

## YANREY URANIUM PROJECT EXPLORATION DRILLING UPDATE

***Two phase drilling programme planned for CY 2024 of up to 25,000 metres. Planning for Phase 1 resource extension and infill drilling programme of up to 7,000 metres well advanced, on track to commence Q2 2024***

### Key Points

- Two-phase uranium target extension and infill drilling programmes for more than 25,000 metres of drilling planned for calendar year 2024.
- Drilling is designed to:
  - further upgrade the resource confidence of the existing JORC (2012) Mineral Resource Estimate (MRE) of 38.8Mt @ 360 ppm eU<sub>3</sub>O<sub>8</sub> for 30.9 Mlbs of contained uranium oxide (U<sub>3</sub>O<sub>8</sub>);
  - test the potential to substantially increase Bennet Well uranium mineral resources on new targets as identified in the Revised Exploration Target for Yanrey Uranium Project (released to ASX on 24 January 2024); and
  - additional mineral resources can be expected to enhance project economics already defined in Scoping Study (released to ASX on 13 December 2023).
- Phase 1 extension and infill drilling program totalling 70 holes for approximately 7,000 metres of drilling scheduled to commence in Q2 2024.
- Heritage clearances and DMIRS POW applications for Phase 1 drilling program completed and approved.
- Planning for recommissioning of Cauldron's existing camp facility at Yanrey and upgrade to support accelerated drilling and geophysics programs has commenced.
- Phase 2 extension and new target drilling programme totalling 188 holes for approximately 18,800 metres of drilling scheduled for Q3/Q4 of 2024.
- Cauldron technical team strengthened with the engagement of highly respected and experienced project geological consultants Jeffrey Moore and Bob Annet to provide senior oversight for the upcoming Yanrey exploration programme.

**Cauldron Energy Limited (ASX: CXU) (“Cauldron” or “the Company”)** is pleased to announce that plans to commence an in-fill and extension drill programme at the Company’s Yanrey Uranium Project are well advanced.

The current planning for the programme is for a total of 25,000 metres to be split over 2 phases. Further, the Company will assess the opportunity to add additional metres to the programme should logistical arrangements allow.

The Phase 1 drilling programme at Yanrey is expected to commence in Q2 2024 with 70 drill holes for approximately 7,000 metres, designed to:

- test for extensions to known uranium mineralisation;
- test previously undrilled targets, and
- provide infill drilling to upgrade the confidence in the existing Bennet Well Mineral Resources, particularly in areas which are expected to be upgraded from Inferred Mineral Resources to Indicated Mineral Resources.

The requisite Programme of Work (POW) for the Phase 1 drilling has been approved by DMIRS and Heritage Clearance over the proposed phase 1 drilling areas has been completed and approved by the Buurabalayji Thalanji Aboriginal Corporation.

Following additional Heritage Clearance work over other target areas and POW approval, the Phase 2 programme will:

- test for additional extensions to known uranium mineralisation in previously uncleared areas;
- test additional previously undrilled targets, and
- provide further infill drilling to upgrade the resource confidence in the Bennet Well mineral deposits.

Commenting on the Yanrey Uranium Project upcoming exploration drilling programme, Cauldron’s Chief Executive Officer, Jonathan Fisher, stated:

*“Following our successful recent capital raising, I am very pleased to confirm that the funds raised are being allocated to near-term, high impact drilling programs at Bennet Well and the greater Yanrey Project area, as we look to grow the mineral resource base and build upon our recent attractive scoping study results.*

*The Yanrey uranium project area represents a significant opportunity to discover and ultimately develop uranium mineral resources in a first world regulatory environment and mining jurisdiction and this drilling programme will enable the Company to demonstrate this potential by further outlining the full extent of uranium mineralisation at Yanrey.*

*While momentum builds to an eventual change in uranium policy in WA, discovering and banking plentiful uranium pounds to Cauldron’s balance sheet is one of the highest leverage shareholder value adding activities we can undertake.”*

## Target Areas for Drilling

Exploration target areas at Yanrey have been chosen using a combination of geophysical and geological parameters, and used to predict where new palaeochannels might exist, or where existing palaeochannels might extend. Useful geophysical data includes airborne magnetics, airborne electromagnetics and passive seismic surveys. Previous drilling data (>80 holes) and geological models have been useful geological tools.

