



Becoming a multi-mine Uranium producer

Honeymoon's restart and Strategic JV with enCore Energy

Bell Potter Unearthed February 2024

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Uranium price is currently trading at 16-year highs ~ US\$ 100/ lb U₃O₈

4 Key Industry Considerations

- 1) Midterm (next 4 years) supply is tight across the cycle, with or without Russian supply
- 2) Supply out Kazakhstan will be more limited to the west as Russia and China take more supply from this area
- 3) It's the level term price (currently ~ \$72lb U₃O₈), not the spot price that will bring on new production, and for that to happen, it will have to be seen as sustainable at close to or over \$85lb U₃O₈
- 4) Cameco 4th Qtr 2023 address notes pricing is the highest it has seen at this stage in the contracting cycle.



Uranium price is currently trading at 16-year highs ~ US\$ 100/ lb U₃O₈

Spot and Term prices

- In Dec '23, Boss entered into its first binding sales agreement to sell 1Mlbs U₃O₈ to a major US power utility over 7yrs from 2025
- Activity in term market has increased significantly, term of 160m lbs U₃O₈ in 2023, compared to 124m lbs U₃O₈ in whole of 2022
- Reasons for net increase in primary uranium demand:
 - Intermediaries and funds/financials buying
 - Life extensions of nuclear power plants (ie Belgium, UK)
 - US and Europe inventories lowest in past decade
 - Geopolitical uncertainty;
 - US senate considering a ban on Russian nuclear fuel import
 - No sign of an end to the Russian invasion of the Ukraine
- Boss has a significant advantage over other new projects, poised to capitalize on the immediate and future demand and price overshoot.
- Security of supply, together with the Alta Mesa JV Boss has increased its near-term sales capacity in a market which continues to strengthen.

Ux U3O8 Price® - 2 Year History (Spot)



UxC U₃O₈ Price – 2 Year History (Weekly)



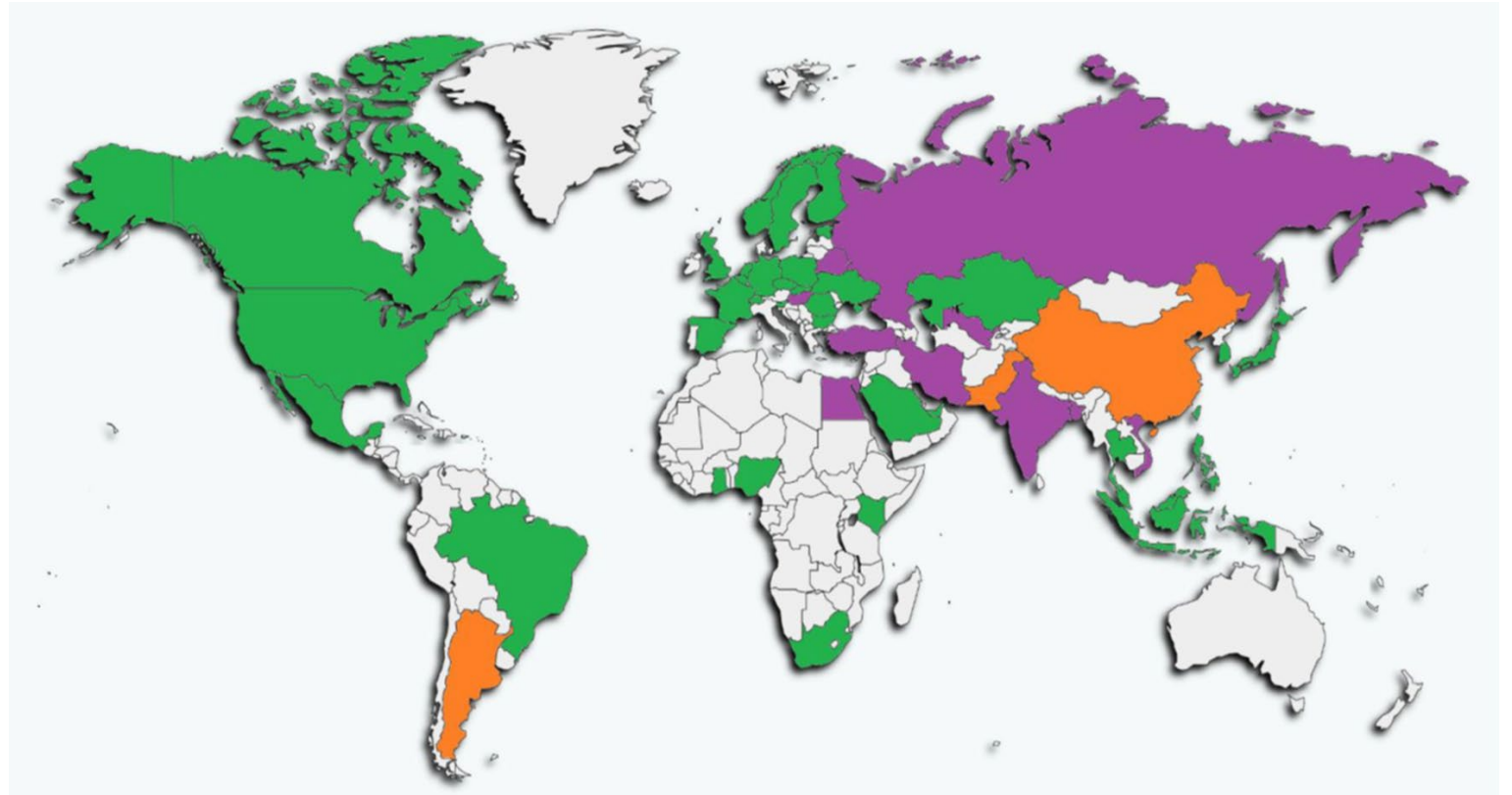
Security of supply is under threat as for the first time since the 1970's there is very little inventory and new production is needed in the near term. China and Russia taking significant positions in Kazakhstan, deliveries from Kazakhstan vulnerable

