ASX ANNOUNCEMENT 8 December 2015

HONEYMOON PROJECT EXPLORATION UPDATE

HIGHLIGHTS

- **Boss exploration team has conducted extensive review of over 2,500 drill hole data base**
- **Historical drilling suggests extensive exploration upside across the 2600km² tenement package**
- **Boss plans to use extensive database to define JORC resources additional to the existing 16Mlb Indicated and Inferred Resource**

Boss Resources Limited (ASX: BOE) is pleased to announce that following the completion of the acquisition of the Honeymoon Uranium Project in South Australia, an extensive review of the historical exploration database have now been conducted by the Boss geological team, headed by Dr Marat Abzalov and Neil Inwood (see below for further details on the experience of the team).



Figure 1: Honeymoon Mine Facility. Showing existing site infrastructure, facilities and plant control room.

Boss is now focussed on understanding the 40 years of exploration drilling that has been done on the 2,600km² tenement package and the current 16Mlb Indicated and Inferred Resource (see Table 2). Significant work has been undertaken to compile and review the recent and historical exploration drilling and exploration data resulting in the compilation of multiple databases acquired from Uranium One into one integrated database.

Based upon the review of the exploration data (see Appendix 2 for more details) an Exploration Target of between 32Mt to 78Mt at a grade of between 450ppm and 1400ppm U_3O_8 has been interpreted for the Project. This points towards a potential target endowment of between 42Mlb and 100Mlb of contained U_3O_8. The Exploration Target is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Suite 23, 513 Hay St, Subiaco WA
PO Box 1311, Subiaco WA 6904
P: +61 (8) 6143 6730
E: admin@bossresources.com.au
ABN 38 118 834 336

The Exploration Target has been based upon a review of approximately 2,500 historical and recent drillholes, custom flown geophysical data by previous workers, recent geostatistical investigations and a review of field work conducted over the last 15 years on the Project.

Table 1: Honeymoon Uranium Project Exploration Target
December 2015

Tenement	Project Region	Tonnage Range		Grade Range		Contained Metal			
		Min Mt	Max Mt	Min. Grade U_3O_8 (ppm)	Max Grade U_3O_8 (ppm)	Min Kg U_3O_8	Max Kg U_3O_8	Min Lb U_3O_8	Max Lb U_3O_8
Eastern Tenements									
EL5621	A - Yarramba - South	2	5	400	800	1.4	2.7	3	6
EL5621	B - Yarramba - North	1.5	6	600	1,500	3.2	8.2	7	18
EL5621	C - Yarramba - Mid	4	10	300	1,200	2.7	7.7	5	17
EL5215	D - South Eagle	3	4	400	1,500	1.4	2.7	3	6
Total		**11**	**25**	**380**	**1,200**	**8**	**21**	**18**	**47**
Western Tenements									
EL5623	E - Gould's Dam and Billeroo – historical grade estimates^	10	20	300	1,200	4.5	9.1	10	20
EL5623	F - Gould's Dam and Billeroo lateral extents	3	15	400	1,200	2.7	5.4	6	12
EL5622	G - Katchwilleroo	5.5	12	400	2,000	3.6	6.8	5	15
EL5043	H - Ethiunda	3	6	600	2,000	1.4	2.7	3	6
Total		**21.5**	**53**	**480**	**1,500**	**12**	**24**	**24**	**53**
Grand Total		**32**	**78**	**450**	**1,400**	**20**	**45**	**42**	**100**

Note: Figures have been rounded. ^ These historical grade estimates are non-JORC 2012.

To conduct the review, the Project was divided into eight distinct regions which allowed for assessment of the exploration potential to be made by region (Table 1). Where drilling information was available (e.g. Brooks Dam, Billeroo, Yarramba) the Exploration Target was based upon assessment of eU_3O_8 grade data, thickness intervals, geology and historical grade-tonnage estimates (if available). In other regions (e.g. Katchwilleroo, Ethiunda), the Exploration Target has relied upon data which is sparse and potentially inconsistent in some regions and has been based upon conceptual geological models to derive potential endowments. The bulk of the grade assessment used for the exploration data is based upon historical (pre-Uranium One Australia) and more recent (Uranium One Australia and Southern Cross Australia) gamma-derived eU_3O_8 data.

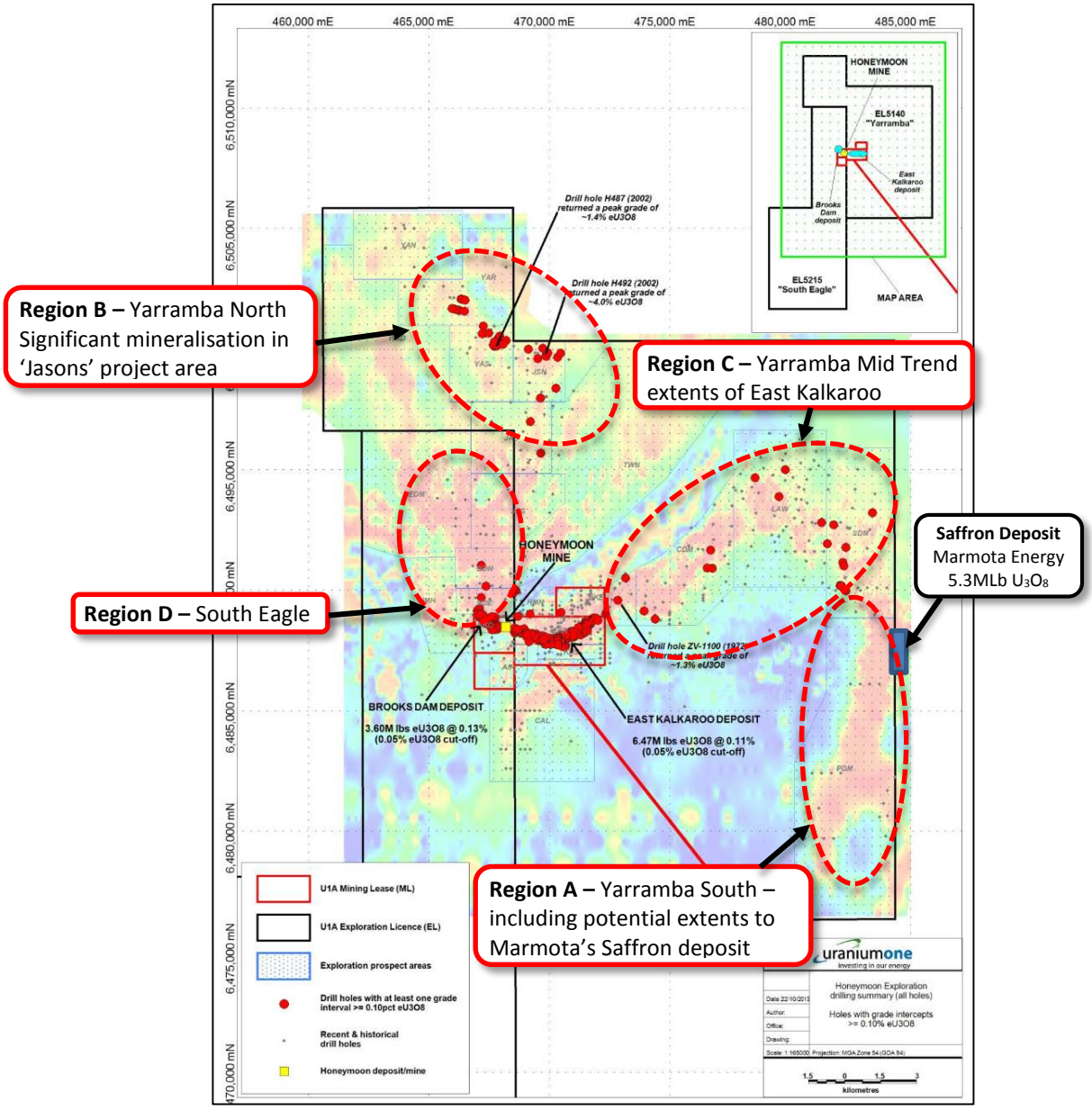


Figure 2: Eastern Exploration Target Regions. Shown on a conductivity map with historical drilling and intercepts. Note: Red, orange and yellow indicate potential paleochannel areas. (Base image source: U1A).

Further work is required to validate and further understand the quality of the historical drilling information; this includes investigations to quantify localised radioactive disequilibrium effects, quality of the historical radiometric assaying and hydrogeological characteristics of the encountered mineralisation. Details of the Exploration Target methodology are shown in Appendix 2.

Work undertaken to test the Exploration Target will include additional data compilation and analysis in 2016, assessment of the existing drillhole database for potential mineral resource assessment, sampling of sonic drill core taken at the Honeymoon Mine, twin drilling of existing holes using sonic core, rotary mud drilling, and additional geophysical investigations (including seismic and EM) and modelling. Work will be systematically conducted over the next 3 years to convert the Exploration Target to JORC resources.

