



# **Ursa Operating Company, LLC**

**Rockies Region**

**Yater**

**YATER 43D-18-07-95**

**Wellbore #1**

**Design: Actual**

## **End of Well Report**

**08 April, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 43D-18-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 43D-18-07-95 @ 5536.0usft (Capstar 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 43D-18-07-95 @ 5536.0usft (Capstar 321)
<b>Well:</b>	YATER 43D-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

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		Yater			
Site Position:		Northing:		1,593,358.14 usft	
From:	Lat/Long	Easting:		2,286,525.77 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
				Latitude: 39° 26' 7.071 N	
				Longitude: 108° 1' 35.041 W	
				Grid Convergence: -1.59 °	

Well		YATER 43D-18-07-95, SHL LAT: 39.435056026 LONG: -108.026472616				
Well Position	+N/-S	0.0 usft	Northing:	1,593,270.76 usft	Latitude:	39° 26' 6.201 N
	+E/-W	0.0 usft	Easting:	2,286,502.88 usft	Longitude:	108° 1' 35.301 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,536.0 usft	Ground Level:	5,519.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/16/2015	9.88	65.58	51,839

Design		Actual			
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	264.20

Survey Program		Date	4/8/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
177.0	6,885.0	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	
177.0	0.49	69.36	177.0	-0.7	0.3	0.7	0.28	0.28	0.00	
206.0	0.26	48.38	206.0	-0.9	0.4	0.9	0.91	-0.79	-72.34	
238.0	0.48	256.77	238.0	-0.8	0.4	0.8	2.25	0.69	-473.78	
268.0	1.32	262.88	268.0	-0.4	0.3	0.3	2.81	2.80	20.37	
298.0	2.33	261.30	298.0	0.6	0.2	-0.6	3.37	3.37	-5.27	
328.0	3.01	261.06	327.9	2.0	0.0	-2.0	2.27	2.27	-0.80	
358.0	3.21	263.54	357.9	3.6	-0.3	-3.6	0.80	0.67	8.27	
388.0	3.33	265.77	387.9	5.3	-0.4	-5.3	0.58	0.40	7.43	
418.0	3.81	263.49	417.8	7.2	-0.6	-7.2	1.67	1.60	-7.60	
448.0	4.22	262.40	447.7	9.3	-0.9	-9.3	1.39	1.37	-3.63	
478.0	5.01	262.40	477.6	11.7	-1.2	-11.6	2.63	2.63	0.00	
508.0	5.58	262.66	507.5	14.5	-1.5	-14.4	1.90	1.90	0.87	
538.0	6.42	262.19	537.3	17.6	-2.0	-17.5	2.80	2.80	-1.57	
568.0	7.38	262.31	567.1	21.2	-2.4	-21.1	3.20	3.20	0.40	
598.0	8.48	261.65	596.8	25.3	-3.0	-25.2	3.68	3.67	-2.20	
628.0	9.45	262.04	626.5	30.0	-3.7	-29.8	3.24	3.23	1.30	
658.0	10.28	262.88	656.0	35.2	-4.4	-34.9	2.81	2.77	2.80	
688.0	11.16	263.93	685.5	40.7	-5.0	-40.4	3.00	2.93	3.50	
718.0	11.87	264.29	714.9	46.7	-5.6	-46.4	2.38	2.37	1.20	
748.0	12.80	264.48	744.2	53.1	-6.2	-52.8	3.10	3.10	0.63	
778.0	13.71	264.02	773.4	60.0	-6.9	-59.6	3.05	3.03	-1.53	
808.0	14.55	263.10	802.5	67.3	-7.7	-66.9	2.90	2.80	-3.07	
838.0	15.49	262.66	831.5	75.1	-8.7	-74.6	3.16	3.13	-1.47	
868.0	16.39	262.75	860.3	83.3	-9.8	-82.8	3.00	3.00	0.30	
898.0	17.53	262.13	889.0	92.1	-10.9	-91.5	3.85	3.80	-2.07	
928.0	18.72	261.39	917.5	101.4	-12.2	-100.7	4.04	3.97	-2.47	

