ASX Announcement

20 February 2014

OUTSTANDING URANIUM EXTRACTION AT CAULDRON'S BENNET WELL

Indicates high recovery at low operating cost

HIGHLIGHTS

- **Acid leach test work achieves over 96% uranium extraction with low acid consumption**
- **Carbonate / bicarbonate leach testwork achieves around 94% uranium extraction**
- **Uranium easily recoverable via acid leach and carbonate / bicarbonate leach methods**
- **Low acid consumption means potential lower operating costs**
- **Site ground water analysis shows no deleterious elements are present that may interfere with downstream processing**
- **XRF results show an increase in core assay grade of approximately 6% from the original ICP assay results**
- **Deconvolved gamma probe grade and assay grade differences have increased from 20% to approximately 25% with the latest XRF results suggesting an increase in the gamma results used to calculate the existing JORC resource**
- **QEMSCAN analysis has identified coffinite, sodium zippeite and uraniferous zircons in the two samples submitted. The high uranium recovery rates suggests that all three uranium species appear to be soluble and easily recoverable**

Australian resources company Cauldron Energy Limited **(ASX: CXU)** ("Cauldron" or "the Company") is pleased to announce that preliminary testwork results from the Bennet Well deposit in Western Australia (Figure 1) show acid and carbonate/bicarbonate leaching methods have achieved high uranium extraction and provide the Company with options as to the most preferred method of extraction.

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178,062,092 shares
7,300,000 unlisted options

All leach testwork was undertaken at the ANSTO facility in NSW. A summary of the leaching tests is presented in Table 1.

Cauldron's Head of Operations, Simon Youds welcomed the results:

"The uranium recovery percentages of up to 98.6% shows that the uranium in the Bennet Well Project is soluble and appears to be extractable using the in-situ recovery (ISR) type production method," Mr Youds said.

"The high uranium recoveries show that the ISR method would be extremely effective and be a relatively cheap production method where uranium oxide will be economic at even the current low commodity prices.

"The fact that both the acid and alkaline leaching methods both worked on the two samples submitted to ANSTO, as well as potentially low acid consumption, is even more encouraging since Cauldron will then have options as to what the preferred method will be," Mr Youds added.

This completes the first part in the project development chain with the aim of establishing an economic uranium resource. The high extraction values obtained in both chemical environments, combined with anticipated low reagent consumption, encourages Cauldron to continue developing the project in light of the prevailing uranium investment climate.

The leach testing was completed on composited samples from YNDD018 and YNDD022 (Refer Figure 2 & 3)). YNDD018 had a grade of **5.1m @ 1209 ppm U_3O_8**. For YNDD018 there were a total of 34 core assay samples composited together for the leaching sample. YNDD022 had a grade of **1.1m @ 473 ppm U_3O_8** and a total of 10 core assay samples were composited together for the leaching sample.

These two core holes were selected to complete the leach testing since YNDD018 represented the most sand dominated core hole drilled and YNDD022 was the most clay rich core hole drilled.

Analysis was completed on the total composition of each composite sample as well as water samples collected from the Bennet Well region to determine whether there are any elements present that would likely cause problems for ISR type mining.

Analysis showed calcium and magnesium were low, indicating that carbonate content should be low and hence acid consumption should also be low. Of the other minor elements, none were at a concentration that would be expected to cause downstream processing problems. Salt content in the site water analysis averaged 1270 mg/L and is therefore not expected to impact any ion exchange or solvent extraction processes in the solution purification and product precipitation plant.

Selected core pulp samples that had ICP (Inductively Couple Plasma) assays completed were re-tested by ALS using the XRF (X-ray Fractionation) method to determine whether the uranium had been completely digested in the ICP assays.

The result of the XRF assays was that there was approximately an overall 6% increase in uranium oxide values when compared to the ICP assays. The XRF results are shown in Table 2. This shows that the ICP method is underestimating the true uranium oxide grade since not all of the contained uranium oxide is being completely digested.

The previously reported difference between the deconvolved gamma probe grades and ICP grades of 20% (see CXU announcement dated 31 January 2014) is now up to approximately 25% based on the XRF results.

Cauldron is continuing to work with Uranium Specialist Mr David Wilson to determine why the deconvolved uranium oxide values are significantly lower than the assay grades.

Preliminary assessment by Mr Wilson has shown that a moisture correction factor may need to be applied. A moisture correction factor is sometimes needed when there is a porosity >30% and is common in sandstone uranium deposits. Cauldron is awaiting further porosity, density and permeability data from CoreLabs which are completing testing of the Bennet Well core samples. Once this data has been compiled then an assessment can be made as to whether any further corrections are needed to bring the deconvolved gamma probe grades in line with the assay grades.

