

### **ASX Announcement**

ASX: DYL

16 July 2015

# Palaeochannel Exploration: Enhanced Prospectivity Potential Confirmed

Deep Yellow Limited ("DYL" or the "Company") is pleased to announce the completion of a combined infill drilling program and geophysical interpretation study by its wholly-owned Namibian operating subsidiary, Reptile Uranium Namibia (Pty) Ltd ("RUN"). When combined the results of this work have successfully achieved the stated objective of demonstrating that RUN's palaeochannels have the potential to far exceed previous interpretations of mineralisation and the existing JORC (2004) resource base of 22.2Mt at 369ppm  $U_3O_8$  for 18Mlbs  $U_3O_8$  at cut off grades of 100 and 200 ppm  $U_3O_8$ .

#### **KEY POINTS**

- Deep Yellow's Namibian operating entity Reptile Uranium Namibia Ltd ("RUN") has significantly enhanced the prospectivity potential of its palaeochannels via a combination of infill drilling and sophisticated geophysical modelling using existing airborne EM survey data.
- The palaeochannels, located on Exclusive Prospecting Licences ("EPL") 3496 and 3497, have existing JORC (2004) compliant resources and were the focus of earlier exploration efforts by RUN prior to 2011 and recently mineral characterisation tests to assess suitability for physical beneficiation.
- The close-spaced infill drill program demonstrated that the palaeochannel was continuously mineralised across a shallow 160 metre section with minimal internal dilution and grades were a good match in tenor with previous results and the existing mineral resource model.
- Geophysical consultants Resource Potentials produced a map of the depth to basement geometry across both EPLs using Aeroquest Helicopter Electromagnetic survey data and advanced techniques which demonstrated that the lateral extent (in excess of 100 kilometres) and depth (down to approximately 130 metres) of the electrically conductive palaeochannels far exceeded previous interpretations.
- The combination of these results has enabled the Company to infer the potential for a much larger mineralisation envelope contained within these extensive and deep interpreted palaeochannels.

DYL's Managing Director Greg Cochran said "Now we have sound evidence that underpins our belief in the prospectivity potential of this extensive palaeochannel system. Not only have we confirmed the mineralisation at surface at good grades which would have low stripping ratios but we now have added the potential for much wider and deeper channel potential. It is also easy to see some parallels of these results with the nearby Langer Heinrich Uranium Mine, the world's only operating calcrete operation."

"With these outstanding results we are already planning the next phase of the exploration program with the objective of ultimately achieving our goal of developing an operation that could produce satellite feed for an existing Namibian uranium producer."

#### **ENDS**



#### **Infill Drilling Program and Assessment**

The infill drill program within the Tumas Zone 1 area (see Figures 1, 2 and 3) which was completed in December 2014 was designed to enhance geological and resource understanding and had the following objectives:

- Confirm the Tumas Zone 1 resource model at a higher resolution;
- Test and document the consistency and continuity of the palaeochannel's mineralisation and assess internal dilution;
- Improve the definition of the palaeochannel's extremities and investigate bedrock effects specifically
  to confirm if any mineralisation was hosted in the bedrock;
- Improve the resolution and variography of the datasets for resource modelling; and
- Combine the results of the drill program with additional modelling, high level pit optimisation exercises
  and a new geophysical interpretation to generate a new estimate of the true potential of the
  palaeochannels by extrapolation into a broader regional target.



Figure 1: Palaeochannel Drilling on EPL3497 in December 2014

The 90-hole close-spaced infill program (at  $12.5 \text{m} \times 12.5 \text{m}$  centres for approximately 1,450m in total) confirmed a continuously mineralised north-south front over 160 metres and 50 metres wide (east-west) which was entirely consistent with previous drilling results. This is highly encouraging as the existing resource model is based on the results of a previous drill program that had a spacing of 50m x 100m. In addition, grades obtained by downhole gamma logging and now validated by ICP-MS assay were a good match in tenor with the historical results and the existing mineral resource model. Table 1 (overleaf) contains selected individual results of 21 drill holes where the grade-thickness metre ("GTM" – calculated by multiplying the interval (m) x eU<sub>3</sub>O<sub>8</sub> (ppm)) exceeded 2000 m eU<sub>3</sub>O<sub>8</sub>. A comprehensive set of drill results is included in Appendix 1 and the JORC Table 1 Report in Appendix 2.

Mineralisation is confined to the channel sediments only and not in the bedrock which will make mining simpler and processing relatively straight forward. (Although there are indications that the vertically cleaved schist does however tend to attract some seepage anomalism from the adjacent gravel/calcrete mineralisation.) Only limited amounts of internal dilution were found to be present which further enhances the level of confidence one can expect in regard to simplicity of processing.



The topography of the palaeochannel base was confirmed to be gently undulating and appears to have no influence on the 'blanket' mineralisation and not to be a significant influence on the uranium grade or thickness or the mineralisation. The saucer-like geometry to some of the detailed channel margins indicates that mineralisation may be present even in areas with as little as 2 metres of channel fill. This can be delineated in future by detailed mapping of the channel margins.

