



# **Ursa Operating Company, LLC**

**Rockies Region**

**Yater**

**YATER 21C-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 21C-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	YATER 21C-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Site:</b>	Yater	<b>MD Reference:</b>	YATER 21C-17-07-95 @ 5536.0usft (CAPSTAR 321)
<b>Well:</b>	YATER 21C-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:		Easting:		2,286,525.77 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
Lat/Long		Latitude:		39° 26' 7.071 N	
0.0 usft		Longitude:		108° 1' 35.041 W	
		Grid Convergence:		-1.59 °	

Well		YATER 21C-17-07-95, SHL LAT: 39.435331805 LONG: -108.026401252				
Well Position	+N-S	0.0 usft	Northing:	1,593,370.61 usft	Latitude:	39° 26' 7.194 N
	+E-W	0.0 usft	Easting:	2,286,525.82 usft	Longitude:	108° 1' 35.045 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	16.64

Survey Program		Date	8/31/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
177.0	7,540.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
177.0	2.55	153.06	176.9	-2.9	-3.5	1.8	1.44	1.44	0.00	
207.0	2.55	152.88	206.9	-3.8	-4.7	2.4	0.03	0.00	-0.60	
238.0	2.77	156.88	237.9	-4.9	-6.0	3.0	0.93	0.71	12.90	
269.0	2.37	154.73	268.8	-5.9	-7.3	3.6	1.33	-1.29	-6.94	
299.0	1.27	148.84	298.8	-6.6	-8.1	4.0	3.71	-3.67	-19.63	
330.0	0.40	122.43	329.8	-6.9	-8.5	4.3	3.00	-2.81	-85.19	
361.0	0.88	10.98	360.8	-6.7	-8.3	4.4	3.52	1.55	-359.52	
391.0	1.98	355.18	390.8	-6.0	-7.6	4.4	3.86	3.67	-52.67	
421.0	3.03	351.60	420.8	-4.8	-6.2	4.3	3.54	3.50	-11.93	
452.0	4.26	358.68	451.7	-2.9	-4.3	4.1	4.22	3.97	22.84	
483.0	5.58	0.92	482.6	-0.4	-1.6	4.1	4.30	4.26	7.23	
513.0	6.81	3.42	512.4	2.7	1.6	4.2	4.20	4.10	8.33	
544.0	8.00	6.10	543.2	6.7	5.6	4.6	4.00	3.84	8.65	
574.0	9.10	10.63	572.8	11.1	10.0	5.2	4.30	3.67	15.10	
605.0	10.28	13.40	603.4	16.3	15.1	6.3	4.09	3.81	8.94	
636.0	11.59	16.36	633.8	22.1	20.8	7.8	4.60	4.23	9.55	
666.0	12.79	17.93	663.2	28.5	26.8	9.7	4.15	4.00	5.23	
696.0	13.97	18.10	692.3	35.4	33.4	11.9	3.94	3.93	0.57	
726.0	15.25	18.89	721.4	43.0	40.6	14.3	4.32	4.27	2.63	
757.0	16.44	18.01	751.2	51.4	48.6	16.9	3.92	3.84	-2.84	
800.0	18.15	16.34	792.2	64.2	60.8	20.7	4.14	3.98	-3.88	
842.0	20.17	14.63	831.9	78.0	74.1	24.4	4.99	4.81	-4.07	
885.0	21.98	14.69	872.0	93.5	89.1	28.3	4.21	4.21	0.14	
928.0	23.77	14.63	911.7	110.2	105.3	32.5	4.16	4.16	-0.14	
971.0	25.58	15.63	950.7	128.1	122.6	37.2	4.32	4.21	2.33	
1,013.0	27.16	15.82	988.4	146.8	140.5	42.3	3.77	3.76	0.45	

