

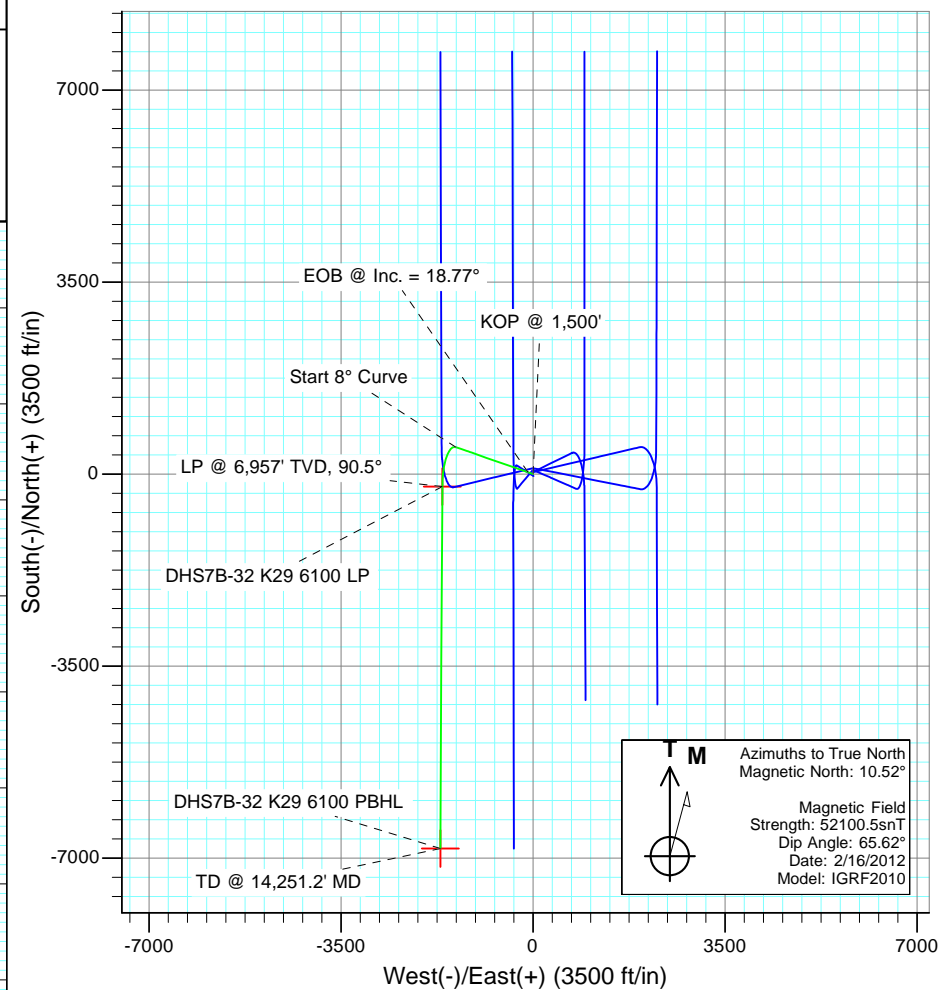
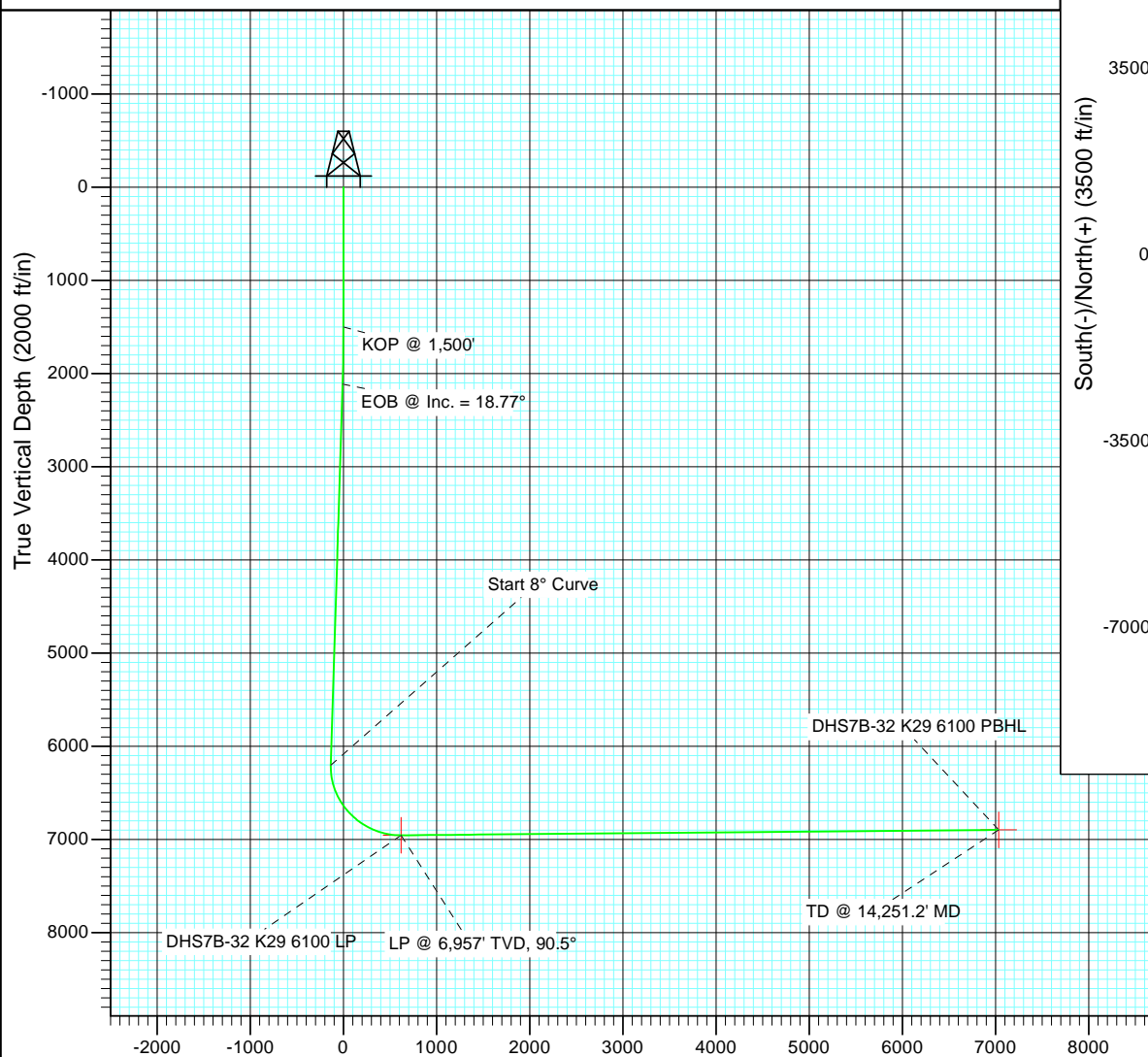


