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26 September 2022

Independent Expert's Report Released

Energy Resources of Australia Ltd (**ERA** or the **Company**) refers to its ASX announcement on 28 July 2022 regarding the appointment of an independent valuation expert.

The Independent Board Committee (**IBC**) of the Company engaged Grant Thornton Corporate Finance Pty Ltd (**Grant Thornton**) as the independent valuation expert to determine the fair value of ERA, on a basis consistent with an independent expert's valuation prepared under Part 6A.4 of the *Corporations Act* and in accordance with published ASIC guidance (including Regulatory Guide 111).

Grant Thornton has prepared an independent expert's report (**IER**), supported by SRK Consulting (Australasia) Pty Ltd (**SRK**) as the independent mining technical specialist.

A full copy of the IER, which includes SRK's report, is attached to this announcement and is also available on ERA's website.

Grant Thornton has determined the fair value of ERA (on the abovementioned basis) to be between $0.159 and $0.243 per share, with a mid-point valuation of $0.201 per share.

As previously foreshadowed, the IBC intends to determine the offer price for an Interim Entitlement Offer by reference to the fair value as determined by the independent valuation expert.

The IBC intends to urgently engage with Rio Tinto to seek its pre-commitment to take up its pro-rata share of entitlements under the Interim Entitlement Offer. ERA will advise shareholders of the terms of the Interim Entitlement Offer once they are determined.

This announcement was authorised by the IBC.

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About Energy Resources of Australia Ltd

Energy Resources of Australia Ltd (**ERA**) has been one of the nation's largest uranium producers and operated Australia's longest continually producing uranium mine.

The operations of ERA are located on Aboriginal land and are surrounded by, but separate from, Kakadu National Park. ERA respectfully acknowledges the Mirarr, Traditional Custodians of the land on which the Ranger mine is situated.

ERA has an excellent track record of reliably supplying customers. Uranium was mined and processed at Ranger for four decades. During that time, Ranger produced in excess of 132,000 tonnes of uranium oxide.

ERA's Ranger Project Area (100%) is located eight kilometres east of Jabiru and 260 kilometres east of Darwin, in Australia's Northern Territory. ERA holds title to the Jabiluka Mineral Lease (100%). ERA is a major employer in the Northern Territory and the Alligator Rivers Region.

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Energy Resources of Australia Limited

Independent Valuation Report and Financial Services Guide

26 September 2022

Grant Thornton
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26 September 2022

Introduction

Energy Resources of Australia Ltd ("ERA" or "the Company") is a uranium mining and exploration company operating in the Northern Territory, Australia. ERA controls two mineral assets, the Ranger mine situated on the Ranger Project Area ("Ranger Project Area" or "Ranger Mine") and the Jabiluka deposit ("Jabiluka Project Area" or "Jabiluka Mine") located on the Jabiluka Mineral Lease ("MLN1" or "Jabiluka Mineral Lease").

The Ranger and Jabiluka projects are within close proximity of one another and are surrounded by the Kakadu National Park, a UNESCO World Heritage Site. Following c. 40 years of production as an open pit mine, ERA is currently rehabilitating Ranger ("Ranger Rehabilitation"). A key condition of the Ranger's regulatory requirements is that Ranger must be rehabilitated so that the Ranger Project Area can be incorporated into the surrounding Kakadu National Park. On 2 February 2022, ERA announced the cost for the Ranger Rehabilitation area to be approximately between A$1.6 billion and A$2.2 billion (including costs already incurred from 1 January 2019) ("Ranger Rehabilitation Costs").

Jabiluka Mineral Lease contains two ore bodies being Jabiluka 1 and the significantly larger Jabiluka 2 that contains approximately 137,100 tonnes of uranium ore equivalent to c. 302 million pounds ("Mlb") of uranium oxide ("U_3O_8") at an average grade of 0.55%. In 2005, Jabiluka entered into a Long-Term Care and Maintenance Agreement ("Care and Maintenance Agreement") with the Aboriginal Mirarr Traditional Owners ("Mirarr Traditional Owners" or "Traditional Owners") who are the custodians of the land. A key condition of the Care and Maintenance Agreement is that ERA is prohibited from mining at Jabiluka without the approval of the Traditional Owners who are currently publicly opposed to the development of the Jabiluka Mine.

ERA is listed on the Australian Securities Exchange ("ASX") and as at 16 September 2022, had a market capitalisation of c. A$867.5 million[1]. The outstanding ordinary shares ("ERA Shares") of ERA are held by Rio Tinto Limited ("Rio Tinto") at 86.33% and Packer & Co, an investment management firm, at 7.9% (together with Rio Tinto defined as "Major Shareholders") with the balance held by other investors.

On 28 July 2022, ERA announced that it had been engaging with the Major Shareholders in relation to a proposed non-underwritten, renounceable entitlement offer to raise approximately A$300 million ("Interim Entitlement Offer") to continue with the planned Ranger Rehabilitation works until the end of 2023. With a view of balancing the potential dilutionary effects of the Interim Entitlement Offer for Shareholders not participating while sufficiently incentivising participation to ensure the necessary funds are raised, the Independent Board Committee ("IBC")[2] proposed to issue shares under the Interim Entitlement Offer at a discount to the prevailing share price between 10% and 15% ("Offer Price"). However, following

[1] Based on 3,691,383,198 ordinary shares outstanding and a share price of A$0.225 as at 23 September 2022.
[2] Consisting of ERA's independent non-executive directors, Messrs Mansell (Chair), Charles and Dowd.

engagement with the Major Shareholders, no pre-commitments to subscribe for entitlements in the Interim Entitlement Offer were provided. Rio Tinto indicated that it does not expect its investment in the Ranger Mine rehabilitation to generate financial returns and as such Rio Tinto did not consider that the IBC's proposed discount to the prevailing share price of ERA reflected fair value.

Following the above, the IBC has engaged Grant Thornton Corporate Finance to assess the fair value of ERA Shares to assist the IBC in determining the Offer Price. The IBC has stated it will determine the Offer Price by reference to the assessed fair value.

Given that Rio Tinto controls approximately 86.33% of ERA Shares, depending on the level of participation in the Interim Entitlement Offer (assuming it occurs), it is possible that Rio Tinto increases its shareholding in ERA to above 90%, which will allow Rio Tinto to compulsorily acquire all the remaining ERA Shares that it does not own in accordance with the requirements of the Corporations Act.

Purpose of the report

The IBC has requested Grant Thornton Corporate Finance to assess the fair value of ERA Shares on the basis consistent with an independent expert's valuation prepared under Part 6A.4 of the *Corporations Act, 2001 (Cth)* ("Corporations Act").

When preparing this IER, Grant Thornton Corporate Finance has also had regard to the Australian Securities Investment Commission's ("ASIC") Regulatory Guide 111 *Contents of expert reports* ("RG 111") and Regulatory Guide 112 *Independence of experts* ("RG 112"). The IER also includes other information and disclosures as required by ASIC.

Grant Thornton Corporate Finance has engaged SRK Consulting (Australasia) Pty Ltd ("SRK") to undertake a review and valuation of ERA's mineral resources and of the closure liability assessment for the Ranger Mine. SRK's report, which is included in Appendix D, has been undertaken in accordance with the Valmin Code ("SRK Report").

Fair Value Assessment of ERA Shares

Grant Thornton Corporate Finance has assessed the fair value of ERA Shares on a 100% basis based on the sum-of-parts method ("SOP Method"), having regard to the fair value of Jabiluka, the Ranger Rehabilitation costs as at 30 June 2022 as reviewed by SRK ("Outstanding Ranger Rehabilitation Costs"), the value of the future tax deductions ("Tax Deductions") and other assets and liabilities on the balance sheet as at 30 June 2022. In accordance with the requirements of reports prepared under Part 6A.4 of the Corporations Act, we have also taken into account the trading prices on the ASX. However, due to the limited liquidity and some other factors identified in our analysis, we have used the trading prices as a broad cross check approach to our primary SOP approach.

A summary of our valuation assessment is set out below

ERA - Valuation summary A$	*Section reference*	Low	High	Mid-point
Primary approach - SOP Approach	*5.1*	0.159	0.243	
Cross Check - Quoted Security Price Method	*5.2*	0.220	0.250	
GT Selected Range		**0.159**	**0.243**	**0.201**

Source: GTCF analysis

We have assessed the fair value of ERA in accordance with the requirements of Part 6A.4 of the Corporations Act between A$0.159 and A$0.243 per share. The broad valuation range reflects the specific risks and opportunities associated with the potential development of the Jabiluka Project Area which are discussed in details in this executive summary.

Our valuation assessment under the SOP Approach includes a point estimate for the Outstanding Ranger Rehabilitation Costs of A$1,416 million[3] (undiscounted and nominal) which has been estimated by SRK based on the information received by ERA and discussions with Management. This point estimate is substantially consistent with the Ranger Rehabilitation provision included in the reviewed accounts as at 30 June 2022 of A$1,376 million (undiscounted and nominal). However, ERA has previously reported that the total Ranger rehabilitation costs are expected to be between A$1.6 billion and A$2.2 billion (including cost occurred since 1 January 2019). This would imply an Outstanding Ranger Rehabilitation Costs of between A$1,190 million and 1,790[4] million with this amount to be finalised as a part of the 2022 Feasibility Study[5]. There are risks that the Ranger Rehabilitation Costs may be different from the amount included in our valuation assessment, which may change, potentially materially, the fair value of ERA. We have included below a sensitivity analysis.

SOP - Mid-point sensitivity analysis Outstanding Ranger Rehabilitation Costs (+/- A$100 million)					SOP Mid-point		
Outstanding Ranger Rehabilitation Costs (A$ million)	1,816	1,716	1,616	1,516	1,416	1,316	1,216
ERA value per share A$	0.121	0.141	0.161	0.181	0.201	0.221	0.241
Change %	**(39.7%)**	**(29.8%)**	**(19.9%)**	**(9.9%)**		**9.9%**	**19.9%**

Source: GTCF analysis

The mid-point fair value of ERA based on the SOP Approach varies between A$0.121 and A$0.241 per share in conjunction with movements in the Outstanding Ranger Rehabilitation Costs within the range provided by the Company with the downside risk greater than the upside potential.

In relation to our fair value assessment of ERA, we note the following:

- *Fair value rather than Offer Price* – It does not represent the Offer Price which will be determined by the Independent Directors taking into account the specific circumstances of ERA, discussions with key investors and other factors.

- *Going concern assessment* – We have undertaken our valuation assessment of ERA on a going concern basis and on the assumption that Rio Tinto will continue to support the Company from a financial perspective. This is consistent with the basis of preparation of the reviewed accounts as at 30 June 2022.

- *Tax Deductions* – As at 30 June 2022, the Company had A$258 million of accumulated net tax losses ("Existing Tax Losses") that could be utilised to offset against future taxable income. Further, in the following years, the Company will incur the Outstanding Ranger Rehabilitation Costs which could potentially increase the available tax losses by a further A$425 million[8] ("Future Tax Deductions"). In our valuation assessment, we have only included the value of the Future Tax Deductions as they are expected to be available to a pool of potential purchasers but we have excluded the Existing Tax

[3] Nominal undiscounted costs yet to be incurred as at 30 June 2022 (i.e. Ranger Rehabilitation Costs net of the cost incurred since January 2019).
[4] After adjusting for costs incurred between 1 January 2019 and 30 June 2022 (undiscounted and in nominal 2022 dollars).
[5] ERA commenced an update to the 2019 feasibility study for the Ranger Rehabilitation based on a lower technical risk rehabilitation methodology, primarily related to a subaerial capping of Pit 3 ("2022 Feasibility Study"). This is expected to be completed in 2023.
[8] Calculated as 30% of the Outstanding Ranger Rehabilitation Costs of A$1,416 million.

Losses. As discussed in section 5, we are of the opinion that a pool of potential purchasers may attribute limited or no value to the Existing Tax Losses, given the challenges and uncertainties in passing the tests required by the ATO in order to utilise them. However, the Existing Tax Losses are expected to be valuable to Rio Tinto as based on its current and historical shareholding in ERA, Rio Tinto should be able to pass the continuity of ownership test. Whilst the Existing Tax Losses represents potential additional value to Rio Tinto, this value is not included in the fair value of ERA assessed in the table above on the basis that it constitutes special value.

- *Franking credits* – ERA has accumulated franking credits of c. A$234 million ("Franking Credits") as at 30 June 2022. Whilst franking credits are likely to become available to a pool of potential purchasers upon the acquisition of ERA, we have not attributed any value to them as, in our opinion, this value does not accrue to ERA, but to certain categories of shareholders. Specifically, franking credits may be valuable in conjunction with dividend distributions to Australian resident shareholders on a lower tax rate who can claim an income tax offset or to foreign residents who can reduce the dividend withholding tax. Accordingly, we have not allocated any value to the Franking Credits in our valuation assessment.

- *Permitting at Jabiluka Mine* – The Jabiluka Mineral Lease was granted on 12 August 1982 and due to expire on 11 August 2024. ERA is in correspondence with the relevant stakeholders and intends to apply for renewal of MLN1. In our valuation assessment, we have assumed that the Jabiluka Mineral Lease will be renewed.

We discuss the selected valuation methods and the key assumptions below.

SOP Method

We have set out below our valuation assessment of the fair value based on the SOP Method.

ERA - SOP Approach A$ million (where not otherwise specified)	*Section reference*	Low	High	Mid-point
Jabiluka resources	*5.1.1*	302	302	302
Selected resource multiple (A$ per lb U_3O_8)	*5.1.2*	3.25	4.25	3.75
Value of Jabiluka Project and Other Assets		**982**	**1,284**	**1,133**
Lease Liabilites	*3.5.2*	(1)	(1)	(1)
NPV Outstanding Ranger Rehabilitation Costs (as at 30 June 22)	*5.1.4*	(1,318)	(1,318)	(1,318)
Future Tax Deductions	*5.1.5*	256	264	260
Net cash balance as at 30 Jun 22	*5.1.6*	669	669	669
ERA assessed Equity Value		**588**	**898**	**743**
Number of outstanding shares (millions)	*5.1.7*	3,691	3,691	3,691
Value per share (A$ per Share)		**0.159**	**0.243**	**0.201**

Source: GTCF analysis

The selection of an appropriate resource multiple[9] to value Jabiluka is an exercise of judgement given the specific circumstances of the asset and the current opposition of the Traditional Owners to its development. The resources multiples may vary significantly between the different comparable companies and transactions due to, amongst other things: the stage of development, the size and quality of the deposits,

[9] The resource multiple is calculated as the enterprise value divided by the reported current uranium resources. In the calculation of the resource multiple we have relied on listed peers and comparable transactions

the location of the assets, the regulatory and approval requirements, the availability of infrastructure, and the cost structure of the operations.

The size of the deposit and the grade have a significant influence on the underlying resource multiple and value of the projects. We note that Jabiluka has a resource estimate of approximately 302.3 Mlb with an average grade of c. 0.55% and cut-off of 0.2% and could be developed, if approval from the Traditional Owners can be obtained, as a conventional underground mine. The SRK Report refers to high grade projects as ones with >0.25%[10] U_3O_8 content. Accordingly, in our analysis of the listed peers, we have focused on companies with flagships assets with a large resource base (assumed greater than 100 Mlb U_3O_8) and with a grade above 0.25% U_3O_8.

Based on the above criteria, we have considered in our analysis Fission Uranium Corp ("Fission"), Global Atomic Corporation ("Global Atomic"), Denison Mines Corp ("Denison") and NexGen Energy Ltd ("NexGen"), collectively referred to as Selected Trading Peers ("Selected Trading Peers").

The Selected Trading Peers have their flagship assets in development or advance development stage and have large high-grade deposits. Whilst the size of the deposit and the grade vary materially within them, they provide guidance of the resources multiple applicable to the Jabiluka Project Area. We have set out below a summary of their resource multiples and other KPIs.

Selected Trading Peers	EV[1]	Resources	Stage of	Production	Res. Grade[2]	Resource multiple
Company	A$m	(Mlb)	Development	start	(% U_3O_8)	A$/lb
Fission Uranium Corp.	533	130	PFS 2019	2029	1.61%	4.3
Global Atomic Corporation	766	151	FS 2021	2024	0.53%	5.0
Denison Mines Corp.[3]	1,469	164	PFS 2018	Na	3.50%	9.2
NexGen Energy Ltd.[4]	2,913	363	FEED 2022	2026-2027	2.37%	8.1
Median						**6.5**
Average						**6.6**

Sources: GTCF analysis, S&P Global, Companies' technical reports
Notes: (1) Based on 30 days VWAP up to 19 September 2022; (2) Total reserves grade as per the latest technical report (3) In the latest public announcement, Denison reported that start of production for its flagship project initially expected in 2024 is now uncertain; (4) NexGen has not released an official production start date, but the FS completed in 2021 assumed a development of 4 years. The FEED is currently ongoing and due to complete between 2022-2023.

In relation to the table above, we note the following:

- All the Selected Trading Peers have their flagship projects in a more advanced stage of development than Jabiluka and apart for Global Atomic, all are based in the uranium friendly jurisdiction of Saskatchewan, Canada (refer to section 5 for details).

- Among them, we consider Fission Uranium as the most relevant comparable company. Fission Uranium's flagship project completed a PFS in 2019 and whilst it has a higher resource grade, the deposit is significantly smaller than Jabiluka. Further, it does not expect to commence production until 2029 which would broadly align with the minimum timeframe expected to obtain requisite approvals for the development of Jabiluka (subject to obtaining Traditional Owners' approval).

- NexGen has completed the feasibility study ("FS") for its Rook I flagship project in 2021 and is advancing the Front End Engineering & Design ("FEED"), scheduled to be completed in the third

[10] SRK has indicated that it would usually consider high grade projects above 0.5% U3O8 content. However, for the purpose of its comparable transaction analysis, SRK has considered lowered this threshold to 0.25% U3O8 content given the limited number of transactions with >0.5% U3O8 content.

quarter of 2022. The Rook I project has production costs at the bottom of the cost curve and it is one of the larger development-stage uranium deposit in the world[11]. We would expect Jabiluka to trade at a large discount to NextGen.

- Similarly, Denison's Wheeler River flagship project is one of the most prospective uranium projects in the world. It has two high-grade uranium deposits named Phoenix and Gryphon. Under the pre-feasibility study ("PFS") completed in 2018, the high-grade Phoenix deposit is designed as an in situ recovery ("ISR")[12] mining operation. Instead, the Gryphon deposit is designed as an underground mining operation. Production is expected after 2024.

- Global Atomic's flagship project is based in the Republic of Niger which is a significantly riskier jurisdiction than Australia but at the same time, it has completed a feasibility study in 2021 and production is expected to commence in 2024, and therefore it is significantly more advanced and more certain than Jabiluka.

Several of the other development companies considered in our screening have a large resource base, however they do not have high grade deposit and the cut-off percentage estimate of the resource base is materially lower than ERA and the Selected Trading Peers. All other things being the same, a lower cut-off percentage has the effect of increasing the resource base and hence reducing the resource multiples. In our analysis, we have also considered exploration companies, however their value is less driven by their current resources' estimate and more affected by their potential to increase their resources size through future drilling programs upon greater definition of the resources. Refer to section 5 for details.

In terms of the comparable transactions, we note the following:

- SRK has presented, in section 8.3 of the SRK Report, the transactions at a project level. Analysis of the normalised dataset for assets in the advanced exploration to pre-development stage (i.e. Reserves development, PFS/Scoping, PFS completed) indicated the median is A$2.32/lb U_3O_8, the average is A$3.93/lb U_3O_8 and the 25th percentile and 75th percentile are A$0.68/lb $U_3O_8$and A$4.93/lb U_3O_8, respectively. The weighted average is A$3.83/lb U_3O_8.

- The only potentially relevant comparable transaction[13] which occurred at a corporate level and not included in the SRK data set is the recent acquisition[14] of UEX Corporation ("UEX") by Uranium Energy Corp ("UEC") at an implied transaction multiple of A$3.18/lb U_3O_8. UEX has c. 100 Mlb of resources across four different projects with different shareholdings across them. The most advanced is the Horseshoe-Raven project which has 37.8 Mlb resources at a low grade of 0.111%/0.154% U_3O_8 at a low cut-off of 0.05% U_3O_8. PEA was completed in 2011 and resources estimate updated in 2022.

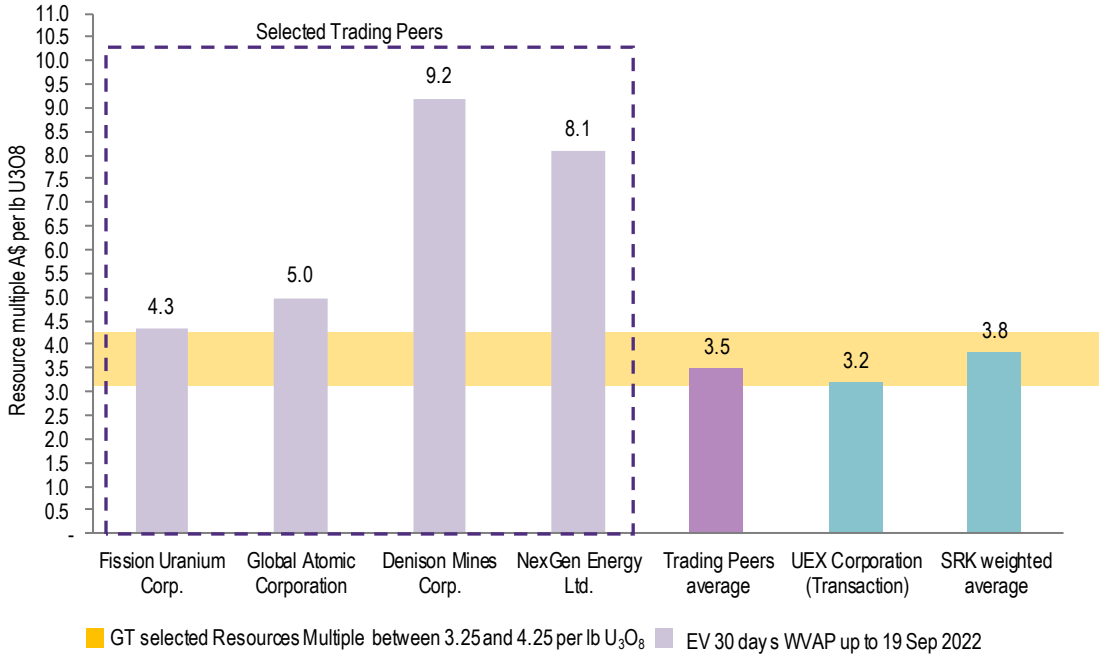
Before selecting the resource multiple applicable to the Jabiluka Project Area, we have also taken into account the following risks and opportunities as identified in the SRK Report.

[11] NexGen Corporate presentation, September 2022
[12] A significantly more cost-effective mining method than underground mining.
[13] Based on the selection criteria discussed above. We have also reviewed the transaction involving the acquisition of Vimy Resources Limited by Deep Yellow Limited, which was announced on March 2022. However, we have excluded it from our analysis since 78% of Vimy's resources have a grade between 0.05% and 0.07% U_3O_8.
[14] Completed in August 2022.

Risks	Opportunities
A. SRK's opinion is that the Jabiluka Mine has not been developed to the required level of confidence to allow it to be considered at PFS level of study. B. A new referral and assessment are likely to be required if development of the Jabiluka deposit is proposed in future (subject to Traditional Owners' approval). C. SRK has indicated that it could take at least seven to eight years before the Jabiluka Mine is developed, subject to Traditional Owners' approval (please refer to section 5.1.1 of SRK report for further details). D. The operating and capital costs included in the previous studies will need to be revised in light of the prevailing economic conditions rather than a mere escalation from 2011 levels. E. SRK has identified some risks that infill drilling may result in a reduction of the mineral resource with further analysis required to be undertaken.	A. The resources of Jabiluka are well understood, and their large size and relatively high grade make it a strategic project with a potential long-term LOM. B. There are other resources that sit within ERA's mineral leases besides Jabiluka 2, including Ranger 3 Deeps and Jabiluka 1, as well as potential resources in other locations that have not yet been extensively explored. C. The Jabiluka resource remains open at depth and to the east. D. The cut-off grade for reporting the Jabiluka resources requires review given the significant increase in the uranium prices since it was prepared. This may result in a material increase of the resource base.

Based on our analysis, we have selected a resource multiple between A$3.25/lb U_3O_8 and A$4.25/lb U_3O_8 on a 100% basis which is presented in the graph below against the selected resource multiple of the Selected Trading Peers and the comparable transactions.

GT selected resources multiple



Source: GTCF analysis

The selected resource multiple is based on the following:

- The average resource multiples of all the listed peers on a minority basis, including the Selected Trading Peers, the other development companies and exploration companies falls within the selected range.

- The weighted average resource multiple of the comparable transactions identified by SRK having regard to advanced exploration to pre-development stage projects (i.e. reserves development, PFS/Scoping, PFS completed) is substantially in line with the mid-point of the range.

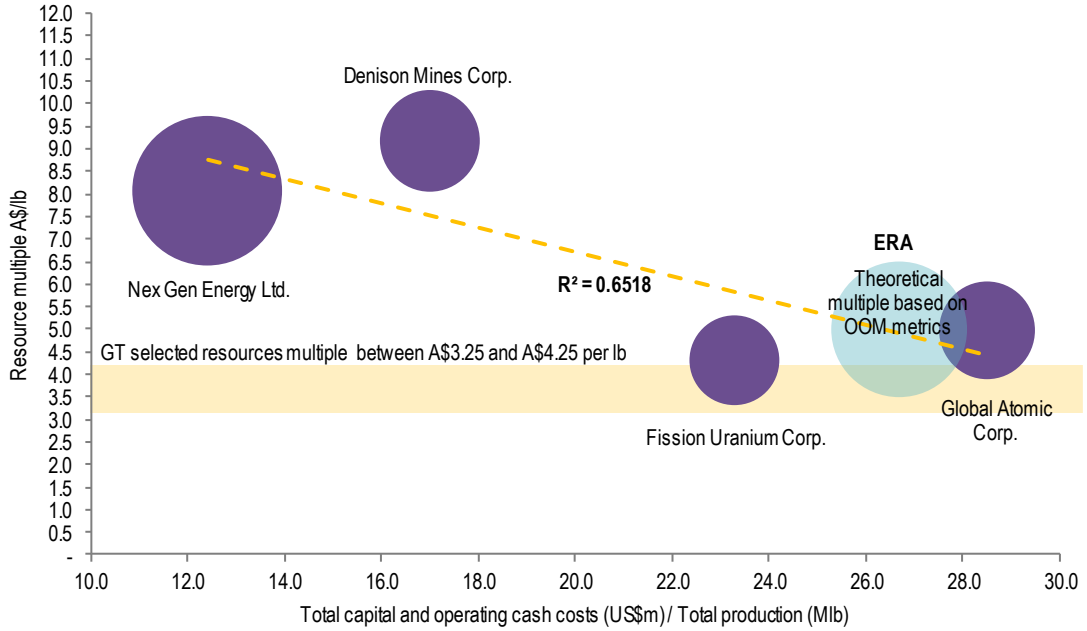
- The low-end of the range is in line with the recently completed UEX acquisition, nothing that UEX has a lower grade, a smaller size deposit and the most advance asset with a PEA dated 2011.

- Fission Uranium's multiple, on a minority basis, is at the high end of the selected range on a 100% basis. Fission Uranium has a higher grade but lower resources and a similar timing to potential development.

- It is at a significant discount to the resource multiple of the other Selected Trading Peers.

In order to further support the selected resource multiple, we have plotted below the correlation between the resource multiple of the Selected Trading Peers against the capital and operating intensity of their projects. As evidenced from the graph, there is a high level of correlation which also assists to explain the resource multiples of NextGen and Denison with both holding large high-grade deposit with low operating and capital costs. Based on the information included in the order of magnitude study ("OOM Study"), which presents limitations as outlined in the SRK Report, this analysis suggests ERA should trade on or around A$5/lb U_3O_8 on a minority basis if the development risks in relation to the Jabiluka Project Area are ignored.

Resource multiples vs Total Capital and operating cash cost



Sources: GTCF analysis, S&P Global, companies' technical studies
Note: (1) The size of the bubbles represent the resources size (2) Resource multiples based on the 30 days VWAP up to 19 September 2022; (3) All cost inflated to 2022 dollars using US CPI data per federal reserve. Where the costs disclosed are not in US$, we have utilised the exchange rate as at 9 September 2022

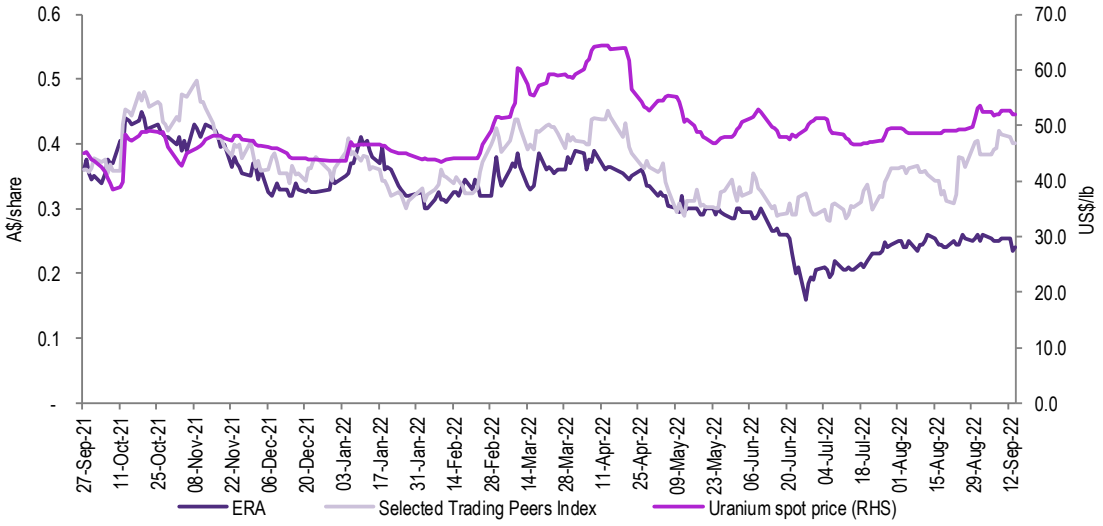
Quoted Security Price Method

In accordance with the requirements of reports prepared under Part 6A.4 of the Corporations Act, we have also taken into account the trading prices of ERA on the ASX. However, we have analysed the liquidity before potentially relying on them for the purpose of our valuation assessment. Specifically, we note the following (refer to section 5.2 for details):

- The level of free float for ERA is low at c. 5.8%[15] and over the last six months, only 0.8% of the issued capital has been traded.
- Over the last six months, the average daily value of ERA shares traded was only c. A$69,931[16]. This is low compared with Selected Trading Peers ranging between A$720,564 and A$14,951,348 on average per day.
- The bid and ask spread[17] was 3.3% since April 2022, which is consistent with the Selected Trading Peers.

Based on the above and the additional analysis included in section 5.2, we have concluded that the liquidity of ERA Shares is low. In order to further test if the trading prices of ERA reacts to the release of price catalyst information, both from the market or the Company, we have assessed the movements in the trading prices of ERA and the Selected Trading Peers alongside movements in uranium prices. Based on the graph below, we have identified that trading in ERA Shares seems to substantially follow the trends in the uranium prices and is largely consistent with the trading of the Selected Trading Peers.

Share price performance of ERA and the Selected Trading Peers (rebased to ERA's share price) and spot uranium price since 27 September 2021[18]



Sources: S&P Global, GTCF analysis.

[15] Computed excluding Rio Tinto and Packer & Co shareholdings.
[16] Corresponding to 0.216 million in shares traded, representing 0.0059% of 3.69 billion ordinary shares outstanding.
[17] Where a company's stock is illiquid, the market typically observes a significant difference between the 'bid' and 'ask' price for the stock as there may be a difference in opinion between the buyer and seller on the value of the stock.
[18] On 27 September 2021, ERA provided an update regarding the ongoing reforecast studies for Ranger Rehabilitation signalling a cost and schedule overrun.

However, during this period, ERA also released a number of price catalysts announcements in relation to the Ranger Rehabilitation Costs and we have considered below the market's reactions:

- On 27 September 2021, ERA provided an update regarding the ongoing reforecast studies for Ranger Rehabilitation signalling a cost and schedule overrun. However, the extent or magnitude of the overrun was not yet known. ERA's share price declined by c. 6% over the following five trading days substantially in line with the uranium prices which declined by 5.0% over the same period.

- On 8 October 2021, ERA provided, for the first time, an order of magnitude for the cost and schedule overruns regarding Ranger Rehabilitation which were expected to be "*material*", still without specifying the quantum. The Company's share price actually rose by almost 19% in the following five trading days. We believe this was a result of the spike in the uranium price from US$38.5 per lb U_3O_8 to US$48.3 per lb U_3O_8 over the same period driven by SPUT[19] ramping up the purchase of physical uranium. The Selected Trading Peers' trading prices also increased by 29% on average over the same period.

- On 2 February 2022, the Company disclosed that the Ranger Rehabilitation costs have increased from A$973 million to between A$1.6 billion and A$2.2 billion. ERA's share price declined by c. 3% over the following five trading days, equivalent to a reduction in the equity value of only A$37 million.

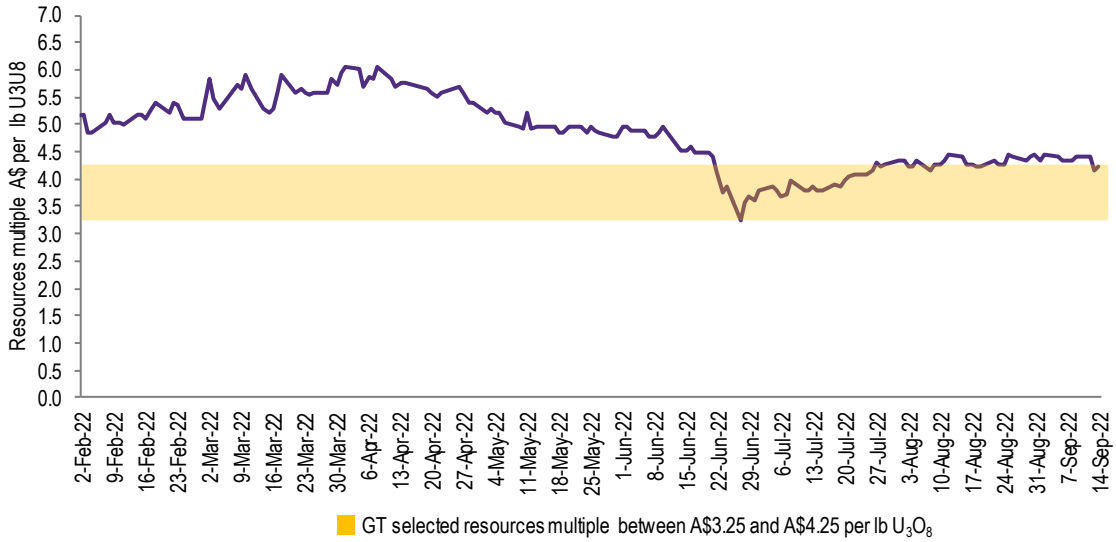
- In the following period, the trading prices of ERA traded in line with the Selected Trading Peers up to 24 June 2022 when the Australian Financial Review flagged the possibility of a recapitalisation of ERA at a steep discount to the prevailing share price ("AFR Article"). The ERA trading prices decreased by 12% over the two following trading days.

Whilst we cannot draw conclusive evidence from the analysis above, it would appear that the trading prices of ERA do not always react to the release of price catalyst information by the Company or to the full extent expected when new information is released.

Before drawing our conclusions on the liquidity of ERA Shares, we have also considered the resource multiple of the Jabiluka Project Area implied in the trading prices of ERA to test the order of magnitude of its value compared with the Selected Trading Peers resource multiple.

[19] Sprott Physical Uranium Trust announced the purchase of 400,000 lb on 5 October and 300,000 lb on 8 October.

Resource multiple of the Jabiluka Project Area implied in the trading prices



Sources: GTCF analysis, ERA ASX's announcements
Notes: The daily enterprise value was computed utilising the ERA market cap less net cash balance (including the Trust Fund) less the value of the Future Tax Deductions (mid-point assessment under the SOP Approach) plus the NPV of the Outstanding Ranger Rehabilitation Costs.

Based on the graph above, it appears that the resource multiple of the Jabiluka Project Area implied in the trading prices of ERA was high (from a relative perspective), in particular before the release of the AFR Article, compared with the resource multiple of the Selected Trading Peers and the analysis undertaken by Grant Thornton in the previous section. This may indicate that the underlying development risks of the Jabiluka Project Area and/or the full extent of the Ranger Rehabilitation Costs may not be fully reflected in the trading prices.

Based on the analysis above, we have considered reasonable to use the Quoted Share Price Method as a broad cross check to our primary SOP approach.

We have set out below the VWAP over the last six month period.

ERA WVAP A$		Low	High	VWAP
Up to	20 Sep 2022			
1 day		0.230	0.240	0.237
5 day		0.225	0.255	0.238
10 day		0.225	0.265	0.245
1 month		0.225	0.265	0.248
2 month		0.210	0.265	0.246
3 month		0.160	0.265	0.223
4 month		0.160	0.305	0.234
5 month		0.160	0.360	0.256
6 month		0.160	0.415	0.288

Sources: S&P Global, GTCF analysis

ERA shares have traded mostly between c. A$0.220 and c. A$0.250 on a VWAP basis in the recent period, which supports the range assessed in the primary SOP approach. Whilst the trading prices usually reflect a minority value of a business, we are of the opinion that it is not feasible to draw this conclusion for ERA

given the limited liquidity in ERA Shares, the value of the Jabiluka Project Area implied in the trading prices, which seems high relative to the Selected Trading Peers, and market's expectations that Rio Tinto may take the Company private given its current shareholding.

Other qualitative and quantitative considerations

While the valuation assessment of ERA is an exercise of judgement given the specific circumstances of the Company and in particular the conditions in the Care and Maintenance Agreement, we believe that our assessment balances risk factors, mitigants and opportunities which are further discussed below.

Traditional Owners' Approval

Mining at Jabiluka requires the approval of the Traditional Owners under the Care and Maintenance Agreement. Jabiluka is surrounded by the Kakadu National Park, a UNESCO World Heritage Site. Whilst the Traditional Owners are currently publicly opposed to the development, we make the following observations:

- ERA is planning to rehabilitate the Ranger Mine in accordance with the cultural closure criteria developed in conjunction with the Traditional Owners, and to demonstrate mining as a temporary land use.

- If the Traditional Owners approve the development of the Jabiluka Mine, it will provide long-term economic benefits to the Mirarr People which could be used to help support their cultural activities and assist in passing their rich and long history to future generations and in sharing it with visitors to the area.

- Unlike the Ranger Mine, which was an open pit mine, the development plan for the Jabiluka Mine, subject to Traditional Owners' approval, is projected to be via underground mining operations. Underground mining produces less waste rock material compared to open pit mining and would have a smaller surface footprint which results in less area disturbance and more preservation of the surrounding land with the intention to store tailings underground as backfill.

- The development of Jabiluka was approved by the Northern Land Council ("NLC") (consulted on behalf of the Mirarr Traditional Owners) in 1982. As a part of the purchase of Jabiluka, this approval was assigned to ERA by NLC in 1991. Subsequently, following a public environment report, the Northern Territory Government and the Commonwealth Government provided the final approval for the development of the mine in 1998. ERA commenced stage one of development at Jabiluka in June 1998, which was completed in July 1999. Whilst the approval occurred at a different time and during different market conditions, it still represents a relevant precedent.

Change in the social and political stance towards nuclear energy

Over the last few months, the political and social stances towards nuclear energy have changed due to the ongoing energy crisis in Europe and nuclear energy is emerging as a possible solution towards greater energy autonomy for European countries.

Europe is currently facing soaring energy prices due to supply and demand imbalances and the Ukraine conflict placing further pressure on the supply side. Coals plants are slowly being shut down due government pressures to maintain climate change goals and gas stockpiles are becoming more depleted, with Russia's uncommitting stance in continuing to supply gas to Europe. As a result, governments are now restarting nuclear programs to assist in the energy transition towards renewable sources and combat rising energy prices. France and the United Kingdom have announced plans to build and commission reactors close to the year 2030[20,21,22]. In addition, Japan recently announced plans to restart its existing nuclear plants and extend their lifetime, while considering longer term investments in new nuclear plants. Meanwhile, Germany plans to postpone the closure of the country's last three nuclear plants due to the possibility of energy shortages resulting from Russia reducing its supply of gas to the country.

Supply shortages are expected to occur by the end of the decade pushing up spot prices. Broker consensus estimates[23,24,25,26] are predicting real uranium prices to continue to increase from c. US$50 per lb U_3O_8 at present to a peak of US$69 per lb U_3O_8 in 2024.

Evidence of value

Notwithstanding the Care and Maintenance Agreement prevents the development of Jabiluka without the approval of the Traditional Owners, we note the following which, in our opinion, assist in framing the potential strategic value that still exists for the Jabiluka Project Area (please refer to Appendix C for more details):

- In 1991, ERA (68% owned by North Limited back then) purchased the Jabiluka ore body and Jabiluka Mineral Lease from Pancontinental Mining for A$125 million[27] notwithstanding that the introduction of the '*Three mine policy'* in 1984 restricted uranium mining to only the three existing mines in Australia[28]. The existence of the Three mine policy, which was only abolished by the Howard government in 1996, did not prevent ERA from paying a considerable amount of money at the time to secure the Jabiluka Mine, recognising its strategic nature even if development was not possible at the time of the transaction.

- There is evidence of acquirers being prepared to pay high resource multiple for projects which are yet to be developed. In 2012, shortly after the Fukushima disaster, Rio Tinto acquired Hathor Exploration[29] at a resource multiple of A$10.9 per lb U_3O_8 which is yet to be developed. Similarly, in 2008 Cameco Corporation ("Cameco") acquired the Kintyre project[30], located in Western Australia, from Rio Tinto at a resource multiple of A$7.3 per lb U_3O_8 when uranium price was c. US$61 per lb U_3O_8. Despite

[20] World Nuclear Association, Nuclear Power in the United Kingdom, July 2022
[21] World Nuclear Association, Nuclear Power in France, March 2022
[22] World Nuclear Association, US Nuclear power policy, August 2021
[23] Canaccord Genuity, Cameco Corporation, 27 July 2022
[24] Macquarie Research, Boss Energy, July 28 2022
[25] RBC Capital Markets, Uranium on track increase focus on futural capital allocations plan, July 29 2022
[26] Credit Suisse, Kazatomprom, April 2022
[27] Northern Territory Government, ERA History of Ranger and Jabiluka, https://geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/74024, 2007
[28] Ranger, Nabarlek and Olympic Dam.
[29] C. 58 Mlb resources with a grade between 1.98% and 11% per lb U_3O_8.
[30] Prior to the acquisition, Rio Tinto completed a conceptual estimation of the resources (not compliant with JORC Code) which identified a grade of between 0.3% to 0.4% and between 60 to 80 Mlb of uranium oxide.

occurring over 14 years ago, the resource is yet to be developed. Finally, in March 2012, Cameco bought an interest in the Millennium mining project at A$7.5 per lb U_3O_8, however after submitting the final EIS, progressively paused the development of the project. Whilst some of the circumstances above were affected by the depressed uranium prices, they nonetheless provide indications of the preparedness of acquirers to recognise strategic and long-term value in certain undeveloped assets.

- In February 2020, the Company completed the 2019 entitlement offer where it raised c. A$476 million via the issue of 3.17 billion shares at A$0.15 per share ("2019 Entitlement Offer"). Rio Tinto subscribed for a total of 2.8 billion shares or c. A$425 million[31] (89% of the cash raised)[32]. We have calculated below the resource multiple implied in the 2019 Entitlement Offer.

Resource Multiple implied in the 2019 Entitlement Offer A$ million (if not otherwise specified)	
TERP Price[1] (A$)	0.16
Shares on issue after the Entitlement Offer (No. shares)	3,691,383,198
Market capitalisation	**602**
Cash balance as at 30 June 2019	(424.9)
2019 Capital Raising Cash	(476.0)
Rehabilitation provision as at 30 June 2019 (discounted, nominal terms)[2]	872.0
Enteprise Value	**572.9**
Resources	302.0
Resource Multiple (including value of tax losses) - A$ per lb U_3O_8	**1.90**

Source: GTCF analysis
Note: (1) The theoretical ex-rights price ("TERP") is the market price that a stock will theoretically have followed a new rights issue and in the table above has been rounded to 2 decimals. Sums and multiplications may not add due to presentation rounding; (2) Undiscounted provision in nominal terms as at 30 June 2019 was A$925 million, discounted to 30 June 2019 utilising the 10 years Australian Government Bond yield of 1.33% as at 30 June 2019.

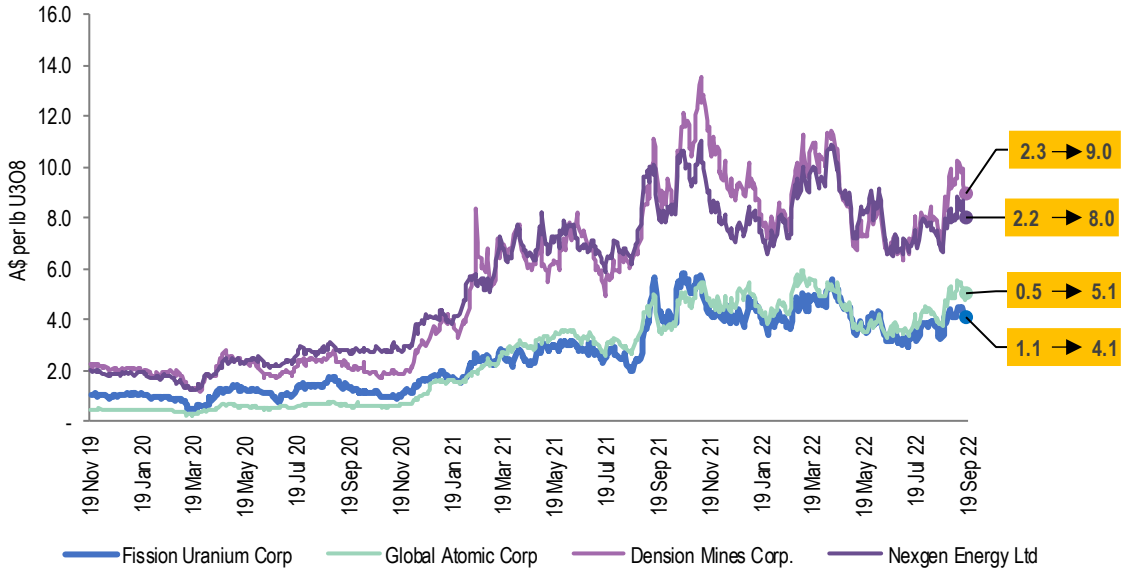
Whilst the resource multiple implied in the 2019 Entitlement Offer of A$1.90[33] per lb U_3O_8 is lower than the resource multiple adopted in our valuation assessment, since then, uranium prices have increased from US$26.45 per lb U_3O_8 on 15 November 2019[34] to US$52.7 per lb U_3O_8 on 12 September 2022 and the overall external environment has become more supportive of the use of nuclear energy to assist in the energy transition.

Further, as set out in the graph below, the resource multiples of the Selected Trading Peers have improved significantly and in excess of the resource multiple increase implied in our valuation assessment from A$1.90 per lb U_3O_8 (including Tax Deductions) to between A$3.25 per lb U_3O_8 and A$4.25 per lb U_3O_8 (excluding Tax Deductions).

Whilst the increase in the resource multiple of the Selected Trading Peers may also be affected by advancing the development of the projects, acquisition of new projects and other reasons, the analysis is nonetheless informative and supportive of the increase in the adopted resource multiple for the Jabiluka Project Area compared with the resource multiple implied in the 2019 Entitlement Offer.

[31] Including its pro-rata share of the Entitlement Offer plus the shares issued under the underwriting agreement
[32] Also Packer & Co subscribed to 2019 Entitlement Offer.
[33] Including the fair value (if any) attributed by investors to the Tax Deductions.
[34] On or around the time of the announcement of the terms of the 2019 Entitlement Offer.

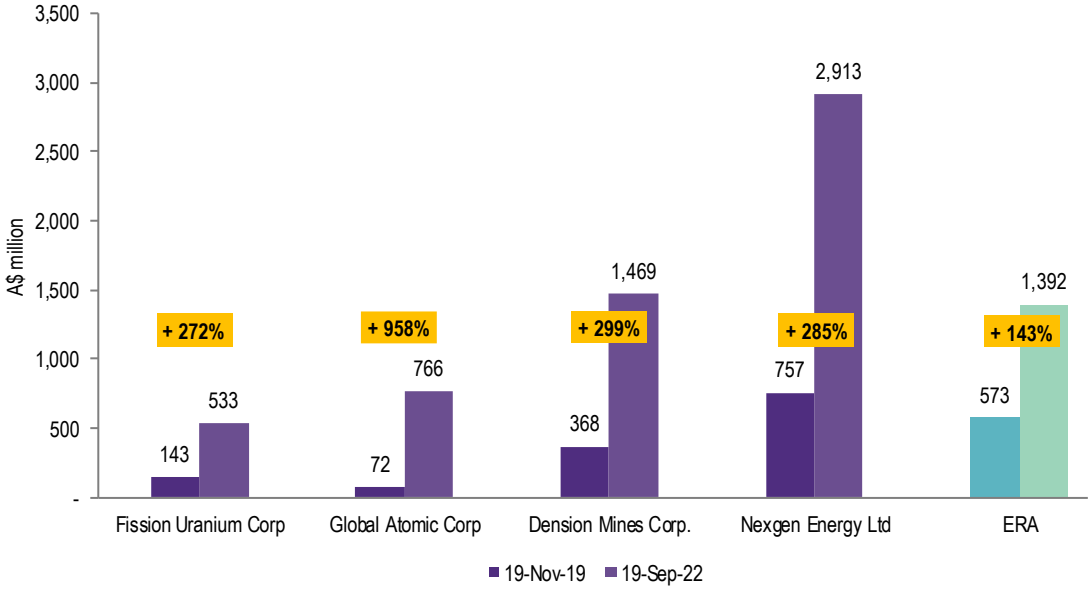
Selected Trading Peers – Rolling resource multiples



Sources: GTCF analysis, S&P Global
Note: Analysis up to 19 September 2022, The resource multiples are calculated based on the spot prices rather than the 30 days VWAP

The mid-point enterprise value implied in our fair value assessment of ERA is c. 143% higher than the enterprise value implied in the 2019 Entitlement Offer. Again, based on the benchmark undertaken with the Selected Trading Peers, it is reasonable for the optionality value of the Jabiluka Project to have increased, however the benefits of improved market conditions and higher uranium prices are mitigated by the significant increase in the Ranger Rehabilitation costs and the lack of progress with the Jabiluka Mine development, which may explain why the increase in ERA's enterprise value since 2019 is less than the Selected Trading Peers.

Selected Trading Peers – Enterprise value appreciation since the 2019 Entitlement Offer



Sources: GTCF analysis, S&P Global
Notes: (1) ERA enterprise value as at 19 November 2019 computed using the TERP price while utilising the mid-point of the Grant Thornton assessed range as at 19 September 2022; (2) The enterprise value of the Selected Trading Peers are based on the spot price

Other matters

Grant Thornton Corporate Finance has prepared a Financial Services Guide in accordance with the Corporations Act. The Financial Services Guide is set out in the following section.

In preparing this report, we have considered the interests of ERA Shareholders as a whole. Accordingly, this report only contains general financial advice and does not consider the personal objectives, financial situations or requirements of individual shareholders.

Yours faithfully
GRANT THORNTON CORPORATE FINANCE PTY LTD

ANDREA DE CIAN
Director

JANNAYA JAMES
Director

26 September 2022

Financial Services Guide

1 Grant Thornton Corporate Finance Pty Ltd

Grant Thornton Corporate Finance carries on a business, and has a registered office, at Level 17, 383 Kent Street, Sydney NSW 2000. Grant Thornton Corporate Finance holds Australian Financial Services Licence No 247140 authorising it to provide financial product advice in relation to securities and superannuation funds to wholesale and retail clients.

Grant Thornton Corporate Finance has been engaged by ERA to provide general financial product advice in the form of an independent valuation report to assist with the Interim Entitlement Offer.

2 Financial Services Guide

This Financial Services Guide ("FSG") has been prepared in accordance with the Corporations Act, 2001 and provides important information to help retail clients make a decision as to their use of general financial product advice in a report, the services we offer, information about us, our dispute resolution process and how we are remunerated.

3 General financial product advice

In our report we provide general financial product advice. The advice in a report does not take into account your personal objectives, financial situation or needs.

Grant Thornton Corporate Finance does not accept instructions from retail clients. Grant Thornton Corporate Finance provides no financial services directly to retail clients and receives no remuneration from retail clients for financial services. Grant Thornton Corporate Finance does not provide any personal retail financial product advice directly to retail investors nor does it provide market-related advice directly to retail investors.

4 Remuneration

When providing the Report, Grant Thornton Corporate Finance's client is the Company. Grant Thornton Corporate Finance receives its remuneration from the Company. In respect of the Report, Grant Thornton Corporate Finance will receive from ERA a fixed fee of A$330,000 (plus GST) which is based on commercial rates, plus reimbursement of out-of-pocket expenses for the preparation of the report. Our directors and employees providing financial services receive an annual salary, a performance bonus or profit share depending on their level of seniority.

Except for the fees referred to above, no related body corporate of Grant Thornton Corporate Finance, or any of the directors or employees of Grant Thornton Corporate Finance or any of those related bodies or any associate receives any other remuneration or other benefit attributable to the preparation of and provision of this report.

5 Independence

Grant Thornton Corporate Finance is required to be independent of ERA and Rio Tinto in order to provide this report. The guidelines for independence in the preparation of independent expert's reports are set out in RG 112 *Independence of expert* issued by ASIC. The following information in relation to the independence of Grant Thornton Corporate Finance is stated below.

"Grant Thornton Corporate Finance and its related entities do not have at the date of this report, and have not had within the previous two years, any shareholding in or other relationship with ERA *(and associated entities) that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the fair value of ERA.*

Grant Thornton Corporate Finance has no involvement with, or interest in the outcome of the Interim Entitlement Offer.

Grant Thornton Corporate Finance will receive a fee based on commercial rates for the preparation of this report. This fee is not contingent on the outcome of the Interim Entitlement Offer. Grant Thornton Corporate Finance's out of pocket expenses in relation to the preparation of the report will be reimbursed. Grant Thornton Corporate Finance will receive no other benefit for the preparation of this report.

Grant Thornton Corporate Finance considers itself to be independent in terms of RG 112 "Independence of expert" issued by the ASIC."

6 Complaints process

Grant Thornton Corporate Finance has an internal complaint handling mechanism and is a member of the Australian Financial Compliance Authority (membership no. 11800). All complaints must be in writing and addressed to the Chief Executive Officer at Grant Thornton Corporate Finance. We will endeavour to resolve all complaints within 30 days of receiving the complaint. If the complaint has not been satisfactorily dealt with, the complaint can be referred to the Australian Financial Compliance Authority who can be contacted at:

Australian Financial Compliance Authority
GPO Box 3
Melbourne, VIC 3001
Telephone: 1800 931 678

Grant Thornton Corporate Finance is only responsible for this report and FSG. Complaints or questions about the General Meeting should not be directed to Grant Thornton Corporate Finance. Grant Thornton Corporate Finance will not respond in any way that might involve any provision of financial product advice to any retail investor.

7 Compensation arrangements

Grant Thornton Corporate Finance has professional indemnity insurance cover under its professional indemnity insurance policy. This policy meets the compensation arrangement requirements of section 912B of the Corporations Act, 2001.

Contents

1 Purpose and scope of the report

1.1 Purpose

The IBC has requested Grant Thornton Corporate Finance to assess the fair value of ERA Shares on the basis consistent with an independent expert's valuation prepared under Part 6A.4 of the *Corporations Act, 2001 (Cth)* ("Corporations Act"). Section 667C, which is included in Part 6A.4, states in relation to the valuation of securities that:

1. *To determine what is fair value for securities for the purposes of this Chapter:*

    a. *First, assess the value of the company as a whole; and*

    b. *then allocate that value among the classes of issued securities in the company (taking into account the relative financial risk, and voting and distribution rights, of the classes); and*

    c. *then allocate the value of each class pro rata among the securities in that class (without allowing a premium or applying a discount for particular securities in that class).*

2. *Without limiting subsection (1), in determining what is fair value for securities for the purposes of this Chapter, the consideration (if any) paid for securities in that class within the previous 6 months must be taken into account.*

1.2 Basis of assessment

In the valuation assessment, Grant Thornton Corporate Finance has had regard to relevant Regulatory Guides issued by the ASIC, including RG 111 and RG 112. The IER will also include other information and disclosures as required by ASIC.

RG 111 requires at paragraph 47 (a) an expert to provide an opinion on whether the proposed terms in the acquisition notice (for compulsory acquisitions) give a fair value for the securities and to set out the reasons for its opinion. Given that the fair value of ERA assessed by Grant Thornton will be used by the IBC to assist them in determining the Offer Price, the terms of the compulsory acquisition notice are not available as at the date of this report and it is unknown whether or not Rio Tinto will become entitled to compulsory acquire ERA Shares following completion of the Interim Entitlement Offer.

Further, ERA has only one class of securities on issue being ordinary shares. We have assessed the fair value of ERA as a whole in accordance with Part 6A.4 of the Corporations Act and set out the reasons for our opinion.

Fair value excludes any special value. Special value is the value that may accrue to a particular purchaser. In a competitive bidding situation, potential purchasers may be prepared to pay part, or all, of the special value that they expect to realise from the acquisition to the seller.

1.3 Independence

Prior to accepting this engagement, Grant Thornton Corporate Finance (a 100% subsidiary of Grant Thornton Australia Limited) considered its independence with respect to ERA and Rio Tinto with reference to RG 112 issued by ASIC.

Grant Thornton Corporate Finance has no involvement with, or interest in, the outcome of the Interim Entitlement Offer. Grant Thornton Corporate Finance is entitled to receive a fee based on commercial rates and including reimbursement of out-of-pocket expenses for the preparation of this report.

Except for these fees, Grant Thornton Corporate Finance will not be entitled to any other pecuniary or other benefit, whether direct or indirect, in connection with the issuing of this report. The payment of this fee is in no way contingent upon the success completion of the Interim Entitlement Offer.

In our opinion, Grant Thornton Corporate Finance is independent of ERA and its Directors.

Compliance with APES 225 Valuation Services

This report has been prepared in accordance with the requirements of the professional standard APES 225 Valuation Services ("APES 225") as issued by the Accounting Professional & Ethical Standards Board. In accordance with the requirements of APES 225, we advise that this assignment is a Valuation Engagement as defined by that standard as follows:

"An Engagement or Assignment to perform a Valuation and provide a Valuation Report where the Member is free to employ the Valuation Approaches, Valuation Methods, and Valuation Procedures that a reasonable and informed third party would perform taking into consideration all the specific facts and circumstances of the Engagement or Assignment available to the Member at that time."

2 Industry overview

2.1 Uranium Overview

Uranium is a relatively abundant metallic, silver-grey radioactive element that naturally occurs in soil, rock and water. It is primarily used as a fuel for nuclear power stations although it also has other applications for medical, industrial and defence purposes. Nuclear power accounts for approximately 10% of the world's electricity supply and almost 30% of its low-carbon electricity, making it the second largest source of low-carbon power[35], behind hydroelectric power.

Approximately 85% of the world's uranium is produced in just a handful of countries: Kazakhstan, Canada, Australia, Namibia, Niger and Russia[36]. Uranium ore is typically mined in either open pits, underground excavations or in situ leach ("ISL") mining (ISL accounts for c. 66% uranium mining[37]). In situ leach mining, also referred to as in situ recovery, is a process whereby minerals are recovered through leaching of a solution that is permeable to the orebody. The minerals are dissolved, and the pregnant solution pumped to the surface for processing, leaving the ore in the ground. ISL mining has now become the most common method to mine uranium as it involves less environmental disturbance at the surface and is a safer environment for mine workers. There are also no tailings or waste rock generated and it is relatively less expensive compared to other methods. However, ISL requires the right geological conditions and a porous ore body.

For conventional mining techniques (open pit and underground), once extracted, the uranium ore is processed at a mill, where it is crushed into smaller particles before being leached in sulfuric acid or alkaline solutions, in tanks, to dissolve the uranium oxides. As most of the ore is barren rock, it remains undissolved and is commonly referred to as "tailings".

The remaining solution is filtered, and uranium recovered through an ion exchange or solvent extraction system. The pregnant solution from ISL is treated in much the same way. The uranium is then stripped, precipitated, filtered, and dried to become uranium oxide concentrate (U_3O_8) also commonly referred to as "yellowcake".

Yellowcake (or uranium oxide concentrate) is the product made available for sale by mining companies and typically contains over 80% uranium[38]. The uranium oxide concentrate must then be converted into uranium hexafluoride (UF_6) in a conversion plant. UF_6 then undergoes an enrichment process to make the isotope uranium-235 which is used as fuel to power nuclear reactors. The process to convert uranium to nuclear fuel can take between one to four years and the uranium spends about five years in a reactor to generate electricity[39].

Most uranium is traded under long-term contractual arrangements, typically between three to fifteen years, at a premium to the spot price at the time of delivery[40].

[35] World Nuclear Association — Nuclear Power in the World Today.
[36] World Nuclear Association, How is uranium made into nuclear fuel?, 2022
[37] World Nuclear Association, World uranium mining production, July 2022
[38] World Nuclear Association, Nuclear Fuel Cycle Overview, April 2021
[39] Nuclear Energy Institute, Nuclear Fuel, 2022
[40] World Nuclear Association, Uranium Markets, June 2022

2.2 Global demand of uranium

At present, the only substantial use of uranium around the world is as a fuel for nuclear reactors to generate electricity. Therefore, the demand for uranium is almost entirely driven by the demand for electricity and the demand for nuclear power within the energy mix.

Nuclear power technology was first commercialised in the 1950s and the number of operable nuclear reactors grew rapidly in the 1960s, 1970s and 1980s as the technology gained widespread adoption[41]. By the end of the 1980s there were over 400 operable reactors around the world[42]. The number of reactors have remained relatively stable since then with approximately 440 operable reactors in 2022.

The slowdown in the growth of new reactors in the 1980s and 1990s was due to several factors including slowing electricity demand growth, increasing capital and construction costs, and increasing public opposition (due to several high-profile accidents, in particular at Three Mile Island and Chernobyl). In the ten-year period following the Three Mile Island accident in 1979, 67 planned nuclear reactor builds in the United States were cancelled[43].

Beginning in the early 2000s, the prospects for nuclear power began to improve driven by expectations of soaring electricity demand (particularly in the rapidly industrialising areas of Asia), concerns about climate change, and the growing importance of energy security and access to affordable and dispatchable electricity at all times.

On 11 March 2011, a major earthquake off the coast of Fukushima, Japan, caused a tsunami that interrupted the power supply and cooling of three nuclear reactors in the Japanese town of Okuma[44]. This resulted in a meltdown in three cores, which led to three hydrogen explosions and the release of radiation into the atmosphere and surrounding areas and evacuation of over 100,000 people ("Fukushima disaster"). Following the Fukushima Disaster, all of Japan's 54 nuclear reactors were either closed down or had their operations suspended for safety inspections. More than a decade after the Fukushima Disaster, only ten nuclear reactors have been approved to restart and only four are currently operating.

Demand for uranium from mine production is expected to fall between 2022 and 2024 as a result of utilities drawing down on secondary supplies of inventory stocks, before recovering and growing from 2025 thereafter[45]. We have also considered other sources of demand forecasts including TradeTech, a research company that focuses on uranium prices and the nuclear fuel market and publishes their forecast demand profile of Uranium. They note that even though there is a positive trajectory from 2019-2040, decreases in stock levels will occur due closures of reactors and restrictions in nuclear fuel production which will result in a steep rise in total requirements across the 2030s.

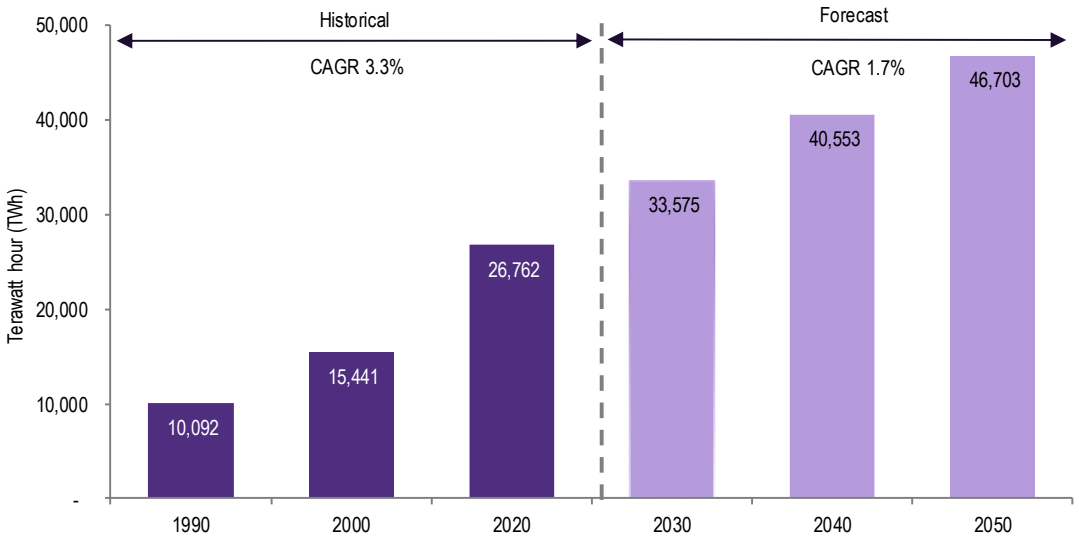
Electricity demand

Globally, electricity demand is expected to grow at a CAGR of c. 2%[46] between 2020 and 2050 due to the electrification of the economy, particularly in end uses such as transport, heating and industrial processes. Approximately 80% of growth is expected to come from emerging market and developing economies[47]. Growing electricity demand is expected to support the investment in new nuclear power plants due to their

[41] World Nuclear Association, Outline History of Nuclear Energy, November 2020.
[42] World Nuclear Association, Outline History of Nuclear Energy, November 2020.
[43] U.S. Energy Information Administration – Most U.S. Nuclear power plants were built between 1970 and 1990, 27 April 2017.
[44] World Nuclear Association, Fukushima Daiichi Accident, May 2022
[45] UXC Market Outlook, Q1 2022, Base Demand scenario.
[46] International Energy Agency, World Energy Outlook 2021, October 2021. Based on the more conservative stated policies scenario (STEPS).
[47] Ibid

ability to supply uninterrupted base-load quantities of electricity 24/7, without releasing any greenhouse gases, and regardless of weather conditions which can hamper renewable energies.

