

DR2005045

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## Data Repository Items

**Table DRA: Data on brecciated beds in the PZ1 and PZ2 sections**

A- alternating laminae of aragonite and detritus. G- alternating laminae of gypsum and detritus. D- detritus bed. D-G- detritus bed overlain by a G-bed. Age assignments are for PZ1. Matching of brecciated beds in the two sections is tentative.

PZ1						PZ2				
Age, (ka)*	No	Height of top (cm)	Lithology		Thick- ness (cm)	No	Height of top (cm)	Lithology		Thick- ness (cm)
			Above	Below				Above	Below	
						<b>34</b>	3701	A	A	3
						<b>33</b>	3686	A	A	3
						<b>32</b>	3663	A	A	6
						<b>31</b>	3557	A	A	3
15.9	<b>29</b>	3762	G	A	12	<b>30</b>	3507	D	A	18
18.0	<b>28</b>	3612	A	A	5	<b>29</b>	3483	D	A	6
						<b>28</b>	3468	D	A	5
18.2	<b>27</b>	3594	A	A	7	<b>27</b>	3442	G	A	5
20.2	<b>26</b>	3455	A	A	12	<b>26</b>	3359	A	A	9
21.3	<b>25</b>	3374	A	A	2	<b>25</b>	3344	A	A	10
21.4	<b>24</b>	3369	A	A	15	<b>24</b>	3297	A	A	3
21.7	<b>23</b>	3347	A	A	7	<b>23</b>	3276	A	A	6
23.7	<b>22</b>	3204	A	A	15	<b>22</b>	3223	A	A	3
25.1	<b>21</b>	3105	A	A	10	<b>21</b>	3020	A	A	3
27.8	<b>20</b>	2909	G	A	15	<b>20</b>	3008	D	A	2
33.3	<b>19</b>	2515	D	A	20	<b>19</b>	2979	D	A	4
38.6	<b>18</b>	2142	A	A	6	<b>18</b>	2899	A	A	4
38.9	<b>17</b>	2114	G	D	16	<b>17</b>	2689	D	A	31
						<b>16</b>	2627	A	A	3
39.5	<b>16</b>	2073	D-G	A	27	<b>15</b>	2588	D	A	33
41.3	<b>15</b>	1943	D-G	A	37	<b>14</b>	2499	D-G	A	45
43.2	<b>14</b>	1810	A	D	10					
43.6	<b>13</b>	1781	A	G	8					
49.1	<b>12</b>	1745	G	A	16	<b>13</b>	2255	D-G	A	7
50.0	<b>11</b>	1602	G	A	12	<b>12</b>	2115	A	A	5
50.3	<b>10</b>	1564	G	A	17	<b>11</b>	1726	D	A	5
51.7	<b>9</b>	1339	G	A	3	<b>10</b>	1627	D	A	10
51.8	<b>8</b>	1320	A	A	3	<b>9</b>	1354	A	A	13
52.0	<b>7</b>	1294	A	D	15	<b>8</b>	1321	A	A	16
52.2	<b>6</b>	1260	G	A	14	<b>7</b>	1147	D	A	19
52.4	<b>5</b>	1220	G	A	48	<b>6</b>	1089	D	A	14
53.1	<b>4</b>	1115	G	G	20	<b>5</b>	1052	D	A	3
						<b>4</b>	1018	A	D	6
53.4	<b>3</b>	1074	D-G	G	10	<b>3</b>	955	D	D	20
53.5	<b>2</b>	1060	G	G	50	<b>2</b>	896	D	A	30
59.3	<b>1</b>	134	A	A	9	<b>1</b>	405	A	A	5

\*The age (T, ka) of the top of the brecciated beds was estimated according to their height (H, m) above the bottom of the PZ1 section according to the following regressions (Haase-Schrammet al., 2004):  $T=68.5-1.4H$  for  $0.8<H<17.7$  and  $T=60.2-0.63H$  for  $17.7<H<38.5$ .

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Table DRB

TABLE DRB. LITHOLOGY OF BEDS BELOW AND ABOVE  
THE 34 BRECCIATED BEDS IN THE PZ2 SECTION

	Lithology		Total
	Gypsum* or detritus	Aragonite†	
<u>Position of beds relative to brecciated beds</u>			
Above	17 <sup>§</sup> (9.5)	17 (24.5)	34
Below	2 <sup>#</sup> (9.5)	32 (24.5)	34
Total	19	49	68

*Note:* Numbers in parentheses are expected values if there is no connection between lithology and position relative to the brecciated beds. Probability of random occurrence:  $p = .0002$  (Yates correction applied to the  $\chi^2$  test).

\* Alternating laminae of gypsum and detritus.

† Alternating laminae of aragonite and silt.

§ 1 gypsum bed.

#2 detritus beds.

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## Table DRC

TABLE DRC. LITHOLOGY OF BEDS BELOW AND ABOVE  
THE 29 BRECCIATED BEDS IN THE PZ1 SECTION

	Lithology		Total
	Gypsum* or detritus	Aragonite†	
<u>Position of beds relative to brecciated beds</u>			
Above	15 <sup>§</sup> (11)	14 (18)	29
Below	7 <sup>#</sup> (9.5)	22 (18)	29
Total	22	36	58

*Note:* Numbers in parentheses are expected values if there is no connection between lithology and position relative to the brecciated beds. Probability of random occurrence:  $p = .058$  (Yates correction applied to the  $\chi^2$  test).

\* Alternating laminae of gypsum and detritus.

† Alternating laminae of aragonite and silt.

§ 4 detritus beds, of which 3 are overlain by alternating laminae of gypsum and detritus.

#3 detritus beds.

Figure DRD

**Figure DRD.** Logistic function, showing that thicker brecciated beds in the PZ2 section have a higher probability to be overlain by detritus beds (BD couplets, triangles) and beds of laminated gypsum and detritus (BGD couplets, circles), rather than by beds of laminated aragonite and detritus (diamonds). Digits above symbols denote number of beds with identical thickness. Full line is for both BGD couplets (brecciated beds overlain by beds of laminated gypsum and detritus) and BD couplets (brecciated beds overlain by beds of detritus).  $p = 0.03$ , where  $p$  denotes the p-value obtained in testing the null hypothesis that the layering is random. Since  $p \leq 0.05$  we reject the null hypothesis that the layering pattern is not related to the thickness of the brecciated beds.

