

# **Denver Division- Colorado**

**DJ - Hereford Ranch**

**Igo Creek 19-25H**

**Igo Creek 19-25H**

**Original Wellbore**

**Plan: APD Directional Plan**

## **Standard Planning Report**

**19 January, 2011**

# EOG Resources Inc

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Site Igo Creek 19-25H
<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4905.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4905.00ft (TBD)
<b>Site:</b>	Igo Creek 19-25H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 19-25H	<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 19-25H		
<b>Site Position:</b>		<b>Northing:</b>	507,544.55 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,438,614.16 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 42' 57.179 N
		<b>Longitude:</b>	103° 55' 3.821 W
		<b>Grid Convergence:</b>	1.02 deg

<b>Well</b>	Igo Creek 19-25H		
<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	1/19/2011	8.44	67.47	53,446

<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	332.61

<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	
5,507.53	0.00	0.00	5,507.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,257.54	90.00	332.61	5,985.00	423.94	-219.65	12.00	12.00	0.00	332.61	
10,512.79	90.00	332.61	5,985.00	4,202.20	-2,177.20	0.00	0.00	0.00	0.00	Igo Creek 19-25H (I

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<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4905.00ft (TBD)
<b>Site:</b>	Igo Creek 19-25H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 19-25H	<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 19-25H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 19-25H	<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
5,507.53	0.00	0.00	5,507.53	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	11.10	332.61	5,599.42	7.92	-4.11	8.93	12.00	12.00	0.00
5,700.00	23.10	332.61	5,694.83	33.98	-17.60	38.27	12.00	12.00	0.00
5,800.00	35.10	332.61	5,782.05	77.08	-39.93	86.81	12.00	12.00	0.00
5,900.00	47.10	332.61	5,857.27	135.33	-70.12	152.42	12.00	12.00	0.00
6,000.00	59.10	332.61	5,917.21	206.20	-106.84	232.24	12.00	12.00	0.00
6,100.00	71.10	332.61	5,959.25	286.59	-148.49	322.77	12.00	12.00	0.00
6,200.00	83.10	332.61	5,981.54	372.98	-193.24	420.07	12.00	12.00	0.00
6,257.54	90.00	332.61	5,985.00	423.95	-219.65	477.47	12.00	12.00	0.00
7"									
6,300.00	90.00	332.61	5,985.00	461.65	-239.18	519.93	0.00	0.00	0.00
6,400.00	90.00	332.61	5,985.00	550.44	-285.19	619.93	0.00	0.00	0.00
6,500.00	90.00	332.61	5,985.00	639.23	-331.19	719.93	0.00	0.00	0.00
6,600.00	90.00	332.61	5,985.00	728.02	-377.19	819.93	0.00	0.00	0.00
6,700.00	90.00	332.61	5,985.00	816.81	-423.20	919.93	0.00	0.00	0.00
6,800.00	90.00	332.61	5,985.00	905.60	-469.20	1,019.93	0.00	0.00	0.00
6,900.00	90.00	332.61	5,985.00	994.39	-515.20	1,119.93	0.00	0.00	0.00
7,000.00	90.00	332.61	5,985.00	1,083.18	-561.20	1,219.93	0.00	0.00	0.00
7,100.00	90.00	332.61	5,985.00	1,171.97	-607.21	1,319.93	0.00	0.00	0.00
7,200.00	90.00	332.61	5,985.00	1,260.76	-653.21	1,419.93	0.00	0.00	0.00
7,300.00	90.00	332.61	5,985.00	1,349.55	-699.21	1,519.93	0.00	0.00	0.00
