ASX Announcement

17 August 2010

Cauldron makes new high-grade uranium discovery at Yanrey Uranium Project in WA

HIGHLIGHTS

- **The first of five targets has been drilled south of the Bennet Well uranium resource and identified a new zone of high grade uranium mineralisation**
- **This initial drilling, 1.5 km south of Bennet Well, has returned significant results include:**

YNAC 264	**1.68 m**	**at**	**582**	**ppm**	**eU_3O_8**
YNAC 277	**1.00 m**	**at**	**699**	**ppm**	**eU_3O_8**
YNAC 278	**2.18 m**	**at**	**657**	**ppm**	**eU_3O_8**
YNAC 278	**1.50 m**	**at**	**1152**	**ppm**	**eU_3O_8**

- **The mineralisation in YNAC 264, 277 and 278 remains open on broad spacing and is already over a strike of 2.5km**
- **4,000 metres of reconnaissance aircore drilling will test five priority targets over a strike of 40 km. To date, 16 holes for 1,563 metres have been completed.**
- **The Company believes the Yanrey Project area, which already hosts the Bennet Well (Cauldron) and Manyingee (Paladin) uranium deposits, has great potential for the development of uranium deposits via insitu recovery mining methods, similar to the Beverley Mine region of South Australia.**

Australian uranium exploration company Cauldron Energy Limited (ASX: CXU) ("Cauldron" or "the Company") has, as a result of its initial drilling program, identified significant new uranium targets at its Yanrey Uranium Project in Western Australia.

Recent drilling of 16 aircore holes for 1,563 metres, has intersected uranium mineralisation within a major palaeochannel system, located 1.5 km south west of the company's Bennet Well uranium deposit, where the company has inferred a resource of 4.8 million pounds eU_3O_8 at 300 ppm eU_3O_8

Reconnaissance drilling in the western side of the channel intersected a zone of high-grade mineralisation, 1.00 metres thick at 699 ppm eU_3O_8 in hole YNAC 277.

Cauldron Energy Ltd.

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ASX Code CXU

88.7 M ordinary shares

13.2 M unlisted options

Market Cap
$22 million (@25c)

This result identifies a new target zone, potentially up to 4 kilometres in length, along the western margin of the channel.

