



HighPoint Resources  
Project: Weld County, CO (NAD83)  
Site: Sec 33-T12N-R63W  
Well: Fox Creek 33-0362D  
Wellbore: Wellbore #1  
Design: Wellbore #1 (Fox Creek 33-0362D/Wellbore #1)

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

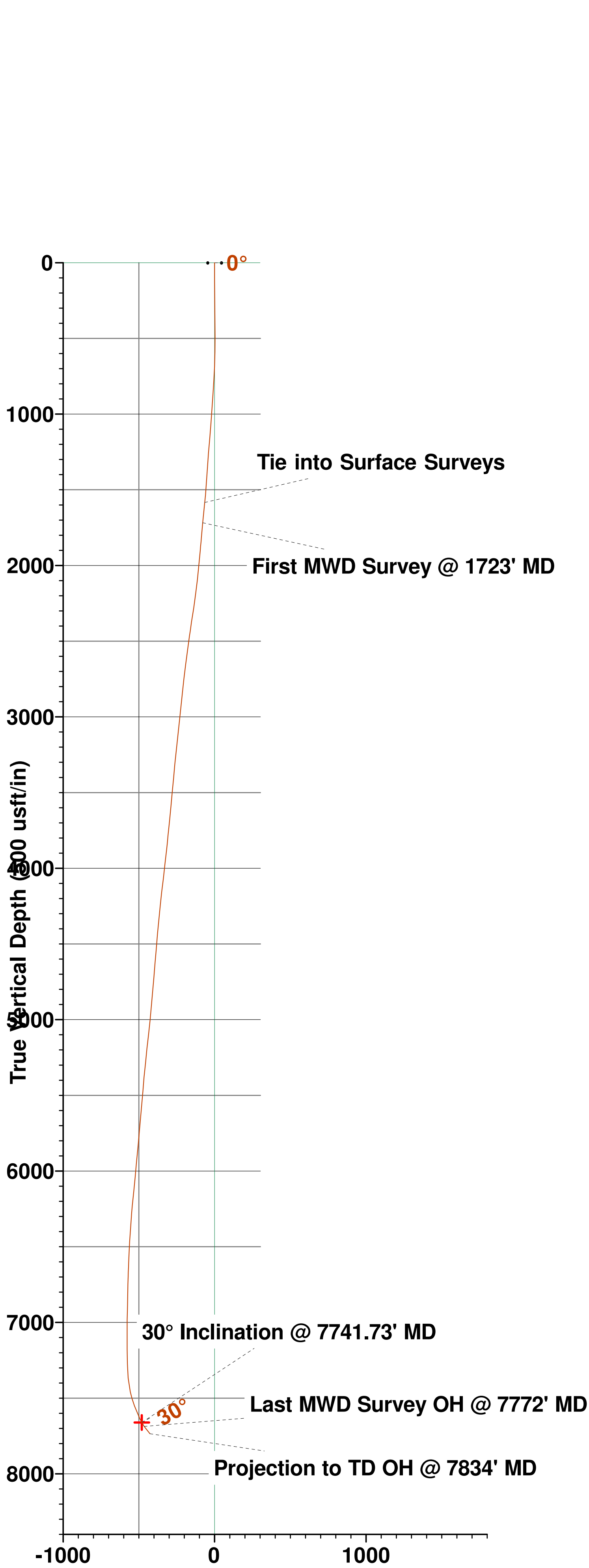
WELL DETAILS: Fox Creek 33-0362D

Ground Elevation:: 5469.60  
RKB Elevation: KB @ 5486.10usft  
Rig Name:

