



PALADIN ENERGY LTD

ACN 061 681 098

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13 January 2014

ASX Market Announcements
Australian Securities Exchange
20 Bridge Street
SYDNEY NSW 2000

By Electronic Lodgement

Dear Sir/Madam

MANYINGEE URANIUM PROJECT, Western Australia Updated Mineral Resource

- **Indicated Mineral Resource now 15.7Mlb**
- **Additional Inferred Mineral Resources of 10.2Mlb**
- **Confirms and expands on existing Mineral Resource**

Paladin Energy Ltd (“Paladin” or the “Company”) is pleased to announce that a revised mineral resource estimate for the Manyingee Deposit, effective 13 January 2014, conforming to both the JORC(2012) Code and Canadian National Instrument 43-101 has now been completed and the results are reported below using a 250ppm and 0.2m minimum thickness cut off (the “**2014 Mineral Resource Estimate**”).

Updated Mineral Resource Estimate (250ppm U₃O₈ and 0.2m cut off)

Unit	Mineral Resource Category	Volume m ³	Tonnes M	Density g/cm ³	Grade ppm U ₃ O ₈	Pounds M	Metal t
U2	Indicated	860,370	1.46	1.7	885	2.85	1,292
	Inferred	784,983	1.33	1.7	830	2.45	1,110
U3a	Indicated	1,561,529	2.65	1.7	895	5.25	2,380
	Inferred	1,108,662	1.88	1.7	960	3.98	1,806
U3b	Indicated	1,533,046	2.61	1.7	850	4.88	2,214
	Inferred	689,457	1.17	1.7	790	2.04	925
U3c	Indicated	693,416	1.18	1.7	745	1.94	881
	Inferred	423,742	0.72	1.7	790	1.25	569
U4	Indicated	277,732	0.47	1.7	765	0.80	362
	Inferred	175,602	0.30	1.7	680	0.45	203
Total	Indicated	4,926,093	8.37		850	15.71	7,127
	Inferred	3,182,445	5.41		850	10.17	4,613

Figures may not add due to rounding.

Compared to the previous Mineral Resource estimate announced in 1999 (reported at a 300ppm U₃O₈ cut off) (the “**1999 Mineral Resource**”) the 2014 Mineral Resource Estimate outlined herein represents a minor reduction in contained U₃O₈ for the indicated portion of the 1999 Mineral Resource and an increase in the Inferred portion. The 2014 Mineral Resource Estimate is based on a combination of recently validated historical drilling and 96 Rotary Mud and Diamond holes drilled by Paladin in late 2012. The validation of the historical data, along with Prompt Fission Neutron (PFN) probe logging of recent drill holes, has resulted in a

change to the disequilibrium factor used to determine uranium grades. This change has resulted in a reduction in the Indicated Mineral Resource grade; however the overall grade of the deposit has increased due to revised geological modelling and estimation techniques.

More detail on the modelling techniques and estimation parameters used for the 2014 Mineral Resource Estimate as well as a plan of drill hole locations and typical cross section can be found in the additional information attached to this announcement. A NI 43-101 Technical Report for the Manyingee deposit will be filed on SEDAR in due course. All sampling, analytical and test data used in this Mineral Resource Estimation has been verified by the Qualified Person.

ADDITIONAL POTENTIAL

Manyingee is scheduled as the next new project development for the Company but will not be considered until the uranium price is sufficiently incentivising. Meanwhile it is expected that additional infill drilling planned for later in 2014 will enable the conversion of a portion of the current Inferred Mineral Resources into the Indicated category. In addition, this drilling will be targeted at identifying representative areas of mineralisation suitable for In-Situ Recovery processing in order to select a location for a field leach trial. Completion of a field leach trial, post gaining all necessary approvals, is seen as the next major step in further defining the potential of the Manyingee Deposit.

