

## ASX ANNOUNCEMENT

Date: 27 November 2014

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### HIGH GRADE NICKEL-COPPER IN 6 ZONES OVER 30m WIDTH AT RED HILL PROSPECT, BROKEN HILL

The first drill hole from Impact Minerals Limited's (ASX:IPT) maiden drill programme at the Red Hill Prospect near Broken Hill in New South Wales has intersected a 30 metre wide zone that contains high-grade nickel and copper in six separate zones.



**Figure 1.** Nickel and iron sulphides with up to 5.3% nickel (by XRF).

The six vein and breccia-style zones are each up to 4 m thick (total width of about 15 m) and occur from 46 m to 76 m down-hole in diamond drill hole RDH001. They contain a mixture of nickel and copper sulphide, oxide and carbonate minerals together with pyrite and pyrrhotite (Figures 1 and 2).

In a few places the veins comprise massive sulphide up to 20 cm thick and these may have been remobilised from a larger body of massive sulphide at depth.

A hand held XRF instrument has been used to analyse the drill core at 50 cm intervals through the mineralised zone.

**Nickel results are commonly in the range 1% to 3% nickel in weathered material and up to 8% nickel in fresh sulphide minerals.**

**Copper results are commonly in the range 0.3% to 5% copper in weathered material and up to 20% copper in sulphide minerals.**

The zones of sulphide minerals probably contain a mixture of fresh nickel and copper sulphide (pentlandite and chalcopyrite) and secondary copper minerals such as chalcocite.

The veins and breccias are interpreted to dip steeply to the south and occur within metasedimentary rocks beneath a thin unit of shallow dipping ultramafic rock that forms part of the Red Hill intrusion. The true width of the mineralised zones is not yet known.

Detailed logging of the diamond core is in progress with assays expected in 3 to 4 weeks. A second drill hole designed to test a nearby IP anomaly is also nearing completion.



**Impact Minerals' Managing Director Dr Mike Jones:**

"This is a very encouraging start to our maiden 1000 m drill programme at the Broken Hill project. The high-grade copper and nickel results from the XRF, although occurring in the weathered zone, are indicative of the potential for high-grade sulphides at depth. The narrow zones of massive nickel and copper sulphide we have discovered may have been remobilised from a larger body of sulphide at depth and further drilling is required. In addition, significant platinum palladium gold and silver grades were mined from the old Red Hill workings and we look forward to seeing if these continue at depth when the assays are received in about 3 to 4 weeks".



**Figure 2a.** Boxwork gossan texture replacing massive iron sulphide and containing up to 1.1% nickel and 3.3% copper by XRF.



**Figure 2b.** Iron oxide (haematite) replacing iron sulphide and nickel sulphide in vein at contact between metasediment and thin mafic unit. XRF assays up to 8.3% nickel and 5.6% copper.



**Figure 2c.** Contact between metasedimentary rock and 15 cm thick chalcopyrite-chalcocite (secondary sulphide) XRF assays up to 20% copper.



This is the first significant drill intercept of nickel and copper within Impact's project area away from the high grade drill intercept of 2 m at 6.1% nickel, 4.5% copper, 10.9 g/t platinum and 23.6 g/t palladium in fresh sulphide discovered some years ago at the Platinum Springs prospect some 15 km to the north east. There are many strike kilometres of the same ultramafic host rock that contain high grade nickel-copper-PGE rock chip assays similar to those at Platinum Springs and Red Hill that have never been drilled. These results at Red Hill confirm Impact's belief that there is potential for a significant discovery near Broken Hill.

Impact recently earned a 51% in the rights to nickel-copper-PGE mineralisation in the Broken Hill Project from Golden Cross Resources Limited (GCR) and has elected to earn an 80% interest by spending a further \$200,000.

This expenditure will be completed during the current drill programme, for which Impact was recently awarded a grant of \$125,000 under the N.S.W. State Government's Co-operative Drilling Funding Programme.

## The Red Hill Prospect

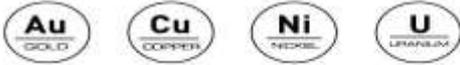
The host ultramafic intrusive unit at Red Hill, which outcrops over an area of about 500 sq metres, has a nickel-rich core and copper-precious metal-rich margins (Figure 1 and announcement dated [21 May 2014](#)). This is a common feature in many major nickel-copper-precious metal sulphide deposits around the world.

The centre of the unit is marked by nickel-in-soil values greater than 10,000 ppb and up to 16,100 ppb nickel (MMI digest) that is 100 m wide and 300 m long. This is a priority area for drilling.

Both the western and, in particular, the eastern margins of the unit are marked by copper-in-soil results greater than 2,500 ppb and up to 16,200 ppb copper (MMI digest) that are up to 200 m wide and 600 m long (Figure 1).

