

ASX / MEDIA

10 July 2018

ANNOUNCEMENT

ABN: 72 002 261 565

ASX CODE: TNR

# SIGNIFCANT RC DRILL RESULTS FROM PARADIGM SOUTH AT THE ZULEIKA PROJECT

#### Highlights:

- ZJVRC033 8m @ 3.14g/t Au from 100m in a black shale unit;
- ZJVRC032 8m @ 1.16g/t Au from 36m in an oxidised dolerite unit;
- ZJVRC030 4m @ 2.81g/t Au from 140m in sheared felsic volcanics.

Torian Resources Ltd (**Torian** or **Company**) (**ASX:TNR**) is pleased to announce assay results at Paradigm South at its flagship Zuleika Project.

Torian has recently completed 7 holes for 888 metres of an RC drill program at Paradigm South, which is part of the Company's phase 2 of planned exploration. The results are from the initial 4m composite taken from the RC drilling at Paradigm south. Drilling is continuing.

The above-highlighted holes are very encouraging, given the 400m hole spacing.

The recent program was based upon results from the recently announced (9<sup>th</sup> April 2018) initial reconnaissance RC drilling program, which focussed on sampling the oxide zone of numerous targets.

The initial oxide RC drilling program confirmed the company geological model for Paradigm South and the continuation of the geology as seen to the north on Northern Star Resources Ltd (ASX:NST) Paradigm project. The results demonstrated an anomalous 1.3km strike length.



Figure 1: Plan showing Torian's Paradigm South Target with surrounding mine sites



### **Board of Directors**

Mr Richard Mehan Non-Executive Chairman

Mr Matthew Sullivan Managing Director

Mr Paul Summers Non-Executive Director

Mr Mark Borman Executive Director

Mr Matthew Foy Company Secretary

104 Colin Street West Perth WA 6005

T: +61 8 9420 8208 F: +61 8 9322 4130

E: info@torianresources.com.au W: www. torianresources.com.au

PO Box 1763 West Perth WA 6872



# **1** Paradigm South

The Paradigm area lies in the northern portion of the Zuleika Project. The area is located along strike to the south of Northern Star's (ASX:NST) historic Paradigm gold mine. There is only limited and very wide spaced (160m by 80m) shallow (generally 30-40m deep) historic RAB and aircore drilling in this area.



Figure 2: Map of Paradigm South showing geology, tenements and drilling.

A total of 7 holes for 888m have been completed to date following up the previous results. The drilling was designed to test the mineralisation with angled holes to depths of approximately 150m. The previous holes were drilled on two 1.1km long sections 400m apart. The area is covered by a variable but generally thin veneer of transported soils and outcrops are limited.

At this early stage, 4 targets have been identified by this drilling (Figure 2 above) and are further explained.



### 1.1 Target ZC004

This target lies in the northwest of the area drilled and is adjacent to the boundary with Northern Star Resources Limited. This mineralisation is associated with a sheared contact between felsic volcanics (mainly rhyolites) and epiclastic sediments. These rocks form a part of the Black Flag Group. Sericite alteration and quartz veining are evident in the holes drilled to date. Hole ZC004 ended in mineralisation (1m @ 0.96g/t Au from 34m) and the recent drilling (Hole ZJVRC030) intersected 4m @ 2.81g/t Au from 140m. This result is encouraging as there is no drilling on Torian's ground for 400m along strike to the south and this target remains open.



Figure 3: Cross section showing exploration target ZC004.



# 1.2 Target ZC030

This target lies approximately 550m northeast of ZC004. This zone of mineralisation is associated with a sheared dolerite in contact with felsic porphyry and felsic volcanics. This mineralisation is associated with quartz veining and chlorite alteration in the dolerite. The recent hole (ZJVRC032) intersected 8m @ 1.16g/t Au from 36m. This zone is open along strike and RC drilling is proposed to further test this target.



Figure 4: Cross section showing exploration target ZC030.



