



# **Ursa Operating Company, LLC**

**Rockies Region**

**Yater**

**YATER 42A-18-07-95**

**Wellbore #1**

**Design: Actual**

## **End of Well Report**

**31 August, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 42A-18-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 42A-18-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 42A-18-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 42A-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>From:</b>	Lat/Long	<b>Easting:</b>	2,286,525.77 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	39° 26' 7.071 N
		<b>Longitude:</b>	108° 1' 35.041 W
		<b>Grid Convergence:</b>	-1.59 °

<b>Well</b>	YATER 42A-18-07-95, SHL LAT: 39.435434684 LONG: -108.026404343					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	1,593,408.09 usft	<b>Latitude:</b>	39° 26' 7.565 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	2,286,525.99 usft	<b>Longitude:</b>	108° 1' 35.056 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				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/15/2015	9.84	65.57	51,814

<b>Design</b>	Actual				
<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	316.81

<b>Survey Program</b>	Date 8/31/2015			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
146.0	7,381.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 42A-18-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 42A-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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
146.0	0.88	54.09	146.0	-0.1	0.7	0.9	0.60	0.60	0.00	
176.0	0.94	56.91	176.0	-0.2	0.9	1.3	0.25	0.20	9.40	
207.0	0.88	62.09	207.0	-0.3	1.2	1.7	0.33	-0.19	16.71	
238.0	0.75	60.68	238.0	-0.4	1.4	2.1	0.42	-0.42	-4.55	
268.0	1.10	353.93	268.0	-0.3	1.8	2.3	3.53	1.17	-222.50	
299.0	1.85	325.76	299.0	0.5	2.5	1.9	3.30	2.42	-90.87	
330.0	2.36	320.38	329.9	1.6	3.4	1.3	1.76	1.65	-17.35	
360.0	2.72	312.80	359.9	2.9	4.3	0.3	1.64	1.20	-25.27	
390.0	3.65	308.98	389.9	4.6	5.4	-0.9	3.18	3.10	-12.73	
421.0	4.53	310.65	420.8	6.8	6.8	-2.6	2.86	2.84	5.39	
452.0	5.54	308.40	451.7	9.5	8.6	-4.7	3.32	3.26	-7.26	
482.0	6.86	311.30	481.5	12.7	10.7	-7.2	4.52	4.40	9.67	
513.0	8.13	313.68	512.2	16.7	13.4	-10.2	4.22	4.10	7.68	
544.0	9.36	313.02	542.9	21.4	16.6	-13.6	3.98	3.97	-2.13	
574.0	10.48	314.06	572.4	26.6	20.2	-17.4	3.78	3.73	3.47	
605.0	11.21	314.16	602.9	32.4	24.2	-21.5	2.36	2.35	0.32	
636.0	12.01	314.88	633.2	38.7	28.6	-26.0	2.62	2.58	2.32	
666.0	13.27	316.31	662.5	45.2	33.3	-30.6	4.33	4.20	4.77	
696.0	14.46	316.93	691.6	52.4	38.5	-35.5	4.00	3.97	2.07	
726.0	14.99	316.45	720.6	60.0	44.1	-40.8	1.81	1.77	-1.60	
757.0	15.97	318.65	750.5	68.3	50.2	-46.3	3.68	3.16	7.10	
800.0	16.96	316.93	791.8	80.5	59.2	-54.5	2.57	2.30	-4.00	
842.0	18.41	318.95	831.8	93.2	68.7	-63.1	3.75	3.45	4.81	
885.0	19.78	318.16	872.4	107.3	79.2	-72.4	3.24	3.19	-1.84	
928.0	20.92	317.00	912.7	122.3	90.3	-82.5	2.81	2.65	-2.70	
971.0	22.32	317.28	952.7	138.1	101.9	-93.2	3.26	3.26	0.65	