Within these margins there are a further three priority areas for follow up work that contain greater than 20 ppb platinum+palladium+gold-in-soil results (fire assay) covering several hundred square metres and which contain rock chip samples with high grade nickel, copper and precious metal assays (Figure1):

1. At the Red Hill Shaft, mined to a depth of about 40 m in the early 1900's, grab samples from outcrops around the shaft returned up to 16 g/t platinum, 12.1 g/t palladium, 4.2% nickel, 7.7% copper, 1.3 g/t gold and 221 g/t silver. Rock chip samples from a surface excavation about 50 m long located 100 m to the south of the shaft returned up to 1 g/t platinum, 2.6 g/t palladium, 0.9% nickel, 0.8% copper, 1.8 g/t gold and 3.3 g/t silver.
2. At Simons Find, rock chip samples returned up to 0.7 g/t platinum, 1.7 g/t palladium, 0.4% nickel, 0.1% copper, 1.9 g/t gold and 6.6 g/t silver.



- In the south east corner of the intrusion, grab samples from weathered rocks associated with some surface diggings returned up to 22% copper, 0.2% nickel, 0.8 g/t gold and 91.1 g/t silver.

The soil geochemistry survey was completed by Impact at a spacing of 50 m by 50 m and submitted for analysis by the MMI partial digest (nickel and copper) and fire assay (platinum, palladium, gold and silver) (see Table 1).

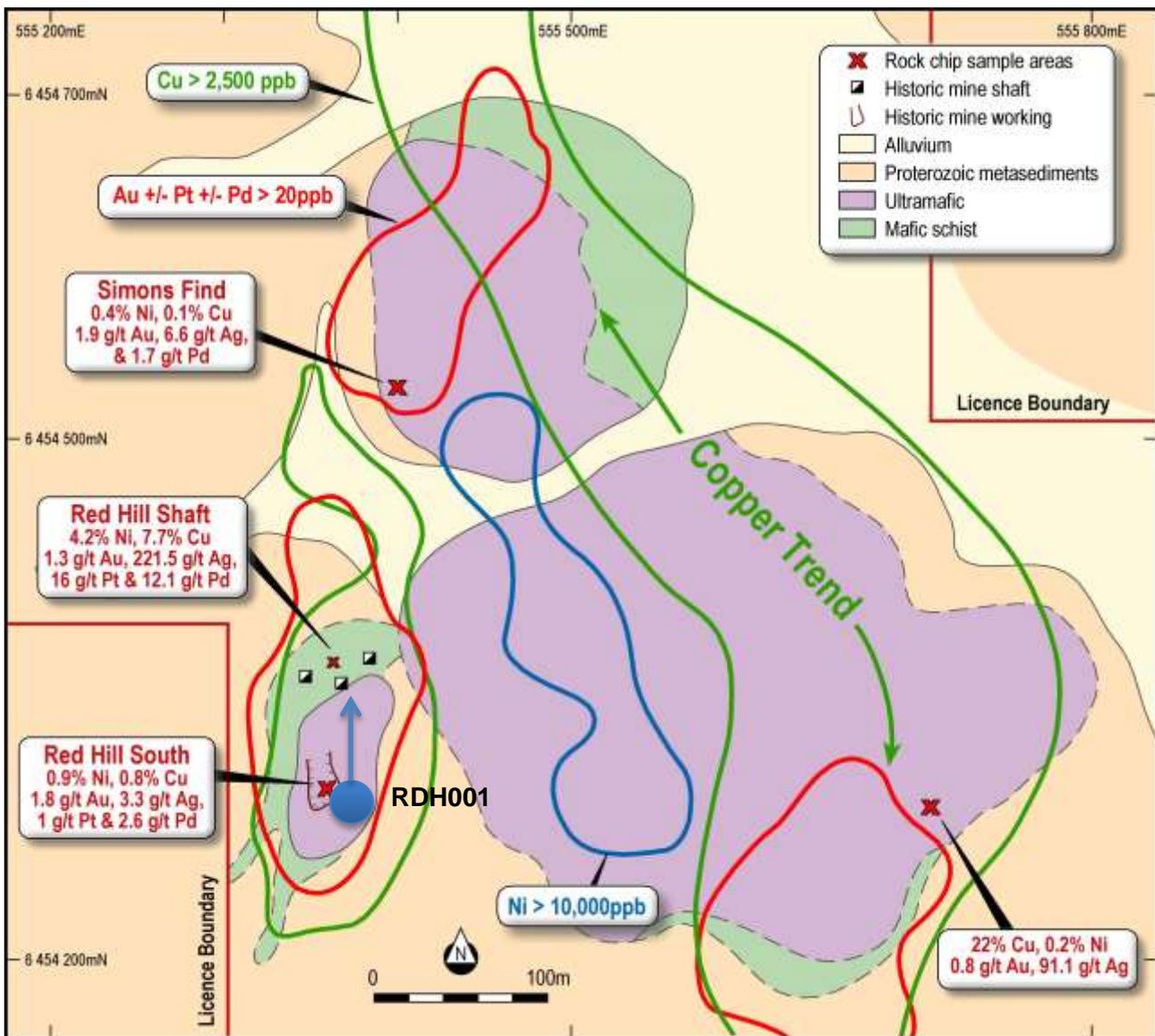


Figure 2. Geology and Soil and Rock Chip Results from the Red Hill Prospect.



