



Ursa Operating Company, LLC

Rockies Region

Yater

YATER 42C-18-07-95

Wellbore #1

Design: Actual

End of Well Report

07 July, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well YATER 42C-18-07-95
Project:	Rockies Region	TVD Reference:	YATER 42C-18-07-95 @ 5536.0usft (CAPSTAR 321)
Site:	Yater	MD Reference:	YATER 42C-18-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 42C-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 42C-18-07-95, SHL LAT: 39.435057463 LONG: -108.026393016					
Well Position	+N/-S	0.0 usft	Northing:	1,593,270.66 usft	Latitude:	39° 26' 6.207 N
	+E/-W	0.0 usft	Easting:	2,286,525.37 usft	Longitude:	108° 1' 35.015 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	51,813

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	308.14

Survey Program	Date 7/7/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
237.0	7,221.0	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	0.00
237.0	0.57	332.44	237.0	1.1	1.0	-0.5	0.24	0.24	0.00	0.00
268.0	0.53	329.50	268.0	1.3	1.3	-0.7	0.16	-0.13	-9.48	-9.48
298.0	0.92	309.46	298.0	1.7	1.6	-0.9	1.53	1.30	-66.80	-66.80
328.0	1.63	311.35	328.0	2.4	2.0	-1.5	2.37	2.37	6.30	6.30
359.0	2.11	309.37	359.0	3.4	2.7	-2.2	1.56	1.55	-6.39	-6.39
390.0	3.03	301.24	389.9	4.8	3.5	-3.4	3.18	2.97	-26.23	-26.23
420.0	3.96	301.81	419.9	6.6	4.4	-4.9	3.10	3.10	1.90	1.90
451.0	4.61	304.01	450.8	8.9	5.7	-6.9	2.16	2.10	7.10	7.10
481.0	5.80	301.77	480.7	11.6	7.1	-9.2	4.02	3.97	-7.47	-7.47
512.0	6.88	304.15	511.5	15.0	9.0	-12.0	3.58	3.48	7.68	7.68
543.0	7.87	306.24	542.2	19.0	11.3	-15.3	3.31	3.19	6.74	6.74
573.0	8.96	306.43	571.9	23.4	13.9	-18.8	3.63	3.63	0.63	0.63
604.0	9.80	310.21	602.5	28.4	17.0	-22.8	3.36	2.71	12.19	12.19
635.0	10.90	312.10	633.0	34.0	20.7	-27.0	3.71	3.55	6.10	6.10
665.0	11.69	310.69	662.4	39.9	24.6	-31.4	2.79	2.63	-4.70	-4.70
696.0	12.70	309.33	692.7	46.4	28.8	-36.4	3.39	3.26	-4.39	-4.39
727.0	14.06	310.12	722.9	53.6	33.4	-41.9	4.43	4.39	2.55	2.55
757.0	15.29	309.63	751.9	61.2	38.3	-47.7	4.12	4.10	-1.63	-1.63
843.0	20.01	305.63	833.8	87.2	54.1	-68.4	5.66	5.49	-4.65	-4.65
885.0	21.49	306.82	873.1	102.1	62.9	-80.4	3.66	3.52	2.83	2.83
928.0	22.98	306.25	912.9	118.4	72.6	-93.5	3.50	3.47	-1.33	-1.33
971.0	24.17	307.17	952.3	135.5	82.8	-107.3	2.90	2.77	2.14	2.14
1,014.0	25.16	307.14	991.4	153.5	93.7	-121.6	2.30	2.30	-0.07	-0.07
1,056.0	27.11	309.02	1,029.1	172.0	105.1	-136.2	5.04	4.64	4.48	4.48
1,099.0	28.48	308.36	1,067.1	192.0	117.6	-151.8	3.27	3.19	-1.53	-1.53
1,142.0	29.84	307.75	1,104.7	213.0	130.5	-168.3	3.24	3.16	-1.42	-1.42

