



## ASX Announcement

16 May 2014

### Ranger 3 Deeps Exploration Decline Project

#### Further underground drilling results released

- Eight additional cross sections of underground close-spaced drilling of the Ranger 3 Deeps mineral resource completed
- Significant intercepts include:
  - R3D\_8C\_007E 23m @ 0.494% U<sub>3</sub>O<sub>8</sub> from 240 metres
  - R3D\_9C\_006 26m @ 0.402% eU<sub>3</sub>O<sub>8</sub> from 95 metres
  - R3D\_9C\_007 27m @ 0.442% eU<sub>3</sub>O<sub>8</sub> from 98 metres
  - R3D\_9C\_011 25m @ 0.447% eU<sub>3</sub>O<sub>8</sub> from 98 metres
  - R3D\_9C\_014 28m @ 0.491% eU<sub>3</sub>O<sub>8</sub> from 109 metres
- Results are in line with the current geological model and structural interpretation

Energy Resources of Australia Ltd (ERA) has completed an additional eight cross sections of underground close-spaced drilling of the Ranger 3 Deeps resource on the Ranger Project Area. These sections comprised 48 drillholes from sections 12175mN Northern Drill Drive (NDD3), 11975mN (Cuddy 7C Central), 11950mN (Cuddy 7C South), 11925mN (Cuddy 8C North), 11875mN (Cuddy 8C South), 11850mN (Cuddy 9C North), 11825mN (Cuddy 9C Central) and 11800mN (Cuddy 9C South) totalling 9677.2 metres.

The downhole collar location and survey of the recent drill holes are outlined in Appendix 1.

These underground drilling results are consistent with the expected geological understanding of the continuity of mineralisation within this zone of the mineral resource.

The results of the sections of the underground drilling programme are outlined below. These results should be read in conjunction with the JORC Code 2012 Edition – Table 1, outlined in Appendix 2 to this announcement. On completion of the Ranger 3 Deeps prefeasibility study, ERA will be in a position to review the Ranger 3 Deeps resource model and make appropriate adjustments to the mineral resource statement.

#### Ranger 3 Deeps exploration decline project

In August 2011, the ERA Board approved the construction of the Ranger 3 Deeps exploration decline to conduct underground close-spaced drilling to further define and evaluate the Ranger 3 Deeps resource. Construction of the decline began in May 2012 and underground drilling commenced in May 2013.

In addition, ERA commenced a prefeasibility study on the proposed Ranger 3 Deeps underground mine in July 2012. The study is on schedule to be completed in the fourth quarter of 2014.

Pursuant to ERA's section 41 Authority, it is permitted to conduct mining and processing operations on the Ranger Project Area until January 2021, following which rehabilitation activities will continue. Further details of the tenure held over the Ranger Project Area and environmental regulations are outlined in the JORC Code 2012 Edition – Table 1, outlined in Appendix 2 to this announcement.

## Drilling Programme

The main objectives of the Ranger 3 Deeps underground drilling programme are to:

- (a) increase confidence in the known mineralisation to allow conversion to a mineral resource; and
- (b) explore those prospective areas with lower drilling density, particularly at the northern end of the deposit.

All drill holes are drilled from positions in dedicated drilling drives or cuddies, sufficient in size to adequately house the drilling operations with drilling fans to be oriented in a direction of approximately 240 degrees and arranged in vertical and inclined fans (Figure 1). Cuddy depths range from -120 metres to -310 metres from the surface.

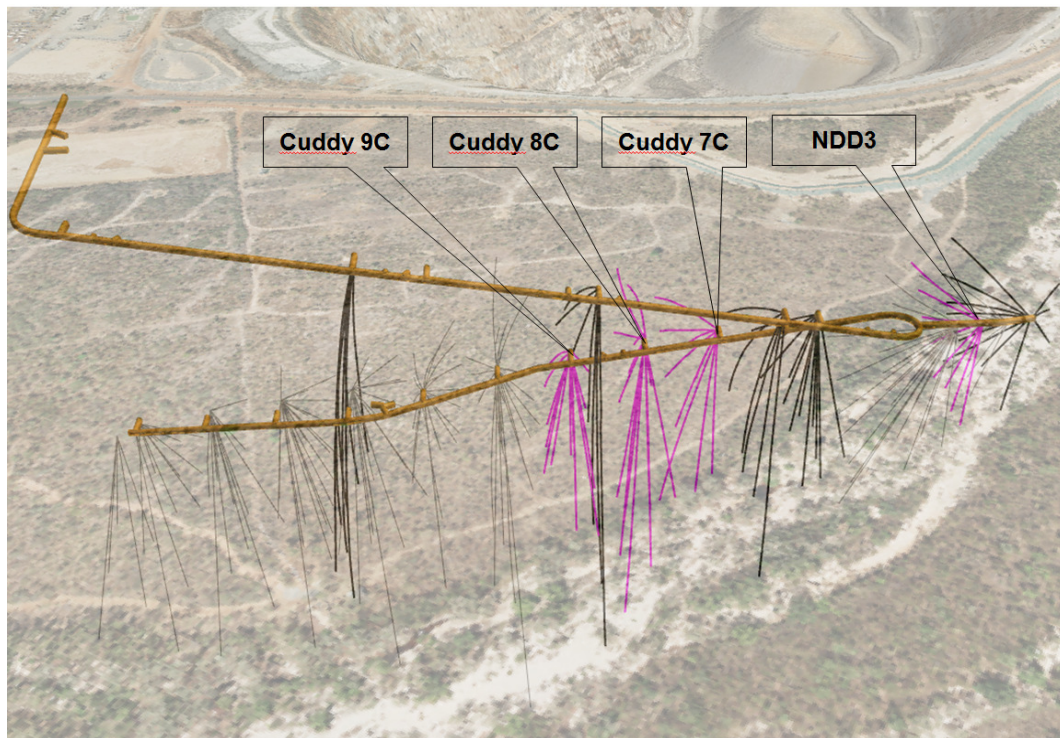


Figure 1 – Location of NDD3, Cuddy 7C, Cuddy 8C and Cuddy 9C from which drilling has recently been completed. (Pink lines are for drill holes relevant to this announcement; black lines are for drill holes from previous announcements; grey lines are for planned drill holes).

- One drill section was undertaken from NDD3 testing geology along section 12175mN.
- Two drill sections were undertaken from Cuddy 7C (Cuddy 7C Central and Cuddy 7C South), at dip angles of 90 and 70 degrees to the south respectively, testing along sections 11975mN and 11950mN.

- Two drill sections were undertaken from Cuddy 8C (Cuddy 8C North and Cuddy 8C South), at dip angles of 70 degrees to the north and 70 degrees to the south respectively, testing along sections 11925mN and 11875mN.
- Three drill sections were undertaken from Cuddy 9C (Cuddy 9C North, Cuddy 9C Central and Cuddy 9C South), at dip angles of 70 degrees to the north and 90 degrees and 70 degrees to the south respectively, testing along sections 11850mN, 11825mN and 11800mN.

Drill intersections from all drill drives have been interpreted and are shown in Figures 2 to 9.

Significant mineralised intervals are shown at a cut-off grade of 0.12%  $U_3O_8$ . Results from all drill drives support and add resolution to the current Ranger 3 Deeps geological model. The width and grade of the reported significant intersections are broadly in line with results from previous surface drilling. Mineralisation from NDD3 was less developed than expected and geological interpretations of this area have been updated accordingly. Additional drilling in the Northern Drill Drive will be necessary to resolve the geological orebody knowledge in this area.

