



# ASX Announcement 20 September 2016 Chalice and Red Hill to explore highly prospective WA gold exploration opportunity through farm-in agreement over West Pilbara Gold Project

JV agreement with Red Hill Iron over project located near multi-million ounce Paulsens Gold Mine

#### Highlights:

- Chalice Gold Limited (ASX:CHN) and Red Hill Iron Limited (ASX:RHI) have reached agreement to allow Chalice to explore the highly prospective West Pilbara Gold Project located in the Ashburton Basin in WA's Pilbara region through a Joint Venture.
- Chalice can earn up to 70% in the gold and base metals interests through expenditure of \$3M with an initial minimum commitment of \$500,000.
- The Project extends over an extensive area of 1,390 square kilometres and covers rocks of the Lower Wyloo Group, which are prospective for both gold and base metals.
- The tenement package extends almost continuously 90km north from the northern margin of the Wyloo Dome, which hosts the nearby +3Moz Paulsens Gold Mine (owned by Northern Star Resources).
- Project area is under-explored with no gold or base metal exploration undertaken since 2009.
- Numerous immediate drilling targets have been identified, including historical drill results of up to 9m at 4.52 g/t Au from previous exploration which have not been fully assessed.

Chalice Gold Mines Limited (ASX:CHN, TSX: CXN) ("Chalice" or the "Company") and Red Hill Iron Limited (ASX: RHI) ("Red Hill") are pleased to advise that they have entered into a binding Heads of Agreement allowing Chalice to farm-in to all minerals other than iron ore within Red Hill's West Pilbara Gold Project (the "Project").

Chalice can earn up to 70% interest in the West Pilbara Project by funding \$3 million worth of exploration with a minimum commitment of \$500,000 within the first 12 months. Chalice may spend \$1 million within two years (including the minimum commitment) to earn 51% at which point Red Hill have a one off election to contribute to its 49% pro rata interest. If Red Hill elects not to contribute, Chalice may then spend another \$2 million to earn a further 19% within no set time period, or withdraw and retain no interest.

This opens up an exciting new gold and base metal exploration opportunity for Chalice and Red Hill in the highly prospective Ashburton Mineral Field in WA's Pilbara region, which is significantly under-explored for gold and base metals.

The project area, covering 1,390km<sup>2</sup>, is located approximately 160km south-southwest of Karratha, and extends almost continuously some 90km north from the northern margin of the Wyloo Dome, an important regional geological feature which hosts the +3Moz Paulsens Gold Deposit.

The Paulsen Gold Mine, which is owned and operated by successful mid-tier gold miner Northern Star Resources (ASX: NST), is located 8km south-west of the southern extent of the Project.

The West Pilbara Project comprising a package of 12 tenements (E08/1227, 1283, 1289, 1293-1295, 1430, 1473, 1516, 1537, E08/1141 and 1693, covering an area of 1,390 km<sup>2</sup>) as shown in Figure 1 below.

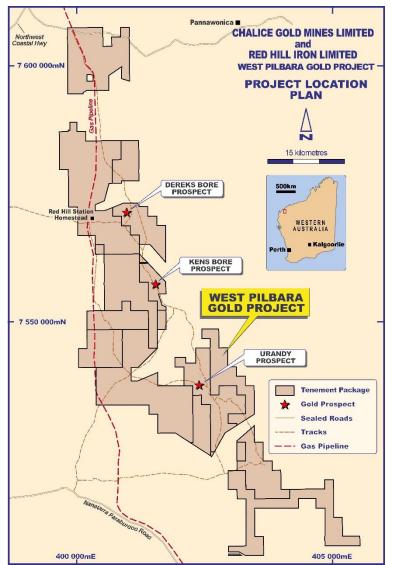


Figure 1. Location of West Pilbara Gold Project.

The Project lies in the north-western sector of the Ashburton Basin and is dominated by volcanic and sedimentary successions comprising the Lower Wyloo Group. The eastern extent of the project area is coincident with the western margin of the Hamersley Basin.

The contact between the two basins is referred to as the Paraburdoo Hinge Zone, defined by major fault/shear structures paralleling the contact including the Nanjilgardy Shear, proximal to the multi-million ounce gold deposits at Paulsens and Mt Olympus.

The west-northwest orientation of the Nanjilgardy Shear on the southern margin of the Hamersley Basin flexes north-northwest at the Wyloo Dome where similar defining structures, the Urandy Shear and Bitherabooga Shear, pass through the project area (see Figure 2).

