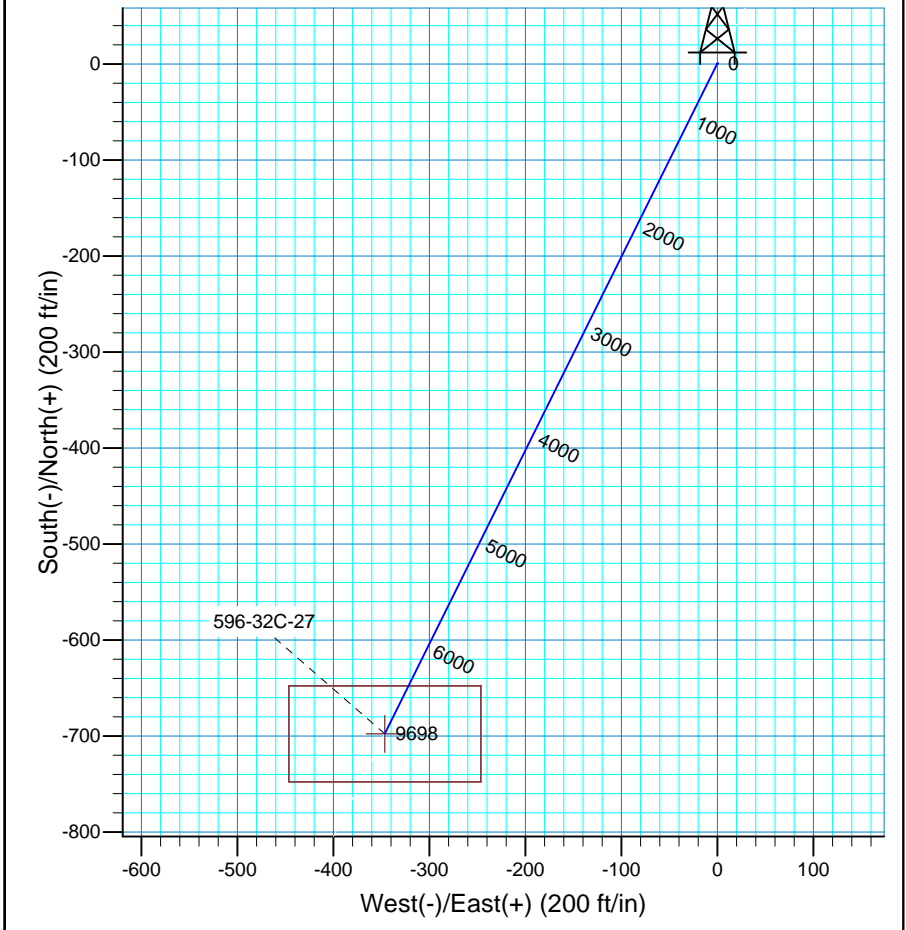
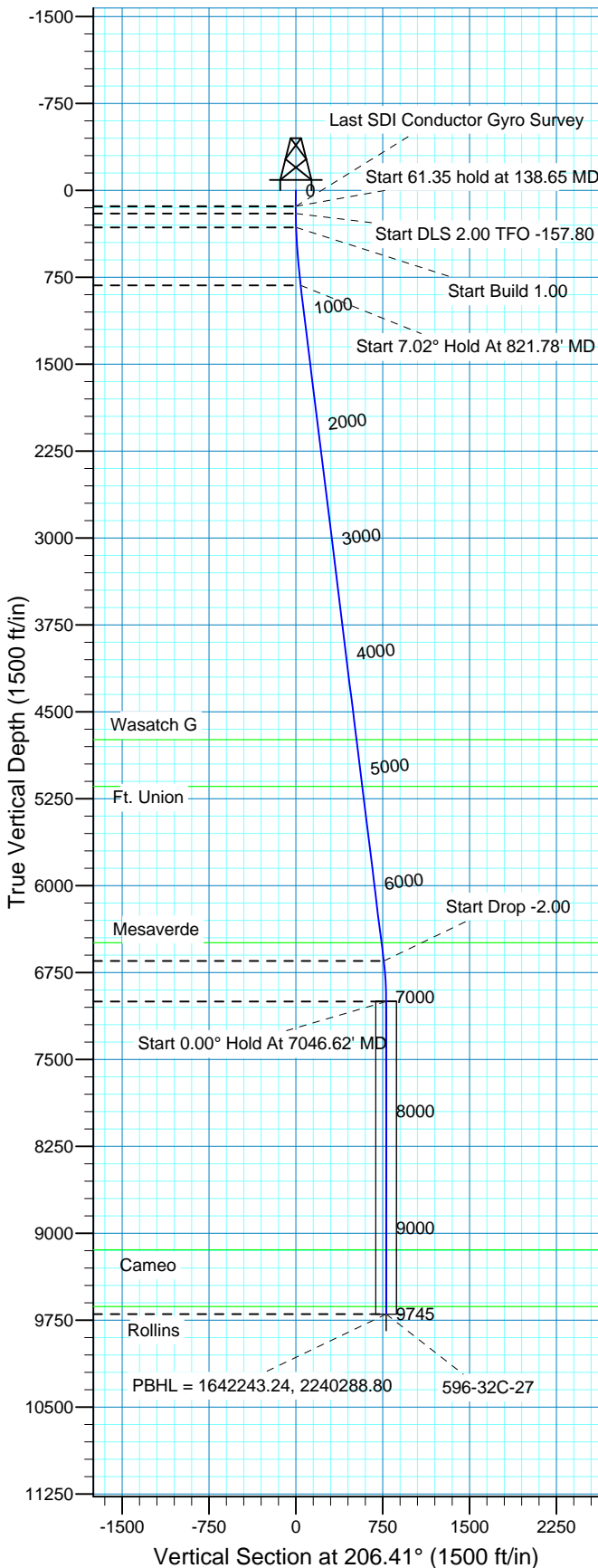


