



Ursa Operating Company, LLC

Rockies Region

Watson Ranch B

WATSON RANCH B 34A-17-07-95

Wellbore #1

Design: Actual

End of Well Report

20 May, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well WATSON RANCH B 34A-17-07-95
Project:	Rockies Region	TVD Reference:	WATSON RANCH B 34A-17-07-95 @ 5602.0usft (Caps)
Site:	Watson Ranch B	MD Reference:	WATSON RANCH B 34A-17-07-95 @ 5602.0usft (Caps)
Well:	WATSON RANCH B 34A-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	Latitude:	39° 26' 0.219 N
From:	Lat/Long	Easting:	2,287,301.12 usft	Longitude:	108° 1' 24.909 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.59 °

Well		WATSON RANCH B 34A-17-07-95, SHL LAT: 39.433333509 LONG: -108.023495968				
Well Position	+N/-S	0.0 usft	Northing:	1,592,620.23 usft	Latitude:	39° 26' 0.000 N
	+E/-W	0.0 usft	Easting:	2,287,325.87 usft	Longitude:	108° 1' 24.585 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	80.02

Survey Program		Date	5/20/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
99.0	6,881.0	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	
99.0	1.31	171.12	99.0	0.0	-1.1	0.2	1.32	1.32	0.00	
129.0	1.54	170.10	129.0	0.0	-1.9	0.3	0.77	0.77	-3.40	
190.0	2.11	166.37	190.0	0.0	-3.8	0.7	0.95	0.93	-6.11	
220.0	2.02	180.17	219.9	0.0	-4.8	0.8	1.68	-0.30	46.00	
250.0	2.17	180.03	249.9	-0.2	-5.9	0.8	0.50	0.50	-0.47	
280.0	1.93	158.59	279.9	-0.2	-7.0	1.0	2.66	-0.80	-71.47	
310.0	1.49	153.41	309.9	0.0	-7.8	1.4	1.55	-1.47	-17.27	
340.0	0.79	115.22	339.9	0.3	-8.2	1.7	3.32	-2.33	-127.30	
370.0	1.17	76.48	369.9	0.8	-8.2	2.2	2.47	1.27	-129.13	
400.0	1.63	33.74	399.9	1.4	-7.8	2.8	3.69	1.53	-142.47	
430.0	2.56	29.92	429.8	2.1	-6.9	3.3	3.13	3.10	-12.73	
460.0	3.03	21.35	459.8	2.9	-5.5	3.9	2.09	1.57	-28.57	
490.0	3.60	24.69	489.8	3.9	-4.0	4.6	2.01	1.90	11.13	
520.0	4.13	30.80	519.7	5.1	-2.2	5.6	2.23	1.77	20.37	
550.0	4.53	37.79	549.6	6.7	-0.3	6.9	2.21	1.33	23.30	
580.0	5.10	48.55	579.5	8.7	1.5	8.6	3.55	1.90	35.87	
610.0	5.76	54.53	609.4	11.2	3.3	10.8	2.90	2.20	19.93	
640.0	6.24	65.34	639.2	14.1	4.8	13.5	4.08	1.60	36.03	
670.0	6.48	73.38	669.0	17.4	6.0	16.6	3.07	0.80	26.80	
700.0	7.16	78.26	698.8	21.0	6.9	20.1	2.98	2.27	16.27	
730.0	7.87	79.45	728.5	24.9	7.6	23.9	2.42	2.37	3.97	
760.0	8.57	81.07	758.2	29.2	8.3	28.1	2.46	2.33	5.40	
790.0	9.62	81.29	787.9	33.9	9.1	32.8	3.50	3.50	0.73	
820.0	10.63	82.39	817.4	39.2	9.8	38.1	3.43	3.37	3.67	
850.0	11.69	82.74	846.8	45.0	10.6	43.8	3.54	3.53	1.17	
880.0	12.74	82.58	876.1	51.3	11.4	50.1	3.50	3.50	-0.53	