Yours faithfully
Paladin Energy Ltd



JOHN BORSHOFF
Managing Director

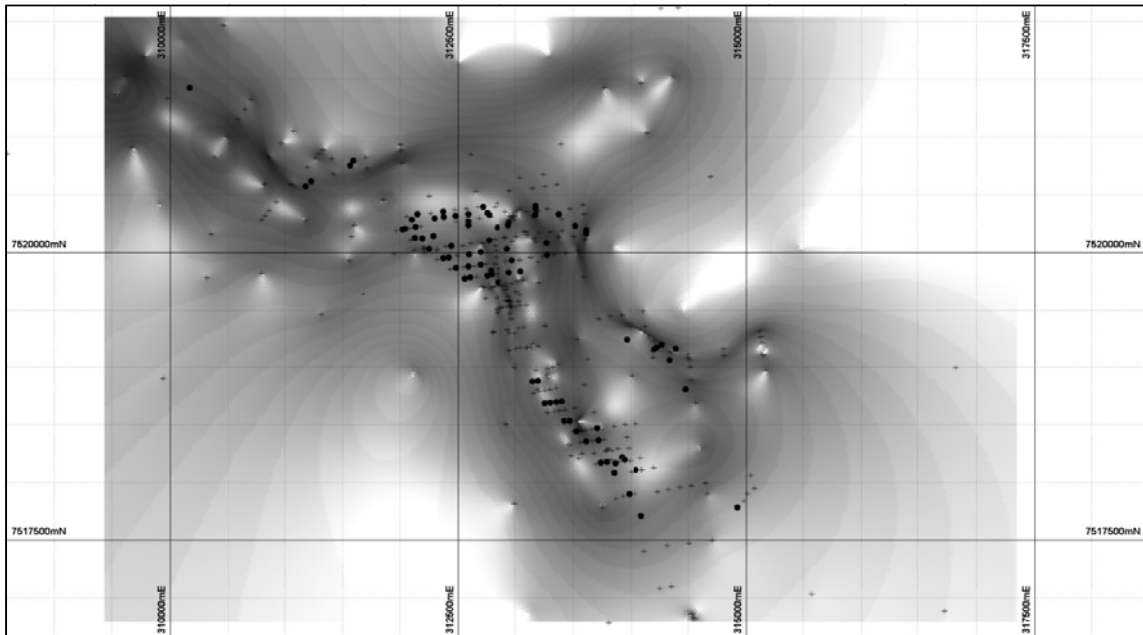
Declaration

The information in this announcement that relates to exploration results and mineral resources is based on information compiled by David Princep B.Sc., FAusIMM(CP). Mr Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", and as a Qualified Person as defined in Canadian National Instrument 43-101. Mr Princep is a full-time employee of Paladin Energy Ltd and consents to the inclusion of the information in this announcement in the form and context in which it appears.

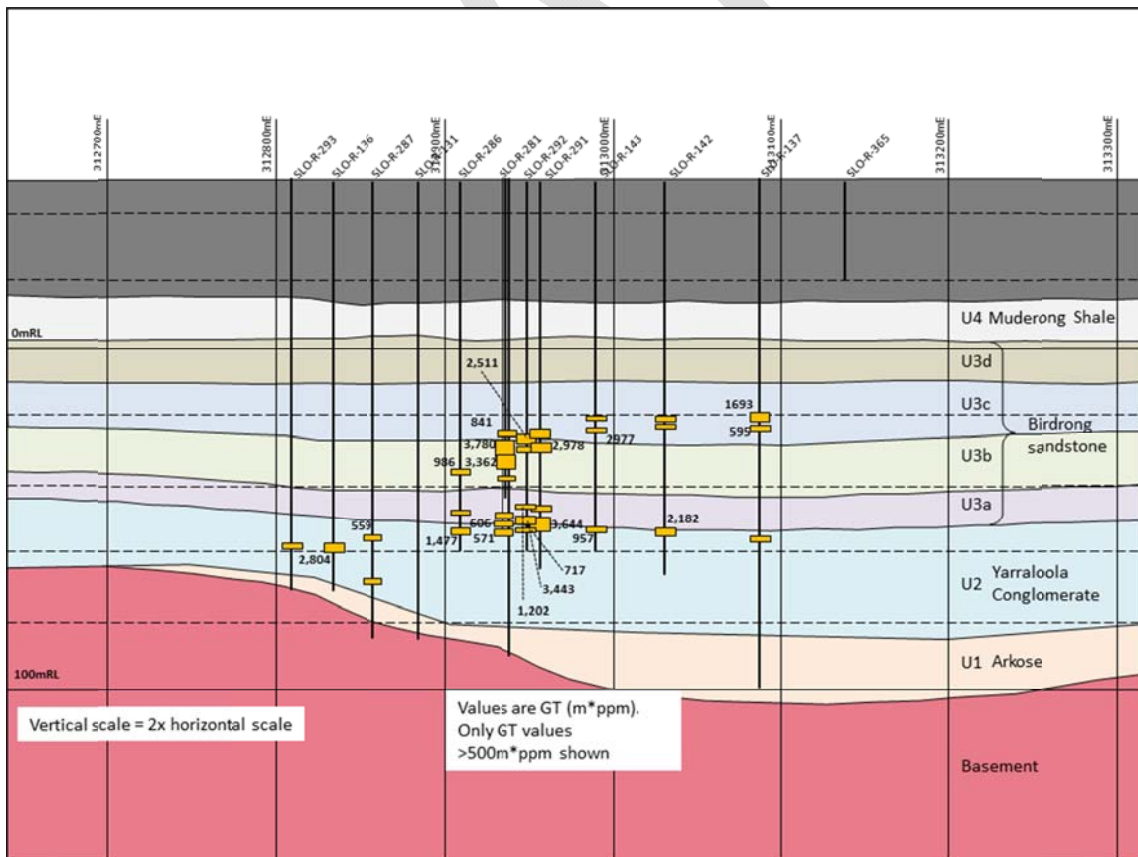
Caution regarding forward-looking information

Except for historical information contained in this news release, this news release contains "forward-looking information" within the meaning of securities laws of applicable jurisdictions. The forward-looking information includes, but is not limited to, statements with respect to Paladin's intentions to undertake additional infill drilling and to complete a field leach trial, and its expectations regarding the ability of such activities to advance the conversion of a portion of the current inferred mineral resources into the indicated resource category. Assumptions upon which such forward-looking information is based include that exploration programs will proceed as planned. Management believes these assumptions are reasonable. However, forward-looking information involves known and unknown risks, uncertainties and other factors, many of which are outside the control of Paladin, and its officers, employees, agents or associates. Such risks, uncertainties and other factors include, but are not limited to, those factors discussed in the section entitled "Risk Factors" in Paladin's most recent Annual Information Form available under Paladin's profile on SEDAR at www.sedar.com. Although Paladin has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. Actual results, performance or achievements may vary materially from those suggested by such forward-looking information. Readers are cautioned not to place undue reliance on forward-looking information and Paladin assumes no obligation to update such information, except as required by applicable law.

