



Ursa Operating Company, LLC

Rockies Region

Yater

YATER 21D-17-07-95

Wellbore #1

Design: Actual

End of Well Report

28 July, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well YATER 21D-17-07-95
Project:	Rockies Region	TVD Reference:	YATER 21D-17-07-95 @ 5536.0usft (CAPSTAR 321)
Site:	Yater	MD Reference:	YATER 21D-17-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 21D-17-07-95	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:		Slot Radius:		13-3/16 "	
				Latitude: 39° 26' 7.071 N	
				Longitude: 108° 1' 35.041 W	
				Grid Convergence: -1.59 °	

Well		YATER 21D-17-07-95, SHL LAT: 39.435263220 LONG: -108.026399193				
Well Position	+N/-S	0.0 usft	Northing:	1,593,345.62 usft	Latitude:	39° 26' 6.947 N
	+E/-W	0.0 usft	Easting:	2,286,525.71 usft	Longitude:	108° 1' 35.037 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	19.44

Survey Program		Date	7/28/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
146.0	7,370.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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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	
146.0	1.01	334.77	146.0	0.9	1.2	-0.5	0.69	0.69	0.00	
176.0	0.93	349.25	176.0	1.3	1.6	-0.7	0.86	-0.27	48.27	
207.0	1.41	11.07	207.0	1.9	2.3	-0.7	2.09	1.55	70.39	
238.0	2.33	25.84	238.0	2.9	3.2	-0.3	3.33	2.97	47.65	
268.0	3.30	39.55	267.9	4.3	4.4	0.5	3.91	3.23	45.70	
299.0	4.23	42.34	298.9	6.2	6.0	1.8	3.06	3.00	9.00	
329.0	5.14	48.03	328.8	8.4	7.7	3.6	3.40	3.03	18.97	
360.0	6.63	50.92	359.6	11.2	9.7	6.0	4.90	4.81	9.32	
390.0	7.71	52.87	389.4	14.3	12.0	8.9	3.69	3.60	6.50	
421.0	8.42	54.34	420.1	17.9	14.6	12.4	2.38	2.29	4.74	
451.0	9.54	51.85	449.7	21.8	17.4	16.2	3.95	3.73	-8.30	
482.0	10.48	50.36	480.2	26.4	20.8	20.4	3.14	3.03	-4.81	
513.0	11.43	47.24	510.7	31.5	24.7	24.8	3.61	3.06	-10.06	
543.0	12.39	42.94	540.0	37.1	29.1	29.2	4.36	3.20	-14.33	
574.0	13.01	40.47	570.2	43.4	34.2	33.7	2.66	2.00	-7.97	
605.0	14.02	37.97	600.4	50.2	39.8	38.3	3.76	3.26	-8.06	
635.0	14.59	32.74	629.5	57.4	45.8	42.6	4.71	1.90	-17.43	
666.0	15.60	28.21	659.4	65.3	52.8	46.6	5.01	3.26	-14.61	
696.0	16.57	25.18	688.2	73.5	60.2	50.4	4.28	3.23	-10.10	
727.0	17.27	25.09	717.9	82.5	68.4	54.2	2.26	2.26	-0.29	
758.0	18.32	23.12	747.4	92.0	77.0	58.1	3.90	3.39	-6.35	
801.0	19.07	22.58	788.1	105.7	89.7	63.4	1.79	1.74	-1.26	
843.0	20.30	22.85	827.7	119.8	102.8	68.9	2.94	2.93	0.64	
886.0	21.14	22.72	867.9	135.0	116.8	74.8	1.96	1.95	-0.30	
929.0	21.97	22.94	907.9	150.8	131.4	80.9	1.94	1.93	0.51	
971.0	22.72	23.90	946.7	166.7	146.0	87.2	1.99	1.79	2.29	