Twenty-two (22) target areas have been defined using these parameters and full details of the target identification parameters and methodologies are detailed in the Revised Exploration Target for Yanrey Uranium Project (released to ASX on 24 January 2024). A summary of the Exploration Target tonnes, grade and contained uranium for the full 22 target areas is attached as Table 1 below:

**Table 1: Exploration Target**

|                    | Tonnage and Grade Range |   | Exploration Target Range                                |
|--------------------|-------------------------|---|---|
| Exploration Target | Tonnes (Mt)             | Grade (ppm eU <sub>3</sub> O <sub>8</sub> ) | Contained Uranium (Mlbs U <sub>3</sub> O <sub>8</sub> ) |
| Lower              | 20.4                    | 326   | 18.8  |
| Upper              | 66.2                    | 464   | 51.8  |

**Cautionary Statement:** The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource in the area considered an exploration target and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code.

The Exploration Target for the Yanrey Uranium Project incorporates work programmes conducted in recent years (post 2015) and encapsulates the twenty-two (22) target areas referred to above and set out the Exploration Target for Yanrey Uranium Project (released to ASX on 24 January 2024).

Ten (10) of the 22 target areas are planned to be tested with 253 drill holes for approximately 25,800 metres of air-core drilling during 2024. Figure 1 (below) shows the location of the Yanrey Project Exploration Targets and planned 2024 drill hole locations and Figure 2 (below) shows the Yanrey Project Exploration Targets (brown outlines) with Bennet Well Mineral Resource (purple >150ppm eU<sub>3</sub>O<sub>8</sub>) and Cauldron Tenements (red outlines).

The planned Phase 1 air-core drilling programs will test 6 of the previously identified 22 target areas (refer to Table 2 below) and the planned Phase 2 drilling program will target a further 4 target areas with up to 188 drill holes for approximately 18,800 metres of air-core drilling.

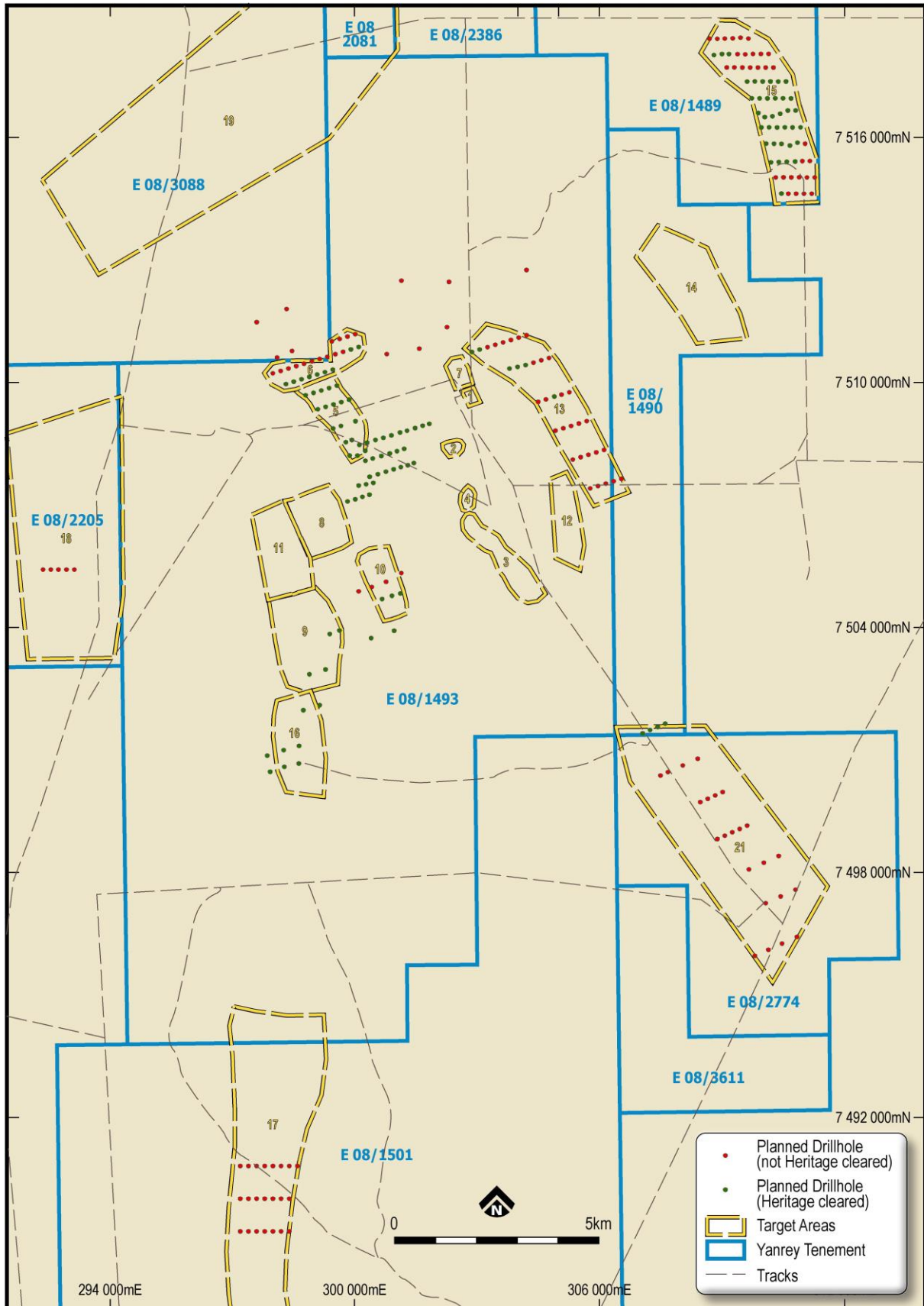
Successful outcomes from these work programmes will have significant potential to grow the uranium Mineral Resources at Bennet Well and the greater Yanery Project area, further demonstrating the scale and importance of the Yanrey Project for future uranium mine development studies.

