ASX Announcement
13 December 2023

CAUTIONARY STATEMENT: BENNET WELL SCOPING STUDY

The Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential 1.5 Mlb U_3O_8 per annum in-situ recovery (‘ISR’) mining operation (16.5Mlb U_3O_8 Production Target) of the Bennet Well uranium deposit which forms part of the Yanrey Project near Onslow, Western Australia, 100% owned by Cauldron Energy Pty Ltd (“Cauldron”).

The Scoping Study is a preliminary technical and economic assessment of the potential viability of the Project and builds on several studies conducted and statements released since 2014 (ASX releases: 20 February 2014, 24 March 2014, 22 September 2015, 2 November 2015, 17 December 2015, 12 January 2016, 25 May 2017). The Scoping Study outcomes, Production Target and forecast financial information referred to in this release are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves. While each of the modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the Production Target itself will be realised. Further exploration and evaluation work and appropriate studies are required before Cauldron will be able to estimate any Ore Reserves or to provide any assurance of an economic development case.

Of the overall JORC compliant Mineral Resource, a subset of which is scheduled for ISR extraction in the Scoping Study production plan (the Production Target), approximately 60% is categorised as an Indicated Mineral Resource and 40% is Inferred. There is a low level of geological confidence associated with an Inferred Mineral Resource and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target will be realised. The subset Inferred Mineral Resource comprises ~27% of the Production Target. Cauldron notes that the style of mineralisation and the experience to date in converting Inferred Mineral Resources to the Indicated category provides a reasonable basis for inclusion.

The Mineral Resources underpinning the Production Target in the Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). The Competent Person’s Statement is found on page 81 of this ASX release. For full details of the Mineral Resource Estimate, please refer to Cauldron’s ASX release dated 17 December 2015, “*Substantial Increase in Tonnes and Grade Confirms Bennet Well as a Globally Significant ISR Project*”. Cauldron confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

This release contains a series of forward-looking statements. Generally, the words "expect," “potential”, "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause the actual results, performance, or achievements, to differ materially from those expressed or implied in any of the forward-looking statements, which are not guarantees of future performance.

Statements in this release regarding Cauldron's business or proposed operations, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource Estimates, market prices of metals, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe Cauldron's future plans, objectives or goals, including words to the effect that Cauldron or Management expects a stated condition or result to occur.

Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by Cauldron, are inherently subject to significant technical, business, economic, competitive, political, and social uncertainties, and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties and are not guarantees of future performance. Actual results and future events could differ materially from that anticipated. These and all subsequent written and oral forward-looking statements are based on estimates and opinions of Cauldron on the dates they are made and expressly qualified in their entirety by this Statement. The Company assumes no obligation to update forward-looking information or statements should circumstances or estimates or opinions change. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

Cauldron has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this ASX release. This includes a reasonable basis to expect that it will be able to fund the development of the Bennet Well Project upon successful delivery of key additional evaluation and regulatory milestones. The supporting reasons for these conclusions are outlined throughout this ASX release. While Cauldron considers all material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved. Cauldron also notes that current WA Labor Government policy will not grant mining approvals for uranium mining, so project production 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.

To achieve the range of outcomes indicated in the Scoping Study, pre-production funding of approximately A$78M to A$162M (+/- 35% of the base case) will likely be required. There is no certainty that Cauldron will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Cauldron's shares. It is also possible that Cauldron could pursue other value realisation strategies such as a sale, partial sale, or joint venture of the Bennet Well Project. These could materially reduce Cauldron's proportionate ownership of the Bennet Well Project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC modifying factors, on which the Production Target and forecast financial information are based have been included in this ASX release.

Bennet Well Scoping Study Confirms Potential for a Low Cost ISR Uranium Operation

Highlights

- Bennet Well Scoping Study confirms the potential for a low cost globally competitive in-situ recovery (**ISR**) uranium operation;
- Mineral Resource (JORC 2012) at Bennet Well contains **30.9 million pounds (~14,000t) of contained uranium oxide (Indicated plus Inferred Mineral Resource of 38.9 million tonnes grading 360 ppm eU_3O_8);**
- A production rate of **1.5 Mlb/year** over 11 years produces **16.5 Mlb of U_3O_8 over the life of mine** (LOM);
- The **mineable resource** (extracted from the Mineral Resource) is **27.7Mt @ 373 ppm eU_3O_8** at an optimised cut-off grade of 175 ppm eU_3O_8;
- **Leach recoveries** based on test work conducted by CSIRO are **67%** (to be confirmed by field leach trial);
- **Upfront capital** is estimated to be **A$117.7M (US$82.4M)**, with **on-going capital** for wellfield development of **A$179.0M (US$125.3M)** un-escalated over LOM;
- **Operating (US$23.23/lb U_3O_8)** and **capital costs (US$12.56/lb U_3O_8) bench mark well** against other similar uranium projects;
- Project **NPV** of **A$449M (US$314M)** pre-tax at a discount rate of 10%, with **IRR** of **79%** and a **payback period** of **1.5 years** using base case assumptions of US$75/lb U_3O_8 and 0.70 AUD:USD;
- At the **current spot uranium price of US$83/lb**, and **exchange rate of 0.66,** the project has a pre-tax **NPV** of **US$380M (A$576M)**, and an **IRR** of **93%**.
- Project economics greatly assisted by low reagent consumption, a relatively shallow depth to mineralization, and good permeability of the host sands;
- **Low environmental footprint**, focus on **minimal disturbance** and continuous rehabilitation, no long-term impact on groundwater, potential for **low carbon intensity project**;
- Further upside opportunities include:
  - Potential for an increase in the Bennet Well resource estimate with further drilling, noting the Company has a Program of Works approved by DMIRS and intends on drilling early next calendar year,
  - In-fill drilling at bennet Well to improve confidence in the resource (i.e. convert Inferred Resources to Indicated Resources),
  - Processing efficiencies aimed at reducing costs and increasing recovery rates,
  - Further exploration potential for additional uranium mineralization to be defined on several targets in the region.

Cauldron Energy Limited (ASX: CXU) ("the Company" or "Cauldron") is pleased to announce the results of its Scoping Study for a proposed stand-alone Bennet Well Uranium operation, located ~ 100 kms south of the town of Onslow in Western Australia, and ~1,050 kms north of Perth.

The Bennet Well Uranium Deposit, forms part of Cauldron's Yanrey Uranium Project which encompasses a total area of 1,270 km^2, and remains open to the north and south and has the potential to be larger. An approved drill program will be conducted in the early part of calendar year 2024 and aims to test for extensions to the deposit as well as undertake infill drilling to upgrade parts of the existing mineral resource from inferred status to indicated.

The Study was assisted by consultants from Ravensgate Mining Industry Consultants and metallurgical and processing consultants at ANSTO and CSIRO, and highlights the project's potential to deliver robust financial returns.

Commenting on the outcomes of the Bennet Well Scoping Study Cauldron's Chief Executive Officer, Jonathan Fisher, said

"The Company is delighted to report these outstanding initial Scoping Study results for the Bennet Well deposit which further highlight the quality and global significance of Cauldron's uranium assets. These strong financial estimates and outcomes, driven by modest capital and operating costs, are the culmination of many years of extensive research and development by Cauldron.

Bennet Well, and the wider Yanrey project area, represents a significant opportunity to discover and ultimately develop uranium mineral resources, and this Scoping Study results clearly illustrate the transformational effect the stand-alone Bennet Well operation could have on the potential economics of the entire Yanrey Uranium Project.

As global uranium markets continue to strengthen, Cauldron is pleased to report the cost estimates and outcomes for Bennet Well are very competitive globally with:

- ***an excellent 79% IRR***
- ***a pre-tax NPV_{10} of $A449M (US$314M)***
- ***short payback period of 1.5 years***
- ***a strong life of mine C1 operating cost of only US$23.23/lb U_3O_8***
- ***a strong life of mine AISC cost of only US$35.79/lb U_3O_8***
- ***a modest upfront CAPEX of A$117.7M (US$82.4M) plus additional capital for wellfield development over the 11 year mine life of A$179M (US$125.3M)***
- ***annual production of 1.5Mlbs U_3O_8 p.a., and total production of 16.5Mlbs U_3O_8 over life of mine***
- ***total undiscounted cash flow of A$1,042M (US$729M) pre-tax***

With continuing feasibility work, Cauldron is confident that there is significant scope to further optimise this Study outcomes for the Bennet Well deposit. The potential integration of mineral resources from additional deposits discovered in the wider Yanrey project area could increase production at Bennet Well and either extend the mine life considerably or allow an increase in annual production rate.

We are now planning our next phase of work based on further defining and converting mineral resources to Indicated status, and at the same time extending the mineral resource base. We will continue to understand the geo-metallurgical model and how that impacts uranium extraction and recovery, and carry out further test work required to bring the project to pre-Feasibility Study level within 12-18 months.

We know this work will be well supported by the market, despite the politically motivated ban on uranium mining by the current WA State Labor Government. We are confident that this ban will be over-turned in time, either by a change of Labor Party policy or a change in government, and so it *is important to put the project back on a development pathway for when the window of opportunity opens."*

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1. EXECUTIVE SUMMARY

Cauldron Energy Limited ('Cauldron') is an ASX listed company (ASX Code: CXU) that owns the Yanrey sandstone-style uranium project located near the township of Onslow in northern Western Australia. The target mineralisation is suitable for in-situ recovery (ISR or ISL) extraction techniques. Mineral Resources containing at over 30 million pounds of uranium oxide have been identified at the Bennet Well deposit, and there is potential to grow the resource base to at least double the amount of contained uranium.

- Mineral Resource (JORC 2012) at Bennet Well contains **30.9 million pounds (~14,000t) of contained uranium oxide (Indicated plus Inferred Mineral Resource of 38.9 million tonnes grading 360 ppm eU_3O_8)**;
- Eleven favourable palaeochannels in the Yanrey Project area are all capable of hosting uranium mineralisation. Nine targets were established prior to the passive seismic program, with results of successfully constraining target dimensions and identifying two new palaeochannels; and
- A robust system style exploration model has been developed by the Company capable of quickly and efficiently targeting economic zones of uranium mineralisation.

Project activities completed at Bennet Well have delivered:

- Proven understanding of a favourable host setting for ISR-type mining extraction; whereby a permeable host unit to mineralisation is overlain by an impermeable sediment that will act as a seal for ISL-type mining fluids;
- Confirmation of a lack of carbonate mineralogy and the ability to extract uranium mineralisation via an acid leachate with high extraction rates;
- Correlation of uranium mineralogy between the 2014 (ANSTO) and 2017 (CSIRO) metallurgical test work programs;
- Suitable resin identified for use in the ion exchange process of uranium extraction during future Field Leach Trials;
- Reactive transport and hydrological models that identified key reactions for the control of mining fluids;
- Favourable economics at the current predicted long-term uranium price.

The Yanrey Project area is fully controlled by Cauldron and encompasses a total area of 1,270 km^2 comprising twelve granted exploration licences and one application for an exploration licence. The exploration titles cover 78 kms of a highly prospective linear palaeo-foreshore which hosts much of the known uranium mineralisation in the district and is centred on the Bennet Well deposit.

The mineral endowment of the district remains to be fully tested but is considerable and exemplified by proximal uranium deposits, including:

- The Manyingee deposit held by Paladin Energy Ltd (ASX: PDN) (ASX Announcement dated 14 January 2014), with an Indicated Mineral Resource (JORC 2012) of 7,127 tonnes grading 850 ppm U_3O_8 for an estimated 15.7 million pounds of contained U_3O_8 and an Inferred Mineral Resource of 4,613 tonnes grading 850 ppm U_3O_8 for an estimated 10.1 million pounds of contained U_3O_8, and

- The Carley Bore deposit, also held by Paladin Energy Ltd (ASX:PDN) (ASX Announcement dated 17 February 2014) with an Indicated Mineral Resource (JORC 2012) of 5.4 million tonnes grading 420 ppm U_3O_8 for an estimated 5.0 million pounds of contained U_3O_8 and an Inferred Mineral Resource of 17.4 million tonnes grading 280 ppm U_3O_8 for an estimated 10.6 million pounds of contained U_3O_8.

Key Economic Outcomes

An economically robust project at the current predicted long-term uranium price (U_3O_8) of US$75/lb as shown in the table below.

- A production rate of **1.5 Mlb/year** over 12 years produces **16.5 Mlb of U_3O_8 over the 11-year life of mine** (LOM);
- The **mineable resource** (extracted from the Mineral Resource) is **27.7Mt @ 373 ppm eU_3O_8** at an optimised cut-off grade of 175 ppm eU_3O_8;
- **Leach recoveries** based on test work conducted by CSIRO are **67%** (to be confirmed by field leach trial);
- **Upfront capital** is estimated to be **US$82.4M (A$117.7M)**, with **on-going capital** for wellfield development of **US$125.3M (A$179.0M)** un-escalated over LOM;
- Operating and capital costs **bench mark well** against other similar uranium projects;
- Project **NPV** of **US$314M (A$449M)** at a discount rate of 10%, with **IRR** of **79%** pre-tax.

Parameter	Unit	Value or US$M	Value or A$M
Production Rate	Mlb/year	1.50	
Mining Cut-Off Grade	ppm U_3O_8	175	
Mineable Resource	Mt	27.7	
Mineable Grade	ppm U_3O_8	373	
Leach Recovery	%	67	
U_3O_8 Produced (LOM)	Mlb	16.5	
Upfront Capex	$M	82.4	117.7
On-going Capex (un-escalated)	$M	125.3	179.0
Total Capex (un-escalated)	$M	207.7	296.7
Opex	$/lb	23.23	33.19
Capex	$/lb	12.56	17.94
All in Cost	$/lb	35.79	51.13
Mine Life	years	11.0	
Uranium (U_3O_8) Price	$/lb	75.0	107.1
Exchange Rate (A$:US$)		0.70	
Undiscounted Cash Flow pre-tax	$M/year	65.3	93.3
Government Royalties (5%)	$M/year	5.6	8.0
Discount Rate	%	10	
NPV pre-tax	$M	314	449
IRR	%	79	
Payback	years	1.5	

2. INTRODUCTION

The Yanrey Project is located approximately 70 km to the south of Onslow and 100 km to the east of Exmouth in northern Western Australia as shown in Figure 1. The project occupies parts of the cattle grazing pastoral leases of Yanrey, Minderoo, Uaroo and Nanutarra stations.

Access to the northern portion of the project area is via the Yanrey Station entrance road or the Twitchen Road, both of which are situated near the intersection of the Northwest Coastal Highway and the Yanrey River. Access to the Bennet Well deposit is via existing tracks on Yanrey Station and some cleared grid lines and drilling access tracks.

The geography of the Yanrey project area is dominated by flat aeolian and alluvial plains with low relief formed by ridges of granitic and gneissic basement; sand dunes are also developed in some areas. Spinifex, kurara bush, snake tree and mulga comprise the dominant vegetation cover in the area.

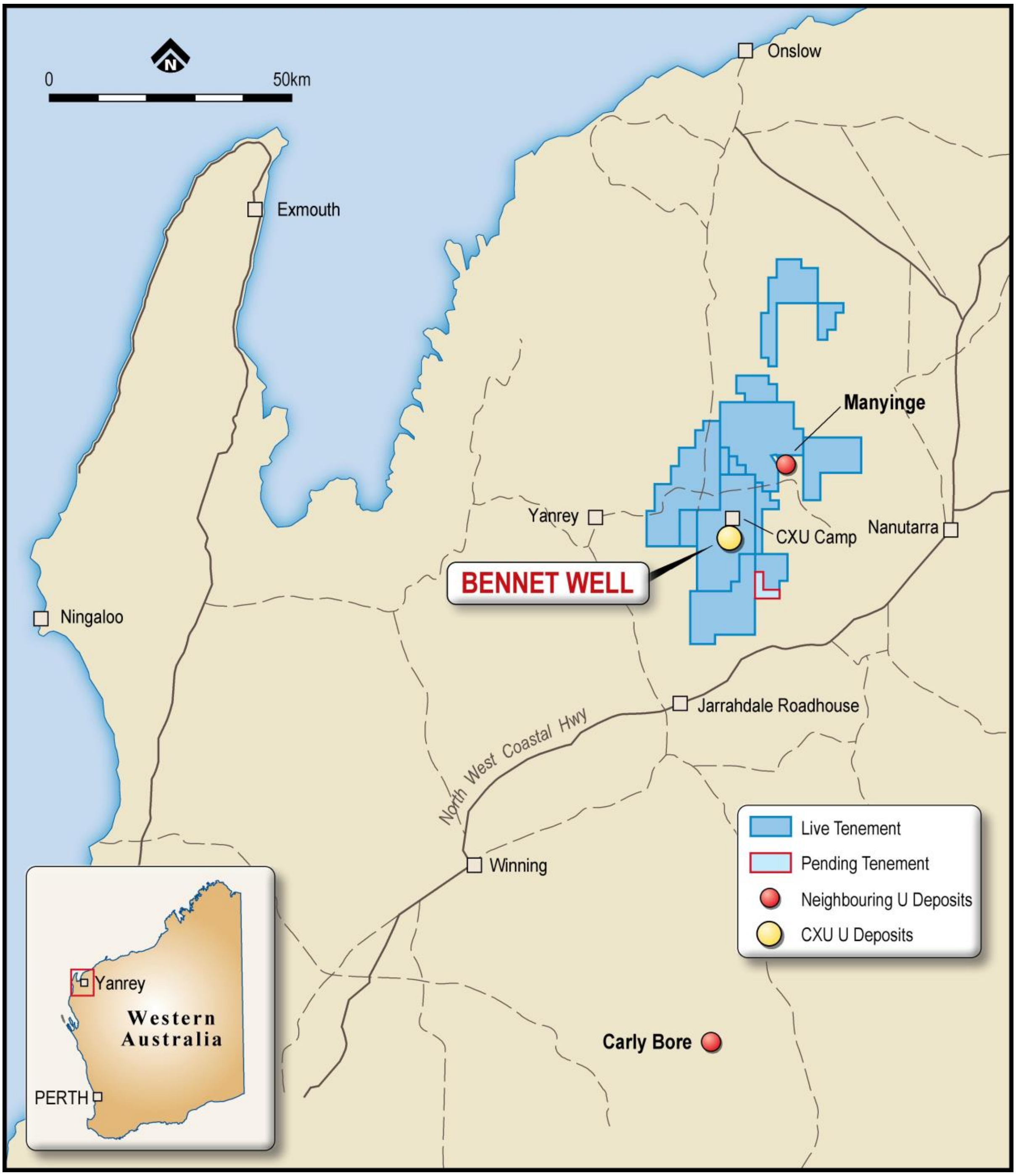

Figure 1: Location of Yanrey Uranium Project

3. LAND TENURE

3.1. Tenements

The Cauldron-owned Yanrey Project tenement package covers approximately 1,242 km^2; consisting of twelve granted exploration licences (see Table 1 & Figure 2). The total statutory expenditure commitment for the granted tenements of the Yanrey project is $1.211M with rents of $230,531.

Table 1: Cauldron Tenements

Licence	Registered Tenement Holder	Grant Date	Expiry Date	Area (km^2)	Minimum Expenditure ($A/yr)	Rent (A$/yr)
E 08/1489	Cauldron Energy Ltd	29/11/2005	28/11/2023	220.01	$210,000	$52,290
E 08/1490	Cauldron Energy Ltd	29/11/2005	28/11/2023	34.82	$70,000	$8,217
E 08/1493	Cauldron Energy Ltd	29/11/2005	28/11/2023	221.53	$210,000	$52,290
E 08/1501	Cauldron Energy Ltd	29/11/2005	28/11/2023	164.4	$156,000	$38,840
E 08/2017	Cauldron Energy Ltd	13/08/2010	12/08/2024	25.4	$70,000	$5,976
E 08/2081	Cauldron Energy Ltd	2/08/2010	1/08/2024	9.5	$50,000	$2,241
E 08/2205	Cauldron Energy Ltd	15/06/2011	14/06/2025	25.3	$70,000	$5,976
E 08/2385	Cauldron Energy Ltd	19/01/2018	18/01/2028	161.8	$102,000	$20,145
E 08/2386	Cauldron Energy Ltd	19/01/2018	18/01/2028	9.5	$30,000	$1,185
E 08/2387	Cauldron Energy Ltd	19/01/2018	18/01/2028	107.68	$68,000	$13,430
E 08/2774	Cauldron Energy Ltd	4/07/2016	3/07/2026	41.11	$70,000	$9,711
E 08/3088	Cauldron Energy Ltd	5/03/2020	4/03/2025	221.68	$105,000	$20,230
E 08/3611	Cauldron Energy Ltd	Application		15.5		
TOTAL				**1,242.73**	**$1,211,000**	**$230,531**

* E08/1489, 1490, 1493 and 1501 are in the process of being renewed
* E08/3611 was applied for on 30-03-2023 and is still pending
* E08/3088 and E08/3611 will be added to the Heritage Agreement with the Thalanyji Native Title group in due course

Because of the WA government ban on granting mining leases for uranium mining, the tenements are still held as Exploration Licences. As soon as the WA government changes policy, mining leases will be applied for over the Bennet Well resource area.

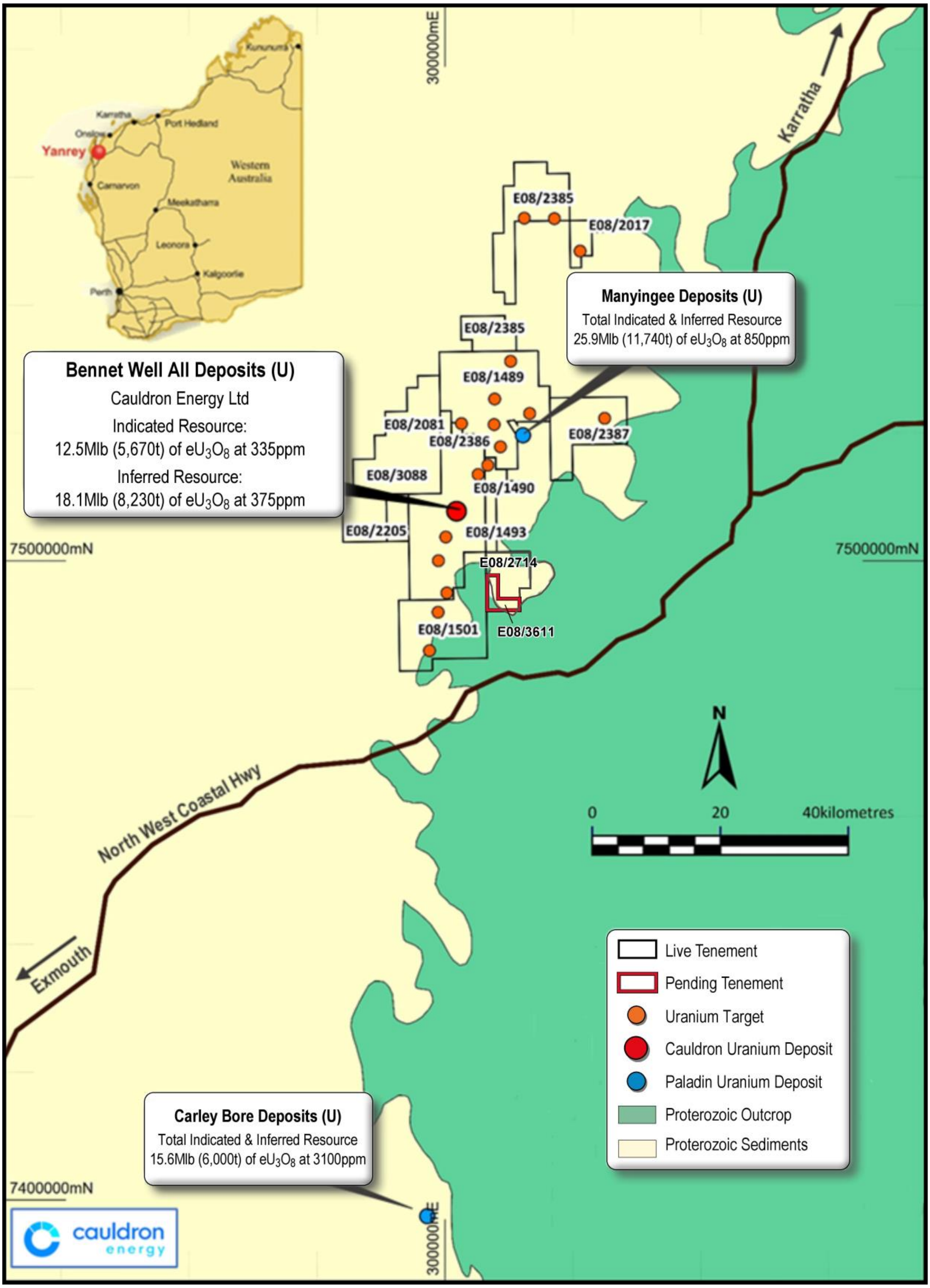

Figure 2: Yanrey Uranium Project Tenements

3.2. Native Title

The Yanrey Project tenure falls completely within the boundaries of the Thalanyji Native Title claim for which Cauldron has an existing heritage agreement in place (Figure 3).

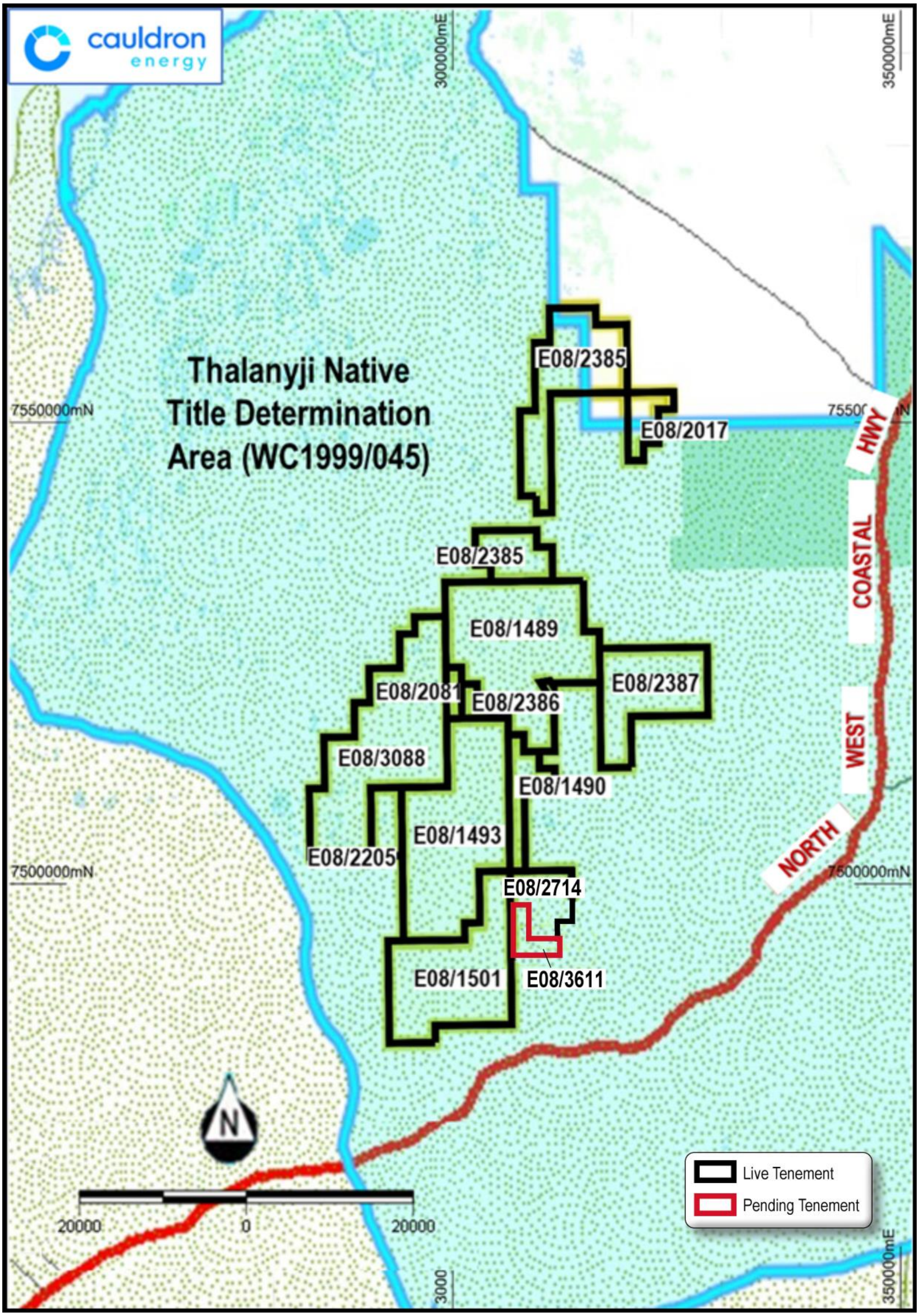

Figure 3: Native Title Determination Area for the Yanrey Project

4. GEOLOGY AND EXPLORATION

4.1. Geology

The geological setting of the Yanrey Project comprises Mesozoic-aged sediments of the Northern Carnarvon Basin, which is known for hosting economic uranium mineralisation in the region, and overlies Proterozoic-aged granite and metasedimentary basement, as shown in Figure 4.

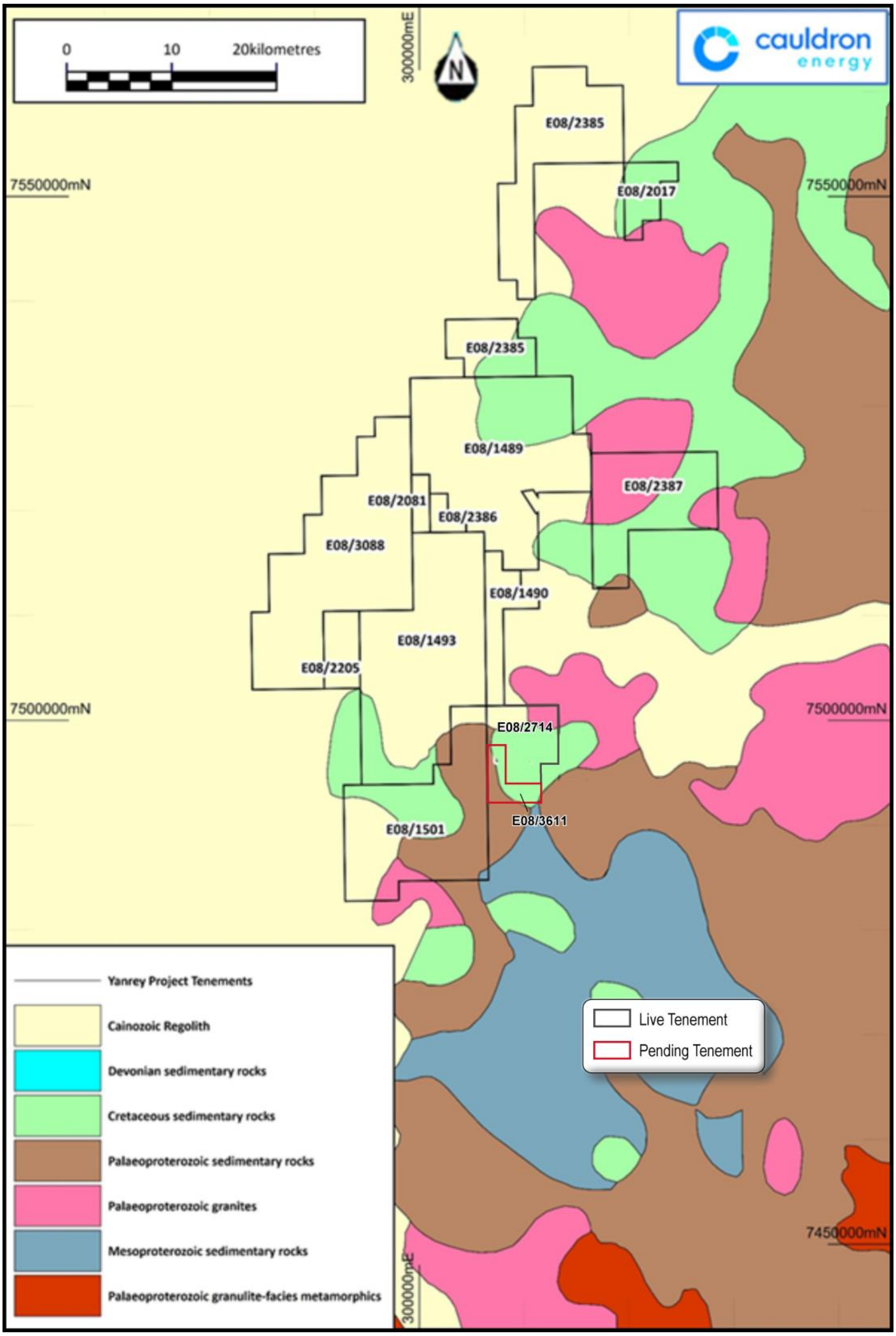

Figure 4: Regional Geology of the Yanrey Project Area

The Proterozoic-aged rocks in the project area are located within the poorly exposed northern end of the Capricorn Orogen, between the Pilbara and Yilgarn cratons, and were formed by the collision of the two cratons. The Capricorn Orogen is subdivided into three geological provinces: the Ashburton in the north, the Gascoyne in the west and the Nabberu in the south. The Gascoyne Province comprises medium to high grade metamorphics intruded by capacious granitoids. The Nabberu Basin contains mainly low-grade metasediments and volcanics while the Glengarry sub-basin possibly represents a back-arc basin.

