


|  | | Well Name: Pintail SWD 0780 2-16D API: 05-057-06566 Formation: Dakota/Lakota | | | COGCC Note: Sandridge says full water analysis of every swab run performed by NALCO. | | | | | | Average from 2/26/2018 9:36 on down = 3172 mg/L |
|--|-----------|--|----------------------|------------------------|---|--------------------------|-----------------------------|-----------------|----------|--------------|--|
| Matrix | Sample ID | Customer | Geographic Region | Geographic Location | System Description | Equipment Description | Sample Point Location | Collection Date | Comments | pH @ 25°C | Dissolved Solids (calculated) |
| EWA | AK28046 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/25/2018 16:21 | | 5.85 | 3.78 |
| EWA | AK28042 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/25/2018 16:30 | | 7.43 | 2645.58831 |
| EWA | AK28043 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/25/2018 16:42 | | 7.15 | 3.78 |
| EWA | AK28044 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/25/2018 16:45 | | 7.12 | 4.41 |
| EWA | AK28045 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/25/2018 16:50 | | 6.32 | 4.41 |
| EWA | AK28047 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 6:30 | | 5.97 | 3.78 |
| EWA | AK28048 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 6:50 | | 6.13 | 3.78 |
| EWA | AK28049 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 7:09 | | 5.76 | 3.78 |
| EWA | AK28050 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 7:30 | | 5.84 | 3.78 |
| EWA | AK28051 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 7:54 | | 5.13 | 3.78 |
| EWA | AK28052 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 8:15 | | 5.28 | 3.78 |
| EWA | AK28053 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 8:29 | | 5.18 | 3.78 |
| EWA | AK28054 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 8:49 | | 5.32 | 3.78 |
| EWA | AK28055 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 9:00 | | 5.56 | 3.78 |
| EWA | AK28056 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 9:18 | | 5.91 | 3.15 |
| EWA | AK28097 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 9:39 | | 7.87 | 3200.4 |
| EWA | AK28100 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 10:17 | | 7.59 | 3143.7 |
| EWA | AK28102 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 10:32 | | 7.95 | 3131.1 |
| EWA | AK28104 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 10:54 | | 7.66 | 3320.1 |
| EWA | AK28105 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 11:10 | | 7.87 | 3244.5 |
| EWA | AK28106 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 11:30 | | 7.34 | 3225.6 |
| EWA | AK28107 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 11:50 | | 7.4 | 3181.5 |
| EWA | AK28108 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 12:30 | | 7.53 | 3175.2 |
| EWA | AK28061 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 13:30 | | 7.4 | 3200.4 |
| EWA | AK28062 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 13:32 | | 7.24 | 3225.6 |
| EWA | AK28063 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 13:50 | | 7.64 | 3150 |
| EWA | AK28068 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 14:00 | | 7.67 | 3105.9 |
| EWA | AK28069 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 14:15 | | 6.67 | 3099.6 |
| EWA | AK28070 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 14:34 | | 6.73 | 3049.2 |
| EWA | AK28071 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 14:58 | | 6.86 | 3093.3 |
| EWA | AK28075 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 15:21 | | 7.26 | 3074.4 |

Sandridge Energy: Pintail SWD 0780 2-16D (API: 057-06566)

| Matrix | Sample ID | Customer | Geographic Region | Geographic Location | System Description | Equipment Description | Sample Point Location | Collection Date | Comments | pH @ 25°C | Dissolved Solids (calculated) |
|--------|-----------|----------------------------|-------------------|---------------------|--------------------|-----------------------|-----------------------|-----------------|----------|-----------|-------------------------------|
| EWA | AK28076 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 15:56 | | 7.26 | 3036.6 |
| EWA | AK28080 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 16:16 | | 7.13 | 3024 |
| EWA | AK28081 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 16:40 | | 7.38 | 3030.3 |
| EWA | AK28083 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/26/2018 17:10 | | 7.61 | 3017.7 |
| EWA | AK28086 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 6:43 | | 7.3 | 3061.8 |
