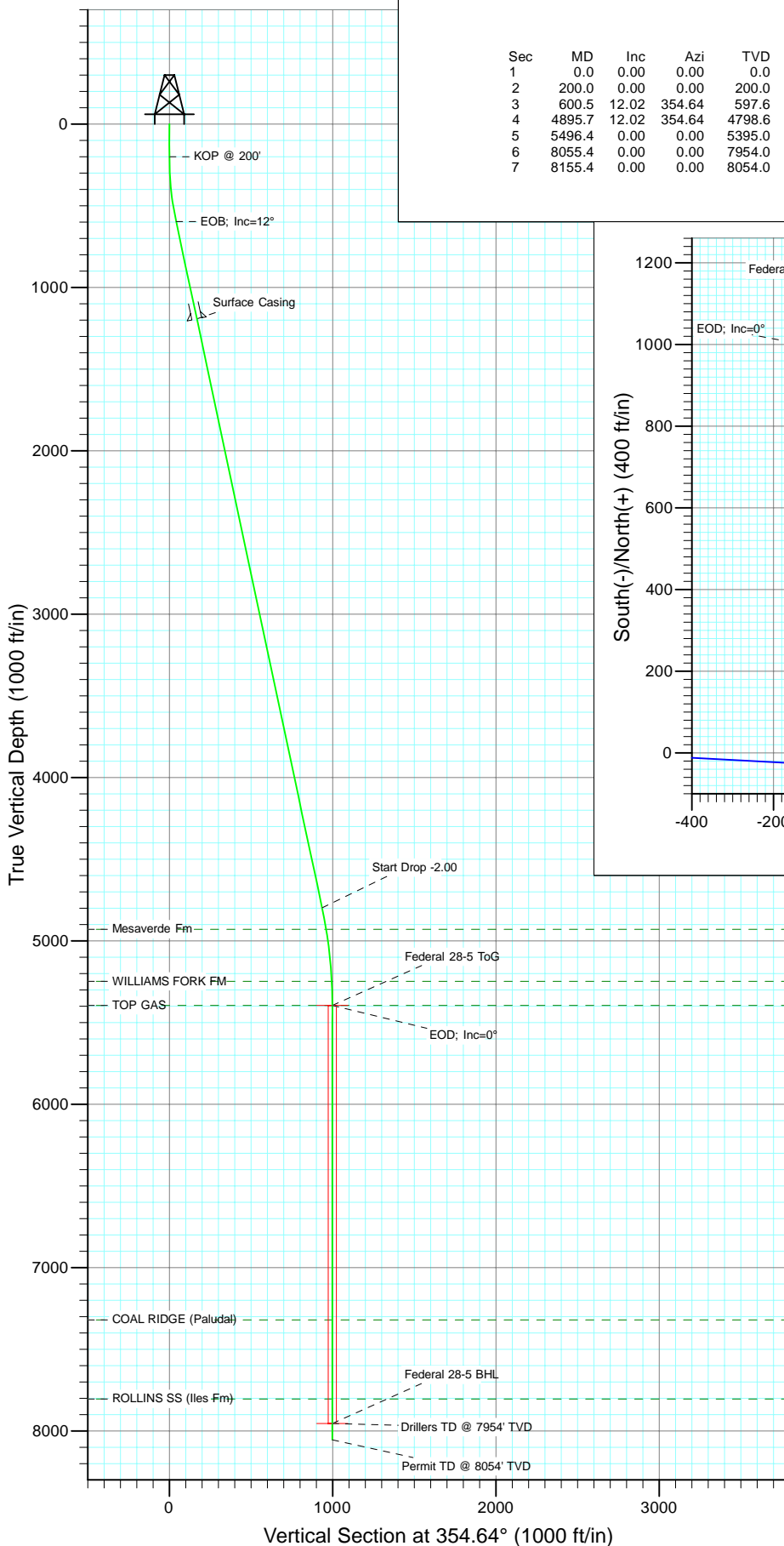


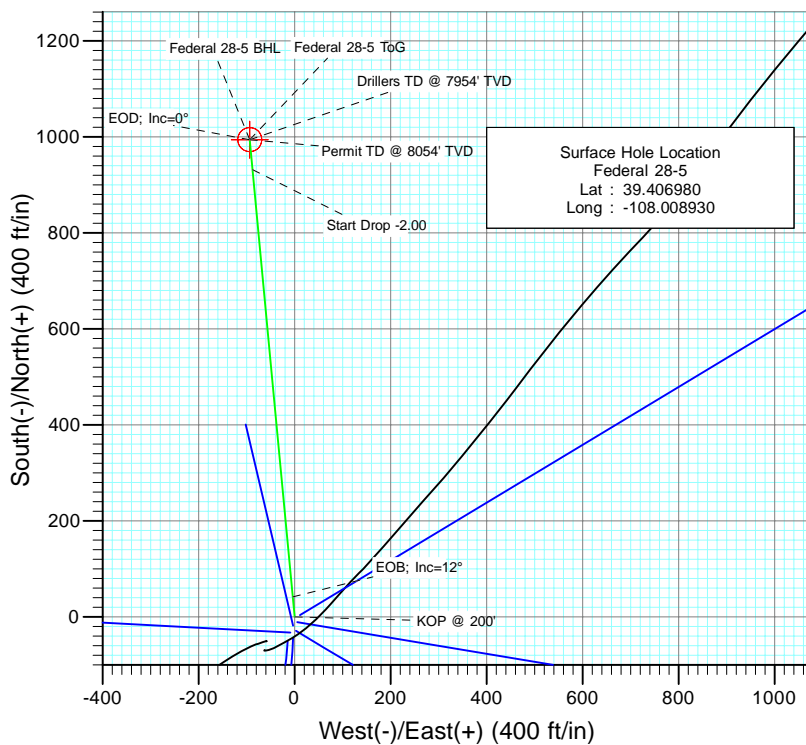


Project: S. Piceance
 Site: PL 28 Pad (S28-T7S-R95W)
 Well: Federal 28-5
 Wellbore: DD
 Design: Plan #1



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	600.5	12.02	354.64	597.6	41.7	-3.9	3.00	354.64	41.8	
4	4895.7	12.02	354.64	4798.6	931.9	-87.4	0.00	0.00	936.0	
5	5496.4	0.00	0.00	5395.0	994.4	-93.2	2.00	180.00	998.7	Federal 28-5 ToG
