



Denver Division- Colorado

**DJ - Hereford Ranch
Garden Creek 06-11H
Garden Creek 6-11H**

Original Wellbore

Plan: APD

Standard Planning Report

15 January, 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Site Garden Creek 06-11H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 5188.0ft (True 30)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 5188.0ft (True 30)
Site:	Garden Creek 06-11H	North Reference:	True
Well:	Garden Creek 6-11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD		

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		Garden Creek 06-11H			
Site Position:		Northing:	584,338.53 ft	Latitude:	40° 55' 51.701 N
From:	Lat/Long	Easting:	2,337,361.93 ft	Longitude:	104° 16' 44.839 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.79 °

Well	Garden Creek 6-11H					
Well Position	+N/-S	0.0 ft	Northing:	584,338.53 ft	Latitude:	40° 55' 51.701 N
	+E/-W	0.0 ft	Easting:	2,337,361.93 ft	Longitude:	104° 16' 44.839 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,163.0 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/15/2010	8.80	67.62	53,624

Design	APD			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	299.05

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	
6,487.5	0.00	0.00	6,487.5	0.0	0.0	0.00	0.00	0.00	0.00	
7,237.5	90.00	297.40	6,965.0	219.7	-423.9	12.00	12.00	0.00	297.40	
10,735.1	90.00	297.40	6,965.0	1,829.3	-3,529.1	0.00	0.00	0.00	0.00	Garden Creek 6-11H
11,654.7	90.00	315.02	6,965.0	2,370.5	-4,268.2	1.92	0.00	1.92	90.00	Garden Creek 6-11H

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Well:	Garden Creek 6-11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD		

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)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

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Wellbore:	Original Wellbore		
Design:	APD		

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)	Turn Rate (°/100ft)
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,487.5	0.00	0.00	6,487.5	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	1.50	297.40	6,500.0	0.1	-0.1	0.2	12.00	12.00	0.00
6,600.0	13.50	297.40	6,599.0	6.1	-11.7	13.2	12.00	12.00	0.00
6,700.0	25.50	297.40	6,693.1	21.4	-41.3	46.5	12.00	12.00	0.00
6,800.0	37.50	297.40	6,778.2	45.4	-87.6	98.6	12.00	12.00	0.00
6,900.0	49.50	297.40	6,850.6	77.0	-148.6	167.3	12.00	12.00	0.00
7,000.0	61.50	297.40	6,907.1	114.9	-221.6	249.5	12.00	12.00	0.00
7,100.0	73.50	297.40	6,945.3	157.3	-303.5	341.7	12.00	12.00	0.00
7,200.0	85.50	297.40	6,963.5	202.5	-390.6	439.8	12.00	12.00	0.00
7,237.5	90.00	297.40	6,965.0	219.7	-423.9	477.2	12.00	12.00	0.00
7"									
7,300.0	90.00	297.40	6,965.0	248.5	-479.4	539.7	0.01	0.01	0.00
7,400.0	90.00	297.40	6,965.0	294.5	-568.1	639.7	0.00	0.00	0.00
7,500.0	90.00	297.40	6,965.0	340.5	-656.9	739.6	0.00	0.00	0.00
7,600.0	90.00	297.40	6,965.0	386.5	-745.7	839.6	0.00	0.00	0.00
7,700.0	90.00	297.40	6,965.0	432.6	-834.5	939.5	0.00	0.00	0.00
7,800.0	90.00	297.40	6,965.0	478.6	-923.3	1,039.5	0.00	0.00	0.00
7,900.0	90.00	297.40	6,965.0	524.6	-1,012.0	1,139.5	0.00	0.00	0.00
8,000.0	90.00	297.40	6,965.0	570.6	-1,100.8	1,239.4	0.00	0.00	0.00
8,100.0	90.00	297.40	6,965.0	616.6	-1,189.6	1,339.4	0.00	0.00	0.00
8,200.0	90.00	297.40	6,965.0	662.7	-1,278.4	1,439.3	0.00	0.00	0.00
8,300.0	90.00	297.40	6,965.0	708.7	-1,367.2	1,539.3	0.00	0.00	0.00
8,400.0	90.00	297.40	6,965.0	754.7	-1,456.0	1,639.3	0.00	0.00	0.00
8,500.0	90.00	297.40	6,965.0	800.7	-1,544.7	1,739.2	0.00	0.00	0.00
8,600.0	90.00	297.40	6,965.0	846.7	-1,633.5	1,839.2	0.00	0.00	0.00
8,700.0	90.00	297.40	6,965.0	892.8	-1,722.3	1,939.1	0.00	0.00	0.00
8,800.0	90.00	297.40	6,965.0	938.8	-1,811.1	2,039.1	0.00	0.00	0.00
8,900.0	90.00	297.40	6,965.0	984.8	-1,899.9	2,139.0	0.00	0.00	0.00
9,000.0	90.00	297.40	6,965.0	1,030.8	-1,988.6	2,239.0	0.00	0.00	0.00
9,100.0	90.00	297.40	6,965.0	1,076.8	-2,077.4	2,339.0	0.00	0.00	0.00
9,200.0	90.00	297.40	6,965.0	1,122.9	-2,166.2	2,438.9	0.00	0.00	0.00
9,300.0	90.00	297.40	6,965.0	1,168.9	-2,255.0	2,538.9	0.00	0.00	0.00
9,400.0	90.00	297.40	6,965.0	1,214.9	-2,343.8	2,638.8	0.00	0.00	0.00
9,500.0	90.00	297.40	6,965.0	1,260.9	-2,432.6	2,738.8	0.00	0.00	0.00
9,600.0	90.00	297.40	6,965.0	1,306.9	-2,521.3	2,838.8	0.00	0.00	0.00
9,700.0	90.00	297.40	6,965.0	1,353.0	-2,610.1	2,938.7	0.00	0.00	0.00
9,800.0	90.00	297.40	6,965.0	1,399.0	-2,698.9	3,038.7	0.00	0.00	0.00
9,900.0	90.00	297.40	6,965.0	1,445.0	-2,787.7	3,138.6	0.00	0.00	0.00
10,000.0	90.00	297.40	6,965.0	1,491.0	-2,876.5	3,238.6	0.00	0.00	0.00
10,100.0	90.00	297.40	6,965.0	1,537.0	-2,965.2	3,338.6	0.00	0.00	0.00
10,200.0	90.00	297.40	6,965.0	1,583.1	-3,054.0	3,438.5	0.00	0.00	0.00

