



**ASX: IPT** Number: 318/141113

# Date: 14 November 2013

**ASX ANNOUNCEMENT** 

# DRILL PROGRAMME UPDATE: MULGA TANK NICKEL PROJECT W.A.

- Narrow zones of high grade disseminated and veins of remobilised massive nickel-copper sulphides have been discovered in the first drill hole to test the first of seven EM conductors;
- The EM anomaly is not explained by these sulphide zones and there are no black shales or other possible sources for the conductor present. This indicates that the conductor is off-hole. A down-hole EM survey will commence within days to more accurately locate the anomaly;
- The disseminated sulphide zones are up to 6 m thick and have returned assays with a grade range of between 0.5% and 2% nickel and 0.1% to 0.8% copper from spot readings taken with a hand held XRF machine. Similarly the narrow veins of remobilised nickel copper sulphide which are up to 30 cm long and 5 cm wide have returned assays of up to 8% nickel and 5% copper;

Investors should note that these assay results are the averages of a number of spot readings and that the mineralisation does not occur over mineable widths.

- The drill hole was not at an optimal orientation to intersect either the conductor nor the veins of massive sulphide which are vertical; and
- The geology and mineralisation discovered in this first hole confirm the very high prospectivity of the project for the discovery of a significant massive nickel-copper sulphide deposit.

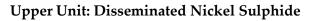
Impact Minerals (ASX:IPT) is pleased to announce that the first drill hole (MTD004) at the Mulga Tank Project 200 km northeast of Kalgoorlie in Western Australia (Figure 1) and designed to test a strong electromagnetic (EM) conductor at a depth of about 310 m below surface has been completed.

The hole, which was drilled at 80 degrees to the south, is the first of seven EM anomalies (Figure 2) to be tested in this programme, all of which lie within E39/988 (Impact 20% and earning a further 50% in joint venture with Golden Cross Resources Limited for 70% in total: Figure 3).

High grade (tenor) disseminated nickel-copper sulphides and remobilised narrow veins of massive nickel-copper sulphide have been discovered that are associated with two mineralised ultramafic units 20 m apart (Upper Unit and Lower Unit) that occur within a sequence of interlayered ultramafic sills, flows and volcanic sedimentary rocks.

This sequence is similar to those that host major nickel sulphide deposits in channels at the base of ultramafic units at Rocky's Reward-Venus and Kambalda in W.A. (Figures 1 and 4).

Importantly this sequence does not contain any black shale or sulphide-bearing sediments that are common sources of EM anomalies that do not contain mineralisation.



N

An 80 cm thick zone with up to 10% disseminated pyrrhotite and pyrite (Figure 5a) occurs at a depth of 302 m within a 20 m thick strongly magnetic ultramafic unit that contains trace to 2% sulphide. The disseminated zone contains up to 2% nickel and 0.75 % copper as determined by numerous spot readings taken with a hand held XRF machine.

ASX Code: IPT

The sulphide zone is of insufficient thickness to explain the strength of the EM anomaly and therefore the target conductor is off-hole and still unexplained. It is possible that this disseminated nickel sulphide zone is lateral to a more significant zone of mineralisation that could be the target conductor.

Detailed logging of the diamond core indicates that the ultramafic units dip moderately to the southwest. Therefore any potential channels of nickel-copper sulphide would be at the base of these units and have a southerly plunge sub-parallel to the drill hole direction. The EM anomaly was modelled as having a northeast plunge.

A down hole EM survey to more accurately define and locate the EM anomaly will be completed by Gap Geophysics using the highest powered transmitter available in Australia. Gap is presently mobilising to site with results, to be interpreted Newexco consultants, due by early next week.

## Lower Unit: Disseminated and Remobilised Nickel-Copper Sulphides

A 6 metre thick zone with up to 5% disseminated pyrrhotite and pyrite occurs from about 355 m depth towards the base of a 20 m thick ultramafic to mafic unit. The disseminated zone has returned a grade range of between 0.3% to 0.8% nickel and up to 0.12% copper as determined by numerous spot readings taken with a hand held XRF machine.

A 30 cm long steeply dipping narrow vein of pyrrhotite (iron sulphide), pentlandite (nickel sulphide), chalcopyrite (copper sulphide) occurs at a depth of 362 m in the immediate footwall to the Lower Unit (Figure 5b). The vein contains up to 8% nickel and 5% copper as determined in numerous spot readings taken with a hand held XRF machine.

The vein texture is very similar to those present around some massive sulphide deposits where the sulphide has been remobilised into later faults and fractures. Importantly the vein and other important structures are sub-parallel to the drill core axis (Figure 5b) and therefore the drill hole is not at the optimum orientation to intersect them. Impact considers it highly likely that many more such veins are present in the area.

