



# **Ursa Operating Company, LLC**

**Rockies Region**

**Watson Ranch B**

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

**Wellbore #1**

**Design: Actual**

## **End of Well Report**

**11 May, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well WATSON RANCH B 33C-17-07-95
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	WATSON RANCH B 33C-17-07-95 @ 5602.0usft (Caps)
<b>Site:</b>	Watson Ranch B	<b>MD Reference:</b>	WATSON RANCH B 33C-17-07-95 @ 5602.0usft (Caps)
<b>Well:</b>	WATSON RANCH B 33C-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

<b>Project</b>	Rockies Region		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

<b>Site</b>	Watson Ranch B		
<b>Site Position:</b>		<b>Northing:</b>	1,592,643.01 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,287,301.12 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	39° 26' 0.219 N
		<b>Longitude:</b>	108° 1' 24.909 W
		<b>Grid Convergence:</b>	-1.59 °

<b>Well</b>	WATSON RANCH B 33C-17-07-95, SHL LAT: 39.433392854 LONG: -108.023674264		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 1,592,643.24 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 2,287,276.13 usft
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b> 5,602.0 usft
			<b>Latitude:</b> 39° 26' 0.214 N
			<b>Longitude:</b> 108° 1' 25.227 W
			<b>Ground Level:</b> 5,585.0 usft

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

<b>Design</b>	Actual		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>
	0.0	0.0	0.0
			<b>Direction (°)</b>
			61.39

<b>Survey Program</b>	Date 5/11/2015		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>
212.0	6,995.0	Survey #1 (Wellbore #1)	MWD
			<b>Description</b>
			MWD - Standard

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<b>Well:</b>	WATSON RANCH B 33C-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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
212.0	0.51	291.55	212.0	-0.6	0.3	-0.9	0.24	0.24	0.00	
245.0	0.39	283.40	245.0	-0.8	0.4	-1.1	0.41	-0.36	-24.70	
275.0	0.26	246.57	275.0	-0.9	0.4	-1.3	0.80	-0.43	-122.77	
305.0	0.22	262.62	305.0	-1.0	0.4	-1.4	0.26	-0.13	53.50	
335.0	0.22	256.15	335.0	-1.2	0.4	-1.5	0.08	0.00	-21.57	
365.0	0.36	63.04	365.0	-1.1	0.4	-1.5	1.92	0.47	556.30	
395.0	0.83	71.80	395.0	-0.8	0.5	-1.2	1.59	1.57	29.20	
425.0	1.85	62.53	425.0	-0.1	0.8	-0.6	3.46	3.40	-30.90	
455.0	2.64	61.52	455.0	1.1	1.4	0.5	2.64	2.63	-3.37	
485.0	3.43	66.48	484.9	2.6	2.0	1.9	2.77	2.63	16.53	
515.0	4.38	65.04	514.8	4.7	2.9	3.8	3.18	3.17	-4.80	
545.0	5.41	62.97	544.7	7.2	4.0	6.1	3.48	3.43	-6.90	
575.0	6.37	66.22	574.6	10.3	5.3	8.8	3.39	3.20	10.83	
605.0	7.03	66.75	604.4	13.8	6.7	12.1	2.21	2.20	1.77	
635.0	8.13	66.48	634.1	17.7	8.3	15.7	3.67	3.67	-0.90	
665.0	9.62	65.73	663.8	22.4	10.2	19.9	4.98	4.97	-2.50	
695.0	10.55	62.66	693.3	27.6	12.5	24.6	3.58	3.10	-10.23	
725.0	11.95	62.57	722.7	33.5	15.1	29.8	4.67	4.67	-0.30	
755.0	13.10	60.90	752.0	40.0	18.2	35.6	4.02	3.83	-5.57	
785.0	14.19	62.70	781.2	47.0	21.6	41.8	3.90	3.63	6.00	
815.0	14.94	61.78	810.2	54.6	25.1	48.5	2.62	2.50	-3.07	
845.0	16.17	61.56	839.1	62.6	28.9	55.6	4.10	4.10	-0.73	
875.0	17.18	59.67	867.8	71.2	33.1	63.1	3.82	3.37	-6.30	
905.0	18.28	59.36	896.4	80.4	37.8	70.9	3.68	3.67	-1.03	
935.0	19.20	59.58	924.8	90.0	42.7	79.2	3.08	3.07	0.73	
965.0	20.52	60.42	953.0	100.2	47.8	88.1	4.50	4.40	2.80	

