Diatreme Resources – ASX:DRX
Company Presentation – November 2019

High-grade silica sands project located adjacent to the world’s largest silica sand mine
DISCLAIMER

This presentation contains certain forward-looking statements and forecasts which include without limitation, expectations regarding future performance, exploration, mineral resources, the financial position of Diatreme Resources Limited (the “Company”), industry growth or other trend projections. Whilst this presentation is based on information from sources which are considered reliable, the Company, its directors, employees and consultants do not represent, warrant or guarantee, expressly or impliedly, that the information in this presentation is complete or accurate. To the maximum extent permitted by law, the Company disclaims any responsibility to inform any recipient of this presentation of any matter that subsequently comes to its notice, which may affect any of the information contained in this document and presentation. Nothing in this presentation should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

Cautionary Statement

Whilst the Company has concluded that it has a reasonable basis for providing the forward looking statements included in this presentation, the Company advises that given the current price of zircon and the company’s current market capitalisation (compared to the capital expenditure required in connection with the Cyclone Zircon Project), the production targets and forecast financial information contained in this presentation do not provide an absolute assurance of economic development at this stage. The stated production targets and forecast financial information contained in this presentation are based on detailed DFS studies and the Company’s current expectations of future results or events, including sourcing of project development finance within the targeted timeline and/or attracting suitable project major financial partners and should not be relied upon by investors when making investment decisions.

Additional Information

This presentation should also be read in conjunction with the DRX Annual Report for 2018 and the September 2019 Quarterly Activities report, together with any announcement made by Diatreme in accordance with its continuous disclosure obligations under the Corporations Act including:

- ASX release regarding positive Definitive Feasibility Study for Cyclone Zircon Project – 15 November 2018
- ASX release regarding Bulk sample testing results at Galalar Silica Project – dated 24th January 2019
- ASX release regarding Galalar Silica Project exploration update – dated 7th February 2019
- ASX release regarding Galalar Silica resource expanded by 22% – dated 7th March 2019
- ASX release regarding Sale of Tick Hill Gold Project – dated 12th March 2019
- ASX release regarding Galalar regional exploration targets – dated 25 March 2019
- ASX release regarding Galalar new silica targets & heavy minerals discovery – 11 April 2019
- ASX release regarding Sale of Tick Hill Gold Project – 24 April 2019
- ASX release regarding Maiden Indicated Resource for Galalar Silica Project – 14 May 2019
- ASX release regarding Regional exploration targets for Galalar Silica Project – 20 June 2019
- ASX release regarding Offtake MOU for Galalar Silica Project – 16 July 2019
- ASX release regarding Offtake MOU for Cyclone Zircon Project – 5 August 2019
- ASX release regarding Scoping study for Galalar Silica Project – 9 September 2019
- ASX release regarding Second offtake MOU for Galalar Silica Project – 19 September 2019
- ASX release regarding Strategic metal potential at Cyclone Zircon Project – 10 October 2019
- ASX release regarding $3.60m Raising to advance Galalar Silica Project – 6 November 2019
**DIATREME – AT A GLANCE**

- ASX-listed silica & mineral sands development company
- Flagship project – Galalar Silica Project in QLD
- Short-term pathway identified to cashflow via low capex project, targeting production by early 2021
- Indicated Resource – 21.5 Mt high-quality silica sand SiO2 > 99%; total resource 30.2 Mt
- Bulk testing confirms product can meet solar panel manufacture requirement of sub 100 PPM Fe203
- Two offtake MOU’s signed; scoping study results extremely positive
- Potential for further upside from development of Cyclone Zircon Project, WA
SLIDE | 4

GALALAR SILICA PROJECT – POSITIVE SCOPING STUDY RESULTS

- Pre-tax NPV $231m, IRR 150% and estimated capital payback within 8 mths
- Estimated development capex $24.4m, opex $42m based on trucking product for transhipment outside Cooktown
- Product price estimate US$75/t (A$107); annual cash costs $43.5m, cash margin $36.8m
- Potential for significant improvement to project economics including logistical solution with purpose-built barge ramp at Nob Point, which could cut $20-$25/t (trucking and transhipment costs) from operating costs
- Additional improvement from developing ultra-low iron silica sand, currently trading at significant price multiple
- 15-year mine life with annual mining rate of 950,000t, producing 750,000t low-iron silica product (79% recovery rate)
- Exploration targets identified within 1km of Mineral Resource, offering potential to expand project
- Project being developed with support of traditional owners, Hopevale Congress
- Potential to generate 30-40 jobs in construction phase and 60 in production; drive-in, drive-out workforce

Note – For key financial assumptions refer - ASX release regarding scoping study for Galalar Silica Project – 9 September 2019
### CORPORATE SNAPSHOT

