



## ASX ANNOUNCEMENT

Date: 30 April 2014

ASX: IPT

Number: 344/300414

### MARCH 2014 QUARTERLY REPORT SUMMARY

#### 1. COMMONWEALTH PROJECT, N.S.W. (IPT 100%)

- Rock chip samples with assays of up to 24 g/t gold, 1,100 g/t silver, 18.2% copper and 5.7% zinc extend mineralised trend at Commonwealth from 250 m to 2.5 km.
- Induced Polarisation ground geophysical survey completed. Interpretation in progress.
- New exploration licences granted to expand ground holding to 315 sq km with significant potential for porphyry copper gold and VMS Au Cu Zn Pb Ag deposits.
- Drill programme to commence in June 2014.

#### 2. BROKEN HILL PROJECT, N.S.W. (IPT EARNING 80%)

- Field checking, further soil and rock chip sampling completed at Red Hill.
- Ground EM survey completed at the Red Hill Prospect. Interpretation in progress.
- Drill programme to commence at Red Hill in June – July 2014.

#### 3. MULGA TANK PROJECT, W.A. (IPT 100% & EARNING 50%)

- Twelve new priority target areas for nickel-copper and copper-gold deposits identified in a review of previous soil geochemistry data.
- Gravity survey completed over the Mulga Tank Dunite. Interpretation in progress.

#### 4. OTHER PROJECTS

- **Botswana Uranium (IPT 100%):** Interpretation of the results of an MMI soil geochemistry survey over the Red Hills Prospect is in progress.
- **Queensland:** All licences relinquished except for EPM14116 containing the high grade Retro Extended Project.
- **Turkey:** Discussions in progress to dispose of or wind up the Turkish subsidiary company.

#### 5. CORPORATE

- Cash at March 31<sup>st</sup> \$0.7 million. Impact received a further \$719,000 from the R&D rebate on April 3<sup>rd</sup>.

### Market Cap

A\$14.6m (0.03 p/s)

### Issued Capital

487,063,471

### Directors

Peter Unsworth  
Chairman

Dr Michael Jones  
Managing Director

Paul Ingram  
Non-Executive Director

Markus Elsasser  
Non-Executive Director

James Cooper-Jones  
Company Secretary

[www.impactminerals.com.au](http://www.impactminerals.com.au)

309 Newcastle Street

Northbridge

Western Australia 6003

tel +61 (8) 6454 6666

fax +61 (8) 6454 6667

email

[info@impactminerals.com.au](mailto:info@impactminerals.com.au)

ASX Code: **IPT**

ABN 52 119 062 261

## 1. COMMONWEALTH PROJECT, N.S.W. (IPT 100%)

The following work was completed at Commonwealth during the Quarter:

1. Further mapping, rock chip and soil sampling.
2. Induced Polarisation ground geophysical survey.
3. Further preparation target generation preparation of statutory approvals for a drill programme due to start in June – July 2014.

### 1.1 HIGH GRADE ROCK CHIP SAMPLES EXTEND MINERALISED TREND TO 2.5 KM

High grade rock chip samples taken by Impact and previous explorers with assays of up to 24 g/t gold, 1,100 g/t silver, 18.2% copper and 5.7% zinc at the company's 100% owned Commonwealth Project in New South Wales have extended the strike length of the known mineralised zone at the Commonwealth Mine from 250 m to at least 2.5 km (Figures 1 and 2). In addition, gold-rich and copper-rich parts of the zone have been identified.

#### **Gold-rich mineralised structure: Commonwealth – Commonwealth South area**

Samples of gossan and weathered rock found 50 m to 75 m north west of the Commonwealth Mine at the contact between porphyry rhyolite and volcanic sedimentary rocks returned assays of:

**up to 24 g/t gold, 154 g/t silver, 2.9% lead, 0.37% zinc and 0.27% copper.**

Samples of silica-altered rocks with semi-massive galena and pyrite from a previously unrecognised shaft and some 275 m south east of Commonwealth South returned assays of:

**up to 3.3 g/t gold, 493 g/t silver 1.2% lead, 0.15% zinc and 0.3% copper (Figure 2).**

A previous shallow drill hole (PH 7) 25 m north of this shaft returned 4 m at 1.4 g/t gold and 38 g/t silver from 22 m depth. There is no other drilling in this area.

#### **Copper-rich mineralised structure: Coronation area**

Field checking of the area between the Commonwealth Mine and the Coronation Mine has identified numerous old shafts and workings over a strike extent of at least 1,500 m that contain extensive copper oxide minerals, in particular malachite and azurite as well as copper sulphide minerals (Figures 2 and 3). The old workings have not been drilled.

Samples of the weathered and mineralised sedimentary and porphyritic rocks from the workings returned assays of up to:

**18.2% copper, 58 g/t silver 0.2% zinc, 0.9% lead and 0.35 g/t gold (see Table 1).**

These new results have for the first time identified a copper-rich part of the mineralised trend which extends for 1,500 m of strike north west of the Commonwealth Mine and includes a line of workings associated with the dormant Coronation Mine (Figure 2). Several near surface weak to moderate electromagnetic conductors which require drill testing have also been identified close to this line of workings in a ground electromagnetic survey (Figure 2).

These results have extended the 250 m long mineralised horizon between the Commonwealth Mine and Commonwealth South to 2.5 km of strike and which is still open and undrilled in both directions.

## New Prospects

At **Silica Hill**, about 200 m north east of the Commonwealth Mine, Impact has discovered a large area of about 200 sq metres underlain by silica-altered porphyry rock with extensive fine grained pyrite (Figure 2). The area contains numerous gold-in-soil results of between 0.1 g/t and 0.5 g/t as well as silver-in-soil results of between 5 g/t and 23 g/t from a previous soil geochemistry survey. A grab sample of the porphyry rock with about 5% pyrite returned **0.5 g/t gold and 14 g/t silver**. The widespread silica alteration may be a very large silica cap above a massive sulphide deposit.

At the **Walls and Stringers Prospects**, about 1 km east of the Commonwealth trend, previous rock chip samples taken in the early 1980's returned high grade results in zones of silicification around a late stage porphyry intrusion (Figure 2). There are adits at both prospects but production figures are not available. At the Walls Prospect four samples returned a grade range of:

**0.8 g/t to 15 g/t gold, 17 to 600 g/t silver, up to 0.9% lead and 0.2% zinc.**

At the Stringers Prospect six samples returned a grade range of:

**0.3 to 2.3 g/t gold, 5 g/t to 1,100 g/t silver and up to 2.6% copper, 5.7% zinc and 1.9% lead.**

These prospects have not been explored or drilled. Impact has now secured a new exploration licence, EL8212, along strike to the east of these two prospects with new licences (Figure 4).

