

19 November 2018

## **Apollo Hill Gold Resource Jumps 36% to 685,000oz**

### **Highlights:**

**Upgraded Apollo Hill Indicated and Inferred Mineral Resource of 20.7 Mt @ 1.0g/t Au for 685,000oz reported above a cut-off grade of 0.5g/t Au. This represents:**

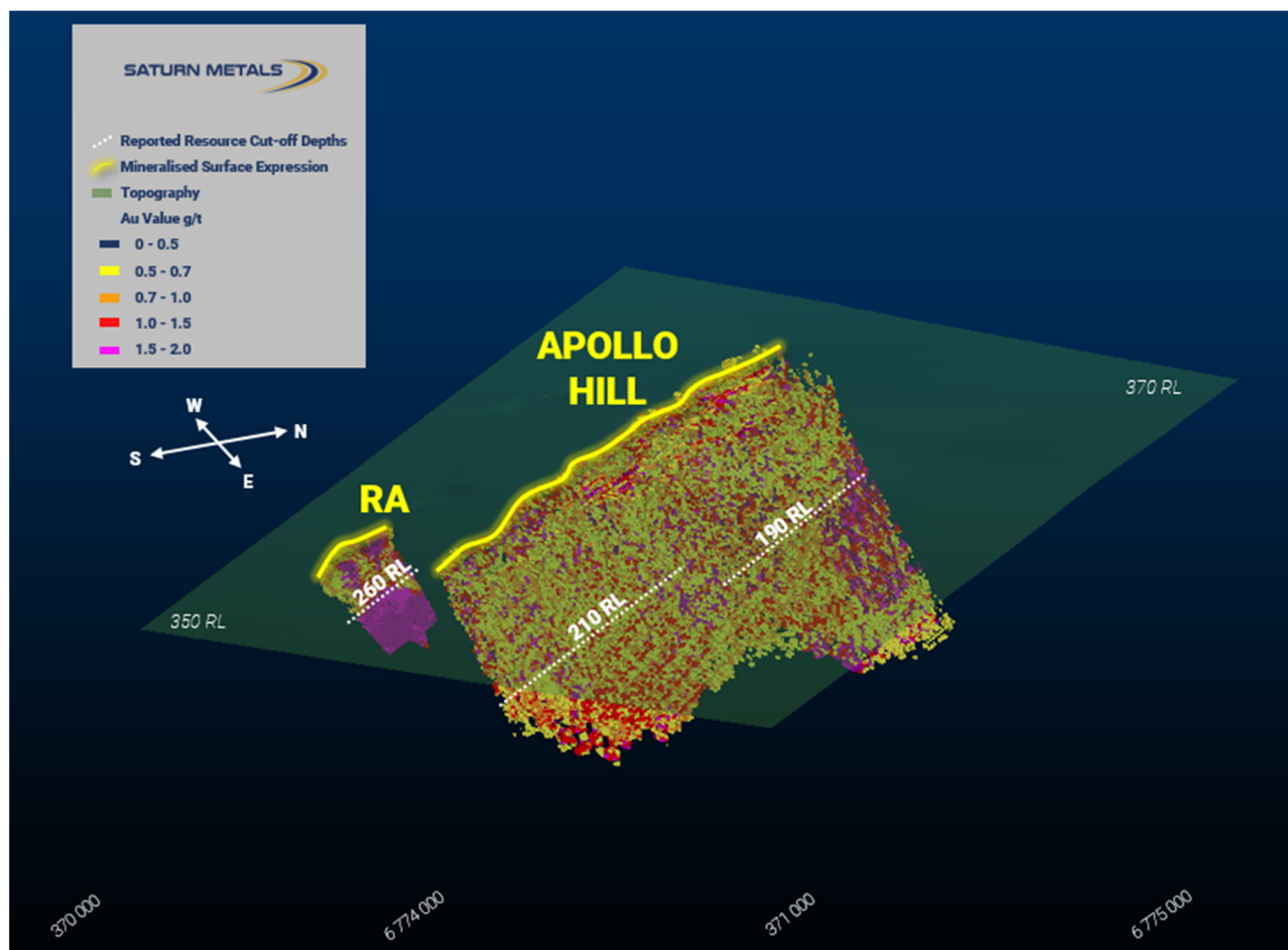
- **A 14% increase in deposit grade to 1.0g/t Au;**
- **A 36% increase in overall contained Mineral Resource to 685koz;**
- **Based on additional Saturn Metals drilling a total of 3.3Mt @ 1.1g/t Au for 116koz is now classified as an Indicated Mineral Resource representing a conversion of 22% of the previous Inferred Mineral Resource;**
- **An excellent discovery cost of only A\$9.40 per ounce;**
- **Saturn's recent quarterly cash figure of \$4.045M means the company is well funded for the next phase of resource discovery and expansion;**
- **Ounce additions driven by less than 10,000m of well-placed drilling in six months since listing on the ASX;**
- **Outstanding potential to deliver continued growth in the Resource, which remains open in all directions;**
- **Drilling already in progress to further test the extents of the Apollo Hill gold system (see ASX announcement 30 October 2018);**
- **The recent drilling and resource work delivered an increase in tonnes, grade, ounces, confidence and quality;**
- **Drilling on the 6km Apollo Hill trend is only a small part of the exploration potential on Saturn's underexplored 1,000km<sup>2</sup> 100% owned contiguous tenement package in the Western Australian Goldfields.**

Commenting on the Mineral Resource upgrade, Saturn Managing Director Ian Bamborough said:

*"This resource upgrade is a significant step for the Company and the Apollo Hill asset only a short while after listing. Improvements in grade, ounces, tonnes, quality and JORC Code category, all with minimal drilling and at a low discovery cost per ounce, bode well for the development of our business. With some of the strongest intersections located at both the northern and southern extent of the deposit, the system is wide open for rapid expansion. Drilling has already resumed to test these targets and results from this expansionary phase of our journey will be reported in due course."*

Saturn Metals Limited (ASX:STN) ("Saturn", "the Company") is pleased to announce that it has completed an updated Mineral Resource estimate for the Apollo Hill gold deposit, part of its 100%-owned Apollo Hill Gold Project near Leonora in the Western Australian Goldfields.

The upgraded Mineral Resource (Figure 1 and Table 1) totals 20.7Mt at 1.0g/t Au for 685,000oz, a 36% increase in contained ounces from the previously published resource. It incorporates the results of a highly successful 72-hole, 9,444m extensional and in-fill drilling campaign completed following the Company's listing on the ASX in March this year.



**Figure 1 3D Representation of the November 2018 Apollo Hill JORC Mineral Resource model and the various reporting RL's**

Lower cut-off grade (Au g/t)	Oxidation State	Measured			Indicated			Inferred			MII Total		
		Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)	Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)	Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)	Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)
0.5	Oxide	0	0	0	0.1	0.9	4	0.4	0.9	12	0.6	0.9	17
	Transitional	0	0	0	1.1	1.0	37	1.2	0.9	36	2.3	1.0	73
	Fresh	0	0	0	2.1	1.1	75	15.8	1.0	520	17.9	1.0	595
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3.3</b>	<b>1.1</b>	<b>116</b>	<b>17.4</b>	<b>1.0</b>	<b>569</b>	<b>20.7</b>	<b>1.0</b>	<b>685</b>

The models are reported above nominal RLs (190 mRL - approximately 180 metres below surface (mbs) for Apollo Hill northwest, 210 mRL approximately 150mbs for Apollo Hill southeast and 260 mRL, 90mbs for Ra deposit) and nominal 0.5 g/t Au lower cut-off grade for all material types. Classification is according to JORC Code Mineral Resource categories. Totals may vary due to rounded figures.

**Table 1 November 2018 Apollo Hill Mineral Resource – See also Table 1b for full table description**

The rapid growth in the Apollo Hill Mineral Resource over the past eight months reflects the success of the drilling undertaken by Saturn, important breakthroughs in the understanding of the geological controls at the deposit (Figure 2), and the subsequent improvement in the resource modelling techniques applied. The 180,000-ounce increase has been driven as much by an increase in the grade of the deposit (up 14% to 1.0g/t Au from the grade in the previous Mineral Resource model) as by an increase in the tonnes (up 18% to 20.3Mt from tonnage in the previous Mineral Resource model).

