



# **Ursa Operating Company, LLC**

**Rockies Region**

**Watson Ranch B**

**WATSON RANCH B 33A-17-07-95**

**Wellbore #1**

**Design: Actual**

## **End of Well Report**

**30 April, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well WATSON RANCH B 33A-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	WATSON RANCH B 33A-17-07-95 @ 5602.0usft (Caps)
<b>Site:</b>	Watson Ranch B	<b>MD Reference:</b>	WATSON RANCH B 33A-17-07-95 @ 5602.0usft (Caps)
<b>Well:</b>	WATSON RANCH B 33A-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		Watson Ranch B								
Site Position:		Northing:		1,592,643.01	usft	Latitude:		39° 26' 0.219 N		
From:	Lat/Long	Easting:		2,287,301.12	usft	Longitude:		108° 1' 24.909 W		
Position Uncertainty:		Slot Radius:		0.0	usft	Grid Convergence:		13-3/16 "		-1.59 °

Well		WATSON RANCH B 33A-17-07-95, SHL LAT: 39.433394646 LONG: -108.023541582				
Well Position	+N/-S	0.0 usft	Northing:	1,592,642.85 usft	Latitude:	39° 26' 0.220 N
	+E/-W	0.0 usft	Easting:	2,287,313.61 usft	Longitude:	108° 1' 24.750 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,602.0 usft	Ground Level:	5,585.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/3/2015	9.88	65.58	51,841

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	46.50

Survey Program		Date	4/30/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
218.0	7,180.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
218.0	0.62	6.10	218.0	0.9	1.2	0.1	0.28	0.28	0.00	
248.0	1.19	14.67	248.0	1.3	1.6	0.2	1.95	1.90	28.57	
278.0	1.63	29.48	278.0	2.0	2.3	0.5	1.89	1.47	49.37	
308.0	1.67	27.15	308.0	2.8	3.1	0.9	0.26	0.13	-7.77	
338.0	1.85	29.26	338.0	3.7	3.9	1.4	0.64	0.60	7.03	
368.0	2.16	31.13	367.9	4.7	4.8	1.9	1.06	1.03	6.23	
398.0	2.50	34.84	397.9	5.8	5.8	2.6	1.24	1.13	12.37	
428.0	3.16	38.44	427.9	7.3	7.0	3.4	2.28	2.20	12.00	
458.0	3.65	39.94	457.8	9.1	8.4	4.6	1.66	1.63	5.00	
488.0	4.31	43.59	487.8	11.1	9.9	6.0	2.36	2.20	12.17	
518.0	5.01	45.83	517.7	13.6	11.6	7.7	2.41	2.33	7.47	
548.0	5.94	44.65	547.5	16.4	13.7	9.7	3.12	3.10	-3.93	
578.0	6.77	48.20	577.3	19.8	16.0	12.1	3.06	2.77	11.83	
608.0	7.69	50.00	607.1	23.5	18.4	15.0	3.16	3.07	6.00	
638.0	8.53	50.75	636.8	27.8	21.1	18.2	2.82	2.80	2.50	
668.0	9.32	49.56	666.4	32.4	24.1	21.8	2.70	2.63	-3.97	
698.0	10.28	49.39	696.0	37.5	27.4	25.7	3.20	3.20	-0.57	
728.0	11.21	49.65	725.5	43.1	31.0	29.9	3.10	3.10	0.87	
758.0	12.18	48.22	754.8	49.2	35.0	34.5	3.37	3.23	-4.77	
788.0	13.01	47.28	784.1	55.7	39.4	39.4	2.85	2.77	-3.13	
818.0	14.00	47.50	813.3	62.7	44.2	44.5	3.30	3.30	0.73	
848.0	14.94	46.27	842.3	70.2	49.3	50.0	3.30	3.13	-4.10	
878.0	15.91	44.29	871.3	78.2	54.9	55.7	3.68	3.23	-6.60	
908.0	16.92	46.62	900.0	86.7	60.9	61.7	4.02	3.37	7.77	
938.0	17.89	47.28	928.7	95.6	67.0	68.3	3.30	3.23	2.20	
968.0	18.68	46.35	957.1	105.0	73.4	75.1	2.81	2.63	-3.10	

