

# **HighPoint Resources**

**Weld County, CO (NAD83)**

**Sec 05-T01N-R64W Grinde Pad**

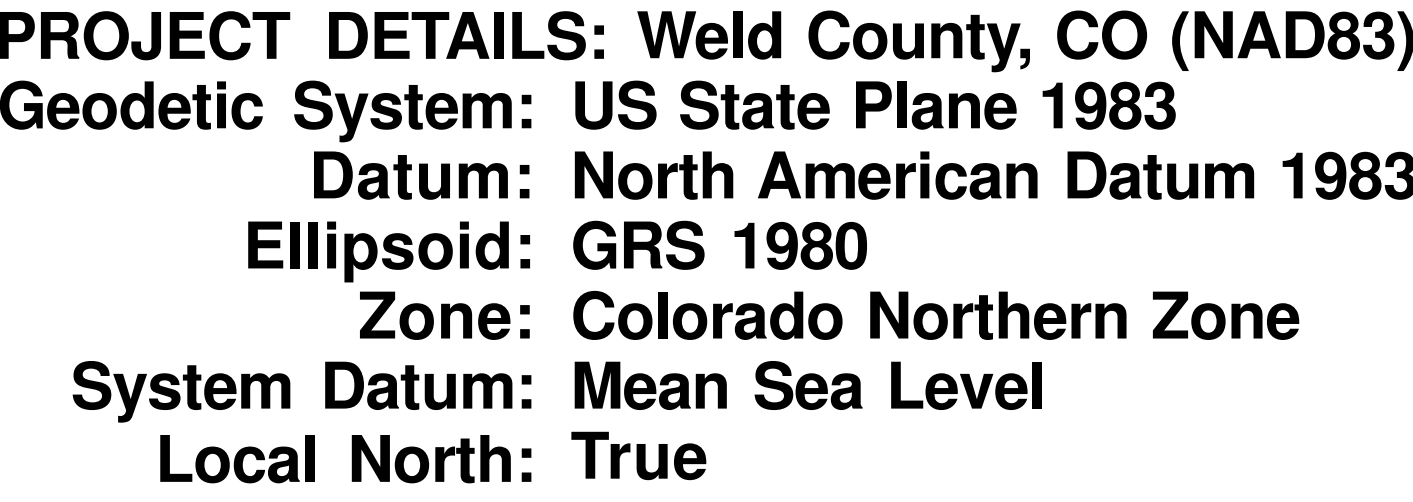
**Grinde 01-64-05-0108C**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**21 February, 2020**

