ASX Announcement
22 April 2024

ACCELERATION OF PREPARATIONS FOR COMMENCEMENT OF MAJOR URANIUM DRILLING PROGRAMME AT YANREY

Air-core drilling programme expanded, drilling and wireline geophysical contractors engaged, heritage clearance survey for additional exploration drilling sites booked for May, and camp upgrade underway

Key Points

- Significant progress being made in respect of logistics, camp upgrade and site preparation in expectation of the near-term commencement of CXU's CY2024 Drilling Programme consisting of 251 holes for ~25,000 metres of drilling;
- Wallis Drilling engaged to provide air-core drilling services, and Wireline Services engaged to provide downhole geophysical gamma radiation logging and rock formation density data measurements;
- CXU's CY2024 Drilling Programme is designed to:
  - expand and further upgrade the resource confidence of the existing JORC (2012) Mineral Resource Estimate (MRE) of 38.8Mt @ 360 ppm eU_3O_8 for 30.9 Mlbs of contained uranium oxide (U_3O_8) - refer Appendix A for MRE Statement;
  - test the potential to substantially increase uranium mineral resources at new targets as identified in the Exploration Target for Yanrey Uranium Project (released to ASX on 24 January 2024) – refer Appendix B; and
  - enhance project economics already defined in Scoping Study (released to ASX on 13 December 2023).
- Phase 1 Drilling programme of up to 8,000 metres is cleared for work to commence with full heritage clearance and work approvals by DMIRS;
- Heritage clearance survey to facilitate Phase 2 extension and new target air-core drilling sites booked for late May, much of which has already been approved by DMIRS.

Commenting on these recent developments for the Yanrey Uranium Project, Cauldron's Chief Executive Officer, Jonathan Fisher, said:

"With the recent increase in interest and attention on future sources for global uranium supply, it is very pleasing that we are making excellent progress on the near-term commencement of our high impact uranium drilling programmes at Bennet Well and the greater Yanrey Project area. Accordingly, we anticipate a steady flow of strong news from our multi-phased drilling programmes scheduled for this calendar year.

I also note the positive collaboration and relationship with Thalanyji, which will enable Cauldron to bring forward its heritage clearance field work into May for CXU's Phase 2 drilling programme. This is a very important driver to accelerate our work and, in conjunction with DMIRS POW approvals, will greatly assist CXU to build its in-the-ground resources.

I reaffirm that Cauldron is committed to uranium exploration in WA and while momentum builds to an eventual change in uranium policy in the state, discovering and banking plentiful uranium pounds to Cauldron's balance sheet is one of the highest leverage shareholder value-adding activities we can undertake."

Cauldron Energy Limited (ASX: CXU) ("Cauldron" or **"the Company")** is pleased to report that significant progress is being made in respect to the near-term commencement of an expanded infill and extension air-core drilling programme at Cauldron's Yanrey Uranium Project.

The selection of highly regarded drilling contractor Wallis Drilling to provide air-core drilling services to Cauldron during CY2024 is an important appointment. As inventor of the air-core drilling process and as the previous provider of air-core drilling services at Yanrey, Wallis is well positioned and experienced to provide the requisite equipment and experience to facilitate the best outcomes from these planned drilling activities.

For uranium exploration work at Yanrey, drilling must be supported by downhole wireline logging to record gamma radiation and rock formation densities. Wireline Services Group has been servicing exploration, mining, hydrology and geotechnical industries in Australia since 1995, in Canada since 2012 and is well experienced and positioned to provide downhole logging services for the Yanrey drilling programme.

The calendar year (CY) 2024 drilling programme at Yanrey consisting of approximately 251 holes for ~25,000 metres of drilling is expected to commence during Q2 2024, and to comprise two distinct phases.

The Phase 1 drilling programme of up to 8,000 metres will be centred on and around the Bennet Well Uranium Deposit and is designed to:

- test for extensions to known uranium mineralisation to expand the existing Bennet Well Mineral Resources; and
- provide infill drilling to expand and 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.

In addition, the Phase 1 will include testing of a small number of high-priority targets previously undrilled in the immediate vicinity of the Bennet Well Uranium Deposit.