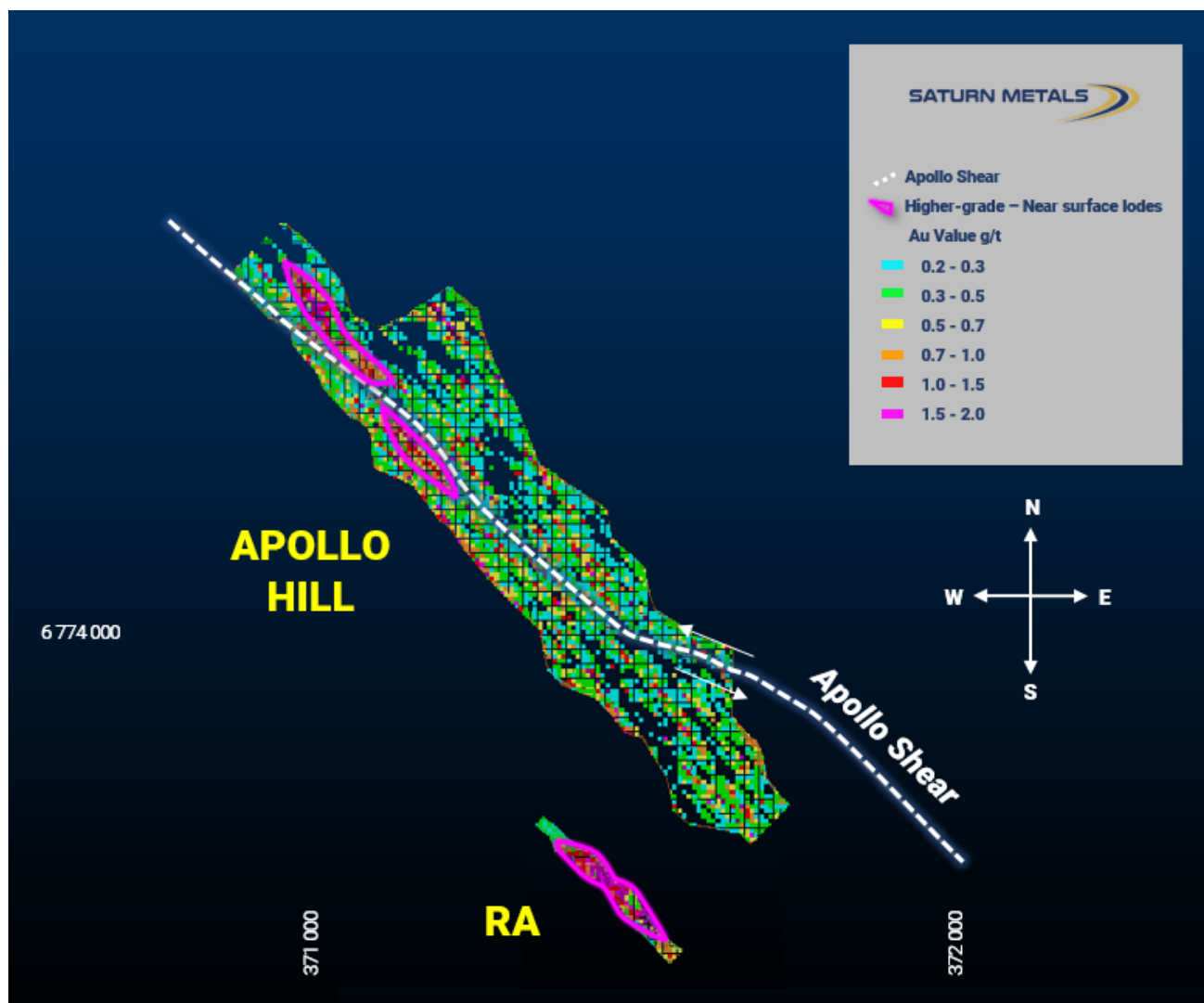


Figure 2 Level plan representation of Apollo Hill deposit Geology and major mineralisation controls with location of higher-grade gold lodes highlighted (330m RL)

Importantly, a portion of the Apollo Hill resource - 3.3Mt @ 1.1g/t Au for 116koz - has been declared in the higher confidence Indicated Mineral Resource category, representing a conversion of 22% of the previously Inferred Mineral Resource. Material in the Indicated Mineral Resource category is mainly located in two distinct shallow/at surface geographical areas at Apollo Hill and Ra (Figure 3), potentially offering excellent starter locations for any possible scoping studies.

Figure 2 shows three distinct higher-grade lodes which cluster proximal to the Indicated Mineral Resource areas illustrated in Figure 3. These near surface mineralised zones are approximately 20m in true thickness.

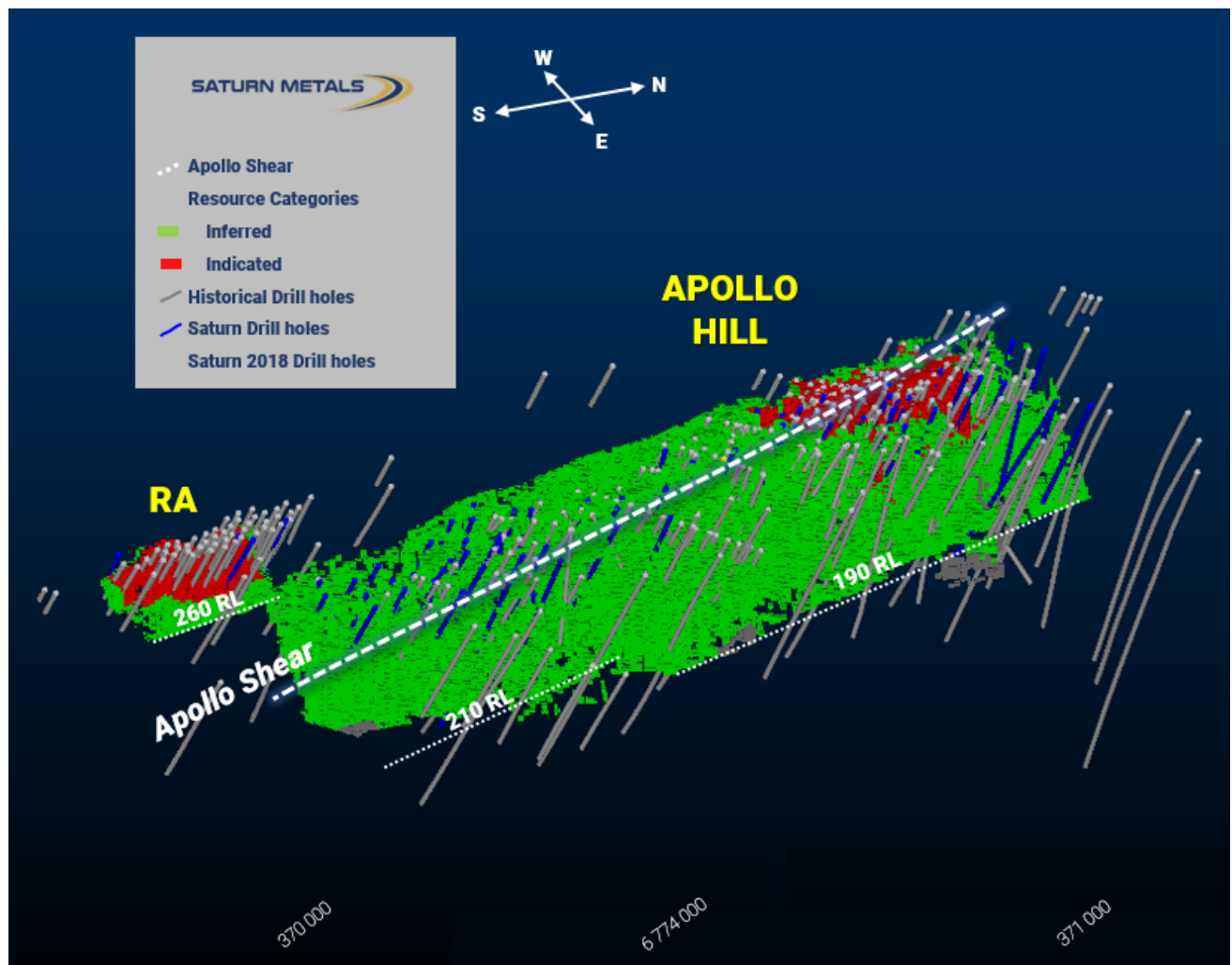


Figure 3 Indicated Mineral Resource clusters in two distinct shallow, well drilled areas at Apollo Hill and Ra. Model blocks for mineralised zones with Au>0.5 g/t.

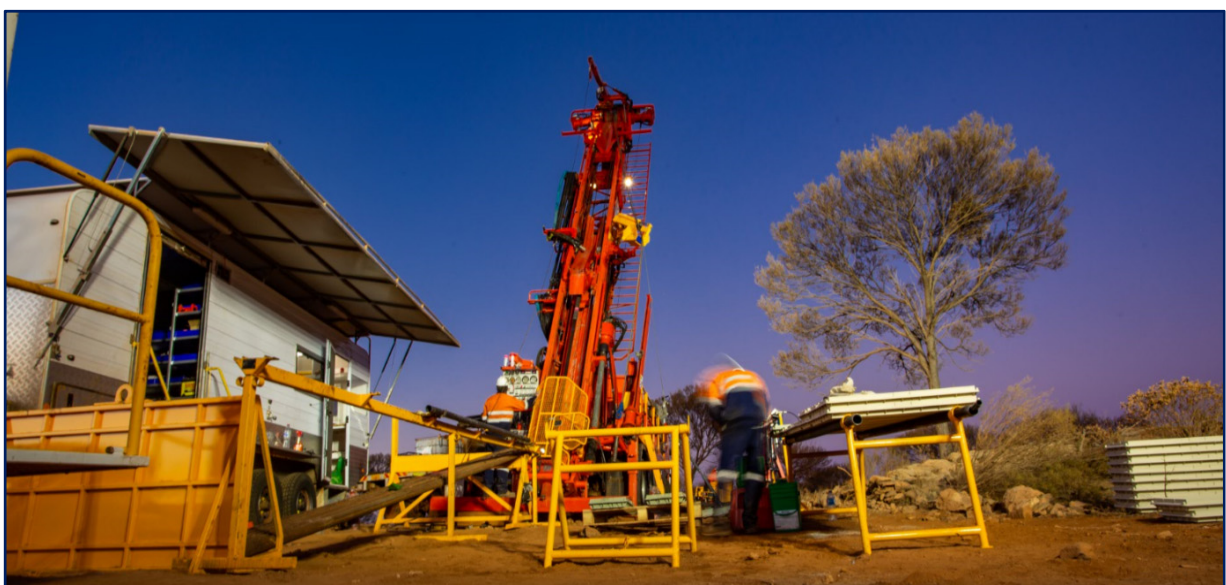




Figure 4 shows a grade-tonnage curve for the deposit.

