# Yanrey Uranium Project Exploration Target

## Highlights

- Revised Exploration Target for Yanrey Uranium Project incorporating work programs conducted in recent years (post 2015)
- Exploration Target encapsulates twenty-two target areas identified based on geophysical and geological parameters
- Exploration Target is additional to existing JORC (2012) Mineral Resource Estimate (MRE) of 38.8Mt @ 360 ppm $eU_3O_8$ for 30.9 Mlbs of contained uranium oxide ($U_3O_8$)
- additional mineral resources can be expected to enhance project economics already defined in Scoping Study

**Cauldron Energy Limited (ASX: CXU) ("Cauldron"** or **"the Company")** is pleased to publish a revised Exploration Target for the Yanrey Uranium Project which, together with the MRE previously reported, confirms the status of Yanrey as a globally significant uranium project.

The revised Exploration Target encapsulates twenty-two (22) target areas, based on geophysical (including airborne magnetics and electromagnetics, and passive seismic survey lines), previous drilling (>80 holes) and geological parameters.

Several of the target areas do not have previous drilling, and as such have been assigned zero tonnes and grade at the present time. It is anticipated that with further drilling, these target areas may be assigned tonnage and grade ranges.

**Table 1: Exploration Target**

| | Tonnage and Grade Range | | Exploration Target Range |
|---|---|---|---|
| **Exploration Target** | **Tonnes (Mt)** | **Grade (ppm $eU_3O_8$)** | **Contained Uranium (Mlbs $U_3O_8$)** |
| **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.**

Commenting on the Yanrey Uranium Project Exploration Target Cauldron's Chief Executive Officer, Jonathan Fisher, said:

*"The Company is pleased to provide this revised Exploration Target which illustrates the outstanding potential of our Yanrey Uranium Project.*

*The Bennet Well, and the wider Yanrey uranium project area, represent a significant opportunity to discover and ultimately develop uranium mineral resources in a first world regulatory environment and mining jurisdiction.*

*We look forward to soon commencing a drill program which aims to drill test a number of the prospective areas outlined in the Exploration Target with the potential to define new areas of mineralisation."*

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## 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 1).

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.

A +25,000m drill program is planned to be conducted during 2024 and aims to test several of the Exploration targets, as well as undertaking infill drilling to upgrade parts of the existing mineral resource from Inferred to Indicated resource status.

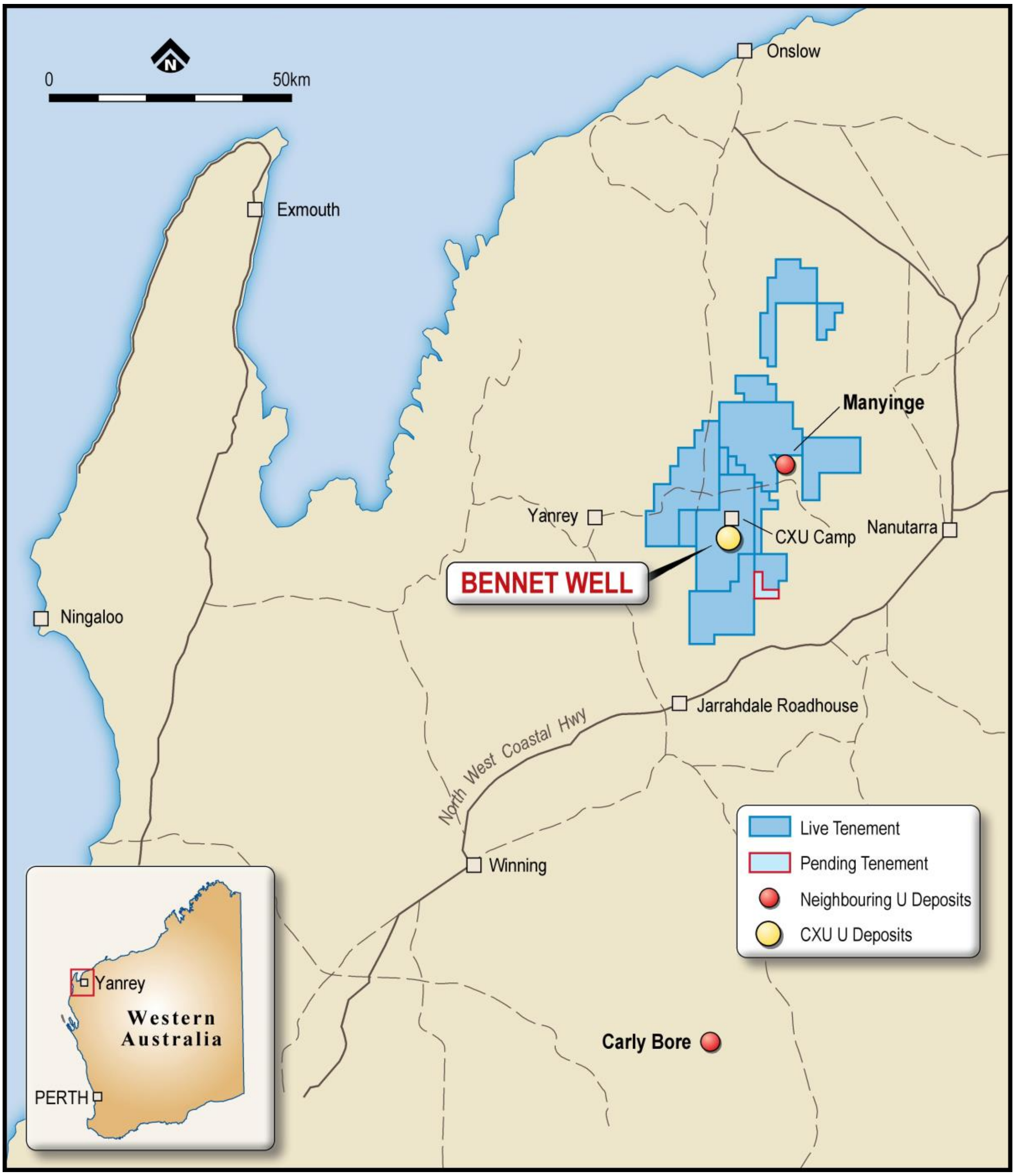


Figure 1: Location of Yanrey Uranium Project

## 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.

Localisation of mineralisation at Bennet Well can be seen in the regional-scale airborne EM and is marked by complexity in the interpreted channel morphology. This occurs particularly where a northwest-southeast oriented, lower-order structure (interpreted as a channel and modelled by a linear and narrow, mildly conductive feature) intersects a major north-south trending, semi-regional scale structure.

The genetic models that can be used to explain this correlation between complex channel morphology and mineralisation may be:

- Complex channel morphology slowed the flow of the initial sedimentation thus allowing for the accumulation of woody detritus or development of organic-rich, lignitic material in quiescent conditions formed during sedimentation. On later basin reactivation, these carbon-rich areas became the reductant required to fix uranium as grain coatings and pore-space infillings of the sediment, or
- Complex channel morphology occurs at the intersection of faults affecting the basement, thus allowing for the inter-mixing of uraniferous groundwater with gaseous reductants (such as methane or di-hydrogen sulphide) that have migrated across the sedimentary sequences.

The exploration model at the Yanrey project revolves around identifying complex palaeochannel morphology which may then become targets for follow-up scout drill testing. The order of exploration work using this model is:

- Fly new airborne EM data at regional to semi-regional scale to identify location of palaeochannels;
- At more local scale, follow-up EM-defined areas of interest that show complex (or potential for complex) channel morphology with the acquisition of high-resolution gravity and passive seismic survey data;
- Drill target areas of complex palaeochannel morphology with scout drill testing (if not already completed by Cauldron or some past explorer), and
- Follow-up drill testing of anomalies identified by scout drilling.

Recent exploration work by Cauldron has used new understanding of mineralisation at the Bennet Well deposit to improve the exploration model so that it can be more predictive. The minerals / system-style exploration model presents all data (airborne magnetics, airborne EM, ground-based gravity and passive seismic, drilling and associated geochemistry) in three dimensions which aims to show inter-relationship and potential causal links between each dataset and mineralisation. The model becomes the foundation on which to plan future mineral exploration programs, with the aim of increasing the known resource at Bennet Well and also in the extensive and highly prospective tenement areas of the Yanrey project.

Further information about the passive seismic surveys can be found in a previous announcement (ASX:CXU 23 November 2021).

## Bennet Well Mineral Resource

The Mineral Resource Estimate for Bennet Well and its classification is shown in Appendix 2 and summarised as a total Indicated plus Inferred Resource (JORC 2012) of **38.9 million tonnes @ 360 ppm $eU_3O_8$ for 30.9 million pounds (13,990 tonnes) of contained uranium oxide, using a cut-off of 150 ppm $eU_3O_8$** (ASX 17 December 2015).

Refer Appendix 2 for detailed information in relation to the above reported Mineral Resource Estimate for Bennet Well.

Figure 2 shows the various grade ranges for the resource.

## Exploration Target Areas

Exploration target areas have been chosen using a combination of geophysical and geological parameters, 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. Drilling data and geological models have been useful geological tools.

Twenty-two (22) target areas (Figure 3 and Table 2) have been defined using these parameters, but 10 of these (highlighted in grey in Table 2) have not had any prior drilling and therefore have not been included in the Exploration Target. It is possible, once some of the undrilled areas are tested with drilling, that they may be added to the Exploration Target in due course.

Four of the target areas (viz. 1 - 4) were part of the previously reported Exploration Target (ASX:CXU 22 September 2015) and now have Mineral Resources defined within them, so are no longer included in the project Exploration Target.