Vulnerable Open vs Captured Fuel Markets

Green = Open Market
65% of world

Purple = Russia Captured
15% of world

Orange = China Captured
20% of world





US uranium demand, highest in the world, heavily reliant on imports from vulnerable sources

U.S. Uranium supply & demand

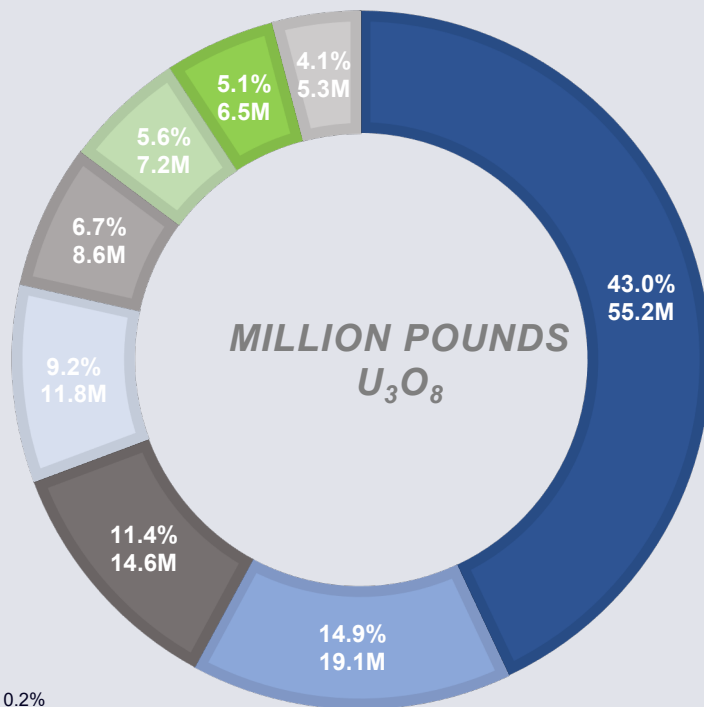
Uranium Production

By Country (2022)

- Kazakhstan 43%
- Canada 14.9%
- Namibia 11.4%
- Australia 9.2%
- Uzbekistan 6.7%
- Other 5.6%
- Russia 5.1%
- Niger 4.1%

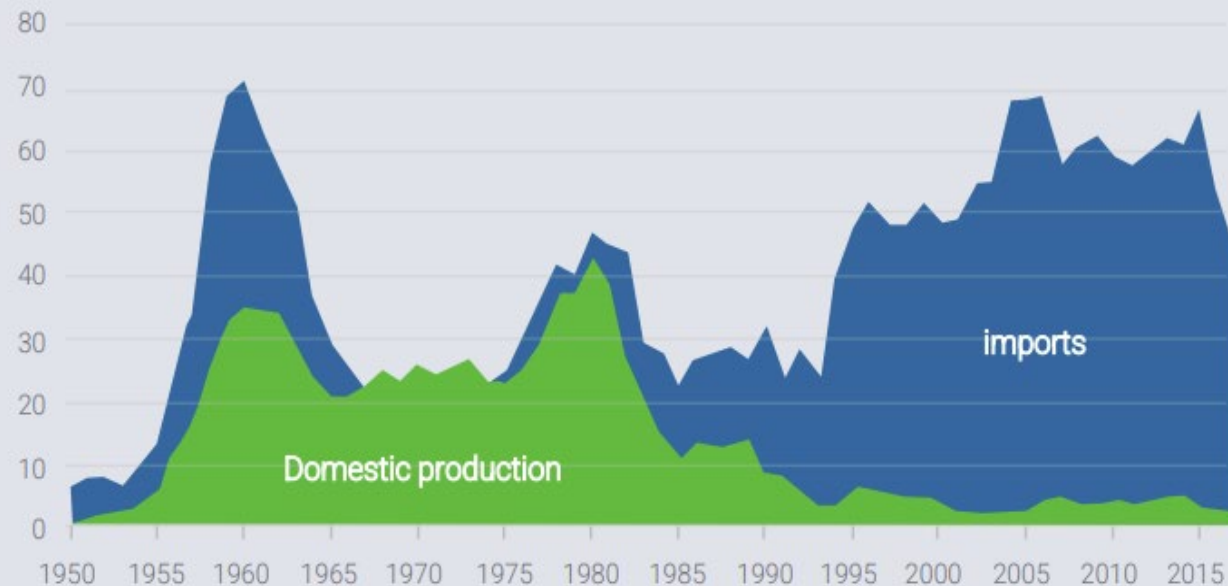
China: 3.4%
South Africa: 0.4%
USA: 0.2%

India: 1.2%
Ukraine: 0.2%
Rest of the world: 0.2%



U.S. uranium supply to commercial nuclear reactors (1950-2017)

Million pounds U₃O₈



Sources: IAEA and enCore corporate presentation 2023



Partnership able to leverage the combined experience in development, commissioning and operating mining projects globally

Leading Development and Operating Experience

BOSS RESOURCES

Wyatt Buck (Chair)

- GM of McArthur River Uranium Mine
- GM Key Lake Mill, the largest uranium mining operation in the world.
- Executive GM for all of First Quantum's global assets

Duncan Craib (CEO and MD)

- Finance Director for construction and commissioning of Husab uranium mine in Namibia.
- CFO for Kalahari Minerals plc and its 43% interest in Extract Resources Ltd.
- MCA Uranium Forum Chair since 2021

Jan Honeyman (NED)