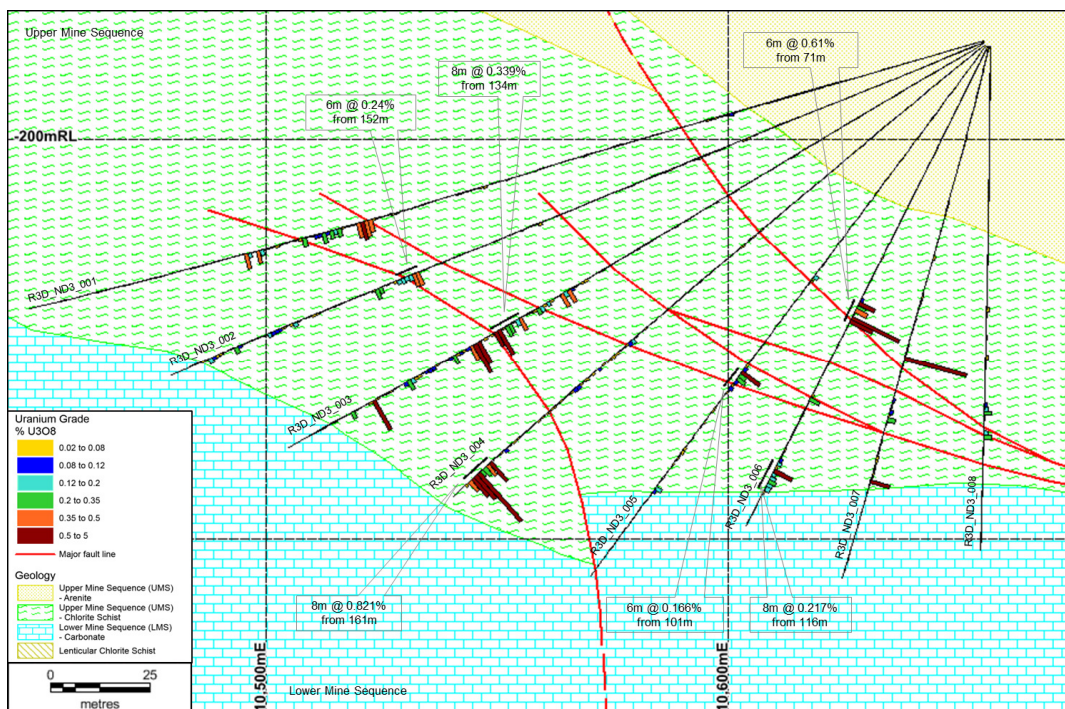


Figure 2 – Interpreted cross section showing the drilling results from NDD3.  
(Includes gamma equivalent and chemical assay results)



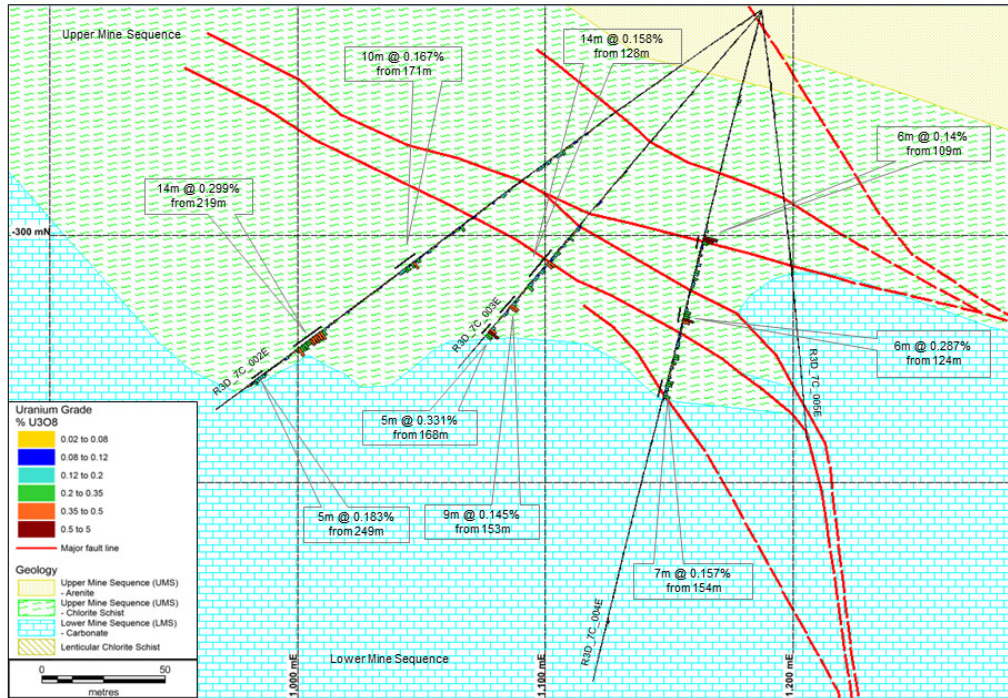


Figure 3 – Interpreted cross section showing the drilling results from Cuddy 7C Central.  
(Includes gamma equivalent and chemical assay results)

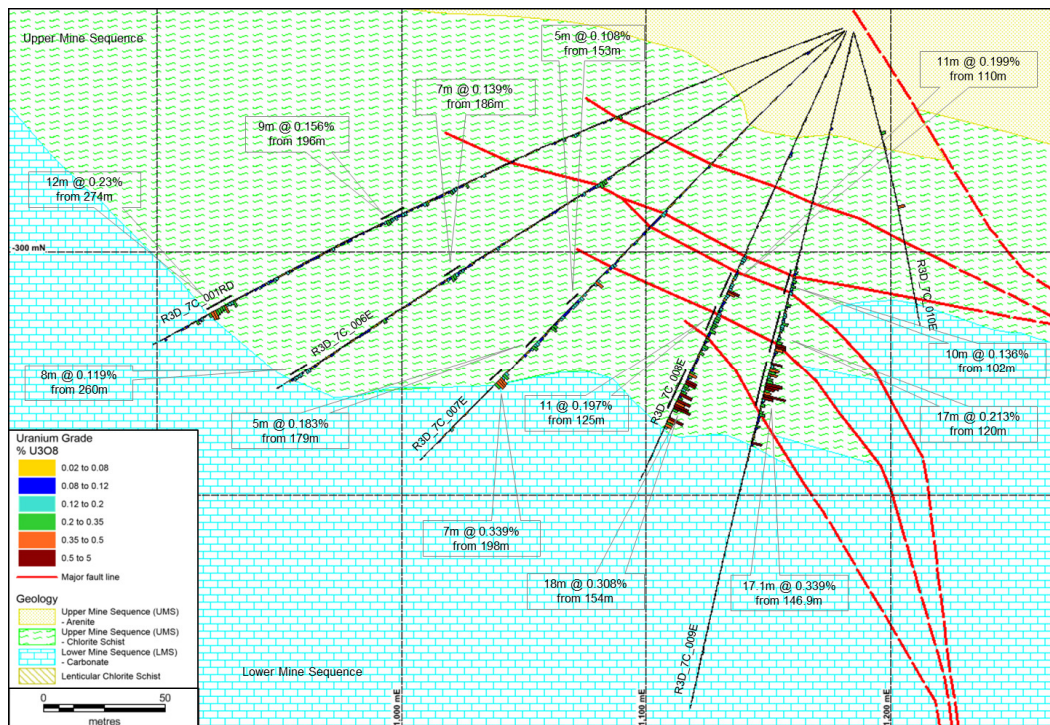
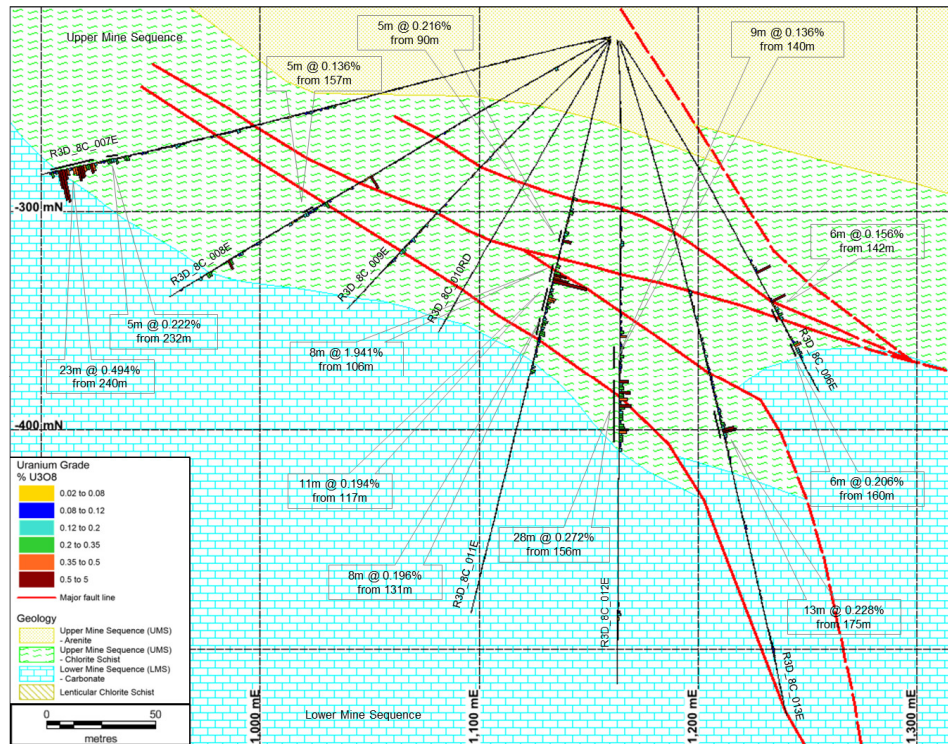
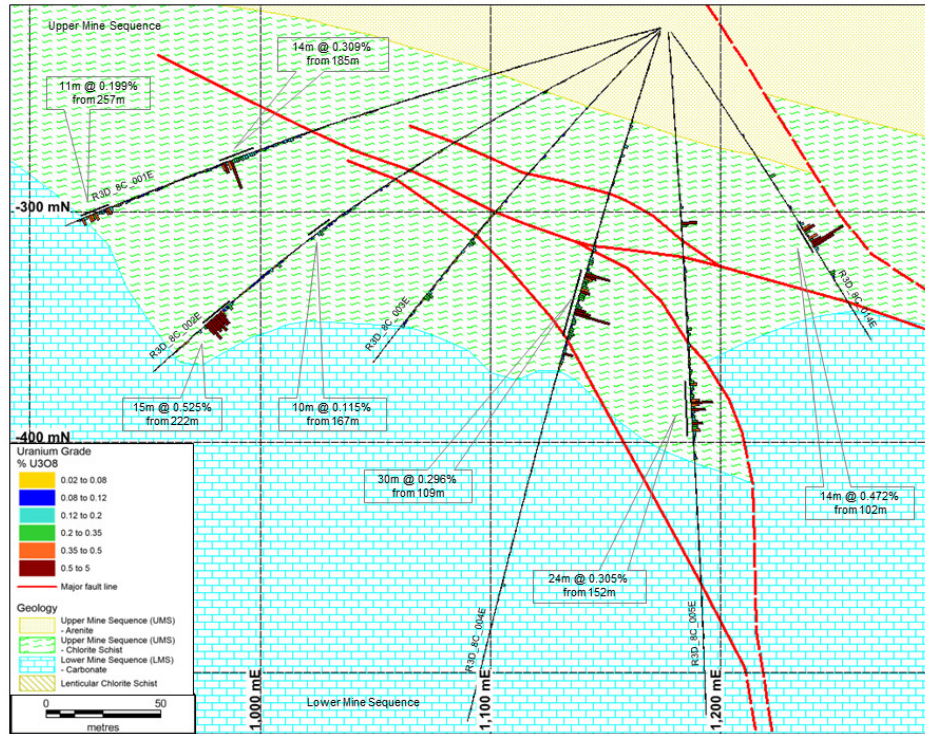


