

# **Denver Division- Colorado**

**DJ - Hereford Ranch  
Garden Creek 24-32H  
Garden Creek 24-32H  
Original Wellbore**

**Plan: APD Directional Plan**

## **Standard Planning Report**

**30 June, 2010**

# EOG RESOURCES INC.

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Garden Creek 24-32H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	Rig @ 5167.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	Rig @ 5167.00ft (TBD)
<b>Site:</b>	Garden Creek 24-32H	<b>North Reference:</b>	True
<b>Well:</b>	Garden Creek 24-32H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	APD Directional 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		

<b>Site</b>	Garden Creek 24-32H		
<b>Site Position:</b>		<b>Northing:</b>	563,260.53ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,321,959.66ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 52' 25.500 N
		<b>Longitude:</b>	104° 20' 9.082 W
		<b>Grid Convergence:</b>	0.75 deg

<b>Well</b>	Garden Creek 24-32H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	6/30/2010	8.76	67.54	53,541

<b>Design</b>	APD Directional 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	291.73

<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	
6,562.53	0.00	0.00	6,562.53	0.00	0.00	0.00	0.00	0.00	0.00	
7,312.54	90.00	291.73	7,040.00	176.77	-443.54	12.00	12.00	0.00	291.73	
11,341.19	90.00	291.73	7,040.00	1,668.32	-4,185.91	0.00	0.00	0.00	0.00	Garden Creek 24-3

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<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	Rig @ 5167.00ft (TBD)
<b>Site:</b>	Garden Creek 24-32H	<b>North Reference:</b>	True
<b>Well:</b>	Garden Creek 24-32H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	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
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
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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

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<b>Wellbore:</b>	Original Wellbore		
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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)
5,100.00	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
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
6,562.53	0.00	0.00	6,562.53	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	4.50	291.73	6,599.96	0.54	-1.36	1.47	12.00	12.00	0.00
6,700.00	16.50	291.73	6,698.11	7.28	-18.26	19.65	12.00	12.00	0.00
6,800.00	28.50	291.73	6,790.33	21.42	-53.73	57.84	12.00	12.00	0.00
6,900.00	40.50	291.73	6,872.60	42.35	-106.25	114.38	12.00	12.00	0.00
7,000.00	52.50	291.73	6,941.31	69.15	-173.50	186.78	12.00	12.00	0.00
7,100.00	64.50	291.73	6,993.47	100.66	-252.56	271.88	12.00	12.00	0.00
7,200.00	76.50	291.73	7,026.80	135.49	-339.96	365.97	12.00	12.00	0.00
7,300.00	88.50	291.73	7,039.84	172.13	-431.89	464.93	12.00	12.00	0.00
7,312.54	90.00	291.73	7,040.00	176.78	-443.54	477.47	12.00	12.00	0.00
7"									
7,400.00	90.00	291.73	7,040.00	209.16	-524.79	564.93	0.00	0.00	0.00
7,500.00	90.00	291.73	7,040.00	246.18	-617.68	664.93	0.00	0.00	0.00
7,600.00	90.00	291.73	7,040.00	283.20	-710.57	764.93	0.00	0.00	0.00
7,700.00	90.00	291.73	7,040.00	320.23	-803.47	864.93	0.00	0.00	0.00
7,800.00	90.00	291.73	7,040.00	357.25	-896.36	964.93	0.00	0.00	0.00
7,900.00	90.00	291.73	7,040.00	394.27	-989.25	1,064.93	0.00	0.00	0.00
8,000.00	90.00	291.73	7,040.00	431.30	-1,082.15	1,164.93	0.00	0.00	0.00
8,100.00	90.00	291.73	7,040.00	468.32	-1,175.04	1,264.93	0.00	0.00	0.00
8,200.00	90.00	291.73	7,040.00	505.34	-1,267.94	1,364.93	0.00	0.00	0.00
8,300.00	90.00	291.73	7,040.00	542.37	-1,360.83	1,464.93	0.00	0.00	0.00
8,400.00	90.00	291.73	7,040.00	579.39	-1,453.72	1,564.93	0.00	0.00	0.00
8,500.00	90.00	291.73	7,040.00	616.41	-1,546.62	1,664.93	0.00	0.00	0.00
8,600.00	90.00	291.73	7,040.00	653.44	-1,639.51	1,764.93	0.00	0.00	0.00
8,700.00	90.00	291.73	7,040.00	690.46	-1,732.41	1,864.93	0.00	0.00	0.00
8,800.00	90.00	291.73	7,040.00	727.48	-1,825.30	1,964.93	0.00	0.00	0.00
8,900.00	90.00	291.73	7,040.00	764.51	-1,918.19	2,064.93	0.00	0.00	0.00
9,000.00	90.00	291.73	7,040.00	801.53	-2,011.09	2,164.93	0.00	0.00	0.00
9,100.00	90.00	291.73	7,040.00	838.55	-2,103.98	2,264.93	0.00	0.00	0.00
9,200.00	90.00	291.73	7,040.00	875.58	-2,196.88	2,364.93	0.00	0.00	0.00
9,300.00	90.00	291.73	7,040.00	912.60	-2,289.77	2,464.93	0.00	0.00	0.00
9,400.00	90.00	291.73	7,040.00	949.62	-2,382.66	2,564.93	0.00	0.00	0.00
9,500.00	90.00	291.73	7,040.00	986.65	-2,475.56	2,664.93	0.00	0.00	0.00
9,600.00	90.00	291.73	7,040.00	1,023.67	-2,568.45	2,764.93	0.00	0.00	0.00
9,700.00	90.00	291.73	7,040.00	1,060.69	-2,661.34	2,864.93	0.00	0.00	0.00
9,800.00	90.00	291.73	7,040.00	1,097.72	-2,754.24	2,964.93	0.00	0.00	0.00
9,900.00	90.00	291.73	7,040.00	1,134.74	-2,847.13	3,064.93	0.00	0.00	0.00
10,000.00	90.00	291.73	7,040.00	1,171.76	-2,940.03	3,164.93	0.00	0.00	0.00