A handwritten signature in black ink that reads 'Michael G Jones'.

**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.*



## 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>	Random rock samples were taken at surface which represented favourable geology and alteration to known mineralisation in the region. Samples are variably weathered. Soil samples were taken at 50 m intervals from a hole 15-20 deep and sieved to -2mm to collect about 250 g of material. A handheld XRF instrument was used to analyse the drill core at 50 cm intervals.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	Representative rock chip samples at each sample site weigh between 0.8 and 1.2 kg. Soil samples are taken at a consistent depth below surface and sieved. The XRF measurements were taken to prevent a bias towards mineralised intervals.
	<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>	Rock samples were sent to Intertek Adelaide where they were crushed, dried and pulverised (total prep) to produce a 25-30 g sub-sample for analysis by four acid digest with an ICP/AES finish for ore grade base metal samples and lead collection fire assay with AAS finish for gold and precious metals. Weathered samples contained gossanous sulphide material. Soil samples were sent to SGS Perth for analysis by the MMI digest. The XRF data is qualitative only. A comparison between the XRF results and wet chemical assay data will be completed on receipt of final results.
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>	No drilling results are reported.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	No drilling results are reported.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	No drilling results are reported.
	<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 drilling results are reported.
Logging	<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>	No drilling results are reported.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	No drilling results are reported.
	<i>The total length and percentage of the relevant intersections logged</i>	No drilling results are reported.



Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling results are reported.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	No drilling results are reported.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The sample preparation techniques follow industry best practice.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Laboratory QC procedures for rock sample assays involve the use of internal certified reference material as assay standards, along with blanks, duplicates and replicates.
	<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 were taken at selected sample sites.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	This is not relevant to soil and rock chip results.
<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>	Industry standard assay techniques were used.
	<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>	For the rock chips, quality control procedures for assays were followed via internal laboratory 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>	The results have not been verified by independent or alternative companies. This is not required at this stage of exploration.
	<i>The use of twinned holes.</i>	No drilling results are reported.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary assay data for rock chips has been entered into standard Excel templates for plotting in Mapinfo.
	<i>Discuss any adjustment to assay data.</i>	There are no adjustments to the assay data.
<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>	Sample locations were located by hand held GPS.
	<i>Specification of the grid system used.</i>	The grid system for Broken Hill is MGA_GDA94, Zone 54.



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	<i>Quality and adequacy of topographic control.</i>	Standard government topographic maps have been used for topographic validation. The DGPS is considered sufficiently accurate for elevation data.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Sample spacing for the soil survey was on a 50 m by 50 m grid.
	<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>	Estimations of grade and tonnes have not yet been made.
	<i>Whether sample compositing has been applied.</i>	Sample compositing has not been applied.
<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>	Not relevant to soil and rock chip results.
	<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>	Not relevant to soil and rock chip results.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by Impact Minerals Ltd. Samples for Broken Hill are delivered by Impact Minerals Ltd by courier who transports them to the laboratory for prep and assay. Whilst in storage, they are kept in a locked yard. Tracking sheets have been set up to track the progress of batches of samples.
<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.



## 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 Broken Hill Project currently comprises 1 exploration licences covering 100 km <sup>2</sup> . The tenement is held 100% by Golden Cross Resources Ltd. Impact Minerals Limited is earning 80% of the nickel-copper-PGE rights in the licence from Golden Cross. No aboriginal sites or places have been declared or recorded over the licence area. There are no national parks over the license area.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement is in good standing with no known impediments.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	There has been no significant previous work at this prospect.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	Nickel-copper-PGE sulphide mineralisation associated with an ultramafic intrusion.
<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>	No drilling results are reported.
<b>Data aggregation methods</b>	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.	
	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.	This is not relevant.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been reported.
<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>	Historical drill holes to date have been sub-perpendicular to the mineralised trend and stratigraphy so intervals are close to true width or otherwise stated.



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<b>Diagrams</b>	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to Figures in body of text.
<b>Balanced reporting</b>	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All results reported are representative
<b>Other substantive exploration data</b>	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Assessment of other substantive exploration data is not yet complete however considered immaterial at this stage.
<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 recent and historic results which is ongoing.