



PROJECT DETAILS: Weld County, CO (NAD83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level
Local North: True

HighPoint Resources
Project: Weld County, CO (NAD83)
Site: Sec 05-T01N-R64W Grinde Pad
Well: Grinde 1-64-05-6457B
Wellbore: Wellbore #1
Design: Wellbore #1 (Grinde 1-64-05-6457B/Wellbore #1)
Cade 23

WELL DETAILS: Grinde 1-64-05-6457B

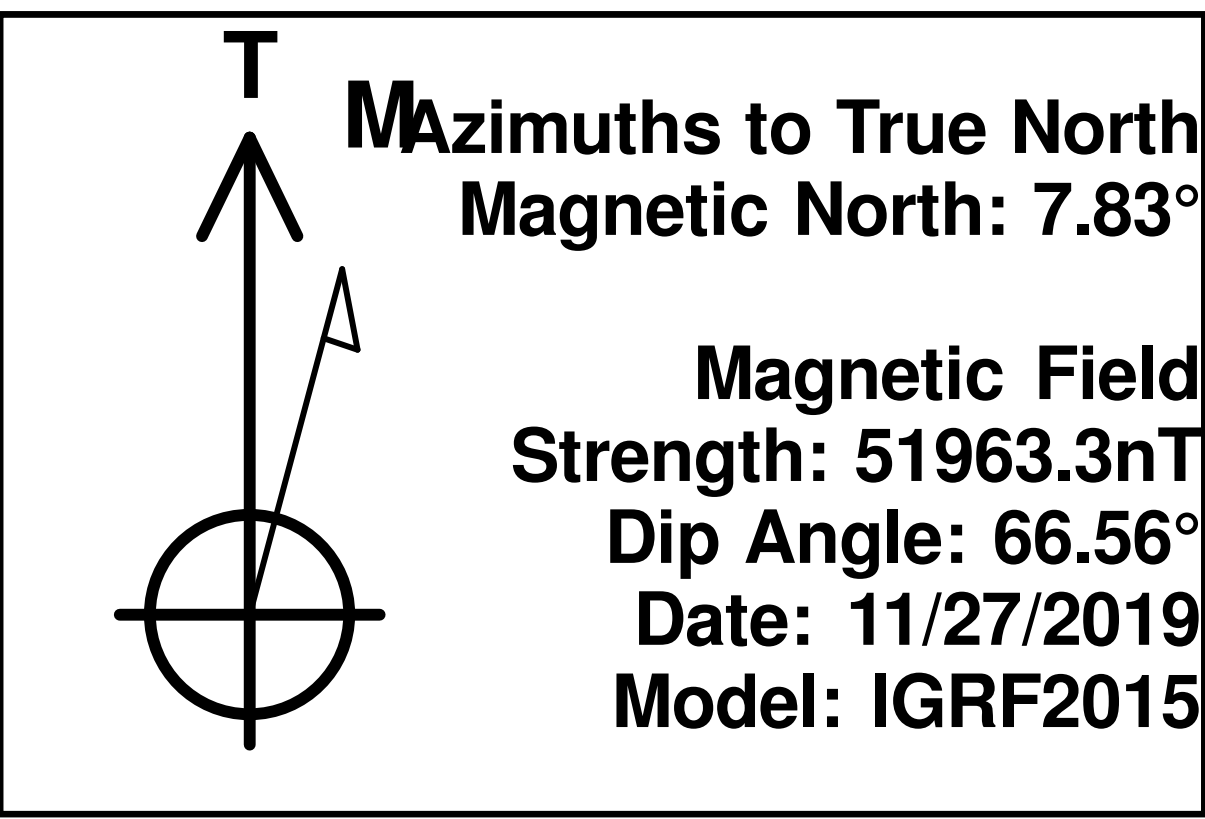
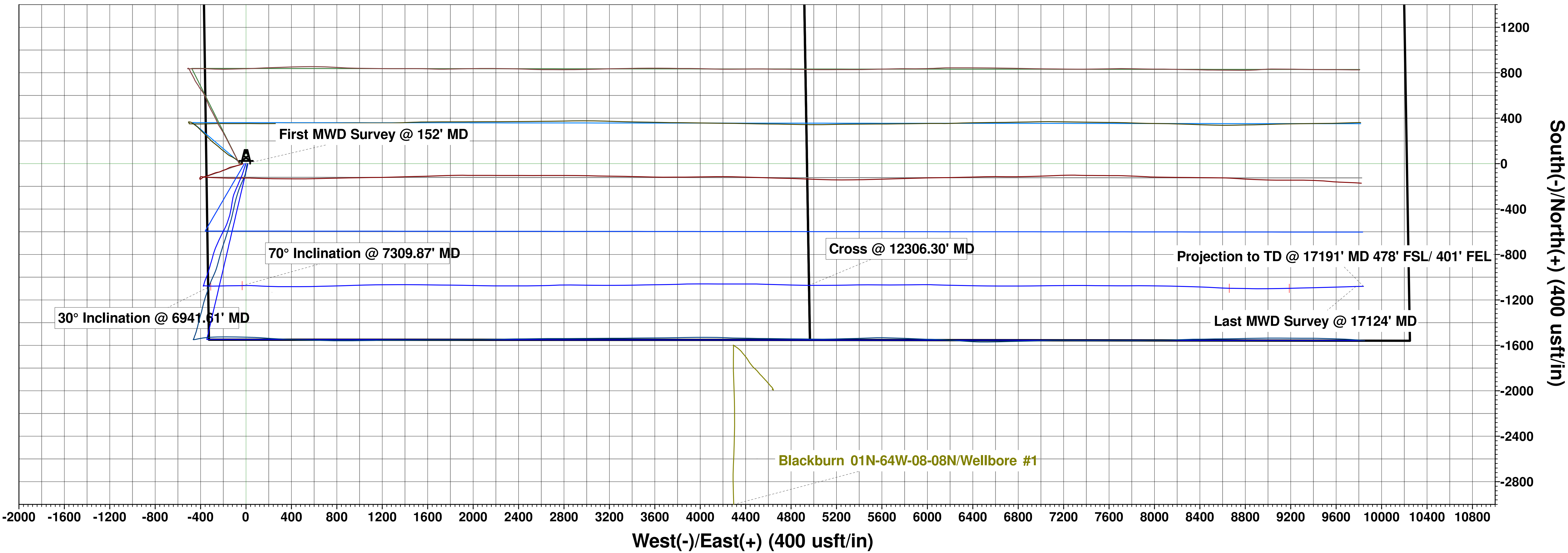
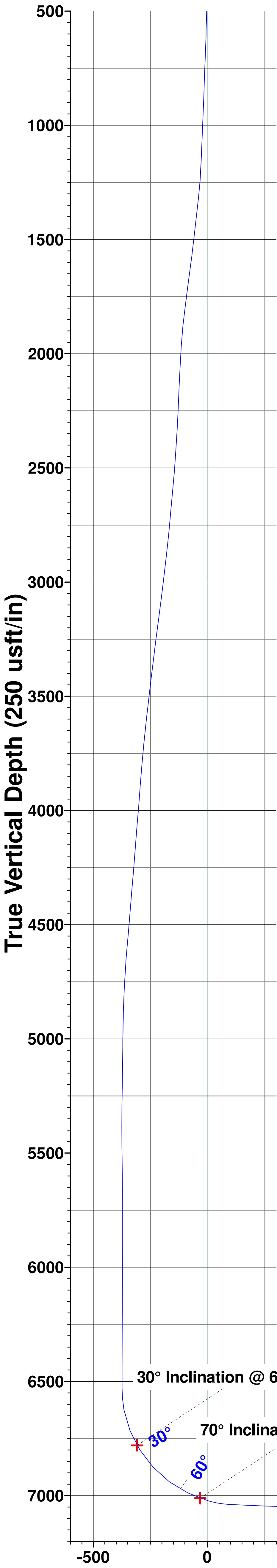
Ground Elevation:: 5030.00
RKB Elevation: KB @ 5046.50usft (Cade 23)
Rig Name: Cade 23



