



ASX ANNOUNCEMENT

QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 March 2019

30 April 2019

Quarterly Highlights

Galalar Silica Project, Qld

- Bulk sampling testing (350kgs) at specialist China laboratory confirms project's ability to produce premium silica product with low iron characteristics using standard industry processing techniques. Testing confirms final product suitable for high-tech applications, such as solar panels and optical glass.
- Galalar Silica Resource upgraded by 22% to 26.4 million tonnes (Mt) (inferred resource) > 99% silicon dioxide (SiO₂); analysis suggests resource capable of being further upgraded to 'Indicated' status
- Numerous regional exploration targets identified and regional exploration commenced within the existing tenement area, with maiden Exploration Target of between 210 million – 2.1 billion tonnes (Bt) of silica; with potential for major new heavy mineral sands discovery.

Cyclone Zircon Project, WA

- Specialist corporate advisers Blackbird Partners appointed to assist Company in sale, joint venture or farm-in negotiations for Cyclone following release of positive definitive feasibility study (DFS).

Tick Hill Gold Project, Qld

- Binding heads of agreement signed for Tick Hill's sale to Berkut Minerals Ltd; sale completed in late April, with DRX shareholders gaining significant shareholding in Berkut and exposure to WA/Qld gold assets.

Corporate

- Diatreme and lead manager Hartleys undertake successful fund raising, targeting a \$1.5m raise (before costs) via placement to sophisticated and professional investors and existing shareholders. Funds raised to advance Galalar project, including further resource drilling, bulk testing and permitting approvals.



Projects Update

GALALAR SILICA PROJECT, QLD

Bulk sampling results

Results were received during the quarter (refer ASX announcement 9 January 2019) from testing undertaken in December 2018 by Bengbu Design & Research Institute for Glass Industry Co., Ltd in Bengbu City, Anhui Province, China (Chinese state-owned glass laboratory). The sample sent to the lab consisted of 350kg of untreated raw drilling samples extracted from 19 drill holes across the project area.

The Bengbu testing results confirm the project's ability to produce a premium-grade product suitable for high-tech applications, such as solar panels and optical glass, potentially capable of attracting premium prices. Notably, the testing showed the project is capable of meeting the exacting specifications of high-end manufacturers/processors, including grain size being within a 30-120 mesh size range (125-600 micron) and iron (Fe_2O_3) content below 100ppm (parts per million).

This low iron level is in high demand by manufacturers with limited available producers of significant volumes and gives the end product glass the high levels of transparency required for production of high efficiency photovoltaic panels, ultra-clear glass, electrical and electronic grade silicon micro powder and other products.

Excellent recovery rates were obtained for the final product of approximately 79% from raw sand feed. The test results also showed the potential to obtain secondary, high-value heavy mineral sands (HMS) by product streams during mining, adding to the project's value.

Located around 200km north of Cairns, the Galalar project lies within the same sand dune system and in close proximity to the world's largest operating silica mine at Cape Flattery.

The project is also located in close proximity to fast-growing Asian markets, with the global silica sand market seen reaching nearly US\$10 billion in annual revenues by 2022, with a compound annual average growth rate of 7.2% (source: IMARC Group).



Regional Exploration

In March 2019 (refer ASX announcement 25 March 2019), Diatreme completed an initial helicopter regional sampling program of all the target sand dunes. Sampling was completed using a sand auger to vertically drill test a nominal 1m sample interval below the identifiable topsoil layer. A 1m sample was deemed sufficient for a first pass program.

Generally, at least 2 samples were collected at most sample locations, at least 100m apart to determine potential variation in the sand dune. Bagged samples have been dispatched to independent laboratory ALS in Townsville for detailed analysis.

Table 1: Silica Sand Targets

	Priority	Description	Surface Area	Ave Dune Height (m)	Resource Target Range (Mt)	
Elim Road North	High	North of Elim Road, very large forest covered dune system along western edge of the dune field.	6,000m x 3,000m	40	100	1,000
Elim Road South	High	South of Elim Road, northern continuation of Nob Point Dune System	4,000m x 800m	20	10	100
Other Regional Targets						
Casuarina Hill	High	Immediately south of CFSM working pit and closest to Port facilities.	1,200m x 800m	30	5	50
Casuarina West Dune	Med	Long Sand dune south of CFSM mine workings	2,000m x 250m	20	2	20



