

# MARMOTA ENERGY LIMITED

## Uranium Projects

Australian Uranium Conference  
July 2012



## Forward Looking Statements

*“These materials include forward looking statements. Forward looking statements inherently involve subjective judgement and analysis and are subject to significant uncertainties, risks and contingencies, many of which are outside of the control of, and may be unknown to, the Company. Actual results and developments may vary materially from those expressed in these materials. The types of uncertainties which are relevant to the Company may include, but are not limited to, commodity prices, political uncertainty, changes to the regulatory framework which applies to the business of the Company and general economic conditions. Given these uncertainties, readers are cautioned not to place undue reliance on such forward looking statements.*

*Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or any change in events, conditions or circumstances on which any such statement is based.”*



# Corporate Snapshot

Marmota Energy (ASX: MEU) is a diversified mineral exploration and development company with key projects across the uranium, copper, gold and iron ore spaces.

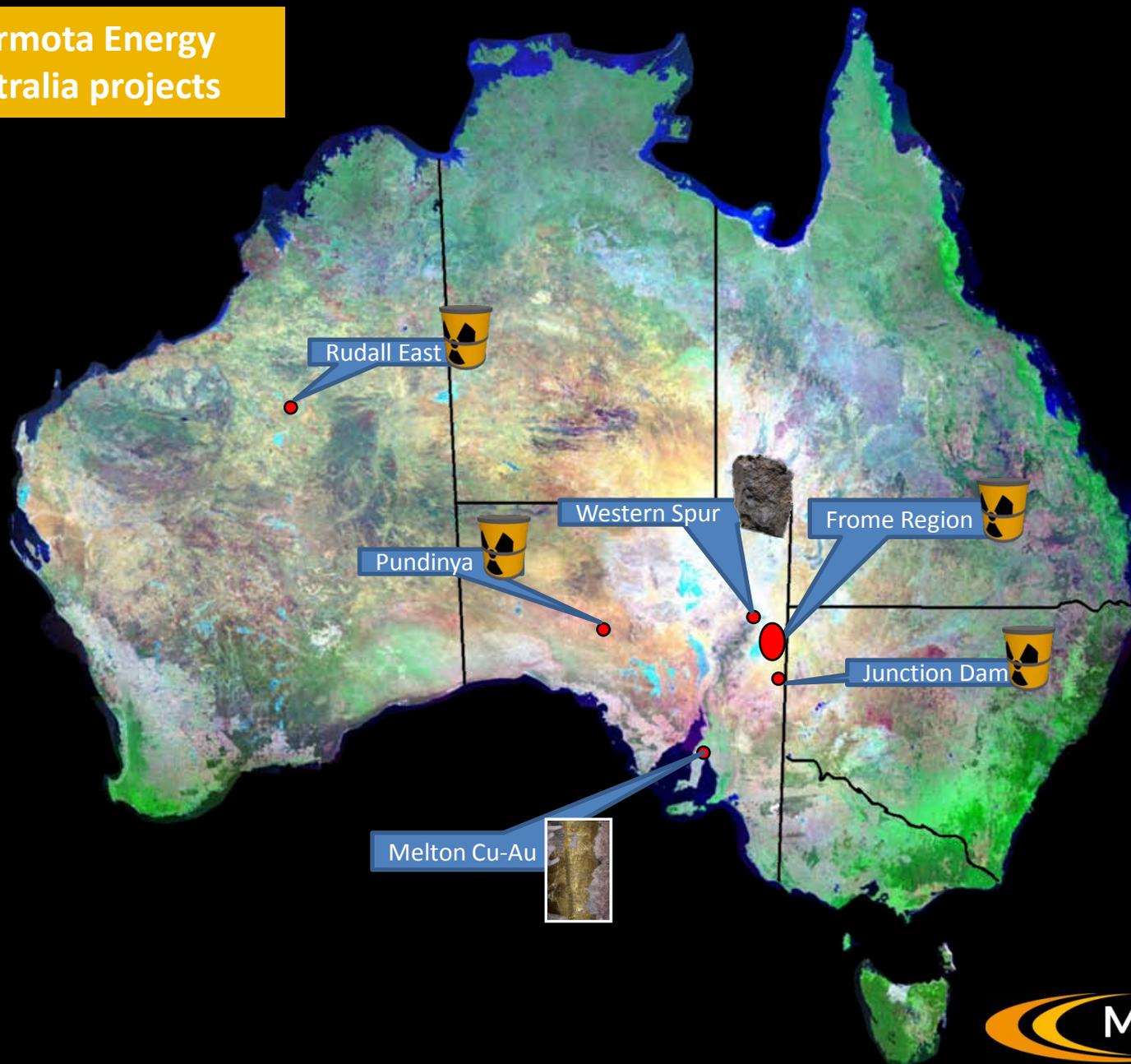
Stock Code	ASX: <b>MEU</b>
Shares	150 m
Market Cap <small>(at 31 March 2012)</small>	A\$10 m
Cash <small>(at 31 March 2012)</small>	A\$3.2 m

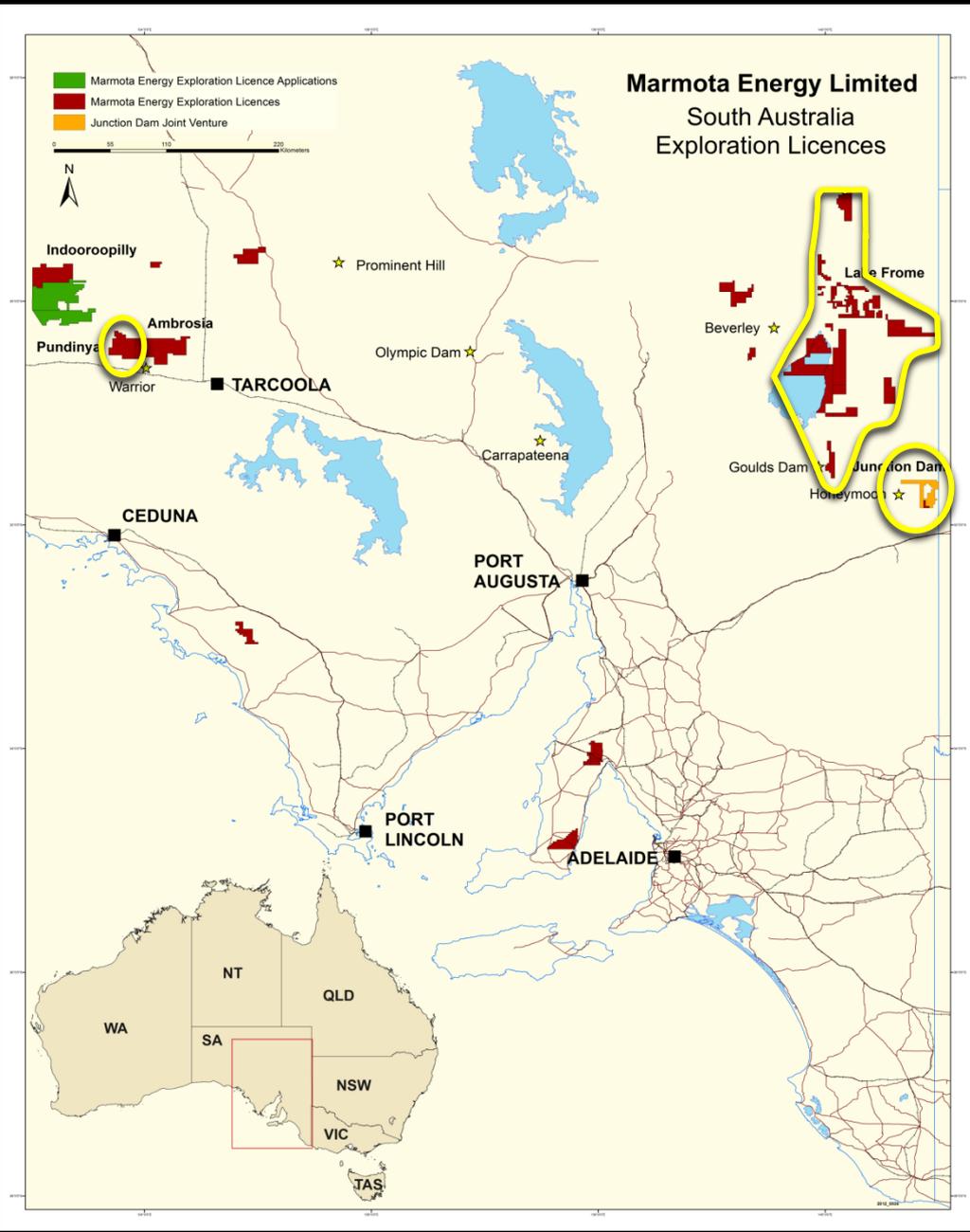
## Brief Corporate History

- Listed on ASX November 2007
- 2008 – 9 Improved exploration licence position, obtaining tenements with listed precious metal and uranium occurrences (100% owned by Marmota)
- Entered into strategic alliance with Ramelius Resources for high grade gold project generation
- Entered into an option agreement on Junction Dam mid 2009
- Junction Dam high grade uranium discovery late 2009
- Earn-in met on Junction Dam 2010
- Acquired Pundinya high grade uranium project mid 2010
- 2011 iron ore discovery at Western Spur
- 2011 significant copper, gold, silver intercepts - Yorke Peninsula
- 2011 maiden Inferred resource at Junction Dam
- 2011 second uranium partnership with Teck for the Rudall East project in WA
- Experienced Board and Management Team



