pit activity in the third and fifth years of mine operations respectively

A reduction in treatment throughput occurs in the sixth year of mine life with transition to plant feed sourced from underground operations only.

The report envisages up to five open pits being mined concurrently. Achievement of material movement rates will require a flexible mining fleet and detailed attention to mine scheduling.

### **Processing**

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Historic metallurgical testwork has indicated the amenability of the Bigrlyi ore types to sulphuric acid leaching at fine grind sizes. The Initial Scoping Study assumes that acid leaching will be employed, followed by conventional solvent extraction and precipitation of yellow cake  $(U_3O_8)$  and vanadium pentoxide  $(V_2O_5)$  products. The limited metallurgical test work undertaken so far indicates high acid consumptions which have been incorporated into the scoping study costs. It is expected that metallurgical test work already programmed, if positive, will see a significant reduction in this cost.

Whilst a number of alternate options exist for uranium and vanadium production it is considered that the conventional design assumed for the study represents the most conservative selection with well understood design and operating requirements.

Preliminary plant design assumes a treatment rate of 500,000 tonne per annum.

# **Capital Costs**

Site capital costs (determined to a nominal accuracy of ±30%) are estimated by MPC to be in the order of \$70 million. This includes the treatment plant, tailings handling and EPCM costs but excludes mine development capital and surface mining infrastructure.

#### **Conclusions**

Energy Metals is delighted with the results of the Initial Scoping Study for the Bigrlyi Uranium and Vanadium Project, which demonstrate that the Project is economically attractive and, based on current resources, has the potential to produce 8.43 million lbs of  $\rm U_3O_8$  and 6.97 million lbs of  $\rm V_2O_5$  in concentrate over a mine life of 8 years. Furthermore the Project is located in the Northern Territory, a jurisdiction which supports the development of new uranium mines.



The Scoping Study also identified that potential exists to enhance Project economics and hence profitability with only modest improvement in insitu resource physicals, particularly in and about both open pit and underground mining positions evaluated by the study.

Results from an extensional drilling program (315 holes) currently underway at Bigrlyi indicate that a material increase in the Project resource is likely, with the upgraded resource due to be announced late in the March 2008 quarter.

This larger resource will then be re-scoped using appropriate parameters, with an expected improvement to the economics of the Bigrlyi Project anticipated.

LINDSAY DUDFIELD

**Executive Director.** 

Note: The information in this report relating to Exploration Results is based on information compiled by Lorry Hughes BSc, MAusIMM. The information in this report relating to mineral resources is based on information compiled by Lorry Hughes who has more than five years relevant experience in estimation of mineral resources and the mineral commodity uranium. Mr Hughes is a full time employee of Energy Metals Limited and takes responsibility for the quality of the data and geological interpretations. Mr Hughes has sufficient experience relevant to the assessment of this style of mineralisation to qualify as a Competent Person as defined in the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code". Mr Hughes consents to the inclusion of the information in the report in the form and context in which it appears.

The information in this report is based on information compiled by Mr. Michael Neubauer, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Neubauer is a full-time employee of Peter O'Bryan & Associates 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 a Competent Person as defined in the 2004 Edition of the 2004 of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Neubauer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.