

Synergy Resources

Well Name: **Roberts F-12NHZ**

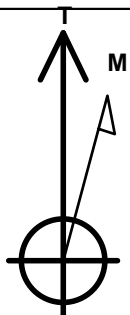
Surface Location: Roberts 10 Pad Sec.12-T7N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 5139.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1458327.17	3185297.90	40.589593	-104.832810	

Original Well Elev WELL @ 5152.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2357'FNL & 277'FEL	1.0	0.0	0.0	Point
BHL 1258'FNL & 460'FWL	7219.0	1058.1	-4520.3	Point



Azimuths to True North
Magnetic North: 8.47°

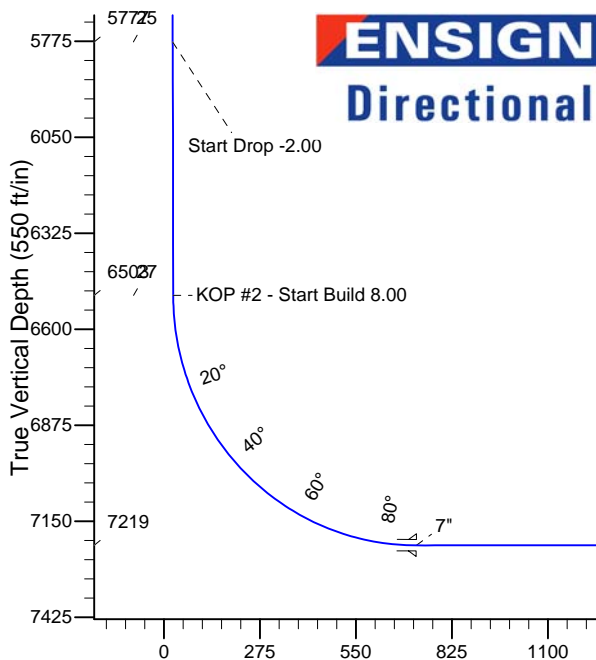
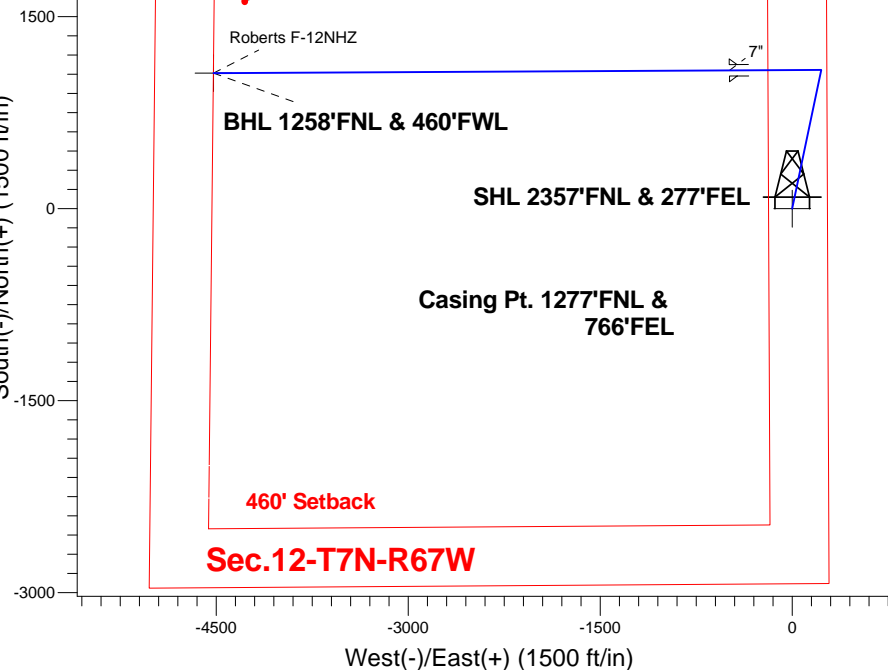
Magnetic Field
Strength: 52871.5nT
Dip Angle: 67.08°
Date: 10/7/2014
Model: IGRF2010

Roberts 10 Pad Sec.12-T7N-R67W
Roberts F-12NHZ
Plan #1 (10-7-14)
15:22, October 09 2014

ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 2.00
5776.9	5888.7	Start Drop -2.00
6502.8	6619.6	KOP #2 - Start Build 8.00
7219.0	11775.2	TD at 11775.2

