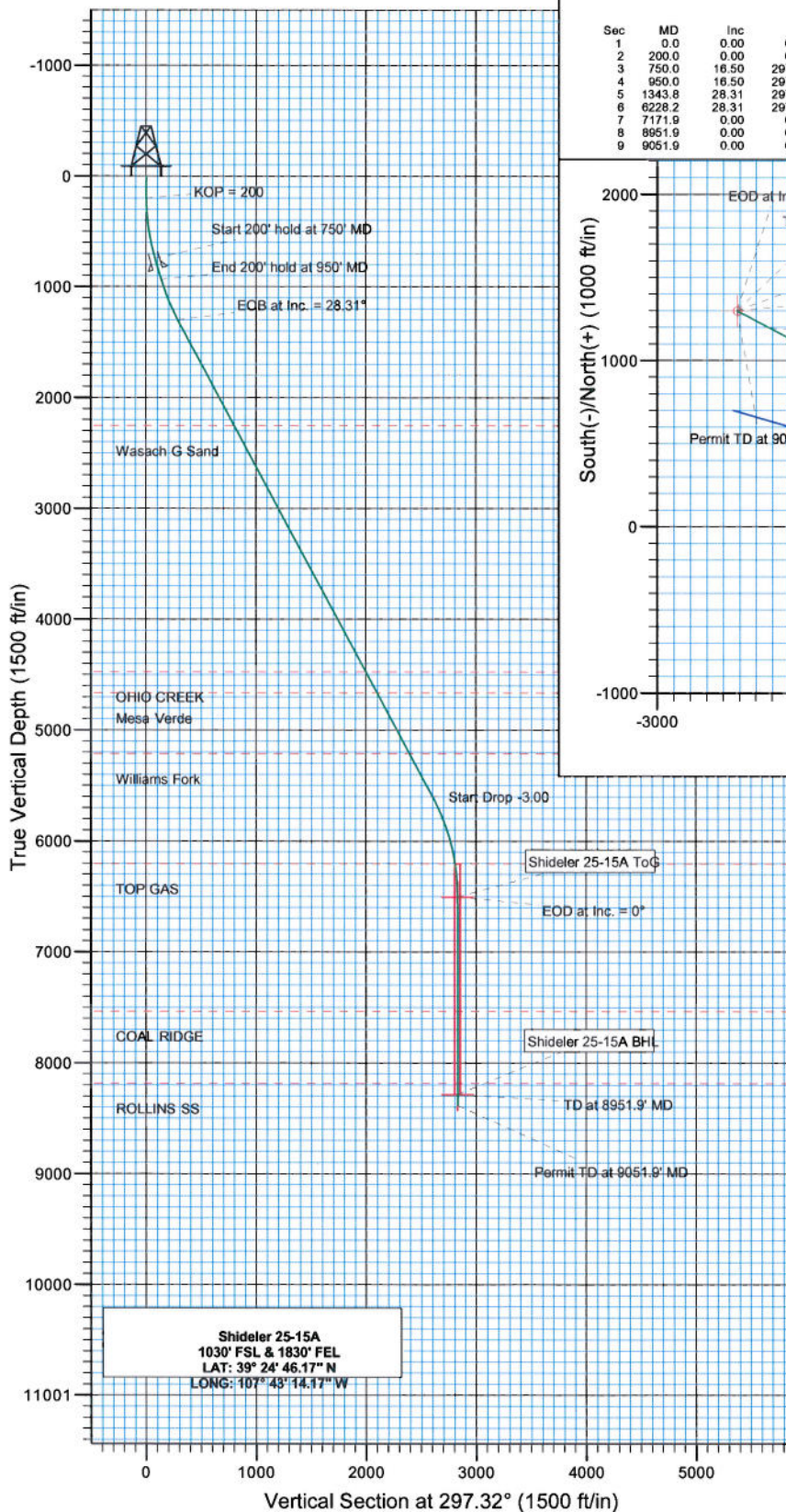
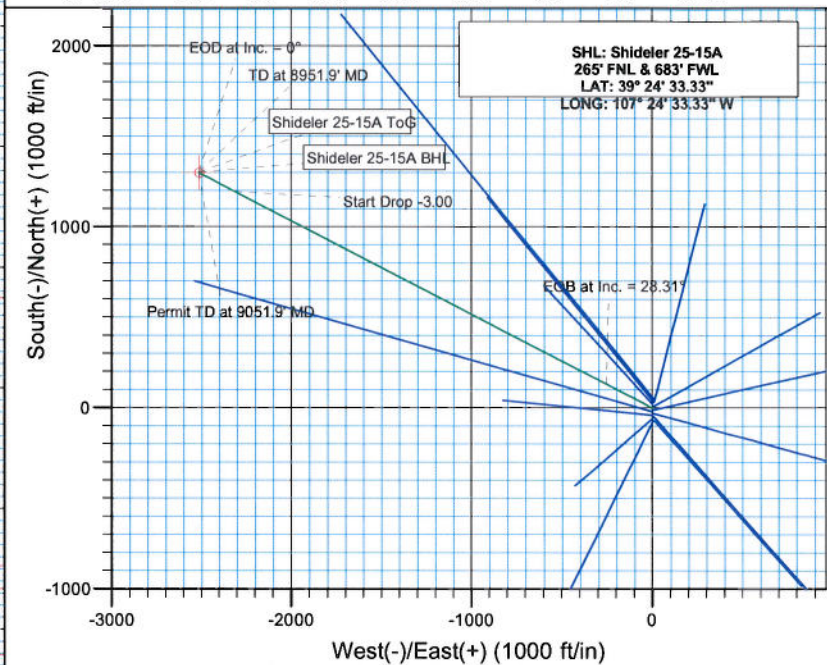




