# **ASX ANNOUNCEMENT**



ASX:1AE auroraenergymetals.com

15 May 2024

## **Aurora Uranium Project Scoping Study**

## **Demonstrating a Viable Pathway to Development**

Aurora Energy Metals Limited (Aurora or the Company) (ASX:1AE) is pleased to advise that the Aurora Uranium Project (AUP or the Project) Scoping Study (the Scoping Study) has been completed, confirming the Project as technically de-risked and demonstrating a feasible pathway to developing the USA's largest, measured uranium deposit.

## Scoping Study Highlights

- Potential 11-year life of mine (LoM), producing 1.15Mlbs per annum of U<sub>3</sub>O<sub>8</sub>.
- Pre-tax NPV<sub>8</sub> assuming contract resign treatment:

US\$/lb	Free Cash Flow AU\$m <sup>1</sup>	Pre-Tax NPV <sub>8</sub> AU\$m <sup>1</sup>	Pre-Tax IRR
90 <sup>2</sup>	502	232	25%
105 <sup>2</sup>	775	405	36%
125 <sup>2</sup>	1140	632	49%

- Pre-production capital of US\$161m (AU\$248m) and cash operating costs of US\$46.10/lb U₃O<sub>8</sub> (scenario using contract resin treatment).
- Production target of 12Mlbs U<sub>3</sub>O<sub>8</sub>, all from Measured and Indicated Mineral Resources within the 19.2Mlb High Grade Zone of the total Resource.
- Approximately 97% of the scheduled throughput over the first 10 years of production within the Measured Mineral Resource category.
- 2 Mtpa Run of Mine (RoM) production rate targeted over the LoM, with a low strip ratio of 2.1:1.
- Beneficiation by scrubbing raises average mined grade of 380ppm U<sub>3</sub>O<sub>8</sub> by 25% to deliver a leach feed grade above 470ppm.
- Initial leach tests using parallel circuits for coarse and fines/clay fractions, resulted in an overall recovery of 69%.
- Opportunities exist to improve recoveries, and these continue to be investigated through further metallurgical testwork.
- Three technically viable transport options to transfer mined material from mine to Nevada processing site (trucking, slurry pipeline and rope conveyor).
- No federal, state or local regulatory or permitting issues have been identified that would preclude Project approval; Nevada processing plant location confirmed as a viable and practical solution.

**AURORA ENERGY METALS LIMITED** ABN 87 604 406 377

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<sup>&</sup>lt;sup>1</sup> Assumes an AUD:USD exchange rate of 0.65.

<sup>&</sup>lt;sup>2</sup> Industry and Company estimates.



#### Aurora Chairman, Peter Lester, said:

"Completion of the Scoping Study is an important milestone for Aurora, technically de-risking the AUP and clearly showing a feasible pathway to developing the USA's largest, measured uranium deposit, at a time when domestic uranium supply is increasingly critical.

"The Scoping Study work has identified a relatively simple processing flowsheet based on beneficiation and atmospheric leaching, with scope to further improve recoveries.

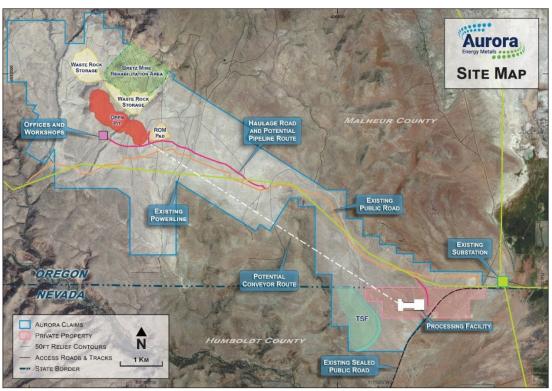
"Based on the Scoping Study, we plan to process ores on the Company's private land in Nevada to simplify permitting, utilise existing infrastructure and reduce capital requirements.

"The production of a loaded resin for off-site toll treatment to final product has also been adopted, bringing further efficiencies to the Project. The widely held expectation of a uranium supply 'crunch' in the US provides the comfort of high projected demand for our product from the domestic market.

"Additionally, we are confident this heightened focus on domestic mineral production will not only help expedite projects like ours but also attract government support for financing new uranium mines.

"Using a spot price Base Case of US\$90/lb, the Project demonstrates strong cashflows and NPV, with significant leverage to higher forecast prices.

"The indicative Project development timetable aligns with the anticipated  $U_3O_8$  supply deficit over the next decade, underpinned by the recently passed US legislation to ban imported uranium from Russia from 2028 onwards."



Aurora Uranium Project: Proposed Site Layout.

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 development of its flagship, 100 per cent owned, Aurora Uranium Project (AUP) in south-east Oregon, USA. The AUP is the USA's largest, mineable, measured and indicated uranium deposit (MRE: 107.3Mt @ 214ppm U₃O₃ for 50.6 Mlbs U<sub>3</sub>O<sub>8</sub>). The Company's vision is to supply minerals that are critical to the USA's energy requirements.

#### FOLLOW US ON TWITTER:

www.twitter.com/Aurora\_1AE

#### FOLLOW US ON LINKEDIN:

www.linkedin.com/company/aurora-energy-metals/

#### **CAPITAL STRUCTURE:**

Share Price (14/05/24): \$0.082 Market Cap: \$15 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:** 

Alasdair Cooke: Non-Executive Director John Gardner: Non-Executive Director SHAREHOLDERS:

Peter Lester: Non-Executive Chairman

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

#### **INVESTOR & MEDIA CONTACT:**

John Gardner SUNGAM Advisory Tel: +61 413 355 997

#### 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.

The information in this announcement relating to Metallurgical Results is based on information compiled by Mr. Martin Errington, B.Sc (Hons) Chemical Engineering, CEng, an independent consultant to Aurora Energy Metals Limited, who is a Fellow of the Institute of Chemical Engineers (FIChemE) Mr. Errington has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken 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. Errington consents to the inclusion in the announcement of the matters based on the information made available to him, in the form and context in which it appears.

#### Previously Reported Information

Information in this announcement is based on the following Aurora Energy Metals Limited Announcements, which are available from the Company's website, www.auroraenergymetals.com.au or the ASX website.

- 23 November 2022 34% Increase in Total Uranium Resource to 50.6 Mlbs Maiden Measured Resource Declared at Aurora Uranium
- 26 April 2023 Positive Review of Historical Uranium Testwork
- 29 August 2023 Scoping Study Metallurgical Testwork Program Underway
- 13 December 2023 Aurora Uranium Project Scoping Study Update
- 25 March 2024 Scoping Study Interim Report

#### Scoping Study Consultants

The AUP Scoping Study has been undertaken by the following parties, listed by work area:

- Trepanier Pty Ltd: resource modelling.
- DRA Global: metallurgical testwork supervision and flowsheet development.
- Amerston Consulting Ltd: independent metallurgical review and flowsheet development.
- ALS Global: metallurgical testwork and assay laboratory.
- orelogy<sup>TM</sup>: mining studies.
- Fortin Pipelines: pipeline testwork, design and costing.
- Doppelmayr Transport Technology GmbH: RopeCon® design and costing.
- GSI Water Solutions: groundwater studies.
- WWC Engineering and Environmental Restoration Group, Inc. permitting and approvals.
- Stoel Rives LLP and Tonkon Torp LLP: permitting and approvals.

All other areas of the Scoping Study have been managed by Aurora personnel and contractors.





#### Cautionary Statement

The 2024 Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential development of the Aurora Uranium Project in Oregon and Nevada, USA ("AUP" or the "Project"). It is a preliminary technical and economic study of the potential viability of the Project. The 2024 Scoping Study outcomes, production target and projected financial information referred to in the release are based on low level technical and economic assessments that are insufficient to support estimation of Ore Reserves. The 2024 Scoping Study was calculated and is presented in US dollars to an accuracy level of +/- 35%.

While each of the modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the production target itself will be realised. Further exploration and evaluation and appropriate studies are required before Aurora Energy Metals will be able to estimate any Ore Reserves or to provide any assurance of any economic development case. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

The Company concludes it has reasonable grounds for disclosing a production target given, that the Company's development strategy is focussed on the geologically modelled 'High Grade Zone', in which 91% of the contained metal is in the Measured category, and 99.5% in the Measured plus Indicated categories. The 'High Grade Zone' is also the shallowest part of the resource.

The viability of the development scenario envisaged in the 2024 Scoping Study does not depend on the inclusion of Inferred Mineral Resources.

The Mineral Resources underpinning the production target in the 2024 Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). For full details on the Mineral Resource estimate, please refer to the ASX announcements of 23 November 2022. Other than as presented in this announcement, Aurora Energy Metals confirms that it is not aware of any new information or data that materially affects the information included and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not been changed. The 2024 Scoping Study is based on the material assumptions outlined in this announcement and which are also detailed in the Appendices. These include assumptions about the availability of funding. While Aurora Energy Metals considers that all the material assumptions are based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the 2024 Scoping Study, funding in the order of US\$161 million will likely be required. Investors should note that that there is no certainty that Aurora Energy Metals will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Aurora Energy Metals' existing shares. It is also possible that Aurora Energy Metals could pursue other value realisation strategies such as a sale or partial sale of its interest in the Project.

This announcement contains forward-looking statements. Aurora Energy Metals has concluded that it has a reasonable basis for providing these forward-looking statements and believes it has a reasonable basis to expect it will be able to fund development of the Project. However, several factors could cause actual results or expectations to differ materially from the results expressed or implied in the forward-looking statements. Given the uncertainties involved, investors should not make any investment decisions based solely of the results of this study.

#### Forward Looking Statements:

Information included in this announcement constitutes forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as "anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will" and other similar words that involve risks and uncertainties.

Forward-looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of resources and reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation as well as other uncertainties and risks set out in the announcements made by the Company from time to time with the Australian Securities Exchange.

Forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, its directors and management of the Company that could cause the Company's actual results to differ materially from the results expressed or anticipated in these statements.

The Company cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Company does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements.



# SCOPING STUDY REPORT AURORA URANIUM PROJECT

## South-East Oregon/Nevada Border, USA

Aurora Uranium Project's (AUP) Scoping Study outlines the potential for a cost competitive, long-term domestic supplier of uranium to the USA's nuclear energy industry.

## **Highlights**

- Potential 11-year life of mine (LoM), producing 1.15Mlbs per annum of U<sub>3</sub>O<sub>8</sub>.
- Pre-tax NPV<sub>8</sub> assuming contract resin treatment:

US\$/Ib	Free Cash Flow A\$M <sup>1</sup>	Pre-Tax NPV <sub>8</sub> A\$m <sup>1</sup>	Pre-Tax IRR
90 <sup>2</sup>	502	232	25%
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- Production target of 12Mlbs U<sub>3</sub>O<sub>8</sub>, all from Measured and Indicated Mineral Resources within the 19.2Mlb High Grade Zone of the total Resource.
- Approximately 97% of the scheduled throughput over the first 10 years of production within the Measured Mineral Resource category.
- 2 Mtpa Run of Mine (RoM) production rate targeted over the LoM, with a strip ratio of 2.1:1.
- Beneficiation by scrubbing raises average mined grade of 380ppm U<sub>3</sub>O<sub>8</sub> by 25% to deliver a leach feed grade above 470ppm.
- Initial leach tests using parallel circuits for coarse and fines/clay fractions, resulted in an overall recovery of 69%.
- Opportunities exist to improve recoveries, and these continue to be investigated through further metallurgical testwork.
- Three technically viable transport options to transfer mined material from mine to Nevada processing site (trucking, slurry pipeline and rope conveyor).
- No federal, state or local regulatory or permitting issues have been identified that would preclude Project approval and Nevada processing plant location confirmed as a viable and practical solution.

<sup>&</sup>lt;sup>1</sup> Assumes an AUD:USD exchange rate of 0.65.

<sup>&</sup>lt;sup>2</sup> Industry and Company estimates.



## **Executive Summary**

Aurora Energy Metals Limited (ASX: 1AE) (**Aurora** or **the Company**) is the 100% owner the Aurora Uranium Project (**AUP** or **the Project**), located in Malheur County, Oregon and Humboldt County, Nevada, in the United States of America.

The AUP hosts the USA's largest mineable, Measured and Indicated uranium Mineral Resource. The Company's project development strategy is focussed on the near surface, high-grade component of this resource which has 91% of the contained metal in the Measured category, and 99.5% in the Measured and Indicated categories.

Mining studies were undertaken by independent mining consultants orelogy<sup>TM</sup> as part of a wider Scoping Study (**the Study**) to assess the viability of the Project. The Study outlined a mine plan for a shallow, open pit, contract-mined operation with an average waste to ore strip ratio of 2.1:1. A staged pit backfill strategy was used to minimise the Project's environmental footprint and remediation requirements.

Mined ore would be transported by either truck, conveyor or slurry pipe from the mine site in Oregon to the planned processing facility on the Company's privately-owned land in Nevada. The proposed plant site has access to grid electricity supply (primarily hydro power generation) sealed State Road that leads directly to a major US highway and the nearby town of McDermitt.

The mine schedule demonstrated a 2Mtpa Run-of-Mine (RoM) mining operation over an 11 year life of mine (LoM) at an average RoM head grade of 380ppm U<sub>3</sub>O<sub>8</sub>.

Metallurgical testwork was supervised by DRA Global and Martin Errington, of Amerston Consulting, who reviewed data from current and previous programmes to assist in the development of a flowsheet that sought the best trade-off between metallurgical recoveries, operating costs and capital expenditure.

Testwork has demonstrated that AUP ore can be upgraded using simple beneficiation techniques such as scrubbing and screening, allowing a significant upgrade of the RoM head grade to a leach feed grade of 476ppm  $U_3O_8$ . Approximately 25-30% of the RoM material is rejected in the beneficiation step, resulting in ~1.5Mtpa of beneficiated ore to the leach feed at >470ppm  $U_3O_8$ .

Previous studies used a "whole of ore" approach in the leach circuit. Recent tests have investigated taking material of three size fractions from beneficiation and leaching each fraction under different conditions. This allows the optimum leach conditions to be refined for each size fraction while minimising the rheology issues associated with the clays.

Using this approach, the flowsheet developed for the Study has a dual atmospheric leach circuit to treat the bulk of the mined material in a coarse "Middlings" fraction which was subject to a coarse grind and a separate smaller line for the clay fraction with no grinding.



Recovery assumptions used in this Study are based on the testwork completed to date at ALS Metallurgy's laboratory in Perth showing uranium recoveries from the clay fraction of up to 62%, and middlings of 74%, which substantiates the earlier assumptions based on the work completed by Energy Ventures Limited (EVE).

The present flowsheet is based on an overall 69% recovery. However, opportunities for improved recoveries have been identified to be investigated through further metallurgical testwork which is in progress. Previous testwork has shown higher recoveries, with tests conducted by Placer showing recoveries of up to 92% using pressure oxidation leaching and tests by EVE showing recoveries of up to 71%, using whole ore atmospheric leaching.

These previous test results are in the early stages of being repeated and do not have sufficient detail available at present to include in this Study. Pressure leaching options have not been considered in the Study as preliminary enquiries indicated higher capital and operating costs that require further investigation.

Capital and operating cost estimates for the Study are based on benchmarking from other recent uranium projects in Australia, USA and Africa (including Namibia). The estimates were also reviewed by an experienced industry consultant.

All costings and estimates are done in US dollars (US\$), unless otherwise stated. All revenue calculations have used the current spot uranium price (at the time of Study completion) of US\$90/lb  $U_3O_8$ . All estimates are within a +/-35% confidence level as appropriate for a Scoping Study.

Key physical parameters from the Study are shown in the following table:

Aurora Uranium Project (AUP)	Units	Production
Life of Mine	Years	11
Mine Strip Ratio	t/t	2.1
Crusher Throughput	Mtpa	2
Crusher Feed Grade	ppm U₃O <sub>8</sub>	380
Atmospheric Leach Throughput	Mtpa	1.5
Atmospheric Leach Feed Grade	ppm U <sub>3</sub> O <sub>8</sub>	476
Overall Uranium Recovery	%	69
Average Annual Uranium Production	MIb U <sub>3</sub> O <sub>8</sub>	1.15

The Study evaluated two options for the back end of the processing plant in Nevada:

- Contract treatment of loaded resin to produce uranium precipitate, or
- Production of uranium precipitate at the Plant site.



The contract resin treatment option was adopted as the Base Case due to the significantly reduced capital requirement for plant construction. Based on benchmark data, the value of the capital saving is estimated to be substantially greater than the cost of transport and contract resin treatment resulting in a higher net present value (NPV) and internal rate of return (IRR) for the Project, as shown:

Contract Resin Treatment – Base Case						
NPV <sub>8</sub> Pre-Tax	US\$151m					
IRR	25.2%					
Resin Treatment On-Site						
NPV <sub>8</sub> Pre-Tax	US\$137m					
IRR	21.2%					

Note: Estimate accuracy is +/- 35%, commensurate with scoping level studies.

Several potential third-party facilities exist within feasible distances of the AUP where such contract resin treatment arrangements may be undertaken.

Capital, operating costs and key financial outcomes for the contract resin treatment Base Case follow:

Cost	Units	Base Case
Start-Up Capital	US\$ Millions	161
Sustaining Capital	US\$ Millions	30
Cash Operating cost (C1)	US\$/lb U <sub>3</sub> O <sub>8</sub>	46.1
All In Sustaining Cost	US\$/lb U <sub>3</sub> O <sub>8</sub>	48.6

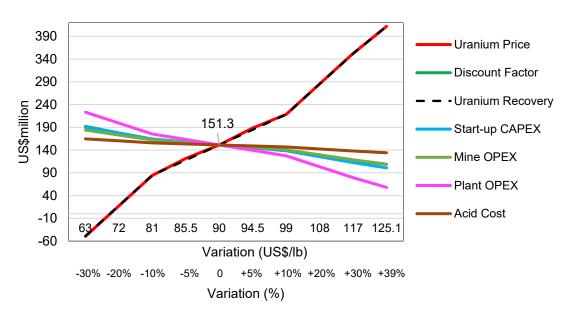
Aurora	Uranium Project (AUP)	Units	Pre-tax	Post-tax <sup>1</sup>
	NPV <sub>8</sub>	US\$ Millions	151	102
Uranium Price (US\$/90lb)	IRR	%	25.2	20.3
	Payback from production start	Years	4.25	4.75

Note 1: Federal tax rates are as at May 2024, and may be subject to future change.



Sensitivity models for key cost and physical inputs were varied from +20% to –20% of the Base Case values. Results of the analysis are shown below.

