



## **Impact Minerals Limited (IPT:AU) Rating Review**

This review of Impact Minerals Limited has been prepared in accordance with the **PortfolioDirect** stock rating framework described on pages 2-3.

**PortfolioDirect***/resources* offers strategy and portfolio recommendations for independent investors. The rating framework has been developed to assist investors and their advisers to grade individual stock risk so as to better match stocks in their own portfolios with their personal risk profiles and to take account of the differing risk characteristics of potential investments when structuring their portfolios.

A **PortfolioDirect** stock rating is not intended as a forecast of future share price movements. Share prices will be influenced by a range of factors including, significantly, macroeconomic conditions and the current cyclical positioning of the sector which are not taken into account in determining a stock rating. The **PortfolioDirect** analytical framework separates the view about market direction from the stock risk analysis contained in this review.

The most important driver of a stock rating for a company being reviewed is an assessment whether the company is likely to meet its exploration and development targets within the timeframes sought by investment markets and, when development has occurred, its ability to maintain positive value momentum over future years.

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Impact Minerals has not had an opportunity to comment on the report or request any amendments prior to its publication.

## Stock Rating Criteria

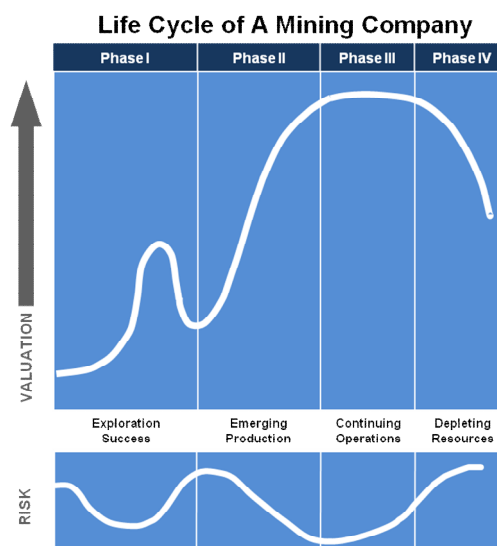
E.I.M. Capital Managers categorises sector investments based on the four phases in the life cycle of mining and oil and gas companies.

**Phase I:** the exploration phase during which relatively small amounts of capital may be deployed with the prospect of a high return but when investors also risk losing all the funds subscribed prior to the company having an agreed development plan.

**Phase II:** the emerging production phase in which companies are able to demonstrate access to a commercial resource and add value by meeting key development milestones along an agreed development path.

**Phase III:** the phase of continuing operations in which organic volume growth is limited and commodity price movements become the dominant driver of earnings and value.

**Phase IV:** a period typically characterised by falling ore grades and rising costs requiring additional capital to prevent output contracting.



Phase I companies will be scored (on a five point scale) on their potential to confirm a commercially viable development within two to three years. Judgements will be based on publicly available information, including clarifying conversations with company management, and the resulting geological inferences drawn by E.I.M. Capital Managers analysts.

Phase II companies will be scored on a five point scale on their capacity to deliver positive value momentum (i.e. the ability to generate increasing fundamental value over future years without any reliance on higher commodity prices).

Since Phase III companies, by definition, no longer have any material organic growth prospects, they will generally fail the 'positive value momentum' test. Some of the largest and best known listed companies meet the criteria for classification as Phase III stocks. Since the share price performance of a Phase III company is more likely to be driven by macroeconomic events and, therefore, likely to display relatively high returns correlations with other Phase III companies, the value contributed by stock selection is limited and Phase III companies will not generally be subjected to the ratings process.

Those stocks with the highest ratings (i.e. ratings of 4-5) will generally be regarded as suitable for inclusion in portfolios of Phase I or Phase II companies but the final decision about whether a stock is used in a portfolio should also depend on a range of factors including the existing exposure of the portfolio to similar commodities, the geographic location of operations and the liquidity needs of an investor.

No inferences about share price performance should be drawn from the rating of an individual stock. Investment returns will be influenced by a range of factors, some of which are included among the **PortfolioDirect** rating criteria, as well as investment market expectations about a range of macroeconomic variables. The **PortfolioDirect** rating does not take account of macroeconomic or investment market conditions that play a role in setting the price levels of securities.

### Trading in PortfolioDirect Rated Stocks by E.I.M. Capital Managers

Stocks rated in accordance with the criteria outlined in this communication may be bought or sold by E.I.M. Capital Managers on behalf of clients or funds whose investments are managed by the firm. Specific investment objectives and individual portfolio considerations may result in transactions by E.I.M. Capital Managers that are contrary to the **PortfolioDirect** ratings for individual stocks.

## Significant Investment Risks

In addition to general equity market risks reflecting unexpected changes in global economic or political conditions, investors in the resources sector may incur further risks specific to investments in the sector.