Exploration Manager Mark Couzens commented: “The current Bennet Well Resource of 15.7 million pounds of U_3O_8 is based primarily on deconvolved gamma probe grades. With the recent findings that the gamma probe data is significantly underestimating the uranium oxide grades as seen in assay values then there is likely to be a considerable correction applied in the near future which could increase the current resource size and average uranium oxide grade”.

Quantitative Evaluation of Minerals by Scanning Electron Microscopy (QEMSCAN) analysis was completed on one high grade core sample from both core holes submitted to ANSTO to determine the types of uranium present in the core samples.

The results showed that there were three types of uranium present in the two samples including coffinite, sodium zippeite and uraniferous zircons. The high uranium recovery rates suggest that all three uranium species appear to be soluble and easily recoverable using an ISR production method.

End.

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Disclosure Statements

Analytical Methods for Bennet Well Diamond Drill Core Geochemistry

Laboratory:- Australia Laboratory Services Pty Ltd (ALS)

Techniques used:

ME-MS61 Multi-Acid Digestion with Hydrofluoric Acid for 48 elements
(Inductively Coupled Plasma with both Atomic Emission Spectrometry and Mass Spectrometry finish).

ME-XRF15b Oxidising Fusion with XRF Finish
(Lithium borate fusion with the addition of a strong oxiding agent)

Competent Person Statements

The information in this announcement to which this statement is attached that relates to Cauldron Energy Limited's testwork is based on information compiled by Mr Mark Couzens who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Couzens is a full-time employee at Cauldron Energy Limited in the role of Exploration Manager and has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Couzens consents to the inclusion in the announcement of the matters based on their information in the form and context in which it appears.

Table 1: Preliminary Leach Test Results

Leach No.	Composite	pH	ORP (mV, Ag/AgCl)	Temp(C)	Estimated Acid Consumption (kg/t)	Feed U_3O_8 (ppm)	Residue U_3O_8 (ppm)	Uranium Extraction (%)
CAULD 3	YNDD018	1.2	600	50	13.6	1,190	17	98.6
CAULD 1		2.0	500	30	7.9	1,190	34	97.1
CAULD 5		Alkaline Leach		30	N/A	1,190	71	94.0
CAULD 4	YNDD022	1.2	600	50	16.3	500	9	98.2
CAULD 2		2.0	500	30	10.1	500	19	96.2
CAULD 6		Alkaline Leach		30	N/A	500	35	93.0

Table 2 - *Bennet Well core drillhole locations showing recently completed XRF assay results and comparisons to previous grade data*

Hole ID	Easting	Northing	TD (m)	RL (m)	Resource Name	Assay Depth From (m)	Assay Depth To (m)	Assay Width (m)	ICP U308 (ppm)	XRF U308 (ppm)	ICP Assay Grade Width (ppm.m)	XRF Assay Grade Width (ppm.m)	GammaProbe Grade Width (ppm.m)	ICP to XRF Change (%)	XRF to Gamma Probe Change (%)
YNDD015	302878	7508657	52.5	47	Bennet Well East	41.45	43.60	2.15	612	658	1316	1415	917	+7.5%	+54.3%
YNDD016	303305	7507544	68	47	Bennet Well East	62.90	63.5	0.6	443	442	266	265	275	-0.4%	-3.6%
YNDD017	303240	7507886	64.1	48	Bennet Well East	58.35	59.25	0.9	538	538	484	485	887	+0.2%	-45.3%
						60.6	61.2	0.6	496	507	298	304	169	+2%	+80%
YNDD019	300271	7506221	99.6	46	Bennet Well South	83.70	85.8	2.1	635	667	1335	1401	1654	+4.9%	-15.3%
						92.25	93	0.75	797	837	598	628	NA	+5%	NA
YNDD020	300538	7505854	90.6	46	Bennet Well South	73.35	73.95	0.6	1066	1144	639	686	569	+7.4%	+20.6%
						82.20	83.70	1.5	1237	NA	1855	NA	1444	NA	NA
YNDD021	299124	7504044	68.7	45	Bennet Well Deep South	53.90	55.40	**Core Loss**					559	NA	NA
						61.15	61.75	0.6	1453	1562	872	937	646	+7.5%	+45%

