



# **Ursa Operating Company, LLC**

**Rockies Region**

**Monument Ridge B**

**Monument Ridge B 33C-08-07-95**

**Wellbore #1**

**Design: Production**

## **End of Well Report**

**11 January, 2016**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Monument Ridge B 33C-08-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	Monument Ridge B 33C-08-07-95 @ 5718.8usft (PLAN
<b>Site:</b>	Monument Ridge B	<b>MD Reference:</b>	Monument Ridge B 33C-08-07-95 @ 5718.8usft (PLAN
<b>Well:</b>	Monument Ridge B 33C-08-07-95	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Production	<b>Database:</b>	EDM 5000.1 Single User Db

Project		Rockies Region	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Monument Ridge B						
Site Position:		Northing:		1,596,716.56	usft	Latitude:		39° 26' 40.501 N
From:	Lat/Long	Easting:		2,287,433.43	usft	Longitude:		108° 1' 24.665 W
Position Uncertainty:	0.0	Slot Radius:		13-3/16	"	Grid Convergence:		-1.59 °

Well		Monument Ridge B 33C-08-07-95, SHL: 39.447681866 -108.012356018				
Well Position	+N-S	0.0 usft	Northing:	1,597,757.23 usft	Latitude:	39° 26' 51.655 N
	+E-W	0.0 usft	Easting:	2,290,615.67 usft	Longitude:	108° 0' 44.482 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,718.8 usft	Ground Level:	5,701.8 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/16/2015	9.78	65.57	51,778

Design		Production			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0		0.0	0.0	291.38

Survey Program		Date	1/11/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
140.0	7,420.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
140.0	0.62	341.04	140.0	0.5	0.7	-0.2	0.44	0.44	0.00	
170.0	0.80	335.90	170.0	0.7	1.1	-0.4	0.64	0.60	-17.13	
201.0	0.83	345.87	201.0	1.0	1.5	-0.5	0.47	0.10	32.16	
231.0	0.95	347.40	231.0	1.3	1.9	-0.6	0.41	0.40	5.10	
262.0	0.83	336.56	262.0	1.6	2.4	-0.8	0.67	-0.39	-34.97	
293.0	0.83	319.55	293.0	2.0	2.8	-1.0	0.79	0.00	-54.87	
323.0	0.88	321.70	323.0	2.3	3.1	-1.3	0.20	0.17	7.17	
354.0	0.73	310.98	354.0	2.7	3.4	-1.6	0.68	-0.48	-34.58	
384.0	0.68	275.13	384.0	3.1	3.6	-1.9	1.46	-0.17	-119.50	
415.0	0.87	263.91	415.0	3.5	3.6	-2.3	0.78	0.61	-36.19	
446.0	1.27	274.68	446.0	4.0	3.6	-2.9	1.44	1.29	34.74	
476.0	2.20	287.29	476.0	4.9	3.8	-3.8	3.33	3.10	42.03	
507.0	3.08	289.14	506.9	6.3	4.2	-5.1	2.85	2.84	5.97	
537.0	3.69	288.96	536.9	8.1	4.8	-6.8	2.03	2.03	-0.60	
567.0	4.54	289.87	566.8	10.2	5.5	-8.9	2.84	2.83	3.03	
597.0	5.41	290.90	596.7	12.9	6.4	-11.3	2.92	2.90	3.43	
628.0	6.05	288.57	627.5	15.9	7.5	-14.2	2.20	2.06	-7.52	
658.0	6.64	290.15	657.3	19.3	8.6	-17.3	2.05	1.97	5.27	
688.0	7.56	291.69	687.1	23.0	9.9	-20.8	3.13	3.07	5.13	
719.0	8.83	293.75	717.8	27.4	11.6	-24.9	4.20	4.10	6.65	
749.0	9.58	294.19	747.4	32.2	13.5	-29.2	2.51	2.50	1.47	
792.0	11.16	292.57	789.7	39.9	16.6	-36.4	3.74	3.67	-3.77	
835.0	12.22	290.99	831.8	48.6	19.8	-44.4	2.57	2.47	-3.67	
877.0	13.23	290.02	872.8	57.9	23.1	-53.1	2.46	2.40	-2.31	
920.0	14.50	286.72	914.5	68.2	26.3	-62.9	3.48	2.95	-7.67	
963.0	15.60	284.75	956.0	79.3	29.3	-73.6	2.82	2.56	-4.58	

