

GHANA

5.1 Moz

ORE RESERVE*
Developer



For personal use only



2019 Thayer Lindsley Award

ASX - TSX: CDV

Investor Presentation - March 2020

* 138.6 Mt @ 1.13 g/t Au; 0.5 g/t Au cut-off

Board & Management

For personal use only



Kevin Tomlinson
Chairman
Banker

Former

- NED - Centamin plc, Orbis Gold, Chairman - Medusa

Current

- Chairman - Bellevue Gold



Archie Koimtsidis
MD / CEO
Project Developer

Former

- PMI Gold – Ghana (now Asanko Gold)
 - Deputy Country Manager

- **Ghanaian resident**



Malik Easah
Executive Director
Government Liaison

Former

- PMI Gold - Ghana (now Asanko Gold)
 - Public Relations Officer

- **Ghanaian citizen**



Michele Muscillo
NED
Corporate Lawyer

Former

- NED - Orbis Gold

Current

- NED - Aeris Resources
- NED - Xanadu Mines



Trevor Schultz
NED
Mine Construction,
Development & Operations

Former

- AngloGold Ashanti – Ghana - COO
- Centamin plc – Egypt – Exec Director
- BHP – Exec Manager
- Rio Tinto – Exec Manager



Dr Kenneth Thomas
NED
Project Implementation

Former

- Barrick Gold Corp – Senior VP

Current

- NED - Continental Gold Corp
- NED – DRA Global



Dave Anthony
COO
Mine Construction
Development & Operations

Former

- Barrick Gold Corp - Africa - COO
- Kinross – Project Director
- +30 Years Experience
 - 12 process plant start ups



Jon Grygorcewicz
CFO

Former

- Focus Minerals – Gold Producer
 - CFO
- Venture Minerals – Iron Ore Dev.
 - CFO

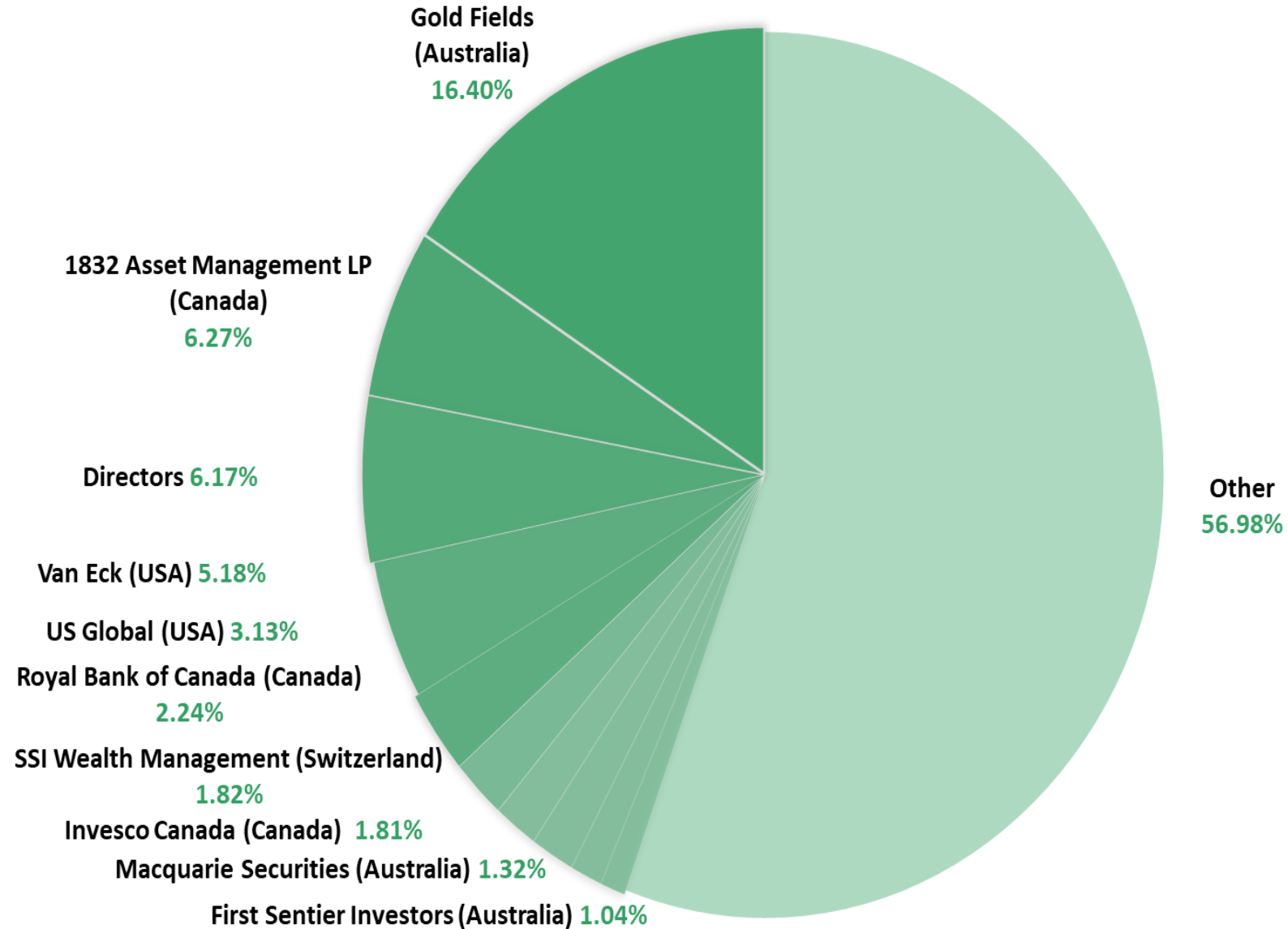
Corporate Overview

For personal use only

ASX / TSX Code	CDV
Current Share Price ¹	A\$ 0.37
Shares on Issue ^{2,3}	494 M
Market Capitalisation	A\$ 182 M
Cash at Bank⁴	A\$ 20.4 M

1. As at 27 February 2020
2. 60 Class C Performance shares on issue. If converted, will total 6 million ordinary shares if certain milestones are achieved. Details of conversion milestones are provided in Cardinal's Annual Report
3. 46,392,102 unlisted options on issue with various expiry dates and exercise prices
4. Cash as at 31 December 2019: Details of loan facility are provided in announcement dated 23 Aug 2018.

Argonaut	(Australia)
Beacon Securities	(Canada)
BMO Capital Markets	(Canada)
Clarus Securities	(Canada)
Cormark Securities	(Canada)
Macquarie Research	(Canada)
Martin Place Securities (MPS)	(Australia)
Hartleys	(Australia)
RFC Ambrian	(United Kingdom)



Namdini Gold Deposit

■ Namdini Discovery Timelines

- Drill Hole # 1 – 2014¹
- Discovery Declared - 2015
- Maiden Resource – 2016²
- PEA – 2018³
- PFS – 2018⁴, 4.76Moz* Ore Reserve
- FS – 2019⁵, 5.1Moz** Ore Reserve
- Gold Production - 2022⁵

■ Well-Established Local Infrastructure

- 30km – National HV hydro grid power
- 25km – Sealed national highway
- 7km – Continuous water supply – White Volta River

■ Excellent Community Relationships

- Facilitates rapid development objective

■ Open Savannah Grassland

- Low population density

■ Mining License Granted for 15 years - renewable



1. Press release 28 July 2014. 2. Press release 7 November 2016. 3. Press release 5 February 2018.

4. Press release 18 September 2018. 5. Press release 28 October 2019.

*129.6Mt @ 1.14 g/t Au at 0.5 g/t cut-off, inclusive of 4.76 Moz Probable (126.9 Mt @ 1.14 g/t Au); 0.5 g/t Au cut-off.