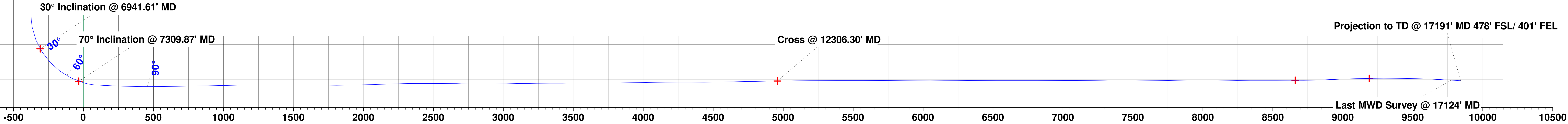
Northing	Easting	Latitude	Longitude
1272404.94	3256601.53	40.077500	-104.583010

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
152.00	0.25	330.66	152.00	0.29	-0.16	-0.16	0.33	First MWD Survey @ 152' MD
6941.61	30.00	91.94	6779.62	-1077.81	-310.20	-309.26	1229.17	30° Inclination @ 6941.61' MD
7309.87	70.00	89.42	7011.10	-1073.62	-33.76	-32.82	1504.67	70° Inclination @ 7309.87' MD
12306.30	90.86	90.62	7009.77	-1071.42	4957.60	4958.54	6496.30	Cross @ 12306.30' MD
17124.00	86.53	88.64	7003.39	-1081.93	9773.75	9774.69	11313.36	Last MWD Survey @ 17124' MD
17191.00	86.53	88.64	7007.45	-1080.34	9840.61	9841.55	11380.24	Projection to TD @ 17191' MD 478' FSL/ 401' FEL