The Mesozoic sequences were laid in response to a major rifting event that saw greater southern China split from the northwest coast of Western Australia. The depression that formed in the Proterozoic rocks caused by early rifting developed on further rifting into the ancient coastline that was subsequently filled by Mesozoic-aged fluvial, fluvial/over-bank and swamp deposits. Increasing influx of oceanic waters into the area of rifting resulted in the formation, and deposition, of deltaic sequences which was then followed by sediments typical of foreshore-type sedimentary environments.

The earliest Mesozoic sediments are fluvial deposits laid in palaeochannels incised into the then-exposed (but now buried) Proterozoic basement surface. At least nine major palaeochannels, sourced from uranium-rich granite areas of the Gascoyne Province, east of the ancient coastline, have been identified within the Yanrey Project.

4.2. Stratigraphy

The stratigraphy identified within the Yanrey Project area, using the scheme of Hocking (1990), is a complex mix of erosional and depositional packages with subtle variations distinguishing the units. A summary of the stratigraphy identified locally at Bennet Well is illustrated in Figure 5 and as follows:

- ***Quaternary - Recent*** – unconsolidated sands, sand dunes and alluvium;
- ***Tertiary*** – partly consolidated sandstone and sands, local calcrete-silcrete development, minor conglomerate marks the base of the unit;
- ***Cretaceous*** – Mardi Greensand, intensely bioturbated, glauconitic, interbedded sand and silts to massive greensand; very low permeability due to bioturbatic destruction of grain sorting;
- ***Cretaceous*** – Nanutarra Formation – unit 4 and 5, alternating intervals, each 5-10 m thick, of sand and silts, with broad upward fining cyclicity;
- ***Cretaceous*** – Nanutarra Formation - unit 1,2 and 3, fluvial sequence
- ***Weathered Basement*** – Saprock of mainly granite and gneiss,
- ***Basement*** – Archaean/Lower Proterozoic Granite with minor granitoids and metasedimentary basement.

Prospective sediment-filled palaeochannels of Mesozoic age occur on incised Proterozoic-aged granite and metamorphic basement comprising the Gascoyne Province of the Capricorn Orogen. The sediments of the channels are sourced from the east and enter into a deep north to south trending depression that was probably caused by regional faulting and may represent an ancient coastline. Most of the channel sediments are limonite-oxidised, quartz-dominated, sub-rounded sand and pebbles with occasional occurrences of a reduced variant. The channels have an erosional base between 50 to 100 m below surface, with only the lower portion comprising channel sediments. During the Cretaceous, sea levels rose flooding the channel depressions of the ancient coastline, depositing thick marine sediments (sands, clays, lignitic clays and carbonaceous sands) of the Nanutarra Formation, Mardi Greensand, Birdrong Sandstone and the Muderong Shale that conformably overlay the channel sediments. In this low energy setting, marine clays (which are glauconitic) and lignitic units were deposited along and across into the overbank regions of the channel sands.

In cross-section, the channels have an asymmetric shape with a steep eastern margin and a very shallow non-demarcated western margin, resembling a series of unconfined valley systems. Bennet Well Central occupies the broadest of the palaeovalley systems, with mineralisation located above the palaeovalley floor (and above the channel basal sands) at the level of the shoulder of the channel, and mostly to the west of the steeper valley edge (refer to Figure 6).

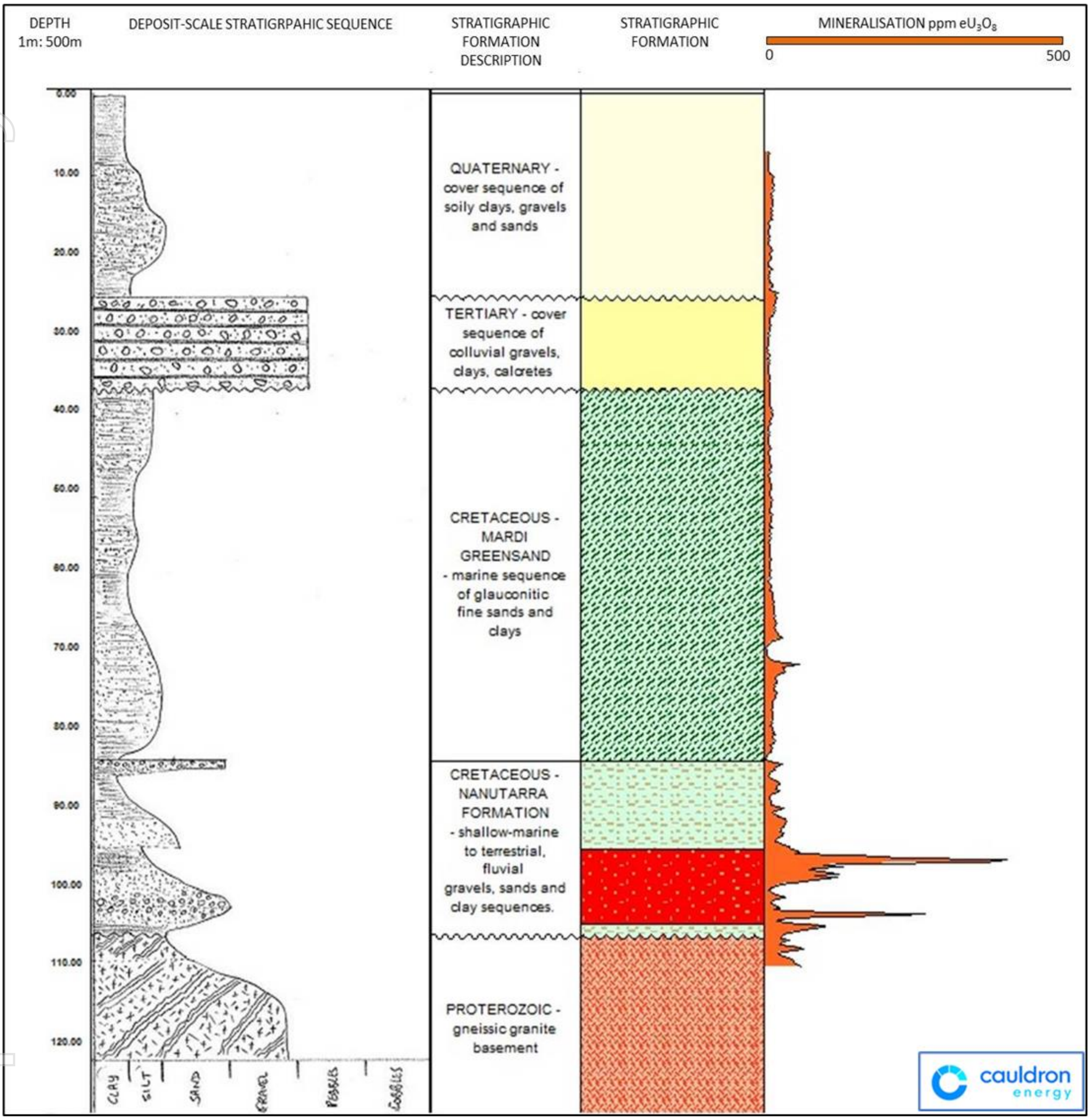

Figure 5: Summary Stratigraphic Column for the Bennet Well Deposit

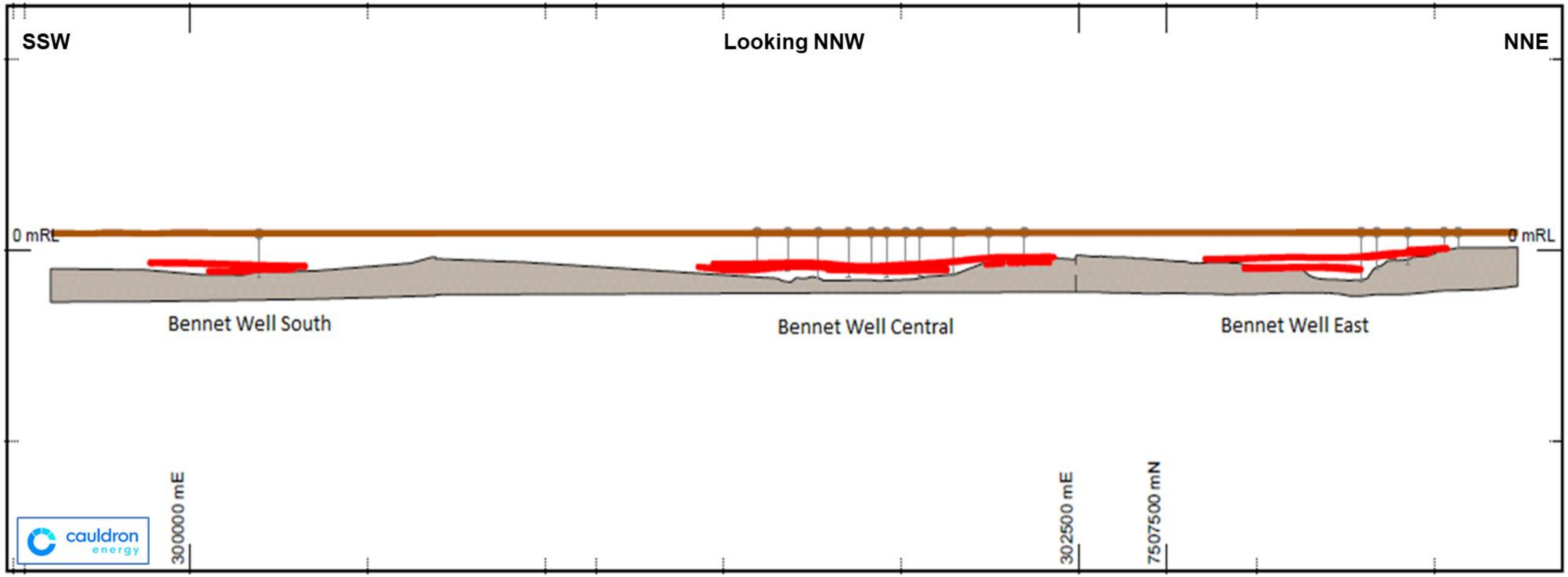

Figure 6: Cross-section of Bennet Well Deposit at about 7,507,500 mN, looking north-northwest; showing relationship between channel morphology and mineralisation; no vertical exaggeration

Most uranium mineralisation occurs in three sedimentary settings, with the majority hosted near the top of the Nanutarra Formation, particularly adjacent to organic-rich sands and lignites beneath intensely bioturbated Mardi Greensand acting as an aquiclude. A less laterally extensive range of uranium mineralisation occurs at the top of the lowermost sedimentary cycle of the Nanutarra Formation.

4.3. Previous Exploration

The Yanrey region was first identified as a target area for sandstone-hosted uranium mineralisation in the early 1970's. CRAE identified a 70 km long regional redox front and several palaeochannels after drilling over 200 holes in the greater Yanrey Project area. This exploration resulted in the discovery of the Manyingee Deposit and the identification of uranium mineralisation at Bennet Well and within the Spinifex Channel. Uranium mineralisation was also identified in the Ballards and Barradale regions. Historical open hole and diamond drilling at the Bennet Well prospect located 15 km south west of the Manyingee deposit, returned several high-grade intersections, such as 0.35 m at 4,100 ppm eU_3O_8, 3.25 m at 2,800 ppm eU_3O_8 and 1.45 m at 1,400 ppm eU_3O_8.

Following the completion of CRAE's work there was a long period during which very little uranium exploration was completed in the Yanrey Project area, as a result of the Australian Government restrictions on uranium mining and the low uranium price.

Cauldron, through its precursor company Scimitar, recommenced uranium exploration in 2006 at the Bennet Well prospect. A vast dataset with a developing enhanced exploration model, in conjunction with the clustering nature of past drilling, all attest to the high probability of further discoveries of uranium mineralised palaeochannels in the greater Yanrey Project area.

Table 2 provides a summary of exploration activities undertaken by Cauldron since 2005.

Table 2: Summary of Cauldron exploration activities

Exploration Year	Summary of Activities
2005	Cauldron applies for three Exploration Licences adjacent to Paladin Energy's Manyingee Deposit, adding two more licences during the year.
2006	Initial airborne EM (Hoist EM) geophysical survey conducted by GPX Surveys, covering 370 km^2 identifies several exploration targets including the Bennet Well Channel. Followed up by a two-phase program of Aircore drilling at Bennet Well, comprising a total of 45 holes for 4,725 m. Drill results confirm the existence of a large, uranium-mineralised palaeochannel system. Second geophysical survey of high-resolution gravity (conducted by Haines Surveys) on a 100 m by 450 m spaced grid over the Bennet Well area and on a 200 m by 800 m spaced grid over the Main Roads prospect (on E08/1493 and E08/1501, respectively).
2007	Two phase Aircore drill program is initiated. • Phase 1 comprises 15 holes for a total of 1,350 m, including four holes drilled 1.2 km to the north of Bennet Well. Significant mineralisation returned from Bennet Well. Also 16 mud rotary holes for 2,007 m is completed over both the Manyingee and Bennet Well area.

Exploration Year	Summary of Activities
	• Phase 2 is more prospect focused drilling at Bennet Well including 118 holes of 13,780 m on a 100 m by 100 m spaced grid. Diamond drilling program of eight holes for 852 m undertaken at Bennet Well to provide detailed geochemical/geotechnical, petrological and physical data for resource estimation.
2008	Second Airborne EM survey completed, resulting in 60% data coverage for the larger Yanrey Project. Subsequent interpretation reveals a new palaeochannel and several new drill targets. A Mineral Resource (JORC 2004) for Bennet Well estimated by Hellman & Schofield results in an Inferred Mineral Resource of 7.3 Mt @ 300 ppm eU_3O_8 for 4.8 million pounds (2,200 tonnes) using a 150 ppm cut-off. Regional-scale air core drilling completed involving 86 holes for a total of 8,674 m, targeting extensions to the Bennet Well Deposit, and testing the newly defined palaeochannel to the south of the main deposit. Drilling identifies a new zone of uranium mineralisation to the northeast of the Bennet Well Deposit, returning encouraging results from the new palaeochannel including 0.8 m @ 420 ppm eU_3O_8.
2009	First tenement-wide project review completed of the uranium potential of the Yanrey Project. Cauldron announces an initial exploration target of 25 to 35 million pounds of U_3O_8, at a grade of 300 to 900 ppm (ASX Announcement 15 September 2009).
2010	Cauldron completes an air core drilling program of 26 holes for a total of 2,534 m over the Bennet Well South prospect, newly identifying a mineralised channel system.
2012	Cauldron completes a mud rotary drill program over the Bennet Well deposit and associated prospects, comprising 73 holes for a total of 6,403 m. Program objective is to define extents and grade of mineralisation in areas surrounding the Bennet Well deposit. Two new resource areas identified were named Bennet Well Deep South and Bennet Well East. Highest grades intercepted were 3.5 m @ 1,810 ppm eU_3O_8 (with a maximum grade of 1.3% eU_3O_8) and 2.3 m @ 1,214 ppm eU_3O_8.
2013	Drill program of eight holes for 613.1 m (mud rotary collars and diamond tails) on the Bennet Well East, Bennet Well South and Bennet Well Deep South prospects. Best results from the drilling were 6.48 m @ 602 ppm eU_3O_8 (YNDD018) and 3.04 m @ 707 ppm eU_30_8 (YNDD020) Geochemical assaying, metallurgical test work and QEMSEM scan on core from diamond drilling. Cauldron announces a significant increase in exploration target to 30 to 115 million pounds of U_3O_8, at a grade of 250 to 900 ppm (ASX Announcement 21 February 2013).

Exploration Year	Summary of Activities
2014	Drill program at Bennet Well to test for extensions of mineralisation and obtain the detailed information required to plan a field leach trial. Drilling comprised 67 mud rotary holes for 5,785 m, six core holes for 534.2 m, downhole geophysical logging and re-interpretation of Bennet Well Mineral Resource.
2015	Water sampling collection and analysis and physical characterisation (Permeability-Porosity-Grain/Bulk Density - PDPK) of core drilled in 2014. Geochemical analysis of 328 core samples taken from 2014 diamond drill holes. Drill program at Bennet Well, Bennet Well Channel, Manyingee South, Main Roads Channel and New Palaeochannel comprising 69 mud rotary holes for 6,156 m to test for existence of mineralisation. The discovery of mineralisation at the Bennet Well Channel from an initial scout drill test funded in part by the Exploration Incentive Scheme of the DMP was immediately followed by a delineation drilling program that allowed for a substantial increase in the Mineral Resource estimate for Bennet Well. Ravensgate Mineral Industry Consultants Pty Ltd completed an update to the Mineral Resource estimate of the Bennet Well uranium deposit. Installation of the Bennet Well weather station for continual and periodic monitoring required for future Field Leach Trial approvals and statutory reporting processes.
2016	Introduction of the Tromino-based passive seismic method. An initial orientation survey was completed over the Bennet Well Deposit comprising 383 stations on lines spaced 100m apart. The survey was originally designed on a grid of 50m spaced stations however this was later extended to 100m spaced stations as this was deemed sufficient for delineation of basement depressions. Pre-selected drill collars were also surveyed to produce a deposit-specific, depth-to-basement model that could later be employed in areas of little to no previous exploration. A follow-up program involved the surveying of 1,934 stations in regional areas surrounding the Bennet Well Deposit and within the wider Yanrey Project. Survey stations were spaced between 100 – 200m apart, while survey lines were designed on spacings between 400 – 800m. This design was based on results from the orientation survey and anticipated target dimensions in each survey location. The regional passive seismic program successfully identified new palaeochannel targets as well as further constraining the boundaries of known palaeochannels in which minor exploration had previously been completed. Reconnaissance geological mapping was undertaken in regional areas south of the Bennet Well Deposit. Outcropping basement was observed comprising fresh, strongly foliated, biotite-rich granitic gneiss and quartzite. These outcrops are highlighted on regional magnetics data as a series of NNW-trending lineaments of moderate to high magnetism. A deposit-wide reinterpretation exercise was initiated in 2016 for Bennet Well, involving the systematic reinterpretation of all lithological,

Exploration Year	Summary of Activities
	stratigraphical, alteration and downhole geophysical data collected from the 2015 rotary mud and diamond drill core holes. This exercise resulted in the creation of 3D wireframe models for each stratigraphic formation, and the production of a representative stratigraphic column for the Bennet Well Deposit. Field Leach Trial (FLT) studies commenced with initiation of the approvals process. This involved reviewing and updating Cauldron's Radiation Management and Radiation Waste Management Plans, during which Radiation Advice and Solutions Pty Ltd consultants were contracted to provide assistance and advice. Discussions were initiated between Cauldron, the CSIRO and MRIWA for funding and research into Field Leach Trials at Bennet Well. Work involved preliminary designs for the FLT well patterns, as part of the regulatory Scope and Program of Works needed for the aforementioned approvals process. This work culminated in the successful award of funding in which Cauldron received $60,000 from the CSIRO and $125,000 from MRIWA. In addition to this, Cauldron injected a total of $125,000 of funds towards the research program which was scheduled to commence in 2017.
2017	Commencement of the CSIRO / MRIWA – supported, two-phase study into the amenability of Bennet Well to mining by In-Situ Recovery mining. Phase 1 involved the use of existing sample and project data to optimise the design of the proposed Field Leach Trials at Bennet Well. Ten column leach tests were undertaken by CSIRO on five mineralised zones, and utilised sampled diamond drill core from the Bennet Well East and Bennet Well Central deposits. Acid and alkali leach solutions were tested during which oxidant was added mid-way through the leaching cycle. The acid leach achieved higher extraction rates than the alkali leach. Uranium extraction rates using the acid leachate were so high that it was deemed the addition of oxidant may actually not be required. The column leach test results were found to concur with the bottle roll tests completed by ANSTO in 2014. Surface geophysics were reinitiated on the Yanrey Project with the continuation of passive seismic surveys. Additional lines were completed in areas extensional to the Bennet Well Deposit, as well as in regional areas to the north and south of tenement E08/1493. A total of 1,234 stations were surveyed on grids of variable station spacings between 100 – 200m, and line spacings between 400 – 2,000m, determined by the approximate strike length and width of the target palaeochannels. As with the 2016 surveys, the resulting depths to basement grids produced from the current passive seismic surveys successfully constrained the dimensions of each respective palaeochannel target, which will allow smarter designing of future drilling to test each of these areas. In March 2017, the West Australian Labour Party won the State election and initiated a change in government policy that resulted in the ban of future uranium mining in Western Australia. Despite constant attempts to gain clarification from the WA government regarding the ability to continue exploration efforts at the Yanrey Project, Cauldron was forced to cease field activities and temporarily shut down the Bennet Well camp in August 2017.

Exploration Year	Summary of Activities
	Since closure of the camp and cessation of field activities, Cauldron focused on project generation and review of base / precious metal mineral potential in and surrounding the Yanrey Project tenements. Projects were reviewed in Australia and Africa.
2018	No field activities were undertaken at the Yanrey Project. Creation of a 3D lithological model, as well as revision / improvement of the 3D stratigraphic model, for the Bennet Well Deposit Desktop studies continued to review the base / precious metal potential of the Yanrey Project, as there had still been no clarity given by the WA State government on whether exploration could continue for uranium projects in the state. Project generation work continued with review of potential high-value, advanced exploration projects capable of rapid improvement in value because of the specific quality of the project. Projects were reviewed throughout Australia as well as in Africa (e.g. copper / uranium and copper / cobalt potential in Namibia, and copper in the Democratic Republic of Congo).
2019 - 2023	No field activities were undertaken at the Yanrey Project due to the lack of clarity given by the WA State government on whether exploration could continue for uranium projects in the state.

4.4. Exploration Potential

4.4.1. Exploration Strategy

Cauldron's principal objective for Yanrey is to substantially increase uranium resource inventory sufficient to commence operations at Bennet Well and to explore for standalone uranium resources on the other Yanrey Project tenements. The short-term strategies are to:

- Improve the current Mineral Resource at Bennet Well to upgrade material from Inferred to Indicated and Indicated to Measured categories, aiming for total resources containing at least 35 to 45 million pounds of U_3O_8 at average grades greater than 300 ppm; and
- Explore for additional standalone uranium projects within the prospective Yanrey tenement package.

4.4.2. 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.

4.4.3. 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.

4.4.4. Prospects and Targets

Work undertaken by Cauldron (based on work from historical explorers plus exploration and project evaluation activities completed between 2006 and 2015) has elucidated numerous exploration opportunities including:

- Re-evaluation of known deposits with mineral resources using contemporary uranium prices;
- Extensions to known deposits with mineral resources;
- Underexplored, but known, prospects at various stages of exploration, and
- Untested geophysical and/or geochemical targets and new exploration targets.

In line with the objective and strategy, three priorities of prospects and targets are identified as:

Priority 1 – Bennet Well: Infill and extensions to existing resources within 5 km;

Priority 2 – Yanrey Regional: follow-up to coincidental geophysical & historic drilling anomalies <20 km to Bennet Well, and

Priority 3 – Yanrey Regional: follow-up drilling or local scale geophysical survey of untested geophysical anomalies.

4.5. Passive Seismic Geophysical Exploration

In 2016, Cauldron initiated surface geophysical surveys using the Tromino-based passive seismic system. The program was undertaken in two phases, with the first phase comprising an orientation survey over the Bennet Well Deposit. The second phase continued in the 2017 exploration year and consisted of extension surveys and regional surveys targeting palaeochannel features both immediately adjacent to Bennet Well and more distally around the greater Yanrey Project.

4.5.1. Orientation Survey – Bennet Well Deposit (E08/1493)

The deposit-wide orientation program involved the acquisition of passive seismic data using sample recording times of 17 minutes, station spacings of 50 – 100m and line spacings of 100m (Figure 7, where the inset map shows the orientation lines in red and the extension survey lines in black). Survey lines ranged from 1 – 15km in length. The completion rate averaged approximately 2 km/day. Geophysical consultant company, Resource Potentials Pty Ltd (Perth) assisted Cauldron with the interpretation of the passive seismic data. The orientation survey was conducted with the following objectives:

- derive the measured response to depth model
- ascertain the sensitivity of the depth to basement measurements derived by the system
- determine the appropriate survey parameters required for the system, particularly station spacing and line separation
- derive the level of repeatability inherent in the measuring system

Additional to the survey lines, 74 pre-selected drillholes from the 2014 and 2015 drilling campaigns were surveyed to determine the accuracy of the passive seismic technique, and to determine the calibration model that converts passive seismic response to basement depth. Surveyed data were processed to provide peak frequencies for each drillhole, which were then plotted against the corresponding depth of basement intersected by drilling. The power-law correlation coefficient of the resulting trendline defined the calibration model by which to estimate the basement depth from passive seismic response.

The drilling density at Bennet Well provided a very good measure of the varying depths to basement, allowing an accurate topographic basement surface map to be derived. This data formed the basis for production of the depth calibration model which was subsequently used to estimate depth to basement in all areas of the Yanrey Project. Another type of modelling was trialled using assigned density values for "Layer 1" (i.e. "cover", or the sedimentary sequence above the basement) and "Layer 2" (i.e. the basement layer), and a calculated shear wave velocity value. The latter value was calculated using a rearrangement of the frequency/shear wave velocity relationship: "f = Vs/(4*H)" where "f" is the peak frequency, "Vs" is the shear wave velocity of the medium, and "H" is the depth, in this case intersected by drilling in each drillhole. The shear wave velocities were then adjusted to match the peaks of the resulting forward model against observed (i.e. drilled) depths. The resulting modelled basement depths from both modelling exercises were then plotted against each other and showed good correlation (Figure 8). It was thus surmised that using either basement estimation model could be used to accurately model depths to basement in areas of little to no previous exploration.

Resulting data from the orientation survey successfully highlighted areas of basement depression, or palaeochannel features, thus potentially indicating areas prospective for uranium mineralisation. These results correlate well with the following observations from previous exploration:

a. the palaeochannels hosting Bennet Well have a northwest-southeast strike, confirming the current lithological and morphological model for the deposit;
b. there is an area in the eastern part of Bennet Well East consisting of coincident observations from drilling and airborne magnetics, indicating a coarse-grained, pegmatitic granite which has been intersected at very shallow depths;
c. there are areas of apparent "jogs" in the channels that were likely produced as a result of cross-cutting fault structures observed in other geophysical datasets;
d. the palaeochannel depressions correlate well with the currently-defined uranium mineralisation outlines, confirming that the mineralisation is not just confined to the deeper parts of the palaeochannels but is also situated on the shoulders of the channels.

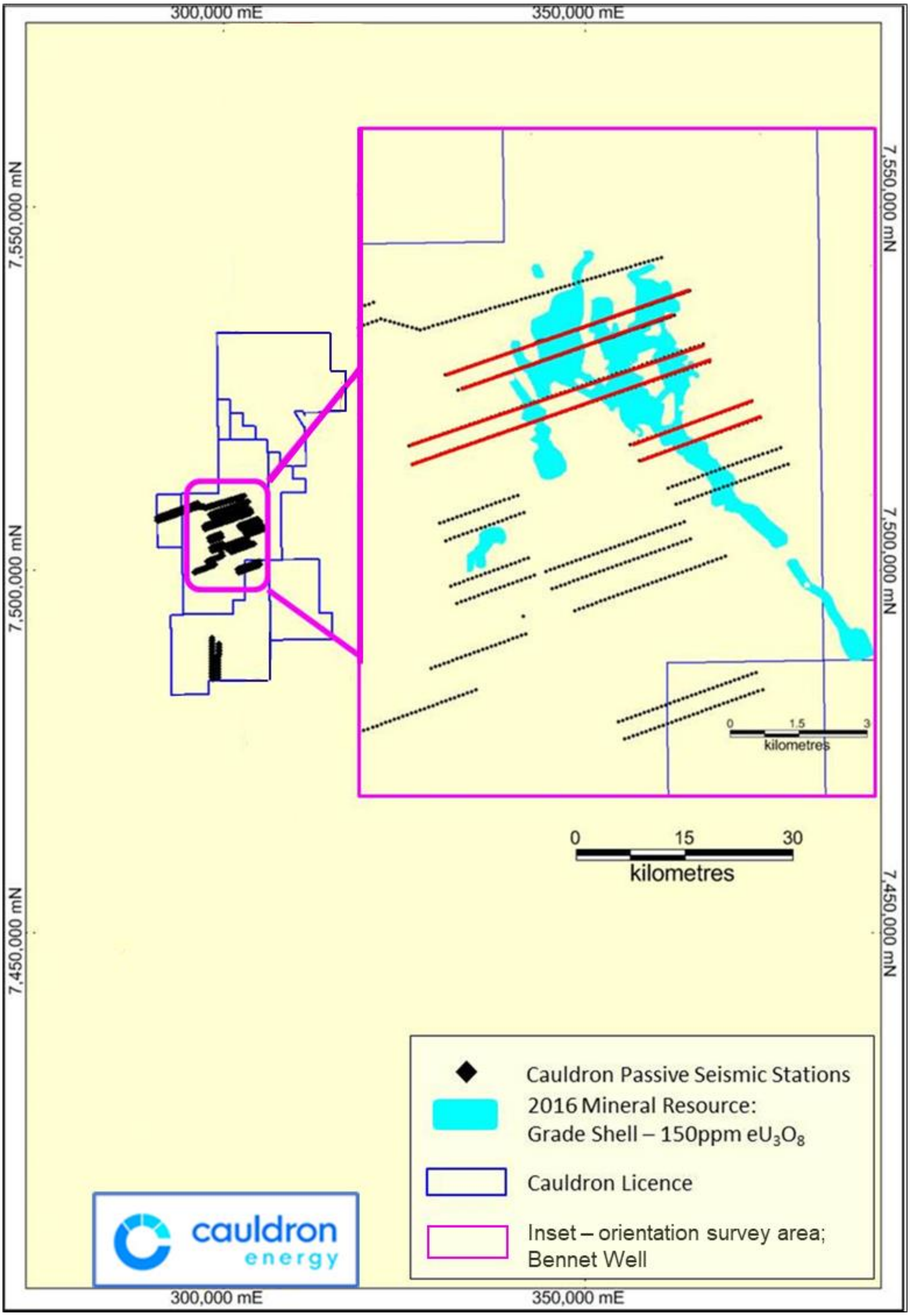

Figure 7: Yanrey Passive Seismic Station Locations. Inset: Orientation Survey lines

Figure 9 provides the modelled topographic surface of depth to basement, as derived from the passive seismic orientation survey program. The rainbow coloured ellipses with cool colours show deeper basement (and channels) ranging to the warmer colours depicting shallow depths. The channel features highlighted by the passive seismic correlate well with those mapped by the close-spaced gravity (Figure 10). Regional magnetics show a series of north-south trending, moderately magnetic features that appear to extend northwards from the northern part of tenement E08/1501 into the southern part of E08/1493 (Figure 11).

