

#### SANDFIRE RESOURCES NL

A QUALITY COPPER-GOLD COMPANY ASX Code:SFR

#### March 2017 Quarterly Report Presentation and Webcast 27 April 2017

Access this presentation at: <u>http://webcasting.boardroom.media/broadcast/58e584458ac6f038fedd5fc0</u> or <u>http://www.sandfire.com.au</u>



#### **Forward-Looking Statements**

This presentation has been prepared by Sandfire Resources NL. This document contains background information about Sandfire Resources NL current at the date of this presentation. The presentation is in summary form and does not purport be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation.

This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of shares in any jurisdiction.

This presentation may not be distributed in any jurisdiction except in accordance with the legal requirements applicable in such jurisdiction. Recipients should inform themselves of the restrictions that apply in their own jurisdiction. A failure to do so may result in a violation of securities laws in such jurisdiction.

This presentation does not constitute investment advice and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek professional advice when deciding if an investment is appropriate. All securities transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments.

To the fullest extent permitted by law, Sandfire Resources NL, its officers, employees, agents and advisers do not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise is accepted.

This presentation may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Sandfire Resources NL. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward looking statements in this presentation speak only at the date of issue of this presentation. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Sandfire Resources NL does not undertake any obligation to update or revise any information or any of the forward looking statements in this presentation or any changes in events, conditions or circumstances on which any such forward looking statement is based.

#### **Competent Person's Statement – Ore Reserves and Mine Plan**

The information in this report that relates to Ore Reserves and Mine Plan is based on information compiled by Mr. Neil Hastings who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Hastings is a permanent employee of Sandfire Resources and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hastings consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Competent Person's Statement – Mineral Resources**

The information in this report that relates to Mineral Resources is based on information compiled by Mr. Ekow Taylor who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Taylor is a permanent employee of Sandfire Resources and has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Taylor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Competent Person's Statement – Exploration Results Doolgunna**

The information in this report that relates to Exploration Results is based on information compiled by Mr. Shannan Bamforth who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Bamforth is a permanent employee of Sandfire Resources and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bamforth consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Competent Person's Statement – Exploration Results Temora**

The information in this report that relates to Exploration Results at Temora is based on information compiled by Mr Bruce Hooper who is a Registered Professional Geoscientist (RPGeo) of The Australian Institute of Geoscientists. Mr Hooper is a permanent employee of Sandfire Resources and has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hooper consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Exploration and Resource Targets**

Any discussion in relation to the potential quantity and grade of Exploration Targets is only conceptual in nature. While Sandfire is confident that it will report additional JORC compliant resources for the DeGrussa Project, there has been insufficient exploration to define mineral resources in addition to the current JORC compliant Mineral Resource inventory and it is uncertain if further exploration will result in the determination of additional JORC compliant Mineral Resources.



### Agenda



- ► Highlights
- ► Safety
- ► Operations
- Development
  Monty Project
  Black Butte
- Exploration
  Doolgunna
  NSW
- Summary & Outlook



#### **Production and Operations**

- March 2017 Quarter: 16,256t copper and 8,988oz gold produced; C1 US\$0.94/lb
- FY2017 guidance maintained: 65-68kt of contained copper, 35-40koz of contained gold; lower end of C1 guidance US\$0.95-1.05/lb

### Development

- Positive Feasibility Study completed on the Monty Copper-Gold Project (Springfield JV)
- Permitting continues for the Black Butte development (Tintina Resources SFR 61%)

### **Exploration**

- New copper-gold porphyry system intersected at Temora Project, NSW with first hole returning 125m at 0.3% Cu and 0.5g/t Au including intervals of 44m and 28m at 0.4% Cu and 0.6g/t Au
- Multi-pronged exploration programs continuing at both Sandfire's Greater Doolgunna Project and the Springfield Joint Venture which, including JV and Farm-in Agreements, now covers a total area of 5,846km<sup>2</sup>
- Series of ~1,200m holes underway at Monty to provide a platform for deep EM testing

