



ASX Release

26 July 2007

## ACQUISITION OF SUBSTANTIAL WESTERN AUSTRALIAN URANIUM PORTFOLIO

### Key Points

- Agreement to acquire 1,900km<sup>2</sup> uranium exploration portfolio comprising 13 Exploration Licences under application in Western Australia.
- Avalon to acquire privately owned company Resource Properties Pty Ltd for 4M Avalon shares and \$100,000 cash.
- Two ELA's in the Kimberley and 11 ELA's in the Yilgarn, prospective for roll-front, unconformity and calcrete-hosted uranium.
- Substantially expands Avalon's existing uranium portfolio, positioning the Company as a significant uranium explorer.
- Additional uranium acquisition opportunities under review.

Avalon Minerals Ltd (**ASX: AVI**) is pleased to announce that it has reached an agreement with privately owned company, Resource Properties Pty Ltd, to acquire a 100% interest in a substantial uranium exploration portfolio spanning some 1,900km<sup>2</sup> and comprising **thirteen Exploration Licence Applications** (ELA's) in the Kimberley and Yilgarn regions of northern Western Australia.

The tenements – all of which have limited historic exploration and either known uranium occurrences or the potential for occurrences – are considered prospective for roll-front, unconformity and calcrete-hosted styles of uranium mineralisation. Several of the tenements and key exploration targets are located within proximity to major known uranium deposits including Yeelirrie, Oobagooma (Paladin Resources) and Wondinong (Aura Energy).

The acquisition complements Avalon's existing 900km<sup>2</sup> Marloo Project in WA's Pilbara region, where it is participating in a major airborne electromagnetic (EM) survey targeting unconformity-styled uranium mineralisation.

Following completion of the acquisition, Avalon will control almost 3,000km<sup>2</sup> of prospective uranium exploration acreage in Western Australia, representing one of the most extensive packages controlled by a junior.

The Resource Properties acquisition reflects an increased focus on uranium exploration by the Company alongside its Lennard Shelf zinc and base metal exploration activities. Avalon is actively assessing other potential uranium acquisitions, both in Australia and overseas.

Under the agreement, Avalon will acquire the issued capital of Resource Properties Pty Ltd by issuing 4 million Avalon shares together with a one-off cash payment of A\$100,000. The vendors have agreed to a voluntary 12-month escrow period on their Avalon shares.

**Avalon Minerals Ltd**  
**ABN 68 123 184 412**

PO Box 165  
West Perth WA 6872

Telephone:  
+61 8 9322 2827  
Mobile:  
0439 399 318

Email:  
[david@avalonminerals.com.au](mailto:david@avalonminerals.com.au)  
Web:  
[www.avalonminerals.com.au](http://www.avalonminerals.com.au)