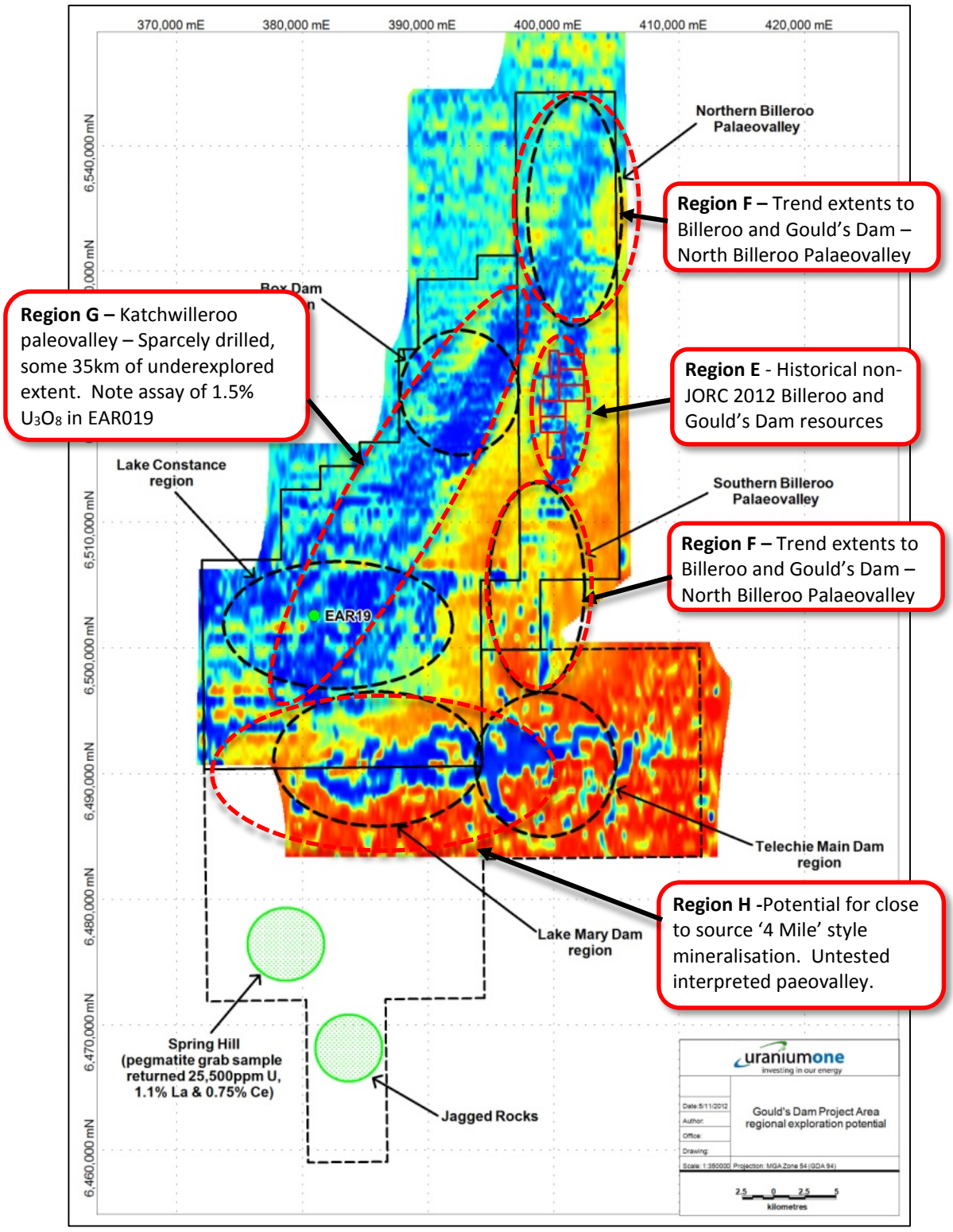


Figure 3: Western Exploration Target Regions. : Blue regions indicate potential paleochannel areas. (Layered Earth Inversion (LEI) depth slice of merged AEM datasets – 100) (Base image source: U1A).

About the Honeymoon Uranium Project

The Honeymoon Uranium Project (Figure 4) is located in South Australia, approximately 80km north-west from the town of Broken Hill near the SA / NSW border. The Project consists of 1 granted Mining Lease, 5 granted Exploration Licenses, 8 Retention Leases and 2 Miscellaneous Purposes Licenses.

There are 2 main exploration regions: the Eastern Region (ELs 5215 and 5621) which hosts the Honeymoon, Brooks Dam and East Kalkaroo Resources; and the Western Region (ELs 5043, 5623 and 5622) which hosts the Gould's Dam and Billeroo deposits which have historical Mineral Resource estimates.

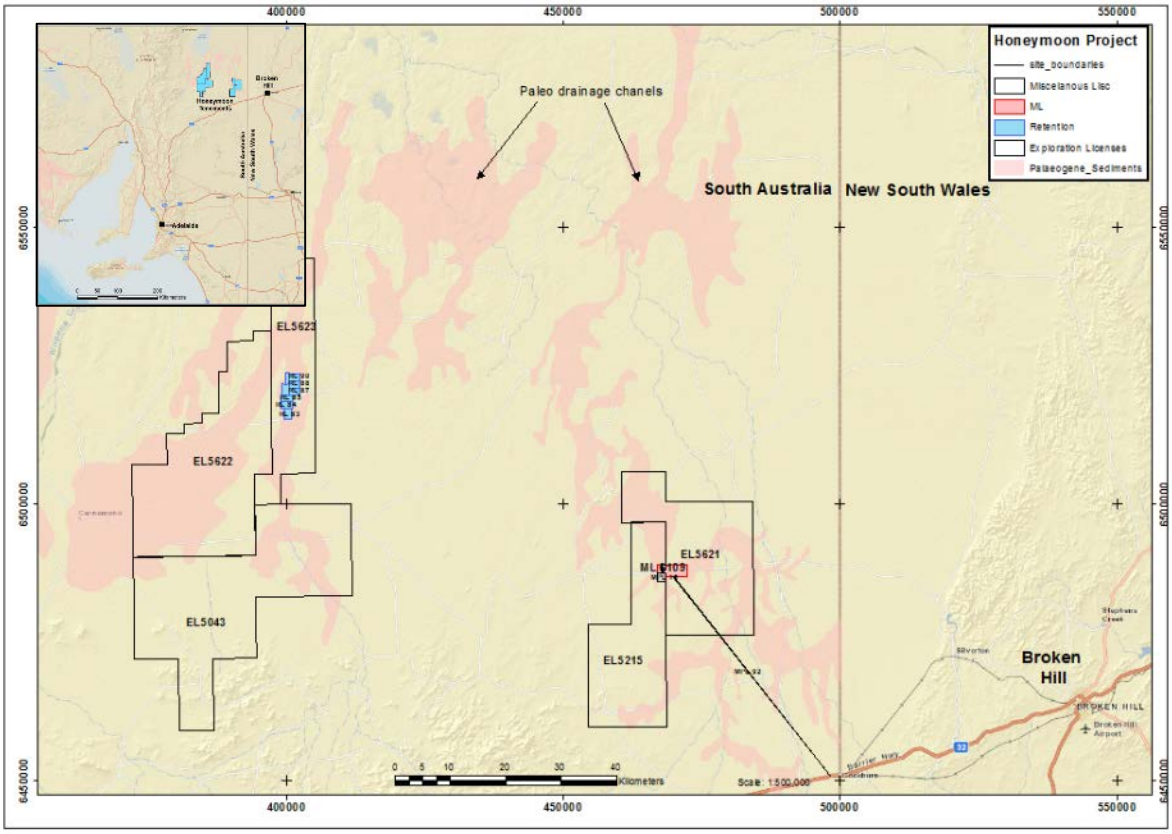


Figure 4: Honeymoon Uranium Project. The pink shaded regions represent palaeodrainage channels which have potential to host uranium mineralisation and are the focus of exploration efforts.

Exploration Team

Dr Marat Abzalov

Dr Abzalov graduated with High Distinction from the Kazan University in Russia in 1983 and obtained his PhD (Geology) in 1987 from St. Petersburg University, Russia, completing a thesis on magmatic nickel sulphide near the western Russian border with Finland. He has undertaken post-graduate studies in Applied Mathematics at Murdoch University, Perth, and Geostatistics at the Centre of Geostatistique, Fontainebleau, France.

With over 30 years of post-graduate experience in geology, Dr Abzalov's work experience includes the Russian Academy of Sciences, WMC Resources where his last role was Geology Manager – Projects, and Rio Tinto, where he held the roles of Manager – Geostatistical Consultant and Exploration Manager – New Opportunities (Eurasia) where he predominantly reviewed ISL uranium projects in Kazakhstan and the USA.

During his professional career, Dr Abzalov has worked on 12 uranium projects worldwide, notably:

- Rossing (Namibia) - resource model for a long term mine plan
- Olympic Dam (Australia) - pre-feasibility study
- Ranger (Australia) - optimisation resource definition drilling programme
- Khan (Jordan) – technical director responsible for all aspects from conceptual exploration model to resource definition drilling
- Budenovskoe (Kazakhstan) - identified acquisition opportunity for Rio Tinto
- Sweetwater (USA) - development of a new geochemical exploration approach

Mr Neil Inwood

Neil Inwood is a professional geologist with 20 years' multi-commodity project and consulting experience in Australia, Africa, USA, Europe, South America and Central Asia. Neil has a BSc in Geology from Curtin University, an MSC in Geology from the University of Western Australia and has studied geostatistics at Edith Cowan University.

Neil was formerly a Principal Consultant with international mining consultancy group, Coffey Mining, and was Competent Person (ASX) / Qualified Person (TSX) for a variety of international uranium, gold, nickel, base metal and iron ore projects. Neil has consulted on uranium projects in Australia, Czech Republic, Columbia, Hungary, Namibia and the USA and was the lead resource consultant on the world-class Husab uranium deposit in Namibia. Other uranium projects include:

- Extract Resources - Husab Uranium Project in Namibia
- Bannerman Resources - Etango Uranium Project in Namibia
- Deep Yellow - Namibia and Australian Projects
- Energia - Nyang ISL Project in Western Australia
- Wildhorse Energy Ltd - Pecs Uranium Project in Hungary
- U3O8 Corp - Argentine and Brazilian Uranium Projects (Berlin Project)
- Atom Energy - Utah Projects

HONEYMOON GEOLOGY

The Honeymoon Uranium Project is located in the southern part of the Callabonna sub-basin in South Australia. Uranium mineralisation within the project area is hosted by the Yarramba and Billeroo palaeochannels (Figure 4). These consist of Palaeogene age palaeovalleys filled by a sequence of

inter-bedded sand, silt and clay). Thickness of the palaeochannels at Honeymoon deposit area reaches a maximum of 55m thick, and is around a depth from surface of approximately 110 metres.

The uranium mineralisation represents a classic basal channel type sandstone-hosted uranium roll-front model. This model implies the movement of oxidised, uranium-bearing fluid through a largely reduced aquifer, with mineralisation occurring at the redox front of the fluid. A geochemical zonation is associated with the roll front, including oxidation of the sands upstream (orange and yellow limonite) and abundance of pyrite/marcasites and organic matter downstream. Mineralisation is associated with discreet accumulations of organic matter and pyrite within the palaeovalley sequence.

Distribution of the uranium accumulations within the palaeochannels is controlled by fluid pathways that have transported the dissolved uranium and the distribution of organic matter which served as reductants causing precipitation of uranium. Interplay of these two main factors has created a stacked geometry of the "uranium rolls" commonly distributed as elongate pods along the strike of the palaeovalley. These features are similar to the uranium mineralisation styles seen in the Shinarump, Monitor Butte and Moss Back members of the Upper Triassic Chinle formation in the White Canyon areas of the uranium mining districts of South Eastern Utah USA.

RESOURCES

The July 2015 JORC Mineral Resources for Honeymoon, Brooks Dam and East Kalkaroo are summarised in Table 2. In total, they contain 5.3Mt of mineralisation at the average grade of 0.14 % U_3O_8, which corresponds to 16.6Mlb (7,540 tonnes) of contained U_3O_8 above a 0.05% U_3O_8 lower cutoff.

All Mineral Resources are located below the water table at the depth of approximately 100m and hosted by the paleochannel sedimentary sequence composed by weakly lithified permeable sands intercalated with clays. Previous hydro-geological test work including pilot production mining study have confirmed that Mineral Resources are amenable for exploitation using in situ leach technologies.

