ASX ANNOUNCEMENT

11 August 2021

Drilling boosts confidence in Galalar resource

- **Mineral resource drilling at Diatreme's flagship Galalar Silica Project totals 94 drill holes for over 1,262 meters using low impact air core, vacuum rigs and hand auger.**
- **Drilling has intersected between 5m-35m depths of silica sand, indicating dune extension of approx. 1km to the northwest from the existing Galalar resource with the Galalar Mining Lease (MLA100235) boundary.**
- **Drilling results within the Galalar Mining Lease will be utilised to improve resource and reserve confidence for inclusion in the PFS. Resource extension drilling will be included in updated resource models prior to DFS.**
- **Improved definition of low iron occurrences within the resource area delivers improved confidence on the initial five years of conceptual mine plan.**
- **Results boost confidence in Project life and delivery of a premium-quality silica sand product for the expanding Asian solar PV market.**

Emerging silica sands developer and explorer, Diatreme Resources Limited (ASX:DRX) has boosted confidence in its silica sand resource at its flagship Galalar Silica Project in North Queensland, following recent resource and exploration drilling.

Conducted in June/July 2021 and using a combination of Diatreme's owned air core drill rig (16 holes for 177m), hand augers (14 holes for 49m) and an external contractor's (Yearlong Contractors) vacuum-based drill rig (64 holes, 1,036m) the programs were designed to provide further resource definition in the following areas:

Programs

1) **June 2021 – DRX Air Core Drilling and Hand Augers**

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In June, Diatreme followed up on resource definition along the eastern extensions of the Galalar resource (Galalar East) infilling the drill spacing to improve resource confidence for the pre-feasibility studies (PFS). This drill data will also contribute to estimation of mine reserves and deliver confidence in the five-year mine plan, focussed on areas of low iron (<500 ppm Fe2O3).

Sixteen air-core holes were completed using Diatreme's drilling rig for a total of 177m drilled, with an additional 14 hand auger holes undertaken for 49m. Hand augering was utilised within interdune areas to limit any disturbance. All holes were limited to 5m depth to ensure sample integrity.

Diatreme will further update the market on the receipt of silica testing results expected over the coming weeks.

2) July 2021 - Vacuum Drill Rig

In July 2021, a tractor-mounted vacuum rig sourced from Yearlong Contractors became available and was "trialled" on the Galalar grid to determine suitability as a low impact "off-track" access capabilities. This avoids development of access roads and disturbance of low level areas of vegetation. A total of 64 vacuum holes were drilled for a total of 1,036.5m within and extending the Galalar resource.

Drilling commenced at the southern end of the Galalar resource area and extended to the mining lease boundary.

Two air-core holes at Galalar (CB108 & CB113) previously twinned by hand auger, were redrilled with the vacuum rig. This provides data to ensure correlatability between the different drilling equipment.