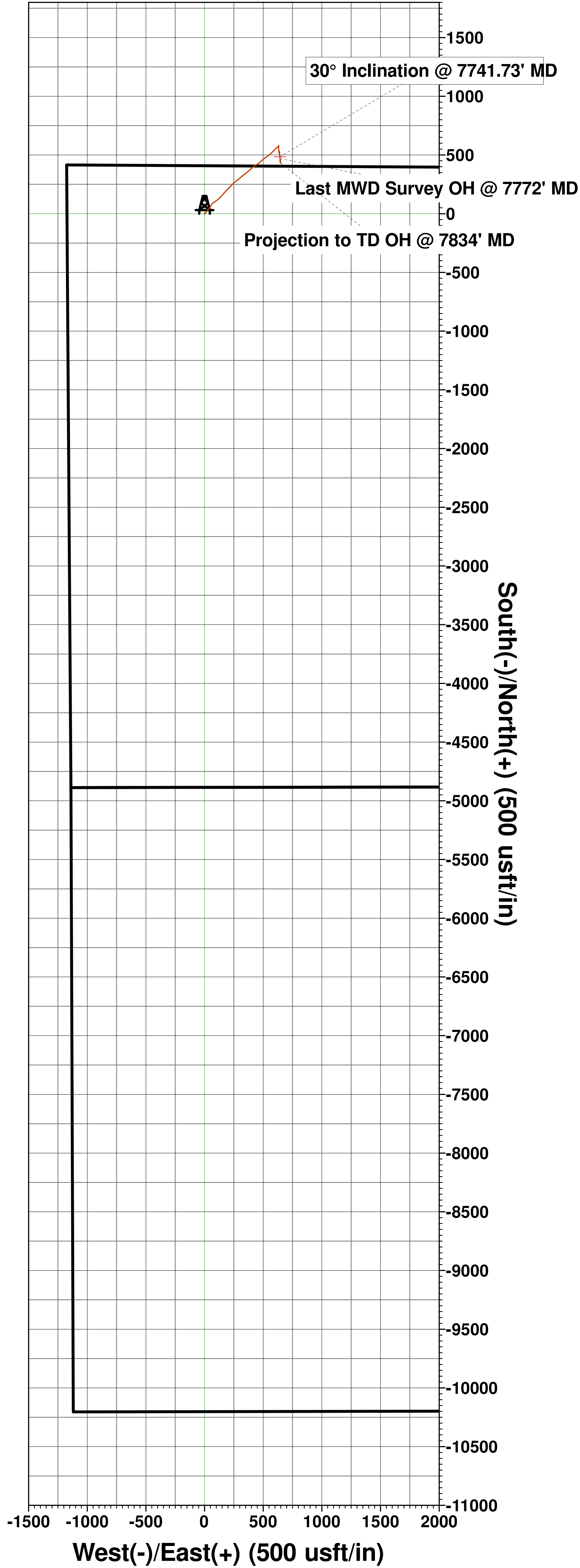
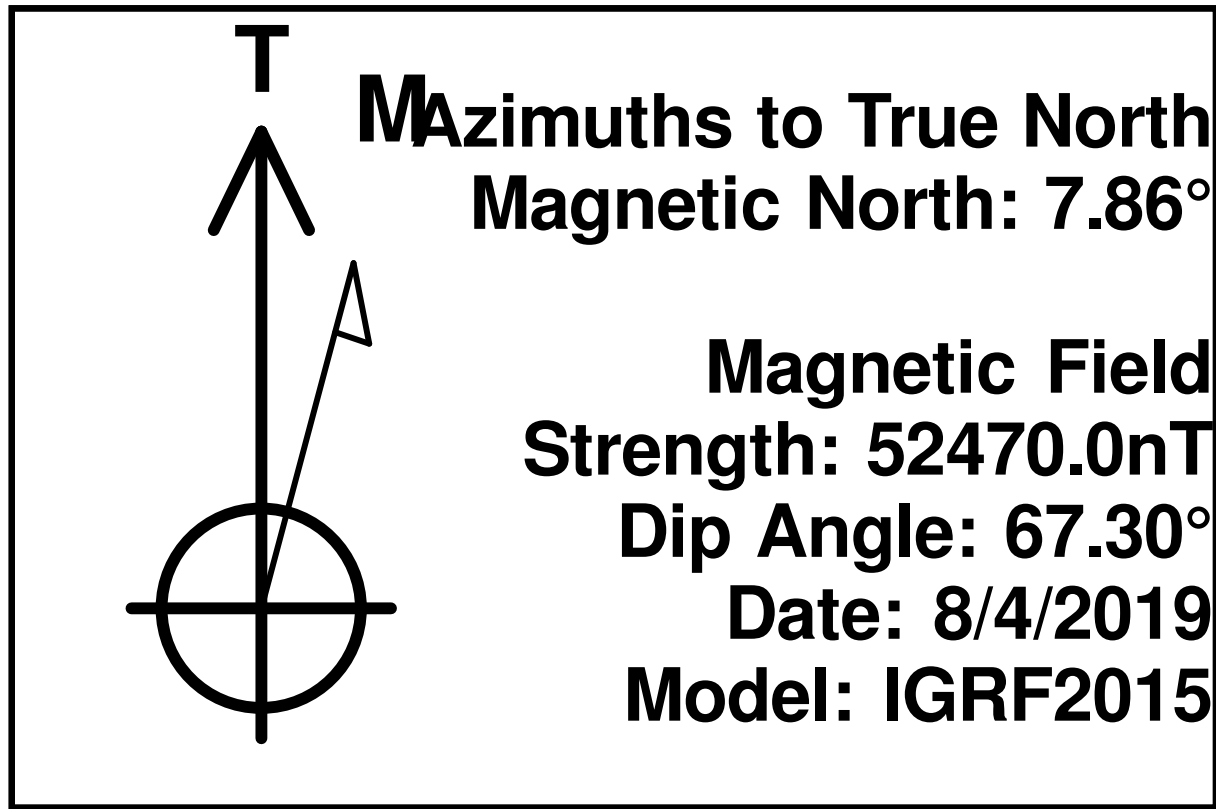