Table 2 – Honeymoon Project Resource Summary – 13 July 2015

Classification	Cut-off grade (% U_3O_8)	Tonnage (Mt)	Grade (% U_3O_8)	Contained U_3O_8 (Thousand Tonnes) [1]	Contained U_3O_8 (Million Pounds)
Honeymoon					
Indicated	**0.05**	**1.44**	**0.23**	**2.97**	**6.54**
[1]Total adjusted to account for historical production of ~335 tonnes U_3O_8. Note: Figures have been rounded					
Brooks Dam (BKD)					
Indicated	0.05	0.78	0.11	0.87	1.92
Brooks Dam Extension (BDE)					
Inferred	0.05	0.51	0.15	0.75	1.66
East Kalkaroo					
Inferred	0.05	2.56	0.11	2.94	6.45
Combined Honeymoon, Brooks Dam, Brooks Dam Extension and East Kalkaroo					
Indicated and Inferred	0.05	5.3	0.14	7.54	16.57

For further information, contact:

Evan Cranston: +61 (0) 408 865 838

Grant Davey: +61 (0) 447 753 163

Competent Persons' Statements

The information in this document that relates to the Honeymoon Mine Project Exploration Target and associated Exploration Data is based on information provided by Mr. Neil Inwood, who is a Fellow of the AUSIMM. Consent is granted only for the purposes of outlining an Exploration Target, no warranty is made on the use of the exploration information and data for other purposes. Mr Inwood is a consultant geologist and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken to qualify as Competent Persons as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr. Inwood has consented to the inclusion of this information in this document in the form and context in which it appears.

The information in this document that relates to the Honeymoon Mine Project Resources is extracted from the report entitled "Boss Acquires Honeymoon Uranium Project" in the release of 1 September 2015 and is available on 'www.bossresources.com.au' . The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.'

Appendix 1.

JORC Code, 2012 Edition – Honeymoon Project (Eastern and Western Tenements) Table 1

Section 1 Sampling Techniques and Data

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

Criteria	Commentary
Sampling techniques	• Uranium levels were determined by use of a variety of tools including: Prompt Fission Neutron (PFN) tools (Honeymoon and Gould's Dam regions) and several generations of traditional down hole gamma grade (over both the eastern and western tenements). Several reports are available on the suitability of PFN tools for assessing down hole Uranium concentration in ISR deposits. • Downhole PFN reading spacing ranges between 2-10cm and has a depth penetration around hole of between 25 and 40cm. Gamma, Induction and resistivity tool reading spacing was between 1-5cm. Uranium One (U1) and Southern Cross Resources (SXR) sample intervals are recorded in original .LAS files. Historical gamma data is available as hard-copy. • U1 and SXR tools were maintained by specialised electronic companies in Adelaide. These companies were - Geoscience Australia Pty. Ltd. (who at the time were the holders of Patents for Jim Turner PFN technology) and CIRA Pty. • U1 undertook calibration of instruments on a regular basis using both the in house calibration pits on site at the Honeymoon mine and the certified calibration facility at Glenside, Conyingham St Adelaide. Historical tools were variously calibrated, some in Adelaide. • While logging holes, U1 commonly undertook multiple runs both up and down hole were made for comparison and to ensure consistency of readings. • Early mud drilling and logging is to be treated as historical data, but it is assumed that these programs were conducted at Industry standards of the day (mid 1970's-80's).
Drilling techniques	• The drilling technique employed for U1 was been rotary mud with Kelly drive rigs conducted to industry standard by a number of specialised water bore drilling companies including Thompson Drilling and Watson Drilling. Historical drilling ranged from RAB to mud rotary and diamond drilling. • U1 holes vary between 4 and 9 inches in diameter (100mm to 228mm). Occasional hard bands above the mineralised zone required swapping to rock roller bits to enable penetration. • Sonic holes were also undertaken at Gould's Dam and Honeymoon. Diamond drilling has also been undertaken at the Honeymoon/East Kalkaroo project regions.
Drill sample recovery	• Diamond drilling often recorded low ample recovery. • Sonic core recorded good sample recovery. U1 sonic drilling core recovery averaged ~95%. • The PFN tool is considered to measure a much larger insitu sample volume compared to collection of physical sample (e.g. core). • Chip samples were collected by U1 and SXR and used to verify geological data obtained from electric logs and generally had good sample recovery. Rotary mud drilling inherently allows sample contamination and sample mixing so chemical assaying of recovered chips is considered to be of little value and was not undertaken. • Triple tube coring program suffered core loss due to the unconsolidated nature of the lithology.
Logging	• U1 - Chip samples have been collected, photographed and were geologically logged for colour, grain size, texture, sorting, alteration and oxidation state. This level of detail supports the mineral resource estimate. • Additional geological information was obtained for downhole electric logs (resistivity, conductivity and porosity). These logs give additional information about lithology, mineral content, variations in porosity and positions of lithological boundaries • All mineralised intervals used in the resource calculation were geologically logged and the general standard of the logging is adequate for accurate geological interpretation • All historical holes were logged geologically. Logging systems varied across explorers though.
Sub-sampling techniques and sample preparation	• The U1 PFN tools down hole interval and depth of formation penetration provide sample sizes appropriate to the deposit style. U1 compared the grade determinations of multiple PFN runs both up and down hole were compared with gamma readings from the gamma sonde on the PFN tool and with and independent gamma sonde on a different tool to ensure consistency of grade readings. • Pre-1980's drilling programs were variably corrected for K-factor, formation factor, hole size etc., and are of varying levels of quality. • Radiometric data post the 2000's is generally of industry standard quality.
Quality of assay data and laboratory tests	• PFN technology was originally developed as a downhole logging technique by Mobil R&D and Sandia Laboratories in the United States during the 1970's specifically to directly measure in-situ uranium grades in sandstone-hosted uranium deposits. Unlike historical gamma techniques, PFN directly measures uranium's 235U isotope and therefore does not suffer the problem of disequilibrium and it is much less affected by variable formation properties such as salinity and porosity. Grade determination of sub-300ppm eU_3O_8 material may be close to the machine design limits.

Criteria	Commentary
	• A Quality Control check of PFN grades for the HML series holes was undertaken in 2006 by an independent consultant that compared PFN results with XRF assays of quarter core (Lawie, 2006) and concluded the results are "consistent with a properly functioning analytical system." Geophysical tools used to collect data included: • Tool — Serial# • Auslog Gamma (with Guard) — S422 • Induction (run with guard) — S423 • Prompt Fission Neutron tool — PFN#4 • Prompt Fission Neutron tool — PFN#8 • Prompt Fission Neutron tool — PFN#27 • Prompt Fission Neutron tool — PFN#32 • Gamma combined with guard — S058 • Auslog 3 arm calliper — A326 • U1 - All tools were regularly calibrated, for gamma tools K-factors, dead times were determined from calibration pits. Moisture / Density Factors and correction for hole size were applied. • For U1 PFN tools, 3 pit slope and offset method was used to calibrate the tools. During logging, correction factors for sensor depth, bore hole size and formation moisture content were applied. Holes were logged in both down and up direction to check for consistency of logs, depth corrections were made by comparison of separate gamma tool runs. • U1 - Logging data is transferred from logging truck computers to servers in geological office as .LAS files (an industry standard log file format). • U1 - Geological logs are entered on paper then transcribed on to excel spreadsheet logging was carried out by either in house U1A loggers or external logging contractors (Borehole Wireline Pty. Ltd. and Independent Logging services) significant intersections were then verified by site geologists. • At Honeymoon, 42 production wells were sited close to previous HML series exploration holes which provided the opportunity to view "twinned" holes for verification and cross checking. A series of these were checked to ensure that grades were of similar magnitude and downhole depth of the grade peaks occurred around the same interval. Lithology data was checked via interpretation of the electric logs to ensure no gross lithological differences were apparent. • Primary data is recorded directly to computer hard disk in the logging truck and transferred to a server at the end of the days logging. Each log is reviewed by the logger and a copy of the raw data file and the prepared log were then handed over to the site geologist. The site geologist will make any depth corrections required and then use the log to interpret geology. • Copies of raw LAS files, geological logs of chip cuttings and final WellCad Logs are kept on the company computer server. • The quality of some historical radiometric data (e.g. pre-1980's) is potentially variable.
Location of data points	• The projection adopted for surveying is GDA 94, MGA zone 54 with AHD elevation. All surveys were tied to the existing registered base stations • For the U1 HML program, Haines Surveys established a 40m grid over the Honeymoon deposit area using a Trimble 4000 Real Time Kinematic (RTK) GPS system, whilst simultaneously collecting gravity readings. Accuracy of the system is better than 2cm both vertically and horizontally. This grid, preserved by wooden pegs, was used to locate the majority of the drilling in these programmes, with the rig being positioned to within sub-metre accuracy from the locating peg. Any off-grid holes were triangulated using measurements from at least three surrounding pegs. While the completed holes were being logged, each collar was also picked up using a handheld GPS, to ensure the correct grid peg location was used. Final RLs for all holes were calculated from an Inverse Distance Squared gridded model of the AHD levels collected during Haines' Survey. • For all later series of holes, positions are set out using a Garmin handheld GPS, after drilling, hole locations are picked up with a Trimble differential GPS system that is coupled to the Omnistar augmentation system to improve accuracy. • Topographic control was improved by Aerometrx Pty. Ltd flying 10cm pixel aerial photography which was rectified using registered survey points installed at site before plant construction began. • Historic hole were located on local grids, the origins of these grids have been established and the collar positions converted. • For all later series of holes, positions are set out using a Garmin handheld GPS, after drilling, hole locations were picked up with a Trimble differential GPS system that is coupled to the Omnistar augmentation system to improve accuracy.
Data spacing and distribution	• At Honeymoon, the average drill hole data spacing (including production drilling) is sub 30m. • More reginal drill spacing in the Katchiwilleroo region is broad and ranges from 1km to 6km. Other resource region drill spacing ranges from 30m (Goulds Dam) to 50m to 200m spacing (Billeroo).
Orientation of data in relation to geological structure	• Almost all drilling was by vertical holes into the predominately flat lying mineralisation and followed along geological strike minimizing any chance of sample bias. Drill spacing ranges from spacing adequate for resource definition (sub 50m) e.g. at the Honeymoon, East Kalkaroo, Brooks Dam, Billeroo and Gould's Dam Projects) to 100s of metres to several kilometres (e.g. Areas B, F, G and H). Further details are given in Appendix 2.
Sample security	• NA