***The Phase 1 program which has already been approved by DMIRS and has been surveyed for Heritage Clearance will commence in Q2 2024.***

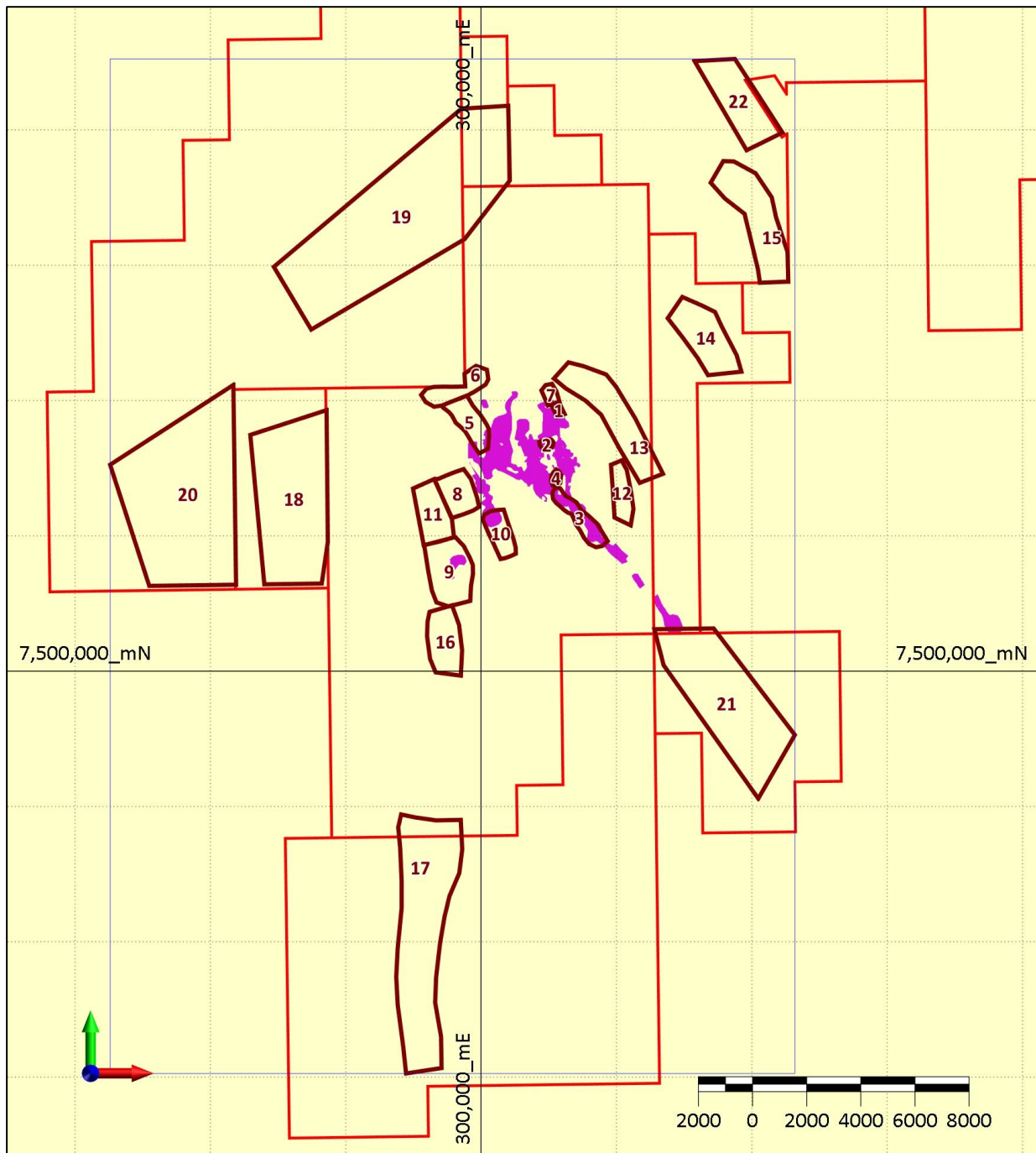
The Company has plans to conduct further drilling programs to progressively target uranium mineralisation in the Target areas identified over the next 3 years with significant drilling planned for calendar year 2024 as outlined herein to expand the MRE and to test the validity of the exploration target (see Table 1 above). Additional mineral resources can be expected to enhance project economics already defined in a Scoping Study.

