

Date: 26 February 2024

ASX Code: MAN

Capital Structure

Ordinary Shares: 615,759,920
Current Share Price: 3.7c
Market Cap: \$22.8M
Cash: \$15.3M (Dec. 2023)
EV: \$7.5M
Debt: Nil

Directors

Lloyd Flint
Non-Executive Chairman
Company Secretary

James Allchurch
Managing Director

Roger Fitzhardinge
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Uranium Exploration Update

Highlights

- **ALS Global has reported that three of the six rock chip samples submitted for analysis exceed radiation levels for safe handling at their laboratory in Reno, Nevada**
- **Samples require a lead-lined container and radiation monitoring equipment for transit to a laboratory equipped to process/analyse high radiation material**
- **Market to be updated on results timing once samples arrive at high-radiation laboratory**
- **Results of remaining rock chip samples (that did not exceed radiation limits) expected shortly**
- **Mandrake strategically staking additional claims targeting uranium – 183 acres staked as of today's date**

Mandrake Resources Limited (ASX: MAN) (Mandrake or the Company) completed preliminary field work designed to assess the uranium potential of its 93,755-acre Utah Lithium Project located in the Lisbon Valley mining district (see ASX announcement 7 February 2024).

Several anomalously radioactive outcrops were located and sampled for laboratory testing, including outcropping areas where uranium mineralisation was preliminarily identified as carnotite, uraninite and potentially covellite. A total of six samples were collected and submitted to ALS Global's (ALS) laboratory in Reno, Nevada for analysis.

ALS has advised that three of the six rock chip samples exceed ALS's radiation safety guidelines (3 microsieverts/hour) and cannot be processed in Reno.

The samples are to be treated as hazardous materials, placed in a lead-lined container within a DOT 7a steel drum and shipped to a laboratory facility equipped to process and analyze high radiation material. The samples are to be accompanied by a Geiger-Mueller meter to monitor radiation in transit.

Mandrake will update the market on results timing once samples arrive at the high-radiation laboratory.

Results for the three rock chips that did not exceed the ALS safety guidelines are expected shortly.

Mandrake has commenced strategic staking of additional claims targeting uranium mineralisation. A total of 183 additional acres have been acquired as of today's date.