- First Quantum Director of Human Resources (across all operations)
- KBR Energy, Global Director, Talent Management

Bryn Jones (NED)

- COO Laramide, (New Mexico and Queensland assets uranium assets)
- Manager technical services Heathgate Resources
- Worley-SNC Lavelin JV Uranium Lead for the Olympic Dam Expansion Project

Jon Owen (Project Manager)

- First Quantum Project Manager for Sentinel copper mine in Zambia
- Construction and commissioning of Cobre Panama copper/gold processing plant

Ben Jeuken (Wellfields Technical Services Superintendent)

- ISR hydrogeological consultant to Heathgate (owner of Beverley and Four Mile ISR projects in South Australia)

Sashi Davies (Sales and Strategic Advisor)

- Vice Chair World Nuclear Fuel Market
- Previously General Manager of CGN Global Uranium Ltd
- Previously Head of Marketing for Extract Resources (Husab mine in Namibia)

ENCORE ENERGY

Bill Sheriff (Founder and Exec Chair) –

- Founder and Chair of Energy Metals Corp
- Responsible for compiling largest domestic uranium resource base in US history prior to acquisition by Uranium One Corp

Dennis Stover (Director & Chief Technical Officer)

- Leading expert in ISR recovery focussed on US production
- Independent ISR consultant for Honeymoon
- Previous CEO enCore
- Executive Vice President, Americas for Uranium One, Inc overseeing development of Uranium One's assets in the US

Paul Goranson (Director & CEO)

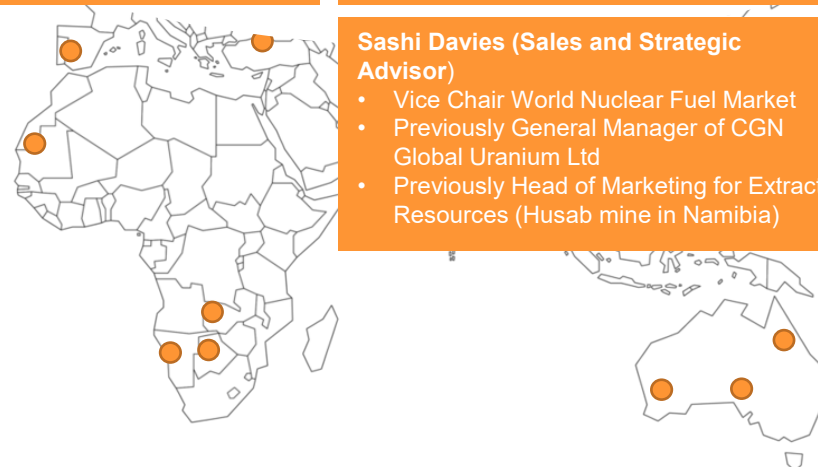
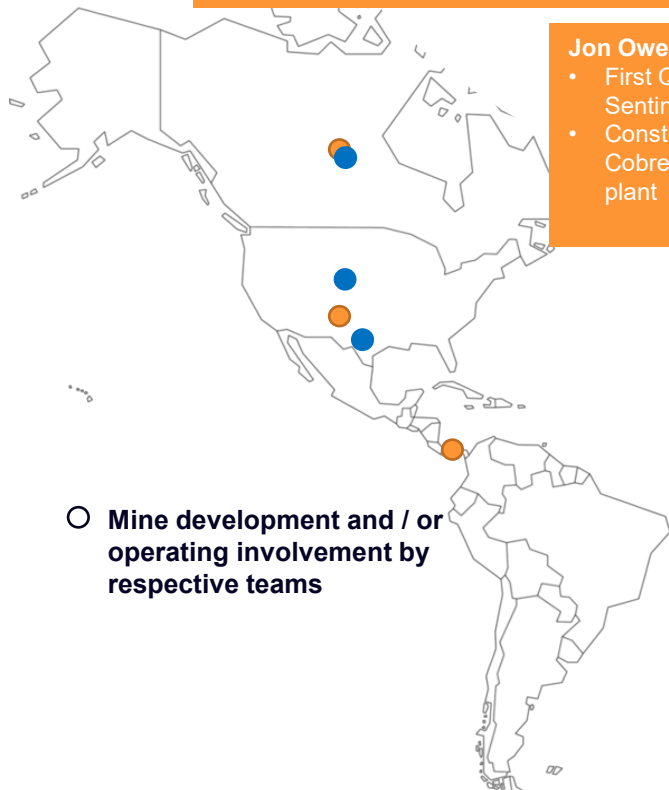
- COO of Energy Fuels - Alta Mesa and Nichols Ranch
- President, COO and Director Uranerz - Nichols Ranch ISR Uranium Project
- President, Cameco Resources
- Vice President of Mestefia Uranium LLC
- Previous President of the Uranium Producers of America

Susan Hoxie-Key (Director)

- Chairwoman of the World Nuclear Fuel Market
- Lead Nuclear Engineer Southern Nuclear Operating Company