**Table 2: Planned Phase 1 Drilling Target Summary**

| Target                      | Target Area ID | Number of Holes Proposed | Metres of drilling (m) Proposed | Target Objective  |
|-----------------------------|----------------|--------------------------|---------------------------------|---|
| Target Area – BW North West | T5-T5S-T5SE    | 48                       | 4,800                           | To explore a largely untested (or very poorly explored) area of low gravity response to the immediate north west of Bennet Well Cent  |
| Target Area – BW North West | T6             | 7                        | 700                             | To test mineralisation potential in an untested area of low gravity response to the west of Bennet Well Central   |
| Bennet Well Deep South      | T9             | 4                        | 400                             | To test potential northern and southern extensions to Bennet Well Deep South as well as possible additional channel limbs   |
| Bennet Well South           | T10            | 5                        | 500                             | To test for a southern extension to Bennet Well South Mineral Resource  |
| Cheetara Prospect           | T13            | 4                        | 400                             | To test an area of high magnetic and EM response coincidental with historic hole YRH128, that could signify the presence of a "new" mineralised channel to the east of Bennet Well. Also testing an area of possible northeastern extension to Bennet Well East as indicated by an area of low gravity response |
| Bennet Well Deep South      | T16            | 2                        | 200                             | To test for a possible new channel to the south of Bennet Well Deep South   |
| <b>TOTAL =</b>              |                | <b>70</b>                | <b>7,000</b>                    |   |



