



# **Ursa Operating Company, LLC**

**Rockies Region**

**Yater**

**YATER 12B-17-07-95**

**Wellbore #1**

**Design: Actual**

## **End of Well Report**

**07 July, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 12B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 12B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 12B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 12B-17-07-95	<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 12B-17-07-95, SHL LAT: 39.435091756 LONG: -108.026394044				
Well Position	+N/-S	0.0 usft	Northing:	1,593,283.15 usft	Latitude:	39° 26' 6.330 N
	+E/-W	0.0 usft	Easting:	2,286,525.43 usft	Longitude:	108° 1' 35.019 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	6/15/2015	9.84	65.57	51,813

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	345.09

Survey Program		Date	7/7/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
113.0	7,137.0	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	
113.0	0.53	359.12	113.0	0.5	0.5	0.0	0.47	0.47	0.00	
144.0	0.48	9.36	144.0	0.8	0.8	0.0	0.33	-0.16	33.03	
174.0	0.40	13.97	174.0	1.0	1.0	0.1	0.29	-0.27	15.37	
205.0	0.37	42.49	205.0	1.1	1.2	0.2	0.62	-0.10	92.00	
236.0	0.26	0.66	236.0	1.2	1.3	0.2	0.80	-0.35	-134.94	
266.0	0.40	334.51	266.0	1.4	1.5	0.2	0.67	0.47	-87.17	
297.0	1.02	324.31	297.0	1.8	1.8	0.0	2.03	2.00	-32.90	
327.0	2.24	324.53	327.0	2.6	2.5	-0.5	4.07	4.07	0.73	
358.0	3.38	323.13	357.9	4.0	3.7	-1.4	3.68	3.68	-4.52	
388.0	4.44	322.60	387.9	5.9	5.4	-2.7	3.54	3.53	-1.77	
419.0	4.83	322.29	418.8	8.2	7.4	-4.2	1.26	1.26	-1.00	
450.0	5.71	318.56	449.6	10.8	9.6	-6.0	3.04	2.84	-12.03	
480.0	6.90	318.38	479.5	13.7	12.0	-8.2	3.97	3.97	-0.60	
511.0	7.70	316.83	510.2	17.2	14.9	-10.9	2.66	2.58	-5.00	
541.0	8.30	318.44	539.9	20.9	18.0	-13.7	2.13	2.00	5.37	
572.0	9.10	320.14	570.6	25.1	21.6	-16.7	2.71	2.58	5.48	
603.0	9.93	321.41	601.1	29.8	25.5	-20.0	2.76	2.68	4.10	
633.0	11.12	321.06	630.6	34.8	29.8	-23.4	3.97	3.97	-1.17	
664.0	12.22	319.70	661.0	40.5	34.6	-27.4	3.66	3.55	-4.39	
694.0	13.19	318.53	690.2	46.4	39.6	-31.7	3.35	3.23	-3.90	
725.0	13.54	318.12	720.4	52.8	45.0	-36.5	1.17	1.13	-1.32	
756.0	14.28	321.02	750.5	59.6	50.6	-41.3	3.28	2.39	9.35	
799.0	15.25	325.15	792.1	69.7	59.4	-47.9	3.33	2.26	9.60	
841.0	16.00	323.87	832.5	80.3	68.6	-54.4	1.97	1.79	-3.05	
884.0	16.92	327.26	873.8	91.8	78.7	-61.3	3.09	2.14	7.88	
927.0	18.28	330.46	914.8	104.3	89.8	-68.0	3.88	3.16	7.44	