Vertical Section at 90.05° (250 usft/in)



HighPoint Resources

Weld County, CO (NAD83)

Sec 05-T01N-R64W Grinde Pad

Grinde 1-64-05-6457B

Wellbore #1

Design: Wellbore #1

Standard Survey Report

23 December, 2019

Survey Report

Company:	HighPoint Resources	Local Co-ordinate Reference:	Well Grinde 1-64-05-6457B
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5046.50usft (Cade 23)
Site:	Sec 05-T01N-R64W Grinde Pad	MD Reference:	KB @ 5046.50usft (Cade 23)
Well:	Grinde 1-64-05-6457B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Project	Weld County, CO (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 1-64-05-6457B					
Well Position	+N/-S	0.00 usft	Northing:	1,272,404.94 usft	Latitude:	40.077500
	+E/-W	0.00 usft	Easting:	3,256,601.53 usft	Longitude:	-104.583010
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,030.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/27/2019	7.83	66.56	51,963.32387262

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	90.05	

Survey Program	Date	12/23/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
152.00	17,191.00	Atlas MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.00	0.25	330.66	152.00	0.29	-0.16	-0.16	0.16	0.16	0.00
First MWD Survey @ 152' MD									
244.00	0.89	287.03	243.99	0.67	-0.94	-0.94	0.79	0.70	-47.42
336.00	1.20	206.22	335.98	0.02	-2.05	-2.05	1.49	0.34	-87.84
427.00	2.81	192.56	426.93	-3.01	-2.96	-2.96	1.83	1.77	-15.01
519.00	4.57	201.15	518.73	-8.63	-4.77	-4.76	2.00	1.91	9.34
611.00	6.65	195.45	610.29	-17.19	-7.51	-7.50	2.34	2.26	-6.20
703.00	6.63	199.86	701.67	-27.32	-10.74	-10.71	0.55	-0.02	4.79
795.00	6.44	197.75	793.07	-37.23	-14.11	-14.08	0.33	-0.21	-2.29
887.00	7.46	197.07	884.40	-47.85	-17.44	-17.40	1.11	1.11	-0.74