Note: All U_30_8 grades are calculated by multiplying the uranium assay grade by 1.179
Note: The U_30_8 cut off used for reporting is 100ppm U_30_8 over a depth of 0.5m
Note: YNDD015 includes 0.5m core loss in the mineralised zone from 42.5m
Note: XRF is ME-XRF15b assay testing that was completed by ALS in WA
Note: ICP is ME-MS61 assay testing that was completed by ALS in WA. NA indicates not applicable
Note: The lower uranium zone in YNDD019 was not gamma probed due to hole blockage
Note: YNDD021 has complete core loss of the 1.5m upper mineralised zone from 53.90m
Note: No XRF analysis was completed on YNDD018 and YNDD022. The XRF was used to check whether there has been a complete uranium digest in the ICP assays
Note: The datum for all drillholes is GDA94_Zone50
Note: All holes were drilled vertical with a dip of -90 and an Azimuth of 0.Note: In YNDD020 the lower zone has XRF values shown as NA since 4 of the 10 assay samples had non sufficient sample to complete testing. NA indicates not applicable

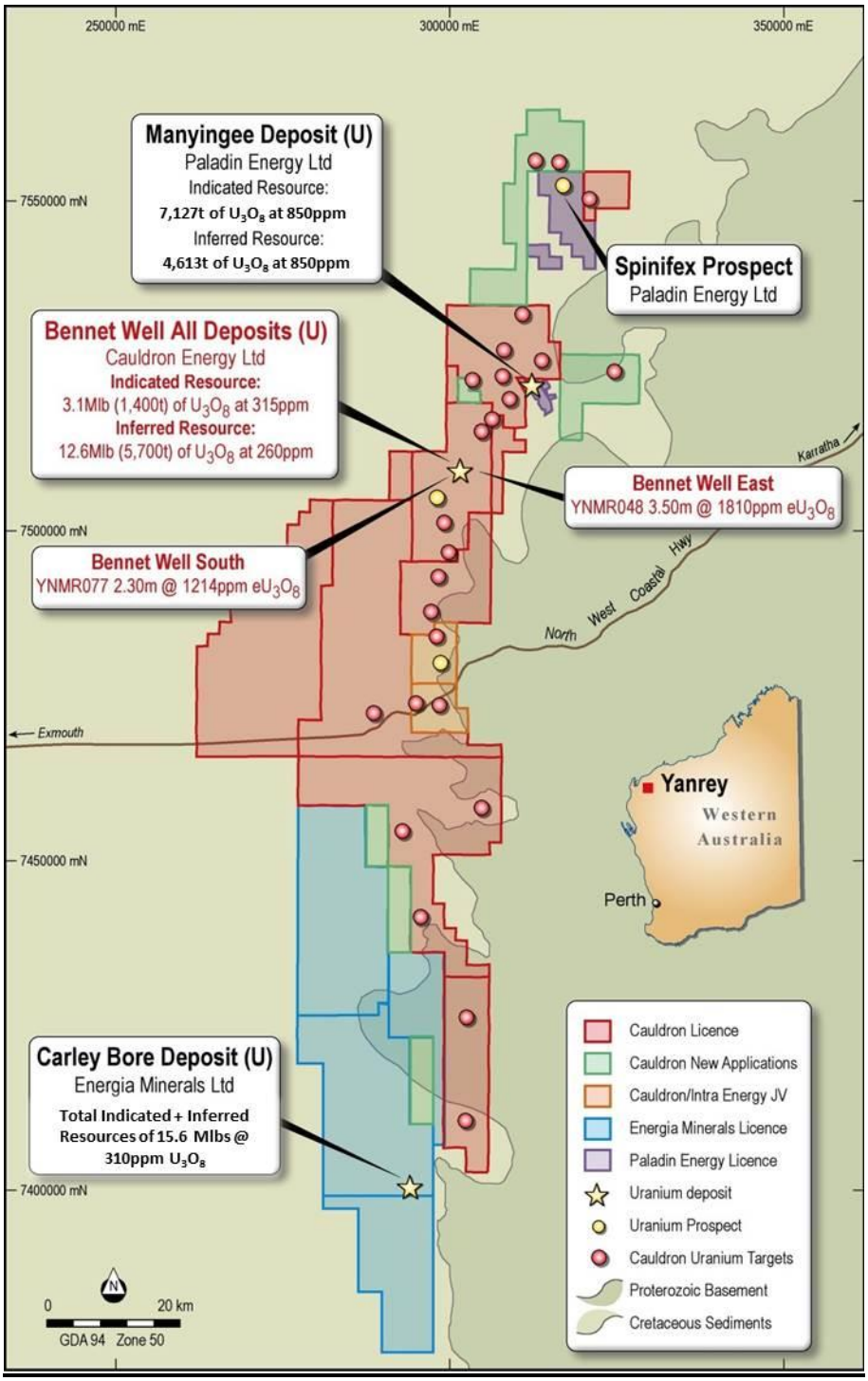

Figure 1 *- Yanrey Project and Prospect Location Plan*

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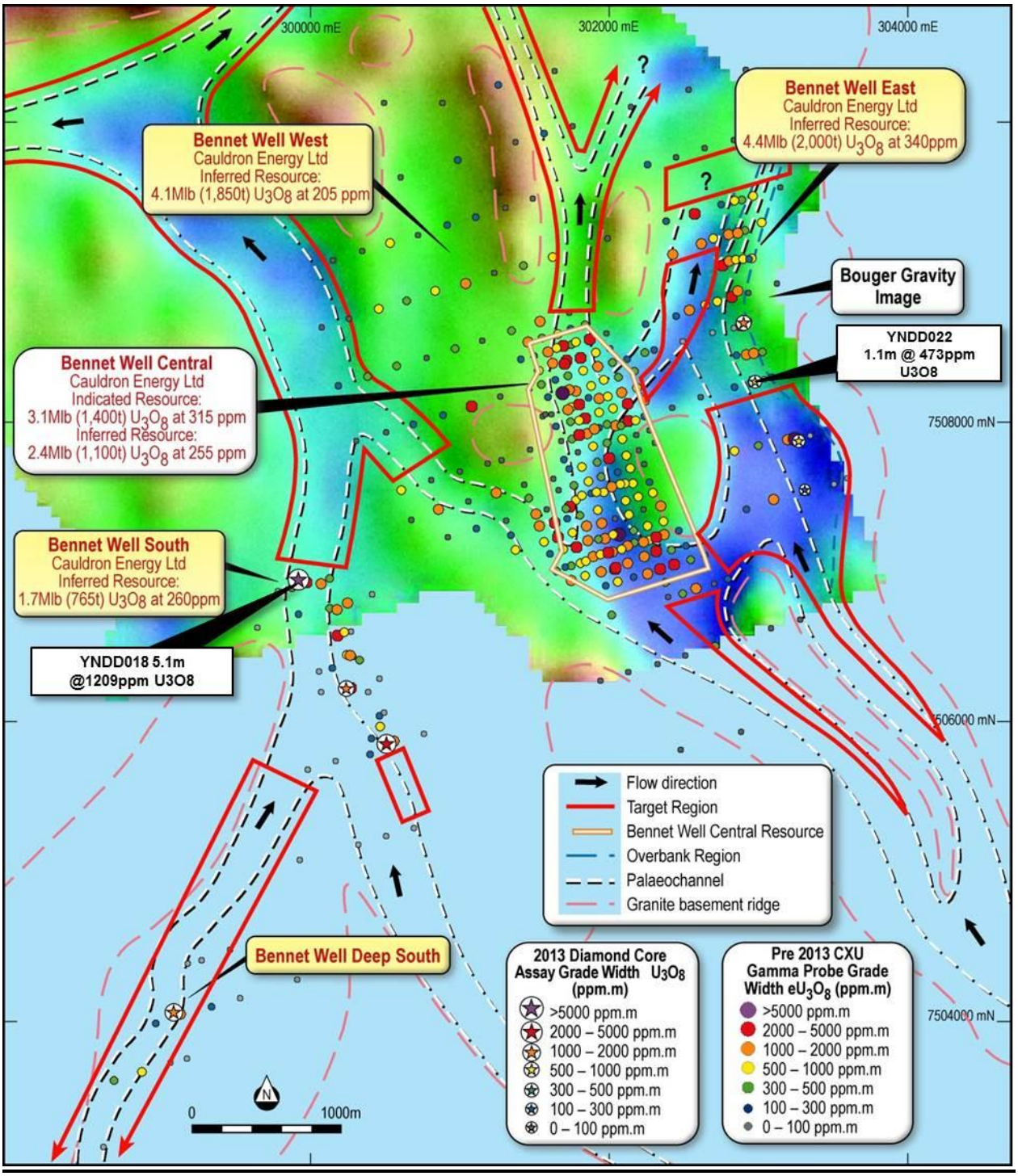

Figure 2 - *Bennet Well prospect location map from part of E08/1493 showing the location and assay grade widths of the recently completed core drill holes and pre 2013 drill holes at the Bennet Well resources. In the background is a Bouguer Gravity image shown with the palaeochannel interpretation.*