| EWA | AK28088 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 7:00 | | 7.3 | 3036.6 |
| EWA | AK28089 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 7:15 | | 7.35 | 3036.6 |
| EWA | AK28090 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 7:35 | | 6.81 | 3049.2 |
| EWA | AK28091 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 7:50 | | 6.79 | 3049.2 |
| EWA | AK28092 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 8:05 | | 6.79 | 2954.7 |
| EWA | AK28093 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 8:25 | | 6.69 | 3181.5 |
| EWA | AK28094 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 8:50 | | 6.5 | 3200.4 |
| EWA | AK28095 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 9:10 | | 6.13 | 3225.6 |
| EWA | AK28096 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 9:25 | | 6.47 | 3213 |
| EWA | AK28098 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 9:45 | | 6.79 | 3257.1 |
| EWA | AK28099 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 10:00 | | 6.76 | 3219.3 |
| EWA | AK28101 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 10:18 | | 7.1 | 3231.9 |
| EWA | AK28103 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 10:35 | | 7.11 | 3206.7 |
| EWA | AK28057 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 13:04 | | 7.86 | 3332.7 |
| EWA | AK28058 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 13:20 | | 7.77 | 3313.8 |
| EWA | AK28059 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 13:30 | | 7.76 | 3294.9 |
| EWA | AK28060 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 13:50 | | 7.82 | 3276 |
| EWA | AK28064 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 14:07 | | 7.79 | 3269.7 |
| EWA | AK28065 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 14:22 | | 7.98 | 3263.4 |
| EWA | AK28066 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 14:40 | | 7.72 | 3219.3 |
| EWA | AK28072 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 15:05 | | 7.79 | 3238.2 |
| EWA | AK28073 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 15:21 | | 7.93 | 3238.2 |
| EWA | AK28074 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 15:40 | | 7.85 | 3219.3 |
| EWA | AK28077 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 16:05 | | 7.85 | 3200.4 |
| EWA | AK28078 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 16:25 | | 8.02 | 3225.6 |
| EWA | AK28079 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 16:45 | | 7.82 | 3200.4 |
| EWA | AK28082 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/27/2018 17:10 | | 7.72 | 3200.4 |
| EWA | AK28084 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/28/2018 6:45 | | 7.73 | 3194.1 |
| EWA | AK28085 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/28/2018 6:58 | | 7.91 | 3219.3 |
| EWA | AK28087 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/28/2018 7:15 | | 7.58 | 3219.3 |
| EWA | AK28067 | Sandridge Energy (1505453) | North Park | Pintail | Production System | 0780 2-16D SWD | Wellhead | 2/28/2018 14:47 | | 8.53 | 3181.5 |
| | | | | | | | | | | | 3172.29 |

| Collection Date | Bicarbonate (CaCO3) | Total Alkalinity (CaCO3) | Conductivity (@ 25°C) | Bromide (Br) | Chloride (Cl) | Fluoride (F) | Nitrate (NO3) | Ortho Phosphate (PO4) | Sulfate (SO4) | Aluminum (Al) | Antimony (Sb) | Barium (Ba) | Boron (B) | Calcium (Ca) | Calcium (CaCO3) |
|-----------------|---------------------|--------------------------|-----------------------|--------------|---------------|--------------|---------------|-----------------------|---------------|---------------|---------------|-------------|-----------|--------------|-----------------|
| 2/25/2018 16:21 | 2167.257 | 2167.257 | 6.43 | 4.2956 | 1330.6026 | 4.6583 | 0.7061 | 0.6746 | 83.3176 | 0.456 | 4.251 | 1.025 | 3.299 | 103.8 | 259.1886 |
| 2/25/2018 16:30 | 2122.783688 | 2122.783688 | 6.18 | 3.8469 | 924.2226 | 4.9558 | 0.7405 | 0.5737 | 77.3583 | -0.666 | 4.065 | 0.362 | 3.454 | 56.37 | 140.7559 |
| 2/25/2018 16:42 | 2488.803563 | 2488.803563 | 6.3 | 3.3669 | 833.5318 | 5.5759 | 0.6926 | 0.6282 | 81.6055 | 0.363 | 4.15 | 1.117 | 3.405 | 117.1 | 292.3987 |
| 2/25/2018 16:45 | 1771.967063 | 1771.967063 | 6.61 | 5.2092 | 1536.4977 | 4.7211 | 0.6574 | 0.6793 | 78.2581 | -0.311 | 3.47 | 0.775 | 3.287 | 55.5 | 138.5835 |
| 2/25/2018 16:50 | 1740.84825 | 1740.84825 | 6.71 | 4.9811 | 1583.8013 | 4.0952 | 0.5238 | 0.6642 | 84.9163 | -0.07 | 3.796 | 0.537 | 3.56 | 62.95 | 157.1862 |
| 2/26/2018 6:30 | 2524.343063 | 2524.343063 | 6.26 | 3.4389 | 836.0254 | 5.605 | 0.5345 | 0.6424 | 78.8775 | -0.149 | 3.54 | 0.606 | 3.263 | 109.4 | 273.1718 |