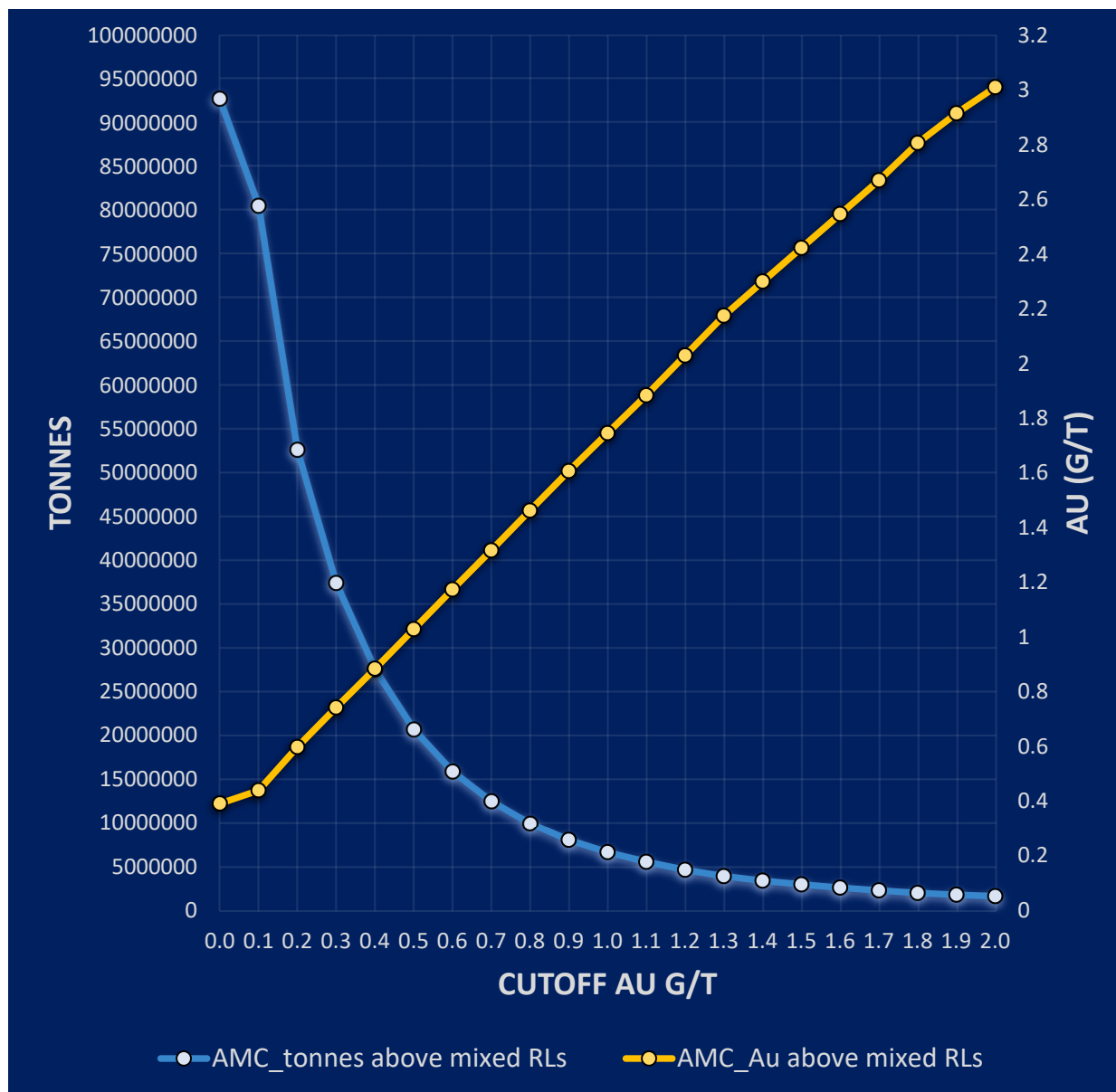
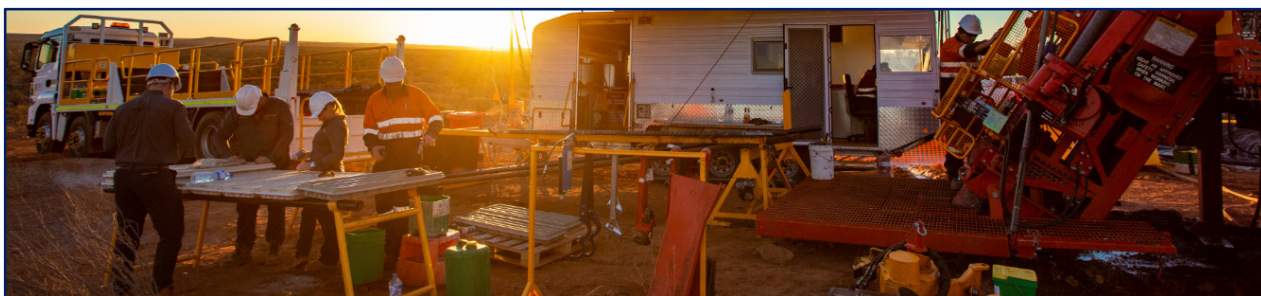
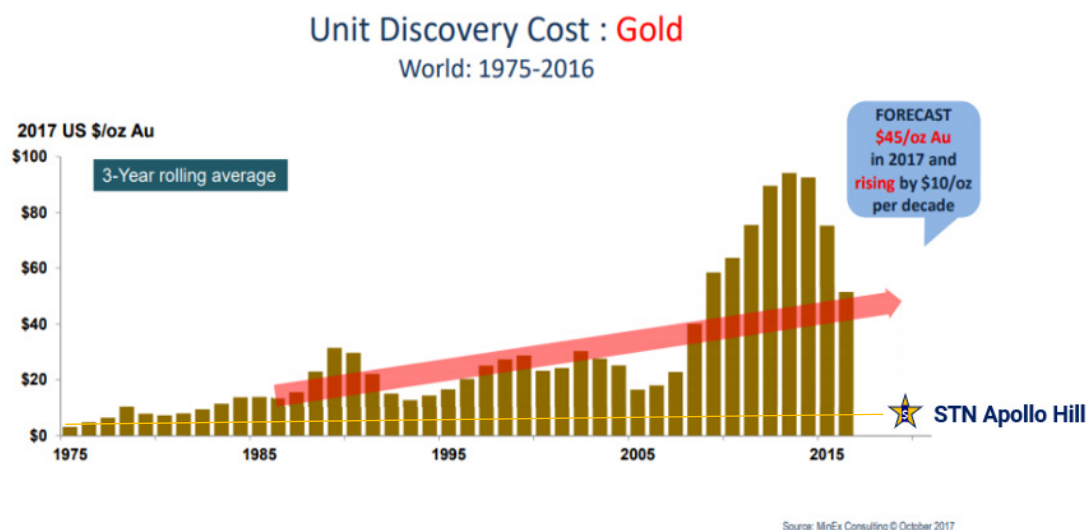


Figure 4 Grade-Tonnage Curve Apollo Hill 2018 Mineral Resource



Resource additions have been made at a discovery cost of only A\$9.40 per ounce (US\$6.77). This compares extremely favourably to the global gold industry average, as illustrated in Figure 5.



**Figure 5 Apollo Hill discovery cost per resource ounce as compared to other deposits (adapted from Schodde, R., October 2017 - 11th Fennoscandian Exploration and Mining Conference - Finland)**

The Company's strategy moving forward is to target an expansion of the Apollo Hill gold deposit and look for new deposits across its regional land package before initiating a scoping study.

The tactics Saturn will employ within this strategy are as follows:

1. Test for and rapidly demonstrate the size potential of the Apollo Hill Gold system by undertaking shallow (<150m vertical depth) step-out and exploratory drilling along an identified 6km long geological corridor.

Recent exciting results at the northern end (**10m @ 2.98g/t Au** from 92m within **28m @ 1.20g/t Au** from 82m - AHRC0036); and southern end (**58m @ 1.06 g/t Au** from 65m including **36m @ 1.39 g/t Au** from 87m - AHRC0049) have left this major gold and alteration system wide open for expansion.

In this respect, RC drilling commenced in late October testing a number of significant aircore anomalies, interpreted structures and geophysical targets (See ASX Announcement 30 October 2018).

