

Denver Division- Colorado

DJ - Hereford Ranch

Sandborn 05-18H

Sandborn 05-18H

Original Wellbore

Plan: APD Directional Plan

Standard Planning Report

08 March, 2011

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Sandborn 05-18H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4621.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4621.00ft (TBD)
Site:	Sandborn 05-18H	North Reference:	True
Well:	Sandborn 05-18H	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	Sandborn 05-18H		
Site Position:		Northing:	393,773.35 ft
From:	Lat/Long	Easting:	2,345,425.99 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	40° 24' 27.709 N
		Longitude:	104° 15' 34.520 W
		Grid Convergence:	0.80 deg

Well	Sandborn 05-18H		
Well Position	+N/-S	0.00 ft	Northing: 393,773.35 ft
	+E/-W	0.00 ft	Easting: 2,345,425.99 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	40° 24' 27.709 N
		Longitude:	104° 15' 34.520 W
		Ground Level:	4,599.00 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	3/8/2011	8.59	67.16	53,240

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	154.24

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	
5,644.53	0.00	0.00	5,644.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,394.54	90.00	154.24	6,122.00	-430.01	207.53	12.00	12.00	0.00	154.24	
10,885.43	90.00	154.24	6,122.00	-4,474.50	2,159.50	0.00	0.00	0.00	0.00	Sandborn 05-18H (I

