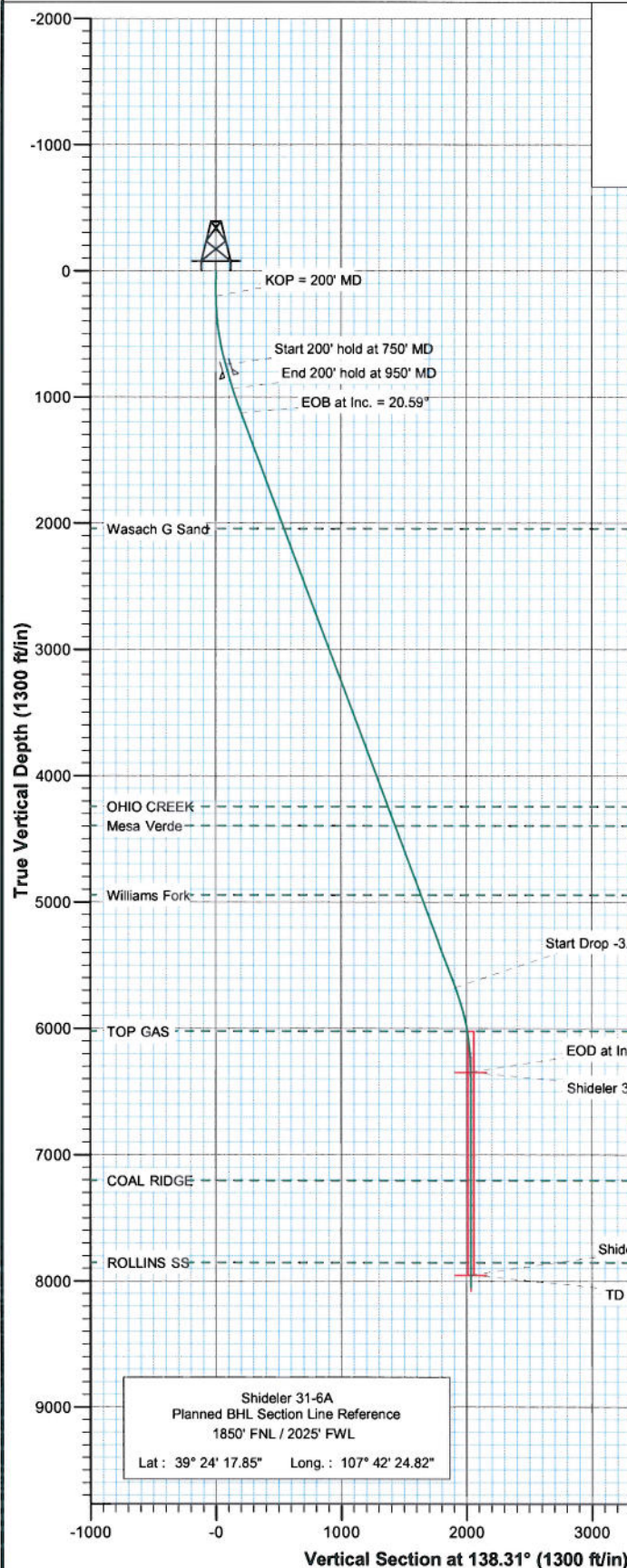
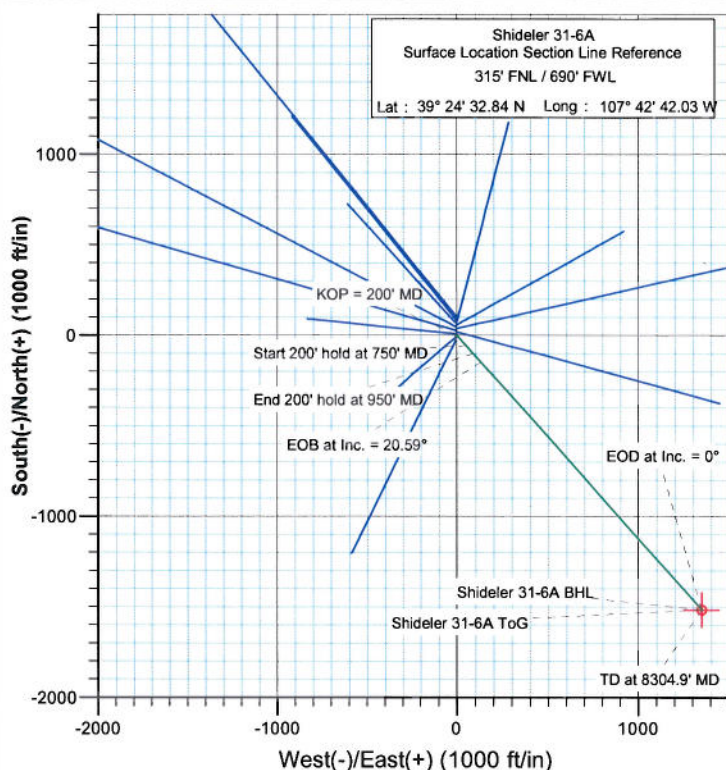




