



Ursa Operating Company, LLC

Rockies Region

Speakman A

BAT 13C-24-07-96

Wellbore #1

Design: Actual

End of Well Report

19 June, 2014



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well BAT 13C-24-07-96
Project:	Rockies Region	TVD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Site:	Speakman A	MD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Well:	BAT 13C-24-07-96	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		Speakman A			
Site Position:		Northing:		1,588,429.06	usft
From:	Lat/Long	Easting:		2,276,734.73	usft
Position Uncertainty:		Slot Radius:		13-3/16	"
				0.0	usft

Well		BAT 13C-24-07-96, SHL LAT: 39.420916655 LONG: -108.060440163				
Well Position	+N/-S	0.0 usft	Northing:	1,588,391.37 usft	Latitude:	39° 25' 15.300 N
	+E/-W	0.0 usft	Easting:	2,276,767.55 usft	Longitude:	108° 3' 37.585 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,197.9 usft	Ground Level:	5,182.5 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/13/2013	10.08	65.63	52,047

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	259.53

Survey Program		Date	6/19/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
152.4	5,805.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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Site:	Speakman A	MD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Well:	BAT 13C-24-07-96	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
152.4	0.80	111.40	152.4	-0.9	-0.4	1.0	0.52	0.52	0.00
180.4	0.90	142.00	180.4	-1.2	-0.6	1.3	1.64	0.36	109.29
211.4	2.10	176.60	211.4	-1.2	-1.4	1.5	4.68	3.87	111.61
241.4	3.60	189.00	241.3	-0.8	-2.9	1.4	5.38	5.00	41.33
271.4	4.80	196.00	271.3	0.0	-5.0	0.9	4.34	4.00	23.33
301.4	5.90	203.60	301.1	1.5	-7.6	-0.1	4.35	3.67	25.33
331.4	6.90	208.60	330.9	3.5	-10.6	-1.6	3.81	3.33	16.67
361.4	7.60	221.30	360.7	6.2	-13.7	-3.7	5.81	2.33	42.33
391.4	8.30	231.90	390.4	9.6	-16.5	-6.7	5.40	2.33	35.33
421.4	9.00	239.90	420.1	13.8	-19.0	-10.5	4.63	2.33	26.67
451.4	9.90	247.50	449.7	18.5	-21.2	-14.9	5.12	3.00	25.33
481.4	11.00	253.90	479.2	23.9	-23.0	-20.0	5.33	3.67	21.33
511.4	12.40	257.50	508.6	29.9	-24.5	-25.9	5.26	4.67	12.00
541.4	13.50	260.80	537.8	36.7	-25.7	-32.5	4.42	3.67	11.00
571.4	14.60	262.60	566.9	43.9	-26.8	-39.7	3.94	3.67	6.00
601.4	15.60	262.90	595.9	51.7	-27.8	-47.5	3.34	3.33	1.00
631.4	16.40	261.40	624.7	60.0	-28.9	-55.7	3.00	2.67	-5.00
661.4	17.40	260.70	653.4	68.7	-30.3	-64.3	3.40	3.33	-2.33
691.4	18.50	259.40	681.9	78.0	-31.9	-73.4	3.90	3.67	-4.33
721.4	18.80	258.30	710.4	87.5	-33.7	-82.8	1.54	1.00	-3.67
751.4	18.70	258.70	738.8	97.2	-35.6	-92.3	0.54	-0.33	1.33
781.4	18.90	258.20	767.2	106.9	-37.6	-101.7	0.86	0.67	-1.67
811.4	18.70	258.40	795.6	116.5	-39.5	-111.2	0.70	-0.67	0.67
841.4	19.00	258.60	824.0	126.2	-41.5	-120.7	1.02	1.00	0.67
871.4	19.30	259.20	852.3	136.1	-43.4	-130.3	1.20	1.00	2.00
901.4	19.10	259.70	880.6	145.9	-45.2	-140.0	0.86	-0.67	1.67