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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)
958.0	19.47	260.64	945.9	111.2	-13.8	-110.4	2.63	2.50	-2.50
988.0	20.52	260.99	974.1	121.4	-15.4	-120.5	3.52	3.50	1.17
1,018.0	21.40	261.47	1,002.1	132.2	-17.1	-131.1	2.99	2.93	1.60
1,048.0	22.41	262.13	1,029.9	143.3	-18.7	-142.2	3.47	3.37	2.20
1,078.0	23.47	262.92	1,057.5	155.0	-20.2	-153.8	3.68	3.53	2.63
1,108.0	24.52	263.27	1,084.9	167.2	-21.6	-165.9	3.53	3.50	1.17
1,138.0	25.49	262.94	1,112.1	179.9	-23.2	-178.5	3.27	3.23	-1.10
1,168.0	26.19	262.66	1,139.1	193.0	-24.8	-191.5	2.37	2.33	-0.93
1,198.0	26.85	262.48	1,166.0	206.4	-26.5	-204.7	2.22	2.20	-0.60
1,228.0	27.91	263.23	1,192.6	220.2	-28.2	-218.4	3.72	3.53	2.50
1,258.0	28.87	262.88	1,219.0	234.4	-30.0	-232.6	3.25	3.20	-1.17
1,288.0	29.58	262.70	1,245.2	249.1	-31.8	-247.1	2.38	2.37	-0.60
1,318.0	30.23	262.62	1,271.2	264.0	-33.7	-262.0	2.17	2.17	-0.27
1,348.0	30.45	263.23	1,297.1	279.2	-35.6	-277.0	1.26	0.73	2.03
1,378.0	30.50	263.14	1,322.9	294.4	-37.4	-292.1	0.23	0.17	-0.30
1,408.0	30.37	262.18	1,348.8	309.6	-39.3	-307.2	1.68	-0.43	-3.20
1,438.0	30.63	262.09	1,374.6	324.8	-41.4	-322.3	0.88	0.87	-0.30
1,468.0	30.41	261.25	1,400.5	340.0	-43.6	-337.3	1.60	-0.73	-2.80
1,498.0	30.37	261.25	1,426.4	355.2	-45.9	-352.3	0.13	-0.13	0.00
1,528.0	30.45	261.56	1,452.2	370.3	-48.2	-367.3	0.59	0.27	1.03
1,558.0	30.45	261.34	1,478.1	385.5	-50.5	-382.4	0.37	0.00	-0.73
1,588.0	30.63	261.34	1,503.9	400.7	-52.8	-397.4	0.60	0.60	0.00
1,618.0	30.76	261.43	1,529.7	416.0	-55.1	-412.6	0.46	0.43	0.30
1,648.0	31.14	261.99	1,555.5	431.5	-57.3	-427.9	1.59	1.27	1.87
1,678.0	31.33	261.91	1,581.1	447.0	-59.5	-443.3	0.65	0.63	-0.27
1,708.0	31.64	261.43	1,606.7	462.7	-61.7	-458.8	1.33	1.03	-1.60
1,738.0	31.82	261.39	1,632.2	478.4	-64.1	-474.4	0.60	0.60	-0.13

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Survey										
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1,768.0	32.04	261.74	1,657.7	494.3	-66.4	-490.1	0.96	0.73	1.17	
1,798.0	31.99	261.43	1,683.1	510.1	-68.7	-505.8	0.57	-0.17	-1.03	
1,847.0	32.34	261.47	1,724.6	536.2	-72.6	-531.6	0.72	0.71	0.08	
1,933.0	31.51	262.21	1,797.6	581.6	-79.1	-576.6	1.07	-0.97	0.86	
2,018.0	31.33	264.46	1,870.1	625.9	-84.2	-620.6	1.40	-0.21	2.65	
2,103.0	30.41	264.24	1,943.1	669.6	-88.5	-664.0	1.09	-1.08	-0.26	
2,189.0	31.07	264.45	2,017.0	713.5	-92.8	-707.8	0.78	0.77	0.24	
2,274.0	29.75	264.67	2,090.3	756.5	-96.9	-750.6	1.56	-1.55	0.26	
2,360.0	30.23	264.37	2,164.8	799.5	-101.0	-793.4	0.58	0.56	-0.35	
2,445.0	32.61	265.11	2,237.3	843.8	-105.1	-837.5	2.84	2.80	0.87	
2,531.0	31.46	265.11	2,310.2	889.4	-109.0	-882.9	1.34	-1.34	0.00	
2,616.0	32.48	263.27	2,382.3	934.4	-113.5	-927.7	1.66	1.20	-2.16	
2,701.0	32.65	264.41	2,454.0	980.2	-118.4	-973.2	0.75	0.20	1.34	
2,787.0	32.30	266.26	2,526.5	1,026.3	-122.2	-1,019.2	1.22	-0.41	2.15	
2,872.0	31.51	265.99	2,598.7	1,071.2	-125.2	-1,064.0	0.94	-0.93	-0.32	
2,958.0	30.37	266.52	2,672.4	1,115.4	-128.1	-1,108.2	1.36	-1.33	0.62	
3,043.0	30.76	264.67	2,745.6	1,158.6	-131.4	-1,151.2	1.20	0.46	-2.18	
3,129.0	31.64	265.64	2,819.2	1,203.2	-135.2	-1,195.6	1.18	1.02	1.13	
3,214.0	30.63	264.81	2,891.9	1,247.1	-138.9	-1,239.4	1.29	-1.19	-0.98	
3,300.0	29.40	264.63	2,966.4	1,290.1	-142.8	-1,282.3	1.43	-1.43	-0.21	
3,385.0	30.28	264.02	3,040.1	1,332.4	-147.0	-1,324.4	1.10	1.04	-0.72	
3,471.0	30.85	264.76	3,114.2	1,376.2	-151.3	-1,367.9	0.79	0.66	0.86	
3,556.0	30.76	265.73	3,187.2	1,419.7	-154.9	-1,411.3	0.59	-0.11	1.14	
3,641.0	29.14	265.42	3,260.9	1,462.1	-158.2	-1,453.6	1.91	-1.91	-0.36	
3,727.0	27.73	264.89	3,336.5	1,503.0	-161.6	-1,494.4	1.67	-1.64	-0.62	
3,812.0	25.97	265.11	3,412.3	1,541.4	-165.0	-1,532.6	2.07	-2.07	0.26	
3,898.0	25.14	265.07	3,489.9	1,578.5	-168.1	-1,569.6	0.97	-0.97	-0.05	