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Survey										
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995.0	21.49	59.67	981.0	110.9	53.1	97.4	3.36	3.23	-2.50	
1,025.0	22.60	60.52	1,008.8	122.2	58.7	107.1	3.85	3.70	2.83	
1,055.0	23.29	60.81	1,036.5	133.9	64.5	117.3	2.33	2.30	0.97	
1,085.0	24.17	61.69	1,063.9	146.0	70.3	127.9	3.16	2.93	2.93	
1,115.0	24.92	62.04	1,091.2	158.4	76.2	138.9	2.55	2.50	1.17	
1,145.0	25.16	61.01	1,118.4	171.1	82.2	150.1	1.66	0.80	-3.43	
1,175.0	25.49	60.94	1,145.5	183.9	88.4	161.3	1.10	1.10	-0.23	
1,205.0	25.49	61.60	1,172.6	196.9	94.6	172.6	0.95	0.00	2.20	
1,235.0	25.53	61.56	1,199.7	209.8	100.8	184.0	0.15	0.13	-0.13	
1,265.0	25.50	61.62	1,226.7	222.7	106.9	195.3	0.13	-0.10	0.20	
1,295.0	25.66	61.21	1,253.8	235.6	113.1	206.7	0.80	0.53	-1.37	
1,325.0	25.80	61.34	1,280.8	248.7	119.4	218.1	0.50	0.47	0.43	
1,355.0	25.80	60.90	1,307.8	261.7	125.7	229.6	0.64	0.00	-1.47	
1,385.0	26.05	61.19	1,334.8	274.8	132.0	241.0	0.93	0.83	0.97	
1,415.0	26.24	62.22	1,361.7	288.1	138.3	252.7	1.64	0.63	3.43	
1,445.0	26.38	61.92	1,388.6	301.4	144.5	264.4	0.64	0.47	-1.00	
1,475.0	26.32	62.57	1,415.5	314.7	150.7	276.2	0.98	-0.20	2.17	
1,505.0	26.41	62.57	1,442.4	328.0	156.9	288.0	0.30	0.30	0.00	
1,535.0	26.63	61.82	1,469.2	341.4	163.1	299.9	1.34	0.73	-2.50	
1,565.0	26.94	61.96	1,496.0	354.9	169.5	311.8	1.05	1.03	0.47	
1,595.0	26.94	62.09	1,522.8	368.5	175.9	323.8	0.20	0.00	0.43	
1,625.0	27.11	61.91	1,549.5	382.1	182.3	335.9	0.63	0.57	-0.60	
1,655.0	27.33	62.39	1,576.2	395.8	188.7	348.0	1.04	0.73	1.60	
1,685.0	27.33	61.43	1,602.8	409.6	195.2	360.1	1.47	0.00	-3.20	
1,715.0	27.60	61.03	1,629.4	423.5	201.8	372.3	1.09	0.90	-1.33	
1,745.0	28.11	61.97	1,656.0	437.5	208.5	384.6	2.24	1.70	3.13	
1,775.0	28.29	60.76	1,682.4	451.6	215.3	397.0	2.00	0.60	-4.03	

