# **NEO** energy metals

Q2 2024

# **NEAR-TERM**

# LOW-COST

# URANIUM PRODUCTION

**Corporate Presentation** 

## HENKRIES URANIUM PROJECT

## **NORTHERN CAPE**

### **SOUTH AFRICA**

# **NEO** energy metals

CORPORATE PRESENTATION | 2024

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### **MAIN BOARD LONDON LISTING**

- Neo Energy Metals (LSE: NEO) is the only uranium exploration company listed on the Main Market of the London Stock Exchange
- Only primary listed uranium mine development company in London to offer investors with direct exposure to the uranium sector
- One of the most advanced, high-grade uranium companies capable of near-term production
- Our focus is on Henkries, an advanced, low-cost uranium project in the Northern Cape Province of South Africa with a clear pathway to production. With +US\$30m of historical work undertaken at the project.
- Currently updating a previously published feasibility study together with increasing the mineral resource ahead of a determination of the development schedule at the end of 2024 to bring Henkries into production.
- £3,500,000 strategic equity investment by Q Global Commodities secured and further £1,500,000 equity raising underway to fully fund the company through to a production decision
- Low valuation relative to TSX and ASX-listed uranium exploration companies
- First Inward Dual Listing on the A2X Markets (A2X: NEO), an independent South African stock exchange. Aimed to expanding its investor base and facilitate strategic acquisitions of uranium projects, particularly within South Africa.



### **STRATEGY**

### Three-pronged approach

### 1.Develop

Fast-track the interrogation of Henkries ahead of a determination of the development schedule by end of 2024, followed by 9 to 18 months developing a small-scale uranium mine to generate cash-flow.

### 2.Procure

Procure assets of a suitable potential to explore and develop in the Northern Cape region of South Africa to extend the life of the Henkries mine or increase the modular production capacity of any future Henkries plant.

### 3.Explore

Explore additional minerals of significant value to the global decarbonisation drive including lithium, graphite, copper, lead, and zinc, should they occur on properties under investigation. Any discoveries worthy of investigation have the potential to be spun out with the proceeds being used to fund Neo's uranium growth strategy.



## **BOARD OF DIRECTORS**

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#### A Board with strong and proven credentials in African mining and investment



#### Sean Heathcote - Chief Executive Officer

- Over 31 years' experience in the mining and exploration industry in Africa and across a broad range of commodities including uranium, bulk commodities, precious metals, diamonds and base metals.
- Operations management positions at Billiton and Anglo American and with 16 years of executive management and directorships in the project development companies of Fluor, Murray & Roberts, GRD Minproc and Sedgman.



#### Jason Brewer (M.Eng (Hons) -- Executive Chairman

- Over 28 years' experience in international mining, financial markets and investment banking with a particular focus in Africa.
- Experience with a number of major global investment banks, including Dresdner Kleinwort Benson, NM Rothschild & Sons and Investec and with listed funds management companies focused on the mining and metals sector.

#### Quinton van der Burgh - Executive Director

- Founder and CEO of Q Global Commodities, one of South Africa's leading independent commodity, mining, logistics and investment funds.
- One of South Africa's leading entrepreneurs, philanthropist and mining magnate.
- Established more than 45 mines in Africa from greenfield status through to production and exports of materials to the global commodity markets.



#### Bongani Raziya - Non-Executive Director

- Over 20 years' experience in oil and gas and mining in Africa with various directorships held in well-established profitable companies.
- Director of Petregaz, a company that aggregates liquefied petroleum gas, with a terminal in Richards Bay and is the largest independent LPG distributer in South Africa. Also, a director of Umsimbithi Mining which operates the Wonderfontein Coal Mine.



#### Jackline Muchai - Non-Executive Director

- Kenyan based businesswoman and founder and Chief Executive of Nairobi based Gathoni Muchai Investments Limited, a focused mining and materials, property and retail business specialising in investments in East and Southern Africa.
- Director of UK incorporated Mayflower Children's Foundation which aims at improving young children's education, health and well-being in Africa through education, nutrition and recreational programs.



#### James Longley - Non-Executive Director

- Over 30 years' experience in finance, James Longley is a chartered accountant whose career has been focused on venture capital, private equity and building growth companies.
- His earlier career was with Arthur Andersen, Creditanstalt-Bankverein Merchant Banking and Touche Ross Corporate Finance.
- Current Co-founder, Director, Chief Financial Officer and interim CEO of Plutus PowerGen plc, a company listed on AIM.