Big Bertha	Med	Longitudinal and exposed dune system about 10km NW of Elim Beach. Large exposed dune	1,200m x 600m	20	2.5	25
Silica 01	Med	Large Area of exposed sand dunes clustered together. Iron stained sand in colour.	6,000M x 1,000m	30	30	300
Silica 02	Med	Large Sand Dune system	8,000m x 1,250m	30	50	500
Gubbins Range	Med	Large Parabolic dune with associated elongate parabolic dunes. Intersects Gubbins Range basement Rocks south of Mclvor River	6,000m x 200m	20	4	40
Wraight West		Dune system immediately west of ML 7069 Mt Wraight which is northern Satellite ML	1,000m x 800m	20	2.5	25
Gray Hill		Longitudinal dune running NW from Coloured Sands, with a large parabolic sand dune adjacent known as Grey Hill.	6,000m x 200m	20	4	40
					210	2,100

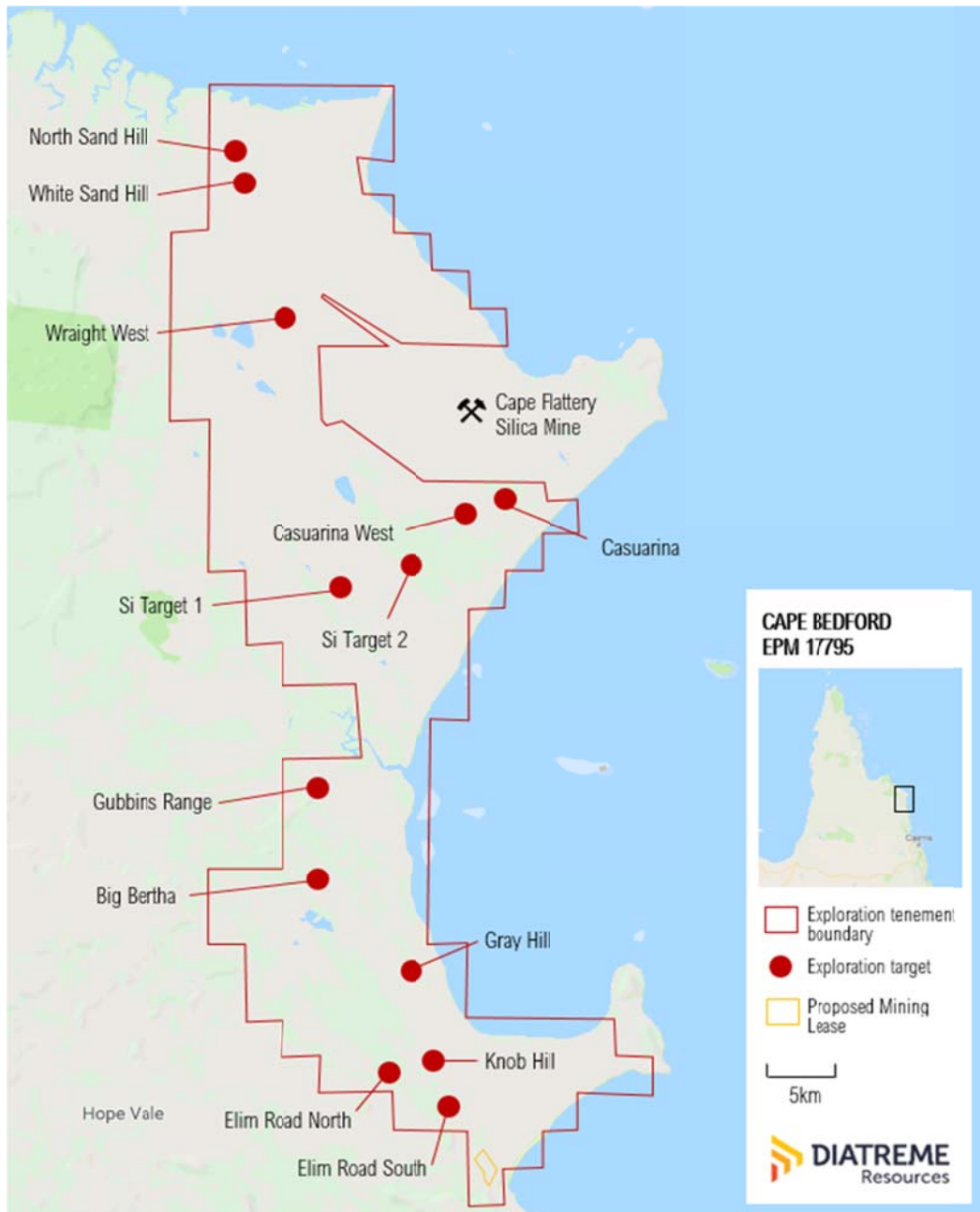


Figure 1: Silica Targets Map



Galalar Silica Resource Upgrade

Based on an independent assessment by Ausrocks Pty Ltd, the project's Inferred Mineral Resource estimate was upgraded to **26.4 Mt > 99% SiO₂, up 22%** on the maiden resource estimate of 21.6 Mt >99% SiO₂ (refer ASX announcement 7 March 2019).