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Survey										
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3,983.0	23.42	266.26	3,567.4	1,613.5	-170.8	-1,604.4	2.10	-2.02	1.40	
4,069.0	20.48	265.64	3,647.1	1,645.6	-173.0	-1,636.5	3.43	-3.42	-0.72	
4,154.0	16.92	265.03	3,727.6	1,672.8	-175.2	-1,663.6	4.19	-4.19	-0.72	
4,240.0	14.15	264.24	3,810.5	1,695.9	-177.4	-1,686.6	3.23	-3.22	-0.92	
4,325.0	12.57	265.07	3,893.2	1,715.5	-179.2	-1,706.1	1.87	-1.86	0.98	
4,411.0	10.63	262.96	3,977.4	1,732.8	-181.0	-1,723.3	2.31	-2.26	-2.45	
4,496.0	8.75	267.36	4,061.2	1,747.1	-182.3	-1,737.6	2.38	-2.21	5.18	
4,581.0	6.86	269.46	4,145.4	1,758.6	-182.6	-1,749.1	2.25	-2.22	2.47	
4,667.0	5.63	271.35	4,230.9	1,767.9	-182.6	-1,758.5	1.45	-1.43	2.20	
4,752.0	3.08	277.07	4,315.6	1,774.3	-182.2	-1,764.9	3.04	-3.00	6.73	
4,837.0	0.70	332.04	4,400.6	1,776.7	-181.4	-1,767.4	3.22	-2.80	64.67	
4,923.0	1.63	59.63	4,486.6	1,775.8	-180.4	-1,766.6	2.03	1.08	101.85	
5,009.0	1.34	63.32	4,572.6	1,773.7	-179.3	-1,764.6	0.35	-0.34	4.29	
5,094.0	0.97	70.83	4,657.5	1,772.1	-178.6	-1,763.1	0.47	-0.44	8.84	
5,179.0	0.65	87.17	4,742.5	1,770.9	-178.3	-1,761.9	0.46	-0.38	19.22	
5,265.0	0.13	126.55	4,828.5	1,770.4	-178.4	-1,761.3	0.65	-0.60	45.79	
5,350.0	0.13	130.16	4,913.5	1,770.2	-178.5	-1,761.2	0.01	0.00	4.25	
5,436.0	0.35	175.60	4,999.5	1,770.2	-178.8	-1,761.1	0.32	0.26	52.84	
5,521.0	0.48	204.60	5,084.5	1,770.3	-179.4	-1,761.2	0.29	0.15	34.12	
5,606.0	0.66	203.46	5,169.5	1,770.8	-180.2	-1,761.6	0.21	0.21	-1.34	
5,692.0	1.10	218.05	5,255.5	1,771.6	-181.3	-1,762.3	0.57	0.51	16.97	
5,777.0	1.36	227.85	5,340.5	1,772.9	-182.6	-1,763.5	0.39	0.31	11.53	
5,863.0	1.45	241.74	5,426.5	1,774.8	-183.8	-1,765.2	0.41	0.10	16.15	
5,948.0	1.94	241.37	5,511.4	1,777.1	-185.0	-1,767.4	0.58	0.58	-0.44	
6,034.0	1.19	306.73	5,597.4	1,779.1	-185.2	-1,769.4	2.10	-0.87	76.00	
6,119.0	1.36	353.97	5,682.4	1,779.8	-183.6	-1,770.3	1.22	0.20	55.58	
6,204.0	1.10	334.99	5,767.4	1,780.0	-181.9	-1,770.7	0.56	-0.31	-22.33	