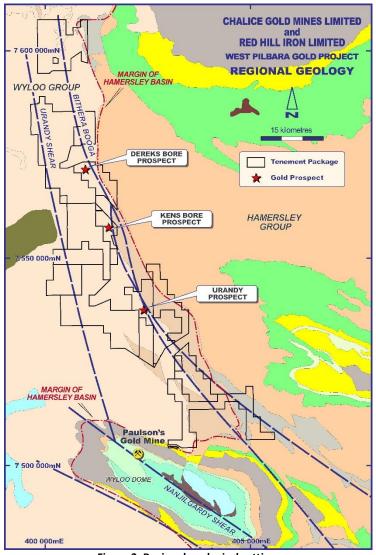


Figure 2. Regional geological setting.

Exploration for gold and base metals across the Project has been carried out in various periods since the 1980's with the most recent work undertaken by Red Hill completed between 2006 and 2009. No gold or base metal exploration has been undertaken on the project since 2009.

Red Hill identified a number of targets, primarily Carlin-style and vein/shear-hosted gold mineralisation through regional soils and RAB drill programs, many of which require further exploration.

Of the prospects identified, Derek's Bore and Urandy are the most advanced with Red Hill completing widely spaced follow-up RC drilling at both prospects.

At the Urandy Prospect, RC drilling returned a best intercept of **9m at 4.52 g/t Au** from 46m in drill hole RCW007 and 9m at 1.79 g/t Au from 14m in drill hole RCW006, the up-dip projection of the RCW007 mineralised zone. Drill sections 50m to the north and south of drill holes RCW006 and 007 returned intercepts of 5m at 0.2 g/t Au from 14m (RCW005) and 4m at 0.8 g/t Au from 41m (RCW009) respectively.

Gold mineralisation at Urandy is associated with a zone of strong silicification within sediments of the Mt McGrath Formation (Wyloo Group) adjacent to major structures associated with the Bitherabooga Fault / Shear zone. RC drilling has defined the mineralised zone over 100 metres to date with surface mapping identifying the extent of silicification to over 1 km.

Drilling at Derek's Bore returned broad low-grade gold intersections associated with strong silica ± minor sulphide alteration within carbonaceous sediments in close proximity to the NNW trending Bitherabooga shear zone. Better drill intercepts include 20m at 0.47 g/t Au from surface including 1m at 2.2 g/t Au from 5m, in drill hole RBI009 and 5m at 0.64 g/t Au from surface in drill hole RB011. Broad spaced (400m x 400m) soil sampling, completed as part of a larger regional program returned disperse low level coincident Au, As, Ag and Sb results across a broader area requiring further work.

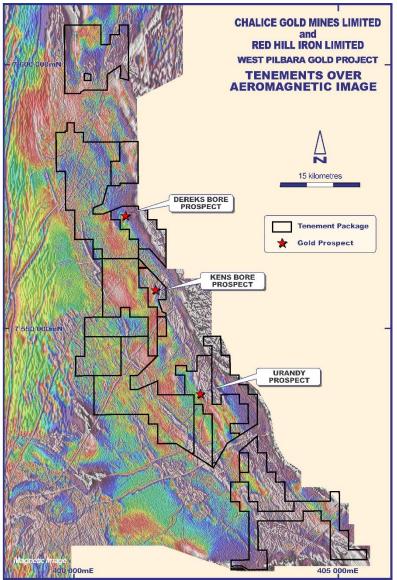


Figure 3. Aeromagnetic coverage - West Pilbara Gold Project

#### **Planned Exploration**

Chalice plans to commence an immediate review of all data and undertake a field review of the identified targets. Mapping and drill programs will follow the review at the earliest opportunity. The Urandy prospects will be prioritised for follow-up RC drilling.

#### Farm-in Agreement Terms

Chalice and Red Hill have entered into a binding Heads of Agreement, which will be fully documented in a formal Farm-in Agreement. Key Terms agreed are listed below:

- Chalice to spend \$1M in the first 24 months from commencement to earn 51%;
- Chalice must spend a minimum of \$0.5M within the first 12 months prior to withdrawal;

- Chalice must notify Red Hill once the first earn-in expenditure has been satisfied of its election to increase its interest at which time Red Hill have 14 days or such shorter period to notify Chalice that Red Hill wish to maintain their interest at 49% by proportionally contributing to all future expenditures;
- If Red Hill does not elect to maintain its interest, Chalice may expend a further \$2M with no set time period to increase its interest to 70%, or withdraw with no interest. Minimum annual expenditures by Chalice during this stage must exceed \$0.1M;
- Once Chalice has earned its 70% interest, both parties will contribute proportionally to all expenditure; and
- The Project area is also subject to an Iron Ore JV with API Management Pty Ltd who are responsible for maintaining all the tenements in good standing.

