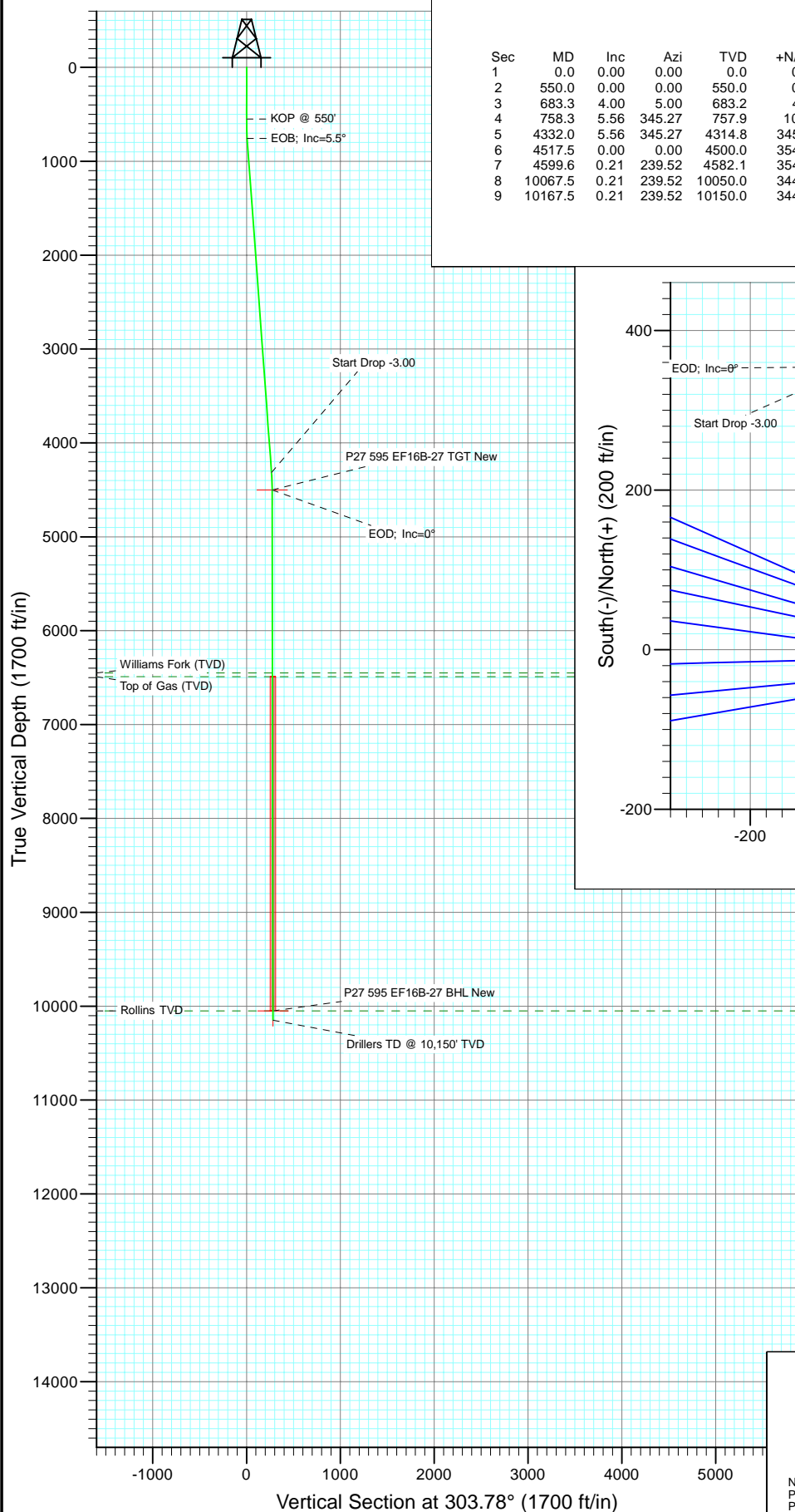


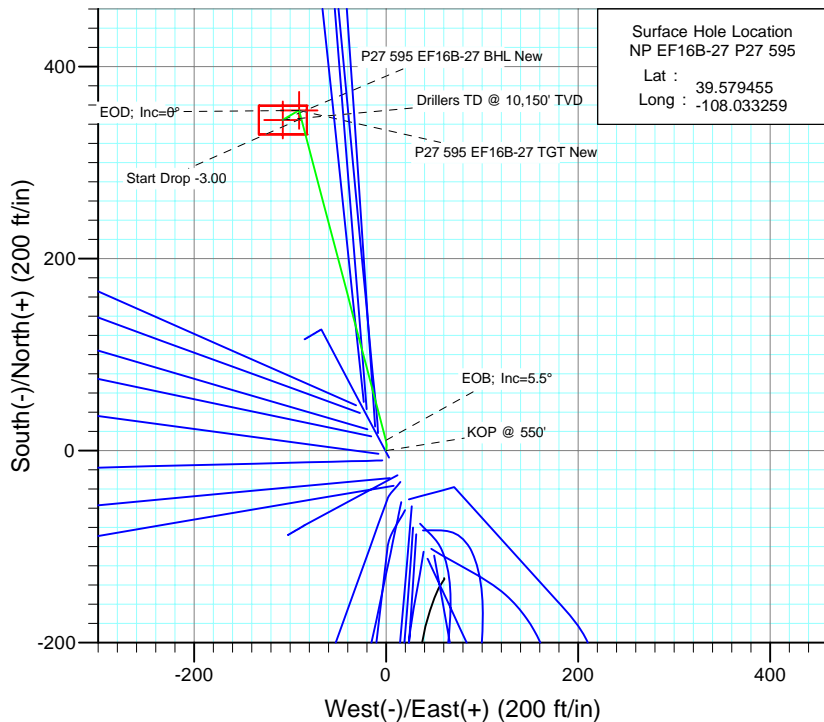


Project: North Piceance
Site: P27 595 (S27-T5S-R95W)
Well: NP EF16B-27 P27 595
Wellbore: DD
Design: Plan #2



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	550.0	0.00	0.00	550.0	0.0	0.0	0.00	0.00	0.0	
3	683.3	4.00	5.00	683.2	4.6	0.4	3.00	5.00	2.2	
4	758.3	5.56	345.27	757.9	10.8	-0.3	3.00	-56.56	6.2	
5	4332.0	5.56	345.27	4314.8	345.9	-88.4	0.00	0.00	265.8	
6	4517.5	0.00	0.00	4500.0	354.6	-90.7	3.00	180.00	272.5	P27 595 EF16B-27 TGT New
7	4599.6	0.21	239.52	4582.1	354.5	-90.8	0.25	239.52	272.6	
8	10067.5	0.21	239.52	10050.0	344.6	-107.7	0.00	0.00	281.1	P27 595 EF16B-27 BHL New
9	10167.5	0.21	239.52	10150.0	344.4	-108.0	0.00	0.00	281.2	



Azimuths to True North
Magnetic North: 10.65°

Magnetic Field
Strength: 52540.8nT
Dip Angle: 65.87°
Date: 3/4/2009
Model: IGRF200510

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
6450.0	6467.5	Williams Fork (TVD)
6490.0	6507.5	Top of Gas (TVD)
10050.0	10067.5	Rollins TVD

Plan #2 NP EF16B-27 P27 595 95xxx; LR EF16B-27 P27 @ 6671.0ft (Original Well Elev) North American Datum 1983 Well NP EF16B-27 P27 595, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W From TVD
Target	P27 595 EF16B-27 BHL	303.78	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
P27 595 EF16B-27 TGT New	4500.0	354.6	-90.7	39.580429	-108.033580	
P27 595 EF16B-27 BHL New	10050.0	344.6	-107.7	39.580401	-108.033641	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16B-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16B-27 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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

Site		P27 595 (S27-T5S-R95W)			
Site Position:		Northing:	1,645,842.89 ft	Latitude:	39.579292
From:	Lat/Long	Easting:	2,286,079.88 ft	Longitude:	-108.033175
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.60 °

Well	NP EF16B-27 P27 595					
Well Position	+N/-S	0.0 ft	Northing:	1,645,903.05 ft	Latitude:	39.579455
	+E/-W	0.0 ft	Easting:	2,286,057.96 ft	Longitude:	-108.033259
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,649.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	3/4/2009	10.65	65.87	52,541