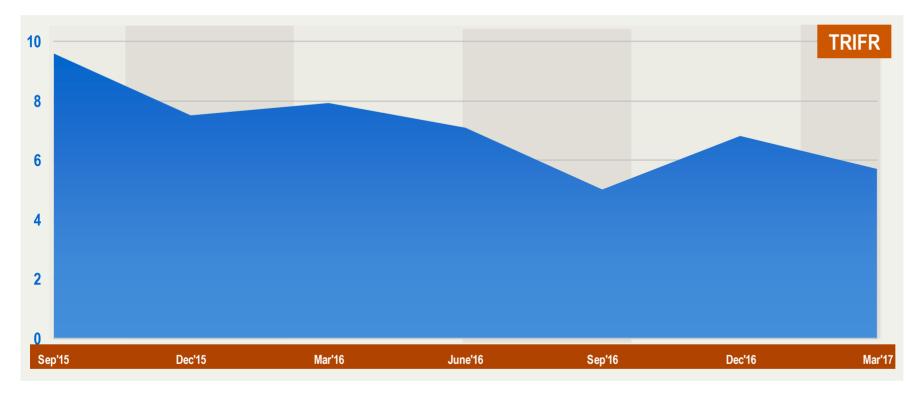
#### **Corporate and Financial**

- Cash and deposits \$86M (Sandfire); \$90M Group
- Debt fully repaid at end of January 2017



# Safety

- Total Recordable Injury Frequency Rate (TRIFR) of 5.7 at Quarter-end (vs. 6.8 at December 2016 Quarter-end)
- ► Safety systems development and critical control management ongoing
- Focus being applied to improving safety leadership, culture and assurance controls





# **Operations – Mining**

# Underground production and mine development

- Total ore production for the Quarter of 402,784 tonnes grading 4.4% Cu
- Mine remains in balance between production and back-fill
- Underground ventilation system completed for Conductor 4 and Conductor 5
- Underground pumping station to be completed around end June 2017 quarter



# **Operations – Processing**

### Mill throughput

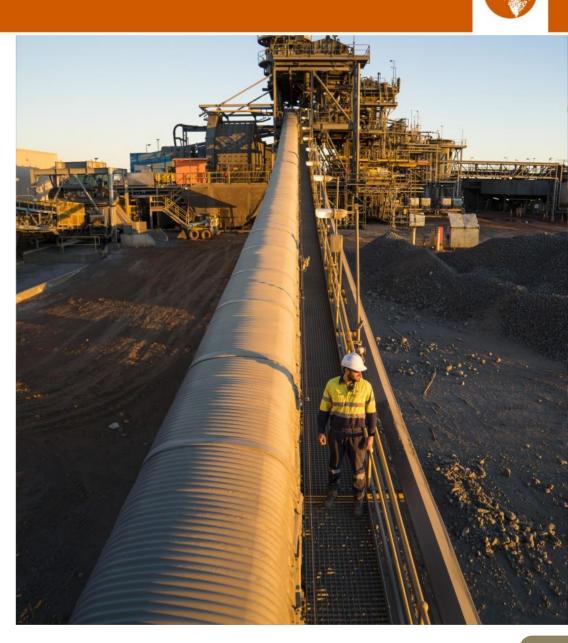
 405,025 tonnes milled at average head feed grade of 4.4% Cu

#### Recovery

- Quarterly copper recovery of 91.3%; Gold recovery 44.3% (FY2017 guidance: copper ~91%, gold ~43%)
- Further improvements to recovery in FY2018 with additional rougher flotation capacity being added

#### **Concentrate & metal production**

- ▶ 66,762 tonnes of concentrate produced
- ▶ 16,256 tonnes of contained copper produced
- ▶ 8,988 ounces of contained gold produced