Survey Report

Company:	HighPoint Resources	Local Co-ordinate Reference:	Well Grinde 1-64-05-6457B
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5046.50usft (Cade 23)
Site:	Sec 05-T01N-R64W Grinde Pad	MD Reference:	KB @ 5046.50usft (Cade 23)
Well:	Grinde 1-64-05-6457B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
978.00	7.48	196.32	974.62	-59.18	-20.84	-20.79	0.11	0.02	-0.82
1,071.00	8.05	198.58	1,066.77	-71.16	-24.61	-24.55	0.70	0.61	2.43
1,163.00	8.95	197.45	1,157.76	-84.10	-28.81	-28.74	0.99	0.98	-1.23
1,196.00	9.00	198.67	1,190.35	-88.99	-30.41	-30.33	0.60	0.15	3.70
1,345.00	16.13	202.76	1,335.69	-119.16	-42.16	-42.06	4.82	4.79	2.74
1,437.00	15.94	205.25	1,424.12	-142.37	-52.50	-52.37	0.78	-0.21	2.71
1,529.00	15.77	201.89	1,512.62	-165.39	-62.55	-62.40	1.01	-0.18	-3.65
1,624.00	18.53	203.96	1,603.39	-191.17	-73.49	-73.32	2.98	2.91	2.18
1,720.00	18.29	203.25	1,694.47	-218.95	-85.63	-85.44	0.34	-0.25	-0.74
1,816.00	18.73	202.50	1,785.51	-247.03	-97.48	-97.26	0.52	0.46	-0.78
1,911.00	18.43	199.29	1,875.56	-275.30	-108.28	-108.04	1.12	-0.32	-3.38
2,007.00	18.69	189.54	1,966.59	-304.80	-115.84	-115.57	3.24	0.27	-10.16
2,102.00	16.31	190.96	2,057.18	-332.91	-120.90	-120.61	2.55	-2.51	1.49
2,197.00	16.00	189.20	2,148.43	-358.93	-125.53	-125.22	0.61	-0.33	-1.85
2,292.00	16.41	187.22	2,239.66	-385.17	-129.31	-128.97	0.72	0.43	-2.08
2,388.00	16.38	193.17	2,331.76	-411.80	-134.10	-133.74	1.75	-0.03	6.20
2,483.00	16.21	190.88	2,422.95	-437.87	-139.65	-139.27	0.70	-0.18	-2.41
2,579.00	15.90	196.95	2,515.21	-463.61	-146.02	-145.61	1.78	-0.32	6.32
2,674.00	15.80	200.05	2,606.60	-488.21	-154.24	-153.82	0.90	-0.11	3.26
2,769.00	15.64	197.22	2,698.05	-512.59	-162.47	-162.02	0.82	-0.17	-2.98
2,865.00	14.87	201.80	2,790.67	-536.39	-170.87	-170.41	1.49	-0.80	4.77
2,960.00	14.47	207.13	2,882.57	-558.27	-180.81	-180.33	1.48	-0.42	5.61
3,056.00	14.25	206.52	2,975.57	-579.52	-191.56	-191.05	0.28	-0.23	-0.64
3,152.00	15.65	207.64	3,068.32	-601.56	-202.84	-202.32	1.49	1.46	1.17
3,247.00	16.47	206.64	3,159.62	-624.95	-214.83	-214.28	0.91	0.86	-1.05
3,342.00	16.39	205.20	3,250.74	-649.11	-226.57	-226.00	0.44	-0.08	-1.52
3,438.00	16.71	204.54	3,342.76	-673.92	-238.07	-237.48	0.39	0.33	-0.69
3,533.00	16.06	204.40	3,433.90	-698.31	-249.17	-248.56	0.69	-0.68	-0.15
3,628.00	15.80	204.20	3,525.25	-722.08	-259.90	-259.27	0.28	-0.27	-0.21
3,723.00	17.23	201.56	3,616.33	-746.96	-270.37	-269.72	1.70	1.51	-2.78
3,819.00	17.36	197.85	3,707.99	-773.82	-279.99	-279.31	1.16	0.14	-3.86
3,914.00	16.68	196.37	3,798.83	-800.39	-288.18	-287.48	0.85	-0.72	-1.56
4,010.00	16.24	194.93	3,890.90	-826.58	-295.52	-294.80	0.63	-0.46	-1.50
4,105.00	16.56	196.21	3,982.03	-852.42	-302.72	-301.98	0.51	0.34	1.35
4,200.00	16.15	197.39	4,073.19	-878.03	-310.45	-309.68	0.56	-0.43	1.24
4,296.00	15.31	194.20	4,165.60	-903.05	-317.55	-316.76	1.26	-0.88	-3.32
4,391.00	15.82	197.69	4,257.11	-927.55	-324.56	-323.75	1.12	0.54	3.67
4,486.00	15.61	197.82	4,348.56	-952.06	-332.41	-331.57	0.22	-0.22	0.14
4,582.00	14.40	197.86	4,441.29	-975.71	-340.02	-339.17	1.26	-1.26	0.04
4,677.00	13.73	201.55	4,533.44	-997.44	-347.78	-346.91	1.18	-0.71	3.88
4,772.00	12.10	202.53	4,626.03	-1,017.13	-355.74	-354.85	1.73	-1.72	1.03
4,868.00	10.22	198.89	4,720.22	-1,034.48	-362.35	-361.45	2.09	-1.96	-3.79
4,963.00	8.76	197.04	4,813.91	-1,049.37	-367.20	-366.29	1.57	-1.54	-1.95