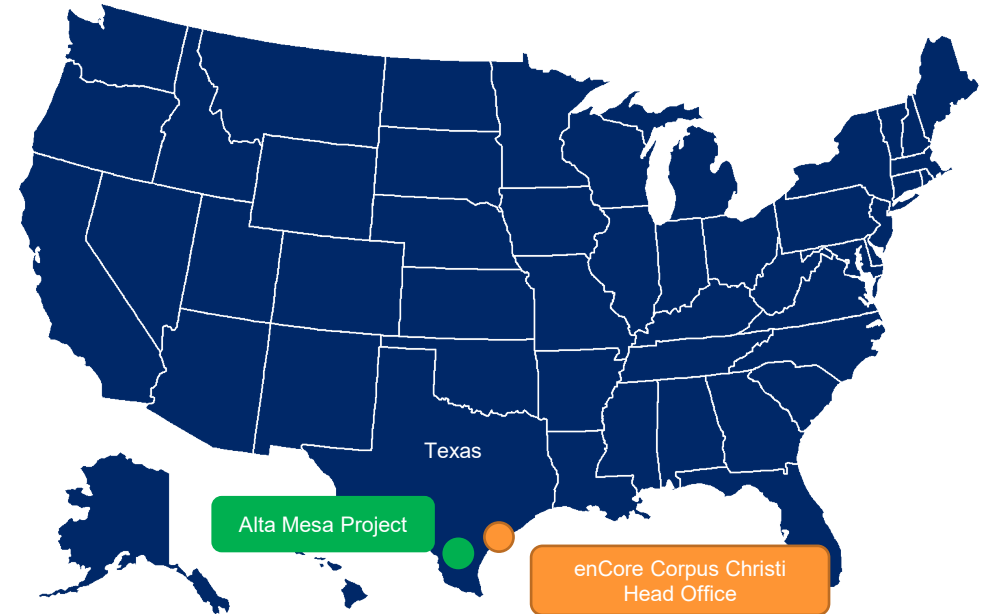
Peter Luthiger (COO)

- Managed the Alta Mesa ISR project during its period of production



On time and on budget to be a multi-mine ISR producer in 1H 2024

Global Uranium Platform in Tier 1 Locations



HONEYMOON:

- **Startup wellfield installation** is complete, pre-flushing producing production-grade uranium
- **Gypsum Repository completed**, Water Treatment and RO Plants operating to design specifications
- **1st set of NIMCIX loading and elution columns for new Ion Exchange (IX) circuit is installed** ready for hydrotesting, then production this month
- **Electrical MCC, Substations and transformers** being installed and energised
- Other commissioning activities, drying and packing area, precipitation area, reagent systems
- **Senior management and employees recruited**, workforce on site continues to grow, currently peaked at 130 employees / contractors on site
- **3.3Mlb U₃O₈ p.a. Export Permit in place**, Native Title and Environmental Agreements in place

ALTA MESA:

- **Wellfield delineation and production pattern installation** is ongoing
- **Refurbishment of the idled Alta Mesa ISR Uranium Processing Plant is ongoing**, in anticipation of the planned production restart in April/ May 2024
- **Elution circuit (used to strip uranium from ion exchange beads)** has been completed
- **All process pumps for the startup IX circuit** have been rebuilt and replaced
- **Radioactive material license and the underground injection control permit** in good standing
- **The Wellfield has two waste disposal wells** that have had their permits recently renewed



Transaction consistent with Boss' strategy

Strategic Rationale

- ✓ Foothold in Tier 1 US geography with exposure to a quality high grade ISR project 20Mlb U_3O_8 ¹ resource with significant growth potential
- ✓ Boss becomes a multi-mine ISR uranium producer, with both Honeymoon and Alta Mesa operating in 1H 2024
- ✓ Boss portfolio of assets are based in South Australia and South Texas, both Tier 1 mining and energy jurisdictions with significant historical and current ISR mining operations
- ✓ Acquisition accelerates growth in inventory, life of mine, production rates and cashflow
- ✓ Maintains exposure to uranium price, with all additional pounds from Alta Mesa currently uncontracted
- ✓ Boss remains debt free with A\$194m² of strategic inventory. Having multiple cash-flowing mines in 1H 2014 will allow for balance sheet optimisation and use of debt for future growth
- ✓ ISR is a proven cost-effective uranium extraction process with reduced environmental impact relative to traditional mining. ISR deposits historically grow and extend well beyond initial mine life
- ✓ Existing highly experienced ISR operator of Alta Mesa, in enCore, allowing Boss to focus on commissioning and ramp-up of Honeymoon which continues on time and on budget
- ✓ Benefits from collaborative use and joint development of enCore's Prompt Fission Neutron (PFN) technology
- ✓ Platform for a potential broader partnership with enCore, leveraging respective assets, balance sheets and construction & operating experience across teams

Notes

1. Please refer to the cautionary statement and accompanying resource table in Slide 10 for further information.
2. Strategic uranium stockpile valued at A\$194M based on a spot U_3O_8 price of US\$101/lb and an exchange rate of A\$1:US\$0.65

Asset Portfolio Highlights

MUTLI-MINE NEAR-TERM PRODUCTION IN 1H 2024 WITH URANIUM PRICES ~ \$100/lb

Boss' post transaction asset portfolio

Honeymoon Project

Ownership	%	100
Location		South Australia
Total resource		71.6Mlb at 0.062% U ₃ O ₈
Production commencement		1Q 2024
Initial plant capacity	Mlbpa	2.45
AISC	US\$/lb	25.6

Alta Mesa Project

Ownership	%	30
Location		South Texas
Total resource (100%) ¹		20Mlb at 0.12% U ₃ O ₈
Production commencement		1H 2024
Initial plant capacity (100%) ²	Mlbpa	1.5

Notes

- Please refer to the cautionary statement and accompanying resource table in Slide 10 for further information.
- ISR typically takes 2-5 years to ramp to full plant capacity