- Sales of 63,507 tonnes of concentrate (dry) containing 15,160 tonnes of copper (14,524 tonnes payable) and 8,222 ounces of gold (7,616 ounces payable)
- ► 6 shipments completed for the quarter



## **Operations – Unit Operating Costs**

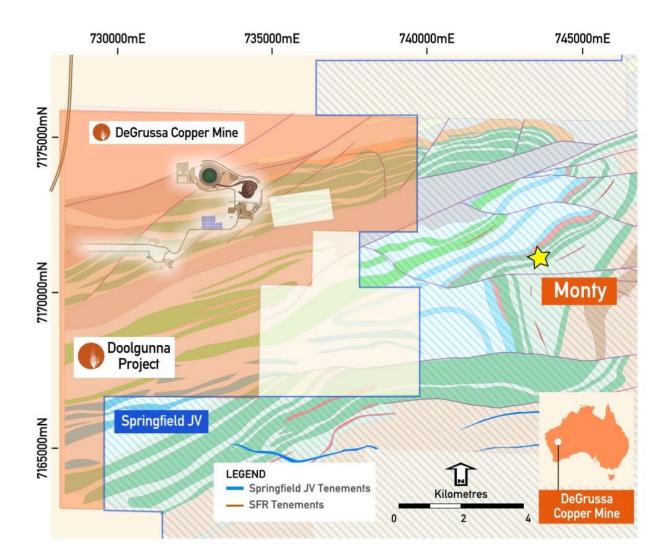


Unit costs – DeGrussa Mine	Q3FY2017 (US\$/lb)	Commentary
Mining (net of development)	0.39	
Processing	0.29	Pleasing cost performance at both a gross and unit
Business services	0.12	cost level. Q4 FY2017 C1 costs expected to approach US\$1.00/lb with higher mining unit costs (net of
Transport, treatment and refining	0.48	development activities).
C1 cost (pre by product credit)	1.27	FY2017 C1 unit costs expected to be at the lower end
By-product credit (gold and silver)	(0.33)	of guidance ~USD0.95-1.05/lb.
C1 cost	0.94	Mine development \$11M for the quarter (FY2017 mine development guidance ~\$50M).
Royalties	0.16	Capital guidance \$27M for FY2017.
Production cost	1.10	Depreciation and amortisation guidance ~\$110M for
Depreciation and amortisation	0.60	FY2017.
Total production cost	1.70	

