

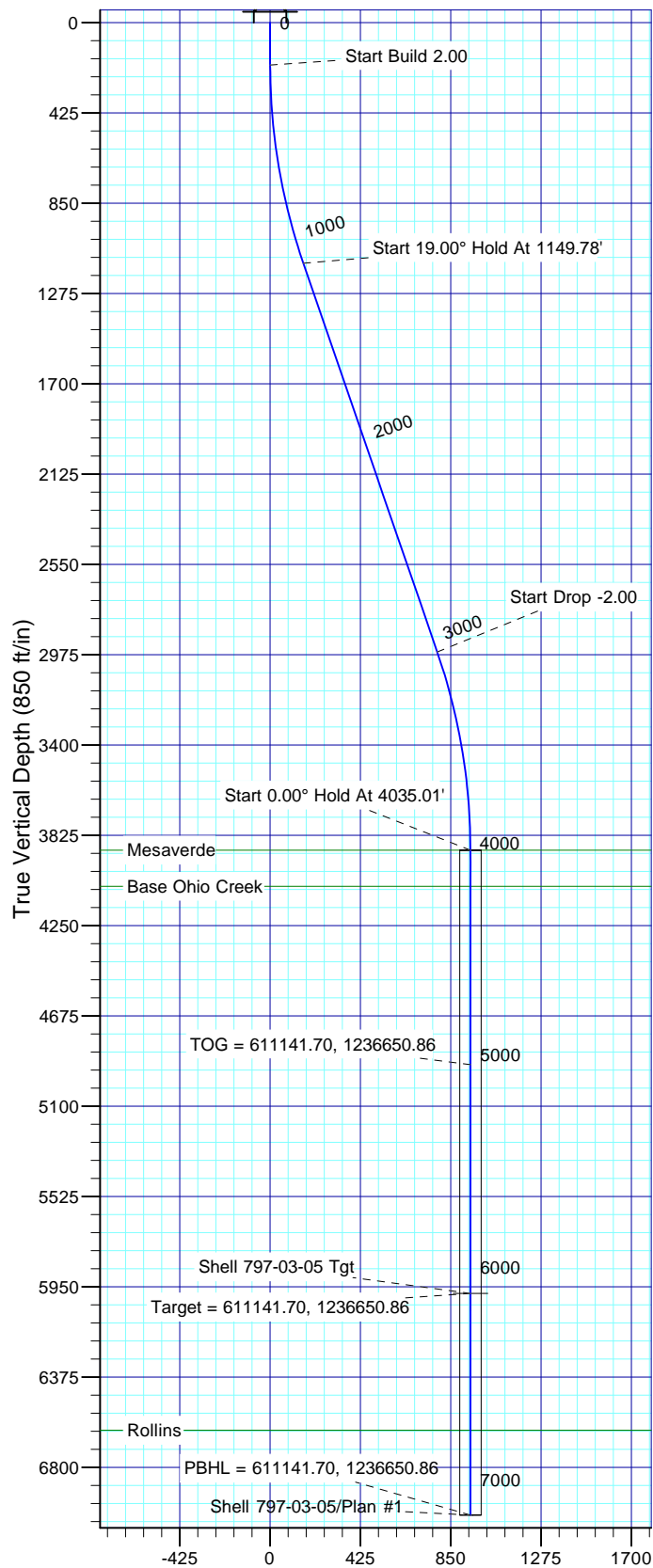
Well Details: Shell 797-03-05

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

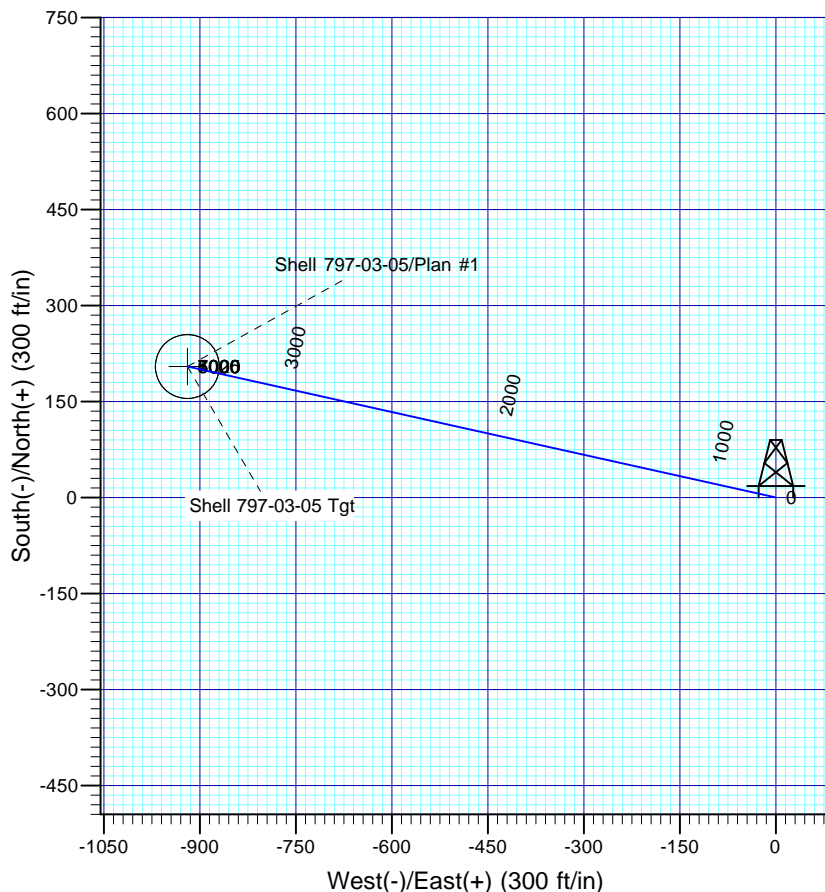
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	610909.75	1237563.84	39° 28' 46.675 N	108° 12' 5.233 W	G

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



Vertical Section at 282.55° (850 ft/in)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3895.00	4035.01	Mesaverde
4065.00	4205.01	Base Ohio Creek
6625.00	6765.01	Rollins

Plan: Plan #1

11:09, 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	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1149.78	19.00	282.55	1132.48	33.90	-152.28	2.00	282.55	156.01	
4	3085.22	19.00	282.55	2962.52	170.80	-767.20	0.00	0.00	785.99	
5	4035.01	0.00	0.00	3895.00	204.71	-919.48	2.00	180.00	941.99	
6	6121.01	0.00	0.00	5981.00	204.71	-919.48	0.00	0.00	941.99	Shell 797-03-05 Tgt
7	7165.01	0.00	0.00	7025.00	204.71	-919.48	0.00	0.00	941.99	

OXY USA RMAT

Garfield County, CO NAD27

Shell 797-03A Pad

Shell 797-03-05 - Slot G

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 797-03-05 - Slot G
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 797-03-05	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 797-03-05 - Slot G					
Well Position	+N/-S	6.63 ft	Northing:	610,909.75 usft	Latitude:	39° 28' 46.675 N
	+E/-W	-37.99 ft	Easting:	1,237,563.84 usft	Longitude:	108° 12' 5.233 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	282.55

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,149.78	19.00	282.55	1,132.48	33.90	-152.28	2.00	2.00	0.00	282.55	
3,085.22	19.00	282.55	2,962.52	170.80	-767.20	0.00	0.00	0.00	0.00	
4,035.01	0.00	0.00	3,895.00	204.71	-919.48	2.00	-2.00	0.00	180.00	
6,121.01	0.00	0.00	5,981.00	204.71	-919.48	0.00	0.00	0.00	0.00	Shell 797-03-05 Tgt
7,165.01	0.00	0.00	7,025.00	204.71	-919.48	0.00	0.00	0.00	0.00	