Figure 4 – Interpreted cross section showing the drilling results from Cuddy 7C South.  
(Includes gamma equivalent and chemical assay results)







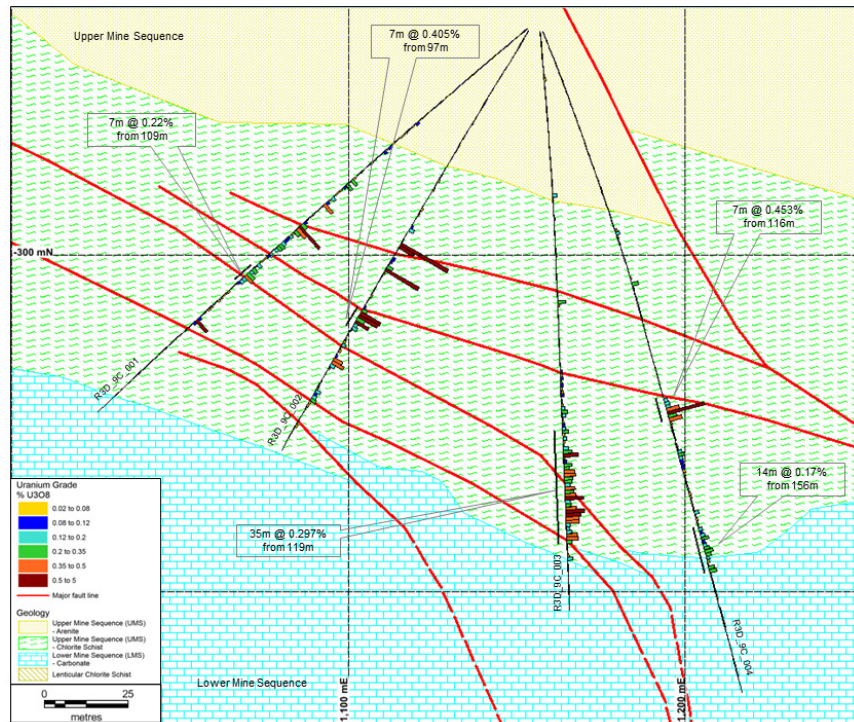


Figure 7 – Interpreted cross section showing the drilling results from Cuddy 9C North.  
(Includes gamma equivalent and chemical assay results)

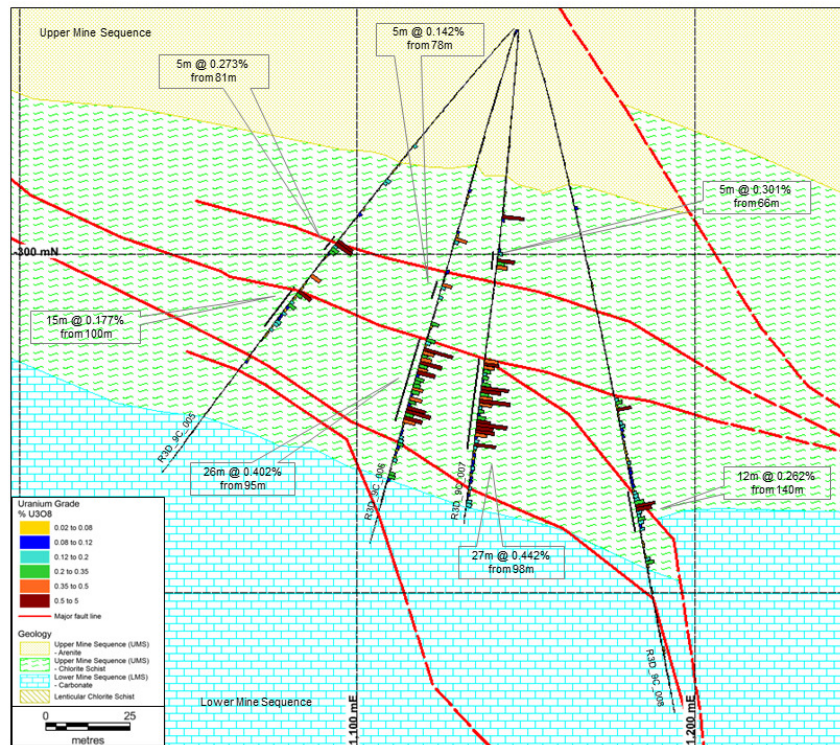


Figure 8 – Interpreted cross section showing the drilling results from Cuddy 9C Central.  
(Includes gamma equivalent and chemical assay results)

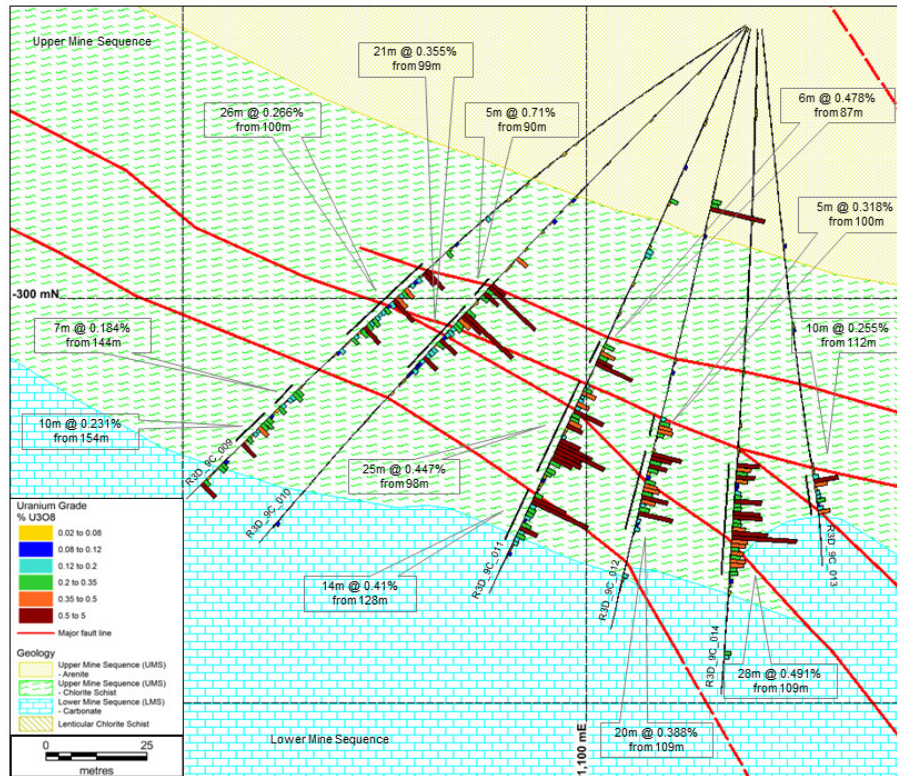


Figure 9 – Interpreted cross section showing the drilling results from Cuddy 9C South.  
(Includes gamma and chemical assay results)

