

1 September 2016

## INFERRED RESOURCE INFILL DRILLING RESULTS

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Hillgrove Resources Limited (ASX:HGO) advises that the Company has completed ten RC drill holes within the Giant Pit area to infill gaps in the drill hole coverage identified by the 2016 Mineral Resource Estimate. These drilling gaps have resulted in the mineralisation being categorised as Inferred. In the December quarter, a revised Mineral Resource Estimate and Ore Reserve Estimate will be prepared to incorporate the drilling results. Highlights of the drilling include <sup>1</sup>;

- KTRC1004: 53m @ 0.8% Cu, 3g/t Ag from 1m
- KTRC1005: 91m @ 0.5% Cu, 2g/t Ag from 59m including;  
8m at 2.3%Cu, 4ppm Ag from 70m
- KTRC1008:; 45m @ 1.4% Cu, 2 g/t Ag from 18m including;  
14m at 2.6%Cu, 4ppm Ag from 48m
- KTRC1010; 72m @ 0.7% Cu, 2g/t Ag, from 55m including;  
8m at 2.2%Cu, 3.6ppm Ag from 68m

### Geology

The Kanmantoo copper operation is located approximately 55km east-south-east of Adelaide, South Australia on Mining Lease 6345 held 100% by Hillgrove. The mine site is fully permitted and has been operational since 2011.

Copper mineralisation at Kanmantoo typically occurs as a complex system of structurally and stratigraphically controlled veins, disseminations and sigmoidal bodies within an intense quartz, biotite, chlorite, garnet and +/- magnetite alteration zone. The central portion of the Giant Pit exhibits strong spatial continuity and intense alteration and mineralisation over broad widths. However, as the alteration intensity weakens with distance from the epicentre, the mineralisation becomes more discontinuous with multiple small layers/zones of intense mineralisation within broad zones of very weak alteration. Primary mineralisation is characterised by coarse grained chalcopyrite, pyrrhotite, pyrite, and minor native gold and native bismuth.

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<sup>1</sup> All distances are downhole, true width is unknown. Primary intersection is calculated as  $\geq 4\text{m downhole} > 0.2\% \text{ Cu}$ , the higher grade intercept is calculated as  $\geq 4\text{m downhole} > 0.8\% \text{ Cu}$

The Mineral Resource Estimate released on 26 May 2016 identified significant areas along the western side of the Giant Pit that were not well drilled by the Company due to the pre-existing 1970's open pit. These areas include both the Central Kavanagh and West Kavanagh mineralised zones. Figure 1 shows the Company's past drilling in blue and the location of the 2016 RC drill holes of this report within the Central and West Kavanagh mineralised zones.