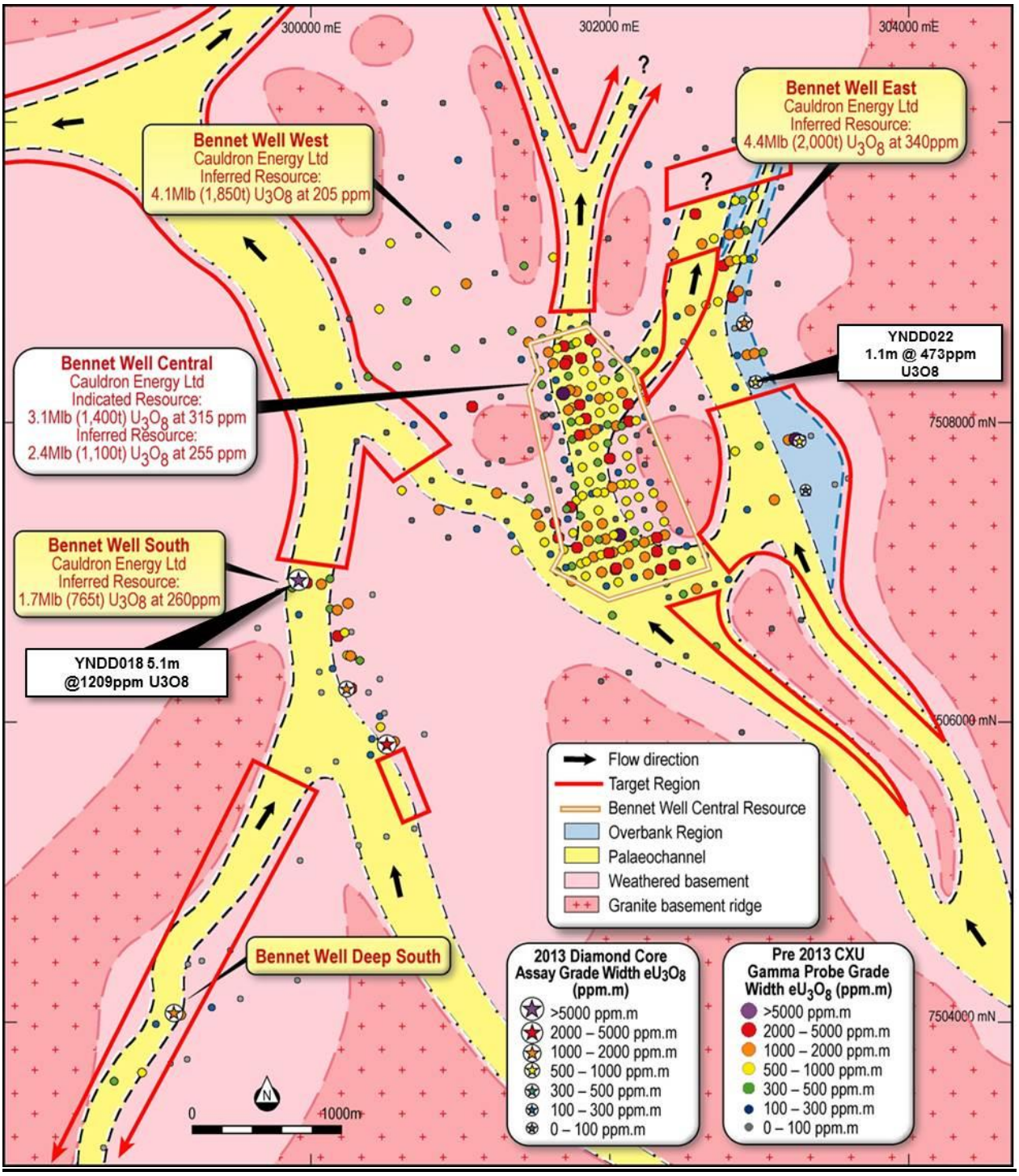

Figure 3 - *Bennet Well prospect location map from part of E08/1493 showing the location and assay grade widths of the recently completed core drill holes and pre 2013 drill holes at the Bennet Well resources. This image is a schematic image showing the palaeochannel interpretation*

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections).

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple*	• The Bennet Well region 2013 Diamond Core drilling program utilised two sampling techniques, down-hole geophysical gamma logging and geochemical assaying. • Down-hole geophysical logging using a gamma sonde was completed immediately after the drill rods were pulled from the drill hole. Gamma readings were collected every 0.02 metres from within the open drill hole. Other down-hole testwork techniques comprised resistivity, magnetic susceptibility and induction. • The gamma sonde used for this program was calibrated at the Model Logging Pits in Adelaide a few months before the start of the program. This calibration is done to check the dead-time and K-Factor conversion variables used to convert observed and true gamma counts into an equivalent eU_3O_8 value. • The final down-hole gamma data were sent to Mr David Wilson from 3D Exploration Ltd in Adelaide for deconvolution during which corrections are made for various parameters such as inter alia hole size, depth to water table and type of gamma probe. This results in a more accurate final equivalent uranium grade based on actual program parameters. • Geochemical assays were completed on the 8 x HQ sized core samples obtained from the drilling program. • Half of the core was retained for archiving and half of the core was used for geochemical assays and metallurgical testing. • The core was tested on site using a handheld GR-135 Scintillometer to identify the main mineralised zones. This data was used to sample the drill core at 0.1 metre to 1.0 metre intervals with over 95% of the mineralised zone sampled at 0.15 metre per sample.