6	8055.4	0.00	0.00	7954.0	994.4	-93.2	0.00	0.00	998.7	Federal 28-5 BHL
7	8155.4	0.00	0.00	8054.0	994.4	-93.2	0.00	0.00	998.7	



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4929.0	5028.3	Mesaverde Fm
5248.0	5349.4	WILLIAMS FORK FM
5395.0	5496.4	TOP GAS
7320.0	7421.4	COAL RIDGE (Paludal)
7804.0	7905.4	ROLLINS SS (Iles Fm)



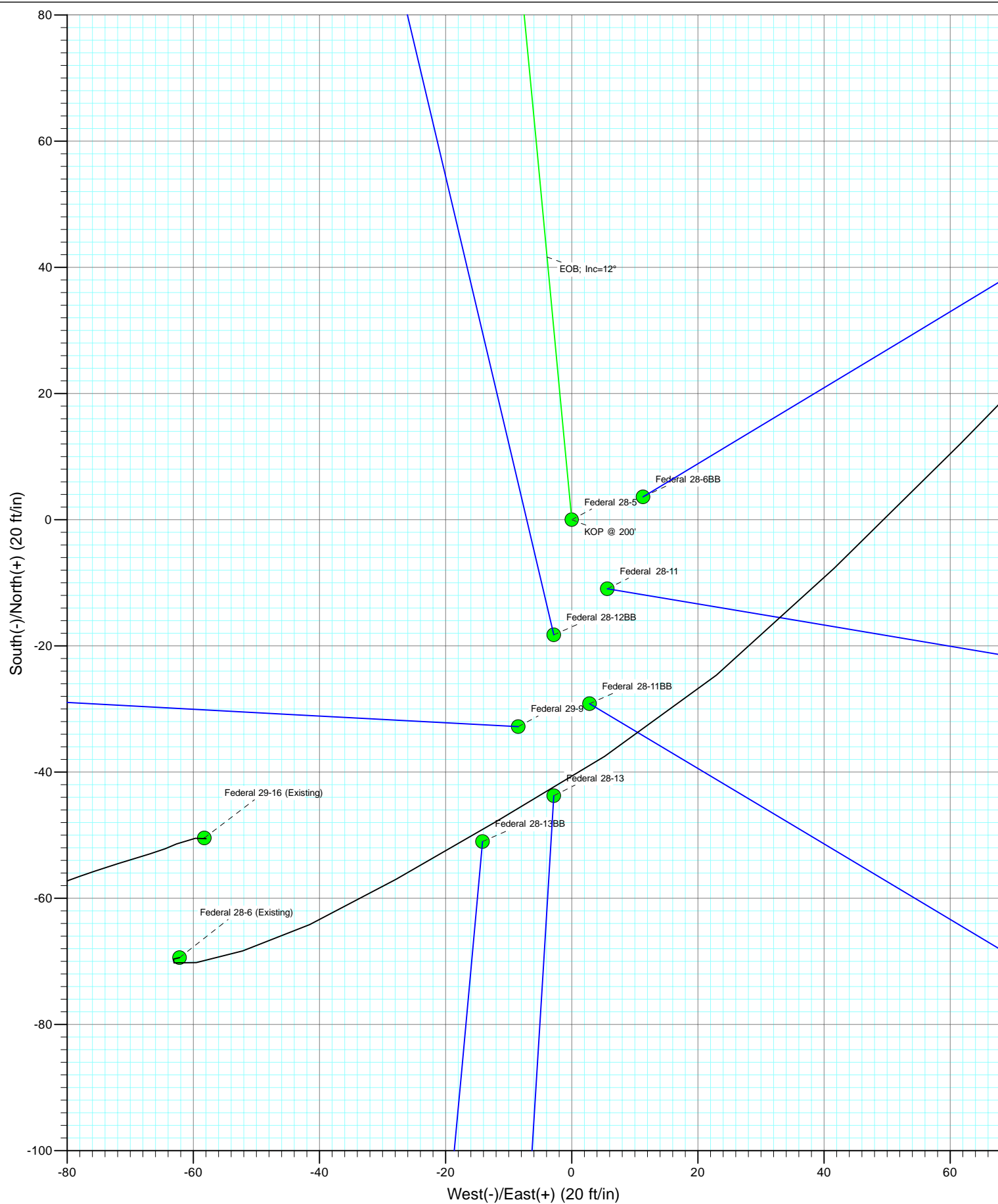
Azimuths to True North
 Magnetic North: 10.45°