Survey Report

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Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5046.50usft (Cade 23)
Site:	Sec 05-T01N-R64W Grinde Pad	MD Reference:	KB @ 5046.50usft (Cade 23)
Well:	Grinde 1-64-05-6457B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
5,059.00	6.56	190.63	4,909.05	-1,061.75	-370.36	-369.43	2.45	-2.29	-6.68
5,154.00	4.05	190.10	5,003.64	-1,070.39	-371.95	-371.01	2.64	-2.64	-0.56
5,250.00	1.87	200.85	5,099.51	-1,075.19	-373.10	-372.16	2.33	-2.27	11.20
5,345.00	1.33	221.91	5,194.47	-1,077.46	-374.39	-373.45	0.83	-0.57	22.17
5,439.00	1.03	238.33	5,288.45	-1,078.72	-375.83	-374.89	0.48	-0.32	17.47
5,535.00	0.52	16.99	5,384.44	-1,078.75	-376.44	-375.50	1.52	-0.53	144.44
5,630.00	1.23	26.87	5,479.43	-1,077.43	-375.85	-374.91	0.76	0.75	10.40
5,725.00	1.02	72.72	5,574.42	-1,076.27	-374.59	-373.65	0.94	-0.22	48.26
5,821.00	0.41	327.05	5,670.41	-1,075.73	-373.96	-373.02	1.25	-0.64	-110.07
5,917.00	0.65	345.33	5,766.41	-1,074.92	-374.28	-373.34	0.30	0.25	19.04
6,012.00	0.78	4.96	5,861.40	-1,073.75	-374.36	-373.43	0.29	0.14	20.66
6,108.00	0.49	22.57	5,957.39	-1,072.72	-374.15	-373.21	0.36	-0.30	18.34
6,203.00	0.11	291.86	6,052.39	-1,072.31	-374.08	-373.14	0.53	-0.40	-95.48
6,299.00	0.23	267.37	6,148.39	-1,072.29	-374.35	-373.42	0.14	0.13	-25.51
6,394.00	0.22	296.99	6,243.39	-1,072.21	-374.71	-373.77	0.12	-0.01	31.18
6,490.00	0.46	223.54	6,339.39	-1,072.41	-375.14	-374.20	0.47	0.25	-76.51
6,585.00	0.46	212.11	6,434.39	-1,073.01	-375.60	-374.67	0.10	0.00	-12.03
6,680.00	0.26	120.54	6,529.39	-1,073.44	-375.62	-374.68	0.56	-0.21	-96.39
6,725.00	4.98	106.12	6,574.33	-1,074.03	-373.65	-372.72	10.51	10.49	-32.04
6,775.00	10.75	98.95	6,623.84	-1,075.36	-366.96	-366.02	11.68	11.54	-14.34
6,871.00	21.21	90.85	6,716.01	-1,077.02	-340.67	-339.73	11.11	10.90	-8.44
6,941.61	30.00	91.94	6,779.62	-1,077.81	-310.20	-309.26	12.46	12.45	1.54
30° Inclination @ 6941.61' MD									
6,967.00	33.16	92.20	6,801.25	-1,078.29	-296.91	-295.97	12.46	12.45	1.02
7,061.00	42.41	87.18	6,875.48	-1,077.71	-239.43	-238.49	10.36	9.84	-5.34
7,157.00	53.49	89.55	6,939.68	-1,075.81	-168.29	-167.35	11.68	11.54	2.47
7,252.00	64.34	88.66	6,988.66	-1,074.51	-87.06	-86.12	11.45	11.42	-0.94
7,309.87	70.00	89.42	7,011.10	-1,073.62	-33.76	-32.82	9.85	9.78	1.31
70° Inclination @ 7309.87' MD									
7,348.00	73.73	89.89	7,022.97	-1,073.40	2.47	3.41	9.85	9.78	1.23
7,439.00	86.71	93.17	7,038.40	-1,075.84	91.91	92.85	14.70	14.26	3.60
7,536.00	87.69	92.15	7,043.14	-1,080.34	188.69	189.63	1.46	1.01	-1.05
7,631.00	88.24	90.67	7,046.51	-1,082.68	283.60	284.54	1.66	0.58	-1.56
7,726.00	88.98	89.96	7,048.81	-1,083.20	378.57	379.51	1.08	0.78	-0.75
7,822.00	90.25	90.04	7,049.46	-1,083.20	474.56	475.51	1.33	1.32	0.08
7,917.00	90.55	88.72	7,048.80	-1,082.17	569.55	570.50	1.42	0.32	-1.39
8,013.00	91.24	88.53	7,047.30	-1,079.87	665.51	666.46	0.75	0.72	-0.20
8,108.00	90.83	88.46	7,045.58	-1,077.37	760.46	761.40	0.44	-0.43	-0.07
8,203.00	90.97	88.28	7,044.09	-1,074.67	855.41	856.35	0.24	0.15	-0.19
8,299.00	91.16	88.33	7,042.30	-1,071.83	951.36	952.29	0.20	0.20	0.05
8,395.00	91.10	87.89	7,040.41	-1,068.66	1,047.28	1,048.22	0.46	-0.06	-0.46
8,490.00	90.69	89.56	7,038.93	-1,066.55	1,142.25	1,143.18	1.81	-0.43	1.76
8,586.00	90.72	89.83	7,037.75	-1,066.04	1,238.24	1,239.17	0.28	0.03	0.28
8,681.00	90.08	89.79	7,037.08	-1,065.73	1,333.23	1,334.16	0.67	-0.67	-0.04

