

## ASX ANNOUNCEMENT

Date: 4 August 2017

Number: 531/040817

### **THICK WIDTHS OF VISIBLE SILVER AND BASE METAL VEINS IN THE FIRST TWO DIAMOND HOLES AT SILICA HILL; ASSAYS FOR GOLD AND ALL METALS PENDING**

- **116 metre thick zone of veins in Hole 63: upper silver rich zone and lower base metal and silver rich zone.**
- **Represent first indications of the anticipated high grade “feeder zones” to the Silica Hill system that may extend for up to one kilometre to the north east.**
- **90 metre thick zone of veins in Hole 61: upper silver rich zone and lower molybdenum zone.**
- **True width estimated to be at least 40 metres thick.**
- **All indications of mineralisation are either visual or by handheld XRF.**
- **Gold and all other assays expected in three to five weeks.**

The first two follow up diamond drill holes at Impact Minerals Limited (ASX:IPT) emerging high grade gold-silver discovery at the Silica Hill Prospect, part of the company’s 100% owned Commonwealth Project 100 km north of Orange in New South Wales, have returned thick widths of stockwork and narrow veins spaced 30 cm to 50 cm apart that contain extensive visible silver minerals and zinc, lead and copper sulphides.

Investors should note that the nature and extent of these minerals have been estimated visually and with a hand held XRF instrument. The XRF instrument is not capable of detecting gold however previous results indicate that gold is likely to be present in places. Assays are expected in 3 to 5 weeks.

Hole CMIPT063 tested a modest north east extension of the mineralised zone and returned a 116 metre thick zone of veins from 57 metres down hole comprising a lower 70 metre thick zone of silver and base metal-rich veins and an upper 40 metre thick zone of silver-rich veins.

