

**ASX ANNOUNCEMENT**

Australian Securities Exchange  
Companies Announcements Office  
ASX Limited  
Level 40, Central Park  
152-158 St Georges Terrace  
PERTH WA 6000

**POSITIVE PETROLOGICAL/PETROPHYSICAL TEST RESULTS**  
**MARK ANOTHER STEP FORWARD FOR MARY VALLEY**  
**MANGANESE PROJECT**

**Highlights**

- Results of petrophysical testing from the historical Amamoor and Upper Kandanga manganese mines suggest that primary mineralisation continues at depth for both areas.
- Results also point to most effective techniques for further exploration
- Testing suggests that ground based IP/ Resistivity surveys will be an effective, precise geophysical exploration method to delineate blind mineralisation along strike from and at depth below known mineralised zones.
- Testing also suggests that a detailed low-level airborne magnetic survey could be an effective tool to indicate zones of potential manganese mineralisation in areas of rugged terrain with dense vegetation.
- Petrological examination supports classification of the mineralisation style as Cuban-type of Volcanogenic Manganese Deposits.
- Most of the mineralisation consists of primary manganese minerals (e.g. hausmannite).
- The results mark another solid step forward following:
  - granting of West Mary Valley exploration permit for minerals (EPM) bringing total tenement area to 209.8 km<sup>2</sup>
  - mapping of geological control of mineralisation
  - identification of potential for at least 167,000t of high grade manganese mineralisation

Eclipse Metals Ltd is an Australian exploration company focused on exploring the Northern Territory and Queensland for multi commodity mineralisation. The company has an impressive portfolio of assets prospective for gold, manganese, iron ore, base metals and uranium mineralisation. The Company's mission is to increase Shareholder wealth through capital growth and ultimately, dividends. Eclipse plans to achieve this goal by exploring for and developing viable mineral deposits to generate mining or joint venture income.

**BOARD**

Carl Popal  
Executive Chairman

Pedro Kastellorizos  
Executive Director

Rodney Dale  
Non-Executive Director

**COMPANY SECRETARY**

Eryn Kestel

**REGISTERED OFFICE**

C/-NKH Knight  
Unit 19  
Level 2, Spectrum  
100 Railway Road  
Subiaco WA 6008  
Phone: +61 8 9367 8133  
Fax: + 61 8 9367 8812

**PRINCIPAL PLACE OF BUSINESS**

Level 3, 1060 Hay Street  
West Perth WA 6005  
Phone: + 61 8 9480 0420  
Fax: + 61 8 9321 0320

**AUSTRALIAN BUSINESS NUMBER**

85 142 366 541

**SHARE REGISTRY**

Security Transfer Registrars  
770 Canning Highway  
Applecross WA 6153

**ASX CODE**

EPM

**WEBSITE**

[www.eclipsemetals.com.au](http://www.eclipsemetals.com.au)

The Directors of Eclipse Metals Limited (“**Eclipse Metals**” or the “**Company**”) (**ASX: EPM**) are pleased to announce results from petrological and petrophysical testing of samples from the Mary Valley Manganese Project.

The petrological and petrophysical testing follows a succession of positive steps to understand and measure manganese mineralisation in the area of historic workings.

## **BACKGROUND**

Located about 15 km south of the town of Gympie in southeast Queensland, the Company's tenements cover areas of high grade outcropping manganese mineralisation which hosted small-scale mining during the 1920s and 1960s.

Within the three tenements comprising Eclipse's Mary Valley Manganese Project there are at least 22 occurrences of known manganese mineralisation.

The Company holds the Amamoor and Upper Kandanga tenement which, with the granting this month of West Mary Exploration Mineral Permit (EPM25698), has now extended its tenement holdings over the Mary Valley Manganese Field to 209.8 km<sup>2</sup>.

There is substantial exploration upside with geological evaluation of old reports over historic workings indicating the potential for significant tonnages of siliceous manganese ore. Recent rock-chip samples from the Amamoor workings returned assays up to 52% Mn and from the Upper Kandanga prospect up to nearly 41% Mn.

There has been no previous systematic modern exploration for manganese deposits within the project area and the Company has now advanced the project significantly.

To date Eclipse has only examined a small part of the high grade mineralised areas within the overall Project. Another six historic mined areas are yet to be geologically assessed with the objective of delineating larger potential resources of manganese mineralisation than apparent from historical production.

This year, a greater understanding of mineralisation in the Amamoor and Upper Kandanga prospects has been achieved through geological mapping, sampling and petrophysical / petrological testing.

Currently within the two areas, geological evaluation by Eclipse has indicated the potential for at least 167,000t of high grade manganese mineralisation with grades of 40% Mn or greater.