Project: Cedar Bench  
 Site: Sec 29-6S-100W (K29 Pad)  
 Well: DHS7B-32 K29 6100  
 Wellbore: HZ  
 Design: Plan #2



#### 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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	2125.7	18.77	289.15	2114.6	33.3	-96.0	3.00	289.15	-9.3	
4	6445.9	18.77	289.15	6205.0	489.4	-1409.2	0.00	0.00	-136.0	
5	7651.5	90.50	180.30	6957.0	-227.6	-1657.1	8.00	-107.76	619.6	DHS7B-32 K29 6100 LP
6	14251.2	90.50	180.30	6899.0	-6827.0	-1692.1	0.00	0.00	7033.5	DHS7B-32 K29 6100 PBHL



**M**  
 Azimuths to True North  
 Magnetic North: 10.52°  
 Magnetic Field  
 Strength: 52100.5snT  
 Dip Angle: 65.62°  
 Date: 2/16/2012  
 Model: IGRF2010

Plan #2  
 DHS7B-32 K29 6100  
 125XXX; SC  
 kbe @ 7065.0ft  
 North American Datum 1983  
 Well DHS7B-32 K29 6100, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
TD	No Target (Freehand)	193.92	Slot		0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
DHS7B-32 K29 6100 PBHL	6899.0	-6827.0	-1692.1	39° 29' 5.01 N	108° 35' 3.48 W		
DHS7B-32 K29 6100 LP	6957.0	-227.6	-1657.1	39° 30' 10.23 N	108° 35' 3.04 W		

