FNQ
Delivering Critical High Purity Silica

AUSIMM – RESOURCEFUL FNQ 2022 – 18 & 19 MAY, CAIRNS

DIATREME Resources

AUSTRALIAN SANDS.
UNIVERSAL DEMAND.

*Expected Product – Metallurgical Result from Process Plant Simulation

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Acknowledgement

Diatreme acknowledges the Indigenous custodians of the land on which we meet today, and pays respect to Elders past, present and emerging. I extend that respect to all Aboriginal and Torres Strait Islander people here today.

Diatreme greatly appreciates the opportunity to interact with the 13 Indigenous Clan groups (Dhuppi, Nukgal, Binthi, Gulaal, Thithaarr, Dharrpa, Ngayumbarr-Ngayumbarr, Dingaal, Ngurrumungu, Thaanil, Gamaay, Ngaatha and Burunga) within the Hope Vale Native Title Determination. We acknowledging their unique cultural heritage, beliefs and connection to the land.

We are committed to building long term success with Indigenous people throughout our areas of operation.

Important Information

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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 silica and the company's current market capitalisation (compared to the capital expenditure required in connection with the Galalar Silica Sand 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 PFS 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.

The Resource Estimates and Production Targets reported by the Company on 29th April 2022 (Annual Report), continue to apply and have not materially changed. The Company confirms that it is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

ASX Announcements

This presentation should also be read in conjunction with the DRX Annual Report for 2022 and the March 2022 Quarterly Activities report, together with any announcement made by the Company in accordance with its continuous disclosure obligations under the Corporations Act including but not limited to the following ASX releases:

2022

- 17 March - Resource base grows to 200MT across high-grade silica project
- 23 February - Diatreme expands Northern Resource Project exploration
- 10 January - Diatreme discovers 2nd major regional high-grade silica deposit

2021

- 9 November – Galalar Maiden Ore Reserve, PFS deliver substantial boost to new silica sand mine
- 3 November – Wayne Swan appointed Non-Executive Director & Chairman
- 28 September – Progress update – high priority northern exploration targets
- 20 September – Galalar silica resource expands by 22% to 75.5Mt
- 6 September - $10M placement to progress Galalar Silica Project
- 18 August – Northern exploration targets resource expansion
- 11 August – Drilling boosts confidence in Galalar resource
- 10 June – Mining Lease Application lodged for Nob Point export solution
- 19 May – Offtake MOU advances development of Galalar Silica Project
- 22 April – Positive initial testwork results received for Galalar DFS
- 8 April – Final metallurgical testwork underway for Galalar project
- 17 March – Galalar silica resource expands 30% to 61.9Mt
- 23 February – Canberra meetings highlight community support for Galalar
- 11 February – Diatreme advances community engagement for Galalar
- 25 January – Diatreme eyes further silica sand resource expansion

Diatreme Company Profile

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Public, ASX-listed company operating over 14 years focused on minerals exploration and development (ASX:DRX)

Current market cap
~ circa $70 million

Experienced Board and management with a track record in implementing and managing projects through to mining, with specific FNQ permitting, feasibility, and project execution experience

Over 1,200 active shareholders including major shareholders Ilwella P/L (Flannery Family Office) (approx. 20%), Deutsche Balaton (approx. 11.5%)

Flagship Project
Cape Bedford EPM
Far North Queensland

Diatreme Board
Chairman
Wayne Swan

Directors
Michael Chapman
Greg Starr
William Wang

DRX Management
CEO – Neil McIntyre
CFO – Tuan Do
COO – Peter Brown
Sustainability (HSEC) – Linda Kingston
Engineering Project Manager – Phil McMurtrie
Exploration Geologist – Neil Forbes
Hopevale Project Manager – Dan Kreutzer
Hope Vale Community Officer – William Bird

Targeting Long Life Sustainable Operations

- Multiphase **high purity** sand dunes located 20-50km northeast of Hope Vale in FNQ, extend inland for 10-15km
- Cape Bedford→Cape Flattery land position (500km^2), adjoins the world's largest high purity silica mine at Cape Flattery (CFSM-Mitsubishi); delivering new economy minerals for over 30 years

✓ Great Logistics

✓ Premium Silica

✓ Existing Port

Transition to Operator (2024)

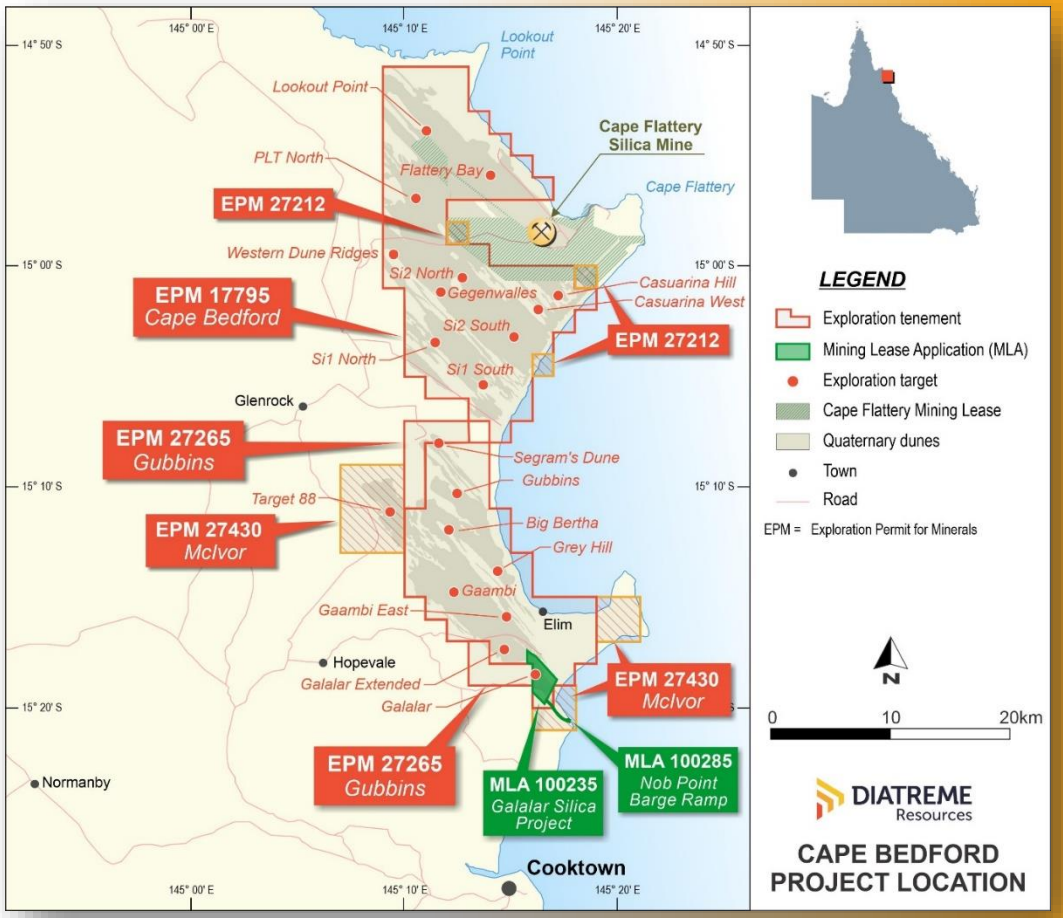
Galalar Silica Sand Project (GSSP)*
Initial 25 years

Build Sustainability (2024-27)