# **Development – Monty Copper-Gold Project**

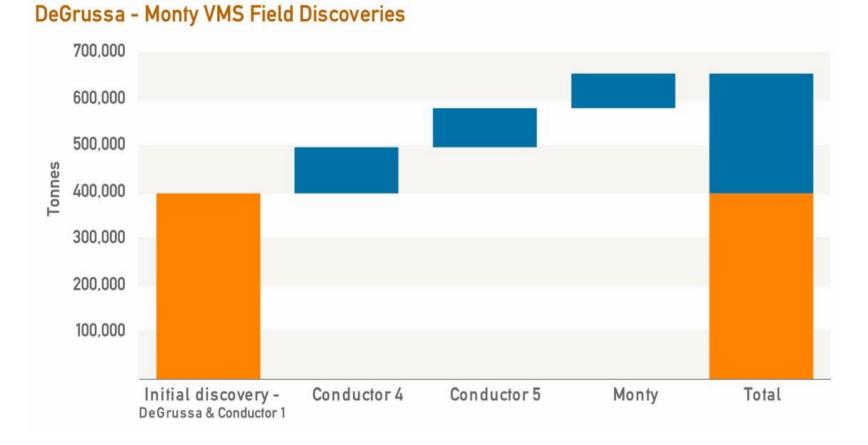


- Sandfire is Manager of the Springfield JV interests Sandfire 70%/Talisman 30%
- Feasibility Study completed:
  - Ore Reserve
    - 0.92Mt at 8.7% Cu and 1.4g/t Au for 80,000t Cu and 42,000oz Au
  - Mine Plan
    - 0.80Mt at 9.4% Cu and 1.5g/t Au for 74,000t Cu and 38,000oz Au
  - Testwork signals positive ore characteristics
  - EJVA and MJVA signed
- DeGrussa and Monty integration
  - Processing rates at DeGrussa to reduce to 1-2-1.3Mta from mid 2019 to allow Monty to be blended in at 0.3-0.4Mtpa for full 1.6Mtpa milling rate
  - Ore Sale and Purchase Agreement signed with Talisman Mining
- ► Approvals
  - Mining Lease granted
  - Other approvals expected by start FY2018



# **Development and Growth – Emerging VMS Field**

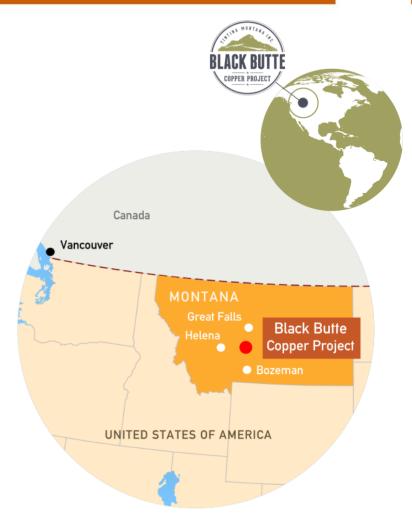
▶ 67% increase in Mine Plan ore since initial discovery of DeGrussa in 2009



# Development and Growth – Black Butte Copper Project, USA

- 61% stake in Black Butte Copper Project, central Montana (via stake in Tintina Resources Inc)
- Advanced, high quality copper project in stable jurisdiction:
  - NI 43-101 Measured and Indicated Resources of 15.7Mt grading 3.4% Cu for 533,600t of contained copper \*
  - NI 43-101 Inferred Resources of 2.3Mt grading 2.8% Cu for 63,500t of contained copper \*
- One of the top-10 undeveloped copper projects worldwide by grade
- Outstanding near-mine and district-wide exploration potential
- Development studies underway
- Mine Operating Permit (MOP) for Johnny Lee copper deposit in final stages with Montana Department of Environmental Quality (DEQ)
- Successful site visit completed February 2017 including meetings with key stakeholders

\* NI 43-101 M&I and I Mineral Resources – Refer TSXV Announcement "Preliminary Economic Assessment Black Butte Project", 12 July 2013" http://www.tintinaresources.com/assets/docs/ppt/TAU-UpdatedPEA\_07-12-2013.pdf



# **Doolgunna Exploration Overview**

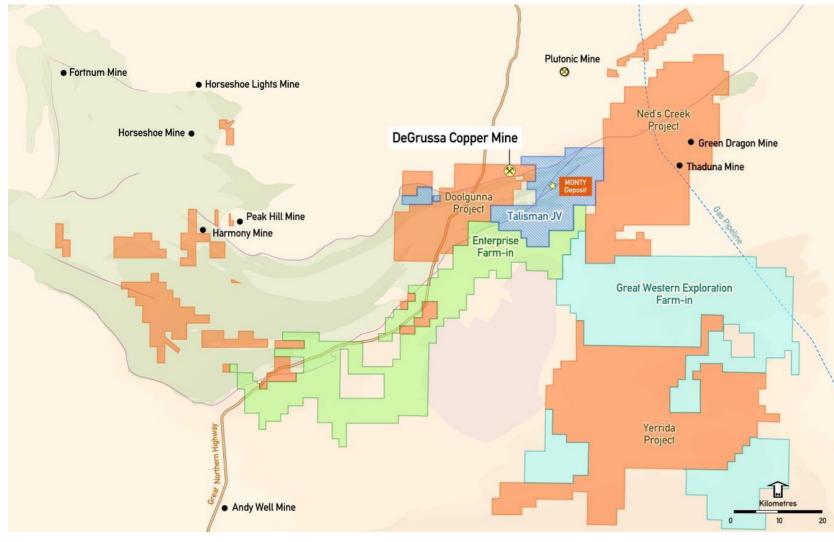
- Exploration continuing as a priority along highly prospective VMS corridor that hosts the DeGrussa and Monty deposits:
  - RC drilling at the Red Bore East Prospect to test the C5 host stratigraphy along strike from DeGrussa
  - The continuation of AC drilling at the Springfield Project targeting the South-Eastern Volcanics
  - Completion of RC pre-collars for diamond drilling tails to test for potential mineralisation at depth along strike from the Monty deposit
  - The planning of a major 600-hole AC drilling program at the Enterprise Metals farm-in project to test 10 strike kilometres of the favourable volcano-sedimentary sequence interpreted to belong to the Narracoota/Karalundi Formations, which host the DeGrussa and Monty copper-gold deposits
  - AC drilling at the Ned's Creek project targeting fault systems that exist in close proximity to known epigenetic copper mineralisation



