



ASX Code: **IPT**

## ASX ANNOUNCEMENT

Date: 6 November 2013

**ASX: IPT**

Number: 316/061113

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### DRILLING STARTS AT THE MULGA TANK NICKEL PROJECT W.A.

Impact Minerals (ASX:IPT) is pleased to announce that drilling has now started at the Mulga Tank Project 200 km northeast of Kalgoorlie in Western Australia (Figure 1).

The drill programme will test seven coincident electromagnetic (EM) and nickel-cobalt-in-soil anomalies identified by Impact on E39/988 in which Impact recently purchased a 20% interest and has the right to earn a further 50% interest (total 70%) as part of the Mulga Tank Joint Venture with Golden Cross Resources Limited (see announcement dated [4<sup>th</sup> November 2013](#)).

The start of the drill programme was announced today as part of a presentation to shareholders at an Extraordinary General Meeting held to approve the recent \$3 million placement (see announcement dated [19<sup>th</sup> September 2013](#)). The presentation is attached to this announcement.

A short Boardroom Radio interview with Managing Director Dr Mike Jones can be found at this link:

<http://www.brr.com.au/event/118253>

Recent further interpretation and modelling of the ground EM data has now highlighted the possible geometry of the conductors and the strong coincidence with the soil geochemistry (Figure 2).

Importantly the time constants for the conductors range from 20 ms to 175 ms which are similar to those seen in many massive sulphide deposits. **However investors should note that other sources of high conductivity are possible.**

One of the EM conductors on the western side of the Mulga Tank Dunitite lies immediately north of a previous diamond drill hole (Figure 2, MTD003). This hole returned an intercept from 202 m depth of:

**11 m at 0.37% nickel, including 1 m at 1.12% nickel, 0.5 g/t PGE and 260 ppm cobalt.**

This zone of mineralisation contains magmatic nickel sulphides and the proximity of this to the EM conductor is encouraging (see announcement [23 July 2013](#)).

The drill programme, which is in part funded by a \$134,000 grant from the W.A. State Government Collaborative Drilling Initiative will take about three weeks to complete and will comprise 4,000 m of reverse circulation and diamond drilling to test all seven targets (Figure 2).



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## Summary of the tenement ownership in 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 3).

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 3).

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 4).

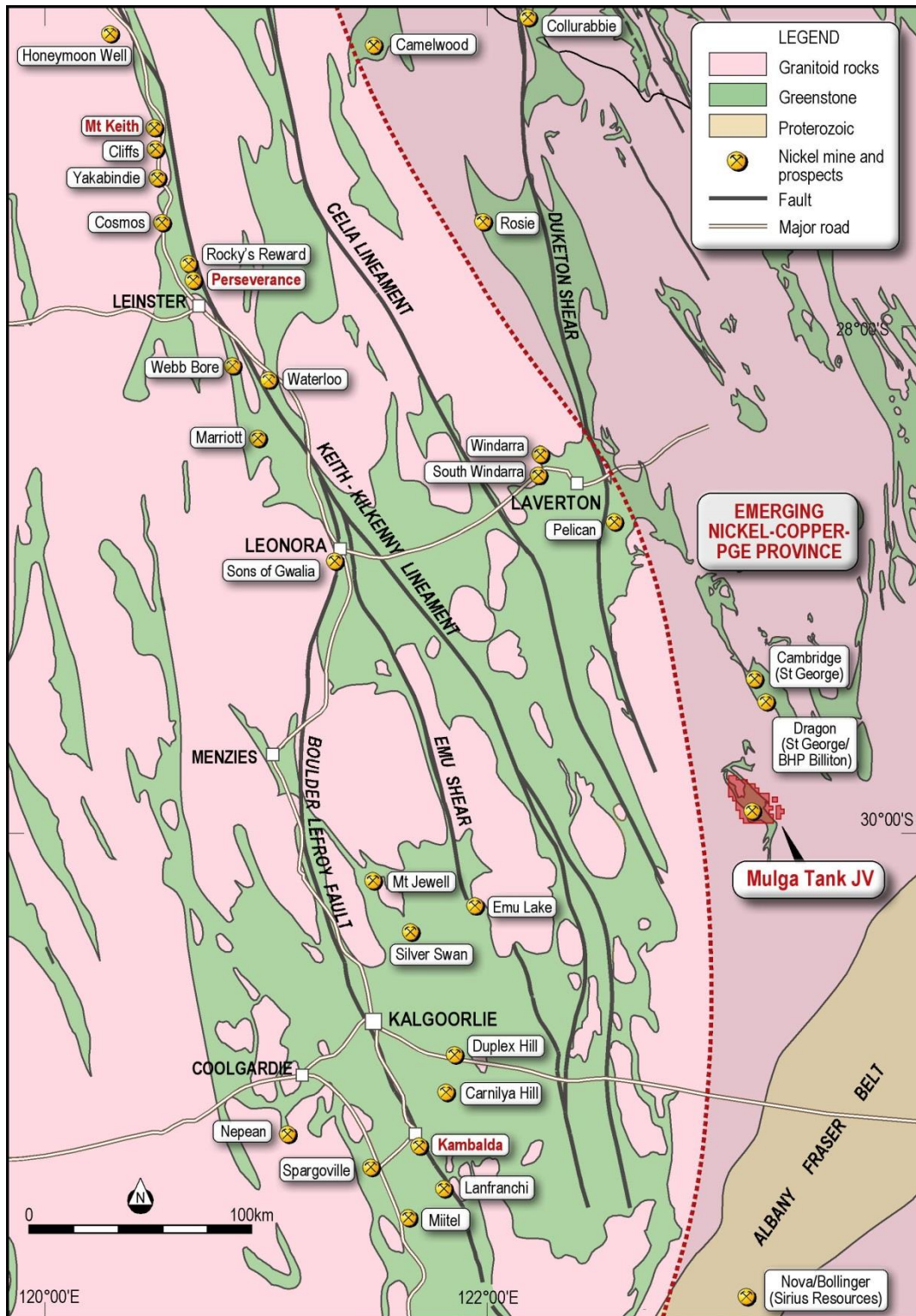
The review also indicated that the Mulga Tank Dunite is very similar to the unit that hosts the Perseverance nickel deposit as well as the host unit to the Mount Keith disseminated nickel deposit that contains more than 2 million tonnes of nickel metal. The geology indicates that the prospective basal unit of the Mulga Tank Dunite is preserved over a 12 sq km area and has not been explored. The conductors identified at Northeast Plate, 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 2 and 4).

Conductors identified at 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 2 and 4).

**Dr Michael G Jones**  
**Managing Director**

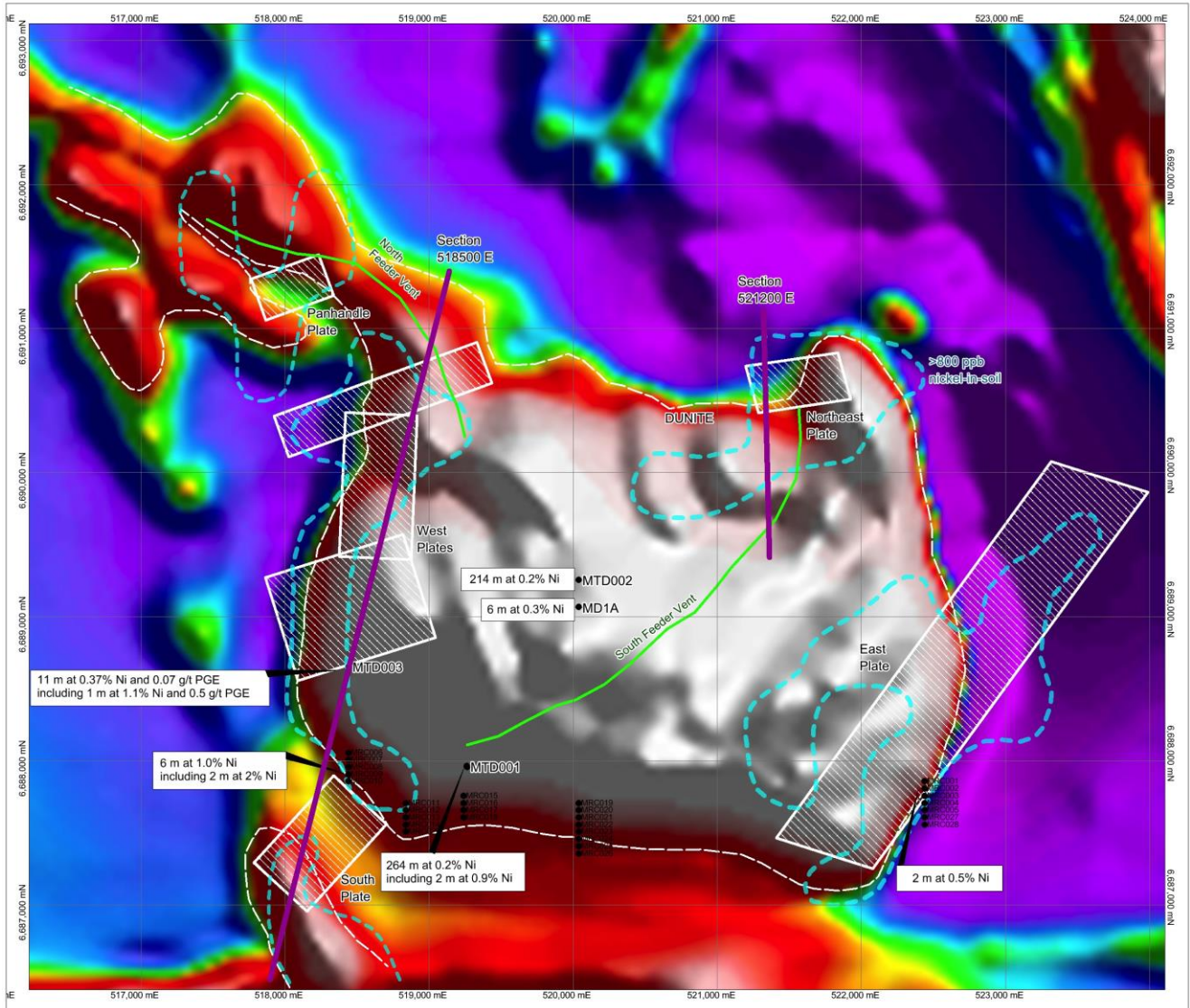
*The review of exploration activities and results contained in this report is based on information compiled by Dr Mike Jones, a Member of the Australian Institute of Geoscientists. He is a director of the company and works for Impact Minerals Limited. He has sufficient experience which is relevant to 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.*





**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 Dunitite (white outline) showing the modelled geometry of the seven 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 dunitite.