7,400.00	90.00	332.61	5,985.00	1,438.34	-745.22	1,619.93	0.00	0.00	0.00
7,500.00	90.00	332.61	5,985.00	1,527.13	-791.22	1,719.93	0.00	0.00	0.00
7,600.00	90.00	332.61	5,985.00	1,615.92	-837.22	1,819.93	0.00	0.00	0.00
7,700.00	90.00	332.61	5,985.00	1,704.71	-883.23	1,919.93	0.00	0.00	0.00
7,800.00	90.00	332.61	5,985.00	1,793.50	-929.23	2,019.93	0.00	0.00	0.00
7,900.00	90.00	332.61	5,985.00	1,882.29	-975.23	2,119.93	0.00	0.00	0.00
8,000.00	90.00	332.61	5,985.00	1,971.08	-1,021.24	2,219.93	0.00	0.00	0.00
8,100.00	90.00	332.61	5,985.00	2,059.87	-1,067.24	2,319.93	0.00	0.00	0.00
8,200.00	90.00	332.61	5,985.00	2,148.66	-1,113.24	2,419.93	0.00	0.00	0.00
8,300.00	90.00	332.61	5,985.00	2,237.45	-1,159.24	2,519.93	0.00	0.00	0.00
8,400.00	90.00	332.61	5,985.00	2,326.24	-1,205.25	2,619.93	0.00	0.00	0.00
8,500.00	90.00	332.61	5,985.00	2,415.03	-1,251.25	2,719.93	0.00	0.00	0.00
8,600.00	90.00	332.61	5,985.00	2,503.83	-1,297.25	2,819.93	0.00	0.00	0.00
8,700.00	90.00	332.61	5,985.00	2,592.62	-1,343.26	2,919.93	0.00	0.00	0.00
8,800.00	90.00	332.61	5,985.00	2,681.41	-1,389.26	3,019.93	0.00	0.00	0.00
8,900.00	90.00	332.61	5,985.00	2,770.20	-1,435.26	3,119.93	0.00	0.00	0.00
9,000.00	90.00	332.61	5,985.00	2,858.99	-1,481.27	3,219.93	0.00	0.00	0.00
9,100.00	90.00	332.61	5,985.00	2,947.78	-1,527.27	3,319.93	0.00	0.00	0.00
9,200.00	90.00	332.61	5,985.00	3,036.57	-1,573.27	3,419.93	0.00	0.00	0.00
9,300.00	90.00	332.61	5,985.00	3,125.36	-1,619.27	3,519.93	0.00	0.00	0.00
9,400.00	90.00	332.61	5,985.00	3,214.15	-1,665.28	3,619.93	0.00	0.00	0.00
9,500.00	90.00	332.61	5,985.00	3,302.94	-1,711.28	3,719.93	0.00	0.00	0.00
9,600.00	90.00	332.61	5,985.00	3,391.73	-1,757.28	3,819.93	0.00	0.00	0.00
9,700.00	90.00	332.61	5,985.00	3,480.52	-1,803.29	3,919.93	0.00	0.00	0.00
9,800.00	90.00	332.61	5,985.00	3,569.31	-1,849.29	4,019.93	0.00	0.00	0.00
9,900.00	90.00	332.61	5,985.00	3,658.10	-1,895.29	4,119.93	0.00	0.00	0.00
10,000.00	90.00	332.61	5,985.00	3,746.89	-1,941.30	4,219.93	0.00	0.00	0.00
10,100.00	90.00	332.61	5,985.00	3,835.68	-1,987.30	4,319.93	0.00	0.00	0.00

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<b>Company:</b>	Denver Division- Colorado	<b>TVD Reference:</b>	RIG @ 4905.00ft (TBD)
<b>Project:</b>	DJ - Hereford Ranch	<b>MD Reference:</b>	RIG @ 4905.00ft (TBD)
<b>Site:</b>	Igo Creek 19-25H	<b>North Reference:</b>	True
<b>Well:</b>	Igo Creek 19-25H	<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	332.61	5,985.00	3,924.47	-2,033.30	4,419.93	0.00	0.00	0.00
10,300.00	90.00	332.61	5,985.00	4,013.26	-2,079.30	4,519.93	0.00	0.00	0.00
10,400.00	90.00	332.61	5,985.00	4,102.05	-2,125.31	4,619.93	0.00	0.00	0.00
10,500.00	90.00	332.61	5,985.00	4,190.84	-2,171.31	4,719.93	0.00	0.00	0.00
10,512.79	90.00	332.61	5,985.00	4,202.20	-2,177.19	4,732.72	0.00	0.00	0.00
4 1/2" - Igo Creek 19-25H (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 19-25H (BH- - plan hits target center - Point		0.00	0.00	5,985.00	4,202.20	-2,177.20	511,707.23	2,436,362.34	40° 43' 38.701 N 103° 55' 32.099 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	
6,257.54	5,985.00	7"	7	8-3/4	
10,512.79	5,985.00	4 1/2"	4-1/2	6-1/4	