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Site:	Garden Creek 06-11H	North Reference:	True
Well:	Garden Creek 6-11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD		

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)	Turn Rate (°/100ft)
10,300.0	90.00	297.40	6,965.0	1,629.1	-3,142.8	3,538.5	0.00	0.00	0.00
10,400.0	90.00	297.40	6,965.0	1,675.1	-3,231.6	3,638.4	0.00	0.00	0.00
10,500.0	90.00	297.40	6,965.0	1,721.1	-3,320.4	3,738.4	0.00	0.00	0.00
10,600.0	90.00	297.40	6,965.0	1,767.1	-3,409.1	3,838.3	0.00	0.00	0.00
10,700.0	90.00	297.40	6,965.0	1,813.2	-3,497.9	3,938.3	0.00	0.00	0.00
10,735.1	90.00	297.40	6,965.0	1,829.3	-3,529.1	3,973.4	0.00	0.00	0.00
Garden Creek 6-11H (Target 1)									
10,800.0	90.00	298.64	6,965.0	1,859.8	-3,586.4	4,038.3	1.92	0.00	1.92
10,900.0	90.00	300.56	6,965.0	1,909.2	-3,673.3	4,138.3	1.92	0.00	1.92
11,000.0	90.00	302.48	6,965.0	1,961.5	-3,758.6	4,238.2	1.92	0.00	1.92
11,100.0	90.00	304.39	6,965.0	2,016.6	-3,842.0	4,337.9	1.92	0.00	1.92
11,200.0	90.00	306.31	6,965.0	2,074.4	-3,923.6	4,437.3	1.92	0.00	1.92
11,300.0	90.00	308.23	6,965.0	2,135.0	-4,003.2	4,536.2	1.92	0.00	1.92
11,400.0	90.00	310.14	6,965.0	2,198.2	-4,080.7	4,634.7	1.92	0.00	1.92
11,500.0	90.00	312.06	6,965.0	2,263.9	-4,156.0	4,732.5	1.92	0.00	1.92
11,600.0	90.00	313.98	6,965.0	2,332.1	-4,229.1	4,829.5	1.92	0.00	1.92
11,654.7	90.00	315.02	6,965.0	2,370.4	-4,268.1	4,882.2	1.92	0.00	1.92
4 1/2" - Garden Creek 6-11H (BHL)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,200.0	1,200.0	9 5/8"	9-5/8	12-1/4	
7,237.5	6,965.0	7"	7	8-3/4	
11,654.7	6,965.0	4 1/2"	4-1/2	6-1/4	