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<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)	
998.0	19.69	48.60	985.5	114.9	80.1	82.4	4.17	3.37	7.50	
1,028.0	20.87	48.68	1,013.6	125.3	87.0	90.2	3.93	3.93	0.27	
1,058.0	22.10	48.16	1,041.5	136.3	94.3	98.4	4.15	4.10	-1.73	
1,088.0	23.47	48.77	1,069.2	147.9	102.0	107.1	4.63	4.57	2.03	
1,118.0	24.83	47.72	1,096.6	160.1	110.1	116.3	4.75	4.53	-3.50	
1,148.0	26.06	47.72	1,123.7	173.0	118.8	125.8	4.10	4.10	0.00	
1,178.0	27.21	47.75	1,150.5	186.5	127.9	135.7	3.83	3.83	0.10	
1,208.0	28.16	46.76	1,177.0	200.4	137.3	146.0	3.52	3.17	-3.30	
1,238.0	28.92	45.48	1,203.4	214.7	147.3	156.3	3.25	2.53	-4.27	
1,268.0	29.62	44.99	1,229.6	229.4	157.6	166.7	2.47	2.33	-1.63	
1,298.0	30.10	44.73	1,255.6	244.3	168.2	177.3	1.66	1.60	-0.87	
1,328.0	30.32	45.14	1,281.5	259.4	178.9	187.9	1.01	0.73	1.37	
1,358.0	30.81	45.20	1,307.3	274.7	189.6	198.7	1.64	1.63	0.20	
1,388.0	30.85	45.34	1,333.1	290.1	200.4	209.7	0.27	0.13	0.47	
1,418.0	31.03	44.73	1,358.8	305.5	211.3	220.6	1.21	0.60	-2.03	
1,448.0	31.38	44.82	1,384.5	321.0	222.4	231.5	1.18	1.17	0.30	
1,478.0	31.33	44.11	1,410.1	336.6	233.5	242.5	1.24	-0.17	-2.37	
1,508.0	31.38	44.29	1,435.7	352.2	244.7	253.3	0.35	0.17	0.60	
1,538.0	31.82	44.55	1,461.3	367.9	255.9	264.3	1.54	1.47	0.87	
1,568.0	31.99	44.60	1,486.7	383.8	267.2	275.5	0.57	0.57	0.17	
1,598.0	32.08	45.56	1,512.2	399.7	278.5	286.7	1.72	0.30	3.20	
1,628.0	31.95	45.34	1,537.6	415.6	289.6	298.1	0.58	-0.43	-0.73	
1,658.0	32.26	45.17	1,563.0	431.5	300.8	309.4	1.08	1.03	-0.57	
1,688.0	32.30	45.04	1,588.4	447.5	312.1	320.7	0.27	0.13	-0.43	
1,718.0	31.90	44.82	1,613.8	463.5	323.4	332.0	1.39	-1.33	-0.73	
1,748.0	31.73	45.48	1,639.3	479.3	334.6	343.2	1.29	-0.57	2.20	
1,846.0	32.31	44.77	1,722.4	531.2	371.2	380.0	0.71	0.59	-0.72	

