



## Bryah Secures Option over Historic Manganese Mine

### HIGHLIGHTS

- Bryah Resources secures exclusive 1 year option to purchase Mining Lease covering the historical Horseshoe South Manganese Mine as well as the Manganese Rights over 154 km<sup>2</sup> of adjoining ground.
- Horseshoe South Manganese Mine was the largest manganese mine in the Bryah Basin and is located less than 1 km north of the recently opened Horseshoe Flats Manganese Mine.
- Historical manganese production from the Horseshoe South Mine was 490,000 tonnes grading 42% Mn (1948-1971).
- Last phase of mining (2008-2011) at Horseshoe South Mine undertaken by Mineral Resources Limited (ASX:MIN) with over 400,000 tonnes of manganese ore produced.
- 215,000m<sup>3</sup> of sub-grade manganese stockpiles remain on site.
- Metallurgical testwork of sub-grade manganese stockpiles to be undertaken – targeting the production of saleable product.
- Detailed exploration programme testing for new manganese deposits to be undertaken during Option Period.

Bryah Resources Limited (“Bryah” or “the Company”) is pleased to announce that it has executed exclusive option agreements to purchase the Mining Lease covering the historic Horseshoe South Manganese Mine as well as the rights to prospect, explore, mine and develop manganese ore (“Manganese Rights”) covering a total of 154km<sup>2</sup> of ground within the Bryah Basin in central Western Australia (see Figure 1).

The Mining Lease and Manganese Rights are currently held by Peak Hill Manganese Pty Ltd (“PHM”). The option agreements are for a period of 1 year and options fees of \$120,000 cash will be payable upon completion of final due diligence in the coming weeks. Further details of the Option Agreements are set out below.

The Horseshoe South Manganese mine was the largest manganese mine in the Bryah and Padbury Basins. The mine was last operated from 2008 to 2011 by Process Minerals International, a subsidiary of ASX-listed Mineral Resources Limited (“MIN”).

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#### ASX Code: BYH

ABN: 59 616 795 245  
Shares on issue: 56,350,120  
Latest Share Price: \$0.13  
Market Capitalisation: \$7.3M

#### Projects

Bryah Basin – Copper, Gold,  
Manganese  
Gabanintha – Gold, Copper  
[bryah.com.au](http://bryah.com.au)