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Site:	Speakman A	MD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Well:	BAT 13C-24-07-96	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)	
931.4	19.00	260.20	909.0	155.7	-46.9	-149.7	0.64	-0.33	1.67	
961.4	18.70	260.10	937.4	165.4	-48.5	-159.2	1.01	-1.00	-0.33	
991.4	18.70	259.70	965.8	175.0	-50.2	-168.7	0.43	0.00	-1.33	
1,021.4	18.50	259.60	994.2	184.6	-51.9	-178.1	0.68	-0.67	-0.33	
1,051.4	18.20	258.10	1,022.7	194.0	-53.8	-187.4	1.86	-1.00	-5.00	
1,081.4	17.90	258.20	1,051.2	203.3	-55.7	-196.5	1.01	-1.00	0.33	
1,111.4	18.20	258.50	1,079.7	212.6	-57.5	-205.6	1.05	1.00	1.00	
1,141.4	18.30	258.10	1,108.2	222.0	-59.4	-214.8	0.53	0.33	-1.33	
1,171.4	18.10	258.30	1,136.7	231.4	-61.4	-224.0	0.70	-0.67	0.67	
1,201.4	18.50	260.00	1,165.2	240.8	-63.1	-233.2	2.22	1.33	5.67	
1,231.4	19.20	261.30	1,193.6	250.5	-64.7	-242.8	2.72	2.33	4.33	
1,261.4	19.10	261.40	1,222.0	260.3	-66.2	-252.5	0.35	-0.33	0.33	
1,291.4	18.90	261.60	1,250.3	270.1	-67.6	-262.2	0.70	-0.67	0.67	
1,321.4	18.90	260.90	1,278.7	279.8	-69.1	-271.8	0.76	0.00	-2.33	
1,351.4	18.90	260.60	1,307.1	289.5	-70.7	-281.4	0.32	0.00	-1.00	
1,381.4	19.20	261.20	1,335.4	299.3	-72.2	-291.0	1.19	1.00	2.00	
1,411.4	19.50	261.80	1,363.7	309.2	-73.7	-300.9	1.20	1.00	2.00	
1,441.4	19.60	261.70	1,392.0	319.3	-75.1	-310.8	0.35	0.33	-0.33	
1,471.4	19.60	261.60	1,420.3	329.3	-76.6	-320.7	0.11	0.00	-0.33	
1,501.4	19.60	260.90	1,448.5	339.4	-78.1	-330.7	0.78	0.00	-2.33	
1,531.4	19.50	260.80	1,476.8	349.4	-79.7	-340.6	0.35	-0.33	-0.33	
1,561.4	19.60	261.40	1,505.1	359.5	-81.3	-350.5	0.75	0.33	2.00	
1,591.4	19.70	262.10	1,533.3	369.5	-82.7	-360.5	0.85	0.33	2.33	
1,621.4	19.70	261.10	1,561.6	379.6	-84.2	-370.5	1.12	0.00	-3.33	
1,651.4	19.70	261.00	1,589.8	389.8	-85.8	-380.5	0.11	0.00	-0.33	
1,681.4	19.70	260.70	1,618.1	399.9	-87.4	-390.5	0.34	0.00	-1.00	
1,711.4	19.70	259.70	1,646.3	410.0	-89.1	-400.5	1.12	0.00	-3.33	

