# Drilling extends copper-nickel-PGE massive sulphides at Stark

- **Latest drill results double strike extent of copper – nickel - PGE mineralised massive sulphides to over 200 metres and identify a new parallel mineralised zone:**
  - **2m @ 3.27% copper, 0.11% nickel and 0.94g/t PGE's**
  - **7m @ 1.41% copper, 0.31% nickel and 0.60g/t PGE's including; 4m @ 2.03% copper, 0.37% nickel and 0.62g/t PGE's**
  - **14m @ 0.40% copper, 0.08% nickel and 0.27g/t PGE's including; 3m @ 0.60% copper, 0.20% nickel and 0.56g/t PGE's**
- **Mineralisation remains open in all directions with untested downhole EM conductor at depth**

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Mithril Resources Ltd ("Mithril" - **ASX: MTH**) is pleased to advise that a recently completed Reverse Circulation drilling program at the Stark prospect (*located 80 kilometres south east of Meekatharra, WA – Figures 1 and 2*) has doubled the strike extent of copper-nickel-PGE mineralised massive sulphides to over 200 metres and identified a potential new "hanging wall" zone of mineralisation.

Two holes (NRC15001 and NRC15002) were drilled along strike from previously reported intercepts at Stark and returned the following results (downhole widths):

- **2m @ 3.27% copper, 0.11% nickel and 0.94g/t PGE's** from 157 metres in NRC15001,
- 7m @ 1.41% copper, 0.31% nickel and 0.60g/t PGE's from 148 metres in NRC15002 including;
  - **4m @ 2.03% copper, 0.37% nickel and 0.62g/t PGE's** from 151 metres.
- 14m @ 0.40% copper, 0.08% nickel and 0.27g/t PGE's from 200 metres in NRC15001 including;
  - 3m @ 0.60% copper, 0.20% nickel, and 0.56g/t PGE's from 213.43 metres

The latest intercepts were returned from disseminated and massive sulphides (pyrrhotite-chalcopyrite-pentlandite-pyrite) that occur both within, and at the base of a mafic (gabbro) intrusion adjacent to a Banded Iron Formation (BIF) and metasedimentary sequence (*Figures 3 to 7*).

The zone of copper mineralisation in NRC15001 (from 157 metres) occurs above the base of the mafic intrusion at the same stratigraphic position as a previously obtained intercept 100 metres to the north in NDD15001 – 0.27m @ 0.41% copper, 1.62% nickel, and 1.60g/t PGE's from 213.43 metres and 0.43m @ 2.19% copper, 0.12% nickel, and 0.77g/t PGE's from 213.70 metres *(see ASX Announcement 23 March 2015).*

As such, these intercepts are interpreted to represent a new "hanging wall" position which is developed parallel to the massive sulphides seen at the base of the mafic intrusion.

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ASX Code: MTH
Issued Shares: 498,598,877
Market Capitalisation: $2.49 million

Copper-nickel-PGE mineralisation in the both the basal massive sulphide position and new hanging wall zone remain open in all directions and further drilling is required to determine their true extents.

In addition, the presence of an untested downhole EM off-hole conductor (modelled conductance up to 6,000S) approximately 150 metres beneath the existing massive sulphides reinforces the potential to extend the Stark mineralisation (*Figure 4 and ASX Announcement dated 13 May 2015*).

Stark lies on tenements subject to a Farmin and Joint Venture Agreement (Nanadie Well Joint Venture) with Intermin Resources Limited (**ASX: IRC**).

Under the terms of the joint venture, Mithril can earn a 60% interest in the project tenements by completing expenditure of $2M by 14 April 2018, and an additional 15% by completing further expenditure of $2M over a further 2 years (*in total $4M over 6 years for 75% - see ASX Announcement dated 6 December 2013*).