Project: Mamm Creek
 Site: C31E Pad (NENW 31-7S-92W)
 Well: Shideler 25-15A
 Wellbore: DD
 Design: Plan #1



Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec
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	297.32	742.4	36.1	-69.9	3.00	297.32	78.6
4	950.0	16.50	297.32	934.2	62.2	-120.3	0.00	0.00	135.5
5	1343.8	28.31	297.32	1297.6	130.9	-253.5	3.00	0.01	285.3
6	6228.2	28.31	297.32	5597.7	1194.3	-2311.6	0.00	0.00	2601.9
7	7171.9	0.00	0.00	6503.5	1299.2	-2514.6	3.00	180.00	2830.4
8	8951.9	0.00	0.00	8283.5	1299.2	-2514.6	0.00	0.00	2830.4
9	9051.9	0.00	0.00	8383.5	1299.2	-2514.6	0.00	0.00	2830.4



TVDPATH	MDPATH	FORMATION
2253.5	2429.6	Wasach G Sand
4473.5	4951.2	OHIO CREEK
4663.5	5167.1	Mesa Verde
5213.5	5791.8	Williams Fork
6203.5	6870.7	TOP GAS
7533.5	8201.9	COAL RIDGE
8183.5	8851.9	ROLLINS SS

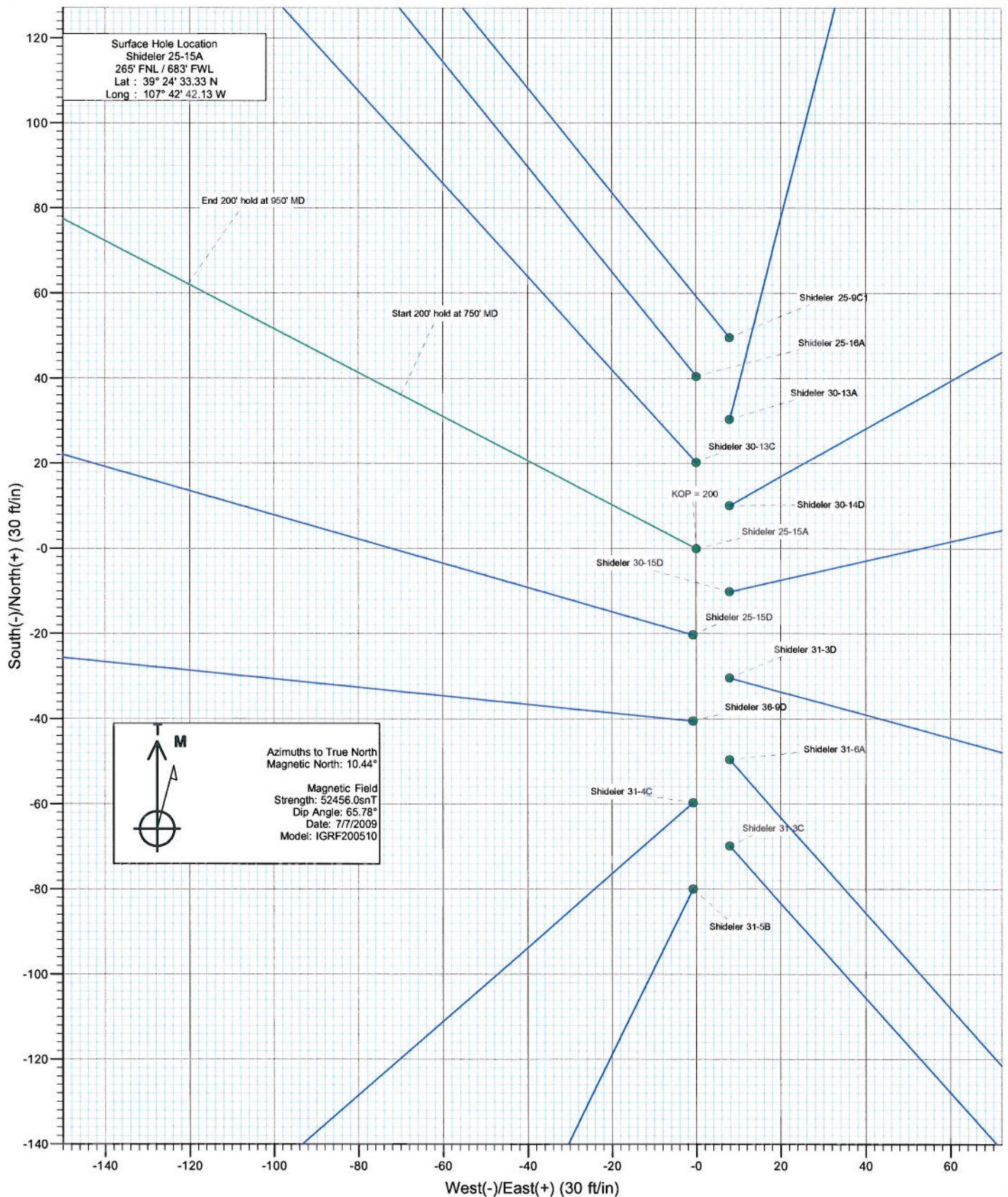


Azimuths to True North
 Magnetic North: 10.44°
 Magnetic Field
 Strength: 52456.0nT
 Dip Angle: 65.78°
 Date: 7/7/2009
 Model: IGRF200510

DESIGN DETAILS: Plan #1
 95xxx: KR
 KBE @ 6763.5ft (Original Well Elev)
 Target Azimuth Origin Type N/S E/W TVD
 Shideler 25-15A BHL 297.32 Slot 0.0 0.0 0.0



Project: Mamm Creek
Site: C31E Pad (NENW 31-7S-92W)
Well: Shideler 25-15A
Wellbore: DD
Design: Plan #1



Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well Shideler 25-15A
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 25-15A	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 25-15A					
Well Position	+N/-S	0.0 ft	Northing:	1,581,562.17 ft	Latitude:	39° 24' 33.33 N
	+E/-W	0.0 ft	Easting:	2,375,153.73 ft	Longitude:	107° 42' 42.13 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	7/7/2009	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	297.32

