



# **Ursa Operating Company, LLC**

**Rockies Region**

**Monument Ridge B**

**Monument Ridge B 42D-08-07-95**

**Wellbore #1**

**Design: Production**

## **End of Well Report**

**08 December, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Monument Ridge B 42D-08-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	Monument Ridge B 42D-08-07-95 @ 5718.8usft (Capst:
<b>Site:</b>	Monument Ridge B	<b>MD Reference:</b>	Monument Ridge B 42D-08-07-95 @ 5718.8usft (Capst:
<b>Well:</b>	Monument Ridge B 42D-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

<b>Project</b>	Rockies Region		
<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 Central Zone		

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

<b>Well</b>	Monument Ridge B 42D-08-07-95, SHL: 39.447901401 -108.012356036		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 1,597,837.15 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 2,290,617.88 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	5,718.8 usft
		<b>Latitude:</b>	39° 26' 52.445 N
		<b>Longitude:</b>	108° 0' 44.482 W
		<b>Ground Level:</b>	5,701.8 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>
	IGRF2010	11/17/2015	9.78	65.57	51,778

<b>Design</b>	Production			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	345.26

<b>Survey Program</b>	<b>Date</b>	12/8/2015		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
86.0	7,413.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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<b>Site:</b>	Monument Ridge B	<b>MD Reference:</b>	Monument Ridge B 42D-08-07-95 @ 5718.8usft (Capst:
<b>Well:</b>	Monument Ridge B 42D-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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
86.0	0.13	111.34	86.0	-0.1	0.0	0.1	0.15	0.15	0.00	
115.0	0.35	191.49	115.0	-0.2	-0.1	0.1	1.21	0.76	276.38	
146.0	0.40	183.94	146.0	-0.3	-0.3	0.1	0.23	0.16	-24.35	
176.0	0.04	144.96	176.0	-0.5	-0.4	0.1	1.23	-1.20	-129.93	
206.0	0.31	321.44	206.0	-0.4	-0.4	0.0	1.17	0.90	588.27	
235.0	0.45	351.04	235.0	-0.2	-0.2	0.0	0.82	0.48	102.07	
266.0	0.97	333.53	266.0	0.2	0.1	-0.2	1.80	1.68	-56.48	
297.0	1.07	351.81	297.0	0.7	0.7	-0.3	1.09	0.32	58.97	
327.0	1.66	349.40	327.0	1.4	1.4	-0.4	1.98	1.97	-8.03	
358.0	2.24	348.20	358.0	2.5	2.4	-0.7	1.88	1.87	-3.87	
389.0	2.94	347.10	388.9	3.9	3.8	-1.0	2.26	2.26	-3.55	
419.0	3.65	346.80	418.9	5.6	5.4	-1.3	2.37	2.37	-1.00	
449.0	4.61	346.88	448.8	7.8	7.5	-1.8	3.20	3.20	0.27	
480.0	5.80	343.85	479.7	10.6	10.3	-2.6	3.94	3.84	-9.77	
511.0	6.99	344.16	510.5	14.0	13.6	-3.5	3.84	3.84	1.00	
541.0	7.91	344.69	540.2	17.9	17.3	-4.6	3.08	3.07	1.77	
572.0	9.10	344.64	570.9	22.5	21.8	-5.8	3.84	3.84	-0.16	
602.0	10.16	345.72	600.5	27.5	26.6	-7.0	3.58	3.53	3.60	
633.0	11.43	345.92	630.9	33.3	32.2	-8.5	4.10	4.10	0.65	
664.0	12.44	345.83	661.2	39.7	38.5	-10.0	3.26	3.26	-0.29	
695.0	13.67	345.13	691.4	46.7	45.2	-11.8	4.00	3.97	-2.26	
725.0	14.89	344.52	720.5	54.1	52.4	-13.7	4.10	4.07	-2.03	
755.0	16.00	344.21	749.4	62.1	60.1	-15.9	3.71	3.70	-1.03	
785.0	17.23	344.12	778.2	70.7	68.3	-18.2	4.10	4.10	-0.30	
816.0	18.68	344.78	807.7	80.3	77.5	-20.8	4.72	4.68	2.13	
847.0	20.16	344.80	836.9	90.6	87.5	-23.5	4.77	4.77	0.06	