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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)	
1,014.0	23.55	23.42	986.3	183.6	161.5	94.0	1.98	1.93	-1.12	
1,057.0	24.61	24.34	1,025.5	201.1	177.5	101.1	2.62	2.47	2.14	
1,100.0	25.93	23.55	1,064.4	219.4	194.3	108.6	3.17	3.07	-1.84	
1,142.0	26.72	22.23	1,102.1	238.0	211.5	115.8	2.34	1.88	-3.14	
1,185.0	27.51	21.71	1,140.3	257.5	229.6	123.1	1.92	1.84	-1.21	
1,228.0	28.43	20.69	1,178.3	277.7	248.4	130.4	2.41	2.14	-2.37	
1,270.0	29.45	20.04	1,215.1	298.0	267.5	137.5	2.54	2.43	-1.55	
1,313.0	30.01	19.86	1,252.4	319.3	287.5	144.8	1.32	1.30	-0.42	
1,356.0	30.54	19.68	1,289.5	341.0	307.9	152.1	1.25	1.23	-0.42	
1,398.0	31.33	19.38	1,325.6	362.6	328.3	159.3	1.92	1.88	-0.71	
1,441.0	31.95	19.11	1,362.2	385.2	349.6	166.8	1.48	1.44	-0.63	
1,484.0	32.08	19.02	1,398.6	408.0	371.1	174.2	0.32	0.30	-0.21	
1,526.0	32.08	19.46	1,434.2	430.3	392.2	181.6	0.56	0.00	1.05	
1,569.0	30.63	17.93	1,470.9	452.6	413.4	188.7	3.85	-3.37	-3.56	
1,612.0	30.19	18.23	1,508.0	474.4	434.1	195.5	1.08	-1.02	0.70	
1,654.0	30.32	17.75	1,544.3	495.5	454.2	202.0	0.65	0.31	-1.14	
1,697.0	31.51	17.66	1,581.2	517.6	475.2	208.8	2.77	2.77	-0.21	
1,740.0	32.30	17.95	1,617.7	540.3	496.9	215.7	1.87	1.84	0.67	
1,782.0	32.70	18.50	1,653.1	562.9	518.3	222.8	1.18	0.95	1.31	
1,825.0	33.57	18.28	1,689.1	586.4	540.6	230.2	2.04	2.02	-0.51	
1,840.0	33.31	18.45	1,701.6	594.7	548.5	232.8	1.84	-1.73	1.13	
1,934.0	33.65	18.32	1,780.0	646.5	597.7	249.1	0.37	0.36	-0.14	
2,019.0	33.00	18.98	1,851.1	693.2	641.9	264.1	0.88	-0.76	0.78	
2,105.0	32.21	18.06	1,923.5	739.5	685.9	278.8	1.08	-0.92	-1.07	
2,190.0	33.57	18.27	1,994.9	785.7	729.7	293.2	1.61	1.60	0.25	
2,276.0	32.28	18.46	2,067.1	832.4	774.1	307.9	1.50	-1.50	0.22	
2,361.0	32.86	18.06	2,138.7	878.2	817.5	322.2	0.73	0.68	-0.47	

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2,446.0	31.38	18.45	2,210.7	923.3	860.4	336.4	1.76	-1.74	0.46	
2,532.0	32.17	18.94	2,283.8	968.6	903.3	350.9	0.97	0.92	0.57	
2,617.0	32.83	18.19	2,355.5	1,014.3	946.6	365.4	0.91	0.78	-0.88	
2,702.0	33.27	18.76	2,426.7	1,060.6	990.6	380.1	0.63	0.52	0.67	
2,788.0	32.34	18.63	2,499.0	1,107.2	1,034.7	395.1	1.08	-1.08	-0.15	
2,873.0	33.52	19.65	2,570.4	1,153.4	1,078.4	410.2	1.53	1.39	1.20	
2,959.0	34.94	17.70	2,641.5	1,201.8	1,124.2	425.7	2.09	1.65	-2.27	
3,044.0	33.93	16.87	2,711.6	1,249.8	1,170.1	440.0	1.31	-1.19	-0.98	
3,130.0	33.75	18.23	2,783.0	1,297.7	1,215.8	454.4	0.91	-0.21	1.58	
3,215.0	33.35	16.74	2,853.8	1,344.6	1,260.6	468.5	1.08	-0.47	-1.75	
3,300.0	33.71	18.98	2,924.7	1,391.6	1,305.2	482.9	1.52	0.42	2.64	
3,386.0	32.78	17.93	2,996.6	1,438.7	1,350.0	497.9	1.27	-1.08	-1.22	
3,471.0	33.75	20.13	3,067.7	1,485.3	1,394.0	513.1	1.82	1.14	2.59	
3,557.0	34.28	19.86	3,139.0	1,533.4	1,439.2	529.5	0.64	0.62	-0.31	
3,642.0	33.35	19.24	3,209.6	1,580.7	1,483.8	545.4	1.17	-1.09	-0.73	
3,727.0	34.06	18.54	3,280.3	1,627.9	1,528.4	560.6	0.95	0.84	-0.82	
3,813.0	32.83	18.10	3,352.1	1,675.3	1,573.4	575.5	1.46	-1.43	-0.51	
3,898.0	32.65	18.80	3,423.6	1,721.2	1,617.0	590.1	0.49	-0.21	0.82	
3,984.0	32.56	20.08	3,496.0	1,767.6	1,660.7	605.5	0.81	-0.10	1.49	
4,069.0	33.84	19.51	3,567.1	1,814.1	1,704.5	621.3	1.55	1.51	-0.67	
4,155.0	32.43	18.06	3,639.2	1,861.1	1,749.0	636.4	1.88	-1.64	-1.69	
4,240.0	32.96	18.01	3,710.7	1,907.0	1,792.7	650.6	0.62	0.62	-0.06	
4,326.0	32.88	19.06	3,782.9	1,953.8	1,837.0	665.5	0.67	-0.09	1.22	
4,411.0	33.13	18.98	3,854.2	2,000.1	1,880.8	680.6	0.30	0.29	-0.09	
4,496.0	31.72	19.02	3,925.9	2,045.6	1,923.9	695.4	1.66	-1.66	0.05	
4,582.0	29.36	18.63	4,000.0	2,089.3	1,965.2	709.5	2.75	-2.74	-0.45	
4,667.0	28.26	19.33	4,074.5	2,130.3	2,004.0	722.8	1.35	-1.29	0.82	