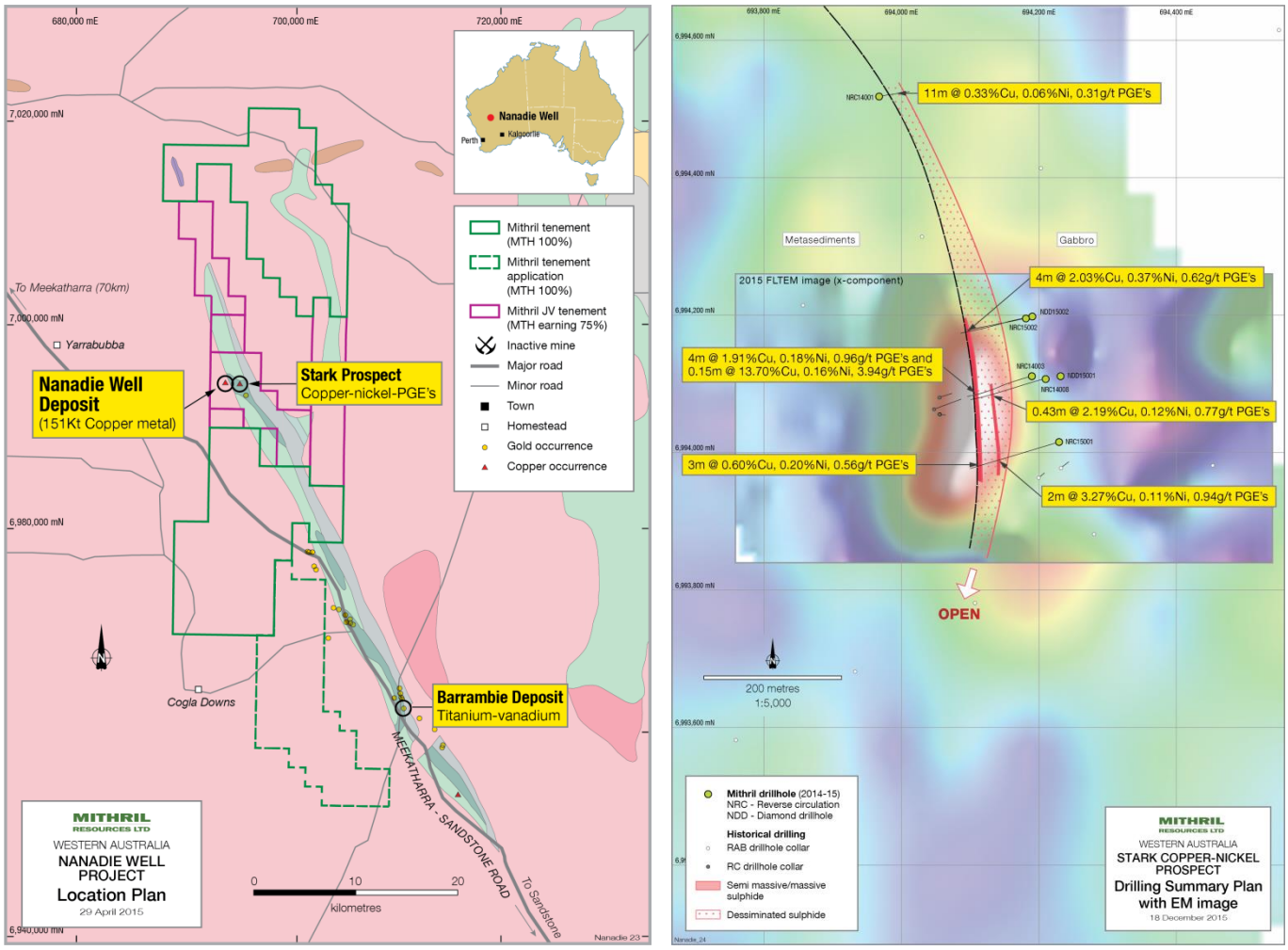


**Figure 1 (left): Stark Prospect location plan. Figure 2 (right) Stark Prospect drill collar location plan, showing drill hole traces, copper-nickel-PGE sulphides and background FLTEM (X component) image.**


**Figure 3: Photo of NRC15002 RC chip tray showing semi-massive and massive sulphides from 150 – 154 metres. Refer to Table 1 for individual copper-nickel-PGE assay values.**

**Table 1: Individual assay values for NRC15002**

| Hole ID | From | To | Copper % | Nickel % | Gold g/t | Platinum g/t | Palladium g/t |
|---|---|---|---|---|---|---|---|
| NRC15002 | 149 | 150 | 0.60 | 0.11 | 0.05 | 0.06 | 0.30 |
| NRC15002 | 150 | 151 | 0.92 | 0.52 | 0.51 | 0.15 | 0.56 |
| NRC15002 | 151 | 152 | 1.47 | 0.72 | 0.05 | 0.07 | 0.58 |
| NRC15002 | 152 | 153 | 1.59 | 0.56 | 0.03 | 0.05 | 0.58 |
| NRC15002 | 153 | 154 | 3.36 | 0.13 | 0.04 | 0.01 | 0.66 |
| NRC15002 | 154 | 155 | 1.69 | 0.07 | 0.04 | 0.03 | 0.34 |
| NRC15002 | 155 | 159 | 0.08 | 0.01 | 0.01 | 0.01 | 0.03 |