Azimuths to True North
 Magnetic North: 10.89°

 Magnetic Field
 Strength: 52627.8snT
 Dip Angle: 65.87°
 Date: 11/7/2007
 Model: IGRF2005-10

WELL DETAILS: 596-32C-27

		GL 8333' & RKB 24' @ 8357.00ft (H&P 324)		8333.00	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1642930.57	2240655.87	39° 34' 3.764 N	108° 11' 38.227 W
					Slot G



FORMATION TOP DETAILS			Plan: Plan #5 (596-32C-27/OH)		
TVDPath	MDPath	Formation	Created By: Rex Hall Date: 2009-07-27		
4740.00	4771.32	Wasatch G	PROJECT DETAILS: Garfield County, CO NAD 83		
5144.00	5178.37	Ft. Union	Geodetic System: US State Plane 1983		
6492.00	6536.55	Mesaverde	Datum: North American Datum 1983		
9143.00	9189.62	Cameo	Ellipsoid: GRS 1980		
9633.00	9679.62	Rollins	Zone: Colorado Central Zone		
			System Datum: Mean Sea Level		
			Local North: True		

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	138.65	0.44	359.42	138.65	0.46	0.41	0.00	0.00	-0.59	
2	200.00	0.44	359.42	200.00	0.93	0.41	0.00	0.00	-1.01	
3	320.03	2.00	206.39	320.00	-0.49	-0.53	2.00	-157.80	0.67	596-32C-27
4	821.78	7.02	206.39	820.05	-35.81	-18.05	1.00	0.00	40.10	
5	6695.74	7.02	206.39	6650.00	-678.69	-336.99	0.00	0.00	757.75	
6	7046.62	0.00	0.00	7000.00	-697.91	-346.53	2.00	180.00	779.21	
7	9744.62	0.00	0.00	9698.00	-697.91	-346.53	0.00	0.00	779.21	596-32C-27



Scientific Drilling
Rocky Mountain Operations

Marathon Oil Co.

Garfield County, CO NAD 83

596-32C Pad

596-32C-27 - Slot G

OH

Plan: Plan #5

Standard Planning Report

27 July, 2009

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well 596-32C-27 - Slot G
Company:	Marathon Oil Co.	TVD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Project:	Garfield County, CO NAD 83	MD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Site:	596-32C Pad	North Reference:	True
Well:	596-32C-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Project	Garfield County, CO NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	596-32C Pad, Sec 32 T5S R96W				
Site Position:		Northing:	1,642,959.78 ft	Latitude:	39° 34' 4.057 N
From:	Map	Easting:	2,240,668.00 ft	Longitude:	108° 11' 38.083 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-1.70 °

Well	596-32C-27 - Slot G, 1173' FSL 2322' FWL					
Well Position	+N/-S	0.00 ft	Northing:	1,642,930.57 ft	Latitude:	39° 34' 3.764 N
	+E/-W	0.00 ft	Easting:	2,240,655.87 ft	Longitude:	108° 11' 38.227 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	8,333.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2005-10	11/7/2007	10.90	65.87	52,628