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

The information in this report that relates to Exploration Results in relation to the West Pilbara Gold 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 – WEST PILBARA GOLD PROJECT - JORC TABLE 1

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	Drill samples for analysis were collected applying standard industry practices with samples collected every 1m down hole directly from a cyclone mounted on the drill rig.
		Sample analysis was completed by Genalysis Laboratory Services Pty Ltd, Perth, Western Australia.
		Samples were analysed for a suite of elements. Analysis for gold was by fire assay (50gm charge) followed by a AAS finish. All other elements were analysed by ICP-OES.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems	Sample collection from Reverse Circulation (RC) drill holes was undertaken using industry standard techniques.
	used. Aspects of the determination of mineralisation that are Material to the Public Report.	Material returned from drilling is crushed / pulverised rock, with the majority of the material less than 1mm in size.
	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.	All material representing each 1m drill interval was passed through a three tier riffle splitter – standard industry practice for sampling of RC drill spoil.
		Each sample represented approximately 129 by volume of the drill interval with average weight of each sample being 3 to 4 kg per 1r interval.
		Samples were dispatched to the laboratory dried and pulverised using a ring mill.
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).	Reverse circulation drilling utilising a 5 ¼" face sampling hammer.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Sample recoveries and quality were recorded for each sampling interval by a geologist as part of the logging process. Sample recoveries were based on estimates of the size of drill spoil piles and were recorded as a percentage of the expected total sample volume. The cyclone was cleaned in between drill holes to minimise sample contamination. Samples were classified as dry, damp or wet.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The majority of drilling was completed above the water table or returned as dry samples and sample recovery estimates of >90% were the norm.
	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.	No bias observed between sample recovery and grade.

Criteria	JORC Code explanation	Commentary
Logging	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.	All RC drill holes were sampled, assayed and geologically logged. All data and information was validated prior to being uploaded and stored in the Access - based geological database in Perth.
		An appropriate logging system was applied to capture required attributes to allow geological interpretation / attribution and mineral resource modelling.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Not applicable
	The total length and percentage of the relevant intersections logged.	All drill holes were logged in their entirety.
Sub-sampling techniques and sample	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable
preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Samples for analysis were collected every 1m down hole directly from the cyclone after passing through a three tier riffle splitter mounted on the RC drilling rig. Each sample represented 12% (by volume) of the drilling interval with an average weight of 3 to 4 kg per 1m interval.
		Samples were classified as dry, damp or wet.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	RC drill (percussion) samples typically comprise particles of <1mm and weigh 25 to 40 kg per 1m interval dependant on rock type and intensity of weathering. Samples of this nature are considered suitable for riffle splitting.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Laboratory standards, duplicate and blank samples were submitted within each submission for analysis at the combined ratio of 1 in 20 samples.
		Results from the standards, duplicate and blank samples were monitored and compared where appropriate to the original sample throughout the drill programme. QA/QC reviews were routinely completed by Red Hill Iron and any issues were addressed immediately. No sample bias was observed.
		No twinned holes were completed during the programme.
		No adjustments have made to any of the results received from the laboratory.
		All data management procedures (field and office) conform to standard industry practice.
	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.	Sample recoveries were monitored by visual
		estimate throughout the drill program. Results from field duplicate samples were consistent indicating sampling methods are
	Whether sample sizes are appropriate to the grain size of the material being sampled.	appropriate and representative Samples submitted for analysis were typically 3 to 4 kg in weight with a typical (majority,

Criteria	JORC Code explanation	Commentary
		estimated at >90%) particle size of <1mm. The sample size range is appropriate and suitable for the type of material and analysis being undertaken.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Sample analysis was completed by Genalysis Laboratories in Maddington, Western Australia.
	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.	Not applicable
	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	Laboratory standards, duplicate and blank samples were inserted into the sample sequence at the rate of 1 in 20 samples. These samples were used to test the precision and accuracy of the sampling method and / or laboratory analysis. All results show an acceptable level of accuracy and precision.
		Genalysis Laboratories Services maintain standard internal laboratory QA/QC protocols.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All reported intercepts are calculated and checked internally by senior geological personnel.
	The use of twinned holes.	No twinned holes were completed during the programme.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All logging has been carried out using standardised logging codes to industry standards.
		All geological and sampling information has been entered into digital formats for validation.
		Digital copies are maintained with back-up copies maintained off-site.
	Discuss any adjustment to assay data.	No adjustments have been applied to assay data.
Location of data points	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.	All drill holes are surveyed by handheld GPS (MGA, Zone 50). Drill hole collar co- ordinates were verified in MapInfo GIS software utilising aerial photography.
	Specification of the grid system used	State mapping grid - MGA, Zone 50.
		Local grids not applied.
	Quality and adequacy of topographic control.	Topographic coverage has been established by aerial survey (LIDAR) with a vertical accuracy of ±0.15m.
Data spacing and	Data spacing for reporting of Exploration Results.	Not applicable
distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	The results and drill spacing are not sufficient to define a minerals resource.

