

Denver Division- Colorado

DJ - Hereford Ranch

Windmill 10-34H

Windmill 10-34H

Original Wellbore

Plan: APD Directional Plan

Standard Planning Report

23 June, 2011

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Windmill 10-34H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4583.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4583.00ft (TBD)
Site:	Windmill 10-34H	North Reference:	True
Well:	Windmill 10-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD Directional Plan		

Project	DJ - Hereford Ranch, Weld County		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado North 501		

Site	Windmill 10-34H				
Site Position:		Northing:	372,882.86 ft	Latitude:	40° 21' 2.840 N
From:	Lat/Long	Easting:	2,333,967.64 ft	Longitude:	104° 18' 6.278 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.77 deg

Well	Windmill 10-34H					
Well Position	+N-S	0.00 ft	Northing:	372,882.86 ft	Latitude:	40° 21' 2.840 N
	+E-W	0.00 ft	Easting:	2,333,967.64 ft	Longitude:	104° 18' 6.278 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,561.00 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	6/23/2011	8.56	67.10	53,176

Design	APD Directional Plan				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (deg)	
	0.00	0.00	0.00	333.42	

Plan Sections										
Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)	TFO (deg)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,697.53	0.00	0.00	5,697.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,447.54	90.00	333.42	6,175.00	427.01	-213.63	12.00	12.00	0.00	333.42	
10,505.01	90.00	333.42	6,175.00	4,055.70	-2,029.03	0.00	0.00	0.00	0.00	Windmill 10-34H (B)

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Windmill 10-34H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4583.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4583.00ft (TBD)
Site:	Windmill 10-34H	North Reference:	True
Well:	Windmill 10-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD Directional Plan		

Planned Survey									
Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8"									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Windmill 10-34H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4583.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4583.00ft (TBD)
Site:	Windmill 10-34H	North Reference:	True
Well:	Windmill 10-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD Directional Plan		