GSSP and Northern Resource Project (NRP) 25+ years

Long Term Delivery to Investors and Stakeholders

GSSP - NRP mining and production hubs 50+ years



*Commencement dependent on permitting and approvals

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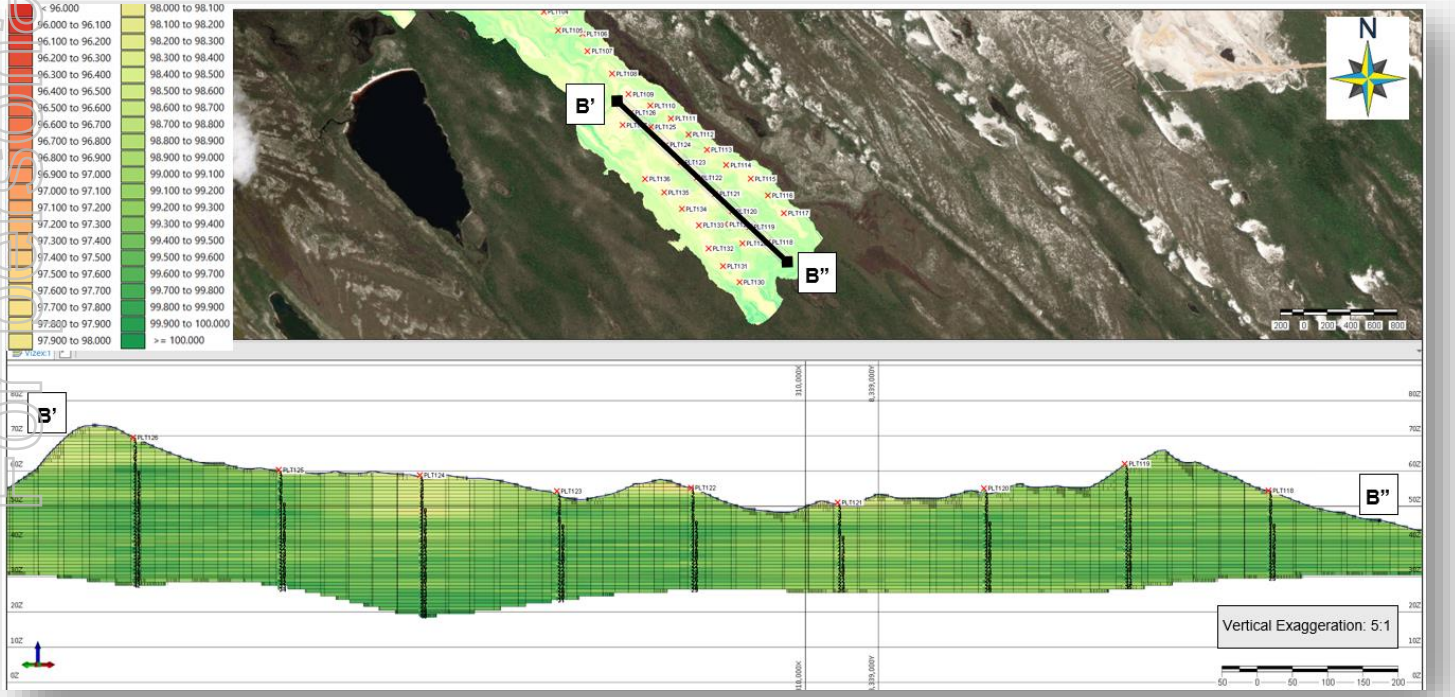
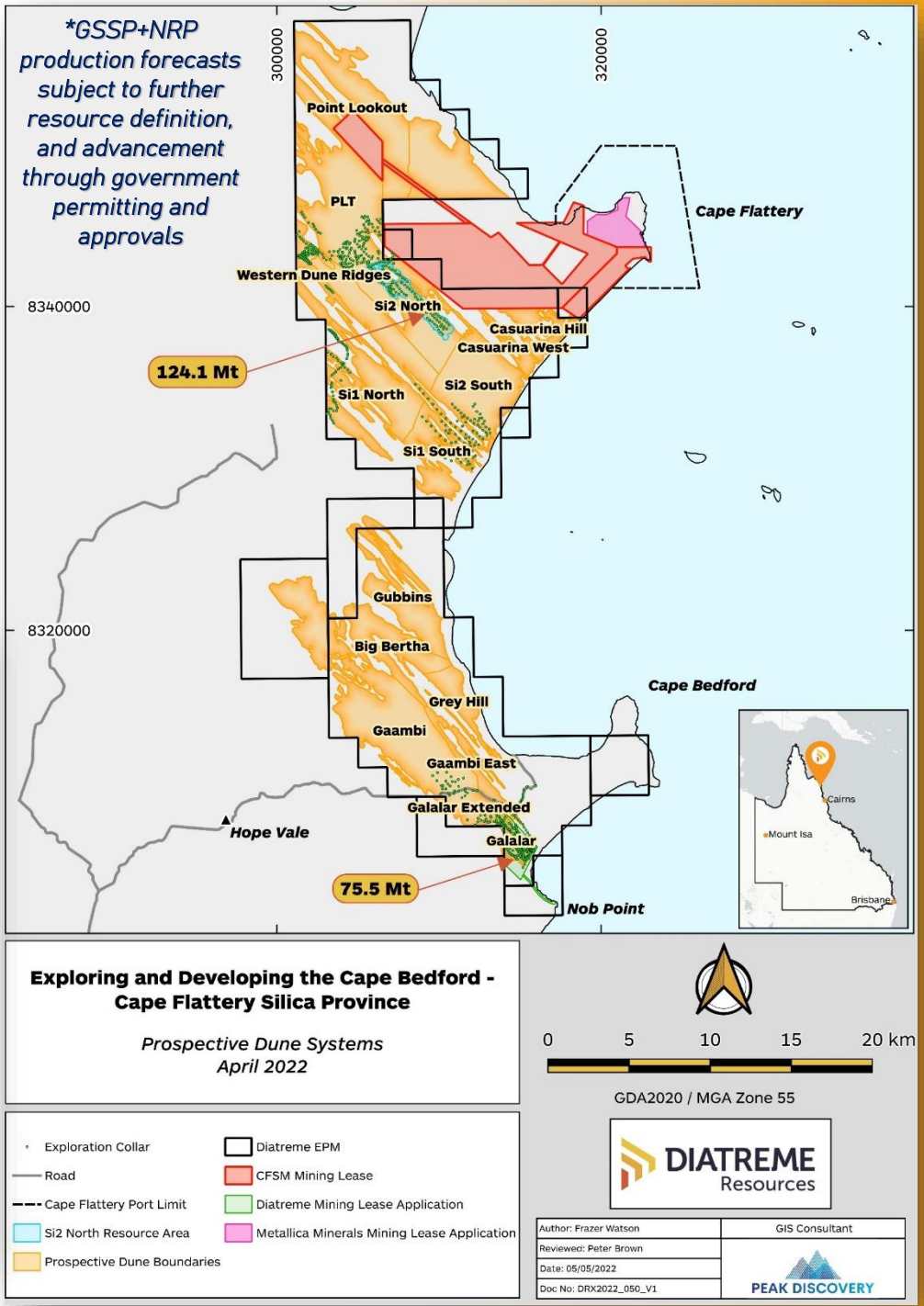
Volume, Scale & Expansion

- GSSP delivers initial personnel training, technical expertise, process refinement, revenues and ESG systems
- 1.3-2Mtpa Production (GSSP), **potentially scalable to 3-5Mtpa (GSSP+NRP)* within 5 years**, aligned to Diatreme low impact model and future silica market demands