#### Capital Structure

<table>
<thead>
<tr>
<th>Description</th>
<th>ASX: DRX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares on Issue</td>
<td>1,464 million</td>
</tr>
<tr>
<td>Options on Issue (Listed 60.8m, Unlisted 50m)</td>
<td>110.8 million</td>
</tr>
<tr>
<td>Performance Rights (Unlisted)</td>
<td>5.8 million</td>
</tr>
<tr>
<td>Share Price (8 November 2019)</td>
<td>A$0.011</td>
</tr>
<tr>
<td>Market Capitalisation (as at 8 November 2019)</td>
<td>A$16.1 million</td>
</tr>
<tr>
<td>Cash and Liquids(^1,^3) (as at 8 November 2019)</td>
<td>$1.0 million</td>
</tr>
<tr>
<td>Debt(^2)</td>
<td>$1.5 million</td>
</tr>
</tbody>
</table>

#### Substantial Shareholders  (8 November 2019) \(^3\)

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Yufeng (Daniel) Zhuang</td>
<td>10.37%</td>
</tr>
<tr>
<td>Ms Jie Wu</td>
<td>5.95%</td>
</tr>
<tr>
<td>Mr Zhenbin Jian</td>
<td>5.60%</td>
</tr>
<tr>
<td>VW Pty Ltd</td>
<td>5.01%</td>
</tr>
<tr>
<td>Andrew Tsang &amp; related parties</td>
<td>5.00%</td>
</tr>
<tr>
<td>Total Interest of Top 20 Shareholders</td>
<td>58.66%</td>
</tr>
<tr>
<td>Directors’ &amp; Management’s Interest</td>
<td>11.08%</td>
</tr>
</tbody>
</table>

#### Board of Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gregory Starr</td>
<td>Non-Executive Chairman</td>
</tr>
<tr>
<td>William Wang</td>
<td>Non-Executive Director</td>
</tr>
<tr>
<td>Daniel Zhuang</td>
<td>Non-Executive Director</td>
</tr>
</tbody>
</table>

#### Management

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neil McIntyre</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Neil Forbes</td>
<td>Chief Geologist</td>
</tr>
<tr>
<td>Phil McMurtrie</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Tuan Do</td>
<td>CFO</td>
</tr>
</tbody>
</table>

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1. Includes cash at bank plus ASX listed shares (CNB) held ~$0.7 million
2. Unsecured Debt Facility, repayment 31 July 2020
3. Before $3.6M Placement (per ASX announcement 6 Nov 2019)
EXPERIENCED BOARD

- **Mr Gregory Starr – Chairman** (non-executive director)
  - Extensive 25 yrs plus senior management experience in minerals exploration, managing operating mines, asset acquisitions/divestments and project finance

- **Mr Cheng (William) Wang** (non-executive director)
  - Extensive Chinese SOE management and negotiating experience, including 15 years as head of international commodities at CITIC. Director of China Century Capital Ltd, Jupiter Mines Ltd & Gulf Alumina Ltd

- **Mr Yufeng (Daniel) Zhuang** (non-executive director)
  - Significant DRX shareholder – Ex-Ping An Securities Beijing & Fujian Mingxing Group Zhangzhou, China
  - Construction, hotels and food manufacturing interests in China
EXPERIENCED MANAGEMENT TEAM

- **Mr Neil McIntyre – CEO**, 25 yrs experience in banking, finance, resources
  - 4 years as Diatreme CEO and 3 years as non-executive director
  - Led Cyclone de-risking, traditional owner negotiations, permitting and approvals process
  - Ex-MD Pacific Capital Ltd, State Manager (Structured & Asset Finance) QIDC
  - Ex-Chairman Niuminco Ltd (PNG gold assets); executive director Belvedere Ltd (Yanderra PNG copper/gold assets) and Indon Energi Ltd

- **Mr Phil McMurtrie – Project Manager, Cyclone & Galalar Silica Projects**, 35 yrs experience mining, 25 yrs mineral sands
  - Mining engineer with experience at Hammersley Iron, Qld Nickel and ex-mine manager at Consolidated Rutile’s Stradbroke Island operation
  - Cyclone Project Manager for PFS/DFS studies and project implementation planning

- **Mr Neil Forbes – Geologist**, 25 yrs in exploration/mining
  - Extensive exploration experience in gold, base metals, coal and silica
  - Previous exploration manager for Metallica and Metro Coal; led Metro Coal team that delineated 4Bt of thermal coal

- **Mr Tuan Do – CFO**, 32 yrs experience, 12 yrs resources sector
  - Chartered accountant, with senior corporate accounting experience at Peabody Australia and Intrepid Mines
  - Experienced in financial reporting, treasury management, capital raisings and start-up operations in mining sector
GALALAR
SILICA SANDS PROJECT

DIATREMÉ
Resources
Silica sand is primarily quartz broken down over time into fine granules. Main end uses glass industry, foundry, hydraulic fracturing, filtration and abrasives.