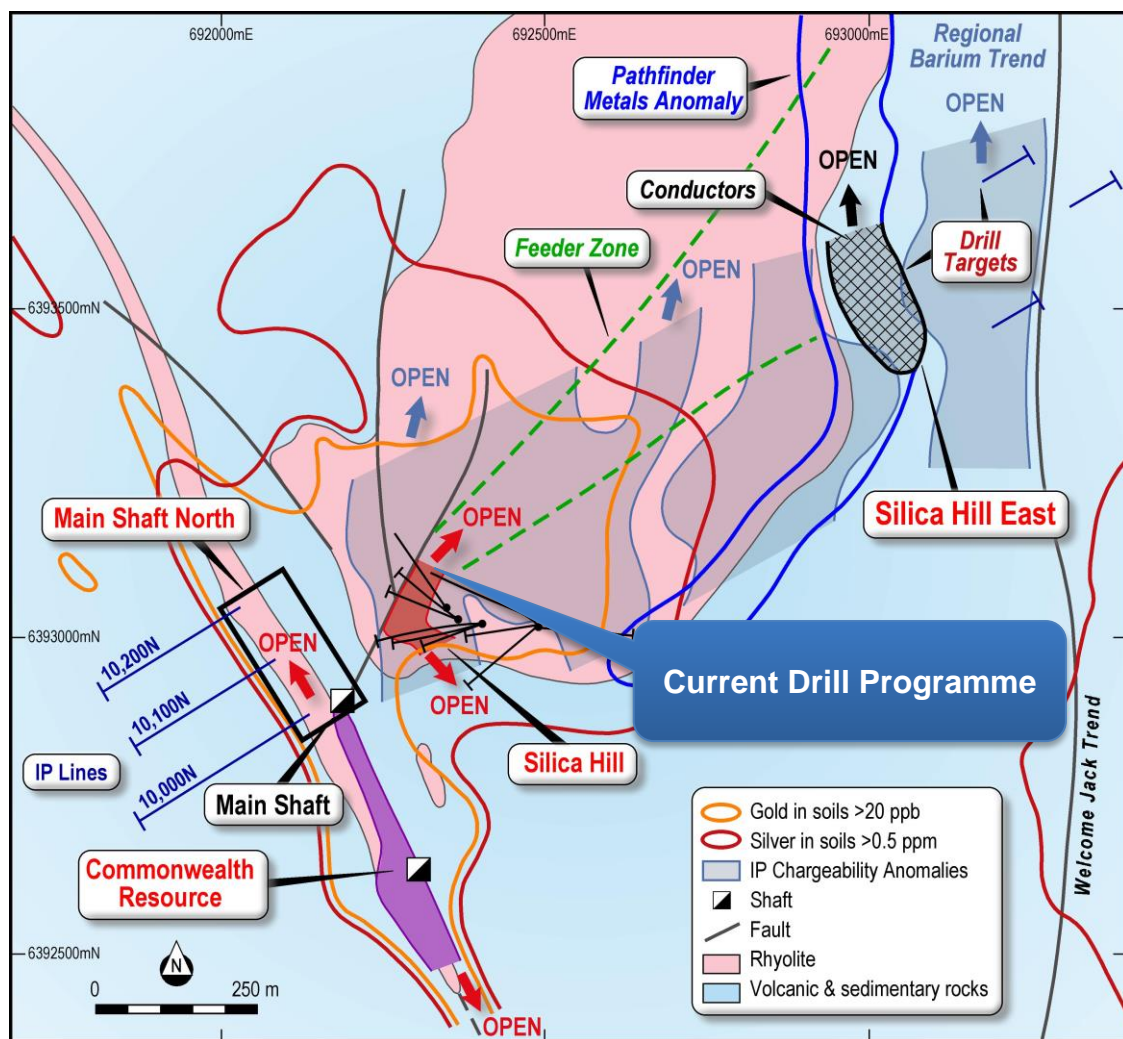


**Figure 1.** High grade “feeder vein” at 114.5 metres depth in Hole 63 containing exceptional silver grades and high grade zinc, lead and copper with accessory molybdenum, antimony, tin and bismuth.

The lower zone comprises veins of zinc, lead and copper sulphides that are up to a few centimetres thick and spaced every 50 cm to 1 metre down hole. There are thicker veins up to 20 cm thick in places (Figure 1).

These veins, although narrow, contain high grades of zinc and lead (up to 20%), good grades of copper (up to 2%) and very high to exceptional grades of silver (commonly in the hundreds of grams and up to 7,000 g/t silver). Accessory metals such as molybdenum, antimony, tin, bismuth and arsenic are also present in measurable amounts.

The nature of the veins and the unique metal assemblage are interpreted to be characteristic of the edges of a high grade “feeder zone” to the large mineralised system at Silica Hill. This is the first indication of this type of feeder vein at Silica Hill and which were postulated to be present in a previous announcement by Impact (ASX announcement [6 June 2017](#)). The feeder zone is interpreted to possibly extend for a further 1,000 metres to the north east (Figure 2).