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<b>Well:</b>	YATER 12B-17-07-95	<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)	
969.0	19.60	334.20	954.5	117.6	101.9	-74.3	4.27	3.14	8.90	
1,012.0	20.96	337.63	994.8	132.3	115.5	-80.4	4.20	3.16	7.98	
1,055.0	21.67	339.61	1,034.9	147.8	130.0	-86.1	2.35	1.65	4.60	
1,098.0	22.17	341.41	1,074.8	163.8	145.2	-91.5	1.95	1.16	4.19	
1,140.0	22.85	342.42	1,113.6	179.9	160.5	-96.4	1.86	1.62	2.40	
1,183.0	23.99	343.91	1,153.0	196.9	176.8	-101.4	2.99	2.65	3.47	
1,226.0	25.49	345.85	1,192.1	214.9	194.2	-106.1	3.97	3.49	4.51	
1,268.0	26.91	347.24	1,229.8	233.5	212.2	-110.4	3.68	3.38	3.31	
1,311.0	27.72	347.94	1,268.0	253.2	231.5	-114.6	2.03	1.88	1.63	
1,354.0	29.18	346.94	1,305.8	273.7	251.5	-119.1	3.57	3.40	-2.33	
1,396.0	30.19	346.51	1,342.3	294.4	271.7	-123.9	2.46	2.40	-1.02	
1,439.0	30.54	346.55	1,379.4	316.2	292.9	-128.9	0.82	0.81	0.09	
1,482.0	30.72	346.81	1,416.4	338.1	314.2	-134.0	0.52	0.42	0.60	
1,525.0	30.86	347.58	1,453.3	360.1	335.6	-138.8	0.97	0.33	1.79	
1,567.0	31.20	347.56	1,489.3	381.7	356.8	-143.5	0.81	0.81	-0.05	
1,610.0	32.15	346.48	1,525.9	404.3	378.8	-148.6	2.57	2.21	-2.51	
1,652.0	32.48	346.33	1,561.4	426.7	400.6	-153.9	0.81	0.79	-0.36	
1,695.0	32.34	346.46	1,597.7	449.8	423.0	-159.3	0.36	-0.33	0.30	
1,738.0	32.48	345.93	1,634.0	472.8	445.4	-164.8	0.74	0.33	-1.23	
1,781.0	32.49	345.39	1,670.3	495.9	467.8	-170.5	0.67	0.02	-1.26	
1,810.0	32.63	345.12	1,694.7	511.5	482.9	-174.5	0.70	0.48	-0.93	
1,888.0	32.65	345.93	1,760.4	553.6	523.6	-185.0	0.56	0.03	1.04	
1,973.0	31.42	345.76	1,832.4	598.6	567.3	-196.0	1.45	-1.45	-0.20	
2,059.0	31.68	346.68	1,905.7	643.6	611.0	-206.7	0.64	0.30	1.07	
2,144.0	32.74	347.08	1,977.6	688.9	655.1	-217.0	1.27	1.25	0.47	
2,230.0	31.55	346.68	2,050.5	734.7	699.7	-227.4	1.41	-1.38	-0.47	
2,315.0	31.95	347.16	2,122.7	779.4	743.3	-237.5	0.56	0.47	0.56	

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<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)
2,400.0	32.04	347.38	2,194.8	824.4	787.2	-247.4	0.17	0.11	0.26
2,486.0	32.83	348.31	2,267.4	870.4	832.3	-257.1	1.09	0.92	1.08
2,571.0	31.77	347.47	2,339.3	915.8	876.7	-266.7	1.35	-1.25	-0.99
2,657.0	32.30	349.32	2,412.2	961.3	921.4	-275.8	1.30	0.62	2.15
2,742.0	32.92	348.70	2,483.8	1,007.0	966.3	-284.6	0.83	0.73	-0.73
2,828.0	32.12	347.91	2,556.3	1,053.2	1,011.6	-293.9	1.05	-0.93	-0.92
2,913.0	31.64	347.21	2,628.5	1,098.0	1,055.5	-303.6	0.71	-0.56	-0.82
2,998.0	32.76	347.57	2,700.4	1,143.3	1,099.7	-313.5	1.34	1.32	0.42
3,084.0	32.43	347.03	2,772.8	1,189.6	1,144.9	-323.7	0.51	-0.38	-0.63
3,169.0	31.55	346.51	2,844.9	1,234.6	1,188.7	-334.0	1.08	-1.04	-0.61
3,254.0	32.70	347.76	2,916.9	1,279.8	1,232.8	-344.0	1.56	1.35	1.47
3,340.0	32.62	346.77	2,989.3	1,326.1	1,278.0	-354.3	0.63	-0.09	-1.15
3,425.0	31.77	346.33	3,061.2	1,371.4	1,322.1	-364.8	1.04	-1.00	-0.52
3,511.0	31.33	345.85	3,134.5	1,416.4	1,365.7	-375.6	0.59	-0.51	-0.56
3,596.0	30.28	347.74	3,207.5	1,459.9	1,408.1	-385.6	1.68	-1.24	2.22
3,682.0	29.13	347.27	3,282.2	1,502.5	1,449.7	-394.8	1.36	-1.34	-0.55
3,767.0	27.69	349.58	3,357.0	1,542.9	1,489.3	-402.9	2.13	-1.69	2.72
3,852.0	28.13	349.18	3,432.1	1,582.5	1,528.4	-410.3	0.56	0.52	-0.47
3,938.0	28.17	350.50	3,507.9	1,623.0	1,568.4	-417.4	0.73	0.05	1.53
4,024.0	27.95	349.45	3,583.8	1,663.3	1,608.2	-424.5	0.63	-0.26	-1.22
4,109.0	27.73	348.48	3,659.0	1,702.9	1,647.2	-432.0	0.59	-0.26	-1.14
4,194.0	24.39	347.87	3,735.3	1,740.2	1,683.7	-439.7	3.94	-3.93	-0.72
4,280.0	21.49	348.17	3,814.5	1,773.6	1,716.5	-446.6	3.37	-3.37	0.35
4,365.0	19.20	346.24	3,894.2	1,803.2	1,745.3	-453.2	2.81	-2.69	-2.27
4,450.0	17.09	345.36	3,975.0	1,829.6	1,771.0	-459.6	2.50	-2.48	-1.04
4,536.0	15.64	343.96	4,057.5	1,853.8	1,794.3	-466.0	1.75	-1.69	-1.63
4,621.0	14.68	345.63	4,139.6	1,876.1	1,815.8	-471.9	1.24	-1.13	1.96