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Survey										
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1,932.0	31.38	46.88	1,795.4	576.6	402.9	412.6	1.69	-1.08	2.45	
2,017.0	31.86	47.32	1,867.8	621.1	433.2	445.2	0.63	0.56	0.52	
2,103.0	30.98	46.57	1,941.2	666.0	463.8	478.0	1.12	-1.02	-0.87	
2,188.0	31.16	46.84	2,014.0	709.8	493.9	509.9	0.27	0.21	0.32	
2,274.0	31.51	47.67	2,087.5	754.6	524.2	542.7	0.65	0.41	0.97	
2,359.0	31.64	47.01	2,159.9	799.1	554.4	575.5	0.43	0.15	-0.78	
2,445.0	32.30	45.87	2,232.8	844.6	585.8	608.5	1.04	0.77	-1.33	
2,530.0	31.33	45.08	2,305.1	889.4	617.2	640.4	1.24	-1.14	-0.93	
2,616.0	31.50	45.70	2,378.5	934.2	648.7	672.3	0.42	0.20	0.72	
2,701.0	30.42	45.41	2,451.4	977.9	679.3	703.6	1.28	-1.27	-0.34	
2,787.0	31.16	46.40	2,525.2	1,022.0	709.9	735.2	1.04	0.86	1.15	
2,872.0	31.51	46.57	2,597.8	1,066.2	740.4	767.2	0.42	0.41	0.20	
2,957.0	31.03	46.35	2,670.5	1,110.3	770.8	799.2	0.58	-0.56	-0.26	
3,043.0	31.77	46.18	2,743.9	1,155.1	801.7	831.6	0.87	0.86	-0.20	
3,128.0	30.89	46.01	2,816.5	1,199.3	832.4	863.4	1.04	-1.04	-0.20	
3,214.0	31.79	46.28	2,890.0	1,244.0	863.4	895.7	1.06	1.05	0.31	
3,299.0	30.85	46.40	2,962.6	1,288.2	893.9	927.6	1.11	-1.11	0.14	
3,384.0	31.42	46.53	3,035.3	1,332.1	924.1	959.5	0.68	0.67	0.15	
3,470.0	30.45	46.40	3,109.1	1,376.3	954.6	991.6	1.13	-1.13	-0.15	
3,555.0	31.30	45.43	3,182.0	1,420.0	984.9	1,022.9	1.16	1.00	-1.14	
3,641.0	31.99	47.41	3,255.3	1,465.1	1,016.0	1,055.6	1.45	0.80	2.30	
3,726.0	31.16	47.50	3,327.7	1,509.6	1,046.1	1,088.4	0.98	-0.98	0.11	
3,811.0	30.85	48.02	3,400.5	1,553.4	1,075.6	1,120.8	0.48	-0.36	0.61	
3,897.0	30.85	47.89	3,474.4	1,597.4	1,105.1	1,153.5	0.08	0.00	-0.15	
3,982.0	29.31	46.57	3,547.9	1,640.0	1,134.0	1,184.8	1.97	-1.81	-1.55	
4,068.0	27.51	46.62	3,623.5	1,681.0	1,162.1	1,214.5	2.09	-2.09	0.06	
4,153.0	26.45	46.43	3,699.3	1,719.5	1,188.7	1,242.5	1.25	-1.25	-0.22	