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<b>Well:</b>	YATER 42A-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)	
1,013.0	23.99	317.76	991.3	154.6	114.1	-104.4	4.00	3.98	1.14	
1,056.0	25.43	317.55	1,030.4	172.6	127.4	-116.5	3.36	3.35	-0.49	
1,099.0	27.42	316.97	1,068.9	191.7	141.4	-129.5	4.67	4.63	-1.35	
1,141.0	29.05	315.52	1,105.9	211.6	155.8	-143.2	4.21	3.88	-3.45	
1,184.0	30.76	315.13	1,143.2	233.0	171.0	-158.3	4.00	3.98	-0.91	
1,227.0	32.43	316.84	1,179.8	255.5	187.2	-174.0	4.41	3.88	3.98	
1,269.0	32.74	316.45	1,215.2	278.2	203.6	-189.5	0.89	0.74	-0.93	
1,312.0	33.09	316.31	1,251.3	301.5	220.6	-205.6	0.83	0.81	-0.33	
1,355.0	34.28	316.76	1,287.0	325.4	237.9	-222.0	2.83	2.77	1.05	
1,397.0	35.07	316.75	1,321.6	349.3	255.3	-238.4	1.88	1.88	-0.02	
1,440.0	36.34	316.71	1,356.5	374.4	273.5	-255.6	2.95	2.95	-0.09	
1,483.0	36.61	316.45	1,391.1	399.9	292.1	-273.1	0.72	0.63	-0.60	
1,525.0	37.00	316.97	1,424.7	425.1	310.4	-290.4	1.19	0.93	1.24	
1,568.0	37.49	316.89	1,458.9	451.1	329.4	-308.2	1.15	1.14	-0.19	
1,611.0	37.13	316.40	1,493.1	477.2	348.4	-326.1	1.09	-0.84	-1.14	
1,653.0	36.91	316.93	1,526.7	502.5	366.8	-343.4	0.92	-0.52	1.26	
1,696.0	36.96	316.84	1,561.0	528.3	385.6	-361.1	0.17	0.12	-0.21	
1,739.0	36.78	316.58	1,595.4	554.1	404.4	-378.8	0.55	-0.42	-0.60	
1,781.0	36.87	316.97	1,629.1	579.3	422.8	-396.0	0.60	0.21	0.93	
1,824.0	36.96	316.75	1,663.4	605.1	441.6	-413.7	0.37	0.21	-0.51	
1,888.0	36.44	316.33	1,714.8	643.3	469.4	-440.0	0.90	-0.81	-0.66	
1,973.0	37.44	317.24	1,782.7	694.4	506.6	-474.9	1.34	1.18	1.07	
2,059.0	36.65	316.58	1,851.3	746.2	544.4	-510.3	1.03	-0.92	-0.77	
2,144.0	36.96	318.12	1,919.4	797.2	581.9	-544.8	1.15	0.36	1.81	
2,229.0	36.74	316.14	1,987.4	848.1	619.3	-579.5	1.42	-0.26	-2.33	
2,315.0	35.64	318.38	2,056.8	898.9	656.5	-614.0	2.00	-1.28	2.60	
2,400.0	34.80	316.89	2,126.3	947.9	692.8	-647.0	1.41	-0.99	-1.75	

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<b>Well:</b>	YATER 42A-18-07-95	<b>North Reference:</b>	True
<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)	
2,486.0	35.24	319.69	2,196.7	997.2	729.6	-679.8	1.94	0.51	3.26	
2,571.0	35.68	318.42	2,265.9	1,046.5	766.8	-712.1	1.01	0.52	-1.49	
2,656.0	36.74	317.98	2,334.5	1,096.7	804.3	-745.6	1.28	1.25	-0.52	
2,742.0	35.90	318.73	2,403.8	1,147.6	842.3	-779.5	1.10	-0.98	0.87	
2,827.0	36.65	318.25	2,472.3	1,197.9	880.0	-812.8	0.94	0.88	-0.56	
2,912.0	36.36	317.20	2,540.7	1,248.4	917.4	-846.8	0.81	-0.34	-1.24	
2,998.0	35.75	316.57	2,610.2	1,299.1	954.4	-881.4	0.83	-0.71	-0.73	
3,083.0	37.27	317.33	2,678.5	1,349.6	991.3	-915.9	1.87	1.79	0.89	
3,169.0	37.18	316.80	2,747.0	1,401.7	1,029.4	-951.4	0.39	-0.10	-0.62	
3,254.0	36.95	315.97	2,814.8	1,452.9	1,066.5	-986.7	0.65	-0.27	-0.98	
3,339.0	36.25	315.35	2,883.0	1,503.5	1,102.7	-1,022.1	0.93	-0.82	-0.73	
3,425.0	36.12	315.39	2,952.5	1,554.3	1,138.9	-1,057.8	0.15	-0.15	0.05	
3,511.0	35.51	314.64	3,022.2	1,604.6	1,174.5	-1,093.4	0.87	-0.71	-0.87	
3,596.0	36.62	316.50	3,090.9	1,654.6	1,210.2	-1,128.4	1.83	1.31	2.19	
3,681.0	35.95	315.13	3,159.4	1,704.9	1,246.3	-1,163.4	1.24	-0.79	-1.61	
3,766.0	36.78	317.76	3,227.9	1,755.3	1,282.8	-1,198.1	2.08	0.98	3.09	
3,852.0	36.17	317.76	3,297.0	1,806.4	1,320.7	-1,232.5	0.71	-0.71	0.00	
3,937.0	34.86	315.99	3,366.2	1,855.8	1,356.7	-1,266.3	1.96	-1.54	-2.08	
4,023.0	35.24	315.74	3,436.6	1,905.2	1,392.1	-1,300.6	0.47	0.44	-0.29	
4,108.0	35.51	317.06	3,505.9	1,954.4	1,427.8	-1,334.6	0.95	0.32	1.55	
4,194.0	36.78	319.13	3,575.4	2,005.1	1,465.5	-1,368.4	2.05	1.48	2.41	
4,279.0	36.34	319.00	3,643.7	2,055.7	1,503.8	-1,401.6	0.53	-0.52	-0.15	
4,364.0	35.86	318.73	3,712.3	2,105.7	1,541.5	-1,434.6	0.59	-0.56	-0.32	
4,450.0	34.67	317.85	3,782.5	2,155.4	1,578.6	-1,467.6	1.50	-1.38	-1.02	
4,535.0	32.65	316.67	3,853.3	2,202.5	1,613.2	-1,499.6	2.50	-2.38	-1.39	
4,621.0	30.76	314.64	3,926.5	2,247.7	1,645.5	-1,531.1	2.52	-2.20	-2.36	
4,706.0	28.83	316.80	4,000.2	2,289.9	1,675.7	-1,560.6	2.60	-2.27	2.54	

