

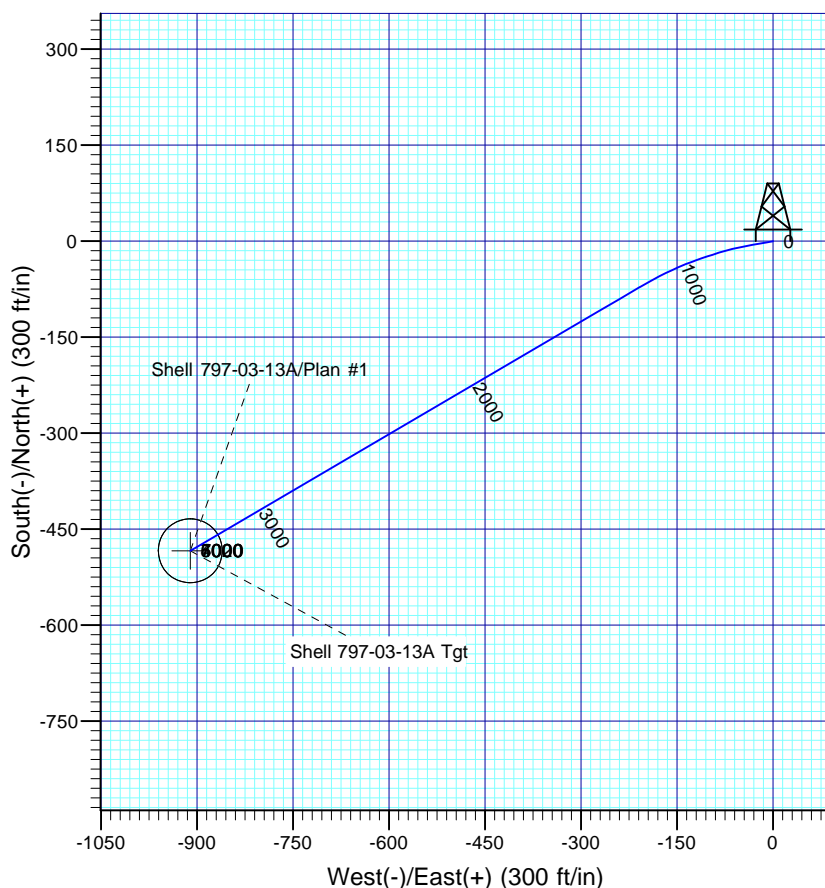
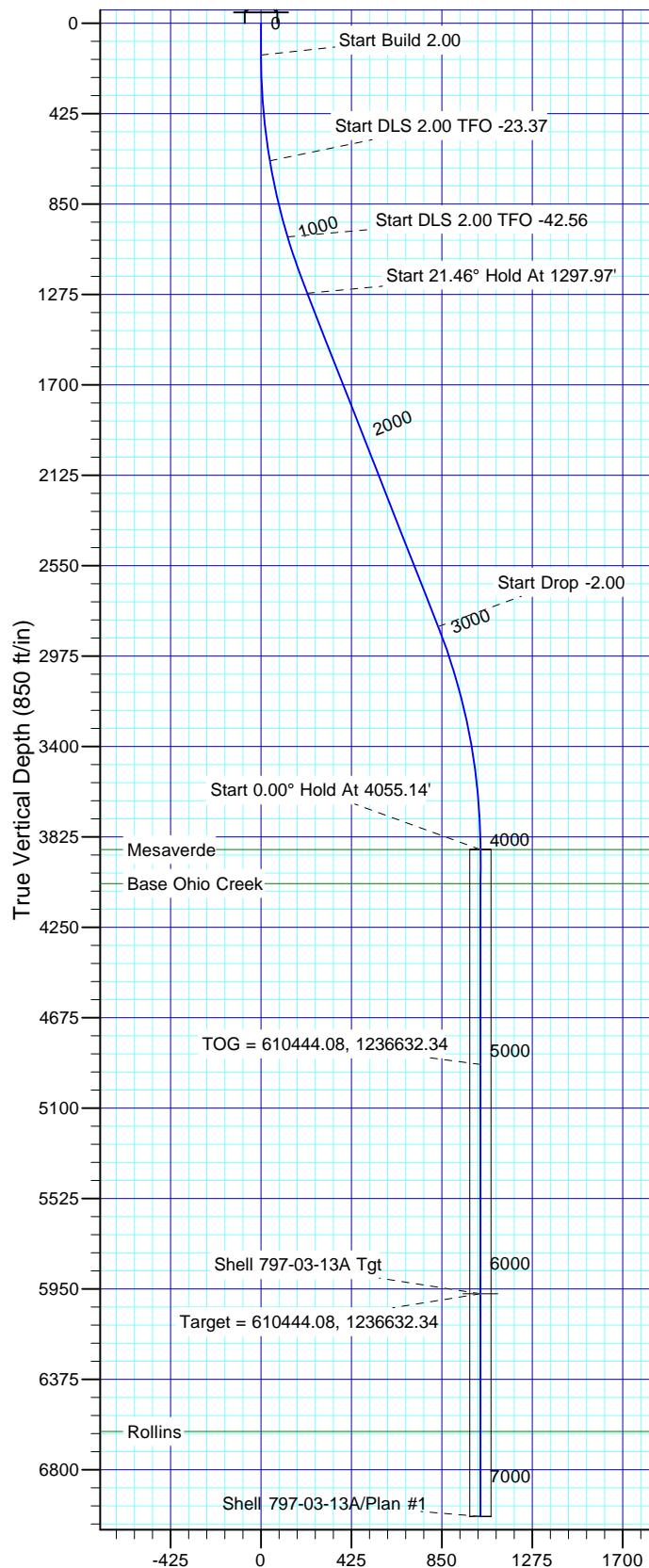
Well Details: Shell 797-03-13A