The requisite Programme of Works (POWs) for the Phase 1 drilling have been approved by Department of Energy, Mines, Industry Regulation and Safety ("DMIRS") and Heritage Clearance over the proposed Phase 1 drilling areas was completed in 2015, and approved by the Buurabalayji Thalanyji Aboriginal Corporation ("Thalanyji").

Following recent discussions with Thalanyji, Cauldron is pleased to report that Thalanyji has agreed to carry out heritage clearance work over additional exploration areas at Yanrey during a 10 day field period in late May 2024. This is an excellent outcome for the Company as it will enable the bringing forward of the proposed Phase-2 drilling work once heritage clearance work is completed and DMIRS remaining POW applications have been approved.

The Phase 2 drilling programme can be expected to immediately follow Phase 1 and is being planned on that basis.

Drilling Programme objectives

Based on exploration work carried out at Yanrey to date, twenty-two (22) exploration target areas have been identified based on geophysical (including airborne magnetics and electromagnetics, and passive seismic survey lines), previous drilling (>80 holes) and geological parameters. For full details, refer to the Exploration Target for Yanrey Uranium Project (released to ASX on 24 January 2024).

The aim of identifying exploration target areas is to assist with predicting where new palaeochannels might exist, or where existing palaeochannels, might extend. To test these targets, ten (10) of the 22 target areas are now planned to be tested with 251 drill holes for approximately 25,100 metres of air-core drilling during 2024.

The planned phase 1 air-core drilling programme will test 6 of the target areas (refer to Table 1 below) and the future phase 2 drilling programme will target further extensions to the phase 1

targets as well as 4 additional target areas with up to 171 drill holes for approximately 17,100 metres of drilling.

Figure 1 (below) shows the location of the Yanrey Project Exploration Target areas 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 $_eU_3O_8$) and Cauldron Tenements (red outlines).

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

The Company has plans to conduct further exploration drilling programmes over the next 3 years, aimed at discovering new uranium mineralisation and upgrading the resource confidence of the existing Bennet Well Mineral Resources.

Table 1: Planned Phase 1 drilling target summary

Target	Target Area ID	Number of holes proposed	Metres of drilling 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	9	900	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	6	600	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	8	800	To test for a possible new channel to the south of Bennet Well Deep South
	TOTAL =	**80**	**8,000**	

