

Denver Division- Colorado

DJ - Hereford Ranch

Igo Creek 21-27H

Igo Creek 21-27H

Original Wellbore

Plan: APD Directional Plan

Standard Planning Report

10 February, 2011

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Igo Creek 21-27H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4838.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4838.00ft (TBD)
Site:	Igo Creek 21-27H	North Reference:	True
Well:	Igo Creek 21-27H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	APD Directional Plan		

Project	DJ - Hereford Ranch, Weld County		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado North 501		

Site	Igo Creek 21-27H		
Site Position:		Northing:	507,284.93 ft
From:	Lat/Long	Easting:	2,428,125.98 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	40° 42' 56.441 N
		Longitude:	103° 57' 20.059 W
		Grid Convergence:	1.00 deg

Well	Igo Creek 21-27H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	40° 42' 56.441 N
		Longitude:	103° 57' 20.059 W
		Ground Level:	4,816.00 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	2/10/2011	8.45	67.46	53,436

Design	APD Directional Plan			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (deg)
	0.00	0.00	0.00	332.72

Plan Sections										
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	
5,520.53	0.00	0.00	5,520.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,270.54	90.00	332.72	5,998.00	424.35	-218.86	12.00	12.00	0.00	332.72	
10,565.13	90.00	332.72	5,998.00	4,241.18	-2,187.45	0.00	0.00	0.00	0.00	Igo Creek 21-27H (I

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Igo Creek 21-27H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4838.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4838.00ft (TBD)
Site:	Igo Creek 21-27H	North Reference:	True
Well:	Igo Creek 21-27H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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
9-5/8"									
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