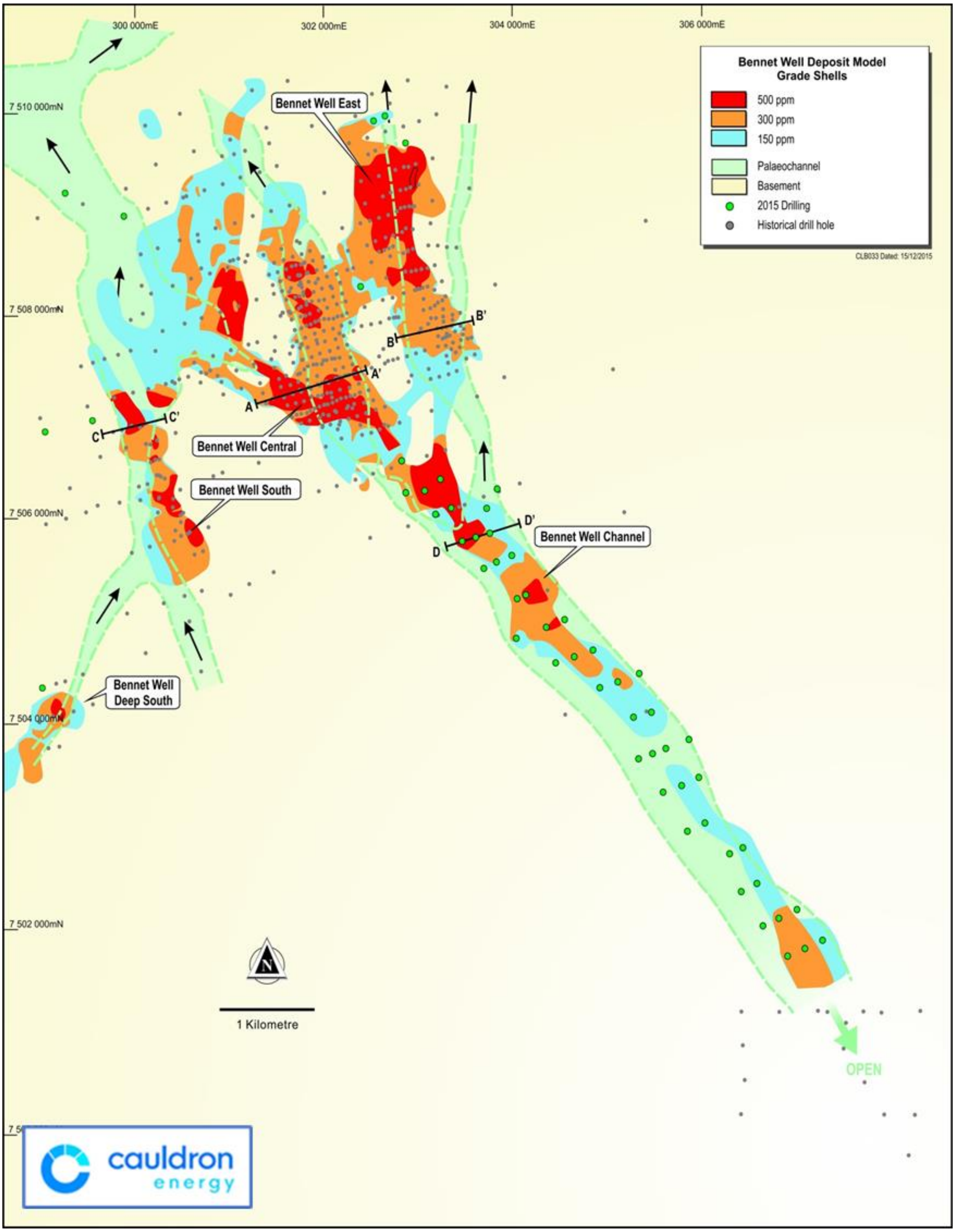


Figure 2: Plan view of Bennet Well Mineral Resource

## Table 2: Exploration Targets

| Area | Target Area ID | Maximum grade intersected to date | Target Size Category | Target Objective | Number of Holes Proposed to Test Target in 2024 |
|---|---|---|---|---|---|
| **Target Area - BW North West** | **5** | YNAC202 - 0.42m @ 397.53ppm from 109.49m | large | To explore a largely untested (or very poorly explored) area of low gravity response to the immediate north west of Bennet Well Central. | **20** |
| **Target Area - BW North West** | **6** | No prior drilling | large | To test mineralisation potential in an untested area of low gravity response to the west of Bennet Well Central. | **23** |
| **Bennet Well East - Northern Extension** | **7** | No prior drilling | small | To test the northern extension to Bennet Well East. Also to validate results from historical drilling. | **0** |
| **Bennet Well South** | **8** | 0.50m @ 160.00ppm from 83.10m | medium | To test: A) a western extension (or possible new channel) to Bennet Well South; B) interpreted forks in mineralisation and channel morphology; C) the existence of a new channel to the west of Bennet Well South | **0** |
| **Bennet Well Deep South** | **9** | YNAC277 - 2.40m @ 412.19ppm from 60.41m | large | To test potential northern and southern extensions to Bennet Well Deep South as well as possible additional channel limbs | **4** |
| **Bennet Well South** | **10** | YNDD020 - 1.68m @ 984.43ppm from 81.38m | medium-large | To test for a southern extension to Bennet Well South Mineral Resource | **9** |
| **Bennet Well Deep South** | **11** | No prior drilling | large | Testing an offset observed on an interpreted NNW-SSE magnetic lineament on regional magnetics (to the north-northwest of Bennet Well Deep South) | **0** |
| **Bennet Well Channel / Cheetara Prospect** | **12** | No prior drilling | large | To test a potential area of intersection and channel interaction (mixing of mineralised fluids) between Bennet Well Channel and the Cheetara Prospect | **0** |
| **Cheetara Prospect** | **13** | No prior drilling | large | 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 | **34** |
| **Four Mile Channel** | **14** | 0.60m @ 370.00ppm from 50.05m | large | Testing an interpreted halo to mineralisation from historic hole YRH126 within the Four Mile | **0** |

| | | | | | |
|---|---|---|---|---|---|
| | | | | Channel, ~8 km to the northeast of Bennet Well | |
| **Manyingee Channel** | **15** | 0.40m @ 860.00ppm from 56.80m | large | Testing a possible southern extension to the Manyingee Channel (Paladin-owned, ~4.5 km to the north of the target area). Area of weakly anomalous EM response. | **35 Priority 1 holes, 36 Priority 2 holes** |
| **Bennet Well Deep South** | **16** | No prior drilling | large | To test for a possible new channel to the south of Bennet Well Deep South | **7** |
| **New Palaeochannel / Main Roads Channel** | **17** | 0.76m @ 415.60ppm @ 58.32m | large | To validate the existence and tenor of mineralisation intersected historically in the New Palaeochannel and Main Roads Channel Prospects, ~14.5 and 21.5 km, respectively, to the south of Bennet Well. | **22** |
| **New Channel West** | **18** | No prior drilling | large | To test for a possible palaechannel detected from passive seismic | **5** |
| **New Channel North** | **19** | No prior drilling | large | To test for possible termination of BW palaeochannel against bedrock | |
| **New Channel Far West** | **20** | No prior drilling | large | To test for extension of possible palaeochannel extending north-west from Target 18 | |
| **Bennet Well Channel Extended** | **21** | 2.10m @ 294.9 ppm from 41.18m | large | To test for extension to BW channel south of Target 3 and defined mineral resource | **28** |
| **Manyingee Channel West** | **22** | No prior drilling | large | To test for possible westerly extension of Manyingee channel west of Target 15 | |

Further details of the Exploration Targets are listed in Appendix 1.

As stated above, the Exploration Target is based on the current geological understanding of the mineralisation geometry supported by a significant amount of geological and geophysical data, resource estimation modelling and surface mapping, however the Exploration Target does not consider factors related to geological complexity, or metallurgical recovery factors. This estimate provides an assessment of the potential scale of the Yanrey project mineralisation beyond the existing MRE and the work programs needed to convert this estimate to a resource in the future.

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 a significant drilling program planned for calendar year 2024 to expand the MRE and to test the validity of the exploration target (see Table 2 above).

Each target area was assessed and its likely extent, taking into account the exploration model, was measured in length and width. A minimum, maximum and average length and width was established (see Table 5). Previous drilling was assessed to estimate a minimum and maximum possible thickness of mineralisation, and the average thickness. These figures were used to estimate a possible minimum, maximum and average volume for the Target (see Table 5). The volume was then multiplied by the average bulk density of mineralisation at Bennet Well, obtained from numerous measurements of drill core as 1.74 g/cm$^3$ (or 1740kg/m$^3$) to derive a minimum, maximum and average potential tonnage. Minimum, maximum and average grades were derived from previous drilling data (see Tables 3, 4 and 5). Grades and tonnage estimates were used to calculate the Exploration Target in Mlbs of $U_3O_8$ potentially present.

