

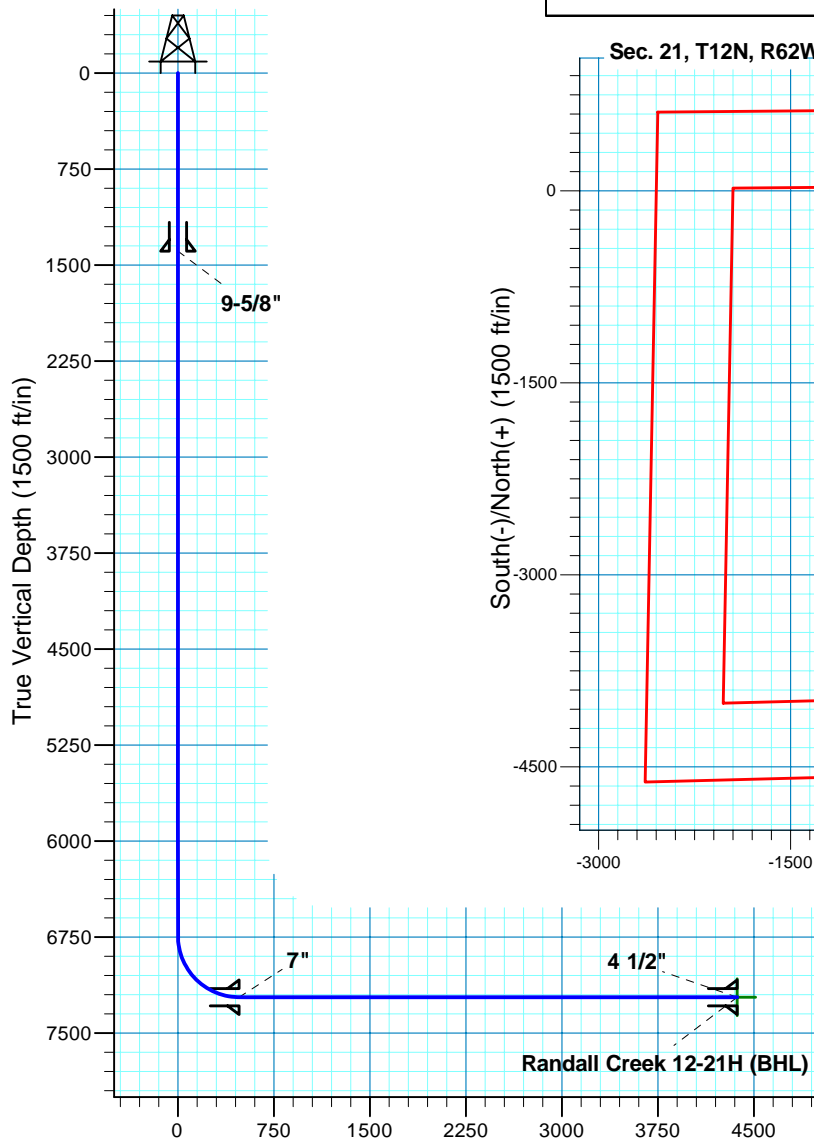
# Randall Creek 12-21H

## Section 21 T12N R62W

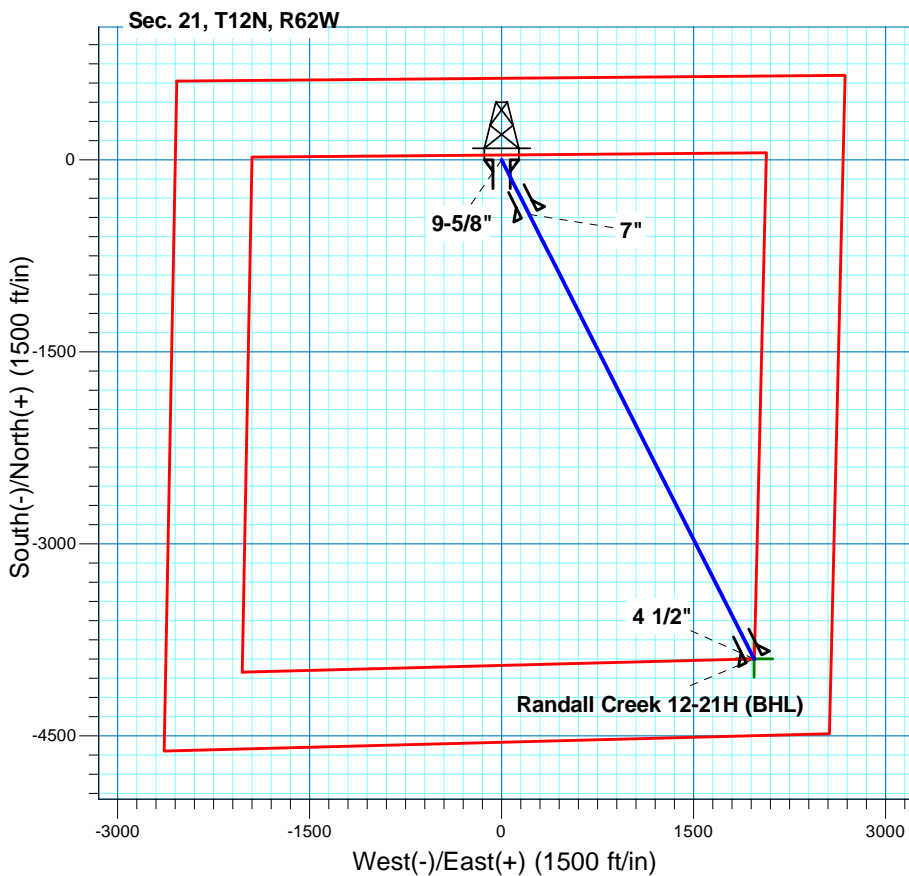
### Weld County, CO

#### Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501  
 Ground Elevation: 5336.00 RIG @ 5358.00ft (TBD)  
 Northing Easting Latitude Longitude  
 609610.15 2324657.11 41° 0' 3.071 N 104° 19' 25.972 W



Vertical Section at 153.17deg (1500 ft/in)



**T M**  
 Azimuths to True North  
 Magnetic North: 8.63°  
 Magnetic Field  
 Strength: 53508.0snT  
 Dip Angle: 67.61°  
 Date: 6/8/2011  
 Model: IGRF200510

Project: DJ - Hereford Ranch  
 Site: Randall Creek 12-21H  
 Well: Randall Creek 12-21H  
 Plan: APD Direcional 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	6741.53	0.00	0.00	6741.53	0.00	0.00	0.00	0.00	0.00	
3	7491.54	90.00	153.17	7219.00	-426.07	215.50	12.00	153.17	477.47	
4	11382.94	90.00	153.17	7219.00	-3898.56	1971.86	0.00	0.00	4368.87	Randall Creek 12-21H (BHL)

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Randall Creek 12-21H (BHL)	7219.00	-3898.56	1971.86	605738.09	2326680.50	40° 59' 24.551 N	104° 19' 0.260 W	

# **Denver Division- Colorado**

**DJ - Hereford Ranch  
Randall Creek 12-21H  
Randall Creek 12-21H**

**Original Wellbore**

**Plan: APD Direcitonal Plan**

## **Standard Planning Report**

**08 June, 2011**

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Randall Creek 12-21H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Site:</b>	Randall Creek 12-21H	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 12-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	APD Direcitonal Plan		

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

Site		Randall Creek 12-21H			
Site Position:		Northing:	609,610.15 ft	Latitude:	41° 0' 3.071 N
From:	Lat/Long	Easting:	2,324,657.11 ft	Longitude:	104° 19' 25.972 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.76 deg

Well	Randall Creek 12-21H					
Well Position	+N-S	0.00 ft	Northing:	609,610.15 ft	Latitude:	41° 0' 3.071 N
	+E-W	0.00 ft	Easting:	2,324,657.11 ft	Longitude:	104° 19' 25.972 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,336.00 ft

