



Ursa Operating Company, LLC

Rockies Region

Watson Ranch B

WATSON RANCH B 32B-17-07-95

Wellbore #1

Design: Actual

End of Well Report

11 May, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well WATSON RANCH B 32B-17-07-95
Project:	Rockies Region	TVD Reference:	WATSON RANCH B 32B-17-07-95 @ 5602.0usft (Caps)
Site:	Watson Ranch B	MD Reference:	WATSON RANCH B 32B-17-07-95 @ 5602.0usft (Caps)
Well:	WATSON RANCH B 32B-17-07-95	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	Watson Ranch B		
Site Position:		Northing:	1,592,643.01 usft
From:	Lat/Long	Easting:	2,287,301.12 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39° 26' 0.219 N
		Longitude:	108° 1' 24.909 W
		Grid Convergence:	-1.59 °

Well	WATSON RANCH B 32B-17-07-95, SHL LAT: 39.433395244 LONG: -108.023497354		
Well Position	+N/-S	0.0 usft	Northing: 1,592,642.73 usft
	+E/-W	0.0 usft	Easting: 2,287,326.10 usft
Position Uncertainty		0.0 usft	Wellhead Elevation: 5,602.0 usft
			Latitude: 39° 26' 0.223 N
			Longitude: 108° 1' 24.590 W
			Ground Level: 5,585.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	3/3/2015	9.88
			Dip Angle (°)
			65.58
			Field Strength (nT)
			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)
	0.0	0.0	0.0
			Direction (°)
			30.44

Survey Program	Date 5/11/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
244.0	7,497.0	Survey #1 (Wellbore #1)	MWD
			Description
			MWD - Standard

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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
244.0	1.23	196.56	244.0	-2.5	-2.5	-0.7	0.50	0.50	0.00	
274.0	0.70	197.70	274.0	-3.0	-3.0	-0.9	1.77	-1.77	3.80	
334.0	1.98	12.69	334.0	-2.4	-2.3	-0.8	4.46	2.13	291.65	
394.0	4.92	19.53	393.9	1.1	1.1	0.3	4.94	4.90	11.40	
424.0	5.93	25.30	423.7	3.9	3.7	1.4	3.82	3.37	19.23	
454.0	6.59	20.77	453.5	7.2	6.7	2.7	2.75	2.20	-15.10	
484.0	7.03	20.82	483.3	10.7	10.1	3.9	1.47	1.47	0.17	
514.0	7.66	28.01	513.1	14.5	13.5	5.5	3.71	2.10	23.97	
574.0	9.10	32.58	572.4	23.2	21.1	10.0	2.64	2.40	7.62	
604.0	9.89	31.90	602.0	28.2	25.3	12.6	2.66	2.63	-2.27	
634.0	10.77	31.63	631.5	33.5	29.8	15.4	2.94	2.93	-0.90	
664.0	11.84	31.23	661.0	39.4	34.8	18.5	3.58	3.57	-1.33	
694.0	13.12	31.07	690.3	45.9	40.4	21.9	4.27	4.27	-0.53	
724.0	14.36	31.09	719.4	53.0	46.5	25.5	4.13	4.13	0.07	
754.0	15.56	31.94	748.4	60.8	53.1	29.6	4.07	4.00	2.83	
784.0	16.74	31.63	777.2	69.1	60.2	34.0	3.94	3.93	-1.03	
814.0	17.89	32.38	805.8	78.0	67.8	38.7	3.90	3.83	2.50	
844.0	19.03	32.35	834.3	87.5	75.8	43.8	3.80	3.80	-0.10	
874.0	20.21	32.91	862.5	97.6	84.3	49.2	3.98	3.93	1.87	
904.0	21.14	33.39	890.6	108.2	93.1	55.0	3.15	3.10	1.60	
934.0	22.10	32.86	918.5	119.2	102.4	61.1	3.27	3.20	-1.77	
964.0	23.12	32.73	946.2	130.7	112.1	67.3	3.40	3.40	-0.43	
994.0	24.30	32.03	973.7	142.8	122.3	73.8	4.04	3.93	-2.33	
1,024.0	25.27	31.28	1,000.9	155.4	133.0	80.4	3.40	3.23	-2.50	
1,054.0	26.32	30.45	1,027.9	168.4	144.2	87.1	3.70	3.50	-2.77	
1,084.0	27.25	29.96	1,054.7	181.9	155.9	93.9	3.19	3.10	-1.63	