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Well:	Sandborn 05-18H	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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Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4621.00ft (TBD)
Site:	Sandborn 05-18H	North Reference:	True
Well:	Sandborn 05-18H	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
5,644.53	0.00	0.00	5,644.53	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	6.66	154.24	5,699.88	-2.90	1.40	3.22	12.00	12.00	0.00
5,800.00	18.66	154.24	5,797.27	-22.59	10.90	25.09	12.00	12.00	0.00
5,900.00	30.66	154.24	5,887.98	-60.10	29.00	66.73	12.00	12.00	0.00
6,000.00	42.66	154.24	5,968.06	-113.76	54.90	126.32	12.00	12.00	0.00
6,100.00	54.66	154.24	6,034.00	-181.25	87.48	201.26	12.00	12.00	0.00
6,200.00	66.66	154.24	6,082.91	-259.61	125.30	288.27	12.00	12.00	0.00
6,300.00	78.66	154.24	6,112.67	-345.42	166.71	383.55	12.00	12.00	0.00
6,394.54	90.00	154.24	6,122.00	-430.01	207.53	477.47	12.00	12.00	0.00
7"									
6,400.00	90.00	154.24	6,122.00	-434.93	209.91	482.93	0.00	0.00	0.00
6,500.00	90.00	154.24	6,122.00	-524.99	253.37	582.93	0.00	0.00	0.00
6,600.00	90.00	154.24	6,122.00	-615.05	296.84	682.93	0.00	0.00	0.00
6,700.00	90.00	154.24	6,122.00	-705.11	340.30	782.93	0.00	0.00	0.00
6,800.00	90.00	154.24	6,122.00	-795.17	383.77	882.93	0.00	0.00	0.00
6,900.00	90.00	154.24	6,122.00	-885.23	427.23	982.93	0.00	0.00	0.00
7,000.00	90.00	154.24	6,122.00	-975.29	470.70	1,082.93	0.00	0.00	0.00
7,100.00	90.00	154.24	6,122.00	-1,065.35	514.16	1,182.93	0.00	0.00	0.00
7,200.00	90.00	154.24	6,122.00	-1,155.41	557.63	1,282.93	0.00	0.00	0.00
7,300.00	90.00	154.24	6,122.00	-1,245.47	601.09	1,382.93	0.00	0.00	0.00
7,400.00	90.00	154.24	6,122.00	-1,335.53	644.56	1,482.93	0.00	0.00	0.00
7,500.00	90.00	154.24	6,122.00	-1,425.59	688.02	1,582.93	0.00	0.00	0.00
7,600.00	90.00	154.24	6,122.00	-1,515.65	731.49	1,682.93	0.00	0.00	0.00
7,700.00	90.00	154.24	6,122.00	-1,605.71	774.95	1,782.93	0.00	0.00	0.00
7,800.00	90.00	154.24	6,122.00	-1,695.77	818.42	1,882.93	0.00	0.00	0.00
7,900.00	90.00	154.24	6,122.00	-1,785.83	861.88	1,982.93	0.00	0.00	0.00
8,000.00	90.00	154.24	6,122.00	-1,875.89	905.35	2,082.93	0.00	0.00	0.00
8,100.00	90.00	154.24	6,122.00	-1,965.95	948.81	2,182.93	0.00	0.00	0.00
8,200.00	90.00	154.24	6,122.00	-2,056.01	992.28	2,282.93	0.00	0.00	0.00
8,300.00	90.00	154.24	6,122.00	-2,146.07	1,035.74	2,382.93	0.00	0.00	0.00
8,400.00	90.00	154.24	6,122.00	-2,236.12	1,079.21	2,482.93	0.00	0.00	0.00
8,500.00	90.00	154.24	6,122.00	-2,326.18	1,122.67	2,582.93	0.00	0.00	0.00
8,600.00	90.00	154.24	6,122.00	-2,416.24	1,166.14	2,682.93	0.00	0.00	0.00
8,700.00	90.00	154.24	6,122.00	-2,506.30	1,209.60	2,782.93	0.00	0.00	0.00
8,800.00	90.00	154.24	6,122.00	-2,596.36	1,253.07	2,882.93	0.00	0.00	0.00
8,900.00	90.00	154.24	6,122.00	-2,686.42	1,296.53	2,982.93	0.00	0.00	0.00
9,000.00	90.00	154.24	6,122.00	-2,776.48	1,340.00	3,082.93	0.00	0.00	0.00
9,100.00	90.00	154.24	6,122.00	-2,866.54	1,383.46	3,182.93	0.00	0.00	0.00
9,200.00	90.00	154.24	6,122.00	-2,956.60	1,426.93	3,282.93	0.00	0.00	0.00
9,300.00	90.00	154.24	6,122.00	-3,046.66	1,470.39	3,382.93	0.00	0.00	0.00
9,400.00	90.00	154.24	6,122.00	-3,136.72	1,513.86	3,482.93	0.00	0.00	0.00
9,500.00	90.00	154.24	6,122.00	-3,226.78	1,557.32	3,582.93	0.00	0.00	0.00
9,600.00	90.00	154.24	6,122.00	-3,316.84	1,600.79	3,682.93	0.00	0.00	0.00
9,700.00	90.00	154.24	6,122.00	-3,406.90	1,644.25	3,782.93	0.00	0.00	0.00
9,800.00	90.00	154.24	6,122.00	-3,496.96	1,687.72	3,882.93	0.00	0.00	0.00
9,900.00	90.00	154.24	6,122.00	-3,587.02	1,731.18	3,982.93	0.00	0.00	0.00
10,000.00	90.00	154.24	6,122.00	-3,677.08	1,774.65	4,082.93	0.00	0.00	0.00
10,100.00	90.00	154.24	6,122.00	-3,767.14	1,818.11	4,182.93	0.00	0.00	0.00