### 1.2 EM SURVEY IDENTIFIES CONDUCTORS CLOSE TO THE CORONATION COPPER MINE

A ground EM survey completed over part of the Commonwealth project area in late 2013 has identified several weak to moderate conductors in an area of poor outcrop immediately west of the Coronation Mine (Figure 2). The conductors trend north-south and dip steeply to the east and are modelled to be at a shallow depth of between 20 m and 230 m below surface. This area has not been drilled.

A small outcrop of silicified porphyry rhyolite with trace pyrite and quartz veins occurs over the conductors and one grab sample returned weakly elevated gold (0.04 g/t), silver (0.2 g/t) and copper (0.02%) results.

### 1.3 IP SURVEY

The results of an Induced Polarisation ground geophysical survey over Commonwealth, Commonwealth South and Silica Hill were received. The results are being interpreted by consultants from Newexco.

### 1.4 NEW EXPLORATION LICENCES GRANTED

During the Quarter Impact expanded its land holding around the high grade gold-silver-base metal Commonwealth Project in NSW from 8 sq km to 315 sq km (Figure 4).

The expansion, a result of the grant of two new 100% owned exploration licences, follows a review of previous exploration data both at Commonwealth and the surrounding area within the richly mineralised Molong Volcanic Belt, host to the world class Cadia-Ridgeway mining centre (>25 Moz gold and 5 Mt of copper) and many other mines and prospects (Figure 1).

The new licences give Impact 100% ownership of a large ground holding in one of the most prolific mineralised areas in Australia. Impact's work at Commonwealth and a review of previous exploration data in the surrounding area has shown that there has been limited exploration in the northern part of the Molong Volcanic Belt.

The new licences are prospective for a number of different mineral deposit styles, in particular porphyry copper gold deposits and volcanogenic massive sulphide deposits.

### **Potential for Porphyry copper-gold-silver deposits**

A number of copper, gold and silver occurrences both at Commonwealth and within Impact's new licences are hosted in granite and porphyry intrusive rocks (Figures 1 and 2).

At Silica Hill, close to Commonwealth, Impact has now identified a pyrite-silica alteration zone that is 300 m thick associated with a previously unrecognised quartz-feldspar porphyry intrusion (Figure 2). Here, a significant silver- and gold-in-soil anomaly covering at least 200 m by 200 m has also been identified by Impact in previous soil geochemistry data. Further assays from soil and rock chip samples taken during recent field checking are due in May. This data will be used to identify additional drill targets for Impact's maiden drill programme at Commonwealth which will commence later this Quarter.

Silica Hill was previously unrecognised as an altered porphyry body and Impact anticipates that there are many similar bodies and unrecognised associations within its new licences.

Other gold occurrences on Impact's new licences associated with granite and porphyry include Welcome Jack, Greenobby's and the dormant Kellys Perseverance Mine with recorded production of 818 oz of gold from 714 tonnes of ore (Figure 1). Face sampling of the mine at a depth of 8 m below surface in the 1970's returned up to 3 m at 22 g/t gold. This mine has not been drilled.

### **Potential for VMS Deposits**

The volcanic rocks in the northern Molong Belt are the same age as other belts around the world that host very large and major volcanogenic massive sulphide (VMS) deposits (Ordovician to Devonian). It was the lack of exploration for this style of deposit in the Molong belt that prompted the review of previous exploration data by Impact.

At the Apsley Project near Wellington (Figure 4) native copper, copper sulphide (chalcopyrite) and copper carbonate (malachite and azurite) mineralisation has been identified over an area of 8 sq km hosted in mafic volcanic and sedimentary rocks. There are several shafts in the area that are up to 30 m deep and previous rock chip results have returned up to 6.5% copper and 13 g/t silver. There has been very limited drilling in this area.

The geological characteristics of the area are similar to those at so-called "Besshi-style" VMS deposits, a sub-type of the VMS deposit style that tends to be copper-rich. One of the type examples of this style is the Windy Craggy deposit in British Columbia which has a resource of 300 Mt at 1.4% copper, 4 g/t silver and 0.2 g/t gold. The Besshi-style contrasts with the Commonwealth-style of VMS deposits which are hosted by felsic rocks and tend to be gold-silver-zinc-lead rich.

Impact's new licences have not been explored for this style of deposit.



## 1.5 WORK FOR NEXT QUARTER

Final target selection for a drill programme to commence in June 2014 will be completed on receipt of the remaining soil and rock chip results and the final interpretation of the IP data. The results of all of this work will be integrated to define further drill targets for drilling in June and July 2014. Drilling to define an Inferred Resource between Commonwealth Mine and Commonwealth South is also planned.

### ABOUT THE COMMONWEALTH PROJECT

The Commonwealth Mine, a high grade volcanogenic massive sulphide deposit (VMS), was discovered in 1900 and mined intermittently until the 1930's. Early production amounted to 470 oz of gold from 480 tons of oxide ore. A blast furnace was installed in 1905 and **6,476 t was mined at a grade of 6 g/t gold, 150 g/t silver, 2% copper, 15% zinc and 7% lead**. Operations were suspended in 1908 following flooding and there are no records of significant mining activity since.

The project has received little exploration attention in the past 25 years. Previous drilling was focused on 300 m of strike between the Commonwealth Mine and the Commonwealth South Prospect and only 66 drill holes for 3,695 m at an average depth of only 56 metres were completed (Figure 2).

Impact's work has identified significant potential for both further high grade VMS deposits at depth and along strike from the Commonwealth Mine and importantly bulk tonnage lower grade disseminated gold and silver mineralisation that either was not recognised or was ignored by the early miners and previous explorers. In addition it is interpreted that there are at least two mineralised horizons in the rock sequence.

