ASX Code: IPT

# **ASX ANNOUNCEMENT**

Date: 30<sup>th</sup> June 2016 Number: 476/300616

### HIGH GRADE EXTENSIONS TO THE COMMONWEALTH DEPOSIT

• High grade extensions intersected 30 metres down plunge of the Commonwealth resource with highlight result in massive sulphide at Main Shaft:

7 metres at 6.3 g/t gold, 496 g/t silver (15.9 ounces), 7.2% zinc, 2.9% lead and 0.2% copper (17.7 g/t gold equivalent) from 91 metres

including 3 metres at 10.6 g/t gold, 571 g/t silver (18.4 ounces), 7.8% zinc, 2.1% lead and 0.2% copper (23.0 g/t gold equivalent) from 92 metres and

also including 1 metre at 2.5 g/t gold, 979 g/t silver (31.5 ounces), 8.3% zinc, 4.4% lead and 0.1% copper (21.4 g/t gold equivalent) from 95 metres

- Further high grade and robust intersections at Commonwealth South of 15 metres up dip and 40 metres down plunge and along trend including:
  - 2.6 metres at 10.3 g/t gold, 55.7 g/t silver (1.8 ounces), 2.5% zinc and 0.9% lead (12.6 g/t gold equivalent) from 88.1 metres

including 0.9 metres at 23.3 g/t gold, 94.6 g/t silver (3 ounces), 3.6% zinc and 1.6% lead (27.1 g/t gold equivalent)

- Assay results confirm Impact's interpretation that high grade mineralisation remains open down plunge with further drilling required.
- These results clearly demonstrate the potential for a significant increase to the Inferred Resource at Commonwealth.

### 20 METRE THICK SILVER-GOLD ZONE AT THE WALLS PROSPECT

• Maiden drill hole at the Walls Prospect on the Welcome Jack Trend located 1.2 km east of Commonwealth identifies potential for new near surface resources and returns:

20 m at 0.5 g/t gold and 27 g/t silver (1 g/t gold equivalent)n from 55 m including 12 m at 0.7 g/t gold and 42 g/t (one and a half ounces) of silver (1.3 g/t gold equivalent) including 1 m at 2.9 g/t gold and 144 g/t silver and 1.1% zinc (5.7 g/t gold equivalent)

- Mineralisation occurs immediately below the contact with a diorite intrusion with up to 630 ppm copper: new drill target for copper-gold identified within the diorite.
- Further drilling required along trend and at depth to be undertaken in the current programme.

### **FURTHER DRILLING IN PROGRESS**

• Drilling is still in progress with assay results expected from Silica Hill with other high priority drill targets to be tested including gravity anomalies at Commonwealth South and Doughnut.

<sup>\*</sup> gold equivalency calculations are shown at the end of this report. Investors are advised to review these in conjunction with the text.



Impact Minerals' current drill programme of up to 3,000 m is testing a significant number of targets that have been identified by Impact at four separate locations: the Commonwealth deposit, Welcome Jack Trend, Silica Hill and Doughnut (Figure 7).

### EXTENSIONS OF THE COMMONWEALTH RESOURCE

Assays for three drill holes designed to test for extensions to the Commonwealth resource at Impact Minerals Limited's (ASX:IPT) 100% owned Commonwealth Project 100 km north of Orange in NSW have confirmed further high grade gold, silver and base metal mineralisation down plunge and along trend. A very high grade drill intercept of massive sulphide at Main Shaft and other high grade intercepts from Commonwealth South have extended the Commonwealth deposit for at least 30 to 40 metres along trend, up dip and down plunge to the south. The mineralisation is still open. These results, and the extension of the massive sulphide in particular, indicate the potential to significantly increase the Inferred Resource at Commonwealth.

#### **Main Shaft**

At Main Shaft, drill hole CMIPT031 targeted an EM conductor interpreted from a previous downhole survey and intersected a 7 metre thick zone of massive sulphide mineralisation with exceptional silver grades (Figures 1 and 2).



