

Honeymoon Uranium Project, South Australia

2024 infill drilling on satellite uranium growth deposits complete

Resource update underway in preparation for bringing significant satellite deposits into the mine plan

Highlights

- Infill drilling campaign completed at the Gould's Dam and Jason's satellite deposits within Honeymoon
- The results will underpin an updated geological/mineralisation model and resource upgrade
- Gould's Dam is located ~80km northwest of the Honeymoon Mine (Figure 1) and currently contains a JORC-compliant resource of 25Mlbs of indicated and inferred U₃O₈; The Jason's deposit is located ~13km north of the Honeymoon mine (Figure 1) and contains a JORC Resource of 6.2Mt at 790ppm U₃O₈ for 10.7Mlbs contained U₃O₈ (Inferred).
- A total of 47 mud rotary holes for 6,455m were completed at Beulah (within the Gould's Dam Inferred Resource envelope) and an additional 25 holes for 3,074m within the Inferred resource envelope at Jason's. Uranium mineralisation highlights from these two programs include (PFN results, ppm pU₃O₈):

○ 3.25m @ 3,873ppm pU ₃ O ₈	GT 12,587	(WRM0176 from 122.00m)
➤ plus 2.75m @ 946ppm pU ₃ O ₈	GT 2,602	(WRM0176 from 126.25m)
○ 6.25m @ 1,094ppm pU ₃ O ₈	GT 6,838	(WRM0175 from 118.00m)
○ 2.00m @ 714ppm pU ₃ O ₈	GT 1,428	(WRM0180 from 119.25m)
➤ plus 4.25m @ 724ppm pU ₃ O ₈	GT 3,077	(WRM0180 from 122.50m)
○ 4.50m @ 548ppm pU ₃ O ₈	GT 2,466	(WRM0190 from 121.75m)
○ 1.50m @ 1,381ppm pU ₃ O ₈	GT 2,072	(WRM0192 from 120.25m)
○ 4.00m @ 504ppm pU ₃ O ₈	GT 2,016	(WRM0187 from 111.25m)
○ 2.50m @ 662ppm pU ₃ O ₈	GT 1,655	(WRM0195 from 122.75m)
○ 2.75m @ 517ppm pU ₃ O ₈	GT 1,422	(WRM0211 from 118.25m)
○ 2.25m @ 626ppm pU ₃ O ₈	GT 1,409	(WRM0207 from 123.75m)
○ 1.75m @ 802ppm pU ₃ O ₈	GT 1,404	(WRM0213 from 124.75m)
○ 3.00m @ 960ppm pU ₃ O ₈	GT 2,880	(BMR233 from 86.75m)
○ 1.25m @ 1,258ppm pU ₃ O ₈	GT 1,573	(BMR232 from 89.25m)
➤ plus 0.50m @ 1,428ppm pU ₃ O ₈	GT 714	(BMR232 from 91.50m)
○ 0.50m @ 3,897ppm pU ₃ O ₈	GT 1,949	(BMR238 from 96.25)
- "These satellite deposits have the potential to drive growth as well as enabling us to leverage existing infrastructure and further capitalise on the opportunity presented by growing global demand for uranium from tier-one locations". – Boss MD Duncan Craib

FOR FURTHER INFORMATION PLEASE CONTACT:

Boss Energy Limited
ABN 38 116 834 336

Level 1, 420 Hay Street, Subiaco
Western Australia 6008

Duncan Craib - Managing Director/ CEO
+61 (08) 6263 4494

Paul Armstrong – Public Relations
+61 (08) 9388 1474

ASX: BOE
OTCQX: BQSSF

www.bossenergy.com
X@Boss_Energy

Boss Energy Limited (ASX: BOE; OTCQX: BQSSF) is pleased to announce the conclusion of a successful infill drilling program at the Gould's Dam and Jason's satellite deposits within its Honeymoon Uranium project in South Australia.

The program has returned strong drilling results as well as high-quality modern downhole geophysical data which will be used to build an updated geological and mineralisation model which will feed into a resource update

The two deposits have combined resources of 36.7Mlbs of contained U_3O_8 . Honeymoon is producing under its current Mining Licence covering 36Mlbs and therefore the Company will now seek government endorsement for the mining of two satellite deposits, effectively doubling the allowance under the License.

This will pave the way for Boss to assess potential increases in the annual production rate and mine life at Honeymoon.

AMC Consultants have been engaged to produce a block model and mineral resource update for these key satellite deposits, which will enable the company to determine those areas which are most economically viable.

Boss Managing Director Duncan Craib said: "With the production ramp-up at Honeymoon progressing so well, we are eager to press ahead with our plans to grow the annual output, cashflow and minelife.

"These satellite deposits have the potential to drive growth as well as enabling us to leverage existing infrastructure and further capitalise on the opportunity presented by growing global demand for uranium from tier-one locations".