Exploratory underground drill holes completed in the 1980's discovered high grade mineralisation (remnant ore) which is still present at the Commonwealth Mine. Drill intercepts included:

**7 m at 5.3 g/t gold, 346 g/t silver, 9.2% zinc and 3.2% lead in CM85-1; and  
3 m at 8 g/t gold, 158 g/t silver, 2.9% zinc and 0.8% lead in CM85-2.**

A long section and cross sections through the area show high grade drill intercepts over robust widths that are open at depth and along strike and which confirm the potential for bulk tonnage mining at Commonwealth. These intercepts include:

At the Commonwealth Mine:

**9.8 m at 8.4 g/t gold and 357 g/t silver from 54.2 m in CW29;  
4.7 m at 5.5 g/t gold and 253 g/t silver from 54.3 m in CW30; and  
17 m at 3.5 g/t gold and 206 g/t silver from 41 m in EMC06.**

At Commonwealth South:

**30 m at 6 g/t gold and 17 g/t silver from 24 m including 2 m at 77.3 g/t gold in PHC4;  
26 m at 2.5 g/t gold and 20 g/t silver from 32 m in PHC9; and  
6.9 m at 3.4 g/t gold, 72 g/t silver, 2.2% zinc and 1% lead from 30 m and  
5.5 m at 3.8 g/t gold, 45 g/t silver, 0.8% zinc and 0.3% lead from 44 m in CW20.**

## 2. BROKEN HILL PROJECT (IMPACT EARNING 80%)

The Broken Hill Project is located 20 km east of the World Class Broken Hill silver-lead-zinc mine in the richly mineralised Curnamona Province and consists of one Exploration Licence (EL7390) covering 110 square kilometres.

Impact can earn 80% of the rights to Ni-Cu-PGE mineralisation associated with mafic and ultramafic rocks from Golden Cross Limited by spending an additional \$100,000 by November 2015 and a further \$200,000 by November 2017.

Previous exploration at Broken Hill has focused on the Platinum Springs Prospect in the area of the Mulga Springs Gossan. Here some of the highest grade PGE assays in Australia including rare high grades of osmium, iridium and ruthenium have been returned including a representative 120 kg sample of gossan which returned **19.6 g/t platinum, 50 g/t palladium, 3 g/t rhodium, 3 g/t osmium, 4.4 g/t iridium, 2 g/t ruthenium, 0.57 g/t gold, 0.34% nickel and 0.71% copper.**

Investors should note that these assays may have been upgraded by near surface weathering. However drill holes beneath some of the gossans has identified massive sulphide mineralisation in relatively fresh rock at about 45 m below surface with similar grades including best intercepts of:

**4 m at 17.9 g/t Pt+Pd+Au, 2.3% nickel and 3.2% copper from 43 m; and**

**2.1 m at 8.3 g/t Pt+Pd+Au, 3% nickel and 3.5% copper from 45 m.**

This suggests that very high grade mineralisation may be found in fresh rock at depth.

During the Quarter work was focussed at the Red Hill prospect. A field programme comprising field checking, soil and rock chip sampling and a ground electromagnetic survey were completed. The results of this work have all been received and are being interpreted to define drill targets for a programme that will commence in early Q3 2014 after the Commonwealth drill programme has finished.

## 3. MULGA TANK PROJECT, W.A. (IMPACT 100% AND EARNING 50% - 70%)

### New Targets Identified

During the Quarter, twelve (12) new priority target areas for nickel-copper and copper-gold deposits were identified in a review of a broad spaced ionic leach soil geochemistry survey covering the central part of the 425 sq km project area (Figure 5) ([see announcement dated 19 February 2014](#)).

Six of the targets occur on the west side of the project area, along strike and adjacent to the Mulga Tank Dunite where Impact recently discovered significant nickel and copper mineralisation under about 50 m of transported cover in its maiden drill programme on E39/988 (Figure 6). Drill intercepts included:

- **114.8 m at 0.3% nickel** from 98 m including **2 m at 1.3% nickel**; and **0.5 m at 1.2% nickel** from 211 m; and **0.6 m at 0.7% nickel** from 181 m in Hole MTD011; and
- **0.75 m at 0.85% nickel, 0.35% copper and 0.24 g/t PGE** and **6.7 m at 0.5% nickel** in Hole MTD004 (see [announcement 29 January 2014](#)).

The mineralisation, which occurs over an area of at least 15 sq km, occurs below elevated nickel-in-soil and copper-in-soil values. This suggests that nickel and copper ions are migrating to the surface through the transported cover and are detected by the ionic leach soil geochemistry technique, which is proprietary to ALS Global Laboratories.

Some of the strongest soil responses, up to 2,670 ppb nickel and 4,830 ppb copper and 4.5 ppb gold occur in the north west corner of E39/988 (Figure 6). These values are significantly elevated above the regional background values for these metals. The anomalies are open to the north west along a 10 km strike extent of the greenstone belt within the project area that has not been soil sampled.

The six other targets occur on the east side of the project area and indicate significant potential for copper and gold mineralisation (Figure 6). There has been limited aircore drilling in some of these areas and data from this work is currently being compiled.

The soil samples were mostly taken at a very wide spacing of 400 m between samples with infill samples taken at 200 m intervals in places. This is a very broad sample spacing compared to that commonly used in nickel sulphide exploration. Infill soil survey programmes and further surveys are warranted along strike in areas not yet sampled.

A programme and budget for the next phase of work at Mulga Tank is being prepared.

### **Gravity Survey**

A detailed gravity survey over the Mulga Tank Dunite was completed during the Quarter. The results have been received and are being interpreted.

## **ABOUT THE MULGA TANK PROJECT**

Impact's Mulga Tank Project comprises 13 exploration licences covering 425 km<sup>2</sup> of the Minigwal greenstone belt and surrounding area in the eastern part of the Yilgarn Craton (Figure 5).

### **Exploration Model for Mulga Tank: Perseverance and Rocky's Reward**

The Mulga Tank Project is prospective for nickel (and copper) sulphide deposits similar to the Perseverance (45 Mt at 2% nickel) and Rocky's Reward (9.6 Mt at 2.4% Nickel) mines near Leinster in Western Australia (Figure 5). The Mulga Tank Dunite is also very similar to the unit that hosts the Perseverance nickel deposit as well as the host unit to the Mount Keith disseminated nickel deposit that contains more than 2 million tonnes of nickel metal.

The geology of the area indicates that the prospective basal unit of the Mulga Tank Dunite is preserved over a 12 sq km area and has not been explored. In addition there are many 10's of kilometres of strike of other ultramafic units throughout the Minigwal greenstone belt that have also not been drilled. Some of these units are associated with significant nickel-copper-precious metal-in-soil anomalies.