### 1.3 Target ZC048

This target lies approximately 900m northeast of ZC004. This zone of mineralisation is associated with a sheared black shale near the contact with felsic porphyry and shales and sandstones of the Black Flag Group. This mineralisation is associated with quartz veining in the black shale. The recent drilling (ZJVRC033) intersected 8m @ 3.14g/t Au from 100m. This zone is open along strike and step out RC drilling is proposed to further test this target.



Figure 5: Cross section showing exploration target ZC048.



The initial 7 holes the RC drilling program at Paradigm South is now complete and all 4m composite assays have been received. Significant assay results above 1g/t Au are listed in Table 1 below. These results show that three of the targets tested by deeper drilling so far now require additional step out RC drilling. Note that the nearest relevant drilling is 400m south of these holes and that the geology is known to continue at least that far from Torian's previous exploration.

Hole	From (m)	To (m)	Interval (m)	Au g/t
ZJVRC033	100	108	8	3.14
ZJVRC032	36	44	8	1.16
ZJVRC030	140	144	4	2.81

Table 1: New drill intercepts (>1.0g/t Au) at Torian's Paradigm South prospect.

# 2 Regional Geology:

The Zuleika Project is located in the central part of the Archaean Norseman-Wiluna greenstone belt in Western Australia. The greenstone belt is approximately 600 kilometres in length and is characterised by thick sequences of ultramafic, mafic, and felsic volcanics as well as various intrusives and sedimentary rocks. Generally the mafic and ultramafic occur at the base of the sequence, with the felsic volcanic to volcaniclastic rocks overlying.

Research by the Geological Survey of Western Australia indicates that coarse grained sandstones and conglomerates unconformably overlie, or are in fault contact with, greenstones in synclinal basins adjacent to or overlying major regional faults.

### 2.1 Mineralisation

Gold mineralisation along the Zuleika Shear occurs in all rock types, although historical and recent production is dominated by two predominant styles:

Laminated quartz veins containing high grade gold (5-30g/t Au) and associated base metal sulphides (galena, sphalerite, and chalcopyrite) and other minerals such as scheelite). Examples of this are the high grade gold deposits at Kundana; and

Quartz vein stockworks developed within granophyric gabbro within the Powder Sill and other intrusives. An example is the very high grade Raleigh Deposit (5-100g/t Au).

Mineralisation styles vary slightly from mine to mine along the Zuleika Shear indicating localised differences due to various rocks and associated minerals. Historically the previous mines have been of a medium to high grade (3-30g/t Au) and occur in clusters, for example the Hornet / Rubicon / Pegasus / Drake / Centenary / North Pit strike line at Kundana which has produced more than 5 million ounces to date.

As previously announced, Torian has developed an extensive digital database of historic and current drill results in the region. The digital data compilation remains incomplete at present however work continues.



# **3** Interpretation

Based upon the assays received to date, Torian's preliminary interpretations are:

- The four zones of mineralisation discovered at Paradigm South are very encouraging and remain open at depth and along strike to the south east;
- The drilling appears to show that mineralisation associated with the Paradigm gold mine continues to the South onto Torian's ground; and
- There are several other high priority targets elsewhere within the project that have only been lightly explored.

Geological interpretation is showing the rocks in this area to be more complex than previously understood. This added complexity is encouraging and suggests potential for additional mineralisation styles to be present away from the main vein structure.

# **4** Commentary

Matthew Sullivan, Torian's MD comments:

"The results at Paradigm South are very encouraging. This area has been of interest for quite some time and these initial results confirm our interpretation. We are now planning more drilling to follow up these wide spaced holes. The Zuleika Project remains our main focus and we have lots more results to come."

For further information, please contact:

Matthew Sullivan Managing Director info@torianresources.com.au



#### About Torian:

Torian Resources Ltd (ASX:TNR) is a highly active gold exploration and development company. The Company has amassed a large and strategic landholding comprising of eight projects and over 500km<sup>2</sup> of tenure located in the Goldfields Region of Western Australia.