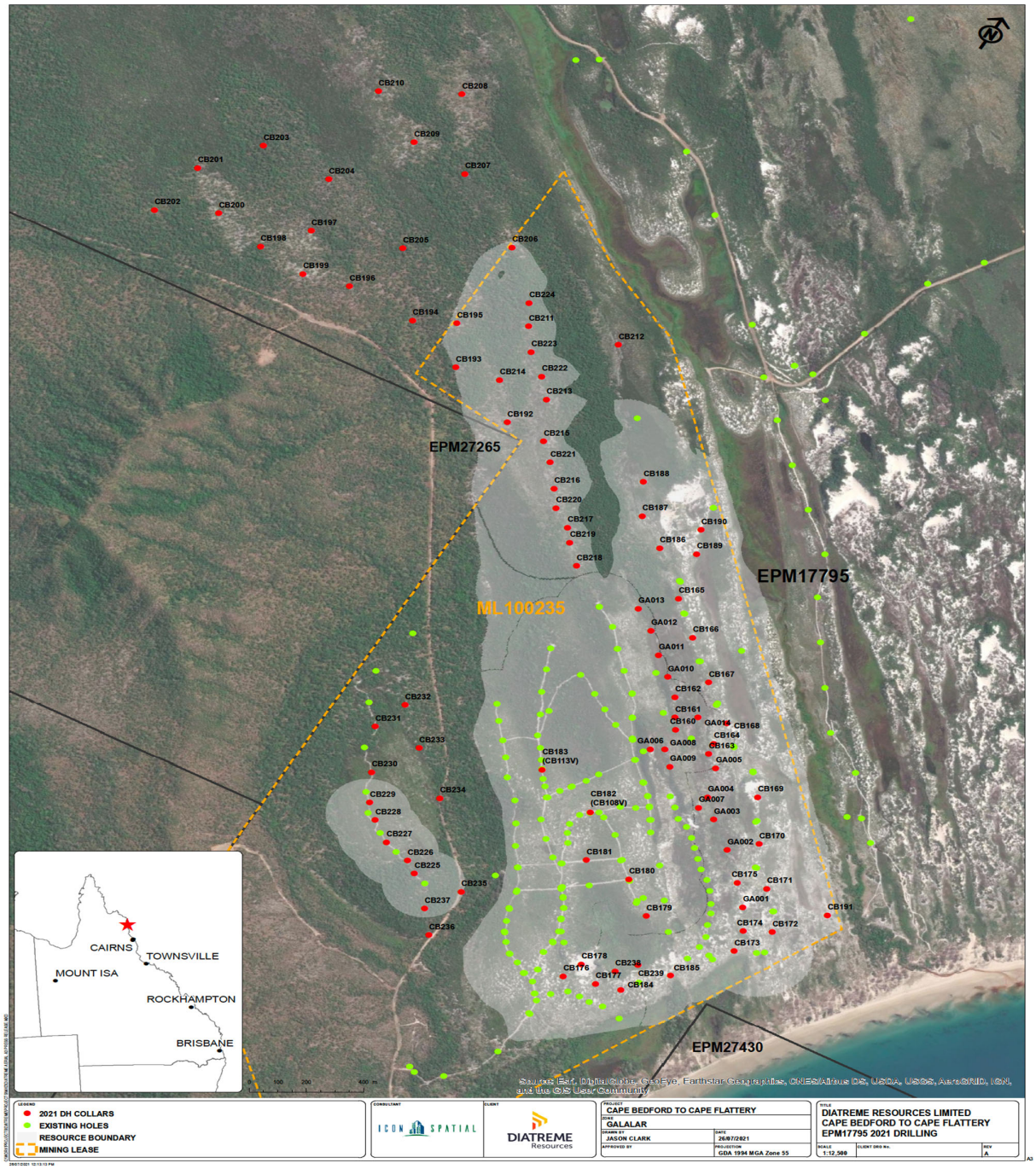
The "off-track" trial delivered non-destructive approaches in open dune heath as an alternate to developing cleared accesses for drilling with the Diatreme air-core rig. This approach aligns with evolving low impact exploration methodologies which are being pioneered by Diatreme in the area.

The vacuum rig was then relocated to Galalar North, which is the northern area of the Mining Lease. This program successfully infilled drill hole spacing and tests the full depth of the dune system, which to date was only tested with shallow hand auger holes. Assay results will be reported in later this Quarter.

Galalar Extended is located immediately to the northwest of the Mining Lease and represents the extension of the Galalar sand dune system identified in the 2019 regional exploration program. The vacuum rig was used to establish a first pass drill program to test this area for a continuation of high purity (low iron) silica sand. Drilling to basement encountered sand between 5m -35m depth and approximately 1km to the NW of the Mining Lease. All data has been submitted to laboratories and assay results are expected by late August.

The vacuum rig was then relocated back to Galalar West to increase the DH density and spread to improve the resource confidence of this dune system for future mine planning. Whilst identifying extensions the isolated dune system, assay results will be utilised to determine how this area is ranked in the initial mine reserve and scheduling.

