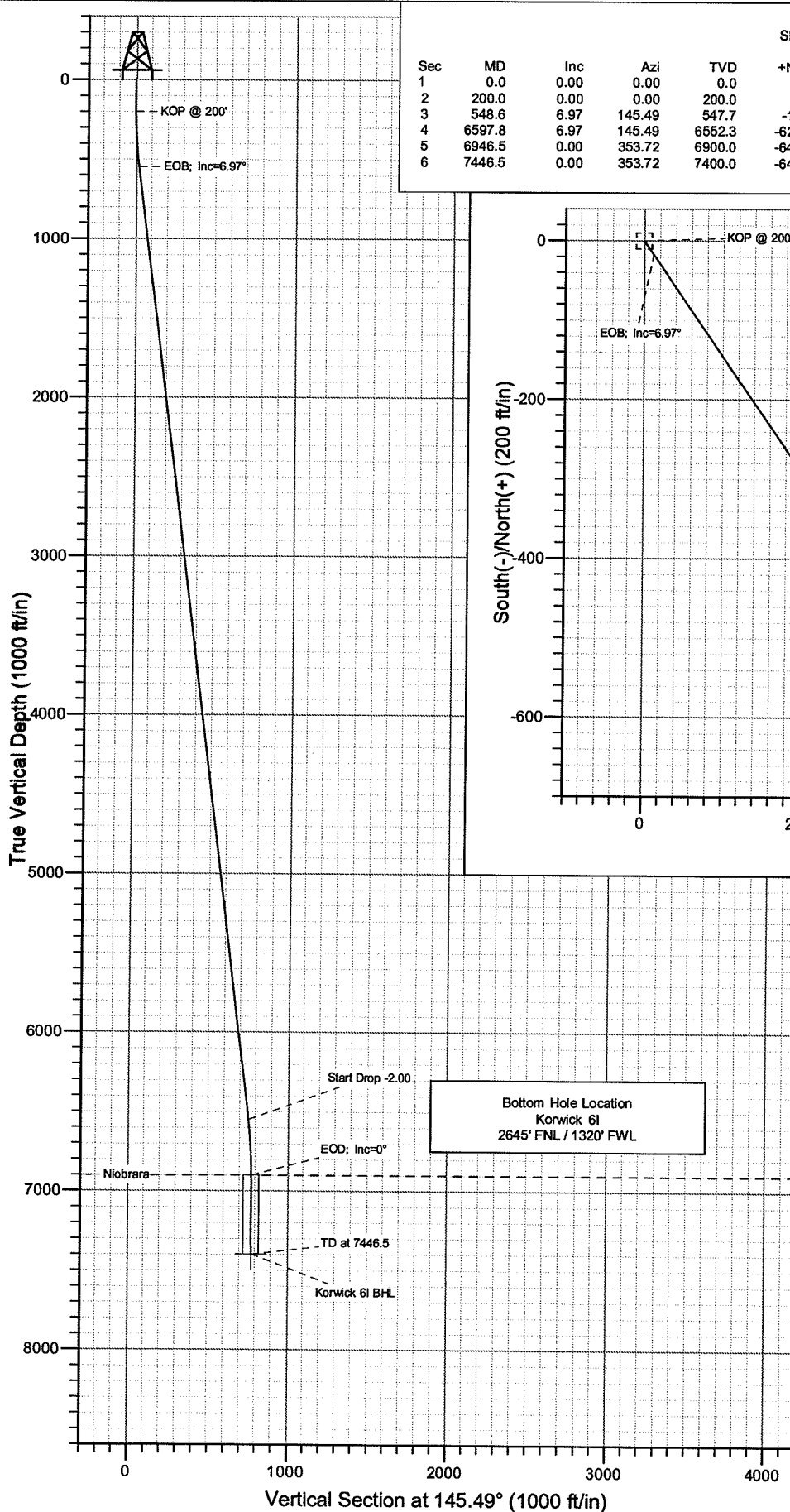


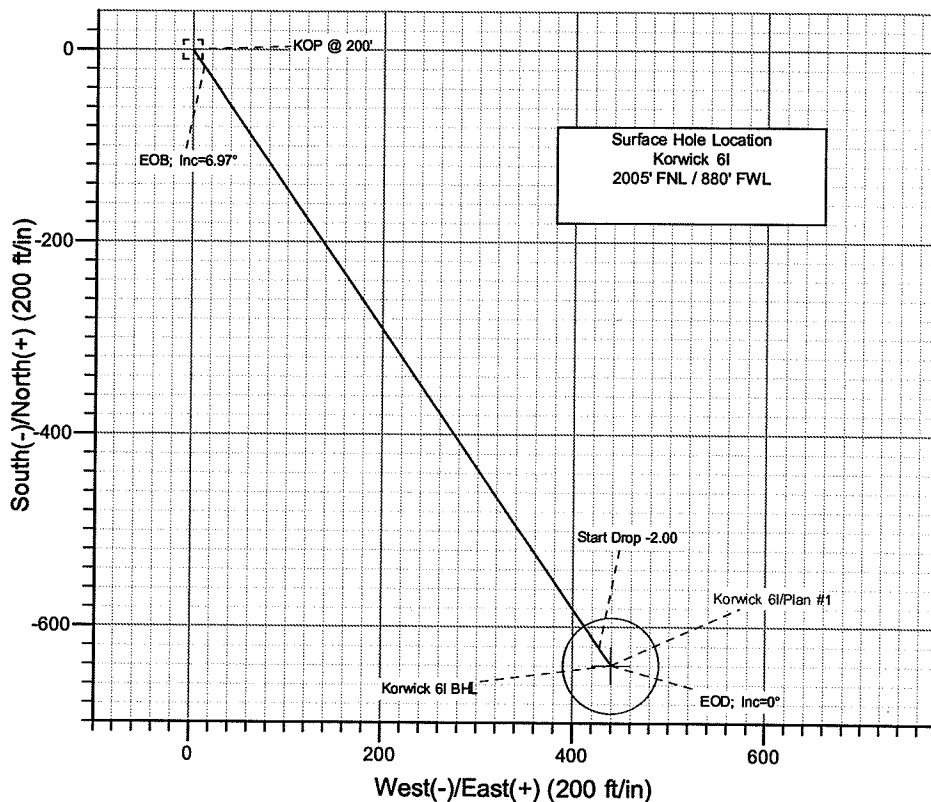
# Merit Energy Company

Project: DJ Basin  
Site: Sec28-T4N-R66W  
Well: Korwick 6I  
Wellbore: DD  
Design: 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	548.6	6.97	145.49	547.7	-17.5	12.0	2.00	145.49	21.2	
4	6597.8	6.97	145.49	6552.3	-622.5	428.0	0.00	0.00	755.5	
5	6946.5	0.00	353.72	6900.0	-640.0	440.0	2.00	180.00	776.7	
6	7446.5	0.00	353.72	7400.0	-640.0	440.0	0.00	0.00	776.7	Korwick 6I BHL



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6900.0	6946.5	Niobrara



Azimuths to True North  
Magnetic North: 12.44°

Magnetic Field  
Strength: 48641.2snT  
Dip Angle: 60.07°  
Date: 4/29/2008  
Model: IGRF200510

DESIGN DETAILS: Plan #1

85xxx; LR  
WELL @ 0.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
Korwick 6I BHL	145.49	Slot	0.0	0.0	0.0



# Cathedral Energy Services

## Planning Report

**Database:** EDM 2003.21 US Multi Users DB  
**Company:** Merit Energy Company  
**Project:** DJ Basin  
**Site:** Sec28-T4N-R66W  
**Well:** Korwick 6I  
**Wellbore:** DD  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Korwick 6I  
**TVD Reference:** WELL @ 0.0ft (Original Well Elev)  
**MD Reference:** WELL @ 0.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	DJ Basin		
<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 Central Zone		