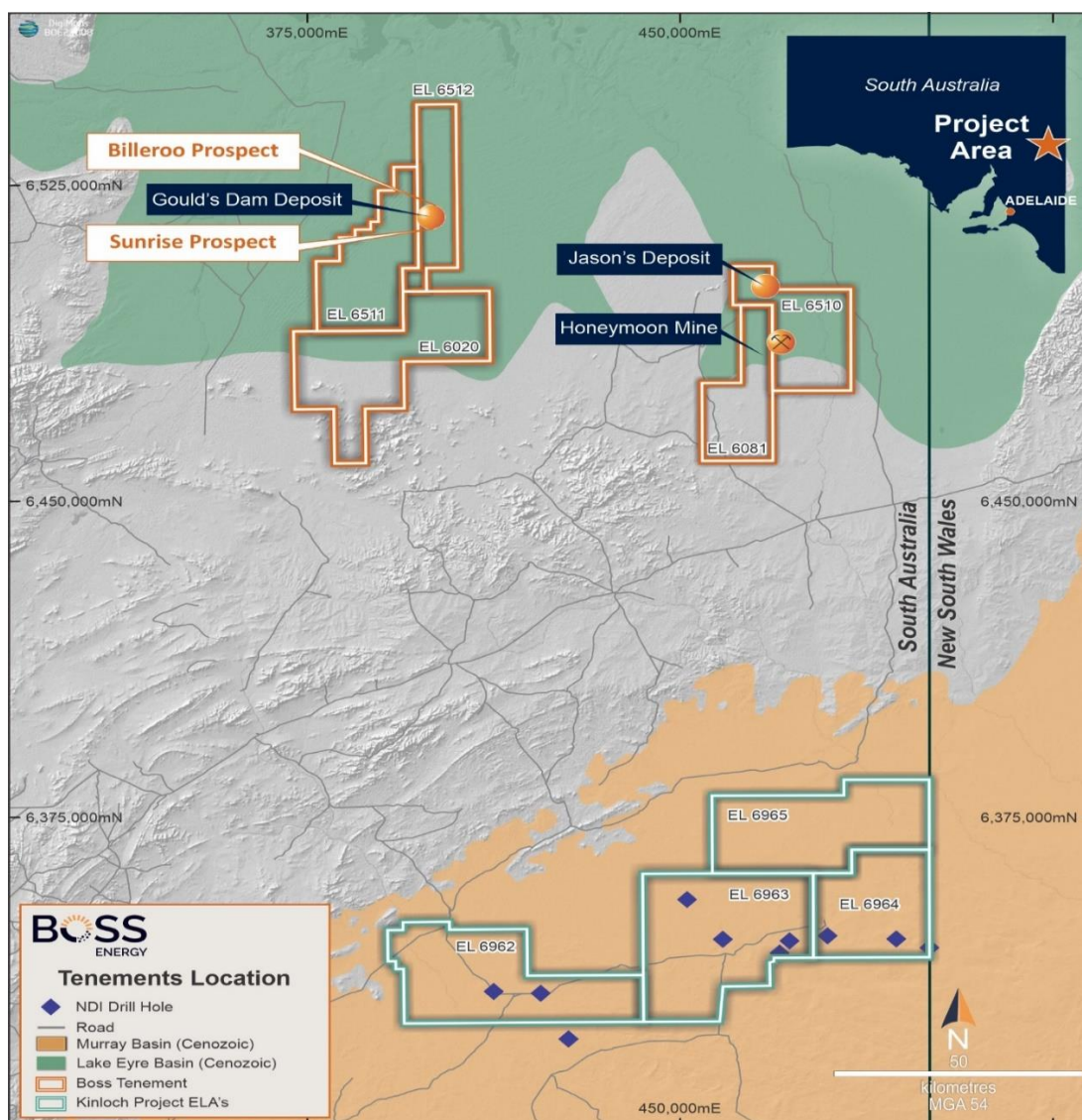


Figure 1: Overview of Boss Energy tenure in South Australia.

Satellite deposit resource update drilling program

Since June 2023, Boss has carried out a comprehensive drilling campaign at its two key satellite deposits – Gould’s Dam and Jason’s – comprising over 260 holes for ~39,000m. Infill drilling on key areas within the satellite deposits enabled the generation of high quality modern downhole geophysical data (in particular BMR and PFN tool data), to provide an updated geological and mineralisation model and ultimately a mineral resource update. These two satellite deposits form an important part of Boss’ strategy to increase the production rate and mine life at its 100 per cent-owned Honeymoon Uranium Mine in South Australia, and the results of this work will feed into a scoping study and preparations for ISR Mining Lease Proposals.

The Borehole Magnetic Resonance (BMR) tool has been utilised throughout the resource update drilling program, as it provides porosity and permeability data, which in turn provides an accurate representation of lithology. This is critical for determining if uranium mineralisation is likely to be amenable to the ISR mining method.

For personal use only

An example of this is illustrated below in Figure 2 for hole BMR179 at the Jason's deposit. The lowermost mineralised zone within the lower Eyre Formation (from ~100 - 102m) predominantly coincide with a consistent sand-dominant aquifer (i.e. movable water) with minor silty sand bands, which is designated by the blue shading in the BMR data. The second mineralised zone (from ~95.5 - 98.0m) is located at the upper margin of the lower Eyre Formation sand unit, associated with sands (blue shading in BMR data), sandy clay (mix of light orange and blue shading in BMR data) and clay (light orange shading in BMR data). The third mineralised zone (~90 - 93m) occurs at the lower margin of the middle Eyre Formation sand, and is associated predominantly with sands (blue shading in the BMR data) and minor clay dominant lithologies (light orange shading in the BMR data).

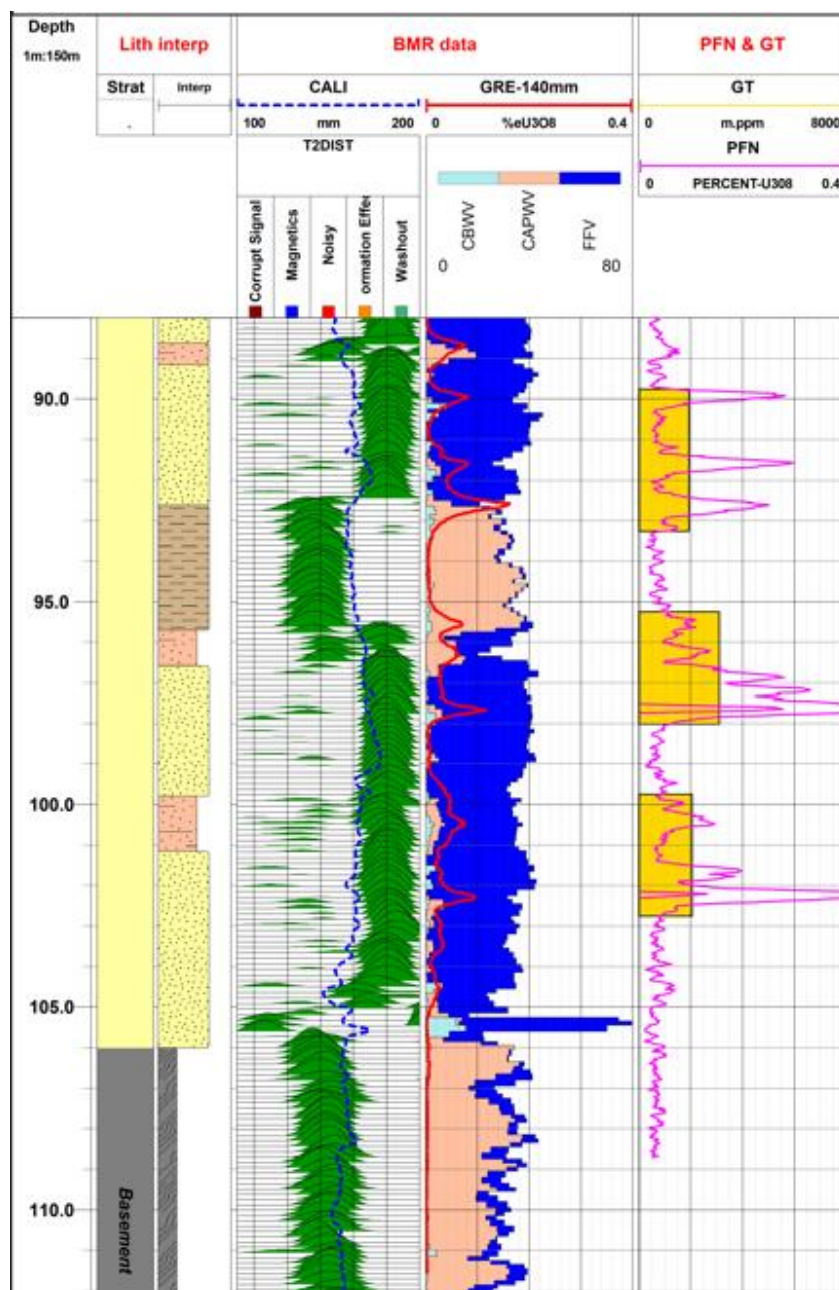


Figure 2: Example of BMR and PFN data usage for geological and mineralisation modelling, hole BMR179.

For personal use only

Gould's Dam - Beulah area drill results

The Beulah area is located within the Gould's Dam Inferred resource envelope ~6.5km north of the current Indicated Resource and covers a strike length of ~2km within the Billeroo Palaeovalley (Figure 3). Beulah was subject to sporadic drilling campaigns between the late 1970's and 2006. The geological data from the historic drilling indicated a potentially geological environment with thick lower Eyre Formation sands and uranium mineralisation associated with a redox boundary developed within these sands. The historic drilling was relatively scattered and widely spaced, with holes ranging from ~80m up to ~450m apart. Key uranium mineralisation from the historical drilling includes: (PFN-derived pU_3O_8 & gamma-derived eU_3O_8):

2.25m @ 1,542ppm pU_3O_8	GT 3,470	(GLD129 from 118.00m)
5.25m @ 575ppm pU_3O_8	GT 3,019	(GLD142 from 121.25m)
7.40m @ 349ppm eU_3O_8	GT 2,583	(BW116 from 108.80m)
1.25m @ 1,725ppm pU_3O_8	GT 2,156	(GLD149 from 114.50m)
7.20m @ 288ppm eU_3O_8	GT 2,074	(BW003 from 121.50m)
4.10m @ 468ppm eU_3O_8	GT 1,919	(BW122A from 123.20m)

Given the historical prospectivity, a total of 47 holes for 6,455m was completed at Beulah (Figure 4), with a handful of historical drill holes twinned as part of the recent drilling campaign to help verify the validity of the historical data.