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<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										
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890.0	22.19	344.91	877.0	106.1	102.5	-27.5	4.72	4.72	0.26	
933.0	23.47	344.82	916.6	122.8	118.6	-31.9	2.98	2.98	-0.21	
975.0	24.35	345.70	955.0	139.8	135.0	-36.2	2.26	2.10	2.10	
1,018.0	25.22	346.58	994.1	157.8	152.5	-40.5	2.20	2.02	2.05	
1,061.0	26.10	345.65	1,032.8	176.4	170.6	-45.0	2.25	2.05	-2.16	
1,104.0	25.84	343.94	1,071.5	195.3	188.8	-50.0	1.84	-0.60	-3.98	
1,146.0	26.46	343.50	1,109.2	213.8	206.5	-55.1	1.55	1.48	-1.05	
1,189.0	27.16	344.42	1,147.6	233.2	225.2	-60.5	1.89	1.63	2.14	
1,232.0	27.99	343.94	1,185.7	253.1	244.3	-65.9	2.00	1.93	-1.12	
1,274.0	28.83	344.47	1,222.6	273.0	263.6	-71.4	2.09	2.00	1.26	
1,317.0	29.36	344.51	1,260.2	294.0	283.7	-77.0	1.23	1.23	0.09	
1,360.0	28.21	344.60	1,297.9	314.7	303.7	-82.5	2.68	-2.67	0.21	
1,402.0	28.21	345.39	1,334.9	334.5	322.8	-87.6	0.89	0.00	1.88	
1,445.0	26.89	345.70	1,373.0	354.4	342.1	-92.6	3.09	-3.07	0.72	
1,488.0	27.55	345.65	1,411.2	374.1	361.2	-97.4	1.54	1.53	-0.12	
1,530.0	28.56	346.80	1,448.3	393.8	380.3	-102.1	2.73	2.40	2.74	
1,573.0	29.53	347.41	1,485.9	414.7	400.7	-106.8	2.36	2.26	1.42	
1,616.0	29.09	346.62	1,523.4	435.7	421.2	-111.5	1.36	-1.02	-1.84	
1,658.0	28.39	345.83	1,560.2	455.9	440.8	-116.3	1.90	-1.67	-1.88	
1,701.0	28.70	344.95	1,598.0	476.5	460.7	-121.5	1.21	0.72	-2.05	
1,744.0	26.85	344.25	1,636.0	496.5	480.0	-126.8	4.37	-4.30	-1.63	
1,786.0	26.84	344.59	1,673.5	515.5	498.3	-131.9	0.37	-0.02	0.81	
1,892.0	27.33	344.64	1,767.9	563.7	544.8	-144.7	0.46	0.46	0.05	
1,978.0	25.27	343.46	1,845.0	601.8	581.5	-155.2	2.47	-2.40	-1.37	
2,063.0	25.40	346.27	1,921.8	638.2	616.6	-164.7	1.42	0.15	3.31	
2,149.0	26.15	347.49	1,999.3	675.5	653.0	-173.2	1.07	0.87	1.42	
2,234.0	26.98	346.03	2,075.3	713.5	690.0	-181.9	1.24	0.98	-1.72	