**138.6Mt @ 1.13 g/t cut-off, inclusive of 0.4Moz Proved (7.4Mt @ 1.31 g/t Au) and 4.7Moz Probable (131.2 Mt @ 1.12 g/t Au); 0.5 g/t Au cut-off

FS Cross Section – Grade Distribution

118,864m

Drilled since first discovery hole in 2015

64,423m

HQ size Diamond Drilling

41,170m

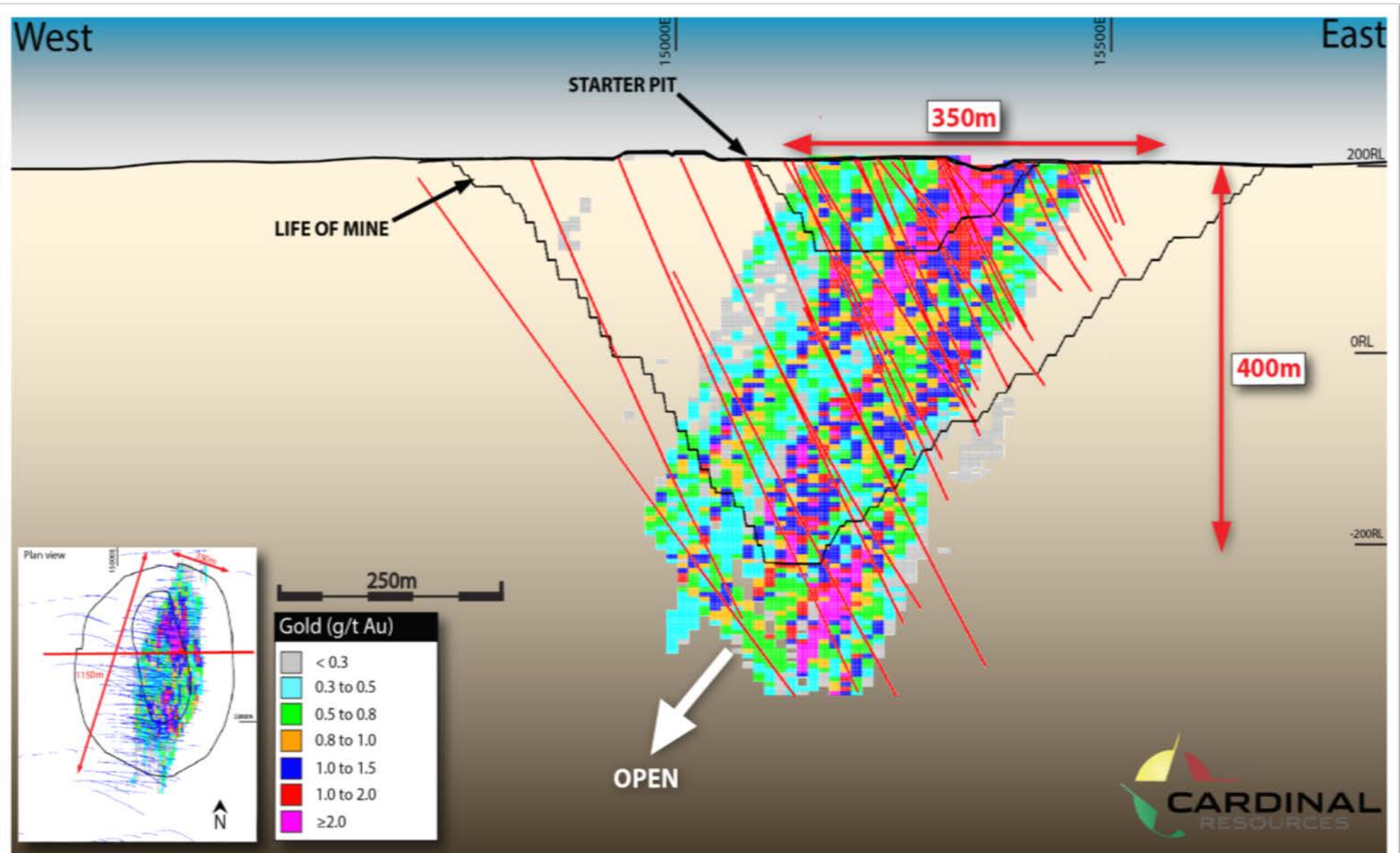
5.5" size RC Drilling

13,271m

Drilled for Grade Control

350m

Average width of mineralisation



FS Long Section – Grade Distribution

Starter Pit

First 27 months
Production ~1.1 Moz

Starter Pit Metrics

28.2Mt @ 1.41 g/t Au
Strip ratio - 0.9 : 1

Life of Mine Pit

Strip ratio - 1.9 : 1

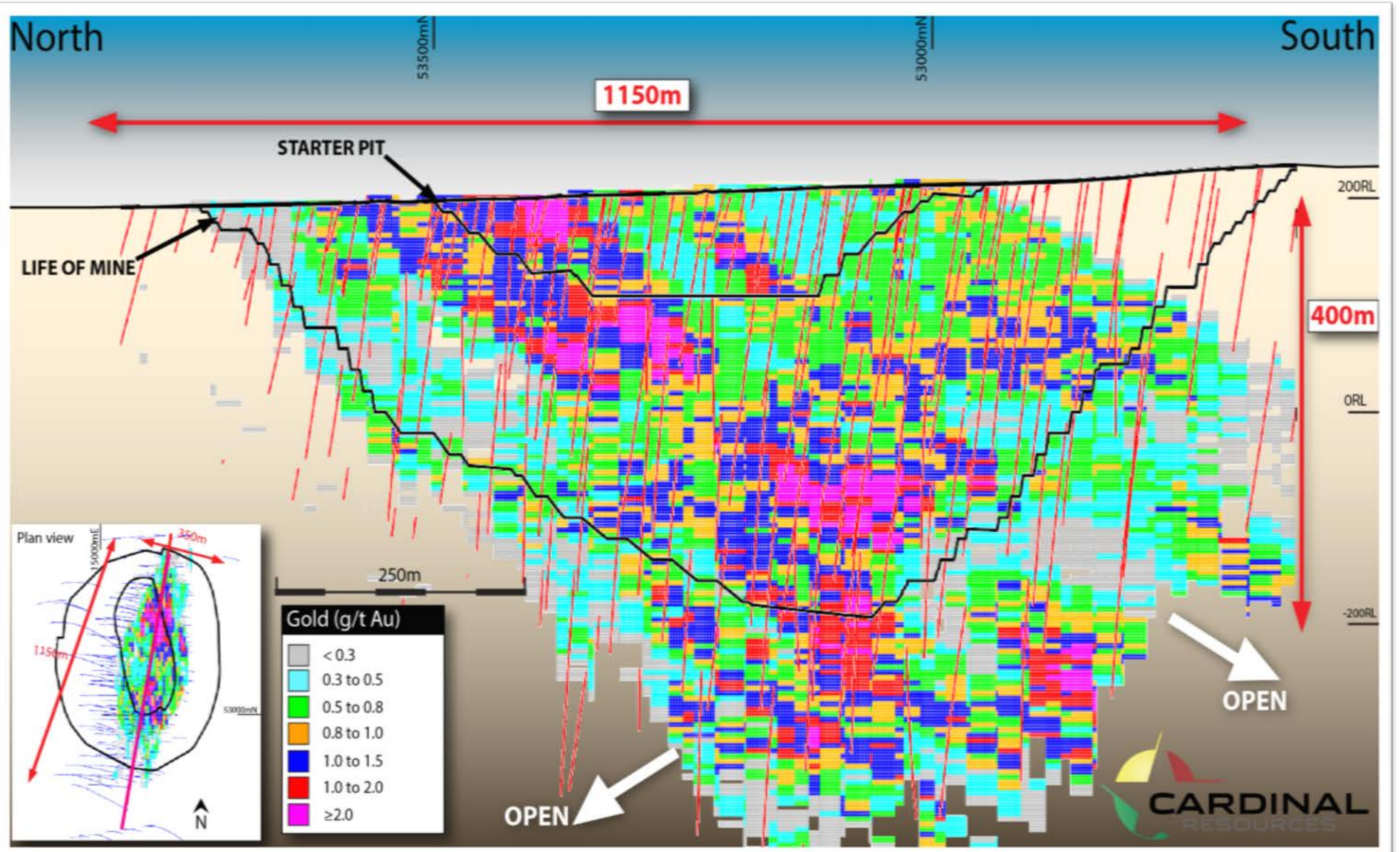
LOM Ore Reserve*

5.1 Moz

138.6Mt @ 1.13 g/t Au;
0.5 g/t cut off

Capex Payback

21 months