Figure 1 – Drilling Program June/July DH Collars (Red)



Diatreme continues to advance the Galalar project, having recently lodged an Infrastructure Mining Lease Application (MLA 100285) for a Nob Point export solution, aimed at minimising community and environmental impacts as well as reducing transport costs (refer ASX release 10 June 2021).

The Company is advancing a definitive feasibility study for Galalar, targeting completion in the fourth quarter of 2021. Mining Lease and final environmental approvals are being targeted for the first quarter 2022, with Diatreme aiming for first production in late 2022.

Diatreme's CEO, Neil McIntyre commented: *"The drilling showed very positive results, with preliminary indications that the sand quality was exceptional with potential for further significant resource extensions. We look forward to further updating the market over the coming weeks as final testing results feed into our resource models and mine planning work.*

"This will further highlight Galalar's ability to produce a low iron, premium quality silica sand product, perfect for the needs of Asia's fast-growing solar PV and specialty glass market."

This announcement was authorised for release by:

Neil McIntyre
Chief Executive Officer

Greg Starr
Chairman

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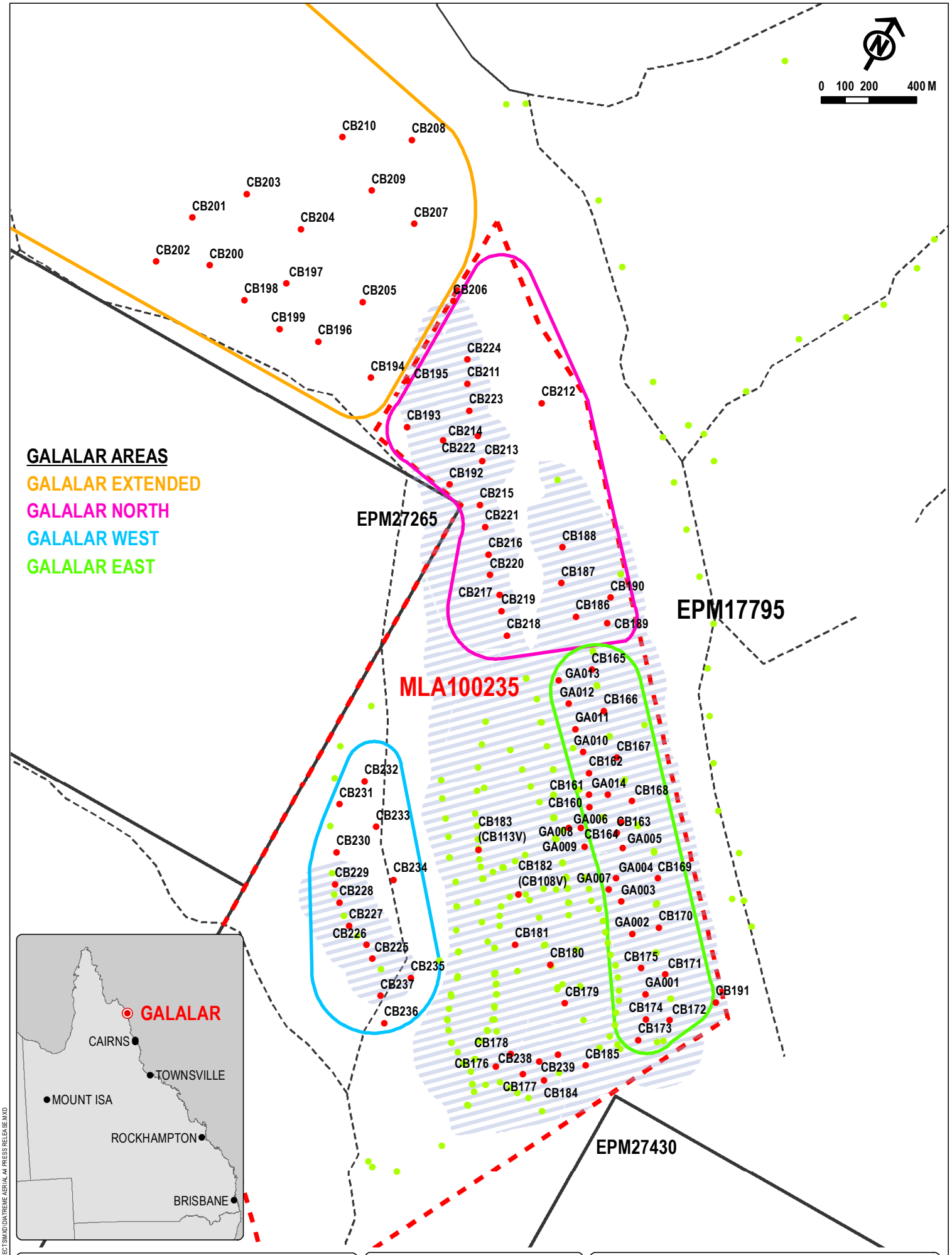
About Diatreme Resources

