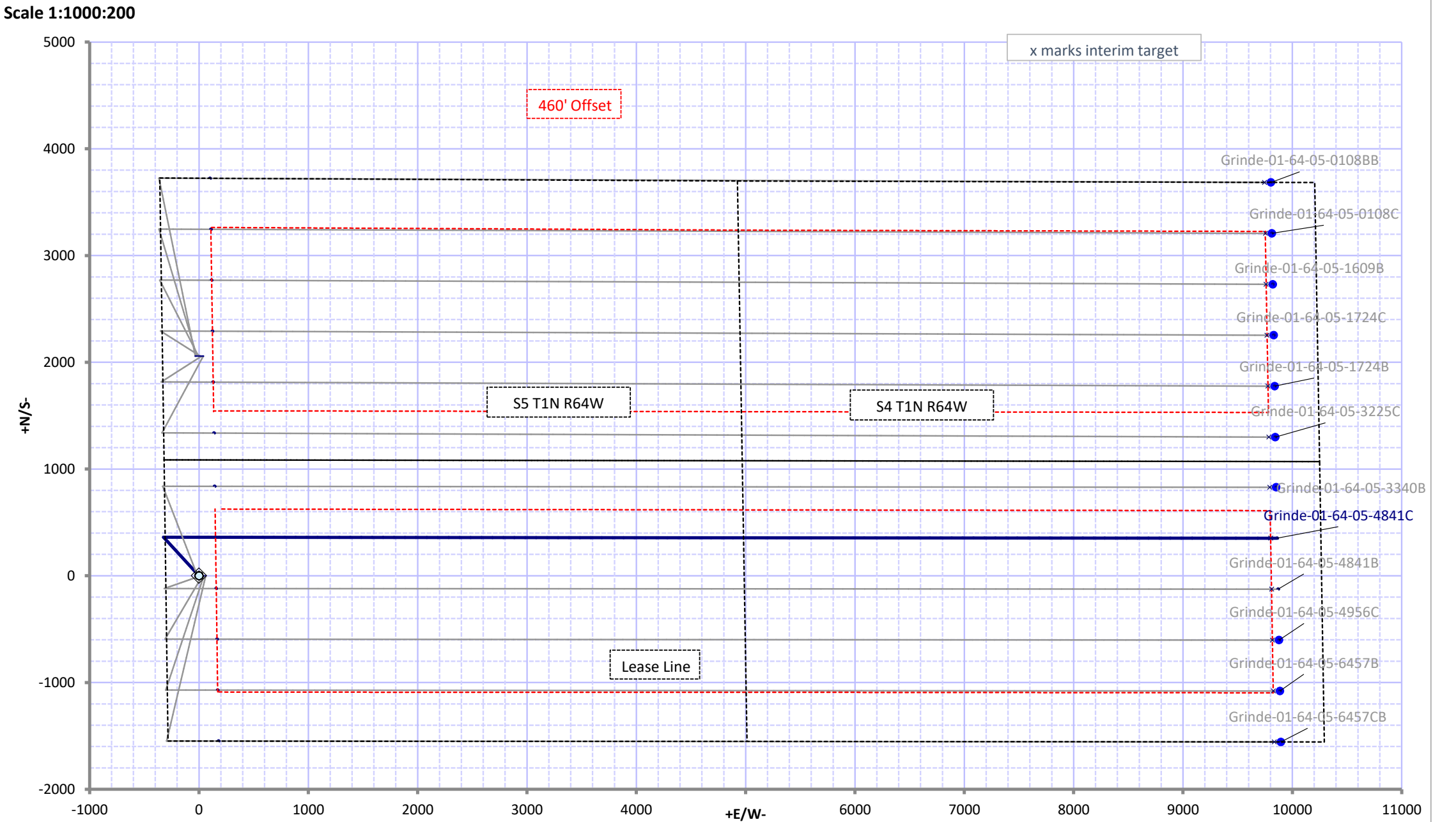
