

# **Denver Division- Colorado**

**DJ - Hereford Ranch**

**Igo Creek 20-26H**

**Igo Creek 20-26H**

**Original Wellbore**

**Plan: APD Directional Plan**

## **Standard Planning Report**

**10 February, 2011**

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Igo Creek 20-26H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4844.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4844.00ft (TBD)
<b>Site:</b>	Igo Creek 20-26H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 20-26H	<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>	Igo Creek 20-26H		
<b>Site Position:</b>		<b>Northing:</b>	507,235.35 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,431,209.74 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 42' 55.418 N
		<b>Longitude:</b>	103° 56' 40.031 W
		<b>Grid Convergence:</b>	1.01 deg

<b>Well</b>	Igo Creek 20-26H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b> 507,235.35 ft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b> 2,431,209.74 ft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40° 42' 55.418 N
		<b>Longitude:</b>	103° 56' 40.031 W
		<b>Ground Level:</b>	4,822.00 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	2/10/2011	8.44	67.46	53,437

<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	334.84

<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	
5,549.53	0.00	0.00	5,549.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,299.54	90.00	334.84	6,027.00	432.17	-202.99	12.00	12.00	0.00	334.84	
10,657.09	90.00	334.84	6,027.00	4,376.33	-2,055.52	0.00	0.00	0.00	0.00	Igo Creek 20-26H (I