Growth of Electricity Generation



Sources: International Energy Agency, World Energy Outlook, October 2021

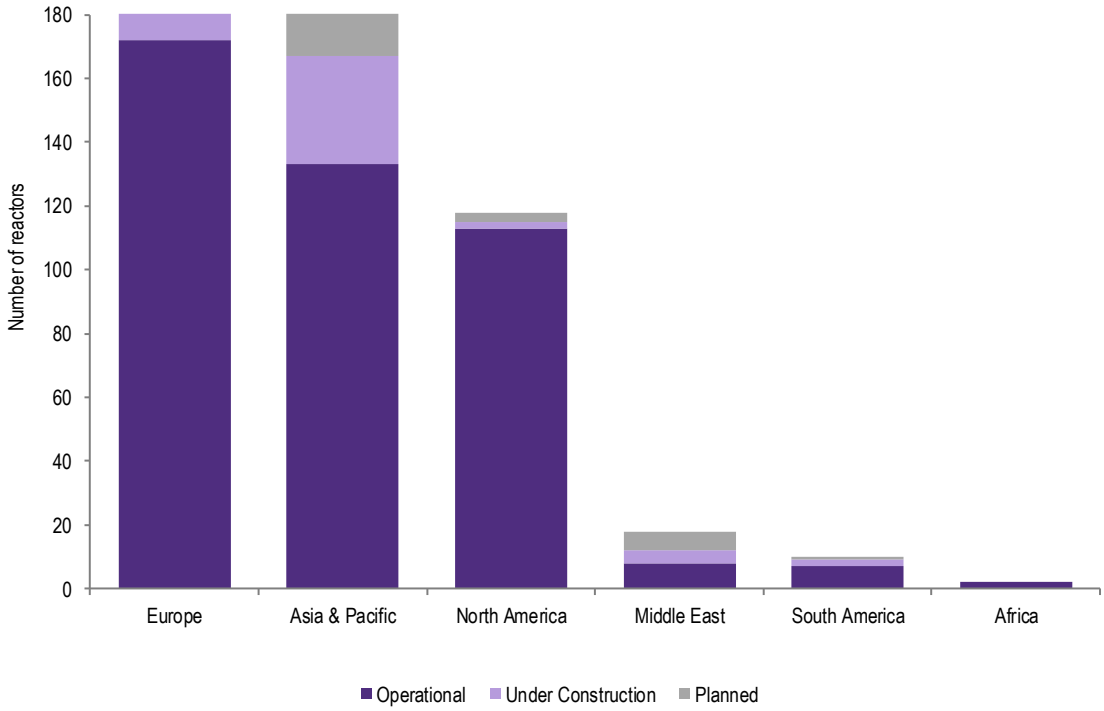
Demand from new and expanded nuclear plants

In order to meet their commitments under the 2015 Paris Agreement, countries may require a significant contribution from nuclear power[48]. This is supported by the Intergovernmental Panel on Climate Change's ("IPCC") mitigation pathways to achieve 1.5°C of global warming rise, compared to 2°C or more in the context of sustainable development[49], with nuclear power seen as potentially playing an important role in meeting climate objectives.

As shown in the graph below, there are currently 435 nuclear power reactors in approximately 32 countries, with a further 57 reactors currently under construction, and 97 ordered or planned. In addition, there are over 300 more proposed reactors and a further 30 countries are considering or planning to start nuclear power programs[50].

[48] International Energy Agency and Nuclear Energy Agency, Projected Costs of Generating Electricity, 2020 Edition.
[49] IPCC Special Report 15.
[50] World Nuclear Association, Plans for new reactors worldwide, July 2022.

Worldwide nuclear power plant count



Sources: World Nuclear Association, June 2022

The vast majority of the growth in nuclear power demand is expected to come from Asia, where approximately two-thirds of the 57 reactors currently under construction are located. The construction is primarily being driven by new investment in China and India. Overall, emerging and developing economies account for more than 90% of global growth in nuclear[51] with advanced economies expected to see a 10% increase in nuclear as retirements are offset by new plants.

In addition to constructing new nuclear plants, a number of countries are increasing the capacity of existing plants. This is a cost-effective method of creating new nuclear capacity. Countries that have adopted this approach include the USA, Switzerland, Spain, Finland and Sweden[52].

Another approach being adopted is to extend the design life of nuclear plants. Nuclear power plants typically have a design operating lifetime of 25 to 40 years. However engineering assessments have determined that many can operate longer, for up to 60 years, by replacing key components such as steam generators in pressurised water reactors ("PWRs"), and outdated control systems[53].

Despite its attractiveness to supply uninterrupted base-load quantities of electricity to the grid 24/7, and low emissions footprint over its life-cycle[54], nuclear power has a number of challenges that limit greater adoption.

Firstly, nuclear power plants take a long time to construct with a median construction time of 9.8 years in 2019[55]. They are also expensive, although the costs vary significantly by country. Investment costs

[51] International Energy Agency, Nuclear Power and Secure Energy Transitions.
[52] Ibid.
[53] Ibid.
[54] World Nuclear Association, Comparison of Lifecycle Greenhouse Gas Emissions of Various Electricity Generation Sources.
[55] World Nuclear Association, Median Construction Times for Reactors Since 1981.

(excluding financing) for new builds vary between US$2,157 per kilowatt electric ("KWe") in Korea and US$6,920 per kWe in Slovakia[56].

Overall, the levelised cost of producing electricity ("LCOE")[57] for nuclear and renewables across a number of countries is presented below. In the US and European Union, nuclear power has one of the highest LCOEs of all technologies, whereas in developing countries such as China and India, the LCOE is relatively more comparable with other technologies.

2020 LCOE[1] (US$ / MWh[2])				
Energy Source	United States	European Union	China	India
Nuclear	105	150	65	70
Coal	75	170	60	55
Gas (combined -cycle gas turbine)	50	110	100	90
Solar photovoltaics	50	55	35	35
Wind onshore	35	50	50	50
Wind offshore	115	75	100	135

Sources: International Energy Agency, World Energy Outlook 2021, October 2021
Notes: (1) Stated Policies scenario was taken to illustrate the LCOE, which reflect the current policies that are in place and have been announced in the United States, European Unions and China. (2) Megawatt - hour

The challenge posed by the high construction costs are particularly acute in advanced economies. In the United States, Vogtle Units 3 and 4 were expected to take 4 years to complete at a projected cost of US$4,300 per kilowatt ("KW"). The units are only expected to come online in 2023, nine years after construction started and at a cost of US$9,000 per KW. In Europe, third generation European Pressurised Water Reactors ("EPR") in Finland and France have also been delayed. The first EPR in Olkiluto, Finland began producing electricity in 2022, a delay of 13 years. The EPR at Flamanville, France has also experienced lengthy delays and cost increases. The initial estimate of EUR 3.3 billion has increased approximately four-fold and is now expected to cost EUR 12.7 billion[58].

Other challenges for nuclear include long and costly decommissioning programs, the safe disposal of spent fuel, prohibitive financing costs, reliance on state ownership or support (due to their size and complexity), and public opposition.

New techniques such as small modular reactors[59] ("SMRs") with lower capital costs, lower project risks, and the ability to slot into brownfield sites (such as decommissioned coal-fires plants) may have the potential to play a greater role in the future, although their economic viability remains unproven, with none yet brought into operation.

Greenhouse gas emission reduction targets

In recent years, emission reduction targets have become more important as world leaders have sought to tackle climate change. In the run up to the 2021 United Nations Climate Change Conference ("COP26"), many countries announced new commitments detailing their contributions to reach global climate goals. More than 50 countries, as well as the European Union, have pledged to meet net-zero emissions in the future[60].

[56] International Energy Agency, Projected Costs of Generating Electricity, 2020 Edition
[57] The levelised cost of electricity (LCOE) is a measure of the average net present cost of electricity generation for a generator over its lifetime.
[58] International Energy Agency, Nuclear Power and Secure Energy Transitions, June 2022.
[59] SMRs are nuclear reactors with 300MW or less
[60] International Energy Agency, World Energy Outlook 2021, October 2021.

Despite consumption of renewable energy growing at a CAGR of 12.6% over the ten years ending 2021 compared to a CAGR of 1.3% for total primary energy consumption, renewable energy still only accounts for 6.7% of global energy consumption[61]. As a result, global carbon emissions have continued to rise, increasing every year since the 2015 Paris Agreement (except 2020, due to COVID-19), and reaching a record high of 36.3 billion tonnes in 2021[62]. In order to meet the Paris climate goals, deep and rapid decarbonisation needs to occur.

Despite the pledges made by governments, these pledges only meet 20% of the required reduction in emissions that are needed by 2030 to keep a 1.5°C path of global warming within reach[63].

Therefore, if the world is to meet its goals as set out in the 2015 Paris Agreement and COP26, further drastic reductions will need to take place. Nuclear power could play a critical role in reining in greenhouse gas emissions in the future.

A number of countries have announced plans to further develop and support their nuclear power sectors. France, which currently derives approximately 70% of its electricity from nuclear, has stated that it intends to build up to a further 14 new-generation nuclear reactors and a fleet of smaller nuclear plants by 2050 in order to reach net-zero. The UK has also announced plans to build eight new nuclear reactors by 2030 to support its goal of supplying 95% of the UK's electricity from low-carbon sources by 2030. In the United States, the government has launched a US$ 6 billion plan to subsidise nuclear power and support the continued operation of U.S. nuclear reactors.

Other countries are also announcing policy reversals on nuclear power. Germany, which had planned to close its remaining nuclear power plants by the end of 2022 recently announced a reversal of this policy, extending the life of its remaining three nuclear power plants, marking the first departure from a two-decade policy to abandon nuclear power. The move is being driven by gas shortages following cuts to gas supplies from Russia and the prospects of gas rationing or shutdowns over the coming winter.

Japan has also announced plans to restart its idle nuclear reactors, more than 10 years after the Fukushima Disaster. Out of Japan's 54 nuclear reactors, only a few were operational at the end of July 2022. In addition to restarting existing reactors, Japan is also considering investing in new next-generation nuclear facilities. The change in policy has stemmed from a desire for greater security of energy supply and rapidly escalating energy costs following Russia's invasion of Ukraine.

Energy security

Russia's invasion of Ukraine has had destabilising effects on energy markets worldwide with oil, gas and coal prices all increasing significantly over the last seven months. As a result, many countries that rely on imports to meet their energy supplies are facing significantly higher input costs and issues securing reliable supplies. This is having ramifications on end consumers who are facing substantially higher energy costs which could lead to social unrest. Nuclear power presents a relatively more secure and stable form of energy as it is relatively easier to stockpile large quantities of uranium, mitigating supply chain risks.

2.3 Supply of uranium

Reserves and resources

[61] BP Statistical Review of World Energy 2022.
[62] International Energy Agency, Global CO2 emissions rebounded to their highest level in history in 2021.
[63] International Energy Agency, World Energy Outlook 2021, October 2021.

Uranium is an abundant element, however the process of mining and milling uranium to uranium oxide and then enriching uranium is what takes time and creates the gap between supply and demand. Australia has the largest recoverable resource base in the world with close to 1.7 million tonnes of uranium (tU), 28% of global resources[64]. Kazakhstan and Canada have the second and third largest resources with 15% and 9% of world resources respectively. Other key resources are located in Russia, Namibia and South Africa. Below we present the current estimated global uranium resources by country:

Uranium resources by country		
Country	Uranium (tonnes)	World %
Australia	1,692,700	28%
Kazakhstan	906,800	15%
Canada	564,900	9%
Russia	486,000	8%
Namibia	448,300	7%
South Africa	320,900	5%
Brazil	276,800	5%
Niger	276,400	4%
China	248,900	4%
Mongolia	143,500	2%
Other	**782,600**	**13%**

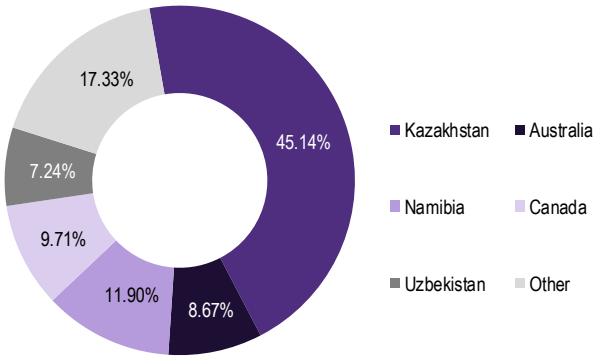
Sources: World Nuclear Association, World Uranium Mining Production, July 2022

In Australia, uranium mining and exploration requires both federal and state/territory approvals. Historically, various legislation at the state/territory level have prohibited uranium exploration and mining. At present, uranium exploration is allowed in all states and territories except for Victoria, however uranium mining is only allowed in South Australia, Northern Territory and Tasmania. Western Australia has banned future uranium mining except for four projects that received State Ministerial approval under the former Liberal National Government.

Production

Global production is dominated by a few countries with the top 5 producing countries supplying c. 83% of uranium and the top 10 supplying c.99%[65].

2021 top uranium producers worldwide



Sources: World Nuclear Association, World Uranium Mining Production, July 2022

[64] World Nuclear Association, World uranium mining production, July 2022
[65] World Nuclear Association, World Uranium Mining Production, July 2022

Global uranium production has declined at a CAGR of 2.1% over the last ten years, from c. 58,500 tU in 2012 to c. 48,300 tU in 2021[66], driven by lower demand and prices following the Fukushima Disaster in 2011. In the aftermath of the Fukushima Disaster, a large number of mines around the world were placed on care and maintenance.

Total production from mines is expected to increase by c. 25% over the next three years driven by the restarting of operations at Cameco's McArthur River mine adding 15 Mlb annually of U_3O_8 into global production, equivalent to more than 10% of total global production[67]. In 2018, Cameco placed the McArthur River mine, historically the world's largest uranium producing mine, on care and maintenance following sustained low uranium prices.

In addition, further production is expected to come online in 2024 with the end of Kazatomprom's 20% production cut in 2023. This is expected to add c. 5 million lb U_3O_8[68]. Beyond 2024, production is expected to gradually increase until 2029 as new mines in Kazakhstan, Budenovskoye 6/7 and Zhalpak, come online and existing mines restart operations[69].

Overall, a supply deficit is expected to occur between 2026 and 2029, however this is expected to be managed through a combination of leveraging unutilised production capacity and restarting existing mines currently on care and maintenance.

Secondary supplies

Historically, global production has not kept pace with reactor requirements. However, this has not had a material effect on spot prices due to secondary supplies including stockpiled uranium held by utilities[70]. Secondary supplies are a critical element balancing the uranium market, filling a primary production shortfall gap of c. 1.4 billion lb U_3O_8 over the last three decades[71].

These stockpiles were heavily depleted over the 15-year period from 1990-2005, in the aftermath of the Cold War, as weapons stockpiles of enriched uranium were released for use in power plants. In 2002, only 54% of uranium used for nuclear power plants came from mining activity, however by 2012, this number increased to 95%[72]. These de-weaponised stockpiles have now been mostly depleted, although some increase in uranium stockpiles has been evident following the Fukushima Disaster due to lower demand in recent years. 77% of uranium requirements were supplied by mines in 2021, and the balance made up from secondary sources.

Secondary supplies are expected to fall significantly over the next three years from c. 89 Mlb U_3O_8 in 2021, to 33 Mlb U_3O_8 in 2024 as commercial inventories wane, inventory overhang is removed, and stockpile optimised[73]. Over the longer term, they are expected to continue to fall to just 15 Mlb U_3O_8 by 2035[74].

Russia / Ukraine War

While the longer-term implications of the Russian / Ukraine war on the nuclear fuel industry remain to be seen, the war has brought significant uncertainty to the uranium market resulting in increases to spot

[66] International Energy Agency, World Energy Outlook 2021, October 2021.
[67] UXC Market Outlook, Q1 2022.
[68] Ibid
[69] Ibid
[70] World Nuclear Association, Uranium Markets, June 2022
[71] UXC Market Outlook, Q1 2022
[72] Sprott Inc., Unearthing Opportunity, Uranium Miners and the Global Clean Energy Transition, April 2022
[73] UXC Market Outlook Q1 2022.
[74] Ibid

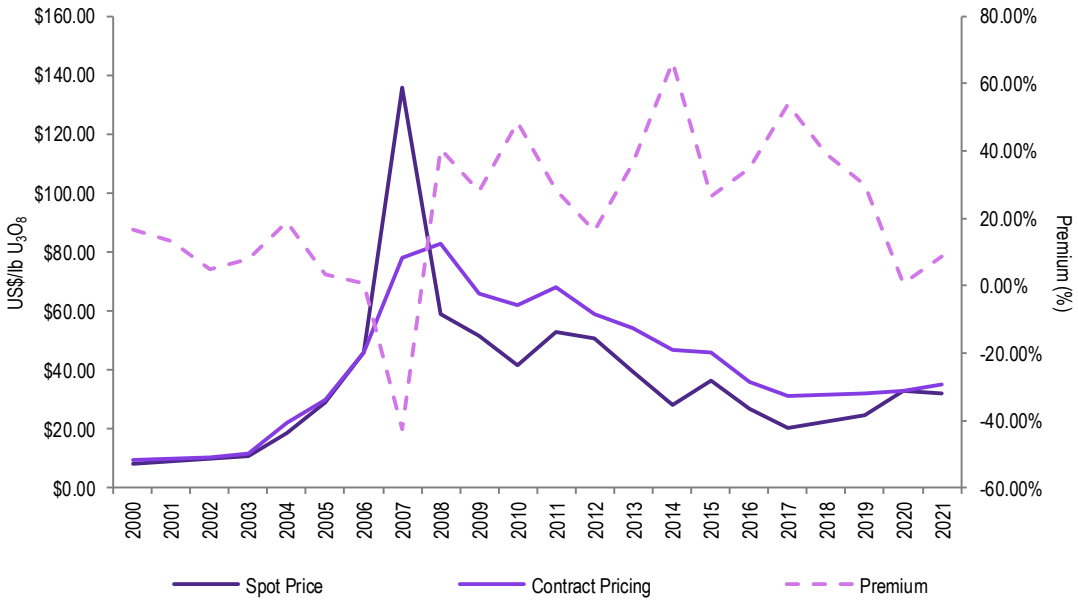
market pricing and trading volumes in recent months. We note that unlike other energy imports such as oil, gas and coal, uranium imports have been relatively less affected by sanctions. The U.S., which imports approximately 14% of its uranium from Russia, did not place any sanctions on Russian uranium imports[75] following its invasion of Ukraine, given its dependence. Similar to the U.S., the EU has not placed any sanctions on Russian uranium and Russia has not embargoed uranium sales. In addition to uranium exports, Russia is a dominant player in uranium supply chains, owning c. 38% of uranium conversion infrastructure and c. 46% of uranium enrichment capacity globally[76].

Fighting between Ukrainian and Russian forces is ongoing in close proximity to certain nuclear power plants, in particular the Zaporizhzhia nuclear power plant in Ukraine. Russian military forces attacked the plant in March 2022. An accident at Ukraine's nuclear power plants could have negative consequences for the nuclear industry, both over the short and long term.

2.4 Uranium Pricing

The vast majority of uranium is sold by producers directly to utilities under long-term contracts, typically between 3-15 years. Prices specified in contracts typically have regard to the spot price at the time of delivery plus a premium reflecting the security of supply. This premium has varied over time, but from previous spot price and contract price comparisons, the average premium is 29% over the last 10 years[77]. Below we outline the historical and forecast uranium prices:

Uranium spot price[1,2] vs long term contract price



Sources: (1) TradeTech, Uranium Market Study, 2022 (2) Cameco, Uranium Price, 2022, (3) UXC Market Outlook, Q1 2022.
Notes: (1) Cameco's uranium spot price and contract price as used which illustrated the real prices from the 1 June 2000 to 1 June 2021. (2) Real US$/lb U_3O_8 prices were used to illustrate the chart.

Presented below is a summary of the key movements in the uranium spot price from 2000 to the present:

- Uranium prices were depressed at the start of the decade due to the abundance of secondary supplies from Cold War era stockpiles of enriched uranium contained in Russian nuclear warheads

[75] U.S. Energy Information Administration, Nuclear explained: Where our uranium comes from.
[76] Columbia School of International and Public Affairs, Reducing Russian Involvement in Western Nuclear Power Markets, May 2022.
[77] Cameco, Uranium Price, 2022

that were converted to fuel for U.S. nuclear reactors. The program colloquially referred to as the "Megatons to Megawatts" program[78] began in 1993 and lasted for 20 years.

- McArthur River, one of the world's largest uranium mines and a flagship operation for Cameco Corporation had to suspend operations as flooding into the mine occurred in April 2003. Mining was suspended for approximately six months and the shortage of uranium increased the price above US$100 per lb U_3O_8 after the incident.

- Operations at Cigar Lake were suspended in October 2006 due to a rockfall in the underground mine, causing flooding and delaying production at the mine. Further water ingress was reported in August 2008 which led to remediation works being suspended. This resulted in the 18Mlb per annum project being delayed beyond 2013 when it was originally due to commence operations in early 2008. Spot prices hit an all-time peak of US$136 lb U_3O_8 in June 2007 due to the tightening in supply.

- With production steadily increasing, prices remained under US$50 per lb U_3O_8 during 2010 due to the effects of the global financial crisis.

- In June 2010, Honeywell locked out union workers due to contract disputes at the Metropolis plant. Uranium hexafluoride production ceased, and Honeywell issued force majeure to ConverDyn. Due to the suspension, uranium spot price rose over US$45 per lb U_3O_8.

- ERA closed Ranger Mine due to excess rainfall for 3 months. With operations closed at one of the world's largest uranium mines, prices jumped to over US$69 per lb U_3O_8.

- In March 2011, a nuclear plant in Japan, Fukushima, was damaged due to earthquakes and tsunami. The reactor core cooling systems malfunctioned, which led to three hydrogen explosions and the release of radioactive contaminants. Prices of uranium dropped dramatically from c. US$60 per lb U_3O_8 to c. US$28 per lb U_3O_8 a few years later due to the low demand following the accident.

- In December 2017, the world's biggest uranium producer, Kazakhstan's stated owned Kazatomprom, announced that production operations were reducing by c. 20% over the next three years to reduce supply.

- Due to weak uranium prices following the Fukushima Disaster accident, Cameco announced the temporary suspension of their McArthur River mining and Key Lake milling operations in January 2018. By 2021, Cameco operated below 75% production capacity where the uranium price hovered around c. US$30 per lb U_3O_8.

- Between September 2021 and October 2021, the uranium prices increased sharply by circa 30% to US$45 per lb U_3O_8 from circa US$34 per lb U_3O_8 at the of August 2021. The increase was mainly drives by the investment management fund SPUT ramping up its physical uranium purchase.

- In February 2022, the invasion of Russia into Ukraine placed stress on the uranium industry which saw a c. 20% jump in uranium spot prices within one month of the war breaking out[79]. Significant supplies of uranium pass through Russia for conversion and enrichment, however with suppliers

[78] Officially called the Agreement between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons.
[79] Cameco, Uranium Price, 2022

moving away from the Russia resources, supply is expected to be delayed, and uranium shortages are expected.

- In August 2022, the Japanese government discussed the development of nuclear reactors in an attempt to provide alternative solutions for Japan's energy crisis[80]. With surging energy prices, Japan will look to restart their idle plants, increase the lifespans of current reactors and develop new reactors to establish energy security in the country.

Uranium price outlook

With nuclear energy set to increase in the future, the demand for uranium is expected to rise in the coming years. As discussed previously, France and the United Kingdom have all announced plans to build and commission reactors close to the year 2030[81,82,83]. In addition, Japan recently announced plans to restart its existing nuclear plants and extend their lifetime, while considering longer term investments in new nuclear plants, such as SMRs. Germany meanwhile plans to postpone the closure of the country's last three nuclear plants due to the possibility of energy shortages resulting from Russia reducing its supply of gas to the country. Supply shortages are expected to occur by the end of the decade pushing up spot prices.

Broker consensus estimates are predicting real uranium prices to continue to increase from c. US$50 per lb U_3O_8 at present to a peak of US$ 69 per lb U_3O_8 in 2024, a 38% increase from current spot prices[84, 85]. However, broker consensus estimates forecast a drop to US$ 63 per lb U_3O_8 in 2025 and further reducing to US$ 55 per lb U_3O_8 in 2026[86] as supply increases and projects restart.

2.5 Mine Rehabilitation and regulation

Before production, mining companies engage with the traditional owners of the land to agree rehabilitation plans to ensure the land returned to an acceptable state when mining finishes prior to commencing exploration or mining activities[87]. The waste products from open cut and underground mining operations, without proper mine closure plans, can lead to detrimental environmental impacts. This is why ISL mining is the preferred method as it causes less environmental disturbances. In addition, uranium is associated with radioactive elements like radium and radon which can cause occupational health and safety issues if they are not disposed correctly. Radon gas is also a product of radiation decay from radium, which can often result on the surface of a mine site from activities associated with open cut and underground mining. Emissions of this gas is also a priority concern[88]. To reduce the environmental effects, during operations, water is used to cover the tailings to reduce the production of radioactive gas and emissions. The closure of a mine site involves covering the tailings with clay and topsoil to ensure the gamma radiation levels are reduced. ISL operations involve using leaching solutions underground; after completion the ground water must be returned to their baseline with contaminated water being evaporated or restored before being reinjected underground.

[80] Foreign Policy, Japan's Nuclear About-Face, August 2022
[81] World Nuclear Association, Nuclear Power in the United Kingdom, July 2022
[82] World Nuclear Association, Nuclear Power in France, March 2022
[83] World Nuclear Association, US Nuclear power policy, August 2021
[84] Canaccord Genuity, Cameco Corporation, 27 July 2022
[85] Macquarie Research, Boss Energy, July 28 2022
[86] RBC Capital Markets, Uranium on track increase focus on futural capital allocations plan, July 29 2022
[87] Department of Climate Change, Energy, the Environment and Water, Closure and rehabilitation of Ranger mine, 3 October 2021
[88] World Nuclear Association, Uranium mining overview, June 2022

Uranium mining in Australian requires both Federal and State legalisation for exploration, mining, production, rehabilitation and exporting uranium[89]. Under the Commonwealth legislation, mining of uranium must follow the *Atomic Energy Act 1953* ("Act") which requires the Minister to be notified and obtain information upon discovery of any uranium or thorium.

The rehabilitation at the Ranger Mine site is regulated under section 41 of the Act, which discloses the requirements when closing and ceasing operations at a mine. Mining companies must also abide by the *Australian Radiation Protection and Nuclear Safety Act 1998* which provides protection for the health of people and the environment against radiation and the *Nuclear Non-Proliferation (Safeguards) Act 1987* which ensures the physical security of nuclear materials within Australia. State policies for exploration and mining of uranium differ and can change rapidly depending on changes to the government priorities and public opinion. Below we outline the current State policy landscape:

Australian State legislation for uranium mining and exploration			
State/Territory	Brief History	Exploration	Mining
New South Wales	Prospecting and mining of uranium was prohibited under the Uranium Mining and Nuclear Facilities (Prohibitions) Act 1986. However, under the Mining Act 1992, uranium could be mined in the process of mining another mineral. However, in 2012 the Mining Legislation Amendment (Uranium Exploration) Bill 2012 passed which removed the general prohibition of prospecting for uranium in NSW. Licenses for new exploration projects would only be permitted through state approval.	Permitted	Not permitted
Northern Territory	The Commonwealth and the Northern Territory regulate controls of any prescribed mining or uranium. Current mine sites like Ranger mine site is regulated by the Atomic Energy Act 1953, which granted ERA the authority to mine, recover, treat and process uranium oxide.	Permitted	Permitted
Queensland	Since 1989, uranium mining has been banned in Queensland, however in 2012, under the Newman government it was repealed. In 2015, the Palaszczuk then reinstated the ban, which prohibits the mining of uranium, but not the exploration of the mineral.	Permitted	Not permitted
South Australia	The exploration and mining of uranium is governed by the Mining Act 1971, Radiation Protection and Control Act 1082 and the Roxby Downs (Indenture Ratification) Act 1982. Radium has been mined in South Australia since the 1930s out of Radium Hill, which was later used to mine uranium oxide and more notably the Olympic Dan uranium mine site which was discovered in	Permitted	Permitted
Tasmania	Under the Mineral Resources Development Act 1995, there are no restrictions for exploration or mining uranium in Tasmania. Exploration and mining licenses are only granted by the Minister under the Act.	Permitted	Permitted
Victoria	Exploration and mining of uranium and Thorium is prohibited in Victoria under the Nuclear Activities (Prohibitions) Act 1983.	Not permitted	Not permitted
Western Australia	The Western Australian government has implemented a ban on uranium mining in 2017, with exception to the current four uranium projects that was granted state Ministerial approval under the Liberal National Government, which are the Wiluna Project, Kintyre Uranium Project, Mulga Rock Project and the Yeelirrie Uranium Project.	Not permitted	Not permitted

Sources: Australian Government, Geoscience Australia, Onshore Legalisation, 2022, Parliament of Australia, Australians Uranium mines, 2022, Wise Uranium, Regulatory Issues – Australia, June 2021

Although past rehabilitation practices can be used as a reference to ensure the environmental impacts are reduced following the closure of a mine sites; it is noted that regulations guiding rehabilitation practices only came into effect from the 1980s. The Rum Jungle uranium mine in the Northern Territory was

[89] Australian Government Geoscience Australia, Onshore legislation, 2022

abandoned in 1971 after 20 years of operation, however, minimal rehabilitation and closure plans were implemented. This led to the local river system being contaminated, costing the federal government c. AUD$16.2 million in 1982[90] to restore and rehabilitate the river system. With mining considered a temporary use of the land, waste and infrastructure need to be cleared and the land needs to be left close to its original state.

[90] PW Waggitt, Improving rehabilitation standards to meet changing community concerns: A history of uranium mine rehabilitation with particular reference to Northern Australia, 2022

3 Profile of ERA

3.1 Introduction

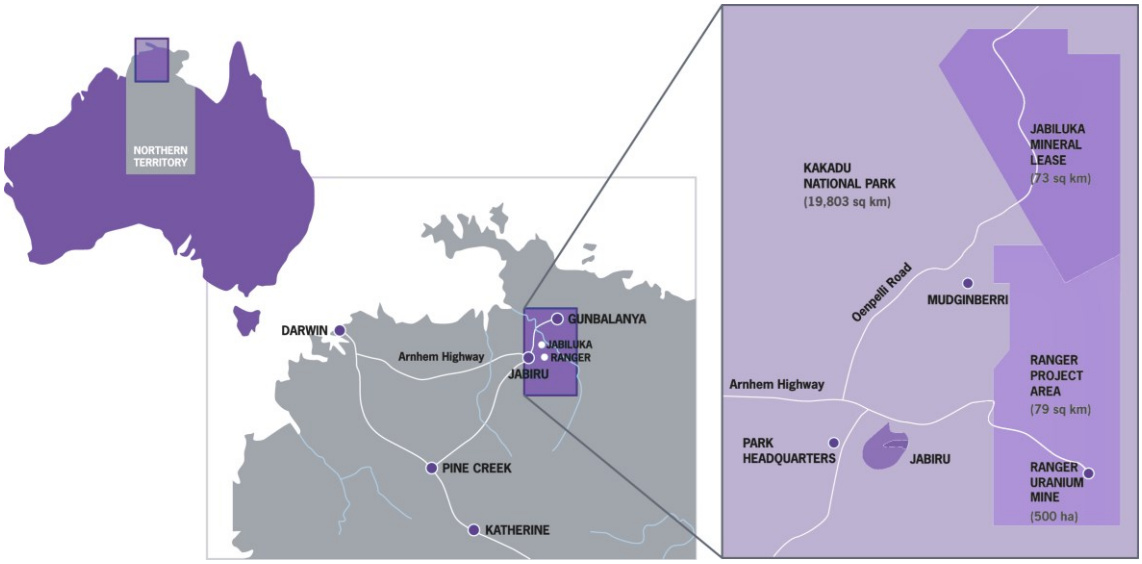
ERA is an Australian mineral exploration company and previously produced uranium at the Ranger Mine until operations ceased in early 2021. Since inception, the Company has focused on the Ranger and Jabiluka uranium projects, located in the Northern Territory, on Aboriginal Land and surrounded by, but separate from, Kakadu National Park.

- *Ranger Project Area* – Ranger Mine was an open pit mine which ceased mining operations in 2012 and continued to process stockpiled ore until January 2021. The final sale of uranium oxide occurred on 31 May 2022. Ranger Mine is now undergoing an extensive rehabilitation program at the estimated cost of between A$1.6 billion and A$2.2 billion[91], including costs already incurred of c. A$410 million from 1 January 2019 up to 30 June 2022.

- *Jabiluka Project Area* – ERA holds the title to the Jabiluka Mineral Lease located 22 kilometres north of the Ranger Mine. Jabiluka Mine is a proposed underground mine with a resource estimate of c. 137,100 tonnes of uranium oxide at an average grade of 0.55% (5,500ppm) as at 30 June 2022. In accordance with the Jabiluka Care and Maintenance Agreement between the Mirarr Traditional Owners, ERA and the NLC, the Jabiluka deposit will not be developed without the approval of the Mirarr Traditional Owners.

Below we provide an overview of ERA's operations:

ERA operations as at 30 June 2022



Source: ERA Operations overview, 2022.

ERA also has a 50% interest in the Cooper Creek Project with Cameco Australia Pty Ltd and Suttons Motors Pty Ltd. The Cooper Creek Project is an exploration concept only with minimal exploration conducted. The area is located outside Kakadu National Park on Mount Borradaile and is believed to have a similar geological setting as the Ranger and Jabiluka Mine, however no mineral occurrence is confirmed.

[91] In undiscounted nominal terms.

3.2 Ranger Project Area

3.2.1 Overview

ERA's operations within the Ranger Project Area are undertaken pursuant to an authorisation granted under section 41 of the Atomic Energy Act 1953 (Cth) ("the Ranger Authority"). The Ranger Mine was an open cut mine on Aboriginal land 260km east of Darwin in the Alligator Rivers Region. The Ranger Mine ore bodies were first discovered in 1969, and in 1979, the Commonwealth government approved the development and the Environmental Impact Statement ("EIS") was drafted.

Official operations began in October 1981. Mining took place over two open pits (Pit 1 and Pit 3) and ended in 2012, with stockpiles continuing to be processed until 2021. During its lifetime, the Ranger Mine produced over 132,000 tonnes of uranium oxide, making it one of three mines worldwide to produce in excess of 120,000 tonnes[92].

The operations at the Ranger Mine assisted with local employment, helped to establish the nearby town of Jabiru and played a key role in the local economy. During its 40 years of operations, more than A$550 million in royalty payments were made to governments and Indigenous interests[93].

3.2.2 Rehabilitation provision

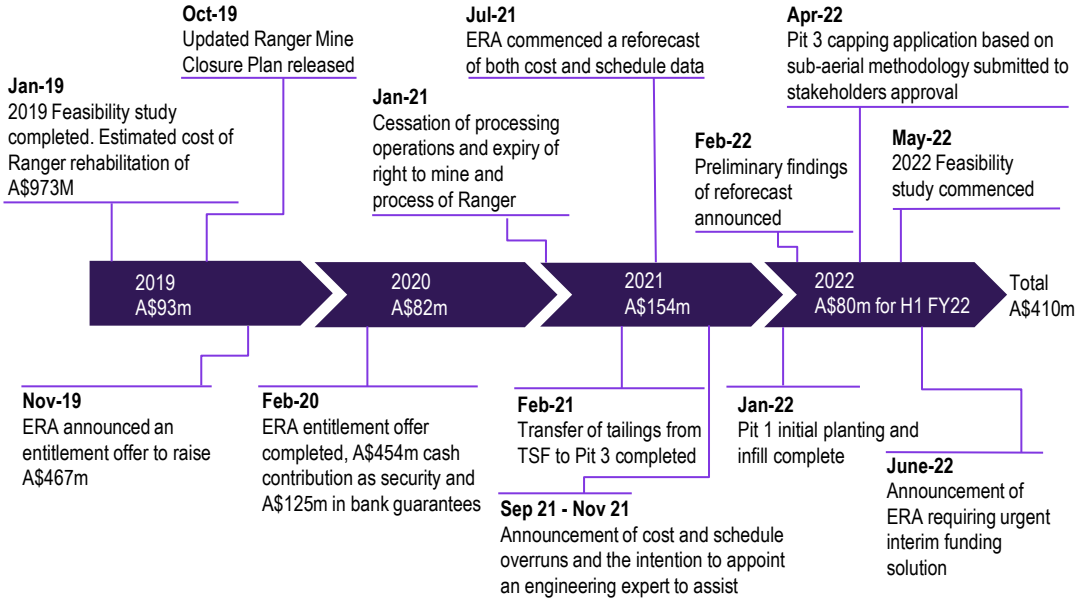
The legislative requirements for the closure of the Ranger Mine are governed by both the Commonwealth and Northern Territory regulations. ERA is required to rehabilitate the Ranger Mine at its own expense to a standard similar to the adjacent area of the Kakadu National Park. This condition was imposed on the mine's operator when Ranger Mine was approved in 1979 and is reflected in the environmental protection conditions attached to the Ranger Authority ("Ranger Environmental Requirements").

A key focus of ERA has been to better understand the cultural landscape of the Ranger Mine to inform its rehabilitation activities. ERA has engaged with the Mirarr Traditional Owners to help inform the cultural requirements of the closure criteria as part of its Mining Closure Plan ("MCP"). The Company is hoping to preserve the cultural landscape of the Ranger Mine, including both the tangible and intangible elements of the Mirarr Traditional Owners heritage, as it is a place of living culture historically used by the Mirarr Traditional Owners. Through its rehabilitation efforts, the Company aims to demonstrate mining as a temporary land use within the Ranger Mine.

ERA began rehabilitating the Ranger Mine in November 2012, following the completion of mining activities. Since then, ERA has progressed the rehabilitation including the backfill of Pit 1, the transfer of tailings to Pit 3, plantation of trees and grasses, refurbishment of properties in Jabiru, and submission of a capping application to stakeholders in April 2022 for Pit 3 based on the lower technical risk and preferred subaerial methodology (further discussed below). Below we outline a timeline of recent rehabilitation activities undertaken at the Ranger Mine since January 2019:

[92] Australian Government – Australian Safeguards and Non-Proliferation Office, Ranger Uranium Mine - The End of An Era.
[93] Energy Resources of Australia, Full year 2021 results announcement released on the ASX on 28 February 2022.

Timeline of key Ranger Rehabilitation events since 1 January 2019



Source: Energy Resources of Australia Limited, 2022

The estimated cost of rehabilitating the Ranger Mine has increased substantially in recent years. In its CY17 annual report, ERA included a provision of A$578 million[94] for rehabilitation works based on a pre-feasibility study the Company had undertaken. However, in early 2019, ERA completed the mine closure Feasibility Study ("2019 Feasibility Study") resulting in an increase of the rehabilitation provision to a total of c. A$973 million[95].

In July 2021, ERA commenced a re-forecast of both cost and schedule data for the rehabilitation ("Rehabilitation Reforecast"). Between September 2021 and November 2021, ERA announced and reiterated that the cost and schedule overruns would have been material, while not providing the quantum due to the Rehabilitation Reforecast yet to be completed and indicated that it was in the process of appointing a global engineering company to assist ERA to finalise the Rehabilitation Forecast.

On 2 February 2022, ERA released the preliminary findings of the Rehabilitation Forecast indicating a revised total cost of between A$1.6 billion and A$2.2 billion[96]. The preliminary findings were the results of ERA reforecast analysis and the engagement of the engineering company Bechtel Australia Proprietary Limited ("Bechtel"), which performed an independent review and gap analysis of ERA's reforecast cost and schedule data.

In June 2022, the Company reported that it had commenced the 2022 Feasibility Study with a completion expected in 12 months or longer.

ERA's estimate for the rehabilitation of the Ranger Mine included in the reviewed accounts as at 30 June 2022 was A$1.376 billion[97], corresponding to a total estimate for rehabilitation of A$1.786 billion[98], including A$410 million already spent. This estimate is based on the lower technical risk subaerial capping methodology for Pit 3, which is still being studied.

[94] In undiscounted nominal terms.
[95] Ibid
[96] Ibid
[97] Ibid
[98] Ibid

Under the terms of the current Ranger Authority, ERA's right to access, occupy and use the Ranger Project Area expires on 8 January 2026 and this is also the final date for all rehabilitation works to be completed. However, ERA does not expect to be able to complete rehabilitation works until after this date and it is currently in the process of seeking an extension to ERA's tenure on the Ranger Project Area. This requires the Commonwealth Government to amend the Atomic Energy Act 1953 and issue a further section 41 Authority. An extension to the Ranger Authority has received support from the Gundjeihmi Aboriginal Corporation ("GAC") and NLC, who along with ERA, jointly wrote to the Commonwealth Government in January 2022 seeking an amendment to the Atomic Energy Act 1953 at the earliest opportunity to allow sufficient time for rehabilitation works to be completed. The Bill to amend the Atomic Energy Act to give ERA more time to rehabilitate the Ranger Project Area was introduced to Parliament on 8 September 2022.

Shortly after the release of the preliminary findings of the Rehabilitation Re-forecast, ERA commenced an update to the 2019 Feasibility Study based on a lower technical risk rehabilitation methodology, primarily related to a subaerial capping of Pit 3. The study is expected to take 12 months or longer to complete and will lead to a new MCP. Bechtel is also assisting ERA with the 2022 Feasibility Study.

The aim of the 2022 Feasibility Study is to lower the risk of the Pit 3 capping, and to refine the scope, cost and schedule of the rehabilitation operations[99]. In the current MCP[100], a subaqueous capping of Pit 3 was adopted, which requires the tailings to be capped below the water line[101]. However, ERA has stated that a subaerial[102] capping methodology consistent with the procedure adopted for Pit 1, was a preferred method. At the time of this report, ERA has submitted a Pit 3 capping application to alter the methodology to a subaerial capping process[103].

In accordance with the Ranger Environmental Requirements, ERA is required to submit a mine closure plan to the Northern Territory and Commonwealth Government resource ministers to approve each year. The MCP describes ERA's broad rehabilitation and closure strategy and is based on the current understanding and knowledge of rehabilitation works.

Following its submission, the MCP is reviewed by the NLC, GAC and Supervising Scientist (a government body tasked with protecting the Alligator Rivers Region from the effects of uranium mining) who provide advice to the ministers. The ministers must consider this advice when deciding whether to approve the MCP. Once approved by the ministers, the MCP becomes binding and enforceable.

ERA released its inaugural MCP[104] in June 2018 and has updated it each year except 2021, when an exemption was provided by regulators and stakeholders to allow the Rehabilitation Re-forecast to be incorporated into the MCP. The next iteration of the MCP is expected to be released publicly in October 2022, reflecting the lower technical risk subaerial capping methodology for Pit 3, which is being reviewed as part of the 2022 Feasibility Study.

[99] Energy Resources of Australia Ltd, ASX Announcement, June 2022 Quarter Operations Review and Business Update, 29 July 2022
[100] The Mine Closure Plan prepared in 2020.
[101] Tailings.info, Deposition Methods of Tailings, 2022
[102] Subaerial capping is a technique that deposes of tailings above the water line or on the ground.
[103] Energy Resources of Australia Ltd, ASX Announcement, June 2022 Quarter Operations Review and Business Update, 29 July 2022
[104] The MCP was developed by reference to the Western Australian Mine Closure Plan Guidelines (in absence of relevant Northern Territory guidelines) and includes closure criteria for the Ranger mine which addresses the key themes of the final landform, radiation, water, flora and fauna, soils and cultural heritage.

Under the MCP, ERA will also conduct a monitoring program of the rehabilitation areas after any close-out certificate has been issued, which will continue for 25 years after all rehabilitation operations have been completed.

3.2.3 Ranger Rehabilitation Trust Fund

Every year, ERA submits an annual plan of rehabilitation ("Annual Plan") to the Commonwealth Government which outlines the rehabilitation activities and their costs for the following year. The Annual Plan is then assessed and ERA must maintain appropriate security in the Ranger Rehabilitation Special Account ("Trust Fund") as a security for the rehabilitation works. The Trust Fund consists of cash and bank guarantees and its amount is updated in conjunction with changes in the rehabilitation cost.

The 44th Annual Plan of Rehabilitation was the latest Annual Plan to be submitted in February 2020. As at 30 June 2022, the Trust Fund totalled A$662 million, including A$537 million of cash on deposit and A$125 million of bank guarantees. The 45th Annual Plan is currently being prepared to allow for the finalisation of the Rehabilitation Re-forecast process, including the change to the Pit 3 capping methodology. This may result in a revised Trust Fund security position due to the increase in the rehabilitation costs. In addition to the Trust Fund, ERA also has cash at bank of A$132 million at 30 June 2022.

3.2.4 Ranger 3 Deeps

Uranium resources under Pit 3 were discovered in November 2008, with an estimated 30,000 to 40,000 tonnes of uranium oxide[105] ("Ranger 3 Deeps"). In August 2011, the ERA Board approved the construction of the exploration decline in Ranger 3 Deeps which was amenable to underground mining. The construction of the 2,710-metre decline commenced in May 2012 at a cost of A$120 million and underground drilling began May 2013. ERA subsequently completed a A$57 million pre-feasibility study that found c. 43,858 tonnes of uranium oxide at a grade of 0.22%. In June 2015, ERA's Board decided not to proceed to the Final Feasibility Study for the Ranger 3 Deeps project due to the operating environment at the time characterised by prevailing low uranium prices at the time. In August 2021, a backfill of the Ranger 3 Deeps decline and vent shaft was completed. On 8 January 2021, ERA ceased to be authorised to conduct mining operations in the Ranger Project Area, and accordingly, no work is being conducted on the Ranger 3 Deeps deposit.

3.3 Jabiluka Project Area

3.3.1 Brief history of Jabiluka

The Jabiluka Mine was first discovered in 1971 by Pancontinental Mining Limited and is located 22 kilometres north of the Ranger Mine [106,107]. Exploration at the site began in the late 1960s with Jabiluka 1 discovered in 1971 and the much larger Jabiluka 2 discovered in 1973, one kilometre from Jabiluka 1.

Following the approval of an EIS in 1979, the Jabiluka Mineral Lease was granted to Pancontinental Mining Limited in 1982 for a period of 42 years in agreement with the NLC and the Mirarr Traditional Owners ("1982 Jabiluka Agreement"). The 1982 Jabiluka Agreement included an upfront payment of A$3.4

[105] Mining Technology, Ranger Uranium Mine, *https://www.mining-technology.com/projects/rangeruraniummine/,* 27 April 2010
[106] World Nuclear Association, Australia's uranium deposits and potential mines, June 2022
[107] Energy Resources of Australia Ltd, Operations, https://www.energyres.com.au/operations/, 2022

million to the NLC at the commencement of production, plus an annual royalty payment of 4.5% of net sales revenues[108], increasing to 5% after 10 years[109].

All necessary approvals were obtained and commencement of mining at the Jabiluka 2 mine site was set to begin. However, the Australian Labor Party, led by Bob Hawke, won the election in 1983 and the Commonwealth Government subsequently withdrew its approval. The '*Three Mine Policy'* adopted by the Australian government, introduced in 1984 (subsequently abolished by the Howard Commonwealth Government in 1996), restricted uranium mining to only the three existing mines in Australia: Ranger, Nabarlek and Olympic Dam[110].

In 1991, ERA (68% owned by North Limited) purchased the Jabiluka ore body and Jabiluka Mineral Lease from Pancontinental Mining for A$125 million[111] with the agreement of the NLC (consulted on behalf of the Mirrar Traditional Owners).

ERA proceeded to conduct a feasibility study in 1993. Over 12,000 metres of drilling of the ore body took place, which found 19.5 million tonnes of ore at a uranium oxide grade of 0.46%. In October 1996, ERA submitted a new EIS for public review that outlined an underground mine at Jabiluka with the tailings disposed of in the mined-out pits of Ranger Mine. The new EIS considered two options for processing of the ore:

- Milling of ore at Jabiluka Mine (similar to the project plan approved by Pancontinental in 1982); or
- Trucking ore from Jabiluka Mine to the then existing Ranger Mine mill for processing, entailing the construction of a 22-kilometre road ("Ranger Mill Alternative" or "RMA").

ERA's preferred option was the RMA and was outlined in a 1997 EIS. However, the Mirarr Traditional Owners did not support the construction of the 22-kilometre road or milling at the Ranger Mine. As a result, ERA developed a second option which involved the milling and tailings disposal at the Jabiluka Mine which was outlined in a Public Environment Report of 1998. This was ultimately approved by the Northern Territory and Commonwealth Government in 1998, conditioned on ERA returning the tailings underground.

Around this time, the general public and Mirarr Traditional Owners opposition to the mine was increasing, culminating in a public blockade that began in March 1998 and continued for eight months. Despite the blockade, construction of the Jabiluka Mine went ahead in June 1998, including the construction of a 1,150 metre decline with c. 50,000 tonnes of mineralised material removed[112].

Domestic and international opposition to the Jabiluka Mine continued but construction of the mine progressed in 1999 and stage one of the development, consisting of a decline, interim water management pond and associated surface facilities, was completed on 4 July 1999. However, in 2000, ERA put the Jabiluka Mine on stand-by to better understand and respond to key stakeholder concerns regarding the development. In August 2000, North Limited was acquired by Rio Tinto, including its c. 68% stake in ERA

[108] Less A$500,000 less any amounts paid to the Aboriginal Benefits Reserve by the Commonwealth under the conditions specific in the mineral lease.
[109] Less any amounts paid to the Aboriginal Benefits Reserve by the Commonwealth under the conditions specific in the mineral lease.
[110] Parliament of Australia, The origins of Australia's uranium export policy, https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/2011-2012/UraniumPolicy, 2 December 2011
[111] Northern Territory Government, ERA History of Ranger and Jabiluka, https://geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/74024, 2007
[112] World Nuclear Association, Australia's uranium deposits and potential mines, June 2022

and in 2001, Rio Tinto publicly stated that the Jabiluka Mine would not be developed without Mirarr Traditional Owners' approval[113].

In 2003, the Northern Territory Government approved the rehabilitation of the Jabiluka Mine and ERA commenced backfilling and the removal of infrastructure at the site. Further rehabilitation works on the water management pond and revegetation occurred over the following decade and the land was reshaped and re-contoured to be similar to the pre-mining landform.

In 2005, the Mirarr Traditional Owners, ERA and NLC entered into the Care and Maintenance Agreement.

3.3.2 Care and Maintenance Agreement

The Care and Maintenance Agreement is partied between ERA, the Traditional Owners and NLC and it was entered into on 5 February 2005. The Care and Maintenance Agreement obliges ERA to secure approval from Mirarr Traditional Owners prior to any future mining development of uranium deposits at the Jabiluka Mine. This gives the Mirarr Traditional Owners a subjective right of veto that cannot be resolved through a tribunal or other means. The key terms of the Care and Maintenance Agreement are summarised below:

- ERA is the holder of the MLN1 and is authorised to mine at Jabiluka.
- NLC and Traditional Owners acknowledge the exclusivity of the MLN1 to ERA. Accordingly, they agree not to initiate or fund any action which result in MLN1 being forfeited, cancelled or otherwise prejudicially affected (subject to ERA not breaching the Care and Maintenance Agreement).
- Prior to ERA undertaking any mining development or applying for authorisation of mining development on the Jabiluka Project Area, the Traditional Owners' approval must be given first.
- All parties to this agreement will meet at least once every four years after 1 July 2006 and any other time requested by the Traditional Owners, to discuss the approval of the mining development.

The Mirarr Traditional Owners released a statement to the media on 28 July 2022 stating their desire for the Jabiluka deposit to never be mined[114]. Mirarr Senior Traditional Owner Yvonne Margarula acknowledged the commitment of Rio Tinto and ERA to honouring the rehabilitation completion at the Ranger Mine but also noted the intention to ensure there is permanent protection of Jabiluka.

3.3.3 Historical studies and resources

The Jabiluka Mine underwent several studies to determine the resources and feasibility of the project. The feasibility study on a Jabiluka Mine, formerly known as North Ranger #2, was completed in August 1993. The study found a U_3O_8 grade of 0.46% with contained resources of 90,400 tonnes of U_3O_8[115]. It also confirmed the viability of the then proposed development concept of underground mining operations and the transport of ore millings and tailings disposal at the Ranger Mine facility. An independent environment report was conducted in parallel with this feasibility study to determine the flora and fauna, public health, land and water management to ensure the operation meets all standards.

[113] Similarly, in 1991 at the time of the Jabiluka Mine acquisition, ERA committed to seeking Traditional Owners approval for the milling of Jabiluka ore at Ranger Mine.
[114] Gundjeihmi Aboriginal Corporation, Media Statement, 28 July 2022
[115] Energy Resources of Australia Ltd, Annual Report, 1994

The next study was conducted in 2000, when the 1993 Feasibility study was reviewed, which found more detailed ore exposures from the underground decline that had been constructed. The total mineral resources at the Jabiluka Mine were 0.53% U_3O_8 grade with 163,000 tonnes of contained U_3O_8.

Finally, ERA undertook reviews and studies on the Jabiluka Mine in 2007, which resulted in the reclassification of the Jabiluka Mine resources resulting in a decrease of the total amount of resources to 137,100 tonnes and an improved overall U_3O_8 grade of 0.55%. The study also analysed the water management system and facilities from the start of the operation to minimise the amount of process water stored. In 2015, ERA updated the Jabiluka Ore Reserves and Mineral Resources statement in line with JORC 2012 Code. As part of the process, the ore reserves were entirely reclassified as mineral resources.

The most recent study was the OOM conceptual study completed in 2011, which assumed an underground mine plan and investigated several alternative options for the development of the Jabiluka deposit using the previously completed studies in 2007 (refer to SRK report for further details).

Unlike the Ranger Mine, which was an open pit mine, the development plan for the Jabiluka Mine, subject to Traditional Owners' approval, is projected to be via underground mining operations which will produce less waste rock compared to open pit mining and would have a smaller surface footprint resulting in less disturbance of the wider area and greater preservation of the surrounding land. To reduce environmental damage, tailings can be deposited back into the declines which is expected to aid in the approval process.

As at 30 June 2022, ERA reported c. 137,100 tonnes of uranium oxide at a grade of 0.55%[116] at Jabiluka 2 as outlined below.

Category Category	Uranium Ore (tonnes)	Grade (% U_3O_8)	Contained U_3O_8 (tonnes)	Uranium (Mlb)
Sub-total Measured and Indicated	15,090,000	0.55%	82,945	182.9
Inferred Resources	10,000,000	0.54%	54,162	119.4
Total Resources	**25,090,000**	**0.55%**	**137,107**	**302.3**

Sources: ERA, Annual Report, 2021

Based on the current resources, Jabiluka 2 is one of the world's largest uranium deposits.

3.4 Capital raises and going concern

The estimated cost of rehabilitating the Ranger Mine has increased substantially in recent years requiring ERA to raise capital from equity markets to fund the rehabilitation.

- On 15 November 2019, ERA announced a fully underwritten[117] 6.13 for 1 pro rata renounceable entitlement offer to raise A$476 million. The offer price of A$0.15 per share, reflected a 38% discount to the 10-day VWAP of ERA shares and an 8% discount to the theoretical ex-rights price ("TERP"), as at 14 November 2019. The 2019 Entitlement Offer closed on 18 February 2020 with a shortfall bookbuild of approximately A$99.3 million. The new shares issued to Rio Tinto under the entitlement offer and underwriting agreement[118] resulted in Rio Tinto increasing its relevant interests in ERA from

[116] Energy Resources of Australia Ltd, 2021 Annual Report, 2022
[117] Underwritten by Rio Tinto's wholly owned subsidiary, North Limited.
[118] Rio Tinto subscribed to its pro rata entitlement of c. A$326 million in full and fully underwrite the offer so that ERA could raise the required funds.

68.39% to 86.33%. The 2019 Entitlement Offer completed on 20 February 2020. Of the A$476 million raised, circa A$454 million was contributed as security on the Trust Fund.

- In February 2022, ERA announced that the estimated costs of rehabilitation increased from A$976 million to between A$1.6 million and A$2.2 million and that the Company was going to conduct a feasibility study on a lower risk capping methodology.

- As a result of the increase in Ranger Rehabilitation Costs and the Company's cash in hand position, ERA is seeking to raise approximately A$300[119] million in interim funding under the Interim Entitlement Offer. The proceeds from the Interim Entitlement Offer and ERA's cash at bank are expected to provide ERA with sufficient cash to fund its planned Ranger Project Area rehabilitation related expenditure until the end of 2023.

As at 30 June 2022, ERA's audited accounts showed a net liability deficit of c. A$476 million due to operating losses, negative cash flow[120] and the increase in the rehabilitation provision. As a result, there is material uncertainty that may cast significant doubt on ERA's ability to continue as a going concern. However, the CY21 and 1HCY22 accounts have been prepared on a going concern basis as ERA Directors believe that the support of Rio Tinto, as the majority shareholder, will continue going forward in order to allow ERA to meet its rehabilitation obligations.

3.5 Financial Information

3.5.1 Financial Performance

The table below illustrates the Company's audited consolidated statements of comprehensive income for CY20, CY21 and H1 CY22.

[119] ERA ASX announcement 28 July 2022.
[120] Energy Resources of Australia, Half Yearly Report and Accounts, 30 August 2022.

Consolidated statements of financial performance	CY20	CY21	H1 CY22
A$ '000	Audited	Audited	Reviewed
Revenue from continuing operations	254,891	201,007	47,663
Changes in inventory	(13,988)	(119,673)	(22,524)
Material and consumables used	(71,818)	(1,618)	(163)
Employee benefits and contractor expenses	(101,304)	(21,821)	(6,494)
Government and other royalties	(12,517)	(9,891)	(1,936)
Commission and shipping expenses	(5,069)	(2,585)	(56)
Depreciation and amortisation expenses	(353)	(354)	(47,615)
Changes in estimate of rehabilitation provision	(6,529)	(668,149)	-
Financing costs	(24,949)	(19,529)	(165)
Stature and corporate expenses	(9,260)	(4,158)	(2,272)
Other expenses	(461)	(624)	(15)
Profit/(loss) before income tax	**8,643**	**(647,395)**	**(33,577)**
Income tax (expense)/benefit	2,817	(2,817)	-
Profit/(loss) for the year	**11,460**	**(650,212)**	**(33,577)**
Other comprehensive income/(loss) for the year, net of tax			
Changes in the fair value of cash flow hedges	9,391	(9,391)	-
Income tax relating to components and other comprehensive income	(2,817)	2,817	-
Other comprehensive income/(loss) for the year, net of tax	**6,574**	**(6,574)**	**-**
Total comprehensive income/(loss) for the year	**18,034**	**(656,786)**	**(33,577)**
Profit/(loss)			
Owners of Energy Resources of Australia Ltd	**11,460**	**(650,212)**	**(33,577)**
Total comprehensive income/(loss) for the year			
Owners of Energy Resources of Australia Ltd	**18,034**	**(656,786)**	**(33,577)**

Source: ERA CY21 and 1HCY22 financial reports

In relation to the above, we note the following:

- Revenue from continuing operations is recognised as the sales of uranium oxide stockpiled. The reduction in revenue in CY21 and 1H CY22 is due to the progressive selldown of uranium inventory and completion of contracted sales, with the final sale of uranium oxide occurring in May 2022.

- The significant losses incurred in CY21 of c. A$650 million primarily relates to the increase in the rehabilitation provision of A$668 million. The increase relates to the preliminary findings of the Rehabilitation Re-forecast and reflected the preferred lower technical risk subaerial capping methodology.

- Depreciation and amortisation expenses of A$47.6 million in H1 CY22 primarily relates to the unwinding of the discount in relation to the fair value calculation of the rehabilitation provision (i.e. the roll forward of the valuation date from 31 December 2021 to 30 June 2022), and the significant increase in inflation over the previous six months. While the underlying real cost assumptions did not change, the macroeconomic environment resulted in a A$47.3 million increase to the non-current portion of the rehabilitation provision.

3.5.2 Financial Position

The table below illustrates the Company's audited consolidated statements of financial position.

Consolidated statements of financial position	31-Dec-20	31-Dec-21	30-Jun-22
A$ '000	Audited	Audited	Reviewed
Assets			
Cash and cash equivalents	204,350	163,872	132,354
Trade and other receivables	7,788	33,375	4,954
Inventories	132,704	29,613	6,911
Government security receivable	123,316	65,400	58,262
Derivative financial instruments	12,423	3,451	1,864
Other assets	2,030	829	4,918
Total current assets	**482,611**	**296,540**	**209,263**
Inventories	15,423	-	
Undeveloped properties	89,856	89,856	89,856
Property, plant and equipment	1,756	92	1,098
Derivative financial instruments	580	-	-
Government security receivable	409,927	469,442	478,253
Total non-current assets	**517,542**	**559,390**	**569,207**
Total assets	**1,000,153**	**855,930**	**778,470**
Liabilities			
Trade and other payables	39,290	36,803	23,303
Lease liabilities	1,583	93	278
Provisions	188,399	232,732	281,397
Total current liabilities	**229,272**	**269,628**	**304,978**
Lease liabilities	186	-	824
Provisions	556,116	1,028,724	948,667
Total non-current liabilities	**556,302**	**1,028,724**	**949,491**
Total liabilities	**785,574**	**1,298,352**	**1,254,469**
Net assets	**214,579**	**(442,422)**	**(475,999)**

Sources: ERA annual and semi-annual financial reports

In relation to the above, we note the following:

- The current government security receivables refers to the amount to be released by the Trust Fund of c. A$58 million.
- ERA reported total cash resources of A$699 million at 30 June 2022, which consisted of A$132 million in cash at bank and A$537 million held in the Ranger Rehabilitation Trust Fund.
- The inventory balance has reduced in line with the sales of the stockpile.
- The Jabiluka undeveloped property has a carrying value of c. A$90 million.
- ERA has c. A$258 million of tax losses (at 30%) that are not recognised as deferred tax assets due to the uncertainty regarding ERA's ability to generate sufficient taxable income.
- The reviewed accounts as at 30 June 2022 included an undiscounted nominal value of the residual Ranger Rehabilitation costs of A$1,376 million as the provision for Outstanding Rehabilitation Costs.

3.5.3 Cash Flow Statement

The Company's cash flow statements are summarised below.

Consolidated statements of cash flow A$ '000	CY20 Audited	CY21 Audited	H1 CY22 Reviewed
Cash flows from operating activities			
Receipts from customers	268,885	194,155	83,454
Payments to suppliers and employees	(209,596)	(78,552)	(37,387)
Payments for rehabilitation	(80,190)	(153,149)	(80,032)
Interest received	2,673	343	224
Financing costs paid	(1,052)	(731)	(312)
Net cash inflow from operating activities	**(19,280)**	**(37,934)**	**(34,053)**
Cash flows from investing activities			
Payments for property, plant and equipment	(193)	(43)	-
Proceeds from sale of property Plant and equipment	-	-	2,705
Contributions to government security receivables	(454,000)	-	-
Net cash outflow from investing activities	**(454,193)**	**(43)**	**2,705**
Cash flow from financing activities			
Payment of lease liabilities	(2,408)	(1,677)	(162)
Proceeds from issues of shares	476,049	-	-
Share issues transaction costs	(2,791)	-	-
Employee share option payments	(1,616)	(835)	-
Net cash (outflow)/inflow from financing activities	**469,234**	**(2,512)**	**(162)**
Net increase / (decrease) in cash and cash equivalents	**(4,239)**	**(40,489)**	**(31,510)**
Cash and cash equivalents at the beginning of the financial year	208,591	204,350	163,872
Effects of exchange rate changes on cash and cash equivalents	(2)	11	(8)
Cash and cash equivalents at year end	**204,350**	**163,872**	**132,354**

Sources: ERA annual and semi-annual financial reports

We note the following in relation to ERA's cash flow statements:

- We note the reduction of payments to suppliers and employees from c. A$210 million in CY20 to c. A$79 million in CY21 is due to the selldown of uranium from the Ranger Mine and the reduction of operational requirements at the mine.

- The significant outflow from investing activities is a result of ERA's contribution of c. A$454 million to the Trust Fund.

3.6 Share capital structure

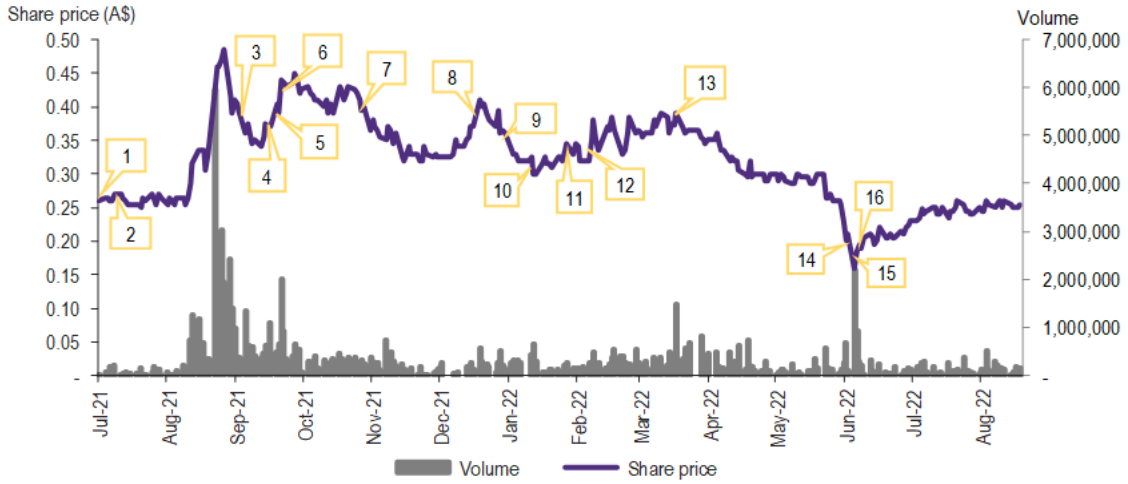
As at the date of this report, ERA's capital structure comprised the following securities:

- 3,691,383,198 fully paid ordinary shares.