The passive seismic data mapped linear depressions in basement, interpreted as the keel to incised valley systems, that support the linear features interpreted from the magnetics. Geological reconnaissance revealed some minor outcropping biotite-rich granitic gneiss at the northernmost point of these magnetic features. Further work is required before any correlative link can be established between the shape of the valley systems and with their magnetic character.

4.5.2. Regional Surveys – Yanrey Project

After the successful results of the orientation survey, the second part of the passive seismic program was initiated over regional areas of the greater Yanrey Project. These surveys were completed between 2016 and 2017. Palaeochannel targets were defined from previous geophysical and drilling anomalies within tenements both proximal and distal to the Bennet Well Deposit. The surveys were designed on grids varying between 100m and 200m spacings for stations and 400m and 2km spacings for the survey lines, depending on the approximate known (if relevant) dimensions of the target features.

Based on the results of the orientation program, the regional surveys were initiated with the following objectives:

a) identify any possible areas of extension to the current Bennet Well Uranium Deposit;
b) define a correlative link between zones of likely basement depression (field observations) with those measured by the passive seismic technique that might be used regionally to derive target areas warranting further follow-up exploration;
c) define exploration drill targets both proximal and distal to the Bennet Well Deposit.

The regional surveys successfully identified new palaeochannels and constrained existing, known, palaeochannel targets. Evaluation and presentation of this data is currently ongoing.

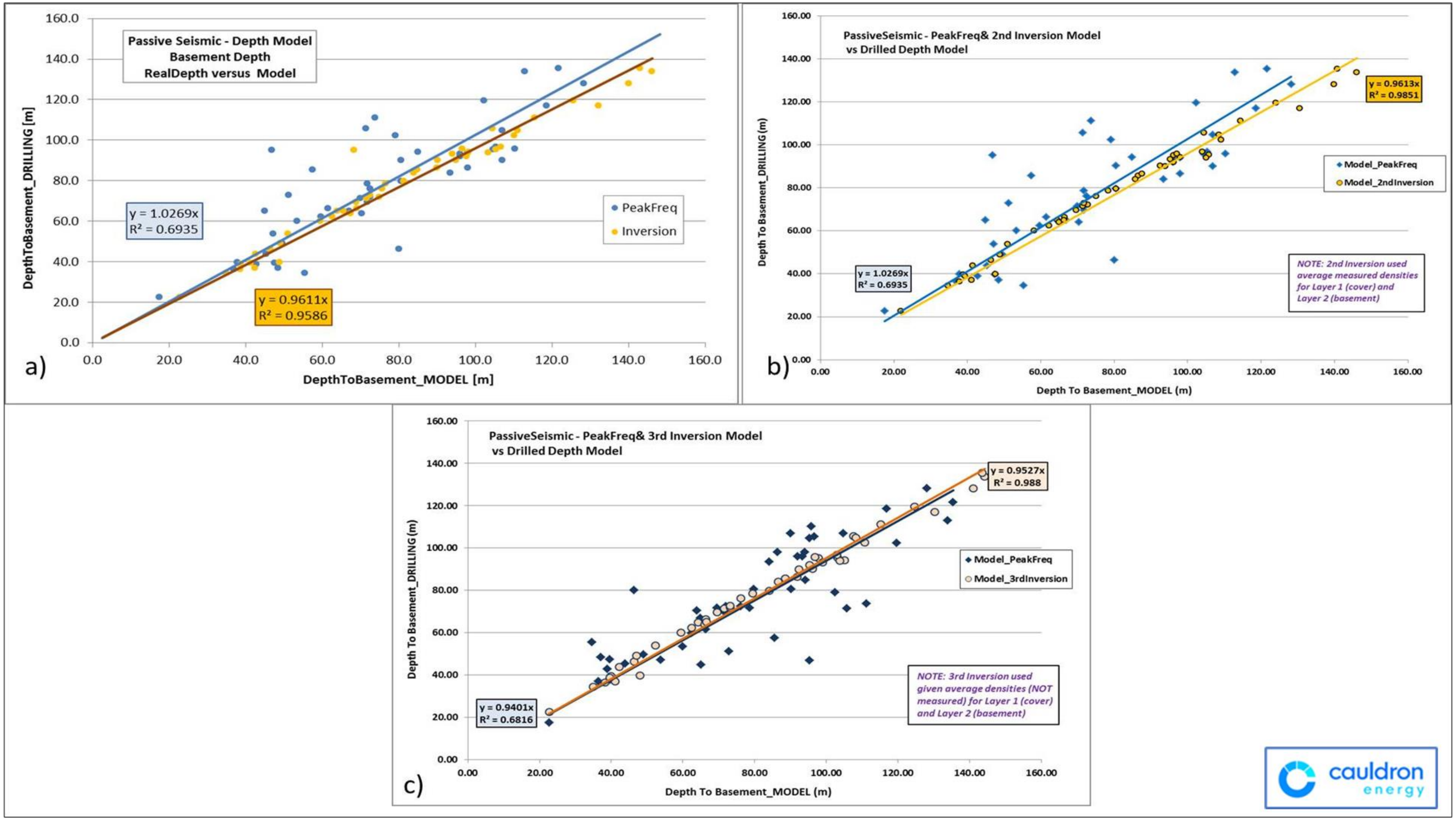

Figure 8: Bennet Well Scatter Plot of Depth Inversion Modelling against depth calibration model for drillholes

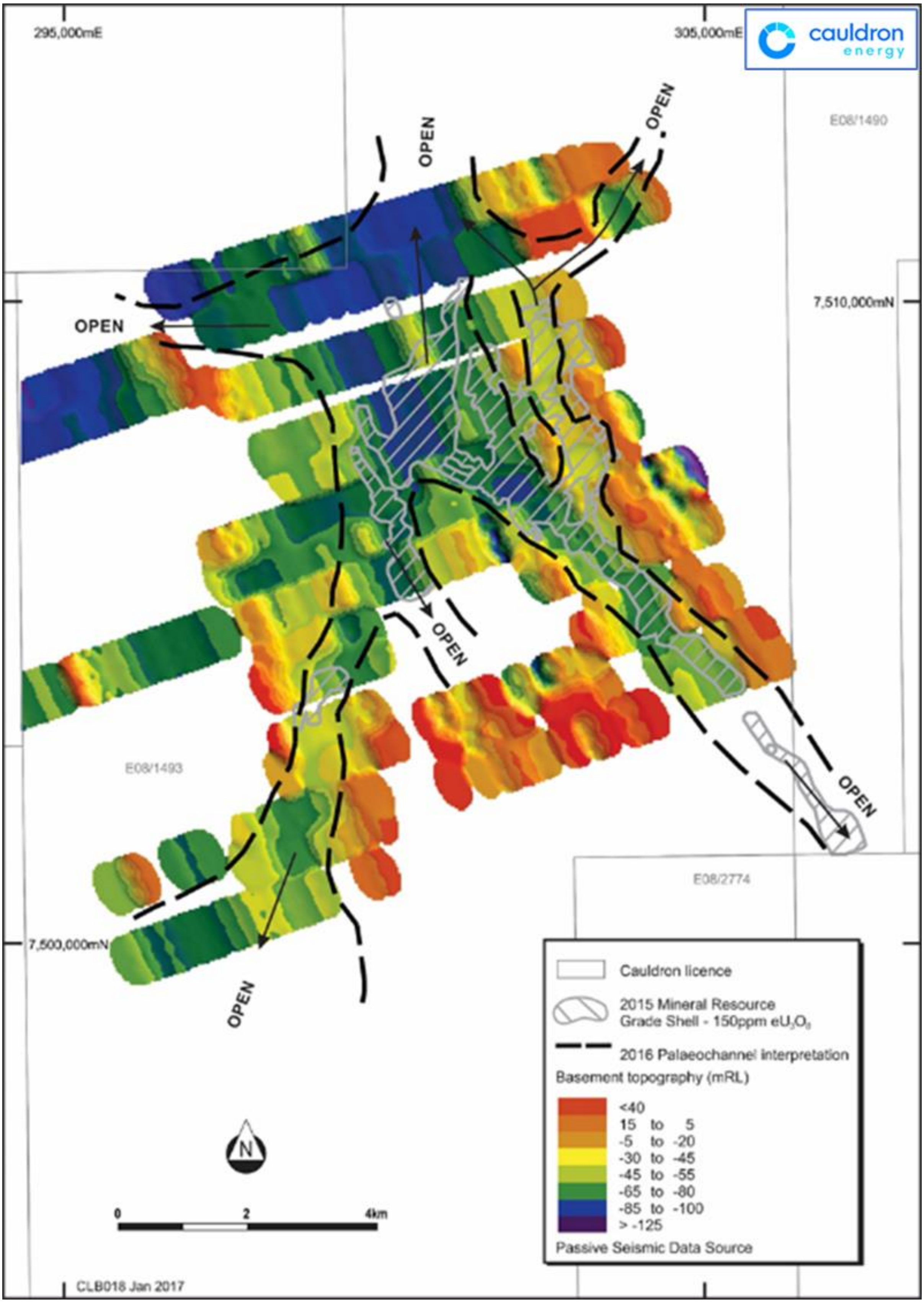

Figure 9: Resulting Basement Topographic Grid from the 2016 passive seismic orientation survey

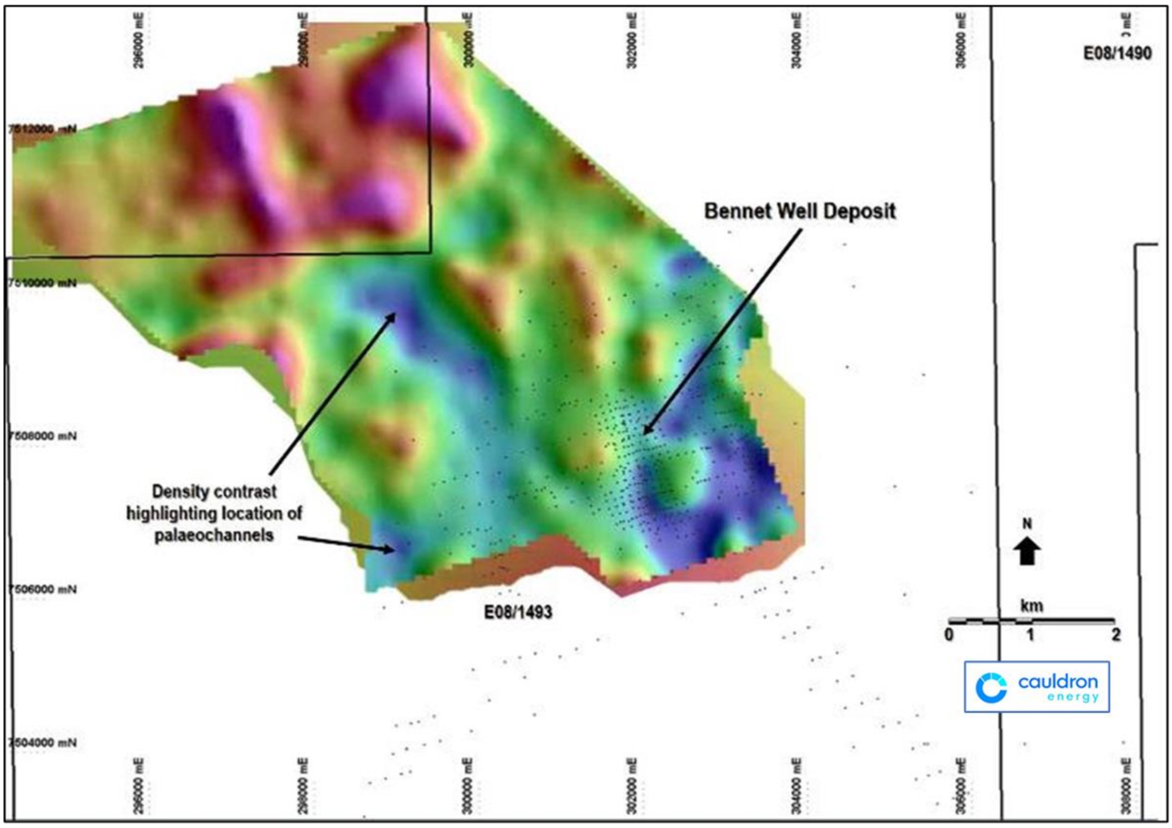

Figure 10: Bouguer Gravity Anomaly Imagery over Bennet Well Deposit. Warmer colours = shallow basement; colder colours = basement depressions/channels.

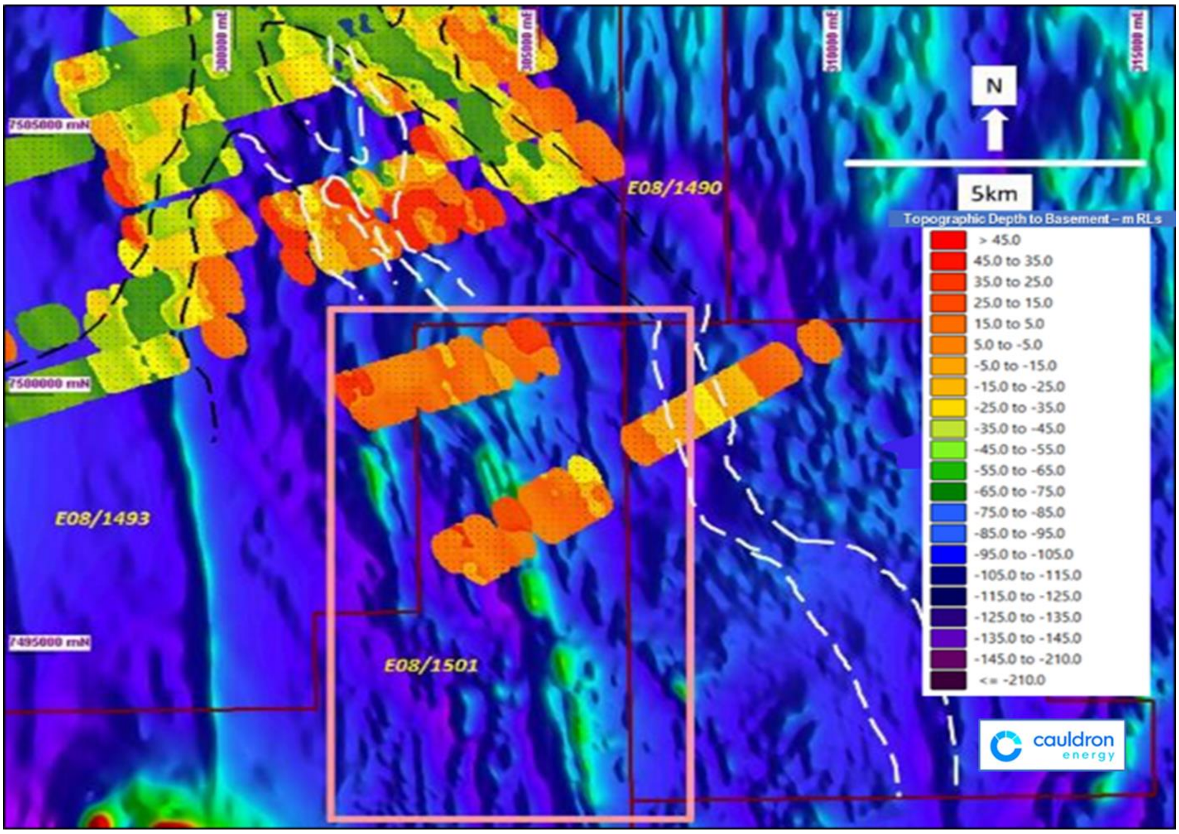

Figure 11: NW-SE trending Magnetic Lineaments crossing E08/1493+1501 boundary. N.B. – Passive seismic data is overlain on regional aeromagnetics imagery

5. BENNET WELL MINERAL RESOURCE

5.1. Mineral Resource Inventory

Ravensgate Mining Industry Consultants (“Ravensgate”) were commissioned to complete an upgrade to the Mineral Resource for the Bennet Well uranium deposit, after the completion of a mud rotary drilling program in late 2015. The report was prepared in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC Code).

Ravensgate updated the Mineral Resource (JORC 2012) estimate using a newly generated three-dimensional resource block model. This resource modelling followed on from a comprehensive revision of the stratigraphic setting completed in-house, following information provided by the 2013 and 2014 diamond drilling program and the mud rotary drill programs of 2014 and 2015, along with a reassessment of all previous drilling results, as summarised in Table 3.

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 (Figure 12).

The Mineral Resource estimate for Bennet Well and its classification is shown in Table 3 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).

Figures 13, 14, 15 and 16 show sectional views through the Bennet Well deposit model, displaying the sedimentary geological units modelled from the recent core drilling. These units were modelled into three-dimensional wireframe solids, used to constrain grade in block model generation, and subsequently for estimation of the Mineral Resource.

Table 3: Mineral Resource Estimate (JORC 2012) for Bennet Well for various cut-off

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.

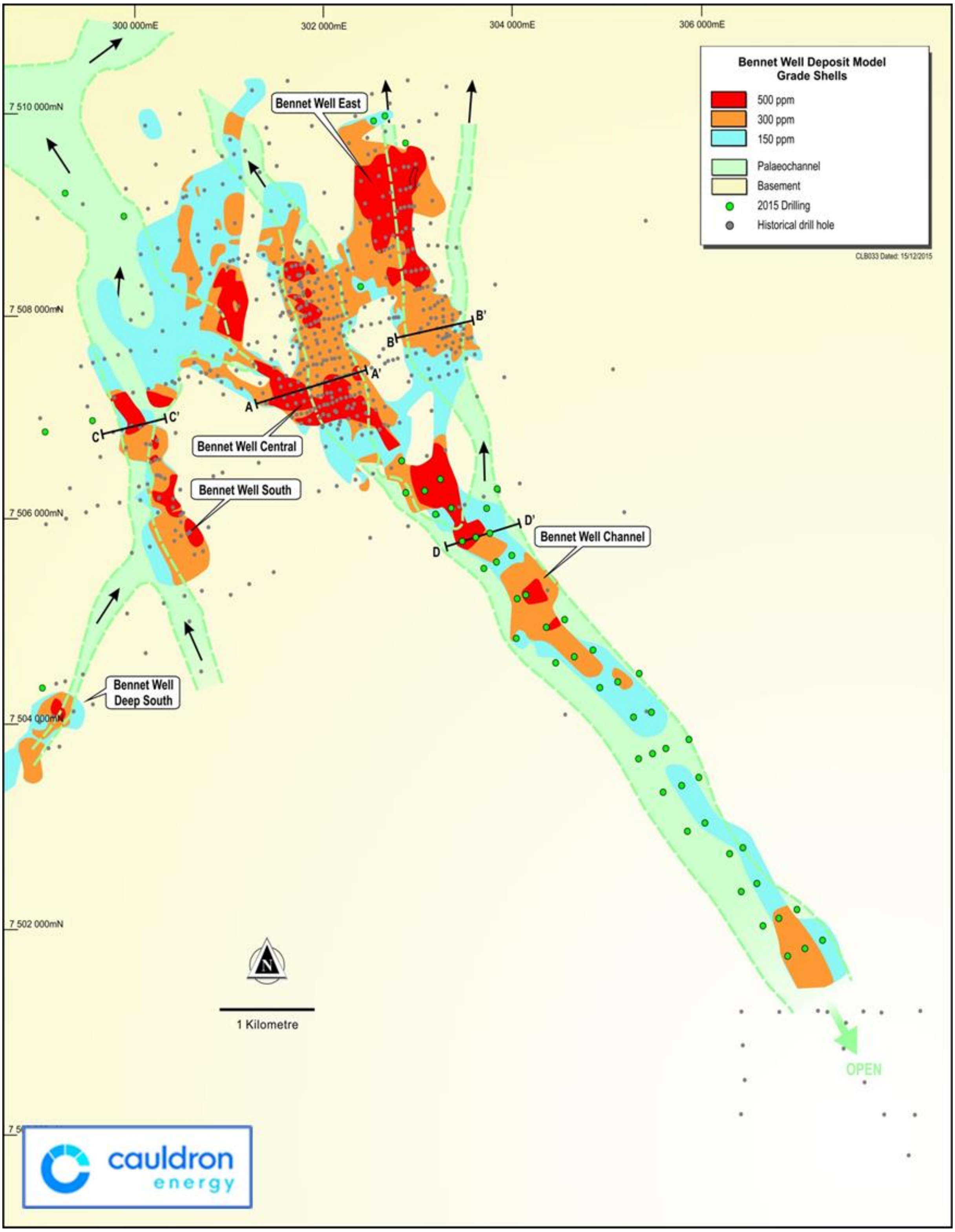

Figure 12: Plan view of Bennet Well Mineralisation

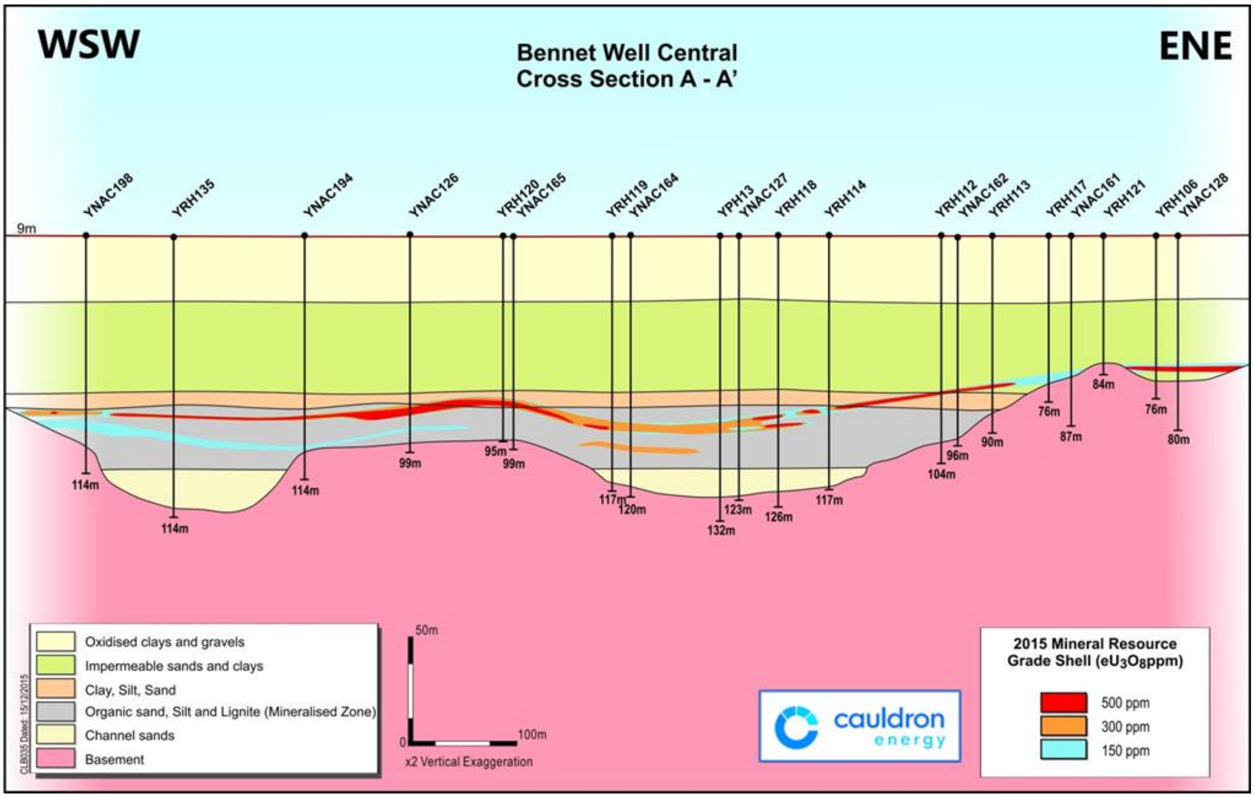

Figure 13: Section View of Bennet Well Central mineralisation

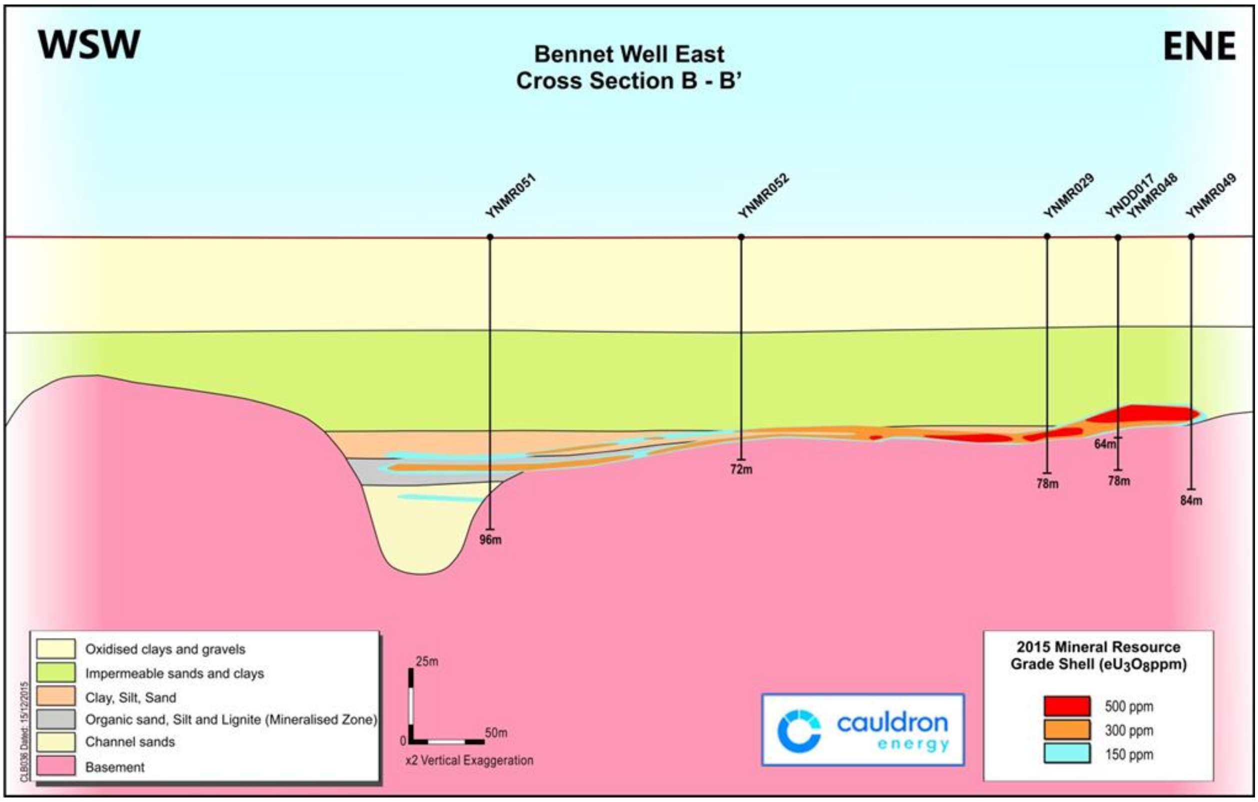

Figure 14: Section View of Bennet Well East mineralisation

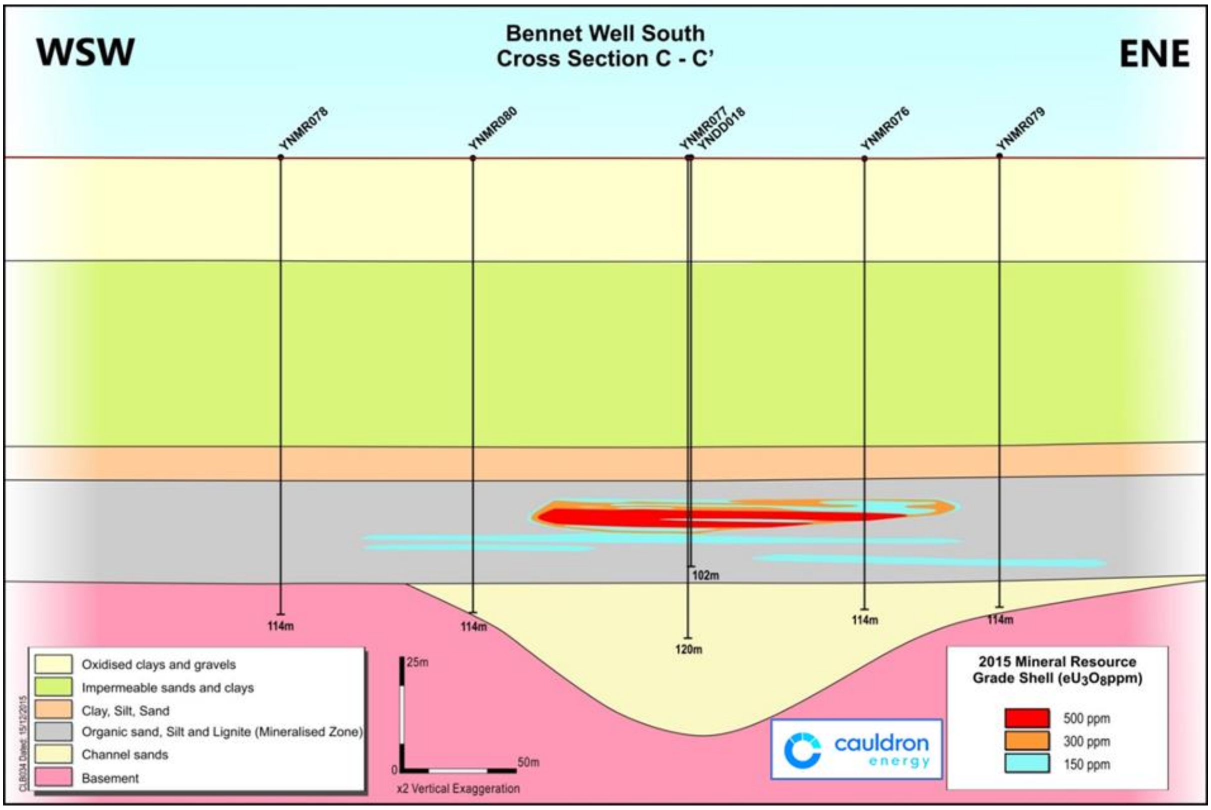

Figure 15: Section View of Bennet Well South mineralisation

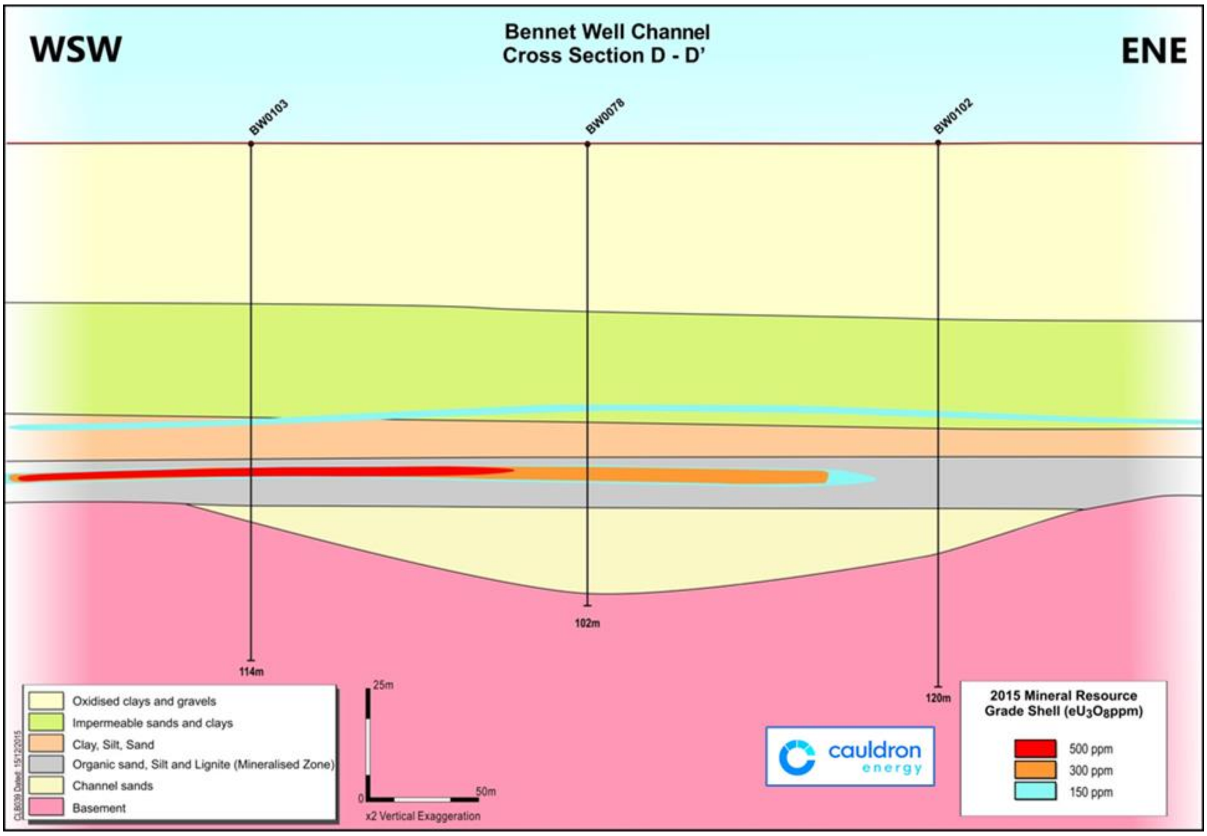

Figure 16: Section View of Bennet Well Channel mineralisation

5.2. Resource Drilling – 2014 & 2015

Two drilling campaigns were completed by the end of 2015 with the following objectives:

- increase the average grade of the Bennet Well Uranium Deposit;
- increase the Mineral Resource to 30 Mlbs of contained uranium oxide;
- discover new areas of high-grade uranium mineralisation to extend the boundaries of the current resource area along strike to the north and to the south;
- complete core drilling to collect physical data important to begin planning the Field Leach Trials.