Historical ore and waste dumps will provide bulk samples and may constitute an initial source of saleable "ore." With a cost effective beneficiation process, the company would have an immediate cash flow.

Further exploration techniques are being determined on the basis of the petrological and petrophysical testing and programs to include 12 vertical diamond drill-holes at Amamoor and 11 holes at Upper Kandanga have been designed to test projected exploration targets.

Gympie is a major regional centre and a gold mining area with associated infrastructure and services including 138km road and rail links south to the port of Brisbane.

## **PETROPHYSICAL AND PETROLOGICAL TESTWORK**

Seven samples of rocks, representing mineralisation and barren host rocks were submitted to Southern Geoscience Consultants for comprehensive petrophysical testing. An additional eight samples were tested for magnetic susceptibility and conductivity.

Three of the samples subjected to comprehensive petrophysical testing were also sent to Townend Mineralogy Laboratory for petrological investigation (table below). These samples were selected to represent low to high grade manganese mineralisation from the Amamoor and Upper Kandanga historical mine areas.

### **Samples submitted for Petrophysical & Petrological investigation**

Test Sample I.D	Description
PP04	Equivalent to PS055 (18.2% Mn) Northern Working Amamoor
PP05	Equivalent to PS060 ( 52.1% Mn) Central Workings Amamoor
PP07	Equivalent to PS039 (40.9% Mn) Upper Kandanga

#### **Main findings of Petrophysical testing:**

1. Mn mineralisation is significantly more magnetic than the surrounding country rocks.
2. Mn mineralisation is non-conductive, in contrast to the country rocks.
3. Mn mineralisation is significantly more dense than the surrounding country rocks.

#### **Implications for exploration:**

1. Magnetic surveys, gravity surveys and I.P./resistivity surveys would be effective geophysical exploration methods. Both gravity and I.P./resistivity are ground-based and would present logistical difficulties and greater expense.
2. A low-level, close line-spaced air-borne magnetometer survey by fixed-wing aircraft is likely to be the most cost-effective initial method of remote sensing exploration.
3. Follow-up IP/resistivity surveys, which recognise robust contrasts between low to average and high grade Mn mineralisation, could be highly effective for mapping mineralised systems in areas indicated by the airborne magnetic survey.
4. The fact that some Mn mineralisation is strongly magnetic will be of great assistance in evaluating the potential of some prospects such as Amamoor West, Skyring Creek and Eel Creek.

#### **Main findings of Petrological investigation:**

1. The mineralisation and host rocks have been metamorphosed which is evident from textures with well-developed triple-point intersections of grain boundaries and mineralogy (i.e. presence of garnet, piemontite, tephroite).
2. Mineralisation definitely pre-dates folding and metamorphism.
3. The mineralogy supports a Cuban classification as the style of mineralisation.
4. Most of the mineralisation consists of primary manganese minerals (e.g. hausmannite). Supergene manganese mineralisation is mostly present as amorphous material and comprises only a small proportion of the whole.
5. The compositional contrast between PP05 and PP07, i.e. dominant hausmannite vs dominant braunite, may indicate a difference between mineral compositions at different prospects (Amamoor vs Upper Kandanga) or may reflect different mineral composition related to grade.

Note - The observed mineralogy confirms many observations made by Oswald (1992).

#### **Implications of Petrological investigation:**

1. It appears that the exposed remnant mineralisation is mostly primary which is supported by field observations.
2. The Mn grade range of samples collected from the workings are likely to be representative of the grade of mineralisation continuing at depth at both Amamoor and Upper Kandanga.

3. Although hausmannite is essentially non-magnetic, it can be altered by hydrothermal fluids (addition of Fe) and become very magnetic; the strong magnetic response of some samples submitted to additional testing may be due to the presence of altered hausmannite. This characteristic can be exploited in future geophysical exploration.

**END**

**For and of behalf of the board.**



Pedro Kastellorizos  
Executive Director

For further information please contact:

Carl Popal  
Executive Chairman  
T: +61 8 9480 0420

Pedro Kastellorizos  
Executive Director  
T: +61 8 9480 0420

*The information in this report that relates to Exploration Results together with any related assessments and interpretations is based on information compiled by Mr Peter Spitalny on behalf of Mr Pedro Kastellorizos and Mr Giles Rodney (Rod) Dale, both Directors of Eclipse Metals Limited. Mr Spitalny is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the styles of mineralisation under consideration and to the activity which he has undertaken to qualify as a Competent Person*

*Mr Dale is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported to qualify as a Competent Person as defined in the 2012 Edition of the .Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Kastellorizos is a geologist with over 17 years of experience relevant to the styles of mineralisation under consideration and to the activity which he is undertaking as Executive Director.*