Planned Survey									
Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,697.53	0.00	0.00	5,697.53	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.30	333.42	5,700.00	0.01	0.00	0.01	12.00	12.00	0.00
5,800.00	12.30	333.42	5,799.22	9.80	-4.90	10.95	12.00	12.00	0.00
5,900.00	24.30	333.42	5,893.99	37.82	-18.92	42.29	12.00	12.00	0.00
6,000.00	36.30	333.42	5,980.17	82.85	-41.45	92.64	12.00	12.00	0.00
6,100.00	48.30	333.42	6,054.01	142.93	-71.50	159.81	12.00	12.00	0.00
6,200.00	60.30	333.42	6,112.26	215.42	-107.77	240.87	12.00	12.00	0.00
6,300.00	72.30	333.42	6,152.39	297.15	-148.66	332.27	12.00	12.00	0.00
6,400.00	84.30	333.42	6,172.64	384.57	-192.40	430.01	12.00	12.00	0.00
6,447.54	90.00	333.42	6,175.00	427.01	-213.63	477.47	12.00	12.00	0.00
7"									
6,500.00	90.00	333.42	6,175.00	473.93	-237.10	529.93	0.00	0.00	0.00
6,600.00	90.00	333.42	6,175.00	563.36	-281.84	629.93	0.00	0.00	0.00
6,700.00	90.00	333.42	6,175.00	652.79	-326.59	729.93	0.00	0.00	0.00
6,800.00	90.00	333.42	6,175.00	742.23	-371.33	829.93	0.00	0.00	0.00
6,900.00	90.00	333.42	6,175.00	831.66	-416.07	929.93	0.00	0.00	0.00
7,000.00	90.00	333.42	6,175.00	921.09	-460.81	1,029.93	0.00	0.00	0.00
7,100.00	90.00	333.42	6,175.00	1,010.52	-505.56	1,129.93	0.00	0.00	0.00
7,200.00	90.00	333.42	6,175.00	1,099.95	-550.30	1,229.93	0.00	0.00	0.00
7,300.00	90.00	333.42	6,175.00	1,189.39	-595.04	1,329.93	0.00	0.00	0.00
7,400.00	90.00	333.42	6,175.00	1,278.82	-639.78	1,429.93	0.00	0.00	0.00
7,500.00	90.00	333.42	6,175.00	1,368.25	-684.52	1,529.93	0.00	0.00	0.00
7,600.00	90.00	333.42	6,175.00	1,457.68	-729.27	1,629.93	0.00	0.00	0.00
7,700.00	90.00	333.42	6,175.00	1,547.12	-774.01	1,729.93	0.00	0.00	0.00
7,800.00	90.00	333.42	6,175.00	1,636.55	-818.75	1,829.93	0.00	0.00	0.00
7,900.00	90.00	333.42	6,175.00	1,725.98	-863.49	1,929.93	0.00	0.00	0.00
8,000.00	90.00	333.42	6,175.00	1,815.41	-908.23	2,029.93	0.00	0.00	0.00
8,100.00	90.00	333.42	6,175.00	1,904.85	-952.98	2,129.93	0.00	0.00	0.00
8,200.00	90.00	333.42	6,175.00	1,994.28	-997.72	2,229.93	0.00	0.00	0.00
8,300.00	90.00	333.42	6,175.00	2,083.71	-1,042.46	2,329.93	0.00	0.00	0.00
8,400.00	90.00	333.42	6,175.00	2,173.14	-1,087.20	2,429.93	0.00	0.00	0.00
8,500.00	90.00	333.42	6,175.00	2,262.57	-1,131.95	2,529.93	0.00	0.00	0.00
8,600.00	90.00	333.42	6,175.00	2,352.01	-1,176.69	2,629.93	0.00	0.00	0.00
8,700.00	90.00	333.42	6,175.00	2,441.44	-1,221.43	2,729.93	0.00	0.00	0.00
8,800.00	90.00	333.42	6,175.00	2,530.87	-1,266.17	2,829.93	0.00	0.00	0.00
8,900.00	90.00	333.42	6,175.00	2,620.30	-1,310.91	2,929.93	0.00	0.00	0.00
9,000.00	90.00	333.42	6,175.00	2,709.74	-1,355.66	3,029.93	0.00	0.00	0.00
9,100.00	90.00	333.42	6,175.00	2,799.17	-1,400.40	3,129.93	0.00	0.00	0.00
9,200.00	90.00	333.42	6,175.00	2,888.60	-1,445.14	3,229.93	0.00	0.00	0.00
9,300.00	90.00	333.42	6,175.00	2,978.03	-1,489.88	3,329.93	0.00	0.00	0.00
9,400.00	90.00	333.42	6,175.00	3,067.47	-1,534.63	3,429.93	0.00	0.00	0.00
9,500.00	90.00	333.42	6,175.00	3,156.90	-1,579.37	3,529.93	0.00	0.00	0.00
9,600.00	90.00	333.42	6,175.00	3,246.33	-1,624.11	3,629.93	0.00	0.00	0.00
9,700.00	90.00	333.42	6,175.00	3,335.76	-1,668.85	3,729.93	0.00	0.00	0.00
9,800.00	90.00	333.42	6,175.00	3,425.19	-1,713.59	3,829.93	0.00	0.00	0.00
9,900.00	90.00	333.42	6,175.00	3,514.63	-1,758.34	3,929.93	0.00	0.00	0.00
10,000.00	90.00	333.42	6,175.00	3,604.06	-1,803.08	4,029.93	0.00	0.00	0.00
10,100.00	90.00	333.42	6,175.00	3,693.49	-1,847.82	4,129.93	0.00	0.00	0.00
10,200.00	90.00	333.42	6,175.00	3,782.92	-1,892.56	4,229.93	0.00	0.00	0.00

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Windmill 10-34H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4583.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4583.00ft (TBD)
Site:	Windmill 10-34H	North Reference:	True
Well:	Windmill 10-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD Directional Plan		

Planned Survey									
Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)
10,300.00	90.00	333.42	6,175.00	3,872.36	-1,937.30	4,329.93	0.00	0.00	0.00
10,400.00	90.00	333.42	6,175.00	3,961.79	-1,982.05	4,429.93	0.00	0.00	0.00
10,500.00	90.00	333.42	6,175.00	4,051.22	-2,026.79	4,529.93	0.00	0.00	0.00
10,505.01	90.00	333.42	6,175.00	4,055.70	-2,029.03	4,534.94	0.00	0.00	0.00
4 1/2" - Windmill 10-34H (BHL)									