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
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Survey										
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4,792.0	27.42	319.61	4,076.1	2,330.4	1,705.9	-1,587.6	2.25	-1.64	3.27	
4,877.0	25.41	319.42	4,152.2	2,368.2	1,734.7	-1,612.2	2.37	-2.36	-0.22	
4,962.0	24.87	318.38	4,229.1	2,404.2	1,761.9	-1,635.9	0.82	-0.64	-1.22	
5,048.0	24.26	316.93	4,307.4	2,440.0	1,788.3	-1,660.0	1.00	-0.71	-1.69	
5,133.0	23.20	317.02	4,385.2	2,474.2	1,813.3	-1,683.3	1.25	-1.25	0.11	
5,219.0	19.64	314.21	4,465.2	2,505.6	1,835.8	-1,705.3	4.31	-4.14	-3.27	
5,304.0	18.40	316.95	4,545.6	2,533.3	1,855.6	-1,724.7	1.80	-1.46	3.22	
5,389.0	17.62	319.00	4,626.4	2,559.5	1,875.1	-1,742.3	1.18	-0.92	2.41	
5,475.0	14.24	319.87	4,709.1	2,583.1	1,893.0	-1,757.6	3.94	-3.93	1.01	
5,560.0	12.00	318.20	4,791.9	2,602.4	1,907.6	-1,770.2	2.67	-2.64	-1.96	
5,646.0	9.49	319.61	4,876.4	2,618.4	1,919.7	-1,780.8	2.93	-2.92	1.64	
5,731.0	6.77	319.17	4,960.5	2,630.4	1,928.8	-1,788.6	3.20	-3.20	-0.52	
5,817.0	4.44	335.12	5,046.1	2,638.6	1,935.6	-1,793.3	3.23	-2.71	18.55	
5,902.0	2.55	311.48	5,130.9	2,643.7	1,939.9	-1,796.1	2.75	-2.22	-27.81	
5,988.0	1.77	307.73	5,216.9	2,646.9	1,942.0	-1,798.6	0.92	-0.91	-4.36	
6,073.0	1.36	305.15	5,301.8	2,649.2	1,943.3	-1,800.5	0.49	-0.48	-3.04	
6,158.0	1.45	273.16	5,386.8	2,650.9	1,944.0	-1,802.4	0.92	0.11	-37.64	
6,244.0	1.67	248.51	5,472.8	2,652.2	1,943.6	-1,804.6	0.81	0.26	-28.66	
6,329.0	2.20	241.04	5,557.7	2,653.0	1,942.3	-1,807.2	0.69	0.62	-8.79	
6,414.0	1.51	275.45	5,642.7	2,654.3	1,941.7	-1,809.8	1.51	-0.81	40.48	
6,499.0	1.49	338.64	5,727.7	2,656.1	1,942.8	-1,811.3	1.85	-0.02	74.34	
6,585.0	1.36	309.77	5,813.6	2,658.2	1,944.5	-1,812.5	0.84	-0.15	-33.57	
6,670.0	1.28	11.32	5,898.6	2,659.7	1,946.1	-1,813.1	1.59	-0.09	72.41	
6,756.0	1.01	352.31	5,984.6	2,660.9	1,947.8	-1,813.0	0.54	-0.31	-22.10	
6,841.0	0.66	324.71	6,069.6	2,662.0	1,948.9	-1,813.4	0.62	-0.41	-32.47	
6,927.0	0.62	312.05	6,155.6	2,663.0	1,949.6	-1,814.0	0.17	-0.05	-14.72	
7,012.0	1.19	268.15	6,240.6	2,664.0	1,949.9	-1,815.2	1.01	0.67	-51.65	