Table 1: Selected Results where GTM exceeded 2000 m eU<sub>3</sub>O<sub>8</sub>

Drillhole	UTM EAST	UTM NORTH	Azi UTM	Dip	TD	From	То	Interval (m)	eU₃O <sub>8</sub> (ppm)	GTM
TUMR7110	514887.60	7451300.00	0	-90	19.0	0.00	14.00	14.00	207	2898
TUMR7111	514887.50	7451313.00	0	-90	19.0	2.00	15.00	13.00	243	3159
TUMR7112	514887.50	7451325.00	0	-90	19.0	0.00	11.00	11.00	255	2805
TUMR7116	514887.60	7451375.00	0	-90	19.0	1.00	12.00	11.00	304	3344
TUMR7117	514887.50	7451388.00	0	-90	19.0	2.00	11.00	9.00	371	3339
TUMR7119	514887.50	7451413.00	0	-90	19.0	1.00	9.00	8.00	307	2456
TUMR7129	514900.10	7451325.00	0	-90	19.0	2.00	10.00	8.00	291	2328
TUMR7131	514900.00	7451350.00	0	-90	19.0	1.00	10.00	9.00	284	2556
TUMR7134	514900.00	7451388.00	0	-90	20.0	1.00	11.00	10.00	209	2090
TUMR7137	514899.90	7451425.00	0	-90	19.0	2.00	16.00	14.00	154	2156
TUMR7146	514912.60	7451325.00	0	-90	19.0	1.00	12.00	11.00	265	2915
TUMR7148	514912.60	7451350.00	0	-90	19.0	2.00	11.00	9.00	310	2790
TUMR7165	514920.00	7451346.00	0	-90	20.0	2.00	11.00	9.00	276	2484
TUMR7166	514920.00	7451359.00	0	-90	20.0	1.00	9.00	8.00	375	3000
TUMR7168	514921.00	7451384.00	0	-90	20.0	3.00	12.00	9.00	252	2268
TUMR7169	514920.00	7451396.00	0	-90	20.0	0.00	9.00	9.00	315	2835
TUMR7171	514925.00	7451425.00	0	-90	19.0	1.00	14.00	13.00	179	2327
TUMR7177	514870.00	7451284.00	0	-90	19.0	2.00	14.00	12.00	315	3780
TUMR7181	514872.00	7451334.00	0	-90	19.0	0.00	9.00	9.00	287	2583
TUMR7184	514873.00	7451372.00	0	-90	20.0	3.00	11.00	8.00	272	2176
TUMR7110	514887.60	7451300.00	0	-90	19.0	0.00	14.00	14.00	207	2898

A recent internal study predicted the calcrete-hosted tonnes uranium per lineal kilometre might be present along the Tumas drainage channel (and by extrapolation potentially the Tubas channel as well). For this prediction certain assumptions pertaining to the consistency of the grade and thickness of the mineralisation within the channels had to be made via interpolation from the historical wide spaced drilling. There is now evidence to support these assumptions, albeit over a limited area. Predictions ranged between 1.8 and 3Mlbs  $U_3O_8$  per kilometre but these figures should be discounted by 50% to build in some conservatism in recognition of the relatively low level of definition across the whole of the palaeochannel system.



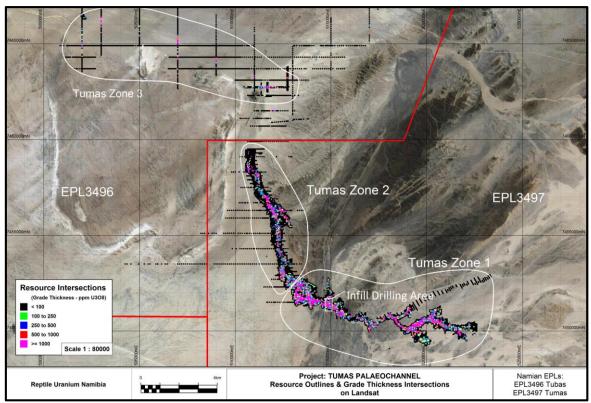


Figure 2: Tumas Palaeochannel on EPLs 3497 and 3496 showing location of Infill Drilling Area

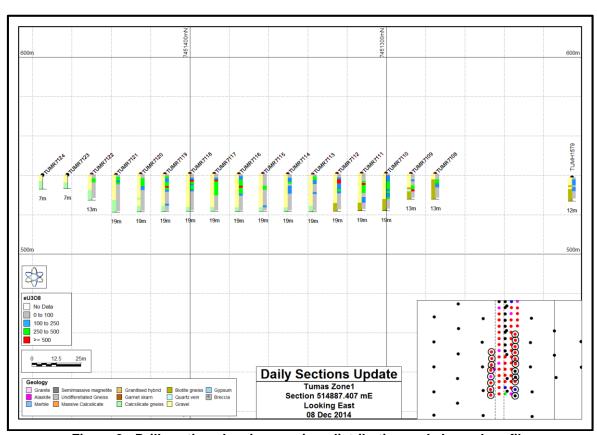


Figure 3: Drill section showing uranium distribution and channel profile



#### **Resource Potentials Geophysical Interpretation**

#### Palaeochannel Interpretation

In 2008 an extensive AeroTEM helicopter electromagnetic ("HEM") survey was flown for RUN by Aeroquest Ltd of Canada covering exploration tenements EPL3496 and EPL3497. A total of 4,107 survey line km were flown at a broad 500m line spacing (See Figure 4).