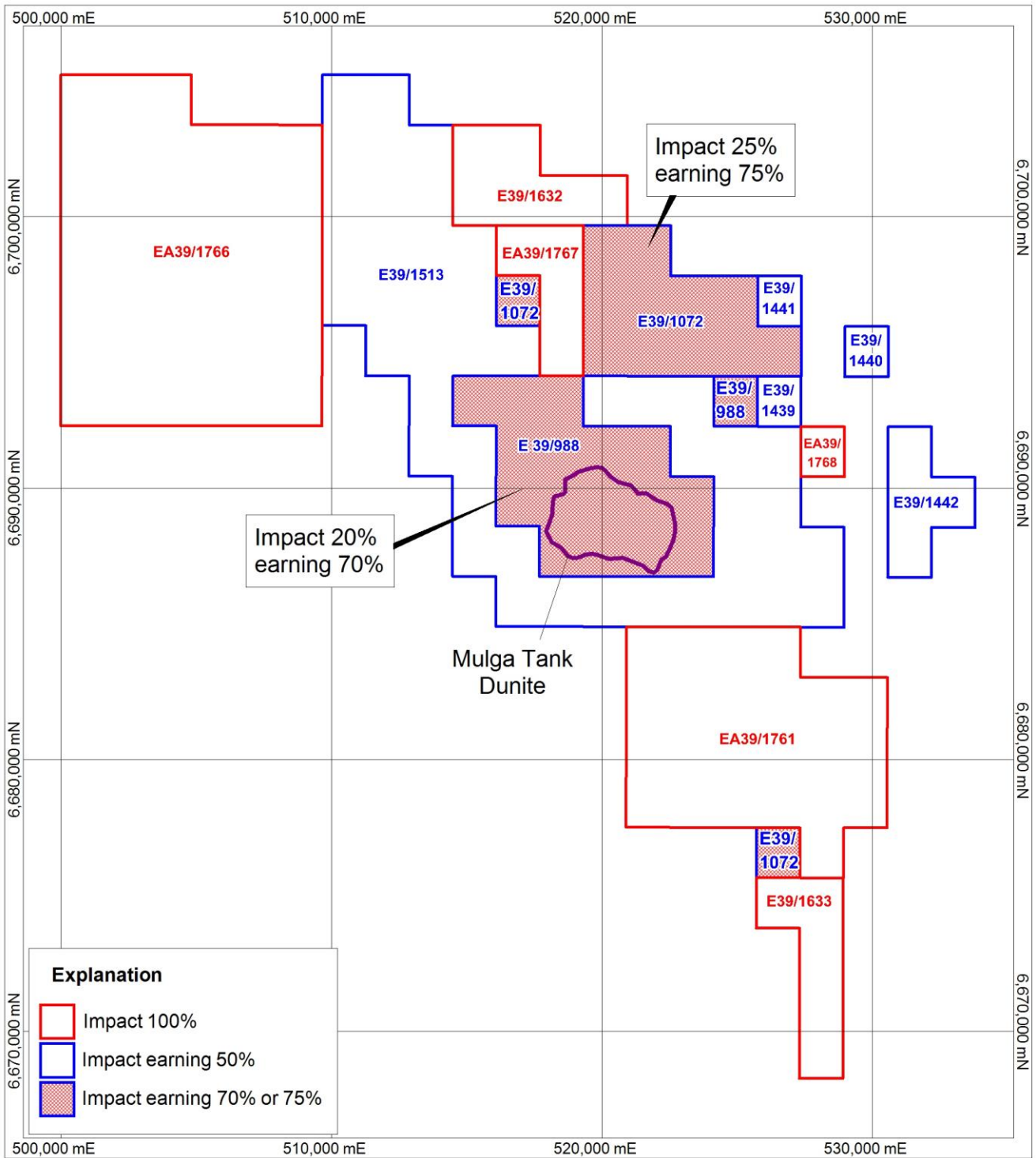
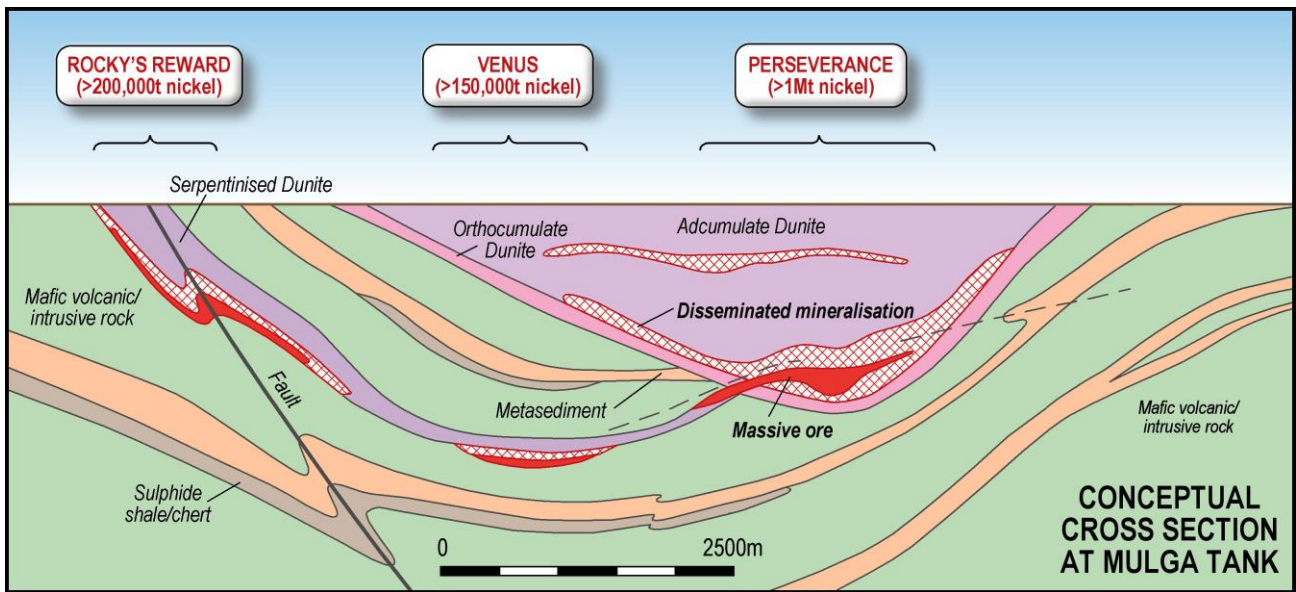


Figure 3. Tenement ownership at the Mulga Tank Project.





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

# Impact Minerals Limited Merger With Invictus Gold Limited

October 2013

Mining 2013



*Mulga Tank, WA*



*Commonwealth, NSW*



*Broken Hill, NSW*



# Disclaimer and Competent Persons Statement

- 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. Mike Jones is a working Director of 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.
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# Introducing Impact Minerals

	Impact Minerals (ASX: IPT)	Invictus Gold (ASX: IVG)
Listed on ASX	November 2006	January 2011
Shares on Issue	450m	111m (74.9% IPT)
Options	28m unlisted	8m listed (IVGOA)
Share Price	4-4.5¢	3 - 4¢
Market Cap	\$16m	\$4m
Key Projects	Mulga Tank JV: Ni-Cu-PGM (WA) Broken Hill JV: Ni-Cu-PGM (NSW) Botswana Uranium (Africa) Botswana Ni-Cu-PGM (Africa)	Commonwealth Au-Ag-Zn-Pb-Cu (NSW) Himmetdede AU (South Turkey) Queensland Au-Cu
Cash	\$3.5m (plus \$750,000 in Jan 2014)	\$0.1m

# Staying Alive in Difficult Times

***“Running a junior exploration company is like riding a bike: if you go too slow you will fall off.”***

***Anon.***

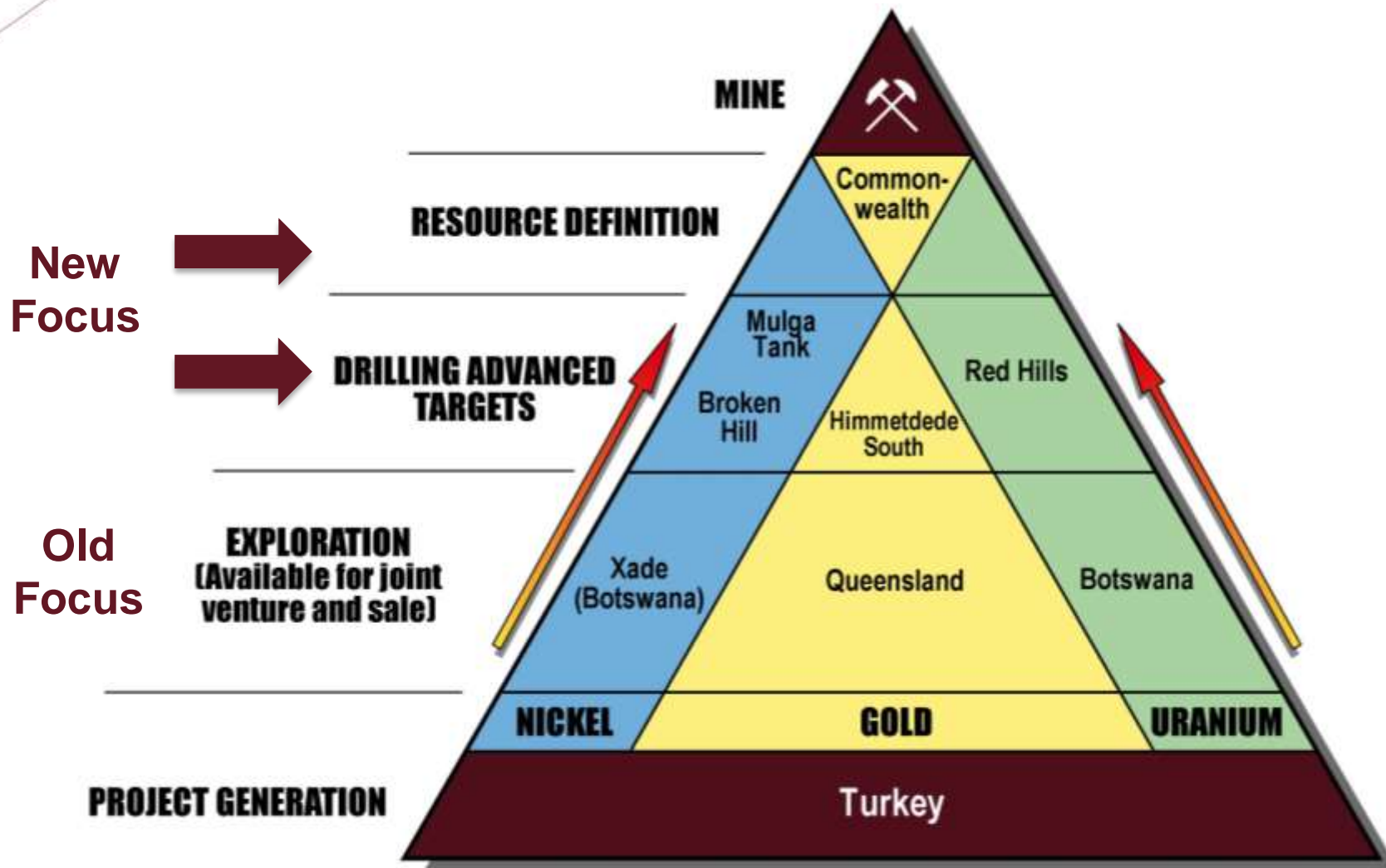


# Deals Completed in 2013

- Acquisition of Endeavour Minerals Pty in conjunction with 75% owned Invictus Gold Limited to acquire 3 advanced projects in Australia for \$1.05M in cash and shares:
  - Impact acquired JV rights to two advanced nickel-copper-PGE projects;
  - Invictus acquires the very high grade Commonwealth gold- and silver-rich VMS deposit;
- Terms and conditions for the above JV rights re-negotiated with extension of terms to expend money to 2017 resulting in lower expenditure requirements;
- Obtained right to increase equity by transfer of “call option”;
- Sale of 4 non-core licences in Botswana for \$800,000 in cash and shares;
- Merger with Invictus Gold
- Raised \$3 million in non-brokered private placement;