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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)	
1,846.0	28.67	59.52	1,744.8	485.5	232.2	426.4	0.99	0.54	-1.75	
1,932.0	28.66	60.80	1,820.3	526.7	252.7	462.2	0.71	-0.01	1.49	
2,017.0	28.21	63.89	1,895.0	567.2	271.5	498.0	1.81	-0.53	3.64	
2,102.0	27.39	64.39	1,970.2	606.8	288.8	533.7	1.00	-0.96	0.59	
2,188.0	26.63	64.15	2,046.8	645.8	305.7	568.9	0.89	-0.88	-0.28	
2,273.0	26.15	61.78	2,123.0	683.6	322.9	602.5	1.36	-0.56	-2.79	
2,359.0	25.71	60.24	2,200.3	721.2	341.1	635.4	0.94	-0.51	-1.79	
2,444.0	25.22	59.76	2,277.1	757.7	359.4	667.1	0.63	-0.58	-0.56	
2,530.0	25.07	62.13	2,354.9	794.2	377.1	699.0	1.18	-0.17	2.76	
2,615.0	24.70	62.39	2,432.0	830.0	393.8	730.6	0.45	-0.44	0.31	
2,700.0	25.81	61.47	2,508.9	866.3	410.8	762.6	1.39	1.31	-1.08	
2,786.0	25.31	62.17	2,586.5	903.4	428.4	795.3	0.68	-0.58	0.81	
2,871.0	24.77	62.08	2,663.5	939.3	445.2	827.1	0.64	-0.64	-0.11	
2,956.0	24.95	60.48	2,740.6	975.1	462.4	858.5	0.82	0.21	-1.88	
3,042.0	25.71	61.47	2,818.3	1,011.9	480.2	890.7	1.01	0.88	1.15	
3,127.0	25.22	60.90	2,895.1	1,048.4	497.8	922.7	0.64	-0.58	-0.67	
3,213.0	24.48	60.40	2,973.1	1,084.5	515.5	954.2	0.89	-0.86	-0.58	
3,298.0	24.04	59.71	3,050.6	1,119.4	533.0	984.4	0.62	-0.52	-0.81	
3,383.0	24.65	60.68	3,128.1	1,154.5	550.4	1,014.8	0.86	0.72	1.14	
3,469.0	25.50	60.18	3,206.0	1,190.9	568.4	1,046.5	1.02	0.99	-0.58	
3,554.0	25.09	60.55	3,282.8	1,227.2	586.3	1,078.1	0.52	-0.48	0.44	
3,640.0	24.52	62.06	3,360.9	1,263.3	603.7	1,109.8	0.99	-0.66	1.76	
3,725.0	23.86	60.46	3,438.4	1,298.1	620.4	1,140.3	1.09	-0.78	-1.88	
3,810.0	22.76	60.29	3,516.5	1,331.8	637.0	1,169.5	1.30	-1.29	-0.20	
3,896.0	21.80	60.59	3,596.0	1,364.4	653.1	1,197.9	1.12	-1.12	0.35	
3,981.0	21.05	60.02	3,675.2	1,395.4	668.5	1,224.9	0.92	-0.88	-0.67	
4,067.0	20.57	59.49	3,755.6	1,425.9	683.9	1,251.3	0.60	-0.56	-0.62	

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4,152.0	19.97	62.12	3,835.3	1,455.4	698.2	1,277.0	1.28	-0.71	3.09	
4,238.0	18.23	62.09	3,916.6	1,483.5	711.4	1,301.8	2.02	-2.02	-0.03	
4,323.0	15.95	63.45	3,997.8	1,508.5	722.8	1,324.0	2.72	-2.68	1.60	
4,409.0	14.50	63.63	4,080.8	1,531.1	732.9	1,344.2	1.69	-1.69	0.21	
4,494.0	11.98	66.56	4,163.5	1,550.5	741.2	1,361.9	3.07	-2.96	3.45	
4,580.0	10.46	66.04	4,247.9	1,567.2	747.9	1,377.2	1.77	-1.77	-0.60	
4,665.0	8.10	67.74	4,331.8	1,580.8	753.3	1,389.8	2.79	-2.78	2.00	
4,751.0	5.41	55.63	4,417.2	1,590.9	757.9	1,398.7	3.52	-3.13	-14.08	
4,836.0	3.03	32.03	4,501.9	1,596.8	762.0	1,403.2	3.41	-2.80	-27.76	
4,922.0	2.59	30.05	4,587.8	1,600.4	765.6	1,405.4	0.52	-0.51	-2.30	
5,007.0	2.07	24.51	4,672.8	1,603.3	768.7	1,407.0	0.67	-0.61	-6.52	
5,092.0	2.09	24.74	4,757.7	1,605.8	771.5	1,408.3	0.03	0.02	0.27	
5,177.0	1.38	21.88	4,842.7	1,607.8	773.9	1,409.3	0.84	-0.84	-3.36	
5,263.0	0.83	19.94	4,928.6	1,609.1	775.4	1,409.9	0.64	-0.64	-2.26	
5,349.0	0.53	15.20	5,014.6	1,609.8	776.4	1,410.3	0.35	-0.35	-5.51	
5,434.0	0.13	347.86	5,099.6	1,610.1	776.8	1,410.3	0.49	-0.47	-32.16	
5,519.0	0.15	226.70	5,184.6	1,610.0	776.9	1,410.2	0.29	0.02	-142.54	
5,604.0	0.22	223.63	5,269.6	1,609.8	776.7	1,410.0	0.08	0.08	-3.61	
5,690.0	0.64	194.71	5,355.6	1,609.3	776.1	1,409.8	0.53	0.49	-33.63	
5,775.0	0.79	202.14	5,440.6	1,608.5	775.1	1,409.5	0.21	0.18	8.74	
5,861.0	1.10	203.20	5,526.6	1,607.4	773.8	1,408.9	0.36	0.36	1.23	
5,946.0	1.10	209.22	5,611.6	1,606.1	772.3	1,408.2	0.14	0.00	7.08	
6,031.0	1.27	218.18	5,696.6	1,604.5	770.9	1,407.2	0.30	0.20	10.54	
6,117.0	1.58	219.19	5,782.5	1,602.5	769.2	1,405.9	0.36	0.36	1.17	
6,202.0	0.83	232.20	5,867.5	1,600.9	767.9	1,404.7	0.93	-0.88	15.31	
6,288.0	0.92	249.03	5,953.5	1,599.6	767.3	1,403.5	0.32	0.10	19.57	
6,373.0	0.74	299.00	6,038.5	1,598.6	767.3	1,402.4	0.85	-0.21	58.79	