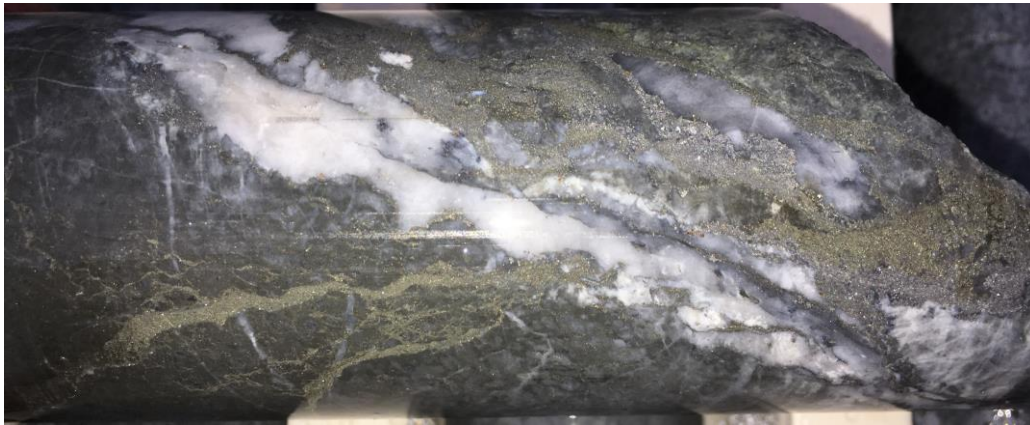


**Figure 2.** Overview of the Commonwealth-Silica Hill area showing interpreted feeder zone in green.

Such feeder zones occur within **gold-rich volcanogenic massive sulphide deposits (gold-rich VMS)**, a class of deposit only recognised within the past 20 years and which the Commonwealth-Silica Hill mineralisation is interpreted to belong to.

The type-deposit of the gold-rich VMS systems is the well known Eskay Creek deposit in British Columbia, Canada which was mined mostly during the early 2000's and contained over 4 million ounces of gold and 180 million ounces of silver in numerous very gold and silver-rich ore shoots over a vertical extent of at least 700 metres (see ASX announcement [9 May 2017](#)).

The upper silver rich zone in Hole CMIPT063 comprises veins of pyrite-arsenopyrite sulphide up to 5 cm thick that occur individually or as stockworks of veins in zones up to 25 cm thick and spaced every 30 cm or so down hole (Figure 3). The veins commonly contain high grades of up to 600 g/t silver.



**Figure 3.** Quartz-pyrite-arsenopyrite-silver vein and stockwork from 77 m depth in Hole 63.

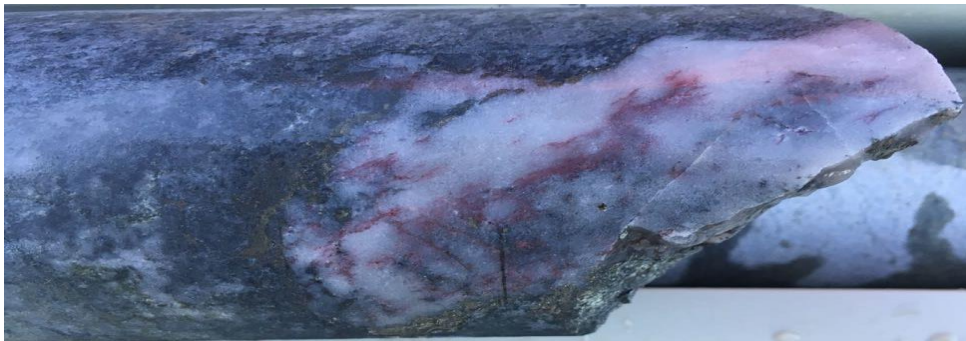
In addition the wallrock is mineralised in a few places and is “flooded “ with so called “ruby silver” minerals (proustite and pyrargyrite) which have exceptionally high grades of silver of in excess of 10,000 g/t silver (Figure 4). Native silver may also be present (and as seen in previous drill holes).



