



# **Ursa Operating Company, LLC**

**Rockies Region**

**Yater**

**YATER 11B-17-07-95**

**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 11B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 11B-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 11B-17-07-95, SHL LAT: 39.435366098 LONG: -108.026402283				
Well Position	+N/-S	0.0 usft	Northing:	1,593,383.10 usft	Latitude:	39° 26' 7.318 N
	+E/-W	0.0 usft	Easting:	2,286,525.88 usft	Longitude:	108° 1' 35.048 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	51,814

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	350.36

Survey Program		Date	8/31/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
174.0	7,770.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 11B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 11B-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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
174.0	1.07	30.25	174.0	1.2	1.4	0.8	0.61	0.61	0.00	
205.0	0.87	35.56	205.0	1.6	1.8	1.1	0.71	-0.65	17.13	
236.0	0.83	40.43	236.0	1.9	2.2	1.4	0.27	-0.13	15.71	
266.0	1.36	30.10	266.0	2.4	2.7	1.7	1.88	1.77	-34.43	
297.0	1.77	10.78	297.0	3.1	3.5	2.0	2.14	1.32	-62.32	
328.0	2.99	2.33	327.9	4.3	4.7	2.1	4.08	3.94	-27.26	
358.0	3.74	3.25	357.9	6.0	6.5	2.2	2.51	2.50	3.07	
388.0	4.83	4.48	387.8	8.2	8.7	2.3	3.65	3.63	4.10	
419.0	5.84	6.98	418.7	11.0	11.6	2.6	3.34	3.26	8.06	
450.0	6.20	9.17	449.5	14.1	14.8	3.1	1.38	1.16	7.06	
480.0	6.72	8.79	479.3	17.3	18.2	3.6	1.74	1.73	-1.27	
511.0	7.82	10.37	510.1	21.0	22.0	4.3	3.61	3.55	5.10	
542.0	8.57	11.07	540.7	25.1	26.4	5.1	2.44	2.42	2.26	
572.0	9.93	11.64	570.3	29.6	31.1	6.1	4.54	4.53	1.90	
603.0	10.72	10.98	600.8	34.8	36.5	7.1	2.58	2.55	-2.13	
634.0	11.47	10.50	631.3	40.4	42.4	8.2	2.44	2.42	-1.55	
664.0	12.17	10.54	660.6	46.2	48.4	9.4	2.33	2.33	0.13	
694.0	13.36	9.66	689.9	52.4	55.0	10.5	4.02	3.97	-2.93	
724.0	14.63	9.31	719.0	59.3	62.1	11.7	4.24	4.23	-1.17	
755.0	15.47	8.52	748.9	66.9	70.1	13.0	2.79	2.71	-2.55	
797.0	17.09	8.13	789.2	78.1	81.7	14.7	3.87	3.86	-0.93	
840.0	18.90	8.35	830.1	90.8	94.9	16.6	4.21	4.21	0.51	
883.0	20.04	7.47	870.7	104.4	109.1	18.5	2.74	2.65	-2.05	
926.0	21.53	6.32	910.9	119.1	124.2	20.4	3.59	3.47	-2.67	
968.0	22.57	3.41	949.8	134.3	139.9	21.7	3.59	2.48	-6.93	
1,011.0	23.69	3.34	989.4	150.8	156.8	22.7	2.61	2.60	-0.16	