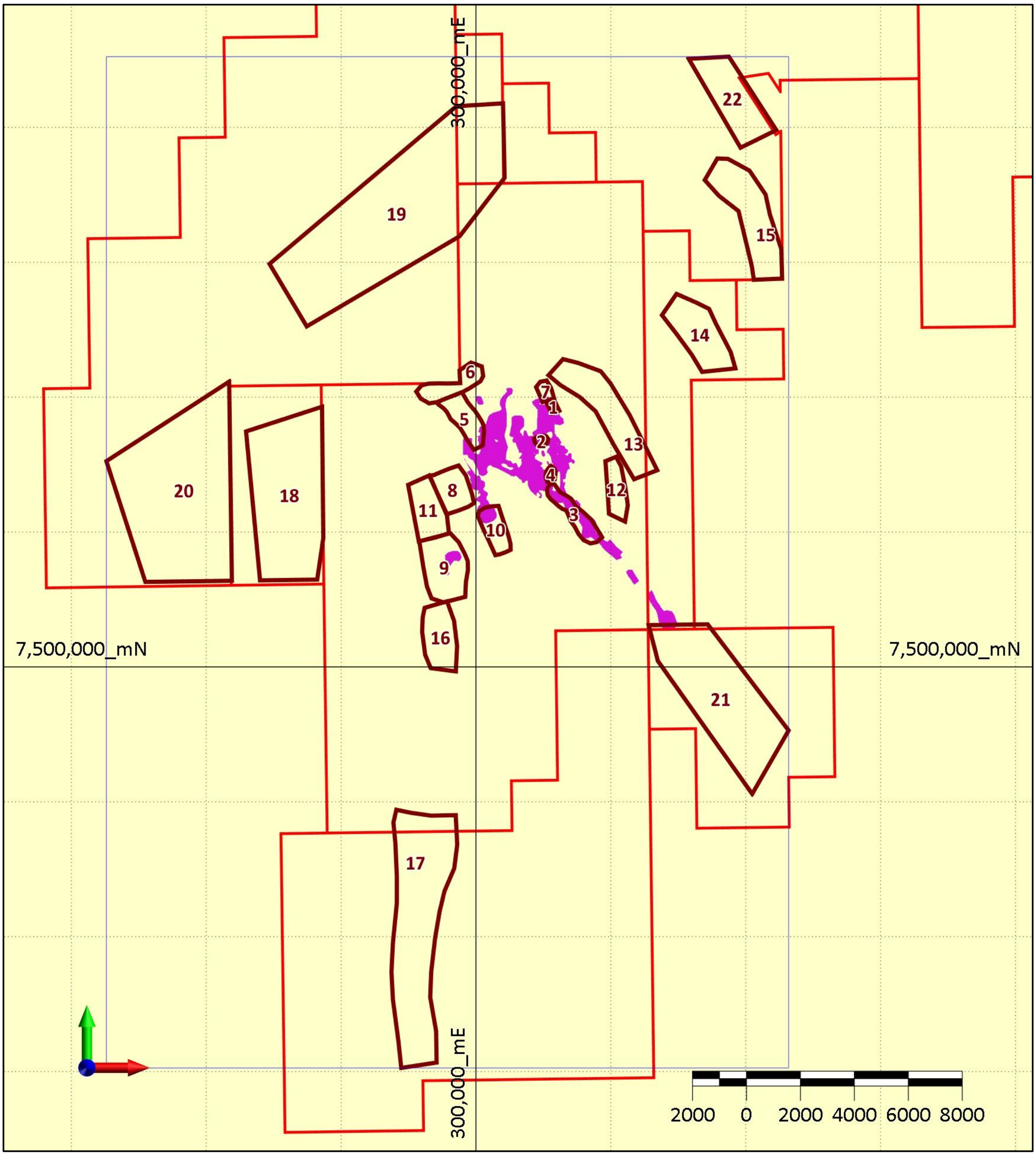


**Figure 3: Yanrey Project Exploration Targets (brown outlines) with Bennet Well Mineral Resource (purple >150ppm $eU_3O_8$), and Cauldron Tenements (red outlines)**