#### Charles Tatnall - Non-Executive Director

- Charles Tatnall is a seasoned advisor and fundraiser, specializing in small and medium-sized enterprises across diverse industries.
- His experience includes advising investment and family wealth firms, evaluating investments and business opportunities, and managing personal investments.
- Previously he held a number of positions with public companies in North America and Canada and was a director and founder of several micro-cap North American listed companies being responsible for general corporate governance and all finance areas.

### **MANAGEMENT TO ADVANCE TO PRODUCTION**

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#### A management team with the capabilities to successfully advance Henkries to production

	Andrew Pedley (B.Sc. M.Sc. Pr. Sci. Nat.) – Senior Geological Consultant
Andrew Pedley	Exploration and resource geologist with over 20 years' of successful mineral exploration work in Africa from greenfields exploration to management of large resource drilling programs, resource modelling and estimation
	<ul> <li>A track-record of adding value by discovering high-quality mineral deposits, expanding existing deposits and identifying new opportunities</li> </ul>
	Previous managed the uranium exploration activities conducted by Niger Uranium Limited at the Henkries Uranium Project between 2008 and 2010
Stephen	Stephen Amphlett – Company Secretary and Chief Financial Officer
Amphlett	<ul> <li>Over 35 years' experience focusing on the management, growth and financing of emerging mining, procurement and mine services companies</li> </ul>
	<ul> <li>Director and Chief Financial Officer of Mayflower Capital Investments, and responsible for overseeing its investments and financial positions in African focused mining and exploration companies</li> </ul>
	Peter Hibberd (B.Sc.(Hons) Min. Geol. B. Sc. (Hons) Min. Eng.) – Project Manager and Country Manager
Peter Hibberd	A qualified geologist and mining engineer with over 30 years' experience in the mining sector in Southern Africa
	<ul><li>Technical positions with a number of major mining houses including De Beers, Rio Tinto and JCI</li></ul>
	<ul> <li>Over 15 years' involvement with the Henkries Uranium Project, as the original founding member of the company and has been directly involved with licencing, access of data from Anglo American, agreements with Niger Uranium, geological field work and the oversight of resource estimation and on site exploration activities</li> </ul>
	Peter Major (BSc -Mining Engineering MBA, SAMMC) – Advisor
Peter Major	<ul> <li>Veteran mining engineer, fund manager and analyst, who is highly regarded and well known in the mining and financial service industries in South Africa</li> </ul>
	Previously Head of Mining and Senior Fund Manager at Nedcor Investment Bank where he was the No 1 Fund Manager in SA twice and further managed Mark Shuttleworth's US\$530m fund, growing it to US\$1.5 bn in 4 years
	<ul> <li>Currently Director of Mining at Modern Corporate Solutions</li> </ul>

## **Q Global Commodities**

- Q Global Commodities has established itself as one of South Africa's leading independent commodity, logistics and investment funds
- Equity subscription agreement signed for a £3,500,000 investment
- Q Global Commodities will become the company's single largest shareholder with an approx 29% interest
- Mr Quinton van der Burgh, CEO of Q Global Commodities and one of South Africa's leading mining entrepreneurs joins the Board of Directors of the Company
- The funds:
  - ✓ supports the development of Henkries and marks their first investment in the uranium sector, adding to their significant position in South Africa's energy sector.
  - Allowed the Company to now finalise its Prospectus for the reverse takeover transaction and allowed re-admission of the company's shares to trading on the London Stock Exchange
  - Ensures sufficient working capital for expansion resource drilling, mining, and metallurgical technical work at Henkries
- In addition to the Q Global Commodities funding, the Company plans to raise up to a further £1,500,000
- The combined £5,000,000 equity funding will enable the Company to complete an updated Feasibility Study and undertake additional expansion resource drilling programs
- The Company's funding will allow it to progress its accelerated development and production plans at Henkries and target the acquisition of other strategic uranium projects in Africa.