The analysis also showed the potential for the resource to be further upgraded to 'Indicated' status, representing increased confidence in its quality, following further bulk density sampling.

The generated surfaces were used to estimate the volume of materials between surfaces and within the Resource boundary string as shown in Figure 2. Due to there being no density testing material with a similar silica content, particle size distribution, age and colour was used for the estimate. The total in situ resource was estimated as shown in Table 1.

Table 1: Estimated In-Situ Volumes of JORC Compliant Inferred Resource @>99%SiO₂

	Silica Sand (Mm3)	Resource Area (Mm2)	Average Thickness (m)	Density (t/m3)	Silica Sand (Mt)
Total	16.5	0.99	16.7	1.6	26.4

The updated Inferred Resource figure of 26.4 Mt > 99% SiO₂ represents an increase of 22% from the initial Inferred Resource Estimate of 21.6 Mt.

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.

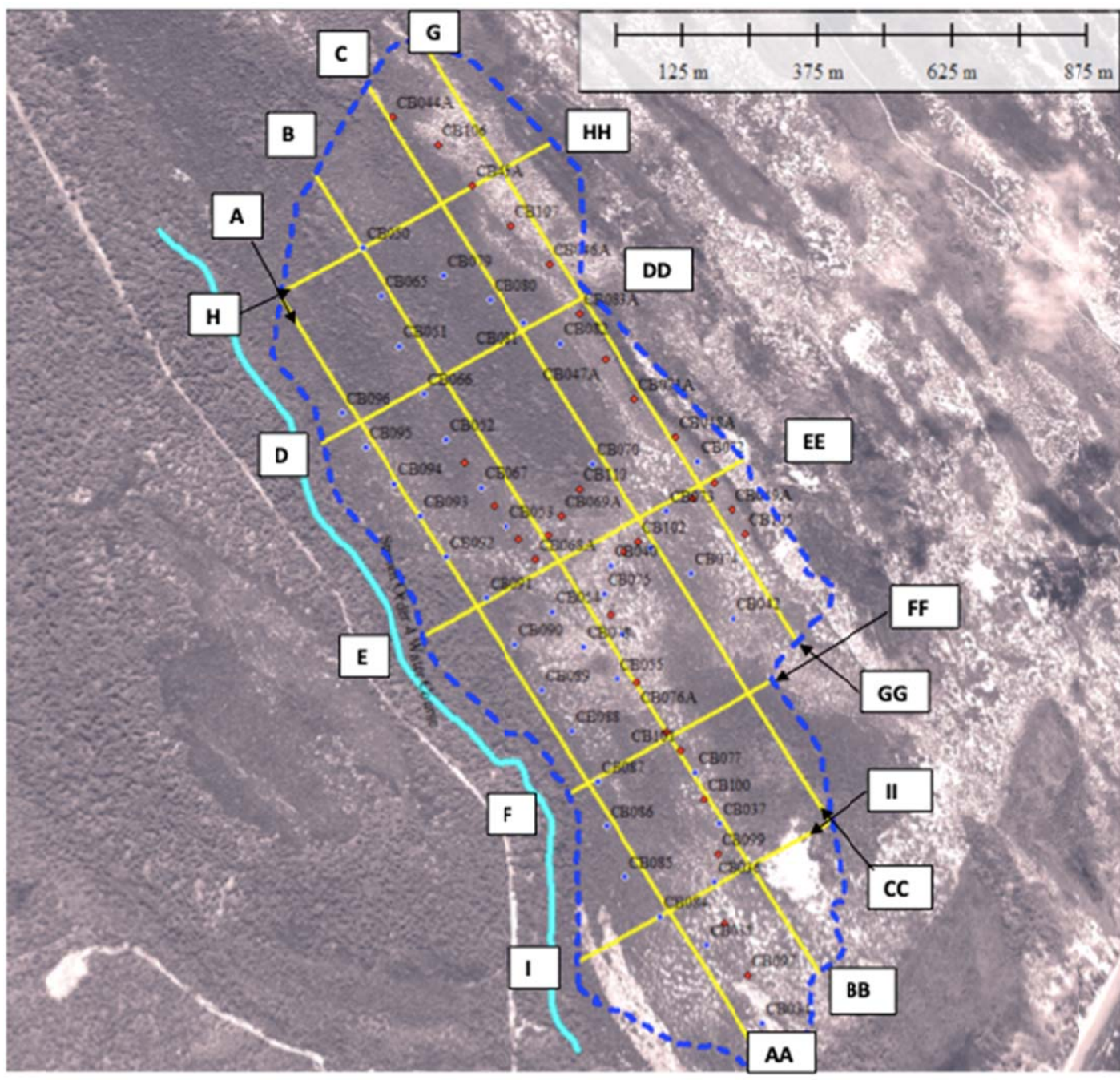


Figure 2: Galalar Silica Project, Inferred Resource Estimate Boundary, Drillholes and Cross-Sections



CYCLONE ZIRCON PROJECT, WA

Blackbird's Appointment

Following the release of a successful DFS (refer ASX announcement 15 November 2018), Diatreme commenced the process of engagement with potential development partners with the assistance of study authors China ENFI Engineering Corporation (ENFI) under the terms of the "Cooperation and Consulting Services" agreement signed with Diatreme (refer ASX announcement 11 January 2018), with a goal of securing major development partner(s) as soon as possible.

In addition to ENFI's assistance, Australia-based specialist corporate advisers Blackbird Partners were engaged in January (refer ASX announcement 23 January 2019) to provide independent specialist corporate and financial advisory services to Diatreme to facilitate and optimise commercial outcomes from the project's development and the work being undertaken by ENFI.

Blackbird is managing a structured, formal process to undertake and progress a detailed scope of work focused on assembling strategic third party interest for the funding and development of the Cyclone project.

This includes detailed assessment and evaluation of future offers for participation in the project via direct investment, joint venture or project sale including sourcing, structuring and pricing of potential debt or similar structured financial instrument to ensure the economic development model and returns are optimised for Diatreme shareholders.

