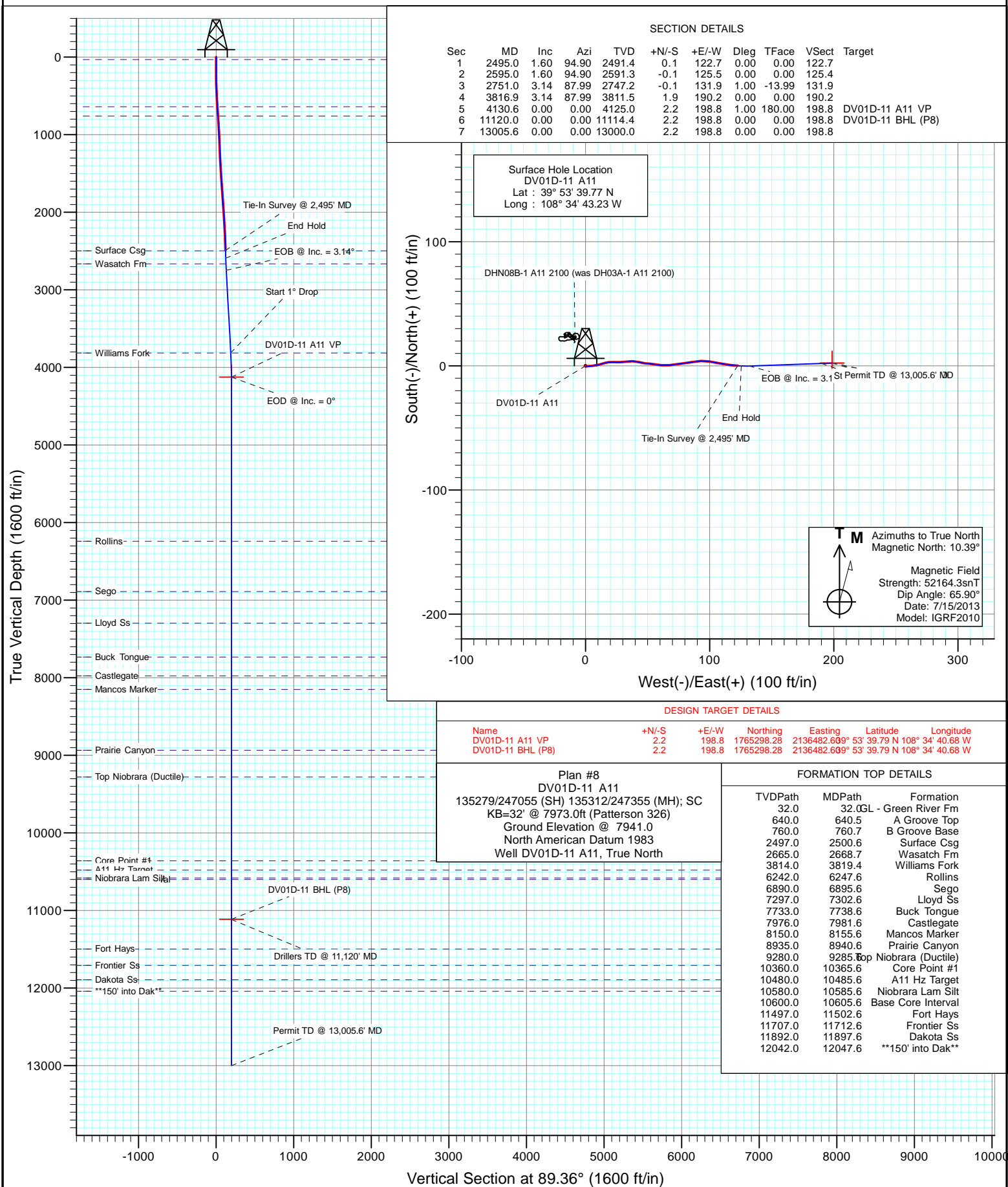




Project: Cathedral Bluffs
Site: Sec 11-2S-R100W
Well: DV01D-11 A11
Wellbore: DD
Design: Plan #8



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well DV01D-11 A11
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Project:	Cathedral Bluffs	MD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Site:	Sec 11-2S-R100W	North Reference:	True
Well:	DV01D-11 A11	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #8		

Project	Cathedral Bluffs		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Sec 11-2S-R100W			
Site Position:		Northing:	1,765,302.83 ft	Latitude:	39° 53' 39.77 N
From:	Lat/Long	Easting:	2,136,283.89 ft	Longitude:	108° 34' 43.23 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.94 °

Well	DV01D-11 A11					
Well Position	+N/-S	0.0 ft	Northing:	1,765,302.79 ft	Latitude:	39° 53' 39.77 N
	+E/-W	0.0 ft	Easting:	2,136,283.89 ft	Longitude:	108° 34' 43.23 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,941.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/15/2013	10.39	65.90	52,164

Design	Plan #8				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	2,495.0	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	89.36	

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
2,495.0	1.60	94.90	2,491.4	0.1	122.7	0.00	0.00	0.00	0.00	
2,595.0	1.60	94.90	2,591.3	-0.1	125.5	0.00	0.00	0.00	0.00	
2,751.0	3.14	87.99	2,747.2	-0.1	131.9	1.00	0.98	-4.43	-13.99	
3,816.9	3.14	87.99	3,811.5	1.9	190.2	0.00	0.00	0.00	0.00	
4,130.6	0.00	0.00	4,125.0	2.2	198.8	1.00	-1.00	0.00	180.00	DV01D-11 A11 VP
11,120.0	0.00	0.00	11,114.4	2.2	198.8	0.00	0.00	0.00	0.00	DV01D-11 BHL (P8)
13,005.6	0.00	0.00	13,000.0	2.2	198.8	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well DV01D-11 A11
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Project:	Cathedral Bluffs	MD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Site:	Sec 11-2S-R100W	North Reference:	True
Well:	DV01D-11 A11	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #8		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
144.0	0.50	142.50	144.0	-0.5	0.4	0.4	0.35	0.35	
236.0	0.50	310.50	236.0	-0.6	0.3	0.3	1.08	0.00	
328.0	1.70	92.60	328.0	-0.4	1.4	1.4	2.30	1.30	
420.0	3.60	81.40	419.9	0.0	5.6	5.6	2.13	2.07	
512.0	3.30	75.70	511.7	1.1	11.0	11.0	0.49	-0.33	