NRP dune section





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Premium Silica Resources

Selective targeting and exploration planning → Avoiding high value environmental areas → Improved resource - reserve conversion → Rehabilitation to DRX-ESG, EA Compliance

Project	Mineral Resource Category	2020 (Mt)	2020 Silica Grade (SiO_2%)	2021 (Mt)	2021 Silica Grade (SiO_2%)	2022 (Mt)	2022 Silica Grade (SiO_2%)	Silica Sand Inventory (Mt) (2020-2022)
GSSP	Measured	30.89	99.28	43.12	99.21	43.12	99.21	+12.23
	Indicated	6.02	99.10	23.12	99.16	23.12	99.16	+17.10
	Inferred	10.59	>99.00	9.22	99.10	9.22	99.10	-1.37
	Total	47.5	>99.19	75.46	99.18	75.46	99.18	+27.96
Si2-North (NRP)	Inferred	-	-	53.00	99.32	124.00	99.33	
	Total	-	-	53.00	99.32	124.00	99.33	+124.00
Total		47.50	>99.19	128.46	99.24	199.46	99.27	+151.46

Note: Under the JORC Code, 2012 Edition an Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to support mine planning and evaluation of the deposit's economic viability. An Inferred Mineral Resource has a lower level of confidence than an Indicated or Measured Mineral Resource.

Note: Total Resource Estimates current as of 17th March 2022 and has not materially changed since – refer attached annexures for full resource tables and competent persons statements.

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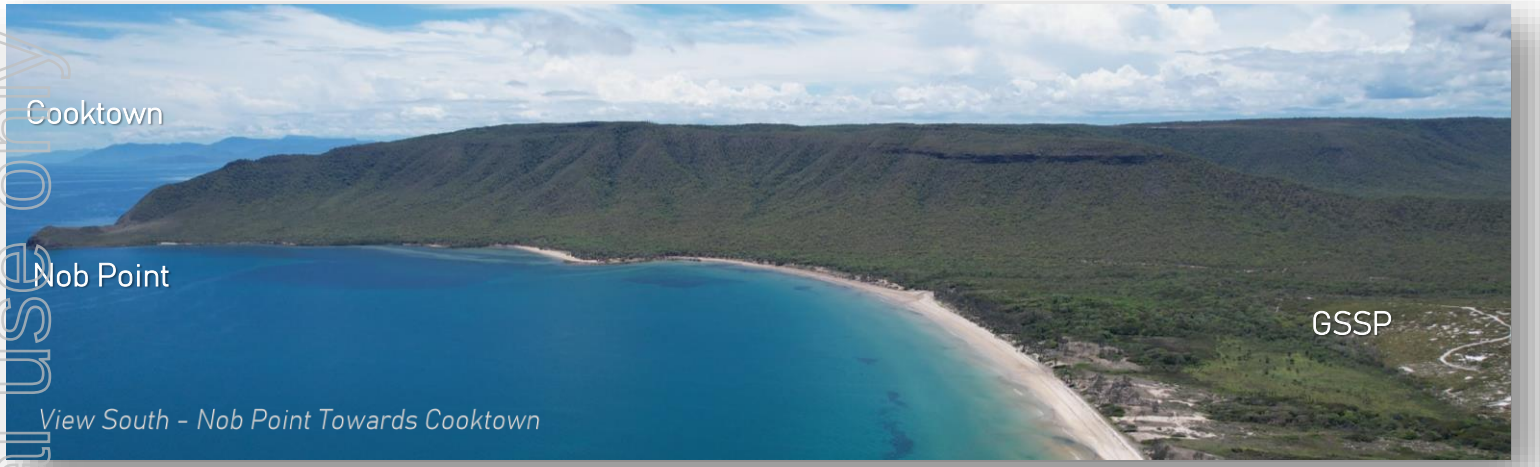
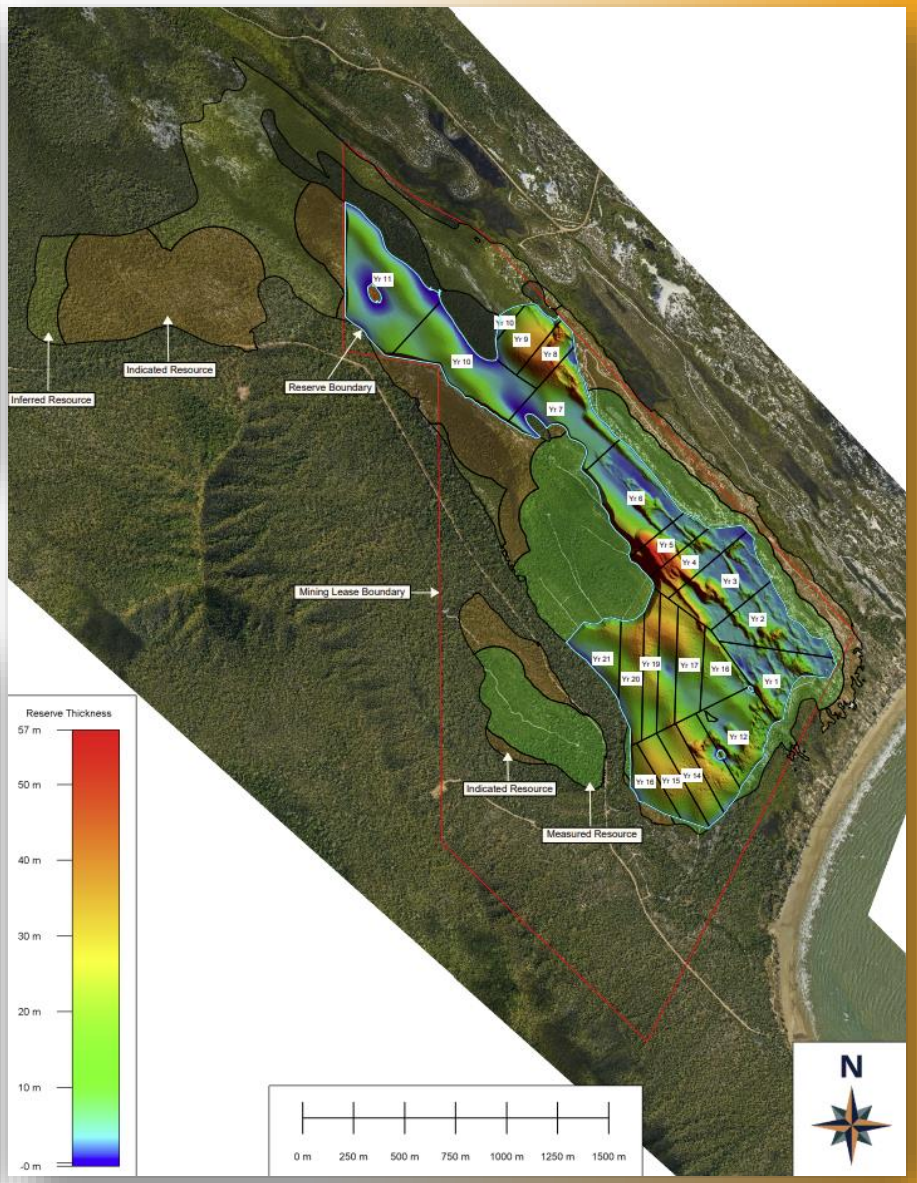
Galalar Silica Sand Project



