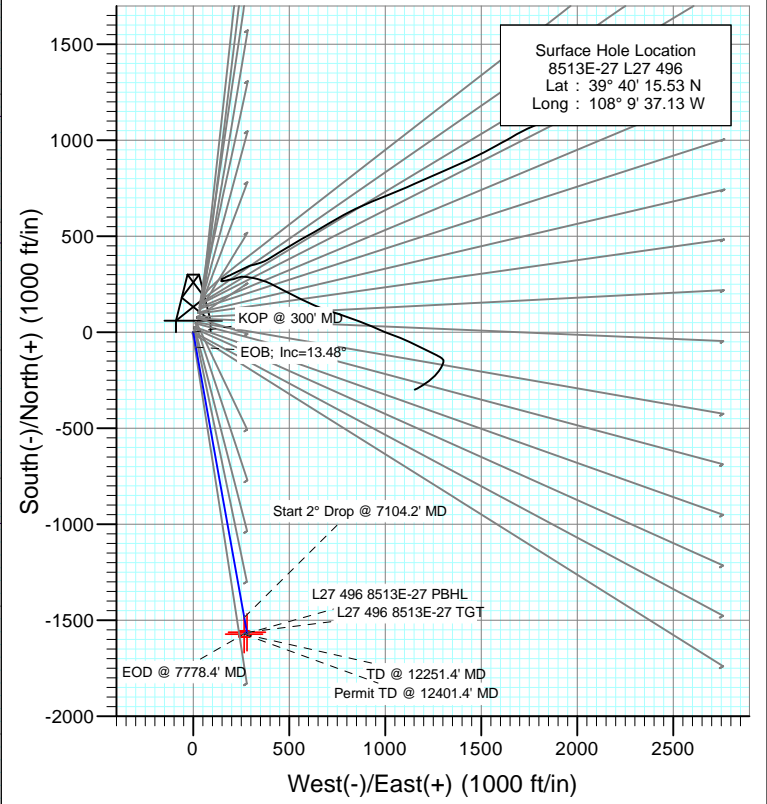


SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	974.2	13.48	169.84	968.0	-77.7	13.9	2.00	169.84	79.0	
4	7104.2	13.48	169.84	6929.0	-1484.7	266.2	0.00	180.00	1508.3	L27 496 8513E-27 TGT
5	7778.4	0.00	0.00	7597.0	-1562.4	280.1	2.00	180.00	1587.2	L27 496 8513E-27 PBHL
6	7871.7	0.23	236.38	7690.3	-1562.5	279.9	0.25	236.38	1587.3	
7	12251.4	0.23	236.38	12070.0	-1572.4	265.1	0.00	0.00	1594.6	
8	12401.4	0.23	236.38	12220.0	-1572.4	264.6	0.00	0.00	1594.8	



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
L27 496 8513E-27 TGT	-1562.4	280.1	1678680.98	2251470.3739° 40' 0.09 N	108° 9' 33.55 W	
L27 496 8513E-27 PBHL	-1572.4	265.1	1678671.45	2251455.089° 39' 59.99 N	108° 9' 33.74 W	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1057.0	1065.7	A_GROOVE_TVD
1211.0	1224.1	B_GROOVE_TVD
1235.0	1248.8	B_GROOVE_BASE_TVD
2174.0	2214.4	GARDEN_GULCH_TVD
3162.0	3230.4	WASATCH_FM_TVD
5353.0	5483.5	WASATCH_G_TVD
7557.0	7738.4	WILLIAMS_FORK_TVD
7597.0	7778.4	TOG_TVD
10757.0	10938.4	CAMEO_TVD
11193.0	11374.4	ROLLINS_TVD
11425.0	11606.4	COZZETTE_TVD
11611.0	11792.4	CORCORAN_TVD
11920.0	12101.4	UPPER_SEGO_TVD
12070.0	12251.4	SEGO_BASE_TARGET_TVD