South(-)/North(+) (1500 ft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1428.1	12.56	11.80	1423.1	67.1	14.0	2.00	11.80	1.6	
4	5888.7	12.56	11.80	5776.9	1016.8	212.4	0.00	0.00	24.9	
5	6516.8	0.00	0.00	6400.0	1083.9	226.4	2.00	180.00	26.6	
6	6619.6	0.00	0.00	6502.8	1083.9	226.4	0.00	0.00	26.6	
7	7744.6	90.00	269.69	7219.0	1080.0	-489.8	8.00	269.69	723.0	
8	11775.2	90.00	269.69	7219.0	1058.1	-4520.3	0.00	0.00	4642.5	BHL 1258'FNL & 460'FWL

BHL 1258'FNL & 460'FWL

TD at 11775.2

Vertical Section at 283.17° (550 ft/in)



Synergy Resources

SEC.12-T7N-R67W

Roberts 10 Pad Sec.12-T7N-R67W

Roberts F-12NHZ

Wellbore #1

Plan: Plan #1 (10-7-14)

Standard Planning Report

09 October, 2014

Database:	Landmark	Local Co-ordinate Reference:	Well Roberts F-12NHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 5152.0ft (Original Well Elev)
Project:	SEC.12-T7N-R67W	MD Reference:	WELL @ 5152.0ft (Original Well Elev)
Site:	Roberts 10 Pad Sec.12-T7N-R67W	North Reference:	True
Well:	Roberts F-12NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-7-14)		

Project	SEC.12-T7N-R67W, Weld, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Roberts 10 Pad Sec.12-T7N-R67W											
Site Position:						Northing:			1,458,387.29 ft			Latitude:			40.589758		
From:			Lat/Long			Easting:			3,185,297.44 ft			Longitude:			-104.832810		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.43 °		

Well	Roberts F-12NHZ					
Well Position	+N/-S	-60.1 ft	Northing:	1,458,327.17 ft	Latitude:	40.589593
	+E/-W	0.0 ft	Easting:	3,185,297.90 ft	Longitude:	-104.832810
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,139.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/7/2014	8.47	67.08	52,872

Design	Plan #1 (10-7-14)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	283.17

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,428.1	12.56	11.80	1,423.1	67.1	14.0	2.00	2.00	0.00	11.80	
5,888.7	12.56	11.80	5,776.9	1,016.8	212.4	0.00	0.00	0.00	0.00	
6,516.8	0.00	0.00	6,400.0	1,083.9	226.4	2.00	-2.00	0.00	180.00	
6,619.6	0.00	0.00	6,502.8	1,083.9	226.4	0.00	0.00	0.00	0.00	
7,744.6	90.00	269.69	7,219.0	1,080.0	-489.8	8.00	8.00	0.00	269.69	
11,775.2	90.00	269.69	7,219.0	1,058.1	-4,520.3	0.00	0.00	0.00	0.00	BHL 1258'FNL & 46

