

13 December 2023

Aurora Uranium Project Scoping Study Update

Testwork and various studies underway

- Scoping Study advancing as uranium spot price reaches a 15-year high and COP28 declaration seeks to triple nuclear energy capacity by 2050.
- Study includes mining and transport trade-off studies, metallurgical testwork, flowsheet development and an assessment of available infrastructure and additional requirements.
- Initial leach sighter tests and first beneficiation tests completed in the metallurgical testwork program, with results and analysis pending.
- Scope of mining study expanded to evaluate mining methods, assess potential for progressive rehabilitation and conceptual Tailings Management Facility design.
- Ore transport studies underway to compare various options for transporting ore to Nevada processing site.

Aurora Energy Metals Limited (**Aurora or the Company**) (ASX:1AE) is pleased to present an update on the Aurora Scoping Study.

A scoping study for the Company's Aurora Uranium Project commenced during the previous quarter with the start of the metallurgical testwork program. The scoping study is now expected to be completed during the first quarter of 2024, with the Company committing to an expanded program for mining method evaluations and a transport trade-off study as part of the broader scoping study that was previously announced.

Metallurgical Testwork Program

A two-stage program was designed by DRA Global with the first stage seeking repeat and confirm results from the beneficiation tests conducted by the Company's predecessor, Energy Ventures Limited, in 2012/13. The second stage will consist of leach testwork. Both stages are required to enable the development of the scoping level flowsheet, although some options have already been explored.

Whilst composite samples were being made up for the beneficiation tests from core that had been shipped to ALS Metallurgy, an additional program was added with sighter leach tests to be conducted on the rejects (i.e. the core that had been crushed for assay purposes). The objective of the sighter tests is to provide information about leach characteristics in advance of the leach phase to be conducted on the beneficiated products.

The initial leach sighter tests and the first beneficiation tests have been completed, with results and analysis pending.

The background to the Metallurgical Testwork Program was explained in detail in an ASX Release entitled "Positive Review of Historical Uranium Testwork" on 26 April 2023. It was concluded in that review, based on encouraging testwork results from 2012/13, that there is significant potential to reduce forecast processing costs by utilising simple physical beneficiation techniques, such as scrubbing and screening, to upgrade future run-of-mine ore.

During that program, conducted on composite samples, it was discovered that typically over 30% of the material consisted of a hard, coarse fraction (+19mm) containing only 10% of the uranium at low grade, generally less than 100 ppm U_3O_8 .

It was found that this hard, coarse low-grade material could be separated by beneficiation techniques (implying a 70% mass pull with 90% uranium recovery). In operation, that would mean the size of the milling and leach circuit required would be smaller as it would treat a lower volume of softer, higher-grade material. Thus, capital and operating costs would be expected to be lower compared to treating non-beneficiated ore.

Transport Trade-off Studies

Last year, Aurora purchased a 410-acre private property in Nevada to secure a potential process plant location for treating ores from the mining operation in Oregon, 8km to the north-west. The property is a good location for plant and tailings facilities and has excellent access to infrastructure (Figure 1). Permitting a plant in Nevada, an established mining jurisdiction, is also more clearly defined, although the Nuclear Regulatory Commission (NRC) will also be involved in plant approval.

There are no restrictions on interstate transfer of ore as both states are "Agreement States" (allow and can regulate uranium mining) and such material movements are common. According to the NRC, some three million packages of radioactive materials are shipped each year in the United States, either by highway, rail, air, or water. Regulation of these shipments is the joint responsibility of the NRC and the Department of Transportation.

The base case transport option will be trucking on existing roads, however, with low-cost hydroelectricity available at the plant site, ore conveying and pumping will be also considered. Also, the topography favours these options with an approximate 200m drop in elevation from the mine to the plant site and they will have substantial benefits compared to trucking.

An order of magnitude quote has already been received for a rope conveyor design. The rope conveyor offers a small footprint and safe, all year-round transport at a very low operating cost (due to the elevation difference mentioned above).

A specialist pipeline consultancy has been engaged to conduct rheology testwork and develop preliminary designs for different pumping scenarios as well. The ability to run a buried pipeline means that there would be no visible footprint.

Mining Studies

An independent mining consultant is being engaged to conduct mining studies with an expanded scope including evaluation of progressive rehabilitation during mining, a site mine layout to deliver to an ore transport facility and a conceptual Tailings Management Facility design.

