

TABLE DR1. MAGNETOSTRATIGRAPHIC SAMPLE SITE DATA

| Site    | Stratigraphic position (m) | Sample position <sup>†</sup> | Bedding (strike azimuth / dip direction) |
|---------|----------------------------|------------------------------|--|
| 03Qo1   | 265.5                      | 568942E, 3682256N            | 261 / 15 NW                              |
| 03Qo2   | 258.0                      | 568961E, 3682251N            | 241 / 16 NW                              |
| 03Qo3   | 252.0                      | 568973E, 3682249N            | 267 / 13 NW                              |
| 03Qo5   | 226.0                      | 569139E, 3682193N            | 207 / 22 NW                              |
| 03Qo6   | 212.3                      | 569232E, 3682120N            | 247 / 19 NW                              |
| 03Qo7   | 185.0                      | 569230E, 3682040N            | 265 / 21 NW                              |
| 03Qo9   | 161.7                      | 569156E, 3681973N            | 263 / 22 NW                              |
| 03Qo8   | 142.6                      | 569158E, 3681951N            | 260 / 23 NW                              |
| 03Qo15  | 114.5                      | 569133E, 3681913N            | 271 / 22 NW                              |
| 03Qo14  | 75.7                       | 569139E, 3681838N            | 271 / 22 NW                              |
| 03Qo10  | 46.5                       | 569063E, 3681606N            | 230 / 22 NW                              |
| 03QTb11 | 34.5                       | 568977E, 3681508N            | 240 / 19 NW                              |
| 03QTb12 | 25.0                       | 569009E, 3681480N            | 261 / 28 NW                              |
| 03QTb13 | 5.7                        | 568966E, 3681445N            | 262 / 32 NW                              |

<sup>†</sup>(UTM zone 11N, NAD83)

TABLE DR2. SITE MEANS OF SECOND-REMOVED MAGNETIZATION COMPONENTS

| Sites                   | N <sub>1</sub> | N <sub>2</sub> | In situ directions |              |               |               | Tilt-corrected directions |              |               |               | Interpreted polarity |
|-------------------------|----------------|----------------|--------------------|--------------|---------------|---------------|---------------------------|--------------|---------------|---------------|----------------------|
|                         |                |                | Dec.<br>(°)        | Inc.<br>(°)  | k             | $\alpha_{95}$ | Dec.<br>(°)               | Inc.<br>(°)  | k             | $\alpha_{95}$ |                      |
| <b>03Qo1</b>            | <b>6</b>       | <b>6</b>       | <b>3.3</b>         | <b>62.2</b>  | <b>71.82</b>  | <b>8.0</b>    | <b>359.4</b>              | <b>47.5</b>  | <b>71.82</b>  | <b>8.0</b>    | <b>normal</b>        |
| <b>03Qo2</b>            | <b>11</b>      | <b>4</b>       | <b>357.0</b>       | <b>49.1</b>  | <b>22.86</b>  | <b>19.6</b>   | <b>351.3</b>              | <b>34.3</b>  | <b>22.86</b>  | <b>19.6</b>   | <b>normal</b>        |
| <b>03Qo3</b>            | <b>11</b>      | <b>11</b>      | <b>342.1</b>       | <b>51.2</b>  | <b>178.91</b> | <b>3.4</b>    | <b>345.1</b>              | <b>38.6</b>  | <b>178.91</b> | <b>3.4</b>    | <b>normal</b>        |
| <b>03Qo5</b>            | <b>12</b>      | <b>2</b>       | <b>174.5</b>       | <b>-62.4</b> | <b>23.79</b>  | <b>53.7</b>   | <b>151.8</b>              | <b>-46.7</b> | <b>23.79</b>  | <b>53.7</b>   | <b>reversed</b>      |
| 03Qo6                   | 4              | 2              | 287.7              | -81.9        | 5.89          | 139.7         | 181.4                     | -75.0        | 5.89          | 139.7         | reversed             |
| 03Qo7                   | 9              | 1              | 14.2               | 57.5         | n/a           | n/a           | 7.8                       | 37.3         | n/a           | n/a           | reversed             |
| <b>03Qo9</b>            | <b>5</b>       | <b>4</b>       | <b>12.8</b>        | <b>50.0</b>  | <b>171.02</b> | <b>7.0</b>    | <b>7.4</b>                | <b>28.9</b>  | <b>171.02</b> | <b>7.0</b>    | <b>normal</b>        |
| <b>03Qo8</b>            | <b>4</b>       | <b>4</b>       | <b>12.2</b>        | <b>47.0</b>  | <b>127.05</b> | <b>8.2</b>    | <b>6.6</b>                | <b>25.2</b>  | <b>127.05</b> | <b>8.2</b>    | <b>normal</b>        |
| <b>03Qo15</b>           | <b>5</b>       | <b>4</b>       | <b>0.7</b>         | <b>57.4</b>  | <b>13.07</b>  | <b>26.4</b>   | <b>0.8</b>                | <b>35.4</b>  | <b>13.07</b>  | <b>26.4</b>   | <b>normal</b>        |
| 03Qo14                  | 6              | 3              | 17.6               | 70.6         | 10.11         | 41.0          | 9.3                       | 49.1         | 10.11         | 41.0          | normal               |
| 03Qo10                  | 4              | 4              | 279.6              | 49.1         | 8.34          | 33.8          | 290.3                     | 30.9         | 8.34          | 33.8          | normal               |
| 03Qo11                  | 4              | 1              | 268.3              | -10.0        | n/a           | n/a           | 262.0                     | -11.8        | n/a           | n/a           | reversed             |
| <b>03QTb12</b>          | <b>5</b>       | <b>3</b>       | <b>237.4</b>       | <b>-71.9</b> | <b>14.75</b>  | <b>33.3</b>   | <b>198.1</b>              | <b>-51.3</b> | <b>14.75</b>  | <b>33.3</b>   | <b>reversed</b>      |
| 03QTb13                 | 6              | 4              | 60.9               | 49.6         | 2.42          | 76.8          | 39.8                      | 46.3         | 2.42          | 76.8          | reversed             |
| Study mean <sup>†</sup> | 26             | 25             | 359.9              | 56.0         | 71            | 11.0          | 358.7                     | 38.1         | 57.10         | 12.3          | normal               |

Note: N<sub>1</sub>—number of demagnetized specimens; N<sub>2</sub>—number of specimens included in statistical analysis.

<sup>†</sup>Study mean is for sites with k > 10,  $\alpha_{95}$  < 15; sites that meet these criteria are in bold type.

Dec.—declination; Inc.—inclination.