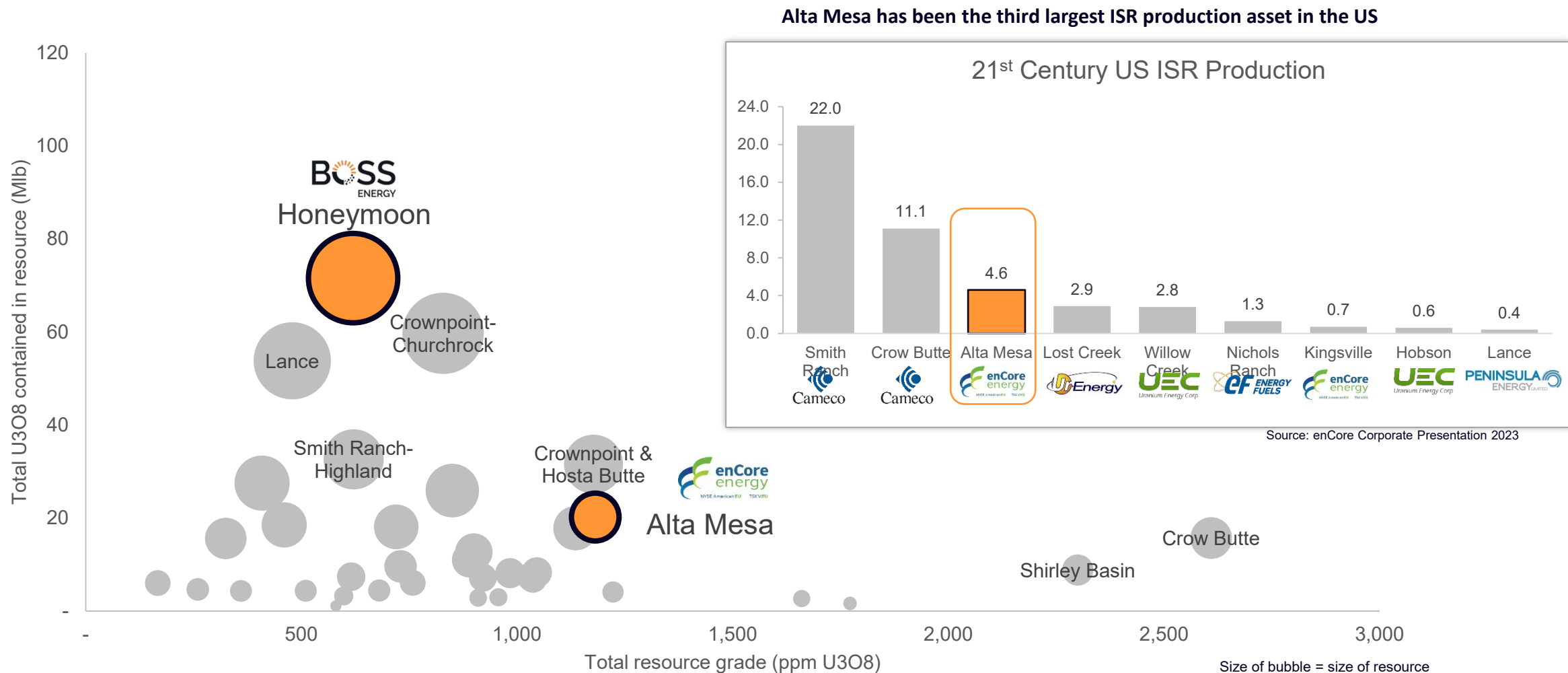
Resource tables

Honeymoon	Tonnes (Mt)	Grade (%U ₃ O ₈)	Contained U ₃ O ₈ (Mlbs)
Measured	3.1	0.110	7.6
Indicated	18.4	0.063	25.5
Inferred	30.9	0.057	38.5
Total	52.4	0.062	71.6


Alta Mesa	Resource Category	Tonnes ('000)	Grade (%U ₃ O ₈)	Contained U ₃ O ₈ ('000 lbs)
Within existing wellfields	Measured	54	0.152	164
Alta Mesa	Indicated	1,397	0.106	2,959
Mestena Grande	Indicated	119	0.120	287
Total M&I Mineral Resources		1,570	0.109	3,410
Alta Mesa	Inferred	1,263	0.126	3,192
Mestena Grande	Inferred	5,733	0.119	13,601
Total Inferred Mineral Resource		6,996	0.120	16,793

Boss will own two large resource, high grade ISR projects located in Tier 1 uranium mining jurisdictions, both producing in 1H 2014

