

Denver Division- Colorado

DJ - Hereford Ranch

Gravel Draw 09-09H

Gravel Draw 09-09H

Original Wellbore

Plan: APD Directional Plan

Standard Planning Report

11 January, 2011

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Gravel Draw 09-09H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4955.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4955.00ft (TBD)
Site:	Gravel Draw 09-09H	North Reference:	True
Well:	Gravel Draw 09-09H	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	Gravel Draw 09-09H		
Site Position:		Northing:	494,016.96 ft
From:	Lat/Long	Easting:	2,355,694.61 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	40° 40' 56.759 N
		Longitude:	104° 13' 3.050 W
		Grid Convergence:	0.83 deg

Well	Gravel Draw 09-09H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	40° 40' 56.759 N
		Longitude:	104° 13' 3.050 W
		Ground Level:	4,933.00 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	1/11/2011	8.60	67.39	53,400

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	153.69

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	
6,067.53	0.00	0.00	6,067.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,817.54	90.00	153.69	6,545.00	-428.02	211.60	12.00	12.00	0.00	153.69	
11,070.97	90.00	153.69	6,545.00	-4,240.94	2,096.63	0.00	0.00	0.00	0.00	Gravel Draw 09-09H

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Well:	Gravel Draw 09-09H	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

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Well:	Gravel Draw 09-09H	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
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,067.53	0.00	0.00	6,067.53	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	3.90	153.69	6,099.97	-0.99	0.49	1.10	12.00	12.00	0.00
6,200.00	15.90	153.69	6,198.31	-16.37	8.09	18.26	12.00	12.00	0.00
6,300.00	27.90	153.69	6,290.92	-49.74	24.59	55.48	12.00	12.00	0.00
6,400.00	39.90	153.69	6,373.78	-99.64	49.26	111.15	12.00	12.00	0.00
6,500.00	51.90	153.69	6,443.25	-163.89	81.02	182.82	12.00	12.00	0.00
6,600.00	63.90	153.69	6,496.30	-239.69	118.50	267.38	12.00	12.00	0.00
6,700.00	75.90	153.69	6,530.61	-323.71	160.04	361.11	12.00	12.00	0.00
6,800.00	87.90	153.69	6,544.68	-412.30	203.83	459.93	12.00	12.00	0.00
6,817.54	90.00	153.69	6,545.00	-428.02	211.60	477.47	12.00	12.00	0.00
7"									
6,900.00	90.00	153.69	6,545.00	-501.94	248.15	559.93	0.00	0.00	0.00
7,000.00	90.00	153.69	6,545.00	-591.58	292.47	659.93	0.00	0.00	0.00
7,100.00	90.00	153.69	6,545.00	-681.23	336.78	759.93	0.00	0.00	0.00
7,200.00	90.00	153.69	6,545.00	-770.87	381.10	859.93	0.00	0.00	0.00
7,300.00	90.00	153.69	6,545.00	-860.51	425.42	959.93	0.00	0.00	0.00
7,400.00	90.00	153.69	6,545.00	-950.16	469.74	1,059.93	0.00	0.00	0.00
7,500.00	90.00	153.69	6,545.00	-1,039.80	514.06	1,159.93	0.00	0.00	0.00
7,600.00	90.00	153.69	6,545.00	-1,129.44	558.37	1,259.93	0.00	0.00	0.00
7,700.00	90.00	153.69	6,545.00	-1,219.09	602.69	1,359.93	0.00	0.00	0.00
7,800.00	90.00	153.69	6,545.00	-1,308.73	647.01	1,459.93	0.00	0.00	0.00
7,900.00	90.00	153.69	6,545.00	-1,398.37	691.33	1,559.93	0.00	0.00	0.00
8,000.00	90.00	153.69	6,545.00	-1,488.02	735.65	1,659.93	0.00	0.00	0.00
8,100.00	90.00	153.69	6,545.00	-1,577.66	779.96	1,759.93	0.00	0.00	0.00
8,200.00	90.00	153.69	6,545.00	-1,667.30	824.28	1,859.93	0.00	0.00	0.00
8,300.00	90.00	153.69	6,545.00	-1,756.95	868.60	1,959.93	0.00	0.00	0.00
8,400.00	90.00	153.69	6,545.00	-1,846.59	912.92	2,059.93	0.00	0.00	0.00
8,500.00	90.00	153.69	6,545.00	-1,936.23	957.23	2,159.93	0.00	0.00	0.00
8,600.00	90.00	153.69	6,545.00	-2,025.88	1,001.55	2,259.93	0.00	0.00	0.00
8,700.00	90.00	153.69	6,545.00	-2,115.52	1,045.87	2,359.93	0.00	0.00	0.00
8,800.00	90.00	153.69	6,545.00	-2,205.16	1,090.19	2,459.93	0.00	0.00	0.00
8,900.00	90.00	153.69	6,545.00	-2,294.81	1,134.51	2,559.93	0.00	0.00	0.00
9,000.00	90.00	153.69	6,545.00	-2,384.45	1,178.82	2,659.93	0.00	0.00	0.00
9,100.00	90.00	153.69	6,545.00	-2,474.09	1,223.14	2,759.93	0.00	0.00	0.00
9,200.00	90.00	153.69	6,545.00	-2,563.74	1,267.46	2,859.93	0.00	0.00	0.00
9,300.00	90.00	153.69	6,545.00	-2,653.38	1,311.78	2,959.93	0.00	0.00	0.00
9,400.00	90.00	153.69	6,545.00	-2,743.02	1,356.10	3,059.93	0.00	0.00	0.00
9,500.00	90.00	153.69	6,545.00	-2,832.67	1,400.41	3,159.93	0.00	0.00	0.00
9,600.00	90.00	153.69	6,545.00	-2,922.31	1,444.73	3,259.93	0.00	0.00	0.00
9,700.00	90.00	153.69	6,545.00	-3,011.95	1,489.05	3,359.93	0.00	0.00	0.00
9,800.00	90.00	153.69	6,545.00	-3,101.60	1,533.37	3,459.93	0.00	0.00	0.00
9,900.00	90.00	153.69	6,545.00	-3,191.24	1,577.68	3,559.93	0.00	0.00	0.00
10,000.00	90.00	153.69	6,545.00	-3,280.88	1,622.00	3,659.93	0.00	0.00	0.00
10,100.00	90.00	153.69	6,545.00	-3,370.53	1,666.32	3,759.93	0.00	0.00	0.00