Diatreme Resources (ASX:DRX) is an emerging Australian producer of mineral and silica sands based in Brisbane. Our key projects comprise the Galalar Silica Project in Far North Queensland, located next to the world's biggest silica sand mine, together with the Cyclone Zircon Project in Western Australia's Eucla Basin, considered one of a handful of major zircon-rich discoveries of the past decade.

For more information, please visit www.diatreme.com.au

Annexure 1 - Drill Hole Details



LEGEND

- 2021 DH COLLARS
- EXISTING HOLES
- RESOURCE BOUNDARY
- MINING LEASE
- MINOR ROAD
- TRACK

PROJECT	CAPE BEDFORD TO CAPE FLATTERY
ZONE	GALALAR
DRAWN BY	JASON CLARK
DATE	10/08/2021
APPROVED BY	
PROJECTION	GDA 1994 MGA Zone 55

TITLE

DIATREME RESOURCES LIMITED
CAPE BEDFORD TO CAPE FLATTERY
EPM17795 2021 DRILLING

DIATREME Resources

SCALE	CLIENT DRG No.	REV
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Table 1: June July 2021 Drilling Collar Details

	Hole ID	Easting	Northing	RL	TD	Project Area
1	CB160	315113	8307087	22	12	Galalar East
2	CB161	315084	8307132	21	12	Galalar East
3	CB162	315039	8307210	26	18	Galalar East
4	CB163	315267	8307051	23	12	Galalar East
5	CB164	315260	8307100	21	12	Galalar East
6	CB165	314832	8307593	24	15	Galalar East
7	CB166	314961	8307469	19	9	Galalar East
8	CB167	315108	8307326	19	9	Galalar East
9	CB168	315255	8307199	21	12	Galalar East
10	CB169	315511	8306973	14	6	Galalar East
11	CB170	315618	8306795	13	9	Galalar East
12	CB171	315741	8306637	10	9	Galalar East
13	CB172	315853	8306480	9	6	Galalar East
14	CB173	315779	8306341	8	6	Galalar East
15	CB174	315763	8306434	18	15	Galalar East
16	GA001	315709	8306525	15	5	Galalar East
17	CB175	315639	8306609	25	15	Galalar East
18	GA002	315535	8306716	12	2	Galalar East
19	GA003	315427	8306810	12	1.8	Galalar East
20	GA004	315358	8306884	14	1.6	Galalar East
21	GA005	315319	8307009	17	5	Galalar East
22	GA006	315080	8306967	66	5	Galalar East
23	GA007	315355	8306828	42	5	Galalar East
24	GA008	315124	8306992	59	5	Galalar East
25	GA009	315177	8306935	55	5	Galalar East
26	GA010	314972	8307275	15	1.5	Galalar East
27	GA011	314896	8307342	14	1	Galalar East
28	GA012	314819	8307422	14	2	Galalar East
29	GA013	314732	8307485	17	4	Galalar East
30	GA014	315153	8307172	18	5	Galalar East
31	CB176	315317	8305945	39	29.5	Galalar South
32	CB177	315431	8305973	19	7.5	Galalar South
33	CB178	315345	8306023	22	8.5	Galalar South