Vertical Section at 193.92° (2000 ft/in)

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DHS7B-32 K29 6100
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	kbe @ 7065.0ft
<b>Project:</b>	Cedar Bench	<b>MD Reference:</b>	kbe @ 7065.0ft
<b>Site:</b>	Sec 29-6S-100W (K29 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	DHS7B-32 K29 6100	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #2		

<b>Project</b>	Cedar Bench		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Sec 29-6S-100W (K29 Pad)			
Site Position:		Northing:	1,077,018.76 ft	Latitude:	39° 30' 12.14 N
From:	Lat/Long	Easting:	2,131,504.99 ft	Longitude:	108° 34' 41.84 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.99 °

Well	DHS7B-32 K29 6100					
Well Position	+N/-S	0.0 ft	Northing:	1,077,053.31 ft	Latitude:	39° 30' 12.48 N
	+E/-W	0.0 ft	Easting:	2,131,501.48 ft	Longitude:	108° 34' 41.90 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,033.0 ft

<b>Wellbore</b>	HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	2/16/2012	10.52	65.62	52,101

<b>Design</b>	Plan #2				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	193.92	

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,125.7	18.77	289.15	2,114.6	33.3	-96.0	3.00	3.00	0.00	289.15	
6,445.9	18.77	289.15	6,205.0	489.4	-1,409.2	0.00	0.00	0.00	0.00	
7,651.5	90.50	180.30	6,957.0	-227.6	-1,657.1	8.00	5.95	-9.03	-107.76	DHS7B-32 K29 6100
14,251.2	90.50	180.30	6,899.0	-6,827.0	-1,692.1	0.00	0.00	0.00	0.00	DHS7B-32 K29 6100