Survey Report

Company:	HighPoint Resources	Local Co-ordinate Reference:	Well Grinde 1-64-05-6457B
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Site:	Sec 05-T01N-R64W Grinde Pad	MD Reference:	KB @ 5046.50usft (Cade 23)
Well:	Grinde 1-64-05-6457B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
8,775.00	89.47	90.06	7,037.45	-1,065.60	1,427.23	1,428.16	0.71	-0.65	0.29
8,870.00	90.46	90.90	7,037.51	-1,066.40	1,522.23	1,523.16	1.37	1.04	0.88
8,966.00	89.43	90.77	7,037.60	-1,067.80	1,618.22	1,619.15	1.08	-1.07	-0.14
9,061.00	88.86	90.22	7,039.02	-1,068.62	1,713.20	1,714.13	0.83	-0.60	-0.58
9,156.00	89.92	90.72	7,040.03	-1,069.40	1,808.19	1,809.12	1.23	1.12	0.53
9,251.00	91.16	91.34	7,039.14	-1,071.10	1,903.17	1,904.10	1.46	1.31	0.65
9,347.00	91.42	91.16	7,036.97	-1,073.20	1,999.12	2,000.06	0.33	0.27	-0.19
9,442.00	91.88	91.04	7,034.24	-1,075.02	2,094.06	2,095.00	0.50	0.48	-0.13
9,537.00	91.97	90.24	7,031.05	-1,076.08	2,189.00	2,189.94	0.85	0.09	-0.84
9,633.00	90.81	89.93	7,028.72	-1,076.22	2,284.97	2,285.91	1.25	-1.21	-0.32
9,729.00	90.79	90.14	7,027.38	-1,076.28	2,380.96	2,381.90	0.22	-0.02	0.22
9,824.00	89.49	89.77	7,027.15	-1,076.21	2,475.96	2,476.90	1.42	-1.37	-0.39
9,919.00	89.76	88.80	7,027.77	-1,075.02	2,570.95	2,571.89	1.06	0.28	-1.02
10,015.00	89.14	88.16	7,028.69	-1,072.48	2,666.91	2,667.85	0.93	-0.65	-0.67
10,110.00	88.08	87.86	7,030.99	-1,069.18	2,761.83	2,762.76	1.16	-1.12	-0.32
10,206.00	90.78	90.95	7,031.95	-1,068.18	2,857.80	2,858.73	4.27	2.81	3.22
10,301.00	90.84	91.02	7,030.61	-1,069.82	2,952.77	2,953.70	0.10	0.06	0.07
10,396.00	91.33	90.27	7,028.81	-1,070.88	3,047.75	3,048.68	0.94	0.52	-0.79
10,492.00	90.39	90.48	7,027.37	-1,071.51	3,143.73	3,144.67	1.00	-0.98	0.22
10,588.00	91.01	89.89	7,026.19	-1,071.82	3,239.73	3,240.66	0.89	0.65	-0.61
10,680.00	89.76	88.98	7,025.58	-1,070.92	3,331.72	3,332.65	1.68	-1.36	-0.99
10,772.00	90.43	89.03	7,025.42	-1,069.32	3,423.70	3,424.63	0.73	0.73	0.05
10,863.00	90.59	88.89	7,024.61	-1,067.67	3,514.68	3,515.61	0.23	0.18	-0.15
10,955.00	90.02	89.15	7,024.12	-1,066.09	3,606.67	3,607.60	0.68	-0.62	0.28
11,047.00	90.17	89.02	7,023.97	-1,064.62	3,698.66	3,699.58	0.22	0.16	-0.14
11,139.00	90.48	88.58	7,023.45	-1,062.70	3,790.63	3,791.56	0.59	0.34	-0.48
11,231.00	90.75	87.98	7,022.46	-1,059.94	3,882.59	3,883.51	0.72	0.29	-0.65
11,323.00	91.33	90.29	7,020.79	-1,058.55	3,974.55	3,975.48	2.59	0.63	2.51
11,415.00	90.82	90.40	7,019.06	-1,059.10	4,066.54	4,067.46	0.57	-0.55	0.12
11,507.00	90.40	90.29	7,018.09	-1,059.66	4,158.53	4,159.45	0.47	-0.46	-0.12
11,599.00	90.15	89.72	7,017.64	-1,059.66	4,250.53	4,251.45	0.68	-0.27	-0.62
11,691.00	89.98	90.02	7,017.54	-1,059.45	4,342.53	4,343.45	0.37	-0.18	0.33
11,783.00	89.54	89.86	7,017.92	-1,059.36	4,434.53	4,435.45	0.51	-0.48	-0.17
11,875.00	91.15	91.97	7,017.37	-1,060.83	4,526.50	4,527.43	2.88	1.75	2.29
11,967.00	91.00	91.42	7,015.64	-1,063.55	4,618.45	4,619.37	0.62	-0.16	-0.60
12,063.00	91.02	91.56	7,013.95	-1,066.04	4,714.40	4,715.33	0.15	0.02	0.15
12,158.00	91.05	91.31	7,012.24	-1,068.42	4,809.35	4,810.28	0.27	0.03	-0.26
12,254.00	90.92	91.25	7,010.59	-1,070.57	4,905.32	4,906.25	0.15	-0.14	-0.06
12,306.30	90.86	90.62	7,009.77	-1,071.42	4,957.60	4,958.54	1.21	-0.11	-1.21
Cross @ 12306.30' MD									
12,349.00	90.82	90.10	7,009.14	-1,071.69	5,000.30	5,001.23	1.21	-0.11	-1.21
12,445.00	90.53	90.06	7,008.01	-1,071.82	5,096.29	5,097.22	0.30	-0.30	-0.04
12,540.00	90.45	89.02	7,007.20	-1,071.06	5,191.28	5,192.22	1.10	-0.08	-1.09

