

# **Denver Division- Colorado**

**DJ - Hereford Ranch**

**Sandborn 12-26H**

**Sandborn 12-26H**

**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 Sandborn 12-26H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4595.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4595.00ft (TBD)
<b>Site:</b>	Sandborn 12-26H	<b>North Reference:</b>	True
<b>Well:</b>	Sandborn 12-26H	<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>	Sandborn 12-26H		
<b>Site Position:</b>		<b>Northing:</b>	383,311.38 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,369,228.47 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 22' 40.930 N
		<b>Longitude:</b>	104° 10' 28.880 W
		<b>Grid Convergence:</b>	0.86 deg

<b>Well</b>	Sandborn 12-26H		
<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	3/16/2011	8.53	67.15	53,231

<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	156.37

<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	
5,470.53	0.00	0.00	5,470.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,220.54	90.00	156.37	5,948.00	-437.42	191.41	12.00	12.00	0.00	156.37	
10,355.64	90.00	156.37	5,948.00	-4,225.69	1,849.16	0.00	0.00	0.00	0.00	Sandborn 12-26H (I

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## Planning Report

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<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4595.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4595.00ft (TBD)
<b>Site:</b>	Sandborn 12-26H	<b>North Reference:</b>	True
<b>Well:</b>	Sandborn 12-26H	<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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## Planning Report