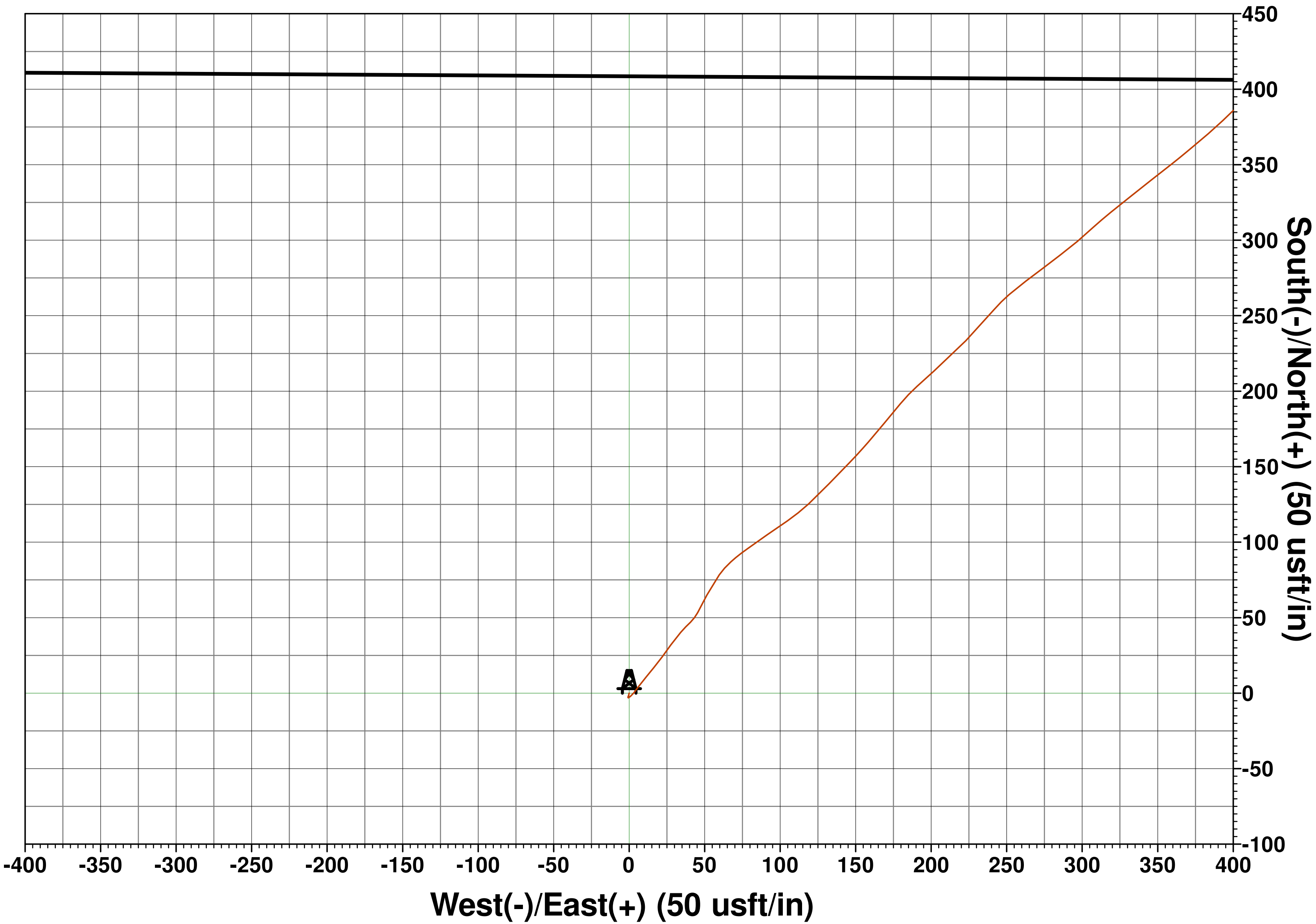
Northing	Easting	Latitude	Longitude
1598718.72	3291798.64	40.972070	-104.443346