**Figure 1**: RC Drill chips from CMIPT031 showing massive sulphide from 91 to 98 m.

#### CMIPT031 returned:

7 metres at 6.3 g/t gold, 496 g/t silver (15.9 ounces), 7.2% zinc, 2.9% lead and 0.2% copper (17.7 g/t gold equivalent) from 91 metres

including 3 metres at 10.6 g/t gold, 571 g/t silver (18.4 ounces), 7.8% zinc, 2.1% lead and 0.2% copper (23.0 g/t gold equivalent) from 92 metres and

also including 1 metre at 2.5 g/t gold, 979 g/t silver (31.5 ounces) 8.3% zinc, 4.4% lead and 0.1% copper (21.4 g/t gold equivalent) from 95 metres



The hole is 30 metres down dip and plunge from the nearest drill hole and the mineralisation is open to the south east, down plunge. Further drilling is required to potentially add significantly to the current resource. The EM plate is modelled to extend at least a further 20 metres down plunge and this is likely to be the limit of detection for the previous EM survey. A new down hole EM survey of CMIPT031 is required and will be completed towards the end of the drill programme.

#### **Commonwealth South**

At Commonwealth South two diamond holes targeted extensions to the deposit along trend and down dip and one diamond hole was drilled close to a previous high grade intercept in RC hole CMIPT017 (intercept of 4 m at 41.8 g/t gold, 62 g/t silver, 3.8% zinc and 1.6% lead – see announcement dated 22<sup>nd</sup> September 2014) to better understand the controls on the high grade mineralisation.

Hole CMIPT022, drilled down plunge to previous mineralisation was designed to test a small downhole EM conductor. No source for the conductor was found. However, the hole returned a thick intercept of:

13.6 metres at 2.1 g/t gold, 21 g/t silver, 0.3% zinc\*(final assays awaited) and 0.2% lead (2.6 g/t gold equivalent) from 68.7 metres

Including 0.6 metres at 10.8 g/t gold, 44 g/t silver (1.5 ounces), >1% zinc\*(final assays awaited) and 1% lead (12.4 g/t gold equivalent)

This is a significant intercept and has extended Commonwealth South mineralisation for 30 metres along trend to the south and helped confirm the south plunge to the mineralisation (Figures 2 and 3).

A down hole EM survey is required to determine the significance and possible location of the EM conductor. This will be completed towards the end of the drill programme.

Hole CMIPT025 which was drilled up plunge and close to CMIPT017 returned:

2.6 metres at 10.3 g/t gold, 55.7 g/t silver (1.8 ounces), 2.5% zinc and 0.9% lead (12.6 g/t gold equivalent) from 88.1 metres

including 0.9 metres at 23.3 g/t gold, 94.6 g/t silver (3 ounces), 3.6% zinc and 1.6% lead (27.1 g/t gold equivalent)

All of these drill results support Impact's interpretation that the Commonwealth deposit is controlled by south plunging high grade shoots that are open along trend and at depth (Figure 3). A detailed structural interpretation is in progress to better understand the orientation of the high grade shoots at depth.

The current Inferred Resource at Commonwealth (Main Shaft and Commonwealth South), prepared in accordance with the JORC 2012 Code by independent resource consultants Optiro at a 0.5 g/t gold cut off, is:

720,000 tonnes at 4.5 g/t gold equivalent for a contained 110,000 gold equivalent ounces comprising 2.8 g/t gold, 48 g/t silver, 1.5% zinc, 0.6% lead and 0.1% copper;

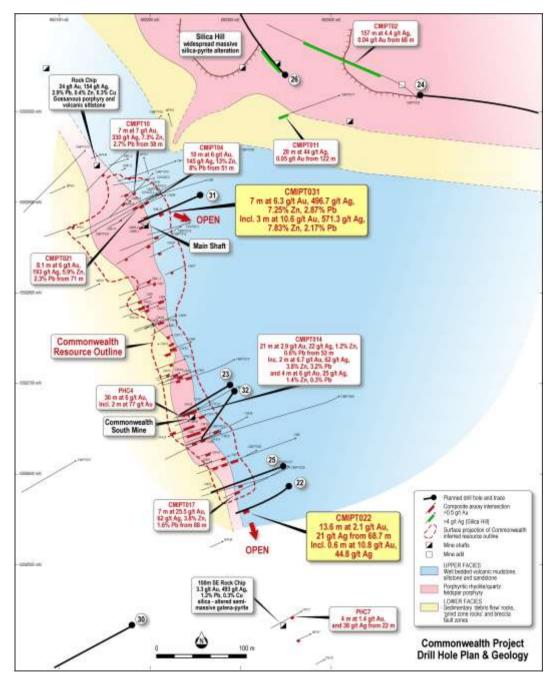
including the high grade resource at Main Shaft:

145,000 tonnes at 9.3 g/t gold equivalent for a contained 47,000 gold equivalent ounces comprising 4.3 g/t gold, 142 g/t silver, 4.8% zinc, 1.7% lead and 0.2% copper.



