



Ursa Operating Company, LLC

Rockies Region

Yater

YATER 42D-18-07-95

Wellbore #1

Design: Actual

End of Well Report

23 March, 2015



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

Well YATER 42D-18-07-95, SHL LAT: 39.435193197 LONG: -108.026476735			
Well Position	+N/-S 0.0 usft	Northing: 1,593,320.73 usft	Latitude: 39° 26' 6.695 N
	+E/-W 0.0 usft	Easting: 2,286,503.11 usft	Longitude: 108° 1' 35.316 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	10/23/2014	9.93	65.59	51,878

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	300.17

Survey Program Date 3/23/2015				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
153.0	7,111.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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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	0.00
153.0	1.27	72.67	153.0	-1.1	0.5	1.6	0.83	0.83	0.00	0.00
181.0	1.14	72.16	181.0	-1.5	0.7	2.2	0.47	-0.46	-1.82	-1.82
209.0	1.05	61.79	209.0	-1.9	0.9	2.7	0.78	-0.32	-37.04	-37.04
242.0	0.79	55.81	242.0	-2.1	1.2	3.1	0.84	-0.79	-18.12	-18.12
272.0	0.69	8.68	272.0	-2.1	1.5	3.3	2.00	-0.33	-157.10	-157.10
302.0	1.01	323.13	302.0	-1.8	1.8	3.2	2.40	1.07	-151.83	-151.83
332.0	1.89	301.73	332.0	-1.1	2.3	2.6	3.40	2.93	-71.33	-71.33
362.0	2.90	299.84	361.9	0.2	3.0	1.5	3.38	3.37	-6.30	-6.30
392.0	3.82	294.08	391.9	1.9	3.7	0.0	3.26	3.07	-19.20	-19.20
422.0	5.19	293.82	421.8	4.3	4.7	-2.2	4.57	4.57	-0.87	-0.87
482.0	8.00	292.54	481.4	11.1	7.4	-8.5	4.69	4.68	-2.13	-2.13
512.0	9.32	294.96	511.0	15.6	9.2	-12.7	4.56	4.40	8.07	8.07
542.0	10.37	295.84	540.6	20.7	11.4	-17.3	3.54	3.50	2.93	2.93
572.0	11.47	296.15	570.1	26.4	13.9	-22.4	3.67	3.67	1.03	1.03
602.0	12.48	295.40	599.4	32.6	16.6	-28.0	3.41	3.37	-2.50	-2.50
632.0	13.54	295.14	628.6	39.3	19.5	-34.1	3.54	3.53	-0.87	-0.87
662.0	14.72	295.53	657.7	46.6	22.6	-40.7	3.95	3.93	1.30	1.30
692.0	15.47	296.41	686.7	54.4	26.1	-47.8	2.61	2.50	2.93	2.93
722.0	16.08	296.98	715.6	62.5	29.7	-55.0	2.10	2.03	1.90	1.90
752.0	16.70	298.17	744.3	71.0	33.6	-62.5	2.35	2.07	3.97	3.97
782.0	17.23	298.17	773.0	79.7	37.8	-70.3	1.77	1.77	0.00	0.00
812.0	18.15	299.05	801.6	88.8	42.1	-78.3	3.19	3.07	2.93	2.93
842.0	18.98	299.84	830.1	98.4	46.8	-86.6	2.89	2.77	2.63	2.63
872.0	20.04	300.28	858.3	108.4	51.9	-95.3	3.57	3.53	1.47	1.47
902.0	20.79	300.10	886.4	118.9	57.1	-104.3	2.51	2.50	-0.60	-0.60
932.0	21.97	300.28	914.4	129.8	62.6	-113.7	3.94	3.93	0.60	0.60