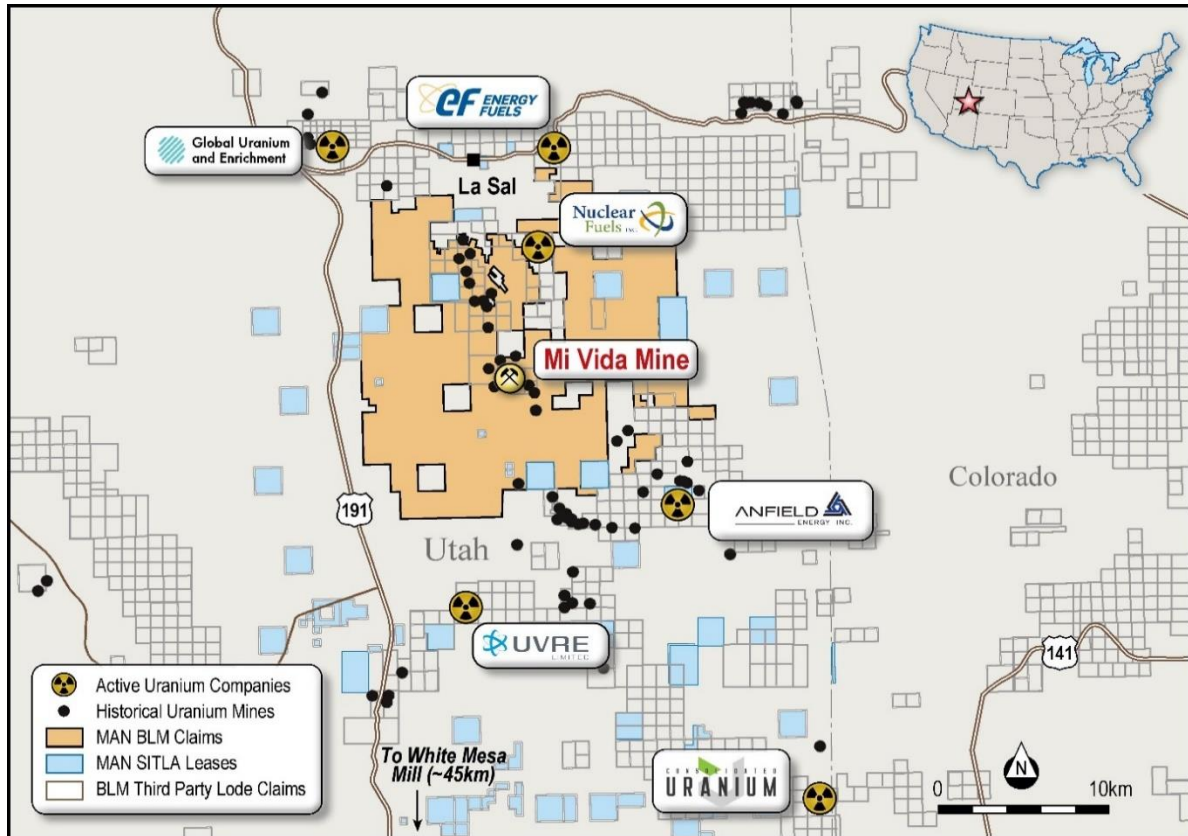


Figure 1: Utah Project – Location of Uranium mines and explorers

Uranium in the Lisbon Valley and Environs

Utah is the third largest uranium producing state in the US with the Lisbon Valley district by far the most important, accounting for nearly 78 million pounds of U_3O_8 production, or 64% of the Utah's total production¹ and approximately 8% of total United States U_3O_8 production between 1949 and 2019.¹

Uranium and vanadium in the Lisbon Valley mining district were discovered in 1913 as outcrops of basal sandstone at the southeast end of the Lisbon Valley anticline, the dominant geologic feature in the region. Mineralisation was then identified to the north west tracing an arcuate belt 16 miles long by one mile with over 40 historical uranium mines/occurrences, of which 20 are located within Mandrake's Utah Project tenure (Figure 1).

The most significant uranium mine in the district is the Mi Vida mine which returned average ore grades of 3,700 ppm U_3O_8 and 1.4% V_2O_5 and was the catalyst for the 1953 to 1961 uranium boom in the region.²

Declining uranium prices in the early 1980s forced many of the mines to close, however exploration activity has since ramped up in the region, attracting a host of uranium juniors (see Figure 1) as well as larger players such as Energy Fuels Inc. (NYSE:UUUU ~ US\$1.2B market cap) and Consolidated Uranium Inc. (TSX-V:CUR ~CAD\$200M market cap).

¹ Table 8.2 - Uranium Overview. Washington, DC: U.S. Energy Information Administration. April 2020.

² Chenoweth (1990) Lisbon Valley, Utah's Premier Uranium Area, A Summary of Exploration and Ore Production, Utah Geological and Mineral Survey, Open-file report 188

Energy Fuels operates the White Mesa Mill, located 100km south of Mandrake's Utah Project, which is the only fully licensed and operational conventional uranium-vanadium mill in the US with a licensed capacity of over 8 million pounds of U₃O₈ per year.

In December 2023, Energy Fuels announced the restart of their La Sal uranium mine, located less than 5km to the north of the Utah Project (Figure 1). Resources at La Sal are quoted at 4.3Mlb of U₃O₈ and 17.8Mlb of V₂O₅ from 0.8Mt of material with grades of 0.26% U₃O₈ and 1.08 V₂O₅³.

In their 21 December 2023 news release, Energy Fuels state:

'The Company's decision to ramp-up uranium production at this time was driven by several favorable market and policy factors, including strengthening spot and long-term uranium prices, increased buying interest from U.S. nuclear utilities, U.S. and global government policies supporting nuclear energy to address global climate change, and the need to reduce U.S. reliance on Russian and Russian-controlled uranium and nuclear fuel. Underscoring these positive trends, attendees at the recently concluded World Climate Action Summit of the 28th Conference of the Parties of the U.N. Framework Convention on Climate Change Summit ("COP28") hosted in Dubai, UAE from November 30, 2023 to December 12, 2023, emphasized the need for more nuclear energy, fueled by uranium, to lower global carbon emissions and help address climate change. According to a December 1, 2023 U.S. Department of Energy ("DOE") [news release](#), more than 20 countries on four continents, including the U.S., pledged to triple nuclear energy by 2050, recognizing "the key role of nuclear energy in achieving global net-zero greenhouse gas emissions by 2050 and keeping the 1.5-degree goal within reach."

Nuclear enjoys strong bipartisan support across the U.S. government. The current fleet of U.S. nuclear plants provides about 20% of all electricity in the U.S. – and about 50% of all carbon-free electricity in the U.S. The U.S. government has acted aggressively to support the existing fleet of reactors, advance future nuclear technologies, and restore domestic nuclear fuel capabilities through the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022. The U.S. Congress recently included the Nuclear Fuel Security Act ("NFSA") in the National Defense Authorization Act ("NDAA"), which is a critical step in restoring U.S. uranium and nuclear fuel capabilities and leadership. On December 11, 2023, the U.S. House of Representatives overwhelmingly passed a ban on the import of Russian uranium and nuclear fuel into the U.S. in response to Russia's unprovoked invasion of Ukraine and ongoing atrocities. The Russian uranium ban appears to enjoy overwhelming support in the U.S. Senate.'

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.

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

³ <https://www.energyfuels.com/la-sal-complex>