Additional information



In the figure above crosses represent historic drill holes and circles are those holes reported in this announcement. The underlying image is the basement profile.



Typical cross section from the main portion of the mineralisation showing the general stratigraphy and underlying basement.

Drill hole information from recent drilling programmes

All drill holes have an initial starting azimuth of 0 degrees and a starting dip of -90 degrees. Down hole deviation surveys indicate minimal deviation.

Hole	Coordinate system	North	East	RL	Hole length	RL of first Intercept	Depth from	GT (m*ppm)	Thickness m	Unit thickness	Unit
MM0415	MGA94_50S	7,517,778.46	314,927.25	51.6	42.8			NSR			
MM0416	MGA94_50S	7,519,974.19	313,278.56	48.9	78.4			NSR			
MM0417 and	MGA94_50S	7,520,233.85	312,590.53	48.2	111.2	-30.8	79.0 93.2	506 10,908	0.75 8.25	14.2 15.3	U3b U3a
MM0418	MGA94_50S	7,520,328.63	312,591.53	48.1	111.0	-45.2	93.3	1,094	1.35	15.1	U3a
MM0419 and and	MGA94_50S	7,520,324.22	313,178.47	48.7	101.3	-12.7	61.4 77.4 99.0	722 761 530	1.70 0.90 0.45	16.0 14.6 2.3	U3c U3b U2
MM0420 and and	MGA94_50S	7,520,378.26	313,179.63	48.5	98.2	-27.4	75.9 87.9 96.5	676 665 62	1.50 1.65 0.20	12.0 8.6 1.7	U3b U3a U2
MM0421	MGA94_50S	7,519,929.11	312,973.13	48.6	110.2	-12.0	60.6	4,397	4.70	17.6	U3c
MM0422	MGA94_50S	7,520,055.79	312,443.79	48.2	110.3	-44.4	92.6	3,202	2.96	16.0	U3a
MM0423	MGA94_50S	7,520,027.62	312,256.46	48.2	108.0	-43.2	91.4	6,368	7.20	12.9	U3a
MM0424 and	MGA94_50S	7,518,353.65	313,615.12	50.0	109.0	7.7	42.3 92.3	217 361	0.40 0.50	11.6 16.7	U3d U2
MM0425 and and and	MGA94_50S	7,518,365.10	313,717.67	49.9	108.3	9.1	40.8 68.0 80.3 91.2	668 644 3,591 595	1.10 1.00 4.30 1.30	12.0 12.3 10.9 17.1	U3d U3b U3a U2
MM0426 and	MGA94_50S	7,518,443.83	313,532.39	50.0	114.3	5.1	44.9 83.6	532 162	1.20 0.30	10.0 11.9	U3d U3a

and							95.5	923	1.70	18.8	U2
MM0427	MGA94_50S	7,518,467.10	313,710.19	50.0	108.6	9.3	40.7	433	1.00	12.2	U3d
and							66.6	999	1.00	9.6	U3b
MM0428	MGA94_50S	7,518,531.68	313,473.56	49.9	108.0	-21.1	71.0	2,224	2.85	14.0	U3b
and							95.6	2,573	3.05	12.4	U2
MM0429	MGA94_50S	7,518,529.80	313,423.02	49.8	102.0	-46.2	96.2	854	1.85	5.8	U2
MM0430	MGA94_50S	7,518,877.59	313,199.92	49.7	115.0	10.8	39.0	1,047	0.72	11.2	U4
and							74.9	1,418	0.95	16.0	U3b
MM0431	MGA94_50S	7,518,702.01	313,403.72	49.9	108.0			NSR			
MM0432	MGA94_50S	7,518,690.10	313,303.92	49.8	108.1	15.4	34.4	1,067	2.50	12.1	U4
and							46.5	1,949	2.30	12.2	U3d
and							76.2	3,946	5.52	11.1	U3b
MM0433	MGA94_50S	7,518,194.64	313,945.28	50.8	108.2	-24.1	75.0	4,046	3.26	11.5	U3a
and							86.5	1,016	1.24	21.7	U2
MM0434	MGA94_50S	7,518,176.81	313,794.15	50.3	102.0	8.6	41.7	617	1.72	11.3	U3d
and							84.7	507	0.65	17.3	U2
MM0435	MGA94_50S	7,517,896.04	313,987.66	51.0	102.0	-21.6	72.6	787	1.00	7.7	U3a
and							80.3	1,015	1.20	21.7	U2
MM0436	MGA94_50S	7,518,105.41	314,052.76	50.9	102.3	-24.8	75.7	3,101	3.92	10.4	U3a
and							86.1	4,592	5.30	16.2	U2
MM0437	MGA94_50S	7,519,166.89	314,234.22	50.2	93.7	16.7	33.5	190	0.34	14.1	U3d
and							47.6	966	1.80	12.9	U3c
and							72.5	738	1.06	7.1	U3a
MM0438	MGA94_50S	7,520,104.24	312,766.38	48.4	102.3	-0.1	48.5	364	0.70	10.3	U3d
and							77.1	203	0.44	16.1	U3b
MM0439	MGA94_50S	7,520,233.77	312,941.31	48.5	114.0	-11.3	59.8	1,694	1.42	16.2	U3c
and							76.0	2,103	2.82	18.0	U3b
and							94.0	350	0.88	11.6	U3a

