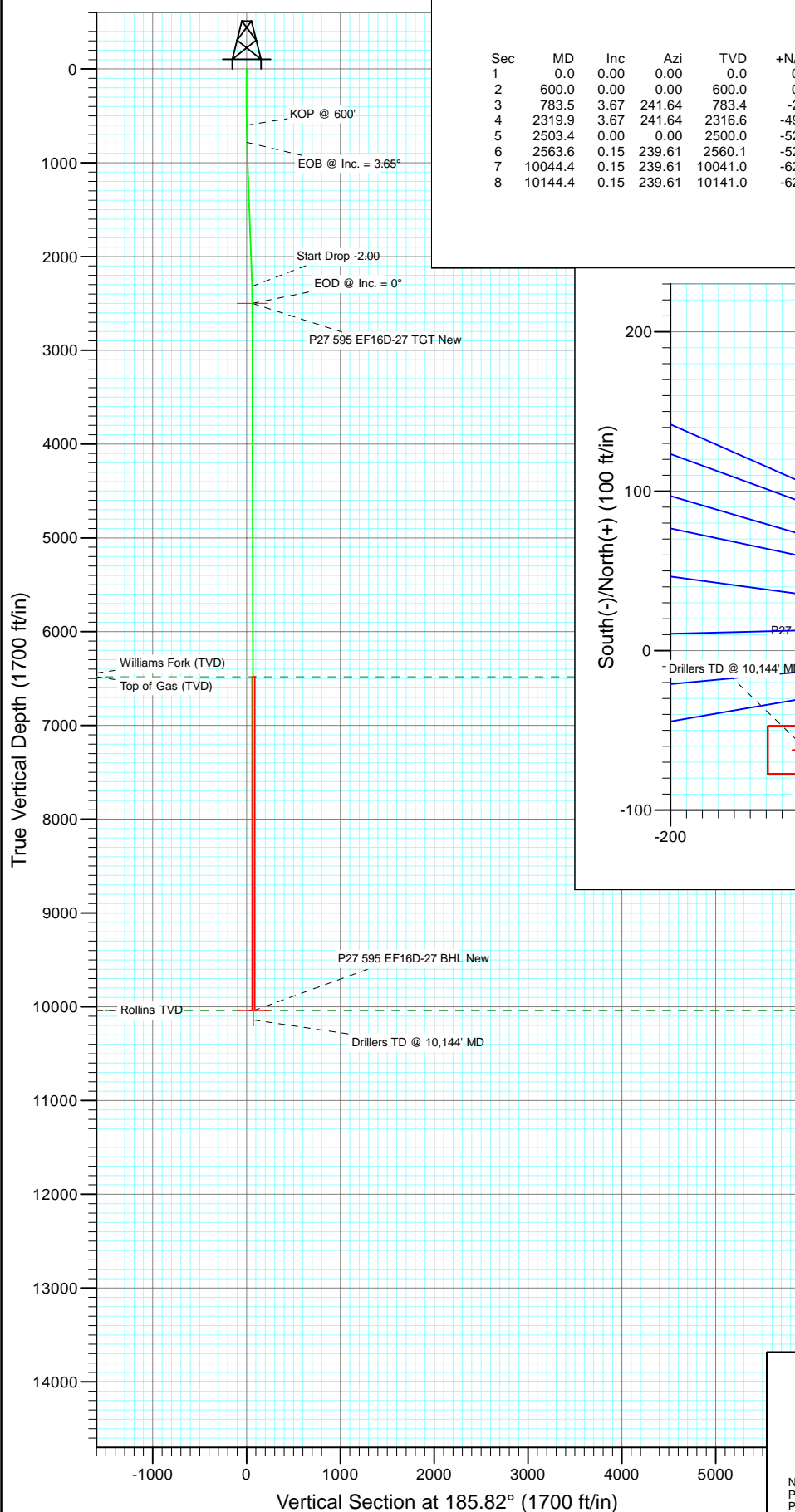


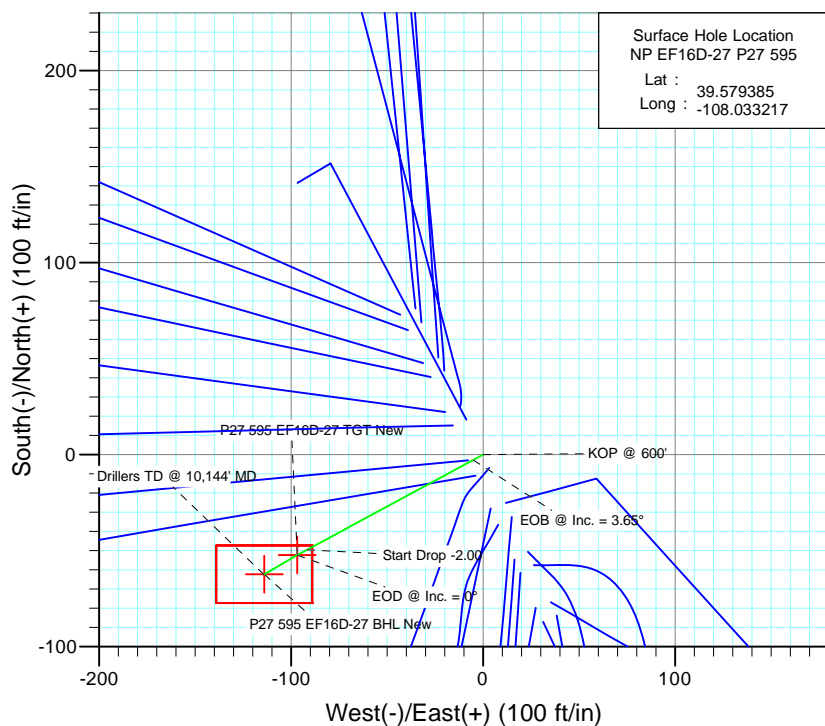


Project: North Piceance
Site: P27 595 (S27-T5S-R95W)
Well: NP EF16D-27 P27 595
Wellbore: DD
Design: Plan #2



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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	783.5	3.67	241.64	783.4	-2.8	-5.2	2.00	241.64	3.3	
4	2319.9	3.67	241.64	2316.6	-49.5	-91.7	0.00	0.00	58.6	
5	2503.4	0.00	0.00	2500.0	-52.3	-96.9	2.00	180.00	61.9	P27 595 EF16D-27 TGT New
6	2563.6	0.15	239.61	2560.1	-52.3	-97.0	0.25	239.61	61.9	
7	10044.4	0.15	239.61	10041.0	-62.3	-113.9	0.00	0.00	73.5	P27 595 EF16D-27 BHL New
8	10144.4	0.15	239.61	10141.0	-62.4	-114.1	0.00	0.00	73.7	



Surface Hole Location
NP EF16D-27 P27 595

Lat : 39.579385
Long : -108.033217



Azimuths to True North
Magnetic North: 10.65°

Magnetic Field
Strength: 52540.2nT
Dip Angle: 65.87°
Date: 3/6/2009
Model: IGRF200510

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
6441.0	6444.4	Williams Fork (TVD)
6481.0	6484.4	Top of Gas (TVD)
10041.0	10044.4	Rollins TVD

Plan #2 NP EF16D-27 P27 595 95xxx: LR EF16D-27 P27 @ 6675.0ft (Original Well Elev) North American Datum 1983 Well NP EF16D-27 P27 595, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W From TVD
Target	P27 595 EF16D-27 BHL	185.82	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
P27 595 EF16D-27 TGT New	2500.0	-52.3	-96.9	39.579241	-108.033560	
P27 595 EF16D-27 BHL New	10041.0	-62.3	-113.9	39.579214	-108.033621	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16D-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16D-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 EF16D-27 P27 595					
Well Position	+N/-S	0.0 ft	Northing:	1,645,877.23 ft	Latitude:	39.579385
	+E/-W	0.0 ft	Easting:	2,286,069.08 ft	Longitude:	-108.033217
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	3/6/2009	10.65	65.87	52,540