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<b>Well:</b>	YATER 21C-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)	
1,056.0	27.91	16.17	1,026.5	166.6	159.6	47.7	1.78	1.74	0.81	
1,099.0	28.74	16.04	1,064.3	187.0	179.2	53.4	1.94	1.93	-0.30	
1,141.0	29.79	15.46	1,101.0	207.6	199.0	59.0	2.59	2.50	-1.38	
1,184.0	30.54	15.73	1,138.2	229.2	219.8	64.8	1.77	1.74	0.63	
1,227.0	31.73	16.43	1,175.0	251.4	241.2	70.9	2.89	2.77	1.63	
1,269.0	32.48	16.74	1,210.5	273.7	262.6	77.3	1.83	1.79	0.74	
1,312.0	33.79	15.95	1,246.5	297.2	285.1	83.9	3.21	3.05	-1.84	
1,355.0	35.16	16.43	1,282.0	321.6	308.5	90.7	3.25	3.19	1.12	
1,398.0	35.73	16.17	1,317.0	346.5	332.4	97.7	1.37	1.33	-0.60	
1,440.0	35.99	16.18	1,351.1	371.1	356.1	104.6	0.62	0.62	0.02	
1,483.0	35.95	16.39	1,385.9	396.4	380.3	111.6	0.30	-0.09	0.49	
1,526.0	36.30	16.04	1,420.6	421.7	404.7	118.7	0.94	0.81	-0.81	
1,569.0	36.21	16.74	1,455.3	447.1	429.0	125.9	0.99	-0.21	1.63	
1,611.0	36.69	16.92	1,489.1	472.1	452.9	133.1	1.17	1.14	0.43	
1,654.0	36.91	17.00	1,523.5	497.8	477.6	140.6	0.52	0.51	0.19	
1,696.0	37.24	16.97	1,557.0	523.2	501.8	148.0	0.79	0.79	-0.07	
1,739.0	37.50	16.89	1,591.2	549.3	526.8	155.6	0.62	0.60	-0.19	
1,782.0	37.22	17.75	1,625.3	575.4	551.7	163.4	1.38	-0.65	2.00	
1,830.0	37.57	17.93	1,663.5	604.5	579.4	172.3	0.76	0.73	0.37	
1,888.0	37.75	18.01	1,709.4	639.9	613.1	183.3	0.32	0.31	0.14	
1,973.0	37.30	17.61	1,776.8	691.7	662.4	199.1	0.60	-0.53	-0.47	
2,059.0	36.67	16.68	1,845.5	743.4	711.9	214.4	0.98	-0.73	-1.08	
2,144.0	36.83	18.10	1,913.6	794.3	760.4	229.6	1.02	0.19	1.67	
2,229.0	36.37	18.07	1,981.9	844.9	808.6	245.3	0.54	-0.54	-0.04	
2,315.0	36.52	18.37	2,051.0	896.0	857.1	261.3	0.27	0.17	0.35	
2,400.0	37.43	18.80	2,118.9	947.1	905.5	277.6	1.11	1.07	0.51	
2,486.0	36.13	17.57	2,187.8	998.6	954.5	293.6	1.74	-1.51	-1.43	

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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)	
2,571.0	36.47	18.89	2,256.3	1,048.9	1,002.2	309.4	1.00	0.40	1.55	
2,656.0	37.35	17.66	2,324.3	1,099.9	1,050.7	325.4	1.35	1.04	-1.45	
2,742.0	36.39	17.13	2,393.1	1,151.5	1,100.0	340.8	1.18	-1.12	-0.62	
2,828.0	37.00	17.35	2,462.0	1,202.9	1,149.0	356.0	0.73	0.71	0.26	
2,913.0	36.30	16.74	2,530.2	1,253.6	1,197.5	370.9	0.93	-0.82	-0.72	
2,998.0	37.22	16.83	2,598.3	1,304.5	1,246.2	385.6	1.08	1.08	0.11	
3,084.0	36.74	17.27	2,667.0	1,356.2	1,295.7	400.8	0.64	-0.56	0.51	
3,169.0	35.68	15.64	2,735.6	1,406.4	1,343.9	415.0	1.68	-1.25	-1.92	
3,255.0	36.91	16.78	2,804.9	1,457.3	1,392.7	429.2	1.63	1.43	1.33	
3,340.0	36.33	15.47	2,873.2	1,508.0	1,441.4	443.3	1.14	-0.68	-1.54	
3,426.0	36.91	18.19	2,942.2	1,559.3	1,490.5	458.2	2.00	0.67	3.16	
3,511.0	35.77	17.44	3,010.7	1,609.7	1,538.5	473.6	1.44	-1.34	-0.88	
3,596.0	37.57	17.40	3,078.8	1,660.4	1,586.9	488.8	2.12	2.12	-0.05	
3,681.0	38.67	18.94	3,145.7	1,712.9	1,636.8	505.1	1.71	1.29	1.81	
3,766.0	38.19	18.67	3,212.3	1,765.7	1,686.8	522.2	0.60	-0.56	-0.32	
3,852.0	37.43	17.22	3,280.2	1,818.4	1,736.9	538.4	1.36	-0.88	-1.69	
3,937.0	37.57	18.67	3,347.7	1,870.1	1,786.1	554.4	1.05	0.16	1.71	
4,023.0	36.78	20.08	3,416.2	1,922.0	1,835.2	571.6	1.35	-0.92	1.64	
4,108.0	36.95	16.80	3,484.2	1,972.9	1,883.5	587.7	2.32	0.20	-3.86	
4,193.0	37.22	20.34	3,552.0	2,024.2	1,932.1	604.0	2.53	0.32	4.16	
4,279.0	36.65	20.08	3,620.8	2,075.7	1,980.6	621.9	0.69	-0.66	-0.30	
4,364.0	35.99	18.89	3,689.2	2,126.0	2,028.1	638.7	1.14	-0.78	-1.40	
4,450.0	36.34	18.72	3,758.7	2,176.7	2,076.1	655.1	0.42	0.41	-0.20	
4,535.0	36.96	17.53	3,826.9	2,227.4	2,124.3	670.8	1.11	0.73	-1.40	
4,621.0	35.60	17.00	3,896.2	2,278.3	2,172.9	685.9	1.62	-1.58	-0.62	
4,706.0	33.57	16.60	3,966.2	2,326.6	2,219.1	699.9	2.40	-2.39	-0.47	
4,792.0	31.99	16.34	4,038.5	2,373.1	2,263.7	713.1	1.84	-1.84	-0.30	