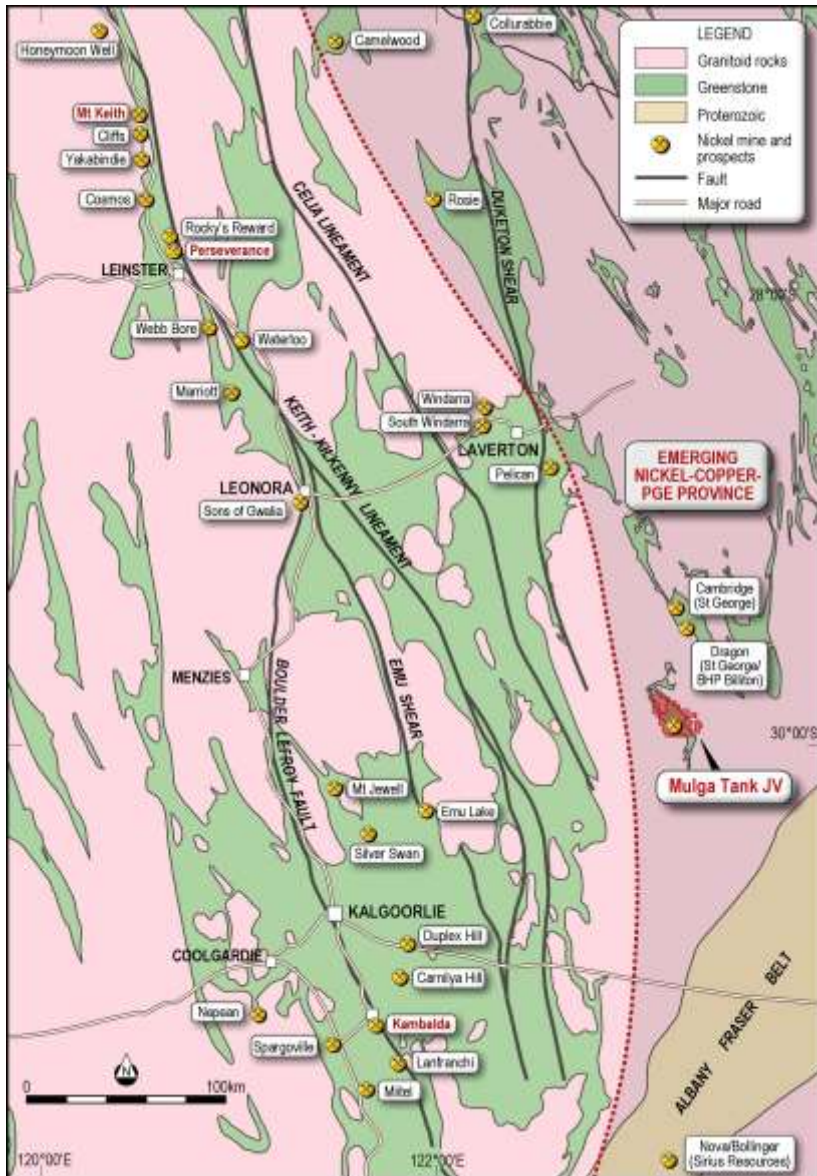
# The Merged Group



# **Mulga Tank Nickel-Copper-PGE Joint Venture Project Western Australia**

Impact 100% and earning 50%

# Mulga Tank Joint Venture Project

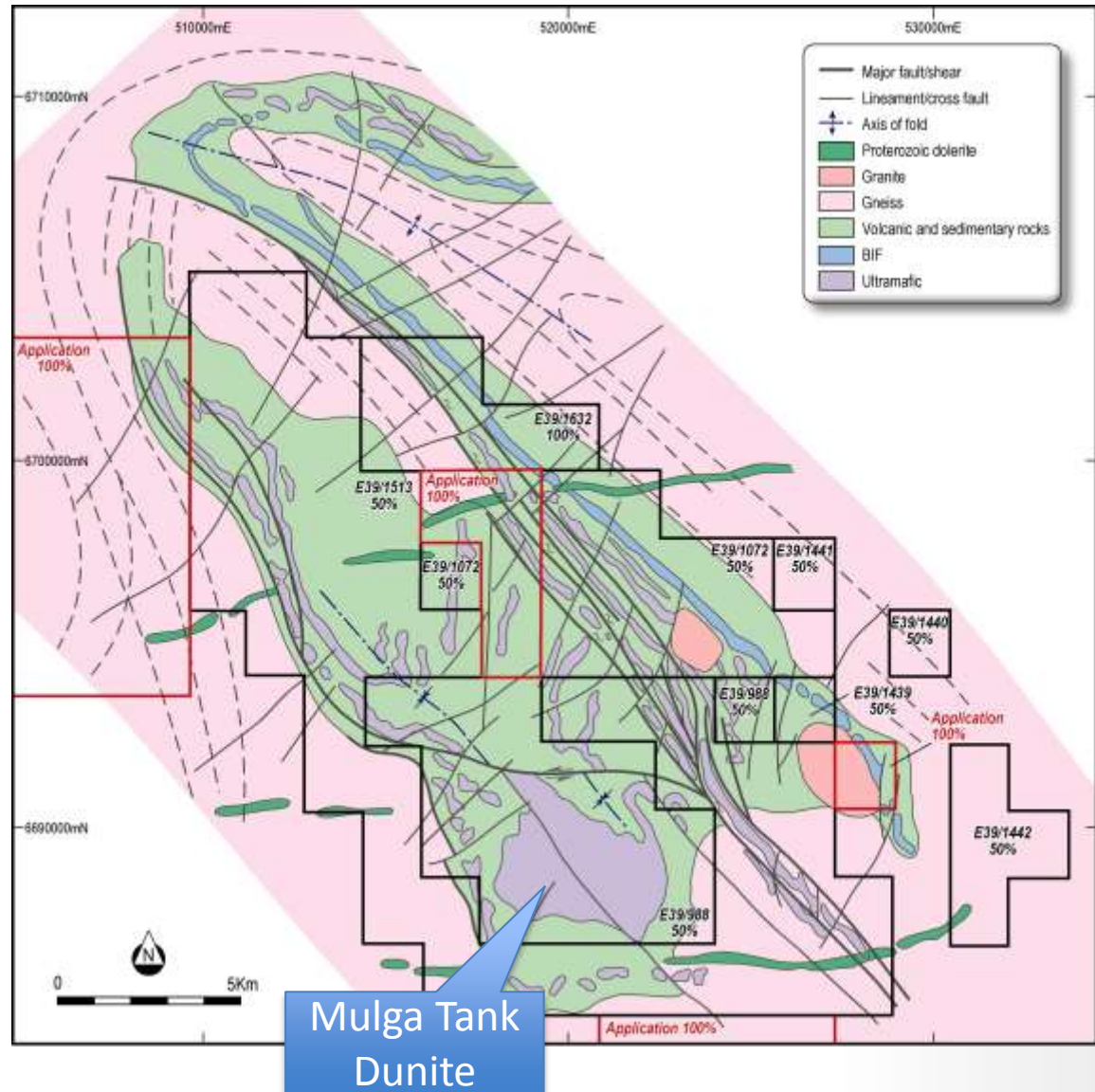


- Emerging WA nickel province
- Near to world class nickel mines:
  - Perseverance >1 Mt Ni metal
  - Mt Keith >2 Mt Ni metal
  - Kambalda camp >1 Mt metal
- Recent discoveries at
  - Nova-Bollinger deposit (0.5 Mt Ni Eq.)
  - Camelwood (Ni)
  - Collurabie (Ni-Cu-PGE)
- Licence ownership:
  - Impact 100% of 6 licences
  - Earning 50% of 7 licences by spending a further \$2.1 M by 2017 with (GCR)
- Discussions in progress for further equity in key licences



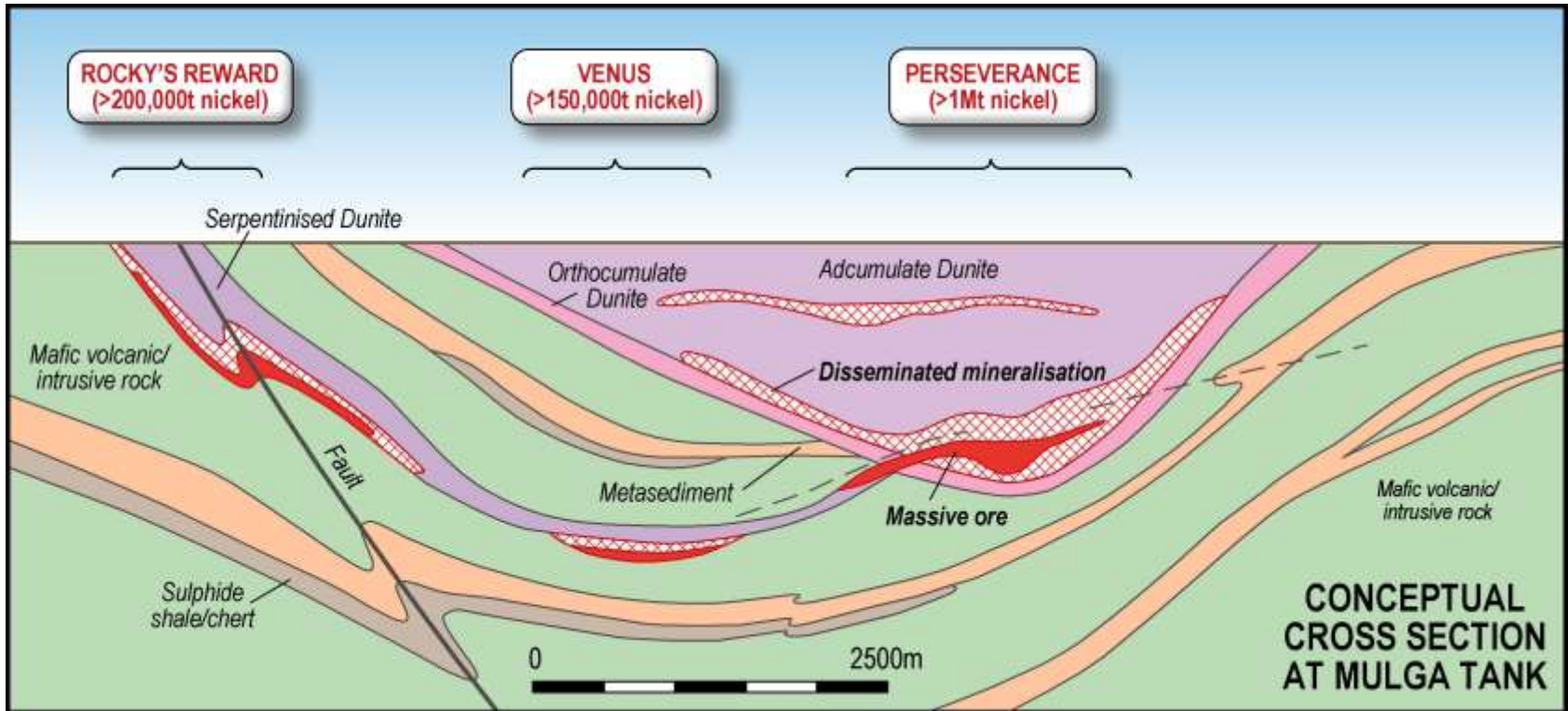
# Mulga Tank: A new nickel field?