EOG Resources Inc

Planning Report

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Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4955.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4955.00ft (TBD)
Site:	Gravel Draw 09-09H	North Reference:	True
Well:	Gravel Draw 09-09H	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	153.69	6,545.00	-3,460.17	1,710.64	3,859.93	0.00	0.00	0.00
10,300.00	90.00	153.69	6,545.00	-3,549.81	1,754.96	3,959.93	0.00	0.00	0.00
10,400.00	90.00	153.69	6,545.00	-3,639.46	1,799.27	4,059.93	0.00	0.00	0.00
10,500.00	90.00	153.69	6,545.00	-3,729.10	1,843.59	4,159.93	0.00	0.00	0.00
10,600.00	90.00	153.69	6,545.00	-3,818.74	1,887.91	4,259.93	0.00	0.00	0.00
10,700.00	90.00	153.69	6,545.00	-3,908.39	1,932.23	4,359.93	0.00	0.00	0.00
10,800.00	90.00	153.69	6,545.00	-3,998.03	1,976.55	4,459.93	0.00	0.00	0.00
10,900.00	90.00	153.69	6,545.00	-4,087.67	2,020.86	4,559.93	0.00	0.00	0.00
11,000.00	90.00	153.69	6,545.00	-4,177.32	2,065.18	4,659.93	0.00	0.00	0.00
11,070.97	90.00	153.69	6,545.00	-4,240.94	2,096.63	4,730.90	0.00	0.00	0.00
Gravel Draw 09-09H (BHL)									