TVD Reference: GL 6485' & RKB 30' @ 6515.00ft (H&P) Ground Level: 6485.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	610900.51	1237556.74	39° 28' 46.582 N	108° 12' 5.320 W	N

T M Azimuths to True North
Magnetic North: 10.37°

Magnetic Field
Strength: 52149.9snT
Dip Angle: 65.67°
Date: 01/18/2012
Model: IGRF2010



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3885.00	4055.14	Mesaverde
4045.00	4215.14	Base Ohio Creek
6620.00	6790.14	Rollins

Plan: Plan #1

11:39, January 19 2012
Created By: Rex Hall

PROJECT DETAILS: Garfield County, CO NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Colorado Central 502

System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	650.00	10.00	260.00	647.47	-7.56	-42.86	2.00	260.00	41.40	
4	1017.69	17.00	250.00	1004.82	-31.52	-124.92	2.00	-23.37	125.11	
5	1297.60	21.45	239.60	1269.13	-71.44	-207.58	2.00	-42.56	216.84	Shell 797-03-13A Tgt
6	1297.97	21.46	239.60	1269.48	-71.51	-207.70	2.00	0.00	216.97	
7	2982.26	21.46	239.60	2837.03	-383.25	-739.15	0.00	0.00	832.56	
8	4055.14	0.00	0.00	3885.00	-483.72	-910.42	2.00	180.00	1030.94	
9	6143.14	0.00	0.00	5973.00	-483.72	-910.42	0.00	0.00	1030.94	Shell 797-03-13A Tgt
10	7190.14	0.00	0.00	7020.00	-483.72	-910.42	0.00	0.00	1030.94	

OXY USA RMAT

Garfield County, CO NAD27

Shell 797-03A Pad

Shell 797-03-13A - Slot N

OH

Plan: Plan #1

Standard Planning Report

19 January, 2012

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-13A - Slot N
Company:	OXY USA RMAT	TVD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Site:	Shell 797-03A Pad	North Reference:	True
Well:	Shell 797-03-13A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Garfield County, CO NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado Central 502		

Site		Shell 797-03A Pad			
Site Position:		Northing:	610,902.00 usft	Latitude:	39° 28' 46.610 N
From:	Lat/Long	Easting:	1,237,601.62 usft	Longitude:	108° 12' 4.748 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.70 °

Well	Shell 797-03-13A - Slot N					
Well Position	+N/-S	-2.82 ft	Northing:	610,900.51 usft	Latitude:	39° 28' 46.582 N
	+E/-W	-44.82 ft	Easting:	1,237,556.74 usft	Longitude:	108° 12' 5.320 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	6,485.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	01/18/12	10.37	65.67	52,150

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	242.02

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
650.00	10.00	260.00	647.47	-7.56	-42.86	2.00	2.00	0.00	260.00	
1,017.69	17.00	250.00	1,004.82	-31.52	-124.92	2.00	1.90	-2.72	-23.37	
1,297.60	21.45	239.60	1,269.13	-71.44	-207.58	2.00	1.59	-3.71	-42.56	Shell 797-03-13A Tgt
1,297.97	21.46	239.60	1,269.48	-71.51	-207.70	2.00	2.00	0.00	0.00	
2,982.26	21.46	239.60	2,837.03	-383.25	-739.15	0.00	0.00	0.00	0.00	
4,055.14	0.00	0.00	3,885.00	-483.72	-910.42	2.00	-2.00	0.00	180.00	
6,143.14	0.00	0.00	5,973.00	-483.72	-910.42	0.00	0.00	0.00	0.00	Shell 797-03-13A Tgt
7,190.14	0.00	0.00	7,020.00	-483.72	-910.42	0.00	0.00	0.00	0.00	