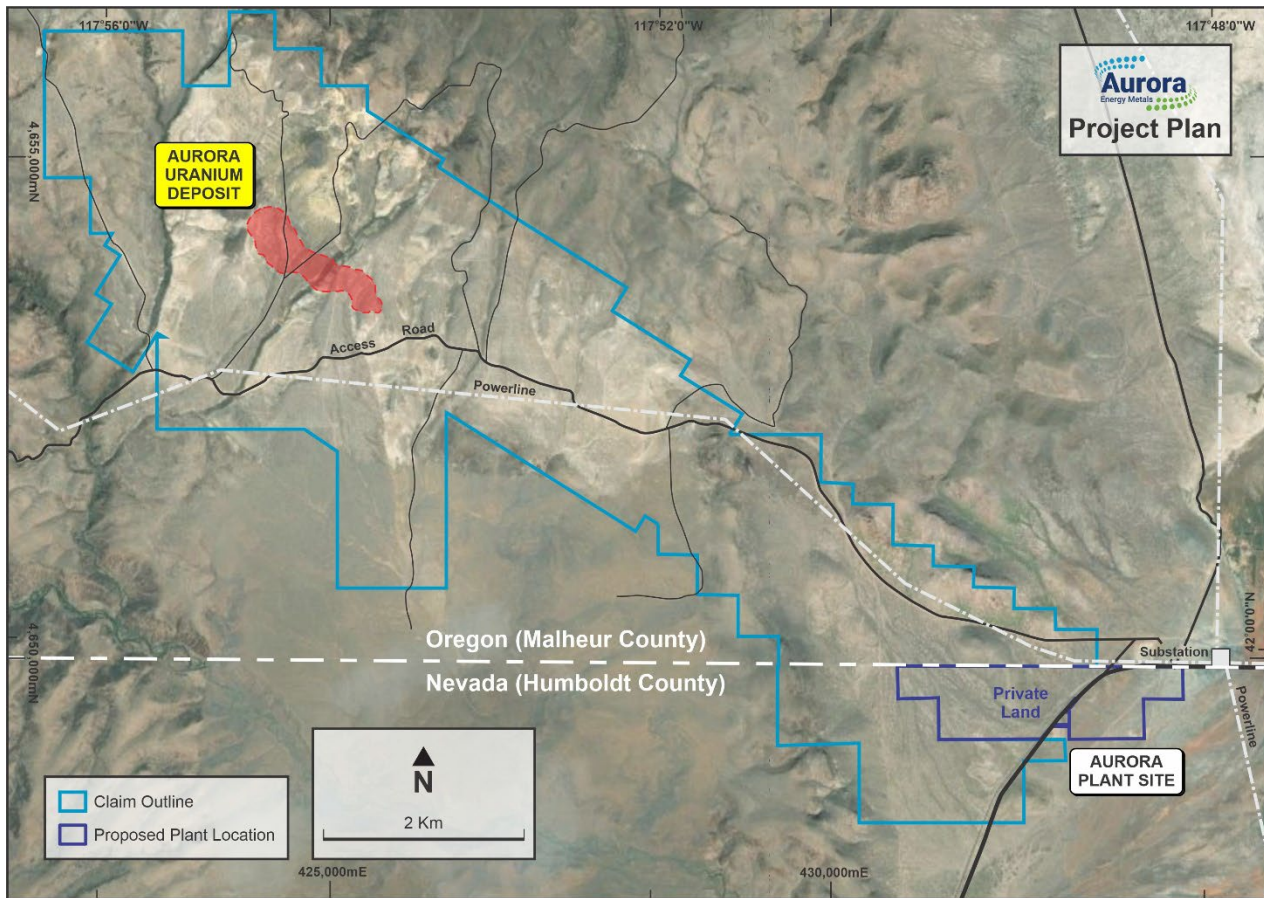


Figure 1. Aurora Project Plan

Permitting – Exploration Plan of Operations

Initial meetings have been held with the Vale District Bureau of Land Management and other regulators from different state and federal bodies.

The meetings were to progress the Baseline Needs Assessment Form (BNAF) which will ultimately define the survey/baseline protocols and studies required prior to formal community engagement, assessment and approval.

On the ground the first round of biological surveys covering the Aurora project area have been completed. A second survey is planned, that must be completed in springtime.

A Cultural Resource Survey, authorised by the BLM, has also been completed and a report submitted.

Nuclear/Uranium Market Update

Uranium is this year's best performing commodity, with the spot uranium price up over 70%, with all three nuclear fuel brokers quoting US\$83/lb U_3O_8 on Monday in the US, a 15-year high.

The key role that nuclear energy will play to enable the world to reach net zero by 2050 was recognised at COP28. 22 Countries, led by the United States and other leading nuclear nations, including France, South Korea, Canada, Britain, Japan, Sweden and the UAE, signed a declaration to triple nuclear energy capacity by 2050.

An important legal development also occurred in the USA on Monday with “The Prohibiting Russian Uranium Imports Act” approved by the House of Representatives. The Act supports a ban on the import of nuclear reactor fuel from Russia, specifically low-enriched uranium (LEU), which will come into force 90 days after it has been enacted. Whilst there is a temporary waiver in place until the end of 2027 (if no alternative source of LEU is available), Russian imports will be restricted once the Act has been signed by the President and will be banned from 1 January 2028.