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Well:	YATER 42C-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)	
1,184.0	31.60	307.57	1,140.8	234.4	143.6	-185.3	4.20	4.19	-0.43	
1,227.0	32.87	307.31	1,177.1	257.4	157.6	-203.5	2.97	2.95	-0.60	
1,270.0	34.54	307.70	1,212.9	281.2	172.1	-222.4	3.92	3.88	0.91	
1,313.0	35.56	308.72	1,248.1	305.9	187.4	-241.8	2.74	2.37	2.37	
1,355.0	36.39	308.27	1,282.1	330.6	202.8	-261.1	2.07	1.98	-1.07	
1,398.0	36.72	308.36	1,316.6	356.2	218.6	-281.2	0.78	0.77	0.21	
1,440.0	37.84	308.62	1,350.1	381.6	234.5	-301.1	2.69	2.67	0.62	
1,483.0	38.14	308.32	1,384.0	408.1	250.9	-321.9	0.82	0.70	-0.70	
1,526.0	38.58	309.02	1,417.7	434.8	267.6	-342.7	1.44	1.02	1.63	
1,568.0	38.62	308.85	1,450.5	461.0	284.1	-363.1	0.27	0.10	-0.40	
1,611.0	38.89	309.24	1,484.0	487.9	301.0	-384.0	0.85	0.63	0.91	
1,654.0	38.23	308.93	1,517.6	514.7	317.9	-404.8	1.60	-1.53	-0.72	
1,696.0	38.36	308.76	1,550.6	540.7	334.2	-425.1	0.40	0.31	-0.40	
1,739.0	38.01	308.36	1,584.4	567.3	350.8	-445.8	1.00	-0.81	-0.93	
1,782.0	38.01	307.83	1,618.3	593.8	367.2	-466.7	0.76	0.00	-1.23	
1,825.0	37.97	307.26	1,652.2	620.3	383.3	-487.7	0.82	-0.09	-1.33	
1,860.0	38.19	307.48	1,679.7	641.9	396.4	-504.8	0.74	0.63	0.63	
1,931.0	37.79	306.87	1,735.7	685.5	422.8	-539.6	0.77	-0.56	-0.86	
2,016.0	36.91	306.38	1,803.3	737.1	453.6	-581.0	1.09	-1.04	-0.58	
2,101.0	36.56	309.37	1,871.4	787.9	484.8	-621.2	2.14	-0.41	3.52	
2,187.0	37.62	308.01	1,940.0	839.8	517.2	-661.6	1.56	1.23	-1.58	
2,272.0	36.83	308.05	2,007.7	891.2	548.9	-702.1	0.93	-0.93	0.05	
2,358.0	37.78	309.03	2,076.1	943.3	581.3	-742.9	1.30	1.10	1.14	
2,443.0	36.61	307.75	2,143.8	994.7	613.2	-783.2	1.65	-1.38	-1.51	
2,529.0	37.18	307.53	2,212.6	1,046.3	644.8	-824.1	0.68	0.66	-0.26	
2,614.0	38.32	307.57	2,279.8	1,098.4	676.5	-865.3	1.34	1.34	0.05	
2,700.0	38.80	306.78	2,347.0	1,152.0	708.9	-908.0	0.80	0.56	-0.92	