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Well:	YATER 42D-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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962.0	22.98	299.97	942.1	141.3	68.4	-123.7	3.39	3.37	-1.03	
992.0	23.69	300.41	969.6	153.2	74.3	-133.9	2.44	2.37	1.47	
1,022.0	24.26	300.06	997.1	165.4	80.5	-144.5	1.96	1.90	-1.17	
1,052.0	25.27	300.02	1,024.3	177.9	86.8	-155.3	3.37	3.37	-0.13	
1,082.0	26.19	300.63	1,051.3	190.9	93.4	-166.6	3.19	3.07	2.03	
1,112.0	27.39	300.22	1,078.1	204.5	100.2	-178.3	4.05	4.00	-1.37	
1,142.0	28.30	300.79	1,104.6	218.5	107.3	-190.3	3.16	3.03	1.90	
1,172.0	29.05	300.76	1,130.9	232.9	114.7	-202.7	2.50	2.50	-0.10	
1,202.0	29.88	300.19	1,157.1	247.6	122.2	-215.4	2.92	2.77	-1.90	
1,232.0	30.54	301.02	1,183.0	262.7	129.8	-228.4	2.60	2.20	2.77	
1,262.0	31.25	300.63	1,208.7	278.1	137.7	-241.6	2.46	2.37	-1.30	
1,292.0	31.33	301.24	1,234.4	293.7	145.8	-255.0	1.09	0.27	2.03	
1,322.0	31.29	300.72	1,260.0	309.3	153.8	-268.4	0.91	-0.13	-1.73	
1,352.0	31.77	299.84	1,285.6	325.0	161.7	-281.9	2.22	1.60	-2.93	
1,382.0	32.26	300.01	1,311.0	340.9	169.6	-295.7	1.66	1.63	0.57	
1,412.0	32.37	300.63	1,336.4	356.9	177.7	-309.5	1.16	0.37	2.07	
1,442.0	32.48	300.63	1,361.7	373.0	185.9	-323.4	0.37	0.37	0.00	
1,472.0	32.61	299.88	1,387.0	389.1	194.0	-337.3	1.41	0.43	-2.50	
1,502.0	33.35	300.50	1,412.1	405.5	202.3	-351.4	2.71	2.47	2.07	
1,532.0	33.71	300.41	1,437.2	422.0	210.7	-365.7	1.21	1.20	-0.30	
1,562.0	33.79	300.41	1,462.1	438.7	219.1	-380.1	0.27	0.27	0.00	
1,592.0	34.00	301.20	1,487.0	455.4	227.7	-394.5	1.63	0.70	2.63	
1,622.0	34.67	301.16	1,511.8	472.4	236.4	-408.9	2.23	2.23	-0.13	
1,652.0	34.58	300.94	1,536.5	489.4	245.2	-423.5	0.51	-0.30	-0.73	
1,682.0	34.45	300.01	1,561.2	506.4	253.8	-438.2	1.81	-0.43	-3.10	
1,712.0	34.41	299.66	1,585.9	523.4	262.3	-452.9	0.67	-0.13	-1.17	
1,742.0	34.58	300.41	1,610.6	540.4	270.8	-467.6	1.53	0.57	2.50	

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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)	
1,772.0	34.32	299.71	1,635.4	557.3	279.3	-482.3	1.58	-0.87	-2.33	
1,802.0	34.67	300.41	1,660.1	574.3	287.8	-497.0	1.76	1.17	2.33	
1,832.0	34.72	299.75	1,684.8	591.4	296.3	-511.8	1.26	0.17	-2.20	
1,887.0	34.89	301.16	1,729.9	622.8	312.3	-538.8	1.50	0.31	2.56	
1,973.0	33.79	300.94	1,800.9	671.3	337.3	-580.4	1.29	-1.28	-0.26	
2,058.0	34.41	300.76	1,871.3	718.9	361.7	-621.3	0.74	0.73	-0.21	
2,144.0	35.07	301.51	1,942.0	767.9	387.1	-663.3	0.91	0.77	0.87	
2,229.0	35.86	300.94	2,011.2	817.2	412.6	-705.4	1.01	0.93	-0.67	
2,314.0	36.52	299.57	2,079.8	867.4	437.9	-748.8	1.23	0.78	-1.61	
2,400.0	35.07	298.52	2,149.6	917.7	462.3	-792.8	1.83	-1.69	-1.22	
2,485.0	35.64	299.05	2,218.9	966.9	486.0	-835.9	0.76	0.67	0.62	
2,571.0	34.28	298.69	2,289.4	1,016.2	509.8	-879.0	1.60	-1.58	-0.42	
2,656.0	34.80	299.40	2,359.4	1,064.3	533.2	-921.1	0.77	0.61	0.84	
2,741.0	35.55	299.66	2,428.9	1,113.3	557.3	-963.7	0.90	0.88	0.31	
2,827.0	36.04	300.67	2,498.6	1,163.6	582.6	-1,007.2	0.89	0.57	1.17	
2,912.0	34.98	300.28	2,567.8	1,213.0	607.7	-1,049.8	1.28	-1.25	-0.46	
2,997.0	35.46	300.63	2,637.3	1,262.0	632.5	-1,092.0	0.61	0.56	0.41	
3,083.0	36.12	301.16	2,707.0	1,312.3	658.3	-1,135.2	0.85	0.77	0.62	
3,168.0	35.28	301.30	2,776.1	1,361.9	684.1	-1,177.6	0.99	-0.99	0.16	
3,254.0	36.25	301.29	2,845.8	1,412.1	710.2	-1,220.6	1.13	1.13	-0.01	
3,339.0	35.51	301.07	2,914.7	1,461.9	736.0	-1,263.2	0.88	-0.87	-0.26	
3,424.0	35.65	300.40	2,983.8	1,511.4	761.2	-1,305.7	0.49	0.16	-0.79	
3,510.0	34.89	300.28	3,054.1	1,561.0	786.3	-1,348.5	0.89	-0.88	-0.14	
3,595.0	33.49	299.57	3,124.4	1,608.8	810.1	-1,389.9	1.71	-1.65	-0.84	
3,681.0	33.75	296.59	3,196.0	1,656.4	832.5	-1,431.9	1.94	0.30	-3.47	
3,766.0	34.45	300.85	3,266.4	1,704.0	855.4	-1,473.7	2.93	0.82	5.01	
3,851.0	32.21	300.23	3,337.4	1,750.7	879.2	-1,513.9	2.67	-2.64	-0.73	