604.0	3.00	74.00	603.6	2.4	15.9	15.9	0.34	-0.33	
699.0	4.00	91.50	698.4	3.0	21.6	21.6	1.53	1.05	
794.0	3.30	89.10	793.2	3.0	27.6	27.7	0.75	-0.74	
888.0	2.90	81.80	887.1	3.4	32.7	32.7	0.60	-0.43	
983.0	3.50	89.90	981.9	3.7	38.0	38.0	0.79	0.63	
1,078.0	3.30	105.30	1,076.8	3.0	43.5	43.6	0.98	-0.21	
1,172.0	2.20	97.10	1,170.6	2.0	47.9	47.9	1.24	-1.17	
1,267.0	2.10	91.80	1,265.6	1.8	51.5	51.5	0.23	-0.11	
1,361.0	2.90	101.70	1,359.5	1.2	55.5	55.5	0.96	0.85	
1,456.0	4.00	92.80	1,454.3	0.6	61.2	61.2	1.28	1.16	
1,551.0	3.70	86.90	1,549.1	0.6	67.6	67.6	0.52	-0.32	
1,645.0	3.20	79.90	1,642.9	1.2	73.2	73.2	0.69	-0.53	
1,739.0	3.80	82.10	1,736.8	2.1	78.8	78.9	0.65	0.64	
1,834.0	4.60	82.00	1,831.5	3.1	85.7	85.8	0.84	0.84	
1,928.0	4.40	84.90	1,925.2	3.9	93.1	93.1	0.32	-0.21	
2,023.0	3.90	101.30	2,020.0	3.6	99.8	99.9	1.35	-0.53	
2,117.0	3.60	100.60	2,113.8	2.4	105.9	105.9	0.32	-0.32	
2,211.0	3.00	98.40	2,207.6	1.5	111.2	111.2	0.65	-0.64	
2,305.0	2.70	100.00	2,301.5	0.8	115.8	115.8	0.33	-0.32	
2,400.0	2.00	92.30	2,396.4	0.3	119.7	119.7	0.81	-0.74	
2,495.0	1.60	94.90	2,491.4	0.1	122.7	122.7	0.43	-0.42	Tie-In Survey @ 2,495' MD
2,500.0	1.60	94.90	2,496.4	0.1	122.8	122.8	0.00	0.00	
2,500.6	1.60	94.90	2,497.0	0.1	122.8	122.8	0.00	0.00	Surface Csg
2,595.0	1.60	94.90	2,591.3	-0.1	125.5	125.4	0.00	0.00	End Hold
2,600.0	1.65	94.48	2,596.3	-0.1	125.6	125.6	1.00	0.97	
2,668.7	2.32	90.50	2,665.0	-0.2	128.0	128.0	1.00	0.98	Wasatch Fm
2,700.0	2.63	89.36	2,696.3	-0.2	129.3	129.3	1.00	0.99	
2,751.0	3.14	87.99	2,747.2	-0.1	131.9	131.9	1.00	0.99	EOB @ Inc. = 3.14°
2,800.0	3.14	87.99	2,796.1	0.0	134.6	134.6	0.00	0.00	
2,900.0	3.14	87.99	2,896.0	0.2	140.0	140.0	0.00	0.00	
3,000.0	3.14	87.99	2,995.8	0.3	145.5	145.5	0.00	0.00	
3,100.0	3.14	87.99	3,095.7	0.5	151.0	151.0	0.00	0.00	
3,200.0	3.14	87.99	3,195.5	0.7	156.4	156.4	0.00	0.00	
3,300.0	3.14	87.99	3,295.4	0.9	161.9	161.9	0.00	0.00	
3,400.0	3.14	87.99	3,395.2	1.1	167.4	167.4	0.00	0.00	
3,500.0	3.14	87.99	3,495.1	1.3	172.8	172.8	0.00	0.00	
3,600.0	3.14	87.99	3,594.9	1.5	178.3	178.3	0.00	0.00	
3,700.0	3.14	87.99	3,694.8	1.7	183.8	183.8	0.00	0.00	
3,800.0	3.14	87.99	3,794.6	1.9	189.2	189.3	0.00	0.00	
3,816.9	3.14	87.99	3,811.5	1.9	190.2	190.2	0.00	0.00	Start 1° Drop
3,819.4	3.11	87.99	3,814.0	1.9	190.3	190.3	1.00	-1.00	Williams Fork
3,900.0	2.31	87.99	3,894.5	2.1	194.1	194.1	1.00	-1.00	