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#### ODITIES





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## URANIUM MARKET FUNDAMENTALS - 'BEST EVER'

21 nations launched the Declaration to Triple Nuclear Energy by 2050 at COP28, which Jonathan Cobb of the WNA acknowledged would not be easy but said... *"That is exactly why the pledge was necessary. The governments are looking at the role they need to play in achieving that. It won't just happen by business as usual.*"

- One of the most significant and strategic modern commodities
- Uranium is clean, safe, reliable and economic
- Value has risen dramatically in our new carbon-free world
- Fragile supply chain apparent from recent global events
- Macro policy changes in Europe and the United States has provided a strong tailwind for uranium
- Robust growth and accelerated rebalancing of supply
- Significant increase in uranium price and price forecasts
- Increased investor sentiment and major impact of uranium ETFs

Potential doubling in electricity demand over next two decades, along with pressure to de-carbonise power sector could prove huge for the uranium industry

With a decade of under investment in the sector, the uranium market and Neo Energy Metals advanced Henkries Uranium Project are well positioned to benefit a strong rebound

### **URANIUM MARKET PRIMED FOR GROWTH**

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### NUCLEAR POWER EMITS NEARLY 70X LESS CARBON DIOXIDE THAN COAL



**Market Growth Drivers** 

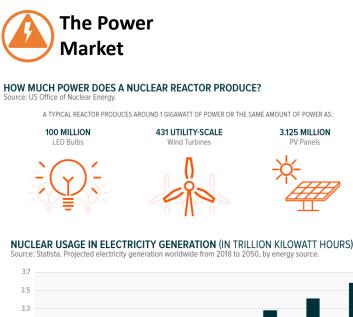
- Gaining favour among policy makers worldwide who are trying to reach carbon-reduction targets
- Increasing interest in Asia where 60% of the new global reactors are under construction

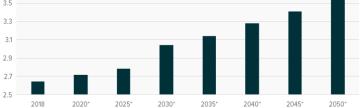


### **International Uranium** Market

- The World Nuclear Association projects uranium demand to reach 206 million pounds in 2030 and supply to drop 50% by 2030 due to lack of investment in new mines
- The industry needs at least to double its development pipeline of new projects by 2040 to avoid potential supply disruptions

### Nuclear generation capacity is expected to grow by 2.6% annually to 2040



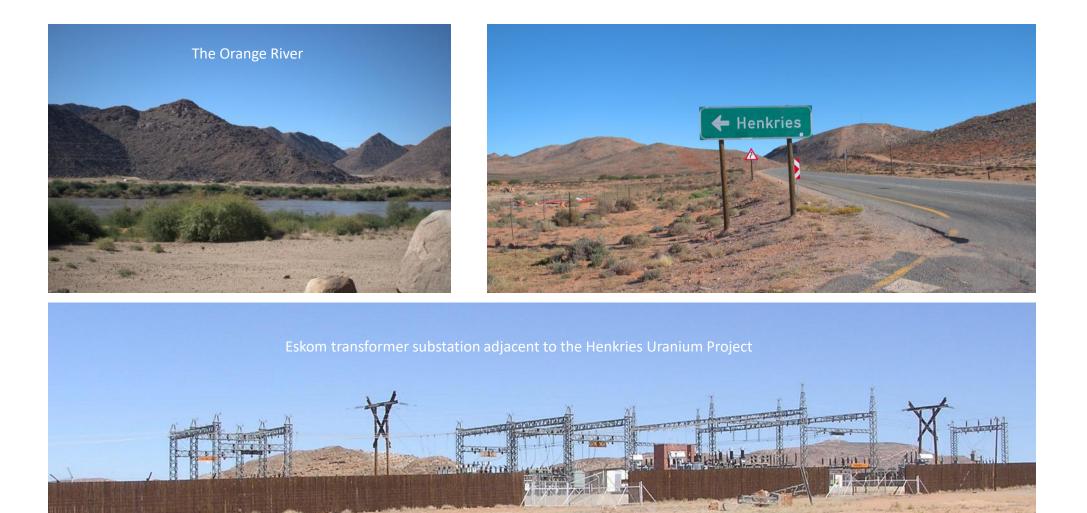


"Given its unique combination of attributes - reliability, affordability, low-carbon and universal deploy ability - it is clear that nuclear energy will play an even larger role in the electricity and energy systems of tomorrow." World Nuclear Association Director General