Magnetic Field
 Strength: 52322.2snT
 Dip Angle: 65.70°
 Date: 6/10/2010
 Model: IGRF200510

Plan #1
 Federal 28-5
 Job #10xxx: KR

KBE @ 7186.0ft (Original Well Elev)
 North American Datum 1983
 Well Federal 28-5, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	TVD
TD	No Target (Freehand)	354.64	Slot		0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
Federal 28-5 BHL	7954.0	994.4	-93.2	39.409710	-108.009260		



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Federal 28-5
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Project:	S. Piceance	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	North Reference:	True
Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Project	S. Piceance, Garfield County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		PL 28 Pad (S28-T7S-R95W)			
Site Position:		Northing:	1,582,914.36 ft	Latitude:	39.406980
From:	Lat/Long	Easting:	2,291,178.00 ft	Longitude:	-108.008930
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.58 °

Well	Federal 28-5					
Well Position	+N/-S	0.0 ft	Northing:	1,582,914.36 ft	Latitude:	39.406980
	+E/-W	0.0 ft	Easting:	2,291,178.00 ft	Longitude:	-108.008930
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,164.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/10/2010	10.45	65.70	52,322

Design	Plan #1			
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	354.64

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	
600.5	12.02	354.64	597.6	41.7	-3.9	3.00	3.00	0.00	354.64	
4,895.7	12.02	354.64	4,798.6	931.9	-87.4	0.00	0.00	0.00	0.00	
5,496.4	0.00	0.00	5,395.0	994.4	-93.2	2.00	-2.00	0.00	180.00	Federal 28-5 ToG
8,055.4	0.00	0.00	7,954.0	994.4	-93.2	0.00	0.00	0.00	0.00	Federal 28-5 BHL
8,155.4	0.00	0.00	8,054.0	994.4	-93.2	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 Federal 28-5
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Project:	S. Piceance	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	North Reference:	True
Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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	3.00	354.64	300.0	2.6	-0.2	2.6	3.00	3.00	
400.0	6.00	354.64	399.6	10.4	-1.0	10.5	3.00	3.00	
500.0	9.00	354.64	498.8	23.4	-2.2	23.5	3.00	3.00	
600.0	12.00	354.64	597.1	41.6	-3.9	41.7	3.00	3.00	
600.5	12.02	354.64	597.6	41.7	-3.9	41.8	3.00	3.00	EOB; Inc=12°
700.0	12.02	354.64	694.9	62.3	-5.8	62.6	0.00	0.00	
800.0	12.02	354.64	792.7	83.0	-7.8	83.4	0.00	0.00	
900.0	12.02	354.64	890.5	103.7	-9.7	104.2	0.00	0.00	
1,000.0	12.02	354.64	988.3	124.5	-11.7	125.0	0.00	0.00	
1,100.0	12.02	354.64	1,086.1	145.2	-13.6	145.8	0.00	0.00	
1,200.0	12.02	354.64	1,183.9	165.9	-15.6	166.6	0.00	0.00	
1,210.0	12.02	354.64	1,193.7	168.0	-15.8	168.7	0.00	0.00	Surface Casing
1,300.0	12.02	354.64	1,281.7	186.6	-17.5	187.5	0.00	0.00	
1,400.0	12.02	354.64	1,379.6	207.4	-19.4	208.3	0.00	0.00	
1,500.0	12.02	354.64	1,477.4	228.1	-21.4	229.1	0.00	0.00	
1,600.0	12.02	354.64	1,575.2	248.8	-23.3	249.9	0.00	0.00	
1,700.0	12.02	354.64	1,673.0	269.5	-25.3	270.7	0.00	0.00	
1,800.0	12.02	354.64	1,770.8	290.3	-27.2	291.5	0.00	0.00	
1,900.0	12.02	354.64	1,868.6	311.0	-29.2	312.4	0.00	0.00	
2,000.0	12.02	354.64	1,966.4	331.7	-31.1	333.2	0.00	0.00	
2,100.0	12.02	354.64	2,064.2	352.4	-33.0	354.0	0.00	0.00	
2,200.0	12.02	354.64	2,162.0	373.2	-35.0	374.8	0.00	0.00	
2,300.0	12.02	354.64	2,259.8	393.9	-36.9	395.6	0.00	0.00	
2,400.0	12.02	354.64	2,357.6	414.6	-38.9	416.4	0.00	0.00	
2,500.0	12.02	354.64	2,455.5	435.3	-40.8	437.3	0.00	0.00	
2,600.0	12.02	354.64	2,553.3	456.1	-42.8	458.1	0.00	0.00	
2,700.0	12.02	354.64	2,651.1	476.8	-44.7	478.9	0.00	0.00	
2,800.0	12.02	354.64	2,748.9	497.5	-46.7	499.7	0.00	0.00	
2,900.0	12.02	354.64	2,846.7	518.2	-48.6	520.5	0.00	0.00	
3,000.0	12.02	354.64	2,944.5	539.0	-50.5	541.3	0.00	0.00	
3,100.0	12.02	354.64	3,042.3	559.7	-52.5	562.2	0.00	0.00	
3,200.0	12.02	354.64	3,140.1	580.4	-54.4	583.0	0.00	0.00	
3,300.0	12.02	354.64	3,237.9	601.2	-56.4	603.8	0.00	0.00	
3,400.0	12.02	354.64	3,335.7	621.9	-58.3	624.6	0.00	0.00	
3,500.0	12.02	354.64	3,433.6	642.6	-60.3	645.4	0.00	0.00	
3,600.0	12.02	354.64	3,531.4	663.3	-62.2	666.2	0.00	0.00	
3,700.0	12.02	354.64	3,629.2	684.1	-64.1	687.1	0.00	0.00	
3,800.0	12.02	354.64	3,727.0	704.8	-66.1	707.9	0.00	0.00	
3,900.0	12.02	354.64	3,824.8	725.5	-68.0	728.7	0.00	0.00	
4,000.0	12.02	354.64	3,922.6	746.2	-70.0	749.5	0.00	0.00	
4,100.0	12.02	354.64	4,020.4	767.0	-71.9	770.3	0.00	0.00	
4,200.0	12.02	354.64	4,118.2	787.7	-73.9	791.1	0.00	0.00	
4,300.0	12.02	354.64	4,216.0	808.4	-75.8	812.0	0.00	0.00	
4,400.0	12.02	354.64	4,313.8	829.1	-77.7	832.8	0.00	0.00	
4,500.0	12.02	354.64	4,411.6	849.9	-79.7	853.6	0.00	0.00	
4,600.0	12.02	354.64	4,509.5	870.6	-81.6	874.4	0.00	0.00	
4,700.0	12.02	354.64	4,607.3	891.3	-83.6	895.2	0.00	0.00	
4,800.0	12.02	354.64	4,705.1	912.0	-85.5	916.0	0.00	0.00	
4,895.7	12.02	354.64	4,798.6	931.9	-87.4	936.0	0.00	0.00	Start Drop -2.00