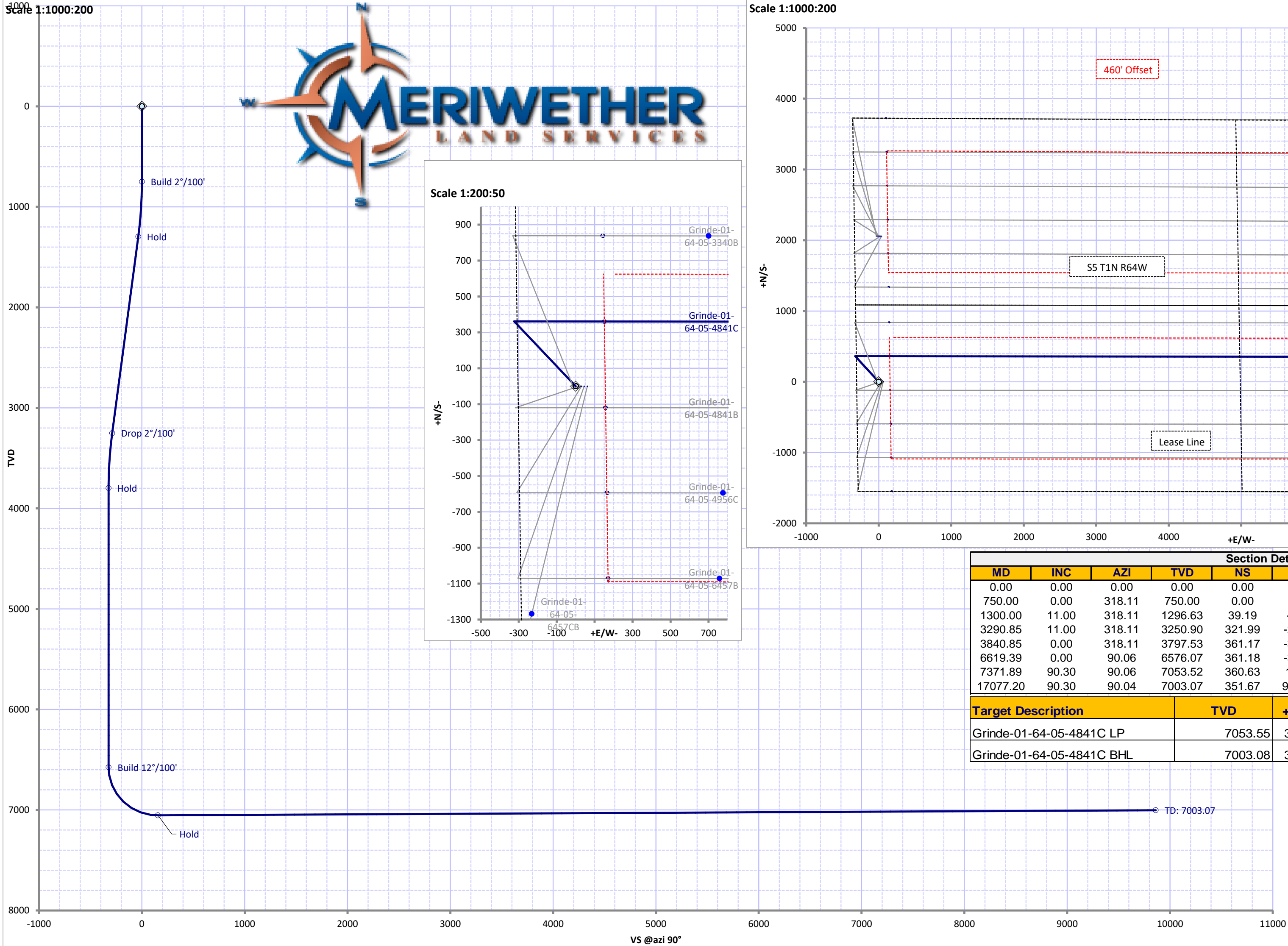