Impact has discovered three different styles of high tenor nickel and copper mineralisation within and surrounding the Mulga Tank Dunite:

1. Extensive disseminated nickel sulphide within the Mulga Tank Dunite, for example at the SGA Project;

2. High tenor nickel and copper in veins at the base of the Mulga Tank Dunite, for example at the Conductor 2 Prospect. This is very encouraging and demonstrates significant potential for the discovery of a major massive sulphide deposit along many strike kilometres of this very prospective contact;
3. High tenor nickel sulphide in multiple komatiites in a flow channel, for example at the Conductor 1 Prospect. Such channels are an important control on nickel sulphide mineralisation at major nickel mines such as Rocky's Reward, Kambalda and Forrestania in W.A.

Impact's work, together with the results from previous explorers drill holes, demonstrates that the Mulga Tank Dunite contains nickel sulphides in multiple horizons over a very large area of many square kilometres.

### **Summary of the licence ownership at the Mulga Tank Project**

Of the 13 licences in the Mulga Tank Project, Impact:

- owns 100% of six licences (E39/1632 and E39/1633 with another four under application);
- owns 20% of E39/988, with Golden Cross 80%. Impact has the right to earn a further 50% from Golden Cross to move to 70% ownership;
- owns 25% of E39/1072, with Golden Cross 75%. Impact has the right to earn a further 50% from Golden Cross to move to 75% ownership; and
- is earning a 50% interest from Golden Cross in five other licences - E39/1439, E39/1440, E39/1441, E39/1442 and E39/1513.

A further \$1.0 million must be spent by Impact before November 2017 to complete the earn-in from Golden Cross.

## **4. OTHER PROJECTS**

### **4.1 BOTSWANA URANIUM (IMPACT 100%)**

In 2012 Impact discovered a large multi-metal alteration system at the Red Hills prospect in Botswana similar to those around iron oxide-copper-gold-rare earth-uranium deposits such as Carapeteena and Olympic Dam in South Australia. A follow up ground gravity survey identified several priority targets for follow up work.

The results of an MMI soil geochemistry survey over the Red Hills Prospect were received last quarter. A total of 424 samples were analysed for a wide variety of metals and interpretation of the results is in progress.

In May 2013 Impact announced that it had agreed to sell four of its Prospecting Licences in Botswana to Shumba Resources Limited, a Botswana registered coal exploration and development company, for US\$250,000 in cash and \$550,000 in shares. The terms of the deal are:

1. US\$50,000 on signing of the agreement (completed);
2. US\$50,000 on renewal of the licences; and



3. US\$150,000 and the shares on the successful transfer of the licences to Shumba.

The Botswana Department of Mines Energy and Water renews licences on a Quarterly basis. Impact is awaiting notification as to whether or not the licences were renewed in April or will be renewed the end of June, however this is subject to workload at the Department. This will determine the completion date for the agreement with Shumba and the receipt of the proceeds.

#### 4.2 QUEENSLAND PROJECTS

A review of the Company's Queensland projects was completed. All licences have been relinquished except for one licence near Clermont with a 10 km long structure that is host to significant mineralisation including the Retro and Retro Extended Projects.

#### 4.3 TURKEY

Following a review of the Turkish assets and political situation in Turkey during the Quarter, a decision was made to close the operations there. Discussions are in progress with one party to dispose of the subsidiary. If this cannot be concluded, the Turkish subsidiary will be wound up.

### 5. CORPORATE

The Merger Implementation Agreement ("MIA") between Impact and Invictus Gold Limited ("Invictus"; ASX: IVG) was completed on 6 January 2014.

Under the associated Share Scheme, Impact offered five IPT shares for every four IVG shares on issue. Impact acquired 28,962,680 Invictus shares, being the number of shares it does not already own or control, and issued 36,203,364 new Impact shares.

In addition, under an associated Option Scheme, eligible Invictus optionholders have received one new listed Impact option for every one listed Invictus option held at an exercise price of 20 cents and expiring 30th November 2015. The options trade under ASX code IPTO.

As well as the reduction in costs achieved by relinquishment of licences and the slowdown in overseas exploration, significant cost reductions have also been made at the Perth head office. As part of this process, Impact will relocate its office in June.



