

**ASX** Announcement

ASX Code: DYL

19 October 2011

# SHIYELA IRON PROJECT METALLURGICAL TESTWORK UPDATE

# **KEY POINTS**

- ProMet Engineers Pty Ltd (ProMet) has supplied Deep Yellow with interim results from its Phase 2 metallurgical testwork programme for the Shiyela Iron Project.
- A coarse grained (with 80% passing -150 micron (μ)) high quality Blast Furnace grade clean concentrate can be produced.
- The 69% Fe magnetite concentrate, with around 1.5% silica, has very low deleterious elements that should attract a premium price.
- The weight recovery from samples collected from the core was between 18% and 32%.
- Shiyela's capital cost and energy consumption are likely to be comparatively low as a result of the coarse grained concentrate, with estimated plant CAPEX at ~US\$100 per annual tonne of product.
- The project also has a significant location advantage, being only 45 kilometres from the Walvis Bay port.
- The concentrate will be produced at the minesite and transported to the port by truck although there is potential for a slurry pipeline.
- ProMet has commenced a Scoping Study based on an initial production of 2 Mtpa magnetite concentrate with completion expected mid-December.

Advanced uranium explorer, **Deep Yellow Limited** (ASX : **DYL**) is pleased to announce that ProMet Engineers Pty Ltd (Perth) has provided interim results for the second phase metallurgical testwork for its Shiyela Iron Project located in Namibia. The testwork, conducted on 450 kilograms of composited drill core samples from the M62 and M63 Shiyela magnetite deposits, demonstrated that a high quality coarse grained Blast Furnace clean concentrate could be produced.

Deep Yellow Managing Director Greg Cochran said this was another encouraging step for the company's Shiyela Iron Project. "These results have given us the confidence we needed to commence the scoping study, which should be completed in two months. With this and the expected completion of JORC Resource estimates by the end of November, Deep Yellow will be well positioned to decide the next steps to be taken on the project in the new year."

He added "the coarse grind, together with the outstanding quality of the product, are two significant advantages for Shiyela, in addition to its favourable location." (See Figure 1.)





Figure 1: Shiyela Iron Project – Locality and Infrastructure

# **Process Flowsheet**

The minesite-located process plant will be designed to produce a final product at 80% passing -150  $\mu$  using a wet Low Intensity Magnetic Separation (LIMS) circuit. The basic flowsheet will consist of a two-stage crushing circuit followed by High Pressure Grinding Rolls and inter-stage magnetic separation producing a 400  $\mu$  pre-concentrate feeding a milling/magnetic separation circuit to produce the final product. Additional information on the crushing and grinding circuit is given in Appendix 1.

# **Product Quality**

It is anticipated that the Blast Furnace grade concentrate will have similar characteristics to those obtained in previous tests, which were released by DYL earlier this year:

Fe	SiO <sub>2</sub>	Al2O3	Р	S	LOI
69.70	1.66	0.99	0.005	0.073	-3.23

# **Scoping Study**

Based on these results, DYL has instructed ProMet to commence a Scoping Study. With the exception of concentrate assay results, which are expected within a week from an external laboratory, ProMet has all the information required to commence the study.



# **Resource Work**

The results of the metallurgical testwork provided by ProMet, in addition to the recently completed DTR programme at RUN's laboratory in Namibia, will enable Golder Associates Pty Ltd (Perth) to immediately commence resource modelling for Shiyela. It is anticipated that JORC compliant resource estimates for both the M62 and M63 deposits will be finished by the end of November 2011.

### Logistics

Shiyela's close proximity to the Walvis Bay port is a major advantage. It is expected that initially the concentrate will be trucked to the port and therefore the moisture content of the product will be at an appropriate level to minimise dust (~9%). However even at 2 Mtpa a slurry pipeline may be more cost effective and will be evaluated as a part of the scoping study.

A transhipment solution will be considered for Walvis Bay to address draught restrictions at the port.

### Mining

As can be seen from the cross-sections presented in Appendix 2, there is good potential for bulk mining with minimal internal waste at both the M62 and the M63 deposits. The cross-sections show estimated percentage magnetite by physical separation and the magnetic susceptibility on a metre by metre basis as logged for each drill hole.

### ENDS

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For further information on the Company and its projects - visit the website at www.deepyellow.com.au

#### Compliance Statement:

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Leon Pretorius, a Fellow of The Australasian Institute of Mining and Metallurgy. Dr Pretorius 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Pretorius consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### About Deep Yellow Limited

Deep Yellow Limited (DYL) is an ASX-listed, advanced stage uranium exploration Company with extensive operations in the southern African nation of Namibia and in Australia. It also has a listing on the NSX.

DYL's primary focus is in Namibia where its operations are conducted by its 100% owned subsidiary Reptile Uranium Namibia (Pty) Ltd (RUN). Its flagship is the Omahola Project currently under Pre-Feasibility Study with concurrent resource drill-outs on the high grade Ongolo Alaskite – INCA trend.

In Australia the Company is focused on resource delineation of mid to high grade discoveries in the Mount Isa district in Queensland and also owns the Napperby Uranium Project and numerous exploration tenements in the Northern Territory.



# Appendix 1

# Process Flowsheet

The process plant will be designed to produce a final product at 80% passing -150  $\mu$  using a wet Low Intensity Magnetic Separation (LIMS) circuit. Medium Intensity Magnetic Separation (MIMS) and Wet High Intensity Magnetic Separation (WHIMS) gave no significant grade improvements in the testwork and have therefore not been recommended by ProMet.

The conceptual preliminary plant design is as follows:

### **Crushing circuit**

A two-stage crushing circuit is envisaged with a primary gyratory crusher forming the first stage of the circuit feeding a vibrating screen at -32 mm, with oversize going into a secondary cone crusher in an open circuit as the High Pressure Grinding Roll (HPGR) circuit is able to accommodate some oversize material.

# **Grinding circuit**

HPGR technology will be used to grind the coarse crushed ore to a -400  $\mu$  pre-concentrate product with inter-stage wet Low Intensity Magnetic Separation resulting in an approximate 50% weight rejection.

### Milling circuit

The -400  $\mu$  HPGR product will be ground further in a standard ball mill to produce a final product at 80% passing -150  $\mu$ , which after the cleaner magnetic separator circuit will produce a 69% Fe product which will be stored ready for transfer to Walvis Bay.

The final concentrate will be de-watered by a belt filter down to an appropriate moisture content to minimise the potential for dust creation (expected to be around 9%). Tailings would be dewatered and thickened prior to placement with a suitable design to minimise water loss from the process.

# Product Transport

It is envisaged that the concentrate will initially be trucked to the Walvis Bay port although even at the 2 Mtpa production rate a slurry pipeline may be more cost effective. This will require a 45  $\mu$  product and is an option that will be considered in the scoping study.





Figure 2: Overall Process Flow Diagram



Appendix 2



Figure 3: M62 Cross-Section – Physical Magnetite Estimate and Magnetic Susceptibility



Figure 4: M63 Cross-Section – Physical Magnetite Estimate and Magnetic Susceptibility