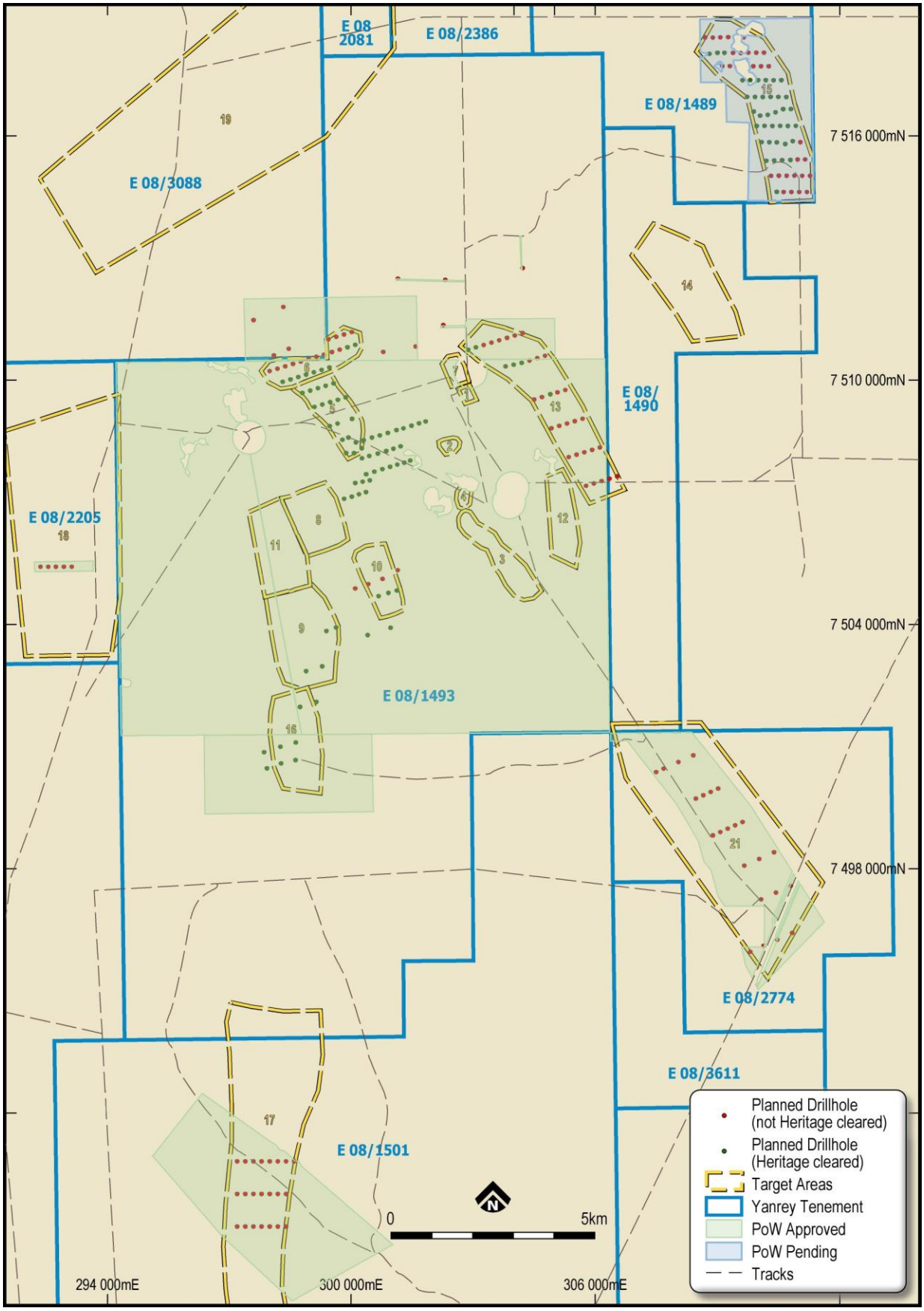


Figure 1: Location of target areas and proposed air-core drill holes for phase 1 and 2 programmes in 2024

