

Denver Division- Colorado

DJ - Hereford Ranch

Dutch Lake 03-03H

Dutch Lake 03-03H

Original Wellbore

Plan: APD Directional Plan

Standard Planning Report

02 February, 2011

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Dutch Lake 03-03H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4884.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4884.00ft (TBD)
Site:	Dutch Lake 03-03H	North Reference:	True
Well:	Dutch Lake 03-03H	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	Dutch Lake 03-03H		
Site Position:		Northing:	435,387.49 ft
From:	Lat/Long	Easting:	2,329,031.89 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	40° 31' 21.119 N
		Longitude:	104° 18' 59.249 W
		Grid Convergence:	0.76 deg

Well	Dutch Lake 03-03H		
Well Position	+N/-S	0.00 ft	Northing: 435,387.49 ft
	+E/-W	0.00 ft	Easting: 2,329,031.89 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	40° 31' 21.119 N
		Longitude:	104° 18' 59.249 W
		Ground Level:	4,862.00 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	1/31/2011	8.64	67.24	53,302

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	151.41

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	
6,094.50	0.00	0.00	6,094.50	0.00	0.00	0.00	0.00	0.00	0.00	
6,844.56	90.00	138.00	6,572.00	-354.85	319.51	12.00	12.00	0.00	138.00	Dutch Lake 03-03H
7,482.89	90.00	153.96	6,572.00	-882.22	675.50	2.50	0.00	2.50	90.00	Dutch Lake 03-03H
11,319.02	90.00	153.96	6,572.00	-4,328.88	2,359.65	0.00	0.00	0.00	0.00	Dutch Lake 03-03H

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Site:	Dutch Lake 03-03H	North Reference:	True
Well:	Dutch Lake 03-03H	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