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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)	
2,785.0	38.19	306.56	2,413.5	1,204.8	740.5	-950.5	0.74	-0.72	-0.26	
2,871.0	37.35	305.81	2,481.5	1,257.5	771.6	-993.0	1.11	-0.98	-0.87	
2,956.0	38.89	307.57	2,548.4	1,309.9	802.9	-1,035.0	2.22	1.81	2.07	
3,042.0	38.72	308.49	2,615.4	1,363.8	836.1	-1,077.5	0.70	-0.20	1.07	
3,127.0	37.84	308.14	2,682.1	1,416.5	868.8	-1,118.8	1.07	-1.04	-0.41	
3,212.0	37.22	308.05	2,749.5	1,468.3	900.7	-1,159.6	0.73	-0.73	-0.11	
3,298.0	36.32	308.86	2,818.4	1,519.7	932.7	-1,199.9	1.19	-1.05	0.94	
3,383.0	37.53	308.58	2,886.4	1,570.8	964.7	-1,239.7	1.44	1.42	-0.33	
3,468.0	38.54	309.90	2,953.3	1,623.2	997.8	-1,280.3	1.53	1.19	1.55	
3,554.0	37.62	309.06	3,021.0	1,676.2	1,031.5	-1,321.2	1.23	-1.07	-0.98	
3,639.0	36.65	308.80	3,088.8	1,727.5	1,063.8	-1,361.1	1.16	-1.14	-0.31	
3,725.0	35.92	309.22	3,158.1	1,778.4	1,095.8	-1,400.7	0.90	-0.85	0.49	
3,810.0	34.45	307.75	3,227.6	1,827.4	1,126.3	-1,439.0	2.00	-1.73	-1.73	
3,895.0	33.49	307.16	3,298.1	1,874.9	1,155.2	-1,476.7	1.19	-1.13	-0.69	
3,981.0	32.26	310.03	3,370.3	1,921.5	1,184.3	-1,513.2	2.31	-1.43	3.34	
4,067.0	30.23	309.06	3,443.8	1,966.1	1,212.7	-1,547.6	2.43	-2.36	-1.13	
4,152.0	28.53	307.38	3,517.9	2,007.8	1,238.5	-1,580.3	2.22	-2.00	-1.98	
4,237.0	27.03	310.38	3,593.1	2,047.4	1,263.3	-1,611.2	2.41	-1.76	3.53	
4,323.0	24.30	310.91	3,670.6	2,084.6	1,287.6	-1,639.4	3.19	-3.17	0.62	
4,408.0	23.33	309.81	3,748.4	2,118.9	1,309.8	-1,665.6	1.26	-1.14	-1.29	
4,494.0	22.15	308.14	3,827.7	2,152.1	1,330.7	-1,691.4	1.56	-1.37	-1.94	
4,579.0	19.58	308.63	3,907.1	2,182.4	1,349.5	-1,715.1	3.03	-3.02	0.58	
4,665.0	16.92	309.42	3,988.8	2,209.3	1,366.5	-1,736.1	3.11	-3.09	0.92	
4,750.0	14.24	311.66	4,070.6	2,232.1	1,381.3	-1,753.4	3.23	-3.15	2.64	
4,878.0	9.36	310.82	4,195.9	2,258.3	1,398.6	-1,773.1	3.81	-3.81	-0.66	
4,964.0	7.24	304.56	4,281.0	2,270.7	1,406.2	-1,782.8	2.68	-2.47	-7.28	
5,049.0	5.19	315.96	4,365.5	2,279.8	1,412.0	-1,789.9	2.80	-2.41	13.41	

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Survey										
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5,134.0	2.50	294.83	4,450.3	2,285.4	1,415.6	-1,794.3	3.53	-3.16	-24.86	
5,220.0	1.36	0.88	4,536.3	2,287.9	1,417.4	-1,796.0	2.69	-1.33	76.80	
5,305.0	1.49	354.02	4,621.2	2,289.3	1,419.5	-1,796.1	0.25	0.15	-8.07	
5,391.0	0.92	337.01	4,707.2	2,290.6	1,421.2	-1,796.5	0.78	-0.66	-19.78	
5,476.0	0.48	326.16	4,792.2	2,291.6	1,422.1	-1,796.9	0.54	-0.52	-12.76	
5,561.0	0.48	260.37	4,877.2	2,292.2	1,422.4	-1,797.5	0.61	0.00	-77.40	
5,647.0	0.75	247.80	4,963.2	2,292.7	1,422.1	-1,798.4	0.35	0.31	-14.62	
5,732.0	1.13	111.74	5,048.2	2,292.2	1,421.6	-1,798.1	2.06	0.45	-160.07	
5,818.0	1.63	128.14	5,134.2	2,290.1	1,420.5	-1,796.3	0.74	0.58	19.07	
5,903.0	1.64	127.25	5,219.1	2,287.7	1,419.0	-1,794.4	0.03	0.01	-1.05	
5,989.0	1.58	148.40	5,305.1	2,285.3	1,417.3	-1,792.8	0.69	-0.07	24.59	
6,074.0	1.76	179.34	5,390.1	2,283.4	1,415.0	-1,792.2	1.07	0.21	36.40	
6,160.0	0.62	10.76	5,476.1	2,282.8	1,414.1	-1,792.1	2.76	-1.33	-196.02	
6,245.0	0.75	329.98	5,561.0	2,283.5	1,415.0	-1,792.3	0.58	0.15	-47.98	
6,330.0	1.32	284.59	5,646.0	2,285.0	1,415.8	-1,793.5	1.12	0.67	-53.40	
6,415.0	1.41	271.01	5,731.0	2,286.7	1,416.0	-1,795.5	0.39	0.11	-15.98	
6,501.0	1.75	264.08	5,817.0	2,288.5	1,415.9	-1,797.9	0.45	0.40	-8.06	
6,586.0	0.44	182.90	5,902.0	2,289.2	1,415.5	-1,799.2	2.04	-1.54	-95.51	
6,672.0	0.92	192.13	5,988.0	2,288.7	1,414.5	-1,799.3	0.57	0.56	10.73	
6,757.0	1.19	209.66	6,072.9	2,288.3	1,413.0	-1,799.9	0.49	0.32	20.62	
6,843.0	1.85	217.09	6,158.9	2,288.1	1,411.1	-1,801.2	0.80	0.77	8.64	
6,928.0	2.20	217.39	6,243.9	2,288.1	1,408.7	-1,803.0	0.41	0.41	0.35	
7,014.0	2.64	218.76	6,329.8	2,288.1	1,405.9	-1,805.3	0.52	0.51	1.59	
7,099.0	2.59	224.42	6,414.7	2,288.3	1,403.0	-1,807.8	0.31	-0.06	6.66	
7,164.0	2.60	225.21	6,479.6	2,288.7	1,400.9	-1,809.9	0.06	0.02	1.22	
7,221.0	2.60	225.21	6,536.6	2,289.0	1,399.1	-1,811.7	0.00	0.00	0.00	