Drilling in 2014 commenced with rotary mud followed by diamond coring that later resulted in the discovery and delineation of a high-grade pod of uranium mineralisation at Bennet Well East. Diamond core drilling was added to the program in order to facilitate and fast-track Field Leach Trials in this part of the overall Mineral Resource area (refer to ASX announcement 2 December 2014).

The entire 2014 field campaign comprised 73 holes for a total of 6,319 drilled metres with the following breakdown:

- Rotary mud drilling: 67 holes for 5,785 m, and
- Diamond core drilling: 6 holes for 534 m

Drilling in 2015 was comprised of 69 mud rotary holes for 6,156 m with the aim of:

- scout exploration drilling to the southeast of Bennet Well
- delineation drilling of Bennet Well Channel following success of scout drilling

Drill core logging and processing involved the selection of samples for various geochemical assay, physical (porosity/permeability/density) test work, and mineralogical analyses.

Figure 17 illustrates, in plan view, the area of high-grade mineralisation delineated at Bennet Well East. The contour of the greater-than 500 ppm eU_3O_8 mineralisation covers an area 500 m by 175 m in dimension. Figure 18 is a cross sectional view through the centre of this high-grade mineralised pod.

Downhole geophysical surveying by gamma, resistivity, density and induction logging was conducted on all drillholes. Table 4 shows the best high-grade mineralisation intercepts derived from deconvolved downhole gamma data, using a minimum internal thickness of 0.4 m and a lower cut-off grade of 150 ppm eU_3O_8.

Table 4: Collar Details and best high-grade uranium intercepts for the 2014 drilling over the Bennet Well Resource area

Hole Name	Hole Type	Easting	Northing	RL	Total Depth (m)	Depth From (m)	Depth To (m)	Thickness (m)	Grade (eU_3O_8 ppm)	Significant Intercept (m@eU_3O_8 ppm)	Drilling Objective (see Footnote)
BW0010	RM	303245	7508159	48	66	41.35	44.05	2.70	1344.29	2.70m @ 1344.29	**B**
						44.50	45.85	1.35	290.48	1.35m @ 290.48	
BW0013	RM	303254	7507998	49	83	49.20	50.45	1.25	528.72	1.25m @ 528.72	**A**
						54.70	56.10	1.40	1519.81	1.40m @ 1519.81	
BW0021	RM	303260	7507946	48	89	51.90	52.75	0.85	404.05	0.85m @ 404.05	**A**
						55.95	58.10	2.15	1081.90	2.15m @ 1081.90	
						58.55	61.05	2.50	371.05	2.50m @ 371.05	
						81.65	82.60	0.95	358.55	0.95m @ 358.55	
BW0035	RM	303292	7507823	48	95	57.60	60.55	2.95	2051.02	2.95m @ 2051.02	**A**
BW0037	RM	303476	7507875	48	53	40.05	42.70	2.65	1028.36	2.65m @ 1028.36	**B**
BW0056	DD	303295	7507805	49	87.42	58.80	61.75	2.95	993.63	2.95m @ 993.63	**A**
BW0061	DD	303270	7507795	49	70.8	61.15	63.60	2.45	1263.79	2.45m @ 1263.79	**A**
BW0072	DD	303325	7507815	49	66.4	57.45	58.65	1.20	1133.63	1.20m @ 1133.63	**A**

Footnote: **A -** to increase tenor of existing high grade; **B -** to define existing high grade areas;

RM - rotary mud drilling; **DD** - diamond drill core
All coordinates given are in MGA94_Zone 50 datum
All holes were drilled at an Azimuth of 000 and an Inclination of -90°

All Significant Intercepts extracted using a 150 ppm cut-off grade and a minimum intercept thickness of 0.4 m

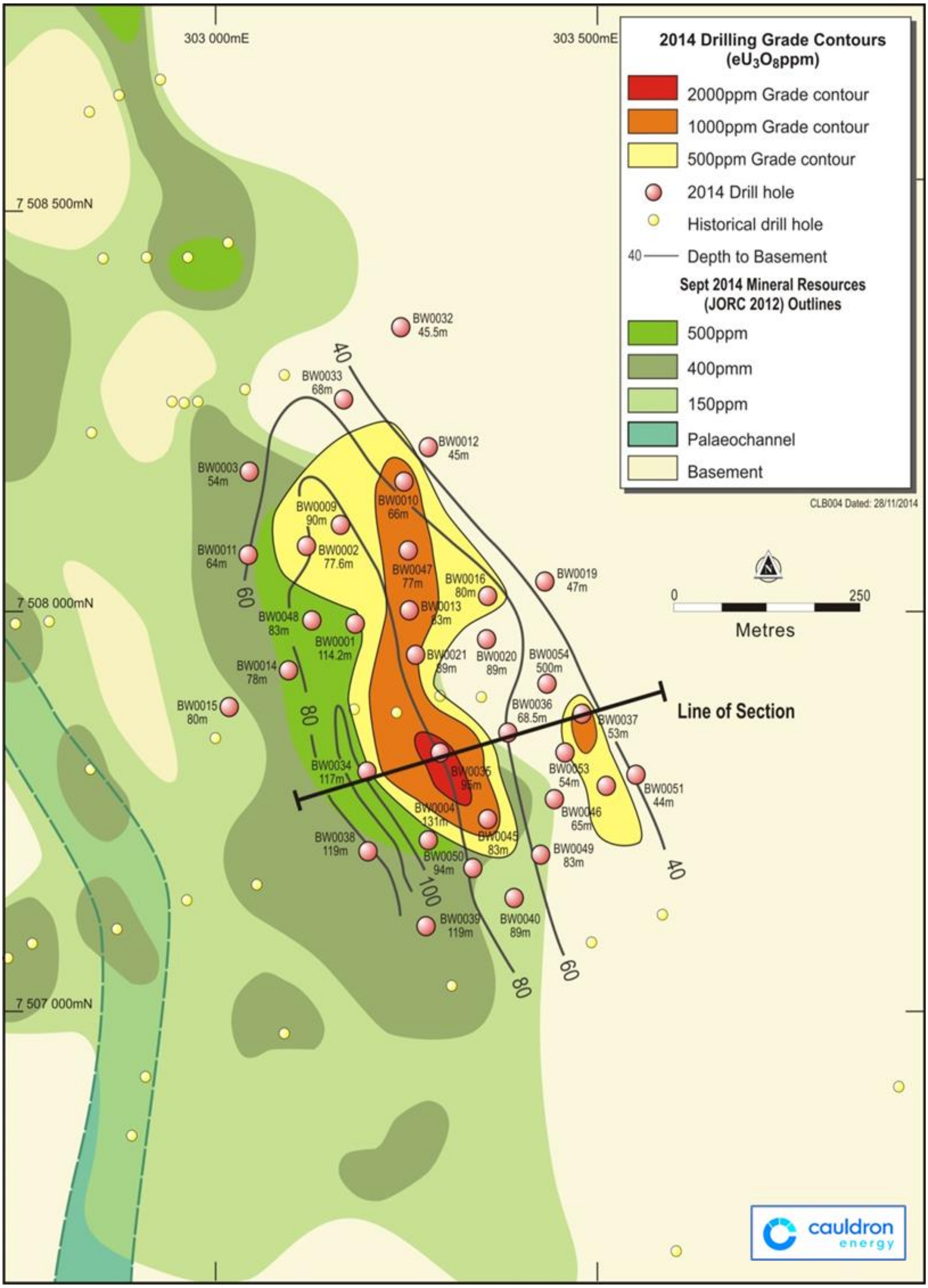

Figure 17: Bennet Well East 2014 Resource Drilling Grade Contours

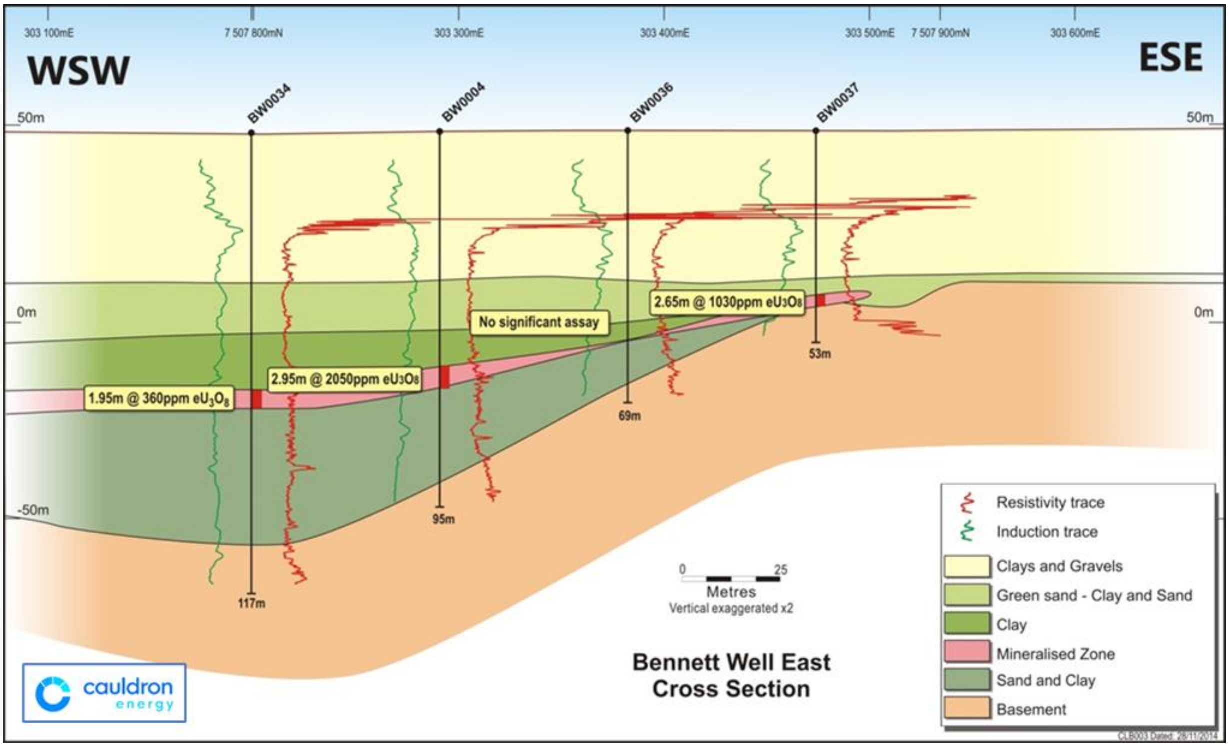

Figure 18: Section View of Bennet Well East 2014 resource drilling

5.3. Physical Testwork 2015

Permeability, porosity and density testing was completed by independent reservoir optimisation specialists, Core Laboratories Australia Pty Ltd (Corelabs) of Kewdale, WA, using core obtained from Bennet Well East and Bennet Well Central. Core was sampled by Corelabs' pressure decay profile permeameter (PDPK) base on depth increments of 15 cm, commencing from about 5 m above mineralisation (in the overlying aquiclude sequence), through the mineralisation zone and 5 m into the lowermost sequence, in order to obtain measured permeability. In addition, porosity and density measurements were obtained using a porosimeter and balance.

This physical characterisation testing shows the porosity of the uranium bearing lithologies is suitable for mining via the In-situ Recovery (ISR) method, having values ranging from 27% to 42%, with an average of 34% porosity. A tightly-bound, highly bioturbated greensand unit overlies mineralisation, having low to extremely low permeability of 0.07 to 10 millidarcies (md), showing that this unit is impermeable and will provide the confining pressure required to contain the mining fluids of a potential ISR operation.

A composite photograph of drill core from hole BW0070 Figure 19, illustrates the varying permeability returned from Air-Permeability (Ka) <10 md (impermeable) measurements taken from the hanging wall, which then increase to Ka 750 md (permeable) within the mineralised zone, and then returning to Ka 60 md (low permeability) in the footwall to mineralisation.

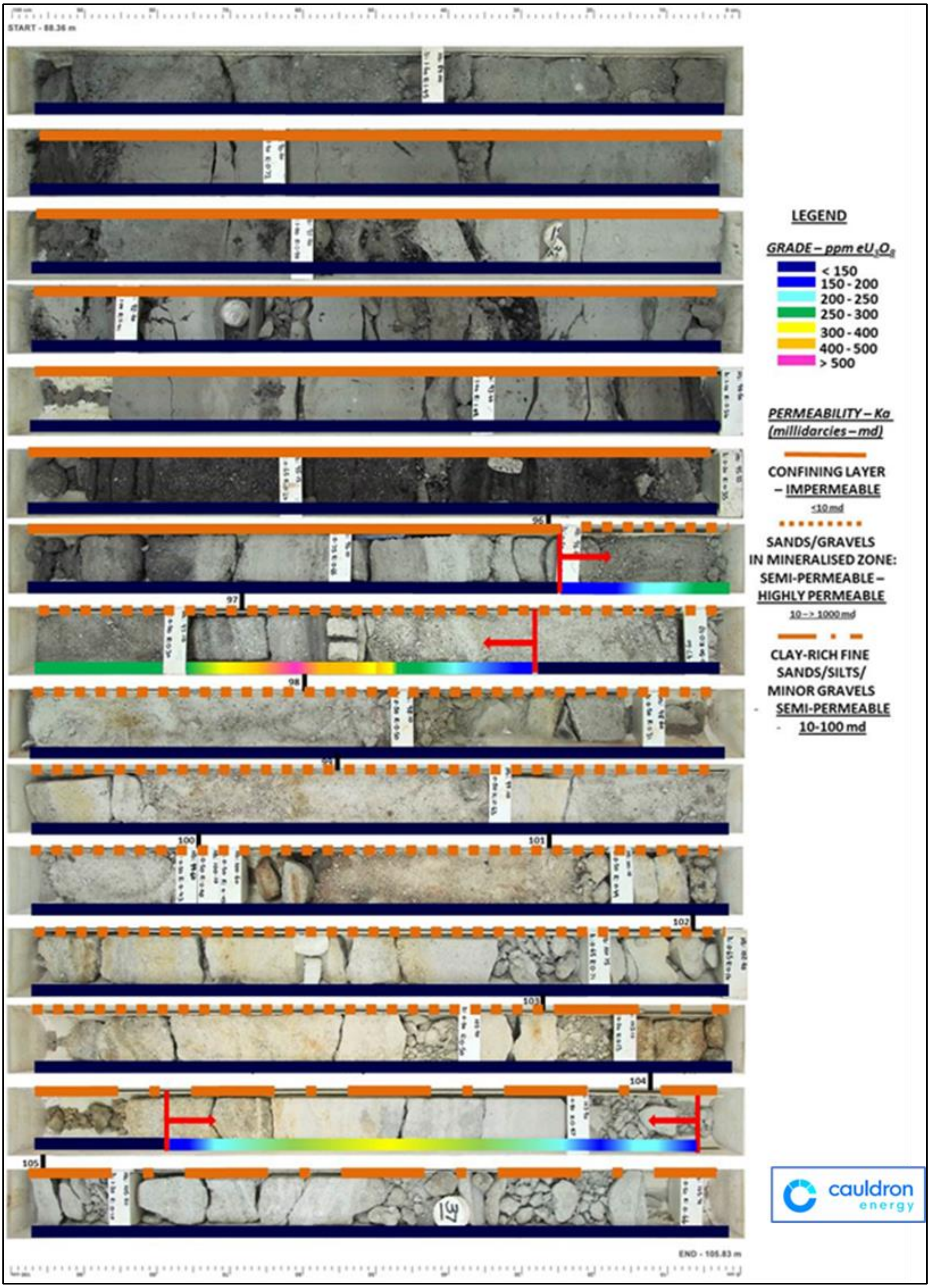

Figure 19: Summary of Permeability and Uranium Grade on Drill core Photograph BW0070, Bennet Well Central

A summary of permeability profiles from the permeametry measurements of four core holes in Bennet Well Central and Bennet Well East is shown in Figure 20. There is generally an order of magnitude increase in the permeability of the sands that are host to mineralisation compared to the sediments of the adjacent hangingwall and footwall.

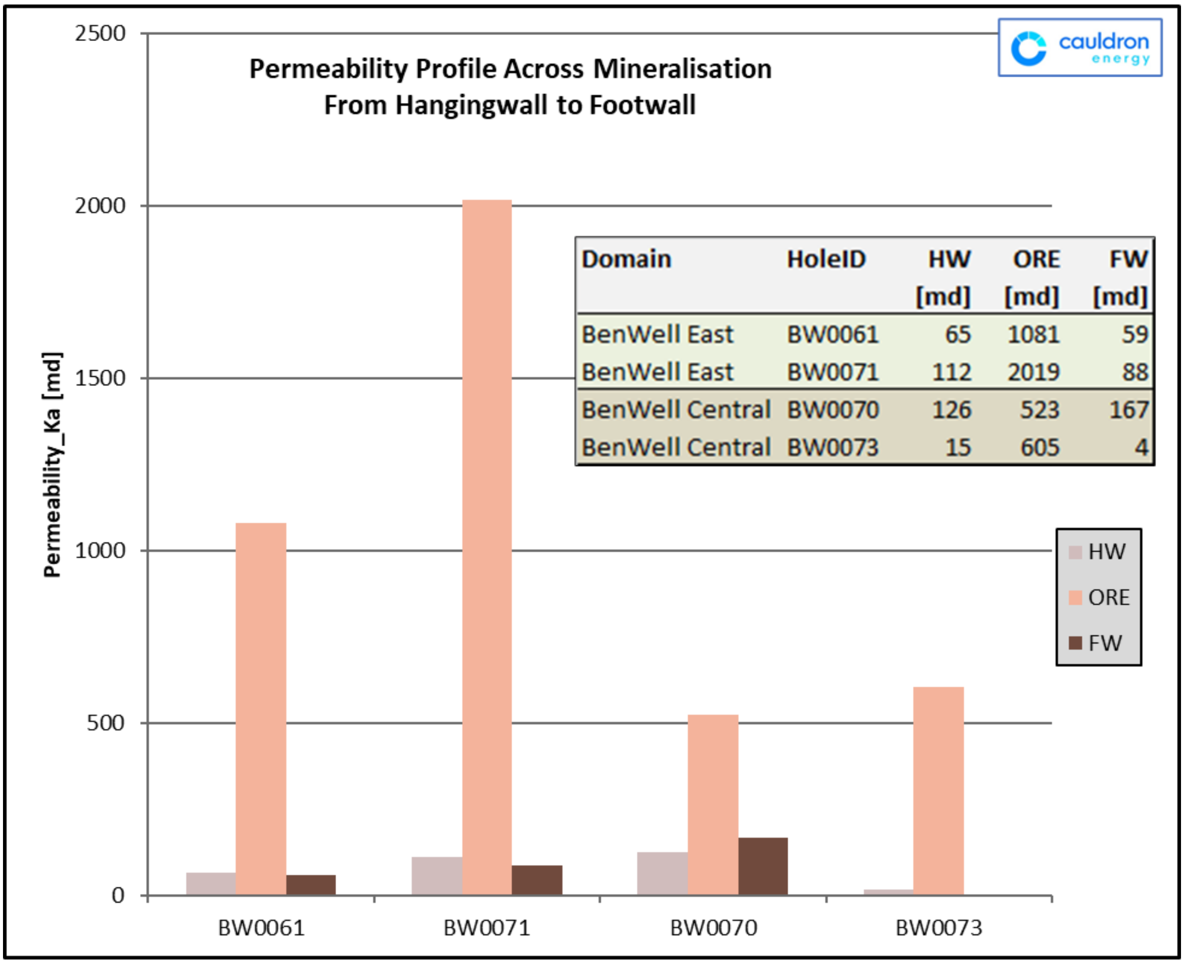

Figure 20: Permeability Profiles of Host Sequence to Mineralisation for core holes in Bennet Well East and Bennet Well Central; HW denotes sediments of the hangingwall, ORE denotes the host to mineralisation, FW denotes the sediments of the footwall

5.4. Hydro-Geological Framework

In-situ leach mining of uranium requires the host sequence to have a very specific form, summarised by having the following favourable physical conditions:

1. Deposit geometry – generally horizontal, well defined mineralised horizons
2. Permeable host rock – the host to mineralisation is permeable to allow mining fluids to access the mineralisation
3. Confining Layers – the hydrogeological geometry must prevent lixiviant from escaping vertically upwards
4. Saturated conditions – mineralisation must be hosted in the hydrologically saturated zone

5.4.1. Deposit Geometry

The geometry of the Bennet Well Deposit is presented Figures 12 to 16, and shown to be aerially extensive, sub-horizontal accumulations of uranium. The host sequence comprises shallow unconsolidated Mesozoic sands of the Nanutarra Formation and mineralisation can be separated into four sub-horizontal lenses.

5.4.2. Permeable Host Sequence

From physical characterisation testing, described in Section 5.3, permeabilities of greater than 1000 milidarcies are shown in the 'PermInterp' log of Figure 21 as 'Permeable_Minz' or 'Permeable-NonMinz' layers (yellowish coloured shading), and non-permeable layers are shown with the greenish coloured shading. There is good correlation between the permeametry tests and grain size as logged in core. The host unit to mineralisation is permeable, as seen from the geological logs and permeametry testwork, refer to Figure 21.

5.4.3. Confining Layers

The Mardi Greensand is a heavily bioturbated, glauconite-rich sand, silt and clay sequence. This unit conformably overlies the Nanutarra Formation and appears massive and very poorly sorted because of the intensity of bioturbation that has destroyed all sedimentary layering. Permeametry shows that this unit has very low permeabilities; usually around 50 milidarcies. The Mardi Greensand is an aquiclude that will act as the confining layer to mining fluids on the upper contact to mineralisation at Bennet Well East.

At Bennet Well Central the host sequence consists of two cycles of sand divided into an upper (from 84.5 to 97.0 m) and a lower sand (from 97.0 to 112.4 m), about 11.4 m and 15.3 m thick, respectively. The upper sand is relatively finer grained with volumetrically more interbeds of clay compared to the lower sand cycle. BW0073 in Figure 21 shows that mineralisation is hosted beneath the upper contact of the lower sand cycle. The lowermost portion of the upper sand cycle, in contact with mineralisation is shown by permeametry to be impermeable and is interpreted to form the confining upper layer to mineralisation.

The lower contact to mineralisation at Bennet Well East and Bennet Well Central is crystalline Proterozoic basement rocks showing variable palaeo-weathering patterns in gneiss, granite and pegmatite. Saprolitic weathering clay (probably kaolinite) is developed on the upper surface of the basement and is mostly impermeable as shown by permeametry. Fault zones of limited size increase the permeability of the basement. The basement, in particular the saprolitic clay, forms the lower confining layer to mineralisation.

5.4.4. Saturated Conditions

The Marker logs on each Wellcad document show the upper surface of the water table. All mineralisation exists well beneath the top of the water table, despite such shallow occurrence of mineralisation in Bennet Well East.

5.4.5. Field Leach Trials

The nature of mineralisation, its host and confinement is sufficient to allow the progress to Field Leach Trials to quantify the in-situ leachability of the Bennet Well Uranium Deposit.

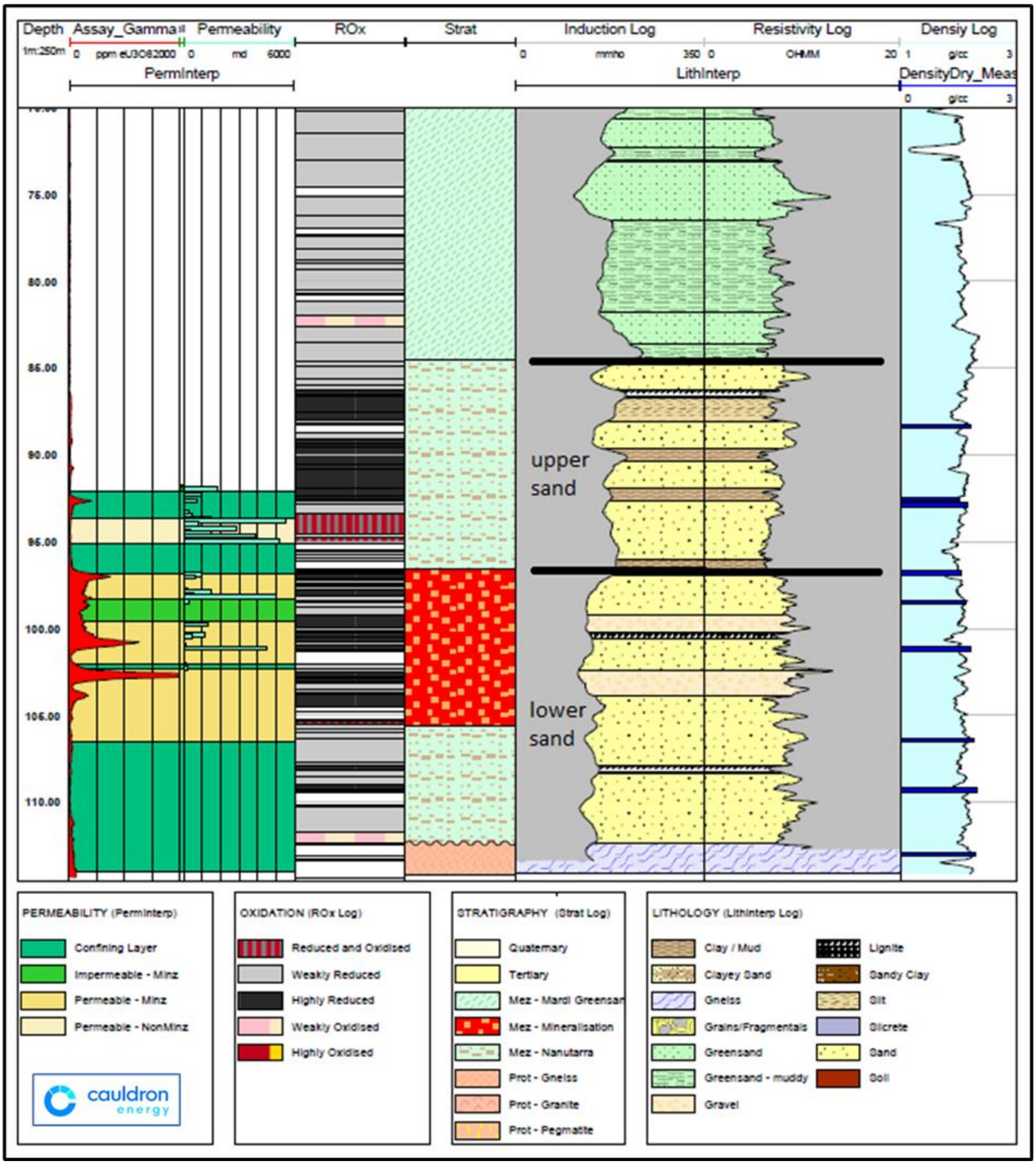

Figure 21: Lithological and Geophysical Logs of Drill Core, BW0073, Bennet Well Central

6. METALLURGICAL TESTWORK

Mineralisation at the Bennet Well deposit may be amenable to in-situ leaching (ISL) followed by solution purification, product precipitation and dewatering before packaging of high-quality uranium oxides and export from site.

6.1. ANSTO Metallurgical Test Work Results

Drill core samples from Bennet Well were submitted to the Australian Nuclear Science and Technology Organisation (ANSTO) laboratory in New South Wales. The sighter testing program was developed in conjunction with ANSTO to ascertain the leach response of the samples under typical ISL conditions considering both the acid leaching route and the alkali/carbonate/bicarbonate leaching route (ASX 24 March 2014). The test work scope also included investigations into 138 drill core interval samples using Delayed Neutron Activation analysis, uranium mineralisation analysis using QEMSCAN, site water chemical composition and determining the degree of secular equilibrium in two high grade samples using gamma spectrometry. The core samples submitted were labelled YNDD018 and YNDD022.