Criteria	Commentary
Audits or reviews	• A comparison of PFN vs. XRF U assaying was carried out by an independent consultant in 2006 with favourable results. • From 01/12/2010 to 03/12/2010 and alternative downhole tool (USAT) was trialled at Honeymoon by Century Geophysics Pty. Ltd. and Ground Search Aust. Ltd. It confirmed the accuracy of the PFN readings but offered no significant advantages over the current technology. •

Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	• The project is located on granted ML and EI's approximately 80km North West of Broken Hill and about 400km north east of the regional capital city of Adelaide near the South Australia/New South Wales border. U1A currently holds a 100% interest in the project. • A discounted state royalty of 1.5% is payable to the South Australian state government, in the future, this will increase to the normal 5% state royalty • The Mining lease falls within Native title claim SC94/1 held by the Adnyamathanha traditional owners association (ATLA) and a native title mining lease agreement (NTMLA) signed on 3rd February 2002 exists between U1A and ATLA that includes the payment of a 1.5% royalty and an annual administration fee. • The mine is currently in a state of care and maintenance but all licenses and permits are understood to be able to be re-activated after site inspections when production is due to re start. • As of the date of this document, all licenses are in good standing.
Exploration done by other parties	• Exploration for Tertiary sediment-hosted uranium occurrences commenced in the southern Lake Frome region in 1968. Philosophy followed closely on United States sediment-hosted uranium exploration experience, particularly that from the Tertiary basins of Wyoming. In the Curnamona region, assessment identified potentially favourable buried fluviatile sands adjacent to uranium-enriched source rocks. • The genetic model used assumed leaching from permeable sands, transport down the hydrological gradient and deposition at a reduction-oxidation interface. Exploration methods employed open-hole rotary drilling and wire-line geophysical logging as a reconnaissance exploration tool, although surface geophysical methods, primarily resistivity and gravity surveys, were also used with limited success to locate and map Tertiary Palaeovalleys. • Exploration in the Gould's Dam broader region includes: Rudd (1968-70) EAR series, Petrocarb (1971 – 535 and 580 series), Pacminex (1971-73) – PMX series, Minad-Teton (1974-80) SE, BW and MTC series, Pacminex (1980) – GD series, PNC exploration (1985-87) – G series and SXR – (1998-2006) – G and H series and U1A(210-2014) HEX series.
Geology	• Recent work on the Honeymoon deposit suggests that uranium mineralisation in the Yarramba Palaeochannel occurs predominantly as "pods" or "lenses", associated with the interaction between oxidised, uranium rich, meteoric waters and discreet accumulations of organic matter/pyrite within the palaeovalley sequence. These meteoric waters have migrated through the channel, probably in response to tectonic events (major uplift episodes since the late Mesozoic (Skirrow 2009). The formation and characteristics of these mineralised pods is a function of both the fluvial depositional environment and the formation of reductant. The resulting pH change at the REDOX boundary leads to the deposition of the uranium at or around these REDOX fronts. • This style of mineralisation is interpreted to be similar to that seen in the Shinarump, Monitor Butte and Moss Back members of the Upper Triassic Chinle formation in the White Canyon areas of the uranium mining districts of South Eastern Utah USA.
Drill hole Information	• Drill hole coordinates for the Honeymoon region are shown in the reported dated 1 September 2015 titled 'Boss Acquires Honeymoon Uranium Project'. Other drill holes coordinates are shown diagrammatically. Exploration results have previously been reported by SRX and U1A on the ASX and TSX respectively. Example Drill hole coordinates, intercepts and logs are shown in Appendix 2. • This statement relates to an Exploration Target only, exploration results have been announced by Boss and by Uranium 1 pursuant to its reporting obligations to TSX.
Data aggregation methods	• Expiration results have been aggregated based upon gamma and PFN derived eU_3O_8 grade intervals (2-10cm). No high-grade cut has been applied. A nominal 300ppm eU_3O_8 or 500ppm eU_3O_8 lower cut-off has been applied. Minimum intervals of 0.5m have been used. It has been assumed that the gamma data is in radioactive disequilibrium.
Relationship between mineralisation widths and intercept lengths	• The mineralisation is interpreted to be predominantly sub-horizontal; accordingly the vertical drilling would produce near true thickness intercepts.
Diagrams	• Diagrams of the drill holes distribution and grade thickness examples are shown in Figures 2 to 6.
Balanced reporting	• This statement relates to an Exploration Target, exploration results have been announced previously by Uranium 1 pursuant to its reporting obligations to TSX. It is noted that much of the historical drilling in the Katchwilleroo region and Ethiunda region have not intercepted significant uranium mineralisation – these results have not been reported

Criteria	Commentary
	as the targeting is on areas of potential mineralisation.
Other substantive exploration data	• Honeymoon has been the subject of extensive drilling and reporting since the late 1970's and there are previous published JORC/Ni-43101 resource estimate reports. • AEM modelling has been used to estimate the paleochannels over both the eastern and western tenement regions. The results from this work is fundamental in targeting paleochannels for future drilling.
Further work	• Future work will focus on compiling a robust project-wide geological database, re-interpretation of exploration data, sonic twin holes (Honeymoon, Jasons and East Kalkaroo), assaying of existing sonic holes (Honeymoon) and planning for a mud rotary program in the Eastern tenements. • Experiments using high definition rapid seismic reflection and refraction will be completed to determine its utility in defining sequence stratigraphy and channel morphology in the depth dimension. • Experiments will also be completed using electrical/electromagnetic survey techniques which potentially can greatly improve efficiency and effectiveness of definition of the palaeochannel morphology. • An integrated exploration program using cooperative modelling of the different geoscience datasets will be undertaken

Appendix 2 – Exploration Target Detail

Eastern Region Exploration Targets

The historical and recent data relied upon for the Eastern tenements Exploration target is shown in Figure 6 A total of 1,847 historical holes (Table 3) from within vicinity of the Honeymoon Eastern Region tenements were available. Of these holes, 1260 had radiometric grade data available for the review.

Table 3 – Drilling Within the region of the Honeymoon Eastern Tenements

Company	# Holes	Min Depth (Metres)	Max Depth (Metres)	Total Metres
Unknown	4	120	125.03	485
MINAD	329	0	136.62	39,322
Minad Teton JV	349	68	146.5	42,560
Mount Isa Mines	47	10.67	169.2	4,850
Rio Tinto	216	30	501	26,347
SA Dept Mines & Energy	1	122.3	122.3	122
Sedimentary Uranium	362	45.7	185.8	43,057
SXR	539	38	176	62,990

The Region A Exploration Target (Figure 6) is focused on the south-eastern extents of the Yarramba Palaeovalley and interpreted trend extents of the nearby Saffron deposit belonging to Marmota Energy. There are 2 broadly spaced U1A drill lines in this region (2 lines 5km apart, 500m spacing – best analysis of 1m @ 700ppm pU_3O_8 from 121.9m– YAM005) and the exploration target is based upon an assumption of geological similarity and indications of the presence of mineralisation from YAM005. Drill spacing ranges from 100m to over 1km.

The Region B exploration target (Figure 6) is based upon multiple significant intercepts by U1A and previous workers and an approximation of potential mineralised volumes. Examples of significant intercepts are tabulated below in Table 4 and an example section is shown in Figure 5. Drill spacing ranges from 100m to over 500m.

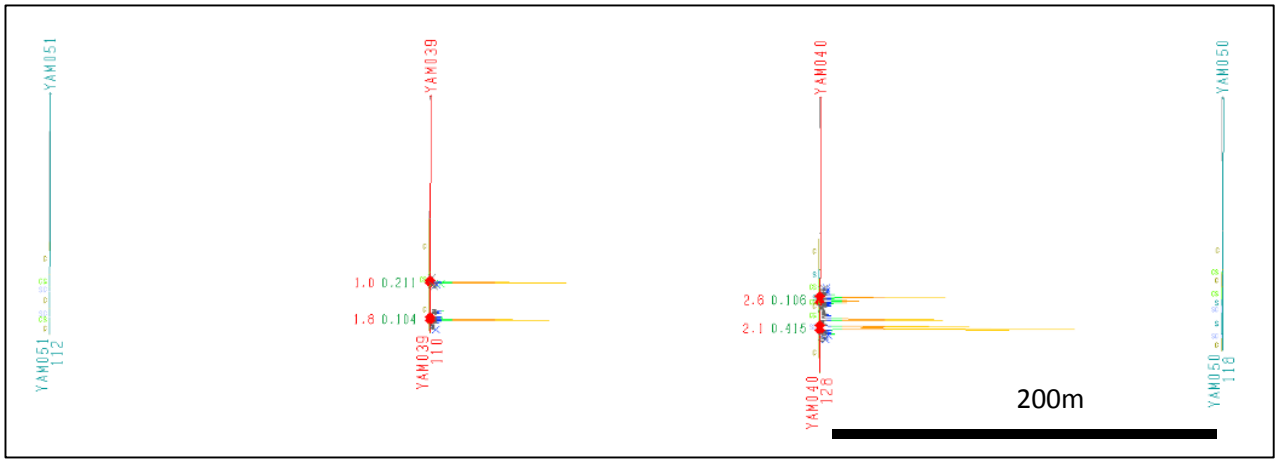


Figure 5 – Region B – Section A (See Figure 6): Showing PFN grades in recent drillholes. Note hole spacing is approximately 200m.