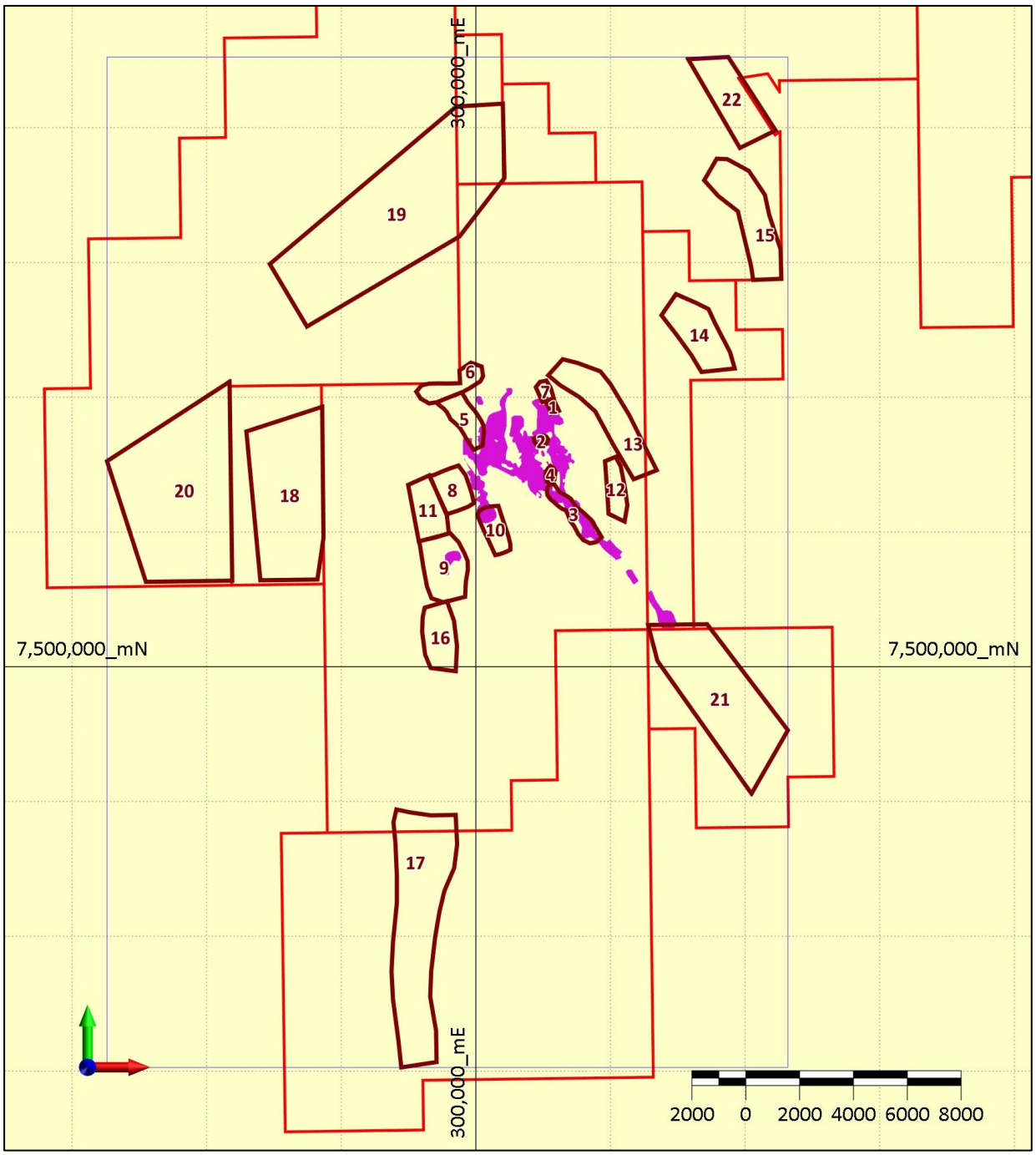


Figure 2: Yanrey Project Exploration Targets (brown outlines) with Bennet Well Mineral Resource (purple >150ppm eU_3O_8), and Cauldron tenements (red outlines)

Project location

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^2, mineralisation remains open to the north and south, and has the potential to be a much larger mineral resource than currently defined.