## Base Case Pre-tax NPV<sub>8</sub>



Valuations and Returns	Units					
Uranium Price	US\$/lb U <sub>3</sub> O <sub>8</sub>	\$85	\$90	\$95	\$105	\$125
Pre-tax NPV <sub>8</sub>	US\$ Millions	114	151	189	263	411
Pre-tax IRR	%	21.4	25.2	28.8	35.8	48.6
Payback period <sup>1</sup>	Years	4.5	4.2	3.5	2.8	2.3
Post-tax NPV <sub>8</sub>	US\$ Millions	74	102	130	186	298
Post-tax IRR	%	17.1	20.3	23.3	28.9	39.5
Cashflow						
LoM EBITDA	US\$ Millions	457	516	576	695	932
Free Cashflow pre-tax (LoM) <sup>2</sup>	US\$ Millions	266	326	385	504	741
Free Cashflow post-tax (LoM)	US\$ Millions	200	244	289	378	556

Note 1: Payback in years from first production.

Note 2: Free cashflow is net of all costs.

The Project is most sensitive to commodity price and uranium recovery variation. Plant operating cost has medium sensitivity and mine operating costs, start-up capital cost and sulphuric acid prices have relatively low sensitivity.

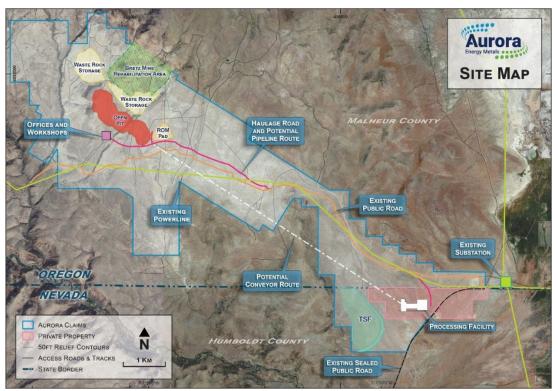


The Study outlines a robust technical and financial case for development of the AUP at current uranium prices. The Study shows the Project has the potential to be developed using industry standard practices and technologies with no major environmental or social impacts. The well-defined resource, simple low-cost mining, standard atmospheric leach process and well-established infrastructure result in a low technical-risk project.

There is a commercial case for development of the Project using off-site contract resin processing to reduce up-front capital requirements, although the NPV and IRR also remain attractive if developed as a stand-alone project.

Metallurgical testwork used for the Study is preliminary and, whilst initial results show recoveries (69%) and acid consumption (60kg/t) that support a viable project, these are considered less than optimal. Previous and current work has shown the potential for higher recoveries and this will be an area for further work.

The Study has demonstrated the AUP can be developed with attractive financial returns and become a significant near-term producer to meet demand in the US domestic uranium market.



Aurora Uranium Project: Proposed Site Layout.





## **Aurora Uranium Project – Scoping Study Report**

#### Introduction

Aurora Energy Metals Limited (Aurora) is an ASX-listed company focused on the exploration and development of the 100% owned Aurora Uranium Project (AUP or the Project) in southeast Oregon, USA, close to the Oregon/Nevada border.

The Project hosts 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 near surface high-grade core of 18Mt @ 485ppm U<sub>3</sub>O<sub>8</sub> for 19.2 Mlbs U<sub>3</sub>O<sub>8</sub>, JORC classified as 99.5% measured and indicated. Resources are well defined with greater than 90,000 metres of historical drilling and extensive testwork conducted over the past 50 years and cumulative expenditures of more than US\$75m.

The Aurora uranium deposit was discovered in 1977 through follow up of anomalies detected on an airborne radiometric survey. The deposit was intensively explored by Placer Amex Corp (Placer) up to 1980. EVE acquired the Aurora Uranium Project from Uranium One Inc. in 2010 and conducted significant drilling and testwork programmes through to around 2013 before being spun out into an unlisted public company. The Project was relisted on the ASX as Aurora Energy Metals Limited in May 2022.

The Company's objective is to develop the AUP to supply uranium to the US domestic market. The USA is the world's largest uranium consumer and is forecast to face a 180 Mlb U<sub>3</sub>O<sub>8</sub> shortfall over the next decade. The US Federal government has bi-partisan support to reestablish a strong domestic nuclear supply chain and is actively undertaking measures to reduce uranium imports and provide funding support for domestic projects.

#### Location

The Aurora Uranium Project is located in Malheur County, Oregon, approximately 16 kilometres northwest of the town of McDermitt, Nevada, McDermitt is 120 kilometres north of Winnemucca, Nevada on US Highway 95, which then proceeds north to Burns Junction, Oregon and Boise, Idaho.

Grid power is available with a substation located close to the proposed location of the Project's processing plant. Natural gas service is available at Winnemucca, as is the nearest railroad (Union Pacific).

Surface elevations on the property range from 1,430 to 1,615 metres above sea level and the climate is typical high desert. Net annual evaporation rate is 1,854 mm.



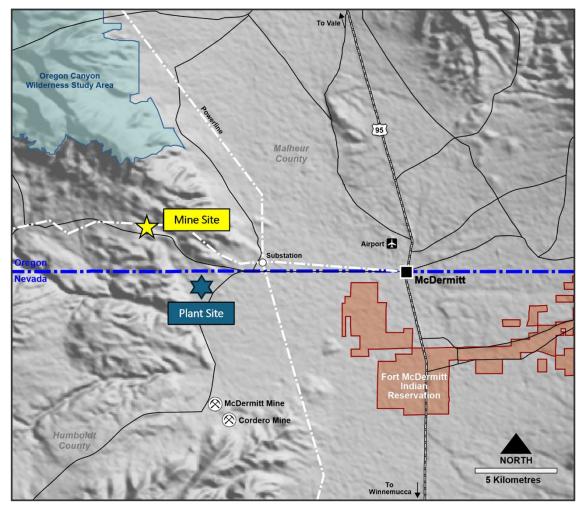


Figure 1. Location Plan of Aurora Uranium Project, Malheur County, Southeast of Oregon

This surrounding region has a mining history, most notably for the production of mercury from the Bretz Mine near the Aurora property and the Placer US, Inc. Cordero Mine at McDermitt.

## **Mineral Tenure and Surface Rights**

The Company's wholly owned US subsidiary Oregon Energy LLC holds 100% of the Project as well as surrounding Mining Claims that extend to the west and to the south-east, across the Oregon/Nevada border. The Mining Claims are located on public lands in Oregon and Nevada and on a contiguous Company owned block of private land in Nevada.

The public lands are administered by the United States Bureau of Land Management (BLM) offices in Oregon and Nevada respectively. The Aurora private land in Nevada is a 410-acre block that adjoins the Mining Claims to the south of the Oregon border and offers an ideal location for the proposed processing facility.





Figure 2. Aurora Uranium Project Plan

The land tenure comprises 451 unpatented lode Mining Claims and 71 unpatented placer Mining Claims in Malheur County, Oregon and 31 unpatented placer Mining Claims in Humboldt County, Nevada. The claim locations are shown in Figure 3. The total area covered by these claims is approximately 43 square kilometres.

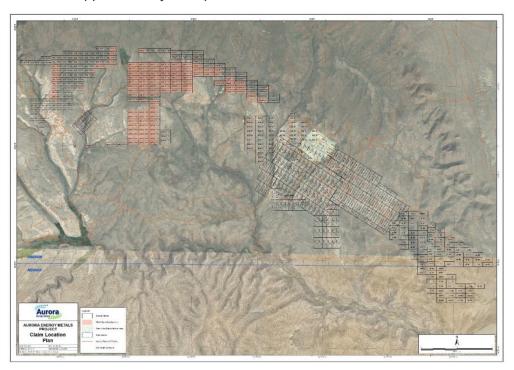


Figure 3. Claim Location Map



#### **Mineral Resources**

## Regional Geology

The AUP is located within the Miocene aged McDermitt Caldera; a large, oval-shaped caldera extending approximately 45 kilometres north-south and 35 kilometres east-west. The caldera is a Miocene collapse structure along the Nevada–Oregon border that is bounded by normal faults on the north and south, and by rhyolite ring domes to the west.

The caldera is interpreted as the oldest in a sequence related to the Yellowstone hotspot track and Columbia River basalt volcanism. The McDermitt Caldera's current irregular 'keyhole' shaped basin is due to caldera collapse when large volumes of erupted McDermitt Tuff ponded within the caldera and then collapsed.

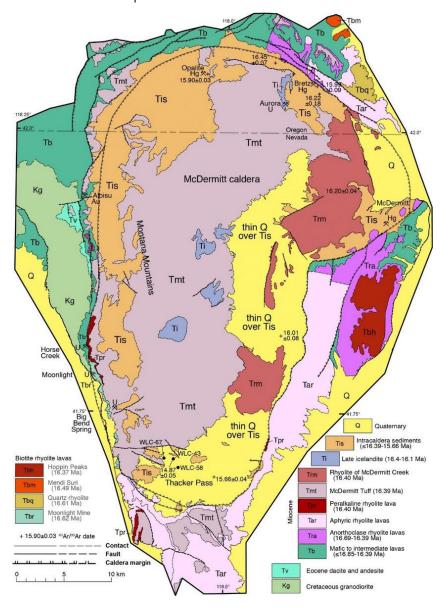


Figure 4. Geological map of the McDermitt Caldera around Aurora Energy Metals Project.



#### Local Geology

The Project area is covered with a thin veneer of alluvium overlying lakebed sediments. The lake sediments are generally tuffaceous but in places are complexly interbedded with dacitic lava flows of the Aurora icelandite volcanic sequence (~16.1 Ma). The lake sediments overlie the flows with a contact that is abrupt in some areas, with thick flows marking the bottom of the sediments or by gradually increasing volumes and thicknesses of the dacitic flows and tuffs. The flows generally become more massive or compact near the contact with the underlying rhyolitic welded tuffs and flow domes. The Aurora lavas were deposited upon an irregular surface of rhyolitic rocks, which appear in part to be intrusive based on porphyritic textures and may represent local volcanic domes.

The lake sediments are composed of poorly consolidated, subaerial tuffaceous material interstratified with fine grained bedded layers and discontinuous lenses and nodules of chalcedony. Lake sediments vary from finely laminated clay-shales, siltstones and tuffaceous sandstones, to more massively bedded rhyolitic air-fall ash tuffs and can be up to 180m thick. The sediments probably originated from local volcanic vents and were deposited in moat-like basins within the caldera margins.

The Aurora lava flows and tuffaceous units consist of a complex interbedded sequence of dark coloured dacitic flows with vesicular to scoriaceous flow tops and some interbeds of ash. Individual flows range in thickness from 1.5 to 15 metres. The lava sequence contains a variety of breccia layers, with cumulative thickness generally between 30 to 90 metres.

#### Mineralisation

The Aurora uranium mineralisation forms stratabound and cross-cutting bodies in the Lake Sediments and dacitic flow units forming an irregular mineralised zone approximately 1,500 metres long by 300 metres wide. The mineralised horizons range from a true thickness of just over a metre to more than 30 metres thick. The mineralised beds range from nearly horizontal to moderately dipping. The beds are spatially related to and partially controlled by possible growth faults or graben bounding structures, primarily on the northeast margin of the mineralisation. Uranium mineralisation seems related to volcanic and hydrothermal activity.

The spatial distribution of uranium with sediments and broken, permeable zones of volcanic rocks suggests mechanically and chemically transported zones of mineralisation are common. Several of the secondary or tertiary basins within the lake sediments and graben block show thin repeating beds of mineralisation within zones of more permeable rocks and often isolated by clay rich zones. Higher grade and thicker zones of mineralisation may represent high angle structures which acted as hydrothermal feeders or enrichment zones.



#### Mineral Resource

The Mineral Resource for the Aurora deposit has been classified in accordance with the criteria laid out in the 2012 JORC code. Measured, Indicated and Inferred Mineral Resources have been defined using definitive criteria determined during the validation of the grade estimates, with detailed consideration of the classification guidelines.

The resource model comprises a higher-grade core of stacked, sub-horizontal to gently dipping, tabular zones of mineralisation that locally coalesce into thicker bodies of mineralisation. This core, which shows continuity at a 300 ppm U<sub>3</sub>O<sub>8</sub> cut-off grade, is surrounded by a large, lower grade halo of mineralisation that extends the overall zone of mineralisation to a depth of 180m below surface which is open along strike and to the northwest.

	IV	leasure	ed	lı	ndicate	ed		nferre	d		Total	
Resource Zone	Mt	U₃O <sub>8</sub> ppm	MIb U <sub>3</sub> O <sub>8</sub>	Mt	U₃O <sub>8</sub> ppm	MIb U₃O <sub>8</sub>	Mt	U₃O <sub>8</sub> ppm	MIb U <sub>3</sub> O <sub>8</sub>	Mt	U₃O <sub>8</sub> ppm	MIb U <sub>3</sub> O <sub>8</sub>
High Grade Zone <sup>1</sup>	16.3	487	17.5	1.6	467	1.6	0.1	425	0.1	18.0	485	19.2
Low Grade Zone <sup>2</sup>	43.2	162	15.4	19.8	161	7.0	26.3	155	9.0	89.3	160	31.5
Total	59.5	251	32.9	21.4	184	8.7	26.4	157	9.1	107.3	214	50.6

Table 1. Aurora Uranium Resource

Note: Appropriate rounding applied

The boundary for the Measured and Indicated resource classification (red and yellow) for the Aurora uranium deposit is largely based upon drill density. Anything outside of the constraining wireframe shape is not reported as resource. The light blue areas were classified as inferred.

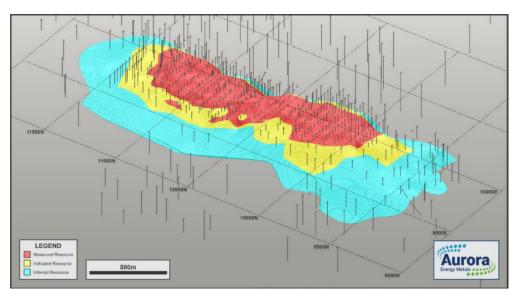


Figure 5. Resource Classification of the Aurora Uranium Deposit - November 2022.

<sup>&</sup>lt;sup>1</sup> High grade zone estimated using a 300 ppm U<sub>3</sub>O<sub>8</sub> cut-off

<sup>&</sup>lt;sup>2</sup> Low grade zone estimated using a 100 ppm U<sub>3</sub>O<sub>8</sub> cut-off



## **Mining and Production Schedule**

Mining consultant orelogy<sup>™</sup> completed the scoping-level mining study for the AUP, including overall site layout and a conceptual tailings storage facility design. orelogy<sup>™</sup> acted as the Company's mining technical professionals and were not required to act as a Competent Person (CP) under JORC for this Study as no Ore Reserves have been declared.

The mining study is based on the Aurora Mineral Resource Estimate (ASX release  $23^{rd}$  November 2022), which comprises 107.3 Mt @ 214 ppm  $U_3O_8$  for 50.6 Mlbs  $U_3O_8$  and is reported in Table 1 above.

The Company's development strategy is focussed on the geologically modelled 'High Grade Zone', in which 91% of the contained metal is in the Measured category, and 99.5% in the Measured plus Indicated categories. The 'High Grade Zone' is also the shallowest part of the resource.

The well-defined resource, supported by 458 drillholes including 32 twinned holes, enabled  $orelogy^{TM}$  to model a mining inventory consisting predominantly of Measured material supplemented by a minor amount from the Indicated category.

The mine study identified a mid-case pit containing a total of 20.7 Mt of mineralised material at 380 ppm  $U_3O_8$ , with a strip ratio of 2.1:1 and a project life of 11 years. A conventional open pit mining method was selected as the basis for the mining operation, potentially using one 120t class excavator matched to 60t class trucks to achieve the targeted 2 Mtpa RoM rate.

Overburden material from pre-stripping the uranium mineralised zone is predominately soft lakebed sediments which supports a free dig mining method with the underlying volcanics and altered material requiring some low-energy blasting.

The mine plan demonstrated the technical feasibility of a concurrent backfilling strategy through the identification of three lateral mining phases, providing an enhanced and simpler rehabilitation approach (refer Figure 6). Approximately 50% of the waste material has been identified as being suitable for backfill.

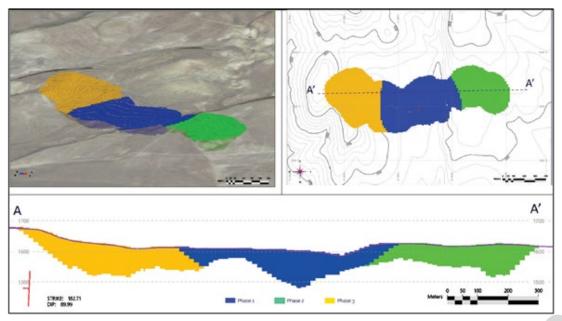


Figure 6. Cross Section of Mine Planning Stages also showing the technical feasibility of concurrent backfilling.



Mining costs were developed using benchmarking based on a contractor mining strategy. The mine schedule was designed so that mineralised uranium material mined in each period would be stockpiled and then rehandled to the processing facility via the preferred transport option, which is described later in this Study. Value has been maximised by prioritising the highest-value pit stages and rehandling the highest grades to optimise the mining and rehandle sequence.

No attempt was made to smooth the grade of the material delivered to the processing facility. The highest-grade material is mined in the first of the three planned phases, while the lowest grade is forecast to occur between mining phases as stockpiles are depleted.

The processing facility's commissioning and ramp-up are expected to occur over the first two years before the rate of 2.0 Mtpa is achieved. The single excavator can support the ramp-up profile to steady state operations, and no extra equipment is required for pre-stripping activities.

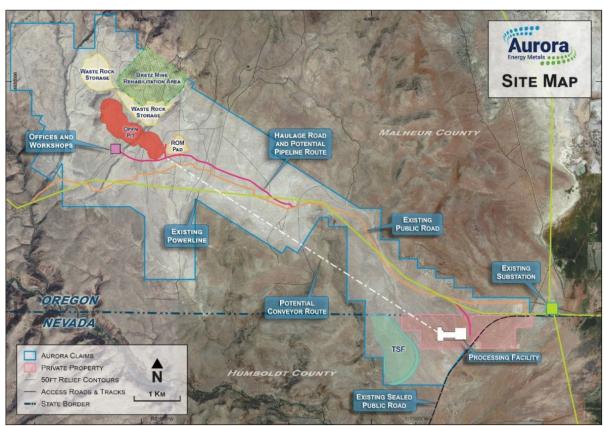


Figure 7. Site Layout.

The site layout map shown in Figure 7 was developed using the existing infrastructure in the region and location of the processing plant, the pit, RoM and waste rock dumps, as well as the corridor for transport of ore to the process plant.

The mine inventory, reported at an economic COG of 211 ppm  $U_3O_8$ , is summarised in the Table below. Approximately 99% of the scheduled throughput over the first 5 years of production is in the Measured Mineral Resource category, and approximately 97% of the scheduled throughput over the first 10 years of production is in the Measured Mineral Resource category.