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-13A - Slot N
Company:	OXY USA RMAT	TVD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Site:	Shell 797-03A Pad	North Reference:	True
Well:	Shell 797-03-13A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
0.00	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
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
200.00	1.00	260.00	200.00	-0.08	-0.43	0.42	2.00	2.00	0.00
300.00	3.00	260.00	299.93	-0.68	-3.87	3.73	2.00	2.00	0.00
400.00	5.00	260.00	399.68	-1.89	-10.74	10.37	2.00	2.00	0.00
500.00	7.00	260.00	499.13	-3.71	-21.03	20.31	2.00	2.00	0.00
600.00	9.00	260.00	598.15	-6.12	-34.73	33.55	2.00	2.00	0.00
650.00	10.00	260.00	647.47	-7.56	-42.86	41.40	2.00	2.00	0.00
Start DLS 2.00 TFO -23.37									
700.00	10.93	257.91	696.63	-9.30	-51.77	50.08	2.00	1.85	-4.19
800.00	12.81	254.63	794.49	-14.23	-71.73	70.02	2.00	1.88	-3.28
900.00	14.72	252.18	891.62	-21.06	-94.51	93.34	2.00	1.91	-2.45
1,000.00	16.66	250.29	987.89	-29.78	-120.11	120.04	2.00	1.93	-1.89
1,017.69	17.00	250.00	1,004.82	-31.52	-124.92	125.11	2.00	1.94	-1.64
Start DLS 2.00 TFO -42.56									
1,100.00	18.25	246.44	1,083.27	-40.78	-148.04	149.87	2.00	1.51	-4.32
1,200.00	19.83	242.72	1,177.80	-54.82	-177.47	182.45	2.00	1.59	-3.73
1,297.60	21.45	239.60	1,269.13	-71.44	-207.58	216.84	2.00	1.65	-3.19
1,297.97	21.46	239.60	1,269.48	-71.51	-207.70	216.97	2.00	2.00	0.00
Start 21.46° Hold At 1297.97'									
1,300.00	21.46	239.60	1,271.36	-71.88	-208.34	217.71	0.00	0.00	0.00
1,400.00	21.46	239.60	1,364.43	-90.39	-239.90	254.26	0.00	0.00	0.00
1,500.00	21.46	239.60	1,457.50	-108.90	-271.45	290.81	0.00	0.00	0.00
1,600.00	21.46	239.60	1,550.57	-127.41	-303.00	327.36	0.00	0.00	0.00
1,700.00	21.46	239.60	1,643.64	-145.92	-334.56	363.91	0.00	0.00	0.00
1,800.00	21.46	239.60	1,736.71	-164.43	-366.11	400.46	0.00	0.00	0.00
1,900.00	21.46	239.60	1,829.78	-182.94	-397.66	437.01	0.00	0.00	0.00
2,000.00	21.46	239.60	1,922.85	-201.45	-429.22	473.56	0.00	0.00	0.00
2,100.00	21.46	239.60	2,015.92	-219.95	-460.77	510.10	0.00	0.00	0.00
2,200.00	21.46	239.60	2,108.98	-238.46	-492.32	546.65	0.00	0.00	0.00
2,300.00	21.46	239.60	2,202.05	-256.97	-523.88	583.20	0.00	0.00	0.00
2,400.00	21.46	239.60	2,295.12	-275.48	-555.43	619.75	0.00	0.00	0.00
2,500.00	21.46	239.60	2,388.19	-293.99	-586.98	656.30	0.00	0.00	0.00
2,600.00	21.46	239.60	2,481.26	-312.50	-618.54	692.85	0.00	0.00	0.00
2,700.00	21.46	239.60	2,574.33	-331.01	-650.09	729.40	0.00	0.00	0.00
2,800.00	21.46	239.60	2,667.40	-349.52	-681.64	765.95	0.00	0.00	0.00
2,900.00	21.46	239.60	2,760.47	-368.03	-713.19	802.49	0.00	0.00	0.00
2,982.26	21.46	239.60	2,837.03	-383.25	-739.15	832.56	0.00	0.00	0.00
Start Drop -2.00									
3,000.00	21.10	239.60	2,853.56	-386.51	-744.70	838.99	2.00	-2.00	0.00
3,100.00	19.10	239.60	2,947.46	-403.90	-774.35	873.33	2.00	-2.00	0.00
3,200.00	17.10	239.60	3,042.50	-419.62	-801.15	904.37	2.00	-2.00	0.00
3,300.00	15.10	239.60	3,138.58	-433.65	-825.07	932.08	2.00	-2.00	0.00
3,400.00	13.10	239.60	3,235.56	-445.98	-846.09	956.43	2.00	-2.00	0.00
3,500.00	11.10	239.60	3,333.33	-456.59	-864.17	977.37	2.00	-2.00	0.00
3,600.00	9.10	239.60	3,431.77	-465.46	-879.30	994.90	2.00	-2.00	0.00
3,700.00	7.10	239.60	3,530.77	-472.59	-891.46	1,008.98	2.00	-2.00	0.00
3,800.00	5.10	239.60	3,630.20	-477.97	-900.63	1,019.60	2.00	-2.00	0.00
3,900.00	3.10	239.60	3,729.94	-481.59	-906.80	1,026.75	2.00	-2.00	0.00
4,000.00	1.10	239.60	3,829.86	-483.45	-909.96	1,030.41	2.00	-2.00	0.00
4,055.14	0.00	0.00	3,885.00	-483.72	-910.42	1,030.95	2.00	-2.00	0.00