Construction sand is a major global industry, with more than 15Bt of sand mined for construction in 2017. Main component in various building/construction products.
SILICA IN DEMAND

GLOBAL SILICA SAND MARKET VOLUME AND VALUE TRENDS 2009 - 2017

- IMARC* forecasts CAGR of 7.2% p.a. through to 2022, reaching US$9.6B revenues
- Increasing demand from automotive, construction industries
- No direct substitutes in majority of applications

* Refer DRX announcement, 30 November 2017
• IMARC expects high growth in demand from North America, Latin America & Western Europe due to increasing hydraulic fracturing
• Increasing demand also from emerging markets such as China and India from foundry and construction industries

Source: Analyst Reports & IMARC Estimates (% of Volume)
Solar panel PV glass market forecast to reach US$48.2 billion by 2025, with a CAGR of 34.7% (source: Bizwit Research & Consulting)

- Asia-Pacific expected to be the fastest growing region for solar PV glass market

- Galalar project confirmed capable of supplying solar PV market with premium product

- Solar panel manufacturers’ feed stock requires >99.5% purity silica with ideally less than 100ppm Fe2o3 levels
Diatreme Resource’s Cape Bedford (Galalar Silica) Project surrounds Cape Flattery Silica Mines

Cape Flattery Silica Mines is a world-class producer of silica sand for the glass, foundry and chemical industries

Owned by Mitsubishi Corporation

Highest production of silica sand of any mine in the world.
TRADITIONAL OWNERS PARTNERSHIP

- Traditional owners (TO’s) – Hopevale Congress will hold a 12.50% “free carry” interest in the Galalar Silica Project
- Traditional owners hold freehold and native title over entire tenement area
- Initial community meetings held prior to any exploration activity – Conduct and Compensation and Cultural Heritage agreements already in place
- Genuine win/win for TO’s who have given full support for project development
- TO’s jointly attend all Government and line agency meetings to assist in project advancement
• Mining infrastructure and associated plant items, wet processing plant, site preparation offices, construction and ancillary facilities plus contingency items (25% on capital, 10% on operating costs) - $24.4m

• Operating costs including labour, mining, maintenance, trucking, barging & transhipping plus contingency - $42m

• Estimated annual revenue $80.3m; cash costs $43.4m for cash margin of $36.8m

• Unit costs per tonne total $58 – Consisting of mining cost $2.70, processing $9.23, transport $16, loading/transhipment $22, contingency/royalties $8

• Note: Refer - ASX release regarding Scoping Study for Galalar Silica Project – 9 September 2019 for detailed financial and operational assumptions.
## Project Delivery Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
<tr>
<td>Scoping Study Completed</td>
<td>Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feasibility Study</td>
<td>Red</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>Approvals and Community</td>
<td>Purple</td>
<td></td>
<td>Purple</td>
</tr>
<tr>
<td>Project Finance</td>
<td></td>
<td></td>
<td>Purple</td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td>Blue</td>
</tr>
<tr>
<td>Procurement and Fabrication</td>
<td></td>
<td></td>
<td>Blue</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td>Green</td>
</tr>
<tr>
<td>Commissioning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramp Up</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• Bulk sample testwork confirms capable of producing premium-grade silica product for high-end glass, solar panel manufacturing

• Initial conceptual production est. 750,000 tpa then potentially ramping up to 1mtpa

• Scoping study released Sept 2019 with extremely positive outcomes

• MOU’s in place with potential silica offtake partners
GALALAR CROSS SECTIONS

A

AA

BB

B

BB

AA
DRX has identified six parameters to prioritise silica sand target areas:

1. Geology – Preserved older dune systems with well-developed podzolisation and preservation of the A2 horizon
2. Sand Quality - Identification of >99% SiO2 sand
3. Size – Exploration target in excess of 20 million tonnes
4. Access – Close to existing road infrastructure
5. Environmental – not overlapping identified environmentally significant areas
6. Cultural – ensuring any potential disturbance is compliant with traditional owners’ values.
Regional exploration program has identified potential resource extensions at Elim Road North and Elim Road South, with high SiO2 results > 99%.

Potential heavy minerals discovery at Gubbins Range, with significant TiO2 levels (up to 1.17%).

Further exploration planned to test target areas, with focus on identifying silica deposits capable of supplying high-value product, together with sample metallurgical testing for Gubbins Range.