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Survey										
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4,877.0	30.72	17.18	4,111.1	2,417.4	2,306.1	725.8	1.58	-1.49	0.99	
4,962.0	30.32	16.74	4,184.3	2,460.5	2,347.4	738.4	0.54	-0.47	-0.52	
5,048.0	28.39	17.71	4,259.2	2,502.7	2,387.6	750.9	2.31	-2.24	1.13	
5,133.0	28.13	18.15	4,334.1	2,542.9	2,425.9	763.3	0.39	-0.31	0.52	
5,218.0	26.49	17.35	4,409.6	2,581.9	2,463.1	775.2	1.98	-1.93	-0.94	
5,304.0	24.92	17.00	4,487.1	2,619.2	2,498.7	786.2	1.83	-1.83	-0.41	
5,389.0	21.84	16.78	4,565.1	2,652.9	2,531.0	796.0	3.62	-3.62	-0.26	
5,475.0	19.56	19.33	4,645.6	2,683.3	2,559.9	805.4	2.85	-2.65	2.97	
5,560.0	17.07	19.10	4,726.3	2,710.0	2,585.1	814.2	2.93	-2.93	-0.27	
5,645.0	14.11	22.63	4,808.1	2,732.8	2,606.5	822.3	3.66	-3.48	4.15	
5,731.0	11.03	23.77	4,892.1	2,751.4	2,623.7	829.6	3.59	-3.58	1.33	
5,816.0	8.04	22.01	4,975.9	2,765.3	2,636.6	835.1	3.53	-3.52	-2.07	
5,902.0	4.79	31.33	5,061.3	2,774.8	2,645.3	839.2	3.96	-3.78	10.84	
5,987.0	2.33	58.09	5,146.2	2,779.5	2,649.2	842.6	3.42	-2.89	31.48	
6,072.0	2.33	66.29	5,231.1	2,782.0	2,650.8	845.6	0.39	0.00	9.65	
6,158.0	1.80	68.86	5,317.0	2,783.9	2,652.0	848.5	0.63	-0.62	2.99	
6,243.0	1.32	75.89	5,402.0	2,785.2	2,652.7	850.7	0.61	-0.56	8.27	
6,329.0	0.83	77.16	5,488.0	2,786.0	2,653.1	852.2	0.57	-0.57	1.48	
6,415.0	0.88	113.73	5,574.0	2,786.3	2,653.0	853.4	0.63	0.06	42.52	
6,501.0	0.66	148.75	5,660.0	2,785.9	2,652.3	854.3	0.59	-0.26	40.72	
6,586.0	0.79	161.36	5,745.0	2,785.0	2,651.3	854.7	0.24	0.15	14.84	
6,671.0	0.62	210.67	5,830.0	2,784.1	2,650.4	854.7	0.72	-0.20	58.01	
6,756.0	1.01	221.39	5,915.0	2,783.0	2,649.4	854.0	0.49	0.46	12.61	
6,842.0	1.67	232.91	6,000.9	2,781.3	2,648.1	852.5	0.83	0.77	13.40	
6,927.0	1.67	230.58	6,085.9	2,779.3	2,646.6	850.5	0.08	0.00	-2.74	
7,013.0	1.93	223.19	6,171.8	2,776.9	2,644.7	848.6	0.40	0.30	-8.59	
7,098.0	2.59	222.58	6,256.8	2,773.9	2,642.2	846.3	0.78	0.78	-0.72	