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Site:	Speakman A	MD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Well:	BAT 13C-24-07-96	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)	
1,741.4	20.00	259.80	1,674.5	420.2	-90.9	-410.5	1.01	1.00	0.33	
1,771.0	20.00	259.40	1,702.3	430.3	-92.7	-420.4	0.46	0.00	-1.35	
1,829.0	20.13	258.28	1,756.8	450.2	-96.6	-440.0	0.70	0.22	-1.93	
1,914.0	19.14	257.29	1,836.9	478.7	-102.6	-467.9	1.23	-1.16	-1.16	
1,999.0	18.68	257.32	1,917.3	506.3	-108.7	-494.7	0.54	-0.54	0.04	
2,085.0	18.94	261.23	1,998.7	534.0	-113.8	-522.0	1.50	0.30	4.55	
2,170.0	19.53	263.90	2,079.0	561.9	-117.4	-549.7	1.25	0.69	3.14	
2,255.0	20.30	266.11	2,158.9	590.7	-120.0	-578.6	1.27	0.91	2.60	
2,340.0	19.78	266.41	2,238.7	619.7	-121.9	-607.6	0.62	-0.61	0.35	
2,425.0	19.20	267.30	2,318.9	647.8	-123.4	-636.0	0.77	-0.68	1.05	
2,510.0	20.13	262.55	2,398.9	676.3	-126.0	-664.4	2.17	1.09	-5.59	
2,595.0	20.79	263.12	2,478.5	705.9	-129.7	-693.9	0.81	0.78	0.67	
2,680.0	20.00	261.54	2,558.2	735.5	-133.6	-723.3	1.13	-0.93	-1.86	
2,765.0	19.60	258.41	2,638.2	764.3	-138.6	-751.6	1.33	-0.47	-3.68	
2,851.0	18.63	257.71	2,719.4	792.4	-144.4	-779.2	1.16	-1.13	-0.81	
2,936.0	18.85	261.84	2,799.9	819.7	-149.3	-806.0	1.58	0.26	4.86	
3,021.0	18.37	260.83	2,880.5	846.8	-153.4	-832.8	0.68	-0.56	-1.19	
3,106.0	17.45	259.16	2,961.4	873.0	-157.9	-858.6	1.24	-1.08	-1.96	
3,191.0	16.22	263.12	3,042.7	897.6	-161.7	-882.9	1.98	-1.45	4.66	
3,276.0	15.33	262.87	3,124.5	920.6	-164.5	-905.8	1.05	-1.05	-0.29	
3,361.0	13.47	263.00	3,206.9	941.7	-167.1	-926.8	2.19	-2.19	0.15	
3,447.0	10.63	260.17	3,291.0	959.7	-169.7	-944.5	3.37	-3.30	-3.29	
3,532.0	7.69	258.63	3,374.9	973.2	-172.2	-957.9	3.47	-3.46	-1.81	
3,617.0	4.20	255.40	3,459.4	982.0	-174.1	-966.4	4.12	-4.11	-3.80	
3,702.0	1.80	230.11	3,544.3	986.3	-175.7	-970.5	3.16	-2.82	-29.75	
3,787.0	1.23	149.56	3,629.3	987.1	-177.4	-971.0	2.36	-0.67	-94.76	
3,872.0	2.24	98.98	3,714.2	985.2	-178.4	-968.9	2.05	1.19	-59.51	