US & Australian ISR Development Projects



Source: Company announcements and Sternship Advisers research



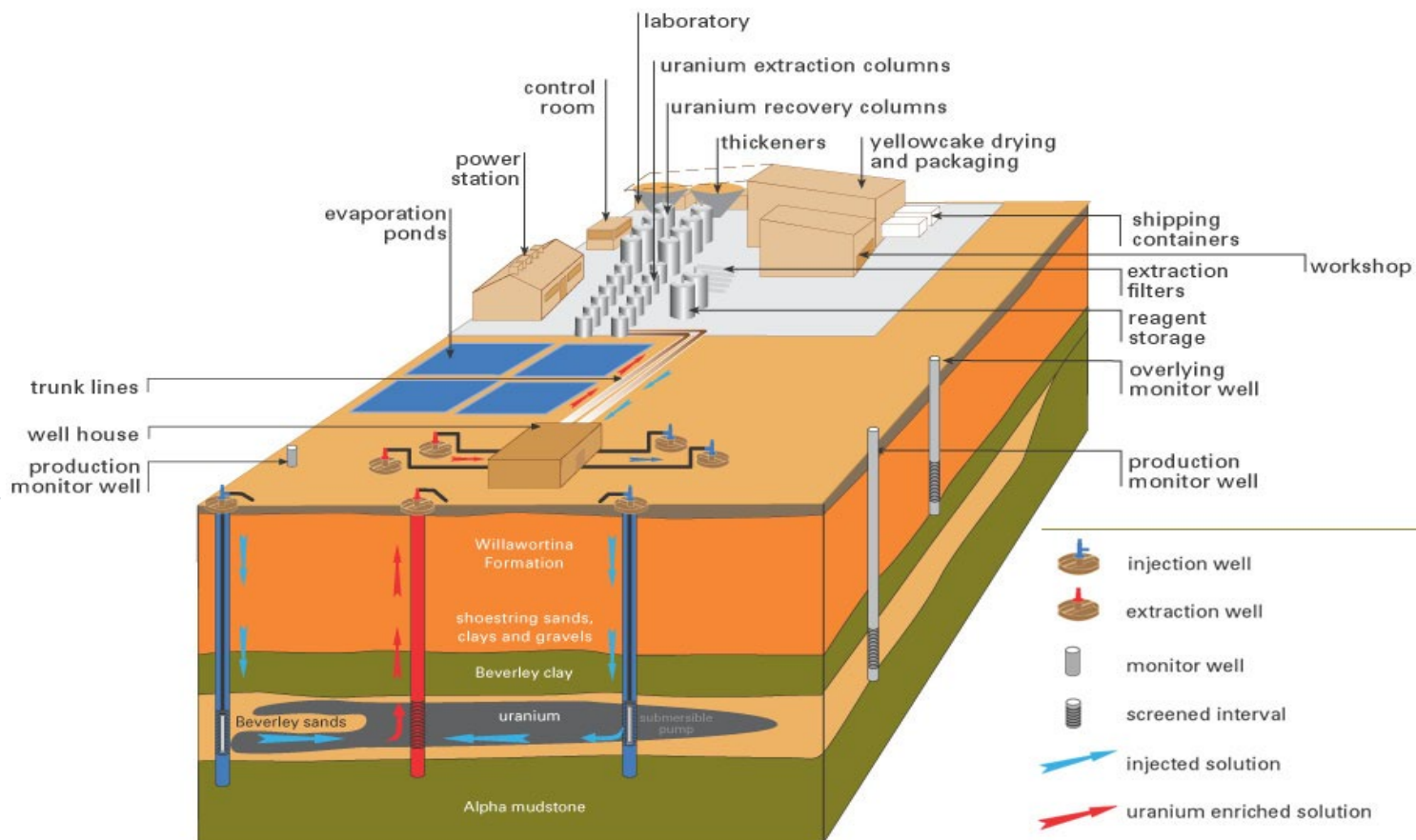
HONEYMOON RESTART



ISR is a proven cost-effective uranium extraction process with reduced environmental impact relative to traditional mining

In-Situ Recovery (ISR) Mining

- ISR accounts for ~ 60% global uranium mined, used in Australia, Kazakhstan, USA
- ESG friendly mining method - unlike conventional mining, temporary ground disturbance, no ground excavations, not tailings, minimal dust and less water consumption
- Barren leach liquor is injected through the uranium hosted ore body, to recover high grade pregnant liquor solution by production wells and pumped to the surface.
- Uranium is then extracted using ion exchange, precipitated out and dried to produce U_3O_8 .
- ~ 2/3 the cost of conventional mining and average CAPEX less than 15% of conventional mines



Source: United States Nuclear Regulatory Commissions (www.nrc.gov) (1) World Nuclear Association – World Mining Uranium Production (December 2020) (2) TradeTech – The Nuclear Review (October 2016)