**Table 2: Drilling Details**

| Prospect | Hole ID | Easting | Northing | Dip° | Azi° | EOH Depth | Comments |
|---|---|---|---|---|---|---|---|
| Stark | NRC15001 | 694,230 | 6,994,016 | -55 | 260 | 242 metres | Cased for DHEM |
| Stark | NRC15002 | 694,173 | 6,994,200 | -55 | 260 | 176 metres | Cased for DHEM |

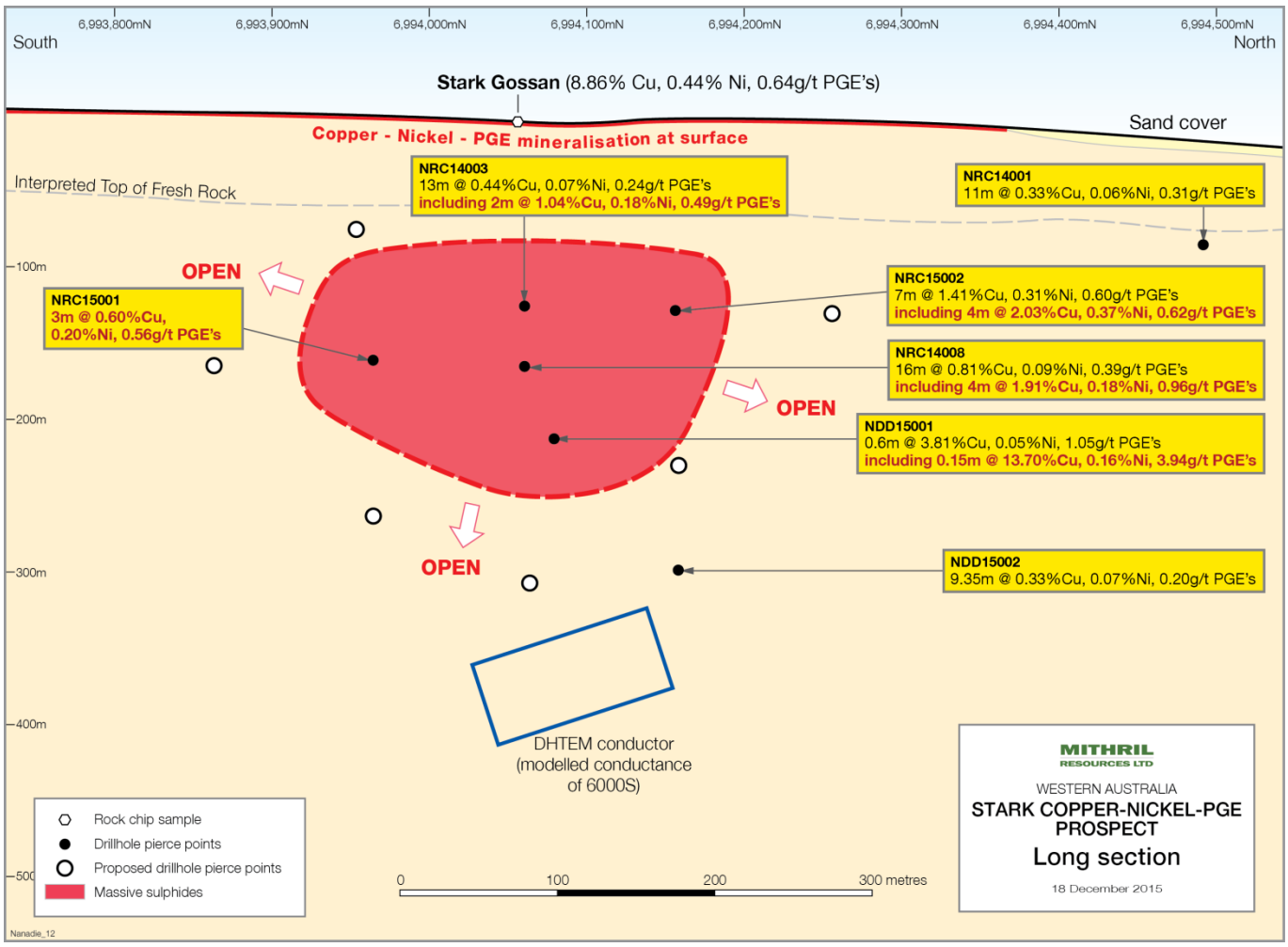


**Figure 4: Stark Prospect intrusion basal contact long section showing drill hole pierce points, intercepts, distribution of massive sulphide mineralisation and DHTEM conductor**