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Well:	Dutch Lake 03-03H	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)
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
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
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,094.50	0.00	0.00	6,094.50	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.66	138.00	6,100.00	-0.02	0.02	0.03	12.00	12.00	0.00
6,200.00	12.66	138.00	6,199.14	-8.63	7.77	11.29	12.00	12.00	0.00
6,300.00	24.66	138.00	6,293.71	-32.36	29.14	42.36	12.00	12.00	0.00
6,400.00	36.66	138.00	6,379.58	-70.18	63.19	91.87	12.00	12.00	0.00
6,500.00	48.66	138.00	6,452.99	-120.45	108.45	157.66	12.00	12.00	0.00
6,600.00	60.66	138.00	6,510.73	-180.95	162.93	236.86	12.00	12.00	0.00
6,700.00	72.65	138.00	6,550.29	-249.06	224.25	326.01	12.00	12.00	0.00
6,800.00	84.65	138.00	6,569.92	-321.79	289.74	421.21	12.00	12.00	0.00
6,844.56	90.00	138.00	6,572.00	-354.85	319.51	464.49	12.00	12.00	0.00
7" - Dutch Lake 03-03H (ICP)									
6,900.00	90.00	139.39	6,572.00	-396.50	356.11	518.57	2.50	0.00	2.50
7,000.00	90.00	141.89	6,572.00	-473.81	419.53	616.81	2.50	0.00	2.50
7,100.00	90.00	144.39	6,572.00	-553.81	479.51	715.76	2.50	0.00	2.50
7,200.00	90.00	146.89	6,572.00	-636.35	535.95	815.24	2.50	0.00	2.50
7,300.00	90.00	149.39	6,572.00	-721.27	588.74	915.07	2.50	0.00	2.50
7,400.00	90.00	151.89	6,572.00	-808.42	637.77	1,015.06	2.50	0.00	2.50
7,482.89	90.00	153.96	6,572.00	-882.22	675.50	1,097.92	2.50	0.00	2.50
7,500.00	90.00	153.96	6,572.00	-897.59	683.01	1,115.01	0.00	0.00	0.00
7,600.00	90.00	153.96	6,572.00	-987.44	726.92	1,214.91	0.00	0.00	0.00
7,700.00	90.00	153.96	6,572.00	-1,077.28	770.82	1,314.81	0.00	0.00	0.00
7,800.00	90.00	153.96	6,572.00	-1,167.13	814.72	1,414.71	0.00	0.00	0.00
7,900.00	90.00	153.96	6,572.00	-1,256.98	858.62	1,514.61	0.00	0.00	0.00
8,000.00	90.00	153.96	6,572.00	-1,346.83	902.52	1,614.51	0.00	0.00	0.00
8,100.00	90.00	153.96	6,572.00	-1,436.68	946.43	1,714.41	0.00	0.00	0.00
8,200.00	90.00	153.96	6,572.00	-1,526.52	990.33	1,814.31	0.00	0.00	0.00
8,300.00	90.00	153.96	6,572.00	-1,616.37	1,034.23	1,914.21	0.00	0.00	0.00
8,400.00	90.00	153.96	6,572.00	-1,706.22	1,078.13	2,014.11	0.00	0.00	0.00
8,500.00	90.00	153.96	6,572.00	-1,796.07	1,122.04	2,114.01	0.00	0.00	0.00
8,600.00	90.00	153.96	6,572.00	-1,885.91	1,165.94	2,213.91	0.00	0.00	0.00
8,700.00	90.00	153.96	6,572.00	-1,975.76	1,209.84	2,313.81	0.00	0.00	0.00
8,800.00	90.00	153.96	6,572.00	-2,065.61	1,253.74	2,413.71	0.00	0.00	0.00
8,900.00	90.00	153.96	6,572.00	-2,155.46	1,297.65	2,513.62	0.00	0.00	0.00
9,000.00	90.00	153.96	6,572.00	-2,245.30	1,341.55	2,613.52	0.00	0.00	0.00
9,100.00	90.00	153.96	6,572.00	-2,335.15	1,385.45	2,713.42	0.00	0.00	0.00
9,200.00	90.00	153.96	6,572.00	-2,425.00	1,429.35	2,813.32	0.00	0.00	0.00
9,300.00	90.00	153.96	6,572.00	-2,514.85	1,473.25	2,913.22	0.00	0.00	0.00
9,400.00	90.00	153.96	6,572.00	-2,604.69	1,517.16	3,013.12	0.00	0.00	0.00
9,500.00	90.00	153.96	6,572.00	-2,694.54	1,561.06	3,113.02	0.00	0.00	0.00
9,600.00	90.00	153.96	6,572.00	-2,784.39	1,604.96	3,212.92	0.00	0.00	0.00
9,700.00	90.00	153.96	6,572.00	-2,874.24	1,648.86	3,312.82	0.00	0.00	0.00
9,800.00	90.00	153.96	6,572.00	-2,964.08	1,692.77	3,412.72	0.00	0.00	0.00
9,900.00	90.00	153.96	6,572.00	-3,053.93	1,736.67	3,512.62	0.00	0.00	0.00
10,000.00	90.00	153.96	6,572.00	-3,143.78	1,780.57	3,612.52	0.00	0.00	0.00

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Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4884.00ft (TBD)
Site:	Dutch Lake 03-03H	North Reference:	True
Well:	Dutch Lake 03-03H	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)
10,100.00	90.00	153.96	6,572.00	-3,233.63	1,824.47	3,712.42	0.00	0.00	0.00
10,200.00	90.00	153.96	6,572.00	-3,323.47	1,868.38	3,812.33	0.00	0.00	0.00
10,300.00	90.00	153.96	6,572.00	-3,413.32	1,912.28	3,912.23	0.00	0.00	0.00
10,400.00	90.00	153.96	6,572.00	-3,503.17	1,956.18	4,012.13	0.00	0.00	0.00
10,500.00	90.00	153.96	6,572.00	-3,593.02	2,000.08	4,112.03	0.00	0.00	0.00
10,600.00	90.00	153.96	6,572.00	-3,682.86	2,043.98	4,211.93	0.00	0.00	0.00
10,700.00	90.00	153.96	6,572.00	-3,772.71	2,087.89	4,311.83	0.00	0.00	0.00
10,800.00	90.00	153.96	6,572.00	-3,862.56	2,131.79	4,411.73	0.00	0.00	0.00
10,900.00	90.00	153.96	6,572.00	-3,952.41	2,175.69	4,511.63	0.00	0.00	0.00
11,000.00	90.00	153.96	6,572.00	-4,042.26	2,219.59	4,611.53	0.00	0.00	0.00
11,100.00	90.00	153.96	6,572.00	-4,132.10	2,263.50	4,711.43	0.00	0.00	0.00
11,200.00	90.00	153.96	6,572.00	-4,221.95	2,307.40	4,811.33	0.00	0.00	0.00
11,300.00	90.00	153.96	6,572.00	-4,311.80	2,351.30	4,911.23	0.00	0.00	0.00
11,319.02	90.00	153.96	6,572.00	-4,328.88	2,359.65	4,930.23	0.00	0.00	0.00
Dutch Lake 03-03H (BHL)									