In line with current ERA procedures, a downhole geophysical gamma sonde is deployed internally within the drill rod string and subsequently in the open hole (subject to ground conditions). Geophysical measurements (gamma logging) are recorded every 0.05 metres and composited into one metre intervals to provide an equivalent  $U_3O_8$  grade (referred to as  $eU_3O_8$ ).

Samples for subsequent geochemical assays are selected on the basis of these downhole geophysical measurements. Intervals that have equivalent grades above 0.02%  $eU_3O_8$  are automatically assigned for assaying, plus two samples above and below the triggered interval.

The significant results from the latest drill holes are presented in Table 1. The table includes  $eU_3O_8$  results from gamma probing and geochemical analysis (ICPMS -  $U_3O_8\_G422M\_ppm$ ) of  $U_3O_8$ . In time all  $eU_3O_8$  will be replaced by geochemical assays effectively overriding the gamma probing analysis. The results are in line with the expectations from these drilling sections and will be used to give more confidence in the location of the mineralisation. Significant high grade intersections are in line with the expected continuity of mineralisation. The downhole collar location and survey of the recent drill holes are outlined in Appendix 1.





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HOLE ID	FROM (m)	TO (m)	WIDTH (m)	GRADE % U <sub>3</sub> O <sub>8</sub>	METHOD
R3D_7C_002E	219	233	14	0.299	Geochemistry
R3D_7C_008E	154	172	18	0.308	Geochemistry
R3D_7C_009E	146.9	164	17.1	0.339	Geochemistry
R3D_8C_001E	185	199	14	0.309	Geochemistry
R3D_8C_002E	222	237	15	0.525	Geochemistry
R3D_8C_004E	109	139	30	0.296	Geochemistry
R3D_8C_005E	152	176	24	0.305	Gamma
R3D_8C_007E	240	263	23	0.494	Geochemistry
R3D_8C_012E	156	184	28	0.272	Gamma
R3D_8C_014E	102	116	14	0.472	Gamma
R3D_9C_003	119	154	35	0.297	Gamma
R3D_9C_006	95	121	26	0.402	Gamma
R3D_9C_007	98	125	27	0.442	Gamma
R3D_9C_009	100	126	26	0.266	Gamma
R3D_9C_010	99	120	21	0.355	Gamma
R3D_9C_011	98	123	25	0.447	Gamma
R3D_9C_011	128	142	14	0.41	Gamma
R3D_9C_012	109	129	20	0.388	Gamma
R3D_9C_014	109	137	28	0.491	Gamma

Table 1: Significant results from Cuddy 7C, Cuddy 8C and Cuddy 9C.

**Notes:**

- A. All intersections were determined using a 0.12% U<sub>3</sub>O<sub>8</sub> cut-off at a minimum five metres composite, including a maximum of two metres of non-mineralised internal material. Intersections are down-hole lengths and the true width of the intersections has not been calculated.
- B. Results include eU<sub>3</sub>O<sub>8</sub> results from gamma probing and geochemical results using ICPMS - U3O8\_G422M\_ppm.

### Competent Person

The information in this report relating to exploration results is based on information compiled by Greg Rogers and Stephen Pevely, Competent Persons who are members of the Australasian Institute of Mining and Metallurgy. Greg Rogers and Stephen Pevely are full-time employees of the Company and have 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Greg Rogers and Stephen Pevely consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.





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### **About Energy Resources of Australia Ltd (ERA)**

Energy Resources of Australia Ltd is one of the nation's largest uranium producers and Australia's longest continually operating uranium mine.

ERA has an excellent track record of reliably supplying customers. Uranium has been mined at Ranger for three decades. Ranger mine is one of only three mines in the world to produce in excess of 110,000 tonnes of uranium oxide.

ERA's Ranger mine is located eight kilometres east of Jabiru and 260 kilometres east of Darwin, located in Australia's Northern Territory.

ERA is a major employer in the Northern Territory and the Alligator Rivers Region. ERA is proud of its diverse workforce of more than 500 people, of which 16 per cent are Indigenous people.

Located on the 79 square kilometre Ranger Project Area, Ranger mine is surrounded by, but separate from, the World Heritage listed Kakadu National Park.

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## Appendix 1

### Drill hole collar summary

Hole ID	AMG Easting GDA94	AMG Northing GDA94	GDA Reduced Level	Depth (metres)	Azimuth	Dip
R3D_7C_001E	274494.6826	8598022.673	-208.78	24.3	236.5	-19.5
R3D_7C_001RD	274494.6988	8598022.873	-208.78	312.3	232.2	-19.9
R3D_7C_002E	274494.1959	8598023.749	-209.09	273	236.5	-34
R3D_7C_003E	274494.1747	8598023.736	-209.833	188.9	236.5	-48.4
R3D_7C_004E	274494.5969	8598022.842	-209.536	279	236	-75
R3D_7C_005E	274494.7273	8598022.767	-209.974	173.9	60	-83
R3D_7C_006E	274494.6491	8598023.893	-209.965	275.8	229.6	-29.5
R3D_7C_007E	274495.562	8598023.123	-209.988	248.5	227.3	-42
R3D_7C_008E	274496.4069	8598022.825	-210.065	203.9	218.5	-62.4
R3D_7C_009E	274498.4857	8598025.196	-210.202	287.9	200	-73
R3D_7C_010E	274498.922	8598024.29	-210.193	124	90.2	-70.2
R3D_8C_001E	274524.7694	8597956.355	-220.239	272.9	244.9	-12.6
R3D_8C_002E	274524.7088	8597956.338	-220.589	267	246.7	-27.3
R3D_8C_003E	274524.5461	8597956.412	-221.328	192	248.4	-44.5
R3D_8C_004E	274524.5461	8597956.412	-221.628	311.9	252	-71.7
R3D_8C_005E	274527.971	8597957.475	-221.997	297	23.7	-83.5
R3D_8C_006E	274529.8465	8597956.572	-222.174	185.6	54.2	-46.5
R3D_8C_007E	274524.8979	8597955.936	-220.241	267.1	236	-12.7
R3D_8C_008E	274524.8367	8597955.861	-220.694	234	236.5	-27.4
R3D_8C_009E	274524.7075	8597955.927	-221.248	172	236.4	-43
R3D_8C_010E	274524.9606	8597955.818	-221.647	132.6	233.5	-57.8
R3D_8C_010RD	274525.058	8597955.646	-221.651	155.8	226.9	-57
R3D_8C_011E	274524.9655	8597955.878	-221.647	269.8	229.6	-75.1
R3D_8C_012E	274528.2184	8597956.59	-222.054	294	108.9	-84.6
R3D_8C_013E	274529.0541	8597956.39	-222.149	317.8	72.2	-71.7
R3D_8C_014E	274529.2454	8597957.785	-222.112	161.6	68.7	-46.5
R3D_9C_001	274556.9357	8597888.482	-232.792	173.2	251.4	-39.1
R3D_9C_002	274558.0402	8597887.352	-233.455	145.9	254.4	-56.6
R3D_9C_003	274560.5258	8597890.149	-233.517	174.1	6.41	-80.3
R3D_9C_004	274561.6765	8597889.526	-233.541	207	40.91	-66.8
R3D_9C_005	274557.1159	8597888.081	-233.121	167.7	241.5	-47.8
R3D_9C_006	274557.6535	8597888.325	-233.398	158	241.5	-73.3
R3D_9C_007	274559.0254	8597887.548	-233.48	147.1	241.5	-85.1
R3D_9C_008	274561.482	8597890.011	-233.531	206.7	58.41	-73
R3D_9C_009	274557.1865	8597887.516	-232.713	182.8	228.3	-32.3
R3D_9C_010	274557.307	8597887.394	-233.097	176.8	225.1	-42.1
R3D_9C_011	274557.1226	8597888.658	-233.191	155.4	213.5	-63.6
R3D_9C_012	274558.695	8597887.359	-233.474	154.4	195.7	-73.3
R3D_9C_013	274561.6335	8597887.808	-233.576	135	114.4	-76.8
R3D_9C_014	274560.6666	8597887.109	-233.544	166.8	156.8	-78.8
R3D_ND3_001	274430.8866	8598269.628	-175.714	247.4	240	-15
R3D_ND3_002	274430.94	8598269.68	-175.992	219.2	240	-21
R3D_ND3_003	274431.0856	8598269.62	-176.253	201	240	-29
R3D_ND3_004	274431.1709	8598269.681	-176.61	174.1	240	-39
R3D_ND3_005	274431.4467	8598269.741	-177.014	164.8	240	-53
R3D_ND3_006	274431.8476	8598270.008	-177.04	133.9	240	-63
R3D_ND3_007	274432.1608	8598270.182	-177.024	137.7	239	-76
R3D_ND3_008	274432.4409	8598270.32	-177.003	125.6	238.41	-90