| 2/26/2018 6:50 | 2545.11975 | 2545.11975 | 6.24 | 3.4617 | 842.2824 | 5.5191 | 0.5215 | 0.6365 | 78.2045 | -0.31 | 3.635 | 0.824 | 3.23 | 109.1 | 272.4227 |
| 2/26/2018 7:09 | 2539.997625 | 2539.997625 | 6.25 | 3.3566 | 870.3963 | 5.3508 | 0.6811 | 0.6469 | 89.3322 | -0.081 | 3.562 | 1.021 | 3.3 | 112 | 279.664 |
| 2/26/2018 7:30 | 2550.269063 | 2550.269063 | 6.25 | 3.3692 | 870.9433 | 5.1467 | 0.6718 | 0.6488 | 88.9305 | 0.269 | 4.277 | 0.873 | 3.831 | 109.6 | 273.6712 |
| 2/26/2018 7:54 | 2576.695313 | 2576.695313 | 6.1 | 3.1455 | 807.1114 | 5.3221 | 0.5058 | 0.6423 | 86.2884 | 0.342 | 3.715 | 1.017 | 3.315 | 95.44 | 238.3137 |
| 2/26/2018 8:15 | 2755.039875 | 2755.039875 | 5.87 | 2.657 | 674.8579 | 5.5645 | 0.5183 | 0 | 83.6076 | -0.302 | 4.496 | 0.721 | 3.186 | 70.52 | 176.0884 |
| 2/26/2018 8:29 | 2757.639 | 2757.639 | 5.71 | 2.4988 | 630.8785 | 5.6966 | 0.5131 | 0.621 | 81.2602 | 0.536 | 3.116 | 0.831 | 3.318 | 56.51 | 141.1055 |
| 2/26/2018 8:49 | 2755.436813 | 2755.436813 | 5.72 | 2.4751 | 626.6777 | 5.8503 | 0.5107 | 0.6191 | 81.0105 | -0.067 | 3.967 | 0.715 | 3.125 | 55.12 | 137.6346 |
| 2/26/2018 9:00 | 2954.965875 | 2954.965875 | 5.59 | 2.3226 | 563.446 | 5.8491 | 0.5173 | 0.6232 | 78.8836 | 2.646 | 3.715 | 3.376 | 3.214 | 76.55 | 191.1454 |
| 2/26/2018 9:18 | 2907.311625 | 2907.311625 | 5.49 | 2.1539 | 495.804 | 5.8788 | 0.5097 | 0.6126 | 73.2874 | 0.186 | 3.918 | 0.691 | 3.122 | 34.76 | 86.7957 |
| 2/26/2018 9:39 | 2447.4906 | 2447.4906 | 5080 | 5.1437 | 448.6352 | 5.8875 | 3.8009 | 1.772 | 71.3917 | -0.021 | 3.299 | 0.648 | 3.198 | 31.96 | 79.8041 |
| 2/26/2018 10:17 | 2504.3688 | 2504.3688 | 4990 | 4.9954 | 385.5219 | 6.0015 | 3.5024 | 0 | 66.2489 | 0.037 | 4.564 | 1.153 | 3.028 | 29.73 | 74.2358 |
| 2/26/2018 10:32 | 2474.5824 | 2474.5824 | 4970 | 4.9223 | 363.4172 | 6.1522 | 3.3987 | 0 | 64.9038 | -0.035 | 4.485 | 0.446 | 2.808 | 26.96 | 67.3191 |
| 2/26/2018 10:54 | 2236.1616 | 2236.1616 | 5270 | 5.5988 | 617.0071 | 5.7529 | 3.5856 | 0 | 76.1696 | -0.318 | 4.432 | 1.247 | 3.531 | 42.37 | 105.7979 |
| 2/26/2018 11:10 | 2374.9416 | 2374.9416 | 5150 | 5.2711 | 486.8766 | 5.8162 | 3.568 | 0 | 72.1632 | -0.193 | 3.332 | 1.001 | 3.258 | 33.02 | 82.4509 |
| 2/26/2018 11:30 | 2386.206 | 2386.206 | 5120 | 5.1624 | 457.7309 | 5.8329 | 3.5273 | 0 | 77.7255 | -0.117 | 4.221 | 0.967 | 3.208 | 30.48 | 76.1086 |
| 2/26/2018 11:50 | 2465.2458 | 2465.2458 | 5050 | 5.0518 | 409.0011 | 5.8343 | 3.6331 | 0 | 74.4811 | -0.413 | 3.934 | 0.861 | 3.233 | 31.17 | 77.8315 |
| 2/26/2018 12:30 | 2457.5778 | 2457.5778 | 5040 | 4.9649 | 380.4329 | 5.8347 | 3.6033 | 0 | 73.5983 | -0.433 | 3.534 | 0.748 | 3.266 | 31.62 | 78.9551 |
| 2/26/2018 13:30 | 2566.7064 | 2566.7064 | 5080 | 4.9339 | 371.4222 | 5.8547 | 3.5849 | 1.6998 | 74.0019 | -0.411 | 4.248 | 0.874 | 3.234 | 41.77 | 104.2997 |
| 2/26/2018 13:32 | 2547.5526 | 2547.5526 | 5120 | 4.8418 | 329.3253 | 5.842 | 3.4812 | 1.6992 | 70.2605 | -0.23 | 4.589 | 0.796 | 3.201 | 32.9 | 82.1513 |
| 2/26/2018 13:50 | 2502.92885 | 2502.92885 | 5000 | 4.8209 | 323.0609 | 6.0235 | 3.5441 | 1.7289 | 71.3499 | -0.046 | 4.454 | 0.976 | 3.295 | 41.81 | 104.3996 |
| 2/26/2018 14:00 | 2580.24255 | 2580.24255 | 4930 | 4.7878 | 318.6151 | 5.9703 | 3.5291 | 1.7173 | 70.6033 | 0.242 | 4.247 | 0.908 | 3.123 | 31.6 | 78.9052 |
| 2/26/2018 14:15 | 2595.99305 | 2595.99305 | 4920 | 4.7845 | 313.1968 | 6.065 | 3.4093 | 1.7018 | 72.3777 | 0.078 | 3.936 | 0.688 | 3.152 | 30.31 | 75.6841 |
| 2/26/2018 14:34 | 2565.4022 | 2565.4022 | 4840 | 4.686 | 279.4818 | 6.1379 | 3.397 | 1.7001 | 73.0842 | -0.095 | 3.573 | 0.714 | 3.91 | 34.48 | 86.0966 |
| 2/26/2018 14:58 | 2624.09325 | 2624.09325 | 4910 | 4.7604 | 304.6227 | 5.9328 | 3.4659 | 1.7346 | 73.7296 | 0.012 | 3.914 | 0.891 | 3.258 | 38.96 | 97.2831 |
| 2/26/2018 15:21 | 2609.3401 | 2609.3401 | 4880 | 4.6359 | 255.4927 | 6.09 | 3.4935 | 1.7246 | 68.6211 | 0.029 | 3.896 | 0.911 | 3.136 | 32.81 | 81.9266 |

| Collection Date | Bicarbonate (CaCO3) | Total Alkalinity (CaCO3) | Conductivity (@ 25°C) | Bromide (Br) | Chloride (Cl) | Fluoride (F) | Nitrate (NO3) | Ortho Phosphate (PO4) | Sulfate (SO4) | Aluminum (Al) | Antimony (Sb) | Barium (Ba) | Boron (B) | Calcium (Ca) | Calcium (CaCO3) |
|-----------------|------------------------|--------------------------------|--------------------------|-----------------|------------------|-----------------|------------------|-----------------------------|------------------|------------------|------------------|----------------|--------------|-----------------|--------------------|
