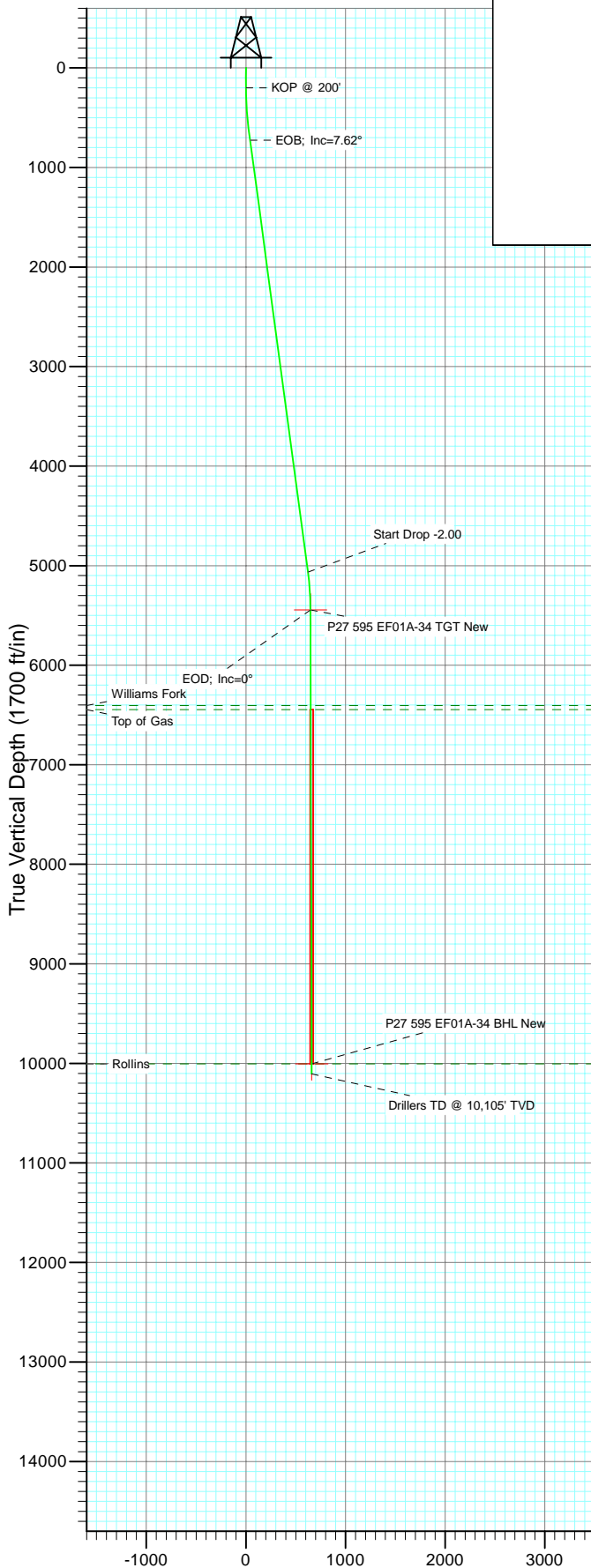




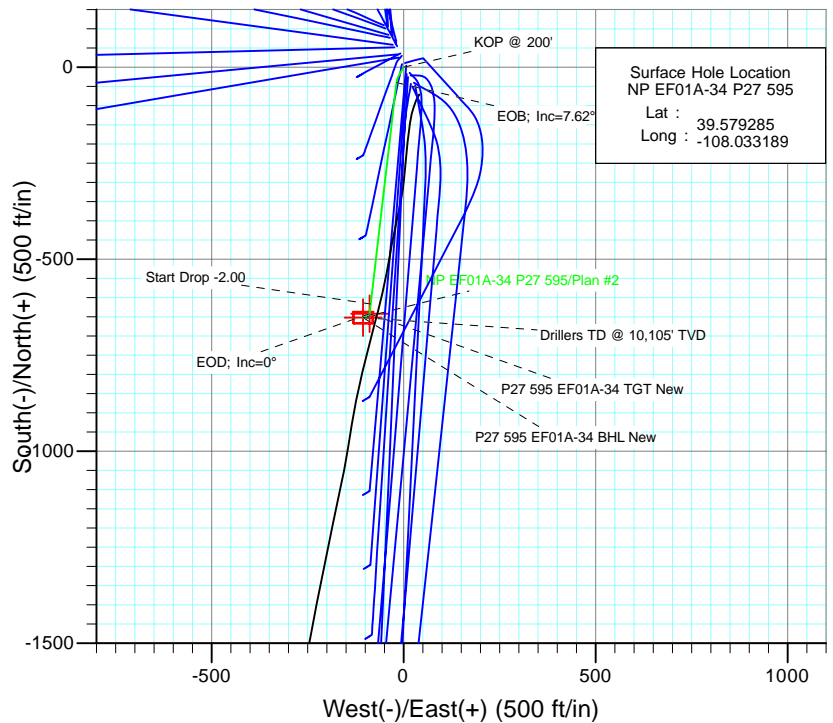
Project: North Piceance
 Site: P27 595 (S27-T5S-R95W)
 Well: NP EF01A-34 P27 595
 Wellbore: DD
 Design: Plan #2