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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)	
1,114.0	28.26	29.48	1,081.2	195.9	168.0	100.8	3.45	3.37	-1.60	
1,144.0	29.09	29.39	1,107.6	210.3	180.5	107.9	2.77	2.77	-0.30	
1,174.0	30.01	29.30	1,133.7	225.1	193.4	115.1	3.07	3.07	-0.30	
1,204.0	31.07	29.17	1,159.5	240.3	206.7	122.6	3.54	3.53	-0.43	
1,234.0	32.30	29.17	1,185.0	256.1	220.5	130.2	4.10	4.10	0.00	
1,264.0	33.05	30.05	1,210.3	272.3	234.6	138.2	2.96	2.50	2.93	
1,294.0	34.09	29.91	1,235.3	288.9	248.9	146.5	3.48	3.47	-0.47	
1,324.0	34.06	30.36	1,260.1	305.7	263.5	155.0	0.85	-0.10	1.50	
1,354.0	34.19	30.58	1,285.0	322.5	278.0	163.5	0.60	0.43	0.73	
1,384.0	34.15	30.62	1,309.8	339.4	292.5	172.1	0.15	-0.13	0.13	
1,414.0	34.45	30.31	1,334.6	356.3	307.1	180.6	1.16	1.00	-1.03	
1,444.0	34.71	29.89	1,359.3	373.3	321.8	189.2	1.18	0.87	-1.40	
1,474.0	34.94	31.11	1,383.9	390.4	336.6	197.9	2.45	0.77	4.07	
1,504.0	35.02	30.80	1,408.5	407.6	351.3	206.7	0.65	0.27	-1.03	
1,534.0	35.20	30.18	1,433.0	424.9	366.2	215.5	1.33	0.60	-2.07	
1,564.0	35.38	30.27	1,457.5	442.2	381.1	224.2	0.62	0.60	0.30	
1,594.0	35.30	30.64	1,482.0	459.6	396.1	233.0	0.76	-0.27	1.23	
1,624.0	35.55	30.31	1,506.4	476.9	411.1	241.8	1.05	0.83	-1.10	
1,654.0	35.90	30.01	1,530.8	494.5	426.2	250.6	1.30	1.17	-1.00	
1,684.0	35.73	30.49	1,555.1	512.0	441.4	259.5	1.09	-0.57	1.60	
1,714.0	35.68	30.67	1,579.5	529.5	456.5	268.4	0.39	-0.17	0.60	
1,744.0	35.80	30.98	1,603.8	547.0	471.5	277.4	0.72	0.40	1.03	
1,774.0	35.90	30.84	1,628.1	564.6	486.6	286.4	0.43	0.33	-0.47	
1,804.0	36.12	30.36	1,652.4	582.3	501.8	295.4	1.19	0.73	-1.60	
1,932.0	35.64	28.12	1,756.1	657.2	567.2	332.0	1.09	-0.37	-1.75	
2,017.0	36.43	29.30	1,824.8	707.2	611.1	356.0	1.24	0.93	1.39	
2,102.0	37.13	29.79	1,892.9	758.1	655.4	381.1	0.89	0.82	0.58	