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Federal 28-5
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Project:	S. Piceance	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	North Reference:	True
Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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
4,900.0	11.93	354.64	4,802.9	932.8	-87.5	936.9	2.00	-2.00	
5,000.0	9.93	354.64	4,901.1	951.6	-89.2	955.8	2.00	-2.00	
5,028.3	9.36	354.64	4,929.0	956.4	-89.7	960.6	2.00	-2.00	Mesaverde Fm
5,100.0	7.93	354.64	4,999.8	967.1	-90.7	971.3	2.00	-2.00	
5,200.0	5.93	354.64	5,099.1	979.1	-91.8	983.4	2.00	-2.00	
5,300.0	3.93	354.64	5,198.7	987.7	-92.6	992.0	2.00	-2.00	
5,349.4	2.94	354.64	5,248.0	990.6	-92.9	994.9	2.00	-2.00	WILLIAMS FORK FM
5,400.0	1.93	354.64	5,298.6	992.7	-93.1	997.1	2.00	-2.00	
5,496.4	0.00	0.00	5,395.0	994.4	-93.2	998.7	2.00	-2.00	EOD; Inc=0° - TOP GAS - Federal 28-5 ToG
5,500.0	0.00	0.00	5,398.6	994.4	-93.2	998.7	0.00	0.00	
5,600.0	0.00	0.00	5,498.6	994.4	-93.2	998.7	0.00	0.00	
5,700.0	0.00	0.00	5,598.6	994.4	-93.2	998.7	0.00	0.00	
5,800.0	0.00	0.00	5,698.6	994.4	-93.2	998.7	0.00	0.00	
5,900.0	0.00	0.00	5,798.6	994.4	-93.2	998.7	0.00	0.00	
6,000.0	0.00	0.00	5,898.6	994.4	-93.2	998.7	0.00	0.00	
6,100.0	0.00	0.00	5,998.6	994.4	-93.2	998.7	0.00	0.00	
6,200.0	0.00	0.00	6,098.6	994.4	-93.2	998.7	0.00	0.00	
6,300.0	0.00	0.00	6,198.6	994.4	-93.2	998.7	0.00	0.00	
6,400.0	0.00	0.00	6,298.6	994.4	-93.2	998.7	0.00	0.00	
6,500.0	0.00	0.00	6,398.6	994.4	-93.2	998.7	0.00	0.00	
6,600.0	0.00	0.00	6,498.6	994.4	-93.2	998.7	0.00	0.00	
6,700.0	0.00	0.00	6,598.6	994.4	-93.2	998.7	0.00	0.00	
6,800.0	0.00	0.00	6,698.6	994.4	-93.2	998.7	0.00	0.00	
6,900.0	0.00	0.00	6,798.6	994.4	-93.2	998.7	0.00	0.00	
7,000.0	0.00	0.00	6,898.6	994.4	-93.2	998.7	0.00	0.00	
7,100.0	0.00	0.00	6,998.6	994.4	-93.2	998.7	0.00	0.00	
7,200.0	0.00	0.00	7,098.6	994.4	-93.2	998.7	0.00	0.00	
7,300.0	0.00	0.00	7,198.6	994.4	-93.2	998.7	0.00	0.00	
7,400.0	0.00	0.00	7,298.6	994.4	-93.2	998.7	0.00	0.00	
7,421.4	0.00	0.00	7,320.0	994.4	-93.2	998.7	0.00	0.00	COAL RIDGE (Paludal)
7,500.0	0.00	0.00	7,398.6	994.4	-93.2	998.7	0.00	0.00	
7,600.0	0.00	0.00	7,498.6	994.4	-93.2	998.7	0.00	0.00	
7,700.0	0.00	0.00	7,598.6	994.4	-93.2	998.7	0.00	0.00	
7,800.0	0.00	0.00	7,698.6	994.4	-93.2	998.7	0.00	0.00	
7,900.0	0.00	0.00	7,798.6	994.4	-93.2	998.7	0.00	0.00	
7,905.4	0.00	0.00	7,804.0	994.4	-93.2	998.7	0.00	0.00	ROLLINS SS (Iles Fm)
8,000.0	0.00	0.00	7,898.6	994.4	-93.2	998.7	0.00	0.00	
8,055.4	0.00	0.00	7,954.0	994.4	-93.2	998.7	0.00	0.00	Drillers TD @ 7954' TVD - Federal 28-5 BHL
8,100.0	0.00	0.00	7,998.6	994.4	-93.2	998.7	0.00	0.00	
8,155.4	0.00	0.00	8,054.0	994.4	-93.2	998.7	0.00	0.00	Permit TD @ 8054' TVD

