



# DIATREME RESOURCES LIMITED

ABN: 33 061 267 061

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ASX : DRX

22 May 2014

## ADDENDUM TO 2013 ANNUAL REPORT

Diatreme Resources Limited (ASX: DRX) (“Diatreme” or “the Company”) provides the following addendum to the 31 December 2013 Annual Report in accordance with ASX Listing Rules 5.21.

### ORE RESERVES AND MINERAL RESOURCES STATEMENT

#### Diatreme HM Ore Reserves at 31 December 2013

Project	Ore Reserve Category	Ore Tonnes Millions	In-situ HM Tonnes Millions	HM Grade (%)	HM Assemblage				
					Zircon Grade (%)	Leuco Grade (%)	HiTi Grade (%)	Alt Ilm Grade (%)	Si TiOx Grade (%)
Cyclone	Probable	97	2.4	2.5	32	10	21	10	23

#### Notes:

1. Cyclone Project is located in the Eucla Basin, Western Australia
2. Competent Person - Ore Reserves, P McMurtrie (MAusIMM)
3. Ore Reserves are a sub-set of Mineral Resources.
4. Mineral assemblage is reported as a percentage of in situ heavy mineral (HM) content.
5. Leuco (Leucoxene) comprises Ti-oxides >85% TiO<sub>2</sub>.
6. HiTi comprises Ti-oxides 70 - 85% TiO<sub>2</sub>.
7. Alt Ilm (Altered Ilmenite) comprises Ti-oxides <70% TiO<sub>2</sub>.
8. Si TiOx (Siliceous Ti-oxide) comprises Ti-oxides with >10% silica rich Ti minerals.

Ore Reserves and Mineral Resources are estimated using all available geological and relevant drill hole and assay data, including mineralogical sampling and analysis and test work on mineral recoveries and final product qualities. Reserve estimates are determined by the consideration of all of the “modifying factors” in accordance with the JORC Code, and for example, may include but are not limited to, product prices, mining costs, metallurgical recoveries, environmental consideration, access and approvals. Resource estimates are determined by consideration of geology, HM cut-off grades, mineralisation thickness vs. overburden ratios and consideration of the potential mining and extraction methodology.

The information in relation to the Cyclone Ore Reserve was first prepared and disclosed under the JORC Code 2004. It has not been updated since to comply with the 2012 JORC Code on the basis that the information has not materially changed since it was last reported.

The information in relation to the Mineral Resource for the Cyclone has been separately reported in an announcement to the Australian Securities Exchange (ASX) on 9 January 2014 “Cyclone Zircon Project Mineral Resource Update” which complies with the guidelines of the 2012 JORC Code.

The information in this report relating to Mineral Resources and Ore Reserves is based on information compiled by Competent Persons (as defined in the JORC Code). Each of the Competent Persons has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity they were undertaking to qualify as a Competent Person as defined by the JORC Code. Mr McMurtrie is a director of Tisana Pty Ltd and a consultant to Diatreme Resources and Mr Reudavey is a full-time employee of Diatreme Resources Limited. Mr McMurtrie and Mr Reudavey consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.



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All of the Mineral Resource and Ore Reserve figures reported represent estimates at 31 December 2013. All tonnes and grade information has been rounded, hence small differences may be present in the totals. All of the Mineral Resource information is inclusive of Ore Reserves (i.e. Mineral Resources are not additional to Ore Reserves).

## Diatreme HM Ore Reserves comparison 2012 to 2013

Project	Ore Reserve Category	2012	2012	2012	2013	2013	2013	In-situ HM Tonnes Millions Change
		Ore Tonnes Millions	HM Grade (%)	In-situ HM Tonnes Millions	Ore Tonnes Millions	HM Grade (%)	In-situ HM Tonnes Millions	
Cyclone	Probable	97	2.5	2.4	97	2.5	2.4	0

The annual review of Ore Reserves concluded that it was not appropriate to report any adjustment to the Cyclone Ore Reserve until more detailed mining and metallurgical parameters were defined as part of the ongoing Cyclone Zircon Project Development Program (CZPDP).

