



Ursa Operating Company, LLC

Rockies Region

Yater

YATER 41D-18-07-95

Wellbore #1

Design: Actual

End of Well Report

31 August, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well YATER 41D-18-07-95
Project:	Rockies Region	TVD Reference:	YATER 41D-18-07-95 @ 5536.0usft (CAPSTAR 321)
Site:	Yater	MD Reference:	YATER 41D-18-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 41D-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	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:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39° 26' 7.071 N
		Longitude:	108° 1' 35.041 W
		Grid Convergence:	-1.59 °

Well	YATER 41D-18-07-95, SHL LAT: 39.435468977 LONG: -108.026405373		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	1,593,420.59 usft
			Latitude:
			39° 26' 7.688 N
Position Uncertainty		0.0 usft	Easting:
			2,286,526.05 usft
			Longitude:
			108° 1' 35.059 W
			Wellhead Elevation:
			5,536.0 usft
			Ground Level:
			5,519.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	6/15/2015	9.84
			Dip Angle (°)
			65.57
			Field Strength (nT)
			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)
	0.0	0.0	0.0
			Direction (°)
			320.86

Survey Program	Date 8/31/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
116.0	7,496.0	Survey #1 (Wellbore #1)	MWD
			Description
			MWD - Standard

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Site:	Yater	MD Reference:	YATER 41D-18-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 41D-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	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	
116.0	0.13	268.77	116.0	0.1	0.0	-0.1	0.11	0.11	0.00	
146.0	0.09	290.69	146.0	0.1	0.0	-0.2	0.19	-0.13	73.07	
176.0	0.04	196.21	176.0	0.1	0.0	-0.2	0.34	-0.17	-314.93	
207.0	0.40	145.67	207.0	0.0	-0.1	-0.2	1.21	1.16	-163.03	
238.0	0.26	201.97	238.0	-0.1	-0.3	-0.1	1.08	-0.45	181.61	
268.0	0.09	344.75	268.0	-0.1	-0.3	-0.2	1.12	-0.57	475.93	
299.0	0.83	322.34	299.0	0.1	-0.1	-0.3	2.41	2.39	-72.29	
330.0	1.85	321.68	330.0	0.8	0.5	-0.7	3.29	3.29	-2.13	
360.0	2.66	330.97	360.0	2.0	1.5	-1.4	2.95	2.70	30.97	
390.0	3.65	327.87	389.9	3.6	2.9	-2.2	3.35	3.30	-10.33	
421.0	4.57	330.11	420.8	5.8	4.8	-3.4	3.01	2.97	7.23	
452.0	5.41	327.17	451.7	8.5	7.1	-4.8	2.83	2.71	-9.48	
482.0	6.46	326.03	481.6	11.6	9.7	-6.5	3.52	3.50	-3.80	
513.0	7.43	324.40	512.3	15.3	12.8	-8.6	3.19	3.13	-5.26	
544.0	8.61	322.91	543.0	19.7	16.2	-11.2	3.86	3.81	-4.81	
574.0	9.58	321.32	572.7	24.4	20.0	-14.1	3.34	3.23	-5.30	
605.0	10.90	321.68	603.2	29.9	24.3	-17.5	4.26	4.26	1.16	
636.0	11.87	322.55	633.5	36.0	29.1	-21.3	3.18	3.13	2.81	
666.0	12.79	320.93	662.9	42.4	34.1	-25.3	3.28	3.07	-5.40	
696.0	13.71	321.72	692.1	49.3	39.5	-29.6	3.13	3.07	2.63	
726.0	14.77	321.72	721.1	56.7	45.3	-34.1	3.53	3.53	0.00	
757.0	15.60	321.59	751.1	64.8	51.7	-39.2	2.68	2.68	-0.42	
800.0	17.23	321.41	792.3	77.0	61.2	-46.7	3.79	3.79	-0.42	
842.0	18.90	321.98	832.2	90.0	71.4	-54.8	4.00	3.98	1.36	
885.0	20.52	321.68	872.7	104.5	82.8	-63.8	3.77	3.77	-0.70	
928.0	22.02	320.84	912.8	120.1	95.0	-73.5	3.56	3.49	-1.95	

