

EnCana Corporation

Planning Report - Geographic

Database:	EDM	Local Co-ordinate Reference:	Well Liberty 11-21
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 5041.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 5041.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Liberty 11-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Liberty 11-21		

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:	1,278,589.08ft	Latitude:	40° 5' 49.848 N
From:	Lat/Long	Easting:	3,130,247.44ft	Longitude:	105° 2' 3.912 W
Position Uncertainty:	ft	Slot Radius:	in	Grid Convergence:	0.30 °

Well	Liberty 11-21					
Well Position	+N-S	43,552.5 ft	Northing:	1,322,179.34 ft	Latitude:	40° 13' 0.264 N
	+E-W	6,960.3 ft	Easting:	3,136,966.74 ft	Longitude:	105° 0' 34.344 W
Position Uncertainty		ft	Wellhead Elevation:	ft	Ground Level:	5,028.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.14	66.92	53,180

Design	Liberty 11-21				
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	269.86	

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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,554.8	16.10	269.86	1,544.3	-0.3	-112.3	2.00	2.00	0.00	269.86	
6,183.7	16.10	269.86	5,991.7	-3.3	-1,395.7	0.00	0.00	0.00	0.00	
6,988.6	0.00	0.00	6,786.0	-3.6	-1,508.0	2.00	-2.00	0.00	180.00	
8,038.6	0.00	0.00	7,836.0	-3.6	-1,508.0	0.00	0.00	0.00	0.00	Liberty 11-21

EnCana Corporation

Planning Report - Geographic

Database:	EDM	Local Co-ordinate Reference:	Well Liberty 11-21
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 5041.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 5041.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Liberty 11-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Liberty 11-21		

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	1,322,179.34	3,136,966.74	40° 13' 0.264 N	105° 0' 34.344 W	
700.0	0.00	0.00	700.0	0.0	0.0	1,322,179.34	3,136,966.74	40° 13' 0.264 N	105° 0' 34.344 W	
Surface										
750.0	0.00	0.00	750.0	0.0	0.0	1,322,179.34	3,136,966.74	40° 13' 0.264 N	105° 0' 34.344 W	
1,554.8	16.10	269.86	1,544.3	-0.3	-112.3	1,322,178.45	3,136,854.43	40° 13' 0.261 N	105° 0' 35.792 W	
4,075.4	16.10	269.86	3,966.0	-1.9	-811.1	1,322,172.93	3,136,155.61	40° 13' 0.245 N	105° 0' 44.801 W	
Sussex										
4,590.6	16.10	269.86	4,461.0	-2.3	-954.0	1,322,171.80	3,136,012.78	40° 13' 0.241 N	105° 0' 46.642 W	
Shannon										
6,183.7	16.10	269.86	5,991.7	-3.3	-1,395.7	1,322,168.30	3,135,571.07	40° 13' 0.231 N	105° 0' 52.336 W	
6,988.6	0.00	0.00	6,786.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
7,163.6	0.00	0.00	6,961.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
Niobrara										
7,433.6	0.00	0.00	7,231.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
Codell										
7,888.6	0.00	0.00	7,686.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
J Sand										
7,958.6	0.00	0.00	7,756.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
A Marker										
8,038.6	0.00	0.00	7,836.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
Production - Liberty 11-21										