Table 4– Region B - Example Drill hole Intercepts

HoleID	Easting	Northing	RL	EOH	Depth	Thickness	eU_3O_8 (%)
YAM050	467713	6500950	120	118		No significant intercepts	
YAM051	467372	6500527	120	112		No significant intercepts	
YAM039	467479	6500667	120	110	86.1	1.0	0.211
					102.8	1.8	0.104
YAM040	467479	6500667	120	110	92.6	2.6	0.106
					106.3	2.1	0.415
580_018	580_018	467679	6500157	95	102.55	4.44	0.107
580_057	580_057	467652	6500008	96	86.98	1.35	0.025
580_058	580_058	467715	6500302	95	79.769	2.08	0.028
					85.157	3.81	0.072
MTC111	MTC111	467671	6500099	95	93.304	3.96	0.029

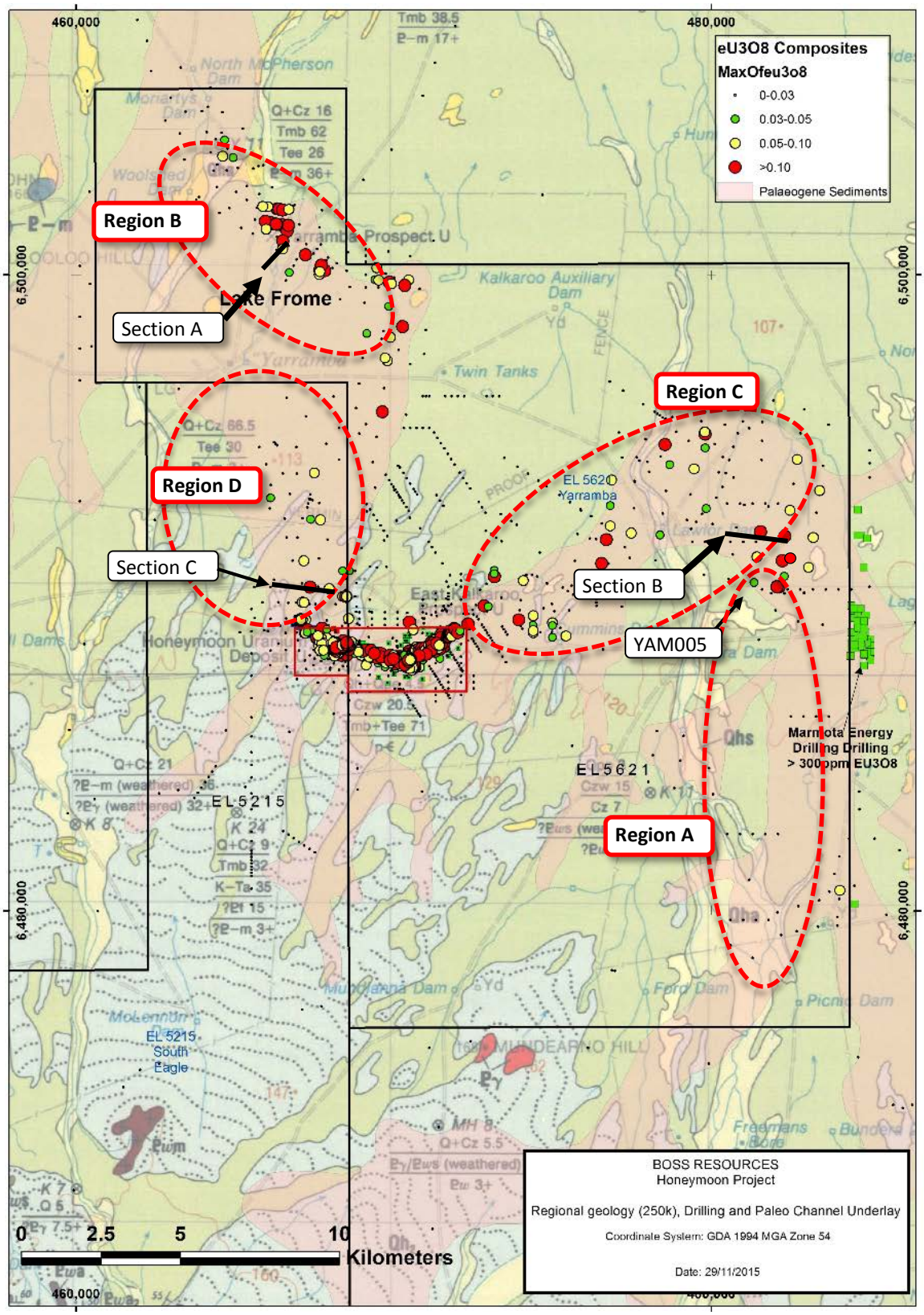


Figure 6: Honeymoon Region Tenements. Showing max eU_3O_8 composites (minimum 25cm composite) from historical drilling from within the paleo-valley sediments. *Note: composites shown from other companies external to Boss's tenements are taken from publicly available sources and no implication is made on data quality.*

The Area C Exploration Target was based upon a review of the broad scale drilling (200m to 700m spacing) in the eastern portion of the Yarramba palaeovalley and on potential trend extents of the East Kalkaroo deposit. Figure 6 shows an example

section with mineralisation indicated by historical drilling. It is noted that in some sections the 580 series of drilling (Petrocarb – 1971) have a higher tenor than the nearby H series hole (SXR – 2000's) or YAM series (SXR/U1A – 2000's), but mineralisation is indicated in all programs. This may be the result of a combination of geological complexity (note the 800m effective drillhole spacing) or the 580 series of drill data being less reliable. Further investigation is required to assess the tenor of mineralisation within this region. Example drilling intercepts are shown in Table 5.

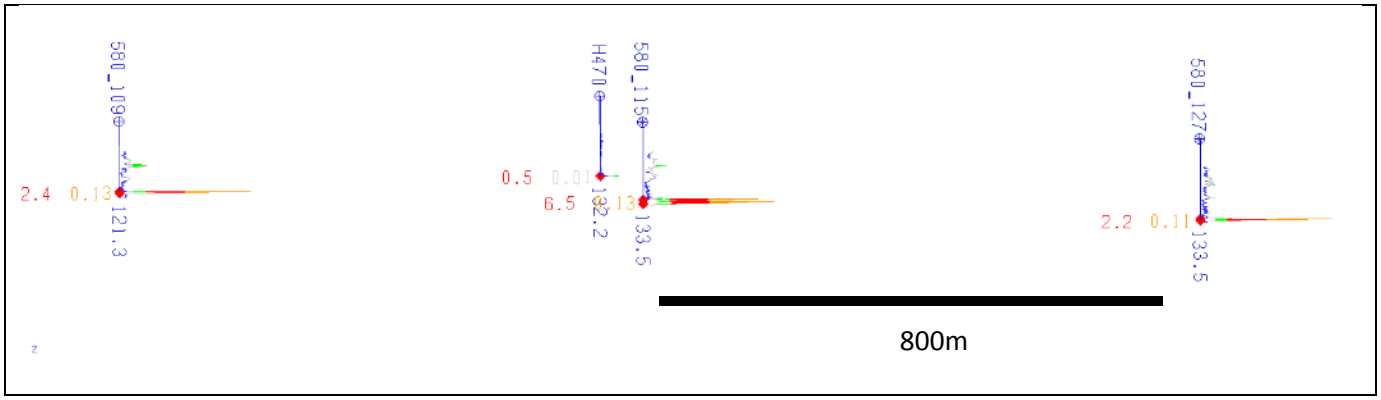


Figure 7: Region C – Section B (See Figure 6): Example section showing historical eU_3O_8 grade data (gamma) and significant composites (LHS thickness, RHS eU_3O_8 %).

Table 5– Region C - Example Drill hole Intercepts							
Hole ID	Easting	Northing	RL	EOH	Depth	Thickness	eU_3O_8 (%)
580_109	580_109	481427	6491120	111	111.19	2.4	0.13
580_115	580_115	482222	6491002	110	123.14	6.5	0.13
580_127	580_127	483057	6490791	109	128.28	2.2	0.11
H470	H470	482172	6491148	108	127.1	0.5	0.01

The Area D Exploration Target was based upon a review of the broad scale drilling (500m to 1300m spacing) in the northern and central portions of the Yarramba Palaeovalley with the Boss tenements; a general endowment was estimated based upon the tenor of drilling and general volumes of mineralisation. Figure 7 shows an example section with mineralisation indicated by historical drilling (Minad Teton JV – 1974-1980). . Example drilling intercepts are shown in Table 6.

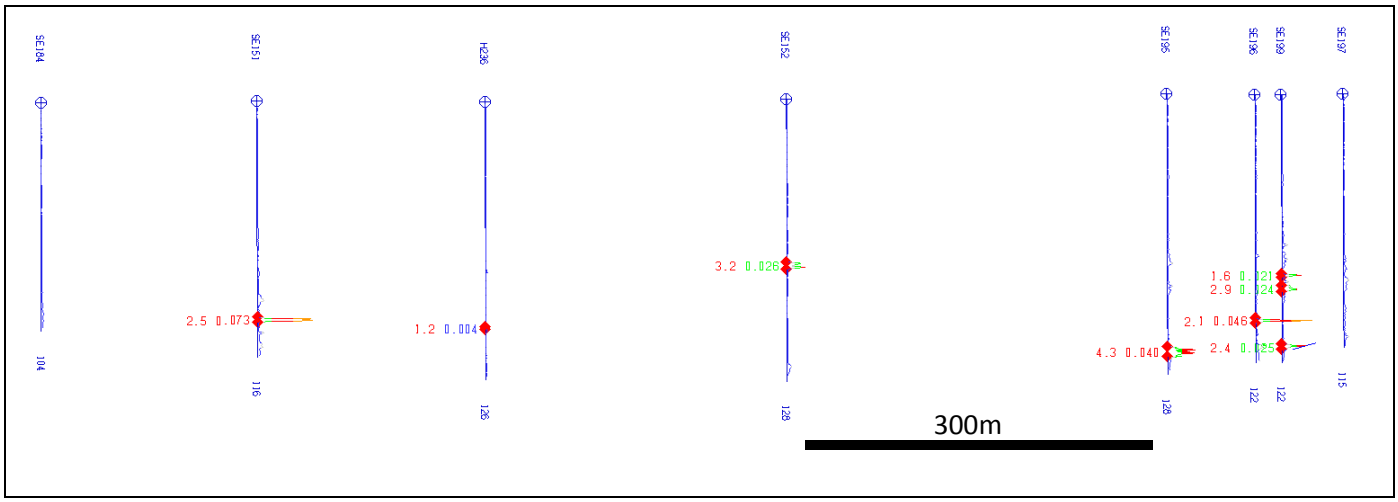


Figure 8: Region D – Section C (See Figure 6): Example section showing historical eU_3O_8 grade data (gamma) and significant composites (LHS thickness, RHS eU_3O_8 %). *Note 3:1 vertical exaggeration*

Table 6– Region D- Example Drill hole Intercepts							
HoleID	Easting	Northing	RL	EOH	Depth	Thickness	eU_3O_8 (%)
580_109	481427	6491120	107	121	111.2	2.4	0.129
580_115	482222	6491003	107	134	123.1	6.5	0.132
580_127	483057	6490791	107	134	128.3	2.2	0.112
H236	467622	6490180	112	126	101.8	1.2	0.004
H470	482172	6491148	108	132	127.1	0.5	0.013
SE151	467362	6490170	113	116	97.8	2.5	0.073
SE152	467962	6490120	113	128	73.9	3.2	0.026
SE184					No Significant intercepts		
SE195	468387	6489880	114	128	114.9	4.3	0.04
SE196	468487	6489880	114	122	101.2	2.1	0.046
SE199	468517	6489880	114	122	81.2	1.6	0.021
					86.8	2.9	0.024
					113.4	2.4	0.025
SE201	468487	6490080	114	134	117.0	1.5	0.012

Western Region Exploration Targets

Four general regions (E, F, G and H) were grouped for the Western Tenement s exploration Target (Figure 2). Some 613 drillholes have been drilled over the tenements (Figure 8 and Table 7), 559 of these have been drilled since 2004 and were predominantly concentrated on defining the historical resources (non-JORC 2012) for the Billeroo and Gould's Dam deposits.