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<b>Well:</b>	Monument Ridge B 33C-08-07-95	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Production	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
1,005.0	17.14	286.50	996.3	91.0	32.5	-85.0	3.85	3.67	4.17	
1,048.0	19.10	288.15	1,037.2	104.4	36.5	-97.8	4.71	4.56	3.84	
1,091.0	20.70	288.09	1,077.6	119.0	41.1	-111.7	3.72	3.72	-0.14	
1,134.0	21.75	289.05	1,117.7	134.5	46.0	-126.5	2.57	2.44	2.23	
1,176.0	23.03	290.59	1,156.6	150.5	51.5	-141.5	3.35	3.05	3.67	
1,219.0	23.82	291.12	1,196.0	167.6	57.5	-157.5	1.90	1.84	1.23	
1,262.0	25.62	292.52	1,235.1	185.6	64.2	-174.2	4.40	4.19	3.26	
1,304.0	26.94	292.44	1,272.7	204.2	71.3	-191.4	3.14	3.14	-0.19	
1,347.0	28.56	292.70	1,310.8	224.2	79.0	-209.8	3.78	3.77	0.60	
1,390.0	30.28	293.27	1,348.2	245.3	87.3	-229.3	4.05	4.00	1.33	
1,432.0	31.55	293.80	1,384.3	266.9	95.9	-249.1	3.09	3.02	1.26	
1,475.0	31.55	292.88	1,420.9	289.4	104.8	-269.7	1.12	0.00	-2.14	
1,518.0	31.69	291.04	1,457.5	311.9	113.2	-290.6	2.27	0.33	-4.28	
1,561.0	31.60	289.80	1,494.1	334.5	121.1	-311.8	1.53	-0.21	-2.88	
1,603.0	31.55	289.14	1,529.9	356.4	128.4	-332.5	0.83	-0.12	-1.57	
1,646.0	32.08	289.67	1,566.5	379.1	136.0	-353.9	1.39	1.23	1.23	
1,689.0	31.97	289.37	1,602.9	401.9	143.6	-375.4	0.45	-0.26	-0.70	
1,731.0	32.30	289.84	1,638.5	424.2	151.1	-396.4	0.99	0.79	1.12	
1,765.0	32.34	289.76	1,667.2	442.4	157.2	-413.5	0.17	0.12	-0.24	
1,848.0	31.99	289.27	1,737.5	486.6	172.0	-455.2	0.53	-0.42	-0.59	
1,933.0	30.89	290.33	1,810.0	530.9	187.0	-496.9	1.45	-1.29	1.25	
2,019.0	29.71	289.27	1,884.2	574.2	201.7	-537.7	1.51	-1.37	-1.23	
2,104.0	30.17	291.82	1,957.9	616.7	216.6	-577.4	1.59	0.54	3.00	
2,190.0	29.05	291.25	2,032.7	659.1	232.2	-616.9	1.34	-1.30	-0.66	
2,275.0	29.71	292.88	2,106.7	700.8	247.9	-655.6	1.22	0.78	1.92	
2,360.0	30.81	293.27	2,180.2	743.7	264.7	-695.0	1.31	1.29	0.46	
2,446.0	29.49	292.96	2,254.5	786.8	281.6	-734.7	1.55	-1.53	-0.36	

