

ABN 47 116 648 956

ASX Announcement 22 May 2017

# Tennant Creek-style copper mineralisation intersected in first drill hole at Warrego North Project, Northern Territory

## **Highlights**

- First diamond drill-hole to test the Parakeet geophysical target intersects Tennant Creek-style mineralisation comprising magnetite-dominant ironstone with visible chalcopyrite and pyrite.
- Strongest chalcopyrite mineralisation intersected between 249m 258m down-hole, with the hole still in progress to test the main geophysical target at approximately 350m down-hole.
- Parakeet comprises a strong circular (1km x 1km) coincidental magnetic and gravity anomaly located ~20km north-west of the historical Warrego Copper-Gold mine (historical production 1.3Moz gold and 90,000t copper).
- Drill core prioritized for cutting and sampling with assays expected in about three weeks.
- Phase 1 diamond drilling (comprising two ~400m deep holes) is continuing.

Chalice Gold Mines Limited ("Chalice" or the "Company") (ASX: CHN) (TSX: CXN) is pleased to announce that it has intersected potentially significant Tennant Creek-style mineralisation in its maiden drill hole at the Warrego North Project in the Northern Territory. Chalice can earn up to a 70% interest in the Project from Meteoric Resources NL (ASX: MEI) by sole funding \$800,000 in expenditure (See ASX announcement dated 15 June 2016).

The Warrego North Project is located ~20km north-west of the historical high-grade Warrego copper-gold mine in the western part of the Tennant Creek Mineral Field (Figure 1). Warrego was the largest deposit mined at Tennant Creek with historical production of 1.3Moz of gold and 90,000t of copper from 5Mt of ore at 8g/t Au and 2% Cu.

The Company's first diamond drill hole, WND17-001, targeted a coincident magnetic-gravity anomaly (see Figure 2) and has intersected interstitial and vein-style chalcopyrite mineralisation in magnetite ironstone between 249-258m downhole depth (see Figures 3 and 4).

The drill hole has also intersected multiple narrow ironstone units within strongly chlorite-altered Warramunga Formation siltstone from 258m to the current down-hole depth of approximately 292m, which demonstrates that the alteration system is continuing with depth. The drill core will be prioritised for cutting and sampling and assay results are expected to be received within about three weeks.

Chalice's General Manager – Exploration, Dr Kevin Frost, said: "This is a great result for our very first drill-hole at Warrego North, which validates our belief that this is an exciting iron-oxide-copper-gold target in the Tennant Creek Mineral Field. The coincident aeromagnetic and gravity anomaly provides a compelling exploration target and we look forward to receiving the first batch of assay results and to further evaluating this target with the rest of our Phase 1 diamond drilling program."

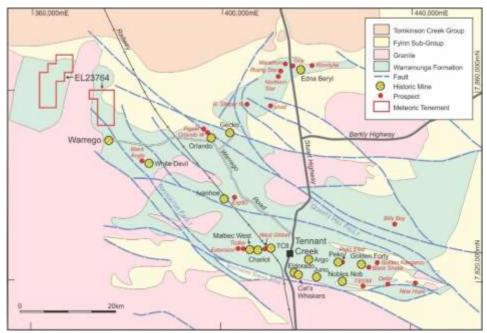


Figure 1. Location map of Warrego North Project, NT

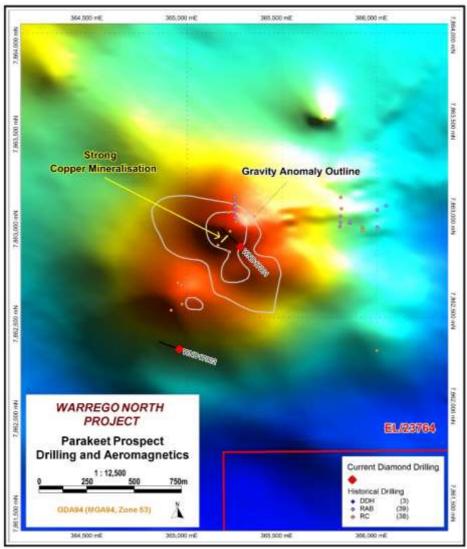


Figure 2. Parakeet aeromagnetic image with superimposed gravity and drill collars.