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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)
4,706.0	11.43	346.37	4,222.3	1,895.3	1,834.4	-476.5	3.83	-3.82	0.87
4,792.0	9.28	351.57	4,306.9	1,910.7	1,849.6	-479.6	2.72	-2.50	6.05
4,877.0	6.94	354.94	4,391.1	1,922.6	1,861.5	-481.0	2.81	-2.75	3.96
4,963.0	4.48	8.74	4,476.7	1,930.7	1,870.0	-481.0	3.26	-2.86	16.05
5,048.0	2.50	27.86	4,561.5	1,935.2	1,874.9	-479.6	2.67	-2.33	22.49
5,134.0	2.11	31.51	4,647.4	1,937.6	1,877.9	-477.9	0.48	-0.45	4.24
5,220.0	1.95	24.16	4,733.4	1,939.8	1,880.6	-476.5	0.35	-0.19	-8.55
5,306.0	0.75	24.47	4,819.3	1,941.4	1,882.4	-475.6	1.40	-1.40	0.36
5,391.0	0.57	12.21	4,904.3	1,942.2	1,883.3	-475.3	0.27	-0.21	-14.42
5,477.0	0.35	349.76	4,990.3	1,942.9	1,884.0	-475.3	0.33	-0.26	-26.10
5,562.0	0.21	297.59	5,075.3	1,943.2	1,884.3	-475.5	0.33	-0.16	-61.38
5,648.0	0.44	226.97	5,161.3	1,943.2	1,884.2	-475.8	0.49	0.27	-82.12
5,733.0	0.66	196.26	5,246.3	1,942.6	1,883.5	-476.2	0.42	0.26	-36.13
5,819.0	0.79	187.07	5,332.3	1,941.6	1,882.4	-476.4	0.20	0.15	-10.69
5,904.0	0.84	174.16	5,417.3	1,940.5	1,881.2	-476.4	0.22	0.06	-15.19
5,989.0	0.53	174.99	5,502.3	1,939.5	1,880.2	-476.3	0.36	-0.36	0.98
6,075.0	0.75	158.20	5,588.3	1,938.5	1,879.3	-476.1	0.33	0.26	-19.52
6,160.0	0.75	162.90	5,673.3	1,937.4	1,878.2	-475.7	0.07	0.00	5.53
6,245.0	1.01	163.52	5,758.3	1,936.1	1,877.0	-475.4	0.31	0.31	0.73
6,331.0	1.01	181.31	5,844.3	1,934.6	1,875.5	-475.2	0.36	0.00	20.69
6,416.0	1.19	212.25	5,929.3	1,933.3	1,874.0	-475.6	0.72	0.21	36.40
6,502.0	1.98	233.83	6,015.2	1,932.2	1,872.4	-477.3	1.14	0.92	25.09
6,587.0	2.24	262.13	6,100.2	1,931.8	1,871.3	-480.1	1.25	0.31	33.29
6,672.0	0.88	275.36	6,185.1	1,932.3	1,871.1	-482.4	1.64	-1.60	15.56
6,758.0	1.54	266.18	6,271.1	1,932.7	1,871.1	-484.3	0.80	0.77	-10.67
6,843.0	1.76	262.39	6,356.1	1,933.1	1,870.9	-486.7	0.29	0.26	-4.46
6,929.0	2.15	250.66	6,442.0	1,933.1	1,870.2	-489.5	0.65	0.45	-13.64