6.1.1. Uranium Mineralisation

The uranium mineralisation distribution as a function of depth below surface is shown in Figure 22.

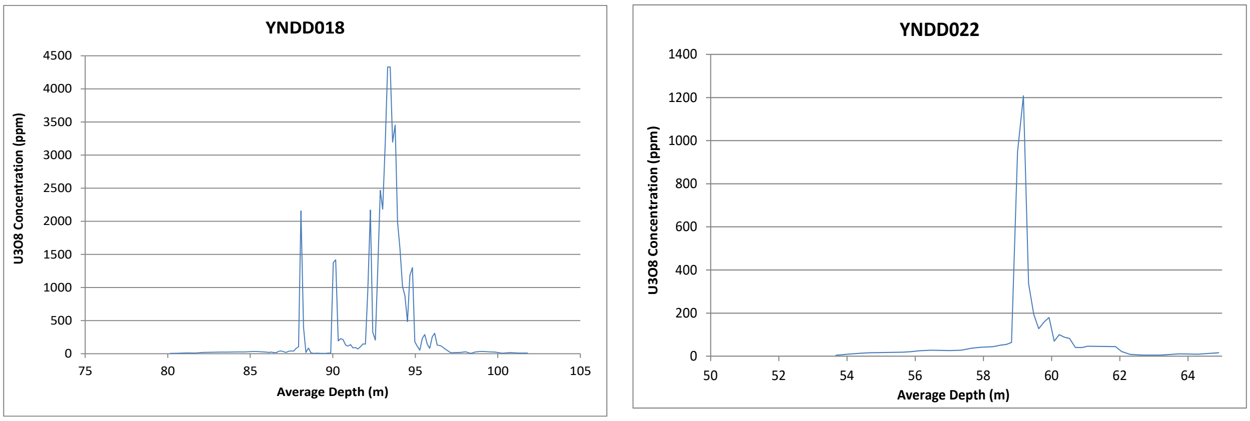

Figure 22: Uranium Occurrence as a Function of Depth

Selected samples from the higher-grade intervals were chosen from each core and submitted for QEMSCAN analysis to determine the mineralogical occurrence of the major phases within the samples. Results from the QEMSCAN analysis are presented in Error! Reference source not found.

6.1.2. Leaching Results

Intervals from high grade portions of YNDD018 and YNDD022 were selected and composited into two samples. These samples were submitted for preliminary leaching test work using both acid and alkali/carbonate/bicarbonate conditions. The elemental compositions of the composite samples, as determined by XRF or otherwise indicated, are provided in Table 6. Both composites show low levels of Ca and Mg suggesting the total carbonate, hence acid consumption, should also be low.

Table 5: QEMSCAN Results

Uranium Bearing Minerals in Higher Grade Intervals			
Mineral	Chemical Formula	YNDD022 (%)	YNDD018 (%)
Uranium Phase	U, S, Si, Zr, O, Na	0.020	0.36
U-Zircon	$(Zr,U)SiO_4$	0.010	0.022
Coffinite	$U(SiO_4)_{1-x}(OH)_{4x}$	0.0002	0.013
Sodium-Zippeite	$Na_4(UO_2)_6(SO_4)_3(OH)_{10} \bullet 4H_2O$	<0.001	0.038

Gangue Minerals in Higher Grade Intervals			
Mineral	Chemical Formula	YNDD022 (%)	YNDD018 (%)
Quartz	SiO_2	70.9	88.5
K-Feldspar	$KAlSi_3O_8$	20.6	3.80
Biotite	$K(Mg,Fe)_3[AlSi_3O_{10}(OH,F)_2]$	2.95	0.35
Kaolinite/Clays	$Al_2Si_2O_5(OH)_4$	2.82	4.16
Muscovite	$KAl_2(Si_3Al)O_{10}(OH,F)_2$	1.87	1.14
Rutile	TiO_2	0.37	0.06
Pyrite	FeS_2	0.20	1.27
Zircon	$ZrSiO_4$	0.12	0.14
Carbonates	$(Ca,Mg,Fe)CO_3$	0.001	0.005
Trace & Others	-	0.20	0.11

Table 6: Head Sample Composition (weight %) for Composited Samples

Element	YNDD018 (%)	YNDD022 (%)	Element	YNDD018 (%)	YNDD022 (%)
Al	2.71	4.00	Pb	<0.001	0.002
As	0.001	0.001	S total (LECO)	2.396	0.573
Ba	0.021	0.073	S as sulphide (LECO)	2.216	0.453
Ca	<0.001	<0.001	Si	38.4	37.3
Fe	2.11	1.35	Th	0.002	0.003
K	1.18	2.69	Ti	0.238	0.245
Mg	0.05	0.16	U_3O_8	1,190	500
Mn	0.011	0.002	V	0.003	0.005
Na	0.06	0.10	Zn	0.008	0.002
P	0.009	0.013	Zr	0.031	0.038

The head grade analysis show that elements present at a concentration greater than 1% were Si, S, Al, Fe and K. Of the minor elements, none were at a concentration that would be expected to cause downstream processing problems.

Preliminary leach tests were performed in small agitated tanks at low solids loading to allow leaching performance to be examined under ideal conditions without the interference of solution matrix effects and to ensure maximum exposure of the uranium minerals to the leach solution. Three tests on each composite were carried including moderate acid leach conditions (duration 1 day), strong acid leach conditions (duration 1 day) and typical alkali/carbonate/bicarbonate leach conditions (duration 7 days).

An additional test to determine the extraction of uranium without the use of an oxidant was undertaken together with two bottle roll tests in acid media on composites from YNDD018 and YNDD022. All tests were conducted in Sydney tap water with results from the leach test work summarised in Table 7.

Table 7: Summary of Sighter Leach Tests

Leach No.	Composite	pH	ORP (mV, Ag/AgCl)	Temp(C)	Fe3+ Add. (g/L)	Mass Loss (%)	Estimated Acid Consumed. (kg/t)	Feed U_3O_8 (ppm)	Residue U_3O_8 (ppm)	U Extract. (%)
CAULD3	YNDD018	1.2	600	50	2.0	6.4	13.6	1,186	17	98.6
CAULD7		2.0	~450	30	0.0	6.0	TBA		32	97.5
CAULD1		2.0	500	30	0.5	5.7	7.9		34	97.3
CAULD8		1.8	~450	21	0.0	3.0	0.4		47	96.1
CAULD5		Alkaline Leach		30	-	3.1	-		56	95.4
CAULD4	YNDD022	1.2	600	50	2.0	6.6	16.3	500	9	98.4
CAULD2		2.0	500	30	0.5	4.7	10.1		19	96.4
CAULD9		1.8	~450	21	0.0	9.2	1.2		23	95.8
CAULD6		Alkaline Leach		30	-	7.5	-		28	94.9

The extractions for the moderate ISL conditions (CAULD1 and CAULD2) were high at 97.3% and 96.4% for the two composites. For the more severe strong acid leach conditions (CAULD3 and CAULD4), uranium extraction increased by approximately 2%. The estimated acid consumptions for the moderate leach conditions were low at between 7.9 kg/t and 10.1 kg/t for the two composites, respectively. Full solution analysis for all tests is pending.

Preliminary XRF results for the alkaline leach conditions (CAULD 5 and CAULD 6) suggest uranium extractions were about 3% lower than the moderate acid ISL conditions. This is a promising result as alkaline leaching is typically slower than acid leaching. The data suggest that high extraction of uranium can be achieved using either an acid or alkali/carbonate/bicarbonate leaching route. The mass loss may be due to the samples being finely pulverised thereby allowing greater gangue dissolution.

The test to determine the effect of ferric ions on leaching (CAULD7) showed high uranium extraction in the absence of additional oxidant. This indicates that uranium in the mineralisation is present in the readily soluble U(VI) form.

The two bottle roll tests (CAULD8 and CAULD9) were conducted over 4 days without additional oxidant. The extraction of uranium was high at 96.1% and 95.8% respectively at low acid consumption. The bottle rolls were conducted on samples with particle size of –2.0 mm which confirms the readily leachable nature of the uranium mineralisation.

Chemical analysis of the site water show low levels of the major elements with the concentration of salt (NaCl) not expected to impact any ion exchange or solvent extraction processes in the solution purification and product precipitation plant. A total of 30 site water samples were analysed and showed levels of Pb, Th, Ti, U, V, Zn and Zr were all <1 mg/L.

6.2. CSIRO Metallurgical Characterisation Research Program

In late 2016, Cauldron successfully secured funding from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Minerals Research Institute of Western Australia (MRIWA) to initiate a deposit-focused investigation into the amenability of Bennet Well for uranium extraction by the In-Situ Recovery (ISR) method of mining (ASX 25 May 2017). The research program commenced in early 2017 in a 2-phase program undertaken by CSIRO (Table 8). Phase 1 involved ten column leach tests on five mineralised zones which had been sampled by diamond drill core from the Bennet Well East and Bennet Well Central deposits. Both acid and alkali leaching solutions were tested, with oxidant added to each leachate mid-way through the leaching cycles. The ion exchange method of extraction was also tested, using nine commercially available ion exchange pellets to strip the uranium mineralisation from the pregnant liquor solution.

The second phase of the investigation (Phase 2) is aimed to support the activities of the proposed Field Leach Trials for which the approvals process was also commenced in 2016 and 2017. However, due to the change in State government and subsequent changes in policy towards uranium mining, these trials and Phase 2 activities are yet to be commenced.

Table 8: The Activities of the CSIRO Research Program

Activity	Laboratory Phase 1	Field – Phase 2			
	Preparatio	Pump	Push-Pull Test	Recirculation	Recovery
Sample characterisation	X	x	x	x	
Leach tests	X	x	x	x	
Downstream processing	X	x	x	x	x
Hydrogeology	X	x	x	x	x
Reactive transport modelling	X	x	x	x	x
Downstream process optimisa			x	x	x
Process flow sheet developm			x	x	
Support field test work		x	x	x	x

Phase 1 activities were conducted in order to technically de-risk and optimise the design of the proposed Field Leach Trials, as well as increasing the understanding of:

A. The inherent chemical, mineralogical and leaching behaviours of the deposit, under variable grain size conditions, to indicate likely uranium recovery, extraction and lixiviant consumption rates;

B. The behaviour of gangue mineral dissolution, deportment of impurities and likely compositions of pregnant leach solutions for downstream processing;

C. The assessment of downstream processing options; and

D. Development of hydrogeological and reactive transport models for better understanding of inherent host aquifer behaviour and control of mining fluids during the Field Leach Trials.

Sample characterisation, bottle roll leach tests, column leach tests, ion-exchange studies, hydrogeological modelling, and reactive transport modelling were conducted to obtain an understanding of the ore properties, leach behaviour and lixiviant/oxidant options, uranium recoveries and impurity treatment, reactive species transport and hydrogeology.

Figure 23 provides the resulting column leach test recovery curves, which show:

- Acid leach achieves higher uranium extraction than alkali leach;
- Use of oxidant improves uranium extraction in acid leachate;

- Oxidant may not be required because very high extraction rates are achieved by acid leaching solutions that do not contain oxidant;
- Column test results concur with bottle roll recoveries measured by ANSTO in a previous study completed in 2014.

Additional results from the Phase 1 investigations highlighted:

- Samples from the deposit were found to contain coffinite and suspected secondary uranium mineral autunite. Uranium was also found associated with coal particles and titanium oxides, but it was not possible to determine the mineralogy of the uranium in these occurrences with the tools and resources available within this project;
- The main gangue mineral was found to be quartz. Moderate quantities of K-feldspar, kaolinite and muscovite were also found to be present;
- A sulfuric acid or carbonate/bicarbonate lixiviant could be used to leach the uranium with the former yielding a higher maximum uranium extraction. In column leach tests on five samples from the deposit, 57% to 84% uranium extraction was achieved for the acid column leach tests, and 32% to 69% uranium extraction was achieved for the carbonate column leach tests, without oxidant addition.
- An oxidant could be used to increase the uranium extraction, depending on the targeted extraction value. Uranium extractions increased to 93% to 98% for the acid column leach tests and 38% to 70% for the carbonate leach tests, however, oxidant addition can also lead to complications with downstream processing;
- The column leach tests yielded lower recoveries compared with the bottle roll leach tests indicating that recoveries can be expected to be reduced further during the Field Leach Trials;
- A number of ion-exchange resins were found to be suitable for uranium recovery, with up to 100% loading and elution achieved in the acid and alkaline systems;
- Reactive transport modelling was used to identify the key reactions that control the leaching of uranium in the experimental column.
- Modelling suggests that uranium leaching by an acidic lixiviant is retarded by the pH-modifying effect of chlorite dissolution;
- Surrogate model simulations on the field-scale ISR operation illustrate that the hydraulic conductivity of the uranium-bearing mineralised layer must be higher than the hydraulic conductivity of the underlying and / or overlying impermeable units, which is key to the effective leaching of the mineralised zone.

The ion exchange screening process revealed:

- Near 100% adsorption of the uranium from the acid solution is possible from one of the commercially-available resins;
- Suitable resins are available for the alkali leach solutions, although resins generally perform better for acid leach than for alkali leachates;
- In the acid leach solution, a resin generally performs better for low oxidant conditions;

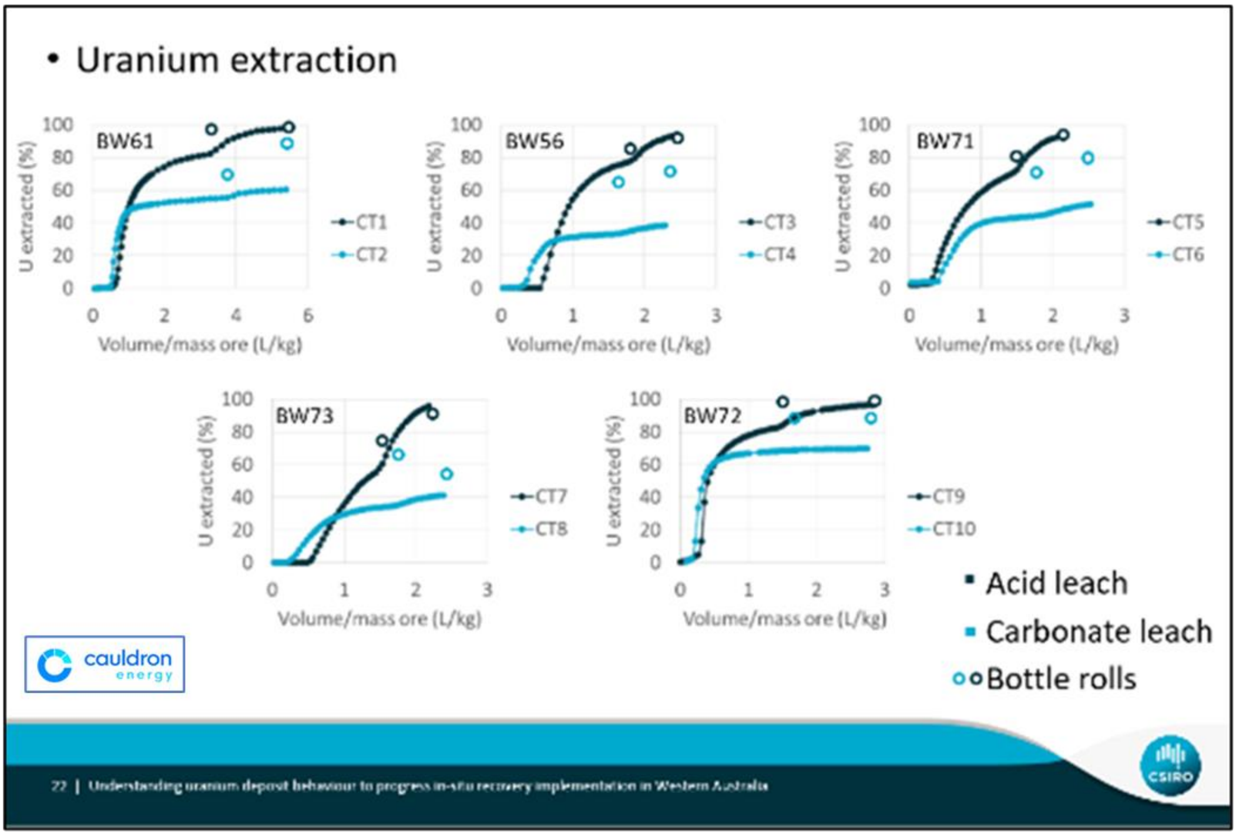

Figure 23: Column leach test recovery curves – mineralised core at Bennet Well

6.3. Conclusions

- All test work (both ANSTO and CSIRO) indicates that an acid lixiviant will extract more uranium than an alkali lixiviant.
- A cost-benefit analysis needs to be run to optimise the balance of oxidant and pH vs. corrosion, gangue dissolution and other factors.
- Bottle Roll tests recovered more uranium than column leach tests, and it is expected that field leach trials will have lower recoveries still. A conservative in-situ recovery of 65% has been used in financial modelling.
- The hydraulic conductivity of the various rock layers needs to be more completely understood before any field leach trial is conducted (even though laboratory permeability tests have been conducted).
- The mineralogy and uranium dissolution reactions need to be more completely understood on a deposit-wide basis.
- The test work carried out has been on samples from limited locations (Figure 24) and a wider geographic and mineralogical spread is required to better characterise the metallurgical model.

6.4. Further Metallurgical Test Work

Recommendations from the 2017 CSIRO research program involved the completion of a techno-economic evaluation to determine whether an acid or alkali leaching route would be most favourable, and whether the use of oxidant was really required given the results from the Phase 1 investigations. Additional experimental and analytical work was also suggested to further characterise the uranium mineralogy, with particular focus on investigating the dissolution properties of coffinite as well as more clearly establishing the role of oxidants in the leaching process.

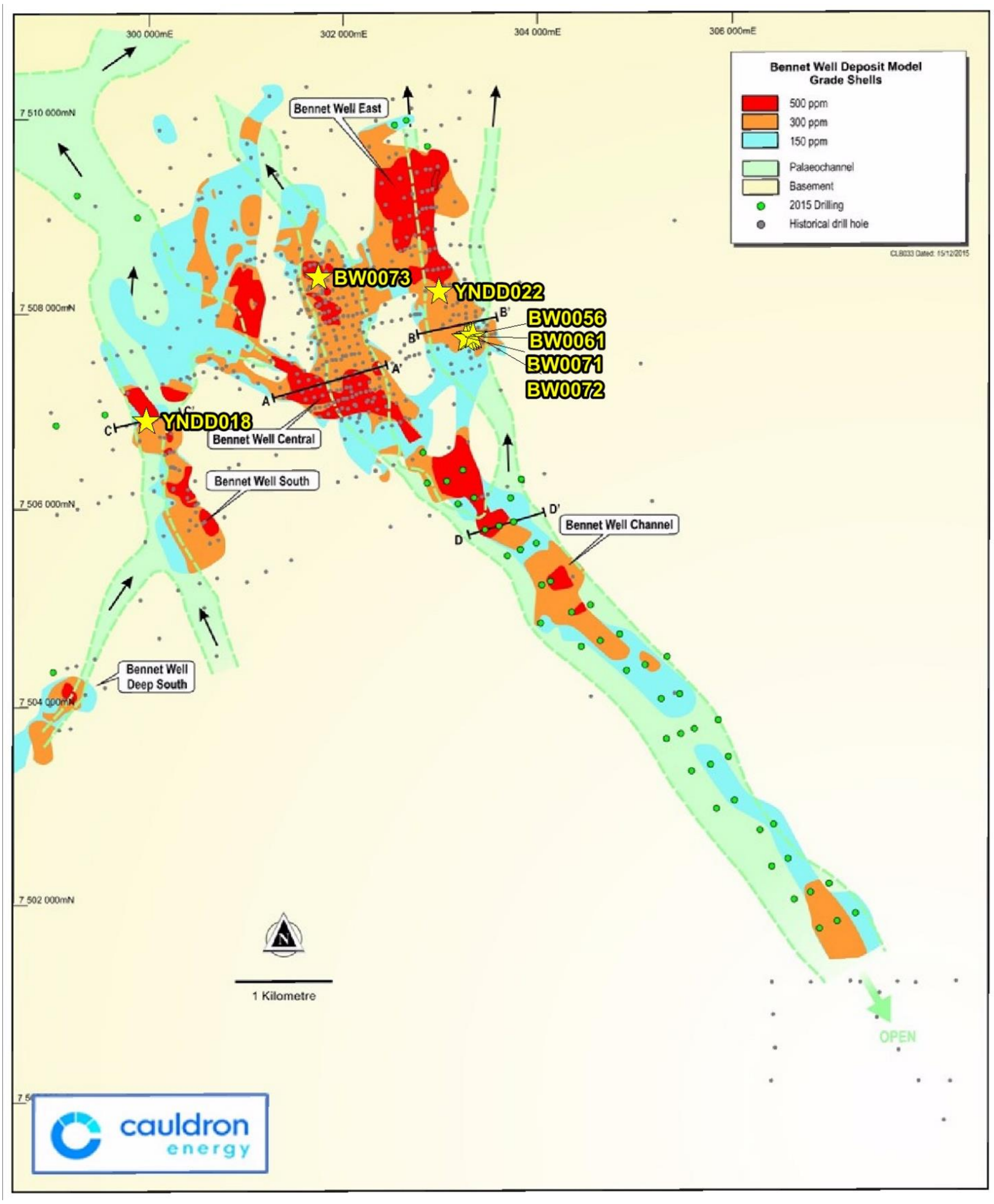

Figure 24: Location of Metallurgical test work drill holes

7. IN-SITU RECOVERY OF URANIUM

7.1. In-Situ Leaching Technology

In-situ Leaching (ISL) technology has been proven at a number of localities around the world, extracting a variety of metals including uranium, gold and copper. Economic advantages with ISL mining mean that low grade ore bodies, which may be sub-economic by conventional mining techniques, may be economically extractable by ISL methods. About 13 per cent of global mine production of uranium in 1996 was recovered using ISL techniques, mainly in the United States, Uzbekistan and Kazakhstan.

The ISL process uses a pattern of injection and recovery wells to connect the uranium bearing ore zone to the surface process facilities. At the well field, a leaching solution (either acid or alkali-carbonate depending on the mineralogy of the gangue components) is introduced into the orebody through a series of injection wells. As the leaching solution moves through the formation, it comes into contact with uranium minerals. The recovery wells pump the uranium-bearing solution to the surface and on to the processing plant.

The uranium ISL process is attractive for both environmental and economic reasons. A substantially smaller capital investment is required compared with a conventional drill and blast mining operation. The processing plant is also considerably smaller and requires fewer operators. The ISL process is environmentally friendly as it doesn't create any permanent land disturbances such as disused pits or tailings dams. Surface disturbances that are created by the mine development and processing plant are temporary at an ISL operation. At the close of operations, the land and groundwater are restored to their pre-mining condition.

Not all geological formations are amenable to ISL as the target orebody must satisfy certain hydrologic and environmental criteria. Major selection criteria for a target ISL mining deposit include:

- Depth to the mineralised zone;
- The presence of confining layers;
- The presence and level of groundwater;
- A sandstone formation;
- Fluid permeability in the sand, and
- The geochemical make-up of the host sandstone.

The host sand must lie within a confined aquifer. Horizontal confinement of the mineralised zone is necessary to prevent vertical migration of the leaching solution to the overlying and underlying aquifers. The presence of groundwater within the confined zone is essential to ISL operations. Normally, the zone must be beneath the water table as the mining zone is chemically enhanced to form the leaching solution. During mining, a slight over-recovery of solution from the formation is maintained to establish effective hydrological control. The aquifer must have sufficient recharge capability to offset the consumptive removal of natural groundwater during mining operations.

Favourable fluid permeability of the sandstone is critically important. As mentioned earlier, the basic principle of ISL is the flow of leaching solution through a porous geological formation which may vary in grain size and consolidation. The level of consolidation directly influences the suitability of the deposit since water flow is greatly reduced with an decrease in porosity.

The choice of leaching reagent is largely based on the nature of the host sandstone which should not react to any great extent with the leaching solution. For alkali-carbonate leaching, the potential to form carbonates or sulphate precipitates is a concern, as these tend to plug the formation and decrease porosity. Acid leaching is done in ores that are low in carbonate, as these consume excessive amounts of acid and form insoluble calcium sulphate (gypsum). Gypsum precipitates within the formation which leads to plugging and poor leaching solution flow.

Well design is of critical importance to efficient ISL operation. The leaching solution is pumped under pressure into a series of injection wells. As the solution migrates through the ore zone it solubilises the uranium which is removed by a submersible pump at the recovery well. Individual recovery wells are manifolded together with piping which carries the uranium bearing solution to the processing plant.

A series of perimeter monitor wells are drilled into the same horizontal mineralised zone. The water quality and level are closely monitored to help ensure that no leaching solution escapes from the production area. Monitor wells are also located in the overlying and underlying aquifers to detect any vertical migration of the leaching solution outside the production zone.

There are several methods of installing and completing wells for ISL operations. Consideration must be given to the geological and hydrological factors when selecting the installation and completion methods as the cost of the selected methods has a large bearing on the economic performance of the project. Site specific variations in the type of casting material, cementing methods, hole completion and wellhead designs are common.

7.2. Production of Uranium from Bennet Well

There are two operating regimes for ISL, determined by the geology and groundwater. If there is significant calcium in the orebody (as limestone or gypsum, more than 2%), alkaline (carbonate) leaching must be used. Otherwise, acid (sulphate) leaching is generally better. In this case the leach solution is at a pH of 2.5-3.0, about the same as vinegar. Acid leaching gives higher uranium recovery – 70-90% – compared with 60-70% for alkaline leach, and operating costs are about half those of alkaline leach.

Techniques for ISL have evolved to the point where it is a controllable, safe, and environmentally benign method of mining which operates under strict operational and regulatory controls. Due to the low capital costs (relative to conventional mining) it can often be a more effective method of mining low-grade uranium deposits.

In either the acid or alkali leaching method the fortified groundwater is pumped into the aquifer via a series of injection wells where it slowly migrates through the aquifer leaching the uranium-bearing host sand on its way to strategically placed extraction wells where submersible pumps transport the liquid to the surface for processing as shown in Figure 25.

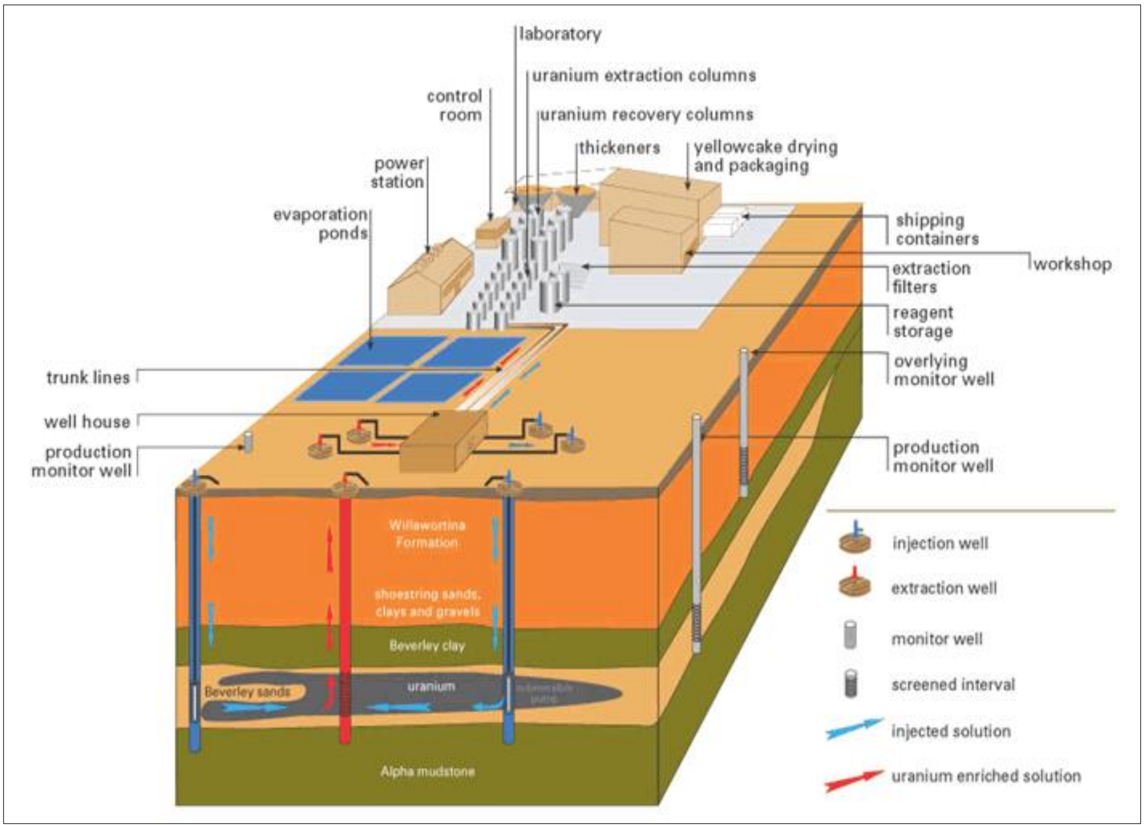

Figure 25: The ISL Process (courtesy of Heathgate Resources)

The submersible pumps initially extract native groundwater from the host aquifer prior to the addition of uranium complexing reagents (acid or alkaline) and an oxidant (hydrogen peroxide or oxygen) before injection into the wellfield. The leach liquors pass through the ore to oxidise and dissolve the uranium minerals in situ.

Depending on the type of leaching environment used, the uranium will be complexed as either a uranyl sulphate, predominantly $UO_2(SO_4)_3^{4-}$, in acid leach conditions or a uranyl carbonate, predominantly $UO_2(CO_3)_3^{4-}$ in a carbonate leach system. This can then be precipitated with an alkali, e.g. as sodium or magnesium diuranate. In either case the pregnant solution from the production wells is pumped to the treatment plant where the uranium is recovered in a resin/polymer Ion Exchange (IX) or Solvent Extraction (SX) system.

IX is used in the vast majority of ISL operations in Kazakhstan, the USA and Australia. In terms of operating and capital costs IX is the preferred processing option. In situations where the groundwater has a high concentration of ions that may compete with the uranyl complexes for active resin/polymer sites, such as chloride and nitrates, the use of IX becomes unattractive due to low uranium loadings on the resin/polymer. As a general rule, if chloride concentration in the groundwater is around 6 g/L the capture of uranium by IX becomes uneconomical. SX is better with very saline groundwater.

Further treatment for IX in Australia involves stripping the uranium from the resin/polymer either with a strong acid or chloride solution or a combination of both in a batch operation. The pregnant solution produced by the stripping cycle is then precipitated by the addition of ammonia, hydrogen peroxide, caustic soda or caustic magnesia. Peroxide products can be dried at low temperatures to produce a product containing about 80% U_3O_8. However, ammonium or sodium diuranate products must be dried at high temperatures to convert the product to 100% U_3O_8.

SX is a continuous loading/stripping cycle involving the use of an organic liquid (usually a kerosene based product) to carry the extractant which removes the uranium from solution. The uranium is then stripped from the loaded organic liquid using ammonia followed by an ammonia precipitation. The resultant slurry is then dried at high temperature as per the IX process.