- Very **poorly explored** greenstone belt
- Extensive sand cover has hindered exploration
- IPT's licences cover 425 sq km
- Significant **untapped gold potential**
- Work by Impact only focused on 15 sq km area over the Mulga Tank Dunite



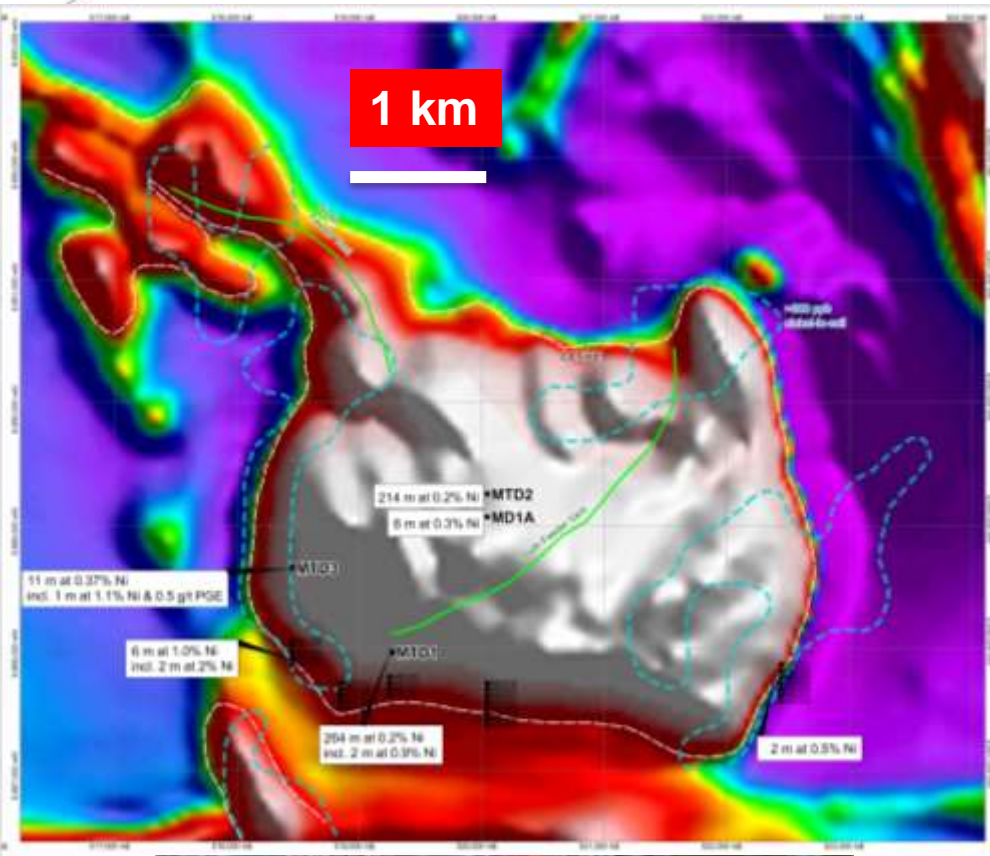
# Mulga Tank: Nickel Model

Perseverance – Rocky's Reward - Venus



- Targeting **very large deposits**  
e.g. Perseverance: >1 Mt nickel metal and Rockys Reward: >0.25 Mt nickel metal  
**(By comparison Nova-Bollinger (Sirius Resources) contains 0.36 Mt nickel equiv)**
- Significant potential to discover multiple deposits and **define a new nickel camp.**

# Mulga Tank: Previous Work

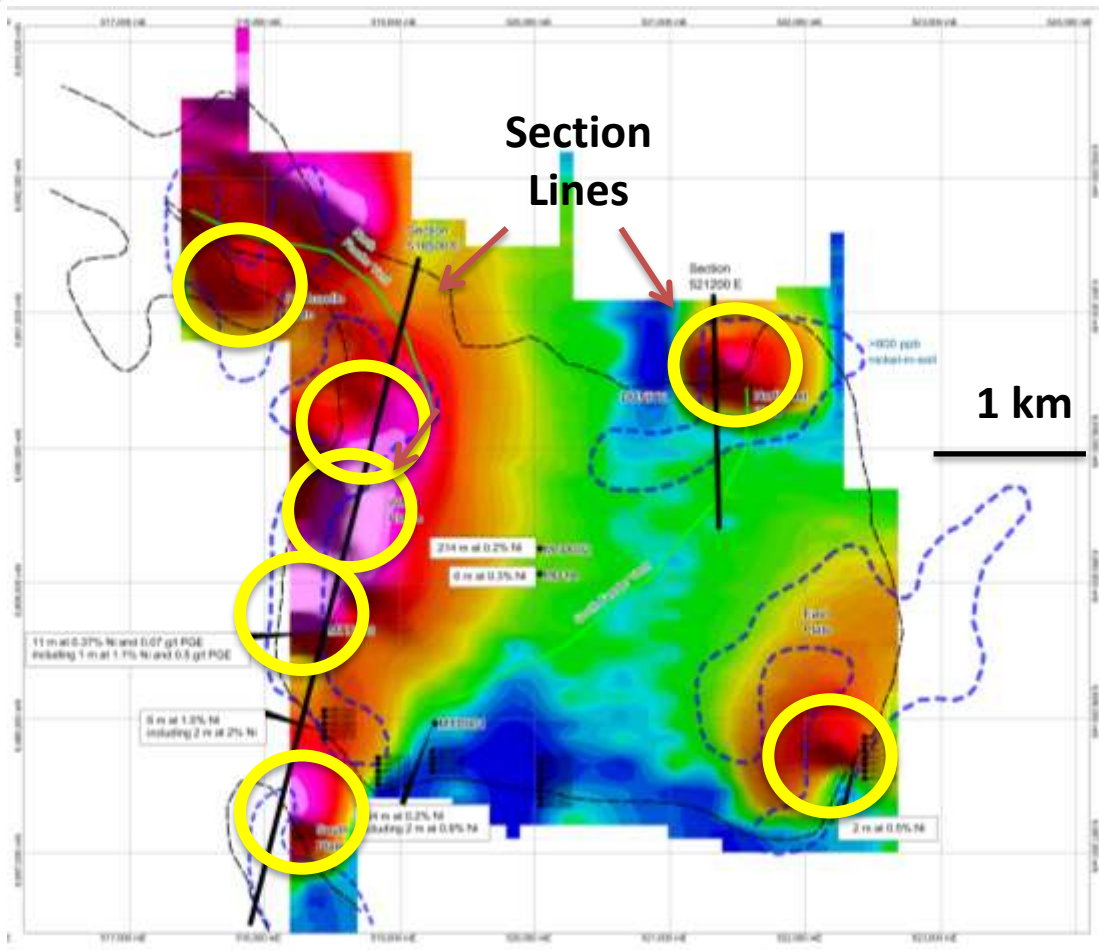


- 4 previous diamond drill holes 1 km apart
- All holes intersected over 200 m of about 0.2% nickel
- **Best results:**
  - 11 m at 0.37% Ni, 0.07 g/t PGE  
160 ppm Co from 202 m including
  - 1 m at 1.12% Ni, 0.5 g/t PGE and  
260 ppm Co; also
  - 40 m at 0.3% nickel
- Magmatic sulphides confirmed
- Up to 2 m at 2% nickel in bedrock-cover interface drilling
- Dunite is on E38/988 (IPT earning 50%)

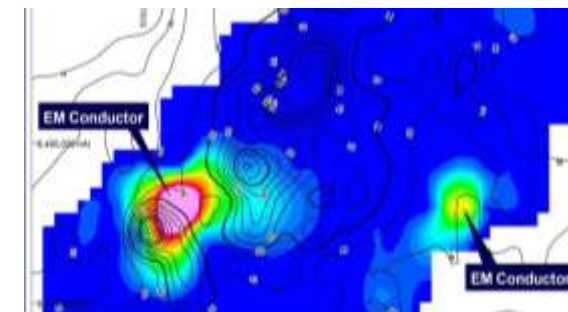
**Semi-massive sulphides from MTD003**



# Mulga Tank: Ground EM

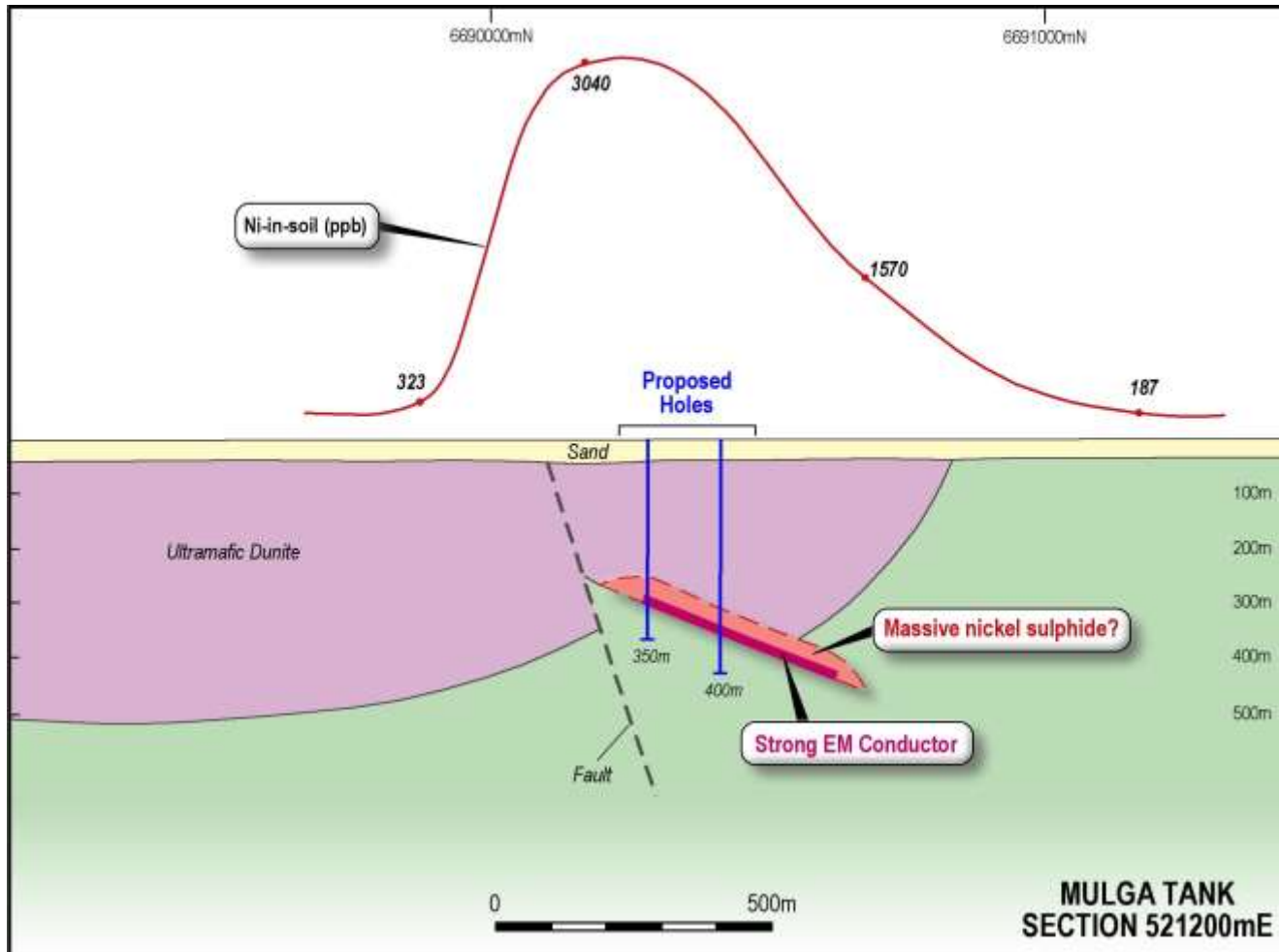


- Impact has identified **7 drill ready targets** with coincident electromagnetic and soil geochemistry anomalies
- **Potential for >1 Mt of contained nickel metal**