Note: Resource targets are not yet fully defined and will be subject to further drilling and exploration activity.
<table>
<thead>
<tr>
<th>Priority</th>
<th>Description</th>
<th>Surface Area</th>
<th>Ave Dune Height (m)</th>
<th>Resource Target Range (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>North of Elim Road, very large forest covered dune system along western edge of the dune field.</td>
<td>6,000m x 3,000m</td>
<td>40</td>
<td>100 - 1000</td>
</tr>
<tr>
<td>High</td>
<td>South of Elim Road, northern continuation of Nob Point Dune System</td>
<td>4,000m x 800m</td>
<td>20</td>
<td>10 - 100</td>
</tr>
<tr>
<td>High</td>
<td>Immediately south of CFSM working pit and closest to Port facilities.</td>
<td>1,200m x 800m</td>
<td>30</td>
<td>5 – 50</td>
</tr>
<tr>
<td>Med</td>
<td>Long Sand dune south of CFSM mine workings</td>
<td>2,000m x 250m</td>
<td>20</td>
<td>2 - 20</td>
</tr>
<tr>
<td>Med</td>
<td>Longitudinal and exposed dune system about 10km NW of Elim Beach. Large exposed dune</td>
<td>1,200m x 600m</td>
<td>20</td>
<td>2.5 - 25</td>
</tr>
<tr>
<td>Med</td>
<td>Large Area of exposed sand dunes clustered together. Iron stained sand in colour.</td>
<td>6,000m x 1,000m</td>
<td>30</td>
<td>30 - 300</td>
</tr>
<tr>
<td>Med</td>
<td>Large Sand Dune system</td>
<td>8,000m x 1,250m</td>
<td>30</td>
<td>50 – 500</td>
</tr>
<tr>
<td>Med</td>
<td>Large Parabolic dune with associated elongate parabolic dunes. Intersects Gubbins Range basement rocks.</td>
<td>6,000m x 200m</td>
<td>20</td>
<td>4 – 40</td>
</tr>
<tr>
<td>Med</td>
<td>Dune system immediately west of ML 7069 Mt Wraight.</td>
<td>1,000m x 800m</td>
<td>20</td>
<td>2.5 - 25</td>
</tr>
<tr>
<td>Med</td>
<td>Longitudinal dune running NW from Coloured Sands, with a large parabolic sand dune adjacent known as Grey Hill.</td>
<td>6,000m x 200m</td>
<td>20</td>
<td>4 – 40</td>
</tr>
</tbody>
</table>
ELIM ROAD NORTH & SOUTH

- Established stationary dune system(s) mapped and interpreted to have well developed podzolic profiles containing high purity silica sands
- NW extension of the Nob Point resource area at Galalar and could potentially contain significant volumes of silica sand
- Preliminary sampling auger testing indicates high purity silica sand. Contingent on results and environmental clearances, access tracks required to better assess potential.
CONCEPTUAL MINING OPERATION

- Mining area: 1,700m x 900m (lease ~2sq km)
- Site offices and amenities within mining lease
- Processing plant located within mining lease
- Dry mining operation above water table
- No chemicals in processing, gravity and water only
- Benign product (silica) produced and exported
- Product haulage: 63km on public roads
- Barge to ship distance 9km
CONCEPTUAL LOGISTICS

- Existing road network close to proposed mining operations, with direct road access to Cooktown
- Use of existing barge ramp facility in Cooktown – subject to upgrading
- Simple truck (<63km one way) and barge transhipping operations
- Tranship bulk product within Cooktown designated port
- Alternative route: development of purpose-built barge ramp 3km from mine site at Nob Point (subject to Qld Govt approval), saving estimated $20-25/t opex

Note: Shipping options subject to further detailed commercial and final permitting studies and relevant approvals.
• Barge loading will occur day and night when a ship is being loaded

• Estimate one ship every second week to start

• 3-4 days to load a ship with 10-15,000 tonnes

• Two barges may be required

• Shipments up to 35,000 tonnes are possible using this system

* Example - Transhipment of bauxite – Metro Mining–Skardon River
OFFTAKE MOU – FENGSHA GROUP

- MOU signed in July 2019 with privately owned Fengsha Group, China’s largest processor and supplier of photovoltaic (solar) and speciality high end silica sand
- DRX to supply up to 500,000 tpa of photovoltaic grade silica sand
- Potential for additional 250,000t of silica product, subject to testing
- MOU terms include technical support, market access and potential for direct investment

Diatreme representatives with Fengsha Group, China, July 2019
FENGSHA FACILITIES, CHINA

Fengsha Group facilities, China; left to right: Chemical pickling vats; MSP; TFT line
OFFTAKE MOU – WAN ZHONG INVESTMENT GROUP

- 2nd MOU signed in September 2019 with privately owned Wan Zhong Investment Group, a supplier to major glass makers in China requiring solar-grade silica and other specialty products

- Potential supply of up to 500,000 tpa of photovoltaic grade silica sand from Galalar

- Agreement may be scaled to reflect targeted output

- Like Fengsha MOU, non-binding and subject to further detailed negotiations, pending binding agreement

- Sets framework for further co-operation while creating competitive process for supply
MINING METHODOLOGY – SILICA PRODUCT