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Well:	WATSON RANCH B 34A-17-07-95	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)	
910.0	13.71	81.86	905.3	58.2	12.3	56.9	3.28	3.23	-2.40	
940.0	14.94	82.43	934.4	65.6	13.3	64.3	4.13	4.10	1.90	
970.0	15.86	82.08	963.3	73.6	14.4	72.2	3.08	3.07	-1.17	
1,000.0	16.95	80.20	992.1	82.0	15.7	80.5	4.04	3.63	-6.27	
1,030.0	17.93	79.23	1,020.7	91.0	17.3	89.4	3.41	3.27	-3.23	
1,060.0	18.76	79.36	1,049.2	100.5	19.1	98.6	2.77	2.77	0.43	
1,090.0	19.60	79.75	1,077.5	110.3	20.8	108.3	2.83	2.80	1.30	
1,120.0	20.08	79.23	1,105.8	120.5	22.7	118.4	1.70	1.60	-1.73	
1,150.0	21.05	79.05	1,133.9	131.0	24.7	128.7	3.24	3.23	-0.60	
1,180.0	21.09	79.45	1,161.8	141.8	26.7	139.3	0.50	0.13	1.33	
1,210.0	21.31	79.53	1,189.8	152.7	28.7	150.0	0.74	0.73	0.27	
1,240.0	21.31	79.01	1,217.8	163.6	30.7	160.7	0.63	0.00	-1.73	
1,270.0	21.49	79.75	1,245.7	174.5	32.7	171.4	1.08	0.60	2.47	
1,300.0	21.84	78.79	1,273.6	185.6	34.8	182.3	1.66	1.17	-3.20	
1,330.0	22.10	79.14	1,301.4	196.8	36.9	193.3	0.97	0.87	1.17	
1,360.0	22.46	79.01	1,329.2	208.2	39.1	204.5	1.21	1.20	-0.43	
1,390.0	22.50	79.01	1,356.9	219.6	41.3	215.8	0.13	0.13	0.00	
1,420.0	22.76	78.57	1,384.6	231.2	43.5	227.1	1.03	0.87	-1.47	
1,450.0	22.19	78.43	1,412.3	242.7	45.8	238.3	1.91	-1.90	-0.47	
1,480.0	21.94	80.31	1,440.1	253.9	47.9	249.4	2.50	-0.83	6.27	
1,510.0	22.19	79.97	1,467.9	265.2	49.8	260.5	0.94	0.83	-1.13	
1,540.0	22.18	80.29	1,495.7	276.5	51.8	271.7	0.40	-0.03	1.07	
1,570.0	22.06	80.19	1,523.5	287.8	53.7	282.8	0.42	-0.40	-0.33	
1,600.0	22.37	80.06	1,551.2	299.2	55.6	294.0	1.05	1.03	-0.43	
1,630.0	22.46	80.50	1,579.0	310.6	57.6	305.2	0.63	0.30	1.47	
1,660.0	22.46	80.58	1,606.7	322.1	59.4	316.5	0.10	0.00	0.27	
1,690.0	22.37	80.90	1,634.4	333.5	61.3	327.8	0.51	-0.30	1.07	

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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)	
1,720.0	22.51	80.81	1,662.2	344.9	63.1	339.1	0.48	0.47	-0.30	
1,750.0	22.90	80.18	1,689.8	356.5	65.0	350.6	1.53	1.30	-2.10	
1,804.0	23.16	79.62	1,739.5	377.6	68.7	371.4	0.63	0.48	-1.04	
1,890.0	22.82	79.11	1,818.7	411.2	74.9	404.4	0.46	-0.40	-0.59	
1,975.0	21.97	78.57	1,897.3	443.6	81.2	436.1	1.03	-1.00	-0.64	
2,060.0	22.02	80.81	1,976.1	475.4	86.9	467.5	0.99	0.06	2.64	
2,145.0	22.37	81.60	2,054.8	507.5	91.8	499.2	0.54	0.41	0.93	
2,231.0	23.42	81.55	2,134.0	541.0	96.7	532.3	1.22	1.22	-0.06	
2,316.0	22.41	80.36	2,212.3	574.1	101.9	565.0	1.31	-1.19	-1.40	
2,402.0	21.64	79.61	2,292.0	606.3	107.5	596.7	0.95	-0.90	-0.87	
2,487.0	22.50	80.28	2,370.8	638.3	113.1	628.2	1.05	1.01	0.79	
2,573.0	23.60	81.51	2,449.9	671.9	118.4	661.4	1.40	1.28	1.43	
2,658.0	23.25	81.64	2,527.9	705.7	123.3	694.9	0.42	-0.41	0.15	
2,744.0	22.63	81.03	2,607.1	739.2	128.4	728.0	0.77	-0.72	-0.71	
2,829.0	22.15	80.46	2,685.7	771.6	133.6	759.9	0.62	-0.56	-0.67	
2,914.0	23.27	80.96	2,764.1	804.4	138.9	792.3	1.34	1.32	0.59	
3,000.0	22.63	81.12	2,843.3	837.9	144.1	825.5	0.75	-0.74	0.19	
3,085.0	21.97	81.07	2,922.0	870.2	149.1	857.3	0.78	-0.78	-0.06	
3,170.0	23.07	79.97	3,000.5	902.7	154.5	889.4	1.39	1.29	-1.29	
3,256.0	22.43	79.72	3,079.8	936.0	160.3	922.2	0.75	-0.74	-0.29	
3,341.0	22.98	80.98	3,158.2	968.8	165.8	954.5	0.86	0.65	1.48	
3,427.0	22.02	81.12	3,237.7	1,001.7	170.9	987.0	1.12	-1.12	0.16	
3,512.0	22.66	80.30	3,316.3	1,034.0	176.2	1,018.9	0.84	0.75	-0.96	
3,597.0	21.49	79.75	3,395.1	1,066.0	181.7	1,050.4	1.40	-1.38	-0.65	
3,683.0	22.32	78.39	3,474.8	1,098.0	187.8	1,081.9	1.13	0.97	-1.58	
3,768.0	22.46	82.52	3,553.4	1,130.4	193.1	1,113.8	1.86	0.16	4.86	
3,853.0	21.44	82.57	3,632.3	1,162.1	197.3	1,145.3	1.20	-1.20	0.06	