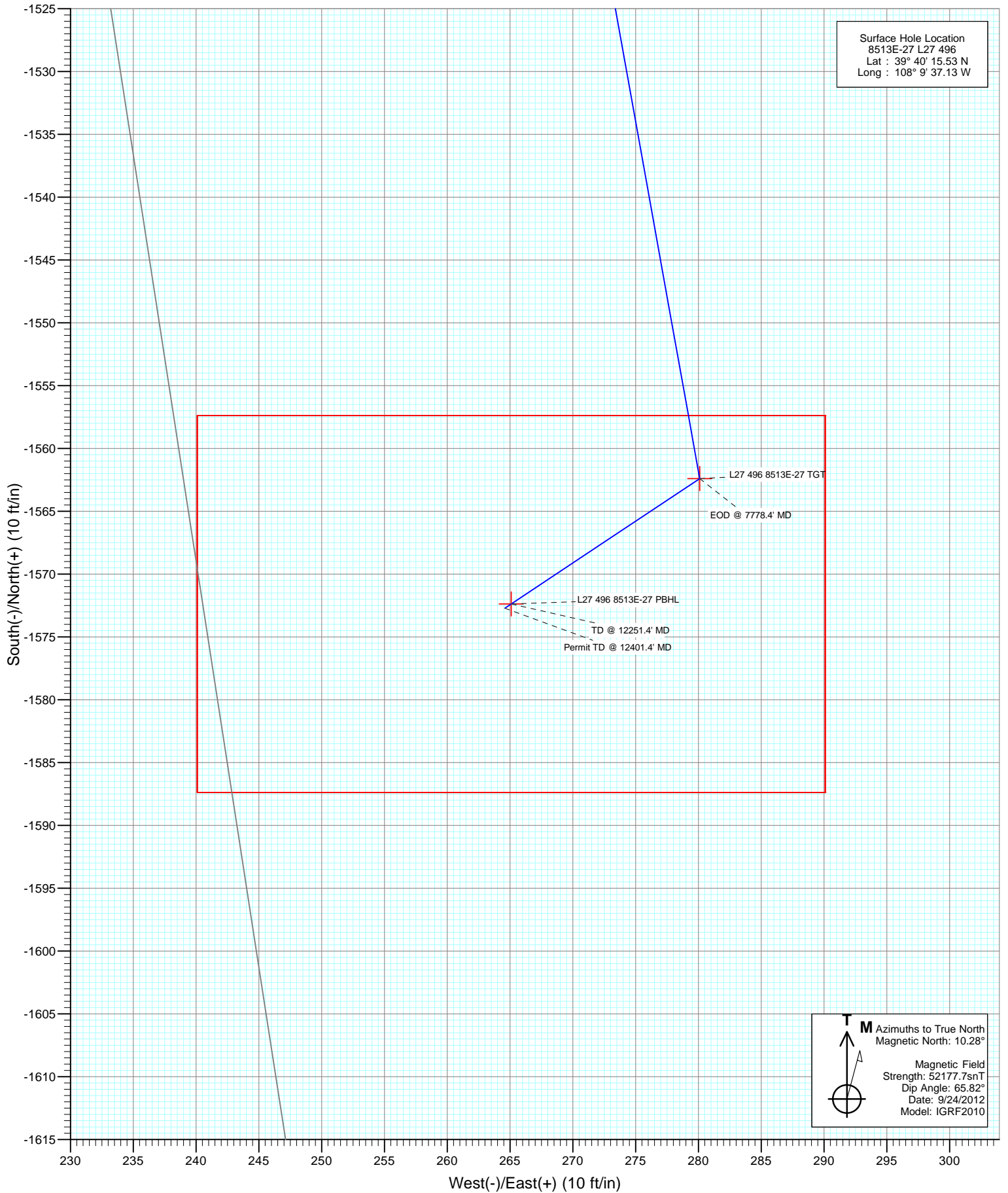
Plan #1
 8513E-27 L27 496
 12xxx; LR
 Well @ 8136.0ft (Rig)
 Ground Elevation @ 8104.0
 North American Datum 1983
 Well 8513E-27 L27 496, True North

M Azimuths to True North
 Magnetic North: 10.28°
 Magnetic Field
 Strength: 52177.7snT
 Dip Angle: 65.82°
 Date: 9/24/2012
 Model: IGRF2010

Vertical Section at 170.43° (1500 ft/in)



Project: Story Gulch
Site: S27-T4S-R96W (L27 496)
Well: 8513E-27 L27 496
Wellbore: DD
Design: Plan #1



Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB	Local Co-ordinate Reference: Well 8513E-27 L27 496
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: Well @ 8136.0ft (Rig)
Project: Story Gulch	MD Reference: Well @ 8136.0ft (Rig)
Site: S27-T4S-R96W (L27 496)	North Reference: True
Well: 8513E-27 L27 496	Survey Calculation Method: Minimum Curvature
Wellbore: DD	
Design: Plan #1	

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

Site S27-T4S-R96W (L27 496)					
Site Position:		Northing:	1,680,404.44 ft	Latitude:	39° 40' 17.06 N
From:	Lat/Long	Easting:	2,251,282.88 ft	Longitude:	108° 9' 36.59 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.68 °

Well 8513E-27 L27 496					
Well Position	+N/-S	0.0 ft	Northing:	1,680,250.91 ft	Latitude: 39° 40' 15.53 N
	+E/-W	0.0 ft	Easting:	2,251,236.14 ft	Longitude: 108° 9' 37.13 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 8,104.0 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	9/24/2012	(°) 10.28	(°) 65.82	(nT) 52,178

Design Plan #1					
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	170.43	

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
974.2	13.48	169.84	968.0	-77.7	13.9	2.00	2.00	0.00	169.84	
7,104.2	13.48	169.84	6,929.0	-1,484.7	266.2	0.00	0.00	0.00	0.00	
7,778.4	0.00	0.00	7,597.0	-1,562.4	280.1	2.00	-2.00	0.00	180.00	L27 496 8513E-27 TC
7,871.7	0.23	236.38	7,690.3	-1,562.5	279.9	0.25	0.25	-132.50	236.38	
12,251.4	0.23	236.38	12,070.0	-1,572.4	265.1	0.00	0.00	0.00	0.00	L27 496 8513E-27 PE
12,401.4	0.23	236.38	12,220.0	-1,572.7	264.6	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 8513E-27 L27 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 8136.0ft (Rig)
Project:	Story Gulch	MD Reference:	Well @ 8136.0ft (Rig)
Site:	S27-T4S-R96W (L27 496)	North Reference:	True
Well:	8513E-27 L27 496	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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300' MD
400.0	2.00	169.84	400.0	-1.7	0.3	1.7	2.00	2.00	
500.0	4.00	169.84	499.8	-6.9	1.2	7.0	2.00	2.00	
600.0	6.00	169.84	599.5	-15.4	2.8	15.7	2.00	2.00	
700.0	8.00	169.84	698.7	-27.4	4.9	27.9	2.00	2.00	
800.0	10.00	169.84	797.5	-42.8	7.7	43.5	2.00	2.00	
900.0	12.00	169.84	895.6	-61.6	11.0	62.6	2.00	2.00	
974.2	13.48	169.84	968.0	-77.7	13.9	79.0	2.00	2.00	EOB; Inc=13.48°
1,000.0	13.48	169.84	993.1	-83.7	15.0	85.0	0.00	0.00	
1,065.7	13.48	169.84	1,057.0	-98.7	17.7	100.3	0.00	0.00	A_GROOVE_TVD
1,100.0	13.48	169.84	1,090.3	-106.6	19.1	108.3	0.00	0.00	
1,200.0	13.48	169.84	1,187.6	-129.6	23.2	131.6	0.00	0.00	
1,224.1	13.48	169.84	1,211.0	-135.1	24.2	137.2	0.00	0.00	B_GROOVE_TVD
1,248.8	13.48	169.84	1,235.0	-140.7	25.2	143.0	0.00	0.00	B_GROOVE_BASE_TVD
1,300.0	13.48	169.84	1,284.8	-152.5	27.3	154.9	0.00	0.00	
1,400.0	13.48	169.84	1,382.1	-175.5	31.5	178.2	0.00	0.00	
1,500.0	13.48	169.84	1,479.3	-198.4	35.6	201.6	0.00	0.00	