The major and trace element geochemistry of the Lower Unit indicates that the parent magma was strongly contaminated by sedimentary material. This is a key trigger for the precipitation of nickel-copper sulphides.



#### Discussion

Although the source of the EM anomaly at Target 1 has yet to be identified, the detailed logging and detailed geochemical studies using the hand held XRF machine at 25 cm intervals along the core have further confirmed and enhanced Impact's view that the Mulga Tank Project is very prospective for the discovery of a significant deposit of high grade nickel-copper sulphides.

In particular Impact has shown that:

- 1. the tenor of the nickel and copper sulphides found is high. This is the first direct indication of high grade nickel-copper sulphides in the Minigwal greenstone belt and also the south east part of the Yilgarn Cration of W.A.;
- 2. the target sulphide deposits may contain significant copper as well as nickel;
- 3. there are two prospective ultramafic units at the first target conductor: an upper unit that hosts disseminated nickel sulphides and which may be lateral to a channel of massive nickel sulphides; and a lower unit that hosts disseminated nickel-copper sulphides and overlies a narrow vein of massive sulphide that may be remobilised from a larger massive sulphide deposit, also in a channel.
- 4. Impact's conceptual model for the mineralisation and geology of the area has been confirmed.

The drill rig is being moved to the second target conductor with drilling expected to start tomorrow. This conductor is immediately north of previous diamond drill hole MTD003 which returned best assay results of **11 m at 0.37% nickel including 1 m at 1.12% nickel** in a zone of disseminated magmatic sulphides.

The rig will be moved back to Target 1 when the results of the down hole EM survey are available.

The drill programme, which is in part funded by a \$134,000 grant from the W.A. State Government will comprise 4,000 m of reverse circulation and diamond drilling to test all seven targets.

Mithael for

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 December 2004 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.



#### ABOUT THE MULGA TANK PROJECT

#### Summary of the tenement ownership in the Mulga Tank Project

N

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).

Of the 13 licences, 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 (Figure 5).

A further \$1.9 million must be spent by Impact before November 2017 to complete the earn-in from Golden Cross.

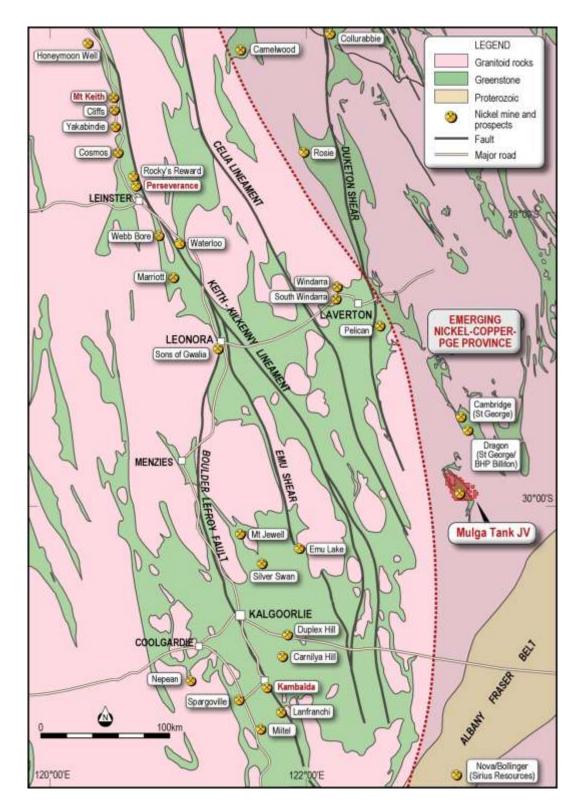
#### EXPLORATION MODEL FOR MULGA TANK: PERSEVERANCE AND ROCKY'S REWARD

A review by Impact of previous diamond drill core confirmed that much of the nickel sulphide mineralisation discovered at Mulga Tank is primary magmatic sulphide hosted in ultramafic rocks similar to those that host the significant nickel deposits found at the Perseverance (45 Mt at 2% nickel) and Rocky's Reward (9.6 Mt at 2.4% Nickel) mines near Leinster in Western Australia (Figures 1 and 3).

The review also indicated that the Mulga Tank Dunite is 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 indicates that the prospective basal unit of the Mulga Tank Dunite is preserved over a 12 sq km area and has not been explored. The conductors identified at West Plates and East Plate on E39/988 all represent drill targets for the Perseverance Model with potential to host more than one million tonnes of nickel (Figures 1 and 3).