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-05 - Slot G
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 797-03-05	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
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
300.00	2.00	282.55	299.98	0.38	-1.70	1.75	2.00	2.00	0.00
400.00	4.00	282.55	399.84	1.52	-6.81	6.98	2.00	2.00	0.00
500.00	6.00	282.55	499.45	3.41	-15.32	15.69	2.00	2.00	0.00
600.00	8.00	282.55	598.70	6.06	-27.21	27.88	2.00	2.00	0.00
700.00	10.00	282.55	697.47	9.46	-42.48	43.52	2.00	2.00	0.00
800.00	12.00	282.55	795.62	13.60	-61.11	62.60	2.00	2.00	0.00
900.00	14.00	282.55	893.06	18.49	-83.06	85.10	2.00	2.00	0.00
1,000.00	16.00	282.55	989.64	24.12	-108.32	110.98	2.00	2.00	0.00
1,100.00	18.00	282.55	1,085.27	30.47	-136.86	140.21	2.00	2.00	0.00
1,149.78	19.00	282.55	1,132.48	33.90	-152.28	156.01	2.00	2.00	0.00
Start 19.00° Hold At 1149.78'									
1,200.00	19.00	282.55	1,179.96	37.45	-168.23	172.35	0.00	0.00	0.00
1,300.00	19.00	282.55	1,274.52	44.53	-200.01	204.90	0.00	0.00	0.00
1,400.00	19.00	282.55	1,369.07	51.60	-231.78	237.45	0.00	0.00	0.00
1,500.00	19.00	282.55	1,463.62	58.67	-263.55	270.00	0.00	0.00	0.00
1,600.00	19.00	282.55	1,558.18	65.75	-295.32	302.55	0.00	0.00	0.00
1,700.00	19.00	282.55	1,652.73	72.82	-327.09	335.10	0.00	0.00	0.00
1,800.00	19.00	282.55	1,747.29	79.89	-358.86	367.65	0.00	0.00	0.00
1,900.00	19.00	282.55	1,841.84	86.97	-390.64	400.20	0.00	0.00	0.00
2,000.00	19.00	282.55	1,936.40	94.04	-422.41	432.75	0.00	0.00	0.00
2,100.00	19.00	282.55	2,030.95	101.11	-454.18	465.30	0.00	0.00	0.00
2,200.00	19.00	282.55	2,125.50	108.19	-485.95	497.85	0.00	0.00	0.00
2,300.00	19.00	282.55	2,220.06	115.26	-517.72	530.40	0.00	0.00	0.00
2,400.00	19.00	282.55	2,314.61	122.33	-549.50	562.95	0.00	0.00	0.00
2,500.00	19.00	282.55	2,409.17	129.41	-581.27	595.50	0.00	0.00	0.00
2,600.00	19.00	282.55	2,503.72	136.48	-613.04	628.05	0.00	0.00	0.00
2,700.00	19.00	282.55	2,598.28	143.56	-644.81	660.60	0.00	0.00	0.00
2,800.00	19.00	282.55	2,692.83	150.63	-676.58	693.15	0.00	0.00	0.00
2,900.00	19.00	282.55	2,787.38	157.70	-708.35	725.70	0.00	0.00	0.00
3,000.00	19.00	282.55	2,881.94	164.78	-740.13	758.25	0.00	0.00	0.00
3,085.22	19.00	282.55	2,962.52	170.80	-767.20	785.99	0.00	0.00	0.00
Start Drop -2.00									
3,100.00	18.70	282.55	2,976.51	171.84	-771.86	790.76	2.00	-2.00	0.00
3,200.00	16.70	282.55	3,071.77	178.45	-801.54	821.16	2.00	-2.00	0.00
3,300.00	14.70	282.55	3,168.03	184.33	-827.95	848.22	2.00	-2.00	0.00
3,400.00	12.70	282.55	3,265.18	189.47	-851.07	871.90	2.00	-2.00	0.00
3,500.00	10.70	282.55	3,363.10	193.88	-870.86	892.18	2.00	-2.00	0.00
3,600.00	8.70	282.55	3,461.66	197.54	-887.31	909.03	2.00	-2.00	0.00
3,700.00	6.70	282.55	3,560.76	200.45	-900.38	922.43	2.00	-2.00	0.00
3,800.00	4.70	282.55	3,660.26	202.61	-910.08	932.36	2.00	-2.00	0.00
3,900.00	2.70	282.55	3,760.04	204.01	-916.38	938.81	2.00	-2.00	0.00
4,000.00	0.70	282.55	3,860.00	204.66	-919.27	941.78	2.00	-2.00	0.00
4,035.01	0.00	0.00	3,895.00	204.71	-919.48	941.99	2.00	-2.00	0.00
Start 0.00° Hold At 4035.01' - Mesaverde									
4,100.00	0.00	0.00	3,959.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,200.00	0.00	0.00	4,059.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,205.01	0.00	0.00	4,065.00	204.71	-919.48	941.99	0.00	0.00	0.00
Base Ohio Creek									
4,300.00	0.00	0.00	4,159.99	204.71	-919.48	941.99	0.00	0.00	0.00