1,600.0	13.48	169.84	1,576.5	-221.4	39.7	224.9	0.00	0.00	
1,700.0	13.48	169.84	1,673.8	-244.3	43.8	248.2	0.00	0.00	
1,800.0	13.48	169.84	1,771.0	-267.3	47.9	271.5	0.00	0.00	
1,900.0	13.48	169.84	1,868.3	-290.2	52.0	294.8	0.00	0.00	
2,000.0	13.48	169.84	1,965.5	-313.2	56.1	318.1	0.00	0.00	
2,100.0	13.48	169.84	2,062.8	-336.1	60.3	341.5	0.00	0.00	
2,200.0	13.48	169.84	2,160.0	-359.1	64.4	364.8	0.00	0.00	
2,214.4	13.48	169.84	2,174.0	-362.4	65.0	368.1	0.00	0.00	GARDEN_GULCH_TVD.
2,300.0	13.48	169.84	2,257.2	-382.0	68.5	388.1	0.00	0.00	
2,400.0	13.48	169.84	2,354.5	-405.0	72.6	411.4	0.00	0.00	
2,500.0	13.48	169.84	2,451.7	-427.9	76.7	434.7	0.00	0.00	
2,600.0	13.48	169.84	2,549.0	-450.9	80.8	458.0	0.00	0.00	
2,700.0	13.48	169.84	2,646.2	-473.8	84.9	481.4	0.00	0.00	
2,800.0	13.48	169.84	2,743.5	-496.8	89.1	504.7	0.00	0.00	
2,900.0	13.48	169.84	2,840.7	-519.7	93.2	528.0	0.00	0.00	
3,000.0	13.48	169.84	2,938.0	-542.7	97.3	551.3	0.00	0.00	
3,100.0	13.48	169.84	3,035.2	-565.6	101.4	574.6	0.00	0.00	
3,200.0	13.48	169.84	3,132.4	-588.6	105.5	597.9	0.00	0.00	
3,230.4	13.48	169.84	3,162.0	-595.6	106.8	605.0	0.00	0.00	WASATCH_FM_TVD
3,300.0	13.48	169.84	3,229.7	-611.5	109.6	621.3	0.00	0.00	
3,400.0	13.48	169.84	3,326.9	-634.5	113.7	644.6	0.00	0.00	
3,500.0	13.48	169.84	3,424.2	-657.4	117.9	667.9	0.00	0.00	
3,600.0	13.48	169.84	3,521.4	-680.4	122.0	691.2	0.00	0.00	
3,700.0	13.48	169.84	3,618.7	-703.3	126.1	714.5	0.00	0.00	
3,800.0	13.48	169.84	3,715.9	-726.3	130.2	737.8	0.00	0.00	
3,900.0	13.48	169.84	3,813.1	-749.3	134.3	761.2	0.00	0.00	
4,000.0	13.48	169.84	3,910.4	-772.2	138.4	784.5	0.00	0.00	
4,100.0	13.48	169.84	4,007.6	-795.2	142.6	807.8	0.00	0.00	
4,200.0	13.48	169.84	4,104.9	-818.1	146.7	831.1	0.00	0.00	
4,300.0	13.48	169.84	4,202.1	-841.1	150.8	854.4	0.00	0.00	
4,400.0	13.48	169.84	4,299.4	-864.0	154.9	877.7	0.00	0.00	
4,500.0	13.48	169.84	4,396.6	-887.0	159.0	901.1	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 8513E-27 L27 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 8136.0ft (Rig)
Project:	Story Gulch	MD Reference:	Well @ 8136.0ft (Rig)
Site:	S27-T4S-R96W (L27 496)	North Reference:	True
Well:	8513E-27 L27 496	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
4,600.0	13.48	169.84	4,493.8	-909.9	163.1	924.4	0.00	0.00	
4,700.0	13.48	169.84	4,591.1	-932.9	167.2	947.7	0.00	0.00	
4,800.0	13.48	169.84	4,688.3	-955.8	171.4	971.0	0.00	0.00	
4,900.0	13.48	169.84	4,785.6	-978.8	175.5	994.3	0.00	0.00	
5,000.0	13.48	169.84	4,882.8	-1,001.7	179.6	1,017.6	0.00	0.00	
5,100.0	13.48	169.84	4,980.1	-1,024.7	183.7	1,041.0	0.00	0.00	
5,200.0	13.48	169.84	5,077.3	-1,047.6	187.8	1,064.3	0.00	0.00	
5,300.0	13.48	169.84	5,174.6	-1,070.6	191.9	1,087.6	0.00	0.00	
5,400.0	13.48	169.84	5,271.8	-1,093.5	196.0	1,110.9	0.00	0.00	