3.6.1 Share price movements

Our analysis of the daily movements in ERA's share price and volumes since July 2020 is set out below.

ERA – Historical share trading price and volumes



Sources: GTCF analysis, S&P Global

The following table illustrates the key events from July 2021 to September 2022, which may have impacted the share price and volume movements shown above.

Event	Date	Comment
1	7-Jul-21	The Company announced June 2021 quarter operations (Q2 CY21), as summarised below: - On 8 January 2021, the processing operation ceased as required by Ranger Authority and in June 2021, uranium oxide production continued to be suspended - 1.37 million pounds of uranium oxide is expected to be sold by the Company through contract sales - Ore milled and mill recovered had decreased, both 100% vs pcp - Rehabilitation activities were performed at the Ranger Mine
2	28-Jul-21	The Company announced its half year results for the period ended 30 June 2021 (H1 CY21) reporting the following: - Starting of the reforecast studies of both cost and schedule data regarding the Ranger Rehabilitation - 34 tonnes of uranium was produced from the stockpile prior to the ceased activity on 8 January 2021 - Net loss of A$5 million was recorded, down 133% vs pcp - Revenue was sales from uranium oxide was A$53 million, down 68% vs pcp - Cash flow from operating activities was recorded at A$13 million, with A$70 million spend on rehabilitation activities in the first half of 2021
3	27-Sep-21	The Company announced overruns in the Ranger Rehabilitation Project and is conducting a reforecast of the costs and schedule data; finding that there will be cost and schedule overruns, with calculations for revised estimates still in progress.
4	4-Oct-21	The Company announced the resignation of Chief Executive and Director Mr Paul Arnold. Mr Brad Welsh has been appointed as the Acting Chief Executive while recruitment will commence. Mr Brad Welsh was previously the Chief Advisor Closure Strategy Non-Managed Assets with Rio Tinto.
5	8-Oct-21	The Company announced material overruns for the Ranger Rehabilitation Project costs, without detailing any estimates. Sprott Physical Uranium Trust ("SPUT"), an investment management fund, ramped up its physical uranium purchases, accumulating c. 57 million pounds of uranium oxide, valued at US$2.77 billion.
6	12-Oct-21	The Company released its quarter operations review for the period ended 30 September 2021 (3Q CY21), as summarised below: - No production of uranium oxide was recorded due to the ceased operations from 8 January 2021 at the Ranger Mine - Expected contract sales of 1.27 million pounds of uranium oxide in 2021 - Progression of the Jabiru housing refurbishment program, following the successful granting of the land and execution of the Section 19A township lease for Jabiru to the Mirarr Traditional Owners - Ore milled and mill recovery has decreased, both 100% vs pcp
7	19-Nov-21	The Company announced that whilst not yet in a position to provide estimates with an acceptable degree of confidence, the progress of that work has identified that both the cost and schedule overruns regarding Ranger Rehabilitation are expected to be significant, relative to the findings of the Ranger Project Area closure feasibility study. In addition, ERA announced to be in the process of appointing a global engineering company to assist ERA to finalise its reforecast with an acceptable degree of confidence.

Event	Date	Comment
8	13-Jan-22	The company announced its operations review for the period ended 31 December 2021 (4Q CY21), as summarised below: - ERA completed sales of 1.5 million pounds of uranium oxide in the spot market and 1.37 million pounds completed in contract sales for 2021 - Completion of water treatment and floor and wall cleaning activities at the Tailings Storage Facility, which is part of the rehabilitation project at Ranger Mine - Pit 3 wicking contract has been awarded, which is a step to be completed prior to the bulk backfill
9	31-Jan-22	The ASX announced a trading halt for the Company, pending an announcement release. The halt will continue until the commencement of normal trading on 2 February 2021 or the release of the announcement to the market.
10	2-Feb-22	The Company released the Ranger Rehabilitation Project cost and schedule overruns findings, as summarised below: - The approximate cost of rehabilitation of Ranger Mine is between A$1.6 billion to A$2.2 billion, compared to the previous estimate of A$973 million - The revised date for completing the rehabilitation is between Q4 2027 and Q4 2028 - ERA will need to analyse new funding options to ensure that the project is fully funded, with A$699 million in cash fundings and the Commonwealth government holding A$125 million in bank guarantees - Betchel was engaged to perform an independent review and gap analysis of ERA forecast cost and schedule data
11	21-Feb-22	The Company announced the appointment of Mr Brad Welsh as the Managing Director and Chief Executive effective from 8 February 2022.
12	28-Feb-22	The Company released their annual statement of reserve and resources, as summarised below: - The mineral deposit remains the same at 137,100 tonnes of uranium oxide at a 0.55% grade - A reforecast of the rehabilitation costs at the Ranger Mine had been undertaken, identifying a significant under provision on costs and schedule data. It was noted that there was a c. A$668 million unfavourable adjustment to the cost estimate of the Ranger Mine Rehabilitation project.
13	8-Apr-22	The Company announced its operations review for the period ended 31 March 2021 (Q1 CY22), as summarised below: - ERA reported that it sold 400,000 pounds of uranium oxide into the spot market and held approximately 136,000 pound of inventory - Housing refurbishment program continues to progress with a further tranche of properties transferred in the March 2022 quarter - Given the provision increase in the rehabilitation of the Ranger Mine, the Company is assessing different funding options to prevent a major impact in the financial performance and ability to continue as a going concern with Rio Tinto ensuring its commitment to successfully rehabilitate the area
14	23-Jun-22	The ASX announced a temporary trading halt for the Company, pending an announcement release. The Australian Financial Review published an article that noted ERA has decided to delay the project booster, which targeted a $300 million rights issue. The Company stressed the importance of urgent interim fundings needed with a potential interim entitlement offer to raise the funds required to complete the rehabilitation of the Ranger Mine
15	28-Jul-22	The Company announced updates regarding the interim entitlement offer, as summarised below: - The three largest shareholders were contacted in relation to a non-underwritten, renounceable entitlement offer which would raise A$300 million interim funding for the rehabilitation works at Ranger Mine - ERA Independent Board Committee has previously proposed an Interim Entitlement Offer at a 10 to 15% discount to the ERA Share price - The Company reported that no pre-commitments to subscribe for entitlements in the Interim Entitlement Offer were forthcoming on the IBC proposed terms from either Rio Tinto or the two next largest shareholders
16	29-Jul-22	The Company released its operations review and business update (unaudited) for the period ended 30 June 2022 (Q2 CY22), as summarised below: - The sale of the last drum of uranium oxide from the Ranger Mine was concluded on 31 May 2022, which brings the total produced uranium oxide drums sold from the Ranger Mine to 132,000 tonnes - A total of 132,895 pounds of uranium oxide was sold on the spot market this quarter, bringing the total sales to 532,895 pounds in 2022 - A$410 million has been spent from 1 January 2019 to 30 June 2022 on the rehabilitation of the Ranger Mine - ERA commenced a feasibility study in May 2022 to update the lower technical risk rehabilitation methodology and to refine the Ranger rehabilitation scope, risks, costs and schedule - Betchel was engaged to review ERA in house project capability in January 2022, with the Company implementing strategic changes focusing on the execution of project capabilities

Sources: ASX announcements; S&P Global

The monthly share price performance of ERA since July 2021 and the weekly share price performance of ERA over the last 16 weeks are summarised below.

Energy Resources of Australia Limited	Share Price			Average
	High $	Low $	Close $	weekly volume 000'
Month ended				
Jul 2021	0.295	0.255	0.270	536
Aug 2021	0.270	0.250	0.255	369
Sep 2021	0.580	0.260	0.345	6,605
Oct 2021	0.450	0.330	0.410	2,650
Nov 2021	0.440	0.327	0.370	1,445
Dec 2021	0.395	0.320	0.340	636
Jan 2022	0.412	0.320	0.320	1,071
Feb 2022	0.345	0.300	0.320	888
Mar 2022	0.395	0.325	0.380	1,425
Apr 2022	0.415	0.335	0.335	1,724
May 2022	0.355	0.280	0.285	943
Jun 2022	0.305	0.160	0.190	1,565
Jul 2022	0.252	0.195	0.245	619
Week ended				
29 Apr 2022	0.360	0.335	0.335	915
6 May 2022	0.355	0.305	0.305	1,538
13 May 2022	0.335	0.290	0.300	1,355
20 May 2022	0.305	0.290	0.300	539
27 May 2022	0.305	0.290	0.290	442
3 Jun 2022	0.305	0.280	0.295	417
10 Jun 2022	0.305	0.285	0.300	823
17 Jun 2022	0.300	0.260	0.260	964
24 Jun 2022	0.265	0.200	0.210	1,278
1 Jul 2022	0.215	0.160	0.205	3,690
8 Jul 2022	0.230	0.195	0.220	798
15 Jul 2022	0.230	0.205	0.205	420
22 Jul 2022	0.240	0.210	0.230	467
29 Jul 2022	0.252	0.230	0.245	902
5 Aug 2022	0.250	0.240	0.250	408
12 Aug 2022	0.265	0.235	0.260	666

Sources: S&P Global, GTCF analysis

3.6.2 Top shareholders

We have set out below the substantial shareholders of ERA as at 15 June 2022.

ERA Top 2 Shareholders as at 15 June 2022		
Name	No. of Shares	Interest (%)
Rio Tinto Limited	3,186,682,634	86.3%
Packer & Co	292,318,529	7.9%
Total Top 2 Shareholders	**3,479,001,163**	**94.2%**
Remaining Shareholders	212,382,035	5.8%
Total Number of Ordinary Shares Outstanding	**3,691,383,198**	**100.0%**

Source: S&P Global

4 Valuation methodologies

4.1 Introduction

Grant Thornton Corporate Finance has assessed the value of ERA using the concept of fair value. Fair value is commonly defined as:

"the price that would be negotiated in an open and unrestricted market between a knowledgeable, willing but not anxious buyer and a knowledgeable, willing but not anxious seller acting at arm's length."

Fair value excludes any special value. Special value is the value that may accrue to a particular purchaser. In a competitive bidding situation, potential purchasers may be prepared to pay part, or all, of the special value that they expect to realise from the acquisition to the seller.

4.2 Valuation methodologies

RG 111 outlines the appropriate methodologies that a valuer should generally consider when valuing assets or securities for the purposes of, amongst other things, share buy-backs, selective capital reductions, schemes of arrangement, takeovers and prospectuses. These include:

- Discounted cash flow and the estimated realisable value of any surplus assets ("DCF Method").
- Application of a reserve and resources multiples to the estimated reserves and resources of the entity, added to the estimated realisable value of any surplus assets ("Resource Multiple Method").
- Amount available for distribution to security holders in an orderly realisation of assets ("NAV Method").
- Quoted price for listed securities, when there is a liquid and active market ("Quoted Security Price Method").
- Any recent genuine offers received by the target for any business units or assets as a basis for valuation of those business units or assets.
- The aggregation of the estimated fair market value of the company underlying assets, before adding the net cash position and any other surplus assets or liabilities as at the valuation date. ("Sum-of-parts Method")

Further details on these methodologies are set out in Appendix A to this report. Each of these methodologies are appropriate in certain circumstances.

RG 111 does not prescribe any of the above methodologies as the method(s) that an expert should use in preparing their report. The decision as to which methodology to use lies with the expert based on the expert's skill and judgement and after considering the unique circumstances of the entity or asset being valued. In general, an expert would have regard to valuation theory, the accepted and most common market practice in valuing the entity or asset in question and the availability of relevant information.

4.3 Selected valuation methods

Grant Thornton Corporate Finance has estimated the fair market value of ERA on a sum-of-parts basis by aggregating the fair market value of ERA's resources and other asset and liabilities as reported in the reviewed balance sheet as at 30 June 2022. We have relied on the Resources Multiple method to assess the fair market value of ERA's uranium resources.

We have utilise the Quoted Security Price Method as a cross check after undertaking a detailed analysis to provide some relevant commercial insights to ERA Shareholders.

While the DCF approach would be commonly adopted to value deposit such as Jabiluka Mine, this is not feasible considering the limitations with the existing information identified in the SRK Report.

4.3.1 Independent technical specialist

For the purpose of this report, Grant Thornton Corporate Finance has engaged SRK to review and opine on the reasonableness of the estimation of the Ranger Rehabilitation costs as at 30 June 2022 and to prepare a valuation of the ERA mineral resources.

The SRK Report is attached in Appendix D.

5 Valuation assessment of ERA

5.1 SOP Approach

As discussed in section 0, we have assessed the fair market value of ERA Shares using the SOP approach which is summarised in the table below.

ERA - SOP Approach A$ million (where not otherwise specified)	*Section reference*	Low	High	Mid-point
Jabiluka resources	*5.1.1*	302	302	302
Selected resource multiple (A$ per lb U_3O_8)	*5.1.2*	3.25	4.25	3.75
Value of Jabiluka Project and Other Assets		**982**	**1,284**	**1,133**
Lease Liabilites	*3.5.2*	(1)	(1)	(1)
NPV Outstanding Ranger Rehabilitation Costs (as at 30 June 22)	*5.1.4*	(1,318)	(1,318)	(1,318)
Future Tax Deductions	*5.1.5*	256	264	260
Net cash balance as at 30 Jun 22	*5.1.6*	669	669	669
ERA assessed Equity Value		**588**	**898**	**743**
Number of outstanding shares (millions)	*5.1.7*	3,691	3,691	3,691
Value per share (A$ per Share)		**0.159**	**0.243**	**0.201**

Source: GTCF analysis

5.1.1 Resources adopted for valuation purposes

The table below summarises the Jabiluka resources as at 30 June 2022 adopted for the purpose of our valuation assessment.

Jabiluka Mine Resources Category	Cut-off (% U_3O_8)	Grade (% U_3O_8)	Contained uranium (Mlb)
Measured		0.89%	23.8
Indicated		0.52%	159.2
Inferred		0.54%	119.0
Total	**0.20%**	**0.55%**	**302.0**

Source: GTCF analysis

For the purpose of the valuation, we have highlighted below certain risks and opportunities that we have considered in our valuation assessment.

Risks

- SRK's opinion is that the Jabiluka Project has not been developed to the required level of confidence to allow it to be considered at PFS level of study.

- Whilst the Jabiluka Mine was approved in 1998, any potential future development is expected to be materially different. As set out in the SRK Report, information standards required for environmental impact assessments are now significantly more stringent than at the time of the previous assessments. Accordingly, a new referral and assessment are likely to be required if development of the Jabiluka deposit is proposed in future (subject to Traditional Owners' approval).

- SRK has indicated that the time required to conduct baseline studies, prepare an EIS (or equivalent) report and complete EPA administrative processes culminating in a Ministerial decision is likely to be at least five to six years. Secondary approvals (operating licences) from the Northern Territory and the Federal Government in relation to the environmental impact assessments could be expected to take an additional 12 months to 18 months to complete, although SRK mentions that a certain amount of the preparation work for subordinate applications could be done concurrently with the primary environmental approvals. In total, it could be seven to eight years before the Jabiluka Mine is developed, subject to Traditional Owners' approval (please refer to section 5.1.1 of SRK report for further details).

- The bulk of the testwork, flowsheet development and engineering design and costings supporting the Jabiluka Project are now dated, with limited additional processing related investigations completed over the last two decades. The operating and capital costs included in the previous studies will need to be revised in light of the prevailing economic conditions rather than a mere escalation from 2011 levels.

- SRK has identified some risks that infill drilling may result in a reduction of the mineral resource with further analysis required to be undertaken.

Opportunities

- The resources of the Jabiluka Mine are well understood, and their large size and relatively high grade make it a strategic project with a potential long term LOM.

- In addition to Jabiluka Mine, there are other resources that sit within ERA's mineral leases besides Jabiluka 2, including Ranger 3 Deeps and Jabiluka 1, as well as potential resources in other locations that have not yet been extensively explored. The Jabiluka resource remains open at depth and to the east. Further exploration may increase the mineral resource.

- The cut-off grade for reporting the Jabiluka resources requires review given the significant increase in the uranium prices since it was prepared. This may result in a material increase of the resource base.

- As a result of the various studies and drilling work undertaken before the Jabiluka Mine entered into the Care and Maintenance Agreement, even if dated, there is a large amount of data regarding the available resources that can be leveraged for future development.

5.1.2 Assessment of the resource multiple

For the purpose of assessing an appropriate resource multiple range to value the Jabiluka Mine, we have given regard to the current trading multiples of listed peers ("Trading Multiples") and acquisitions of comparable companies prepared by SRK for transactions at a project level which Grant Thornton has integrated with transactions at a corporate level ("Transaction Multiples").

We note resource multiples may vary significantly between the different comparable companies and transactions due to, amongst other things: the stage of development, the size and quality of the deposits, the location of the assets, the availability of infrastructure, and the cost structure of the operations. Putting aside obtaining the approval of the Traditional Owners, which we have considered separately given it is unique to the Jabiluka Mine, in analysing the resource multiple of the listed peers, we have considered the following:

- *Grade and size of deposit* – The size of the deposit and the grade have a significant influence on the underlying resource multiple and value of the projects. We note that the Jabiluka Mine has a resource estimate of approximately 302.3 Mlb with an average grade of c. 0.55% and cut-off of 0.2%.

- *Stage of development* – The Jabiluka Mine deposit is a well understood deposit with drilling undertaken since the 1970s and with studies conducted between 1993 and 2007 including c. 12,000 metres of drilling. However, SRK has indicated that the bulk of the testwork, flowsheet development and engineering design and costings supporting the Jabiluka Project are now dated with the operating and capital costs included in the previous studies to be revised in light of the prevailing economic conditions. Based on discussions with SRK and as outlined in the SRK Report, the confidence level of the Jabiluka Mine is similar to a pre-developed project.

- *Mining methodology* – Given Jabiluka is a conventional underground mine development, we have sought to rely on listed peers and comparable transactions with similar mining method.

- *Jurisdiction* – In Australia, the regulatory framework governing uranium mining is complex and differs between the Commonwealth, State and Territory jurisdictions[121] with both State/Territory and Commonwealth governments able to allow or restrict uranium mining and exploration. Other jurisdictions, such as the one governing the Saskatchewan region in Canada, presents a more favourable environment as the approval process is more streamlined and simpler and historically have not had uranium moratoria or bans in place. Further, the presence of several already existing mines provide examples of clear paths to be followed.

5.1.2.1 Trading Multiples

The Jabiluka Project contains total mineral resources of approximately 302.3 Mlb U_3O_8 at an average grade of 0.55% U_3O_8, which is amongst the largest, high-grade undeveloped uranium deposits in the world. Due to the scarcity of data if a high grade threshold of 0.50% was adopted, SRK has considered, for the purpose of its analysis, that projects with >0.25% U_3O_8 content are high grade. Accordingly, in our screening, we have focused on companies with flagships assets with large resource base (assumed greater than 100 Mlb U_3O_8) with a >0.25% U_3O_8 content.

The table below summarises the Trading Multiple of listed peers.

[121] See Section 3.6 for a high-level overview of the current regulatory landscape in Australia.

Trading Multiples - Summary table		Resources (Mlb) (company %)			Resources	Grade	Resources Mult.
Company	EV - A$m	Measured	Indicated	Inferred	Mlb	(% U_3O_8)	A$/lb
Jabiluka Mine		24	159	119	302	0.55%	
Selected Trading Peers							
Fission Uranium Corp.	562	-	115	15	130	0.44%-1.94%	4.3
Global Atomic Corporation	754	-	81	70	151	0.06%-2.4%	5.0
Denison Mines Corp.	1,501	151	13	-	164	0.37% - 19.1%	9.2
NexGen Energy Ltd.	2,930	210	71	82	363	3.1%-0.83%	8.1
Average							**6.6**
Median							**6.5**
Tier 2 - Exploration companies							
Toro Energy Limited	65	6	60	17	84	0.048%	0.8
Elevate Uranium Ltd	127	-	5	106	111	0.01%-0.09%	1.1
Laramide Resources Ltd.	126	-	36	79	115	0.075%-0.23%	1.1
Alligator Energy Limited	198	-	-	47	47	0.023%	4.2
IsoEnergy Ltd.	495	-	49	3	51	34.54% (2.23% Inferred)	9.7
Average							**3.4**
Median							**1.1**
Tier 2 - Developing companies							
Berkeley Energia Limited	62	12	48	30	89	0.051%	0.7
Aura Energy Limited	135	5	12	32	48	0.034%	2.8
Forsys Metals Corp.	134	7	108	11	126	0.024%	1.1
GoviEx Uranium Inc.	200	30	91	80	202	0.030% - 0.133%	1.0
Deep Yellow Limited	699	41	165	183	389	0.12%	1.8
Bannerman Energy Ltd	272	13	130	55	197	0.022%	1.4
Average							**1.5**
Median							**1.2**
Overall - Average							**3.5**
Overall - Median							**1.8**

Source: GTCF analysis
Notes: (1) Enterprise value computed utilising the 30 days VWAP up to 19 September 2022; (2) When required to convert amounts to A$, we have utilised the exchange rate as at 19 September 2022; (3) The resources selected are reflective of the interest in the deposits of the company; (4) NexGen resources have been adjusted to reflect 50.1% interest in Iso Energy's resources (5) We have relied on JORC, NI 43-101 and CIM compliant resources (6) When resources have been provided at a various cut-off grade, we have selected the cut-off grade utilised in the most advanced study or mostly referred by the companies in their announcements; (7) Only uranium resources included

As discussed in the executive summary, we have considered the Selected Trading Peers as the most relevant given the grade and resource of their projects.

In performing our analysis, we note that with the exception of Global Atomic, the key asset for the Selected Trading Peers are all based in the Athabasca basin in Saskatchewan province, Canada. Saskatchewan is home to the world's largest and highest-grade uranium mines and deposits, and it is recognised as the premier mining jurisdiction in Canada and one of the best globally. For decades, it has also been established as one of the most stable, dependable jurisdictions for the world's nuclear energy providers to source uranium. Overall, Saskatchewan has a 60-year history of uranium mining, and enjoys strong support at a local, regional and provincial level. As a result, permitting is relatively straightforward and well-understood.

We explore each of the Selected Trading Peers in further detail below.

Fission Uranium Corp

Its primary asset is the wholly owned Patterson Lake South property ("PLS"), which covers an area of 31,039 hectares in the Athabasca Basin region. PLS hosts the Triple R deposit characterised by high-grade resources at a shallow depth[122] and is well connected to existing infrastructure. The table below illustrates the PLS resources.

Fission - PLS Resources Category	Grade (% U_3O_8)	Contained uranium (Mlb)
Indicated	1.94%	114.9
Inferred	0.44%	15.4
Total Resources		**130.3**

Source: Fission TSX's announcements
Notes: (1) The Canadian Institute of Mining Metallurgy and Petroleum (CIM) (2014) definitions were followed for all Mineral Resources categories, and a NI 43-101 technical report was prepared; (2) Mineral resources are estimated at a uranium cut-off grade of 0.25% U_3O_8; (3) Mineral Resources are estimated using a long-term uranium price of US$50/lb

Based on the PFS completed in 2019, the project will be developed as a conventional underground mine using artificial ground freezing to extract some of the mineralised material that approaches the overburden layer. Relevant for the purposes of our valuation of the Jabiluka Mine, Fission wanted to initially develop a combined open-pit and underground mine, however, following feedback from the local communities, it opted for an underground-only mine plan. The underground mine plan is expected, among other things, to facilitate decommissioning and a low-profile final shape that fits into the landscape and eliminates contaminant escape during operations[123]. As at the date of this report, Fission has been able to sign two capacity and funding agreements and an engagement and communication agreement with certain Indigenous Rightsholders.

Construction is expected to commence in 2026 with production to start in 2029 and an anticipated seven-year LOM. Operating costs were estimated at the bottom end of the quartile compared to other mines in the area and among the lowest operating costs for uranium in the world.

Global Atomic Corporation

Global Atomic acquires, explores, and develops uranium properties in Niger, Africa. The company's key asset is the Dasa project, a large, high-grade uranium deposit located c. 100 kilometres south of the established uranium mining town of Arlit[124].

Under the Nigerien Mining Code, the Republic of Niger has the right to a 10% carried interest in any mining project and may subscribe for up to an additional 30% interest, provided it commits to funding its proportionate share of capital costs and operating deficits for such additional interest. On 11 August 2022, Global Atomic concluded the negotiation with the Government of Niger, which resulted in the incorporation of a new company (Somida) under which the Dasa project will operate. At the date of this report, Global

[122] The Triple R deposit is the only high-grade deposit in the Athabasca Basin region with substantial high-grade mineralisation starting just 50 metres from the surface.
[123] Fission Corporate Update, 26-29 July 2022
[124] Global Atomic also holds a 49% interest in the unlisted Befesa Silvermet Turkey, S.L. ("BST") Joint Venture which is equity accounted for circa C$10 million as at June 2022.

Atomic owns 80% of Somida, while the balance is owned by the Niger Government (inclusive of the 10% compulsory interest).

The latest update to Dasa mineral resources was completed in June 2019, and the company, at the end of 2021, began a new drilling program expected to be completed by the end of 2022. As shown in the table below, mineral resources were reported in two parts; those that have the potential for extraction by open-cut mining methods and the deeper higher-grade material outside of the open pit that may be amenable to underground mining.

Dasa deposit - Resources Category	Cut-Off ($\% U_3O_8$)	Grade ($\% U_3O_8$)	Contained uranium Mlb (100%)	Global Atomic share Mlb (80%)
Indicated				
Open Pit	0.03%	0.17%	96.5	77.2
Underground	0.12%	0.33%	5.1	4.1
Total Indicated		**0.18%**	**101.6**	**81.3**
Inferred				
Open Pit	0.03%	0.14%	56.6	45.3
Underground	0.12%	0.42%	31.0	24.8
Total Inferred		**0.18%**	**87.6**	**70.1**
Total Indicated and Inferred			**189.2**	**151.4**

Sources: Global Atomic TSX's announcement
Notes: (1) The CIM (2014) definitions were followed for all Mineral Resources categories and a NI 43-101 technical report was prepared, (2) Mineral Resources are estimated using a long-term uranium price of US$45/lb

The above-reported resources were used in the FS completed in 2021 projecting an underground mine plan. While the FS confirmed that the Dasa project was economically viable, it focused solely on developing a part of the Dasa deposit defined as Phase 1, which represents 12 years of production and only c. 25% of the Dasa's total indicated and inferred resources. Under the FS, production is expected to commence in 2024. The company has recently received letters of intent from a banking syndicate to finance the processing plant and it has entered into a mine development contract and a letter of intent with a major North American utility for the supply of 2.1 million pounds U_3O_8 over a six-year period commencing 2025.

Denison Mines Corp

The company has an effective 95% interest in its flagship Wheeler River Uranium Project, the largest undeveloped uranium project in the infrastructure-rich eastern portion of the Athabasca Basin region of northern Saskatchewan. Denison's interests in Saskatchewan also include a 22.5% ownership in the McClean Lake joint venture ("MLJV"), which includes several uranium deposits and the McClean Lake uranium mill, contracted to process the ore from the Cigar Lake mine under a toll milling agreement, plus interests in other deposits[125] and activities[126]. The table below summarises Denison's resources across the various projects.

[125] A 25.12% interest in the Midwest Main and Midwest A deposits, and a 66.90% interest in the Tthe Heldeth Túé ("THT") and Huskie deposits on the Waterbury Lake property. Each of Midwest Main, Midwest A, THT and Huskie are within 20 kilometres of the McClean Lake mill. In addition, through the 50% ownership of JCU Exploration Company ("JCU"), acquired in August 2021, Denison's exploration portfolio includes additional interests in various uranium project joint ventures in Canada.
[126] Denison is also engaged in post-closure mine care and maintenance services through its Closed Mines Group.

Denison Resources Project	Status	Cut-off ($\% U_3O_8$)	Grade ($\% U_3O_8$)	Contained uranium Mlb (100%)	Denison share Mlb
Indicated Mineral Resources					
Wheeler River - Phoenix	PFS 2018	0.20%	19.1%	70.2	66.7
Wheeler River - Gryphon	PFS 2018	0.80%	1.7%	61.9	58.8
Total Wheeler River - Flagship project				**132.1**	**125.5**
McClean Project	Exploration	0.10%	1.1% -2.8%	17.8	3.9
Midwest Project	Exploration	0.10%	0.9%-4.0%	50.7	12.8
Waterbury – THT	PEA	0.10%	2.0%	12.8	8.6
Total Indicated Mineral Resources				**213.4**	**150.8**
Inferred Mineral Resources					
Wheeler River - Phoenix	PFS 2018	0.20%	5.8%	1.1	1.0
Wheeler River - Gryphon	PFS 2018	0.80%	1.2%	1.9	1.8
Total Wheeler River - Flagship project				**3.0**	**2.8**
McClean Project	Exploration	0.10%	0.4%-0.8%	7.6	1.6
Midwest Project	Exploration	0.10%	0.7%-5.8%	18.2	4.6
Waterbury - Huskie	PEA	0.10%	1.0%	5.7	3.8
Total Inferred Mineral Resources				**34.5**	**12.8**
Total Indicated and inferred resources				**247.9**	**163.6**

Source: Denison TSX's announcements
Notes: (1) CIM definitions were followed for the classification of mineral reserves and mineral resources

As shown above, the core project is the Wheeler River which accounts for almost 80% of the company resources. Wheeler River is made of two high-grade uranium deposits named Phoenix and Gryphon, located in the eastern portion of the Athabasca Basin. Under the PFS completed in 2018, the high-grade Phoenix deposit is designed as an ISR mining operation, with associated processing to a finished product occurring at a plant to be built on-site at the Wheeler River. The Gryphon deposit is designed as an underground mining operation, utilising a conventional long-hole mining approach with the processing of mine production assumed at Denison's 22.5% owned McClean Lake mill.

We note that due to the outbreak of COVID-19 in 2020, Denison suspended certain activities at Wheeler River, including the Environmental Assessment ("EA") programs, on the critical path to achieving the project development schedule outlined in the PFS. Whilst the EA programs were subsequently resumed, the temporary suspension impacted the project development schedule outlined in the PFS for Wheeler River, with production date, previously around 2024, now uncertain.

The remaining Denison assets are all located in the Athabasca Basin and are at a relatively earlier stage of development than the Wheeler project.

NexGen Energy Ltd

NexGen's principal asset is the wholly owned Rook I project comprising 32 contiguous mineral claims totalling an area of 35,065 hectares located in the southwestern Athabasca Basin of Saskatchewan. The Rook I project is host to several high-grade deposits[127] and its resources, accounting for 100% of NexGen resources, are summarised in the table below:

[127] Arrow deposit (discovered in February 2014 and at the core of the project), South Arrow (discovered in July 2017), Harpoon (discovered August 2016), Bow (discovered March 2015) and the Cannon area (discovered in April 2016).

NexGen Resources - Rook I Category	Grade (% U_3O_8)	Contained uranium (Mlb)
Measured	4.35%	209.6
Indicated	1.36%	47.1
Total Measured and Indicated Resources	**3.10%**	**256.7**
Inferred	0.83%	80.6
Total Resources		**337.3**

Source: NexGen TSX's announcements
Notes: (1) CIM definitions were followed for classification of mineral reserves and mineral resources. The resources exclude the 51% interest in Iso Energy; (2) Mineral resources are reported at a cut-off of 0.25% U_3O_8 based on a long-term price of US$50 per lb U_3O_8

The Rook I project advanced through a PEA in 2017, a PFS in 2018 and FS in 2021. The key outcomes of the FS study were follows:

- From the mineral resources outlined above, 239.6 Mlb of U_3O_8 were categorised as probable reserves with a U_3O_8 grade of 2.37%[128]. The study outlined an initial 11-year LOM capable of producing 29 Mlb U_3O_8 per annum (first five years). Overall, the Rook I project is being permitted for a 24-year mine life.

- The project will result in an underground mine. In particular, the characteristics of the Arrow deposit are conducive to conventional low-cost bulk mining methods, tailings and environmental mine management. The natural geological setting of the deposit eliminates the requirement for complex, costly and technically challenging engineering designs.[129].

- Under the base case, assuming uranium prices are at US$50 per lb, the mine is expected to generate an after-tax NPV of C$3.47 billion with initial capex C$1.3 billion resulting overall in an after-tax IRR of 52.4%.[130] The Rook I project is expected to have production costs at the bottom of the cost curve and it is the largest development-stage uranium deposit in the world[131].

Following the successful completion of the Rook I FS in 2021, NexGen has transitioned into the next stage of project development with the advancement of Front End Engineering & Design ("FEED") at the end of 2021, scheduled to be completed in the third quarter of 2022.

Further, NexGen has reached a major milestone in the advancement of the regulatory approvals for the 100% owned Rook I Project with the submission of the draft the EIS in June 2022, followed by the acceptance of the EIS by the Canadian Nuclear Safety Commission ("CNSC") in July 2022. This marked the formal commencement of the 90-day period during which the CNSC will coordinate both the Federal technical and public review of the draft EIS. The company is also progressing the Licence Application in order to obtain a Uranium Mine and Mill Licence from the CNSC for the project, which is dependent on the EIS result.

In addition to the Rook I project, NexGen holds 50.1% in IsoEnergy which is a listed company with a market capitalisation of c. A$540 million. IsoEnergy's key asset is the Larocque East property located in the Eastern Athabasca basin, which was acquired in 2018 and contains the area of high-grade uranium named Hurricane Zone. Maiden resource estimates were announced in July 2022 and they comprise 48.61 Mlb U_3O_8 of high grade (34.5%) indicated resources and 2.66 Mlb U_3O_8 inferred resources. Hurricane is currently the world's highest grade uranium deposit and the potential value is enhanced by

[128] CIM definitions were followed for mineral reserves and utilising a cut-off grade of 0.30% U_3O_8. Arrow Deposit, Rook I Project – NI 43-101 Technical Report on Feasibility Study, February 2021.
[129] NexGen corporate presentation, August 2022.
[130] The FS study excluded pre-commitment early works of C$158 million, which NexGen intends on expending prior to FID.
[131] NexGen Corporate presentation, September 2022

the relatively shallow depth of the deposit together with the proximity to existing eastern Athabasca Basin roads, power and milling infrastructures.

5.1.2.2 Transaction Multiples

The SRK Report considers, in section 8.3.1, transactions involving Australian and North American high grade (>0.25% U_3O_8) uranium assets, but it excludes transactions occurred at a corporate level. We have summarised below some key observations made by SRK in relation to the comparable transactions:

- The Kintyre transaction is considered comparable as a uranium development project within a National Park, with strong representation from Traditional Owners and other stakeholders. SRK highlights the smaller scale and lower grade at Kintyre and that Kintyre was to be developed by open pit.

- Only the Four Mile, Cigar Lake and Wheeler River transactions are of a similar (albeit smaller) scale to the defined resources at Jabiluka Mine. However, we note that Cigar Lake and Four Mile were producing assets at the time. In relation to the Wheeler River transaction, it occurred in October 2018 when uranium price was c. US$28/lb and around the same time that Cameco (the seller of the Wheeler River interest) announced that due to continued uranium price weakness, production from the McArthur River mining and Key Lake milling operations in northern Saskatchewan were temporarily suspended. The market conditions at the time makes this transaction not comparable.

- In SRK's view, it is reasonable for the Jabiluka Project to trade at a lower resource multiple than those assets included in SRK's analysis that have attained production status and regulatory approval/traditional owner approval. These transactions occurred at >A$10/lb U_3O_8 multiple.

- SRK has normalised to the average monthly spot U_3O_8 price as at the date of the valuation. Analysis of the normalised dataset for assets in the advanced exploration to pre-development stage (i.e. Reserves development, PFS/Scoping, PFS completed) indicated the median is A$2.32/lb U_3O_8, the average is A$3.93/lb U_3O_8, and the 25th percentile and 75th percentile are A$0.68/lb $U_3O_8$and A$4.93/lb U_3O_8, respectively. The weighted average is A$3.83/lb U_3O_8.

The only relevant comparable transactions (based on the selection criteria discussed earlier) which occurred recently at a corporate level involving non-producing assets is the UEX acquisition as described below[132].

UEX Corporation ("UEX")

Between June and August 2022, UEX has been subject to a series of takeover offers from Uranium Energy Corp ("UEC") and Denison, with both companies interested in acquiring 100% of UXC. The transaction completed on 15 August 2022 with the acquisition by UEC with an implied transaction multiple of A$3.18 per lb U_3O_8.

Founded in 2001, UEX is a Canadian uranium and cobalt exploration and development company with four flagship projects in the Athabasca Basin.

[132] As part of our analysis, we have reviewed the recent transaction involving the acquisition of Vimy Resources Limited by Deep Yellow Limited, announced on March 2022. However, we have excluded it from our analysis since 78% of Vimy resources have a grade between 0.05% and 0.07% U3O8.

- *Horseshoe-Raven project (100% UEX)* – Horseshoe & Raven deposit is the most advanced among the portfolio and it is amenable to conventional open pit and underground mine development. The company estimates that they will not require costly ground freezing or extra radiation protection measures routinely employed at many of Saskatchewan's uranium operations.

- *Shea Creek project (49.1% UEX)* – Shea Creek is a joint venture between UEX (49.1%) and Orano (50.9%) and is located just 18 km south of the past-producing Cluff Lake mine. Four deposits combine to form one of the largest undeveloped uranium resources in the area.

- *West Bear project (100% UEX)* – The 100% owned West Bear project, although holds negligible uranium resources, is relevant to the company for its high-grade Cobalt-Nickle deposit of 6.93 Mlb (combined indicated resources), which is shallow, open-pit amenable and open in all directions for expansion.

- *Christie Lake project (65.55% UEX)* – The company holds a 65.55% direct interest in a joint venture with JCU Canada. The project is in the exploration phase.

The table below summarises UEX projects' resources and key characteristics:

UEX Uranium Projects		Cut Off	Grade	Development	UEX shares
Deposit	Category	(% U_3O_8)	(% U_3O_8)	Status	(Mlb)
Horseshoe-Raven	Measured&Indicated	0.05%	0.154%-0.111%	Development Ready	37.8
West Bear[1]	Indicated	0.05%	0.908%	Exploration	1.6
Shea Creek	Indicated	0.30%	1.491%	Brownfield	33.2
Shea Creek	Inferred	0.30%	1.015%	Brownfield	13.8
Christie Lake	Inferred	0.20%	1.57%	Exploration	13.3
Total Resources					**99.6**

Sources: UEX's TSX announcements
Note: (1 In addition to the above, UEX through the 50% interest in JCU retains 5% interest in Wheeler River project resulting on 6.75 Mlb of U_3O_8; (2) In addition to uranium resources, UEX owns 6.93 Mlb of cobalt and nickel indicated resources

5.1.2.3 Conclusion on the resources multiple

The selection of an appropriate resource multiple to value the Jabiluka Mine is an exercise of judgement given the specific circumstances of the assets and the current opposition of the Traditional Owners to its development. We have selected a resource multiple between A$3.25 per lb U_3O_8 and A$4.25 per lb U_3O_8 on a 100% basis for our valuation assessment. Refer to the executive summary for details.

5.1.3 Valuation of other resources

Whilst not recognised as JORC-compliant reserves and resources, there are other resources that sit within ERA's mineral leases besides Jabiluka 2, including Ranger 3 Deeps and Jabiluka 1, as well as potential resources in other locations that have not yet been extensively explored, including MLN1. Notwithstanding this, the resource multiples implied in the comparable trading and transactions also reflect an element of exploration and prospecting potential. Accordingly, we are of the view that the value of other potential resources is already captured in our valuation assessment of the Jabiluka Mine.

5.1.4 Ranger Rehabilitation Costs

As at 30 June 2022, SRK has estimated the Outstanding Rehabilitation Costs at A$1,416 million (undiscounted and nominal) based on the information received and discussions with ERA. We note that the reviewed accounts as at 30 June 2022 included an undiscounted nominal value of A$1,376 million as the provision regarding Outstanding Rehabilitation Costs, which is consistent, from a materiality perspective, with SRK's estimate.

In our valuation assessment of the equity value of the ERA Shares, we have deducted A$1,371 million, being the net present value[133] of the assessed Outstanding Ranger Rehabilitation Costs.

5.1.5 Tax losses and other tax benefits

As at 30 June 2022, the Company had A$258 million of accumulated net tax losses that could be utilised to offset against future taxable income. Further, in the following years, the Company will incur the Ranger Rehabilitation costs estimated at A$1,416 million (undiscounted and nominal) by SRK, which could potentially increase the available tax losses by a further A$424 million[134].

In our valuation assessment, we have considered both the Existing Tax Losses and the Future Tax Deductions, but we have excluded any losses that ERA may accumulate from the future potential development of the Jabiluka Mine[135].

The majority of the Existing Tax Losses are in relation to the Rehabilitation Costs incurred up to 30 June 2022 amounting to A$410 million. None of the Selected Trading Peers have incurred this type of rehabilitation expenses recently and accordingly, we are of the opinion that it is appropriate to consider if any value attaches the Existing Tax Losses even if we have selected a market based methodology.

Assuming ERA does not pursue the acquisition of new profitable businesses and having regard to the business as-is, ERA may be able to utilise the Existing Tax Losses and Future Tax Deductions against potential future earnings generated by the Jabiluka Mine if the development is approved by the Traditional Owners and relevant authorities. However, the value of the tax losses under this scenario is difficult to quantify on a reasonable basis given that future potential cash flows from the Jabiluka Mine have not been recently updated or independently reviewed.

From a potential purchaser perspective, the utilisation of the Existing Tax Losses would be subject to meeting either the continuity of ownership test ("COT") or the continuity of business tests ("CBT").

The COT is satisfied where shares comprising more than 50% of the voting, dividend and capital rights have been held by the same beneficial owners from the beginning of the income year in which the loss was incurred until the end of the income year of utilisation (called the ownership test period).

The CBT only applies when the COT fails and it requires a comparison of the business carried out by ERA immediately prior to the failure of the COT to the business carried on in the income year of the recoupment of the losses.

[133] Utilising the Australian cash rate as at 14 September 2022 of 2.35%.
[134] Computed using 30% Australian Corporate tax rate.
[135] Future exploration and development and construction costs.

If 100% of the issued share capital in ERA is acquired by an acquiring entity such that ERA joins the acquiring entities income tax consolidated group, the Existing Tax Losses could be used to shelter income in the acquiring entities tax consolidated group. This will require satisfaction of the above noted COT or CBT test. Further, the Existing Tax Losses will only be able to be utilised based on an available fraction ("AF"). The AF is calculated as the ratio of the market value of ERA (reduced by the 2019 Entitlement Offer)[136] as a proportion of the market value of the acquirer (including ERA's value). This percentage is applied to Australian taxable income of the acquirer to assess the percentage of utilisation of the Existing Tax Losses. The AF can further reduce in future periods if there are certain transactions entered into by the acquiring entity. Most notably, any capital raisings or any non-arm's length transactions could also impact the AF.

Overall due to ERA's historic and current shareholder structure, we are of the opinion that a pool of potential purchaser may attribute limited or no value to the Existing Tax Losses, whereas they are valuable for Rio Tinto as it is expected to pass the COT. However, this represents special value for Rio Tinto and it should not be included in the fair market value assessment of ERA.

Regarding the Future Tax Deductions in conjunction with the Outstanding Ranger Rehabilitation Costs, we note that any potential purchaser, including Rio Tinto, would be in a position to utilise them in the year they are incurred, subject to generating sufficient taxable income. Given the specific circumstances of ERA with the large Ranger Rehabilitation liability and the uncertainty in relation to the future development of the Jabiluka Mine, it is reasonable to assume that a pool of potential purchasers of ERA is likely to include large corporations with significant earnings generation capacity. The assumption on which this rests is that the future development costs will represent costs that are deductible and not on capital account for tax purposes.

We have estimated the fair market value of the Future Tax Deductions between A$256 million and A$264 million based on the net present value in the year they are incurred. In our assessment, we have considered only the costs to be incurred beyond January 2023 to reflect timing of a potential change of ownership.

It is noted that the tax rules associated with tax losses and deductibility of mining costs are complex and technical matters. Our valuation approach outlined above is not binding on the Commissioner of Taxation and it is not assurance that the Commissioner of Taxation would follow our views or that the actual tax treatment adopted by Rio Tinto or other parties would follow this approach.

5.1.6 Net Cash

The table below summarise the net cash position as at 30 June 2022.

ERA - Net cash balance A$ million	
Cash sources at 30 June 2022:	
Cash at bank	132
Cash held in the Trust Fund	537
Total cash resources as at 30 June 2022	**669**
Corporate debt as at 30 June 2022	-
Net cash as at 30 June 2022	**669**

[136] We have not deducted the Interim Entitlement Offer as it will increase the value of ERA by the same amount, so it is considered neutral.

Sources: GTCF analysis, ERA financial accounts as at 30 June 2022

As mentioned in section 5.1.4, since we have deducted the Outstanding Ranger Rehabilitation Costs, we have included the cash held in the Trust Fund in our valuation assessment. The Trust Fund is intended to provide security against the estimated cost of closing and rehabilitating the Ranger Mine.

5.1.7 Shares outstanding

As at the date of this report, the Company has 3,691,383,198 fully paid ordinary shares.

5.2 Quoted Security Price Method

The assessed value per share based on the trading price is an exercise of professional judgement that takes into consideration the depth of the market for listed securities, the volatility of the trading price, and whether or not the trading price is likely to represent the underlying value of the ERA Shares.

5.2.1 Liquidity analysis

In accordance with the requirements of RG 111, we have analysed the liquidity of ERA shares before potentially relying on them for the purpose of our valuation assessment. In assessing the liquidity of the ERA Shares, we have considered a number of data points and indicators. These include the level of free float, trading volumes (in both percentage and $ terms), bid-ask spreads, investment broker coverage and whether or not the trading prices reacted to the release of price sensitive information such as pertinent announcements and changes in uranium prices, amongst other things.

Below we set out the monthly trading volumes over the last six months as a percentage of the total shares outstanding as well as free float shares outstanding.

Month end	Volume traded ('000)	Monthly VWAP ($)	Total value of shares traded ($'000)	Volume traded as % of total shares	Cumulative Volume traded as % of total shares	Volume traded as % of free float shares	Cumulative Volume traded as % of free float shares
Mar 2022	6,555	0.3610	2,366	0.2%	0.2%	3.1%	3.1%
Apr 2022	7,239	0.3670	2,656	0.2%	0.4%	3.4%	6.4%
May 2022	4,148	0.3080	1,278	0.1%	0.5%	1.9%	8.4%
Jun 2022	6,885	0.2204	1,518	0.2%	0.7%	3.2%	11.6%
Jul 2022	2,599	0.2241	582	0.1%	0.7%	1.2%	12.8%
Aug 2022	3,264	0.2496	815	0.1%	0.8%	1.5%	14.3%
Min				**0.07%**		**1.21%**	
Average				**0.14%**		**2.39%**	
Median				**0.14%**		**2.50%**	
Max				**0.20%**		**3.38%**	

Sources: S&P Global, GTCF analysis

We have also considered the value of the ERA Shares traded in the last six months, including the daily average value of the ERA Shares traded as set out below.

Energy Resources of Australia Limited - Liquidity Analysis Month end	Average daily value traded	Average daily volume traded
Month ended		
Mar 2022	102,873	284,991
Apr 2022	126,494	344,704
May 2022	58,073	188,565
Jun 2022	68,990	312,974
Jul 2022	27,734	123,777
Aug 2022	35,420	141,907
Min	**27,734**	**123,777**
Average	**69,931**	**232,820**
Median	**63,531**	**236,778**
Max	**126,494**	**344,704**

Source: S&P Global, GTCF analysis

With regard to the above analysis, we note that:

- The level of free float for ERA is low at c. 5.8% given that Rio Tinto and Packer & Co hold 86.33% and 7.9% respectively of the issued capital.

- Over the last six months, the daily value of ERA Shares traded was only A$69,931[137], this is low compared with the Selected Trading Peers as outlined in the table below.

	Fission Uranium Corp.		Global Atomic Corporation		Denison Mines Corp.		NexGen Energy Ltd.	
Month end	Average daily value traded	Average daily volume traded	Average daily value traded	Average daily volume traded	Average daily value traded	Average daily volume traded	Average daily value traded	Average daily volume traded
Mar 2022	3,036,752	3,185,976	2,380,688	523,046	8,526,496	4,195,286	14,951,348	2,155,600
Apr 2022	2,337,055	2,398,692	2,138,299	505,298	7,242,227	3,621,201	13,007,642	1,812,703
May 2022	1,209,293	1,588,305	1,599,919	507,917	4,807,081	3,239,891	10,520,797	1,853,896
Jun 2022	879,552	1,231,701	863,615	292,419	3,324,593	2,288,289	7,865,177	1,470,197
Jul 2022	768,494	1,173,986	720,564	241,808	2,049,490	1,466,444	4,994,605	1,005,079
Aug 2022	909,579	1,197,212	993,026	283,417	3,282,728	2,043,545	6,419,957	1,191,273
Min	**768,494**	**1,173,986**	**720,564**	**241,808**	**2,049,490**	**1,466,444**	**4,994,605**	**1,005,079**
Average	**1,523,454**	**1,795,979**	**1,449,352**	**392,317**	**4,872,103**	**2,809,109**	**9,626,588**	**1,581,458**
Median	**1,059,436**	**1,410,003**	**1,296,473**	**398,858**	**4,065,837**	**2,764,090**	**9,192,987**	**1,641,450**
Max	**3,036,752**	**3,185,976**	**2,380,688**	**523,046**	**8,526,496**	**4,195,286**	**14,951,348**	**2,155,600**

Sources: S&P Global, GTCF analysis

- ERA is currently not covered by any investment brokers.

- ERA complies with the full disclosure regime required by the ASX. As a result, the market is fully informed about the performance of the Company. ERA provides updates to the market on a regular basis with information regarding its operations and future outlook for both Ranger Mine and Jabiluka Mine sites.

[137] Corresponding to 0.388 million in shares traded, representing 0.00011% of 3.69 billion ordinary shares outstanding.

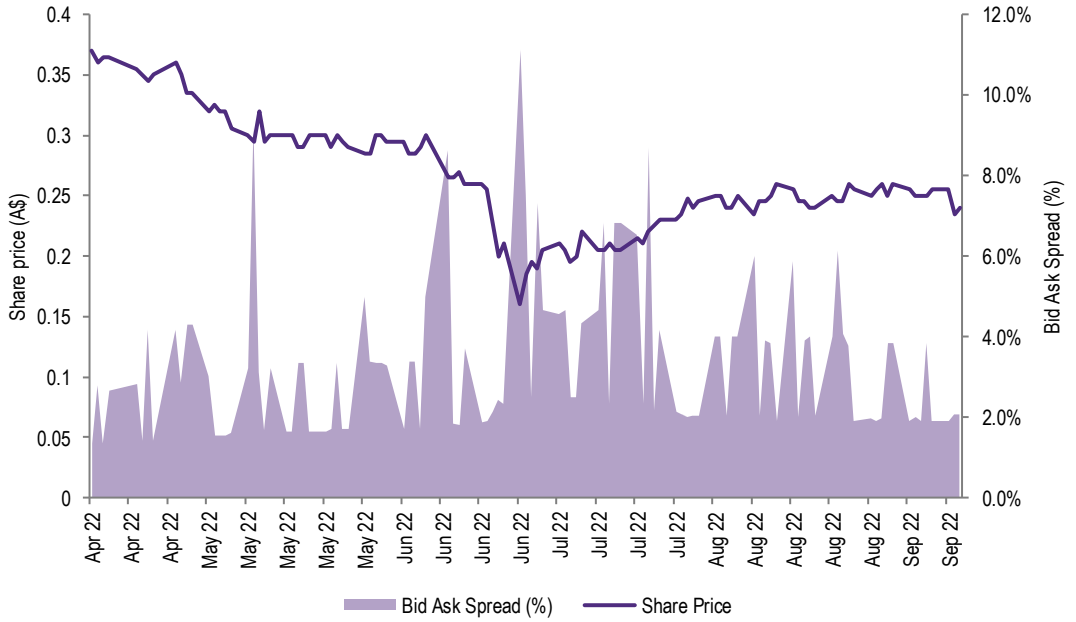
As set out below, the level of free float of ERA shares is lower than the Selected Trading Peers from the last six months. In addition, the average monthly volume traded as percentage of free float shares is also lower than most of the Selected Trading Peers.

Liquidity analysis			Average volume traded as a % of total shares	Average volume traded as a % of free float shares	Cumulative volume traded as a % of total shares	Cumulative volume traded as a % of free float shares
Company	Country	Free float (%)				
Energy Resources of Australia Ltd	Australia	5.8%	0.1%	2.4%	0.8%	14.3%
Fission Uranium Corp.	Canada	85.0%	5.9%	7.1%	35.2%	42.6%
Global Atomic Corporation	Canada	87.5%	4.9%	5.7%	29.5%	34.4%
Denison Mines Corp.	Canada	99.5%	7.6%	7.7%	45.6%	45.9%
NexGen Energy Ltd.	Canada	94.3%	7.3%	7.6%	43.7%	45.6%
Low		**85.0%**	**4.9%**	**5.7%**	**29.5%**	**34.4%**
Average		**91.6%**	**6.4%**	**7.0%**	**38.5%**	**42.2%**
Median		**90.9%**	**6.6%**	**7.4%**	**39.4%**	**44.1%**
High		**99.5%**	**7.6%**	**7.7%**	**45.6%**	**45.9%**

Sources: S&P Global, GTCF analysis

Where a company's stock is illiquid, the market typically observes a difference between the 'bid' and 'ask' price for the stock as there may be a difference in opinion between the buyer and seller on the value of the stock. We have set out below the bid and ask price of ERA Shares since listing.

ERA share price and Bid/Ask Spread over the last 6 months



Sources: S&P Global, GTCF analysis

The average bid-ask spread was 3.3% since April 2022 which is slightly higher than the Selected Trading Peers as outlined below.

Liquidity analysis Company	Country	Market Cap (A$m)	12 month average Bid-Ask Spread
Energy Resources of Australia Ltd	Australia	923	3.3%
Fission Uranium Corp.	Canada	603	2.4%
Global Atomic Corporation	Canada	754	2.5%
Denison Mines Corp.	Canada	1,575	1.2%
NexGen Energy Ltd.	Canada	2,915	1.1%
Average (excluding ERA)			**1.8%**
Median (excluding ERA)			**1.8%**

Sources: S&P Global, GTCF analysis

Based on the limitations above and the additional discussions and analysis set out in the executive summary, we have considered the trading prices of ERA as a cross check only.

6 Sources of information, disclaimer and consents

6.1 Sources of information

In preparing this report Grant Thornton Corporate Finance has used various sources of information, including:

- Annual reports/consolidated accounts of ERA for CY20, CY21 and H1 CY22.
- Management accounts.
- Management presentations and Board reports.
- Internal Projections.
- Minutes of Board meetings.
- Access to other relevant documents in the Data Room.
- Transaction databases such as S&P Global Capital IQ and Mergermarket.
- Industry reports provided by the Company.
- Various broker reports for the listed peers (and for the Company, nothing the Company is currently not covered by any investment brokers).
- Other publicly available information.

In preparing this report, Grant Thornton Corporate Finance has also held discussions with, and obtained information from, Management of ERA and its advisers.

6.2 Limitations and reliance on information

This report and opinion is based on economic, market and other conditions prevailing at the date of this report. Such conditions can change significantly over relatively short periods of time.

Grant Thornton Corporate Finance has prepared this report on the basis of financial and other information provided by the Company, and publicly available information. Grant Thornton Corporate Finance has considered and relied upon this information. Grant Thornton Corporate Finance has no reason to believe that any information supplied was false or that any material information has been withheld. Grant Thornton Corporate Finance has evaluated the information provided by the Company through inquiry, analysis and review, and nothing has come to our attention to indicate the information provided was materially misstated or would not afford reasonable grounds upon which to base our report. Nothing in this report should be taken to imply that Grant Thornton Corporate Finance has audited any information supplied to us, or has in any way carried out an audit on the books of accounts or other records of the Company.

This Report has been prepared to assist the IBC in determining the Offer Price for the purpose of the Interim Entitlement Offer. This Report should not be used for any other purpose.

ERA has indemnified Grant Thornton Corporate Finance, its affiliated companies and their respective officers and employees, who may be involved in or in any way associated with the performance of services contemplated by our engagement letter, against any and all losses, claims, damages and liabilities arising out of or related to the performance of those services whether by reason of their negligence or otherwise, excepting gross negligence and wilful misconduct, and which arise from reliance on information provided

by the Company, which the Company knew or should have known to be false and/or reliance on information, which was material information the Company had in its possession and which the Company knew or should have known to be material and which did not provide to Grant Thornton Corporate Finance. The Company will reimburse any indemnified party for all expenses (including without limitation, legal expenses) on a full indemnity basis as they are incurred.

6.3 Consents

Grant Thornton Corporate Finance consents to the issuing of this report in the form and context in which it is included in the relevant communication to be sent to ERA Shareholders in relation to the Interim Entitlement Offer. Neither the whole nor part of this report nor any reference thereto may be included in or with or attached to any other document, resolution, letter or statement without the prior written consent of Grant Thornton Corporate Finance as to the form and context in which it appears.

Appendix A – Valuation methodologies

Discounted future cash flows

An analysis of the net present value of forecast cash flows or DCF is a valuation technique based on the premise that the value of the business is the present value of its future cash flows. This technique is particularly suited to a business with a finite life. In applying this method, the expected level of future cash flows are discounted by an appropriate discount rate based on the weighted average cost of capital. The cost of equity capital, being a component of the WACC, is estimated using the Capital Asset Pricing Model. Predicting future cash flows is a complex exercise requiring assumptions as to the future direction of the company, growth rates, operating and capital expenditure and numerous other factors. An application of this method generally requires cash flow forecasts for a minimum of five years.

Reserve and Resource Multiple Method

The capitalisation of reported resources multiplied by appropriate resource multiple is a suitable and common valuation method for mining companies. This approach involves a review of the multiples at which shares in listed companies in the same industry sector trade on the share market. These multiples give an indication of the price payable by portfolio investors for the acquisition of a parcel shareholding in the company.

NAV method

The amount that would be distributed to shareholders on an orderly realisation of assets is based on the assumption that a company is liquidated with the funds realised from the sale of its assets, after payment of all liabilities, including realisation costs and taxation charges that arise, being distributed to shareholders.

Market value of quoted securities

Market value is the price per issued share as quoted on the ASX or other recognised securities exchange. The share market price would, prima facie, constitute the market value of the shares of a publicly traded company, although such market price usually reflects the price paid for a minority holding or small parcel of shares, and does not reflect the market value offering control to the acquirer.

Sum-of-part method

The aggregation of the estimated fair market value of the company underlying assets, before adding the net cash position and any other surplus assets or liabilities as at the valuation date. In order to assess the value of the company underlying asset and liabilities, different valuations approach could be used.

Appendix B – Comparable companies descriptions

Company	Description
Energy Resources of Australia Ltd	Energy Resources of Australia Ltd operates as a uranium producer. It holds a 100% interest in the Jabiluka mineral lease. The company was incorporated in 1980 and is headquartered in Darwin, Australia. Energy Resources of Australia Ltd is a subsidiary of North Limited.
NexGen Energy Ltd.	NexGen Energy Ltd., an exploration and development stage company, engages in the acquisition, exploration, and evaluation and development of uranium properties in Canada. Its principal asset is the Rook I project comprising 32 contiguous mineral claims totalling an area of 35,065 hectares located in the southwestern Athabasca Basin of Saskatchewan. The company is headquartered in Vancouver, Canada.
Denison Mines Corp.	Denison Mines Corp. engages in the acquisition, exploration, development, extraction, processing, selling of, and investing in uranium properties in Canada. Its flagship project is the 95% interest owned Wheeler River uranium project located in the Athabasca Basin region in northern Saskatchewan. The company was formerly known as International Uranium Corporation and changed its name to Denison Mines Corp. in December 2006. Denison Mines Corp. was founded in 1997 and is headquartered in Toronto, Canada.
Global Atomic Corporation	Global Atomic Corporation engages in the acquisition, exploration, and development of uranium properties in Niger. It owns 100% interest in the Dasa deposit located in the Republic of Niger. The company also processes electric arc furnace dust into zinc concentrates, which is sold to zinc smelters. Global Atomic Corporation is headquartered in Toronto, Canada.
Fission Uranium Corp.	Fission Uranium Corp. engages in the acquisition, exploration, and development of uranium resource properties in Canada. Its primary asset is the 100% owned Patterson Lake South property that consists of 17 contiguous mineral claims covering an area of 31,039 hectares located in the Athabasca Basin region of Saskatchewan. The company was incorporated in 2013 and is headquartered in Kelowna, Canada.
Bannerman Energy Ltd	Bannerman Energy Ltd engages in the exploration and development of uranium properties in Namibia, Southern Africa. Its principal property is its 95% owned Etango Project located in the Erongo uranium mining region of Namibia. The company was formerly known as Bannerman Resources Limited and changed its name to Bannerman Energy Ltd in July 2021. Bannerman Energy Ltd was incorporated in 2005 and is based in Subiaco, Australia.
GoviEx Uranium Inc.	GoviEx Uranium Inc., a mineral resources company, engages in the acquisition, exploration, and development of uranium projects in Africa. The company's flagship property is the Madaouela project located in north-central Niger. It also owns 100% interest in the Mutanga project that consists of 3 mine permits situated to the south of Lusaka, Zambia; and the Falea project located in Mali. The company was formerly known as Govi High Power Exploration Inc. and changed its name to GoviEx Uranium Inc. in September 2008. GoviEx Uranium Inc. was incorporated in 2006 and is headquartered in Vancouver, Canada.
Berkeley Energia Limited	Berkeley Energia Limited engages in the exploration and development of uranium properties in Spain. It primarily holds interest in the Salamanca project located in western Spain. The company was formerly known as Berkeley Energy Limited and changed its name to Berkeley Energia Limited in November 2015. Berkeley Energia Limited was incorporated in 1991 and is based in Perth, Australia.
Aura Energy Limited	Aura Energy Limited, together with its subsidiaries, engages in the evaluation, development, and exploration of mineral properties in Sweden and Mauritania. It primarily explores for uranium, vanadium, gold, and base metals. The company owns 100% interests in the Tiris uranium project located in Mauritania; and the Häggån vanadium project located in Sweden. It also holds interest in the Tasiast South gold project located in Mauritania. The company was incorporated in 2005 and is based in Carlton, Australia.
Forsys Metals Corp.	Forsys Metals Corp., an exploration stage company, engages in the acquisition, exploration, and development of mineral properties in Namibia, Africa. The company explores for uranium and gold mineral properties. Its flagship project is Norasa Uranium Project, which includes the Valencia project covering an area of 735.6 hectares located in the south-west of the town of Usakos in central-west Namibia; and the Namibplaas project located in the northeast of Valencia. The company was formerly known as Forsys Technologies Inc. and changed its name to Forsys Metals Corp. in June 2005. Forsys Metals Corp. was incorporated in 1985 and is headquartered in Toronto, Canada.
Deep Yellow Limited	Deep Yellow Ltd is an Australian listed company that engages in the exploration and development of uranium mines in both Africa and Australia. Establishing in 1954, the company has two current advanced stage projects, located in Namibia, Africa and Western Australia, with another two projects in early stages located in Namibia and the Northern Territory. The company has another two current projects in the exploration stage in Namibia and is headquartered in Western Australia.

Company	Description
Toro Energy Limited	Toro Energy Limited is an Australian listed company engaged in exploration and development of uranium, gold, and base metals. The company's flagship project is the Wiluna Uranium Project, located in Western Australia, which consists of uranium deposits that have been approved for mining by the Federal and State governments of Australia. The company also has further uranium exploration projects in Western Australia, with minority interests in uranium ventures in Namibia and Canada.
Elevate Uranium Limited	Elevate Uranium Ltd, an uranium exploration company, engages in the exploration and evaluation of uranium deposits in Namibia and Australia. Its flagship projects include the Koppies, Hirabeb, Namib IV, and Marenica located in Namibia. The company also holds interests in the Angela, Thatcher Soak, Oobagooma, and Minerva located in Australia. The company was formerly known as Marenica Energy Limited and changed its name to Elevate Uranium Ltd in May 2021. Elevate Uranium Ltd was incorporated in 1978 and is based in West Perth, Australia.
Laramide Resources Limited	Laramide Resources Ltd. engages in the mining, exploration, and development of uranium assets in Australia, Canada, and the United States. It holds 100% interest in the Church rock uranium project, the Crownpoint uranium project, the La Jara Mesa Uranium project, and the La Sal Uranium project located in the United States; and holds 100% interest in the Westmoreland Uranium project and the Murphy uranium project located in Australia. The company was incorporated in 1980 and is headquartered in Toronto, Canada.
Alligator Energy Limited	Alligator Energy Limited engages in the mineral exploration activities in Australia and Italy. The company primarily explores for uranium, nickel, cobalt, copper, and other energy mineral deposits. It holds interests in the Alligator Rivers Uranium Project located in Northern Territory; Samphire Uranium Project situated in Whyalla Region, South Australia; and Big Lake Uranium Project situated in Cooper Basin, South Australia. The company has a strategic relationship with Traxys North America LLC to provide uranium marketing services for future uranium production, long term offtake contracting, project development financing, and assistance in uranium project acquisition opportunities. Alligator Energy Limited was incorporated in 2009 and is headquartered in Brisbane, Australia.
IsoEnergy Ltd	IsoEnergy Ltd. engages in the acquisition, development, evaluation, and exploration of uranium mineral properties. It primarily holds interest in the Larocque East, Geiger, Thorburn Lake, Radio, Hawk, Ranger, and Collins Bay Extension properties in the Athabasca Basin of Saskatchewan, Canada, as well as interests in various other properties. The company was incorporated in 2016 and is headquartered in Saskatoon, Canada. IsoEnergy Ltd. is a subsidiary of NexGen Energy Ltd.
GoviEx Uranium Inc	GoviEx Uranium Inc., a mineral resources company, engages in the acquisition, exploration, and development of uranium projects in Africa. The company's flagship property is the Madaouela project located in north-central Niger. It also owns 100% interest in the Mutanga project that consists of 3 mine permits situated to the south of Lusaka, Zambia; and the Falea project located in Mali. The company was formerly known as Govi High Power Exploration Inc. and changed its name to GoviEx Uranium Inc. in September 2008. GoviEx Uranium Inc. was incorporated in 2006 and is headquartered in Vancouver, Canada.