2. Undertake additional resource and infill drilling to generate additional Inferred Mineral Resource material (planned for early 2019).
3. Continue to improve the drill density within the current Inferred Mineral Resource area to convert material into the higher confidence Indicated Mineral Resource category and continue to develop higher grade shoots such as the Armstrong and Eagle Shoots (planned for 2019).
4. Explore for new styles of mineralisation and opportunities within the larger Apollo Hill gold system by targeting geological structures generated by geophysics (drilling already commenced).
5. Maintain a concerted exploration effort in Saturn's 1000km<sup>2</sup> 100% owned contiguous regional tenement package aimed at making and developing new satellite discoveries (drilling planned for early 2019).

## Listing Rule 5.8.1

Pursuant to ASX listing rule 5.8.1, and in addition to the information contained in the attached JORC Code tables, the Company provides the following details in respect of the Apollo Hill Mineral Resource.

### Mineral Resource Statement Overview

AMC Consultants Pty Ltd (AMC) was employed to update the Mineral Resource estimate for the Saturn Metals Ltd Apollo Hill gold project for reporting in accordance with the JORC Code. The Mineral Resource estimate used all current and appropriate exploration data and information collected up to 21 September 2018 for the project.

There is no material historic underground or open pit mining that affects the Apollo Hill Mineral Resource.

At this stage, there are no current mining studies for the project.

A summary of the updated 2018 Apollo Hill Mineral Resource is provided in Table 1(a) below:

Lower cut-off grade (Au g/t)	Oxidation State	Measured			Indicated			Inferred			MII Total		
		Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)	Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)	Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)	Tonnes (Mtonnes)	Au (g/t)	Au metal (K ozs)
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The models are reported above nominal RLs (190 mRL – approximately 180 metres below surface (mbs) for Apollo Hill northwest, 210 mRL approximately 150mbs for Apollo Hill southeast and 260 mRL 90mbs for Ra deposit) and nominal 0.5 g/t Au lower cut-off grade for all material types.

Saturn Metals advise that there is no material depletion by mining within the model area.

Estimation is by localized multiple indicator kriging for Apollo Hill zone; estimation of Ra zone used restricted ordinary kriging due to limited data.

The model assumes a 7.5 mE by 7.5 mN by 5 mRL Selective Mining Unit (SMU) for selective open pit mining.

The final models are SMU models and incorporate internal dilution to the scale of the SMU. Technically the models do not account for mining related edge dilution and ore loss. These parameters should be considered during the mining study as being dependent on grade control, equipment and mining configurations including drilling and blasting.

Classification is according to JORC Code Mineral Resource categories.

Totals may vary due to rounded figures.

**Table 1 (a). November 2018 Mineral Resource Statement; 0.5g/t Au Cut-off above various RL's by oxidation domain**

## Location

Apollo Hill (29.15°S and 121.68°E) is located approximately 60km south-east of Leonora in the heart of WA's goldfields region (Figure 6). The deposit and the Apollo Hill project are 100% owned by Saturn Metals and is surrounded by good infrastructure and several significant gold deposits.

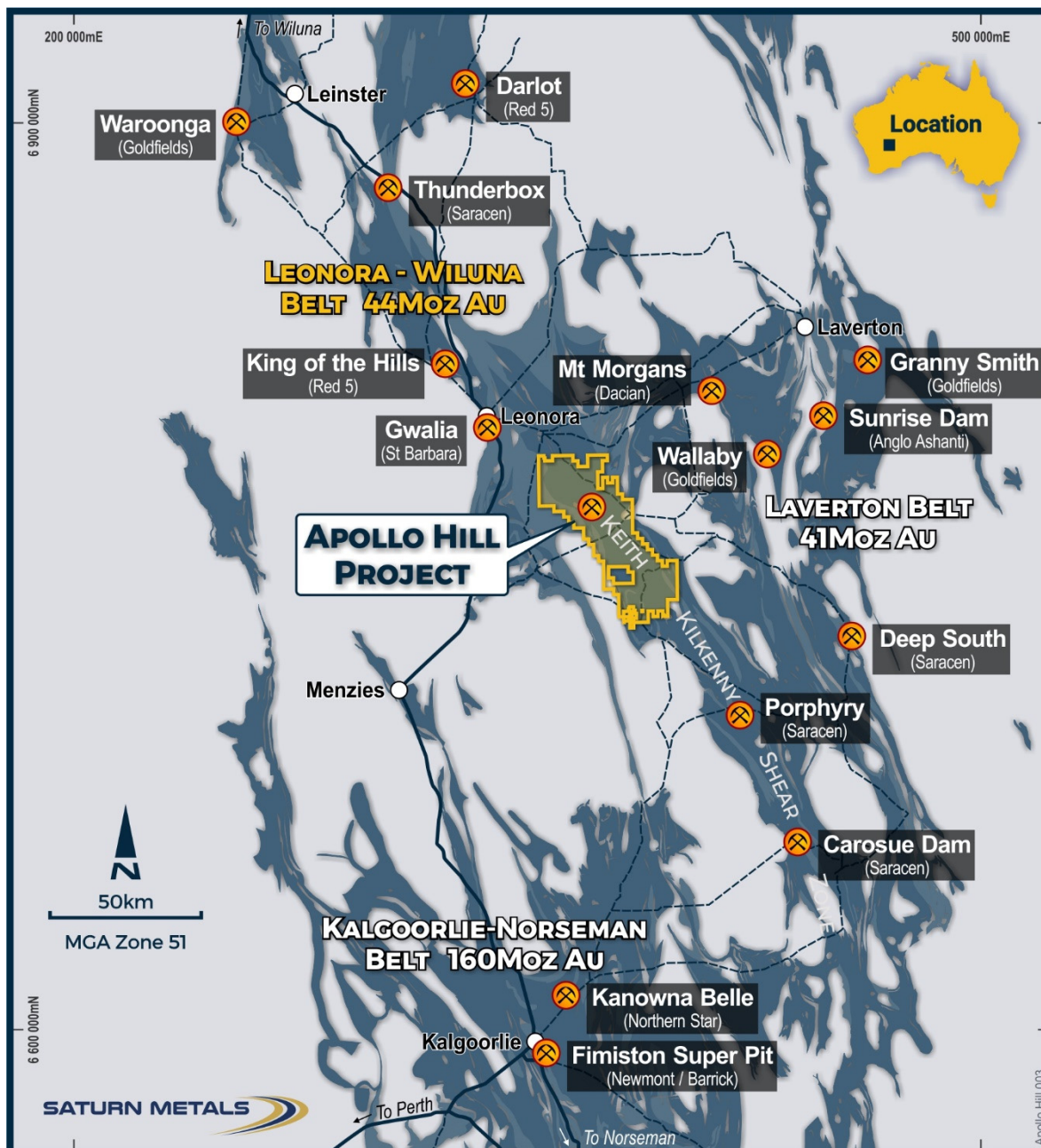


Figure 6 Apollo Hill location, Saturn Metals' tenements and surrounding gold deposits and infrastructure.



## District Geology

The Apollo Hill deposit occurs in the Archean Wiluna-Norseman greenstone belt in a mineralised structure parallel and adjacent to the district scale Keith-Kilkenny Fault system. The tenement holdings are dissected by this district scale lineament, which is a complex system of northwest oriented shearing and faulting. This lineament is known to be associated with gold deposits in the region including St Barbara's Sons of Gwalia Mine some 40-50km to the northwest and Saracen's Carosue Dam Operation approximately 130km to the south-east (Figure 6).

## Deposit Geology and Geological Interpretation

### Lithology

Mineralised rock types include strongly deformed mafic volcanoclastic and schistose rocks to the west (footwall) with relatively undeformed pillow basalt and dolerite to the east (hanging wall). The Ra gold deposit occurs in dolerite within the felsic schists approximately 200m to 400 m south of the Apollo deposit. Inter-flow meta-sedimentary rocks, dominantly shale, occur in outcrops commonly less than 5 m thick and 200 m strike length throughout the sequence. Rock units generally strike north-west and dip at 60° towards the northeast (Figure 7).