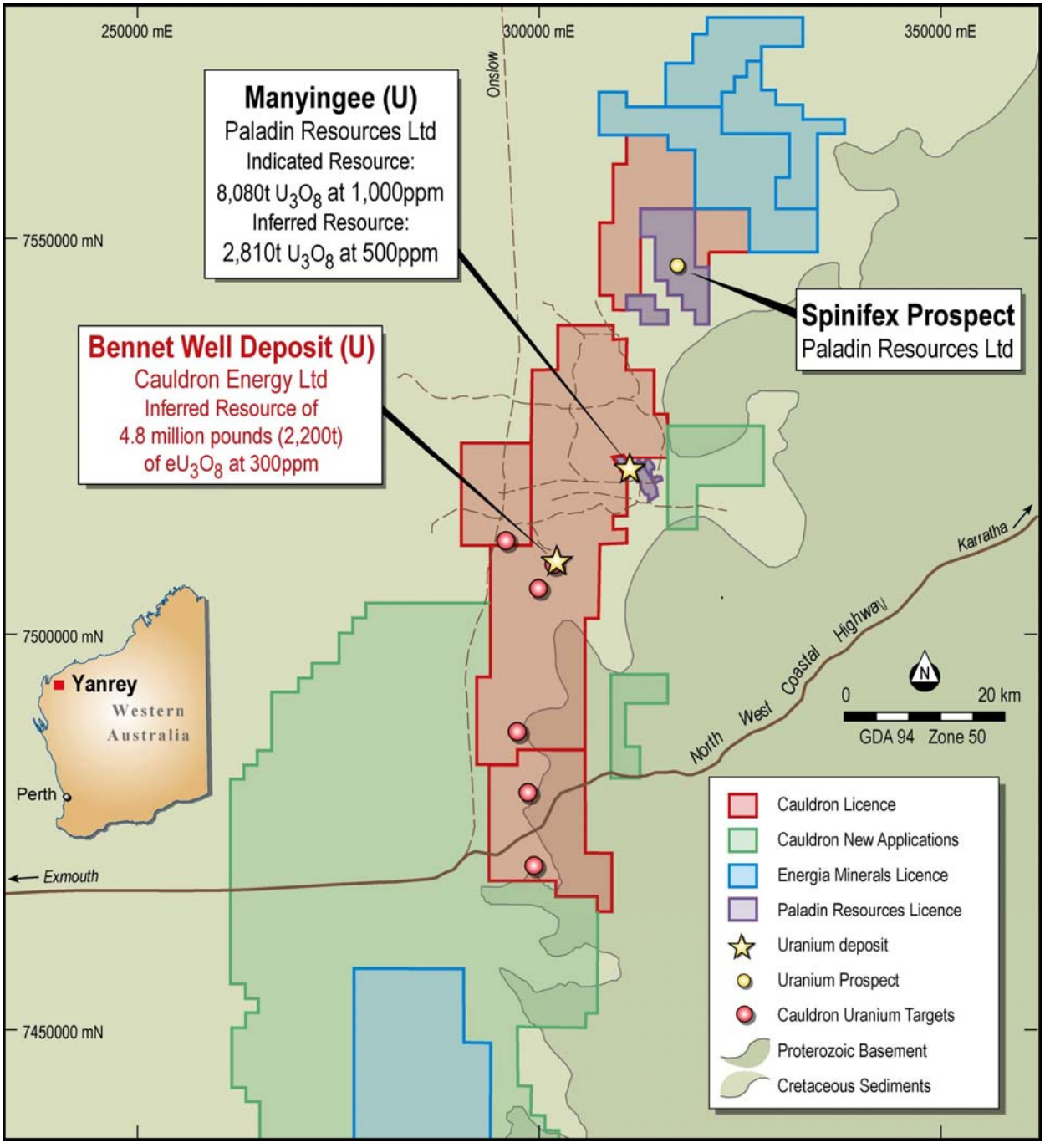
Drilling on the eastern side of the channel also returned a number of significant results, including 1.00m at 852 ppm eU_3O_8 in hole YNAC 264 and multiple thick intersections of high grade uranium, including 1.28 metres at 1318 ppm eU_3O_8 and 2.18 metres at 657 ppm eU_3O_8 in hole YNAC 278. The uranium mineralisation in this channel is defined over a strike length of 500 metres and remains open to the north.

The current drilling, part of a 4,000 m regional drilling program, targeted one of five major target areas that have been identified by the company through geological interpretation of the company's airborne and ground geophysical data and geological interpretation.