Database:	Landmark	Local Co-ordinate Reference:	Well Roberts F-12NHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 5152.0ft (Original Well Elev)
Project:	SEC.12-T7N-R67W	MD Reference:	WELL @ 5152.0ft (Original Well Elev)
Site:	Roberts 10 Pad Sec.12-T7N-R67W	North Reference:	True
Well:	Roberts F-12NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-7-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
900.0	2.00	11.80	900.0	1.7	0.4	0.0	2.00	2.00	0.00
1,000.0	4.00	11.80	999.8	6.8	1.4	0.2	2.00	2.00	0.00
1,100.0	6.00	11.80	1,099.5	15.4	3.2	0.4	2.00	2.00	0.00
1,200.0	8.00	11.80	1,198.7	27.3	5.7	0.7	2.00	2.00	0.00
1,300.0	10.00	11.80	1,297.5	42.6	8.9	1.0	2.00	2.00	0.00
1,400.0	12.00	11.80	1,395.6	61.3	12.8	1.5	2.00	2.00	0.00
1,428.1	12.56	11.80	1,423.1	67.1	14.0	1.6	2.00	2.00	0.00
1,500.0	12.56	11.80	1,493.3	82.4	17.2	2.0	0.00	0.00	0.00
1,600.0	12.56	11.80	1,590.9	103.7	21.7	2.5	0.00	0.00	0.00
1,700.0	12.56	11.80	1,688.5	125.0	26.1	3.1	0.00	0.00	0.00
1,800.0	12.56	11.80	1,786.1	146.3	30.6	3.6	0.00	0.00	0.00
1,900.0	12.56	11.80	1,883.7	167.6	35.0	4.1	0.00	0.00	0.00
2,000.0	12.56	11.80	1,981.3	188.9	39.5	4.6	0.00	0.00	0.00
2,100.0	12.56	11.80	2,078.9	210.2	43.9	5.2	0.00	0.00	0.00
2,200.0	12.56	11.80	2,176.5	231.5	48.3	5.7	0.00	0.00	0.00
2,300.0	12.56	11.80	2,274.1	252.8	52.8	6.2	0.00	0.00	0.00
2,400.0	12.56	11.80	2,371.7	274.0	57.2	6.7	0.00	0.00	0.00
2,500.0	12.56	11.80	2,469.3	295.3	61.7	7.2	0.00	0.00	0.00
2,600.0	12.56	11.80	2,566.9	316.6	66.1	7.8	0.00	0.00	0.00
2,700.0	12.56	11.80	2,664.5	337.9	70.6	8.3	0.00	0.00	0.00
2,800.0	12.56	11.80	2,762.1	359.2	75.0	8.8	0.00	0.00	0.00
2,900.0	12.56	11.80	2,859.7	380.5	79.5	9.3	0.00	0.00	0.00
3,000.0	12.56	11.80	2,957.4	401.8	83.9	9.9	0.00	0.00	0.00
3,100.0	12.56	11.80	3,055.0	423.1	88.4	10.4	0.00	0.00	0.00
3,200.0	12.56	11.80	3,152.6	444.4	92.8	10.9	0.00	0.00	0.00
3,300.0	12.56	11.80	3,250.2	465.6	97.3	11.4	0.00	0.00	0.00
3,400.0	12.56	11.80	3,347.8	486.9	101.7	11.9	0.00	0.00	0.00
3,500.0	12.56	11.80	3,445.4	508.2	106.2	12.5	0.00	0.00	0.00
3,600.0	12.56	11.80	3,543.0	529.5	110.6	13.0	0.00	0.00	0.00
3,700.0	12.56	11.80	3,640.6	550.8	115.0	13.5	0.00	0.00	0.00
3,800.0	12.56	11.80	3,738.2	572.1	119.5	14.0	0.00	0.00	0.00
3,900.0	12.56	11.80	3,835.8	593.4	123.9	14.6	0.00	0.00	0.00
4,000.0	12.56	11.80	3,933.4	614.7	128.4	15.1	0.00	0.00	0.00
4,100.0	12.56	11.80	4,031.0	636.0	132.8	15.6	0.00	0.00	0.00
4,200.0	12.56	11.80	4,128.6	657.3	137.3	16.1	0.00	0.00	0.00
4,300.0	12.56	11.80	4,226.2	678.5	141.7	16.6	0.00	0.00	0.00
4,400.0	12.56	11.80	4,323.8	699.8	146.2	17.2	0.00	0.00	0.00
4,500.0	12.56	11.80	4,421.4	721.1	150.6	17.7	0.00	0.00	0.00
4,600.0	12.56	11.80	4,519.1	742.4	155.1	18.2	0.00	0.00	0.00
4,700.0	12.56	11.80	4,616.7	763.7	159.5	18.7	0.00	0.00	0.00
4,800.0	12.56	11.80	4,714.3	785.0	164.0	19.3	0.00	0.00	0.00
4,900.0	12.56	11.80	4,811.9	806.3	168.4	19.8	0.00	0.00	0.00
5,000.0	12.56	11.80	4,909.5	827.6	172.9	20.3	0.00	0.00	0.00
5,100.0	12.56	11.80	5,007.1	848.9	177.3	20.8	0.00	0.00	0.00