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
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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)	
2,319.0	28.21	345.04	2,150.6	752.9	728.1	-191.7	1.54	1.45	-1.16	
2,405.0	28.61	345.13	2,226.3	793.8	767.6	-202.2	0.47	0.47	0.10	
2,490.0	27.16	345.39	2,301.4	833.6	806.1	-212.4	1.71	-1.71	0.31	
2,575.0	27.65	343.97	2,376.8	872.7	843.8	-222.7	0.96	0.58	-1.67	
2,661.0	28.43	345.17	2,452.8	913.1	882.8	-233.5	1.12	0.91	1.40	
2,746.0	27.69	344.38	2,527.8	953.1	921.4	-244.0	0.97	-0.87	-0.93	
2,831.0	26.59	343.63	2,603.4	991.9	958.6	-254.6	1.36	-1.29	-0.88	
2,917.0	27.66	343.33	2,679.9	1,031.1	996.2	-265.8	1.25	1.24	-0.35	
3,002.0	26.94	343.24	2,755.5	1,070.0	1,033.6	-277.0	0.85	-0.85	-0.11	
3,088.0	27.69	343.63	2,831.9	1,109.5	1,071.4	-288.2	0.90	0.87	0.45	
3,173.0	26.98	342.62	2,907.4	1,148.5	1,108.7	-299.6	1.00	-0.84	-1.19	
3,259.0	27.91	344.69	2,983.7	1,188.1	1,146.8	-310.7	1.55	1.08	2.41	
3,344.0	27.39	344.03	3,059.0	1,227.5	1,184.8	-321.3	0.71	-0.61	-0.78	
3,429.0	25.94	343.52	3,135.0	1,265.7	1,221.4	-332.0	1.73	-1.71	-0.60	
3,515.0	26.19	344.07	3,212.2	1,303.4	1,257.7	-342.5	0.40	0.29	0.64	
3,600.0	26.95	343.95	3,288.2	1,341.4	1,294.2	-353.0	0.90	0.89	-0.14	
3,686.0	27.91	346.49	3,364.6	1,381.1	1,332.5	-363.1	1.76	1.12	2.95	
3,771.0	28.52	346.66	3,439.5	1,421.2	1,371.6	-372.4	0.72	0.72	0.20	
3,856.0	27.25	344.99	3,514.6	1,461.0	1,410.1	-382.2	1.75	-1.49	-1.96	
3,942.0	27.86	347.94	3,590.9	1,500.7	1,448.8	-391.5	1.74	0.71	3.43	
4,027.0	27.38	346.36	3,666.2	1,540.1	1,487.2	-400.2	1.03	-0.56	-1.86	
4,113.0	26.54	346.88	3,742.8	1,579.1	1,525.2	-409.2	1.01	-0.98	0.60	
4,198.0	24.43	345.70	3,819.5	1,615.7	1,560.7	-417.9	2.55	-2.48	-1.39	
4,283.0	25.84	346.40	3,896.5	1,651.8	1,595.7	-426.6	1.70	1.66	0.82	
4,369.0	24.65	345.04	3,974.3	1,688.4	1,631.3	-435.6	1.54	-1.38	-1.58	
4,454.0	22.59	345.39	4,052.2	1,722.5	1,664.2	-444.3	2.43	-2.42	0.41	
4,540.0	20.39	344.42	4,132.2	1,754.0	1,694.6	-452.5	2.59	-2.56	-1.13	