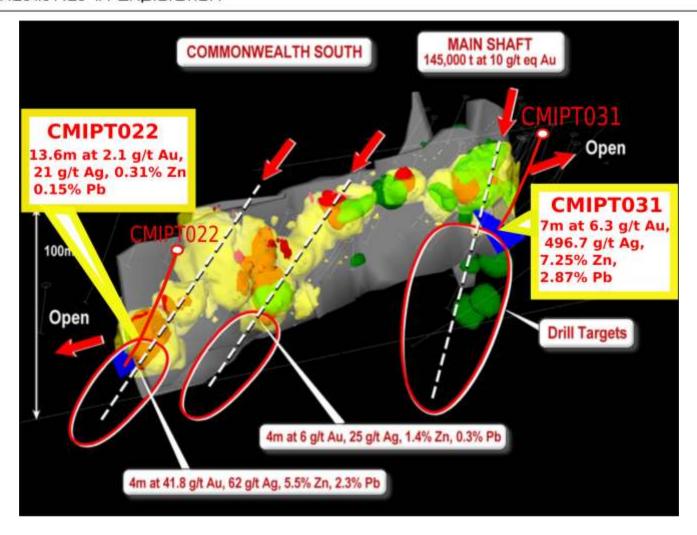
This massive sulphide lens at Main Shaft demonstrates the high grade nature of such deposits that are the principal target for Impact's exploration programme at the Commonwealth area.

The above drill results at Commonwealth indicate that a further intensive and close spaced drill programme is now required to continue to expand the resource.



**Figure 2.** Drill plan at Commonwealth with the location of the recent drill holes (black bold) including significant intercepts at CMIPT022 and CMIPT031.





**Figure 3.** 3D view looking to the north west of the Commonwealth resource (grey outline) and showing: grade shells for gold (yellow = 1g/t, red/orange = 2 g/t) and copper (green = 500 ppm copper) from drill assay data; interpreted EM conductors (blue rectangles) and interpreted ore shoots (dashed lines). Recent drill holes CMIPT022 and CMIPT031 indicate mineralisation is open down plunge in at least 2 areas.



### DRILL RESULTS AT THE WELCOME JACK TREND

The maiden drill hole at the Walls Prospect located 1.2 km east of Commonwealth has identified a 20 metre thick zone (true width) of gold and silver mineralisation. The Walls prospect occurs at the southern end of the Welcome Jack Trend over a strike length of at least one kilometre and has never been drill tested (Figures 4 and 5).

### **Walls Prospect**

The first exploration drill hole CMIPT027 has returned a very encouraging thick and robust intercept of:

20 m at 0.5 g/t gold and 27 g/t silver (1 g/t gold equivalent) from 55 metres down hole: including 12 m at 0.7 g/t gold and 42 g/t (one and a half ounces) of silver (1.3 g/t gold equivalent) including 1 m at 2.9 g/t gold and 144 g/t silver and 1.1% zinc (5.7 g/t gold equivalent).

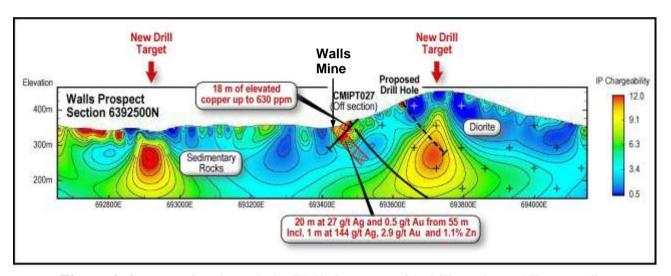


Figure 4. Cross section through the Walls Prospect with drill results and IP anomalies

This 20 m thick zone of silver-gold mineralisation at about 50 m from surface is interpreted to be the down dip extension of high grade veins mined at surface where previous explorers returned rock chips up to 15 g/t gold and 600 g/t silver (see announcement dated 26<sup>th</sup> April 2016). The maiden drill result is highly encouraging for the discovery of further high grade gold-silver mineralisation and indicates the potential for near surface open pitable resources at Walls.

The mineralised zone occurs within sedimentary rocks immediately below the contact with an overlying diorite intrusion that is marked by an eight metre thick zone of anomalous copper mineralisation of up to 600 ppm (Figure 5). The zone is also partly coincident with a near surface Induced Polarisation anomaly and confirms again the high degree of correlation between IP anomalies and disseminated sulphide mineralisation at the Commonwealth Project (see announcement dated 5<sup>th</sup> May 2016).