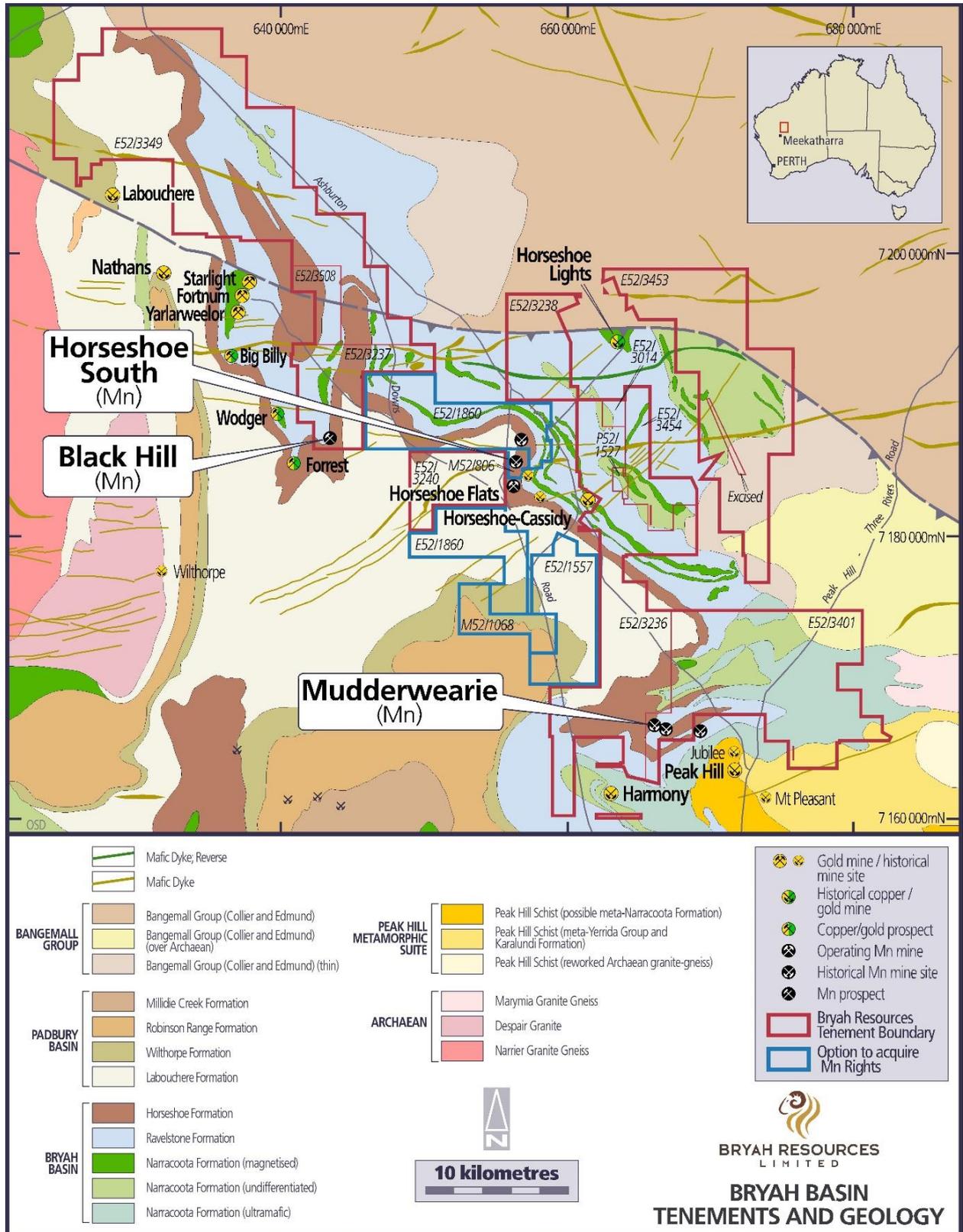


Figure 1 – Bryah Basin Tenements and Regional Geology Map

## Horseshoe South Manganese Mine

The Horseshoe Range area has been the main manganese producing region within the Bryah and Padbury Basins, with production dominated by the Horseshoe South Mine, and a smaller satellite deposit at the Horseshoe North Mine which is located on E52/1860 (see Figure 1). The first production period for these 2 deposits was from 1948 to 1971, when 490,000 tonnes of manganese ore was mined at a reported average grade of 42% Mn.

The manganese enriched zones were 3 to 4.5 metres thick and typically extended over lengths of 400 to 500 metres. The North deposit averaged 30 metres in width, whereas the South deposit was fan shaped, opening from 20 to 300 metres wide at its maximum extent<sup>1</sup>.

In 2003/2004 PHM produced 39,000 tonnes of manganese ore by reprocessing stockpiled material. PHM signed a Mining Agreement with MIN in February 2008 which allowed MIN to undertake mining operations. The Mining Agreement expired in February 2018, although MIN has 6 months after the expiry of the agreement to remove all remaining plant on site.

During their mining operations, MIN processed both sub-grade lump and fines stockpiles as well as completing hard rock mining operations in the Horseshoe South pit and at a satellite deposit in the Horseshoe South Extended pit. The stockpiles were processed using mobile screening equipment whilst a simple beneficiation plant was installed to treat the hard rock ore. Over 400,000 tonnes of manganese ore was produced by MIN between 2008 and 2011.

## Manganese Potential

Whilst there has been no further mining at the Horseshoe South mine since 2011, the Mining Lease and the surrounding tenements covered by the Manganese Rights are considered by the Company to be highly prospective for new manganese discoveries like the Horseshoe Flats manganese deposit, which was discovered by shallow drilling in 2010.