- Clearing ahead of mining area using bulldozer to stockpile surface vegetation and surface soil
- Front end loader excavates sand and loads sand directly into a hopper-feeder unit
- The hopper-feeder unit will screen out rubbish and transfer sand to a mobile wet spiral plant at a controlled feed rate
PROCESSING & REHABILITATION

PROCESSING

The wet plant processing includes:
- a trommel which receives run of mine sand and spray water will screen out trash and coarse particles larger than 1mm
- the sand that passes through the trommel screen will fall into a slurry feed bin which will be kept full using a water level controller
- slurry from the feed bin will be pumped to a spiral circuit which will be designed to remove heavy mineral and slimes from the feed
- heavy mineral and fine sand removed by the process will be dewatered using a hydrocyclone and stockpiled on the site
- the light silica product from the spirals will be attritioned, classified and magnetically separated to reduce the iron content to <100ppm
- slimes removed by the process will be pumped to a dam for settling, dewatering, and covering for rehabilitation
- upgraded white silica sand produced by the spirals (80% recovery) will be pumped to a product area where it will be dewatered using a hydrocyclone, stockpiled and allowed to drain to a low moisture content

REHABILITATION

When an operational area is no longer required for mining, processing or stockpiling, it will be rehabilitated by shaping the surface using a bulldozer and returning the previously removed surface soil and vegetation. Where necessary seed, seedlings, and wind protection will be used to assist the rehabilitation process.
CONCEPTUAL PROCESSING

Simple and established processing techniques
Amenable to low CAPEX

No chemicals or dust
Amenable to low OPEX

Front-end loader
Hopper-conveyor
Trommel
Spirals
Hydrocyclone product stacker
Wet high-intensity magnetic separators
Classifiers
Attritioner cells
UPCOMING MILESTONES DRIVING SHAREHOLDER VALUE

Q4 2019
- Further Regional Resource Identification
- TO Mining Agreement Negotiations Advance
- Mine Planning Studies
- ML Submission
- Environmental Physical Surveys Completed

Q1 2020
- Galalar mineable resource definition
- Environmental Study (EIS) Submissions Lodgement
- Binding Offtakes Advanced

Q2/Q3 2020
- Finalise Bankable Feasibility Studies
- Finalise Project Funding
- Final Plant design and Engineering Studies
- Mining activity production planning

Advancing Galalar Silica Project through to production – Targeted For Q2 2021
• Near-term silica sand production opportunity at Galalar Silica Project, with low capex and opex

• Silica sands exposure next to the world’s largest silica sands project

• DRX expects further company value re-ratings from project positive news flow

• Additionally, potential for value to be realised for Cyclone Zircon Project (see over)
Blackbird Partners appointed to support progression of the Cyclone Zircon Project and ensure maximum shareholder benefit.

All primary project approvals in place - Mining Lease, TO Agreements, Environmental Approvals.

JORC Resource: 211Mt @ 2.3% VHM

Sufficient reserves to support a long mine life (currently 14 years at 10Mtpa)

Strategic metal (hafnium) identified within zircon component of HMC

Supply deficit projected amid ore reserve depletion and jurisdictional risks.
HEAVY MINERAL SANDS

Zircon is an opaque, hard wearing, inert mineral, with around 1.2Mt produced globally in 2018. It is primarily used to produce ceramic tiles, as well as specialty applications.

Titanium dioxide is mined as ilmenite, rutile or leucoxene. 7.4Mt of titanium feedstocks were produced in 2018 for pigments in paints, plastics, paper and titanium metal.
ZIRCON USES

- Most valuable heavy mineral with current prices US$1,505/t (up 11% from US$1,351 for FY18*)
- Approx. 1.2m tonnes produced globally in 2018
- Used primarily in production of ceramic tiles
- Other applications include refractories, foundry casting
- Speciality applications in nuclear fuel rods, jet turbine blades

*Source: Iluka Resources, 31 October 2019
TITANIUM USES

- Around 7.4m tpa global market (2018)
- Used primarily in pigments
- Demand increasing due to China’s higher environmental standards and technological advancements
- Rutile price averaged US$1,152/t Q3 2019, up 21% from FY2018 price*

*Source: Iluka Resources, 31 October 2019
Mining Lease M69/141 was granted Nov 2014 for the Cyclone Ore Reserve (red) and the operational activities that will occur around it. These activities include wet concentrating, tailings disposal, HMC stockpiles, offices, workshops, infrastructure and services.

- Cyclone Extended (pink) is secured under a Mineral Retention Licence (R69/1).
- Miscellaneous Licence L69/26 for the site access road, accommodation camp, airstrip, and borefield was granted in July 2016.
- Implementation of the mining project and associated activities including the proposed haul road have all been approved by the WA Minister for Environment.
PROPOSED MINING METHOD
MINERAL TRANSPORT DETAILS

HMC loaded into containers at Cyclone. 33 tonne per container.