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3,937.0	29.34	299.46	3,411.3	1,794.7	901.1	-1,552.1	3.37	-3.34	-0.90	
4,022.0	26.41	298.61	3,486.4	1,834.4	920.4	-1,586.8	3.48	-3.45	-1.00	
4,108.0	24.48	298.04	3,564.1	1,871.3	937.9	-1,619.3	2.26	-2.24	-0.66	
4,193.0	22.46	298.17	3,642.0	1,905.2	953.9	-1,649.2	2.38	-2.38	0.15	
4,278.0	20.35	300.58	3,721.2	1,936.2	969.1	-1,676.2	2.69	-2.48	2.84	
4,364.0	16.96	303.18	3,802.6	1,963.7	983.5	-1,699.6	4.06	-3.94	3.02	
4,449.0	13.50	304.64	3,884.6	1,985.9	996.0	-1,718.2	4.10	-4.07	1.72	
4,535.0	10.76	306.08	3,968.7	2,003.9	1,006.4	-1,732.9	3.21	-3.19	1.67	
4,620.0	8.61	307.31	4,052.5	2,018.2	1,014.9	-1,744.4	2.54	-2.53	1.45	
4,706.0	6.90	304.76	4,137.7	2,029.7	1,021.8	-1,753.7	2.03	-1.99	-2.97	
4,791.0	4.66	309.86	4,222.3	2,038.2	1,026.9	-1,760.6	2.70	-2.64	6.00	
4,876.0	2.46	295.75	4,307.1	2,043.4	1,029.9	-1,764.9	2.77	-2.59	-16.60	
4,962.0	1.05	233.57	4,393.1	2,045.6	1,030.2	-1,767.2	2.53	-1.64	-72.30	
5,047.0	1.12	216.84	4,478.0	2,046.0	1,029.1	-1,768.3	0.38	0.08	-19.68	
5,133.0	1.10	209.84	4,564.0	2,046.1	1,027.7	-1,769.2	0.16	-0.02	-8.14	
5,218.0	0.92	205.62	4,649.0	2,046.0	1,026.4	-1,769.9	0.23	-0.21	-4.96	
5,303.0	0.63	38.04	4,734.0	2,045.9	1,026.2	-1,769.9	1.81	-0.34	-197.15	
5,389.0	1.85	34.19	4,820.0	2,045.7	1,027.7	-1,768.9	1.42	1.42	-4.48	
5,474.0	1.41	33.26	4,905.0	2,045.6	1,029.7	-1,767.5	0.52	-0.52	-1.09	
5,560.0	1.14	38.19	4,990.9	2,045.4	1,031.2	-1,766.4	0.34	-0.31	5.73	
5,645.0	0.83	47.37	5,075.9	2,045.1	1,032.3	-1,765.4	0.41	-0.36	10.80	
5,730.0	0.75	68.16	5,160.9	2,044.6	1,032.9	-1,764.5	0.35	-0.09	24.46	
5,816.0	0.70	92.64	5,246.9	2,043.8	1,033.1	-1,763.4	0.36	-0.06	28.47	
5,901.0	0.66	132.05	5,331.9	2,042.8	1,032.8	-1,762.5	0.54	-0.05	46.36	
5,987.0	0.75	161.32	5,417.9	2,041.9	1,031.9	-1,762.0	0.43	0.10	34.03	
6,072.0	1.67	187.86	5,502.9	2,041.0	1,030.2	-1,762.0	1.24	1.08	31.22	
6,157.0	0.48	242.36	5,587.9	2,040.7	1,028.8	-1,762.5	1.70	-1.40	64.12	