**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.*

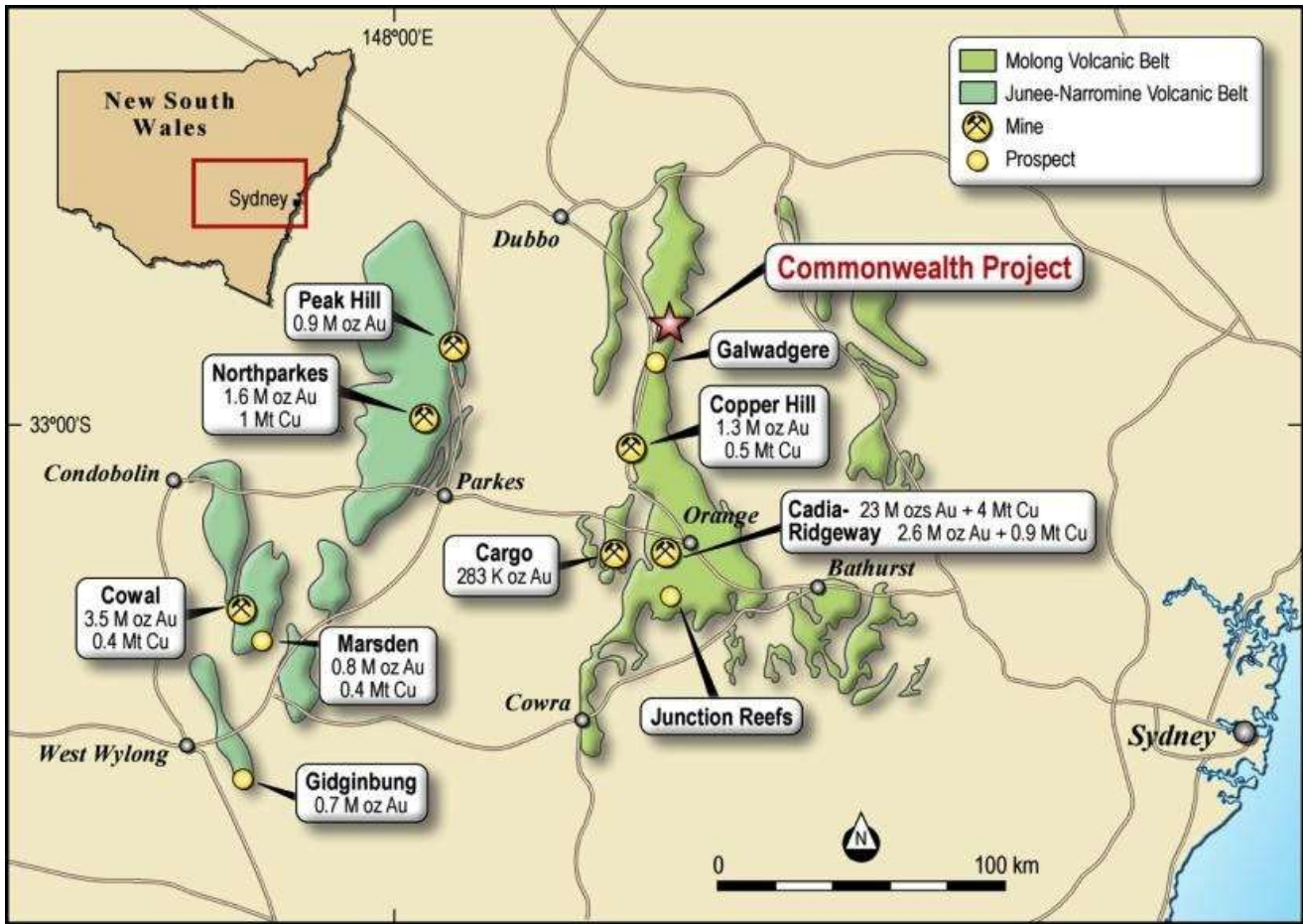
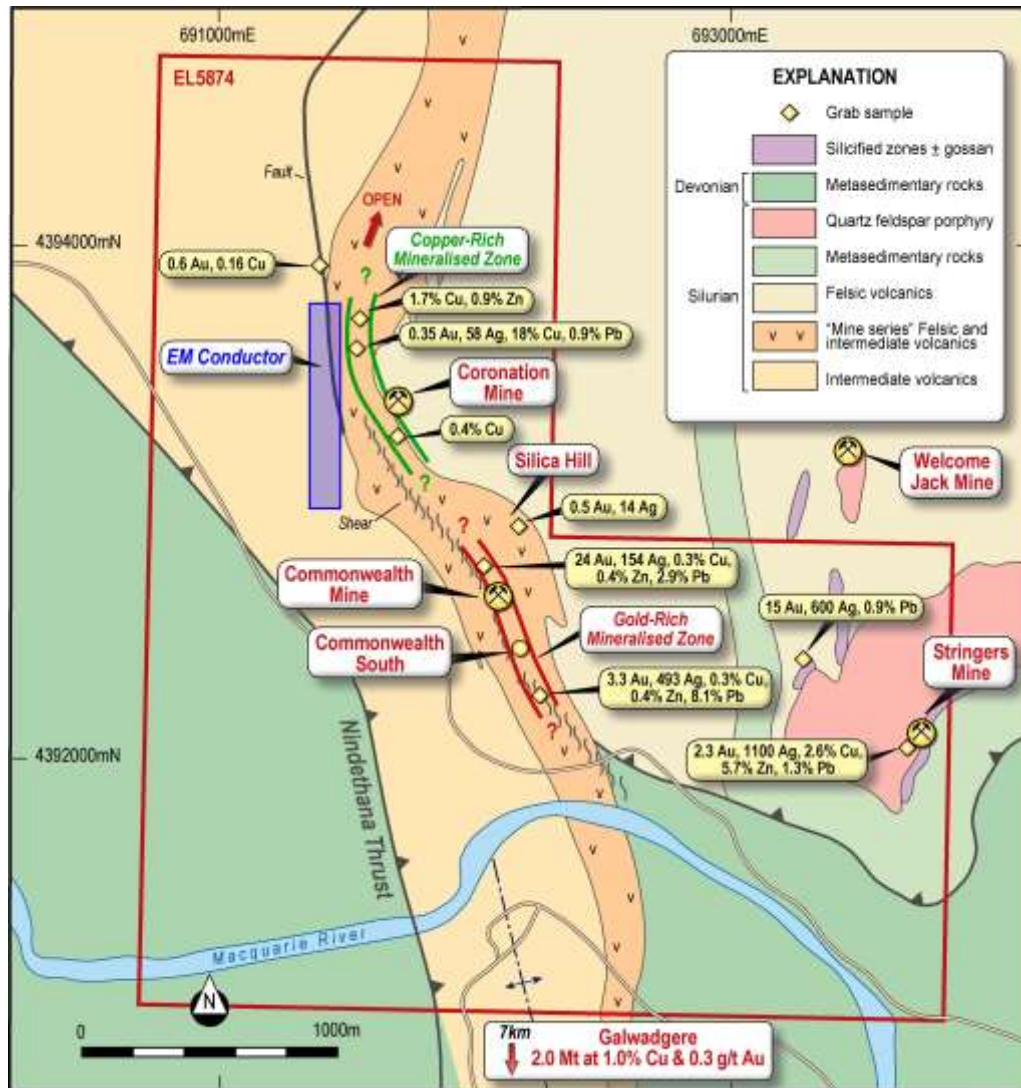


Figure 1. Location of the Commonwealth Project and Location of Major Mines and Deposits in the Lachlan Fold Belt of New South Wales.



**Figure 2.** Commonwealth Project: Geology, Prospects and Significant Rock Chip Assays. Previous exploration focused solely only on 300 m of strike between the Commonwealth Mine and Commonwealth South Prospect.



**Figure 3.** Examples of mineralised rocks from the Coronation area. Malachite (green colour) stained weathered breccia (left) and silica altered pyrite-chalcopyrite-bearing rock (right).