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	297.32	742.4	36.1	-69.9	3.00	3.00	0.00	297.32	
950.0	16.50	297.32	934.2	62.2	-120.3	0.00	0.00	0.00	0.00	
1,343.8	28.31	297.32	1,297.6	130.9	-253.5	3.00	3.00	0.00	0.01	
6,228.2	28.31	297.32	5,597.7	1,194.3	-2,311.6	0.00	0.00	0.00	0.00	
7,171.9	0.00	0.00	6,503.5	1,299.2	-2,514.6	3.00	-3.00	0.00	180.00	Shideler 25-15A ToG
8,951.9	0.00	0.00	8,283.5	1,299.2	-2,514.6	0.00	0.00	0.00	0.00	Shideler 25-15A BHL
9,051.9	0.00	0.00	8,383.5	1,299.2	-2,514.6	0.00	0.00	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 25-15A
 Wellbore: DD
 Design: Plan #1

Local Co-ordinate Reference: Well Shideler 25-15A
 TVD Reference: KBE @ 6763.5ft (Original Well Elev)
 MD Reference: KBE @ 6763.5ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: 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
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	297.32	300.0	1.2	-2.3	2.6	3.00	3.00	
400.0	6.00	297.32	399.6	4.8	-9.3	10.5	3.00	3.00	
500.0	9.00	297.32	498.8	10.8	-20.9	23.5	3.00	3.00	
600.0	12.00	297.32	597.1	19.2	-37.1	41.7	3.00	3.00	
700.0	15.00	297.32	694.3	29.9	-57.8	65.1	3.00	3.00	
750.0	16.50	297.32	742.4	36.1	-69.9	78.6	3.00	3.00	Start 200' hold at 750' MD
800.0	16.50	297.32	790.4	42.6	-82.5	92.8	0.00	0.00	
850.0	16.50	297.32	838.3	49.1	-95.1	107.1	0.00	0.00	Surface Casing
900.0	16.50	297.32	886.3	55.6	-107.7	121.3	0.00	0.00	
950.0	16.50	297.32	934.2	62.2	-120.3	135.5	0.00	0.00	End 200' hold at 950' MD
1,000.0	18.00	297.32	981.9	69.0	-133.5	150.3	3.00	3.00	
1,100.0	21.00	297.32	1,076.2	84.3	-163.2	183.7	3.00	3.00	
1,200.0	24.00	297.32	1,168.6	101.9	-197.2	221.9	3.00	3.00	
1,300.0	27.00	297.32	1,258.8	121.6	-235.4	265.0	3.00	3.00	
1,343.8	28.31	297.32	1,297.6	130.9	-253.5	285.3	3.00	3.00	EOB at Inc. = 28.31°
1,400.0	28.31	297.32	1,347.1	143.2	-277.2	312.0	0.00	0.00	
1,500.0	28.31	297.32	1,435.1	165.0	-319.3	359.4	0.00	0.00	
1,600.0	28.31	297.32	1,523.2	186.7	-361.4	406.8	0.00	0.00	