Project: Mamm Creek  
Site: C31E Pad (NENW 31-7S-92W)  
Well: Shideler 31-6A  
Wellbore: DD  
Plan: Plan #1



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	750.0	16.50	138.31	742.4	-58.7	52.3	3.00	138.31	78.6	
4	950.0	16.50	138.31	934.2	-101.1	90.1	0.00	0.00	135.5	
5	1154.3	20.59	138.31	1127.8	-149.6	133.3	2.00	-0.01	200.4	
6	6013.7	20.59	138.31	5677.0	-1425.5	1269.7	0.00	0.00	1909.0	
7	6669.9	0.00	0.00	6348.5	-1516.6	1350.8	3.00	180.00	2030.9	Shideler 31-6A ToG
8	8304.9	0.00	0.00	7953.5	-1516.6	1350.8	0.00	0.00	2030.9	Shideler 31-6A BHL
9	8404.9	0.00	0.00	8053.5	-1516.6	1350.8	0.00	0.00	2030.9	



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2043.5	2132.4	Wasach G Sand
4243.5	4482.5	OHIO CREEK
4393.5	4642.7	Mesa Verde
4943.5	5230.2	Williams Fork
6023.5	6373.3	TOP GAS
7203.5	7554.9	COAL RIDGE
7853.5	8204.9	ROLLINS SS



Azimuths to True North  
Magnetic North: 10.44°

Magnetic Field  
Strength: 52455.7nT  
Dip Angle: 65.78°  
Date: 7/8/2009  
Model: IGRF200510