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Federal 28-5
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Project:	S. Piceance	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	North Reference:	True
Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Federal 28-5 ToG	0.00	0.00	5,395.0	994.4	-93.2	1,583,910.91	2,291,112.25	39.409710	-108.009260
- plan hits target center									
- Point									
Federal 28-5 BHL	0.00	0.00	7,954.0	994.4	-93.2	1,583,910.91	2,291,112.25	39.409710	-108.009260
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(in)	(in)
1,210.0	1,193.7	Surface Casing		0.000	0.000

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
5,028.3	4,929.0	Mesaverde Fm				
5,349.4	5,248.0	WILLIAMS FORK FM				
5,496.4	5,395.0	TOP GAS				
7,421.4	7,320.0	COAL RIDGE (Paludal)				
7,905.4	7,804.0	ROLLINS SS (Iles Fm)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
200.0	200.0	0.0	0.0	KOP @ 200'	
600.5	597.6	41.7	-3.9	EOB; Inc=12°	
4,895.7	4,798.6	931.9	-87.4	Start Drop -2.00	
5,496.4	5,395.0	994.4	-93.2	EOD; Inc=0°	
8,055.4	7,954.0	994.4	-93.2	Drillers TD @ 7954' TVD	
8,155.4	8,054.0	994.4	-93.2	Permit TD @ 8054' TVD	

EnCana Oil & Gas (USA) Inc

S. Piceance

PL 28 Pad (S28-T7S-R95W)