*Ore Reserves as of Oct 2019 FS

Mineral Resource Estimate



Measured and Indicated Mineral Resource

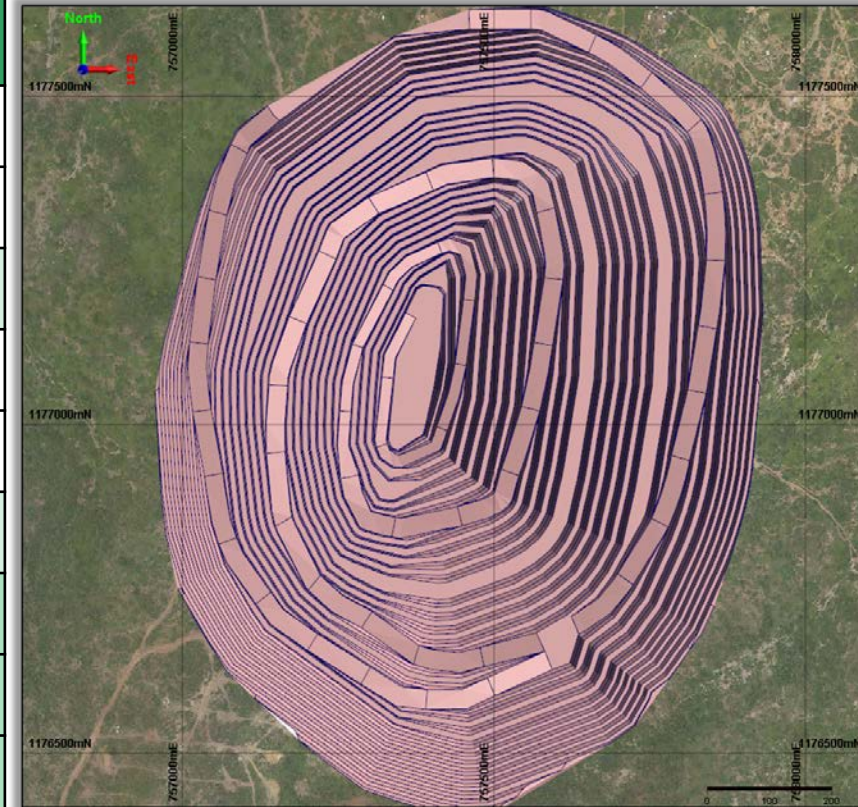
Mineral Resource category	Type	Tonnes (Mt)	Gold grade (g/t Au)	Contained gold (Moz)
Measured	Oxide	1.1	1.23	0.04
Measured	Fresh	6.4	1.33	0.27
Measured Resource	Total	7.5	1.31	0.32
Indicated	Oxide	3.3	1.08	0.11
Indicated	Fresh	171	1.11	6.10
Indicated Resource	Total	174	1.11	6.21
Measured and Indicated	Oxide	4.40	1.12	0.16
Measured and Indicated	Fresh	177	1.12	6.38
Measured and Indicated	Total	182	1.12	6.53

Inferred Mineral Resource

Mineral Resource category	Type	Tonnes (Mt)	Gold grade (g/t Au)	Contained gold (Moz)
Inferred	Oxide	0.04	1.0	0.001
Inferred	Fresh	12	1.2	0.46
Inferred Resource	Total	12	1.2	0.46