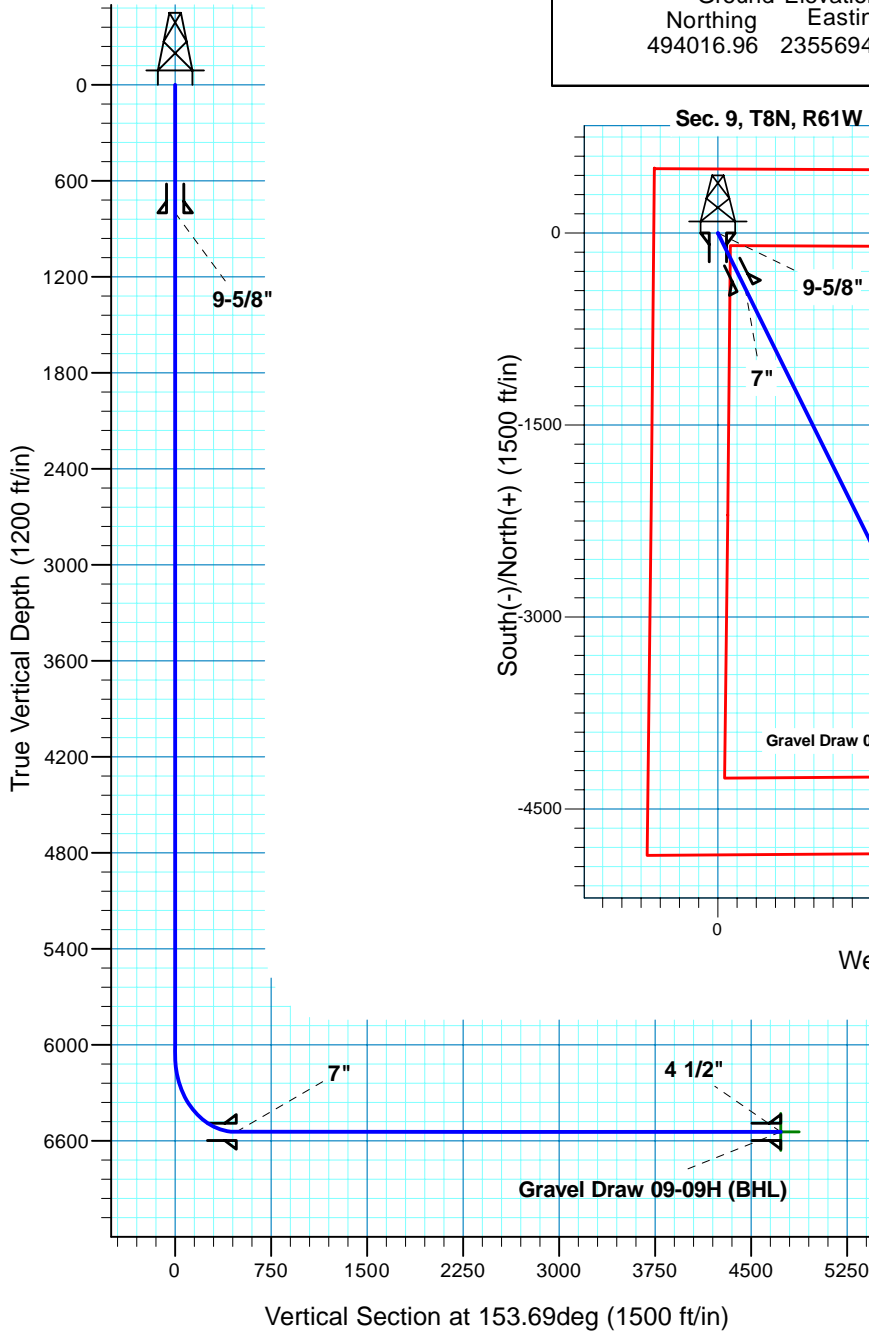
Targets									
Target Name	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Gravel Draw 09-09H (0.00	0.00	6,545.00	-4,240.94	2,096.63	489,806.79	2,357,852.35	40° 40' 14.851 N	104° 12' 35.842 W
- plan 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	
6,817.54	6,545.00	7"	7	8-3/4	
11,070.97	6,545.00	4 1/2"	4-1/2	6-1/4	

