

# **Denver Division- Colorado**

**DJ - Hereford Ranch**

**Igo Creek 08-12H**

**Igo Creek 08-12H**

**Original Wellbore**

**Plan: APD Directional Plan**

## **Standard Planning Report**

**13 January, 2011**

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Igo Creek 08-12H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4929.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4929.00ft (TBD)
<b>Site:</b>	Igo Creek 08-12H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 08-12H	<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>	Igo Creek 08-12H		
<b>Site Position:</b>		<b>Northing:</b>	527,708.11 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,433,878.83 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 46' 17.220 N
		<b>Longitude:</b>	103° 56' 0.679 W
		<b>Grid Convergence:</b>	1.01 deg

<b>Well</b>	Igo Creek 08-12H		
<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>	ft
		<b>Latitude:</b>	40° 46' 17.220 N
		<b>Longitude:</b>	103° 56' 0.679 W
		<b>Ground Level:</b>	4,907.00 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	1/13/2011	8.45	67.51	53,474

<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	153.24

<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	
5,547.53	0.00	0.00	5,547.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,297.54	90.00	153.24	6,025.00	-426.35	214.95	12.00	12.00	0.00	153.24	
10,501.92	90.00	153.24	6,025.00	-4,180.58	2,107.72	0.00	0.00	0.00	0.00	Igo Creek 08-12H (I