Table 7: Drillhole Statistics for the Western Tenements

All Drilling

Current U1 tenement	# of holes	Total metres	Average depth (m)
EL3905 Gould's Dam	501	65,952	131
EL3906 Katchiiwilleroo Dam	36	4,365	121
EL3714 Ethiunda	76	4,001	52
TOTAL	**613**	**74,318**	

Post 2004 Drilling

Tenement	Year	Hole ID from	Hole ID to	No. of holes	Total metres
EL3905	2004	GLD001	GLD117	117	15,312
EL3906	2005	KAT001	KAT026	26	3,494
EL3714	2005	ETH001	ETH026	26	3,072
EL3905	2005	GLD118	GLD148	31	4,080
EL3905	2006	GLD149	GLD245	97	12,872
EL3714	2007	ETH027	ETH111	86	9,052
EL3905	2009	GLD246	GLD394	149	19,856
EL3905	2010	GLD395	GLD420	27	3,564
Total:				**559**	**71,302**
Totals for EL3905 "Gould's Dam"				*421*	*55,684*
Totals for EL3906 "Katchiililleroo Dam"				*26*	*3,494*
Totals for EL3714 "Ethiunda"				*112*	*12,124*

The Exploration Target for Region E (the Gould's Dam and Billeroo deposits) was based upon a review of the endowment of non-JORC 2012 resource estimates undertaken on behalf of SXR and U1A by previous workers from 2001 to 2013. The Gould's Dam/Billeroo Deposits occur along a 15km long trend of mineralised paleofluvial sediments. Example intercepts and collar positions are shown in Tables 8 and 9. Figure 9 shows grade contours in the Gould's Dam and Billeroo region. Figure 10 shows an example section from Gould's Dam. Drill spacing at Gould's Dam ranges from 40 to 100m and the drill spacing in the Billeroo region ranges from 40m to 200m.

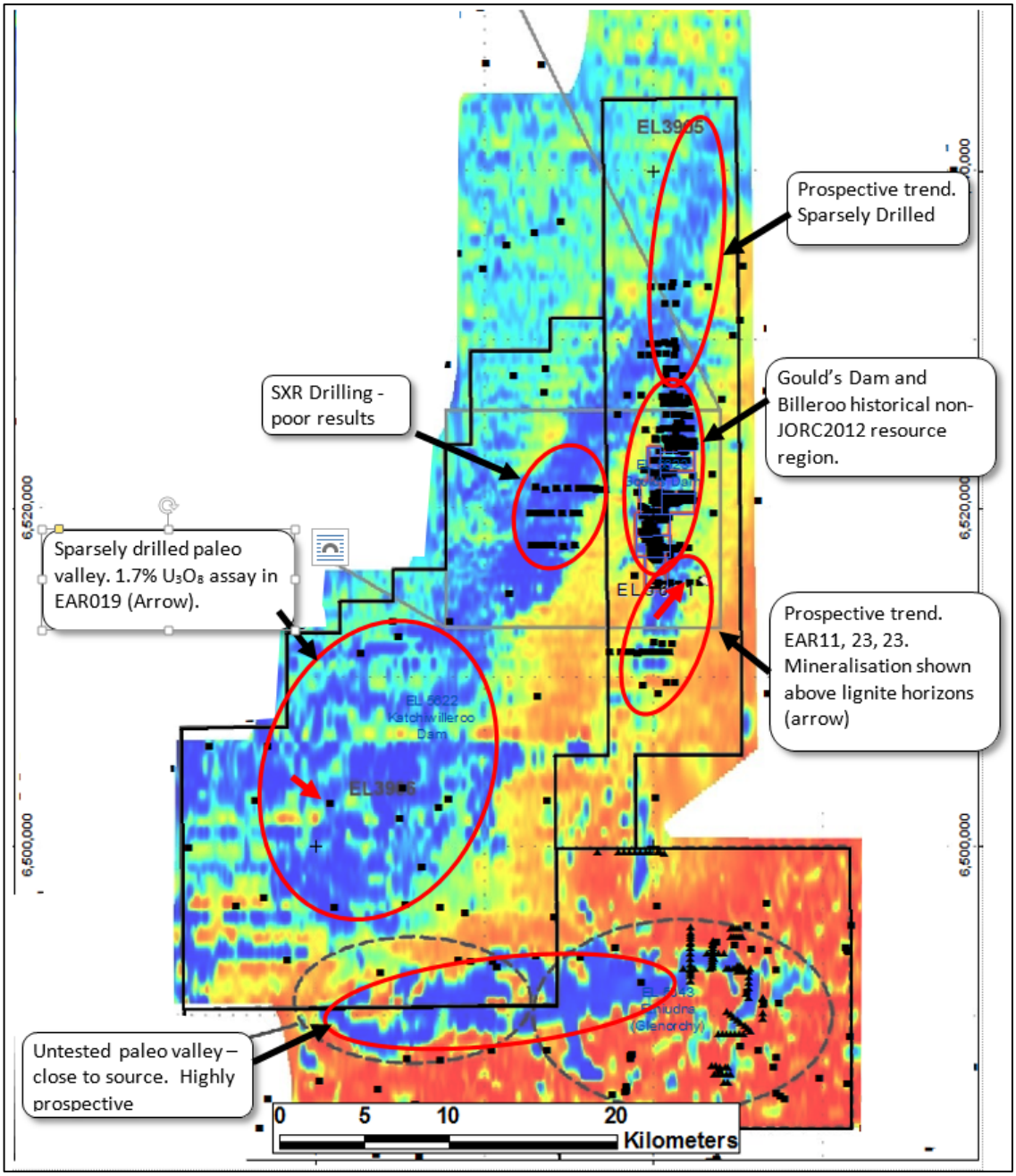


Figure 9: Historical Drilling undertaken on the Western Region tenements. Blue colours indicate interpreted paleo valleys.

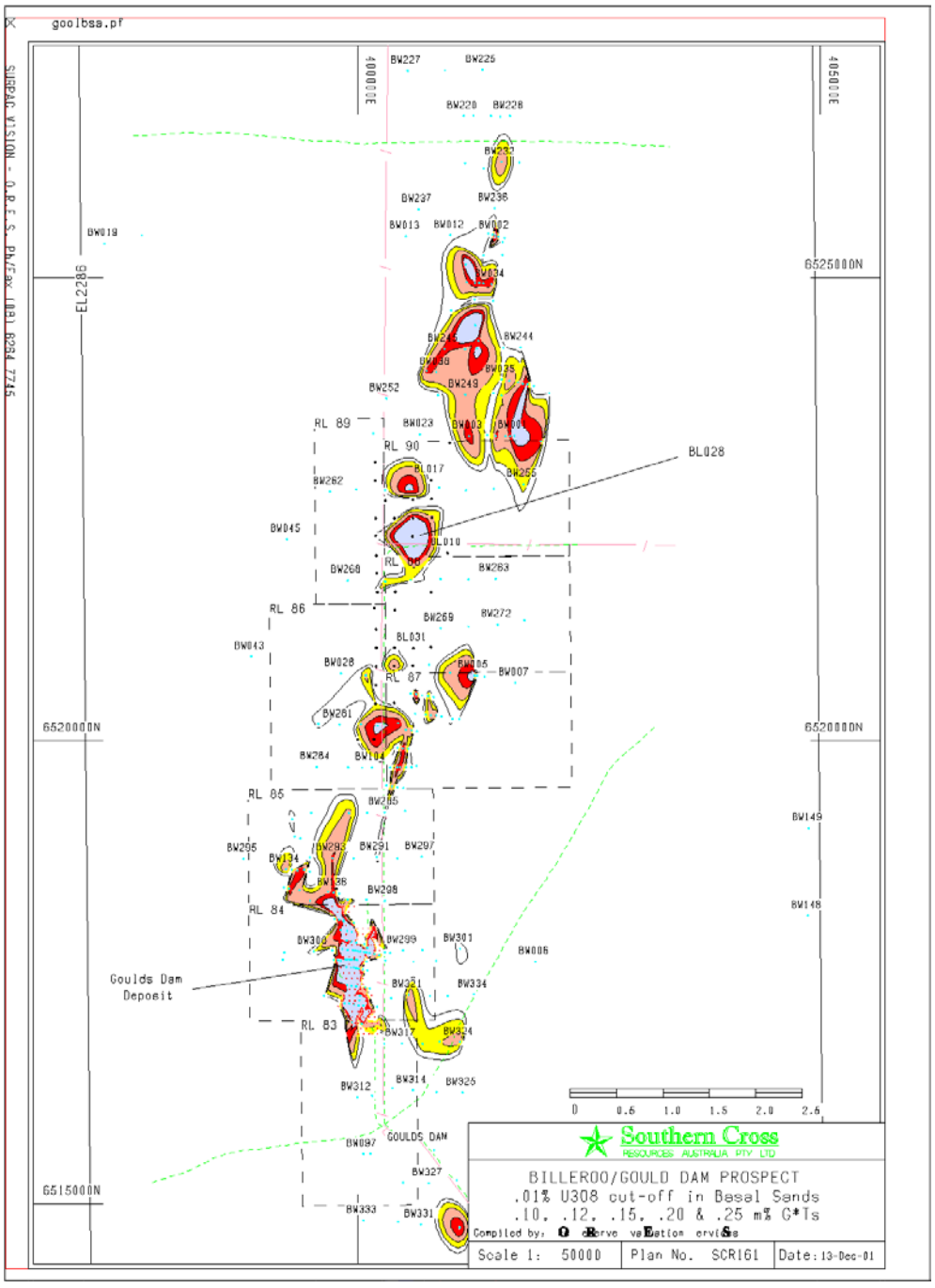


Figure 10: Exploration Target Region F – Gould's Dam and Billeroo region – Contour plot highlighting mineralisation at Gould's Dam and Billeroo. (Source: U1A).