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1587.50	6.64	28.72	1583.66	65.07	51.55	-64.79	90.38	Tie into Surface Surveys
1723.00	6.67	34.34	1718.25	78.44	59.75	-78.12	106.09	First MWD Survey @ 1723' MD
7741.73	30.00	171.06	7661.42	484.45	641.69	-480.97	972.53	30° Inclination @ 7741.73' MD
7772.00	34.20	172.10	7687.06	468.54	644.03	-465.05	987.79	Last MWD Survey OH @ 7772' MD
7834.00	42.90	173.00	7735.50	430.26	649.01	-426.74	1026.39	Projection to TD OH @ 7834' MD



Vertical Section at 179.69° (500 usft/in)



# **HighPoint Resources**

**Weld County, CO (NAD83)**

**Sec 33-T12N-R63W**

**Fox Creek 33-0362D**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**18 October, 2019**

## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Fox Creek 33-0362D
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5486.10usft
<b>Site:</b>	Sec 33-T12N-R63W	<b>MD Reference:</b>	KB @ 5486.10usft
<b>Well:</b>	Fox Creek 33-0362D	<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 33-T12N-R63W			
Site Position:		Northing:	1,599,120.15 usft	Latitude:	40.973210
From:	Lat/Long	Easting:	3,290,617.90 usft	Longitude:	-104.447604
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.68 °

Well		Fox Creek 33-0362D				
Well Position	+N/-S	0.00 usft	Northing:	1,598,718.72 usft	Latitude:	40.972070
	+E/-W	0.00 usft	Easting:	3,291,798.64 usft	Longitude:	-104.443346
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,469.60 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	8/4/2019	7.86	67.30	52,469.95297736