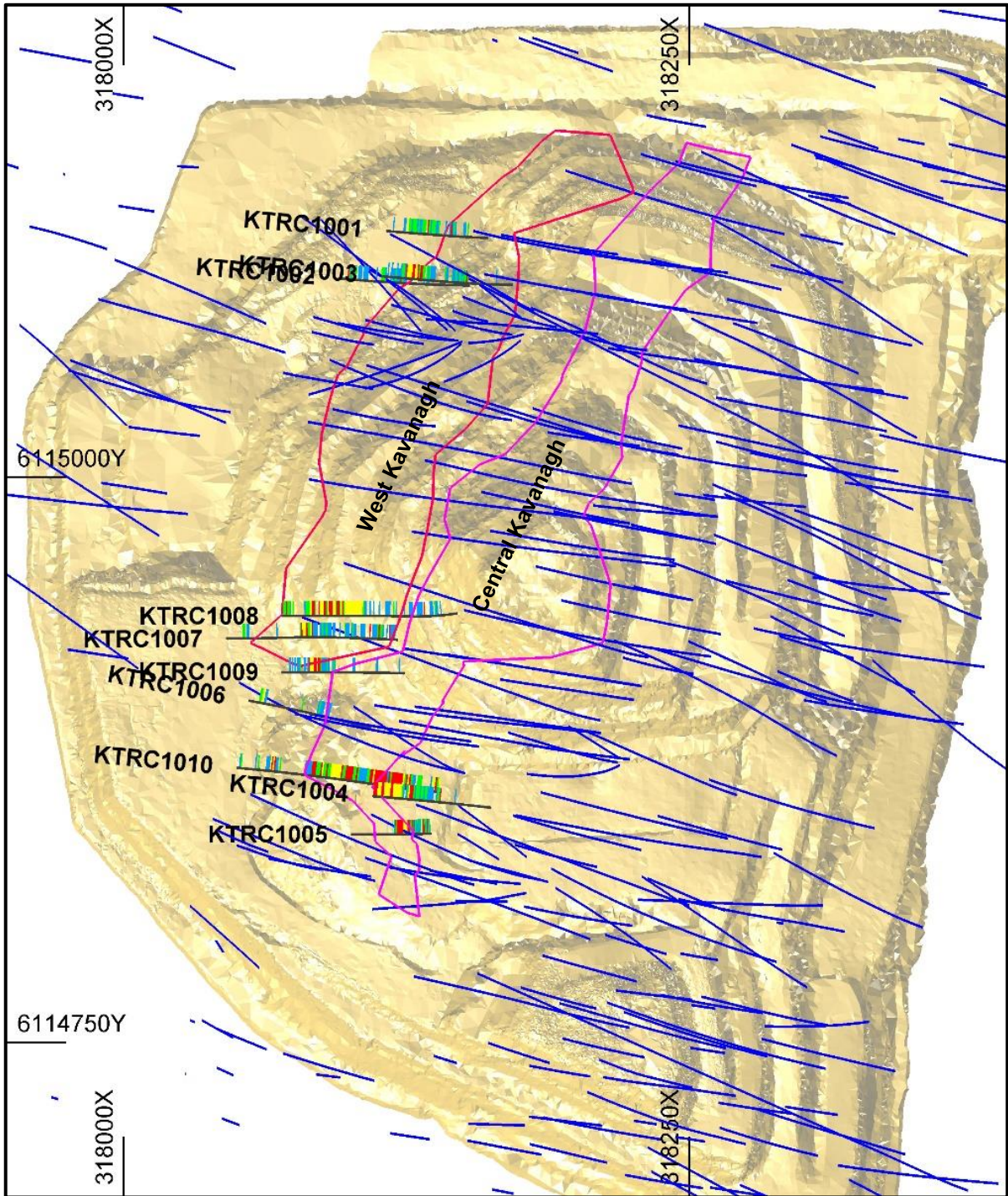
Figures 2 to 4 show cross sections through the new 2016 RC drilling in the areas of low drill density. It is clear that the 2016 RC drilling has identified additional mineralisation not previously intersected by the Company which will now be able to inform new areas of the Mineral Resource Estimate.

The drilling results are tabulated in Table 1 based on 0.2% Cu cut-off grade. Table 2 provides the drilling details.