<b>Site</b>	Sec28-T4N-R66W		
<b>Site Position:</b>		<b>Northing:</b>	m
<b>From:</b>	None	<b>Easting:</b>	m
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	in
		<b>Latitude:</b>	
		<b>Longitude:</b>	
		<b>Grid Convergence:</b>	0.00 °

<b>Well</b>	Korwick 6I		
<b>Well Position</b>	+N/-S	0.0 ft	<b>Northing:</b> 0.00 m
	+E/-W	0.0 ft	<b>Easting:</b> 0.00 m
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	34° 38' 17.637 N
		<b>Longitude:</b>	115° 27' 50.627 W
		<b>Ground Level:</b>	0.0 ft

<b>Wellbore</b>	DD		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>
			(°)
	IGRF200510	4/29/2008	12.44
			Dip Angle (°)
			60.07
			Field Strength (nT)
			48,641

<b>Design</b>	Plan #1		
<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>
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			<b>Direction</b>
			(°)
			145.49

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	
548.6	6.97	145.49	547.7	-17.5	12.0	2.00	2.00	0.00	145.49	
6,597.8	6.97	145.49	6,552.3	-622.5	428.0	0.00	0.00	0.00	0.00	
6,946.5	0.00	353.72	6,900.0	-640.0	440.0	2.00	-2.00	0.00	180.00	
7,446.5	0.00	353.72	7,400.0	-640.0	440.0	0.00	0.00	0.00	0.00	Korwick 6I BHL



# Cathedral Energy Services

## Planning Report

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Well: Korwick 6I  
Wellbore: DD  
Design: Plan #1