View South - Nob Point Towards Cooktown

View North - GSSP Dune and Cape Flattery (CFP)



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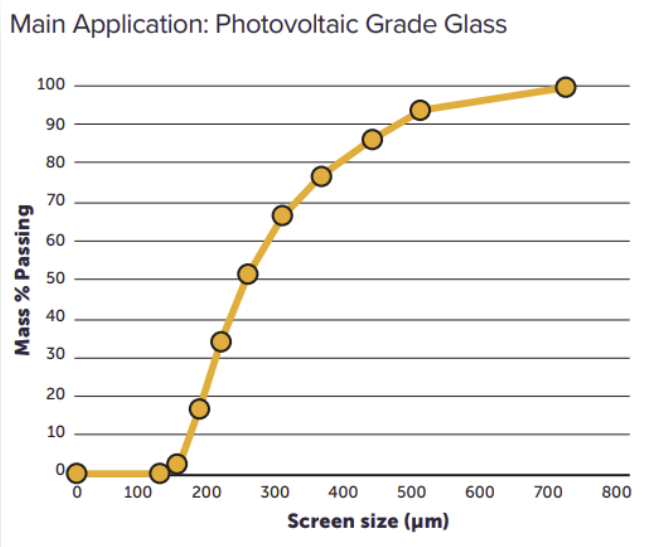
Mine Reserves

Mine Reserve
32.5Mt Silica sand
>98.50% SiO_2 grade



High Purity Silica Product*

Iron oxide	Silicon dioxide	Particle size distribution	Titanium dioxide	Aluminium oxide
=< 110ppm	=> 99.9%	109-700 Microns 24-140 mesh	< 140ppm	< 500ppm
International required specifications <120ppm	International required specifications >99.5%	International required specifications 109-700microns	International required specifications <400ppm	International required specifications <1000ppm
100% in range	100% in range	98% in range	100% in range	100% in range

**Expected Product – metallurgical results from process plant simulation*

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Pre-Feasibility Study Metrics

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Annual ore feed 950,000tpa	Annual production 1,320,000tpa	Silica price US$59/t*	Annual gross revenue A$80m	x 23.5 years Project life	Gross revenue A$2.5b
	CAPEX+ A$67m	Payback period 14 months	Annual operating costs A$42m		
Post-tax NPV8% A$358m	IRR (post-tax) 66%		Annual operating margin A$37m	x 23.5 years Project life	Total project EBITDA A$555m

* The price assumption is for a 'low iron' silica sand product suitable for solar PV (FOB – Cape Flattery Port)

+ Capital development costs include a 11% contingency ($7.6m)

Note: Refer to ASX announcement on 9th November 2021 –"Galalar Maiden Ore Reserve, PFS delivers substantial boost to new Silica Sand mine". Diatreme confirms it is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Mining and Infrastructure

- Topsoil and vegetation stockpile in advance of each mine panels (6-12month feed), delivers **low exposure footprint**
- 1.65Mtpa mined **above water table**, delivered to slurry line feed to processing
- **Progressively re-form** dunes and swales pre-revegetation
- **80-85% of water returned to dunes** with **no change to water quality**
- Rehabilitation nurseries established pre-construction
- **No waste dumps or referable dams, zero discharge site**
- Definitive Feasibility to assess **solar hybrid** power solutions
- Nob Point Boat Ramp delivers community access for reef programs, recreation and other business

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Processing

- Uncomplicated screening, gravity antirationing and classifying
- WHIMS (magnets) remove final Iron particles (5% of mass, 10-15ppm Fe_2O_3 reduction)
- Product slurry pumped to 50-60Kt stockpile
- Damp sand product conveyed as direct feeding to barge
- Reject fines (about 20% of total sand) pumped to mine panel for rehabilitation
- Reject and contains 150ppm Fe_2O_3
- **No toxic chemicals**

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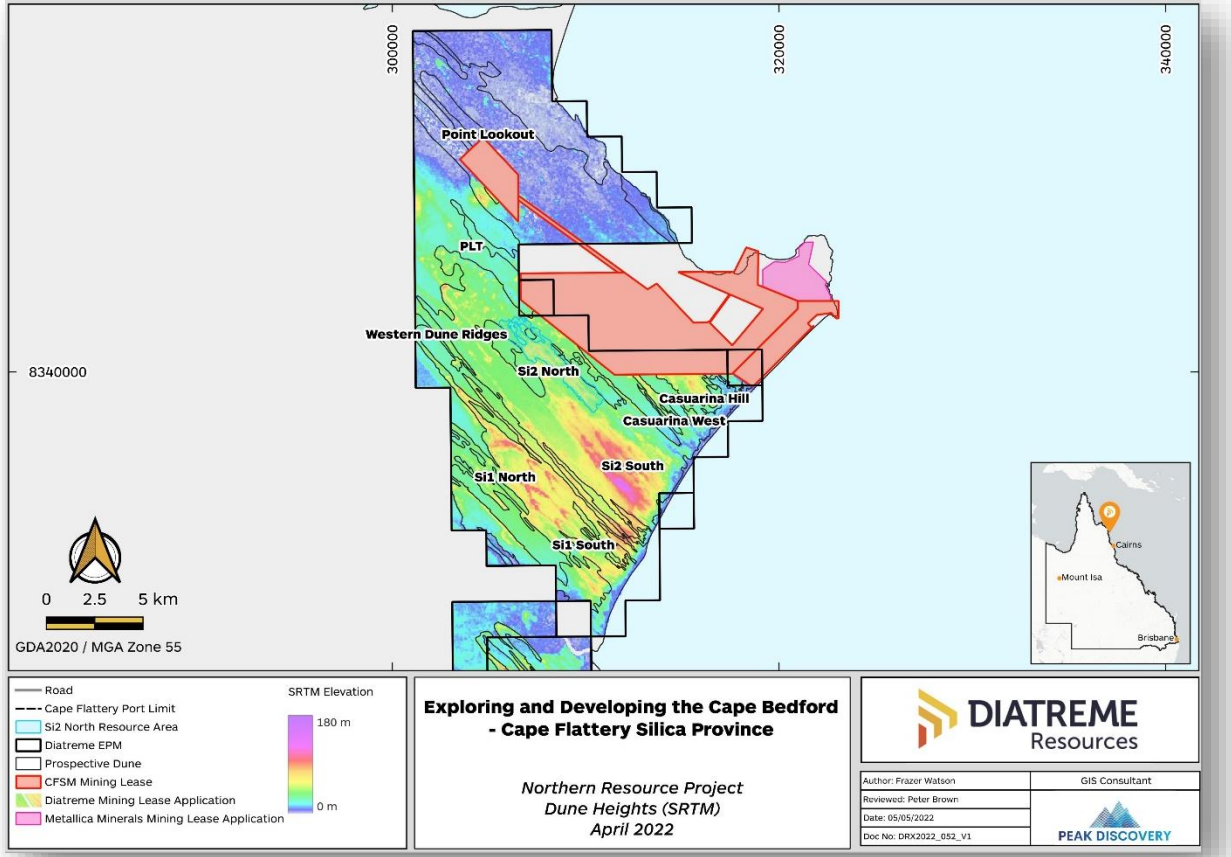
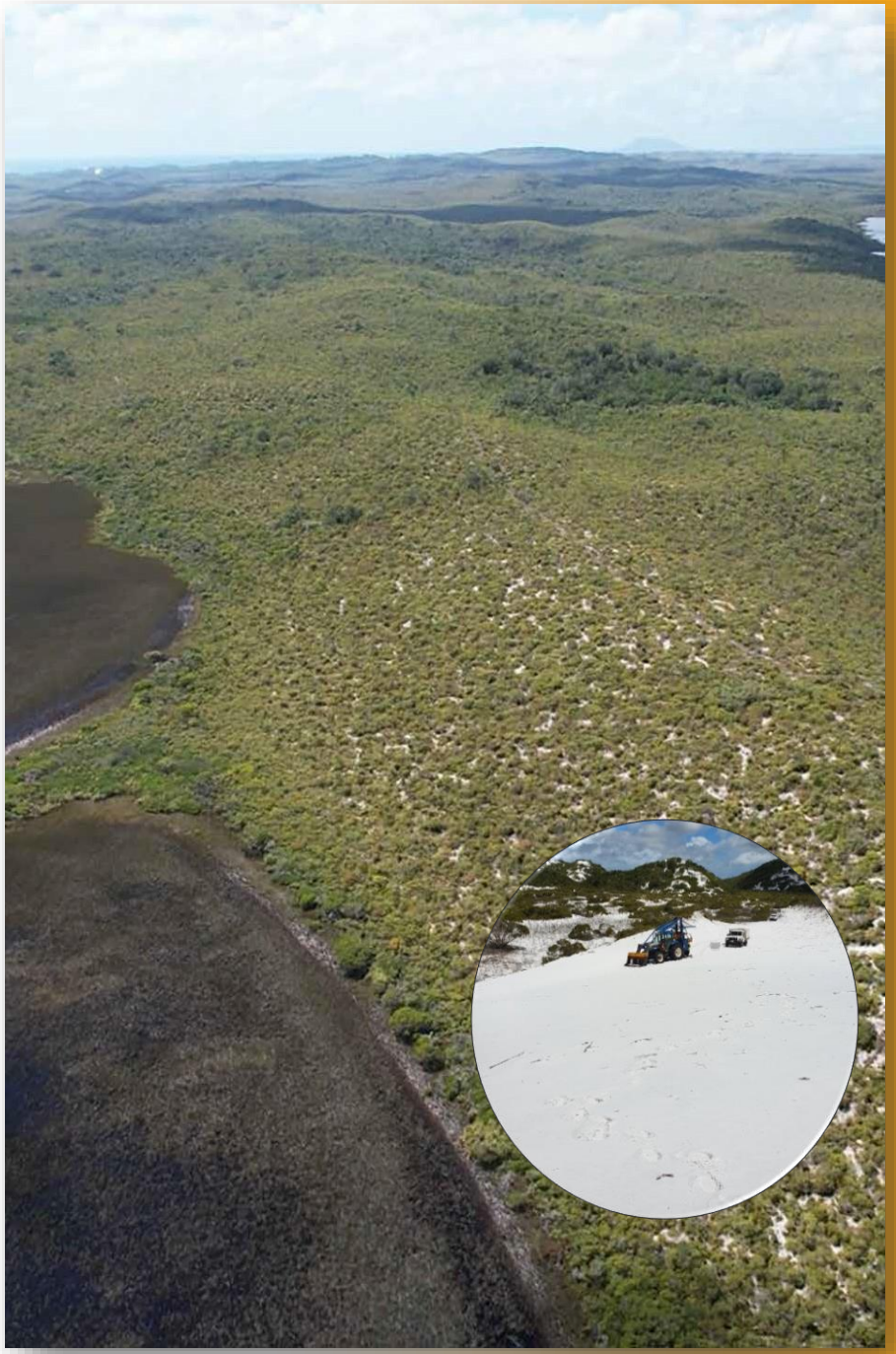
Northern Resource Project