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<b>Wellbore:</b>	Original Wellbore		
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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	291.73	7,040.00	1,208.79	-3,032.92	3,264.93	0.00	0.00	0.00
10,200.00	90.00	291.73	7,040.00	1,245.81	-3,125.81	3,364.93	0.00	0.00	0.00
10,300.00	90.00	291.73	7,040.00	1,282.83	-3,218.71	3,464.93	0.00	0.00	0.00
10,400.00	90.00	291.73	7,040.00	1,319.86	-3,311.60	3,564.93	0.00	0.00	0.00
10,500.00	90.00	291.73	7,040.00	1,356.88	-3,404.50	3,664.93	0.00	0.00	0.00
10,600.00	90.00	291.73	7,040.00	1,393.90	-3,497.39	3,764.93	0.00	0.00	0.00
10,700.00	90.00	291.73	7,040.00	1,430.93	-3,590.28	3,864.93	0.00	0.00	0.00
10,800.00	90.00	291.73	7,040.00	1,467.95	-3,683.18	3,964.93	0.00	0.00	0.00
10,900.00	90.00	291.73	7,040.00	1,504.97	-3,776.07	4,064.93	0.00	0.00	0.00
11,000.00	90.00	291.73	7,040.00	1,542.00	-3,868.96	4,164.93	0.00	0.00	0.00
11,100.00	90.00	291.73	7,040.00	1,579.02	-3,961.86	4,264.93	0.00	0.00	0.00
11,200.00	90.00	291.73	7,040.00	1,616.04	-4,054.75	4,364.93	0.00	0.00	0.00
11,300.00	90.00	291.73	7,040.00	1,653.07	-4,147.65	4,464.93	0.00	0.00	0.00
11,341.19	90.00	291.73	7,040.00	1,668.32	-4,185.91	4,506.12	0.00	0.00	0.00
Garden Creek 24-32H (BHL)									