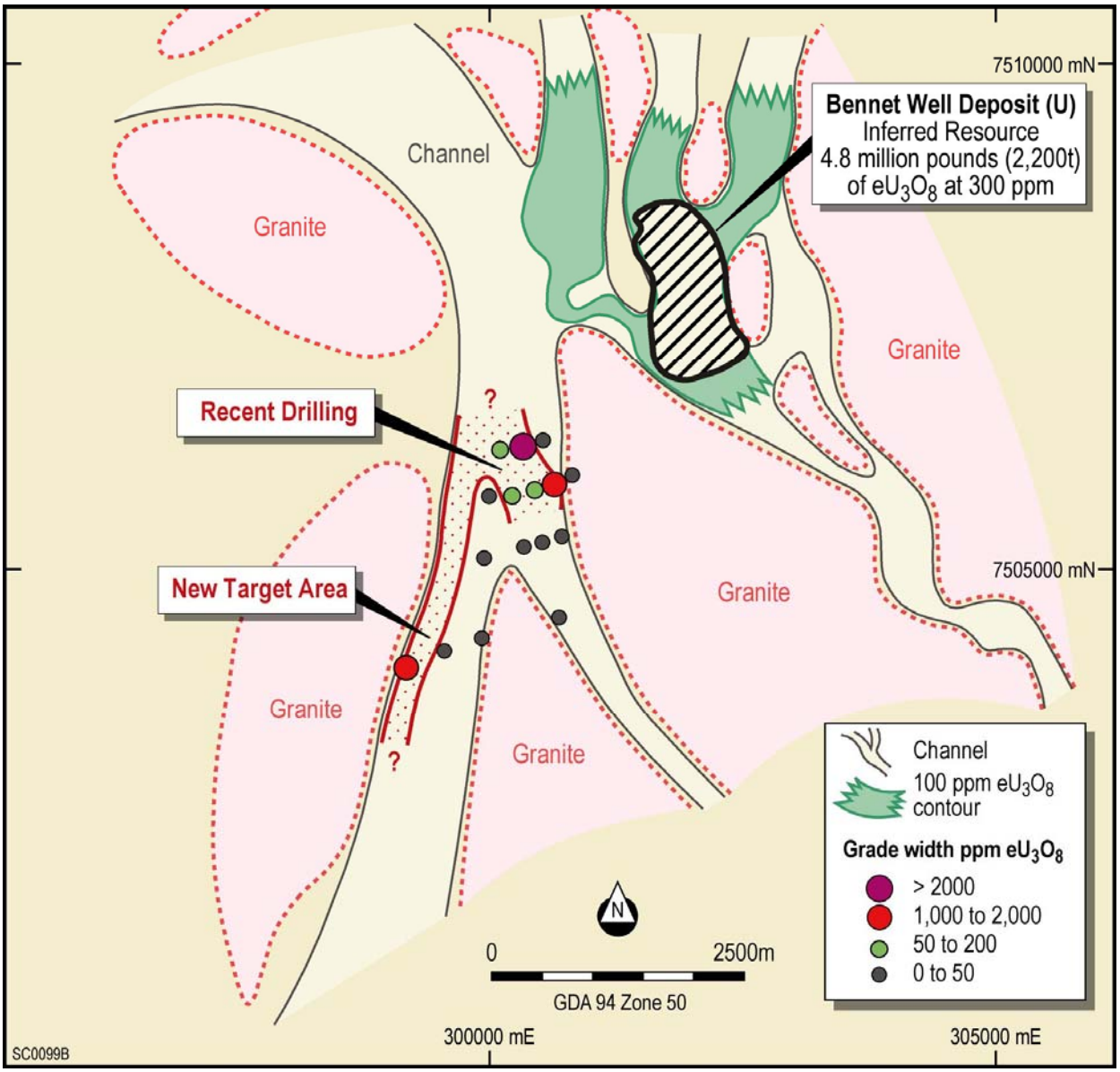
The Yanrey Project covers 3,371 sq km of Mesozoic sediments which are highly prospective for sandstone hosted uranium mineralisation, amenable to In-situ Recovery (ISR) mining, similar to Paladin Resources Ltd's (ASX: PDN) adjoining Manyingee deposit. Included in the Company's project is the Bennet Well deposit containing an inferred JORC compliant resource of 4.8 million pounds of eU_3O_8 at a grade of 300ppm eU_3O_8.