# **Doolgunna Exploration Overview**



► Exploration advancing at multiple prospects within Greater Doolgunna area:

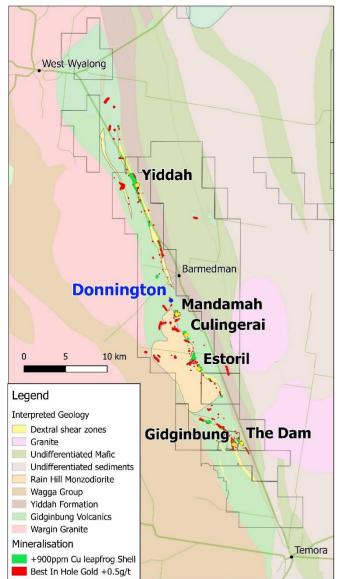


- ~18,000m of AC/RAB and RC drilling during the quarter
- Committed to in-ground spend with over ~ 121,000m drilled FY to date
- Farm-in deal completed with Great Western Exploration (ASX: GTE) at North Yerrida Project
- ► Total Tenure 5,846km<sup>2</sup>



### **Donnington Prospect, Temora - 100% Sandfire**





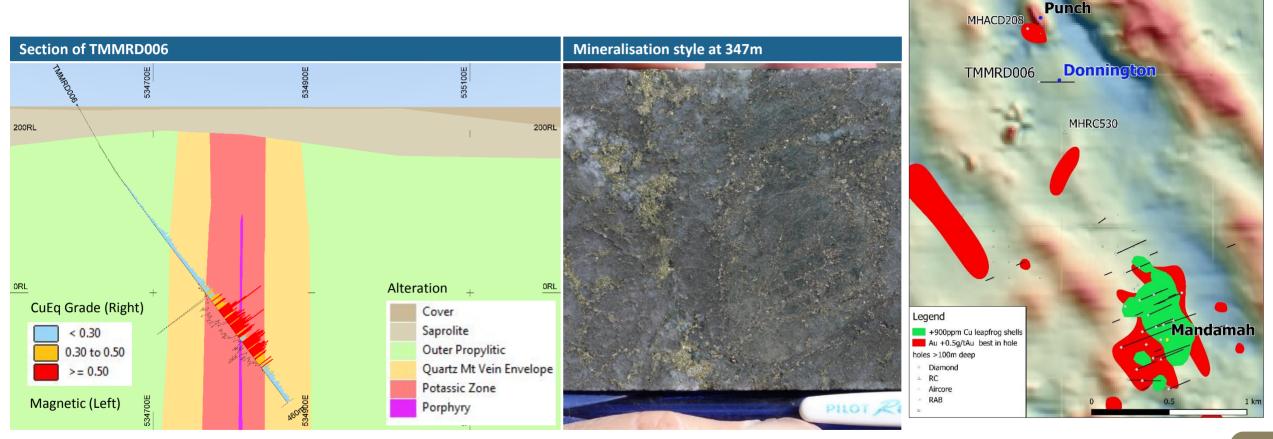
- New porphyry system intercepted at Donnington, Temora in New South Wales
- First diamond hole at prospect intersected
  - 125m @ 0.3% copper and 0.5g/t gold including
  - 44m and 28m at 0.4% copper and 0.6g/t gold
- Porphyry-style mineralisation intersected
- Nearest deep hole 400m to north at historical Punch prospect
- Mandamah deposit over one kilometre to south
- Close to infrastructure

