

# **Denver Division- Colorado**

**DJ - Hereford Ranch**

**Greasewood 08-18H**

**Greasewood 08-18H**

**Original Wellbore**

**Plan: APD Directional Plan**

## **Standard Planning Report**

**16 March, 2011**

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Greasewood 08-18H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4748.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4748.00ft (TBD)
<b>Site:</b>	Greasewood 08-18H	<b>North Reference:</b>	True
<b>Well:</b>	Greasewood 08-18H	<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>	Greasewood 08-18H		
<b>Site Position:</b>		<b>Northing:</b>	425,164.01 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,347,392.10 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 29' 37.612 N
		<b>Longitude:</b>	104° 15' 3.391 W
		<b>Grid Convergence:</b>	0.81 deg

<b>Well</b>	Greasewood 08-18H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b> 425,164.01 ft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b> 2,347,392.10 ft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40° 29' 37.612 N
		<b>Longitude:</b>	104° 15' 3.391 W
		<b>Ground Level:</b>	4,726.00 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	3/16/2011	8.58	67.23	53,282

<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	156.54

<b>Plan Sections</b>										
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	
5,817.53	0.00	0.00	5,817.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,567.54	90.00	156.54	6,295.00	-437.99	190.10	12.00	12.00	0.00	156.54	
10,596.66	90.00	156.54	6,295.00	-4,134.00	1,794.26	0.00	0.00	0.00	0.00	Greasewood 08-18H