## All mined resources for the total life of mine are in the Measured or Indicated category.

Table 2. Mine Inventory

Schedule Stage	Mined Total Rock	Mined Waste Rock			Mined Grade Contained (MIF) U <sub>3</sub> O <sub>8</sub>	
	Mt	Mt	Mt	U₃O <sub>8</sub> ppm	kt U₃Oଃ	t:t
Phase 1	23.5	13.2	10.3	394	3.1	1.28
Phase 2	23.3	17.0	6.3	385	1.9	2.69
Phase 3	17.3	13.3	4.1	336	1.0	3.27
Total	64.1	43.5	20.7	380	6.0	2.10

All ore mined in each period is stockpiled and then rehandled to the processing facility at a rate of 2.0 Mtpa. Value has been maximised by prioritising the highest-value pit stages and rehandling the highest grades to optimise the mining and rehandle sequence.

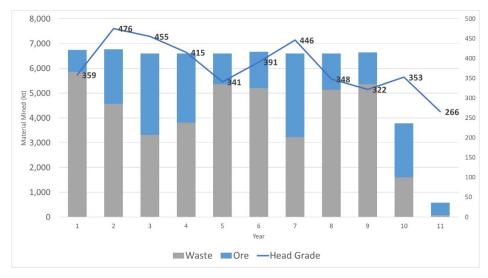


Figure 8. Mine Schedule

The mining study used a processing cost of US\$27.88/t, an average mining cost of US\$3.11/t, a selling cost of US\$1.5/lb  $U_3O_8$  and a rehabilitation cost of US\$0.10/t. The capital cost estimate to build the haul road from the mine to the processing facility is US\$0.5M.

The mining costs were built up as follows:

Table 3. Mining Cost

Cost Centre	US\$/t mined (LoM Average)
Clearing, topsoil & rehabilitation	0.10
Grade control	0.04
Drill and Blast	0.42
Load and Haul	2.16
Ancillary	0.39
Total	3.11



The scheduled physicals and total mining costs are presented in Table 4 below.

Table 4. Mining Schedule and Total Mining Costs

Production	Total	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Waste ('000t)	43,500	3,029	5,401	3,669	3,516	4,255	5,864	3,959	3,558	6,064	3,844	326	14
Ore mined ('000t)	20,672	336	1,370	2,998	3,084	2,345	738	2,707	3,043	536	2,149	1,227	141
Total Mined ('000t)	64,172	3,365	6,771	6,667	6,600	6,600	6,601	6,666	6,601	6,600	5,993	1,553	155
Strip Ratio (t:t)	2.1	9.0	3.9	1.2	1.1	1.8	7.9	1.5	1.2	11.3	1.8	0.3	0.1
Ore Feed from RoM ('000t)	20,672		1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,172
Precipitate produced ('000t)	8,335		628	1,018	838	704	820	915	736	794	715	710	456
Uranium in Ore Feed from RoM ('000lb U <sub>3</sub> O <sub>8</sub> )	17,301		1,309	1,980	1,717	1,524	1,691	1,827	1,570	1,653	1,541	1,532	956
Ore Feed from RoM Grade (ppm U <sub>3</sub> O <sub>8</sub> )	380		396	449	389	346	384	414	356	375	349	348	370
Uranium produced ('000lb U₃O <sub>8</sub> )	11,943		900	1,459	1,201	1,009	1,176	1,312	1,054	1,137	1,025	1,017	654
Uranium Recovery (%)	69%		69%	74%	70%	66%	70%	72%	67%	69%	67%	66%	68%
Mining Costs (US\$ '000's)	128,829	6,849	13,694	13,278	13,130	13,223	13,427	13,312	13,136	13,449	12,004	3,026	300



## **Transport Studies**

Mined material will be transported from the mine site in Oregon to the Company's privately held site in Nevada for processing. There are no restrictions on the mining or processing of uranium in these States as they are both "Agreement States" (i.e. have the authority to regulate uranium mining). There are also no restrictions on interstate transfer of mineralised uranium material and such material movements of uranium ores and other radioactive products are common in the US.

Trucking mineralised uranium material from the mine to the plant was used in the mining study as the Base Case option, however, with low-cost electricity available at the plant site, conveying or pumping the material have both been evaluated as cost effective options although both require additional initial capital.

Topography favours all options with an approximate 200 metre drop in elevation from the mine to the plant site, as shown in the longitudinal profile in Figure 9. The pipe or conveyor alternatives may also offer other benefits over trucking such as enhanced safety and community acceptance.

Fortin Pipelines conducted the pipeline scoping study with three options assessed based on physical property testwork of the Aurora mineralised material and the proposed pipeline route. The preferred pipeline option is to pump a sub 19 millimetre fraction to the plant in a buried pipeline approximately 8.5 kilometre long.



Figure 9. Pipeline Route from mine to plant.



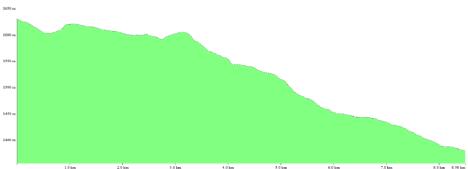


Figure 10. Pipeline Longitudinal Profile from mine to plant

Table 5. Pipeline Design Parameters

Design Scenario	2 mtpa <	19 mm
Parameter	Slurry Pipeline	Return Water
Flowrate (m <sup>3</sup> /hr)	604.33	604.33
Solids SG	2.629	-
Slurry SG	1.23	-
Velocity (m/s)	3.5	1.4
Pipe Diameter (in)	10.75	18
Wall (in)	0.5	0.25
Steel Tonnes	690	598
TDH (m)	107	283.8
Discharge Pressure (Bar)	13.2	27.8
Power (kW)	319.9	582.8

The Study found there are no major road or river crossings and a single power line crossing, with an overall benign route to the plant that can be further optimised. Bare steel pipe with wear allowance was used in the design with 100% pump redundancy using proven technology. The pipeline option delivers a lower operating cost than trucking and has minimal impact on other stakeholders and wildlife.

An order of magnitude capital and operating cost quote was provided by Doppelmayr GmbH for a rope conveyor (RopeCon®) design. The rope conveyor also offers a small footprint and safe, all year-round transport, at a very low operating cost (due to the elevation difference), but significantly higher capital compared to the pipeline. This option is unlikely to demonstrate superior economics to trucking or pipeline options.

An initial order of magnitude cost estimate comparison of the three transport options is shown in Table 6. The estimates include capital and operating costs for crushing and handling facilities in Oregon to provide the required size for each transport method. Conveyor and road haulage options are expected to require primary crushing to <200mm sized product for transport.



The pipeline option is based on <19mm transport size. However, the secondary crushing unit required to achieve this in Oregon would replace a secondary crushing unit in Nevada, required for the other two options, so for this comparison the same primary crushing and handling plant has been included for the pipeline option.

Option	Transport Method	Capital Cost US\$	Operating Cost US\$	Total Cost US\$	Present Value US\$
Α	Overland Conveyor	71,844,930	1,674,432	98,665,088	78,517,663
В	Trucking	24,485,665	41,344,012	74,399,660	53,307,953
С	Pumping	40,449,665	47,276,878	101,883,926	74,375,364
"B" is Best option in present value terms					

Table 6. Comparison of Transport Options

For the purposes of this study, Option B as the lowest overall cost was used as the Base Case transport solution. A decision on the final transport option will be made upon final selection of the process flowsheet in the next study phase, as the flowsheet will drive the physical and chemical properties of the mined material to be delivered to the plant. Permitting and social acceptance will also be significant factors to be considered prior to the final decision.

## **Metallurgical Testwork**

#### **Background**

Studies by Placer Dome in the 1980's focussed on pressure oxidation leaching and demonstrated recoveries around 92%. Review of these results indicated capital and operating expenses will be relatively high and significant further testwork and engineering would be required to further assess that flowsheet option. For the purposes of this Scoping Study it was determined to first assess more simple atmospheric leach flowsheets to establish a Base Case. Further work on pressure oxidation leaching may be conducted in future, particularly if using higher uranium price assumptions and capital expenditure is warranted to secure higher recoveries.

In studies prior to 2012, all testwork was conducted on a "whole of ore" basis, bulking the clay rich higher-grade mineralisation with more competent lower grade material and no consideration given to beneficiation. More recent geological logging of core samples observed the uranium mineralisation is hosted by volcanic flows in which zones of higher porosity, created by vesicles and fractures at the top of each flow, have been subject to clay alteration and host the bulk of the uranium mineralisation. Less porous volcanics are less altered and contain less uranium whilst generally being more competent. This suggested that the uranium may be concentrated in the softer and finer fractions of the mineralised package.

Testwork conducted by EVE in 2012/13 demonstrated that scrubbing and wet screening techniques could be used to classify mineralised material into coarse, competent fraction with very low grade, a finer middlings and a clay fraction. Five large scale tests were conducted under varying processing conditions, ranging from simple soaking to intense scrubbing with a



light ball charge. Results of these tests are summarised in Table 7 (published in ASX release 26 April 2023).

Table 7. Results of Aurora uranium deposit scrubbing and screening tests 2012/13

Size Fraction	Fraction Weight (%)		Grade U₃O <sub>8</sub> (ppm)		U₃O <sub>8</sub> Content (%)		Comment
	Min	Max	Min	Max	Min	Max	
+19.0 mm	29.4	36.8	71	126	5.1	11.2	Coarse grained, low grade
-19.0 mm. +12.7 mm	9.6	11.1	165	259	5.3	8.2	Coarse middlings
-12.7 mm, +6.35 mm	10.1	12.1	248	366	8.5	12.4	Coarse middlings
-6.35 mm, +2.0 mm	11.9	15.1	366	578	14.0	20.4	Coarse middlings
-2.0 mm, +595 μm	5.8	7.5	427	620	9.2	11.2	Coarse middlings
-595 μm, +149 μm	7.0	11.5	408	574	10.4	15.1	Coarse middlings
-149 μm, +37 μm	4.0	8.5	443	623	5.6	16.7	Fine middlings
-37 μm	7.9	12.1	562	829	14.7	24.9	Clay fraction

These results confirmed the potential to reject around 30-35% of the mass with losses of less than 10% of the uranium, of which a significant component was not available to leaching. This achieved a significant increase in plant feed grade with minimal leach recovery losses. The rejection of the harder coarse material and separation of the clays also allow significantly lower cost for any crushing and grinding required for the smaller volume of middlings.

#### **Testwork Programmes**

The 2023-24 testwork programmes was designed by Aurora with DRA Global, with the programme managed by DRA Global and performed by ALS Metallurgy in Perth, WA. The testwork was designed to confirm the findings from previous programmes and advance understanding of the metallurgical characteristics of the Aurora deposit for design of a process flowsheet. A key focus is testing the clay and middlings separately to potentially improve overall recovery compared to the earlier whole of ore testwork.

#### Beneficiation

The first stage of the testwork programme repeated previous beneficiation work to provide separate samples for subsequent leach tests. The beneficiation was undertaken using a wet scrubber and screen resulted in the following deportment of uranium summarised in Table 8.

Table 8. Results of Aurora uranium deposit scrubbing and screening tests 2024

Size Fraction	Fraction	Mass %	U₃O₃ Content (%)	Comment
+19.0 mm	Coarse	25	6	<100 ppm U <sub>3</sub> O <sub>8</sub>
-19.0 mm. +38 μm	Middlings	59	72	
-38 μm	Clay	16	22	









Figure 12: Altered and partially wetted sample



Figure 13: Sample taken directly from the scrubber showing coarser lumps and middlngs, sand-like particles

These results are consistent with the results achieved in previous metallurgical testwork conducted in 2012/13. Leach tests were then conducted on each fraction to assess recoveries, operating costs and capital for the various circuit options. Consideration was also given to potential material handling issues associated with the clay fraction.

#### Comminution

Comminution testing was completed on various sample fractions to derive the required indices and parameters for initial comminution assessments. These parameters include determinations for Rod Mill Work Index, Ball Mill Work Index and Drop Weight Index (a measure of the strength of rock when broken under impact conditions).

The tests determined that size reduction of the uranium material from 200mm to <38mm for scrubbing beneficiation will require a power input ~0.4 kWh/t, depending on the comminution method chosen. At the required grind size of 80% passing 150µm the total power requirement to reduce the rock size from <38mm to 150µm will be ~13.4 kWh/t, depending on the configuration of the comminution circuit.

Using the beneficiation process, 2.0 million tonnes of ore per annum will be crushed to 38mm and then wet screened to the various size fractions. Only the middlings fraction requires grinding, which represents ~59% of the total feed mass (~1.18mtpa), for which the estimated total power required will be 16.6GWh.

These results indicate a lower power requirement than previous estimates, where the power required to crush and grind the material without a beneficiation step was estimated at



17 kWh/t, requiring 34.0GWh for 2.0mtpa, more than double that of the current preferred processing route.

#### Leaching

Significant leach test work has been conducted in the past using atmospheric leach on whole of ore samples. Recent work has been designed to duplicate and optimise this previous testing when applied to separate clay and middlings fractions.

The work to date has confirmed acceptable recoveries and acid consumptions may be achieved through using atmospheric leach conditions and indicated that improved recoveries may be attained through more test work on beneficiation, finer grind with the addition of ferric sulphate and pulp density research.

#### **Previous Testwork**

EVE conducted the last significant tests in 2012/13 which were a series of atmospheric uranium leaching tests conducted on whole of ore. Two key tests were completed, Test SC01 and Test SC02.

Using un-beneficiated material the head grade for these tests were relatively low at 227ppm and 280ppm uranium respectively, compared to the recent tests at 400 to 500ppm on beneficiated material.

Test SC01 and SC02 were conducted with identical starting conditions:

Lixiviant: 50kg/t sulphuric acid, and 3 g/L Fe(III)

% solids: 40% Temperature: 60°C

Whole of Ore recovery of 71% was achieved.

Results for the SC01 test are shown graphically in Figure 14.

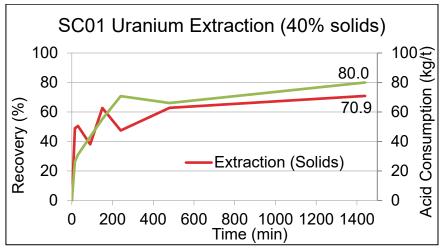


Figure 14. Test SC01 Leach Extraction and Acid Consumption



Test SC01 achieved a significantly higher uranium extraction at 71% compared to SC02 at 54%. SC02 also consumed significantly more sulphuric acid. The difference between the two tests was a significantly higher oxidant addition in the case of SC01, which physically lowered the pulp density after 90 minutes, with test SC01 reporting a final pulp density of 33% compared with SC02 which reported a final pulp density of 40% solids.

SC01 reported a residue grade of 81ppm Uranium and SC02 reported a residue grade of 130ppm Uranium.

The work demonstrated the effect of viscosity on a standard atmospheric acid leach. This was investigated and demonstrated that an increase in solids density from 10% to 40% resulted in ~10% reduction in maximum extraction (Test SC01 - Figure 15).

It was proposed that this effect was associated with the <38µm "clay" fraction present in the whole of ore sample.

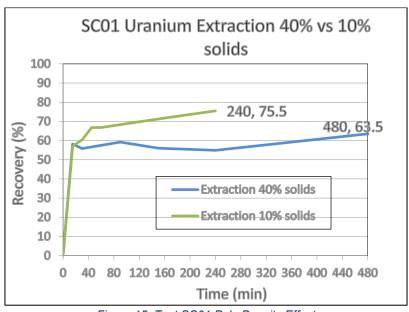


Figure 15. Test SC01 Pulp Density Effect

#### **Current Testwork**

Atmospheric leach testing has been conducted on a middlings fraction at <19mm >38 µm and a clay fraction at <38µm. Results used in this study are based on several atmospheric leach tests completed to date.

Leaching on Clay Fraction (<38µm).

Test HY17792 and Test HY17793 were both conducted under the following starting conditions:

•	Temperature:	80°C,
•	Leach time:	24hr,
•	Pressure:	Atmospheric,
•	Acid Addition (kg acid/t ore)	125ka/t

125kg/t, Sodium Chlorate (NaOCl3): 20kg/t, and

Initial Pulp density (solids w/w) 35%



Test HY17793 was preconditioned for 24 hours in salt water (NaCl).

Significant viscosity effects were observed as initial acid additions were made into the agitated vessels. The tests were diluted, to provide improved mixing characteristics. As a result, both tests proceeded at 25-26% solids.

HY17792 reported 58% uranium extraction with 56kg/t acid consumption. HY17793 reported 55% uranium extraction and an associated 65kg/t acid consumption.

These results demonstrated there is no advantage in preconditioning with NaCl.

HY 18101 (latest test) with similar starting conditions other than a starting pulp density of 25% solids and starting addition of 150kg/t acid. This test had a consumption of 50kg/t acid and with added ferric sulphate, reported 62.1% uranium extraction.

From the above tests, a uranium recovery from clays of 58% has been used in the current process flowsheet with potential upside to 62%.

*Middlings Fraction (>38μm <19mm)* 

The latest atmospheric leach test completed to date, test HY18904, was conducted on middlings ground to ≈80% <106µm. This test was undertaken with the same conditions as test HY18101 above.

This test reported a uranium extraction of 74.1% with an associated acid consumption of 69kg/t.

The recent clay and middlings recovery results combine to give an overall uranium recovery of 69% as used in the flowsheet modelling. Peak recoveries suggest a combined recovery into the 70s is possible with further work.

These recent atmospheric leach tests were conducted with oxidant and ferric iron additions and at finer grind sizes to replicate and improve on the conditions of the 2014 EVE SC01 test results, which so far has been the case. Given the SC01 recovery of 71% on whole of ore and the recent clay recovery of 62%, there appears to be scope with continuing testing to enhance the middlings recovery further.



## **Flowsheet Development**

#### Selection of Preferred Flowsheet

A number of flowsheet options were developed, costed and modelled using recent and historical testwork results. These were:

- Beneficiation to reject coarse material followed by atmospheric leach on the undersize fractions.
- Beneficiation to reject coarse material followed by atmospheric leach of separate middlings and clay fractions.
- Tests were also conducted on the low-grade reject material to test recovery of uranium from a dump leaching method.

The selected flowsheet uses beneficiation to reject coarse low-grade material and separate atmospheric leaching of middlings and clays as shown in (Figure 16). The beneficiation improves leach feed grade by removing coarse low-grade material and the separation of clays and middlings allows better control on leaching and reduces the volume of material (middlings) through the grinding circuit. At the average annual RoM production rate of 2.0 Mtpa, an average 500 ktpa is rejected and 1.5 Mtpa is available for leaching at a LoM average grade of 476 ppm U<sub>3</sub>O<sub>8</sub>, compared to the average mined grade of 380 ppm U<sub>3</sub>O<sub>8</sub>.