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-05 - Slot G
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 797-03-05	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)
4,400.00	0.00	0.00	4,259.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,500.00	0.00	0.00	4,359.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,600.00	0.00	0.00	4,459.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,700.00	0.00	0.00	4,559.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,800.00	0.00	0.00	4,659.99	204.71	-919.48	941.99	0.00	0.00	0.00
4,900.00	0.00	0.00	4,759.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,000.00	0.00	0.00	4,859.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,045.01	0.00	0.00	4,905.00	204.71	-919.48	941.99	0.00	0.00	0.00
TOG = 611141.70, 1236650.86									
5,100.00	0.00	0.00	4,959.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,200.00	0.00	0.00	5,059.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,300.00	0.00	0.00	5,159.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,400.00	0.00	0.00	5,259.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,500.00	0.00	0.00	5,359.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,600.00	0.00	0.00	5,459.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,700.00	0.00	0.00	5,559.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,800.00	0.00	0.00	5,659.99	204.71	-919.48	941.99	0.00	0.00	0.00
5,900.00	0.00	0.00	5,759.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,000.00	0.00	0.00	5,859.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,100.00	0.00	0.00	5,959.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,121.01	0.00	0.00	5,981.00	204.71	-919.48	941.99	0.00	0.00	0.00
Target = 611141.70, 1236650.86									
6,200.00	0.00	0.00	6,059.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,300.00	0.00	0.00	6,159.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,400.00	0.00	0.00	6,259.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,500.00	0.00	0.00	6,359.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,600.00	0.00	0.00	6,459.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,700.00	0.00	0.00	6,559.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,765.01	0.00	0.00	6,625.00	204.71	-919.48	941.99	0.00	0.00	0.00
Rollins									
6,800.00	0.00	0.00	6,659.99	204.71	-919.48	941.99	0.00	0.00	0.00
6,900.00	0.00	0.00	6,759.99	204.71	-919.48	941.99	0.00	0.00	0.00
7,000.00	0.00	0.00	6,859.99	204.71	-919.48	941.99	0.00	0.00	0.00
7,100.00	0.00	0.00	6,959.99	204.71	-919.48	941.99	0.00	0.00	0.00
7,165.01	0.00	0.00	7,025.00	204.71	-919.48	941.99	0.00	0.00	0.00
PBHL = 611141.70, 1236650.86									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Shell 797-03-05 Tgt	0.00	0.00	5,981.00	204.71	-919.48	611,141.71	1,236,650.86	39° 28' 48.698 N	108° 12' 16.960 W
- plan hits target center									
- Circle (radius 50.00)									

Scientific Drilling International

Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well Shell 797-03-05 - Slot G
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 797-03-05	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,035.01	3,895.00	Mesaverde		0.00	
4,205.01	4,065.00	Base Ohio Creek		0.00	
6,765.01	6,625.00	Rollins		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.00	200.00	0.00	0.00	Start Build 2.00	
1,149.78	1,132.48	33.90	-152.28	Start 19.00° Hold At 1149.78'	
3,085.22	2,962.52	170.80	-767.20	Start Drop -2.00	
4,035.01	3,895.00	204.71	-919.48	Start 0.00° Hold At 4035.01'	
5,045.01	4,905.00	204.71	-919.48	TOG = 611141.70, 1236650.86	
6,121.01	5,981.00	204.71	-919.48	Target = 611141.70, 1236650.86	
7,165.01	7,025.00	204.71	-919.48	PBHL = 611141.70, 1236650.86	