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## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Greasewood 08-18H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4748.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4748.00ft (TBD)
<b>Site:</b>	Greasewood 08-18H	<b>North Reference:</b>	True
<b>Well:</b>	Greasewood 08-18H	<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
<b>9-5/8"</b>									
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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<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4748.00ft (TBD)
<b>Site:</b>	Greasewood 08-18H	<b>North Reference:</b>	True
<b>Well:</b>	Greasewood 08-18H	<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)
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
5,817.53	0.00	0.00	5,817.53	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	9.90	156.54	5,899.59	-6.52	2.83	7.10	12.00	12.00	0.00
6,000.00	21.90	156.54	5,995.59	-31.60	13.71	34.44	12.00	12.00	0.00
6,100.00	33.90	156.54	6,083.81	-74.44	32.31	81.14	12.00	12.00	0.00
6,200.00	45.90	156.54	6,160.39	-133.16	57.80	145.17	12.00	12.00	0.00
6,300.00	57.90	156.54	6,221.99	-205.22	89.07	223.71	12.00	12.00	0.00
6,400.00	69.90	156.54	6,265.91	-287.44	124.76	313.35	12.00	12.00	0.00
6,500.00	81.90	156.54	6,290.23	-376.25	163.30	410.16	12.00	12.00	0.00
6,567.54	90.00	156.54	6,295.00	-437.99	190.10	477.47	12.00	12.00	0.00
7"									
6,600.00	90.00	156.54	6,295.00	-467.77	203.02	509.93	0.00	0.00	0.00
6,700.00	90.00	156.54	6,295.00	-559.50	242.84	609.93	0.00	0.00	0.00
6,800.00	90.00	156.54	6,295.00	-651.24	282.65	709.93	0.00	0.00	0.00
6,900.00	90.00	156.54	6,295.00	-742.97	322.47	809.93	0.00	0.00	0.00
7,000.00	90.00	156.54	6,295.00	-834.70	362.28	909.93	0.00	0.00	0.00
7,100.00	90.00	156.54	6,295.00	-926.43	402.10	1,009.93	0.00	0.00	0.00
7,200.00	90.00	156.54	6,295.00	-1,018.17	441.91	1,109.93	0.00	0.00	0.00
7,300.00	90.00	156.54	6,295.00	-1,109.90	481.72	1,209.93	0.00	0.00	0.00
7,400.00	90.00	156.54	6,295.00	-1,201.63	521.54	1,309.93	0.00	0.00	0.00
7,500.00	90.00	156.54	6,295.00	-1,293.36	561.35	1,409.93	0.00	0.00	0.00
7,600.00	90.00	156.54	6,295.00	-1,385.10	601.17	1,509.93	0.00	0.00	0.00
7,700.00	90.00	156.54	6,295.00	-1,476.83	640.98	1,609.93	0.00	0.00	0.00
7,800.00	90.00	156.54	6,295.00	-1,568.56	680.79	1,709.93	0.00	0.00	0.00
7,900.00	90.00	156.54	6,295.00	-1,660.29	720.61	1,809.93	0.00	0.00	0.00
8,000.00	90.00	156.54	6,295.00	-1,752.02	760.42	1,909.93	0.00	0.00	0.00
8,100.00	90.00	156.54	6,295.00	-1,843.76	800.24	2,009.93	0.00	0.00	0.00
8,200.00	90.00	156.54	6,295.00	-1,935.49	840.05	2,109.93	0.00	0.00	0.00
8,300.00	90.00	156.54	6,295.00	-2,027.22	879.86	2,209.93	0.00	0.00	0.00
8,400.00	90.00	156.54	6,295.00	-2,118.95	919.68	2,309.93	0.00	0.00	0.00
8,500.00	90.00	156.54	6,295.00	-2,210.69	959.49	2,409.93	0.00	0.00	0.00
8,600.00	90.00	156.54	6,295.00	-2,302.42	999.31	2,509.93	0.00	0.00	0.00
8,700.00	90.00	156.54	6,295.00	-2,394.15	1,039.12	2,609.93	0.00	0.00	0.00
8,800.00	90.00	156.54	6,295.00	-2,485.88	1,078.94	2,709.93	0.00	0.00	0.00
8,900.00	90.00	156.54	6,295.00	-2,577.62	1,118.75	2,809.93	0.00	0.00	0.00
9,000.00	90.00	156.54	6,295.00	-2,669.35	1,158.56	2,909.93	0.00	0.00	0.00
9,100.00	90.00	156.54	6,295.00	-2,761.08	1,198.38	3,009.93	0.00	0.00	0.00
9,200.00	90.00	156.54	6,295.00	-2,852.81	1,238.19	3,109.93	0.00	0.00	0.00
9,300.00	90.00	156.54	6,295.00	-2,944.55	1,278.01	3,209.93	0.00	0.00	0.00
9,400.00	90.00	156.54	6,295.00	-3,036.28	1,317.82	3,309.93	0.00	0.00	0.00
9,500.00	90.00	156.54	6,295.00	-3,128.01	1,357.63	3,409.93	0.00	0.00	0.00
9,600.00	90.00	156.54	6,295.00	-3,219.74	1,397.45	3,509.93	0.00	0.00	0.00
9,700.00	90.00	156.54	6,295.00	-3,311.48	1,437.26	3,609.93	0.00	0.00	0.00
9,800.00	90.00	156.54	6,295.00	-3,403.21	1,477.08	3,709.93	0.00	0.00	0.00
9,900.00	90.00	156.54	6,295.00	-3,494.94	1,516.89	3,809.93	0.00	0.00	0.00
10,000.00	90.00	156.54	6,295.00	-3,586.67	1,556.71	3,909.93	0.00	0.00	0.00
10,100.00	90.00	156.54	6,295.00	-3,678.41	1,596.52	4,009.93	0.00	0.00	0.00

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<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4748.00ft (TBD)
<b>Site:</b>	Greasewood 08-18H	<b>North Reference:</b>	True
<b>Well:</b>	Greasewood 08-18H	<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)
10,200.00	90.00	156.54	6,295.00	-3,770.14	1,636.33	4,109.93	0.00	0.00	0.00
10,300.00	90.00	156.54	6,295.00	-3,861.87	1,676.15	4,209.93	0.00	0.00	0.00
10,400.00	90.00	156.54	6,295.00	-3,953.60	1,715.96	4,309.93	0.00	0.00	0.00
10,500.00	90.00	156.54	6,295.00	-4,045.33	1,755.78	4,409.93	0.00	0.00	0.00
10,596.66	90.00	156.54	6,295.00	-4,134.00	1,794.26	4,506.59	0.00	0.00	0.00
Greasewood 08-18H (BHL)									