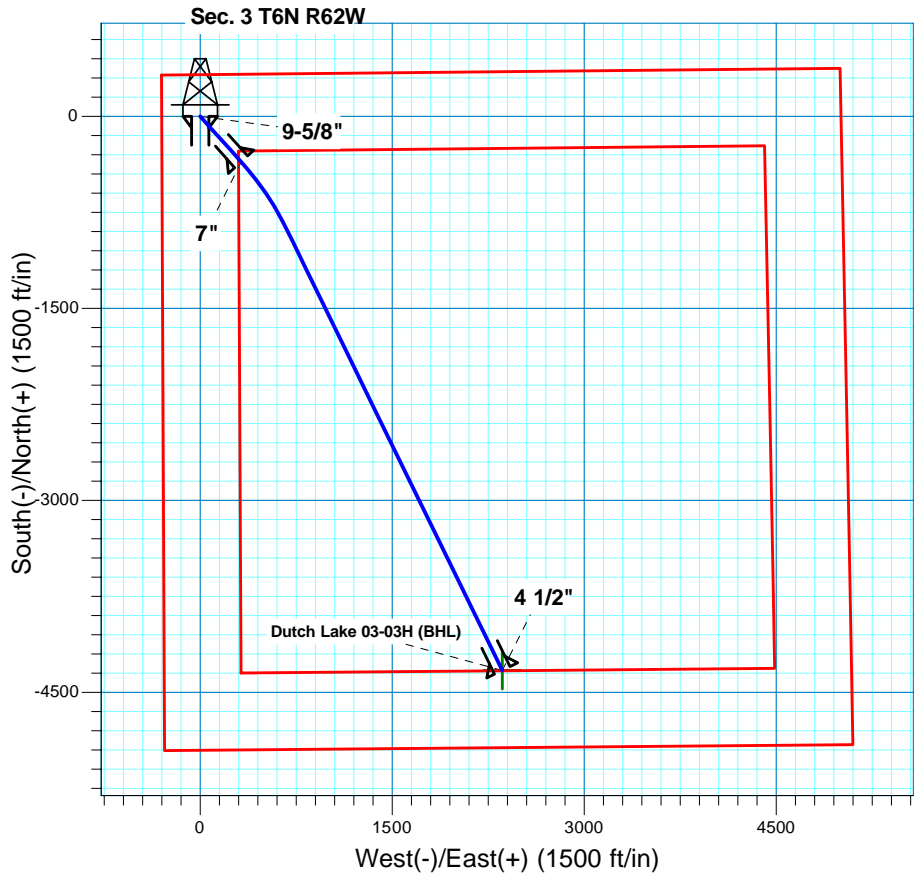
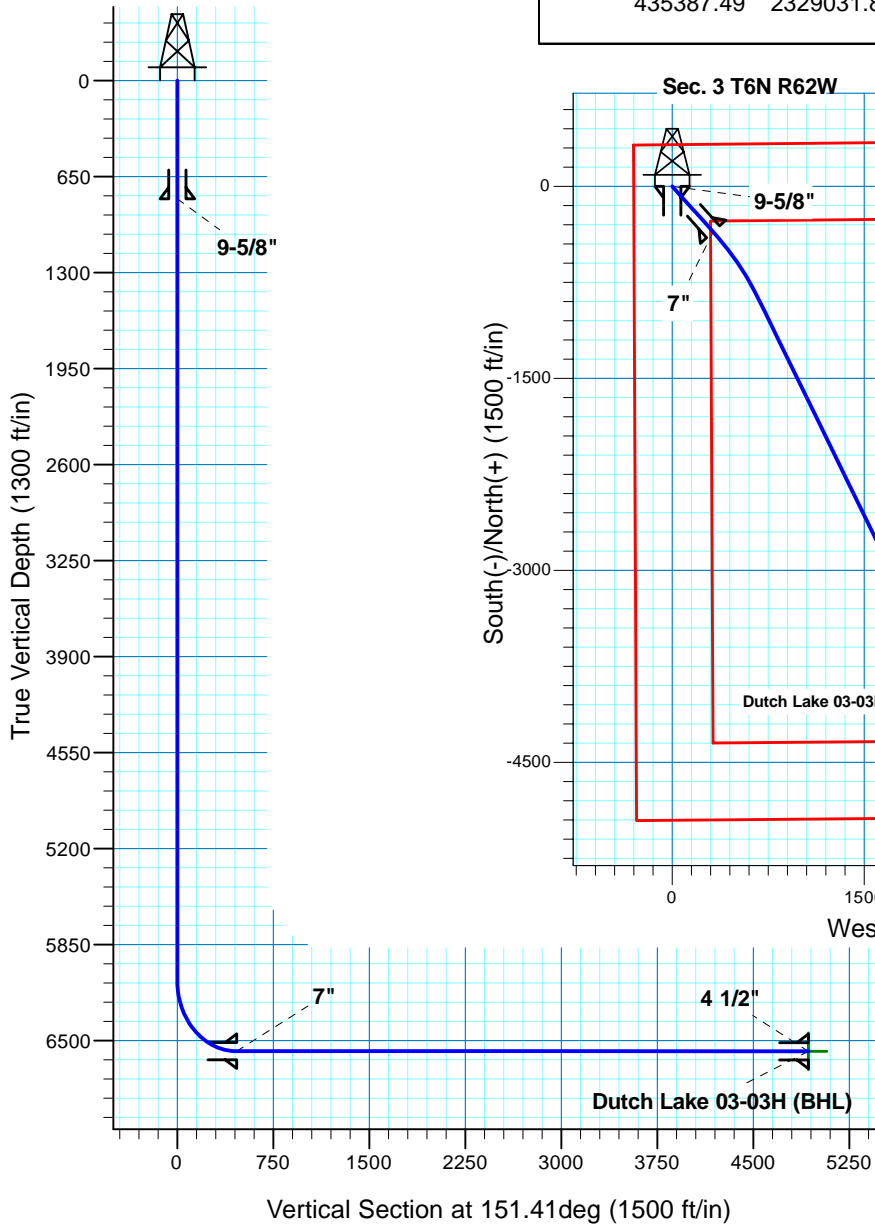
Targets									
Target Name	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Dutch Lake 03-03H (E	0.00	0.00	6,572.00	-4,328.88	2,359.65	431,090.50	2,331,449.10	40° 30' 38.340 N	104° 18' 28.699 W
- 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	
6,844.56	6,572.00	7"	7	8-3/4	
11,319.02	6,572.00	4 1/2"	4-1/2	6-1/4	