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2,531.0	29.63	292.25	2,328.5	828.7	297.7	-773.4	0.44	0.16	-0.84	
2,616.0	28.83	291.47	2,402.6	870.3	313.2	-811.9	1.04	-0.94	-0.92	
2,702.0	29.09	293.36	2,477.9	911.9	329.1	-850.4	1.11	0.30	2.20	
2,787.0	29.31	292.96	2,552.1	953.3	345.4	-888.6	0.35	0.26	-0.47	
2,872.0	29.93	291.60	2,626.0	995.3	361.3	-927.4	1.08	0.73	-1.60	
2,958.0	31.19	292.77	2,700.0	1,039.1	377.8	-967.9	1.62	1.47	1.36	
3,043.0	30.01	293.72	2,773.2	1,082.3	394.9	-1,007.7	1.50	-1.39	1.12	
3,129.0	31.38	292.26	2,847.1	1,126.2	412.0	-1,048.1	1.81	1.59	-1.70	
3,214.0	30.89	292.48	2,919.9	1,170.1	428.8	-1,088.7	0.59	-0.58	0.26	
3,300.0	30.54	294.02	2,993.8	1,214.0	446.1	-1,129.1	1.00	-0.41	1.79	
3,385.0	29.62	293.49	3,067.4	1,256.6	463.3	-1,168.1	1.13	-1.08	-0.62	
3,470.0	29.79	292.04	3,141.2	1,298.7	479.6	-1,206.9	0.87	0.20	-1.71	
3,555.0	31.07	292.92	3,214.5	1,341.7	496.0	-1,246.7	1.59	1.51	1.04	
3,641.0	29.66	292.74	3,288.7	1,385.2	512.9	-1,286.8	1.64	-1.64	-0.21	
3,726.0	29.93	291.47	3,362.5	1,427.4	528.8	-1,325.9	0.81	0.32	-1.49	
3,811.0	30.32	291.21	3,436.0	1,470.1	544.3	-1,365.6	0.48	0.46	-0.31	
3,897.0	28.98	290.40	3,510.7	1,512.6	559.4	-1,405.4	1.63	-1.56	-0.94	
3,982.0	29.14	290.94	3,585.0	1,553.9	574.0	-1,444.0	0.36	0.19	0.64	
4,068.0	27.38	290.06	3,660.8	1,594.6	588.3	-1,482.2	2.10	-2.05	-1.02	
4,153.0	26.71	290.49	3,736.5	1,633.3	601.7	-1,518.4	0.82	-0.79	0.51	
4,239.0	25.17	290.49	3,813.8	1,670.9	614.8	-1,553.7	1.79	-1.79	0.00	
4,325.0	24.35	290.37	3,891.9	1,706.9	627.4	-1,587.4	0.96	-0.95	-0.14	
4,410.0	22.84	289.02	3,969.8	1,740.9	638.9	-1,619.4	1.89	-1.78	-1.59	
4,496.0	21.05	288.13	4,049.6	1,773.0	649.1	-1,649.9	2.12	-2.08	-1.03	
4,580.0	19.47	288.13	4,128.4	1,802.0	658.2	-1,677.5	1.88	-1.88	0.00	
4,666.0	17.27	285.62	4,210.0	1,829.0	666.1	-1,703.4	2.72	-2.56	-2.92	
4,750.0	15.60	290.81	4,290.5	1,852.7	673.4	-1,726.0	2.65	-1.99	6.18	