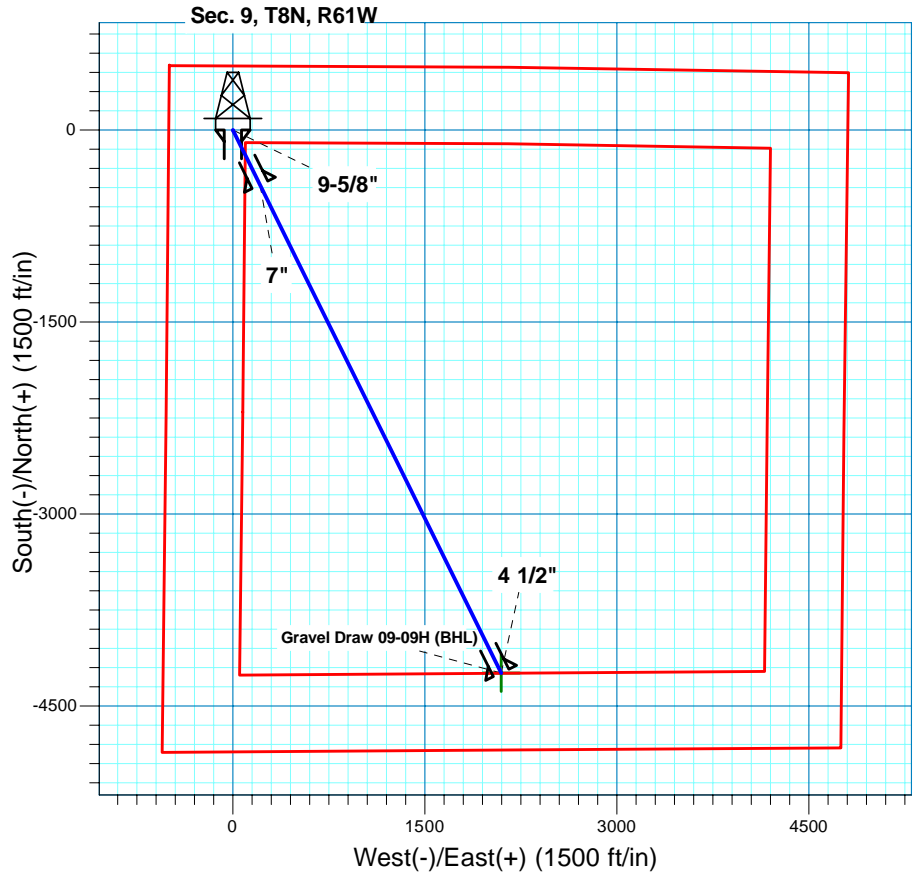
Gravel Draw 09-09H

Section 9 T8N R61W

Weld County, CO



Surface Location					
NAD 1927 (NADCON CONUS) Colorado North 501					
Ground Elevation: 4933.00			RIG @ 4955.00ft (TBD)		
Northing	Easting	Latitude	Longitude		
494016.96	2355694.61	40° 40' 56.759 N	104° 13' 3.050 W		



T M

Azimuths to True North
Magnetic North: 8.60°

Magnetic Field
Strength: 53400.2nT
Dip Angle: 67.39°
Date: 1/11/2011
Model: IGRF200510

Project: DJ - Hereford Ranch
Site: Gravel Draw 09-09H
Well: Gravel Draw 09-09H
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	6067.53	0.00	0.00	6067.53	0.00	0.00	0.00	0.00	0.00	
3	6817.54	90.00	153.69	6545.00	-428.02	211.60	12.00	153.69	477.47	
4	11070.97	90.00	153.69	6545.00	-4240.94	2096.63	0.00	0.00	4730.90	Gravel Draw 09-09H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Gravel Draw 09-09H (BHL)	6545.00	-4240.94	2096.63	489806.79	2357852.35	40° 40' 14.851 N	104° 12' 35.842 W	Point