#### DESIGN DETAILS: Plan #1

Job# 95xxx: KR

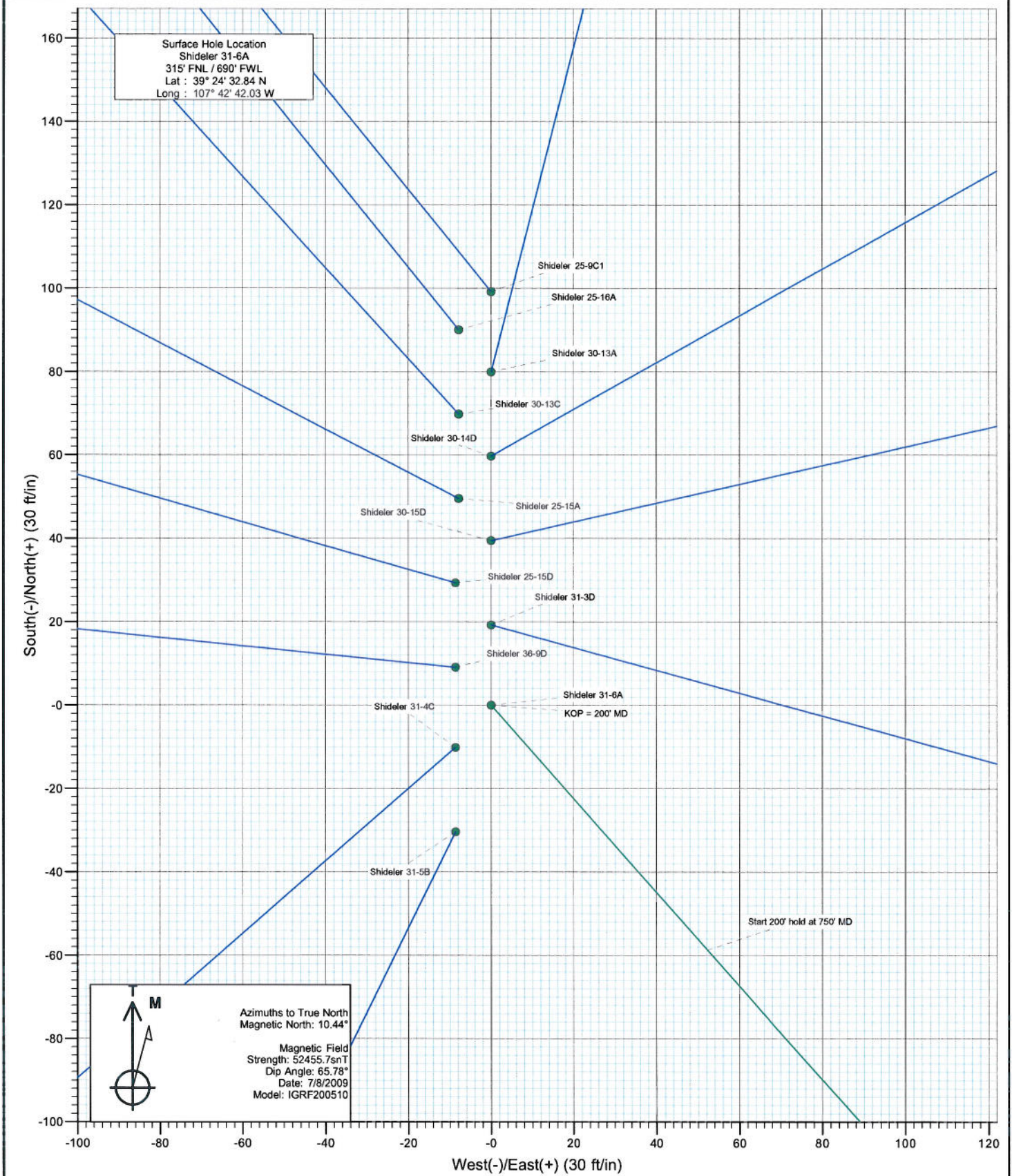
KBE @ 6763.5ft (Original Well Elev)

Target	Azimuth	Origin Type	N/S	E/W	From TVD
Shideler 31-6A BHL	138.31	Slot	0.0	0.0	0.0





Project: Mamm Creek  
Site: C31E Pad (NENW 31-7S-92W)  
Well: Shideler 31-6A  
Wellbore: DD  
Design: Plan #1





## Planning Report

Database:	US EDM 2003.21 Multi User Db			Local Co-ordinate Reference:	Well Shideler 31-6A		
Company:	EnCana Oil & Gas (USA) Inc			TVD Reference:	KBE @ 6763.5ft (Original Well Elev)		
Project:	Mamm Creek			MD Reference:	KBE @ 6763.5ft (Original Well Elev)		
Site:	C31E Pad (NENW 31-7S-92W)			North Reference:	True		
Well:	Shideler 31-6A			Survey Calculation Method:	Minimum Curvature		
Wellbore:	DD						
Design:	Plan #1						

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

Site	C31E Pad (NENW 31-7S-92W)				
Site Position:		Northing:	1,581,611.55 ft	Latitude:	39° 24' 33.82 N
From:	Lat/Long	Easting:	2,375,162.79 ft	Longitude:	107° 42' 42.03 W
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.39 °

Well	Shideler 31-6A					
Well Position	+N/-S	0.0 ft	Northing:	1,581,512.42 ft	Latitude:	39° 24' 32.84 N
	+E/-W	0.0 ft	Easting:	2,375,160.37 ft	Longitude:	107° 42' 42.03 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,750.0 ft	