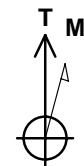
Vertical Section at 189.19° (1700 ft/in)

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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	574.5	7.49	210.00	573.4	-21.2	-12.2	2.00	210.00	22.8	
4	727.1	7.62	186.64	724.8	-39.8	-18.4	2.00	-99.23	42.3	
5	5106.2	7.62	186.64	5065.2	-616.5	-85.5	0.00	0.00	622.2	P27 595 EF01A-34 TGT New
6	5487.1	0.00	0.00	5445.0	-641.6	-88.4	2.00	180.00	647.5	
7	5587.5	0.25	239.49	5545.4	-641.7	-88.6	0.25	239.49	647.6	
8	10047.2	0.25	239.49	10005.0	-651.6	-105.4	0.00	0.00	660.1	P27 595 EF01A-34 BHL New
9	10147.2	0.25	239.49	10105.0	-651.9	-105.8	0.00	0.00	660.4	



Surface Hole Location
 NP EF01A-34 P27 595
 Lat : 39.579285
 Long : -108.033189



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
6405.0	6447.1	Williams Fork
6445.0	6487.1	Top of Gas
10005.0	10047.2	Rollins

Plan #2 NP EF01A-34 P27 595 95xxx; LR EF01A-34 P27 @ 6671.0ft (Original Well Elev) North American Datum 1983 Well NP EF01A-34 P27 595, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
Target	P27 595 EF01A-34 BHL New	189.19	Slot		0.0	0.0
						From TVD
						0.0
Name	Target	TVD	+N/-S	+E/-W	Latitude	Longitude
P27 595 EF01A-34 TGT New		5445.0	-641.6	-88.4	39.577524	-108.033502
P27 595 EF01A-34 BHL New		10005.0	-651.6	-105.4	39.577496	-108.033563

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01A-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01A-34 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 EF01A-34 P27 595					
Well Position	+N/-S	0.0 ft	Northing:	1,645,840.60 ft	Latitude:	39.579285
	+E/-W	0.0 ft	Easting:	2,286,075.96 ft	Longitude:	-108.033189
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	189.19