# Marmota Energy Australia projects



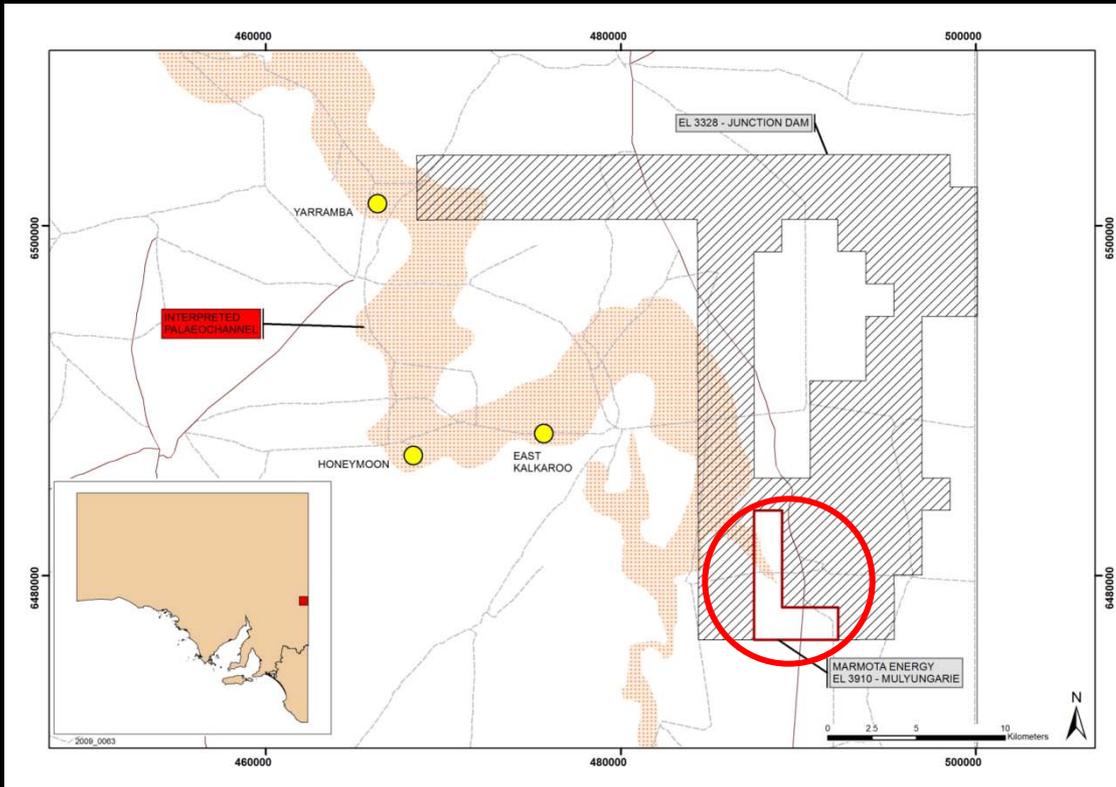


**South Australia uranium projects**



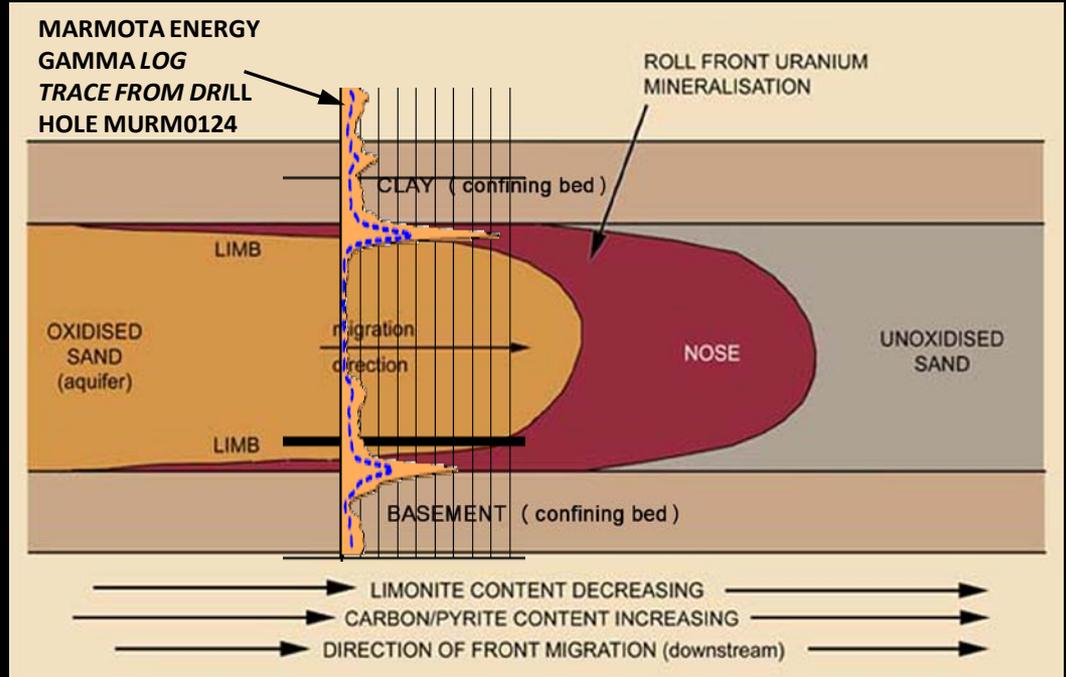
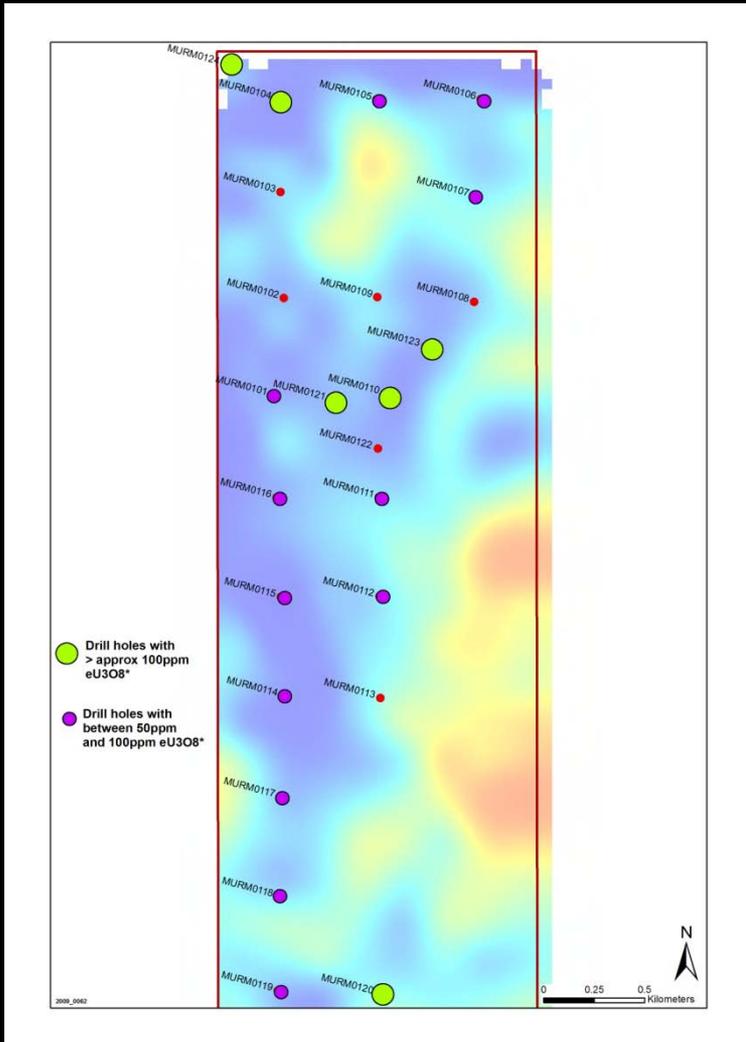
- Junction Dam
- Pundinya
- Lake Frome region

## Junction Dam background - Mulyungarie Project



Early 2009, first phase drilling was completed by Marmota intersecting multiple occurrences of uranium on the Mulyungarie project nearby to the Honeymoon uranium mine

- *Anomalous gamma readings in 18 drill holes*
- *Six holes return significant grade values  $eU_3O_8$*

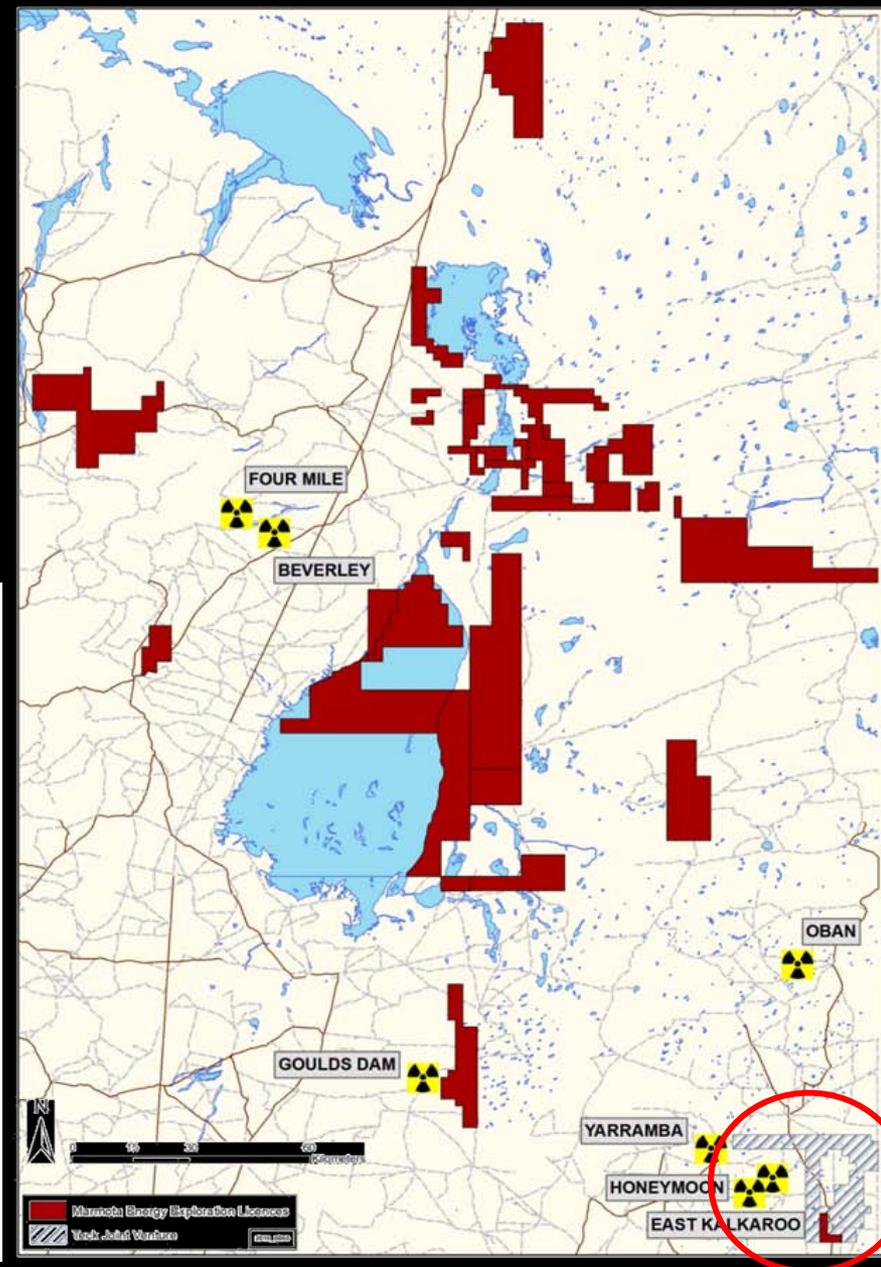
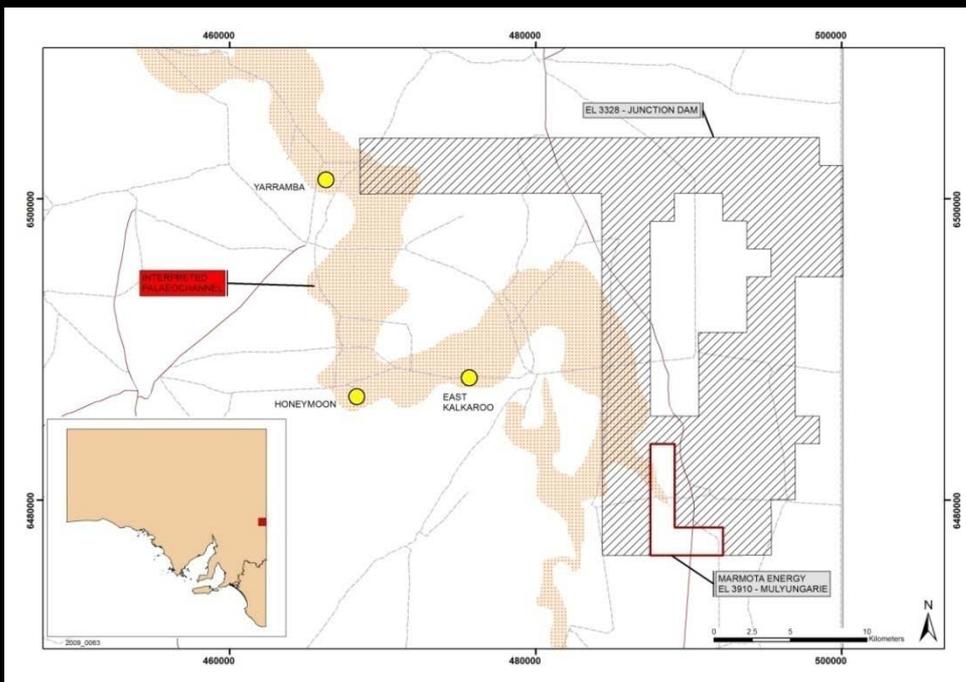


Roll front uranium schematic model cross section overlain by downhole gamma trace from drill hole MURM0124. (Adapted from published sources)

Mulyungarie drillhole locations with eU<sub>3</sub>O<sub>8</sub>\* grades over Bouguer gravity image.