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2,188.0	36.78	31.37	1,961.6	809.8	699.9	407.4	1.18	-0.41	1.84	
2,273.0	37.49	31.33	2,029.4	861.1	743.7	434.1	0.84	0.84	-0.05	
2,359.0	36.38	31.00	2,098.1	912.8	787.9	460.9	1.31	-1.29	-0.38	
2,444.0	36.77	31.90	2,166.4	963.4	831.1	487.3	0.78	0.46	1.06	
2,530.0	35.51	31.24	2,235.9	1,014.1	874.3	513.8	1.53	-1.47	-0.77	
2,615.0	35.86	30.14	2,304.9	1,063.7	917.0	539.2	0.86	0.41	-1.29	
2,701.0	36.91	29.70	2,374.1	1,114.7	961.2	564.6	1.26	1.22	-0.51	
2,786.0	37.61	30.96	2,441.8	1,166.2	1,005.6	590.6	1.22	0.82	1.48	
2,871.0	36.91	30.62	2,509.4	1,217.6	1,049.8	616.9	0.86	-0.82	-0.40	
2,957.0	37.57	31.68	2,577.9	1,269.7	1,094.3	643.9	1.07	0.77	1.23	
3,042.0	36.96	31.55	2,645.6	1,321.1	1,138.2	670.8	0.72	-0.72	-0.15	
3,128.0	35.95	30.89	2,714.7	1,372.2	1,181.9	697.3	1.26	-1.17	-0.77	
3,213.0	34.89	30.27	2,784.0	1,421.5	1,224.3	722.4	1.32	-1.25	-0.73	
3,299.0	35.55	29.92	2,854.2	1,471.1	1,267.2	747.3	0.80	0.77	-0.41	
3,384.0	35.77	32.12	2,923.3	1,520.6	1,309.6	772.8	1.53	0.26	2.59	
3,469.0	36.61	31.76	2,991.9	1,570.8	1,352.2	799.3	1.02	0.99	-0.42	
3,555.0	35.65	31.97	3,061.4	1,621.5	1,395.3	826.1	1.13	-1.12	0.24	
3,640.0	36.21	31.13	3,130.2	1,671.4	1,437.8	852.2	0.88	0.66	-0.99	
3,725.0	35.20	30.36	3,199.2	1,721.0	1,480.4	877.6	1.30	-1.19	-0.91	
3,811.0	35.16	30.40	3,269.5	1,770.5	1,523.2	902.6	0.05	-0.05	0.05	
3,896.0	35.88	30.89	3,338.7	1,819.9	1,565.7	927.8	0.91	0.85	0.58	
3,982.0	36.65	30.89	3,408.0	1,870.8	1,609.3	953.9	0.90	0.90	0.00	
4,067.0	35.51	29.79	3,476.7	1,920.8	1,652.5	979.2	1.54	-1.34	-1.29	
4,152.0	35.46	30.58	3,545.9	1,970.2	1,695.2	1,004.0	0.54	-0.06	0.93	
4,238.0	35.42	30.93	3,616.0	2,020.0	1,738.0	1,029.5	0.24	-0.05	0.41	
4,323.0	36.17	32.07	3,685.0	2,069.7	1,780.4	1,055.5	1.18	0.88	1.34	
4,409.0	36.83	32.38	3,754.1	2,120.9	1,823.7	1,082.8	0.80	0.77	0.36	