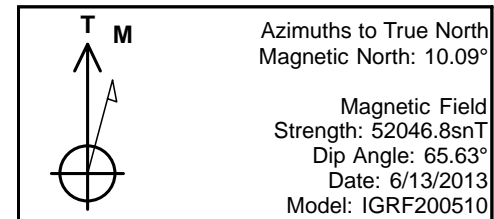
Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well BAT 13C-24-07-96
Project:	Rockies Region	TVD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Site:	Speakman A	MD Reference:	BAT 13C-24-07-96 @ 5197.9usft (XTREME 15)
Well:	BAT 13C-24-07-96	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
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3,957.0	2.15	107.80	3,799.2	982.3	-179.2	-965.8	0.41	-0.11	10.38	
4,042.0	2.02	118.45	3,884.1	979.7	-180.4	-962.9	0.48	-0.15	12.53	
4,128.0	2.11	86.54	3,970.1	976.9	-181.0	-960.0	1.32	0.10	-37.10	
4,213.0	2.15	60.79	4,055.0	973.9	-180.1	-957.1	1.12	0.05	-30.29	
4,298.0	1.58	72.22	4,139.9	971.2	-179.0	-954.6	0.80	-0.67	13.45	
4,386.0	1.05	52.79	4,227.9	969.3	-178.1	-952.8	0.78	-0.60	-22.08	
4,468.0	0.35	39.22	4,309.9	968.4	-177.5	-952.0	0.87	-0.85	-16.55	
4,554.0	0.66	350.39	4,395.9	968.2	-176.8	-951.9	0.59	0.36	-56.78	
4,639.0	2.10	13.20	4,480.9	967.6	-174.8	-951.7	1.78	1.69	26.84	
4,724.0	1.93	3.27	4,565.8	966.6	-171.8	-951.2	0.46	-0.20	-11.68	
4,809.0	1.76	6.21	4,650.8	965.9	-169.1	-951.0	0.23	-0.20	3.46	
4,894.0	1.36	355.31	4,735.8	965.4	-166.8	-950.9	0.58	-0.47	-12.82	
4,979.0	0.92	331.36	4,820.7	965.5	-165.2	-951.3	0.75	-0.52	-28.18	