EOG Resources Inc

Planning Report

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Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4621.00ft (TBD)
Site:	Sandborn 05-18H	North Reference:	True
Well:	Sandborn 05-18H	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	154.24	6,122.00	-3,857.20	1,861.58	4,282.93	0.00	0.00	0.00
10,300.00	90.00	154.24	6,122.00	-3,947.26	1,905.04	4,382.93	0.00	0.00	0.00
10,400.00	90.00	154.24	6,122.00	-4,037.32	1,948.51	4,482.93	0.00	0.00	0.00
10,500.00	90.00	154.24	6,122.00	-4,127.38	1,991.97	4,582.93	0.00	0.00	0.00
10,600.00	90.00	154.24	6,122.00	-4,217.44	2,035.44	4,682.93	0.00	0.00	0.00
10,700.00	90.00	154.24	6,122.00	-4,307.50	2,078.90	4,782.93	0.00	0.00	0.00
10,800.00	90.00	154.24	6,122.00	-4,397.56	2,122.37	4,882.93	0.00	0.00	0.00
10,885.43	90.00	154.24	6,122.00	-4,474.50	2,159.50	4,968.36	0.00	0.00	0.00
Sandborn 05-18H (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									
Sandborn 05-18H (BH-	0.00	0.00	6,122.00	-4,474.50	2,159.50	389,329.50	2,347,647.86	40° 23' 43.490 N	104° 15' 6.610 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	
6,394.54	6,122.00	7"	7	8-3/4	
10,885.43	6,122.00	4 1/2"	4-1/2	6	