**Table 3: Drill Hole Assay Results. Length weighted intersections (0.25% copper lower cut-off)**

| Prospect | Hole ID | From | Width | Cu % | Ni % | Au g/t | Pt g/t | Pd g/t | Au+Pt+Pd g/t |
|---|---|---|---|---|---|---|---|---|---|
| Stark | NRC15001 | *157* | 2 | 3.27 | 0.11 | 0.55 | 0.15 | 0.24 | 0.94 |
| Stark | NRC15001 | 200 | 14 | 0.40 | 0.08 | 0.05 | 0.06 | 0.17 | 0.27 |
| *including* | | *211* | *3* | *0.60* | *0.20* | *0.08* | *0.08* | *0.40* | *0.56* |
| Stark | NRC15002 | 148 | 7 | 1.41 | 0.31 | 0.11 | 0.05 | 0.44 | 0.60 |
| *including* | | *151* | *4* | *2.03* | *0.37* | *0.04* | *0.04* | *0.54* | *0.62* |

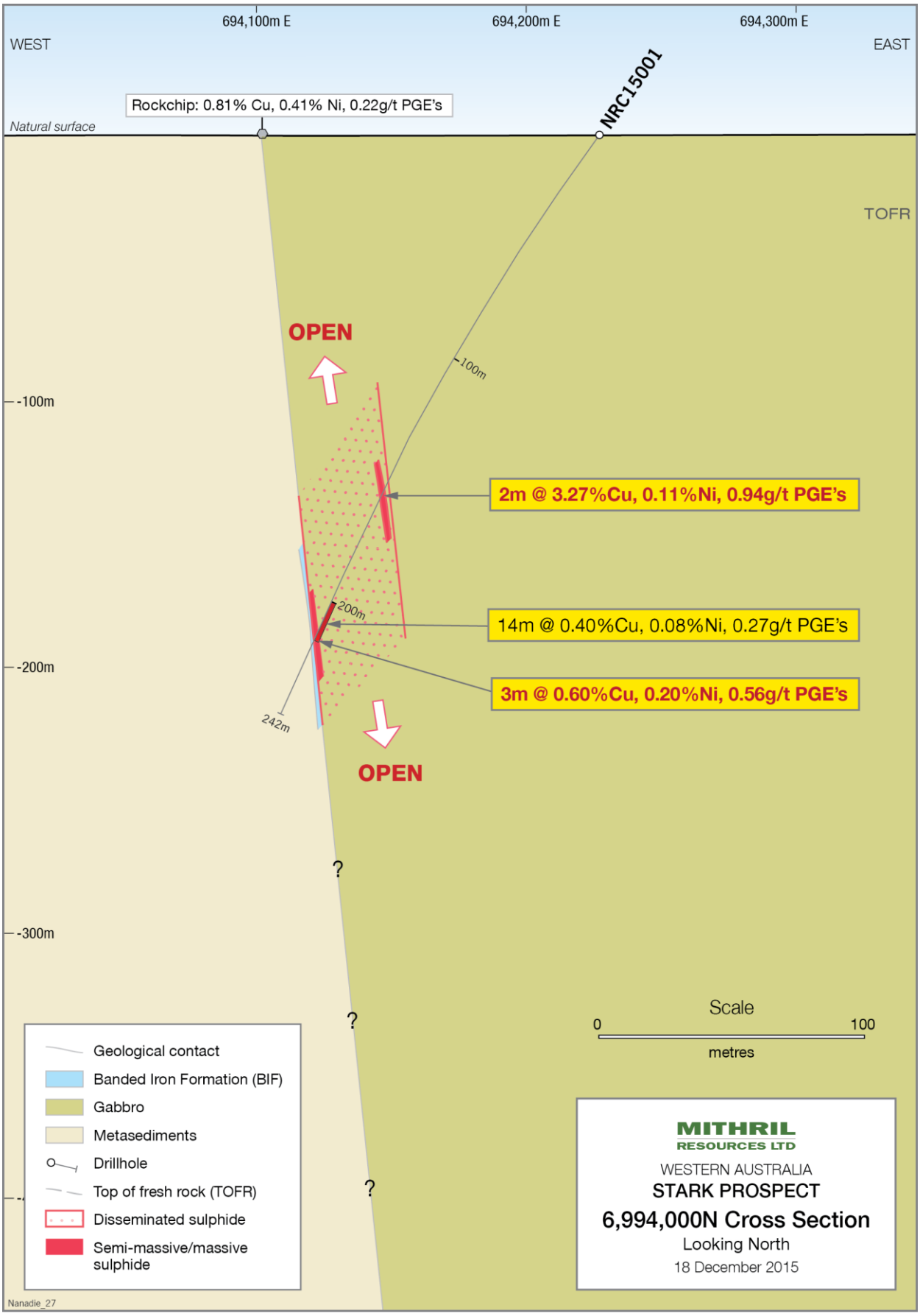


**Figure 5: Stark Prospect 6,994,000N cross section showing NRC15001**

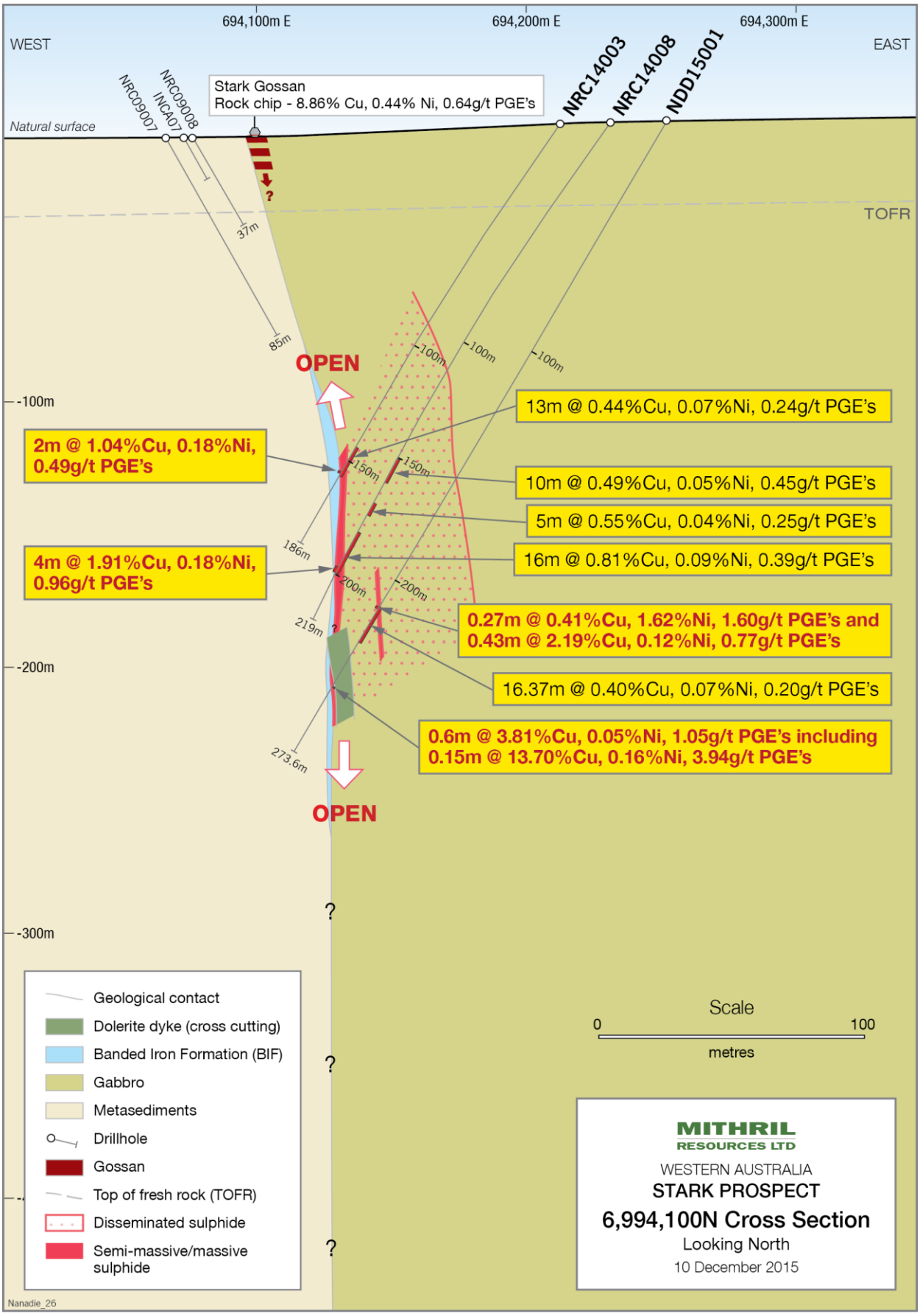


**Figure 6: Stark Prospect 6,994,100N cross section**

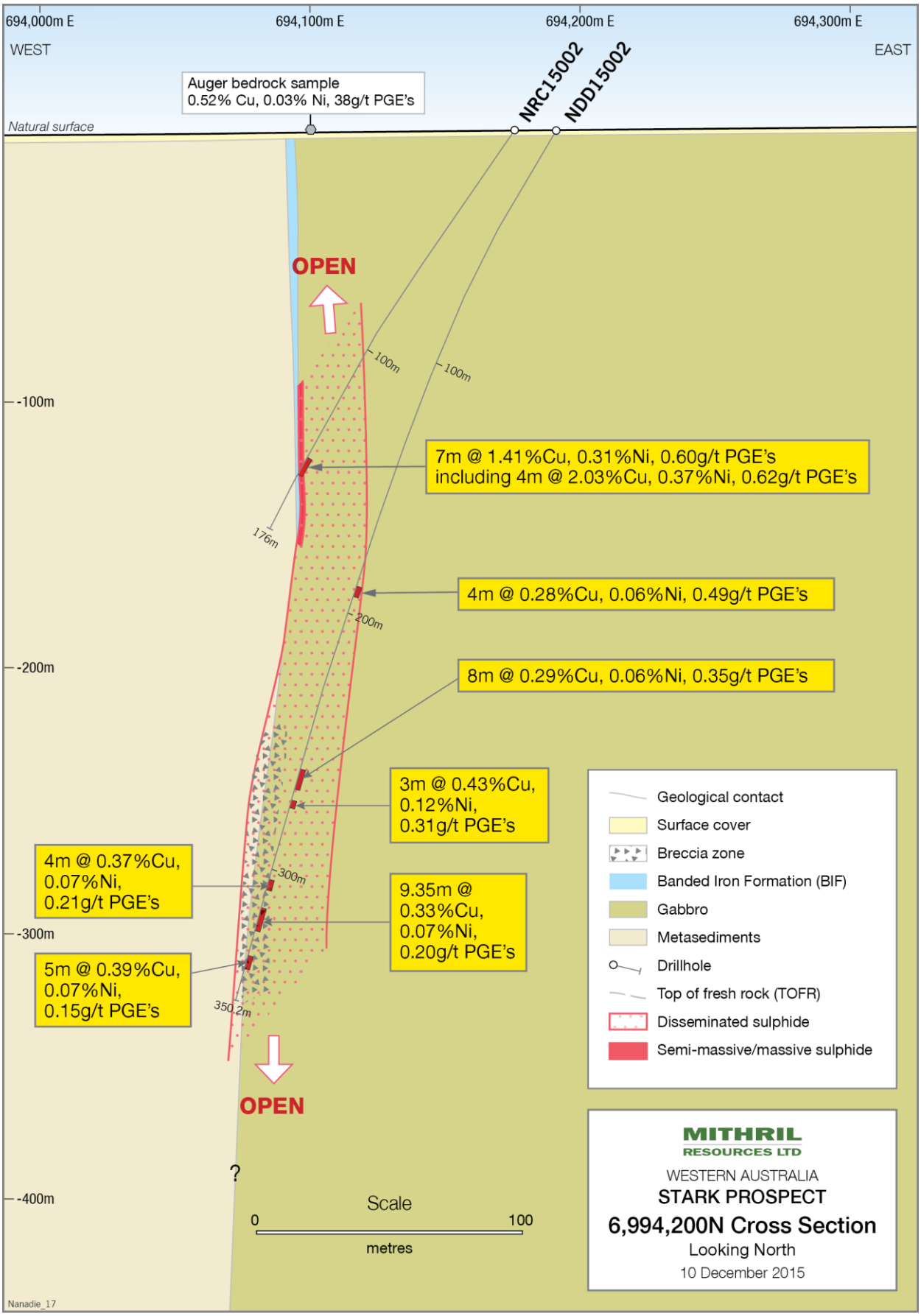


**Figure 7: Stark Prospect 6,994,200N cross section showing NRC15002**

## JORC Code, 2012 Edition - TABLE 1 (Section 1: Sampling Techniques and Data)

| Criteria | *JORC Code explanation* | Commentary |
|---|---|---|
| *Sampling techniques* | *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.* | Reverse Circulation (RC) drilling was completed at the Stark copper-nickel-PGE prospect. Samples were either collected as 1m splits directly from the rig cyclone, or as composites (up to 4m) from the drill spoils laid out on the ground. Sample sizes were ~2-3kg. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | Each drill hole location (easting and northing) was collected by a handheld GPS. Detailed logging of Collar, Drilling, Survey, Lithology, Sample, and Magnetic Susceptibility information was completed for every metre, or as necessary, for each drill hole. All logging and sampling protocols remained constant throughout the program. |