In response to the Act being passed by the House there were reports that spot U_3O_8 had traded up to US\$85/lb in after-hours trading activity.

These recent political developments in the USA add impetus to other already approved acts that are designed to support the country’s nuclear power industry and re-establish a reliable, domestic nuclear fuel supply chain. These include the Infrastructure Investment and Jobs Act of 2021 (**Infrastructure Bill**) and the Inflation Reduction Act of 2022 (**IRA**).

For example, under the Infrastructure Bill the Civil Nuclear Credit Program allocated a \$6 billion strategic investment to help preserve the existing U.S. reactor fleet and also save thousands of high-paying jobs across the country.

The US\$369 billion IRA, aimed at energy security and climate change programs, reflected a further significant step towards meeting the USA’s emission reduction targets by recognising the indispensable role that nuclear power will play in future. The act contains several key provisions, such as allowing new production tax credits for existing nuclear plants. It is believed that the act will bolster a broad spectrum of new and existing activities in the industry which could prove transformative by allowing access to the tax equity markets for nuclear project financing.

The IRA also provides additional funding to establish a domestic supply of High-Assay Low-Enriched Uranium (HALEU) fuel, which will be needed by many next-generation reactors.

These various pieces of legislation further enhance the appeal of the Company’s advanced stage Aurora Uranium Project, which is the USA’s largest mineable, measured and indicated uranium resource.

Commenting about the market and the Company’s progress, Aurora’s Managing Director, Greg Cochran, said:

“For those of us that have been in the uranium industry a long time, these are without doubt the most promising of times. At long last nuclear is now widely recognised as an indispensable key to both energy security and to unlocking a safe and affordable path to net zero.

The United States has become a leading protagonist for the world and its own nuclear industry, which is why Aurora is so well-positioned. Based on the work program currently underway we are aiming to complete the scoping study before the end of the first quarter next year. We believe that the conclusion of a successful scoping study will lead to broader recognition of the Project’s inherent value.”

THIS ANNOUNCEMENT HAS BEEN AUTHORISED FOR RELEASE ON THE ASX BY THE COMPANY’S BOARD OF DIRECTORS

ABOUT AURORA ENERGY METALS

Aurora Energy Metals is an ASX-listed company focused on the exploration and development of its flagship, the 100% owned Aurora Energy Metals Project in south-east Oregon, USA. Boasting the USA's largest, mineable, measured and indicated uranium deposit (MRE: 107.3Mt @ 214ppm U_3O_8 for 50.6 Mlbs U_3O_8) with a shallow high-grade core of 18Mt @ 485ppm U_3O_8 for 19.2 Mlbs U_3O_8 . The high-grade resource is 99.5% in the measured and indicated JORC category and the project has a clear pathway to development. Lithium mineralisation is found in soft lakebed sediments above and surrounding the uranium deposit, and the region hosts the USA's two largest lithium deposits.

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CAPITAL STRUCTURE:

Share Price (12/12/23): \$0.075
Market Cap: \$13.4 million
Shares on Issue: 179 million

COMPANY SECRETARY:

Steven Jackson

SHAREHOLDER CONTACT:

Steven Jackson
Email: info@auroraenergymetals.com
Tel: +61 8 6465 5500

BOARD OF DIRECTORS:

Peter Lester: Non-Executive Chairman
Greg Cochran: Managing Director
Alasdair Cooke: Non-Executive Director

SHAREHOLDERS:

Directors: 15%
Management: 13%
Institutional shareholders: 10%
Balance of Top 20: 14%
Balance of Register: 48%

INVESTOR & MEDIA CONTACT:

Andrew Rowell
White Noise Communications
Tel: +61 (0) 400 466 226
Email: andrew@whitenoisecomms.com

Competent Person Statement:

Information in this announcement relating to Exploration Results and Mineral Resources is based on information compiled by Mr. Lauritz Barnes (a consultant to Aurora Energy Metals Limited and a shareholder) who is a member of The Australian Institute of Mining and Metallurgy and The Australian Institute of Geoscientists. Mr. Barnes has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person under the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Barnes consents to the inclusion of the data in the form and context in which it appears.

Information in this announcement relating to Mineral Resources is extracted from the announcement titled 'Uranium Resource Up 34% to 50.6Mlb, Maiden Measured Resource' released by the ASX on 23 November 2022. Aurora Energy Metals Limited confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the Mineral Resource continue to apply and have not materially changed. Aurora Energy Metals Limited confirms that the form and context in which the Competent Persons' findings are presented in this announcement have not been materially modified from the original market announcement.