**Table 1 RC Drill Intercepts**

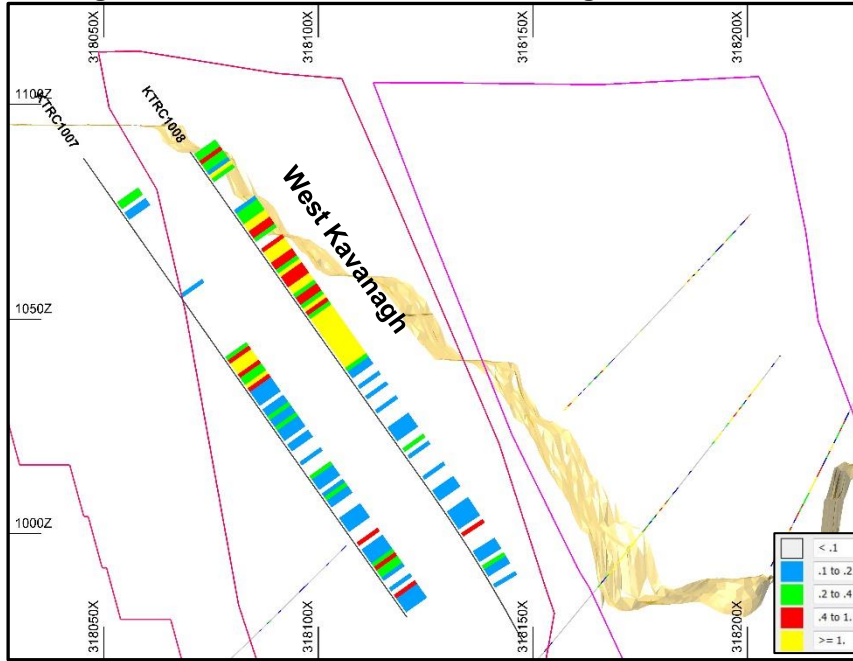
Area	HoleId	Minimum 4m > 0.2% Cu				
		From	To	Down Hole Length	Cu%	Ag ppm
NW Giant	KTRC1001	16	40	24	0.3	1.8
NW Giant	KTRC1002	88	101	13	0.2	1
NW Giant	KTRC1003	16	38	22	0.66	1.3
Kavanagh Central	KTRC1004	1	54	53	0.75	2.9
Kavanagh Central	KTRC1005	59	150	91	0.53	1.6
Kavanagh West	KTRC1006	8	12	4	1.37	4.6
Kavanagh West	KTRC1007	56	67	10	0.97	2.3
Kavanagh West	KTRC1007	116	120	4	0.32	1.5
Kavanagh West	KTRC1008	1	9	8	0.48	0.7
Kavanagh West	KTRC1008	18	63	45	1.43	2.4
Kavanagh West	KTRC1009	21	31	10	1.05	3
Kavanagh Central	KTRC1010	25	33	8	0.56	1.8
Kavanagh Central	KTRC1010	55	127	72	0.69	1.5
Kavanagh Central	KTRC1010	133	138	5	1.36	3.7