Ore Reserve Estimate

Feasibility Life Of Mine Pit Design

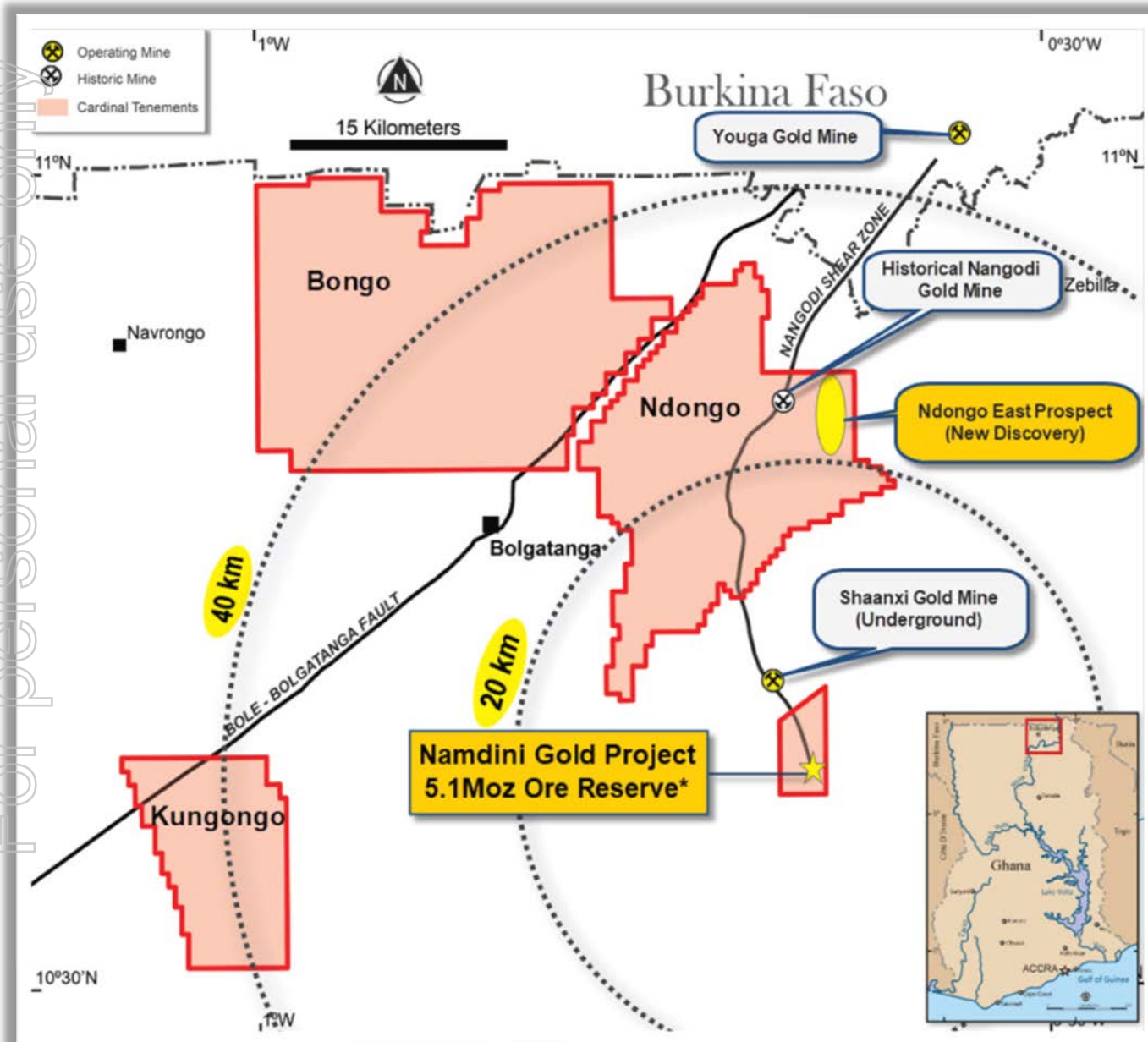


Ore Reserve category	Type	Ore Tonnes (Fully Diluted) (Mt)	Diluted Contained Ounces (koz)	Grade (Au g/t)
Proved	Oxide	1.03	40.0	1.21
Proved	Fresh	6.35	271	1.33
Proved Reserves	Total	7.38	311	1.31
Probable	Oxide	3.02	105	1.08
Probable	Fresh	128.2	4,638	1.13
Probable	Total	131.2	4,743	1.12
Proved and Probable	Oxide	4.04	144	1.11
Proved and Probable	Fresh	134.5	4,909	1.13
Proved and Probable	Total	138.6	5,054	1.13

Notes on Table (Ore Reserve Estimate as at April 2019):

- The Ore Reserve conforms with and uses the JORC 2012 Code definitions
- The Ore Reserve is evaluated using a gold price of US\$1,300/oz
- The Ore Reserve is evaluated using a fixed cut-off grade of 0.5 g/t Au
- Ore block grade and tonnage dilution was incorporated through the use of an MIK estimation model that has demonstrated to incorporate an expected level of equivalent ore loss and dilution for the scale of mining envisaged
- All figures are rounded to reflect appropriate levels of confidence
- Apparent differences may occur due to rounding

Northern Ghana - New Exploration Frontier



■ Shallow high-grade discovery at Ndongo East

○ Recent significant drill hole intersections¹ include:

- **5.3m @ 13.9g/t Au** from 78m
- **5.5m @ 3.8g/t Au** from 31m
- **3.7m @ 3.3g/t Au** from 59m
- **2.7m @ 7.7g/t Au** from 19m
- **2.0m @ 18.3g/t Au** from 59m
- **14.0m @ 7.0g/t Au** from 69m
- **8.3m @ 11.3g/t Au** from 76m
- **5.2m @ 4.5g/t Au** from 60m

¹ Refer to ASX/TSX press releases dated 16 July and 29 August 2018, 23 January 25 March and 10 July 2019

* 138.6 Mt @ 1.13 g/t Au; 0.5 g/t cut-off, inclusive of 0.4Moz Proved (7.4 Mt @ 1.31 g/t Au) and 4.7Moz Probable (131.2 Mt @ 1.12 g/t Au); 0.5 g/t Au cut-off.