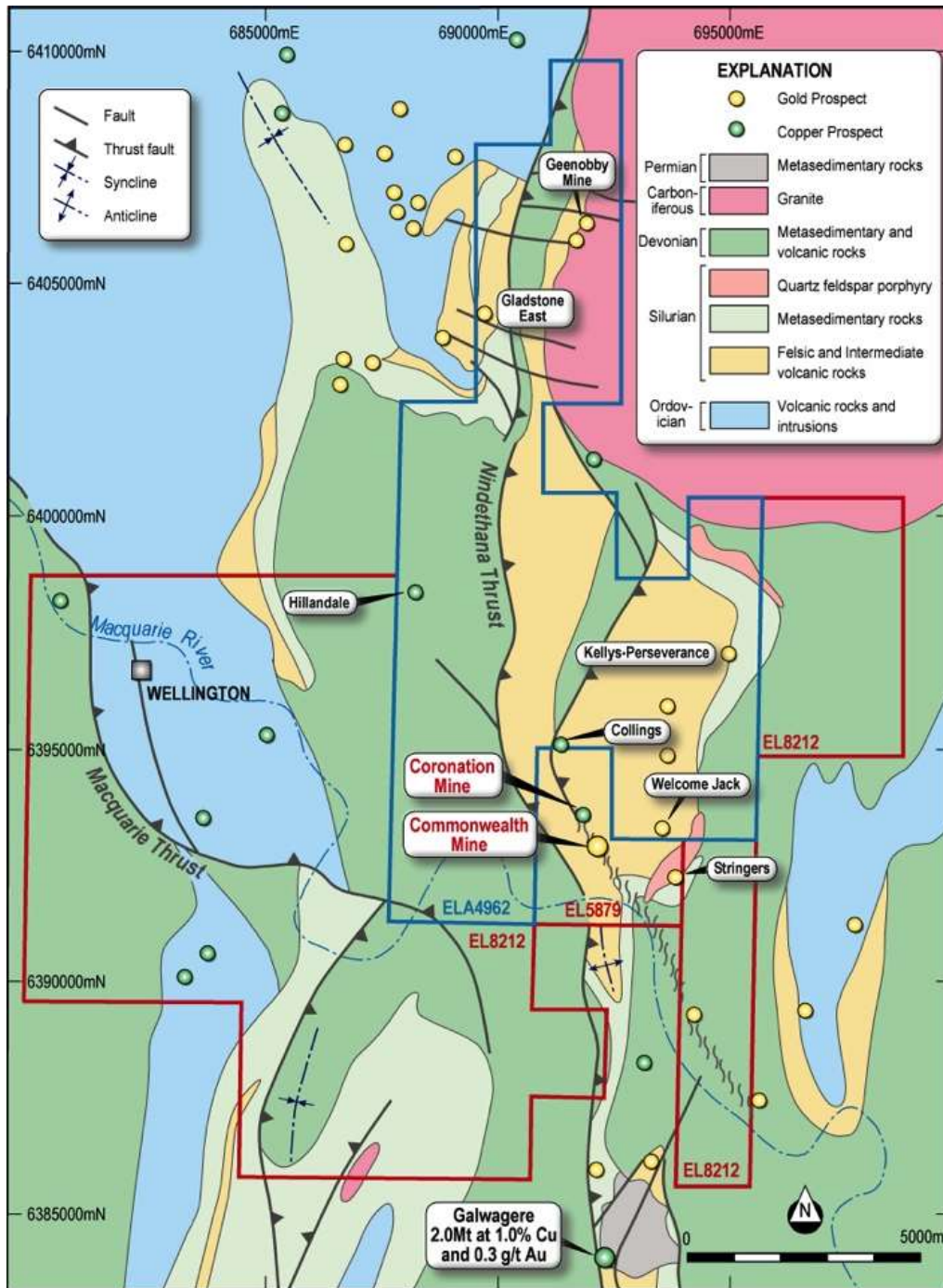
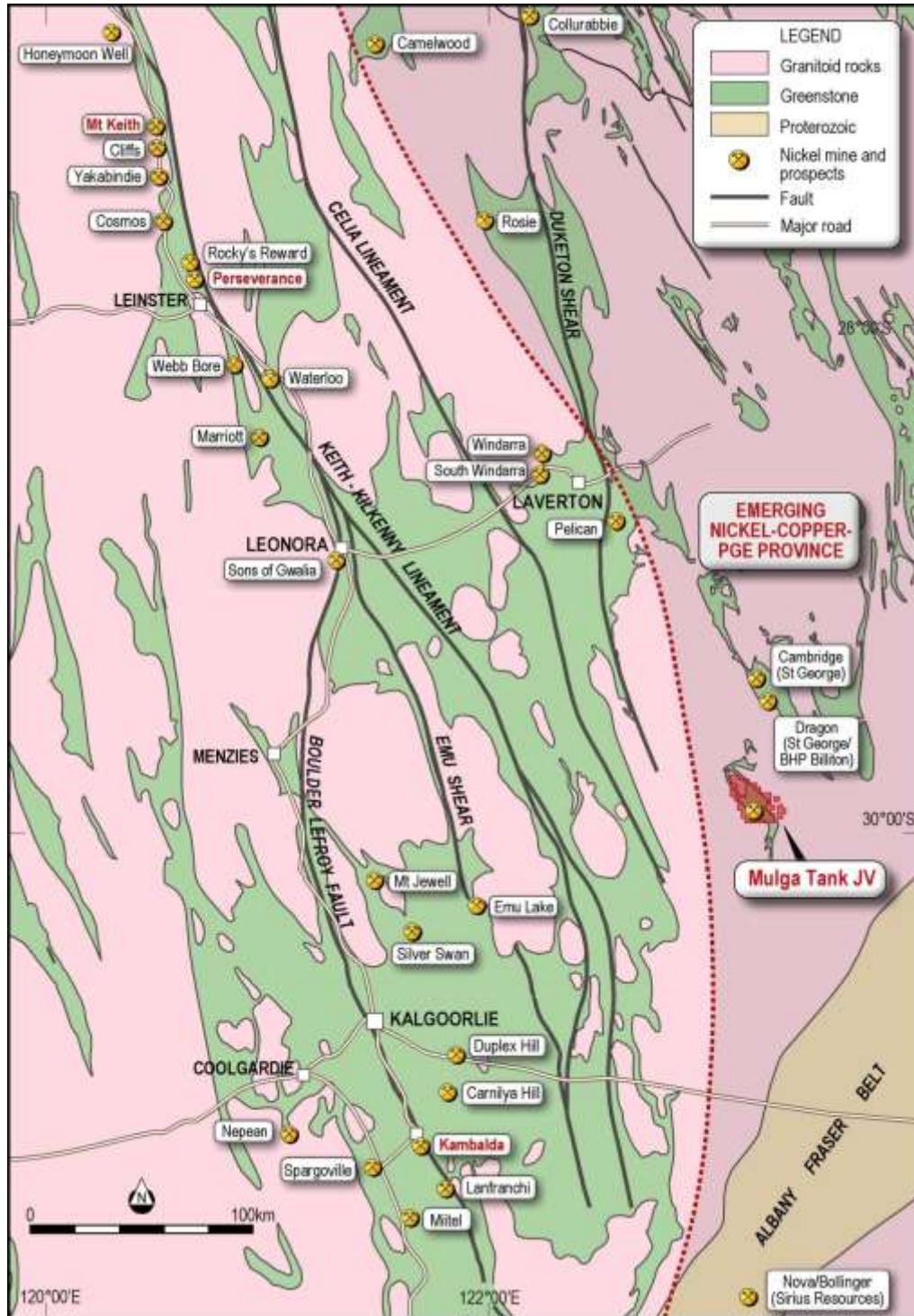
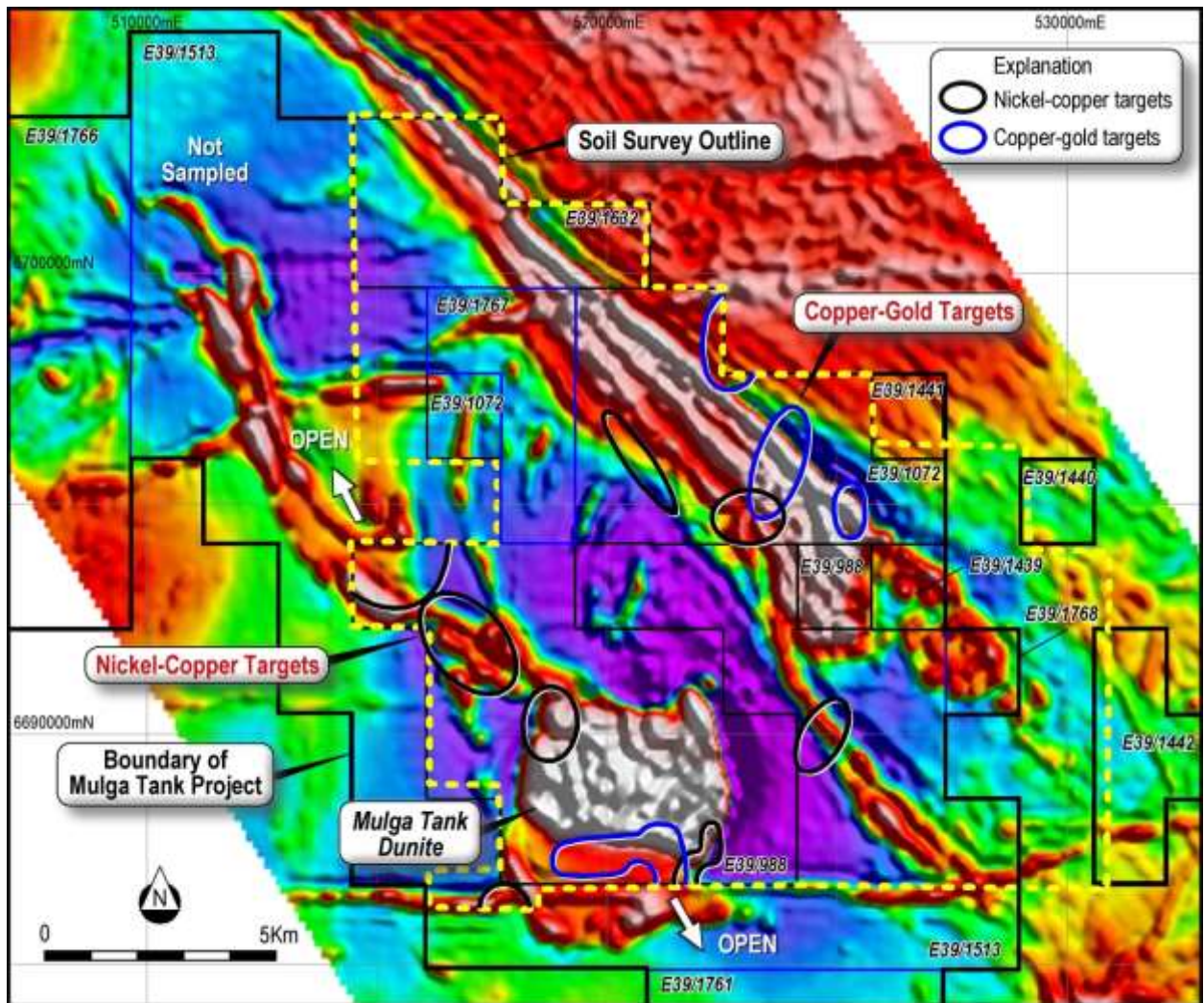