## Diatreme HM Mineral Resources at 31 December 2013

Project	Mineral Resource Category	Material Tonnes Millions	In-situ HM Tonnes Millions	HM Grade (%)	HM Assemblage				
					Zircon Grade (%)	Leuco Grade (%)	HiTi Grade (%)	Alt Ilm Grade (%)	Si TiOx Grade (%)
Cyclone	Measured	118	2.69	2.3	31	10	22	10	22
	Indicated	19	0.29	1.5	26	6	33	5	19
<b>Cyclone</b>	<b>Total</b>	<b>137</b>	<b>2.97</b>	<b>2.2</b>	<b>31</b>	<b>10</b>	<b>23</b>	<b>10</b>	<b>22</b>
Zephyr	Inferred	106	1.54	1.5	9	58	-	32	-
<b>Eucla Basin</b>	<b>Grand Total</b>	<b>243</b>	<b>4.51</b>	<b>1.9</b>					

1. Cyclone and Zephyr Projects are located in the Eucla Basin, Western Australia
2. Competent Person - Mineral Resources, I Reudavey (MAIG)
3. Mineral Resources are inclusive of Ore Reserves.
4. Rounding may generate differences in last decimal place.
5. Mineral assemblage is reported as a percentage of in situ heavy mineral content.
6. Leuco (Leucosene) comprises Ti-oxides >85% TiO<sub>2</sub> at Cyclone and leucosene (by graincount) at Zephyr
7. HiTi comprises Ti-oxides 70 - 85% TiO<sub>2</sub>.
8. Alt Ilm (Altered Ilmenite) comprises Ti-oxides <70% TiO<sub>2</sub> at Cyclone and "pseudorutile" (by graincount) at Zephyr
9. Si TiOx (Siliceous Ti-oxide) comprises Ti-oxides with >10% silica rich Ti minerals.

The information in relation to the Zephyr Mineral Resource was first prepared and disclosed under the JORC Code 2004. It has not been updated since to comply with the 2012 JORC Code on the basis that the information has not materially changed since it was last reported.



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### Diatreme HM Mineral Resource comparison 2012 to 2013

Project	Mineral Resource Category	2012 Material Tonnes Millions	2012 HM Grade (%)	2012 In-situ HM Tonnes Millions	2013 Material Tonnes Millions	2013 HM Grade (%)	2013 In-situ HM Tonnes Millions	In-situ HM Tonnes Millions Change
Cyclone	Measured	107	2.4	2.63	118	2.3	2.69	0.06
	Indicated	29	1.6	0.47	19	1.5	0.29	(0.18)
<b>Cyclone</b>	<b>Total</b>	<b>136</b>	<b>2.3</b>	<b>3.10</b>	<b>137</b>	<b>2.2</b>	<b>2.97</b>	<b>(0.13)</b>
<b>Zephyr</b>	<b>Inferred</b>	<b>106</b>	<b>1.5</b>	<b>1.54</b>	<b>106</b>	<b>1.5</b>	<b>1.54</b>	<b>0</b>
<b>Eucla Basin</b>	<b>Grand Total</b>	<b>242</b>	<b>1.9</b>	<b>4.64</b>	<b>243</b>	<b>1.9</b>	<b>4.51</b>	<b>(0.13)</b>

The annual review of Mineral Resources resulted in an updated resource estimate for the Cyclone Project, as disclosed in the ASX release on 9 January 2014 "Cyclone Zircon Project Mineral Resource Update". This update resulted in a slight decrease in reported HM grade, with a subsequent reduction in contained HM from 3.1 Mt to 3.0 Mt for the Cyclone resource. A review of the Zephyr mineral resource concluded that in the absence of any new drill data, and pending the outcomes from the CZPDP, no adjustment to the Zephyr resource estimate was necessary.

### Mineral Resource and Ore Reserve Governance

Mineral Resource and Ore Reserves are estimated by suitably qualified Diatreme personnel in accordance with the requirements of the JORC Code, using industry standard techniques and internal guidelines for the estimation and reporting of Ore Reserves and Mineral Resources.

All Mineral Resource and Ore Reserve estimates and supporting documentation are reviewed by a Competent Person employed by Diatreme Resources.

All Ore Reserve estimates are prepared in conjunction with pre-feasibility studies which consider all material factors.

The Ore Reserves and Mineral Resources Statement included in the Annual Report is reviewed by suitably qualified internal Competent Person prior to its inclusion.