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	185.82

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
783.5	3.67	241.64	783.4	-2.8	-5.2	2.00	2.00	0.00	241.64	
2,319.9	3.67	241.64	2,316.6	-49.5	-91.7	0.00	0.00	0.00	0.00	
2,503.4	0.00	0.00	2,500.0	-52.3	-96.9	2.00	-2.00	0.00	180.00	P27 595 EF16D-27 T
2,563.6	0.15	239.61	2,560.1	-52.3	-97.0	0.25	0.25	-200.17	239.61	
10,044.4	0.15	239.61	10,041.0	-62.3	-113.9	0.00	0.00	0.00	0.00	P27 595 EF16D-27 B
10,144.4	0.15	239.61	10,141.0	-62.4	-114.1	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 EF16D-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16D-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	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	2.00	241.64	700.0	-0.8	-1.5	1.0	2.00	2.00	
782.7	3.65	241.64	782.6	-2.8	-5.1	3.3	2.00	2.00	EOB @ Inc. = 3.65°
783.5	3.67	241.64	783.4	-2.8	-5.2	3.3	2.00	2.00	
800.0	3.67	241.64	799.8	-3.3	-6.1	3.9	0.00	0.00	
900.0	3.67	241.64	899.6	-6.3	-11.7	7.5	0.00	0.00	
1,000.0	3.67	241.64	999.4	-9.4	-17.4	11.1	0.00	0.00	
1,100.0	3.67	241.64	1,099.2	-12.4	-23.0	14.7	0.00	0.00	
1,200.0	3.67	241.64	1,199.0	-15.5	-28.6	18.3	0.00	0.00	
1,300.0	3.67	241.64	1,298.8	-18.5	-34.3	21.9	0.00	0.00	
1,400.0	3.67	241.64	1,398.6	-21.5	-39.9	25.5	0.00	0.00	
1,500.0	3.67	241.64	1,498.4	-24.6	-45.5	29.1	0.00	0.00	
1,600.0	3.67	241.64	1,598.2	-27.6	-51.2	32.7	0.00	0.00	
1,700.0	3.67	241.64	1,698.0	-30.7	-56.8	36.3	0.00	0.00	
1,800.0	3.67	241.64	1,797.8	-33.7	-62.4	39.9	0.00	0.00	
1,900.0	3.67	241.64	1,897.6	-36.7	-68.1	43.5	0.00	0.00	
2,000.0	3.67	241.64	1,997.4	-39.8	-73.7	47.1	0.00	0.00	
2,100.0	3.67	241.64	2,097.2	-42.8	-79.3	50.6	0.00	0.00	
2,200.0	3.67	241.64	2,197.0	-45.9	-85.0	54.2	0.00	0.00	
2,300.0	3.67	241.64	2,296.8	-48.9	-90.6	57.8	0.00	0.00	
2,319.9	3.67	241.64	2,316.6	-49.5	-91.7	58.6	0.00	0.00	
2,320.6	3.66	241.64	2,317.4	-49.5	-91.8	58.6	2.00	-2.00	Start Drop -2.00
2,400.0	2.07	241.64	2,396.6	-51.4	-95.3	60.8	2.00	-2.00	
2,500.0	0.07	241.64	2,496.6	-52.3	-96.9	61.9	2.00	-2.00	
2,503.4	0.00	241.64	2,500.0	-52.3	-96.9	61.9	1.98	-1.98	EOD @ Inc. = 0° - P27 595 EF16D-27 TGT Nev
2,563.6	0.15	239.61	2,560.1	-52.3	-97.0	61.9	0.25	0.25	
2,600.0	0.15	239.61	2,596.6	-52.4	-97.1	62.0	0.00	0.00	
2,700.0	0.15	239.61	2,696.6	-52.5	-97.3	62.1	0.00	0.00	
2,800.0	0.15	239.61	2,796.6	-52.7	-97.5	62.3	0.00	0.00	
2,900.0	0.15	239.61	2,896.6	-52.8	-97.7	62.4	0.00	0.00	
3,000.0	0.15	239.61	2,996.6	-52.9	-98.0	62.6	0.00	0.00	
3,100.0	0.15	239.61	3,096.6	-53.1	-98.2	62.7	0.00	0.00	
3,200.0	0.15	239.61	3,196.6	-53.2	-98.4	62.9	0.00	0.00	
3,300.0	0.15	239.61	3,296.6	-53.3	-98.6	63.0	0.00	0.00	
3,400.0	0.15	239.61	3,396.6	-53.5	-98.9	63.2	0.00	0.00	
3,500.0	0.15	239.61	3,496.6	-53.6	-99.1	63.4	0.00	0.00	
3,600.0	0.15	239.61	3,596.6	-53.7	-99.3	63.5	0.00	0.00	
3,700.0	0.15	239.61	3,696.6	-53.8	-99.5	63.7	0.00	0.00	