Quality Partners

Lycopodium

 **GOLDER**

 **Knight Piésold**
CONSULTING

 **ALS**

 **OMC**
orway mineral consultants

MPR *Geological*
Consultants Pty Ltd

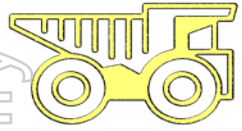
 **i mo** EVERYTHING
METALLURGY



For personal use only

FS Process Flowsheet

For personal use only



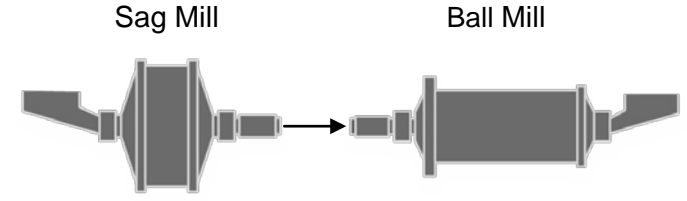
9.5 Mtpa



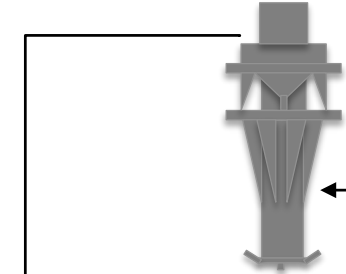
Primary Crushing



Crushed Ore Stockpile



Grinding Circuit



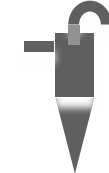
Regrind Circuit

0.76 Mtpa
15 - 17 g/t Au

High Grade concentrate produced



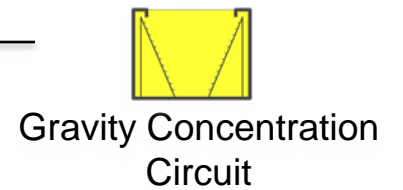
Flotation Concentrate Circuit



Cyclone Classification

8.74 Mtpa

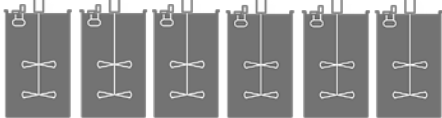
Tailings Storage Facility



Gravity Concentration Circuit



Aachen™ Shear Vessel



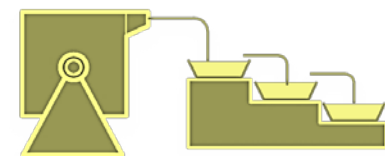
CIL Circuit



Elution Circuit



Electrowinning

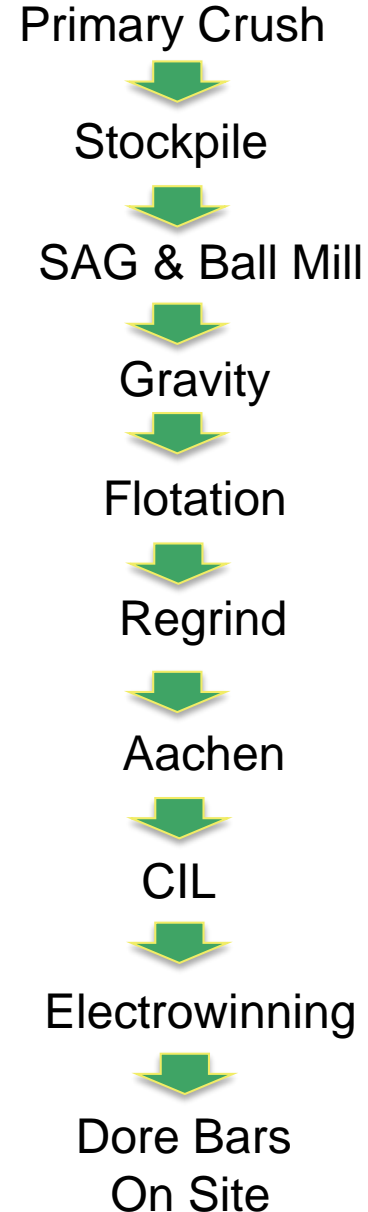


Gold Doré Bars Produced On-Site



Conventional Flowsheet

- **9.5 Mtpa Front End – 0.75 Mtpa Back End – NOT Whole of Ore Circuit**
- *Lower Capex than Whole of Ore due to small back end circuit*
- Primary Crusher 60" x 89" unit and conveyors capable of 9.5Mtpa (3000 tph)
- Primary Grinding Design on P80 106 μ m and 85th percentile indices
- Pebble crushing designed on 25% of new feed recycle
- Gravity circuit sized with 2 units at 140% of mill feed
- Flotation Cells uses a 2 times scale up factor on testwork
- Flotation mass pull 7.5% yielding 0.75Mtpa (89 tph) to Re grind & CIL
- Re grind designed on P90 9 μ m with Outotec HIGmill™
- Aachen™ Scrubbing Process
- Small CIL Circuit – 0.75Mtpa (89 tph) low OPEX and CAPEX back end circuit



Namdini Process Technology

▪ Outotec Regrind HIGmill™

- Proven – developed over last 40 years
- Over 200 mills installed on all continents
- Flat grinding discs with counter rings
- Minimises short-circuiting / dead zones
- Maximises media-slurry contact
- Largest stirred mills worldwide – 5 MW
- Direct 1:1 scale-up methodology
- Internal classification
- ***Namdini ore has been pilot scale tested***



Namdini Process Technology

▪ Aachen™ Scrubbing Process

- Widely used by Barrick in Africa
- Improves gold recovery
- Scrubbing process – removes particle oxidation layers
- Increases kinetics
- Improves surface activation
- Lowers Opex – improves power and reagent use



FS Financials

KEY ECONOMIC RESULTS		UNIT	Feasibility Study
Gold Price	<i>Pit Design</i>	US\$ / oz	1,235
	<i>Financial Model</i>		1,350
Capital Cost (including \$42M contingency)		US\$ M	390
All in Sustaining Costs (AISC) ¹	<i>Starter Pit</i>	US\$ / oz	585
	<i>Life of Mine</i>		895
Total Project Payback		months	21
Pre-Tax NPV ^{5%}		US\$ M	914
Post-Tax NPV ^{5%}		US\$ M	590
Pre-Tax IRR		%	43
Post-Tax IRR		%	33