# HENKRIES URANIUM PROJECT

### **HENKRIES URANIUM PROJECT**





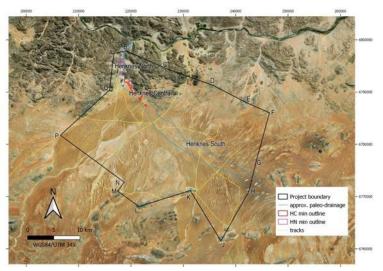
### **NEO ENERGY METALS PLC**

- Up to 70% interest in the Henkries Uranium Project located in the Northern Cape Province of South Africa
- Henkries is considered an advanced and near term, low-cost uranium project capable of an accelerated development and production timetable
- A clear pathway to production of uranium and sales into the international uranium market following an updated DFS, FEED & application for a Mining Right
- Project benefits from excellent infrastructure with road, power and water all available at the project site
- Provides immediate exposure to the uranium sector and a near-term uranium producer
- JORC compliant Mineral Resource at Henkries Central and Henkries North
- Additional JORC compliant Exploration Target defined at Henkries North prepared according to JORC.
- Less than 10% of prospective ground fully tested project is wide open for potential new uranium discoveries
- Over US\$30m of historical exploration, drilling, test-pitting and mining, metallurgical test work and pilot plant work and feasibility study completed by Anglo American, Niger Uranium and Namakwa Uranium
- Funds raised to be used to complete an updated Feasibility Study and target an increase in Mineral Resources
- Erudite Strategies was appointed in April 2024 and completed the update the Order of Magnitude Capex and Opex estimates for the Positive Feasibility Study completed by Anglo American.

### **PROJECT IN PROVEN MINING DISTRICT**

- 80km north of the mining town of Springbok in the Northern Cape Province of South Africa
- Immediately south of the Orange River, and the border with Namibia
- Excellent infrastructure with access by tar and gravel roads, a 22kVA power-line and water from the Orange River is available on site
- The Henkries deposit is located across the border from Namibia, which is host to a number of established operating uranium mines which include Rossing and Langer Heinrich
- Exploration commenced at Henkries in the 1970s by Anglo America following the discovery of similar surficial uranium deposits in Namibia such as Langer Heinrich
- Project will benefit from the strong mining skills and associated infrastructure in the Northern Cape Province
- Major mining investments in the area include Vedanta's Gamsberg Lead Zinc Mine and and Orion's Prieska Copper Project







## **DISCOVERED BY ANGLO AMERICAN**

- Discovered by Anglo American in 1975
- Granted Prospecting Right extending over 743km<sup>2</sup>
- Uranium mineralisation hosted in soft, very shallow paleochannel sediments
- Prospective uranium channel extends for 37km on the license area
- Two deposits, Henkries Central and Henkries North defined along a 12km section of the paleochannel, and largely within 8m of surface
- At Henkries Central 80% of the uranium in a continuous layer 3.6km long and up to 1.1km wide and up to 8 m thick
- Uranium at Henkries North is within 6 zones, the largest being 1km in length
- Major exploration upside at Henkries South which extends for a further 24km along the defined uranium paleochannel
- Positive Feasibility Study completed by Anglo American, following mining of 211 pits, bulk metallurgical sampling and pilot plant test work - worked stopped after uranium market drop in 1979
- JORC Resource Estimate dated January 2022 estimates 4.7 Mlbs U3O8 at 399 ppm Pilot plant metallurgical work confirmed good recoveries and process flowsheet

### **ANGLO AMERICAN FEASIBILITY STUDY WORK**

- Anglo American Feasibility Study based on 9,693m of drilling and over 700 holes
- Anglo also mined 211 pits and 254t bulk sample processed at the National Institute for Metallurgy in South Africa

### Material is unconsolidated sands

 Free-dig with no blasting or crushing required and only minimal grinding needed

MINING

- Major cost advantages
- Mining costs will be very low for the simple scraper operations
- Shallow open pit mining at Henkries Central of less than 5m
- Very low strip ratio
- Neo Energy aims to Increase the resource to support 0.75Mlbs U3O8 operation.
- Deposit well suited to mining higher grades (>500 ppm) in the initial years of operation

### PROCESSING

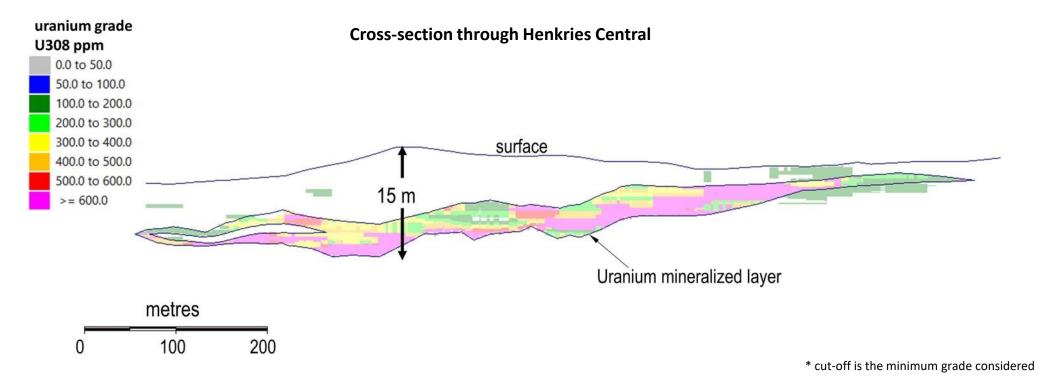
- Process was developed by Anglo American in a pilot plant with a throughput of 50kgs dry ore/hr for 3 months continuously
- Access to many 'faces' will allow simple blending of 'ore types' for an optimal plant feed.
- Light crushing and screening only
- Sulphuric acid leaching followed by ion exchange produced best recoveries: leach 85%, ion exchange 95%, overall 81%.
- Re-deposition with a resin
- Liberation from resin and filtration
- Drying to produce a "Yellow Cake" sales product