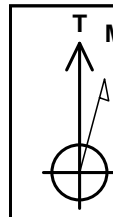
<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 12B-17-07-95
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Survey										
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7,014.0	2.33	248.33	6,527.0	1,932.8	1,869.0	-492.6	0.24	0.21	-2.74	
7,080.0	2.32	238.99	6,592.9	1,932.3	1,867.8	-495.0	0.57	-0.02	-14.15	
7,137.0	2.32	238.99	6,649.9	1,931.6	1,866.6	-497.0	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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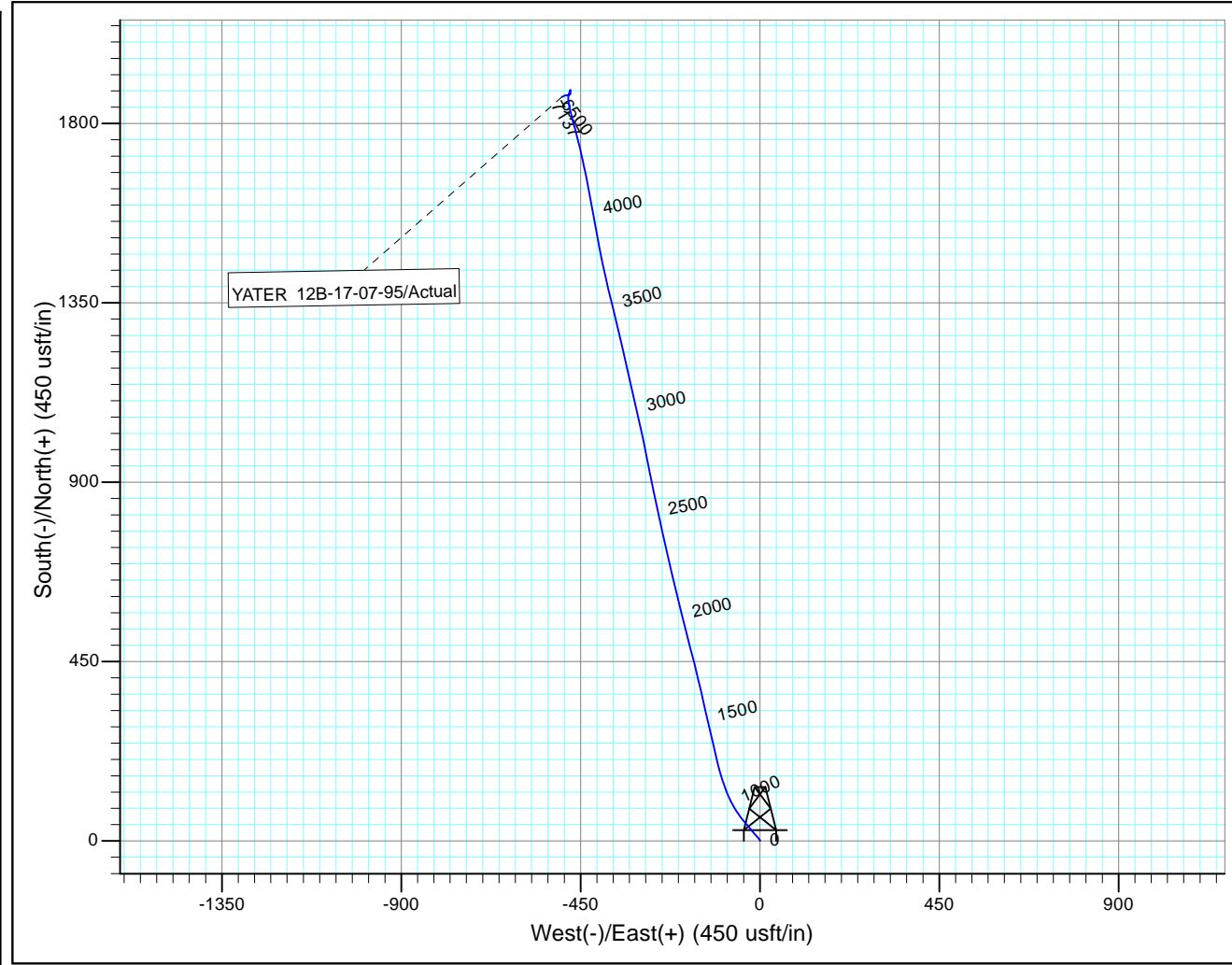
