



# **Ursa Operating Company, LLC**

**Rockies Region**

**Yater**

**YATER 43B-18-07-95**

**Wellbore #1**

**Design: Actual**

## **End of Well Report**

**06 April, 2015**



<b>Company:</b> Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b> Well YATER 43B-18-07-95
<b>Project:</b> Rockies Region	<b>TVD Reference:</b> YATER 43B-18-07-95 @ 5536.0usft (Capstar 321)
<b>Site:</b> Yater	<b>MD Reference:</b> YATER 43B-18-07-95 @ 5536.0usft (Capstar 321)
<b>Well:</b> YATER 43B-18-07-95	<b>North Reference:</b> True
<b>Wellbore:</b> Wellbore #1	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Actual	<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> Yater		
<b>Site Position:</b>	<b>Northing:</b> 1,593,358.14 usft	<b>Latitude:</b> 39° 26' 7.071 N
<b>From:</b> Lat/Long	<b>Easting:</b> 2,286,525.77 usft	<b>Longitude:</b> 108° 1' 35.041 W
<b>Position Uncertainty:</b> 0.0 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> -1.59 °

<b>Well</b> YATER 43B-18-07-95, SHL LAT: 39.435124611 LONG: -108.026474675		
<b>Well Position</b> +N/-S 0.0 usft	<b>Northing:</b> 1,593,295.75 usft	<b>Latitude:</b> 39° 26' 6.448 N
+E/-W 0.0 usft	<b>Easting:</b> 2,286,502.99 usft	<b>Longitude:</b> 108° 1' 35.309 W
<b>Position Uncertainty</b> 0.0 usft	<b>Wellhead Elevation:</b> 5,536.0 usft	<b>Ground Level:</b> 5,519.0 usft

<b>Wellbore</b> Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/23/2014	9.93	65.59	51,878

<b>Design</b> Actual				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.0		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	282.55

<b>Survey Program</b> Date 4/6/2015				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
177.0	6,970.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<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	0.00
177.0	0.40	309.11	177.0	0.6	0.4	-0.5	0.23	0.23	0.00	
206.0	0.43	296.71	206.0	0.7	0.5	-0.7	0.33	0.10	-42.76	
238.0	0.47	295.78	238.0	1.0	0.6	-0.9	0.13	0.12	-2.91	
268.0	0.70	297.33	268.0	1.3	0.8	-1.2	0.77	0.77	5.17	
298.0	1.19	289.11	298.0	1.8	0.9	-1.6	1.69	1.63	-27.40	
328.0	1.80	287.58	328.0	2.6	1.2	-2.4	2.04	2.03	-5.10	
358.0	2.24	286.24	358.0	3.6	1.5	-3.4	1.47	1.47	-4.47	
388.0	2.50	284.15	387.9	4.8	1.8	-4.6	0.91	0.87	-6.97	
418.0	3.34	284.15	417.9	6.4	2.2	-6.0	2.80	2.80	0.00	
448.0	4.20	281.55	447.8	8.3	2.6	-8.0	2.92	2.87	-8.67	
478.0	5.32	281.78	477.7	10.8	3.1	-10.4	3.73	3.73	0.77	
508.0	6.20	282.43	507.6	13.8	3.8	-13.4	2.94	2.93	2.17	
538.0	6.90	283.14	537.4	17.3	4.5	-16.7	2.35	2.33	2.37	
568.0	7.73	283.18	567.1	21.1	5.4	-20.4	2.77	2.77	0.13	
598.0	8.57	282.30	596.8	25.3	6.3	-24.6	2.83	2.80	-2.93	
628.0	9.62	283.31	626.5	30.1	7.4	-29.2	3.54	3.50	3.37	
658.0	10.59	283.75	656.0	35.3	8.6	-34.3	3.24	3.23	1.47	
688.0	11.49	283.00	685.4	41.1	9.9	-39.9	3.04	3.00	-2.50	
718.0	12.30	282.35	714.8	47.3	11.3	-45.9	2.74	2.70	-2.17	
748.0	13.27	282.74	744.0	53.9	12.7	-52.4	3.25	3.23	1.30	
778.0	14.11	282.26	773.2	61.0	14.3	-59.3	2.83	2.80	-1.60	
808.0	15.02	283.10	802.2	68.6	15.9	-66.7	3.11	3.03	2.80	
838.0	15.69	281.73	831.2	76.5	17.6	-74.4	2.54	2.23	-4.57	
868.0	16.79	281.82	860.0	84.9	19.3	-82.7	3.67	3.67	0.30	
898.0	17.84	281.20	888.6	93.8	21.1	-91.4	3.55	3.50	-2.07	
928.0	18.90	281.64	917.1	103.3	23.0	-100.7	3.56	3.53	1.47	