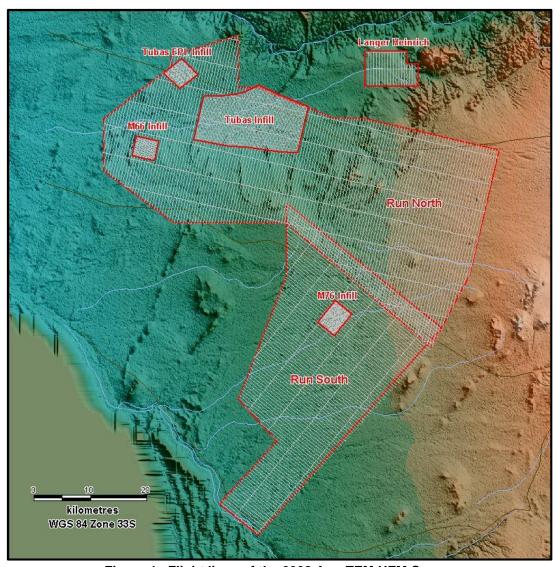


Figure 4: Flight lines of the 2008 AeroTEM HEM Survey

The HEM survey area was known to be prospective for uranium mineralisation located in near-surface palaeochannels which may be expected to have a positive conductivity contrast with underlying fresh bedrock. Palaeochannel conductivity varies based on a number of factors including clay type and content, porosity, permeability and most importantly the salinity of the ground water. A saline palaeochannel would be expected to be much more conductive and produce a stronger EM signal compared to one containing fresh water.

Resource Potentials was commissioned to convert the AeroTEM EM time channel data to conductivity-depth values and then run an auto-picking processing routine on the conductivity-depth data to determine the thickness of conductive cover above fresh bedrock "basement", and produce a set of georeferenced data products.



Selected AeroTEM survey flight lines were initially processed using the industry standard conductivity-depth imaging ("CDI") software EMFlow but did not produce reliable results. An alternative software code, Layered Earth Inversion ("LEI") recently released by Geoscience Australia was trialled and proved to be much more robust. The complete AeroTEM dataset was then processed using the LEI program to generate conductivity-depth values for all flight lines.

The auto depth-picking routine process was then run on the LEI data along each flight line to calculate the thickness of conductive cover, as represented by the conductivity variation in the LEI sections. A suite of georeferenced images was created, together with a range of data products encapsulating the LEI and auto depth-picking results; such as grid surfaces and images of the fresh rock depth, conductivity depth slices and other processed EM data. LEI conductivity sections and EM decay multiplots were produced for each AeroTEM survey flight line to display the final depth of conductive cover thickness along each survey line.

Depth to fresh bedrock from drilling was also gridded and imaged for selected prospect areas, and compared to the LEI results. The calculated conductive cover thickness results were compared to drilling data supplied by Deep Yellow over the known palaeochannels hosting uranium mineralisation. In general, the calculated conductive cover thickness broadly agreed with the palaeochannel thickness determined from drilling (Figure 5). It should be noted that gridded images and resulting contours of the calculated conductive cover thickness model may only broadly represent the palaeochannels, because of the very broad 500m flight line spacing for this survey; i.e. modelling of the palaeochannels is limited by the survey flight line orientational resolution.

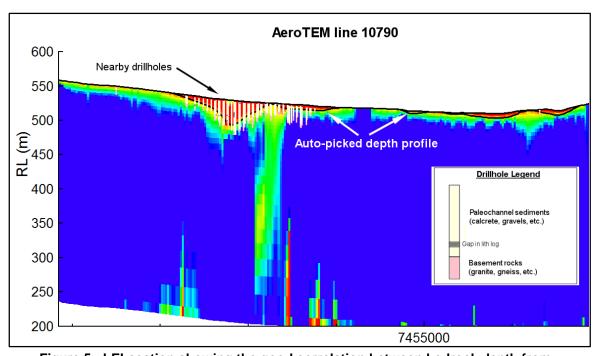


Figure 5: LEI-section showing the good correlation between bedrock depth from drilling and the depth-to-bedrock from the auto-picking routine

The drillholes shown in Figure 5 appear slightly vertically offset because the "envelope" of displayed drillholes is 50 m each side of the survey line. Therefore, their collar elevation is likely to be slightly different to the survey line elevation given the slope of the ground on either side of the profile and the 3D geometry of meandering palaeochannels. Despite this, the logged bedrock lithologies generally reflect the same shape of the LEI autopicked depth-to-basement well. Furthermore, the HEM results identified new zones of palaeochannel deposits that have not been drill tested and will form the basis for direct drill targeting.



The Palaeochannel depth map in this area can now be used to interpret uranium potential of undrilled areas and help to plan focussed drilling on new targets; despite the wide 500m survey line spacing. The most encouraging result of this interpretation is the confirmation of the lateral extent and potential depth of the palaeochannel system across the two EPLs. As can be seen in the two figures below (Figures 6 and 7), the palaeochannel system is well over 100 kilometres in extent and in places reaches depths of 130 metres.