| 2/26/2018 15:56 | 2687.69475 | 2687.69475 | 4820 | 4.688 | 286.0276 | 5.8912 | 3.4474 | 1.7303 | 72.9399 | -0.215 | 4.658 | 0.52 | 3.328 | 18.31 | 45.7201 |
| 2/26/2018 16:16 | 2677.06725 | 2677.06725 | 4800 | 4.5705 | 233.8704 | 6.1403 | 3.5218 | 1.7184 | 65.8021 | 0.378 | 4.239 | 0.968 | 3.178 | 32.16 | 80.3035 |
| 2/26/2018 16:40 | 2702.9711 | 2702.9711 | 4810 | 4.5624 | 226.2755 | 6.3428 | 3.4474 | 1.7482 | 65.1099 | -0.218 | 3.73 | 1.026 | 3.01 | 29.54 | 73.7614 |
| 2/26/2018 17:10 | 2690.48515 | 2690.48515 | 4790 | 4.5699 | 226.1422 | 6.3619 | 3.4929 | 1.7297 | 65.3801 | 0.089 | 3.934 | 1.011 | 3.178 | 27.51 | 68.6925 |
| 2/27/2018 6:43 | 2749.50865 | 2749.50865 | 4860 | 4.5393 | 212.5604 | 6.3139 | 3.4489 | 1.7239 | 64.7184 | 0.117 | 3.625 | 1.096 | 3.015 | 41.78 | 104.3247 |
| 2/27/2018 7:00 | 2793.81715 | 2793.81715 | 4820 | 4.5395 | 209.5574 | 6.2189 | 3.5132 | 1.6713 | 64.7909 | -0.187 | 4.946 | 1.052 | 3.115 | 43.61 | 108.8942 |
| 2/27/2018 7:15 | 2721.1632 | 2721.1632 | 4820 | 4.5354 | 207.8557 | 6.1808 | 3.4512 | 1.6947 | 64.3534 | 0.037 | 4.456 | 1.079 | 2.845 | 43.6 | 108.8692 |
| 2/27/2018 7:35 | 2765.0902 | 2765.0902 | 4840 | 4.5184 | 203.9967 | 6.2092 | 3.3841 | 1.6818 | 65.5081 | -0.317 | 3.644 | 1.134 | 3.58 | 47.07 | 117.5338 |
| 2/27/2018 7:50 | 2774.9111 | 2774.9111 | 4840 | 4.5075 | 200.4512 | 6.225 | 3.3705 | 0 | 65.4785 | 0.137 | 3.332 | 1.056 | 3.079 | 39.32 | 98.182 |
| 2/27/2018 8:05 | 2766.63255 | 2766.63255 | 4690 | 4.5298 | 198.6192 | 6.2464 | 3.4017 | 0 | 64.1488 | 0.009 | 4.011 | 1.066 | 3.025 | 37.42 | 93.4377 |
| 2/27/2018 8:25 | 2777.84865 | 2777.84865 | 5050 | 4.4826 | 186.0442 | 6.1842 | 3.3442 | 0 | 63.046 | -0.391 | 4.621 | 1.135 | 3.11 | 34.17 | 85.3225 |
| 2/27/2018 8:50 | 2819.96625 | 2819.96625 | 5080 | 4.4687 | 184.8491 | 6.0584 | 3.3397 | 0 | 63.1783 | 0.006 | 4.555 | 1.065 | 3.161 | 31.1 | 77.6567 |
| 2/27/2018 9:10 | 2837.6188 | 2837.6188 | 5120 | 4.4669 | 179.835 | 6.3288 | 3.3375 | 1.6763 | 62.3621 | 0.155 | 3.762 | 1.078 | 2.975 | 33.22 | 82.9503 |
| 2/27/2018 9:25 | 2829.4329 | 2829.4329 | 5100 | 4.4546 | 177.152 | 6.3604 | 3.393 | 1.7087 | 62.3178 | -0.098 | 4.956 | 1.071 | 3.078 | 30.3 | 75.6591 |
| 2/27/2018 9:45 | 2843.1669 | 2843.1669 | 5170 | 4.4371 | 165.3115 | 6.3817 | 3.7775 | 1.6905 | 60.4167 | 0.133 | 4.247 | 0.959 | 3.073 | 29.04 | 72.5129 |
| 2/27/2018 10:00 | 2834.21255 | 2834.21255 | 5110 | 4.4164 | 156.0556 | 6.4472 | 3.6782 | 1.7336 | 58.66 | 0.114 | 4.115 | 1.167 | 3.002 | 29.9 | 74.6603 |
| 2/27/2018 10:18 | 2843.8645 | 2843.8645 | 5130 | 4.3945 | 144.8363 | 6.3992 | 3.3968 | 1.7308 | 57.2664 | 0.008 | 4 | 1.085 | 3.089 | 30.81 | 76.9326 |
| 2/27/2018 10:35 | 2821.47045 | 2821.47045 | 5090 | 4.4346 | 174.0862 | 6.5474 | 3.3681 | 1.8274 | 57.6404 | 0.292 | 3.654 | 1.089 | 3.543 | 29.2 | 72.9124 |
| 2/27/2018 13:04 | 2581.10775 | 2581.10775 | 5290 | 4.6661 | 286.7672 | 6.4748 | 3.3747 | 1.8646 | 65.2714 | -0.188 | 4.114 | 1.109 | 3.221 | 31.32 | 78.206 |
| 2/27/2018 13:20 | 2667.015 | 2667.015 | 5260 | 4.5885 | 236.4598 | 6.3295 | 3.4869 | 1.7562 | 65.4635 | 0.224 | 4.214 | 1.175 | 3.159 | 40.23 | 100.4543 |
| 2/27/2018 13:30 | 2661.4107 | 2661.4107 | 5230 | 4.5761 | 223.4112 | 6.2731 | 3.3123 | 1.7428 | 65.9777 | 0.132 | 4.645 | 1.126 | 3.013 | 34.23 | 85.4723 |
| 2/27/2018 13:50 | 2675.205 | 2675.205 | 5200 | 1.2299 | 211.3986 | 6.5484 | 3.3211 | 0.7796 | 67.6013 | 0.07 | 4.15 | 1.102 | 3.184 | 32.29 | 80.6281 |
| 2/27/2018 14:07 | 2676.4569 | 2676.4569 | 5190 | 1.2036 | 194.1948 | 6.3874 | 0.6891 | 0.4694 | 65.5234 | 0.185 | 4.696 | 1.097 | 3.096 | 30.97 | 77.3321 |
| 2/27/2018 14:22 | 2700.0792 | 2700.0792 | 5180 | 1.1885 | 186.4956 | 6.5918 | 0.6962 | 0.4407 | 65.9598 | 0.228 | 3.674 | 1.088 | 3.07 | 30.45 | 76.0337 |
| 2/27/2018 14:40 | 2723.9472 | 2723.9472 | 5110 | 1.1782 | 181.0148 | 6.58 | 0.6742 | 0.4816 | 65.6626 | -0.403 | 4.368 | 1.15 | 2.913 | 31.5 | 78.6555 |
| 2/27/2018 15:05 | 2718.71145 | 2718.71145 | 5140 | 1.1384 | 163.6905 | 5.9733 | 0.7078 | 0.4393 | 59.8811 | 0.266 | 4.276 | 1.085 | 3.111 | 31.33 | 78.231 |
| 2/27/2018 15:21 | 2712.9141 | 2712.9141 | 5140 | 1.1541 | 171.6577 | 6.5253 | 0.67 | 0.4608 | 65.2757 | 0.3 | 3.97 | 1.079 | 2.929 | 27.65 | 69.0421 |
| 2/27/2018 15:40 | 2706.71895 | 2706.71895 | 5110 | 1.1446 | 175.4449 | 6.5457 | 0.7005 | 0.4593 | 64.2639 | 0.354 | 4.024 | 1.094 | 3.542 | 29.13 | 72.7376 |
| 2/27/2018 16:05 | 2722.7304 | 2722.7304 | 5080 | 1.1214 | 154.1692 | 6.6973 | 0.681 | 0.4647 | 62.7004 | -0.003 | 3.898 | 1.189 | 3.176 | 27.42 | 68.4677 |