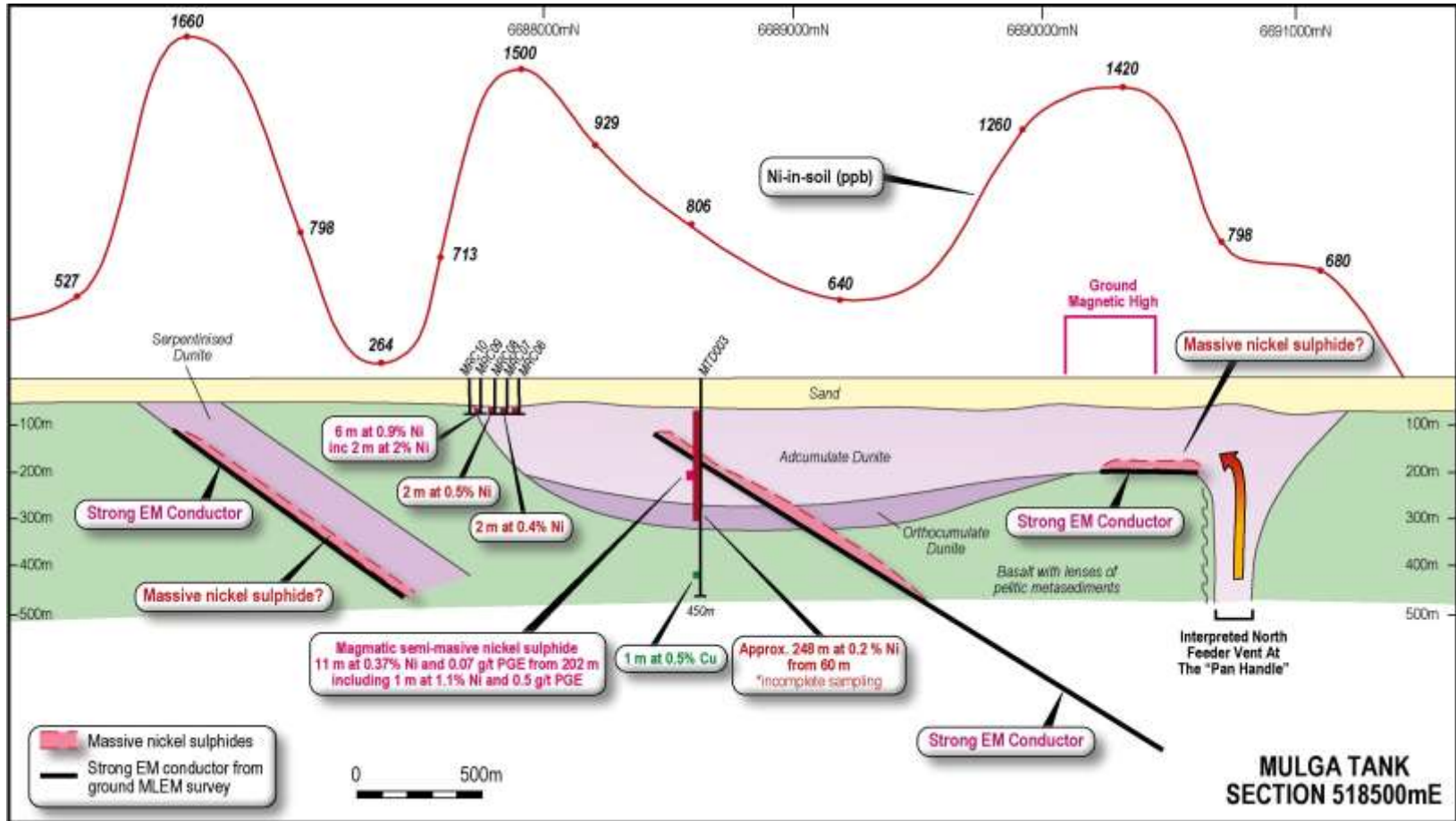
# Mulga Tank: Northeast Plate



- Strongest EM conductor and strongest soil response
- **Drill Ready**



# Mulga Tank: Western Targets

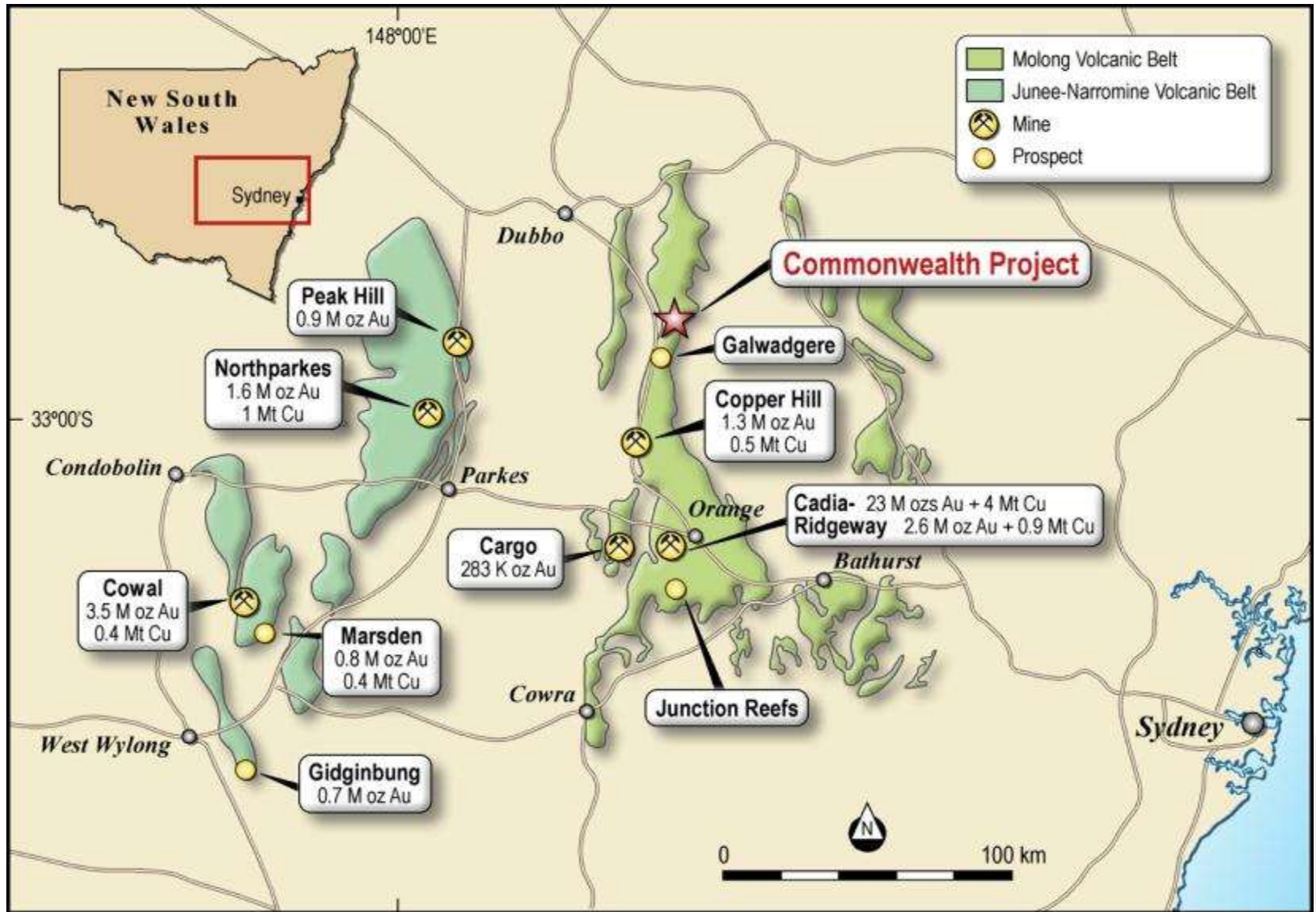


- **Three drill-ready** EM/soil geochemistry targets
- Previous drill intercept of 11 m at 0.4% nickel incl. 1 m at 1.1% nickel towards top of EM plate
- Perseverance Model and Rocky's Reward – Venus Model