and							105.6	539	0.60	8.4	U2
MM0440	MGA94_50S	7,520,212.42	312,842.78	48.4	108.0	18.1	30.3	1,568	1.18	20.5	U4
and							50.8	817	1.30	9.0	U3d
and							78.0	1,771	1.96	16.9	U3b
and							94.9	1,567	1.30	11.1	U3a
MM0441	MGA94_50S	7,520,029.63	312,931.52	48.5	114.0	17.0	31.5	495	0.82	18.6	U4
and							76.1	1,937	3.45	17.6	U3b
MM0442	MGA94_50S	7,520,161.10	313,615.72	48.8	88.3	-10.3	59.1	2,023	3.50	12.1	U3c
and							71.2	356	0.65	9.2	U3b
MM0443	MGA94_50S	7,520,278.95	312,105.22	47.9	120.1	-27.4	75.3	3,754	4.54	18.1	U3b
MM0444	MGA94_50S	7,520,314.21	312,479.78	48.1	108.0	-31.7	79.8	153	0.40	15.0	U3b
and							94.8	486	0.64	13.2	U3a
MM0445	MGA94_50S	7,519,955.79	312,423.08	48.3	116.0	-41.8	90.1	6,952	3.54	14.9	U3a
MM0446	MGA94_50S	7,520,402.91	313,179.93	48.7	98.0	-10.3	59.0	317	0.44	16.0	U3c
and							75.0	4,666	2.56	13.0	U3b
MM0447	MGA94_50S	7,520,342.43	312,751.89	48.1	112.0	-32.2	80.3	845	1.04	14.2	U3b
and							106.0	1,122	0.60	6.0	U2
MM0448	MGA94_50S	7,520,196.20	312,026.57	47.9	108.0	-28.9	76.8	565	1.50	15.0	U3b
and							91.8	735	1.82	14.9	U3a
MM0449	MGA94_50S	7,519,984.68	312,593.59	48.3	110.0	-29.6	78.1	348	0.56	14.3	U3b
MM0450	MGA94_50S	7,520,001.98	312,694.26	48.4	108.0	-29.5	77.9	446	0.50	14.8	U3b
MM0452	MGA94_50S	7,519,799.92	312,750.76	48.4	110.5	-29.2	77.6	2,137	2.02	15.5	U3b
and							93.1	1,211	1.65	9.6	U3a
and							102.7	1,365	2.95	7.8	U2
MM0453	MGA94_50S	7,519,774.02	312,559.22	48.5	104.0	-29.5	78.1	2,972	3.20	14.9	U3b
MM0454	MGA94_50S	7,519,194.96	314,276.13	50.1	81.3	17.2	32.9	1,346	2.85	14.2	U3d
MM0455	MGA94_50S	7,520,390.70	312,717.54	48.1	112.0	-56.9	105.0	555	0.50	7.0	U2
MM0456	MGA94_50S	7,519,949.65	312,374.44	48.3	112.1	-39.7	88.0	6,493	4.30	16.6	U3a