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DHS7B-32 K29 6100
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	kbe @ 7065.0ft
<b>Project:</b>	Cedar Bench	<b>MD Reference:</b>	kbe @ 7065.0ft
<b>Site:</b>	Sec 29-6S-100W (K29 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	DHS7B-32 K29 6100	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1,500'
1,600.0	3.00	289.15	1,600.0	0.9	-2.5	-0.2	3.00	3.00	
1,700.0	6.00	289.15	1,699.6	3.4	-9.9	-1.0	3.00	3.00	
1,800.0	9.00	289.15	1,798.8	7.7	-22.2	-2.1	3.00	3.00	
1,900.0	12.00	289.15	1,897.1	13.7	-39.4	-3.8	3.00	3.00	
2,000.0	15.00	289.15	1,994.3	21.4	-61.5	-5.9	3.00	3.00	
2,100.0	18.00	289.15	2,090.2	30.7	-88.3	-8.5	3.00	3.00	
2,125.7	18.77	289.15	2,114.6	33.3	-96.0	-9.3	3.00	3.00	EOB @ Inc. = 18.77°
2,200.0	18.77	289.15	2,184.9	41.2	-118.5	-11.4	0.00	0.00	
2,300.0	18.77	289.15	2,279.6	51.7	-148.9	-14.4	0.00	0.00	
2,400.0	18.77	289.15	2,374.3	62.3	-179.3	-17.3	0.00	0.00	
2,500.0	18.77	289.15	2,469.0	72.8	-209.7	-20.2	0.00	0.00	
2,600.0	18.77	289.15	2,563.6	83.4	-240.1	-23.2	0.00	0.00	
2,700.0	18.77	289.15	2,658.3	94.0	-270.5	-26.1	0.00	0.00	
2,800.0	18.77	289.15	2,753.0	104.5	-300.9	-29.0	0.00	0.00	
2,900.0	18.77	289.15	2,847.7	115.1	-331.3	-32.0	0.00	0.00	
3,000.0	18.77	289.15	2,942.4	125.6	-361.7	-34.9	0.00	0.00	
3,100.0	18.77	289.15	3,037.0	136.2	-392.1	-37.9	0.00	0.00	
3,200.0	18.77	289.15	3,131.7	146.7	-422.5	-40.8	0.00	0.00	
3,300.0	18.77	289.15	3,226.4	157.3	-452.9	-43.7	0.00	0.00	
3,400.0	18.77	289.15	3,321.1	167.9	-483.3	-46.7	0.00	0.00	
3,500.0	18.77	289.15	3,415.8	178.4	-513.7	-49.6	0.00	0.00	
3,600.0	18.77	289.15	3,510.5	189.0	-544.1	-52.5	0.00	0.00	
3,700.0	18.77	289.15	3,605.1	199.5	-574.5	-55.5	0.00	0.00	
3,800.0	18.77	289.15	3,699.8	210.1	-604.9	-58.4	0.00	0.00	
3,900.0	18.77	289.15	3,794.5	220.6	-635.3	-61.3	0.00	0.00	
4,000.0	18.77	289.15	3,889.2	231.2	-665.7	-64.3	0.00	0.00	
4,100.0	18.77	289.15	3,983.9	241.8	-696.1	-67.2	0.00	0.00	
4,200.0	18.77	289.15	4,078.5	252.3	-726.5	-70.1	0.00	0.00	
4,300.0	18.77	289.15	4,173.2	262.9	-756.9	-73.1	0.00	0.00	
4,400.0	18.77	289.15	4,267.9	273.4	-787.3	-76.0	0.00	0.00	
4,500.0	18.77	289.15	4,362.6	284.0	-817.7	-78.9	0.00	0.00	
4,600.0	18.77	289.15	4,457.3	294.5	-848.1	-81.9	0.00	0.00	
4,700.0	18.77	289.15	4,551.9	305.1	-878.5	-84.8	0.00	0.00	
4,800.0	18.77	289.15	4,646.6	315.6	-908.9	-87.7	0.00	0.00	
4,900.0	18.77	289.15	4,741.3	326.2	-939.3	-90.7	0.00	0.00	
5,000.0	18.77	289.15	4,836.0	336.8	-969.7	-93.6	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DHS7B-32 K29 6100
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	kbe @ 7065.0ft
<b>Project:</b>	Cedar Bench	<b>MD Reference:</b>	kbe @ 7065.0ft
<b>Site:</b>	Sec 29-6S-100W (K29 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	DHS7B-32 K29 6100	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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