Sources: S&P Global

Appendix C – Glossary

$, A$ or AUD	Australian Dollar
1982 Jabiluka Agreement	Jabiluka Mineral Lease granted to Pancontinental Mining Limited
2019 Entitlement Offer	ERA 2019 Entitlement Offer
2019 Feasibility Study	ERA Mine closure Feasibility Study
Act	Atomic Energy Act 1953
AF	Available Fraction
AFR Article	Australian Financial Review Article
Annual Plan	ERA Annual Plan of Rehabilitation
APES 225	APES 225 Valuation Services
AREVA	AREVA Resources Canada
ASIC	Australian Securities Investments Commission
ASX	Australian Securities Exchange
Care and Maintenance Agreement	Long-Term Care and Maintenance Agreement
CAGR	Compound average growth rate
CAPM	Capital Asset Pricing Model
CBT	Continuity of Business Test
CCI	Consumer Confidence Index
CGNPC	CGNPC Uranium Resources URC
CIM	Canadian Institute of Mining Metallurgy and Petroleum
CNSC	Canadian Nuclear Safety Commission
COP26	United Nations Climate Change Conference
COT	Continuity of Ownership
COVID-19	Coronavirus pandemic
Cth, Corporations Act	Corporations Act 2001 (Cth)
CYXX	Financial year ending 31 December 20XX
DCF Method	Discounted cash flow and the estimated realisable value of any surplus assets
Deep Yellow Limited	Deep Yellow Limited
Denison	Denison Mines Corp
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPR	European Pressurised Water Reactor
ERA	Energy Resources of Australia Ltd
ERA Shares	Ordinary shares of ERA
EU	European Union
EV	Enterprise Value
Existing Tax Losses	ERA Existing Tax Losses
Extract	Extract Resources Limited

FAM	Forward Availability Model
Fed	United States Federal Reserve
FEED	Front End Engineering & Design
FID	Financial Investment Decision
Fission	Fission Uranium Corp
FME Method	Future Maintainable Earnings Model
Franking Credits	ERA Franking Credits
FSG	Financial Services Guide
Fukushima disaster	2011 Fukushima Nuclear Disaster
Future Tax Deductions	ERA Future Tax deductions associated with the Outstanding Rehabilitation Costs
GAC	Gundjeihmi Aboriginal Corporation
Global Atomic	Global Atomic Corporation
GTCF, Grant Thornton, or Grant Thornton Corporate Finance	Grant Thornton Corporate Finance Pty Ltd (ACN 003 265 987)
Hathor	Hathor Exploration Limited
IBC	Independent Board Committee
IER or Report	Independent Expert's Report
Interim Entitlement Offer	ERA 2022 Interim Entitlement Offer
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
ISL/ISR	In Situ Leaching (Type of mining method for uranium)
Jabiluka Mine	Jabiluka Project Area
Jabiluka Project Area, Jabiluka Mine or Jabiluka	Jabiluka Project Area
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
Kintyre	Kintyre Uranium Project
Kw	Kilowatt
kWe	Kilowatt electric
lb	Pound
LCOE	Levelised Cost of Producing Electricity
LOM	Life of Mine
MCP	Mining Closure Plan
Mirarr Traditional Owners, Traditional Owners	Aboriginal Mirarr Traditional Owners
Mlb	Million pound
MLJV	McClean Lake Joint Venture
MLN1, Jabiluka Mineral Lease	Jabiluka Mineral Lease
MWh	Megawatt - Hour
NAV Method	Net Asset Value Method
NexGen	NexGen Energy Ltd

NLC	Northern Land Council
NPV	Net Present Value
Offer Price	Proposed share price from Interim Entitlement Offer
OOM Study	Order of Magnitude Study
Outstanding Ranger Rehabilitation Costs	Outstanding Ranger Rehabilitation Costs as at 30 June 2022
Pcp	Previous corresponding period
PEA	Preliminary Economic Assessment
Per lb U_3O_8	Pound per Uranium Oxide
PES	Accounting Professional & Ethical Standards Board
PFS	Pre-Feasibility Study
PLS	Patterson Lake South property
PPM	Parts Per Million
PWR	Pressurised Water Reactors
QSPM, QSP Method, Quoted Security Price Method	Quoted Security Price Method
Quoted Security Price Method	Quoted price for listed securities when there is a liquid and active market
Ranger 3 Deeps	Ranger 3 Deeps Project
Ranger Environmental Requirements	Ranger Environmental Requirements outlined in the Ranger Authority
Ranger Project Area, Ranger Mine, Ranger	Ranger Project Area
Ranger Rehabilitation	Ranger Rehabilitation Project
Ranger Rehabilitation Costs	Ranger Rehabilitation Project Costs including costs incurred from 1 January 2019
RG111	ASIC Regulatory Guide 111 "Contents of experts reports"
RG112	ASIC Regulatory Guide 112 "Independence of experts"
RG60	Regulatory Guide 60 "Scheme of arrangement"
Rio Tinto	Rio Tinto Limited
RMA, Ranger Mill Alternative	Ranger Mill Alternative
Selected Trading Peers, Listed Peers	Comparable listed Trading Peers
SMR	Small Modular Reactors
SOP	Sum of Parts Method (Approach)
SPUT	The Sprott Physical Uranium Trust
SRK	SRK Consulting (Australasia) Pty Ltd
SRK Report	SRK Consulting (Australasia) Pty Ltd Report
Tax Deductions	Existing and future tax deductions
TERP	Theoretical Ex-Rights Price
Transaction Multiples	The multiples implied by acquisitions of companies with broadly similar operations
Trust Fund	Ranger Rehabilitation Special Account
tU	Tonnes of Uranium

U_3O_8	Uranium Oxide
UEC	Uranium Energy Corp
UEX Corporation	UEX
UF_6	Uranium Hexafluoride
UNESCO	United Nations Educational Scientific and Cultural Organisation
US$	United States Dollar
VWAP	Volume Weighted Average Price
Yoy	Year on year

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Appendix D – SRK Report

Independent Specialist Report

Assisting Grant Thornton to determine the fair value of ERA shares under Part 6A.4 of the *Corporations Act 2001* (Cth)

Prepared for:
Grant Thornton Corporate Finance Pty Ltd
Energy Resources of Australia Ltd's Independent Board Committee

SRK Consulting (Australasia) Pty Ltd ▪ GRT007 ▪ September 2022

srk consulting

Independent Specialist Report

Assisting Grant Thornton to determine the fair value of ERA shares under Part 6A.4 of the *Corporations Act 2001* (Cth)

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Useful Definitions

This list contains definitions of symbols, units, abbreviations, and terminology that may be unfamiliar to the reader.

µm or um	micrometres
°C	degrees Celsius
A$	Australian dollars
AAEC	Australian Atomic Energy Commission
AAS	atomic absorption spectroscopy
AHC	Australian Heritage Commission
AIG	Australian Institute of Geoscientists
AMC	AMC Consultants Pty Ltd
Anticline	A ‘∩’ shaped fold or structure in stratified rocks with the oldest rocks in the centre
ARRTC	Alligator Rivers Region Technical Committee
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
AusIMM	Australasian Institute of Mining and Metallurgy
BAC	base acquisition cost
Basin	A general region with an overall history of subsidence and thick sedimentary accumulation
Bn	billion
Ca	calcium
Cameco	Cameco Australia Pty Ltd
CCD	counter current decantation
Company	Energy Resources of Australia Ltd
Corporations Act	*Corporations Act 2001* (Cth)
Cth	Commonwealth
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DCF	discounted cashflow
DD	diamond drilling
Deposit	An anomalous occurrence of a specific mineral or minerals within the Earth’s crust
DITT	Northern Territory Department of Industry, Tourism and Trade
DME	Northern Territory Department of Mines and Energy
Drill core	A solid, cylindrical sample of rock produced by diamond drilling
EIS	Environmental Impact Study
ELA	exploration licence application
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ERA	Energy Resources of Australia Ltd
ERISS	Environmental Research Institute of the Supervising Scientist

EZ	Electrolytic Zinc Company of Australasia Limited
Fault	A fracture or a fracture zone along which there has been displacement of the two sides relative to one another parallel to the fracture. The displacement may be a few millimetres or many kilometres.
FS	Feasibility Study
FWS	Footwall Sequence
g/t	grams per tonne
GAC	Gundjeihmi Aboriginal Corporation
Geophysical data	Data from the branch of geology that studies the physics of the Earth, using the physical principles underlying such phenomena as seismic waves, heat flow, gravity, and magnetism.
GLpa	gigalitres per annum
Grant Thornton	Grant Thornton Corporate Finance Pty Ltd
ha	hectares
HWS	Hanging Wall Sequence
IBC	Independent Board Committee of ERA
IER	Independent Experts Report
ISL	in situ leach
ISR	Independent Specialist Report
IVSC	International Valuation Standards Committee
JMA	Jabiluka Mill Alternative
JORC Code	Australasian Code for the reporting of Exploration Results, Mineral Resources and Ore Reserves – the JORC Code 2012 edition
JV	joint venture
k	thousands
KKN	Key Knowledge Need
km^2	square kilometres
koz	kilo or thousand ounces
lb	pounds
LMS	Lower Mine Sequence
LOM	life-of-mine
LTCMA	Long-Term Care and Maintenance Agreement dated 25 February 2005 between Mirarr Gundjeihmi Aboriginal People, Energy Resources of Australia and the Northern Land Council on the long-term management of the Jabiluka lease area.
m	metres
M	millions
m^3/s	cubic metres per second
Ma	millions of years old
MCP	Mine Closure Plan
MEE	multiples of exploration expenditure
ML	mineral lease

Mlb	million pounds
MLN	Mineral Lease North
mm	millimetres
MRE	Mineral Resource Estimate
Mt	million tonnes
MTC	Minesite Technical Committee
Mtpa	million tonnes per annum
NLC	Northern Land Council, a registered Native Title Body
North	North Limited
NT	Northern Territory, Australia
OoM	Order of Magnitude
Pancontinental	Pancontinental Mining Limited
Peko	Peko-Wallsend Operations Ltd
PER	Public Environment Report
PFS	Pre-feasibility Study
PGE	platinum group elements
ppm	parts per million
QAQC	quality assurance and quality control
R3D	Ranger 3 Deeps
RG111	Regulatory Guide 111 Contents of expert reports
RICS	Royal Institution of Chartered Surveyors
RMA	Ranger Mill Alternative
RPA	Ranger Project Area
RPEEE	reasonable prospects for eventual economic extraction
S&P Capital IQ Pro	A global intelligence database platform – https://www.capitaliq.spglobal.com/
SAG	semi-autogenous grind
SAL	Stratigraphic Assay Level
SRK	SRK Consulting (Australasia) Pty Ltd
SSB	Supervising Scientific Branch
Sutton	Sutton Motors Pty Ltd
SX	solvent extraction
Syncline	A ‘U’-shaped fold or structure in stratified rocks, with youngest rocks in the centre.
t	tonnes
t/m^3	tonnes per cubic metre
Trench	The excavation of a horizontally elongate pit (trench), typically up to 2 m deep and up to 1.5 m wide in order to access fresh or weathered bedrock and take channel samples across a mineralised structure. The trench is normally orientated such that samples taken along the longest wall are perpendicular to the mineralised structure.
U_3O_8	uranium oxide

UMS	Upper Mine Sequence
US$	United States dollars
VALMIN	Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets 2015 – The VALMIN Code 2015 edition
Vimy	Vimy Resources Limited
WRI	Wage Rate Index
XRF	x-ray fluorescence

Executive Summary

SRK Consulting (Australasia) Pty Ltd (SRK) understands that Grant Thornton Corporate Finance Pty Ltd (Grant Thornton) has been engaged by the Independent Board Committee (IBC) of Energy Resources of Australia Limited (ERA or the Company) to prepare a valuation under Part 6A.4 of the *Corporations Act 2001* (Cth) and in accordance with Australian Securities and Investments Commission (ASIC) guidance.

Grant Thornton's Independent Experts Report (IER) incorporating its valuation will assess the fair value of ERA shares to assist the IBC in determining the offer price of a proposed non-underwritten, renounceable entitlement offer (Interim Entitlement Offer). The Interim Entitlement Offer is required to continue with planned Ranger rehabilitation works on an optimised basis until the end of 2023.

Grant Thornton has subsequently contacted SRK to provide an Independent Specialist Report (ISR) incorporating a technical assessment and valuation of ERA's mineral assets to accompany its IER. The IER and ISR may be referred to or extracted in whole or in part (with the consent of the relevant author), in materials released to the Australian Securities Exchange (ASX) and/or distributed to ERA shareholders in connection with the Interim Entitlement Offer (Offer Materials).

ERA is an ASX listed company that operates the Ranger uranium mine (now being rehabilitated) and holds the Jabiluka Mineral Lease (ML) near Jabiru and surrounded by the Kakadu National Park in Australia's Northern Territory (NT). In addition, the Company holds two exploration licence applications (ELAs) located outside and to the north of the Kakadu National Park boundaries.

ERA's projects range from exploration to post-production (rehabilitation and mine closure) assets, with defined and publicly reported JORC Code (2012) Mineral Resources at Jabiluka.

The Ranger Project Area (RPA) has been extensively mined previously with last production in 2021. It is currently the focus of mine closure activities targeting full closure in early 2026 in line with the requirements of the Section 41 Authority for Ranger (also referred to as the Ranger Authority). Recent updates from ERA note that it is currently seeking to amend the legislation requiring closure by this time, with preliminary forecasts for the amended closure timeframe from the Company ranging between the fourth quarter (Q4) 2027 and Q4 2028.

Jabiluka has previously been evaluated by various technical studies (most recently to Order of Magnitude (OoM) level in 2011). Assurances have previously been given by the Company to Traditional Owners that development of Jabiluka would not proceed without their full approval.

SRK's ISR has been prepared in accordance with the guidelines outlined in the *Australasian Code for the Public Reporting of Technical Assessment and Valuation of Mineral Assets* (VALMIN Code, 2015), which incorporates the *Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC Code, 2012).

As defined in the VALMIN Code (2015), Mineral Assets comprise all property including (but not limited to) tangible property, intellectual property, mining and exploration tenure and other rights held or acquired in relation to the exploration, development of, and production from, those tenures. This may include plant, equipment and infrastructure owned or acquired for the development, extraction and processing of minerals relating to that tenure.

Based on its review of the RPA, SRK notes the following:

- According to ERA's 2020 Mine Closure Plan (MCP), the primary goal of closure at Ranger is to rehabilitate the disturbed areas of the RPA, establishing an environment similar to adjacent areas of Kakadu National Park.
- The total area of disturbance in the RPA to be rehabilitated is approximately 1,062 ha.
- ERA has identified two options for cover placement at Pit 3: Option A which involves the placement of a subaqueous cover, and Option D comprising subaerial cover placement. Financial provisioning for closure has been calculated for both options using a commercial based estimate.
- The current closure estimate as reported by ERA to the market is based on Option A and lies in the range from A$1.6 Bn to A$2.2 Bn for total works to be completed (ERA ASX announcement dated 2 February 2022).
- SRK is advised that the financial provision included in ERA's most recent public accounts pertains to Option D (subaerial capping) (refer ERA's ASX announcement dated 30 August 2022).
- A working estimate for project budget and progress tracking as advised by ERA to SRK is A$1,786 M, with a 'total completed' spend to date of A$410 M and estimated 'to complete' costs of A$1,376 M.
- The Company has undertaken closure liability assessments derived via a commercial costing approach as opposed to using a generic liability estimate calculator. SRK believes the commercial costing is more accurate and therefore believes the operation understands its liability as much as is currently possible in the absence of further studies proposed to be undertaken. The Company is currently undertaking a feasibility study (FS) which SRK believes will add benefit in many aspects, in particular (but not limited to), the schedule and the market related rates applied, thereby impacting the actual cost of closure.
- Taking the above findings into account, SRK recommends increasing the contingency included in the provision with the final assessment of the rehabilitation costs to be in the order of A$1,826 M if the preferred Option D is approved.
- There are no Mineral Resources or Ore Reserves reported within the RPA (including the Ranger 3 Deeps deposit) as ERA no longer considers it is able to demonstrate 'reasonable prospects for eventual economic extraction' (RPEEE) as is required by Section 20 of the JORC Code (2012). As such, no work is being conducted on further development options for the Ranger 3 Deeps (R3D) deposit.
- There is a high degree of confidence in the amenability of the R3D underground deposit to processing using a conventional flowsheet in line with the Ranger processing facility used to process the Ranger open pit ores. Geometallurgical assessment and testwork have demonstrated this feed would have similar metallurgical behaviours to the Ranger 3 open pit ores, and while there is an elevated carbonate component to some of the deeper domains, this does not present a material risk to producing a saleable product with high metallurgical recoveries.

- However, the Ranger processing facility is currently being decommissioned, demolished and rehabilitated. No consideration has been made to the future processing options for the R3D deposit. No capital cost has been estimated for a new processing facility, nor new processing operating costs. As a result, from a processing perspective, the R3D Project cannot be valued on a discounted cashflow (DCF) basis.

Based on its review of the Jabiluka Project, SRK notes the following:

- In SRK's opinion, future mining at Jabiluka is unlikely to be able to rely on environmental consents granted on the basis of technical studies and environmental impact assessments completed in 1997. The time required for territory and federal impact assessments is not fixed in statute, but could be expected to take in the order of 6 years, assuming the assessments are conducted under the bilateral assessment process between the NT and the Commonwealth governments. Subordinate approvals will be required before the commencement of on-ground works and these could reasonably be expected to take up to 2 years to secure.
- It is unlikely that a mining management plan for future mining at Jabiluka would be approved until a new agreement with the Northern Land Council (NLC) is executed under the *Aboriginal Land Rights (Northern Territory) Act 1976*. Negotiation of such an agreement could occur concurrently with environmental assessments and would almost certainly take several years to conclude, if an agreement could be reached at all.
- The Jabiluka Project contains Total Measured, Indicated and Inferred Mineral Resources of approximately 302.3 Mlb U_3O_8 at an average grade of 0.55% U_3O_8, which is among the largest, high-grade (+0.25% U_3O_8) uranium deposits in the world. No Ore Reserves are presently defined.
- The Jabiluka II deposit remains open along strike and at depth to the south and east.
- There have been a number of studies completed to investigate the development of the Jabiluka Project over a period of almost 20 years. Previous techno-economic studies (most recently at OoM level in 2011) at Jabiluka envisaged it to be developed by underground mining methods (open stoping incorporating backfill of the stopes with cemented paste fill and access via a conventional decline), with a comparatively small footprint relative to the Ranger open pit mining operation.
- Notwithstanding the high uranium grade, significant tonnage, and there being no technical obstacles to the potential recovery of a saleable product, the Jabiluka metallurgical testwork, processing flowsheet selection, proposed plant location and the associated capital and operating cost estimates are currently not sufficiently advanced to be considered at a pre-feasibility study (PFS) level of confidence. As a result, from a processing perspective, the Jabiluka Project cannot be valued on a DCF basis.
- SRK does not consider the processing related inputs to the financial model shown in *Project Eagle Jackdaw Model Jun 2022.xlsx* to be sufficiently supported for use in a JORC Code (2012) and VALMIN Code (2015) compliant project assessment. SRK has undertaken a high-level review of the processing capital and operating inputs and found the unit costs to be outdated. The basis of this model is derived from the 2011 update of a 2007 OoM study, which is based on a flowsheet and mechanical equipment list derived in circa 2000. A number of inputs to the supplied model are considered to be insufficiently developed, (i.e. to a PFS level of confidence or are now outdated).

- Otherwise, there is a good degree of confidence in the amenability to treat the Jabiluka underground deposit using a conventional process in line with the former Ranger processing facility and the ability to produce a saleable uranium product with high metallurgical recoveries. No material technical related processing risks have been identified to date that would restrict the ability to process this material.

Given the development status of ERA's mineral assets, SRK has used a combination of market and cost approaches to assist Grant Thornton in the valuation of ERA's mineral assets.

In forming its overall opinion regarding the Market Value for each of ERA's mineral assets, SRK has adopted the market valuation approach using comparable market transactions supported by the yardstick approach as a secondary guide for the defined Mineral Resources. In the case of the exploration potential, SRK has also used the comparable market transactions method supported by the geoscientific rating method.

Table ES1 summarises SRK's opinion regarding the current Market Value of ERA's mineral interests in the NT.

Table ES1: Valuation summary of ERA's mineral assets

Project	Value opinion methodology	Low (A$ M)	High (A$ M)	Preferred (A$ M)
Ranger Project	Comparable Transaction	0.62	16.34	7.42
	Yardstick	0.45	7.68	2.78
	Selected	**0.62**	**16.34**	**7.42**
Jabiluka Project	**Selected**	To be undertaken by Grant Thornton		
Cooper Creek	Comparable Transaction	0.40	2.01	1.21
	Geoscientific Method	0.29	1.44	0.86
	Selected	**0.40**	**2.01**	**1.21**
Total (excluding Jabiluka)		**1.02**	**18.35**	**8.63**

Notes: Totals may not add up due to rounding.

Based on the analysis outlined elsewhere in this report, SRK considers the current market is likely to pay between A$1.02 M and A$18.35 M, with a preferred value of A$8.63 M, for ERA's mineral assets (excluding the Jabiluka Project which has been valued separately by Grant Thornton).

1 Introduction

1.1 Background

On 28 July 2022, ERA announced that it had been engaging with its three largest shareholders in relation to a proposed non-underwritten, renounceable entitlement offer, which would seek to raise approximately A$300 M in interim funding required to continue with the planned Ranger rehabilitation works on an optimised basis until the end of 2023 (Interim Entitlement Offer).

SRK understands that Grant Thornton has been engaged by ERA's IBC to prepare an IER on a basis consistent with an independent expert's valuation prepared under Part 6A.4 of the *Corporations Act 2001* (Cth) (Corporations Act) and in accordance with ASIC guidance (including Regulatory Guide 111 Contents of expert reports (RG111)).

Grant Thornton has subsequently contacted SRK to provide an ISR incorporating a technical assessment and valuation of ERA's mineral assets to accompany its IER. The IER and the ISR may be referred to, or extracted in whole or in part (with the consent of the relevant author) in materials released to the ASX and/or distributed to ERA shareholders in connection with the Interim Entitlement Offer (Offer Materials).

ERA is an ASX listed company which previously operated the Ranger uranium mine and holds the Jabiluka ML near Jabiru in Australia's Northern Territory. Based on the Company's most recent Mineral Resources and Ore Reserves statement, Jabiluka Mineral Resources as at 31 December 2021 were estimated at 137,100 t of uranium oxide. ERA no longer reports any Ore Reserves and Mineral Resources for the RPA as it no longer considers it has '*reasonable prospects for eventual economic extraction*' as is required by Section 20 of the JORC Code (2012) following the expiry on 8 January 2021 of the right to mine and process ore on the RPA (refer ERA ASX announcement dated 28 February 2022).

SRK is required to complete a technical assessment of the Ranger and Jabiluka projects under the current scope of work.

1.2 Scope

Under its mandate as determined by Grant Thornton, SRK has:

1. Met with ERA management and ERA's advisors to understand the respective points of view regarding options and constraints associated with the mineral assets
2. Considered the reasonableness of the stated Mineral Resources and Ore Reserve estimates in light of potential project opportunities and constraints
3. Considered the reasonableness of the cost estimates associated with the proposed rehabilitation and MCPs
4. Reviewed the technical project assumptions of the Jabiluka and R3D projects and provided an assessment on the reasonableness of each of the assumptions used in the cash flow model (the respective Models) including commenting on:
    a. the status of the supporting techno-economic studies
    b. mining physicals (including tonnes of ore mined, quality, waste material, and mine life)

c. processing physicals (including ore processed and produced)

d. production and operating costs (including but not limited to drilling, blasting, mining, haulage, processing, transport, general administration, distribution and marketing, contingencies and royalties or levies)

e. capital expenditure (including but not limited to pre-production costs, project capital costs, sustaining capital expenditure, salvage value, rehabilitation, and contingency)

f. any other relevant technical assumptions not specified above.

Should SRK determine that an assumption included in the Model is unreasonable then this will be reflected in its Report.

5. Considered potential development scenarios and cashflow generation opportunities and assisted Grant Thornton in modelling these scenarios

6. Prepared a report which includes:

   a. a detailed description of the mineral assets including associated tenure, the status of exploration/development/rehabilitation and progress relative to the MCP, Mineral Resources and Ore Reserves, and exploration opportunities

   b. valuation methodologies and principal assumptions adopted by SRK in determining the value of the Company's mineral assets

   c. valuation of the currently defined Mineral Resources outside of any life-of-mine (LOM) plans

   d. valuation of the exploration potential associated with the broader tenure

   e. details of any factors that would result in the Market Value of these assets differing from the Technical Value, including the quantum of adjustment required, if any

   f. valuation results cross checked against other relevant benchmarks, where possible.

1.3 Reporting standard

This ISR has been prepared to the standard of, and is considered by SRK to be, a Technical Assessment and Valuation Report under the guidelines of the VALMIN Code (2015). The authors of this Report are Members of either the Australasian Institute of Mining and Metallurgy (AusIMM) or the Australian Institute of Geoscientists (AIG) and, as such, are bound by both the VALMIN and JORC codes. For the avoidance of doubt, this Report has been prepared according to:

- the 2015 edition of the *Australasian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets* (VALMIN Code)
- the 2012 edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC Code).

For the purpose of the Report, value is defined as Market Value, being *'the amount of money (or the cash equivalent or some other consideration) for which a mineral asset should change hands on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after appropriate marketing, wherein the parties each acted knowledgeably, prudently and without compulsion'*.

As defined in the VALMIN Code (2015), Mineral Assets comprise all property including (but not limited to) tangible property, intellectual property, mining and exploration tenure and other rights held or acquired in connection with the exploration, development of and production from those tenures. This may include the plant, equipment and infrastructure owned or acquired for the development, extraction and processing of minerals in connection with that tenure.

A first draft of the report was supplied to ERA to check for material errors, factual accuracy and omissions before the final report was issued. SRK's Report does not comment on the 'fairness and reasonableness' of any transaction between ERA and any other parties.

1.4 Work program

This assignment commenced on 8 August 2022, with an initial scoping meeting with key Company representatives and their advisors followed by a review of ERA's supplied data (in a virtual data room), publicly available data and other information sourced by SRK from literature, as well as subscription databases such as S&P Capital IQ Pro database services.

In accordance with Section 11.1 of the VALMIN Code (2015), a site visit may be required if it is likely to provide information material to the preparation of the Report. Given the rehabilitation status of ERA's mineral assets, a site inspection was not undertaken. In SRK's opinion, a site inspection was not likely to reveal additional information that would be material to the preparation of the ISR. Several of the SRK consultants involved in the preparation of this ISR have previously worked at Ranger or been involved in exploration, technical reviews and valuations of assets in the near environs to ERA's mineral assets. Therefore, SRK has a reasonable understanding of the prevailing site conditions.

The work program of this commission included:

- Review of the Company's mineral assets and associated Exploration Results/Mineral Resources for compliance with JORC Code (2012).
- Review of the proposed MCPs and associated cost estimates
- Review of exploration and development activities
- Compilation of implied value multiples based on transaction analysis
- Provision of the draft report (including SRK's internal and external peer reviews)
- Finalisation of the report (inclusive of values) after receiving feedback from ERA/Grant Thornton regarding factual accuracy, errors or omissions.

1.5 Legal matters

SRK has not been engaged to comment on any legal matters. SRK notes that it is not qualified to make legal representations as to the ownership and legal standing of the mineral tenements that are the subject of this Report. SRK has not attempted to confirm the legal status of the tenements with respect to joint venture (JV) agreements, local heritage or potential environmental or land access restrictions.

SRK has completed a review of the subject tenure to this report to ensure ERA holds valid title and the subject tenements are in good standing. SRK has confirmed this to be the case.

1.6 Valuation Date and Effective Date

The Valuation Date and the Effective Date of this Report is 1 September 2022.

All monetary amounts are expressed in Australian dollars (A$), unless otherwise stated. The final valuation is expressed in A$ terms. The Valuation is only appropriate for this date and may change in time in response to variations in economic, market, legal or political factors, in addition to ongoing exploration results.

1.7 Project team

This Report has been prepared by a team of consultants from SRK's offices in Australia. Details of the qualifications and experience of the consultants who have carried out the work in this Report, who have extensive experience in the mining industry and are members in good standing of appropriate professional institutions, are set out in Figure 1-1.

Figure 1-1: Details of the qualifications and experience of the consultants

Specialist	Position/ Company	Responsibility	Length and type of experience	Site inspection	Professional designation
Jeames McKibben	Principal Consultant/ SRK	Project Manager	27 years; 17 years in valuation and corporate advisory, 2 years as an analyst and 8 years in exploration and project management roles	None	BSc (Hons), MBA, FAusIMM (CP), MAIG, MRICS, MSME
James Carpenter	Senior Consultant/ SRK	Mineral Resources and Geology	+20 years' experience in Mineral Resource estimation, open pit and underground production, and reconciliation and project evaluation	None	BAppSc (Hons), MGeostats, MAusIMM (CP)
Robert Urie	Principal Consultant/ SRK	Ore Reserves and Mine Engineering	25 years – open pit and underground engineering, specialising in complex underground mining projects	None	BEng (Hons), FAusIMM
Simon Walsh	Associate Principal Consultant/ Simulus	Metallurgical testwork and processing	25 years – 15 years in consulting specialising in engineering design, metallurgical laboratory management and independent technical reviews; 10 years in operations	None	BSc, MBA, MAusIMM (CP), GAICD
Lisa Chandler	Associate Principal Consultant/ Aethos	Environment and Social Governance, permitting and approvals	28 years – 20 years as environmental consultant to the resources sector; 5 years as government regulator; 3 years in operations	None	MEng, BSc, MNELA, MAusIMM, AMANCOLD, MSER

Specialist	Position/ Company	Responsibility	Length and type of experience	Site inspection	Professional designation
Ray Mayne	Principal Consultant/ SRK	Mine closure and rehabilitation	17 years – 11 years closure planning and closure liability assessments	None	BSc, Pr.Sci.Nat, PMP
Danielle Kyan	Principal Consultant/ SRK	Closure cost estimation	17 years specialising in closure cost estimation	None	BAppSc (Hons), MAusIMM
Shaun Barry	Principal Consultant/ SRK	Valuation	30 years in mining valuation, mineral economics, minerals marketing and geology	None	MSc Eng, BSc (Hons), MAusIMM (CP), MRICS
Philip Ashley	Principal Consultant/ SRK	Peer review	40 years – mine engineering and management, technical and corporate support	None	BE (Hons) Mining, SME, MAusIMM

1.8 Limitations, reliance on information, declaration and consent

1.8.1 Limitations

SRK's opinion contained herein is based on information provided to SRK by ERA throughout the course of SRK's investigations as described in this Report, which in turn reflect various technical and economic conditions at the time of writing. Such technical information as provided by ERA was taken in good faith by SRK. SRK has not recalculated the Mineral Resources or Ore Reserve estimates but has independently assessed the reasonableness of the estimates.

This Report includes technical information, which requires subsequent calculations to derive subtotals, totals, averages, and weighted averages. Such calculations may involve a degree of rounding and consequently introduce an error. Where such errors occur, SRK does not consider them to be material.

As far as SRK has been able to ascertain, the information provided by ERA was complete and not incorrect, misleading, or irrelevant in any material aspect.

ERA has confirmed in writing to SRK that full disclosure has been made of all material information and that to the best of its knowledge and understanding, the information provided by ERA was complete, accurate and true and not incorrect, misleading or irrelevant in any material aspect. SRK has no reason to believe that any material facts have been withheld.

1.8.2 Statement of SRK independence

Neither SRK nor any of the authors of this Report have any material present or contingent interest in the outcome of this Report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of SRK.

A number of the authors of this Report previously worked at Ranger and hence have a good understanding of site conditions. SRK has previously completed geotechnical and ventilation shaft rehabilitation reviews on behalf of ERA in the period 2014 to 2016, but has no recent association with the Company in regard to the mineral assets that are the subject of this Report. SRK has no beneficial interest in the outcome of the technical assessment being capable of affecting its independence.

SRK's fee for completing this Report is based on its normal professional daily rates plus reimbursement of travel and other incidental expenses. The payment of that professional fee is not contingent on the outcome of this Report.

1.8.3 Indemnities

As recommended by the VALMIN Code (2015), ERA has provided SRK with an indemnity under which SRK is to be compensated for any liability and/or any additional work or expenditure resulting from any additional work required:

- which results from SRK's reliance on information provided by either ERA or by ERA not providing material information
- which relates to any consequential extension workload through queries, questions or public hearings arising from this Report.

1.8.4 Consent

SRK consents to this Report being included in Grant Thornton's IER provided it is included in its entirety and considered within the context in which the ISR is provided. SRK provides this consent on the basis that the ISR expressed in the Executive Summary and in the individual sections of this Report are considered with, and not independently of, the information set out in the complete report.

1.8.5 Consulting fees

SRK's estimated fee for completing this Report is based on its normal professional daily rates plus reimbursement of incidental expenses. The fees are agreed based on the complexity of the assignment, SRK's knowledge of the assets, and availability of data. The fee payable to SRK for this engagement is estimated at approximately A$115,000. The payment of this professional fee is not contingent upon the outcome of the Report.

2 Energy Resources of Australia Ltd

Energy Resources of Australia Ltd (ERA) is an Australia-based company, which was engaged in the production of uranium oxide (U_3O_8). The principal activities of the Company consist of the processing and sale of uranium oxide and site rehabilitation. The Company operated the Ranger uranium mine, Australia's longest continually operating uranium mine.

The Company was incorporated in February 1980 for the development of energy resource projects within Australia and specifically for the acquisition of all rights in the RPA. In July 1980, ERA became a public company and in September 1980, it acquired the interests of the Commonwealth of Australia and the joint venturers, Peko-Wallsend Operations Ltd (Peko), Electrolytic Zinc Company of Australasia Limited (EZ) and the Australian Atomic Energy Commission (AAEC) in the RPA.

At the time of writing, ERA's main assets comprise the R3D deposit and the Jabiluka ML. In addition, ERA holds interests in two ELAs to the north of the Jabiluka ML and outside of the Kakadu National Park (the Cooper Creek JV Project).

The RPA and the Jabiluka ML are located on Aboriginal land and are surrounded by, but separate from, the World Heritage-listed Kakadu National Park, which extends over an area of approximately 19,800 km^2.

ERA is party to a suite of agreements which govern its activities on the RPA with the Gundjeihmi Aboriginal Corporation (GAC), on behalf of the Mirarr Traditional Owners, the NLC and the Commonwealth Government.

The Company is headquartered in Darwin, Australia, and remains a major employer in the NT and particularly in the Alligator Rivers Region. The Company's shares are publicly held and traded on the ASX.

ERA's majority parent is Rio Tinto Limited. This interest is held through North Limited (North) (incorporated in Victoria, Australia) which has beneficial ownership of 86.3% of the issued ordinary shares of the Company. North owns 52.0% directly and the remaining 34.3% through its subsidiary, Peko-Wallsend Pty Ltd.

2.1 Business strategy

During the second half of 2021, ERA announced that it had commenced a major reforecast of both the cost and schedule associated with the rehabilitation provision and timing to complete the rehabilitation of the RPA. To assist with the reforecast, ERA engaged Bechtel to perform an independent review and gap analysis of ERA's forecast cost and schedule data.

This process identified that existing cash resources and expected future cash resources were inadequate to fully fund rehabilitation activities.

Consequently, ERA's near-term strategic priorities have been redefined and now include:

- Secure a suitable funding option to meet future rehabilitation obligations
- Complete rehabilitation of the RPA
- Preserve optionality over the Company's undeveloped resources.

A key constraint for ERA is the *Atomic Energy Act 1953*, which currently requires completion of rehabilitation activities at Ranger by 8 January 2026. ERA has been engaging with both Territory and Australian governments and key stakeholders to amend the *Atomic Energy Act 1953* and extend the expiry date of ERA's tenure on the RPA. An amending bill (the Atomic Energy Amendment (Mine Rehabilitation and Closure*)* Bill 2022) to give ERA more time to rehabilitate Ranger was introduced to Federal Parliament on 8 September 2022.

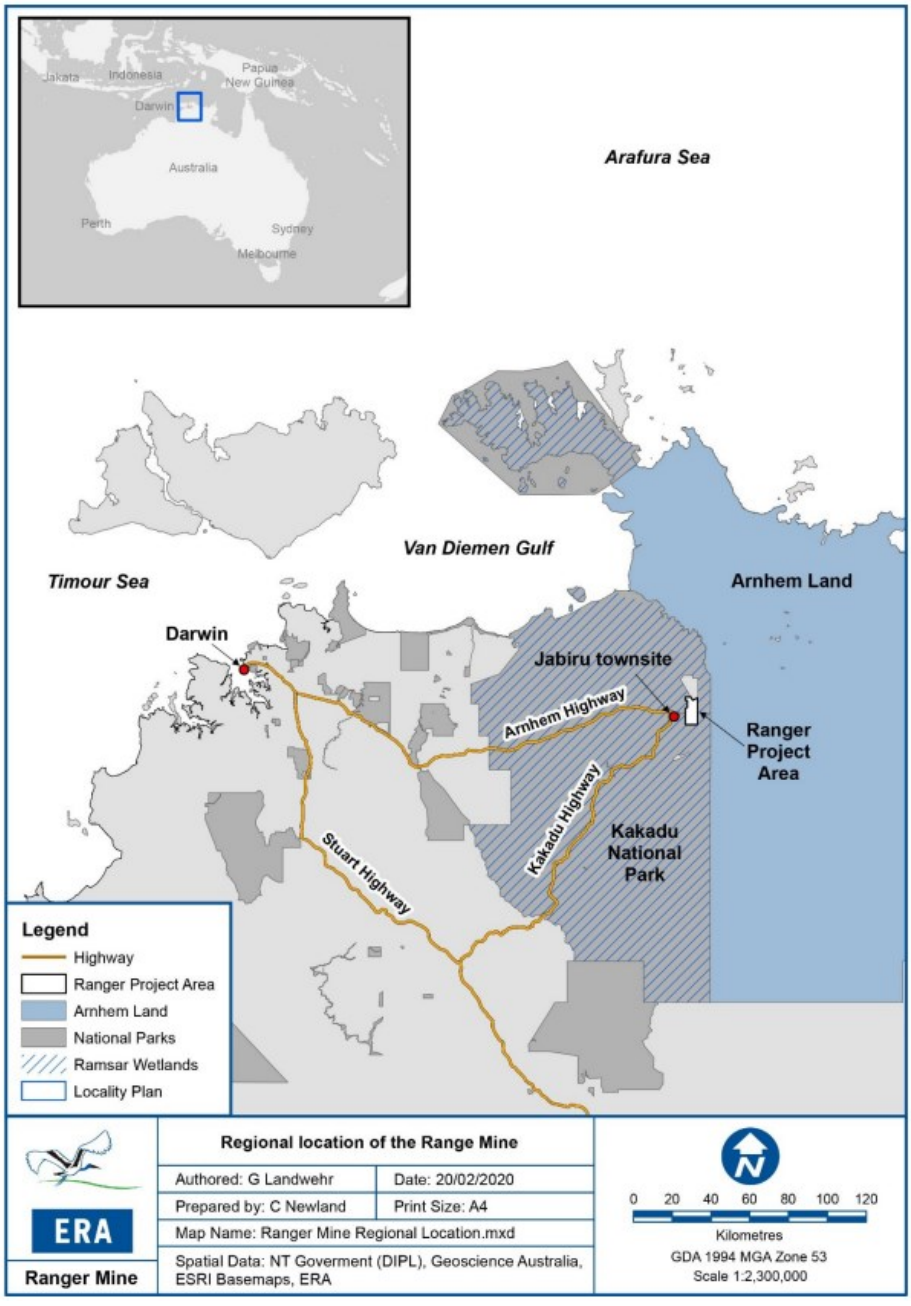
In addition to Ranger, ERA also holds title to the Jabiluka ML which contains a large undeveloped, high-grade uranium deposit. In accordance with the Long-Term Care and Maintenance Agreement (LTCMA) executed on 25 February 2005, the Jabiluka deposit will not be developed by ERA without the approval of the Mirarr Traditional Owners.

3 Project setting

3.1 Location and access

As shown in Figure 3-1, the RPA is located approximately 8 km east of Jabiru and approximately 260 km east of Darwin, in Australia's NT at latitude 12° 41’ S, longitude 132° 55’ E. The deposits lie on the Alligator River (SD 53-1) 1:250 000 scale map sheet (Needham, 1984).

Figure 3-1: Location of the Ranger project area



Source: ERA (2020) – 2020 Mine Closure Plan

The RPA is located in the Alligator Rivers Region. The site lies approximately 70 km southeast of Van Diemen Gulf between the South Alligator and East Alligator rivers on the extensive northern coastal plains. To the east lies the Arnhem Land Plateau.

The Jabiluka deposits are 15 km to the north, while the Koongarra deposit (part of Kakadu) lies 20 km to the south-southwest, and the third party held Nabarlek deposit is 77 km to the northeast. The RPA lies close to the northeastern boundary of Kakadu National Park within the Arnhem Land Aboriginal Reserve. The town of Jabiru is located to the west of the RPA and is included in the Kakadu National Park. The Jabiluka ML lies directly north of the RPA.

The town of Jabiru was originally established in 1982 to service the Ranger mine. Jabiru is the main service town for the Kakadu National Park, providing a range of small regional town facilities for national and international visitors and the town's residents.

In June 2021, Jabiru was formally granted to the Kakadu Aboriginal Land Trust and the town is currently transitioning from a mining support town to a tourism hub and government services centre. Through the Gundjeihmi Aboriginal Corporation Jabiru Town, the Mirarr People now formally own and manage the town. The Northern Territory government has guaranteed to maintain service levels for health, education, police, fire and emergency services until at least 2023. ERA manages the Jabiru airport, but is required to remove this infrastructure as part of the current rehabilitation requirements unless otherwise agreed with relevant stakeholders. The West Arnhem Shire Council is responsible for the production, treatment and mains reticulation of water for Jabiru from three bores situated near Nanambu Creek on the Arnhem Highway. The Jabiru community is also served by the West Arnhem College and a Regional Training Centre operated by the NT Department of Education and Training and Charles Darwin University. Jabiru is the health service hub for the Kakadu region and plays a vital role in the provision of health services to the outstations and town camps surrounding Jabiru. The town is powered by a new hybrid power station installed by the Northern Territory Government on the outskirts of the town to replace the town's previous diesel fuel supplied station from the Ranger mine.

The RPA and Jabiru are accessible from Darwin via the sealed Stuart and Arnhem highways via Pine Creek, as well as by air charter.

The Jabiluka area is accessible from the township of Jabiru along an all-weather bitumen road and a secondary gravel road, which connects to Gunbalanya (historically referred to as Oenpelli) and the Nabarlek uranium deposit.

3.2 Climate and physiography

The Ranger mine area is bounded on the east and north by Magela Creek and its tributaries and on the west by Gulungul Creek and its tributaries. To the east lies the Arnhem Land Plateau, composed of the Kombolgie Subgroup sandstones and conglomerates. Most surface cover within the RPA is outwash from the Kombolgie sandstones, under which lies a lateritic profile. The surrounding region is known for its high conservation and cultural values.

The Jabiluka area is situated along the eastern edge of a large, low-lying flood plain which is extensively flooded during the wet season from December to April. During the remainder of the year the area becomes a flat mud plain containing numerous billabongs and dissected by meandering intermittent streams. The Arnhem Land Plateau rises abruptly from the plains and

continues to the east. This area is characterised by a deeply incised, flat lying sandstone sequence with steep cliffs and narrow gorges.

The area's climate is dictated by the annual migration of the monsoon trough that brings intensive rain from November to March (wet season) and dry conditions from May to September (dry season) with October and April as transitional months. Mean temperatures vary from 19°C to 32°C in the dry season and 24°C to 38°C in the wet season. The annual average rainfall is 1,550 mm, although rainfall ranges between 1,000 mm and 2,600 mm per annum.

3.3 Ownership, land access and tenure

ERA has uranium exploration opportunities in three areas (Figure 3-2) over four tenements (Table 3-1):

- Within the RPA, and the associated ELA9644, within which the historical R3D Mineral Resource is located.
- Within mineral lease MLN1, within which the Jabiluka II Mineral Resource is located
- Within ELA23311 and ELA23312, collectively known as the Cooper Creek JV Project.

Title to the RPA was granted to the Kakadu Aboriginal Land Trust, under the Commonwealth *Aboriginal Land Rights (Northern Territory) Act 1976* (Aboriginal Land Rights Act). In 1978, the Australian Government entered into an agreement with the NLC to permit mining to proceed. The RPA is the land described in Schedule 2 to the Aboriginal Land Rights Act.

Tenure on the RPA is governed by the Section 41 Authority issued under the Commonwealth *Atomic Energy Act 1953* (Section 41 Authority) and subject to the Ranger Authorisation 0108-10 issued under the *Mining Management Act 2001*, which only permitted ERA to explore, mine and process uranium ore at Ranger uranium mine until 8 January 2021. Accordingly, processing operations at Ranger ceased on 8 January 2021. Ongoing works at the site are focused on decommissioning and making the processing plant safe, and rehabilitation and closure of the site in accordance with the current Section 41 Authority deadline of 8 January 2026.

On 8 September 2022, the Atomic Energy Amendment (Mine Rehabilitation and Closure) Bill 2022, a Bill to amend the *Atomic Energy Act 1953*, was introduced to Federal Parliament. The proposed amendments seek to provide an ongoing framework (beyond 2026) for the progressive rehabilitation of the RPA and specifically allow for:

- Conferring a new 'Rehabilitation Authority' on the Mine Operator for the purposes of authorising rehabilitation, remediation and monitoring operations at Ranger
- Approval by the minister of variations to the historical Section 41 Authority conferred on the Mine Operator to authorise the carrying out of rehabilitation, remediation and monitoring operations and extending the period over which the Section 41 Authority is in force, thereby providing a pathway to authorise rehabilitation activities at Ranger beyond 2026 should the Mine Operator opt not to apply for a Rehabilitation Authority
- Progressive close-out of rehabilitation obligations by declaring that a Section 41 or Rehabilitation Authority conferred under the Act will no longer be in force in relation to a part of the RPA for which the Mine Operator is considered to have satisfied its rehabilitation requirements.

The entire area of the RPA is underlain by an ELA – EL9644 originally granted under the NT *Mining Act 1980* but subsequently transitioned to an EL under the *Mineral Titles Act 2010* – which is registered (100%) to ERA.

The Jabiluka Mineral Lease, MLN1, which is not part of the RPA, is an ML initially granted under the NT *Mining Act 1980*, but subsequently transitioned under the *Mineral Titles Act 2010.*

In addition, ERA is the registered holder of two EL applications, EL23311 and EL13312, known as the Cooper Creek JV Project and located to the north and outside of the Kakadu National Park. These tenures are in moratorium pending negotiations with Traditional Owners.

Table 3-1 summarises the current mineral tenures held by ERA in the East Alligator River mineral field.

Table 3-1: Tenement schedule

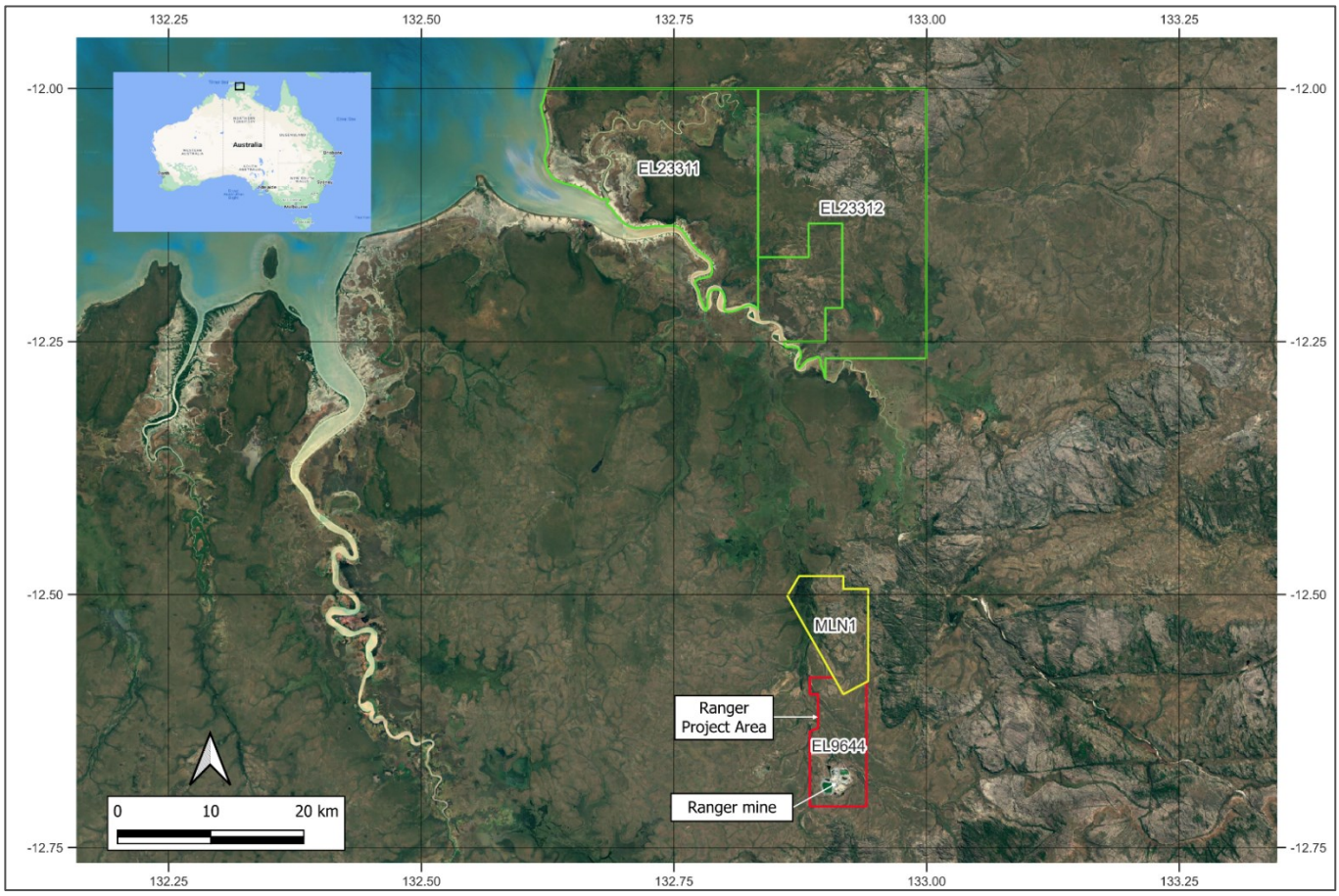
Number	Status	Area (km^2)	Interest	Granted	Expiry	Originating Act
RPA	Granted	79.0	100%		08/01/2021	*Atomic Energy Act 1953*
EL9644	Application	79.0	100%	-	-	*NT Mining Act 1980 / Mineral Titles Act 2010*
MLN1	Granted	72.75	100%	12/08/1982	11/08/2024	*NT Mining Act 1980 / Mineral Titles Act 2010*
EL23311	Application	369.64	100%*	-	-	*NT Mining Act 1980 / Mineral Titles Act 2010*
EL23312	Application	440.6	100%*	-	-	*NT Mining Act 1980 / Mineral Titles Act 2010*

Source: ERA, NT Strike portal, accessed 23 August 2022

Notes: * Tenement is wholly registered to ERA but held in JV with Cameco Australia Pty Ltd (Cameco) and Sutton Motors Pty Ltd (in moratorium). ERA's interest in the JV is 50%.

In its 2021 Annual Report, ERA noted that in order to maintain its current rights to mining tenures, the Company was required to outlay an amount of A$1.235 M in the year ending 31 December 2022 for tenement lease rentals. This amount includes payments for the RPA and Jabiluka lease. For periods beyond 1 year, but not later than 5 years, ERA expected future ML payments of A$3.659 M.

Figure 3-2: Location of ERA's tenements



Source: SRK analysis, Northern Territory Geological Survey (STRIKE database)

3.3.1 Other land uses

There are no common property land tenures, property titles and/or land claims pertaining to the RPA or the Ranger mine operations.

The surrounding area of the project includes several land use types including Kakadu National Park, mining leases and native title lands. The RPA operates in accordance with a Section 41 Authority under the Commonwealth *Atomic Energy Act 1953* and operates under NT Mining Authorisation 0108-10.

Land tenure in the region is complex and is a combination of Aboriginal freehold land and Australian Government freehold land, which is managed through a number of leasing, governance and service arrangements.

Aboriginal freehold title exists across most of the land of the RPA. Aboriginal freehold titles granted under the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) are held by the Kakadu Aboriginal Land Trust. NT Portion 2376 is leased back to the Director of National Parks with the lease expiring on 31 December 2077. However, not all of NT Portion 2376 is included in the declaration of Kakadu National Park, as part of it is within the RPA. NT Portion 1656, Portion 1657,

Portion 1662, Portion 1685 and Portion 1696 are within the RPA boundaries and are not included in the Kakadu National Park or any lease to the Director of National Parks.

The Kakadu Aboriginal Land Trust was handed Aboriginal freehold title of NT Portion 7127 (currently Portion 2273) under the Commonwealth *Aboriginal Land Rights (Northern Territory) Act 1976* on 16 August 2013.

3.3.2 Compensation and royalties

Royalty arrangements for Ranger are established in the Ranger Uranium Mining Project – Section 44 Agreement Amendment and Restatement Deed of 14 January 2013 (the 2013 Agreement), which updates the 1978 Ranger Uranium Project Section 44 Agreement (the 1978 Agreement). The 2013 Agreement was part of a suite of agreements between the Commonwealth Government, the NLC and ERA, that were finalised after extensive negotiation.

In general terms, the 2013 suite of agreements provide:

- Details of the proportion of Ranger production revenue to be paid to the Commonwealth for distribution to the NT Government and Aboriginal interests
- Details of rent payments by ERA to the NLC
- Agreement to establish a Relationship Committee between ERA and the GAC to promote information sharing and collaboration including on environmental matters
- Various statements of commitment and intent in relation to sacred site management, promotion and preservation of traditional culture and language, employment and training, and business development
- Clarification of various roles and responsibilities including the effect of the NT Emergency Response on the RPA and other areas.

The relevant Commonwealth ministers have entered into an agreement under Section 63 of the *Aboriginal Land Rights (Northern Territory) Act 1976*, which determines how much of the royalties paid by ERA go to the Commonwealth or to the Traditional Owners. Currently royalties are calculated on 5.5% of net sales revenue from Ranger mine production, with 4.25% of Ranger sales revenue paid to NT based Aboriginal organisations, including the GAC. The remaining 1.25% of royalties is paid to the Commonwealth and distributed to the NT Government.

Table 3-2 summarises recent financial payments from the Ranger mine.

Table 3-2: Financial payments derived from Ranger operations over the last 10 years

Year	Total financial contribution (A$ M)	Royalty payment (Commonwealth and NT Governments) (A$ M)	Payments to Aboriginal interests (A$ M)
2021	9.98	2.25	7.64
2020	12.52	2.85	9.67
2019	11.09	2.52	8.57
2018	10.72	2.48	8.29
2017	11.22	2.55	8.67
2016	14.29	3.25	11.04
2015	17.91	4.07	13.84
2014	15.42	3.51	11.92
2013	18.41	4.18	14.22
2012	20.64	4.69	15.95

Source: ERA Annual Reports 2012–21

The Mirarr people are the Traditional Owners of the land on which Ranger is situated. Under the 2013 suite of agreements, the Mirarr receive a greater proportion of the royalty payments than previously, providing greater benefit for the Mirarr and the local Indigenous population (and the region). The GAC has reported that financial payments derived from Ranger mine are now used for investment, social programs and other projects to address Indigenous disadvantage in the region.

According to its website (mirarr.net), the GAC directs a considerable portion of ERA sourced payments to the Kakadu West Arnhem Social Trust.

3.4 Project history

In 1968, Commonwealth government geologists noted the similarity of the Alligator Rivers Region to the Rum Jungle uranium field to the south of Darwin, which led numerous companies into the region despite the area being proposed as a national park. This resulted in a succession of uranium discoveries including Ranger (1969), Koongarra and Nabarlek (1970) and Jabiluka (1971).

In 1968, an Authority to Prospect (AtP 2013) was issued to Peko-Wallsend Operations Limited for the Peko – Electrolytic Zinc Company of Australia Ltd Joint Venture.

The Ranger deposits were first detected by the JV partners during an airborne radiometric geophysical survey in late 1969. Ground reconnaissance and geological mapping supported by a helicopter spectrometer survey confirmed the discovery, resulting in pegging of the first mineral claims. Four anomalies were found within what is now the RPA, while a further anomaly, No. 2, lies to the south and outside the RPA to the north of Mount Brockman. Of the original radiometric anomalies, No. 1 and No. 3 were subsequently delineated to the declaration of Ore Reserves in 1970 and are now known as the No. 1 and No. 3 orebodies, respectively. The No. 4 and No. 5 anomalies initially received only limited attention.

In June 1971, the two companies established Ranger Uranium Mines Pty Ltd to manage and develop the Ranger deposits.

In 1972, project viability was established and negotiation for mining rights to commence mining at Ranger were initiated and sales contracts concluded. In December 1972, a Labor Government was elected which led to deferral of the mining lease while the government defined and implemented a policy of public ownership of certain energy resources, including uranium.

In 1974, in the 'Lodge Agreement', the Commonwealth, Peko and EZ established a JV to mine and process Ranger uranium. The Commonwealth was given a 50% interest in Ranger for a 72.5% contribution to the capital costs, with uranium marketing to be the responsibility of the Commonwealth. An environmental impact statement was to be completed.

In 1975, the Labor Government instituted the Ranger Uranium Environmental Inquiry (also known as the Fox Commission) to resolve various competing interests between Indigenous groups, the national park and the potential for uranium mining.

In the following year, the Fox Commission's first report (released in October 1976) assessed the broad issues around nuclear power and concluded that uranium mining would be acceptable provided it was properly regulated[1]. At the same time, the regulatory framework was established under the Aboriginal Land Rights Act to transfer land to the Traditional Owners. Basic design and cost estimates were also prepared at this time.

In 1977, the second and final report from the Fox Commission was submitted. This report effectively evaluated an environmental assessment process and a land rights claim (for the Indigenous people over the area now known as Kakadu National Park), as well as assessing all of the issues relating to Ranger and the entire Alligator Rivers Region through a public inquiry. It provided the government with the basis to approve the Ranger Project and to allow uranium mining and export to proceed under stringent safeguards. Part of the RPA was declared as Aboriginal land.

In 1978, the Commonwealth Government and the NLC, on behalf of the Traditional Owners, agreed on terms under which mining could proceed. Design and management of the Ranger Project commenced in September 1978.

Authority was granted under the *Atomic Energy Act 1953* to enable the joint venturers to mine, and on-site construction of the Ranger mine and mill commenced in January 1979. Work subsequently commenced on the construction camp and temporary town and facilities. In June 1979, the Ranger mine was opened by then deputy Prime Minister, Doug Anthony. The JV parties appointed Ranger Uranium Mines Pty Ltd (then a wholly owned subsidiary of ERA) as manager of the Project. In August 1979, the Commonwealth Government announced its intention to divest its interest in the Project.

In 1979, Pancontinental Mining Limited (Pancontinental) submitted and received approval from the Commonwealth Government for an Environmental Impact Statement relating to an underground mine and processing facility at Jabiluka.

Structures were completed at Ranger in 1980 and mechanical and electrical installation commenced. Open cut mining of the Ranger No. 1 orebody commenced in May 1980. ERA was

[1] The Fox Commission's first report notes that '*the hazards of mining and milling uranium, if those hazards are properly regulated and controlled, are not such to justify a decision not to develop Australian uranium mines'.*

formed and reached agreement with the Commonwealth of Australia, AAEC, EZ and Peko to acquire all interests in the Ranger Project for A$407 M. The Company became a publicly listed entity with sales contracts for approximately 88% of the initial design capacity for the first 15 years.

In 1981, construction of the Ranger processing plant was completed, commissioning and plant start-up occurred and the mine became fully operational. Production commenced with the first drum of U_3O_8 produced on 13 August 1981. The processing plant was operating at full production rate in September 1981.

In July 1982, an agreement on mining at Jabiluka was reached between Pancontinental and the NLC with the Jabiluka Mineral Lease subsequently granted in August 1982.

In 1991, ERA purchased the Jabiluka orebody from Pancontinental for A$125 M. As part of the purchase, the NLC, on behalf of the Traditional Owners assigned Aboriginal approvals to ERA.

In 1993, ERA undertook a FS on the Jabiluka development, significantly changing the project design from the original Pancontinental plan.

In December 1994, the Ranger No. 1 open pit was exhausted.

In May 1996, final approval to mine the Ranger No. 3 orebody was received from the NT Government, with open cut mining commencing in July 1997.

In October 1996, a new environmental impact statement was submitted for public review outlining two options: mining and milling uranium ore at Jabiluka (similar in concept to the Pancontinental design, that had been approved by Traditional Owners, but with a significantly smaller impact), and trucking Jabiluka ore to the existing Ranger mill for processing.

In June 1997, the environmental impact statement for the Ranger Mill Alternative (RMA) for the development of Jabiluka was forwarded to the NT and Commonwealth Environment Ministers, and was subsequently approved in October 1997 by the Minister for Resources and Energy.

In June 1998, the Public Environment Report on the Jabiluka Mill Alternative (JMA) was issued with a 50/50 option for the disposal of tailings underground and in surface pits. Around the same time, the NT Government authorised construction of the common elements of the RMA and JMA proposals and Stage 1 development of Jabiluka commenced, with excavation of the decline (tunnel) commencing in September 1998.

Final approvals from the NT Government were received in June 1999.

In August 2000, Rio Tinto completed its acquisition and gained control of North Limited, which held a 68.4% interest in ERA.

On 25 February 2005, the Traditional Owners, ERA and the NLC announced the signing of an agreement on the long-term management of the Jabiluka lease area. The Jabiluka LTCMA obliged ERA (and its successors) to secure Mirarr approval prior to any future mining development of uranium deposits at Jabiluka.

In October 2006, ERA announced an increase in defined Ore Reserves at Ranger extending the projected life of Ranger by 6 years from at least 2014 to 2020.

Cyclonic rainfall in early 2007 impacted open pit operations, and led to further evaluation and exploration of Ranger, in particular resource extension to the east and at depth to the southeast of the Ranger 3 open pit. In September 2007, ERA approved the extension of the Ranger 3 operating pit and reported updated reserves and resources for the project.

In November 2008, ERA defined an Exploration Target at R3D, based on exploration and completed drilling; the target was potentially able to underpin a further expansion via underground mining. The Company halted further studies while investigating open pit expansion opportunities due to the depth of the mineralisation.

In 2009, ERA conducted a PFS for the development of a heap leach facility with a nominal capacity of 10 Mtpa of lower grade ore. On 16 March 2009, ERA formally applied for statutory approval for a heap leach facility. An FS for the heap leach was completed in late 2010.

In early December 2012, ERA completed open cut mining at Ranger 3, with backfilling of the pit expected to be completed by late 2014.

In January 2013, ERA formally commenced a statutory approval process for the R3D exploration decline and underground mine. In May 2013, ERA commenced the R3D PFS and by June 2013, the R3D decline had reportedly reached 1,000 m in length (ultimately extending to 2,700 m in length and 450 m depth below surface).

In September 2013, ERA opened the new brine concentrator at Ranger which was expected to help treat water and to progressively rehabilitate the site.

In June 2014, ERA announced updated Mineral Resources for R3D as part of the ongoing PFS, which was followed by further updates in September 2014 and February 2015. An environmental impact study (EIS) for R3D was lodged in September 2014. Rehabilitation of the RPA continued during the December 2014 quarter, when infrastructure to enable Pit 3 to receive tailings for final deposition was installed.

In June 2015, ERA decided it would not proceed with the final FS for the R3D project in the prevailing operating environment. The decision was driven by two factors: no improvement in the uranium market and uncertainty regarding the market's future; and the PFS indicated that the economics of the project required operations beyond the current Ranger Authority, which was due to expire in 2021. Rio Tinto agreed with the decision not to progress the study, but did not support the logic of any further study or future development of R3D due to the project's economic challenges. In late June 2015, ERA assessed whether the R3D asset may be impaired in the light of Rio Tinto's differing view on the future development of R3D. ERA planned to continue discussions relevant to R3D with the Traditional Owners and the Commonwealth Government, but three directors resigned in response to the difficulties ERA faced in pursuing its stated approach without the support of its major shareholder. In early July 2015, ERA updated the R3D resource model as part of the R3D PFS.

During the March 2016 quarter, ERA announced that progressive rehabilitation of the RPA continued, including the completion of laterite capping for Pit 1. The Ranger 3 Deeps exploration decline remained under care and maintenance. In April 2016, ERA entered into a A$100 M credit facility agreement with Rio Tinto Limited; the funds to be used for rehabilitation obligations on the Ranger Project. The funding was conditional on ERA making no expenditure on the R3D Project without Rio Tinto's consent, apart from care and maintenance expenditure. In May 2016, ERA

concluded a strategic review of its business and determined three near-term strategic priorities: progressive rehabilitation of Ranger; maximise the generation of cash flow from the processing of stockpiled ore; preserve the option for the future development of R3D.

In January 2017, ERA reported an updated Ore Reserve and Mineral Resource estimate at Ranger. In August 2017, ERA reported that backfill of Pit 1 had started at Ranger. ERA reported that the rehabilitation FS that started in the final quarter of 2017 was expected to be completed by the third quarter of 2018.

In June 2018, ERA released its Mine Closure Plan for Ranger.

In February 2019, ERA announced the finalisation of the closure FS for the rehabilitation of Ranger. The approval and implementation of the FS resulted in an increase in the rehabilitation provision from A$526 M to A$830 M.

Production at the Ranger mine ceased after 40 years of operations in accordance with the Ranger Authority on 8 January 2021. In February 2021, ERA announced that reserves were depleted and no Ore Reserves and Mineral Resources remained at Ranger. ERA also announced that no work was being conducted on further development options for the R3D deposit.

During the March 2021 quarter, ERA completed the tailings transfer to Pit 3 and commenced the final design of the Pit 3 wicking, capping, and bulk backfill works. This work was supported by a number of tailings characterisation studies.

In July 2021, ERA announced it was reforecasting both the cost and schedule in relation to the rehabilitation provision over the RPA and that there were likely to be overruns.