All flowsheet options start with a Primary Crusher or MMD Sizer to reduce run of mine material to 80% passing 200mm for road transport or conveying or in the case of the pipeline, to produce a slurry of sub-19mm material. The material would pass through beneficiation scrubbing at the process plant and then require further crushing/grinding prior to uranium leaching.

A "Middling" fraction <19mm >38µm, representing 59% of the plant feed, will then be ground, thickened and leached in an atmospheric leach circuit.

A "Clay" fraction <38µm, representing 16% of the plant feed, will be thickened and leached in a separate atmospheric leach circuit.

The uranium recovery plant (CIX Plant) and tailings storage facility are sized for recovery of uranium and storage for solids and solutions from all fractions.

Acid consumptions based on the ALS test work are outlined below:

- Dump Leach 15kg/t
- Clay Fraction 56kg/t
- Middling Fraction 69kg/t

The overall acid consumption used for the Study is 60kg/t. All other reagent costs have been derived from the benchmarking exercise.



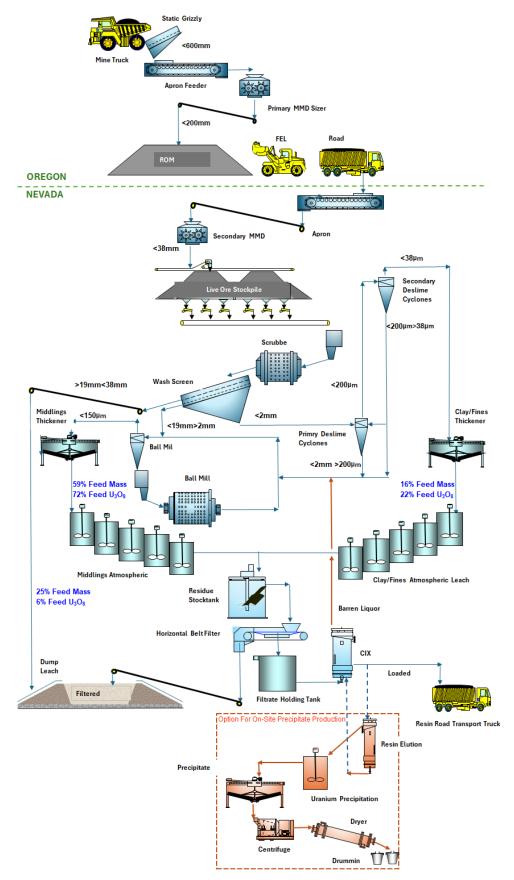


Figure 16. Parallel Leach Flowsheet.



Key process plant operating assumptions are shown in Table 9.

Table 9. Plant Operating Assumptions

rable 9. Plant Operating Assumptions				
Criteria	Assumption			
Mine Operating Hours	24 h/day, 7 days/week, 365 days/year			
Ore Trucking Operations	12 h/day, 7 days/week, 365 days/year			
Milling Operating Hours	24 h/day, 7 days/week, 365 days/year			
Crusher Utilisation	~ 65 %			
Process Plant Utilisation	~ 97 %			
Throughput	~ 2,000,000 tpa			
U₃O <sub>8</sub> Recovery (Design)	~ 69%			
U₃O <sub>8</sub> Feed Grade	380 ppm			
Ore Moisture	9.0% (w/w)			
Bulk Density	1.9 t/m <sup>3</sup>			
Feed Material Top Size (P95)	600mm			
Ore Delivery - Nevada	Run of Mine Ore Stockpile (ROM) fed via Road Trucks			
Raw Make-up Water	Nominal: 139 m <sup>3</sup> /h			
Potable Water	Company to supply Nominal: 1 m³/h			
Power	Power Grid Supply voltage: 115KV			
1 OWG!	Installed power is ~5,000 kW			

#### CIX Contract Resin Treatment

The option to send loaded resin off-site for contract treatment allows significant reduction in the plant capital cost. This option is possible due to the availability of a number of operations in the US where loaded resins may be processed under contract arrangements as described below.

Following atmospheric leaching at the processing plant, uranium bearing liquor is loaded onto Ion exchange (IX) resin.

Bulk transport tankers will be used to ferry loaded resin to the resin treatment facility.

A contract resin treatment cost applies and covers resin receipt, storage, elution, precipitation, drying and packaging, along with all associated handling and reagent use.

Contract resin treatment would produce a saleable drummed U<sub>3</sub>O<sub>8</sub> product for sale to customers.

The simple block flow diagram in Figure 17 depicts the different state jurisdictions, battery limits and associated stakeholders.



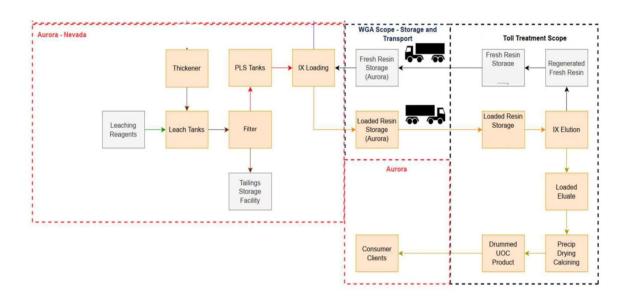


Figure 17. State jurisdictions, battery limits and associated stakeholders

## Infrastructure

The infrastructure considered for the Study includes all supporting facilities and site works located outside the mining pit areas:

- Mining Main access and Ore Haulage Road from Oregon to Process Plant Site in Nevada.
- Internal access roads and tracks.
- Bulk earthworks
- Accommodation village.
- · Communications system.
- Site Support buildings.
- · Site Operations steel framed buildings.
- Explosives Magazine/Storage facilities.
- Fuel storage and distribution facility.
- Power reticulation.
- Site security
- Raw Water supply and pipelines, and
- Potable water supply and waste-water treatment.

#### Access Roads

The existing unsealed road that leads to the mining area will be upgraded to provide access along a 9km section to a standard suitable for triple B road trains. The mine access road will



deviate from the existing unsealed road before it reaches the County Line Road to access the Process Plant area.

The proposed Process plant area is located on the western side of the sealed County Line Road approximately 8.5km due west of the town of McDermitt in Nevada. It is expected that construction equipment, spares, reagents, personnel and uranium product (or loaded resin) will be transported via McDermitt using National Highway Route 95.

#### Accommodation Village

A long-established mining industry exists in Nevada. There are several gold and copper mines in the area which utilise experienced labour and support services for mining operations. There are also several chemical processing operations (pyrometallurgy and gold processing) in the local area. Most of the workforce for this Project is likely to be drawn from the regional population within a 300km radius of the operations.

It is expected that an accommodation village will be required to house the construction and early mining teams and in the longer term to allow up to 50% of the operating workforce to commute weekly, from distances beyond a one hour driving distance from the site.

#### Aerodrome

McDermitt State Airport is located on the Oregon-Nevada border, west of McDermitt and east of the process plant site. This is available for emergency evacuation and light passenger aircraft traffic. The Airport is currently used for recreational flying, agricultural spraying and emergency medical evacuation.

#### **Communications System**

Two new communication towers are expected to support the communications infrastructure across the Aurora operation. The main mast communication tower will be installed at the process plant whilst a second mast tower will be located at the mining area.

#### Reagents, Consumables and Product Transport

Limestone, quicklime, flocculant, and soda ash reagents will be delivered to the processing plant site in Nevada in solid form via trucks. Liquid sulphuric acid, propane, carbon dioxide, ferric sulphate, and caustic soda will be delivered as liquids, also by trucks.

Off highway diesel will be delivered to a suitable storage facility at the processing facility site.

The largest volume of diesel fuel will be delivered to a suitable storage and distribution facility at the mine site in Oregon. This diesel fuel will be delivered by truck using the upgraded mine haul road.

Mine explosives will also be delivered by truck to a secure facility at the mine site using the mine haul road.

Dried uranium precipitate produced at site will be packaged and transported in drums loaded in containers, in adherence to industry standard practice.

For off-site resin treatment, resin will be pumped to a loaded resin holding tank, then transferred to a bulk road transporter tanker.



#### **Power Supply**

The Project is located in the service territory of the local Harney Electric Cooperative (HEC), which operates a 115 kV transmission network nearby. HEC is an electric transmission and distribution consumer-owned cooperative that serves more than 50,000 square kilometres in southeast Oregon and northern Nevada.

HEC is headquartered in Hines, Oregon, with a district office in Orovada, Nevada and a satellite office in Fields, Oregon. HEC was founded in 1961 to provide power to rural farmers and ranchers in the region and now serves approximately 4,000 members with over 640 kilometres of transmission line and almost 4,200 kilometres of distribution lines spanning across south-east Oregon and northern Nevada.

An overhead powerline will be installed linking the processing facility area Electrical Distribution Yard to the existing Harney Electric Cooperative electrical switchyard 1.7 km to the east.

HEC sources its energy from the Department of Energy's Bonneville Power Administration (BPA). BPA delivers hydropower produced in the Columbia River Basin. Once the Project's power requirements have been estimated, a Power Service Application will be submitted to HEC, which would then initiate an Interconnection Study for their system and a System Impact Study with BPA. An initial discussion with HEC has indicated that the system will be able to support the Project's expected energy load. High level estimates indicate a maximum demand of 5MW with an average demand of 4MW.



Figure 18. Existing HEC Substation located close to planned plant site.

#### Raw Water

A hydrogeological model for the Aurora project and an assessment of the groundwater permitting requirements for the Project were completed by Oregon-based consultancy GSI Water Solutions Inc.



The investigations conducted in 2012 provided a conceptual deep system groundwater target. During the Prefeasibility Study phase of the Project the target area of high fracture density that is within the existing lease area will be investigated to confirm the size and quality of a groundwater supply (Figure 19).

Aurora intends to develop an alternative primary supply source outside the caldera which may serve a dual purpose, providing water to the processing plant in Nevada and acting as a backup supply outside the caldera. The proposed use of water for the AUP will require a water right issued by the Oregon Water Resources Department (OWRD). Based on the geologic setting, future groundwater production close to the Project's mine site is unlikely to impair Oregon surface water or groundwater users. Consequently, obtaining a new permit for the use of groundwater appears viable.

The estimated total project make-up raw water requirement is 1.2million cubic metres per annum. Within the mining areas, pit water will be used for dust suppression on haul roads, pit benches, ex-pit overburden landforms, in-pit backfill and dust suppression for regional and site roads.

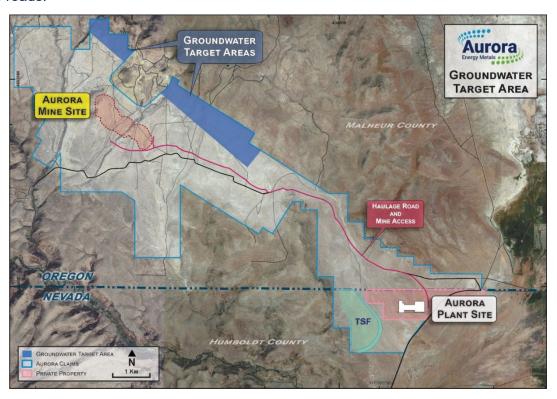


Figure 19. Proposed Prefeasibility Groundwater Investigation Target Area

#### Waste Rock and Tailings Management

Table 10 shows volumes contained in each storage facility and the estimated volume in loose cubic metres (LCM) at the end of the mine life.

Total LoM Volume (LCM) **Storage Facility** Waste Rock Dump 16.6 million Tailings Storage & Dump Leach Facility 14.0 million

Table 10. Volume of Storage Facilities



The inventory for mining by phase is detailed in Table 11.

Table 11. Mining Plan Inventory

Mine Planning Inventory	Waste (Mt)
Phase 1	13.2
Phase 2	17.0
Phase 3	13.3
Total	43.5

The mine sequence to support backfill will be as follows:

- Phase 1, waste to Waste Rock Dump
- Phase 2, waste fills Phase 1 open pit void, with early overburden material to Waste Rock Dump
- Phase 3, mine to completion, waste fills Phase 2 open pit void

The mine plan was developed to complete the mining of Phase 1 to allow Phase 2 material to be backfilled into the phase 1 open pit void. The backfill sequencing by volume is calculated on a LoM basis in Table 12. The project includes the excavation of an in-situ waste volume of 26.4 M BCM, and a conservative swell factor of 30% was used to calculate the LoM swelled volume of 34.3 M LCM. As Phase 1 mining is completed, the remaining material from Phase 2 and Phase 3 can be backfilled into the space. A detailed backfill schedule will be required as a part of further studies.

Table 12. LoM Waste Destination Total (M LCM)

Waste Source	Destination	Total (M LCM)
Phase 1	WSD	10.3
Phase 2	WSD	6.3
Phase 2	Phase 1 Pit Void	7.2
Phase 3	Phase 1 & 2 Pit Void	10.5
Total		34.3

#### **Tailings Storage and Dump Leach Facility**

During the mine optimisation stage of the scoping study, the concept of a tailings storage facility was to store "whole-of-ore" thickened slurry tailings, orelogy<sup>TM</sup> provided a conceptual design for such a facility. Subsequently, as a result of the metallurgical testwork programme, beneficiation of the mined material into three size fractions has determined that the long-term tailings will consist of filtered tailings from the atmospheric leach plants together with a dump/heap leached coarse ore fraction.

As a result of the above, the option to combine stacked, filtered tailings with a coarse ore dump leach facility has been developed and included as the preferred option for providing a stable landform at the conclusion of processing operations.



The Tailings Storage and Dump Leach Facility (TSDLF) will be located on the Aurora owned private land next to the process plant area, located on the western side of the County Line Road, approximately 8.5km west of the town of McDermitt in Nevada.

#### **Tailings**

The final tailings will consist of filtered and washed leached product from the horizontal belt filter plant. Washed leach product solids are expected to be filtered to <15% moisture. The compacted bulk density of the tailings is expected to be 1.5t/m3. This 'dry' cake will either be loaded onto trucks and hauled to the TSDLF or conveyed. At the TSDLF tailings will be dumped, spread and compacted to form a stable "dry" stack with 1V:4H side slopes.

A total of 15.5M dry tonnes of tailings require secure disposal over the plant operating period.

#### **Coarse Rejects**

Coarse rejects from the ore scrubbing beneficiation plant will be trucked (or conveyed) and stacked at the perimeter of the TSDLF. This will provide additional strength to the containment. The coarse ore is a scrubbed >19mm<38mm "washed gravel" product. The bulk density of this material is expected to be 1.4t/m³. The total quantity of coarse reject material to be placed will be 5.2M dry tonnes over the project life.

All tailings and coarse rejects will be stacked on an engineered HDPE/Geofabric base with rock and pipe filter underdrainage. The TSDLF will accommodate this volume with a stack height of up to 20 m. The facility will be expanded throughout the life of the mine to a total footprint 1,250m x 800m, covering an area 1.0km². The facility will be constructed in 3 stages, each stage covering an area of approximately 0.33km².

The design of the TSDLF is based on the following key considerations:

- Perimeter structural zone using coarse reject ore to enhance stability of the filtered tailings.
- HDPE liner for containment and environmental protection.
- Placement of potentially higher moisture tailings in the interior of the deposit during the wet season if required.
- Underdrain collection system to collect drainage from tailings and dump leach ore.
- Surface water management.

The TSDLF conceptual design is shown in the figure below.

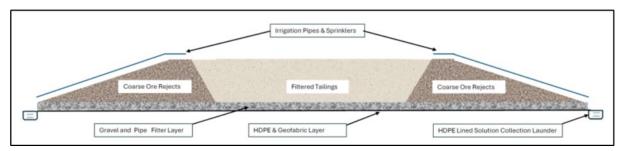


Figure 20. TSDLF Conceptual Design - Section

The tailings will be stacked with a coarse ore structural zone around the perimeter of the facility, and a filtered tailings, non-structural zone in the interior of the stack. Tailings will be



placed in lifts, the thickness of which may be determined using test pads during the start of operations that meet the minimum density requirements. Lifts will be placed progressively moving upslope on the TSDLF lined base.

Construction of Stage 1 will include approximately 35% of the required base, HDPE and geofabric liner and the rock and pipe filter underdrainage. The leach solution and barren solution storage ponds and associated launders and pumping facilities will also be included in Stage 1. Figure 21 shows the TSDLF conceptual design in plan view.

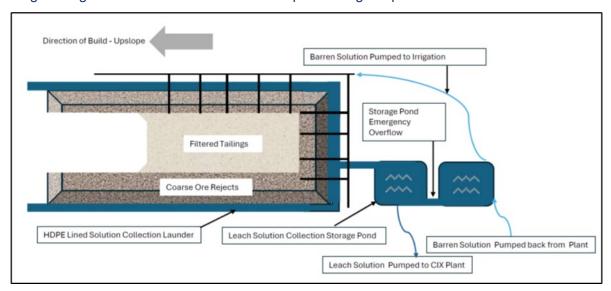


Figure 21. TSF & Dump Leach Conceptual Design - Plan

Subsequent base construction and lining will advance upslope to keep ahead of coarse rejects placement and subsequent filtered tailings placement.

The TSDLF area will be fully lined with an HDPE geomembrane, underlain with a sand/clay bedding material. The facility will include an underdrain collection system above the HDPE geomembrane to collect drainage from the stack. Drainage from the stack will report to two geomembrane - lined reclaim ponds.

#### **Environmental Considerations**

With an arid climate averaging around 31.2 cm precipitation per annum, the evaporation rate will exceed precipitation. The approach to protecting the environment is based on the following factors:

- The base of the TSDLF area will consist of HDPE geomembrane overlain by an underdrain gravel.
- The underdrain system will consist of a network of perforated polypropylene pipes with a layer of gravel overliner material placed over the top.
- The Reclaim Ponds will be double geomembrane lined and can contain the run-off from a 100-year, 24-hour storm event.
- Solution collected in the pond will be pumped to the Process Plant where it will be contacted with resin in the CIX facility.



The ponds will be equipped with a leak collection and removal system consisting of a collection sump between the two liners and a riser pipe laid along one of the slopes, providing access for monitoring and recovering any leakage through the primary liner.

# **Permitting**

The AUP is located on federal public lands administered by the U.S. Department of the Interior, Bureau of Land Management (BLM) in Oregon and Nevada. The proposed processing site is located in Nevada, on private land owned by the Company. Construction of the Project requires permits and approvals from various federal, state, and local government agencies.

Based on various sources of independent advice obtained by the Company to date, no federal, state or local regulatory or permitting issues have been identified that could preclude approval for the Project's development.

The process to obtain approval to develop the mine and associated processing facilities includes the submission of a proposed Mine Plan of Operations (PoO) and a Reclamation Plan for approval by the BLM in both Oregon and Nevada, and a Uranium Milling Licence, Byproduct Material and Mill Environmental Impact Statement to the US Nuclear Regulatory Commission (NRC). The Oregon Department of Geology and Mineral Industries (DOGAMI) is responsible for issuing an Operating Permit for the mine as there are no plans for mineral processing at that site.