Uranium mineralisation is typically hosted within the basal sand package of the Eyre Formation, associated with (and directly below) a typically well-defined redox boundary between relatively clean, variably oxidised sands and more reduced "dirty" sands beneath which contain higher proportions of interstitial fine silt and organic material and occasionally pyrite (Figure 5). Importantly, BMR data obtained throughout the program to date indicates that the mineralisation at Beulah hosted within the lower Eyre Formation sands should be in most cases amenable to ISR mining.

For personal use only

For personal use only

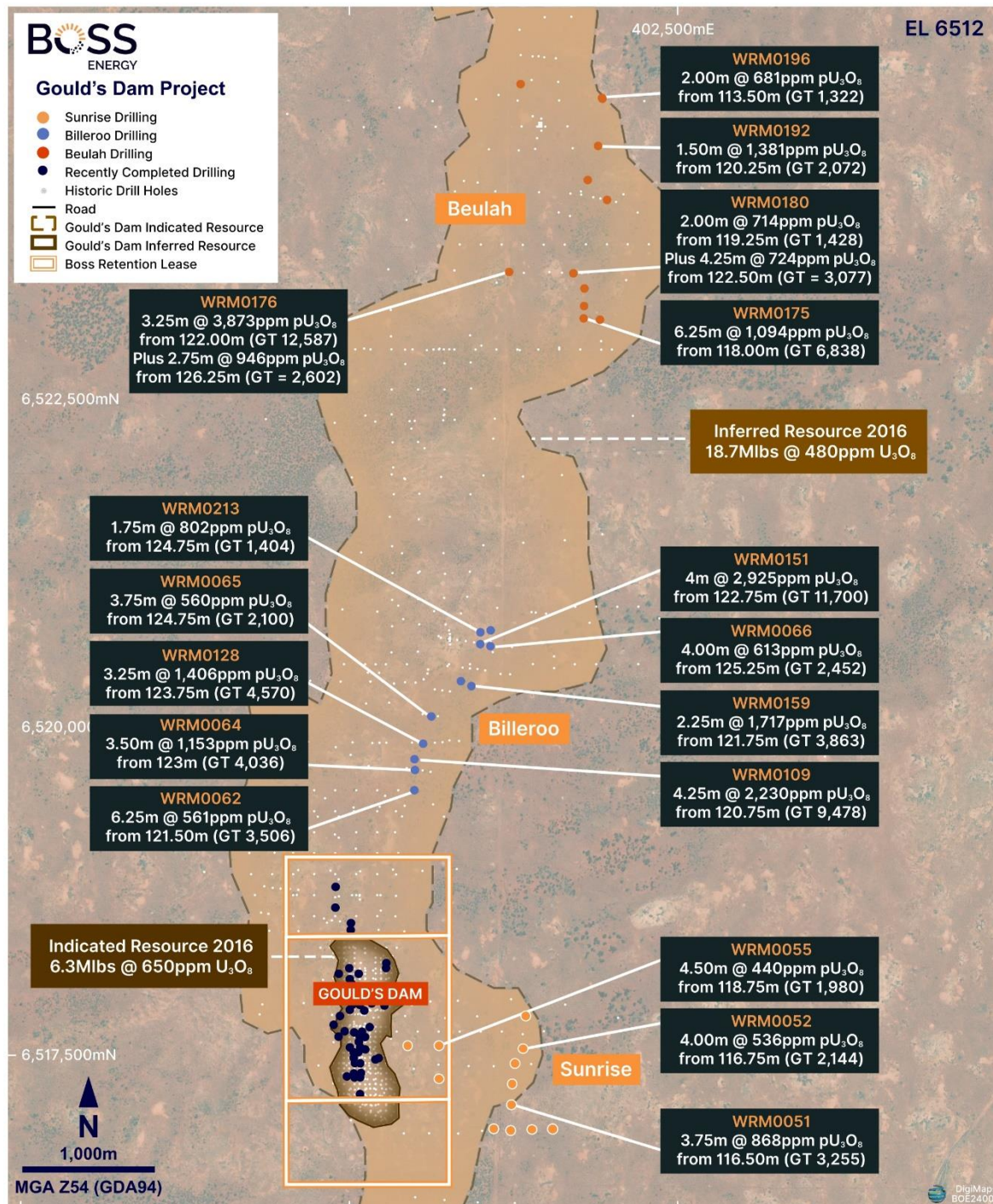


Figure 3: Overview of the Gould's Dam project, located ~80km NW of the Honeymoon Mine.