Figure 1 Plan of the Giant Pit showing the location of the 2016 RC drill holes

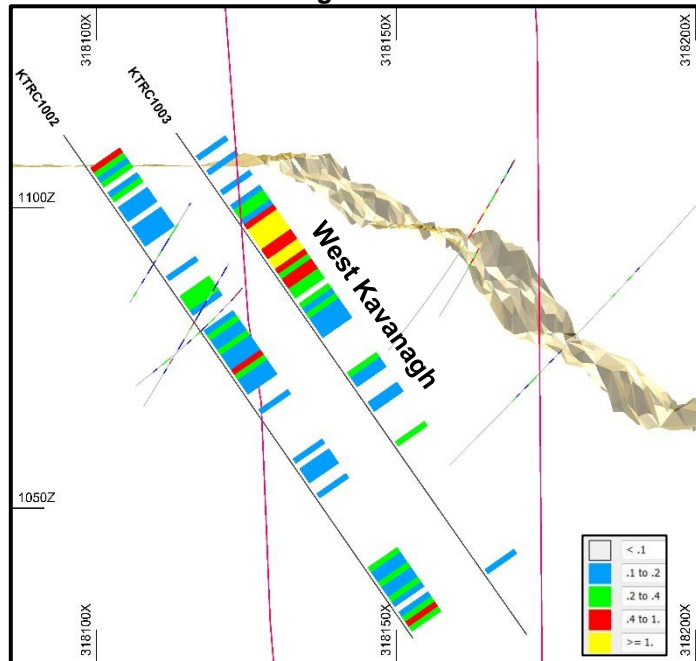




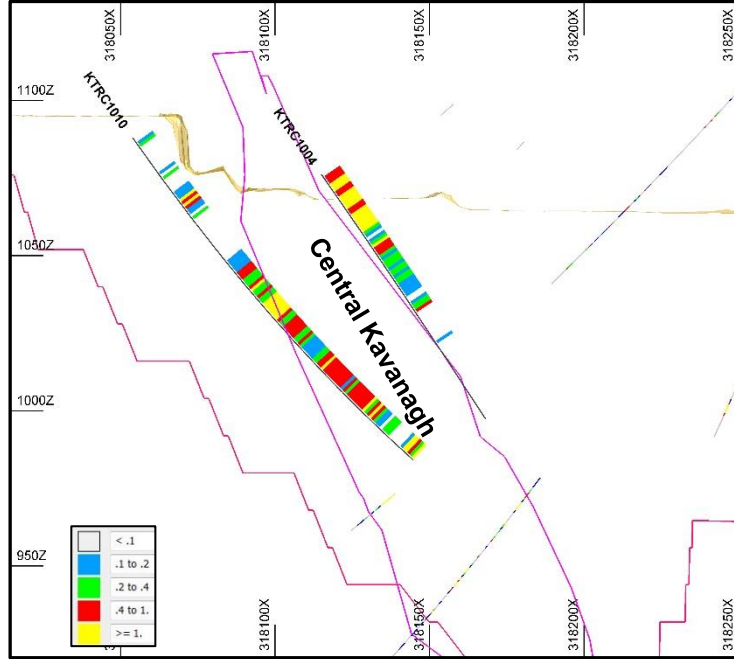
**Figure 2 RC holes in West Kavanagh mineralisation**



**Figure 3 RC holes in Kavanagh mineralisation in North-West Giant Pit**



**Figure 4 Cross section of new RC holes in Central Kavanagh**



**Table 2 Drilling co-ordinates and collar survey data<sup>2</sup>**

HoleId	East	North	Elev	Total Depth	Azimuth (True)	Dip
KTRC1001	318116.0	6115109.0	1111.8	75	95	-55
KTRC1002	318094.9	6115088.0	1112.1	102	95	-55
KTRC1003	318113.7	6115089.0	1112.5	102	95	-55
KTRC1004	318109.7	6114859.0	1076.2	95	95	-55
KTRC1005	318100.4	6114842.0	1076.1	150	90	-70
KTRC1006	318055.1	6114901.3	1087.8	96	100	-55
KTRC1007	318045.2	6114928.7	1087.6	132	90	-55
KTRC1008	318070.0	6114938.7	1089.0	138	90	-55
KTRC1009	318069.8	6114913.8	1088.2	96	90	-55
KTRC1010	318049.8	6114871.5	1088.1	138	95	-55

<sup>2</sup> MGA 94 Zone 54 with 1000m added to ASL for elevation

## **ABOUT HILLGROVE**

Hillgrove is an Australian mining company listed on the Australian Securities Exchange (ASX: HGO) focused on the operation of the Kanmantoo Copper Mine in South Australia, and with exploration projects on its Indonesian tenements. The Kanmantoo Copper Mine is located less than 55 kilometres from Adelaide in South Australia. With construction completed in late 2011, Kanmantoo is an open-cut mine with a throughput of 3.0 - 3.5Mt p.a., to produce up to 100,000 dry metric tonnes of copper concentrate per annum, containing approximately 20,000t copper and associated gold and silver per annum over the current life of mine.

### **Competent Person's Statement**

The information in this release that relates to the Exploration Results and to the 2016 Mineral Resource is based upon information compiled by Mr Peter Rolley, who is a Member of The Australian Institute of Geoscientists. Mr Rolley is a full-time employee of Hillgrove Resources Limited and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration 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 (JORC Code)'. Mr Rolley has consented to the inclusion in the release of the matters based on their information in the form and context in which it appears.