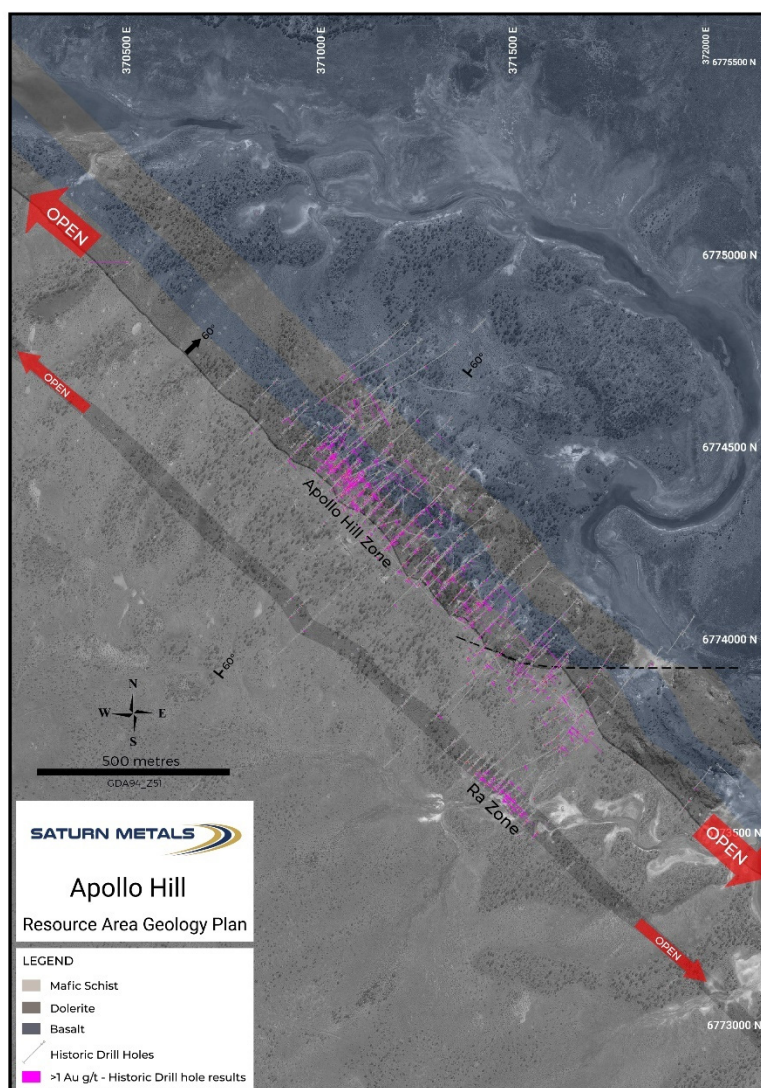


Figure 7 Apollo Hill geology plan

## Structure

The Apollo Hill mineralised shear zone is 5km long and 500m wide. The shear zone dips at 60° to the north-east and approximate contact between the mafic hangingwall and mafic schist/volcanoclastic footwall sequences (Figure 7). Figure 8 illustrates the schematic structure and geology in cross section.

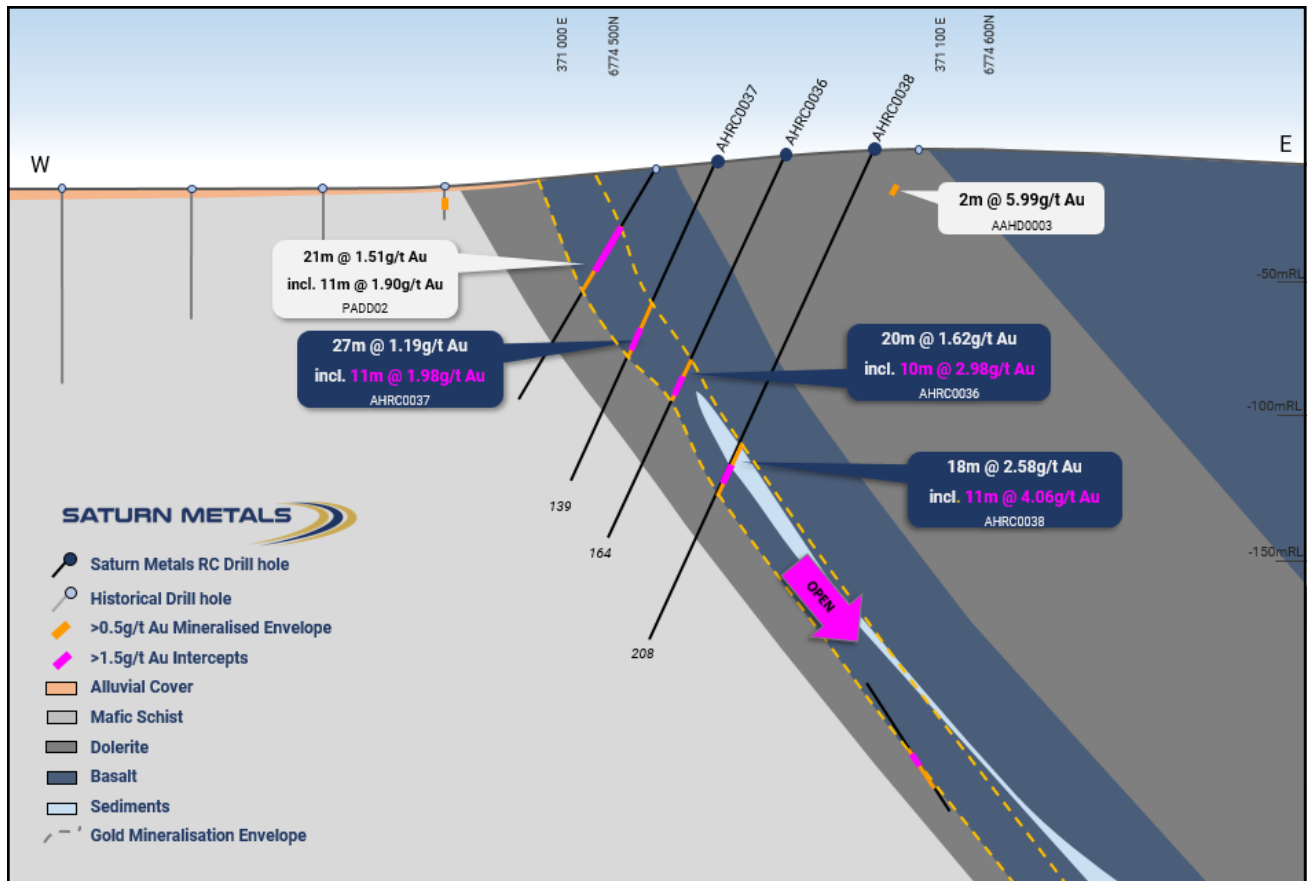


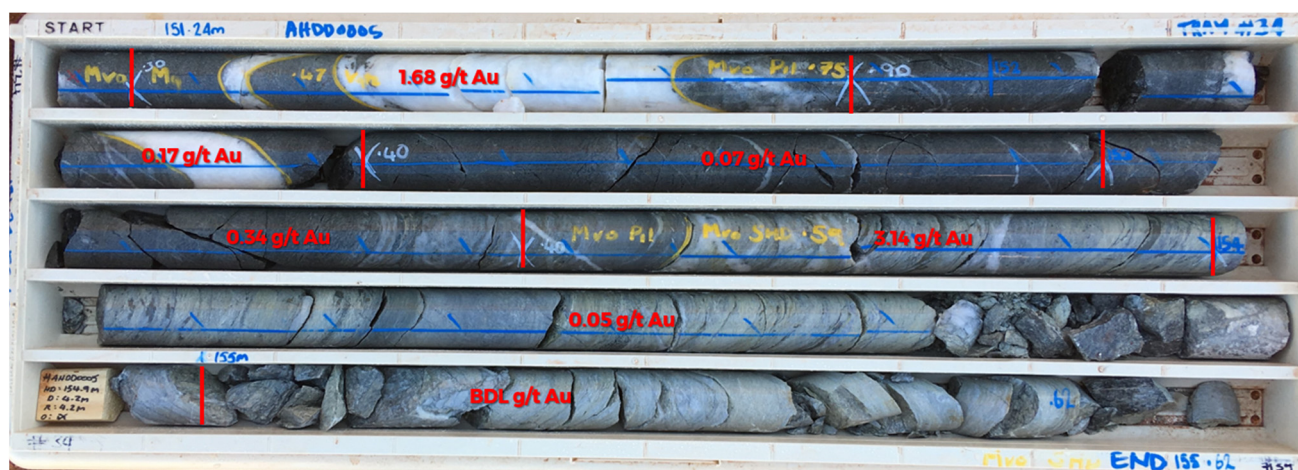
Figure 8 Apollo Hill Shear and gold mineralisation in cross section

## Veining

Discontinuous sheeted and/or stockwork veins associated with the gold and hosted by all rock-types commonly dip at approximately 53° degrees towards 054° (north-east) and also towards 134° (southeast). Veins vary between a few millimetres and a few centimetres thick. In the mineralised areas, vein density ranges between 2-3 per metre to 20 per metre. Gold grade is seen to increase with vein density. Figure 9 shows recent diamond core where the sheeted veins are clearly visible. Ladder veining between sheeted vein sets is often associated with the highest-grade intercepts. All veins have been deformed to some extent.

## Mineralisation

Relatively coarse gold is noted within the quartz veins at Apollo Hill. Gold mineralisation is broadly focused along the contact between hangingwall and footwall rock-types. The vein systems define several broad mineralised zones (Apollo, Ra). Mineralisation contacts appear to be relatively gradational on most sections. Studies suggest a complex gold forming history for Apollo Hill with multiple generations of quartz veins and associated mineralisation. Figure 9 shows recent diamond core and a mineralised intercept.



**Figure 9 Recent diamond drill core from Apollo Hill, showing rock types, veining, structure, alteration and assayed grade (AHDD0005 151.24m to 155.62m)**

### Alteration

Gold mineralisation associated with the Apollo Shear zone is characterised by a silica sericite pyrite alteration assemblage particularly proximal (50m) to the Apollo Shear. Gold is noted in association with ankerite around some quartz veins. Epidote is noted around higher grades. An outer alteration zone of chlorite-carbonate  $\pm$  magnetite is noted. Leucoxene formation is developed in Dolerites along much of the Apollo Shear. Figure 9 depicts a section of recent core showing alteration around mineralised veins in pillow basalts and dolerites.