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-13A - Slot N
Company:	OXY USA RMAT	TVD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Site:	Shell 797-03A Pad	North Reference:	True
Well:	Shell 797-03-13A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
Start 0.00° Hold At 4055.14' - Mesaverde									
4,100.00	0.00	0.00	3,929.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,200.00	0.00	0.00	4,029.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,215.14	0.00	0.00	4,045.00	-483.72	-910.42	1,030.95	0.00	0.00	0.00
Base Ohio Creek									
4,300.00	0.00	0.00	4,129.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,400.00	0.00	0.00	4,229.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,500.00	0.00	0.00	4,329.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,600.00	0.00	0.00	4,429.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,700.00	0.00	0.00	4,529.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,800.00	0.00	0.00	4,629.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
4,900.00	0.00	0.00	4,729.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,000.00	0.00	0.00	4,829.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,065.14	0.00	0.00	4,895.00	-483.72	-910.42	1,030.95	0.00	0.00	0.00
TOG = 610444.08, 1236632.34									
5,100.00	0.00	0.00	4,929.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,200.00	0.00	0.00	5,029.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,300.00	0.00	0.00	5,129.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,400.00	0.00	0.00	5,229.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,500.00	0.00	0.00	5,329.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,600.00	0.00	0.00	5,429.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,700.00	0.00	0.00	5,529.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,800.00	0.00	0.00	5,629.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
5,900.00	0.00	0.00	5,729.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,000.00	0.00	0.00	5,829.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,100.00	0.00	0.00	5,929.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,143.14	0.00	0.00	5,973.00	-483.72	-910.42	1,030.95	0.00	0.00	0.00
Target = 610444.08, 1236632.34									
6,200.00	0.00	0.00	6,029.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,300.00	0.00	0.00	6,129.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,400.00	0.00	0.00	6,229.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,500.00	0.00	0.00	6,329.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,600.00	0.00	0.00	6,429.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,700.00	0.00	0.00	6,529.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,790.14	0.00	0.00	6,620.00	-483.72	-910.42	1,030.95	0.00	0.00	0.00
Rollins									
6,800.00	0.00	0.00	6,629.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
6,900.00	0.00	0.00	6,729.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
7,000.00	0.00	0.00	6,829.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
7,100.00	0.00	0.00	6,929.86	-483.72	-910.42	1,030.95	0.00	0.00	0.00
7,190.14	0.00	0.00	7,020.00	-483.72	-910.42	1,030.95	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Shell 797-03-13A Tgt - plan hits target center - Circle (radius 50.00)	0.00	0.00	5,973.00	-483.72	-910.42	610,444.08	1,236,632.34	39° 28' 41.801 N	108° 12' 16.931 W

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-13A - Slot N
Company:	OXY USA RMAT	TVD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 6485' & RKB 30' @ 6515.00ft (H&P)
Site:	Shell 797-03A Pad	North Reference:	True
Well:	Shell 797-03-13A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,055.14	3,885.00	Mesaverde		0.00	
4,215.14	4,045.00	Base Ohio Creek		0.00	
6,790.14	6,620.00	Rollins		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
150.00	150.00	0.00	0.00	Start Build 2.00	
650.00	647.47	-7.56	-42.86	Start DLS 2.00 TFO -23.37	
1,017.69	1,004.82	-31.52	-124.92	Start DLS 2.00 TFO -42.56	
1,297.97	1,269.48	-71.51	-207.70	Start 21.46° Hold At 1297.97'	
2,982.26	2,837.03	-383.25	-739.15	Start Drop -2.00	
4,055.14	3,885.00	-483.72	-910.42	Start 0.00° Hold At 4055.14'	
5,065.14	4,895.00	-483.72	-910.42	TOG = 610444.08, 1236632.34	
6,143.14	5,973.00	-483.72	-910.42	Target = 610444.08, 1236632.34	
7,190.14	7,020.00	-483.72	-910.42	PBHL = 610444.08, 1236632.34	