MM0459	MGA94_50S	7,520,120.00	312,196.46	47.9	116.0	-44.4	92.2	2,162	2.44	15.6	U3a
MM0460	MGA94_50S	7,519,835.62	313,048.75	48.7	108.0			NSR			
MM0461	MGA94_50S	7,520,324.43	312,768.03	48.1	110.0	-31.9	80.0	363	0.75	14.7	U3b
and							105.0	575	0.35	5.0	U2
MM0464	MGA94_50S	7,519,891.20	312,692.08	48.4	94.0			NSR			
MM0465	MGA94_50S	7,520,303.37	312,378.95	47.9	114.0	-47.4	95.3	2,068	3.30	17.5	U3a
MM0466	MGA94_50S	7,520,614.58	311,232.19	46.8	140.0	-68.2	115.0	198	0.36	25.0	U2
MM0467	MGA94_50S	7,520,750.45	311,564.49	46.9	126.1	-13.0	59.9	503	1.54	16.9	U3c
and							76.8	2,929	2.34	16.5	U3b
and							93.3	1,136	1.70	18.8	U3a
and							112.1	1,263	1.94	10.1	U2
MM0469	MGA94_50S	7,519,236.43	313,968.38	49.7	96.0			NSR			
MM0470	MGA94_50S	7,519,155.89	314,395.77	50.4	74.4			NSR			
MM0471	MGA94_50S	7,520,230.67	313,520.62	48.7	102.1	-7.4	56.1	525	1.16	16.5	U3c
and							72.6	406	0.55	13.1	U3b
and							85.7	261	0.45	6.3	U3a
MM0472	MGA94_50S	7,520,329.11	313,376.86	48.6	102.0	-9.5	58.1	370	0.95	14.7	U3c
MM0474	MGA94_50S	7,519,824.84	312,948.12	48.6	108.0	-30.2	78.8	2,118	3.70	17.5	U3b
MM0476	MGA94_50S	7,520,083.41	313,272.51	48.9	108.0	-10.3	59.2	1,205	2.20	15.7	U3c
MM0477	MGA94_50S	7,519,780.31	312,606.64	48.4	104.9	-11.7	60.1	280	0.52	17.7	U3c
and							77.8	904	1.86	15.2	U3b
and							93.0	3,614	4.60	9.0	U3a
MM0478	MGA94_50S	7,520,139.52	312,289.68	47.9	120.0	1.3	46.6	121	0.30	14.0	U3d
and							60.6	1,653	2.10	15.9	U3c
and							93.8	645	0.78	16.0	U3a
MM0479	MGA94_50S	7,520,125.28	312,135.47	48.0	114.0	-44.7	92.7	4,076	3.50	14.3	U3a
MM0480	MGA94_50S	7,520,328.13	312,155.86	47.7	120.1	-28.7	76.4	1,658	4.10	17.6	U3b
and							94.0	1,024	1.50	14.8	U3a

MM0482 and and	MGA94_50S	7,519,057.67	314,343.87	50.2	90.0	26.4	23.8 33.5 86.4	637 294 484	1.48 0.88 1.30	9.7 11.5 3.6	U4 U3d U2
MM0483 and and and and	MGA94_50S	7,520,790.06	311,593.71	46.7	121.0	3.1	43.6 59.7 76.8 92.3 111.3	885 4,891 867 3,562 384	0.94 3.92 0.95 4.10 0.75	16.1 17.1 15.5 19.0 9.7	U3d U3c U3b U3a U2
MM0485	MGA94_50S	7,518,871.15	313,150.59	49.7	108.3	-40.6	90.3	90	0.24	9.9	U3a
MM0486 and	MGA94_50S	7,518,682.90	313,257.47	49.8	108.3	-37.6	87.4 95.2	1,024 830	2.16 1.65	7.8 13.1	U3a U2
MM0487	MGA94_50S	7,518,695.75	313,355.14	49.8	108.0	-26.3	76.1	368	0.68	10.8	U3b
MM0488 and	MGA94_50S	7,518,168.52	313,742.88	50.2	108.0	8.3	41.9 84.7	165 257	0.62 0.50	11.1 23.3	U3d U2
MM0489 and	MGA94_50S	7,518,080.79	313,857.49	50.6	110.0	10.3	40.3 84.5	2,176 2,200	0.90 1.25	12.0 25.5	U3d U2
MM0490	MGA94_50S	7,517,709.03	314,098.33	51.0	102.0			NSR			
MM0491	MGA94_50S	7,518,804.62	314,483.26	51.0	103.0			NSR			
MM0492	MGA94_50S	7,520,351.41	312,376.16	47.8	120.0	-47.5	95.3	362	0.32	16.7	U3a
MM0493	MGA94_50S	7,519,809.32	312,788.93	48.6	98.0			NSR			
MM0494	MGA94_50S	7,519,840.90	312,784.57	48.7	94.4	-11.1	59.8	411	1.10	17.4	U3c
MM0495	MGA94_50S	7,519,737.11	312,844.91	48.8	94.4	-28.4	77.2	6,363	4.25	16.2	U3b
MM0496	MGA94_50S	7,519,732.51	312,848.17	48.9	28.0			NSR			
MM0497	MGA94_50S	7,519,741.22	312,850.35	48.8	38.0			NSR			
MM0498 and	MGA94_50S	7,518,216.69	313,926.40	50.7	85.2	-14.3	65.0 75.6	2,000 2,073	1.95 3.80	10.6 9.6	U3b U3a
MM0499	MGA94_50S	7,518,191.87	313,948.17	50.8	25.0			NSR			
MM0500	MGA94_50S	7,518,684.09	313,310.04	49.8	28.0			NSR			