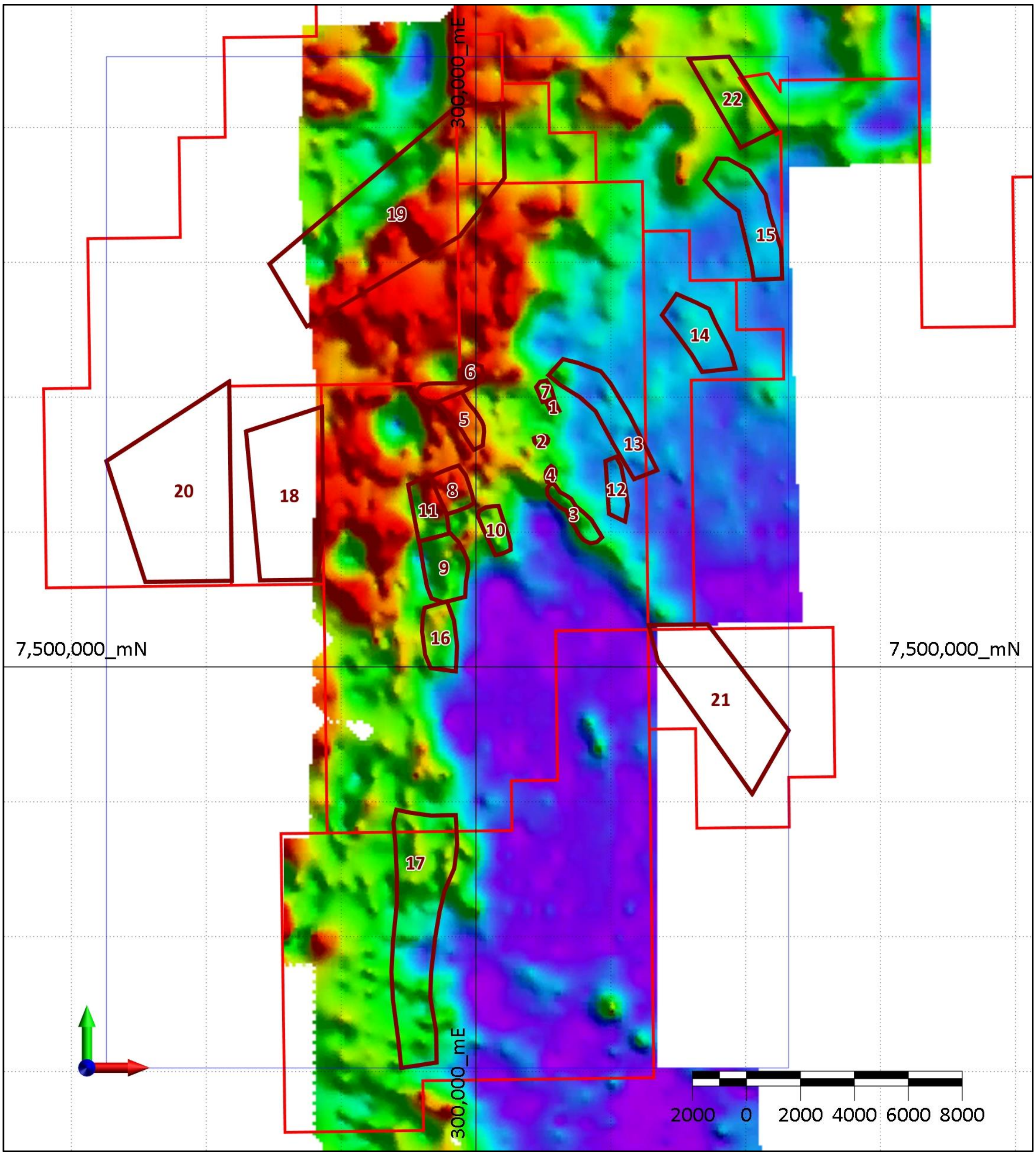


Figure 4: Yanrey Project Exploration Targets with Airborne Electromagnetics

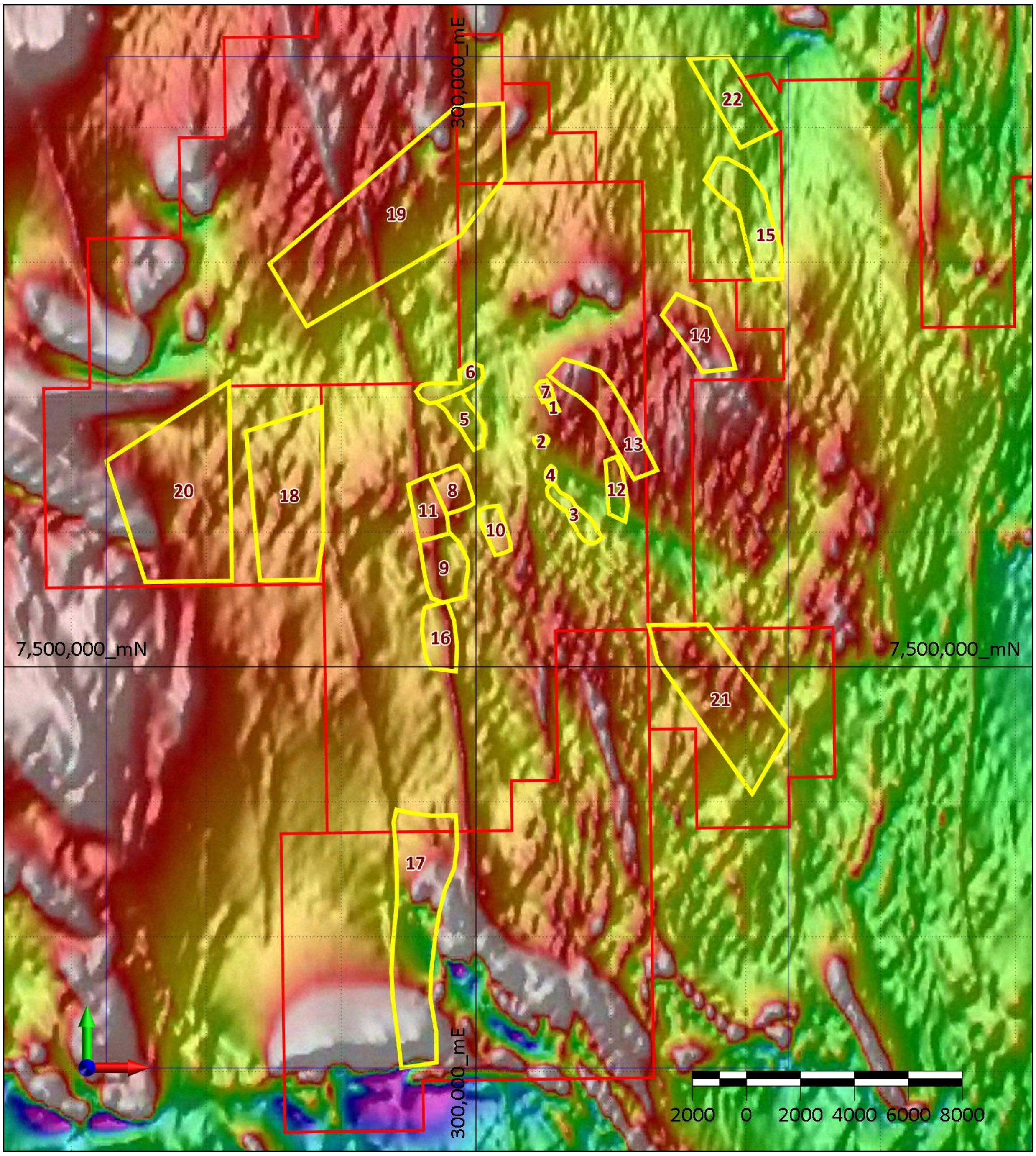


**Figure 5: Yanrey Project Exploration Targets with Airborne Magnetics**

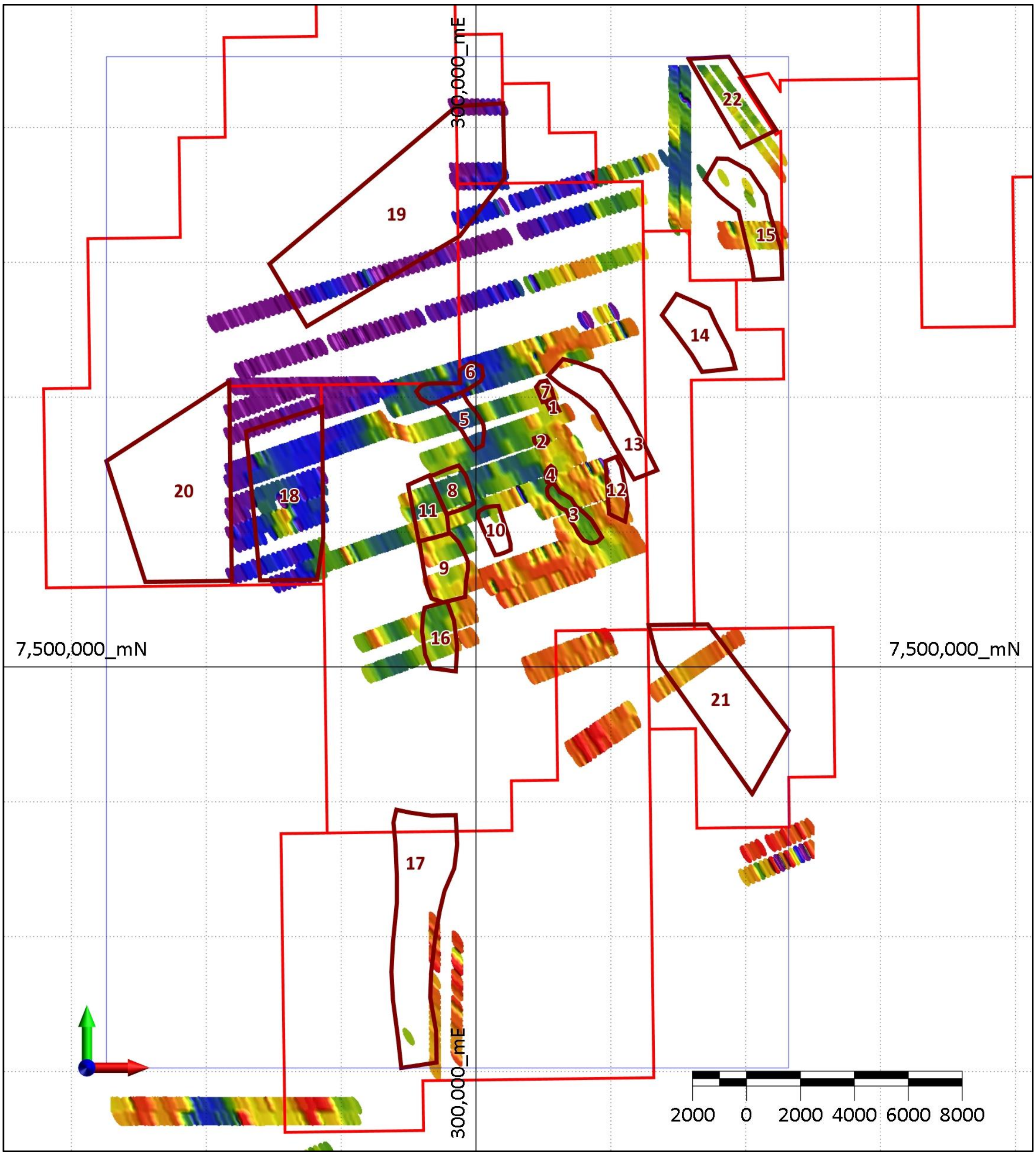


**Figure 6: Yanrey Project Exploration Targets with Passive Seismic Profiles**

Cauldron notes that current WA Labor Government policy 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**

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## Competent Person Statement

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.

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.

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.

## 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 1: Exploration Target Descriptions

***Target 5***

Target 5 is immediately north of an area of defined resources (Figure 3). There has been very little previous drilling over the area. Passive seismic (Figure 6) indicates this may be an area of confluence of the Bennet Well Central and Bennet Well South channels. Airborne EM (Figure 4) and airborne magnetics (Figure 5) show features that could be interpreted to support the presence of a palaeochannel.

***Target 6***

Target 6 is immediately north of Target 5 (Figure 3). There has been no previous drilling over the area. Passive seismic (Figure 6) indicates this may be an area of confluence of the Bennet Well Central and Bennet Well South channels. Airborne EM (Figure 4) and airborne magnetics (Figure 5) show features that could be interpreted to support the presence of a palaeochannel.

***Target 7***

Target 7 is a very small target along the northern extension of Bennet Well East (Figure 3). Passive seismic (Figure 6) and Airborne EM (Figure 4) indicate that continuation of the palaeochannel is possible.

***Target 8***

Target 8 is located to the west of Bennet Well South (Figure 3) and is possibly a new channel indicated by passive seismic (Figure 6).

***Target 9***

Target 9 covers part of the interpreted Bennet Well Deep South channel (Figure 3). There has been some previous drilling over the area, and a mineral resource has been partly defined (Figure 3). Passive seismic (Figure 6) indicates this may be an area of undulating sub-surface topography, and Airborne EM (Figure 4) and airborne magnetics (Figure 5) also indicate the presence of a palaeochannel with the channel being defined by a north-south trending magnetic linear (Figure 5).

***Target 10***

Target 10 covers part of the interpreted Bennet Well South channel (Figure 3). There has been some previous drilling over the area, and a mineral resource has been partly defined (Figure 3). Passive seismic (Figure 6) indicates this may be an area of undulating sub-surface topography, and Airborne EM (Figure 4) and airborne magnetics (Figure 5) indicate the presence of a palaeochannel with the channel possibly being defined by shedding off a magnetic high located to the south-east.

***Target 11***

Target 11 (Figure 3) is a possible offset observed on an interpreted NNW-SSE magnetic lineament on regional magnetics (to the north-northwest of Bennet Well Deep South) (Figure 5). Passive seismic (Figure 6) also supports the possibility of a palaeochannel in this location.

***Target 12***

Target 12 is a potential area of intersection and channel interaction (mixing of mineralised fluids) between Bennet Well Channel and the Cheetara Prospect (Figure 3). Passive seismic (Figure 6) does not really cover it, and airborne EM (Figure 4) and magnetics (Figure 5) are not conclusive.

**_Target 13_**

Target 13 covers part of the interpreted Bennet Well South channel (Figure 3). There has been some previous drilling over the area, and a mineral resource has been partly defined (Figure 3). Passive seismic (Figure 6) does not cover this area, and instead it is based on airborne EM (Figure 4) and airborne magnetics (Figure 5) which show features that could be interpreted to support the presence of this palaeochannel.

**_Target 14_**

Target 14 is an interpreted halo to mineralisation from historic hole YRH126 within the Four Mile Channel, ~8 km to the northeast of Bennet Well (Figure 3). There is the suggestion of a palaeochannel in airborne EM (Figure 4) and magnetics (Figure 5).

**_Target 15_**

Target 15 covers part of the interpreted Manyingee South channel (Figure 3). Passive seismic indicates this may be an area of undulating sub-surface topography (Figure 6), and Airborne EM (Figure 4) and airborne magnetics (Figure 5) also indicate the presence of a palaeochannel.

**_Target 16_**

Target 16 covers part of the interpreted Bennet Well Deep South channel (Figure 3). There has been some previous drilling over the area. Passive seismic (Figure 6) indicates this may be an area of undulating sub-surface topography, which could indicate the presence of a palaeochannel. Airborne EM (Figure 4) and airborne magnetics (Figure 5) show features that could be interpreted to support the presence of this palaeochannel with the channel being defined by a north-south trending dyke (magnetic linear in Figure 5).

**_Target 17_**

Target 17 is located some 20km south of Bennet Well (Figure 3). There has been almost no previous drilling over the area. Passive seismic (Figure 6) does not indicate much, since most of the target area was not covered by it. Airborne EM (Figure 4) and airborne magnetics (Figure 5) show features that could be interpreted to support the presence of this palaeochannel with the potential channel being defined by a magnetic low.

**_Target 18_**

Target 18 is a possible palaechannel detected from passive seismic (Figure 6). There is no airborne EM coverage (Figure 4).

**_Target 19_**

Target 19 is the possible termination of the Bennet Well palaeochannels against a bedrock high indicated in airborne magnetics (Figure 5).

**_Target 20_**

Target 20 is a possible extension of the palaeochannel extending north-west from Target 18 (Figures 3 and 6).

**_Target 21_**

Target 21 is located some 10km south of Bennet Well (Figure 3), along the trend of the Bennet Well Channel. There has been almost no previous drilling over the area, but the adjacent area to the north has mineral resources defined (Figure 3). There is only one line of passive seismic coverage (Figure 6). Airborne EM (Figure 4) has no coverage, while airborne magnetics (Figure 5) show features that could be interpreted to support a shallowing of cover rocks above magnetic basement.