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3,939.0	20.48	82.35	3,712.6	1,192.9	201.3	1,175.8	1.12	-1.12	-0.26	
4,024.0	18.02	83.66	3,792.8	1,220.8	204.7	1,203.6	2.94	-2.89	1.54	
4,109.0	16.00	80.85	3,874.1	1,245.7	208.0	1,228.2	2.57	-2.38	-3.31	
4,195.0	13.93	81.16	3,957.2	1,267.9	211.5	1,250.1	2.41	-2.41	0.36	
4,280.0	11.12	81.20	4,040.2	1,286.3	214.3	1,268.4	3.31	-3.31	0.05	
4,366.0	9.01	79.40	4,124.8	1,301.3	216.9	1,283.2	2.48	-2.45	-2.09	
4,451.0	8.55	80.21	4,208.8	1,314.3	219.2	1,295.9	0.56	-0.54	0.95	
4,536.0	7.29	80.41	4,293.0	1,326.0	221.1	1,307.5	1.48	-1.48	0.24	
4,622.0	4.29	82.74	4,378.6	1,334.7	222.4	1,316.1	3.50	-3.49	2.71	
4,707.0	3.69	88.41	4,463.4	1,340.6	222.9	1,322.0	0.84	-0.71	6.67	
4,793.0	2.72	80.46	4,549.2	1,345.4	223.3	1,326.7	1.24	-1.13	-9.24	
4,878.0	1.85	60.07	4,634.2	1,348.7	224.4	1,329.9	1.39	-1.02	-23.99	
4,963.0	1.54	58.00	4,719.1	1,351.0	225.6	1,332.1	0.37	-0.36	-2.44	
5,049.0	1.31	64.43	4,805.1	1,353.0	226.7	1,333.9	0.33	-0.27	7.48	
5,134.0	0.96	63.07	4,890.1	1,354.6	227.4	1,335.4	0.41	-0.41	-1.60	
5,219.0	1.32	44.99	4,975.1	1,356.1	228.4	1,336.8	0.59	0.42	-21.27	
5,305.0	1.14	25.61	5,061.0	1,357.4	229.9	1,337.8	0.52	-0.21	-22.53	
5,390.0	0.75	35.81	5,146.0	1,358.3	231.1	1,338.5	0.50	-0.46	12.00	
5,476.0	0.44	34.71	5,232.0	1,359.0	231.8	1,339.0	0.36	-0.36	-1.28	
5,561.0	1.05	76.72	5,317.0	1,360.0	232.3	1,340.0	0.92	0.72	49.42	
5,646.0	1.10	83.40	5,402.0	1,361.6	232.6	1,341.6	0.16	0.06	7.86	
5,732.0	0.75	109.24	5,488.0	1,362.9	232.5	1,342.9	0.62	-0.41	30.05	
5,817.0	0.09	168.87	5,573.0	1,363.4	232.2	1,343.5	0.83	-0.78	70.15	
5,903.0	0.88	21.09	5,659.0	1,363.7	232.8	1,343.7	1.11	0.92	-171.84	
5,988.0	2.11	34.93	5,744.0	1,365.2	234.7	1,344.8	1.50	1.45	16.28	
6,073.0	2.11	30.62	5,828.9	1,367.3	237.3	1,346.5	0.19	0.00	-5.07	
6,159.0	1.19	15.72	5,914.9	1,368.7	239.5	1,347.6	1.17	-1.07	-17.33	