**Commodity market risk:** Resources sector investment returns are generally more volatile than returns from other equity market sectors due to the earnings of resources companies being exposed to commodity price and foreign exchange movements. Commodity prices can be influenced by a range of factors including economic events, which might affect the volume of commodities used, monetary policies which might affect levels of speculation and changes in output reflecting levels of industry exploration, investment and production disruptions.

**Operational risk:** Companies may fail to meet their development goals as a result of unexpected external influences, including political conditions and natural phenomena, as well as the skill base and operational capabilities of company management. Companies engaged in exploration activities may fail to locate or define mineral deposits of a sufficient size to be commercially viable.

**Funding risk:** Since companies in the resources sector require ongoing funding for development, expansion and maintenance of output, changes in financial market conditions can affect the value of investments adversely through the cost or availability of capital.

**Regulatory risk:** The value of investments in the sector may be affected adversely by changes in government policies relating to the conditions under which mine developments are permitted, including the need for more stringent environmental controls, higher taxation or royalty rates or requirements for local equity participation.

**Small companies risk:** Small or early stage companies generally have less diversified income streams, less stable funding sources and weaker bargaining positions with their counterparties than larger companies. The securities of small companies may also be less liquid than those of larger companies making the purchase or sale of securities more difficult or costly to complete, possibly with an adverse impact on portfolio performance.

### How does PortfolioDirect rate a Phase I company?

Phase I companies have yet to confirm a commercially viable development. The **PortfolioDirect** rating system scores Phase I companies on the potential to confirm a commercially viable development within two to three years. A company still seeking to define a resource will be assessed on how its exploration or development properties, as well as the company as a whole, measure up against 10 individual criteria.

1. Consistency with recognised deposit types.
2. Proximity to other discoveries.
3. Adequacy of funding to complete a critical program of drilling or analysis.
4. The track records of key executives driving exploration programs on behalf of the company.
5. The company's possession of unique or innovative insights leading to reinterpretation of previous geological assessments.
6. A strong focus on a specific geographic region.
7. The likelihood of a market surprise arising from a change in view about the quality of a potential mineral resource.
8. The likelihood of a market surprise arising from a change in view about the size of a potential mineral deposit.
9. The potential to resolve outstanding technical parameters within a reasonable investment horizon.
10. Whether the company's share price has already been re-rated by the share market.

## A Guide to the PortfolioDirect Rating Report

Each **PortfolioDirect** company rating report addresses questions affecting business outcomes and potential investment standing under five separate headings.

### Primary Development Assets

- What are the most important geological or operational attributes of the company?
- Where are the assets located and what is the availability of local infrastructure?
- What potential impact does location have on business outcomes?
- How was ownership achieved - corporate exploration, acquisition or farm-in - and what obligations remain to the vendors or partners?
- Do historical outcomes on or near these exploration properties say anything about likely mineral characteristics on the company's own assets?
- Are there identifiable technical issues that need addressing before further work can be completed?

### Regulatory Standing

- What approvals have been received?
- What additional approvals will be necessary to meet business goals?
- Has the company been in breach of any regulatory requirements at this site or elsewhere on any previous occasion?
- Can the company show a commitment to environmental and social needs?

### Project Potential

- What scale of development is anticipated or, if judgements about this cannot be made presently, what must happen before such a judgement can be made?
- What operational or market constraints might affect the project potential?
- What is the likely range of project capital needs in the event of development?

### Capacity to Meet Targets

- What skills does the company currently have available?
- What additional or alternative skills will be needed for the next stage of activities?
- How does the track record of the existing management impact current judgements about the capacity of the company to meet its targets?
- What financial resources are currently available? Are they adequate for the targets being set?
- Are there unresolved technical, financial or regulatory matters that could impact the achievement of business targets?

### Rating Discussion

- Into which development phase has the company been classified?
- What are the key criteria against which the company is being benchmarked?
- How does the company stand against the rating criteria for a company at this stage of development?
- Are there criteria which have been more or less important in coming to a rating decision?
- Are there matters which might affect the rating in the future?
- Are there any special attributes displayed by the company that might impact on its role in a portfolio?
- How have historic investment returns affected judgements about current and future market risk?

# Company Rating Update ~ *Positive* Impact Minerals Limited (IPT:AU)

(This update should be read as part of the original rating report dated 7 July 2014 which follows in this document.)

**Development Stage: Phase I**



**Recent Events**

At the Commonwealth project, the company has undertaken drilling, surface sampling and geophysical programs to extend a precious metal bearing massive sulphide system that has received limited exploration attention. The company has also identified a large siliceous alteration halo that has been interpreted to be related to an untested potentially gold-bearing epithermal system.