240 kilometre truck transport by road from Cyclone to Forrest rail siding in 100 tonne loads.

1,100 kilometre rail transport from Forrest siding to Port Adelaide in 3,000 tonne loads

Containers stacked at Port Adelaide until 15,000 tonnes accumulated. Crane uses container rotator to bulk load a Handisize ship for transport to China.
MINING PROPOSAL

**Mining & Logistics**

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strip Ratio</td>
<td>1 : 1</td>
</tr>
<tr>
<td>Mining Rate (Dry)</td>
<td>1,300 tonnes per hour – 2 x Dozer traps</td>
</tr>
<tr>
<td>Wet Concentrator Plant Product</td>
<td>20 Tonnes / Hour HMC production</td>
</tr>
<tr>
<td></td>
<td>144,000 tpa @ 96% HM Concentrate</td>
</tr>
<tr>
<td>Transport - Road</td>
<td>240km - 100 tonne loads to Forrest</td>
</tr>
<tr>
<td>Transport - Rail</td>
<td>1,100km – 3,000 tonne loads to Port Pirie</td>
</tr>
</tbody>
</table>

**Project Development Options**

- Mineral Separation Plant in Australia – Final products from Australia
- Mineral Separation Plant in China or other country
- Direct sale of HMC within Australia
- Direct sale of HMC offshore
PROPOSED PROJECT TIMELINE

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Feasibility Study</td>
<td>March 2012 - Completed</td>
</tr>
<tr>
<td>Definitive Feasibility Study</td>
<td>November 2018 - Completed</td>
</tr>
<tr>
<td>Project Financing/Partner Entry</td>
<td>2019</td>
</tr>
<tr>
<td>Construction &amp; Development</td>
<td>2019/20</td>
</tr>
<tr>
<td>Mining &amp; Production</td>
<td>Q 1/2 - 2021</td>
</tr>
</tbody>
</table>
### Products

**Average Annual Production and Product Quality**

<table>
<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
<th>ZrO2 %</th>
<th>FE2O3 %</th>
<th>SiO2 %</th>
<th>Al2O3 %</th>
<th>TiO2 %</th>
<th>P2O5 %</th>
<th>U+Th ppm</th>
<th>CeO2 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zircon</td>
<td>65,000 tonnes</td>
<td>66.0</td>
<td>0.10</td>
<td>32.8</td>
<td>0.20</td>
<td>0.31</td>
<td>0.07</td>
<td>369</td>
<td>0.020</td>
</tr>
<tr>
<td>HiTi87</td>
<td>10,000 tonnes</td>
<td>86.6</td>
<td>2.6</td>
<td>5.0</td>
<td>1.01</td>
<td>3.3</td>
<td>0.04</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>HiTi67</td>
<td>46,000 tonnes</td>
<td>67.3</td>
<td>20.1</td>
<td>6.3</td>
<td>1.75</td>
<td>0.5</td>
<td>0.10</td>
<td>0.42</td>
<td>0.07</td>
</tr>
</tbody>
</table>
PROJECT FUNDAMENTALS

• All primary project approvals in place
  Mining Lease, TO Agreements, Environmental Approvals.

• Sufficient reserves to support a long mine life
  Currently 14 years at 10Mt pa
  Strand mineralisation gives options for high grading
  Substantial resource base to support potential long term expansion

• Support of Traditional Owners to develop project
  Strong relationship, mining agreement signed

• No competing land use
  Quaternary dune field, Great Victoria Desert
## ENFI DFS - SNAPSHOT

### Financial Results & Data (AUD$)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Present Value</td>
<td>$113.3m</td>
</tr>
<tr>
<td>Internal Rate of Return</td>
<td>27.2%</td>
</tr>
<tr>
<td>Payback period (production years)</td>
<td>2.7 years</td>
</tr>
<tr>
<td>Construction Capital (capex)</td>
<td>$135.7m</td>
</tr>
<tr>
<td>Average Annual Revenue</td>
<td>$130.1m</td>
</tr>
<tr>
<td>Average Annual operating expenditure (opex)</td>
<td>$75.5m</td>
</tr>
<tr>
<td>Working Capital *</td>
<td>$11.7m in Year 1</td>
</tr>
<tr>
<td>Sustaining Capital *</td>
<td>$18.7m ($10.2m in Year 1)</td>
</tr>
<tr>
<td>Average Annual Company Tax (30%)</td>
<td>$11.6m</td>
</tr>
<tr>
<td>Average Annual After-Tax Profit</td>
<td>$26.6m</td>
</tr>
<tr>
<td>Average Annual Depreciation</td>
<td>$9.9m</td>
</tr>
<tr>
<td>Average Annual State Royalty</td>
<td>$6.5m</td>
</tr>
</tbody>
</table>