Federal 28-5

DD

Plan #1

Anticollision Report

26 July, 2010

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 100.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/26/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,155.4	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
PL 28 Pad (S28-T7S-R95W)						
Federal 28-11 - DD - Plan #1	200.0	200.0	12.3	11.7	19.812	CC, ES
Federal 28-11 - DD - Plan #1	300.0	299.4	16.3	15.4	16.749	SF
Federal 28-11BB - DD - Plan #1	200.0	200.0	29.3	28.7	47.131	CC, ES
Federal 28-11BB - DD - Plan #1	300.0	298.9	33.5	32.5	34.444	SF
Federal 28-12BB - DD - Plan #1	200.0	200.0	18.4	17.8	29.675	CC
Federal 28-12BB - DD - Plan #1	300.0	300.9	18.5	17.6	19.040	ES
Federal 28-12BB - DD - Plan #1	500.0	501.3	23.9	22.2	14.058	SF
Federal 28-13 - DD - Plan #1	200.0	200.0	43.8	43.2	70.513	CC, ES
Federal 28-13 - DD - Plan #1	400.0	393.5	64.3	63.0	49.277	SF
Federal 28-13BB - DD - Plan #1	200.0	200.0	52.9	52.3	85.181	CC, ES
Federal 28-13BB - DD - Plan #1	500.0	494.9	77.8	76.2	46.834	SF
Federal 28-6 (Existing) - DD - Schlumberger Surveys	0.0	0.0	93.2			
Federal 28-6 (Existing) - DD - Schlumberger Surveys	500.0	510.8	96.3	94.5	53.447	SF
Federal 28-6BB - DD - Plan #1	200.0	200.0	11.9	11.3	19.107	CC, ES
Federal 28-6BB - DD - Plan #1	300.0	299.3	14.0	13.0	14.278	SF
Federal 29-16 (Existing) - DD - Schlumberger surveys	172.6	172.6	76.9	76.3	146.220	CC
Federal 29-16 (Existing) - DD - Schlumberger surveys	200.0	199.9	76.9	76.3	123.746	ES
Federal 29-16 (Existing) - DD - Schlumberger surveys	500.0	495.8	96.7	94.9	55.421	SF
Federal 29-9 - DD - Plan #1	200.0	200.0	33.9	33.3	54.515	CC, ES
Federal 29-9 - DD - Plan #1	400.0	398.4	46.2	44.9	33.660	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												PL 28 Pad (S28-T7S-R95W) - Federal 28-11 - DD - Plan #1		Offset Site Error:		0.0 ft	
Survey Program:												0-MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)							
0.0	0.0	0.0	0.0	0.0	0.0	152.67	-10.9	5.7	12.3								
100.0	100.0	100.0	100.0	0.1	0.1	152.67	-10.9	5.7	12.3	12.0	0.27	45.211					
200.0	200.0	200.0	200.0	0.3	0.3	152.67	-10.9	5.7	12.3	11.7	0.62	19.812 CC, ES					
300.0	300.0	299.4	299.4	0.5	0.5	154.12	-11.4	8.2	16.3	15.4	0.98	16.749 SF					
400.0	399.6	397.9	397.5	0.7	0.7	149.01	-12.6	15.8	28.6	27.2	1.35	21.091					
500.0	498.8	494.3	493.2	1.0	1.0	146.06	-14.7	28.0	48.9	47.1	1.77	27.555					
600.0	597.1	587.9	585.3	1.4	1.3	144.37	-17.4	44.4	77.1	74.9	2.25	34.265					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design PL 28 Pad (S28-T7S-R95W) - Federal 28-11BB - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	174.46	-29.1	2.8	29.3					
100.0	100.0	100.0	100.0	0.1	0.1	174.46	-29.1	2.8	29.3	29.0	0.27	107.554		
200.0	200.0	200.0	200.0	0.3	0.3	174.46	-29.1	2.8	29.3	28.7	0.62	47.131 CC, ES		
300.0	300.0	298.9	298.8	0.5	0.5	176.30	-30.5	5.0	33.5	32.5	0.97	34.444 SF		
400.0	399.6	396.5	396.2	0.7	0.7	169.65	-34.3	11.5	46.6	45.2	1.34	34.855		
500.0	498.8	491.7	490.5	1.0	1.0	164.23	-40.6	21.9	68.8	67.1	1.72	40.104		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design PL 28 Pad (S28-T7S-R95W) - Federal 28-12BB - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-171.18	-18.2	-2.8	18.4				
100.0	100.0	100.0	100.0	0.1	0.1	-171.18	-18.2	-2.8	18.4	18.2	0.27	67.720	
200.0	200.0	200.0	200.0	0.3	0.3	-171.18	-18.2	-2.8	18.4	17.8	0.62	29.675 CC	
300.0	300.0	300.9	300.9	0.5	0.5	-164.73	-15.6	-3.4	18.5	17.6	0.97	19.040 ES	
400.0	399.6	401.5	401.1	0.7	0.7	-161.98	-8.2	-5.2	19.2	17.8	1.33	14.378	
500.0	498.8	501.3	500.6	1.0	0.9	-162.60	0.2	-7.2	23.9	22.2	1.70	14.058 SF	
600.0	597.1	600.8	599.8	1.4	1.1	-165.57	8.5	-9.1	33.6	31.5	2.05	16.368	
700.0	694.9	700.1	698.6	1.7	1.4	-167.99	16.8	-11.1	45.9	43.5	2.41	19.082	
800.0	792.7	799.3	797.5	2.1	1.6	-169.38	25.2	-13.1	58.3	55.5	2.76	21.114	
900.0	890.5	898.5	896.3	2.5	1.8	-170.28	33.5	-15.0	70.7	67.6	3.12	22.690	
1,000.0	988.3	997.7	995.2	2.9	2.1	-170.92	41.8	-17.0	83.1	79.6	3.47	23.948	
1,100.0	1,086.1	1,097.0	1,094.0	3.3	2.3	-171.39	50.1	-19.0	95.5	91.7	3.83	24.974	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design PL 28 Pad (S28-T7S-R95W) - Federal 28-13 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-176.30	-43.7	-2.8	43.8					