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Survey										
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4,239.0	24.43	46.22	3,777.0	1,756.5	1,214.2	1,269.2	2.35	-2.35	-0.24	
4,324.0	21.97	45.96	3,855.1	1,789.9	1,237.4	1,293.4	2.90	-2.89	-0.31	
4,409.0	18.54	45.52	3,934.8	1,819.4	1,257.9	1,314.4	4.04	-4.04	-0.52	
4,495.0	16.35	44.99	4,016.8	1,845.1	1,276.1	1,332.8	2.55	-2.55	-0.62	
4,580.0	13.58	44.25	4,099.0	1,867.1	1,291.7	1,348.2	3.27	-3.26	-0.87	
4,665.0	11.12	46.09	4,182.0	1,885.2	1,304.5	1,361.0	2.93	-2.89	2.16	
4,750.0	8.13	44.86	4,265.8	1,899.4	1,314.5	1,371.2	3.53	-3.52	-1.45	
4,836.0	5.89	43.23	4,351.1	1,909.9	1,322.0	1,378.5	2.61	-2.60	-1.90	
4,921.0	3.43	43.81	4,435.8	1,916.8	1,327.0	1,383.3	2.89	-2.89	0.68	
5,007.0	2.99	42.40	4,521.7	1,921.6	1,330.5	1,386.5	0.52	-0.51	-1.64	
5,092.0	2.02	45.30	4,606.6	1,925.3	1,333.2	1,389.1	1.15	-1.14	3.41	
5,177.0	1.65	44.01	4,691.6	1,928.1	1,335.1	1,391.0	0.44	-0.44	-1.52	
5,263.0	1.32	43.76	4,777.5	1,930.3	1,336.7	1,392.6	0.38	-0.38	-0.29	
5,348.0	1.19	44.25	4,862.5	1,932.1	1,338.1	1,393.9	0.15	-0.15	0.58	
5,433.0	0.88	69.43	4,947.5	1,933.6	1,338.9	1,395.1	0.64	-0.36	29.62	
5,519.0	0.46	117.49	5,033.5	1,934.3	1,339.0	1,396.0	0.78	-0.49	55.88	
5,604.0	0.75	144.84	5,118.5	1,934.4	1,338.4	1,396.6	0.47	0.34	32.18	
5,689.0	1.09	162.19	5,203.5	1,933.9	1,337.2	1,397.2	0.51	0.40	20.41	
5,775.0	1.05	167.25	5,289.5	1,933.2	1,335.6	1,397.6	0.12	-0.05	5.88	
5,860.0	1.01	172.43	5,374.5	1,932.4	1,334.1	1,397.9	0.12	-0.05	6.09	
5,946.0	1.01	171.34	5,460.5	1,931.5	1,332.6	1,398.1	0.02	0.00	-1.27	
6,031.0	0.16	286.00	5,545.4	1,931.0	1,331.9	1,398.1	1.28	-1.00	134.89	
6,116.0	1.04	30.07	5,630.4	1,931.7	1,332.6	1,398.4	1.28	1.04	122.44	
6,202.0	0.70	39.37	5,716.4	1,932.9	1,333.7	1,399.1	0.43	-0.40	10.81	
6,287.0	0.48	44.03	5,801.4	1,933.8	1,334.4	1,399.7	0.26	-0.26	5.48	
6,373.0	0.48	89.29	5,887.4	1,934.4	1,334.6	1,400.3	0.43	0.00	52.63	
6,458.0	0.88	106.91	5,972.4	1,935.0	1,334.4	1,401.3	0.53	0.47	20.73	

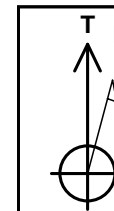
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6,543.0	0.79	113.02	6,057.4	1,935.6	1,334.0	1,402.4	0.15	-0.11	7.19
6,629.0	0.79	181.62	6,143.4	1,935.4	1,333.2	1,403.0	1.04	0.00	79.77
6,714.0	1.05	182.54	6,228.4	1,934.4	1,331.8	1,402.9	0.31	0.31	1.08
6,800.0	1.10	168.96	6,314.4	1,933.4	1,330.2	1,403.0	0.30	0.06	-15.79
6,885.0	0.48	343.52	6,399.4	1,933.1	1,329.8	1,403.1	1.86	-0.73	205.36
6,971.0	0.42	299.55	6,485.4	1,933.2	1,330.3	1,402.7	0.40	-0.07	-51.13
7,056.0	0.40	247.32	6,570.4	1,932.8	1,330.3	1,402.2	0.43	-0.02	-61.45
7,123.0	0.54	226.85	6,637.4	1,932.3	1,330.0	1,401.7	0.32	0.21	-30.55
7,180.0	0.54	226.85	6,694.4	1,931.8	1,329.6	1,401.3	0.00	0.00	0.00