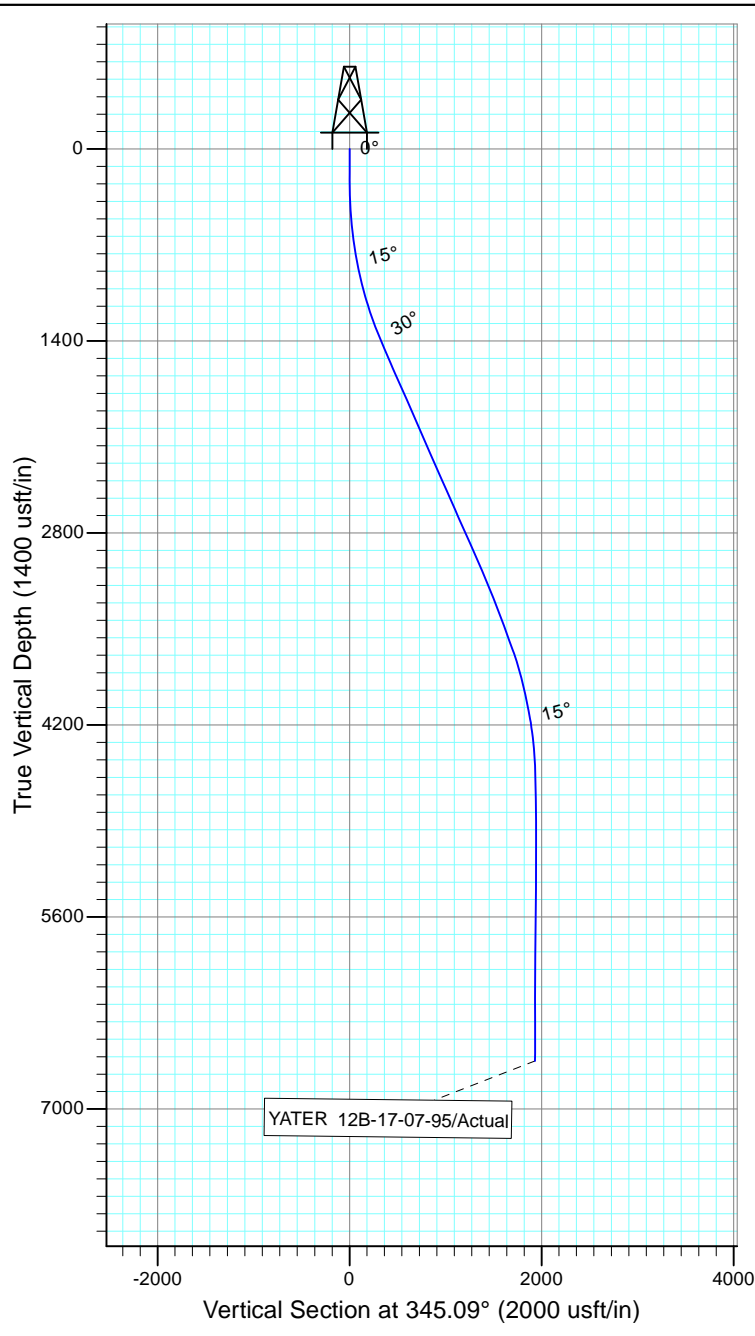


Project: Rockies Region  
Site: Yater  
Well: YATER 12B-17-07-95  
Wellbore: Wellbore #1  
Design: Actual



Azimuths to True North  
Magnetic North: 9.84°

Magnetic Field  
Strength: 51813.4snT  
Dip Angle: 65.57°  
Date: 6/15/2015  
Model: IGRF2010



Design: Actual (YATER 12B-17-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 12:08, July 07 2015

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