| | *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.* | RC chip samples were collected from either the cyclone as a representative 1m split or from the drill spoils as a 2-4m composite. Around 2 – 3kg sample was collected for geochemical analysis by ALS Laboratories in Perth, WA.<br>In the laboratory, samples were crushed (~10mm) and pulverised to produce a representative 25g sub-sample for analysis using fire assay with ICP-MS finish for Au, Pt, and Pd (PGM-ICP23 – Lab Code) and four acid digest with ICP-AES finish for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W, and Zn (ME-ICP61 – Lab Code). |
| *Drilling techniques* | *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.).* | A KWL350 Reverse Circulation (RC) rig was used to complete the program. Drill bit size was 146mm. |
| *Drill sample recovery* | *Method of recording and assessing core and chip sample recoveries and results assessed.* | No recordings of recoveries were undertaken. |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | No measures taken to maximise sample recovery. |
| | *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.* | No relationship has been identified. |
| *Logging* | *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.* | Detailed logging of Collar, Drilling, Survey, Lithology, Sample, and Magnetic Susceptibility information was completed in each hole. Lithology and Magnetic Susceptibility was logged for every metre intervals, and Surveys collected every 30m down hole. |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography* | Logging of rock chip samples is of a qualitative nature.<br>RC chip samples are always logged for lithology, colour, texture, weathering, minerals, alteration, and sulphide percentage and type, with comments included as necessary. Photos of the chip trays (include 5m/per photo) are taken for the entire hole. |