The Horseshoe Flats deposit is located less than 1 km south of the Horseshoe South mine (see Figure 1 & Plate 1). Manganese mining operations commenced at the Horseshoe Flats in late 2017 with ore being trucked to Port Hedland for export. The deposit has been described as a talus-style deposit which lies near the foot of the Horseshoe Range under shallow transported cover (see Figure 2). Within Mining Lease M52/806 and Exploration Licence E52/1860 there appears to be over 15 kilometres of the same stratigraphic horizon as the Horseshoe Flats deposit, which has the potential to host similarly concealed talus-style mineralisation. The Company therefore intends to explore for concealed manganese deposits throughout its existing and optioned tenements covering the Horseshoe Formation.

There are a number of coarse and fine sub-grade manganese stockpiles remaining on site within M52/806 (see Plates 2, 3 & 4). The coarse stockpile has been calculated to be 65,000m<sup>3</sup> in volume and the fines stockpiles are approximately 150,000m<sup>3</sup> in total volume.

The Company intends to evaluate these remnant stockpiles to see if simple beneficiation techniques and/or modern ore sorting methods can be used to produce saleable products.



Plate 1 – Exploration Manager Rohan Williams standing on outcropping manganese on M52/806 with Horseshoe Flats Manganese Mine in the background.

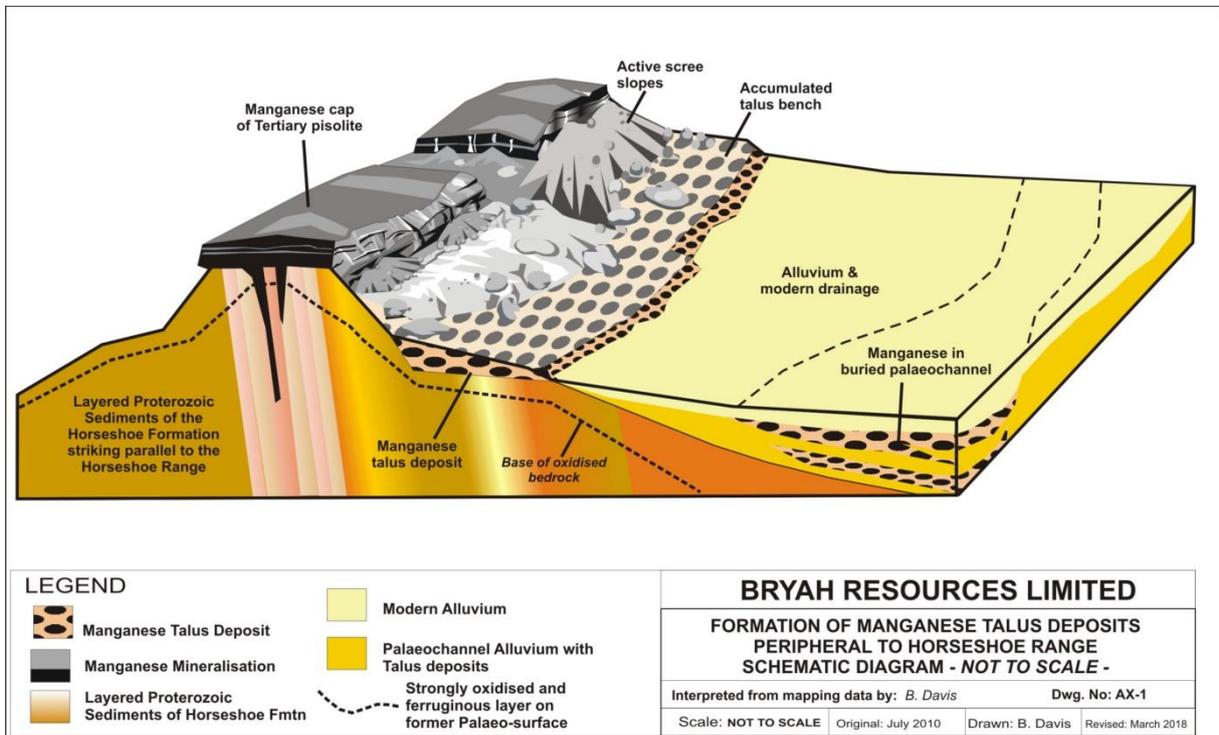


Figure 2



*Plate 2 – Part of the Horseshoe South Mine coarse sub-grade Mn stockpile.*



*Plate 3 – One of the Horseshoe South Mine fine sub-grade Mn stockpiles.*



*Plate 4 – View of Horseshoe South Mine taken from the top of the coarse sub-grade Mn stockpile (foreground), showing MIN’s beneficiation plant and fine sub-grade Mn stockpiles (background).*

### Future Activities

The Company is delighted to have secured the option to acquire the Manganese Rights and most importantly the granted Mining Lease over the largest manganese mine in the region.