Criteria	JORC Code explanation	Commentary
	(eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• Core samples from 2 x drill holes, namely YNDD018 and YNDD022, were sent to the Australian Nuclear Science and Testing Organisation (ANSTO) in Sydney for geochemical assay, Quantitative Evaluation of Minerals by Scanning Electron Microscopy (QEMSCAN) and preliminary leach testing. (see 'Other Substantive Exploration data' section). Each sample was dried to 50^{o}C, then broken up and mixed manually to produce a homogenous sample. A representative sample was obtained by riffling and pulverizing. Assay testing was completed using Delayed Neutron Activation Analysis (DNA) for uranium only. • Core samples from the remaining 6 x drill holes were sent to Australian Laboratory Services (ALS) in Perth for geochemical assay. Each sample was dried, crushed to minus 6 millimetre and then pulverized to 85% passing 75 microns before assay testing was completed using a 4 x acid Inductively Coupled Plasma Atomic Emission Spectroscopy (ICPAES) and Inductively Coupled Plasma Mass Spectrometry (ICPMS) analysis for 48 elements including U (0.1 ppm detection limit). Ore grade. Other elements analysed include Ag, Ba, Ca, Fe, K, Mg, Mn, P, Pb, S,Th, Ti and V. • To test whether the ICP (Inductively Couple Plasma) analysis has been a complete digest for uranium Cauldron selected specific higher grade samples for re-assaying by ALS. The technique used was Oxidising Fusion with XRF Finish using lithium borate fusion with the addition of a strong oxidising agent.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• 8 x vertical diamond core holes were drilled. Each hole had a mud rotary pre-collar and a HQ diameter diamond tail. • A total of 356 metres of mud rotary pre-collar was drilled with a total 257 metres of HQ diamond core tails. • The mud rotary pre-collar was drilled using a 120.6 millimetre pitch circle diameter drill bit. In instances where hard zones were encountered, the pre-collar was drilled using a PQ core barrel. • The target zone was cored using a 1.5 metre long HQ standard chrome core barrel.
Drill sample recovery	• *Method of recording and assessing core and chip sample*	• The core is checked every run for accuracy on drilling blocks and identifying where in a core run the core loss is likely to have come from.