3,800.0	0.15	239.61	3,796.6	-54.0	-99.8	63.8	0.00	0.00	
3,900.0	0.15	239.61	3,896.6	-54.1	-100.0	64.0	0.00	0.00	
4,000.0	0.15	239.61	3,996.6	-54.2	-100.2	64.1	0.00	0.00	
4,100.0	0.15	239.61	4,096.6	-54.4	-100.4	64.3	0.00	0.00	
4,200.0	0.15	239.61	4,196.6	-54.5	-100.7	64.4	0.00	0.00	
4,300.0	0.15	239.61	4,296.6	-54.6	-100.9	64.6	0.00	0.00	
4,400.0	0.15	239.61	4,396.6	-54.8	-101.1	64.7	0.00	0.00	
4,500.0	0.15	239.61	4,496.6	-54.9	-101.4	64.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16D-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16D-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
4,600.0	0.15	239.61	4,596.6	-55.0	-101.6	65.1	0.00	0.00	
4,700.0	0.15	239.61	4,696.6	-55.2	-101.8	65.2	0.00	0.00	
4,800.0	0.15	239.61	4,796.6	-55.3	-102.0	65.4	0.00	0.00	
4,900.0	0.15	239.61	4,896.6	-55.4	-102.3	65.5	0.00	0.00	
5,000.0	0.15	239.61	4,996.6	-55.6	-102.5	65.7	0.00	0.00	
5,100.0	0.15	239.61	5,096.6	-55.7	-102.7	65.8	0.00	0.00	
5,200.0	0.15	239.61	5,196.6	-55.8	-102.9	66.0	0.00	0.00	
5,300.0	0.15	239.61	5,296.6	-56.0	-103.2	66.1	0.00	0.00	
5,400.0	0.15	239.61	5,396.6	-56.1	-103.4	66.3	0.00	0.00	
5,500.0	0.15	239.61	5,496.6	-56.2	-103.6	66.5	0.00	0.00	
5,600.0	0.15	239.61	5,596.6	-56.4	-103.8	66.6	0.00	0.00	
5,700.0	0.15	239.61	5,696.6	-56.5	-104.1	66.8	0.00	0.00	
5,800.0	0.15	239.61	5,796.6	-56.6	-104.3	66.9	0.00	0.00	
5,900.0	0.15	239.61	5,896.6	-56.8	-104.5	67.1	0.00	0.00	
6,000.0	0.15	239.61	5,996.6	-56.9	-104.7	67.2	0.00	0.00	
6,100.0	0.15	239.61	6,096.6	-57.0	-105.0	67.4	0.00	0.00	
6,200.0	0.15	239.61	6,196.6	-57.2	-105.2	67.5	0.00	0.00	
6,300.0	0.15	239.61	6,296.6	-57.3	-105.4	67.7	0.00	0.00	
6,400.0	0.15	239.61	6,396.6	-57.4	-105.7	67.9	0.00	0.00	
6,444.4	0.15	239.61	6,441.0	-57.5	-105.8	67.9	0.00	0.00	Williams Fork (TVD)
6,479.8	0.15	239.61	6,476.4	-57.5	-105.8	68.0	0.00	0.00	P27 595 EF16D-27 TGT
6,484.4	0.15	239.61	6,481.0	-57.5	-105.8	68.0	0.00	0.00	Top of Gas (TVD)
6,500.0	0.15	239.61	6,496.6	-57.6	-105.9	68.0	0.00	0.00	
6,600.0	0.15	239.61	6,596.6	-57.7	-106.1	68.2	0.00	0.00	
6,700.0	0.15	239.61	6,696.6	-57.8	-106.3	68.3	0.00	0.00	
6,800.0	0.15	239.61	6,796.6	-58.0	-106.6	68.5	0.00	0.00	
6,900.0	0.15	239.61	6,896.6	-58.1	-106.8	68.6	0.00	0.00	
7,000.0	0.15	239.61	6,996.6	-58.2	-107.0	68.8	0.00	0.00	
7,100.0	0.15	239.61	7,096.6	-58.4	-107.2	68.9	0.00	0.00	
7,200.0	0.15	239.61	7,196.6	-58.5	-107.5	69.1	0.00	0.00	
7,300.0	0.15	239.61	7,296.6	-58.6	-107.7	69.2	0.00	0.00	
7,400.0	0.15	239.61	7,396.6	-58.8	-107.9	69.4	0.00	0.00	
7,500.0	0.15	239.61	7,496.6	-58.9	-108.1	69.6	0.00	0.00	
7,600.0	0.15	239.61	7,596.6	-59.0	-108.4	69.7	0.00	0.00	
7,700.0	0.15	239.61	7,696.6	-59.2	-108.6	69.9	0.00	0.00	
7,800.0	0.15	239.61	7,796.6	-59.3	-108.8	70.0	0.00	0.00	
7,900.0	0.15	239.61	7,896.6	-59.4	-109.0	70.2	0.00	0.00	
8,000.0	0.15	239.61	7,996.6	-59.6	-109.3	70.3	0.00	0.00	