**Figure 4.** Extensive “christmas tree” of ruby silver minerals adjacent to sulphide vein.

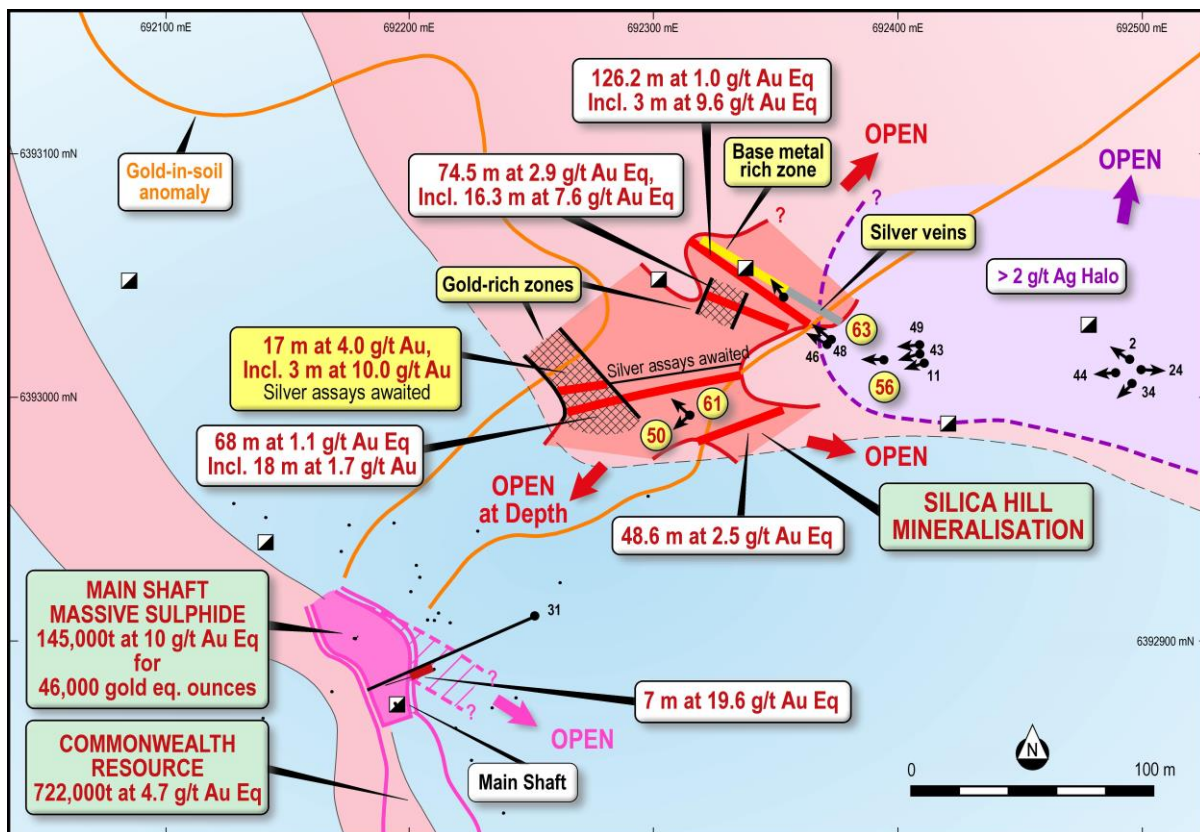
Diamond drill hole CMIPT061 was drilled to test the north west extension of mineralisation and has intersected a 90 metre thick zone comprising an upper 30 metre thick zone of silver rich veins and a lower 60 metre thick zone of 50 ppm to 200 ppm molybdenum that occurs in narrow fractures and as fine grained disseminations in the rhyolite host rock.

The upper silver rich quartz veins also contain visible ruby silver minerals in places (Figure 5).



**Figure 5.** Quartz-ruby silver vein with pyrite and arsenopyrite from 55 m depth in Hole 61.

The location of Holes 61 and 63 are shown in Figure 6 and demonstrate the emerging discovery at Silica Hill. A further diamond drill hole is in progress to further test the north eastern extension of the mineralisation.



**Figure 6.** Drill hole location Plan, Silica Hill Prospect.

## Progress of Drill Programme

In addition to the diamond drill rig, a small track mounted RC drill rig was also in use. However the rig failed to perform to standard with significant deviations encountered in the drilling direction and accordingly the operator has been dismissed.

The intricate stockwork nature of the vein systems at Silica Hill have many different orientations. This dictates that the majority of the follow up drill programme will require diamond drilling in order to accurately map out this unique and exciting mineral system and to define a resource.

A resource drill-out at Silica Hill has the potential to significantly expand the high grade gold-silver-zinc-lead-copper resources already defined at the Commonwealth Project which stand at an Inferred Resource of **720,000 tonnes at 2.8 g/t gold, 48 g/t silver, 1.5% zinc and 0.6% lead** (4.5 g/t gold equivalent for 110,000 gold equivalent ounces).

Within this resource is a massive sulphide lens about 50 metres by 50 metres by about 8 metres thick in size which has an Inferred Resource of 145,000 tonnes at 4.5 g/t gold, 4.8% zinc, 1.7% lead and 0.2% copper (10 g/t gold equivalent for 47,000 gold equivalent ounces; Figures 2 and 6 and see announcement [19 February 2015](#)).