MM0501	MGA94_50S	7,517,704.14	314,094.65	51.1	28.0			NSR			
MM0502	MGA94_50S	7,517,709.42	314,097.54	51.1	81.0			NSR			
MM0503	MGA94_50S	7,519,169.25	314,242.29	50.3	28.0			NSR			
MM0504	MGA94_50S	7,519,782.18	312,805.08	48.8	38.0			NSR			
MM0505	MGA94_50S	7,519,778.79	312,811.70	48.8	24.5			NSR			
MM0506	MGA94_50S	7,521,421.47	310,169.64	45.4	115.4			NSR			
MM0507	MGA94_50S	7,520,238.17	311,608.41	47.3	30.0			NSR			
MM0508	MGA94_50S	7,521,412.67	310,167.62	45.3	49.0			NSR			
MM0509	MGA94_50S	7,520,569.82	311,181.54	46.8	117.6			NSR			
MM0510	MGA94_50S	7,518,194.74	313,953.90	50.9	29.0			NSR			
MMD0451 and	MGA94_50S	7,520,216.44	312,135.12	47.9	104.0	-27.6	75.6	472	0.86	16.2	U3b
							91.8	1,892	3.50	12.2	U3a
MMD0457 and and and	MGA94_50S	7,520,289.95	312,302.65	47.8	103.5	0.5	47.3	152	0.30	14.6	U3d
							61.9	770	0.84	16.3	U3c
							78.2	2,209	4.20	17.1	U3b
							95.3	89	0.26	8.2	U3a
MMD0458 and and	MGA94_50S	7,520,258.58	312,590.12	48.2	104.0	-13.7	61.9	394	0.70	17.5	U3c
							79.4	284	0.80	14.6	U3b
							94.0	1,040	1.76	10.0	U3a
MMD0462 and	MGA94_50S	7,519,865.01	312,487.60	48.4	105.3	-43.7	92.1	2,643	1.48	11.9	U3a
							104.0	3,427	1.60	1.3	U2
MMD0463 and	MGA94_50S	7,519,876.83	312,591.82	48.4	112.0	-31.5	79.8	633	0.50	13.0	U3b
							92.8	277	0.40	10.9	U3a
MMD0468	MGA94_50S	7,520,199.97	312,051.78	47.9	108.5	-43.1	90.9	7,958	6.10	14.4	U3a
MMD0473 and and and	MGA94_50S	7,520,258.73	312,948.51	48.5	106.0	-2.7	51.2	465	0.82	8.4	U3d
							59.6	1,332	2.48	17.5	U3c
							77.1	353	0.48	16.4	U3b
							90.0	299	0.40	15.0	U2

MMD0475 and and	MGA94_50S	7,520,186.51	313,613.90	48.7	93.0	2.3	46.4 70.8 81.8	2,023 1,805 430	2.90 2.94 0.60	8.2 11.0 6.0	U3d U3b U3a
MMD0481	MGA94_50S	7,519,151.88	314,210.61	50.0	91.0			NSR			
MMD0484 and and	MGA94_50S	7,518,163.90	313,866.08	50.5	100.0	10.5	40.0 84.6 94.3	161 2,777 2,088	0.30 2.80 1.60	12.1 15.4 10.0	U3d U2 U1

JORC Code, 2012 Edition – Manyingee uranium deposit

Section 1 Sampling Techniques and Data

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"> The most recent sampling has been by either downhole gamma radiometric probe, Prompt Fission Neutron (PFN) probe or by ICP assay of diamond drilled half core. Both the gamma and PFN probes were appropriately calibrated at recognised calibration facilities. The gamma probes used were owned and operated by the Company. The PFN probe was owned and operated by independent contractor GAA. Comparisons were undertaken between downhole gamma measurements taken with Company owned equipment with those derived from both gamma and PFN measurements from GAA equipment. Appropriate factors were applied to all downhole geophysical results to make allowance for casing and water factors (where appropriate), hole size corrections based on down hole calliper values, density and salinity adjustments for PFN values.
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"> Drilling was conducted by either Mud Rotary for the entire hole or PQ triple tube Diamond core following a Mud Rotary pre-collar. Given the nature of the ground, mineralisation and geology the core was

Criteria	JORC Code explanation	Commentary
		not orientated.
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 whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Rotary Mud samples were taken only for lithological logging and not for assay; in this case recoveries are not relevant. Special precautions were taken during Diamond drilling to preserve as much core as possible. Core recovery was good to very good in the majority of areas however in zones of running sand recoveries were reduced to <50%. In these instances assays were not taken.
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"> Rotary Mud drilling chips and Diamond drill core were logged to provide some lithological information however downhole electric logs were used to provide detailed stratigraphic information used to generate the geological model. Logging has provided both quantitative and qualitative information. All Diamond drill core and washed Mud Rotary drill chips were photographed and the digital images incorporated into the geological database.
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"> Diamond drill core was cut to half core for the majority of assay samples with quarter core being cut for duplicate sampling. Where practical, the same side of the core was sampled to limit any potential for selective bias. Samples for assay were dispatched to the assay laboratory for drying and total pulverisation prior to being split for analysis. Sample duplicates were taken both in the field prior to preparation and in the laboratory after pulverisation to ensure that the samples are representative of the mineralisation. Results of the duplicate sample programme indicated that, whilst there was some scatter in the data, there was no systematic bias in the results. The mineralisation is sufficiently fine grained that total preparation of PQ quarter core gives a representative sample of the mineralisation.
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. 	<ul style="list-style-type: none"> The assay method used was a four acid digest incorporation hydrofluoric acid and is considered a total digest. The analytical finish was Atomic Emission Spectrometry and is considered appropriate for the quantities of mineralisation present. All down hole tools were calibrated at the test pits in Adelaide within the preceding 12 months and subject to additional routine sensitivity checks