4,000.0	1.31	87.99	3,994.4	2.2	197.3	197.3	1.00	-1.00	
4,100.0	0.31	87.99	4,094.4	2.2	198.7	198.7	1.00	-1.00	
4,130.6	0.00	0.00	4,125.0	2.2	198.8	198.8	1.00	-1.00	EOD @ Inc. = 0°
4,200.0	0.00	0.00	4,194.4	2.2	198.8	198.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well DV01D-11 A11
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Project:	Cathedral Bluffs	MD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Site:	Sec 11-2S-R100W	North Reference:	True
Well:	DV01D-11 A11	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #8		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,300.0	0.00	0.00	4,294.4	2.2	198.8	198.8	0.00	0.00	
4,400.0	0.00	0.00	4,394.4	2.2	198.8	198.8	0.00	0.00	
4,500.0	0.00	0.00	4,494.4	2.2	198.8	198.8	0.00	0.00	
4,600.0	0.00	0.00	4,594.4	2.2	198.8	198.8	0.00	0.00	
4,700.0	0.00	0.00	4,694.4	2.2	198.8	198.8	0.00	0.00	
4,800.0	0.00	0.00	4,794.4	2.2	198.8	198.8	0.00	0.00	
4,900.0	0.00	0.00	4,894.4	2.2	198.8	198.8	0.00	0.00	
5,000.0	0.00	0.00	4,994.4	2.2	198.8	198.8	0.00	0.00	
5,100.0	0.00	0.00	5,094.4	2.2	198.8	198.8	0.00	0.00	
5,200.0	0.00	0.00	5,194.4	2.2	198.8	198.8	0.00	0.00	
5,300.0	0.00	0.00	5,294.4	2.2	198.8	198.8	0.00	0.00	
5,400.0	0.00	0.00	5,394.4	2.2	198.8	198.8	0.00	0.00	
5,500.0	0.00	0.00	5,494.4	2.2	198.8	198.8	0.00	0.00	
5,600.0	0.00	0.00	5,594.4	2.2	198.8	198.8	0.00	0.00	
5,700.0	0.00	0.00	5,694.4	2.2	198.8	198.8	0.00	0.00	
5,800.0	0.00	0.00	5,794.4	2.2	198.8	198.8	0.00	0.00	
5,900.0	0.00	0.00	5,894.4	2.2	198.8	198.8	0.00	0.00	
6,000.0	0.00	0.00	5,994.4	2.2	198.8	198.8	0.00	0.00	
6,100.0	0.00	0.00	6,094.4	2.2	198.8	198.8	0.00	0.00	
6,200.0	0.00	0.00	6,194.4	2.2	198.8	198.8	0.00	0.00	
6,247.6	0.00	0.00	6,242.0	2.2	198.8	198.8	0.00	0.00	Rollins
6,300.0	0.00	0.00	6,294.4	2.2	198.8	198.8	0.00	0.00	
6,400.0	0.00	0.00	6,394.4	2.2	198.8	198.8	0.00	0.00	
6,500.0	0.00	0.00	6,494.4	2.2	198.8	198.8	0.00	0.00	
6,600.0	0.00	0.00	6,594.4	2.2	198.8	198.8	0.00	0.00	
6,700.0	0.00	0.00	6,694.4	2.2	198.8	198.8	0.00	0.00	
6,800.0	0.00	0.00	6,794.4	2.2	198.8	198.8	0.00	0.00	
6,895.6	0.00	0.00	6,890.0	2.2	198.8	198.8	0.00	0.00	Sego
6,900.0	0.00	0.00	6,894.4	2.2	198.8	198.8	0.00	0.00	
7,000.0	0.00	0.00	6,994.4	2.2	198.8	198.8	0.00	0.00	
7,100.0	0.00	0.00	7,094.4	2.2	198.8	198.8	0.00	0.00	
7,200.0	0.00	0.00	7,194.4	2.2	198.8	198.8	0.00	0.00	