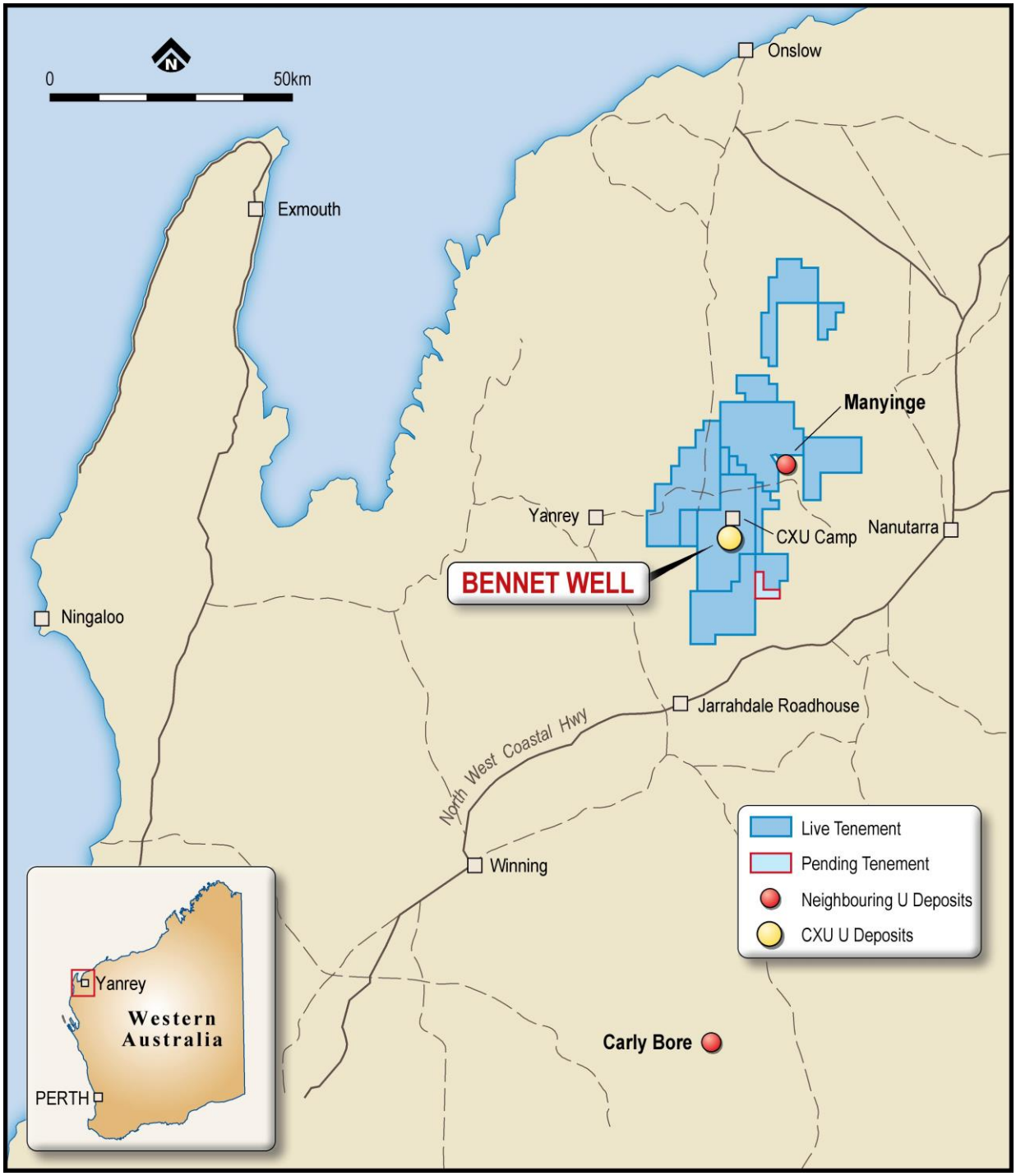


Figure 3: Location of Yanrey Uranium Project

Camp Upgrade

During April 2024, Terra Search attended site and undertook an independent assessment of suitability of camp to facilitate CXU's CY2024 drilling program and sufficiency to accommodate up to ten persons commencing May 2024.

The assessment included amongst other things: electrical wiring testing, electrical equipment testing, generator testing, water testing, suitability of existing fuel tanks and fuel availability, sufficiency of accommodation, ablutions, kitchen, office and storage, communications, fire safety, cyclone rating and preparedness, waste disposal facilities, etc.

A small list of items to address was reported, and are being actioned, none of which will delay the commencement of the drill program.