| 2/27/2018 16:25 | 2748.88575 | 2748.88575 | 5120 | 1.0805 | 140.2203 | 6.8721 | 0.6763 | 0.4765 | 60.8132 | 0.005 | 4.738 | 1.089 | 3.029 | 29.99 | 74.885 |
| 2/27/2018 16:45 | 2760.86655 | 2760.86655 | 5080 | 1.0634 | 128.9042 | 6.8122 | 0.6666 | 0.515 | 58.6498 | 0.239 | 4.191 | 1.018 | 2.977 | 29.28 | 73.1122 |
| 2/27/2018 17:10 | 2755.8765 | 2755.8765 | 5080 | 1.073 | 138.8934 | 6.7902 | 0.6724 | 0.5158 | 61.319 | 0.16 | 4.097 | 1.099 | 2.968 | 29.11 | 72.6877 |
| 2/28/2018 6:45 | 2692.3923 | 2692.3923 | 5070 | 1.0876 | 140.1741 | 6.6026 | 0.6636 | 0.3555 | 62.3063 | 0.029 | 3.892 | 1.03 | 2.961 | 29.95 | 74.7852 |
| 2/28/2018 6:58 | 2775.63195 | 2775.63195 | 5110 | 1.0982 | 144.4209 | 6.5432 | 0.6705 | 0.3987 | 64.1339 | -0.02 | 4.461 | 1.127 | 2.913 | 39.45 | 98.5067 |
| 2/28/2018 7:15 | 2791.33335 | 2791.33335 | 5110 | 1.0861 | 138.8166 | 6.7774 | 0.6881 | 0.4117 | 62.5521 | 0.472 | 4.255 | 1.187 | 3.052 | 38.67 | 96.559 |
| 2/28/2018 14:47 | 2701.0386 | 2701.0386 | 5050 | 1.0603 | 122.8171 | 6.8858 | 0.7126 | 0.47 | 61.0596 | 0.394 | 4.006 | 0.638 | 2.85 | 11.09 | 27.6917 |
| | | | | | | | | | | | | | | | |

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|------------------------|----------------------|--------------------|--------------------|------------------|------------------|---------------------|--------------------------|-----------------------|-----------------------|------------------------|--------------------|-----------------------|----------------------|----------------------|---------------------|-----------------------|
| | | | | | | | | | | | | | | | | |
| Collection Date | Chromium (Cr) | Cobalt (Co) | Copper (Cu) | Iron (Fe) | Lead (Pb) | Lithium (Li) | Magnesium (CaCO3) | Magnesium (Mg) | Manganese (Mn) | Molybdenum (Mo) | Nickel (Ni) | Phosphorus (P) | Potassium (K) | Silica (SiO2) | Silicon (Si) | Sodium (CaCO3) |
| 2/25/2018 16:21 | 0.646 | 0.198 | -7.036 | 28.13 | -3.261 | 4.743 | 30.5514 | 7.419 | 1.42 | 5.256 | 0.72 | 3.226 | 59.61 | 123.9123 | 57.93 | 3084.7 |
| 2/25/2018 16:30 | 0.654 | 0.113 | -6.798 | 12.49 | 0 | 4.743 | 18.9057 | 4.591 | 1.81 | 5.633 | 0.856 | 3.278 | 57.16 | 83.5493 | 39.06 | 2910.3 |
| 2/25/2018 16:42 | 0.606 | 0.224 | -7.194 | 7.26 | -2.158 | 4.648 | 21.4136 | 5.2 | 1.127 | 5.537 | 0.579 | 3.564 | 55.29 | 109.5596 | 51.22 | 2875.42 |
| 2/25/2018 16:45 | 0.691 | 0.26 | -7.367 | 19.1 | -2.675 | 4.789 | 22.5461 | 5.475 | 1.322 | 5.088 | 0.459 | 3.66 | 66.6 | 99.4849 | 46.51 | 3008.4 |
| 2/25/2018 16:50 | 0.759 | 0.221 | -6.629 | 17.65 | -2.206 | 4.836 | 28.0148 | 6.803 | 1.392 | 5.594 | 0.87 | 3.603 | 69.73 | 119.6771 | 55.95 | 3110.86 |
| 2/26/2018 6:30 | 0.615 | 0.247 | -7.243 | 7.337 | -1.779 | 4.961 | 22.1466 | 5.378 | 1.574 | 5.372 | 0.449 | 4.173 | 53.86 | 100.3405 | 46.91 | 3056.36 |
| 2/26/2018 6:50 | 0.575 | 0.263 | -6.604 | 11.63 | -1.82 | 4.88 | 21.0595 | 5.114 | 1.28 | 5.421 | 0.412 | 5.221 | 56.59 | 104.7468 | 48.97 | 2938.64 |
| 2/26/2018 7:09 | 0.668 | 0.221 | -6.605 | 13.24 | -1.993 | 4.76 | 21.8831 | 5.314 | 1.263 | 5.42 | 0.623 | 3.933 | 60.99 | 120.5327 | 56.35 | 2929.92 |
| 2/26/2018 7:30 | 0.567 | 0.24 | -7.275 | 11.76 | -1.409 | 4.732 | 21.183 | 5.144 | 1.142 | 5.202 | 0.433 | 2.02 | 60.59 | 122.3508 | 57.2 | 3030.2 |
| 2/26/2018 7:54 | 0.624 | 0.3 | -6.861 | 13.77 | -1.824 | 4.64 | 20.2235 | 4.911 | 1.329 | 4.907 | 0.38 | 5.441 | 57.73 | 104.3404 | 48.78 | 3014.94 |
| 2/26/2018 8:15 | 0.66 | 0.345 | -7.294 | 7.944 | -1.806 | 4.636 | 14.7589 | 3.584 | 1.026 | 5.304 | 0.25 | 4.526 | 54.03 | 106.7361 | 49.9 | 2816.56 |
| 2/26/2018 8:29 | 0.653 | 0.276 | -7.078 | 11.37 | -2.456 | 4.72 | 16.5255 | 4.013 | 1.084 | 5.394 | 0.64 | 5.304 | 54.17 | 114.7146 | 53.63 | 2977.88 |
| 2/26/2018 8:49 | 0.565 | 0.093 | -7.342 | 11 | -1.875 | 4.639 | 15.319 | 3.72 | 1.025 | 4.954 | 0.641 | 2.383 | 52.84 | 111.5061 | 52.13 | 2875.42 |
| 2/26/2018 9:00 | 0.585 | 0.285 | -6.812 | 29.05 | -2.006 | 4.629 | 33.154 | 8.051 | 1.213 | 4.806 | 0.669 | 4.912 | 49.16 | 123.4417 | 57.71 | 2901.58 |
| 2/26/2018 9:18 | 0.593 | 0.312 | -7.169 | 5.972 | -2.041 | 4.615 | 13.2888 | 3.227 | 0.951 | 5.476 | 0.516 | 5.387 | 48.24 | 106.2441 | 49.67 | 2960.44 |
| 2/26/2018 9:39 | 0.6 | 0.329 | -7.359 | 4.866 | -2.129 | 4.711 | 10.9086 | 2.649 | 0.938 | 5.537 | 0.736 | 4.682 | 43.92 | 108.4901 | 50.72 | 3032.38 |
| 2/26/2018 10:17 | 0.675 | 0.338 | -7.623 | 4.315 | -1.207 | 4.628 | 11.2874 | 2.741 | 0.883 | 5.258 | 0.434 | 4.483 | 42.53 | 113.6879 | 53.15 | 2999.68 |
| 2/26/2018 10:32 | 9.397 | 0.299 | -7.193 | 2.449 | -1.545 | 4.571 | 10.8427 | 2.633 | 0.93 | 5.407 | 0.39 | 2.243 | 40.21 | 102.6292 | 47.98 | 2912.48 |