Survey Report

Company:	HighPoint Resources	Local Co-ordinate Reference:	Well Grinde 1-64-05-6457B
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5046.50usft (Cade 23)
Site:	Sec 05-T01N-R64W Grinde Pad	MD Reference:	KB @ 5046.50usft (Cade 23)
Well:	Grinde 1-64-05-6457B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
12,636.00	90.25	88.96	7,006.61	-1,069.36	5,287.27	5,288.20	0.22	-0.21	-0.06
12,732.00	90.15	88.99	7,006.28	-1,067.65	5,383.25	5,384.18	0.11	-0.10	0.03
12,827.00	89.71	90.39	7,006.39	-1,067.13	5,478.25	5,479.17	1.54	-0.46	1.47
12,923.00	90.27	90.32	7,006.41	-1,067.73	5,574.24	5,575.17	0.59	0.58	-0.07
13,018.00	90.45	90.10	7,005.81	-1,068.08	5,669.24	5,670.17	0.30	0.19	-0.23
13,113.00	90.09	89.35	7,005.37	-1,067.62	5,764.24	5,765.17	0.88	-0.38	-0.79
13,209.00	90.38	89.79	7,004.97	-1,066.90	5,860.23	5,861.16	0.55	0.30	0.46
13,305.00	90.85	88.98	7,003.94	-1,065.87	5,956.22	5,957.15	0.98	0.49	-0.84
13,400.00	89.42	91.70	7,003.72	-1,066.43	6,051.21	6,052.14	3.23	-1.51	2.86
13,495.00	89.61	91.71	7,004.52	-1,069.26	6,146.16	6,147.09	0.20	0.20	0.01
13,591.00	89.63	90.95	7,005.16	-1,071.49	6,242.13	6,243.07	0.79	0.02	-0.79
13,685.00	89.64	91.41	7,005.76	-1,073.42	6,336.11	6,337.05	0.49	0.01	0.49
13,781.00	89.69	90.89	7,006.32	-1,075.35	6,432.09	6,433.03	0.54	0.05	-0.54
13,877.00	89.83	90.52	7,006.72	-1,076.53	6,528.08	6,529.02	0.41	0.15	-0.39
13,973.00	89.91	90.34	7,006.94	-1,077.25	6,624.08	6,625.02	0.21	0.08	-0.19
14,068.00	90.04	90.01	7,006.98	-1,077.54	6,719.08	6,720.02	0.37	0.14	-0.35
14,164.00	90.20	89.79	7,006.78	-1,077.37	6,815.08	6,816.02	0.28	0.17	-0.23
14,259.00	90.31	89.26	7,006.36	-1,076.59	6,910.07	6,911.01	0.57	0.12	-0.56
14,355.00	90.16	89.57	7,005.96	-1,075.61	7,006.07	7,007.00	0.36	-0.16	0.32
14,450.00	89.80	88.87	7,006.00	-1,074.31	7,101.06	7,101.99	0.83	-0.38	-0.74
14,545.00	89.42	89.80	7,006.64	-1,073.21	7,196.05	7,196.98	1.06	-0.40	0.98
14,640.00	88.82	89.32	7,008.10	-1,072.48	7,291.03	7,291.97	0.81	-0.63	-0.51
14,736.00	90.08	90.86	7,009.02	-1,072.63	7,387.02	7,387.96	2.07	1.31	1.60
14,832.00	90.23	90.92	7,008.76	-1,074.12	7,483.01	7,483.95	0.17	0.16	0.06
14,926.00	90.53	90.04	7,008.14	-1,074.91	7,577.01	7,577.94	0.99	0.32	-0.94
15,021.00	90.79	90.53	7,007.05	-1,075.38	7,672.00	7,672.93	0.58	0.27	0.52
15,117.00	91.25	89.65	7,005.34	-1,075.53	7,767.98	7,768.92	1.03	0.48	-0.92
15,212.00	91.07	89.93	7,003.41	-1,075.19	7,862.96	7,863.90	0.35	-0.19	0.29
15,307.00	90.30	90.77	7,002.28	-1,075.77	7,957.95	7,958.89	1.20	-0.81	0.88
15,401.00	89.55	90.67	7,002.40	-1,076.95	8,051.94	8,052.88	0.80	-0.80	-0.11
15,496.00	88.63	90.93	7,003.91	-1,078.27	8,146.92	8,147.86	1.01	-0.97	0.27
15,592.00	89.71	91.98	7,005.30	-1,080.71	8,242.88	8,243.82	1.57	1.13	1.09
15,686.00	90.70	91.74	7,004.96	-1,083.76	8,336.83	8,337.77	1.08	1.05	-0.26
15,782.00	89.81	91.99	7,004.54	-1,086.89	8,432.77	8,433.72	0.96	-0.93	0.26
15,878.00	90.10	93.55	7,004.61	-1,091.53	8,528.66	8,529.61	1.65	0.30	1.63
15,973.00	90.16	91.89	7,004.40	-1,096.03	8,623.55	8,624.50	1.75	0.06	-1.75
16,069.00	89.70	90.54	7,004.51	-1,098.07	8,719.52	8,720.48	1.49	-0.48	-1.41
16,164.00	92.31	91.46	7,002.85	-1,099.73	8,814.48	8,815.44	2.91	2.75	0.97
16,258.00	92.26	90.36	6,999.10	-1,101.22	8,908.40	8,909.35	1.17	-0.05	-1.17
16,354.00	91.95	89.32	6,995.57	-1,100.95	9,004.33	9,005.29	1.13	-0.32	-1.08
16,450.00	91.51	89.08	6,992.68	-1,099.61	9,100.28	9,101.23	0.52	-0.46	-0.25
16,544.00	90.79	88.22	6,990.79	-1,097.40	9,194.23	9,195.18	1.19	-0.77	-0.91
16,640.00	90.26	88.78	6,989.91	-1,094.88	9,290.19	9,291.14	0.80	-0.55	0.58