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Well: YATER 41D-18-07-95	North Reference: True
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Actual	Database: 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)	
971.0	23.25	319.52	952.5	136.6	107.7	-84.1	3.09	2.86	-3.07	
1,013.0	24.70	319.96	990.8	153.7	120.7	-95.2	3.48	3.45	1.05	
1,056.0	25.93	319.26	1,029.7	172.1	134.7	-107.1	2.94	2.86	-1.63	
1,099.0	27.64	320.31	1,068.1	191.4	149.5	-119.6	4.13	3.98	2.44	
1,141.0	28.87	319.92	1,105.1	211.3	164.8	-132.3	2.96	2.93	-0.93	
1,184.0	30.41	320.40	1,142.5	232.6	181.1	-146.0	3.62	3.58	1.12	
1,227.0	31.60	320.97	1,179.3	254.7	198.2	-160.0	2.85	2.77	1.33	
1,269.0	33.13	321.85	1,214.8	277.2	215.8	-174.0	3.81	3.64	2.10	
1,312.0	34.46	321.01	1,250.5	301.1	234.5	-188.9	3.28	3.09	-1.95	
1,355.0	35.90	321.54	1,285.7	325.9	253.8	-204.4	3.42	3.35	1.23	
1,397.0	37.71	323.08	1,319.3	351.0	273.7	-219.8	4.84	4.31	3.67	
1,440.0	38.89	323.43	1,353.0	377.7	295.1	-235.7	2.79	2.74	0.81	
1,483.0	39.07	323.92	1,386.5	404.7	316.9	-251.8	0.83	0.42	1.14	
1,525.0	39.50	323.19	1,419.0	431.3	338.3	-267.6	1.50	1.02	-1.74	
1,568.0	40.62	321.46	1,451.9	458.9	360.2	-284.5	3.67	2.60	-4.02	
1,611.0	40.56	321.68	1,484.5	486.9	382.1	-301.9	0.36	-0.14	0.51	
1,653.0	39.77	322.03	1,516.6	514.0	403.4	-318.6	1.96	-1.88	0.83	
1,696.0	39.64	321.10	1,549.7	541.4	424.9	-335.7	1.41	-0.30	-2.16	
1,739.0	40.56	321.90	1,582.6	569.1	446.6	-352.9	2.45	2.14	1.86	
1,782.0	40.69	321.85	1,615.2	597.1	468.6	-370.2	0.31	0.30	-0.12	
1,824.0	40.61	321.85	1,647.1	624.5	490.1	-387.1	0.19	-0.19	0.00	
1,867.0	40.35	321.53	1,679.8	652.4	512.0	-404.4	0.77	-0.60	-0.74	
1,931.0	39.77	322.51	1,728.8	693.6	544.5	-429.7	1.34	-0.91	1.53	
2,016.0	39.42	322.51	1,794.3	747.7	587.5	-462.7	0.41	-0.41	0.00	
2,102.0	39.73	321.46	1,860.6	802.5	630.7	-496.5	0.86	0.36	-1.22	
2,187.0	38.98	320.45	1,926.3	856.4	672.5	-530.4	1.16	-0.88	-1.19	
2,273.0	39.29	320.71	1,993.0	910.7	714.4	-564.9	0.41	0.36	0.30	