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	303.78

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	
550.0	0.00	0.00	550.0	0.0	0.0	0.00	0.00	0.00	0.00	
683.3	4.00	5.00	683.2	4.6	0.4	3.00	3.00	0.00	5.00	
758.3	5.56	345.27	757.9	10.8	-0.3	3.00	2.09	-26.33	-56.56	
4,332.0	5.56	345.27	4,314.8	345.9	-88.4	0.00	0.00	0.00	0.00	
4,517.5	0.00	0.00	4,500.0	354.6	-90.7	3.00	-3.00	0.00	180.00	P27 595 EF16B-27 T
4,599.6	0.21	239.52	4,582.1	354.5	-90.8	0.25	0.25	-146.82	239.52	
10,067.5	0.21	239.52	10,050.0	344.6	-107.7	0.00	0.00	0.00	0.00	P27 595 EF16B-27 B
10,167.5	0.21	239.52	10,150.0	344.4	-108.0	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16B-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16B-27 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
550.0	0.00	0.00	550.0	0.0	0.0	0.0	0.00	0.00	KOP @ 550'
600.0	1.50	5.00	600.0	0.7	0.1	0.3	3.00	3.00	
683.3	4.00	5.00	683.2	4.6	0.4	2.2	3.00	3.00	
700.0	4.30	359.42	699.8	5.8	0.4	2.9	3.00	1.78	
758.3	5.56	345.27	757.9	10.8	-0.3	6.2	3.00	2.18	EOB; Inc=5.5°
800.0	5.56	345.27	799.4	14.7	-1.3	9.3	0.00	0.00	
900.0	5.56	345.27	899.0	24.0	-3.8	16.5	0.00	0.00	
1,000.0	5.56	345.27	998.5	33.4	-6.3	23.8	0.00	0.00	
1,100.0	5.56	345.27	1,098.0	42.8	-8.7	31.0	0.00	0.00	
1,200.0	5.56	345.27	1,197.6	52.2	-11.2	38.3	0.00	0.00	
1,300.0	5.56	345.27	1,297.1	61.6	-13.6	45.6	0.00	0.00	
1,400.0	5.56	345.27	1,396.6	70.9	-16.1	52.8	0.00	0.00	
1,405.4	5.56	345.27	1,402.0	71.4	-16.2	53.2	0.00	0.00	P27 595 EF16B-27 TGT
1,500.0	5.56	345.27	1,496.1	80.3	-18.6	60.1	0.00	0.00	
1,600.0	5.56	345.27	1,595.7	89.7	-21.0	67.4	0.00	0.00	
1,700.0	5.56	345.27	1,695.2	99.1	-23.5	74.6	0.00	0.00	
1,800.0	5.56	345.27	1,794.7	108.4	-26.0	81.9	0.00	0.00	
1,900.0	5.56	345.27	1,894.3	117.8	-28.4	89.1	0.00	0.00	
2,000.0	5.56	345.27	1,993.8	127.2	-30.9	96.4	0.00	0.00	
2,100.0	5.56	345.27	2,093.3	136.6	-33.4	103.7	0.00	0.00	
2,200.0	5.56	345.27	2,192.8	146.0	-35.8	110.9	0.00	0.00	
2,300.0	5.56	345.27	2,292.4	155.3	-38.3	118.2	0.00	0.00	
2,400.0	5.56	345.27	2,391.9	164.7	-40.8	125.5	0.00	0.00	
2,500.0	5.56	345.27	2,491.4	174.1	-43.2	132.7	0.00	0.00	
2,600.0	5.56	345.27	2,591.0	183.5	-45.7	140.0	0.00	0.00	
2,700.0	5.56	345.27	2,690.5	192.8	-48.2	147.2	0.00	0.00	
2,800.0	5.56	345.27	2,790.0	202.2	-50.6	154.5	0.00	0.00	
2,900.0	5.56	345.27	2,889.5	211.6	-53.1	161.8	0.00	0.00	
3,000.0	5.56	345.27	2,989.1	221.0	-55.6	169.0	0.00	0.00	
3,100.0	5.56	345.27	3,088.6	230.4	-58.0	176.3	0.00	0.00	
3,200.0	5.56	345.27	3,188.1	239.7	-60.5	183.6	0.00	0.00	
3,300.0	5.56	345.27	3,287.7	249.1	-63.0	190.8	0.00	0.00	
3,400.0	5.56	345.27	3,387.2	258.5	-65.4	198.1	0.00	0.00	
3,500.0	5.56	345.27	3,486.7	267.9	-67.9	205.4	0.00	0.00	
3,600.0	5.56	345.27	3,586.2	277.2	-70.4	212.6	0.00	0.00	
3,700.0	5.56	345.27	3,685.8	286.6	-72.8	219.9	0.00	0.00	
3,800.0	5.56	345.27	3,785.3	296.0	-75.3	227.1	0.00	0.00	
3,900.0	5.56	345.27	3,884.8	305.4	-77.8	234.4	0.00	0.00	
4,000.0	5.56	345.27	3,984.4	314.8	-80.2	241.7	0.00	0.00	
4,100.0	5.56	345.27	4,083.9	324.1	-82.7	248.9	0.00	0.00	
4,200.0	5.56	345.27	4,183.4	333.5	-85.2	256.2	0.00	0.00	
4,300.0	5.56	345.27	4,282.9	342.9	-87.6	263.5	0.00	0.00	
4,332.0	5.56	345.27	4,314.8	345.9	-88.4	265.8	0.00	0.00	Start Drop -3.00
4,400.0	3.52	345.27	4,382.6	351.1	-89.8	269.8	3.00	-3.00	
4,500.0	0.52	345.27	4,482.5	354.5	-90.7	272.5	3.00	-3.00	
4,517.5	0.00	0.00	4,500.0	354.6	-90.7	272.5	3.00	-3.00	EOD; Inc=0° - P27 595 EF16B-27 TGT New