# Mulga Tank: Next Steps

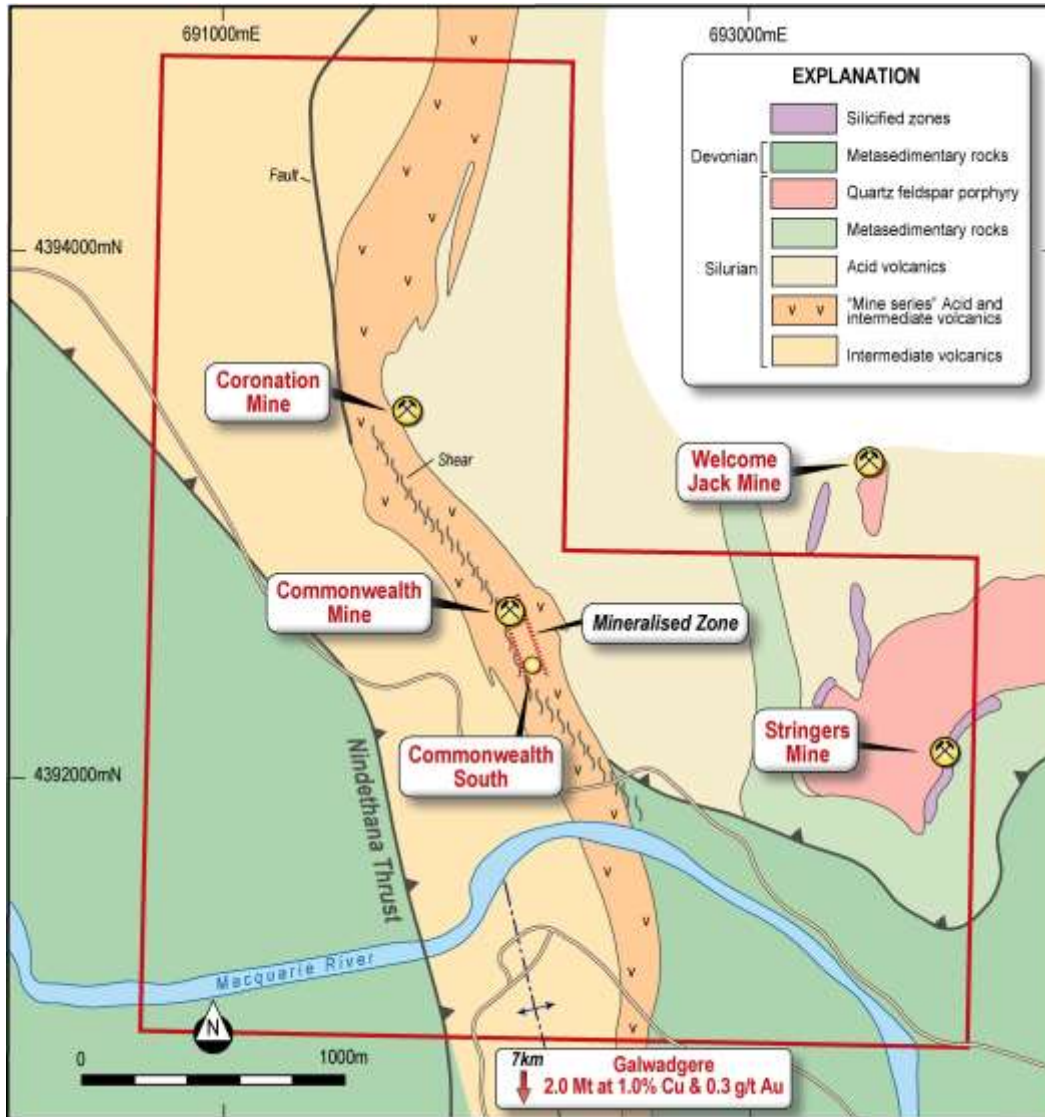
- Drill programme to commence in November
- About 4,000 m to test all 7 targets
- 2 holes per target
- Budget \$800,000
- \$134,000 grant from the WA Drilling Initiative
- Downhole EM on site
- Hand held XRF on-site for preliminary assays
- Further ground EM required to the north west

# Commonwealth Project





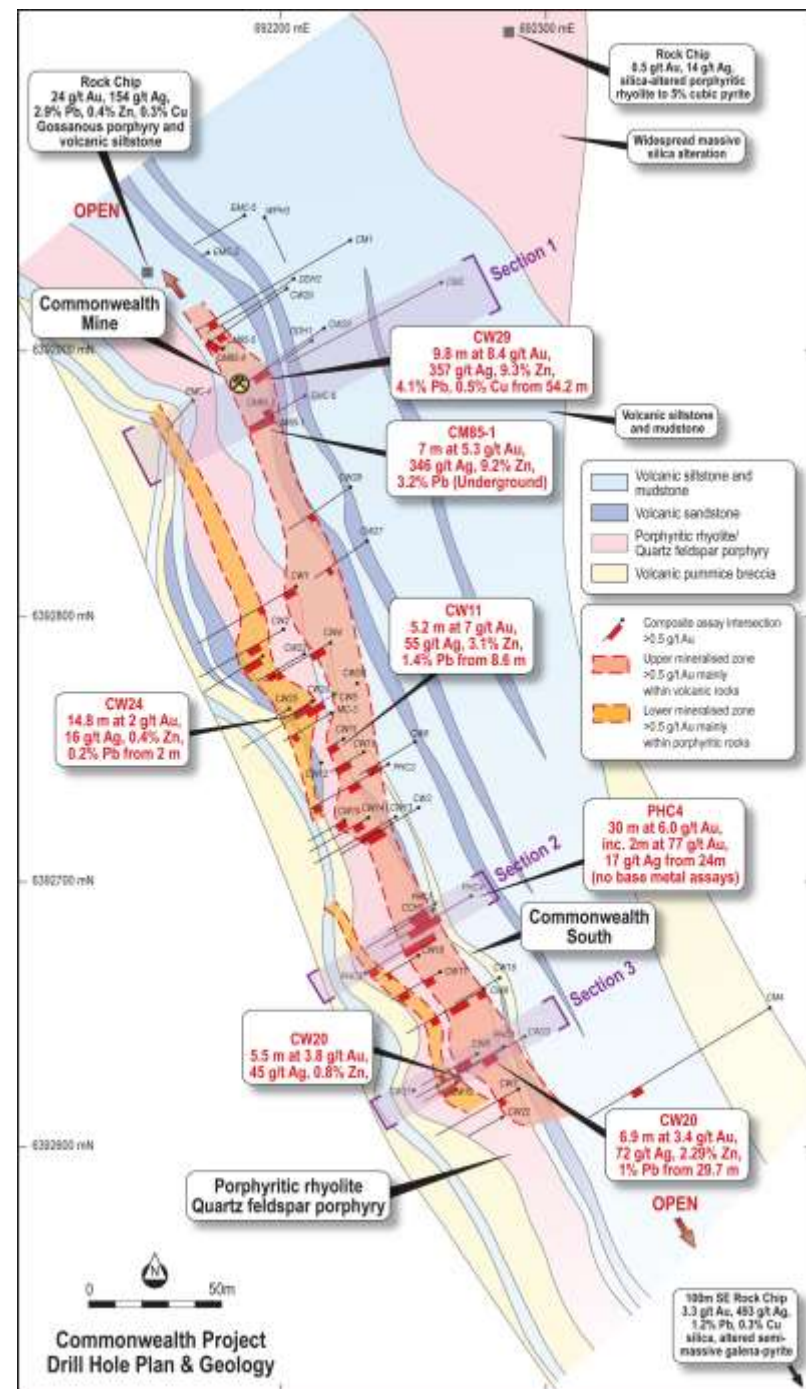
# Commonwealth Project: Geology



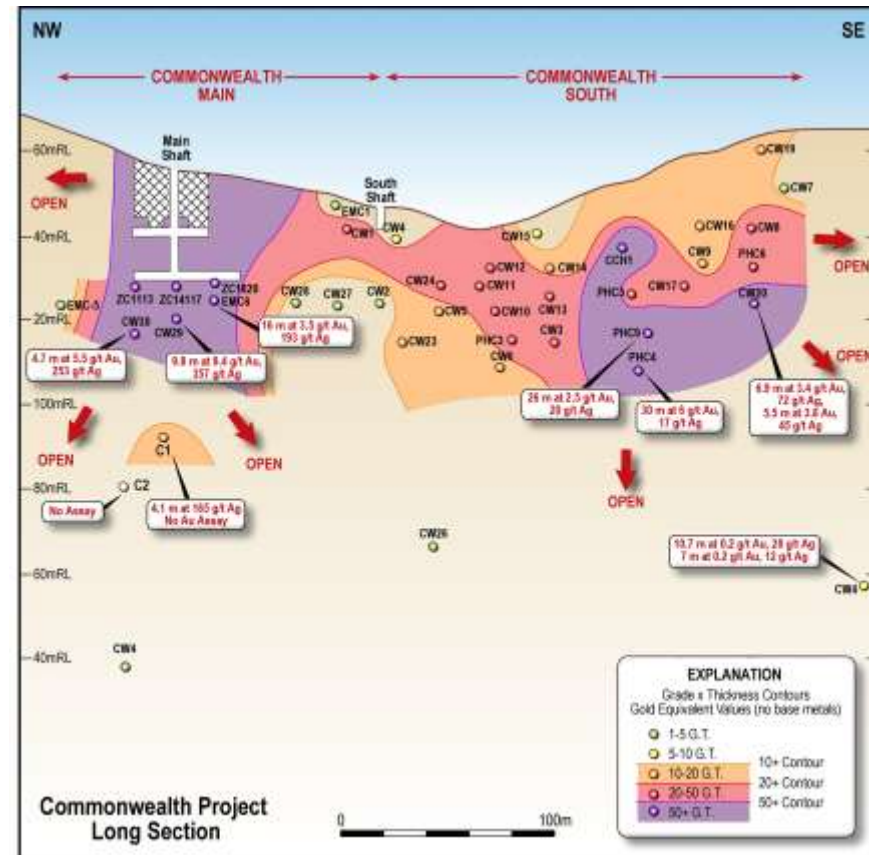
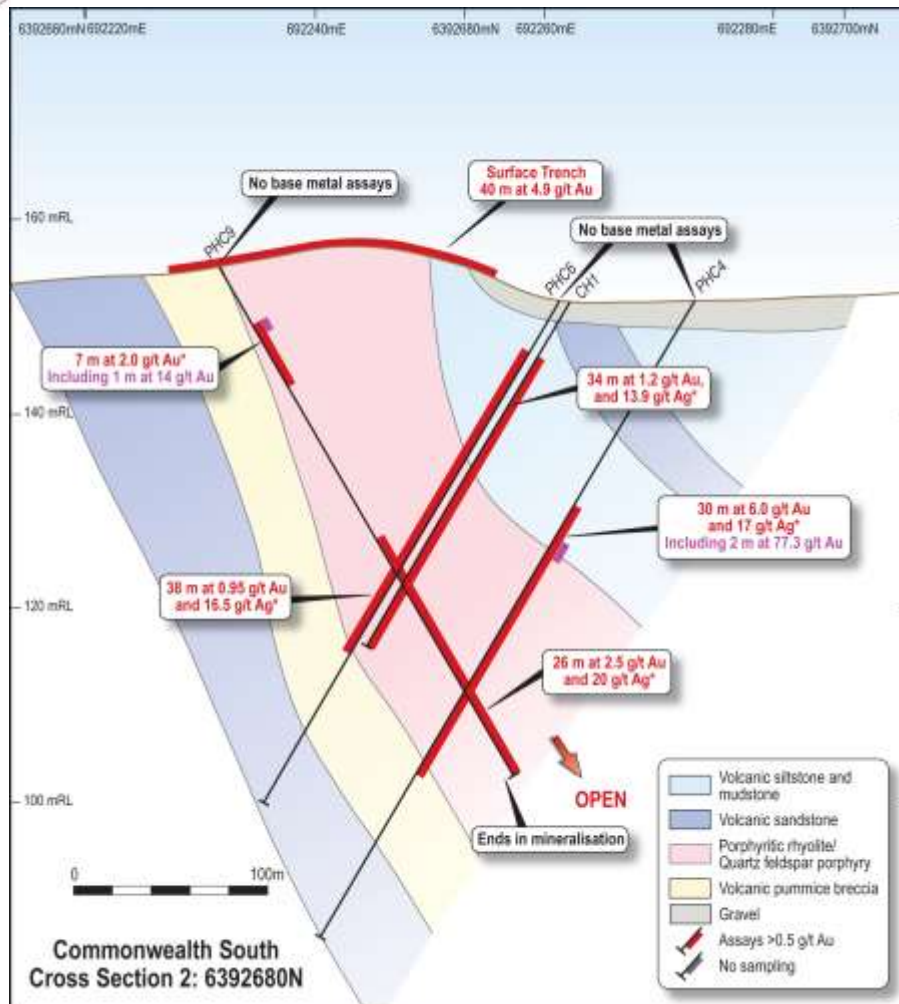
- Volcanogenic Massive Sulphide Deposit
- Mined 1906-1930's at 1 oz per tonne gold
- Multiple mineralised areas and structural trends
- Poorly explored: 66 drill holes for an average depth of 53 metres.