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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)	
7,097.0	1.54	261.51	6,325.6	2,665.2	1,949.7	-1,817.2	0.45	0.41	-7.81	
7,183.0	2.11	255.58	6,411.5	2,666.7	1,949.1	-1,819.9	0.70	0.66	-6.90	
7,268.0	2.20	253.82	6,496.4	2,668.2	1,948.3	-1,823.0	0.13	0.11	-2.07	
7,321.0	2.33	245.65	6,549.4	2,669.0	1,947.6	-1,824.9	0.66	0.25	-15.42	
7,381.0	2.33	245.65	6,609.4	2,669.8	1,946.6	-1,827.2	0.00	0.00	0.00	

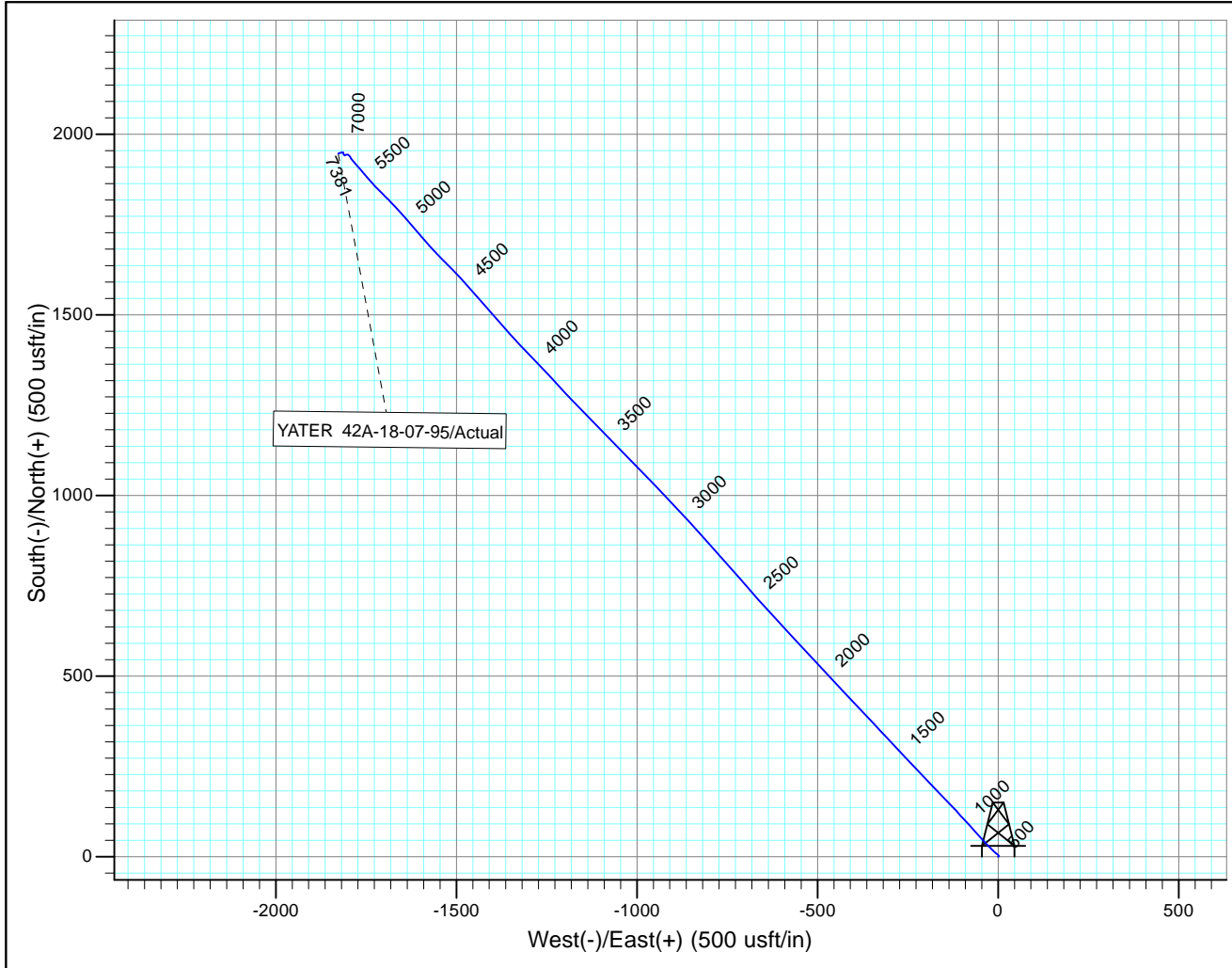