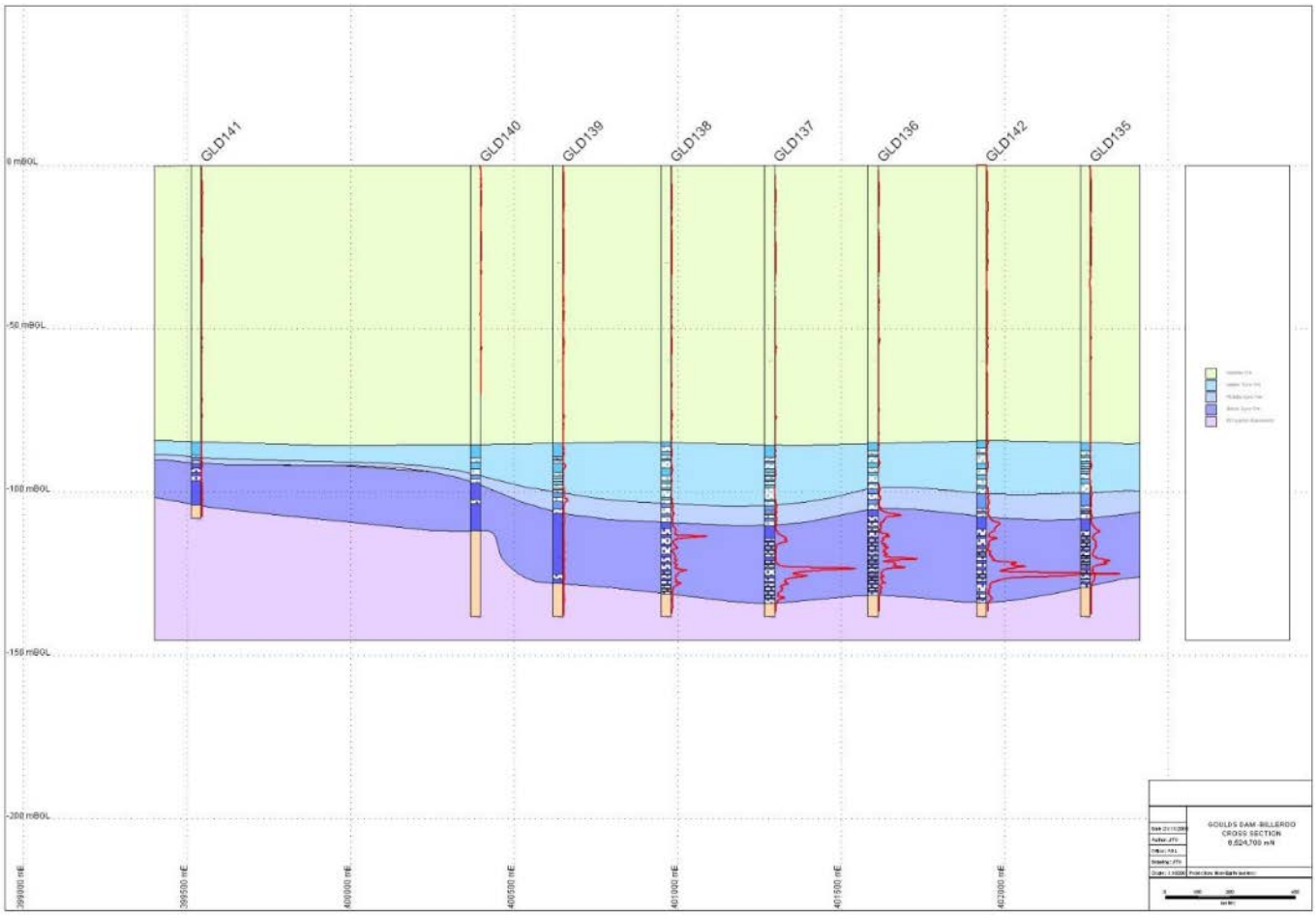


Figure 11: Example Section – Showing 2005 Gould's Dam drill results. (Source: U1A).

Table 8: Example Billeroo Intercepts
- 0.01% eU_3O_8Lower cutoff

Hole ID	mgaE	mgaN	CalcRL	EOH	Date	Company	From	To	Thickness	Grade (eU_3O_8)
BL002	400321.3	6522386	70.82	140	30-Jan-98	SXR	123.5	124.29	0.79	0.011
							125.34	127.19	1.85	0.018
							128.74	130.59	1.85	0.022
BL003	400321.9	6522575	70.36	139	02-Feb-98	SXR	128.69	130.04	1.35	0.012
							131.99	132.44	0.45	0.013
BL004	400522.8	6522575	70.41	138	05-Feb-98	SXR	123.64	125.94	2.3	0.032
							129.89	129.94	0.05	0.01
							131.49	131.79	0.3	0.012
							123.34	124.54	1.2	0.024
							127.04	127.69	0.65	0.027
BL006	400722.4	6522776	70.41	138	11-Feb-98	SXR	130.89	130.99	0.1	0.01
BL007	400522.9	6522175	71.32	138	14-Feb-98	SXR	130.69	131.19	0.5	0.013
BL008R	400523.7	6521179	74.19	137.05	03-Jun-98	SXR	126	126.84	0.84	0.018
							127.04	127.09	0.05	0.01
BL009	400522.5	6520978	75.17	140	14-Apr-98	SXR	124.5	127.19	2.69	0.035
							118.64	119.79	1.15	0.034
BL013	400315.8	6523182	69.69	144.3	05-May-98	SXR	120.99	121.59	0.6	0.011
							124.75	125.29	0.54	0.027
BL015	401120.8	6523389	69.62	144	13-May-98	SXR	130.54	131.09	0.55	0.015
							121.75	126.64	4.89	0.047
							127.59	128.24	0.65	0.012
BL016	400302.8	6520188	79.06	140	17-May-98	SXR	128.84	129.29	0.45	0.012
BL017	400919.3	6522988	70.08	144	15-May-98	SXR	123	125.39	2.39	0.03
BL018	400723.9	6522575	70.41	144	27-May-98	SXR	121.44	126.04	4.6	0.056

							130.19	130.84	0.65	0.016
BL019	400127	6520182	79.52	141	21-May-98	SXR	123	127.94	4.94	0.021
BL020	400320.2	6520571	76.76	138	22-May-98	SXR	123	126.74	3.74	0.032
BL021	400325.8	6520771	76.76	144	24-May-98	SXR	127.79	129.04	1.25	0.012
BL022	400325.5	6520972	75.67	140	26-May-98	SXR	123	127.59	4.59	0.016
BL023	400328.4	6521176	74.65	141	28-May-98	SXR	129.54	130	0.46	0.042
BL024	400325.3	6521381	73.71	140	29-May-98	SXR	126.25	126.54	0.29	0.011
BL025	400927	6522583	70.38	138	29-May-98	SXR	120.69	121.04	0.35	0.015
							122.09	126.09	4	0.033
							127.44	128	0.56	0.024
BL026	400923.6	6522782	70.38	138	30-May-98	SXR	122	123.84	1.84	0.019
							128.39	128.69	0.3	0.012
GD082	400062.7	6517965	80.94	132	06-May-80	Minad Teton JV	114	126	12	0.032
GD084	400122.7	6517966	80.94	131	06-May-80	Minad Teton JV	118.24	119.74	1.5	0.092
							120.79	125	4.21	0.034
GD085	400301.7	6518088	81.64	128.2	16-May-80	Minad Teton JV	120	120.49	0.49	0.419
							121.69	123.5	1.81	0.037
GD086	400001.7	6518085	81.18	130.8	06-May-80	Minad Teton JV	112.75	124.75	12	0.061
GD088	400301.1	6518147	81.64	128	17-May-80	Minad Teton JV	119.19	124	4.81	0.05
GD089	400037	6517485	81.08	130	18-May-80	Minad Teton JV	121.94	122.24	0.3	0.01
GD090	400096.9	6517486	81.08	130	18-May-80	Minad Teton JV	124.24	125.64	1.4	0.016
GDC002	400092.4	6517819	80.94	128.8	06-Mar-79	Minad Teton JV	113.5	114.24	0.74	0.023
							115.44	120.84	5.4	0.061
							122.14	125.75	3.61	0.052
GDC003	400087	6517817	80.94	128	19-Oct-79	Minad Teton JV	115.74	116.29	0.55	0.013
							116.94	117.14	0.2	0.012
							117.49	119.34	1.85	0.067
							121.39	124.24	2.85	0.019
							124.59	125.5	0.91	0.011
GDC004	400048.2	6518004	80.94	128	27-Oct-79	Minad Teton JV	115.75	117.99	2.24	0.027
							120.09	125.25	5.16	0.03
GDC039	400159.1	6517246	81.4	119.1	27-Apr-80	Minad Teton JV	115.14	115.25	0.11	0.011
GDC047	400065.4	6517665	80.91	138	03-May-80	Minad Teton JV	119.5	128.24	8.74	0.022
GDC091	400156.9	6517486	81.08	129.89	20-May-80	Minad Teton JV	114	114.19	0.19	0.037
							123.24	125.39	2.15	0.015
GDC093	400034.6	6517755	80.91	130	23-May-80	Minad Teton JV	119.75	121.24	1.49	0.029
							122.69	128	5.31	0.03
GDC094	400272.7	6517967	81.47	125.5	25-May-80	Minad Teton JV	116	117.14	1.14	0.034
							119.44	120.94	1.5	0.693
							123.24	123.25	0.01	0.01
GDC095	400000.9	6518175	81.18	127.2	26-May-80	Minad Teton JV	118	125	7	0.05

Table 9: Example Intercepts from Gould's Dam
0.03% eU_3O_8 cut-off, 0.5m minimum thickness