**Figure 1: Location of target areas and proposed aircore drill holes for Phase 1 and 2 programs 2024**

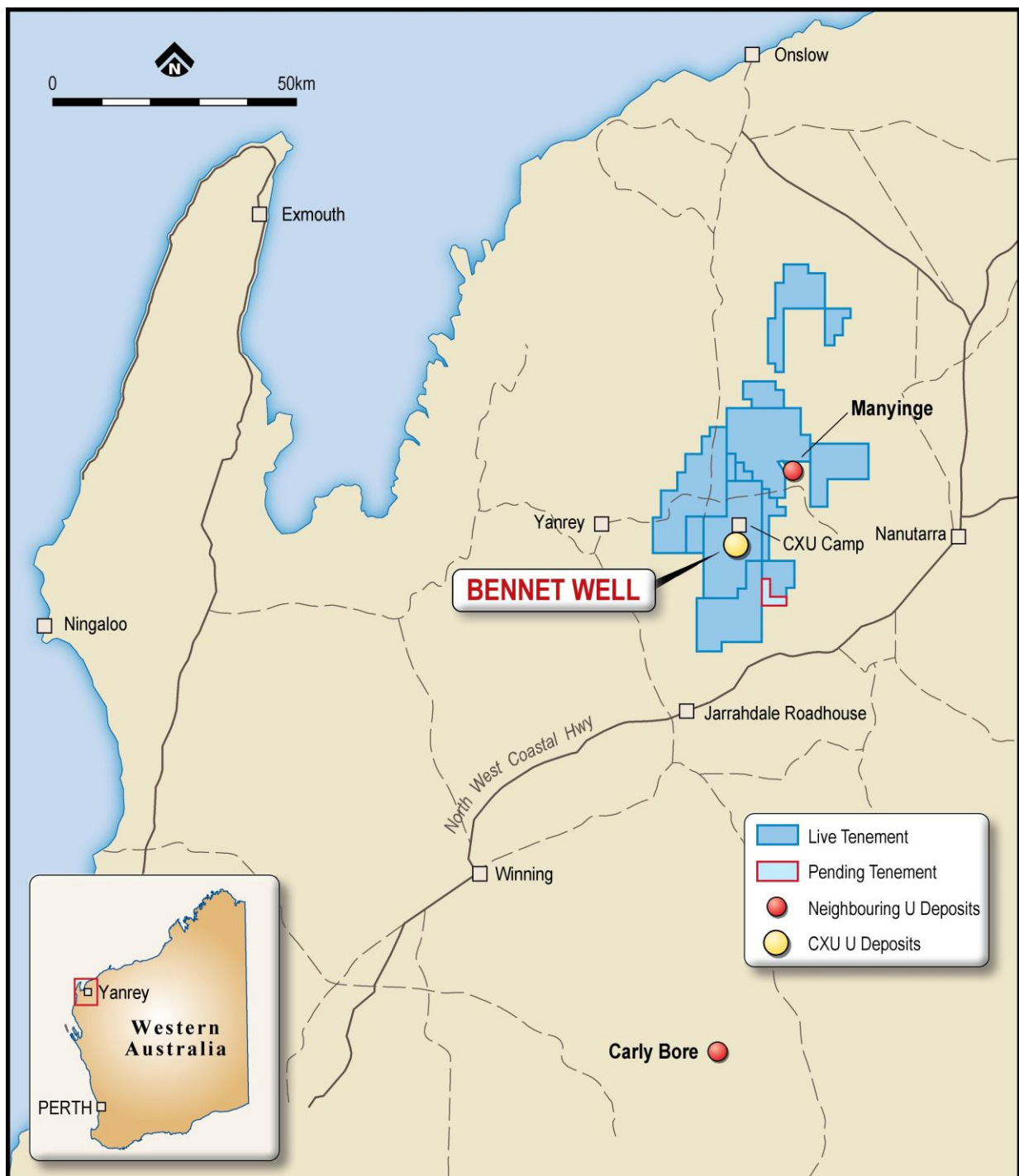


**Figure 2: Yanrey Project Exploration Targets (brown outlines) with Bennet Well Mineral Resource (purple >150ppm  $eU_3O_8$ ), and Cauldron Tenements (red outlines)**

## Project Location and Brief Overview

The Yanrey Uranium Project is located ~ 100 kms south of the town of Onslow in Western Australia, and ~1,050 kms north of Perth (Figure 3).

The Bennet Well Uranium Deposit, forms part of Cauldron's Yanrey Uranium Project which encompasses a total area of 1,270 km<sup>2</sup>, mineralisation remains open to the north and south, and has the potential to be a much larger mineral resource than currently defined.



**Figure 3: Location of Yanrey Uranium Project**

### **Bennet Well Exploration Model**

The most continuous and highest grade of mineralisation at Bennet Well is hosted within unconsolidated sands at the edge of, and above, the shoulder of the incised basement palaeochannel, long since buried by Mesozoic and Tertiary sand and clay sequences.