On 2 February 2022, ERA reported a revised total cost based on Option A (subaqueous capping of Ranger 3 open pit) of between A$1.6 Bn and A$2.2 Bn for the RPA rehabilitation (relative to the A$973 M[2] outlined in the Rehabilitation FS as announced on 8 February 2019), and which was expected to be completed between the 2027 to 2028 December quarters.

The sale of ERA's last drum of U_3O_8 from the RPA was concluded on 31 May 2022.

In May 2022, ERA commenced an FS update in connection with a lower technical risk rehabilitation methodology (primarily relating to the subaerial capping of Pit 3) and to further define the RPA rehabilitation cost and schedule.

On 9 September 2022, an amending bill to the *Atomic Energy Act 1953* was introduced to Federal Parliament seeking to give ERA additional time to rehabilitate the RPA beyond the stipulated date of 8 January 2026. ERA's recent production history is summarised in Table 3-3.

[2] Based on 31 December 2018 rehabilitation provision A$973 M undiscounted in nominal terms, excluding not yet recognised termination benefits and including an allowance of A$1 M in relation to the estimated cost of Jabiluka ML rehabilitation expense.

Table 3-3: Recent production at Ranger

Year	Ore mined (Mt)	Ore milled (Mt)	Mill head grade (% U_3O_8)	Mill recovery (%)	Production (t U_3O_8)	Drummed sales – Ranger concentrates (t U_3O_8)	Sales – other concentrates (t U_3O_8)	Sales – total (t U_3O_8)
2021	-	0.02	0.07	86.1	34	1,302	-	1,302
2020	-	2.5	0.07	84.9	1,574	1,711	10	1,721
2019	-	2.5	0.08	86.8	1,751	1,577	20	1,597
2018	-	2.5	0.09	86.6	1,999	1,467	-	1,467
2017	-	2.6	0.10	84.7	2,294	2,089	-	2,089
2016	-	2.7	0.10	84.9	2,351	2,130	9	2,139
2015	-	2.5	0.10	82.0	2,005	2,183	-	2,183
2014	-	1.3	0.11	81.5	1,165	2,164	984	3,148
2013	-	2.3	0.15	84.8	2,960	2,767	48	2,815
2012	3.8	2.6	0.17	86.2	3,710	2,665	558	3,223

Source: ERA Annual Report 2021, S&P Capital IQ Pro

3.5 Regional geological setting

Ranger and Jabiluka are two of the major uranium deposits of the Pine Creek Geosyncline, a Lower Proterozoic basin extending over a 66,000 km^2 area to the south and east of Darwin in Australia's NT. The Pine Creek Geosyncline has been draped over mixed Archaean and Archaean-Lower Proterozoic granitoid and gneissic basement. It is surrounded and partly covered by younger sedimentary basins, from Middle Proterozoic to Mesozoic in age, and is largely covered by Cenozoic sediments (Figure 3-3).

The oldest rocks in the region consist of medium- to coarse-grained granite and leucogneiss in the core of the Nanambu Complex. The unconformably overlying Cahill Formation, the main host to the known uranium mineralisation, is interpreted to reach a maximum thickness of 3,000 m. It is described as a carbonate carbonaceous – pelitic lower unit and a more psammitic upper unit, both containing amphibolite-grade schist as the major rock type. Unconformably overlying the Cahill Formation is the Kombolgie Formation. The middle Proterozoic Kombolgie Formation is divided into upper and lower sandstone units by amygdaloidal basalts of the Nungbalgarri Member. The lower unit tends to be coarser grained, and less homogeneous, with conglomerate beds and thin siltstone interbeds. Cross-bedding and ripple marks are common.

Uranium mineralisation at Jabiluka and Ranger is focused along the unconformable contact between the Cahill Formation and the overlying Kombolgie Formation.

Deposit model

The ERA deposits (including R3D, Jabiluka and exploration targets) belong to a class of deposits termed unconformity related uranium deposits. Unconformity related uranium deposits are typically higher grade and have some of the largest uranium inventories in the world. Historically these deposits have been significant sources of production, and they account for around 25% of total world uranium production (IAEA, 2018).

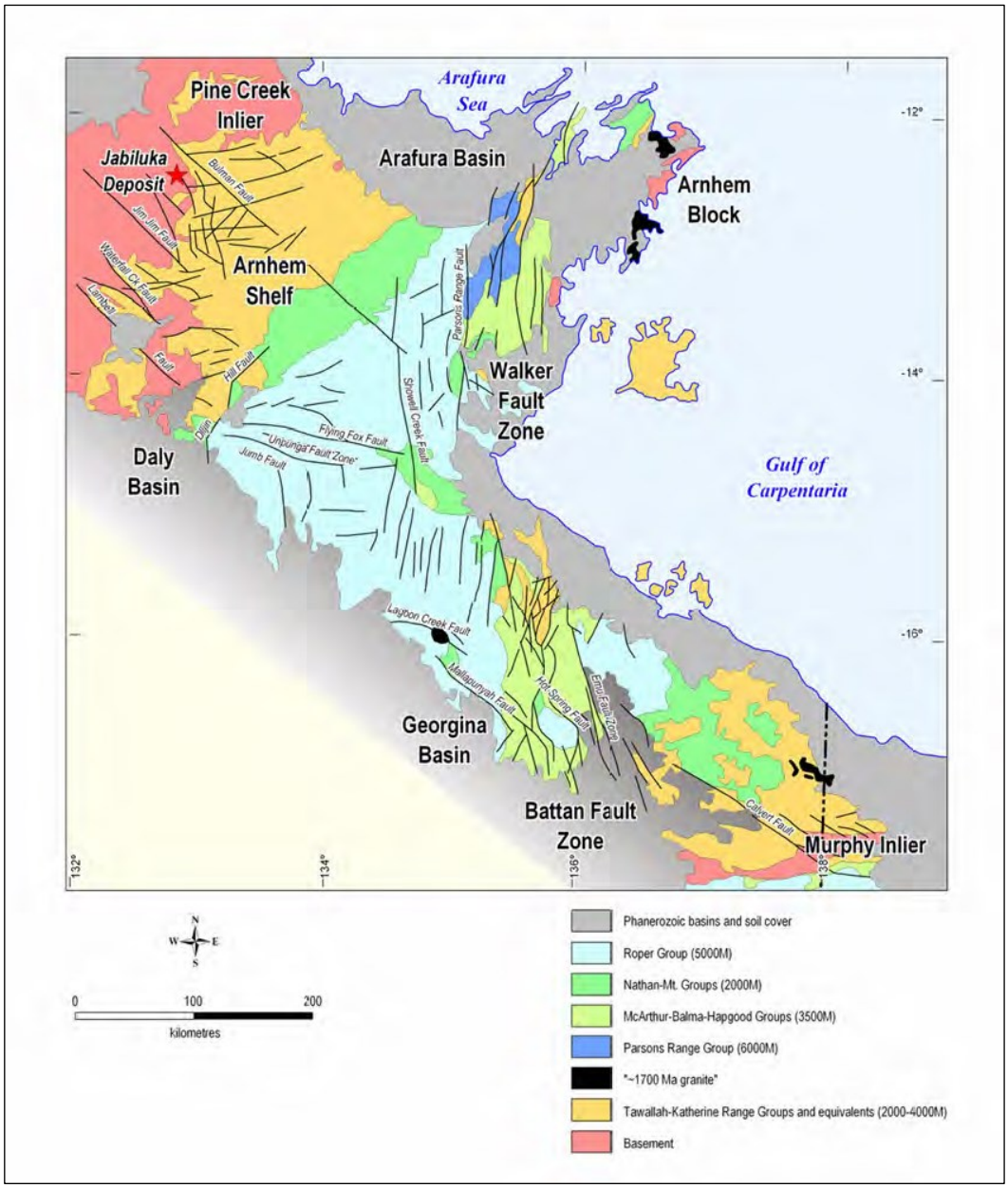
An unconformity is defined as a contact between two rock units which represents a break in the geological record and is so called as the ages of the layers of rocks that are abutting are discontinuous. Unconformity related uranium deposits form when uranium enriched fluids reach the unconformity where they encounter an abrupt change in geochemistry, forcing the uranium in the fluids to precipitate as uranium minerals. Unconformity related deposits are associated with fault systems, which play a role in the ore-forming process by providing a conduit for fluids to cross the unconformity.

The Pine Creek Geosyncline contains a variety of known uranium deposits and occurrences with the most important type being unconformity related. There are three main known areas of unconformity-type uranium deposits, being the Rum Jungle field in the western sector, the South Alligator Valley field in the south, and the Alligator River uranium field in the northeast. The Alligator River uranium field contains the prominent deposits of Ranger, Jabiluka, Koongarra and Nabarlek.

Mineralisation

Uraninite (UO_2 with some U_3O_8) represents the most important uranium mineral and is typically accompanied by lesser but variable amounts of coffinite ($U(SiO_4)_{1-x}(OH)_{4x}$) and brannerite (UTi_2O_6). Other uranium-bearing minerals are also present but are not usually volumetrically significant and are localised in their occurrence. These include schoepite, curite and uranopilite as well as uranium-bearing carbonaceous material or kerogen.

Figure 3-3: Regional geology of the Pine Creek Inlier relative to other North Australian basins



Source: ERA (2022) – 2021 CP report

4 Ranger Project

4.1 Overview

For more than 40 years, ERA produced uranium oxide from the Ranger mine for the global nuclear energy market. Historically, in excess of 291 Mlb or 132,000 t of U_3O_8 has been produced at Ranger, with ore derived from two main open pits known as Pit 1 (mined from May 1980 to December 1994) and Pit 3 (mined from July 1997 to November 2012).

Historically, mining at Ranger consisted of a conventional open pit operation using front-end loaders and haul trucks. Benches were 7 m in height with two benches being combined for the mining of waste. Initial mining at Pit 1 was planned at the rate of 4 Mtpa, of which 1.15 Mtpa was ore, with the remainder being waste and mineralised waste below ore grade (0.10% U_3O_8). Mined material was categorised by a discriminator, which measured the uranium grade for either stockpiling or immediate processing. All material above 0.02% uranium and below 0.10% was stockpiled as low-grade ore for possible subsequent recovery of uranium. Lateritic and weathered materials were stockpiled separately for subsequent treatment in the mill. Initially a 15% weathered/85% primary blend was milled but this changed towards an increased amount of weathered ore as operational experience was gained, before transitioning to fresh ores only. Low-grade ore and non-mineralised rock was stockpiled and returned as backfill to the mined-out pits prior to contouring to create the final landform.

The Ranger mill was conventional in design using equipment of proven reliability at the time of initial construction. The plant incorporated three stage crushing followed by an open circuit rod mill and closed circuit ball milling. The ground ore was treated with sulfuric acid and pyrolusite to dissolve the contained uranium and the uranium bearing solution separated from the barren pulp by counter current decantation (CCD) in a series of rubber lined thickeners. The tailings were neutralised with lime and pumped to the tailings dam. Uranium was recovered from the acidic solution by extraction into an organic liquor with the aqueous acidic solution being returned to the earlier part of the circuit. Yellowcake (ammonium diuranate) was precipitated for the organic solution by the addition of ammonia and the precipitate washed, centrifuged and roasted to yield a calcined concentrate containing in excess of 90% U_3O_8. The product was packed into 200 L steel drums that were sealed and transported by road to a secure holding facility using an accredited transport company, and then exported by ship.

ERA had a sales and marketing agreement with Rio Tinto Uranium, pursuant to which ERA's product, drummed uranium oxide, was sold to international power utilities under strict international and Australian Government safeguards, which ensured that Australian uranium was only used for peaceful purposes. ERA sold its product to power utilities in Asia, Europe and North America. Production of uranium oxide ceased in line with the Ranger Authority on 8 January 2021.

Rehabilitation has been ongoing at Ranger for more than 30 years. A staged backfill of Pit 1 commenced in 1996 with the tailings being deposited into the pit over an 8 year period, with a laterite cap completed in January 2016. Soon after mining ceased in Pit 3 in November 2012, the backfilling of that pit commenced using an underfill methodology to provide space for brine injection in support of the long-term storage of brine from the Brine Concentrator operations. Tailings from the mill and tailings storage facility were deposited directly into Pit 3, and the tailings previously

stored in the tailing storage facility (TSF) were transferred to Pit 3. Following consolidation, waste rock will be used to create the final landforms prior to revegetation.

4.2 Permitting and approvals

This section provides an overview of the land access consents and environmental permitting for the Ranger Project. Land access is not administered under environmental legislation, but the access and mining agreements executed under the *Atomic Energy Act 1953* and the *Aboriginal Land Rights (Northern Territory) Act 1976* include environmental requirements that affect permits issued under NT and Commonwealth environmental legislation (for example, under the Ranger mining management plan approved under the Northern Territory *Mining Management Act 2001*).

4.2.1 Land access and mining rights

The RPA lies within the traditional lands of the Mirarr People, on freehold Aboriginal land (NT Portion 000; Parcel 7127) scheduled under the *Aboriginal Land Rights (Northern Territory) Act 1976*. The Kakadu Aboriginal Land Trust is the owner of the freehold land, acting for the benefit of Aboriginal people entitled by Aboriginal tradition to the use or occupation of the land. The land is held in fee simple: it cannot be sold by the Kakadu Aboriginal Land Trust. Kakadu National Park, which was established in three stages between 1979 and 1991, surrounds but does not include the RPA, which has been excised from the park.

The Kakadu Aboriginal Land Trust acts on the direction of the NLC, one of four land councils established under the *Aboriginal Land Rights (Northern Territory) Act 1976*. The NLC has a special role as an entity authorised to negotiate land access agreements and authorities to mine under Section 41 of the *Atomic Energy Act 1953* and Part IV of the Aboriginal Land Rights Act. The NLC was a signatory to a 'Section 41 Authority' initially executed in January 1979, in which Peko-Wallsend Operations Ltd, Electrolytic Zinc Company of Australasia Limited and the AAEC were jointly issued an authority to mine in the RPA, with an expiry date of 9 January 2005. The authority was subsequently assigned to ERA in September 1980. In December 1995, ERA applied to extend the authorised mining period. An extension to the authority was granted in November 1999, subject to a range of conditions set out in the Schedule to the Section 41 Authority. The current mining authority is set to expire on 9 January 2026. Under the conditions of the current Section 41 Authority, ERA was required to cease all mining operations permitted under the Authority by 8 January 2021. Clause 5.2 of the Authority stipulates that ERA's rights to access, occupy or use[3] the RPA expire on 8 January 2026 (unless terminated earlier through revocation of the Authority or completion of 'final close-out' (completion of environmental requirements)).

A key element of the Section 41 Authority is Appendix A: *Environmental Requirements of the Commonwealth of Australia for the Operation of the Ranger Uranium Mine*. The appendix specifies a set of 'primary environmental objectives' relating to i) environmental protection and ii) mine rehabilitation and defines a framework for the eventual 'close out' of environmental obligations, subject to the attainment of the primary environmental protection and rehabilitation objectives.

[3] Access for ongoing monitoring activities appear to be allowed after the expiry of the Agreement. Monitoring is required until a close-out certificate is issued by the Supervising Authority. ERA advises that it assumes monitoring will continue for up to 25 years after rehabilitation is completed.

The primary environmental protection objectives specified in the Section 41 Authority are to:

- maintain the attributes for which Kakadu National Park was inscribed on the World Heritage list
- maintain the ecosystem health of the wetlands [within stages I and II of Kakadu National Park] listed under the Ramsar Convention on Wetlands
- protect the health of Aboriginal people and other members of the regional community
- maintain the natural biological diversity and ecological processes of aquatic and terrestrial ecosystems of the Alligator Rivers Region.

The Section 41 Authority also includes a range of 'secondary environmental objectives' relating to water quality; air quality; radiological protection; storage, use and disposal of hazardous substances/wastes; management of excavated material; blasting; protection of vegetation, fauna and soil; tailings management and mine rehabilitation.

The rehabilitation objectives specified in the Section 41 Authority are to:

- revegetate disturbed areas of the RPA using native plant species to achieve a density and abundance similar to those existing in adjacent areas of Kakadu National Park and establish an ecosystem, the long-term viability of which would not require a maintenance regime significantly different from that appropriate to adjacent areas of the park
- establish radiological conditions on areas impacted by mining such that the health risk to members of the public, including traditional owners, is as low as reasonably achievable and members of the public do not receive a radiation dose which exceeds applicable limits recommended by the most recently published and relevant Australian standards, codes of practice, and guidelines, while minimising restrictions on the use of the area
- establish erosion characteristics in rehabilitated areas which, as far as can reasonably be achieved, do not vary significantly from those of comparable landforms in surrounding undisturbed areas.

The broad rehabilitation objectives set out in the 'Environmental Requirements' are not sufficiently specific to serve as a practical basis for objectively assessing rehabilitation performance. Completion criteria are being developed to link between the statutory requirements of the *Atomic Energy Act 1953* and the regulatory framework administered under the Northern Territory *Mining Management Act 2018*. This matter is discussed further in Section 4.2.2.

As it now appears that mine rehabilitation works cannot be completed by 8 January 2026, ERA is seeking to have the *Atomic Energy Act 1953* amended to allow granting of a new Section 41 Authority extension to the time for completion of mine rehabilitation works. On 8 September 2022, an amending bill to the *Atomic Energy Act 1953* was introduced to Federal Parliament seeking to give ERA additional time to rehabilitate the RPA beyond the stipulated date of 8 January 2026. The proposed amendment of the *Atomic Energy Act 1953* has the support of the NLC and the GAC (correspondence dated 24 June 2022).

Once the Act has been amended, an amended Section 41 Authority will need to be negotiated with traditional owners to cover the period for completion of rehabilitation (the ministers responsible are the Minister for Indigenous Australians and the Minister for the Environment). It is possible that the Environmental Requirements in Appendix A of the Authority would be revised as part of the development of a new or amended Authority, however this does not appear to be contemplated under the version of the Amendment Bill introduced to Federal Parliament in September 2022. As

at 8 September 2022, Paragraph 41CE(1)(b) of the Bill proposed that any rehabilitation requirements imposed by a Rehabilitation Authority issued under the amended Act would have to be substantially similar to the environmental requirements imposed '*by the historic Section 41 Authority*'.

At the present time there are no tenure arrangements in place which provide ERA with ongoing access to the RPA (other than for environmental monitoring) beyond 8 January 2026. Until the *Atomic Energy Act 1953* has been amended and a new Section 41 Authority executed, there remains a level of uncertainty around the ability of the project to comply with statutory requirements and to deliver environmental outcomes required under any future access agreements.

4.2.2 Environment approvals and permits

Potential environmental and social impacts of the Ranger Project were assessed between 1975 and 1977 by a committee of inquiry established under the Commonwealth *Environmental Protection (Impact of Proposal) Act 1974* (which has since been repealed and replaced by the *Environment Protection and Biodiversity Conservation Act 1999*). The project was approved in January 1979.

Environmental aspects of operations at the Ranger mine are regulated under both NT and Australian Commonwealth legislation and regulations. The key instrument that governs day-to-day operations at Ranger is 'the Ranger Authorisation' (0108), an approval issued under the NT's *Mining Management Act 2001.* The most recent variation of Authorisation 0108 was issued on 22 June 2018. It includes an annex (Annex B) setting out the process for the submission and assessment of a MCP in accordance with Section 34 of the *Mining Management Act 2001*. Given that active mining operations at Ranger ceased in 2021, the main focus of government oversight is now on mine rehabilitation activities.

The Ranger MCP is required to be reviewed and updated annually on or before 1 October each year. The most recent MCP for the Ranger operation was submitted to the NT and Commonwealth governments on 1 October 2020 and formally approved on 30 September 2021. ERA did not submit an updated MCP in 2021. SRK has sighted correspondence in which the NT Department of Industry, Tourism and Trade (DITT) agreed to extend the deadline for submission of the plan to 31 December 2021 (correspondence from A Padovan to F Egerton, 29 October 2021). It is SRK's understanding that a further extension was approved, and ERA is now preparing an updated closure plan to be submitted on or before 1 October 2022.

The Supervising Scientist provides independent advice to the Commonwealth Minister for Resources and Northern Australia and the NT Minister for Primary Industry and Resources on the adequacy of the Ranger MCP and the acceptability (or otherwise) of mine closure criteria. In its most recent report on the 2020 MCP (Supervising Scientist, 2020), the Supervising Scientist concluded that the plan does not yet provide sufficient evidence to demonstrate that the rehabilitation works proposed will satisfy the Environmental Requirements. The following matters requiring further development were specifically mentioned:

- the predictions of post-closure surface water quality are not yet finalised
- significant additional studies are required on ecosystem establishment
- a radiation dose assessment is yet to be completed
- it is not yet known how the residual contamination beneath the tailings dam will be managed.

The key requirement of the rehabilitation of the RPA is the creation of a final landform and sustainable environment that could be incorporated into the Kakadu National Park, should the Traditional Owners and other relevant authorities so wish.

As at September 2021, some but not all closure criteria proposed by ERA had been approved by the federal minister for outcomes relating to radiation, engineered landforms, surface water quality and ecosystem restoration. A range of closure criteria are yet to be agreed in relation to surface water, groundwater, soil and sediment quality. In addition to the conventional, technical mine rehabilitation criteria for which government approval is required, a separate set of 'cultural closure criteria' has been developed on the advice of Traditional Owners. These criteria, which do not require government approval, are largely qualitative and address a range of environmental attributes, ranging from trafficability of the land surface to vegetation health, biodiversity, water quality, erosion susceptibility and aesthetic values.

ERA obtained a 'Permit to Decommission Facility' on 8 January 2021 under the *Nuclear Non-Proliferation (Safeguards) Act 1987* from the Australian Safeguards and Non-Proliferation Office (ASNO). Decommissioning works proceeded following the receipt of the permit. SRK understands that government consultation and/or approvals are also required before ERA can implement specific closure activities, including, for example deconstruction of the tailings storage facility, final landform works and Pit 3 closure works (placement of initial and secondary capping layers; installation of a decant system; placement of demolition waste from the processing plant and other site infrastructure in the pit void; bulk backfill of waste rock). A proposal for Pit 3 capping and other rehabilitation works was submitted to regulators and other stakeholders in April 2022 and a formal application for approval of the Pit 3 closure works is due to be submitted to the Commonwealth Minister in November 2022 (ERA, 2022). Separate approvals will be required in relation to deconstructing the Ranger water dam and establishing a final landform.

4.3 Stakeholder engagement

ERA has for many years engaged with stakeholders through both formal and informal meetings and is a regular participant in meetings with traditional owner representatives and local, territory and federal governments. A range of committees, working groups and other consultative groups have been established to provide forums for the exchange of views and information. Many of the committees also provide opportunities for attendance by interested parties who are not part of the formal committee structure. Table 4-1 lists examples of the committees and other formal meeting structures in which ERA participates.

A stakeholder consultation register appended to the 2020 Ranger MCP shows that ERA participated in some 108 stakeholder meetings between June 2019 and June 2020. The register notes that stakeholder comments were not minuted in 79% of these meetings. Follow-up actions, ERA responses to stakeholders or resolution of issues raised in meetings were recorded for only 55% of the meetings listed in the register. While acknowledging the considerable investment of effort, time and resources represented by the consultation register, and recognising that some of the meetings were very informal, SRK considers that the lack of recorded information on stakeholder views may be indicative of a consultation process that could be made more effective. At the least, documenting views expressed by stakeholders would demonstrate ERA's ability to hear stakeholder views and could serve to better protect ERA's interests in the event of future conflict.

Table 4-1: Stakeholder engagement forums – Ranger Project

Engagement forum	Frequency	Purpose	Participants
Minesite Technical Committee (MTC)	Bi-annually (additional meetings held as required)	To discuss and resolve technical environmental management matters relating to the operation of the Ranger mine, including the development of closure criteria. Committee discusses matters relevant to the regulatory functions of the NT Government and the supervisory and assessment functions of the Supervising Scientist, as well as operational requirements of ERA and the views of the Mirarr and other affected Aboriginal people.	DITT (Chair), Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW), Supervising Scientific Branch (SSB), GAC, NLC and ERA.
Ecosystem Restoration Forum; Water and Sediment Working Group; Closure Criteria Working Group; Monitoring Evaluation and Research Review Group	As required, (at least monthly)	Communication and consultation with stakeholders focusing on ecosystem restoration closure criteria, surface water and sediment closure criteria; revegetation monitoring and various key knowledge needs (KKNs).	Former working groups now operate under the MTC.
Ranger Closure Consultative Forum	Monthly meetings	To provide ongoing updates of closure activities; information on upcoming approvals; and to receive feedback from stakeholders on studies, applications and the close-out progress of KKNs.	Commonwealth Department of Industry, Science and Resources SSB, DITT, NLC/GAC.
Alligator Rivers Region Technical Committee (ARRTC)	Bi-annually	Group established in 1993 and restructured in 2001 in response to a recommendation by an Independent Science Panel established by the World Heritage Committee. Purpose of the committee is to review the quality and adequacy of scientific research conducted by the Supervising Scientist, ERA and others and to make recommendations to the Minister on the nature and extent of research necessary to protect and restore the environment in the Alligator Rivers Region.	Members include an independent Chairperson, the Supervising Scientist, independent scientific members, member representing the NLC and a member representing environmental non-government organisations. http://www.environment.gov.au/science/supervising-scientist/communication/committees/arrtc
Alligator Rivers Region Advisory Committee (ARRAC) meetings	Bi-annually	Facilitates communication between government, industry and community stakeholders on environmental issues associated with uranium mining in the Alligator Rivers Region.	Membership as established under the *Environment Protection (Alligator Rivers Regions) Act 1978*: *http://www.environment.gov.au/science/supervising-scientist/communication/committees/arrac*.
Investor briefings	Bi-annually	Briefings provided by the ERA Chief Executive regarding ERA operations.	Company shareholders.

Engagement forum	Frequency	Purpose	Participants
Relationship Committee meetings	Quarterly	To ensure effective information sharing and review processes between ERA and the Mirarr Traditional Owners and their representatives.	NLC and ERA: as provided for in Clause 12.3 in Ranger Uranium Project – Government Agreement Amendment (2013) and Restatement Deed.
Ministerial briefings	Regularly, as required	Briefings are provided on various operational issues at the Ranger mine, including aspects relating to mine rehabilitation and closure.	Federal and NT Ministers and senior advisors.
Kakadu Park Board of Management meetings	Board meetings held quarterly: ERA update provided bi-annually	A board of management established as part of the governance structure for Kakadu National Park, a jointly managed park between Parks Australia and the Traditional Owners of Kakadu. ERA provides a regular operations update, including mine closure status, and consults with the broader indigenous population through this forum.	Commonwealth Government representatives, Park Management and Traditional Owners from each region in the park.
'Town Hall' briefings	Quarterly	Presentation and question and answer session on ERA operations by either the Chief Executive or General Manager Operations.	All ERA personnel and contractors

Source: ERA (2022) – Chapter 4 of Draft Ranger Mine Closure Plan, Revision number 1.20.0, July 2022.

4.4 Mine closure

This section describes what ERA has undertaken in terms of its financial provision estimation in relation to the RPA.

According to ERA's 2020 MCP, the primary goal of closure at the Ranger mine is to rehabilitate the disturbed areas of the RPA, establishing an environment similar to adjacent areas of Kakadu National Park. The total area of disturbance in the RPA to be rehabilitated is approximately 1,062 ha. The closure domains for Ranger are outlined in Figure 4-1 with a summary of the closure activities to be completed for each domain provided in Table 4-2.

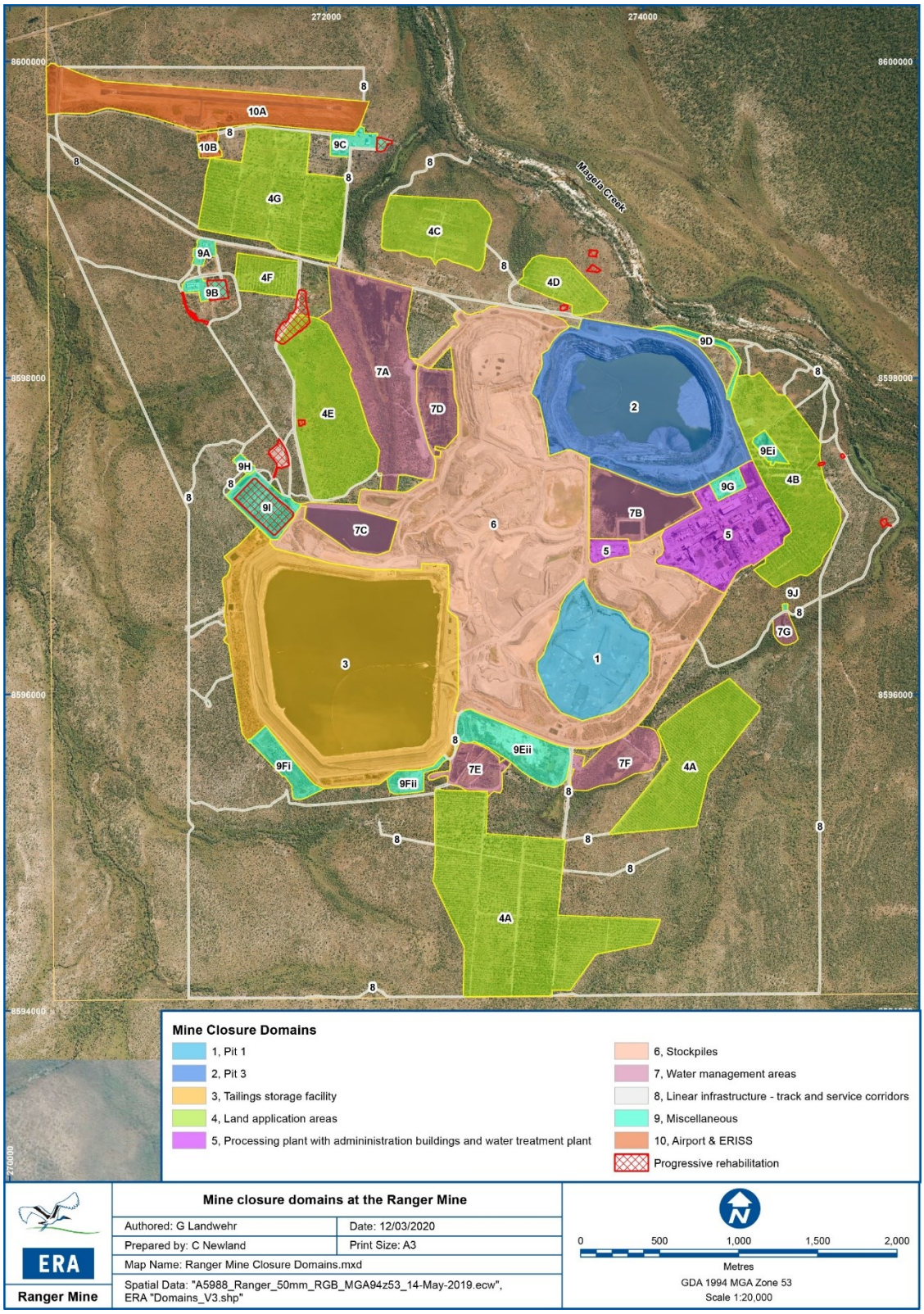
The current estimate as reported by ERA to the market lies in the range from A$1.6 Bn to A$2.2 Bn for total works completed (ERA ASX announcement dated 2 February 2022).

A working estimate for project budget and progress tracking as advised by ERA to SRK is A$1,786 M, with a 'total completed' spend to date of A$410 M and estimated 'to complete' costs of A$1,376 M.

ERA has identified two options for cover placement in Pit 3: Option A which involves the placement of a subaqueous cover, and Option D comprising placement of a subaerial cover. Financial provisioning for closure has been calculated for both options using a commercial based estimate.

SRK's review considered all estimates provided, with the final recommendations for a provision to be based on the preferred option estimate, Option D, the subaerial capping method. ERA is in the process of undertaking a FS of the preferred option to better understand aspects related to this approach.

Figure 4-1: Ranger mine closure domain map



Source: ERA (2020) – 2020 Mine Closure Plan Report

Table 4-2: Closure implementation work program summaries

Area	Summary of closure implementation
Pit 1	ERA commenced deposition of neutralised tailings into Pit 1 in 1996 following an application to the Minesite Technical Committee, approved by the NT minister in 1995. Following the installation of prefabricated vertical drains (wicks) to promote consolidation in 2012, Pit 1 backfill activities commenced. The final backfill and landform contouring was completed in August 2020, with scarification of the final landform occurring in November 2020 and revegetation during the 2020/2021 wet season. Closure and rehabilitation have been completed on Pit 1 with monitoring and adaptive management now being undertaken.
Pit 3	Open cut mining in Pit 3 commenced in July 1997 and ended in November 2012. Tailings deposition into Pit 3 commenced in 2015. Subaerial mill tailings deposition was scaled back to flushing and cleaning activity with the cessation of Mill operations on 8 January 2021. Dredge tailings deposition was completed on 15 February 2021. Pit 3 is continuing to receive remnant tailings from the TSF. Tailings deposition methods have been trialled and modified to improve consolidation and increase the likelihood of achieving the target closure date. Decant wells will be installed during backfill options for tailings dewatering/consolidation. Prior to the placement of tailings in Pit 3, 33.7 Mt of low-grade ore and non-mineralised waste rock (termed underfill) was backfilled. This void within the underfill is being used for the storage of waste residue produced by the Brine Concentrator. An underdrain system comprising a 2 m layer of waste rock and a sump was constructed over the underfill to facilitate tailings consolidation and allow for the injection of brine. Brine injection wells are installed to allow for placement of the brine into Pit 3 underfill. Remediation work on the underdrain bore and associated infrastructure was completed in the second half of 2020, and recommissioning of the existing brine injection system is underway. Following completion of tailings deposition, pit capping works will commence similar to Pit 1. Once sufficient geotechnical strength is obtained in the initial cap, bulk backfill will commence, followed by surface contouring to the final landform shape and revegetation.
TSF	The TSF dredged tailings transfer to Pit 3 started in 2015 and ceased on 15 February 2021. The remnant tailings within the TSF floor and the wall were subsequently removed and transferred to Pit 3. The bulk of the decant pond in the Pit was then pumped to the TSF. At the cessation of process water storage, the TSF will be deconstructed. The TSF serves as an important storage facility for water, during Pit 3 closure works. ERA has identified a suitable location in the southeast corner of the TSF; to allow for the burial of the dredging equipment and any other miscellaneous waste material remaining in the TSF at the time of deconstruction. Once the TSF is empty of process water, decommissioning, including any contaminated material management activities, will commence. During the deconstruction work, the TSF will be converted to a pond water catchment. Upon completion of the final landform in this area, the TSF catchment will be converted to a release water catchment. TSF deconstruction will involve reducing the walls to final landform level. Wall material will be used to fill in the TSF basin. The majority of the material used in the construction of the TSF walls will fit into the TSF basin to achieve the final landform. Final landform contouring and revegetation for the TSF site is planned for 2025.

Area	Summary of closure implementation
Process plant, water treatment plants and other infrastructure	A demolition sequence has been determined for the areas of the plant. Following the cessation of processing activities on 8 January 2021, decommissioning and demolition of the process plant commenced. Plant, equipment, buildings and other structures were removed unless approval of the Traditional Owners and Commonwealth Minister is given for infrastructure to remain on the RPA. Demolished materials will be disposed of onsite at 6 m level deep below final landform if disposed amidst waste rock. Work on decommissioning and decontamination of all infrastructure within the processing plant has now been completed. Works to ensure the continuity of services have also commenced. Detailed material take-offs (a list of materials with quantities and types) have been completed to provide a more accurate estimate for major process buildings. With the completion of decommissioning of the processing plant, current rehabilitation involves only care and maintenance work to ensure the area remains safe prior to completion of demolition work.
Stockpiles	The bulk material movement plan provides for excavation of areas above the final landform (in the stockpiles and TSF) when there is nearly 100% acceptable material for the final landform. Mining of stockpiles for the backfilling of Pit 3 and creation of the final landform is scheduled to commence in October 2022. Mining material from stockpiles and the TSF is scheduled for completion in September 2025.
Water management areas	There is an ongoing need to actively manage water throughout the closure and rehabilitation. The Ranger mine footprint is divided into catchment areas that generate run-off and/or seepage as a result of incidental rainfall. Each catchment may comprise of several elements including retention ponds, sumps, collection basins and groundwater interception ponds. Currently, within the closure schedule, rehabilitation is expected to commence in 2023 depending upon the level of rehabilitation required. Pond water (water derived from rainfall on the active mine catchments) is collected on the RPA is transferred to retention pond 2 (RP2 – the main pond water storage) or RP6. To allow earlier deconstruction of the TSF, process water in the TSF will be transferred out of the TSF into RP6. Once all the pond water has been treated on site, RP2 will be prepared to receive waste material from Phase 2 of demolition. Release waters (rain water from the mine footprint) are stored within RP1 and Georgetown Creek median bund level line (GCMBL) is required until almost to the end of closure. Wetland filters will be required throughout the majority of closure for ongoing water management. The Ranger Water Management Plan requires sumps and pumps to manage the flow and separation of classes of water throughout the wet season and will continue during closure. Georgetown and Coonjimba creeks will continue to receive direct release water from the final landform during and after closure.
Land Application Areas	LAAs will be required throughout closure to allow for the ongoing disposal of release water. A preliminary assessment of the total percentage of each LAA requiring revegetation has been made. Assessments to characterise the LAA substrates have been completed. It has been determined that only 158 ha within the total area of LAAs will require active revegetation. ERA is planning to conduct further surveys of the LAAs to finalise the rehabilitation planning just prior to execution.
Ranger 3 Deeps decline	The R3D underground mine project was not progressed and the decline was placed in care and maintenance in June 2015. In April 2019 ERA received approval from both the Commonwealth and Northern Territory Ministers to commence rehabilitation and closure of R3D. The first stages of closure of the decline commenced in 2019 with the removal of all infrastructure, the plugging of the base of the vent shaft and the flooding of the underground workings. In May 2021, ERA notified stakeholders of its intent to commence the final closure and backfill program component of the R3D exploration decline decommissioning plan. Backfilling of the decline (the weathered zone) commenced in June 2021 and was completed in late 2021. The revegetation program is currently scheduled to commence in January 2025.

Area	Summary of closure implementation
Other areas	Other areas subject to closure implementation and addressed in the MCP include: ■ waste material management ■ linear infrastructure ■ miscellaneous non-plant buildings ■ nursery and core-yard ■ Magela levee. Under current legislation, ERA is obliged to rehabilitate the airport precinct. ERA is in consultation with key stakeholders regarding the ongoing operation of the airport. The ERISS offices and external services (Telstra) facilities are excluded from the Ranger Mine Closure Plan.
Contaminated sites	A *Plume and contaminated site management plan* describes future work (site assessments and BPT assessments), post remediation validation assessments and post-closure monitoring. A Contaminated Sites investigation was completed to address these gaps between December 2019 and January 2020. Results from this investigation and the historical work will be used to inform BPT assessments to determine future actions if required. A sediment investigation program was conducted between November 2020 and February 2021 to characterise the ASS contamination potential and fill knowledge gaps in the inventory of sediment metal and radionuclide contamination on the RPA. Results from this investigation will be used to inform BPT assessments to determine future actions if required.
Final landform/surface preparation	The area of the final landform will be 795 ha. During the closure feasibility study, the final landform topography was updated and included progression of the following aspects from the pre-feasibility study design: ■ material balance for closure works (total material available) ■ flood modelling for erosion ■ location of drain flow paths to prevent channels forming over pits ■ overall landform slope gradient to minimise sediment transport ■ slope contour ripping to minimise sediment transportation and improve water ingress ■ in-stream environmental rock bars to slow sediment transportation ■ in-stream sediment control structures to prevent (as far as practical) the loss of sediment from the disturbed area, and ■ learnings from land evolution modelling conducted by the SSB. The surface layer of the final landform will be constructed with 1s waste rock (non-mineralised) to ensure that radiation doses are as low as reasonably achievable. To achieve the revegetation objectives, design and construction of the surface layer requires consideration of plant available water, depth and heterogeneity of the waste rock surface layer, material chemical characteristics, and surface treatments to optimise nutrient cycling. A variety of surface treatments have been identified by ERA to limit erosion and sediment discharge on the general surface of the landform. The final landform construction of Pit 1 commenced in Q2 2020 and was completed in September 2020. The remainder of the final landform construction will commence on or about March 2023 and will be ongoing to enable areas to be released progressively for revegetation.

Area	Summary of closure implementation
Revegetation implementation	There is approximately 1,062 ha of land to rehabilitate and revegetate for the successful closure of the Ranger Mine, including 795 ha of waste rock covered area. Revegetation planning and implementation will be guided by the ERA Ecosystem Establishment Strategy that has been developed based on the learnings from over 30 years of revegetation trials and research and an understanding of the natural surrounding ecosystems. Ongoing monitoring of the trial landform will continue to inform the final approach to revegetation of the RPA. A key consideration of the closure strategy was to provide progressive handover of final landforms to facilitate achievable revegetation production rates for contractors. A maximum rate of 1.5 ha/day revegetation day was set as a target, with the schedule commencing in April 2023. Initial revegetation activities commence after site preparation is complete for an entire revegetation area. However, revegetation planning and preparation begins several years earlier; for example, with seed collection. The initial revegetation process broadly includes: ▪ planting design (planting density and distribution according to domain). ▪ seed collection and plant production. ▪ revegetation activities: – site preparation (herbicide application, irrigation installation, planting site cultivation) – tubestock planting (hole digging, fertiliser application, planting, watering in and/or irrigation). The selection of (revegetation) species is based on previous stakeholder-agreed lists, historic and recent reference site surveys, and consultation with CDU researchers, Bininj ecology experts, and Traditional Owners. The majority of stems (approximately 70%) used for revegetating the Eucalyptus savanna woodland domain on the final landform will consist of a handful of species, including dominate Eucalyptus and Corymbia trees, Acacias, and common fruiting shrubs. The remaining stems will be a range of tree, shrub and groundcover plants that, although in smaller densities, contribute significantly to the ecosystem's species richness, provide food and shelter for fauna, and/or are important species for Traditional Owners. Substrates used to create the final landform shall be carefully managed during construction to prevent site contamination with weeds or their seeds

Source: Modified after ERA (2020) – 2020 Mine Closure Plan Report

4.4.1 Data review

In undertaking its review, SRK received information via a virtual data room, and engaged with specific ERA personnel, to better understand the approach adopted with respect to closure planning, the forecasting of the Company's liability estimates, and how the Company is tracking with regards to current rehabilitation expenditure at the Ranger operation.

Numerous models were made available to SRK, which made this review particularly complex. The information provided is not intuitive, and required a substantial amount of analysis and discussion with ERA to understand the movement in costs and differentiation in rehabilitation activities between all the supplied models. SRK also found that the multiple estimates were not well documented or clearly stated in relation to tracing current liabilities and reforecasting, in particular, the most recent internal forecasting for 2022–23 budgeting and forward planning.

For the purpose of its review, SRK reviewed the following data.

Provision modelling:

- 2022 ERA Funding Reforecast Database BoE OPTION D MarAct UPDATED (2022–23 budgeting and forward planning model).
- 211202 ERA Q3 Major Reforecast Database BoE OPTION A

- 211202 ERA Q3 Major Reforecast Database BoE OPTION D
- Detailed estimate worksheets used to build the Major reforecast Option A provision
- Contingency Workshop report: 211022 ERA Reforecast BoE RevA.docx.

Basis of cost estimate reports:

- 211022 ERA Reforecast BoE RevA.docx
- Ranger Closure Feasibility Study Basis of Estimate H355334-00000-621-610-0001, (Hatch, 2018).

Rehabilitation tracking:

- Rehab ERA Jun22.xlsx.

Third party technical reviews:

- Ranger Rehabilitation Project Short Term Spend Review – 2022 & 2023 Rev B June 2022 (Betchel, 2022)
- 2.8 – ERA independent estimate review – REV D (Final) (Bechtel, 2022).

Preferred option definitions:

- Pit 3 Capping BPT- Board member shortened Presentation_20 Dec 2021
- Pit 3 Capping BPT-Stakeholder Presentation_06 Dec 2021.

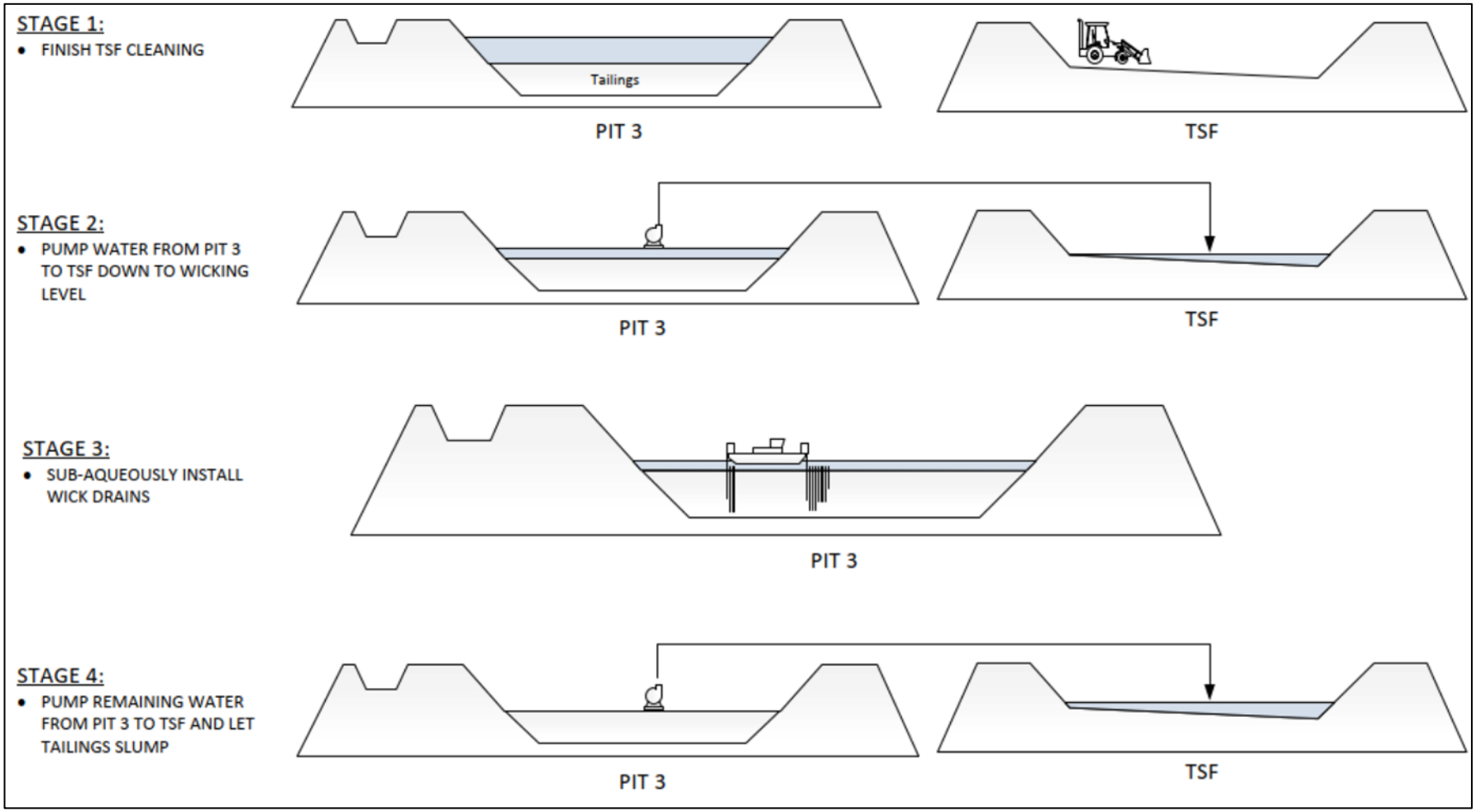
4.4.2 Closure options and cost estimation

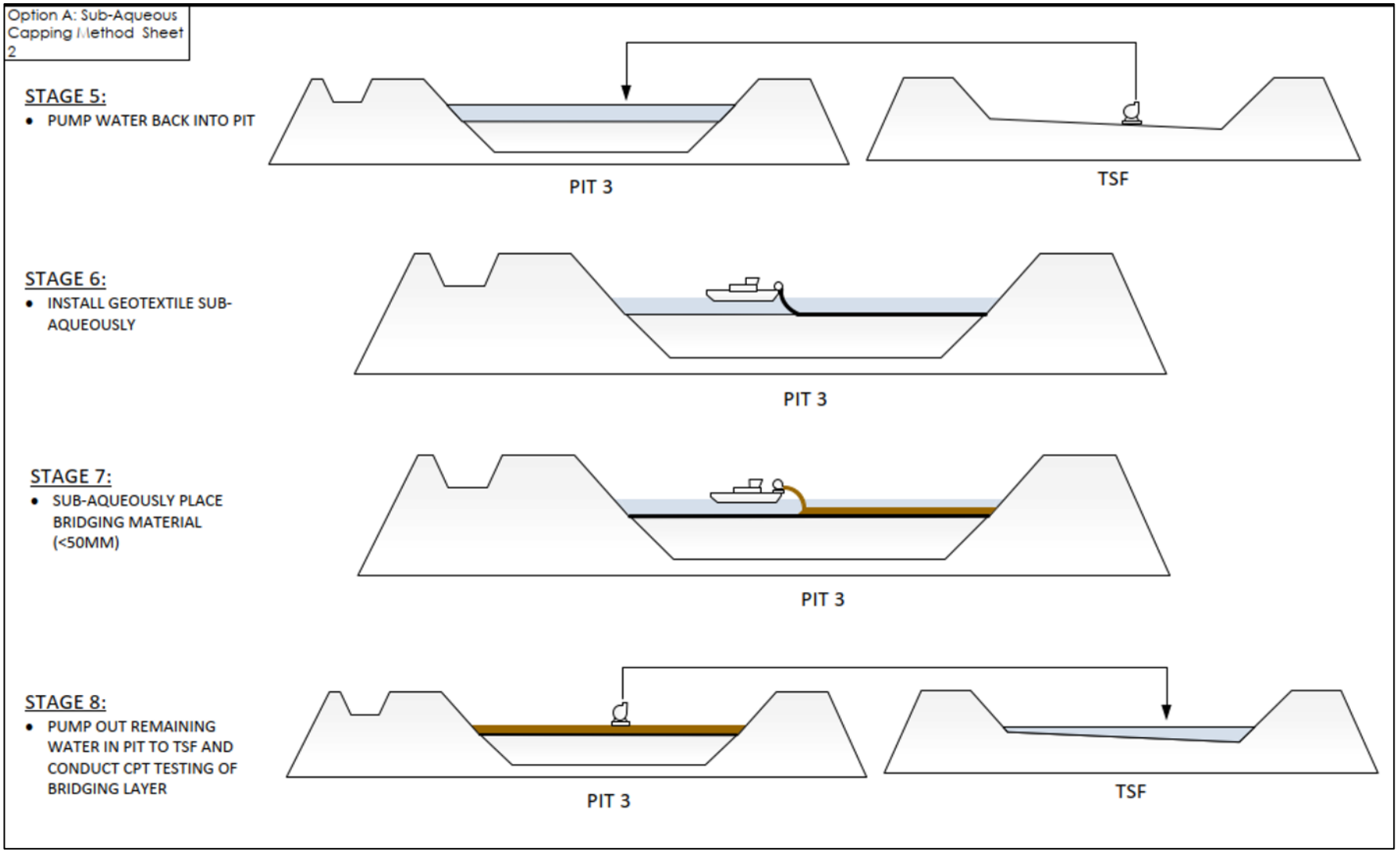
ERA has previously investigated several options for the closure of Pit 3. The current closure costings are based on two prevailing options, namely Option A and Option D.

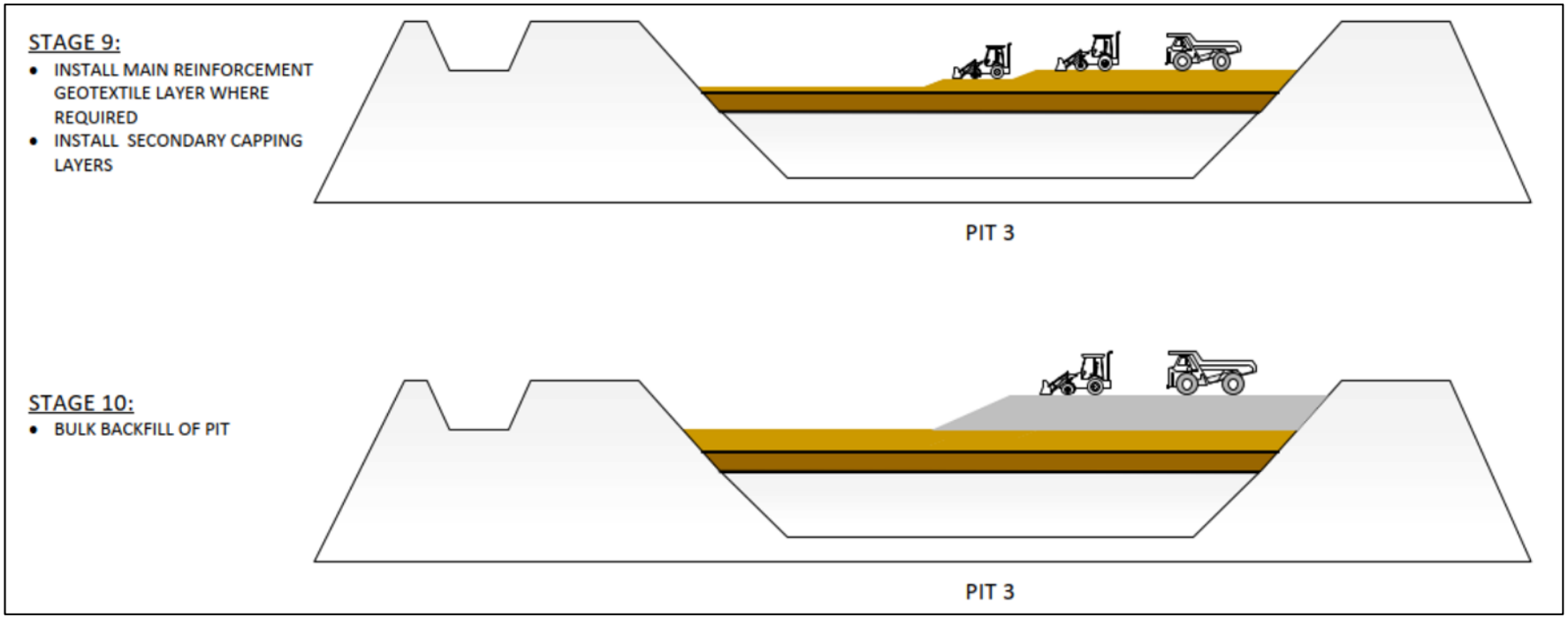
Option A comprises subaqueous capping of Pit 3, which will require the installation of wick drains, initial geotextile and bridging material underwater, before removal of the remaining water and installation of the reinforcement geotextile, secondary capping layers and final bulk backfill of the pit (Figure 4-2).

Option D is a hybrid model based on subaerial capping of Pit 3, which requires the installation of wick drains via a barge, and pumping out any remaining water before mechanically assisting wicking to decrease drying time (Figure 4-3). Capping will be started from an initial working platform over the dry edges of the pit before applying a geotextile over the wicked portions followed by a bridging layer, then secondary capping and finally bulk backfill of the pit. The implementation of this option is stated as requiring an extra 5 months in addition to the current delayed schedule for Option A.

Figure 4-2: Schematic of proposed subaqueous capping method (Option A)

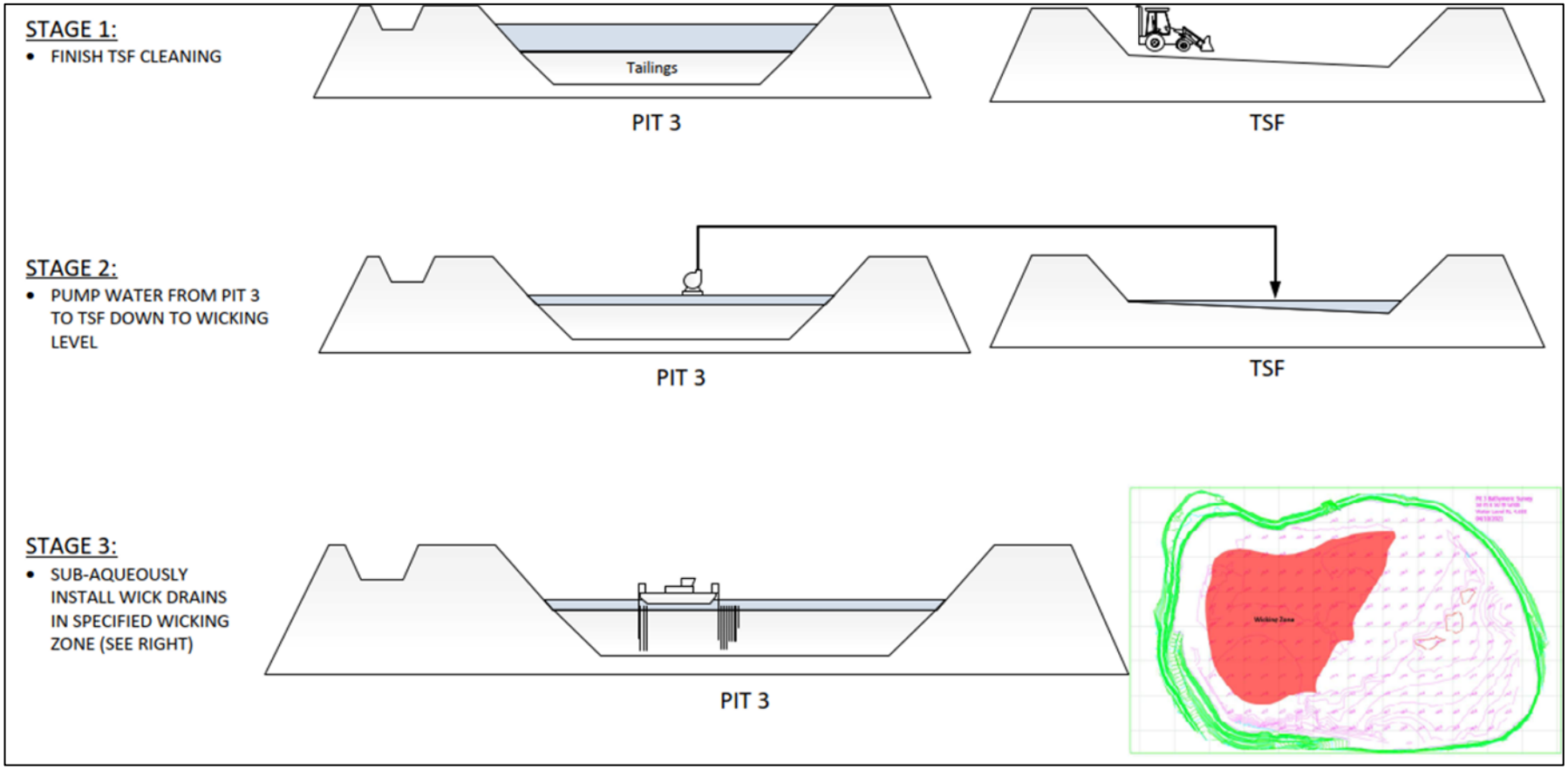


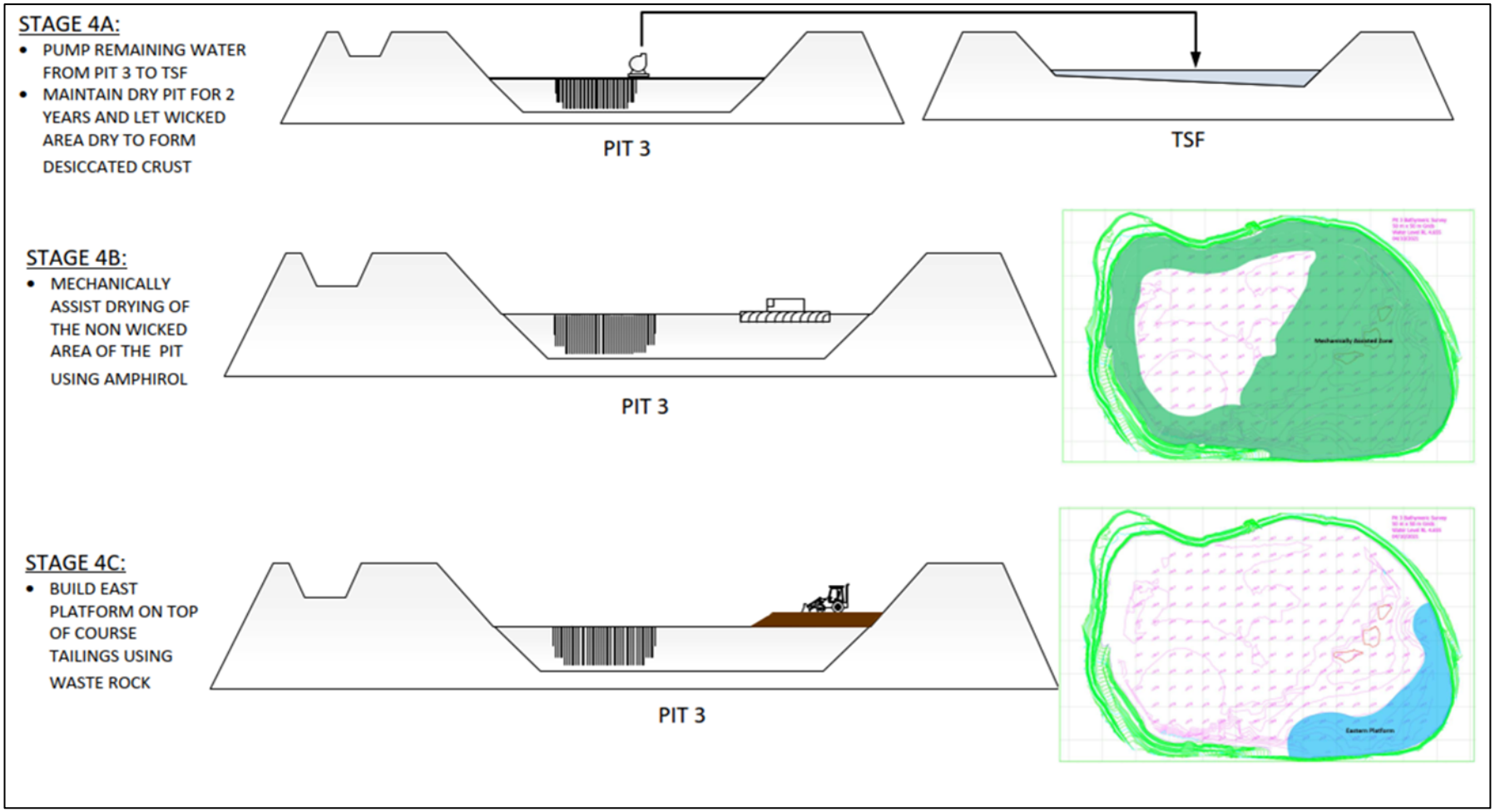

Option A: Sub-Aqueous Capping Method Sheet 2
STAGE 5:
• PUMP WATER BACK INTO PIT
PIT 3
TSF
STAGE 6:
• INSTALL GEOTEXTILE SUB-AQUEOUSLY
PIT 3
STAGE 7:
• SUB-AQUEOUSLY PLACE BRIDGING MATERIAL (<50MM)
PIT 3
STAGE 8:
• PUMP OUT REMAINING WATER IN PIT TO TSF AND CONDUCT CPT TESTING OF BRIDGING LAYER
PIT 3
TSF

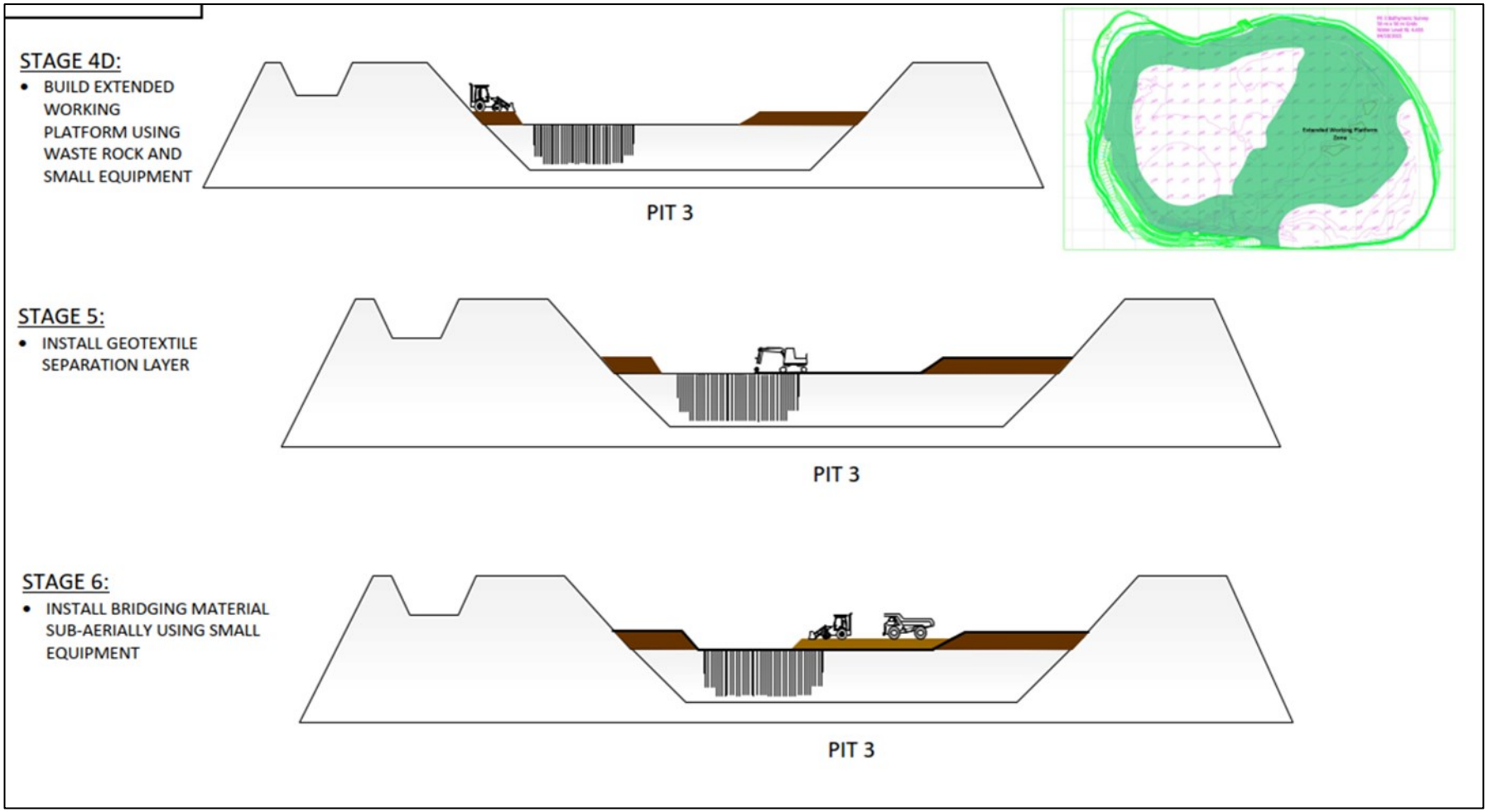


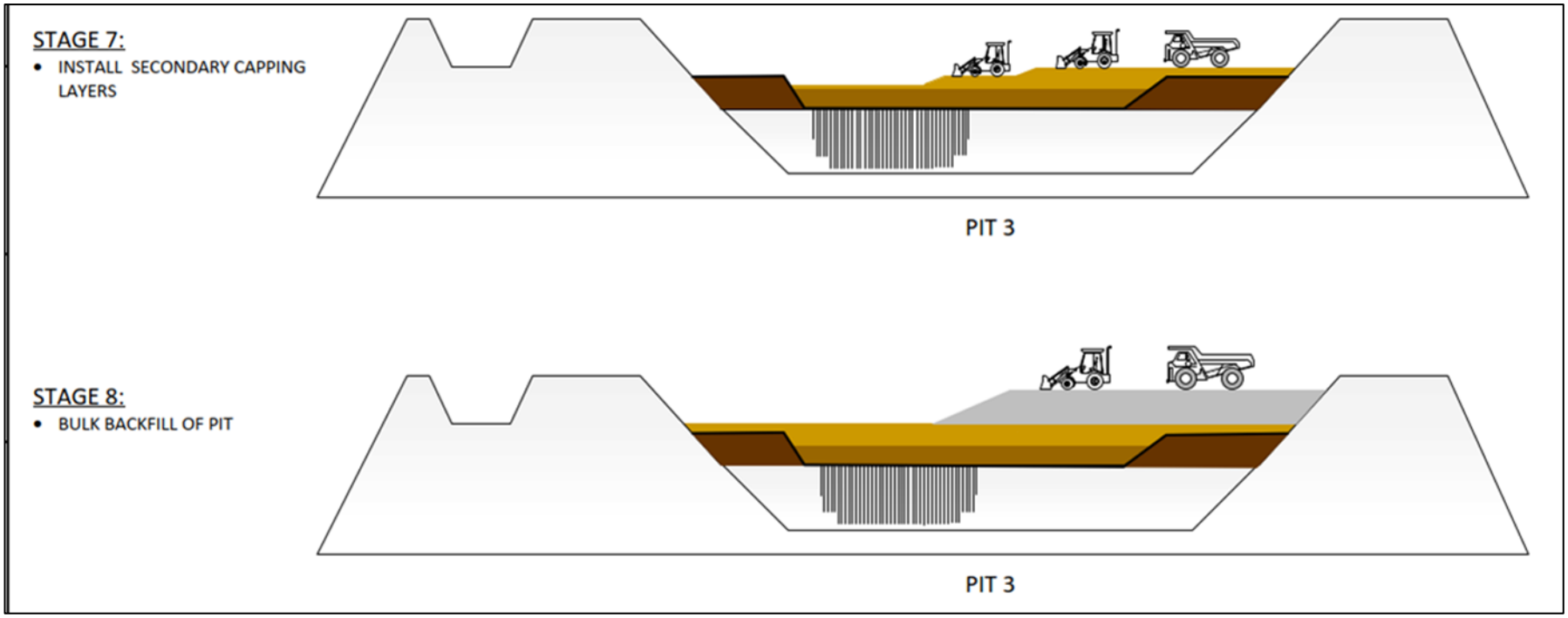
Source: Pit 3 Capping BPT – Board member shortened Presentation_20 Dec 2021.pptx

Figure 4-3: Schematic of proposed subaerial capping method (Option D)




STAGE 4A:
PUMP REMAINING WATER FROM PIT 3 TO TSF
MAINTAIN DRY PIT FOR 2 YEARS AND LET WICKED AREA DRY TO FORM DESICCATED CRUST
PIT 3
TSF
STAGE 4B:
MECHANICALLY ASSIST DRYING OF THE NON WICKED AREA OF THE PIT USING AMPHIROL
PIT 3
STAGE 4C:
BUILD EAST PLATFORM ON TOP OF COURSE TAILINGS USING WASTE ROCK
PIT 3


STAGE 4D:
• BUILD EXTENDED WORKING PLATFORM USING WASTE ROCK AND SMALL EQUIPMENT
PIT 3
STAGE 5:
• INSTALL GEOTEXTILE SEPARATION LAYER
PIT 3
STAGE 6:
• INSTALL BRIDGING MATERIAL SUB-AERIALLY USING SMALL EQUIPMENT
PIT 3



Source: Pit 3 Capping BPT – Board member shortened Presentation_20 Dec 2021.pptx

In 2017, both subaqueous (Option A) and subaerial (Option D) capping methods for Pit 3 were investigated by ERA. At that stage, SRK understands the subaqueous method (Option A) was able to meet the legislated closure deadline of 8 January 2026.