<b>Wellbore</b>	Original Wellbore				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (deg)</b>	<b>Dip Angle (deg)</b>	<b>Field Strength (nT)</b>
	IGRF200510	6/8/2011	8.63	67.61	53,508

<b>Design</b>	APD Direcitonal Plan				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (deg)</b>	
	0.00	0.00	0.00	153.17	

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (deg)</b>	<b>Azimuth (deg)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (?/100ft)</b>	<b>Build Rate (?/100ft)</b>	<b>Turn Rate (?/100ft)</b>	<b>TFO (deg)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,741.53	0.00	0.00	6,741.53	0.00	0.00	0.00	0.00	0.00	0.00	
7,491.54	90.00	153.17	7,219.00	-426.07	215.50	12.00	12.00	0.00	153.17	
11,382.94	90.00	153.17	7,219.00	-3,898.56	1,971.86	0.00	0.00	0.00	0.00	Randall Creek 12-2

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Randall Creek 12-21H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Site:</b>	Randall Creek 12-21H	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 12-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	APD Direcitonal 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
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
1,390.00	0.00	0.00	1,390.00	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8"									
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

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Randall Creek 12-21H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Site:</b>	Randall Creek 12-21H	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 12-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	APD Direcitonal 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
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,741.53	0.00	0.00	6,741.53	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	7.02	153.17	6,799.85	-3.19	1.61	3.58	12.00	12.00	0.00
6,900.00	19.02	153.17	6,897.11	-23.25	11.76	26.06	12.00	12.00	0.00
7,000.00	31.02	153.17	6,987.56	-60.92	30.81	68.27	12.00	12.00	0.00
7,100.00	43.02	153.17	7,067.26	-114.54	57.93	128.36	12.00	12.00	0.00
7,200.00	55.02	153.17	7,132.73	-181.78	91.94	203.71	12.00	12.00	0.00
7,300.00	67.02	153.17	7,181.10	-259.70	131.35	291.03	12.00	12.00	0.00
7,400.00	79.02	153.17	7,210.25	-344.88	174.44	386.49	12.00	12.00	0.00
7,491.54	90.00	153.17	7,219.00	-426.07	215.50	477.47	12.00	12.00	0.00
7"									
7,500.00	90.00	153.17	7,219.00	-433.62	219.32	485.93	0.00	0.00	0.00
7,600.00	90.00	153.17	7,219.00	-522.85	264.46	585.93	0.00	0.00	0.00
7,700.00	90.00	153.17	7,219.00	-612.09	309.59	685.93	0.00	0.00	0.00
7,800.00	90.00	153.17	7,219.00	-701.32	354.72	785.93	0.00	0.00	0.00
7,900.00	90.00	153.17	7,219.00	-790.56	399.86	885.93	0.00	0.00	0.00
8,000.00	90.00	153.17	7,219.00	-879.80	444.99	985.93	0.00	0.00	0.00
8,100.00	90.00	153.17	7,219.00	-969.03	490.13	1,085.93	0.00	0.00	0.00
8,200.00	90.00	153.17	7,219.00	-1,058.27	535.26	1,185.93	0.00	0.00	0.00
8,300.00	90.00	153.17	7,219.00	-1,147.50	580.40	1,285.93	0.00	0.00	0.00
8,400.00	90.00	153.17	7,219.00	-1,236.74	625.53	1,385.93	0.00	0.00	0.00
8,500.00	90.00	153.17	7,219.00	-1,325.97	670.66	1,485.93	0.00	0.00	0.00
8,600.00	90.00	153.17	7,219.00	-1,415.21	715.80	1,585.93	0.00	0.00	0.00
8,700.00	90.00	153.17	7,219.00	-1,504.44	760.93	1,685.93	0.00	0.00	0.00
8,800.00	90.00	153.17	7,219.00	-1,593.68	806.07	1,785.93	0.00	0.00	0.00
8,900.00	90.00	153.17	7,219.00	-1,682.91	851.20	1,885.93	0.00	0.00	0.00
9,000.00	90.00	153.17	7,219.00	-1,772.15	896.34	1,985.93	0.00	0.00	0.00
9,100.00	90.00	153.17	7,219.00	-1,861.38	941.47	2,085.93	0.00	0.00	0.00
9,200.00	90.00	153.17	7,219.00	-1,950.62	986.61	2,185.93	0.00	0.00	0.00
9,300.00	90.00	153.17	7,219.00	-2,039.85	1,031.74	2,285.93	0.00	0.00	0.00
9,400.00	90.00	153.17	7,219.00	-2,129.09	1,076.87	2,385.93	0.00	0.00	0.00
9,500.00	90.00	153.17	7,219.00	-2,218.32	1,122.01	2,485.93	0.00	0.00	0.00
9,600.00	90.00	153.17	7,219.00	-2,307.56	1,167.14	2,585.93	0.00	0.00	0.00
9,700.00	90.00	153.17	7,219.00	-2,396.79	1,212.28	2,685.93	0.00	0.00	0.00
9,800.00	90.00	153.17	7,219.00	-2,486.03	1,257.41	2,785.93	0.00	0.00	0.00
9,900.00	90.00	153.17	7,219.00	-2,575.26	1,302.55	2,885.93	0.00	0.00	0.00
10,000.00	90.00	153.17	7,219.00	-2,664.50	1,347.68	2,985.93	0.00	0.00	0.00
10,100.00	90.00	153.17	7,219.00	-2,753.73	1,392.81	3,085.93	0.00	0.00	0.00

