

ENSIGN

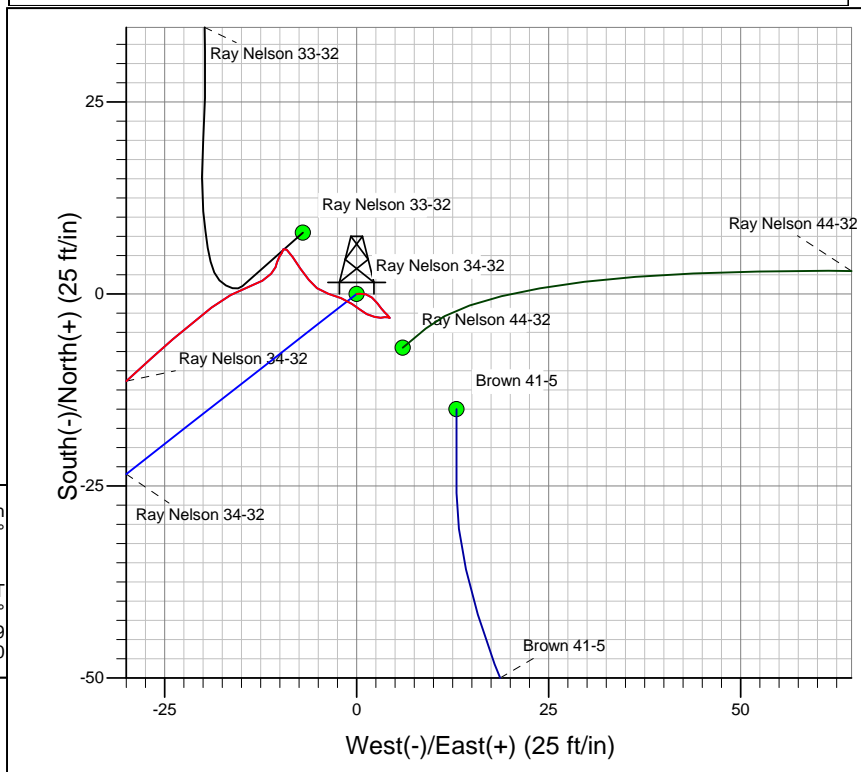
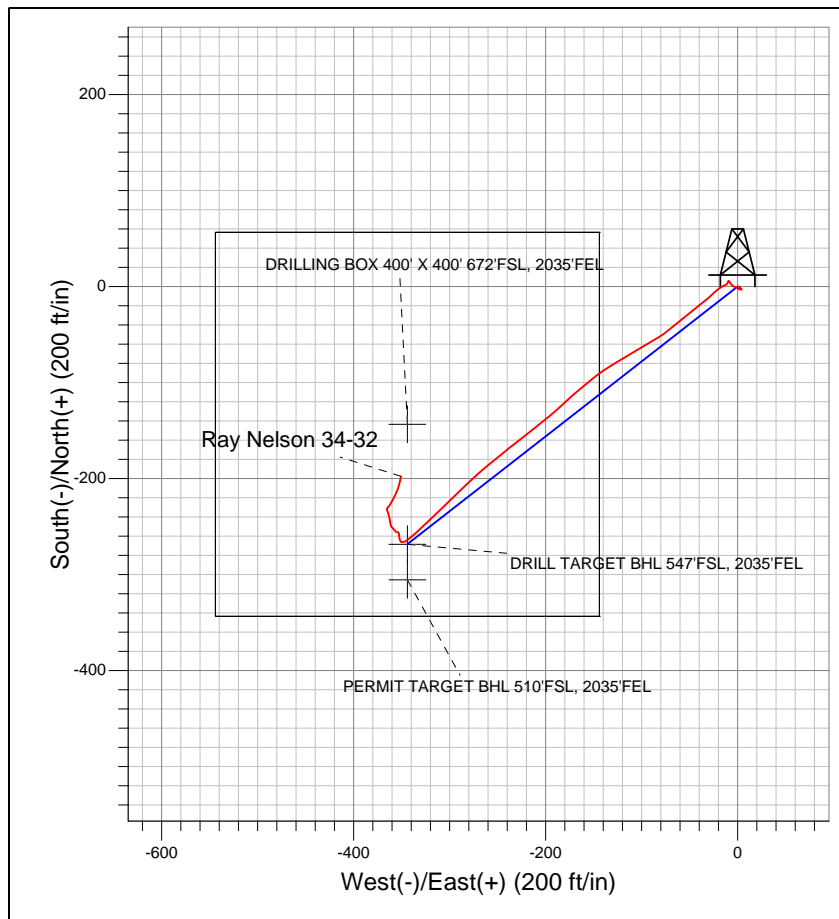
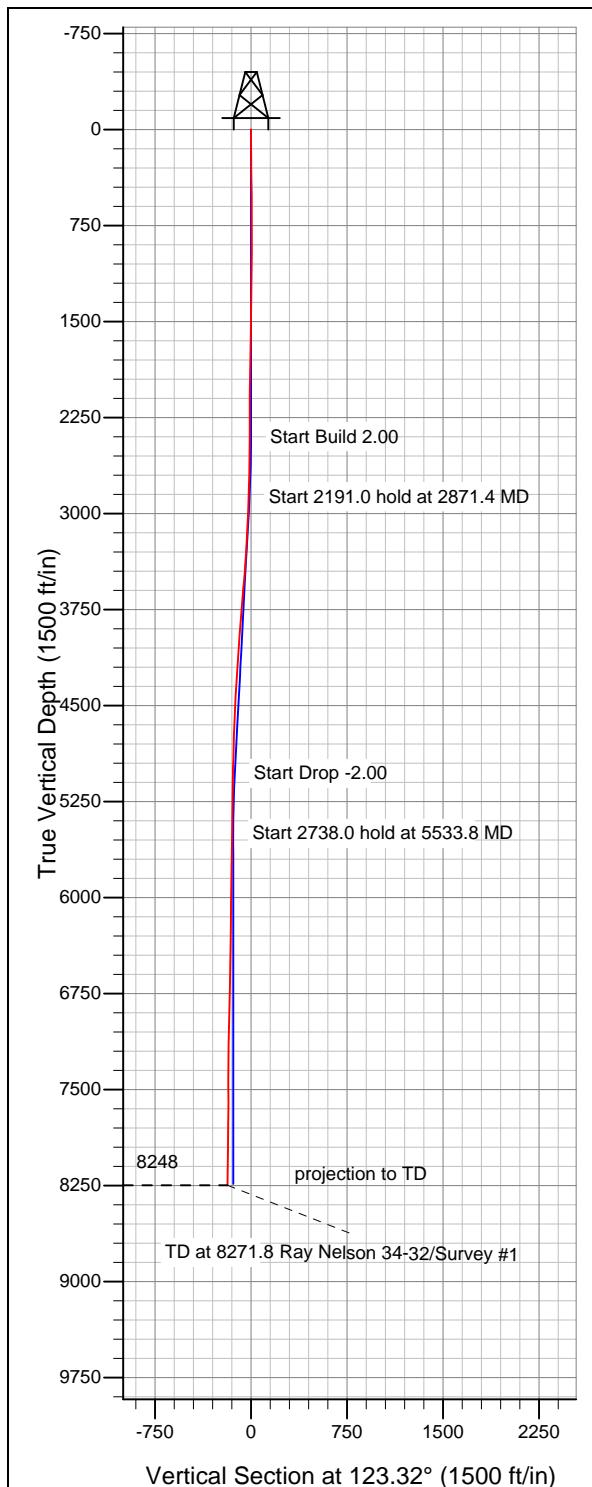
Directional