Well <b>Grinde-01-64-05-4841C</b>		Operating Company <b>Bill Barrett Corporation</b>			Rig <b>TBD, est. KB of 20'</b>	
Magnetics		Location			Other	
Curr. Datum BGGM2016 Mag Date 14-Mar-2017 Field Str, nT 52552.70		Decl., ° 8.15 Dip Angle, ° 67.05 Convergence, ° 0.5923945		Northing, ft 1,272,404.48 Easting, ft 3,256,556.76 Elevation, ft 5057.00		<b>Meriwether Land Services, LLC</b>
		Latitude 40.077500 Longitude 104.583170 TVD Ref GL 5037' + KB 20'		Map System St. Plane Map Datum NAD83 Map Zone 0501 - Colorado North		North Reference True North Vert. Sect, ° 90.00 December 12, 2017



Section Details: Grinde-01-64-05-4841C										
MD	INC	AZI	TVD	NS	EW	VS90	BR	TR	DLS	Comments
0.00	0.00	0.00	0.00	0.00	0.00	0.00				TIE-IN
750.00	0.00	318.11	750.00	0.00	0.00	0.00	0.00	-83.77	0.00	Build 2°/100'
1300.00	11.00	318.11	1296.63	39.19	-35.14	-35.14	2.00	0.00	2.00	Hold
3290.85	11.00	318.11	3250.90	321.99	-288.77	-288.77	0.00	0.00	0.00	Drop 2°/100'
3840.85	0.00	318.11	3797.53	361.17	-323.91	-323.91	-2.00	0.00	2.00	Hold
6619.39	0.00	90.06	6576.07	361.18	-323.91	-323.91	0.00	17.46	0.00	Build 12°/100'
7371.89	90.30	90.06	7053.52	360.63	156.05	156.05	12.00	0.00	12.00	Hold
17077.20	90.30	90.04	7003.07	351.67	9861.23	9861.23	0.00	0.00	0.00	TD: 7003.07

Target Description	TVD	+N/S-	+E/W-	Latitude	Longitude	Northing	Easting
Grinde-01-64-05-4841C LP	7053.55	360.63	151.11	40.07849	104.58263	1272766.66	3256704.13
Grinde-01-64-05-4841C BHL	7003.08	351.67	9861.25	40.07846	104.54793	1272858.08	3266413.85

Magnetics	
Mag North, °	8.15
True North, °	0.00
Grid North, °	0.59
Mag Dip, °	67.05
Mag Str, nT	52552.70



## Survey Report: Grinde-01-64-05-4841C

<b>Operator</b>	Bill Barrett Corporation	<b>Northing</b>	1272404.482	<b>Date</b>	12-Dec-17
<b>Dir. Co.</b>	Meriwether Land Services, LLC	<b>Easting</b>	3256556.755	<b>System</b>	2 - St. Plane
<b>Well Name</b>	Grinde-01-64-05-4841C	<b>Elevation</b>	5037.00	<b>Datum</b>	1983 - NAD83
<b>Location</b>	Weld Cty, CO	<b>Latitude</b>	40.077500	<b>Zone</b>	0501 - Colorado North
<b>Rig</b>	TBD, est. KB of 20'	<b>Longitude</b>	104.583170	<b>Scale Fac.</b>	0.999961
<b>Job</b>		<b>Units</b>	Feet	<b>Converg.</b>	0.592395