Criteria	JORC Code explanation	Commentary
	recoveries and results assessed. • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• By locating all zones of core loss, a total sample recovery for the entire hole can then be determined. • For this program the total core recovery was 93.6% with one hole returning 100% recovery. • The core run lengths varied depending on proximity to the target zone to maximize the core return. • Run lengths were 1.0 metre to 1.5 metre above and below the specified uranium target zone and 0.5 metre within the specified uranium target zone to assist in core recovery since the sediments were mostly unconsolidated. • To date, Cauldron has not identified any relationship between sample recovery and grade from the core drilling program.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All core and pre-collar chip samples were geologically logged on site. • The mud rotary chip samples were collected every 1 metre and geologically logged according to sediment/rock type • The core was logged down to centimeter scales with the main emphasis being on both small and larger scale lithology. No geotechnical data was collected due to the generally flat lying geology and mostly unconsolidated sediments. • The geological logging completed was both qualitative (sediment/rock type, colour, degree of oxidation, etc) and quantitative (recording of specific depths and percentages). • The chip samples were sieved and laid out on a table where each was photographed. • The core was both photographed wet (lightly sprayed with water) and dry. Selected half-core zones are also currently being photographed by Core Labs in Perth showing the cut and cleaned surfaces. • All mud rotary chip samples and core samples were geologically logged.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• Most of the core was cut in half using a handheld angle grinder and chisels on site since the core was mostly unconsolidated sediments. More consolidated core was cut at Core Labs in Perth using a diamond saw.
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• None of the mud rotary chip samples were collected for geochemical assay.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• Due to the flat-lying nature of the unconsolidated sediments no orientation lines were done on the core. • When the core was cut in half on site, the site geologist cut the core to ensure that nugget type features such as wood fragments and pyrite nodules were present in both the original and duplicate samples. • Individual sample intervals in the mineralised zone were generally 0.15 metre lengths but samples were made larger or smaller so that no lithology or reduction/oxidation (redox) zones were crossed.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Duplicates were collected at 1 in 20 samples and both blanks and Certified Reference Material (CRM) standards were inserted at 1 in 30 samples. Blanks used were low uranium grade CRM samples.
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	• When field duplicates were collected, half of the core was cut into quarters so that two separate samples could be generated from the same interval. There were occasions where features such as wood fragments and pyrite distribution coincident with areas of uranium concentration were not equally proportioned in the two quarter samples as evidenced by differences with the assay results.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The laboratories used by Cauldron for geochemical assessment of the core samples ensured that all crushing and pulverizing was suitable for the material being tested.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• The core sent to ANSTO in Sydney was tested using DNA for uranium only which is considered to be a complete digest for uranium. • The core sent to ALS in Perth was tested using a 4 x acid ICPAES and ICPMS analysis for 48 elements. This method is considered to be a near total digest since highly resistant minerals are not always entirely digested which can result in the underestimation of assay results. • The high grade intervals from the 6 core holes assayed by ALS using ICP (Inductively Coupled Plasma) were retested using Oxidised Fusion with XRF (X-ray Fractionation) Finish. This method is seen as a complete digest fro uranium and was used to check the accuracy of the ICP assays.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• The gamma sonde used for this program was calibrated at the Model Logging Pits in Adelaide a few months before the start of the program. This calibration is done to check the dead-time and K-Factor conversion variables used to convert observed and true gamma counts into an equivalent eU_3O_8 value. • Deconvolution of the down-hole gamma grades is also completed by an external consultant to take into account environmental and calibration factors. • Duplicates were collected at 1 in 20 samples and both blanks and CRM standards were inserted at 1 in 30 samples.
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Cauldron completed a Quality Assurance/Quality Control report on uranium for all assay samples from ALS and ANSTO. The overall result was that 84% of standards were within one standard deviation. • Duplicate samples were generally within one standard deviation. Two out of 26 duplicate samples were significantly different suggesting that nugget type features such as the relative distribution of wood fragments and pyrite nodules within the core were not always equally proportioned in both duplicate samples. • For the XRF re-testing the same duplicates, standards and blanks were also re-tested using this method.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	All drill results are checked by senior Cauldron employees or consultants who have adequate experience with uranium deposits.
	• *The use of twinned holes.*	• The 8 x core holes completed in this drilling program were a mix of twinned holes and new exploration holes in geologically and mineralogically significant areas. The twinned holes ranged from 2 metre to 5 metre from existing holes due to access issues.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• Primary assay data are stored as '.csv' and '.pdf' files on the Cauldron server for future reference. Assay data is verified by senior personnel and then entered into an in-house SQL database by a designated database consultant who manages all data entry. All data is saved as electronic copies with server backups completed.
	• *Discuss any adjustment to assay data.*	• The laboratory values for uranium assays in parts per million are adjusted by a factor of 1.179 to obtain the equivalent U_30_8 value in ppm. This is done to comply with the industry standard for the reporting of uranium assays and resources is U_30_8.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• The survey method used for this drilling program was a differential global positioning system. No down-hole surveys were completed since all holes were drilled vertically and the relatively shallow hole depths drilled would be unlikely to have any significant down-hole deviation.
	• *Specification of the grid system used.*	• The grid system used at the Yanrey Project is MGA_GDA94, Zone 50. All data is recorded using Eastings and Northings.
	• *Quality and adequacy of topographic control.*	• The primary topographic control is from Shuttle Radar Topographic Mission. This data is adequate given the flat-lying nature of sediments at the Yanrey Project.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• The spacing of the core holes was between 350 metre and 800 metre within individual prospects.
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• The core holes were drilled for numerous reasons, including et al confirmation of uranium grades, assisting with geological interpretation, providing density and porosity data for resource work and identifying how well the uranium leaches from the sediments. As such, the spacing of core hole locations was adequate for this type of work. • No compositing of core assays were completed. The only compositing done was for leach testing by ANSTO over a selected interval. • For the leach composite from YNDD018 a total of 34 assay pulp samples were composited to make the leaching sample • For the leach composite from YNDD022 a total of 10 assay pulp samples were composited to make the leaching sample
	• *Whether sample compositing has been applied.*	
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• All drill holes were drilled vertically since the sediments are mostly unconsolidated and generally flat-lying. All holes are therefore considered to be representing true width of the uranium mineralisation.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• There is no apparent sampling bias created from the orientation of the drill holes.
Sample security	• *The measures taken to ensure sample security.*	• The core samples collected were put onto a pallet and held down with metal strapping. The package was then wrapped numerous times in clear plastic wrap along with the appropriate and relevant signage for the transport of radioactive material. These signs were placed in such a way as to be clearly visible before, during and after transport from site to Perth. The samples were then freighted by truck to selected laboratories where they were