After recovery of the uranium, the barren solution is re-fortified with oxidant and complexing agent before being returned to the wellfield via the injection wells. However, a small flow (about 0.5%) is bled off to maintain a pressure gradient in the wellfield and this, with some solutions from surface processing, is treated as waste. This wastewater contains various dissolved ions such as chloride, sulphate, sodium, radium, arsenic and iron from the orebody and is reinjected into approved disposal wells in a depleted portion of the orebody. This bleed of process solution ensures that there is a steady flow into the wellfield from the surrounding aquifer and serves to restrict the flow of mining solutions away from the mining area.

Acid consumption in acid leach environments is variable depending on operating philosophy and geological conditions. In general, the acid consumption in Australian ISL mines is only a fraction of that used in a Kazakh mine (per kilogram of uranium produced). A general figure for Kazakh ISL production is about 40 kg acid per kgU, though other figures of up to twice that amount are quoted and consumption figures for some mines are a bit lower. Acid consumption for the Beverley mine, Australia, in 2007 was 7.7 kg/kgU. Unit power consumption is about 19 kWh/kgU (16 kWh/kg U_3O_8) in Australia and around 33 kWh/kgU in Kazakhstan.

7.3. Bennet Well In-Situ Leach Trial

In 2017, prior to the State election and changes in policy towards uranium mining in Western Australia, Cauldron revised and redrafted its Radiation Management Plan (RMP) and Radiation Waste Management Plan (RWMP) documents. The final versions were approved by the former Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) in March 2017.

The proposed Field Leach Trials aimed to ascertain the true effectiveness of the In-Situ Recovery process of uranium extraction at Bennet Well. The first proposed stage of the FLT would be a Hydrodynamic Test, with the aim of understanding the possible effects of any significant extraction from the host aquifer. No chemical lixiviant, or injection of any fluid, would be involved in Stage 1 of the FLT, as the work would be purely to establish a sub-deposit, supra-pattern-scale permeability of the mineralised host sequence.

The Program of Works (POW) for Stage 1 (Hydrodynamic Test) of the proposed Field Leach Trials (FLT) was submitted for approval on 20 February 2017, approximately 2 weeks before the W.A. State government elections in March 2017.

The following sections detail the Field Leach Trial concept.

7.3.1. Field Leach Trial - Overview

There are four proposed stages of activity that constitute Field Leach Tests (FLT) aimed at quantifying the extraction of uranium from the Bennet Well Deposit by In-Situ Recovery (ISR) mining techniques. These four stages comprise:

- ***Stage 1:*** hydrodynamic test
- ***Stage 2:*** push-pull leachability test
- ***Stage 3:*** recirculation leachability test
- ***Stage 4:*** wellfield recovery test

To complete the FLT, the DMIRS guidance note, "*Proposed small-scale in situ recovery field leach test activities*", requires the following:

1. an approved Program of Work (POW);
2. an approved Radiation Management Plan (RMP);
3. evidence that the weight of in-ground ore subject to the FLT is less than 5000 tonnes;
4. hydrological modelling has been conducted prior to the use of any leachate;
5. the site is rehabilitated in accordance with DMP requirements and ground waters are restored to meet pre-existing water quality standards.

To satisfy the fourth condition, the proposed operations covered by the POW document provide the information to complete the hydrological modelling, allowing effective planning (including designing appropriate environmental management controls) of the later stages of the FLT, which require the use of a leachate.

7.3.2. Field Leach Trial – Overall Design

All the wells (injector, extractor and monitor wells) required for the FLT will be progressively completed in Stage 1, Stage 2 and Stage 3 as shown in Figure 26. The top-left frame in the figure is the final well-field configuration showing the injector and extractor layout of three adjacent five-spot ISR patterns. The bottom three frames from left-to-right show the wells required for **Stage 1 - hydrodynamic test**, **Stage 2 - push-pull test** and **Stage 3 - recirculation test**, respectively. **Stage 4-recovery test** uses the same well configuration as that established for Stage 3.

The key to the figure:

- the orange squares show the position of the monitor wells;
- the cluster of four orange squares denotes the four wells required to position piezometers in four separate stratigraphic horizons;
- the blue circles with cross show the injector wells; and the
- green circles show the extractor wells;

- the grey coloured squares in any frame denote a well drilled in a previous stage that is available for a new purpose, for which is usually given by its respective colour in the final design of the top-left frame;

- the non-greyed symbol is coloured according to its original purpose installed at the stage it is shown.

The outer set of nine wells (four of which are clustered together) form the outer monitor ring (refer Figure 26) and will be installed as a monitor bore. The inner set of monitors will be installed as a production bore. Figure 26 shows the staged design for the FLT with no scale provided. The top frame is final design and the bottom three frames show the wells required for each stage of the FLT (no new wells required for Stage 4). The purpose of a greyed well is usually indicated by its respective colour given in the final pattern of the top-left frame.

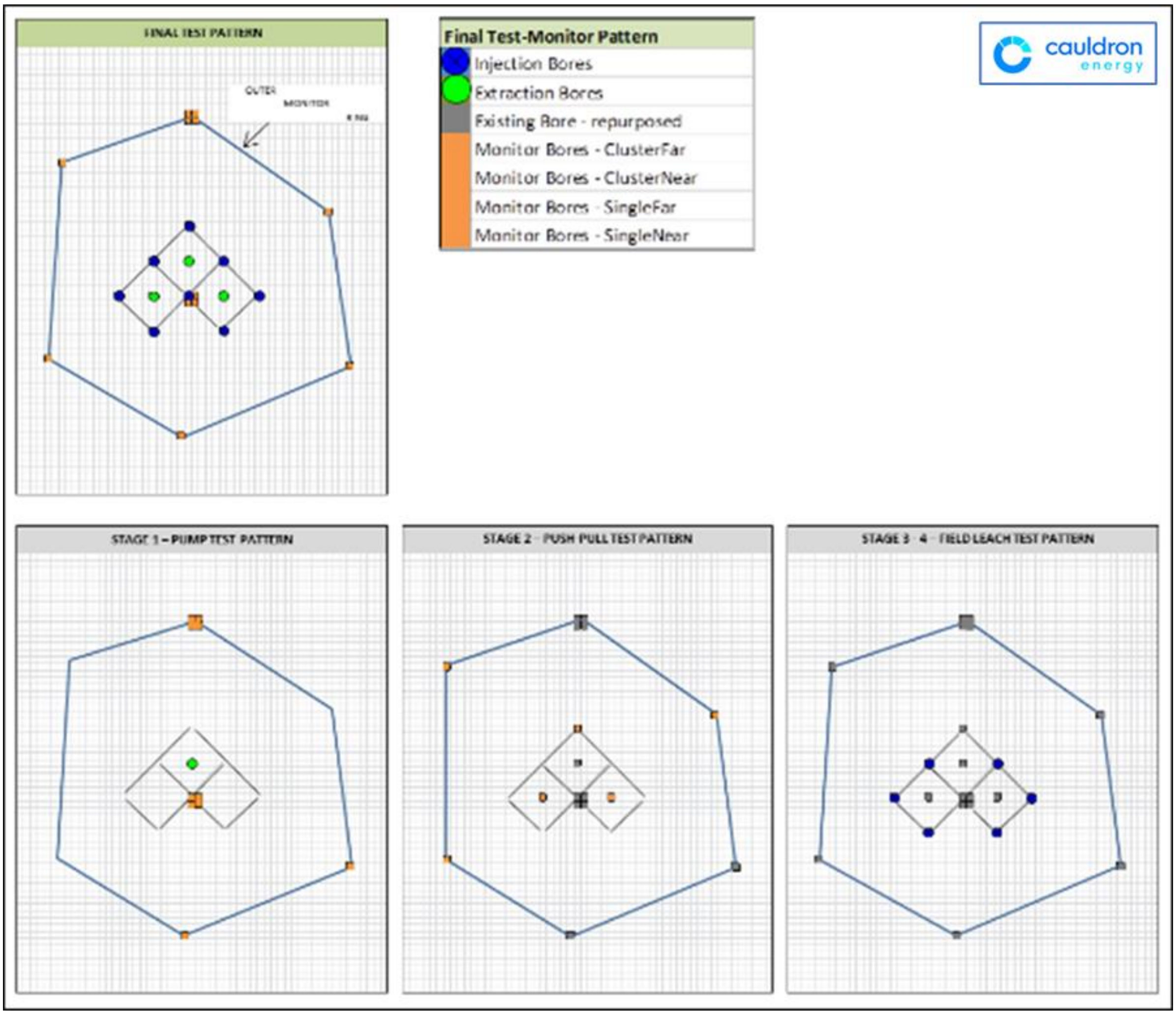

Figure 26: Design of the Proposed Field Leach Trials

7.3.3. Field Leach Trial – Evolving Design

There is an 'evolving design' nature to the staged advance of the FLT, which involves both the gathering of information and installation of well infrastructure. The information gained from Stage 1 is used for later stages; similarly, the information from Stage 2 is used for all later stages; and so on. Well infrastructure also expands from one stage to the next where, for example, a well installed for monitoring in Stage 1, might become an injection well in Stages 2, 3 and 4.

This 'evolving design' process to the staged events of the FLT (as shown in Figure 26) requires all wells not in the outer monitoring ring to be completed as if it will be used for circulating lixiviant, regardless of original purpose. All production wells (or wells that will become a production well) will be installed with a pressure-grouted annulus that must pass a pressure integrity test before it is brought into production.

7.3.4. Field Leach Trial – Research – Site Location

Based on the results from the 2017 CSIRO research program (refer to Section 6.2), the most favourable location for the initial Field Leach Trials is suggested to be Bennet Well East. This is supported by the fact that higher overall uranium extractions were obtained in the column leach tests for samples taken from this zone (BW0061, BW0056, BW0071, BW0072) compared with the column leach test undertaken using samples from drillhole BW0073 from Bennet Well Central. It must be noted, however, that only one sample from Bennet Well Central was studied (the other sample available, BW0070, was of lower grade so was not considered as a priority in the CSIRO test work).

While the general layout of the FLT is known, the exact layout of well spacing and monitor positioning is subject to research yet to be completed which explains the lack of scale in the plans provided by Figure 26. Well spacing between injector and extractor is expected to be between 10m - 30m which is influenced by in-host aquifer permeability, as indicated by results from the CSIRO study and results of FLT Stage 1.

7.3.5. Field Leach Trial – Stage 1 Hydrodynamic (Pump) Test

Stage 1 of the FLT is a hydrodynamic test, designed to:

- determine the piezometric head of the confined aquifer (host to mineralisation) and approximate water flow rate and direction;
- determine the rate of water discharge during pumping;
- ascertain groundwater chemistry through sampling in order to reveal any additional elements that could result in contaminant accumulation during Stage 3 and 4 of the FLT;
- monitor the performance of the groundwater under pumping conditions;
- monitor the hydrologic connection (or disconnection) between the unconfined aquifers, the confined aquifer (Nanutarra Formation) and any intervening aquiclude (Mardi Greensand, refer to Section 4.2 and Figure 5);
- monitor the rate of drawdown in the respective aquifers, in order to gauge the overall, lateral and larger-scale environmental impacts of the FLT; and
- establish parameters upon which the FLT patterns will be designed, such as well spacing, pumping rates and volumes.

There are three possible locations for the FLT, namely FLT_North, FLT_East, FLT_Central. The final location will be determined in due course after further test work.

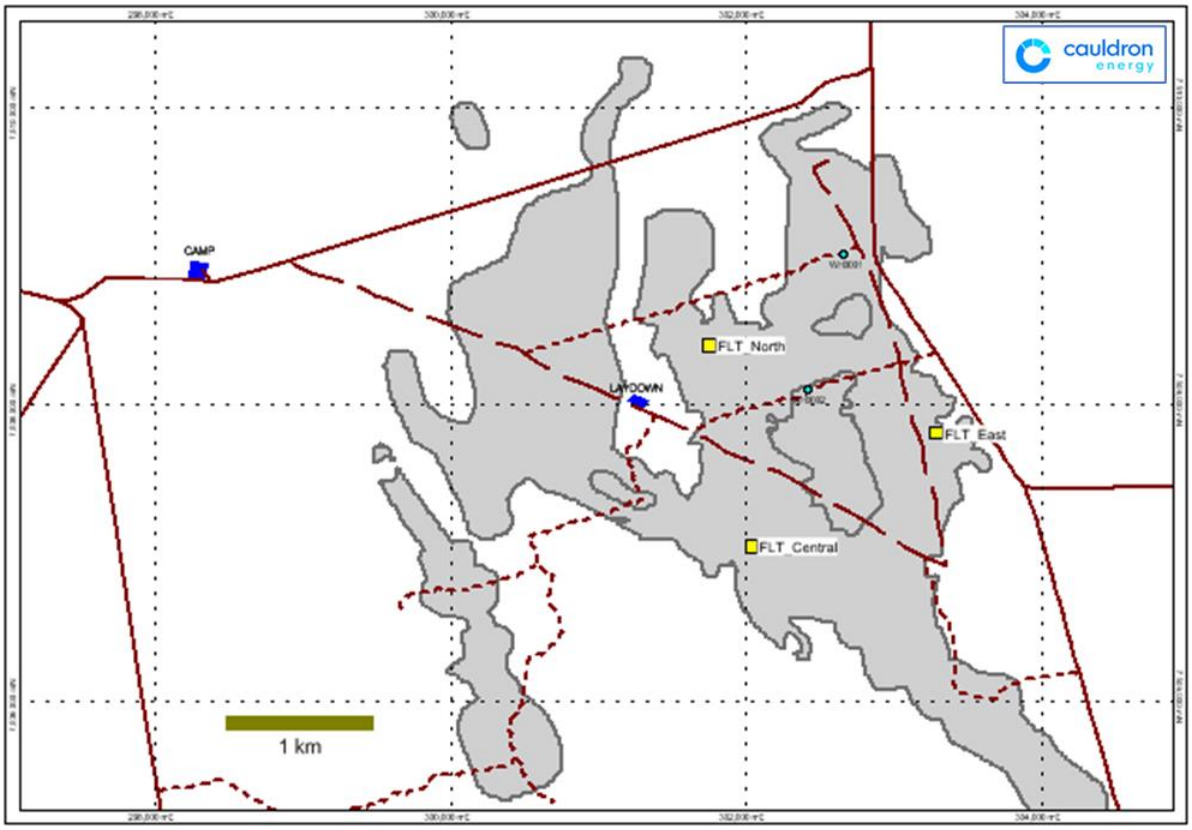

Figure 27: Possible FLT Site Locations within E08/1493

7.3.6. Field Leach Trial – Pump Test Well Layout

The extraction well and monitor array shown in Figure 28 is designed to test the degree of hydraulic connection (or disconnection) between aquifers and aquicludes of various stratigraphic levels. More specifically, it is designed to test the degree of aquiclude-disconnect that is supposed to separate the confined aquifer (that is host to mineralisation) from the near surficial unconfined aquifer. The information is used to understand risk of losing control of lixiviant and will be used to design pumping pressure differentials required to control the flow of lixiviant.

The monitor array pattern described in Figure 28 is designed to specifically monitor the pressure reaction in aquifers of various stratigraphic levels due to water abstraction from an in-host production well. The monitor configuration will measure:

- near and far-field, in-host-aquifer pressure reaction;
- near and far-field, in-aquiclude (cap to mineralised sequence) pressure reaction;
- near and far field, unconfined aquifer pressure reaction; and
- near and far field, basement aquifer pressure reaction.

In addition to the pressure reaction observed in the stratigraphic sequence, the hydrodynamic test will ascertain well-field scale in-host aquifer yield and permeability. As a rough indication of scale, each greyed-out line of Figure 28 represents the boundary edge of a single five-spot well pattern, which may be 25 m long.

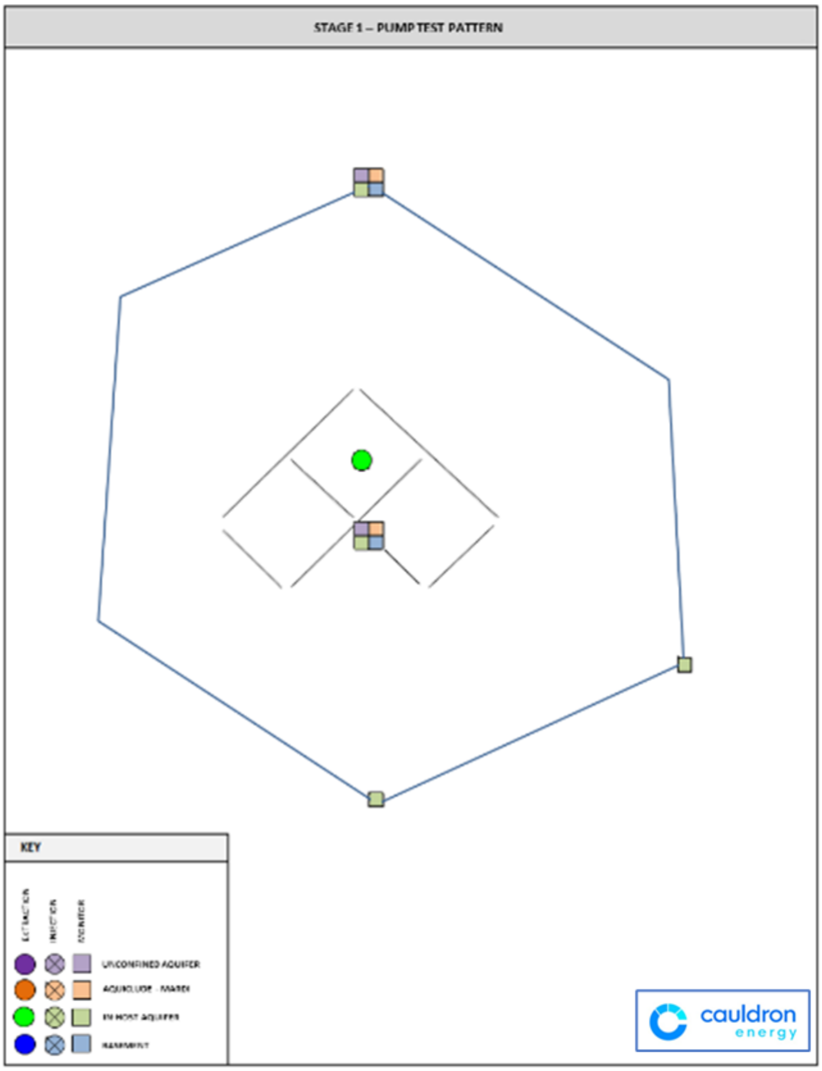

Figure 28: Pump Test Well Pattern (grey lines denote outline of final FLT pattern) (no scale)

Rigorous sampling of all leach trials will be undertaken to provide the data necessary for the design of the commercial facility. Extracted uranium may be removed from the solution by passing the solution through an ion exchange resin which will selectively adsorb the solubilised uranium. The uranium loaded resin will be securely stored on-site and processed off-site once the trial is complete to desorb the uranium and restore the resin. The duration for each individual in-situ leach trial is expected to be approximately 6 to 12 months.

At completion of the leach trial, site water will continue to be injected until the pH value of the solution removed from the recovery well is the same pH value of the site water. This ensures that no residual acid is present in the aquifer. All wells will be capped and rehabilitated in accordance with environmental regulations.

Cauldron had also submitted the completed Program of Works (POW) for Stage 1 of the proposed Field Leach Trials prior to the state election of March 2017). The day before the election, Cauldron received notification that the POW would not require referral to the Office of the Environmental Protection Authority (OEPA). However, the election of the Labour Party resulted in a change in mining policy towards uranium in Western Australia. The change in State government also caused a lengthy delay in processing the POW application that involved the proposal of a simple groundwater pump (hydrodynamic test). This delay in the approvals process had a direct impact in stopping the Field Leach Trials from commencing and resulted in Cauldron formally withdrawing its POW application.

8. INFRASTRUCTURE

8.1. Power

Power for site operations would come from either diesel electricity generation or solar. In the case of solar (which would be preferred if financially viable), a diesel generator backup system would be installed to run essential services.

8.2. Logistics & Access

Site access is via the gravel Twitchen Road, 43km south to the North West Coastal Highway (bitumen) and then 193km to the port of Onslow (Figure 29).

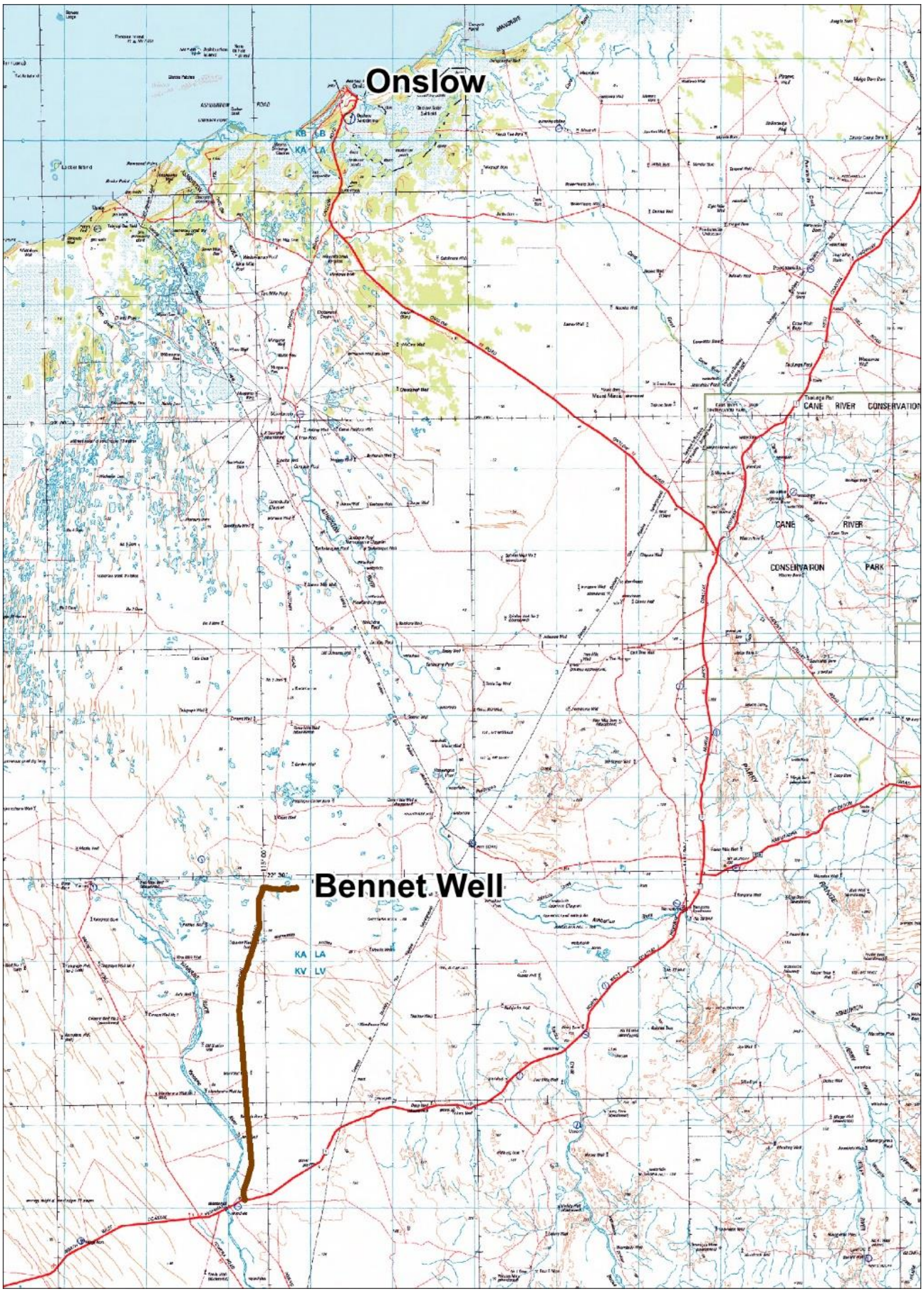

Figure 29: Bennet Well Project Location Map

8.3. Personnel Requirements

Exact personnel requirements have not been estimated to any accuracy, but based on similar projects it is envisaged a work force of about 100 – 150 will be required for steady state production and possibly double that number during construction.

8.4. Camp & Airstrip

A 100-150 room camp will be constructed for the steady state production phase of the operation. This will include accommodation, dry mess/kitchen, wet mess, gym, ablutions and laundry units. The camp may be temporarily expanded during the construction phase. Wastewater from the camp and the plant ablutions will report to a sewage treatment plant.

8.5. Waste Management

Waste liquid will be collected in a liquid disposal pond and disposed of via liquid disposal wells. Any solid waste will be collected in waste ponds and once the design capacity is reached, the pond will be capped and made environmentally safe. The exact design of the waste management system will be made in accordance with environmental regulations and requirements.

8.6. Fuel Storage

Diesel will be stored on site in a self-bunded diesel storage tank with unloading and dispensing facilities. Liquefied petroleum gas, if required, will be stored on site in an approved storage tank.

8.7. Administration & Plant Buildings

Administration and plant buildings will be located on site appropriate to the operation, this would include management office, plant operations, on site laboratory, workshops and stores.

8.8. Water Supply

Raw water for the operation will be obtained from a ground water bore-field and infrastructure. Potable water for human consumption will be produced by a containerised RO plant fed from the raw water tank located at the plant site and reticulated around the site as required.

9. URANIUM MARKET

A note on data sources and units

One of the positive aspects of the nuclear and uranium industries is the availability of through and transparent data. The industry has taken the view that providing such data is a necessary step to building strong social licence for the industry – there is nothing to hide.

Some of the leading sources of data are:

- The World Nuclear Association (WNA) – see www.worldnuclear.org
- The International Energy Agency (IEA) – see www.iea.org
- The International Atomic Energy Agency (IAEA) – see www.iaea.org
- UXC – see www.uxc.com

With respect to these data sources, two different units are used to report uranium:

- 1 tonne of Uranium
- = 1.17924t of U_3O_8
- = 2,599 pounds U_3O_8
- 1 tonne (metric) of Uranium Oxide (U_3O_8)
- = 2,205 pounds U_3O_8

9.1. Current state of the global nuclear and uranium markets

Nuclear is an extremely efficient form of generation from an energy density perspective – a relatively small amount of raw materials, in a small geographic footprint, can produce a large volume of energy, strongly differentiating from fossil fuel or renewables generation.

Nuclear is most often used as base load generation - reliable, large-scale, continuous electricity demand. However, advances in technology are seeing nuclear advance into smaller applications being small modular reactors (SMRs) and micro-reactors.

According to World Nuclear Association, nuclear power currently generates approximately 10 % of the world's electricity, approximately 2,545 TWh in 2022. As of August 2023, there were some 436 operable nuclear power reactors globally in 32 countries, and 60 reactors under construction - 110 in planning stage and a further 321 proposed.

The top current producers of uranium are (2022 data, from World Nuclear Association) shown in Table 9.

Table 9: Uranium Mine Production 2022

Country	2022 Production from Mines (tonnes U)	% of World Mined
Kazakhstan	21,227	43.0%
Canada	7,351	13.9%
Namibia	5,613	11.3%
Australia	4,553	9.2%
Uzbekistan	3,300	6.7%
Russia	2,508	5.1%
TOTAL WORLD	49,355	

(Note: Data is tonnes U. 1 tonne U = approx 1.18 tonnes U_3O_8).

(Note World Mined = only approx. 75% of world demand; with other sources accounting for rest of demand including inventories, reprocessing, etc).

As can be seen from Table 9, former Soviet Bloc countries (i.e. Kazakhstan, Uzbekistan, Russia) account for approx. 54.8% of global production; which has been noted as a concern for security of supply for Western countries and therefore presents an opportunity for more Western friendly countries such as Australia to further invest in uranium exploration and development. Australia's current uranium production continues to lag behind its potential to supply to the world uranium market, as Australia has about 28 per cent of the world's known uranium resources, as per Table 10 below (source: World Nuclear).

Table 10: Global Resources of Uranium

	tonnes U	percentage of world
Australia	1,684,100	28%
Kazakhstan	815,200	13%
Canada	588,500	10%
Russia	480,900	8%
Namibia	470,100	8%
South Africa	320,900	5%
Niger	311,100	5%
Brazil	276,800	5%
China	223,900	4%
Mongolia	144,600	2%
Uzbekistan	131,300	2%
Ukraine	107,200	2%
Botswana	87,200	1%
USA	59,400	1%
Tanzania	58,200	1%
Jordan	52,500	1%
Other	266,600	5%
World total	**6,078,500**	

9.2. Decarbonisation of the global energy system driving massive increase in electricity demand

The world's overall energy demands continue to rise in line with continued global economic development and population increase.

Historically, much of the global energy system has been powered by fossil fuels. For example, various means of transport have historically been powered by petrol, diesel, bunker oil, jet fuel. Gas has often powered household heating or cooking (stovetops). And coal (in addition to gas) has been the main source of electrical power stations.

However, global concerns around climate change are driving a strong decarbonisation push. Decarbonising the global economy while ensuring a steady supply of energy is a fundamental challenge that is now considered of utmost importance.

In order to decarbonise the energy system, fossil fuel driven energy sources must be phased out and instead be replaced with electricity – and those sources of electricity must also be fossil free; which will significantly increase the overall global electricity demand. Electricity demand alone is therefore increasing twice as fast as overall energy use, with 75% increase in electricity use expected by 2050, as seen in Figure 30 below.

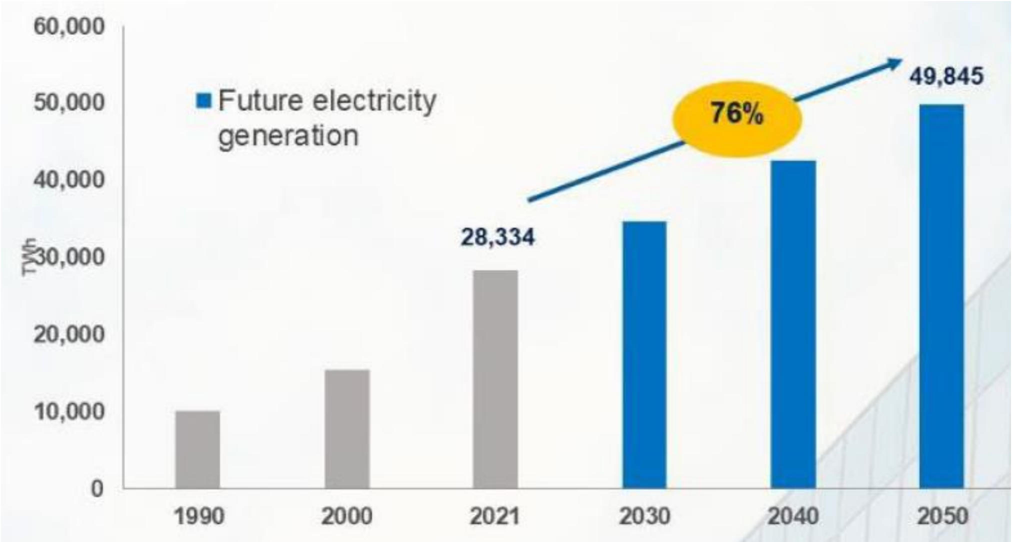

Figure 30: Forecast World Electricity Demand

(Source: Cameco Second Quarter report 2023, citing IEA 2022 World Energy Outlook – Stated Policies Scenario)

9.3. Fundamental Growth in nuclear energy market

Globally the nuclear renaissance is underway.