Honeymoon ISR & IX Mine

Water Treatment Plant

Production Well Fields

Drying Circuit

Ion Exchange

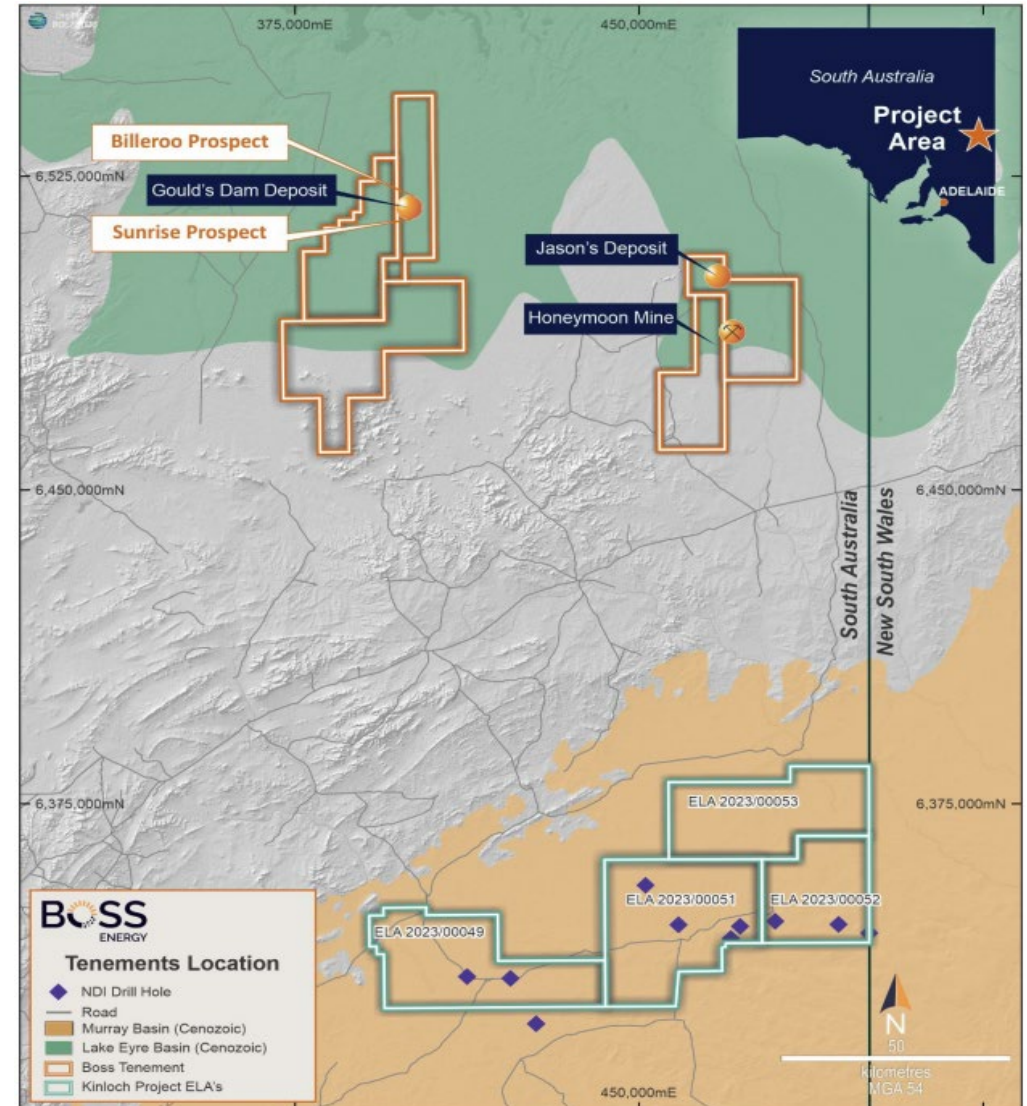




Substantial Exploration Target of 58Mlbs to 190Mlbs at grades up to 1,080ppm U_3O_8 ¹

Honeymoon Exploration Potential

- Following strong infill drilling results at Gould's Dam, Boss is now preparing for technical and economic studies on developing the satellite deposit as an additional production source, currently 25Mlb U_3O_8 indicated and inferred resource
- Boss recently identified Billeroo and Sunrise as two new satellite prospects close to Honeymoon (in addition to Gould's Dam and Jason's)
- In addition to the JORC Resource of 71.6Mlb, Honeymoon has a substantial Exploration Target¹ of 58Mlbs to 190Mlbs at grades up to 1,080ppm U_3O_8
- Recently won competitive application for the Kinloch Project ELAs to explore a new potential uranium province just ~130km south of Honeymoon and covers an area of ~3,184km²
- Boss' exploration strategy has already been highly successful, increasing the JORC Resource at Honeymoon from 16.57Mlbs to 71.67Mlbs (~4.3x increase) since project acquisition in December 2015



Notes:
1. Refer ASX announcement 25 March 2019. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain whether future exploration will result in the definition of a Mineral Resource. Please refer to the cautionary statement and accompanying resource table in Slide 4 for further information.



ENCORE TRANSACTION OVERVIEW & RATIONALE



Transaction Overview

- **Boss to purchase of 30% of Alta Mesa for US\$60m cash, forming an asset JV and strategic relationship with the owner, enCore Energy**
 - Alta Mesa is a high-grade uranium mine with a Resource of 20Mlb grading 0.12% U₃O₈¹, and significant resource growth potential
 - Fully licensed 1.5Mlbpa plant with simple pathway to expansion and is expected to commence production 1H 2024
 - Alta Mesa has produced the third largest amount of uranium relative to all US ISR assets, having produced 4.6Mlb² before being placed on C&M post-Fukushima
- **Strategic relationship formed between Boss and Encore - combines two teams with significant global construction & operating expertise:**
 - Strategic Collaboration Agreement for the use and joint development of enCore's Prompt Fission Neutron (PFN) technology
 - Boss to subscribe for US\$10m of enCore ordinary shares and provide 200klbs of physical uranium secured loan to enCore for 12 months, at commercial rates to be repaid in-kind
 - Allows Boss to focus on growth at Honeymoon whilst establishing a US platform by leveraging enCore's strong operating experience. The enCore operating team previously ran Alta Mesa and have just successfully commissioned the Rosita ISR project re-start, in just 20 months
- **Post acquisition, Boss becomes a multi-mine ISR uranium producer in 1H 2024 with producing assets in South Australia and South Texas**
 - Both geographies are tier 1 mining and energy jurisdictions with significant historical and current ISR mining operations

Notes:

1. Please refer to the cautionary statement and accompanying resource table in Slide 10 for further information.
2. From enCore Corporate Presentation 2023



High grade 1,200ppm ISR project in a Tier 1 jurisdiction with significant potential for growth

Alta Mesa ISR Uranium project

- Located in South Texas – a prolific US district for sandstone-hosted ISR production with historic production of ~80Mlb¹
- Most progressive permitting production jurisdiction in the US
- Historically has produced the third largest amount of uranium out of all ISR assets in the US, producing 4.6Mlb between 2005 and 2013 through ISR mining with an alkaline lixiviant¹
- Existing 20Mlb total high-grade resource of 1,200 ppm²
- 1.5Mlb plant capacity with a simple path to expand capacity using existing licences and drying capacity of 2Mlb

ALTA MESA PROCESSING FACILITY



ALTA MESA HISTORICAL PRODUCTION REFERENCE POINTS

Production reference points ³	
Average production between 2005 and 2013	0.58Mlb
Maximum yearly production between 2005 and 2013	1.07Mlb
Licensed processing capacity	1.5Mlb

ALTA MESA NI 43-101 MINERAL RESOURCE ESTIMATE (2023)