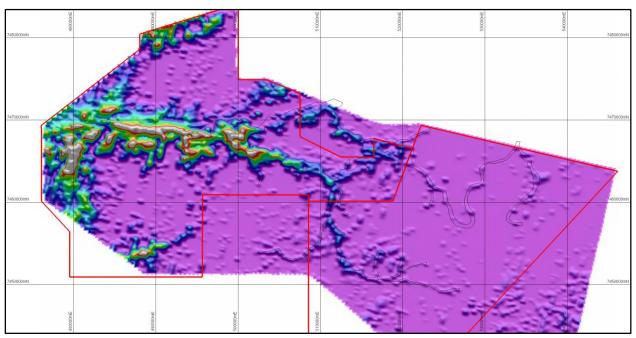


Figure 6: Map showing LEI conductance image with additional interpretation of the palaeochannel system across EPLs 3496 and 3497

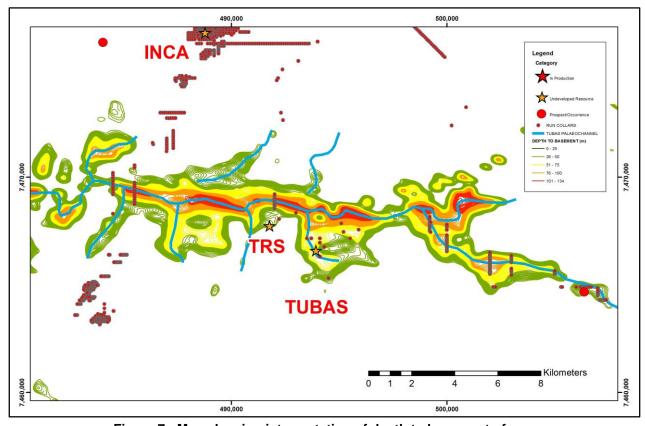


Figure 7: Map showing interpretation of depth to basement of the palaeochannel system across EPL 3496



#### Bedrock targets identified

In addition to the palaeochannel interpretation, the AeroTEM EM decay time channel data were also analysed on a line-by-line basis to identify and then rank potential bedrock conductors, which may correlate to uranium mineralisation associated with Fe and Cu sulphide minerals. Despite the fact that the AeroTEM is a low power system not ideally suited for detecting bedrock conductors beneath conductive regolith cover or deeper than 100m, a number of bedrock conductor targets were identified. It was recognised that some of these bedrock EM targets occur in areas of reverse magnetisation, which could possibly be caused by Alaskite intrusions. However, these bedrock conductors are limited to bodies with roughly E-W strike directions, due to optimal EM coupling across the NNE-SSW flight line direction.

The list of HEM bedrock targets is being compared to RUN's existing portfolio of bedrock alaskite targets, and where appropriate, will be followed up in due course.

#### For further information regarding this announcement, contact:

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For further information on the Company and its projects: visit the website at www.deepyellow.com.au

#### **About Deep Yellow Limited**

Deep Yellow Limited is an ASX-listed, Namibian-focussed advanced stage uranium exploration company. It also has a listing on the Namibian Stock Exchange.

Deep Yellow's operations in Namibia are conducted by its 100% owned subsidiary Reptile Uranium Namibia (Pty) Ltd. Its flagship is the higher grade alaskite Omahola Project on which studies are being conducted to supplement the recently completed preliminary economic analysis and the scoping phase of metallurgical testwork is being planned.

The Company is also evaluating fast track development options for its surficial calcrete deposits which are amenable to various physical beneficiation upgrading techniques that have been successfully tested over the last four years.

#### Tubas-Tumas Palaeochannel Resource - JORC 2004

Deposit	Category	Cut-off (ppm U3O8)	Tonnes (M)	eU3O8 (ppm)	eU3O8 (t)	eU3O8 (MIb)
Tumas Deposit	Indicated	200	14.4	366	5,300	11.6
Tumas Deposit	Inferred	200	0.4	360	100	0.3
Tubas Calcrete Deposit	Inferred	100	7.4	374	2,800	6.1
Tubas-Tumas Palaeoch	annel Total	22.2	369	8,200	18.0	

Notes: Figures have been rounded and totals may reflect small rounding errors.

eU308 - equivalent uranium grade as determined by downhole gamma logging.

Gamma probes were calibrated at Pelindaba, South Africa in 2007 and sensitivity checks were conducted by periodic re-logging of a test hole to confirm operation between 2008 and 2013. During drilling, probes were checked daily against a standard source. Auslog probes were re-calibrated at the calibration pit located at Langer Heinrich Minesite in 2014 and 2015.