MD	INC	AZI	TVD	+N/S-	+E/W-	VS@90°	BR	TR	DLS
0	0	0	0	0	0	0	0	0	0
0: TIE-IN									
100	0	360	100	0	0	0	0	0	0
200	0	360	200	0	0	0	0	0	0
300	0	360	300	0	0	0	0	0	0
400	0	360	400	0	0	0	0	0	0
500	0	360	500	0	0	0	0	0	0
600	0	360	600	0	0	0	0	0	0
700	0	360	700	0	0	0	0	0	0
750	0	318.11	750	0	0	0	0	-83.77	0
750: Build 2°/100'									
800	1	318.11	800	0.33	-0.29	-0.29	2	0	2
900	3	318.11	899.93	2.92	-2.62	-2.62	2	0	2
1000	5	318.11	999.68	8.12	-7.28	-7.28	2	0	2
1100	7	318.11	1099.13	15.9	-14.26	-14.26	2	0	2
1200	9	318.11	1198.15	26.26	-23.55	-23.55	2	0	2
1300	11	318.11	1296.63	39.19	-35.14	-35.14	2	0	2
1300: Hold									
1400	11	318.11	1394.79	53.39	-47.88	-47.88	0	0	0
1500	11	318.11	1492.95	67.6	-60.62	-60.62	0	0	0
1600	11	318.11	1591.12	81.8	-73.36	-73.36	0	0	0
1700	11	318.11	1689.28	96.01	-86.1	-86.1	0	0	0
1800	11	318.11	1787.44	110.21	-98.84	-98.84	0	0	0
1900	11	318.11	1885.6	124.42	-111.58	-111.58	0	0	0
2000	11	318.11	1983.77	138.62	-124.32	-124.32	0	0	0
2100	11	318.11	2081.93	152.83	-137.06	-137.06	0	0	0
2200	11	318.11	2180.09	167.03	-149.8	-149.8	0	0	0
2300	11	318.11	2278.25	181.24	-162.54	-162.54	0	0	0
2400	11	318.11	2376.42	195.44	-175.28	-175.28	0	0	0
2500	11	318.11	2474.58	209.65	-188.02	-188.02	0	0	0
2600	11	318.11	2572.74	223.85	-200.76	-200.76	0	0	0
2700	11	318.11	2670.91	238.06	-213.5	-213.5	0	0	0
2800	11	318.11	2769.07	252.26	-226.24	-226.24	0	0	0
2900	11	318.11	2867.23	266.47	-238.98	-238.98	0	0	0
3000	11	318.11	2965.39	280.67	-251.72	-251.72	0	0	0
3100	11	318.11	3063.56	294.88	-264.46	-264.46	0	0	0
3200	11	318.11	3161.72	309.08	-277.19	-277.19	0	0	0
3290.85	11	318.11	3250.9	321.99	-288.77	-288.77	0	0	0
3290.85: Drop 2°/100'									
3300	10.82	318.11	3259.88	323.28	-289.92	-289.92	-2	0	2
3400	8.82	318.11	3358.41	335.97	-301.31	-301.31	-2	0	2
3500	6.82	318.11	3457.48	346.1	-310.39	-310.39	-2	0	2
3600	4.82	318.11	3556.96	353.64	-317.16	-317.16	-2	0	2
3700	2.82	318.11	3656.73	358.6	-321.6	-321.6	-2	0	2



## Survey Report: Grinde-01-64-05-4841C

<b>Operator</b>	Bill Barrett Corporation	<b>Northing</b>	1272404.482	<b>Date</b>	12-Dec-17
<b>Dir. Co.</b>	Meriwether Land Services, LLC	<b>Easting</b>	3256556.755	<b>System</b>	2 - St. Plane
<b>Well Name</b>	Grinde-01-64-05-4841C	<b>Elevation</b>	5037.00	<b>Datum</b>	1983 - NAD83
<b>Location</b>	Weld Cty, CO	<b>Latitude</b>	40.077500	<b>Zone</b>	0501 - Colorado North
<b>Rig</b>	TBD, est. KB of 20'	<b>Longitude</b>	104.583170	<b>Scale Fac.</b>	0.999961
<b>Job</b>		<b>Units</b>	Feet	<b>Converg.</b>	0.592395