A follow up drill hole is planned as part of the current programme to the north of CMIPT027 to test the along-trend extension of the newly discovered mineralised structure (Figure 5).

In addition two strong IP anomalies (up to 12 mV/V) have now been prioritised for follow up work including drilling. First, within the diorite, where the IP anomaly is up to 250 metres wide and forms part



of the Welcome Jack Trend, identified in IP data and by a gold-silver-arsenic-thallium-molybdenum-in-soil geochemistry anomaly (Figures 4 and 5 and announcement dated 26<sup>th</sup> April 2016). This is a target for porphyry copper-gold mineralisation; and secondly an IP anomaly up to 100 metres thick that occurs 500 metres west of Walls (Figure 4).

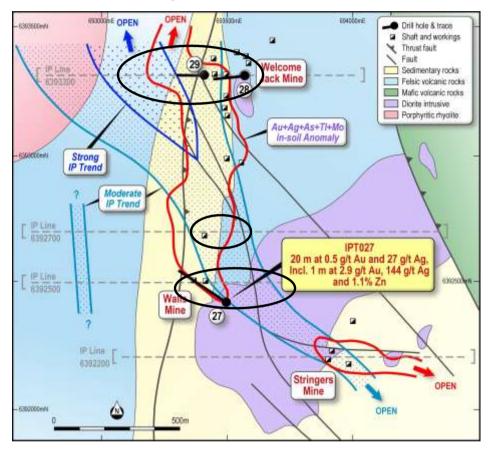


Figure 5. Geology with IP and soil geochemistry anomalies at the Welcome Jack Prospect. Three priority drill targets have been identified (black ellipses).

### Welcome Jack Mines

An RC drill hole, CMIPT028 has also been completed at the north eastern edge of the Welcome Jack Trend to test beneath old workings (Figures 5 and 6).

The drill hole entered a void that is likely to be the old workings and accordingly no significant results were returned. A 15 metre thick zone of weak gold anomalism associated with pyrite and lesser arsenopyrite occurs at about 140 metres depth and is coincident with the edges of an IP anomaly centred about 250 metres to the west (Figure 5). This anomaly will be tested by drill hole CMIPT029 for which the RC pre-collar has been completed. The hole will be completed by diamond drilling as part of the current programme.

A further drill hole below CMIPT028 will also be required to test beneath the mined extent of the vein system.



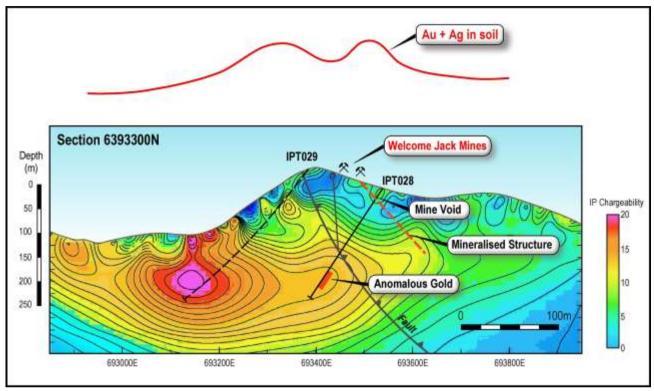


Figure 6. Cross-section of the Welcome Jack area showing IP anomalies and drill holes.

## PROGRESS OF THE DRILL PROGRAMME

A major drill programme of up to 3,000 metres of reverse circulation (RC) and diamond drilling is still in progress at the Commonwealth Project. The programme has been delayed by the extensive wet and cold weather that has affected eastern Australia over the past two to three weeks.

The programme is testing a significant number of targets that have been identified by Impact at four separate locations: the Commonwealth deposit, Welcome Jack Trend, Silica Hill and Doughnut (Figure 7).