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16B-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16B-27 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
4,599.6	0.21	239.52	4,582.1	354.5	-90.8	272.6	0.25	0.25	
4,600.0	0.21	239.52	4,582.5	354.5	-90.8	272.6	0.00	0.00	
4,700.0	0.21	239.52	4,682.5	354.3	-91.1	272.7	0.00	0.00	
4,800.0	0.21	239.52	4,782.5	354.2	-91.4	272.9	0.00	0.00	
4,900.0	0.21	239.52	4,882.5	354.0	-91.8	273.1	0.00	0.00	
5,000.0	0.21	239.52	4,982.5	353.8	-92.1	273.2	0.00	0.00	
5,100.0	0.21	239.52	5,082.5	353.6	-92.4	273.4	0.00	0.00	
5,200.0	0.21	239.52	5,182.5	353.4	-92.7	273.5	0.00	0.00	
5,300.0	0.21	239.52	5,282.5	353.3	-93.0	273.7	0.00	0.00	
5,400.0	0.21	239.52	5,382.5	353.1	-93.3	273.8	0.00	0.00	
5,500.0	0.21	239.52	5,482.5	352.9	-93.6	274.0	0.00	0.00	
5,600.0	0.21	239.52	5,582.5	352.7	-93.9	274.1	0.00	0.00	
5,700.0	0.21	239.52	5,682.5	352.5	-94.2	274.3	0.00	0.00	
5,800.0	0.21	239.52	5,782.5	352.3	-94.5	274.5	0.00	0.00	
5,900.0	0.21	239.52	5,882.5	352.2	-94.8	274.6	0.00	0.00	
6,000.0	0.21	239.52	5,982.5	352.0	-95.1	274.8	0.00	0.00	
6,100.0	0.21	239.52	6,082.5	351.8	-95.5	274.9	0.00	0.00	
6,200.0	0.21	239.52	6,182.5	351.6	-95.8	275.1	0.00	0.00	
6,300.0	0.21	239.52	6,282.5	351.4	-96.1	275.2	0.00	0.00	
6,400.0	0.21	239.52	6,382.5	351.3	-96.4	275.4	0.00	0.00	
6,467.5	0.21	239.52	6,450.0	351.1	-96.6	275.5	0.00	0.00	Williams Fork (TVD)
6,500.0	0.21	239.52	6,482.5	351.1	-96.7	275.5	0.00	0.00	
6,507.5	0.21	239.52	6,490.0	351.1	-96.7	275.6	0.00	0.00	Top of Gas (TVD)
6,600.0	0.21	239.52	6,582.5	350.9	-97.0	275.7	0.00	0.00	
6,700.0	0.21	239.52	6,682.5	350.7	-97.3	275.9	0.00	0.00	
6,800.0	0.21	239.52	6,782.5	350.5	-97.6	276.0	0.00	0.00	
6,900.0	0.21	239.52	6,882.5	350.3	-97.9	276.2	0.00	0.00	
7,000.0	0.21	239.52	6,982.5	350.2	-98.2	276.3	0.00	0.00	
7,100.0	0.21	239.52	7,082.5	350.0	-98.5	276.5	0.00	0.00	
7,200.0	0.21	239.52	7,182.5	349.8	-98.9	276.6	0.00	0.00	
7,300.0	0.21	239.52	7,282.5	349.6	-99.2	276.8	0.00	0.00	
7,400.0	0.21	239.52	7,382.5	349.4	-99.5	276.9	0.00	0.00	
7,500.0	0.21	239.52	7,482.5	349.3	-99.8	277.1	0.00	0.00	
7,600.0	0.21	239.52	7,582.5	349.1	-100.1	277.3	0.00	0.00	
7,700.0	0.21	239.52	7,682.5	348.9	-100.4	277.4	0.00	0.00	
7,800.0	0.21	239.52	7,782.5	348.7	-100.7	277.6	0.00	0.00	
7,900.0	0.21	239.52	7,882.5	348.5	-101.0	277.7	0.00	0.00	
8,000.0	0.21	239.52	7,982.5	348.3	-101.3	277.9	0.00	0.00	
8,100.0	0.21	239.52	8,082.5	348.2	-101.6	278.0	0.00	0.00	
8,200.0	0.21	239.52	8,182.5	348.0	-101.9	278.2	0.00	0.00	
8,300.0	0.21	239.52	8,282.5	347.8	-102.2	278.3	0.00	0.00	
8,400.0	0.21	239.52	8,382.5	347.6	-102.6	278.5	0.00	0.00	
8,500.0	0.21	239.52	8,482.5	347.4	-102.9	278.7	0.00	0.00	
8,600.0	0.21	239.52	8,582.5	347.3	-103.2	278.8	0.00	0.00	
8,700.0	0.21	239.52	8,682.5	347.1	-103.5	279.0	0.00	0.00	
8,800.0	0.21	239.52	8,782.5	346.9	-103.8	279.1	0.00	0.00	
8,900.0	0.21	239.52	8,882.5	346.7	-104.1	279.3	0.00	0.00	
9,000.0	0.21	239.52	8,982.5	346.5	-104.4	279.4	0.00	0.00	
9,100.0	0.21	239.52	9,082.5	346.4	-104.7	279.6	0.00	0.00	
9,200.0	0.21	239.52	9,182.5	346.2	-105.0	279.7	0.00	0.00	
9,300.0	0.21	239.52	9,282.5	346.0	-105.3	279.9	0.00	0.00	
9,400.0	0.21	239.52	9,382.5	345.8	-105.6	280.1	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16B-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16B-27 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16B-27 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
9,500.0	0.21	239.52	9,482.5	345.6	-105.9	280.2	0.00	0.00	
9,600.0	0.21	239.52	9,582.5	345.4	-106.3	280.4	0.00	0.00	
9,700.0	0.21	239.52	9,682.5	345.3	-106.6	280.5	0.00	0.00	
9,800.0	0.21	239.52	9,782.5	345.1	-106.9	280.7	0.00	0.00	
9,900.0	0.21	239.52	9,882.5	344.9	-107.2	280.8	0.00	0.00	
10,000.0	0.21	239.52	9,982.5	344.7	-107.5	281.0	0.00	0.00	
10,067.5	0.21	239.52	10,050.0	344.6	-107.7	281.1	0.00	0.00	Rollins TVD - P27 595 EF16B-27 BHL New
10,069.0	0.21	239.52	10,051.5	344.6	-107.7	281.1	0.00	0.00	P27 595 EF16B-27 BHL
10,100.0	0.21	239.52	10,082.5	344.5	-107.8	281.1	0.00	0.00	
10,167.5	0.21	239.52	10,150.0	344.4	-108.0	281.2	0.00	0.00	Drillers TD @ 10,150' TVD