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Well:	YATER 41D-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	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)	
2,358.0	39.20	319.83	2,058.9	964.5	755.8	-599.2	0.66	-0.11	-1.04	
2,443.0	40.25	319.13	2,124.2	1,018.8	797.1	-634.5	1.34	1.24	-0.82	
2,529.0	39.73	318.95	2,190.1	1,074.0	838.8	-670.8	0.62	-0.60	-0.21	
2,614.0	40.61	319.48	2,255.1	1,128.8	880.3	-706.6	1.11	1.04	0.62	
2,699.0	40.25	318.73	2,319.8	1,183.9	922.0	-742.7	0.71	-0.42	-0.88	
2,785.0	39.90	318.43	2,385.6	1,239.2	963.5	-779.3	0.46	-0.41	-0.35	
2,870.0	40.17	320.09	2,450.7	1,293.9	1,005.0	-815.0	1.30	0.32	1.95	
2,956.0	39.76	321.92	2,516.6	1,349.1	1,047.9	-849.7	1.45	-0.48	2.13	
3,041.0	38.85	321.28	2,582.3	1,403.0	1,090.1	-883.2	1.17	-1.07	-0.75	
3,127.0	38.23	320.97	2,649.6	1,456.5	1,131.8	-916.8	0.76	-0.72	-0.36	
3,212.0	39.51	322.12	2,715.8	1,509.9	1,173.6	-950.0	1.73	1.51	1.35	
3,297.0	39.34	322.26	2,781.4	1,563.8	1,216.2	-983.1	0.23	-0.20	0.16	
3,383.0	38.19	322.07	2,848.5	1,617.7	1,258.7	-1,016.1	1.34	-1.34	-0.22	
3,468.0	39.42	322.69	2,914.7	1,670.9	1,300.9	-1,048.6	1.52	1.45	0.73	
3,554.0	39.07	322.64	2,981.3	1,725.3	1,344.2	-1,081.6	0.41	-0.41	-0.06	
3,639.0	38.19	322.38	3,047.7	1,778.3	1,386.3	-1,113.9	1.05	-1.04	-0.31	
3,724.0	39.51	322.60	3,113.9	1,831.6	1,428.6	-1,146.4	1.56	1.55	0.26	
3,809.0	39.08	322.72	3,179.7	1,885.4	1,471.4	-1,179.0	0.51	-0.51	0.14	
3,895.0	37.90	321.71	3,247.0	1,938.9	1,513.7	-1,211.8	1.55	-1.37	-1.17	
3,980.0	38.63	321.72	3,313.8	1,991.6	1,555.0	-1,244.4	0.86	0.86	0.01	
4,066.0	39.64	321.24	3,380.5	2,045.9	1,597.5	-1,278.2	1.23	1.17	-0.56	
4,151.0	38.45	320.67	3,446.5	2,099.4	1,639.1	-1,311.9	1.46	-1.40	-0.67	
4,237.0	40.07	320.94	3,513.1	2,153.8	1,681.2	-1,346.3	1.89	1.88	0.31	
4,322.0	40.17	321.90	3,578.1	2,208.6	1,724.1	-1,380.5	0.74	0.12	1.13	
4,407.0	39.51	321.15	3,643.3	2,263.0	1,766.7	-1,414.4	0.96	-0.78	-0.88	
4,493.0	38.58	320.71	3,710.1	2,317.2	1,808.8	-1,448.5	1.13	-1.08	-0.51	
4,578.0	38.14	319.87	3,776.8	2,370.0	1,849.3	-1,482.2	0.80	-0.52	-0.99	