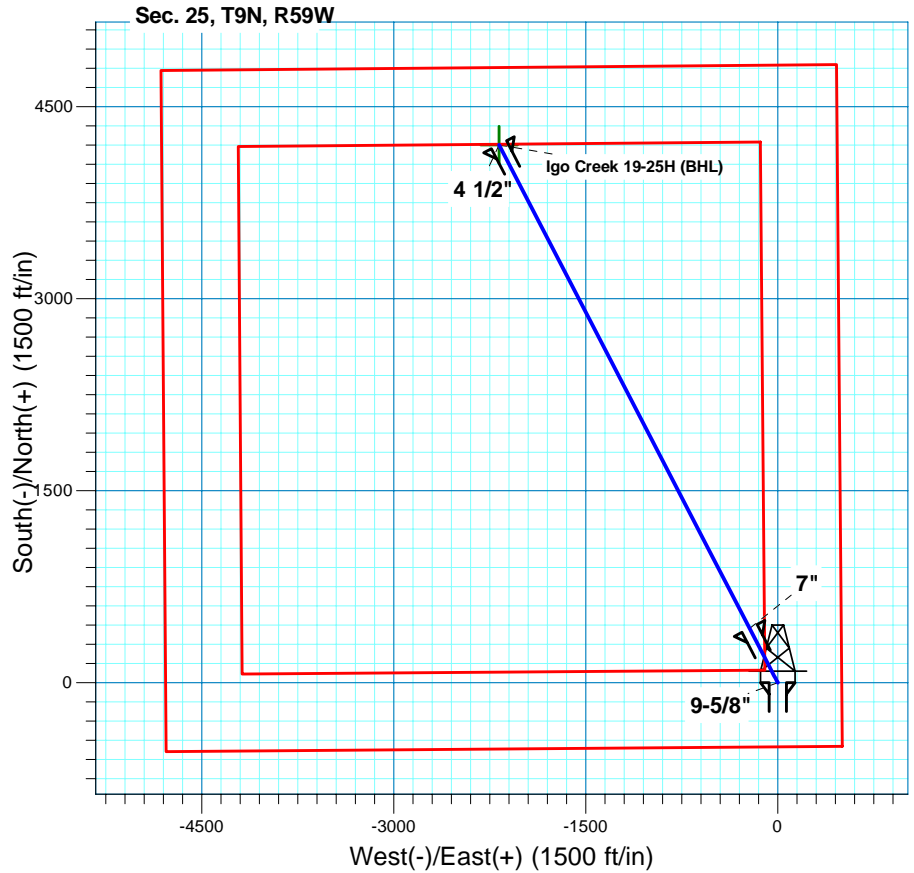
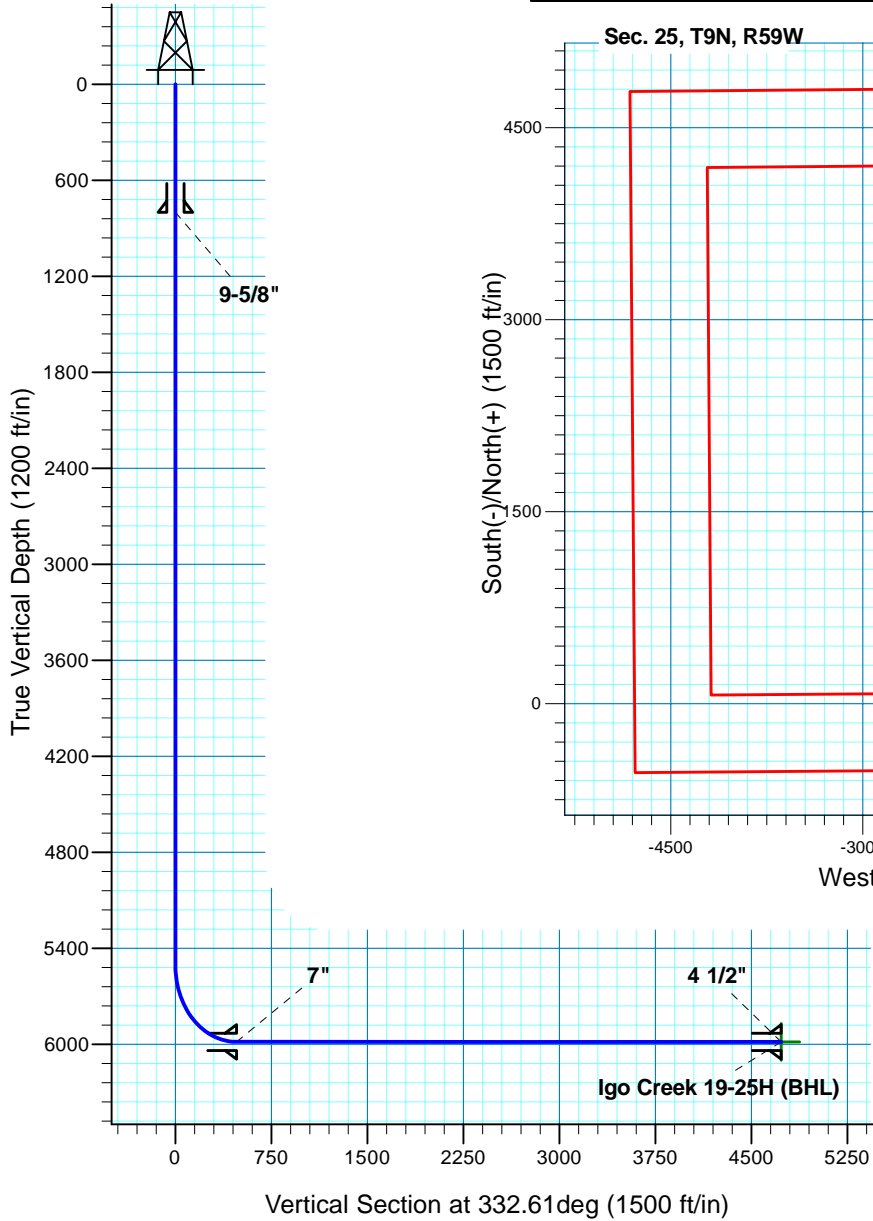
# Igo Creek 19-25H

## Section 25 T9N R59W

### Weld County, CO

#### Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501  
Ground Elevation: 4883.00 RIG @ 4905.00ft (TBD)  
Northing Easting Latitude Longitude  
507544.55 2438614.16 40° 42' 57.179 N 103° 55' 3.821 W



**T M**  
Azimuths to True North  
Magnetic North: 8.44°  
Magnetic Field  
Strength: 53445.6snT  
Dip Angle: 67.47°  
Date: 1/19/2011  
Model: IGRF200510

Project: DJ - Hereford Ranch  
Site: Igo Creek 19-25H  
Well: Igo Creek 19-25H  
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	5507.53	0.00	0.00	5507.53	0.00	0.00	0.00	0.00	0.00	
3	6257.54	90.00	332.61	5985.00	423.94	-219.65	12.00	332.61	477.47	
4	10512.79	90.00	332.61	5985.00	4202.20	-2177.20	0.00	0.00	4732.72	Igo Creek 19-25H (BHL)

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Igo Creek 19-25H (BHL)	5985.00	4202.20	-2177.20	511707.23	2436362.34	40° 43' 38.701 N	103° 55' 32.099 W	Point