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<b>Well:</b>	YATER 43B-18-07-95	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<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)	
958.0	19.91	282.79	945.4	113.2	25.1	-110.4	3.60	3.37	3.83	
988.0	20.79	283.49	973.5	123.7	27.5	-120.6	3.04	2.93	2.33	
1,018.0	21.53	283.40	1,001.5	134.5	30.0	-131.1	2.47	2.47	-0.30	
1,048.0	22.37	283.27	1,029.3	145.7	32.6	-142.0	2.80	2.80	-0.43	
1,078.0	23.16	282.48	1,057.0	157.3	35.2	-153.3	2.82	2.63	-2.63	
1,108.0	23.88	281.49	1,084.5	169.3	37.7	-165.0	2.74	2.40	-3.30	
1,138.0	24.76	281.63	1,111.8	181.6	40.1	-177.2	2.94	2.93	0.47	
1,168.0	25.40	281.91	1,139.0	194.4	42.7	-189.6	2.17	2.13	0.93	
1,198.0	26.59	281.95	1,165.9	207.5	45.4	-202.5	3.97	3.97	0.13	
1,228.0	27.03	282.57	1,192.7	221.0	48.3	-215.7	1.74	1.47	2.07	
1,258.0	27.81	282.69	1,219.3	234.8	51.3	-229.2	2.61	2.60	0.40	
1,288.0	28.56	282.52	1,245.8	249.0	54.4	-243.0	2.51	2.50	-0.57	
1,318.0	29.31	282.79	1,272.0	263.5	57.6	-257.2	2.54	2.50	0.90	
1,348.0	29.84	282.61	1,298.1	278.3	60.9	-271.6	1.79	1.77	-0.60	
1,378.0	30.63	283.40	1,324.1	293.4	64.3	-286.3	2.95	2.63	2.63	
1,408.0	31.03	283.18	1,349.8	308.8	67.8	-301.3	1.39	1.33	-0.73	
1,438.0	30.89	282.57	1,375.5	324.3	71.2	-316.3	1.15	-0.47	-2.03	
1,468.0	31.60	283.97	1,401.2	339.8	74.8	-331.5	3.39	2.37	4.67	
1,498.0	32.04	284.33	1,426.7	355.6	78.7	-346.8	1.60	1.47	1.20	
1,528.0	31.99	283.71	1,452.1	371.5	82.5	-362.2	1.11	-0.17	-2.07	
1,558.0	32.17	284.28	1,477.5	387.4	86.4	-377.7	1.17	0.60	1.90	
1,588.0	32.24	284.35	1,502.9	403.4	90.3	-393.2	0.26	0.23	0.23	
1,618.0	32.15	283.29	1,528.3	419.4	94.2	-408.7	1.91	-0.30	-3.53	
1,648.0	32.36	283.19	1,553.7	435.4	97.8	-424.3	0.72	0.70	-0.33	
1,678.0	32.54	283.26	1,579.0	451.5	101.5	-440.0	0.61	0.60	0.23	
1,708.0	32.70	282.96	1,604.3	467.7	105.2	-455.7	0.76	0.53	-1.00	
1,738.0	32.92	282.96	1,629.5	483.9	108.8	-471.6	0.73	0.73	0.00	