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Site:	Yater	MD Reference:	YATER 41D-18-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 41D-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
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4,664.0	35.49	318.56	3,845.6	2,421.5	1,888.4	-1,515.9	3.21	-3.08	-1.52	
4,749.0	33.48	320.74	3,915.7	2,469.6	1,925.0	-1,547.0	2.77	-2.36	2.56	
4,835.0	31.95	319.83	3,988.1	2,516.0	1,960.8	-1,576.7	1.87	-1.78	-1.06	
4,920.0	30.46	318.65	4,060.8	2,560.1	1,994.1	-1,605.5	1.89	-1.75	-1.39	
5,006.0	28.78	317.46	4,135.5	2,602.5	2,025.8	-1,633.9	2.07	-1.95	-1.38	
5,091.0	26.94	321.85	4,210.7	2,642.2	2,056.0	-1,659.6	3.24	-2.16	5.16	
5,176.0	26.41	321.59	4,286.6	2,680.4	2,085.9	-1,683.2	0.64	-0.62	-0.31	
5,262.0	24.70	320.18	4,364.2	2,717.5	2,114.7	-1,706.6	2.11	-1.99	-1.64	
5,347.0	22.06	321.24	4,442.2	2,751.2	2,140.8	-1,728.0	3.14	-3.11	1.25	
5,432.0	18.50	320.27	4,521.9	2,780.6	2,163.6	-1,746.6	4.21	-4.19	-1.14	
5,518.0	16.33	320.31	4,604.0	2,806.4	2,183.4	-1,763.1	2.52	-2.52	0.05	
5,603.0	14.25	320.84	4,686.0	2,828.8	2,200.8	-1,777.3	2.45	-2.45	0.62	
5,689.0	11.91	326.33	4,769.7	2,848.2	2,216.3	-1,788.9	3.08	-2.72	6.38	
5,774.0	8.75	321.02	4,853.4	2,863.4	2,228.7	-1,797.8	3.88	-3.72	-6.25	
5,859.0	5.58	314.07	4,937.7	2,874.0	2,236.6	-1,804.9	3.86	-3.73	-8.18	
5,945.0	2.37	338.11	5,023.5	2,879.8	2,241.1	-1,808.5	4.13	-3.73	27.95	
6,030.0	1.49	351.95	5,108.4	2,882.5	2,243.9	-1,809.4	1.16	-1.04	16.28	
6,116.0	1.15	341.65	5,194.4	2,884.2	2,245.8	-1,809.8	0.48	-0.40	-11.98	
6,201.0	0.75	338.64	5,279.4	2,885.5	2,247.1	-1,810.3	0.47	-0.47	-3.54	
6,286.0	1.80	30.19	5,364.4	2,886.5	2,248.8	-1,809.8	1.71	1.24	60.65	
6,372.0	2.02	31.72	5,450.3	2,887.5	2,251.2	-1,808.3	0.26	0.26	1.78	
6,457.0	1.21	35.36	5,535.3	2,888.2	2,253.3	-1,807.0	0.96	-0.95	4.28	
6,543.0	0.31	1.27	5,621.3	2,888.7	2,254.2	-1,806.5	1.13	-1.05	-39.64	
6,628.0	0.53	278.96	5,706.3	2,889.1	2,254.5	-1,806.9	0.68	0.26	-96.84	
6,714.0	0.70	49.04	5,792.3	2,889.4	2,254.9	-1,806.9	1.30	0.20	151.26	
6,799.0	0.57	100.32	5,877.3	2,889.1	2,255.2	-1,806.0	0.66	-0.15	60.33	
6,885.0	0.88	199.42	5,963.3	2,888.5	2,254.5	-1,805.8	1.30	0.36	115.23	

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Site:	Yater	MD Reference:	YATER 41D-18-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 41D-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
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6,970.0	1.36	205.05	6,048.2	2,887.7	2,253.0	-1,806.5	0.58	0.56	6.62	
7,055.0	1.89	225.57	6,133.2	2,887.1	2,251.1	-1,807.9	0.92	0.62	24.14	
7,141.0	2.77	219.59	6,219.1	2,886.6	2,248.5	-1,810.3	1.06	1.02	-6.95	
7,226.0	2.59	228.91	6,304.0	2,886.1	2,245.6	-1,813.0	0.55	-0.21	10.96	
7,311.0	2.29	232.55	6,389.0	2,886.1	2,243.3	-1,815.8	0.40	-0.35	4.28	
7,397.0	2.39	233.70	6,474.9	2,886.2	2,241.2	-1,818.6	0.13	0.12	1.34	
7,436.0	2.41	235.70	6,513.9	2,886.4	2,240.3	-1,819.9	0.22	0.05	5.13	
7,496.0	2.41	235.70	6,573.8	2,886.6	2,238.9	-1,822.0	0.00	0.00	0.00	