# Commonwealth Mine

- Volcanogenic Massive Sulphide Deposit
- Historic resource estimate:
  - 85,000 t at 6 g/t gold, 250g/t silver, 10% zinc, 3% lead, 0.5% copper in the top 50 m
- Drill intercepts in fresh rock of:
  - 7 m at 6.2 g/t gold, 346 g/t silver, 3.2% lead, 9.2% zinc
  - 30 m at 6 g/t including 2 m at 77 g/t gold
- Potential for a gold-silver deposit beneath & along strike from Main Shaft
  - 17 m at 3.5 g/t gold & 206 g/t silver
- **Resource definition drilling required**
- **Exploration Target >1 M oz gold equivalent** (see Notes 1 and 2)



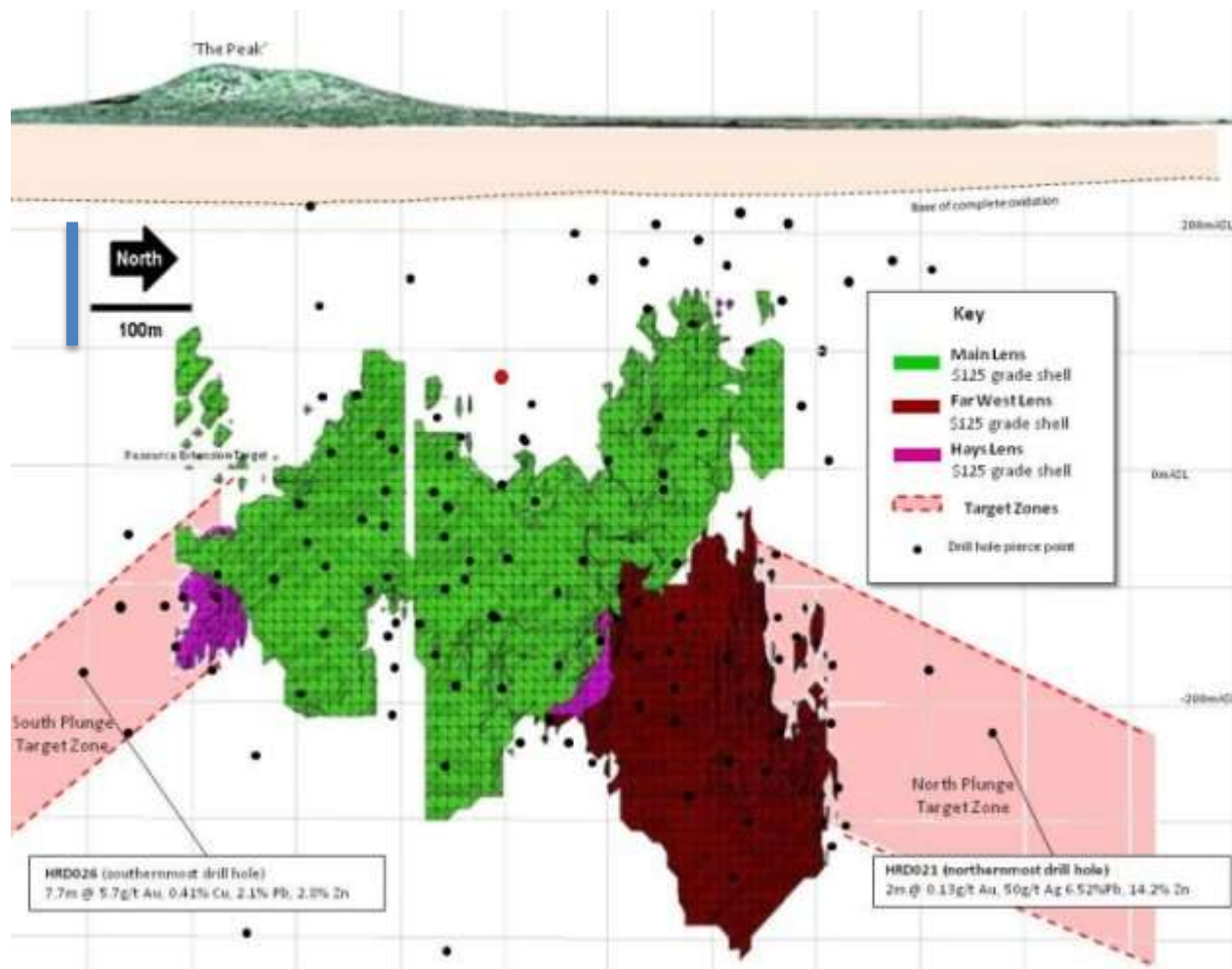
# Commonwealth South



- High grade gold results open at depth
  - e.g. 30 m at 6 g/t including 2 m at 77 g/t gold
- Long Section highlights very high grade and down plunge potential



# Analogy: Hera deposit (YTC) - Cobar, NSW



- 1 Moz gold equivalent resource and reserve
- Gold-silver-zinc-lead
- Starts 200 m below surface
- Initial production 50,000 oz per year
- **Fully funded by Glencore**

# Commonwealth: Next Steps

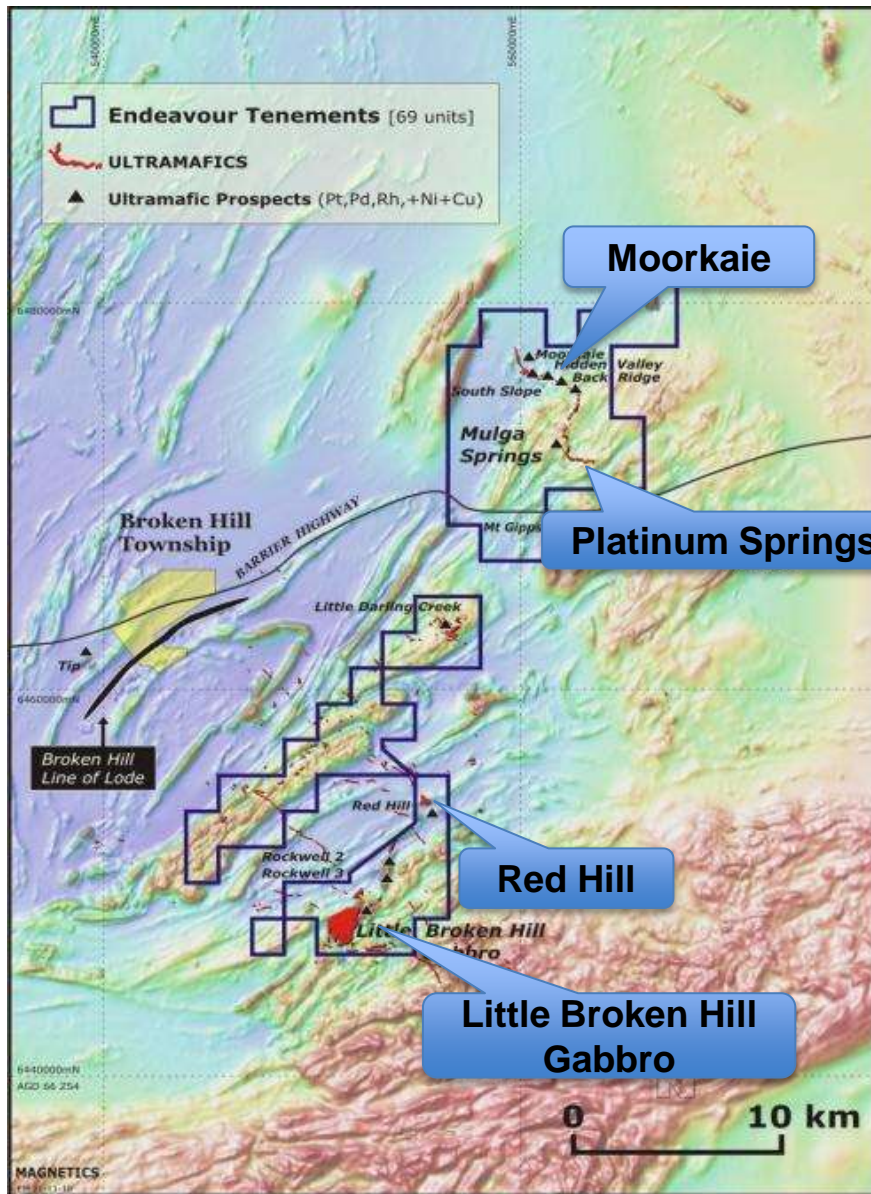
- Drill programme to commence in Q1 2014
- 2,500 m programme
- Initial aim to define >100,000 oz gold eq. resource
- Define plunge of shoots
- Define potential for >1 million ounces gold eq.

**Broken Hill  
Nickel-Copper-PGM  
Joint Venture Project  
New South Wales**

Impact earning 80%

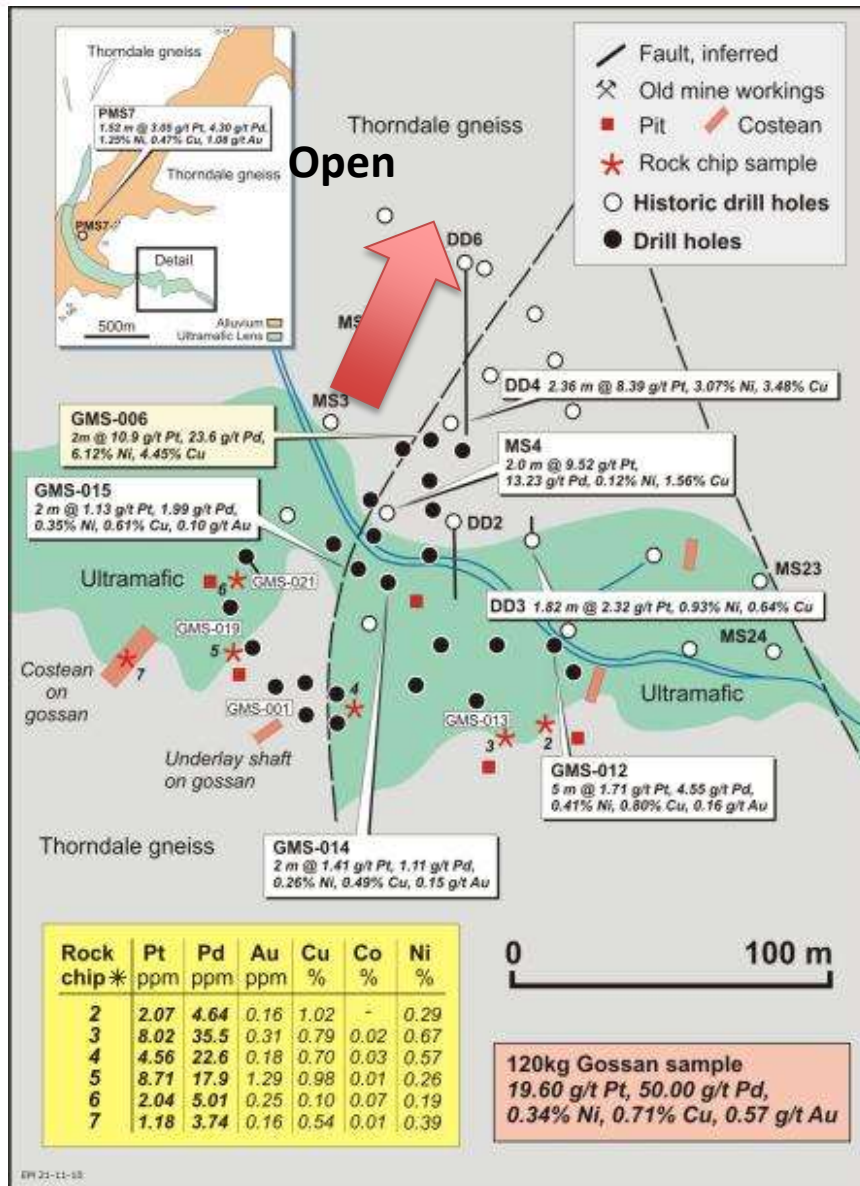


# Broken Hill Ni-Cu-PGE JV Project



- Located in the richly mineralised NSW Curnamona Province
- **3 drill ready targets:**
  - **Platinum Springs**
  - **Red Hill**
  - **Moorkaie**
- Highest platinum grades in Australia with **potential for >1 Moz PGE**
- Mineralised mafic and ultramafic dykes and sills with high grade gossans over a 35 km belt
- Impact to earn 80% by spending a further \$500,000 by Nov 2017