- 124Mt resource is the start, next steps are to grow the resource, infill and upgrade resource category
- Preliminary metallurgy - 99.9% SiO_2 and 100-120ppm Fe_2O_3 product
- Amenable to conventional processing technologies, delivering high purity silica





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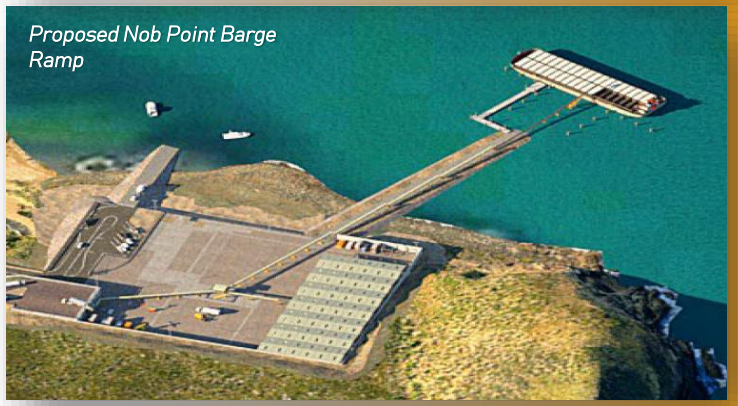
Transshipment and Port Facilities

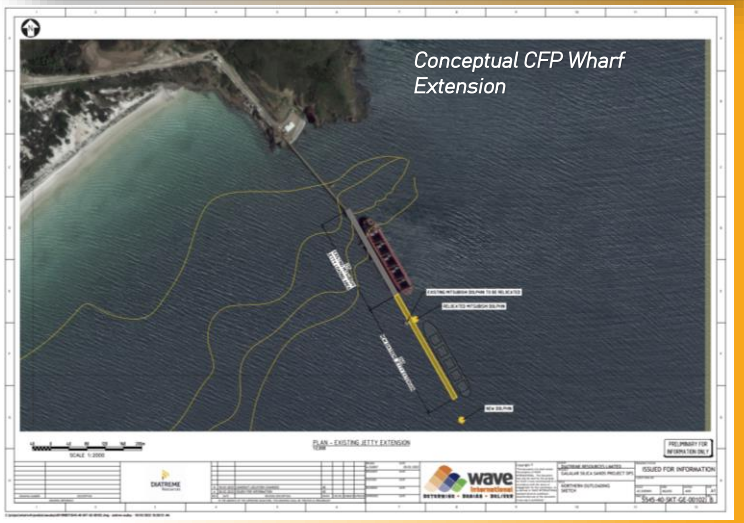
Nob Point Barge Ramp and Hope Vale Community Boat Ramp delivering a multipurpose-low impact facility

Moorings* possibly extending Cape Flattery Port (CFP), delivering a solution for GSSP transhipments

CFP wharf upgrade and extension*

*Subject to engineering feasibility studies and government permitting





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Silica Market

Wogen Ltd and other specialist market consultants to Diatreme have completed extensive market investigations and engagement with various potential offtake partners

The indicative price range (PFS) for delivery into China was variable, (RMB 500-600 CIF per tonne), delivered at major port (Quindao), or approximately US$77 – US$93 (as at 23 September 2021)*