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 11B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 11B-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)	
1,054.0	25.31	1.80	1,028.5	168.2	174.6	23.5	4.05	3.77	-3.58	
1,096.0	26.46	0.00	1,066.3	186.2	192.9	23.8	3.32	2.74	-4.29	
1,139.0	27.99	359.29	1,104.5	205.6	212.6	23.6	3.64	3.56	-1.65	
1,182.0	29.27	357.93	1,142.2	226.0	233.2	23.1	3.34	2.98	-3.16	
1,225.0	30.19	357.27	1,179.6	247.2	254.5	22.2	2.27	2.14	-1.53	
1,267.0	31.60	356.70	1,215.6	268.6	276.0	21.1	3.43	3.36	-1.36	
1,310.0	32.66	355.68	1,252.0	291.4	298.9	19.6	2.77	2.47	-2.37	
1,353.0	33.44	354.11	1,288.1	314.7	322.2	17.5	2.69	1.81	-3.65	
1,396.0	34.58	353.14	1,323.7	338.7	346.1	14.8	2.94	2.65	-2.26	
1,438.0	36.39	352.48	1,357.9	363.1	370.3	11.8	4.40	4.31	-1.57	
1,481.0	38.41	352.22	1,392.1	389.2	396.2	8.3	4.71	4.70	-0.60	
1,523.0	39.95	351.78	1,424.6	415.7	422.5	4.6	3.73	3.67	-1.05	
1,566.0	40.96	351.47	1,457.4	443.6	450.1	0.5	2.39	2.35	-0.72	
1,609.0	41.18	351.12	1,489.8	471.9	478.0	-3.7	0.74	0.51	-0.81	
1,651.0	41.26	349.67	1,521.4	499.5	505.3	-8.4	2.28	0.19	-3.45	
1,694.0	42.32	349.36	1,553.4	528.2	533.4	-13.6	2.51	2.47	-0.72	
1,737.0	43.55	348.83	1,584.9	557.5	562.2	-19.1	2.98	2.86	-1.23	
1,780.0	43.90	348.79	1,616.0	587.2	591.4	-24.9	0.82	0.81	-0.09	
1,822.0	44.30	348.53	1,646.1	616.4	620.0	-30.6	1.05	0.95	-0.62	
1,865.0	44.52	348.09	1,676.9	646.5	649.5	-36.7	0.88	0.51	-1.02	
1,930.0	45.15	348.39	1,723.0	692.3	694.4	-46.1	1.02	0.97	0.46	
2,016.0	44.82	347.47	1,783.8	753.0	753.8	-58.8	0.85	-0.38	-1.07	
2,101.0	44.30	346.72	1,844.3	812.6	811.9	-72.1	0.87	-0.61	-0.88	
2,186.0	43.68	348.17	1,905.5	871.5	869.6	-84.9	1.39	-0.73	1.71	
2,272.0	44.12	349.05	1,967.5	931.1	928.0	-96.7	0.87	0.51	1.02	
2,358.0	43.90	350.33	2,029.3	990.9	986.8	-107.4	1.07	-0.26	1.49	
2,443.0	42.93	350.42	2,091.1	1,049.3	1,044.4	-117.2	1.14	-1.14	0.11	

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 11B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 11B-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)	
2,528.0	41.79	349.80	2,153.9	1,106.5	1,100.8	-127.0	1.43	-1.34	-0.73	
2,614.0	41.09	349.75	2,218.3	1,163.5	1,156.8	-137.1	0.81	-0.81	-0.06	
2,699.0	41.44	348.35	2,282.2	1,219.5	1,211.9	-147.8	1.16	0.41	-1.65	
2,785.0	41.66	348.26	2,346.6	1,276.5	1,267.7	-159.3	0.27	0.26	-0.10	
2,870.0	42.06	348.66	2,409.9	1,333.2	1,323.3	-170.7	0.57	0.47	0.47	
2,955.0	42.71	351.21	2,472.7	1,390.5	1,379.7	-180.7	2.16	0.76	3.00	
3,041.0	42.14	350.86	2,536.2	1,448.5	1,437.0	-189.7	0.72	-0.66	-0.41	
3,126.0	41.23	350.33	2,599.7	1,505.0	1,492.8	-198.9	1.15	-1.07	-0.62	
3,212.0	41.97	348.95	2,664.0	1,562.1	1,548.9	-209.2	1.37	0.86	-1.60	
3,297.0	42.50	348.79	2,726.9	1,619.2	1,605.0	-220.2	0.64	0.62	-0.19	
3,383.0	42.06	347.87	2,790.5	1,677.0	1,661.7	-232.0	0.88	-0.51	-1.07	
3,468.0	41.84	349.05	2,853.7	1,733.8	1,717.3	-243.3	0.96	-0.26	1.39	
3,553.0	42.93	348.70	2,916.5	1,791.1	1,773.6	-254.4	1.31	1.28	-0.41	
3,639.0	42.28	348.39	2,979.8	1,849.3	1,830.6	-265.9	0.79	-0.76	-0.36	
3,724.0	41.70	347.65	3,043.0	1,906.1	1,886.2	-277.7	0.90	-0.68	-0.87	
3,810.0	41.78	348.38	3,107.2	1,963.3	1,942.2	-289.6	0.57	0.09	0.85	
3,895.0	42.93	349.36	3,170.0	2,020.6	1,998.4	-300.7	1.56	1.35	1.15	
3,980.0	41.97	349.89	3,232.7	2,077.9	2,054.9	-311.0	1.21	-1.13	0.62	
4,066.0	42.63	349.07	3,296.3	2,135.8	2,111.8	-321.6	1.00	0.77	-0.95	
4,151.0	42.71	350.20	3,358.8	2,193.4	2,168.4	-331.9	0.91	0.09	1.33	
4,237.0	41.48	350.11	3,422.6	2,251.1	2,225.2	-341.8	1.43	-1.43	-0.10	
4,322.0	40.39	349.45	3,486.8	2,306.7	2,280.0	-351.7	1.38	-1.28	-0.78	
4,407.0	40.91	349.80	3,551.3	2,362.1	2,334.5	-361.6	0.67	0.61	0.41	
4,493.0	42.50	348.79	3,615.5	2,419.3	2,390.7	-372.3	2.01	1.85	-1.17	
4,578.0	42.98	348.09	3,678.0	2,477.0	2,447.2	-383.8	0.79	0.56	-0.82	
4,664.0	43.29	349.05	3,740.7	2,535.7	2,504.9	-395.5	0.84	0.36	1.12	
4,749.0	42.93	349.10	3,802.8	2,593.8	2,561.9	-406.5	0.43	-0.42	0.06	