100.0	100.0	100.0	100.0	0.1	0.1	-176.30	-43.7	-2.8	43.8	43.5	0.27	160.914		
200.0	200.0	200.0	200.0	0.3	0.3	-176.30	-43.7	-2.8	43.8	43.2	0.62	70.513 CC, ES		
300.0	300.0	297.5	297.5	0.5	0.5	-171.40	-46.2	-3.0	49.0	48.0	0.97	50.704		
400.0	399.6	393.5	393.1	0.7	0.7	-172.33	-53.5	-3.4	64.3	63.0	1.30	49.277 SF		
500.0	498.8	486.5	485.4	1.0	1.0	-173.14	-65.1	-4.1	89.6	87.9	1.63	54.789		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design PL 28 Pad (S28-T7S-R95W) - Federal 28-13BB - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-164.52	-51.0	-14.1	52.9					
100.0	100.0	100.0	100.0	0.1	0.1	-164.52	-51.0	-14.1	52.9	52.7	0.27	194.387		
200.0	200.0	200.0	200.0	0.3	0.3	-164.52	-51.0	-14.1	52.9	52.3	0.62	85.181 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.10	-51.0	-14.1	55.4	54.4	0.97	57.056		
400.0	399.6	399.6	399.6	0.7	0.7	-162.47	-51.0	-14.1	62.8	61.5	1.32	47.568		
500.0	498.8	494.9	494.9	1.0	0.8	-165.37	-53.4	-14.3	77.8	76.2	1.66	46.834 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design PL 28 Pad (S28-T7S-R95W) - Federal 28-6 (Existing) - DD - Schlumberger Surveys													Offset Site Error:	0.0 ft
Survey Program: 141-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-138.16	-69.4	-62.2	93.2					
100.0	100.0	99.3	99.2	0.1	0.1	-137.98	-69.5	-62.6	93.6	93.3	0.28	331.012		
200.0	200.0	199.8	199.8	0.3	0.3	-137.79	-69.9	-63.4	94.4	93.8	0.62	151.906		
300.0	300.0	303.4	303.3	0.5	0.5	-134.97	-70.4	-60.9	94.9	94.0	0.98	96.465		
400.0	399.6	407.3	407.0	0.7	0.7	-141.32	-68.6	-53.2	95.1	93.7	1.38	69.065		
500.0	498.8	510.8	509.7	1.0	1.0	-150.81	-64.0	-41.2	96.3	94.5	1.80	53.447 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design PL 28 Pad (S28-T7S-R95W) - Federal 28-6BB - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	72.18	3.6	11.3	11.9				
100.0	100.0	100.0	100.0	0.1	0.1	72.18	3.6	11.3	11.9	11.6	0.27	43.604	
200.0	200.0	200.0	200.0	0.3	0.3	72.18	3.6	11.3	11.9	11.3	0.62	19.107 CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	85.48	5.0	13.5	14.0	13.0	0.98	14.278 SF	
400.0	399.6	398.2	397.8	0.7	0.7	98.82	8.9	20.1	21.2	19.8	1.39	15.287	
500.0	498.8	496.2	495.0	1.0	1.0	107.68	15.5	30.9	34.3	32.4	1.89	18.153	
600.0	597.1	592.8	590.1	1.4	1.3	112.44	24.4	45.8	53.0	50.5	2.50	21.181	
700.0	694.9	688.1	682.8	1.7	1.8	113.85	35.6	64.4	76.1	72.9	3.19	23.882	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													PL 28 Pad (S28-T7S-R95W) - Federal 29-16 (Existing) - DD - Schlumberger surveys		Offset Site Error:		0.0 ft	
Survey Program:		110-MWD												Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance											
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor						
0.0	0.0	0.0	0.0	0.0	0.0	-130.88	-50.4	-58.2	77.0									
100.0	100.0	100.1	100.1	0.1	0.1	-131.04	-50.5	-58.0	76.9	76.7	0.28	278.694						
172.6	172.6	172.6	172.6	0.3	0.3	-131.18	-50.6	-57.9	76.9	76.3	0.53	146.220	CC					
200.0	200.0	199.9	199.9	0.3	0.3	-131.16	-50.6	-57.9	76.9	76.3	0.62	123.746	ES					
300.0	300.0	299.2	299.2	0.5	0.5	-126.87	-50.5	-58.6	78.9	77.9	0.97	80.910						
400.0	399.6	397.9	397.9	0.7	0.7	-130.11	-50.6	-60.5	85.3	83.9	1.35	63.235						
500.0	498.8	495.8	495.7	1.0	0.8	-135.01	-51.6	-63.1	96.7	94.9	1.74	55.421	SF					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												PL 28 Pad (S28-T7S-R95W) - Federal 29-9 - DD - Plan #1		Offset Site Error:		0.0 ft			
Survey Program:				0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance												
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)		(ft)	(ft)								
0.0	0.0	0.0	0.0	0.0	0.0	-165.51	-32.8	-8.5	33.9										
100.0	100.0	100.0	100.0	0.1	0.1	-165.51	-32.8	-8.5	33.9	33.6	0.27	124.405							
200.0	200.0	200.0	200.0	0.3	0.3	-165.51	-32.8	-8.5	33.9	33.3	0.62	54.515	CC, ES						
300.0	300.0	299.5	299.5	0.5	0.5	-157.54	-32.7	-11.1	36.9	35.9	0.98	37.711							
400.0	399.6	398.4	398.0	0.7	0.7	-151.79	-32.2	-18.8	46.2	44.9	1.37	33.660	SF						
500.0	498.8	495.9	494.7	1.0	1.0	-146.08	-31.6	-31.3	62.4	60.5	1.84	33.915							
600.0	597.1	591.4	588.7	1.4	1.3	-141.65	-30.7	-48.4	85.2	82.8	2.39	35.632							