The company has extended the known mineralised lenses at Commonwealth during 2014 and reported promising results from the southern margin of the Commonwealth trend. On 22 September 2014, the company reported an intersection of 7 metres at 25.5 g/t Au, 62 g/t Ag, 3.8% zinc and 0.6% lead from a depth of 88 metres in a step out hole.

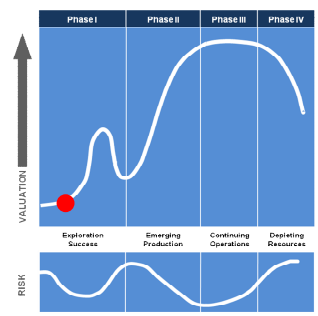
In late 2014, the company drill tested the Red Hill prospect near Broken Hill which was a conceptual exploration target based on an area with minor historic workings of PGE bearing rock. The company related these occurrences to a potentially larger deeper ultramafic intrusive system. On 27 November, the company reported that nickel and copper-bearing breccias and veins were intersected at relatively shallow depths and, on 17 December, reported assay results including thick intersections within a brecciated zone and an overlying meta-pyroxenite unit.

Within an "upper zone", two intersections of 9.5 metres at 1.5% Cu, 0.8% Ni, 4.7 g/t PGE+Au from 53.7 metres (RH DD001) and 5.2 metres at 1.1% Cu, 1.6% Ni and 3.4 g/t PGE+Au from 54.2 metres (RD DD006) was reported. A "lower zone" approximately five metres below the "upper zone" saw results of 9.9 metres at 1.4% Cu, 0.3% Ni and 6.7 g/t PGE+Au from 67 metres (RH DD001) and 13.8 metres at 1.1% Cu, 0.3% Ni and 6.3 g/t PGE+ Au from 63.2 metres (RD DD006). The RD DD006 intersections can be aggregated to a thickness of 25.5 metres at 0.8% Cu, 0.6% Ni and 4.3 g/t PGE+Au. The intersections also carry 7-10 g/t silver. The intersections dip shallowly to the south and appear to be close to true width.

**Rating Discussion**

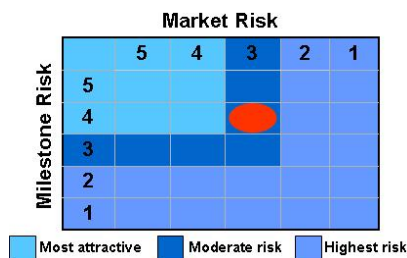
The existing **PortfolioDirect** rating highlighted the exploration prospectivity of the Commonwealth system which coupled a demonstrated exploration competence with an active evaluation program. The company has built on the geological knowledge of the prospect and highlighted potential areas of opportunity (such as the Silica Hill alteration zone).

The Red Hill prospect was a more risky conceptual target but within the exploration capabilities of the company. The maiden diamond drilling program at Red Hill has placed the historic PGE occurrence within the context of a deformed ultramafic host with thick intersections of precious metal bearing base metal sulphides distributed in two zones approximately five metres apart. The intersections were at shallow depth allowing for cost effective evaluation work and a possible open pit development. ■



**Statistical Risk Measures**

<b>Deviation from</b>	
• 15 week moving average	-8%
• 25 week moving average	-13%
• 50 week moving average	-30%
<b>Historical return ranking (1-100)</b>	
• Since Jan 2011	39
• Since last report	80
<b>Return volatility<sup>1</sup></b>	1.2X
<b>Liquidity<sup>2</sup></b>	11%
1. Relative to sector 2. Turnover for 12 months as % of current shares	





# Company Rating Review

## Impact Minerals Limited (IPT:AU)

### Development Stage: Phase I

**Selection Criteria:** Subscriber initiated update

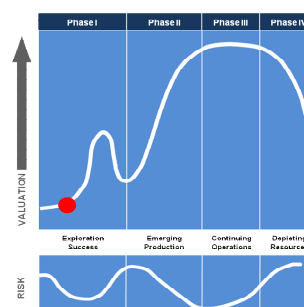
**Rating:** 

**Rating Impact:** No change

**Previous Review:** 12 May 2013

### Recent Company Events

- In July, the company recast the Commonwealth project in New South Wales as a composite porphyry copper-gold and epithermal system drawing on the results of an induced polarisation survey and a recent soil sampling program.
- A 2,500 metre drill program has been scheduled for late July 2014 at the Commonwealth prospect.
- A mapping and ground based electromagnetic survey was completed at the Red Hill platinum prospect near Broken Hill in preparation for drill testing in the third quarter of 2014.
- The company raised \$2.59M to fund the two upcoming drilling programs.
- A merger between Impact Minerals and Invictus Gold took effect in January 2014.