#### **Competent Person's Statements**

#### **Tubas-Tumas Project**

The information in this report that relates to the Tumas Zone 1 Infill Drilling Exploration Results is based on and fairly represents information and supporting documentation prepared or reviewed by Mr Geoffrey Gee, a Competent Person who is a Member of the Australasian Institute of Geoscientists. Mr Gee, who is employed as a contract Exploration Geologist with Deep Yellow Limited, has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity which 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'. Mr Gee consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report that relates to previous Exploration Results for the Tubas Calcrete and Tumas Mineral Resources is based on information compiled by Dr Katrin Kärner who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM CP(Geo)). Dr Katrin Kärner, who was the Exploration Manager for Reptile Uranium Namibia (Pty) Ltd during 2013, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2004 Edition). Dr Katrin Kärner consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The information in this report that relates to the Tubas Calcrete Mineral Resource is based on information compiled by Mr Willem H. Kotzé Pr.Sci.Nat MSAIMM. Mr Kotzé is a Member and Professional Geoscientist Consultant of Geomine Consulting Namibia CC. Mr Kotzé has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2004 Edition). Mr Kotzé consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Tumas Mineral Resources is based on work completed by Mr Jonathon Abbott who is a full time employee of MPR Geological Consultants Pty Lt and a Member of the Australian Institute of Geoscientists. Mr Abbott has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, to qualify a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2004 Edition') and as a Qualified Person as defined in the AIM Rules. Mr Abbott consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information relating to Tubas-Tumas Mineral Resource Estimates was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

#### **Geophysical Results: Resource Potentials**

The information in this report that relates to Geophysical Results is based on information compiled by Dr Jayson Meyers who is a Fellow of the Australian Institute of Geoscientists. Dr Meyers is a full time employee of Resource Potentials Pty Ltd. Dr Meyers has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which 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". Dr Meyers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



Appendix 1

Comprehensive set of drilling results – See Appendix 2 (JORC Table 1 Report) for more details

Drillhole	UTM EAST	UTM NORTH	Azi UTM	Dip	TD	From	То	Interval (m)	eU₃O <sub>8</sub> (ppm)	GTM
TUMR7109	514887.5	7451288.0	0	-90	13.0	0.0	1.0	1.0	(ppiii) 91	91
TUMR7109	514887.5	7451288.0	0	-90	13.0	3.0	12.0	9.0	210	1890
TUMR7110	514887.6	7451300.0	0	-90	19.0	0.0	14.0	14.0	207	2898
TUMR7111	514887.5	7451313.0	0	-90	19.0	2.0	15.0	13.0	243	3159
TUMR7112	514887.5	7451325.0	0	-90	19.0	0.0	11.0	11.0	255	2805
TUMR7113	514887.4	7451338.0	0	-90	19.0	1.0	5.0	4.0	229	916
TUMR7113	514887.4	7451338.0	0	-90	19.0	9.0	10.0	1.0	135	135
TUMR7114	514887.5	7451350.0	0	-90	19.0	0.0	10.0	10.0	144	1440
TUMR7115	514887.5	7451363.0	0	-90	19.0	4.0	8.0	4.0	214	856
TUMR7115	514887.5	7451363.0	0	-90	19.0	16.0	17.0	1.0	204	204
TUMR7116	514887.6	7451375.0	0	-90	19.0	1.0	12.0	11.0	304	3344
TUMR7117	514887.5	7451388.0	0	-90	19.0	2.0	11.0	9.0	371	3339
TUMR7118	514887.6	7451400.0	0	-90	19.0	2.0	9.0	7.0	285	1995
TUMR7119	514887.5	7451413.0	0	-90	19.0	1.0	9.0	8.0	307	2456
TUMR7120	514887.5	7451425.0	0	-90	19.0	1.0	8.0	7.0	271	1897
TUMR7121	514887.6	7451438.0	0	-90	19.0	1.0	6.0	5.0	234	1170
TUMR7122	514887.6	7451450.0	0	-90	13.0	2.0	6.0	4.0	204	816
TUMR7123	514887.6	7451463.0	0	-90	7.0	1.0	6.0	5.0	177	885
TUMR7124	514887.7	7451475.0	0	-90	7.0	0.0	4.0	4.0	210	840
TUMR7125	514899.8	7451275.0	0	-90	7.0	3.0	5.0	2.0	67	134
TUMR7126	514899.9	7451288.0	0	-90	7.0	2.0	5.0	3.0	122	366
TUMR7127	514900.0	7451300.0	0	-90	13.0	2.0	11.0	9.0	170	1530
TUMR7128	514900.0	7451313.0	0	-90	19.0	4.0	14.0	10.0	166	1660
TUMR7129	514900.1	7451325.0	0	-90	19.0	2.0	10.0	8.0	291	2328
TUMR7130	514900.1	7451338.0	0	-90	19.0	0.0	11.0	11.0	175	1925
TUMR7131	514900.0	7451350.0	0	-90	19.0	1.0	10.0	9.0	284	2556
TUMR7132	514899.9	7451363.0	0	-90	20.0	3.0	11.0	8.0	237	1896
TUMR7133	514899.9	7451375.0	0	-90	20.0	2.0	12.0	10.0	110	1100
TUMR7134	514900.0	7451388.0	0	-90	20.0	1.0	11.0	10.0	209	2090
TUMR7135	514900.0	7451400.0	0	-90	19.0	3.0	7.0	4.0	168	672
TUMR7136	514899.9	7451413.0	0	-90	19.0	2.0	8.0	6.0	191	1146
TUMR7136	514899.9	7451413.0	0	-90	19.0	13.0	17.0	4.0	103	412
TUMR7137	514899.9	7451425.0	0	-90	19.0	2.0	16.0	14.0	154	2156
TUMR7138	514899.9	7451438.0	0	-90	19.0	3.0	16.0	13.0	104	1352
TUMR7139	514900.1	7451450.0	0	-90	13.0	1.0	8.0	7.0	91	637
TUMR7140	514899.9	7451463.0	0	-90	13.0	2.0	7.0	5.0	125	625
TUMR7141	514900.0	7451475.0	0	-90	7.0	0.0	6.0	6.0	247	1482
TUMR7142	514912.3	7451275.0	0	-90	7.0	1.0	6.0	5.0	105	525
TUMR7143	514912.4	7451288.0	0	-90	13.0	1.0	11.0	10.0	165	1650
TUMR7144	514912.4	7451300.0	0	-90	13.0	3.0	11.0	8.0	236	1888
TUMR7145	514912.5	7451313.0	0	-90	19.0	3.0	12.0	9.0	174	1566
TUMR7146	514912.6	7451325.0	0	-90	19.0	1.0	12.0	11.0	265	2915
TUMR7147	514912.5	7451338.0	0	-90	19.0	0.0	11.0	11.0	147	1617
TUMR7148	514912.6	7451350.0	0	-90	19.0	2.0	11.0	9.0	310	2790
TUMR7149	514912.6	7451363.0	0	-90	20.0	3.0	11.0	8.0	246	1968
TUMR7150	514912.5	7451375.0	0	-90	20.0	4.0	11.0	7.0	182	1274