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4,494.0	35.86	32.34	3,822.6	2,171.2	1,866.2	1,109.7	1.14	-1.14	-0.05	
4,579.0	34.06	31.68	3,892.2	2,219.9	1,907.5	1,135.6	2.16	-2.12	-0.78	
4,665.0	32.87	31.41	3,964.0	2,267.3	1,947.9	1,160.4	1.39	-1.38	-0.31	
4,750.0	31.64	31.15	4,035.8	2,312.7	1,986.7	1,183.9	1.46	-1.45	-0.31	
4,836.0	29.39	30.62	4,109.9	2,356.3	2,024.2	1,206.3	2.63	-2.62	-0.62	
4,921.0	28.52	29.62	4,184.3	2,397.5	2,059.8	1,227.0	1.17	-1.02	-1.18	
5,006.0	26.86	31.58	4,259.6	2,437.0	2,093.8	1,247.1	2.23	-1.95	2.31	
5,092.0	24.25	32.84	4,337.1	2,474.0	2,125.2	1,266.8	3.10	-3.03	1.47	
5,177.0	21.67	34.40	4,415.4	2,507.2	2,152.8	1,285.2	3.12	-3.04	1.84	
5,263.0	19.69	33.48	4,495.9	2,537.5	2,178.0	1,302.1	2.33	-2.30	-1.07	
5,348.0	17.20	32.19	4,576.5	2,564.3	2,200.5	1,316.7	2.97	-2.93	-1.52	
5,433.0	14.06	33.39	4,658.3	2,587.2	2,219.8	1,329.1	3.71	-3.69	1.41	
5,519.0	11.65	31.11	4,742.2	2,606.3	2,236.0	1,339.3	2.86	-2.80	-2.65	
5,604.0	9.04	30.80	4,825.8	2,621.6	2,249.1	1,347.2	3.07	-3.07	-0.36	
5,689.0	6.99	29.52	4,909.9	2,633.4	2,259.3	1,353.2	2.42	-2.41	-1.51	
5,775.0	5.01	30.27	4,995.5	2,642.4	2,267.1	1,357.6	2.30	-2.30	0.87	
5,860.0	3.12	32.47	5,080.2	2,648.4	2,272.2	1,360.8	2.23	-2.22	2.59	
5,946.0	2.55	37.04	5,166.1	2,652.7	2,275.8	1,363.2	0.71	-0.66	5.31	
6,031.0	1.92	36.35	5,251.1	2,656.0	2,278.4	1,365.1	0.74	-0.74	-0.81	
6,116.0	2.07	33.57	5,336.0	2,658.9	2,280.8	1,366.8	0.21	0.18	-3.27	
6,202.0	1.45	38.80	5,422.0	2,661.6	2,283.0	1,368.4	0.74	-0.72	6.08	
6,287.0	2.15	12.56	5,506.9	2,664.1	2,285.4	1,369.4	1.25	0.82	-30.87	
6,373.0	2.02	11.90	5,592.9	2,667.1	2,288.4	1,370.1	0.15	-0.15	-0.77	
6,458.0	1.21	19.52	5,677.9	2,669.4	2,290.7	1,370.7	0.98	-0.95	8.96	
6,543.0	0.53	28.91	5,762.8	2,670.7	2,291.9	1,371.2	0.81	-0.80	11.05	
6,629.0	0.18	125.50	5,848.8	2,671.1	2,292.2	1,371.5	0.67	-0.41	112.31	
6,714.0	1.27	322.38	5,933.8	2,671.4	2,292.9	1,371.0	1.70	1.28	-191.91	

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6,799.0	1.63	311.08	6,018.8	2,672.0	2,294.4	1,369.5	0.54	0.42	-13.29	
6,885.0	1.49	295.66	6,104.8	2,672.1	2,295.7	1,367.6	0.51	-0.16	-17.93	
6,970.0	1.64	287.41	6,189.7	2,671.8	2,296.5	1,365.4	0.32	0.18	-9.71	
7,056.0	1.49	268.06	6,275.7	2,670.9	2,296.9	1,363.1	0.64	-0.17	-22.50	
7,141.0	1.88	267.67	6,360.7	2,669.5	2,296.8	1,360.6	0.46	0.46	-0.46	
7,227.0	2.15	262.39	6,446.6	2,667.8	2,296.5	1,357.6	0.38	0.31	-6.14	
7,312.0	2.24	258.68	6,531.6	2,665.7	2,296.0	1,354.4	0.20	0.11	-4.36	
7,397.0	2.02	250.35	6,616.5	2,663.4	2,295.1	1,351.4	0.45	-0.26	-9.80	
7,440.0	2.11	251.58	6,659.5	2,662.3	2,294.6	1,349.9	0.23	0.21	2.86	
7,497.0	2.11	251.58	6,716.4	2,660.7	2,294.0	1,347.9	0.00	0.00	0.00	