### Table 3: Exploration Target Estimations

| Area | Target Area ID | Min Grade ($eU_3O_8$ ppm)** | Max Grade ($eU_3O_8$ ppm)** | Average Grade ($eU_3O_8$ ppm)** | Estimated Min Tonnage (t)* | Estimated Max Tonnage (t)* | Average Estimated Tonnage (t)* | Minimum Target (Mlbs)*** | Maximum Target (Mlbs)*** |
|---|---|---|---|---|---|---|---|---|---|
| Target Area - BW North West | 5 | 290 | 398 | 344 | 690,042 | 1,341,749 | 1,150,070 | 0.52 | 1.02 |
| Target Area - BW North West | 6a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| Bennet Well East - northern extension | 7a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| Bennet Well South | 8 | 160 | 160 | 160 | 891,113 | 1,591,274 | 1,591,274 | 0.31 | 0.56 |
| Bennet Well Deep South | 9 | 150 | 676 | 396 | 2,116,865 | 14,632,704 | 7,499,261 | 1.85 | 12.76 |
| Bennet Well South | 10 | 142 | 1269 | 696 | 521,165 | 2,630,880 | 1,675,620 | 0.80 | 4.04 |
| Bennet Well Deep South | 11a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| Bennet Well Channel / Cheetara Prospect | 12a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| Cheetara Prospect | 13a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| Four Mile Channel | 14 | 370 | 370 | 370 | 2,441,457 | 3,814,776 | 3,814,776 | 1.99 | 3.11 |
| Manyingee Channel | 15 | 860 | 860 | 860 | 2,694,021 | 4,209,408 | 4,209,408 | 5.11 | 7.98 |
| Bennet Well Deep South | 16a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| New Palaeochannel / Main Roads Channel | 17 | 416 | 416 | 416 | 6,885,790 | 10,759,046 | 10,759,046 | 6.31 | 9.86 |
| New Channel West | 18a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| New Channel North | 19a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| New Channel Far West | 20a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| Bennet Well Channel Extended | 21 | 208 | 208 | 208 | 4,142,592 | 27,185,760 | 12,427,776 | 1.90 | 12.47 |
| Manyingee Channel West | 22a | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 |
| **Total** | | **326** | **464** | **391** | **20,383,044** | **66,165,597** | **43,127,231** | **18.8** | **51.8** |

** Average thickness and SG taken from Table 4*
*** calculated using Average Grades from existing drilling within target area - Table 4*
**** calculated using Min and Max Grades from existing drilling in target area - Table 4*
*a - these targets do not contain any drilling from which to calculate tonnages and grades, therefore no exploration targets have been estimated*

## Table 4: Historical Drilling Results for Exploration Target Areas

| Target Area ID | Hole ID | Hole Type | Easting GDA94 | Northing GDA94 | RL (m) | EOH Depth (m) | Depth From (m) | Depth To (m) | Interval Thickness (m) | Grade (ppm $eU_3O_8$) | GT | Average Grade ($eU_3O_8$ ppm) | Average Thickness (m) | Min Grade ($eU_3O_8$) | Max Grade ($eU_3O_8$) | Best Significant Intercept ($eU_3O_8$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | YNAC202 | AC | 300185 | 7508242 | 47 | 120 | 109.49 | 109.91 | 0.42 | 398 | 167 | 344 | 0.36 | 290 | 398 | YNAC202 - 0.42m @ 397.53ppm from 109.49m |
| | YRH131 | RM | 299460 | 7509127 | 44 | 160 | 81.70 | 82.00 | 0.30 | 290 | 87 | | | | | |
| 6 | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | |
| 8 | YRH083 | RM | 299494 | 7506080 | 46 | 90 | 82.60 | 83.10 | 0.50 | 160 | 80 | 160 | 0.50 | 160 | 160 | 0.50m @ 160.00ppm from 83.10m |
| 9 | YNMR088 | RM | 298873 | 7503666 | 45 | 96 | 63.20 | 64.45 | 1.25 | 397 | 496 | 396 | 1.23 | 150 | 676 | YNAC277 - 2.40m @ 412.19ppm from 60.41m |
| | YNAC282 | AC | 298966 | 7503987 | 45 | 102 | 50.90 | 51.52 | 0.62 | 150 | 93 | | | | | |
| | YNAC277 | AC | 299130 | 7504050 | 45 | 90 | 60.41 | 62.81 | 2.40 | 412 | 989 | | | | | |
| | YNDD021 | DD | 299124 | 7504044 | 45 | 68.6 | 54.08 | 55.38 | 1.30 | 460 | 598 | | | | | |
| | YNDD021 | DD | 299124 | 7504044 | 45 | 68.6 | 60.64 | 61.70 | 1.06 | 676 | 717 | | | | | |
| | YNAC321 | AC | 299339 | 7504101 | 46 | 76 | 62.15 | 62.91 | 0.76 | 280 | 213 | | | | | |
| 10 | YNAC264 | AC | 300561 | 7505870 | 47 | 102 | 75.13 | 75.65 | 0.52 | 1269 | 660 | 696 | 1.07 | 142 | 1269 | YNDD020 - 1.68m @ 984.43ppm from 81.38m |
| | YNAC264 | AC | 300561 | 7505870 | 47 | 102 | 82.75 | 84.05 | 1.30 | 468 | 608 | | | | | |
| | YNDD020 | DD | 300538 | 7505854 | 46 | 90.6 | 72.66 | 73.70 | 1.04 | 616 | 640 | | | | | |
| | YNDD020 | DD | 300538 | 7505854 | 46 | 90.6 | 81.38 | 83.06 | 1.68 | 984 | 1654 | | | | | |
| | YNAC281 | AC | 300470 | 7505835 | 46 | 96 | 70.51 | 71.31 | 0.80 | 142 | 114 | | | | | |
| 11 | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 14 | YRH126 | RM | 308596 | 7512134 | 51 | 62 | 50.05 | 50.65 | 0.60 | 370 | 222 | 370 | 0.60 | 370 | 370 | 0.60m @ 370.00ppm from 50.05m |
| 15 | YRH149 | RM | 301631 | 7508035 | 47 | 104.1 | 56.80 | 57.20 | 0.40 | 860 | 344 | 860 | 0.40 | 860 | 860 | 0.40m @ 860.00ppm from 56.80m |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | | | | | | | | | | | | | | | | |
| 17 | YNAC251 | AC | 297782 | 7491963 | 59 | 60 | 58.32 | 59.08 | 0.76 | 416 | 316 | 416 | 0.76 | 416 | 416 | 0.76m @ 415.60ppm from 58.32m |
| 18 | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | |
| 21 | DYNAC004 | AC | 307205 | 7501206 | 51 | 77 | 32.77 | 33.37 | 0.60 | 198 | 119 | 208 | 0.96 | 158 | 317 | DYNAC006 - 2.10m @ 294.9 ppm from 41.18m |
| | DYNAC004 | AC | 307205 | 7501206 | 51 | 77 | 36.32 | 36.92 | 0.60 | 317 | 190 | | | | | |
| | DYNAC004 | AC | 307205 | 7501206 | 51 | 77 | 58.12 | 58.62 | 0.50 | 170 | 85 | | | | | |
| | DYNAC003 | AC | 307302 | 7501197 | 51 | 86 | 40.87 | 41.57 | 0.70 | 225 | 157 | | | | | |
| | DYNAC003 | AC | 307302 | 7501197 | 51 | 86 | 57.87 | 57.57 | 0.70 | 171 | 119 | | | | | |
| | DYNAC005 | AC | 307470 | 7500840 | 53 | 73 | 35.89 | 36.39 | 0.50 | 158 | 79 | | | | | |
| | DYNAC005 | AC | 307470 | 7500840 | 53 | 73 | 60.14 | 61.44 | 1.30 | 163 | 212 | | | | | |
| | DYNAC006 | AC | 307690 | 7500510 | 55 | 69 | 35.18 | 36.83 | 1.65 | 177 | 292 | | | | | |
| | DYNAC006 | AC | 307690 | 7500510 | 55 | 69 | 41.18 | 43.28 | 2.10 | 295 | 619 | | | | | |
| 22 | | | | | | | | | | | | | | | | |

### Table 5: Details used in estimation of Exploration Targets

| | | | Approx. Strike Length (m) | | | Approx. Width (m) | | | Thickness of $eU_3O_8$ (m)* | | | Estimated Volume ($m^3$) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Area** | **Target Area ID** | **Exploration Category** | **Min** | **Max** | **Average** | **Min** | **Max** | **Average** | **Min** | **Max** | **Average** | **Min** | **Max** | **Average** | **Average Dry Bulk Density ($kg/m^3$)**** |
| **Target Area - BW West** | **5** | C | 1944 | 2160 | 2160 | 680 | 850 | 850 | 0.30 | 0.42 | 0.36 | 396,576 | 771,120 | 660,960 | 1740 |
| **Target Area - BW West** | **6** | C | 2286 | 2540 | 2540 | 484 | 605 | 605 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Bennet Well East - northern extension** | **7** | C | 666 | 740 | 740 | 360 | 450 | 450 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Bennet Well South** | **8** | C / D | 1099 | 1570 | 1570 | 932 | 1165 | 1165 | 0.50 | 0.50 | 0.50 | 512,134 | 914,525 | 914,525 | 1740 |
| **Bennet Well Deep South** | **9** | C / D | 1680 | 2400 | 2400 | 1168 | 1460 | 1460 | 0.62 | 2.40 | 1.23 | 1,216,589 | 8,409,600 | 4,309,920 | 1740 |
| **Bennet Well South** | **10** | C | 960 | 1200 | 1200 | 600 | 750 | 750 | 0.52 | 1.68 | 1.07 | 299,520 | 1,512,000 | 963,000 | 1740 |
| **Bennet Well Deep South** | **11** | E | 1760 | 2200 | 2200 | 864 | 1080 | 1080 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Bennet Well Channel / Cheetara Prospect** | **12** | D | 1736 | 2170 | 2170 | 512 | 640 | 640 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Cheetara Prospect** | **13** | C / D | 4152 | 5190 | 5190 | 852 | 1065 | 1065 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Four Mile Channel** | **14** | C | 2320 | 2900 | 2900 | 1008 | 1260 | 1260 | 0.60 | 0.60 | 0.60 | 1,403,136 | 2,192,400 | 2,192,400 | 1740 |
| **Manyingee Channel** | **15** | C / D | 3840 | 4800 | 4800 | 1008 | 1260 | 1260 | 0.40 | 0.40 | 0.40 | 1,548,288 | 2,419,200 | 2,419,200 | 1740 |
| **Bennet Well Deep South** | **16** | E | 1920 | 2400 | 2400 | 904 | 1130 | 1130 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **New Palaeochannel / Main Roads Channel** | **17** | C | 3840 | 4800 | 4800 | 1356 | 1695 | 1695 | 0.76 | 0.76 | 0.76 | 3,957,350 | 6,183,360 | 6,183,360 | 1740 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **New Channel West** | **18** | E | 4620 | 5775 | 5775 | 2322.4 | 2903 | 2903 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **New Channel North** | **19** | E | 7840 | 9800 | 9800 | 2880 | 3600 | 3600 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **New Channel Far West** | **20** | E | 4240 | 5300 | 5300 | 3200 | 4000 | 4000 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Bennet Well Channel Extended** | **21** | C | 4960 | 6200 | 6200 | 960 | 1200 | 1200 | 0.50 | 2.10 | 0.96 | 2,380,800 | 15,624,000 | 7,142,400 | 1740 |
| **Manyingee Channel West** | **22** | E | 2640 | 3300 | 3300 | 960 | 1200 | 1200 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1740 |
| **Total** | | | | | | | | | | | | **11,714,393** | **38,026,205** | **24,785,765** | |