Local Co-ordinate Reference: Well Korwick 6I  
TVD Reference: WELL @ 0.0ft (Original Well Elev)  
MD Reference: WELL @ 0.0ft (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	2.00	145.49	300.0	-1.4	1.0	1.7	2.00	2.00	
400.0	4.00	145.49	399.8	-5.8	4.0	7.0	2.00	2.00	
500.0	6.00	145.49	499.5	-12.9	8.9	15.7	2.00	2.00	
548.6	6.97	145.49	547.7	-17.5	12.0	21.2	2.00	2.00	EOB; Inc=6.97°
600.0	6.97	145.49	598.8	-22.6	15.5	27.4	0.00	0.00	
700.0	6.97	145.49	698.0	-32.6	22.4	39.6	0.00	0.00	
800.0	6.97	145.49	797.3	-42.6	29.3	51.7	0.00	0.00	
900.0	6.97	145.49	896.5	-52.6	36.2	63.8	0.00	0.00	
1,000.0	6.97	145.49	995.8	-62.6	43.0	76.0	0.00	0.00	
1,100.0	6.97	145.49	1,095.1	-72.6	49.9	88.1	0.00	0.00	
1,200.0	6.97	145.49	1,194.3	-82.6	56.8	100.3	0.00	0.00	
1,300.0	6.97	145.49	1,293.6	-92.6	63.7	112.4	0.00	0.00	
1,400.0	6.97	145.49	1,392.8	-102.6	70.6	124.5	0.00	0.00	
1,500.0	6.97	145.49	1,492.1	-112.6	77.4	136.7	0.00	0.00	
1,600.0	6.97	145.49	1,591.4	-122.6	84.3	148.8	0.00	0.00	
1,700.0	6.97	145.49	1,690.6	-132.6	91.2	160.9	0.00	0.00	
1,800.0	6.97	145.49	1,789.9	-142.6	98.1	173.1	0.00	0.00	
1,900.0	6.97	145.49	1,889.1	-152.6	104.9	185.2	0.00	0.00	
2,000.0	6.97	145.49	1,988.4	-162.6	111.8	197.4	0.00	0.00	
2,100.0	6.97	145.49	2,087.7	-172.6	118.7	209.5	0.00	0.00	
2,200.0	6.97	145.49	2,186.9	-182.6	125.6	221.6	0.00	0.00	
2,300.0	6.97	145.49	2,286.2	-192.6	132.4	233.8	0.00	0.00	
2,400.0	6.97	145.49	2,385.5	-202.6	139.3	245.9	0.00	0.00	
2,500.0	6.97	145.49	2,484.7	-212.6	146.2	258.1	0.00	0.00	
2,600.0	6.97	145.49	2,584.0	-222.7	153.1	270.2	0.00	0.00	
2,700.0	6.97	145.49	2,683.2	-232.7	159.9	282.3	0.00	0.00	
2,800.0	6.97	145.49	2,782.5	-242.7	166.8	294.5	0.00	0.00	
2,900.0	6.97	145.49	2,881.8	-252.7	173.7	306.6	0.00	0.00	
3,000.0	6.97	145.49	2,981.0	-262.7	180.6	318.7	0.00	0.00	
3,100.0	6.97	145.49	3,080.3	-272.7	187.5	330.9	0.00	0.00	
3,200.0	6.97	145.49	3,179.5	-282.7	194.3	343.0	0.00	0.00	
3,300.0	6.97	145.49	3,278.8	-292.7	201.2	355.2	0.00	0.00	
3,400.0	6.97	145.49	3,378.1	-302.7	208.1	367.3	0.00	0.00	
3,500.0	6.97	145.49	3,477.3	-312.7	215.0	379.4	0.00	0.00	
3,600.0	6.97	145.49	3,576.6	-322.7	221.8	391.6	0.00	0.00	
3,700.0	6.97	145.49	3,675.8	-332.7	228.7	403.7	0.00	0.00	
3,800.0	6.97	145.49	3,775.1	-342.7	235.6	415.9	0.00	0.00	
3,900.0	6.97	145.49	3,874.4	-352.7	242.5	428.0	0.00	0.00	
4,000.0	6.97	145.49	3,973.6	-362.7	249.3	440.1	0.00	0.00	
4,100.0	6.97	145.49	4,072.9	-372.7	256.2	452.3	0.00	0.00	
4,200.0	6.97	145.49	4,172.1	-382.7	263.1	464.4	0.00	0.00	
4,300.0	6.97	145.49	4,271.4	-392.7	270.0	476.5	0.00	0.00	
4,400.0	6.97	145.49	4,370.7	-402.7	276.9	488.7	0.00	0.00	
4,500.0	6.97	145.49	4,469.9	-412.7	283.7	500.8	0.00	0.00	
4,600.0	6.97	145.49	4,569.2	-422.7	290.6	513.0	0.00	0.00	
4,700.0	6.97	145.49	4,668.4	-432.7	297.5	525.1	0.00	0.00	
4,800.0	6.97	145.49	4,767.7	-442.7	304.4	537.2	0.00	0.00	
4,900.0	6.97	145.49	4,867.0	-452.7	311.2	549.4	0.00	0.00	
5,000.0	6.97	145.49	4,966.2	-462.7	318.1	561.5	0.00	0.00	



