

REFERENCE INFORMATION

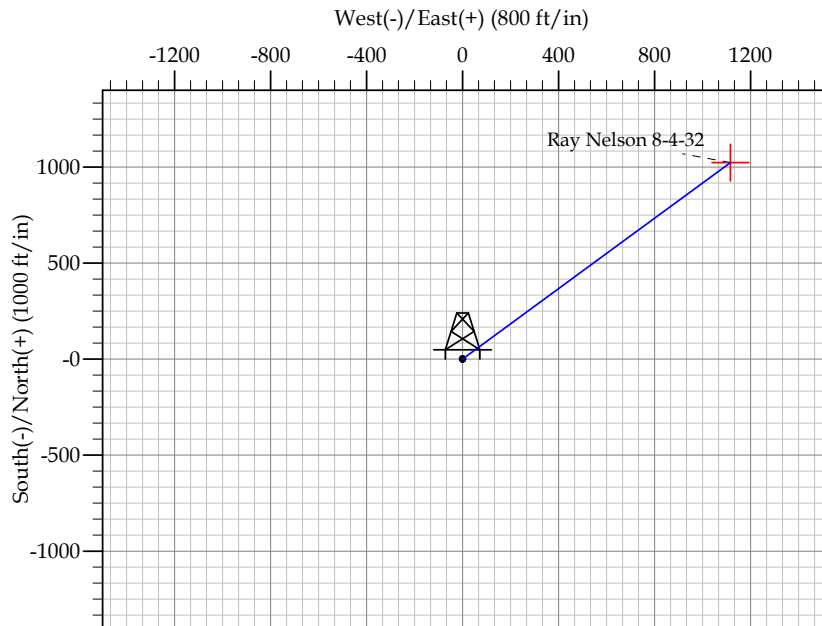
Co-ordinate (N/E) Reference: Well Ray Nelson 8-4-32, True North
Vertical (TVD) Reference: WELL @ 4977.0ft (Original Well Elev)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: WELL @ 4977.0ft (Original Well Elev)
Calculation Method:

WELL DETAILS: Ray Nelson 8-4-32

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.0	0.0	1276709.88	4964.0	3133765.75	40° 5' 31.092 N	105° 1' 18.768 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.0	
3	1625.6	15.51	47.48	1616.2	70.5	76.9	2.00	47.48	104.4	
4	6508.1	15.51	47.48	6320.8	953.1	1039.3	0.00	0.00	1410.2	
5	7283.8	0.00	0.00	7087.0	1023.7	1116.3	2.00	180.00	1514.6	
6	8383.8	0.00	0.00	8187.0	1023.7	1116.3	0.00	0.00	1514.6	Ray Nelson 8-4-32



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4367.0	4480.4	Sussex
4927.0	5061.6	Shannon
7307.0	7503.8	Niobrara
7577.0	7773.8	Codell
8037.0	8233.8	J Sand
8082.0	8278.8	A Marker

CASING DETAILS

TVD	MD	Name	Size
800.0	800.0	Surface	8.625
8187.0	8383.8	Production	4.500

EnCana Corporation
Planning Report - Geographic

Database:	EDM	Local Co-ordinate Reference:	Well Ray Nelson 8-4-32
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 4977.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 4977.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Ray Nelson 8-4-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Ray Nelson 8-4-32		

Project	Wattenberg,		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		New Drills				
Site Position:		Northing:	1,252,450.66 ft	Latitude:	40° 1' 32.016 N	
From:	Lat/Long	Easting:	3,120,627.66 ft	Longitude:	105° 4' 9.336 W	
Position Uncertainty:		ft	Slot Radius:	in	Grid Convergence:	0.28 °

Well		Ray Nelson 8-4-32				
Well Position	+N/-S	24,188.1 ft	Northing:	1,276,709.88 ft	Latitude:	40° 5' 31.092 N
	+E/-W	13,268.7 ft	Easting:	3,133,765.75 ft	Longitude:	105° 1' 18.768 W
Position Uncertainty		ft	Wellhead Elevation:	ft	Ground Level:	4,964.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.13	66.81	53,113

Design	Ray Nelson 8-4-32			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	47.48

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,625.6	15.51	47.48	1,616.2	70.5	76.9	2.00	2.00	0.00	47.48	
6,508.1	15.51	47.48	6,320.8	953.1	1,039.3	0.00	0.00	0.00	0.00	
7,283.8	0.00	0.00	7,087.0	1,023.7	1,116.3	2.00	-2.00	0.00	180.00	
8,383.8	0.00	0.00	8,187.0	1,023.7	1,116.3	0.00	0.00	0.00	0.00	Ray Nelson 8-4-32

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Project:	Wattenberg	MD Reference:	WELL @ 4977.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Ray Nelson 8-4-32	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Ray Nelson 8-4-32		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,276,709.88	3,133,765.75	40° 5' 31.092 N	105° 1' 18.768 W	
800.0	0.00	0.00	800.0	0.0	0.0	1,276,709.88	3,133,765.75	40° 5' 31.092 N	105° 1' 18.768 W	
Surface										
850.0	0.00	0.00	850.0	0.0	0.0	1,276,709.88	3,133,765.75	40° 5' 31.092 N	105° 1' 18.768 W	
1,625.6	15.51	47.48	1,616.2	70.5	76.9	1,276,780.83	3,133,842.28	40° 5' 31.789 N	105° 1' 17.778 W	
4,480.4	15.51	47.48	4,367.0	586.6	639.7	1,277,299.90	3,134,402.23	40° 5' 36.889 N	105° 1' 10.537 W	
Sussex										
5,061.6	15.51	47.48	4,927.0	691.6	754.2	1,277,405.57	3,134,516.22	40° 5' 37.927 N	105° 1' 9.063 W	
Shannon										
6,508.1	15.51	47.48	6,320.8	953.1	1,039.3	1,277,668.58	3,134,799.94	40° 5' 40.511 N	105° 1' 5.394 W	
7,283.8	0.00	0.00	7,087.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
7,503.8	0.00	0.00	7,307.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
Niobrara										
7,773.8	0.00	0.00	7,577.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
Codell										
8,233.8	0.00	0.00	8,037.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
J Sand										
8,278.8	0.00	0.00	8,082.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
A Marker										
8,383.8	0.00	0.00	8,187.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
Production - Ray Nelson 8-4-32										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Ray Nelson 8-4-32	0.00	0.00	8,187.0	1,023.7	1,116.3	1,277,739.53	3,134,876.47	40° 5' 41.208 N	105° 1' 4.404 W	
- plan hits target										
- Point										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
800.0	800.0	Surface	8.625	12.250		
8,383.8	8,187.0	Production	4.500	7.785		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,480.4	4,367.0	Sussex		0.00		
5,061.6	4,927.0	Shannon		0.00		
7,503.8	7,307.0	Niobrara		0.00		
7,773.8	7,577.0	Codell		0.00		
8,233.8	8,037.0	J Sand		0.00		
8,278.8	8,082.0	A Marker		0.00		

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