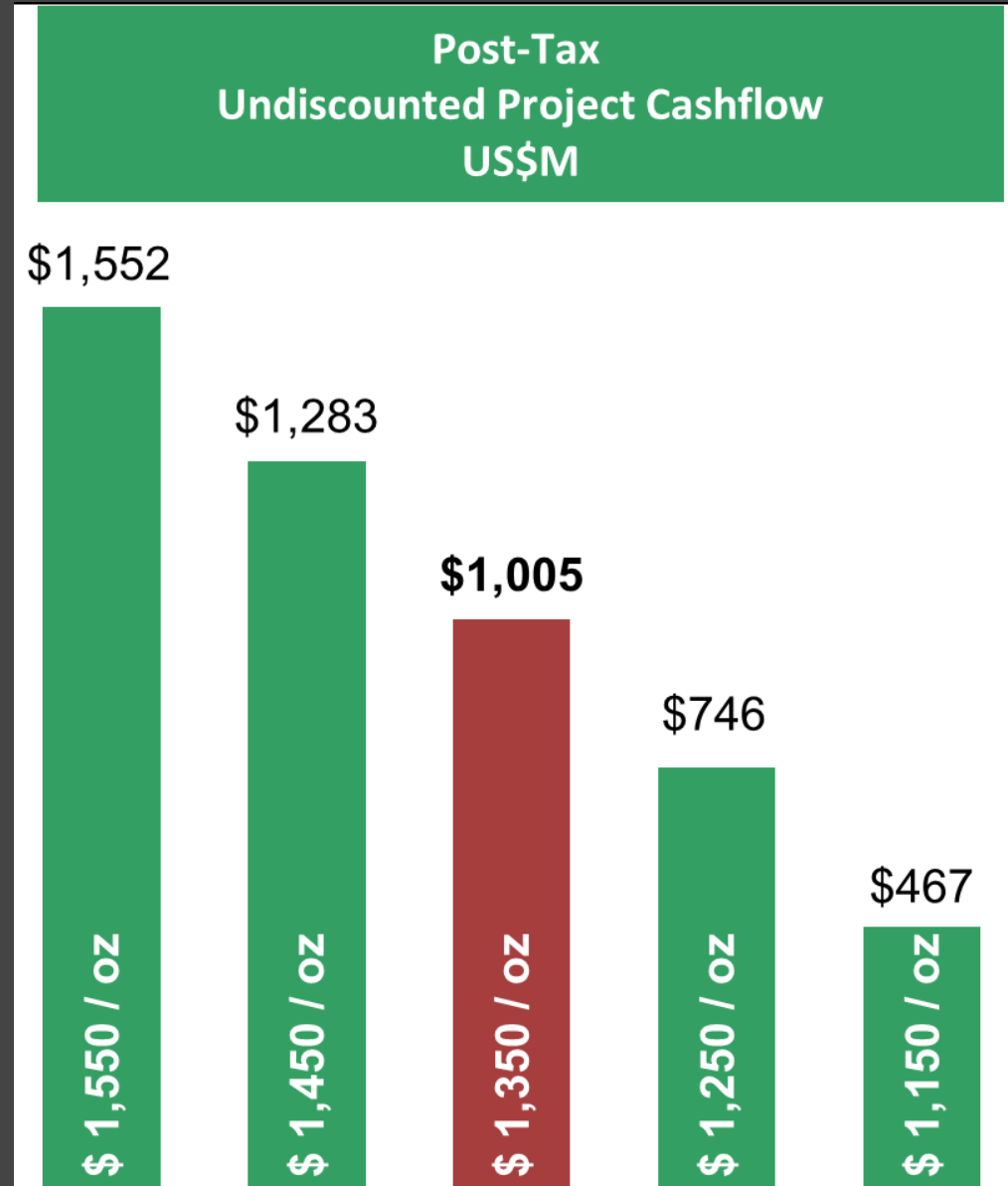
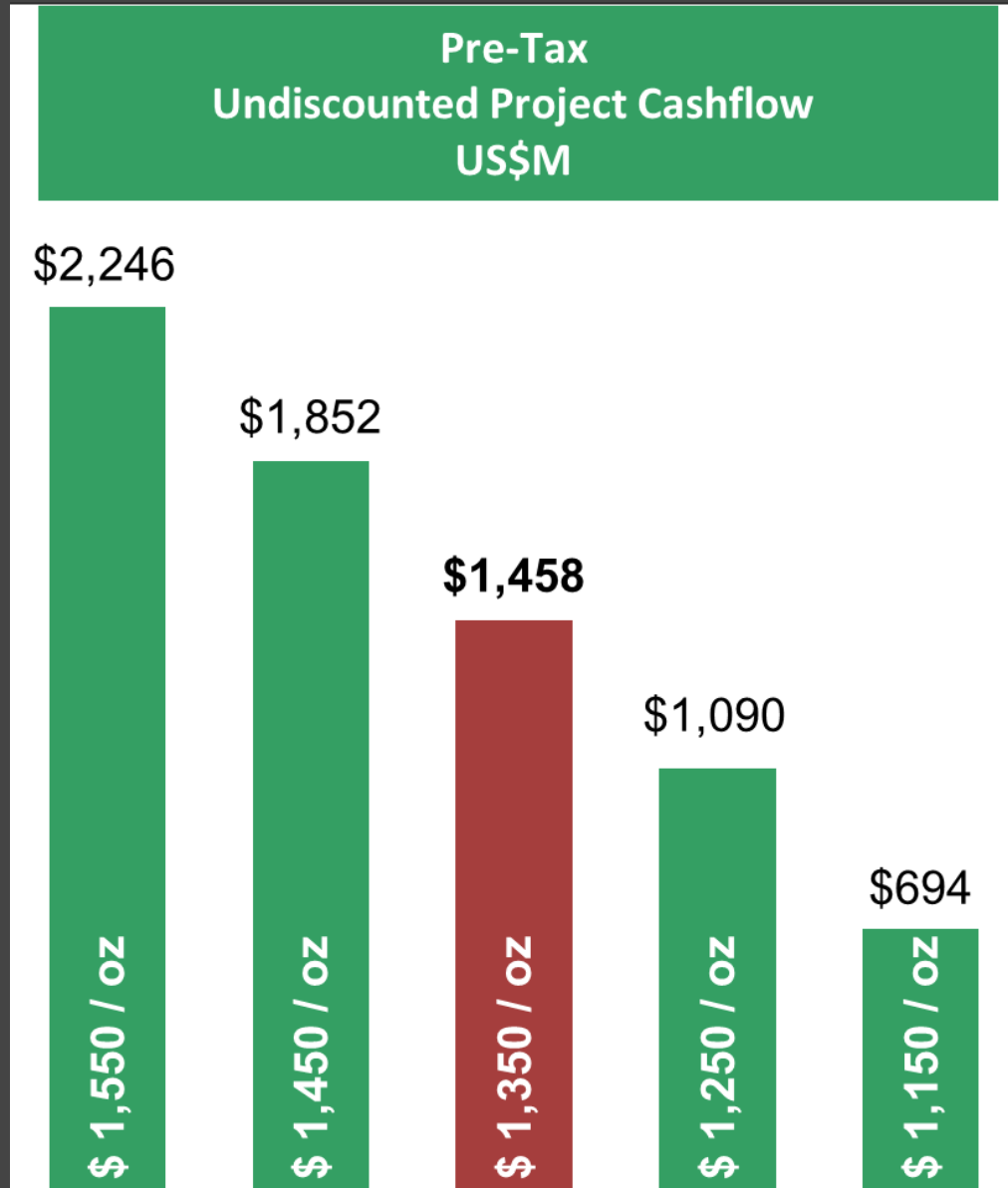
¹ Cash Costs + Royalties + Levies + Life of Mine Sustaining Capital Costs (World Gold Council Standard).
 Royalties calculated at a rate of 5.5% and a corporate tax rate of 32.5%; both subject to negotiation.

FS Physicals

ESTIMATED PRODUCTION RESULTS	UNIT	<i>Starter Pit</i>	<i>Life of Mine</i>
Gold Price – Financial Model	US\$ / oz	1,350	
Gold Produced <i>(Average for full production years)</i>	(oz / yr)	361,000	287,000
Gold Produced	(oz)	1,100,000	4,177,000
Gold Head Grade	g/t Au	1.41	1.13
Gold Recovery	%	85	83
Ore Mined <i>(0.5 g/t cut-off grade)</i>	Tonnes	47,000,000	138,600,000
Strip Ratio	W:O	0.9 : 1	1.9 : 1
Mine Life	years	2.3	15
Capital Cost <i>(including \$42M contingency)</i>	US\$ M	390	