For personal use only

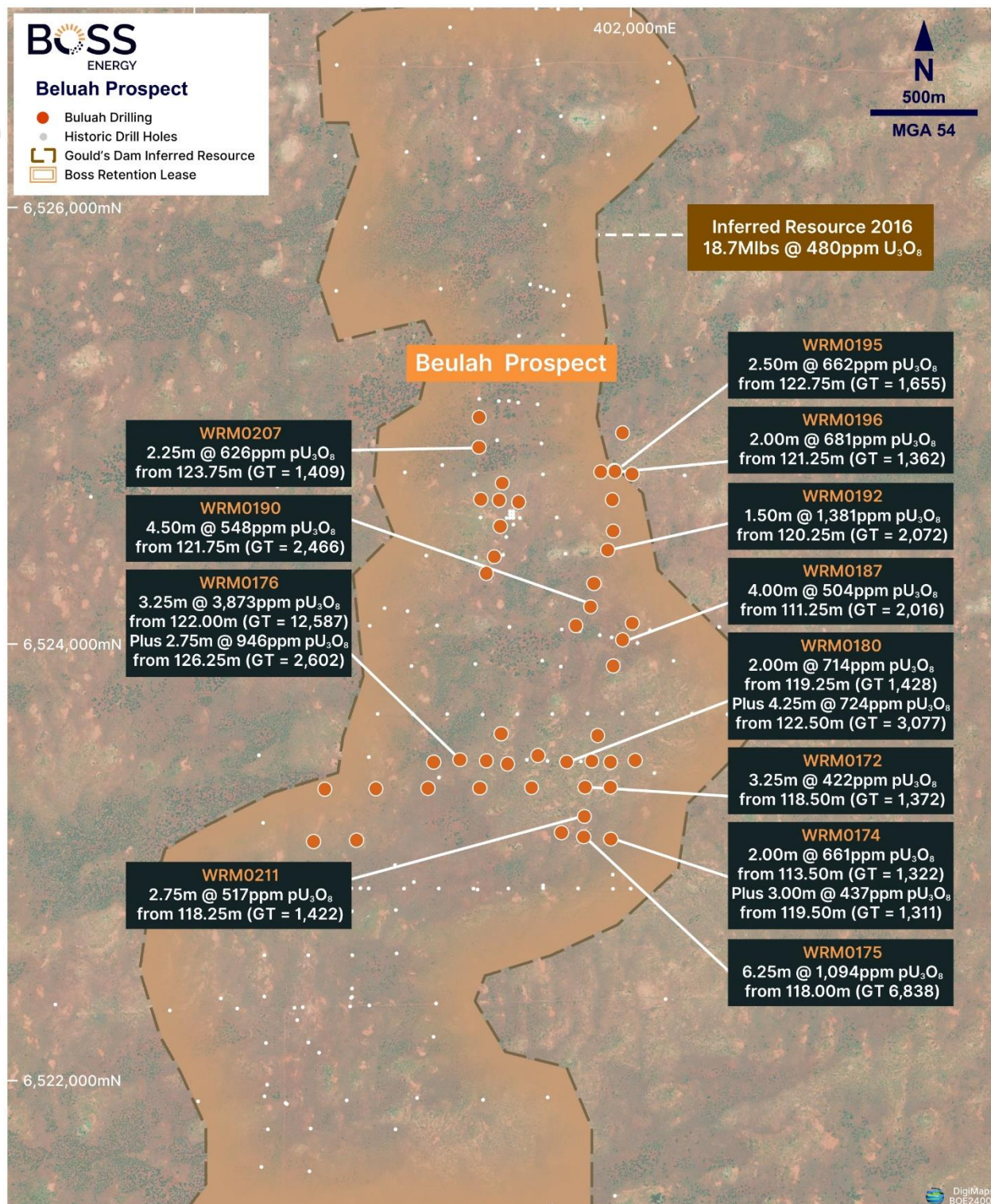


Figure 4: Overview of results from the recently completed drilling campaign at Beulah.



Figure 5: Example of uranium mineralisation within the lower Eyre Formation at Beulah (hole WRM0176).

Uranium mineralisation highlights from the recent drilling at Beulah are listed below, including an intercept from hole WRM0176 which is the strongest identified to date outside of the Gould's Dam Indicated resource (PFN results, ppm pU_3O_8):

- | | | |
|---|-----------|------------------------|
| ○ 3.25m @ 3,873ppm pU_3O_8 | GT 12,587 | (WRM0176 from 122.00m) |
| ➤ plus 2.75m @ 946ppm pU_3O_8 | GT 2,602 | (WRM0176 from 126.25m) |
| ○ 6.25m @ 1,094ppm pU_3O_8 | GT 6,838 | (WRM0175 from 118.00m) |
| ○ 2.00m @ 714ppm pU_3O_8 | GT 1,428 | (WRM0180 from 119.25m) |
| ➤ plus 4.25m @ 724ppm pU_3O_8 | GT 3,077 | (WRM0180 from 122.50m) |
| ○ 4.50m @ 548ppm pU_3O_8 | GT 2,466 | (WRM0190 from 121.75m) |
| ○ 1.50m @ 1,381ppm pU_3O_8 | GT 2,072 | (WRM0192 from 120.25m) |
| ○ 4.00m @ 504ppm pU_3O_8 | GT 2,016 | (WRM0187 from 111.25m) |
| ○ 2.00m @ 845ppm pU_3O_8 | GT 1,690 | (WRM0202 from 117.75m) |
| ○ 2.50m @ 662ppm pU_3O_8 | GT 1,655 | (WRM0195 from 122.75m) |
| ○ 2.75m @ 517ppm pU_3O_8 | GT 1,422 | (WRM0211 from 118.25m) |
| ○ 2.25m @ 626ppm pU_3O_8 | GT 1,409 | (WRM0207 from 123.75m) |
| ○ 1.75m @ 802ppm pU_3O_8 | GT 1,404 | (WRM0213 from 124.75m) |
| ○ 3.25m @ 422ppm pU_3O_8 | GT 1,372 | (WRM0172 from 118.50m) |
| ○ 2.00m @ 681ppm pU_3O_8 | GT 1,362 | (WRM0196 from 121.25m) |
| ○ 3.00m @ 437ppm pU_3O_8 | GT 1,311 | (WRM0174 from 119.50m) |
| ○ 1.50m @ 802ppm pU_3O_8 | GT 1,203 | (WRM0209 from 123.00m) |

Areas remain within the Gould's Dam Inferred Resource envelope which require further exploratory drilling and the updated geological and mineralisation model will help guide future infill drilling.

For personal use only

Jason's drill results

A limited drilling program comprising 25 holes for 3,074m has been completed at Jason's (Figure 6), with the primary purpose of ensuring sufficient coverage of BMR and PFN data across the deposit to complete the updated geological and mineralisation model and ultimately feed into the upcoming resource update work.

Uranium mineralisation highlights from the drilling at Jason's are listed below (PFN results, ppm pU_3O_8):

- | | | |
|--|----------|-----------------------|
| ○ 3.00m @ 960ppm pU_3O_8 | GT 2,880 | (BMR233 from 86.75m) |
| ○ 1.25m @ 1,258ppm pU_3O_8 | GT 1,573 | (BMR232 from 89.25m) |
| ○ 2.00m @ 606ppm pU_3O_8 | GT 1,212 | (BMR254 from 83.75m) |
| ○ 0.75m @ 2,950ppm pU_3O_8 | GT 2,213 | (BMR247 from 103.50m) |
| ○ 1.00m @ 1,101ppm pU_3O_8 | GT 1,101 | (BMR244 from 89.25m) |