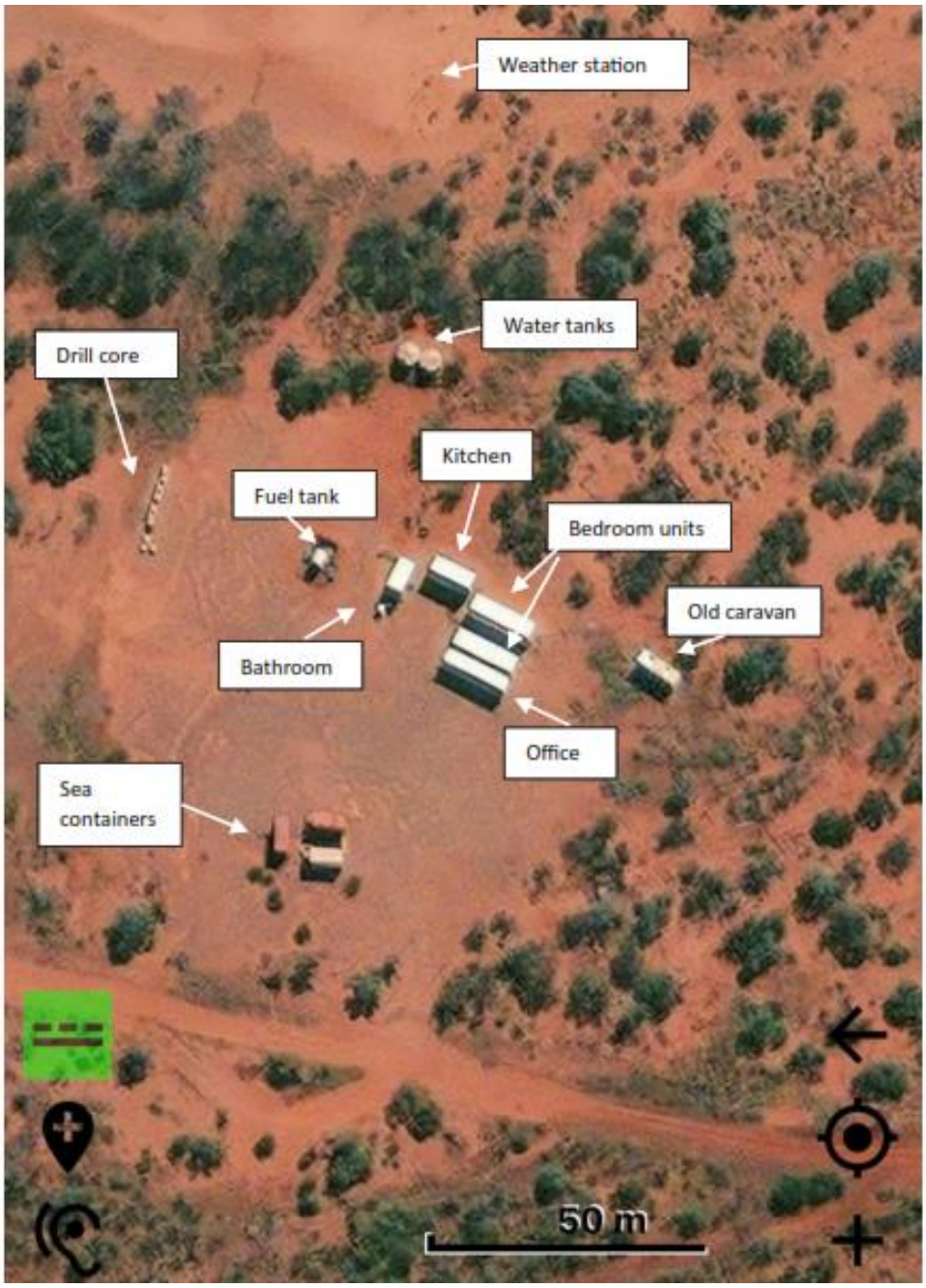
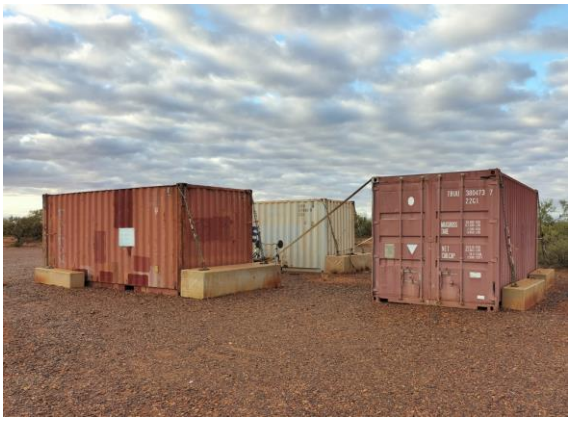


Figure 4: Overhead View of Camp at Yanrey Uranium Project





Images of faclities and equipment at Yanrey Camp

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

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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

Enquiries may be directed to:

Jonathan Fisher
Chief Executive Officer
Cauldron Energy Limited
M: +61 407 981 867
jonathan.fisher@cauldronenergy.com.au

Michael Fry
Director and Company Secretary
Cauldron Energy Limited
M: +61 417 996 454
michael.fry@cauldronenergy.com.au

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 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.

Unless otherwise stated, where reference is made to previous releases of a Mineral Resource Estimate for the Bennet Well Uranium Deposit in this announcement, 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 extracted from a report released to the Australian Securities Exchange (ASX) on 24 January 2024 titled "Yanrey Uranium Project Exploration Target" and available to view at www.cauldronenergy.com.au and for which a Competent Person's consent was obtained. The 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 the form and context in which the Competent Persons' findings are presented have not been materially modified from the original ASX announcement.

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.

Appendix A: Bennet Well Mineral Resource Estimate

A Mineral Resource Estimate (JORC 2012) for the mineralisation at Bennet Well was completed by Ravensgate Mining Industry Consultants (Ravensgate) in 2015 and is based on information compiled by Mr Jess Oram, Executive Director of Cauldron Energy and Mr Stephen Hyland, who was a Principal Consultant of Ravensgate. Mr Oram is a Member of the Australasian Institute of Geoscientists and Mr Hyland is a Fellow of the Australasian Institute of Mining and Metallurgy.

The mineralisation at Bennet Well is a shallow accumulation of uranium hosted in unconsolidated sands close to surface (less than 100 m downhole depth) in Cretaceous sedimentary units of the Ashburton Embayment.

The Bennet Well deposit is comprised of four spatially separate deposits; namely Bennet Well East, Bennet Well Central, Bennet Well South and Bennet Well Channel.