8,100.0	0.15	239.61	8,096.6	-59.7	-109.5	70.5	0.00	0.00	
8,200.0	0.15	239.61	8,196.6	-59.8	-109.7	70.6	0.00	0.00	
8,300.0	0.15	239.61	8,296.6	-60.0	-110.0	70.8	0.00	0.00	
8,400.0	0.15	239.61	8,396.6	-60.1	-110.2	71.0	0.00	0.00	
8,500.0	0.15	239.61	8,496.6	-60.2	-110.4	71.1	0.00	0.00	
8,600.0	0.15	239.61	8,596.6	-60.4	-110.6	71.3	0.00	0.00	
8,700.0	0.15	239.61	8,696.6	-60.5	-110.9	71.4	0.00	0.00	
8,800.0	0.15	239.61	8,796.6	-60.6	-111.1	71.6	0.00	0.00	
8,900.0	0.15	239.61	8,896.6	-60.8	-111.3	71.7	0.00	0.00	
9,000.0	0.15	239.61	8,996.6	-60.9	-111.5	71.9	0.00	0.00	
9,100.0	0.15	239.61	9,096.6	-61.0	-111.8	72.0	0.00	0.00	
9,200.0	0.15	239.61	9,196.6	-61.2	-112.0	72.2	0.00	0.00	
9,300.0	0.15	239.61	9,296.6	-61.3	-112.2	72.3	0.00	0.00	
9,400.0	0.15	239.61	9,396.6	-61.4	-112.4	72.5	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF16D-27 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF16D-27 P27 @ 6675.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF16D-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	0.15	239.61	9,496.6	-61.6	-112.7	72.7	0.00	0.00	
9,600.0	0.15	239.61	9,596.6	-61.7	-112.9	72.8	0.00	0.00	
9,700.0	0.15	239.61	9,696.6	-61.8	-113.1	73.0	0.00	0.00	
9,800.0	0.15	239.61	9,796.6	-61.9	-113.3	73.1	0.00	0.00	
9,900.0	0.15	239.61	9,896.6	-62.1	-113.6	73.3	0.00	0.00	
10,000.0	0.15	239.61	9,996.6	-62.2	-113.8	73.4	0.00	0.00	
10,039.9	0.15	239.61	10,036.5	-62.3	-113.9	73.5	0.00	0.00	P27 595 EF16D-27 BHL
10,044.4	0.15	239.61	10,041.0	-62.3	-113.9	73.5	0.00	0.00	Rollins TVD - P27 595 EF16D-27 BHL New
10,100.0	0.15	239.61	10,096.6	-62.3	-114.0	73.6	0.00	0.00	
10,144.4	0.15	239.61	10,141.0	-62.4	-114.1	73.7	0.00	0.00	Drillers TD @ 10,144' 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
P27 595 EF16D-27 TGT - plan misses target center by 453.7ft at 6479.8ft MD (6476.4 TVD, -57.5 N, -105.8 E) - Point	0.00	0.00	6,476.0	-504.6	-28.4	1,645,373.58	2,286,026.62	39.578000	-108.033317
P27 595 EF16D-27 BHL - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	10,041.0	-62.3	-113.9	1,645,818.16	2,285,953.49	39.579214	-108.033621
P27 595 EF16D-27 BHL - plan misses target center by 456.5ft at 10039.9ft MD (10036.5 TVD, -62.3 N, -113.9 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	10,036.0	-514.6	-52.5	1,645,364.26	2,286,002.30	39.577972	-108.033403
P27 595 EF16D-27 TGT - plan hits target center - Point	0.00	0.00	2,500.0	-52.3	-96.9	1,645,827.65	2,285,970.76	39.579241	-108.033560

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,444.4	6,441.0	Williams Fork (TVD)			
6,484.4	6,481.0	Top of Gas (TVD)			
10,044.4	10,041.0	Rollins TVD			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
600.0	600.0	0.0	0.0	KOP @ 600'
782.7	782.6	-2.8	-5.1	EOB @ Inc. = 3.65°
2,320.6	2,317.4	-49.5	-91.8	Start Drop -2.00
2,503.4	2,500.0	-52.3	-96.9	EOD @ Inc. = 0°
10,144.4	10,141.0	-62.4	-114.1	Drillers TD @ 10,144' MD