5,100.0	18.77	289.15	4,930.7	347.3	-1,000.1	-96.5	0.00	0.00	
5,200.0	18.77	289.15	5,025.4	357.9	-1,030.5	-99.5	0.00	0.00	
5,300.0	18.77	289.15	5,120.0	368.4	-1,060.9	-102.4	0.00	0.00	
5,400.0	18.77	289.15	5,214.7	379.0	-1,091.3	-105.3	0.00	0.00	
5,500.0	18.77	289.15	5,309.4	389.5	-1,121.7	-108.3	0.00	0.00	
5,600.0	18.77	289.15	5,404.1	400.1	-1,152.1	-111.2	0.00	0.00	
5,700.0	18.77	289.15	5,498.8	410.7	-1,182.4	-114.1	0.00	0.00	
5,800.0	18.77	289.15	5,593.4	421.2	-1,212.8	-117.1	0.00	0.00	
5,900.0	18.77	289.15	5,688.1	431.8	-1,243.2	-120.0	0.00	0.00	
6,000.0	18.77	289.15	5,782.8	442.3	-1,273.6	-122.9	0.00	0.00	
6,100.0	18.77	289.15	5,877.5	452.9	-1,304.0	-125.9	0.00	0.00	
6,200.0	18.77	289.15	5,972.2	463.4	-1,334.4	-128.8	0.00	0.00	
6,300.0	18.77	289.15	6,066.9	474.0	-1,364.8	-131.7	0.00	0.00	
6,400.0	18.77	289.15	6,161.5	484.6	-1,395.2	-134.7	0.00	0.00	
6,445.9	18.77	289.15	6,205.0	489.4	-1,409.2	-136.0	0.00	0.00	Start 8° Curve
6,450.0	18.67	288.18	6,208.9	489.8	-1,410.4	-136.1	8.00	-2.38	
6,500.0	17.91	275.64	6,256.4	493.1	-1,425.7	-135.6	8.00	-1.52	
6,550.0	18.00	262.65	6,303.9	492.8	-1,441.0	-131.7	8.00	0.18	
6,600.0	18.93	250.34	6,351.4	489.1	-1,456.3	-124.4	8.00	1.85	
6,650.0	20.57	239.53	6,398.5	481.9	-1,471.5	-113.8	8.00	3.30	
6,700.0	22.79	230.49	6,444.9	471.3	-1,486.6	-99.9	8.00	4.43	
6,750.0	25.42	223.10	6,490.6	457.3	-1,501.4	-82.7	8.00	5.27	
6,800.0	28.36	217.08	6,535.2	440.0	-1,515.9	-62.4	8.00	5.87	
6,850.0	31.51	212.14	6,578.5	419.5	-1,530.0	-39.1	8.00	6.31	
6,900.0	34.82	208.04	6,620.4	395.8	-1,543.7	-12.8	8.00	6.62	
6,950.0	38.25	204.57	6,660.5	369.1	-1,556.8	16.3	8.00	6.86	
7,000.0	41.76	201.60	6,698.8	339.5	-1,569.4	48.0	8.00	7.03	
7,050.0	45.35	199.01	6,735.1	307.2	-1,581.3	82.2	8.00	7.16	
7,100.0	48.98	196.73	6,769.1	272.3	-1,592.6	118.8	8.00	7.27	
7,150.0	52.65	194.69	6,800.6	235.0	-1,603.0	157.5	8.00	7.35	
7,200.0	56.36	192.84	6,829.7	195.5	-1,612.7	198.2	8.00	7.41	
7,250.0	60.09	191.14	6,856.0	153.9	-1,621.5	240.7	8.00	7.46	
7,300.0	63.84	189.56	6,879.5	110.5	-1,629.4	284.7	8.00	7.50	
7,350.0	67.61	188.09	6,900.1	65.5	-1,636.4	330.1	8.00	7.53	
7,400.0	71.39	186.69	6,917.6	19.0	-1,642.4	376.6	8.00	7.56	
7,450.0	75.18	185.35	6,931.9	-28.6	-1,647.4	424.1	8.00	7.58	
7,500.0	78.97	184.06	6,943.1	-77.1	-1,651.4	472.1	8.00	7.59	
7,550.0	82.78	182.80	6,951.1	-126.4	-1,654.4	520.7	8.00	7.60	
7,600.0	86.58	181.57	6,955.7	-176.1	-1,656.3	569.4	8.00	7.61	
7,651.5	90.50	180.30	6,957.0	-227.6	-1,657.1	619.6	8.00	7.61	LP @ 6,957' TVD, 90.5°
7,700.0	90.50	180.30	6,956.6	-276.1	-1,657.4	666.7	0.00	0.00	
7,800.0	90.50	180.30	6,955.7	-376.1	-1,657.9	763.9	0.00	0.00	
7,900.0	90.50	180.30	6,954.8	-476.1	-1,658.4	861.1	0.00	0.00	
8,000.0	90.50	180.30	6,953.9	-576.1	-1,659.0	958.3	0.00	0.00	