In 2019, a FS was completed evaluating the rehabilitation of the Ranger site based on the 2020 MCP using the Option A capping methodology.

In 2021, ERA undertook a reforecast study of the 2019 FS for the site, focusing on the Option A capping method for Pit 3. A third-party review was undertaken by Bechtel, that informed ERA of the likely range of total costs to complete the capping works at Ranger. The current estimate as reported to the market lies in the range from A$1,640 M to A$2,220 M for total works completed (refer to Table 1 in ERA's ASX announcement dated 30 August 2022).

In light of its understanding of the current status of rehabilitation activities and delays in schedule, ERA's ongoing monitoring and reforecasting deemed that the previously preferred method for closure of Pit 3 (i.e. Option A – subaqueous) would no longer meet the legislated closure deadline of 8 January 2026.

Given this updated understanding of the likely timeline, as well as the requirement to obtain approval for a change in legislated date for completion of rehabilitation, ERA subsequently engaged Hatch to undertake a closure trade-off study to further evaluate the Pit 3 capping. This study recommended that a subaerial capping method (i.e. Option D – subaerial) is the preferred 'go-forward' option. The subaerial method is considered by ERA to be a more traditional, lower risk method and has since been adopted as the Company's preferred method.

In May 2022, ERA initiated a FS update related primarily to the subaerial capping method. While most of the studies completed to date investigated Option A (subaqueous capping) only limited data have been developed to assess option D (subaerial capping). This FS remained ongoing at the time of preparation of SRK's report. SRK assumes that the ongoing review of the subaerial capping provision, with a new basis of estimate, will be developed as part of the FS for Option D to clarify engineering, schedule implications, and packaging of the project to optimise the rehabilitation of the site.

Major reforecasting of the 2019 FS provisioning estimates have been completed for both capping approaches in Q4 2021, with both methods falling within the range previously reported to the market. The subaqueous capping approach has been estimated by ERA to total A$1,794 M, while the subaerial capping approach is estimated to total A$1,733 M. SRK understands that ERA has spent A$259 M on rehabilitation works over the period January 2019 to August 2021 period. SRK further notes that there is an estimate to complete both options from August 2021 onwards and these estimates are A$1,535 M and A$1,474 M respectively, depending on which capping option is ultimately adopted. SRK understands that additional spend on closure works has occurred, thereby taking the actual spend to the end of June 2022 to A$410 M, resulting in estimates to complete of A$1.38 Bn and A$1.32 Bn, respectively.

SRK notes the approval for the preferred option (Option D – subaerial) remains to be sought from regulatory bodies, and that the estimate and potential expenditure is highly dependent on the duration of the schedule, which is currently undetermined. In SRK's opinion, the forecasts have largely been undertaken to holistically capture aspects related to liability estimations. Water treatment, for an example, has been included in the forecast and SRK understands that those allowances have been derived using available pumping, volume and other existing data.

In addition to the two Q4 2021 reforecasting models for Option A and Option D, ERA provided SRK with an internal budgeting reforecast model, which addresses works to be completed in 2022–23. SRK was advised this model had not been reforecast over the entire closure period. This model did however, include adjustments for diesel price increases, addressed inflation for materials and workforce, and included several specialist studies, which will address several of the KKN areas outlined by the Office of the Supervising Scientist.

4.4.3 Cost estimation review

SRK reviewed a selection of unit rates outlined within the detailed estimate worksheets, which inform the two estimates. These were spot checked against a third party NT rates database. NT rates are, on average, usually higher compared with other regions in Australia. In SRK's opinion, the rates assessed for Ranger are within the expected range for contractors, with some rates being lower than expected, while others are higher when compared to SRK's internal third party unit cost rate database. Of significance, SRK notes that contractor rates will typically vary depending on, but not limited to, the prevailing tender processes, general availability of plant and resources, as well as perceived interest in the work to be undertaken.

The Wage Rate Index (WRI) for NT was also reviewed over the periods of inputs into the funding reforecast modelling. WRI has not moved significantly over the period September 2021 to June 2022, across the mining, construction and professional industries. In general, with regards to earthworks undertaken at Ranger, SRK expects an annual wage rate increase of around 2.5–3% in NT industries.

SRK notes that the 2021 major reforecasting models provided by ERA have been through multiple rounds of review, and contingencies workshops using Monte Carlo methods were undertaken (for the Option A major reforecast only). SRK understand that the same contingency has been applied to all models.

A contingency of 8% has been derived from the data and applied to the costing estimate. It is SRK's experience that an expected contingency for a Class 3 estimate (or pre-feasibility stage of Mine Closure Planning) would be within 15–25%. For this reason, SRK considers that the contingency applied is potentially low in relation to the status of the cost estimate.

While SRK considers that the contingency is at the lower end, through consultation with ERA team members, SRK understands that allowances have been made for various items within the provisions, as well as there being a good understanding of water-related costs, aspects all of which could in theory elevate the actual contingency to the 10–15% range. While there is acknowledgement in this regard, SRK believes that the contingency should be transparent, and it should be amply documented such that other items can be shown to support or impact the overall contingency.

Since the completion of the major reforecast estimates in 2021, there has been significant movement in the cost of fuel and CPI inflation, which will directly affect supply of materials, given supply chain constraints and a tight labour market. Although this is not unusual given the period over which this work was completed, it does impact the total costs as documented in the major reforecast models.

SRK notes that adjustments have not been made to the total reforecast provisions, but have been addressed in the 2022–23 budget and forward planning model for Option D. SRK assessed the

2022–23 budget and forward planning model against individual activities to determine the potential impact to the remaining rehabilitation works, current movements in costs due to material supply, fuel and workforce adjustments, and any additional works not previously included such as closure planning refinement studies. ERA has advised SRK that the 2022–23 budget model was not a complete estimate, with the schedule outside of the period assessed not being finalised. This was taken into account by SRK during its review, however recent changes have guided SRK's long-term view of the movement in costs.

4.4.4 Status of current rehabilitation activities

The current status of the Ranger rehabilitation activities was not assessed by SRK as a site visit was not completed to review site details against closure criteria and correlate back to the rehabilitation cost estimate. SRK was limited in terms of its review of progressively rehabilitated areas, and ongoing monitoring tracking progress towards agreed closure criteria.

SRK understands that Bechtel has been engaged by ERA to advise of the current status of the rehabilitation and to complete a review of the activities required to complete the rehabilitation works.

As noted in Section 4.2.2, not all closure criteria, particularly in relation to surface water, groundwater, soil and sediment quality, have been formally agreed with the federal minister.

SRK acknowledges that ERA has been tracking the progress of rehabilitation activities within its provision estimates linking back to actuals spent and accommodating schedule adjustments where delays have impacted the rehabilitation works (e.g. the Pit 3 capping approvals have not yet been received and with a changed approach to the Option D subaerial capping methods, an increase of 10 months has been added to the schedule).

4.4.5 Closure risks and opportunities

Underestimation of the financial liability

Risk description

SRK is satisfied that the methodology used to develop the closure liability estimate has been appropriately applied. This estimate is based on the reforecast developed for the preferred Option D. However, as the estimate was finalised in Q3/4 2021, the stated figure does not include prevailing fuel and CPI rates.

SRK considers that there is further risk to the schedule as a result of the preferred option remaining to be approved and notes the potential that the current project schedule could be pushed out further. In the event that the schedule is extended, this could potentially equate to a further A$6.5 M/month. The schedule used for forecasting was increased by 10 months in total, which equates to an extension of, and additional time for Option D. As the status of the Pit 3 closure approval submission has not been confirmed, there is potential for this task to be pushed out further than currently estimated in the forecast. As a result, SRK considers that further detail regarding the stated estimate is required to better understand the likely costs of closure.

Consequence

Due to a lower than anticipated contingency being in place, as well as the major reforecast estimate completed in Q4 2021 (with rates applicable to the prevailing market conditions at the time), an increase in the overall closure cost is anticipated, particularly due to the preferred option requiring bulk earthworks, that are impacted by fuel rates, which are currently trending higher. Delays or lack of environmental authorisations for the preferred option may result in a delay to the commencement of the rehabilitation operations. SRK understands that rehabilitation activities have commenced, however there are certain secondary approvals that are required, which could potentially impact progress.

Current identified management solutions

As SRK understands, ERA is currently undertaking a FS relating to subaerial capping of Pit 3 (the currently preferred option). This study is likely to further refine the execution of the project, as well as increase understanding of the associated risk, cost, and implication on the schedule. As per its purpose, the FS will refine current information and potentially guide the Company's present estimated cost. SRK considers ERA understands its liability, as much as is currently possible, in the absence of completing the FS and other potential studies that may be contemplated going forward.

Socio-economic transitioning

Risk description

SRK is aware that the operation has links with, and supports, the Jabiru community in certain facets. SRK did not review the potential costs related to socio-economic transitioning at closure of the operation, and how this may or may not affect communities or interested and affected parties.

Consequence

Understanding socio-economic transitioning impacts and related costs is an intricate process and may require the Company to undertake additional studies to better understand its position as well as the position of interested and affected parties.

4.4.6 Conclusion

ERA has undertaken closure liability assessments derived via a commercial costing approach as opposed to using a generic liability estimate calculator. SRK considers that commercial costing is more accurate and therefore believes the operation understands its liability as much as is currently possible in the absence of further studies. ERA is also undertaking a FS which SRK considers will add benefit – in particular but not limited to – the schedule, market related rates, and FS engineering design confidence all of which can impact the actual cost of closure.

Taking the above findings into account, SRK recommends increasing the contingency included in the estimate. In SRK's view, the final assessment of the rehabilitation costs is estimated to be in the order of A$1,826 M (incorporating a 15% contingency), if the preferred Option D (subaerial capping) is approved. This figure falls within ERA's estimated range of A$1.6 Bn to A$2.2 Bn as previously advised to the market.

In general, SRK considers the schedule outlined for the Ranger mine closure to be aligned with the data made available. As noted previously, ERA is currently undertaking studies (including near term finalisation of the 2022 Mine Closure Plan) and SRK considers the outcome of these studies will better refine the schedule going forward.

4.5 Growth opportunity – Ranger 3 Deeps

4.5.1 Overview

ERA constructed an exploration decline at the Ranger mine adjacent to the southeastern rim of Pit 3, from early May 2012 to December 2014. The decline enabled an underground exploration and infill drilling program to increase orebody knowledge and provide geological, hydrogeological and radiological data.

The decline extended 2,700 m in length and 450 m below the ground surface, above and parallel to the target mineralisation zone. The decline was intended to provide access to the mineral resource and subsequent underground mine known as R3D.

The decline was extended, and the ventilation shaft constructed between October 2013 and October 2014. Exploration drilling commenced in May 2013 and continued intermittently until September 2014. In 2015, ERA decided not to progress the R3D Project to FS and the project was placed into care and maintenance.

In April 2019, ERA received approval from both the Commonwealth and NT ministers to commence rehabilitation and closure of the R3D exploration decline. Rehabilitation works commenced immediately after approval of the mine closure plan. The 2019 rehabilitation works program included the removal of infrastructure and subsequent backfilling of the vent shaft access. The exploration decline was then allowed to flood naturally to -25 mRL. These works were completed by the end of June 2019. The exploration decline was backfilled during 2021, following the conclusion of processing on the RPA, as required by the Ranger Authority.

While the R3D underground was initially considered by ERA to represent a ‘bridging strategy’ for development between the completion of the Ranger 3 open pit and the commencement of mining at Jabiluka, future development is now considered unlikely in light of the economic, legislative and operational challenges that exist for the project. If the R3D Project were to be developed at some future point, ERA considers this would not be until the completion of the Jabiluka Project, if that were eventually developed.

4.5.2 Project geological setting

The R3D deposit has no surface radiometric expression and was discovered in 2005 during Pit 3 step-out exploration drilling. The R3D deposit occurs down-dip of the previously mined Pit 3 mineralisation.

R3D is a structurally controlled deposit hosted by arenites, shales and carbonate sedimentary units of the Cahill Formation, which has been regionally metamorphosed to psammites, chlorite schists and magnesite marble, all of which dip at moderate angles to the east. The deposit sits within the Deeps Fault Zone, a north-northwest trending complex reverse fault system controlled by the differing competencies of the local stratigraphy.

The basement rocks at R3D comprise the Nanambu Complex, which comprises granite, gneiss and schists ranging in age from 2,470 to 1,800 Ma. This complex is locally termed the Footwall Sequence (FWS) and is mostly schistose to gneissic, chloritised and sericitised within Pit 1, but moving away from this deposit a more granitic texture was noted in drill core. This textural variability reflects the complex structural history of the succession.

Overlying the FWS is the Lower Mine Sequence (LMS) of the Cahill Formation. The LMS consists of a sequence of carbonates, with interbedded schist and chert. These carbonates range in composition from magnesite to dolomite and can be up to 300 m thick. Along the contact with the overlying Upper Mine Sequence (UMS) lies a brecciated chert approximately 5 m to 15 m thick, which has been mineralised in the upper 100 m from the contact. At depths of less than 330 m below surface, only patchy mineralisation occurs in the LMS, whereas at depths below this, significant mineralisation exists. R3D occurs at depth and has formed as a result of a local fault system.

The UMS is a 500 m thick sequence of quartz-feldspar-biotite schist and microgneiss, which has been altered to quartz chlorite schist in the mineralised zone. Discrete but discontinuous carbonaceous beds are evident in the sequence and most probably represent original black shale beds. The presence of haematite is also noted in structurally disturbed high-grade zones in the deposit.

The Hanging Wall Sequence (HWS) comprises a group of micaceous quartz-feldspar schists with intercalated amphibolitic units and local garnetiferous horizons. Discontinuous bands of magnetite occur low in the HWS and were used as a geophysical marker in regional mapping.

Intrusive bodies into this package include pegmatites and dolerite dykes. The dolerite dykes are interpreted to form part of the Oenpelli Dolerite and have been observed in the western wall of Pit 3. These dolerite dykes intruded along mineralisation-bearing faults and are therefore interpreted to be syngenetic or slightly post-dating mineralisation, possibly because there is scant evidence of the dykes being mineralised. Pegmatite dykes are divided into four categories based on the quartz content and colour: dark green quartz-rich, dark green quartz-poor, light green quartz-rich, and light green quartz-poor. The dark green pegmatites occur mostly in the LMS and show evidence of in situ digestion of LMS rocks. The light green pegmatites occur throughout the mine succession and show evidence of chilled margins and shearing, suggesting they are true intrusives.

The Cahill Formation, consisting of the LMS, UMS and HWS, is unconformably overlain by sandstones, quartzites, conglomerates and breccias of the Kombolgie Formation. The Kombolgie Formation forms part of the Katherine River Group. Sedimentary structures can still be seen in the Kombolgie sandstones.

Mineralisation

Mineralisation at Ranger is associated with brecciation and structural overprint adjacent to reverse faulting and is closely linked to the geochemistry of the chlorite schist host lithology.

Uranium mineralisation is principally present as pitchblende, is associated with chloritisation and occurs as sooty smudges on joint planes and foliations. Secondary uranium minerals saleeite, sklodowskite, gummite and metatorbenite are common in the oxidised zone.

Gold is present as a zone of up to 1 g/t Au in the higher grade uranium mineralisation, while 0.5 g/t Au is an average for the remainder of the uranium mineralised UMS.

4.5.3 Mineral Resources

Historical estimates

The two previous Mineral Resource estimates (MRE) at R3D were reported in 2010 and 2014. The reported estimates were sourced from the 2014 R3D PFS. The Competent Person for the historical Mineral Resources is Mr Stephen Pevely, MAusIMM, a part-time employee of ERA.

The applied cut-off grade used in the 2010, 2014 and 2015 historical estimates was 0.15% U_3O_8, and 0.11% U_3O_8 for estimates spanning 2016 to 2020.

Table 4-3: Ranger 3 Deeps historical Mineral Resource, 2010

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured	-	-	-
Indicated	9.49	0.32	30,820
Inferred	0.65	0.32	2,480
Total	**10.14**	**0.32**	**33,000***

Source: ERA (2014) – 2014 Prefeasiblity Study, Geology. 61801-PFS-RE-PM-0013_1 - Chapter 13 - Geology.pdf
Note: *equating to approximately 72.7 Mlb U_3O_8.

Table 4-4: Ranger 3 Deeps historical Mineral Resource, 2014

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured	3.11	0.33	10,120
Indicated	5.44	0.28	15,950
Inferred	3.64	0.27	9,690
Total	**12.19**	**0.29**	**34,760***

Source: ERA (2014) – 2014 Prefeasiblity Study, Geology. 61801-PFS-RE-PM-0013_1 - Chapter 13 - Geology.pdf
Note: *equating to approximately 76.6 Mlb U_3O_8

Table 4-5: Ranger 3 Deeps historical Mineral Resource, 2015

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured (in-situ)	2.78	0.32	8,922
Indicated	6.30	0.28	17,336
Inferred	3.50	0.25	8,579
Total	**12.58**	**0.28**	**34,837***

Source: ASX:ERA 28 January 2016
Note: *equating to approximately 76.8 Mlb U_3O_8

Table 4-6: Ranger 3 Deeps historical Mineral Resource, 2016 to 2020

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured (in-situ)	3.72	0.27	10,134
Indicated	10.41	0.22	22,636
Inferred	5.44	0.20	11,087
Total	**19.57**	**0.22**	**43,857***

Source: ASX:ERA 15 February 2021

Note: *equating to approximately 96.7 Mlb U_3O_8

Current Mineral Resource

As outlined in its ASX announcement dated 28 February 2022, ERA no longer reports any Ore Reserves and Mineral Resources for the RPA (including R3D).

On 8 January 2021, ERA ceased to be authorised to conduct mining operations in the RPA, and accordingly development of R3D is not an authorised activity. ERA does not presently have the authority to mine R3D and is not pursuing such an authority.

In addition to an authorisation to mine R3D, the project would need to be economically viable in order to support its development. ERA has historically assessed the economics of the R3D Project to be unviable and given the recent work undertaken on the rehabilitation of the RPA, the project would now be required to be able to support a standalone mill and tailings construction among other infrastructure, which would add fixed cost to any future operation, further challenging the R3D Project's viability. ERA has also completed backfill works on the R3D exploration decline.

As such, ERA no longer considers it is able to demonstrate 'reasonable prospects for eventual economic extraction' of the previously reported Ore Reserves and Mineral Resources at R3D, as is required by Section 20 of the JORC Code (2012). No work is currently being conducted on further development options for the R3D deposit.

Mineral Resource risks and opportunities

Risks

ERA has stated publicly that there are currently no RPEEE within the RPA due to a lack of regulatory, social and environmental approvals.

Opportunities

The R3D deposit, nominally containing approximately 44 kt of U_3O_8, remains within the RPA, but without development consent and possibly marginal economics under prevailing economic conditions. While gaining the regulatory, social and environmental approvals to develop R3D is not impossible, SRK considers it unlikely to occur within a reasonable timeframe, nominally 30 years, given current conditions.

As such, SRK considers that while the deposit still offers some potential for longer term development, this is currently offset by near term risks associated with the likely economics and

ongoing closure of the site, such that little perceived value could reasonably be allocated to the R3D deposit. As such, SRK has considered the R3D mineralisation as an Exploration Target (as defined in the JORC Code 2012) for valuation purposes.

Exploration potential

SRK understands that the R3D deposit has been extensively drill tested and closed out in all directions. In SRK's opinion, there does not appear to be any further exploration upside potential at R3D.

Similarly, outside of the Ranger mine area, there appears to be little to no potential for further targets given ERA's public statement (refer ERA ASX announcement dated 28 February 2022) that there are no prospects for eventual economic extraction at R3D, and by logical extension, the surrounding exploration prospects within the RPA (and underlying ELA9644).

SRK has reviewed publicly available information pertaining to the reported mineral occurrences within the RPA. This review highlighted six radiometric geophysical anomalies within the area covered by ELA9644 of which four are associated with the Ranger 1 anomaly. Ranger 1 number 1 was mined as the Ranger 1 open pit and Ranger 1 number 3 was mined as the Ranger 3 open pit.

The Ranger 19 and Ranger 63 radiometric anomalies, located toward the north, are not considered by ERA to have high potential for further economic uranium discoveries.

4.5.4 Mining

Overview of former mining operation

Previous mining at Ranger involved a conventional open cut process, which commenced with drilling and blasting prior to load and haul activities. Primary blasthole drilling was carried out using inclined holes typically on staggered blast patterns varying from 4.7–5.4 m by 5.4–6.2 m depending on rock type. The grade of ore at the blasthole cuttings was determined radiometrically, enabling ore and waste to be fired separately. The bulk emulsion explosive used for blasting was manufactured on site. Powder factors varied by rock type but were typically 0.22 kg/t in mineralised rock and 0.30 kg/t in un-mineralised massive carbonates. All materials were loaded using front-end loaders and transferred from the pit using a fleet of haul trucks. A selection of graders, bulldozers, and water tankers were used for general production support, road and stockpile maintenance and dust suppression. Main ramps were constructed at a 1:10 gradient.

Pit development was influenced by high annual rainfall, particularly during the period from November to March. Bench development was typically planned for the period from June to November when groundwater seepage was at a minimum and resulted in minimal production delays. During the peak of the wet season, the lowermost bench was often underwater and occasionally the next lowermost bench inaccessible for periods of up to several days. A pit dewatering system incorporating pontoon mounted submersible pumps staging to a pressure tank was used during these periods with power supplied from the site generating station. Ore stockpile volumes were maintained several years ahead of processing requirements to accommodate interruptions to mining resulting from high rainfall.

Pit 1 was mined out in 1994 and mining in Pit 3 ceased in November 2012. Bench heights used in the open pits were 7 m and 10 m respectively, pit slopes varied between 35° and 50° and final pit depths were -150 mRL (Pit 1) and -265 mRL (Pit 3).

As mining progressed, mined material was categorised for either stockpiling or immediate processing (Table 4-7). Low-grade ore and non-mineralised rock was stockpiled for return to the mined out pits and contoured to create the final landform.

Table 4-7: Indicative ore grades and mineral type

Grade	Grade (% U_3O_8)			Material type
	1980–1997	1998–2009	2010–2021	
1	<0.02	<0.02	<0.02	Non-mineralised rock
2	0.02–0.05	0.02–0.08	Low 2 0.02–0.06	Very low-grade ore
			High 2 0.06–0.08	Low-grade ore
3	0.05–0.10	0.08–0.12	0.08–0.12	Ore
4	0.10–0.20	0.12–0.20	0.12–0.20	Ore
5	0.20–0.35	0.20–0.35	0.20–0.35	Ore
6	0.35–0.50	0.35–0.50	0.35–0.50	Ore
7	>0.50	>0.50	>0.50	Ore

Source: ERA (2022) – 2022 Draft Mine Closure Plan - Chapter 2 - Project Overview.pdf

In 2011–12, ERA was planning to transition from open pit to underground exploration of the R3D deposit. The Company committed A$120 M to the construction of an exploration decline to conduct closely spaced underground exploration drilling and explore areas adjacent to the R3D resource. Construction of the exploration decline commenced in May 2012, with the box-cut and portal access successfully completed in October 2012. Excavation of a 6.0 m high and 5.5 m wide decline tunnel commenced shortly thereafter. In 2014 a 3 m diameter vertical ventilation shaft was also constructed to a depth of 280 m below the surface.

The exploration decline project comprised a three-stage construction program and an underground drilling program. The first phase of development was completed in April 2014 and involved construction of a 185 m entrance portal and 1,900 m of tunnel development. The second phase involved construction of a low-profile ventilation shaft and an extension of the decline to a distance of 2,710 m. The third phase involved developing a 40 m cross-cut through the deposit. The cross-cut was designed to gather further data to validate mine design assumptions. The exploration drilling occurred in parallel with the decline construction and comprised a total of 47,000 m of closely spaced drilling.

Mining studies

In parallel with the construction of the exploration decline, ERA commenced a PFS into the potential development of an R3D underground mine. This study was designed to assess the economic viability of the project, optimise mining methods and confirm metallurgical performance and likely production rates. The study also included designs for associated surface infrastructure such as the power plant, cooling facilities for underground air supply, a paste plant for backfill operations and nine low-profile ventilation shafts.

This study identified bottom-up, longhole open stoping with paste backfill as the preferred mining technique, with ore production of up to 1.2 Mtpa over a 5–9 year mine life (depending on the option adopted). This approach maximised use of existing surface infrastructure including the exploration decline as a production decline, reuse of processed tailings material for the paste backfill operations and construction of a paste plant at the surface. Mining levels were envisaged to be developed at 15 m to 30 m vertical intervals. The ore was to be blasted using blastholes drilled from either level and charged with explosives. The blasted ore would be loaded into 60 t trucks using load haul dump loaders. The trucks would haul the ore to the surface via the decline ramp. Bulk heads (walls) would be constructed across the entrance to the empty stopes and the void would be backfilled with cemented paste. The paste was expected to comprise de-slimed mill tailings, crushed rock and binders. Adjacent stopes would then be mined once the fill had attained a strength of 0.5 MPa (curing time 2–4 weeks).

In June 2015, ERA announced that the R3D would not proceed to a final FS largely driven by two factors: i) the Board's view that the uranium market had not improved as ERA had previously expected and there was uncertainty regarding the uranium market's near-term direction and ii) the economics of the R3D Project required operations to continue beyond the date set by the current Ranger Authority (i.e. 8 January 2021) to demonstrate economic viability (ERA ASX announcement dated 11 June 2015). This decision not to progress the project was supported by ERA's major shareholder, Rio Tinto.

4.5.5 Processing

Overview of former processing operation

There is an extensive operating history for the Ranger mine's processing of the open pit ores across a range of feed types including laterite, transitional and fresh feeds. This included the processing of medium and low-grade stockpiles following the cessation of mining activities. Substantive historical testwork and associated processing studies completed on the Ranger deposits, including the R3D underground deposit, further supplements the metallurgical understanding of these deposits. SRK has a high degree of confidence in the amenability of the Ranger Mill, or one of like configuration, to treat similar uranium ores.

The 'Ranger Mill' as it is often colloquially described, even though it incorporates hydrometallurgical circuits, adopts a long established, conventional uranium processing flowsheet reflective of other well-known operations. For example, it is very similar to BHP's Olympic Dam uranium flowsheet, although there are minor nuanced differences such as the use of pyrolusite as an oxidant (at Ranger), rather than sodium chlorate. The plant incorporates beneficiation, oxidative acidic leach under ambient conditions, neutralisation, CCD, solvent extraction (SX), ammonium sulfate stripping, ammonium diuranate precipitation, dewatering and calcination to produce a U_3O_8 product and drumming (packaging) of the final product prior to trucking to port for export to international customers.

The R3D underground deposit has not been treated through the existing Ranger processing facility. Historical testwork was undertaken to confirm the ability of this plant to treat the potential future feed from R3D. Testing was undertaken on various composite and variability samples, including samples taken from drilling from the R3D exploration decline and associated platform, and can be considered representative for the purposes of a PFS.

Comminution (crushing and grinding) testwork demonstrated that the R3D samples behave similarly to the historical open pit ores processed, i.e. not materially harder or different to the open pit fresh feed. Mineralogy work showed the deeper uranium mineralisation to be associated with the chloritic schists in the UMS and the elevated carbonate/dolomite component of the LMS was 'barren' which allows partial removal of the acid consuming carbonate through a beneficiation process. There are some areas of elevated pyrite associated uranium mineralisation that would need to be blended. Acid leaching under ambient oxidising conditions, neutralisation and settling (via CCDs), phase disengagement (via SX) and the associated implications of the testwork results on recovery algorithms, scale-up from laboratory to commercial plant size, and other techno-commercial inputs were reasonably advanced.

As a result of this historical testwork, there is a good geometallurgical understanding of the R3D deposit and there is a reasonable expectation that the ores and processing performance will be similar to the fresh ores treated from the former open pits. Other independent reviewers have also reached this general conclusion. For example, as part of ERA's previous MRE reporting, it was noted that '*Geometallurgical studies have confirmed that there are no significant mineralogical differences between R3D mineralisation and that process treatment and recoveries are similar to ore from the now completed Ranger 3 pit*' (Pevely et al., 2014).

Of note and relevance to the underground ores, it is reported that there are two main styles of uranium mineralisation at R3D, with greater than 65% of the uranium resource occurring in brecciated chlorite schists of the UMS and the remainder occurring in the deeper LMS carbonates hosted by bedding parallel brecciated schist horizons. Of the carbonate hosted uranium, particularly in the LMS, it is known that approximately 20% of the underground mineralisation contains elevated carbonate. The weighted average calcium (Ca) grade of the 12.2 Mt R3D resource was previously estimated at 2.25%, at a U_3O_8 cut-off grade of 0.285%. This has ramifications on the acid consumption and the associated operating costs, milling rates, blended feed grades and other process flow constraints.

During previous studies, the elevated calcium grades were not considered to negate the ability to treat the R3D material. ERA's intent was to consistently reject a significant portion of this material through existing radiometric (and alternatively optical) sorters to reduce the carbonate levels to below 1% Ca in the overall feed blend, prior to being fed through the existing processing facility. This would then be blended with medium and low-grade uranium stockpiles, also containing lower calcium grades.

Ore sorting technology has been further advanced since these studies were undertaken and would likely improve the performance of a new circuit. There are alternative carbonate removal processes that have been successfully tested on this material, including flotation. Other beneficiation processes such as magnetic separation, heavy media separation or scrubbing have been less effective. If the R3D deposit was to be processed in future, further work would be required on sequencing blending and to confirm the process flowsheet and leaching circuit sizing is suitable for the higher carbonate feed. The forecast processing costs would need to be updated to reflect the higher acid consumption requirements – particularly, given that the stockpiles that were to be blended with the underground feed to help manage calcium grades have now been exhausted.

While no fatal flaws were identified in the historical R3D work, it is no longer at a PFS level of study confidence. Metallurgical testwork was not considered to be at a PFS level of confidence by technical representatives of ERA's majority shareholder, Rio Tinto, during an internal peer processing review undertaken in December 2014. This assessment highlighted several gaps in the

program that had been completed and the application of the results to the study's project assumptions. While no fatal flaws were identified in that review, the Rio Tinto Technical and Innovation group made several recommendations for further work to be undertaken as part of the proposed FS program.

In SRK's opinion, the historical performance and additional testing sufficiently demonstrate that the Ranger processing facility or the equivalent, is amenable to treatment of this material, if it were to be eventually processed. There were, and still are, several processing risks including: material blasting fragmentation and the impact on screening and the amount of feed suitable for ore sorting, the estimates of ore sorting uranium and mass recovery, paste fill and/or shotcrete ingress to the run of mine resulting in increased acid addition (higher cost), and differences in ore properties such as more refractory uranium species leading to lower recoveries and/or higher carbonate levels than planned.

While the testing of the R3D deposit has not identified any metallurgical issues, the lack of a processing facility to treat the R3D ore is a likely fatal flaw. The cessation of processing at Ranger occurred on 8 January 2021. ERA is now obligated to decommission the plant and associated processing, and non-processing infrastructure, and then undertake demolition and site rehabilitation works. SRK understands that the plant decommissioning has been advanced to a 'make safe' state. Demolition has not yet been undertaken and the plant site has not yet been rehabilitated.

As a result, there is no immediate processing option for the R3D deposit. If the R3D ores were ever to be treated, this would need to be through a new dedicated greenfield plant, or alternatively, through an alternate plant, for example if one were constructed at Jabiluka or at a remote site. The associated capital cost, operating cost or other aspects of the viability and/or likelihood of this option, including approvals has not been established.

The previous PFS assessment of the R3D Project issued in Q4 2010, assumed underground mining and processing within the RPA would cease in Q4 2020, i.e. prior to the expiry of the authority to mine and process. The project economics did not generate a net present value that would be sufficient to meet the cost of a new processing facility, nor new supporting infrastructure. The Ranger processing option is no longer available to the Project. In SRK's opinion, it is unlikely that a standalone R3D Project would support a new processing facility.

From a processing perspective, the decision to rehabilitate the Ranger site including the processing facility and the decision by ERA to permanently cancel the R3D Project and the lack of alternative treatment options contributed to the RPEEE resource test, i.e. whether there are 'reasonable prospects for eventual economic extraction'. This is reflected in ERA's ASX announcement relating to the 'Annual Statement of Reserves and Resources', issued in February 2022, in which the Company reported that: '*The expiry on 8 January 2021 of the right to mine and process ore on the Ranger Project Area (RPA) under the Ranger Section 41 of the Atomic Energy Act extinguished any reasonable prospects for eventual economic extraction of previously reported Ranger Ore Reserves and Mineral Resources, as is required by Section 20 of the JORC Code 2012*'.

Without a defined processing option, other modifying factors used for reserve estimation purposes and for DCF assessments of the project need to be reviewed if there was future consideration for treatment of the R3D deposit. In particular, metallurgical recoveries and processing costs, as well as capital requirements. Various U_3O_8 recoveries have been used in previous internal studies and estimations. The 2014 PFS assumed a LOM recovery of 86%, whereas previous reserve estimates

were premised on a U_3O_8 recovery of 84% from the fresh ores (and lower for laterites/oxides). Ultimately, recovery is partly dependent on any new circuit and is sensitive to feed U_3O_8 grade, carbonate grade, the use of sorting, blending, leach tank residence time, and the downstream processing flowsheet selected and final product generated.

In respect to the likely processing costs, they have not been sufficiently estimated to allow them to be confidently incorporated into DCF modelling, i.e. to a PFS level of confidence. Benchmarking historical costs would no longer accurately reflect the future processing of future ones if treated through a new plant. The underground production rate (i.e. 1.2 Mtpa) would be lower than that historically treated at Ranger, and this would impact the fixed versus variable components of the costs. Acid consumption costs are likely to be higher, and recent inflationary pressures which have resulted in increased unit power, reagent, freight, maintenance and labour costs will all serve to increase the overall production costs.

In SRK's opinion, despite the significant historical testwork completed and the expected amenability of the R3D underground material to treatment through a conventional uranium processing flowsheet equivalent to that employed by the Ranger Plant, given the limitations listed below, the R3D deposit cannot be considered as being at a PFS level of study. As a result, from a processing perspective, the R3D Project cannot be valued on a DCF basis.

- Metallurgical testwork is not at a PFS level of confidence
- Several technical challenges remain to be adequately resolved
- There is no identified processing facility option
- No capital cost estimate has been provided for development of a new processing facility
- No process operating cost estimate has been made associated with a new processing facility.

4.5.6 Infrastructure

Up until recently, the Ranger site had all the requisite facilities and equipment to both mine and process uranium ores. The infrastructure was extensive and included open pit workings (Pit 1 and Pit 3), Ranger 3 Deeps exploration decline and other mining earthworks connected by a network of haul roads and other access (tracks, service corridors and other linear infrastructure), processing plant, TSF[4], mine waste dumps, stockpiles, power plant, water treatment and water management areas (including bores), site offices, workshops, wash-down bays, refuelling facility, explosives magazine, nursery, core-yard, mine accommodation and demountable village, landfill sites, bioremediation pads and drill pads.

The Ranger TSF was commissioned in 1980 and is a ring dyke tailings dam. It is an approximate square with each of its sides measuring ~1 km in length. The initial dam design was for a proposed crest level of 51.0 mRL, however additional designed structural additions allowed the crest limit to attain 60.5 mRL. Neutralised mill tailings were deposited in the TSF from 1980 to 1996, after which time mill tailings were sent to the mined-out Pit 1. Once Pit 1 reached its maximum tailings level, mill tailings were directed to the TSF from 2008 to February 2015, when the mined-out Pit 3 became available.

[4] The TSF, Pit 1 and Pit 3 were all approved for the storage of tailings and process water in accordance with relevant conditions prescribed in the Ranger Authorisation.

Several stockpiles of ore grade material and waste were situated within the vicinity of the mine pits and the TSF. Upon closure, these had been largely depleted with only minimal material remaining post-January 2021.

The Ranger mine footprint is divided into catchment areas which generate surface run-off and/or seepage for water management purposes. Each catchment may comprise several elements such as retention ponds, sumps, collection basins and groundwater interception ponds. Ranger operated three water treatment plants to treat excess pond water to a level suitable for release to the surrounding environment. Ranger also commissioned a brine concentrator in 2013 to produce 1.83 GLpa of clean distilled water with discharge via a wetland filter to Magela Creek with brine transferred to the TSF. In 2015, ERA completed five injection bores in Pit 3 to pump brine from the brine concentrator directly into the underfill layer at the base of Pit 3 for final storage, and an additional three injection bores are being constructed at present as part of rehabilitation works.

ERA ceased mining and processing uranium at Ranger on 8 January 2021, with the site infrastructure now being removed, demolished and rehabilitated in preparation for eventual mine closure in accordance with the stipulated timeline of 8 January 2026.

Mine closure activities at Ranger are discussed in detail in Section 4.4 of this report.

5 Jabiluka Project

5.1 Overview

The Jabiluka 1 deposit was discovered in 1971 by Pancontinental. In 1973, further drilling located the larger Jabiluka II deposit approximately 1 km to the east.

Jabiluka lies 22 km north of the Ranger mine on the edge of the Magela Creek floodplain. It is surrounded by the Kakadu National Park, but the ML is excluded from the national park and adjoins the RPA to the north. Jabiluka II hosts resources in excess of 137,000 t of contained uranium oxide and is one of the world's larger, high-grade uranium deposits.

ERA continues to maintain the Jabiluka site in line with the Long Term Care and Maintenance Agreement, as first announced to the market in February 2005.

5.1.1 Project history

Jabiluka has been studied on an intermittent basis for over 40 years.

In 1969, the Bureau of Mineral Resources (now Geoscience Australia) flew the first fixed wing airborne magnetic/radiometric survey over part of the Alligator Rivers area. No radiometric anomalies were detected from this survey. In 1971, Pancontinental conducted a helicopter borne radiometric survey over MLN1 that did not detect either Jabiluka I or II, but did detect other anomalies that were subsequently followed up. In the 1971 dry season a hand-held radiometric survey detected Anomaly 7e (Jabiluka I). Although given a low ranking, a detailed radiometric grid survey was conducted over the anomaly; one of the anthills in the area had a very high radiometric count, which provided sufficient evidence for follow-up. Costeans were dug and secondary uranium mineralisation at Jabiluka I was intersected. Between 1971 and 1973 the area was drilled using diamond and percussion drilling.

The Hades Flat prospect, located in the south of MLN1, was discovered in 1971. A series of auger, diamond and percussion drilling programs were conducted between 1971 and 1976.

Scout drilling to the east and west of Jabiluka I, along the strike of mineralisation, led to the discovery of the Jabiluka II mineralisation to the east of Jabiluka I. Between 1973 and 1976 percussion and diamond drilling (DD) at Jabiluka II was carried out. In November 1976 Pancontinental formed the Jabiluka Division to handle the development of the deposit. During 1977 to 1979, further DD and resource assessment was performed. An EIS was lodged as a precursor to the granting of permits to develop the project.

An EIS for the Jabiluka Project was approved in August 1979. In August 1982, MLN1 was granted by the NT Government for a period of 42 years following the signing of an agreement with the NLC representing Aboriginal owners. The agreement, approved by the Commonwealth, was to provide funding to local Aboriginal people up to the end of construction and then royalty type payments.

By late 1982, all necessary mining and environmental approvals had been obtained to commence mining of the Jabiluka II deposit. However, the change of government in 1983 led to the implementation of the Labor Party's 'Three Mines Policy', resulting in the withdrawal of Commonwealth approval and development ceased.

In 1987, Pancontinental acquired the 35% interest that it did not already own in the project from Texaco.

In August 1991, ERA purchased the Jabiluka orebody from Pancontinental for A$125 M. As part of the ERA purchase, the NLC, on behalf of the Traditional Owners, assigned Aboriginal approvals to ERA.

Subsequently, ERA undertook drilling programs in 1992 to 1993, consisting of Mineral Resource definition and geotechnical assessment. ERA undertook a FS on the Jabiluka development in 1993 and significantly changed the design of the project from that of the original Pancontinental plan. The study envisaged an underground mine, with ore being milled and treated at the existing Ranger site and tailings disposal also at Ranger.

In October 1996, a new EIS was submitted for public review which outlined two options: mining and milling uranium ore at Jabiluka (similar in concept to the Aboriginal approved Pancontinental design but now significantly smaller in impact); and trucking Jabiluka ore to the existing Ranger Mill for processing. In response to the public review, a supplement to this EIS was submitted in June 1997 which focused on the concept of trucking Jabiluka ore to the Ranger Mill for processing.

In October 1997, the Commonwealth Government announced that the Jabiluka proposal had completed environmental procedures and would be subject to stringent conditions. In recognition of Aboriginal approvals received in 1982, ERA put forward an alternative to process the ore at Jabiluka. This Jabiluka Mill Alternative was subject to a Public Environment Report (PER) and further public review. Environmental approvals for this alternative were received in August 1998 and subject to strict environmental conditions, provided ERA returned all tailings to the underground mine voids. This completed the Commonwealth approvals process for the project.

In May 1998, ERA began consultations with the NLC, who act on behalf of the local Aboriginal people, in relation to the change in design for the Jabiluka proposal. Final NT approvals for the development of the mine were received in June 1998.

ERA commenced stage one of development at Jabiluka on 15 June 1998. This phase was completed on 4 July 1999 and included surface works, a water management pond and the construction of a 1,150 m exploration decline and a further 700 m of development to provide drilling access to the deposit. Approximately 50,000 t of mineralised material was removed during development and stockpiled under cover on surface. From 1998 to 1999, ERA conducted underground DD after the development of the exploration decline and cross-cut.

Following ERA’s completion of stage one development, the 17 ha development site (which included surface works, a water management pond and exploratory decline – all of which are common to both development options at Jabiluka) was placed on standby with environmental care and maintenance to facilitate further community discussions regarding the project.

In 2000, following intensive drilling from the underground access to the Jabiluka deposit, ERA revised the overall Mineral Resource with some reduction in overall Ore Reserves. ERA continued to report Ore Reserves at Jabiluka up until 2015 when these were reclassified as Measured and Indicated Resources.

In 2003, the NT Government approved ERA's proposal for long-term care and maintenance of the Jabiluka site. The stockpiled material was backfilled to the decline along with a similar amount of waste rock, with these works completed in late 2003. ERA completed improvements to the water management and environmental management of the site.

In 2004, ERA and Rio Tinto declared Jabiluka would not be developed without Mirarr approval. The Jabiluka LTCMA was signed by the Mirarr Gundjeihmi Aboriginal people, ERA and the NLC, and defines the arrangements for the Jabiluka lease area. This agreement obliges ERA (and its successors) to secure Mirarr approval prior to any future mining of the Jabiluka deposit (refer ERA ASX announcement dated 25 February 2005).

Between 2005 and 2015, the Jabiluka site has been rehabilitated with ongoing management and monitoring. In 2013, ERA committed to rehabilitating the Interim Water Management pond.

Since this time, further underground design has been completed and the project economics have been reviewed, but no further work other than limited desktop technical studies have been undertaken. The most recent example was in 2011, when ERA conducted an OoM mining study in conjunction with Rio Tinto Technology and Innovation, which found Jabiluka to continue to be an economically viable resource worth pursuing in the future.

5.2 Permitting and approvals

Four key types of consent are required to conduct mining and mineral processing in the NT:

- Grant of a mineral entitlement (under the *Mining Act 1980* or subsequent Acts, such as the *Mineral Titles Act 2010*)
- Land access authorisation under the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth)
- Primary environmental approvals under the NT E*nvironment Protection Act 2019* and the Commonwealth *Environment Protection Biodiversity Conservation Act 1999*
- Various operating consents, including (but not limited to) approvals under the NT *Mining Management Act 2001*, the *Water Act 1992* (as amended), the *Australian Radiation Protection and Nuclear Safety Act 1998*, and Customs (Prohibited Exports) Regulations 1958 under the *Customs Act 1901*.

5.2.1 Mining tenure

The Jabiluka deposit lies within granted ML, MLN1. The 7,275 ha lease was granted to ERA on 12 August 1982 and is set to expire on 11 August 2024 (STRIKE database, accessed 31 August 2022). Under Section 43 of the *Mineral Titles Act 2010*, a lease holder may apply for an extension to the term of the ML before the end of the term of an ML. The minister may renew the ML over all or part of the title area for the term the minister considers appropriate. The ML may be renewed more than once. Providing ERA applies for an extension of MLN1 before the expiry of the current lease, this permitting step should not unduly constrain project timelines for any future development at Jabiluka.

5.2.2 Access to Aboriginal land

The entirety of MLN1 lies within land to which the *Aboriginal Land Rights (Northern Territory) Act 1976* applies. Under the Act, 'Aboriginal land' means land the subject of a deed of grant held in

escrow by a Land Council. The NLC administers land over the Jabiluka area on behalf of Traditional Owners and is responsible for negotiating mining and land access agreements in the area. Section 48C of the Aboriginal Land Rights Act specifies that Acts authorising mining for minerals do not allow access by mineral entitlement holders to Aboriginal land unless either:

a. the Governor-General has, by Proclamation, declared that both the Minister and the Land Council for the area in which the land is situated have consented to the application of that Act in relation to entry on that land; or

b. the Governor-General has, by Proclamation, declared that the national interest requires the application of that Act in relation to entry on that land.

There is some dispute as to whether the agreement executed between the NLC, Pancontinental and Getty Oil under Section 43 of the Aboriginal Land Rights Act in 1982 is valid. There are suggestions that the 'Jabiluka Agreement' was entered into under duress and did not involve free, prior and informed consent (Parliamentary Inquiry into the Jabiluka Uranium Mine Project, 1999). There is a strong possibility that eventual approval of a mining management plan authorising mining operations under the *Mining Management Plan Act 2001* will require a new agreement to be established under the Aboriginal Land Rights Act. Alternatively, the responsible minister may consider whether the requirements of the Aboriginal Land Rights Act have been satisfied before approving an extension of the mining lease tenure on MLN1. ERA has given repeated public assurances that it will not mine at Jabiluka without the agreement of Traditional Owners.

Recent media releases by the GAC, which represents the Mirarr People, indicate that at present the Mirarr People are implacably opposed to mining at Jabiluka (https://www.mirarr.net/news_items/jabiluka-deposit-will-never-be-mined). Negotiation of an agreement with the NLC – which is obliged under the Aboriginal Land Rights Act to consult with Aboriginal people affected by the grant of an exploration licence (and presumably any other mining licence) about the terms and conditions of the licence, should it be granted – is likely to be protracted and difficult. Negotiation of a land access agreement to update or replace the current Jabiluka Agreement would necessarily progress in parallel with environmental assessments and permitting of any future mining activity at Jabiluka.

5.2.3 Environmental assessment and permitting

Historical assessment and permitting

An EIS for mining at Jabiluka was prepared and submitted to the Commonwealth Government in 1979. The original Pancontinental proposal involved an open cut mine, with a tailings dam and milling facilities located on the Jabiluka lease. By late 1982, all necessary mining and environmental approvals (including environmental approval under the (now repealed) *Uranium Mining (Environment Control) Act 1979*) to allow mining of the Jabiluka II deposit had been obtained. However, the change of government in 1983 led to the implementation of the Labor Party's 'Three Mines Policy', resulting in the withdrawal of Commonwealth approval and development ceased.

In 1996, when changed uranium mining policies had been introduced by the Liberal-National Commonwealth Government, ERA submitted a revised EIS proposal for an underground mine, from which the ore would be trucked to Ranger for milling. Tailings would be disposed of in the mined-out pits at Ranger. This new proposal would entail the construction of a 22 km road between

the two sites, and require the approval of the Traditional Owners. This option was known as the RMA and was outlined in a 1997 EIS prepared by ERA.

When it became clear that the Mirarr People would refuse to allow the construction of the access road or milling at Ranger, ERA developed a second option which involved the milling of mined ore and tailings disposal at the Jabiluka site. ERA's preferred option, outlined in a PER of 1998, was for the disposal of half the tailings underground in mined-out stopes, and the remainder in purpose-built pits near the surface. A second option was for the entire tailings to be disposed of underground, which would involve the excavation of more rock to create room. These options were known as the JMA.

On 2 June 1998, following the conclusion of the EIS process for the RMA, but prior to the conclusion of the PER process for the new JMA, the NT Government granted an authorisation under the *Uranium Mining (Environment Control) Act 1979* allowing the construction of those parts of the project 'common' to both the RMA and JMA, being the portal, access decline and associated infrastructure. Construction work on the mine began in June 1998. Approval for the JMA option was eventually granted by the Federal Minister for Resources and Energy on 27 August 1998, subject to a range of implementation conditions.

Following ERA's completion of stage one development in 1999, the Jabiluka operation was placed on standby with environmental care and maintenance to facilitate further community discussions regarding the project.

Assessment and permitting of future mining at Jabiluka

SRK notes that mining at Jabiluka was previously subject to various assessments under the *Environment Protection (Impact of Proposals) Act 1974*, an Act subsequently repealed by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The project approved at Jabiluka in 1998 is almost certain to differ in material particulars from any future developments proposed at Jabiluka. Information standards required for environmental impact assessments are now significantly more stringent than at the time of the previous assessments. Accordingly, a new referral and assessment are likely to be required if development of the Jabiluka deposit is proposed in future. At the very least, future mining at Jabiluka would be treated as a 'significant amendment' to the previous approval and the time required to complete permitting would not differ materially to the time required to carry out assessment of a new project. Authorisations under both NT and Commonwealth environmental legislation are likely to be required.

Assessment Under *the Environment Protection Biodiversity Conservation Act 1999* (Cth)

Assessments under the EPBC Act can be conducted under a bilateral assessment agreement with the NT (Commonwealth of Australia, 2014) or, alternatively, can be separately assessed by the Commonwealth and the NT. In either case, separate decisions will be issued on whether the project will be approved and – if so – subject to what conditions. Mining at Jabiluka is certain to trigger assessment under the EPBC Act, unless the minister determines, within 20 business days of the project referral, that the proposed action is 'clearly unacceptable'. If that were to occur, a range of options is available for either modifying the project or seeking ministerial review.

If a review decision is requested, the time for completion of the review would probably be in the order of 60 to 80 business days (10 business day public comment period, indefinite period for DCCEEW to prepare a report and 20 business days for the minister to review their decision).

If the project is not deemed to be 'clearly unacceptable', and not assessed under a bilateral accredited process, it would most likely be assessed via an EIS. This is the assessment path nominated by the Commonwealth when ERA referred its proposed R3D Project under the EPBC Act in 2013.[5] The Olympic Dam project at Roxby Downs was also assessed via an EIS. Uranium projects assessed under the bilateral assessment path include Cameco's Yeelirrrie uranium project, Toro's Wiluna uranium project and Vimy Resources Limited's (Vimy's, now Deep Yellow) Mulga Rock project.

The time required to complete an assessment under the EPBC Act will depend principally upon whether the project is assessed under an accredited process (in which case the federal processes may add in the order of 6 weeks to 6 months to the NT assessment timelines). Commonwealth guidelines indicate that federal decisions on projects assessed under a bilateral process must be made within 30 business days of receiving an assessment report from the collaborating jurisdiction, but it is not unknown for the Commonwealth to either request additional information from the project proponent or to extend the time allowed for deciding whether to approve the project, or both.

Assessment under the Northern Territory *Environment Protection Act 2019*

In the NT, projects considered to have the potential for significant environmental impact are required to be referred to the Environment Protection Authority (NT EPA) for possible assessment under the *Environment Protection Act 2019* (Environmental Protection Act). Mining at Jabiluka would trigger a requirement for an EPA assessment. The EPA does not decide whether or not a proposal may be implemented, rather it advises the responsible minister (Minister for Environment, Parks and Water Security) whether the proposal may be implemented and if so, subject to what implementation conditions. If the NT EPA determined that proposed action will have an unacceptable environmental impact and the impact cannot be appropriately avoided or mitigated, it may prepare a statement of unacceptable impact for the minister.

The EPA has a range of options for the process it uses to assess significant projects. A conventional assessment path is via an EIS (which can be required by the EPA or voluntarily initiated by the proponent). The EPA also has the option of conducting an assessment via an 'inquiry'. EPA guidelines state that an assessment by inquiry can be used:

> *…when a traditional environmental assessment approach will not produce the best assessment outcome for an action. For example, due to cultural or language issues prohibiting potentially impacted communities to easily engage in a paper-based environmental impact assessment approach. For some actions the NT EPA may decide that an assessment by inquiry methodology is used for just one element of the action coupled with another assessment methodology for the remainder of the action…*

[5] The Ranger 3 Deeps project was withdrawn from EPBC Act assessment in September 2021.

SRK considers it possible that the NT EPA would elect to assess at least some elements of the environmental impact assessment of future mining at Jabiluka by inquiry, although it would be more usual to assess the project via an EIS. Completion of EPA administrative processes for assessment via an EIS could be expected to take a minimum of approximately 10 to 12 months, but allowing for regulator requests for additional information, could take 18 months. This does not include the time required for:

- pre-referral consultation with regulators or others
- technical studies in support of the EIS
- preparation of the EIS (and revision of the EIS/preparation of an EIS supplementary report
- stakeholder consultation
- any litigation potentially arising in relation to the minister's decision to grant or refuse an approval
- delays occasioned by project changes arising in the course of the assessment.

Although the Environment Protection Act makes provision for assessment of amended proposals and the Jabiluka Project was assessed via an EIS in 1997, current EIS evidentiary and process requirements are significantly more exacting than those that applied at the time of the earlier assessment. It can be assumed that any future impact assessment would take at least as long as the assessment time for a new significant project. In broad terms, the time that might be required for baseline technical studies (depending upon the terms of reference agreed with the EPA) could be expected to be in the order of 2 years (minimum).

The subsequent (and in some instances concurrent) preparation of EIS documentation is also likely to take in the order of 18 months to 2 years. Taken together, the time required to conduct baseline studies, prepare an EIS (or equivalent) report and complete EPA administrative processes culminating in a ministerial decision is likely to be at least 5 to 6 years.

Secondary approvals (operating licences) would follow sequentially from NT and Commonwealth environmental impact assessments and could be expected to take in the order of 12 months to 18 months to complete, although a certain amount of the preparation work for subordinate applications could be done concurrently with the primary environmental approvals.

5.3 Growth opportunity – Jabiluka

5.3.1 Project geological setting

Two uranium deposits have previously been defined at Jabiluka, known as Jabiluka I and Jabiluka II. Jabiluka II has been the focus for most of the previous exploration and development studies.

The Jabiluka I and II deposits are contained within an east–west folded sequence of Lower Proterozoic sandstones of the Cahill Formation which are locally exposed as a window through the Kombolgie Formation at Jabiluka I. Jabiluka II is entirely concealed below 20 m to 200 m of Kombolgie Formation. The Cahill Formation dips to the south from near horizontal to near vertical below the unconformity in the deposit area.

In detail, the local stratigraphic sequence consists of eight recognisable units in a series of quartz-chlorite-sericite-graphite units. The mineralisation at Jabiluka I is entirely confined to a single unit within the Cahill Formation, the Main Mine sequence, while at Jabiluka II around 70% of the known mineralisation occurs within the same horizon which remains open at depth and along strike. Mineralisation is also found within the overlaying 'upper graphite sequence' and in the LMS1 and LMS2, which are separated from one another by barren bands.

Jabiluka I measures approximately 400 m by 200 m in a northwest–southeast direction and in the Main Mine series is up to 35 m thick.

Jabiluka II remains open at depth to the south and east and extends over at least 1 km by 400 m.

Structural setting

The Jabiluka deposits occur in folded metasediments flanking the northeast part of the Nanambu Complex. They are localised in an asymmetric flexure, dipping south and striking east-southeast. The flexure is an asymmetric syncline-anticline feature with a general southerly dip.

The uranium mineralisation is interpreted to be related to the flow of a granitoid derived hydrothermal fluid co-genetic with pegmatite intrusions, which was controlled by a linked network of brittle extensional faults. The system is interpreted to have developed in response to post-orogenic collapse, after the end of regional thrust faulting.

Mineralisation

The main mineralisation is uraninite, with minor coffinite, brannerite and organo-uranium minerals. It occurs in three main forms: i) in breccias, ii) in veins adjacent to the breccias and iii) as fine grained disseminations in schistose host rocks. It occurs with accessory sulfides and gold in the northwest portion of Jabiluka II. The gold is mainly hosted in breccia zones of the Main Mine series in mineralisation averaging 2 m thick.

5.3.2 Mineral Resources

Historical estimates

The Jabiluka uranium deposit was discovered by Pancontinental in 1971 and since then ownership of the project has changed several times. North's subsidiary ERA purchased the Jabiluka ML in 1991 and Rio Tinto purchased the majority shareholding in ERA when it acquired North in 2000. There have been several generations of studies undertaken on Jabiluka. These can be broken down into three phases. The first resulted in the completion of the last FS in 1993, the second was when this study was reviewed in 2000, as a result of more detailed ore exposures revealed in the underground decline, and the third phase comprises a series of reviews and studies undertaken by Rio Tinto in 2007.

There have been two previous MREs at Jabiluka II as summarised in Table 5-1 and Table 5-2. The change in the 2000 MRE compared to the 1997 estimate was the reduction in the proportion of combined Measured and Indicated Resources from 87% to 53%. This was attributed to the lower level of mineralisation continuity demonstrated by the underground drilling and mapping studies after the decline and cross-cut were completed.

Table 5-1: Jabiluka II historical Mineral Resource, 1997

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured	17.5	0.55	96,300
Indicated	10.3	0.50	51,300
Inferred	4.6	0.49	22,300
Total	**32.4**	**0.53**	**169,900**

Source: ERA (2022) – ERA Jabiluka II Competent Persons Report 2021.pdf

Table 5-2: Jabiluka II historical Mineral Resource, 2000

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured	6.8	0.67	45,500
Indicated	7.4	0.51	37,800
Inferred	15.0	0.49	73,200
Total	**29.2**	**0.54**	**156,500***

Source: ERA (2022) – ERA Jabiluka II Competent Persons Report 2021.pdf

Notes: *equivalent to approximately 345.0 Mlb U_3O_8.

Current Mineral Resource

The Jabiluka II Mineral Resource, as at 31 December 2021, is presented in Table 5-3. The entire Mineral Resource is in the fresh (unweathered) rocks. The estimate was originally generated in 2007.

Table 5-3: Jabiluka II Mineral Resource as at 31 December 2021

Classification	Tonnes (Mt)	Grade (% U_3O_8)	Contained metal (t U_3O_8)
Measured	1.21	0.89	10,800
Indicated	13.88	0.52	72,200
Inferred	10.00	0.54	54,000
Total	**25.10**	**0.55**	**137,100***

Source: ASX:ERA (28 February 2022)

Notes:

*equivalent to approximately 302 3 Mlb U_3O_8

Cut-off grade 0.2% U_3O_8

The overall dry bulk density for the Mineral Resource is 2.64 t/m^3

The Competent Person for the Jabiluka II Mineral Resource is Mr Stephen Pevely, MAusIMM, part-time employee of ERA.

Data and database

The Jabiluka II deposit was discovered in 1971 by Pancontinental during an extension of grid percussion drilling to the east of Jabiluka I. Since the discovery there have been eight drilling campaigns between 1973 and 1999 in two phases; drilling by Pancontinental between 1973 and 1980, followed by drilling by ERA post acquisition between 1993 and 2000. In total, 294 holes have been drilled at Jabiluka II comprising 59,906 m of diamond drill core (typically NQ size or 47 mm diameter core) and 10,533 m of open hole percussion drilling, which was used to drill through the barren overlying Kombolgie sandstone by Pancontinental. ERA drilled diamond core from the surface.

Drilling has been conducted from both the surface and underground. Underground drilling occurred in 1999 where 61 holes comprising 4,579 m of LTK60 (45 mm diameter) sized diamond core was drilled. Face and wall channel sampling and mapping was performed in the development where mineralisation was encountered. The drill hole spacing was nominally 60 m by 60 m from surface drilling over the deposit, with some areas infilled to 30 m by 30 m. The underground drill spacing was 15 m by 15 m. Sample lengths were 1 m long in the mineralised parts of the deposit. Core recovery is reported to be greater than 98% in the mineralised intercepts.

SRK notes that the area covered by the 15 m by 15 m spaced underground drilling now comprises the Measured Mineral Resources at Jabiluka II.

Downhole surveys were performed at 25 m to 30 m intervals downhole using single or multi-shot instruments which rely on the earth's magnetic field to determine the bearing of the holes. Given a lack of magnetic minerals at Jabiluka it is unlikely that the surveys would have been affected. SRK also notes that the magnetic north correction (declination) has been adjusted from 4° in 1980 to 3° in the late 1990s to reflect the change in the earth's magnetic north pole over that time period, however given the declination was 3°50' E over the 1990s a value of 4° could have been used. It is possible that the declination adjustments may result in positional inaccuracies for deeper holes (>500 m deep), which could mean development and stope designs may need to be slightly adjusted. As long as positionally accurate grade control drilling is undertaken prior to final design this risk is immaterial. It is reported that a reasonable proportion of the downhole surveys (38%) were checked and validated against the original survey discs in 2007.