In the regional magnetics, Bennet Well is located on the northwestern margin of a circular, weakly-magnetic, dome-shaped high which is cut by a northwest-southeast, linear magnetic low. Coincident with this linear magnetic low is an EM conductive high. This is interpreted to represent a faulted contact in basement lithologies along which the Bennet Well palaeochannel has formed, thereby acting as a conduit for uraniferous fluids.

The strong north-south oriented conductive body running through the axis of the tenement group is shown by drilling to coincide with a deepening of basement at Bennet Well marked by many channels oriented in a branching and sub-parallel array. This conductive lineament is interpreted to be an ancient coastline that flooded on the earliest marine transgression caused by the incipient separation of greater India from north-western Western Australia during the Mesozoic. This allowed the accumulation of the earliest glauconitic marine muds and sands in a deltaic environment. The muds are rich in organic material and form the present day aquicludes that act to contain the mineralisation.

### **Yanrey Exploration Model**

Cauldron has considerably extended the exploration model for uranium mineralisation in the tenement group. The model was developed through drilling and geological interpretation, collection of airborne EM and ground based gravity and passive seismic, at significant cost to the Company. The passive seismic data acquired in 2016 and 2017 effectively constrained dimensions of various palaeochannel targets around the greater project area, thereby vastly improving the existing exploration model.

The geological model of the Bennet Well deposit is well advanced, now comprising three-dimensional stratigraphic, lithologic and mineralisation wireframe models based on thorough compilation and reinterpretation exercises of more than 500 drillholes, of which 445 were drilled by Cauldron.

The exploration model at the Yanrey project revolves around identifying complex palaeochannel morphology which may then become targets for follow-up scout drill testing.

### **Bennet Well Mineral Resource**

The Mineral Resource Estimate for Bennet Well (see Figure 4 below) can be summarised as a total Indicated plus Inferred Resource (JORC 2012) of **38.9 million tonnes @ 360 ppm eU<sub>3</sub>O<sub>8</sub> for 30.9 million pounds (13,990 tonnes) of contained uranium oxide, using a cut-off of 150 ppm eU<sub>3</sub>O<sub>8</sub>** (ASX 17 December 2015).

For full and detailed information in relation to the above reported Mineral Resource Estimate for Bennet Well, please refer to Cauldron's ASX release dated 17 December 2015, "Substantial Increase in Tonnes and Grade Confirms Bennet Well as a Globally Significant ISR Project".

### **Technical Team Appointments**

Cauldron advises that as it moves into accelerated exploration and drilling programs commencing this year, it has engaged Mr Jeffery Moore as Technical Advisor to the Company and has also engaged the services of Mr Bob Annet as uranium resource consultant to bolster the Company's technical team. Both Mr Moore and Mr Annet have considerable experience in advancing minerals projects through exploration, resource estimation and feasibility studies necessary to underpin eventual mine development.