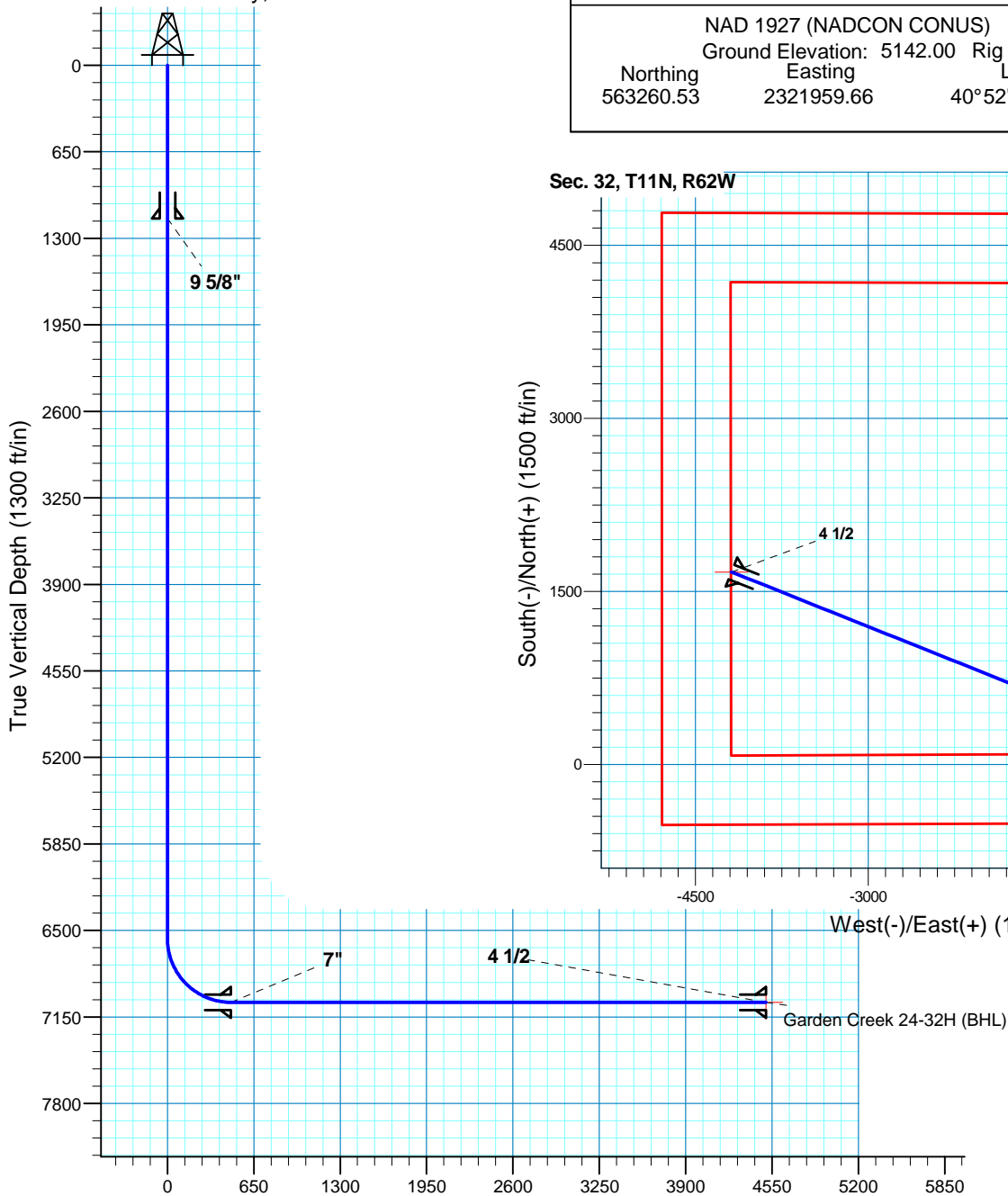
Targets									
Target Name	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Garden Creek 24-32H	0.00	0.00	7,040.00	1,668.32	-4,185.91	564,873.75	2,317,752.22	40° 52' 41.981 N	104° 21' 3.571 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,150.00	1,150.00	9 5/8"	9-5/8	13-1/2	
7,312.54	7,040.00	7"	7	8-3/4	
11,341.19	7,040.00	4 1/2	4-1/2	6	