# Junction Dam Uranium JV

- Extends Marmota's footprint in best uranium address in South Australia
- Junction Dam covers the eastern extension of the Yarramba Palaeochannel, which hosts the nearby Honeymoon uranium mine
- JV with Teck Australia, PlatSearch, and Eaglehawk Consulting, where Marmota has **87.3%** of the uranium rights on Junction Dam



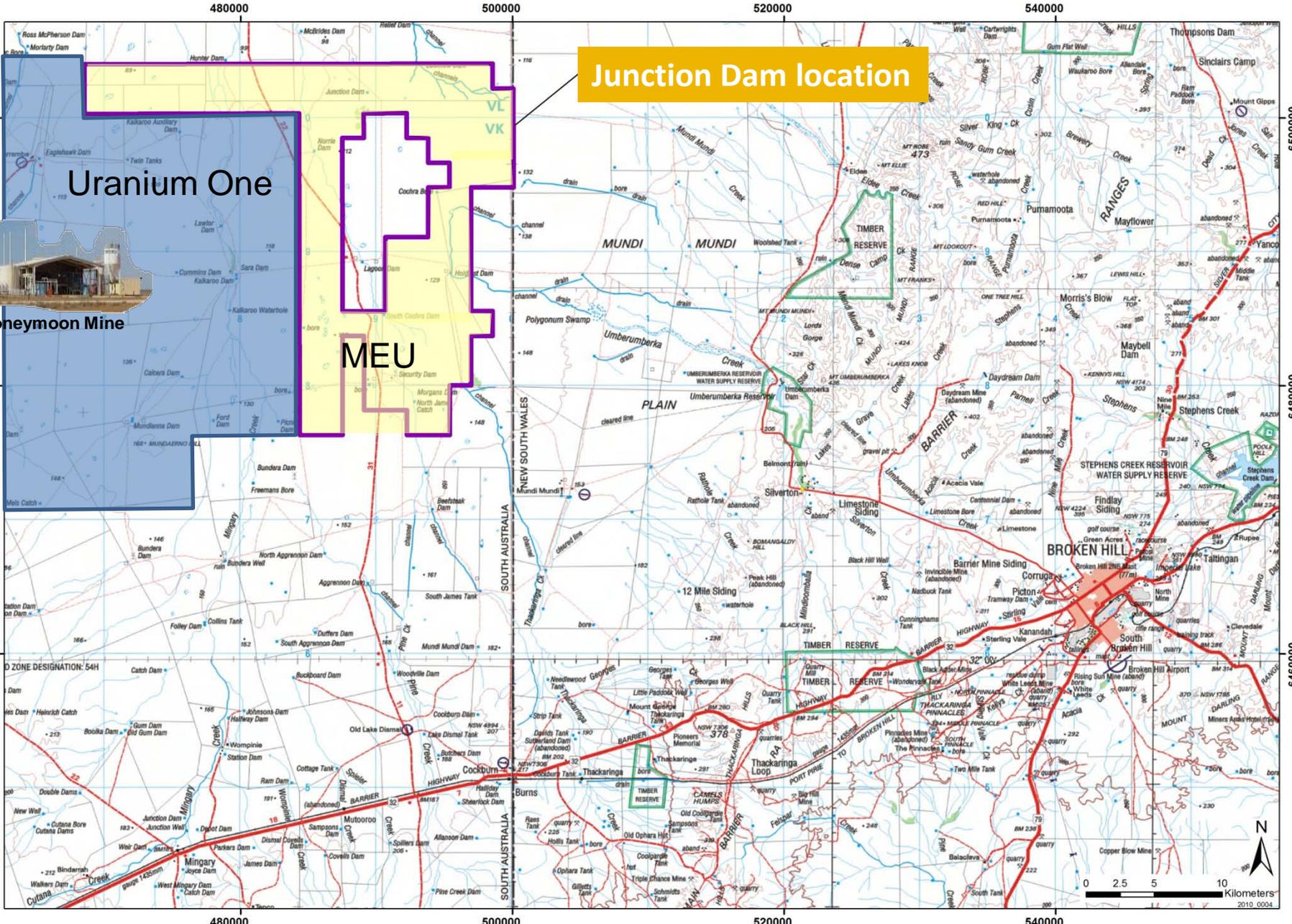


Honeymoon Mine

Uranium One

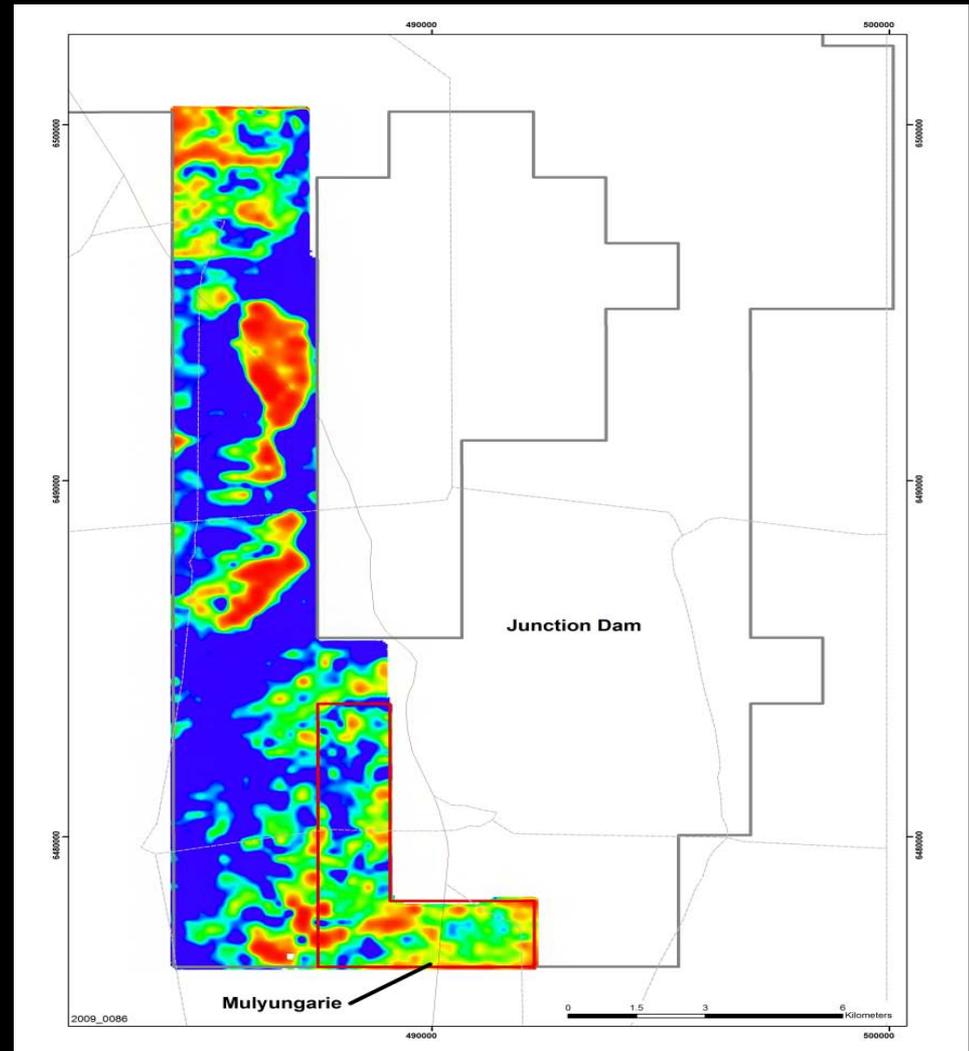
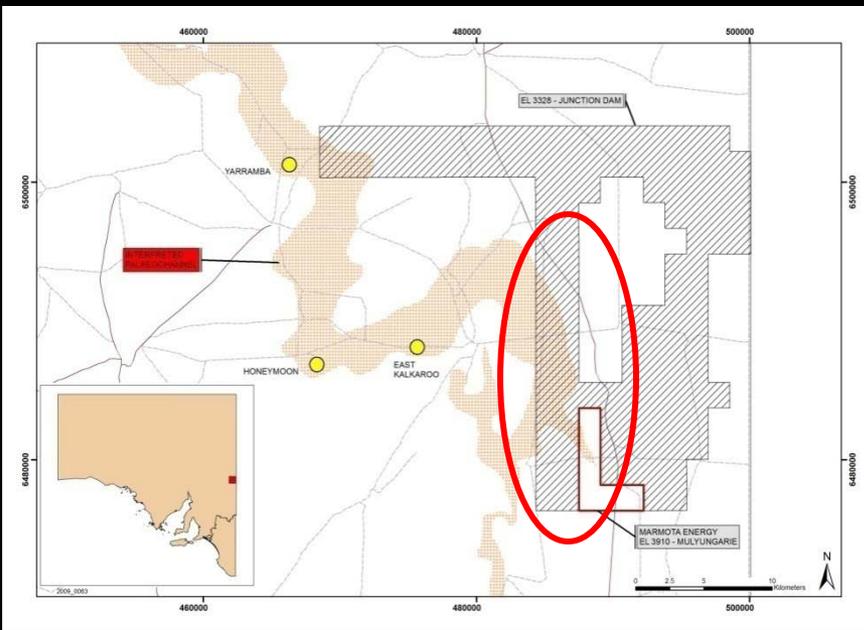
MEU

Junction Dam location



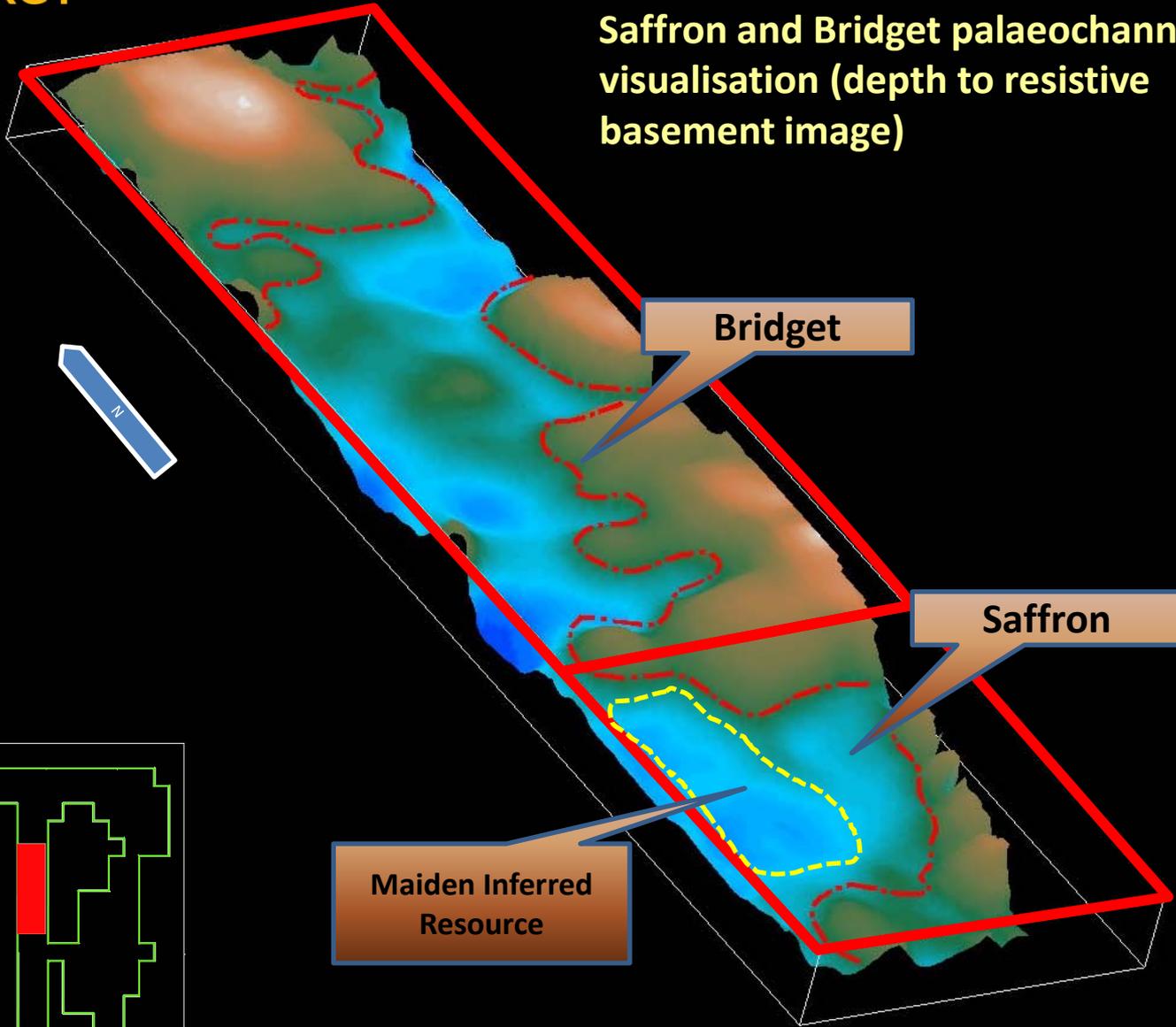
# Junction Dam Exploration

- Exploration program was launched in mid September 2009.
- High resolution ground gravity survey over the western target zone was completed.
- Augmented by soil and radon surveys.
- Geophysics defined 20 km extent of the Yarramba Palaeochannel.