### Base DFS Assumptions

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD:AUD Exchange Rate</td>
<td>0.735</td>
</tr>
<tr>
<td>CNY:USD Exchange Rate</td>
<td>6.8</td>
</tr>
<tr>
<td>Financial Model Discount Rate</td>
<td>10%</td>
</tr>
<tr>
<td>HMC Product Price</td>
<td>85% of final product value</td>
</tr>
<tr>
<td>Study accuracy</td>
<td>15%</td>
</tr>
<tr>
<td>Contingency</td>
<td>10%</td>
</tr>
<tr>
<td>Mining Rate</td>
<td>10 million tonnes per annum (Mtpa)</td>
</tr>
<tr>
<td>HMC Annual Production Rate</td>
<td>147,700 tonnes (average)</td>
</tr>
<tr>
<td>Mine life</td>
<td>13.2 years</td>
</tr>
<tr>
<td>Construction period</td>
<td>2 years</td>
</tr>
</tbody>
</table>
ENFI DFS – KEY RESULTS & RECOMMENDATIONS

- Positive after-tax financial results, including estimated net present value (NPV) of $113 million, internal rate of return (IRR) of 27% and capital payback (post-production) in 2.7 years
- Capital cost slashed to $135m a significant reduction on the previous independent estimate in 2016
- Life of Mine (LOM) production of 1.94 million tonnes (Mt) of heavy mineral concentrate (HMC), containing 936 kilotonne (kt) zircon, producing 772kt of zircon final product
- ENFI, part of major SOE Chinese mining group China Minmetals, formally endorses the Cyclone project and recommends immediate development.
Tick Hill, Qld

- Sold to Berkut Minerals (now Carnaby Resources – ASX:CNB)
- Consideration at sale – 7,211,539 listed shares valued at $565,000
- Plus immediate replacement of lodged tenement bonds $337,000 (cash back to DRX)
- Shares escrowed 12 months (to March 2020)
- Current Value of CNB shares as at 8/11/19 - $721,154

(refer DRX ASX release dated 12/3/19)
## RESOURCE STATEMENT – MINERAL SANDS

### Cyclone Project Resource & Reserve Estimate

#### MINERAL RESOURCE ESTIMATE

<table>
<thead>
<tr>
<th>Resource Category</th>
<th>HM cut-off</th>
<th>Material Mt</th>
<th>HM %</th>
<th>HM Mt</th>
<th>Slime %</th>
<th>OS %</th>
<th>Zircon %</th>
<th>Rutile %</th>
<th>Leuc %</th>
<th>HiTi %</th>
<th>Alt Ilm %</th>
<th>Si TiOx %</th>
<th>Zircon Mt</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEASURED</td>
<td>1.0</td>
<td>156</td>
<td>2.4</td>
<td>3.81</td>
<td>4.2</td>
<td>5.1</td>
<td>0.69</td>
<td>0.07</td>
<td>0.16</td>
<td>0.58</td>
<td>0.30</td>
<td>0.53</td>
<td>1,079</td>
</tr>
<tr>
<td>INDICATED</td>
<td>1.0</td>
<td>48</td>
<td>1.9</td>
<td>0.89</td>
<td>4.1</td>
<td>4.5</td>
<td>0.38</td>
<td>0.04</td>
<td>0.09</td>
<td>0.62</td>
<td>0.30</td>
<td>0.34</td>
<td>183</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.0</td>
<td>203</td>
<td>2.3</td>
<td>4.70</td>
<td>4.2</td>
<td>4.9</td>
<td>0.62</td>
<td>0.06</td>
<td>0.14</td>
<td>0.59</td>
<td>0.30</td>
<td>0.49</td>
<td>1,262</td>
</tr>
</tbody>
</table>

Mineral Assemblage: 27% 3% 6% 26% 13% 21%

#### ORE RESERVE ESTIMATE

<table>
<thead>
<tr>
<th>Reserve Category</th>
<th>Zircon cut-off</th>
<th>Material Mt</th>
<th>HM %</th>
<th>HM Mt</th>
<th>Slime %</th>
<th>OS %</th>
<th>Zircon %</th>
<th>Rutile %</th>
<th>Leuc %</th>
<th>HiTi %</th>
<th>Alt Ilm %</th>
<th>Si TiOx %</th>
<th>Zircon Kt</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBABLE</td>
<td>0.4</td>
<td>138</td>
<td>2.6</td>
<td>3.52</td>
<td>4.6</td>
<td>5.3</td>
<td>0.72</td>
<td>0.07</td>
<td>0.17</td>
<td>0.59</td>
<td>0.32</td>
<td>0.57</td>
<td>990</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.4</td>
<td>138</td>
<td>2.6</td>
<td>3.52</td>
<td>4.6</td>
<td>5.3</td>
<td>0.72</td>
<td>0.07</td>
<td>0.17</td>
<td>0.59</td>
<td>0.32</td>
<td>0.57</td>
<td>990</td>
</tr>
</tbody>
</table>