7,300.0	0.00	0.00	7,294.4	2.2	198.8	198.8	0.00	0.00	
7,302.6	0.00	0.00	7,297.0	2.2	198.8	198.8	0.00	0.00	Lloyd Ss
7,400.0	0.00	0.00	7,394.4	2.2	198.8	198.8	0.00	0.00	
7,500.0	0.00	0.00	7,494.4	2.2	198.8	198.8	0.00	0.00	
7,600.0	0.00	0.00	7,594.4	2.2	198.8	198.8	0.00	0.00	
7,700.0	0.00	0.00	7,694.4	2.2	198.8	198.8	0.00	0.00	
7,738.6	0.00	0.00	7,733.0	2.2	198.8	198.8	0.00	0.00	Buck Tongue
7,800.0	0.00	0.00	7,794.4	2.2	198.8	198.8	0.00	0.00	
7,900.0	0.00	0.00	7,894.4	2.2	198.8	198.8	0.00	0.00	
7,981.6	0.00	0.00	7,976.0	2.2	198.8	198.8	0.00	0.00	Castlegate
8,000.0	0.00	0.00	7,994.4	2.2	198.8	198.8	0.00	0.00	
8,100.0	0.00	0.00	8,094.4	2.2	198.8	198.8	0.00	0.00	
8,155.6	0.00	0.00	8,150.0	2.2	198.8	198.8	0.00	0.00	Mancos Marker
8,200.0	0.00	0.00	8,194.4	2.2	198.8	198.8	0.00	0.00	
8,300.0	0.00	0.00	8,294.4	2.2	198.8	198.8	0.00	0.00	
8,400.0	0.00	0.00	8,394.4	2.2	198.8	198.8	0.00	0.00	
8,500.0	0.00	0.00	8,494.4	2.2	198.8	198.8	0.00	0.00	
8,600.0	0.00	0.00	8,594.4	2.2	198.8	198.8	0.00	0.00	
8,700.0	0.00	0.00	8,694.4	2.2	198.8	198.8	0.00	0.00	
8,800.0	0.00	0.00	8,794.4	2.2	198.8	198.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well DV01D-11 A11
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Project:	Cathedral Bluffs	MD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Site:	Sec 11-2S-R100W	North Reference:	True
Well:	DV01D-11 A11	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #8		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,900.0	0.00	0.00	8,894.4	2.2	198.8	198.8	0.00	0.00	
8,940.6	0.00	0.00	8,935.0	2.2	198.8	198.8	0.00	0.00	Prairie Canyon
9,000.0	0.00	0.00	8,994.4	2.2	198.8	198.8	0.00	0.00	
9,100.0	0.00	0.00	9,094.4	2.2	198.8	198.8	0.00	0.00	
9,200.0	0.00	0.00	9,194.4	2.2	198.8	198.8	0.00	0.00	
9,285.6	0.00	0.00	9,280.0	2.2	198.8	198.8	0.00	0.00	Top Niobrara (Ductile)
9,300.0	0.00	0.00	9,294.4	2.2	198.8	198.8	0.00	0.00	
9,400.0	0.00	0.00	9,394.4	2.2	198.8	198.8	0.00	0.00	
9,500.0	0.00	0.00	9,494.4	2.2	198.8	198.8	0.00	0.00	
9,600.0	0.00	0.00	9,594.4	2.2	198.8	198.8	0.00	0.00	
9,700.0	0.00	0.00	9,694.4	2.2	198.8	198.8	0.00	0.00	
9,800.0	0.00	0.00	9,794.4	2.2	198.8	198.8	0.00	0.00	
9,900.0	0.00	0.00	9,894.4	2.2	198.8	198.8	0.00	0.00	
10,000.0	0.00	0.00	9,994.4	2.2	198.8	198.8	0.00	0.00	
10,100.0	0.00	0.00	10,094.4	2.2	198.8	198.8	0.00	0.00	