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6,243.0	0.53	24.62	5,673.9	2,041.0	1,029.0	-1,762.6	1.11	0.06	165.42	
6,328.0	0.22	228.82	5,758.9	2,041.1	1,029.2	-1,762.6	0.87	-0.36	-183.29	
6,413.0	1.18	215.84	5,843.9	2,041.2	1,028.4	-1,763.2	1.14	1.13	-15.27	
6,499.0	1.32	215.20	5,929.8	2,041.4	1,026.9	-1,764.3	0.16	0.16	-0.74	
6,584.0	1.32	214.23	6,014.8	2,041.5	1,025.3	-1,765.4	0.03	0.00	-1.14	
6,670.0	1.36	31.42	6,100.8	2,041.6	1,025.3	-1,765.4	3.12	0.05	206.03	
6,755.0	0.70	14.81	6,185.8	2,041.7	1,026.7	-1,764.8	0.84	-0.78	-19.54	
6,841.0	0.40	328.45	6,271.8	2,042.1	1,027.4	-1,764.8	0.60	-0.35	-53.91	
6,926.0	0.35	265.43	6,356.8	2,042.6	1,027.7	-1,765.2	0.46	-0.06	-74.14	
7,012.0	0.57	258.48	6,442.8	2,043.1	1,027.6	-1,765.9	0.26	0.26	-8.08	
7,054.0	0.64	256.48	6,484.8	2,043.4	1,027.5	-1,766.3	0.17	0.17	-4.76	
7,111.0	0.64	256.48	6,541.8	2,043.9	1,027.3	-1,766.9	0.00	0.00	0.00	