| 2/26/2018 10:54 | 0.653 | 0.215 | -7.072 | 4.373 | -0.913 | 4.635 | 17.2627 | 4.192 | 0.897 | 5.43 | 0.438 | 4.187 | 46.74 | 131.8907 | 61.66 | 2971.34 |
| 2/26/2018 11:10 | 0.639 | 0.39 | -7.415 | 4.592 | -2.09 | 4.684 | 14.4048 | 3.498 | 0.92 | 5.306 | 0.124 | 3.789 | 44.41 | 123.1208 | 57.56 | 3062.9 |
| 2/26/2018 11:30 | 0.654 | 0.365 | -7.162 | 2.929 | -2.307 | 4.675 | 13.1817 | 3.201 | 0.899 | 5.074 | 0.163 | 4.449 | 47.23 | 122.5433 | 57.29 | 2884.14 |
| 2/26/2018 11:50 | 0.665 | 0.13 | -7.467 | 6.285 | -1.88 | 4.622 | 12.1399 | 2.948 | 0.956 | 4.968 | 0.162 | 4.14 | 45.82 | 114.9499 | 53.74 | 2881.96 |
| 2/26/2018 12:30 | 0.67 | 0.212 | -7.392 | 7.237 | -2.03 | 4.627 | 11.8187 | 2.87 | 1.036 | 5.131 | 0.35 | 3.222 | 46.83 | 113.7734 | 53.19 | 2903.76 |
| 2/26/2018 13:30 | 0.614 | 0.378 | -7.155 | 1.998 | -1.829 | 4.704 | 12.4652 | 3.027 | 0.899 | 5.443 | 0.42 | 4.586 | 45.11 | 118.9284 | 55.6 | 2986.6 |
| 2/26/2018 13:32 | 0.657 | 0.43 | -7.297 | 2.322 | -2.461 | 4.611 | 12.181 | 2.958 | 0.855 | 5.524 | 0.458 | 4.781 | 44.6 | 117.0033 | 54.7 | 3047.64 |
| 2/26/2018 13:50 | 0.626 | 0.256 | -7.416 | 1.786 | -3.222 | 4.605 | 11.9875 | 2.911 | 0.861 | 5.26 | 0.777 | 4.392 | 42.31 | 115.2707 | 53.89 | 2988.78 |
| 2/26/2018 14:00 | 0.61 | 0.427 | -7.393 | 1.692 | -2.544 | 4.597 | 11.2051 | 2.721 | 0.85 | 5.608 | 0.311 | 3.882 | 43.1 | 116.5755 | 54.5 | 3017.12 |
| 2/26/2018 14:15 | 0.61 | 0.242 | -7.494 | 2.41 | -2.534 | 4.592 | 12.1893 | 2.96 | 0.832 | 5.128 | 0.672 | 4.187 | 42.87 | 113.6665 | 53.14 | 2908.12 |
| 2/26/2018 14:34 | 0.624 | 0.279 | -7.517 | 1.889 | -2.862 | 4.541 | 11.6992 | 2.841 | 0.833 | 5.142 | 0.47 | 3.551 | 44.32 | 116.8322 | 54.62 | 2975.7 |
| 2/26/2018 14:58 | 0.571 | 0.146 | -7.631 | 2.598 | -2.224 | 4.57 | 11.7034 | 2.842 | 0.845 | 5.668 | 0.459 | 3.846 | 44.21 | 122.9069 | 57.46 | 3023.66 |
| 2/26/2018 15:21 | 0.613 | 0.246 | -7.542 | 2.008 | -1.722 | 4.627 | 11.0445 | 2.682 | 0.844 | 5.606 | 0.634 | 3.811 | 42.83 | 115.2065 | 53.86 | 2997.5 |

| Collection Date | Chromium (Cr) | Cobalt (Co) | Copper (Cu) | Iron (Fe) | Lead (Pb) | Lithium (Li) | Magnesium (CaCO3) | Magnesium (Mg) | Manganese (Mn) | Molybdenum (Mo) | Nickel (Ni) | Phosphorus (P) | Potassium (K) | Silica (SiO2) | Silicon (Si) | Sodium (CaCO3) |
|-----------------|---------------|-------------|-------------|-----------|-----------|--------------|-------------------|----------------|----------------|-----------------|-------------|----------------|---------------|---------------|--------------|----------------|
| 2/26/2018 15:56 | 0.668 | 0.272 | -7.384 | 1.993 | -1.807 | 4.565 | 11.0733 | 2.689 | 0.8 | 5.269 | 0.428 | 5.158 | 43.22 | 119.0781 | 55.67 | 3025.84 |
| 2/26/2018 16:16 | 0.677 | 0.181 | -7.674 | 2.303 | -1.725 | 4.571 | 10.3362 | 2.51 | 0.849 | 5.645 | 0.606 | 5.086 | 39.83 | 113.7306 | 53.17 | 3036.74 |
| 2/26/2018 16:40 | 0.677 | 0.22 | -7.482 | 1.684 | -1.871 | 4.568 | 10.1385 | 2.462 | 0.831 | 5.078 | 0.445 | 3.947 | 38.37 | 112.5114 | 52.6 | 2975.7 |
| 2/26/2018 17:10 | 0.512 | 0.32 | -7.603 | 1.686 | -0.346 | 4.533 | 9.9614 | 2.419 | 0.823 | 4.989 | 0.089 | 3.351 | 39.72 | 112.8109 | 52.74 | 2980.06 |
| 2/27/2018 6:43 | 0.57 | 0.298 | -7.686 | 1.642 | -2.277 | 4.598 | 11.9134 | 2.893 | 0.872 | 5.313 | 0.399 | 2.825 | 39.57 | 117.3669 | 54.87 | 2984.42 |
| 2/27/2018 7:00 | 0.618 | 0.508 | -7.498 | 2.186 | -0.889 | 4.533 | 11.7692 | 2.858 | 0.857 | 5.282 | 0.325 | 4.118 | 38.9 | 112.9392 | 52.8 | 2919.02 |
| 2/27/2018 7:15 | 0.513 | 0.284 | -7.446 | 2.209 | -2.039 | 4.577 | 11.901 | 2.89 | 0.854 | 5.15 | 0.321 | 5.128 | 39.08 | 114.3723 | 53.47 | 2934.28 |
| 2/27/2018 7:35 | 0.622 | 0.314 | -7.726 | 3.472 | -2.267 | 4.599 | 11.9504 | 2.902 | 0.864 | 5.036 | 0.262 | 2.697 | 41.29 | 115.014 | 53.77 | 2988.78 |
| 2/27/2018 7:50 | 0.595 | 0.295 | -7.809 | 3.716 | -2.15 | 4.571 | 11.2133 | 2.723 | 0.858 | 5.557 | 0.394 | 3.594 | 39.1 | 111.5489 | 52.15 | 2943 |
| 2/27/2018 8:05 | 0.73 | 0.331 | -7.716 | 4.123 | -2.011 | 4.543 | 11.0239 | 2.677 | 0.857 | 5.22 | 0.041 | 4.823 | 39.19 | 110.5649 | 51.69 | 2949.54 |
| 2/27/2018 8:25 | 0.636 | 0.446 | -7.692 | 5.019 | -1.685 | 4.587 | 10.6244 | 2.58 | 0.884 | 5.157 | 0.517 | 4.851 | 38.9 | 110.8216 | 51.81 | 2973.52 |
| 2/27/2018 8:50 | 0.579 | 0.185 | -7.804 | 6.122 | -2.661 | 4.609 | 10.9868 | 2.668 | 0.874 | 5.015 | 0.454 | 2.926 | 40.52 | 114.9926 | 53.76 | 3012.76 |
| 2/27/2018 9:10 | 0.647 | 0.138 | -7.634 | 3.321 | -1.874 | 4.572 | 10.7192 | 2.603 | 0.861 | 5.379 | 0.222 | 3.05 | 38.22 | 111.72 | 52.23 | 2980.06 |