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

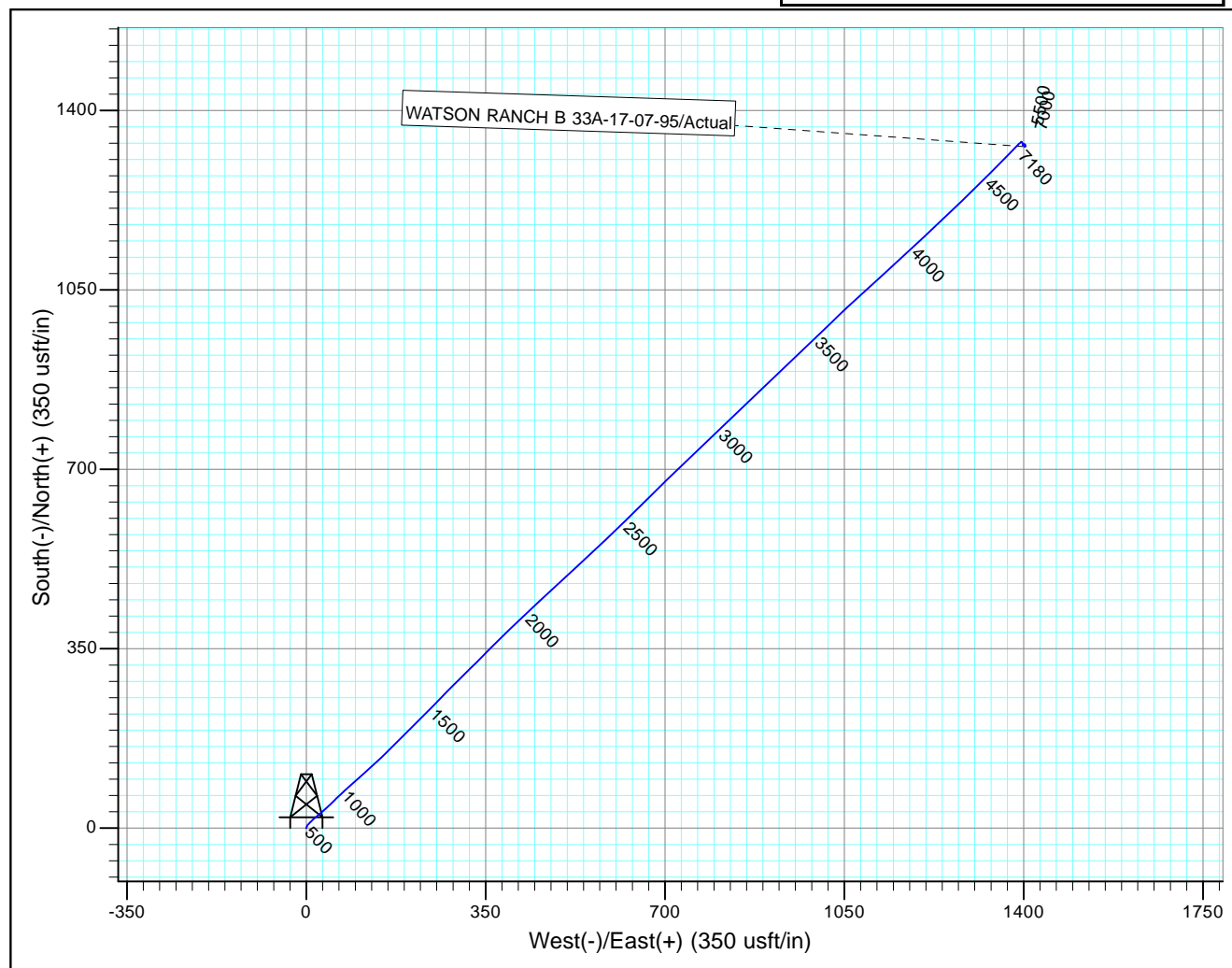
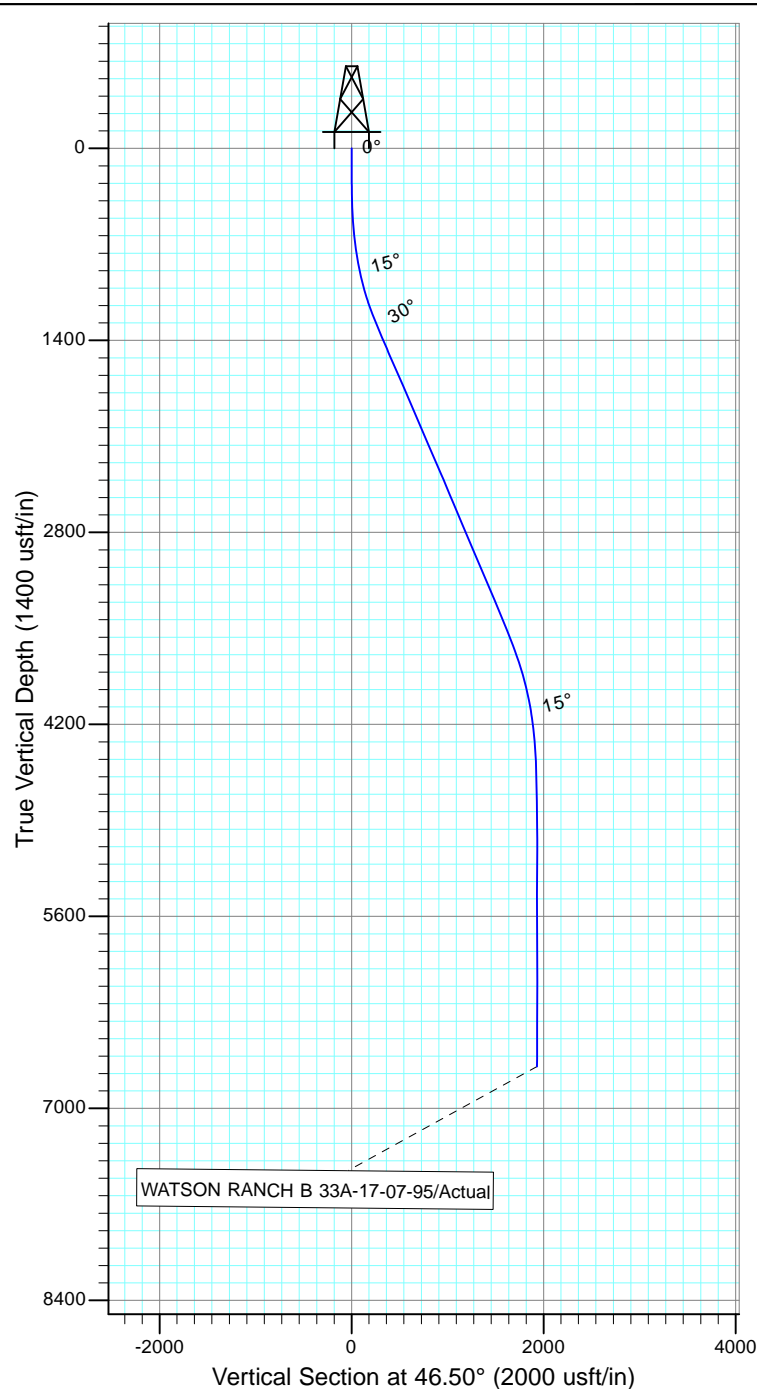


Project: Rockies Region  
 Site: Watson Ranch B  
 Well: WATSON RANCH B 33A-17-07-95  
 Wellbore: Wellbore #1  
 Design: Actual



Azimuths to True North  
 Magnetic North: 9.88°

Magnetic Field  
 Strength: 51841.0nT  
 Dip Angle: 65.58°  
 Date: 3/3/2015  
 Model: IGRF2010



Design: Actual (WATSON RANCH B 33A-17-07-95/Wellbore #1)

Created By: *Matthew Linton*

Date: 13:20, April 30 2015

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