The Company will require permits to be issued by other federal and state agencies for Project approval, including:

- Oregon Department of Fish and Wildlife;
- Oregon Department of Environmental Quality (ODEQ);
- Nevada Division of Environmental Protection: and
- Nevada Division of Water Resources.

To meet the requirements of the National Environmental Policy Act of 1969 (NEPA), the BLM, as the lead federal regulatory agency, oversees the preparation of an Environmental Impact Statement as part of the overall permitting and approval process.

Aurora has commenced baseline environmental and cultural studies required for an Exploration Plan of Operations. An Exploration PoO would enable the Company to disturb an area larger than the five-acre limit imposed whilst operating under the current Notice level exploration permits.

For example, the excavation of a bulk sample intended to be used in further phases of metallurgical testwork would likely require an approved Exploration PoO.

The permits required for the mine, processing plant and tailings facilities at the federal and state levels are presented in the Tables 13-15 below.



Table 13. Federal Permitting Requirements

Jurisdiction	Agency	Permit or License
	U.S. Nuclear Regulatory Commission	Uranium Milling License (Source Material and 11e,(2) Byproduct Material
		Mill Environmental Impact Statement
	U.S. Bureau of Land Management	Mine Plan of Operations
FEDERAL		Environmental Impact Statement
	U.S. Environmental Protection Agency	Clean Air Act Subpart W. Permit to Construct Tailings Facility

Table 14. Oregon Permitting Requirements

Jurisdiction	Agency Permit or License	
	Oregon Department of Geology and Mineral Industries	Operating Permit and Supplemental Forms
	Oregon Department of Environmental Quality	Air Quality Permit
	Oregon Department of Environmental Quality	NPDES Discharge Permits
OREGON	Oregon Water Resources Department	Water Rights Permits
	Oregon Department of State Lands	Fill/Removal Permit
	Oregon State Historic Preservation Office	Cultural Resource Survey
	Oregon Department of Fish and Wildlife Interagency Review Team	Greater Sage- grouse Mitigation Plan

Table 15. Nevada Permitting Requirements

Jurisdiction	Agency	Permit or License
	Nevada Division of Environmental Protection,	Water Pollution Control Permit
	Bureau of Mining Regulation and Reclamation	State Groundwater Permit
	rtodamaton	Reclamation Permit
	Nevada Division of Environmental Protection, Bureau of Air Pollution Control	Air Quality Operating Permit
	Nevada Division of Environmental Protection, Bureau of Water Pollution Control	Stormwater General Discharge Permit
NEVADA	Nevada Division of Environmental Protection, Bureau of Waste Management	Approval to Operate a Solid Waste System
		Permit to Appropriate Water
	Nevada Division of Water Resources	Permit to Construct Dam
	Nevada Department of Wildlife	Industrial Artificial Pond Permit
	Nevada State Fire Marshal's Division	Hazardous Materials Permit
	Nevada Sagebrush Ecosystem Program	Greater Sage- grouse Mitigation Plan



# **Capital Cost**

The overall project capital cost estimate was developed by Aurora and its independent consultants, factored from multiple sources in accordance with industry standard scoping study guidelines. The primary source for project capital cost estimates are benchmarking studies of similar projects in the industry in Australia, USA, Namibia and South Africa. Sources used in the benchmark process included:

- Vimy Resources (now Deep Yellow) Mulga Rock Project
- · Lotus Resources Limited Kayelekera
- Berkeley Resources Salamanca Project
- Black Range Taylor Ranch Project
- Deep Yellow Omahola Project
- PepinNini Minerals Crocker Well Project
- Stonehenge Metals Daemon Project

The International Atomic Energy Agency's Study Guidelines titled "Mathematical Algorithms for Capital Cost Estimates" and "Capital and Operating Cost Estimation Handbook for the Milling of Uranium Ores in the United States" by A.L. Kuestermeyer, Colorado School of Mines were used to estimate factors for differences in capacity and escalation. The Company also referred to Placer Development Limited's *Aurora Pre-Feasibility Study* and its *Engineering and Economic Review* completed in 1979.

Reported project costs have been escalated to end December 2023 costs and appropriately scaled to the size of the Aurora Project (2.0 Mtpa Mined & Beneficiated and 1.5Mtpa Leached) utilising the 'six tenth rule'. These are considered appropriate measures for this level of study given the +/-35% confidence level. Specific differences with the Aurora Uranium Project compared to the benchmark projects have been accounted for, mainly related to specific terrain, climate and availability of local facilities.

From the benchmarking study the estimated capital cost for a 1.5Mt atmospheric leach project was US\$238m. These costs were reviewed by an experienced independent uranium industry processing consultant at Amerston Consulting and the estimate for a 2.0Mtpa plant was reduced to US\$200m. A Contingency of 7% has been applied for all capital estimates.

The level of accuracy of the capital cost estimates at +/-35%, is in line with typical scoping study levels. Study capital costs for a future pre-feasibility and feasibility study have not been included. No exploration expenditure was included in the capital estimate as the targeted high-grade component of the resource is already 99.5% in the measured and indicated category and no 'blue-sky' potential was included in the evaluation.

#### **Estimate Structure**

The capital estimate is structured into the following major categories Direct and Indirect Costs, a Growth allowance and Owner's costs. Direct costs are project expenditures that cover the supply of equipment and materials, freight to site and construction labour. Indirect costs are project expenditures that cover miscellaneous construction costs such as EPCM services, mobilisation/demobilisation, construction facilities, temporary construction accommodation,



travel, meals, as well as plant first fills, critical equipment spares and plant commissioning costs.

A growth allowance has been included in the estimate which is commensurate with the level of design and estimating confidence. Growth allowance is reserved for errors and omissions based upon data assumed and equipment detailed as the basis for this study.

Owner's costs have been included in the capital estimate for the following:

- Owner's project management team
- Pre-mobilisation construction costs
- Insurances
- Approvals
- Computing systems (business services systems)
- · Recruitment costs for operational team
- Salaries for operational team during commissioning and handover period and
- Office costs.

Owner's contingencies and/or risk amounts have been included in the estimate. Owner's contingency is an allowance to cover costs associated with unexpected items during construction that are not covered by the EPCM contract. These may include such items as scope changes or changes to equipment and/or material specification changes or unforeseen delays such as inclement weather delays, etc.

# Mining Infrastructure

The capital cost of the following mining infrastructure has been estimated based on the following assets:

- Mining operational and administration buildings.
- Mining compound, including earthworks, civils, fencing, bunding, jack pads, laydown areas.
- Mining workshop and stores.
- Mining heavy and light vehicle re-fueling facility.
- Heavy and light vehicle washdown bays; and
- · Explosives storage and magazine facility.

All mining facilities will be constructed at the mine site in Oregon.

#### Process Plant – Beneficiation and Hydrometallurgical Circuits

The beneficiation circuit resides within the process plant footprint and consists of the following major unit operations:

- ROM Ore Stockpile. (Oregon)
- First Stage MMD sizer. (Oregon)
- Live Ore Stockpile.
- Second Stage MMD sizer.



- · Rock Scrubber unit.
- Screening
- Deslime separation.
- Coarse Ore Reject Dump Leach facility.

The RoM ore stockpile and the first stage MMD sizer will be located at the mine site in Oregon, assuming either trucking or conveying are the preferred transport options.

The live ore stockpile and beneficiation plant will be constructed at the process facility site in Nevada. The hydrometallurgical circuit is based on the process design criteria. The process plant consists of the following major unit operations:

- Grinding
- Middlings atmospheric uranium leach circuit.
- Deslime "clay" atmospheric uranium leach circuit.
- Horizontal belt filter circuit.
- Continuous ion exchange.

# Utilities, Reagents and Services

The utilities and services area of the process plant were costed by Aurora with the plant consisting of the following major components:

- Water supply raw water, pit water, demineralised water, potable water, process water, fire water, gland water, and safety shower systems.
- Air supply plant air and instrument air; and
- Steam supply boiler to provide low pressure steam.
- The reagents area of the process plant consists mainly of tanks and pumps and consists of the following major unit operations:
- Sulphuric acid storage.
- Ferric sulphate generation and storage.
- Sodium chloride dissolution and storage.
- Caustic unloading and storage.
- Flocculant mixing and storage.

#### Plant Infrastructure

Process plant infrastructure will consist of the following major assets:

- Bulk fuel storage and distribution.
- Sewage disposal and treatment.
- Plant buildings,
- Process plant control system.
- High voltage switch yards, substations buildings and power distribution.
- Mobile plant equipment; and
- Site communication systems,



# Tailings Storage and Dump Leach Facility

The tailings storage and dump leach facility has been costed independently of the benchmarking exercise. The basis of the cost estimate for this facility is from data published by the Australian Centre for Geomechanics, Perth. "A conceptual cost comparison of alternative tailings disposal strategies in Western Australia" by RJ Jewell and AB Fourie (eds) © 2018.

The facility is based on a fully lined filtered tailings stacking facility. The Net Present Cost (NPC) for such a facility is quoted in the reference as between A\$1.48 to A\$3.26 /tonne of filtered tailings. This costing was undertaken in 2018. The present-day cost is between A\$1.81 and A\$4.00 /tonne of filtered tailings.

For the current study the Mid-range NPC has been adopted, a cost of US\$1.98/t (A\$2.91/t). The facility capacity for Dump Leach solids, Clay filtered tailings and Middlings filtered tailings totals 21.47Mt.

This provides a total NPC of US\$42.5m. The median operating cost of US\$0.98/t was adopted based on the reference, providing a total operating cost of US\$21.04m for the life of mine.

Consequently, the capital cost component for the facility is estimated at US\$21.46m.

The capital cost has been split into 3 Stages. The initial capital for stage 1 at 40% of the capital component (US\$8.6m). Stage 2 and 3 are assumed to each cost 30% of the total capital component (US\$6.4m).

Stage 2 and 3 capital costs have been included as sustaining capital costs.

#### Regional and Area Infrastructure

The regional infrastructure includes the haul Road from the mine site in Oregon to the processing facility in Nevada. The cost for the supply and installation of all of the above assets has been included in the capital estimate on an EPCM basis.

#### Other inclusions are:

- First Fills and Critical Spares.
- Mobilisation and demobilisation.
- Vendor Representative costs.
- Commissioning assistance.
- Construction facilities and services.
- Construction camp.
- EPCM costs.
- Design growth.
- · Owner's team.

### The area infrastructure includes:

- The accommodation village, if required.
- Raw water supply and distribution system.
- High voltage electrical connection.



- Main access and process area roads.
- Area Communications.

#### Sustaining Capital

Sustaining capital includes the costs associated with the following:

- The second and third stages of the Tailings Storage and Dump Leach Facility. Each stage is estimated to cost US\$6.4m. The second stage is expected to be built over 9 months, starting in the 13th operating quarter. The third stage is expected to commence construction in the 28th operating quarter. The costs associated with Stage 1 of this facility, together with the required pumps and pipelines are included as start-up capital costs.
- Estimated rehabilitation costs for the mine site and processing facility areas. This cost has been estimated based on expected areas of disturbance and totals US\$8.6m. This will be spent in the last operating year, the subsequent closure year and then environmental monitoring programmes which are typically required for a period of 10
- An allowance for plant maintenance requirements based on 5% of the start-up capital requirement.

### **Capital Cost Estimate**

Two separate capital cost estimates were derived:

- A Base Case using contract resin treatment in which loaded resin is transported off site to a third party for resin stripping and uranium precipitate production, and
- A On Site case in which all processing including uranium precipitate production is completed on site.

A breakdown of the capital estimates by area for the two options considered are presented in the tables below.



Table 16. Capital Cost Estimate - Contract Resin Treatment - Base Case

	Start-Up Capital Cost - Contract Resin Treatment		
Area	Cost Area	US\$/M	
1000	Mining	\$3.9	
2000	Process Plant	\$58.2	
3000	Plant Infrastructure	\$21.1	
4000	Area Infrastructure	\$13.8	
5000	Regional Infrastructure	\$2.1	
6000	Miscellaneous	\$7.1	
7000	Indirect Costs	\$19.3	
8000	Growth Allowance	\$6.6	
9000	Owner's Costs	\$9.6	
9500	Tailings Storage & Dump Leach Facility (Stage 1)	\$8.6	
	Contingency	\$10.5	
	Total	\$160.9	
	LoM Sustaining Capital	\$30.0	

Note: Estimate accuracy is +/- 35%, commensurate with scoping level studies.

Table 17. Capital Cost Estimate – Resin Treatment On Site

Start-Up Capital Cost - Resin Treatment On-Site		
Area	Cost Area	US\$/M
1000	Mining	\$3.9
2000	Process Plant	\$88.2
3000	Plant Infrastructure	\$21.1
4000	Area Infrastructure	\$13.8
5000	Regional Infrastructure	\$2.1
6000	Miscellaneous	\$9.3
7000	Indirect Costs	\$25.2
8000	Growth Allowance	\$8.7
9000	Owner's Costs	\$9.6
9500	Tailings Storage & Dump Leach Facility (Stage 1)	\$8.6
	Contingency	\$13.3
	Total	\$203.8
	LoM Sustaining Capital	\$32.0

Note: Estimate accuracy is +/- 35%, commensurate with scoping level studies.



A comparison of the capital required for contract resin treatment compared to treatment on site is shown in Table 18.

Table 18. Capital Cost Comparison

Start-Up Capital Cost - Contract Resin Treatment		
Total US\$160.9		
Start-Up Capital Cost – On Site Resin Treatment		
Total	US\$203.8	

Note: Estimate accuracy is +/- 35%, commensurate with scoping level studies.

The estimated capital saving for contract resin treatment is based on the removal of the following plant components:

- Resin elution.
- Resin elution reagents make-up.
- Eluate Clarifier.
- Uranium precipitation circuit; and
- Uranium precipitate thickening, washing, drying and packaging.

The estimate for the capital cost of this section of the process plant and associated equipment was reviewed by Amerston Consulting.

Total operating costs for both scenarios have been estimated as follows;

**Contract Resin Treatment** US\$46/lb  $U_3O_8$ . On-site Resin Treatment US\$43/lb U<sub>3</sub>O<sub>8</sub>.

Considering the differences in capital and operating costs and using a uranium price of US\$90/lb the overall project NPV and IRR for the two options, based on an 8% discount rate are shown in Table 19.

Table 19. NPV and IRR for the two resin treatment options.

Contract Resin Treatment	
NPV <sub>8</sub> Pre-Tax	US\$151
IRR	25.2%
Resin Treatment On-Site	
NPV <sub>8</sub> Pre-Tax	US\$137
IRR	21.2%

Note: Estimate accuracy is +/- 35%, commensurate with scoping level studies.

The scenario using production of a loaded resin for off-site processing has been adopted as the Base Case due to the significant capital saving of around US\$42m and improved NPV and IRR (Table 19).



For the alternate scenario based on production of precipitate on site the Capital Cost estimate is US\$204m, which is within the expected range based on the benchmark study (US\$238m), and the independently derived estimate of US\$215m.

# **Operating Costs Estimates**

# **Key Assumptions**

The operating cost estimate has been factored from benchmark estimates from studies of similar projects. The overall operating costs are illustrated in Figure 22.

All costs are reported with a +/-35% level of confidence, appropriate for this level of study.

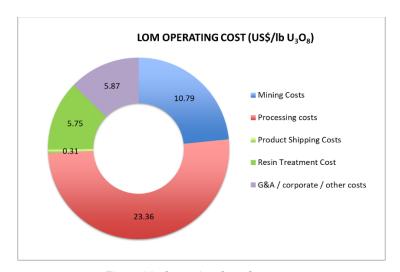


Figure 22. Operating Cost Summary

### **Mining Costs**

The assumptions used to derive an estimate of the mining operating cost estimation are described in this section. orelogy<sup>TM</sup> provided initial cost centre estimates benchmarked against recent orelogy<sup>™</sup> projects and available public information from similar projects.

These costs were used for the pit optimisation and strategic mine planning and are summarised below in Table 20.

Cost Centre	US\$/t mined LoM average
Clearing, topsoil and rehabilitation	\$0.10
Grade Control	\$0.04
Drill and Blast	\$0.42
Load and Haul	\$2.16
Ancillary	\$0.39
Average Mining Cost	\$3.11

Table 20. Open Pit Optimisation Mining Costs



In a separate exercise, Aurora undertook an independent benchmarking exercise comparing mining costs available in the public domain from six different mining projects. The mean mining cost derived from this benchmarking was US\$2.70/t mined.

The most recent project used in the benchmarking was the Lotus-owned Kayelekera Project, which is a mudstone associated uranium project with a 1.82:1 strip ratio, similar to the Aurora strip ratio.

The Lotus mining costs were adapted where there were specific differences to the Aurora Project. The following changes made were:

- The Drill & Blast cost was reduced. At Aurora it is estimated that only the volcanics will require low-energy blasting, and the lake sediments will not require blasting. Aurora estimates that 25% of all ore and waste will require drill and blast.
- Rehandle was removed from mining costs, as at Aurora this is included in the beneficiation & trucking costs at \$2.00/tonne of ore.
- A grade control cost was added based on the unit rate provided for the pit optimisation by orelogy $^{TM}$ .

The Kayelekera Project was costed at Quarter 3, 2021, and these costs were escalated for inflation to 2024 (13%). The estimate assumes using a mining contractor, with Aurora providing an owner's team for planning, scheduling, survey and grade control. The overall unit costs are shown in Table 21.

Table 21. Open pit unit cost

Expenditure Area	US\$ '000/y		Unit Costs Used
Owner's Team	740	0.11	US\$/t mined
General Fixed Overheads and Admin	2,919	0.43	US\$/t mined
Pit Dewatering	77	0.01	US\$/t mined
Load and Haul - Waste	7,297	1.67	US\$/t waste mined
Load and Haul - Ore	3,687	1.55	US\$/t ore mined
Drill and Blast - Waste	768	0.18	US\$/t waste mined
Drill and Blast - Ore	422	0.18	US\$/t ore mined
Fuel			Included in L&H
Dayworks	230	0.03	US\$/t mined
Grade Control	300	0.04	US\$/t mined
Operating Cash Costs	16,441		
Unit Cost (Total Ore & Waste Mined)		2.96	US\$/t mined



The main assumptions used are as follows:

- Open pit mining will be conducted by a Contractor.
- Grade control a campaign-based reverse-circulation grade control approach was used for the cost estimate, utilising a contractor drill fleet to complete grade control activities in scheduled campaigns well ahead of mining activities.
- Drill and Blast it is estimated that only the volcanics component of the ore body will require low-energy blasting, and the lake sediments will not require blasting. Aurora estimates that 25% of the total waste and ore will require drill and blast. Heavy ANFO is assumed for blasting activities.
- Load and Haul unit operational time was calculated as follows:
- Mechanical Availability: 85% of calendar hours
- Use of Availability: 85% of mechanically available hours
- General Administration, management and technical roles have been factored from other comparable studies and benchmarks.
- Open pit pre-strip mining costs have not been separated from operating costs.
- Rehabilitation requirements for the mine site areas has been separately estimated and is included as sustaining capital.