## **NEAR TERM AND LOW COST OPERATION**

Good continuity of mineralisation

- Mineralisation at surface or very shallow
- Henkries Central well drilled (>800 holes)
- Henkries Central Av. grade of 436 ppm U3O8

- Overburden and mineralized material free-dig
- Water and power within 2km
- Forecast low operating costs
- New Feasibility Study currently being completed



### **HENKRIES MINERAL RIGHTS AREA**

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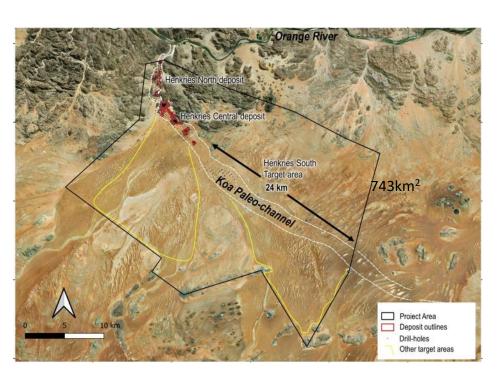
- Granted Prospecting Right in place over the Henkries Uranium Project extending over a total area of 743km<sup>2</sup>
- Existing Henkries Central and Henkries North deposits occupy <10% of the prospective area
- Potential to make new discoveries and significantly increase resources

#### **Henkries Central Resource**

- 6 km of paleo-channel
- Main orebody
- Existing high-grade resources

### Henkries North Resource and Exploration Target

- 5 km of paleo-channel
- Existing resources on 3 identified zones
- Upgrade of Exploration
   Target to increase resources



#### Henkries South Major Exploration Upside :

- Extends over 25km of the 37km paleochannel to the southeast on the on rights area.
- Henkries South underexplored and offers potential for new uranium discoveries
- Has significant potential to increase overall project resources

## **OVER 18,000M OF DRILLING**

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### **URANIUM MINERAL RESOURCE ESTIMATE**

HENKRIES URANIUM PROJECT - JORC COMPLIANT RESOURCES (100ppm U3O8 cut-ff grade)								
	Million Tonnes	Average Grade (ppm U3O8)	Average Dry Density (t/m³)	Million lbs. U3O8 contained				
Henkries Central								
Indicated	1.97	635	1.08	2.75				
Inferred	1.74	211	1.38	0.81				
Total Henkries Central	3.71	436	1.22	3.57				
Henkries North								
Inferred	1.63	315	1.13	1.14				
Total Henkries North	1.63	315	1.13	1.14				
TOTAL HENKRIES PROJECT RESOURCES	5.34	399	1.19	4.70				

HENKRIES URANIUM PROJECT - JORC EXPLORATION TARGET*								
	Million Tonnes	Grade (ppm U3O8)	Average Dry Density (t/m³)	Million lbs. U3O8 contained				
Henkries North	2.1 – 2.9	230 - 315	1.15	1.1 - 2.0				

\*An Exploration Target is not a Mineral Resource Estimate; the potential quantity and grade is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and that it is uncertain if further exploration will result in the estimation of a Mineral Resource.

## **ECONOMICS UPDATE**

- Erudite Strategies appointed to update Order of Magnitude Capex and Opex estimate for the Henkries Uranium Project
- To update the financial evaluation report for the Project originally produced by Anglo American Corporation in 1979.
- Findings from the independent report, confirmed the low operating cost and capital cost and overall robust project economics of Henkries
- Financial modelling of the detailed cost estimates has further confirmed the Project's robust and attractive underlying economics.
- The Project economics were assessed based on three potential operating scenarios

- The Life of Mine for all project scenarios was set at 10 years, using an average price of US\$90/lb and a discount factor of 8%, with no escalation and no gearing applied to any of the three operating scenarios.
- The head grade was set at the current Mineral Resource Estimate average of 399ppm U3O8, with a cut-off grade 100ppm.
- The Economics update by Erudite, confirms the excellent current economic potential for near term development of Henkries to production.
- The data enables a "fast track" Front End Engineering Design (FEED) phase.