Well Name: Ray Nelson 34-32

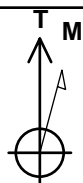
Surface Location: Ray Nelson/Brown Pad Sec.32-T2N-R68W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4980.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1275970.56	3133253.53	40° 5' 23.813 N	105° 1' 25.410 W	
Original Well Elev WELL @ 4993.0ft (Original Well Elev)						

EnCana Oil & Gas Weld County CO



Ray Nelson 34-32
 Wellbore #1
 7:56, March 07 2010



Azimuths to True North
 Magnetic North: 9.13°
 Magnetic Field
 Strength: 53111.4snT
 Dip Angle: 66.81°
 Date: 12/31/2009
 Model: IGRF200510



EnCana Oil & Gas Weld County CO

SEC.32-T2N-R68W

Ray Nelson/Brown Pad Sec.32-T2N-R68W

Ray Nelson 34-32

Wellbore #1

Survey: Survey #1

Standard Survey Report

07 March, 2010

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
109.0	0.40	84.50	109.0	0.0	0.4	0.3	0.37	0.37	0.00
204.0	0.60	102.90	204.0	0.0	1.2	1.0	0.27	0.21	19.37
296.0	0.60	131.40	296.0	-0.5	2.0	1.9	0.32	0.00	30.98
390.0	0.60	143.90	390.0	-1.2	2.7	2.9	0.14	0.00	13.30
481.0	0.50	143.50	481.0	-1.9	3.2	3.7	0.11	-0.11	-0.44
568.0	0.40	128.90	568.0	-2.4	3.7	4.4	0.17	-0.11	-16.78
657.0	0.30	142.20	657.0	-2.8	4.0	4.9	0.14	-0.11	14.94
747.0	0.10	141.50	747.0	-3.0	4.2	5.2	0.22	-0.22	-0.78
811.0	0.10	141.50	811.0	-3.1	4.3	5.3	0.00	0.00	0.00
936.0	0.30	296.20	936.0	-3.0	4.1	5.1	0.31	0.16	123.76
1,023.0	0.30	251.30	1,023.0	-3.0	3.7	4.7	0.26	0.00	-51.61
1,110.0	0.40	272.80	1,110.0	-3.1	3.1	4.3	0.19	0.11	24.71