10,200.0	0.00	0.00	10,194.4	2.2	198.8	198.8	0.00	0.00	
10,300.0	0.00	0.00	10,294.4	2.2	198.8	198.8	0.00	0.00	
10,365.6	0.00	0.00	10,360.0	2.2	198.8	198.8	0.00	0.00	Core Point #1
10,400.0	0.00	0.00	10,394.4	2.2	198.8	198.8	0.00	0.00	
10,485.6	0.00	0.00	10,480.0	2.2	198.8	198.8	0.00	0.00	A11 Hz Target
10,500.0	0.00	0.00	10,494.4	2.2	198.8	198.8	0.00	0.00	
10,585.6	0.00	0.00	10,580.0	2.2	198.8	198.8	0.00	0.00	Niobrara Lam Silt
10,600.0	0.00	0.00	10,594.4	2.2	198.8	198.8	0.00	0.00	
10,605.6	0.00	0.00	10,600.0	2.2	198.8	198.8	0.00	0.00	Base Core Interval
10,700.0	0.00	0.00	10,694.4	2.2	198.8	198.8	0.00	0.00	
10,800.0	0.00	0.00	10,794.4	2.2	198.8	198.8	0.00	0.00	
10,900.0	0.00	0.00	10,894.4	2.2	198.8	198.8	0.00	0.00	
11,000.0	0.00	0.00	10,994.4	2.2	198.8	198.8	0.00	0.00	
11,100.0	0.00	0.00	11,094.4	2.2	198.8	198.8	0.00	0.00	
11,120.0	0.00	0.00	11,114.4	2.2	198.8	198.8	0.00	0.00	Drillers TD @ 11,120' MD
11,200.0	0.00	0.00	11,194.4	2.2	198.8	198.8	0.00	0.00	
11,300.0	0.00	0.00	11,294.4	2.2	198.8	198.8	0.00	0.00	
11,400.0	0.00	0.00	11,394.4	2.2	198.8	198.8	0.00	0.00	
11,500.0	0.00	0.00	11,494.4	2.2	198.8	198.8	0.00	0.00	
11,502.6	0.00	0.00	11,497.0	2.2	198.8	198.8	0.00	0.00	Fort Hays
11,600.0	0.00	0.00	11,594.4	2.2	198.8	198.8	0.00	0.00	
11,700.0	0.00	0.00	11,694.4	2.2	198.8	198.8	0.00	0.00	
11,712.6	0.00	0.00	11,707.0	2.2	198.8	198.8	0.00	0.00	Frontier Ss
11,800.0	0.00	0.00	11,794.4	2.2	198.8	198.8	0.00	0.00	
11,897.6	0.00	0.00	11,892.0	2.2	198.8	198.8	0.00	0.00	Dakota Ss
11,900.0	0.00	0.00	11,894.4	2.2	198.8	198.8	0.00	0.00	
12,000.0	0.00	0.00	11,994.4	2.2	198.8	198.8	0.00	0.00	
12,047.6	0.00	0.00	12,042.0	2.2	198.8	198.8	0.00	0.00	**150' into Dak**
12,100.0	0.00	0.00	12,094.4	2.2	198.8	198.8	0.00	0.00	
12,200.0	0.00	0.00	12,194.4	2.2	198.8	198.8	0.00	0.00	
12,300.0	0.00	0.00	12,294.4	2.2	198.8	198.8	0.00	0.00	
12,400.0	0.00	0.00	12,394.4	2.2	198.8	198.8	0.00	0.00	
12,500.0	0.00	0.00	12,494.4	2.2	198.8	198.8	0.00	0.00	
12,600.0	0.00	0.00	12,594.4	2.2	198.8	198.8	0.00	0.00	
12,700.0	0.00	0.00	12,694.4	2.2	198.8	198.8	0.00	0.00	
12,800.0	0.00	0.00	12,794.4	2.2	198.8	198.8	0.00	0.00	
12,900.0	0.00	0.00	12,894.4	2.2	198.8	198.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well DV01D-11 A11
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Project:	Cathedral Bluffs	MD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Site:	Sec 11-2S-R100W	North Reference:	True