5,483.5	13.48	169.84	5,353.0	-1,112.7	199.5	1,130.4	0.00	0.00	WASATCH_G_TVD
5,500.0	13.48	169.84	5,369.0	-1,116.5	200.2	1,134.2	0.00	0.00	
5,600.0	13.48	169.84	5,466.3	-1,139.4	204.3	1,157.5	0.00	0.00	
5,700.0	13.48	169.84	5,563.5	-1,162.4	208.4	1,180.8	0.00	0.00	
5,800.0	13.48	169.84	5,660.8	-1,185.3	212.5	1,204.2	0.00	0.00	
5,900.0	13.48	169.84	5,758.0	-1,208.3	216.6	1,227.5	0.00	0.00	
6,000.0	13.48	169.84	5,855.3	-1,231.2	220.7	1,250.8	0.00	0.00	
6,100.0	13.48	169.84	5,952.5	-1,254.2	224.8	1,274.1	0.00	0.00	
6,200.0	13.48	169.84	6,049.7	-1,277.1	229.0	1,297.4	0.00	0.00	
6,300.0	13.48	169.84	6,147.0	-1,300.1	233.1	1,320.7	0.00	0.00	
6,400.0	13.48	169.84	6,244.2	-1,323.0	237.2	1,344.1	0.00	0.00	
6,500.0	13.48	169.84	6,341.5	-1,346.0	241.3	1,367.4	0.00	0.00	
6,600.0	13.48	169.84	6,438.7	-1,368.9	245.4	1,390.7	0.00	0.00	
6,700.0	13.48	169.84	6,536.0	-1,391.9	249.5	1,414.0	0.00	0.00	
6,800.0	13.48	169.84	6,633.2	-1,414.9	253.6	1,437.3	0.00	0.00	
6,900.0	13.48	169.84	6,730.4	-1,437.8	257.8	1,460.6	0.00	0.00	
7,000.0	13.48	169.84	6,827.7	-1,460.8	261.9	1,484.0	0.00	0.00	
7,100.0	13.48	169.84	6,924.9	-1,483.7	266.0	1,507.3	0.00	0.00	
7,104.2	13.48	169.84	6,929.0	-1,484.7	266.2	1,508.3	0.00	0.00	Start 2° Drop @ 7104.2' MD
7,200.0	11.57	169.84	7,022.5	-1,505.1	269.8	1,529.0	2.00	-2.00	
7,300.0	9.57	169.84	7,120.8	-1,523.2	273.1	1,547.4	2.00	-2.00	
7,400.0	7.57	169.84	7,219.7	-1,537.8	275.7	1,562.3	2.00	-2.00	
7,500.0	5.57	169.84	7,319.0	-1,549.1	277.7	1,573.7	2.00	-2.00	
7,600.0	3.57	169.84	7,418.7	-1,556.9	279.1	1,581.7	2.00	-2.00	
7,700.0	1.57	169.84	7,518.6	-1,561.3	279.9	1,586.1	2.00	-2.00	
7,738.4	0.80	169.84	7,557.0	-1,562.1	280.1	1,586.9	2.00	-2.00	WILLIAMS_FORK_TVD
7,778.4	0.00	0.00	7,597.0	-1,562.4	280.1	1,587.2	2.00	-2.00	EOD @ 7778.4' MD - TOG TVD
7,800.0	0.05	236.38	7,618.6	-1,562.4	280.1	1,587.2	0.25	0.25	
7,871.7	0.23	236.38	7,690.3	-1,562.5	279.9	1,587.3	0.25	0.25	
7,900.0	0.23	236.38	7,718.6	-1,562.6	279.8	1,587.3	0.00	0.00	
8,000.0	0.23	236.38	7,818.6	-1,562.8	279.5	1,587.5	0.00	0.00	
8,100.0	0.23	236.38	7,918.6	-1,563.0	279.2	1,587.7	0.00	0.00	
8,200.0	0.23	236.38	8,018.6	-1,563.2	278.8	1,587.8	0.00	0.00	
8,300.0	0.23	236.38	8,118.6	-1,563.5	278.5	1,588.0	0.00	0.00	
8,400.0	0.23	236.38	8,218.6	-1,563.7	278.2	1,588.2	0.00	0.00	
8,500.0	0.23	236.38	8,318.6	-1,563.9	277.8	1,588.3	0.00	0.00	
8,600.0	0.23	236.38	8,418.6	-1,564.1	277.5	1,588.5	0.00	0.00	
8,700.0	0.23	236.38	8,518.6	-1,564.4	277.1	1,588.7	0.00	0.00	
8,800.0	0.23	236.38	8,618.6	-1,564.6	276.8	1,588.8	0.00	0.00	
8,900.0	0.23	236.38	8,718.6	-1,564.8	276.5	1,589.0	0.00	0.00	
9,000.0	0.23	236.38	8,818.6	-1,565.0	276.1	1,589.2	0.00	0.00	
9,100.0	0.23	236.38	8,918.6	-1,565.3	275.8	1,589.3	0.00	0.00	
9,200.0	0.23	236.38	9,018.6	-1,565.5	275.4	1,589.5	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 8513E-27 L27 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 8136.0ft (Rig)