**ASX Code:** AVI

**Issued Capital**  
40 million shares  
11 million unlisted options  
Nil convertible notes

**Market Capitalisation**  
~A\$11.2 million

**Cash**  
A\$3 million

**Directors**  
David McSweeney  
(Managing Director &  
CEO)

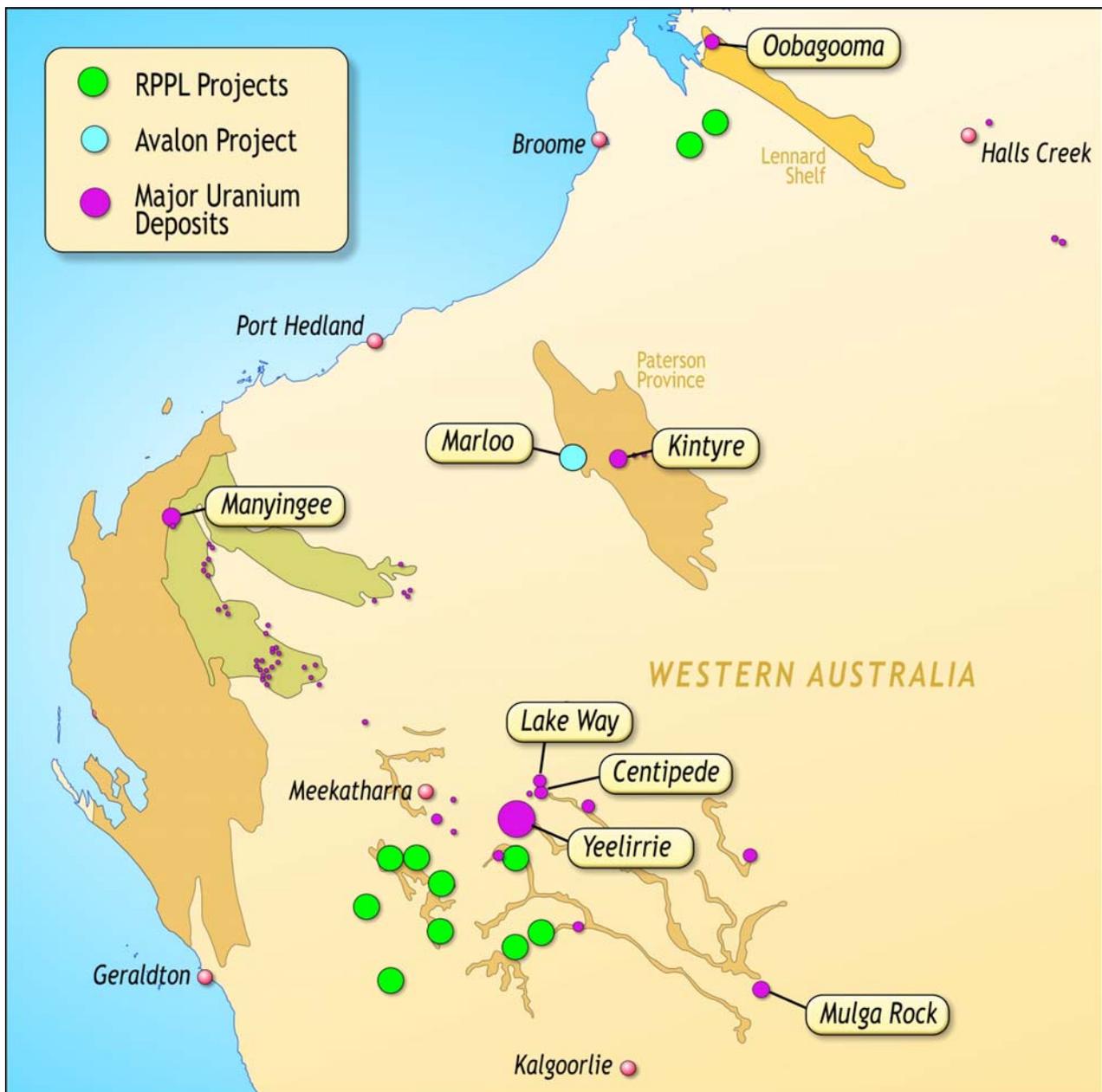
Stephen Stone  
(Director)

Gary Steinepreis  
(Director)

## **Resource Properties Portfolio**

The uranium portfolio to be acquired from Resource Properties comprises two (2) exploration licences in the Kimberley region – both with potential for roll-front uranium targets – and eleven (11) exploration licences in the Yilgarn which are considered prospective for near-surface, calcrete-hosted uranium mineralisation in paleochannels (see Fig. 1).

The targets were selected from a review of airborne radiometric data, geological mapping and historical exploration reports.



**Figure 1 – Resource Properties projects in relation to other significant uranium discoveries in WA**

## **Kimberley Projects (2 ELA's)**

The two Kimberley projects (see Fig. 2) were first identified by Afmeco Pty Ltd (a 100%-owned subsidiary of French uranium giant Cogema) in 1978. Afmeco's regional exploration identified roll-front styled mineralisation at Meda, 45km east of Derby and Frome Rocks, 90km south of Derby.

Exploration work carried out by Afmeco is also credited with the discovery of the 10,000 tonne Oobagooma uranium deposit (owned by Paladin Resources Limited), located 75km north of Derby.

### Meda - 550km<sup>2</sup> (E04/1714)

Afmeco identified 3 anomalous zones associated with outcropping sandstone channel sands with a peak uranium assay reading of 200ppm. Future exploration at Meda will include airborne radiometric and remote sensing data, combined with reconnaissance drilling within the 50km of strike in the Eskine Sandstone/ Blina Shale contact in the tenement area. Access to the Meda project is via the Gibb River road, east of Derby

### Frome Rocks - 156km<sup>2</sup> (E 04/1652)

At the Frome Rocks area and adjacent to the Fenton fault, Afmeco identified the existence of mineralised redox fronts within the Wallall Sandstone. Reconnaissance drilling of a 16km<sup>2</sup> grid, located 3km to the south-east of the tenement, was successful in identifying one major and two minor channelling zones, with uranium values of up to 270ppm returned in association with redox fronts.



**Figure 2 – Kimberley ELA's**



## **Yilgarn Projects (11 ELA's)**

The remaining prospects within the acquired portfolio are all located within main paleochannels, or tributaries of paleochannels, in the Yilgarn region of Western Australia (Fig. 3).