Hole ID	Easting	Northing	Depth	Date Finished	From (m)	To (m)	Thickness (m)	Avg grade (%eU_3O_8)*	GT (m%)
GDN001	400355	6518715	126	16/08/2012	-	-	-	-	-
GDN002	400212	6518720	132	16/08/2012	113.95	115.75	1.8	0.05	0.09
GDN003	400052	6518720	132	17/08/2012	121.15	121.75	0.6	0.13	0.08
GDN004	399892	6518704	132	17/08/2012	117.4	120.4	3	0.12	0.36
GDN005	399732	6518720	132	18/08/2012	-	-	-	-	-
GDN006	399572	6518720	138	18/08/2012	115.65	116.5	0.85	0.07	0.06
					121.1	121.8	0.7	0.07	0.05
GDN007	399572	6518560	132	18/08/2012	105.6	106.9	1.3	0.08	0.1
GDN008	399732	6518560	132	19/08/2012	-	-	-	-	-
GDN009	399892	6518560	132	19/08/2012	123.1	123.6	0.5	0.04	0.02
GDN010	400052	6518560	132	19/08/2012	123.95	124.45	0.5	0.04	0.02
GDN011	400212	6518560	132	20/08/2012	120.75	121.3	0.55	0.04	0.02
GDN012	400351	6518559	126	20/08/2012	-	-	-	-	-
GDN013	400356	6518878	126	20/08/2012	-	-	-	-	-
GDN014	400212	6518880	126	21/08/2012	120.5	121.95	1.45	0.11	0.16
GDN015	400052	6518880	126	21/08/2012	-	-	-	-	-
GDN016	399892	6518880	132	21/08/2012	-	-	-	-	-
GDN017	399732	6518880	132	22/08/2012	-	-	-	-	-
GDN018	399572	6518880	132	22/08/2012	-	-	-	-	-
GDN019	399412	6518880	132	22/08/2012	113.55	116.35	2.8	0.04	0.11
GDN020	399252	6518880	120	23/08/2012	-	-	-	-	-
GDN021	399238	6519042	120	23/08/2012	-	-	-	-	-
GDN022	399430	6519044	132	23/08/2012	107.65	108.55	0.9	0.1	0.09
GDN023	399572	6519040	132	24/08/2012	-	-	-	-	-
GDN024	399732	6519040	132	24/08/2012	120.25	121.25	1	0.05	0.05
GDN025	399892	6519040	132	25/08/2012	119.5	122	2.5	0.05	0.13
GDN026	400049	6519075	132	25/08/2012	121.4	122.35	0.95	0.12	0.11
GDN027	400212	6519040	132	25/08/2012	124.6	125.25	0.65	0.03	0.02
GDN028	400372	6519040	132	26/08/2012	122	122.65	0.65	0.06	0.04
GDN029	400348	6519200	132	26/08/2012	-	-	-	-	-
GDN030	400212	6519200	132	27/08/2012	120.7	123.55	2.85	0.05	0.14
GDN031	400052	6519200	132	27/08/2012	118.25	119.55	1.3	0.09	0.12
GDN032	399890	6519183	132	27/08/2012	120.3	122.9	2.6	0.03	0.08
GDN033	399732	6519200	132	28/08/2012	Hole blocked, not logged.				
GDN034	399572	6519200	132	28/08/2012	-	-	-	-	-
GDN035	399412	6519200	132	28/08/2012	-	-	-	-	-
GDN036	399252	6519200	126	29/08/2012	104.15	105.05	0.9	0.15	0.13
					112.7	113.5	0.8	0.05	0.04
GDN037	399412	6519360	132	30/08/2012	107.9	109.4	1.5	0.07	0.11
GDN038	399572	6519360	126	30/08/2012	107.9	109	1.1	0.07	0.08
GDN039	399732	6519360	132	30/08/2012	117.8	118.6	0.8	0.14	0.11
					120.75	122.15	1.4	0.06	0.08
					124.15	125.1	0.95	0.03	0.03
GDN040	399892	6519360	126	31/08/2012	122.05	122.8	0.75	0.06	0.05
GDN041	400035	6519359	130	31/08/2012	Hole blocked, not logged.				
GDN042	400212	6519360	132	31/08/2012	121.1	122.25	1.15	0.04	0.05
					125.3	126	0.7	0.03	0.02
GDN043	400354	6519360	132	1/09/2012	120.35	122.9	2.55	0.05	0.13
					124.3	124.9	0.6	0.03	0.02
GDN044	400372	6519520	132	1/09/2012	122.35	125.85	3.5	0.06	0.21
					126.9	128.6	1.7	0.1	0.17
GDN045	400212	6519520	132	1/09/2012	120.95	121.7	0.75	0.16	0.12
GDN046	400052	6519520	132	2/09/2012	-	-	-	-	-
GDN047	399892	6519520	132	2/09/2012	121.85	122.9	1.05	0.21	0.22
GDN048	399732	6519520	132	2/09/2012	117.2	117.9	0.7	0.04	0.03
GDN049	399572	6519520	132	3/09/2012	-	-	-	-	-
GDN050	399412	6519520	126	3/09/2012	105.3	106.8	1.5	0.06	0.09

The Region G Exploration Target at Katchwilleroo is based upon a geological interpretation focussed on a region of interpreted paleochannel with complex geometry (Figures 9 and 10). This type of region is interpreted to have high potential for fluvial material with high organic content, which in turn could be favourable to host uranium mineralisation. This is highlighted by a character sample (65% clay, 35% black material) of 'black material' within friable clays taken at 333 ft (101.5m) from hole

EAR19 (Figures 2 and 9) in 1970 which recorded a grade of 1.75% U_3O_8 and a maximum gamma log of 600cps. Additionally there is an 8km trend of the Katchwilleroo paleochannel that is poorly drilled that approaches the system which hosts Billeroo and Gould's Dam. It is noted that the tenor of historical drilling in this region was generally low, however the sparse nature of the drilling pattern and new interpretation of complex palaeovalley topography open up new avenues for targeting mineralisation. The drill spacing in this region is predominantly on a 3-5km spacing.

The Region F Exploration Target is based upon a geological interpretation of 20km of untested to poorly tested trend extent (north and south) of the well drilled Gould's Dam and Billeroo deposits. Historical drilling shows elevated gamma counts (up to 500cps) associated with sandy clays near a lignite horizon at 320ft (98m) in EAR11, with a nearby hole (EAR22 hosting 0.8M @ 250ppm U_3O_8 hosted above a lignite horizon at 98m) with gamma anomalies up to 400cps. Additionally, mineralisation has been intercepted in PMX 8A (0.3m @ 425ppm eU_3O_8 from 121.5m) 2km west of these holes.

The Region H Exploration Target is a geological interpretation of an untested interpreted paleochannel in the Lake Mary Dam Region (Figures 12 and 13). This region is close to interpreted source-rocks near the Crocker Well granites where outcrop of 2.5% U_3O_8 have been collected in outcrop at Spring Hill (Figure 2) and would also be looked at for a close to source Four-Mile style of deposit. There is no drilling understood to have been taken in the core of this region, drill spacing on the peripheries is in the order of several kilometres.

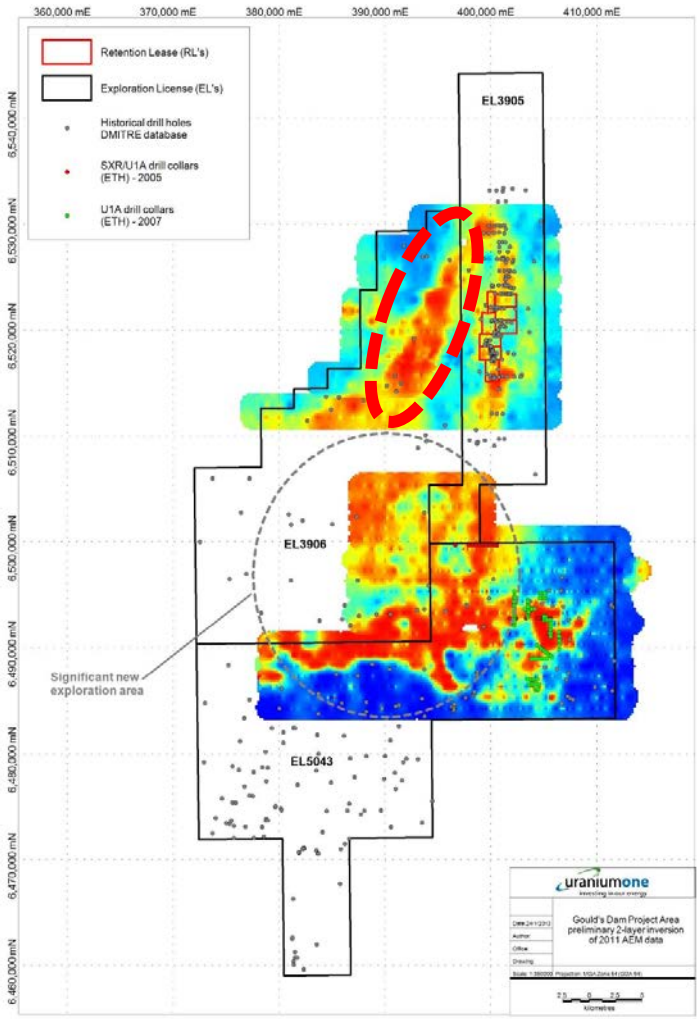


Figure 12: Exploration Target Region G. Highlighting the broad region of interpreted complex paleochannel geometry (red and orange indicates paleochannels) and previous broad-scale drilling. (Layered Earth Inversion (LEI) depth slice of merged AEM datasets – 100) (Source: U1A).

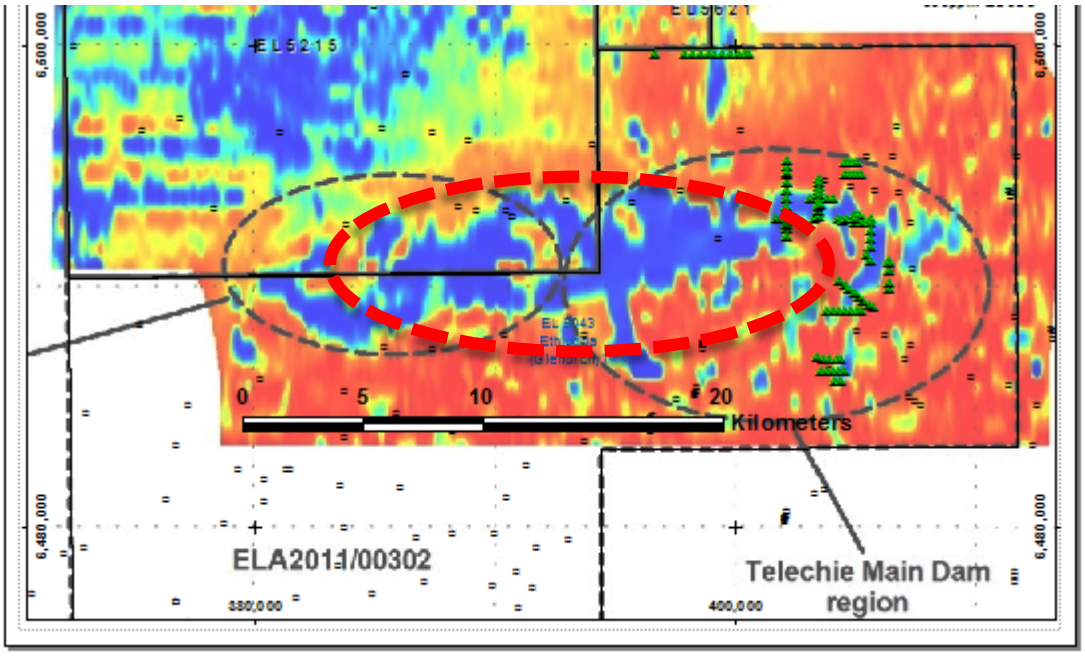


Figure 13: Region G - Lake Mary Dam. The interpreted paleochannel (blue colours) in the Lake Mary Dam Region. Note the interpreted complex paleochannel geometry (interpreted as being favourable) and the lack of drilling in this paleochannel**.**