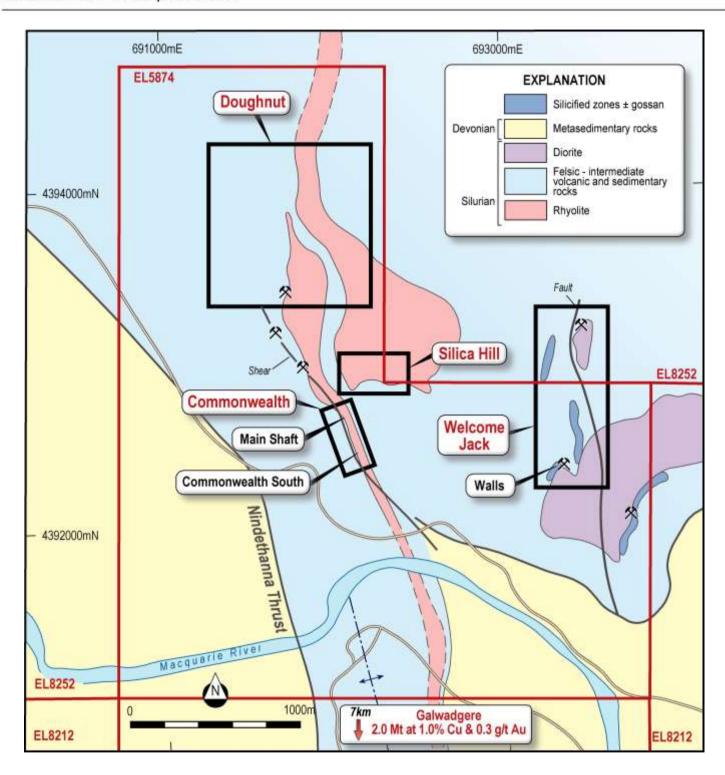
The targets were identified in geological, geochemical and geophysical data sets collected and compiled over the past 12 to 18 months and in particular at areas of variably overlapping gravity, induced polarisation (IP) and soil geochemistry anomalies. The targets are described in detail in announcements dated 5<sup>th</sup> April, 18<sup>th</sup> April, 26<sup>th</sup> April and 5<sup>th</sup> May 2016.

Five diamond drill holes have now been completed: three at Commonwealth South and two at Silica Hill with one in progress. In addition three reverse circulation drill holes have been completed; one at Welcome Jack, one at Main Shaft and one at Commonwealth South in addition to several pre-collars for further diamond drill holes.

Further assays are being awaited for two drillholes at Silica Hill, two at Commonwealth South and several percussion precollars.

Additional drill targets at Commonwealth South and Doughnut are yet to be drill tested (Figure 7).





**Figure 7.** Geology and location of the four priority prospects at the Commonwealth Project: Commonwealth, Silica Hill, Welcome Jack Trend and Doughnut. The Commonwealth Prospect contains the Commonwealth deposit that has two parts, Main Shaft and Commonwealth South.



**Table 1:** Drill collar spreadsheet from the 2016 drill program at Commonwealth.

Impact			Planned				RC Metres	Diamond Metres	Date	Date	
Collar ID	Easting^	Northing^	Depth	Dip	Azimuth	Elevation	Drilled	Drilled	Started	Completed	Prospect
CMIPT022	692348	6392583	110	-59	240	364		134.3	20/05/2016	23/05/2016	Commonwealth South EM
CMIPT023	692298	6392696	180	-68	250	351		126.4	23/05/2016	27/05/2016	Commonwealth South
CMIPT024	692501	6393012	200	-45	95	406	151.8	63.8	24/05/2016	26/05/2016	Silica Hill IP East
CMIPT025	692354	6392611	110	-45	240	370		125.7	27/05/2016	31/05/2016	Commonwealth South
CMIPT026	692354	6393041	200	-45	325	402	120	86.5	27/05/2016	18/06/2016	Silica Hill Gravity Geochem
CMIPT027	693500	6392470	120	-55	285	374	120		31/05/2016	31/05/2016	Walls
CMIPT028	693538	6393321	250	-55	270	498	159	TBC	1/06/2016	1/06/2016	Welcome Jack
CMIPT029	693400	6393300	350	-50	270	563	151	TBC	2/06/2016	2/06/2016	Welcome Jack
CMIPT030	692180	6392430	200	-60	275	318.3	105	TBC	8/06/2016	9/06/2016	South Western Gravity
CMIPT031	692251	6392911	120	-65	243	354.5	120		10/06/2016	11/06/2016	Main Shaft EM
CMIPT032	692307	6392663	140	-65	210	351	142		11/06/2016	15/06/2016	Commonwealth South - south plunge
CMIPT033	692496	6392791	180	-65	270	340	135	TBC	18/06/2016	19/06/2016	Y2 Gravity anomaly