### Weathering and Regolith

At Apollo Hill the depth of the weathering profile is relatively shallow. Where deeper weathering is noted it is related to structure-induced permeability. The base of complete oxidation ranges between 2m to 30 m but is typically 10m to 20m. The depth to the top of fresh rock ranges from 8m to 70m but is typically 20m to 30m. There is little evidence for supergene gold enrichment in what is left of the eroded weathering profile. Young alluvial and aeolian sediments on lap onto the variously stripped profile at Apollo Hill. Where cover sequences occur, bedrock is covered by a maximum of 20 m of transported alluvium. Fresh rock is known to outcrop at Apollo Hill in many locations.

### Drilling and Drilling Techniques

Since discovery in 1986, several companies have completed drilling on the project including Fimiston Mining NL, Battle Mountain (Australia) Ltd, Homestake Gold of Australia Ltd, Mining Project Investors Ltd (MPI), Hampton Hill Mining NL, Apex Minerals NL, Peel Mining Ltd, and Saturn Metals Ltd. Most of the exploration drilling at Apollo Hill can be divided into four main periods: 1996 to 1997, 2003 to 2007, 2014 to 2017 and 2018. Most of the critical RC and DD holes completed at Apollo Hill can be divided into several main periods: 1988 to 1989, 2003, 2011 and 2018.

All holes used directly for the Mineral Resource estimation at Apollo Hill are reverse circulation (RC) or diamond drill (DD) holes completed by Saturn or its predecessor companies since 1986. Drilling at Apollo Hill tends to be on 30 to 60 m spaced northeast-southwest fences with drilling along the fences ranging from 25m to 50m intervals. Drill spacing is less dense towards the margins of the deposits. Mineralisation is not closed off along strike or at depth.

The Apollo Hill Mineral Resource estimate has used 363 diamond holes and RC drill holes for a total of 35,915m drilled comprising a total of 35,110 intervals. The holes have been surveyed (collar locations), downhole surveyed, logged, sampled, and recent core has been photographed. The

location of the diamond and RC drillholes used in the Mineral Resource estimate are shown in Figure 3. The drillholes are surveyed using the GDA94 datum and MGA zone 51 coordinates.

## **Data Review**

Drillholes are predominantly sampled over the full length of the holes with sample intervals generally 1 m in length, with core sampling considering geological boundaries.

The drillhole data, assay data and quality assurance/quality control (QAQC) data have been compiled since 1986. Since that time, a number of different laboratories have been used, with a corresponding range of sample preparation, assaying, and QAQC protocols.

Analysis of QAQC data since 1986 did not highlight any matters for concern.

## **Sampling and Sub-sampling Techniques**

Measures taken to ensure the representivity RC sampling include close supervision by geologists, use of appropriate sub-sampling methods, routine cleaning of splitters and cyclones, and RC rigs with enough capacity to provide generally dry, reasonable recovery samples. Information available to demonstrate sample representivity includes RC sample weights, sample recovery, sample consistency, field duplicates, standards and blanks. RC holes were sampled over 1m intervals by a cone-splitter mounted to the RC drill rig.

Diamond core was drilled HQ3 and NQ2 dependant on weathering profile and ground conditions. Core was generally cut in half although some full core sampling (8 holes) has been utilised in 2018 to help account for nuggety coarse gold noted in logging. Sample sizes range in size but generally 1m intervals were used adhering to geological boundaries where appropriate (minimum 0.3m to maximum 1.2m). Sampling was undertaken using QAQC procedures in line with industry best practice. This includes the submission of standards, blanks and duplicates at regular intervals within each submission, for RC and Diamond samples.

Reverse Circulation (RC) drilling was conducted with either a 4.5" or 5.5" face-sampling bit.

For this upgrade, all core was oriented using a Reflex orientation tool which was recorded at the drill site. All core was pieced back together and orientated at the Saturn Core yard at Apollo Hill.

## **Sample Analysis Method**

Recent Saturn drilling samples were analysed by NAGROM in Kelmscott, and ALS in Kalgoorlie and Perth. At the laboratories the samples were oven dried and crushed to 90% passing 2mm, and pulverised to 95% passing 106 microns, with analysis by 50g fire assay.

Detailed review of the Saturn QAQC data determined that the results were satisfactory and that the drilling database was suitable for resource estimation.

The Saturn in-fill drilling supports the previous drill hole data suggesting that there is no problem with the spatial location and tenor of mineralisation defined in the historic drilling.



## **Estimation Methodology**

Mineralisation envelopes were constructed on oblique southwest-northeast cross sections using a nominal 0.3 g/t cut-off grade using raw grade data and geological shapes to define the edges of mineralised zones. Delineation of internal dilution material and minimum thickness are not relevant to the estimation method. Strings were snapped to drillholes and were used to develop wireframes of the mineralisation for both Apollo Hill and Ra mineralised zones.

Wireframe interpretations for secondary weathering related oxidation and top of fresh rock were incorporated into the model.

Raw sample/assay files were flagged/coded for the interpreted mineralisation zones, oxidation profile and rock-types using the relevant wireframes and then composited to a regular 2 m downhole composite length as a means of achieving a uniform sample support.

Bulk density was generated from a set of 87 Archimedean determinations using billets of core. Densities have been assigned based on oxidation state. At Apollo Hill, assigned densities range from 2.7 t/m<sup>3</sup> (oxide) to 2.9 t/m<sup>3</sup> (fresh).

Grade estimation has been completed using local multiple indicator kriging (LMIK) for the major Apollo Hill mineralised zone given its mixed host-rock types, variable grades, complex local geometries and mixed orientations. The smaller Ra mineralised zone has a relatively geographically limited and less diverse data set and therefore restricted ordinary kriging (ROK) was used for gold grade estimation.

The flagged composites were used in estimation of panels with initial parent block dimensions of 30m by 30m by 5 m.

The flagged composites were used for estimation of panels with initial parent block dimensions of 30 m by 30 m by 5 m. Indicator thresholds were selected based on the geostatistical characteristics of the Apollo Hill mineralised zone and were selected to discretise the profiles at slope changes and key grade thresholds. The indicator estimates were modified with a change of support correction to emulate a selective mining unit (SMU) scale mining block. The resultant MIK estimates were localised into an SMU model having block dimensions of 7.5 m by 7.5 m by 5 m and combined with the remaining ROK estimates for the minor mineralised zone and waste.

## **Mineral Resource Classification**

A combination of Indicated and Inferred Mineral Resources has been defined, considering a range of parameters including the robustness of the input data, the confidence in the geological interpretation (the predictability of both structures and grades within the mineralised zones), distance from data, and amount of data available for block estimates within the mineralised zones.

## **Reporting**

The Mineral Resource model for Apollo Hill is reported above variable and nominal RLs, considering a potential open pit mining scenario similar to other projects in the region. Reporting RLs (noted in Table 1 and Table 1a vary according to general base of consistent drilling and apparent continuity of mineralisation within area.

The Mineral Resource was reported using a 0.5 g/t Au cut-off grade in line with preliminary economic analysis and other similar projects in the region.

Saturn has advised that there is no material historic depletion by mining within the project area. The Apollo Hill Mineral Resource estimate was developed with a view to open pit mining on 5 m benches.

### **Metallurgy**

Metallurgical test work has been carried out for typical mineralised material at Apollo Hill confirming that the ore is amenable to conventional recovery by gravity and cyanide leaching methods. Ongoing test work by Saturn has confirmed gold recoveries from primary ore to be approximately 92% to 98%. Further test work is ongoing.



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### **Competent Persons Statements**

The information in this report that relates to Exploration Targets, geology, and Exploration Results and data compilation is based on information compiled by Kathryn Cutler, a Competent Person who is a Member of The Australian Institute of Mining and Metallurgists. Kathryn Cutler is a fulltime employee of the Company. Kathryn Cutler has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Kathryn Cutler 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 announcement that relates to the Apollo Hill Mineral Resource estimate (gold) is based on information compiled and generated by Ingvar Kirchner, an employee of AMC Consultants. Mr Kirchner consents to the inclusion, form and context of the relevant information herein as derived from the original resource reports. Mr Kirchner has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