	HENKRIES URANIUM PROJECT - Inputs and Financial Outputs									
	LOM (yrs)	Total Ore (Dry) (Tonnes)	Contained Uranium (Ibs U3O8)	Total waste mined (Dry- mt)	Plant Design Process throughput (dry- tpa)	Average Uranium Head Grade (ppm U3O8)	Cut Off Grade (ppm U3O8)	Forecast Uranium Recovery (%)	Total Production (Ibs U3O8)	Average Annual Production (Ibs U3O8)
Current Case	10	5,341,000	4,700,000	12,550,000	535,000	399	100	81	3,807,000	380,700
Competent Person Report Case	10	7,954,000	7,000,000	18,691,000	796,000	399	100	81	3,807,000	567,000
Initial Target Case	10	11,362,000	10,000,000	26,701,000	1,137,000	399	100	81	8,100,000	810,000

### **ECONOMICS UPDATE**

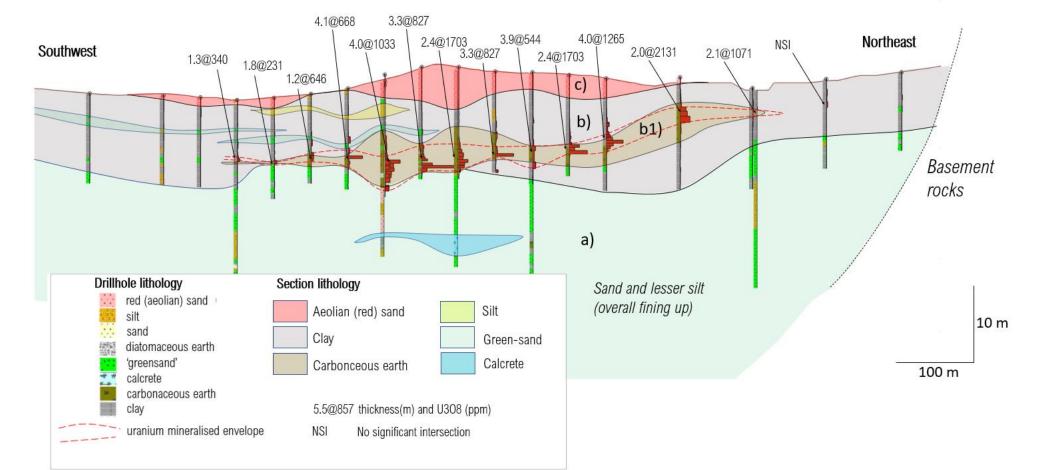
- Financial Models were generated based on the Erudite Study outcomes, for three operating scenarios for the development of the project defined as:
- Low Case assuming the project is developed based on the current 4.7Mlb U3O8 JORC resource,
- II. Competent Person Report Case- assuming that JORC resources are increased to 7Mlb U3O8, as supported in the Henkries Competent Persons Report published in November 2023, (after updating the Mineral Resource Estimate based on the analysis of available historical drill samples and the infill drilling at Henkries North being completed in H2 2024), and;
- III. Initial Target Case- assuming the 10Mlb U3O8 JORC resource target of the current exploration program is achieved.

Henkries Uranium Project- Valuation Returns and Key Ratios - C1 Cash Cost Basis									
	<i>Combined C1 Cash Cost</i> (US\$/lb U3O8 produced)	Project Capital including Owners Cost and Contingency (US\$ million)	Sustaining Capital (US\$ million)	NPV (Pre-Tax, real basis, ungeared) C1 (US\$M)	IRR (Pre-Tax, real basis, ungeared) C1 (%)	Payback Period (yrs)			
Low Case	42.17	41.1	13.6	63.9	30.1	3.6			
Competent Person Report Case	36.8	52.2	17.3	106.6	43.4	2.9			
Initial Target Case	33.56	64.6	21.5	195.4	72	2.5			