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## APPENDIX A – JORC Table 1

## Section 1 Sampling Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Reverse circulation (RC) samples collected by Hillgrove Resources personnel have been used for the geological interpretation and estimation.</li> <li>2016 RC Drill hole sampling was conducted as per the Hillgrove Resources procedures and QAQC protocols. <ul style="list-style-type: none"> <li>1m bulk samples were collected during drilling with smaller split samples (2-3kg) for assay being collected using a riffle splitter directly off the rig.</li> <li>Samples were prepared by ALS Adelaide with each sample being pulverised to &gt;85% passing &lt;75µm and then shipped to ALS Perth for assay.</li> </ul> </li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>RC drilling undertaken by external RC drilling contractor with a 5 ¼ inch RC face sample bit hammer.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Every RC sample was weighed and variations in sample recovery immediately reported to the driller. There were no wet samples. On average sample recovery was &gt;80%. There is no correlation between sample recovery and copper grades in this RC drill program.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>All RC chips were logged for lithology, alteration, weathering and mineralisation by Hillgrove Geologists in accordance with Hillgrove's Core Logging Procedure. Colour and any additional qualitative comments were also recorded.</li> <li>All RC chip trays were photographed before sampling and these photographs are stored on the Hillgrove server.</li> <li>RC chip trays area stored on site in a core yard facility.</li> <li>All geological logging is recorded in the field manually using a paper-based system and then manually entered into Excel spread sheet templates and visually validated before being imported into the Hillgrove drill hole database. Additional validation is conducted automatically on import.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<p>RC holes</p> <ul style="list-style-type: none"> <li>Sub-sampling as described in the "<i>Sampling Techniques</i>" section above.</li> <li>Field Duplicates were collected via manual splitting of the bulk sample with a riffle splitter. Analysis of the field duplicate results indicates that this method of duplicate sample collection is satisfactory.</li> <li>Hillgrove have detailed sampling and QAQC procedures in place to ensure sample collection is carried out to maximise representivity of the samples and minimise contamination.</li> </ul>

Criteria	Commentary
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• All samples were submitted to ALS for analysis. Cu, Ag, Bi, S analysed via a 4-acid digest with determination by Atomic Emission Spectrometry (AES). If the copper result was greater than 1%, the analysis was repeated using a slightly modified mixed acid digestion technique.</li> <li>• The QAQC of sample preparation and analysis processes were via the following samples:               <ul style="list-style-type: none"> <li>• Certified reference materials (CRMS) inserted into the sample sequence at a frequency of one in 20.</li> <li>• Field duplicates inserted at a rate of one in every 20 samples.</li> <li>• Blanks inserted at a rate of one in every 20 samples.</li> <li>• Laboratory QAQC samples were inserted with a minimum of two standards and one blank for every batch of 40 samples.</li> </ul> </li> <li>• Hillgrove’s Quality policy is that at a minimum of 5% of all samples are CRM’s, 5% of samples submitted are blanks and 5% of samples submitted are field duplicates thus ensuring that as a minimum, 15% of all samples submitted for analysis are QAQC samples.</li> <li>• Results from all returned QAQC samples provide reasonable confidence as to the accuracy of the assay results used in the estimation. Field duplicates show a good correlation with original sample results and the CRM results all fall within the expected ranges.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• Primary sample data is captured in the field onto paper templates and then entered electronically into Excel templates and stored on the Hillgrove server. The Excel templates were then imported into the SQL database using data entry procedures and database import tools. Data was visually checked by the Geologist prior to import and additional validation was carried out by the database upon import.</li> <li>• Copper results were reported in ppm units from the laboratories and then converted to a % value within the database.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• The map projection of Map Grid of Australia 1994 - Zone 54, (MGA94-54) was used all work undertaken for this drilling.</li> <li>• Within the database the relative level (RL) has been calculated as RL+1000m to ensure no negative RL values within the dataset.</li> <li>• The Kanmantoo Mine area and immediate surrounds have +/-20mm accuracy as this area is updated by the Hillgrove Surveyors regularly using a DGPS (Trimble R8 GNSS Model 3 using kinematic option).</li> <li>• All drill hole collars surveyed using DGPS (Trimble R8 GNSS Model 3 - kinematic option) by onsite Hillgrove Surveyors. The accuracy of this instrument is 10mm in the horizontal plane and 20mm in the vertical. All pick-ups were reported in MGA94-54 coordinate system.</li> <li>• Downhole surveys were determined using a Digital downhole camera at 48m intervals. All holes repeat surveyed for verification.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• The variable drill spacing is dictated by drill site access during the continuing open pit mining operations. Drill holes are approximately 20m apart in North and easting in two geographic areas – NW and SW Giant pit. See Figure 1 in body of this ASX release.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• The majority of holes are angled drill holes, dipping at -55° towards 090deg (true). This is not ideal as the mineralisation also dips steeply to the east, however drilling access is limited by existing pit operations. Therefore the intersections are oblique to true widths and not representative intersections of lithology and mineralisation.</li> </ul>