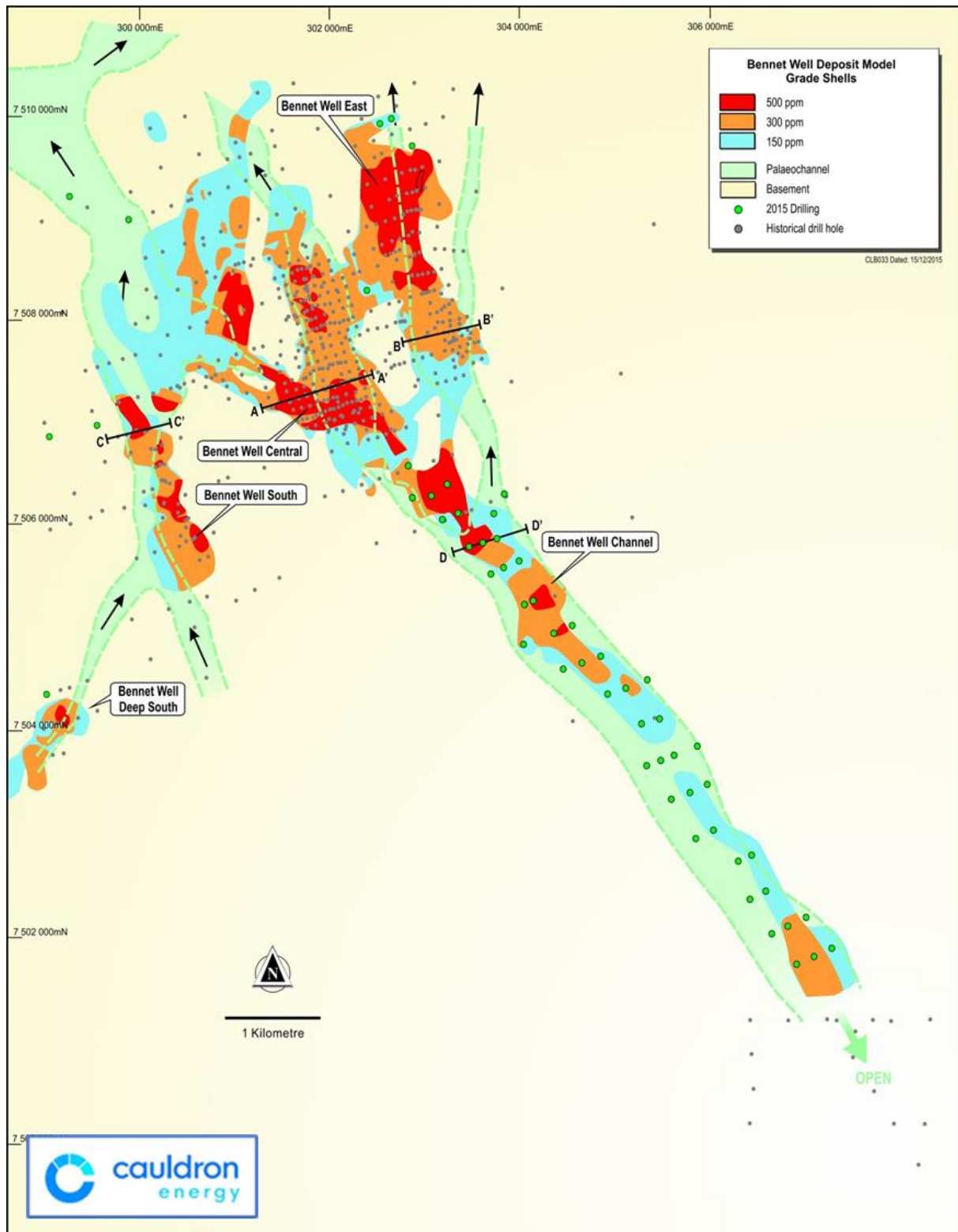


Figure 4: Plan view of Bennet Well Mineral Resource

Cauldron notes that current WA Labor Government policy presently will not grant mining approvals for uranium mining, and that as such uranium mining will only be possible once that government policy is changed. Cauldron has a reasonable expectation that this will occur based on current public opinion polling and Liberal party policy.

This announcement has been authorised for release by Mr Ian Mulholland, Non-Executive Chairman.

Yours sincerely,  
CAULDRON ENERGY LIMITED

**End**

**Shareholders and Investors are invited to follow the Company on LinkedIn ([here](#)), X / Twitter through @cxuasx ([here](#)), or sign up to the Mailchimp list through [www.cauldronenergy.com.au](http://www.cauldronenergy.com.au)**

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**Competent Person Statement**

The information in this report that relates to Mineral Resources for the Bennett Well Deposit is extracted from a report released to the Australian Securities Exchange (ASX) on 17 December 2015 titled "Substantial Increase in Tonnes and Grade Confirms Bennet Well as Globally Significant ISR Project" and available to view at [www.cauldronenergy.com.au](http://www.cauldronenergy.com.au) and for which Competent Persons' consents were obtained. Each Competent Person's consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.

The Company confirms that is not aware of any new information or data that materially affects the information included in the original ASX announcement released on 17 December 2015 and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the original ASX announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original ASX announcement.

The information in this report that relates to the Exploration Target for the Yanrey Uranium Project is based on information compiled by Mr Ian Mulholland, B.Sc.(hons), M.Sc., Non-Executive Chairman of Cauldron Energy, who is a Fellow of the Australasian Institute of Geoscientists. Mr Mulholland has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration, Results, Mineral Resource and Ore Reserves (JORC Code 2012). Mr Mulholland consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

**Forward Looking Statements**

This announcement may include forward-looking statements, based on Cauldron's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Cauldron, which could cause actual results to differ materially from such statements. Cauldron makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of the announcement.