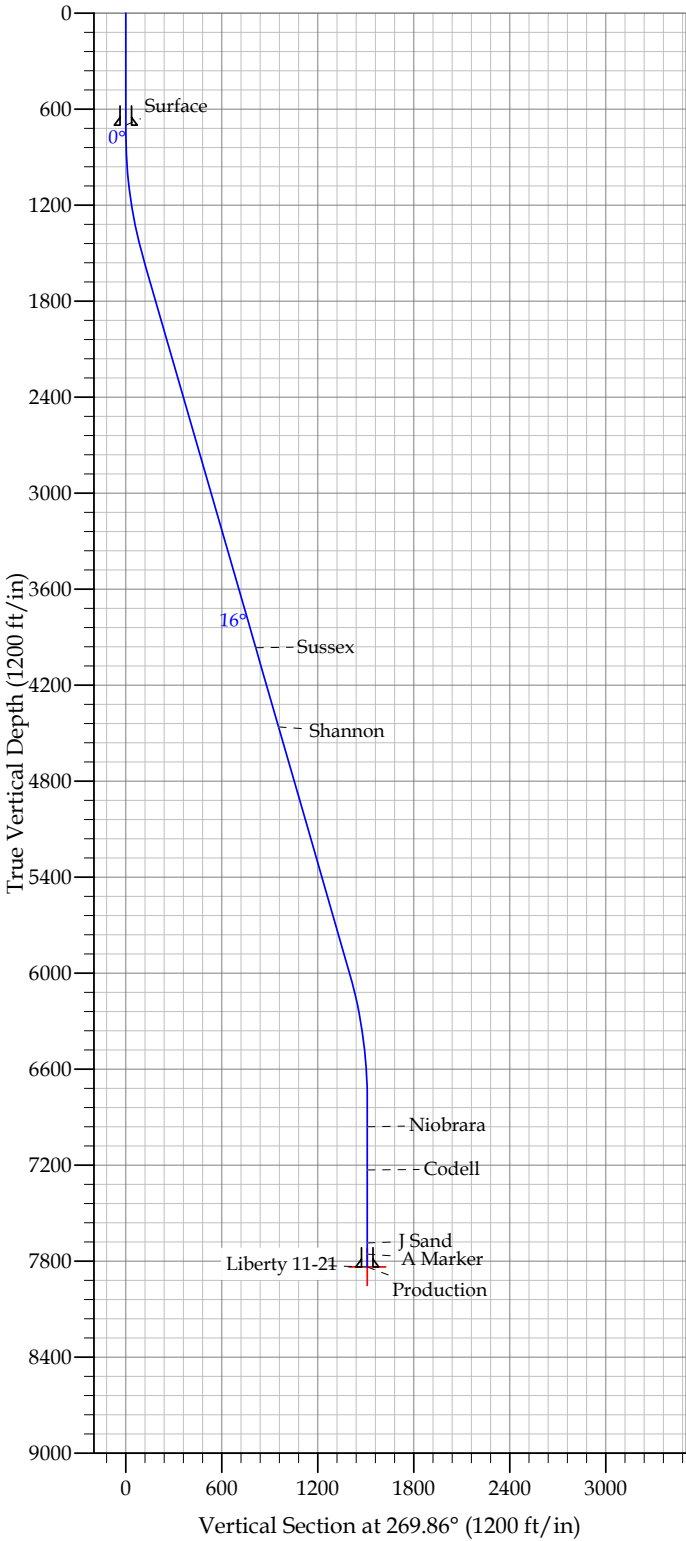
Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Liberty 11-21	0.00	0.00	7,836.0	-3.6	-1,508.0	1,322,167.41	3,135,458.76	40° 13' 0.228 N	105° 0' 53.784 W	
- plan hits target										
- Point										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
700.0	700.0	Surface	8.625	12.250	
8,038.6	7,836.0	Production	4.500	7.785	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,075.4	3,966.0	Sussex		0.00		
4,590.6	4,461.0	Shannon		0.00		
7,163.6	6,961.0	Niobrara		0.00		
7,433.6	7,231.0	Codell		0.00		
7,888.6	7,686.0	J Sand		0.00		
7,958.6	7,756.0	A Marker		0.00		

EnCana Corporation
Planning Report - Geographic

Database:	EDM	Local Co-ordinate Reference:	Well Liberty 11-21
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 5041.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 5041.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Liberty 11-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Liberty 11-21		



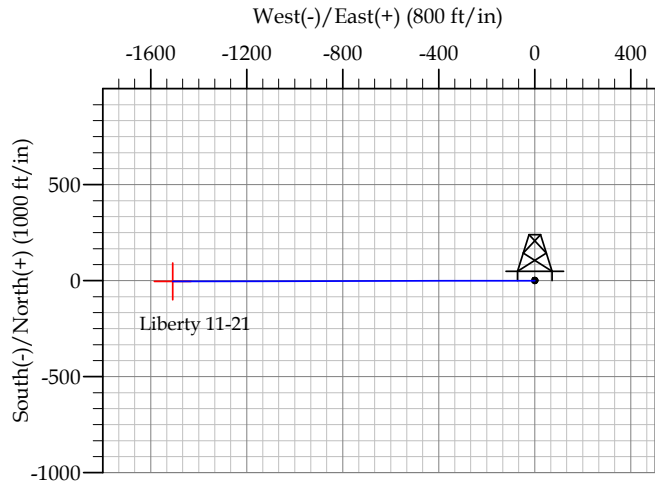
Co-ordinate (N/E) Reference: Well Liberty 11-21, True North
Vertical (TVD) Reference: WELL @ 5041.0ft (Original Well Elev)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: WELL @ 5041.0ft (Original Well Elev)
Calculation Method:

WELL DETAILS: Liberty 11-21

+N/-S	+E/-W	Northing	Ground Level:	5028.0			
0.0	0.0	1322179.34	Easting	3136966.74	Latitude	40° 13' 0.264 N	Longitude 105° 0' 34.344 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1554.8	16.10	269.86	1544.3	-0.3	-112.3	2.00	269.86	112.3	
4	6183.7	16.10	269.86	5991.7	-3.3	-1395.7	0.00	0.00	1395.7	
5	6988.6	0.00	0.00	6786.0	-3.6	-1508.0	2.00	180.00	1508.0	
6	8038.6	0.00	0.00	7836.0	-3.6	-1508.0	0.00	0.00	1508.0	Liberty 11-21



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3966.0	4075.4	Sussex
4461.0	4590.6	Shannon
6961.0	7163.6	Niobrara
7231.0	7433.6	Codell
7686.0	7888.6	J Sand
7756.0	7958.6	A Marker

CASING DETAILS

TVD	MD	Name	Size
700.0	700.0	Surface	8.625
7836.0	8038.6	Production	4.500