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/8/2009	10.44	65.78	52,456

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	138.31	

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	
750.0	16.50	138.31	742.4	-58.7	52.3	3.00	3.00	0.00	138.31	
950.0	16.50	138.31	934.2	-101.1	90.1	0.00	0.00	0.00	0.00	
1,154.3	20.59	138.31	1,127.8	-149.6	133.3	2.00	2.00	0.00	-0.01	
6,013.7	20.59	138.31	5,677.0	-1,425.5	1,269.7	0.00	0.00	0.00	0.00	
6,699.9	0.00	0.00	6,348.5	-1,516.6	1,350.8	3.00	-3.00	0.00	180.00	Shideler 31-6A ToG
8,304.9	0.00	0.00	7,953.5	-1,516.6	1,350.8	0.00	0.00	0.00	0.00	Shideler 31-6A BHL
8,404.9	0.00	0.00	8,053.5	-1,516.6	1,350.8	0.00	0.00	0.00	0.00	

# Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well Shideler 31-6A
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6763.5ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 6763.5ft (Original Well Elev)
Site:	C31E Pad (NENW 31-7S-92W)	North Reference:	True
Well:	Shideler 31-6A	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' MD
300.0	3.00	138.31	300.0	-2.0	1.7	2.6	3.00	3.00	
400.0	6.00	138.31	399.6	-7.8	7.0	10.5	3.00	3.00	
500.0	9.00	138.31	498.8	-17.6	15.6	23.5	3.00	3.00	
600.0	12.00	138.31	597.1	-31.2	27.8	41.7	3.00	3.00	
700.0	15.00	138.31	694.3	-48.6	43.3	65.1	3.00	3.00	
750.0	16.50	138.31	742.4	-58.7	52.3	78.6	3.00	3.00	Start 200' hold at 750' MD
800.0	16.50	138.31	790.4	-69.3	61.8	92.8	0.00	0.00	
850.0	16.50	138.31	838.3	-79.9	71.2	107.1	0.00	0.00	Surface Casing
900.0	16.50	138.31	886.3	-90.5	80.6	121.3	0.00	0.00	
950.0	16.50	138.31	934.2	-101.1	90.1	135.5	0.00	0.00	End 200' hold at 950' MD
1,000.0	17.50	138.31	982.0	-112.1	99.8	150.1	2.00	2.00	
1,100.0	19.50	138.31	1,076.8	-135.8	120.9	181.8	2.00	2.00	
1,154.3	20.59	138.31	1,127.8	-149.6	133.3	200.4	2.00	2.00	EOB at Inc. = 20.59°
1,200.0	20.59	138.31	1,170.6	-161.7	144.0	216.5	0.00	0.00	
1,300.0	20.59	138.31	1,264.2	-187.9	167.4	251.6	0.00	0.00	
1,400.0	20.59	138.31	1,357.9	-214.2	190.8	286.8	0.00	0.00	