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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)	
1,768.0	32.83	282.65	1,654.7	500.2	112.4	-487.4	0.64	-0.30	-1.03	
1,798.0	32.96	282.61	1,679.9	516.5	116.0	-503.3	0.44	0.43	-0.13	
1,849.0	33.18	283.40	1,722.6	544.3	122.3	-530.5	0.95	0.43	1.55	
1,934.0	32.38	283.92	1,794.1	590.4	133.1	-575.2	1.00	-0.94	0.61	
2,020.0	33.00	283.84	1,866.4	636.8	144.3	-620.3	0.72	0.72	-0.09	
2,105.0	31.95	282.87	1,938.1	682.4	154.8	-664.7	1.38	-1.24	-1.14	
2,190.0	32.08	281.54	2,010.2	727.5	164.3	-708.7	0.84	0.15	-1.56	
2,276.0	32.34	282.08	2,083.0	773.3	173.7	-753.6	0.45	0.30	0.63	
2,361.0	32.11	280.27	2,154.9	818.6	182.5	-798.0	1.17	-0.27	-2.13	
2,447.0	32.08	279.58	2,227.8	864.3	190.4	-843.0	0.43	-0.03	-0.80	
2,532.0	32.21	279.84	2,299.7	909.4	198.0	-887.6	0.22	0.15	0.31	
2,618.0	32.26	281.86	2,372.5	955.3	206.6	-932.7	1.25	0.06	2.35	
2,703.0	31.61	282.54	2,444.6	1,000.2	216.1	-976.6	0.87	-0.76	0.80	
2,788.0	31.38	284.10	2,517.1	1,044.6	226.4	-1,019.8	1.00	-0.27	1.84	
2,874.0	30.89	284.02	2,590.7	1,089.1	237.2	-1,063.0	0.57	-0.57	-0.09	
2,959.0	31.25	284.54	2,663.5	1,132.9	248.0	-1,105.5	0.53	0.42	0.61	
3,045.0	30.54	283.53	2,737.3	1,177.1	258.7	-1,148.3	1.02	-0.83	-1.17	
3,130.0	31.16	284.15	2,810.3	1,220.7	269.1	-1,190.6	0.82	0.73	0.73	
3,216.0	31.25	284.06	2,883.8	1,265.2	280.0	-1,233.8	0.12	0.10	-0.10	
3,301.0	31.68	282.30	2,956.3	1,309.6	290.1	-1,277.0	1.19	0.51	-2.07	
3,386.0	30.72	281.95	3,029.0	1,353.6	299.4	-1,320.1	1.15	-1.13	-0.41	
3,472.0	31.51	281.86	3,102.7	1,398.0	308.5	-1,363.6	0.92	0.92	-0.10	
3,557.0	31.76	283.19	3,175.0	1,442.6	318.2	-1,407.1	0.87	0.29	1.56	
3,643.0	30.37	283.40	3,248.7	1,487.0	328.4	-1,450.3	1.62	-1.62	0.24	
3,728.0	28.66	283.67	3,322.7	1,528.8	338.2	-1,491.0	2.02	-2.01	0.32	
3,813.0	25.14	286.43	3,398.5	1,567.3	348.1	-1,528.1	4.39	-4.14	3.25	
3,899.0	23.03	283.80	3,477.0	1,602.3	357.3	-1,562.0	2.75	-2.45	-3.06	