Prospect	Hole Number	Easting (m)	Northing (m)	Azimuth	Dip	Total Depth (m)	Depth From (m)	Interval (m)	Cu (%)	Au (g/t)
Donnington	TMMRD006	534604	6218741	090	-60	460	287	125	0.32	0.46
	Including						314	44	0.41	0.62
							364	28	0.39	0.61
Punch	MHACD208	534533	6219084	0	-90	250	64	15	0.11	0.32
Reported at 0.3% CuEq (Cu x 0.55 Au), including at >0.5% CuEq with up to 3m internal dilution.										
Holes at 236m RL in MGA94 Zone 55. Downhole intervals are not true widths.										

## **Donnington Prospect, Temora - 100% Sandfire**

Location of TMMRD006 on regional aeromagnetics

- Mineralisation associated with quartz-magnetite-pyrite-chalcopyrite veined stockwork surrounding a narrow porphyry intrusive
- Associated weak magnetic anomaly, untested anomalies along strike
- Weathering is up to 80m depth in the region



# **Summary & Outlook**

- Strong and consistent production and cost performance:
  - FY2017 guidance maintained: 65-68kt contained copper, 35-40koz contained gold, C1 cost lower end US\$0.95-1.05/lb
- Original \$380M DeGrussa finance facility now fully repaid
- Monty Feasibility Study, Ore Reserve, Mine Plan and JV agreements finalised
- Progressing permitting for 61%-owned Black Butte Copper Project, USA
- Active exploration underway along 5km long prospective VMS horizon around Monty targeting the next VMS discovery
- Emerging Bryah Basin VMS district aggregate contiguous exploration area of 5,846km<sup>2</sup>
- New porphyry copper discovery in NSW with follow-up drilling underway to establish extents of mineralisation

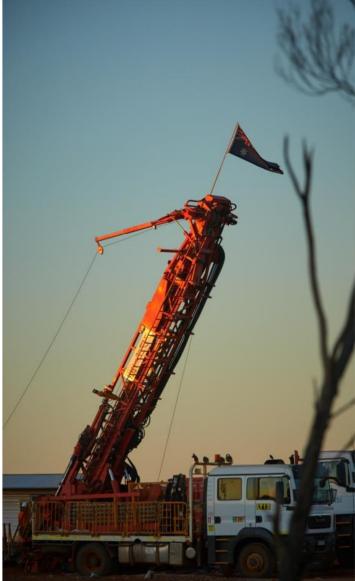




	Mt	Cu (%)	Au (g/t)	Contained Cu (t)	Contained Au (oz)
Mineral Resource	1.05	9.4	1.6	99,000	55,000
Ore Reserve	0.92	8.7	1.4	80,000	42,000
Mine Plan	0.80	9.4	1.5	74,000	38,000

#### Table 1: Monty Mineral Resource, Ore Reserve and Mine Plan (100% basis)

The Mine Plan incorporates the mining of the Lower Zone, which is the higher grade portion of the Ore Reserve. The Upper Zone, while marginally economic, will be subject to further technical and economic assessment in due course.







Contact Details: Sandfire Resources NL

Registered Office and Principal Place of Business Level 1, 31 Ventnor Avenue, West Perth, Western Australia 6005 T +61 8 6430 3800 F +61 8 6430 3849 www.sandfire.com.au