## JORC Code, 2012 Edition – Table 1 - Apollo Hill

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to the Apollo Hill and Ra exploration area and all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>Measures taken to ensure the representivity RC sampling include close supervision by geologists, use of appropriate sub-sampling methods, routine cleaning of splitters and cyclones, and RC rigs with sufficient capacity to provide generally dry, reasonable recovery samples. Information available to demonstrate sample representivity includes RC sample weights, sample recovery, sample consistency, field duplicates, standards and blanks.</li> <li>RC holes were sampled over 1m intervals by a cone-splitter mounted to the RC drill rig. RC samples were analysed by NAGROM in Kelmscott, and ALS in Kalgoorlie and Perth. At the laboratories the samples were oven dried and crushed to 90% passing 2mm, and pulverised to 95% passing 106 microns, with analysis by 50g fire assay.</li> <li>RC samples were composited to 4m to produce a 3kg representative sample to be submitted to the laboratory.</li> <li>Diamond core was drilled HQ3 and NQ2 dependant on weathering profile and ground conditions. The core was cut in half by a Corewise diamond saw at the ALS laboratory in Perth, where half and full core were submitted for analysis.</li> <li>Half and full core samples were taken with a diamond saw generally on ranging in size from 1m intervals dependant on geological boundaries where appropriate (minimum 0.3m to maximum 1.2m). Whole core samples were taken within the zones of mineralisation to account for coarse grained nature of the gold.</li> <li>Sampling was undertaken using Saturn Metals sampling and QAQC procedures in line with industry best practice, which includes the submission of standards, blanks and duplicates at regular intervals within each submission, for RC and Diamond samples.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation (RC) drilling was conducted, which used either a 4.5" or 5.5" face-sampling bit.</li> <li>Diamond core was HQ3 of NQ2. All core was oriented using a Reflex orientation tool, which was recorded at the drill site, and all core pieced back together and orientated at the Saturn Core yard at Apollo Hill.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery was visually estimated by volume for each 1m bulk sample bag and recorded digitally in the sample database. Very little variation was observed.</li> <li>Measures taken to maximise recovery for RC drilling included use of face sampling bits and drilling rigs of sufficient capacity to provide generally dry, high recovery samples. RC sample weights indicate an average recovery of 85-95% and were dry.</li> <li>The cone splitter was regularly cleaned with compressed air at the completion of each rod.</li> <li>The RC Drilling was completed using auxillary compressors and boosters to keep the hole dry and ensure the sample was lifted to the sampling equipment as efficiently as possible. The cyclone and cone splitter were kept dry and clean, with the cyclone cleaned after each drill hole and the splitter cleaned after each rod, to minimise down-hole or cross-hole contamination.</li> <li>Diamond core recovery was likewise measured and recorded for each drill run. The core was physically measured by tape and recorded for each run. Core recovery was recorded as percentage recovered. All data was loaded into the Saturn Database.</li> <li>Diamond drilling utilised drilling additives and muds to ensure the hole was conditioned to maximise recoveries and sample quality.</li> <li>There was no observable relationship between recovery and grade, or preferential bias in the RC drilling at this stage.</li> <li>There was no significant loss of material reported in the mineralised parts of the core to date.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes were geologically logged by industry standard methods, including depth, colour, lithology, alteration, mineralisation and weathering.</li> <li>RC Chip trays and Diamond Core trays were photographed.</li> <li>The logging is qualitative in nature and of sufficient detail to support the current interpretation.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• RC holes were sampled over 1m intervals by cone-splitting. RC sampling was closely supervised by field geologists and included appropriate sampling methods, routine cleaning of splitters and cyclones, and rigs with sufficient capacity to provide generally dry, high recovery RC samples. Sample representivity monitoring included weighing RC samples and field duplicates.</li> <li>• Whole core sent for assay in logged mineralised zones. Half core submitted in surrounding country rock.</li> <li>• Assay samples were crushed to 90% passing 2mm, and pulverised to 95% passing 75 microns, with fire assay of 50g sub-samples. Assay quality monitoring included reference standards and inter-laboratory checks assays.</li> <li>• Duplicate samples were collected every 20 samples, and certified reference material and blank material was inserted every 40 samples.</li> <li>• The project is at an early stage of evaluation and the suitability of sub-sampling methods and sub-sample sizes for all sampling groups has not been comprehensively established. The available data suggests that sampling procedures provide sufficiently representative sub-samples for the current interpretation.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Sampling included field duplicates, blind reference standards, field blanks and inter-laboratory checks confirm assay precision and accuracy with sufficient confidence for the current results.</li> <li>• Samples were submitted to ALS in Kalgoorlie and Perth and Nagrom in Perth, where they were prepared, processed and analysed via 50g charge fire assay.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• No independent geologists were engaged to verify results. Saturn Metals project geologists were supervised by the company's Exploration Manager. No adjustments were made to any assays of data.</li> <li>• Logs were recorded by field geologists on hard copy sampling sheets which were entered into spreadsheets for merging into a central SQL database.</li> <li>• Laboratory assay files were merged directly into the database. The project geologists routinely validate data when loading into the database.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Collars are surveyed by hand held GPS, utilising GDA94, Zone 51.</li> <li>Drill hole collars are all surveyed by DGPS, by ABIMS.</li> <li>All RC and diamond holes were down-hole surveyed, by Gyro.</li> <li>A topographic triangulation was generated from drill hole collar surveys and the close-spaced (50m) aeromagnetics data.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Apollo Hill mineralisation has been tested by generally 30m spaced traverses of south- westerly inclined drill holes towards 225°. Across strike spacing is variable. The upper approximately 50m has been generally tested by 20-30m spaced holes, with deeper drilling ranging from locally 20m to commonly greater than 60m spacing.</li> <li>The data spacing is sufficient to establish geological and grade continuity.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Mineralised zones dip at an average of around 50° to the northeast. Detailed orientations of all short-scale mineralised features have not yet been confidently established. The majority of the drill holes were inclined at around 60° to the southwest.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Apollo Hill is in an isolated area, with little access by general public. Saturn's field sampling was supervised by Saturn geologists. Sub-samples selected for assaying were collected in heavy- duty polywoven bags which were immediately sealed. These bags were delivered to the assay laboratory by independent couriers, Saturn employees or contractors.</li> <li>Results of field duplicates, blanks and reference material, and the general consistency of results between sampling phases provide confidence in the general reliability of the drilling data.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>The competent person independently reviewed Saturn's sample quality information and database validity. These reviews included consistency checks within and between database tables and comparison of assay entries with original source records for Saturn's drilling. These reviews showed no material discrepancies. The competent person considers that the Apollo Hill drilling data has been sufficiently verified to provide an adequate basis for the current reporting of exploration results.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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 style="list-style-type: none"> <li>The Apollo Hill Project lies within Exploration Licence E39/1198, M31/486 and M39/296. These tenements are wholly-owned by Saturn Metals Limited. These tenements, along with certain other tenure, are the subject of a 5% gross over-riding royalty (payable to HHM) on Apollo Hill gold production exceeding 1 million ounces. M39/296 is the subject of a \$1/t royalty (payable to a group of parties) on any production.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Aircore, RC and diamond drilling by previous tenement holders provides around 79% of the estimation dataset. The data is primarily from RC and diamond drilling by Battle Mountain, Apex Minerals, Fimiston Mining, Hampton Hill, Homestake, MPI and Peel Mining.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Apollo Hill project comprises two deposits: The main Apollo Hill deposit in the north-west of the project area, and the smaller Ra Deposit in the south. Gold mineralisation is associated with quartz veins and carbonate-pyrite alteration along a steeply north-east dipping contact between felsic rocks to the west, and mafic dominated rocks to the east. The combined mineralised zones extend over a strike length of approximately 1.4km and have been intersected by drilling to approximately 350m depth.</li> <li>The depth of complete oxidation averages around 4m with depth to fresh rock averaging around 21m.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>All relevant information material to the understanding of exploration results has been included within the body of the announcement or as appendices.</li> <li>No information has been excluded.</li> </ul>



Criteria	JORC Code explanation	Commentary
	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.	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No top-cuts have been applied.</li> <li>All reported RC and diamond drill assay results have been length weighted (arithmetic length weighting).</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All drill hole intercepts are measured in downhole metres, with true widths estimated to be about 60% of the down-hole width.</li> <li>The orientation of the drilling may introduce some sampling bias (positive of negative).</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Refer to Figures and Tables within the body of the text.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All results are reported, no lower cut-off or top-cuts have been applied.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>There is no other substantive exploration data.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Although not yet planned in detail, it is anticipated that further work will include infill and step out drilling. This work will be designed to improve confidence in, and test potential extensions to the current resource estimates.</li> </ul>