*Mr Peter Spitalny consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The Company is not aware of any new information or data that materially affects the information in this report and such information is based on the information compiled on behalf of company Geologists, Executive director Mr Pedro Kastellorizos and Non-Executive Director Mr Giles Rodney (Rod) Dale.*

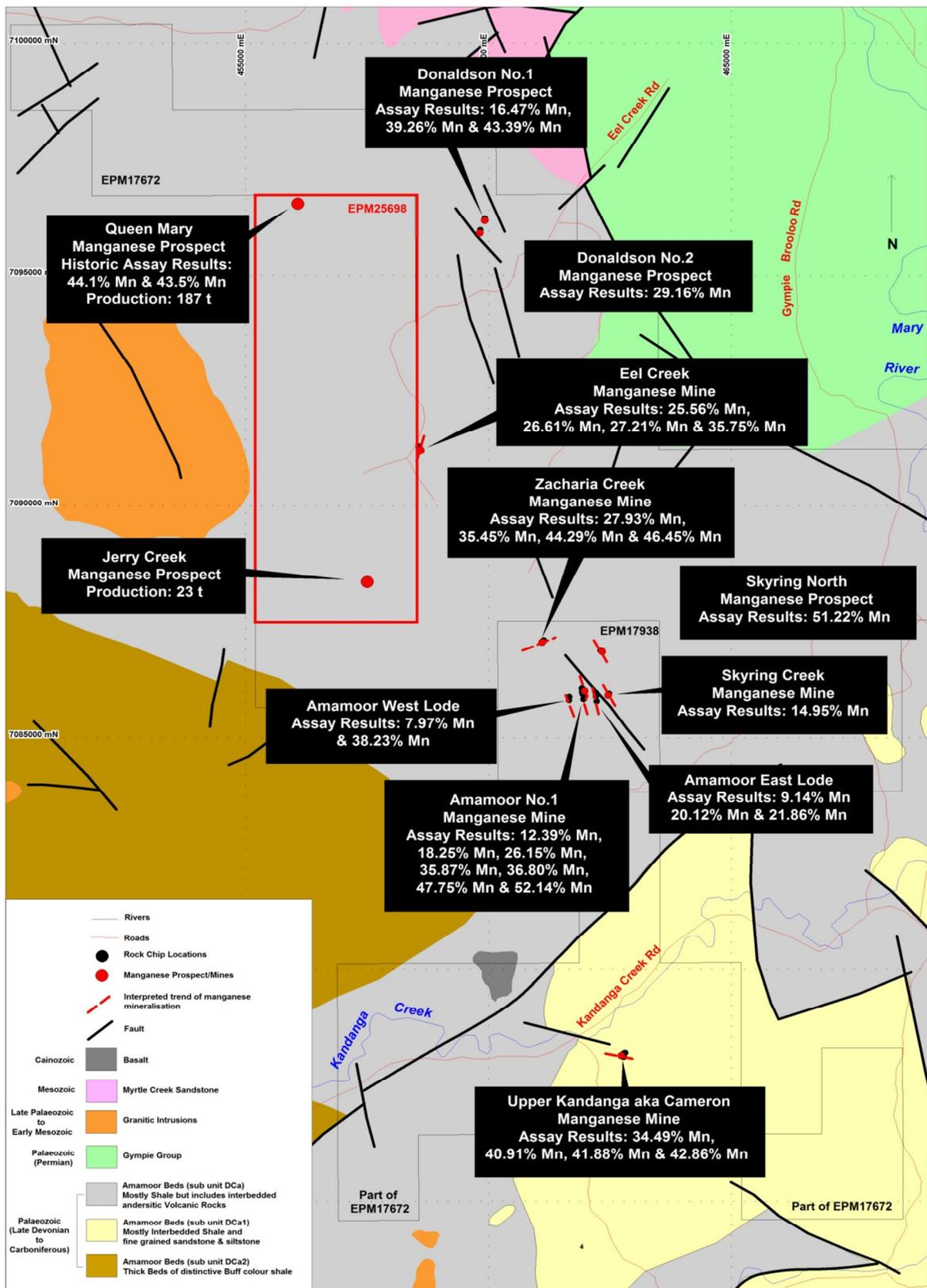


Figure 1: Regional Interpreted Geology Map showing Eclipse sample locations and Mn% with new granted EPM25698 Area (outlined in red boundary)

**Reference**

Ostwald, J. (1992) Mineralogy, paragenesis and genesis of the braunite deposits of the Mary Valley Manganese Belt, Queensland, Australia. Mineralium Deposita 27, p326-335