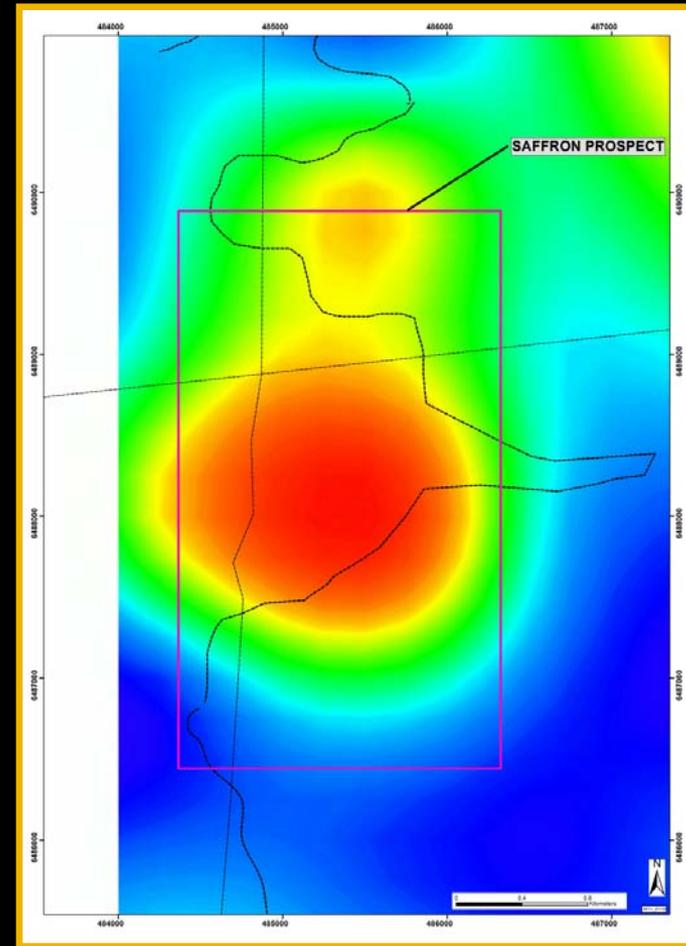
High resolution Bouguer gravity image.

**Saffron and Bridget palaeochannel  
visualisation (depth to resistive  
basement image)**



## Radon data

- The element radon is the radioactive daughter product of radium decay. Both radium and radon are progeny of uranium decay.
- Marmota has been developing a radon tool for use in exploration.
- Radon data acquired over target areas at Junction Dam.
- Radon is potentially a good pathfinder element for uranium exploration.
- Radon is relatively inexpensive to measure and can be acquired at various resolutions.
- Assists with targeting for drill testing.

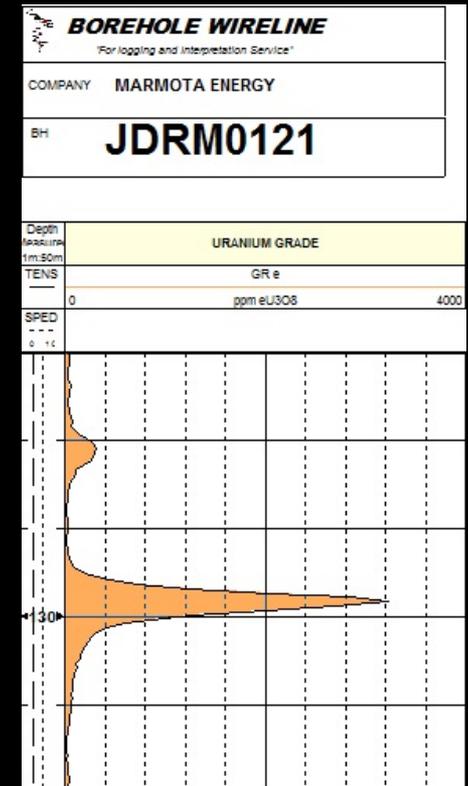
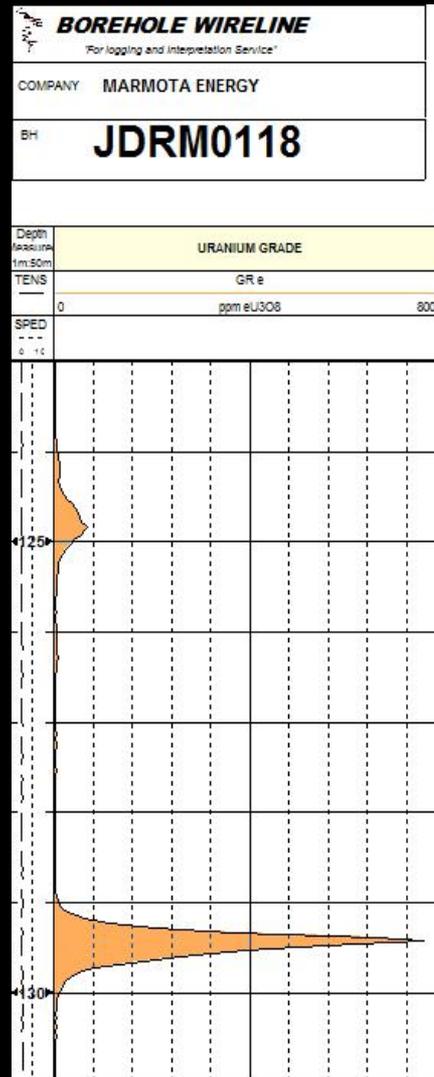


Broad spaced radon survey gridded data image. Radon high coincident with Saffron deposit location.



## Junction Dam Phase 1 Drilling Results

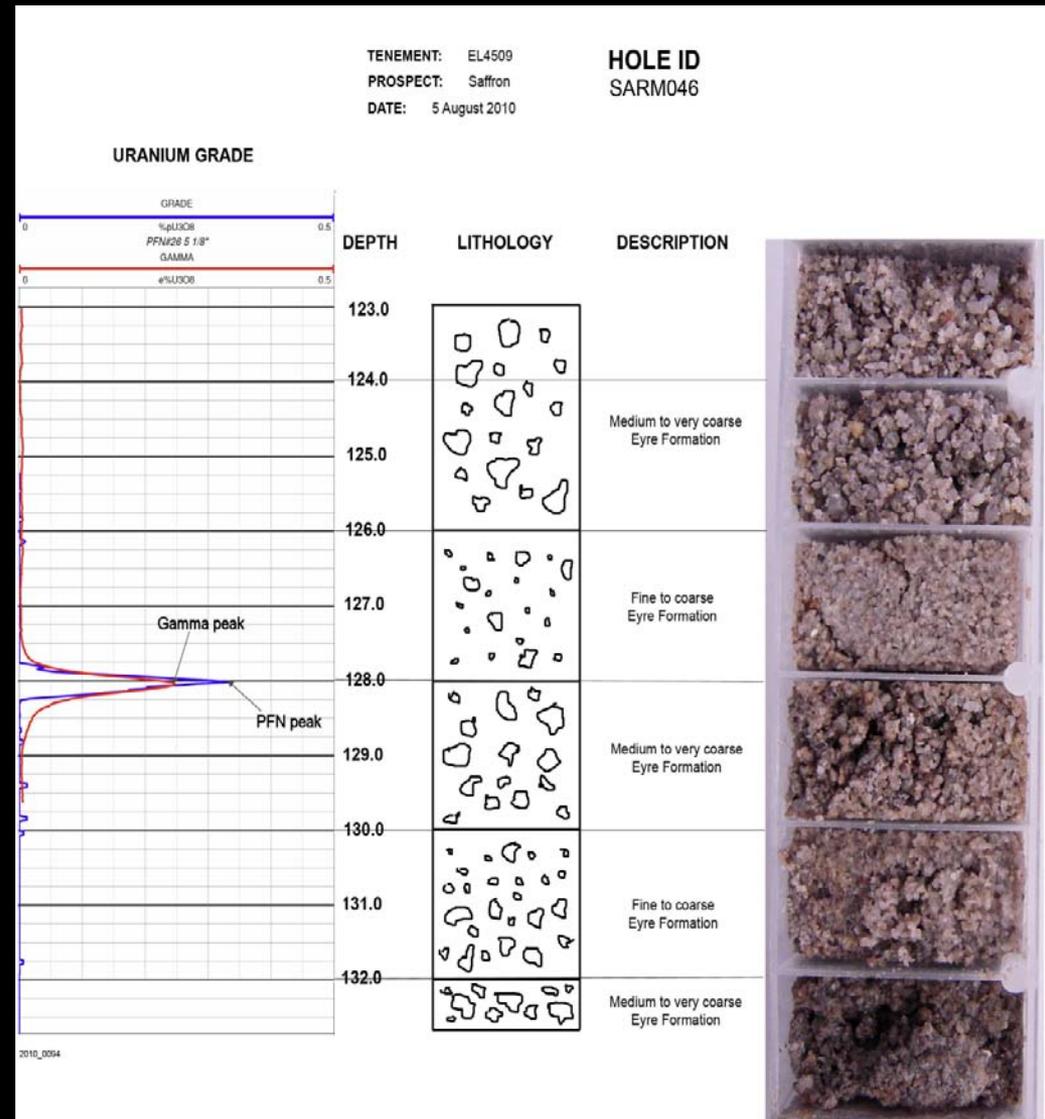
- Phase 1 drilling: 20 Holes drilled
- Multiple holes returning peak grades greater than 1000 ppm  $eU_3O_8$ \* over a 1.5 km strike length open at both ends
- Outstanding high grade intercepts including:
  - ave 2011 ppm with peak grade of 7,551 ppm (JDRM0118) and
  - ave 889 ppm with peak grade of 3,226 ppm (JDRM0121)  $eU_3O_8$ \*
- Significant uranium discovery in an established uranium province



\*Equivalent grades ( $eU_3O_8$ ) from Borehole Wireline Pty Ltd gamma probe 3024, calibrated at Adelaide Test Pits. Dead time 6.06656e-6, k factor 2.47442e-5, 108mm hole, water filled.