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<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4595.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4595.00ft (TBD)
<b>Site:</b>	Sandborn 12-26H	<b>North Reference:</b>	True
<b>Well:</b>	Sandborn 12-26H	<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
5,470.53	0.00	0.00	5,470.53	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	3.54	156.37	5,499.98	-0.83	0.36	0.91	12.00	12.00	0.00
5,600.00	15.54	156.37	5,598.42	-15.98	6.99	17.45	12.00	12.00	0.00
5,700.00	27.54	156.37	5,691.27	-49.55	21.68	54.09	12.00	12.00	0.00
5,800.00	39.54	156.37	5,774.47	-100.07	43.79	109.23	12.00	12.00	0.00
5,900.00	51.54	156.37	5,844.39	-165.33	72.35	180.47	12.00	12.00	0.00
6,000.00	63.54	156.37	5,897.97	-242.49	106.11	264.69	12.00	12.00	0.00
6,100.00	75.54	156.37	5,932.87	-328.16	143.60	358.21	12.00	12.00	0.00
6,200.00	87.54	156.37	5,947.56	-418.61	183.18	456.94	12.00	12.00	0.00
6,220.54	90.00	156.37	5,948.00	-437.42	191.42	477.47	12.00	12.00	0.00
7"									
6,266.27	90.00	156.37	5,948.00	-479.32	209.75	523.20	0.00	0.00	0.00
Farr #1-26									
6,300.00	90.00	156.37	5,948.00	-510.22	223.27	556.93	0.00	0.00	0.00
6,400.00	90.00	156.37	5,948.00	-601.83	263.36	656.93	0.00	0.00	0.00
6,500.00	90.00	156.37	5,948.00	-693.44	303.45	756.93	0.00	0.00	0.00
6,600.00	90.00	156.37	5,948.00	-785.05	343.54	856.93	0.00	0.00	0.00
6,700.00	90.00	156.37	5,948.00	-876.67	383.63	956.93	0.00	0.00	0.00
6,800.00	90.00	156.37	5,948.00	-968.28	423.72	1,056.93	0.00	0.00	0.00
6,900.00	90.00	156.37	5,948.00	-1,059.89	463.81	1,156.93	0.00	0.00	0.00
7,000.00	90.00	156.37	5,948.00	-1,151.50	503.90	1,256.93	0.00	0.00	0.00
7,100.00	90.00	156.37	5,948.00	-1,243.12	543.99	1,356.93	0.00	0.00	0.00
7,200.00	90.00	156.37	5,948.00	-1,334.73	584.08	1,456.93	0.00	0.00	0.00
7,300.00	90.00	156.37	5,948.00	-1,426.34	624.17	1,556.93	0.00	0.00	0.00
7,400.00	90.00	156.37	5,948.00	-1,517.95	664.26	1,656.93	0.00	0.00	0.00
7,500.00	90.00	156.37	5,948.00	-1,609.56	704.35	1,756.93	0.00	0.00	0.00
7,600.00	90.00	156.37	5,948.00	-1,701.18	744.44	1,856.93	0.00	0.00	0.00
7,700.00	90.00	156.37	5,948.00	-1,792.79	784.53	1,956.93	0.00	0.00	0.00
7,800.00	90.00	156.37	5,948.00	-1,884.40	824.62	2,056.93	0.00	0.00	0.00
7,900.00	90.00	156.37	5,948.00	-1,976.01	864.70	2,156.93	0.00	0.00	0.00
8,000.00	90.00	156.37	5,948.00	-2,067.63	904.79	2,256.93	0.00	0.00	0.00
8,100.00	90.00	156.37	5,948.00	-2,159.24	944.88	2,356.93	0.00	0.00	0.00
8,200.00	90.00	156.37	5,948.00	-2,250.85	984.97	2,456.93	0.00	0.00	0.00
8,300.00	90.00	156.37	5,948.00	-2,342.46	1,025.06	2,556.93	0.00	0.00	0.00
8,400.00	90.00	156.37	5,948.00	-2,434.08	1,065.15	2,656.93	0.00	0.00	0.00
8,500.00	90.00	156.37	5,948.00	-2,525.69	1,105.24	2,756.93	0.00	0.00	0.00
8,600.00	90.00	156.37	5,948.00	-2,617.30	1,145.33	2,856.93	0.00	0.00	0.00
8,700.00	90.00	156.37	5,948.00	-2,708.91	1,185.42	2,956.93	0.00	0.00	0.00
8,800.00	90.00	156.37	5,948.00	-2,800.53	1,225.51	3,056.93	0.00	0.00	0.00
8,900.00	90.00	156.37	5,948.00	-2,892.14	1,265.60	3,156.93	0.00	0.00	0.00
9,000.00	90.00	156.37	5,948.00	-2,983.75	1,305.69	3,256.93	0.00	0.00	0.00
9,100.00	90.00	156.37	5,948.00	-3,075.36	1,345.78	3,356.93	0.00	0.00	0.00
9,200.00	90.00	156.37	5,948.00	-3,166.97	1,385.87	3,456.93	0.00	0.00	0.00
9,300.00	90.00	156.37	5,948.00	-3,258.59	1,425.96	3,556.93	0.00	0.00	0.00
9,400.00	90.00	156.37	5,948.00	-3,350.20	1,466.05	3,656.93	0.00	0.00	0.00
9,500.00	90.00	156.37	5,948.00	-3,441.81	1,506.14	3,756.93	0.00	0.00	0.00
9,600.00	90.00	156.37	5,948.00	-3,533.42	1,546.23	3,856.93	0.00	0.00	0.00
9,700.00	90.00	156.37	5,948.00	-3,625.04	1,586.32	3,956.93	0.00	0.00	0.00
9,800.00	90.00	156.37	5,948.00	-3,716.65	1,626.41	4,056.93	0.00	0.00	0.00
9,900.00	90.00	156.37	5,948.00	-3,808.26	1,666.50	4,156.93	0.00	0.00	0.00

# EOG Resources Inc

## Planning Report

**Database:**  
**Company:**  
**Project:**  
**Site:**  
**Well:**  
**Wellbore:**  
**Design:**

EDM  
Denver Division- Colorado  
DJ - Hereford Ranch  
Sandborn 12-26H  
Sandborn 12-26H  
Original Wellbore  
APD Directional Plan

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**

Site Sandborn 12-26H  
RIG @ 4595.00ft (TBD)  
RIG @ 4595.00ft (TBD)  
True  
Minimum Curvature