<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 11B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 11B-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)
4,834.0	40.47	350.46	3,866.2	2,650.3	2,617.6	-416.6	3.08	-2.89	1.60
4,920.0	37.62	350.55	3,933.0	2,704.5	2,671.0	-425.5	3.31	-3.31	0.10
5,005.0	35.55	350.77	4,001.3	2,755.2	2,721.0	-433.7	2.44	-2.44	0.26
5,091.0	32.74	349.71	4,072.4	2,803.4	2,768.5	-441.9	3.34	-3.27	-1.23
5,176.0	31.03	349.49	4,144.6	2,848.3	2,812.7	-450.0	2.02	-2.01	-0.26
5,261.0	29.09	348.73	4,218.2	2,890.9	2,854.5	-458.0	2.33	-2.28	-0.89
5,347.0	26.37	351.25	4,294.3	2,930.9	2,893.9	-465.0	3.44	-3.16	2.93
5,432.0	24.49	350.95	4,371.1	2,967.4	2,929.9	-470.7	2.22	-2.21	-0.35
5,518.0	21.62	353.49	4,450.2	3,001.0	2,963.3	-475.3	3.53	-3.34	2.95
5,603.0	18.28	355.07	4,530.1	3,030.0	2,992.1	-478.2	3.98	-3.93	1.86
5,689.0	15.22	357.30	4,612.4	3,054.6	3,016.9	-479.9	3.64	-3.56	2.59
5,774.0	12.15	357.20	4,695.0	3,074.6	3,037.0	-480.8	3.61	-3.61	-0.12
5,860.0	8.96	355.60	4,779.5	3,090.2	3,052.7	-481.8	3.72	-3.71	-1.86
5,945.0	6.90	355.73	4,863.7	3,101.9	3,064.4	-482.7	2.42	-2.42	0.15
6,030.0	5.41	352.79	4,948.2	3,111.0	3,073.4	-483.6	1.79	-1.75	-3.46
6,116.0	2.73	340.50	5,034.0	3,117.1	3,079.4	-484.8	3.26	-3.12	-14.29
6,201.0	2.07	328.80	5,118.9	3,120.5	3,082.6	-486.2	0.96	-0.78	-13.76
6,287.0	1.49	326.95	5,204.9	3,123.0	3,084.9	-487.6	0.68	-0.67	-2.15
6,372.0	1.66	326.88	5,289.8	3,125.1	3,086.8	-488.9	0.20	0.20	-0.08
6,458.0	1.23	310.69	5,375.8	3,127.0	3,088.5	-490.3	0.68	-0.50	-18.83
6,543.0	0.73	276.67	5,460.8	3,127.8	3,089.1	-491.5	0.88	-0.59	-40.02
6,629.0	1.63	335.34	5,546.8	3,129.2	3,090.3	-492.6	1.62	1.05	68.22
6,714.0	1.67	339.17	5,631.7	3,131.5	3,092.6	-493.5	0.14	0.05	4.51
6,799.0	1.67	310.95	5,716.7	3,133.7	3,094.5	-494.9	0.96	0.00	-33.20
6,884.0	1.74	298.62	5,801.7	3,135.5	3,096.0	-497.0	0.44	0.08	-14.51
6,970.0	1.67	276.90	5,887.6	3,136.6	3,096.7	-499.4	0.75	-0.08	-25.26
7,055.0	2.20	246.53	5,972.6	3,136.6	3,096.2	-502.1	1.34	0.62	-35.73