MD	INC	AZI	TVD	+N/S-	+E/W-	VS@90°	BR	TR	DLS
3800	0.82	318.11	3756.68	360.96	-323.72	-323.72	-2	0	2
3840.85	0	318.11	3797.53	361.17	-323.91	-323.91	-2	0	2
3840.85: Hold									
3900	0	318.11	3856.68	361.17	-323.91	-323.91	0	0	0
4000	0	318.11	3956.68	361.17	-323.91	-323.91	0	0	0
4100	0	318.11	4056.68	361.17	-323.91	-323.91	0	0	0
4200	0	318.11	4156.68	361.17	-323.91	-323.91	0	0	0
4300	0	318.11	4256.68	361.17	-323.91	-323.91	0	0	0
4400	0	318.11	4356.68	361.17	-323.91	-323.91	0	0	0
4500	0	318.11	4456.68	361.17	-323.91	-323.91	0	0	0
4600	0	318.11	4556.68	361.17	-323.91	-323.91	0	0	0
4700	0	318.11	4656.68	361.17	-323.91	-323.91	0	0	0
4800	0	318.11	4756.68	361.17	-323.91	-323.91	0	0	0
4900	0	318.11	4856.68	361.17	-323.91	-323.91	0	0	0
5000	0	318.11	4956.68	361.17	-323.91	-323.91	0	0	0
5100	0	318.11	5056.68	361.17	-323.91	-323.91	0	0	0
5200	0	318.11	5156.68	361.17	-323.91	-323.91	0	0	0
5300	0	318.11	5256.68	361.17	-323.91	-323.91	0	0	0
5400	0	318.11	5356.68	361.18	-323.91	-323.91	0	0	0
5500	0	318.11	5456.68	361.18	-323.91	-323.91	0	0	0
5600	0	318.11	5556.68	361.18	-323.91	-323.91	0	0	0
5700	0	318.11	5656.68	361.18	-323.91	-323.91	0	0	0
5800	0	318.11	5756.68	361.18	-323.91	-323.91	0	0	0
5900	0	318.11	5856.68	361.18	-323.91	-323.91	0	0	0
6000	0	318.11	5956.68	361.18	-323.91	-323.91	0	0	0
6100	0	318.11	6056.68	361.18	-323.91	-323.91	0	0	0
6200	0	318.11	6156.68	361.18	-323.91	-323.91	0	0	0
6300	0	318.11	6256.68	361.18	-323.91	-323.91	0	0	0
6400	0	331.19	6356.68	361.18	-323.91	-323.91	0	13.07	0
6500	0	40.95	6456.68	361.18	-323.91	-323.91	0	69.76	0
6600	0	86.68	6556.68	361.18	-323.91	-323.91	0	45.73	0
6619.39	0	90.06	6576.07	361.18	-323.91	-323.91	0	17.46	0
6619.39: Build 12°/100'									
6700	9.67	90.06	6656.29	361.17	-317.12	-317.12	12	0	12
6800	21.67	90.06	6752.4	361.14	-290.16	-290.16	12	0	12
6900	33.67	90.06	6840.8	361.09	-243.8	-243.8	12	0	12
7000	45.67	90.06	6917.63	361.01	-180.08	-180.08	12	0	12
7100	57.67	90.06	6979.53	360.93	-101.77	-101.77	12	0	12
7200	69.67	90.06	7023.8	360.82	-12.31	-12.31	12	0	12
7300	81.67	90.06	7048.5	360.72	84.41	84.41	12	0	12
7371.89	90.3	90.06	7053.52	360.63	156.05	156.05	12	0	12
7371.89: Hold									
7400	90.3	90.06	7053.38	360.6	184.16	184.16	0	0	0
7500	90.3	90.06	7052.85	360.49	284.16	284.16	0	0	0