### Section 3 Estimate and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database Integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription of keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data Validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Geological data is stored centrally in a relational SQL database using Aveza software. Saturn Metals Limited employs a Contract Database Administrator who is responsible for the integrity of the data.</li> <li>All geological and field data is entered into excel spreadsheets using lookup tables, fixed formatting and validation rules, to promote data integrity and prevent errors within the database.</li> <li>Assay data is received from the laboratory as a direct export and imported into the SQL in its entirety without edits.</li> <li>The database is continually validated by Saturn employed geologists, who validate and audit the data.</li> <li>During the import of data within the Aveza database, a series of validation procedures occur. The database references established lookup tables and triggers validation procedures to ensure that data is valid before being uploaded into the relevant tables.</li> <li>A comparison of all data planned and what is in the database is made, to ensure all logging, collars, surveys, assays and collar pickups check against the actual collar locations.</li> <li>All data was checked visually in 3D to check all collar locations and surveys were correct.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person for the drillhole data, QAQC and geology has been to site frequently during 2018. The Competent Person for the Mineral Resource has not been to site yet, with a site visit still to be organized when appropriate.</li> <li>Surface geology was inspected, as well as drilling, logging, sampling and assaying.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The use of broader mineralisation envelopes for use in LMIK modelling of the main zone significantly improves the confidence in the interpretation of the deposit.</li> <li>The lithology contact between mafic and felsic rocks were interpreted and modelled based on simplified summary geology data provided.</li> <li>The interpretations are based on good quality core and RC drilling, good quality assay data, and satisfactory logging.</li> <li>On a local scale, the mineralisation is not highly structured. The veinlet type stockwork structures related to the mineralisation are not likely to be continuous relative to the scale of the drilling.</li> <li>Alteration and association with the Apollo Shear and mafic/felsic contact are</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>material but not limiting to the definition of mineralisation. Mineralisation occurs both along the shear and contact and within surrounding mafic and felsic host rock-types.</p> <ul style="list-style-type: none"> <li>On a broad scale, the mineralized zones are broad and relatively persistent along strike and down dip, but with erratic local grades and complex structure within the zones.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>Apollo Hill mineralisation has an approximate northwest-southeast strike length of 1.2 km, variable width of up to 200 m, and down dip extent of up to 700 m. Ra mineralisation has an approximate northwest-southeast strike length of 300 m, variable width of up to 25 m, and down dip extent of up to 200 m. Mineralisation extends to near-surface, truncated in some area by a thin layer of barren transported cover sediments. The mineralisation is not closed-off by the resource definition drilling either along strike or down-dip, although decreasing grade trend along strike at the current limits is observed</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Localized Multiple Indicator Kriging estimation was used to estimate a SMU scale model which is an appropriate technique for a gold deposit with highly variable grade, and uncertain continuity. It allows the estimation of the local metal distribution into mining blocks that can reasonably be mined.</li> <li>Data was domained according to deposit areas. Extents were strongly guided by geology and grades.</li> <li>Datamine Studio 3 and ISATIS 2017 were used for modelling, variography and estimation.</li> <li>Previous estimates exist and have been considered during modelling. The new model incorporates significant new infill drilling and some extension drilling.</li> <li>There was insufficient data to estimate any deleterious elements or by-products.</li> <li>There are two block sizes, the panel estimate used for the MIK estimate is 30 m by 30 m by 5 m and is based on the nominal drill fence spacing and one mining bench. The SMU block size into which the MIK estimate is localized is 7.5 m by 7.5 m by 5 m and is considered a reasonable SMU for the scale of the deposit and proposed medium scale open pit mining method.</li> <li>Estimation parameters and search parameters were selected to best estimate the model without creating undue conditional bias or regression effects. Parameters and estimation results were validated via appropriate check methods. Parameters are described in the report.</li> <li>The resource estimate was constrained within the modelled mineralisation envelopes for domains to limit extrapolation of grade.</li> <li>High grade cutting is not used directly for the MIK/LMIK estimation method.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>However, there are similar material decisions affecting the MIK/LMIK estimation process, such as:</p> <ul style="list-style-type: none"> <li>○ Values applied for the top indicator bin grades.</li> <li>○ Choice of variance adjustment factors utilized for the indirect lognormal change of support process.</li> <li>○ Choice of SMU dimension.</li> <li>○ Details are supplied in the context of this report.</li> </ul> <ul style="list-style-type: none"> <li>• Validation was completed using the comparison of the LMIK results to the theoretical grade tonnage curves derived from the global estimates (discrete Gaussian change of support model) as well as review of the MIK derived E-type means vs the panel OK estimate. Further validation using modified swath plots and visual review of grade mapping between the models and the drilling data was conducted.</li> <li>• Only gold was estimated.</li> <li>• No assumptions are made regarding recovery of by-products.</li> <li>• Previous estimates comprise a Mineral Resource reported for Apollo Hill in 2011, subsequently re-reported during the STN listing in early 2018.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages are estimated using dry bulk density values.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• The 2018 Mineral Resource estimates for Apollo Hill have been reported at a cut-off of 0.5 g/t Au for all material types, based on economic parameter checks and similar cut-offs for other projects with this style of mineralisation.</li> <li>• The project is at an early stage. No mining studies have been completed. It is probable that the cut-off grade may be revised in the future.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>• The mining method is assumed to be by open pit method, using medium scale equipment and excavators. Production rate is currently unspecified as the project is at an early exploration stage and no mining study has been completed.</li> <li>• Mining is assumed to be on 5 m benches with a minimum selective mining unit (SMU) dimension of 7.5 m by 7.5 m by 5 m based on RC grade control or similar. This is assumed based on other projects having a similar style of mineralisation.</li> <li>• Mineralisation is reported above those cut-offs and constrained above some varied RLs that represent some potential open pit limits based on limits of drilling and tenor of mineralisation as a proximate determination of reasonable prospects for eventual economic extraction until a mining study is completed.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No mining has been conducted at the project.</li> <li>Metallurgical assumptions for all material types are based on existing test-work that indicate high recoveries (93%) in a typical CIL processing scenario as advised by STN.</li> <li>Test-work is on-going.</li> <li>Further analytical work and modelling may be required to differentiate ore types.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No assumptions have been made regarding possible waste and process residue options. The project is at an early exploration stage and no mining studies have been completed.</li> <li>Typical open pit mining and CIL processing scenarios would require generation of waste dumps and tailings dams. There is potential that heap leaching may be a viable treatment option for some low-grade ore.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Dry bulk densities are based on 87 analyses of Apollo Hill core billets. It is possible that additional data will modify the averaged density values that were applied to the model as below.</li> <li>Bulk densities were determined using Archimedean methods on dried, unsealed core.</li> <li>STN concur that the following rounded density values are appropriate: <ul style="list-style-type: none"> <li>Oxide density=2.7 t/m<sup>3</sup></li> <li>Transitional density=2.9 t/m<sup>3</sup></li> <li>Fresh density=2.9 t/m<sup>3</sup></li> </ul> </li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The classification of the resource estimate is limited to a maximum classification of Indicated Mineral Resource. The classification considers:</li> <li>Use of good quality diamond core and RC data for data used in the resource estimate.</li> <li>The complex structural continuity of both geology and mineralisation, and consistency of grade data in all directions.</li> <li>Drillhole data spacing in all directions.</li> <li>Data quality, variability, and analytical data.</li> <li>Bulk density data and representivity for rock-types and the style of mineralisation.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Variography.</li> <li>Estimation statistics (number of samples used, distance to data, and estimation pass).</li> <li>Confidence in the interpretations.</li> <li>The use of average densities based on the oxidation divisions.</li> <li>Some areas of the deposit are moderately drilled for a gold deposit, but the mineralisation is not highly structured nor visual. Drilling fences are usually on 25 m to 50 m intervals with similar spaced drilling along the fences. There are gaps in the drilling in some key areas.</li> <li>The mineralisation interpretation to a limited distance past the bottom of drilling – usually no more than 50 m to 100 m. Most of the extrapolated areas tend to be left as unclassified in the models.</li> <li>The estimate has been classified as Indicated Resource in the core of the mineralisation demonstrating coherent zones of mineralisation with relatively close spaced drilling. The estimate is classified as Inferred Resource at the edges of the mineralisation.</li> <li>Background and waste portions of the model have not been classified.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has not been externally audited or reviewed.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource assumes that medium scale open cut mining methods will be applied.</li> <li>The Mineral Resource assumes an SMU dimension of 7.5 m by 7.5 m by 5 m.</li> <li>The LMIK SMU model is deemed appropriate for this style of deposit.</li> <li>Factors affecting the confidence and relative accuracy of the Resource are primarily: <ul style="list-style-type: none"> <li>Good quality drilling samples.</li> <li>Minor concerns over the extended history of the project regarding companies and drilling.</li> </ul> </li> <li>Need for improved geological and metallurgical understanding of the mineralisation. Geology and domains are likely to be more complex than assumed by the current resource model. The relation of the mineralisation to alteration and structural domains is considered potentially significant.</li> <li>Increased drilling density will vary model results in local areas. Additional infill drilling is warranted in most areas. Some close spaced drilling and deliberate twinning of holes would be beneficial to improve understanding of the short-range variability of the mineralisation.</li> <li>The data appears to have a relatively high nugget variance (60% to 65% for the gold variograms) which correlates with the erratic nature of the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>mineralisation and possible precision issues associated with repeat or duplicate samples.</p> <ul style="list-style-type: none"> <li>• Accuracy of averaged bulk density data and porosity/moisture assumptions. Mineralisation and lithology may prove to be more variable than the current scale of drilling and limited density data suggest.</li> <li>• The variance adjustment factor applied for the LMIK SMU model may vary in future estimates according to the amount of data available within the domains being modelled.</li> <li>• Cut-off grades may vary in future according to mining studies.</li> <li>• There has been no statistical or geostatistical determination of relative accuracy or confidence due to the non-stationarity of the data and moderate quality variography in some directions.</li> <li>• The resource classification is considered reasonable based on visual and graphical review of the estimates.</li> <li>• The mineralized area is drilled at a semi-regular spacing and while local variance to the estimate may occur, there is a moderate-to-high degree of confidence in the overall estimate.</li> <li>• The primary mineralized zones are moderately-defined by drilling, constrained to an interpretation that reflects the broad geological control on grade, and appropriately estimated.</li> </ul>