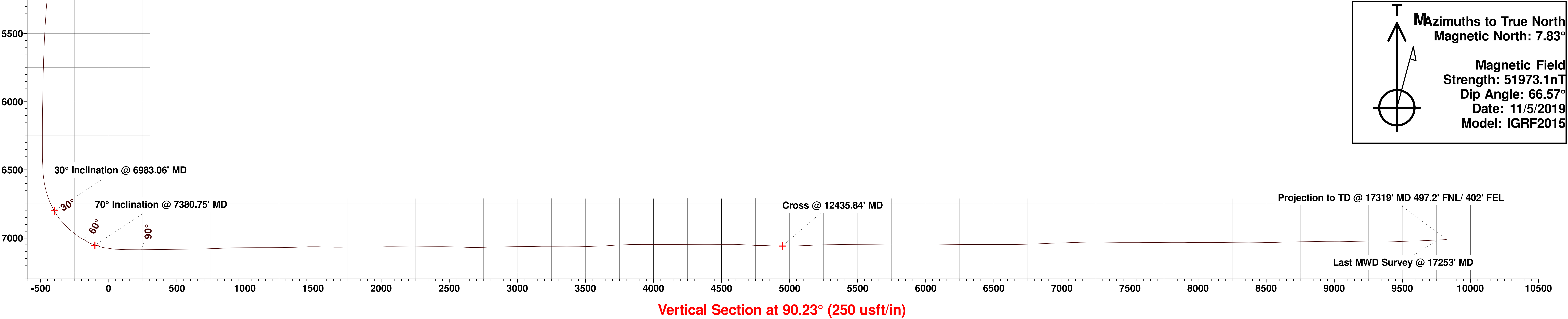
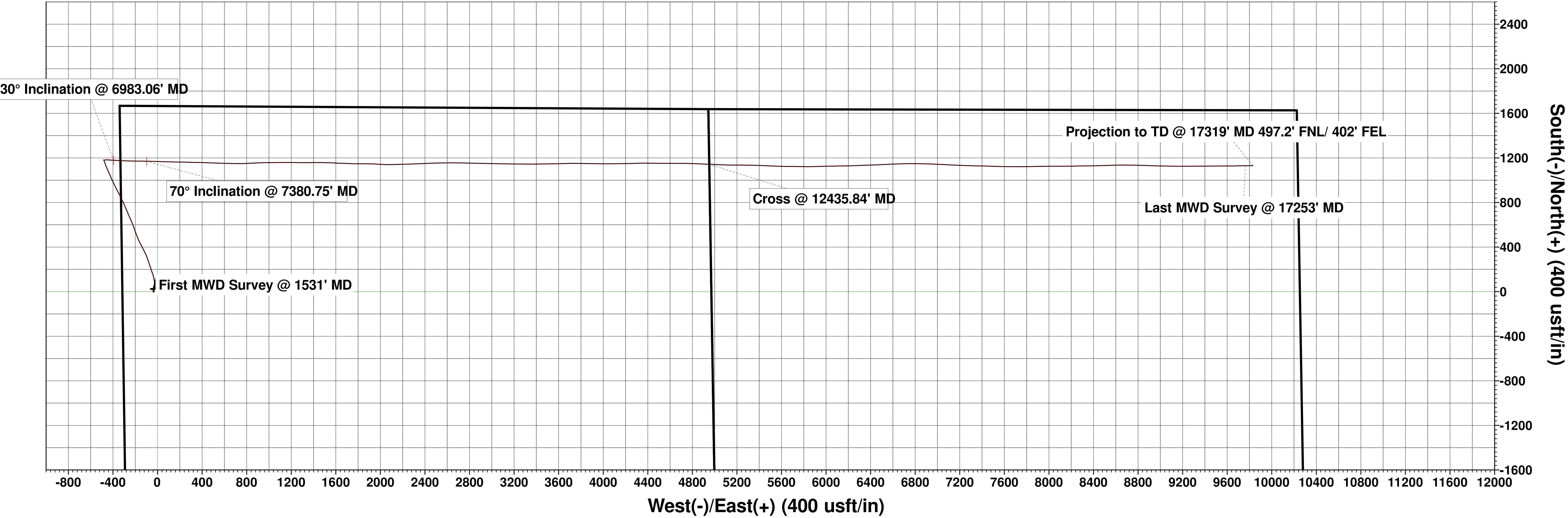
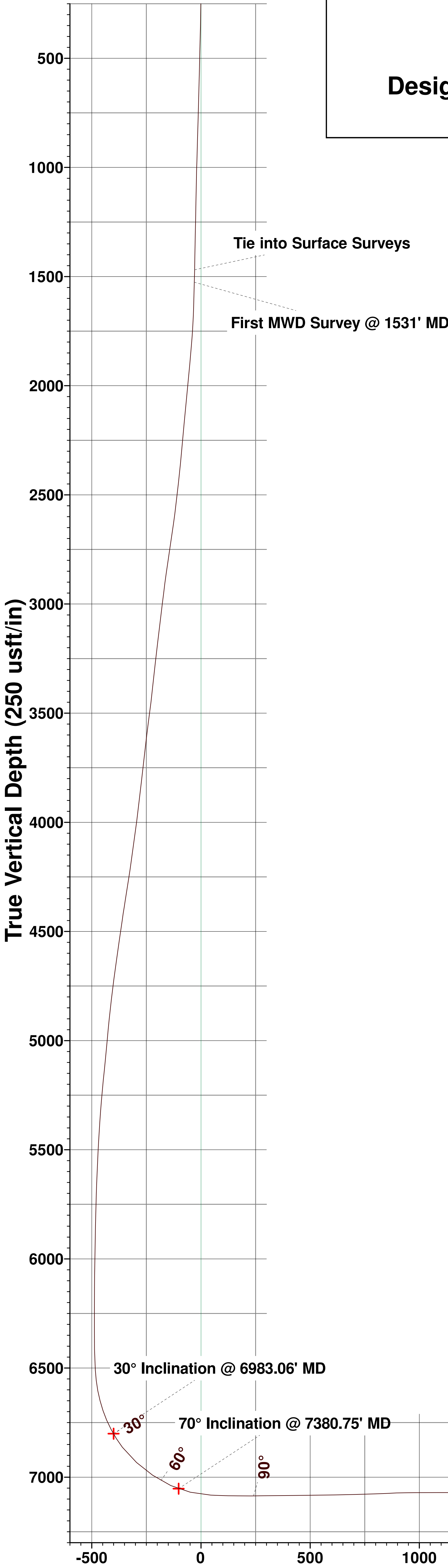


Ground Elevation:: 5025.00  
RKB Elevation: KB @ 5041.50usft (Cade 23)  
Rig Name: Cade 23



**HighPoint Resources**  
**Project: Weld County, CO (NAD83)**  
**Site: Sec 05-T01N-R64W Grinde Pad**  
**Well: Grinde 01-64-05-0108C**  
**Wellbore: Wellbore #1**  
**Design: Wellbore #1 (Grinde 01-64-05-0108C/Wellbore #1)**  
**Cade 23**