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<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4844.00ft (TBD)
<b>Site:</b>	Igo Creek 20-26H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 20-26H	<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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<b>Well:</b>	Igo Creek 20-26H	<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
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,549.53	0.00	0.00	5,549.53	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	6.06	334.84	5,599.91	2.41	-1.13	2.66	12.00	12.00	0.00
5,700.00	18.06	334.84	5,697.52	21.28	-10.00	23.51	12.00	12.00	0.00
5,800.00	30.06	334.84	5,788.67	58.11	-27.29	64.20	12.00	12.00	0.00
5,900.00	42.06	334.84	5,869.37	111.29	-52.27	122.95	12.00	12.00	0.00
6,000.00	54.06	334.84	5,936.09	178.49	-83.83	197.19	12.00	12.00	0.00
6,100.00	66.06	334.84	5,985.91	256.77	-120.60	283.69	12.00	12.00	0.00
6,200.00	78.06	334.84	6,016.66	342.73	-160.98	378.65	12.00	12.00	0.00
6,299.54	90.00	334.84	6,027.00	432.17	-202.99	477.47	12.00	12.00	0.00
7"									
6,300.00	90.00	334.84	6,027.00	432.59	-203.18	477.93	0.00	0.00	0.00
6,400.00	90.00	334.84	6,027.00	523.10	-245.70	577.93	0.00	0.00	0.00
6,500.00	90.00	334.84	6,027.00	613.62	-288.21	677.93	0.00	0.00	0.00
6,600.00	90.00	334.84	6,027.00	704.13	-330.72	777.93	0.00	0.00	0.00
6,700.00	90.00	334.84	6,027.00	794.64	-373.23	877.93	0.00	0.00	0.00
6,800.00	90.00	334.84	6,027.00	885.16	-415.75	977.93	0.00	0.00	0.00
6,900.00	90.00	334.84	6,027.00	975.67	-458.26	1,077.93	0.00	0.00	0.00
7,000.00	90.00	334.84	6,027.00	1,066.18	-500.77	1,177.93	0.00	0.00	0.00
7,100.00	90.00	334.84	6,027.00	1,156.70	-543.29	1,277.93	0.00	0.00	0.00
7,200.00	90.00	334.84	6,027.00	1,247.21	-585.80	1,377.93	0.00	0.00	0.00
7,300.00	90.00	334.84	6,027.00	1,337.72	-628.31	1,477.93	0.00	0.00	0.00
7,400.00	90.00	334.84	6,027.00	1,428.24	-670.83	1,577.93	0.00	0.00	0.00
7,500.00	90.00	334.84	6,027.00	1,518.75	-713.34	1,677.93	0.00	0.00	0.00
7,600.00	90.00	334.84	6,027.00	1,609.26	-755.85	1,777.93	0.00	0.00	0.00
7,700.00	90.00	334.84	6,027.00	1,699.77	-798.37	1,877.93	0.00	0.00	0.00
7,800.00	90.00	334.84	6,027.00	1,790.29	-840.88	1,977.93	0.00	0.00	0.00
7,900.00	90.00	334.84	6,027.00	1,880.80	-883.39	2,077.93	0.00	0.00	0.00
8,000.00	90.00	334.84	6,027.00	1,971.31	-925.90	2,177.93	0.00	0.00	0.00
8,100.00	90.00	334.84	6,027.00	2,061.83	-968.42	2,277.93	0.00	0.00	0.00
8,200.00	90.00	334.84	6,027.00	2,152.34	-1,010.93	2,377.93	0.00	0.00	0.00
8,300.00	90.00	334.84	6,027.00	2,242.85	-1,053.44	2,477.93	0.00	0.00	0.00
8,400.00	90.00	334.84	6,027.00	2,333.37	-1,095.96	2,577.93	0.00	0.00	0.00
8,500.00	90.00	334.84	6,027.00	2,423.88	-1,138.47	2,677.93	0.00	0.00	0.00
8,600.00	90.00	334.84	6,027.00	2,514.39	-1,180.98	2,777.93	0.00	0.00	0.00
8,700.00	90.00	334.84	6,027.00	2,604.91	-1,223.50	2,877.93	0.00	0.00	0.00
8,800.00	90.00	334.84	6,027.00	2,695.42	-1,266.01	2,977.93	0.00	0.00	0.00
8,900.00	90.00	334.84	6,027.00	2,785.93	-1,308.52	3,077.93	0.00	0.00	0.00
9,000.00	90.00	334.84	6,027.00	2,876.45	-1,351.04	3,177.93	0.00	0.00	0.00
9,100.00	90.00	334.84	6,027.00	2,966.96	-1,393.55	3,277.93	0.00	0.00	0.00
9,200.00	90.00	334.84	6,027.00	3,057.47	-1,436.06	3,377.93	0.00	0.00	0.00
9,300.00	90.00	334.84	6,027.00	3,147.99	-1,478.57	3,477.93	0.00	0.00	0.00
9,400.00	90.00	334.84	6,027.00	3,238.50	-1,521.09	3,577.93	0.00	0.00	0.00
9,500.00	90.00	334.84	6,027.00	3,329.01	-1,563.60	3,677.93	0.00	0.00	0.00
9,600.00	90.00	334.84	6,027.00	3,419.53	-1,606.11	3,777.93	0.00	0.00	0.00
9,700.00	90.00	334.84	6,027.00	3,510.04	-1,648.63	3,877.93	0.00	0.00	0.00
9,800.00	90.00	334.84	6,027.00	3,600.55	-1,691.14	3,977.93	0.00	0.00	0.00
9,900.00	90.00	334.84	6,027.00	3,691.07	-1,733.65	4,077.93	0.00	0.00	0.00
10,000.00	90.00	334.84	6,027.00	3,781.58	-1,776.17	4,177.93	0.00	0.00	0.00
10,100.00	90.00	334.84	6,027.00	3,872.09	-1,818.68	4,277.93	0.00	0.00	0.00