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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)	
4,625.0	18.33	343.37	4,212.4	1,782.2	1,721.7	-460.3	2.46	-2.42	-1.24	
4,710.0	16.83	342.36	4,293.4	1,807.8	1,746.2	-467.9	1.80	-1.76	-1.19	
4,795.0	14.81	344.12	4,375.2	1,831.0	1,768.4	-474.6	2.44	-2.38	2.07	
4,881.0	12.61	346.45	4,458.7	1,851.3	1,788.1	-479.8	2.64	-2.56	2.71	
4,966.0	9.98	349.65	4,542.1	1,868.0	1,804.4	-483.3	3.18	-3.09	3.76	
5,052.0	7.87	354.14	4,627.0	1,881.2	1,817.6	-485.2	2.58	-2.45	5.22	
5,137.0	5.80	355.98	4,711.4	1,891.2	1,827.6	-486.1	2.45	-2.44	2.16	
5,223.0	3.47	0.11	4,797.1	1,898.0	1,834.6	-486.4	2.74	-2.71	4.80	
5,308.0	1.76	36.76	4,882.0	1,901.3	1,838.2	-485.6	2.72	-2.01	43.12	
5,393.0	1.63	39.36	4,967.0	1,902.8	1,840.2	-484.1	0.18	-0.15	3.06	
5,479.0	1.38	34.41	5,053.0	1,904.2	1,842.0	-482.7	0.33	-0.29	-5.76	
5,564.0	1.14	25.29	5,137.9	1,905.5	1,843.6	-481.8	0.37	-0.28	-10.73	
5,650.0	1.23	47.09	5,223.9	1,906.6	1,845.0	-480.7	0.53	0.10	25.35	
5,735.0	0.70	40.45	5,308.9	1,907.3	1,846.0	-479.7	0.64	-0.62	-7.81	
5,821.0	0.31	22.30	5,394.9	1,907.8	1,846.6	-479.3	0.48	-0.45	-21.10	
5,906.0	0.22	50.25	5,479.9	1,908.1	1,846.9	-479.1	0.18	-0.11	32.88	
5,991.0	0.09	64.32	5,564.9	1,908.1	1,847.1	-478.9	0.16	-0.15	16.55	
6,077.0	0.57	172.73	5,650.9	1,907.7	1,846.7	-478.8	0.70	0.56	126.06	
6,162.0	0.92	190.66	5,735.9	1,906.7	1,845.6	-478.9	0.49	0.41	21.09	
6,247.0	1.27	210.21	5,820.9	1,905.4	1,844.1	-479.5	0.60	0.41	23.00	
6,333.0	1.25	209.70	5,906.9	1,904.1	1,842.5	-480.4	0.03	-0.02	-0.59	
6,418.0	1.36	200.02	5,991.8	1,902.6	1,840.7	-481.2	0.29	0.13	-11.39	
6,503.0	0.00	105.49	6,076.8	1,901.7	1,839.8	-481.6	1.60	-1.60	0.00	
6,589.0	0.22	103.86	6,162.8	1,901.7	1,839.7	-481.4	0.26	0.26	0.00	
6,674.0	0.62	164.42	6,247.8	1,901.1	1,839.2	-481.1	0.64	0.47	71.25	
6,760.0	0.83	21.82	6,333.8	1,901.2	1,839.4	-480.8	1.60	0.24	-165.81	
6,845.0	0.66	355.89	6,418.8	1,902.1	1,840.4	-480.6	0.44	-0.20	-30.51	

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6,931.0	0.35	284.57	6,504.8	1,902.8	1,841.0	-480.9	0.74	-0.36	-82.93
7,016.0	0.40	211.27	6,589.8	1,902.7	1,840.8	-481.3	0.53	0.06	-86.24
7,101.0	0.44	187.76	6,674.8	1,902.2	1,840.2	-481.5	0.21	0.05	-27.66
7,187.0	0.53	219.66	6,760.8	1,901.6	1,839.6	-481.8	0.33	0.10	37.09
7,272.0	0.57	229.86	6,845.8	1,901.2	1,839.0	-482.3	0.12	0.05	12.00
7,358.0	0.57	241.50	6,931.8	1,900.9	1,838.5	-483.0	0.13	0.00	13.53
<b>Projection to Bit</b>									
7,413.0	0.57	241.50	6,986.8	1,900.8	1,838.3	-483.5	0.00	0.00	0.00

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,358.0	6,931.8	1,838.5	-483.0	Projection to Bit