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Ray Nelson 34-32
Project:	SEC.32-T2N-R68W	TVD Reference:	WELL @ 4993.0ft (Original Well Elev)
Site:	Ray Nelson/Brown Pad Sec.32-T2N-R68W	MD Reference:	WELL @ 4993.0ft (Original Well Elev)
Well:	Ray Nelson 34-32	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,197.0	0.70	279.70	1,197.0	-3.0	2.3	3.6	0.35	0.34	7.93
1,285.0	0.70	300.10	1,285.0	-2.6	1.3	2.5	0.28	0.00	23.18
1,372.0	0.70	306.80	1,372.0	-2.0	0.4	1.5	0.09	0.00	7.70
1,459.0	1.00	304.00	1,458.9	-1.3	-0.6	0.2	0.35	0.34	-3.22
1,547.0	1.10	292.80	1,546.9	-0.5	-2.0	-1.4	0.26	0.11	-12.73
1,634.0	1.20	284.70	1,633.9	0.0	-3.7	-3.1	0.22	0.11	-9.31
1,722.0	1.00	310.90	1,721.9	0.8	-5.2	-4.7	0.61	-0.23	29.77
1,809.0	1.00	320.50	1,808.9	1.8	-6.2	-6.2	0.19	0.00	11.03
1,896.0	1.40	324.30	1,895.9	3.3	-7.3	-7.9	0.47	0.46	4.37
1,984.0	1.00	329.20	1,983.8	4.8	-8.3	-9.6	0.47	-0.45	5.57
2,071.0	0.60	307.80	2,070.8	5.8	-9.1	-10.8	0.57	-0.46	-24.60
2,158.0	0.30	201.90	2,157.8	5.8	-9.5	-11.2	0.85	-0.34	-121.72
2,245.0	0.40	201.50	2,244.8	5.3	-9.7	-11.1	0.11	0.11	-0.46
2,333.0	0.40	230.40	2,332.8	4.9	-10.1	-11.1	0.23	0.00	32.84
2,420.0	0.70	184.60	2,419.8	4.1	-10.4	-10.9	0.59	0.34	-52.64
2,507.0	1.60	218.00	2,506.8	2.6	-11.1	-10.8	1.25	1.03	38.39
2,594.0	3.10	250.80	2,593.7	0.9	-14.1	-12.3	2.25	1.72	37.70
2,681.0	4.20	233.30	2,680.6	-1.8	-18.9	-14.8	1.79	1.26	-20.11
2,768.0	4.40	228.60	2,767.3	-5.9	-23.9	-16.8	0.47	0.23	-5.40
2,856.0	6.20	227.40	2,854.9	-11.3	-30.0	-18.8	2.05	2.05	-1.36
2,943.0	5.90	232.60	2,941.5	-17.2	-37.0	-21.4	0.72	-0.34	5.98
3,030.0	7.40	230.40	3,027.9	-23.5	-44.9	-24.6	1.75	1.72	-2.53
3,118.0	9.80	231.60	3,114.9	-31.8	-55.1	-28.6	2.73	2.73	1.36
3,205.0	9.40	230.50	3,200.7	-40.9	-66.4	-33.0	0.51	-0.46	-1.26
3,292.0	8.80	233.70	3,286.6	-49.4	-77.2	-37.4	0.90	-0.69	3.68
3,379.0	9.20	240.80	3,372.5	-56.7	-88.7	-42.9	1.36	0.46	8.16
3,467.0	11.50	238.70	3,459.1	-64.7	-102.3	-50.0	2.65	2.61	-2.39
3,554.0	11.40	239.10	3,544.3	-73.6	-117.1	-57.4	0.15	-0.11	0.46
3,641.0	12.60	239.10	3,629.4	-82.9	-132.6	-65.3	1.38	1.38	0.00
3,729.0	12.90	231.20	3,715.3	-94.0	-148.5	-72.5	2.01	0.34	-8.98
3,816.0	13.90	230.50	3,799.9	-106.7	-164.1	-78.5	1.16	1.15	-0.80
3,903.0	13.90	226.20	3,884.3	-120.6	-179.7	-84.0	1.19	0.00	-4.94
3,990.0	14.60	230.20	3,968.7	-134.8	-195.7	-89.5	1.39	0.80	4.60
4,078.0	14.10	232.30	4,053.9	-148.5	-212.7	-96.2	0.82	-0.57	2.39
4,165.0	13.80	232.40	4,138.4	-161.3	-229.3	-103.0	0.35	-0.34	0.11
4,252.0	12.50	229.60	4,223.1	-173.7	-244.7	-109.0	1.66	-1.49	-3.22
4,340.0	11.80	232.20	4,309.1	-185.4	-259.1	-114.6	1.01	-0.80	2.95
4,427.0	10.90	226.70	4,394.4	-196.5	-272.1	-119.4	1.62	-1.03	-6.32
4,514.0	11.00	226.40	4,479.8	-207.9	-284.1	-123.2	0.13	0.11	-0.34
4,602.0	11.50	226.60	4,566.1	-219.7	-296.5	-127.1	0.57	0.57	0.23
4,689.0	10.70	225.30	4,651.5	-231.3	-308.6	-130.8	0.96	-0.92	-1.49
4,776.0	8.80	226.90	4,737.2	-241.6	-319.2	-134.0	2.21	-2.18	1.84
4,863.0	6.50	226.80	4,823.5	-249.5	-327.6	-136.7	2.64	-2.64	-0.11
4,951.0	5.00	225.90	4,911.0	-255.6	-334.0	-138.7	1.71	-1.70	-1.02
5,038.0	4.20	231.10	4,997.7	-260.2	-339.2	-140.5	1.04	-0.92	5.98
5,125.0	3.00	232.50	5,084.6	-263.6	-343.5	-142.2	1.38	-1.38	1.61
5,212.0	2.10	250.80	5,171.5	-265.5	-346.8	-144.0	1.38	-1.03	21.03
5,300.0	1.40	259.80	5,259.4	-266.2	-349.4	-145.7	0.85	-0.80	10.23
5,387.0	0.50	328.40	5,346.4	-266.1	-350.6	-146.8	1.50	-1.03	78.85
5,474.0	1.00	330.50	5,433.4	-265.1	-351.2	-147.9	0.58	0.57	2.41
5,539.7	1.37	339.47	5,499.1	-263.9	-351.8	-149.0	0.63	0.57	13.65
PERMIT TARGET BHL 510'FSL, 2035'FEL									
5,540.4	1.38	339.54	5,499.8	-263.9	-351.8	-149.0	0.63	0.59	9.86
DRILL TARGET BHL 547'FSL, 2035'FEL									