Nuclear energy's ability to provide:

1. Low carbon;
2. Safe; and
3. Reliable (base load)

energy over a long lifespan means that it must play an important role in a decarbonised future.

9.3.1. Nuclear is green (low carbon)

Almost all reports on future energy supply from major organizations suggest an expanded role for nuclear power is required, alongside growth in other forms of low-carbon power generation, to create a sustainable future energy system. Figure 31 below highlights the low carbon nature of nuclear compared to other fuel sources.

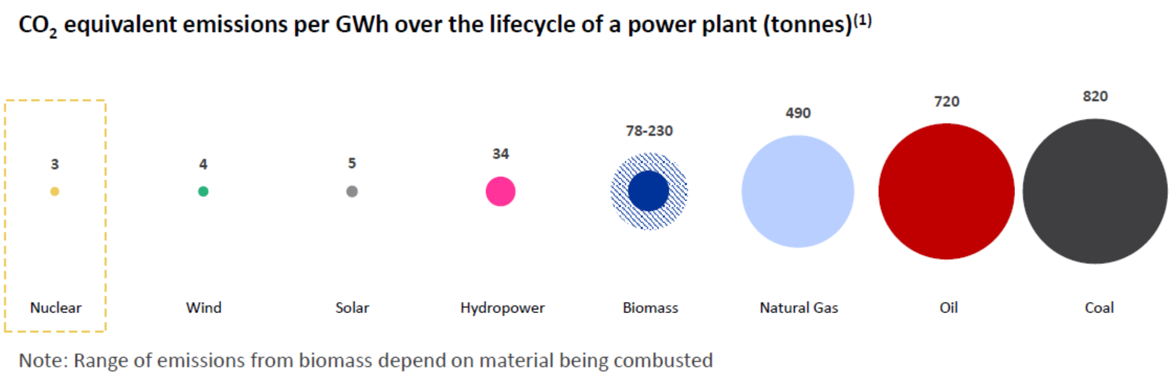

Figure 31: CO_2 equivalent emissions for different energy sources

Source: Our World in Data, "Safest Sources of Energy" Yellowcake plc Investor Presentation, June 2023

Politically, various environmental groups are now actively promoting nuclear energy as "green" - quite a different position to their historical stances. The European Union has recently included nuclear power in its 2022 taxonomy report classifying nuclear as a sustainable energy source. Further, there is positive sentiment from both major parties in the US and the recent Inflation Reduction Act provides substantial support for nuclear power; and additionally for US based nuclear fuel development, and phasing out of Russian nuclear fuel supply to improve security of supply.

9.3.2. Nuclear is safe

Increasing focus on carbon has led to a change in views towards nuclear. For example, the issue of long-term management of nuclear waste was historically viewed quite negatively, however waste is no longer seen as a major barrier to further industry development.

Further, there is growing recognition that nuclear is safe, and incurs lower fatality rates than any other energy source (Figure 32).

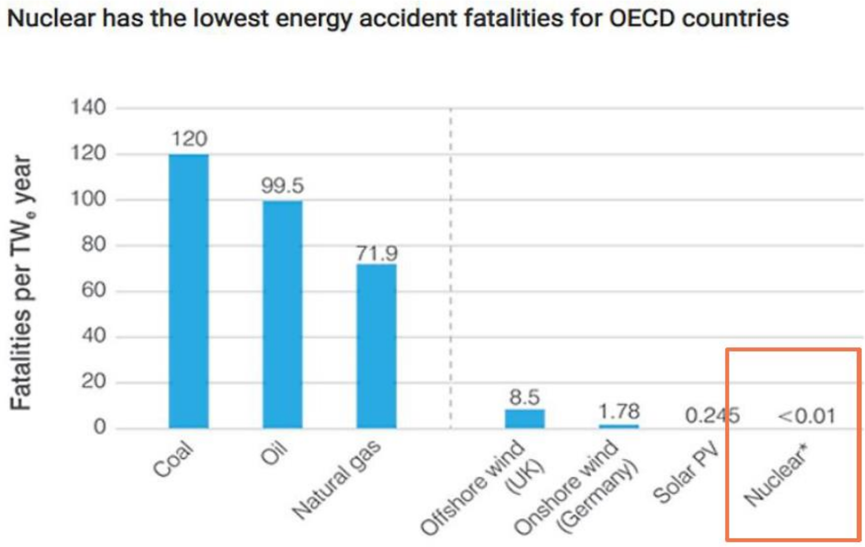

Figure 32: Accident fatalities for different energy sources

Source: World Nuclear Association – Harmony Programme

9.3.3. Nuclear is reliable

Whilst renewables are playing a very large role in the decarbonisation of the energy grids, the ability of nuclear to provide baseload low carbon megawatt hours is being recognised. Nuclear is often not seen as an alternative to renewables, but as a complement, and evidence suggests some policies are being adapted to roll back a projected reliance on renewables to a more balanced strategy that recognises the need for both technologies.

Nuclear Energy provides the extremely important baseload, reliable energy to the grid. It is significantly more reliable than any other power source, as demonstrated below in Figure 33, which provides data from the US energy system.

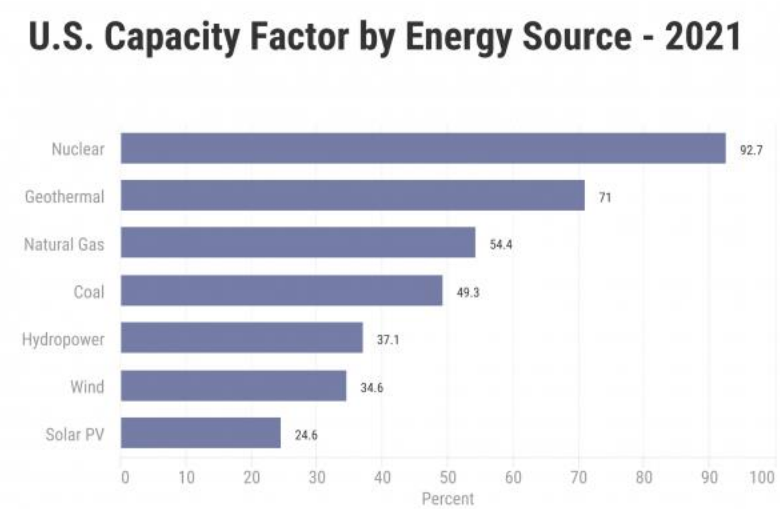

Figure 33: US Capacity Factor by Energy Source

Source: US Energy Information Administration; https://www.energy.gov/ne/articles/what-generation-capacity.

9.3.4. The renaissance is happening globally

Not only are existing nuclear players increasing their reactor fleets, but new jurisdictions are looking to get into the nuclear energy space as part of their decarbonisation strategies. Currently there are around 22 new countries either developing projects, enacting legislation, or investigating and planning these (Figure 34, source: World Nuclear).

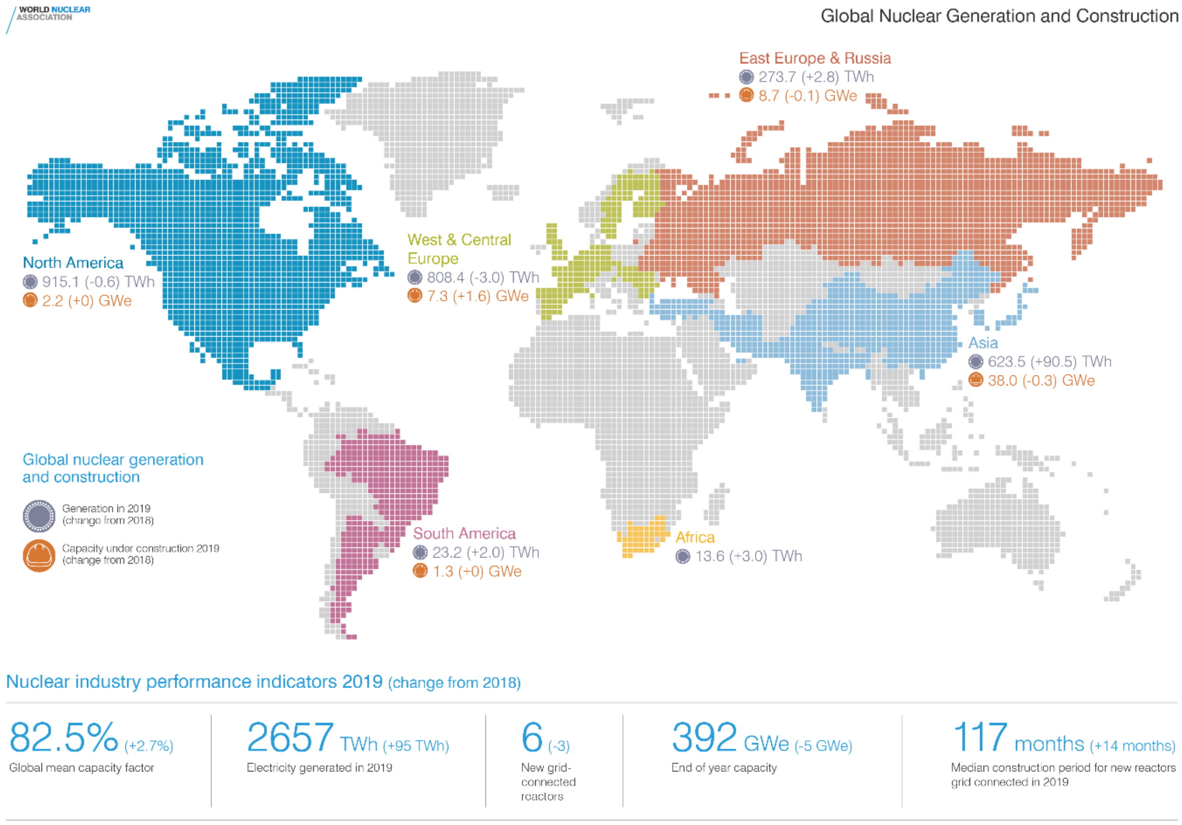

Figure 34: Planned Global Nuclear Power Generation and Construction

This increased demand for reactors is coming from:

- New nuclear reactor builds (data on this is very well known and available from the World Nuclear Association) – as the global nuclear renaissance continues, more new reactors are either announced as under construction, or in various stages of planning and approval. Latest data suggest around 60 reactors currently under construction, 110 planned and 321 proposed.
- Restarts of previously idled operational nuclear reactors, such as those in Japan;
- Restarts of previously idled construction projects for reactors, such as in South Korea, USA
- Existing operating nuclear reactors having their life extended; for example, most recently in France, US, Japan, Finland.
- Progression of SMR (small modular reactors) technologies and deployment strategies. Currently 76 different SMR designs are being developed globally across 18 countries, with research suggesting the SMR market alone could reach $31 trillion by 2050. (Source: *Barclays Research, European Utilities – "New Horizons: New Nuclear: A $1trn SMR Market and Fusion Revolution", 8 March 2023 as cited in Yellowcake plc Investor Presentation, June 2023*)

Many different research bodies produce a range of potential future demand scenarios for nuclear; ranging from low to high. However, the one thing that is common is that there **is significant growth in nuclear energy demand projected across all scenarios**, driven by the factors outlined above.

The nuclear demand scenarios from the World Nuclear Fuel Report 2021 are outlined in Figure 35.

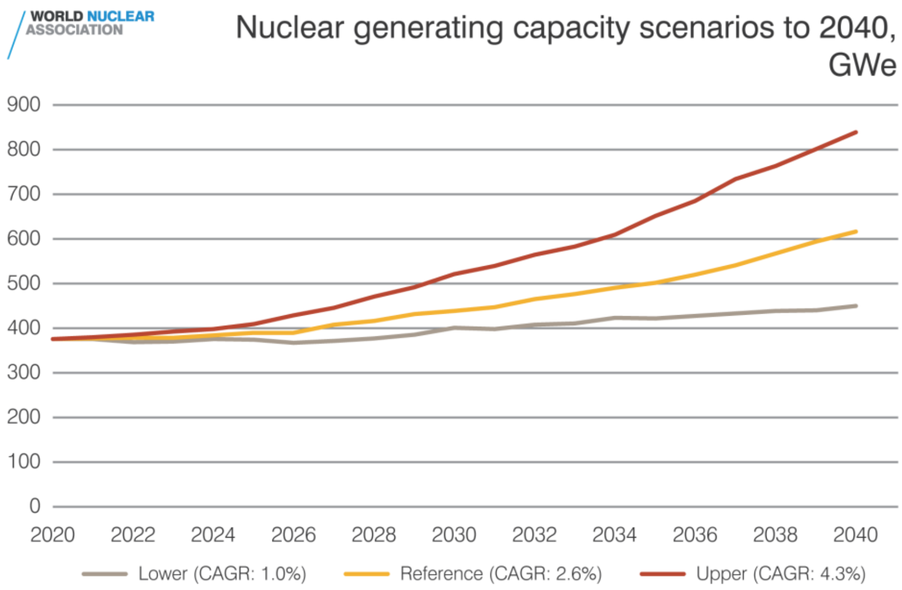

Figure 35: Nuclear generating capacity scenarios to 2040

Source: World Nuclear Fuel Report

9.4. Increased demand for nuclear energy driving a global "bull market" for uranium

The current sentiment for uranium is extremely positive driven by the strong nuclear renaissance which is underway globally (as outlined above).

9.4.1. Current production weakness

This improving demand has occurred at a time when many previous uranium mines were either shut down, reducing output or on care and maintenance; leading to a growing gap between production and world requirements as per Figure 36 below.

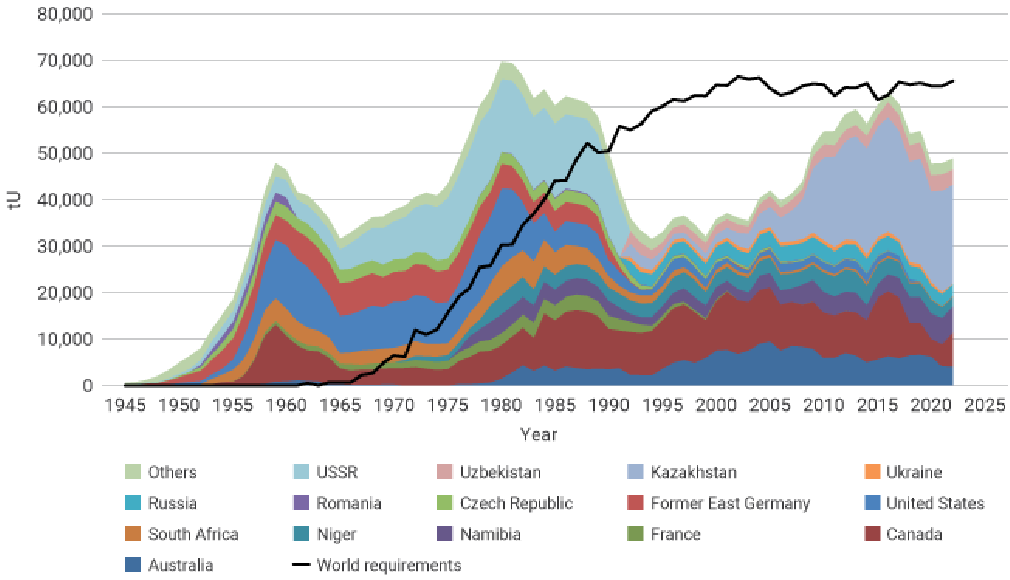

Figure 36: Global Uranium Production 1945 – 2022

Reasons for the sharp decline in production from 2016 to 2020 include highly unfavourable market conditions leading to curtailment of production, mines coming to an end of their life with insufficient investment in exploration to replace that production, and the impact of the COIVD 19 pandemic.

9.4.2. Strong future demand scenarios

World Nuclear Association publishes a global nuclear fuel report, the latest published being published in September 2021, which provides the following projections for low, reference and high cases for future uranium demand (Figure 37). It is worth noting that these numbers in the 2021 edition are approximately 12% higher than the comparable 2019 edition; and since publication of the 2021 report, the global nuclear renaissance has continued to gain steam.

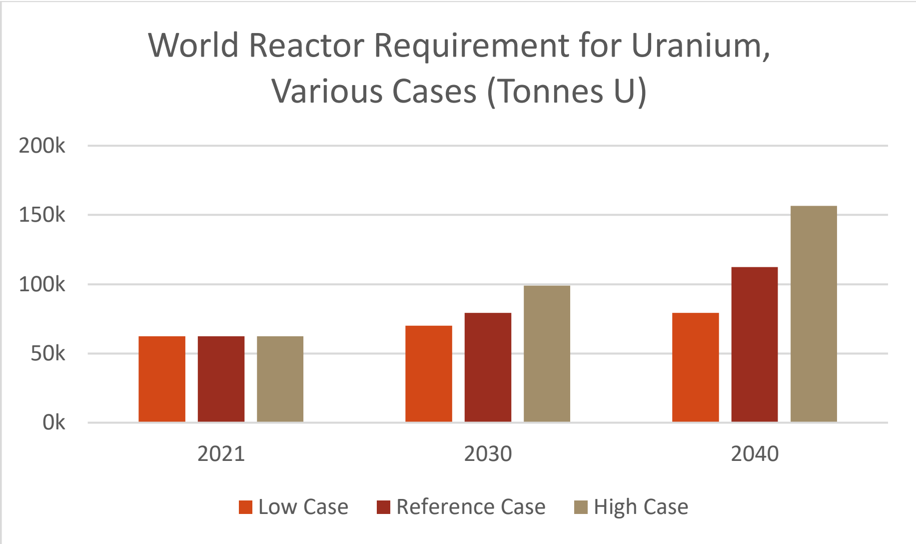

Figure 37: Predicted World Nuclear Reactor Requirements for Uranium

9.4.3. Future demand / supply imbalance

Overall, there exists significant current concern about a structural deficit in supply in the uranium market. Even just considering the Reference Case as outlined by World Nuclear, Figure 38 below demonstrates the significant shortfall in uranium supply that must be met by unspecified sources.

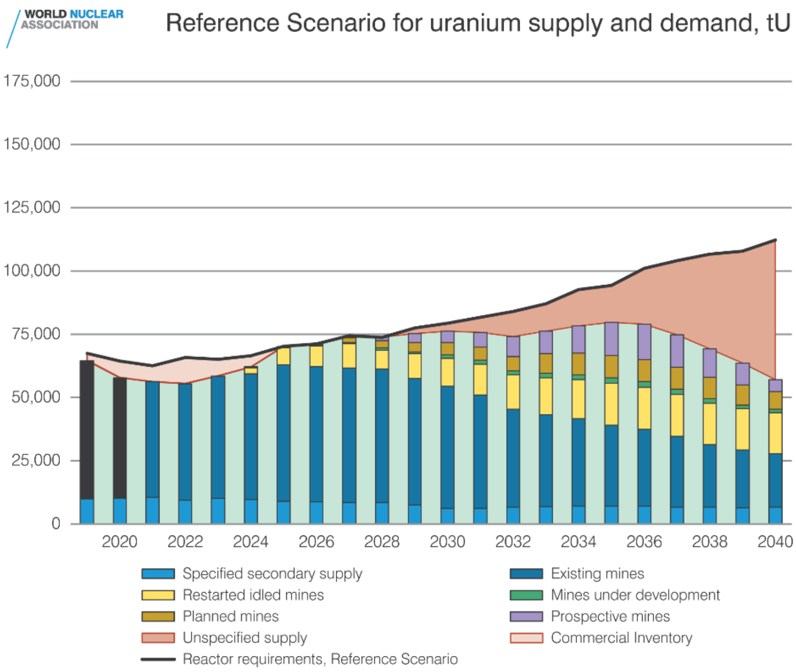

Figure 38: Predicted World Supply of Uranium 2019 – 2040

Source: World Nuclear, September 2021

Note: In this World Nuclear classification, Bennet Well would fit into the "Unspecified supply" gap, which grows to approx. 50,000t U per annum in the reference scenario, or 130m lb U_3O_8. Bennet

Well annual production proposed in the scoping study of 1.5Mlb U_3O_8 would account for 1.2% of the required unspecified supply gap by 2040.

The following factors are contributing to the concerns of a structurally short position going forward:

- Reduction going forward in the level of secondary uranium sources available in the market. (For many years, the market has relied on secondary sources to cover demand);
- The Russian invasion of Ukraine is encouraging western nuclear countries and utilities to reduce their reliance on Russia as a nuclear fuel supplier and act collectively to encourage supply from more politically aligned nations. Australia is a potential net beneficiary of this.
- A slow response from the uranium supply market; with market pricing not yet reaching a level which is expected to incentivise new supply into the market; Various analysts now suggest that ~US$80+ is needed before significant new production is incentivised into the market.
- Production difficulties at existing operations. Cameco Corporation, one of the world's largest producers of uranium accounting for about 16% of global production according to its website, has released revised production guidance recently stating that it will produce approximately 2.7 million pounds less this year than previous guidance[1]. Cameco also noted in its guidance that it may be forced to buy physical uranium on the market in order to meet the delivery commitments to its customers. Such purchases would reduce inventories available for other spot purchasers of uranium.
- Redirection of uranium production away from the spot market – recent reports suggest that BHP Olympic Dam, historically a major supplier of uranium to the spot market, may no longer supply that market, instead directing its production on a contracted basis.[2] Reduction of volume in the spot market is expected to increase volatility and generate further upward price pressure in the spot price of uranium.
- Expected impacts of physical uranium trusts, the largest of which is Sprott. As momentum builds in the uranium markets, the physical trusts may trade above their net asset value; allowing them to issue further units in the trust and buy more physical uranium inventories. Such activity can end up having a significant impact on spot uranium price.

This structural deficit in supply existing in the uranium market suggests that the price must increase towards a new equilibrium to enable new production to come on-line.

9.4.4. Bifurcation in the market and concerns over future Russian uranium and nuclear fuel supply

Russia's unprovoked invasion of Ukraine in 2022 has exacerbated existing security of supply concerns across several commodities.

As a result of the invasion, Russia has been hit with a huge number of sanctions, but these have not, as yet been applied to uranium or nuclear fuel assemblies, as Western utilities have needed time to work out alternative sources of supply, as Russia is a major player in not only uranium production, but also the conversion, enrichment and fuel fabrication parts of the supply chain. It is expected than in due course, sanctions may well be extended to these areas.

Such geopolitical concerns around future supply of uranium from Russia have led to significantly increased interest in potential "Western" sources of uranium supply, and obviously Australia is well positioned to take advantage given Australia has the world's largest resources of uranium (*source: World Nuclear Association*); and is a strong ally of Western countries. In many other commodities, Australia is considered the world leader in mining, and hence there is the potential that this world leading position could extend to uranium mining as well, if changes in long term policies are made to match the evolving global dynamic.

To learn more about the global nuclear and uranium markets, please visit the World Nuclear Association (WNA) website at www.world-nuclear.org.

[1] https://www.cameco.com/media/news/cameco-provides-production-and-market-update (September 2023)
[2] see https://greeninvesting.co/2023/09/olympic-dam-uranium-not-going-to-spot-market-report/

9.4.5. Uranium spot price improving as a result/ projected to continue strong trend

As a result of all the positive factors noted above, spot uranium has performed extremely strongly in recent months, trading through a key barrier of US$80 per pound, to a decade high level (source: Trading Economics) of approx. US$81/lb shown in the graph (Figure 39). Note the latest update shows uranium has traded on 8th December at $US83/lb.

Figure 39: Uranium Spot Price 2014 – 2023

All the positive market factors described above are being reflected in updated forecasts from analysts with respect to future price forecasts. Whilst there are a variety of different analyst forecasts available; without doubt there has been an overall recent strengthening of forecast across the board. Most recent data available, published below from Uranium market specialist Cantor Fitzgerald (Table 11), shows substantial recent upgrades to price forecasts, which are at levels substantially above current spot pricing.

Table 11: Predicted Uranium Spot and Long-Term Prices 2023 -2027

($/lb U3O8)	2023	2024	2025	2026	2027+
Previous - spot	$75.00	$75.00	$75.00	$75.00	$75.00
Previous - term	$85.00	$85.00	$85.00	$85.00	$85.00
Revised - spot	*$73.38**	*$90.00*	*$100.00*	*$110.00*	*$110.00*
Revised - term	*$61.50**	*$100.00*	*$110.00*	*$120.00*	*$120.00*

*last reported
Source: Cantor Fitzgerald

Source: Cantor Fitzgerald, 25 October 2023

9.4.6. Market forecasts support Scoping Study price assumptions

For the purposes of this scoping study, Cauldron has elected to use a flat price forecast of US$75/lb as its base case which broadly reflects the current spot price, and provides sensitivity analyses for a lower case (US$60/lb) and an upper case (US$90/lb) uranium price. See Section 10.3 for sensitivity analysis.

Based on the forward-looking curves for uranium supply / demand balance as described above, the improving price forecasts from independent analysts, and the expected development timeframe for Bennet Well (understanding the need for the current WA Government policy to change), it is believed the base case price of US$75 per lb U_3O_8 used in this Scoping Study is realistic (probably a little conservative) for offtake contracts in the time frame assumed in the Scoping Study for development.

9.5. Marketing strategy

This scoping study envisages the Bennet Well project ramping up to produce 1.5 million pounds of U_3O_8 per annum, which would account for less than 1% of the unspecified supply gap in 2040 under the reference scenario (see Figure 38 above). As such, Bennet Well will be one of many projects that are needed to come on line to satisfy world reactor demand for uranium. This gives the company confidence that there will be room in the global market for production from Bennet Well.

The Company has not yet formalised or finalised its marketing strategy, however there are certain dynamics of the uranium market the suggest that, at least initially, the Company is likely to appoint an industry experienced marketing agent to drive market acceptance of its new product. This includes the importance of quality and reliability of supply in the market. Over time, once the product is accepted into the market, the Company could look to take a more direct role in marketing. The Company's market entry strategy will be refined as it moves through the feasibility process.

9.5.1. Price risk mitigation and contracting optionality

There are several different mechanisms available in the uranium market that can be leveraged to reduce price risk and provide certainty of covering operating costs; a key consideration for potential debt financiers especially.

- Unlike many other commodities, uranium is not broadly exchange traded. Prices are generally reported by consultants (e.g. UxC) following discussions with suppliers and other indirect reporting mechanisms.
- Spot market sales are conducted for neat term deliveries. These retain maximum exposure to potential rising prices for suppliers of uranium.
- Term contracts fix supply of uranium for certain timeframes and volumes. These contracts may include certain price mechanisms such as floors, caps, or collars. Further, term contracts with Spot Price based pricing are now available to provide utilities with certainty of supply whilst retaining exposure for suppliers to price movements. Term contracts may also include escalation provisions for impacts of inflation.
- Term contracts may include flex arrangements on volume which can be exercised at the option of the buyer.
- Generally, Term contracts have traded at a premium to spot, reflecting the benefit of certainty of supply for the utility.

Practically, utilities supply their reactors from a mix of inventory, term contracts and spot purchases. The Russian invasion of Ukraine has spurred nuclear fuel buyers to pay increasing attention to ensuring robust and flexible fuel supply arrangements to ensure security of supply under all scenarios.

As the development pathway for Bennet Well is progressed a contracting strategy will be developed which leverages these different contracting features, provides requisite comfort to financiers whilst retaining attractive upside to the uranium price for investors.

10. FINANCIAL ANALYSIS

10.1. Extraction Schedule

The extraction schedule for the project involves developing well fields to leach the uranium bearing strata, set out in patterns as described in section 7.4. During the Life of Mine (LOM) of 11 years, there would be about 20,880 wells developed, or about 1,900 wells per year, each at an estimated cost of US$6,000, for a cost of ~US$11.4 million per year, and a LOM cost of ~US$125 million (see Table 12).

With a cut-off grade of 175ppm U_3O_8, the first 6 years would be extracted totally from Indicated resources, and then a combination of Indicated and Inferred resources, with a total of 73% of production from Indicated Resources (16.6 Mlb U_3O_8) and 27% from Inferred Resources (6.2 Mlb U_3O_8), as shown in Figures 40 and 41. Infill drilling in the north-west area is planned to convert the Inferred Resource here to an Indicated Resource, and to infill other Inferred Resource areas as well.

The subset of the total resource scheduled in this Production Target is ~27.7 Mt @ 373 ppm eU_3O_8 from the total resource of 36.2 Mt @ 375 ppm eU_3O_8 at a cut-off of 175 ppm eU_3O_8 (see section 5.1).