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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
4,836.0	13.75	289.10	4,373.7	1,874.5	680.9	-1,746.5	2.21	-2.15	-1.99	
4,921.0	12.35	296.35	4,456.5	1,893.7	688.2	-1,764.2	2.53	-1.65	8.53	
5,007.0	10.06	298.24	4,540.9	1,910.3	695.9	-1,779.0	2.70	-2.66	2.20	
5,092.0	8.00	303.38	4,624.8	1,923.5	702.6	-1,790.5	2.60	-2.42	6.05	
5,177.0	6.90	301.40	4,709.1	1,934.3	708.6	-1,799.8	1.33	-1.29	-2.33	
5,263.0	6.06	300.96	4,794.6	1,943.8	713.6	-1,808.1	0.98	-0.98	-0.51	
5,348.0	5.63	297.67	4,879.1	1,952.4	717.8	-1,815.7	0.64	-0.51	-3.87	
5,433.0	5.10	297.53	4,963.8	1,960.3	721.5	-1,822.7	0.62	-0.62	-0.16	
5,519.0	2.90	290.46	5,049.5	1,966.3	724.0	-1,828.1	2.62	-2.56	-8.22	
5,604.0	2.59	291.60	5,134.4	1,970.3	725.5	-1,831.9	0.37	-0.36	1.34	
5,689.0	2.68	288.44	5,219.4	1,974.3	726.8	-1,835.6	0.20	0.11	-3.72	
5,775.0	0.53	285.01	5,305.3	1,976.7	727.6	-1,837.9	2.50	-2.50	-3.99	
5,860.0	0.57	225.38	5,390.3	1,977.2	727.4	-1,838.6	0.64	0.05	-70.15	
5,945.0	0.44	225.90	5,475.3	1,977.5	726.9	-1,839.1	0.15	-0.15	0.61	
6,031.0	0.57	201.12	5,561.3	1,977.7	726.2	-1,839.5	0.29	0.15	-28.81	
6,116.0	0.79	214.35	5,646.3	1,977.8	725.3	-1,840.0	0.32	0.26	15.56	
6,202.0	0.91	198.26	5,732.3	1,977.9	724.2	-1,840.5	0.31	0.14	-18.71	
6,287.0	1.14	185.69	5,817.3	1,977.6	722.7	-1,840.8	0.38	0.27	-14.79	
6,373.0	1.32	181.12	5,903.3	1,977.0	720.9	-1,840.9	0.24	0.21	-5.31	
6,458.0	0.88	20.68	5,988.3	1,976.7	720.5	-1,840.7	2.55	-0.52	-188.75	
6,544.0	0.79	10.09	6,074.2	1,976.8	721.7	-1,840.4	0.21	-0.10	-12.31	
6,629.0	0.48	11.14	6,159.2	1,977.0	722.6	-1,840.2	0.36	-0.36	1.24	
6,714.0	0.31	55.66	6,244.2	1,977.0	723.1	-1,840.0	0.40	-0.20	52.38	
6,800.0	0.22	100.97	6,330.2	1,976.7	723.2	-1,839.6	0.26	-0.10	52.69	
6,885.0	0.55	147.95	6,415.2	1,976.2	722.8	-1,839.2	0.51	0.39	55.27	
6,970.0	0.70	157.30	6,500.2	1,975.5	722.0	-1,838.8	0.21	0.18	11.00	
7,056.0	0.62	187.76	6,586.2	1,975.0	721.1	-1,838.7	0.41	-0.09	35.42	

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7,141.0	0.46	253.72	6,671.2	1,975.2	720.5	-1,839.1	0.71	-0.19	77.60	
7,226.0	0.35	289.98	6,756.2	1,975.7	720.5	-1,839.6	0.32	-0.13	42.66	
7,312.0	0.13	255.61	6,842.2	1,976.0	720.6	-1,840.0	0.29	-0.26	-39.97	
7,365.0	0.04	250.07	6,895.2	1,976.1	720.6	-1,840.0	0.17	-0.17	-10.45	
Projection to Bit										
7,420.0	0.04	250.07	6,950.2	1,976.1	720.5	-1,840.1	0.00	0.00	0.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
7,365.0	6,895.2	720.6	-1,840.0	Projection to Bit	