## Survey Report: Grinde-01-64-05-4841C

<b>Operator</b>	Bill Barrett Corporation			<b>Northing</b>	1272404.482		<b>Date</b>	12-Dec-17	
<b>Dir. Co.</b>	Meriwether Land Services, LLC			<b>Easting</b>	3256556.755		<b>System</b>	2 - St. Plane	
<b>Well Name</b>	Grinde-01-64-05-4841C			<b>Elevation</b>	5037.00		<b>Datum</b>	1983 - NAD83	
<b>Location</b>	Weld Cty, CO			<b>Latitude</b>	40.077500		<b>Zone</b>	0501 - Colorado North	
<b>Rig</b>	TBD, est. KB of 20'			<b>Longitude</b>	104.583170		<b>Scale Fac.</b>	0.999961	
<b>Job</b>				<b>Units</b>	Feet		<b>Converg.</b>	0.592395	
MD	INC	AZI	TVD	+N/S-	+E/W-	VS@90°	BR	TR	DLS
7600	90.3	90.06	7052.33	360.38	384.16	384.16	0	0	0
7700	90.3	90.06	7051.81	360.27	484.16	484.16	0	0	0
7800	90.3	90.06	7051.28	360.15	584.16	584.16	0	0	0
7900	90.3	90.06	7050.76	360.04	684.16	684.16	0	0	0
8000	90.3	90.06	7050.24	359.93	784.15	784.15	0	0	0
8100	90.3	90.06	7049.71	359.82	884.15	884.15	0	0	0
8200	90.3	90.06	7049.19	359.71	984.15	984.15	0	0	0
8300	90.3	90.06	7048.67	359.6	1084.15	1084.15	0	0	0
8400	90.3	90.06	7048.15	359.5	1184.15	1184.15	0	0	0
8500	90.3	90.06	7047.62	359.39	1284.15	1284.15	0	0	0
8600	90.3	90.06	7047.1	359.28	1384.15	1384.15	0	0	0
8700	90.3	90.06	7046.58	359.17	1484.14	1484.14	0	0	0
8800	90.3	90.06	7046.06	359.06	1584.14	1584.14	0	0	0
8900	90.3	90.06	7045.53	358.96	1684.14	1684.14	0	0	0
9000	90.3	90.06	7045.01	358.85	1784.14	1784.14	0	0	0
9100	90.3	90.06	7044.49	358.75	1884.14	1884.14	0	0	0
9200	90.3	90.06	7043.97	358.64	1984.14	1984.14	0	0	0
9300	90.3	90.06	7043.44	358.54	2084.14	2084.14	0	0	0
9400	90.3	90.06	7042.92	358.43	2184.13	2184.13	0	0	0
9500	90.3	90.06	7042.4	358.33	2284.13	2284.13	0	0	0
9600	90.3	90.06	7041.88	358.22	2384.13	2384.13	0	0	0
9700	90.3	90.06	7041.36	358.12	2484.13	2484.13	0	0	0
9800	90.3	90.06	7040.84	358.02	2584.13	2584.13	0	0	0
9900	90.3	90.06	7040.31	357.91	2684.13	2684.13	0	0	0
10000	90.3	90.06	7039.79	357.81	2784.13	2784.13	0	0	0
10100	90.3	90.06	7039.27	357.71	2884.12	2884.12	0	0	0
10200	90.3	90.06	7038.75	357.61	2984.12	2984.12	0	0	0
10300	90.3	90.06	7038.23	357.51	3084.12	3084.12	0	0	0
10400	90.3	90.06	7037.71	357.41	3184.12	3184.12	0	0	0
10500	90.3	90.06	7037.19	357.31	3284.12	3284.12	0	0	0
10600	90.3	90.06	7036.66	357.21	3384.12	3384.12	0	0	0
10700	90.3	90.06	7036.14	357.11	3484.12	3484.12	0	0	0
10800	90.3	90.06	7035.62	357.01	3584.11	3584.11	0	0	0
10900	90.3	90.06	7035.1	356.91	3684.11	3684.11	0	0	0
11000	90.3	90.06	7034.58	356.82	3784.11	3784.11	0	0	0
11100	90.3	90.06	7034.06	356.72	3884.11	3884.11	0	0	0
11200	90.3	90.06	7033.54	356.62	3984.11	3984.11	0	0	0
11300	90.3	90.06	7033.02	356.52	4084.11	4084.11	0	0	0
11400	90.3	90.05	7032.5	356.43	4184.11	4184.11	0	0	0
11500	90.3	90.05	7031.98	356.33	4284.1	4284.1	0	0	0
11600	90.3	90.05	7031.46	356.24	4384.1	4384.1	0	0	0
11700	90.3	90.05	7030.94	356.14	4484.1	4484.1	0	0	0
11800	90.3	90.05	7030.42	356.05	4584.1	4584.1	0	0	0
11900	90.3	90.05	7029.9	355.95	4684.1	4684.1	0	0	0