Figure 4. Geology and mineral occurrences in the Molong Volcanic Belt and showing Impact's licences that now cover 315 sq km.



**Figure 5.** Location of Impact’s Mulga Tank Project and significant nickel sulphide mines and prospects including Perseverance and Rocky’s Reward deposits with new nickel-copper-PGE discoveries in the emerging nickel-copper province to the east.



**Figure 6.** Image of magnetic data over the Mulga Tank Project showing the location of the new targets identified in the soil geochemistry data.



ASX Code: **IPT**



## APPENDIX 1 - SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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>The targets at Mulga Tank have been drilled by Reverse Circulation (RC) and diamond drill holes (DD). Eight holes for 3,025 m were completed.</p> <p>A hand held Olympus XRF machine was used to take multi-element readings on the samples bags from the RC drill pre-collars (1 reading every 1 metre) and at 25 cm to 50 cm intervals on the diamond core. These readings are a guide only and do not constitute an accurate or precise assay. Impact has conducted a number of quality control experiments to determine the optimal reading time and number of readings per sample site. A correlation of these readings against the assay data suggests that at values greater than 1% nickel, the XRF analyser gives a good approximation to the chemical assay value.</p> <p>Drill holes were oriented to intersect the dip of electromagnetic conductors as interpreted by Impact's consultants Newexco.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	<p>RC samples have been collected by riffle splitter. Diamond core was used to obtain high quality samples that were logged for lithological, structural, alteration and other attributes. Sampling was carried out under Impact Minerals Ltd protocols and QAQC procedures as per industry best practice.</p> <p>A combination of mapping, soil geochemistry, airborne magnetic data and ground EM surveys identified the Mulga Tank target.</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>Diamond core is mostly NQ2 size, sampled on geological intervals cut into half core to give sample weights under 3 kg. Reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised. Samples were crushed, dried and pulverised (total prep) to produce a sub-sample for analysis by four acid digest with an ICP/OES finish for base metals and lead collection fire assay with AAS finish for precious metals.</p> <p>The main sulphide types are expected to be pentlandite and chalcopyrite, with pyrite, and minor sphalerite. Non-sulphide nickel species in weathered and transitional material have not yet been identified.</p>
Drilling techniques	<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>Diamond drilling accounts for 75 % of the drilling and comprises HQ and NQ2 sized core. Pre-collar depths range from 50 m to about 150 m and hole depths range from 300 m to 570 m. The core was oriented using a down-hole orientation tool at the end of every run with 70% of orientations rated as "good".</p> <p>RC drilling in the pre-collar accounts for 20 % of the total drilling and comprises 140 mm diameter face sampling hammer drilling.</p>
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	<p>Diamond core and RC recoveries are logged and recorded in the database. Overall recoveries are &gt;95% for Mulga Tank and there are no core loss issues or significant sample recovery problems.</p>