Drillhole	UTM	UTM	Azi	Dip	TD	From	То	Interval	eU₃O <sub>8</sub>	GTM
	EAST	NORTH	UTM					(m)	(ppm)	
	514912.5	7451388.0	0	-90	20.0	1.0	11.0	10.0	204	2040
	514912.4	7451400.0	0	-90	20.0	1.0	10.0	9.0	231	2079
	514912.5	7451413.0	0	-90	19.0	1.0	8.0	7.0	222	1554
	514912.5	7451425.0	0	-90	19.0	2.0	8.0	6.0	333	1998
	514912.5	7451425.0	0	-90	19.0	11.0	13.0	2.0	109	218
	514912.5	7451438.0	0	-90	13.0	2.0	4.0	2.0	125	250
	514912.5	7451438.0	0	-90	13.0	7.0	11.0	4.0	139	556
	514912.6	7451450.0	0	-90	13.0	1.0	12.0	11.0	143	1573
TUMR7157 !	514912.6	7451463.0	0	-90	13.0	3.0	7.0	4.0	114	456
TUMR7159 !	514920.0	7451271.0	0	-90	7.0	0.0	0.0	0.0	0	0
TUMR7160 !	514920.0	7451284.0	0	-90	7.0	0.0	3.0	3.0	103	309
TUMR7160 !	514920.0	7451284.0	0	-90	7.0	4.0	5.0	1.0	109	109
TUMR7161	514920.0	7451300.0	0	-90	13.0	3.0	11.0	8.0	131	1048
TUMR7164	514921.0	7451336.0	0	-90	19.0	0.0	10.0	10.0	126	1260
TUMR7165	514920.0	7451346.0	0	-90	20.0	2.0	11.0	9.0	276	2484
TUMR7166	514920.0	7451359.0	0	-90	20.0	1.0	9.0	8.0	375	3000
TUMR7167 !	514920.0	7451371.0	0	-90	20.0	1.0	9.0	8.0	230	1840
TUMR7167 !	514920.0	7451371.0	0	-90	20.0	11.0	12.0	1.0	114	114
TUMR7168 !	514921.0	7451384.0	0	-90	20.0	3.0	12.0	9.0	252	2268
TUMR7169 !	514920.0	7451396.0	0	-90	20.0	0.0	9.0	9.0	315	2835
TUMR7170 !	514925.0	7451413.0	0	-90	19.0	1.0	9.0	8.0	233	1864
TUMR7171 !	514925.0	7451425.0	0	-90	19.0	1.0	14.0	13.0	179	2327
TUMR7172	514925.0	7451438.0	0	-90	13.0	1.0	9.0	8.0	204	1632
TUMR7173	514925.0	7451450.0	0	-90	13.0	2.0	11.0	9.0	192	1728
TUMR7174	514925.0	7451463.0	0	-90	13.0	1.0	7.0	6.0	146	876
TUMR7175	514925.2	7451475.0	0	-90	7.0	0.0	4.0	4.0	151	604
TUMR7176	514871.0	7451272.0	0	-90	13.0	2.0	11.0	9.0	199	1791
TUMR7177 !	514870.0	7451284.0	0	-90	19.0	2.0	14.0	12.0	315	3780
TUMR7178	514871.0	7451297.0	0	-90	19.0	1.0	8.0	7.0	295	2065
TUMR7178	514871.0	7451297.0	0	-90	19.0	10.0	15.0	5.0	190	950
TUMR7179	514871.0	7451310.0	0	-90	19.0	2.0	11.0	9.0	100	900
TUMR718 5	512000.0	7456275.0	0	-90	42.0	19.0	22.0	3.0	122	354
TUMR718 5	512000.0	7456275.0	0	-90	42.0	26.0	29.0	2.0	190	456
TUMR7180	514871.0	7451323.0	0	-90	19.0	3.0	13.0	10.0	120	1200
TUMR7181	514872.0	7451334.0	0	-90	19.0	0.0	9.0	9.0	287	2583
TUMR7182	514873.0	7451347.0	0	-90	20.0	0.0	8.0	8.0	144	1152
TUMR7182	514873.0	7451347.0	0	-90	20.0	15.0	16.0	1.0	123	122.92
TUMR7183	514872.0	7451360.0	0	-90	20.0	2.0	9.0	7.0	237	1659
TUMR7184	514873.0	7451372.0	0	-90	20.0	3.0	11.0	8.0	272	2176
TUMR7185	514872.0	7451384.0	0	-90	20.0	2.0	10.0	8.0	166	1328
TUMR7186	514872.0	7451397.0	0	-90	20.0	2.0	11.0	9.0	194	1746
TUMR7187	514871.0	7451410.0	0	-90	20.0	2.0	10.0	8.0	150	1200
TUMR7187 !	514871.0	7451410.0	0	-90	20.0	13.0	15.0	2.0	93	186
	514871.0	7451422.0	0	-90	19.0	3.0	7.0	4.0	156	624
	514871.0	7451434.0	0	-90	19.0	2.0	8.0	6.0	176	1056
	514871.0	7451434.0	0	-90	19.0	11.0	13.0	2.0	70	140
	514872.0	7451446.0	0	-90	13.0	1.0	7.0	6.0	175	1050
	514871.0	7451459.0	0	-90	13.0	1.0	10.0	9.0	147	1323
	514870.0	7451473.0	0	-90	13.0	1.0	8.0	7.0	78	546