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### Downhole survey summary

Hole ID	Depth	Azimuth	Dip
R3D_7C_001E	12	226.7	-20.50
R3D_7C_001E	24	227	-20.80
R3D_7C_001RD	12	232.3	-19.90
R3D_7C_001RD	30	232.6	-20.90
R3D_7C_001RD	60	233	-21.70
R3D_7C_001RD	90	233.9	-22.10
R3D_7C_001RD	180	234.1	-25.20
R3D_7C_001RD	210	234.6	-26.10
R3D_7C_001RD	240	234	-27.50
R3D_7C_001RD	270	233.8	-28.10
R3D_7C_001RD	300	234.1	-28.90
R3D_7C_002E	12	237.1	-34.40
R3D_7C_002E	30	238.1	-34.60
R3D_7C_002E	60	238.4	-35.47
R3D_7C_002E	90	238.4	-35.90
R3D_7C_002E	120	239	-36.00
R3D_7C_002E	150	240.8	-37.20
R3D_7C_002E	180	240.9	-37.10
R3D_7C_002E	210	241.7	-36.70
R3D_7C_002E	250	244	-36.55
R3D_7C_002E	265	244.1	-36.59
R3D_7C_003E	12	238	-49.25
R3D_7C_003E	30	238.4	-49.51
R3D_7C_003E	60	238.7	-49.71
R3D_7C_003E	90	240	-49.68
R3D_7C_003E	120	241.2	-49.61
R3D_7C_003E	150	243.2	-49.48
R3D_7C_003E	180	244.5	-49.73
R3D_7C_004E	12	237.6	-75.50
R3D_7C_004E	30	238.6	-75.40
R3D_7C_004E	60	239.4	-75.90
R3D_7C_004E	120	242.2	-75.80
R3D_7C_004E	180	243.5	-75.70
R3D_7C_004E	210	244.2	-75.90
R3D_7C_004E	240	244.7	-76.40
R3D_7C_004E	270	245	-76.20
R3D_7C_005E	0	60	-83.14
R3D_7C_005E	12	54.4	-82.82
R3D_7C_005E	30	54.2	-83.09
R3D_7C_005E	60	51.6	-83.39
R3D_7C_005E	90	50.3	-83.59
R3D_7C_005E	120	40.5	-84.28
R3D_7C_005E	150	37.8	-84.64
R3D_7C_006E	12	229.6	-30.10
R3D_7C_006E	30	229.9	-31.10
R3D_7C_006E	60	230.3	-32.00
R3D_7C_006E	90	231.2	-32.10
R3D_7C_006E	120	231.6	-31.90
R3D_7C_006E	150	232.9	-31.80
R3D_7C_006E	180	234	-32.10
R3D_7C_006E	210	234.9	-32.50
R3D_7C_006E	240	235.4	-33.40
R3D_7C_006E	270	236	-33.00
R3D_7C_007E	12	226.8	-43.30
R3D_7C_007E	30	228.7	-44.00
R3D_7C_007E	60	229.7	-44.70
R3D_7C_007E	90	232.1	-45.30
R3D_7C_007E	120	228.7	-45.20
R3D_7C_007E	150	232.9	-45.40
R3D_7C_007E	180	233.5	-45.30
R3D_7C_008E	12	219.7	-63.56
R3D_7C_008E	30	221.2	-64.17



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Hole ID	Depth	Azimuth	Dip
R3D_7C_008E	60	223	-64.65
R3D_7C_008E	90	223.9	-64.70
R3D_7C_008E	120	225.2	-64.66
R3D_7C_008E	150	227.7	-64.62
R3D_7C_008E	180	228.2	-64.62
R3D_7C_009E	12	201.5	-72.80
R3D_7C_009E	30	202.7	-73.17
R3D_7C_009E	60	205.7	-73.51
R3D_7C_009E	90	208.1	-73.50
R3D_7C_009E	120	209	-73.30
R3D_7C_009E	150	209.1	-73.97
R3D_7C_009E	180	210.9	-73.85
R3D_7C_009E	210	212	-74.93
R3D_7C_009E	240	212.2	-75.97
R3D_7C_009E	270	216.5	-76.41
R3D_7C_009E	280	216.4	-76.33
R3D_7C_010E	12	88.2	-72.29
R3D_7C_010E	30	85.9	-73.96
R3D_7C_010E	60	85.8	-75.67
R3D_7C_010E	90	83.1	-78.49
R3D_7C_010E	114	83.4	-78.72
R3D_8C_001E	11	244.3	-14.60
R3D_8C_001E	20	244	-14.90
R3D_8C_001E	32	243.8	-15.50
R3D_8C_001E	62	243.3	-16.10
R3D_8C_001E	90	242.9	-15.60
R3D_8C_001E	120	242.5	-17.00
R3D_8C_001E	149	241.5	-18.60
R3D_8C_001E	179	239.8	-20.30
R3D_8C_001E	210	238.8	-20.60
R3D_8C_001E	240	237.7	-21.40
R3D_8C_001E	269	235.6	-22.30
R3D_8C_002E	12	244.9	-28.20
R3D_8C_002E	30	244.6	-28.80
R3D_8C_002E	60	244.9	-29.30
R3D_8C_002E	90	244.6	-30.90
R3D_8C_002E	120	244.2	-32.80
R3D_8C_002E	150	243.7	-35.60
R3D_8C_002E	180	241.4	-37.90
R3D_8C_002E	210	239.2	-40.10
R3D_8C_002E	240	237.5	-41.50
R3D_8C_002E	263	237.3	-42.34
R3D_8C_003E	10	249	-45.94
R3D_8C_003E	30	249.4	-46.51
R3D_8C_003E	60	250	-47.43
R3D_8C_003E	90	250.5	-48.52
R3D_8C_003E	120	252	-49.37
R3D_8C_003E	150	252.2	-50.09
R3D_8C_003E	185	252.7	-51.78
R3D_8C_004E	13	252.4	-71.98
R3D_8C_004E	30	254.6	-72.10
R3D_8C_004E	60	256.9	-72.20
R3D_8C_004E	78	256	-72.64
R3D_8C_004E	120	258.9	-73.20
R3D_8C_004E	150	259.7	-74.20
R3D_8C_004E	180	258.5	-74.60
R3D_8C_004E	210	259.6	-74.70
R3D_8C_004E	240	261.1	-74.90
R3D_8C_004E	270	262	-75.00
R3D_8C_004E	300	263.6	-75.30
R3D_8C_004E	308	260.5	-75.04
R3D_8C_005E	12	22.6	-84.40
R3D_8C_005E	30	18.8	-85.00
R3D_8C_005E	60	15.7	-84.90