## Survey Report: Grinde-01-64-05-4841C

<b>Operator</b>	Bill Barrett Corporation			<b>Northing</b>	1272404.482		<b>Date</b>	12-Dec-17	
<b>Dir. Co.</b>	Meriwether Land Services, LLC			<b>Easting</b>	3256556.755		<b>System</b>	2 - St. Plane	
<b>Well Name</b>	Grinde-01-64-05-4841C			<b>Elevation</b>	5037.00		<b>Datum</b>	1983 - NAD83	
<b>Location</b>	Weld Cty, CO			<b>Latitude</b>	40.077500		<b>Zone</b>	0501 - Colorado North	
<b>Rig</b>	TBD, est. KB of 20'			<b>Longitude</b>	104.583170		<b>Scale Fac.</b>	0.999961	
<b>Job</b>				<b>Units</b>	Feet		<b>Converg.</b>	0.592395	
MD	INC	AZI	TVD	+N/S-	+E/W-	VS@90°	BR	TR	DLS
12000	90.3	90.05	7029.38	355.86	4784.1	4784.1	0	0	0
12100	90.3	90.05	7028.86	355.77	4884.1	4884.1	0	0	0
12200	90.3	90.05	7028.34	355.68	4984.09	4984.09	0	0	0
12300	90.3	90.05	7027.82	355.58	5084.09	5084.09	0	0	0
12400	90.3	90.05	7027.3	355.49	5184.09	5184.09	0	0	0
12500	90.3	90.05	7026.78	355.4	5284.09	5284.09	0	0	0
12600	90.3	90.05	7026.26	355.31	5384.09	5384.09	0	0	0
12700	90.3	90.05	7025.74	355.22	5484.09	5484.09	0	0	0
12800	90.3	90.05	7025.22	355.13	5584.09	5584.09	0	0	0
12900	90.3	90.05	7024.7	355.04	5684.09	5684.09	0	0	0
13000	90.3	90.05	7024.18	354.95	5784.08	5784.08	0	0	0
13100	90.3	90.05	7023.66	354.86	5884.08	5884.08	0	0	0
13200	90.3	90.05	7023.14	354.77	5984.08	5984.08	0	0	0
13300	90.3	90.05	7022.62	354.68	6084.08	6084.08	0	0	0
13400	90.3	90.05	7022.1	354.6	6184.08	6184.08	0	0	0
13500	90.3	90.05	7021.58	354.51	6284.08	6284.08	0	0	0
13600	90.3	90.05	7021.07	354.42	6384.08	6384.08	0	0	0
13700	90.3	90.05	7020.55	354.34	6484.07	6484.07	0	0	0
13800	90.3	90.05	7020.03	354.25	6584.07	6584.07	0	0	0
13900	90.3	90.05	7019.51	354.16	6684.07	6684.07	0	0	0
14000	90.3	90.05	7018.99	354.08	6784.07	6784.07	0	0	0
14100	90.3	90.05	7018.47	354	6884.07	6884.07	0	0	0
14200	90.3	90.05	7017.95	353.91	6984.07	6984.07	0	0	0
14300	90.3	90.05	7017.44	353.83	7084.07	7084.07	0	0	0
14400	90.3	90.05	7016.92	353.74	7184.06	7184.06	0	0	0
14500	90.3	90.05	7016.4	353.66	7284.06	7284.06	0	0	0
14600	90.3	90.05	7015.88	353.58	7384.06	7384.06	0	0	0
14700	90.3	90.05	7015.36	353.5	7484.06	7484.06	0	0	0
14800	90.3	90.05	7014.85	353.41	7584.06	7584.06	0	0	0
14900	90.3	90.05	7014.33	353.33	7684.06	7684.06	0	0	0
15000	90.3	90.05	7013.81	353.25	7784.06	7784.06	0	0	0
15100	90.3	90.05	7013.29	353.17	7884.06	7884.06	0	0	0
15200	90.3	90.05	7012.77	353.09	7984.05	7984.05	0	0	0
15300	90.3	90.05	7012.26	353.01	8084.05	8084.05	0	0	0
15400	90.3	90.05	7011.74	352.93	8184.05	8184.05	0	0	0
15500	90.3	90.04	7011.22	352.86	8284.05	8284.05	0	0	0
15600	90.3	90.04	7010.7	352.78	8384.05	8384.05	0	0	0
15700	90.3	90.04	7010.19	352.7	8484.05	8484.05	0	0	0
15800	90.3	90.04	7009.67	352.62	8584.05	8584.05	0	0	0
15900	90.3	90.04	7009.15	352.54	8684.04	8684.04	0	0	0
16000	90.3	90.04	7008.64	352.47	8784.04	8784.04	0	0	0
16100	90.3	90.04	7008.12	352.39	8884.04	8884.04	0	0	0
16200	90.3	90.04	7007.6	352.32	8984.04	8984.04	0	0	0
16300	90.3	90.04	7007.09	352.24	9084.04	9084.04	0	0	0