	Hole ID	Easting	Northing	RL	TD	Project Area
34	CB179	315436	8306321	36	10	Galalar South
35	CB180	315301	8306432	45	17	Galalar South
36	CB181	315130	8306429	29	8	Galalar South
37	CB182	315037	8306621	48	29.5	Galalar South
38	CB183	314797	8306699	35	18	Galalar South
39	CB184	315522	8305995	26	20	Galalar South
40	CB185	315641	8306137	13	7.5	Galalar South
41	CB186	314663	8307753	20	6.5	Galalar North
42	CB187	314539	8307846	33	19	Galalar North
43	CB188	314467	8307978	51	36	Galalar North
44	CB189	314789	8307796	16	4	Galalar North
45	CB190	314748	8307896	15	4	Galalar North
46	CB191	315983	8306642	9	3	Galalar East
47	CB192	313923	8307969	29	9.5	Galalar North
48	CB193	313646	8308089	35	7	Galalar North
49	CB194	313411	9308193	36	3	Galalar Extended
50	CB195	313551	8308259	42	11.5	Galalar North
51	CB196	313145	8308213	53	5	Galalar Extended
52	CB197	312905	8308359	64	16	Galalar Extended
53	CB198	312787	8308210	69	39	Galalar Extended
54	CB199	312976	8308179	63	22	Galalar Extended
55	CB200	312587	8308264	72	11	Galalar Extended
56	CB201	312423	8308401	65	19	Galalar Extended
57	CB202	312384	8308164	72	26	Galalar Extended
58	CB203	312572	8308602	60	19	Galalar Extended
59	CB204	312844	8308587	56	13	Galalar Extended
60	CB205	313222	8308452	49	24	Galalar Extended
61	CB206	313551	8308647	41	24.5	Galalar North
62	CB207	313245	8308845	36	14	Galalar Extended
63	CB208	313060	8309146	37	8	Galalar Extended
64	CB209	313021	8308878	48	8.5	Galalar Extended
65	CB210	312801	8309011	62	9	Galalar Extended
66	CB211	313775	8308374	52	26	Galalar North
67	CB212	314088	8308460	43	29	Galalar North
68	CB213	313992	8308124	47	30	Galalar North
69	CB214	313807	8308117	28	10	Galalar North
70	CB215	314076	8307959	45	30	Galalar North

	Hole ID	Easting	Northing	RL	TD	Project Area
71	CB216	314212	8307797	42	19	Galalar North
72	CB217	314338	8307671	37	20	Galalar North
73	CB218	314450	8307540	35	18	Galalar North
74	CB219	314378	8307618	37	21	Galalar North
75	CB220	314261	8307725	41	15	Galalar North
76	CB221	314142	8307890	43	25	Galalar North
77	CB222	313926	8308205	44	20	Galalar North
78	CB223	313840	8308280	47	20	Galalar North
79	CB224	313725	8308463	47	20	Galalar North
80	CB225	314638	8306079	33	20.5	Galalar West
81	CB226	314589	8306116	36	10.5	Galalar West
82	CB227	314485	8306149	42	14	Galalar West
83	CB228	314401	8306215	47	18.5	Galalar West
84	CB229	314346	8306272	50	20	Galalar West
85	CB230	314285	8306391	56	21	Galalar West
86	CB231	314195	8306573	53	21	Galalar West
87	CB232	314238	8306708	45	30	Galalar West
88	CB233	314376	8306567	42	25.5	Galalar West
89	CB234	314549	8306411	25	11	Galalar West
90	CB235	314821	8306090	18	7.5	Galalar West
91	CB236	314819	8305868	10	1	Galalar West
92	CB237	314747	8305962	22	10	Galalar West
93	CB238	315463	8306055	20	3	Galalar South
94	CB239	315519	8306120	19	3	Galalar South
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COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Results and Exploration targets from the Galalar Silica 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.