# Cathedral Energy Services

## Planning Report

**Database:** EDM 2003.21 US Multi Users DB  
**Company:** Merit Energy Company  
**Project:** DJ Basin  
**Site:** Sec28-T4N-R66W  
**Well:** Korwick 6I  
**Wellbore:** DD  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Korwick 6I  
**TVD Reference:** WELL @ 0.0ft (Original Well Elev)  
**MD Reference:** WELL @ 0.0ft (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
5,100.0	6.97	145.49	5,065.5	-472.7	325.0	573.7	0.00	0.00	
5,200.0	6.97	145.49	5,164.7	-482.7	331.9	585.8	0.00	0.00	
5,300.0	6.97	145.49	5,264.0	-492.7	338.7	597.9	0.00	0.00	
5,400.0	6.97	145.49	5,363.3	-502.7	345.6	610.1	0.00	0.00	
5,500.0	6.97	145.49	5,462.5	-512.7	352.5	622.2	0.00	0.00	
5,600.0	6.97	145.49	5,561.8	-522.7	359.4	634.4	0.00	0.00	
5,700.0	6.97	145.49	5,661.0	-532.7	366.3	646.5	0.00	0.00	
5,800.0	6.97	145.49	5,760.3	-542.7	373.1	658.6	0.00	0.00	
5,900.0	6.97	145.49	5,859.6	-552.7	380.0	670.8	0.00	0.00	
6,000.0	6.97	145.49	5,958.8	-562.7	386.9	682.9	0.00	0.00	
6,100.0	6.97	145.49	6,058.1	-572.7	393.8	695.0	0.00	0.00	
6,200.0	6.97	145.49	6,157.4	-582.7	400.6	707.2	0.00	0.00	
6,300.0	6.97	145.49	6,256.6	-592.8	407.5	719.3	0.00	0.00	
6,400.0	6.97	145.49	6,355.9	-602.8	414.4	731.5	0.00	0.00	
6,500.0	6.97	145.49	6,455.1	-612.8	421.3	743.6	0.00	0.00	
6,597.8	6.97	145.49	6,552.3	-622.5	428.0	755.5	0.00	0.00	Start Drop -2.00
6,600.0	6.93	145.49	6,554.4	-622.8	428.1	755.7	2.00	-2.00	
6,700.0	4.93	145.49	6,653.9	-631.3	434.0	766.1	2.00	-2.00	
6,800.0	2.93	145.49	6,753.6	-636.9	437.9	772.9	2.00	-2.00	
6,900.0	0.93	145.49	6,853.6	-639.7	439.8	776.3	2.00	-2.00	
6,946.5	0.00	353.72	6,900.0	-640.0	440.0	776.7	2.00	-2.00	EOD; Inc=0° - Niobrara
7,000.0	0.00	353.72	6,953.5	-640.0	440.0	776.7	0.00	0.00	
7,100.0	0.00	353.72	7,053.5	-640.0	440.0	776.7	0.00	0.00	
7,200.0	0.00	353.72	7,153.5	-640.0	440.0	776.7	0.00	0.00	
7,300.0	0.00	353.72	7,253.5	-640.0	440.0	776.7	0.00	0.00	
7,400.0	0.00	353.72	7,353.5	-640.0	440.0	776.7	0.00	0.00	
7,446.5	0.00	353.72	7,400.0	-640.0	440.0	776.7	0.00	0.00	TD at 7446.5 - Korwick 6I BHL

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
Korwick 6I BHL	0.00	353.72	7,400.0	-640.0	440.0	-208.58	111.95	34° 38' 11.325 N	115° 27' 45.377 W
- hit/miss target									
- Shape									
Korwick 6I BHL - plan hits target center - Circle (radius 50.0)									

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,946.5	6,900.0	Niobrara		0.00	



# Cathedral Energy Services

## Planning Report

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**Project:** DJ Basin  
**Site:** Sec28-T4N-R66W  
**Well:** Korwick 6I  
**Wellbore:** DD  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Korwick 6I  
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**MD Reference:** WELL @ 0.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
548.6	547.7	-17.5	12.0	EOB; Inc=6.97°
6,597.8	6,552.3	-622.5	428.0	Start Drop -2.00
6,946.5	6,900.0	-640.0	440.0	EOD; Inc=0°
7,446.5	7,400.0	-640.0	440.0	TD at 7446.5