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
3,984.0	20.70	284.28	3,555.8	1,633.9	365.0	-1,592.7	2.75	-2.74	0.56	
4,070.0	19.22	284.48	3,636.7	1,663.3	372.3	-1,621.1	1.72	-1.72	0.23	
4,155.0	16.88	283.27	3,717.5	1,689.6	378.6	-1,646.7	2.79	-2.75	-1.42	
4,240.0	13.89	279.14	3,799.4	1,712.1	383.0	-1,668.8	3.74	-3.52	-4.86	
4,326.0	12.48	278.83	3,883.2	1,731.7	386.1	-1,688.2	1.64	-1.64	-0.36	
4,411.0	10.48	279.91	3,966.5	1,748.6	388.9	-1,704.9	2.37	-2.35	1.27	
4,495.0	8.35	278.74	4,049.3	1,762.3	391.1	-1,718.4	2.55	-2.54	-1.39	
4,583.0	6.20	286.30	4,136.6	1,773.5	393.4	-1,729.3	2.67	-2.44	8.59	
4,668.0	4.88	285.56	4,221.2	1,781.6	395.7	-1,737.2	1.56	-1.55	-0.87	
4,753.0	2.99	275.32	4,306.0	1,787.5	396.8	-1,742.9	2.36	-2.22	-12.05	
4,839.0	2.94	267.49	4,391.9	1,791.8	396.9	-1,747.3	0.47	-0.06	-9.10	
4,924.0	2.86	260.24	4,476.8	1,795.9	396.5	-1,751.6	0.44	-0.09	-8.53	
5,009.0	2.94	257.39	4,561.7	1,799.8	395.7	-1,755.8	0.19	0.09	-3.35	
5,094.0	4.13	264.37	4,646.5	1,804.7	394.9	-1,761.0	1.49	1.40	8.21	
5,180.0	2.81	268.68	4,732.4	1,809.7	394.5	-1,766.2	1.56	-1.53	5.01	
5,266.0	0.83	283.40	4,818.3	1,812.3	394.6	-1,768.9	2.35	-2.30	17.12	
5,351.0	0.97	346.83	4,903.3	1,813.3	395.5	-1,769.6	1.12	0.16	74.62	
5,436.0	0.66	336.36	4,988.3	1,813.9	396.6	-1,770.0	0.40	-0.36	-12.32	
5,522.0	0.31	355.82	5,074.3	1,814.2	397.3	-1,770.2	0.44	-0.41	22.63	
5,608.0	0.09	103.71	5,160.3	1,814.2	397.5	-1,770.2	0.41	-0.26	125.45	
5,693.0	0.13	256.08	5,245.3	1,814.3	397.5	-1,770.2	0.25	0.05	179.26	
5,779.0	1.36	0.35	5,331.3	1,814.6	398.5	-1,770.3	1.63	1.43	121.24	
5,864.0	0.92	330.25	5,416.3	1,815.2	400.1	-1,770.6	0.86	-0.52	-35.41	
5,949.0	1.32	29.35	5,501.3	1,815.4	401.5	-1,770.5	1.36	0.47	69.53	
6,035.0	1.19	27.82	5,587.2	1,814.9	403.2	-1,769.6	0.16	-0.15	-1.78	
6,120.0	1.01	24.61	5,672.2	1,814.5	404.6	-1,768.8	0.22	-0.21	-3.78	
6,206.0	0.70	9.36	5,758.2	1,814.4	405.8	-1,768.4	0.44	-0.36	-17.73	

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6,291.0	0.79	311.97	5,843.2	1,814.9	406.7	-1,768.8	0.85	0.11	-67.52	
6,377.0	1.23	277.07	5,929.2	1,816.3	407.3	-1,770.1	0.86	0.51	-40.58	
6,462.0	1.19	249.70	6,014.2	1,818.0	407.1	-1,771.9	0.68	-0.05	-32.20	
6,548.0	1.27	243.50	6,100.2	1,819.5	406.3	-1,773.6	0.18	0.09	-7.21	
6,633.0	1.63	235.57	6,185.1	1,821.0	405.2	-1,775.4	0.48	0.42	-9.33	
6,719.0	1.93	234.97	6,271.1	1,822.9	403.7	-1,777.6	0.35	0.35	-0.70	
6,804.0	2.24	227.15	6,356.0	1,824.8	401.8	-1,780.0	0.49	0.36	-9.20	
6,890.0	2.24	224.95	6,442.0	1,826.6	399.4	-1,782.4	0.10	0.00	-2.56	
6,970.0	2.24	224.95	6,521.9	1,828.3	397.2	-1,784.6	0.00	0.00	0.00	