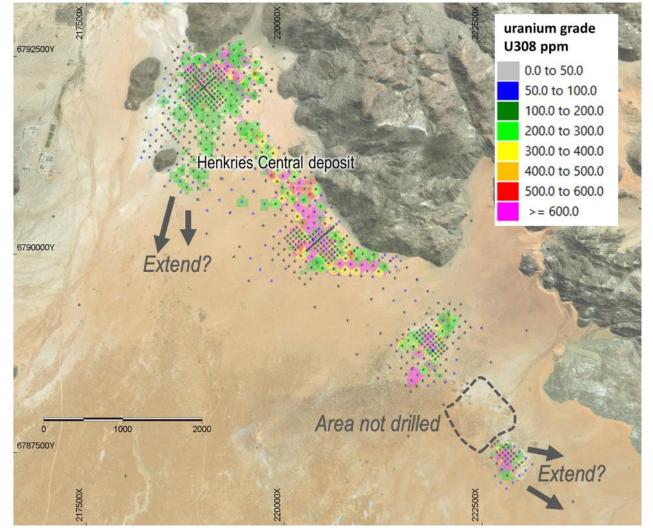
### **HENKRIES CENTRAL – HIGH GRADE ZONE**

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- 4.1m at 668ppm U3O8
- 4.0m at 1,033ppm U3O8
- 3.3m at 827ppm U3O8
- 2.4m at 1,703ppm U3O8
- 2.4m at 1,703ppm U3O8
- 4.0m at 1,265ppm U3O8
- 2.0m at 2,131ppm U308
- 2.1m at 1,071ppm U3O8



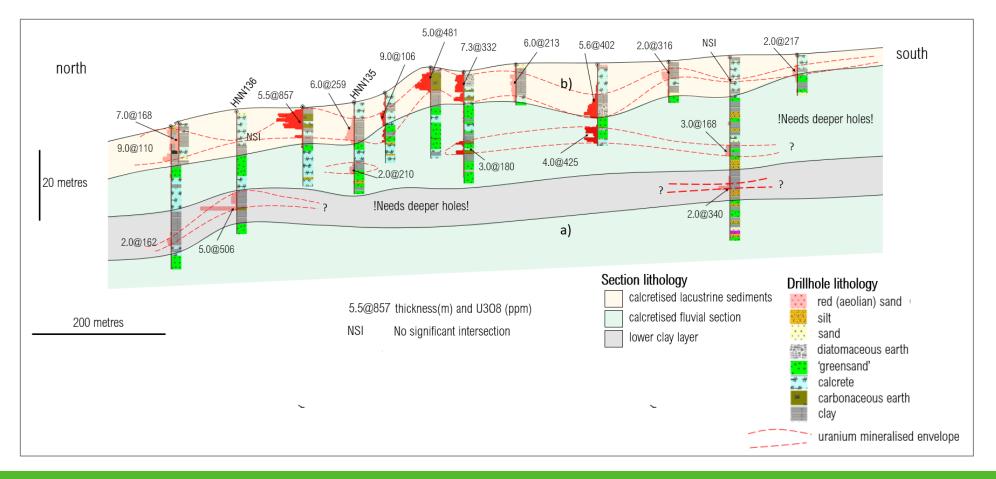
### **HENKRIES CENTRAL RESOURCE UPSIDE**



- Drilled by both Anglo American and Niger Uranium
- Multiple high grade drill intercepts
- Individual assays reported up to 5 kgs/tonne U3O8 in carbonaceous ore type
- Opportunity to extend mineralisation already identified in the paleochannel.
- Major potential to add further shallow uranium to the existing resources
- Drilling planned to test all potential extensions to the existing Henkries Central
- Company targeting severalfold increase in resources

### **HENKRIES NORTH**

- Resources defined on just 3 of the 6 identified zones of uranium mineralisation
- Exploration Target completed for the other 3 zones to be upgraded to resources
- Additional drilling and assays of existing unsampled drillholes may further support resource increase and upgrade
- Opportunity for uranium from a deeper (25-35m) layer intersected in some holes some holes stopped short



### **ADVANTAGES OF HENKRIES MINERALISATION**

- High-grade uranium mineralisation relative to other established and operating open-pit uranium deposits
- Uranium mineralisation is at surface and mostly within 8m of the surface
- Good continuity with mineralisation at Henkries Central a continuous sheet 3.6km long and up to 1.1km wide
- At its thickest the mineralisation is 7-8 m thick but typically 2-3m thick
- Mineralised material is visually very distinctive and is contained with 3 main ore types: green sand, carbonaceous clay and diatomaceous earth
- All mineralisation is shallow, soft and free-dig material
- Pilot scale test-work achieved 85% recovery
- Simple mining, favourable processing, low capital
- Low operating costs