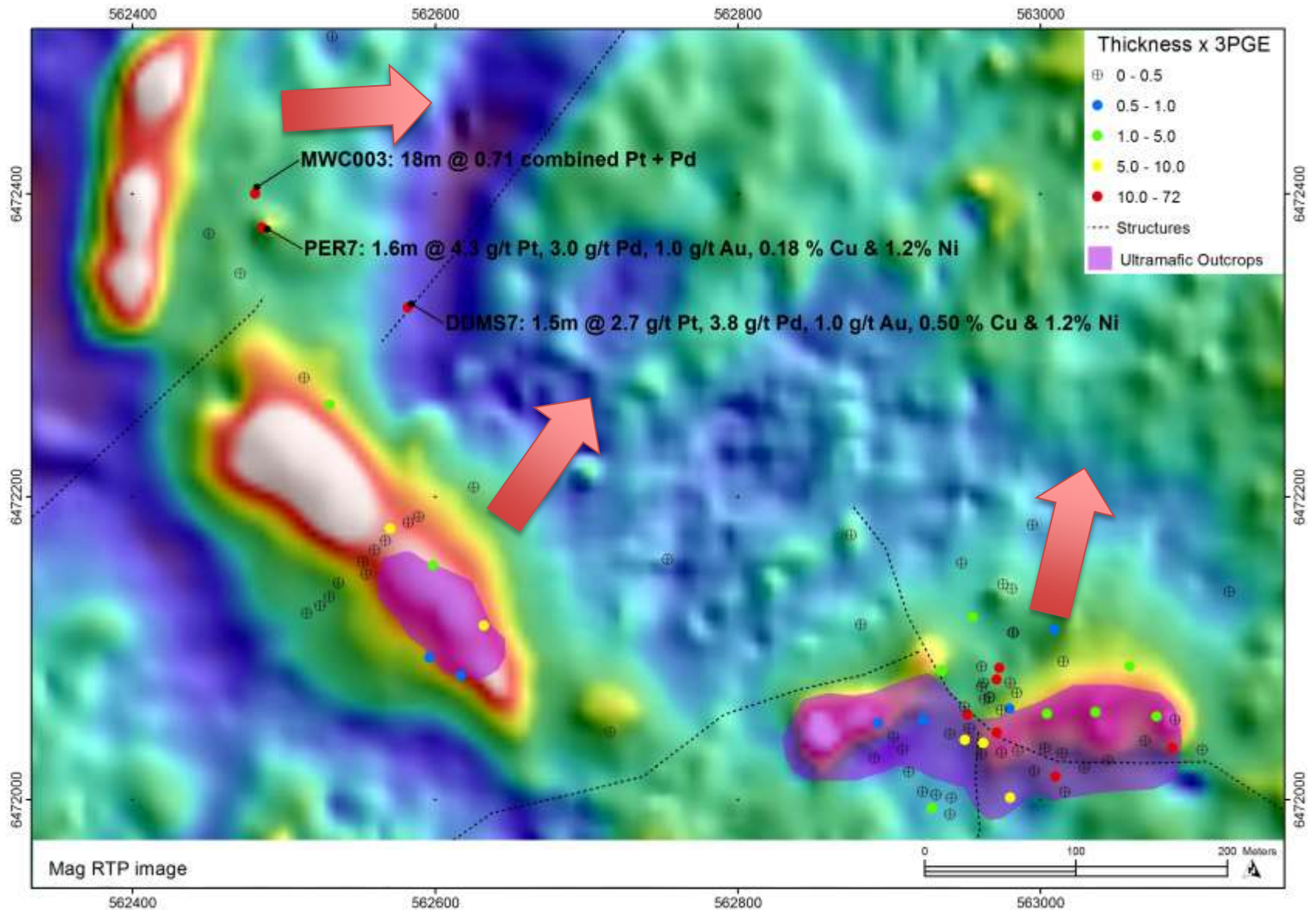
# Platinum Springs Prospect



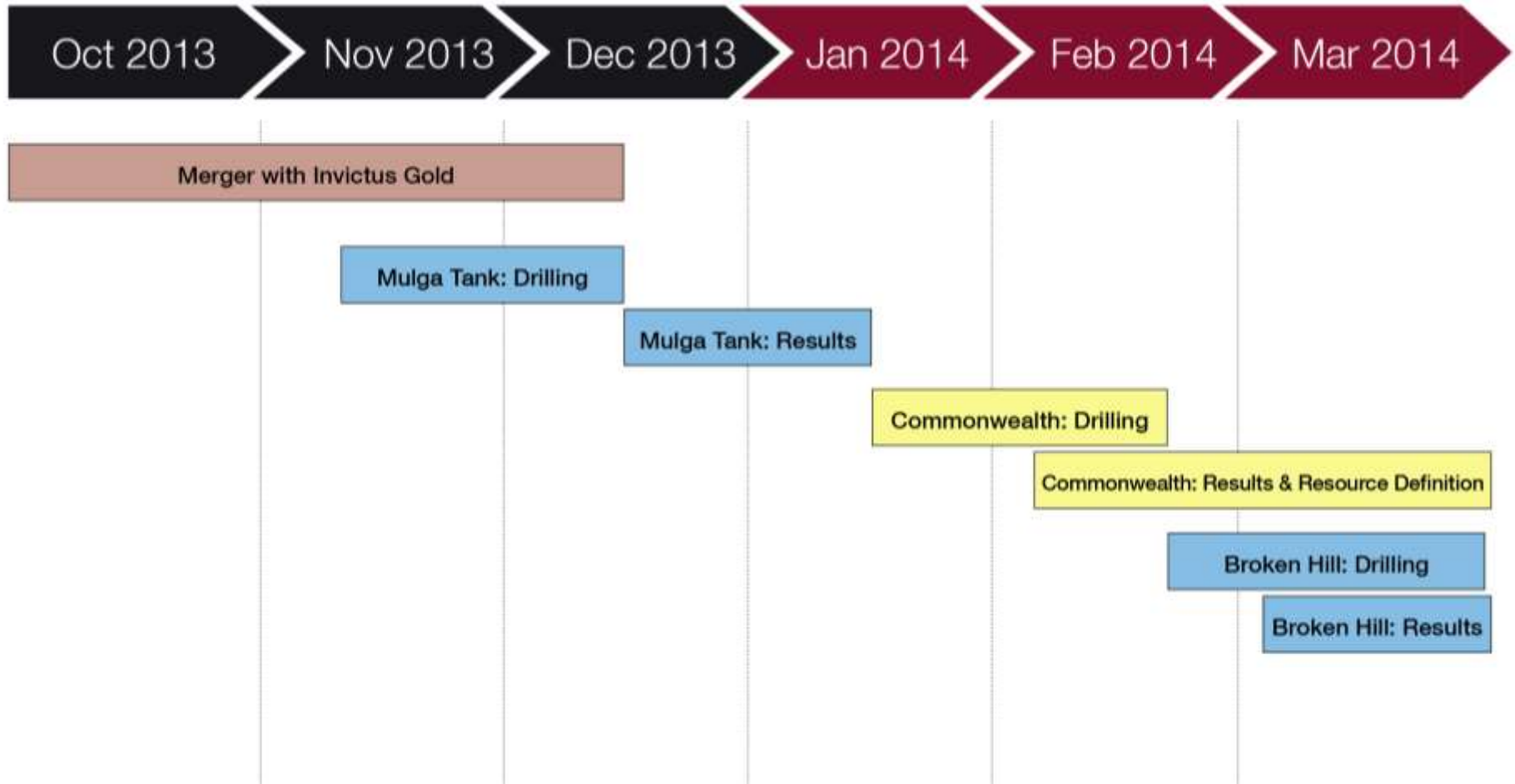
- Bulk sample of gossan averaged up to
  - 19.6 g/t platinum
  - 50 g/t palladium
  - 12 g/t other PGM's (Os, Ir, Ru, Rh)
- High grade drill intercepts and rock chip samples over small 100 m x 100 m area. GMS-006 returned:
  - 2 m at 10.9 g/t Pt, 23.6 g/t Pd, 6.12% Ni, 4.45% Cu
- Massive sulphides at sill base
- Possible feeder zones
- Previous work focussed on east-west trending sill-model rather than Impact's north-south trending structural model



# Platinum Springs West Prospect



# News flow





# Notes

## **Note 1: Calculation of gold equivalent grades.**

Metal prices used for the gold equivalent grades are:

Gold: \$1,350/oz, Silver: \$22/oz, Copper: \$7,300/t, Zinc: \$1,800/t, Lead: \$2,000/t

Given the high grade base metal results it is assumed that very high recoveries of all metals will be achieved. However investors should note that the gold equivalent grades and contained ounces quoted are for comparative purposes only. They should not be used as a basis for investment.

## **Note 2: Parameters used for the calculation of the Exploration Target.**

The Exploration Target described in this report is conceptual in nature and should not be construed as a resource calculated in accordance with the JORC Code. The Exploration Target is based on projections of established grade ranges over appropriate widths and strike lengths having regard for geological considerations including mineralisation style, specific gravity and expected mineralisation continuity as determined by qualified geological assessment. There is insufficient information to determine whether further exploration will result in the definition of a mineral resource.

The Exploration Target quoted is based on a combined Exploration Target for the VMS mineralisation at the Commonwealth Mine and the gold-silver mineralisation discovered in the footwall and along strike to the Commonwealth South area.

For the Commonwealth Mine area the following parameters were used:

Average thickness: 5 m to 6 m as defined by underground mapping and drilling;  
Length: 130 m to 150 m as defined by drilling between Main and South Shaft;  
Depth: 500 m;  
Specific gravity: 5 kg/t as defined from samples taken underground;  
Grades: 5.9 g/t gold, 275 g/t silver, 0.3% copper, 3% lead and 11.4% zinc.

For the Commonwealth South area the following parameters were used:

Average thickness: 4 m to 5 m as defined by underground mapping and drilling;  
Length: 300 m to 350 m as defined by drilling;  
Depth: 500 m. Specific gravity: 2.5 kg/t;  
Grades: 1.8 g/t gold, 34 g/t silver.