The 1973 to 1980 drill collars were resurveyed by ERA post acquisition from Pancontinental, however the method and instrument used for the survey is not reported. In SRK's opinion, the nature of drilling, being diamond core in the mineralised intercepts, is appropriate. The description of the quality checks and reviews indicates that there is unlikely to be any major issues with the position of the drill holes. One potential improvement would be to drill oriented diamond drill holes to further understand the structures and their effect over the orientation and continuity of the mineralisation. A small number of oriented diamond drill holes (the exact number is unknown) were reportedly drilled for geotechnical purposes.

The orientation of the drill holes relative to the mineralisation is mostly optimal, where the drill hole intercepts are almost perpendicular. However, the orebody plunges at depth (i.e. the steepness increases to almost vertical) from a shallower 20–40° dip in the upper parts of the deposit. The deeper holes drilled from surface are therefore almost drilling down strike of the orebody, meaning the sampling is less representative. One possible solution is to drill the deeper parts of the deposit from underground drives however this will only be feasible once the development has been extended down.

The Jabiluka II geological database has been the subject of three reviews in 1992, 1997 and 2007. The reviews identified issues with the original assay data and downhole surveys, and established a priority system for using the most appropriate uranium assay where multiple methods were used. SRK considers the thorough checking of the data, given the age of some of the data predates digital data collection, to be good practice and the data and database likely represent a low risk to the project.

The typically 1 m long samples collected in the mineralised parts of the deposit were assayed by either pressed powder x-ray fluorescence (XRF) or fusion XRF for uranium, which are total assays of the uranium content. Gold and palladium were assayed by 50 g fire assay with atomic absorption spectroscopy (AAS) finish. A downhole geophysical method, natural gamma, was used to derive an indicative uranium grade prior to cutting the core by measuring the amount of radioactivity before calculating an approximate grade based on calibrations. All intervals with gamma logging greater than 0.02% U_3O_8 were cut using a diamond core saw along the axis of the structural fabric and submitted for laboratory analysis. Sample preparation involved drying at 105°C before crushing to less than 2 mm, a 500 g split was collected (method unknown) and pulverised to 85% passing 75 µm. Aliquots for analysis were extracted from the pulp.

Quality assurance and quality control (QAQC) measures relied mostly on internal laboratory QAQC, without independent accuracy checks such as certified reference materials. Field duplicates were regularly collected and assayed. Duplicate assays were also regularly performed to compare the Pancontinental standard assay method, pressed powder XRF, against fusion XRF and neutron activation analysis. The bias and precision studies based on the paired assay methods identified minor biases between the analytical methods, however such biases are expected and do not represent a material problem. There is an absence of QAQC on the gold and palladium assays and for this reason the gold and palladium are not reported as Mineral Resources at Jabiluka II. Undertaking further QAQC work and verifying the gold and palladium assays, along with a more thorough assessment of the estimate, may result in the upgrade of the classification of the gold, or gold-palladium mineralisation to possibly Inferred (pending RPEEE including social and environmental permission and a reasonable processing option).

The dry bulk density tests were performed across all major rock types using a water displacement method; core samples are dried, weighed and then immersed in a volumetric flask, the increase in volume is measured and the bulk density calculated. It is SRK's experience that water displacement methods are usually a check or secondary measurement method, with the Archimedes (weight-in-air, weight-in-water) method with dried and wax coated samples being preferred. The main uranium mineral present at Jabiluka II is approximately four times heavier than the host rocks, and therefore higher grade parts of the deposit (which are approximately 4% U_3O_8) should have a higher density. Therefore, the density was assigned into the block model using a regression formula derived from the densities and grades of the density samples. The density in the model is then calculated using the estimated uranium grade. SRK considers the bulk density testing to be mostly appropriate, and the use of a regression formula to be good practice, however SRK also recommends additional bulk density testwork to verify the Jabiluka II density data. Such tests could include weight-in-air, weight-in-water and air pycnometer (specific gravity) tests. SRK notes that air pycnometer tests were regularly performed at R3D.

SRK also notes that approximately 740 m of core remains to be chemically assayed for U_3O_8 as recommended following the 1997 database review. The Competent Persons report notes while the *'absence of these assays is not considered critical to the current resource estimate, this outstanding assaying should be performed were the project to progress'*. SRK concurs with this conclusion and recommendation.

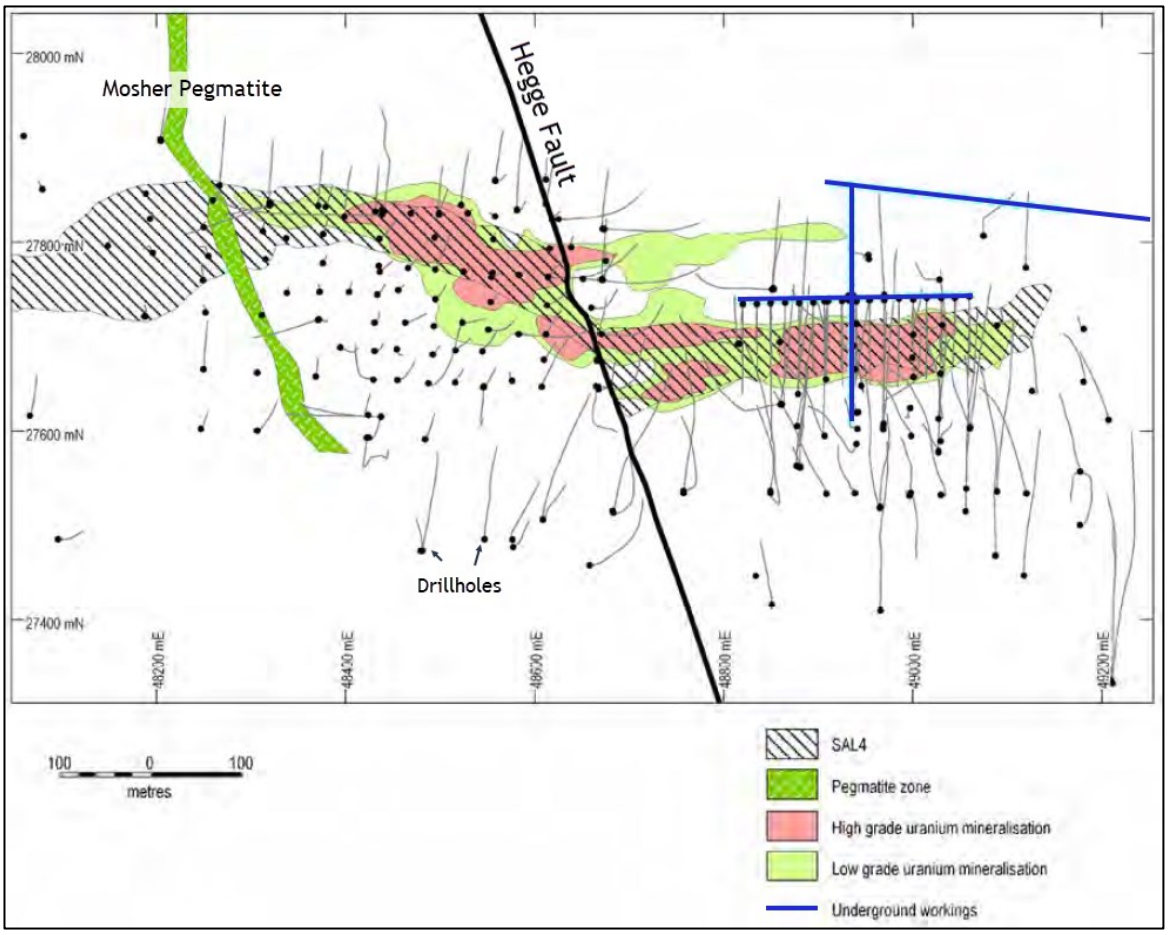
Geological interpretation

The Jabiluka II geological interpretation is based on nine units termed Stratigraphic Assay Level (SAL) units. SAL1 forms the uppermost unit with SAL2, SAL4, SAL6 and SAL8 being the mineralised units. The majority of the mineralisation resides in SAL4, which hosts approximately 19 Mt at 0.52% U_3O_8 of the total of 25 Mt at 0.55% U_3O_8 in the Mineral Resource.

The mineralised SAL units share similar geological characteristics, being carbonaceous schists (containing graphite) with breccia textures. The graphite is most likely to have caused the precipitation of the uranium from fluids and the brecciation and faulting will most likely have generated fluid pathways. The poorly mineralised SAL units are typically non-carbonaceous quartz-chlorite muscovite schists and are mostly homogeneous. This differentiation is likely to allow for reasonably straightforward geological logging as the rock fabric and colour is distinct between the stratigraphic horizons.

The SAL domain interpretation was undertaken by digitising three-dimensional (3D) strings on cross sections with a 30 m spacing across the deposit, except for the area covered by underground drilling where a 15 m spacing could be used due to the additional infill drilling.. The strings were linked to form wireframe surfaces for the top of each SAL unit. The deposit is divided approximately in two by the north-northwest trending Hegge Fault (Figure 5-1). The faulting has resulted in a downthrow of the western side of approximately 50 m. A total of 16 separate SAL unit surfaces were generated, dividing the deposit into 9 SAL units either side of the Hegge Fault.

Figure 5-1: Plan section of Jabiluka II



Source: ERA (2022) – 2021 Competent Persons report

The base of the Kombolgie Formation (i.e. the unconformity between the Kombolgie and Cahill formations) was modelled in a similar method. A barren pegmatite (the Mosher Pegmatite) is located to the west of the mineralisation and has been modelled separately. SRK notes that numerous scattered minor (and generally barren) pegmatite intrusions occur throughout the Jabiluka II deposit and have been observed in core and underground exposures. Such pegmatites were also commonly observed at the Ranger deposits. The minor pegmatites have not been modelled separately and, presumably have been included in the estimate of the SAL units as very low-grade intervals that will dilute the estimate to a minor extent.

The 16 SAL units (9 either side of the Hegge Fault) were further sub-divided into six structural zones reflecting the variation in foliation orientation across the deposit. The six structural zones split the deposit into areas of more or less equal strike and plunge. The upper structural zones are generally flatter, with dips of between 20° to 45° to the south. The lowest structural zones are steeper, between 50° and 80° and also dipping to the south. Dividing the SAL units by the Hegge Fault and the six structural zones results in 54 estimation domains in total.

The assay intervals were composited into 2 m lengths from the typically 1 m long sample intervals within each of the 54 estimation domains. Un-assayed intervals were assigned a nominal uranium grade of 0.005% to prevent grade smearing through lower grade intervals. The face and wall channel samples were excluded from the estimate on the basis that channel samples are generally subject to a high sampling error and should not be used for Mineral Resource estimation. Statistical

analysis indicated that the coefficient of variation was moderate, generally greater than 2 but less than 3.5 in the mineralised SAL units. The mineralised domains had a positive skew containing a small number of high-grade samples.

In SRK's opinion, the geological modelling has been performed to a reasonable to high standard and presents a low risk to the project.

Estimation

The block model was constructed covering a majority of the drilling extent with some mineralised intercepts in widely spaced drilling not included in the block model extent. The block sizes were 15 m by 10 m by 10 m in the X, Y and Z and were sub-blocked to 7.5 m by 5 m by 5 m to retain adequate resolution along the estimation domain boundaries.

Due to the skewed distribution of the composite grades, a non-linear estimation method, multiple indicator kriging, was used to interpolate the grades into the block model. Fifteen grade bins were selected based on percentiles and the variogram models determined. The estimate was performed in three passes with the first search radius measuring 30 m by 30 m by 9 m out to a third search radius of 70 m by 70 m by 20 m. A minimum of 16 and a maximum of 40 composites in at least four octants were required for the first and second searches, which dropped to a minimum of 8 and a maximum of 40 composites and two octants in the third estimation pass.

The mean grade (rather than the median) was used for indicator bins when determining the final block grade. The choice of the mean over the median is slightly less conservative for the highest grade bin, however it was determined this best represented the infrequent higher grade intercepts. Validation was performed which demonstrated that the estimate fairly reflected the input data.

The gold grade was also estimated in 2007, however it was not classified due to assay QAQC concerns and remains separate from the Mineral Resource. The 2021 Competent Persons report does not discuss the unclassified estimate of gold mineralisation, however the 2011 OoM study notes the gold mineralisation at various cut-off grades (Table 5-4). It is SRK's opinion that the gold mineralisation represents an opportunity for Jabiluka II.

Table 5-4: Gold mineralisation at Jabiluka II (not a Mineral Resource)

Au cut-off (g/t)	Tonnage (Mt)	Gold grade (g/t)	Gold metal (koz)
0.1	13.50	0.9	374
0.5	4.20	2.3	311
1.0	2.70	3.2	277
2.0	1.61	4.4	226
3.0	1.01	5.5	179
4.0	0.67	6.5	141
5.0	0.46	7.5	110
10.0	0.06	13.8	25

Source: ERA (2011) – 2011 OoM study

Notes: Not reported in the 2021 Competent Persons report and not classified and reported as a Mineral Resource.

SRK recommends that the gold mineralisation at a 2.0 g/t Au cut-off be treated as exploration potential and be considered as an upside case for valuation purposes.

In SRK's opinion, the estimation of the Jabiluka II Mineral Resource has been performed to a reasonable standard and represents a low risk to the project. Minor improvements, such as the use of dynamic anisotropy to reflect the local orientation of the orebody more accurately, could be performed but are unlikely to materially change the estimate.

Classification

The Mineral Resource classification was based on the estimate pass, which reflected the drill hole spacing. The search pass was then refined using 3D solids to account for patches of different classification. A small number of blocks west of the Mosher Pegmatite were classified as Inferred due to the extrapolation of data from the east of the pegmatite. Consideration was given to the data reliability, such as core recovery or the reliance on the gamma derived uranium assays, however this reportedly had an immaterial influence.

Of considerable note it is the comment that *'Previously, all material estimated in the first pass was classified as Measured, but in light of the substantial local change in the resource (20% loss in contained oxide) as a result of the underground drilling…'* (ERA, 2022). SRK has interpreted this to mean that prior to the underground drilling, in the 1997 estimate, there was 20% more contained uranium oxide in the area. Following the underground drilling and re-estimation, either the grade or volume or both were reduced, that resulted in a lower contained metal estimate. This has raised a concern that following underground infill drilling the estimate may reduce materially. This is not guaranteed; infill drilling may also result in an increase in the contained metal, should higher grades be encountered. Given the relatively small area of infill drilling relative to the deposit, this observation cannot be considered a trend, however it is a risk that could be considered for valuation purposes.

RPEEE at Jabiluka II are required for a Mineral Resource to be classified and reported. ERA has listed the following points as justification:

- The continuing role of nuclear energy as a decarbonised energy source and impact on the long-term uranium market
- The demonstration of successful world-class rehabilitation at Ranger mine as a potential medium to long-term pathway to developing Jabiluka (SRK considers this is yet to be achieved)
- The preparation of an OoM study, that provides options for an underground mining operation at Jabiluka based on the 2007 MRE
- The Mineral Resource Competent Persons report which underpins the technical aspects of the resource model, geology and estimation.
- The 2005 Long Term Care and Maintenance Agreement reserves ERA's rights to mine Jabiluka II.

In SRK's opinion the RPEEE and the methods of Mineral Resource classification appear reasonable. Significant risks still remain from metal loss due to infill drilling, and uncertainty regarding social and environmental approvals.

Previously identified recommendations

The 2021 Competent Persons report lists nine recommendations, that were first generated in 2007. SRK has reviewed the recommendations and found them to be consistent with its own observations. As such the recommendations have been outlined below to allow the reader to understand the extent of the recommended technical work required to progress the Jabiluka II deposit to the next stage of project development. The recommendations are:

1. *The Ore Reserves for Jabiluka II need to be thoroughly re-evaluated. A new mine design around the new resource model is required, accounting for changes in other mining parameters such as cut-off grade.* (SRK notes that this is not strictly a Mineral Resource recommendation, and is potentially confusing as it appears the 2007 Ore Reserve was based on the 2007 Mineral Resource)
2. *The cut-off grade for reporting the Jabiluka II resources requires review, particularly given the ten-fold increase in uranium price since year 2000.*
3. *Additional drilling is required to better define the detailed grade distribution of the orebody and to upgrade the Inferred and Indicated categories to Measured resource. Drilling is also required to determine the continuity and extent of the high-grade mineralisation intersected at depth in the lower eastern block.*
4. *Any future drilling will require a comprehensive QAQC program that should include independently submitted matrix matched standards, blanks, duplicate field samples and replicate pulp analyses by another laboratory and assay method.*
5. *Un-assayed intervals with significant radiometric values should be located and chemically assayed with appropriate QAQC samples.*
6. *Additional density data should be collected from existing core and from future drilling, particularly from areas poorly represented in the existing database.* (SRK – alternate testing methods to water displace should also be considered)
7. *The grid transformation from AMG to GDA needs to be reviewed. All surface drill hole collars should also be located and resurveyed using the new GDA grid.*
8. *Further detailed (e.g.: hole-by-hole) analysis of the available duplicate assay data is recommended if the project was to proceed to a higher level of study.*
9. *Consideration needs to be given to the handling of low-grade pegmatite intersections within mineralisation during resource estimation.*

In addition, SRK recommends:

10. Consider the use of dynamic anisotropy for future Mineral Resource updates.
11. Further study to better define the risks of grade or tonnage reductions following infill drilling.

Mineral Resource risks and opportunities

Risks

The social and environmental approvals are a significant risk to the RPEEE for Jabiluka II. SRK recommends considering a worst-case scenario where the entire Mineral Resource is classified as Inferred for valuation purposes.

According to the 2021 Competent Persons report, the result of underground drilling at Jabiluka II reduced the estimated contained uranium by 20% within the immediate area of the drilling. SRK considers this to be significant, as it implies that infill drilling may result in a reduction of the Mineral Resource by a fifth. Only a small portion of the deposit has been infilled to a 15 m drill spacing and such a trend may not be consistent across the deposit (some areas may increase in contained uranium following infill drilling).

As such, SRK recommends adopting the Mineral Resources as stated for valuation purposes.

Opportunities

The Jabiluka II Mineral Resource remains open at depth and to the east. Further exploration efforts may increase the Mineral Resource however it is not possible to reasonably quantify this increase in the absence of drill data.

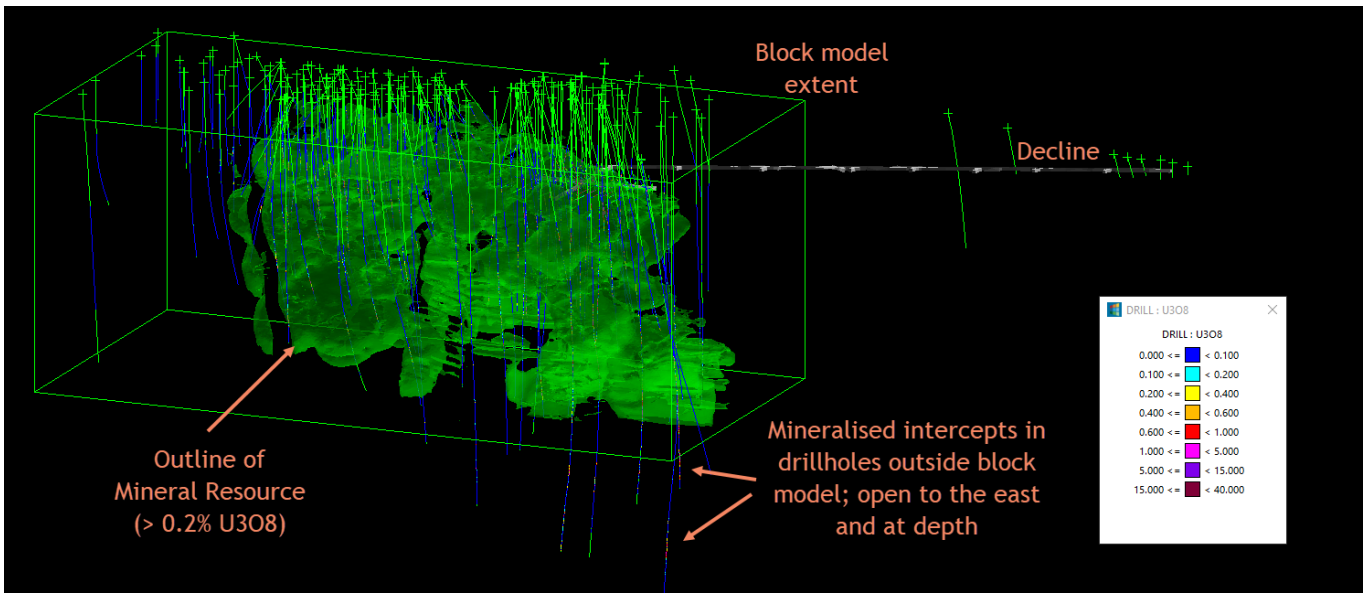
The gold estimate for Jabiluka II has not been included in the Mineral Resource due to concerns with assay QAQC. Further work to assess the gold assays may result in the inclusion of the gold, or gold and palladium, should RPEEE be determined. SRK recommends that 1.61 Mt at 4.4 g/t Au for 226 koz of gold metal be treated as upside exploration potential for valuation purposes. There are concerns with including the gold in the Mineral Resource, based on social and environmental approval risks as well as processing risks for the gold, which is typically associated with uranium mineralisation.

Inclusion of a gold component to the mineralisation should be considered as an upside case for valuation purposes.

Exploration potential

The Jabiluka II deposit offers further potential to increase the defined estimate for uranium as it remains open at depth and to the east. Drilling at depth has demonstrated that uranium mineralisation is present below the current Mineral Resource (Figure 5-2).

Figure 5-2: Jabiluka II exploration potential



Notes: All development has been backfilled and a bulkhead installed at the unconformity between the Kombolgie and Cahill formations to prevent aquifer mixing.

SRK notes the gold mineralisation at Jabiluka II also offers further exploration potential above that attributable to the uranium alone.

Outside of the Jabiluka Mineral Resource areas, the broader tenement MLN1, contains a further six target areas as outlined in the 2011 OoM study, namely:

- East of Jabiluka II
- Jabiluka III
- Jabiluka I
- Hades Flat
- Granite Hill
- Valley Area.

These are discussed in greater detail below and their locations are shown in Figure 5-3.

East of Jabiluka II

At the eastern end of the Jabiluka II resource area, the host sequence and mineralisation dip increasingly steeply to the east. Surface drilling has been limited in this area because of hole depth and thus cost. From the available aeromagnetic geophysical data, it is interpreted that the strike of the prospective host sequence swings from east–west to north–south to the east of Jabiluka II. This area has not been investigated and requires additional drill testing with approximately 9 km of prospective stratigraphy interpreted to be present.

The area is covered by Quaternary transported sands and as such, does not have a surface radiometric response evident in the historical geophysical data. Blocks of Kombolgie sandstone may also underlie the Quaternary cover, which would also cover the prospective Cahill sequence. A 1997 airborne radiometric survey noted elevated potassium, however the significance is unknown.

Jabiluka III

Mineralisation has been identified in previous drilling approximately 300 m down-dip from Jabiluka I. The prospect is located on the edge of the Magela floodplain and ERA reports that only one drill hole has been completed in this location with no further testing due to the environmentally sensitive setting.

Jabiluka I

The original discovery of uranium mineralisation within MLN1 was Jabiluka I. The area was explored based on the results from airborne radiometric surveys. Jabiluka I is described as a small, shallow uranium occurrence. A historical Mineral Resource has previously been declared at Jabiluka I, being 1.3 Mt at 0.25% U_3O_8 and containing 3,400 t of U_3O_8. SRK has not been provided with this historical Mineral Resource report and does not know any details relating to this estimate, including the version of the JORC Code it was reported under. However, SRK notes that ERA does not currently report this Mineral Resource. The deposit is located proximal to the Oenpelli Road and the Magela floodplain, and is subject to inundation during the wet season.

Hades Flat

The Hades Flat area was explored between 1971 and 1976. ERA notes there is a historical 'reserve' of 800 t of U_3O_8 delineated within narrow lenses. ERA also states that knowledge gained about the deposit geology in the RPA has not been applied at Hades Flat, hence this target remains underexplored and the potential exists for deeper, structurally controlled mineralisation. The northern end of Hades Flat was drilled for sterilisation purposes for a proposed tailings dam (at the time) with negative results for mineralisation. From aeromagnetic geophysical survey data, it is interpreted that the strike of the prospective Cahill Formation east of Jabiluka II swings from east–west to north–south towards Hades Flat.

Granite Hill

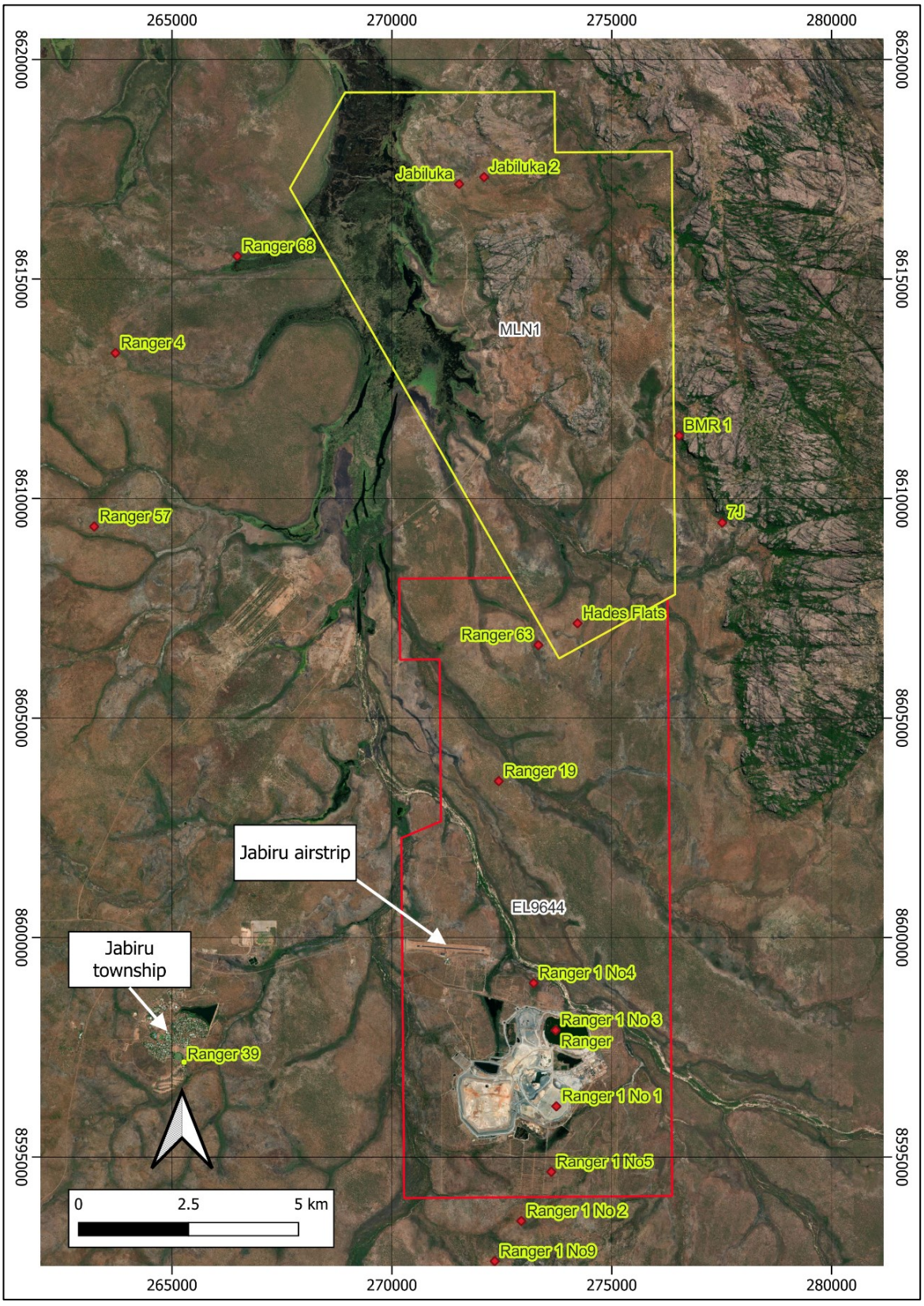
ERA notes that this target is represented by a surface radiometric geophysical anomaly due to a slightly radioactive granite/gneiss. No uranium mineralisation is present however it was noted to be valuable as a source of aggregate for construction purposes.

Valley Area

Five historical percussion holes have previously been drilled into the Valley Area, which is reportedly northeast of Jabiluka II. One of the percussion holes intersected the Kombolgie sandstone, with the total thickness of Quaternary sediments and Kombolgie sandstone cover being 100 m to 200 m thick.

ERA advised SRK that no recent exploration work has been conducted within MLN1, and also notes the exploration potential remains high as there has been no systematic exploration efforts east of the Jabiluka II deposit and north of Hades Flat, which hosts the favourable Cahill Formation.

Figure 5-3: Mineral occurrences within MLN1 and the RPA



Source: SRK, Northern Territory Geological Survey (STRIKE database)

Notes: Map projection is GDA94, zone 53

5.3.3 Mining

Previous studies

There have been a number of studies completed to investigate the development of the Jabiluka project over a period of almost 20 years. The initial FS was completed in 1993 and envisaged the development of an underground mine with haulage of the ore to Ranger for processing and tailings disposal. A subsequent JMA study was completed in 1998 and considered processing the ore at Jabiluka with a new mill, and storage of the tailings underground and in two surface pits.

The original FS was then reviewed and updated in 2000 to reflect information gained from the development of the exploration decline, and new resource drilling. The resource model and mine design were updated as part of the review. The mine design update included reducing the sub-level spacing and shortening the stope lengths. The mined ore production rate was in the order of 1.0 Mtpa.

A series of studies were then completed by Rio Tinto between 2003 and 2007. As part of these studies the dilution and mining recovery parameters were adjusted, and the production rate increased to 1.2 Mtpa. In 2006, AMC Consultants Pty Ltd *(*AMC) completed a mining review and update of the mine design to incorporate underground storage of tailings. The capital and operating cost estimates were updated to a PFS study standard, and in 2007 an Ore Reserve for the Jabiluka Project was also estimated in accordance with the JORC Code (2004).

In 2011, an OoM study known as Project Eagle was completed which investigated several alternative options for the development of the Jabiluka deposit using the previously completed studies as a basis. Options were identified to be progressed for further analysis in subsequent studies. In the mining discipline, the OoM study investigated options for aspects such as the mining rate, cut-off grade, portal location, mining method, ventilation and materials handling.

The 2011 OoM study and very limited sections of the studies completed between 2003 and 2007 were provided to SRK for review. This report is based on the information provided. In some cases, more detailed information may exist in relation to the mining aspects of the Jabiluka Project, such as the updated study in 2000 and the studies completed between 2003 and 2007, however these studies were not provided to inform this report.

Overview of proposed mining operation

The most recent study (i.e. the 2011 OoM study) assumed underground mining using an open stoping mining method incorporating backfill of the stopes with cemented paste fill. This study investigated three production rate options, namely 1.2 Mtpa, 1.6 Mtpa and 2.0 Mtpa. The study also investigated three cut-off grades of 0.45% U_3O_8, 0.2% U_3O_8 and 0.1% U_3O_8.

Under this study, access to the orebody was planned to be via a conventional decline with four options considered for the decline portal location.

Mining method

The mining method proposed for the Jabiluka orebody in both the 2011 OoM study and previous studies was sub-level longhole open stoping, with backfill.

Longhole open stoping with backfill was selected as it was considered to best meet the unique requirements at Jabiluka. These requirements include:

- no surface subsidence and limited impact on the surface
- variable dip and thickness of the Jabiluka mineralisation
- a largely no-entry mining method that minimises the exposure of the workforce to radiation
- the ability to store tailings underground as backfill.

The proposed longhole open stoping mining method incorporated a level spacing of 25 m and stope widths of 12 m that were considered appropriate for the relatively foliated schist rock mass hosting the mineralisation.

Several variations of the sub-level longhole open stoping method were developed to suit the varying dip and dimensions at Jabiluka with two of these shown in Figure 5-4 and Figure 5-5.

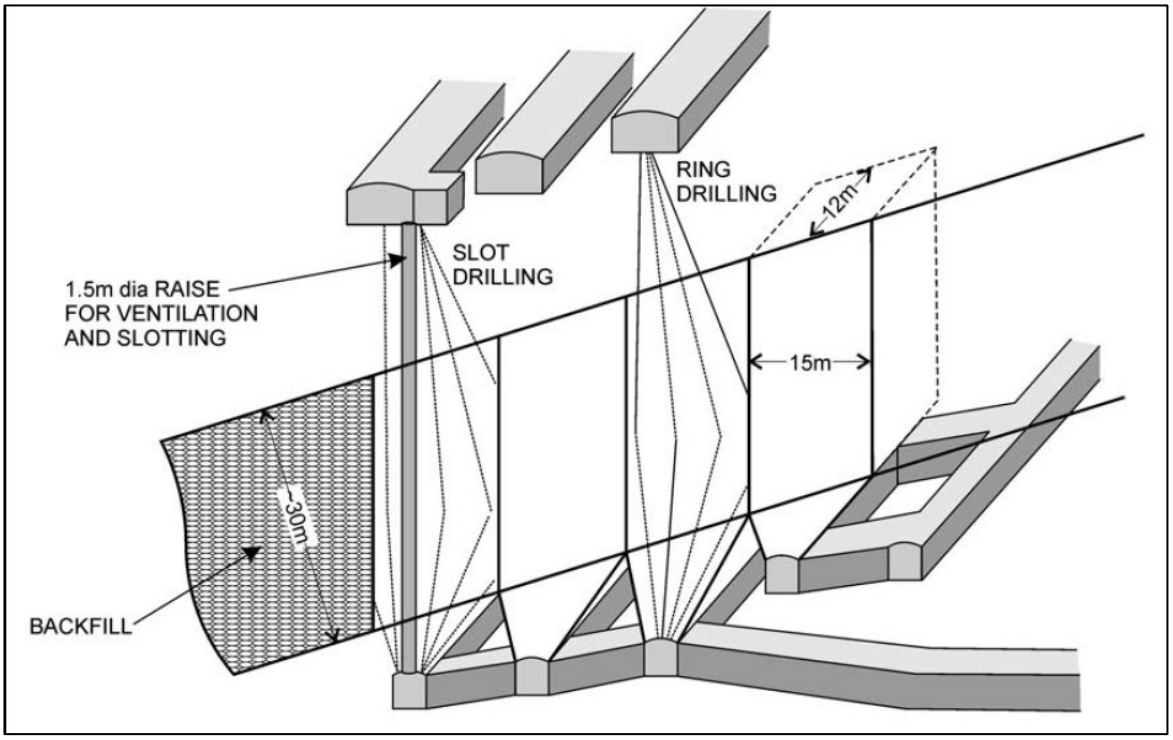
A key feature of the planned stoping layouts was the location of the drilling and bogging development outside the high-grade ore zones and the use of the ventilation raise at the top of each stope to place the stope under negative ventilation pressure and prevent the build-up of radiation inside the stope.

SRK considers the planned sub-level longhole stoping method to be appropriate for the orebody at Jabiluka and the unique requirements for mining the deposit. The mining method and stoping layouts developed and reviewed over numerous studies are considered to be relatively well developed and at a PFS level. In addition, the mining method selection and stoping layout were informed by experience from the exploration decline, where the rock mass conditions in both the ore and waste were exposed via development.

A series of cut-off grades were used in the 2011 OoM study to generate a number of planning scenarios. The cut-off grades used were 0.1%, 0.2% and 0.45% U_3O_8. The 0.2% U_3O_8 grade is described, at times, as the preferred cut-off grade.

Work completed in earlier studies (AMC, 2007b) identified that the cut-off grade is highly sensitive to the metal price, especially below US$25/lb U_3O_8. SRK considers the 0.2% U_3O_8 cut-off grade to be reasonable based on the estimated costs, metallurgical recoveries and forecast metal prices at the time of reporting, however further optimisation should be completed to determine the optimal cut-off grade under current conditions.

Figure 5-4: Stoping layout for flat dipping ore zones



Source: AMC (2007a) – Mining Review

In the 2011 OoM study, the stope external dilution factor was set at 7% based on estimates of overbreak in the hanging wall and footwall of between 1 m and 3 m. In addition to hanging wall and footwall dilution, an allowance was made for dilution from the backfill that regularly forms some of the side walls of the stopes. The dilution allowance for backfill assumed 0.5 m of backfill dilution for each exposed backfill face.

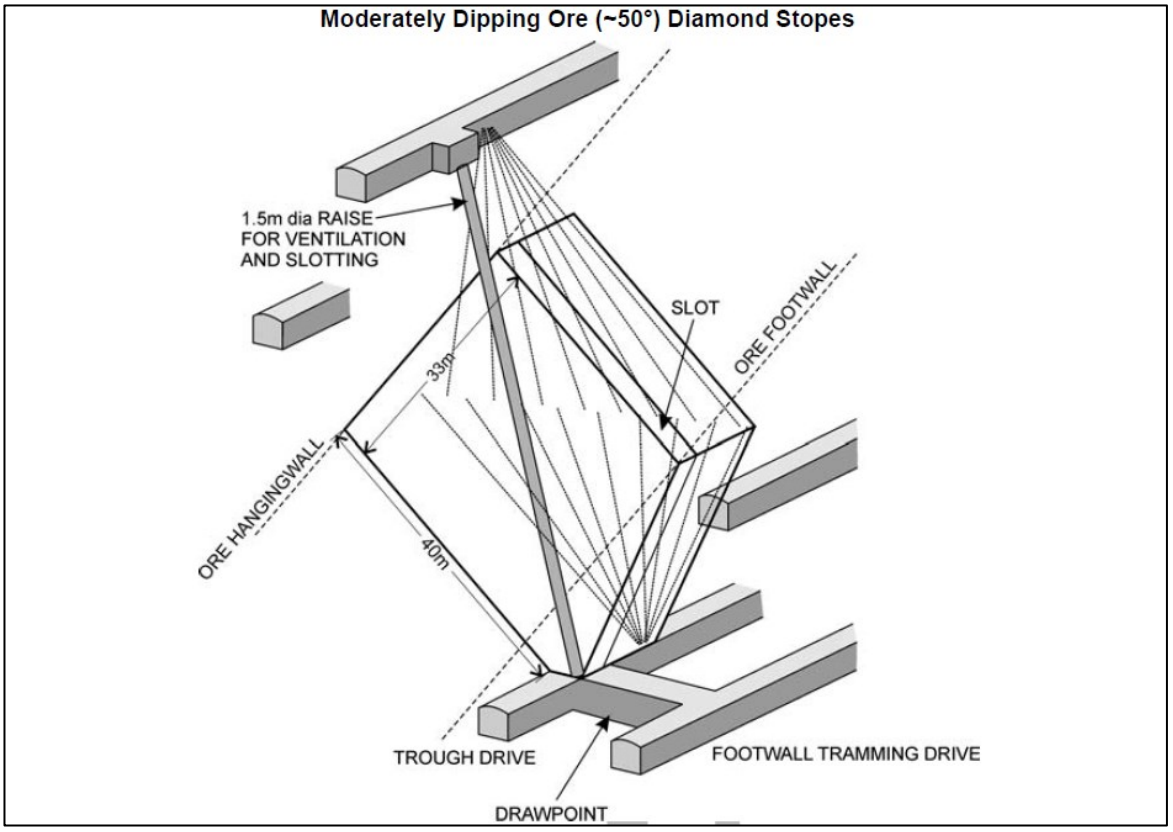
A mining recovery factor of 89% was applied to the diamond and longhole stopes, while a factor of 95% was applied to the panel stopes. These factors represent an appropriate increase from previous studies, where a factor of 95% was used for mining recovery in all stopes.

SRK considers the dilution and mining recovery factors used in the 2011 OoM study to be reasonable and appropriate for the planned stoping method and rock mass conditions.

Geotechnical inputs

Limited information was provided on the geotechnical data collected and work completed to inform the mine plan and design. The provided information indicates that an *in situ* stress measurement and numerical modelling has not been completed at Jabiluka. Although the planned mining is relatively shallow, in situ stress measurements and numerical modelling of the planned mining sequence are now considered part of a comprehensive PFS study and the lack of these in the 2011 OoM study indicates that this aspect of the technical work is not at a PFS standard.

Figure 5-5: Stoping layout for moderately dipping ore zones



Source: AMC (2007a) – Mining Review

Mine access and material handling

Previous studies assumed access to the Jabiluka deposit would be via a decline with a portal located to the east of the deposit, where the exploration decline was constructed. SRK understands that this site is no longer considered viable due to the culturally sensitive nature of this area. From a purely technical and cost basis, this location is the most cost-effective location to access the Jabiluka deposit.

As part of the 2011 OoM study, several access and processing location options were investigated to allow access to the orebody and for transportation of the mined ore and waste from the mine. The four access options were:

- Option 1, Raven tunnel – a 23 km tunnel from the Ranger mine with two portals
- Option 2, Heron decline – a direct decline path from the Heron area to the Jabiluka deposit passing beneath the Australian Heritage Commission (AHC) restricted area
- Option 3, alternative Heron decline – a variation of the Heron decline with the decline path modified to skirt the eastern edge of the AHC area
- Option 4, alternative Jackdaw decline – an alternative to the previous Jabiluka decline with a portal further east, so as not to disturb the Jabiluka site.

The various access options are shown in Figure 5-6. The Heron decline option (Option 2) and the alternative Jackdaw decline (Option 4) were not progressed, due to cultural sensitivity issues.

However, work progressed on Option 1, the tunnel from Ranger, and Option 3, the alternative decline from the Heron area.

For each of these two remaining options, various material handling options were investigated for the transportation of the ore from a potential Jabiluka mine to Ranger. The materials handling options investigated were:

- Truck haulage. This option involved the transport of the broken ore and waste to the surface using underground haulage trucks or road train type trucks. This option may require a dedicated haulage decline parallel to the access decline for the management of radon gas emitted from the ore.
- Conveyor haulage. In this option, the ore and waste rock were to be crushed underground and then transported from the mine on a conveyor in a dedicated conveyor decline drive.
- Slurry pumping. In this option, the ore was to be reduced in size underground using crushing and/or grinding processes and then pumped from the mine as a slurry.

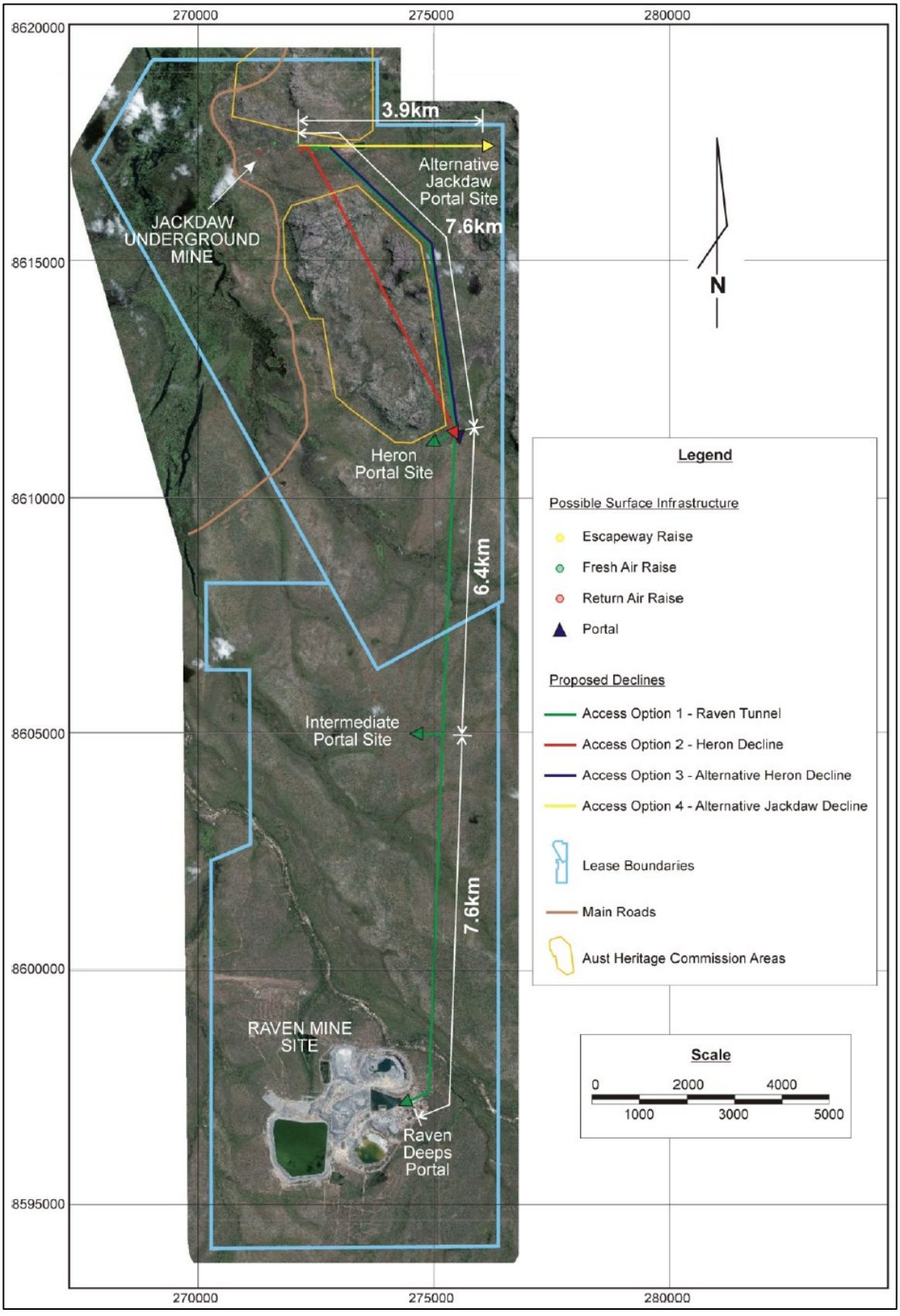
The Option 3 access option – a portal located at the Heron area and the use of twin declines with conveyor haulage – was discussed in the 2011 OoM study as an initially preferred option, however the report also discussed that the other options needed to be further investigated.

SRK considers that all the options proposed are potentially feasible, however the level of technical work completed on the access and material handling options remains at a relatively preliminary stage and has not reached the level of a PFS. From the provided information, it appears that the geotechnical conditions along the proposed access decline and tunnels were not investigated. The geotechnical assessment is an important aspect that needs to be completed before the access option can be finalised.

The use of truck haulage with a twin decline access arrangement may offer advantages over the conveyor haulage option as underground crushing infrastructure will not be required. SRK considers there may be limited ventilation and radiation management advantages to using a conveyor, as opposed to underground truck haulage.

The use of slurry pumping from underground to a processing plant located in a less culturally sensitive area is considered by SRK to offer many advantages for project advancement and represents an opportunity for further investigation. Slurry pumping technology has progressed significantly over the last 20 years and is now commonly used to pump ore and mineral concentrate for tens and hundreds of kilometres. If this option was progressed, it is likely to require an underground comminution facility that reduces the ore to a particle size of several millimetres and an underground pumping facility using high pressure slurry pumps.

Figure 5-6: Mine access options



Source: ERA (2011) – Project Eagle OoM Study

Ventilation

The ventilation of any future Jabiluka underground mine presents several specific challenges due to the relatively high U_3O_8 grade of the ore and the requirement to maintain workforce exposure levels of radiation below specified levels. The mine is also located in a tropical climate and heat management will be an issue requiring careful consideration to ensure a safe working environment without excessive temperatures.

Several stages of ventilation planning for the Jabiluka deposit were completed, including the 2007 AMC study and the 2011 OoM study. The specific hazards related to radiation at Jabiluka include exposure to gamma radiation, inhalation of radioactive dust, alpha radiation and inhalation of radon and decay products.

The mine planning work completed to date, and particularly the ventilation design, was developed with a strong focus on managing the hazards associated with radiation exposure. The residence time of the airflow in the mine after exposure to uranium mineralisation was limited to 10 minutes. This was designed to prevent the growth of radon decay products in the airflow. This was to be achieved by the location of relatively closely spaced intake and exhaust shafts throughout the mineralised area, in order to limit the distance that the air must travel following contact with exposed radioactive mineralisation.

The mining method in high-grade areas was designed using a non-entry mining method that largely eliminates development in, and contact with, high-grade ores and hence reduces the exposure of the workforce to gamma radiation emanating from the ore. A high volume of airflow was also planned to ventilate the mine (approximately 2,000 m^3/s) to ensure relatively high airflow velocities in the mine working areas. Cooling of the intake airflow was also planned to ensure acceptable temperature conditions throughout the underground mine.

SRK considers that the technical work completed to plan and manage the hazards associated with radiation and heat exposure in the proposed Jabiluka underground mine is appropriate and generally consistent with good practice. The ventilation planning work is considered to be generally at a PFS level. The ventilation plan discussed in the 2011 OoM study is considered to be relatively elaborate, and opportunity exists to simplify and improve the system by removing features such as the ‘push pull’ primary ventilation fan arrangement. In addition, further ventilation planning may confirm that a simpler and less capital-intensive material handling system incorporating two-way truck haulage in a twin access decline arrangement can be used. The use of battery electric loaders and trucks provides an opportunity that should also be investigated, as these will reduce the heat load applied to ventilating air and may allow for a reduced primary airflow requirement for the mine.

The risks associated with exposure to radiation are one of the major operational risks associated with the Jabiluka Project and will require detailed and thorough mine planning as well as focused management during any future operation of the mine.

Cost estimation

Operating and capital costs were estimated several times for the Jabiluka Project during the previous studies. The cost estimated as part of the 2011 OoM study were provided for SRK’s review. The 2011 OoM study mining operating costs were estimated using a zero based fixed and variable approach. The mining operating costs for the 2 Mtpa scenario with a cut-off grade of 0.2% U_3O_8 were estimated at A$135/t ore (2011 basis). This mining operating cost includes a cost

of A$36/t ore (2011 basis) for the construction of underground tailings storage silos. Other significant components of the estimated mining operating costs included backfill A$29/t ore, development A$22/t ore, and power at A$21/t ore (all 2011 basis).

SRK considers the estimated mining operating costs to be reasonable based on a 2011 calendar year cost base. The estimated operating costs benchmark above those for other third party held mines operating at a similar production rate and using paste fill. However, SRK considers this is understandable in light of the unique nature of the Jabiluka Project. Limited detail has been provided to SRK on the breakdown and detail of the 2011 estimated costs, making it difficult to comment on the accuracy of the cost estimate.

Based on the information provided in relation to the Jabiluka capital costs as at 2011, SRK considers these to have been appropriate, and potentially towards the high end of the range for comparable projects at the time. However, given the escalation in costs since 2011, SRK considers that escalation of costs to provide an updated capital cost estimate for valuation purposes is likely to provide an outcome that is merely indicative and insufficient to provide a reasonable basis for investment purposes.

Given the level of accuracy required to support an investment, SRK considers that all costs need to be reviewed in light of prevailing economic conditions in order to provide definitive cost estimates for valuation purposes, rather than escalating the 2011 operating and capital costs.

5.3.4 Processing

Overview of proposed processing options

The Jabiluka underground uranium deposit has not been exploited to date, but has a long history of metallurgical testwork and processing development. Various studies have been completed, spanning back to the early 1970s. The Jabiluka resource was extensively studied between 1975 and 2000, and early works were progressed in the late 1990s incorporating an exploration decline and supporting surface works including roads, buildings and raw water storage.

The related metallurgical testwork and engineering study documents are well summarised in the reports provided to SRK. The work completed demonstrates that the Jabiluka ores are amenable to acid leaching using pyrolusite (or equivalent) as an oxidant, as is commonly practiced, with high uranium extractions in the mid to high nineties (+90%) at ambient temperatures and with moderate acid consumption.

Studies at both Jabiluka and R3D have consistently engaged competent and reputable metallurgical laboratories, consultants and engineers specialising in uranium processing. As such, there is a high degree of confidence in the historical testwork that has been undertaken. Examples include the Australian Nuclear Science and Technology Organisation (ANSTO) previously the AAEC, Warman Laboratories, Amdel, Bureau Veritas Minerals, Rio Tinto's Bundoora Technical Development Centre, ERA Technical Services, North Ltd Technical Services, CSIRO, GRD Minproc Ltd, AMEC Minproc Ltd and Ausenco Ltd.

In the past, this work has been considered to be sufficient to support the definition of Mineral Resource and Ore Reserve estimates, but this is no longer the case as the latest 2021 update outlines Mineral Resources only. The bulk of the testwork, flowsheet development and engineering design and costings supporting the Jabiluka Project are now dated, with limited additional

processing related investigations completed over the last two decades. Supporting data, including that for the uranium recovery assumption of 94.0% U_3O_8, no longer meets the JORC Code (2012) requirements for the deposit to be classified as having an Ore Reserve. Previous Ore Reserve estimates have been in the order of 11.8 Mt of feed at 0.50% U_3O_8. This would be considered a high-grade uranium deposit, with adequate tonnage and contained metal to support a standalone processing facility.

A base case processing option for the Jabiluka Project is not currently defined. The obvious option was treatment through the Ranger facility, located approximately 23 km from the Jabiluka site. Over its operating history, Ranger has successfully processed a range of uranium feed types including fresh ores comparable to those potentially able be mined at Jabiluka. The Ranger processing plant was the logical treatment option for the Jabiluka Project and represented the base case processing scenario, described as the RMA. The RMA processing option is no longer available due to the ongoing rehabilitation of the Ranger site.

Various studies and a number of processing options have been considered for the Jabiluka deposit over many years. The most relevant study relates to the 2007 OoM study and an updated 2010 engineering estimate. The alternative processing solutions at the time included the potential locations of the treatment sites, including the use of the existing nearby Ranger Mill (the original assumption), or a greenfield plant to be located at the Jabiluka site (known as the JMA). Studies have also considered various downstream flowsheet options available to a new plant including the use of SX, ion exchange or a less conventional direct/bulk precipitation from solution (but all adopting a common standard comminution and acid leaching technology approach). A range of throughput rates were also assessed, most relevantly targeting production at 1.2 Mtpa and 2.0 Mtpa, each assuming a metallurgical recovery of 96.0% U_3O_8, despite previous resource modelling assuming a 94.0% U_3O_8 recovery.

The 2010 study ultimately recommended the use of the existing Ranger plant, or a greenfield direct precipitation plant. This options assessment showed the RMA option offered significantly superior project economics when compared to a greenfield plant. In SRK's opinion, neither the direct precipitation flowsheet – which was considered to avoid the production of a sodium sulfate by-product and to eliminate the use of SX and use of ammonia on site – or the SX and strong acid strip and peroxide precipitation flowsheet options were adequately demonstrated to allow them to be considered as an alternative base case flowsheet option. Both of these options also incur higher uranium losses, that were not incorporated into the associated modelling.

Supporting testwork for a processing solution is reliant on historical testwork. Little further testing has been completed in the last 20 years, in part due to the limited availability of samples. Design work is therefore largely reliant on the historical work now dating back several decades. While an oxidative acid leach demonstrated the Jabiluka deposit is amenable to acid leaching, with extractions in the mid to high nineties (+90%) and no risks highlighted, other aspects of the flowsheet have not been as well developed. For example, the testwork relating to direct precipitation was not conclusive, did not generate a saleable concentrate in the lower grade feed composite tests and downstream testing was not extensive. Ultimately, this work is not at the level expected of a PFS, particularly if a new dedicated processing facility is required.

Testwork was not limited to acidic tank leaching, it also included the assessment of alkaline atmospheric and pressure leaching, acid heap leaching, in situ leaching and separate investigations into the recovery of associated gold from the leach tailings (associated with the uraninite and pyrite). These options were not progressed further. The obstacles to the alkaline

leach and heap leaching options are numerous, but include lower uranium recoveries of approximately 78% and 75%, respectively for each of these options and the large footprint required for heap leaching. Gold recovery was precluded due to the perceived risk of transporting sodium cyanide through the Kakadu National Park and the use of sodium cyanide, the conventional lixiviant for gold extraction for gold ores, adjacent to the Kakadu National Park.

In more recent years, the Jabiluka Project assumed a base case of site-based treatment. Consideration was given to locate the plant or at least part of the plant underground in purpose-built cavities, or to truck or pipe slurry ores to several potential remote processing facilities to minimise surface disturbance in order to assist with Project approvals. It is important to understand the distinction between minimising the surface disturbance, as it could never eliminate it altogether.

The most recent study, and that most relevant to the ISR, is the Project Eagle study issued in April 2011. This study was undertaken at a conceptual level and was described as being at an OoM level of confidence. That report describes the required action needed as part of the next level of study (i.e. it highlights that the study had not been developed sufficiently to meet the requirements of a PFS level of confidence).

By way of example, the 2011 study identified the following activities to bring the metallurgical testwork and processing aspects of the Jabiluka Project to a PFS level of confidence.

> *Processing: To assess each of the three proposed flow sheets (SX-ADU, SX-strong acid and direct precipitation) to a PFS standard, further test work is required. Particularly, given its novel nature, direct precipitation will require extensive testwork to demonstrate its applicability, and further, the marketability of the direct precipitation product will need to be verified. A number of engineering studies will be required as part of the PFS including: leach optimisation, filtration, flowsheet options, product recovery optimisation, greenfield or brownfield development options including plant location, power station integration and optimisation, ore throughput, infrastructure optimisation including use of the existing (Ranger) infrastructure, beneficiation, a remote operations centre and gold recovery. A continuation of the modelling initiated in the OoM study will be necessary to support the process design efforts in the PFS.* (ERA, 2011).

Given the age of this last substantive study (i.e. 2011), further work would now also be required beyond that outlined in the previous statement.

Although the development options are not sufficiently defined, the highest degree of confidence at this stage of study would be to adopt the same metallurgical flowsheet as Ranger, but potentially exclude radiometric sorting, due to the high grade and the Jabiluka Project's financial sensitivity to uranium recoveries. This flowsheet includes two stage crushing, semi-autogenous grind (SAG) milling, acid leach under ambient oxidative conditions, neutralisation, filtration or CCD settling of the leach discharge, SX, ammonium sulfate stripping, ammonium diuranate precipitation, dewatering and calcination to produce a U_3O_8 product, with tailings dewatered in pressure plate and frame filters, neutralised and returned to the underground mine. This would be supported by associated process infrastructure including a dedicated sulfuric acid plant.

SRK has undertaken a high-level review of the processing capital and operating inputs and unit costs used in the supplied financial model titled *Project Eagle Jackdaw Model Jun 2022.xlsx*. This model selects the 2.0 Mtpa case located underground at the Jabiluka site, with an SX, acid strip and peroxide precipitation downstream flowsheet, with filtered and neutralised tailings stored in silos located underground. SRK considers a number of inputs into this model to be insufficiently

developed (i.e. to a PFS level of confidence or outdated). As a result, the financial outcomes are not sufficiently supported for use in a JORC (2012) Code and VALMIN (2015) Code compliant project technical assessment and valuation.

The basis of this model is from the 2011 update of a 2007 OoM study, which in turn has its origins in a flowsheet and mechanical equipment list derived in circa 2000. At the time, the modelling provided relative values across the 19 different processing options. In SRK's opinion, the likely deficiencies include, but are not limited to, the capital cost, insufficient contingency allowance, owner's cost, lack of owner's accuracy provision, base and total salaries, head count, sulfur cost, diesel cost (and associated power cost), insufficient freight, maintenance, contract maintenance, reagents and other costs. Another potential deficiency in the financial modelling is the metallurgical recovery assumption of 96.0% U_3O_8. This is based on leach extractions on a high-grade sample (not the average LOM grade) of 97% and allowing for 1% soluble losses. In SRK's opinion, this is not supported by the available testwork, sample representivity or the proposed base case downstream flowsheet of SX, strong acid strip and peroxide precipitation.

In SRK's opinion, from a metallurgical testwork and processing perspective, no material processing risks have been identified that would prevent the treatment of feed from this deposit. There is a high degree of confidence that the Jabiluka deposit ores would be amenable to treatment through conventional uranium processing flowsheets. This view is informed by historical testing of samples from this project and the similarities between Jabiluka and the Ranger deposit and the associated metallurgical behaviours of their ores.

However, in SRK's opinion, the Jabiluka Project has not been developed to the required level of confidence to allow it to be considered at a PFS level. The reasons for this opinion include those listed below. As a result, the processing aspects of the Jabiluka Project do not yet meet the requirements of the VALMIN Code that would allow the project valuation to be based on a DCF basis. An alternative valuation approach is required at this time.

- Testwork and engineering development has not been progressed to a PFS level of confidence. The flowsheet is based on studies dating back to 2000 and considered direct precipitation and other flowsheet variations. The flowsheet remains to be finalised and testwork is dated and while valuable, is now inadequate.
- A definitive processing flowsheet for the Jabiluka deposit has not been selected, although three general options have been considered. More metallurgical testing is required once the base case flowsheet has been finalised.
- The location of the processing plant has not been finalised, for example whether it is on the Jabiluka site or partly or fully offsite, i.e. the trucking or slurry pumping option to a remote greenfield processing location, nominally 178 km or 50 km away.
- The base case capacity has not been finalised. Several feed rate scenarios have been considered, 1.2 Mtpa, 2.0 Mtpa or even 1.0 Mtpa of feed. The lower feed rate is more closely related with the underground plant option, due to the reduced plant footprint requirements.
- If processing were undertaken on site, and whether it would be constructed partly or fully underground, or located on surface. Either way, some surface facilities would be required.
- The technical complexities of constructing and operating the underground processing option have not been substantially developed. While there are peer comparisons, such as partial processing of ore to slurry phase at Cameco's Cigar Lake underground operation as part of its 'jet boring' mining method, it has not been considered in sufficient detail at Jabiluka. The

technique is relatively novel and in SRK's opinion, only part, not all of a potential processing plant could reasonably be located underground, with large footprint areas such as the CCD or filters, water storage tanks and dams, brine concentrator, and even the SX, precipitation, calcination and product containerisation, as well as loadout, all being on the surface.

- A viable infrastructure option has not been scoped and costed in sufficient detail, i.e. to PFS level. Some of the previous infrastructure assumptions would also need to be reconsidered, such as the approach to power generation, which previously assumed diesel fired generators with the ability to convert to natural gas, i.e. dual fuel reciprocating engines).
- The positive water balance, and need to treat and dispose of, or manage, excess water was always a challenge during the processing of the Ranger deposit. The same challenge would be experienced during any future treatment of Jabiluka underground ores. This has not been sufficiently resolved technically and requires a higher level of technical confidence, even at a PFS level, given the sensitivity of the project to environmental, Traditional Owners, social and political aspects.
- The operating cost estimates for processing, and associated processing and non-processing infrastructure, were undertaken with a claimed accuracy of ±30% adopting a base date of Q4 2010, and are no longer current. In SRK's opinion, even with in-built escalation factors, these estimates cannot be confidently relied upon for a publicly reported DCF style assessment as presented in *Project Eagle Jackdaw Model Jun 2022.xlsx*.
- The capital cost estimates for processing, and associated processing and non-processing infrastructure were last undertaken with a base date of Q4 2010 and are no longer current, nor relevant. In SRK's opinion, even with in-built escalation factors, these estimates cannot be confidently relied on for a publicly reported DCF style assessment as presented in *Project Eagle Jackdaw Model Jun 2022.xlsx.*
- The metallurgical recoveries were/are potentially modestly overstated in *Project Eagle Jackdaw Model Jun 2022.xlsx*.
- These findings are also reflected in the decision to downgrade the Jabiluka Ore Reserves back to a resource estimate only in 2015. This downgrade was a result of the 2007 Ore Reserve estimate (as prepared by AMC) no longer conforming to Clause 29 of the JORC Code (2012).

Future processing technologies

Any future development of the Jabiluka underground deposit may benefit from a processing option that results in less surface disruption. Existing technologies offering this advantage – specifically in situ leaching (ISL) which is a long-established treatment option for many operations – do not currently appear amenable to this application at Jabiluka due to the deposit geology, host mineralogy, permeability, hydrology and hydrogeology, U_3O_8 grade and the likely closure groundwater remediation requirements.

While the generic uranium processing flowsheet has remained largely unchanged for many years, SRK acknowledges that future, as yet undefined, advancements in uranium technologies may provide alternative treatment options resulting in a smaller surface footprint, or offer other advantages that could potentially support the development of the Jabiluka asset from a processing perspective.

Gold processing

SRK notes that historically, consideration has been made during several studies for the recovery of gold from zones of elevated grade contained in the Jabiluka deposit, but the work has never been significantly advanced. Even though a gold recovery option was incorporated into the 1993 Jackdaw (Jabiluka) FS, the level of confidence in the metallurgical testwork and engineering was not at this level. Historical studies generally assessed the gold project as a standalone opportunity that would be selectively mined and separately treated. More recent studies have been more focused on an integrated uranium and gold processing facility option.

Any gold related testwork that has been done is now dated and engineering studies are not current or meaningfully progressed. The 'sighter level' testwork campaigns from 1975, 1992 and 1993 are now circa 30 to 50 years old, and the level these were completed to at the time was not extensive. Given the early standalone gold project approach, SRK does not consider the samples tested to be representative of an integrated uranium and gold processing facility.

The testing that was done was modest. Gravity testwork was limited and dates back to 1975, on a high-grade sample of 61 g/t Au, around 24 times the indicative deposit grade. The indicative gravity recovery assumption of 20% based on this testwork is therefore not supported and likely to be materially overstated. Subsequent studies actually reported the gold to be finely disseminated with the uranium particles and not amenable to gravity concentration. There is a refractory component to some of the gold lithology types as well as the presence of preg-robbing minerals.

Compounding this, the project approvals acquired in 1997 to bring the Jabiluka deposit into production specifically excluded the recovery of gold. The following extract is from the 1997 Environment Australia, Environmental Assessment Report, Proposal to Extract, Process and Export Uranium from Alpha Orebody No.2: The Alpha Proposal:

> *In 1997 the environmental assessment branch of Environment Australia released a report on the Alpha proposal. The proposal encompassed underground mining at Alpha, followed by trucking ore to the Raven operation for treatment. Tailings produced from the process would be disposed of in the Raven's existing open cut pits.*
>
> *In regard to material processing, Environment Australia made one recommendation. This stated that 'approval for the Alpha proposal, and export of uranium only be given on the condition that the proposal does not include the extraction of gold, and that if it is proposed to extract gold, further assessment under the environmental protection act would be required.*

Ultimately, a gold treatment facility was not adopted in the Jabiluka Project at that time, and continues to be specifically excluded from the base case modelling. During the earlier studies, the commercial evaluation was not compelling, demonstrating the gold project being marginal, albeit during a period of particularly low gold prices. In the 2011 OoM study, the lack of definition of an integrated processing facility, and the perceived risk of transporting cyanide through the Kakadu National Park resulted in this option again being eliminated, unless processing was undertaken at a remote facility.