**Table 2:** Assay result composite spreadsheet from the 2016 drill program at Commonwealth.

Hole Id	From	То	Interval	Au	Ag	Zn	Pb	Cu	Au Equ g/t*	Cutoff	Prospect
CMIPT022	68.7	82.3	13.6	2.08	21.38	0.31*	0.15	NSA	2.57	1g/t Au	Commonwealth South
including	68.7	69.3	0.6	10.80	44.80	>1%*	0.95	0.10	12.35	5 g/t Au	
also including	74	75	1	5.34	22.00	0.15	0.04	NSA	5.72	5 g/t Au	
CMIPT025	88.15	90.8	2.65	10.31	55.66	2.49	0.89	0.05	12.62	1g/t Au	Commonwealth South
including	89.2	90.1	0.9	23.30	94.60	3.55	1.64	0.09	26.97	20g/t Au	
CMIPT027	55	75	20	0.50	27.30	0.11	0.05	NSA	0.94	0.1 g/t Au	Walls Mine
including	55	67	12	0.68	41.80	0.17	0.08	NSA	1.35	10 g/t Ag	
including	57	58	1	2.89	144.00	1.07	0.50	0.10	5.63	1g/t Ag	
CMIPT028	142	147	15	Elevated A	lu from 10	to 36 ppb					Welcome Jack
CMIPT031	91	98	7	6.32	496.68	7.25	2.87	0.18	17.69	1 g/t Au	Main Shaft EM
including	92	95	3	10.61	571.33	7.83	2.17	0.22	23.02	10 g/t Au	
including	95	96	1	2.52	979.00	8.25	4.42	0.14	21.40	800g/t Ag	

<sup>\*</sup>Ore grade zinc results pending



## **Investment by Squadron Resources Pty Limited**

The Commonwealth gold-silver-zinc-lead project and also Impact's Broken Hill platinum-copper-nickel project are part of the investment agreement between Impact Minerals and Squadron Resources Pty Ltd, part of the Minderoo Group which represents the philanthropic and business interests of Andrew and Nicola Forrest (see announcement 17 July 2015).

As part of the investment agreement, Squadron at its sole discretion, can invest a further A\$1 million into either or both of the projects to earn a 19.9% interest after Impact has spent a combined total of \$2.5 million on them.

It is anticipated that Impact will meet the \$2.5 million expenditure target in the September Quarter 2016.

## 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). Mike 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.

Grades have been reported as individual elements (gold, silver, zinc, lead and copper) and, in addition, a gold-equivalent grade has been defined. This has used the following Australian dollar commodity prices from the 27<sup>th</sup> June 2016:
Gold \$1792.65 / oz; Silver \$24.02 / oz; Copper \$6321.96 / tonne; Lead \$2,296.19 / tonne;
Zinc \$2,683.85 / tonne.

There has been no metallurgical testing of the Commonwealth mineralisation to date so no metallurgical recoveries have been incorporated into the gold equivalent calculation.



### **APPENDIX 1 - SECTION 1 SAMPLING TECHNIQUES AND DATA**

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	Rock chip samples Random grab samples were taken at surface which represented favourable geology and alteration to known mineralisation in the region. Samples are variably weathered.  Soil Samples 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.  RC Drilling 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.  Diamond Drilling Diamond drilling was used to produce drill core either with a diameter of 63.5 mm (HQ) or 47.6 mm (NQ).
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Rock chip samples 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.  Soil Samples and Drill Samples 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



Criteria	JORC Code explanation	Commentary
	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	Rock chip samples Rock samples were sent to SGS Perth where they were crushed, dried and pulverised (total prep) to produce a 25-30 g subsamples 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.  Soil Samples 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. RC and diamond drill samples 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 >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.
Drilling techniques	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).	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.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	Diamond core recoveries for all holes are logged and recorded. Recoveries are estimated to be approximately >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.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	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.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No sample bias has been established.



Criteria	JORC Code explanation	Commentary
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	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.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	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.
		All diamond drill holes were logged in full.
	The total length and percentage of the relevant intersections logged	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.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	All core samples were sampled by half core. Selected intervals of quarter core will be selected for check assays if required.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples were split using a riffle splitter.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	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").
	Quality control procedures adopted for all sub-sampling stages to	Laboratory QC procedures for rock sample assays involve the use of internal certified reference material as assay standards, along with blanks, duplicates and replicates.
	maximise representivity of samples.	The QC procedure for historical diamond and RC samples is unknown but is assumed to have been minimal; however, the impact of historical samples has been somewhat mitigated by recent drilling.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Sample 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.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	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.