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<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4929.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4929.00ft (TBD)
<b>Site:</b>	Igo Creek 08-12H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 08-12H	<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>Site:</b>	Igo Creek 08-12H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 08-12H	<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
5,547.53	0.00	0.00	5,547.53	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	6.30	153.24	5,599.89	-2.57	1.30	2.88	12.00	12.00	0.00
5,700.00	18.30	153.24	5,697.42	-21.55	10.87	24.14	12.00	12.00	0.00
5,800.00	30.30	153.24	5,788.40	-58.22	29.36	65.21	12.00	12.00	0.00
5,900.00	42.30	153.24	5,868.85	-110.99	55.96	124.29	12.00	12.00	0.00
6,000.00	54.30	153.24	5,935.26	-177.53	89.50	198.82	12.00	12.00	0.00
6,100.00	66.30	153.24	5,984.72	-254.95	128.54	285.52	12.00	12.00	0.00
6,200.00	78.30	153.24	6,015.07	-339.86	171.35	380.61	12.00	12.00	0.00
6,297.54	90.00	153.24	6,025.00	-426.35	214.95	477.47	12.00	12.00	0.00
7"									
6,300.00	90.00	153.24	6,025.00	-428.55	216.06	479.93	0.00	0.00	0.00
6,400.00	90.00	153.24	6,025.00	-517.84	261.08	579.93	0.00	0.00	0.00
6,500.00	90.00	153.24	6,025.00	-607.13	306.10	679.93	0.00	0.00	0.00
6,600.00	90.00	153.24	6,025.00	-696.43	351.12	779.93	0.00	0.00	0.00
6,700.00	90.00	153.24	6,025.00	-785.72	396.13	879.93	0.00	0.00	0.00
6,800.00	90.00	153.24	6,025.00	-875.01	441.15	979.93	0.00	0.00	0.00
6,900.00	90.00	153.24	6,025.00	-964.31	486.17	1,079.93	0.00	0.00	0.00
7,000.00	90.00	153.24	6,025.00	-1,053.60	531.19	1,179.93	0.00	0.00	0.00
7,100.00	90.00	153.24	6,025.00	-1,142.89	576.21	1,279.93	0.00	0.00	0.00
7,200.00	90.00	153.24	6,025.00	-1,232.19	621.23	1,379.93	0.00	0.00	0.00
7,300.00	90.00	153.24	6,025.00	-1,321.48	666.25	1,479.93	0.00	0.00	0.00
7,400.00	90.00	153.24	6,025.00	-1,410.77	711.27	1,579.93	0.00	0.00	0.00
7,500.00	90.00	153.24	6,025.00	-1,500.07	756.29	1,679.93	0.00	0.00	0.00
7,600.00	90.00	153.24	6,025.00	-1,589.36	801.30	1,779.93	0.00	0.00	0.00
7,700.00	90.00	153.24	6,025.00	-1,678.65	846.32	1,879.93	0.00	0.00	0.00
7,800.00	90.00	153.24	6,025.00	-1,767.95	891.34	1,979.93	0.00	0.00	0.00
7,900.00	90.00	153.24	6,025.00	-1,857.24	936.36	2,079.93	0.00	0.00	0.00
8,000.00	90.00	153.24	6,025.00	-1,946.53	981.38	2,179.93	0.00	0.00	0.00
8,100.00	90.00	153.24	6,025.00	-2,035.83	1,026.40	2,279.93	0.00	0.00	0.00
8,200.00	90.00	153.24	6,025.00	-2,125.12	1,071.42	2,379.93	0.00	0.00	0.00
8,300.00	90.00	153.24	6,025.00	-2,214.41	1,116.44	2,479.93	0.00	0.00	0.00
8,400.00	90.00	153.24	6,025.00	-2,303.71	1,161.46	2,579.93	0.00	0.00	0.00
8,500.00	90.00	153.24	6,025.00	-2,393.00	1,206.47	2,679.93	0.00	0.00	0.00
8,600.00	90.00	153.24	6,025.00	-2,482.29	1,251.49	2,779.93	0.00	0.00	0.00
8,700.00	90.00	153.24	6,025.00	-2,571.59	1,296.51	2,879.93	0.00	0.00	0.00
8,800.00	90.00	153.24	6,025.00	-2,660.88	1,341.53	2,979.93	0.00	0.00	0.00
8,900.00	90.00	153.24	6,025.00	-2,750.17	1,386.55	3,079.93	0.00	0.00	0.00
9,000.00	90.00	153.24	6,025.00	-2,839.47	1,431.57	3,179.93	0.00	0.00	0.00
9,100.00	90.00	153.24	6,025.00	-2,928.76	1,476.59	3,279.93	0.00	0.00	0.00
9,200.00	90.00	153.24	6,025.00	-3,018.05	1,521.61	3,379.93	0.00	0.00	0.00
9,300.00	90.00	153.24	6,025.00	-3,107.35	1,566.63	3,479.93	0.00	0.00	0.00
9,400.00	90.00	153.24	6,025.00	-3,196.64	1,611.65	3,579.93	0.00	0.00	0.00
9,500.00	90.00	153.24	6,025.00	-3,285.93	1,656.66	3,679.93	0.00	0.00	0.00
9,600.00	90.00	153.24	6,025.00	-3,375.23	1,701.68	3,779.93	0.00	0.00	0.00
9,700.00	90.00	153.24	6,025.00	-3,464.52	1,746.70	3,879.93	0.00	0.00	0.00
9,800.00	90.00	153.24	6,025.00	-3,553.81	1,791.72	3,979.93	0.00	0.00	0.00
9,900.00	90.00	153.24	6,025.00	-3,643.11	1,836.74	4,079.93	0.00	0.00	0.00
10,000.00	90.00	153.24	6,025.00	-3,732.40	1,881.76	4,179.93	0.00	0.00	0.00
10,100.00	90.00	153.24	6,025.00	-3,821.69	1,926.78	4,279.93	0.00	0.00	0.00

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Igo Creek 08-12H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4929.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4929.00ft (TBD)
<b>Site:</b>	Igo Creek 08-12H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 08-12H	<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	153.24	6,025.00	-3,910.99	1,971.80	4,379.93	0.00	0.00	0.00
10,300.00	90.00	153.24	6,025.00	-4,000.28	2,016.82	4,479.93	0.00	0.00	0.00
10,400.00	90.00	153.24	6,025.00	-4,089.57	2,061.83	4,579.93	0.00	0.00	0.00
10,500.00	90.00	153.24	6,025.00	-4,178.87	2,106.85	4,679.93	0.00	0.00	0.00
10,501.92	90.00	153.24	6,025.00	-4,180.58	2,107.72	4,681.85	0.00	0.00	0.00
Igo Creek 08-12H (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)	
- Shape									Latitude Longitude
Igo Creek 08-12H (BH- - plan hits target center - Point		0.00	0.00	6,025.00	-4,180.58	2,107.72	523,565.42	2,436,060.06	40° 45' 35.910 N 103° 55' 33.290 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	
6,297.54	6,025.00	7"	7	8-3/4	
10,501.92	6,025.00	4 1/2"	4-1/2	6-1/4	