Project:	Story Gulch	MD Reference:	Well @ 8136.0ft (Rig)
Site:	S27-T4S-R96W (L27 496)	North Reference:	True
Well:	8513E-27 L27 496	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
9,300.0	0.23	236.38	9,118.6	-1,565.7	275.1	1,589.7	0.00	0.00	
9,400.0	0.23	236.38	9,218.6	-1,565.9	274.8	1,589.8	0.00	0.00	
9,500.0	0.23	236.38	9,318.6	-1,566.2	274.4	1,590.0	0.00	0.00	
9,600.0	0.23	236.38	9,418.6	-1,566.4	274.1	1,590.2	0.00	0.00	
9,700.0	0.23	236.38	9,518.6	-1,566.6	273.7	1,590.3	0.00	0.00	
9,800.0	0.23	236.38	9,618.6	-1,566.8	273.4	1,590.5	0.00	0.00	
9,900.0	0.23	236.38	9,718.6	-1,567.1	273.1	1,590.7	0.00	0.00	
10,000.0	0.23	236.38	9,818.6	-1,567.3	272.7	1,590.8	0.00	0.00	
10,100.0	0.23	236.38	9,918.6	-1,567.5	272.4	1,591.0	0.00	0.00	
10,200.0	0.23	236.38	10,018.6	-1,567.7	272.0	1,591.2	0.00	0.00	
10,300.0	0.23	236.38	10,118.6	-1,568.0	271.7	1,591.3	0.00	0.00	
10,400.0	0.23	236.38	10,218.6	-1,568.2	271.4	1,591.5	0.00	0.00	
10,500.0	0.23	236.38	10,318.6	-1,568.4	271.0	1,591.7	0.00	0.00	
10,600.0	0.23	236.38	10,418.6	-1,568.7	270.7	1,591.8	0.00	0.00	
10,700.0	0.23	236.38	10,518.6	-1,568.9	270.4	1,592.0	0.00	0.00	
10,800.0	0.23	236.38	10,618.6	-1,569.1	270.0	1,592.2	0.00	0.00	
10,900.0	0.23	236.38	10,718.6	-1,569.3	269.7	1,592.3	0.00	0.00	
10,938.4	0.23	236.38	10,757.0	-1,569.4	269.5	1,592.4	0.00	0.00	CAMEO_TVD
11,000.0	0.23	236.38	10,818.6	-1,569.6	269.3	1,592.5	0.00	0.00	
11,100.0	0.23	236.38	10,918.6	-1,569.8	269.0	1,592.7	0.00	0.00	
11,200.0	0.23	236.38	11,018.6	-1,570.0	268.7	1,592.8	0.00	0.00	
11,300.0	0.23	236.38	11,118.6	-1,570.2	268.3	1,593.0	0.00	0.00	
11,374.4	0.23	236.38	11,193.0	-1,570.4	268.1	1,593.1	0.00	0.00	ROLLINS_TVD
11,400.0	0.23	236.38	11,218.6	-1,570.5	268.0	1,593.2	0.00	0.00	
11,500.0	0.23	236.38	11,318.6	-1,570.7	267.6	1,593.3	0.00	0.00	
11,600.0	0.23	236.38	11,418.6	-1,570.9	267.3	1,593.5	0.00	0.00	
11,606.4	0.23	236.38	11,425.0	-1,570.9	267.3	1,593.5	0.00	0.00	COZZETTE_TVD
11,700.0	0.23	236.38	11,518.6	-1,571.1	267.0	1,593.6	0.00	0.00	
11,792.4	0.23	236.38	11,611.0	-1,571.3	266.7	1,593.8	0.00	0.00	CORCORAN_TVD
11,800.0	0.23	236.38	11,618.6	-1,571.4	266.6	1,593.8	0.00	0.00	
11,900.0	0.23	236.38	11,718.6	-1,571.6	266.3	1,594.0	0.00	0.00	
12,000.0	0.23	236.38	11,818.6	-1,571.8	265.9	1,594.1	0.00	0.00	
12,100.0	0.23	236.38	11,918.6	-1,572.0	265.6	1,594.3	0.00	0.00	
12,101.4	0.23	236.38	11,920.0	-1,572.0	265.6	1,594.3	0.00	0.00	UPPER_SEGO_TVD
12,200.0	0.23	236.38	12,018.6	-1,572.3	265.3	1,594.5	0.00	0.00	
12,251.4	0.23	236.38	12,070.0	-1,572.4	265.1	1,594.6	0.00	0.00	TD @ 12251.4' MD - SEGO_BASE_TARGET_1
12,300.0	0.23	236.38	12,118.6	-1,572.5	264.9	1,594.6	0.00	0.00	
12,400.0	0.23	236.38	12,218.6	-1,572.7	264.6	1,594.8	0.00	0.00	
12,401.4	0.23	236.38	12,220.0	-1,572.7	264.6	1,594.8	0.00	0.00	Permit TD @ 12401.4' MD