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
574.5	7.49	210.00	573.4	-21.2	-12.2	2.00	2.00	0.00	210.00	
727.1	7.62	186.64	724.8	-39.8	-18.4	2.00	0.08	-15.30	-99.23	
5,106.2	7.62	186.64	5,065.2	-616.5	-85.5	0.00	0.00	0.00	0.00	
5,487.1	0.00	0.00	5,445.0	-641.6	-88.4	2.00	-2.00	0.00	180.00	P27 595 EF01A-34 T
5,587.5	0.25	239.49	5,545.4	-641.7	-88.6	0.25	0.25	-120.03	239.49	
10,047.2	0.25	239.49	10,005.0	-651.6	-105.4	0.00	0.00	0.00	0.00	P27 595 EF01A-34 B
10,147.2	0.25	239.49	10,105.0	-651.9	-105.8	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 EF01A-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01A-34 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	KOP @ 200'
300.0	2.00	210.00	300.0	-1.5	-0.9	1.6	2.00	2.00	
400.0	4.00	210.00	399.8	-6.0	-3.5	6.5	2.00	2.00	
500.0	6.00	210.00	499.5	-13.6	-7.8	14.7	2.00	2.00	
574.5	7.49	210.00	573.4	-21.2	-12.2	22.8	2.00	2.00	
600.0	7.43	206.10	598.7	-24.1	-13.8	26.0	2.00	-0.25	
700.0	7.51	190.68	697.9	-36.3	-17.8	38.7	2.00	0.08	
727.1	7.62	186.64	724.7	-39.8	-18.4	42.3	2.00	0.41	EOB; Inc=7.62°
800.0	7.62	186.64	797.0	-49.4	-19.5	51.9	0.00	0.00	
900.0	7.62	186.64	896.1	-62.6	-21.0	65.2	0.00	0.00	
1,000.0	7.62	186.64	995.2	-75.8	-22.5	78.4	0.00	0.00	
1,100.0	7.62	186.64	1,094.4	-88.9	-24.1	91.6	0.00	0.00	
1,200.0	7.62	186.64	1,193.5	-102.1	-25.6	104.9	0.00	0.00	
1,300.0	7.62	186.64	1,292.6	-115.3	-27.1	118.1	0.00	0.00	
1,400.0	7.62	186.64	1,391.7	-128.4	-28.7	131.4	0.00	0.00	
1,500.0	7.62	186.64	1,490.8	-141.6	-30.2	144.6	0.00	0.00	
1,600.0	7.62	186.64	1,589.9	-154.8	-31.7	157.9	0.00	0.00	
1,700.0	7.62	186.64	1,689.1	-167.9	-33.3	171.1	0.00	0.00	
1,800.0	7.62	186.64	1,788.2	-181.1	-34.8	184.3	0.00	0.00	
1,900.0	7.62	186.64	1,887.3	-194.3	-36.3	197.6	0.00	0.00	
2,000.0	7.62	186.64	1,986.4	-207.5	-37.9	210.8	0.00	0.00	
2,100.0	7.62	186.64	2,085.5	-220.6	-39.4	224.1	0.00	0.00	
2,200.0	7.62	186.64	2,184.6	-233.8	-40.9	237.3	0.00	0.00	
2,300.0	7.62	186.64	2,283.8	-247.0	-42.5	250.6	0.00	0.00	
2,400.0	7.62	186.64	2,382.9	-260.1	-44.0	263.8	0.00	0.00	
2,500.0	7.62	186.64	2,482.0	-273.3	-45.5	277.1	0.00	0.00	
2,600.0	7.62	186.64	2,581.1	-286.5	-47.1	290.3	0.00	0.00	
2,700.0	7.62	186.64	2,680.2	-299.6	-48.6	303.5	0.00	0.00	
2,800.0	7.62	186.64	2,779.3	-312.8	-50.1	316.8	0.00	0.00	
2,900.0	7.62	186.64	2,878.5	-326.0	-51.7	330.0	0.00	0.00	
3,000.0	7.62	186.64	2,977.6	-339.1	-53.2	343.3	0.00	0.00	
3,100.0	7.62	186.64	3,076.7	-352.3	-54.7	356.5	0.00	0.00	
3,200.0	7.62	186.64	3,175.8	-365.5	-56.3	369.8	0.00	0.00	
3,300.0	7.62	186.64	3,274.9	-378.6	-57.8	383.0	0.00	0.00	
3,400.0	7.62	186.64	3,374.1	-391.8	-59.3	396.3	0.00	0.00	
3,500.0	7.62	186.64	3,473.2	-405.0	-60.9	409.5	0.00	0.00	
3,600.0	7.62	186.64	3,572.3	-418.1	-62.4	422.7	0.00	0.00	
3,700.0	7.62	186.64	3,671.4	-431.3	-63.9	436.0	0.00	0.00	
3,800.0	7.62	186.64	3,770.5	-444.5	-65.5	449.2	0.00	0.00	
3,900.0	7.62	186.64	3,869.6	-457.6	-67.0	462.5	0.00	0.00	
4,000.0	7.62	186.64	3,968.8	-470.8	-68.5	475.7	0.00	0.00	
4,100.0	7.62	186.64	4,067.9	-484.0	-70.1	489.0	0.00	0.00	
4,200.0	7.62	186.64	4,167.0	-497.2	-71.6	502.2	0.00	0.00	
4,300.0	7.62	186.64	4,266.1	-510.3	-73.1	515.4	0.00	0.00	
4,400.0	7.62	186.64	4,365.2	-523.5	-74.7	528.7	0.00	0.00	
4,500.0	7.62	186.64	4,464.3	-536.7	-76.2	541.9	0.00	0.00	
4,600.0	7.62	186.64	4,563.5	-549.8	-77.7	555.2	0.00	0.00	
4,700.0	7.62	186.64	4,662.6	-563.0	-79.3	568.4	0.00	0.00	
4,800.0	7.62	186.64	4,761.7	-576.2	-80.8	581.7	0.00	0.00	
4,900.0	7.62	186.64	4,860.8	-589.3	-82.3	594.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01A-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01A-34 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
5,000.0	7.62	186.64	4,959.9	-602.5	-83.8	608.2	0.00	0.00	
5,100.0	7.62	186.64	5,059.0	-615.7	-85.4	621.4	0.00	0.00	