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Hole ID	Depth	Azimuth	Dip
R3D_8C_005E	90	14.2	-85.00
R3D_8C_005E	120	14	-85.80
R3D_8C_005E	150	15.1	-85.60
R3D_8C_005E	180	17.4	-85.30
R3D_8C_005E	210	14	-85.80
R3D_8C_005E	270	8.6	-86.20
R3D_8C_006E	10	72.8	-56.62
R3D_8C_006E	30	72.7	-57.67
R3D_8C_006E	60	73	-58.89
R3D_8C_006E	90	73.9	-60.37
R3D_8C_006E	120	74.8	-61.18
R3D_8C_006E	150	75.7	-61.43
R3D_8C_006E	185	76.8	-61.46
R3D_8C_007E	12	234.1	-13.20
R3D_8C_007E	30	234.8	-13.50
R3D_8C_007E	68	236.7	-14.16
R3D_8C_007E	92	237.2	-14.35
R3D_8C_007E	120	236.4	-14.80
R3D_8C_007E	150	236.9	-14.20
R3D_8C_007E	182	239.7	-13.95
R3D_8C_007E	210	236.6	-13.00
R3D_8C_007E	240	237.1	-12.50
R3D_8C_007E	260	241.9	-11.99
R3D_8C_008E	12	233	-28.70
R3D_8C_008E	30	235.4	-29.62
R3D_8C_008E	60	235.7	-30.12
R3D_8C_008E	90	235.5	-30.75
R3D_8C_008E	120	235.8	-29.87
R3D_8C_008E	150	236.2	-30.14
R3D_8C_008E	180	236.1	-30.66
R3D_8C_008E	210	236.2	-31.55
R3D_8C_008E	230	236.2	-31.49
R3D_8C_009E	12	236.6	-41.00
R3D_8C_009E	30	237.5	-44.50
R3D_8C_009E	60	238.5	-45.70
R3D_8C_009E	90	238.6	-46.30
R3D_8C_009E	120	238.9	-46.80
R3D_8C_009E	150	239.2	-46.80
R3D_8C_009E	169	239.9	-47.25
R3D_8C_010E	12	232.2	-57.90
R3D_8C_010E	30	232.7	-57.97
R3D_8C_010E	60	233.7	-58.31
R3D_8C_010E	90	234.3	-58.21
R3D_8C_010E	125	234.5	-58.62
R3D_8C_010RD	12	226.9	-57.70
R3D_8C_010RD	30	227.3	-58.35
R3D_8C_010RD	60	227.5	-58.86
R3D_8C_010RD	90	228.3	-59.01
R3D_8C_010RD	120	228.2	-59.59
R3D_8C_010RD	150	228.5	-60.03
R3D_8C_011E	10	226.9	-76.46
R3D_8C_011E	30	226.3	-76.42
R3D_8C_011E	60	225.2	-76.19
R3D_8C_011E	90	224.8	-75.81
R3D_8C_011E	120	226.1	-75.68
R3D_8C_011E	150	225.7	-76.05
R3D_8C_011E	180	226	-75.73
R3D_8C_011E	210	223.9	-75.60
R3D_8C_011E	240	221.6	-75.35
R3D_8C_011E	255	220.8	-75.22
R3D_8C_012E	12	109.4	-85.10
R3D_8C_012E	30	111.7	-85.10
R3D_8C_012E	60	116.7	-85.60
R3D_8C_012E	90	116.2	-86.00

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Hole ID	Depth	Azimuth	Dip
R3D_8C_012E	116	156.5	-86.34
R3D_8C_012E	152	160.9	-87.17
R3D_8C_012E	180	132.6	-87.70
R3D_8C_012E	210	125.8	-87.40
R3D_8C_012E	242	161.2	-87.67
R3D_8C_012E	272	166.1	-87.30
R3D_8C_012E	290	168.2	-87.44
R3D_8C_013E	12	71.5	-72.59
R3D_8C_013E	30	70.7	-72.80
R3D_8C_013E	60	70.2	-74.10
R3D_8C_013E	92	70.8	-75.13
R3D_8C_013E	120	70.3	-75.50
R3D_8C_013E	150	69.8	-76.50
R3D_8C_013E	180	70.2	-76.60
R3D_8C_013E	210	70.7	-76.80
R3D_8C_013E	240	71.7	-76.90
R3D_8C_013E	270	73.5	-77.10
R3D_8C_013E	297	75.5	-77.24
R3D_8C_013E	317	76.4	-77.49
R3D_8C_014E	12	42.4	-53.20
R3D_8C_014E	30	42.6	-54.30
R3D_8C_014E	60	42.2	-55.50
R3D_8C_014E	90	43.4	-56.00
R3D_8C_014E	109	42.5	-56.92
R3D_8C_014E	150	42.7	-57.30
R3D_8C_014E	157	41.9	-57.20
R3D_9C_001	12	249.6	-39.60
R3D_9C_001	30	250.9	-40.12
R3D_9C_001	60	251.5	-40.85
R3D_9C_001	90	252.1	-41.23
R3D_9C_001	120	252.6	-41.54
R3D_9C_001	150	253.1	-42.18
R3D_9C_001	165	253.5	-42.22
R3D_9C_002	12	253.5	-57.50
R3D_9C_002	30	255.1	-58.02
R3D_9C_002	60	255.6	-58.36
R3D_9C_002	90	256.2	-58.64
R3D_9C_002	120	257.1	-59.03
R3D_9C_002	140	257.3	-59.03
R3D_9C_003	30	357.4	-80.62
R3D_9C_003	60	348.4	-80.81
R3D_9C_003	90	343.5	-80.98
R3D_9C_003	120	344.8	-81.27
R3D_9C_003	150	346	-81.82
R3D_9C_003	165	345.4	-81.97
R3D_9C_004	12	39.6	-67.75
R3D_9C_004	30	38	-68.65
R3D_9C_004	60	37.1	-70.06
R3D_9C_004	90	31.6	-72.69
R3D_9C_004	120	31.7	-72.97
R3D_9C_004	150	31.5	-73.01
R3D_9C_004	180	32.6	-73.20
R3D_9C_004	204	32.8	-73.35
R3D_9C_005	12	240.9	-49.00
R3D_9C_005	30	242.9	-49.90
R3D_9C_005	60	243.9	-51.14
R3D_9C_005	90	244.6	-52.03
R3D_9C_005	120	245	-52.67
R3D_9C_005	150	245	-53.35
R3D_9C_005	160	245.2	-53.46
R3D_9C_006	12	241.5	-73.74
R3D_9C_006	30	244.2	-73.84
R3D_9C_006	60	247.4	-73.90
R3D_9C_006	90	249.5	-73.84





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Hole ID	Depth	Azimuth	Dip
R3D_9C_006	120	249.7	-74.32
R3D_9C_006	150	250.2	-74.60
R3D_9C_007	12	239.8	-85.37
R3D_9C_007	30	242.3	-85.05
R3D_9C_007	60	248.3	-83.44
R3D_9C_007	90	249.7	-82.69
R3D_9C_007	120	250.2	-82.64
R3D_9C_007	144	252.1	-82.71
R3D_9C_008	12	53.9	-73.70
R3D_9C_008	30	53.1	-76.70
R3D_9C_008	60	50.6	-77.50
R3D_9C_008	90	53.1	-78.00
R3D_9C_008	120	51.3	-78.30
R3D_9C_008	150	52	-78.80
R3D_9C_008	180	54.2	-79.10
R3D_9C_008	200	52.7	-78.99
R3D_9C_009	12	228.6	-33.02
R3D_9C_009	30	229.4	-34.25
R3D_9C_009	60	230.1	-38.35
R3D_9C_009	90	230.7	-41.06
R3D_9C_009	120	231.1	-42.38
R3D_9C_009	150	231.2	-43.76
R3D_9C_009	180	231.7	-44.34
R3D_9C_010	12	224.3	-43.11
R3D_9C_010	30	225.5	-44.05
R3D_9C_010	60	227	-45.13
R3D_9C_010	90	228.9	-46.40
R3D_9C_010	120	230	-46.80
R3D_9C_010	150	232.7	-48.56
R3D_9C_010	168	233.5	-49.02
R3D_9C_011	12	214.5	-63.39
R3D_9C_011	30	215.4	-63.85
R3D_9C_011	60	218	-64.09
R3D_9C_011	90	219.8	-63.88
R3D_9C_011	120	222	-64.03
R3D_9C_011	144	222.8	-64.07
R3D_9C_012	12	196.6	-73.13
R3D_9C_012	30	199.1	-73.29
R3D_9C_012	60	204.5	-74.03
R3D_9C_012	90	207.3	-73.99
R3D_9C_012	120	208.3	-74.33
R3D_9C_012	144	208.7	-74.46
R3D_9C_013	12	116.5	-80.28
R3D_9C_013	30	115.2	-80.17
R3D_9C_013	60	113.6	-79.58
R3D_9C_013	90	109.2	-78.41
R3D_9C_013	125	123.9	-80.40
R3D_9C_014	12	159	-78.80
R3D_9C_014	30	160.1	-79.50
R3D_9C_014	60	169.5	-79.80
R3D_9C_014	90	177.4	-80.40
R3D_9C_014	120	177.9	-80.60
R3D_9C_014	150	178.2	-80.80
R3D_9C_014	160	176.5	-80.84
R3D_ND3_001	12	240	-15.69
R3D_ND3_001	30	240	-15.99
R3D_ND3_001	60	240.3	-15.91
R3D_ND3_001	90	240.4	-16.00
R3D_ND3_001	120	240.9	-16.98
R3D_ND3_001	150	240.9	-16.26
R3D_ND3_001	180	241.1	-14.96
R3D_ND3_001	210	241.5	-14.51
R3D_ND3_001	240	241.9	-13.60
R3D_ND3_002	12	240	-22.35