| | *The total length and percentage of the relevant intersections logged.* | Every hole was logged (Lithology and Magnetic Susceptibility) for every metre (entire length of hole). |
| *Sub-sampling* | *If core, whether cut or sawn and whether quarter, half or all core taken.* | Drilling was by RC only – no core. |

| Criteria | *JORC Code explanation* | Commentary |
|---|---|---|
| *techniques and sample preparation* | *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* | Samples were collected either as a 1m split directly from the rig cyclone or as a composite sample (2-4m) from the drill spoils (scoop used) laid out on the ground.<br>All samples were dry, with only a few wet samples. Wet samples were not listed as wet. |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | The sample preparation of the RC chip samples follows industry best practice, involving oven drying (110°C) where necessary, crushing and pulverising (~90% less than 75µm). |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | Along with RC chip samples taken at the rig, standards and blanks were inserted (around every 20 samples) and were included in the laboratory analysis process. Standards were Certified Reference Material (from Geostats Pty Ltd) of varying grades of Cu and Ni, and blanks were coarse sand.<br>The laboratory completed repeat analysis on samples returning >10,000 ppm Cu, Ni, and Zn. |
| | *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.* | Sampling was supervised by the field geologist following geological logging to ensure that sampling was representative of the in situ material collected.<br>Selected repeat sampling will be undertaken following receipt of original assay data. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled* | Sample sizes are considered appropriate for the exploration method and produce results to indicate degree and extent of mineralisation. |