## Junction Dam Phase 2 Drilling Results

- Multiple holes returning peak grades greater than 1000 ppm  $eU_3O_8^*$  over significant interval thicknesses
- PFN holes completed confirming high grades
- Strike length increased to 2km open north and south
- High grade intercepts in Phase 2 including:
  - ave 1272.8 ppm with peak grade of 5192 ppm (SARM008) and
  - ave 825.9 ppm with peak grade of 2510 ppm (SARM004 )  $eU_3O_8^*$
- Potential at the Saffron prospect - exploration target of 3 – 9Mt at a grade of .03 - .05%  $eU_3O_8 \sim$  (July 2010)



*Cautionary Statement: The initial estimate of  $U_3O_8$  potential within the Junction Dam project is based on conservative grade estimates applied over a sedimentary 'roll front' strike length of 1.5km. Marmota notes that this initial view on an exploration target is conceptual in nature. There has been insufficient exploration to define this exploration potential as a Mineral Resource and it is uncertain if further exploration will result in the determination of such a Mineral Resource.*

# Junction Dam Phase 1 & 2 Drilling Results cont.

HOLE ID	EASTING	NORTHING	DEPTH FROM (metres)	THICKNESS (metres)	AVERAGE GRADE eU308*(ppm)	PEAK GRADE eU308*(ppm)	GRADE THICKNESS m%eU308
JDRM0111	484800	6488818	124.8	0.8	588.237	1152	0.047
JDRM0114	485000	6488530	124.07	3.15	174.605	830	0.055
JDRM0115	485000	6488330	128.86	0.75	648.597	1676	0.049
JDRM0116	485000	6488130	123.98	0.85	540.732	1411	0.046
JDRM0117	485000	6487850	116.42	0.9	509.983	1095	0.046
			123.27	0.85	674.378	1996	0.057
JDRM0118	484799	6488726	124.03	5.95	423.793	7551	0.252
JDRM0121	484800	6488530	127.88	2.7	427.609	3226	0.115
JDRM0122	484810	6488330	126.1	3.15	238.561	1328	0.075
SARM002	484784	6488669	124.69	6.85	67.845	135	0.046
SARM003	484794	6488617	123.88	5.5	106.763	459	0.059
SARM004	484798	6488567	129.84	0.85	825.935	2510	0.070
SARM007	484805	6488385	128.2	1.85	693.498	1935	0.128
SARM008	484749	6488715	124.75	1.7	1272.899	5192	0.216
SARM009	484749	6488533	125.7	6.55	117.728	935	0.077
SARM012	484596	6488740	125.32	4	156.526	888	0.063
SARM013	484594	6488645	123.66	3.15	633.658	2720	0.200
SARM021	484706	6488438	126.16	3.85	357.926	2565	0.138
SARM022	484695	6488358	126.15	4.15	584.18	3674	0.242
SARM027	484803	6488038	118.65	1	459.641	1204	0.046
SARM028	484657	6488501	124.95	3.7	161.195	663	0.060
SARM029	484646	6488402	125.15	4.05	328.41	1927	0.133
SARM032	484739	6488300	127.55	1.8	409.594	2075	0.074
SARM037	484698	6489195	128.1	1.15	766.124	2416	0.088
SARM039	484373	6488010	129.44	0.85	535.907	1163	0.046
SARM046	484490	6488651	126.9	1	926.326	3221	0.093
SARM050	484895	6488118	124.99	4.2	300.341	1457	0.126
SARM063	484700	6488403	125.2	4.7	161.647	543	0.076
SARM066	484794	6488067	125.55	1.75	496.171	2132	0.087



Uranium peak grade greater than 1000 ppm  
Grade thickness greater than .045 m%eU308

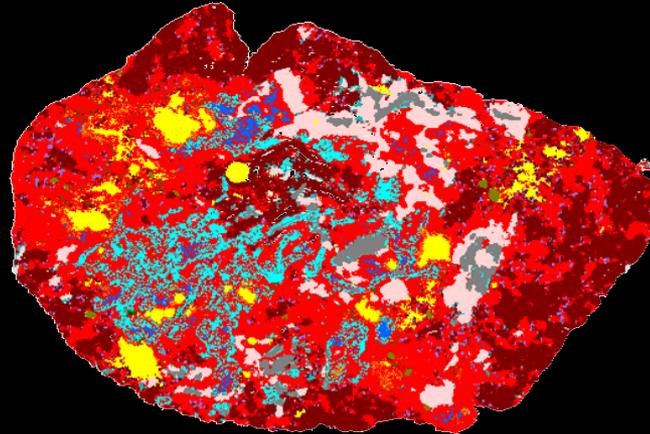
Table 1: Best high grade down hole readings from Junction Dam from 2009 and 2010 phases of drilling. The widths shown are true widths with a 100 ppm cut off applied.

\*Hole prefix 'JDR': \*Equivalent grades (eU<sub>3</sub>O<sub>8</sub>) from Borehole Wireline Pty Ltd gamma probe 3024, calibrated at Adelaide Test Pits. Dead time 6.06656e-6, k factor 2.47442e-5, 108mm hole, water filled.

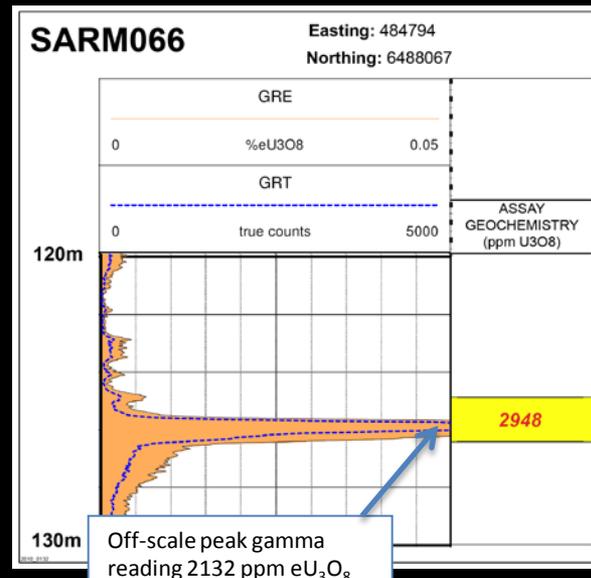
\*Hole prefix 'SAR': \*Equivalent grades (eU<sub>3</sub>O<sub>8</sub>) from Borehole Wireline Pty Ltd gamma probe 3785, calibrated at Adelaide Test Pits. Dead time 4.27264e-6, k factor 2.2702e-5, 108mm hole, water filled.

## Junction Dam – Saffron QEMSCAN Results

- Direct mineralogical assessment
- Samples from 2 cored drill holes analysed
- Coffinite, uraninite, and uranium phosphates confirmed as the uranium minerals at Saffron
- Analogous with the principle uranium minerals at the Honeymoon ISL uranium project
- Assay results associated with QEMSCAN analysis further support the high grades achieved at Saffron



Above. QEMSCAN image from mineralised interval in hole SARM066, particle width approx 0.5mm, dominate uranium mineral in this sample is coffinite (dark blue).

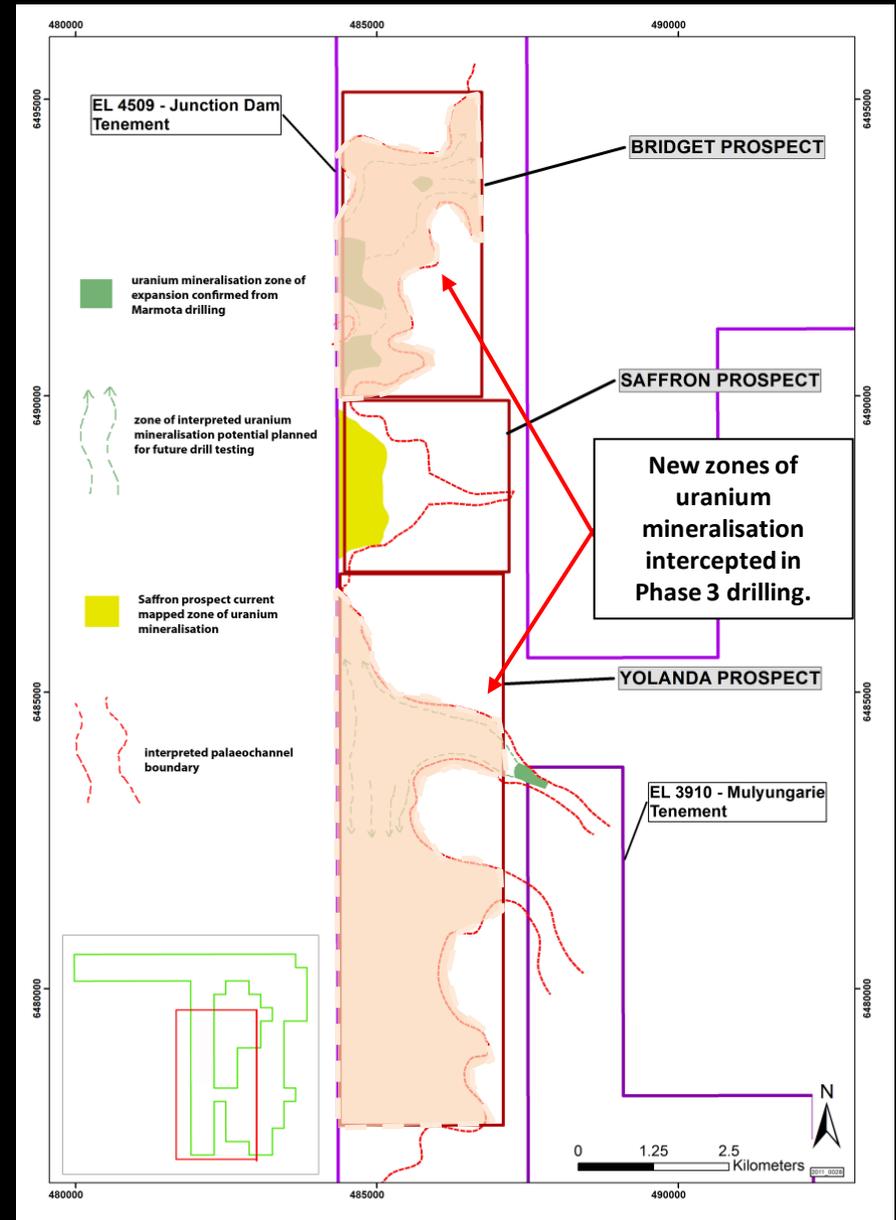


Left. Gamma log from drill hole SARM066 intersecting interval of mineralisation with assay result shown for interval (125.2 – 126.2m)

## Junction Dam – 2011 Phase 3 drilling

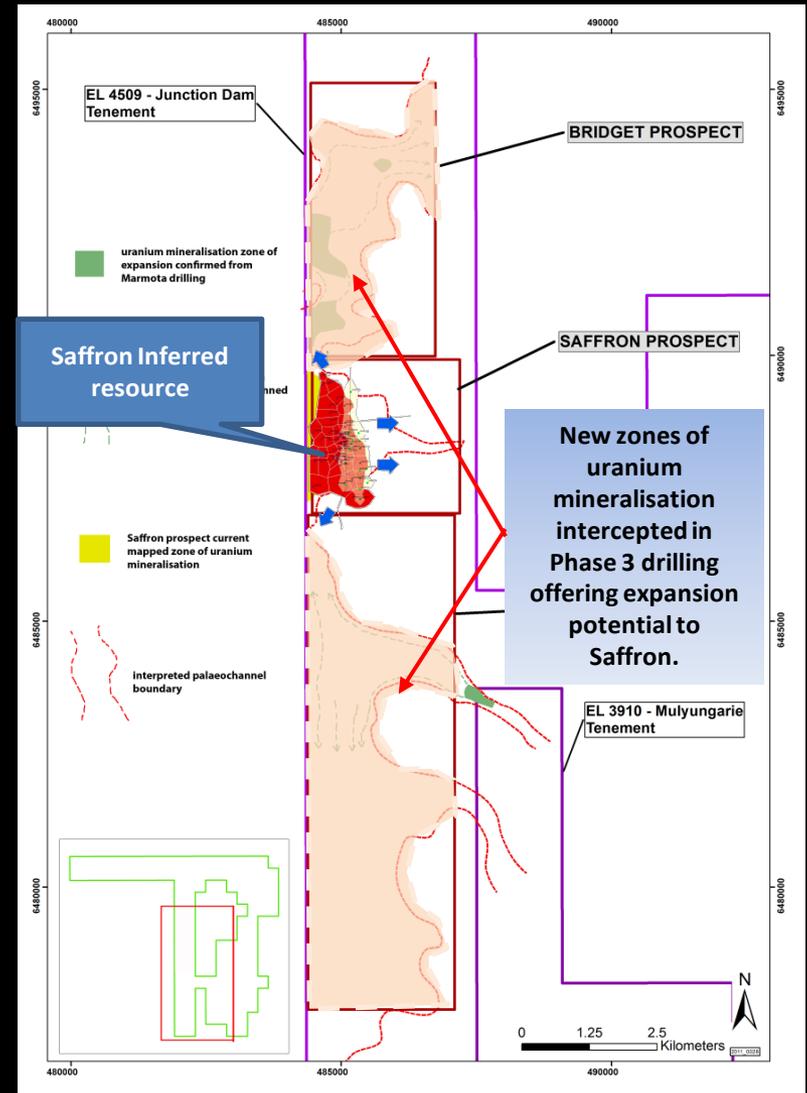
- Mineralisation confirmed from broad spaced drilling at the Bridget and Yolanda prospects immediately adjacent to Saffron.
- Uranium mineralisation confirmed along 15km strike on Junction Dam open north and south.
- New intercepts in multiple holes achieving grades greater than 1000 ppm  $eU_3O_8$  offering expansion potential to the existing defined zone of uranium mineralisation at Saffron.