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Igo Creek 21-27H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4838.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4838.00ft (TBD)
Site:	Igo Creek 21-27H	North Reference:	True
Well:	Igo Creek 21-27H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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
5,520.53	0.00	0.00	5,520.53	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	9.54	332.72	5,599.63	5.86	-3.02	6.60	12.00	12.00	0.00
5,700.00	21.54	332.72	5,695.80	29.62	-15.28	33.33	12.00	12.00	0.00
5,800.00	33.54	332.72	5,784.31	70.64	-36.43	79.48	12.00	12.00	0.00
5,900.00	45.54	332.72	5,861.30	127.11	-65.56	143.02	12.00	12.00	0.00
6,000.00	57.54	332.72	5,923.38	196.57	-101.38	221.18	12.00	12.00	0.00
6,100.00	69.54	332.72	5,967.87	275.99	-142.34	310.53	12.00	12.00	0.00
6,200.00	81.54	332.72	5,992.80	361.89	-186.65	407.19	12.00	12.00	0.00
6,270.54	90.00	332.72	5,998.00	424.35	-218.87	477.47	12.00	12.00	0.00
7"									
6,300.00	90.00	332.72	5,998.00	450.54	-232.37	506.93	0.00	0.00	0.00
6,400.00	90.00	332.72	5,998.00	539.41	-278.21	606.93	0.00	0.00	0.00
6,500.00	90.00	332.72	5,998.00	628.29	-324.05	706.93	0.00	0.00	0.00
6,600.00	90.00	332.72	5,998.00	717.16	-369.89	806.93	0.00	0.00	0.00
6,700.00	90.00	332.72	5,998.00	806.04	-415.73	906.93	0.00	0.00	0.00
6,800.00	90.00	332.72	5,998.00	894.91	-461.56	1,006.93	0.00	0.00	0.00
6,900.00	90.00	332.72	5,998.00	983.79	-507.40	1,106.93	0.00	0.00	0.00
7,000.00	90.00	332.72	5,998.00	1,072.66	-553.24	1,206.93	0.00	0.00	0.00
7,100.00	90.00	332.72	5,998.00	1,161.54	-599.08	1,306.93	0.00	0.00	0.00
7,200.00	90.00	332.72	5,998.00	1,250.41	-644.92	1,406.93	0.00	0.00	0.00
7,300.00	90.00	332.72	5,998.00	1,339.29	-690.76	1,506.93	0.00	0.00	0.00
7,400.00	90.00	332.72	5,998.00	1,428.16	-736.60	1,606.93	0.00	0.00	0.00
7,500.00	90.00	332.72	5,998.00	1,517.04	-782.44	1,706.93	0.00	0.00	0.00
7,600.00	90.00	332.72	5,998.00	1,605.91	-828.27	1,806.93	0.00	0.00	0.00
7,700.00	90.00	332.72	5,998.00	1,694.79	-874.11	1,906.93	0.00	0.00	0.00
7,800.00	90.00	332.72	5,998.00	1,783.66	-919.95	2,006.93	0.00	0.00	0.00
7,900.00	90.00	332.72	5,998.00	1,872.54	-965.79	2,106.93	0.00	0.00	0.00
8,000.00	90.00	332.72	5,998.00	1,961.41	-1,011.63	2,206.93	0.00	0.00	0.00
8,100.00	90.00	332.72	5,998.00	2,050.29	-1,057.47	2,306.93	0.00	0.00	0.00
8,200.00	90.00	332.72	5,998.00	2,139.16	-1,103.31	2,406.93	0.00	0.00	0.00
8,300.00	90.00	332.72	5,998.00	2,228.04	-1,149.15	2,506.93	0.00	0.00	0.00
8,400.00	90.00	332.72	5,998.00	2,316.92	-1,194.98	2,606.93	0.00	0.00	0.00
8,500.00	90.00	332.72	5,998.00	2,405.79	-1,240.82	2,706.93	0.00	0.00	0.00
8,600.00	90.00	332.72	5,998.00	2,494.67	-1,286.66	2,806.93	0.00	0.00	0.00
8,700.00	90.00	332.72	5,998.00	2,583.54	-1,332.50	2,906.93	0.00	0.00	0.00
8,800.00	90.00	332.72	5,998.00	2,672.42	-1,378.34	3,006.93	0.00	0.00	0.00
8,900.00	90.00	332.72	5,998.00	2,761.29	-1,424.18	3,106.93	0.00	0.00	0.00
9,000.00	90.00	332.72	5,998.00	2,850.17	-1,470.02	3,206.93	0.00	0.00	0.00
9,100.00	90.00	332.72	5,998.00	2,939.04	-1,515.86	3,306.93	0.00	0.00	0.00
9,200.00	90.00	332.72	5,998.00	3,027.92	-1,561.69	3,406.93	0.00	0.00	0.00
9,300.00	90.00	332.72	5,998.00	3,116.79	-1,607.53	3,506.93	0.00	0.00	0.00
9,400.00	90.00	332.72	5,998.00	3,205.67	-1,653.37	3,606.93	0.00	0.00	0.00
9,500.00	90.00	332.72	5,998.00	3,294.54	-1,699.21	3,706.93	0.00	0.00	0.00
9,600.00	90.00	332.72	5,998.00	3,383.42	-1,745.05	3,806.93	0.00	0.00	0.00
9,700.00	90.00	332.72	5,998.00	3,472.29	-1,790.89	3,906.93	0.00	0.00	0.00
9,800.00	90.00	332.72	5,998.00	3,561.17	-1,836.73	4,006.93	0.00	0.00	0.00
9,900.00	90.00	332.72	5,998.00	3,650.04	-1,882.57	4,106.93	0.00	0.00	0.00
10,000.00	90.00	332.72	5,998.00	3,738.92	-1,928.40	4,206.93	0.00	0.00	0.00
10,100.00	90.00	332.72	5,998.00	3,827.79	-1,974.24	4,306.93	0.00	0.00	0.00

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Igo Creek 21-27H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4838.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4838.00ft (TBD)
Site:	Igo Creek 21-27H	North Reference:	True
Well:	Igo Creek 21-27H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	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	332.72	5,998.00	3,916.67	-2,020.08	4,406.93	0.00	0.00	0.00
10,300.00	90.00	332.72	5,998.00	4,005.55	-2,065.92	4,506.93	0.00	0.00	0.00
10,400.00	90.00	332.72	5,998.00	4,094.42	-2,111.76	4,606.93	0.00	0.00	0.00
10,500.00	90.00	332.72	5,998.00	4,183.30	-2,157.60	4,706.93	0.00	0.00	0.00
10,565.13	90.00	332.72	5,998.00	4,241.18	-2,187.45	4,772.06	0.00	0.00	0.00
4 1/2" - Igo Creek 21-27H (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 21-27H (BH	0.00	0.00	5,998.00	4,241.18	-2,187.45	511,487.36	2,425,864.99	40° 43' 38.348 N	103° 57' 48.470 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	
6,270.54	5,998.00	7"	7	8-3/4	
10,565.13	5,998.00	4 1/2"	4-1/2	6	