Survey Report

Company:	HighPoint Resources	Local Co-ordinate Reference:	Well Grinde 1-64-05-6457B
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5046.50usft (Cade 23)
Site:	Sec 05-T01N-R64W Grinde Pad	MD Reference:	KB @ 5046.50usft (Cade 23)
Well:	Grinde 1-64-05-6457B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
16,735.00	89.28	88.43	6,990.29	-1,092.57	9,385.16	9,386.11	1.10	-1.03	-0.37	
16,831.00	88.94	88.64	6,991.78	-1,090.12	9,481.12	9,482.07	0.42	-0.35	0.22	
16,927.00	88.12	88.76	6,994.25	-1,087.94	9,577.06	9,578.01	0.86	-0.85	0.13	
17,022.00	87.38	87.80	6,997.97	-1,085.09	9,671.94	9,672.89	1.28	-0.78	-1.01	
17,124.00	86.53	88.64	7,003.39	-1,081.93	9,773.75	9,774.69	1.17	-0.83	0.82	
Last MWD Survey @ 17124' MD										
17,191.00	86.53	88.64	7,007.45	-1,080.34	9,840.61	9,841.55	0.00	0.00	0.00	
Projection to TD @ 17191' MD 478' FSL/ 401' FEL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
30° Inclination @ 6941.6'	0.00	0.00	6,779.63	-1,077.78	-310.20	1,271,324.01	3,256,302.49	40.074541	-104.584119	
- actual wellpath misses target center by 0.03usft at 6941.61usft MD (6779.63 TVD, -1077.81 N, -310.20 E)										
- Point										
Enter In 460' FSL@ 165'	0.00	0.00	6,990.89	-1,097.62	9,187.00	1,271,402.38	3,265,799.39	40.074482	-104.550182	
- actual wellpath hits target center										
- Point										
Exit Out 460' FSL @ 160'	0.00	0.00	7,004.35	-1,097.04	8,658.50	1,271,397.49	3,265,270.91	40.074484	-104.552070	
- actual wellpath hits target center										
- Point										
Cross @ 12306.30' MD	0.00	0.00	7,009.77	-1,071.42	4,957.60	1,271,384.84	3,261,569.94	40.074557	-104.565295	
- actual wellpath hits target center										
- Point										
70° Inclination @ 7309.8'	0.00	0.00	7,011.10	-1,073.61	-33.76	1,271,331.03	3,256,578.87	40.074553	-104.583131	
- actual wellpath misses target center by 0.01usft at 7309.87usft MD (7011.10 TVD, -1073.62 N, -33.76 E)										
- Point										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
152.00	152.00	0.29	-0.16	First MWD Survey @ 152' MD	
6,941.61	6,779.62	-1,077.81	-310.20	30° Inclination @ 6941.61' MD	
7,309.87	7,011.10	-1,073.62	-33.76	70° Inclination @ 7309.87' MD	
12,306.30	7,009.77	-1,071.42	4,957.60	Cross @ 12306.30' MD	
17,124.00	7,003.39	-1,081.93	9,773.75	Last MWD Survey @ 17124' MD	
17,191.00	7,007.45	-1,080.34	9,840.61	Projection to TD @ 17191' MD 478' FSL/ 401' FEL	

Checked By: _____ Approved By: _____ Date: _____