### Statistical Risk Measures

<b>Deviation from</b>	
• 15 week moving average	+19%
• 25 week moving average	+23%
• 50 week moving average	+7%
<b>Historical return ranking (1-100)</b>	
• 2011-2014	29
• 12 months	18
<b>Return volatility<sup>1</sup></b>	1.4X
<b>Liquidity<sup>2</sup></b>	20%
1. Relative to sector 2. Turnover for 12 months as % of current shares	

### Primary Development Assets

*Commonwealth project, New South Wales, Impact Minerals 100%*

The Commonwealth prospect is located 15km east of Wellington in New South Wales. The prospect sits within the Molong Volcanic Belt of central New South Wales, a major mineralised province with a number of active copper and gold mines including Cadia.

The deposit was acquired in March 2013 by Invictus Gold after being held privately for close to 20 years. By April 2014, Invictus had significantly expanded the tenement holding from an initial eight square kilometres to 315 square kilometres (ASX 4 April 2014). The move was a reflection of the apparent prospectivity and recognition of the limited past exploration work in the northern end of the Molong Volcanic Belt. The company also flagged two volcanogenic massive sulphide accumulations and porphyry related copper gold system exploration targets. Both styles of mineralisation are well represented in the Molong Volcanic Belt as well as rocks further south hosting the former Woodlawn mine. The target has since been refined to a composite porphyry epithermal system.

The Commonwealth prospect is centred on historic base metal workings at Commonwealth which were discovered in 1900 and mined intermittently until around 1930 reporting production of gold and mixed base metal sulphide ore from two shafts and open pits. The area has received little exploration attention in the interim. A historic drilling campaign was carried out testing a



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prospective 250m long corridor between the historic Commonwealth and Commonwealth South shafts with 66 holes drilled for a total of 3,695m but the holes had an average depth of only 56 metres.

The initial phase of the company work has been assimilating this database of historic information, mapping the geology, including alteration assemblages, and generating new maps and sections through the area. This mapping identified a wide area of intense silicification to the east of the historic workings which was initially interpreted as a chemical sediment related to a volcanogenic system. More recently, the outcrop has been integrated into an epithermal setting being an ancient sinter at the top of a high sulphidation system which extends westward.

Some of the historic exploration work from close to 30 years ago reported attractive intercepts within packages of remnant ore in the vicinity of the Commonwealth shaft highlighting a precious metal rich base metal system. Other much wider intersections from this time with grades of 3-8 g/t Au have also been reported.

Remnant ore intersections, stope areas, Commonwealth mine:

CMB 85-1 7 metres 5.3 g/t Au, 346 g/t Ag, 9.2% Zn, 3.2% Pb

CMB 85-2 3 metres 8.0 g/t Au, 158 g/t Ag, 2.9% Zn, 0.8% Pb

The geology of the project shows a sequence of Silurian age felsic and intermediate volcanics hosting the Commonwealth mineralised trend with some thickening of that package of "mine sequence" rocks in the vicinity of the historic mines.

Company materials show an EM conductor with a strike of close to 800m located approximately 1km northwest of the former Commonwealth mine occurring within and on the margin of the "mine sequence" rocks with an underlying intermediate volcanic sequence. It is unclear if there is a major difference between these two mapped rocks.

In February, the company reported high grade results to the north of the former Commonwealth shaft extending the mineralised trend to at least 600m (ASX 12 February 2014). The same release also noted that a large outcrop of highly altered silica-pyrite rock at the Silica Hill area was gold bearing as evidenced by outcrop samples and a coincident gold-silver-arsenic in-soil anomaly. The zone was estimated to be over 300 metres wide and has since been related to an epithermal system.

In March, the company pushed the prospective trend out to 2,500 metres following more encouraging chip sampling and mapping (ASX 26 March 2014). This trend extends within the mine host volcanics north of a shaft at Coronation and north of the previously defined electromagnetic conductor. Samples from this area show mineralised breccia and siliceous rocks.

#### *June 2014 Induced Polarization survey results*

In early June, Impact Minerals reported the results of an induced polarisation survey at the prospect initially identifying two large anomalies under the historic workings at Commonwealth with a third anomaly under Silica Hill (ASX 4, 17 June 2014). Refinement of the survey results, as reported later in the month, established three sub parallel trends in the soil geochemistry and induced polarisation data each trending to the northwest and matching the orientation of mapped volcanoclastic units to the west of the Commonwealth field. These trends include that of the Silica Hill anomaly extending a potential mineralised zone to the southeast.

#### *New Exploration Leads for Commonwealth Prospect*

In early July, the company recast the exploration potential for the Commonwealth prospect as a composite porphyry and epithermal system. The Silica Hill area of the prospect has been lifted in priority, the Commonwealth workings related to mineralised rhyolitic rocks above a buried porphyry, with the development of a modest skarn system at the Coronation workings to the northwest, which sit on the western margin of a large circular structure termed "the Doughnut" (ASX 1 July 2014). This range of individual targets occur within a 4km x 4km area centred on the historic Commonwealth workings.

