# Mandrake secures funding grant from the US Department of Energy

Date: 5 August 2024

ASX Code: MAN

Capital Structure
Ordinary Shares: 616,759,920
Current Share Price: 3.0c
Market Capitalisation: $18.5M
Cash: $14.9M (June 2024)
EV: $3.6M
Debt: Nil

Directors

Lloyd Flint
Non-Executive Chairman
Company Secretary

James Allchurch
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## Highlights

- **Mandrake, in conjunction with several pre-eminent technical groups, has been awarded US$1M by the US Department of Energy (DoE) to characterise and estimate reserves of Lithium and other critical minerals in the Paradox Basin**
- **The US has a stated policy of reducing the dependence on unreliable foreign Lithium supply chains by stimulating domestic exploration and production of Lithium**
- **Mandrake's successful qualification for DoE funding provides crucial validation of the Utah Lithium Project given DoE's rigorous selection process of grant applications**
- **Mandrake, in conjunction with other parties, has also lodged a further three funding applications with the DoE and affiliate agencies, with results expected over the coming months**

Mandrake Resources Limited (ASX: MAN) (Mandrake or the Company), together with Idaho National Laboratories (INL), the National Renewable Energy Laboratory (NREL) and the University of Utah, have been granted US$1 million to conduct relevant field work and research to address the following item: '*Characterizing and Estimating Reserves of Lithium and Other Critical Minerals in the Paradox Basin, Utah.*'

The US$1 million dollar in funding comes from the Geothermal Technologies Office (GTO), under the Office of Energy, Efficiency and Renewable Energy (EERE) in the US Department of Energy (DoE).

Managing Director James Allchurch commented:

'The successful qualification for US$1M of US Federal DoE funding is a fantastic vote of *confidence from the US government on the lithium potential of Mandrake's Utah Lithium Project and the greater Paradox Basin. Grant funds are always welcome, but of most importance to the Company is the building of strong partnerships with leading US government agencies and leveraging of those partnerships to progress the Utah Lithium Project.*

*Partnering with INL, NREL and the University of Utah will give Mandrake access to the foremost U.S. scientists and sophisticated U.S.-funded laboratories and thrust both Mandrake and the lithium potential of the Paradox Basin into the US national spotlight.*

*The US DoE is known to conduct rigorous and exhaustive assessments on funding applications, so the fact that a Mandrake-supported application has qualified for funding*

*will carry prestige and recognition from industry participants and potential US-based investors.*

*Outstanding funding opportunities and general support from the US government are currently available for US-based critical minerals projects as the US seeks to promote a domestic supply of critical minerals and navigate the geopolitical permutations of the new energy transition. Mandrake has an additional three DoE applications for funding that are outstanding.'*

**Idaho National Laboratory (INL) and National Renewable Energy Laboratory (NREL)**

Mandrake's partner, INL, is a DoE national laboratory and employs 6,169 people with a FY2022 budget of US$1.6B.

NREL is a federally funded research and development center sponsored by the DoE with 3,675 employees.

Both organizations have a deep understanding of the critical minerals space and bring an immense skillset to the lithium brines of the Paradox Basin.

## Project Objectives

The stated objectives of the project, as per the successful submission document, are to:

1) *assemble existing data on brine concentrations of Li and other critical minerals (CM) and generate new brine Li data by additional sampling from deep wells and;*

*2) combine geological, hydrological, geochemical, and modelling results to improve understanding of the resource, reserve, economic feasibility, and environmental sustainability of Direct Lithium Extraction (DLE) in the Paradox Basin in southeastern Utah*.

'The project aims to characterize and evaluate Li and other CM in brines produced from different geologic formations of the Paradox Basin in Utah. It will also collect and characterize corresponding reservoir and source rocks to conduct batch geochemical and reactive transport modelling, coupled with operational DLE scenarios to assess long-term economic viability of the resources. Finally, it will evaluate the potential environmental consequences of DLE operation(s) in the area with an emphasis on air quality, water quality, waste management, chemical usage, and induced seismicity. The successful characterization, economical, and environmental evaluation of Li resource in the area can lead to the establishment of DLE facilities and help supply Li to the nation for urgently needed green technologies as well as provide much needed economic boost to the local underserved community in the southeastern Utah.'

## About Mandrake

Mandrake is an ASX listed explorer, focused on advancing its large-scale lithium project in the prolific 'lithium four corners' Paradox Basin in south-eastern Utah, USA. The Company's 100%-owned tenure position exceeds 93,000 acres (~379km$^2$).

Mandrake has produced a significant Exploration Target (JORC 2012) for Lithium mineralisation which ranges from 1.7 to 5.6 million tonnes (Mt) of contained Lithium Carbonate Equivalent (LCE) and is currently establishing a maiden Mineral Resource.

The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Positioned within Utah's pro-mining jurisdiction, the project benefits from a favourable regulatory environment that supports mining activities. The project has access to Tier 1 infrastructure, including power and water resources.

Furthermore, the project aligns with the proactive efforts of the US government and industry to promote domestic exploration and production of strategic and critical materials.

**This announcement has been authorised for release by the Board of Mandrake Resources.**

**Competent Persons Statement**

The information related in this announcement has been compiled and assessed under the supervision of Mr James Allchurch, Managing Director of Mandrake Resources. Mr Allchurch is a Member of the Australian Institute of Geoscientists. He has sufficient experience that is relevant to the information under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Allchurch consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.