Design Targets									
Target Name	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Windmill 10-34H (BHL)	0.00	0.00	6,175.00	4,055.70	-2,029.03	376,910.76	2,331,884.00	40° 21' 42.919 N	104° 18' 32.490 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
800.00	800.00	9-5/8"	9-5/8	13-1/2	
6,447.54	6,175.00	7"	7	8-3/4	
10,505.01	6,175.00	4 1/2"	4-1/2	6	

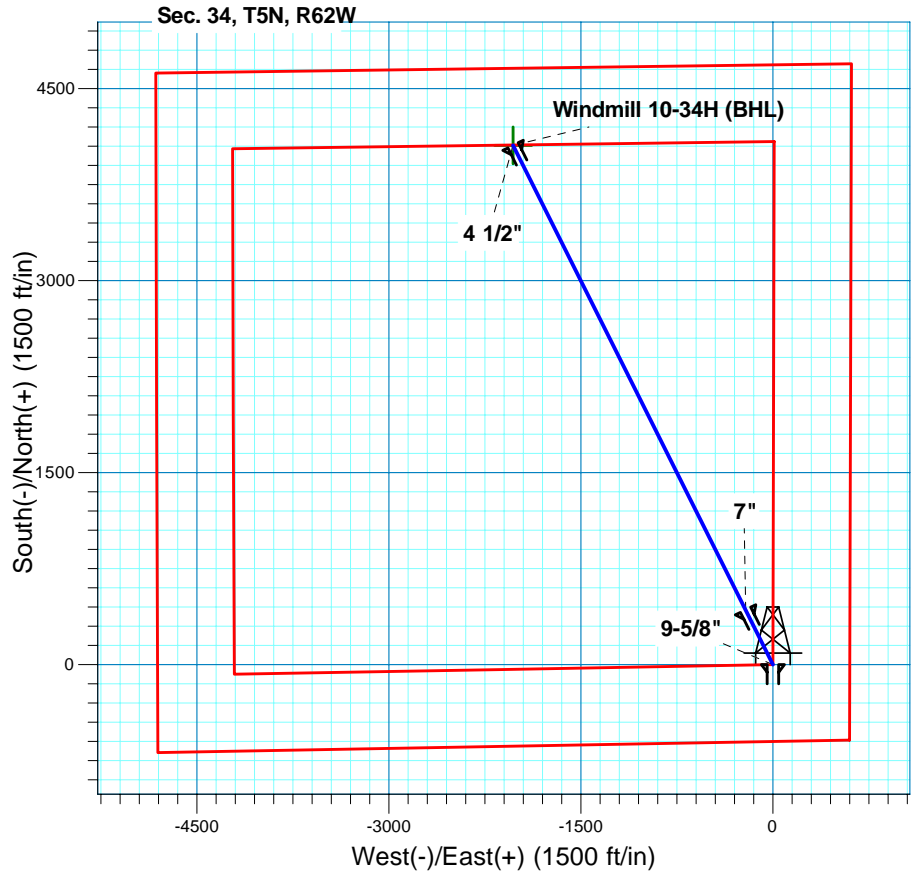
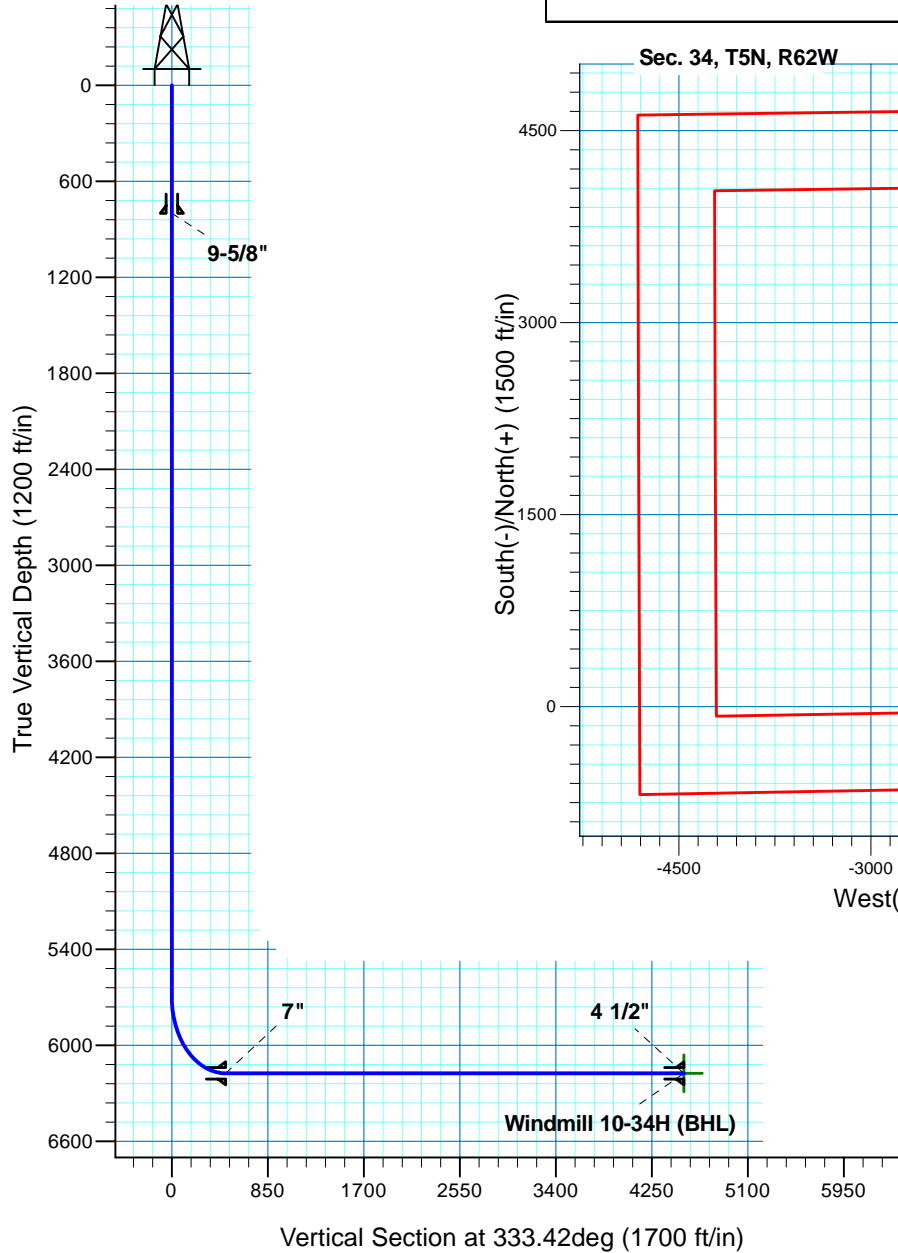
Windmill 10-34H

Section 34 T5N R62W

Weld County, CO

Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501
Ground Elevation: 4561.00 RIG @ 4583.00ft (TBD)
Northing Easting Latitude Longitude
372882.86 2333967.64 40° 21' 2.840 N 104° 18' 6.278 W



T M
Azimuths to True North
Magnetic North: 8.56°
Magnetic Field
Strength: 53175.6snT
Dip Angle: 67.10°
Date: 6/23/2011
Model: IGRF200510

Project: DJ - Hereford Ranch
Site: Windmill 10-34H
Well: Windmill 10-34H
Plan: APD Directional Plan

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5697.53	0.00	0.00	5697.53	0.00	0.00	0.00	0.00	0.00	
3	6447.54	90.00	333.42	6175.00	427.01	-213.63	12.00	333.42	477.47	
4	10505.01	90.00	333.42	6175.00	4055.70	-2029.03	0.00	0.00	4534.94	Windmill 10-34H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Windmill 10-34H (BHL)	6175.00	4055.70	-2029.03	376910.76	2331884.00	40° 21' 42.919 N	104° 18' 32.490 W	Point