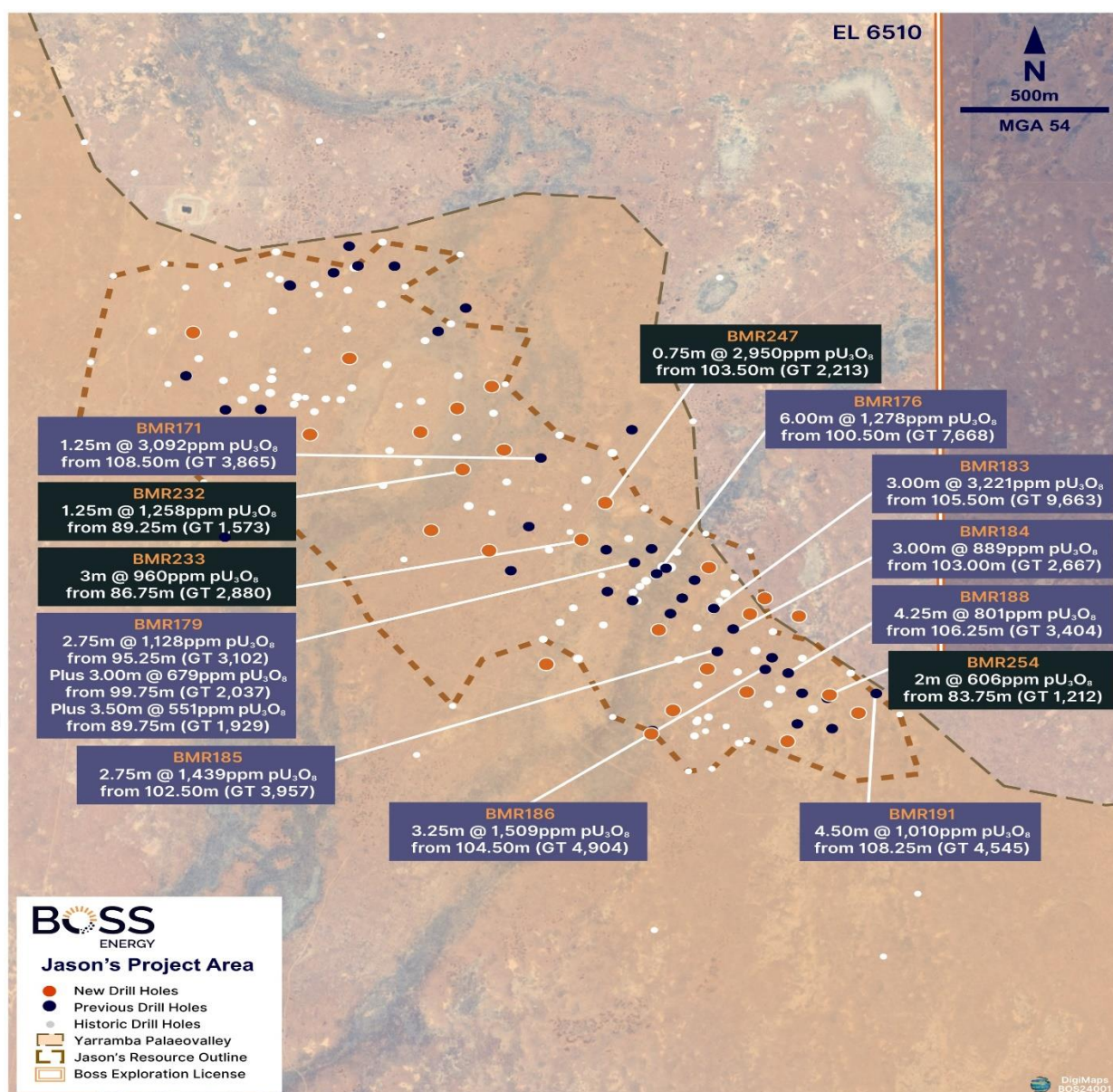


Figure 6: Overview of results from the current drilling campaign at Jason's.

Next steps

All of the latest drilling data will be incorporated into the ongoing geological and mineralisation modelling that is in progress for the Gould's Dam and Jason's satellite deposits, with the updated models and data feeding in to a mineral resource update in the first half of calendar year 2025.

This resource update will feed into both ongoing development work on these satellite deposits (including proposed scoping studies and mining lease applications), as well as guide further infill drilling at Gould's Dam going forward.

Gould's Dam deposit

The Gould's Dam deposit is located ~80km northwest of the Honeymoon Mine and currently contains a JORC-compliant resource (Table 1) of 4.4Mt @ 650ppm U₃O₈ for 6.3Mlbs contained U₃O₈ (Indicated) and 17.7Mt @ 480ppm U₃O₈ for 18.7Mlbs contained U₃O₈ (Inferred).

Table 1: Summary of Mineral Resource for satellite deposit of Gould's Dam

Resource Classification	Tonnage (Million Tonnes)	Average Grade (ppm U ₃ O ₈)	Contained Metal (Kt, U ₃ O ₈)	Contained Metal (Mlb, U ₃ O ₈)
Gould's Dam (April 2016)¹				
Indicated	4.4	650	2.9	6.3
Inferred	17.7	480	8.5	18.7

Honeymoon Project Mineral Resource

The global Honeymoon Mineral Resource stands at 71.6 Mlb (52.4Mt) with an average grade of 620ppm U₃O₈, using a cut-off grade of 250ppm, as summarised in Table 2.

The current Honeymoon restart feasibility studies utilise only a portion of Honeymoon's JORC resource, excluding 36Mlb of JORC resource outside the HRA, which could expand the mine life, and Boss' defined exploration target could potentially extend the mine life beyond the initial 11 years and increase the production profile. Honeymoon's Federal EPIP Act approvals allow export of more than 3Mlbs/annum U₃O₈ equivalent.

In addition to the global Mineral Resource, the Honeymoon Uranium Project also has an Exploration Target range of 28 Mt to 133 Mt of mineralisation at a grade of 340 ppm to 1,080 ppm U₃O₈ for a contained 58 Mlbs to 190 Mlbs U₃O₈ (26,300 to 86,160 tonnes of contained U₃O₈), using a cut-off of 250ppm². Note the potential quantity and grade of the Exploration Target range is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain whether future exploration will result in the definition of a Mineral Resource.

¹ Refer to ASX: BOE Announcement dated 8 April 2016

² Refer to ASX: BOE announcement dated 25 March 2019.

For personal use only

Table 2: Summary of Mineral Resource for satellite deposits of Gould's Dam and Jason's

Resource Classification	Tonnage (Million Tonnes)	Average Grade (ppm U ₃ O ₈)	Contained Metal (Kt, U ₃ O ₈)	Contained Metal (Mlb, U ₃ O ₈)
Jason's (March 2017)³				
Inferred	6.2	790	4.9	10.7
Gould's Dam (April 2016)⁴				
Indicated	4.4	650	2.9	6.3
Inferred	17.7	480	8.5	18.7
Honeymoon Restart Area (January 2019)				
Measured	3.1	1,100	3.4	7.6
Indicated	14	610	8.7	19
Inferred	7.0	590	4.1	9.1
GLOBAL HONEYMOON URANIUM PROJECT				
Measured	3.1	1,100	3.4	7.6
Indicated	18.4	630	12.0	25.3
Inferred	30.9	570	18.0	38.5
Total	52.4	620	32.5	71.6

This ASX announcement was approved and authorised by the Board of Boss Energy Limited.

For further information, contact:

Duncan Craib
Chief Executive Officer
P: +61 (8) 6263 4494
E: boss@bossenergy.com

For media enquiries, contact:

Paul Armstrong
Read Corporate
P: +61 (8) 9388 1474
E: info@readcorporate.com

Competent Person's Statement

The information contained in this announcement that relates to exploration results is provided by Mr Jason Cherry, who is a Member of the Australasian Institute of Geoscientists (AIG). Mr Cherry has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person, as defined in the JORC 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Cherry has 17 years' experience and is a full-time employee as Geology Manager for Boss Energy Ltd. Mr Cherry consents to the inclusion in this report of the matters based on this information in the form and context in which they appear.

³ Refer to ASX: BOE announcement dated 15 March 2017.

⁴ Refer to ASX: BOE announcement dated 8 April 2016.

For personal use only

Reference to previous ASX announcements

In relation to the results of the Feasibility Study announced 21 January 2020, the Company confirms that all material assumptions underpinning the production target and forecast financial information included in that announcement continue to apply and have not materially changed. Nothing in this announcement pre-empts the findings of the Enhanced Feasibility Study currently being undertaken.

In relation to the Mineral Resource announced on 8 April 2016, 25 February 2019 and the Exploration Targets announced on 25 March 2019, 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 that all material assumptions and technical parameters underpinning the estimates in that market announcement continue to apply and have not materially changed.

Forward-Looking Statements

This announcement includes forward-looking statements. These forward-looking statements are based on the Company's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties, and other factors, many of which are outside the control of Boss Energy, which could cause actual results to differ materially from such statements. Boss Energy makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of this announcement.

Cautionary Statement

For historical drilling or in instances during modern drilling where the PFN tool data was unavailable, gamma tool derived data is used which is designated eU3O8 and may be affected by radiometric disequilibrium. The downhole PFN (Prompt Fission Neutron) logging tool directly measures the amount of isotope U235 that is present in all naturally occurring uranium. This is considered to give a reliable estimate of the grade of uranium, while downhole gamma logging is a proxy that relies on detecting the daughter products of uranium, including Bi214 and Pb214. The Boss Energy PFN tools are routinely calibrated in Adelaide at the facility now managed by the Department of Water, Land and Biodiversity Conservation. These calibration pits were purpose built to provide for the calibration of radiometric tools. In using the Boss Energy PFN tools, results below 250ppm are considered unreliable and this cut-off value is used for calculating uranium intersections.