| 2/27/2018 9:25 | 0.668 | 0.415 | -7.661 | 2.463 | -1.984 | 4.561 | 10.2456 | 2.488 | 0.842 | 5.036 | 0.364 | 2.876 | 39.25 | 113.1531 | 52.9 | 2975.7 |
| 2/27/2018 9:45 | 0.64 | 0.305 | -7.628 | 2.386 | -2.482 | 4.545 | 9.8914 | 2.402 | 0.855 | 4.998 | 0.327 | 3.459 | 37.11 | 110.1585 | 51.5 | 2971.34 |
| 2/27/2018 10:00 | 0.63 | 0.325 | -7.673 | 1.831 | -1.9 | 4.555 | 10.2085 | 2.479 | 0.856 | 4.754 | 0.36 | 4.593 | 37.29 | 110.6719 | 51.74 | 2988.78 |
| 2/27/2018 10:18 | 0.572 | 0.229 | -7.713 | 1.882 | -2.851 | 4.65 | 10.122 | 2.458 | 0.84 | 5.457 | 0.285 | 4.39 | 34.79 | 111.0997 | 51.94 | 2986.6 |
| 2/27/2018 10:35 | 0.669 | 0.142 | -7.641 | 1.543 | -2.835 | 4.568 | 11.6869 | 2.838 | 0.857 | 5.244 | 0.63 | 4.673 | 36 | 125.5807 | 58.71 | 2962.62 |
| 2/27/2018 13:04 | 0.648 | 0.331 | -7.657 | 1.509 | -1.984 | 4.679 | 13.3464 | 3.241 | 0.838 | 5.564 | 0.283 | 2.294 | 37.09 | 121.4096 | 56.76 | 2932.1 |
| 2/27/2018 13:20 | 0.684 | 0.291 | -7.647 | 1.561 | -2.595 | 4.608 | 12.8976 | 3.132 | 0.838 | 4.969 | 0.363 | 4.015 | 38.27 | 112.7681 | 52.72 | 2871.06 |
| 2/27/2018 13:30 | 0.592 | 0.303 | -7.655 | 1.846 | -1.975 | 4.596 | 11.9834 | 2.91 | 0.831 | 5.009 | 0.277 | 3.437 | 39.01 | 114.9285 | 53.73 | 2921.2 |
| 2/27/2018 13:50 | 0.679 | 0.332 | -7.614 | 2.116 | -1.401 | 4.611 | 11.7034 | 2.842 | 0.846 | 5.213 | 0.276 | 4.137 | 38.81 | 115.014 | 53.77 | 2973.52 |
| 2/27/2018 14:07 | 0.629 | 0.223 | -7.621 | 1.747 | -2.348 | 4.539 | 11.0527 | 2.684 | 0.834 | 4.816 | 0.306 | 3.348 | 39.29 | 111.613 | 52.18 | 2951.72 |
| 2/27/2018 14:22 | 0.593 | 0.413 | -7.749 | 2.208 | -2.438 | 4.542 | 10.7933 | 2.621 | 0.813 | 5.493 | 0.102 | 4.494 | 38.32 | 112.7895 | 52.73 | 2984.42 |
| 2/27/2018 14:40 | 0.563 | 0.297 | -7.77 | 1.721 | -1.324 | 4.579 | 10.8798 | 2.642 | 0.824 | 5.257 | 0.564 | 3.313 | 37.08 | 111.4419 | 52.1 | 2984.42 |
| 2/27/2018 15:05 | 0.584 | 0.231 | -7.561 | 2.055 | -2.115 | 4.54 | 10.2579 | 2.491 | 0.827 | 5.07 | 0.59 | 3.722 | 37.13 | 111.9767 | 52.35 | 2977.88 |
| 2/27/2018 15:21 | 0.613 | 0.255 | -7.614 | 3.218 | -2.097 | 4.588 | 12.0616 | 2.929 | 0.829 | 5.383 | 0.602 | 5.233 | 38.25 | 111.4419 | 52.1 | 2943 |
| 2/27/2018 15:40 | 0.68 | 0.26 | -7.753 | 1.809 | -1.824 | 4.508 | 10.1962 | 2.476 | 0.819 | 5.078 | 0.6 | 3.49 | 38.73 | 112.4472 | 52.57 | 2986.6 |
| 2/27/2018 16:05 | 0.665 | 0.361 | -7.628 | 1.5 | -1.346 | 4.561 | 9.7473 | 2.367 | 0.824 | 5.142 | 0.413 | 4.506 | 38.16 | 107.5275 | 50.27 | 2966.98 |
| 2/27/2018 16:25 | 0.574 | 0.227 | -7.713 | 2.067 | -0.78 | 4.539 | 9.8914 | 2.402 | 0.818 | 5.15 | 0.409 | 2.975 | 34.26 | 103.934 | 48.59 | 2956.08 |
| 2/27/2018 16:45 | 0.627 | 0.148 | -7.706 | 1.284 | -1.94 | 4.557 | 9.7432 | 2.366 | 0.813 | 4.982 | 0.647 | 4.382 | 33.87 | 100.0624 | 46.78 | 2921.2 |
| 2/27/2018 17:10 | 0.598 | 0.282 | -7.678 | 1.453 | -1.324 | 4.513 | 9.9903 | 2.426 | 0.815 | 5.083 | 0.297 | 4.215 | 34.63 | 104.2763 | 48.75 | 2940.82 |
| 2/28/2018 6:45 | 0.581 | 0.169 | -7.397 | 2.184 | -1.718 | 4.625 | 10.4474 | 2.537 | 0.871 | 5.32 | 0.117 | 4.425 | 37.07 | 105.2388 | 49.2 | 2886.32 |
| 2/28/2018 6:58 | 0.559 | 0.382 | -7.581 | 2.108 | -2.201 | 4.617 | 11.4975 | 2.792 | 0.838 | 5.584 | 0.257 | 3.327 | 36.94 | 110.0302 | 51.44 | 2953.9 |
| 2/28/2018 7:15 | 0.611 | 0.238 | -0.196 | 2.855 | -1.719 | 4.763 | 11.5922 | 2.815 | 0.96 | 5.393 | 0.282 | 6.267 | 35.82 | 106.6933 | 49.88 | 2975.7 |
| 2/28/2018 14:47 | 0.651 | 0.27 | -7.737 | 1.886 | -1.991 | 4.567 | 9.492 | 2.305 | 0.79 | 5.254 | 0.293 | 4.755 | 35.45 | 103.442 | 48.36 | 2980.06 |
| | | | | | | | | | | | | | | | | |

Sandridge Energy: Pintail SWD 0780 2-16D (API: 057-06566)

| Collection Date | Sodium (Na) | Strontium (Sr) | Sulfur (S) | Sulfur (SO4) | Titanium (Ti) | Vanadium (V) | Zinc (Zn) |
|-----------------|-------------|----------------|------------|--------------|---------------|--------------|-----------|
| 2/25/2018 16:21 | 1415 | 4.574 | 29.31 | 87.93 | 2.14 | 3.606 | 1.219 |
| 2/25/2018 16:30 | 1335 | 0 | 29.02 | 87.06 | 0 | 0 | 0 |
| 2/25/2018 16:42 | 1319 | 4.242 | 28.49 | 85.47 | 2.097 | 3.552 | 1.395 |
| 2/25/2018 16:45 | 1380 | 4.168 | 26.04 | 78.12 | 2.121 | 3.682 | 1.276 |
| 2/25/2018 16:50 | 1427 | 3.87 | 32.42 | 97.26 | 2.104 | 3.645 | 1.219 |
| 2/26/2018 6:30 | 1402 | 4.175 | 29.71 | 89.13 | 2.103 | 3.575 | 1.227 |
| 2/26/2018 6:50 | 1348 | 4.095 | 31.23 | 93.69 | 2.105 | 3.684 | 1.34 |
| 2/26/2018 7:09 | 1344 | 4.016 | 30.27 | 90.81 | 2.098 | 3.581 | 1.47 |
| 2/26/2018 7:30 | 1390 | 4.071 | 28.83 | 86.49 | 2.114 | 3.605 | 1.443 |