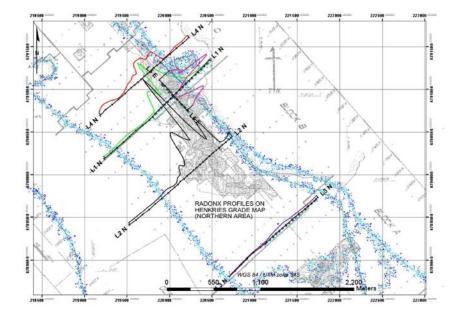


#### CORPORATE PRESENTATION | 2024

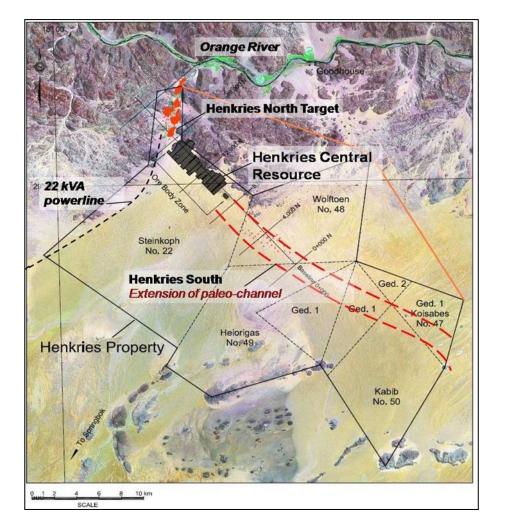
### **RESOURCE POTENTIAL AT HENKRIES SOUTH**

#### Major exploration and resource upside at Henkries South

 Extends over 24km of the 37km defined paleochannel that hosts Henkries Central and Henkries North resources



- 794 detector RadonX survey completed over Henkries South
- Drilling and geophysics planned to test all potential areas of uranium mineralisation
- Major potential for increase in project resources



## **HENKRIES PROJECT HIGHLIGHTS**

### **NEO** energy metals



#### Advanced Uranium Project

JORC Resource Estimate (Jan 2022) 4.7 Mlbs U3O8 at 399 ppm Pilot plant metallurgical work confirmed good recoveries and process flowsheet



### Near Term Production Opportunity to accelerate production in a relatively short time frame Key studies to be updated and fully funded from IPO



#### **Cost Competitive**

Forecast low cost mining as deposit and uranium mineralisation. is very shallow and free-dig - no blasting or crushing is required and minimal grinding



#### **Growing Market**

Green energy - industry needs at least to double its development pipeline of new projects by 2040 to avoid potential supply disruptions



### **Excellent Location** Good infrastructure and highly skilled labour force in the area Power and water on site



#### **Upside potential**

Large license area with considerable upside potential with less than 10% of prospective ground fully tested

### **STEPS TOWARDS PRODUCTION**

- Funds raised to be used to complete an updated Feasibility Study
- 4,000 6,000m drilling program aimed at increasing the uranium Mineral Resource and supporting Ore Reserve estimation.
- Drilling to focus on potential lateral expansion and deeper mineralisation at the Henkries Central and Henkries North deposits.
- Henkries South under-explored and offers potential for new uranium discoveries
- Major geophysics program to commence and assist exploration.
- Metallurgical test work to update process flow sheet
- Optimisation of uranium acid leaching given improvements in technology and equipment required for uranium processing; aimed at increasing uranium recoveries
- Development schedule decision at the end of 2024 to bring Henkries into production.

## **SUMMARY**



- A new uranium exploration and mining company listed on the London Stock Exchange and South Africa's A2X Markets
- Provides immediate exposure to the uranium sector
- The Henkries Uranium Project is an advanced and near term, lowcost uranium project capable of an accelerated development and production timetable with over US\$30m of historical expenditure
- Uranium mineralisation hosted in soft, shallow paleochannel sediments mostly within 5-10 m of surface
- Simple shallow open pit mining, favorable processing technology with historical pilot scale test-work demonstrating good recoveries
- Forecast low and capital operating costs for Henkries development
- Project also benefits from excellent infrastructure
- 2022 Mineral Resource Estimate for Henkries Central and part of Henkries North, prepared in accordance with JORC
- Potential to expand the Mineral Resource and significant exploration upside
- Update underway on the Feasibility Study completed by Anglo American
- Clear pathway to low-cost production

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