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Design:	Actual	Database:	EDM 5000.1 Single User Db

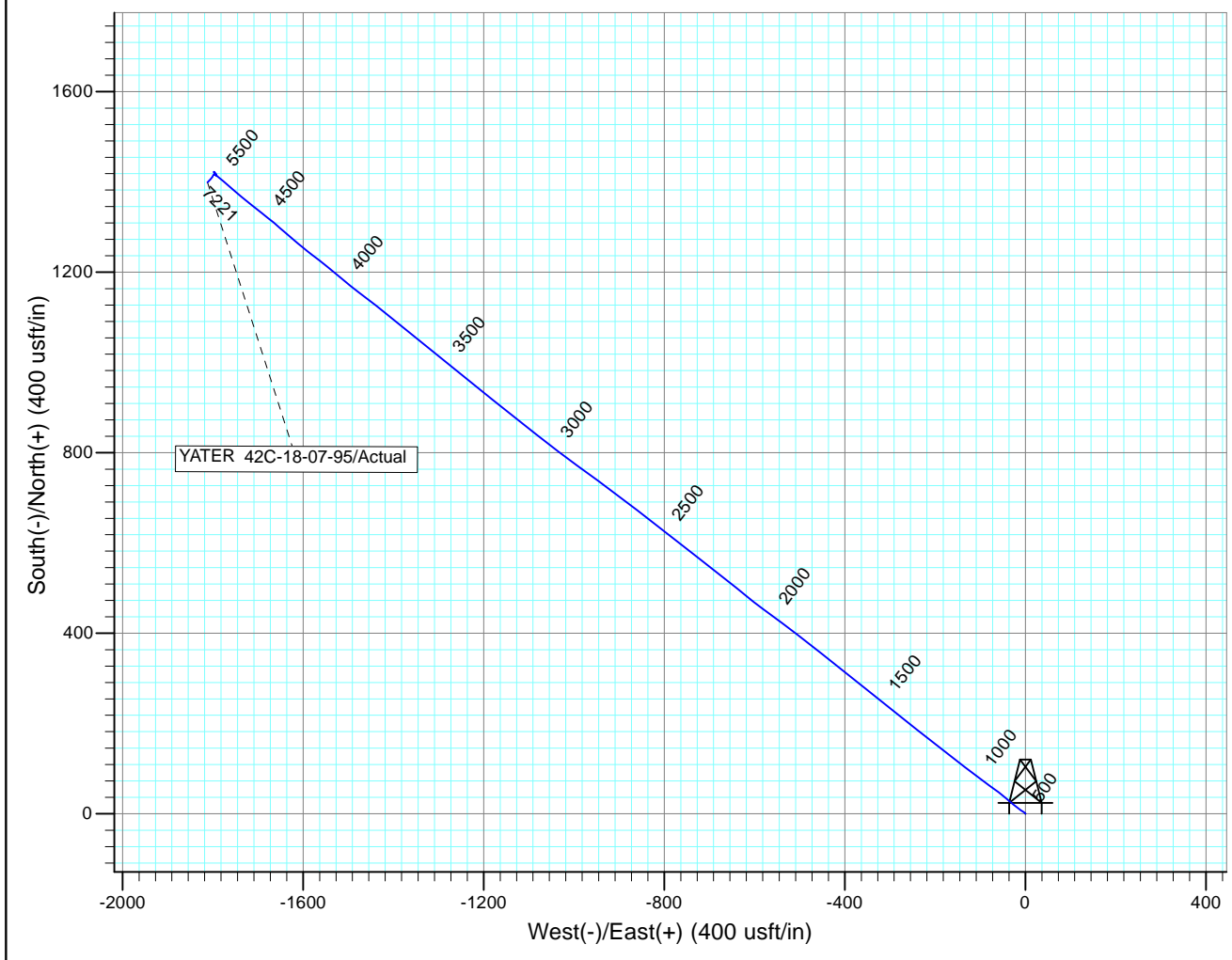
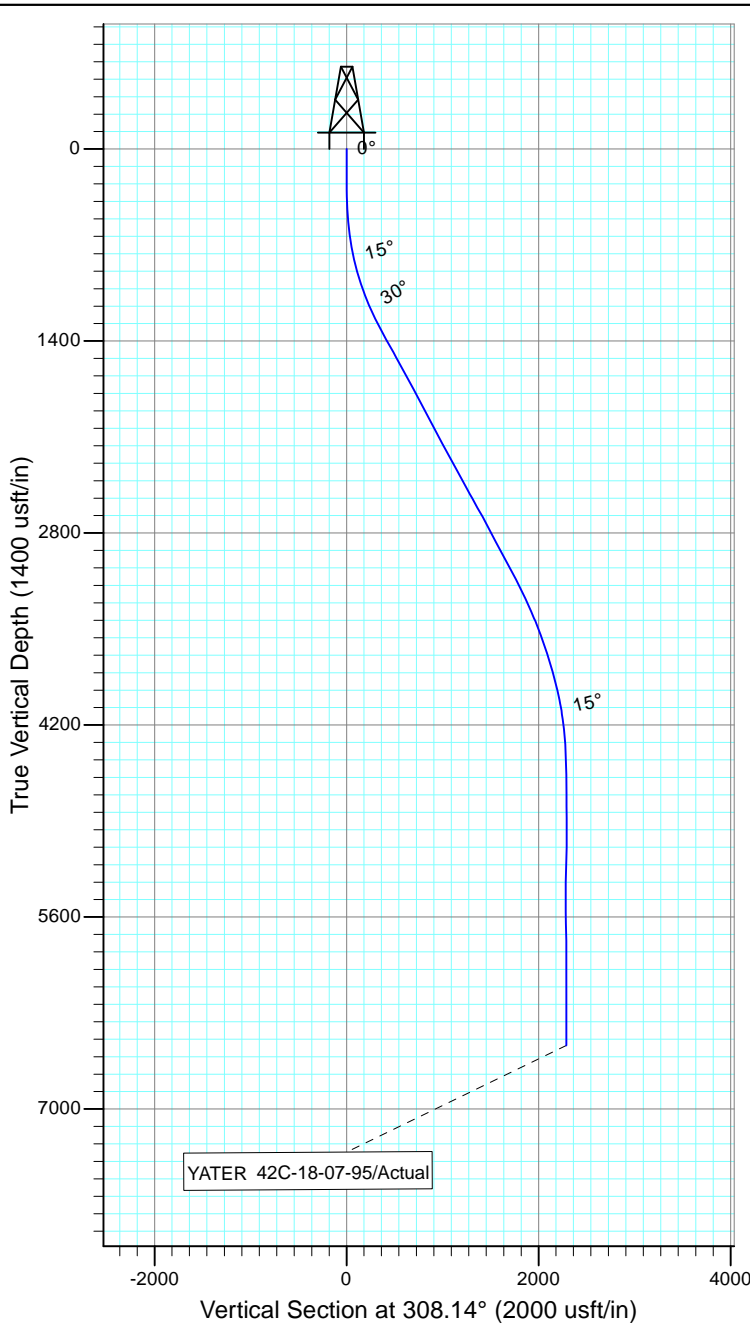
Checked By: _____ Approved By: _____ Date: _____



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

Azimuths to True North
 Magnetic North: 9.84°

Magnetic Field
 Strength: 51813.4snT
 Dip Angle: 65.57°
 Date: 6/15/2015
 Model: IGRF2010



Design: Actual (YATER 42C-18-07-95/Wellbore #1)
 Created By: *Matthew Linton* Date: 11:56, July 07 2015

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