## Dr Michael G Jones Managing Director

*The review of exploration activities and results contained in this report is based on information compiled by Dr Mike Jones, a Member of the Australian Institute of Geoscientists. He is a director of the company and works for Impact Minerals Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Dr Jones has consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*Impact Minerals confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcements referred to and in the case of mineral resource estimates, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The relevant announcements for this report are listed below and also contain the relevant Table outlining the JORC requirements.*

Silica Hill and Commonwealth continue to expand [22 February 2017](#).

Drilling commences at Silica Hill gold-silver discovery near Orange in NSW [5 December 2016](#).

Maiden High Grade Resource at Commonwealth [19 February 2015](#).

## APPENDIX 1 - SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><i>Nature and quality of sampling (e.g. 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></p>	<p><b>Rock chip samples</b> Random grab samples were taken at surface which represented favourable geology and alteration to known mineralisation in the region. Samples are variably weathered.</p> <p><b>Soil Samples</b> About 250g of soil was taken from 15-20cm below surface and sieved to - 2mm size. Samples put in plastic snap seal bags. Samples were subsequently sieved to -250 micron at SGS Laboratories for assay by aqua regia digest.</p> <p><b>RC Drilling</b> Reverse Circulation (RC) percussion drilling was used to produce a 1m bulk sample (~25kg) which was collected in plastic bags and representative 1m split samples (12.5%, or nominally 3kg) were collected using a riffle splitter and placed in a calico bag. The cyclone was cleaned out with compressed air at the end of each hole and periodically during the drilling. Holes were drilled to optimally intercept interpreted mineralised zones.</p> <p><b>Diamond Drilling</b> Diamond drilling was used to produce drill core either with a diameter of 63.5 mm (HQ) or 47.6 mm (NQ).</p>
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i></p>	<p><b>Rock chip samples</b> Representative samples at each sample site weigh between 0.8 and 1.2 kg. Sample sites were chosen due to historic rock and soil assay results and the geophysical surveys conducted on the Commonwealth Project. Historic rock sample methods are unknown but are considered immaterial.</p> <p><b>Soil Samples and Drill Samples</b> Sample representivity was ensured by a combination of Company Procedures regarding quality control (QC) and quality assurance / testing (QA). Examples of QC include (but are not limited to), daily workplace and equipment inspections, as well as drilling and sampling procedures. Examples of QA include (but are not limited to) collection of “field duplicates”, the use of certified standards and blank samples approximately every 50 samples</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information</i></p>	<p><b>Rock chip samples</b> Rock samples were sent to SGS Perth where they were crushed, dried and pulverised (total prep) to produce a 25-30 g sub-samples for analysis initially by Aqua Regia digest with ICP-MS finish for base metals then by four acid digest with an ICP/AES finish for ore grade base metal samples and lead collection fire assay with AAS finish for gold.</p> <p><b>Soil Samples</b> Soil samples were sent to ACME Laboratories in Vancouver for analysis by aqua regia digest or to SGS Laboratories in Perth for analysis by the MMI digest.</p> <p><b>RC and diamond drill samples</b> RC samples and cut samples of core were submitted to ALS in Orange, NSW. Laboratory sample preparation involved: sample crushed to 70% less than 2mm, riffle/rotary split off 1 kg, pulverise split to &gt;85% passing 75 microns. RC samples analysed by MEICP41 or MEOG46 for ore grade samples, aqua regia digest with ICP OES analysis and AA24 fire assay with AAS finish. Historical diamond and RC samples were sent to Fox Anamet, Brookvale NSW where gold was determined by fire assay, base metals by DCP and AAS methods. Weathered samples contained gossanous sulphide material and fresh samples containing visible pyrite, galena, sphalerite and chalcopyrite.</p>
<b>Drilling techniques</b>	<p><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).</i></p>	<p>Diamond drilling accounts for about 50 % of the drilling and comprises NQ (47.6 mm diameter) and HQ (63.5 mm diameter) sized core. Impact diamond core is triple tube and is oriented. Historical diamond core was not oriented. RC drilling accounts for about 50% of the drilling and comprises 4 inch hammer.</p>
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed</i></p> <hr/> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i></p> <hr/> <p><i>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.</i></p>	<p>Diamond core recoveries for all holes are logged and recorded. Recoveries are estimated to be approximately &gt;97% for the Commonwealth Project. No significant core loss or sample recovery problems are observed in the drill core or historic reports. RC samples were visually checked for recovery, moisture and contamination.</p> <hr/> <p>Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the driller. The RC samples are collected by plastic bag directly from the rig-mounted cyclone and laid directly on the ground in rows of 10. The drill cyclone and sample buckets are cleaned between rod-changes and after each hole to minimise down-hole and/or cross contamination.</p> <hr/> <p>No sample bias has been established.</p>
<b>Logging</b>	<p><i>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.</i></p>	<p>Geological logging of samples followed company and industry common practice. Qualitative logging of samples included (but not limited to); lithology, mineralogy, alteration, veining and weathering. Diamond core logging included additional fields such as structure and geotechnical parameters. Magnetic Susceptibility measurements were taken for each 1m RC sample and each 1m diamond core interval. For diamond core, information on structure type, dip, dip direction, texture, shape and fill material has been recorded in the logs. RQD data has been recorded on selected diamond holes. Handheld XRF analysis was completed at 50 cm and 1 m intervals on diamond core and for every metre for RC samples.</p>