Design	Plan #5				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	138.65	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	206.41	

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
138.65	0.44	359.42	138.65	0.46	0.41	0.00	0.00	0.00	0.00	
200.00	0.44	359.42	200.00	0.93	0.41	0.00	0.00	0.00	0.00	
320.03	2.00	206.39	320.00	-0.49	-0.53	2.00	1.30	-127.50	-157.80	596-32C-27
821.78	7.02	206.39	820.05	-35.81	-18.05	1.00	1.00	0.00	0.00	
6,695.74	7.02	206.39	6,650.00	-678.69	-336.99	0.00	0.00	0.00	0.00	
7,046.62	0.00	0.00	7,000.00	-697.91	-346.53	2.00	-2.00	0.00	180.00	
9,744.62	0.00	0.00	9,698.00	-697.91	-346.53	0.00	0.00	0.00	0.00	596-32C-27

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well 596-32C-27 - Slot G
Company:	Marathon Oil Co.	TVD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Project:	Garfield County, CO NAD 83	MD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Site:	596-32C Pad	North Reference:	True
Well:	596-32C-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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	0.28	19.84	100.00	0.26	0.38	-0.40	0.28	0.28	0.00
138.65	0.44	359.42	138.65	0.46	0.41	-0.59	0.52	0.40	-52.84
Start 61.35 hold at 138.65 MD									
200.00	0.44	359.42	200.00	0.93	0.41	-1.01	0.00	0.00	0.00
Start DLS 2.00 TFO -157.80									
300.00	1.60	207.58	299.99	0.07	-0.24	0.04	2.00	1.16	-151.85
320.03	2.00	206.39	320.00	-0.49	-0.53	0.67	2.00	1.99	-5.95
Start Build 1.00									
400.00	2.80	206.39	399.90	-3.49	-2.02	4.02	1.00	1.00	0.00
500.00	3.80	206.39	499.74	-8.64	-4.58	9.78	1.00	1.00	0.00
600.00	4.80	206.39	599.45	-15.36	-7.91	17.27	1.00	1.00	0.00
700.00	5.80	206.39	699.03	-23.63	-12.01	26.51	1.00	1.00	0.00
800.00	6.80	206.39	798.42	-33.46	-16.89	37.48	1.00	1.00	0.00
821.78	7.02	206.39	820.05	-35.81	-18.05	40.10	1.00	1.00	0.00
Start 7.02° Hold At 821.78' MD									
900.00	7.02	206.39	897.68	-44.37	-22.30	49.66	0.00	0.00	0.00
1,000.00	7.02	206.39	996.93	-55.32	-27.73	61.88	0.00	0.00	0.00
1,100.00	7.02	206.39	1,096.18	-66.26	-33.16	74.09	0.00	0.00	0.00
1,200.00	7.02	206.39	1,195.43	-77.20	-38.59	86.31	0.00	0.00	0.00
1,300.00	7.02	206.39	1,294.68	-88.15	-44.02	98.53	0.00	0.00	0.00
1,400.00	7.02	206.39	1,393.93	-99.09	-49.45	110.75	0.00	0.00	0.00
1,500.00	7.02	206.39	1,493.18	-110.04	-54.88	122.96	0.00	0.00	0.00
1,600.00	7.02	206.39	1,592.43	-120.98	-60.31	135.18	0.00	0.00	0.00
1,700.00	7.02	206.39	1,691.68	-131.93	-65.74	147.40	0.00	0.00	0.00
1,800.00	7.02	206.39	1,790.93	-142.87	-71.17	159.62	0.00	0.00	0.00
1,900.00	7.02	206.39	1,890.19	-153.82	-76.60	171.83	0.00	0.00	0.00
2,000.00	7.02	206.39	1,989.44	-164.76	-82.03	184.05	0.00	0.00	0.00
2,100.00	7.02	206.39	2,088.69	-175.71	-87.46	196.27	0.00	0.00	0.00
2,200.00	7.02	206.39	2,187.94	-186.65	-92.89	208.48	0.00	0.00	0.00
2,300.00	7.02	206.39	2,287.19	-197.59	-98.32	220.70	0.00	0.00	0.00
2,400.00	7.02	206.39	2,386.44	-208.54	-103.75	232.92	0.00	0.00	0.00
2,500.00	7.02	206.39	2,485.69	-219.48	-109.18	245.14	0.00	0.00	0.00
2,600.00	7.02	206.39	2,584.94	-230.43	-114.61	257.35	0.00	0.00	0.00
2,700.00	7.02	206.39	2,684.19	-241.37	-120.04	269.57	0.00	0.00	0.00
2,800.00	7.02	206.39	2,783.44	-252.32	-125.46	281.79	0.00	0.00	0.00
2,900.00	7.02	206.39	2,882.69	-263.26	-130.89	294.01	0.00	0.00	0.00
3,000.00	7.02	206.39	2,981.95	-274.21	-136.32	306.22	0.00	0.00	0.00
3,100.00	7.02	206.39	3,081.20	-285.15	-141.75	318.44	0.00	0.00	0.00
3,200.00	7.02	206.39	3,180.45	-296.09	-147.18	330.66	0.00	0.00	0.00
3,300.00	7.02	206.39	3,279.70	-307.04	-152.61	342.88	0.00	0.00	0.00
3,400.00	7.02	206.39	3,378.95	-317.98	-158.04	355.09	0.00	0.00	0.00
3,500.00	7.02	206.39	3,478.20	-328.93	-163.47	367.31	0.00	0.00	0.00
3,600.00	7.02	206.39	3,577.45	-339.87	-168.90	379.53	0.00	0.00	0.00
3,700.00	7.02	206.39	3,676.70	-350.82	-174.33	391.75	0.00	0.00	0.00
3,800.00	7.02	206.39	3,775.95	-361.76	-179.76	403.96	0.00	0.00	0.00
3,900.00	7.02	206.39	3,875.20	-372.71	-185.19	416.18	0.00	0.00	0.00
4,000.00	7.02	206.39	3,974.45	-383.65	-190.62	428.40	0.00	0.00	0.00
4,100.00	7.02	206.39	4,073.70	-394.60	-196.05	440.61	0.00	0.00	0.00
4,200.00	7.02	206.39	4,172.96	-405.54	-201.48	452.83	0.00	0.00	0.00
4,300.00	7.02	206.39	4,272.21	-416.48	-206.91	465.05	0.00	0.00	0.00
4,400.00	7.02	206.39	4,371.46	-427.43	-212.34	477.27	0.00	0.00	0.00
4,500.00	7.02	206.39	4,470.71	-438.37	-217.77	489.48	0.00	0.00	0.00