1,500.0	20.59	138.31	1,451.5	-240.4	214.1	322.0	0.00	0.00	
1,600.0	20.59	138.31	1,545.1	-266.7	237.5	357.1	0.00	0.00	
1,700.0	20.59	138.31	1,638.7	-292.9	260.9	392.3	0.00	0.00	
1,800.0	20.59	138.31	1,732.3	-319.2	284.3	427.4	0.00	0.00	
1,900.0	20.59	138.31	1,825.9	-345.4	307.7	462.6	0.00	0.00	
2,000.0	20.59	138.31	1,919.5	-371.7	331.1	497.8	0.00	0.00	
2,100.0	20.59	138.31	2,013.2	-398.0	354.5	532.9	0.00	0.00	
2,132.4	20.59	138.31	2,043.5	-406.5	362.0	544.3	0.00	0.00	Wasach G Sand
2,200.0	20.59	138.31	2,106.8	-424.2	377.8	568.1	0.00	0.00	
2,300.0	20.59	138.31	2,200.4	-450.5	401.2	603.2	0.00	0.00	
2,400.0	20.59	138.31	2,294.0	-476.7	424.6	638.4	0.00	0.00	
2,500.0	20.59	138.31	2,387.6	-503.0	448.0	673.6	0.00	0.00	
2,600.0	20.59	138.31	2,481.2	-529.2	471.4	708.7	0.00	0.00	
2,700.0	20.59	138.31	2,574.9	-555.5	494.8	743.9	0.00	0.00	
2,800.0	20.59	138.31	2,668.5	-581.7	518.2	779.0	0.00	0.00	
2,900.0	20.59	138.31	2,762.1	-608.0	541.5	814.2	0.00	0.00	
3,000.0	20.59	138.31	2,855.7	-634.3	564.9	849.4	0.00	0.00	
3,100.0	20.59	138.31	2,949.3	-660.5	588.3	884.5	0.00	0.00	
3,200.0	20.59	138.31	3,042.9	-686.8	611.7	919.7	0.00	0.00	
3,300.0	20.59	138.31	3,136.5	-713.0	635.1	954.8	0.00	0.00	
3,400.0	20.59	138.31	3,230.2	-739.3	658.5	990.0	0.00	0.00	
3,500.0	20.59	138.31	3,323.8	-765.5	681.9	1,025.2	0.00	0.00	
3,600.0	20.59	138.31	3,417.4	-791.8	705.2	1,060.3	0.00	0.00	
3,700.0	20.59	138.31	3,511.0	-818.0	728.6	1,095.5	0.00	0.00	
3,800.0	20.59	138.31	3,604.6	-844.3	752.0	1,130.6	0.00	0.00	
3,900.0	20.59	138.31	3,698.2	-870.5	775.4	1,165.8	0.00	0.00	
4,000.0	20.59	138.31	3,791.8	-896.8	798.8	1,201.0	0.00	0.00	
4,100.0	20.59	138.31	3,885.5	-923.1	822.2	1,236.1	0.00	0.00	
4,200.0	20.59	138.31	3,979.1	-949.3	845.6	1,271.3	0.00	0.00	
4,300.0	20.59	138.31	4,072.7	-975.6	868.9	1,306.4	0.00	0.00	
4,400.0	20.59	138.31	4,166.3	-1,001.8	892.3	1,341.6	0.00	0.00	
4,482.5	20.59	138.31	4,243.5	-1,023.5	911.6	1,370.6	0.00	0.00	OHIO CREEK
4,500.0	20.59	138.31	4,259.9	-1,028.1	915.7	1,376.8	0.00	0.00	