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	
	Whether sample compositing has been applied.	No compositing of sample intervals applied.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	All drill holes have been orientated to intersect mineralisation approximately perpendicular to its trend and orientation. All drill holes reported in the above report were drilled -60° to 090° (east).
	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.	Not assessed.
Sample security	The measures taken to ensure sample security.	Standard chain of custody paperwork is maintained for all sample submissions. Samples were despatched and transported to the laboratory on a regular basis.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been carried out.

## Section 2 Reporting of Exploration Results

JORC Code explanation	Commentary
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.	The West Pilbara Gold Project comprises 12 granted exploration licenses (E08/1227, 1283, 1289, 1293 to 1295 inclusive, 1430, 1473, 1516, 1537, E47/1141 and 1693) which cover a total area of ~1390km <sup>2</sup> . The project is located ~40km SW of Pannawonica, Western Australia.
	The tenements are held by API Management Pty Ltd and Red Hill Iron Limited. Red Hill Iron Limited hold 100% of all mineral rights other than iron ore.
	The iron ore rights are held by API Management Pty Ltd (60%) and Red Hill Iron (40%) under the Red Hill Iron Ore Joint Venture.
	Chalice has executed a farm-in agreement with Red Hill Iron Limited whereby Chalice can earn-in to all other mineral rights other than iron ore and construction materials on the following terms:
	<ol> <li>Earn-in 51% interest by spending \$1,000,000 within 24 months, with a minimum expenditure commitment of \$500,000 within 12 months of commencement prior to withdrawal (inclusive of 2,000m of Reverse Circulation drilling) and;</li> <li>Earn-in 70% by spending an additional A\$2,000,000 within no specified time frame. Chalice must expend a minimum of \$100,000 per</li> </ol>
	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

Criteria	JORC Code explanation	Commentary
		There are no other material issues affecting the tenement
	The security of the tenure held at the time of	All tenements are in good standing.
	reporting along with any known impediments to obtaining a licence to operate in the area.	API Management Pty Ltd is responsible of maintaining the tenements in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	There have been periods of modern exploration work including prospecting with rock-chip sampling, soil sampling, aeromagnetic and electromagnetic (EM) surveys, RAB drilling, and reverse circulation (RC) drilling.
		Historic exploration reports have been reviewed and results summarised however, Chalice has not yet completed digital capture and compilation of data collected by previou explorers.
Geology	Deposit type, geological setting and style of mineralisation.	The West Pilbara Gold Project is located in th western Pilbara region of Western Australia.
		The Project lies in the north-western sector of the Ashburton Basin and is dominated by volcanic and sedimentary successions comprising the Lower Wyloo Group. The eastern extent of the project area is coincident with the western margin of the Hamersley Basin.
		The contact between the Ashburton and Hamersley basins is referred to as the Paraburdoo Hinge Zone and is defined by major fault/shear structures paralleling the contact including the Nanjilgardy Shear, proximal to the multi-million ounce gold deposit at Paulsens, located approximately 8 km south of the project.
		The west-northwest orientation of the Nanjilgardy Shear, paralleling the southern margin of the Hamersley Basin flexes north- northwest at the Wyloo Dome where similar defining structures, the Urandy Shear and Bitherabooga Shear, pass through the project area.
Drill hole Information	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:	Previous exploration drilling has been undertaken across all tenements prior to Chalice. Drilling completed by Red Hill Iron and others included RAB and reverse circulation drilling.
	<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> </ul>	Chalice has not verified the location or details of previous drill holes.
	• hole length.	

Criteria	JORC Code explanation	Commentary
	cut-off grades are usually Material and should be stated.	Gold cut-off of 0.1 g/t applied.
	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.	Not verified
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable.
Relationship between mineralisation widths	These relationships are particularly important in the reporting of Exploration Results.	At this stage true widths of mineralisation have not fully been assessed.
and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	True widths of mineralisation are estimated to be between 60% to 90% of reported widths.
	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').	
Diagrams	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.	Figures showing tenements and regional geology are contained within the body of this report.
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.	The information detailed in this report has been previously reported to the ASX by Red Hill Iron. No material information has been omitted.
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.	Previous exploration programs on the project include rock-chip sampling, soil sampling, aeromagnetic and electromagnetic (EM) surveys, RAB drilling, and reverse circulation (RC) drilling.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	Capture and compilation of historic data into a digital database.
	narge scale step-out arminig).	Mapping and RC drilling to test identified targets.