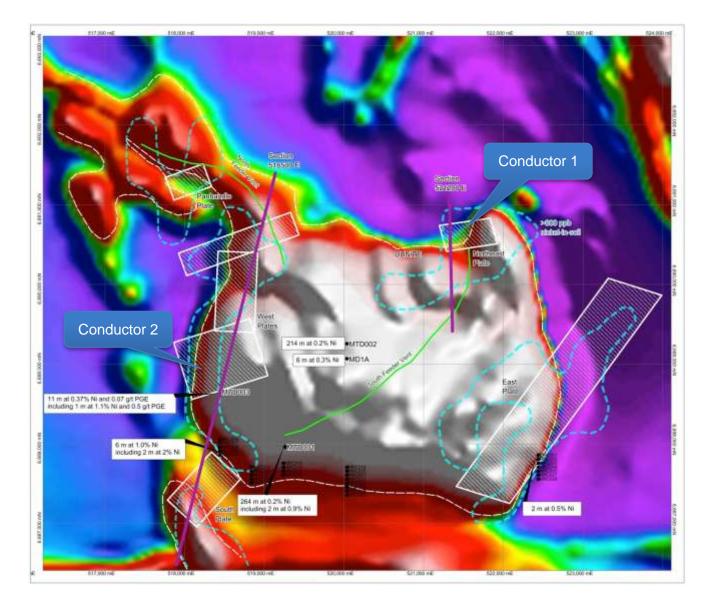
Conductors identified at Northeast Plate, South Plate and Panhandle Plate on E39/988 occur at the base of separate narrow ultramafic intrusions interpreted from the airborne magnetic data that surround the main Mulga Tank Dunite. These target areas represent drill targets for the Rocky's Reward Model with the potential to host more than 200,000 tonnes of nickel (Figures 1 and 3).





**Figure 1:** 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.



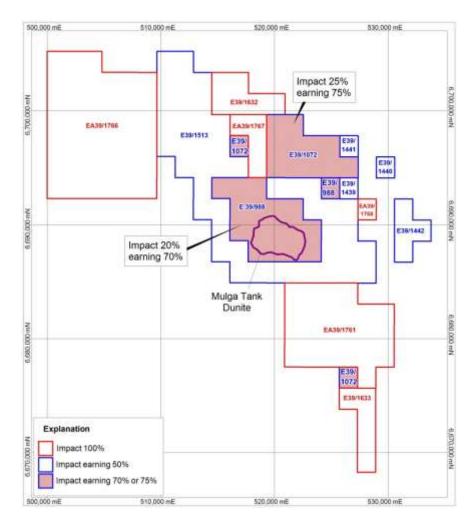


**Figure 2.** Image of the Total Magnetic Intensity from airborne magnetic data over the Mulga Tank Dunite (white outline) showing the location of the first Conductor and the modelled geometry of all seven of the priority EM targets. Note the coincidence with the nickel-in-soil geochemistry and also the location of previous drill hole MTD003 with a best result of 11 m at 0.37% nickel including 1 m at

1.1% nickel that lies immediately south of one of the conductors on the west side of the dunite.

ABN 52 119 062 261

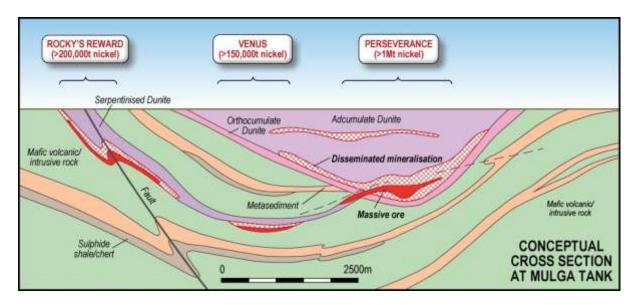




U

Ni

Figure 3. Tenement ownership at the Mulga Tank Project.



**Figure 4.** Conceptual cross-section for the Mulga Tank Dunite and surrounding area showing the Perseverance and Rocky's Reward exploration model.

An ASX listed Australian company focused on uranium and copper-nickel-PGE exploration.

## ASX Code: IPT



**Figure 5a (left hand side).** Disseminated pyrrhotite and pyrite with up to 2% nickel and 0.8% copper from 302.5 m.

**Figure 5b (right hand side).** Vein of massive nickel and copper sulphides with pyrrhotite. The paler coloured areas in the lower part of the vein are crystals of pentlandite (nickel sulphide). The pale yellow areas in the very upper part of the vein are chalcopyrite (copper sulphide).



An ASX listed Australian company focused on uranium and copper-nickel-PGE exploration.