| *Quality of assay data and laboratory tests* | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | Fire Assay and a four acid digest are considered near total digest and are appropriate for the type of exploration undertaken. |
| | *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.* | A handheld XRF instrument (NITON) was used in the field to assist with identifying anomalous base metal zones. Magnetic susceptibility readings were also taken of each sample. |
| | *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.* | The laboratory completed repeat analysis on samples returning >10,000 ppm Cu, Ni, and Zn. From results achieved it is determined an acceptable level of accuracy and precision has been established. |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.* | The significant intersections were verified by the Managing Director. |
| | *The use of twinned holes.* | No twin holes were drilled. |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Collar locations were predetermined in the office and modified in the field as necessary (dependent on access etc.). All data collection (lithology logging, sampling, etc.) was completed at each drill hole location as hole was being drilled. Data initially written on paper log sheets.<br>A complete data set (excel spreadsheet) was created by Mithril on completion of the program, based on all information collected. |
| | *Discuss any adjustment to assay data* | None undertaken. |
| *Location of data points* | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | Each drill hole location (easting and northing) was collected by a handheld GPS. Down hole surveys were recorded using a Global Tech Pathfinder surveying tool which is supported by quality checks that quantify anomalies allowing Drillers to record survey data accurately without errors. |
| | *Specification of the grid system used.* | Data points have been quoted in this Report using the MGA Zone 50 (GDA94) coordinate system. |