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB	Local Co-ordinate Reference: Well 8513E-27 L27 496
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: Well @ 8136.0ft (Rig)
Project: Story Gulch	MD Reference: Well @ 8136.0ft (Rig)
Site: S27-T4S-R96W (L27 496)	North Reference: True
Well: 8513E-27 L27 496	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									
L27 496 8513E-27 TGT - plan hits target center - Point	0.00	0.00	7,597.0	-1,562.4	280.1	1,678,680.98	2,251,470.37	39° 40' 0.09 N	108° 9' 33.55 W
L27 496 8513E-27 PBHI - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	12,070.0	-1,572.4	265.1	1,678,671.45	2,251,455.08	39° 39' 59.99 N	108° 9' 33.74 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
1,065.7	1,057.0	A_GROOVE_TVD				
1,224.1	1,211.0	B_GROOVE_TVD				
1,248.8	1,235.0	B_GROOVE_BASE_TVD				
2,214.4	2,174.0	GARDEN_GULCH_TVD.				
3,230.4	3,162.0	WASATCH_FM_TVD				
5,483.5	5,353.0	WASATCH_G_TVD				
7,738.4	7,557.0	WILLIAMS_FORK_TVD				
7,778.4	7,597.0	TOG TVD				
10,938.4	10,757.0	CAMEO_TVD				
11,374.4	11,193.0	ROLLINS_TVD				
11,606.4	11,425.0	COZZETTE_TVD				
11,792.4	11,611.0	CORCORAN_TVD				
12,101.4	11,920.0	UPPER_SEGO_TVD				
12,251.4	12,070.0	SEGO_BASE_TARGET_TVD				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
300.0	300.0	0.0	0.0	KOP @ 300' MD	
974.2	968.0	-77.7	13.9	EOB; Inc=13.48°	
7,104.2	6,929.0	-1,484.7	266.2	Start 2° Drop @ 7104.2' MD	
7,778.4	7,597.0	-1,562.4	280.1	EOD @ 7778.4' MD	
12,251.4	12,070.0	-1,562.5	279.9	TD @ 12251.4' MD	
12,401.4	12,220.0	-1,572.4	265.1	Permit TD @ 12401.4' MD	