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Site:	Roberts 10 Pad Sec.12-T7N-R67W	North Reference:	True
Well:	Roberts F-12NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-7-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.0	12.56	11.80	5,104.7	870.1	181.8	21.3	0.00	0.00	0.00
5,300.0	12.56	11.80	5,202.3	891.4	186.2	21.9	0.00	0.00	0.00
5,400.0	12.56	11.80	5,299.9	912.7	190.6	22.4	0.00	0.00	0.00
5,500.0	12.56	11.80	5,397.5	934.0	195.1	22.9	0.00	0.00	0.00
5,600.0	12.56	11.80	5,495.1	955.3	199.5	23.4	0.00	0.00	0.00
5,700.0	12.56	11.80	5,592.7	976.6	204.0	24.0	0.00	0.00	0.00
5,800.0	12.56	11.80	5,690.3	997.9	208.4	24.5	0.00	0.00	0.00
5,888.7	12.56	11.80	5,776.9	1,016.8	212.4	24.9	0.00	0.00	0.00
Start Drop -2.00									
5,900.0	12.34	11.80	5,787.9	1,019.2	212.9	25.0	1.99	-1.99	0.00
6,000.0	10.34	11.80	5,886.0	1,038.4	216.9	25.5	2.00	-2.00	0.00
6,100.0	8.34	11.80	5,984.7	1,054.3	220.2	25.9	2.00	-2.00	0.00
6,200.0	6.34	11.80	6,083.8	1,066.8	222.8	26.2	2.00	-2.00	0.00
6,300.0	4.34	11.80	6,183.4	1,075.9	224.7	26.4	2.00	-2.00	0.00
6,400.0	2.34	11.80	6,283.2	1,081.6	225.9	26.5	2.00	-2.00	0.00
6,500.0	0.34	11.80	6,383.2	1,083.9	226.4	26.6	2.00	-2.00	0.00
6,516.8	0.00	0.00	6,400.0	1,083.9	226.4	26.6	2.00	-2.00	0.00
6,600.0	0.00	0.00	6,483.2	1,083.9	226.4	26.6	0.00	0.00	0.00
6,619.6	0.00	0.00	6,502.8	1,083.9	226.4	26.6	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
6,700.0	6.43	269.69	6,583.0	1,083.9	221.9	31.0	8.00	8.00	0.00
6,800.0	14.43	269.69	6,681.3	1,083.8	203.8	48.6	8.00	8.00	0.00
6,900.0	22.43	269.69	6,776.1	1,083.6	172.2	79.3	8.00	8.00	0.00
7,000.0	30.43	269.69	6,865.6	1,083.4	127.7	122.5	8.00	8.00	0.00
7,100.0	38.43	269.69	6,948.0	1,083.1	71.2	177.5	8.00	8.00	0.00
7,200.0	46.43	269.69	7,021.7	1,082.7	3.8	243.0	8.00	8.00	0.00
7,300.0	54.43	269.69	7,085.4	1,082.3	-73.2	317.9	8.00	8.00	0.00
7,400.0	62.43	269.69	7,137.7	1,081.8	-158.3	400.7	8.00	8.00	0.00
7,500.0	70.43	269.69	7,177.6	1,081.3	-249.9	489.8	8.00	8.00	0.00
7,600.0	78.43	269.69	7,204.4	1,080.8	-346.2	583.4	8.00	8.00	0.00
7,700.0	86.43	269.69	7,217.6	1,080.2	-445.2	679.7	8.00	8.00	0.00
7,744.6	90.00	269.69	7,219.0	1,080.0	-489.8	723.0	8.00	8.00	0.00
7"									
7,800.0	90.00	269.69	7,219.0	1,079.7	-545.2	776.9	0.00	0.00	0.00
7,900.0	90.00	269.69	7,219.0	1,079.2	-645.2	874.1	0.00	0.00	0.00
8,000.0	90.00	269.69	7,219.0	1,078.6	-745.2	971.4	0.00	0.00	0.00
8,100.0	90.00	269.69	7,219.0	1,078.1	-845.2	1,068.6	0.00	0.00	0.00
8,200.0	90.00	269.69	7,219.0	1,077.5	-945.2	1,165.9	0.00	0.00	0.00
8,300.0	90.00	269.69	7,219.0	1,077.0	-1,045.2	1,263.1	0.00	0.00	0.00
8,400.0	90.00	269.69	7,219.0	1,076.4	-1,145.2	1,360.4	0.00	0.00	0.00
8,500.0	90.00	269.69	7,219.0	1,075.9	-1,245.2	1,457.6	0.00	0.00	0.00
8,600.0	90.00	269.69	7,219.0	1,075.3	-1,345.2	1,554.8	0.00	0.00	0.00
8,700.0	90.00	269.69	7,219.0	1,074.8	-1,445.2	1,652.1	0.00	0.00	0.00
8,800.0	90.00	269.69	7,219.0	1,074.3	-1,545.2	1,749.3	0.00	0.00	0.00
8,900.0	90.00	269.69	7,219.0	1,073.7	-1,645.2	1,846.6	0.00	0.00	0.00
9,000.0	90.00	269.69	7,219.0	1,073.2	-1,745.2	1,943.8	0.00	0.00	0.00
9,100.0	90.00	269.69	7,219.0	1,072.6	-1,845.1	2,041.1	0.00	0.00	0.00
9,200.0	90.00	269.69	7,219.0	1,072.1	-1,945.1	2,138.3	0.00	0.00	0.00
9,300.0	90.00	269.69	7,219.0	1,071.5	-2,045.1	2,235.5	0.00	0.00	0.00
9,400.0	90.00	269.69	7,219.0	1,071.0	-2,145.1	2,332.8	0.00	0.00	0.00
9,500.0	90.00	269.69	7,219.0	1,070.4	-2,245.1	2,430.0	0.00	0.00	0.00
9,600.0	90.00	269.69	7,219.0	1,069.9	-2,345.1	2,527.3	0.00	0.00	0.00
9,700.0	90.00	269.69	7,219.0	1,069.4	-2,445.1	2,624.5	0.00	0.00	0.00