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#### *Silica Hill*

Silica hill has been reappraised as a product of epithermal alteration of an intrusive body. An IP anomaly sits approximately 150 metres beneath the siliceous pyrite rock at surface and the company has related this to a potential sulphide bearing zone. A separate ellipse-shaped magnetic anomaly occurs south of the soil geochemical anomaly in an area of little outcrop. The company has supported the epithermal provenance based on a trace element suite of molybdenum, arsenic, thallium, mercury and selenium. The presence of a leached siliceous cap suggests that the rest of the epithermal system (with potential bonanza gold zones) may be preserved at depth. This is described as a priority target by the company.

#### *Commonwealth area*

The area of the former workings on the Commonwealth trend has a series of deeper induced polarisation anomalies. The historic workings have been placed in the context of the mid level of a high sulphidation system with alteration of volcanoclastic rocks above a buried intrusive. The epithermal association, like Silica Hill, is based on trace element geochemistry with a different suite of target elements than the cap or deeper parts of an alteration system. This is described as a priority target.

#### *Coronation area*

The Coronation area to the northwest of the Commonwealth system has been placed in the context of a possible copper gold skarn in contact with a buried intrusive at depth, possibly the deep intrusive target at Doughnut located immediately to the east. Old workings in this area have been sampled yielding very high mine dump samples (18.2% copper, 55 g/t silver).

#### *Doughnut*

The 1 July analysis of the company shows a large circular target approximately 1km north of the buried induced polarisation target under the Commonwealth workings. The target is a wide and extensive circular soil anomaly with a depleted central zone. The depleted zone, possibly reflecting remobilisation of metals from later pulses of intrusive activity and fluid migration, is broadly the same size as the induced polarisation target that has been detected at depth in this area. Geological mapping in this part of the prospect shows an outcropping rhyolitic rock which has been attenuated on its northern margin. The outcrop may be a composite of various intrusive rocks with a host volcanoclastic sequence.

#### *Mulga Tank nickel prospect, Western Australia, Impact Minerals 100%, others earning to 50-70%*

The Mulga Tank prospect is located in the Minigawal Greenstone Belt of Western Australia which is part of the Archaean age Yilgarn Craton. The project area is approximately 200km east of Kalgoorlie and west of the Mulga Rocks prospect. The area is approximately 150km southwest of the AngloGold Ashanti-Independence Tropicana gold mine. The recent Rox Resources discoveries at Camelwood and Musket occur in a similarly isolated greenstone block located east of the Norseman-Wiluna Belt which hosts approximately 50% of the nickel resources in Western Australia.

The prospect comprises 13 exploration licences of which six are 100% held and the remainder in joint venture with listed entity Golden Cross Resources. The area is considered prospective for nickel and platinum group elements but has limited outcrop and, in places, extensive cover.

The ultramafic rocks in this area, including a large dunite body (the Mulga Tank Dunite), have been mapped from aeromagnetic surveys, surface exposures and drilling. The prospect dates from work undertaken by BHP over a decade ago when three diamond holes were drilled into the dunite, one intersecting sulphides (intergranular within the igneous rock) adding weight to the hypothesis that the dunite has the attributes for the formation of sulphide deposits. The core from this hole has been located by the company in storage in Kalgoorlie. Work has proceeded with a Perseverance style dunite host system as the primary exploration target.

In January 2014, the company reported the results of a maiden drilling program at Mulga Tank with three styles of nickel sulphide mineralisation recognised. These styles included disseminations within the dunite, higher grades at the base of the dunite and ultramafic units displaying komatiite textures located in the northeast portion of the prospect. The company

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reported extensive disseminated sulphide in the Mulga Tank Dunite with the SGA area showing most potential. Within the SGA area, the company reported a long intersection in hole MTD011 with four narrow higher grade intervals (ASX 29 January 2014). This result was as follows:

MTD 011 114.8 metres from 98 metres depth, 0.3% Ni, which included

- 2 metres at 1.13 % Ni from 102 metres
- 0.5 metres at 0.7% Ni from 155 metres
- 0.5 metres at 0.7% Ni from 158.5 metres
- 0.5 metres at 1.2% Ni from 211.7 metres

Two holes were drilled to test EM conductors along the western side of the dunite and to the northwest of the dunite. Both holes intersected narrow high grade veins.

MTD 006 (Conductor 3) 0.25 metres from 212.6 metres depth, 3.8 % Ni  
 MTD 005 (Conductor 2) 0.3 metres from 154.7 metres depth, 0.7% Ni

Holes 4, 7 and 10 were drilled to test a strong ground EM anomaly coincident with a nickel in soil anomaly located at Conductor 1 in the northeast part of the dunite. Two mineralised ultramafic units were intersected 20 metres apart and continuous for at least 150 metres. The company has interpreted these to be the southwestern margin of a flow channel that dips at 65 degrees to the northwest containing various mafic, ultramafic and sedimentary rocks (ASX 29 January 2014). The upper unit contains spinifex textures while the lower unit is approximately 50 metres thick with sulphides on the basal contact.