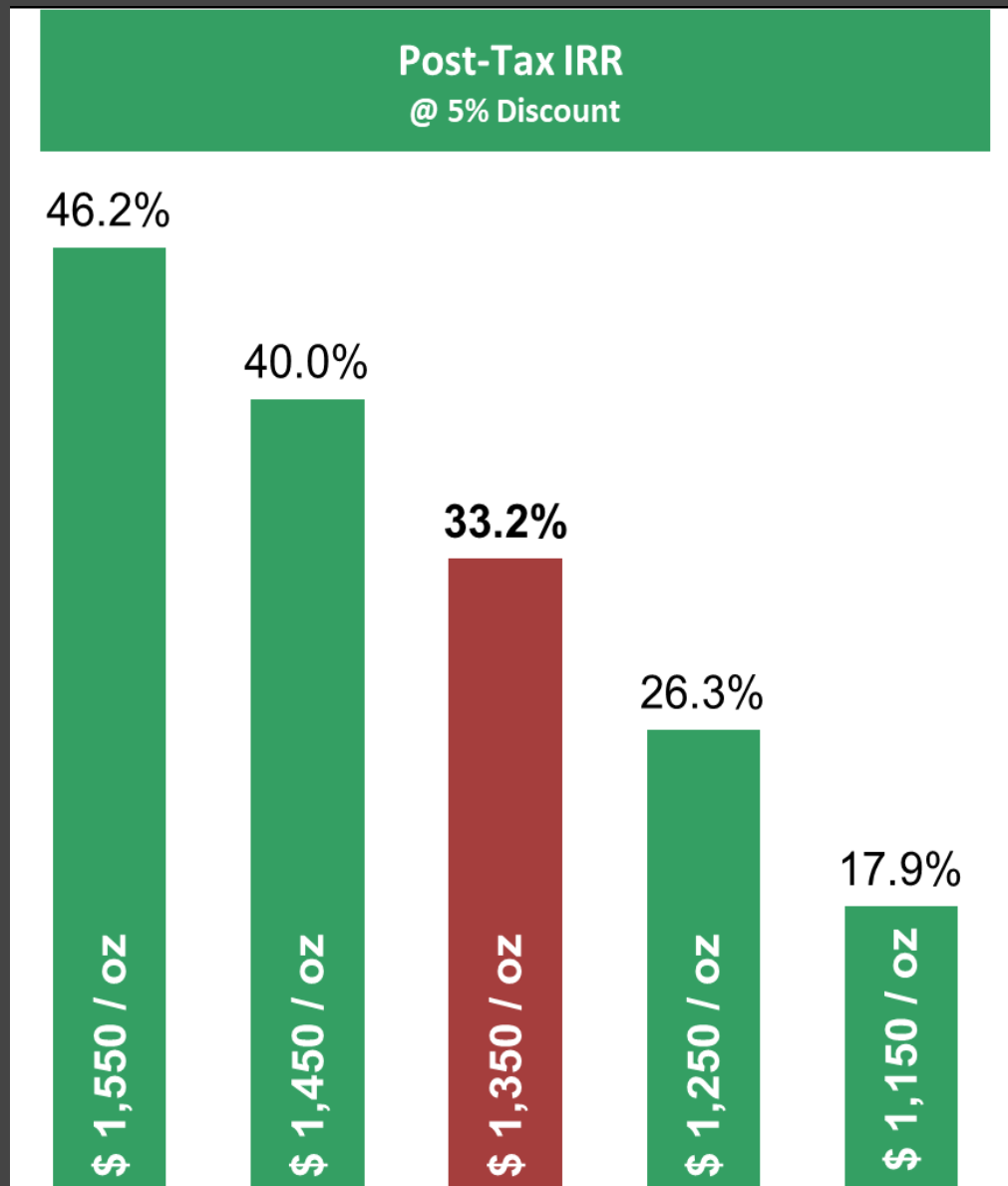
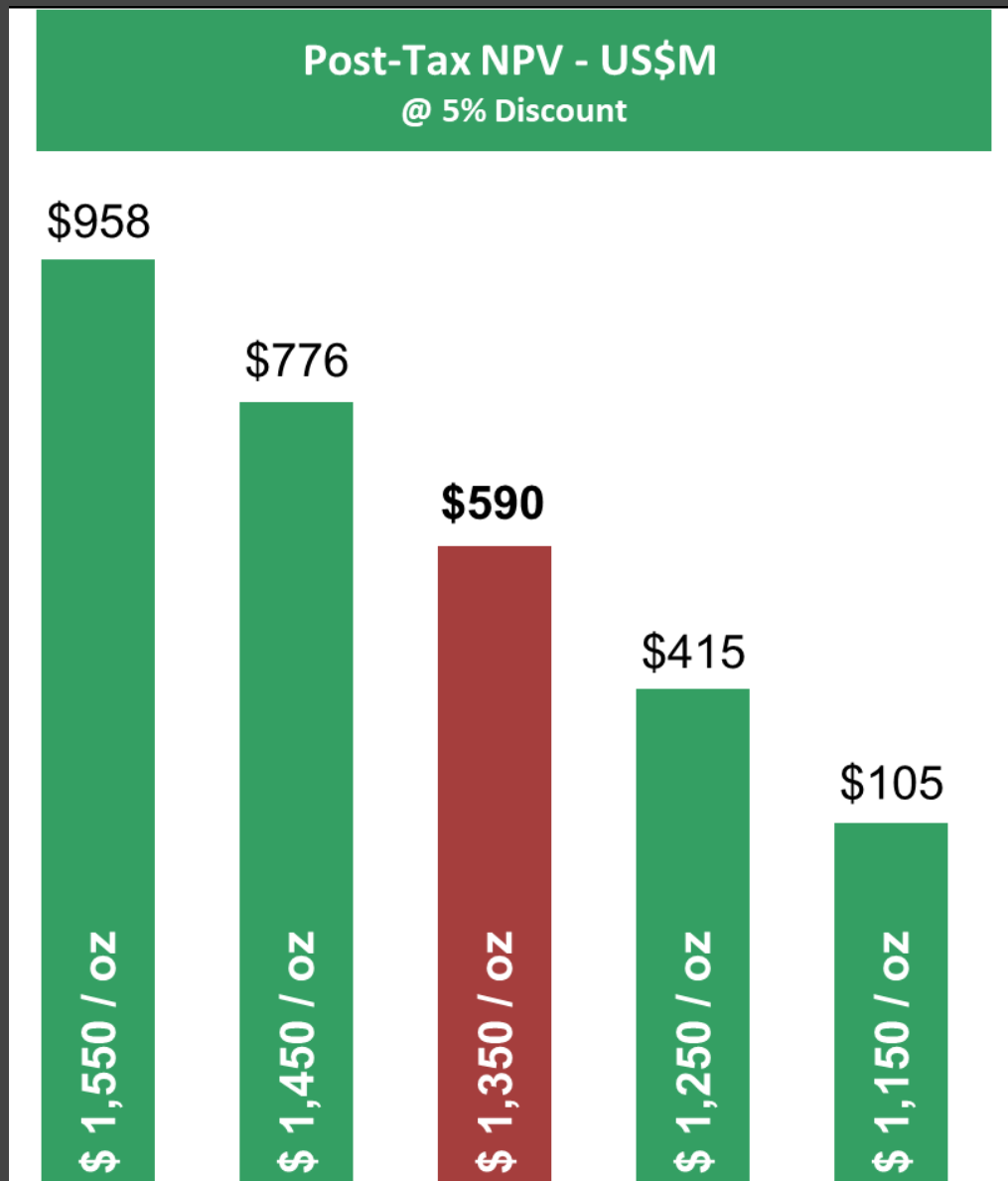
FS Financial Sensitivity (*Cashflow – Life of Mine*)

For personal use only



FS Financial Sensitivity (*Post Tax NPV & IRR – Life of Mine*)

For personal use only



Current Scenario

		Feasibility Study +USD \$200	
Gold Price	US\$/oz	USD \$1,350	USD \$1,550
Gold Production	oz	4,177,000	4,177,000
AISC	US\$/oz	895	895
Payback period	months	21	9
Undiscounted cashflow - Pre tax	US\$	1,438	2,246
Undiscounted cashflow - Post tax	US\$	1,005	1,552
NPV^{5%} - Pre tax	US\$	914	1,438
NPV^{5%} - Post tax	US\$	590	958
IRR - Pre tax	%	43.0%	57.4%
IRR - Post tax	%	33.2%	46.2%

Development Timeline

For personal use only

	2019 Q4	2020 H1	2020 H2	2021 H1	2021 H2	2022 H1	2022 H2
Front End Engineering & Design (FEED)	■						
Construction			■ *				
Commissioning					■ *		
Gold Production							■ *

* The Company's Construction, Commissioning and Gold Production schedules within the development timeline assumes that the Company is fully funded. The actual timelines will depend upon the manner and timing of the Company's financing plans. Dates are therefore indicative only.