# Planning Report

Database: US EDM 2003.21 Multi User Db  
 Company: EnCana Oil & Gas (USA) Inc  
 Project: Mamm Creek  
 Site: C31E Pad (NENW 31-7S-92W)  
 Well: Shideler 31-6A  
 Wellbore: DD  
 Design: Plan #1

Local Co-ordinate Reference:  
 TVD Reference:  
 MD Reference:  
 North Reference:  
 Survey Calculation Method:

Well Shideler 31-6A  
 KBE @ 6763.5ft (Original Well Elev)  
 KBE @ 6763.5ft (Original Well Elev)  
 True  
 Minimum Curvature

## 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	20.59	138.31	4,353.5	-1,054.3	939.1	1,411.9	0.00	0.00	
4,642.7	20.59	138.31	4,393.5	-1,065.5	949.1	1,426.9	0.00	0.00	Mesa Verde
4,700.0	20.59	138.31	4,447.2	-1,080.6	962.5	1,447.1	0.00	0.00	
4,800.0	20.59	138.31	4,540.8	-1,106.8	985.9	1,482.2	0.00	0.00	
4,900.0	20.59	138.31	4,634.4	-1,133.1	1,009.3	1,517.4	0.00	0.00	
5,000.0	20.59	138.31	4,728.0	-1,159.4	1,032.6	1,552.6	0.00	0.00	
5,100.0	20.59	138.31	4,821.6	-1,185.6	1,056.0	1,587.7	0.00	0.00	
5,200.0	20.59	138.31	4,915.2	-1,211.9	1,079.4	1,622.9	0.00	0.00	
5,230.2	20.59	138.31	4,943.5	-1,219.8	1,086.5	1,633.5	0.00	0.00	Williams Fork
5,300.0	20.59	138.31	5,008.8	-1,238.1	1,102.8	1,658.0	0.00	0.00	
5,400.0	20.59	138.31	5,102.5	-1,264.4	1,126.2	1,693.2	0.00	0.00	
5,500.0	20.59	138.31	5,196.1	-1,290.6	1,149.6	1,728.4	0.00	0.00	
5,600.0	20.59	138.31	5,289.7	-1,316.9	1,173.0	1,763.5	0.00	0.00	
5,700.0	20.59	138.31	5,383.3	-1,343.1	1,196.3	1,798.7	0.00	0.00	
5,800.0	20.59	138.31	5,476.9	-1,369.4	1,219.7	1,833.9	0.00	0.00	
5,900.0	20.59	138.31	5,570.5	-1,395.7	1,243.1	1,869.0	0.00	0.00	
6,000.0	20.59	138.31	5,664.1	-1,421.9	1,266.5	1,904.2	0.00	0.00	
6,013.7	20.59	138.31	5,677.0	-1,425.5	1,269.7	1,909.0	0.00	0.00	Start Drop -3.00
6,100.0	18.00	138.31	5,758.4	-1,446.8	1,288.7	1,937.5	3.00	-3.00	
6,200.0	15.00	138.31	5,854.3	-1,468.0	1,307.6	1,965.9	3.00	-3.00	
6,300.0	12.00	138.31	5,951.5	-1,485.4	1,323.1	1,989.2	3.00	-3.00	
6,373.3	9.80	138.31	6,023.5	-1,495.8	1,332.3	2,003.1	3.00	-3.00	TOP GAS
6,400.0	9.00	138.31	6,049.8	-1,499.0	1,335.2	2,007.4	3.00	-3.00	
6,500.0	6.00	138.31	6,149.0	-1,508.8	1,343.9	2,020.5	3.00	-3.00	
6,600.0	3.00	138.31	6,248.6	-1,514.6	1,349.1	2,028.3	3.00	-3.00	
6,699.9	0.00	0.00	6,348.5	-1,516.6	1,350.8	2,030.9	3.00	-3.00	EOD at Inc. = 0° - Shideler 31-6A ToG
6,700.0	0.00	0.00	6,348.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
6,800.0	0.00	0.00	6,448.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
6,900.0	0.00	0.00	6,548.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,000.0	0.00	0.00	6,648.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,100.0	0.00	0.00	6,748.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,200.0	0.00	0.00	6,848.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,300.0	0.00	0.00	6,948.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,400.0	0.00	0.00	7,048.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,500.0	0.00	0.00	7,148.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,554.9	0.00	0.00	7,203.5	-1,516.6	1,350.8	2,030.9	0.00	0.00	COAL RIDGE
7,600.0	0.00	0.00	7,248.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,700.0	0.00	0.00	7,348.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,800.0	0.00	0.00	7,448.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
7,900.0	0.00	0.00	7,548.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
8,000.0	0.00	0.00	7,648.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
8,100.0	0.00	0.00	7,748.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
8,200.0	0.00	0.00	7,848.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
8,204.9	0.00	0.00	7,853.5	-1,516.6	1,350.8	2,030.9	0.00	0.00	ROLLINS SS
8,300.0	0.00	0.00	7,948.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
8,304.9	0.00	0.00	7,953.5	-1,516.6	1,350.8	2,030.9	0.00	0.00	TD at 8304.9' MD - Shideler 31-6A BHL
8,400.0	0.00	0.00	8,048.6	-1,516.6	1,350.8	2,030.9	0.00	0.00	
8,404.9	0.00	0.00	8,053.5	-1,516.6	1,350.8	2,030.9	0.00	0.00	Permit TD at 8404.9' MD