APPENDIX 1 – Table 1: Historical drill results

In accordance with ASX Listing Rule 5.7.2, the Company provides the following information:

Hole ID	Easting	Northing	RL	EOH	From	To	Width	eU ₃ O ₈	Grade Thickness
	MGA94, z54		(m)	(m)	(m)	(m)	(m)	(ppm)	(m.ppm)
BW003	401329	6523464	71	145	121.54	128.74	7.20	288	2,074
					102.10	105.10	3.00	1,040	3,120
BW116	401964	6524019	71	133	108.79	116.19	7.40	349	2,583
BW122A	401396	6524659	70	139	111.40	114.30	2.90	254	737
					118.40	120.30	1.90	1,121	2186
					123.10	127.30	4.20	468	1,966
					130.60	131.70	1.10	261	287
BW123	401305	6525125	69	139	120.50	126.50	6.00	358	2,148
GLD129 *	401763	6524085	75	150	118.00	120.25	2.25	1,542	3,470
GLD142 *	401929	6524778	75	138	121.25	126.50	5.25	575	3,019
GLD149 *	402442	6523679	73	132	105.20	109.20	4.00	380	1,520
					114.50	115.75	1.25	1,725	2,156

All results reported as gamma-derived eU₃O₈ in the above table unless otherwise indicated.

* indicates PFN-derived equivalent pU₃O₈.

Values are reported above the nominal 250ppm pU₃O₈ cutoff grade, 0.5m minimum interval thickness and maximum 1m internal dilution. Results below 250ppm are considered unreliable and this cut-off value is used for calculating uranium intersections.

All holes were drilled vertically (-90° inclination and 0° azimuth).

For personal use only

APPENDIX 1 – Table 2: Current drill results (Beulah area)

Hole ID	Easting	Northing	RL	EOH	From	To	Width	pU3O8	Grade Thickness
	MGA94, z54		(m)	(m)	(m)	(m)	(m)	(ppm)	(m.ppm)
WRM0162	400409	6519775	74.9	139	-	-	-	-	-
WRM0163	400609	6519601	75.4	139	125.50	126.50	1.00	472	472
	<i>plus</i>				128.00	128.50	0.50	391	196
WRM0164	400736	6519776	75.5	139	123.00	124.25	1.25	355	444
WRM0165	400547	6523096	71.7	139	-	-	-	-	-
WRM0166	400743	6523102	72.0	139	85.75	86.25	0.50	358	179
WRM0167	400598	6523336	71.0	139	108.50	109.50	1.00	300	300
WRM0168	400832	6523338	70.44	139	102.50	103.50	1.00	283	283
	<i>plus</i>				106.75	107.50	0.75	1,706	1,280
WRM0169	401071	6523340	71.4	139	93.25	94.25	1.00	302	302
	<i>plus</i>				111.25	114.00	2.75	297	817
WRM0170	401308	6523341	71.61	139	122.25	123.25	1.00	956	956
	<i>plus</i>				125.00	125.50	0.50	518	259
WRM0171	401545	6523343	71.6	139	126.25	127.50	1.25	301	376
WRM0172	401790	6523345	71.7	139	114.00	114.75	0.75	577	433
	<i>plus</i>				118.50	121.75	3.25	422	1,372
WRM0173	401906	6523345	71.9	139	Hole collapsed - no logs obtained				
WRM0174	401908	6523107	72.7	139	113.50	115.50	2.00	661	1,322
	<i>plus</i>				119.50	122.50	3.00	437	1,311
WRM0175	401784	6523117	72.5	139	118.00	124.25	6.25	1,094	6,838
WRM0176	401217	6523471	70.9	139	116.75	118.25	1.50	277	416
	<i>plus</i>				122.00	125.25	3.25	3,873	12,587
	<i>plus</i>				126.25	129.00	2.75	946	2,602
WRM0177	401338	6523466	71.1	139	110.50	112.25	1.75	395	691
	<i>plus</i>				124.25	125.50	1.25	445	556
	<i>plus</i>				128.50	129.00	0.50	1,200	600
WRM0178	401435	6523451	71.1	139	110.00	111.50	1.50	564	846
	<i>plus</i>				123.75	124.25	0.50	497	249
	<i>plus</i>				126.25	126.75	0.50	333	167
WRM0179	401574	6523490	71.01	139	125.50	126.50	1.00	449	449
	<i>plus</i>				130.25	131.00	0.75	1,291	968
WRM0180	401706	6523461	71.37	139	119.25	121.25	2.00	714	1,428
	<i>plus</i>				122.50	126.75	4.25	724	3,077
WRM0181	401821	6523465	71.5	139	113.00	115.50	2.50	303	758
WRM0182	401907	6523460	71.4	139	-	-	-	-	-
WRM0183	402020	6523468	71.58	139	Hole collapsed - no logs obtained				
WRM0184	401406	6523590	70.5	139	112.00	112.50	0.50	387	194
WRM0185	401,848	6,523,582	71.3	61	Hole abandoned - no logs obtained				
WRM0186	401919	6523901	70.43	139	108.75	111.25	2.50	342	855
WRM0187	401962	6524020	70.3	139	107.75	109.75	2.00	294	588
	<i>plus</i>				111.25	115.25	4.00	504	2,016
WRM0188	402006	6524097	70.2	139	110.00	110.50	0.50	453	227
WRM0189	401748	6524086	70.71	139	123.75	125.00	1.25	943	1,179

Hole ID	Easting	Northing	RL	EOH	From	To	Width	pU3O8	Grade Thickness
	MGA94, z54		(m)	(m)	(m)	(m)	(m)	(ppm)	(m.ppm)
WRM0190	401815	6524172	70.2	139	111.50	112.25	0.75	321	241
	<i>plus</i>				121.75	126.25	4.50	548	2,466
WRM0191	401831	6524279	70.1	139	114.00	114.50	0.50	475	238
	<i>plus</i>				122.00	123.50	1.50	366	549
WRM0192	401894	6524432	69.2	139	120.25	121.75	1.50	1,381	2,072
WRM0193	401,919	6,524,519	69.7	139	112.50	113.00	0.50	566	283
	<i>plus</i>				128.00	128.50	0.50	318	159
WRM0194	401915	6524662	69.78	139	111.00	111.75	0.75	303	227
	<i>plus</i>				120.75	121.25	0.50	1,102	551
	<i>plus</i>				122.50	123.25	0.75	358	269
WRM0195	401924	6524797	69.63	139	121.50	122.00	0.50	911	456
	<i>plus</i>				122.75	125.25	2.50	662	1,655
WRM0196	401927	6524792	69.64	139	121.25	123.25	2.00	681	1,362
	<i>plus</i>				124.75	125.75	1.00	255	255
WRM0197	401962	6524969	68.6	139	115.25	116.00	0.75	1,654	1,241
	<i>plus</i>				121.25	122.00	0.75	828	621
WRM0198	402005	6524780	69.8	139	-	-	-	-	-
WRM0199	401862	6524790	69.8	139	112.00	113.25	1.25	275	344
	<i>plus</i>				122.50	123.50	1.00	561	561
WRM0200	401486	6524652	70.1	139	123.75	124.25	0.50	582	291
WRM0201	401411	6524739	70.5	139	123.25	124.25	1.00	390	390
	<i>plus</i>				129.25	129.75	0.50	587	294
WRM0202	401397	6524661	70.37	139	117.75	119.75	2.00	845	1,690
	<i>plus</i>				123.50	124.50	1.00	378	378
WRM0203	401402	6524541	70.1	139	118.00	118.50	0.50	988	494
	<i>plus</i>				122.25	122.75	0.50	372	186
WRM0204	401374	6524401	69.7	139	122.50	123.25	0.75	406	305
WRM0205	401338	6524325	69.62	139	110.00	111.25	1.25	412	515
WRM0206	401313	6524664	70.3	139	112.50	113.00	0.50	443	222
	<i>plus</i>				124.50	125.00	0.50	351	176
WRM0207	401304	6524903	69.57	139	121.00	121.50	0.50	1,037	519
	<i>plus</i>				123.75	126.00	2.25	626	1,409
	<i>plus</i>				130.50	131.25	0.75	439	329
WRM0208	401305	6525040	68.48	139	Hole collapsed - no logs obtained				
WRM0209	401097	6523460	71.24	139	112.50	113.25	0.75	368	276
	<i>plus</i>				123.00	124.50	1.50	802	1,203
	<i>plus</i>				126.00	126.75	0.75	315	236
WRM0210	401682	6523137	72.2	139	114.75	115.25	0.50	281	141
WRM0211	401787	6523211	72.36	139	111.50	113.25	1.75	573	1,003
	<i>plus</i>				116.00	116.75	0.75	310	233
	<i>plus</i>				118.25	121.00	2.75	517	1,422
WRM0212	400567	6520588	74.41	139	-	-	-	-	-
WRM0213	400998	6520724	75.7	139	124.75	126.50	1.75	802	1,404
WRM0214	400818	6519846	75.33	139	-	-	-	-	-