Hole ID	Depth	Azimuth	Dip
R3D ND3 002	30	239.7	-22.10
R3D ND3 002	60	240.3	-22.10
R3D ND3 002	90	240.7	-22.20
R3D ND3 002	120	241.5	-22.20
R3D ND3 002	150	241.4	-22.10
R3D ND3 002	180	241.3	-22.20
R3D ND3 002	212	242	-23.57
R3D ND3 003	12	240	-30.31
R3D ND3 003	30	240.6	-30.49
R3D ND3 003	60	241	-30.88
R3D ND3 003	90	241.4	-30.67
R3D ND3 003	120	242	-30.22
R3D ND3 003	150	242.2	-29.66
R3D ND3 003	180	242.3	-28.82
R3D ND3 003	198	242.5	-28.90
R3D ND3 004	12	239.2	-39.00
R3D ND3 004	30	240.1	-39.40
R3D ND3 004	60	240.1	-39.60
R3D ND3 004	90	240.1	-40.10
R3D ND3 004	120	239.7	-40.80
R3D ND3 004	150	239.5	-40.80
R3D ND3 004	170	239.1	-42.51
R3D ND3 005	12	238.3	-53.30
R3D ND3 005	31	239.8	-53.23
R3D ND3 005	60	241	-53.00
R3D ND3 005	90	241.5	-52.80
R3D ND3 005	120	243.7	-53.20
R3D ND3 005	151	243.8	-53.35
R3D ND3 005	160	244	-53.17
R3D ND3 006	12	239.9	-63.57
R3D ND3 006	30	240.6	-63.50
R3D ND3 006	60	242	-63.20
R3D ND3 006	90	242.7	-63.00
R3D ND3 006	120	243.4	-63.20
R3D ND3 006	127	242.9	-63.11
R3D ND3 007	12	240.5	-76.01
R3D ND3 007	30	244.2	-74.75
R3D ND3 007	60	245.5	-74.11
R3D ND3 007	90	246.2	-74.23
R3D ND3 007	120	249.5	-74.00
R3D ND3 007	132	249.8	-73.77
R3D ND3 008	30	276	-89.10
R3D ND3 008	60	281.5	-88.40
R3D ND3 008	107	273.7	-88.20





## Appendix 2

# JORC Code, 2012 Edition – Table 1 – NDD3, Cuddy 7C, Cuddy 8C and Cuddy 9C Drill results

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Three primary sampling techniques are utilised, geophysical gamma logging, geochemical assaying and specific gravity by pycnometry testing, all of which are set as 1m intervals.</li> <li>During the drilling phase a down hole geophysics gamma sonde is deployed during both the inrod and openhole drill runs (where possible according to ground conditions). Geophysical sampling is recorded every 0.05 metre and composited into 1 metre intervals and provides an equivalent <math>U_3O_8</math> result (referred to as <math>eU_3O_8</math>).</li> <li>The gamma sonde undertakes a daily calibration test against a standard source, and also undertakes a yearly calibration to verify the dead-time and K-Factor conversion variables used to convert observed and true gamma counts into an <math>eU_3O_8</math> reading.</li> <li>The selection of samples for geochemical assaying is initially defined by the results from the down hole geophysics 1 metre <math>eU_3O_8</math> composites. Intervals that have gamma results above 0.02% <math>eU_3O_8</math> are automatically assigned for assaying, plus the two samples above and below the triggered interval. In zones where the down hole geophysics were unable to reach and no gamma data was obtained the entire interval is selected for assay.</li> <li>The current suite of geochemical analyses consists of 48 major and trace elements which is analysed by ICPMS and ICPOES. All elements are reported in parts per million (ppm), except for U, which is reported as the weight percent oxide <math>U_3O_8</math>.</li> </ul>



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Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Every tenth sample is also assigned for SG testing, and is conducted on the pulverized material by gas pycnometer at the analytical laboratory.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>All current drilling has been HQ3 Diamond core, with future drilling to include NQ/NQ3 drilling diameters.</li> <li>Core orientation is conducted by a reflex digital orientation tool and the low side markup is made at the drilling rig upon core retrieval. The remaining core orientation lines are completed by the field team at the core logging facility.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery is logged according to geotechnical intervals, with interval length and total recovered metres logged for the entire drill hole. All exclusion intervals are also recorded (due to core loss) to provide a total sample recovery percentage for every drill hole.</li> <li>The diamond core is processed in the ERA Jabiru East core yard where each metre is checked, measured and marked before the core is geologically and geotechnically logged. Every discrepancy between the measured length of the core and the driller's length marked on the core blocks is investigated. Discrepancies are resolved by ERA field staff, geologists and drilling personnel prior to cutting and sampling.</li> <li>Triple tube drilling has been selected to increase core recovery in the mineralised zone.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All diamond core is oriented and geologically logged to a detailed system that is constructed around the specific style of geological model/mineralisation under evaluation. Emphasis is placed upon the association of stratigraphy, lithology, structure and brecciation intensity. Similarly, the same core is geotechnically logged to system that is specifically adopted to derive a Tunneling Quality Index (Q) for geotechnical stope span support criteria. 100% of the core is logged in this manner. All core is photographed under consistent lighting conditions and the digital images stored on an internal shared drive.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>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.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>Individual metres of diamond core that have been selected for geochemical analysis are cut in half by diamond saw, with each half of each metre representing a single sample.</li> <li>Core is cut along a line through the centre of the axis of symmetry as defined by the dominant fabric in the rock (or the mineralised structures), i.e. the line which passes through the apex of the foliation ellipsoid.</li> <li>Upon receipt at the analytical laboratory, samples are dried at 105 degrees Celsius to remove sample moisture.</li> <li>Samples undergo a primary crushing stage to take the entire sample to &lt;2 millimetres. On occasions, at this stage a sample may be rotary split off for additional metallurgical testing.</li> <li>The remaining sample undergoes a secondary drying phase at 80 degrees Celsius to remove any additional moisture that may have resulted from the high humidity conditions in the NT.</li> <li>A rotary split is conducted on up to 3 kilograms of crushed material to a 300 gram result, which then undergoes a final pulverise stage to take the entire sample to 95%&lt;75µm.</li> <li>The final pulverised sample undergoes a 4-acid near total digestion and submitted to ICPMS and ICPOES analysis.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>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.</i></li> <li><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</i></li> </ul>	<ul style="list-style-type: none"> <li>The down hole gamma sonde is a Geovista 38 millimetres Total Count Gamma Probe and there are currently three in cyclical use, 3348, 3498 and 3540. All three probes were calibrated on the Adelaide Models (AM1, AM2, AM3 and AM7) on 6 June 2013 in order to derive the Deadtime and K Factor for each probe. The derivation of these variables and the drilling diameter correction factors are all documented in a technical report provided by Borehole Wireline Pty Ltd.</li> <li>To ensure quality control measures are in place for geochemical analysis, a uniform quality control process is assigned for each drillhole to be sampled.</li> </ul>