Right: Junction Dam project with areas of confirmed mineralisation highlighted. New zone of mineralisation highlighted on the Bridget prospect open in all directions. Third zone of uranium potential highlighted on the Yolanda prospect for future drill testing.



## Maiden Inferred Resource for Saffron (November 2011)

- 4.36 million tonnes of mineralisation\*
- Estimated to contain some 1,510 tonnes of  $U_3O_8$  (3.33 million pounds)
- Two mineralised sand layers of the Eyre Formation (basal and upper) intersected
- Average grade 437 parts per million (.044%)  $eU_3O_8$  and 248 parts per million (.025%)  $eU_3O_8$  for the basal and upper layers respectively



*~Cautionary Statement: The initial estimate of  $U_3O_8$  potential within the Junction Dam project is based on conservative grade estimates applied over a sedimentary 'roll front' strike length of 15km. Marmota notes that this initial view on an exploration target is conceptual in nature. There has been insufficient exploration to define this exploration potential as a Mineral Resource and it is uncertain if further exploration will result in the determination of such a Mineral Resource.*

*\* It is uncertain if further exploration work or feasibility studies will result in the determination of an Ore Reserve.*

## High grade assay results (February 2012)

- 2011 Phase 3 drilling included 1500 metres of Sonic drilling across Saffron and Bridget prospects.
- Critical for statistically appropriate sample return.
- High grade results from assay up to **8142 ppm  $U_3O_8$**  from sonic cored holes drilled across the Saffron deposit.
- Results indicate strong **positive disequilibrium** ranging between 1.22 and 2.25 underpinning an upwards resource recalculation of the **Saffron deposit** with potential of **5.4 Mlb\***.



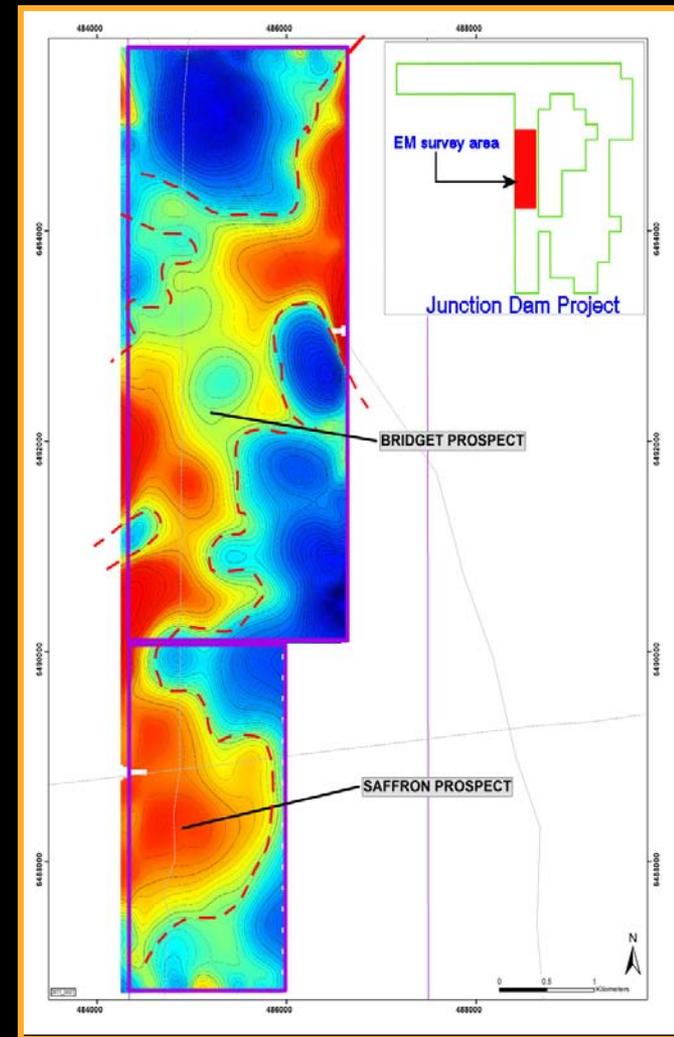
Above. Example of sonic drilling core sample at Saffron.



\* Upward revision of the Saffron deposit Inferred resource size as indicated above follows the application of an average positive disequilibrium factor of 1.63. This is an indicative result and further assessment is underway.

## 2012 drilling results

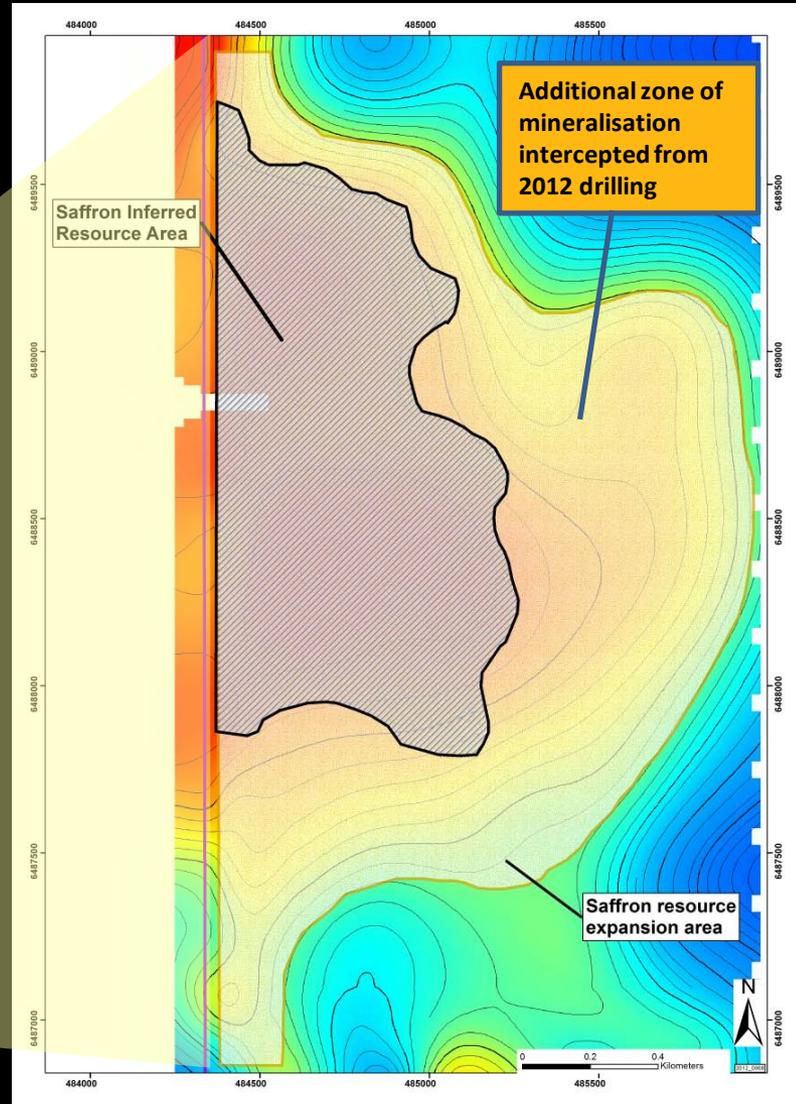
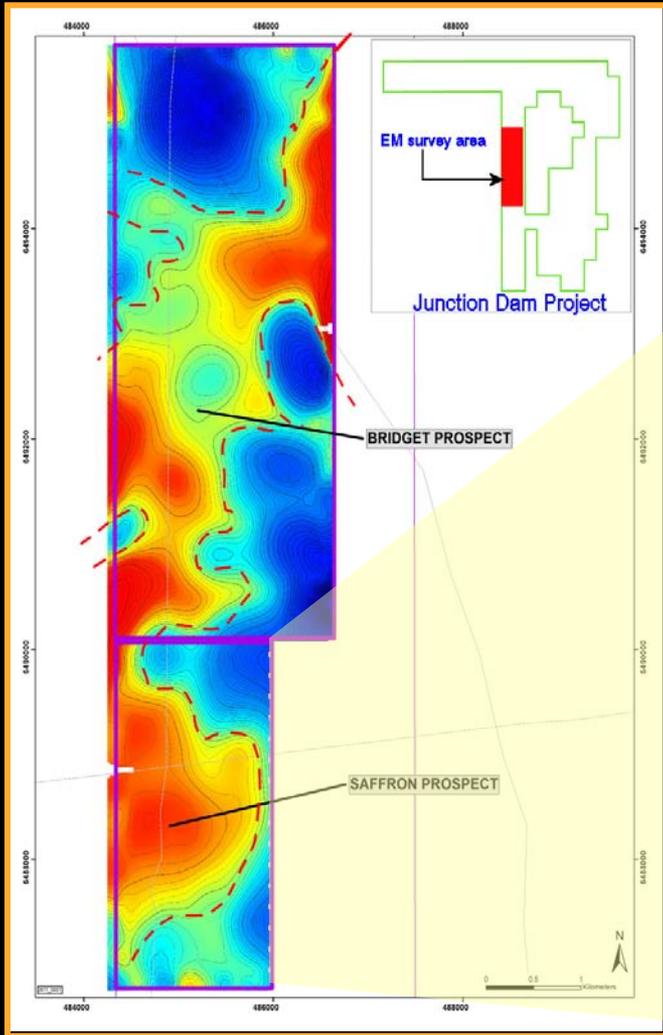
- Saffron deposit footprint increases to approximately eight times the size of the nearby Honeymoon uranium deposit area.
- Campaign results also confirm contiguous grade continuity with adjoining Bridget deposit on Saffron's northern boundary, for a total combined strike length of 6.5km.
- Key areas of mineralisation identified at the large scale Yolanda prospect including drill hole YORM028 achieving a significant 5.5 metre intercept of mineralisation with GT of 0.15 m%U<sub>3</sub>O<sub>8</sub>.
- Further mineralisation inventory at Bridget and Yolanda offering significant expansion potential **increasing exploration target for Junction Dam 15Mt to 25Mt @ approx 400 to 700 parts per million (ppm) U<sub>3</sub>O<sub>8</sub>, for 10,000t to 15,000t U<sub>3</sub>O<sub>8</sub> or 22Mlb to 33Mlb U<sub>3</sub>O<sub>8</sub> ~**



**CAUTIONARY STATEMENT:** ~ The estimates of exploration target sizes mentioned above should not be misunderstood or misconstrued as estimates of Mineral Resources. The estimates of exploration target sizes are conceptual in nature and there has been insufficient results received from drilling completed to date to estimate a Mineral Resource compliant with the JORC Code (2004) guidelines. Furthermore, it is uncertain if further exploration will result in the determination of a Mineral Resource.

Ground EM survey result over Saffron and Bridget prospects. Interpreted palaeochannel outlined with red dash line.