** Average thickness taken from Table 4*
*** Average Dry Bulk Density (sampled core 2013-15) - kg/m3*
***Exploration Categories:***
*A - to improve and upgrade Mineral Resources or to improve metallurgical understanding of the deposit*
*B - to test strike extensions from existing, defined high-grade mineralisation*
*C - to follow-up to test geophysical or geochemical anomalies, in areas of poor drilling density*
*D - to follow-up areas of geophysical or geochemical anomalism, observed in more than one datasets, previously untested by drilling*
*E - to test isolated geophysical/geochemical anomalies in areas previously untested by drilling*

## Appendix 2: Mineral Resource Estimate (JORC 2012) for Bennet Well for various cut-offs

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

| Resource Category | Cutoff (ppm $eU_3O_8$) | Deposit Mass (t) | Deposit Grade (ppm $eU_3O_8$) | Mass $U_3O_8$ (kg) | Mass $U_3O_8$ (lbs) |
|---|---|---|---|---|---|
| Indicated | 125 | 22,028,000 | 375 | 8,260,000 | 18,200,000 |
| **Indicated** | **150** | **21,939,000** | **375** | **8,230,000** | **18,100,000** |
| Indicated | 175 | 21,732,000 | 380 | 8,260,000 | 18,200,000 |
| Indicated | 200 | 20,916,000 | 385 | 8,050,000 | 17,800,000 |
| Indicated | 250 | 17,404,000 | 415 | 7,220,000 | 15,900,000 |
| Indicated | 300 | 13,044,000 | 465 | 6,070,000 | 13,400,000 |
| Indicated | 400 | 7,421,000 | 560 | 4,160,000 | 9,200,000 |
| Indicated | 500 | 4,496,000 | 635 | 2,850,000 | 6,300,000 |
| Indicated | 800 | 353,000 | 910 | 320,000 | 700,000 |

| Resource Category | Cutoff (ppm $eU_3O_8$) | Deposit Mass (t) | Deposit Grade (ppm $eU_3O_8$) | Mass $U_3O_8$ (kg) | Mass $U_3O_8$ (lbs) |
|---|---|---|---|---|---|
| Inferred | 125 | 17,179,000 | 335 | 5,750,000 | 12,700,000 |
| **Inferred** | **150** | **16,932,000** | **335** | **5,670,000** | **12,500,000** |
| Inferred | 175 | 14,474,000 | 365 | 5,280,000 | 11,600,000 |
| Inferred | 200 | 13,288,000 | 380 | 5,050,000 | 11,100,000 |
| Inferred | 250 | 9,080,000 | 455 | 4,130,000 | 9,100,000 |
| Inferred | 300 | 6,266,000 | 535 | 3,350,000 | 7,400,000 |
| Inferred | 400 | 2,736,000 | 780 | 2,130,000 | 4,700,000 |
| Inferred | 500 | 1,998,000 | 900 | 1,800,000 | 4,000,000 |
| Inferred | 800 | 853,000 | 1285 | 1,100,000 | 2,400,000 |

Note:
Total is Indicated plus Inferred Resource.
Tables show rounded numbers therefore units may not convert nor sum exactly.
Preferred 150 ppm cut-off shown in bold.

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# JORC Code, 2012 Edition – Table 1

# Yanrey Project – Yanrey Exploration Target 2024

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Part | Criteria | Explanation | Comment |
|---|---|---|---|
| **1-1** | **Sampling Techniques** | *Nature and quality of sampling (e.g. cut channels, random chips, or specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments etc.). These examples should not be taken as limiting the broad meaning of sampling.* | The principal sampling method for all drilling conducted at the Bennet Well and larger Yanrey projects has been by downhole geophysical gamma logging to determine uranium assay and in-situ formation density data. Data collected at 1 cm sample rate comprised gamma ray (two calibrated sondes on two separate sonde stacks), calliper, dual lateral resistivity, dual induction and triple density. Downhole geophysical log data was collected by contractors, Borehole Wireline Logging Services of Adelaide using GeoVista made downhole slim-line tools.<br><br>Core samples were also collected for the diamond drilling conducted in 2013 and 2014 however these data have not been deemed as being representative of the entire project area and have therefore not been used in the derivation of the Exploration Target.<br><br>All uranium assay grade is determined from deconvolved gamma logs; using non dead-time corrected calibrated gamma sondes, the consecutive application of a smoothing and sharpening filter on the raw data, hole-size correction, moisture correction, and a correction for secular disequilibrium.<br><br>All in-situ formation density estimated from data was collected by a triple density probe; using calibrated density sondes from the three channels of the probe (short spaced, long spaced and bed resolution density). These data were corrected for the high background gamma environment of the mineralised zone (by running the probe without the source in grades above 800 ppm $eU_3O_8$) and for variations in hole-size by applying a hole-size correction model derived from the AMDEL calibration facility. |
| | | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | Downhole gamma logging was performed by Borehole Wireline Pty Ltd using a Geovista 38mm total count gamma probe. Calibration of two gamma sondes was completed using non-dead-time corrected grade and hole-size correction models, and for the density sonde using a density model and a hole-size correction model. |
| | | *Aspects of the determination of mineralisation that are Material to the Public Report.* | Data was collected at 1 cm sample intervals down the length of the drillhole. Uranium assay grades were determined from deconvolved gamma logs using non dead-time corrected calibrated gamma sondes, the consecutive application of a smoothing and sharpening filter on the raw data, hole-size correction, moisture correction, and a correction for secular disequilibrium. |

| | | | |
|---|---|---|---|
| | | | Downhole geophysical logging was undertaken by contractors, Borehole Wireline Logging Services of Adelaide using GeoVista made downhole slim-line tools. |
| | **Drilling Techniques** | *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | Drilling within the Bennet Well – Yanrey project consists of various phases of rotary mud, aircore and diamond core drilling conducted between 1979 (historical) and 2014-2015 (CXU). All holes were drilled vertically. The breakdown of programs is as follows:<br>➢ pre-2013: historical drilling consisting mostly of aircore, comprising 285 holes for a total of 29,065 m and rotary mud, consisting of 95 holes for 8,993 m.<br>➢ 2013: diamond core drilling comprising a total of 8 holes, consisting of 356 m rotary mud pre-collars and 257 m of HQ diamond core tails. The rotary mud pre-collars were drilled at a diameter of 5¼" while the diamond core tails were drilled with triple-tube PQ (diameter 83mm) in areas of hard drilling, and subsequently HQ (61mm) when the target zone of mineralisation was intersected.<br>➢ 2014: approximately 90 % of the drill program was comprised of rotary mud (diameter for a total of 67 holes (5,785 m), while 10% consisted of triple tube diamond-drilled PQ core for a total of 6 holes (534m). The bore wall was stabilised by bentonite muds and chemical polymers. |
| **1-2** | **Drill Sample Recovery** | *Method of recording and assessing core and chip sample recoveries and results assessed.* | Core processing for the 2013 and 2014 diamond drill programs involved checking every run for accuracy on drilling blocks to identify areas of core loss/gain that would then assist with determination of total core recovery. Recoveries of core were measured inside the splits before transferring it to the core trays. The measured recoveries were then logged in a database and later used to determine recovery percentages. Average core recoveries for the 2013 and 2014 programs were 93.6% and 87.8%, respectively.<br>Sample recovery from mud rotary drilling is not required for assay, but during the 2014 program a sample was collected in 1 m downhole increments and laid out near the drill collar for use in logging the downhole lithology, redox state, alteration and the stratigraphic sequence. A specimen sample of each downhole increment for each drillhole remains on-site. |
| | | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | Sample recovery from the mud rotary drilling has never been recorded because a physical sample is unnecessary for assay determination.<br>Triple tube PQ core has been determined as the most effective drilling method (outside of potential use of sonic drilling) to maximize recovery of the mostly unconsolidated interbedded sand and clay sequences hosting the mineralisation. The 2013 and 2014 diamond core programs involved drilling run lengths of 3.0 m outside of the target ore zone and then decreasing the run length to 1.5, 1.0 and even 0.5 m on approach to and within the ore zone itself. The short runs were found to achieve the best overall recovery. |
| | | *Whether a relationship exists between sample recovery and grade and whether sample bias may have* | Cauldron has not identified any relationship between sample recovery and the determination of uranium assay from deconvolved gamma ray data. |