8,100.0	90.50	180.30	6,953.1	-676.1	-1,659.5	1,055.4	0.00	0.00	
8,200.0	90.50	180.30	6,952.2	-776.1	-1,660.0	1,152.6	0.00	0.00	
8,300.0	90.50	180.30	6,951.3	-876.1	-1,660.6	1,249.8	0.00	0.00	
8,400.0	90.50	180.30	6,950.4	-976.1	-1,661.1	1,347.0	0.00	0.00	
8,500.0	90.50	180.30	6,949.5	-1,076.1	-1,661.6	1,444.2	0.00	0.00	
8,600.0	90.50	180.30	6,948.7	-1,176.0	-1,662.1	1,541.4	0.00	0.00	
8,700.0	90.50	180.30	6,947.8	-1,276.0	-1,662.7	1,638.6	0.00	0.00	
8,800.0	90.50	180.30	6,946.9	-1,376.0	-1,663.2	1,735.7	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DHS7B-32 K29 6100
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	kbe @ 7065.0ft
<b>Project:</b>	Cedar Bench	<b>MD Reference:</b>	kbe @ 7065.0ft
<b>Site:</b>	Sec 29-6S-100W (K29 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	DHS7B-32 K29 6100	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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
8,900.0	90.50	180.30	6,946.0	-1,476.0	-1,663.7	1,832.9	0.00	0.00	
9,000.0	90.50	180.30	6,945.1	-1,576.0	-1,664.3	1,930.1	0.00	0.00	
9,100.0	90.50	180.30	6,944.3	-1,676.0	-1,664.8	2,027.3	0.00	0.00	
9,200.0	90.50	180.30	6,943.4	-1,776.0	-1,665.3	2,124.5	0.00	0.00	
9,300.0	90.50	180.30	6,942.5	-1,876.0	-1,665.8	2,221.7	0.00	0.00	
9,400.0	90.50	180.30	6,941.6	-1,976.0	-1,666.4	2,318.9	0.00	0.00	
9,500.0	90.50	180.30	6,940.8	-2,076.0	-1,666.9	2,416.0	0.00	0.00	
9,600.0	90.50	180.30	6,939.9	-2,176.0	-1,667.4	2,513.2	0.00	0.00	
9,700.0	90.50	180.30	6,939.0	-2,276.0	-1,668.0	2,610.4	0.00	0.00	
9,800.0	90.50	180.30	6,938.1	-2,376.0	-1,668.5	2,707.6	0.00	0.00	
9,900.0	90.50	180.30	6,937.2	-2,476.0	-1,669.0	2,804.8	0.00	0.00	
10,000.0	90.50	180.30	6,936.4	-2,576.0	-1,669.6	2,902.0	0.00	0.00	
10,100.0	90.50	180.30	6,935.5	-2,676.0	-1,670.1	2,999.2	0.00	0.00	
10,200.0	90.50	180.30	6,934.6	-2,776.0	-1,670.6	3,096.3	0.00	0.00	
10,300.0	90.50	180.30	6,933.7	-2,876.0	-1,671.1	3,193.5	0.00	0.00	
10,400.0	90.50	180.30	6,932.8	-2,976.0	-1,671.7	3,290.7	0.00	0.00	
10,500.0	90.50	180.30	6,932.0	-3,075.9	-1,672.2	3,387.9	0.00	0.00	
10,600.0	90.50	180.30	6,931.1	-3,175.9	-1,672.7	3,485.1	0.00	0.00	
10,700.0	90.50	180.30	6,930.2	-3,275.9	-1,673.3	3,582.3	0.00	0.00	
10,800.0	90.50	180.30	6,929.3	-3,375.9	-1,673.8	3,679.5	0.00	0.00	
10,900.0	90.50	180.30	6,928.5	-3,475.9	-1,674.3	3,776.6	0.00	0.00	
11,000.0	90.50	180.30	6,927.6	-3,575.9	-1,674.8	3,873.8	0.00	0.00	
11,100.0	90.50	180.30	6,926.7	-3,675.9	-1,675.4	3,971.0	0.00	0.00	
11,200.0	90.50	180.30	6,925.8	-3,775.9	-1,675.9	4,068.2	0.00	0.00	
11,300.0	90.50	180.30	6,924.9	-3,875.9	-1,676.4	4,165.4	0.00	0.00	
11,400.0	90.50	180.30	6,924.1	-3,975.9	-1,677.0	4,262.6	0.00	0.00	
11,500.0	90.50	180.30	6,923.2	-4,075.9	-1,677.5	4,359.7	0.00	0.00	
11,600.0	90.50	180.30	6,922.3	-4,175.9	-1,678.0	4,456.9	0.00	0.00	
11,700.0	90.50	180.30	6,921.4	-4,275.9	-1,678.6	4,554.1	0.00	0.00	