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation	
1473.50	6.81	350.07	1469.11	93.92	-28.60	-28.98	99.39	Tie into Surface Surveys	
1531.00	8.19	349.58	1526.12	101.31	-29.93	-30.34	106.89	First MWD Survey @ 1531' MD	
6983.06	30.00	93.51	6800.97	1179.24	-396.03	-400.76	1369.92	30° Inclination @ 6983.06' MD	
7380.75	70.00	91.27	7052.77	1170.35	-98.17	-102.86	1668.33	70° Inclination @ 7380.75' MD	
12435.84	90.07	92.48	7058.92	1143.06	4950.44	4945.81	6717.80	Cross @ 12435.84' MD	
17253.00	93.13	89.32	7014.49	1130.06	9764.83	9760.21	11533.89	Last MWD Survey @ 17253' MD	
17319.00	93.13	89.32	7010.89	1130.84	9830.72	9826.11	11599.79	Projection to TD @ 17319' MD 497.2' FNL/ 402' FEL	



## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

<b>Project</b>	Weld County, CO (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Sec 05-T01N-R64W Grinde Pad			
Site Position:		Northing:	1,276,126.40 usft	Latitude:	40.087728
From:	Lat/Long	Easting:	3,256,159.56 usft	Longitude:	-104.584452
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.59 °

Well	Grinde 01-64-05-0108C					
Well Position	+N/-S	0.00 usft	Northing:	1,274,462.31 usft	Latitude:	40.083150
	+E/-W	0.00 usft	Easting:	3,256,515.89 usft	Longitude:	-104.583240
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,025.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	11/5/2019	7.83	66.57	51,973.11500198

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	90.23	

<b>Survey Program</b>	<b>Date</b>	2/20/2020			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
116.00	1,473.50	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,473.50	17,319.00	MagVar Corrected Surveys (Wellbore #1)	MWD+HRGM+MS	MWD + HRGM + Multi-Station Correction	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
210.50	0.31	302.25	210.50	0.30	-0.48	-0.48	0.15	0.15	0.00	
305.50	1.09	303.40	305.49	0.94	-1.45	-1.46	0.82	0.82	1.21	
400.50	2.20	315.88	400.45	2.74	-3.48	-3.49	1.22	1.17	13.14	
496.50	3.82	341.28	496.32	7.10	-5.79	-5.81	2.15	1.69	26.46	
591.50	5.54	344.88	591.00	14.52	-8.00	-8.06	1.84	1.81	3.79	
686.50	5.49	343.56	685.56	23.31	-10.48	-10.57	0.14	-0.05	-1.39	
781.50	5.76	344.18	780.10	32.25	-13.07	-13.20	0.29	0.28	0.65	
876.50	5.71	342.77	874.63	41.35	-15.77	-15.93	0.16	-0.05	-1.48	
971.50	5.76	343.30	969.15	50.43	-18.54	-18.74	0.08	0.05	0.56	

## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,066.50	4.53	346.11	1,063.77	58.64	-20.81	-21.04	1.32	-1.29	2.96
1,161.50	4.39	345.23	1,158.48	65.80	-22.63	-22.90	0.16	-0.15	-0.93
1,256.50	4.22	342.77	1,253.21	72.65	-24.60	-24.89	0.26	-0.18	-2.59
1,352.50	5.80	350.95	1,348.84	80.82	-26.41	-26.73	1.80	1.65	8.52
1,473.50	6.81	350.07	1,469.11	93.92	-28.60	-28.98	0.84	0.83	-0.73
Tie into Surface Surveys									
1,531.00	8.19	349.58	1,526.12	101.31	-29.93	-30.34	2.40	2.40	-0.85
First MWD Survey @ 1531' MD									
1,626.00	9.76	350.75	1,619.95	115.91	-32.45	-32.92	1.66	1.65	1.23
1,722.00	12.51	346.65	1,714.13	134.06	-36.16	-36.70	2.98	2.86	-4.27
1,817.00	14.57	341.30	1,806.49	155.40	-42.37	-42.99	2.54	2.17	-5.63
1,913.00	15.50	340.57	1,899.21	178.93	-50.51	-51.23	0.99	0.97	-0.76
2,008.00	16.17	341.52	1,990.60	203.45	-58.92	-59.74	0.76	0.71	1.00
2,104.00	16.26	340.91	2,082.78	228.83	-67.56	-68.47	0.20	0.09	-0.64
2,199.00	16.26	341.67	2,173.98	254.02	-76.09	-77.11	0.22	0.00	0.80
2,295.00	15.86	342.38	2,266.23	279.28	-84.29	-85.41	0.46	-0.42	0.74
2,389.00	15.66	339.77	2,356.70	303.43	-92.56	-93.78	0.78	-0.21	-2.78
2,484.00	15.36	336.83	2,448.24	327.03	-101.94	-103.26	0.89	-0.32	-3.09
2,580.00	15.28	333.18	2,540.84	350.00	-112.66	-114.06	1.01	-0.08	-3.80
2,676.00	17.27	333.64	2,632.98	374.06	-124.69	-126.19	2.08	2.07	0.48
2,771.00	17.36	332.08	2,723.68	399.22	-137.59	-139.19	0.50	0.09	-1.64
2,867.00	17.38	332.20	2,815.30	424.56	-150.98	-152.68	0.04	0.02	0.13
2,962.00	16.38	333.93	2,906.21	449.14	-163.49	-165.29	1.18	-1.05	1.82
3,057.00	17.52	338.06	2,997.08	474.44	-174.72	-176.62	1.74	1.20	4.35
3,152.00	18.02	338.14	3,087.55	501.34	-185.53	-187.54	0.53	0.53	0.08
3,247.00	18.82	340.13	3,177.68	529.39	-196.21	-198.33	1.07	0.84	2.09
3,342.00	18.67	340.56	3,267.64	558.14	-206.48	-208.72	0.21	-0.16	0.45
3,437.00	17.66	340.85	3,357.91	586.09	-216.27	-218.62	1.07	-1.06	0.31
3,533.00	17.66	338.01	3,449.39	613.35	-226.50	-228.96	0.90	0.00	-2.96
3,627.00	18.05	336.13	3,538.86	639.89	-237.73	-240.30	0.74	0.41	-2.00
3,722.00	15.46	334.45	3,629.82	664.78	-249.15	-251.81	2.77	-2.73	-1.77
3,817.00	16.06	338.43	3,721.25	688.42	-259.44	-262.20	1.30	0.63	4.19
3,912.00	16.04	336.32	3,812.55	712.66	-269.54	-272.40	0.61	-0.02	-2.22
4,008.00	16.80	336.75	3,904.63	737.56	-280.35	-283.30	0.80	0.79	0.45
4,103.00	18.06	337.45	3,995.27	763.77	-291.41	-294.48	1.34	1.33	0.74
4,199.00	17.69	334.45	4,086.64	790.68	-303.41	-306.58	1.03	-0.39	-3.13
4,294.00	18.24	335.16	4,177.00	817.19	-315.88	-319.16	0.62	0.58	0.75
4,390.00	19.62	334.68	4,267.81	845.39	-329.09	-332.48	1.45	1.44	-0.50
4,485.00	18.78	332.04	4,357.53	873.32	-343.08	-346.58	1.27	-0.88	-2.78
4,581.00	16.75	331.34	4,448.94	899.11	-356.96	-360.57	2.13	-2.11	-0.73
4,676.00	17.95	333.49	4,539.62	924.22	-370.06	-373.77	1.43	1.26	2.26
4,772.00	17.23	333.82	4,631.13	950.22	-382.94	-386.75	0.76	-0.75	0.34
4,867.00	16.02	332.67	4,722.16	974.49	-395.16	-399.07	1.32	-1.27	-1.21

# Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,962.00	15.44	335.55	4,813.60	997.65	-406.41	-410.42	1.02	-0.61	3.03	
5,056.00	14.98	337.00	4,904.31	1,020.22	-416.34	-420.43	0.63	-0.49	1.54	
5,152.00	13.06	338.30	4,997.44	1,041.73	-425.20	-429.38	2.03	-2.00	1.35	
5,247.00	13.77	335.74	5,089.85	1,062.01	-433.81	-438.07	0.97	0.75	-2.69	
5,343.00	12.54	334.72	5,183.33	1,081.85	-442.96	-447.30	1.30	-1.28	-1.06	
5,438.00	12.13	336.23	5,276.14	1,100.31	-451.39	-455.80	0.55	-0.43	1.59	
5,533.00	10.28	338.53	5,369.32	1,117.33	-458.51	-462.99	2.00	-1.95	2.42	
5,628.00	8.90	339.96	5,463.00	1,132.13	-464.13	-468.68	1.47	-1.45	1.51	
5,723.00	7.31	338.32	5,557.04	1,144.65	-468.89	-473.48	1.69	-1.67	-1.73	
5,819.00	6.04	339.73	5,652.39	1,155.06	-472.89	-477.52	1.33	-1.32	1.47	
5,914.00	4.94	341.66	5,746.95	1,163.63	-475.91	-480.58	1.17	-1.16	2.03	
6,009.00	3.83	343.14	5,841.67	1,170.55	-478.12	-482.81	1.17	-1.17	1.56	
6,104.00	3.33	340.07	5,936.49	1,176.18	-479.98	-484.70	0.56	-0.53	-3.23	
6,199.00	1.70	330.20	6,031.39	1,180.00	-481.62	-486.35	1.77	-1.72	-10.39	
6,295.00	0.58	284.13	6,127.37	1,181.35	-482.80	-487.54	1.42	-1.17	-47.99	
6,391.00	0.33	355.93	6,223.37	1,181.75	-483.29	-488.03	0.59	-0.26	74.79	
6,486.00	0.36	130.15	6,318.37	1,181.83	-483.08	-487.82	0.67	0.03	141.28	
6,582.00	0.39	75.83	6,414.37	1,181.71	-482.53	-487.27	0.36	0.03	-56.58	
6,677.00	3.64	93.28	6,509.30	1,181.62	-479.21	-483.95	3.44	3.42	18.37	
6,724.00	7.00	88.92	6,556.09	1,181.59	-474.85	-479.59	7.20	7.15	-9.28	
6,772.00	10.66	83.60	6,603.51	1,182.14	-467.51	-472.26	7.80	7.63	-11.08	
6,819.00	14.52	88.34	6,649.38	1,182.79	-457.30	-462.05	8.50	8.21	10.09	
6,866.00	18.62	93.46	6,694.42	1,182.51	-443.92	-448.66	9.25	8.72	10.89	
6,913.00	22.99	94.45	6,738.34	1,181.35	-427.27	-432.01	9.33	9.30	2.11	
6,961.00	27.93	93.62	6,781.67	1,179.91	-406.69	-411.42	10.32	10.29	-1.73	
6,983.06	30.00	93.51	6,800.97	1,179.24	-396.03	-400.76	9.39	9.38	-0.50	
30° Inclination @ 6983.06' MD										
7,008.00	32.34	93.40	6,822.30	1,178.47	-383.14	-387.87	9.39	9.38	-0.44	
7,057.00	37.33	93.12	6,862.51	1,176.88	-355.21	-359.93	10.19	10.18	-0.57	
7,153.00	48.33	92.54	6,932.81	1,173.70	-290.12	-294.83	11.47	11.46	-0.60	
7,247.00	55.23	90.21	6,990.93	1,172.00	-216.35	-221.05	7.59	7.34	-2.48	
7,343.00	65.37	91.04	7,038.44	1,171.06	-133.07	-137.77	10.59	10.56	0.86	
7,380.75	70.00	91.27	7,052.77	1,170.35	-98.17	-102.86	12.28	12.27	0.60	
70° Inclination @ 7380.75' MD										
7,437.00	76.90	91.58	7,068.78	1,169.01	-44.30	-48.99	12.28	12.27	0.56	
7,532.00	86.93	91.57	7,082.12	1,166.43	49.60	44.92	10.56	10.56	-0.01	
7,573.00	87.97	91.51	7,083.95	1,165.33	90.55	85.87	2.54	2.54	-0.15	
7,653.00	89.64	91.14	7,085.62	1,163.48	170.51	165.83	2.14	2.09	-0.46	
7,717.00	89.61	90.68	7,086.03	1,162.47	234.50	229.83	0.72	-0.05	-0.72	
7,774.00	91.65	91.98	7,085.41	1,161.14	291.47	286.81	4.24	3.58	2.28	
7,813.00	89.93	90.87	7,084.87	1,160.17	330.46	325.80	5.25	-4.41	-2.85	
7,908.00	91.19	92.00	7,083.94	1,157.79	425.42	420.77	1.78	1.33	1.19	
8,003.00	90.37	92.27	7,082.65	1,154.26	520.34	515.70	0.91	-0.86	0.28	
8,098.00	90.80	91.83	7,081.68	1,150.86	615.28	610.65	0.65	0.45	-0.46	



## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,192.00	91.96	90.34	7,079.41	1,149.08	709.23	704.61	2.01	1.23	-1.59
8,288.00	91.39	87.02	7,076.61	1,151.29	805.15	800.52	3.51	-0.59	-3.46
8,334.00	93.64	87.65	7,074.59	1,153.43	851.05	846.41	5.08	4.89	1.37
8,383.00	91.53	87.66	7,072.38	1,155.43	899.96	895.31	4.31	-4.31	0.02
8,429.00	90.08	87.72	7,071.73	1,157.28	945.91	941.26	3.15	-3.15	0.13
8,479.00	91.18	90.09	7,071.18	1,158.24	995.90	991.24	5.23	2.20	4.74
8,574.00	89.48	89.38	7,070.64	1,158.68	1,090.89	1,086.23	1.94	-1.79	-0.75
8,669.00	90.39	90.32	7,070.74	1,158.93	1,185.89	1,181.23	1.38	0.96	0.99
8,765.00	90.27	90.31	7,070.19	1,158.40	1,281.88	1,277.22	0.13	-0.13	-0.01
8,860.00	92.17	89.80	7,068.17	1,158.31	1,376.86	1,372.20	2.07	2.00	-0.54
8,907.00	93.44	89.49	7,065.87	1,158.60	1,423.80	1,419.14	2.78	2.70	-0.66
8,955.00	90.71	90.52	7,064.13	1,158.59	1,471.76	1,467.10	6.08	-5.69	2.15
9,051.00	88.79	93.02	7,064.55	1,155.63	1,567.70	1,563.05	3.28	-2.00	2.60
9,097.00	87.92	92.59	7,065.87	1,153.38	1,613.63	1,608.99	2.11	-1.89	-0.93
9,146.00	87.95	91.28	7,067.64	1,151.72	1,662.57	1,657.93	2.67	0.06	-2.67
9,193.00	91.46	92.69	7,067.88	1,150.10	1,709.53	1,704.90	8.05	7.47	3.00
9,241.00	91.16	92.90	7,066.78	1,147.76	1,757.46	1,752.84	0.76	-0.63	0.44
9,289.00	89.10	88.47	7,066.67	1,147.18	1,805.44	1,800.82	10.18	-4.29	-9.23
9,337.00	89.01	89.49	7,067.46	1,148.04	1,853.43	1,848.81	2.13	-0.19	2.13
9,432.00	92.01	93.38	7,066.62	1,145.66	1,948.37	1,943.75	5.17	3.16	4.09
9,481.00	91.58	93.46	7,065.08	1,142.74	1,997.25	1,992.65	0.89	-0.88	0.16
9,528.00	90.62	91.85	7,064.18	1,140.56	2,044.19	2,039.60	3.99	-2.04	-3.43
9,575.00	89.71	89.32	7,064.04	1,140.08	2,091.19	2,086.59	5.72	-1.94	-5.38
9,623.00	89.40	88.09	7,064.42	1,141.17	2,139.17	2,134.57	2.64	-0.65	-2.56
9,719.00	90.33	88.42	7,064.64	1,144.09	2,235.13	2,230.52	1.03	0.97	0.34
9,814.00	90.44	87.81	7,064.00	1,147.21	2,330.07	2,325.45	0.65	0.12	-0.64
9,910.00	90.12	87.19	7,063.54	1,151.40	2,425.98	2,421.34	0.73	-0.33	-0.65
10,005.00	88.97	89.14	7,064.29	1,154.44	2,520.92	2,516.27	2.38	-1.21	2.05
10,058.00	87.44	88.95	7,065.95	1,155.33	2,573.89	2,569.23	2.91	-2.89	-0.36
10,100.00	86.99	89.11	7,067.99	1,156.04	2,615.83	2,611.17	1.14	-1.07	0.38
10,146.00	89.15	90.86	7,069.54	1,156.05	2,661.80	2,657.14	6.04	4.70	3.80
10,196.00	90.80	90.87	7,069.56	1,155.29	2,711.79	2,707.13	3.30	3.30	0.02
10,241.00	92.27	91.14	7,068.36	1,154.50	2,756.77	2,752.11	3.32	3.27	0.60
10,291.00	92.38	91.15	7,066.33	1,153.51	2,806.72	2,802.06	0.22	0.22	0.02
10,323.00	90.82	91.53	7,065.43	1,152.76	2,838.69	2,834.04	5.02	-4.88	1.19
10,386.00	90.44	90.96	7,064.74	1,151.39	2,901.68	2,897.03	1.09	-0.60	-0.90
10,482.00	91.58	91.52	7,063.05	1,149.31	2,997.64	2,993.00	1.32	1.19	0.58
10,577.00	89.53	91.02	7,062.13	1,147.21	3,092.60	3,087.97	2.22	-2.16	-0.53
10,634.00	88.49	90.47	7,063.11	1,146.47	3,149.59	3,144.96	2.06	-1.82	-0.96
10,668.00	89.36	90.77	7,063.75	1,146.10	3,183.58	3,178.95	2.71	2.56	0.88
10,760.00	90.04	90.65	7,064.23	1,144.96	3,275.57	3,270.95	0.75	0.74	-0.13
10,852.00	89.79	89.60	7,064.37	1,144.76	3,367.57	3,362.95	1.17	-0.27	-1.14
10,944.00	90.72	89.17	7,063.96	1,145.75	3,459.56	3,454.94	1.11	1.01	-0.47

# Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,036.00	92.11	89.01	7,061.69	1,147.21	3,551.52	3,546.89	1.52	1.51	-0.17
11,127.00	92.55	88.08	7,057.99	1,149.51	3,642.41	3,637.77	1.13	0.48	-1.02
11,220.00	94.42	90.21	7,052.34	1,150.90	3,735.22	3,730.57	3.04	2.01	2.29
11,311.00	90.85	90.94	7,048.15	1,149.99	3,826.11	3,821.46	4.00	-3.92	0.80
11,403.00	90.02	90.88	7,047.45	1,148.53	3,918.09	3,913.45	0.90	-0.90	-0.07
11,495.00	89.96	90.32	7,047.47	1,147.56	4,010.09	4,005.45	0.61	-0.07	-0.61
11,586.00	90.06	89.50	7,047.45	1,147.71	4,101.09	4,096.45	0.91	0.11	-0.90
11,678.00	90.16	89.02	7,047.28	1,148.89	4,193.08	4,188.43	0.53	0.11	-0.52
11,771.00	90.35	88.10	7,046.86	1,151.23	4,286.05	4,281.39	1.01	0.20	-0.99
11,862.00	89.98	89.73	7,046.60	1,152.95	4,377.03	4,372.36	1.84	-0.41	1.79
11,907.00	89.76	90.97	7,046.70	1,152.68	4,422.02	4,417.36	2.80	-0.49	2.76
11,958.00	89.85	90.77	7,046.88	1,151.91	4,473.02	4,468.36	0.43	0.18	-0.39
12,052.00	90.20	89.79	7,046.84	1,151.45	4,567.02	4,562.36	1.11	0.37	-1.04
12,148.00	86.93	90.46	7,049.24	1,151.24	4,662.97	4,658.31	3.48	-3.41	0.70
12,207.00	86.34	90.28	7,052.70	1,150.86	4,721.87	4,717.21	1.05	-1.00	-0.31
12,243.00	87.88	91.05	7,054.52	1,150.44	4,757.82	4,753.16	4.78	4.28	2.14
12,291.00	90.23	92.81	7,055.31	1,148.82	4,805.78	4,801.13	6.12	4.90	3.67
12,338.00	87.28	91.35	7,056.33	1,147.12	4,852.73	4,848.09	7.00	-6.28	-3.11
12,387.00	88.28	92.85	7,058.23	1,145.32	4,901.66	4,897.02	3.68	2.04	3.06
12,434.00	90.04	92.47	7,058.92	1,143.14	4,948.60	4,943.97	3.83	3.74	-0.81
12,435.84	90.07	92.48	7,058.92	1,143.06	4,950.44	4,945.81	1.51	1.48	0.28
<b>Cross @ 12435.84' MD</b>									
12,529.00	91.45	92.74	7,057.68	1,138.82	5,043.49	5,038.88	1.51	1.48	0.28
12,624.00	92.00	90.33	7,054.82	1,136.28	5,138.41	5,133.81	2.60	0.58	-2.54
12,671.00	92.63	90.35	7,052.93	1,136.00	5,185.37	5,180.77	1.34	1.34	0.04
12,720.00	92.69	90.32	7,050.65	1,135.72	5,234.32	5,229.71	0.14	0.12	-0.06
12,767.00	91.00	91.13	7,049.14	1,135.12	5,281.29	5,276.69	3.99	-3.60	1.72
12,816.00	90.52	90.40	7,048.49	1,134.47	5,330.28	5,325.68	1.78	-0.98	-1.49
12,910.00	90.77	92.87	7,047.43	1,131.79	5,424.22	5,419.64	2.64	0.27	2.63
13,006.00	90.31	92.86	7,046.52	1,126.99	5,520.10	5,515.53	0.48	-0.48	-0.01
13,101.00	90.41	90.76	7,045.93	1,123.99	5,615.05	5,610.49	2.21	0.11	-2.21
13,197.00	90.25	90.51	7,045.37	1,122.92	5,711.04	5,706.48	0.31	-0.17	-0.26
13,292.00	92.35	90.88	7,043.22	1,121.77	5,806.00	5,801.45	2.24	2.21	0.39
13,387.00	88.36	87.99	7,042.63	1,122.71	5,900.97	5,896.41	5.19	-4.20	-3.04
13,483.00	89.91	89.08	7,044.08	1,125.16	5,996.92	5,992.35	1.97	1.61	1.14
13,579.00	88.98	88.96	7,045.01	1,126.80	6,092.90	6,088.33	0.98	-0.97	-0.13
13,674.00	89.05	88.65	7,046.64	1,128.79	6,187.86	6,183.28	0.33	0.07	-0.33
13,770.00	89.63	87.56	7,047.75	1,131.96	6,283.80	6,279.21	1.29	0.60	-1.14
13,865.00	90.39	88.15	7,047.73	1,135.52	6,378.74	6,374.13	1.01	0.80	0.62
13,961.00	89.76	88.04	7,047.61	1,138.71	6,474.68	6,470.06	0.67	-0.66	-0.11
14,044.00	90.29	86.35	7,047.57	1,142.77	6,557.58	6,552.94	2.13	0.64	-2.04
14,055.00	90.20	87.29	7,047.52	1,143.38	6,568.56	6,563.92	8.58	-0.82	8.55
14,087.00	89.87	87.45	7,047.50	1,144.85	6,600.53	6,595.88	1.15	-1.03	0.50
14,122.00	89.80	88.75	7,047.60	1,146.01	6,635.51	6,630.85	3.72	-0.20	3.71

# Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,151.00	90.33	87.65	7,047.57	1,146.92	6,664.49	6,659.84	4.21	1.83	-3.79
14,247.00	92.39	89.67	7,045.29	1,149.16	6,760.43	6,755.76	3.00	2.15	2.10
14,342.00	92.34	92.02	7,041.37	1,147.76	6,855.33	6,850.67	2.47	-0.05	2.47
14,362.00	92.12	91.85	7,040.59	1,147.09	6,875.31	6,870.65	1.39	-1.10	-0.85
14,437.00	92.52	91.18	7,037.56	1,145.11	6,950.22	6,945.56	1.04	0.53	-0.89
14,533.00	91.29	93.28	7,034.37	1,141.37	7,046.08	7,041.45	2.53	-1.28	2.19
14,628.00	91.88	92.98	7,031.74	1,136.19	7,140.91	7,136.29	0.70	0.62	-0.32
14,723.00	89.68	91.80	7,030.45	1,132.23	7,235.81	7,231.20	2.63	-2.32	-1.24
14,820.00	89.57	91.76	7,031.08	1,129.21	7,332.76	7,328.17	0.12	-0.11	-0.04
14,915.00	89.60	91.00	7,031.77	1,126.93	7,427.73	7,423.14	0.80	0.03	-0.80
15,010.00	90.25	92.15	7,031.89	1,124.32	7,522.69	7,518.12	1.39	0.68	1.21
15,106.00	89.09	90.60	7,032.45	1,122.01	7,618.66	7,614.09	2.02	-1.21	-1.61
15,201.00	89.65	90.14	7,033.49	1,121.40	7,713.65	7,709.08	0.76	0.59	-0.48
15,296.00	89.88	89.21	7,033.88	1,121.94	7,808.64	7,804.08	1.01	0.24	-0.98
15,390.00	90.11	88.70	7,033.89	1,123.65	7,902.63	7,898.05	0.60	0.24	-0.54
15,485.00	91.32	89.91	7,032.70	1,124.80	7,997.61	7,993.03	1.80	1.27	1.27
15,580.00	89.09	89.99	7,032.36	1,124.89	8,092.60	8,088.02	2.35	-2.35	0.08
15,676.00	89.55	89.06	7,033.50	1,125.68	8,188.59	8,184.01	1.08	0.48	-0.97
15,771.00	89.51	88.62	7,034.28	1,127.61	8,283.57	8,278.98	0.47	-0.04	-0.46
15,866.00	89.97	89.52	7,034.71	1,129.15	8,378.55	8,373.95	1.06	0.48	0.95
15,961.00	90.74	88.27	7,034.12	1,130.98	8,473.53	8,468.92	1.55	0.81	-1.32
16,056.00	91.22	87.74	7,032.50	1,134.29	8,568.46	8,563.84	0.75	0.51	-0.56
16,151.00	91.86	90.23	7,029.95	1,135.97	8,663.40	8,658.77	2.71	0.67	2.62
16,246.00	91.22	90.63	7,027.39	1,135.26	8,758.37	8,753.74	0.79	-0.67	0.42
16,341.00	90.71	92.49	7,025.79	1,132.67	8,853.31	8,848.69	2.03	-0.54	1.96
16,436.00	91.05	91.51	7,024.33	1,129.36	8,948.24	8,943.64	1.09	0.36	-1.03
16,531.00	89.19	91.50	7,024.13	1,126.86	9,043.20	9,038.61	1.96	-1.96	-0.01
16,626.00	88.54	90.26	7,026.02	1,125.40	9,138.17	9,133.58	1.47	-0.68	-1.31
16,722.00	88.83	89.52	7,028.22	1,125.59	9,234.15	9,229.55	0.83	0.30	-0.77
16,817.00	89.81	89.77	7,029.35	1,126.17	9,329.14	9,324.54	1.06	1.03	0.26
16,912.00	92.06	89.59	7,027.80	1,126.70	9,424.12	9,419.52	2.38	2.37	-0.19
17,007.00	92.13	89.45	7,024.32	1,127.50	9,519.05	9,514.45	0.16	0.07	-0.15
17,102.00	92.03	90.13	7,020.88	1,127.85	9,613.99	9,609.38	0.72	-0.11	0.72
17,197.00	92.41	88.49	7,017.20	1,128.99	9,708.90	9,704.29	1.77	0.40	-1.73
17,253.00	93.13	89.32	7,014.49	1,130.06	9,764.83	9,760.21	1.96	1.29	1.48
Last MWD Survey @ 17253' MD									
17,319.00	93.13	89.32	7,010.89	1,130.84	9,830.72	9,826.11	0.00	0.00	0.00
Projection to TD @ 17319' MD 497.2' FNL/ 402' FEL									



## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Grinde 01-64-05-0108C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Site:</b>	Sec 05-T01N-R64W Grinde Pad	<b>MD Reference:</b>	KB @ 5041.50usft (Cade 23)
<b>Well:</b>	Grinde 01-64-05-0108C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db

### Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
30° Inclination @ 6983.0 - actual wellpath misses target center by 0.81usft at 6983.37usft MD (6801.24 TVD, 1179.23 N, -395.87 E) - Point	0.00	0.00	6,800.97	1,178.59	-395.47	1,275,636.74	3,256,108.26	40.086385	-104.584654
70° Inclination @ 7380.7 - actual wellpath misses target center by 0.67usft at 7381.30usft MD (7052.95 TVD, 1170.34 N, -97.65 E) - Point	0.00	0.00	7,052.76	1,169.70	-97.61	1,275,630.94	3,256,406.19	40.086361	-104.583589
Cross @ 12435.84' MD - actual wellpath misses target center by 0.63usft at 12436.43usft MD (7058.92 TVD, 1143.04 N, 4951.03 E) - Point	0.00	0.00	7,058.92	1,142.41	4,951.00	1,275,655.84	3,261,454.82	40.086285	-104.565545

### Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,473.50	1,469.11	93.92	-28.60	Tie into Surface Surveys
1,531.00	1,526.12	101.31	-29.93	First MWD Survey @ 1531' MD
6,983.06	6,800.97	1,179.24	-396.03	30° Inclination @ 6983.06' MD
7,380.75	7,052.77	1,170.35	-98.17	70° Inclination @ 7380.75' MD
12,435.84	7,058.92	1,143.06	4,950.44	Cross @ 12435.84' MD
17,253.00	7,014.49	1,130.06	9,764.83	Last MWD Survey @ 17253' MD
17,319.00	7,010.89	1,130.84	9,830.72	Projection to TD @ 17319' MD 497.2' FNL/ 402' FEL

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_