MTD 004 6.7 metres from 356 metres depth, 0.5 % Ni plus 0.14 g/t PGE

The company has used these results in conjunction with a reinterpretation of soil geochemistry data to identify 12 new exploration targets at Mulga Tank. In the March quarter, the company completed a gravity survey over the prospect (ASX 30 April 2014).

The Mulga Tank dunite is a very large igneous body with a mapped footprint close to 20 square kilometres. Within this body, the company is finding variability of the intrusive geology and variability of the nickel distribution having outlined three styles of mineralisation to date. This size has warranted a current pause in drilling to assimilate the recently acquired information and undertake further geophysical work (the current gravity survey) to better position future drilling.

A recent company presentation compares the scale of the Mulga Tank dunite which, when compared to the Kambalda mining camp, extends from the Durkin lodes to the north, right across the Kambalda dome and south to the Victor south lodes. This footprint is approximately the same size as the entire northern Kambalda tenements of Mincor.

*Red Hill platinum group elements prospect, Broken Hill, Impact earning to 80%*

The Red Hill and related platinum group element bearing nickel and copper sulphide prospects are located in a series of tenements approximately 10km southeast of Broken Hill and to the northeast of the city at Platinum Springs and Moorakia. These tenements cover a number of mafic and ultramafic intrusive dykes with associated gossans within Proterozoic age rocks. Impact Minerals has an option to earn initially 51% of the tenement package through the expenditure of \$100,000 and a further \$200,000 to earn an 80% interest.

These prospects are historical platinum occurrences with very small scale mining at Red Hill recorded from 1906-1937 when approximately 500t of high grade sulphide material (with high platinum and silver credits) were extracted from sulphides within ultramafic dykes. Work by CRA Exploration over 1970-1972 at Mulga Springs saw some drilling including a 2m intersection of high grade nickel and copper with PGE credits. The prospective intrusions, although narrow, have been mapped for over 35km of strike with wide areas that remain untested. Where drilling has taken place in the past, a complex geometry has led to ambiguous drilling results. Recent work by the company is pointing to structural intersections between faults and the dykes and enriched zones at the base of some sill-like bodies as key controls of mineralisation. At

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Platinum Springs, historic drilling reported 4m and 1.3m intersections of massive sulphide with elevated PGE from 43m and 45m in fresh rock (ASX 6 March 2014). The company is focused on identifying high grade shoots in these prospects, particularly in the fresh rock.

Presentation materials from the company have shown the results of a fixed loop electromagnetic survey over the historic Red Hill mine which suggested the presence of a large buried ultramafic unit 200m wide and open to the south. Iron sulphide zones in the historical workings are located on the western margin of this body with anomalous soil geochemistry reported to the south of the strongest electromagnetic feature. The company plans to undertake a 1,500m RC program to test the EM feature at Red Hill and follow up the historical high grade intersections at Moorkaie and Platinum Springs (Mulga Springs tenement).

### **Regulatory Standing**

Under the New South Wales Mining Act, an exploration licence is granted for an initial five year period with a renewal period of a further five years. The original Commonwealth tenement (EL 5874) was granted on 3 July 2009 and was renewed in 2013. It covers nine square kilometres. The Broken Hill prospect is located on EL 7390 which was initially granted on 25 October 2010.

The Mulga Tank prospect is held by Western Australian EL 39/988, 39/1072, 39/1439, 39/1440, 39/1441, 39/1442, 39/1513, 39/1632 and 39/1633 initially granted in 2009, 2010 and 2011.

### **Project Potential**

The company has repositioned and upgraded its exploration portfolio through the merger with Invictus Gold. There has been a refocus on a domestic exploration portfolio with two project areas located in readily accessible parts of New South Wales.

This refocused portfolio ranges from a relatively straightforward modest scale test program that should lead to definitive outcomes on prospects (such as the Broken Hill platinum prospect) to larger scale prospects that offer considerable opportunity from multiple "plays" over longer duration exploration work. The Mulga Tank nickel prospect is such an example with multiple targets over a very large area of prospective and complex geology.

#### *Commonwealth*

The Commonwealth prospect is located in an easily accessible region of historical gold and base metal mineralisation which has been under explored for many years in part due to the particular ownership at Commonwealth but also due to a more focused effort by companies in the southern part of the Molong Volcanic Belt.

Although the historic mining effort at Commonwealth was modest, the geology points to a much more extensive composite porphyry system with epithermal related alteration and the likely development of copper gold skarns on the western margin of a large circular structure. This is a refinement of the exploration targets since the last company review based on new geophysical surveys and detailed soil sampling and mapping programs.