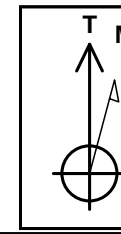
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7,183.0	1.27	207.55	6,341.7	2,771.3	2,640.0	844.5	1.65	-1.55	-17.68	
7,269.0	0.61	221.91	6,427.7	2,769.9	2,638.8	843.8	0.81	-0.77	16.70	
7,354.0	0.57	200.21	6,512.7	2,769.1	2,638.1	843.3	0.27	-0.05	-25.53	
7,439.0	0.62	192.52	6,597.7	2,768.2	2,637.2	843.1	0.11	0.06	-9.05	
7,480.0	0.66	201.44	6,638.7	2,767.8	2,636.8	843.0	0.26	0.10	21.76	
7,540.0	0.66	201.44	6,698.7	2,767.1	2,636.2	842.7	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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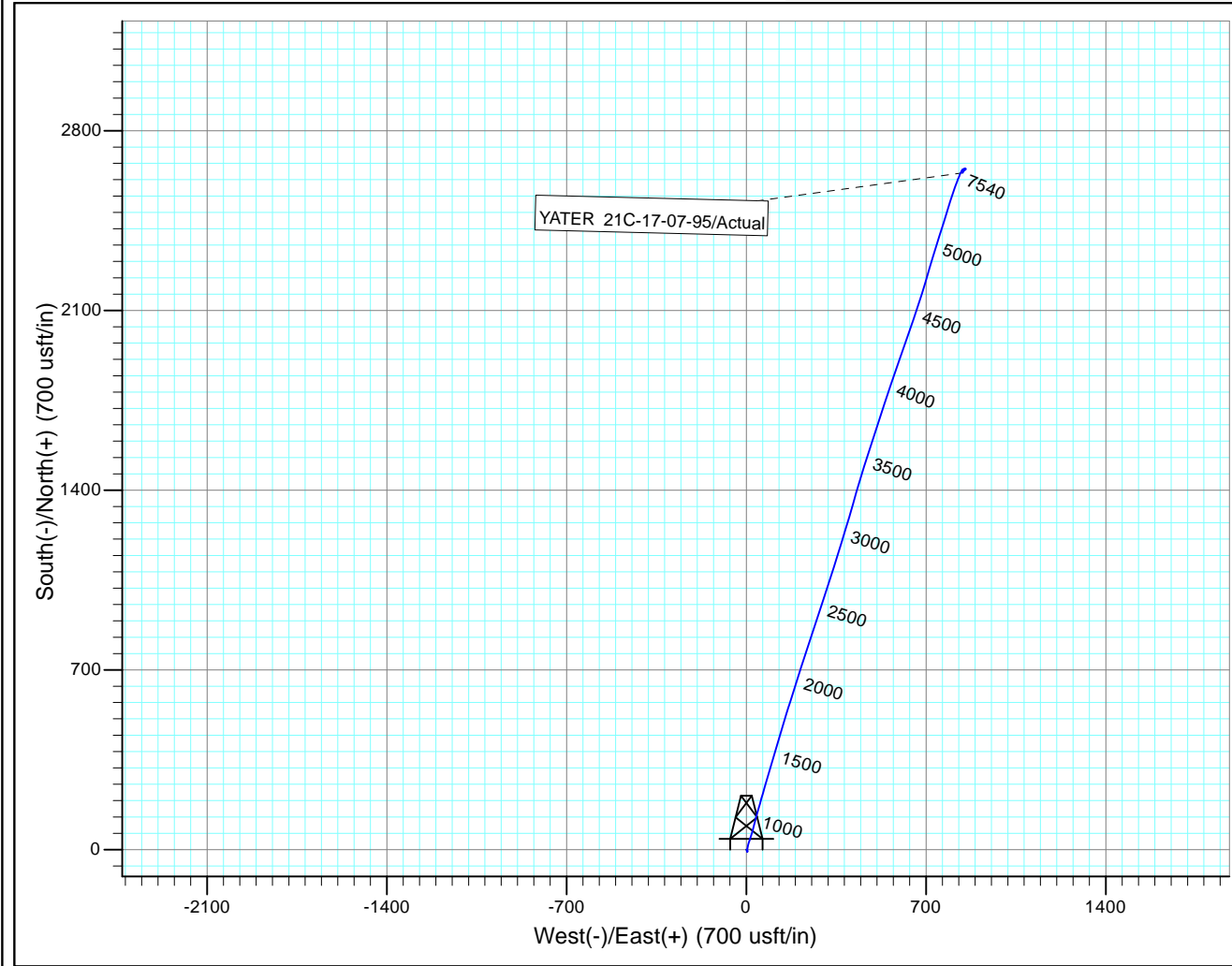
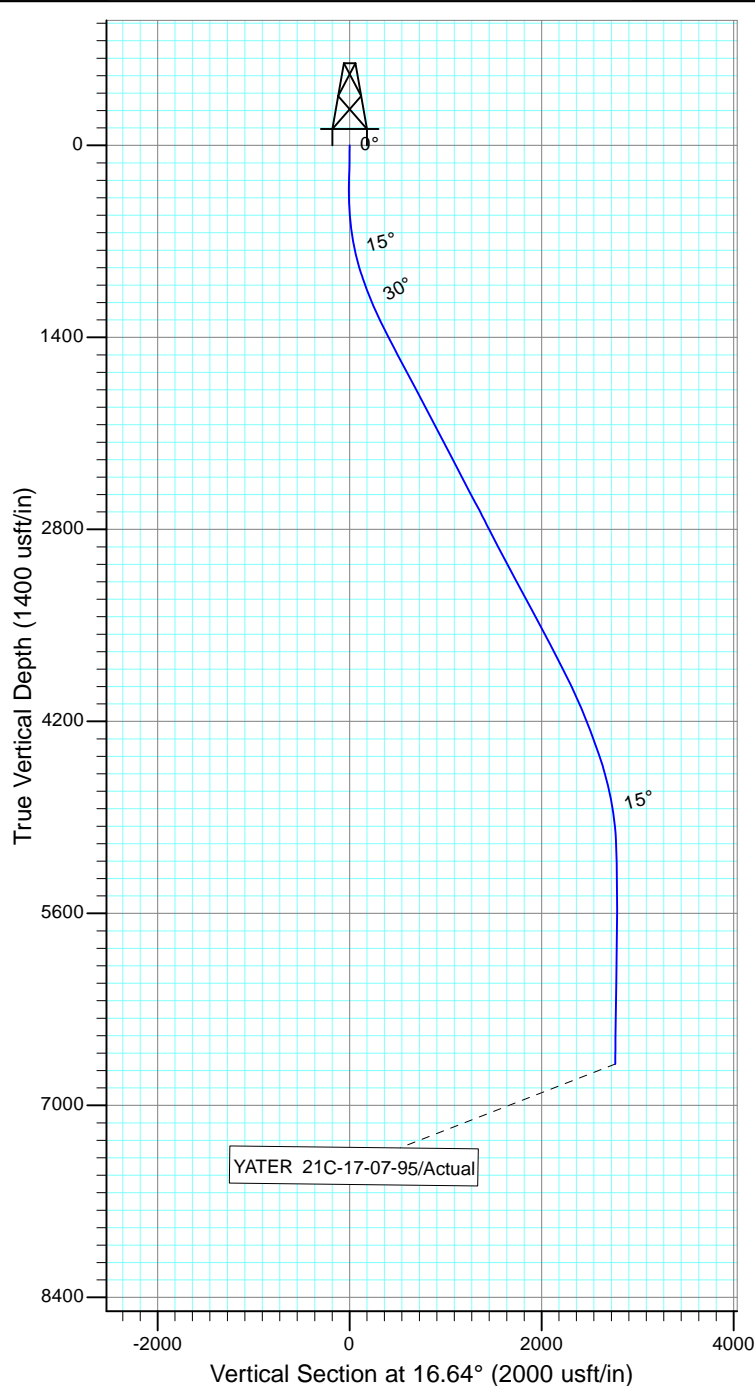


Project: Rockies Region  
 Site: Yater  
 Well: YATER 21C-17-07-95  
 Wellbore: Wellbore #1  
 Design: Actual



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 21C-17-07-95/Wellbore #1)

Created By: Matthew Linton Date: 6:59, August 31 2015

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