# Garden Creek 24-32H

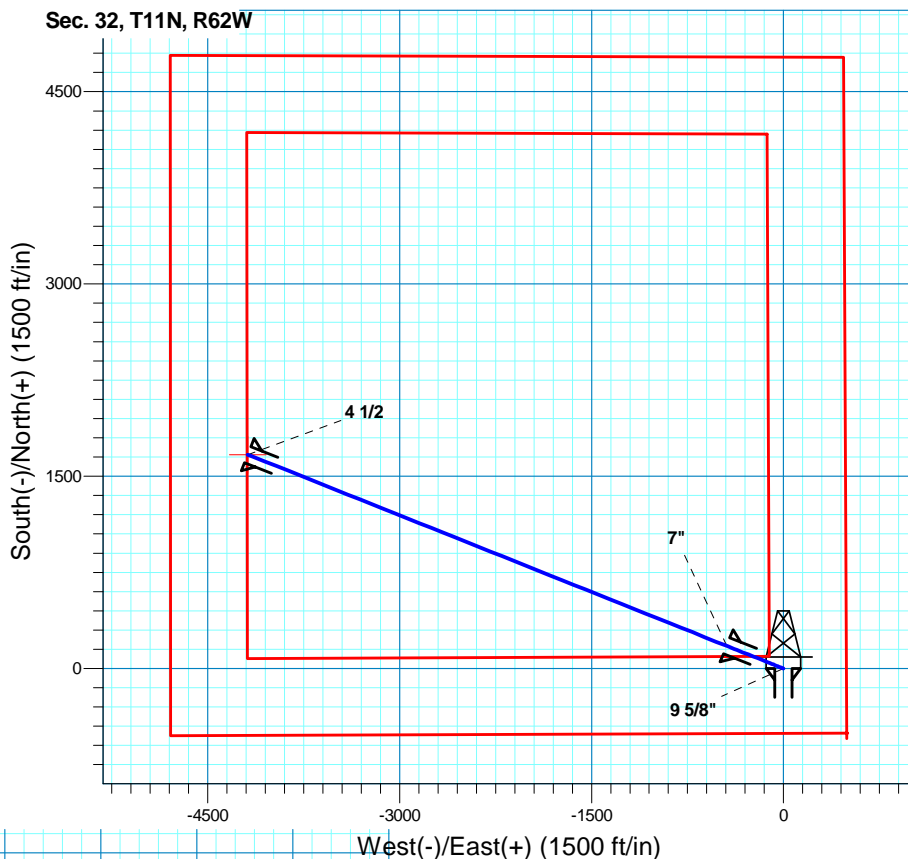
Section 7 T11N R63W

Weld County, CO



Vertical Section at 291.73deg (1300 ft/in)

Surface Location			
NAD 1927 (NADCON CONUS) Colorado North 501			
Ground Elevation: 5142.00 Rig @ 5167.00ft (TBD)			
Northing	Easting	Latitude	Longitude
563260.53	2321959.66	40°52' 25.500 N	104°20' 9.082 W



**T M**  
 Azimuths to True North  
 Magnetic North: 8.76°  
 Magnetic Field  
 Strength: 53541.0snT  
 Dip Angle: 67.54°  
 Date: 6/30/2010  
 Model: IGRF200510

Project: DJ - Hereford Ranch  
 Site: Garden Creek 24-32H  
 Well: Garden Creek 24-32H  
 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	6562.53	0.00	0.00	6562.53	0.00	0.00	0.00	0.00	0.00	
3	7312.54	90.00	291.73	7040.00	176.77	-443.54	12.00	291.73	477.47	
4	11341.19	90.00	291.73	7040.00	1668.32	-4185.91	0.00	0.00	4506.12	Garden Creek 24-32H (BHL)
TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
Garden Creek 24-32H (BHL)	7040.00	1668.32	-4185.91	564873.75	2317752.22	40°52' 41.981 N	104°21' 3.571 W	Point		