

Quarterly Activities Report
Quarter ended 31st December 2015

Exploration Activities

NSW

EL6463 (100%)

EL6874 (100%)

EL7975 (100%)

Development

The **Surface and Groundwater** assessment is the major current and remaining project critical component of the EIS and therefore was the focus for the quarter. The proposed project design criterion is for zero release to the environment. Water requirements for the operation can be sourced from either surface harvesting, dewatering of the Lloyds workings or making use of the nearby Burruga Dam; or some combination of these. Usage of ground and or surface water in NSW requires a license which may only be granted once a ground water model is completed. Coffey Geotechnics Pty Ltd ("Coffey") has assisted the Company in establishing the water monitoring bores and during 2015 created the hydrogeological conceptual model and the numerical groundwater model from the data collected during the year from the water monitoring bores. Coffey is a recognised consultancy well-versed in the hydrogeological requirements for mine permitting in NSW.

Based on the results of the two models Coffey demonstrated that they were compliant with what was outlined in the Ground Water Modelling Plan presented to NSW Office of Water (NOW) in September 2014 and indicated that existing groundwater levels are quite stable and do not respond significantly to rainfall events. Groundwater Dependent Ecosystems and registered bores are unlikely to be impacted by the development. On this basis the company's groundwater consultant Coffey advised NSW DPI Water that it considers 12 months of groundwater level monitoring to be a sufficient basis for groundwater modelling of the mine operation and to provide baseline data for subsequent assessment of impacts.

Coffeys are investigating the possibility of completing the surface water modelling in conjunction with the groundwater modelling to finalize the site water balance and complete these components of the EIS. This work is expected to be completed in the 1st quarter of 2016.

Elysium Resources Limited

ABN 45 115 593 005

Suite 705, 3 Spring Street, Sydney NSW 2000

PO Box H238, Australia Square NSW 1215

Phone: +61 2 9247 7744

Fax: +61 2 9247 7244

Email: info@elysiumresources.com.au

Web: www.elysiumresources.com.au

The initial design of the **Stage 1 Tailings Storage Facility (TSF)** has been completed. It has a crest level at RL 840 and this provides a storage capacity of 375,000m³. This will be enough storage capacity for the first 18 months of start-up and operations. The purpose of Stage 1 is to build a TSF to get the project into operation for the lowest capital cost. The additional costs of future stages will be funded from sustaining capital. Building the Stage 1 to the RL 840 level significantly reduces the costs of clay lining the TSF in the early stages of development as a natural clay lining exists in the footprint below this RL 840.

As announced on October 8th, an extensive **metallurgical test work program** was completed on samples of diamond core drilled specifically for the collection of metallurgical samples. The samples consisted of one fresh bulk sample and 10 smaller variability samples representing variances in location, grade and oxidation state. Copper exists as chalcopyrite within the fresh ore alongside pyrite, galena, sphalerite, at times arsenopyrite, and minor levels of silver, gold and indium.

The comminution results showed that the ore will be easily crushed and ground to the desired size range in a conventional crushing and ball mill circuit. A Bond mill work index of 11.1 kwh/t was obtained for the bulk sample and ranged from 10.3 to 13.2 kwh/t for the fresh variability samples, which is lower than the average for copper ores.

Flotation response of all the fresh ore samples was excellent with high copper recovery and low reagent consumption at an optimised grind of $P_{80}=125\ \mu\text{m}$. A six stage locked cycle test on the bulk sample resulted in +95% recovery while maintaining a copper concentrate grade of 25%. Depression of pyrite using SMBS during rougher flotation was required to reduce pyrite contamination in the concentrate. Although not present in the bulk sample flotation concentrate, varying levels of zinc and lead contamination occurred in the fresh variability sample concentrates.

The transition ore samples tested gave low recoveries across a range of head grades when using Controlled Potential Sulphidisation (CPS) for the recovery of oxide copper minerals. While the near surface transition material accounts for only around 10% of the in-situ resource being considered for mining, further test-work will be considered to allow this material to be processed alongside the in-situ primary material, tailings and slag dumps.

Precious metals were upgraded to the concentrate.

Material handling with regard to thickening, filtration and pumping holds no concern.