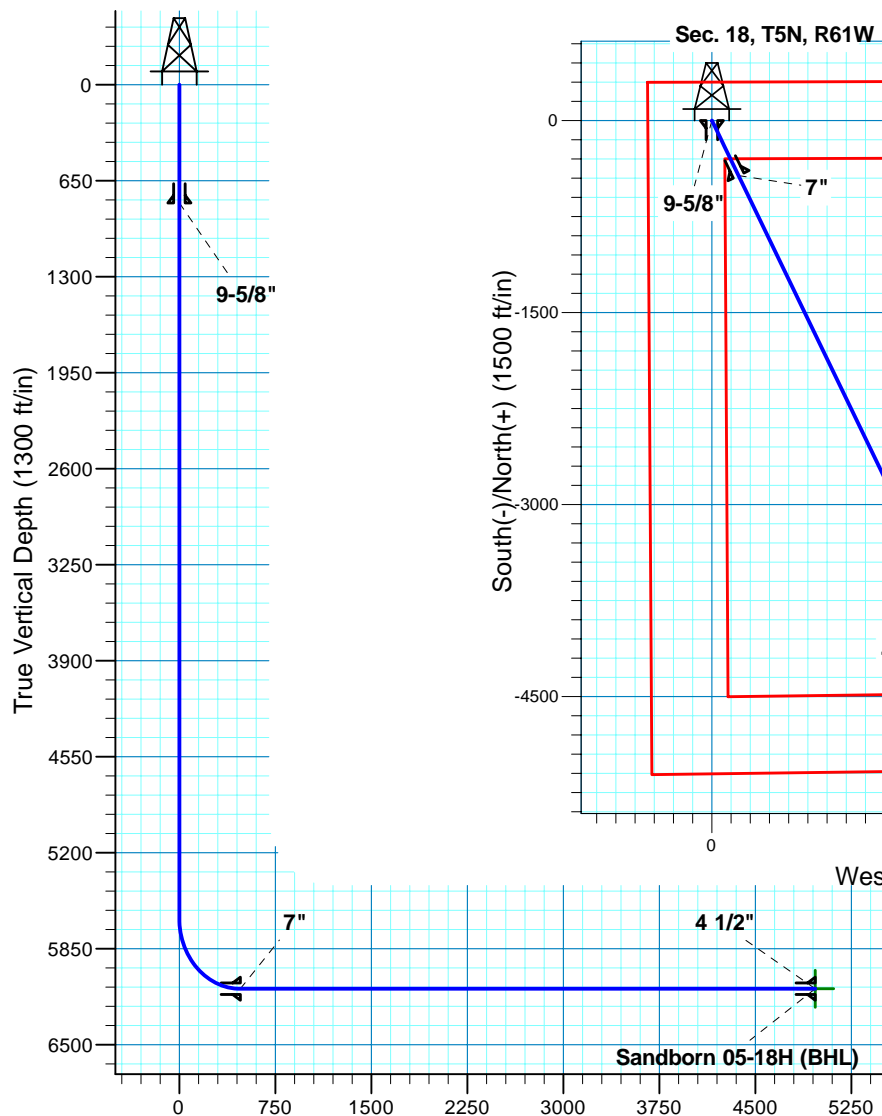
Sandborn 05-18H

Section 18 T5N R61W

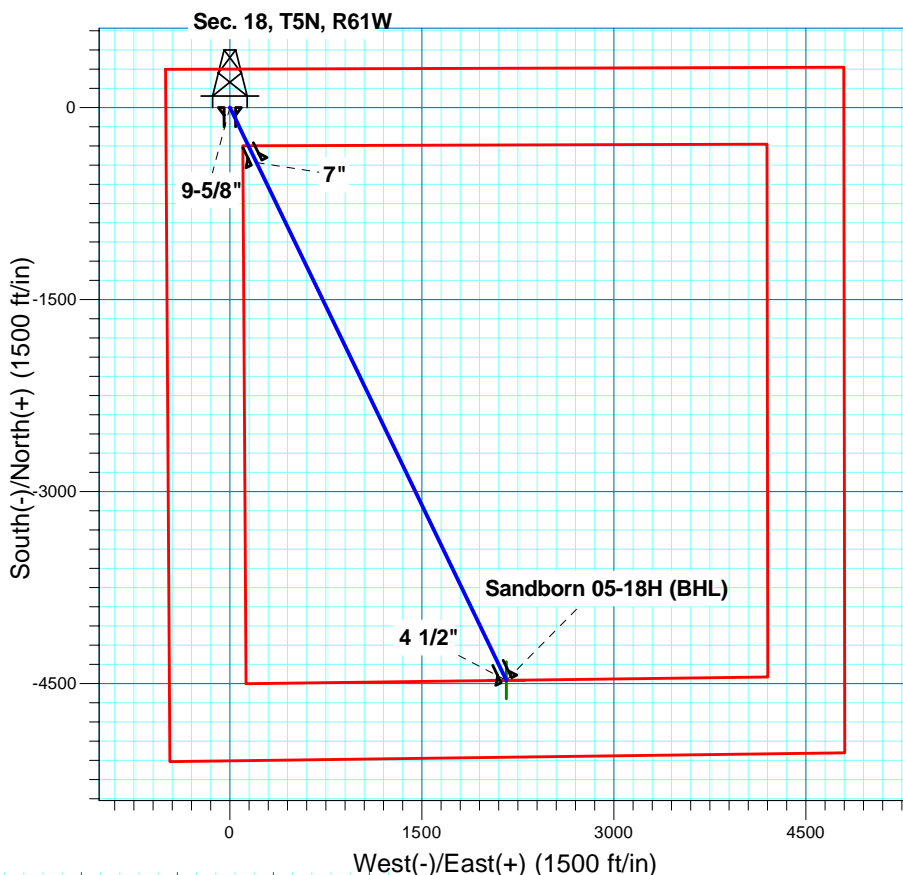
Weld County, CO

Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501
 Ground Elevation: 4599.00 RIG @ 4621.00ft (TBD)
 Northing Easting Latitude Longitude
 393773.35 2345425.99 40° 24' 27.709 N 104° 15' 34.520 W



Vertical Section at 154.24deg (1500 ft/in)



T M
 Azimuths to True North
 Magnetic North: 8.58°
 Magnetic Field
 Strength: 53239.8nT
 Dip Angle: 67.16°
 Date: 3/8/2011
 Model: IGRF200510

Project: DJ - Hereford Ranch
 Site: Sandborn 05-18H
 Well: Sandborn 05-18H
 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	5644.53	0.00	0.00	5644.53	0.00	0.00	0.00	0.00	0.00	
3	6394.54	90.00	154.24	6122.00	-430.01	207.53	12.00	154.24	477.47	
4	10885.43	90.00	154.24	6122.00	-4474.50	2159.50	0.00	0.00	4968.36	Sandborn 05-18H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Sandborn 05-18H (BHL)	6122.00	-4474.50	2159.50	389329.50	2347647.86	40° 23' 43.490 N	104° 15' 6.610 W	Point