### **Processing Costs**

The processing cost estimation was derived using assumptions described in the following sections. Processing costs have been factored from benchmark estimates from atmospheric leach projects. The most recent of the Benchmark Projects is Mulga Rock for the atmospheric leach case, which have been used as the basis of the Aurora process operating cost but have been modified to include Aurora's sulphuric acid use and a reassessment of labour costs for USA.

Since completing the benchmarking study, a further operating cost estimate was received in March 2024 from an experienced uranium industry consultant providing an independent estimate for the Aurora processing cost. This cost estimate was US\$23 to US\$25/t leached and included a mining operating cost of US\$8/t. This provides an estimate for processing only of US\$17/t leached.

The cost for transport of ore from the Oregon RoM stockpile to the Nevada process plant facility was estimated by orelogy<sup>TM</sup>. The estimate includes rehandle from the mine using a front-end loader (FEL) into on-highway trucks. The trucks will transport the material to the processing facility stockpiles. The estimate for transport is US\$2.00/t transported and is included in the "Beneficiation and Transport from Oregon" cost area.

Beneficiation costs include costs for crushing, scrubbing and screening facilities, at a feed rate of 2.0Mtpa. Beneficiation removes 25% of the mined material as a coarse low-grade reject, which will be dump leached on a combined tailings storage and dump leach facility.

Labour rates have been derived by Aurora to reflect the personnel required for operations in Nevada. Labour rates were used based on the "2022 S-K 1300 Technical Report Summary on Feasibility Study Grassy Mountain, Oregon" and adjusted for inflation. Labour salary rates



are total costs including all Nevada based on-costs. The detailed breakdown of plant labour is shown in Table 22.

Table 22. Process Plant Labour Cost Estimate

Personnel	Number	Total Personnel Cost (US\$ 000's)
Process Plant	40	\$4,354
Maintenance	29	\$3,158
Total Costs	69	\$7,512

Operating expenses are primarily comprised of reagent costs. The sulphuric acid price used is \$80/t based on a market report published in December 2023. The report quoted the latest price for Sulphuric Acid FOB Linden NJ in the USA for the current quarter being USD 64/MT".

The overall acid consumption used for the Study is 60kg/t. All other reagent costs have been derived from the benchmarking exercise, with all other reagents and operating costs representing 6.2% of the acid cost.

Maintenance costs include the cost for spare parts and maintenance consumables necessary to maintain the process plant. Maintenance costs also include costs for re-lining of the grinding mill, plant shutdowns, main access and internal road maintenance, and maintenance of access to the raw water supply. The direct labour cost for maintenance personnel is included in the labour cost category (above).

Power will be supplied by the Harney Electric Cooperative. Aurora have estimated the power requirements for the process plant. The total installed power is estimated to be 5.0MW, with a maximum demand of 4.0MW. Overall annual power consumption is estimated to be 32GWh at a recently quoted supply price of US\$0.0595/kWh.

Contract resin treatment costs have been estimated by Wallbridge Gilbert Aztec (WGA) and compared with other projects. Contract resin treatment rates provided vary from US\$4/lb to US\$8/lb U<sub>3</sub>O<sub>8</sub>.

Transport costs represent the cost of delivery of supplies and the cost of transport of final product. Transport of final product is included in the process operating costs and an additional allowance is provided in the Product Shipping Cost. The combined overall estimated cost for contract resin treatment is US\$6.4/lb U<sub>3</sub>O<sub>8</sub>.

General and administration costs include General and Contract expenses. General expenses relate to personnel and mine site and process site office costs and include:

- Safety and training;
- Travel:
- Office supplies, software and computing;
- Vendor support;
- Government fees and other charges;
- Insurance;



- · Recruitment;
- General equipment hire (e.g. vehicles); and
- Communications.

# Contract expenses include:

- Contracted Power Supply Costs
- Laboratory contract fees;
- · Consultant fees and environmental monitoring costs;
- Shutdown contract labour;
- Camp accommodation and messing.

Complete site G & A expenses are summarised in Table 23.

Table 23. Total Site General and Administration Expenses

General & Admin Expenditure Area - Over	US\$ '000/y	Unit Cost
General & Aumin Expenditure Area - Over	US\$ UUU/Y	(US\$/t Feed)
General Fixed Overheads and Admin - Mining	2,919	1.46
General Fixed Overheads and Admin - Processing	3,408	1.70
Total Site G & A Cost	6,327	3.16

Included in the general fixed overhead and administration cost for the process plant is the power supply cost of US\$0.95/t Feed.

The summary of operating cost build-up is shown in Table 24. All unit costs are quoted as US\$/tonne feed.

Table 24. Processing Operating Costs.

Expenditure Area	US\$ ('000/y)	(US\$/t Feed)
Transport from Oregon	4000	2.00
Beneficiation	2,179	1.09
Labour (Fixed)	7,512	3.76
Operating Expenses	8,747	4.37
Transport	1,068	0.53
Maintenance	3,372	1.69
Contract Resin Treatment	6,647	3.32
Operating Cash Cost	33,525	16.76



# **Financial Analysis**

# **Key Assumptions**

A project evaluation model was constructed in Microsoft Excel and used to estimate the overall project net present value (NPV) and internal rate of return (IRR). The main assumptions underlying the financial analysis are:

- Open pit mining will be conducted by a Contractor.
- Drill and Blast: it is estimated that 25% of the total waste and ore will require drill and blast.
- Load and Haul unit operational time was calculated as follows:
  - Mechanical Availability: 85% of calendar hours.
  - Use of Availability: 85% of mechanically available hours.
  - Off-site contract resin treatment of loaded resin to produce final saleable product.
  - Open pit pre-strip mining costs have not been separated from operating costs.
  - o Rehabilitation requirements for the mine site areas has been separately estimated and are included as sustaining capital.
- Federal Tax Rate: 25%.
- NPV Discount rate: 8%.
- No Royalties apply.
- Contingency on Start-up Capital: 7%.

The Base Case price assumption for uranium is \$90/lb U<sub>3</sub>O<sub>8</sub>. The model is made up of various sections which are discussed in detail below.

#### **Capital Costs**

The capital cost for the project was divided into initial capital which is accrued until the plant construction is complete which is after approximately month 18 of the project. Capital spent subsequent to this is considered as deferred or sustaining capital.

Initial capital is divided into five areas:

- Mining
- Process Plant and Site Services
- Tailings Storage and Dump Leach Facility (TSDLF)
- Indirect Costs
- Contingency

Mining, process plant, services and indirect costs have been estimated by Aurora, benchmarked against similar recent projects where information is available in the public domain. All capital costs have been reviewed at a high level by an industry experienced



consultant. For the next stage of study, specialist consultants will be used to refine each of the capital cost area estimates.

The capital cost for the Base Case – incorporating resin stripping off-site is shown in Figure 23.

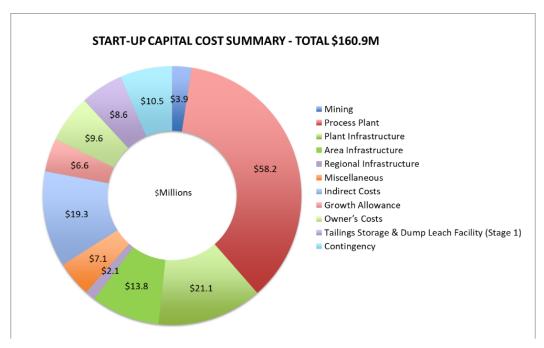


Figure 23. Start-up Capital Summary

# **Operating Costs**

Operating costs were estimated by Aurora based on benchmarking against similar recent projects with data in the public domain and reviewed by an industry experienced consultant. The operating costs for each area are illustrated in the following Figure 24.

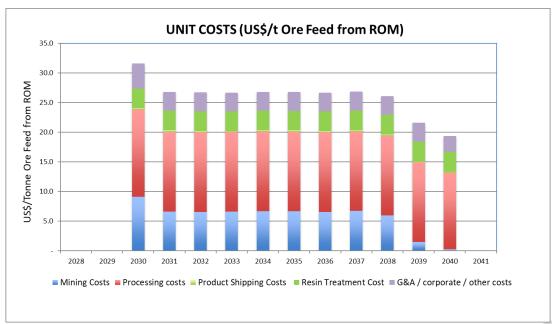


Figure 24. Summary of Project Operating Costs



#### **Production**

The project mining plan was determined by orelogy<sup>™</sup> as part of the mining study. Key average annual production parameters are shown in Figure 25 below.

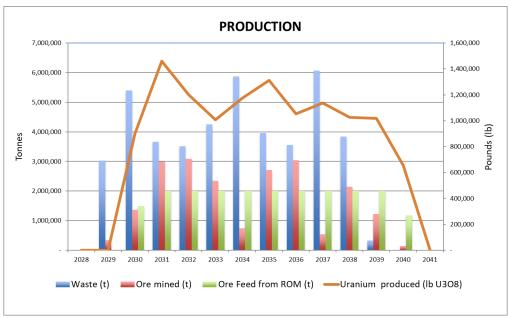


Figure 25. Summary of Life of Mine Production

## **Evaluation Summary**

The evaluation page of the model brings together all the expenses both capital and operating and all the revenue from the various sources. Revenue is derived from metal sales of uranium precipitate.

The Contact Resin Treatment Base Case project NPV (pre-tax) discounted at 8% and IRR are:

NPV: US\$151m.

• IRR: 25.2%

The onsite production project NPV (pre-tax) discounted at 8% and IRR are:

• NPV: US\$137m.

• IRR: 21.2%

Summary tables are presented below, which show the financial results for three different uranium price assumptions.

Note that federal tax rates used were as at May 2024, which may be subject to future change.



Table 25. Project Financials – Pre-Tax

	Table 20. I Toject i Inancialo	I IC IUX		
Aurora Project		Units	Contract Resin	Aurora
			Treatment	Treatment
Start-Up Capital		US\$ Millions	161	204
Sustaining Capital		US\$ Millions	30	32
Cash Operating cost (C1)		US\$/lb U₃O <sub>8</sub>	46.1	43.1
All In Sustaining Cost		US\$/lb U₃O <sub>8</sub>	48.6	45.8
	Pre-tax NPV <sub>8</sub>	US\$ Millions	114	100
Uranium Price (US\$/85lb)	Pre-tax IRR	%	21.4	17.9
	Payback from production start	Years	4.5	5.0
	Pre-tax NPV <sub>8</sub>	US\$ Millions	151	137
Uranium Price (US\$/90lb)	Pre-tax IRR	%	25.2	21.2
	Payback from production start	Years	4.25	4.75
	Pre-tax NPV <sub>8</sub>	US\$ Millions	189	175
Uranium Price (US\$/95lb)	Pre-tax IRR	%	28.8	24.4
	Payback from production start	Years	3.5	4.25
	Discount Rate	%	8	8

Table 26. Project Financials – Post-Tax

Aurora Project		Units	Contract Resin Treatment	Aurora Treatment
	Post-tax NPV <sub>8</sub>	US\$ Millions	74	58
Uranium Price (US\$/85lb)	Post-tax IRR	%	17.1	14.0
	Payback from production start	Years	4.5	5.0
	Post-tax NPV <sub>8</sub>	US\$ Millions	102	87
Uranium Price (US\$/90lb)	Post-tax IRR	%	20.3	16.7
	Payback from production start	Years	4.25	4.75
	Post-tax NPV <sub>8</sub>	US\$ Millions	130	115
Uranium Price (US\$/95lb)	Post-tax IRR	%	23.3	19.2
	Payback from production start	Years	3.5	4.35
	Discount Rate	%	8	8



# Full production and cost profiles are provided below in Tables 27-28.

Table 27. Capital and Production Profile

Start-up Capital (US\$Million)	Total	Year -5	Year -4	Year -3	Year -2	Year -1	Year 1
Mining	3.9	-	-	-	1.2	2.7	-
Processing & Site Services	102.3	-	-	-	9.5	90.8	1.9
Tailings (Stage 1)	8.6	-	-	-	-	8.6	-
Indirects/Owner's Team/Growth	35.6	-	-	-	7.1	28.5	-
Federal/State/County Permits	-	-	-	-	-	-	-
Contingency	10.5	-	-	-	1.2	9.1	0.1
Total	160.9	-	-	-	19.1	139.8	2.1

Production	Annual average	Total	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Waste ('000t)	3,810	43,500	3,029	5,401	3,669	3,516	4,255	5,864	3,959	3,558	6,064	3,844	326	14
Ore mined ('000t)	1,959	20,672	336	1,370	2,998	3,084	2,345	738	2,707	3,043	536	2,149	1,227	141
Ore Feed from RoM ('000t)	2,000	20,672	-	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,172
Precipitate produced (t)	806	8,335	-	628	1,018	838	704	820	915	736	794	715	710	456
Uranium in Ore Feed from RoM ('000lb U <sub>3</sub> O <sub>8</sub> )	1,674	17,301	-	1,309	1,980	1,717	1,524	1,691	1,827	1,570	1,653	1,541	1,532	956
Uranium produced ('000lb U <sub>3</sub> O <sub>8</sub> )	1,155	11,943	-	900	1,459	1,201	1,009	1,176	1,312	1,054	1,137	1,025	1,017	654
Uranium Recovery	69%	69%	0%	74%	70%	66%	70%	72%	67%	69%	67%	66%	68%	0%
Revenue (US\$'000) @US\$90/lb	98,188	1,007,934	-	76,469	124,005	102,118	85,723	99,923	111,499	89,599	96,674	87,145	86,434	48,344



Table 28. Operating Costs and Sustaining Capital Cost Profile

Mining Costs  Processing costs  Product Shipping Costs  Resin Treatment Cost  G&A / corporate / other costs  Total  Operating Costs by Area (US\$/t)  Mining Costs  Processing costs  Product Shipping Costs  Resin Treatment Cost	11,569 26,877 359 6,647 6,332 51,784 LoM Average 6.23 13.50 0.18 3.32 3.39	128,829 279,051 3,702 68,703 70,142 550,429 Year 1 9.13 14.71 0.18 3.32	- - 728 728 728 Year 2 6.64 13.43 0.23	6,849 2,919 9,768  Year 3 6.56 13.44	13,694 22,070 276 4,985 6,327 47,353 Year 4 6.61 13.43	13,278 26,868 454 6,647 6,327 53,574 Year 5 6.71	13,130 26,888 374 6,647 6,344 53,384 Year 6	13,223 26,868 312 6,647 6,327 53,376 Year 7	13,427 26,868 365 6,647 6,327 53,633 Year 8	13,312 26,868 409 6,647 6,327 53,564 Year 9	13,136 26,888 320 6,647 6,344 53,337	13,449 26,868 356 6,647 6,327 53,647 Year 11	12,004 26,868 320 6,647 6,327 52,167	3,026 26,868 312 6,647 6,327 43,180	300 15,129 205 3,895 3,190 22,719	
Product Shipping Costs  Resin Treatment Cost  G&A / corporate / other costs  Total  Operating Costs by Area (US\$/t)  Mining Costs  Processing costs  Product Shipping Costs	359 6,647 6,332 51,784 LoM Average 6.23 13.50 0.18 3.32 3.39	3,702 68,703 70,142 <b>550,429</b> <b>Year 1</b> 9.13 14.71 0.18 3.32	- 728 728 728 Year 2 6.64 13.43 0.23	2,919 9,768 Year 3 6.56 13.44	276 4,985 6,327 47,353 Year 4 6.61	454 6,647 6,327 53,574 Year 5 6.71	374 6,647 6,344 53,384 Year 6	312 6,647 6,327 53,376 Year 7	365 6,647 6,327 53,633 Year 8	409 6,647 6,327 53,564	320 6,647 6,344 53,337	356 6,647 6,327 53,647	320 6,647 6,327	312 6,647 6,327	205 3,895 3,190	
Resin Treatment Cost  G&A / corporate / other costs  Total  Operating Costs by Area (US\$/t)  Mining Costs  Processing costs  Product Shipping Costs	6,647 6,332 51,784 LoM Average 6.23 13.50 0.18 3.32 3.39	68,703 70,142 550,429 Year 1 9.13 14.71 0.18 3.32	728 728 728 Year 2 6.64 13.43 0.23	2,919 9,768 Year 3 6.56 13.44	4,985 6,327 47,353 Year 4 6.61	6,647 6,327 53,574 Year 5 6.71	6,647 6,344 53,384 Year 6	6,647 6,327 53,376 Year 7	6,647 6,327 53,633 Year 8	6,647 6,327 53,564	6,647 6,344 53,337	6,647 6,327 53,647	6,647 6,327	6,647 6,327	3,895 3,190	
G&A / corporate / other costs  Total  Operating Costs by Area (US\$/t)  Mining Costs  Processing costs  Product Shipping Costs	6,332 51,784 LoM Average 6.23 13.50 0.18 3.32 3.39	70,142 550,429 Year 1 9.13 14.71 0.18 3.32	728 728 Year 2 6.64 13.43 0.23	2,919 9,768 Year 3 6.56 13.44	6,327 47,353 Year 4 6.61	6,327 53,574 Year 5 6.71	6,344 53,384 Year 6	6,327 53,376 Year 7	6,327 53,633 Year 8	6,327 53,564	6,344 53,337	6,327 53,647	6,327	6,327	3,190	
Operating Costs by Area (US\$/t) Mining Costs Processing costs Product Shipping Costs	51,784  LoM Average 6.23 13.50 0.18 3.32 3.39	Year 1 9.13 14.71 0.18 3.32	728 Year 2 6.64 13.43 0.23	9,768 Year 3 6.56 13.44	47,353 Year 4 6.61	53,574 Year 5 6.71	53,384 Year 6	53,376 Year 7	53,633 Year 8	53,564	53,337	53,647			•	
Operating Costs by Area (US\$/t)  Mining Costs  Processing costs  Product Shipping Costs	6.23 13.50 0.18 3.32 3.39	Year 1  9.13 14.71 0.18 3.32	Year 2 6.64 13.43 0.23	Year 3 6.56 13.44	<b>Year 4</b> 6.61	Year 5	Year 6	Year 7	Year 8				52,167	43,180	22,719	
Mining Costs Processing costs Product Shipping Costs	6.23 13.50 0.18 3.32 3.39	9.13 14.71 0.18 3.32	6.64 13.43 0.23	6.56 13.44	6.61	6.71				Year 9	Year 10	Year 11				
Processing costs Product Shipping Costs	13.50 0.18 3.32 3.39	14.71 0.18 3.32	13.43 0.23	13.44			6.66	C E7								
Product Shipping Costs	0.18 3.32 3.39	0.18 3.32	0.23		13.43			0.57	6.72	6.00	1.51	0.26				
•	3.32 3.39	3.32		0.40		13.43	13.43	13.44	13.43	13.43	13.43	12.91				
Resin Treatment Cost	3.39			0.19	0.16	0.18	0.20	0.16	0.18	0.16	0.16	0.17				
		4.22	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32				
G&A / corporate / other costs	00.00	4.22	3.16	3.17	3.16	3.16	3.16	3.17	3.16	3.16	3.16	2.72				
Total	26.63	31.57	26.79	26.69	26.69	26.82	26.78	26.67	26.82	26.08	21.59	19.38				
Operating Costs by Area (US\$/lb)	LoM Average	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11				
Mining Costs	10.79	15.22	9.10	10.93	13.11	11.42	10.15	12.46	11.83	11.71	2.98	0.46				
Processing costs	23.36	24.53	18.42	22.38	26.64	22.86	20.48	25.51	23.62	26.21	26.42	23.13				
Product Shipping Costs	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.30	0.31	0.31	0.31	0.31				
Resin Treatment Cost	5.75	5.54	4.56	5.53	6.59	5.65	5.07	6.31	5.84	6.48	6.54	5.96				
G&A / corporate / other costs	5.87	7.03	4.34	5.28	6.27	5.38	4.82	6.02	5.56	6.17	6.22	4.88				
Total	46.09	52.64	36.72	44.43	52.93	45.62	40.83	50.60	47.17	50.88	42.46	34.74				
Sustaining Capital US\$ million	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12			
	30.0	0.3	1.0	1.0	7.4	1.0	1.0	3.1	5.3	1.0	2.4	4.3	2.1			
All In Sustaining Cost (AISC) US\$/lb	LoM Average	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11				
	48.6	52.9	37.4	45.3	60.3	46.5	41.6	53.6	51.8	51.9	44.8	41.3				
												<u></u> j				
AURORA ENERGY METALS LIMITED																



# Sensitivity Analysis

A sensitivity analysis was performed on various project drivers, each of the drivers was varied by 5%, 10%, and 20% up and down and the pre-tax NPV and pre-tax IRR determined for each is shown in Figure 26 and Figure 27 respectively.