**Figure 3.** Diamond Hole WND17-001 – 249.3-258.15m showing strong magnetite-ironstone with chalcopyrite mineralisation.



**Figure 4.** Interstitial chalcopyrite mineralisation, diamond drill hole WND17-001 – 255.7m depth.

## **Next Steps**

Diamond drill hole WND17-001 will continue to the planned depth of approximately 400m. The drill rig will then move to the site of WND17-002 to begin diamond coring.

## **ENDS**

TIM GOYDER Managing Director

For further information, please contact: Tim Goyder, Managing Director Chalice Gold Mines Limited Telephone +618 9322 3960

22 May 2017

#### **Competent Persons and Qualifying Persons Statement**

The information in this report that relates to Exploration Results in relation to the Warrego North Project is based on information compiled by Dr Kevin Frost BSc (Hons), PhD, who is a Member of the Australian Institute of Geoscientists. Dr Frost is a full-time employee of the company and has sufficient experience in the field of activity being reported to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, and is a Qualified Person under National Instrument 43-101 – 'Standards of Disclosure for Mineral Projects'. The Qualified Person has verified the data disclosed in this release, including sampling, analytical and test data underlying the information contained in this release. Dr Frost consents to the release of information in the form and context in which it appears here.

## **Forward Looking Statements**

This document may contain forward-looking information within the meaning of Canadian securities legislation and forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 (collectively, forward-looking statements). These forward-looking statements are made as of the date of this document and Chalice Gold Mines Limited (the Company) does not intend, and does not assume any obligation, to update these forward-looking statements.

Forward-looking statements relate to future events or future performance and reflect Company management's expectations or beliefs regarding future events and include, but are not limited to, the estimation of mineral reserve and mineral resources, the realisation of mineral reserve estimates, the likelihood of exploration success, the timing and amount of estimated future production, costs of production, capital expenditures, success of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims and limitations on insurance coverage.

In certain cases, forward-looking statements can be identified by the use of words such as plans, expects or does not expect, is expected, will, may would, budget, scheduled, estimates, forecasts, intends, anticipates or does not anticipate, or believes, or variations of such words and phrases or statements that certain actions, events or results may, could, would, might or will be taken, occur or be achieved or the negative of these terms or comparable terminology. By their very nature forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors may include, among others, risks related to actual results of current exploration activities; changes in project parameters as plans continue to be refined; future prices of mineral resources; possible variations in mineral resources or ore reserves, grade or recovery rates; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; as well as those factors detailed from time to time in the Company's interim and annual financial statements, all of which are filed and available for review on SEDAR at sedar.com. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

# Appendix 1. Warrego North Project - JORC Table 1

Section 1 Sampling Techniques and Data

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</li> </ul>	<ul> <li>Drill holes will be sampled via NQ2 diamond drilling [1/2 core) or Reverse Circulation drilling.</li> <li>Sampling will be carried out under Chalice's standard protocols and QAQC procedures which are industry standard practice.</li> <li>n/a - samples will be sent a laboratory in due course</li> </ul>			
	<ul> <li>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>				
Drilling techniques	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).	NQ2 diamond drilling (holes WND17-001 – 002) and RC (reverse circulation) drilling were undertaken RC drilling used a 5 1/2 inch face sampling hammer. The core is being oriented using a Core Map.			
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>Diamond core recoveries are being measured and recorded. Recoveries in excess of 95% have been achieved for the diamond core drilled to date. RC sample recoveries remained consistent throughout the program. Any poor (low) recovery intervals were logged and entered into the database.</li> <li>Diamond core is being reconstructed into continuous runs for structural orientation and depth marking. Depths were checked against driller core blocks. The cyclone and cone splitter were routinely cleaned and inspected during drilling ensuring no excessive material build up. Care was taken to ensure the split calico samples were of consistent volume.</li> <li>Not Applicable – assay results have not yet been received.</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>	Diamond drill holes are being logged geologically including but not limited to weathering, regolith, lithology, structure, texture, alteration and mineralisation and also geotechnically for recovery and RQD. RC holes were logged geologically including but not limited to weathering, regolith, lithology, structure, texture, alteration and mineralisation. Logging was at an appropriate quantitative standard to support future geological, engineering and metallurgical studies.  Logging is considered quantitative in nature.  All holes are being geologically logged in full.			