| | | | |
|---|---|---|---|
| | | *occurred due to preferential loss/gain of fine/coarse material.* | Variations in uranium grade caused by changing drillhole size is minimised through an accurate measurement of hole diameter using the calliper tool and application of a hole-size correction factor. Hole-size correction models have been determined by Borehole Wireline, using data collected at the PIRSA calibration facility in Adelaide; with a hole-size correction factor derived as a function of drillhole diameter. |
| **1-3** | **Logging** | *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* | All mud rotary chips are geologically logged and used to assist in the interpretation of the resistivity, induction and density profiles derived from the downhole geophysical sondes. Uranium assay for a potential in-situ leach project requires mineralisation to be hosted in a porous sedimentary sequence that is readily leachable, and is determined for the former geophysical data and the mud rotary chips.<br><br>The drill core was also geologically logged in greater detail than that undertaken during the logging of the mud rotary chips. This information was later used in a deposit-wide geological interpretation exercise and the subsequent establishment of a working 3D exploration model that has also been used in the derivation of the Exploration Target as well the planning and design of the proposed work to test these Targets.<br><br>No geotechnical data was collected due to the generally flat-lying geology and mostly unconsolidated sediments. |
| | | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* | The geological logging completed was both qualitative (sediment/rock type, colour, degree of oxidation, etc.) and quantitative (recording of specific depths and various geophysical data).<br><br>The chip samples were sieved and photographed wet (lightly sprayed with water) and dry. Selected half-core zones were also photographed by Core Labs Australia, (Kewdale, W.A.), showing the cut and cleaned surfaces. |
| | | *The total length and percentage of the relevant intersections logged.* | All mud rotary chip samples and core samples were geologically logged. All drillholes from the 2013 and 2014 programs were logged with the downhole geophysical probes. |
| **1-4** | **Sub-Sampling Techniques and Sample Preparation** | *If core, whether cut or sawn and whether quarter, half or all core taken.* | Most of the core from the 2013 program was cut on-site in half using an angle grinder and chisels by the Site Geologist since the core was loosely consolidated. More consolidated core was cut at Core Labs (Kewdale, W.A.) using a diamond blade saw.<br><br>Core from the 2014 program was treated differently. Immediately after the drilled core was measured and logged, the trays containing the target mineralised zones would be separated from the 'barren' core. Core from the mineralised zone were wrapped in cling-wrap and the whole trays were then stored and transported within freezers for delivery to Core Labs, Kewdale W.A.<br><br>Drill core samples from both the 2013 and 2014 diamond core programs were processed at Core Labs (during their respective exploration periods) and selected intervals chosen for porosity/density and permeability testing (PdpK) which involved the drilling of a half-inch length plug removed from the interval of core.<br><br>Intervals were later selected for geochemical assay sampling which involved the collection of half core for normal samples and quarter core as duplicate (QAQC) samples. The geochemical assay results have not been used in the calculations behind the derivation of the Exploration Target in this report |

| | | | |
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| | | | and therefore have not been included here.<br><br>After the sampling process, the surfaces of the remaining half-core intervals were cleaned and smoothened by the use of very small, thin razor blades and thin brushes (for the removal of the resulting dust and debris). This procedure is part of the "slabbing" procedure routinely conducted by Core Labs. Once the core was sufficiently cleaned, profile permeability measurements were taken to establish amenability to the passage of fluids through the mineralised target zones. |
| | | *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* | No mud rotary chip samples were collected for geochemical assay. |
| | | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | Rotary mud drilling does not require a physical sample to assay nor would it provide a sufficiently clean sample if there was a need for geochemical assaying (because it involves an open hole with no control on contamination or smearing of the sample between metres). However, this type of drilling does allow the passage of geophysical probes which can derive assay for uranium mineralisation. A check against assay and density derived from gamma and density probes, respectively, was completed using physical sampling derived from core drilled during the 2014 program.<br><br>Geochemical assays from the diamond core have not been used in the derivation of the Exploration Targets. Sampling information will therefore not be included here as it is deemed irrelevant for the purpose of this report. |
| | | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | Two calibrated gamma probes run in separate stacks were utilised to derive uranium assay from every hole. Assay from only one probe (the grade probe) is used in grade determination; the alternate probe is used to check the result derived from the grade probe. This cross-check is used to check if the correct calibration models are applied to the data, and to ascertain potential spurious results from a damaged probe or a probe that drifts out of calibration range.<br><br>Geochemical assays from the diamond core have not been used in the derivation of the Exploration Targets. Sampling information will therefore not be included here as it is deemed irrelevant for the purpose of this report. |
| | | *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* | All holes drilled during the 2014 rotary mud / diamond core program were assayed with two different calibrated gamma probes.<br><br>Geochemical assays from the diamond core have not been used in the derivation of the Exploration Targets. Sampling information will therefore not be included here as it is deemed irrelevant for the purpose of this report. |
| | | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | During the downhole logging process, the gamma and density probe used for uranium assay determination and in situ density measurement is retracted past in-situ material accessed by the drillhole. No sorting of sample by grain size will occur under these conditions.<br><br>Cauldron used well known laboratories for geochemical assessment of the core samples to ensure that all sample preparation including crushing and pulverizing was suitable for the material being tested. |

| | | | |
|---|---|---|---|
| | | | The profile permeability measurements were taken every 15 centimetres, where possible, along the cut face of the remaining one-half core section, throughout each of the 8 x drill core holes. The grain size of the sampled material is therefore not relevant to the selection of sample points for this type of analysis.<br><br>Samples selected for the porosity/grain and bulk density test work were trimmed, dried and cooled (see “Sampling Techniques” section) according to standard Core Lab sampling procedures. Material grain size is also irrelevant to the selection of samples for these test works. |
| **1-5** | **Quality of Assay Data and Laboratory Tests** | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | Borehole Wireline Logging Services have strict quality assurance procedures to ensure tool reliability and tool calibration. Borehole Wireline has collected recent data to calibrate the gamma, density and calliper probes, and has supplied these data to Cauldron.<br><br>Provided appropriate correction factors and assay control, deconvolved downhole gamma assay provide the best assay for uranium hosted in unconsolidated sedimentary material, because of low sample quality derived from RC drilling and potential low recovery from core drilling.<br><br>Geochemical assays from the diamond core have not been used in the derivation of the Exploration Targets. Sampling information will therefore not be included here as it is deemed irrelevant for the purpose of this report.<br><br>The PdpK technique is a well-used procedure throughout the Oil and Gas Industry and is widely used by Core Labs for many Petroleum companies throughout the world. As such, this analytical method is usually considered to result in a very accurate, representative and precise data set. |
| | | *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* | Deconvolved uranium grade from gamma logging comprises the following:<br><br>• each gamma tool is calibrated for tool count (gamma scintillations) against uranium response in the PIRSA calibration pits, Adelaide; using the revised pit grades of Dickson 2012<br>• hole size correction factor is applied; which is generated from the PIRSA calibration pits, Adelaide; applied to every hole based on the measured hole diameter of the drillhole<br>• moisture correction factor of 1.11 is applied because of the difference in dry weight uranium grade between the relatively dry calibration pits compared to the saturated unconsolidated sediments that are host to the deposit<br>• disequilibrium factor of 1.07 is applied to all holes based on minimal data that needs further analysis and quantification<br><br>Profile permeability was measured on the cut face of the remaining one-half core section of each of the core holes using the PdpK TM 300 Profile Permeameter. Measurements were made approximately every 15 centimetres, where possible, along the core. A total of only 514 point measurements were made from the 2013 program, as the core in each hole was in a very deteriorated condition. The 2014 core samples submitted for PdpK testing returned a total of 258 point measurements because of more constrained sampling procedures in line with budgetary limitations.<br><br>Samples selected for porosity, grain and bulk density measurement were first weighed and then |

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|---|---|---|---|
| | | | processed through the Ultrapore TM 400 Porosimeter to first determine Grain Volume, using a combination of Helium gas and calculations involving Boyle's Law. A calibration check plug was run after every 5th sample. Grain density data was subsequently calculated from the grain volume and sample weight results.<br><br>Bulk volume data for each of the samples were obtained by the use of Mercury displacement (using a Volumetric Displacement Pump) and Grain Volume data. Dry bulk density data was subsequently calculated using these resulting bulk volumes and the sample weights.<br><br>The porosity of each sample was finally calculated from the same dataset using the bulk volume results and the grain volume data obtained at the beginning of the process. |
| | | *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* | In every hole, duplicate deconvolved gamma assay data is derived from two distinct probes and used to check for potential inaccuracy caused by electronic malfunction of any probe at any possible time.<br><br>Core Labs, Perth, performed their own in-house calibration checks (such as running the calibration check plugs every 5th sample on the Ultrapore 400 Porosimeter) and re-running samples through the respective machines, as part of their quality control procedures. |
| **1-6** | **Verification of Sampling and Assaying** | *The verification of significant intersections by independent or alternative company personnel.* | Independent checks were completed on these data by Borehole Wireline; which were cross-checked by Cauldron against deconvolved gamma grades derived by Cauldron. |
| | | *The use of twinned holes.* | Eight core holes drilled in 2013 comprised a mix of twinned holes and new exploration holes in geologically and mineralogically significant areas. The core holes that served as twins were situated between 2.0 m to 10.0 m from the original holes. |
| | | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Data used to derive deconvolved gamma assay (depth, gamma reading and caliper, tool ID, calibration ID) is stored in .LAS files (a common industry space delimited format for downhole geophysical data) and viewed in WellCad (saved as WellCad .WCL files) which is then later uploaded to SQL database. The database and server is backed up regularly.<br><br>Preliminary and final PdpK data are stored as '.csv' files on the Cauldron server for future reference. All data is verified by senior personnel and then entered into an in-house SQL database by a designated database consultant who manages all data entry. All data is saved as electronic copies with server backups completed.<br><br>Profile permeability data is reported in units of milli Darcies or Darcies |
| | | *Discuss any adjustment to assay data.* | Geochemical assays from the diamond core have not been used in the derivation of the Exploration Targets. Sampling information will therefore not be included here as it is deemed irrelevant for the purpose of this report.<br><br>A disequilibrium factor of 1.07 is applied to the gamma deconvolved grade to account for secular disequilibrium as measured by ANSTO on limited samples in 2007; and by the difference between wet chemical assay derived from core and deconvolved assay derived from gamma logging as seen in the core drilling completed in 2013. Spatial variations in secular disequilibrium in any orebody is common; and can range from a value both greater and less than 1. More work is required to map the |

