

# MEDCALF PROJECT UPDATE

## HIGHLIGHTS

- **METS Engineering appointed to complete updated PFS study**
- **Bulk sample extraction completed for metallurgical test work**
- **Environmental studies completed to address PER comments**

Audalia Resources Limited (ASX:ACP) (**Audalia** or the **Company**) is pleased to provide an update on activities at the Medcalf Project, a vanadium-titanium-iron project located approximately 470 kilometres south east of Perth near Lake Johnston, Western Australia.

### Updated PFS study

Audalia completed a pre-feasibility study (**PFS**) in 2016 based on a hydrometallurgical process route to produce titanium dioxide, vanadium pentoxide products and iron oxide ( $\text{Fe}_2\text{O}_3$ ) and copperas ( $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ ) by-products (refer to ASX announcement dated 9 March 2016). The identified process route included beneficiation, acid leaching, solvent extraction, precipitation and calcination. The PFS was also based on the Mineral Resource estimate released to ASX on 18 August 2014.

Audalia has since been investigating options to improve the economic outcomes of the Medcalf Project and reduce the environmental impact of the Project. The Company has focused on securing the necessary licences and approvals, in particular the primary environmental approval, required for the development of the Medcalf Project.

Metallurgical test work has also been prioritised and alternative process routes have been investigated to further optimise and de-risk the Medcalf Project with simplified process and different products (refer to ASX announcements dated 26 October 2017 and 28 September 2020). Audalia also reported an update to the Mineral Resource estimate on 18 August 2018 following completion of a reverse circulation drilling program of 89 holes for 3,794m.

Audalia has recently identified the possibility of producing a lump ore product to be used for blast furnace refractory liner protection. The proposed product is a direct shipping ore (DSO) type product only requiring crushing and screening to specified size range. Therefore, the capital and operating expenditure requirement for processing DSO will be less compared to the hydrometallurgical process identified in 2016 PFS.

The production of pig iron in the blast furnace is the most widely used method for iron making. Blast furnace is a large scale industrial reactor that converts iron oxide to usable pig iron using coke and coal as fuel. It is well recognised that one of the main limitations of the furnace life is the wear of the hearth refractories.

A proven approach to reduce the wear of the hearth refractory lining is the addition of titanium bearing materials in the furnace by means of forming scaffolds along the surface of the eroded hearth lining. This scaffold is rich in titanium, has a high melting point and act as protection agent to prevent the eroded hearth lining from further damage.

As a result, the Company has engaged METS Engineering to undertake an updated PFS study on the DSO.

METS Engineering is a Perth based independent consulting group specialising in mineral processing, engineering studies, training and specialist services. The updated PFS study will review and examine all new information since the 2016 PFS with the focus on the newly identified DSO lump ore product.

The updated PFS study information will be provided to a mining consultant for reporting a JORC compliant Ore Reserve estimate.

### **Metallurgical test work update**

A preliminary review of the current (2018) resource model has indicated through a series of optimisations, that high grade  $\text{TiO}_2$  ore could be mined from the existing mineral resource. As a result, the Company, in conjunction with Cube Consulting, identified an area suitable for extracting a high grade  $\text{TiO}_2$  bulk sample. Following the approval of the programme of work by the Department of Mines, Industry, Research and Safety (DMIRS), the bulk test sample programme was successfully completed by the Company in October 2021.

Approximate 12 tonnes of samples were extracted from the designated location and delivered to Nagrom to undergo metallurgical test work. A series of sample characterisation and metallurgical test work will be undertaken to determine the viability of producing refractory protection lump ore from the Medcalf Project.

The test work results will confirm if the Medcalf ore can be processed by crushing and screening to produce the lump ore product and meeting the required specifications. The metallurgical test work program is a critical component in the proposed updated PFS study.

The lump ore sample produced from the metallurgical test work will be provided to potential offtake customer for consideration and if acceptable, facilitate the offtake negotiation.

### **Environmental permitting update**

Various environmental studies have been completed by Audalia's environmental consultants to address the comments received during the Public Environmental Review (**PER**) period. The environmental study reports have been submitted to the Environmental Protection Authority (**EPA**) form part of the Response to Submission document submitted to the EPA on 8 October

2021. The Company awaits confirmation from the EPA in respect of the Response to Submission document.

This announcement was authorised to be given to ASX by the Board of Directors of Audalia Resources Limited.

**Authorised by:**

**Brent Butler**  
***CEO and Executive Director***

**Forward Looking Statements**

This announcement contains forward looking statements that are based on the Company's current expectations, intentions or strategies regarding future events and results.

Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions, and other factors, which could cause actual results to differ materially to future results expressed, projected, or implied by such forward looking statements.

The Company does not undertake any obligation to release publicly any revisions to any "forward looking statements" to reflect events or circumstances after the date of this announcement or to reflect the occurrence of unanticipated events, except as may be required under the applicable securities laws.

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