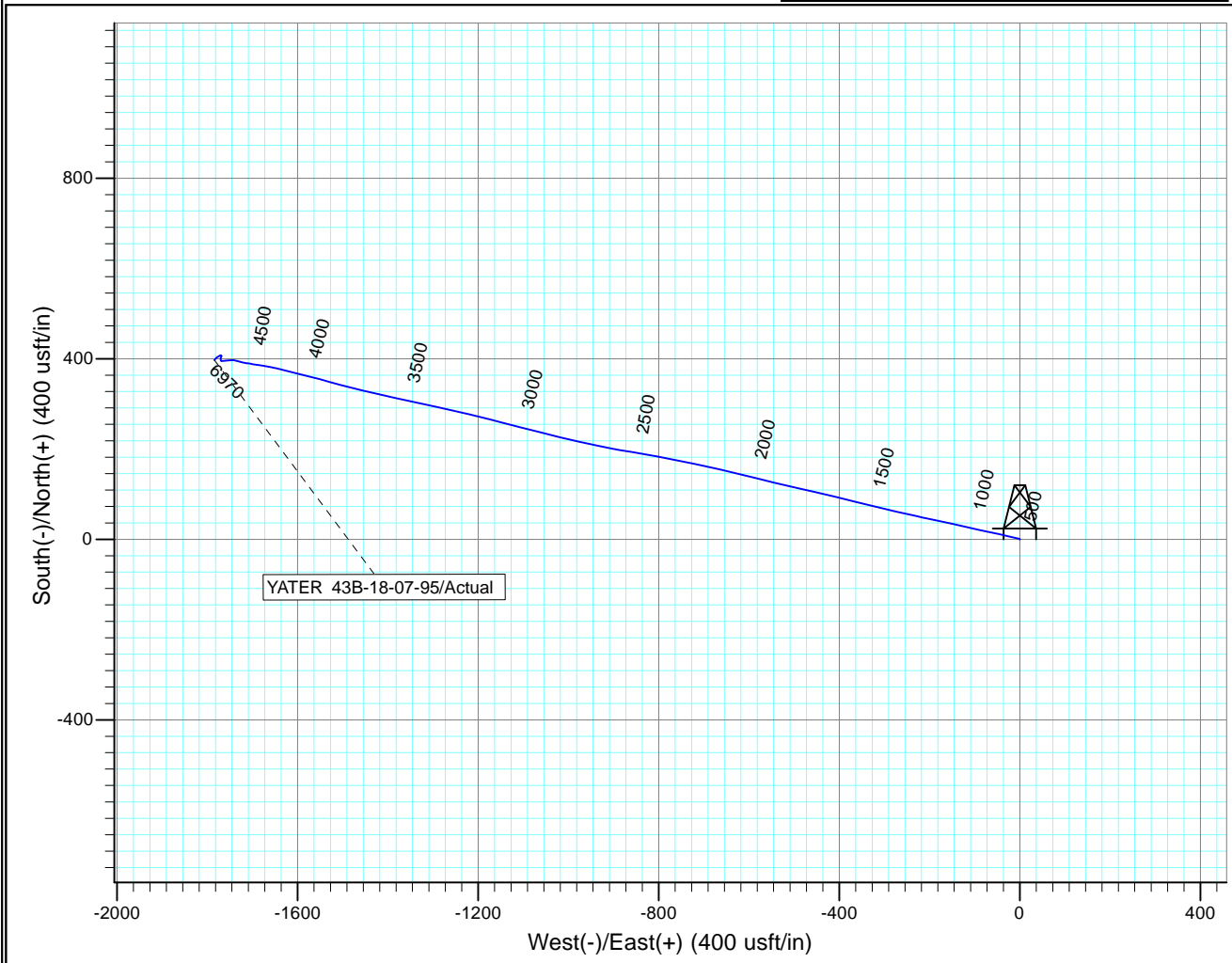
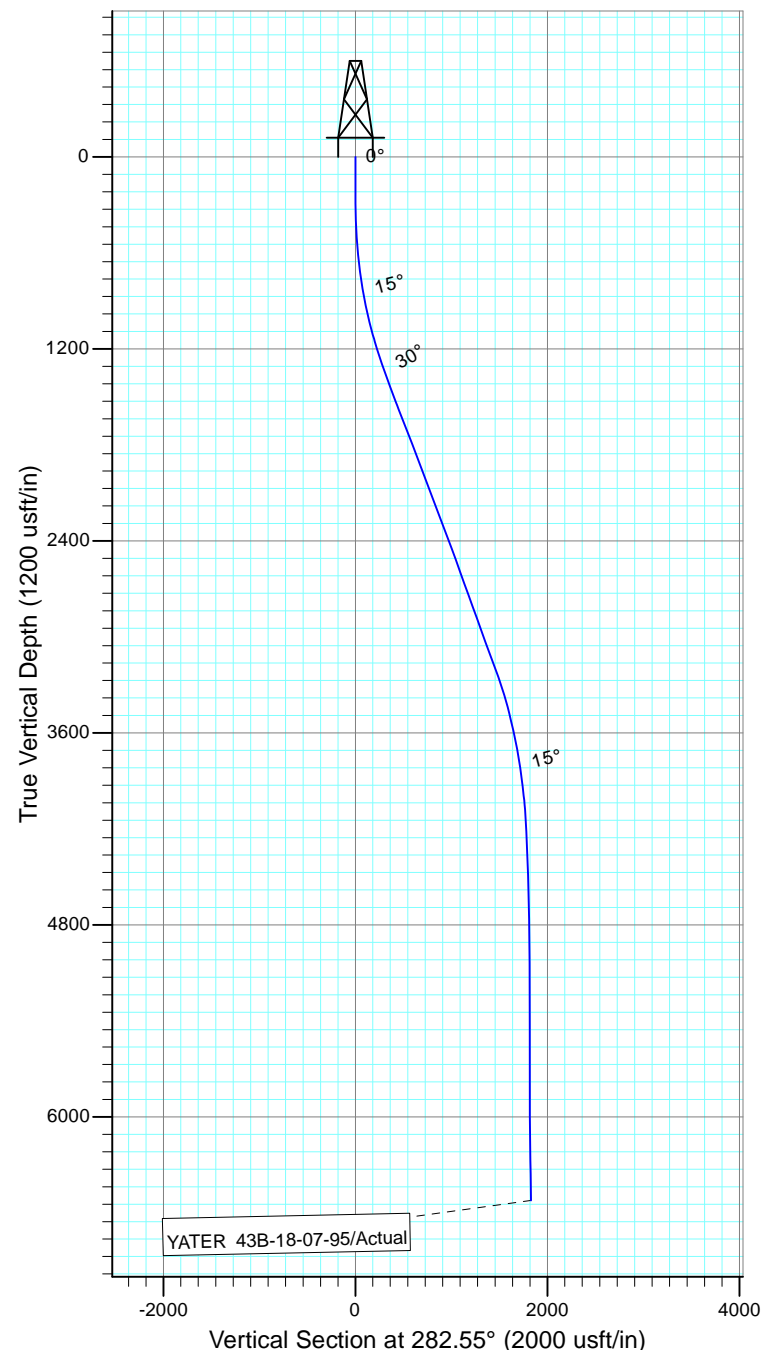
Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



Project: Rockies Region  
 Site: Yater  
 Well: YATER 43B-18-07-95  
 Wellbore: Wellbore #1  
 Design: Actual

Azimuths to True North  
 Magnetic North: 9.93°

Magnetic Field  
 Strength: 51878.3snT  
 Dip Angle: 65.59°  
 Date: 10/23/2014  
 Model: IGRF2010



Design: Actual (YATER 43B-18-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 5:51, April 06 2015

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