<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	179.69	

<b>Survey Program</b>	<b>Date</b>	10/18/2019			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
115.50	1,587.50	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,587.50	7,834.00	Atlas MWD Surveys OH (Wellbore #1)	MWD	MWD - Standard	

<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	
115.50	0.13	206.97	115.50	-0.12	-0.06	0.12	0.11	0.11	0.00	
210.50	0.35	179.46	210.50	-0.50	-0.11	0.50	0.26	0.23	-28.96	
305.50	0.75	196.95	305.49	-1.39	-0.28	1.39	0.45	0.42	18.41	
400.50	0.88	203.54	400.48	-2.65	-0.76	2.65	0.17	0.14	6.94	
496.50	0.66	62.13	496.48	-3.07	-0.56	3.07	1.52	-0.23	-147.30	
590.50	1.32	54.74	590.47	-2.19	0.80	2.20	0.71	0.70	-7.86	
685.50	2.94	36.81	685.40	0.39	3.15	-0.37	1.82	1.71	-18.87	
780.50	4.22	38.31	780.21	5.09	6.78	-5.05	1.35	1.35	1.58	
875.50	4.48	38.75	874.94	10.72	11.27	-10.66	0.28	0.27	0.46	

## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Fox Creek 33-0362D
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5486.10usft
<b>Site:</b>	Sec 33-T12N-R63W	<b>MD Reference:</b>	KB @ 5486.10usft
<b>Well:</b>	Fox Creek 33-0362D	<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)
970.50	5.45	39.54	969.58	17.09	16.46	-17.00	1.02	1.02	0.83
1,066.50	5.45	36.29	1,065.15	24.28	22.06	-24.16	0.32	0.00	-3.39
1,160.50	6.20	35.23	1,158.66	32.03	27.63	-31.88	0.81	0.80	-1.13
1,256.50	6.28	41.38	1,254.09	40.20	34.10	-40.02	0.70	0.08	6.41
1,351.50	5.10	45.78	1,348.62	47.05	40.56	-46.83	1.32	-1.24	4.63
1,446.50	4.57	28.29	1,443.29	53.33	45.38	-53.08	1.64	-0.56	-18.41
1,540.50	5.54	26.97	1,536.92	60.67	49.21	-60.40	1.04	1.03	-1.40
1,587.50	6.64	28.72	1,583.66	65.07	51.55	-64.79	2.37	2.34	3.72
Tie into Surface Surveys									
1,723.00	6.67	34.34	1,718.25	78.44	59.75	-78.12	0.48	0.02	4.15
First MWD Survey @ 1723' MD									
1,817.00	7.38	48.05	1,811.55	86.98	67.32	-86.62	1.93	0.76	14.59
1,913.00	9.24	54.40	1,906.54	95.59	78.17	-95.17	2.16	1.94	6.61
2,008.00	9.94	55.06	2,000.21	104.73	91.10	-104.23	0.75	0.74	0.69
2,103.00	10.43	55.98	2,093.71	114.24	104.94	-113.67	0.54	0.52	0.97
2,198.00	11.14	47.12	2,187.04	125.29	118.80	-124.65	1.90	0.75	-9.33
2,293.00	11.84	43.86	2,280.14	138.57	132.28	-137.85	1.00	0.74	-3.43
2,388.00	12.20	44.13	2,373.05	152.80	146.02	-152.00	0.38	0.38	0.28
2,483.00	10.16	40.38	2,466.25	166.39	158.44	-165.53	2.28	-2.15	-3.95
2,578.00	9.99	40.03	2,559.78	179.08	169.17	-178.16	0.19	-0.18	-0.37
2,673.00	9.85	39.24	2,653.36	191.68	179.61	-190.71	0.21	-0.15	-0.83
2,769.00	9.41	48.27	2,748.01	203.27	190.66	-202.23	1.64	-0.46	9.41
2,864.00	8.93	48.09	2,841.80	213.36	201.94	-212.26	0.51	-0.51	-0.19
3,056.00	8.53	44.26	3,031.58	233.51	222.97	-232.30	0.37	-0.21	-1.99
3,245.00	8.40	40.25	3,218.52	254.09	241.67	-252.78	0.32	-0.07	-2.12
3,340.00	8.48	49.94	3,312.49	263.89	251.52	-262.53	1.50	0.08	10.20
3,436.00	8.66	52.37	3,407.42	272.86	262.66	-271.44	0.42	0.19	2.53
3,531.00	8.75	53.16	3,501.33	281.56	274.10	-280.07	0.16	0.09	0.83
3,625.00	8.71	52.76	3,594.24	290.15	285.49	-288.60	0.08	-0.04	-0.43
3,721.00	8.84	50.08	3,689.12	299.29	296.94	-297.68	0.45	0.14	-2.79
3,816.00	8.31	46.73	3,783.05	308.68	307.53	-307.01	0.77	-0.56	-3.53
3,911.00	9.90	51.62	3,876.86	318.45	318.94	-316.72	1.86	1.67	5.15
4,005.00	10.43	51.00	3,969.38	328.82	331.88	-327.02	0.58	0.56	-0.66
4,100.00	10.91	52.10	4,062.74	339.76	345.66	-337.88	0.55	0.51	1.16
4,195.00	11.09	51.40	4,155.99	350.98	359.89	-349.03	0.24	0.19	-0.74
4,291.00	8.88	50.16	4,250.53	361.49	372.80	-359.47	2.31	-2.30	-1.29
4,386.00	8.22	49.28	4,344.48	370.62	383.58	-368.54	0.71	-0.69	-0.93
4,481.00	7.42	46.42	4,438.59	379.28	393.17	-377.14	0.94	-0.84	-3.01
4,576.00	7.07	45.58	4,532.83	387.60	401.79	-385.42	0.38	-0.37	-0.88
4,671.00	8.13	53.82	4,627.00	395.66	411.39	-393.42	1.60	1.12	8.67
4,767.00	8.57	55.72	4,721.98	403.69	422.78	-401.40	0.54	0.46	1.98
4,862.00	8.88	57.22	4,815.88	411.65	434.79	-409.29	0.40	0.33	1.58
4,957.00	9.50	58.93	4,909.66	419.66	447.67	-417.24	0.71	0.65	1.80