# **Appendix 2 – JORC Code, 2012 Edition – Table 1 Report**

# **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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</li> </ul>	<ul> <li>U<sub>3</sub>O<sub>8</sub> values are derived from both down-hole total gamma counting (eU<sub>3</sub>O<sub>8</sub>) and chemical assay data.</li> </ul>
	<ul> <li>sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Total gamma eU<sub>3</sub>O<sub>8</sub></li> <li>33 mm Auslog total gamma probes were used and operated by company personnel.</li> <li>Gamma probes were calibrated at Pelindaba, South Africa, in May 2007 (T029, T030) and in December 2007 (T161, T162, T164, T165).</li> <li>Between 2008 and 2013 sensitivity checks were conducted by periodic re-logging of a test hole to confirm operation.</li> <li>During drilling, probes were checked daily against a standard source.</li> <li>Auslog probes T030, T161, T162, &amp; T164 were re-calibrated at the calibration pit located at Langer Heinrich Minesite in December 2014.</li> <li>Gamma measurements were taken at 5 cm intervals at a logging speed of approximately 2 m per minute.</li> <li>Probing was done immediately after drilling through the drill rods. Rod factors were established to compensate for the reduced gamma count when logging through rods.</li> <li>Gamma measurements were converted to equivalent (e) U<sub>3</sub>O<sub>8</sub> values by appropriate probe-related factors and rod factors where applicable. The historic eU<sub>3</sub>O<sub>8</sub> data from the Tumas Resource has, within experimental error, been shown to be in equilibrium with chemical U<sub>3</sub>O<sub>8</sub> data. All significant eU<sub>3</sub>O<sub>8</sub> intercepts have been submitted for backup chemical (ICPMS) assay.</li> </ul>
		<ul> <li>Chemical assay data</li> <li>Geochemical samples were derived from Reverse Circulation (RC) drilling and represent an interval of 1 m. Samples were spilt at the drill site using either a riffle or cone splitter to obtain a 1 to 4 kg sample from which 90 g was pulverised to produce a subset for ICPMS-analysis.</li> </ul>
		<ul> <li>A total of 240 samples were taken for confirmatory assay and submitted to Bureau Veritas laboratory in Swakopmund for U₃O<sub>8</sub> by</li> </ul>