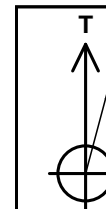
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Survey										
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6,290.0	0.92	279.57	5,853.3	1,781.0	-181.0	-1,771.7	1.11	-0.21	-64.44	
6,375.0	0.53	252.55	5,938.3	1,782.0	-181.0	-1,772.8	0.60	-0.46	-31.79	
6,460.0	0.66	65.16	6,023.3	1,781.9	-180.9	-1,772.7	1.40	0.15	203.07	
6,546.0	0.66	85.57	6,109.3	1,781.0	-180.7	-1,771.8	0.27	0.00	23.73	
6,631.0	1.49	71.89	6,194.3	1,779.4	-180.3	-1,770.2	1.02	0.98	-16.09	
6,716.0	1.10	73.86	6,279.3	1,777.5	-179.7	-1,768.4	0.46	-0.46	2.32	
6,802.0	0.62	85.16	6,365.3	1,776.2	-179.5	-1,767.1	0.59	-0.56	13.14	
6,828.0	0.79	81.69	6,391.3	1,775.9	-179.4	-1,766.8	0.67	0.65	-13.35	
6,885.0	0.79	81.69	6,448.3	1,775.1	-179.3	-1,766.0	0.00	0.00	0.00	

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

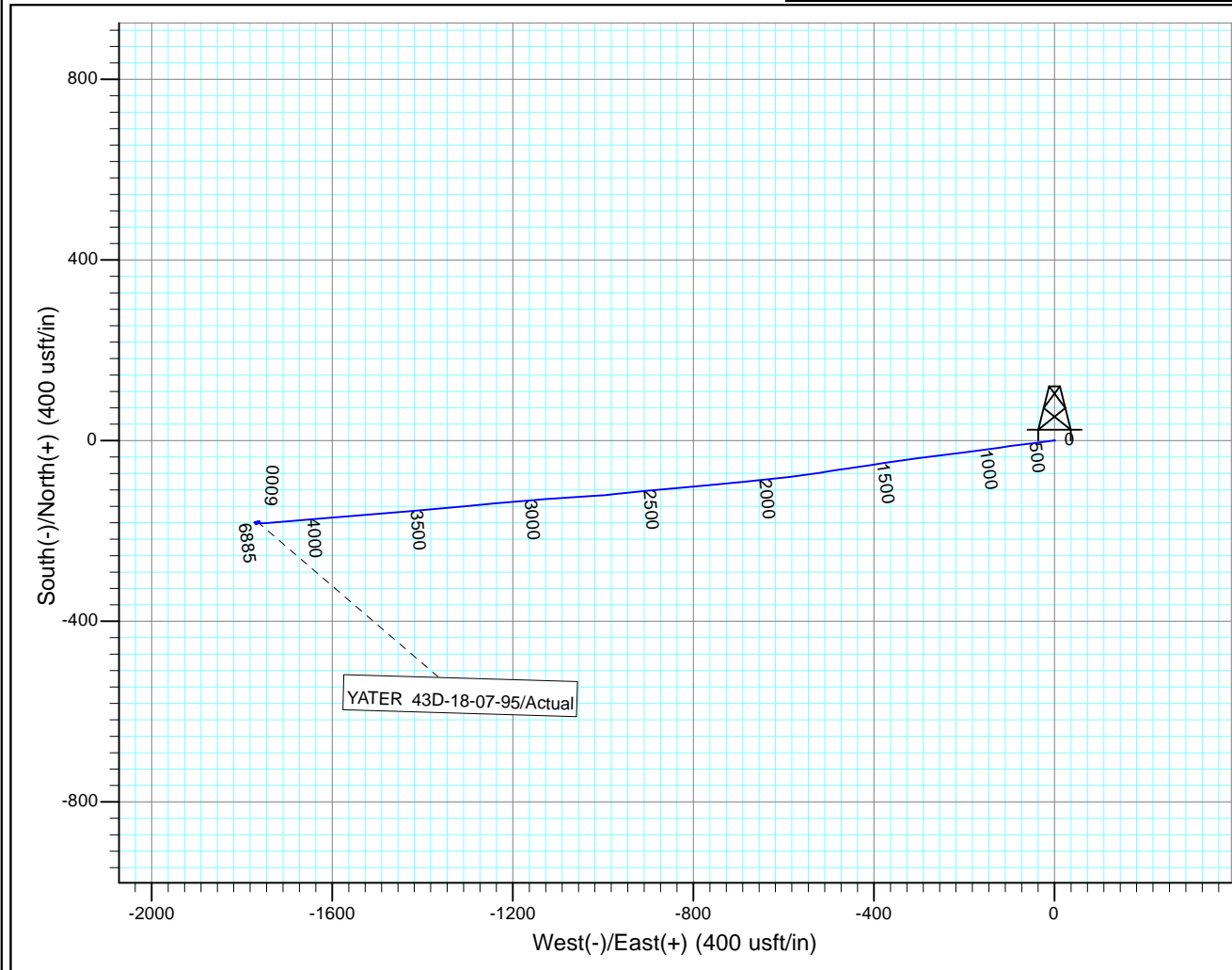
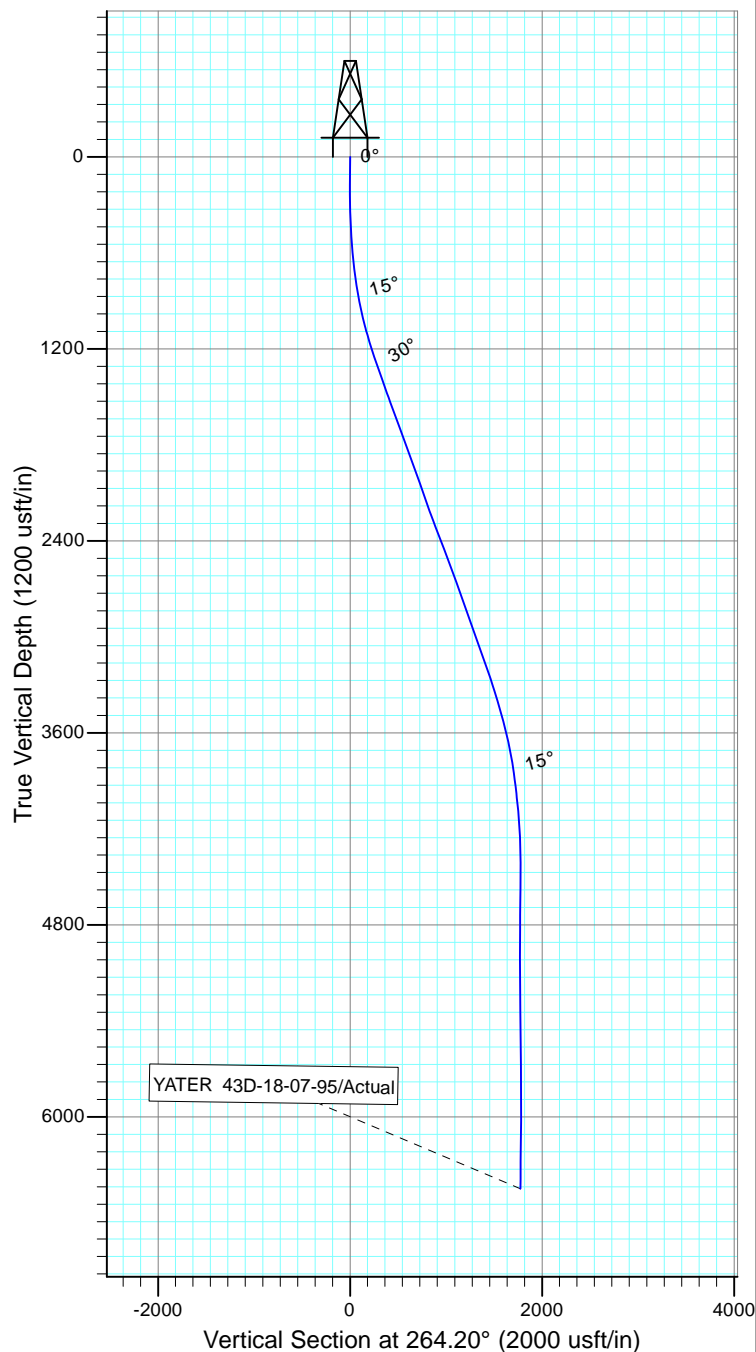


Project: Rockies Region  
Site: Yater  
Well: YATER 43D-18-07-95  
Wellbore: Wellbore #1  
Design: Actual



Azimuths to True North  
Magnetic North: 9.87°

Magnetic Field  
Strength: 51838.5nT  
Dip Angle: 65.58°  
Date: 3/16/2015  
Model: IGRF2010



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

Created By: *Matthew Linton*

Date: 10:45, April 08 2015

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