

Date: 5 December 2023

ASX Code: MAN

#### Capital Structure

Ordinary Shares: 615,759,920  
Current Share Price: 4.2c  
Market Capitalisation: \$25.2M  
Cash: \$15.5M (Sept 2023)  
EV: \$9.7M  
Debt: Nil

#### Directors

Lloyd Flint  
Non-Executive Chairman  
Company Secretary

James Allchurch  
Managing Director

Roger Fitzhardinge  
Non-Executive Director

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## Lithium Brine Sampling Successfully Completed

### Highlights

- Preliminary Lithium brine sampling of legacy oil and gas wells completed at Mandrake's 100%-owned Utah Lithium Project
- Five wells sampled with a total of six discrete sampling intervals
- Existing legacy well bore conditions confirmed as suitable for exploitation of Lithium brines
- Brine samples to be sent for laboratory analysis and DLE testing – 2/3 week turnaround
- Compilation of JORC-compliant Exploration Target underway
- Mandrake fully funded - \$15.5M

Mandrake Resources Limited (ASX: MAN) (Mandrake or the Company) is pleased to advise that it has successfully completed a preliminary Lithium brine sampling programme at its flagship 93,755 acre (~379km<sup>2</sup>) Utah Lithium Project.



Figure 1: 2 x 5L brine samples from the Lisbon B-912 well

### Preliminary Wireline Sampling Programme

Mandrake completed wireline brine sampling at five shut-in legacy oil and gas wells owned by local oil field owner Paradox Resources Inc (Paradox). Mandrake signed a Well Access Agreement with Paradox in May 2023<sup>1</sup>.

The wells were selected on the basis of the following:

- Proximity to major fault structures that may influence brine migration and thus play a role in the distribution of elevated lithium concentrations
- Total depth of the wells and depth of perforated interval – targeting reservoirs known to host brines with elevated lithium concentrations
- Down-hole well conditions and integrity of wellbore
- Wells awaiting workover approval from Bureau Land Management (BLM)

Existing wells have historically targeted the deeper Mississippian (Leadville) and Devonian formations, being the principal oil and gas productive horizons in the basin, however the Paradox formation has also been completed (perforated) in some wells as various sub-units have been proven to host hydrocarbons, such as the Cane Creek unit.

Well	Field	Status	Target Formation	Number of brine samples
Big Indian #1	Big Indian	Sampled	Paradox	2
Lisbon B-912	Lisbon	Sampled	Leadville	1
Lisbon D-89	Lisbon	Sampled	Paradox	1
Lisbon U D-84	Lisbon	Sampled	Leadville	1
Hook n Ladder Fed 15-25	Hook n Ladder	Sampled	Paradox	1

**Table 1: Preliminary wireline brine sampling - wells sampled**

A wireline unit from The Wireline Group (TWG) collected samples from five wells using a simple bailer configuration. Two wells originally scheduled in the programme, Lisbon U D-610 and Lisbon U D-84, were not sampled due to limitations of the wireline unit, however these wells remain as candidates for follow-up swab sampling.

The Hook n Ladder Fed 15-25 well was added to the programme, bringing a useful sample point from the Cane Creek unit (Paradox formation) which is distal to other wells sampled.

Each sample has been sent to an accredited laboratory for comprehensive analytical testing, with two larger bulk samples sent to two Direct Lithium Extraction (DLE) providers. Analytical results are expected within 2 – 3 weeks.

Once wireline results are received, together with Mandrake's extensive well hole and geophysical data set, a JORC-compliant Exploration Target can be estimated.

A swabbing unit will then be mobilised which will enable larger volumes of water to be removed from the well allowing for the ingress of brines representative of surrounding formations.

<sup>1</sup> See ASX Announcement 22 May 2023



**Figure 2: Wireline Sampling at the Hook n Ladder Fed 15-25 well**

**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.