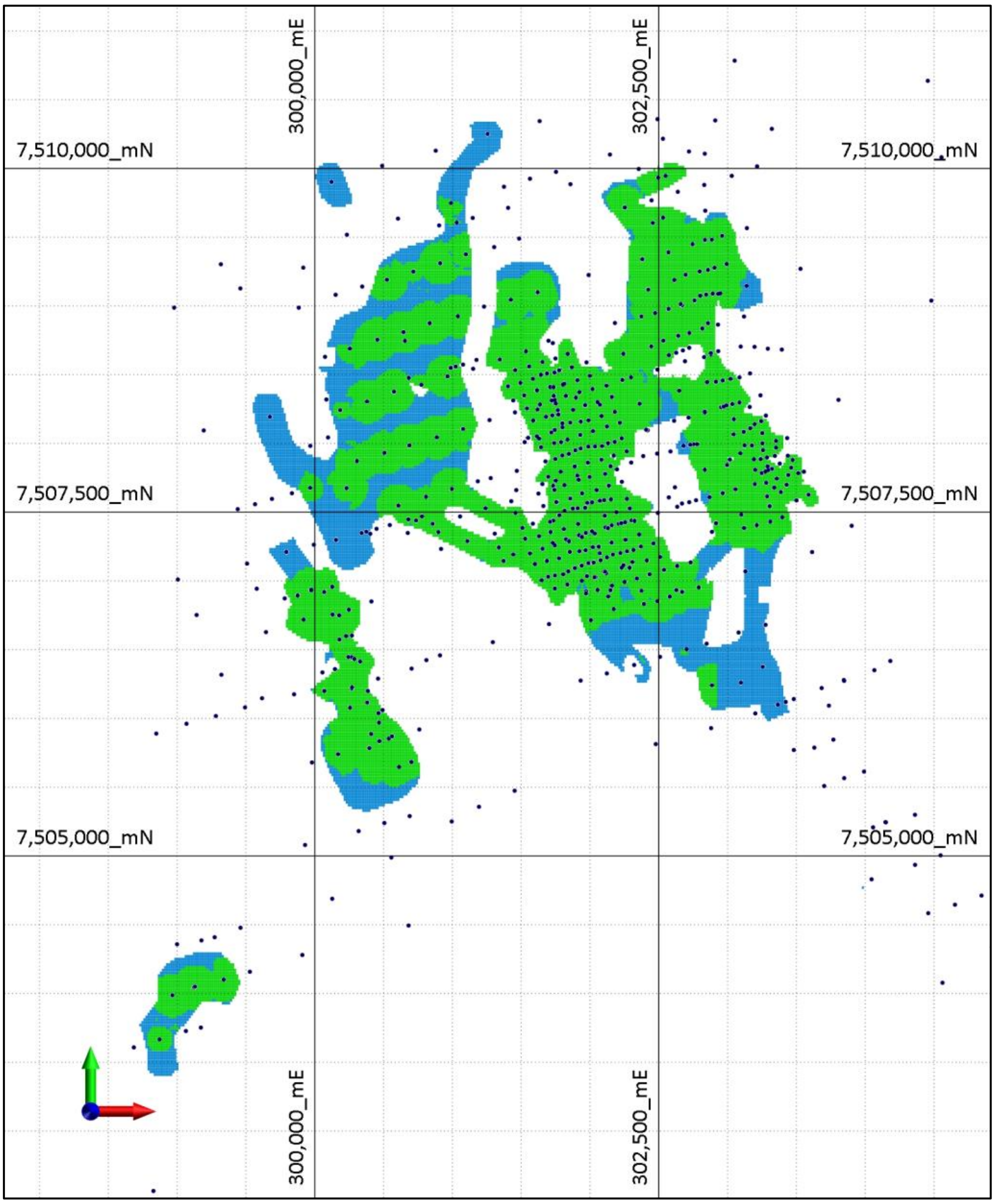

Figure 40: Bennet Well Mineable Resource by Resource Category (Green = Indicated, Blue = Inferred)

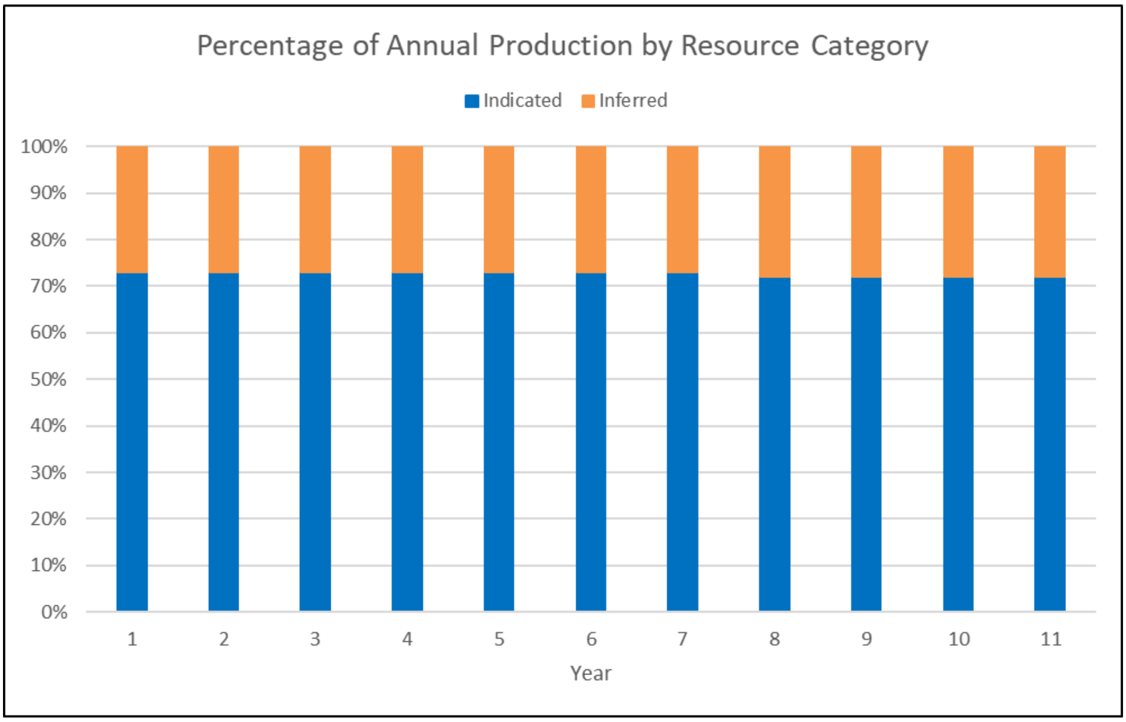

Figure 41: Percentage of Annual Production by Resource Category

10.2. Capital and Operating Costs

10.2.1. Capital Costs

At this stage capital costs (Table 12) have been estimated based on a desk top study and comparison with other similar ISR and uranium leaching projects, and are at best +/- 35%. The results are comparable with these other projects on a cost per pound of U_3O_8 produced basis.

Table 12: Capital Costs

Capital Item	Cost US$M	Cost A$M
Reserve Establishment	15.0	21.4
Site Works	5.0	7.1
Plant & Equipment	50	71.4
Sustaining Capital*	1	1.4
Wellfield Development*	11.4	16.4
Total Upfront Capital	**82.4**	**117.7**
Sustaining Capital*	1	1.4
Wellfield Development*	11.4	16.3
Total Sustaining Capital*	12.4	17.7
Life of Mine Capital (unescalated)	**125.3**	**179.0**
Total Capital LOM	**207.7**	**296.7**

* Sustaining capital is on a yearly basis

10.2.2. Operating Costs

Operating costs (Table 13) are derived from the preliminary metallurgical test work completed to date, and have also been benchmarked against operating costs from other similar ISR and uranium leaching projects, and are at best +/- 35%. The results are comparable with these other projects on a cost per pound of U_3O_8 produced basis.

Table 13: Operating Costs

Operating Item	Cost US$/lb U_3O_8	Cost A$/lb U_3O_8
ISR Mining	2.00	2.86
Processing Plant Operation	5.00	7.14
Liquor cost	6.64	9.49
Transport	0.05	0.06
Administration	3.00	4.29
Royalties & Native Title	4.88	6.97
Contingency	1.67	2.39
Total Operating Cost	**23.23**	**33.19**

10.3. Benchmarking of Capital & Operating Costs

Benchmarking of capital and operating costs was undertaken on two recently published uranium projects in Australia. The first is Boss Energy's ("BOE") Honeymoon Well project in South Australia, which is an ISR project (ASX:BOE 21 June 2021 – Enhanced Feasibility Study Outcomes). The second is Toro Energy's ("TOE") Lake Maitland project in Western Australia, which is not ISR (being a shallow calcrete mining type project, but extraction of uranium from the ore by leaching is a similar process) (ASX:TOE 24 October 2022). The benchmarked results are shown below in Table 14.

Table 14: Benchmarking of Capital & Operating Costs and Production Parameters

Parameter	Unit	CXU	BOE	TOE
Production Rate	Mlb/year	1.50	2.45	1.30
Mining Cut-Off Grade	ppm U_3O_8	175	250	200
Mineable Resource	Mt	27.7	24.1	34.1
Mineable Grade	ppm U_3O_8	373	667	371
Leach Recovery	%	67	70	79.5
U_3O_8 Produced	Mlbs	16.5	21.8	22.8
Upfront Capex	US$	82.4	80.0	189.0
	A$	117.7	106.7	270.0
On-going Capex (unescalated)	US$	125.3	97.4	N/A
	A$	179.0	129.9	N/A
Total Capex (unescalated)	US$	207.7	347.4	189.0
	A$	296.7	463.2	270.0
Opex	US$/lb	23.23	22.21	23.10
Capex	US$/lb	12.56	9.65	4.92
All in Cost	US$/lb	35.79	31.86	28.02

Mine Life	years	11.0	11.0	17.5
Payback Period	years	1.5	3.5	2.5

As can be seen in Table 15, The operating cost of US$23.23/lb for this Scoping Study by Cauldron Energy ("CXU") is comparable (perhaps a little conservative) to BOE's operating cost of US$22.21/lb for their larger Honeymoon Well project, and comparable to TOE's Lake Maitland project (allowing for differences in mining cost etc.).

The capital costs are also comparable between Bennet Well and Honeymoon Well, given that Honeymoon Well already has several wellfields established (hence lower on-going capex for Honeymoon Well, US$97.4M (BOE) vs. US$125.3M (CXU). Upfront capex is similar, but Honeymoon Well has the benefit of sunk capital and existing site infrastructure from previous operations. The Honeymoon Well upfront capital is for essentially a different processing plant (IX vs. SX), and IX would probably be used at Bennet Well (based on CSIRO test work). Also, the Honeymoon Well capex is for a larger plant throughput than Bennet Well.

10.4. Financial Results

The key financial assumptions and outcomes used in this updated Scoping Study are shown below in Table 15. For the base case, a price of US$75/lb has been used. This reflects the uranium market and price forecast analysis in section 9. An exchange rate of A$:US$ = 0.70 has been used based on long term forecasts and benchmarking against other similar studies.

In order to determine the optimum cut-off grade for ISR, an analysis was run considering the cut-off grade, resource and in-situ mass of U_3O_8 to estimate the Net Present Value and Internal Rate of Return based on assumed uranium price, discount rate and annual uranium precipitate production.

- The Bennet Well project is financially positive at a uranium price of US$75/ lb U_3O_8;
- The minimum uranium price for a breakeven project is US$37/lb U_3O_8 (10% IRR);
- The NPV vs. Cut-Off Grade graph (Figure 42) has a maximum at 175 ppm U_3O_8;
- The lowering of financial performance for increasing cut-off grade beyond 175 ppm U_3O_8 is explained by the relationship between areal coverage of in-situ resource and life-of-mine; at higher cut-off grade, the projected area of the resource reduces markedly thus shortening the mine life;
- The financial performance becomes less attractive due to the requirement to expend the same up-front capital (well field and processing plant) for a reduced mine life;
- At a lower cut-off grade, the larger area requires a higher sustaining capital (more wells to cover the larger area) for only a marginal increase in production.

The results show a robust project with good returns on capital. The pre-tax NPV_{10} is US$314.1M (A$448.7M) and the IRR is 79% (Table 15).

The sensitivity analysis in section 10.5 shows that the project has strong tolerance to changes in the values of various financial and operating parameters over its 11-year life. If additional resources can be identified and exploited, and Inferred Resources converted to Indicated Resources, then the project will have a longer life and deliver more value to investors and government.

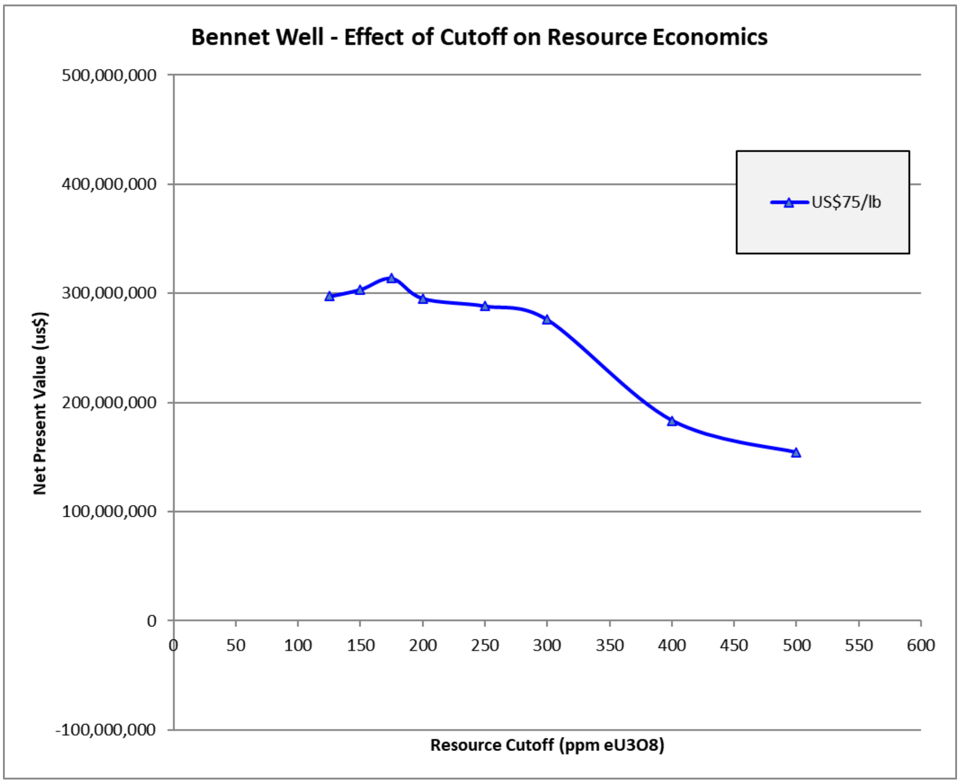

Figure 42: NPV vs Cut-Off Grade at a U_3O_8 price of US$75/lb

Table 15: Key Financial Assumptions and Metrics

Financial Parameter	Unit	US$	A$
Uranium (U_3O_8) Price	$/lb	75.0	107.1
Exchange Rate (A$:US$)		0.70	0.70
Undiscounted Cash Flow	$M/year	65.3	93.3
Government Royalties (5%)	$M/year	5.6	8.0
Discount Rate	%	10	10
NPV	$M	314.1	448.7
IRR	%	79	79
Payback	years	1.5	1.5

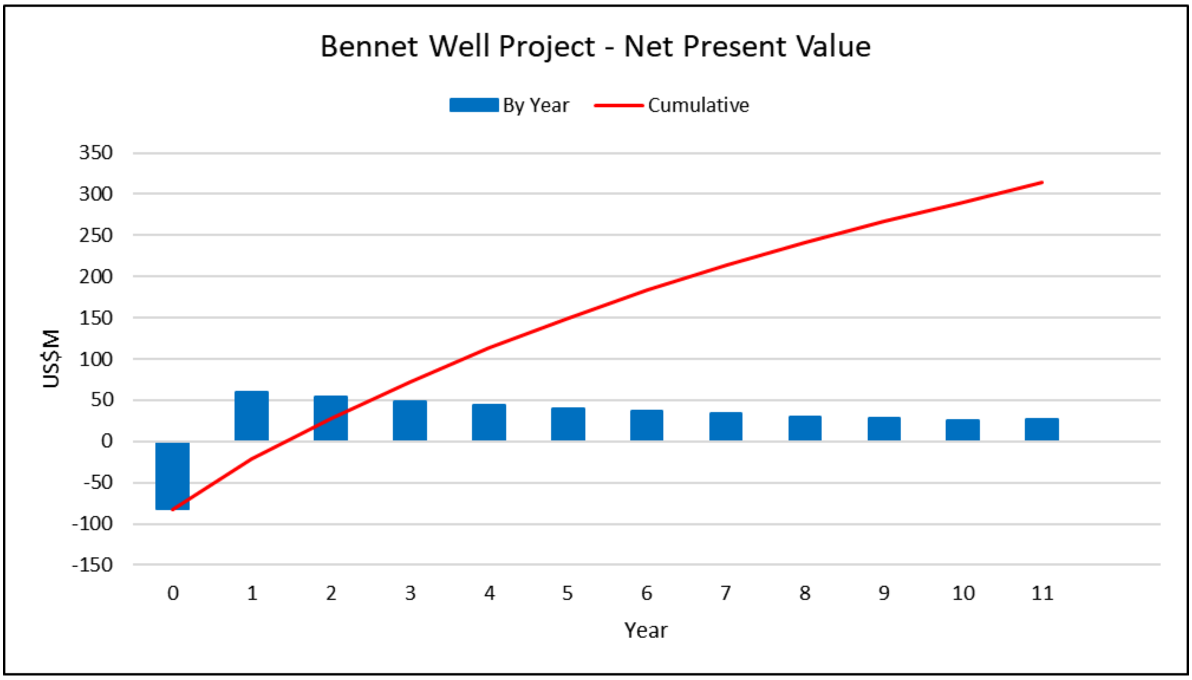

Figure 43: Discounted Cash Flow Graph – by year and cumulative

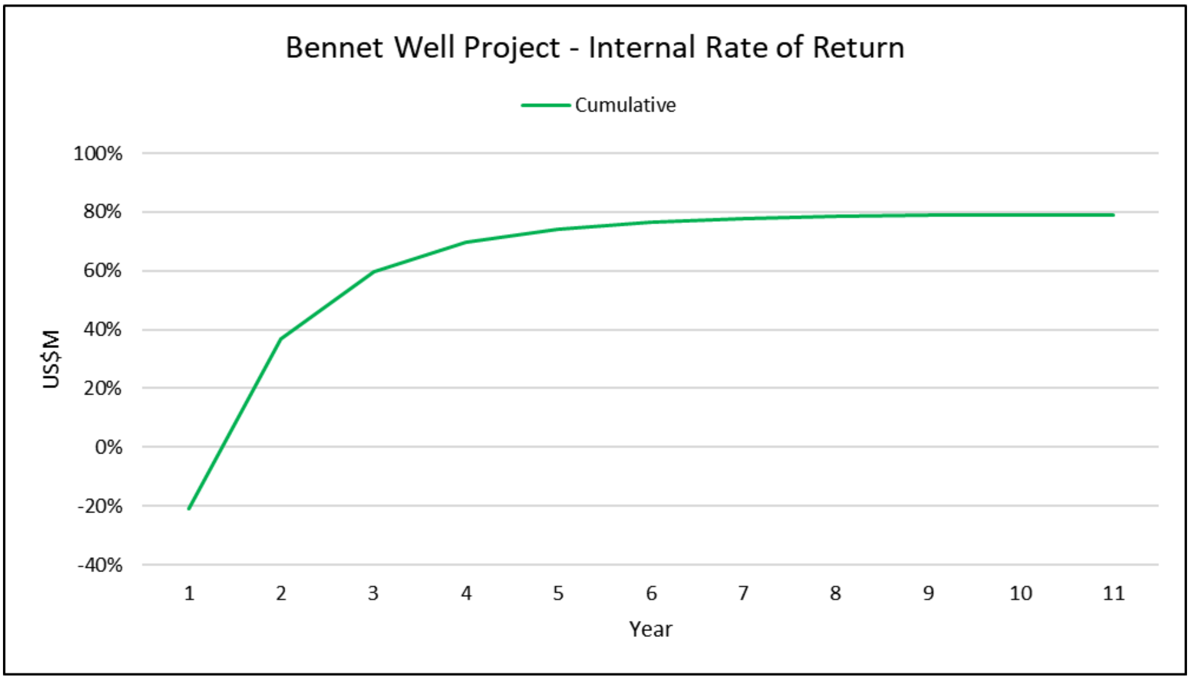

Figure 44: Discounted Cash Flow Graph – by year and cumulative

10.5. Sensitivity Analysis

A sensitivity analysis was run to examine sensitivity of NPV (US$M) (Table 16 and Figure 45) and IRR (%) (Table 17 and Figure 46) to changes in operating and financial parameters such as U_3O_8 price, operating and capital costs, and production rate.

At the recent spot uranium price of US$83/lb, and exchange rate of 0.66, the project has a pre-tax NPV of ~US$380M (~A$576M), and IRR of 93%.

Table 16: Sensitivity Metrics – NPV US$M

Parameter	Unit	Base Case	-50%	-25%	0%	+25%	+50%
Uranium (U_3O_8) Price	US$/lb	75.0	4	159	314	469	625
Capital Costs	US$/lb	12.2	386	350	314	278	242
Operating Costs	US$/lb	22.9	411	367	314	253	185
Production Rate	Mlb/year	1.5	138	235	314	373	384

Table 17: Sensitivity Metrics – IRR %

Parameter	Unit	Base Case	-50%	-25%	0%	+25%	+50%
Uranium (U_3O_8) Price	US$/lb	75.0	11	47	79	111	142
Capital Costs	US$/lb	12.2	173	111	79	60	47
Operating Costs	US$/lb	22.9	99	90	79	63	52
Production Rate	Mlb/year	1.5	34	57	79	100	116

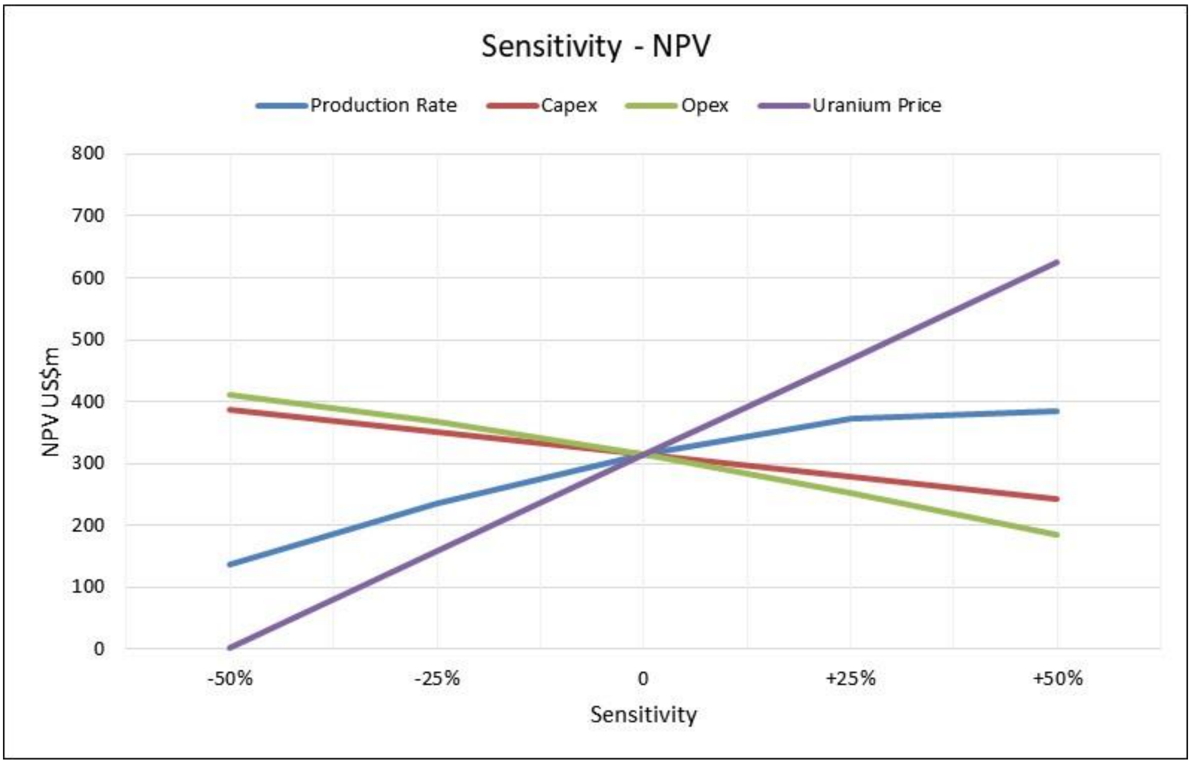

Figure 45: Sensitivity Graph for NPV

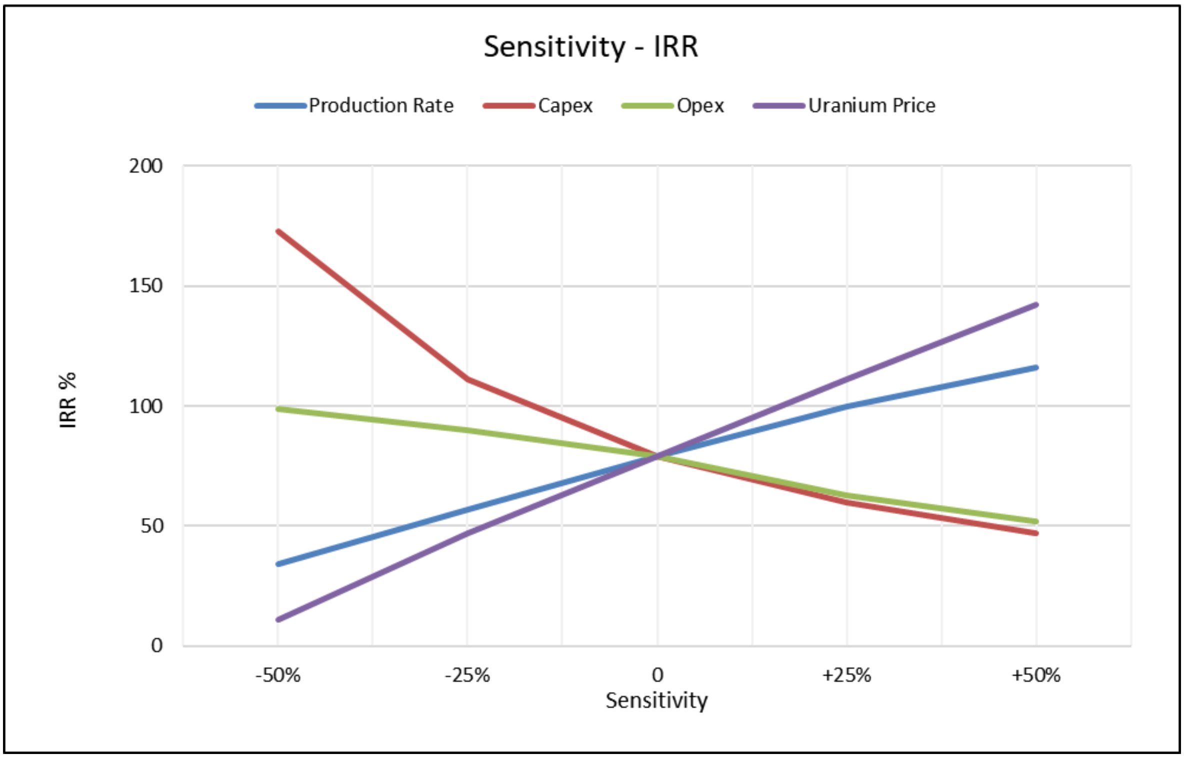

Figure 46: Sensitivity Graph for IRR

11. PROJECT IMPLEMENTATION

11.1. Time Frame

A realistic time frame from the current date to achievement of production at Bennet Well is estimated to be a minimum of 3 years and maximum of 6 years as follows:

- Pre-Feasibility Study 12-18 months
- Definitive Feasibility Study 12-18 months
- Project Approvals 12-24 months
- Construction 12 months

These may vary depending on a number of factors, including the prevailing uranium price, labour costs, materials costs, availability of funding, project approvals and government regulations, availability of a suitably skilled work force, machinery and equipment etc.

11.2. Environmental Approvals & Permitting

Since the change of state government in March 2017, with the Labour party being elected, Cauldron has completed no real uranium exploration or mine development work on the Yanrey Project or the Bennet Well Deposit. The change of government from Liberal to Labor placed a caveat on the grant of new mining leases which did not allow extraction of uranium. This effectively banned uranium mining in Western Australia.

In light of recent statements by the state Labor government in support of "green energy" it seems illogical that this ban on uranium could continue, since nuclear power generation is one of the cleanest "green energy" sources available. If the WA government continues its ban, it can only be on ideological grounds, not based on economics, logic nor reality.

It will be important to have the project ready to go through the approvals process when the uranium mining ban is lifted, which it inevitably will be when a Liberal state government is elected.

The following licences and management plans will need to be put in place for the project to proceed:

- Mining Lease (subject to WA government policy as above);
- Environmental Protection Agency (EPA) Licence;
- Native Title Agreements;
- Radiation Management Plan;
- Radioactive Waste Management Plan;
- Flora and Native Vegetation Management Plan;
- Mine Closure and Rehabilitation Plan; and
- Product export permits.

Native Title Agreements for uranium production need to be signed and endorsed by local Indigenous communities.

11.3. Funding

The Bennet Well Uranium Project's technically simple and strong economic fundamentals give Cauldron the foundation to source traditional financing through traditional debt and equity markets. This may include other fund-raising channels that could benefit shareholders, such as joint ventures, take-off agreements, or a corporate transaction and the like, however, there is no certainty Cauldron will be able to source the required finance.

Cauldron is of the opinion that there is a reasonable basis to believe that requisite future funding for development of Bennet Well will be available when required. However, the economic analysis does not price in the cost of funding over and above the application of the discount factor of 10%, based on conventional ISR mining methods and a very short capital payback period. The grounds on which this reasonable basis is founded include:

- Finance availability for high-quality projects remains robust.
- The Bennet Well project is technically simple and has a rapid payback of only 1.5 years from commercial production.
- The strategic nature of uranium, especially in the context of urgent global energy issues.
- Bennet Well has significant potential to grow the Mineral Resource base that forms this Scoping Study from adjacent 100% owned uranium deposits, which may further strengthen the potential economics.
- The release of the Scoping Study results enables Cauldron to discuss the outcomes with potential financiers.
- The Board and management of Cauldron have a strong background in raising finance for exploration and mining projects.
- Australia is a stable mining and investor friendly jurisdiction with a history of successful traditional debt financing of mining projects.
- All sustaining and deferred capital expenditure funding is assumed to be generated by company generated cashflow.

11.4. Opportunities

There are several opportunities to improve the Bennet Well project outcomes as it progresses. These include:

- Growth of the Mineral Resource base may lead to either a longer mine life, or a higher production rate, both of which would have a positive impact on project economics (note: the Company has obtained an approved PoW for further drilling and is planning to undertake the works in the first half of CY2024;
- Improvements in leach recoveries, which can only be finally assessed once a field leach trial has been conducted in a representative area of the deposit;
- Refinement of the project flowsheet to reflect improvements in uranium extraction technology, including use of oxidants and alternative lixiviants;
- Development of a fully integrated geometallurgical model to understand the interaction of geology, leach recovery and mineralogy and how it impacts uranium production;
- Continued worldwide focus on nuclear energy as a clean “Green” energy source to help mitigate global warming;
- Use of solar energy to power the operation, given its favourable location and hours of sunlight per day;
- Optimisation studies on wellfield configurations to ensure that it is fit for purpose and fully efficient;

11.5. Risks

Key risks for the Bennet Well project include:

- A change of the WA government policy, which currently bans uranium mining. There is a growing consensus, even amongst left-wing political groups, that nuclear power needs to be a necessary part of any global solution to climate change and global warming, with nuclear seen as the only real viable base-load power alternative to coal, gas and oil.

- Ability to meet the various environmental approvals that will undoubtedly be stronger for a uranium project that for a normal hard rock metallic mining project.
- Current leach recoveries are based on laboratory tests and “factorisation” into what might happen in the field, but still need to be properly established by a field leach trial, which at the present time, the WA government is refusing to approve.
- Capital and operating costs could increase due to inflation and other cost pressures (such as availability of human and physical resources).
- The continued demand for uranium to produce nuclear power. This could be adversely affected by a nuclear power plant incident in another part of the world, or by a nuclear warhead incident, especially given the current flighting between Russia and Ukraine, and Israel and Hamas.
- Cauldron has no control over the price of uranium or the supply from other sources which may affect demand, although studies have shown that the market is currently robust.
- Given certain market conditions therefore, the project may not be able to be satisfactorily financed.
- The resource at Bennet Well is 60% Indicated, but a part of that will need to be improved in confidence to measured through further drilling and test work. Similarly, areas that are currently Inferred may need to be increased in confidence to Indicated. There is no guarantee that drilling will achieve this, although it is expected with some confidence.
- Some risks may compound each other and have an even greater effect on project economics that in isolation.

11.6. Further Work Required

Further work is required to progress the project to the pre-Feasibility stage and then Feasibility stage, with each stage examining and eliminating, or reducing or mitigating risk.

- Further exploration drilling and targeting is required to grow the resource, increase resource confidence, and better understand mineralogy and the geological model. This will require sonic and aircore and/or rotary mud drilling, with the use of downhole tools to determine uranium equilibrium and therefore grade estimates;
- Once the geological and mineralogical model is better defined, further extensive metallurgical sampling is required to collect more geographically representative samples that better represent areas of the orebody that are proposed to be mined. This will require sonic or diamond drilling;
- The hydrological model needs to be understood before a field leach trial is undertaken to examine fluid pathways and extraction and injection capacities;
- Most of the assumptions concerning logistics in this Scoping Study are based on similar projects and need to be investigated and costed specifically for Bennet Well;
- Full development of operating and capital costs from first principles needs to be undertaken;
- Discussions with financial institutions regarding project finance, and nuclear power customers regarding marketing and sales of yellowcake need to be undertaken;
- Full engagement with government needs to be undertaken to understand regulatory requirements, including environmental approvals, export licences etc.

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 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.