Criteria	Commentary
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• RC samples – A Hillgrove employee is present for the collection of samples off the rig and is also responsible for collecting and organising the samples ready for assay. Hillgrove has a detailed sample collection/submission procedure in place to ensure sample security.</li> <li>• Assay samples are collected from the rig at the end of each day by Hillgrove Field Technicians, sealed in large plastic bags and placed at the Mine office ready for pick up by courier. Check sheets detailing all samples for a specific batch are generated prior to the samples leaving site.</li> <li>• Sample transport is by dedicated road transport to the Adelaide sample preparation facility. All samples are transported in sealed plastic bags and are accompanied by (either paper form or by email) a detailed sample submission form generated by the Field Technician.</li> <li>• On receiving a batch of samples, the receiving laboratory checks received samples against a sample dispatch sheet supplied by Hillgrove personnel. On completion of this check a sample reconciliation report is provided for each batch received.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• There has not been an external review of this RC drilling program. Previous audits of the Hillgrove sampling methods were reviewed by independent consultant in 2008 and were considered to be of a very high standard.</li> </ul>

**Section 2 Reporting of Exploration Results**

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>The Kanmantoo Copper Deposit is situated 55kms south-east of Adelaide on Mining Lease (ML) 6345 and is owned 100% by Hillgrove Resources Limited (HGO).</li> <li>The Mining Lease overlies freehold land also held by Hillgrove Resources.</li> <li>There are no Native Title interests, nor are there any historical or environmental issues considered material to this Mineral Resource.</li> <li>All drilling in this release is within the Mining lease and within the currently operating Giant Pit.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Previous exploration has been summarised in the 26 May 2016 ASX release by Hillgrove</li> <li>Hillgrove Resources commenced exploration drilling in 2004 and since then have completed a number of exploration drill campaigns which have resulted in extensions and additions to the known deposit. Pre-strip and near surface mining commenced in early 2011 and the commissioning of the processing plant was completed in November of the same year. Open pit mining is continuing.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Mineralisation occurs as a complex system of structurally controlled veins, with mineralisation typically forming pipe-like bodies and lenses of chalcopyrite, pyrrhotite, pyrite, magnetite, chalcocite and bornite within a quartz + biotite + andalusite ± garnet ± chlorite schist host rock. Structural studies suggest the main controls on the mineralisation are north-south striking shear zones and north-north-east/north-east striking cross-shears and tension veins.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>Drill collars, surveys, intercepts are reported in the body of this release.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>Intercepts tabulated in the body of the report are amalgamated over a minimum down hole length of 4m &gt; 0.2% Cu with a maximum of 4m internal dilution &lt; 0.2% Cu. Two assays were cut to 6% Cu before amalgamating for the intercept calculation.</li> <li>No metal equivalent values have been reported.</li> </ul>
<i>Mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>Table of mineralised intercepts is reported in the body of this release.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Diagrams that are relevant to this release have been included in the body of the release.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>All drill holes completed in 2016 have been reported.</li> </ul>
<i>Other exploration data</i>	<ul style="list-style-type: none"> <li>Previous exploration drilling within the Giant Pit has been reported in the ASX release of 26 May 2016.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>These drill hole results will be incorporated into the Company's drill hole database for inclusion in the next update of the Mineral Resource for the Giant Pit.</li> </ul>