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Criteria	JORC Code explanation	Commentary
	<i>have been established.</i>	<ul style="list-style-type: none"> <li>Field duplicates are taken every 10m in the mineralised zone.</li> <li>The five highest <math>eU_3O_8</math> samples are also assigned as a field duplicate if not already duplicate as per 10 metre intervals.</li> <li>A certified reference standard is inserted at a frequency of every 25th sample. There are 10 certified reference standards available, ranging from 0.03% to 1.68%, all of which have been created from ERA material and are matrix matched. The first standard is selected at random and subsequent standards are incremented from ERA_CRS_1 to ERA_CRS_10.</li> <li>A blank sample (quartz sand) is also inserted at a frequency of every 20th sample.</li> <li>All drill holes are sent as a single dispatch, whereby they are split up into sets of 88 by the analytical laboratory. An additional 12 check samples are included by the laboratory to conduct 100 sample analyses at a time (Qty x4 each of internal laboratory repeats, standards and blanks).</li> <li>A Quartz flush is also inserted between every sample during the crushing stage to minimise potential contamination of sample preparation equipment.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>All samples are conducted by a NATA accredited laboratory (Northern Territory Environmental Laboratory, a division of Intertek). All sample results are reported in electronic format and imported directly into acQuire without modification to the original files. All results are saved in CSV and PDF format for future verification by if required.</li> <li>A report of the import process and results is also saved on a shared network drive for archive purposes.</li> <li>Access to the import process is restricted by three layers of security, acQuire software, Active Directory and SQL server protocols are implemented to ensure that only trained and qualified staff are physically capable of importing assay results.</li> <li>The sample approval process also abides by the same level of security, with specific staff permitted to write permissions, all other staff have read-only</li> </ul>



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Criteria	JORC Code explanation	Commentary
		access to assay results.
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• At present DGPS – Differential Global Positioning System, is used in conjunction with a real time kinematic (RTK) system involving a base/static station radio broadcasting its received satellite telemetry to a moving/rover receiver. Regular QA/QC checks are conducted for the veracity of the GPS system by positioning the GPS rover over known, monumented ground stations with the receivers on a fast static or dynamic mode.</li> <li>• Base Station and Mine Grid System – the survey department of the ERA – Ranger mine maintains a base/static station 24/7 at the mine site office and broadcast the satellite telemetry on the local/adopted mine grid system. The relative positions of various features and earth works requirements are instantly available to the roving receivers for both setting-out and as-built surveys.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <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></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The maximum range of mineralisation continuity as suggested by existing variography studies to achieve a “measured” mineral resource confidence category is a maximum of 25 x 25 metres. The goal of the underground drilling program is to reduce the current data spacing of existing surface exploration drilling from 50 x 50 metres to a maximum of 25 x 25 metres. This confidence classification will be reviewed with further variography studies as new data is gathered. All sampling is conducted on regular 1 metre intervals.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• All drilling from the underground decline has been oriented to ensure it is 90 degrees to the strike of the known mineralisation and controlling structures. Previous surface drilling was oriented parallel to northing sections which was not 90 degrees the strike of the known mineralisation and controlling structures. The influence of this change of drilling orientation on sampling bias is under assessment.</li> </ul>



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Criteria	JORC Code explanation	Commentary
<b>Sample security</b>	<ul style="list-style-type: none"><li><i>The measures taken to ensure sample security.</i></li></ul>	<ul style="list-style-type: none"><li>All post drilling assessments are undertaken within a fully lockable facility located at the Ranger mine.</li><li>In preparation for dispatch to the laboratory, all bagged cut core samples are packed into 44 gallon drums with tension strapped lids, closed and stored for transport in a fully enclosed, lockable shipping module.</li></ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"><li><i>The results of any audits or reviews of sampling techniques and data.</i></li></ul>	<ul style="list-style-type: none"><li>ERA has internal audit and governance processes in place with respect to the classification and reporting of Mineral Resources.</li></ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"><li><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></li><li><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></li></ul>	<ul style="list-style-type: none"><li>ERA holds an authority issued pursuant to section 41 of the <i>Atomic Energy Act 1953</i> (Cth) ('Section 41 Authority') over the Ranger Project Area. This authorises ERA to conduct mining and processing operations on the Ranger Project Area.</li><li>The Section 41 Authority permits the conduct of mining and processing operations until 8 January 2021. Following this date, ERA must cease all mining and processing operations and is required to rehabilitate the Ranger Project Area in accordance with the Environmental Requirements annexed to the Section 41 Authority.</li><li>The Ranger Project Area is located on Aboriginal land. In January 2013, ERA, the Commonwealth Government, the Gundjeihmi Aboriginal Corporation (representing the Mirarr Traditional Owners) and the Northern Land Council entered into a suite of agreements governing the conduct of operations on the Ranger Project Area.</li><li>ERA's operations are closely supervised and monitored by key statutory bodies including the Northern Territory Department of Mines and Energy, Commonwealth Government's Supervising Scientist Division, Northern Land Council, Gundjeihmi Aboriginal Corporation (representing the Mirarr Traditional</li></ul>





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Criteria	JORC Code explanation	Commentary
		Owners) and the Commonwealth Department of Industry.
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Ranger 3 Deeps mineralisation is down dip of the Ranger Pit 3 deposit, which was mined from 1997 to 28 November 2012. The Ranger 3 Deeps mineralisation has been defined by a series of successive surface diamond drilling programs from 2005-2009 undertaken by ERA.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Ranger mine and the Ranger Project Area lie in the north-easternmost part of the Pine Creek Geosyncline. Ranger 3 Deeps is a structurally controlled U<sub>3</sub>O<sub>8</sub> deposit hosted by Paleo-Proterozoic arenites, shales and carbonate sediments of the Cahill formation which have been regionally metamorphosed to psammities, chlorite schists and magnesian marble all of which dip at moderate angles to the east. The deposit sits within the "Deeps Fault Zone", a NNW trending complex upward soling reverse fault system controlled by the competency structure of the local stratigraphy. This competency contrast of the Ranger package is hypothesised to directly reflect its depositional character. Mineralisation is associated with brecciation and structural overprint adjacent to reverse faulting and is intimately linked to the geochemistry of the chlorite schist host lithology.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The initial azimuth and dip setup of the drill hole is conducted via a Downhole Surveys Azimuth Aligner™, which utilises north seeking gyros with precision to 0.2 degrees azimuth and 0.01 degrees inclination. Down hole surveys are conducted via a Reflex EZ-TRAC™ Survey camera (accuracy 0.35 degrees azimuth and 0.25 degrees inclination), with a single shot recorded every 30 metres during drilling, and multi-shot when retrieving rods as a means of quality control. The Reflex tool measures magnetic north, and therefore a correction factor is applied to convert to True North, taking into account yearly magnetic north drift as defined by Geoscience Australia.</li> <li>Down hole length is recorded both via a daily drill plod and on each core tray blocks to define the start, end and core loss intervals for each drilling run. This is verified by the geologists and field team by cross referencing the drilling contractor measurements with actual core mark-up measurements. Any discrepancies are noted and rectified before any core logging or sampling is</li> </ul>



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Criteria	JORC Code explanation	Commentary
		<p>conducted.</p> <ul style="list-style-type: none"> <li>Initial interception depth (as defined by <math>eU_3O_8</math>) is determined by the Geovista Logging unit, which records the wireline depth, speed and cable tension to determine a true down hole depth every five centimetres during the geophysics logging process. A daily wireline calibration check is conducted against known markers on the wireline to ensure the unit is calibrated before each logging run.</li> <li>Chemical assaying interception depth is determined by the core samples which are created against the core length markups conducted by the logging geologist.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>All significant intersections are reported at a 0.12% <math>U_3O_8</math> cut-off with a maximum of 2 metres internal dilution below that value. This is considered appropriate for a high grade underground mining project.</li> <li>All reporting of intersections is based on a regular sample length of 1 metre.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>Previous surface drilling was completed on an E-W exploration/mine grid orientation towards 270 degrees.</li> <li>Current and proposed underground drilling is oriented towards 240 degrees which is at right angles to the strike of the structures known to host the mineralisation.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) are included in the body of the accompanying announcement.</li> </ul>



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Criteria	JORC Code explanation	Commentary
	<i>plan view of drill hole collar locations and appropriate sectional views.</i>	
<b>Balanced reporting</b>	<ul style="list-style-type: none"><li>• <i>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.</i></li></ul>	<ul style="list-style-type: none"><li>• The associated report is considered to represent a balanced report.</li></ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"><li>• <i>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.</i></li></ul>	<ul style="list-style-type: none"><li>• Other exploration data collected is not material to this announcement. Further data and interpretation will be reviewed and reported when considered material.</li></ul>
<b>Further work</b>	<ul style="list-style-type: none"><li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li><li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li></ul>	<ul style="list-style-type: none"><li>• Approximately 200 drillholes are planned from approximately 15 drill positions. Appropriate drill sections will be reported following drilling.</li></ul>