Cathedral Energy Services

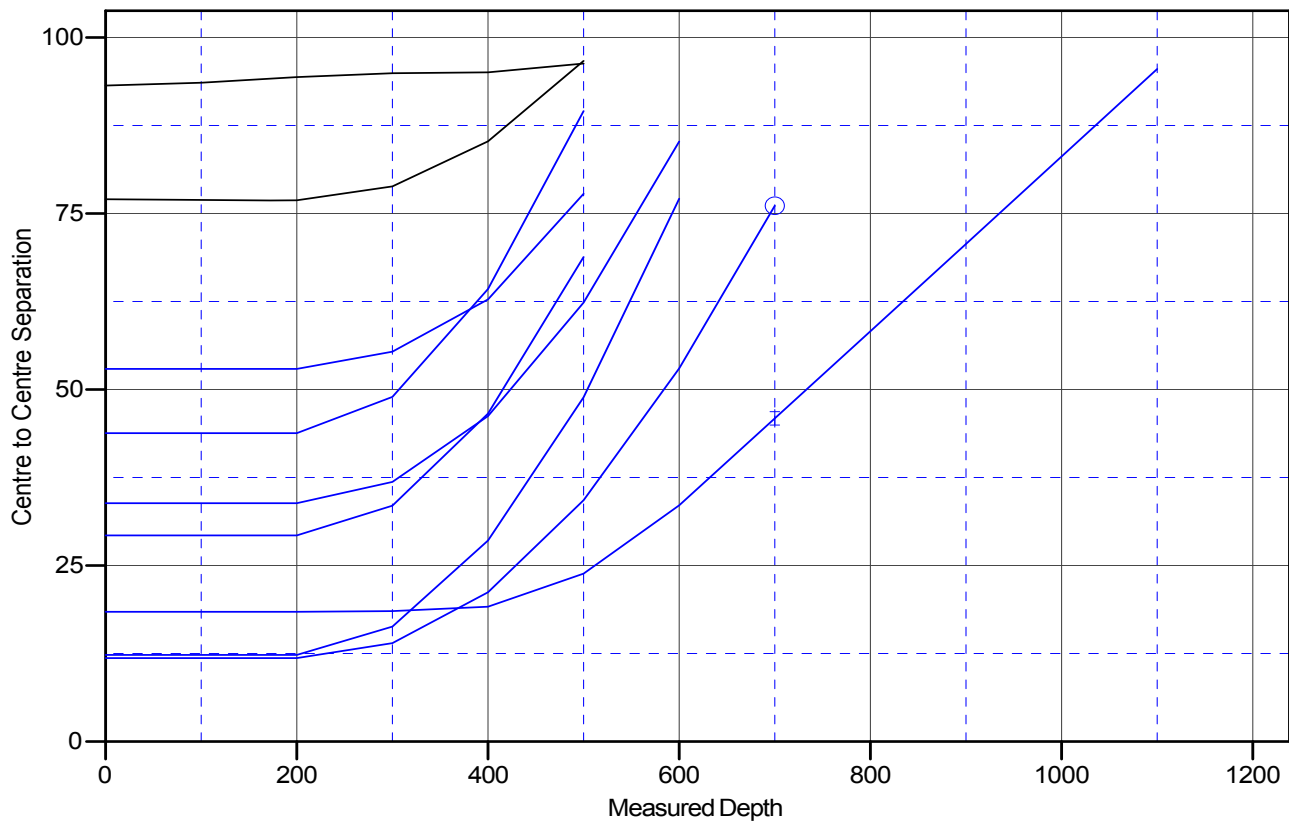
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Reference Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Federal 28-5	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 7186.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Federal 28-5
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.58°

Ladder Plot



LEGEND

-11, DD, Plan #1 V0	Federal 28-13, DD, Plan #1 V0	Federal 28-6BB, DD, Plan #1 V0
-11 BB, DD, Plan #1 V0	Federal 28-13BB, DD, Plan #1 V0	Federal 29-16 (Existing), DD, Schlumberger Surveys V0
-12BB, DD, Plan #1 V0	Federal 28-6 (Existing), DD, Schlumberger Surveys V0	Federal 29-9, DD, Plan #1 V0