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6,459.0	0.70	319.78	6,124.5	1,598.2	768.0	1,401.6	0.31	-0.05	24.16	
6,544.0	0.40	263.09	6,209.5	1,597.8	768.3	1,400.9	0.69	-0.35	-66.69	
6,630.0	1.01	229.30	6,295.5	1,596.8	767.8	1,400.1	0.83	0.71	-39.29	
6,715.0	1.49	224.73	6,380.5	1,595.0	766.5	1,398.7	0.58	0.56	-5.38	
6,800.0	1.76	218.40	6,465.4	1,592.7	764.7	1,397.1	0.38	0.32	-7.45	
6,886.0	1.71	210.45	6,551.4	1,590.4	762.6	1,395.7	0.29	-0.06	-9.24	
6,938.0	1.67	219.59	6,603.4	1,589.0	761.3	1,394.8	0.52	-0.08	17.58	
6,995.0	1.67	219.59	6,660.4	1,587.5	760.0	1,393.7	0.00	0.00	0.00	

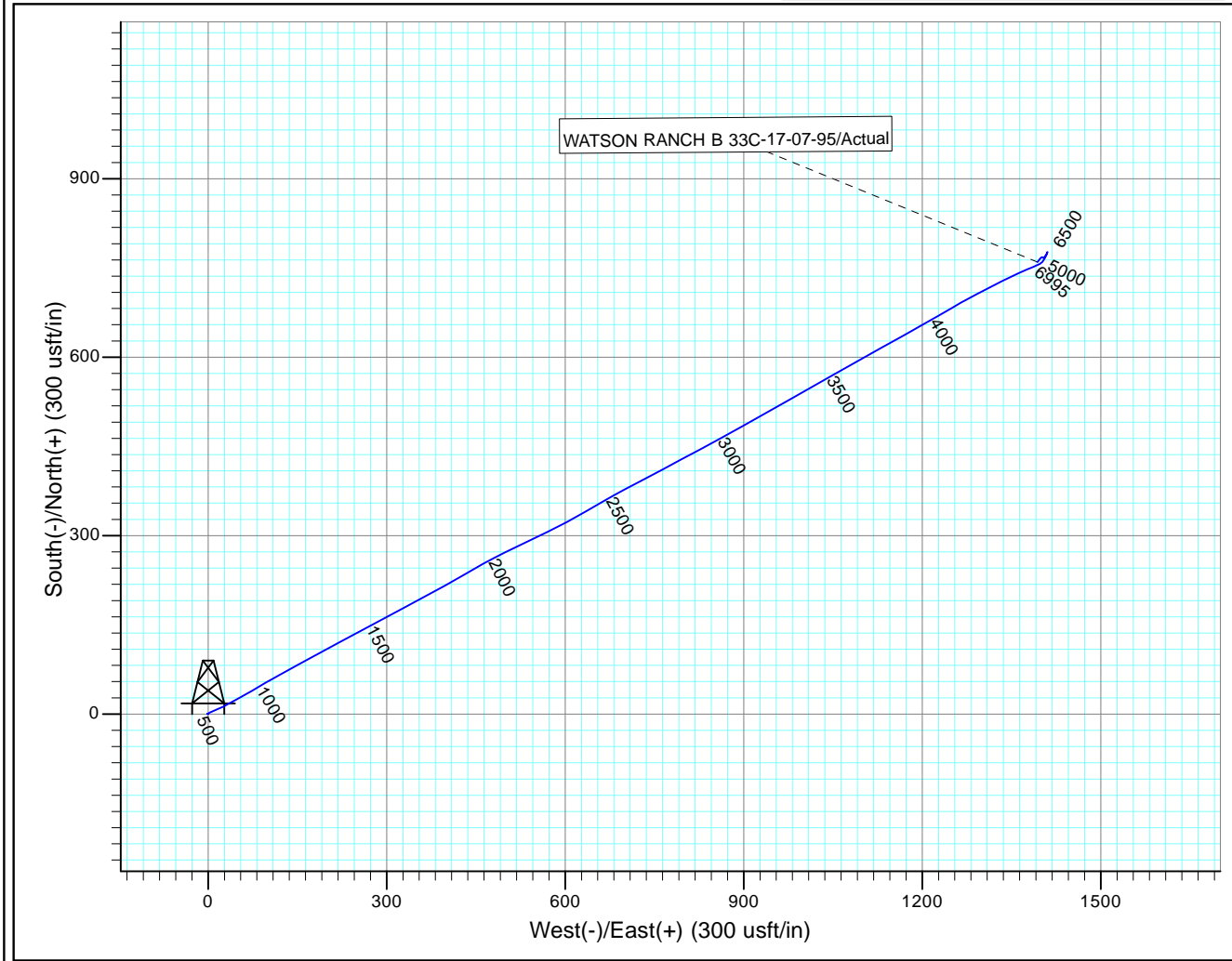
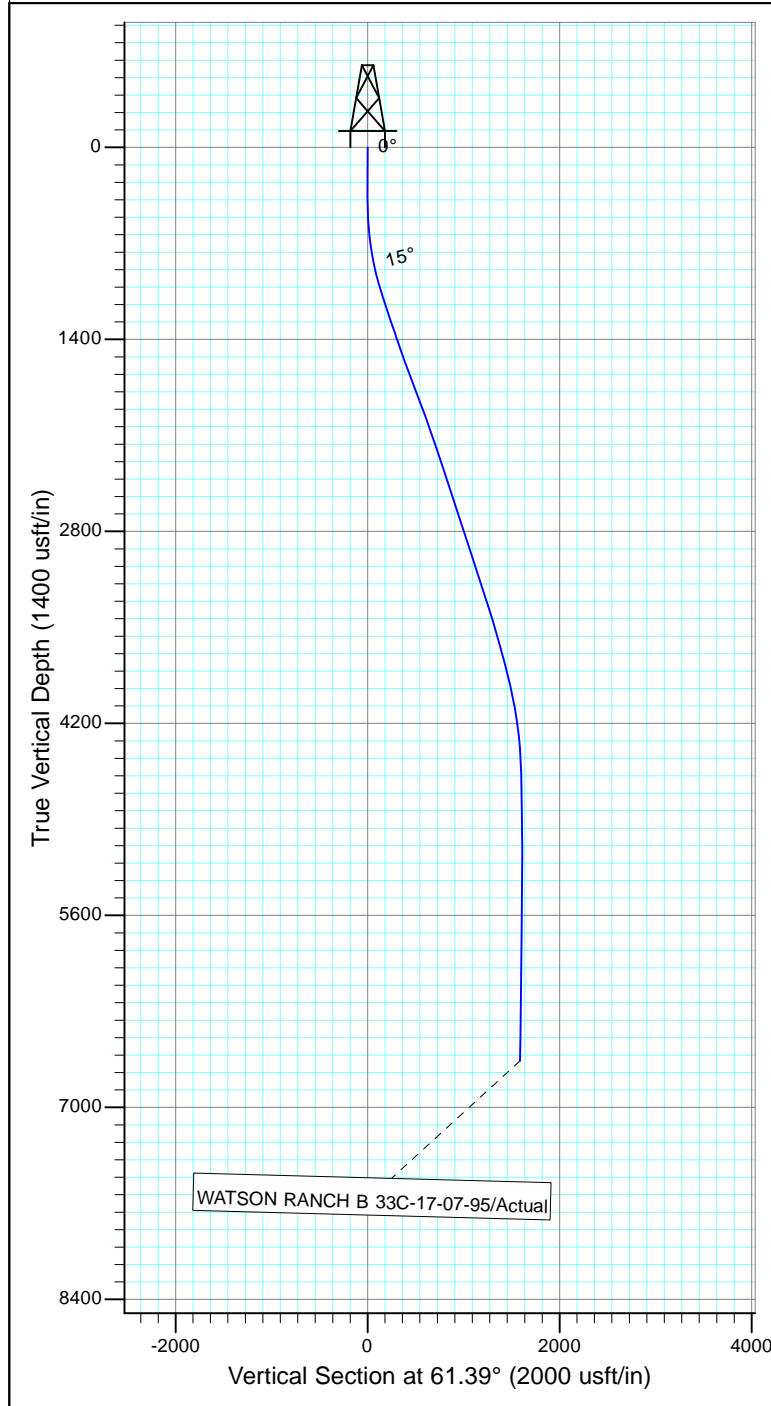
Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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

Azimuths to True North  
 Magnetic North: 9.88°

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



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

Created By: *Matthew Linton* Date: 13:25, May 11 2015

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