# Increase in Saffron deposit area footprint



## Retention Lease Works – Saffron Deposit

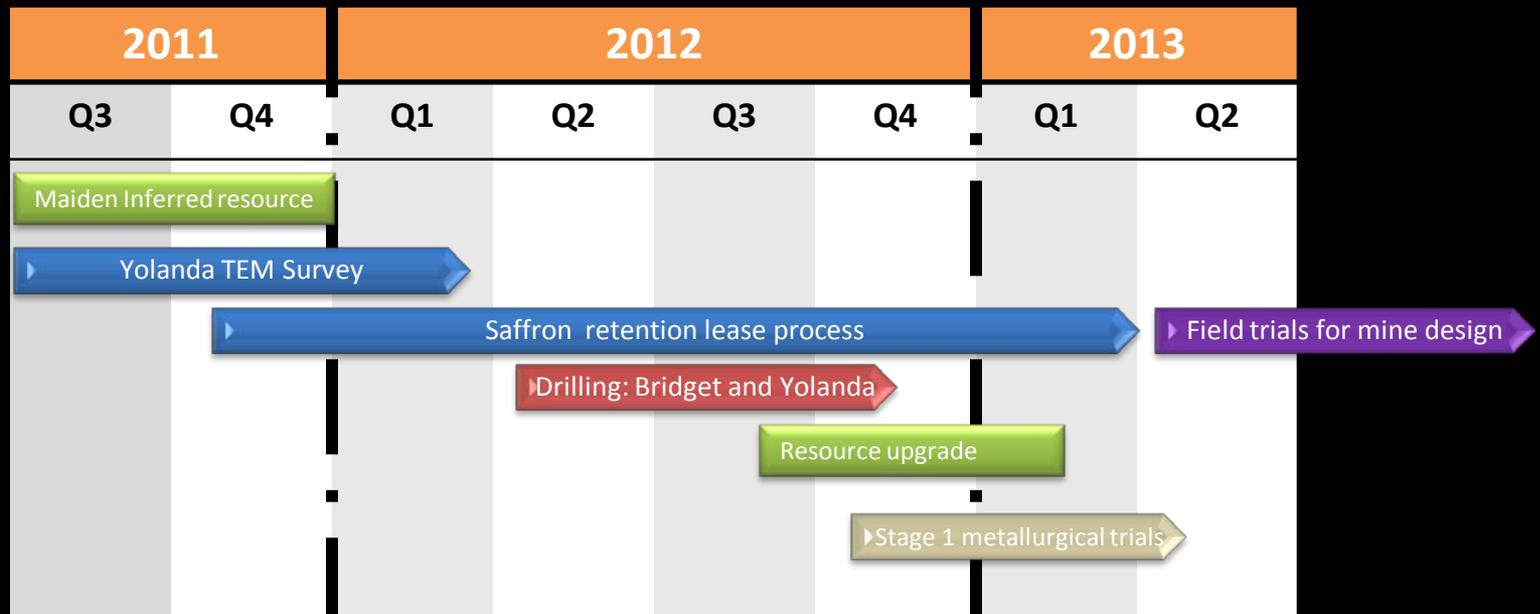
- **Process required to meet regulatory approval to undertake field leach trials.**
- **RL works will include baseline investigations of:**
  - Flora and fauna
  - Groundwater conditions, including aquifer conditions (quality, flow direction, modelling of potential impacts)
  - Noise and air quality impact
  - Storage and use of dangerous substances
  - Surface water management
  - Stakeholder engagement
  - Visual impact
- **Process expected to require 6 months to complete.**
- **Water bore permits for groundwater monitoring have been obtained by Marmota.**



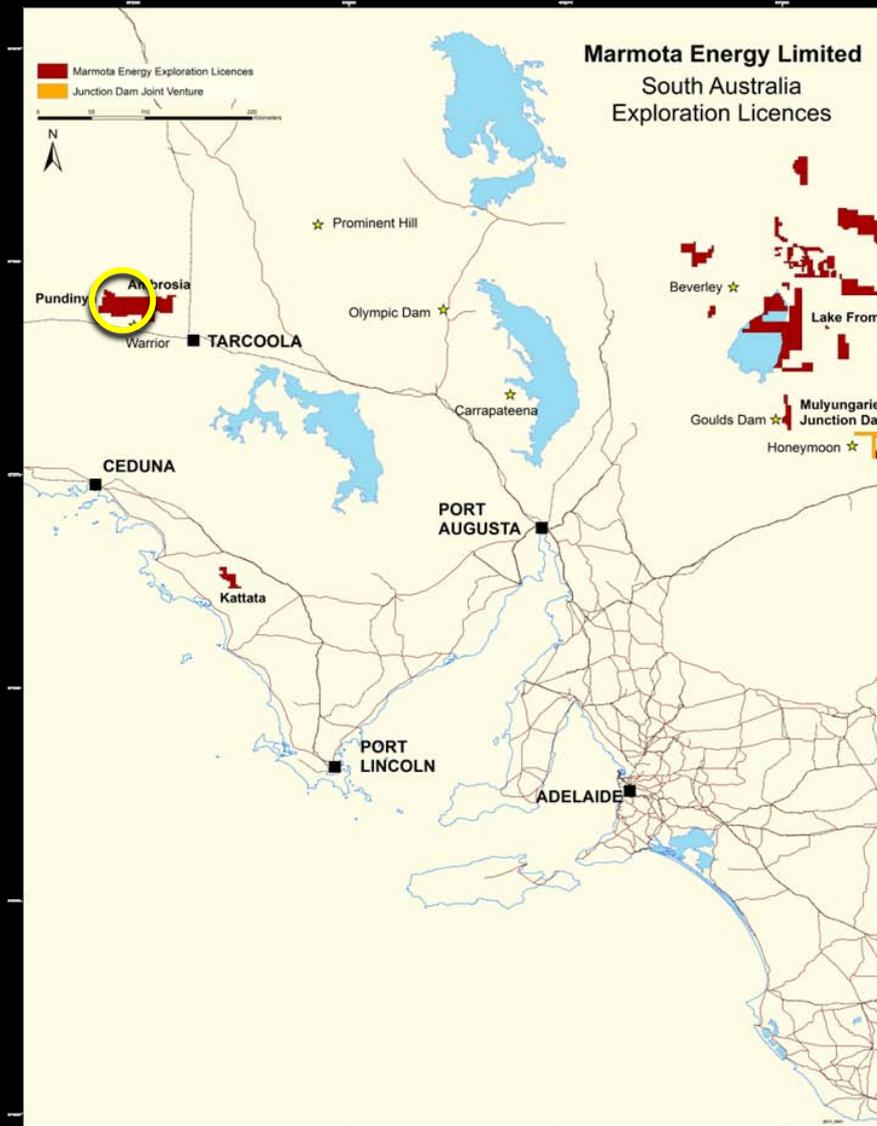
Example of small footprint plant for leach trial:  
Photograph of Curnamona Energy 's Oban well house for field ISL trial published in July 2010 announcement.

## Junction Dam first stage development strategy

- South Australia, well established regulatory regime for uranium mining
- Marmota has a robust and successful exploration methodology offering rapid growth of the resource base at Junction Dam
- Marmota is focused on a path to ISL uranium production at Junction Dam

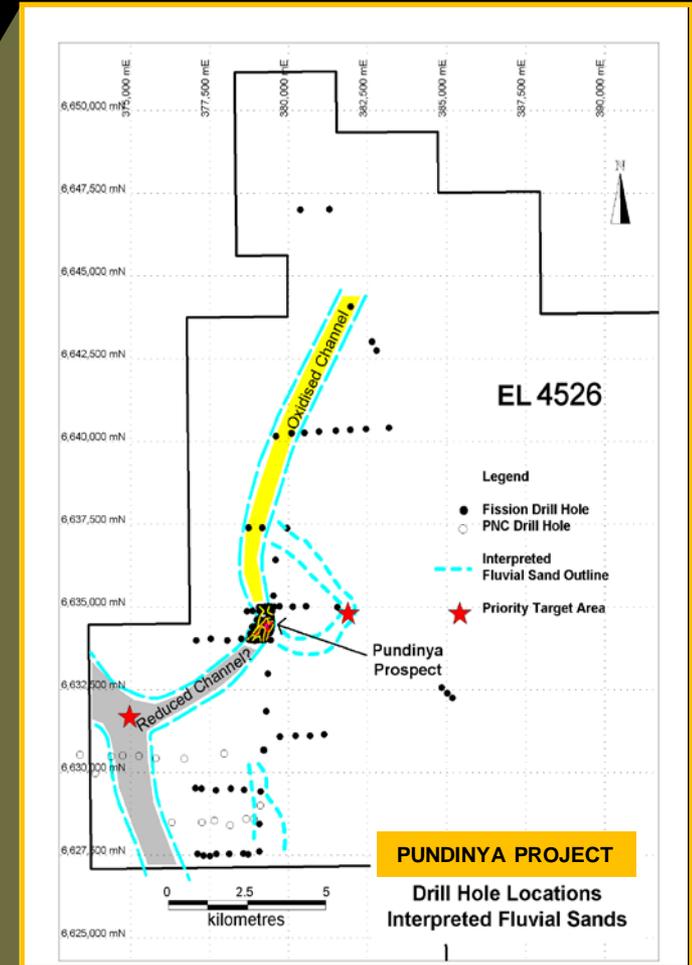
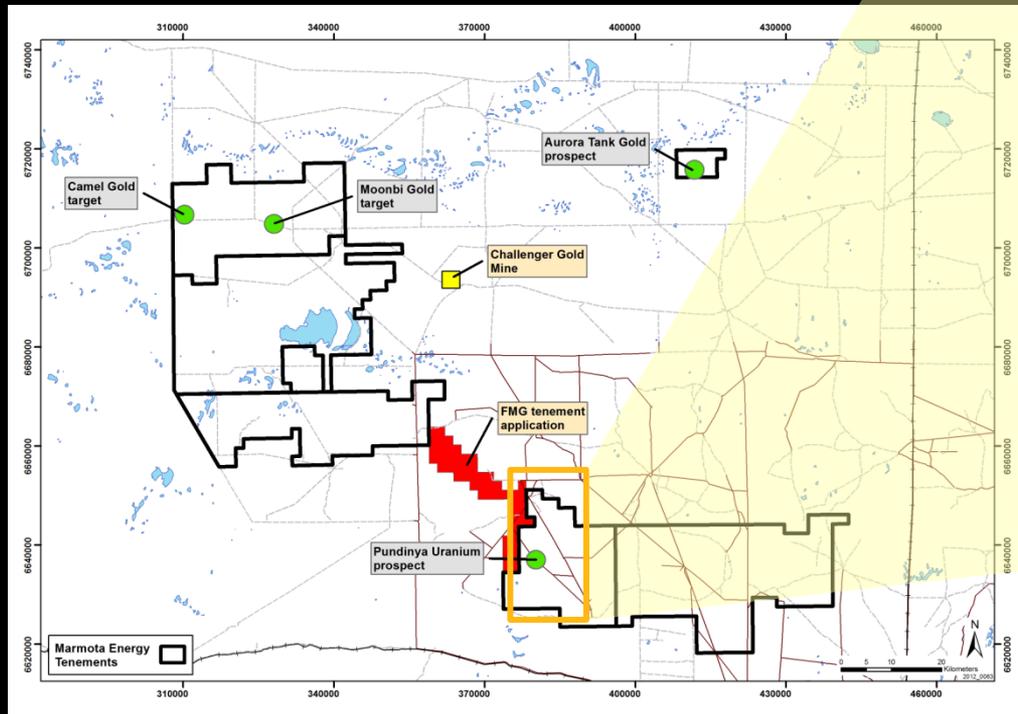


# Pundinya Uranium Project



# Pundinya Uranium Project

- Further expansion of Marmota's South Australian uranium project interests with the acquisition of the Pundinya uranium project.
- Exciting grades of up to 3200 ppm  $U_3O_8$  have been returned from assay in drillholes completed on the project.
- Significant expansion potential.
- 100 % owned by Marmota Energy.



## Pundinya Uranium Project

- Mineralised zone lies in the basal sand unit unconformably overlying the basement.
- Interpreted to be the Eocene Pidinga Formation:
  - a high energy depositional layer with pebbly sand grains with the reducing agent being pyrite and lignite.