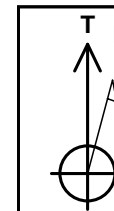
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6,244.0	0.97	11.86	5,999.9	1,369.3	241.1	1,348.0	0.27	-0.26	-4.54	
6,330.0	0.53	29.08	6,085.8	1,369.9	242.1	1,348.3	0.57	-0.51	20.02	
6,415.0	0.31	113.98	6,170.8	1,370.3	242.4	1,348.7	0.69	-0.26	99.88	
6,501.0	0.62	205.70	6,256.8	1,370.2	241.9	1,348.7	0.82	0.36	106.65	
6,586.0	0.75	210.62	6,341.8	1,369.6	241.0	1,348.2	0.17	0.15	5.79	
6,671.0	1.14	218.62	6,426.8	1,368.6	239.8	1,347.4	0.48	0.46	9.41	
6,757.0	1.05	212.73	6,512.8	1,367.4	238.5	1,346.5	0.17	-0.10	-6.85	
6,824.0	1.10	219.81	6,579.8	1,366.5	237.5	1,345.7	0.21	0.07	10.57	
6,881.0	1.10	219.81	6,636.8	1,365.7	236.7	1,345.0	0.00	0.00	0.00	

Checked By: _____ Approved By: _____ Date: _____

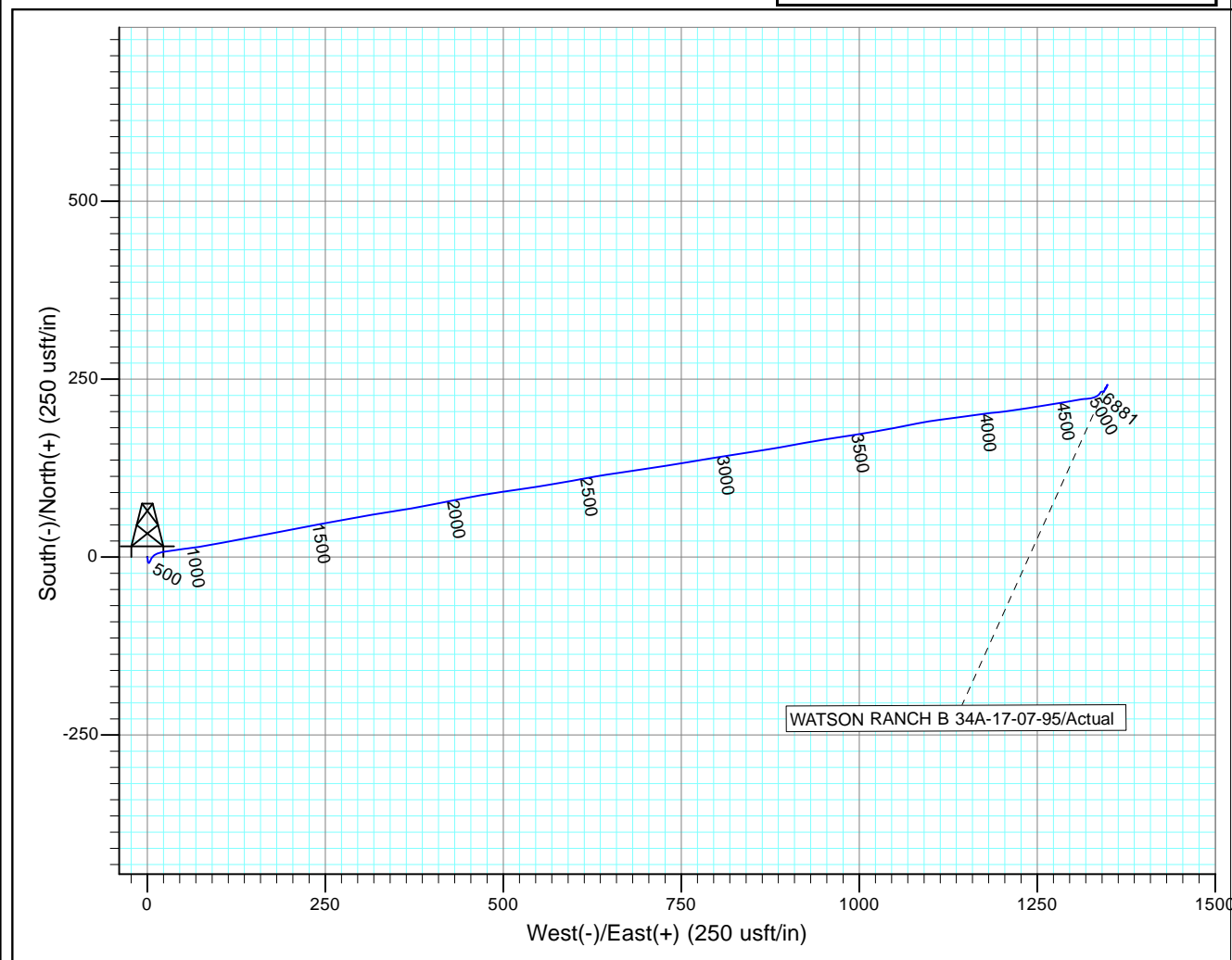
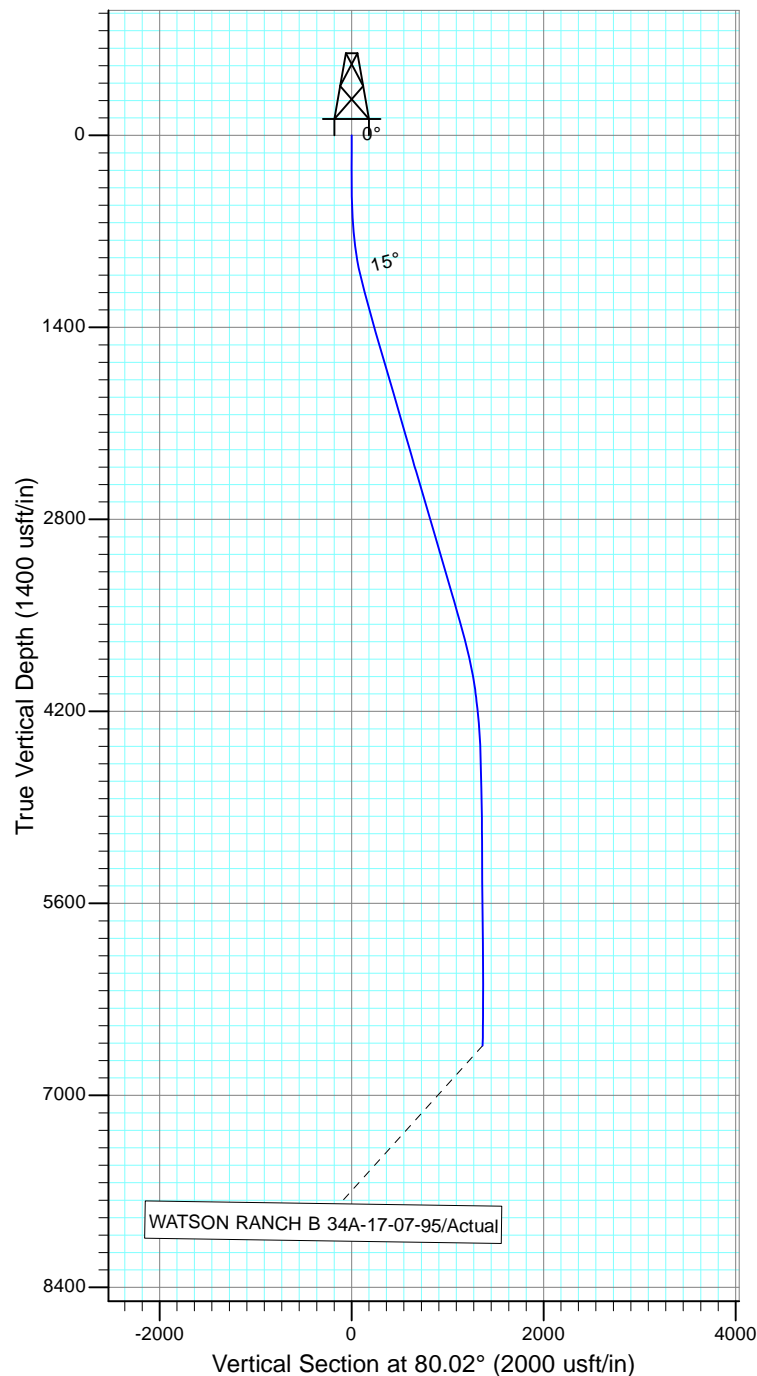


Project: Rockies Region
Site: Watson Ranch B
Well: WATSON RANCH B 34A-17-07-95
Wellbore: Wellbore #1
Design: Actual



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 34A-17-07-95/Wellbore #1)

Created By: *Matthew Linton*

Date: 12:31, May 20 2015

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