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Site:	Ray Nelson/Brown Pad Sec.32-T2N-R68W	MD Reference:	WELL @ 4993.0ft (Original Well Elev)
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,561.0	1.50	341.40	5,520.4	-263.4	-351.9	-149.4	0.63	0.59	9.04
5,736.0	0.80	9.00	5,695.4	-260.0	-352.5	-151.7	0.50	-0.40	15.77
5,910.0	1.10	341.40	5,869.3	-257.2	-352.8	-153.5	0.31	0.17	-15.86
6,085.0	0.80	264.40	6,044.3	-255.7	-354.6	-155.8	0.69	-0.17	-44.00
6,260.0	1.20	326.90	6,219.3	-254.3	-356.8	-158.4	0.62	0.23	35.71
6,435.0	0.80	301.80	6,394.3	-252.1	-358.8	-161.3	0.33	-0.23	-14.34
6,609.0	1.30	325.70	6,568.2	-249.9	-361.0	-164.4	0.38	0.29	13.74
6,784.0	1.50	6.50	6,743.2	-246.0	-361.8	-167.3	0.57	0.11	23.31
6,959.0	1.80	340.10	6,918.1	-241.1	-362.5	-170.5	0.46	0.17	-15.09
7,133.0	2.10	345.00	7,092.0	-235.4	-364.3	-175.1	0.20	0.17	2.82
7,302.0	0.40	335.30	7,261.0	-231.9	-365.3	-177.9	1.01	-1.01	-5.74
7,385.5	0.96	30.39	7,344.5	-231.0	-365.1	-178.2	0.96	0.67	65.95
DRILLING BOX 400' X 400' 672'FSL, 2035'FEL									
7,477.0	1.80	41.90	7,435.9	-229.3	-363.7	-178.0	0.96	0.92	12.59
7,651.0	2.20	26.50	7,609.8	-224.3	-360.4	-178.0	0.38	0.23	-8.85
7,826.0	2.90	30.40	7,784.7	-217.5	-356.7	-178.6	0.41	0.40	2.23
8,001.0	2.50	14.90	7,959.5	-210.0	-353.5	-180.0	0.47	-0.23	-8.86
8,175.0	2.60	13.20	8,133.3	-202.5	-351.6	-182.6	0.07	0.06	-0.98
8,290.0	2.40	11.50	8,248.2	-197.6	-350.5	-184.4	0.19	-0.17	-1.48
projection to TD									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,290.0	8,248.2	-197.6	-350.5	projection to TD

Checked By: _____ Approved By: _____ Date: _____