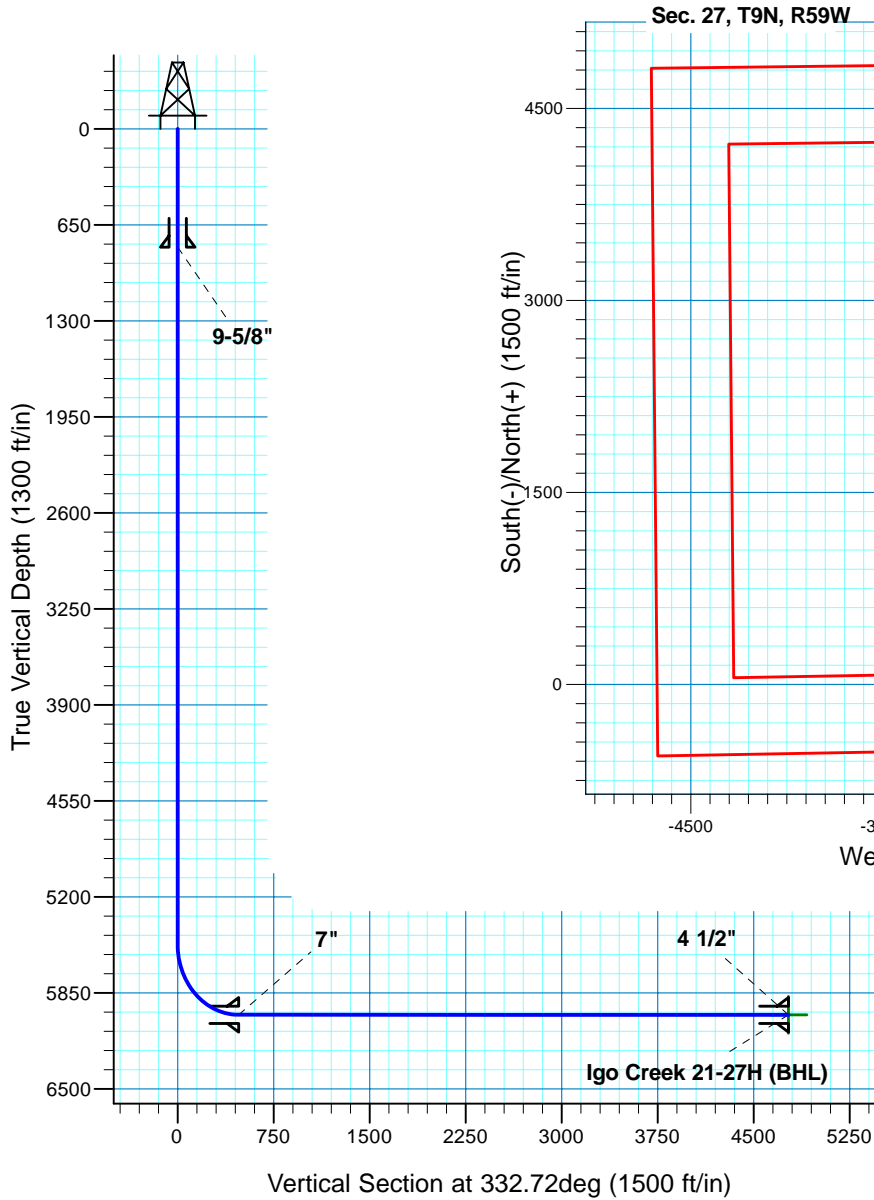
Igo Creek 21-27H

Section 27 T9N R59W

Weld County, CO

Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501
Ground Elevation: 4816.00 RIG @ 4838.00ft (TBD)
Northing Easting Latitude Longitude
507284.93 2428125.98 40° 42' 56.441 N 103° 57' 20.059 W



T M
Azimuths to True North
Magnetic North: 8.45°
Magnetic Field
Strength: 53435.9nT
Dip Angle: 67.46°
Date: 2/10/2011
Model: IGRF200510

Project: DJ - Hereford Ranch
Site: Igo Creek 21-27H
Well: Igo Creek 21-27H
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	5520.53	0.00	0.00	5520.53	0.00	0.00	0.00	0.00	0.00	
3	6270.54	90.00	332.72	5998.00	424.35	-218.86	12.00	332.72	477.47	
4	10565.13	90.00	332.72	5998.00	4241.18	-2187.45	0.00	0.00	4772.06	Igo Creek 21-27H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Igo Creek 21-27H (BHL)	5998.00	4241.18	-2187.45	511487.36	2425864.99	40° 43' 38.348 N	103° 57' 48.470 W	Point