11,800.0	90.50	180.30	6,920.5	-4,375.9	-1,679.1	4,651.3	0.00	0.00	
11,900.0	90.50	180.30	6,919.7	-4,475.9	-1,679.6	4,748.5	0.00	0.00	
12,000.0	90.50	180.30	6,918.8	-4,575.9	-1,680.1	4,845.7	0.00	0.00	
12,100.0	90.50	180.30	6,917.9	-4,675.9	-1,680.7	4,942.9	0.00	0.00	
12,200.0	90.50	180.30	6,917.0	-4,775.9	-1,681.2	5,040.0	0.00	0.00	
12,300.0	90.50	180.30	6,916.1	-4,875.9	-1,681.7	5,137.2	0.00	0.00	
12,400.0	90.50	180.30	6,915.3	-4,975.8	-1,682.3	5,234.4	0.00	0.00	
12,500.0	90.50	180.30	6,914.4	-5,075.8	-1,682.8	5,331.6	0.00	0.00	
12,600.0	90.50	180.30	6,913.5	-5,175.8	-1,683.3	5,428.8	0.00	0.00	
12,700.0	90.50	180.30	6,912.6	-5,275.8	-1,683.8	5,526.0	0.00	0.00	
12,800.0	90.50	180.30	6,911.8	-5,375.8	-1,684.4	5,623.2	0.00	0.00	
12,900.0	90.50	180.30	6,910.9	-5,475.8	-1,684.9	5,720.3	0.00	0.00	
13,000.0	90.50	180.30	6,910.0	-5,575.8	-1,685.4	5,817.5	0.00	0.00	
13,100.0	90.50	180.30	6,909.1	-5,675.8	-1,686.0	5,914.7	0.00	0.00	
13,200.0	90.50	180.30	6,908.2	-5,775.8	-1,686.5	6,011.9	0.00	0.00	
13,300.0	90.50	180.30	6,907.4	-5,875.8	-1,687.0	6,109.1	0.00	0.00	
13,400.0	90.50	180.30	6,906.5	-5,975.8	-1,687.6	6,206.3	0.00	0.00	
13,500.0	90.50	180.30	6,905.6	-6,075.8	-1,688.1	6,303.5	0.00	0.00	
13,600.0	90.50	180.30	6,904.7	-6,175.8	-1,688.6	6,400.6	0.00	0.00	
13,700.0	90.50	180.30	6,903.8	-6,275.8	-1,689.1	6,497.8	0.00	0.00	
13,800.0	90.50	180.30	6,903.0	-6,375.8	-1,689.7	6,595.0	0.00	0.00	
13,900.0	90.50	180.30	6,902.1	-6,475.8	-1,690.2	6,692.2	0.00	0.00	
14,000.0	90.50	180.30	6,901.2	-6,575.8	-1,690.7	6,789.4	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DHS7B-32 K29 6100
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	kbe @ 7065.0ft
<b>Project:</b>	Cedar Bench	<b>MD Reference:</b>	kbe @ 7065.0ft
<b>Site:</b>	Sec 29-6S-100W (K29 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	DHS7B-32 K29 6100	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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
14,100.0	90.50	180.30	6,900.3	-6,675.8	-1,691.3	6,886.6	0.00	0.00	
14,200.0	90.50	180.30	6,899.5	-6,775.8	-1,691.8	6,983.8	0.00	0.00	
14,251.2	90.50	180.30	6,899.0	-6,827.0	-1,692.1	7,033.5	0.00	0.00	TD @ 14,251.2' 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
DHS7B-32 K29 6100 LP - plan hits target center - Point	0.00	0.00	6,957.0	-227.6	-1,657.1	1,076,883.36	2,129,837.46	39° 30' 10.23 N	108° 35' 3.04 W
DHS7B-32 K29 6100 PE - plan hits target center - Point	0.00	0.00	6,899.0	-6,827.0	-1,692.1	1,070,289.18	2,129,573.50	39° 29' 5.01 N	108° 35' 3.48 W

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.0	1,500.0	0.0	0.0	KOP @ 1,500'
2,125.7	2,114.6	33.3	-96.0	EOB @ Inc. = 18.77°
6,445.9	6,205.0	489.4	-1,409.2	Start 8° Curve
7,651.5	6,957.0	-227.6	-1,657.1	LP @ 6,957' TVD, 90.5°
14,251.2	6,899.0	-6,827.0	-1,692.1	TD @ 14,251.2' MD