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> • <i>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.</i> 	<p>to confirm operation. Company gamma tools are Auslog A075 slimline probes, downhole reading interval is 5cm and logging speed in mineralisation is 2.5m/minute. The PFN tools are manufactured, operated and calibrated by GAA and are operated at a 2cm down hole logging interval</p> <ul style="list-style-type: none"> • Certified reference standards, blanks and field duplicates were inserted into the assay batches at the rate of one set every 20 samples. All issues identified by the QAQC samples were resolved satisfactorily with the assay laboratory. Accuracy and precision was established for the sampling programme to the level required by the Company's QAQC procedures. • Geochemical assays were undertaken by independent analytical company, ALS Geochemistry, at their Malaga laboratory in Western Australia.
<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, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Mineralised intervals have been verified by multiple techniques, gamma radiometrics, PFN with additional gamma radiometrics and assays for intervals drilled by Diamond core. • No drill holes were twinned in this programme however the majority were radiometrically and PFN logged a number of times to confirm consistency. • All data is stored on servers located in the Company's head office with full on-line backups. All paper logs recorded at site were delivered to the head office for permanent storage at the close of the drilling programme. The geological and geochemical database has appropriate audit and data entry protocols. • Radiometric values were converted to an equivalent uranium oxide value by applying calibration and modifying factors within the database. The factors applied to the radiometric values are also stored within the database. The intermediate uranium oxide values are also deconvolved using standardised algorithms to produce a final equivalent uranium oxide value. All data is stored as the original 5 and 2cm values. • Following comparison between Gamma radiometric, PFN and assay data a disequilibrium factor of 1.07 was determined for the deposit. This factor is lower than that applied to the data used in the previous mineral resource estimate and has resulted in a lower overall grade being defined.

Criteria	JORC Code explanation	Commentary
<i>Location of data points</i>	<ul style="list-style-type: none"> • 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. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • All drill collars were picked up using differential GPS (DGPS) and drill holes were down hole surveyed using a multishot survey tool. Deviation surveys were validated on site immediately after data collection. • All holes were drilled on the Map Grid of Australia (MGA94) Zone 50S • Topographic control was defined relationship to surveyed tenement corner pegs.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • See the attached plan. • Due to the nature of the mineralisation the drilling data is not regularly spaced and is considered appropriate to the use to which it is applied. • Samples are not composited in the field and are stored in the geological database in their original form. Sample intervals are reduced to length weighted composites based on cut-off grade and thickness criteria for mineral resource estimation purposes.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • 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. 	<ul style="list-style-type: none"> • The drill holes are essentially vertical and drilled into a horizontal stratiform sequence of mineralisation and are therefore considered to represent the true width of the mineralisation. There are no apparent internal structures present and therefore it is unlikely that any sample bias may have been introduced.
<i>Sample security</i>	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • Samples are shipped direct from the field site to the assay laboratory. Confirmation of received sample numbers and sample weights is used to validate the delivery. Samples are shipped in calico bags sealed with zip lock ties and placed into sealed plastic tubs at site.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • Data is validated both in the field and by the database administrator in the Company's office in Perth. No external audits have been undertaken.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The work to which this information relates was undertaken on mining leases M08/86, M08/87 and M08/88. The leases were initially granted in 1989 and were renewed in 2010 for a further period of 21 years. • Whilst the leases are within the area of a Native Title claim they were

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> 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. 	<p>granted prior to the promulgation of the relevant Native Title Act.</p> <ul style="list-style-type: none"> The tenements are not subject to any additional agreements. The leases are in good standing and there are no known impediments to operation in the area.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The work undertaken is based on extensive validated historical information performed by Total/Afmecc in the 1980's and 1990's. This work included extensive drilling, hydrogeological and feasibility studies and culminated in a Field Leach Trial.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The deposit is a uranium, sandstone hosted, roll front style.
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"> See attached table.
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"> The values used in the mineral resource estimation are based on length weighted composites with a minimum length of 0.2m and a minimum grade of 250ppm U₃O₈.
Relationship between	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. 	<ul style="list-style-type: none"> As the mineralisation is sub horizontal and the drilling is near vertical all

Criteria	JORC Code explanation	Commentary
<i>mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> 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'). 	mineralisation intercepts can be considered at true widths.
<i>Diagrams</i>	<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"> See attached.
<i>Balanced reporting</i>	<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"> See attached for distribution of recent drill holes and historical drilling. As exploration results are not reported here as such this section is not considered relevant.
<i>Other substantive exploration data</i>	<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"> The deposit has previously been the subject extensive drilling, metallurgical, hydrogeological and pre-feasibility studies and culminated in a long term Field Leach Trial.
<i>Further work</i>	<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"> Further work is expected to include additional infill drilling and detailed hydrogeological investigations. See attached.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	<ul style="list-style-type: none"> All data has been extensively validated back to the original paper and electronic logs and any issues have been resolved. The geological database contains extensive validation tools for automatic flagging of a significant number of potential validation issues. Data validation procedures are visual (based on comparison of printed logs and sections) and electronic (on database upload of electronic information – assay results, gamma and down hole survey logs etc.)