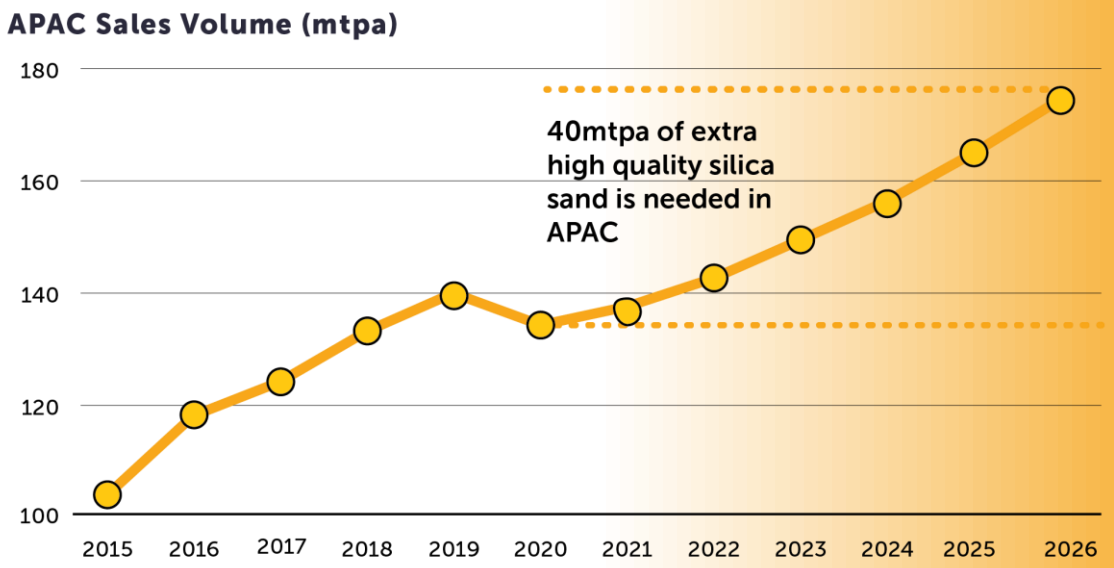
IMARC estimates global silica sand market could grow from **US$8B in 2019 to US$20B by 2024**; Asia-Pacific the fastest growing region with potential to reach US$8B by 2026

Supply is diminishing as a lot of the sand used in Asia comes from rivers where environmental concerns are increasingly restricting extraction

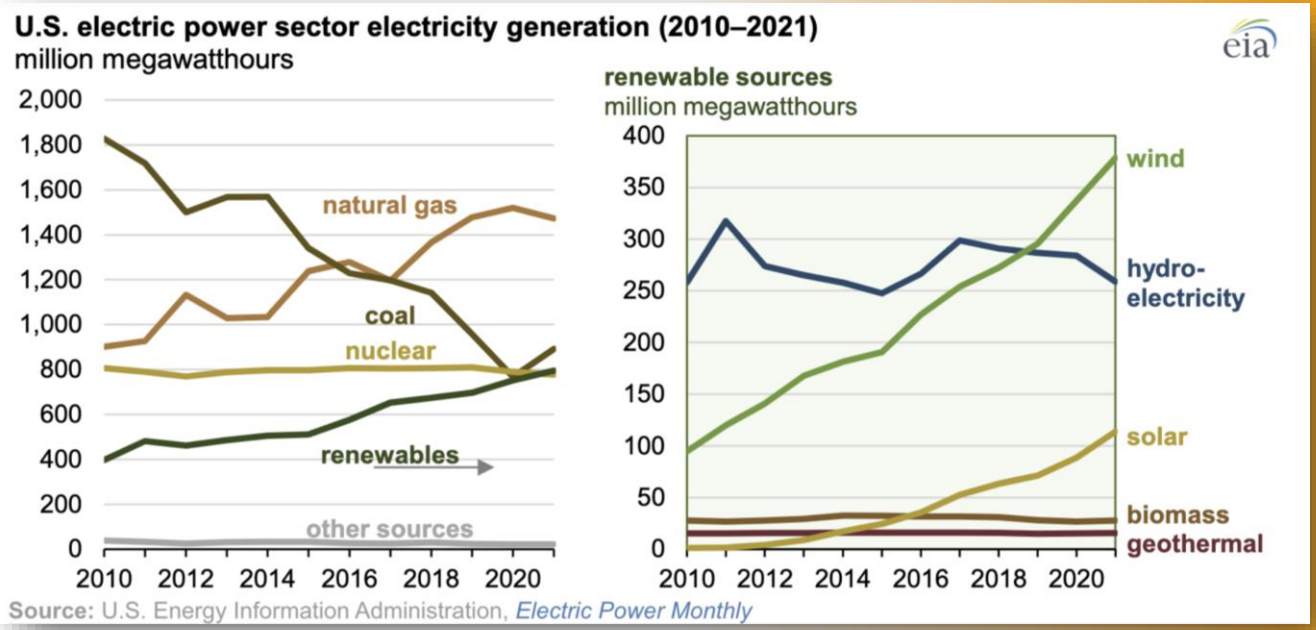
No direct substitutes exist for the majority of applications

The Solar panel PV market is forecast to reach US$48.2 billion by 2025, with a CAGR of 34.7%

World Bank estimates global renewable capacity will grow by over **1TW from 2018 to 2023, up 46%**, with solar PV accounting for more than half of this growth



Source: IMARC Group, Report Title: "Asia Pacific Silica Sand Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2021-2026," February 2021



**CIF includes shipping costs to Asian markets and the Company notes recent fluctuations in actual shipping rates may impact pricing*

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Aboriginal Community at the Forefront

Diatremes approaches in Hope Vale

- Recognise that we are on Aboriginal land and prioritise **Community Engagement**
- Committed to **Indigenous business participation**
- Respecting cultural heritage, customs and obligations towards **Caring for Country**
- Developing an inclusive and diverse team, promoting **Youth Opportunities**
- Ensure financial benefits and programs are audited and communicated
- Promoting Indigenous **Self Determination and Sustainability**

Measuring our success – three simple indicators:

- ✓ **Demonstrate successes every year, meeting or exceeding KPI's**
- ✓ **Aboriginal people and Hope Vale achievements delivering a pathway for others**
- ✓ **Earn community trust and appreciation**

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Development Benefits

- Hope Vale is the base of operations
- Mining Project Agreements* deliver an integrated **Equity - Royalty – Business** benefit to clan groups and the broader community
- GSSP delivers an estimated **$800M,** distributed into the local and QLD economy over the project life
- Initial **60% Indigenous** employment target is tracked by KPI's
- Indigenous business development, **owned and managed in Hope Vale**
- Acquire goods and services in the community over project life
- Employee housing allowance, assists with rent or housing loan repayments
- Establishment and support Hope Vale based **Indigenous Labour and Enterprise Solution** (ILES)
- TAFE & University Scholarship programs deliver **Future Industry Leaders**

**Agreements currently under negotiation*

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Environment, Social & Governance (ESG)

Sustainability Strategy Roadmap

STAGE 1:
2021-22
Evaluation and Strategy Implementation

- initial actions to establish benchmark
- implement management plans
- review existing policies

STAGE 2:
2023-24
Evaluation, data management and Strategy refinement

- establish baseline metrics
- set up new policies where required
- commence UNGC, GRI and S&P global reporting
- improve assessment, monitoring and data management

STAGE 3:
2024-2030
Impactful action and data-led direction

- use improved data to refine action plans and set ambitious, attainable targets to align with UNGC targets
- manage and reassess material issues and stakeholder priorities to ensure continued relevance

PLANET
- Great Barrier Reef 2050 Plan alignment
- GHG reduction inhouse and suppliers
- Low Carbon business model
- Seagrass and coral health monitoring

PEOPLE
- Target 60% Indigenous employees
- Access to education for all
- Women support programs
- Ensure wages provide a decent standard of living

GOVERNANCE
- ESG Roadmap
- Target Zero incidents of bribery
- Diversity on the Board
- Whistleblower Protections