Blackbird will also further assist Diatreme with relevant parties through to financial close.

TICK HILL GOLD PROJECT, QLD

On 12 March 2019, Diatreme announced an agreement with ASX-listed Berkut Minerals Limited (Berkut) concerning the sale of the Company's non-core Tick Hill Gold Project, a historic former gold mine near Mount Isa, Qld.

Under the legally binding, conditional Heads of Agreement (HOA) with Berkut, Diatreme agreed the sale of its three related mining tenements (ML7094, ML7096 and ML7097) and associated mining information to a Berkut nominee. Consideration for the sale was the issue of fully paid ordinary shares in BMT to the value of \$562,500 upon issue, with the shares subject to voluntary escrow for a 12-month period from their date of issue.



Post-quarter, Diatreme announced on 24 April 2019 the completion of Tick Hill's sale to Berkut following the early completion of the conditions precedent in the HOA. Following a successful company restructure by Berkut and various asset acquisitions, including Tick Hill, the value of the BMT shares as at settlement date (23 April) significantly increased, being valued at \$937,500 (\$0.13 per share), up \$375,000 since the HOA was signed.

BMT will also, as a condition of settlement and title transfer, replace existing tenement environmental bonds held by the regulatory authority (Queensland's Department of Natural Resources Mines and Energy) totalling \$336,844. These bonds are currently supported by cash equivalent security (\$336,844) deposited by Diatreme, which will be refunded to Diatreme on discharge.

CLERMONT COPPER PROJECT, QLD

Diatreme management and external consultants continue to review the Clermont Copper Project, particularly the Rosevale Porphyry Corridor, to determine its potential for further exploration or disposal.

CORPORATE


Diatreme supported by lead manager Hartleys completed a successful bookbuild, targeting a raise of \$1.5 million before costs via a placement of approximately 136 million fully paid ordinary shares at an issue price of 1.1 cents (refer ASX announcement 27 March 2019).

Post quarter actual funds received to date totaled \$1,380,733 with a further \$330,000 due for collection and additional placement (refer ASX release dated 4th April 2019).

The placement was well supported by new sophisticated and professional investors and existing shareholders.