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is	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.
	considered partial or total.	The quality of historical drill sample assays is unknown; however it is reasonable to assume that core samples were representative of the mineralisation.
	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.	No geophysical tools were used to determine material element concentrations. A handheld XRF was used for qualitative analysis only.
		For the rock chips, quality control procedures for assays were followed via internal laboratory protocols. Accuracy and precision are within acceptable limits.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether	Reference standards and blanks are routinely inserted into every batch of samples at a rate of 1 in every 25 samples in the Impact drilling. Impact's inserted standards in general showed results within expected ranges. The calculated means for Lab standards are very close to expected for the majority of standards and are within industry expectations.
	acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Laboratoy repeat checks and original samples correlated very well.
		There is minimal quality control of historical drill sample assays. Twin holes have been drilled to verify historical drilling.
		The QAQC results indicate that the assays used for resource estimation are a fair representation of the material that has been sampled.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections from drilling have not been verified by independent or alternative companies or by Impact.
	The use of twinned holes.	Two twin diamond holes versus historic RC holes have been drilled at Commonwealth South and Main Shaft.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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.
	Discuss any adjustment to assay data.	No significant adjustments have been required.
Location of data points	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.	Recent drill holes have been located by DGPS. Historical drill holes and mine shafts have been verified by DGPS.
	Specification of the grid system used.	The grid system for Commonwealth is MGA_GDA94, Zone 55.



Criteria	JORC Code explanation	Commentary
		Standard government topographic maps have been used for topographic validation. The DGPS is considered sufficiently accurate for elevation data.
	Quality and adequacy of topographic control.	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.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill spacing of drill holes ranges between 10 and 30 m which is considered adequate for Exploration Results.
	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.	Spacing of drill holes ranges between 10 m and 50 m on section and are considered adequate for Mineral Resource estimation procedures.
	Whether sample compositing has been applied.	Sample compositing has been applied for quoting drill composite results only.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Drilling is oriented sub-perpendicular to the mineralised trend and stratigraphic contacts as determined by field data and cross section interpretation.
	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.	No significant sample bias has been identified from drilling due to the optimum drill orientation described above. Where present, sample bias will be reported.
Sample security	The measures taken to ensure sample security.	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.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	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
Mineral tenement and land tenure status	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 km². 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.
Exploration done by other parties	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.
Geology	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.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  • easting and northing of the drill hole collar  • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  • dip and azimuth of the hole  • down hole length and interception depth  • hole length.	A tabulation of this information is considered not material for this inferred mineral resource.
Data aggregation methods	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 in the reporting of the drill assays. 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 and in the resource calculation. Australian metal prices used for the gold equivalent were \$1,580/oz gold, \$22/oz silver, \$2,740/t zinc, \$2,396/t lead and \$7,320/t copper. 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
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.  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').	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.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to figures in body of text.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All results reported are representative
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Assessment of other substantive exploration data is not yet complete however, it is not considered material at this stage to a Mineral Resource Estimate.
Further work	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	Follow up work programmes will be subject to interpretation of recent and historic results which is ongoing.



### **SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES**

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	A visual comparison is completed between assay results and original logs (if hand drawn/logged) and detailed print outs and down hole logs for each hole. All errors are corrected.
	Data validation procedures used.	Impact's database has industry standard protocols to ensure that only valid data is accepted. For example, only geological codes that form part of the Impact logging code system can be accepted into the database.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The geology competent person, Dr Mike Jones has been with Impact since its inception and is closely involved in the Commonwealth project. He was present during a significant part of the drill programme and helped supervise the geological interpretation of the deposit. The majority of the work was compiled by Mr Leo Horn who is also a Competent Person for the reporting of Exploration Results and has been responsible for all aspects of the exploration programmes at the Commonwealth Project. The Competent Person for the Mineral Resource estimate, Mr Ian Glacken, has not visited site.
	If no site visits have been undertaken indicate why this is the case.	
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological	There is a high level of confidence in the geological interpretation due to the historical operating experience and the readily identifiable stratigraphic control on mineralisation.
	interpretation of the mineral deposit.	Wireframes are used to constrain the estimation and are based on drill hole intercepts and geological boundaries. All wireframes are constructed to 0.5 g/t Au cut-off grades for shape consistency.
	Nature of the data used and of any assumptions made.	The mineralisation is generally quite consistent and drill intercepts clearly define the shape of the mineralised body with limited options for large scale alternate interpretations.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The controls on and interpretation of mineralisation is relatively straightforward and no alternative interpretations have been considered.
	The use of geology in guiding and controlling Mineral Resource estimation.	Wireframes are used to constrain the estimation and are based on drill hole intercepts and geological boundaries.
	The factors affecting continuity both of grade and geology.	Wireframes are constructed to 0.5 g/t Au cut-off grade for shape consistency.
Dimensions	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	The mineral resource at Commonwealth comprises two main areas, being Main Shaft and Commonwealth South, which have a total strike length of 400 m and extend vertically for approximately 120 m below surface. Main Shaft has been historically mined from surface to 40 m below surface.



Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	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.	Grade estimation using Ordinary Kriging (OK) was completed using Datamine software for six elements; Au, Ag, Cu, Pb, Zn and As. Drill grid spacing was between 10 m and 30 m.  Variogram orientations were largely controlled by the strike of mineralisation and downhole variography. Variograms for estimation were determined individually for each element.  Other estimation parameters, such as search distance, minimum and maximum sample numbers was derived from KNA. Search distances varied depending on the element being estimated.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	There has been no previous resource estimation on the Commonwealth Project, hence no comparisons are available.  The resource model has not been compared to any reconciliation data.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of any by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Arsenic was the only deleterious element estimated.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The block model dimensions and parameters were based on the geological boundaries and average drill grid spacing. Subblocks were used to ensure that the block model honoured the domain geometries and volume. Block estimates were controlled by the original parent block dimensions.  The individual parent block dimensions were 5 mE by 15 mN by 10 mRL, with sub-blocking allowed.  Estimation into parent blocks used a discretisation of 5 (X points) by 10 (Y points) by 8 (Z points) to better represent estimated block volumes.
	Any assumptions behind modelling of selective mining units.	No selective mining units were modelled in this estimate. It is assumed that the SMU is equal to the block model parent cell or smaller.
	Any assumptions about correlation between variables.	Multi-element analysis was conducted on the composites. There was a strong correlation between silver and lead and between lead and zinc.
	Description of how the geological interpretation was used to control the resource estimates.	Drillhole sample data was flagged using domain codes generated from three dimensional mineralisation domains. Sample data was composited to a one metre downhole length.  Mineralisation domains were treated as hard boundaries in the estimation process.
	Discussion of basis for using or not using grade cutting or capping.	Top cuts were established by investigating univariate statistics and histograms of sample values. A top cut level was selected if it affected outliers, reduced the sample variance and did not materially change the mean value.



Criteria	JORC Code explanation	Commentary
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Model validation was carried out using visual comparisons between composites and estimated blocks, checks for negative or absent grades, and statistical comparison against the input drillhole data and graphical profile (swath) plots.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied	The mineralisation is modelled to a nominal wireframe cut-off grade of 0.5 g/t Au with a minimum width of 1 m to encapsulate the entire mineralised body. The edges of the resource shapes may be narrower than potential minimum mining widths, which suggest that a small proportion of the shape is unlikely to be mineable; however the inclusion of these zones adds to the orebody continuity and the ore/waste discrimination of the Reserve process.
Mining factors or assumptions	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.	No minimum mining assumptions were made during the resource wire framing or estimation process. Mining parameters, including minimum width assumptions, will be applied during the conversion to Ore Reserves.
Metallurgical factors or assumptions	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.	No metallurgical factors or assumptions are made during the resource estimation process as this will be addressed during conversion to Ore Reserve. The resource block model has been populated with multi-element data which is required for the metallurgical analysis during the Ore Reserve process.



Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	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	The Commonwealth Project is a historic brown-fields mine with a 20 year operating history. No environmental factors or assumptions are made during the resource estimation process.
Bulk density	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.	Bulk density (specific gravity) measurements are taken using conventional weight in air vs weight in water methodology.
	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,	All drill core within the mineralisation is in fresh rock and solid, so no coatings are applied to reduce water penetration.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	A zinc grade vs. density regression formula was used to assign specific gravity (SG) values to the block model. The regression formula of "SG = (0.0815*Zn%)+2.67" was used.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories	Classification of the resource models is based primarily on drill density and geological understanding, in conjunction with increased confidence from areas of historic mining.
	Whether appropriate account has been taken of all relevant factors (i.e. 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).	The classification takes into account the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The classification reflects the view of the Competent Person.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	This is the maiden Mineral Resource estimate, therefore no audits or reviews have been carried out.



Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/confidence	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	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. The statement relates to global estimates of tonnes and grade.
	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	The estimate is considered to be relevant to a global estimation of tonnage and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	