#### 390 Uranium Price 340 **Discount Factor** 290 Uranium Recovery 240 JS\$million 151.3 190 Start-up CAPEX 140 Mine OPEX 90 Plant OPEX 40 Acid Cost -10 108 72 81 85.5 90 94.5 99 117 125.1 -60 Variation (US\$/lb) +5% +10% +20% +30% +39% -30% -20% -10% -5%

Base Case Pre-tax NPV<sub>8</sub>

Figure 26. Pre-tax NPV Sensitivity Graph

Variation (%)

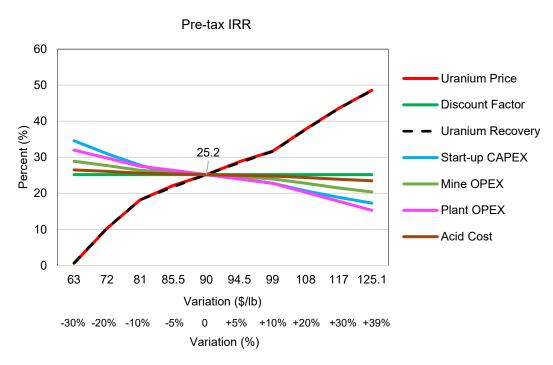


Figure 27. Pre-tax IRR Sensitivity Graph



The project is most sensitive to commodity price and uranium recovery. Plant operating cost has a medium sensitivity and lower sensitivity to fluctuations in mine operating costs, start-up capital cost and sulphuric acid price.

#### **Funding**

The Company believes there is a reasonable basis to assume that funding for the development of its Aurora Uranium Project will be available when required if the uranium price supports an attractive financial return from the Project. To achieve the outcomes indicated in this Scoping Study, it is estimated that pre-production funding of approximately US\$161m before working capital may be required.

It is anticipated that the finance will be sourced through a combination of equity and debt instruments from existing shareholders, new equity investors and debt providers from the USA and potentially Australia and there is also the potential for streaming of the targeted uranium production.

The Company notes that the US Office of Clean Energy within the US Dept. of Energy has earmarked US\$20 billion in grants to industry to fast-track clean energy projects in the US. The largest to date has been US\$2 billion to the Thacker Pass lithium project just to the south of the Aurora Project.

# **Opportunities**

Several areas have been identified which offer opportunities for further improvements to the Project's economics.

#### **Uranium Recovery**

Metallurgical testwork used in the Study is limited to a relatively small number of samples available to date. This work is ongoing, however a number of opportunities have already been identified to improve the uranium recoveries by optimising leach conditions, providing an important area for further investigation.

#### Molybdenum

The Project mineralisation is known to contain molybdenum (Mo) in association with the uranium. Mo has not been reported in the Aurora resource as there is insufficient metallurgical data available. It is known from other projects that Mo may be recovered as a by-product from a uranium leach process, warranting further investigation.

### **Uranium Price**

The Mine Plan was conducted using a uranium price of US\$85/lb and focussed the mining on the Measured & Indicated component of the High Grade Zone, only 38% of the total Mineral Resource Estimate. At higher prices, significantly more of the resource could come into the mine plan and therefore the Project may operate at larger throughputs for a higher uranium production or extend the life of mine. In either event the larger revenues could have significant impact on the NPV beyond the direct impact of higher prices on current planned uranium production.



# Further Work Programmes

The following future activities have been identified from the Scoping Study:

- Further drilling is required to generate 4-6 tonnes of core for the next phase of metallurgical testwork. The testwork programme will be designed to optimise parameters for specialist design engineering of the preferred flowsheet and enable capital and operating cost estimates to be made to a prefeasibility study level of accuracy.
- Identification and discussions with potential resin treatment partners.
- Further mine scheduling to capture opportunities identified by orelogy<sup>TM</sup> and to optimise mining outcomes based on the preferred processing strategy. This schedule to provide updated capital and operating costs for the mine plan to a prefeasibility study level of accuracy.
- Further evaluation and assessment of the three ore transport options to enable the selection of the preferred solution for the Project.
- Specialist design and engineering for the combined tailings storage and dump leach facility.
- Advancement of environmental and cultural studies as the first phase for detailed planning and scheduling of required permitting activities.
- Detailed planning and scheduling of activities to confirm the required water source for the Project.
- Commence engagement with federal agencies, such as the Department of Energy, to explore potential sources of funding support for feasibility studies and development.



# Appendix 1:

Drill hole summary for the holes used in the 2024 Metallurgical Testwork Program

Hole ID	Hole	Easting	Northing	RL	Total Depth	Dip	Azimuth
22AUD001	DDH	424300	4654512	1643	192.0	-90	000
22AUD002	DDH	424355	4654583	1645	239.3	-90	000
22AUD003	DDH	424246	4654574	1673	219.5	-90	000
22AUD004	DDH	424280	4654622	1669	261.5	-90	000
22AUD005	DDH	424823	4654311	1621	206.0	-55	222
22AURC005DT	RCDT	424823	4654311	1621	260.0	-90	000

Note: All coordinates are in UTM Zone 11N, datum WGS84.

# Appendix 2:

Summary of Uranium Oxide Assay Results.

Hole ID	Cut-off U₃O <sub>8</sub> (ppm)	From (m)	Interval (m)	Grade U₃O <sub>8</sub> (ppm)
22AUD001	10	98.2	187.8	200
incl	50	100.4	104.6	329
and	200	132.1	137.3	490
and	100	152.3	160.8	505
and	80	169.8	176.2	580
22AUD002	10	189.7	205.7	116
22AUD003	10	157.9	176.3	119
incl	200	160.9	164.4	259
22AUD004	10	183.2	202.8	90
22AUD005	10	183.1	206.0	150
incl	200	203.6	206.0	537
22AURC005DT	10	156.6	203.9	158
incl	300	164.6	169.5	430



# Appendix 3: Metallurgical Testwork JORC 2012 Compliance Table

# Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Drilling that defines the Aurora deposit and within the surrounding tenure was completed in three phases to date – the first between 1978 and 1980 by private landowner and prospector Locke Jacobs (Jacobs) in Joint Venture with Placer Amex Inc. (Placer) and the second by Energy Ventures Limited (EVE) in 2011. In addition, the Cordex Syndicate drilled over 100 holes on claims adjacent to the Aurora deposit also between 1978 and 1980. The third phase took place in November 2022, when AEM drilled 12 RC holes (one with a diamond tail) and 5 diamond core holes.</li> <li>For all phases, holes were drilled utilising Reverse Circulation (RC) and Diamond drilling (DD).</li> <li>EVE's program, which generated the core that was used in the metallurgical testwork program reviewed in this release, included 32 PQ sized core holes (4,257m) and 6 (wet) RC holes (950m) in 2011.</li> <li>AEM's November 2022 program included 12 RC holes (one with a diamond tail) and 5 diamond core holes for 2,152m of RC and 1,263m of core (a mix of HQ and PQ).</li> <li>Sampling during 2011 and 2022 was carried out under EVE's and AEM's standard protocols and QAQC procedures which are considered standard industry practice.</li> <li>EVE's and AEM's RC holes obtained representative 5ft (1.5m) metre samples.</li> <li>EVE's and AEM's diamond drill core holes were completed to provide metallurgical sample material. Whole PQ or HQ drill core was cut as either quarter or half core on mostly 3ft (0.9m) intervals with some variation to geological control.</li> <li>No trenching or other sampling has been completed at the Aurora deposit, other than the drilling.</li> <li>Metallurgical sample drill core intervals were sent to ALS Laboratories Australia.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>Three bulk composite samples were prepared from the available core intervals providing a High Grade (446kg), Medium Grade (195kg) and Low Grade bulk sample composite (136kg).</li> <li>A separate Comminution composite sample (≈160kg) was prepared from reserve uranium bearing core intercept samples, to represent the physical properties of the High, Medium and Low grade bulk composites.</li> </ul>
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit, or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Historical RC percussion drilling was completed using a 5 to 5.5 inch bit.</li> <li>Placer core holes were drilled to 3.8", 5.3" &amp; 6" core sizes with recovery averaging over 93%. Only one of these core holes was angled (all others vertical) and it is not known whether this core was oriented.</li> <li>EVE's 2011 diamond core drilling was completed using a PQ drill bit with triple tube used where required to maximise core recovery, which averaged over 88%.</li> <li>4 of the EVE core holes were angled (the remainder drilled vertical) and none of the core was oriented.</li> <li>In addition, EVE drilled six 5.5" wet RC holes.</li> <li>AEM's November 2022 diamond core drilling was completed using a mix of PQ and HQ drill bits with triple tube used where required to maximise core recovery, which averaged over 90%. Only one hole was angled (-55/222), all others were vertical.</li> <li>In addition, AEM drilled twelve 5.5' dry RC holes using a mix of tricone and centre return hammer.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Diamond drill core was routinely measured and cross-checked with drill blocks to determine recovery from each core tube.</li> <li>Diamond drill core recoveries were excellent at above 93% (historic Placer drilling), &gt;88% for EVE drilling and &gt;90% for new AEM core drilling). Where core loss did occur, it was measured and recorded during logging.</li> <li>There is no observed sample bias, nor a relationship observed between grade and recovery.</li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	<ul> <li>RC and core holes were logged geologically, including but not limited to, recording weathering, regolith, lithology, structure, texture, alteration, and mineralisation (type and abundance).</li> <li>All holes and all relevant intersections were geologically logged in full.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Logging was at a qualitative and quantitative standard to support appropriate Mineral Resource studies.</li> <li>Remaining sample pulps and core (that were not removed for metallurgical testwork purposes) from the EVE 2011 and AEM 2022 drilling are stored at the Company's Project base close to McDermitt, NV.</li> <li>All EVE and AEM diamond drill core was photographed, and all holes were logged downhole at the time of drilling using a calibrated radiometric logging probe.</li> <li>No core or core photographs remain from the historic core drilling.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>All holes (RC or diamond) were logged using downhole radiometric logging probes to collect measurement of the uranium concentration, described in detail in the next section. As such, not all holes were sampled.</li> <li>EVE diamond drill core holes were routinely sampled, with PQ drill core cut in half, plus into quarters for selected holes. Half or quarter core was typically composited on 3ft (0.9m) intervals, coarse crushed and then pulverised (nominal 85% passing 75 microns) to obtain a homogenous sub-sample for assay.</li> <li>For the EVE RC percussion drilling, samples were collected in 5ft (1.5m) composites, dried, weighed, and for those selected samples that were assayed, they were pulverized to 85% passing 75 microns.</li> <li>AEM diamond drill core holes were routinely sampled, with HQ and PQ drill core cut in half, plus into quarters for selected holes/intervals – or dry split so water is not involved in the process for some sections of core. Samples were typically composited on 3ft (0.9m) intervals, coarse crushed and then pulverised (nominal 85% passing 75 microns) to obtain a homogenous sub-sample for assay.</li> <li>For the AEM RC percussion drilling, samples were collected in 5ft (1.5m) composites, dried, weighed, and for those selected samples that were assayed, they were pulverized to 85% passing 75 microns.</li> <li>The sample sizes are considered appropriate for the style of mineralisation observed.</li> </ul>



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (if lack of bias) and precision have been established.</li> </ul>	<ul> <li>For the 2011 EVE drilling and the recent 2022 AEM drilling, radiometric logging was completed by Century Wirelines Services using the CompuLog system and probe type 9512C. This system is comprised of radiometric logging equipment based on a truck-mounted digital computer. Well data were digitally recorded at 1/10th foot increments for the parameter's gamma, conductivity, resistivity, and temperature. The ely<sub>0</sub>0<sub>8</sub>% conversions from the gamma log data were calculated and reported with the original, unprocessed gamma logs. These were composited to 3ft values.</li> <li>All EVE and AEM core drilling samples (and selected RC samples) were assayed at American Assay Laboratories (AAL) for analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS) using a four-acid digestion (HNO3-HClO4-HF-HCl). Samples were then checked using XRF techniques.</li> <li>These techniques are considered appropriate and are industry best standard. The techniques are considered to be a total digest.</li> <li>EVE utilised industry standard QAQC procedures involving the use of matrix matched certified reference materials (CRM standards), blanks and field duplicates. A total of five different CRM standards with uranium grades ranging from 84ppm to 713ppm.</li> <li>AEM utilised industry standard QAQC procedures involving the use of matrix matched certified reference materials (CRM standards), blanks and field duplicates. A total of three different CRM standards with uranium grades ranging from 84ppm to 858ppm U<sub>3</sub>O<sub>8</sub>.</li> <li>EVE and AEM QAQC results have been checked with no apparent issues for all data received to date.</li> <li>Field duplicate data suggests there is general consistency in the drilling results.</li> <li>EVE submitted samples for umpire checks to both ALS in Reno, NV and ACME laboratory in Vancouver, Canada. Both labs analysed using both ICP-MS and XRF methods equivalent to AAL's. 98 samples were submitted to ALS and 52 to Acme with a spread of U grades ranging up to 1,100ppm.</li></ul>



Criteria	JORC Code explanation	Commentary
		No samples from the 2022 AEM drilling program have yet been sent for umpire lab checks.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Competent Person for the current JORC 2012 Mineral Resource, Lauritz Barnes, has verified all significant intersections.</li> <li>For all historical core holes plus 26 of the 32 EVE core holes, measurement of the uranium concentration (eU<sub>3</sub>O<sub>8</sub>) was made with radiometric logging. For selected historic core and for all the EVE core, they were also assayed for U<sub>3</sub>O<sub>8</sub> by ICP-MS and XRF methods. All methods were compared with consistent results, verifying all significant intersections.</li> <li>22 pairs of twin holes (historic RC percussion and EVE 2011 diamond drill core) have been drilled for comparative purposes. The twinned holes show strong correlation near 1:1 correlation between the radiometric assaying and the chemical assays (correlation coefficients &gt; 0.9). With this validation, the November 2022 Mineral Resource is now reported as U<sub>3</sub>O<sub>8</sub> rather than eU<sub>3</sub>O<sub>8</sub>.</li> <li>For EVE holes, primary geological data was collected via paper (and data entered) logging and software using in-house logging methodology and codes.</li> <li>For AEM holes, primary geological data was collected via digital logging and software using in-house logging methodology and codes.</li> <li>Logging data was sent to the Perth based office where the data was validated and entered into an industry standard master database maintained by the Mitchell River Group Pty Ltd database administrator.</li> <li>The only adjustments made to the assay data is when the labs report uranium as U – and within the database management system, this is converted to U<sub>3</sub>O<sub>8</sub> using a factor of 1.179.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>EVE completed a due diligence site visit in March 2010 using handheld GPS to check claim monuments, historical drillhole locations plus using a handheld spectrometer to confirm mineralisation.</li> <li>EVE collar positions for the 2011 drilling program were located using handheld GPS in UTM Zone 11N, WGS84 datum. It is noted that the GPS was left to measure the position of a minimum of 3 minutes at each site.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>AEM collar positions for the 2022 drilling program were located using handheld GPS in UTM Zone 11N, WGS84 datum. It is noted that the GPS was left to measure the position of a minimum of 3 minutes at each site.</li> <li>Downhole surveys were completed on a few EVE drill holes using a downhole survey tool. Only 4 of the 32 EVE holes were angled.</li> <li>Downhole surveys were completed on a few AEM drill holes using a gyro downhole survey tool. Only 1 of the 32 EVE holes were angled.</li> <li>The local grid system used for location of all drill holes is converted to UTMN Zone 11, WGS84 datum using the two-point conversion as follows: <ul> <li>10000.000mE, 10000.000mN = 425315.859mE, 4653333.481mN</li> <li>10248.631mE, 10723.868mN = 424944.287mE, 4654002.612mN</li> <li>N042°E rotation, Scale factor 1.</li> </ul> </li> <li>The topographic surface used in Surpac format to code the block model was generated from the USGS National Elevation Dataset at 10m cell resolution with the collars added.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drillholes are typically spaced 100 feet apart on lines spaced 200 feet apart. This spacing equates to 60m x 30m. Drill lines are orientated N042°E, a local grid was used.</li> <li>Drill hole spacing and distribution is considered more than sufficient as to make geological and grade continuity assumptions appropriate for Mineral Resource estimation.</li> <li>1.5m sample compositing of the RC and diamond core drilling samples was routinely used.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The orientation of drilling and sampling is not considered to have any significant biasing effects.</li> <li>The drill holes are mostly vertical at Aurora and are interpreted to have intersected the typically horizontal trending mineralised zone approximately perpendicular or at an acceptable angle to the dip.</li> </ul>
Sample security	The measures taken to ensure sample security.	Sample chain of custody for the 2011 drilling was managed by EVE geological personnel and samples were transported to the AAL laboratory in Reno by EVE geological personnel.