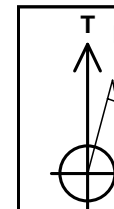
<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well YATER 11B-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 11B-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 11B-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)	
7,141.0	2.46	254.92	6,058.5	3,136.0	3,095.1	-505.4	0.50	0.30	9.76	
7,226.0	1.63	272.11	6,143.5	3,136.1	3,094.7	-508.3	1.20	-0.98	20.22	
7,312.0	1.45	260.50	6,229.4	3,136.4	3,094.5	-510.6	0.42	-0.21	-13.50	
7,397.0	1.58	244.02	6,314.4	3,136.0	3,093.8	-512.8	0.53	0.15	-19.39	
7,482.0	1.93	240.86	6,399.4	3,135.2	3,092.6	-515.1	0.43	0.41	-3.72	
7,568.0	2.46	228.34	6,485.3	3,133.8	3,090.7	-517.7	0.83	0.62	-14.56	
7,653.0	2.50	221.48	6,570.2	3,131.6	3,088.1	-520.3	0.35	0.05	-8.07	
7,710.0	2.50	221.12	6,627.2	3,130.1	3,086.2	-521.9	0.03	0.00	-0.63	
7,770.0	2.50	221.12	6,687.1	3,128.4	3,084.3	-523.7	0.00	0.00	0.00	