Torian's flagship project, Zuleika, is located along the world-class Zuleika Shear. The Zuleika Shear is the fourth largest gold producing region in Australia and consistently produces some of the country's highest grade and lowest cost gold mines. Torian's Zuleika project lies north and partly along strike of several major gold deposits including Northern Star's (ASX:NST) 7.0Moz East Kundana Joint Venture and Evolutions (ASX:EVN) 1.8Moz Frogs Legs and White Foil deposits.

The Zuleika Shear has seen significant corporate activity of late with over A\$1 Billion worth of acquisition in the region by major mining companies. Torian's Zuleika project comprises approximately 223km<sup>2</sup> of tenure making Torian the second largest landholder in this sought after region.

Last year Torian drilled 59,345m for a total of 1,319 holes across its projects. The large drilling campaign tested 26 exploration targets and, importantly, made four gold discoveries making Torian one of the most active gold explorers on the ASX.

#### Competent Person:

Information in this report pertaining to mineral resources and exploration results was compiled by Mr MP Sullivan who is a member of Aus.I.M.M. Mr Sullivan is the chief geologist of Jemda Pty Ltd, consultants to the company. Mr Sullivan has sufficient experience which is relevant to the style of mineralisation and the type of deposit that is under consideration and to the activity that he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Sullivan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### Collar Details:

Hole	MGA E	MGA N	Depth	Az	Dip
ZJVRC030	304163	6625743	150	40	-60
ZJVRC031	304142	6625713	150	40	-60
ZJVRC032	304470	6626095	156	40	-60
ZJVRC033	304717	6626408	142	40	-60
ZJVRC034	304642	6626315	150	40	-60
ZJVRC035	304730	6625791	118	40	-60
ZJVRC043	304358	6625972	172	40	-60

Table 1: Drill holes completed at Paradigm South.



# Appendix 1 Zuleika Project

# JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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 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>Samples from the current drilling programme were collected via Reverse Circulation (RC) drill chips.</li> <li>All drilling yielded samples on a metre basis. The initial samples from this drilling were composited into intervals of 4m. Reverse Circulation (RC) drilling is utilised to obtain 1 m samples which are riffle split, from which approx. 2-3 kg is pulverised to produce a 40g charge for fire assay. The individual 1m samples for the anomalous intervals were submitted to the lab and these assays have now been received.</li> <li>Sample preparation method is total material dried and pulverized to nominally 85% passing 75 µm particle size. Gold analysis method is generally by 40g Aqua Regia with Fire Assay being competed over anomalous (+0.10g/t Au) samples, with Atomic Absorption Spectrometry (AAS) finish (DL 0.01 – UL 50 ppm Au). Samples exceeding the upper limit of the method were automatically re-assayed utilizing a high grade gravimetric method.</li> </ul>
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>The RC drilling is usually 150mm in diameter. RC drilling was via an RC hammer face sampling bit.</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 logged onto paper logs during drilling. Recoveries were visually assessed.</li> <li>Sample recoveries were maximised in the RC drilling via collecting the samples in a cyclone prior to sub sampling.</li> <li>No relationship appears from the data between sample recovery and grade of the samples.</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 drillholes were geologically logged. This logging is to be of a good quality and suitable for use in further studies.</li> <li>Logging is qualitative in nature.</li> <li>All samples / intersections are logged. 100% of relevant length intersections are logged.</li> </ul>