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<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4844.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4844.00ft (TBD)
<b>Site:</b>	Igo Creek 20-26H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 20-26H	<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)
10,200.00	90.00	334.84	6,027.00	3,962.60	-1,861.19	4,377.93	0.00	0.00	0.00
10,300.00	90.00	334.84	6,027.00	4,053.12	-1,903.71	4,477.93	0.00	0.00	0.00
10,400.00	90.00	334.84	6,027.00	4,143.63	-1,946.22	4,577.93	0.00	0.00	0.00
10,500.00	90.00	334.84	6,027.00	4,234.14	-1,988.73	4,677.93	0.00	0.00	0.00
10,600.00	90.00	334.84	6,027.00	4,324.66	-2,031.24	4,777.93	0.00	0.00	0.00
10,657.09	90.00	334.84	6,027.00	4,376.33	-2,055.52	4,835.02	0.00	0.00	0.00
4 1/2" - Igo Creek 20-26H (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									
Igo Creek 20-26H (BHL)	0.00	0.00	6,027.00	4,376.33	-2,055.52	511,574.95	2,429,077.78	40° 43' 38.662 N	103° 57' 6.728 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	
6,299.54	6,027.00	7"	7	8-3/4	
10,657.09	6,027.00	4 1/2"	4-1/2	6	

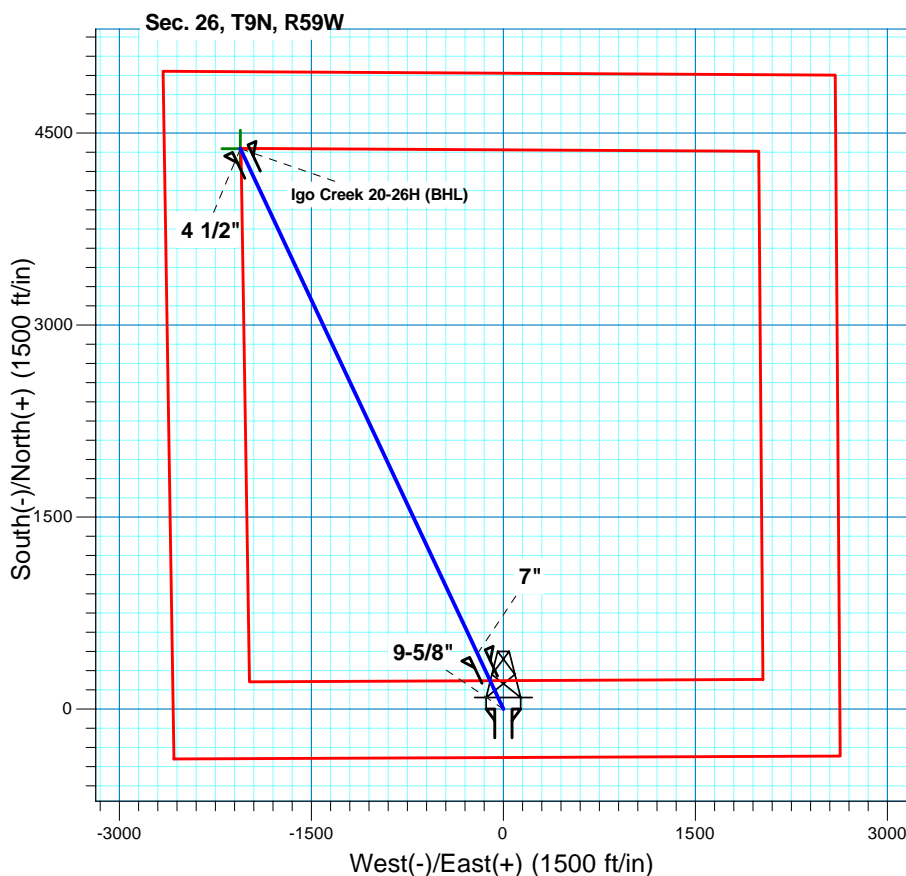
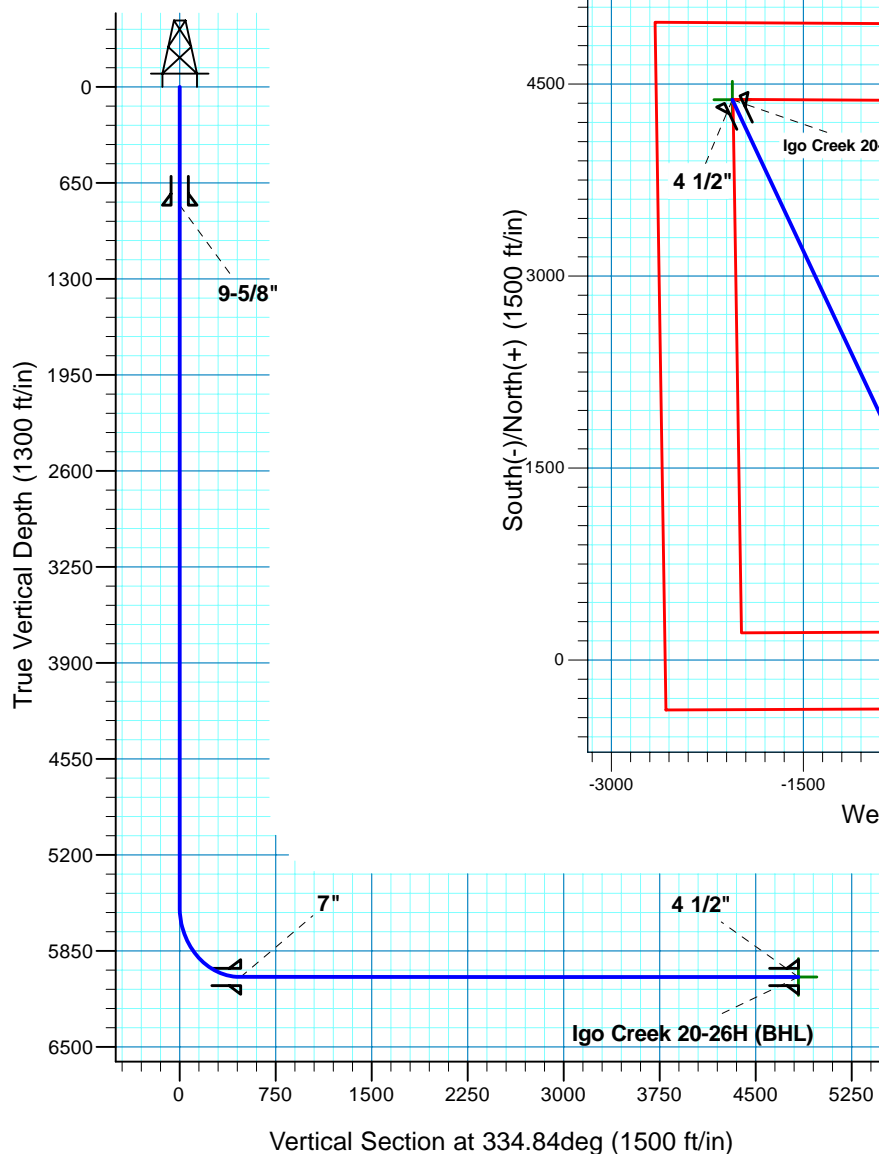
# Igo Creek 20-26H

## Section 26 T9N R59W

### Weld County, CO

#### Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501  
 Ground Elevation: 4822.00 RIG @ 4844.00ft (TBD)  
 Northing Easting Latitude Longitude  
 507235.35 2431209.74 40° 42' 55.418 N 103° 56' 40.031 W



**T M**  
 Azimuths to True North  
 Magnetic North: 8.44°  
 Magnetic Field  
 Strength: 53436.8nT  
 Dip Angle: 67.46°  
 Date: 2/10/2011  
 Model: IGRF200510

Project: DJ - Hereford Ranch  
 Site: Igo Creek 20-26H  
 Well: Igo Creek 20-26H  
 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	5549.53	0.00	0.00	5549.53	0.00	0.00	0.00	0.00	0.00	
3	6299.54	90.00	334.84	6027.00	432.17	-202.99	12.00	334.84	477.47	
4	10657.09	90.00	334.84	6027.00	4376.33	-2055.52	0.00	0.00	4835.02	Igo Creek 20-26H (BHL)

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Igo Creek 20-26H (BHL)	6027.00	4376.33	-2055.52	511574.95	2429077.78	40° 43' 38.662 N	103° 57' 6.728 W	Point