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

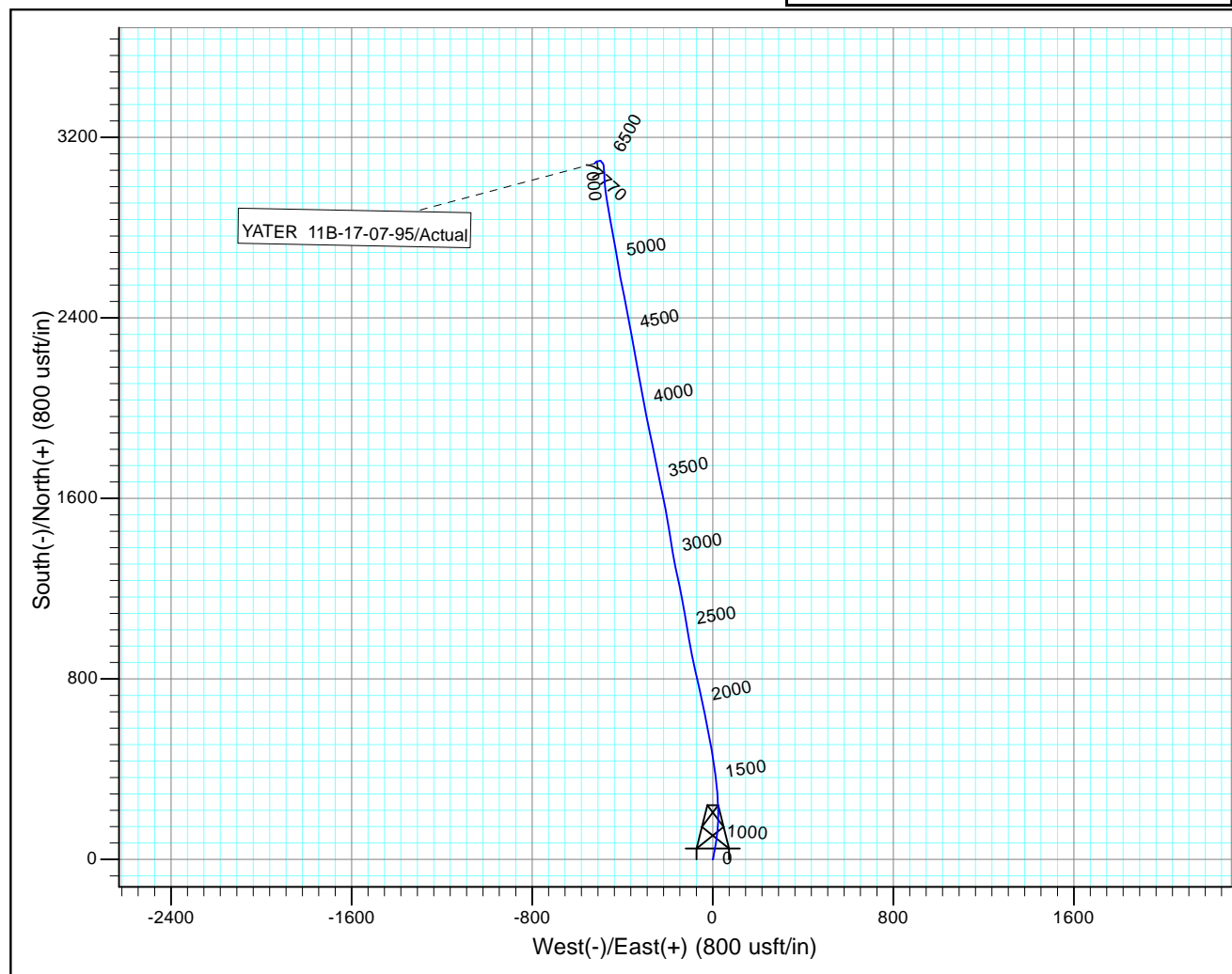
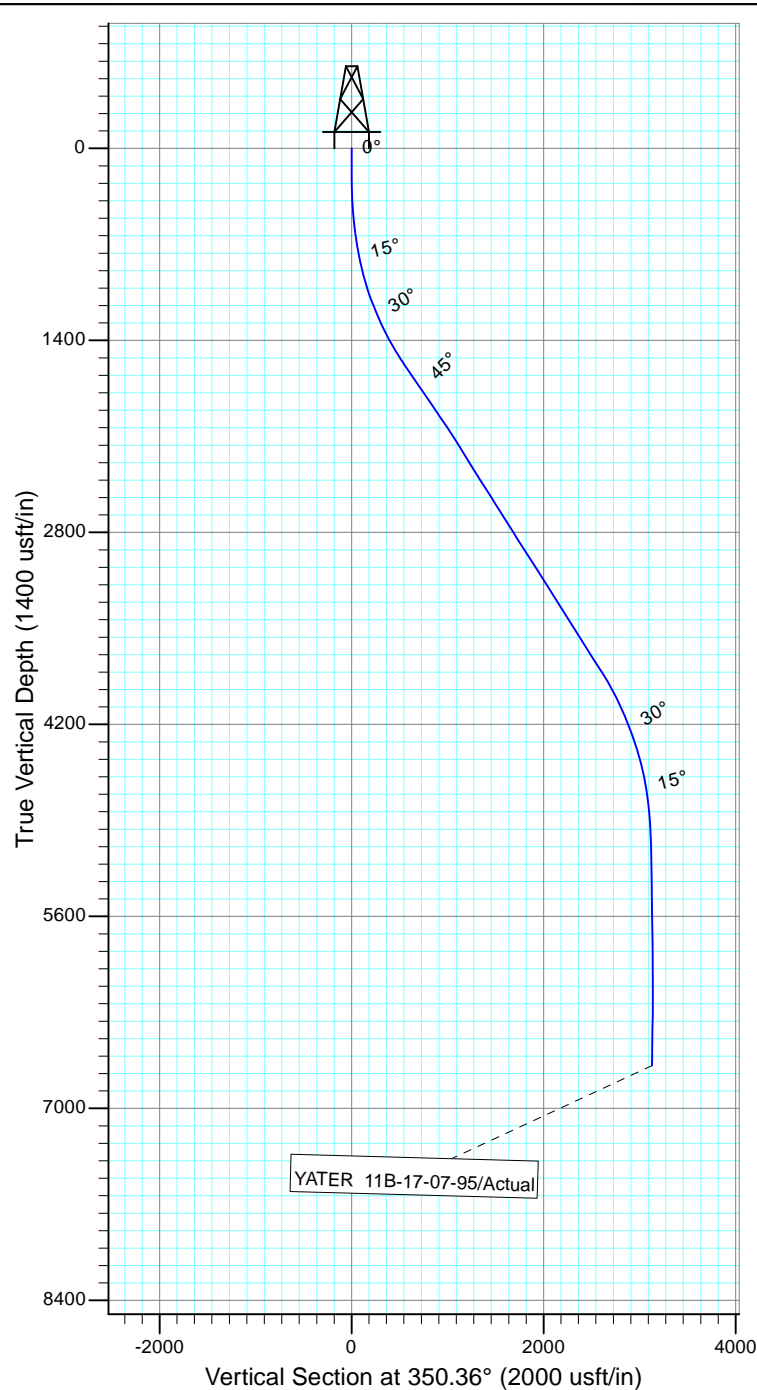


Project: Rockies Region  
 Site: Yater  
 Well: YATER 11B-17-07-95  
 Wellbore: Wellbore #1  
 Design: Actual



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 11B-17-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 7:21, August 31 2015

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