Criteria	JORC Code explanation	Commentary
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>	<ul> <li>Non-core RC drill chip sample material is riffle split, where sample is dry. In case of wet sample a representative 'grab' sample method is utilized.</li> <li>The sample preparation technique is total material dried and pulverized to nominally 85% passing 75 µm particle size, from which a 40g charge was representatively riffle split off, for assay.</li> <li>Standard check (known value) samples were used in all sample submissions to the lab. The known values correspond closely with the expected values. A duplicate (same sample duplicated) were commonly inserted for every 40 or 50 samples taken.</li> <li>Routine standards and duplicates were used to check for accuracy and precision of the results.</li> <li>The grain size is generally fine and so the sample size is appropriate.</li> </ul>
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>	<ul> <li>The independent laboratories used for this work are internationally accredited for QAQC in mineral analysis.</li> <li>No geophysical tools have been used to date.</li> <li>The laboratory inserted blank and check samples for each batch of samples analysed and reports these accordingly with all results.</li> </ul>
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>The intersections have been subject to field checking and the individual 1m samples are presently being assayed.</li> <li>No twinned holes have been used to date.</li> <li>Documentation of primary data is hand written field log sheets. Primary data is entered into application specific data base. The data base is subjected to data verification program, erroneous data is corrected. Data storage is retention of physical log sheet, two electronic backup storage devices and primary electronic database.</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>Survey control used is hand held GPS. No down hole surveys were completed. As the other drillholes were drilled to less than 100m significant deviations are not expected.</li> <li>Grid systems are MGA coordinates.</li> <li>Topographic control is accurate to +/- 0.5 m.</li> </ul>
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 drill spacing of the RC holes is variable but generally no greater than.</li> <li>The infilled areas do not have drilling density sufficient for JORC Inferred category. Further infill drilling will be required for all JORC categories.</li> <li>For the initial samples 4m compositing has been used. Individual 1m samples for anomalous (+0.10g/t Au values) were assayed by a second lab via Fire Assay and any values above 0.5g/t Au are reported here.</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>The orientation of the drilling is approximately at right angles to the known mineralisation and so gives a fair representation of the mineralisation intersected.</li> <li>No sampling bias is believed to occur due to the orientation of the drilling.</li> </ul>

Page 10 of 12 / 10 July 2018



Criteria	JORC Code explanation	Commentary
Sample security	• The measures taken to ensure sample security.	<ul> <li>Samples were delivered to the laboratory in batches at regular intervals. These are temporarily stored in a secure facility after drilling and before delivery</li> </ul>
Audits reviews	or • The results of any audits or reviews of sampling techniques and data.	<ul> <li>The company engages independent consultants who regularly audit the data for inconsistencies and other issues. None have been reported to date.</li> </ul>

# 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>	• The drilling at Paradigm South was carried out on P16/2882. This tenement forms part of the Zuleika Project. This tenement is held by Cascade Resources Pty Ltd, a wholly owned subsidiary of the company. The tenement was granted by the WA Minister of Mines and does not have any unusual conditions attached.
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>All work relating to previous exploration contained within this report was completed by other parties. Companies such as Centaur Mining, Placer Dome have completed broad spaced drilling in this area in the past 15 years.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	Details of the geology are found elsewhere in this report.
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>	<ul> <li>Details of the drilling, etc are found within the various tables and diagrams elsewhere in this report.</li> <li>No material information, results or data have been excluded.</li> <li>No material information has been excluded.</li> </ul>
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</li> </ul>	<ul> <li>Weighted averages were calculated by a simple weighting of from and to distances down each hole. These are 4m composite samples. No top cuts were applied. Lower cot-offs used were 1g/t Au.</li> <li>The drilling results are shown tabulated elsewhere in this report.</li> <li>No metal equivalents have been used</li> </ul>



Criteria	JORC Code explanation	Commentary
	clearly stated.	
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>Details of geology, and selected cross sections are given elsewhere in this report.</li> <li>The steep dipping nature of the mineralisation means that steeply inclined drillholes will show exaggerated widths. These are shown in the diagrams and tables elsewhere in this report.</li> <li>The drilling results shown elsewhere in this report are drill widths not 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>	<ul> <li>Details of geology, and selected cross sections are given elsewhere in this report.</li> </ul>
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>	Details of the results, drilling, etc are reported elsewhere in this report.
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>Details of geology, and selected cross sections are given elsewhere in this report.</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>	<ul> <li>Proposed work included drilling of infill and step out RC drilling across the mineralisation. The aim of such work is to increase confidence in the data and also to test for extensions to the known mineralisation. Budgets are being prepared for this work at present.</li> <li>Various maps and diagrams are presented elsewhere in this report to highlight possible extensions and new targets.</li> </ul>