5,106.2	7.62	186.64	5,065.2	-616.5	-85.5	622.2	0.00	0.00	Start Drop -2.00
5,200.0	5.74	186.64	5,158.4	-627.3	-86.7	633.1	2.00	-2.00	
5,300.0	3.74	186.64	5,258.0	-635.5	-87.7	641.4	2.00	-2.00	
5,400.0	1.74	186.64	5,357.9	-640.3	-88.2	646.2	2.00	-2.00	
5,487.1	0.00	186.64	5,445.0	-641.6	-88.4	647.5	2.00	-2.00	EOD; Inc=0° - P27 595 EF01A-34 TGT New
5,500.0	0.03	239.49	5,457.9	-641.6	-88.4	647.5	0.25	0.25	
5,587.5	0.25	239.49	5,545.4	-641.7	-88.6	647.6	0.25	0.25	
5,600.0	0.25	239.49	5,557.9	-641.7	-88.6	647.7	0.00	0.00	
5,700.0	0.25	239.49	5,657.9	-642.0	-89.0	647.9	0.00	0.00	
5,800.0	0.25	239.49	5,757.9	-642.2	-89.4	648.2	0.00	0.00	
5,900.0	0.25	239.49	5,857.9	-642.4	-89.8	648.5	0.00	0.00	
6,000.0	0.25	239.49	5,957.9	-642.6	-90.1	648.8	0.00	0.00	
6,100.0	0.25	239.49	6,057.9	-642.9	-90.5	649.1	0.00	0.00	
6,200.0	0.25	239.49	6,157.9	-643.1	-90.9	649.3	0.00	0.00	
6,300.0	0.25	239.49	6,257.9	-643.3	-91.3	649.6	0.00	0.00	
6,400.0	0.25	239.49	6,357.9	-643.5	-91.7	649.9	0.00	0.00	
6,447.1	0.25	239.49	6,405.0	-643.6	-91.8	650.0	0.00	0.00	Williams Fork
6,487.1	0.25	239.49	6,445.0	-643.7	-92.0	650.1	0.00	0.00	Top of Gas
6,500.0	0.25	239.49	6,457.9	-643.7	-92.0	650.2	0.00	0.00	
6,508.2	0.25	239.49	6,466.1	-643.8	-92.1	650.2	0.00	0.00	P27 595 EF01A-34 TGT
6,600.0	0.25	239.49	6,557.9	-644.0	-92.4	650.5	0.00	0.00	
6,700.0	0.25	239.49	6,657.9	-644.2	-92.8	650.7	0.00	0.00	
6,800.0	0.25	239.49	6,757.9	-644.4	-93.2	651.0	0.00	0.00	
6,900.0	0.25	239.49	6,857.9	-644.6	-93.5	651.3	0.00	0.00	
7,000.0	0.25	239.49	6,957.9	-644.9	-93.9	651.6	0.00	0.00	
7,100.0	0.25	239.49	7,057.9	-645.1	-94.3	651.9	0.00	0.00	
7,200.0	0.25	239.49	7,157.9	-645.3	-94.7	652.1	0.00	0.00	
7,300.0	0.25	239.49	7,257.9	-645.5	-95.1	652.4	0.00	0.00	
7,400.0	0.25	239.49	7,357.9	-645.7	-95.4	652.7	0.00	0.00	
7,500.0	0.25	239.49	7,457.9	-646.0	-95.8	653.0	0.00	0.00	
7,600.0	0.25	239.49	7,557.9	-646.2	-96.2	653.3	0.00	0.00	
7,700.0	0.25	239.49	7,657.9	-646.4	-96.6	653.5	0.00	0.00	
7,800.0	0.25	239.49	7,757.9	-646.6	-96.9	653.8	0.00	0.00	
7,900.0	0.25	239.49	7,857.8	-646.9	-97.3	654.1	0.00	0.00	
8,000.0	0.25	239.49	7,957.8	-647.1	-97.7	654.4	0.00	0.00	
8,100.0	0.25	239.49	8,057.8	-647.3	-98.1	654.7	0.00	0.00	
8,200.0	0.25	239.49	8,157.8	-647.5	-98.4	654.9	0.00	0.00	
8,300.0	0.25	239.49	8,257.8	-647.7	-98.8	655.2	0.00	0.00	
8,400.0	0.25	239.49	8,357.8	-648.0	-99.2	655.5	0.00	0.00	
8,500.0	0.25	239.49	8,457.8	-648.2	-99.6	655.8	0.00	0.00	
8,600.0	0.25	239.49	8,557.8	-648.4	-100.0	656.1	0.00	0.00	
8,700.0	0.25	239.49	8,657.8	-648.6	-100.3	656.3	0.00	0.00	
8,800.0	0.25	239.49	8,757.8	-648.9	-100.7	656.6	0.00	0.00	
8,900.0	0.25	239.49	8,857.8	-649.1	-101.1	656.9	0.00	0.00	
9,000.0	0.25	239.49	8,957.8	-649.3	-101.5	657.2	0.00	0.00	
9,100.0	0.25	239.49	9,057.8	-649.5	-101.8	657.5	0.00	0.00	
9,200.0	0.25	239.49	9,157.8	-649.7	-102.2	657.7	0.00	0.00	
9,300.0	0.25	239.49	9,257.8	-650.0	-102.6	658.0	0.00	0.00	
9,400.0	0.25	239.49	9,357.8	-650.2	-103.0	658.3	0.00	0.00	
9,500.0	0.25	239.49	9,457.8	-650.4	-103.4	658.6	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01A-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01A-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01A-34 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
9,600.0	0.25	239.49	9,557.8	-650.6	-103.7	658.9	0.00	0.00	
9,700.0	0.25	239.49	9,657.8	-650.9	-104.1	659.1	0.00	0.00	
9,800.0	0.25	239.49	9,757.8	-651.1	-104.5	659.4	0.00	0.00	
9,900.0	0.25	239.49	9,857.8	-651.3	-104.9	659.7	0.00	0.00	
10,000.0	0.25	239.49	9,957.8	-651.5	-105.2	660.0	0.00	0.00	
10,047.2	0.25	239.49	10,005.0	-651.6	-105.4	660.1	0.00	0.00	Rollins - P27 595 EF01A-34 BHL New
10,100.0	0.25	239.49	10,057.8	-651.7	-105.6	660.2	0.00	0.00	
10,147.2	0.25	239.49	10,105.0	-651.9	-105.8	660.4	0.00	0.00	