Plant, Infrastructure and Engineering Pty Ltd (PIE) were awarded the contract to complete the **Process Design** for the process plant. The scope included a review the metallurgical test work data for validation and determination if any more test work is required. The development of the mass balance for the process design and produce the equipment sizing and require process flowchart for the engineering design. Based on the initial metallurgical test results for the three different ore sources it was decided that the fresh ore be processed prior to the tailings stockpile. The fresh ore will be exposed in the mine pre-strip for the TSF construction. This is a variation to 2011 PFS which processed the tailings first. (PIE) has issued the final report on the fresh ore process design work, summarized as follows. For the Lloyds material a feed grind size P_{80} of 125 μm produced similar copper flotation kinetics and copper recovery to a grind size P_{80} of 75 μm . The copper grade versus

recovery curve was improved at the 125 µm size, and this was chosen as the design grind size. The flotation rate of the chalcopyrite was fast, with 99% of the floatable copper recovered in three minutes of rougher flotation. The remaining 10 minute rougher 3 recovered 1% of the copper and 28% of the NSG in the combined rougher concentrate. Fresh ore recovery of 90% or more (depend on head grade) should not be a problem.

Mincore Pty Ltd (Mincore) was awarded the contract to develop a **Capital Cost Estimate** +/- 15% for the process plant design, equipment procurement and construction of the process plant and associates services.

The deliverables were;

- Capital Cost Estimate Report with quotations from supplies for the equipment selected.
- Bill of Quantities for construction.
- Cost estimate for the detailed plant engineering.
- 3D viewing model of the process plant, available for “slicing” for plant layout.

Mincore completed the scope in late December. This model was required for “slicing” the plant layout to obtain information for various parts of the EIS to be completed. The process design criteria supplied by PIE was utilized to develop the preliminary process plant design. This plant design was then used to develop an equipment selection and sizing list, which was forwarded to suppliers for quotation. Mincore produced a report that contained the basis of the design; process design criteria used; process plant description; site layouts; equipment lists and project schedule. The capital cost estimate provided the design cost and both direct and indirect costs for the engineering procurement and construction of the process plant. It contains the assumptions and quotation from suppliers used to develop the estimate. The company has developed an estimate for the construction of the TSF, earthworks and owners costs. This estimate will be used in conjunction with updated operating costs to develop a full financial model and full feasibility early in 2016.

Process plant layout and conceptual diagrams have been included in the December half year operations report.

Exploration

Exploration was limited to reporting and database validation activities.

Indonesia – Malang Project

IUP (Industrial) number: 180/005/IUPE/421.302/2013 (earn to 67.5%)

No work was conducted during the quarter.



WA

Horseshoe South Project

EL52/2569 (100%)

Horseshoe Metals Ltd (ASX:HOR) is managing this tenement under an option agreement.

HOR has had a change in management and EYM is awaiting a reply on when the drilling under the agreement is to be completed.

Neb Zurkic

Director

25 January 2016

EYM tenements held as at 31st December 2015.

Permit Type	Permit Number	Location	Held Via	Beneficial %	Agreement Type
EL	6463	Australia, NSW	BC Exploration Pty Ltd	100.0%	
EL	6874	Australia, NSW	BC Exploration Pty Ltd	100.0%	
EL	7975	Australia, NSW	BC Exploration Pty Ltd	100.0%	
E	52/2569	Australia, WA	Elysium Resources Limited	100.0%	Under option
IUPE	421.302/2013	Indonesia, JAVA	Malang Resources Pty Ltd	67.5%	Farm-in

JORC Compliance Statement

The information in this announcement that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore reserves is based on information reviewed or compiled by Neb Zurkic BAppSc(Geol), MSc(Min & Energy Economics), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and a Registered Professional Geoscientist with the Australian Institute of Geoscientists. Mr. Zurkic is employed by Zurkic Mining Consultants Pty Ltd. Mr. Zurkic has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr. Zurkic consents to the inclusion in this announcement of the matters based on his

information in the form and context in which it appears. Zurkic Mining Consultants Pty Ltd, which is owned and controlled by Mr. Zurkic, owns shares in Elysium Resources Limited and provides consulting services as required to both companies.

Exploration Targets

References to Exploration Targets or Targets in this document are in accordance with guidelines of the JORC Code (2012). As such it is important to note that the reported Targets are based on existing data, historical production and geology models. Any references to grade and quantity are conceptual in nature. Exploration carried out to date is insufficient to be able to estimate and report mineral resources in accordance with the JORC Code (2012). It is uncertain if further exploration will result in the determination of a Mineral Resource.

Reserves and Project Development

The information in this announcement that relates to Ore Reserves or Project Development is based on information reviewed or compiled by Dean Pontin BAppSc (Surv), Grad Dip (Mining), a Competent Person, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Pontin is employed by Lesmau Pty Ltd. Mr. Pontin has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Mineral Resources and Ore Reserves”. Mr. Pontin consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Lesmau Pty Ltd, which is owned and controlled by Mr. Pontin, owns shares in Elysium Resources.