Criteria	JORC Code explanation	Commentary
		<ul> <li>Sample chain of custody for the 2022 drilling was managed by AEM's contract geologists from Piton Exploration, LLC and samples were transported to the AAL laboratory in Reno by Piton geological personnel.</li> <li>Cutting and sampling of the EVE diamond drill core was carried out by AAL personnel under the direction and supervision of EVE geological personnel.</li> <li>Cutting and sampling of the AEM diamond drill core was carried out by AAL personnel under the direction and supervision of AEM and Piton geological personnel.</li> <li>Remaining core and all lab pulp samples are securely stored at a location in McDermitt, NV close to the Aurora deposit site.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No independent audit or review has been carried out on the EVE or AEM sampling techniques and data.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>AEM, through its wholly owned US subsidiary Oregon Energy LLC, holds 100% of the Aurora Energy Metals Project in southeast Oregon, USA.</li> <li>The Project comprises 395 Mining Claims that cover an area of approximately 28.5 square kilometres.</li> <li>The tenements are held securely and no impediments to obtaining a licence to operate have been identified.</li> <li>The Aurora Project is on federal land managed by the Bureau of Land Management.</li> <li>The Aurora Project is directly connected by road with the town of McDermitt, 15km to the east, and the adjacent Fort McDermitt Indian Reservation of the Fort McDermitt Paiute and Shoshone Tribes. McDermitt and Fort McDermitt have a combined population of 513 (2010 census) of which 75% are American Indian.</li> <li>The Company has recently or historically undertaken periodic consultation with the Fort McDermitt Paiute-Shoshone Tribal Council, as well as held</li> </ul>



Criteria	JORC Code explanation	Commentary
		community information meetings at the Fort McDermitt Indian Reservation, Burns Paiute Tribal Council, Malheur County Judges, Association of Oregon Counties President, and State Congress Representative.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Uranium exploration in the Project area began as an offshoot of gold and other metals exploration efforts around the nearby Bretz and Cordero Mines. Placer had a limited reconnaissance program during 1974 and 1975. The program did not look promising, and interest quickly ended.</li> <li>Locke Jacobs completed an airborne geophysical survey over the area in 1977. Ground follow-up of a radiometric anomaly identified uranium mineralized outcrops and Jacobs staked claims on what became the Aurora prospect.</li> <li>Programs of aircore, RC percussion and diamond drilling were subsequently completed between 1978 and 1980, initially by Locke Jacobs and then with JV partner Placer. The Cordex Syndicate also completed RC and core drilling on claim adjacent to the current Aurora Uranium deposit.</li> <li>Feasibility studies were also completed by Placer during this period, culminating in a pre-Feasibility Study report for the Aurora Uranium Project published in 1980. The collapse of the uranium market in the 1980's resulted in a loss of interest in the project. Placer maintained the claim blocks until 1990 and let the claims lapse.</li> <li>The project lay dormant until a brief drilling program was completed by Newmont during December 2003/January 2004 with most of the holes located at the nearby Bretz workings. One hole was drilled immediately adjacent to the Aurora U ore zone (hole RZDH-6) but data for this is not completed to date. It does not materially impact the Aurora Mineral Resource as it is located on the margin of the interpreted mineralised zone.</li> <li>William Sherriff re-staked the new U claims in 1997. Energy Metals Corp (EMC) entered into an agreement to purchase the project rights from Sherriff and completed an initial 43-101 report in 2004. EMC acquired a 100% interest in the Property from Sheriff on July 19, 2004.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>In 2005, Quincy Energy Corp (Quincy) entered into a Joint Venture agreement with Energy Metals Corp. (EMC), the property owner, to purchase up to a 75% interest in the property. Work completed included completion of a technical report by Qualified Person (as set out in Canadian National Instrument 43-101) Gregory Myers Ph.D. for the "dual purpose of <ul> <li>a) a property qualifying report for the listing of Quincy Energy on the Toronto Stock Exchange and</li> <li>b) to confirm a historic uranium resource and bring this resource up to modern industry standards.</li> </ul> </li> <li>As a significant body of exploration data previously existed for the deposit, and an historical pre-Feasibility study was completed by Placer Development Ltd., work performed for the subject report was limited to: <ul> <li>a) compilation of all available data,</li> <li>b) a site visit to confirm historic drill hole locations and infrastructure, and</li> <li>c) an independent recalculation of mineral resources to confirm previous estimates by Placer Development."</li> </ul> </li> <li>Quincy Energy Corp also completed a Scoping Study in January 2007 but subsequently withdrew from the deal.</li> <li>Uranium One Inc. acquired EMC in 2007</li> <li>EVE subsequently acquired the project rights from Uranium One Inc. in 2010. As part of the acquisition, EVE received a digital database plus a hardcopy database including approximately 43 archive boxes full of Jacobs/Placer reports and drill logs along with an inventory.</li> </ul>
Geology	Deposit type, geological setting, and style of mineralisation.	The Aurora uranium property is within the Miocene McDermitt caldera system straddling the Oregon-Nevada border. The McDermitt caldera is approximately 30 miles long north to south and 20 miles wide east to west and consists of at least five nested ring fracture systems. The oldest rocks in the region of the caldera are intrusive rocks of Cretaceous age. A granodiorite pluton outcrops along the western margin of the caldera. Early Miocene age basalt, andesite, and dacite flows erupted 18 to 24 million years before present (m.y.b.p.) and lie unconformably upon the eroded granodiorite pluton and appear to be the earliest volcanic rocks related to the caldera complex. Collapse of the caldera occurred about 16



Criteria	JORC Code explanation	Commentary
		m.y.b.p. as the result of explosive eruptions of peralkaline ash flow tuff which began about 18 m.y.b.p Voluminous rhyolitic to peralkaline ash flow tuffs were erupted from 15.8 to 17.9 m.y.b.p.  • Lacustrine sedimentary rocks consisting of tuffaceous sandstone, siltstone, shale, and claystone, with local chalcedony beds occur in restricted basins within the calderas. Lakebeds directly overlie dacitic lavas as well as rhyolite welded tuff and occupy about 20 percent of the interior of the caldera. Lake sediments generally fill moat-portions of the calderas and tend to be thickest near the ring fracture zones.  • Several mineralized systems occur within the caldera systems and include mercury, uranium, and lithium occurrences. The mineralized systems are related to the well-developed hydrothermal activity associated with the volcanic complex and formed in shallow hot spring systems.  • The Aurora uranium mineralization forms strata-bound and cross-cutting bodies in the dacitic flow units immediately below the Lake Sediments unconformity, forming an irregular mineralized zone approximately 1.5km (5,000ft) long by 300m (1000ft) wide. The mineralized horizons range from a true thickness of a few feet around the fringes to more than 50m (150ft) thick. The mineralized beds range from predominantly horizontal to moderately dipping (up to 40°) along the north-easter margin. The beds are spatially related to and partially controlled by possible growth faults or graben bounding structures, primarily on the northeast margin of the mineralization. Review of the diamond core logs indicate the uranium mineralization contained minor primary deposition related to volcanic and hydrothermal activity. The spatial distribution of uranium with sediments and broken, permeable zones of volcanic rocks suggest mechanically, and chemically transported zones of mineralization are common. Several of the secondary or tertiary basins, within the Lake Sediments and graben block, show thin repeating beds of mineralization, within zones of t



Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including Easting and northing of the drill hole collar, Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	associated with mafic to felsic volcanic rocks and is often intercalated with clastic sediments. Mineralization is largely controlled by structures, occurs at several stratigraphic levels of the volcanic and sedimentary units, and extends into the basement where it is found in fractured granite and in metamorphic rocks. There is generally a strong hydrothermal control to the transportation of uranium and the mineralization occurs as both primary and remobilized uranium in an oxidizing-reducing setting. Uranium mineralization is commonly associated with molybdenum, vanadium, lithium, other sulphides, violet fluorite and quartz to colloidal silica or opal. Examples of volcanic hosted uranium deposits include the Dornod deposit in Mongolia, the Michelin deposit in Canada, the Nopal deposit in Mexico, and the Strelsovsk Caldera in the Russian Federation hosts several commercial deposits.  • Lithium deposits occur within tuffaceous sedimentary rocks found in the restricted lake sediments within the caldera.  • Drill hole information that has been presented as Exploration Results for drilling conducted by EVE in 2011 is now within the Mineral Resource estimate. A Mineral Resource has been estimated for all prior drilling, additional information is available within Myers, 2005.  • Drill hole information that has been presented as Exploration Results for drilling conducted by AEM in 2022 is not yet included in the Mineral Resource estimate.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Exploration results are based on length-weighted average grades.</li> <li>No maximum or minimum grade truncations have been applied.</li> <li>For drilling conducted by EVE in 2011 and reported in the 15 May 2022 IPO Prospectus or as Exploration Results, cut-off grades of 100ppm or 300ppm U<sub>3</sub>O<sub>8</sub> have been used to report the significant uranium mineralised intersections.</li> <li>For drilling conducted by AEM in 2022 and reported as Exploration Results, cut-off grades of 100ppm or 300ppm eU<sub>3</sub>O<sub>8</sub> have been used to report the significant uranium mineralised intersections.</li> </ul>



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</li> </ul>	<ul> <li>Significant intersections do not contain intervals of more than 2m of subgrade samples.</li> <li>No metal equivalent values have been reported.</li> <li>The orientation of drilling and sampling is not considered to have any significant biasing effects.</li> <li>Drill holes are usually vertical and are interpreted to have intersected the mineralised zone approximately perpendicular to its dip such that down hole intervals reported are considered to be or very close to true width.</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	A map is included in the body of the report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>A Mineral Resource has been estimated for all prior drilling, additional information is available within Myers, 2005 or the subsequent January 2011 EVE ASX announcement (ASX: EVE on 12 January 2011).</li> <li>Comprehensive reporting of all results is not practicable as there are hundreds of holes and intercepts contributing to the Mineral Resource. Significant intercepts were previously reported in the 15 May 2022 IPO document for AEM.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• In mid-May 2011, Goldak Airborne Surveys completed a high sensitivity aeromagnetic radiometric survey over the Aurora deposit and surrounds. Aircraft equipment operated included a caesium vapour, digitally compensated magnetometer, a 1024 channel spectrometer consisting of 48 litres of downward looking Nal detectors and 8 litres of upward looking detectors, a GPS real-time and post-corrected differential positioning system, a flight path recovery camera, digital titling and recording system, as well as radar and barometric altimeters. All data was recorded digitally in GEDAS binary file format. Reference ground equipment included a GEM Systems GSM-19W Overhauser magnetometer and a Novatel 12 channel GPS base station which was set up at the base of operations for differential post-flight corrections. A total of 2,070-line kilometres of high resolution magnetic and radiometric data was collected, processed and



Criteria	JORC Code explanation	Commentary
		plotted. The traverse lines were flown East-West on a spacing of 100 metres with perpendicular control lines flown at a separation of 1000 metres.  • To date, no potentially deleterious substances have been identified associated with the Aurora mineralisation.
Further work	<ul> <li>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>As detailed in this report additional work is proposed and recommended.</li> <li>Further diamond core drilling will be undertaken within the uranium resource to generate core for further phases of metallurgical testwork.</li> <li>Further diamond core drilling will be undertaken testing the uranium potential of zones along strike and adjacent to the defined Aurora deposit, in particular zones identified in the nearby Cordex drilling. Also, in referring to the Cordex drilling, verification of this historic drilling data will be completed.</li> </ul>



# Appendix 4: Reasonable Basis for Forward Looking Statements

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this announcement and are disclosed in the table below.

Consideration of Modifying Factors (in the form of Section 4 of the JORC Code (2012) Table 1).

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul> <li>No Ore Reserve has been declared as part of the scoping study.</li> <li>The Mineral Resource estimate on which the scoping study is based was previously announced on 23 November 2022.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>A site visit was undertaken by a consultant from orelogy<sup>TM</sup> for the mining study conducted by that company.</li> <li>Multiple site visits have been undertaken by the Competent Person named for the resource estimations.</li> </ul>
Study status	<ul> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre- Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	The study presented is a scoping study and no Ore Reserve has been declared.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Cut-off grade parameters have been determined orelogy <sup>TM</sup> utilising scoping study level cost inputs.
Mining factors or assumptions	<ul> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (ie. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as prestrip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes,</li> </ul>	<ul> <li>No Ore Reserve has been declared.</li> <li>Open pit mining, based on an economic optimisation exercise, is considered appropriate.</li> <li>A conventional truck and shovel open pit operation has been designed, with overall wall angles of range from 37° for Oxide to 45° for Fresh rock55° have been assumed for the pit with batter angles of 70° to 80°, batter heights of 4m and 3.5 to 4m wide berms.</li> <li>The Mineral Resource estimate on which the scoping study is based was previously announced on 23 November 2022. Pit optimisation parameters were</li> </ul>



Criteria	JORC Code Explanation	Commentary
	stope sizes, etc), grade control and pre- production drilling.  The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).  The mining dilution factors used.  The mining recovery factors used.  Any minimum mining widths used.  The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.  The infrastructure requirements of the selected mining methods.	referenced to the 1980 Placer Feasibility Study.  Open pit dilution of 5% and ore loss of 2% has been applied using a 4m bench height.  No Inferred Mineral Resources are used in the evaluation as described in the body of this release.  Limited infrastructure, such as offices, workshops, ablutions and sub-stations will be required.
Metallurgical factors or assumptions	<ul> <li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>Whether the metallurgical process is well tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<ul> <li>A conventional crushing/grinding and beneficiation circuit has been assumed, followed by sulphuric acid leach IX and elution circuits, which is fairly commonplace in the uranium industry.</li> <li>This technology is well established and tested.</li> <li>The metallurgical testwork has been conducted on several composite samples from the resource in several testing programs by industry expert metallurgical testing organisations. Work conducted prior to 2012 was conducted by Hazen Research Inc. Golden Colorado. Work since has been conducted by ALS Laboratories, Perth, under the supervision of DRA Global Limited.Study of deleterious elements has formed part of the on-going metallurgical testing,</li> <li>No work has been undertaken on potential by-product recovery.</li> <li>No bulk sample mining or pilot plant testing has been conducted.</li> <li>There is no ore reserve estimation at this time.</li> </ul>
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Cultural and environmental impact assessments have commenced. Potential for AMD and tails classifications will occur at PFS level. No mining and processing approvals have been applied for.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labor, accommodation; or	Processing is assumed in this scoping study to occur at a plant in Nevada, with mined material transported some 8.5km from the pit to plant either by truck, conveyor of slurry pumping.



Criteria	JORC Code Explanation	Commentary
01110110	the ease with which the infrastructure can be provided, or accessed.	An accommodation camp is assumed for the project.
Costs	<ul> <li>The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul> <li>The capital cost estimates were based on benchmarking with similar operations and factoring appropriate for a scoping study with a target accuracy of +/- 35%.</li> <li>Process plant and other infrastructure was scaled from similar projects using the 'six-tenth rule'. Some costs have been allocated to separate subsections of the plant.</li> <li>Capital development costs were built up from benchmarked rates and first principles.</li> <li>Preliminary operating costs were built up from first principles and benchmark exercises for mining and processing.</li> <li>Transportation costs were escalated from previous quotes and checked with benchmarks.</li> <li>All costs are in USD.</li> <li>No royalties are applicable to the project.</li> </ul>
Revenue factors	<ul> <li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and coproducts.</li> </ul>	<ul> <li>Key revenue assumptions in this assessment are based on the following price:         <ul> <li>U308 price – US \$90/t</li> </ul> </li> <li>Product transportation costs have been included.</li> <li>No sales contracts have been negotiated.</li> </ul>
Market assessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	No detailed assessment of the market has been completed given the lead time to construction with respect to the life of the project. Market sentiment is strong for uranium in the medium to long term with the global themes of decarbonisation, energy security and electrification now prioritised.
Economic	<ul> <li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul> <li>The evaluation is at a project level (100% ownership).</li> <li>The NPV was determined using the Discounted Cash Flow method of valuation using a discount rate of 8%.</li> <li>The financial model is in real terms based on yearly increments.</li> <li>No escalation was applied.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Social	The status of agreements with key	US Federal corporate tax and state tax have been applied. Sensitivity to 4 different variables has been modelled:  1. Uranium Price 2. Uranium Recovery 3. Up-Front CAPEX 4. Operating Costs The project is most sensitive to uranium price and uranium process recovery, followed by processing operating costs.  The Aurora resource occurs on federally
	stakeholders and matters leading to social license to operate.	<ul> <li>owned land managed by the Bureau of Land Management in Oregon and Nevada.</li> <li>There is no Native Corporation ownership of land on which the Project is located.</li> <li>There are no other formal stakeholders in these projects.</li> </ul>
Other (incl Legal and Governmental)	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<ul> <li>No ore reserve has been declared.</li> <li>No material naturally occurring risks have been identified.</li> <li>The project is owned 100% by Aurora and there are no marketing agreements in place.</li> <li>There are currently no governmental agreements in place.</li> <li>The Mining Claims upon which the deposit is located are owned by Aurora's subsidiary in the US.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	No ore reserve has been declared. The Mineral Resource Estimate stands as detailed in the Aurora Energy Limited ASX release, dated 23 November 2022 "34% Increase in Total Uranium Resource to 50.6 Mlbs Maiden Measured Resource Declared at Aurora Uranium Deposit"
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	No ore reserve has been declared.
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and confidence level in	No ore reserve has been declared. The Mineral Resource Estimate stands as



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Criteria	JORC Code Explanation	Commentary
	the Ore Reserve estimate using an	detailed in the Aurora Energy Limited ASX
	approach or procedure deemed	release, dated 23 November 2022 "34%
	appropriate by the Competent Person.	Increase in Total Uranium Resource to
	For example, the application of statistical	50.6 Mlbs Maiden Measured Resource
	or geostatistical procedures to quantify	Declared at Aurora Uranium Deposit"
	the relative accuracy of the reserve within	
	stated confidence limits, or, if such an	
	approach is not deemed appropriate, a	
	qualitative discussion of the factors	
	which could affect the relative accuracy	
	and confidence of the estimate.	
	The statement should specify whether it	
	relates to global or local estimates, and, if	
	local, state the relevant tonnages, which	
	should be relevant to technical and	
	economic evaluation. Documentation	
	should include assumptions made and	
	the procedures used.	
	Accuracy and confidence discussions     Accuracy and to an office discussions of	
	should extend to specific discussions of	
	any applied Modifying Factors that may	
	have a material impact on Ore Reserve	
	viability, or for which there are remaining	
	areas of uncertainty at the current study	
	stage.  It is recognised that this may not be	
	It is recognised that this may not be possible or appropriate in all	
	circumstances. These statements of	
	relative accuracy and confidence of the	
	estimate should be compared with	
	production data, where available.	
	production data, where available.	