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Randall Creek 12-21H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 5358.00ft (TBD)
<b>Site:</b>	Randall Creek 12-21H	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 12-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	APD Direcitonal 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)	
10,200.00	90.00	153.17	7,219.00	-2,842.97	1,437.95	3,185.93	0.00	0.00	0.00	
10,300.00	90.00	153.17	7,219.00	-2,932.20	1,483.08	3,285.93	0.00	0.00	0.00	
10,400.00	90.00	153.17	7,219.00	-3,021.44	1,528.22	3,385.93	0.00	0.00	0.00	
10,500.00	90.00	153.17	7,219.00	-3,110.67	1,573.35	3,485.93	0.00	0.00	0.00	
10,600.00	90.00	153.17	7,219.00	-3,199.91	1,618.49	3,585.93	0.00	0.00	0.00	
10,700.00	90.00	153.17	7,219.00	-3,289.14	1,663.62	3,685.93	0.00	0.00	0.00	
10,800.00	90.00	153.17	7,219.00	-3,378.38	1,708.75	3,785.93	0.00	0.00	0.00	
10,900.00	90.00	153.17	7,219.00	-3,467.61	1,753.89	3,885.93	0.00	0.00	0.00	
11,000.00	90.00	153.17	7,219.00	-3,556.85	1,799.02	3,985.93	0.00	0.00	0.00	
11,100.00	90.00	153.17	7,219.00	-3,646.08	1,844.16	4,085.93	0.00	0.00	0.00	
11,200.00	90.00	153.17	7,219.00	-3,735.32	1,889.29	4,185.93	0.00	0.00	0.00	
11,300.00	90.00	153.17	7,219.00	-3,824.55	1,934.43	4,285.93	0.00	0.00	0.00	
11,382.94	90.00	153.17	7,219.00	-3,898.56	1,971.86	4,368.87	0.00	0.00	0.00	
4 1/2" - Randall Creek 12-21H (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									
Randall Creek 12-21H	0.00	0.00	7,219.00	-3,898.56	1,971.86	605,738.09	2,326,680.50	40° 59' 24.551 N	104° 19' 0.260 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,390.00	1,390.00	9-5/8"	9-5/8	13-1/2	
7,491.54	7,219.00	7"	7	8-3/4	
11,382.94	7,219.00	4 1/2"	4-1/2	6	