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

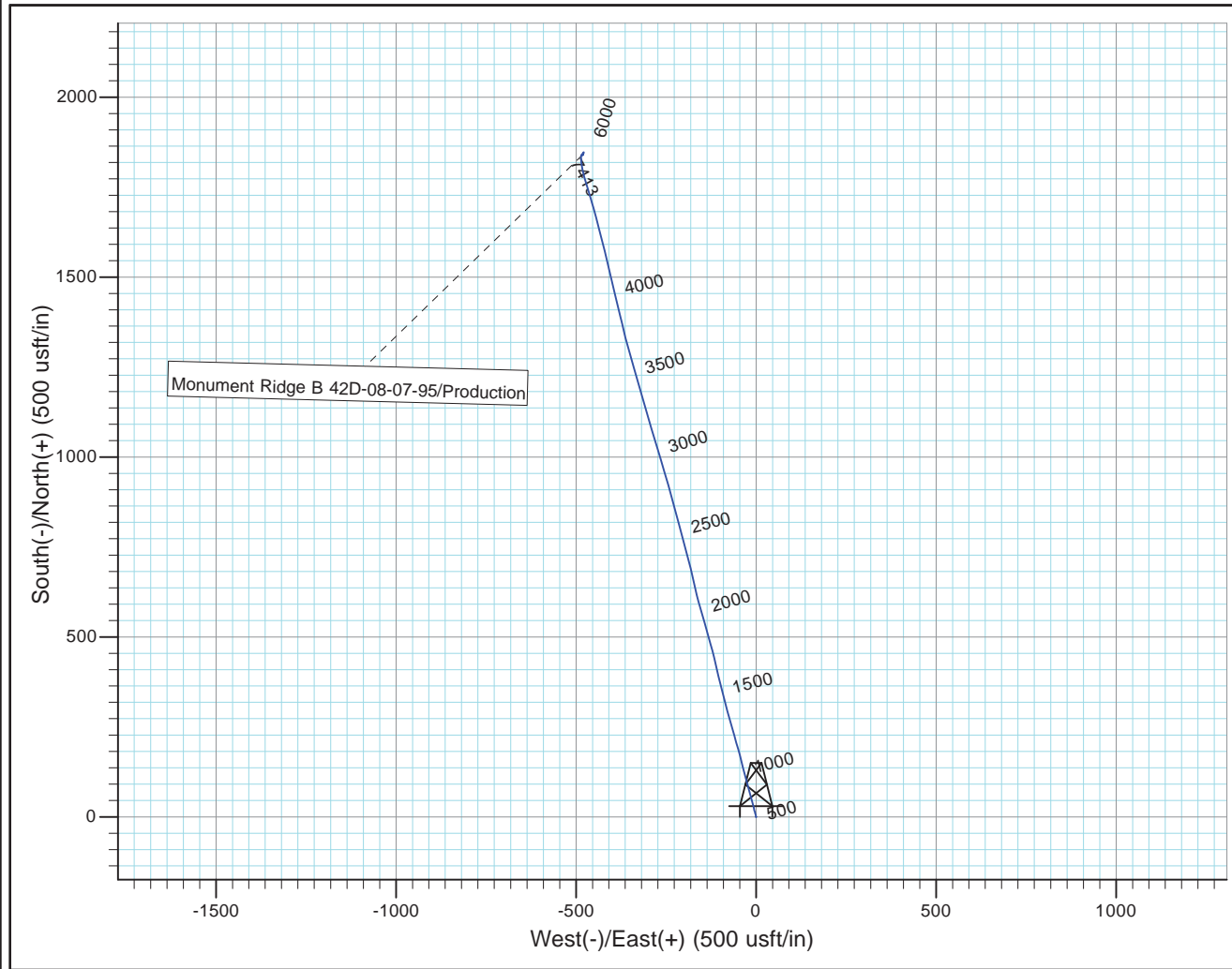
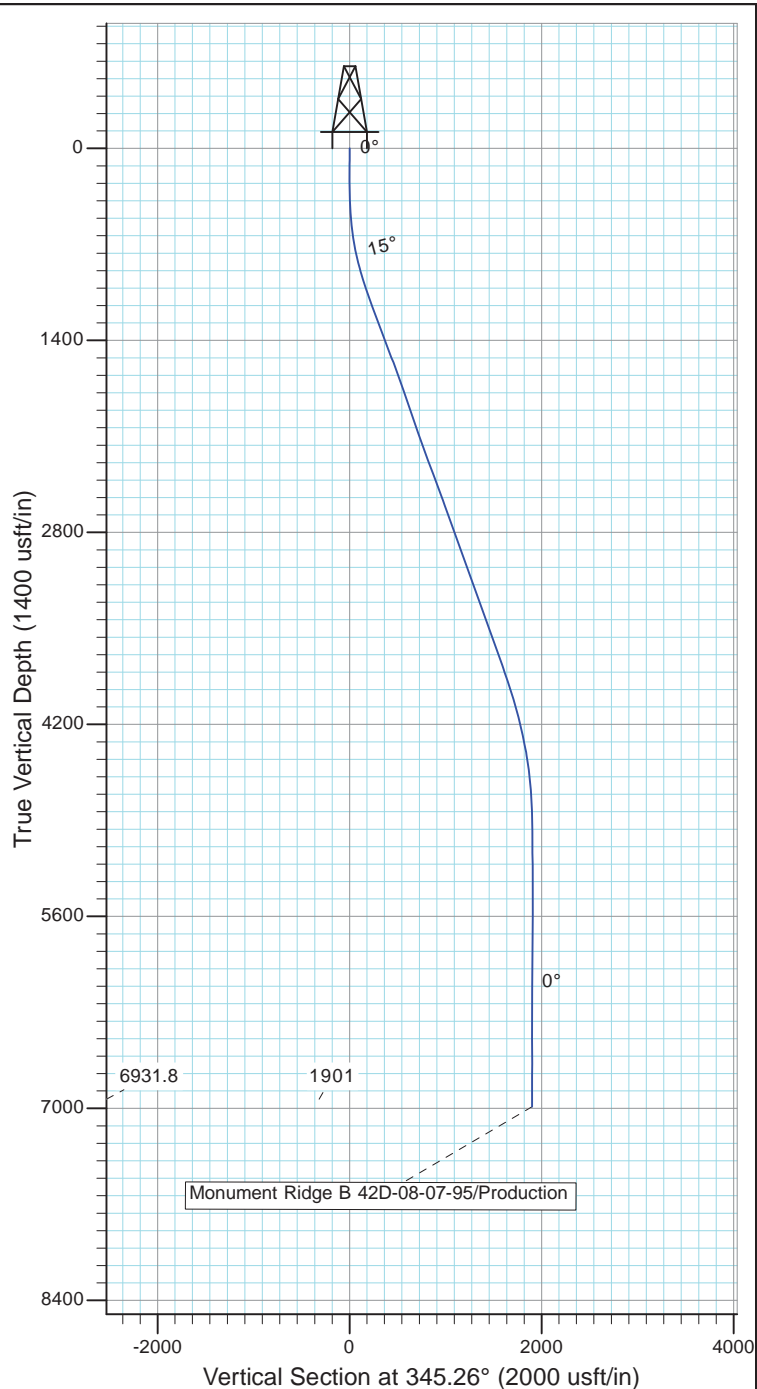


Project: Rockies Region  
Site: Monument Ridge B  
Well: Monument Ridge B 42D-08-07-95  
Wellbore: Wellbore #1  
Design: Production



Azimuths to True North  
Magnetic North: 9.78°

Magnetic Field  
Strength: 51778.0snT  
Dip Angle: 65.57°  
Date: 11/17/2015  
Model: IGRF2010



Design: Production (Monument Ridge B 42D-08-07-95/Wellbore #1)

Created By: *Matthew Linton*

Date: 11:21, December 08 2015

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