

Denver Division- Colorado

DJ - Hereford Ranch

Igo Creek 16-22H

Igo Creek 16-22H

Original Wellbore

Plan: APD Directional Plan

Standard Planning Report

13 January, 2011

EOG Resources Inc

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Site Igo Creek 16-22H
Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4938.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4938.00ft (TBD)
Site:	Igo Creek 16-22H	North Reference:	True
Well:	Igo Creek 16-22H	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 16-22H				
Site Position:		Northing:	516,817.96 ft	Latitude:	40° 44' 31.402 N	
From:	Lat/Long	Easting:	2,423,594.74 ft	Longitude:	103° 58' 16.759 W	
Position Uncertainty:		0.00 ft	Slot Radius:	"	Grid Convergence:	0.99 deg

Well	Igo Creek 16-22H					
Well Position	+N-S	0.00 ft	Northing:	516,817.96 ft	Latitude:	40° 44' 31.402 N
	+E-W	0.00 ft	Easting:	2,423,594.74 ft	Longitude:	103° 58' 16.759 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,916.00 ft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	1/13/2011	8.47	67.48	53,455

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	152.64

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	
5,623.53	0.00	0.00	5,623.53	0.00	0.00	0.00	0.00	0.00	0.00	
6,373.54	90.00	152.64	6,101.00	-424.04	219.46	12.00	12.00	0.00	152.64	
10,591.00	90.00	152.64	6,101.00	-4,169.60	2,157.97	0.00	0.00	0.00	0.00	Igo Creek 16-22H (I