1,700.0	28.31	297.32	1,611.2	208.5	-403.6	454.2	0.00	0.00	
1,800.0	28.31	297.32	1,699.2	230.3	-445.7	501.7	0.00	0.00	
1,900.0	28.31	297.32	1,787.3	252.0	-487.8	549.1	0.00	0.00	
2,000.0	28.31	297.32	1,875.3	273.8	-530.0	596.5	0.00	0.00	
2,100.0	28.31	297.32	1,963.4	295.6	-572.1	644.0	0.00	0.00	
2,200.0	28.31	297.32	2,051.4	317.4	-614.2	691.4	0.00	0.00	
2,300.0	28.31	297.32	2,139.4	339.1	-656.4	738.8	0.00	0.00	
2,400.0	28.31	297.32	2,227.5	360.9	-698.5	786.2	0.00	0.00	
2,429.6	28.31	297.32	2,253.5	367.3	-711.0	800.3	0.00	0.00	Wasach G Sand
2,500.0	28.31	297.32	2,315.5	382.7	-740.7	833.7	0.00	0.00	
2,600.0	28.31	297.32	2,403.5	404.4	-782.8	881.1	0.00	0.00	
2,700.0	28.31	297.32	2,491.6	426.2	-824.9	928.5	0.00	0.00	
2,800.0	28.31	297.32	2,579.6	448.0	-867.1	976.0	0.00	0.00	
2,900.0	28.31	297.32	2,667.6	469.8	-909.2	1,023.4	0.00	0.00	
3,000.0	28.31	297.32	2,755.7	491.5	-951.3	1,070.8	0.00	0.00	
3,100.0	28.31	297.32	2,843.7	513.3	-993.5	1,118.2	0.00	0.00	
3,200.0	28.31	297.32	2,931.8	535.1	-1,035.6	1,165.7	0.00	0.00	
3,300.0	28.31	297.32	3,019.8	556.8	-1,077.7	1,213.1	0.00	0.00	
3,400.0	28.31	297.32	3,107.8	578.6	-1,119.9	1,260.5	0.00	0.00	
3,500.0	28.31	297.32	3,195.9	600.4	-1,162.0	1,308.0	0.00	0.00	
3,600.0	28.31	297.32	3,283.9	622.2	-1,204.2	1,355.4	0.00	0.00	
3,700.0	28.31	297.32	3,371.9	643.9	-1,246.3	1,402.8	0.00	0.00	
3,800.0	28.31	297.32	3,460.0	665.7	-1,288.4	1,450.2	0.00	0.00	
3,900.0	28.31	297.32	3,548.0	687.5	-1,330.6	1,497.7	0.00	0.00	
4,000.0	28.31	297.32	3,636.1	709.2	-1,372.7	1,545.1	0.00	0.00	
4,100.0	28.31	297.32	3,724.1	731.0	-1,414.8	1,592.5	0.00	0.00	
4,200.0	28.31	297.32	3,812.1	752.8	-1,457.0	1,640.0	0.00	0.00	
4,300.0	28.31	297.32	3,900.2	774.6	-1,499.1	1,687.4	0.00	0.00	
4,400.0	28.31	297.32	3,988.2	796.3	-1,541.2	1,734.8	0.00	0.00	
4,500.0	28.31	297.32	4,076.2	818.1	-1,583.4	1,782.2	0.00	0.00	
4,600.0	28.31	297.32	4,164.3	839.9	-1,625.5	1,829.7	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 25-15A
 Wellbore: DD
 Design: Plan #1