### Targets

#### Target Name

- hit/miss target	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Greasewood 08-18H (	0.00	0.00	6,295.00	-4,134.00	1,794.26	421,055.70	2,349,244.41	40° 28' 56.759 N	104° 14' 40.171 W
- plan hits target center									
- Point									

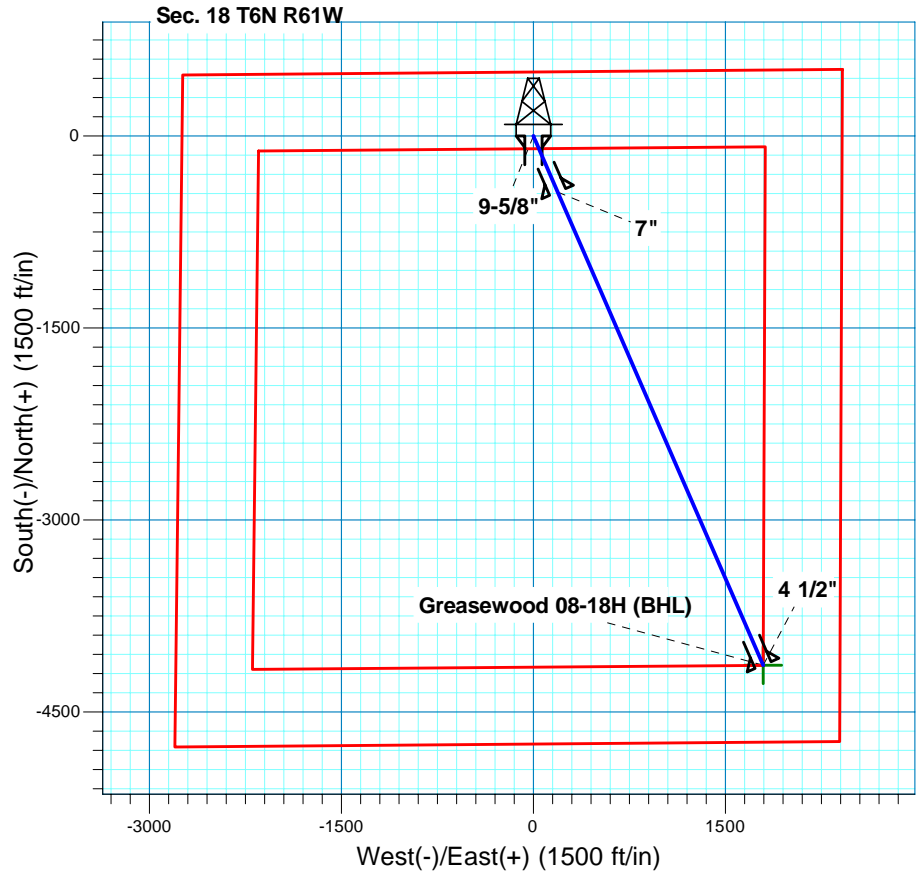
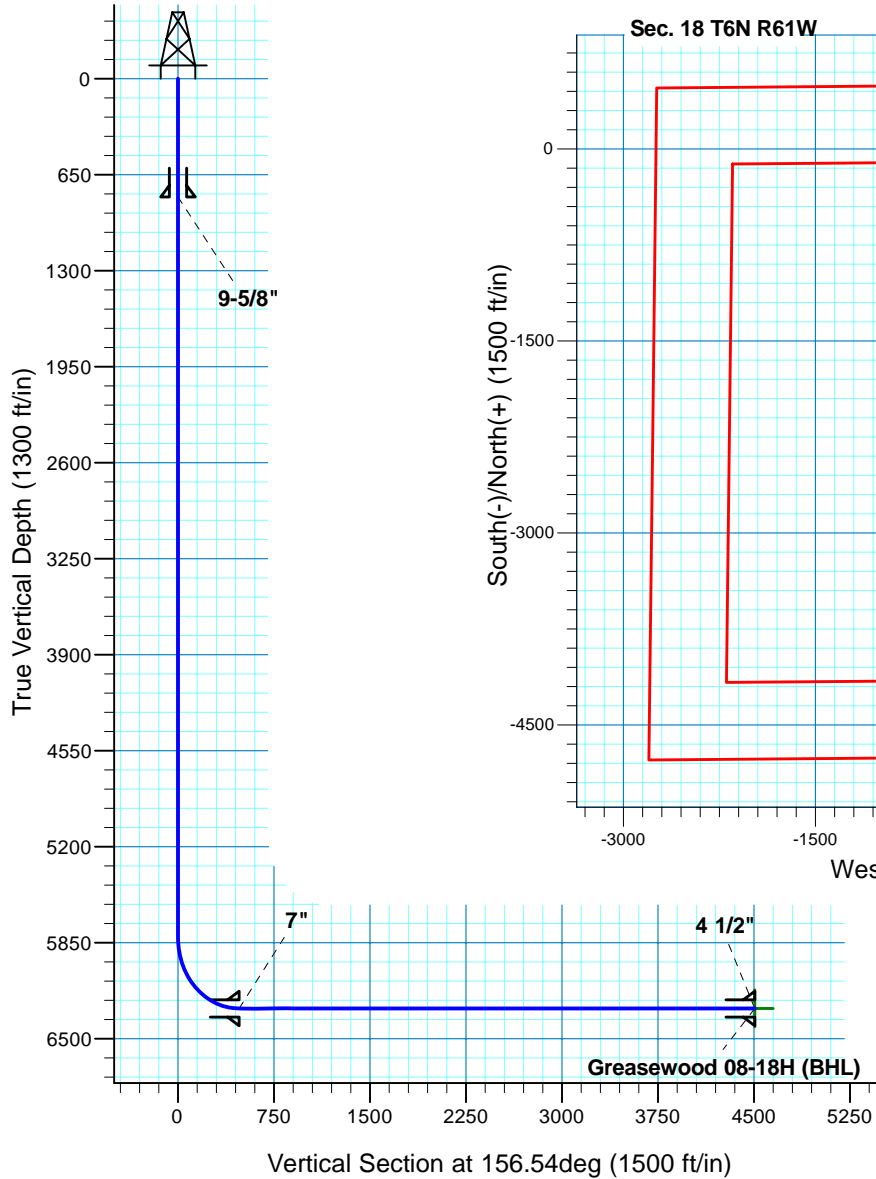
### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
800.00	800.00	9-5/8"	9-5/8	13-1/2
6,567.54	6,295.00	7"	7	8-3/4
10,596.66	6,295.00	4 1/2"	4-1/2	6

**Greasewood 08-18H**  
**Section 18 T6N R61W**  
**Weld County, CO**

Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501  
Ground Elevation: 4726.00 RIG @ 4748.00ft (TBD)  
Northing Easting Latitude Longitude  
425164.01 2347392.10 40° 29' 37.612 N 104° 15' 3.391 W



**T M**  
Azimuths to True North  
Magnetic North: 8.58°  
Magnetic Field  
Strength: 53282.3snT  
Dip Angle: 67.23°  
Date: 3/16/2011  
Model: IGRF200510

Project: DJ - Hereford Ranch  
Site: Greasewood 08-18H  
Well: Greasewood 08-18H  
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	5817.53	0.00	0.00	5817.53	0.00	0.00	0.00	0.00	0.00	
3	6567.54	90.00	156.54	6295.00	-437.99	190.10	12.00	156.54	477.47	
4	10596.66	90.00	156.54	6295.00	-4134.00	1794.26	0.00	0.00	4506.59	Greasewood 08-18H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Greasewood 08-18H (BHL)	6295.00	-4134.00	1794.26	421055.70	2349244.41	40° 28' 56.759 N	104° 14' 40.171 W	Point