Criteria	JORC Code explanation	Commentary
ub-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 subsampling 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>Diamond core will be sawn in half and 0.3-1.3m samples sent for analysis. Duplicate samples will be halved and sent for analysis.</li> <li>1 meter RC samples were split off the drill rig into calico bags using a riffle splitter. Selective 1m and 5m composite samples were collected and will be sent for assay. &gt;95% of the samples were dry in nature.</li> <li>Diamond core is being cut with the same half of core being sent for assay.</li> <li>Chalice has its own internal QAQC procedure involving the use of certified reference materials (standards), blanks and duplicates which accounts for 7% of the total submitted samples.</li> <li>Field duplicate samples will be sent every 20th sample to check for repeatability</li> <li>The sample sizes are considered to be appropriate for the style of sulphide mineralisation observed which is typically coarse grained disseminated and interstitially replaced chalcopyrite.</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>	Not Applicable – Assay results not available.  Not Applicable Chalice has its own internal QAQC procedure involving the use of certified reference materials (standards), blanks and duplicates which accounts for 7% of the total submitted 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>Significant intersections are checked by the Exploration Director and Senior Geologist. Significant intersections are also verified/cross-checked by portable XRF data collected whilst in the field and cross checked after final assays are received.</li> <li>No twin holes have been drilled for comparative purposes. The prospect is still considered to be in an early exploration stage.</li> <li>Primary data was collected via excel through a Toughbook laptop computer using in house logging codes. The data will be sent to the Perth based office where the data is validated and entered into the master database.</li> <li>Not Applicable - Assay results not yet received</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>Hole collar locations have been picked up by Chalice employees using a handheld GPS with a +/- 3m error. Downhole surveys on angled holes (WND17-001 and 002) are being performed by a reflex multi-shot tool at every ~30m downhole intervals.</li> <li>The grid system used for location of all drill holes and as shown on all figures is MGA_GDA94, Zone 53.</li> <li>RL data is considered unreliable at present although topography around the drill area is relatively flat and hence should not have any significant effect on the current interpretation of data.</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>Nominal drill hole spacing is generally 600m between diamond holes.</li> <li>The current spacing is not considered sufficient to assume any geological or grade continuity of the mineralised system.</li> <li>Not Applicable - no results reported</li> </ul>
Orientation of data in relation to	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Considering the lack of systematic drilling at the prospect, it is unclear whether the sampling will or

Criteria	JORC Code explanation	Commentary		
geological structure	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.	won't achieve unbiased results. As above		
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by Chalice. Samples are being stored on site before being transported by third parties to the laboratory.		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No review has been carried out to date.		

# **Section 2 Reporting of Exploration Results**

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>	Parakeet is located wholly within Exploration Licence EL/23764. The licence is wholly owned by Meteoric Resources Limited with no known encumbrances.		
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Previous RC and RAB drilling has been completed by Normandy Gold. Additional RC drilling has been completed by Meteoric Resources Limited. These results were not released to the market.		
Geology	Deposit type, geological setting and style of mineralisation.	The mineralisation has an analogy to Tennant Creek style Proterozoic Cu-Au-Bi deposits		
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 Annexure 1      Not Applicable		
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>Not Applicable – Assay results not yet received.</li> <li>Not Applicable</li> <li>Not Applicable</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>	The drill intersections reported are not considered true widths. Further detailed geological analysis and drilling is required to determine the geometry of the intersected mineralisation.		
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</li> </ul>	Refer to figures in the body of text		

Criteria	JORC Code explanation	Commentary		
	collar locations and appropriate sectional views.			
Balanced reporting	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.	Not Applicable - Assay results not yet received		
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.	Not Applicable		
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</li> </ul>	Follow up drilling will be planned to better define the geological controls of mineralisation.		

## Annexure 2

HOLE ID	MGA EAST	MGA NORTH	RL	AZI	DIP	Planned EOH (m)	RC Pre-Collar Depth (m)
WND17001	365282	7862872	340	315	-69	400	138
WND17002	364960	7862332	340	290	-74	400	138