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Site:	Roberts 10 Pad Sec.12-T7N-R67W	North Reference:	True
Well:	Roberts F-12NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-7-14)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,800.0	90.00	269.69	7,219.0	1,068.8	-2,545.1	2,721.7	0.00	0.00	0.00	
9,900.0	90.00	269.69	7,219.0	1,068.3	-2,645.1	2,819.0	0.00	0.00	0.00	
10,000.0	90.00	269.69	7,219.0	1,067.7	-2,745.1	2,916.2	0.00	0.00	0.00	
10,100.0	90.00	269.69	7,219.0	1,067.2	-2,845.1	3,013.5	0.00	0.00	0.00	
10,200.0	90.00	269.69	7,219.0	1,066.6	-2,945.1	3,110.7	0.00	0.00	0.00	
10,300.0	90.00	269.69	7,219.0	1,066.1	-3,045.1	3,208.0	0.00	0.00	0.00	
10,400.0	90.00	269.69	7,219.0	1,065.5	-3,145.1	3,305.2	0.00	0.00	0.00	
10,500.0	90.00	269.69	7,219.0	1,065.0	-3,245.1	3,402.4	0.00	0.00	0.00	
10,600.0	90.00	269.69	7,219.0	1,064.5	-3,345.1	3,499.7	0.00	0.00	0.00	
10,700.0	90.00	269.69	7,219.0	1,063.9	-3,445.1	3,596.9	0.00	0.00	0.00	
10,800.0	90.00	269.69	7,219.0	1,063.4	-3,545.1	3,694.2	0.00	0.00	0.00	
10,900.0	90.00	269.69	7,219.0	1,062.8	-3,645.1	3,791.4	0.00	0.00	0.00	
11,000.0	90.00	269.69	7,219.0	1,062.3	-3,745.1	3,888.7	0.00	0.00	0.00	
11,100.0	90.00	269.69	7,219.0	1,061.7	-3,845.1	3,985.9	0.00	0.00	0.00	
11,200.0	90.00	269.69	7,219.0	1,061.2	-3,945.1	4,083.1	0.00	0.00	0.00	
11,300.0	90.00	269.69	7,219.0	1,060.6	-4,045.1	4,180.4	0.00	0.00	0.00	
11,400.0	90.00	269.69	7,219.0	1,060.1	-4,145.1	4,277.6	0.00	0.00	0.00	
11,500.0	90.00	269.69	7,219.0	1,059.6	-4,245.1	4,374.9	0.00	0.00	0.00	
11,600.0	90.00	269.69	7,219.0	1,059.0	-4,345.1	4,472.1	0.00	0.00	0.00	
11,700.0	90.00	269.69	7,219.0	1,058.5	-4,445.1	4,569.4	0.00	0.00	0.00	
11,775.2	90.00	269.69	7,219.0	1,058.1	-4,520.3	4,642.5	0.00	0.00	0.00	

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 2357'FNL & 277'	- plan hits target center	0.00	0.00	1.0	0.0	0.0	1,458,327.18	3,185,297.90	40.589593	-104.832810
	- Point									
BHL 1258'FNL & 460'	- plan hits target center	0.00	0.00	7,219.0	1,058.1	-4,520.3	1,459,351.16	3,180,769.90	40.592496	-104.849086
	- Point									

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name			Casing Diameter (")	Hole Diameter (")
7,744.6	7,219.0	7"			7	7-1/2

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
800.0	800.0	0.0	0.0	KOP - Start Build 2.00	
5,888.7	5,776.9	1,016.8	212.4	Start Drop -2.00	
6,619.6	6,502.8	1,083.9	226.4	KOP #2 - Start Build 8.00	
11,775.2	7,219.0	1,058.1	-4,520.3	TD at 11775.2	