Dutch Lake 03-03H
Section 3 T6N R62W
Weld County, CO

Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501
Ground Elevation: 4862.00 RIG @ 4884.00ft (TBD)
Northing Easting Latitude Longitude
435387.49 2329031.89 40° 31' 21.119 N 104° 18' 59.249 W



T M
Azimuths to True North
Magnetic North: 8.64°
Magnetic Field
Strength: 53302.2snT
Dip Angle: 67.24°
Date: 1/31/2011
Model: IGRF200510

Project: DJ - Hereford Ranch
Site: Dutch Lake 03-03H
Well: Dutch Lake 03-03H
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	6094.50	0.00	0.00	6094.50	0.00	0.00	0.00	0.00	0.00	
3	6844.56	90.00	138.00	6572.00	-354.85	319.51	12.00	138.00	464.49	Dutch Lake 03-03H (ICP)
4	7482.89	90.00	153.96	6572.00	-882.22	675.50	2.50	90.00	1097.92	Dutch Lake 03-03H (BHL)
5	11319.02	90.00	153.96	6572.00	-4328.88	2359.65	0.00	0.00	4930.23	Dutch Lake 03-03H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Dutch Lake 03-03H (BHL)	6572.00	-4328.88	2359.65	431090.50	2331449.10	40° 30' 38.340 N	104° 18' 28.699 W	Point