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Criteria	JORC Code explanation	Commentary
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	Diamond core at Mulga Tank 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 drillers. RC samples were visually checked for recovery, moisture and contamination.
	<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>	No sample bias has been established because an insufficient number of samples have been assayed.
<b>Logging</b>	<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>	Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape and fill material is stored in the structure table of the database.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of diamond core and RC samples at Mulga Tank recorded lithology, mineralogy, mineralisation, structural (DDH only), weathering, colour and other features of the samples. Core was photographed in both dry and wet form.
	<i>The total length and percentage of the relevant intersections logged</i>	All drillholes were logged in full, apart from rock roller diamond hole pre-collar intervals of between about 50 m and 70 m depth.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Core for Mulga Tank was cut in half onsite using an automatic core saw. All samples were collected from the same side of the core.
	<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>	The sample preparation of diamond core for Mulga Tank follows industry best practice in sample preparation involving oven drying, coarse crushing of the half core sample down to ~10 mm followed by pulverisation of the entire sample (total prep) using Essa LM5 grinding mills to a grind size of 85% passing 75 micron. The sample preparation for RC samples is identical, without the coarse crush stage.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Field QC procedures involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes. The insertion rate of these averaged 1:50.
	<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>	Field duplicates are done every 50 samples.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample sizes are considered to be appropriate to correctly represent the sulphide mineralisation at Mulga Tank based on the disseminated style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.





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Criteria	JORC Code explanation	Commentary
<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>	See optiro. An industry standard fire assay technique using lead collection with an Atomic Absorption Spectrometry (AAS) finish was used for Au, Ag, Pt, Pd.
	<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.
	<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>	Quality control procedures for assays are as per Impact Minerals protocols. Accuracy and precision are within acceptable limits.
	<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>
<i>The use of twinned holes.</i>		No twin holes have been drilled at Mulga Tank.
<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>		Primary data was collected using a set of standard Excel templates on Toughbook laptop computers using lookup codes. The information was sent to IOGlobal/Reflex for validation and compilation into a SQL database server.
<i>Discuss any adjustment to assay data.</i>		
<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>	Drill holes have been located by hand held GPS. Down-hole surveys used single shot readings have been completed during drilling at least at 50 m intervals.
	<i>Specification of the grid system used.</i>	The grid system for Mulga Tank is MGA_GDA94, Zone 51.
	<i>Quality and adequacy of topographic control.</i>	Standard government topographic maps and hand held GPS have been used for topographic control. The land surface is flat and increased accuracy and precision for topographic contours is not required at this stage.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	This is a first pass reconnaissance drill programme designed to test geochemical and geophysical anomalies. Drill spacing is adequate for that and will change according to on-going 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>	This is a first pass reconnaissance drill programme designed to test geochemical and geophysical anomalies. Drill spacing is adequate for that and will change according to on-going results.
	<i>Whether sample compositing has been applied.</i>	Samples will be composited to one metre lengths and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit).
<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>	The targets have been drilled sub-perpendicular to mineralisation within the stratigraphy, but subparallel to the orientation of some veins in the mineralised trend. Structural logging based on oriented core to determine the controls on mineralisation are on-going.



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	<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 orientation based sampling bias has been identified at Mulga Tank in the data at this point, although the vertical sulphide veins may cause hole orientations to be changed in future drill programmes.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by Impact Minerals Ltd. Samples for Mulga Tank are stored on site and delivered by Impact Minerals Ltd personnel to Kalgoorlie for initial sample preparation by Genalysis who then transport the samples to Perth for 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.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	At this stage of exploration a review of the sampling techniques and data by an external party is not warranted. An internal review of the sampling techniques and data will be completed at the end of the current programme.

## 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 Mulga Tank Project comprises 13 exploration licences covering 425 km <sup>2</sup> . Mulga Tank is located wholly within Exploration Licence E39/988. Impact Minerals Ltd (IPT) has a 20% interest in the tenement with Golden Cross Resources Limited (GCR: 80%). There is no Native Title Claim over the licence.
	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 tenement is in good standing with no known impediments. IPT has the right to earn 70% ownership with \$1.9M expenditure commitment before November 2017.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	Limited bedrock-cover interface percussion drilling completed by previous explorers focused on the southern contact of the dunite, a circular, strongly magnetic feature 3.5 km by 4 km in diameter that is interpreted to represent a flat-lying ultramafic sill. A total of 28 RC and 4 diamond holes were completed.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	Mulga Tank is interpreted as an ultramafic hosted primary magmatic nickel sulphide deposit, similar in style to the Perseverance and Rocky's Reward nickel mines at Leinster in Western Australia. The Mulga Tank Dunite is also similar to the unit that hosts the Mount Keith disseminated nickel sulphide deposit. There are two prospective units (Upper and Lower) that host the initial sulphide intersections at a depth of 300 and 350 metres vertically (respectively).



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Criteria	JORC Code explanation	Commentary
<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>	Refer to Table 2 in body of text. Further details are not material for this early stage of exploration.
<b>Data aggregation methods</b>	<p>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.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>All reported assays have been length weighted. No top outs have been applied. A nominal cut-off of 0.3% to 0.5% nickel has been applied.</p> <p>High grade massive sulphide intervals internal to broader zones of sulphide mineralisation are reported as included intervals.</p> <p>No metal equivalent values are used for reporting exploration results.</p>
<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>	The Mulga Tank deposit is a flat lying ultramafic sill. Holes to date have been sub-vertical and whilst this is perpendicular to stratigraphy, steeply dipping sulphide veins are at a sub-optimal orientation to the drillhole.
<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>	<p>The drill targets at Mulga Tank have been ranked on the basis of soil geochemistry and ground EM results.</p> <p>Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is stored in the structure table of the database.</p>



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Criteria	JORC Code explanation	Commentary
<b>Further work</b>	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 assay results which is ongoing.