The funds raised from the placement will be used to advance the Galalar project, including:

- Further resource drilling focussed on major resource extension targets Elim Road North/South;
- Bulk testing and product definition - delivery of larger bulk samples to potential off-takers;
- Advancement of permitting and development approvals (mining lease, environmental and other approvals);
- Advancement of project economic studies; and
- Working capital.



The new shares were issued on the same terms and rank equally in all respects with the existing fully paid ordinary shares in the Company. The allotment of the placement (except for Director's participation) is not subject to shareholder approval and falls within the Company's 15% placement capacity under ASX LR 7.1.

COMPANY OUTLOOK – JUNE QUARTER 2019

Diatreme's operational focus and key tasks for the June quarter 2019 comprises the following:

- **Galalar Silica Project**
 - Further advance permitting and approvals planning and implementation process to "fast track" the project development process
 - Undertake initial detailed commercial scoping studies
 - Look to secure early, stage appropriate silica offtake arrangements with suitable parties sufficient to underpin a commercial development case.
- **Cyclone Zircon Project**
 - Review and examine various development, sale or joint venture options through discussions and negotiations with relevant parties through to commercial closure after a detailed assessment to determine the best commercial outcome for the company by end of second quarter 2019.
 - **Note:** Diatreme is currently engaged with a range of interested parties including several large Chinese State owned Groups , several large specialist mining focussed private equity funds and a number of significant ASX listed Heavy Minerals focussed (Australian based) mining companies who are currently undertaking project due diligence.

CASH POSITION

The Company's cash position at 31 March 2019 (Appendix 5B) was \$63k*.

Note: * In April 2019 the Company received funds (before costs) totalling \$1,380,733 from a Placement program (refer ASX announcement 4 April 2019). The Company also anticipates receiving during May 2019, the following additional cash:

- \$330,000 from the Additional Placement (refer also to ASX announcement 4 April 2019), and
- \$336,844 from Tick Hill security deposit refund.

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MINERAL SANDS AND SILICA - COMPETENT PERSON STATEMENTS

The information in this report that relates to Mineral Resources at the Cape Bedford Project is based on information compiled by John Siemon from Ausrocks Pty Ltd who has significant experience in Industrial Minerals and Quarry Resource assessments. John Siemon 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). John Siemon consents to the inclusion in the report on the matters based on their information in the form and context in which it appears.

The information in this report that relates to Exploration Results 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.

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APPENDIX 1

Appendix 1 provides information required under ASX listing rule 5.3.3 for mineral exploration entities.

Mining tenements held at the end of the quarter and their location

State	Tenement	Tenement	Location	Interes	Holder	Comment
WA	Cyclone	M69/141	Eucla Basin	100%	LSPL	Granted
WA	Cyclone Extended	R69/1	Eucla Basin	100%	DRX	Granted
QLD	Clermont	EPM17968	Clermont	100%	CHAL	Granted
QLD	Cape Bedford	EPM17795	Hopevale	100%	DRX	Granted
QLD	Tick Hill	ML7094	Duchess	100%	DRX	Granted
QLD	Tick Hill	ML7096	Duchess	100%	DRX	Granted
QLD	Tick Hill	ML7097	Duchess	100%	DRX	Granted

Mining tenements acquired and disposed of during the quarter and their location

State	Tenement	Tenement	Location	Interes	Holder	Comment
-	-	-	-	-	-	-

Beneficial percentage interests held in farm-in or farm-out agreements at end of the quarter

State	Project Name	Agreement Type	Parties	Interest held at end of	Comments
WA	Cyclone Zircon Project	Farm-out Heads of Agreement	LSPL and Perpetual Mining Holding Limited	94%	HoA announced Jan 2014, initial 6% farm-out completed 18 Sept 2014
QLD	Tick Hill Gold Project	Farm-out and Joint Venture Agreement	DRX and Superior Resources Limited	100%	Proposed JV announced Aug 2011, formal Agreement announced Jun 2013, Joint Venture commenced Jan 2015, Jun 2018 sale to Carnaby subject to successful IPO. Superseded by Mar 2019 announcement - Heads of Agreement executed with Berkut Minerals Ltd for sale of Tick Hill



Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter

State	Project Name	Agreement Type	Parties	Interest held at end of	Comments
-	-	-	-	-	-

Abbreviations:

M	Western Australia	Mining Lease	DRX - Diatreme Resources Limited
R	Western Australia	Retention Licence	CHAL – Chalcophile Resources Pty Ltd
EPM	Queensland	Exploration Permit for Minerals	LSPL – Lost Sands Pty Ltd
ML	Queensland	Mining Lease	