The Mineral Resource (JORC 2012) estimate is:

- Inferred Resource: 16.9 Mt at 335 ppm eU_3O_8 for total contained uranium-oxide of 12.5 Mlb (5,670 t) at 150 ppm cut-off;
- Indicated Resource: 21.9 Mt at 375 ppm eU_3O_8 for total contained uranium-oxide of 18.1 Mlb (8,230 t) at 150 ppm cut-off;
- total combined Mineral Resource: 38.9 Mt at 360 ppm eU_3O_8, for total contained uranium-oxide of 30.9 Mlb (13,990 t) at 150 ppm cut-off.

Table: Mineral Resource (JORC 2012) at various cut-off

Deposit	Cutoff (ppm eU_3O_8)	Deposit Mass (t)	Deposit Grade (ppm eU_3O_8)	Mass U_3O_8 (kg)	Mass U_3O_8 (lbs)
Bennet Well_Total	125	39,207,000	355	13,920,000	30,700,000
Bennet Well_Total	**150**	**38,871,000**	**360**	**13,990,000**	**30,900,000**
Bennet Well_Total	175	36,205,000	375	13,580,000	29,900,000
Bennet Well_Total	200	34,205,000	385	13,170,000	29,000,000
Bennet Well_Total	250	26,484,000	430	11,390,000	25,100,000
Bennet Well_Total	300	19,310,000	490	9,460,000	20,900,000
Bennet Well_Total	400	10,157,000	620	6,300,000	13,900,000
Bennet Well_Total	500	6,494,000	715	4,640,000	10,200,000
Bennet Well_Total	800	1,206,000	1175	1,420,000	3,100,000

Deposit	Cutoff (ppm U_3O_8)	Deposit Mass (t)	Deposit Grade (ppm U_3O_8)	Mass U_3O_8 (kg)	Mass U_3O_8 (lbs)
BenWell_Indicated	125	22,028,000	375	8,260,000	18,200,000
BenWell_Indicated	**150**	**21,939,000**	**375**	**8,230,000**	**18,100,000**
BenWell_Indicated	175	21,732,000	380	8,260,000	18,200,000
BenWell_Indicated	200	20,916,000	385	8,050,000	17,800,000
BenWell_Indicated	250	17,404,000	415	7,220,000	15,900,000
BenWell_Indicated	300	13,044,000	465	6,070,000	13,400,000
BenWell_Indicated	400	7,421,000	560	4,160,000	9,200,000
BenWell_Indicated	500	4,496,000	635	2,850,000	6,300,000
BenWell_Indicated	800	353,000	910	320,000	700,000

Deposit	Cutoff (ppm U_3O_8)	Deposit Mass (t)	Deposit Grade (ppm U_3O_8)	Mass U_3O_8 (kg)	Mass U_3O_8 (lbs)
BenWell_Inferred	125	17,179,000	335	5,750,000	12,700,000
BenWell_Inferred	**150**	**16,932,000**	**335**	**5,670,000**	**12,500,000**
BenWell_Inferred	175	14,474,000	365	5,280,000	11,600,000
BenWell_Inferred	200	13,288,000	380	5,050,000	11,100,000
BenWell_Inferred	250	9,080,000	455	4,130,000	9,100,000
BenWell_Inferred	300	6,266,000	535	3,350,000	7,400,000
BenWell_Inferred	400	2,736,000	780	2,130,000	4,700,000
BenWell_Inferred	500	1,998,000	900	1,800,000	4,000,000
BenWell_Inferred	800	853,000	1285	1,100,000	2,400,000

Note 1: table shows rounded numbers therefore units may not convert nor sum exactly**Note 2***:* preferred 150 ppm cut-off shown in bold.

Appendix B: Exploration Target for Yanrey Uranium Project

Table: Exploration target for Yanrey Uranium Project

	Tonnage and Grade Range	
Exploration Target	**Tonnes (Mt)**	**Grade (ppm eU_3O_8)**
Lower	**20.4**	**326**
Upper	**66.2**	**464**

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_3O_8) and Cauldron Tenements (red outlines).

The planned Phase 1 air-core drilling programs will test 6 of the previously identified 22 target areas and the planned Phase 2 drilling program will target a further 4 target areas.

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 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.