| Criteria | *JORC Code explanation* | Commentary |
|---|---|---|
| | *Quality and adequacy of topographic control.* | Level of topographic control offered by the handheld GPS was considered sufficient for the work undertaken. |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.* | There was no pre-determined grid space for the program, drill holes based on specific targeting of modelled bedrock conductors derived from ground EM geophysical surveying. |
| | *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.* | The data spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s). |
| | *Whether sample compositing has been applied.* | Sample compositing was employed throughout the drillholes – typically up to 4 metre intervals depending on the geology. |
| *Orientation of data in relation to geological structure* | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | RC chip samples are unable to be orientated and do not provide structural information. |
| | *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.* | No orientation based sampling bias has been identified. |
| *Sample security* | *The measures taken to ensure sample security.* | All drill samples were collected by company personnel and stored in a secure location until completion of the program. Samples were taken to the ALS Laboratory in Perth. |
| *Audits or reviews* | *The results of any audits or reviews of sampling techniques and data.* | All results were reviewed by Company personnel including the Geology Manager and Managing Director. No negative issues were identified from these reviews. |

**JORC Code, 2012 Edition - TABLE 1 (Section 2: Reporting of Exploration Results)**

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Mineral tenement and land tenure status* | *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 work described in this Report was undertaken on Exploration Licence 51/1040 which is owned by Intermin Resources and in which, Mithril has the right to earn up to a 75% interest by completing $4M expenditure over 6 years (See ASX Announcement dated 6 December 2013). |
| | *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.* | There are no existing impediments to the tenements. |
| *Exploration done by other parties* | *Acknowledgment and appraisal of exploration by other parties.* | Intermin estimated a 2004 JORC Code Compliant Inferred Resource for the Nanadie Well Copper Deposit of 36.07Mt @ 0.42% Cu in September 2013.<br>This work followed the completion of various previous RAB, RC and geophysical surveys throughout the area by Intermin and previous exploration companies.<br>No previous drilling of the Stark Prospect drill targets prior to Mithril's discovery in late 2014 has been previously undertaken. |
| *Geology* | *Deposit type, geological setting and style of mineralisation.* | The Nanadie Well Copper Deposit and Stark Prospect is interpreted to be an Archaean – age, mafic-hosted magmatic copper-nickel deposit.<br>Disseminated copper (+/- lead, zinc, nickel) sulphide mineralisation occurs within a package of structurally deformed mafic lithologies. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Drill hole Information* | *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:*<br>*easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth, hole length.* | A summary of the RC drilling referred to in this Announcement is presented in Tables 1 – 3 of this Report. Also see Figures 2 to 7 of this Report. |
| | *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | No information has been excluded. |
| *Data aggregation methods* | *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.* | Length weighted averaging of drill results was applied where an intercept of greater than 1 metre contained internal intervals of varying lengths.<br>For reporting copper and nickel results, a lower cut-off grade of 0.25% has been applied. No upper cut offs have been applied. No cut-off grades have been applied to reporting of PGE's. |
| | *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.* | Length weighted averaging of drill results was carried out according to the following formula:<br>[Sum of (all individual assay values x corresponding individual sample length for selected intersection)] divided by [total length of selected intersection]. |
| | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | No metal equivalents reported. |
| *Relationship between mineralisation widths and intercept lengths* | *These relationships are particularly important in the reporting of Exploration Results.* | Widths of mineralisation have not been postulated. |
| | *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* | The geometry of the mineralisation is not known. |
| | *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').* | The Exploration Results in this Announcement are reported as down hole widths only and true width not known. |
| *Diagrams* | *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.* | See Figures 2 - 7 of this Report. |
| *Balanced reporting* | *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 are reported. |
| *Other substantive exploration data* | *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.* | All relevant data has been included within this Report. |
| *Further work* | *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* | Detailed review of all drilling and geophysical data for the prospect to be followed by further drilling. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | Figures 2 - 7 display areas of interest within the Stark Prospect area |

**ENDS**

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**Competent Persons Statement:**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr David Hutton, who is a Competent Person, and a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Hutton is Managing Director and a full-time employee of Mithril Resources Ltd.

Mr Hutton has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'.

Mr Hutton consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**About Mithril Resources Ltd:**

Mithril Resources Ltd is an Australian exploration company focused on the discovery and development of base metal deposits primarily copper. Mithril is a frontier explorer with a small but highly experienced team based in Adelaide. Combining advanced technology with a proven field-based approach ensures the bulk of the company's expenses go directly into the ground.

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