The Molong Volcanic Belt is host to a range of gold and copper bearing systems related to porphyry systems (Cadia deposits) and more modest but relatively high grade gold accumulations such as Sheehan-Grant (Junction Reefs) and Browns Creek with the development of skarns or replacement zones on the margins of intrusive bodies. The induced polarisation survey results and the previous mapping and rock chip work is supportive of a deposit of this type.

The recent soil geochemistry work of the company is pointing to a potentially much larger system than those of Browns Creek and Sheehan-Grant (refer ASX 23 June, 1 July 2014). The soil geochemistry at "Doughnut" shows a central potassium enriched zone (or alteration) with a near circular halo of anomalous zinc, copper, gold and molybdenum. The halo zone is close to 800m wide (from side to side) and has been compared by the company to the alteration pattern at the 75Moz gold equivalent Wafi-Golpu system 65km west of Lae in Papua New Guinea. Here, a series of nested porphyry and epithermal alteration systems show a similar zinc-copper-molybdenum-gold alteration margin to that observed at Doughnut. The Wafi-Golpu system has distinct high sulphidation epithermal alteration systems immediately south of a circular diatreme (zones A and

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B) and the mineralised Golpu porphyry located further away on the northeast margin of the diatreme. Another porphyry occurs on the northwest margin. Unlike Commonwealth and the Doughnut, a quartz-alunite cap sits atop extensive kaolinite and sericite alteration zones at Wafi-Golpu.

Impact Minerals has shown that the greater Commonwealth prospect has the potential to be a substantive porphyry and epithermal gold copper system. The prospect is aided by location and the relative shallowness of the target zones reducing the financial burden of an exploration program on a company the size of Impact Minerals.

#### *Mulga Tank*

The Mulga Tank dunite is a significant intrusive body displaying all the characteristics of a geologically complex feature with good potential for nickel sulphide mineralisation. Drilling in 2013 showed the internal complexity and the nickel bearing potential of the system. The project is high quality but will require a significant ongoing commitment with a staged exploration approach.

#### *Platinum*

Historic minor mineral occurrences are being targeted at Broken Hill in an attempt to find a larger resource proposition at depth. The geophysical survey data at Red Hill is encouraging in that it may be indicative of a larger mafic intrusive with platinum potential. In recent company presentation materials, the company has highlighted a possible exploration analogue in the high grade Eagle nickel copper mine of Canada (5mt at 3.7% Ni, 3% Cu) which was not discovered using an electromagnetic survey. This example shows that a range of base metal scenarios may present themselves from the drilling of these historic platinum shows.

As with the Commonwealth area, although long recognised, limited modern exploration work has been undertaken here giving rise to the potential for an exploration surprise.

#### **Capacity to Meet Targets**

The company has demonstrated a capacity to manage regulatory and permitting processes in several Australian states. Company management has demonstrated a capacity to conduct exploration activity leading to the quantification of resources with an appropriate staged approach to evaluation and application of geophysics in conjunction with use of available historical data. The company has run two geophysical programs at Commonwealth prior to drilling in a prudent step given the array of potential targets.

Managing Director Mr. Michael Jones is an experienced exploration geologist with advanced qualifications in ore deposit geology pertaining to nickel sulphide accumulations giving him an advantage in addressing the geological variability at the Mulga Tank property.

The company has moved to focus on the core projects outlined here and divest tenements in Botswana and Queensland.

Key near term milestones for the company include:

- commencement of a 2,500 metre RC and diamond drill program at Commonwealth in late July; and,
- Commencement of a 1,500 metre RC and diamond drill program at Red Hill in the September quarter.












In September 2013, the company raised \$3M at 3.8c a share to progress work at Mulga Tank (ASX 19 September 2013). During April 2014, the company received a \$0.7M R&D rebate lifting cash to approximately \$1.4M (ASX 30 April 2014). In July, following the reappraisal of the Commonwealth prospect, the company raised \$2.59M in an oversubscribed placement at 3.3c. Funds are to be directed at the two upcoming drilling programs in New South Wales (ASX 4 July 2014).

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### Rating Discussion

**PortfolioDirect** has classified Impact Minerals as a Phase I company. The **PortfolioDirect** rating system scores Phase I companies on the potential to confirm a commercially viable development within a reasonable timeframe acceptable to investment markets. A company still seeking to define a resource and whose investment potential relies primarily on exploration success will be assessed on how its exploration or development properties as well as the company measure up against the criteria summarised in the table below. The investment potential of Impact Minerals relies primarily on a market re-rating resulting from exploration success.