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Well:	Igo Creek 16-22H	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:	Igo Creek 16-22H	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
5,623.53	0.00	0.00	5,623.53	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	9.18	152.64	5,699.67	-5.43	2.81	6.11	12.00	12.00	0.00
5,800.00	21.18	152.64	5,796.01	-28.63	14.82	32.24	12.00	12.00	0.00
5,900.00	33.18	152.64	5,884.81	-69.12	35.77	77.83	12.00	12.00	0.00
6,000.00	45.18	152.64	5,962.19	-125.12	64.76	140.88	12.00	12.00	0.00
6,100.00	57.18	152.64	6,024.77	-194.18	100.50	218.65	12.00	12.00	0.00
6,200.00	69.18	152.64	6,069.81	-273.29	141.44	307.73	12.00	12.00	0.00
6,300.00	81.18	152.64	6,095.35	-358.99	185.79	404.22	12.00	12.00	0.00
6,373.54	90.00	152.64	6,101.00	-424.04	219.46	477.47	12.00	12.00	0.00
7"									
6,400.00	90.00	152.64	6,101.00	-447.54	231.63	503.93	0.00	0.00	0.00
6,500.00	90.00	152.64	6,101.00	-536.35	277.59	603.93	0.00	0.00	0.00
6,600.00	90.00	152.64	6,101.00	-625.16	323.55	703.93	0.00	0.00	0.00
6,700.00	90.00	152.64	6,101.00	-713.98	369.52	803.93	0.00	0.00	0.00
6,800.00	90.00	152.64	6,101.00	-802.79	415.48	903.93	0.00	0.00	0.00
6,900.00	90.00	152.64	6,101.00	-891.60	461.44	1,003.93	0.00	0.00	0.00
7,000.00	90.00	152.64	6,101.00	-980.41	507.41	1,103.93	0.00	0.00	0.00
7,100.00	90.00	152.64	6,101.00	-1,069.22	553.37	1,203.93	0.00	0.00	0.00
7,200.00	90.00	152.64	6,101.00	-1,158.03	599.34	1,303.93	0.00	0.00	0.00
7,300.00	90.00	152.64	6,101.00	-1,246.84	645.30	1,403.93	0.00	0.00	0.00
7,400.00	90.00	152.64	6,101.00	-1,335.65	691.26	1,503.93	0.00	0.00	0.00
7,500.00	90.00	152.64	6,101.00	-1,424.46	737.23	1,603.93	0.00	0.00	0.00
7,600.00	90.00	152.64	6,101.00	-1,513.27	783.19	1,703.93	0.00	0.00	0.00
7,700.00	90.00	152.64	6,101.00	-1,602.08	829.15	1,803.93	0.00	0.00	0.00
7,800.00	90.00	152.64	6,101.00	-1,690.89	875.12	1,903.93	0.00	0.00	0.00
7,900.00	90.00	152.64	6,101.00	-1,779.70	921.08	2,003.93	0.00	0.00	0.00
8,000.00	90.00	152.64	6,101.00	-1,868.51	967.05	2,103.93	0.00	0.00	0.00
8,100.00	90.00	152.64	6,101.00	-1,957.32	1,013.01	2,203.93	0.00	0.00	0.00
8,200.00	90.00	152.64	6,101.00	-2,046.14	1,058.97	2,303.93	0.00	0.00	0.00
8,300.00	90.00	152.64	6,101.00	-2,134.95	1,104.94	2,403.93	0.00	0.00	0.00
8,400.00	90.00	152.64	6,101.00	-2,223.76	1,150.90	2,503.93	0.00	0.00	0.00
8,500.00	90.00	152.64	6,101.00	-2,312.57	1,196.86	2,603.93	0.00	0.00	0.00
8,600.00	90.00	152.64	6,101.00	-2,401.38	1,242.83	2,703.93	0.00	0.00	0.00
8,700.00	90.00	152.64	6,101.00	-2,490.19	1,288.79	2,803.93	0.00	0.00	0.00
8,800.00	90.00	152.64	6,101.00	-2,579.00	1,334.76	2,903.93	0.00	0.00	0.00
8,900.00	90.00	152.64	6,101.00	-2,667.81	1,380.72	3,003.93	0.00	0.00	0.00
9,000.00	90.00	152.64	6,101.00	-2,756.62	1,426.68	3,103.93	0.00	0.00	0.00
9,100.00	90.00	152.64	6,101.00	-2,845.43	1,472.65	3,203.93	0.00	0.00	0.00
9,200.00	90.00	152.64	6,101.00	-2,934.24	1,518.61	3,303.93	0.00	0.00	0.00
9,300.00	90.00	152.64	6,101.00	-3,023.05	1,564.57	3,403.93	0.00	0.00	0.00
9,400.00	90.00	152.64	6,101.00	-3,111.86	1,610.54	3,503.93	0.00	0.00	0.00
9,500.00	90.00	152.64	6,101.00	-3,200.67	1,656.50	3,603.93	0.00	0.00	0.00
9,600.00	90.00	152.64	6,101.00	-3,289.48	1,702.47	3,703.93	0.00	0.00	0.00
9,700.00	90.00	152.64	6,101.00	-3,378.30	1,748.43	3,803.93	0.00	0.00	0.00
9,800.00	90.00	152.64	6,101.00	-3,467.11	1,794.39	3,903.93	0.00	0.00	0.00
9,900.00	90.00	152.64	6,101.00	-3,555.92	1,840.36	4,003.93	0.00	0.00	0.00
10,000.00	90.00	152.64	6,101.00	-3,644.73	1,886.32	4,103.93	0.00	0.00	0.00
10,100.00	90.00	152.64	6,101.00	-3,733.54	1,932.28	4,203.93	0.00	0.00	0.00

EOG Resources Inc

Planning Report

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Company:	Denver Division- Colorado	TVD Reference:	RIG @ 4938.00ft (TBD)
Project:	DJ - Hereford Ranch	MD Reference:	RIG @ 4938.00ft (TBD)
Site:	Igo Creek 16-22H	North Reference:	True
Well:	Igo Creek 16-22H	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	152.64	6,101.00	-3,822.35	1,978.25	4,303.93	0.00	0.00	0.00
10,300.00	90.00	152.64	6,101.00	-3,911.16	2,024.21	4,403.93	0.00	0.00	0.00
10,400.00	90.00	152.64	6,101.00	-3,999.97	2,070.18	4,503.93	0.00	0.00	0.00
10,500.00	90.00	152.64	6,101.00	-4,088.78	2,116.14	4,603.93	0.00	0.00	0.00
10,591.00	90.00	152.64	6,101.00	-4,169.60	2,157.97	4,694.93	0.00	0.00	0.00
4 1/2" - Igo Creek 16-22H (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 16-22H (BH- - plan hits target center - Point		0.00	0.00	6,101.00	-4,169.60	2,157.97	512,686.19	2,425,824.26	40° 43' 50.200 N 103° 57' 48.730 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	
6,373.54	6,101.00	7"	7	8-3/4	
10,591.00	6,101.00	4 1/2"	4-1/2	6-1/4	