For personal use only

Values are reported above the nominal 250ppm pU₃O₈ cutoff grade, 0.5m minimum interval thickness and maximum 1m internal dilution. Results below 250ppm are considered unreliable and this cut-off value is used for calculating uranium intersections. All results reported as PFN-derived pU₃O₈ in the above table unless otherwise indicated.

All holes were drilled vertically (-90° inclination and 0° azimuth).

APPENDIX 1 – Table 3: Current drill results (Jason’s)

Hole ID	Easting	Northing	RL	EOH	From	To	Width	pU3O8	Grade Thickness
	MGA94, z54		(m)	(m)	(m)	(m)	(m)	(ppm)	(m.ppm)
BMR231	467027	6501303	93	128	74.50	75.00	0.50	403	202
	<i>plus</i>				77.75	78.25	0.50	850	425
	<i>plus</i>				90.50	91.00	0.50	1,364	682
BMR232	466886	6501221	94	128	89.25	90.50	1.25	1,258	1,573
	<i>plus</i>				91.50	92.00	0.50	1,428	714
BMR233	467290	6500924	94	122	86.75	89.75	3.00	960	2,880
BMR234	466976	6500879	94	128	91.50	92.00	0.50	844	422
	<i>plus</i>				100.25	100.75	0.50	791	396
	<i>plus</i>				104.25	104.75	0.50	546	273
BMR235	466779	6500964	95	128	93.50	94.00	0.50	983	492
BMR236	467722	6500807	95	128	106.25	106.75	0.50	342	171
BMR237	467862	6500611	94	122	101.75	102.25	0.50	875	438
BMR238	467912	6500677	94	116	96.25	96.75	0.50	3,897	1,949
BMR239	467717	6500380	93	122	85.50	86.00	0.50	812	406
	<i>plus</i>				93.75	94.25	0.50	630	315
BMR240	467552	6500544	94	122	86.00	86.50	0.50	976	488
BMR241	467851	6500282	95	122	85.75	86.25	0.50	1,153	577
	<i>plus</i>				94.75	95.75	1.00	474	474
BMR242	466985	6501570	95	122	-	-	-	-	-
BMR243	466868	6501478	94	122	102.50	103.50	1.00	642	642
BMR244	466743	6501378	94	122	89.25	90.25	1.00	1,101	1,101
	<i>plus</i>				92.50	93.00	0.50	1,125	563
BMR245	466502	6501689	94	122	85.75	86.50	0.75	750	563
BMR246	466368	6501368	93	128	93.75	94.25	0.50	1,135	568
BMR247	467370	6501080	94	116	99.25	100.00	0.75	449	337
	<i>plus</i>				103.50	104.25	0.75	2,950	2,213
BMR248	465971	6501798	94	128	95.00	95.50	0.50	1,855	928
BMR249	467170	6500399	95	128	87.50	88.50	1.00	478	478
BMR250	467600	6500205	92	116	92.75	93.50	0.75	742	557
BMR251	467527	6500106	93	128	-	-	-	-	-
BMR252	468028	6500602	94	98	-	-	-	-	-
BMR253	467989	6500074	94	122	93.75	94.25	0.50	1,044	522
BMR254	468132	6500270	94	128	83.75	85.75	2.00	606	1,212
	<i>plus</i>				89.75	90.25	0.50	1,424	712
	<i>plus</i>				95.50	96.00	0.50	795	398
BMR255	468230	6500194	95	128	-	-	-	-	-

For personal use only

Values are reported above the nominal 250ppm pU_3O_8 cutoff grade, 0.5m minimum interval thickness and maximum 1m internal dilution. Results below 250ppm are considered unreliable and this cut-off value is used for calculating uranium intersections. All results reported as PFN-derived pU_3O_8 in the above table unless otherwise indicated.

All holes were drilled vertically (-90° inclination and 0° azimuth).

** Denotes drill hole result reported as calibrated gamma derived equivalent U_3O_8 (eU_3O_8).*

JORC Code, 2012 Edition – Table 1

Section 1 – Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Rotary mud drill cuttings were collected at 1m intervals for each drill hole. The latest WRM series drill holes have been geophysically logged upon completion with a combination of Prompt Fission Neutron (PFN), Borehole Magnetic Resonance (BMR), calibrated gamma and induction tools. Data is collected at 1cm intervals and incorporated in the Boss Energy drilling database. The GLD series holes were drilled in during 2005 – 2006 by Southern Cross Resources. Drill holes were logged Prompt Fission Neutron (PFN) where available, along with calibrated gamma and induction tools. Data was collected at 1cm and 5cm intervals. Historic uranium grade data from the BW series drilling (completed in the 1970's and early 1980's) was digitised from paper logs by Southern Cross Resources. All natural gamma and Prompt Fission Neutron (PFN) tools used during the current drilling program were calibrated at the PIRSA calibration facility in Adelaide prior to the program commencing.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> The drilling technique used for all holes was the Rotary Mud, with all drilling completed by highly experienced contractor Watson Drilling. The standard hole diameter is 5 5/8" (or 143mm), with all holes being vertical.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and 	<ul style="list-style-type: none"> Drill chips were collected for geological logging purposes only, with very good sample recoveries. Due to the historic nature of the BW and GLD series drill holes, it is not possible to comment further regarding sample recoveries.