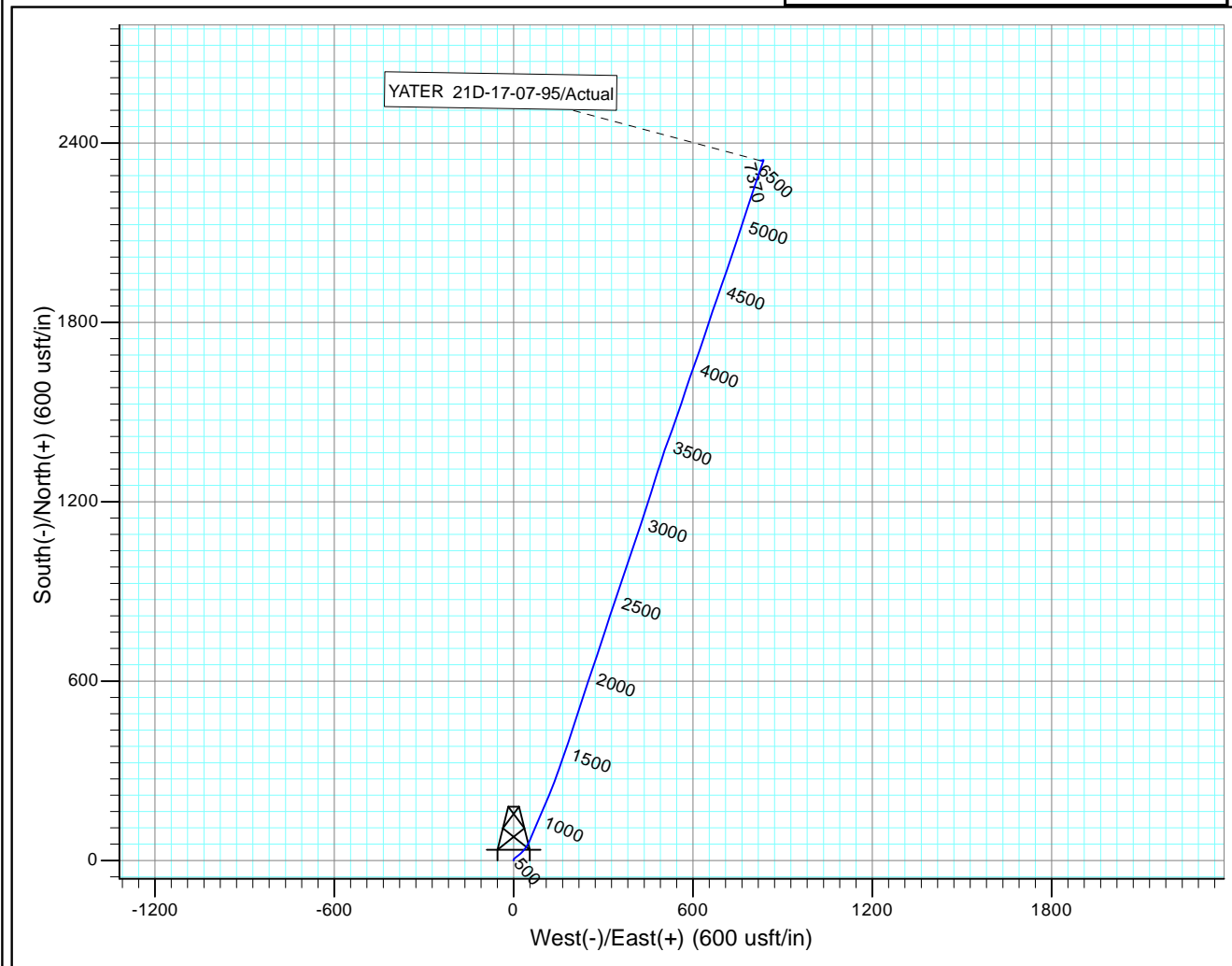
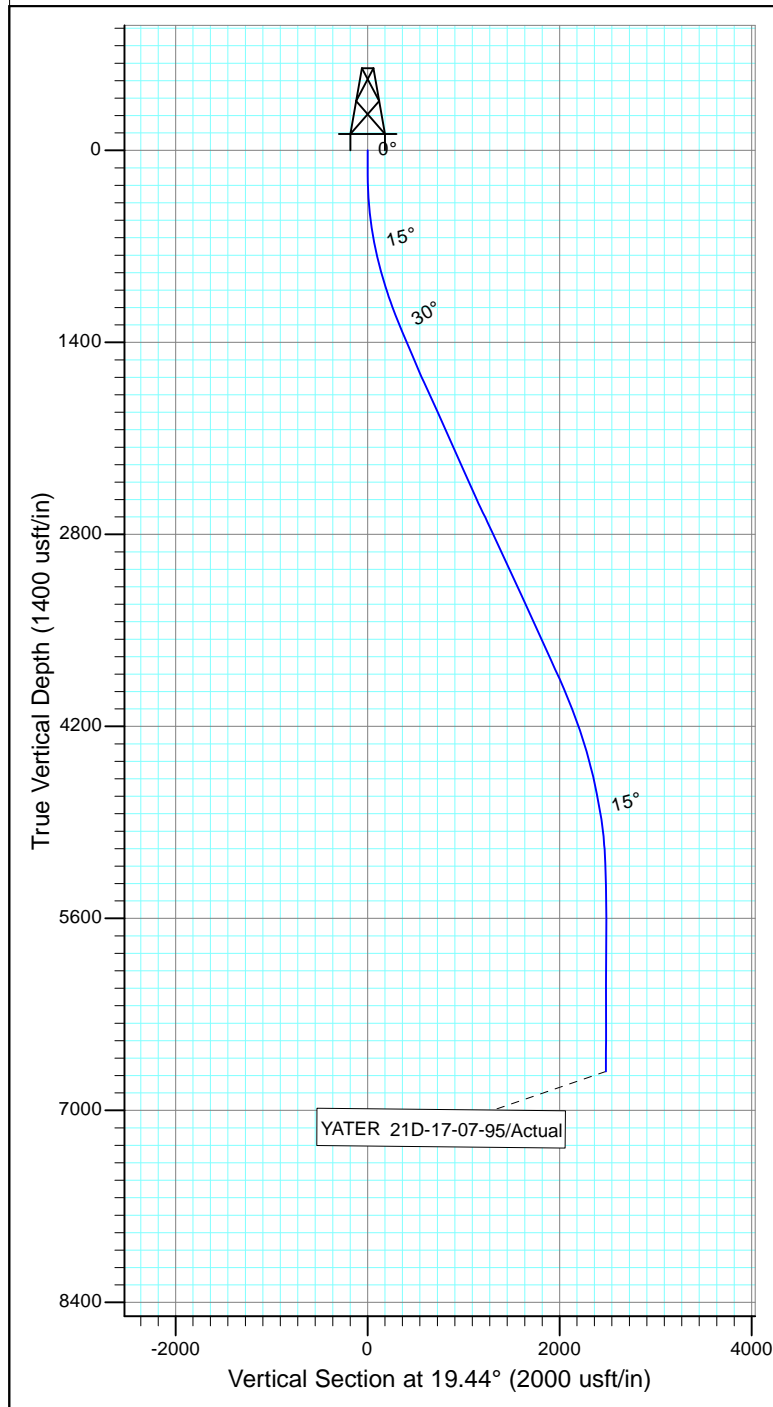
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4,752.0	28.27	19.42	4,149.3	2,170.5	2,041.9	736.2	0.05	0.01	0.11	
4,838.0	26.81	17.75	4,225.6	2,210.3	2,079.6	748.9	1.92	-1.70	-1.94	
4,923.0	23.91	18.23	4,302.4	2,246.7	2,114.2	760.1	3.42	-3.41	0.56	
5,009.0	22.06	17.71	4,381.5	2,280.2	2,146.2	770.5	2.16	-2.15	-0.60	
5,094.0	21.31	18.28	4,460.5	2,311.6	2,176.0	780.2	0.92	-0.88	0.67	
5,180.0	18.81	18.37	4,541.3	2,341.1	2,204.0	789.4	2.91	-2.91	0.10	
5,265.0	16.70	15.82	4,622.2	2,367.0	2,228.8	797.1	2.64	-2.48	-3.00	
5,350.0	16.04	19.95	4,703.8	2,391.0	2,251.6	804.4	1.57	-0.78	4.86	
5,436.0	14.59	18.76	4,786.7	2,413.7	2,273.0	812.0	1.73	-1.69	-1.38	
5,521.0	12.57	18.94	4,869.4	2,433.6	2,291.9	818.4	2.38	-2.38	0.21	
5,607.0	9.32	21.13	4,953.8	2,450.0	2,307.3	824.0	3.81	-3.78	2.55	
