15 September 2009



Cauldron identifies initial exploration target of 25 to 35 million pounds of uranium at Yanrey in WA

Highlights:

- Cauldron Energy continues to define a large fertile uranium exploration project at Yanrey, in the north-west of Western Australia,
- Initial Exploration Target of 25 to 35 million pounds of U₃O₈ at a grade of 300 to 900 ppm identified,
- Project is adjacent to Paladin Resources' Manyingee project, which contains 24 million pounds of U₃O₈,
- Reconnaissance exploration has been effective in identifying several new sandstone hosted roll-front uranium targets and,
- Company to undertake focused exploration to provide a quick test of the potential of new areas.

Australian resources company, Cauldron Energy Limited (ASX: CXU) ("Cauldron" or "the Company") plans to accelerate exploration activities at its 100% owned Yanrey Project ("Yanrey") in Western Australia, following confirmation the project hosts an initial Exploration Target of 25 to 35 million pounds of U₃O₈ at a grade of 300 to 900 ppm.

In the Company's view, Yanrey (figure 1), which is adjacent to Paladin Resources Ltd's Manyingee deposit containing 24 million pounds of U₃O₈, has the potential to be a major uranium resource centre.

Cauldron's Executive Chairman, Tony Sage, said several new uranium exploration targets have been identified using newly acquired geophysics, coupled with a detailed analysis of past drilling.

While it is very early on in the exploration of this area of Western Australia, we believe the area is emerging as a significant uranium province", Mr Sage said.

The company believes the style of mineralisation at Yanrey is similar to that of the Beverly-Four Mile and Honeymoon deposits in South Australia's Lake Frome Basin.

"We've defined an initial resource in the palaeochannels at Bennet Well of just under 5 Mlbs eU₃O₈, but only a small area has been drilled and we can see from reconnaissance drilling where this resource will grow," Mr Sage added.

"Bennet Well, or any one or number of newly defined palaeochannels have the potential to be another Manyingee."

ABN 22 102 912 783

35 Richardson Street WEST PERTH WA 6005

PO BOX 1916 West Perth WA 6872

ASX Code CXU 73.0 million ordinary shares 5.3 million unlisted options

Market Cap A\$26 million (@35c)

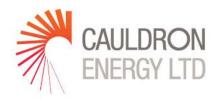
Tony Sage Executive Chairman

Terry Topping
Chief Executive Officer

Brett Smith
Executive Director

Kent Hunter Non-executive Director

Stephen Brockhurst Company Secretary



In the area explored by Cauldron, there are at least eleven favourable palaeochannels targets, including five (5) newly discovered mineralised palaeochannels. These are all close to known uranium resources at Bennet Well and Manyingee and include potential extensions in palaeochannels leading from those resources. In addition to these targets, the company believes it has over 90 km² of untested prime target areas which are favourable for uranium mineralisation.

Uranium exploration in the Yanrey area of Western Australia commenced in 1970's; there has been very little work done in the last 25 years, and the intensity of exploration does not compare with that of the Lake Frome Basin in South Australia.

Cauldron are in the process of getting government and heritage approvals for drilling, and the timing of the drilling will depend on whether the approvals are granted before or after the coming wet season.

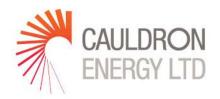
Exploration Target

The Exploration Target is for sandstone hosted roll front uranium mineralisation. It is based on work which has identified over 60 kilometres of redox front in the Yanrey area with associated palaeochannels. Work carried out by Cauldron has identified at least eleven palaeochannels which are highly prospective for uranium mineralisation. The Exploration Target has yet to be fully drill tested and is conceptual in nature. There has been insufficient exploration (ie. Drilling) to define a mineral resource and it is uncertain if future exploration will result in the determination of a mineral resource.

Cauldron Energy announced its maiden resource at the Bennet Well prospect in 2008. It was calculated by Hellman and Schofield from 174 air core, 8 diamond, and 8 mud rotary holes over a small area of 1.2 km². The results returned an inferred resource of 4.8 million pounds of eU₃O₈ at a grade of 300 ppm eU₃O₈ using a cut-off grade of 150 ppm. To date, the area of the mineralisation at Bennet Well is small in comparison to that of Manyingee, and there is a good indication to suggest it has the potential to grow with additional drilling.

There are many areas around Bennet Well that contain potential uranium mineralisation, as shown by the Company's drilling program conducted in late 2008. The Exploration Target is based on previous exploration of the project area, including:

- Gravity surveys conducted by CRAE in the 1970's, and interpretation of palaeochannels and redox boundaries.
- Previous drilling by CRAE and others from the late 1960's to early 1980's.
- Gravity surveys conducted by Cauldron completed in 2006 covering the Bennet Channel and the Main Road Channel for a total of 75 km².
- Three Airborne EM surveys conducted by Cauldron covering over 1,430 km² completed in 2006, 2007 and 2009.
- Over 280 aircore, mud rotary and diamond drill holes for 30,000 metres of drilling conducted by Cauldron resulting in the definition of a JORC classified inferred resource at Bennet Well in 2008.



The company now believes it has over 90 km² of untested prime target areas which are favourable to uranium mineralisation. These include, but are not limited to:

- The Bennet Well channel has had both gravity and EM surveys, as well as 174 holes over seven programs drilled by Cauldron. The area of the current resource is small (1.2 km²) compared to Manyingee (approximately 7km²). There is over 11 km² of potential mineralisation around Bennet Well with an area open to the north east returning 4.32m at 488 ppm eU₃O₈.
- The Barradale channel was previously outlined by CRAE by gravity and drilling over an interpreted redox boundary with the best result of 1.7 m at 290ppm eU₃O₈.
- The South and North Ballard's have previous drill results of 1.3m at 580ppm and 3.7m at 107ppm eU₃O₈, respectively. Chemical analyses from the south Ballard channel produced a result of 2m at 700 ppm U₃O₈). They are known to contain a redox boundary and the historic gravity and the recent EM outlines the palaeochannels.
- The Main Road Channel produced result of 1.05m at 566 ppm eU₃O₈. The recent EM program shows it is more extensive than previous interpretations.
- A new palaeochannel as yet unnamed was interpreted from historic drill holes and EM surveys conducted by Cauldron. The area has been sparsely drilled and includes 2.66m at 161ppm and 0.35 at 580ppm eU₃O₈.
- The Osborne channel was outlined by CRAE during the 1970's and has only been sparsely tested.
- North of Bennet Well there is potential along the redox boundary towards the Manyingee Deposit.
 Inadequately tested to date, however Cauldrons EM interpretation indicates the presence of potential palaeochannels.
- North of Manyingee there are several other target areas including the extensions of the Manyingee channel, and the Spinifex channel, outlined by Cauldron's EM and historic interpretations. Inadequately tested to date.

End

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

Tony Sage (Executive Chairman, Cauldron Energy Limited)

c/o- Cape Lambert Iron Ore Limited

Ph: (08) 9380 9555

Terry Topping / Brett Smith

Cauldron Energy Limited Ph: (08) 9211 5777

Karen Oswald

Professional Public Relations

Ph: (08) 9388 0944



Disclosure Statement

Exploration Targets

Under clause 18 of the JORC code the exploration targets (excluding the portion already classified into JORC inferred resource) outlined in this report are conceptual in nature as there has been insufficient exploration to define additional mineral resources; it is uncertain if further exploration will result in the determination of any additional mineral resources.

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.



Figure 1. Yanrey Project licenses on EM