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

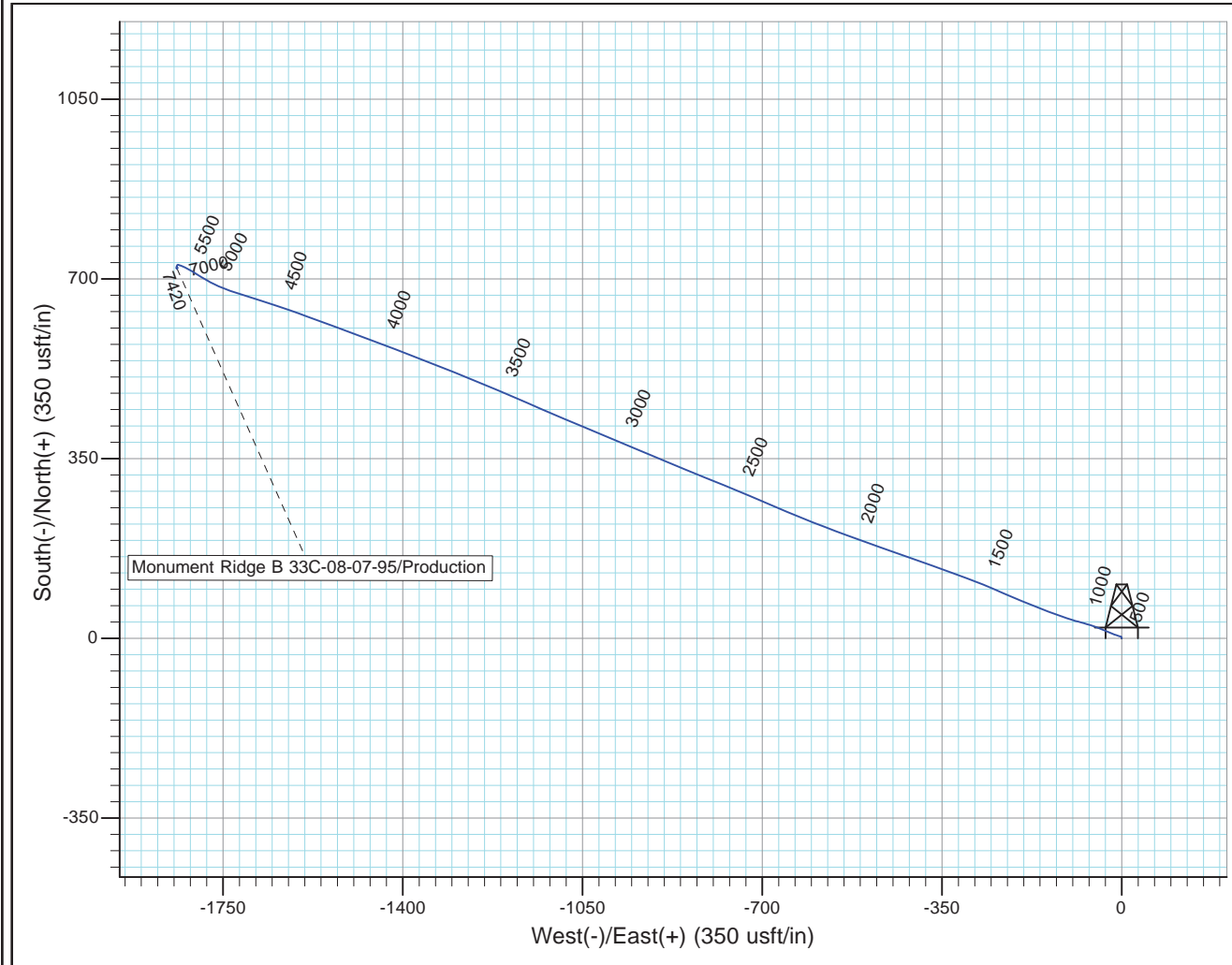
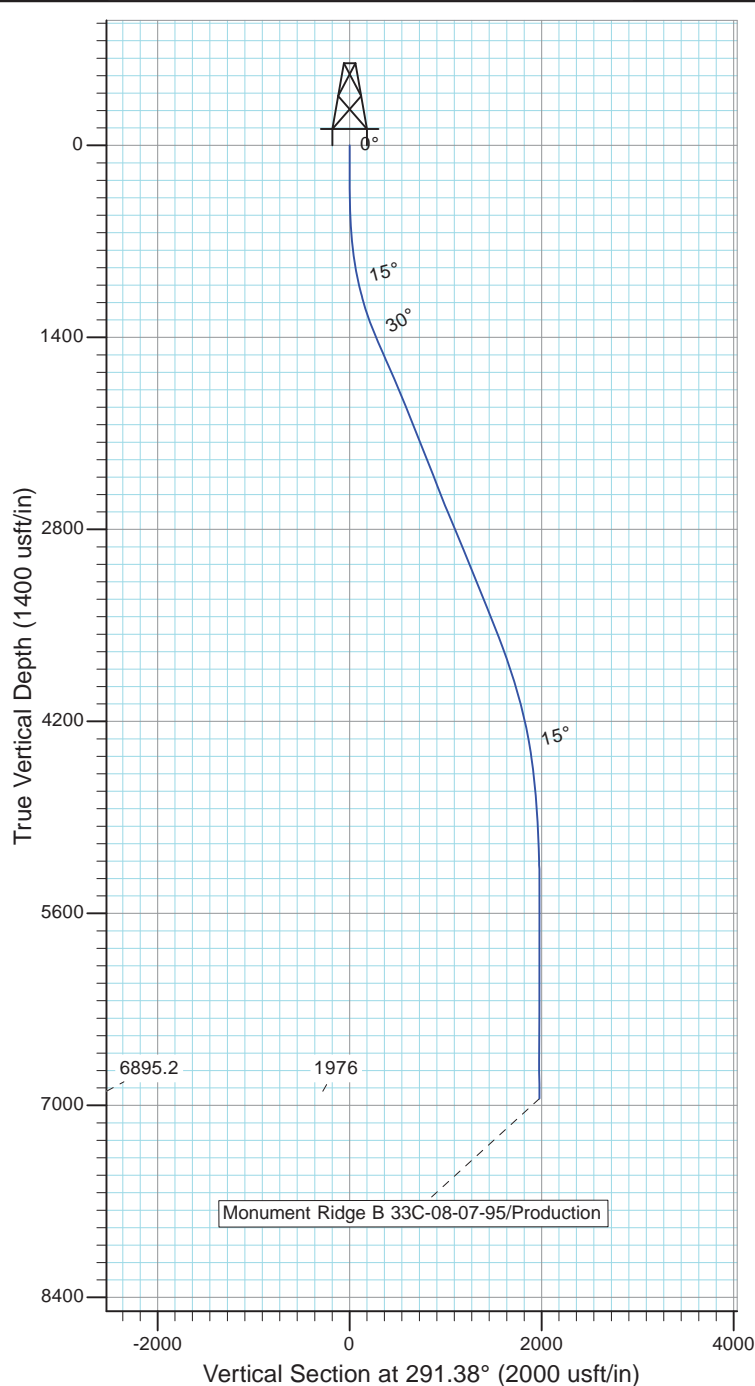


Project: Rockies Region  
 Site: Monument Ridge B  
 Well: Monument Ridge B 33C-08-07-95  
 Wellbore: Wellbore #1  
 Design: Production



Azimuths to True North  
 Magnetic North: 9.78°

Magnetic Field  
 Strength: 51778.1snT  
 Dip Angle: 65.57°  
 Date: 11/16/2015  
 Model: IGRF2010



Design: Production (Monument Ridge B 33C-08-07-95/Wellbore #1)

Created By: Matthew Linton Date: 10:31, January 11 20

THIS SURVEY IS CORRECT TO THE BEST OF  
 MY KNOWLEDGE AND IS SUPPORTED  
 BY ACTUAL FIELD DATA