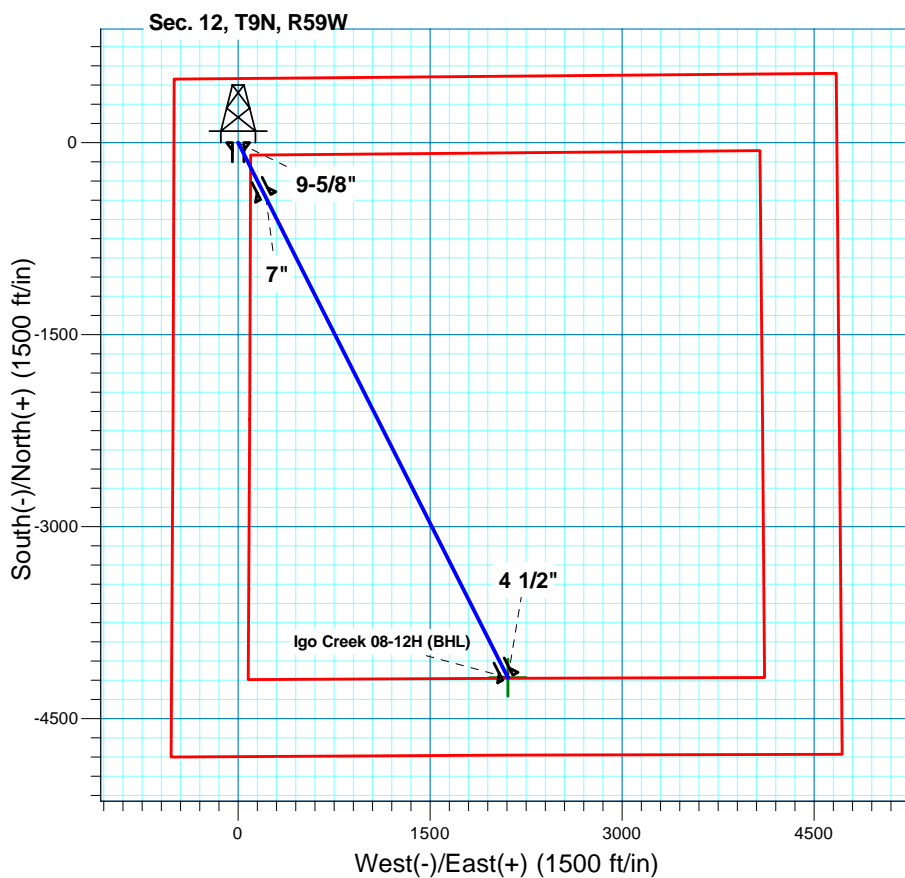
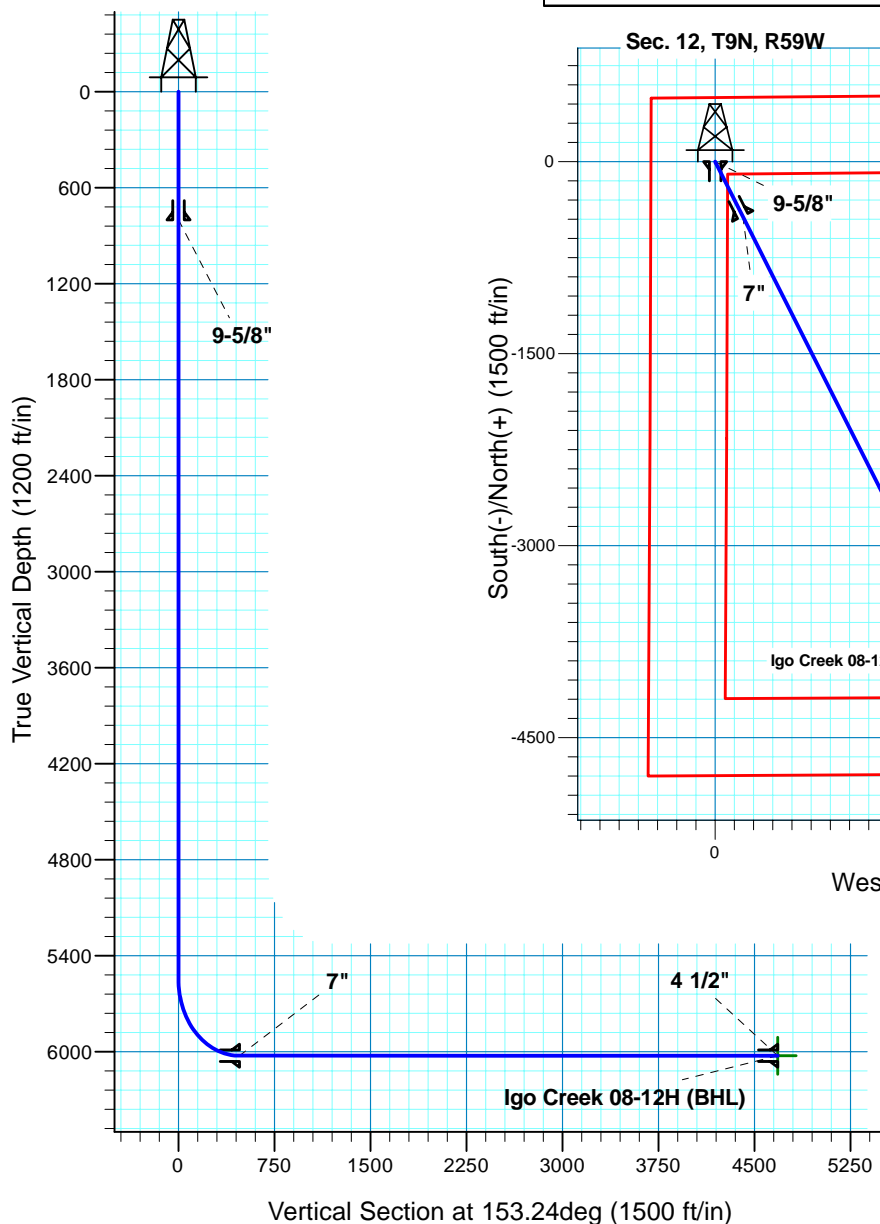
# Igo Creek 08-12H

## Section 12 T9N R59W

### Weld County, CO

#### Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501  
 Ground Elevation: 4907.00 RIG @ 4929.00ft (TBD)  
 Northing Easting Latitude Longitude  
 527708.11 2433878.83 40° 46' 17.220 N 103° 56' 0.679 W



**T M**  
 Azimuths to True North  
 Magnetic North: 8.45°  
 Magnetic Field  
 Strength: 53474.1snT  
 Dip Angle: 67.51°  
 Date: 1/13/2011  
 Model: IGRF200510

Project: DJ - Hereford Ranch  
 Site: Igo Creek 08-12H  
 Well: Igo Creek 08-12H  
 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	5547.53	0.00	0.00	5547.53	0.00	0.00	0.00	0.00	0.00	
3	6297.54	90.00	153.24	6025.00	-426.35	214.95	12.00	153.24	477.47	
4	10501.92	90.00	153.24	6025.00	-4180.58	2107.72	0.00	0.00	4681.85	Igo Creek 08-12H (BHL)

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Igo Creek 08-12H (BHL)	6025.00	-4180.58	2107.72	523565.42	2436060.06	40° 45' 35.910 N	103° 55' 33.290 W	Point