<b>Impact Minerals Phase I Rating Scorecard</b>	
<b>Milestone Risks</b>	
Consistency with recognised deposit types.	
Proximity to other discoveries.	
Availability of funding to complete a critical program of drilling or analysis.	
The track records of key executives driving exploration programs on behalf of the company.	
The company's possession of unique or innovative insights leading to reinterpretation of previous geological assessments.	
A strong focus on a specific geographic region.	
The potential to resolve outstanding technical parameters within a reasonable investment horizon.	
<b>Market Risks</b>	
The likelihood of a market surprise arising from a change in view about the quality of a potential mineral resource or oilfield.	
The likelihood of a market surprise arising from a change in view about the size of a potential mineral deposit or oilfield.	
Whether the company's share price has already been re-rated by the share market.	
The likelihood of a near term capital raising	

Investors have clear near term potentially value accretive milestones which the **PortfolioDirect** rating implies have a good chance of being realised.

The risk profile of the Commonwealth prospect has been reduced since the previous **PortfolioDirect** rating review. The company has employed a recently completed geophysical survey and a multi-element soil sampling program over the prospect to recast the property as a more attractive exploration target with interrelated porphyry and high sulphidation epithermal systems responsible for the existing accumulations at Commonwealth and the Coronation trend. The evidence now available points to more extensive systems at depth. The reappraisal has highlighted a similarity in the geochemical signature with the Wafi-Golpu system located in Papua New Guinea.

Drill testing of the Commonwealth property is planned for July 2014 followed by a program of drilling at the Broken Hill platinum prospect offering near term outcomes against which investors can judge progress.

While Impact Minerals does not bring an especially unique or innovative approach to the exploration effort, it does continue to have an opportunity to fill an exploration void by matching

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earlier exploration efforts with more modern geophysical techniques as it has shown in recent months and as the earlier **PortfolioDirect** review had anticipated. In one sense, the company is following standard practice but with the potential for materially significant commercial results from linking the two sources of information. The potential commercial pay-off from that understanding underpins the prospective investment returns in the period ahead.

The emphasis is now on reaffirming the inferences about the geology through a program of drilling which is about to commence. There are no outstanding technical issues relating to the processing of ore or development of markets that might act as a catalyst for a material reappraisal of value in the near term. The investment outcome rests almost exclusively on the results of the planned drilling program.

The Impact Minerals share price has produced better than average returns over the course of the current market cycle as well as in the shorter term with a fivefold increase in the share price in the latter part of 2013 pushing the company's return ranking into the top 15% of sector outcomes for the past 12 months. These relatively favourable outcomes are assumed to reduce the leverage from positive exploration results (at least relative to other companies in similar positions which have experienced more severe cyclical price adjustments) although the bulk of the share price gains made toward the end of 2013 have been subsequently reversed.

Not unusually for a company at this stage, finance has been tight although the company has gained additional flexibility from a capital raising in July, an improvement on the position at the time of the previous **PortfolioDirect** review. A successfully concluded drilling program will enhance the capacity of the company to subsequently raise additional funds but, in common with many other companies in the sector, a low cash base will leave it at risk of adverse market conditions or less favourable exploration outcomes forcing it to complete unfavourable funding deals or delay further exploration activities. The investment implications flowing from this possibility should be reassessed after the results of the upcoming program of drilling. ■





## Abbreviations and Symbols

lb	pound	cif	cost, insurance and freight
oz	troy ounce	fob	free on board
Koz	1,000 troy ounces	fot	free on truck
Mlbs	million pounds	g/t	grams per tonne
kg	kilogram	ppm	parts per million
t	tonne	RC	reverse circulation
kt	1,000 tonnes	RAB	rotary air blast
Mt	1,000,000 tonnes	U <sub>3</sub> O <sub>8</sub>	yellowcake (uranium)
Mtpa	million tonnes per annum	Fe/FeO	iron/iron ore
kL	kilolitre (1,000 litres)	SiO <sub>2</sub>	silica
ML	megalitre (one million litres)	Al <sub>2</sub> O <sub>3</sub>	alumina
GL	gigalitre (one billion litres)	P	phosphorus
ha	hectare	TiO <sub>2</sub>	titanium dioxide
m	metre	ZrO <sub>2</sub>	zirconium dioxide
m <sup>3</sup>	cubic metre	LOI	loss on ignition
km	kilometre	mg/l	milligrams per litre
A\$	Australian dollar	Mj/kg	mega joules per kilogram
\$M	million dollars	EBITDA	earnings before interest, tax, depreciation & amortisation
US\$	United States dollar	EBIT	earnings before interest & tax
MG/GW	megawatt/gigawatt	ROM	run of mine
ct	carat	LOM	life of mine
bbl	barrel	MOU	memorandum of understanding
mbd	million barrels a day	VTEM	Versatile Time Domain Electromagnetic
MBOE	million barrels of oil equivalent		



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