PROFIT
- Employment of 110 in construction and 82 in operations (excluding contractors and consultants)
- Life of mine contribution of more than $800m to local economy in wages, royalties and taxes
- Progressive renewable solar power to supply operation
- Supply solar energy market with essential commodity for panel manufacturing

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Business Value Drivers

- Environmental and Social **license to operate**
- Single **high purity silica** product
- Consistent delivery into silica market deficit (undersupply)
- Low capex start-up, high NPV, rapid payback operations
- Lowering operating unit rates – **economies of scale, production optionality**
- **Evolving downstream** high purity silica products with offtake partner expertise
- Supporting **domestic innovation and technology**

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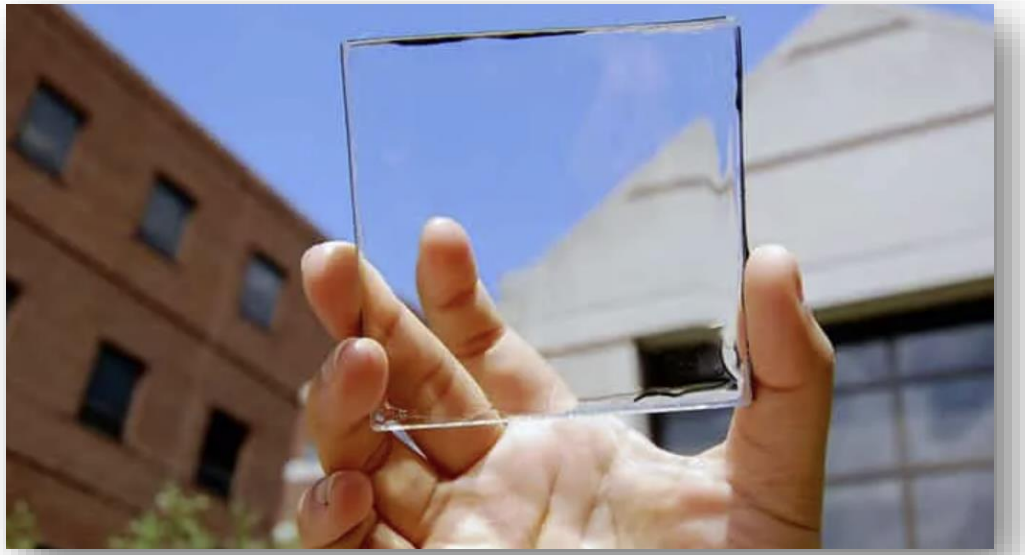
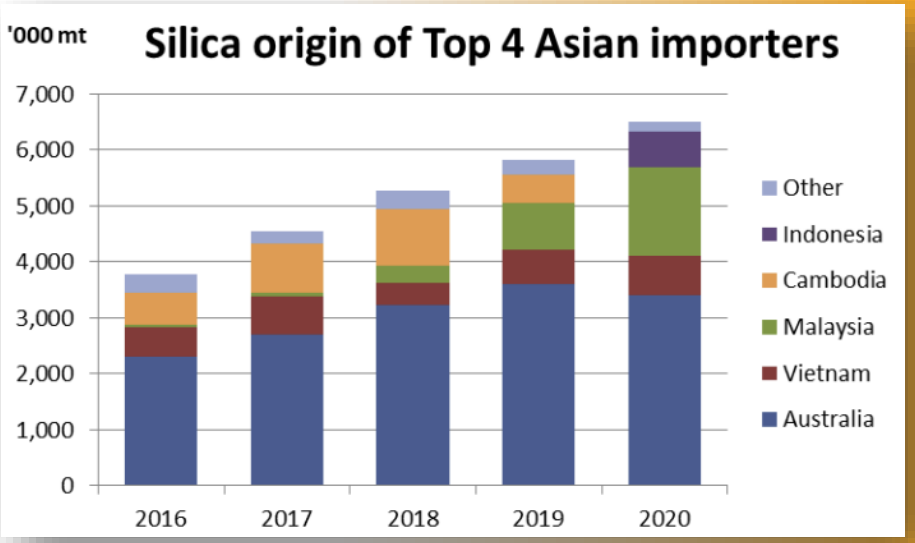
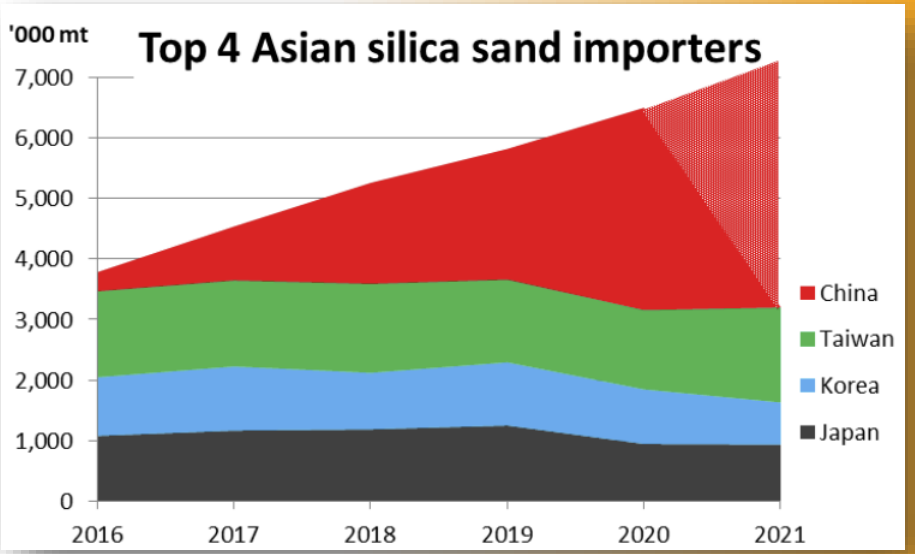
Downstream Innovation and Technology

- Australia's 2022 Critical Minerals Strategy (2022) and EU, identify the importance of Silica in the rapid transition **to lower Global Carbon emissions**
- Diatreme is assessing potential beneficiation to produce ultra-low iron (sub 50ppm Fe) silica used in high value electronics
- **The potential downstream benefits support QLD regional investment and jobs**, Qld Govt renewable energy drive and new economy minerals initiatives
- **De-risking** silica supply distribution will be delivered by engagement with Tier-1 offtake partners







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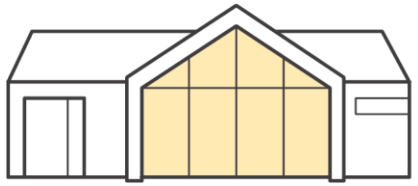
Contributing to Cleaner Energy

- GSSP alone will produce 31Mt of high quality silica over LOM, used to produce over **3.2B solar panels** producing "cleaner energy" well beyond Project Life
- Based on estimated energy generation over life of panels, this would equate to taking 132M cars off the road, or planting 34-291 million ha of trees or powering 38.7M Australian households
- Further environmental benefits expected from use of solar energy to power site operation
- Net projected reduction in emissions of **25.5Kt CO_2**

CO_2e savings



38.7 million
households

132 million
cars

34 to 291 million
hectares of trees

Note: Calculations on silica consumption in PV panel manufacturing and electricity generation undertaken by independent consultants BMT Oct 2021 from available public data and production data from DRX.