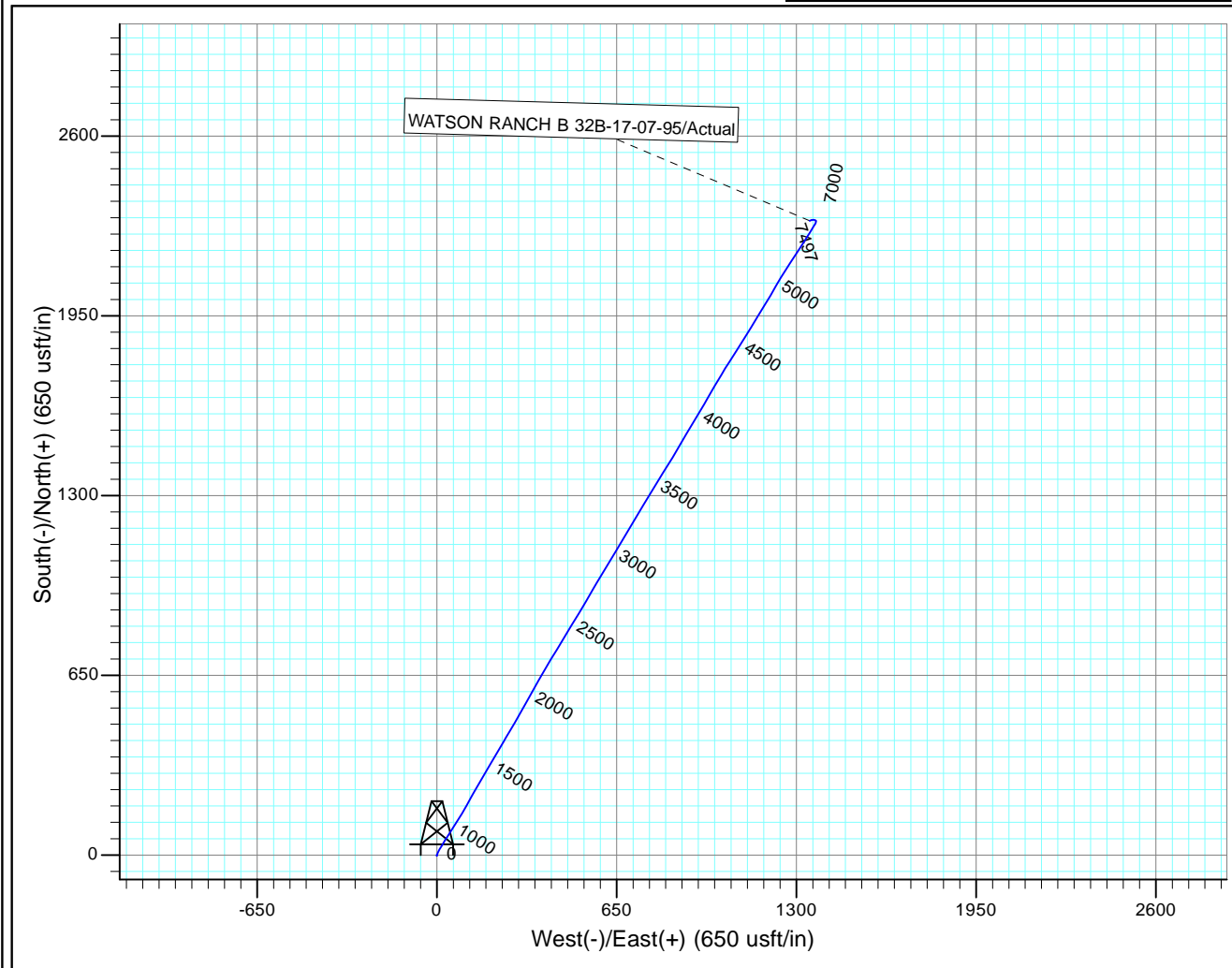
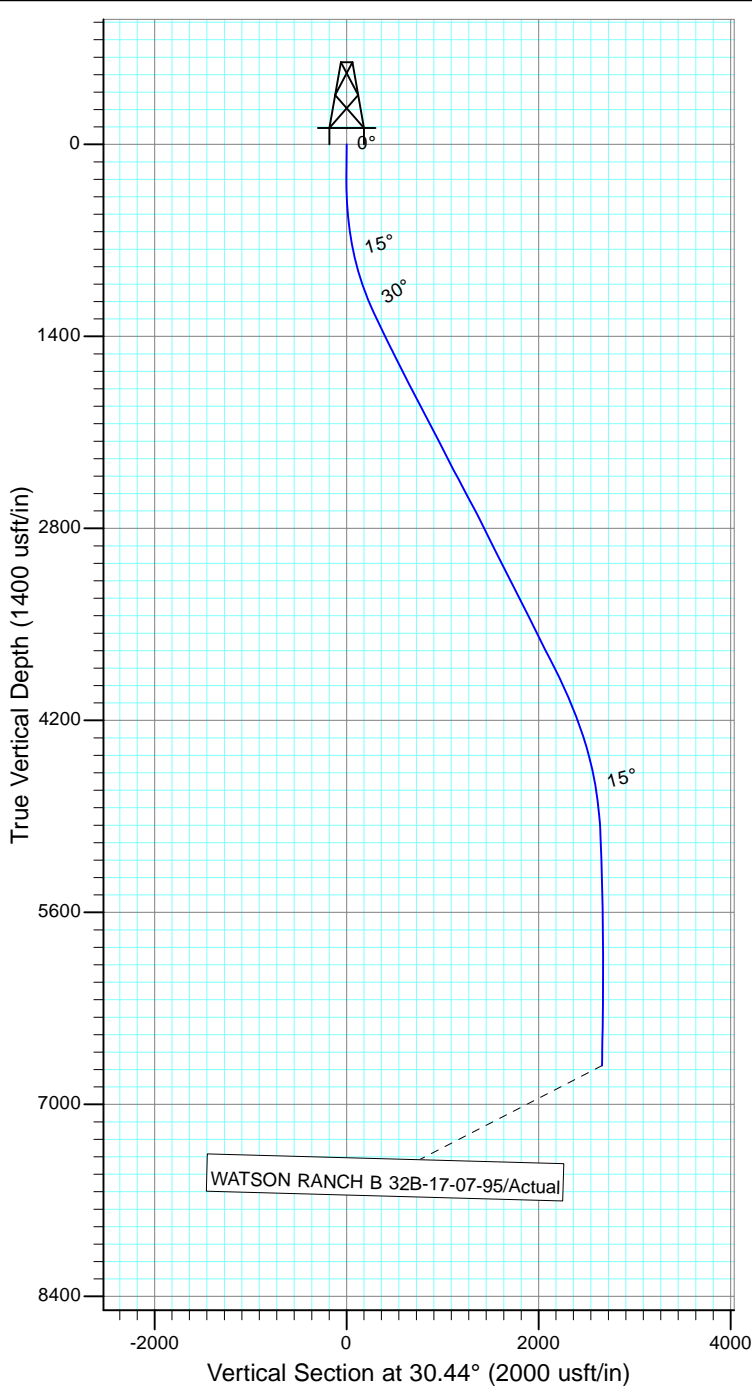
Checked By: _____ Approved By: _____ Date: _____



Project: Rockies Region
 Site: Watson Ranch B
 Well: WATSON RANCH B 32B-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 32B-17-07-95/Wellbore #1)

Created By: *Matthew Linton* Date: 13:19, May 11 2015

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