	Resource Category	Tonnes ('000)	Grade (%U ₃ O ₈)	Contained U ₃ O ₈ ('000 lbs)
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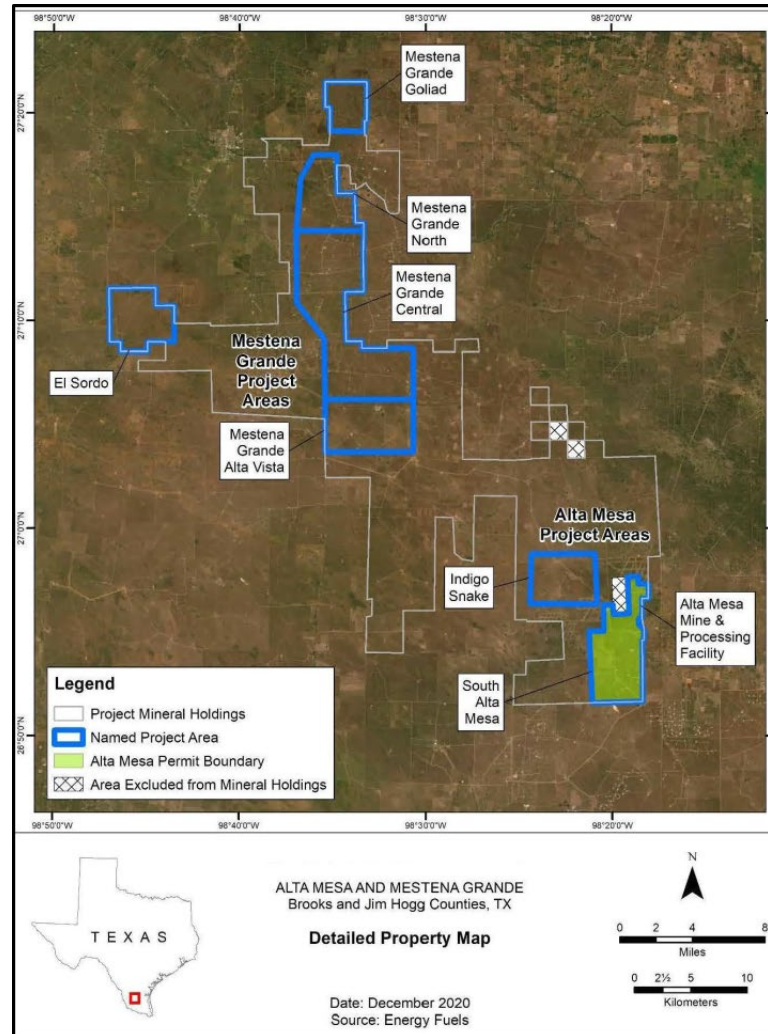
1. enCore Energy November 2023 Corporate Presentation
2. Please refer to the cautionary statement and accompanying resource table in Slide 4 for further information.
3. Technical Report Summary for the Alta Mesa Uranium Project, Brooks and Jim Hogg Counties, Texas, USA National Instrument 43-101, Technical Report 2023, BRS Engineering, using mid-point



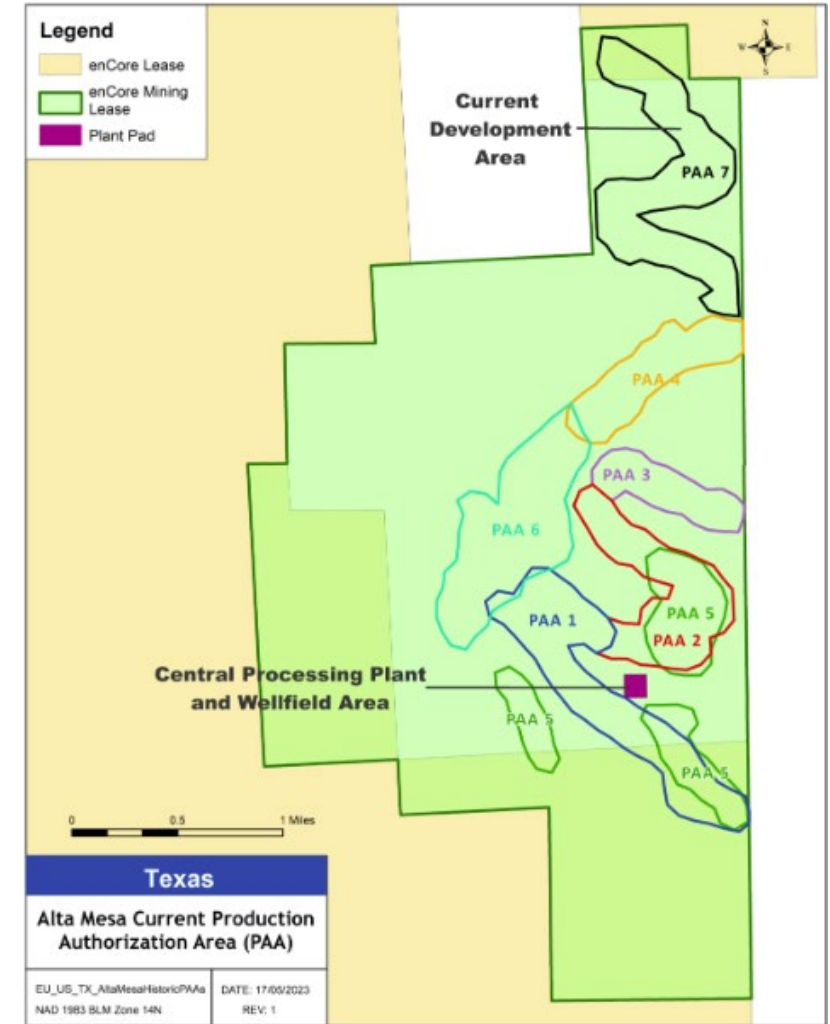
Large ~200,000 acres of underexplored land package in a prolific uranium region

Alta Mesa Exploration Potential

- Large underexplored land package totaling ~200,000 acres (~800sqkm)
- Uranium mineralisation occurs locally as roll-front deposits hosted in porous and permeable sandstones, at depths ranging from 300 to 600 feet beneath the surface
- Significant exploration potential – 52 miles of stacked uranium roll-front identified; only 5 miles explored to date
- Continues to expand the recently discovered Middle C mineralized zone



Alta Mesa and Mestena Grande property



Alta Mesa historic PAAs (Production Area Authorisation)



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