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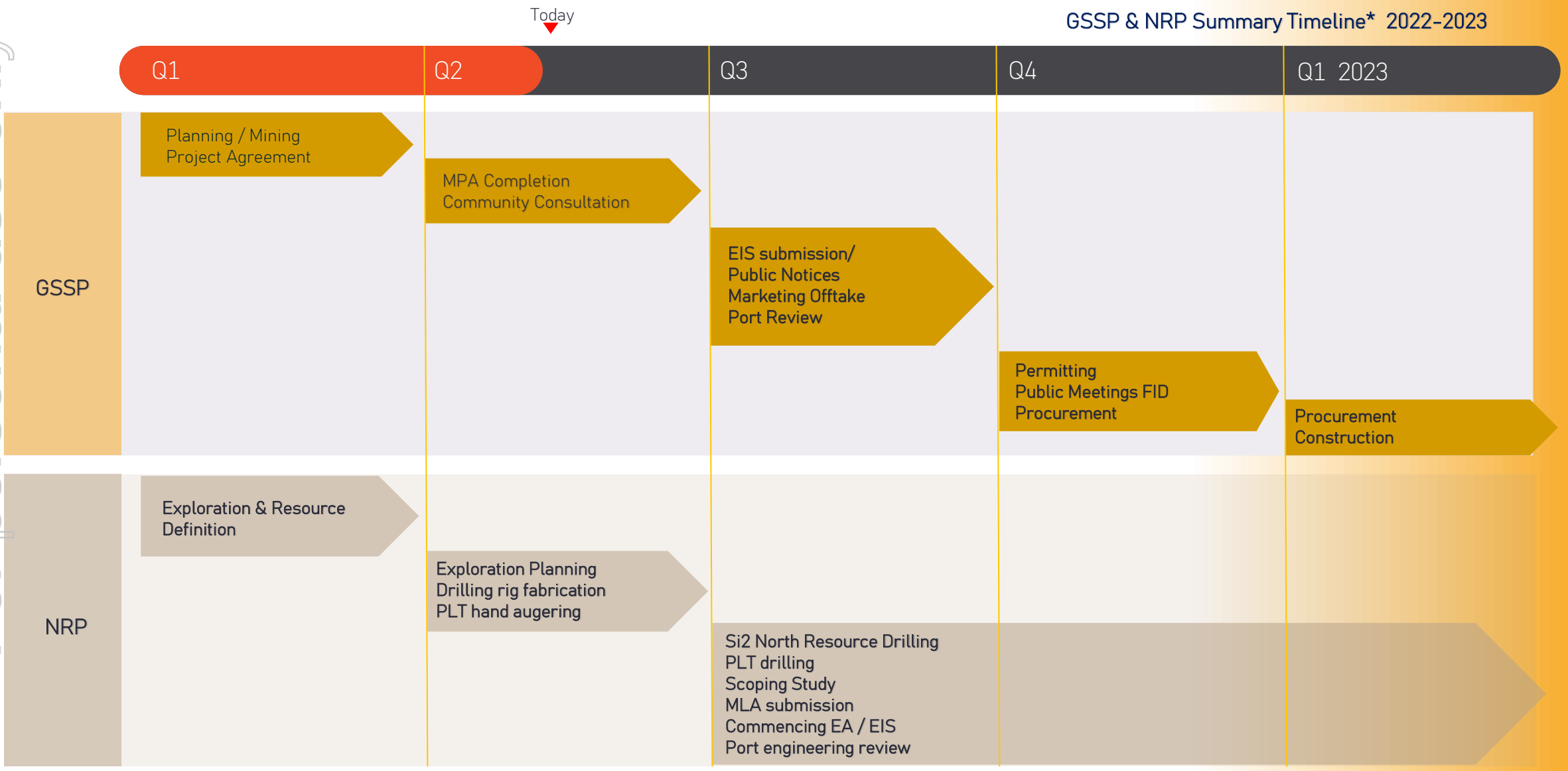
Project Delivery Timeline



Subject to advancement through permitting and approvals

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DIATREME Resources

AUSTRALIAN SANDS.
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APPENDIX

DIATREME Resources

Diatreme Integrated Sustainability

Business Delivery

Secure Jurisdiction, including a government commitment to Critical-New Economy Minerals

Proving multiple long life projects, with low risk resource upside

Utilising and upgrading product delivery infrastructure

Low CAPEX, low payback, long lived projects delivery consistent revenue

Uncomplicated mining, metallurgy and processing

Attracting investor support towards long term company development

Innovation delivering operational performance

People, Community, Environment

Implementing measurable ESG including total supply chain

Training a local, safety driven, high performance, integrated team

Empowering Indigenous People, catalysing measurable benefits in local communities

Sustained contribution to environmental improvement projects, aligned to Caring for Country

Targeted programs lowering carbon emissions

Develop low impact mines with minimised areas of disturbance for progressive rehabilitation

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Resource and Reserve Statements

	JORC Resource Category	Silica sand (Mt)	Silica sand (Mm^3)	Cut-off SiO_2 (%)	SiO_2 %	Fe_2O_3 %	TiO_2 %	LOI %	Al_2O_3 %	Density (t/m^3)
Galalar Silica Sand Project	Measured	43.12	26.95	98.5	99.21	0.09	0.11	0.16	0.13	1.6
	Indicated	23.12	14.45	98.5	99.16	0.09	0.13	0.24	0.10	1.6
	Inferred	9.22	5.76	98.5	99.10	0.11	0.16	0.27	0.11	1.6
	Sub Total*	75.46	47.16	98.5	99.18	0.09	0.12	0.20	0.12	1.6
Si2 North	Inferred**	124	77.6	98.5	99.33	0.11	0.15	0.12	0.08	1.6

**Resource Estimate current as of 20 September 2021*
*** Resource Estimate current as of 17 March 2022*

	JORC Reserve Category	Silica sand (Mt)	Silica sand (Mm^3)	Cut-off SiO_2 (%)	SiO_2 %	Fe_2O_3 %	TiO_2 %	LOI %	Al_2O_3 %	Density (t/m^3)
Galalar Silica Sand Project	Probable Ore Reserve***	32.5	20.3	98.5	99.20	0.08	0.11	0.16	0.13	1.6

****Reserve Estimate current as of 9 November 2021*

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Competent Person's Statement

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Statement in accordance with the Australasian code for reporting of exploration results, mineral resources and ore reserves (the JORC code)

Exploration Results and Exploration Targets

The information in this presentation that relates to Exploration Results and Exploration Targets from the Galalar Silica Sand 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 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' (**JORC Code**). Mr Mackenzie-Forbes consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Consent is not required if the two matters set out in the dot points above are confirmed by the company.

Mineral Resources

The information in this presentation that relates to Mineral Resources at the Galalar Silica Sand Project is based on information, geostatistical analysis and modelling carried out by Mr Chris Ainslie, Project Engineer – Mining & Quarrying. Mr Ainslie is an employee of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy. Mr Ainslie worked under the supervision of Mr Carl Morandy, Mining Engineer who is Managing Director of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy and Mr Brice Mutton, Senior Geologist who is an Associate of Ausrocks Pty Ltd and is a Fellow of the Australasian Institute of Mining & Metallurgy and a Fellow of The Australian Institute of Geoscientists.

Mr 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 JORC Code. Mr Mutton consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Ore Reserves

The information in this presentation that relates to Ore Reserves at the Galalar Silica Sand Project is based on information reviewed or work undertaken by Mr Carl Morandy, Mining Engineer & Managing Director. Mr Morandy is the Managing Director of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy. Mr Morandy has relied on the Company for marketing, environmental, economic, social and government permitting.

Mr Morandy has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the preparation of mining studies to qualify as a Competent Person as defined in the JORC Code. Mr Morandy consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.