## Survey Report: Grinde-01-64-05-4841C

<b>Operator</b>	Bill Barrett Corporation	<b>Northing</b>	1272404.482	<b>Date</b>	12-Dec-17
<b>Dir. Co.</b>	Meriwether Land Services, LLC	<b>Easting</b>	3256556.755	<b>System</b>	2 - St. Plane
<b>Well Name</b>	Grinde-01-64-05-4841C	<b>Elevation</b>	5037.00	<b>Datum</b>	1983 - NAD83
<b>Location</b>	Weld Cty, CO	<b>Latitude</b>	40.077500	<b>Zone</b>	0501 - Colorado North
<b>Rig</b>	TBD, est. KB of 20'	<b>Longitude</b>	104.583170	<b>Scale Fac.</b>	0.999961
<b>Job</b>		<b>Units</b>	Feet	<b>Converg.</b>	0.592395

MD	INC	AZI	TVD	+N/S-	+E/W-	VS@90°	BR	TR	DLS
16400	90.3	90.04	7006.57	352.17	9184.04	9184.04	0	0	0
16500	90.3	90.04	7006.05	352.09	9284.04	9284.04	0	0	0
16600	90.3	90.04	7005.54	352.02	9384.03	9384.03	0	0	0
16700	90.3	90.04	7005.02	351.94	9484.03	9484.03	0	0	0
16800	90.3	90.04	7004.5	351.87	9584.03	9584.03	0	0	0
16900	90.3	90.04	7003.99	351.8	9684.03	9684.03	0	0	0
17000	90.3	90.04	7003.47	351.73	9784.03	9784.03	0	0	0
17077.2	90.3	90.04	7003.07	351.67	9861.23	9861.23	0	0	0

17077.2: TD: 7003.07