### 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)
10,000.00	90.00	156.37	5,948.00	-3,899.87	1,706.59	4,256.93	0.00	0.00	0.00
10,100.00	90.00	156.37	5,948.00	-3,991.49	1,746.68	4,356.93	0.00	0.00	0.00
10,200.00	90.00	156.37	5,948.00	-4,083.10	1,786.77	4,456.93	0.00	0.00	0.00
10,300.00	90.00	156.37	5,948.00	-4,174.71	1,826.86	4,556.93	0.00	0.00	0.00
10,355.64	90.00	156.37	5,948.00	-4,225.68	1,849.16	4,612.57	0.00	0.00	0.00
4 1/2" - Sandborn 12-26H (BHL)									

### Targets

#### Target Name

- hit/miss target - Shape	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Sandborn 12-26H (BH- - plan hits target center - Point	0.00	0.00	5,948.00	-4,225.69	1,849.16	379,113.81	2,371,140.57	40° 21' 59.170 N	104° 10' 4.991 W

### 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
6,220.54	5,948.00	7"	7	8-3/4
10,355.64	5,948.00	4 1/2"	4-1/2	6

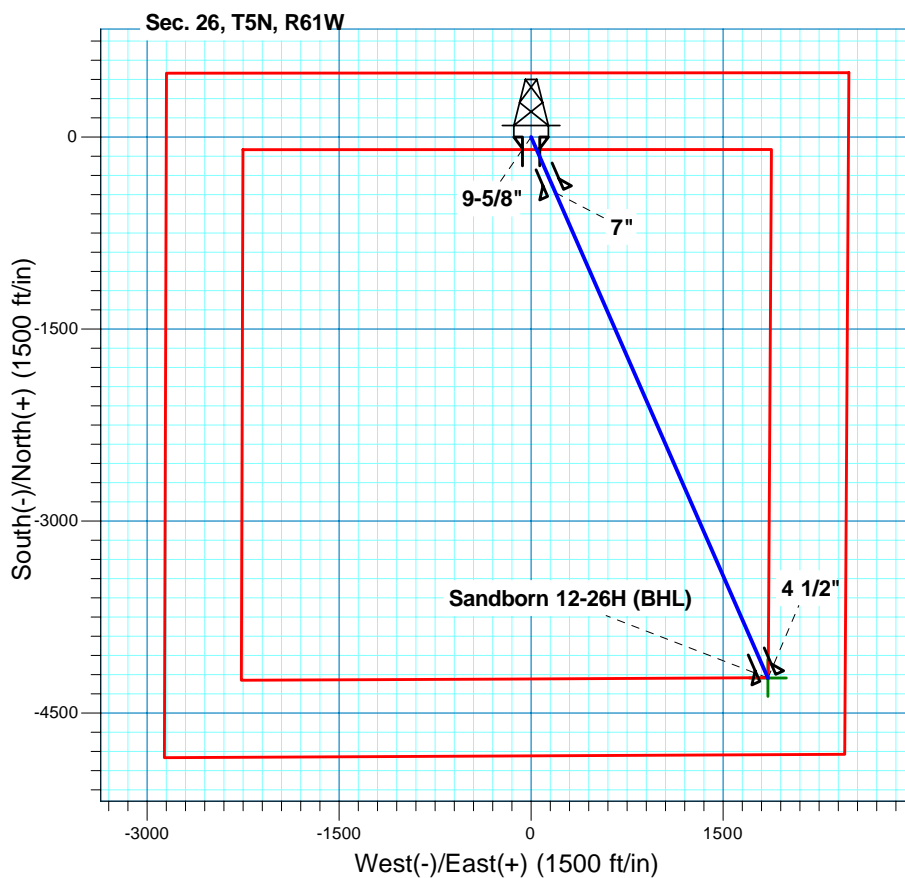
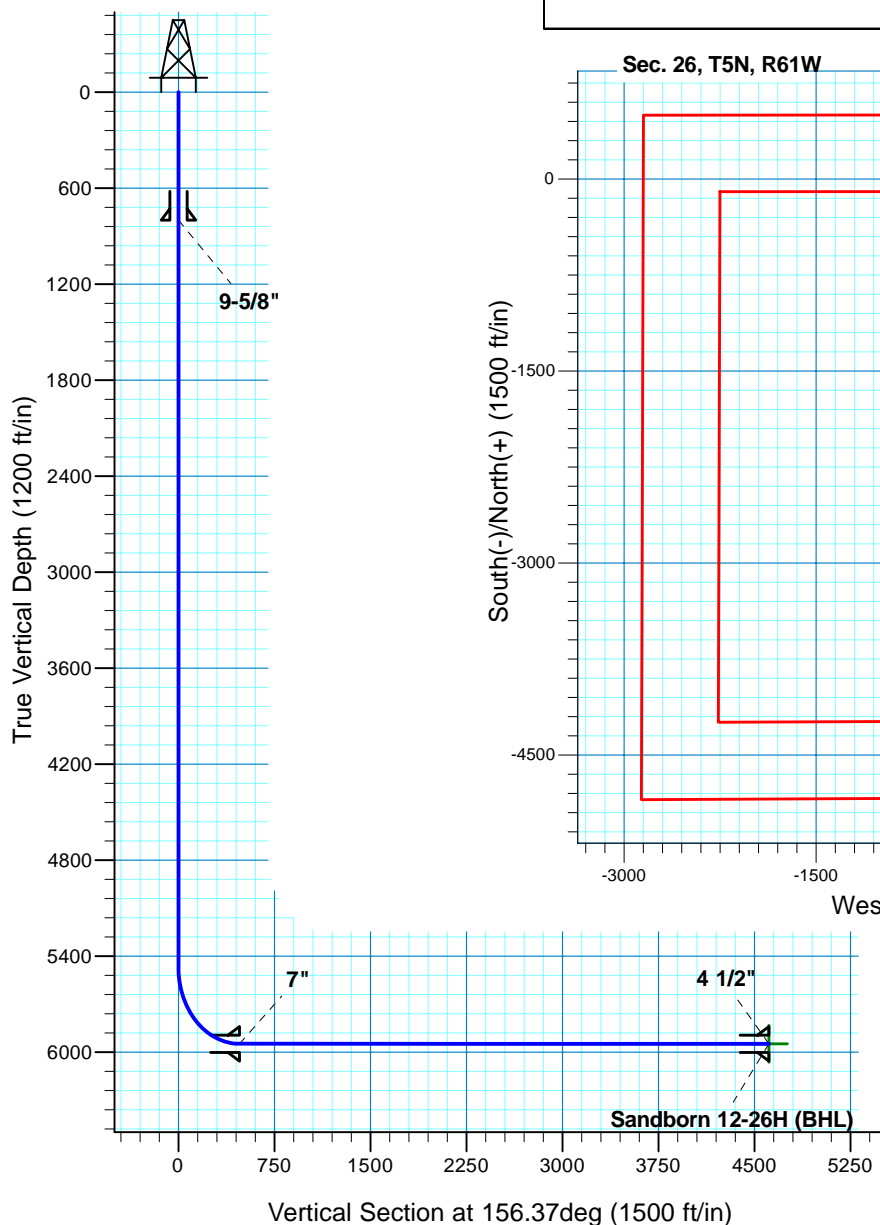
# Sandborn 12-26H

Section 26 T5N R61W

Weld County, CO

## Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501  
Ground Elevation: 4573.00 RIG @ 4595.00ft (TBD)  
Northing Easting Latitude Longitude  
383311.38 2369228.47 40° 22' 40.930 N 104° 10' 28.880 W



**T M**  
Azimuths to True North  
Magnetic North: 8.53°  
Magnetic Field  
Strength: 53230.9snT  
Dip Angle: 67.15°  
Date: 3/16/2011  
Model: IGRF200510

Project: DJ - Hereford Ranch  
Site: Sandborn 12-26H  
Well: Sandborn 12-26H  
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	5470.53	0.00	0.00	5470.53	0.00	0.00	0.00	0.00	0.00	
3	6220.54	90.00	156.37	5948.00	-437.42	191.41	12.00	156.37	477.47	
4	10355.64	90.00	156.37	5948.00	-4225.69	1849.16	0.00	0.00	4612.57	Sandborn 12-26H (BHL)

## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Sandborn 12-26H (BHL)	5948.00	-4225.69	1849.16	379113.81	2371140.57	40° 21' 59.170 N	104° 10' 4.991 W	Point