Well:	DV01D-11 A11	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #8		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
13,005.6	0.00	0.00	13,000.0	2.2	198.8	198.8	0.00	0.00	Permit TD @ 13,005.6' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
DV01D-11 BHL (P8) - plan hits target center - Point	0.00	0.00	11,114.4	2.2	198.8	1,765,298.28	2,136,482.60	39° 53' 39.79 N	108° 34' 40.68 W
DV01D-11 A11 VP - plan hits target center - Point	0.00	0.00	4,125.0	2.2	198.8	1,765,298.28	2,136,482.60	39° 53' 39.79 N	108° 34' 40.68 W
DV01D-11 BHL (3) - plan hits target center - Point	0.00	0.00	11,125.0	2.2	198.8	1,765,298.28	2,136,482.60	39° 53' 39.79 N	108° 34' 40.68 W
DV01D-11 BHL (P7) - plan hits target center - Point	0.00	0.00	11,120.0	2.2	198.8	1,765,298.28	2,136,482.60	39° 53' 39.79 N	108° 34' 40.68 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
32.0	32.0	GL - Green River Fm			
640.5	640.0	A Groove Top			
760.7	760.0	B Groove Base			
2,500.6	2,497.0	Surface Csg			
2,668.7	2,665.0	Wasatch Fm			
3,819.4	3,814.0	Williams Fork			
6,247.6	6,242.0	Rollins			
6,895.6	6,890.0	Sego			
7,302.6	7,297.0	Lloyd Ss			
7,738.6	7,733.0	Buck Tongue			
7,981.6	7,976.0	Castlegate			
8,155.6	8,150.0	Mancos Marker			
8,940.6	8,935.0	Prairie Canyon			
9,285.6	9,280.0	Top Niobrara (Ductile)			
10,365.6	10,360.0	Core Point #1			
10,485.6	10,480.0	A11 Hz Target			
10,585.6	10,580.0	Niobrara Lam Silt			
10,605.6	10,600.0	Base Core Interval			
11,502.6	11,497.0	Fort Hays			
11,712.6	11,707.0	Frontier Ss			
11,897.6	11,892.0	Dakota Ss			
12,047.6	12,042.0	**150' into Dak**			

Cathedral Energy Services

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Project:	Cathedral Bluffs	MD Reference:	KB=32' @ 7973.0ft (Patterson 326)
Site:	Sec 11-2S-R100W	North Reference:	True
Well:	DV01D-11 A11	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #8		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,495.0	2,491.4	0.1	122.7	Tie-In Survey @ 2,495' MD
2,595.0	2,591.3	-0.1	125.5	End Hold
2,751.0	2,747.2	-0.1	131.9	EOB @ Inc. = 3.14°
3,816.9	3,811.5	1.9	190.2	Start 1° Drop
4,130.6	4,125.0	2.2	198.8	EOD @ Inc. = 0°
11,120.0	11,114.4	2.2	198.8	Drillers TD @ 11,120' MD
13,005.6	13,000.0	2.2	198.8	Permit TD @ 13,005.6' MD