Criteria	JORC Code explanation	Commentary
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	All logging is quantitative, based on visual field estimates. Systematic photography of the diamond core in the wet and dry form was completed. Chip trays with representative 1m RC samples were collected and photographed then stored for future reference.
	<i>The total length and percentage of the relevant intersections logged</i>	All diamond drill holes were logged in full. All RC chips samples were geologically logged by Impact's on-site geologist on a 1m basis, with digital capture in the field. Detailed diamond core logging, with digital capture was conducted for 100% of the core by Impact's on-site geologist.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	All core samples were sampled by half core. Selected intervals of quarter core will be selected for check assays if required.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	RC samples were split using a riffle splitter.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Company procedures were followed to ensure sub-sampling adequacy and consistency. These included (but were not limited to), daily work place inspections of sampling equipment and practices, as well as sub-sample duplicates ("field duplicates").
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Laboratory QC procedures for rock sample assays involve the use of internal certified reference material as assay standards, along with blanks, duplicates and replicates. The QC procedure for historical diamond and RC samples is unknown but considered immaterial.
	<i>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.</i>	Sample duplicates from the historical drilling were taken from selected intervals and compared to the original assay. Quarter core was taken for diamond samples and riffle resplits for RC samples.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The samples sizes at Commonwealth are considered appropriate since gold has been identified as predominantly fine-grained by thin section analysis which would indicate the nugget effect is minimal.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	An industry standard fire assay technique for samples using lead collection with an Atomic Absorption Spectrometry (AAS) finish was used for gold and aqua regia digest for base metals and silver. The quality of historical drill sample assays is unknown, however this is considered immaterial at this stage of exploration.
	<i>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.</i>	No geophysical tools were used to determine material element concentrations. A handheld XRF was used for qualitative analysis only.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	For the rock chips, quality control procedures for assays were followed via internal laboratory protocols. Accuracy and precision are within acceptable limits. The quality control of historical drill sample assays is unknown, however this is considered immaterial at this stage of exploration.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Significant intersections from drilling have not been verified by independent or alternative companies. This is not required at this stage of exploration.