### **Altona - 78km<sup>2</sup> (E36/636)**

The Altona Project is located downstream from the Bolitho Bore Deposit, owned by Prime Minerals Ltd, where around 1 million tonnes of mineralisation grading 170ppmU has been identified. The project adjoins the Puncture Well prospect at Altona to the south (owned by Aura Energy). The world-class Yeelirrie uranium deposit lies approximately 50km north. A 5km long tributary of the Raeside channel is interpreted to pass through the prospect.

### **Lake Barlee - 228km<sup>2</sup> (E57/691 & E29/665)**

The Lake Barlee Project includes 16km of prospective Raeside paleodrainage where a detailed radiometric survey is planned to test for blind uranium mineralisation below surficial cover.

### **Austin and Moore Paleochannel (E59/1320)**

Five projects (8 Exploration Licences) lie within the Austin and Moore paleochannels. The Austin paleochannel hosts a number of advanced uranium projects including the Lakeside/ Austin Downs, Wondinong, Anketell and Windi uranium deposits.

### **Wondinong – 339km<sup>2</sup> (E58/347-8)**

The Wondinong Project covers approximately 25km of the Austin Paleodrainage and lies immediately adjacent to Aura Energy Ltd's Wondinong uranium deposit, where drilling results including 2m @ 541ppmU, 1.5m @ 687ppmU and 0.5m @ 926ppmU have been reported.

The uranium channel airborne radiometric image of the area is shown below, highlighting the line of the main channel as well as the calcrete-hosted deposit owned by Aura Energy immediately upstream and east of Avalon's eastern project boundary.

### **Austin Downs - 228km<sup>2</sup> (E2000665, E2000652-3)**

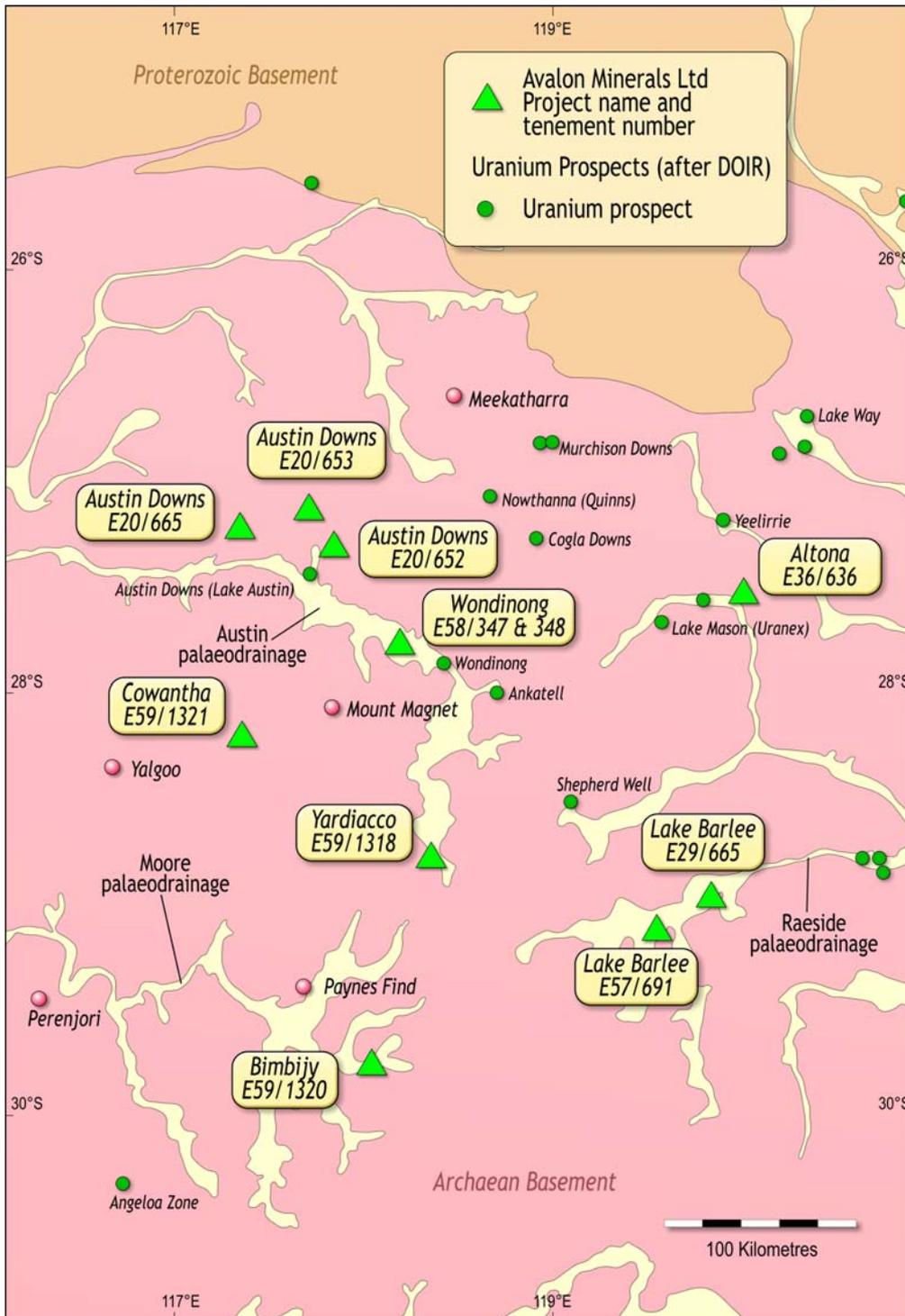
The Austin Downs project contains three Exploration Licence Applications and lies within two significant tributaries that drain into the main Austin paleodrainage from the north. Avalon's licences are considered prospective for both calcrete-hosted and playa-hosted uranium mineralisation with radiometric anomalies identified on all three tenements, some of which are associated with potentially attractive uranium trap sites at channel junctions.