Criteria	JORC Code explanation	Commentary
		ICPMS, following the procedure described above. Assay results are expected to be available in January 2015.
Drilling techniques	<ul> <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> <li>RC drilling was used at the Tumas Palaeochannel Project.</li> <li>All holes were drilled vertically.</li> </ul>
Drill sample recovery	<ul> <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> <li>Recoveries were assessed by weighing 1 m drill chip samples at the drill site. Weights were recorded in sample tag books.</li> <li>Sample loss was minimized by placing the sample bags directly underneath cyclone/splitter.</li> </ul>
Logging	<ul> <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> <li>All drill holes were geologically logged. The logging was qualitative in nature. The lithotype was determined for all samples. Other parameters routinely logged include colour, colour intensity, weathering, oxidation, grain size, carbonate (CaCO₃) content, sample condition (wet, dry) and total gamma count (by Rad-eye monitor).</li> <li>Lithology codes were used to generate surfaces for the different host-rocks at Tumas Project, which are from top to bottom: gypcrete, non-calcareous and calcareous sand, gravel, calcrete and bedrock. This information was used in the reporting process.</li> <li>In total, 1430 m was geologically logged, which represents more than 99% of meters drilled.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	approximate rate of one every 7 samples.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	analysis of the standards and replicates. The standards (certified reference materials) are assayed to monitor the instruments accuracy and consistency as well as laboratory procedure accuracy. The AMIS standards P0090, P0092 plus a RUN Internal Standard were submitted in the ratio of 1 standard per 24 samples.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All samples verified by acquisition of separate readings of radiometric data via downhole probing and surface single-metre batch readings.</li> <li>Twinned holes are not considered due to the high variability in grade distribution.</li> <li>Paper logs recorded in the field as well as sample tag books are filed at the RUN's office in Swakopmund. The field drill data of those logs and tag books (lithology, sample specifications etc.) is captured by a designated data clerk and subsequently imported into geological and geochemical database following strict data validation protocols.</li> <li>Equivalent (e) U<sub>3</sub>O<sub>8</sub> values are calculated from raw gamma files by applying calibration factors and casing factors where applicable. The adjustment factors are also stored in the database. Equivalent U<sub>3</sub>O<sub>8</sub> data is further composited to 1 m intervals. The correlation of eU<sub>3</sub>O<sub>8</sub> and assayed U<sub>3</sub>O<sub>8</sub> (matching composites), pending receipt of assays, will determine if any adjustment or factoring of equivalent (e) U<sub>3</sub>O<sub>8</sub> values is required.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The 2014 collars were surveyed by in-house operators using a differential GPS.</li> <li>All drill holes are vertical and shallow, therefore, no down-hole surveying was required.</li> <li>The grid system is Word Geodetic System (WGS) 1984, Zone 33.</li> </ul>

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The data spacing and distribution is close-spaced to mimic a grade control pattern. The pattern was drilled at 12.5 m by 12.5 m grid. The pattern is considered sufficient to establish the degree of geological and grade continuity appropriate for optimizing future Mineral Resource estimation upgrades.</li> <li>The total gamma count data, which is recorded at 5 cm intervals, was composited to 1 m composites to match the 1 m geochemical samples from drilling.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>No bias is suspected as uranium mineralisation at Tumas is stratabound and horizontal. All holes were drilled vertically, and hence, mineralised intercepts represent the true width.</li> <li>All holes were sampled down-hole from surface. Geochemical samples were collected at 1 m intervals. Total-gamma count data was collected at 5 cm intervals.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>1 m RC drill chip samples are prepared at the drill site. The assay samples are stored in plastic bags. Sample tags are placed inside the bags. The samples are placed into plastic crates and transported from drill site to RUN's site premises in Swakopmund by company personnel, prior to forwarding to Bureau Veritas laboratory.</li> <li>Upon completion of the assay work the remainder of the drill chip sample bags for each hole is packed back into crates and then stored in designated containers in chronological order.</li> <li>Assays are imported into the company's geological and geochemical database following a strict validation procedure.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	GeoMine (Namibia) conducted an audit of exploration and sampling processes and procedures in August 2007. Some deficiencies in approaches and procedures were identified, which have since been rectified.

# **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The work to which the Exploration Results relates was undertaken on the exclusive prospecting licence (EPL) 3497. EPL3497 was originally granted to Reptile Uranium Namibia (Pty) Ltd (RUN) in 2006. The EPL was renewed in 2013 for a further period of 2 years.</li> <li>EPL3497 is located within the Namib Naukluft National Park.</li> <li>The EPL is not subject to any additional agreement and is in good standing.</li> <li>There are no known impediments to the project.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Prior to RUN's ownership of the EPL, extensive work has been conducted by Anglo American Prospecting Services (AAPS) in the 1970s. AAPS's work included extensive drilling, bulk density testing, metallurgical testwork as well as scoping studies.</li> <li>Assay results from AAPS's drilling were available to RUN on paper logs. They were, however, not used for estimating the Mineral Resource.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Uranium mineralisation at Tumas is surficial, stratabound and hosted by Cenozoic sediments, which include from top to bottom gypcrete, calcareous sand and calcrete. The majority of the mineralisation is hosted by calcrete. Locally, the underlying weathered Proterozoic bedrock is also mineralised.</li> </ul>
Drill hole Information	<ul> <li>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> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	See table of Comprehensive set of all Exploration Results in Appendix 1

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>5 cm gamma intervals were composited to 1 m intervals.</li> <li>No grade truncations were applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>The mineralisation is sub-horizontal and all drilling vertical, therefore, mineralised intercepts are considered to represent true widths.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	Included within text and appendices
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>Comprehensive report of all Exploration Results is included within text and appendices</li> </ul>
Other substantive exploration data	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> <li>The deposit has been subject to extensive drilling, bulk density test work and scoping studies in the 1970s by Anglo Prospecting Services.</li> <li>Downhole gamma-gamma density logging for bulk density was conducted by Terratec on a selection of drill holes. This activity is still in progress at time of reporting.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Further work is expected to include additional infill drilling as well as extension drilling as mineralisation is open along and across strike.