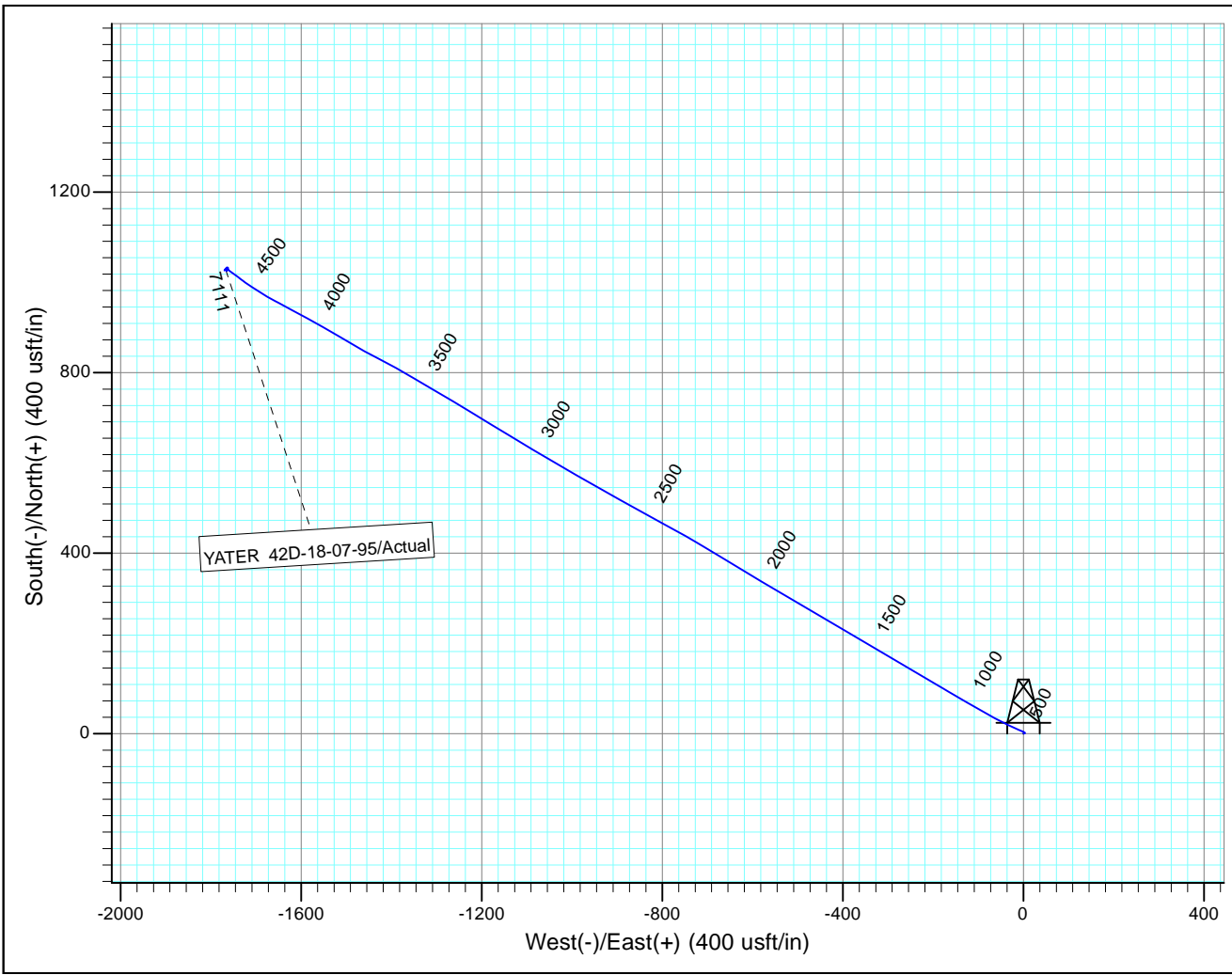
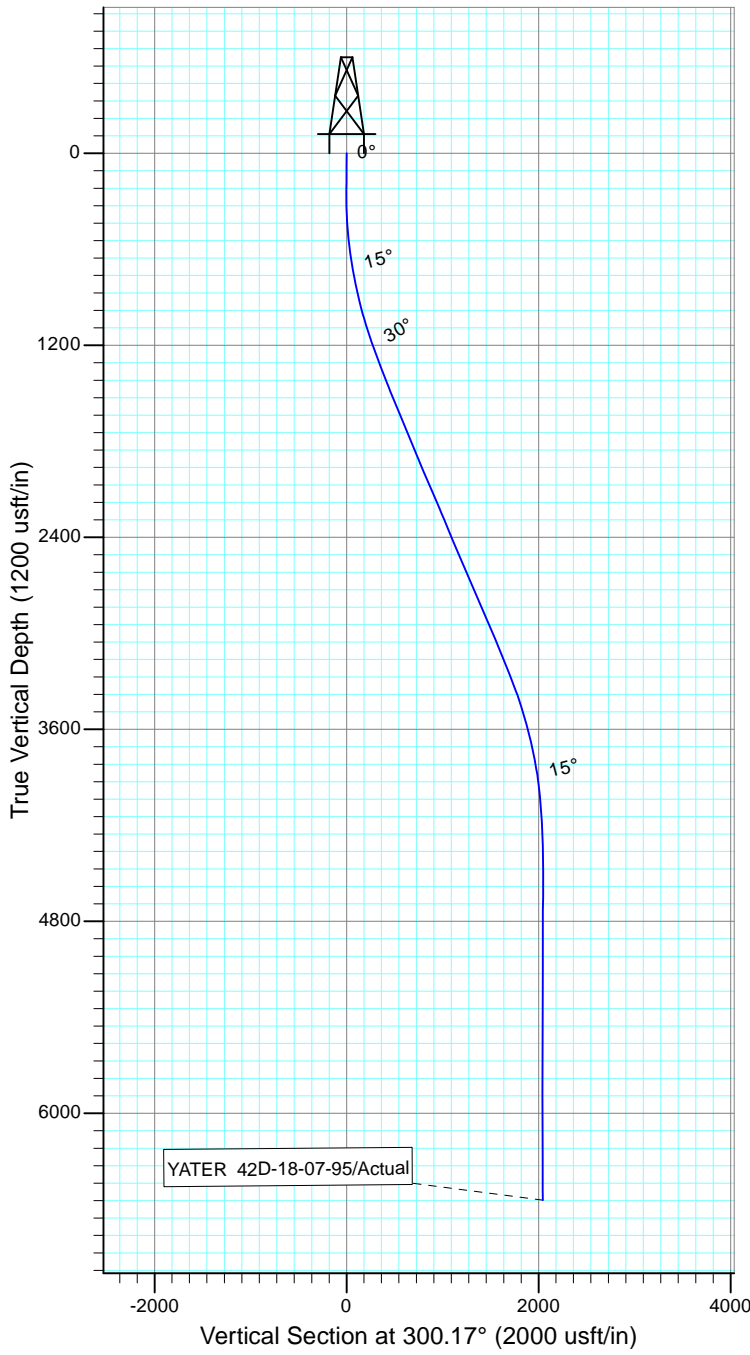
Checked By: _____ Approved By: _____ Date: _____



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

Azimuths to True North
 Magnetic North: 9.93°

Magnetic Field
 Strength: 51878.3snT
 Dip Angle: 65.59°
 Date: 10/23/2014
 Model: IGRF2010



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

Created By: *Matthew Linton* Date: 10:44, March 23 2014

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