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
P27 595 EF16B-27 BHL - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	10,050.0	344.6	-107.7	1,646,250.51	2,285,959.91	39.580401	-108.033641
P27 595 EF16B-27 TGT - plan hits target center - Point	0.00	0.00	4,500.0	354.6	-90.7	1,646,260.04	2,285,977.18	39.580429	-108.033580
P27 595 EF16B-27 BHL - plan misses target center by 277.7ft at 10069.0ft MD (10051.5 TVD, 344.6 N, -107.7 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	10,051.0	67.0	-100.1	1,645,972.77	2,285,959.75	39.579639	-108.033614
P27 595 EF16B-27 TGT - plan misses target center by 60.2ft at 1405.4ft MD (1402.0 TVD, 71.4 N, -16.2 E) - Point	0.00	0.00	1,400.0	77.0	-76.1	1,645,982.10	2,285,983.99	39.579666	-108.033529

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,467.5	6,450.0	Williams Fork (TVD)			
6,507.5	6,490.0	Top of Gas (TVD)			
10,067.5	10,050.0	Rollins TVD			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
550.0	550.0	0.0	0.0	KOP @ 550'
758.3	757.9	4.6	0.4	EOB; Inc=5.5°
4,332.0	4,314.8	10.8	-0.3	Start Drop -3.00
4,517.5	4,500.0	345.9	-88.4	EOD; Inc=0°
10,167.5	10,150.0	354.6	-90.7	Drillers TD @ 10,150' TVD