| 2/26/2018 7:54 | 1383 | 3.655 | 30.13 | 90.39 | 2.113 | 3.521 | 1.539 |
| 2/26/2018 8:15 | 1292 | 3.306 | 27.29 | 81.87 | 2.113 | 3.504 | 1.075 |
| 2/26/2018 8:29 | 1366 | 3.249 | 33.43 | 100.29 | 2.112 | 3.696 | 1.261 |
| 2/26/2018 8:49 | 1319 | 3.21 | 29.01 | 87.03 | 2.113 | 3.599 | 1.284 |
| 2/26/2018 9:00 | 1331 | 3.129 | 31.66 | 94.98 | 2.235 | 3.64 | 1.464 |
| 2/26/2018 9:18 | 1358 | 2.892 | 27.75 | 83.25 | 2.139 | 3.503 | 1.355 |
| 2/26/2018 9:39 | 1391 | 2.996 | 25.85 | 77.55 | 2.099 | 3.64 | 1.379 |
| 2/26/2018 10:17 | 1376 | 3.326 | 23.4 | 70.2 | 2.109 | 3.579 | 1.253 |
| 2/26/2018 10:32 | 1336 | 2.817 | 24.22 | 72.66 | 2.129 | 3.606 | 1.126 |
| 2/26/2018 10:54 | 1363 | 3.685 | 27.16 | 81.48 | 2.108 | 3.551 | 1.389 |
| 2/26/2018 11:10 | 1405 | 3.427 | 25.04 | 75.12 | 2.105 | 3.532 | 1.267 |
| 2/26/2018 11:30 | 1323 | 3.144 | 27.07 | 81.21 | 2.114 | 3.461 | 1.361 |
| 2/26/2018 11:50 | 1322 | 3.125 | 24.39 | 73.17 | 2.092 | 3.578 | 1.294 |
| 2/26/2018 12:30 | 1332 | 2.972 | 25.62 | 76.86 | 2.121 | 3.49 | 1.259 |
| 2/26/2018 13:30 | 1370 | 3.178 | 26.08 | 78.24 | 2.112 | 3.574 | 1.252 |
| 2/26/2018 13:32 | 1398 | 3.013 | 24.95 | 74.85 | 2.114 | 3.56 | 1.196 |
| 2/26/2018 13:50 | 1371 | 3.193 | 23.09 | 69.27 | 2.113 | 3.567 | 1.15 |
| 2/26/2018 14:00 | 1384 | 3.076 | 22.75 | 68.25 | 2.094 | 3.541 | 1.396 |
| 2/26/2018 14:15 | 1334 | 2.804 | 23.69 | 71.07 | 2.112 | 3.49 | 1.36 |
| 2/26/2018 14:34 | 1365 | 2.887 | 23.55 | 70.65 | 2.104 | 3.622 | 1.177 |
| 2/26/2018 14:58 | 1387 | 3.058 | 26.41 | 79.23 | 2.108 | 3.594 | 1.275 |
| 2/26/2018 15:21 | 1375 | 3.059 | 27.39 | 82.17 | 2.108 | 3.51 | 1.259 |

Sandridge Energy: Pintail SWD 0780 2-16D (API: 057-06566)

| Collection Date | Sodium (Na) | Strontium (Sr) | Sulfur (S) | Sulfur (SO4) | Titanium (Ti) | Vanadium (V) | Zinc (Zn) |
|-----------------|-------------|----------------|------------|--------------|---------------|--------------|-----------|
| 2/26/2018 15:56 | 1388 | 2.413 | 26.49 | 79.47 | 2.123 | 3.534 | 1.377 |
| 2/26/2018 16:16 | 1393 | 3.093 | 22.69 | 68.07 | 2.103 | 3.562 | 1.404 |
| 2/26/2018 16:40 | 1365 | 3.052 | 25.55 | 76.65 | 2.094 | 3.457 | 1.123 |
| 2/26/2018 17:10 | 1367 | 3.035 | 24.17 | 72.51 | 2.1 | 3.581 | 1.228 |
| 2/27/2018 6:43 | 1369 | 3.175 | 25.02 | 75.06 | 2.115 | 3.618 | 1.26 |
| 2/27/2018 7:00 | 1339 | 3.153 | 25.79 | 77.37 | 2.088 | 3.556 | 1.25 |
| 2/27/2018 7:15 | 1346 | 3.164 | 23.84 | 71.52 | 2.12 | 3.557 | 1.167 |
| 2/27/2018 7:35 | 1371 | 3.21 | 25.77 | 77.31 | 2.111 | 3.688 | 1.28 |
| 2/27/2018 7:50 | 1350 | 3.067 | 22.14 | 66.42 | 2.107 | 3.587 | 1.309 |
| 2/27/2018 8:05 | 1353 | 3.104 | 22.88 | 68.64 | 2.121 | 3.577 | 1.301 |
| 2/27/2018 8:25 | 1364 | 3.099 | 25.27 | 75.81 | 2.133 | 3.682 | 1.096 |
| 2/27/2018 8:50 | 1382 | 3.085 | 23.28 | 69.84 | 2.132 | 3.622 | 1.395 |
| 2/27/2018 9:10 | 1367 | 3.09 | 20.8 | 62.4 | 2.125 | 3.524 | 1.285 |
| 2/27/2018 9:25 | 1365 | 3.008 | 24.22 | 72.66 | 2.11 | 3.452 | 1.371 |
| 2/27/2018 9:45 | 1363 | 3.041 | 24.89 | 74.67 | 2.119 | 3.476 | 1.306 |
| 2/27/2018 10:00 | 1371 | 3.116 | 21.95 | 65.85 | 2.108 | 3.61 | 1.176 |
| 2/27/2018 10:18 | 1370 | 3.136 | 24.82 | 74.46 | 2.116 | 3.513 | 1.303 |
| 2/27/2018 10:35 | 1359 | 3.089 | 21.93 | 65.79 | 2.119 | 3.692 | 1.264 |
| 2/27/2018 13:04 | 1345 | 3.169 | 25.96 | 77.88 | 2.101 | 3.62 | 1.288 |
| 2/27/2018 13:20 | 1317 | 3.194 | 21.72 | 65.16 | 2.088 | 3.474 | 1.304 |
| 2/27/2018 13:30 | 1340 | 3.153 | 24.25 | 72.75 | 2.088 | 3.471 | 1.334 |
| 2/27/2018 13:50 | 1364 | 3.134 | 25.7 | 77.1 | 2.134 | 3.57 | 1.17 |
| 2/27/2018 14:07 | 1354 | 3.104 | 23.87 | 71.61 | 2.116 | 3.615 | 1.248 |
| 2/27/2018 14:22 | 1369 | 3.129 | 21.7 | 65.1 | 2.103 | 3.475 | 1.297 |
| 2/27/2018 14:40 | 1369 | 3.129 | 26.42 | 79.26 | 2.109 | 3.529 | 1.234 |
| 2/27/2018 15:05 | 1366 | 3.063 | 19.68 | 59.04 | 2.123 | 3.569 | 1.099 |
| 2/27/2018 15:21 | 1350 | 2.996 | 25.85 | 77.55 | 2.13 | 3.541 | 1.259 |
| 2/27/2018 15:40 | 1370 | 3.062 | 21.98 | 65.94 | 2.118 | 3.658 | 1.307 |
| 2/27/2018 16:05 | 1361 | 3.051 | 22.55 | 67.65 | 2.12 | 3.561 | 1.432 |
| 2/27/2018 16:25 | 1356 | 3.069 | 21.15 | 63.45 | 2.115 | 3.554 | 1.815 |
| 2/27/2018 16:45 | 1340 | 3.027 | 19.26 | 57.78 | 2.116 | 3.556 | 1.297 |
| 2/27/2018 17:10 | 1349 | 3.065 | 22.45 | 67.35 | 2.111 | 3.597 | 1.466 |
| 2/28/2018 6:45 | 1324 | 3.059 | 24.97 | 74.91 | 2.085 | 3.653 | 1.211 |
| 2/28/2018 6:58 | 1355 | 3.11 | 22.22 | 66.66 | 2.082 | 3.507 | 1.233 |
| 2/28/2018 7:15 | 1365 | 3.108 | 24.18 | 72.54 | 2.117 | 3.631 | 1.256 |
| 2/28/2018 14:47 | 1367 | 2.315 | 21.25 | 63.75 | 2.11 | 3.565 | 1.176 |
| | | | | | | | |