Criteria	JORC Code explanation	Commentary
	<i>whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	
Logging	<ul style="list-style-type: none"> • Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> • All WRM series drill holes have been geologically logged and incorporated into the Boss Energy database. • Chip samples were collected at 1m intervals and final chip trays photographed.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> • The PFN tool has a depth of investigation radius of approximately 25-40 cm around the borehole. This provides an accurate measurement of epithermal/thermal neutron ratios for the calculation of pU_3O_8. • The downhole PFN (Prompt Fission Neutron) logging tool directly measures the amount of isotope U^{235} that is present in all naturally occurring uranium. This is considered to give a reliable estimate of the grade of uranium, while downhole gamma logging is a proxy that relies on detecting the daughter products of uranium, including Bi^{214} and Pb^{214}. The Boss Energy PFN tools are routinely calibrated in Adelaide at the facility now managed by the Department of Water, Land and Biodiversity Conservation. These calibration pits were purpose built to provide for the calibration of radiometric tools. • QA/QC of PFN data throughout the program included two calibration runs at the Adelaide test pits throughout the program, along with multiple tool runs in a number of holes for direct PFN comparisons. • No chemical assay sampling was carried out for the drill holes in question. • Given the historic nature of the BW and GLD series holes, it is not possible to comment on the gamma and PFN logging carried out at the time.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> • Three PFN (Prompt Fission Neutron) tools have been used throughout the program (serial numbers 02, 08 and 32). These tools were manufactured by Geoinstruments Inc, comprise a neutron generator and are run at a logging speed of $\sim 0.5m/minute$. • One Borehole Magnetic Resonance (BMR-60) tool was used during the program, serial # 223108, manufactured by Orica. • One 3-arm caliper (serial 5363), manufactured by Geovista. • One Induction/Conductivity tool (serial 3822), manufactured by Geovista.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> • Two natural gamma tools (serial 3540 & 5140), manufactured by Geovista. • All PFN and gamma tools being used as part of the current drilling campaign have been calibrated at the PIRSA calibration facility in Adelaide by both Boss Energy and logging contractor Borehole Wireline prior to the program commencing. Gamma jigs are used daily to confirm calibration of the natural gamma tools. • Gamma and PFN tools used to log the GLD series drill holes were typically calibrated prior to a drilling program commencing, both at the PIRSA facility in Adelaide and purpose-built pits at the Honeymoon Uranium Mine. • Given the historic nature of the BW series holes, it is not possible to comment on the calibration of gamma logging tools carried out at the time. • Rotary mud chip samples are not of sufficient quality for chemical assay, therefore no physical assaying has been carried out during the program. The PFN tools are designed to provide a direct measure of uranium (in the form of U^{235}) within the formation, unaffected by radiometric disequilibrium. • Typical gamma-ray logging tools measure radioactive decay products which occur in the uranium decay chain rather than the U^{235} of interest. Over a long period of geologic time the decay products measured by gamma ray logging tools will be directly proportional to the uranium in the formation provided that geologic processes have not caused the uranium to be separated from the gamma emitters being measured. If the uranium has migrated to another location, the gamma ray log can not be relied upon to indicate the correct grade. The grade calculation made from the gamma can be either optimistic or pessimistic. Uranium may have moved into an area of low gamma thus increasing the grade or out of an area of high gamma thus decreasing the grade. When this occurs, the ore body is said to be in disequilibrium. The Prompt Fission Neutron (PFN) logging tool overcomes this problem by measuring the U^{235} in the formation (Source: GeolInstruments Inc website www.geoinstrumentsinc.com/PFN).
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification,</i> 	<ul style="list-style-type: none"> • Several twin holes have been drilled as part of the current campaign. The PFN and calibrated gamma results from this drilling will be used to verify the historic gamma logging from the 1970's/1980's and also the historic PFN logging from the 2000's.

personal use only

Criteria	JORC Code explanation	Commentary
	<p><i>data storage (physical and electronic) protocols.</i></p> <ul style="list-style-type: none"> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Natural gamma logs are used to depth match all geophysical tool runs to ensure accuracy.
<i>Location of data points</i>	<ul style="list-style-type: none"> • <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • The current WRM series drill holes have been pegged using a hand-held Garmin GPS with a nominal accuracy of $\pm 4\text{m}$. Coordinates are cited in MGA94 grid, z54.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • The Competent Person has reviewed all available data and, based on their knowledge and experience with the various exploration techniques employed, is satisfied that the historical drilling data included here is of sufficient quality and accuracy to provide a reasonable, if indicative, basis for the mineralisation reported herein. • Historic drill hole spacing within the Inferred Resource footprint varies greatly from $\sim 80\text{m}$ up to 500m. • The current WRM series drill hole spacing ranges from 80m to $\sim 200\text{m}$ within the Beulah area and $\sim 80\text{-}160\text{m}$ at Jason's. • All PFN and gamma-derived eU_3O_8 data (both new and historic) has been composited to 25cm intervals where possible.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<ul style="list-style-type: none"> • All new & historical holes were drilled vertically which provides an accurate intersection of the flat laying mineralised bodies.
<i>Sample security</i>	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • All new data from the current campaign is processed and verified on site and then incorporated directly into the Boss Energy database.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • All information and data used in this report have been reviewed by the Boss Energy Competent Person. Multiple PFN tools are being run on several of the new WRM series holes for validation and comparison purposes.

Section 2 – Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i> 	<ul style="list-style-type: none"> The Boss Energy tenure within South Australia currently comprises 1 granted Mining Lease, 12 granted Exploration Licenses, two Exploration Licence Applications, 3 Retention Leases and 2 Miscellaneous Purpose Licenses.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> The Gould's Dam project area was first explored for uranium in the late 1960's and has been subject to fluctuating levels of uranium exploration since this time. The Gould's Dam deposit has been the subject of several resource estimates since the mid-late 1970's, with the most recent being completed by Boss Energy in 2016. The Honeymoon deposit and surrounding areas of the Yarramba palaeovalley have been subject to exploration activities periodically since the early 1970's. The Honeymoon Project was evaluated several times, with the degree of details varying from scoping studies to bankable feasibility undertaken in 2006. Resource estimates have been made from 1998 to 2019.
<i>Geology</i>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<p>Palaeovalley-type, sand-hosted, tabular style uranium of the following model:</p> <ul style="list-style-type: none"> Narrower, mineralised, palaeochannels within a broader palaeovalley system, Underlying basement faults reactivated sporadically, greatly influencing the shape and formation of the overlying fluvial system, creating uplifted ridges of basement and the meandering narrow palaeochannels described above; REDOX interfaces from the vertical and lateral movement of uraniferous (oxidised) fluids from south (granitic source rocks in the Olary Ranges) to north (towards Lake Frome); Organic/sulphide-rich horizons and possible hydrocarbon fluids, the latter seeping upwards along the basement faults. Organic- and sulphide-rich material formed within shallow channel embankments and ledges.

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> Please refer to Appendix 1, Table 2 for drill collar information.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Mineralised intervals were chosen based upon a nominal 250ppm U₃O₈ cutoff, 0.50 m minimum interval thickness and maximum 1m internal dilution for reporting. Where available, Prompt Fission Neutron (PFN) data is used which is designated pU₃O₈. For historical drilling or in instances during modern drilling where the PFN tool data was unavailable, gamma tool derived data is used which is designated eU₃O₈ and may be affected by radiometric disequilibrium. There have been no disequilibrium correction factors applied to eU₃O₈ data collected during the recent program at this stage.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Historic drill traverses were oriented at oblique angles across the strike of the palaeovalley as per the historical interpretation current at the time of drilling. Modern drill traverses are often oriented at right angle across the domain strike, although this can vary depending on the interpreted geological setting of each area.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Appropriate and relevant diagrams have been included in the announcement

Criteria	JORC Code explanation	Commentary
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> Balanced reporting has been adhered to.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> Not applicable.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> All results will be used to update the geological and resource models in the coming months, which will then be used to plan the next phase of exploration activity at the Gould's Dam project.

personal use only