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	
- Shape									Latitude Longitude
P27 595 EF01A-34 TGT	- plan hits target center	0.00	0.00	5,445.0	-641.6	-88.4	1,645,201.71	2,285,969.70	39.577524 -108.033502
	- Point								
P27 595 EF01A-34 TGT	- plan misses target center by 71.8ft at 6508.2ft MD (6466.1 TVD, -643.8 N, -92.1 E)	0.00	0.00	6,466.0	-712.1	-70.1	1,645,130.74	2,285,986.07	39.577330 -108.033437
	- Point								
P27 595 EF01A-34 BHL	- plan hits target center	0.00	0.00	10,005.0	-651.6	-105.4	1,645,192.16	2,285,952.41	39.577496 -108.033563
	- Rectangle (sides W30.0 H50.0 D0.0)								

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,447.1	6,405.0	Williams Fork			
6,487.1	6,445.0	Top of Gas			
10,047.2	10,005.0	Rollins			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
727.1	724.8	-21.2	-12.2	EOB; Inc=7.62°
5,106.2	5,065.2	-39.8	-18.4	Start Drop -2.00
5,487.1	5,445.0	-616.5	-85.5	EOD; Inc=0°
10,147.2	10,105.0	-641.6	-88.4	Drillers TD @ 10,105' TVD