Hole No	East	North	From	To	Thickness	U <sub>3</sub> O <sub>8</sub>	GRADE THICKNESS
			m	m	m	ppm	m%eU3O8
W057	379264	6634393	48	52	4	249	0.0996
W058	379452	6634410	43	48	5	219	0.1095
W074	379296	6634614	49	52	3	166	0.0498
W079	379346	6634417	48	53	5	854	0.427
W080	379301	6634404	47	52	5	443	0.2215
W083	379097	6634389	49	51	2	235	0.047
W086	379404	6634219	42	46	4	169	0.0676
W087	379295	6634187	44	52	8	167	0.1336
W096	379250	6634011	40	43	3	189	0.0567
W098	379395	6634301	47	52	5	235	0.1175
W099	379346	6634308	46	52	6	210	0.126
W100	379305	6634296	47	52	5	460	0.23
W102	379442	6634505	46	49	3	169	0.0507
W104	379467	6634603	42	52	10	134	0.134
W108	379299	6634499	50	54	4	178	0.0712
W109	379253	6634497	48	52	4	138	0.0552
W113	379352	6634450	48	52	4	376	0.1504
W119	379372	6634406	50	53	3	155	0.0465
W120	379350	6634404	47	54	7	368	0.2576
W121	379321	6634402	49	53	4	360	0.144
W122	379304	6634349	49	52	3	150	0.045
W124	379401	6634352	49	52	3	301	0.0903
W125	379447	6634349	44	48	4	241	0.0964
W128	379298	6634251	48	51	3	178	0.0534
W192	379371	6634430	47	53	6	375	0.225
W193	379317	6634433	49	53	4	205	0.082
W194	379448	6634552	47	51	4	136	0.0544

Table 2: Example of results from Pundinya phases of drilling with GT > .045. Grades of intercepts which included up to 5m at 0.085% or 854ppm U<sub>3</sub>O<sub>8</sub> (including 1m at 0.32% or 3,200ppm U<sub>3</sub>O<sub>8</sub>) in hole W079

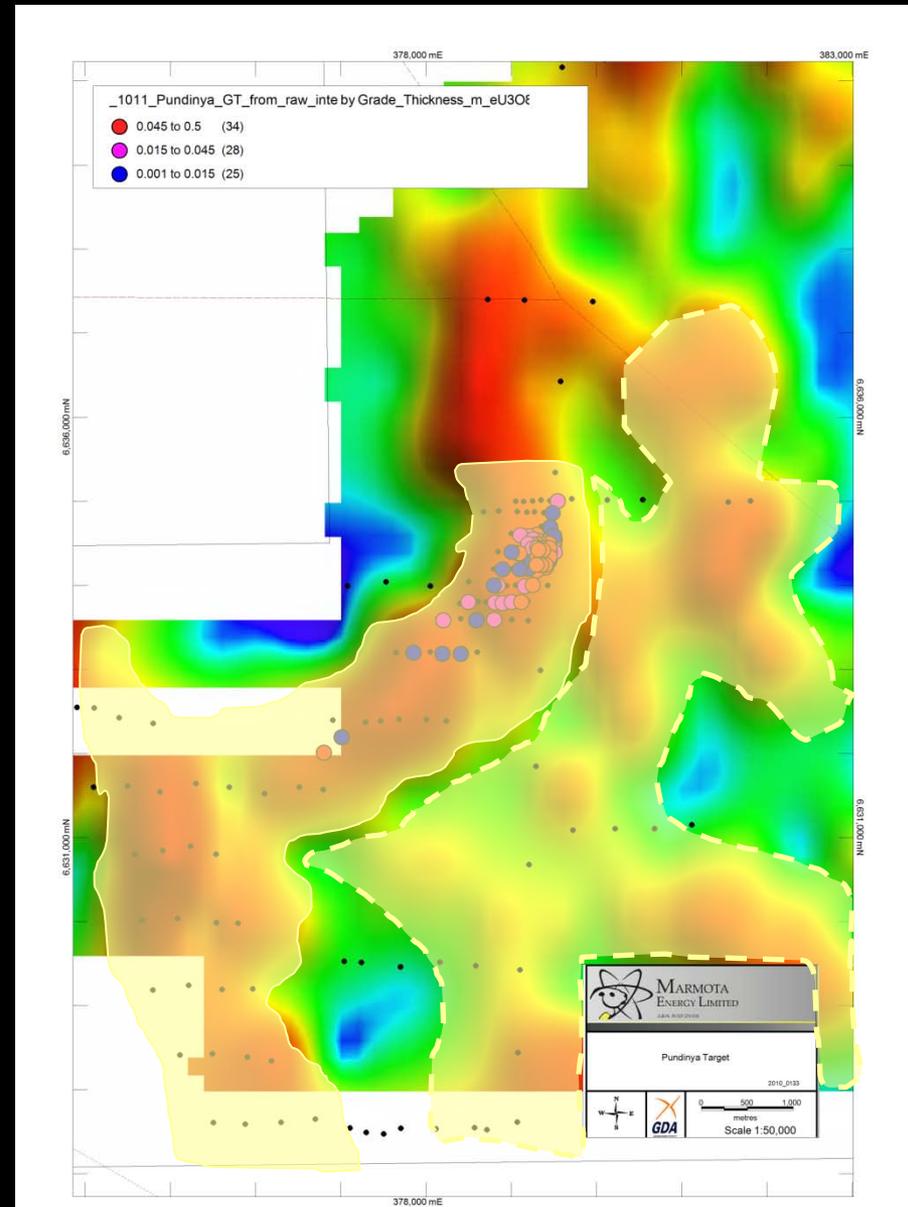
# Pundinya Uranium Project

In 2012, application of the same exploration methodology successfully used at Junction Dam.

Proposed exploration program along an additional 9km of prospective channel to include:

- Biovegetation, soil and calcrete sampling.
- Ground radon surveys.
- High resolution gravity.
- High resolution ground electromagnetic surveys.

- Expansion along current mapped channel
- Further expansion potential



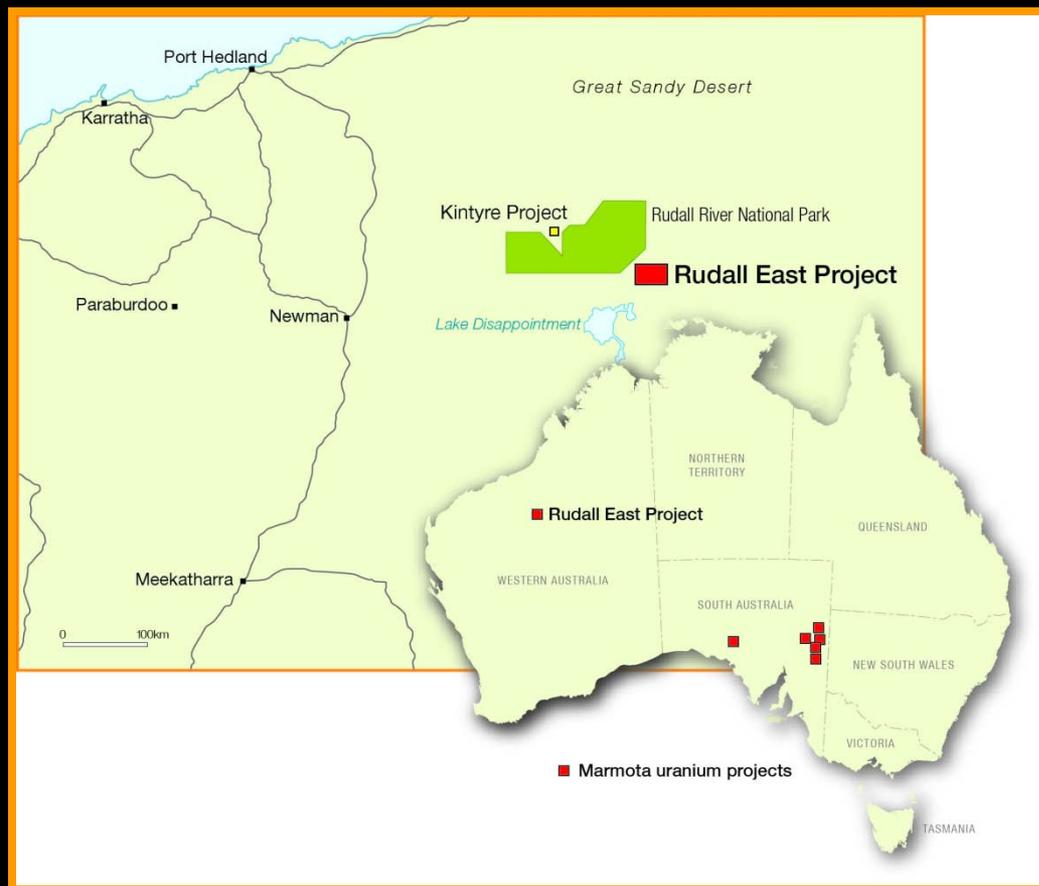
## Rudall East Uranium Project

### Rudall East uranium JV with Teck

Second agreement with Teck Australia Pty Ltd to explore for uranium expanding from SA into the Rudall East uranium project in WA.

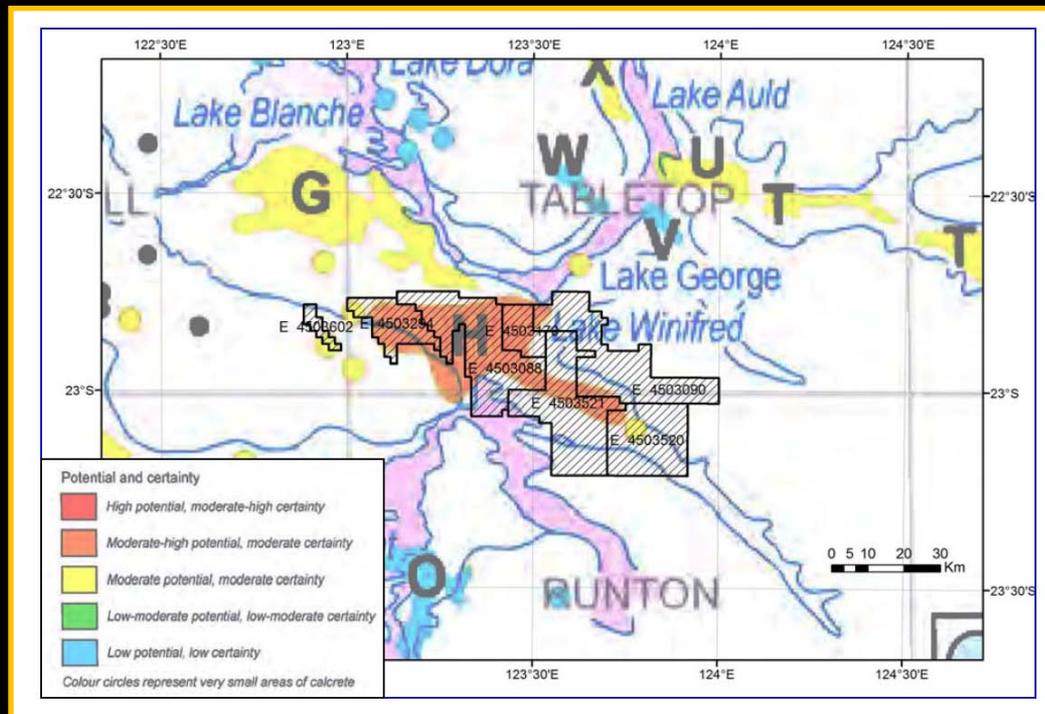
Rudall East covers the eastern extension of the Patterson Orogen which hosts the nearby Cameco-Mitsubishi JV owned Kintyre uranium deposit, a 56.4M lbs  $U_3O_8$  inferred resource in northern WA.

Marmota Energy will spend a total of A\$1M over 3 years to earn a 51% interest in uranium on the Rudall East project.



## On the project:

- Comprehensive suite of pre-competitive data supplied by the government provides a valuable 'head-start' to exploration.
- AEM survey has delineated buried palaeochannels and unconformity contacts, both of which are important for uranium targeting in the project area.
- Studies completed by Geoscience Australia (GA) indicate that palaeo-valleys within the Rudall Complex represent one of the most prospective exploration opportunities for uranium mineralisation.
- A large proportion of the project area marked in orange is interpreted to have a high degree of certainty for significant uranium potential.



Uranium prospectivity map for South Paterson region. Orange represents moderate-high potential.

From GA publication #17086.

Rudall East project tenements are shown in black.

## Summary

Marmota Energy is an innovative and diversified mineral exploration company strongly valuing social licence to operate.

Our robust and successful exploration methodology offering rapid discovery and growth across Marmota's strong uranium portfolio.

Marmota is well positioned to capitalise on opportunities as the uranium sector continues to regain momentum over the months to come.





**MARMOTA ENERGY LIMITED**  
**ASX CODE: 'MEU'**  
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*The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr D J Calandro, who is a Member of the Australian Institute of Geoscientists. Mr Calandro is employed full time by the Company as Managing Director and, has sufficient experience in the style of mineralisation and type of deposit under consideration and 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". Mr Calandro consents to the inclusion of the information in this report in the form and context in which it appears.*