The genesis of the technical development of the gold prospects of Jabiluka are well summarised in the 2010 technical memorandum titled 'Confidential – Eagle gold processing options' issued in November 2010 as part of the Q1 2011 OoM (options) study for the Jabiluka Project. It describes the historical testwork completed and the processing options available as gold recovery was contemplated as one of the project options.

In SRK's opinion, there are several technical areas that require resolution, prior to any commercial consideration, i.e. the capital and operating cost estimation. These include, but are not limited to, whether or not it would be integrated with a uranium processing facility, whether gold recovery would be before or after uranium acid leaching, where the plant would be located, i.e. on-site or remotely, what flowsheet would be selected, i.e. gravity only, or a gravity and cyanide leach circuit, whether or not it is decided if cyanide can be safely transported through the Kakadu National Park, what plant throughput would be selected, or whether treatment is deferred and the tailings are reprocessed at another time.

- There are some complexities with the gold hosted minerals and associations with uranium minerals. There are several styles of gold hosting mineralisation, some closely associated with the uranium mineralisation. These include fine inclusions in pitchblende, as veinlets with and without tellurides, occurring in pyrite microfractures or finely associated with massive uraninite and accompanied by tellurides. References to potentially refractory minerals, the presence of pre-robbing carbonaceous and graphite minerals, and fine gold particle sizes all highlight some of the likely processing challenges with the Jabiluka underground deposit.
- Previous studies have considered the gold project to be commercially marginal as an integrated gold/uranium plant. In the context of the location, the modest gold grades (for an underground deposit), the need for underground mining, approvals and other expected challenges, the project is even more unlikely to standalone as a gold project.
- Furthermore, the gold flowsheet benefits from the integration with a uranium project as the acidic leach also serves to remove uranium and pre-condition the refractory gold component of the minerals such as pyrite hosted gold. The acid leach also partly addresses potential pregnant liquor robbing carbonaceous, graphitic material. The alternative option is to undertake significantly finer grinding, accept a lower gold recovery and manage the higher uranium associated with the gold doré. Gold leaching before uranium acid leaching results in a lower gold recovery of nominally 6% (in absolute terms) due to the semi-refractory nature of some of the ores.
- There are several technical issues that need to be resolved including the need to neutralise the uranium leach discharge and then precipitate and filter out the neutralisation products before cyanide leaching. The precipitation of gypsum and other metal hydroxide products would otherwise coat the gold hosted minerals and inhibit leaching and contaminate/foul the activated carbon used for the adsorption of gold from solution. Elevated levels of uranium and other radionuclides in the gravity concentrate and/or final gold sludge/gold doré would also need to be managed, likely requiring some acid leaching of these products, and separating the cyanide circuit from the acid leach circuit to eliminate the potential for poisonous hydrogen cyanide gas generation are just some that will be encountered.
- Whether there could be reconsideration of using cyanide at the Jabiluka site, which would entail transporting cyanide through the Kakadu National Park, and using cyanide adjacent to Kakadu, otherwise the gold processing circuit would almost certainly have to be located remotely.
- There are no current or accurate capital or operating costs for the gold processing options. Even the 2011 OoM study costs were benchmarked by AMEC Minproc from other plants, not built from first principles, and therefore cannot be relied on for cashflow type modelling.
- Flowsheets not incorporating cyanide such as gravity only and flotation will also concentrate lead (210Pb) and polonium (210Po) that will have to be managed with additional concentrate

acid leaching. SRK does not consider either of these alternative flowsheet options likely to recover sufficient gold to justify this processing option. The installation of a gravity gold recovery circuit at Olympic Dam was not particularly successful. A conventional gold processing circuit is not considered a problem as radionuclides are not mobilised in an alkaline circuit, i.e. at the high pH environment of a cyanide leach circuit. Any residual radionuclides in the acid leach would precipitate in the pH adjustment process and be filtered out and removed.

It is noted that there are platinum group elements (PGEs) also associated with the Jabiluka deposit. Insufficient definition of the PGEs, metallurgical testwork or processing development has been undertaken to determine the amenability of these to potential recovery, but it is not unreasonable to assume some could be recovered through conventional flowsheets. For example, it is expected that some of the other precious metals would report to a gravity product and that cyanide leaching would also recover part of any PGE content. Alternative, novel hydrometallurgical flowsheets exist that specifically target PGEs.

In SRK's opinion, from a technical perspective, the limited work done, while highlighting several potential challenges relating to gold processing, has not identified any fatal flaws. The testwork does support the potential recovery of gold from the Jabiluka underground deposit at acceptable levels, but almost certainly not exclusively using gravity, i.e. it would also need to incorporate cyanide leaching. For this reason, notwithstanding other potential non-processing related obstacles to a gold project, valuation of the gold project cannot be eliminated based on reasonable prospects of processing ability. However, insufficient work has been undertaken to support the likely gold recoveries, capital and operating costs, and other key inputs that would be needed for any type of cash flow modelling.

5.3.5 Infrastructure

There is currently no installed infrastructure at the Jabiluka site.

As with the proposed processing facility, the associated above-ground processing and non-process infrastructure at Jabiluka have historically been considered and costed at a conceptual level, for the range of processing scenarios considered, including processing operations located at Jabiluka either above or below ground, at the existing Ranger site, or at one of a number of remote greenfield locations. These 19 options and associated engineering and costings, based on the 2011 OoM study, were at a conceptual level of assessment.

Several of these options are now obsolete, such as processing at Ranger, which has been decommissioned and is to be fully rehabilitated back to its natural state. The infrastructure at Ranger that was available as part of that treatment option at the time of the 2011 OoM study will now be removed, and any future consideration will only be for a greenfield site, requiring new infrastructure to be constructed. Other options such as the remote sites, are not adequately demarcated.

In SRK's opinion it is not possible to adopt a DCF analysis for Jabiluka. Given there is no defined treatment option for the Jabiluka Project, limited engineering design advanced only to a conceptual level (i.e. not to a PFS level of confidence), and dated costs for the options historically considered, and insufficient information relating to the required infrastructure, including roads, water supply and storage, power supply and site reticulation, administration buildings, IT and communications, warehouse and maintenance facilities, diesel storage, and security.

6 Cooper Creek Joint Venture

6.1 Overview

ERA is party to the Cooper Creek JV agreement with Cameco Australia Pty Ltd (Cameco) and Sutton Motors Pty Ltd (Sutton) (the JV Agreement).

The JV relates to two EL applications (ELA23311 and ELA23312) covering 810.24 km^2 centred on Mount Borradaile and outside of the Kakadu National Park (the Applications). The Applications are situated approximately 65 km northwest of the RPA in northwest Arnhem Land. The tenements are located entirely within Aboriginal freehold land.

The Cooper Creek JV Project is centred at approximately Latitude 12°05'43.65' S and Longitude 132°49'42.54' E, on the Alligator River (SD5301) 1: 250,000 scale and East Alligator (5473), 1:100,000 scale topographic sheets.

These tenures lie immediately adjacent to, and west of Deep Yellow Limited's (Deep Yellow) Wellington Range/King River tenements, which Deep Yellow acquired an initial interest from Cameco via an earn-in agreement in March 2018, before moving to a 100% interest in 2021.

The tenures may be accessed from Jabiru by the Gabalanya – Maningrida Road to Gabalnanya and then via the Airstrip Access and Mount Borradaile roads.

Topography is a combination of inland wetlands, billabongs, and swampy areas grading towards the sandstone plateau surrounding the Wellington Range and Algodo Inlier to the east. Low lying areas consist almost entirely of gently undulating savannah woodland. Soils consist of thin sandy types and black loams covering in part the sandstone plateau country. Several drainages are evident including Cooper Creek and other tributaries of the East Alligator River system.

6.1.1 Joint Venture terms

Under the terms of the JV Agreement, each party holds a beneficial interest in the Applications, and upon their grant, each party will hold the following interests: ERA 50%, Cameco 40% and Sutton 10%.

Before the NT Department of Mines and Energy (DME) is able to consider approval of the Applications, a number of preconditions must be satisfied, including obtaining the consent of the Traditional Owners for the grant of the ELs.

In October 2015, representatives of Cameco held an on-country meeting with Traditional Owners who declined to provide this consent. The NLC formally advised the DME of this in November 2015 and the Applications were returned to moratorium for a period of 5 years. That period ended on 15 November 2020 with Cameco subsequently lodging a further application on behalf of the JV on 10 December 2020.

As at the Valuation Date, the Applications remained in moratorium.

6.2 Project geological setting

Historically, the surrounding region to the project tenures has been widely explored for unconformity-related uranium deposits. Companies involved in regional exploration efforts include Union Carbide Exploration Corporation (1970–96), Cameco/Stockdale Prospecting (1996–2004, Cameco (2004–18) and Rio Tinto Exploration (2018–21). Historical exploration activities include regional airborne radiometric and aeromagnetic geophysical surveys, project scale mapping, minor rock chip geochemical sampling, rotary air blast drilling, reverse circulation drilling and DD.

There are no known mineral occurrences within the Cooper Creek JV Project, and it appears there has been little exploration conducted by ERA or the JV partners (including desktop analysis) given the tenures remain in application and in moratorium. The Cooper Creek tenures are an exploration concept only.

The concept is that permissive host rocks lie under cover within the tenements, however there is no direct evidence that this is the case. Although the prospective Cahill stratigraphy (or its equivalent) as evident within the RPA is not exposed, it is interpreted to continue through the application area based on analysis and interpretation of historical aeromagnetic geophysical data.

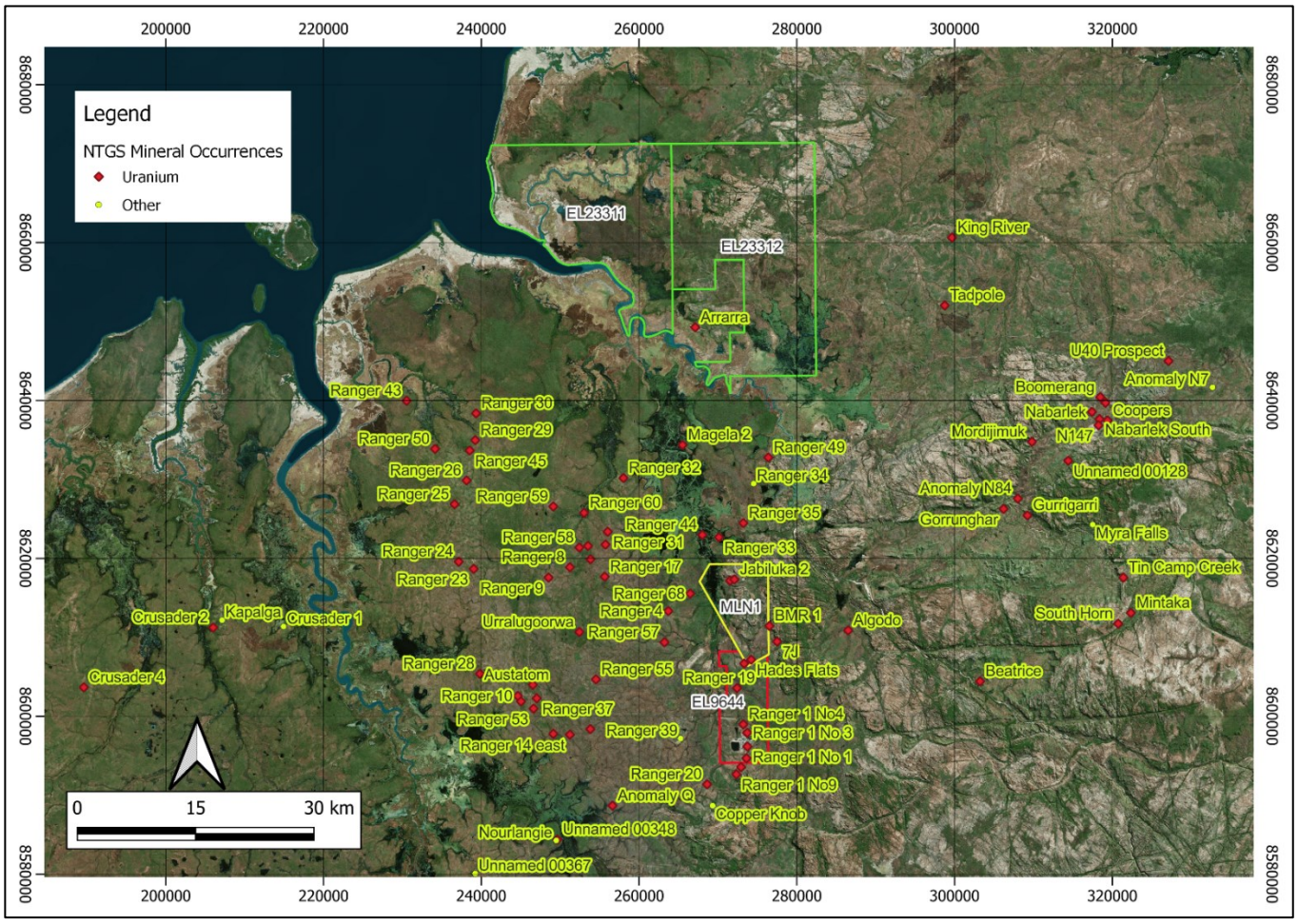
The exploration concept at Cooper Creek is based on the same geological setting and exploration concepts as for Ranger and Jabiluka, which seek to identify concentrations of unconformity-related uranium deposits hosted in the Cahill Formation carbonaceous schists. The coincidence of deep structures with the host lithologies is a controlling feature of these local uranium deposits, therefore the ideal targets have:

- permissive lithology (Cahill Formation)
- structural complexity
- if close to surface, a radiometric anomaly indicating the presence of elevated levels of uranium.

6.2.1 Existing radiometric anomalies

Based on previous airborne radiometric geophysical surveys, with the first conducted in 1969, numerous radiometric targets have been identified over the broader region surrounding the ERA tenures (Figure 6-1).

Figure 6-1: Mineral occurrences in the ERA exploration tenements and surrounds



Source: SRK, Northern Territory Geological Survey (STRIKE database)

Notes: Map projection is GDA94, zone 53

6.2.2 Deposit model

The key target within the Cooper Creek application area is for unconformity related uranium deposits, similar to those at Ranger and Jabiluka, as well as the nearby Nabarlek uranium deposit.

Several styles of unconformity related uranium deposits are recognised in the Alligator River Province including:

- high angle fault hosted deposits such as Angularli, Koongarra and Nabarlek
- the lower grade, bulk tonnage low angle shear deposits such as Ranger and Jabiluka within reactivated shear zones.

7 Other considerations

7.1 Uranium market

Unlike most other commodities, the uranium price does not trade on an open, liquid market. Buyers and sellers negotiate contracts privately, so prices are published by independent market consultants. Contract pricing is most commonly on a long-term supply basis among energy companies who require the long-term security of supply to justify development of new nuclear power plants, for example. Given this security, the long-term supply contracts are priced at a premium to spot pricing.

According to the Australian Government's Office of Chief Economist *Resources and Energy Quarterly (June 2022 and March 2022 editions)*, uranium markets are now entering a new phase after a long period of low prices which resulted in many uranium projects being deferred or cancelled post-2011 (following the Fukushima disaster). However, the market has recently shifted with demand rising rapidly relative to supply.

Uranium inventories have declined, and suspended mining projects in Africa, Australia and Kazakhstan are being revisited. Price rises that previously appeared tentative now appear to be solid. The twin demands of lower carbon emissions and reduced dependence upon Russian gas may support further nuclear take-up. Uranium miners, however, retain some unused capacity, that could be brought to markets relatively easily. However, it is not yet clear whether this unused capacity will be sufficient to meet demand over the next few years.

In terms of consumption, nuclear power development is being adopted by a broader array of countries, with several building nuclear power plants for the first time, or pivoting back to it. Among the latter countries are:

- the UK which recently released a new Energy Security Strategy which calls for the construction of eight new reactors supported by small modular reactors
- France, where six new nuclear reactors will be constructed, with a further eight under consideration
- uptake is also growing in other parts of Europe, with:
  - a small modular reactor scheduled for deployment in Poland from 2029
  - fuel loading has commenced at the Ostrovets Plant's second reactor in Belarus
  - Finland's Olkiluoto unit 3 has started supplying electricity to the national grid
  - the Slovenian Government has announced it is to close all coal-fired power plants by 2033 and will construct a nuclear power plant as a replacement.

China continues to progress with numerous reactors. Unit 6 of the Hongyanhe nuclear power plant has begun supplying power to the grid. The State Council has also approved the construction of six new reactors, with power stations at Sanmen, Haiyang, and Lufeng each to gain two reactors.

South Korea has overturned the previous government's nuclear phase-out policy and announced that 'reasonable' use of nuclear power will continue.

India is also seeking to develop economies of scale in its reactor development, announcing plans to start constructing reactors in fleet mode from 2024, with 10 reactors expected to be constructed.

In terms of production, large suppliers are shifting back towards full production albeit slowly, with Cameco announcing the recommencement of production at McArthur River in 2024. Uranium mines typically take a long time to obtain approvals, potentially drawing out any supply shortages over the longer term and creating a baseline for structurally higher prices over the remaining 2020s.

Uranium prices have lifted in recent months and the rise is expected to be sustained over time. Structural changes in uranium markets have reversed the conditions of the past 11 years, with years of deferrals of uranium projects closing the window on numerous potential avenues of supply. Broker Consensus forecasts for spot uranium prices to reach between US$4/lb and US$6/lb by 2025, with a median price of US$58/lb.

Prospects for additional production in Australia over the longer term are mixed. Of the four potential mines that have previously been granted permits in Western Australia, three have now seen their permits lapse due to a failure to pass key milestones for ‘substantial commencement’ of the projects. Cameco has announced that it remains committed to its proposed mine at Yeelirrie, and has requested an extension to Western Australian Government approvals processes.

Production at Olympic Dam has recovered, following the completion of maintenance at the site. Output is expected to lift in 2022 and be sustained going forward.

Reopening of the Honeymoon mine in South Australia also remains a prospect.

Overall mining exploration fell to A$3 M in the December Quarter 2021 (the most recent available), continuing a trend of low exploration spending in recent years. Growth in uranium exploration is expected if uranium prices continue to rise.

Figure 7-1: Uranium prices (US$/lb) over the past 10 years

Source: Cameco.com (accessed 5 September 2022)
Note: Blue – Uranium spot price, Grey – Long-term uranium price.

7.2 Previous valuations

The VALMIN Code (2015) requires that an Independent Valuation Report should refer to other recent valuations undertaken on the mineral assets being assessed.

Having asked the relevant questions of ERA representatives, SRK is not aware of any previous valuations (either public or private) relating to the mineral assets that are the subject of this report.

8 Valuation

The objective of this section is to assist Grant Thornton with a market valuation of ERA's mineral assets. SRK has not valued ERA, this being the corporate entity which is the beneficial owner of the mineral assets considered in this report.

In assessing the technical aspects relevant to this valuation, SRK has relied on information provided by ERA, as well as information sourced from the public domain, SRK's internal databases and SRK's subscription databases.

In determining the appropriate parameters for valuation, SRK has considered the assessments that might be made by a willing, knowledgeable and prudent buyer in assessing the value of the projects and the associated tenure.

The opinions expressed and conclusions drawn are appropriate at the Valuation Date of 1 September 2022. The valuation may change with time in response to variations in economic, market, legal or political conditions in addition to the receipt of new exploration information.

8.1 Valuation approaches

While the VALMIN Code (2015) states that the selection of the valuation approach and methodology is the responsibility of the practitioner, where possible, SRK considers a number of methods.

The aim of this approach is to compare the results achieved using different methods to select a preferred value within a valuation range. This reflects the uncertainty in the data and interaction of the various assumptions inherent in the valuation.

The VALMIN Code (2015) outlines three generally accepted valuation approaches:

1. Market Approach
2. Income Approach
3. Cost Approach.

The Market Approach is based primarily on the principle of substitution and is also called the Sales Comparison Approach. The mineral asset being valued is compared with the transaction value of similar mineral assets under similar time and circumstance on an open market (VALMIN Code, 2015). Methods include comparable transactions, metal transaction ratio and option or Farm-in Agreement terms analysis.

The Income Approach is based on the principle of anticipation of economic benefits and includes all methods that are based on the anticipated benefits of the potential income or cashflow generation of the mineral asset (VALMIN Code, 2015). Valuation methods that follow this approach include DCF modelling, Capitalised Earnings, Option Pricing and Probabilistic methods.

The Cost Approach is based on the principle of cost contribution to value, with the costs incurred providing the basis of analysis (VALMIN Code, 2015). Methods include the appraised value method and multiples of exploration expenditure (MEE), where expenditures are analysed for their contribution to the exploration potential of the mineral asset.

The applicability of the various valuation approaches and methods vary depending on the stage of exploration or development of the mineral asset, and hence the amount and quality of the information available on the mineral potential of the assets.

Table 8-1 presents the various valuation approaches for the valuation of mineral assets at the various stages of exploration and development.

Table 8-1: VALMIN – valuation approaches according to development status

Valuation approach	Exploration projects	Pre-development projects	Development projects	Production projects
Market	Yes	Yes	Yes	Yes
Income	No	In some cases	Yes	Yes
Cost	Yes	In some cases	No	No

Source: VALMIN Code (2015)

The market-based approach to valuation is generally accepted as the most suitable approach for valuation of projects at all stages of development.

An income-based method such as a DCF model is commonly adopted for assessing the value of a tenure containing a deposit where an Ore Reserve has been reported following an appropriate level of technical study and to accepted technical guidelines such as the JORC Code (2012). However, an income-based method is not considered an appropriate method for deposits or mineral tenure that are less advanced, i.e. where there is no declared Ore Reserve or supporting mining and related technical studies.

The use of cost-based methods, such as considering suitable MEE, is best suited to exploration properties, i.e. prior to the estimation of Mineral Resources. Within the valuation hierarchy, cost-based methods of valuation are considered less suitable than market-based methods of valuation.

In general, these methods are accepted analytical valuation approaches that are in common use for determining Market Value (defined below) of Mineral Assets, using market-derived data.

The 'Market Value' is defined in the VALMIN Code (2015) as, in respect of a Mineral Asset, the *'estimated amount of money (or the cash equivalent of some other consideration) for which the Mineral Asset should exchange on the date of Valuation between a willing buyer and a willing seller in an arm's length transaction after appropriate marketing wherein the parties each acted knowledgeably, prudently and without compulsion'*. The term Market Value has the same intended meaning and context as the International Valuation Standards Council (IVSC) term of the same name. This has the same meaning as Fair Value in RG111. In the 2005 edition of the VALMIN Code this was known as Fair Market Value.

The 'Technical Value' is defined in the VALMIN Code (2015) as *'an assessment of a Mineral Asset's future net economic benefit at the Valuation Date under a set of assumptions deemed most appropriate by a Practitioner, excluding any premium or discount to account for market considerations'*. The term 'Technical Value' has an intended meaning that is similar to the IVSC term 'Investment Value'.

In summary, the various recognised valuation methods are designed to provide an estimate of the mineral asset or property value in each of the various categories of development. In some instances, a particular Mineral Asset or property or project may comprise assets that logically fall under more than one of the previously discussed development categories.

8.2 Valuation basis

In estimating the value of the projects as at the Valuation Date, SRK has considered various valuation methods within the context of the VALMIN Code (2015).

The valuation method applied depends on the relative maturity of assessment for each asset, as well as the amount of available data supporting the project. For this valuation, the mineral assets were classified according to the development stage categories as per the VALMIN Code (2015):

- **Early Stage Exploration Projects** – Tenure holdings where mineralisation may or may not have been identified, but where Mineral Resources have not been identified.
- **Advanced Exploration Projects** – Tenure holdings where considerable exploration has been undertaken and specific targets have been identified that warrant further detailed evaluation, usually by drill testing, trenching or some other form of detailed geological sampling. A MRE may or may not have been made, but sufficient work will have been undertaken on at least one prospect to provide both a good understanding of the type of mineralisation present and encouragement that further work will elevate one or more of the prospects to the Mineral Resources category.
- **Pre-development Projects** – Tenure holdings where Mineral Resources have been identified and their extent estimated (possibly incompletely) but where a decision to proceed with development has not been made. Properties at the early assessment stage, properties for which a decision has been made not to proceed with development, properties on care and maintenance, and properties held on retention titles are included in this category if Mineral Resources have been identified, even if no further work is being undertaken.
- **Development Projects** – Tenure holdings for which a decision has been made to proceed with construction or production or both, but which are not yet commissioned or operating at design levels. Economic viability of Development Projects will be proven by at least a PFS.
- **Production Projects** – Tenure holdings – particularly mines, wellfields and processing plants that have been commissioned and are in production.

SRK's valuation basis is presented in Table 8-2.

Table 8-2: SRK's adopted valuation basis for ERA's projects

Asset	Development stage	Description	Valuation basis
Ranger Project	Mine Closure	Rehabilitation and closure cost	NA – recommended modifications to Grant Thornton
		Exploration Target	Market: Comparable transactions
Jabiluka Project	Pre-development	Mineral Resource	SRK considered Market: Comparable transactions Recommended Grant Thornton consider Peer Trading Multiples
		Exploration Potential	
Cooper Creek	Early-stage Exploration	Exploration Potential	Market: Comparable transactions Cost: Geoscientific rating

Source: SRK analysis (2022)
Notes: NA – not applicable

8.3 Considerations for valuation of Mineral Resources

8.3.1 Comparable Transaction analysis

SRK has compiled a list of transactions involving broadly similar U_3O_8 exploration projects using its internal databases, as well as the S&P Capital IQ Pro subscription database to support Grant Thornton's assessment of the Market Value of ERA's defined Mineral Resources (Table 8-3).

In considering the multipliers to be applied to the defined Mineral Resources associated with the Jabiluka and Ranger projects, SRK has considered transactions relating to higher grade (+0.25% U_3O_8) uranium projects. Initially, SRK considered transactions relating to uranium projects above a +0.5% U_3O_8 grade, however insufficient transactions in the dataset led to this threshold being lowered to +0.25% U_3O_8. This has typically resulted in a preference for unconformity related uranium projects within the Alligator River area of Australia's NT and the Athabasca Basin of Alberta and Saskatchewan in Canada, albeit there are several transactions outside of these regions. While the uranium deposits of Kazakhstan are also of higher uranium grades, they tend to be mined via in situ recovery methods rather than the conventional underground methods currently being advanced for future mining at Jabiluka and R3D. As such, SRK has tended to focus on transactions involving higher grade uranium deposits in Australia and North America, which are planned to be mined using underground mining techniques.

The implied transaction multiples for Mineral Resources are expressed in A$/lb U_3O_8 terms. The implied multiples are calculated using the transaction value (at the implied 100% acquisition price) and the total contained pounds of U_3O_8 in the defined Mineral Resource supporting the transaction. The implied transaction multiple was then normalised to the average monthly spot U_3O_8 price as at the date of the valuation.

Importantly, while transaction multiples are widely used in valuation, they rely on the assumption that the defined Mineral Resources have been appropriately reported and can be taken at face value. As such, the method assumes that differences in reporting regimes, between different Competent Persons, resource classification, metal recovery and adopted cut-off grades (which may change between assets and/or companies) do not materially influence the implied multiple. The method implicitly assumes total recoverability of all metal tonnes or ounces, as reliable and accurate data are generally not disclosed or available around the time of most transactions or for

all companies. Importantly, SRK's implied value calculations are for the purpose of its valuation and do not attempt to estimate or reflect the metal likely to be recovered as required under the JORC Code (2012).

SRK notes that due to the paucity of transactions, it has considered a wider 'lookback' window than would normally be the case. In this instance, it has placed greater weighting on the values implied by more recent transactions.

Comparable uranium resource projects

To remove fluctuations in the uranium price between the transaction and valuation dates, SRK has normalised transaction multiples to the prevailing monthly average spot price.

In consideration of ERA's mineral assets, SRK has considered transactions involving Australian and North American higher grade (+0.25% U_3O_8) uranium assets. SRK notes the market has been paying (on a normalised basis) in the range from A$0.05/lb to A$19.02/lb U_3O_8 for *in situ* uranium resources in Australia and North America (Table 8-3).

Based on its review of the relevant dataset, SRK notes the following:

1. Historically, the Jabiluka project hosted Ore Reserves (Probable) were defined at a FS level (albeit the project concept was subsequently redesigned), and had Traditional Owner approval, as well as most of the regulatory permits in place to allow for the project to be progressed towards production. Redesign following a change in ownership in early 1990s meant that many of these project aspects may be no longer relevant and will need to be re-assessed.
2. There are very few transactions involving higher grade uranium resources in Australia and of those that are evident, most are now significantly dated. This reflects the policy of successive Australian Governments to only support a limited number of uranium mines which has significantly curtailed investment and exploration for uranium in Australia from the 1980s onwards.
3. In considering the multiple to apply to the Jabiluka Project, SRK notes the higher grade at Alligator River (the most recent transaction involving an Australian higher grade uranium resource) relative to Jabiluka.
4. In addition, SRK notes the Kintyre transaction involved a broadly analogous situation to Jabiluka, namely a uranium development project within (but excised from) a National Park, with strong representation from Traditional Owners and other stakeholders. The key differences between Kintyre and Jabiluka being that no Mineral Resources were reported at Kintyre at the time of the transaction (with the stated resource figure adopted by SRK for valuation purposes based on the results of Cameco's due diligence), the smaller scale, and the lower grade at Kintyre. Kintyre was to be developed by a single open pit encompassing several discrete mineralised zones, while Jabiluka is proposed as an underground operation extending from a depth of 100 m to a final depth of approximately 550 m below surface. Mineralisation at Jabiluka remains open along strike and at depth.
5. In SRK's view, the Athabasca Basin of North America provides the best global analogue for the prices likely to be paid in the current market for high-grade (+0.5% U_3O_8), underground uranium resources under a permissive regulatory regime. While higher grade resources may also be found in other jurisdictions (such as Kazakhstan), these tend to be extracted using ISL recovery

methods and would likely attract discounts for geopolitical reasons relative to similar assets in North America.

6. Only the Four Mile, Cigar Lake and Wheeler River transactions are of a similar (albeit smaller) scale to the defined resources (on a contained pounds of uranium basis) at Jabiluka (which at the time of the 1991 transaction was reported to contain 315.9 Mlb U_3O_8). The remaining transactions involve assets that are significantly smaller than at Jabiluka.
7. Several transactions relate to projects with higher uranium resource grades than are evident at Jabiluka. It is reasonable to assume that these projects may trade at a premium to Jabiluka given the higher grade and resultant operating cost implications, all other things being equal. However the Jabiluka Project also has materially greater Mineral Resources defined than most of the transactions considered.
8. SRK considers the following projects within the Athabasca Basin transaction dataset to be of note:
    a. Midwest Northeast – a preliminary economic assessment relating to the underground development of the Roughrider East and West deposits was released by Hathor in September 2011 (prior to the 2012 transaction date). This study was based on Indicated and Inferred Resources of 555,800 t at 4.73% U_3O_8 for approximately 57.94 Mlb contained U_3O_8, with a number of higher grade (>10% U_3O_8) lenses defined across the two deposits. The deposits are located near established infrastructure, notably 11 km from the McClean Lake mill. Underground mining was to be completed using raise boring developed below a grout or freeze cover and accessed via a decline. Sensitivity analysis demonstrated the project was very robust.
    b. Millennium – at the time of the 2012 transaction, Cameco held a 41.96% interest in the project and would move to majority ownership upon completion. In addition to the consideration, a 4% royalty on revenue from 27.94% of any production that exceeds 63 Mlb U_3O_8 was payable to Areva. The project was under evaluation for underground mining with total Indicated and Inferred Mineral Resources of 805,600 t at 3.81% U_3O_8 for approximately 67.6 Mlb contained U_3O_8. Cameco was continuing to advance the project towards an investment decision with Millennium expected to take advantage of its excess milling capacity. Ongoing work at the time included environmental assessment, additional technical studies (including definition drilling) and design work. The project was the subject of a First Nation claim that was rejected by the Saskatchewan government – the decision was challenged, and litigation is ongoing.
    c. Wheeler River – the 2018 acquisition increased Denison's interest in the Wheeler River JV to 90%. Wheeler River hosts the Phoenix and Gryphon uranium deposits which were estimated to contain combined Indicated and Inferred Mineral Resources of 1.89 Mt at 3.24% U_3O_8 for approximately 135.1 Mlb contained U_3O_8. The project is supported by road and power, with connections to Cameco's McArthur River mine and Key Lake mill complex. Prior to completion of the transaction, Denison reported the results of a PFS based on co-development of ISL mining at the Phoenix deposit and conventional longhole open stope underground mining at Gryphon. ISL mining at Phoenix required the installation of a freeze-wall above the ore zone to contain groundwater movement, while significant capital and operating expenditures were expected to support Gryphon's future development and mining. The potential for credits from rare earth element by-products was also noted. The introduction of ISL mining, a low-cost mining method, to Phoenix represents a novel mining approach and the first application of ISL mining in the Athabasca Basin.

9. Lower resource multiples tend to be associated with projects that are at a significantly earlier stage of assessment when compared to the Jabiluka Project.
10. Higher resource multiples tend to be for projects which are either in production or on care and maintenance. As such, the transaction is likely to include installed infrastructure with the project including processing facility, tailings facilities and associated infrastructure.
11. Both the Cigar Lake and McClean Lake transactions involved production assets based on conventional underground methods, while the transaction involving the Tony M, Daneros and Rim assets pertain to past underground producers (now on care and maintenance). In SRK's view, it would be reasonable to assume that the Jabiluka Project would trade at a lower resource multiple than these assets given it has never attained production status and the regulatory approval/traditional owner approval issues.
12. The environmental liabilities associated with an underground operation tend to be lower when compared to a conventional open pit uranium mining operation, in part due to the smaller footprint of the operation and the potential to store tailings in underground voids to ensure the naturally occurring daughter radionuclides are not released to the environment.
13. In considering the multiple to apply to Jabiluka, SRK notes the presence of potentially economic quantities of gold mineralisation associated with the uranium ores at Jabiluka. Importantly, the gold cannot be selectively mined and would be mined concurrently with the uranium ores. The payability of the gold would need to be demonstrated prior to the commencement of mining.

Analysis of the normalised dataset for assets in the advanced exploration to pre-development stage (i.e. Reserves development, PFS/Scoping, PFS completed) indicated the median is A$2.32/lb U_3O_8, while the average is A$3.93/lb U_3O_8, the 25th percentile and 75th percentile are A$0.68/lb U_3O_8 and A$4.93/lb U_3O_8, respectively. The weighted average is A$3.83/lb U_3O_8.

Table 8-3: Resource comparable transactions

Date	Project	Acquirer	Seller	Interest	Development stage/s	Mining method	Consideration A$ M (100% basis)	Resource Class	Grade (% U_3O_8)	Resources acquired (Mlb)	Raw multiple (A$/lb)	Normalised multiples (A$/lb)
Australian uranium projects												
15/06/2022	Ben Lomond/ Georgetown (Queensland)	Consolidated Uranium Inc.	Mega Uranium Ltd	100%	Reserves Development	OP/UG	5.3	Indicated and Inferred	0.25%	10.7	0.49	0.47
10/03/2021	Alligator River (Northern Territory)	Viva Resources Pty Ltd	Rio Tinto Exploration	20.89%	Reserves Development	UG	9.6	Inferred	1.39%	25.9	0.37	0.62
10/07/2008	Kintyre (Western Australia)	Cameco/Mitsubishi	Rio Tinto	100%	Pre-feasibility	OP	524.7	Ex Target	0.35%	71	7.39	7.37
03/02/1992	Koongarra (Northern Territory)	Denison Australia	Total	70%	Feasibility	UG	40.3	Reserves	0.80%	32.0	1.26	8.10
21/08/1991	*Jabiluka (Northern Territory)*	*ERA*	*Pancontinental*	*100%*	*Feasibility*	*UG*	*125.0*	*Measured, Indicated and Inferred*	*0.44%*	*315.9*	*0.40*	*2.86*
13/07/2015	Four Mile (South Australia)	Quasar Resources Pty Ltd	Alliance Resources Limited	25%	Production	ISL	295.9	*Measured, Indicated and Inferred*	0.32%	120.4	2.45	3.43
North American uranium projects												
17/03/2022	Mormon Lake (Arizona)	Margaret Lake Diamonds	Gold Express Mines	100%	Exploration	OP/UG	0.2	Inferred (hist)	1.06%	3.2	0.05	0.05
06/05/2021	Beartooth Island (Saskatchewan)	International Prospect Ventures	Undisclosed	60%	Exploration	-	0.1	Inferred (hist)	0.60%	1.5	0.07	0.11
06/01/2016	Pinyon Plains (Arizona, New Mexico)	Glencore Energy Corp.	Energy Fuels	100%	Exploration	OP/UG	0.8	Measured, Indicated and Inferred	1.14%	17.1	0.05	0.06
08/03/2011	Maurice Bay (Saskatchewan)	Forum Uranium/Mega Uranium	Cameco Group	60%	Target Outline	OP	7.3	Hist	0.60%	1.5	4.87	5.66
11/05/2021	Matoush (Quebec)	Consolidated Uranium	Investor Group	100%	Reserves Development	UG	11.7	Indicated and Inferred (hist)	0.57%	28.7	0.41	0.68
13/11/2018	Christie Lake (Saskatchewan)	UEX Corp.	JCU (Canada) Exploration	60%	Reserves Development	-	27.6	Inferred	1.57%	20.35	1.36	2.32
27/10/2015	Wate (Arizona)	Energy Fuels Inc.	Anfield Resources	50%	Reserves Development	UG	3.2	Inferred	0.79%	1.1	2.85	4.93

Date	Project	Acquirer	Seller	Interest	Development stage/s	Mining method	Consideration A$ M (100% basis)	Resource Class	Grade (% U_3O_8)	Resources acquired (Mlb)	Raw multiple (A$/lb)	Normalised multiples (A$/lb)
02/01/2015	Wate (Arizona)	Energy Fuels Inc.	VANE Minerals	50%	Reserves Development	UG	3.4	Inferred	0.79%	1.2	2.74	4.26
30/12/2004	Midwest (Saskatchewan)	Denison/Cogema	Redstone Resources	20.7%	Reserves Development	OP/UG	23.6		0.98%	8.6	2.73	7.04
19/01/2012	Midwest Northeast (Saskatchewan)	Rio Tinto Group	Hathor Exploration	88%	Scoping	OP/UG	587.6	Indicated and Inferred	4.73%	57.9	10.14	14.10
26/10/2018	Wheeler River (Saskatchewan)	Denison Mines Inc.	Cameco Corp	23.12%	Pre-feasibility completed	UG/ISL	77.6	Indicated and Inferred	3.24%	135.1	0.57	0.99
04/03/2016	Roca Honda (New Mexico)	Stratmore Resources (US) Ltd	Sumitomo Corp	40%	Feasibility	UG	23.7	Measured, Indicated and Inferred	0.47%	25.77	0.92	1.75
11/06/2012	Millennium (Saskatchewan)	Cameco	Areva Resources	27.94%	Feasibility	UG	510.8	Indicated and Inferred	3.81%	67.6	7.55	10.34
10/05/2022	Cigar Lake (Saskatchewan)	Cameco/Orano	Idemitsu Uranium	7.87%	Operating	UG	2,549.4	Measured, Indicated and Inferred	12.98%	279.1	9.13	9.37
14/04/2009	McClean Lake (Saskatchewan)	KEPCO	Denison Mines	20%	Operating	OP/UG	420.6	Indicated and Inferred	1.30%	24.6	17.10	19.02
15/07/2021	Tony M, Daneros, Rim (Utah)	International Consolidated	Energy Fuels Inc	100%	Care and Maintenance	UG	53.2	Measured, Indicated and Inferred	0.21%	5.5	9.57	14.85

Source: SRK analysis, S&P Capital IQ Pro, Company reports

Notes: OP – open pit, UG – underground, ISL – in situ leach, hist – historical estimate

8.4 Considerations for valuation of Exploration Potential

8.4.1 Comparable Transactions – Exploration Potential

In addition to the Mineral Resource transaction multiples, SRK has also compiled a list of transactions involving broadly similar early to advanced exploration projects without defined Mineral Resources to support its assessment of the Market Value of the exploration potential associated with ERA's mineral assets.

The implied transaction multiples for exploration potential are expressed in A$/km² terms. The implied multiples are calculated using the transaction value (at the implied 100% acquisition cost) and the total area of all tenure. The implied transaction multiple was then normalised to the U_3O_8 price as at the date of the valuation.

Exploration projects

When considering ERA's regional exploration potential, SRK was able to identify several transactions in Australia and North America where meaningful third party area-based multiples could be calculated as discussed in Table 8-4.

Table 8-4: Uranium exploration transactions

Date	Project	Buyer	Seller	Interest (%)	Consideration (100% basis) (A$)	Area (km²)	Implied Value (A$/km²)	
							Raw	Normalised
Australian projects								
09/09/2021	Mount Douglas (Northern Territory)	Argonaut	Not disclosed	100%	200,000	474	422	486
18/05/2021	EL 6350 (South Australia)	Alligator Energy	Stellar Resources	100%	248,700	38	6,644	11,139
24/02/2021	Erudina (South Australia)	Argonaut	Groundwater Science Pty Ltd	100%	615,000*	987	623	1,188
16/10/2019	Big Lake (South Australia)	Alligator Energy	Big Lake Uranium	100%	1,797,500	818	2,197	4,276
07/11/2018	Murphy (Northern Territory)	Laramide	Rio Tinto	100%	450,000	684	658	1,127
04/08/2018	Lagoon Creek (Northern Territory)	Laramide	Verdant	100%	125,000	190	658	1,238
01/03/2018	Alligator River (Northern Territory)	Vimy	Cameco	100%	6,500,000	3,865	1,876^	4,655
16/06/2014	West Arnhem Land (Northern Territory)	Uranium Equities	Spectrum Rare Earths	100%	625,000	2,096	298	678
11/09/2012	West Arnhem Land (Northern Territory)	Uranium Equities	Cameco	60%	3,333,000	450	7,407	10,109
27/11/2008	Lake Blanche (South Australia)	Uranium Equities	Cameco	51%	6,862,000	6,253	1,097	893
29/09/2008	Watson	Uranium Equities	Hillgrove	51%	980,400	2,391	410	422

Date	Project	Buyer	Seller	Interest (%)	Consideration (100% basis) (A$)	Area (km^2)	Implied Value (A$/$km^2$)	
							Raw	Normalised
04/04/2008	Nabarlek mine lease (Northern Territory)	Uranium Equities	Hanson Australia	100%	496,352	12.79	38,807	37,988
North American projects								
26/07/2022	Three uranium Projects (Saskatchewan)	Power Metal Resources	Consortium	100%	154,000	271	568	568
19/05/2022	Russell Lake (Saskatchewan)	Skyharbour Resources	Rio Tinto	51%	16,322,000	732.94	22,270	22,842
29/03/2022	KLR/Walker (Saskatchewan)	Marvel Discovery	Undisclosed	100%	3,388,000	141.9	23,875	20,916
11/02/2021	Yurchison	Mendaro MIning	Skyharbour Resources	70%	12,80,000	559.34	22,885	43,637
10/2020	Clover, Gemini, Tower	92 Energy	IsoEnergy	100%	2,060,000	360.4	5,707	9,224
03/05/2018	Larocque East	IsoEnergy	Cameco	100%	360,000	32.0	11,339	25,714
03/2018	Dawn Lake	IsoEnergy	Cameco/JCU	100%	1,490,000	68	21,950	54,467
03/2018	Davidson River	Standard Uranium	877384 Alberta	90%	1,930,000	263.6	8,151	20,226
11/2016	Kay Lake Road	Broome Capital	Doctors Investment	100%	410,000	24.1	17,215	48,711
14/07/2016	Moore Lake	Skyharbour Resources	Denison Mines	100%	6,250,000	357.1	17,493	35,233

Source: SRK analysis, S&P Capital IQ Pro, Company Reports

Note: Based on normalisation to a uranium spot price of US$47.75/lb (A$71.43/lb) as at the Valuation Date.

*Inclusive of contingent payment where at least 10 drill holes exhibit 500 ppm U_3O_8 grade thickness accumulation within a 100 ppm U_3O_8 grade cut-off at a minimum drill hole spacing of 100 m. Without the contingent payment, the raw value falls to A$319/$km^2$ and normalised value to A$609/$km^2$.

^Based on earn-in over the entire tenure package (adjusted for only 75% being acquired in Package 1). If only granted tenure is considered (i.e. 1,600 km^2), this increases to A$5,417/$km^2$ (raw) and A$13,434/$km^2$ (normalised).

Based on its analysis, SRK considers the recent market has been paying in the order of A$1,000/$km^2$ to A$5,000/$km^2$ for early-stage uranium exploration projects. Strategically located or more advanced exploration tenures are likely to trade at higher multiples, potentially up to A$40,000/$km^2$.

8.4.2 Geoscientific rating

As a further crosscheck, SRK has also used the Geoscientific Rating method to estimate the market value of a 100% interest in the exploration potential associated with ERA's mineral assets. The geoscientific rating or modified Kilburn method of valuation attempts to quantify the relevant technical aspects of a property through the use of appropriate Multipliers (factors) applied to an appropriate base (or intrinsic) value. The intrinsic value is referred to as the Base Acquisition Cost (BAC) and is critical in that it forms the standard base from which to commence a valuation. It represents the 'average cost to identify, apply for and retain a base unit of area of title'.

Multipliers are considered for off-property aspects, on-property aspects, anomaly aspects, and geology aspects. These multipliers are applied sequentially to the BAC to estimate the Technical Value for each tenement. A further market factor is then considered to derive a Market Value.

The BAC incorporates annual rental, administration and application fees, in addition to nominal indicative minimum expenditure on acquisition. The BAC assumptions are listed in Table 8-5.

Table 8-5: Base acquisition cost

NT Exploration Licence		
Metric	**Unit**	**Value**
Average licence size	km^2	67.7
Average licence age	Years	4
Application fee	A$ per licence	423
Annual rent	A$ per km^2	36.92
Minimal annual expenditure	A$ per km^2	13,500
Costs of identification	A$ per licence	10,000
Administration and other	A$ per licence	2,500
Landowner notices, negotiations, legal costs and other	A$ per licence	810
BAC of average exploration licence	**A$ per km^2**	**589**
BAC of average exploration licence	**A$ per ha**	**5.89**

Source: SRK analysis

In converting its implied technical value to a market value, SRK considers that market participants would apply a slight premium or discount to the technical value of the exploration tenure given current market sentiment in relation to Australian uranium. SRK notes that while there has been recent news flow and listings in Australia relating to uranium assets these tend to have been directed to international assets in Africa and North America. The recent transaction between Vimy and Deep Yellow provides an example of Australian corporate transactions in the uranium sector.

However, SRK has used its professional judgement and applied a 50% discount to the values associated with ERA's ELAs to account for the uncertainty (in both timing and imposed conditions) relating to tenements in application given they remain in moratorium.

The rating criteria use to assess the modifying factors are provided in Table 8-6. These ratings criteria have been modified by SRK.

Table 8-6: Modified property rating criteria

Rating	Off-property factor	On-property factor	Geological factor	Anomaly factor
0.1			Generally unfavourable lithology	No mineralisation identified – area sterilised
0.5	Unfavourable district/basin	Unfavourable area	Alluvium covered, generally favourable lithology (50%)	Extensive previous exploration provided poor results
0.9			Generally favourable geological setting, under cover or complexly deformed or metamorphosed lithologies (50%)	Poor results to date
1.0	No known mineralisation in district	No known mineralisation on lease	Generally favourable lithology at surface (70%)	No targets outlined
1.5	Minor workings	Minor workings or mineralised zones exposed		Target identified, initial indications positive
2.0	Several old workings in district	Several old workings or exploration targets identified	Generally favourable lithology with structures at surface	Several well defined targets Multiple exploration models being applied simultaneously
2.5				Significant mineralised zones exposed in prospective host rock Significant grade intercepts evident but not linked on cross or long sections
3.0	Abundant workings	Abundant workings	Generally favourable lithology with structures at surface along strike from mine	
3.5				Several economic grade intercepts on adjacent sections Well-understood exploration model, with valid targets in structurally complex area, or under cover
4.0	Mine or abundant workings with significant previous production	Mine or abundant workings with significant previous production	Generally favourable lithology with structures at surface along strike from major mine	
5.0	Along strike from a major deposit			Several significant ore grade correlatable intersections Well-understood exploration model, with valid targets in well understood stratigraphy
6.0		Major mine with significant historical production		Advanced exploration model constrained by known and well-understood mineralisation
10.0	Along strike from a world class mine	World class mine		

Source: Modified after Xstract (2009) and Agricola Mining Consultants (2011)

8.5 Valuation

The following sections summarise SRK's valuation of ERA's mineral assets.

SRK has completed a review of information provided relating to the Ranger, Jabiluka and Cooper Creek JV projects to establish its valuation of ERA's interest. The findings from the SRK review are summarised as follows.

8.5.1 Ranger Project

Ranger 3 Deeps Exploration Target – comparable transaction analysis

In considering the value that may be attributed by the market to the R3D deposit, SRK notes the following:

- The Section 41 Authority over the RPA has now expired. However, the entire area of the RPA is underlain by an ELA (ELA9644) under the NT *Mining Act 1992*.
- While the R3D within the RPA has been deemed by ERA to no longer meet the RPEEE criteria outlined in the JORC Code (2012), no such criteria are required to support an Exploration Target (with the meaning as intended in the JORC Code) within the underlying ELA.
- SRK considers the longer term potential associated with uranium mineralisation at R3D may be evaluated by the market as an Exploration Target within ELA9644. As such, both tonnages and grade must be expressed in a range. The conceptual nature of the defined mineralisation must also be noted, with no guarantee that this will be converted to a Mineral Resource with further exploration or that the ELA will be eventually granted.
- To this end and based on the results of historical exploration and mining studies (as well as historical active mining at Ranger 3 open pit), SRK considers an appropriate Exploration Target for the R3D deposit for valuation purposes ranges between 9.8 Mt and 12.2 Mt averaging 0.29–0.32% U_3O_8 for approximately 62.3–86.0 Mlb U_3O_8.
- In such situations, SRK uses its professional judgement in applying an appropriate discount to the implied value assigned to Inferred Resources to determine the multiplier to be applied to an Exploration Target.
- Given the R3D deposit is hosted within an ELA, for which the timing of eventual grant and implementation of any conditions associated with grant remains to be determined, SRK considers it appropriate to apply a 50% discount to any assigned values associated with the Exploration Target.
- Furthermore, given the status of the mineral tenure rights at Ranger and associated uncertainty as to whether an Exploration Target may eventually be converted to a Mineral Resource, SRK considers it appropriate to assign a further discount to the R3D Exploration Target of between 50% and 80%.

In analysing the dataset for assets in early to advanced exploration stage (i.e. Exploration, Target outline, Reserves development), SRK has only considered transactions from the period 2018 to 2022 (i.e. within the last 5 years) from both Australia and North America.

Analysis of this dataset (normalised) indicated the median is A$0.47/lb U_3O_8, while the 25th percentile and 75th percentile are A$0.11/lb U_3O_8 and A$0.62/lb U_3O_8, respectively. The weighted average is A$1.11/lb U_3O_8.

SRK notes that these transactions all involved Inferred Mineral Resources, but typically of a smaller scale (on contained metal basis) than at R3D (i.e. 1.5–25.9 Mlb U_3O_8 versus 76.6 Mlb U_3O_8 at R3D). Grades in the dataset appear generally higher (at 0.25–1.57%) versus 0.29% at R3D. On balance, SRK considers the higher grades are offset by the smaller scale and as such has adopted the multipliers without adjustment.

On this basis, SRK has elected to adopt a preferred value of A$0.10/lb U_3O_8 in the range from A$0.02 to A$0.19/lb U_3O_8. This range reflects discounts (as discussed above) applied by SRK in its professional judgement to account for uncertainty in the likely grant of the ELA tenure and in future conversion of the Exploration Target to a Mineral Resource able to meet the RPEEE requirements under the prevailing version of the JORC Code.

Application of these multiples to the R3D deposit implies a current value range of between A$0.6 M and A$16.3 M, with a preferred value of A$7.4 M. In assigning these values, SRK has adopted a preferred value slightly below the midpoint and towards the lower end of the range given the likely opposition to any future redevelopment of the Ranger site post-closure.

Yardstick crosscheck

As a crosscheck to the values implied by market multiples, SRK has also considered standard industry yardsticks. Under the Yardstick method of valuation, specified percentages of the U_3O_8 spot price are used to assess the likely value. Commonly used Yardstick factors are between 0.5% and 5% of the spot price (Table 8-7):

1. Measured Resources – 2% to 5% of the spot price
2. Indicated Resources – 1% to 2% of the spot price
3. Inferred Resources – 0.5% to 1% of the spot price
4. Exploration Target – 0.1% to 0.5% of the spot price.

As at July 2022, the average spot price for U_3O_8 was US$47.75/lb (A$71.43/lb), which was sourced from the Cameco website commodity price data.

Table 8-7: Yardstick multiples

Classification	% of the spot price	Value range (A$/lb U_3O_8)	
		Low	High
Measured	2% to 5%	1.43	3.57
Indicated	1% to 2%	0.71	1.43
Inferred	0.5% to 1%	0.36	0.71
Exploration Targets	0.1% to 0.5%	0.07	0.36

Source: SRK analysis (2022)

Application of these multiples and the associated discounts – as previously discussed – to the R3D deposit implies a current value of between A$0.4 M and A$7.7 M, with a preferred value of A$2.8 M. SRK notes that these values are broadly aligned but lower than the values determined by Comparable Transaction analysis. SRK considers this to be a reasonable outcome, given the Yardstick provides only an order of magnitude crosscheck on the values implied by other valuation techniques.

Exploration Potential

As noted previously, ERA has largely downgraded the potential for further exploration potential within the RPA/ELA9644 tenure areas. As such, SRK has not considered the exploration potential of this tenure area other than to consider the value likely to be attributed to R3D as noted previously.

8.5.2 Jabiluka Project

SRK notes that the Jabiluka Project has previously transacted in 1991, which was prior to the implementation of the prevailing JORC Code (2012) guidelines. SRK has considered this transaction but notes that it is unlikely to be instructive regarding the value as paid in the current market for a pre-development uranium project.

ERA acquires the Jabiluka Project (August 1991)

On 21 August 1991, ERA completed the acquisition of a 100% interest in the Jabiluka Project from Pancontinental for A$125 M. At the time of the transaction, the Jabiluka Measured, Indicated and Inferred Mineral Resource comprised 32.44 Mt at 0.44% U_3O_8 for approximately 143,300 t (or 315.92 Mlb) of contained U_3O_8 using the same cut-off grade as employed at Ranger of 0.10% U_3O_8 (ERA Annual Report 1991, page 4). It was noted that past drilling had not fully defined the deposit nor had the cut-off grade been validated by detailed cost studies.

On the basis of the stated Mineral Resource, SRK notes that the implied value of this transaction is A$0.40/lb (raw) or A$2.86/lb (normalised to July 2022 average spot price).

Jabiluka Mineral Resource – comparable transaction analysis

In light of the foregoing discussion and without the requirement for significant adjustments, SRK notes the following collective attributes of the dataset (i.e. Reserves development to completion of a PFS):

- A majority of transactions involve assets with significantly smaller defined resources (on a contained U_3O_8 metal basis) with only the Wheeler River transaction of similar scale (albeit considerably smaller at only 135.1 Mlb U_3O_8 versus 302.2 Mlb U_3O_8 at Jabiluka)
- A majority of transactions involved assets with higher reported Mineral Resource grades (up to 11.43% U_3O_8) than at Jabiluka (average grade 0.55% U_3O_8)
- A majority of transactions involved assets at lower Mineral Resource classification levels (typically historical estimates, Inferred only or Indicated and Inferred) than at Jabiluka (which has Measured, Indicated and Inferred)

- The Jabiluka Mineral Resource includes a gold component, which is not evident in the other transactions in the available dataset
- The transaction dataset (i.e. Reserves development to completion of a PFS) did not appear to have any mineral assets with multiple constraints to project development (as evident at Jabiluka) and hence it is difficult to quantify the impact of such constraints on the values likely to be paid in the marketplace. SRK understand that this has been taken into account by Grant Thornton.
- A majority of the transactions occurred more than 5 years prior to the Valuation Date (extending back as far as 2004) and may not accurately reflect prevailing market conditions.

On this basis, SRK has recommended Grant Thornton take the following limitations into account in its valuation of the Jabiluka Project. SRK understands that Grant Thornton has also carried out an analysis of ERA's trading peer companies and adopted this to supplement the transaction analysis to value the Jabiluka Project. SRK concurs with this approach.

In SRK's view, the multiple implied by trading peer analysis recognises the contained Mineral Resources and Ore Reserves, associated gold mineralisation, associated mineral tenure and level of techno-economic study completed to date.

8.5.3 Cooper Creek JV Project

Comparable transaction analysis

In considering the exploration potential of ERA's Cooper Creek JV Project tenures, SRK has considered the transactions involving early to advanced stage uranium exploration assets as discussed in Section 8.4.1.

Based on its analysis of the transaction data, SRK has estimated the Market Value of ERA's Cooper Creek tenures as summarised in Table 8-8. Applications have been discounted to account for the risk that they may not be granted or have stringent conditions included as part of the grant process, particularly as both tenures are currently in moratorium pending further discussions with Traditional Owners.

Table 8-8: Cooper Creek exploration potential valuation

Tenure	Area valued (km^2)	Selected multiples (A/km^2$)	Market Value (A$ M)		
			Lower	Upper	Midpoint
ELA23311	364.64	500–2,500*	0.18	0.91	0.55
ELA23312	440.6	500–2,500*	0.22	1.10	0.66
		Total	**0.40**	**2.01**	**1.21**

Source: SRK analysis (2022)

Note: *Includes a 50% discount as the tenures remain in application and moratorium (pending closure of discussions with Traditional Owners).

Exploration potential, geoscientific rating

To confirm SRK's value outcomes using the comparable transaction method, SRK has also considered the geoscientific rating valuation method to assess the value of the exploration potential of ERA's mineral assets, as summarised in Table 8-9.

Based on its geoscientific rating analysis, SRK has estimated the value of ERA's Cooper Creek tenures resides between A$0.29 M and A$1.44 M, with a preferred value of A$0.86 M as summarised in Table 8-9. Applications have been discounted to account for the risk that they may not be granted or have stringent conditions included as part of the grant process, particularly as both tenures are currently in moratorium pending further discussions with Traditional Owners.

Table 8-9: ERA's exploration potential geoscientific rating valuation

Tenement	Area (km^2)	BAC (A/km^2$)	Equity	Off-property		On-property		Geology		Anomaly		Market	Application	Market Value (A$ M)		
				Low	High	Low	High	Low	High	Low	High			Lower	Upper	Midpoint
ELA23311	364.64	$589	100%	1	1.5	1	1.5	1	1.5	1	1.5	1.2	0.5	0.13	0.65	0.39
ELA23312	440.6	$589	100%	1	1.5	1	1.5	1	1.5	1	1.5	1.2	0.5	0.16	0.79	0.47
Grand Total														**0.29**	**1.44**	**0.86**

Source: SRK analysis (2022)

Note: *Application areas discounted by 50% due to the perceived uncertainty associated with likely timing of grant and associated conditions on approval, and that the tenures remain in moratorium.

8.6 Valuation summary

Table 8-10 summarises the Market Value of ERA's mineral assets as at the effective Valuation Date (1 September 2022).

In valuing the R3D deposit, SRK considers this is best considered as an Exploration Target within ELA9644 (as the RPA expired in 2021). As such, SRK has relied upon Comparative Transaction analysis as the primary methodology supported by the Yardstick method, with appropriate discounts applied to reflect the uncertainty in the tenure status and likelihood that the Exploration Target will be ultimately converted to a Mineral Resource able to meet RPEEE as required under the prevailing version of the JORC Code. Furthermore, SRK does not consider there is any material value associated with the exploration potential at Ranger.

In valuing the Jabiluka Mineral Resource, SRK compiled transaction data relating to higher grade (+0.25% U_3O_8) uranium deposits in Australia and North America. For various reasons as outlined in this report, SRK considers that the compiled dataset presents some limitations which have been considered by Grant Thornton in the valuation of the Jabiluka Project. SRK understands that Grant Thornton has also considered the trading peer multiple approach. SRK concurs with this approach but notes its understanding that this method captures all value associated with an asset. On this basis, SRK has not considered the value attributable to exploration potential at Jabiluka.

In valuing the exploration potential of the Cooper Creek application areas, SRK has relied upon Comparative Transaction analysis as the primary methodology to derive its selected value range for the exploration potential. SRK has cross checked the derived values using the Geoscientific Rating method.

SRK has adopted the values implied by Comparable Transaction analysis in preference to those defined using other methods, on the basis of direct linkages to the recent market.

As such, it is SRK's opinion that the current market is likely to pay between A$1.02 M and A$18.35 M, with a preferred value of A$8.63 M for ERA's mineral assets.

Table 8-10: Market Value of ERA's mineral assets – summary

Project	Value opinion methodology	Low (A$ M)	High (A$ M)	Preferred (A$ M)
Ranger Project	Comparable Transaction	0.62	16.34	7.42
	Yardstick	0.45	7.68	2.78
	Selected	**0.62**	**16.34**	**7.42**
Jabiluka Project	**Selected**	To be undertaken by Grant Thornton		
Cooper Creek	Comparable Transaction	0.40	2.01	1.21
	Geoscientific Method	0.29	1.44	0.86
	Selected	**0.40**	**2.01**	**1.21**
Total (excluding Jabiluka)		**1.02**	**18.35**	**8.63**

Note: Totals may not add up due to rounding.

8.7 Discussion on SRK's valuation range

In assigning its valuation range and preferred value, SRK is mindful that the valuation range is also indicative of the uncertainty associated with exploration and development assets.

The range in value is driven by the confidence limits placed around the size and grade of mineralised occurrences assumed to occur within each prospect area. Typically, this means that, as exploration progresses, and a prospect moves from an Early-Stage prospect, through Inferred, Indicated or Measured Mineral Resource categories to Ore Reserve status, there is greater confidence around the likely size and quality of the contained mineral and its potential to be extracted profitably.

Table 8-11 presents a general guide of the confidence in exploration targets, Mineral Resource and Ore Reserve estimates, and hence value, referred to in the mining industry.

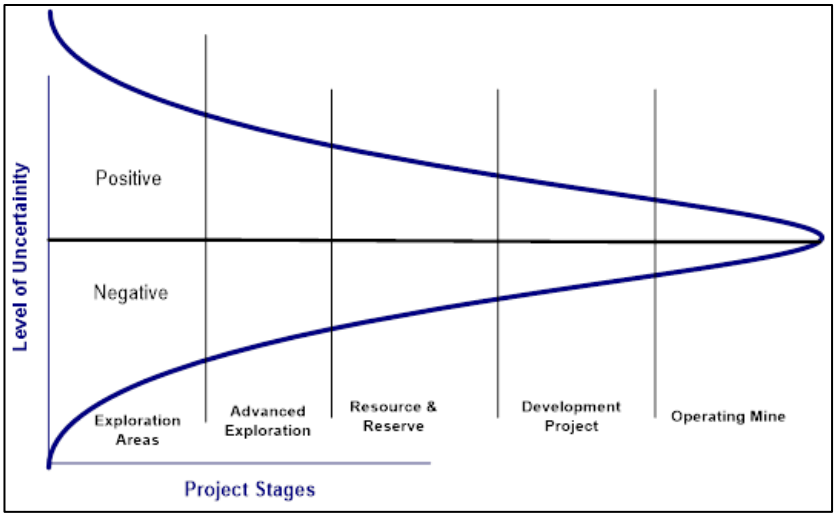
Table 8-11: General guide regarding confidence for target and Mineral Resource and Ore Reserve estimates

Classification	Estimate range (90% confidence limit)
Proven/Probable Ore Reserves	±5 to 10%
Measured Mineral Resources	±10 to 20%
Indicated Mineral Resources	±30 to 50%
Inferred Mineral Resources	±50 to 100%
Exploration Target	+100%

This level of uncertainty with advancing project stages can be seen in Figure 8-1.

Estimated confidence ranges from ±60% to 100% or more, are not uncommon for exploration areas and are within acceptable bounds, given the level of uncertainty associated with early-stage exploration assets. By applying narrower confidence ranges, one is implying a greater degree of certainty regarding these assets than may be the case. Where possible, SRK has endeavoured to narrow its valuation range.

Figure 8-1: Uncertainty by advancing exploration stage



Valuation risks

SRK is conscious of the risks associated with valuing exploration to development assets that can impact the valuation range. In defining its valuation range, SRK notes that there are always inherent risks involved when deriving any arm's length valuation. These factors can ultimately result in significant differences in valuations over time. The key risks include but are not limited to the risks outlined in the following subsections:

- Geological risk – uranium mineralisation is inherently inconsistent. SRK considers the geological risk as moderate.
- Uranium price – the uranium price is subject to economic market factors, which can result in large swings in price, with corrections thereafter, presenting a moderate risk to future project development.
- Market risk – the global market has sufficient capacity to absorb any potential production from the project.
- Technical issues – while the Ranger Project has been closed following the expiry of relevant approvals, the potential development of Jabiluka has not yet been sufficiently tested. For example, a number of options remain to be finalised regarding siting of processing infrastructure which is likely to impact the project's economic viability. Further to this, no recent technical studies have been completed and as such many of the capital and operating costs estimates are no longer relevant.
- Approvals and permitting risk – SRK considers the approvals and permitting risk at the subject tenements to be high, given the expiry or near-term expiry of relevant approvals and permits.
- Native Title risk – SRK considers the risk from Native Title and Traditional Owner approval at the subject tenements to be high, given the prolonged and consistent opposition of Traditional Owners to the development of Jabiluka, as well as previous commitments made by both Rio Tinto and ERA. SRK notes that Native Title does not apply in the same way to this project as to others in the mining industry. The Long-Term Care and Maintenance Agreement grants a 'subjective' approval right to the Traditional Owners which is a higher standard than Native Title interests.
- Environmental risk – SRK considers the environmental and social risk at the subject tenements to be high, given the location of the mineral assets in proximity to the Kakadu National Park and that many of the thresholds or outcomes to be achieved through ongoing rehabilitation and closure works remain to be agreed.
- Geopolitical risk – terrorist, political and operational risks are rated low.

Closure

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All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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