5,692.0	6.97	20.24	5,037.9	2,462.0	2,318.5	828.2	2.77	-2.76	-1.05	
5,777.0	4.58	13.23	5,122.5	2,470.5	2,326.7	830.8	2.93	-2.81	-8.25	
5,863.0	3.03	24.69	5,208.3	2,476.2	2,332.1	832.5	2.00	-1.80	13.33	
5,949.0	2.48	20.98	5,294.2	2,480.3	2,335.9	834.1	0.67	-0.64	-4.31	
6,034.0	1.71	14.85	5,379.1	2,483.4	2,338.8	835.1	0.94	-0.91	-7.21	
6,119.0	1.10	19.60	5,464.1	2,485.5	2,340.8	835.7	0.73	-0.72	5.59	
6,205.0	0.92	350.99	5,550.1	2,486.9	2,342.3	835.9	0.61	-0.21	-33.27	
6,290.0	0.53	283.97	5,635.1	2,487.5	2,343.0	835.4	1.02	-0.46	-78.85	
6,375.0	0.66	239.23	5,720.1	2,487.1	2,342.9	834.6	0.55	0.15	-52.64	
6,461.0	0.57	235.50	5,806.1	2,486.4	2,342.4	833.8	0.11	-0.10	-4.34	
6,546.0	1.05	216.25	5,891.1	2,485.3	2,341.5	833.0	0.64	0.56	-22.65	
6,632.0	0.88	226.67	5,977.1	2,483.9	2,340.4	832.1	0.28	-0.20	12.12	
6,717.0	0.70	23.06	6,062.1	2,483.9	2,340.5	831.8	1.82	-0.21	183.99	
6,802.0	0.56	1.11	6,147.1	2,484.8	2,341.4	832.0	0.33	-0.16	-25.82	
6,888.0	0.13	285.16	6,233.1	2,485.2	2,341.8	831.9	0.63	-0.50	-88.31	
6,974.0	0.13	262.66	6,319.1	2,485.1	2,341.8	831.7	0.06	0.00	-26.16	

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7,059.0	0.62	250.97	6,404.1	2,484.8	2,341.7	831.2	0.58	0.58	-13.75	
7,145.0	0.88	264.06	6,490.1	2,484.2	2,341.4	830.1	0.36	0.30	15.22	
7,231.0	0.97	265.69	6,576.0	2,483.6	2,341.3	828.7	0.11	0.10	1.90	
7,313.0	1.05	255.93	6,658.0	2,483.0	2,341.1	827.3	0.23	0.10	-11.90	
7,370.0	1.05	255.93	6,715.0	2,482.4	2,340.8	826.3	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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Design: Actual (YATER 21D-17-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 11:18, July 28 2015

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