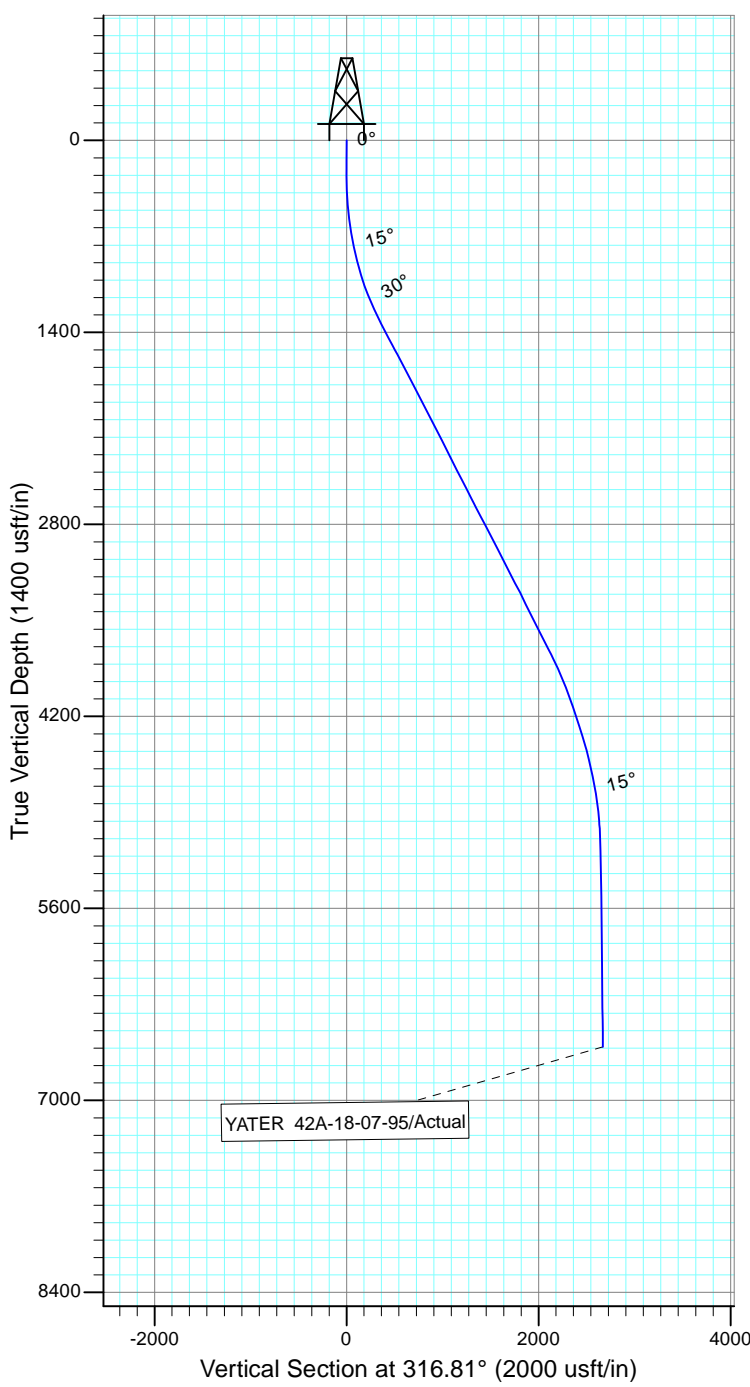
Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



Project: Rockies Region  
 Site: Yater  
 Well: YATER 42A-18-07-95  
 Wellbore: Wellbore #1  
 Design: Actual

Azimuths to True North  
 Magnetic North: 9.84°

Magnetic Field  
 Strength: 51813.6snT  
 Dip Angle: 65.57°  
 Date: 6/15/2015  
 Model: IGRF2010



Design: Actual (YATER 42A-18-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 7:15, August 31 2015

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