Table 1: Significant Intersections

Hole ID	East GDA 94	North GDA 94	Thickness metres		Grade ppm eU3O8	Depth From Metres	Depth To metres	Cutt Off Grade
YNAC 264	**300,561**	**7,505,870**	**1.68**	**at**	**582**	**74.47**	**76.15**	**100**
		including	**1.00**	**at**	**852**	**74.83**	**75.83**	**250**
YNAC 264			**1.44**	**at**	**418**	**82.65**	**84.09**	**100**
		including	**0.96**	**at**	**551**	**82.81**	**83.77**	**200**
YNAC 265	**300,397**	**7,505,784**	**0.54**	**at**	**235**	**64.43**	**64.97**	**100**
YNAC 277	**299,130**	**7,504,050**	**2.76**	**at**	**359**	**60.29**	**63.05**	**100**
		including	**1.00**	**at**	**699**	**60.49**	**61.49**	**200**
YNAC 278	**300,271**	**7,506,226**	**3.20**	**at**	**511**	**82.74**	**85.94**	**100**
		including	**2.18**	**at**	**657**	**83.42**	**85.60**	**250**
YNAC 278			**1.50**	**at**	**1152**	**88.52**	**90.02**	**100**
		including	**1.28**	**at**	**1318**	**88.58**	**89.86**	**250**
YNAC 278			**1.06**	**at**	**305**	**92.04**	**93.10**	**100**



YANREY URANIUM PROJECT, W.A.



YANREY URANIUM PROJECT, W.A.

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For further information, visit **www.cauldronenergy.com.au** or contact:

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Disclosure Statements

* Analytical Method

All holes were gamma logged with an Auslog A75 total count gamma tool. The gamma tool was calibrated in Adelaide at the Department of Water, Land and Biodiversity Conservation in calibration pits constructed under the supervision of CSIRO. The gamma tool measures the total gamma ray flux in the drill hole. Readings are averaged over 5 centimetre intervals and the reading and depth recorded on a portable computer. The gamma ray readings are converted to equivalent U3O8 readings by using the calibration factors derived in the Adelaide calibration pits. These factors also take into account differences in hole size and water content. The grade and calibration was calculated by David Wilson BSc MSc MAusIMM from 3D Exploration Ltd based in Western Australia.

The gamma radiation used to calculate the equivalent U3O8 is predominately from the daughter products in the uranium decay chain. When a deposit is in equilibrium, the measurement of the gamma radiation from the daughter products is representative of the uranium present. It takes approximately 2.4M years for the uranium decay series to reach equilibrium. Thus, it is possible that these daughter products, such as radium, may have moved away from the uranium or not yet have achieved equilibrium if the deposit is younger than 2.4M years. In these cases the measured gamma radiation will over or under estimate the amount of uranium present. Sandstone hosted roll front mineralisation may not be in equilibrium due to one of the above factors.

Competent Person Statement

The information in this report to which this statement is attached that relates to Cauldron Energy Limited's Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Brett Smith and Mr Terry Topping who are Members of the Australasian Institute of Mining and Metallurgy. Mr Smith and Mr Topping are full-time employees of Cauldron Energy Limited. Mr Smith and Mr Topping have sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration. They are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Both Mr Smith and Mr Topping consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The Bennet Well resource estimate was undertaken by Robert Spiers BSc Hons, MAIG (reviewed by Simon Gatehouse, MAIG), who are full-time employees of Hellman & Schofield Pty Limited. Mr Spiers has more than five years experience in resource estimation and Mr Simon Gatehouse has more than five years experience in uranium exploration and the assessment of uranium deposits. Mr Gatehouse has specific experience in the assessment of ISL uranium deposits. Together they are Competent Persons according to the JORC Code for Reporting of Mineral Resources and Ore Reserves (2004).

The calculation of the uranium grades used in the resource estimate are based on information compiled by David Wilson BSc MSc MAusIMM from 3D Exploration Ltd based in Western Australia. These uranium grades form the basis of the resource estimate and have been calculated from the gamma results and from the disequilibrium testing. Mr Wilson has sufficient experience relevant to the style of mineralisation and the deposit type and the activities he is undertaking to qualify as a Competent Person as defined by JORC Code for Reporting of Mineral Resources and Ore Reserves (2004).

Information relating to the geological interpretations and data supplied to H&S was compiled by Mark Fogarty BSc MAusIMM from Cauldron Energy Ltd. Mr Fogarty has sufficient experience relevant to the style of mineralisation and the deposit type and the activities he is undertaking to qualify as a Competent Person as defined by JORC Code for Reporting of Mineral Resources and Ore Reserves (2004).