Mineral Assemblage: 28% 3% 7% 23% 13% 22%

Notes:
- Refer to DRX ASX Release 15th November, 2018 “Cyclone DFS Results” for more detail.
- Rounding may generate differences in last decimal place.
- A constant SG of 1.7 has been used to derive material tonnes.
- Slime refers to material typically <53um.
- OS refers to material typically >2mm.
- Mineral Assemblage derived from QEMSCAN® analysis.
- High Titanium Oxides (HiTi) – Ti-oxides containing 70 - 95% TiO₂, Altered Ilmenite (Alt Ilm) – Ti-oxides containing <70% TiO₂, Siliceous Ti-Oxide (Si TiOx) – Ti-oxides containing >10% silica rich Ti minerals.
- Resources are inclusive of Reserves.
- The above Table Notes - Mineral Resource and Ore Reserves Estimate is current as of 11th November 2019 and has not materially changed since release 15th November, 2018.
RESOURCE STATEMENT – SILICA SAND

Galalar Silica Project Indicated/Inferred Mineral Resource 30.20Mt >99% SiO2

<table>
<thead>
<tr>
<th>Area</th>
<th>Cut-off SiO2%</th>
<th>SiO2% Grade</th>
<th>Indicated (Mt)</th>
<th>Inferred (Mt)</th>
<th>Inferred &amp; Indicated (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Nob Point</td>
<td>99%</td>
<td>99.26%</td>
<td>20.2</td>
<td>6.6</td>
<td>26.8</td>
</tr>
<tr>
<td>West Nob Point</td>
<td>99%</td>
<td>99.16%</td>
<td>1.3</td>
<td>2.1</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>21.5</td>
<td>8.7</td>
<td>30.2</td>
</tr>
</tbody>
</table>

*The above Table Notes Resource Estimate is current as of 14th of May 2019 and has not materially changed

Notes:
It is anticipated that due to the nature of the assessment all of the 99% silica sand volume will be used as product and therefore will be included in the Resource assessment. As such, the estimated in situ volumes are equivalent to “Mineral Resources” as defined by the JORC Code (2012).

In accordance with the JORC Code (2012) the classification of mineral resources is a function of the level of geological knowledge and confidence. With increasing level of geological knowledge and confidence the mineral resources are classified as “Inferred”, “Indicated” and “Measured Mineral Resources”. Both the geological knowledge and the level of confidence are a function of the complexity of the mineral resource and the amount of exploration/investigation carried out.

Available exploration data for the Galalar Silica Project indicates that the sand mass has a relatively uniform lithological composition and its extent and volume can be relatively easily estimated using readily available topographic data sets. Based on available subsurface information and the reliability of the geological model, the calculated mineral resources, as shown in Table above, are considered as an in situ “Indicated and Inferred Mineral Resource”.

Notes:
COMPETENT PERSONS STATEMENT

STATEMENT IN ACCORDANCE WITH THE AUSTRALASIAN CODE FOR REPORTING OF EXPLORATION RESULTS, MINERAL RESOURCES AND ORE RESERVES (THE JORC CODE)

The information in this report that relates to Exploration Results and Exploration Targets from the Cape Bedford Project is based on information reviewed and compiled by Mr. Neil Mackenzie-Forbes, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr. Mackenzie-Forbes is a director of Sebrof Projects Pty Ltd (a consultant geologist to Diatreme Resources Limited). Mr. Mackenzie-Forbes has sufficient experience which 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. Mackenzie-Forbes consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report, insofar as it relates to Mineral Resources at the Cyclone Project is based on information compiled by Mr Ian Reudavey, who was a full time employee of Diatreme Resources Limited and a Member of the Australian Institute of Geoscientists. Mr Reudavey 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 2012 Edition of ‘The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Reudavey consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report, insofar as it relates to Ore Reserves at the Cyclone Project is based on information compiled by Mr Phil McMurtrie, who is a director of Tisana Pty Ltd (a consultant to Diatreme Resources Limited), and a Member of the Australasian Institute of Mining and Metallurgy. Mr McMurtrie 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 2012 Edition of ‘The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr McMurtrie consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at the Galalar Silica Project is based on information compiled by Brice Mutton from Ausrocks Pty Ltd who has significant experience in Industrial Minerals and Quarry Resource assessments. Brice Mutton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for 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).

Brice Mutton consents to the inclusion in the report on the matters based on their information in the form and context in which it appears.
DIATREME CONTACT DETAILS

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neil.mcintyre@diatreme.com.au

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Coorparoo QLD 4151