Criteria	JORC Code explanation	Commentary
		opened by Cauldron personnel to check the integrity of the samples.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• In conjunction with Cauldron's Competent Person, a full audit of the drill data set is underway to calibrate and update the historical gamma results with both X-ray Fractionation (XRF) and Delayed Neutron Activation (DNA) Analysis. The results are expected to be used in the JORC 2012 compliant resource upgrade following the leach work. • Cauldron's Competent Person has verified that all sampling techniques and data collection is of high standard and no reviews are required at this stage.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• The location of the drilling program was completely on E08/1493 which is 100% owned by Cauldron. Cauldron has a Native Title Agreement with the Thalanyji Traditional Owners which cover 100% of this tenement. The tenement is located entirely on the pastoral lease of Yanrey Station.
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• This tenement is in good standing and there are no known impediments for exploration on this tenement to Cauldron's knowledge.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A 70 kilometre long regional redox front and several palaeochannels were identified by open hole drilling by CRA Exploration Pty Ltd (CRAE) during the 1970s and early 1980s. CRAE drilled over 200 holes in the greater

Criteria	JORC Code explanation	Commentary
		Yanrey Project area, resulting in the discovery of the Manyingee Deposit and the identification of uranium mineralisation in the Bennet Well channel and the Spinifex channel. Uranium mineralisation was also identified in the Ballards and Barradale Prospects.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Yanrey Project area covers the contact between the Cretaceous aged marine sediments of the Carnarvon Basin and the Proterozoic Yilgarn Block, which lies along the granitic and metamorphic ancient coastline. At least 15 major palaeochannels, sourced from the granite and uranium rich areas of the Gascoyne Province, east of the ancient coastline, have been identified within the Yanrey Project. The channels are Cretaceous in age and are almost completely filled by Cretaceous sediments with a relatively thin Tertiary and Quaternary cover on top. • The bases of these channels are eroded into the underlying Proterozoic-aged granite and metamorphic basement. The channels sourced from the east enter into a deep north to south trending depression that was probably caused by regional faulting and may represent an ancient coastline depression. • The uranium mineralisation of the Yanrey project is sourced from uranium rich granites that, due to erosion, shed detrital uranium locally into palaeochannels. Over time, the amount of uranium from such erosional episodes can reach economic levels. • The style of uranium mineralisation at the Yanrey Project is a mix of roll-front style deposits to more tabular-style uranium orebodies.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea*	• Drill Hole Information previously reported on the ASX on 31Jan 2014

Criteria	JORC Code explanation	Commentary
	level in metres) of the drill hole collar ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	• With the reporting of assay results a 100 ppm cut off was used at a minimum distance of 0.5 metre.
	• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	• The length of assay sample intervals varies so for all results, a weighted average has been applied when calculating assay grades to take into account the size of each interval.
	• *The assumptions used for any*	

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	reporting of metal equivalent values should be clearly stated.	• There have been no metal equivalents used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• The mineralisation reported in this release is sub-horizontal and all drilling is near-vertical so all mineralisation values reported can be considered as true widths.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Drill Hole Information previously reported on the ASX on 31Jan 2014
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Drill Hole Information previously reported on the ASX on 31Jan 2014
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological*	• A preliminary metallurgical testing program developed by Cauldron and ANSTO has been undertaken to ascertain the leach response of the samples under typical conditions considering both the acid leaching route and the carbonate/bicarbonate leaching route. The results of this form the

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	observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	substantive aspects of this announcement. • The test work scope also included investigations into 138 x drill core interval samples using DNA, uranium mineralisation analysis using QEMSCAN, site water chemical composition and determining the degree of secular equilibrium in two high grade samples using gamma spectrometry to facilitate an audit and upgrade of the existing drill data base which will be incorporated into the new resourced planned for March 2014. • Preliminary leaching 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 carbonate/bicarbonate leach conditions (duration 7 days). • Results for this leach test work form the substantive aspects of this announcement.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The leach test results indicate that the uranium mineralisation in the samples tested were readily leached under acid or carbonate/bicarbonate conditions. Cauldron plans to incorporate the extraction and geological data into the JORC 2012 resource upgrade by March 2014. The further development of the feasibility of this mineralisation towards economic extraction now can be initiated. • Cauldron plans on undertaking more detailed testwork in subsequent phases of study with the aim of confirming the optimum metallurgical extraction (whether acid or carbonate/bicarbonate) and identifying the solution purification processes that lead to the production of a high quality uranium oxide product. • The Bennet Well East and Bennet Well South deposits are open along strike in both north and south directions. The priority for future work is to define the full extent of these resources. The location of potential extensions is shown in the plan view diagrams released on the ASX on 31Jan 2014 • The aim in upcoming work will be to get all uranium identified into an Indicated Resource where possible. Infill drilling may be required in certain

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		areas in future drill programs to increase confidence in grades between drill holes so that resources identified can be classified as Indicated. • More core drilling will also be completed to assist in resource calculation, provide samples for metallurgical and leaching testwork, improve geological understanding and provide data for future planned scoping studies.

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