# Survey Report

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<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5486.10usft
<b>Site:</b>	Sec 33-T12N-R63W	<b>MD Reference:</b>	KB @ 5486.10usft
<b>Well:</b>	Fox Creek 33-0362D	<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)	
5,052.00	9.68	50.61	5,003.34	428.78	460.56	-426.28	1.47	0.19	-8.76	
5,147.00	9.50	49.28	5,097.01	438.96	472.67	-436.40	0.30	-0.19	-1.40	
5,242.00	9.10	46.82	5,190.76	449.22	484.09	-446.59	0.59	-0.42	-2.59	
5,338.00	8.93	50.69	5,285.58	459.13	495.39	-456.45	0.66	-0.18	4.03	
5,433.00	8.53	50.61	5,379.48	468.28	506.54	-465.53	0.42	-0.42	-0.08	
5,528.00	7.87	53.16	5,473.51	476.65	517.19	-473.84	0.79	-0.69	2.68	
5,623.00	8.97	56.69	5,567.48	484.61	528.59	-481.75	1.28	1.16	3.72	
5,718.00	8.79	55.85	5,661.34	492.75	540.79	-489.82	0.23	-0.19	-0.88	
5,814.00	8.04	51.18	5,756.31	501.08	552.09	-498.09	1.06	-0.78	-4.86	
5,908.00	8.35	48.05	5,849.35	509.76	562.28	-506.72	0.58	0.33	-3.33	
6,003.00	7.47	45.58	5,943.45	518.70	571.83	-515.60	0.99	-0.93	-2.60	
6,098.00	8.18	47.83	6,037.56	527.56	581.25	-524.41	0.81	0.75	2.37	
6,193.00	7.82	42.94	6,131.64	536.83	590.66	-533.62	0.81	-0.38	-5.15	
6,289.00	7.78	43.55	6,226.75	546.32	599.58	-543.06	0.10	-0.04	0.64	
6,385.00	6.10	46.46	6,322.04	554.54	607.76	-551.24	1.79	-1.75	3.03	
6,480.00	5.57	44.44	6,416.55	561.31	614.65	-557.98	0.60	-0.56	-2.13	
6,575.00	4.24	50.12	6,511.20	566.85	620.57	-563.49	1.49	-1.40	5.98	
6,670.00	4.15	59.37	6,605.95	570.86	626.22	-567.46	0.72	-0.09	9.74	
6,764.00	2.34	39.02	6,699.80	574.08	630.36	-570.66	2.25	-1.93	-21.65	
6,860.00	1.28	35.45	6,795.75	576.48	632.21	-573.05	1.11	-1.10	-3.72	
6,956.00	1.77	24.12	6,891.71	578.70	633.44	-575.27	0.60	0.51	-11.80	
7,051.00	0.88	349.69	6,986.69	580.76	633.91	-577.32	1.22	-0.94	-36.24	
7,146.00	0.13	208.81	7,081.68	581.38	633.73	-577.95	1.04	-0.79	-148.29	
7,241.00	0.49	228.42	7,176.68	581.02	633.37	-577.58	0.39	0.38	20.64	
7,336.00	1.55	184.31	7,271.67	579.47	632.97	-576.04	1.31	1.12	-46.43	
7,431.00	4.51	193.21	7,366.52	574.55	632.02	-571.12	3.15	3.12	9.37	
7,525.00	13.26	179.24	7,459.31	560.14	631.32	-556.72	9.52	9.31	-14.86	
7,571.00	16.79	174.30	7,503.74	548.25	632.05	-544.83	8.16	7.67	-10.74	
7,621.00	19.31	172.28	7,551.27	532.87	633.88	-529.44	5.19	5.04	-4.04	
7,716.00	26.43	169.94	7,638.75	496.44	639.69	-492.97	7.55	7.49	-2.46	
7,741.73	30.00	171.06	7,661.42	484.45	641.69	-480.97	14.01	13.86	4.35	
30° Inclination @ 7741.73' MD										
7,772.00	34.20	172.10	7,687.06	468.54	644.03	-465.05	14.01	13.89	3.44	
Last MWD Survey OH @ 7772' MD										
7,834.00	42.90	173.00	7,735.50	430.26	649.01	-426.74	14.06	14.03	1.45	
Projection to TD OH @ 7834' MD										

## Survey Report

<b>Company:</b>	HighPoint Resources	<b>Local Co-ordinate Reference:</b>	Well Fox Creek 33-0362D
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5486.10usft
<b>Site:</b>	Sec 33-T12N-R63W	<b>MD Reference:</b>	KB @ 5486.10usft
<b>Well:</b>	Fox Creek 33-0362D	<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 @ 7741.7 - actual wellpath misses target center by 0.01usft at 7741.73usft MD (7661.42 TVD, 484.45 N, 641.69 E) - Point	0.00	0.00	7,661.42	484.45	641.70	1,599,210.78	3,292,434.52	40.973399	-104.441023

### Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,587.50	1,583.66	65.07	51.55	Tie into Surface Surveys
1,723.00	1,718.25	78.44	59.75	First MWD Survey @ 1723' MD
7,741.73	7,661.42	484.45	641.69	30° Inclination @ 7741.73' MD
7,772.00	7,687.06	468.54	644.03	Last MWD Survey OH @ 7772' MD
7,834.00	7,735.50	430.26	649.01	Projection to TD OH @ 7834' MD

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