Criteria	JORC Code explanation	Commentary
Site visits	<ul style="list-style-type: none"> • <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> • <i>If no site visits have been undertaken indicate why this is the case.</i> 	<ul style="list-style-type: none"> • The exploration area was visited by the CP for a period of 7 days during the most recent drilling programme in October 2012.
Geological interpretation	<ul style="list-style-type: none"> • <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> • <i>Nature of the data used and of any assumptions made.</i> • <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> • <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> • <i>The factors affecting continuity both of grade and geology.</i> 	<ul style="list-style-type: none"> • The geological setting of the deposit is well understood having been subject to extensive exploration over a number of years. A combination of chip and core logging as well as downhole radiometric and electric logs has been used to refine and more accurately define the stratigraphic model. • The mineral resource was defined by the modelled stratigraphic sequence. • The local geology is defined by the surrounding basement profile and the grade distribution by the internal stratigraphic sequence, grain size, cementation and redox processes.
Dimensions	<ul style="list-style-type: none"> • <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i> 	<ul style="list-style-type: none"> • The mineralisation is contained, primarily along the edges of a paleovalley approximately 6,200m long and 1,000m wide and is approximately 40m to 170m below surface. The mineralisation is variable in both width and strike within this area but is considered to be continuous within the particular stratigraphic unit. It is considered as fairly typical of the majority of sandstone hosted roll front deposits.
Estimation and modelling techniques	<ul style="list-style-type: none"> • <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i> • <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> 	<ul style="list-style-type: none"> • The mineral resource is based on 2D Ordinary Kriging of thickness and grade thickness values with appropriate top cuts applied to the grade thickness values. A first pass was used to define the location of mineralisation within a particular stratigraphic horizon and then a more constrained estimation was undertaken within the mineralised zone. Variography was derived from the data points contained within each individual stratigraphic unit. Micromine software was used to perform all work. • The mineral resource compares well with the previous, JORC (1999) mineral resource. Grades in particular were reduced in this current mineral resource update following changes to the disequilibrium factor applied to the equivalent uranium values. • There are no by-products within the deposit. • A hydrogeological model for the deposit is currently being undertaken to further assist in defining any processing parameters.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 	<ul style="list-style-type: none"> • Block sizes and search distances are appropriate for the size and extent of the deposit and the drill spacing employed in the exploration phase of the project. • As the deposit will be mined by in-situ recovery methods there is no consideration of selective mining units. • The stratigraphic units were modelled individually and are only reported in total. • There is no correlation between grade and thickness within the deposit, the only correlation between the variables used in the estimate is only that imposed by generating a grade thickness value. • Cutting was applied to extreme grade values however the estimation methodology used is expected to be tolerant of outlying values. • The model was validated globally and visually against the underlying sample data.
Moisture	<ul style="list-style-type: none"> • Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> • Tonnages are estimated dry.
Cut-off parameters	<ul style="list-style-type: none"> • The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> • Cut off parameters are based on the limits of the likely recovery method.
Mining factors or assumptions	<ul style="list-style-type: none"> • Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	<ul style="list-style-type: none"> • The project will be an in-situ recovery one with well field size and pattern shape defined by additional detailed infill and a Field Leach Trial.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> • The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the 	<ul style="list-style-type: none"> • The majority of metallurgical test work that has been completed is historical. Some small scale test work was completed on drill core recovered from the most recent drilling programme and this confirmed the historical assumptions. The previous Field Leach Trial confirmed that the material can be leached and also that recoveries typical of ISR projects can be expected. Further test work will be undertaken to refine the processing parameters for the project.

Criteria	JORC Code explanation	Commentary
	<i>metallurgical assumptions made.</i>	
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	<ul style="list-style-type: none"> Mineral resource extraction will be typical for ISR operations with minimal waste created and sufficient footprint within the lease area is available for disposal.
<i>Bulk density</i>	<ul style="list-style-type: none"> Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	<ul style="list-style-type: none"> Bulk density values are dependent on geology (particularly stratigraphic position and degree of cementation) and have been determined by measurements taken on the diamond drill core recovered. In addition, a number of down hole geophysical density measurements were undertaken at the time of drilling. Whilst there is a range of bulk density values throughout the deposit a conservative global value of 1.70g/cm³ has been applied. This is consistent with other deposits of similar style.
<i>Classification</i>	<ul style="list-style-type: none"> The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	<ul style="list-style-type: none"> The mineral resource has been classified on the basis of drilling density throughout the deposit as well as the validity of the underlying data. All relevant factors have been taken into account when determining the mineral resource classification. The current classification of the deposit reflects the opinion of the Competent Person.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> The mineral resource estimate has been reviewed by Company specialists and the current values reflect this review.
<i>Discussion of relative accuracy/confidence</i>	<ul style="list-style-type: none"> Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative 	<ul style="list-style-type: none"> Based on the current understanding of the deposit it is believed that the mineral resource estimate reasonably reflects the accuracy and confidence levels within the deposit. Due to the nature and style of the mineralisation it is expected that additional, detailed, infill drilling will locally

Criteria	JORC Code explanation	Commentary
	<p><i>accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> • <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i> • <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<p>modify grades and thicknesses however the global tonnages and grades are expected to remain consistent.</p> <ul style="list-style-type: none"> • As the actual extent of the field leach trial cannot be determined and the extraction process had not been optimised a comparison to the results of metal produced are not considered relevant.