For personal use only

Cardinal Australia Office

Suite 1, 28 Ord Street,
West Perth, WA, 6005
PO Box 829, West Perth, WA, 6872
Australia

P +61 8 6558 0573

E info@cardinalresources.com.au

Cardinal Ghana Office

Durugu Residential Area,
Kumbosco, Bolgatanga
PO Box 350, Bolgatanga
Ghana

P + 233 382 021 838

E info@cardinalresources.com.au

Canadian Office

The Exchange Tower
Suite 1822
130 King Street West
Toronto, Ontario
MSX 1E3 Canada

P +1 647 256 1922

E info@cardinalresources.com.au



Thank you

Disclaimer and Forward Looking Statements

FORWARD LOOKING STATEMENTS

This presentation contains “forward-looking statements”, within the meaning of Section 27A of the United States Securities Act of 1933, as amended and Section 21E of the United States Exchange Act of 1934, as amended and forward-looking information as defined under applicable Canadian securities legislation (collectively, “forward-looking statements”). These forward-looking statements relate to, among other things, the objectives, goals, strategies, beliefs, intentions, plans, estimates and outlook of Cardinal Resources. Ltd (“Cardinal Resources” or the “Company”). Forward-looking statements can generally be identified by the use of words such as “believe,” “anticipate,” “expect,” “intend,” “plan,” “goal,” “will,” “may,” “target,” “potential” and other similar expressions. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. Forward-looking statements are based on estimates and assumptions made by Cardinal Resources in light of its experience and perception of historical trends, current conditions and expected future developments, as well as other factors Cardinal Resources believes are appropriate in the circumstances. These estimates and assumptions are inherently subject to significant business, economic, competitive and other uncertainties and contingencies, many of which, with respect to future events, are subject to change. Although Cardinal Resources believes that the expectations reflected in such forward-looking statements are reasonable, undue reliance should not be placed on such statements.

In making the forward-looking statements in this presentation, Cardinal Resources has made several assumptions, including, but not limited to assumptions concerning: production costs; statements with respect to the future price of gold, the estimation of mineral reserves and resources, the realization of mineral reserve estimates, the timing and amount of estimated future production, costs of production, capital expenditures, costs and timing of the development of new deposits, success of exploration activities, permitting time lines, currency exchange rate fluctuations, requirements of additional capital, government regulation of mining operations, environmental risks, costs of closure of various operations and changes to the political stability or government regulation in the country in which Cardinal Resources operates .

Actual results may differ materially from those expressed or implied in the forward-looking statements contained in this presentation. Important factors that could cause actual results to differ materially from these expectations are discussed in greater detail under the heading “Risk Factors” in Cardinal Resource’s annual information form for the current year available on www.sedar.com. When relying on forward-looking statements to make decisions with respect to Cardinal Resources, carefully consider these risk factors and other uncertainties and potential events. Cardinal Resources undertakes no obligation to update or revise any forward-looking statement, except as required by law.

Although Cardinal Resources has carefully prepared and verified the Mineral Resource and Ore Reserve figures presented herein, such figures are estimates, which are, in part, based on forward-looking information and no assurance can be given that the indicated level of gold will be produced. Estimated Mineral Resources and Ore Reserves may have to be recalculated based on actual production experience. Market price fluctuations of gold as well as increased production costs or reduced recovery rates and other factors may render the present Proven and Probable Ore Reserves unprofitable to develop at a particular site or sites for periods of time.

FEASIBILITY STUDY – CAUTIONARY STATEMENT (REFER PRESS RELEASE DATED 28 OCTOBER 2019)

The FS is based upon a Proven and Probable Ore Reserve derived from Measured and Indicated Mineral Resources. No Inferred Mineral Resources have been included in the estimation of Ore Reserves. The Company advises that the Proven and Probable Ore Reserve provides 100% of the total tonnage and 100% of the total gold metal underpinning the forecast production target and financial projections. No Inferred Mineral Resource material is included in the Life of Mine plan. The FS is based on material assumptions outlined in the FS Report. The Company has concluded it has a reasonable basis for providing the forward-looking statements in this document.

Competent Person's Statement and Disclaimer

QUALIFIED PERSON - COMPETENT PERSON'S STATEMENT

Mr David Gordon, who is a full-time employee of Lycopodium Minerals Ltd, is a Qualified Person as defined by National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI43-101"). Mr Gordon holds a Qualified Person status being a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM). Mr Gordon has no economic, financial or pecuniary interest in the Company.

Mr. Daryl Evans, who is a full time employee of Independent Metallurgical Operations Pty Ltd, is a Qualified Person as defined by National Instrument 43-101- Standards of Disclosure for Mineral Projects ("NI43-101"). Mr. Evans holds a Qualified Person status being a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM). Mr. Evans is an independent consultant appointed by Cardinal. Mr Evans has no economic, financial or pecuniary interest in the company

Mr Nicolas Johnson, a member of the Australian Institute of Geoscientists, who is an employee of MPR Geological Consultants Pty Ltd, has compiled the information relating to the Mineral Resources in the Resource Summary of the Namdini Project. Mr Johnson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person, as defined in the JORC Code and a Qualified Person as defined by the NI43-101 instrument. Mr Johnson has no economic, financial or pecuniary interest in the company.

Mr. Richard Bray is a Registered Professional Geologist with the Australian Institute of Geoscientists. Mr Bray has compiled the information in this presentation that relates to the Exploration Results and Mineral Resources. Mr. Bray has more than 5 years' experience relevant to the styles of mineralisation and type of deposit under consideration and to the activity which is 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" and as a Qualified Person as defined by the NI43-101 instrument. Mr. Bray is a fulltime employee of Cardinal Resources Limited and holds equity securities in the Company.

Mr. Ekow Taylor is a Chartered Professional Geologist with the Australasian Institute of Mining and Metallurgy. Mr Taylor has compiled the information in this presentation that relates to the Exploration Results and Mineral Resources. Mr. Taylor has more than 5 years' experience relevant to the styles of mineralisation and type of deposit under consideration and to the activity which is 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" and as a Qualified Person as defined by the NI43-101 instrument. Mr. Taylor is a fulltime employee of Cardinal Resources Limited and holds equity securities in the Company.

Mr Glenn Turnbull, a Competent Person who is a Chartered Engineer and a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Golder Associates Pty Ltd has compiled the information relating to the Ore Reserves in the Ore Reserve Summary. Mr Turnbull has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012 and is a Qualified Person for the purposes of NI43-101. Mr Turnbull has no economic, financial or pecuniary interest in the company

NO NEW INFORMATION

This Presentation contains information extracted from ASX and TSX market announcements reported in accordance with the JORC Code (2012) and NI 43-101 and available for viewing at www.cardinalresources.com.au

Cardinal Resources Limited ("Cardinal" or the "Company") confirms that it is not aware of any new information or data that materially affects the information included in any original ASX market announcements carried out at the Company's projects and that all material assumptions and technical parameters underpinning the exploration activities and estimates of Mineral Resources in the relevant market announcements continue to apply and have not been materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Please also refer to the Company's Annual and Quarterly Reports for further background information which are available on the Company's website.