### **Yardiacco - 84km<sup>2</sup> (E59/1318)**

The Yardiacco tenement application lies at the southern end of the Austin paleochannel, 100km north of Paynes Find and has a number of uranium channel airborne radiometric anomalies.

Cowantha - 195km<sup>2</sup> (E59/1321)

The Cowantha Project is situated 50km west of Mt Magnet and covers a 40km long section of the upper reaches of the Moore paleochannel. Significantly, a strong 8km long radiometric anomaly coincides with 5km of exposed valley calcrete.



**Figure 3 – Yilgarn ELA's**



## **Acquisition Summary**

The acquisition of these highly prospective tenements represents an important strategic development for Avalon. With all the Exploration Licences at various stages in the application process, several are expected to be granted within a matter of months, which will enable the Company to commence exploration activities in a timely fashion.

Commenting on the acquisition, Avalon's Managing Director, Mr David McSweeney, said the Resource Properties portfolio provided Avalon with an excellent suite of advanced and early stage uranium exploration projects, adding to its existing uranium portfolio at Marloo, 40km west of the Kintyre uranium deposit in the Pilbara region.

"This is a significant acquisition which really positions Avalon as one of a leading junior uranium explorer, complementing our existing zinc exploration activities in the Lennard Shelf region," he said.

"We are planning a very active uranium exploration program over the next 12 months which will include a data review, site visits, various new radiometric surveys, sampling and drilling across the new portfolio of tenements," Mr McSweeney said. "This opens up an exciting new exploration front for the Company with the potential to deliver a steady exploration news flow as we commence field activities in the near future."

### *Competent Persons Statements*

*The information in this report relates to Exploration information reviewed by Mr Geoff Hewlett MSc DIC MAIG who is a Member of the Australasian Institute of Mining and Metallurgy and acts as a geological consultant to Avalon Minerals Ltd. Mr Hewlett has four years relevant experience in the style of mineralisation and types of deposit under consideration and consents to inclusion of the information in this report in the form and context in which it appears. He qualifies as a Competent Person as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".*

**- ENDS -**

**Released by:**  
**Nicholas Read/Jason Cunningham**  
**Read Corporate**  
**Telephone: +61 (0)8 9388 1474**

**On behalf of:**  
**Mr David McSweeney**  
**Managing Director and CEO**  
**Avalon Minerals Limited**  
**Mobile: +61 0439 399 318**

## **Avalon Minerals – Background**

Avalon Minerals Ltd completed a successful listing on the Australian Stock Exchange on the 22nd of March 2007, after closing an A\$3.5 million IPO oversubscribed, approximately three weeks after its launch.

The Company is initially seeking to become an independent zinc producer by focusing on the exploration and evaluation of its substantial Lennard Shelf Project, located in the West Kimberley region of Western Australia, within a world-class mineral province.

Avalon is simultaneously conducting exploration programs on its Paterson Uranium and Copper-Gold Projects, covering seven exploration licence areas in the mineral rich East Pilbara region of Western Australia. In addition, it aims to identify and evaluate other mineral resource opportunities, both in Australia and overseas including its recently acquired Kimberley and Yilgarn uranium prospects.

Avalon has commenced and will maintain an active project generation and review program for advanced projects which it can independently develop and operate.