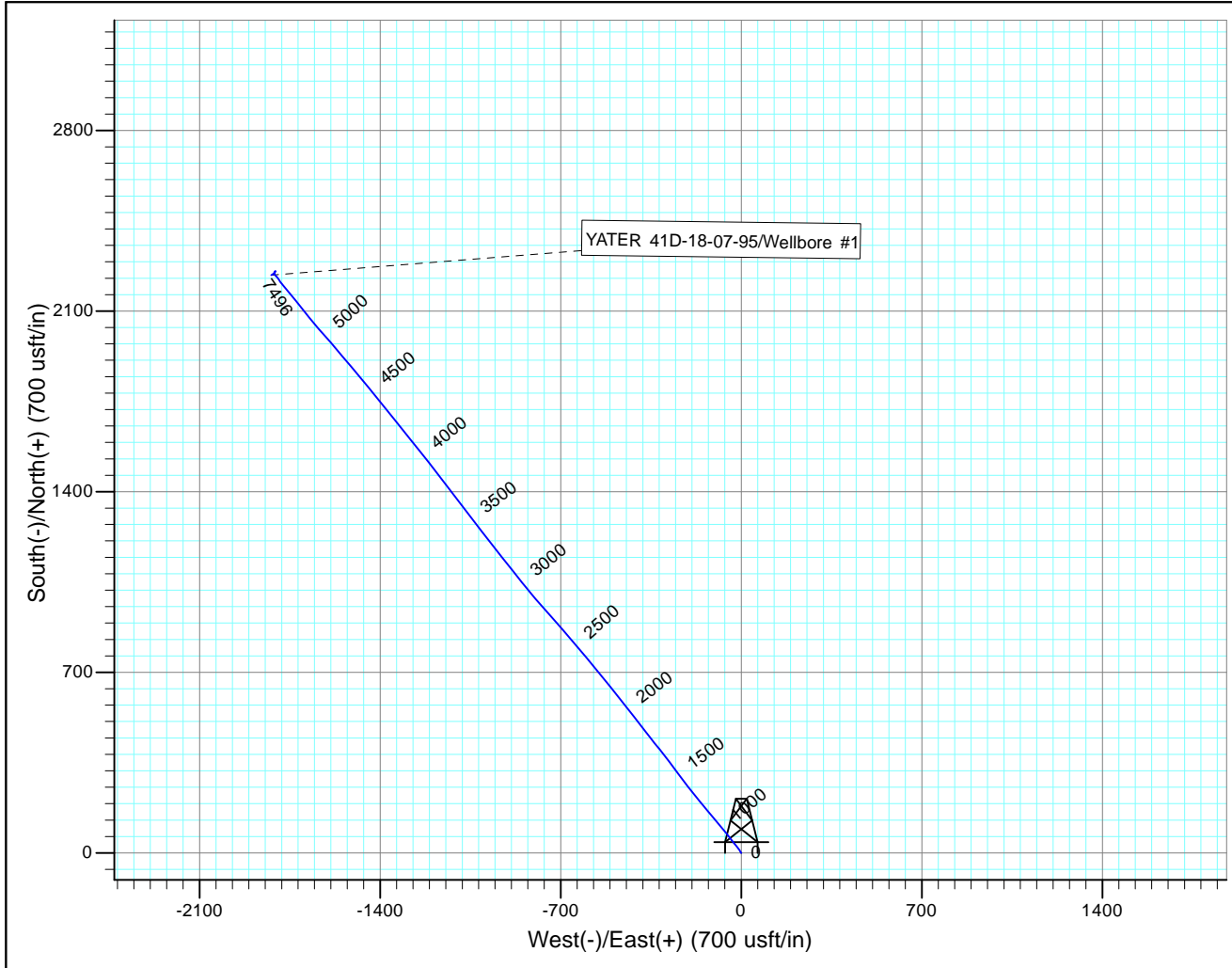
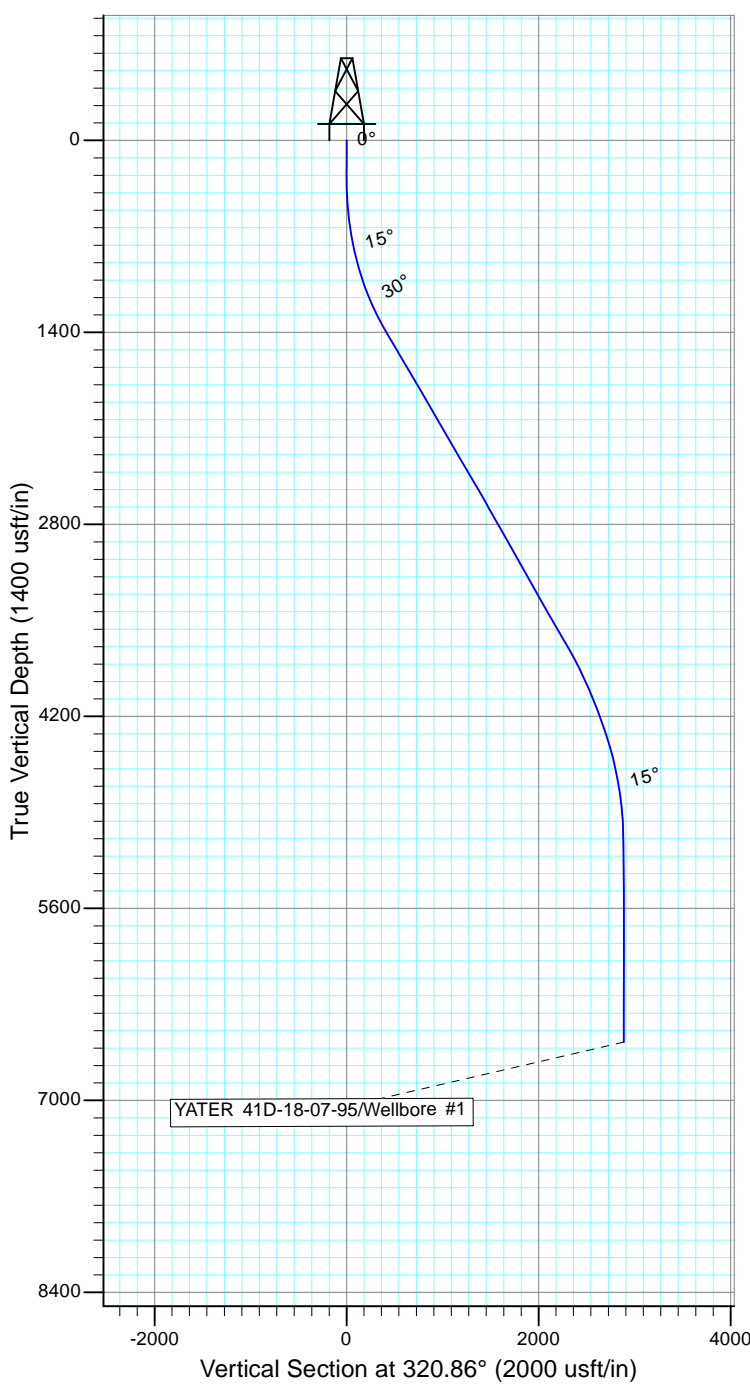
Checked By: _____ Approved By: _____ Date: _____



Project: Rockies Region
 Site: Yater
 Well: YATER 41D-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 41D-18-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 7:06, August 31 2015

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