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| | | | variations in secular disequilibrium.<br>The calculations used to obtain the grain, bulk and porosity data, and the respective reported units given to each data set, are as follows:<br>Grain density and volume: GD = W1/GV where: GD = Grain Density (grams per cubic centimeter – g/cc) W1 = Weight of sample (grams - g) GV = Grain Volume (cubic centimetres – cc)<br>Porosity: Ø = ((BV-GV)/BV) x 100 where: Ø = Porosity (percent - %) BV = Bulk Volume<br>(cubic centimetres – cc) GV = Grain Volume (cubic centimetres – cc)<br>Bulk Density: BD = W1/BV where: BD = Bulk Density (grams per cubic centimeter – g/cc) W1 = Weight of sample (grams – g) BV = Bulk Volume (cubic centimetres – cc) |
| **1-7** | **Location of Data Points** | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | The method to locate collars is by a real-time kinematic GPS system having an accuracy of plus or minus 0.5 m in the X-Y-Z plane, collected by qualified surveyor, Phil Richards of MHR Surveyors, WA. The relative level is determined from levelling to a grid derived from Shuttle Radar Topographic Mission (SRTM) data having 90 m sample spacing.<br>No downhole surveys were completed since all holes were drilled vertically and the shallow drillhole depths relative to wide drill spacing would have minimal effect on potential mis-position of mineralised intercepts. |
| | | *Specification of the grid system used.* | The grid system used at the Bennet Well-Yanrey project area is MGA_GDA94, Zone 50. All data is recorded using Easting and Northing and AHD. |
| | | *Quality and adequacy of topographic control.* | The primary topographic control is from SRTM. This technique is adequate given the generally flat-lying nature of the sediments. The highly accurate RTK pickups of collars from the most recent drilling is for only a small portion of the total drilling of the deposit; the SRTM derived data provide the best means to mitigate against level-busts that would occur with RL derived from two different methods. |
| **1-8** | **Data Spacing and Distribution** | *Data spacing for reporting of Exploration Results.* | Spacing of holes drilled historically is variable between 30 and 200 m on individual fence lines, and 50 m to 1,100 m between fence lines along strike.<br>Spacing of the core holes from the 2013 drilling program varied between 350 m and 800 m within individual prospects.<br>The spacing of the drill holes from the 2014 program varied between 100 m and 800 m within individual prospects. |
| | | *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* | The area occupied by the deposit is very large and therefore drill spacing has always been variable. |

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| | | *Whether sample compositing has been applied.* | Downhole geophysical data was collected on 0.01 m increments; a running five point smoothing average was subsequently applied to these data for the purposes of reducing file storage sizes.<br><br>All downhole geophysical data was later composited to 0.50 m increments for the purpose of block modelling for the revision of the mineral resource estimate.<br><br>The only compositing undertaken for core thus far was conducted in 2013 in relation to leach testing by ANSTO over a selected interval. A total of 34 and 10 assay pulp samples for YNDD018 and YNDD022 respectively were composited to make the leach test samples. These results however have not been used in the derivation of the Exploration Target supplied in this report. |
| **1-9** | **Orientation of Data in Relation to Geological Structure** | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | All drill holes were drilled vertically since the sediments are mostly unconsolidated and generally flat-lying. All holes therefore sample the true width of mineralisation. |
| | | *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | No sampling bias is observed by the orientation of the drill holes. |
| **1-10** | **Sample Security** | *The measures taken to ensure sample security.* | Chips collected from each rotary mud and aircore drill hole are stored securely in a locked sea container at the Bennet Well Exploration Camp. Diamond drill core from the 2008 and 2013 drill programs is also stored at a secure location on the project site, in lockable sea containers.<br><br>If there is a requirement to transport core to Perth for sampling and assaying, the following procedure is followed:<br><br>➢ Core is frozen, wrapped and stacked on pallets and strapped with secure metal strapping;<br><br>➢ A Ludlum Alpha/Gamma Surface meter is then used to measure the concentration of alpha/gamma particles (if any) being emitted from each of the pallets.<br><br>➢ Pending the results of these surveys, and in accordance with the Safe Transport of Radioactive Material (2008) guidelines issued by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), the appropriate transport documentation was inserted into the top layer of plastic pallet wrap in such a way as to be visible to the transporter, if required.<br><br>➢ Upon arrival at the desired destination in Perth, the core is finally inspected by senior Cauldron personnel to check that sample integrity has been maintained. |
| **1-11** | **Audits or Reviews** | *The results of any audits or reviews of sampling techniques and data.* | Cauldron's Competent Person has verified all sampling techniques and data collection is of high standard and no reviews are required at this stage. |

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

| Part | Criteria | Explanation | Comment |
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| 2-1 | **Mineral Tenement and Land Tenure Status** | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* | All drilling was completed, at various times, on exploration tenements E08/1493, E08/1489, E08/1490, E08/1501 and E08/2774, which are 100% owned by Cauldron.<br>A Native Title Agreement is struck with the Thalanyji Traditional Owners which covers 100% of the tenements listed above. |
| | | *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | These tenements are in good standing and Cauldron is unaware of any impediments for exploration on these leases. |
| 2-2 | **Exploration Done by Other Parties** | *Acknowledgment and appraisal of exploration by other parties.* | A 70 km long regional redox front and several palaeochannels were identified by open hole drilling by CRA Exploration Pty Ltd (CRAE) during the 1970s and early 1980s. CRAE drilled over 200 holes in the greater Yanrey Project area, resulting in the discovery of the Manyingee Deposit and the identification of uranium mineralisation in the Bennet Well channel and the Spinifex Well Channel. Uranium mineralisation was also identified in the Ballards and Barradale Prospects. |
| 2-3 | **Geology** | *Deposit type, geological setting and style of mineralisation.* | At least 15 major palaeochannels have been identified in the greater Yanrey project area at the contact between the Cretaceous aged marine sediments of the Carnarvon Basin and the Proterozoic Yilgarn Block which lies along the granitic and metamorphic ancient coastline.<br>These palaeochannels have incised the underlying Proterozoic-aged granite and metamorphic rocks, which are subsequently filled and submerged by up to 150m of mostly unconsolidated sand and clay of Mesozoic, Tertiary and Quaternary age. The channels sourced from the east enter into a deep north-south trending depression that was probably caused by regional faulting and may be a depression formed at the former Mesozoic-aged coastline. |

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| **2-4** | **Drill Hole Information** | *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br>• *Easting and northing of the drill hole collar;*<br>• *Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill collar;*<br>• *Dip and azimuth of the hole;*<br>• *Down hole length and interception depth;*<br>• *Hole length*<br><br>*If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract for the understanding of the report, the Competent Person should clearly explain why this is the case.* | Refer to Table 4 titled: "Historical Drilling Results for Exploration Target Areas" |
| **2-5** | **Data Aggregation Methods** | *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* | Average reporting intervals are derived from applying a cut-off grade of 150 ppm $U_3O_8$ for a minimum thickness of 0.50 m. |
| | | *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* | The length of assay sample intervals varies for all results, therefore a weighted average on a 0.50m composite has been applied when calculating assay grades to take into account the size of each interval.<br><br>The higher grade intervals quoted in Table 2 are derived by length averaging intervals greater than 0.5 m in width that have assays above 800 ppm e $U_3O_8$; sometimes these higher grade intervals appear inside a lower grade zone defined by the lower 150 ppm cutoff. A maximum internal dilution of 0.5 m was used to aggregate a thin barren zone within bounding higher grade material as long as the grade-thickness of the entire interval was above cutoff (= 150 x 0.5). |
| | | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | No metal equivalents are used. |

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| **2-6** | **Relationship Between Mineralisation Widths and Intercept Lengths** | *These relationships are particularly important in the reporting of Exploration Results.* | All drilling at Bennet Well is vertical. The recent 3D interpretation and establishment of a mineralisation model has determined that the uranium mineralisation dips very shallowly (no more than 2-3°) to the west at Bennet Well East, yet at Bennet Well Central the mineralisation is observed to follow the contours of the underlying granitic basement.<br><br>The overall dip of the mineralisation in the Bennet Well Resource Area could be described as sub-horizontal therefore, all mineralisation values could be considered to be true width. |
| | | *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* | The recent 3D interpretation and establishment of a mineralisation model has determined that the uranium mineralisation dips very shallowly (no more than 2-3°) to the west at Bennet Well East, yet at Bennet Well Central the mineralisation is observed to follow the contours of the underlying granitic basement.<br><br>The overall dip of the mineralisation in the Bennet Well Resource Area could be described as sub-horizontal therefore, all mineralisation values could be considered to be true width. |
| | | *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').* | The recent 3D interpretation and establishment of a mineralisation model has determined that the uranium mineralisation dips very shallowly (no more than 2-3°) to the west at Bennet Well East, yet at Bennet Well Central the mineralisation is observed to follow the contours of the underlying granitic basement.<br><br>The overall dip of the mineralisation in the Bennet Well Resource Area could be described as sub-horizontal therefore, all mineralisation values could be considered to be true width. |
| **2-7** | **Diagrams** | *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | Included in this report. |
| **2-8** | **Balanced Reporting** | *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | All drill locations are shown in Table 4; intercepts that are greater than 150 ppm for at least 0.5 m in thickness. |
| **2-9** | **Other Substantive Exploration Data** | *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater,* | Metallurgical sighter testing was completed by the Australian Nuclear Science and Technology Organisation (ANSTO) for the diamond core drilled in 2013, with further testing planned for core drilled in 2014.<br><br>Geochemical assaying was also completed for the diamond core from both 2013 and 2014.<br><br>ISR leach test work was carried out at CSIRO in 2017. |

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| | | *geotechnical and rock characteristics; potential deleterious or contaminating substances.* | These data however have not been used in the derivation of the Exploration Targets reported here. Sampling information will therefore not be included here as it is deemed irrelevant for the purpose of this report. |
| **2-10** | **Further Work** | *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* | The core obtained from recent drilling will provide samples for density and profile permeability testing and geochemical assay; with further metallurgical characterisation. The former physical and chemical characterisation testing will be used to cross-check the data collected by the downhole geophysics system, the latter metallurgical testing will expand on the core work completed in 2013.<br><br>The aims of proposed metallurgical work include: characterisation of the modal mineralogy of mineralisation using QEMSCAN/SEM or similar; quantification of the elemental composition of mineralisation and host sequences; quantify the degree of secular disequilibrium; test for the presence and behaviour of organic material, carbonate material or pyrite that may affect efficiency of leaching; further test the leach performance of mineralisation in acid and in alkali/carbonate media.<br><br>Further core and mud rotary drilling to improve the Mineral Resource category of the Bennet Well deposit.<br><br>Further exploration drilling is required to identify extensions to mineralisation. |
| | | *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | Plans and sections have been included in this report as applicable. |