Recent site visits have identified evidence of manganese outcrops both within M52/806 and the adjoining E52/1860. The Company therefore intends to embark on a detailed exploration and evaluation programme during the Option Period which will include:

- Stockpile sampling and metallurgical testwork;
- Ground mapping and sampling;
- Trenching; and
- Drilling.

Exploration of the Company’s copper-gold targets within the Bryah Basin will continue in parallel with these activities.

For Further Information, please contact

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## Option Details

Key details of the exclusive Option Agreements are set out below:

### Option to acquire Mining Lease

Tenement:	M52/806.
Tenement Holder:	Peak Hill Manganese Pty Ltd.
Option Period:	12 months from Completion Date.
Completion Date:	Within 3 months of execution of Option Agreement.
Conditions Precedent:	Satisfactory due diligence and any necessary 3 <sup>rd</sup> party documentation.
Option Fee:	\$100,000 cash.
Exercise Fee:	\$300,000 payable as \$150,000 cash and \$150,000 in Bryah Ordinary Shares based on the 5 days VWAP prior to the date of Exercise.

### Option to acquire Manganese Rights

Tenements:	E52/1557, E52/1860 and M52/1068.
Tenement Holder:	Desert Resources Pty Ltd (wholly owned subsidiary of Austsino Resources Limited (ASX:ANS)).
Holder of Manganese Rights:	Peak Hill Manganese Pty Ltd.
Option Period:	12 months from Completion Date.
Completion Date:	Within 1 month of execution of Option Agreement.
Conditions Precedent:	Satisfactory due diligence and any necessary 3 <sup>rd</sup> party documentation.
Option Fee:	\$20,000 cash.
Exercise Fee:	\$40,000 payable as \$20,000 cash and \$20,000 in Bryah Ordinary Shares based on the 5 days VWAP prior to the date of Exercise.

## References

1. Geology & Mineralisation of the Palaeoproterozoic Bryah & Padbury Basins, Western Australia. GSWA Report 59, 2000, Pirajno, F, et al.

## About Bryah Resources Limited

*In October 2017 Bryah Resources Limited raised \$5 Million and was admitted to the official list on the Australian Securities Exchange (ASX). The Company is a copper-gold-manganese focused explorer with 2 projects located in central Western Australia, being the 718 km<sup>2</sup> Bryah Basin Project and the 202km<sup>2</sup> Gabanintha Project.*

*The Bryah Basin is host to the high-grade copper-gold mines at DeGrussa, discovered by Sandfire Resources NL in 2009, and at Horseshoe Lights, which was mined up until 1994. The Bryah Basin also has several historical and current manganese mines.*

*Bryah Resources Limited's exploration strategy is:*

- *to apply the best and latest exploration methods to evaluate the ground;*
- *to use high resolution geophysics to identify deeper structures and potentially mineralised zones;*
- *to drill test targets below the depth of previous drilling, and*
- *to apply maximum funds on exploration activities.*

*At Gabanintha, Bryah holds the rights to all minerals except Vanadium/Uranium/Cobalt/Chromium/Titanium/Lithium/Tantalum/Manganese & Iron Ore (Excluded Minerals). Australian Vanadium Limited retains 100% rights in the Excluded Minerals on the Gabanintha Project.*

## Competent Persons Statement

*The information in this announcement that relates to Exploration Results is based on information compiled by Mr Rohan Williams, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Williams is an employee of Bryah Resources Limited ("the Company"). Rohan Williams has sufficient experience which is relevant to the style of mineralisation and type of deposit 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'. Rohan Williams consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.*

## Forward Looking Statements

*This report may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this report, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.*