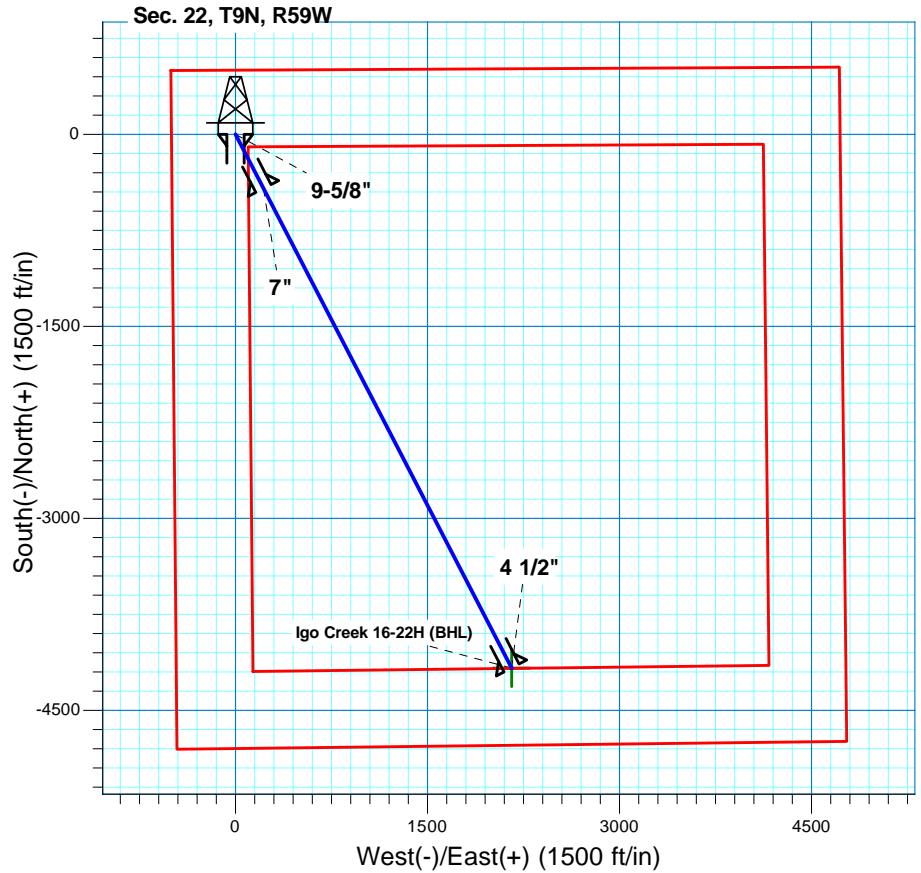
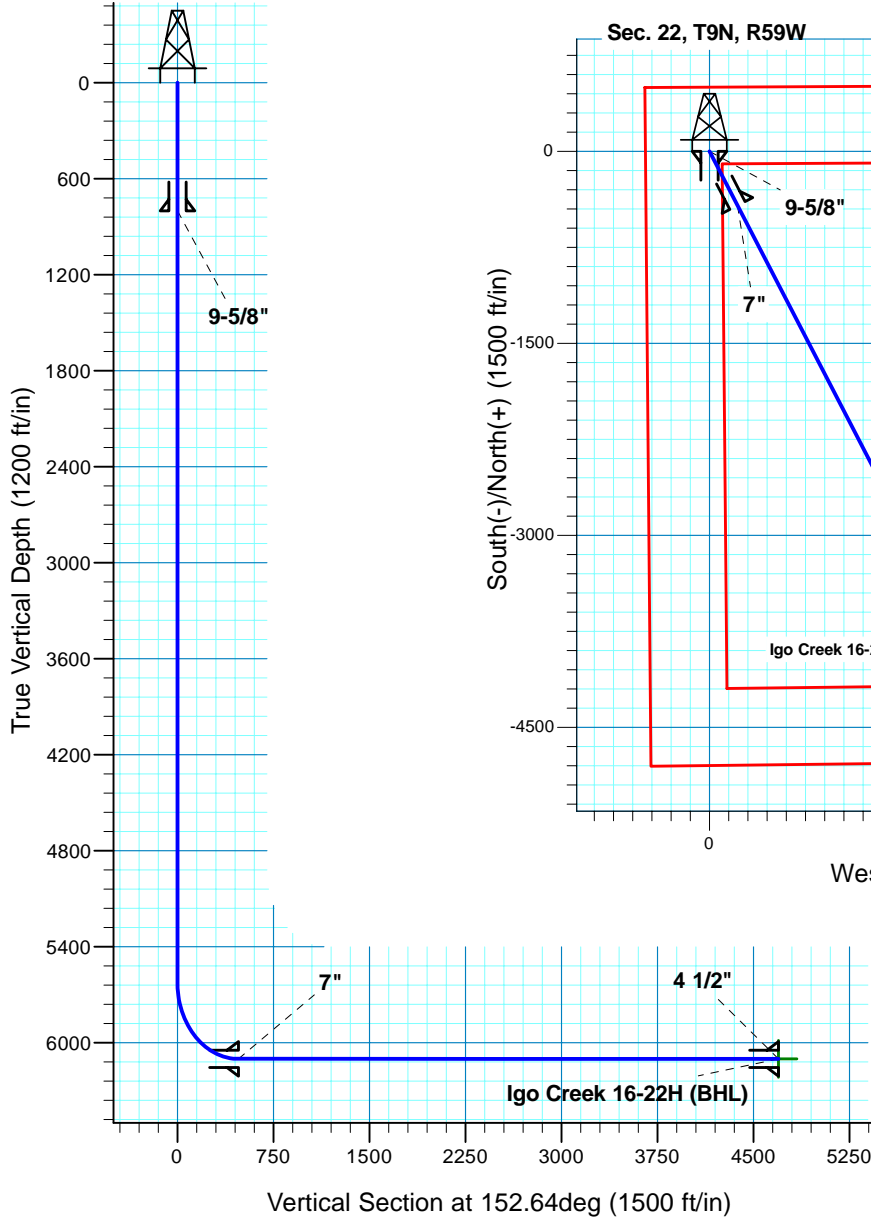
Igo Creek 16-22H

Section 22 T9N R59W

Weld County, CO

Surface Location

NAD 1927 (NADCON CONUS) Colorado North 501
 Ground Elevation: 4916.00 RIG @ 4938.00ft (TBD)
 Northing Easting Latitude Longitude
 516817.96 2423594.74 40° 44' 31.402 N 103° 58' 16.759 W



T M
 Azimuths to True North
 Magnetic North: 8.47°
 Magnetic Field
 Strength: 53455.1nT
 Dip Angle: 67.48°
 Date: 1/13/2011
 Model: IGRF200510

Project: DJ - Hereford Ranch
 Site: Igo Creek 16-22H
 Well: Igo Creek 16-22H
 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	5623.53	0.00	0.00	5623.53	0.00	0.00	0.00	0.00	0.00	
3	6373.54	90.00	152.64	6101.00	-424.04	219.46	12.00	152.64	477.47	
4	10591.00	90.00	152.64	6101.00	-4169.60	2157.97	0.00	0.00	4694.93	Igo Creek 16-22H (BHL)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Igo Creek 16-22H (BHL)	6101.00	-4169.60	2157.97	512686.19	2425824.26	40° 43' 50.200 N	103° 57' 48.730 W	Point