5,065.0	1.16	294.88	4,906.7	966.5	-164.2	-952.5	0.80	0.28	-42.42	
5,150.0	1.63	283.20	4,991.7	968.3	-163.6	-954.4	0.64	0.55	-13.74	
5,235.0	1.45	277.44	5,076.7	970.4	-163.2	-956.7	0.28	-0.21	-6.78	
5,320.0	1.63	250.37	5,161.6	972.6	-163.4	-958.9	0.87	0.21	-31.85	
5,405.0	1.85	248.53	5,246.6	975.2	-164.3	-961.3	0.27	0.26	-2.16	
5,490.0	2.33	242.11	5,331.6	978.1	-165.7	-964.1	0.63	0.56	-7.55	
5,575.0	2.94	208.45	5,416.5	981.2	-168.4	-966.7	1.92	0.72	-39.60	
5,660.0	3.08	205.07	5,501.3	983.9	-172.4	-968.7	0.27	0.16	-3.98	
5,749.0	3.07	202.44	5,590.2	986.5	-176.7	-970.6	0.16	-0.01	-2.96	
5,805.0	3.07	202.44	5,646.1	988.2	-179.5	-971.7	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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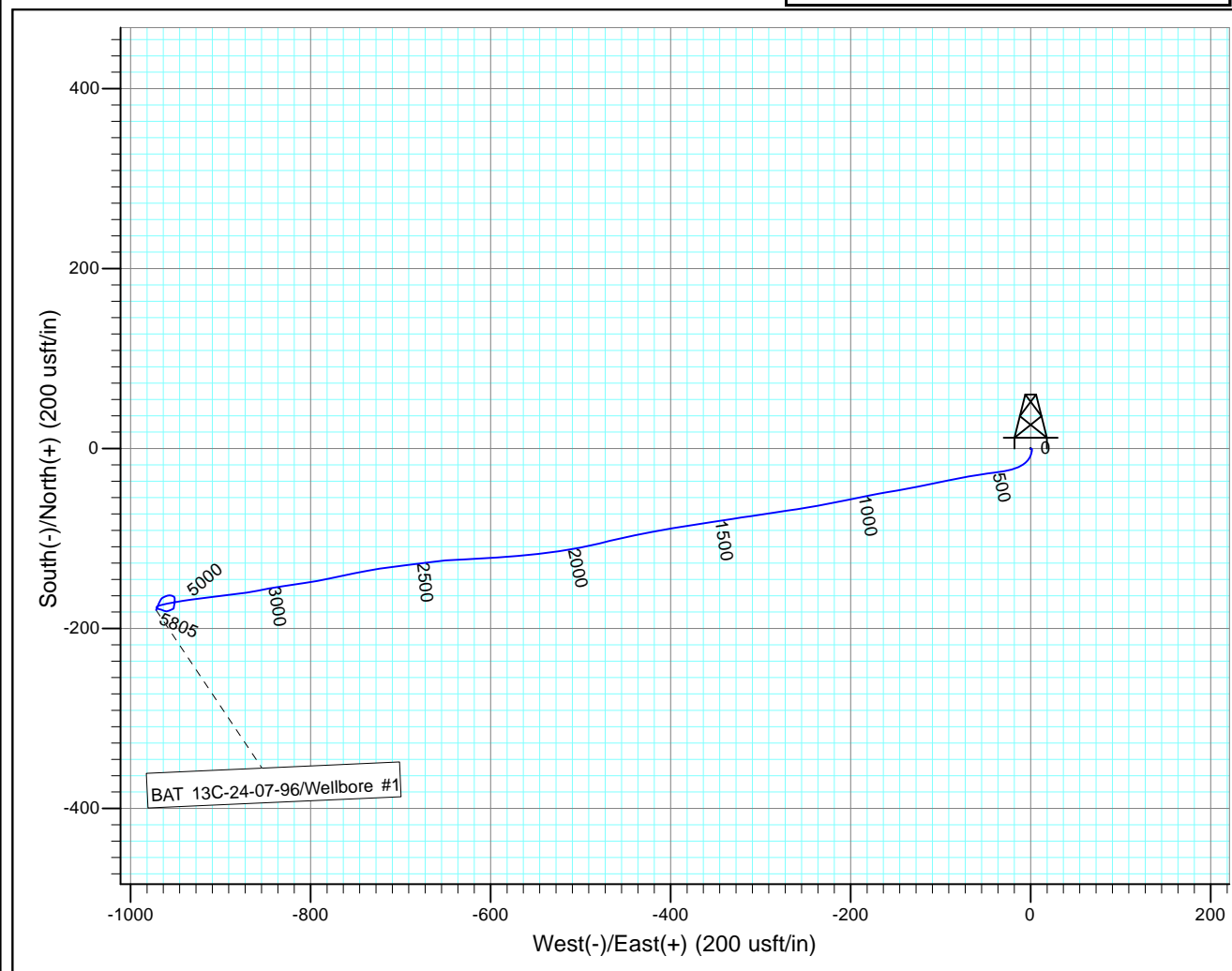
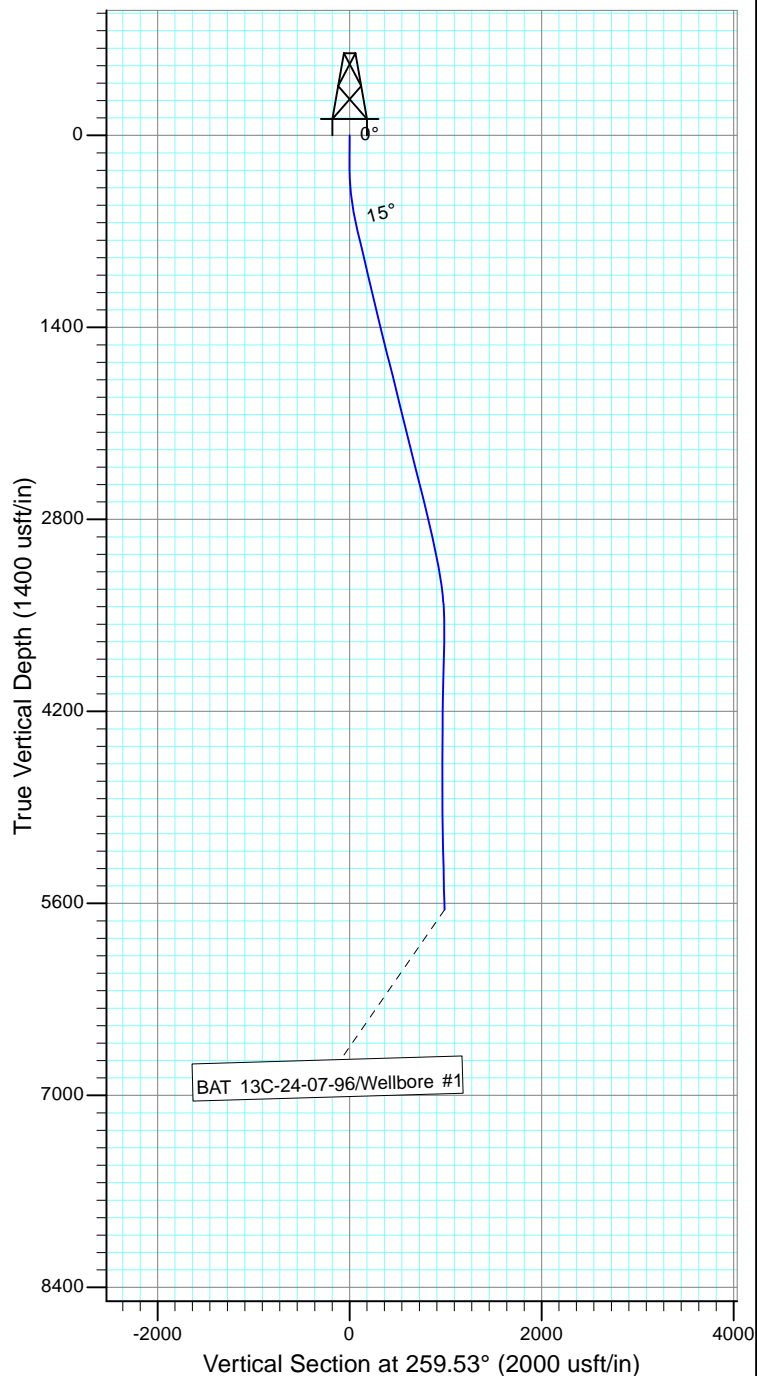


Project: Rockies Region
Site: Speakman A
Well: BAT 13C-24-07-96
Wellbore: Wellbore #1
Design: Actual



Azimuths to True North
Magnetic North: 10.09°

Magnetic Field
Strength: 52046.8snT
Dip Angle: 65.63°
Date: 6/13/2013
Model: IGRF200510



Design: Actual (BAT 13C-24-07-96/Wellbore #1)

Created By: *Matthew Linton* Date: 11:13, June 19 2014

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