## Excellence in Exploration

Criteria	JORC Code explanation	Commentary
	<i>The use of twinned holes.</i>	Two twin diamond holes versus historic RC holes have been drilled at Commonwealth South and Main Shaft.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary assay data for rock chips has been entered into standard Excel templates for plotting in Mapinfo and Target. All historical drill data has been entered digitally by previous explorers and verified internally by Impact.
	<i>Discuss any adjustment to assay data.</i>	No significant adjustments have been required.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Recent drill holes have been located by DGPS. Historical drill holes and mine shafts have been verified by DGPS.
	<i>Specification of the grid system used.</i>	The grid system for Commonwealth is MGA_GDA94, Zone 55.
	<i>Quality and adequacy of topographic control.</i>	Standard government topographic maps have been used for topographic validation. The DGPS is considered sufficiently accurate for elevation data. For the diamond holes, down-hole single shot surveys were conducted by the drilling contractor. Surveys were conducted at 6m, 18, 30m and then approximately every 30m down-hole. For the RC drill holes, downhole dip surveys were taken at approximately 30m intervals and at the bottom of the hole.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Drill spacing of drill holes ranges between 10 and 30 m which is considered adequate for Exploration Results.
	<i>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.</i>	Drill spacing of drill holes ranges between 10 and 50 m and may be considered adequate for Mineral Resource and Ore reserve estimation procedures. However estimations of grade and tonnes have not yet been made.
	<i>Whether sample compositing has been applied.</i>	Sample compositing has been applied for quoting drill composite results only.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Drilling is oriented sub-perpendicular to the mineralised trend and stratigraphic contacts as determined by field data and cross section interpretation.
	<i>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.</i>	No significant sample bias has been identified from drilling due to the optimum drill orientation described above. Where present, sample bias will be reported.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	For rock samples, chain of custody is managed by Impact Minerals Ltd. Samples for Commonwealth are delivered by Impact Minerals Ltd personnel to ALS in Orange, NSW or to SGS Perth for prep and assay. Whilst in storage, they are kept in a locked yard. Tracking sheets have been set up to track the progress of batches of samples. Security of historic drill samples is unknown however is considered immaterial.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	A review of the sampling techniques and data both of historic drill holes and of Impact's procedures has been completed by Optiro Consultants of Perth, WA.

## SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	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 Commonwealth Project currently comprises 3 exploration licences covering 315 km <sup>2</sup> . The tenements are held 100% by Endeavour Minerals Pty Ltd, a subsidiary company of Impact Minerals Limited. No aboriginal sites or places have been declared or recorded in areas where Impact is currently exploring. There are no national parks over the license area.
	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.	The tenements are in good standing with no known impediments.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	A total of 66 drillholes have been completed over 300 m strike between the Commonwealth main shaft and Commonwealth South by previous explorers to an average depth of 53 m.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	The Commonwealth and Commonwealth South deposits are considered gold-rich volcanic hosted massive sulphide (VMS) deposits that occur at and below the contact with a porphyritic rhyolite and overlying volcanic sedimentary rocks. The mineralisation may have been overprinted by epithermal mineralisation.
<b>Drill hole Information</b>	<p>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:</p> <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>	See Table in text.
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	All reported assays have been length weighted. No top cuts have been applied. A nominal cut-off of approximately 0.5 g/t Au has been 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.	High grade massive sulphide intervals internal to broader zones of disseminated sulphide mineralisation are reported as included intervals.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Gold equivalent values have been used in the long section. Metal prices used for the gold equivalent were \$1,650 for gold and \$30 for silver. Given the high grade results, it is assumed that very high recoveries will be achieved. However no metallurgical studies have been completed to verify this. Such studies will be done as and when appropriate.

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</p>	Historical drill holes to date have been sub-perpendicular to the mineralised trend and stratigraphy so intervals are close to true width or otherwise stated.
<b>Diagrams</b>	<p>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.</p>	Refer to Figures in body of text.
<b>Balanced reporting</b>	<p>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.</p>	All results reported are representative
<b>Other substantive exploration data</b>	<p>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.</p>	Assessment of other substantive exploration data is not yet complete however considered immaterial at this stage.
<b>Further work</b>	<p>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</p>	Follow up work programmes will be subject to interpretation of recent and historic results which is ongoing.