Local Co-ordinate Reference: Well Shideler 25-15A
 TVD Reference: KBE @ 6763.5ft (Original Well Elev)
 MD Reference: KBE @ 6763.5ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: 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
4,700.0	28.31	297.32	4,252.3	861.6	-1,667.7	1,877.1	0.00	0.00	
4,800.0	28.31	297.32	4,340.4	883.4	-1,709.8	1,924.5	0.00	0.00	
4,900.0	28.31	297.32	4,428.4	905.2	-1,751.9	1,972.0	0.00	0.00	
4,951.2	28.31	297.32	4,473.5	916.3	-1,773.5	1,996.3	0.00	0.00	OHIO CREEK
5,000.0	28.31	297.32	4,516.4	927.0	-1,794.1	2,019.4	0.00	0.00	
5,100.0	28.31	297.32	4,604.5	948.7	-1,836.2	2,066.8	0.00	0.00	
5,167.1	28.31	297.32	4,663.5	963.3	-1,864.5	2,098.6	0.00	0.00	Mesa Verde
5,200.0	28.31	297.32	4,692.5	970.5	-1,878.3	2,114.2	0.00	0.00	
5,300.0	28.31	297.32	4,780.5	992.3	-1,920.5	2,161.7	0.00	0.00	
5,400.0	28.31	297.32	4,868.6	1,014.0	-1,962.6	2,209.1	0.00	0.00	
5,500.0	28.31	297.32	4,956.6	1,035.8	-2,004.7	2,256.5	0.00	0.00	
5,600.0	28.31	297.32	5,044.6	1,057.6	-2,046.9	2,304.0	0.00	0.00	
5,700.0	28.31	297.32	5,132.7	1,079.4	-2,089.0	2,351.4	0.00	0.00	
5,791.8	28.31	297.32	5,213.5	1,099.3	-2,127.7	2,394.9	0.00	0.00	Williams Fork
5,800.0	28.31	297.32	5,220.7	1,101.1	-2,131.2	2,398.8	0.00	0.00	
5,900.0	28.31	297.32	5,308.8	1,122.9	-2,173.3	2,446.2	0.00	0.00	
6,000.0	28.31	297.32	5,396.8	1,144.7	-2,215.4	2,493.7	0.00	0.00	
6,100.0	28.31	297.32	5,484.8	1,166.4	-2,257.6	2,541.1	0.00	0.00	
6,200.0	28.31	297.32	5,572.9	1,188.2	-2,299.7	2,588.5	0.00	0.00	
6,228.2	28.31	297.32	5,597.7	1,194.3	-2,311.6	2,601.9	0.00	0.00	Start Drop -3.00
6,300.0	26.16	297.32	5,661.5	1,209.4	-2,340.8	2,634.8	3.00	-3.00	
6,400.0	23.16	297.32	5,752.4	1,228.6	-2,377.8	2,676.5	3.00	-3.00	
6,500.0	20.16	297.32	5,845.3	1,245.5	-2,410.6	2,713.4	3.00	-3.00	
6,600.0	17.16	297.32	5,940.1	1,260.2	-2,439.0	2,745.4	3.00	-3.00	
6,700.0	14.16	297.32	6,036.3	1,272.6	-2,463.0	2,772.4	3.00	-3.00	
6,800.0	11.16	297.32	6,133.9	1,282.7	-2,482.5	2,794.3	3.00	-3.00	
6,870.7	9.04	297.32	6,203.5	1,288.3	-2,493.5	2,806.7	3.00	-3.00	TOP GAS
6,900.0	8.16	297.32	6,232.5	1,290.4	-2,497.4	2,811.0	3.00	-3.00	
7,000.0	5.16	297.32	6,331.8	1,295.7	-2,507.7	2,822.6	3.00	-3.00	
7,100.0	2.16	297.32	6,431.6	1,298.6	-2,513.4	2,829.0	3.00	-3.00	
7,171.9	0.00	0.00	6,503.5	1,299.2	-2,514.6	2,830.4	3.00	-3.00	EOD at Inc. = 0° - Shideler 25-15A ToG
7,200.0	0.00	0.00	6,531.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,300.0	0.00	0.00	6,631.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,400.0	0.00	0.00	6,731.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,500.0	0.00	0.00	6,831.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,600.0	0.00	0.00	6,931.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,700.0	0.00	0.00	7,031.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,800.0	0.00	0.00	7,131.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
7,900.0	0.00	0.00	7,231.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,000.0	0.00	0.00	7,331.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,100.0	0.00	0.00	7,431.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,200.0	0.00	0.00	7,531.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,201.9	0.00	0.00	7,533.5	1,299.2	-2,514.6	2,830.4	0.00	0.00	COAL RIDGE
8,300.0	0.00	0.00	7,631.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,400.0	0.00	0.00	7,731.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,500.0	0.00	0.00	7,831.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,600.0	0.00	0.00	7,931.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,700.0	0.00	0.00	8,031.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,800.0	0.00	0.00	8,131.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,851.9	0.00	0.00	8,183.5	1,299.2	-2,514.6	2,830.4	0.00	0.00	ROLLINS SS
8,900.0	0.00	0.00	8,231.6	1,299.2	-2,514.6	2,830.4	0.00	0.00	
8,951.9	0.00	0.00	8,283.5	1,299.2	-2,514.6	2,830.4	0.00	0.00	TD at 8951.9' MD - Shideler 25-15A BHL