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well 596-32C-27 - Slot G
Company:	Marathon Oil Co.	TVD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Project:	Garfield County, CO NAD 83	MD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Site:	596-32C Pad	North Reference:	True
Well:	596-32C-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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)
4,600.00	7.02	206.39	4,569.96	-449.32	-223.20	501.70	0.00	0.00	0.00
4,700.00	7.02	206.39	4,669.21	-460.26	-228.63	513.92	0.00	0.00	0.00
4,771.32	7.02	206.39	4,740.00	-468.07	-232.50	522.63	0.00	0.00	0.00
Wasatch G									
4,800.00	7.02	206.39	4,768.46	-471.21	-234.06	526.14	0.00	0.00	0.00
4,900.00	7.02	206.39	4,867.71	-482.15	-239.49	538.35	0.00	0.00	0.00
5,000.00	7.02	206.39	4,966.96	-493.10	-244.92	550.57	0.00	0.00	0.00
5,100.00	7.02	206.39	5,066.21	-504.04	-250.35	562.79	0.00	0.00	0.00
5,178.37	7.02	206.39	5,144.00	-512.62	-254.60	572.36	0.00	0.00	0.00
Ft. Union									
5,200.00	7.02	206.39	5,165.46	-514.98	-255.78	575.01	0.00	0.00	0.00
5,300.00	7.02	206.39	5,264.72	-525.93	-261.21	587.22	0.00	0.00	0.00
5,400.00	7.02	206.39	5,363.97	-536.87	-266.64	599.44	0.00	0.00	0.00
5,500.00	7.02	206.39	5,463.22	-547.82	-272.07	611.66	0.00	0.00	0.00
5,600.00	7.02	206.39	5,562.47	-558.76	-277.50	623.88	0.00	0.00	0.00
5,700.00	7.02	206.39	5,661.72	-569.71	-282.93	636.09	0.00	0.00	0.00
5,800.00	7.02	206.39	5,760.97	-580.65	-288.36	648.31	0.00	0.00	0.00
5,900.00	7.02	206.39	5,860.22	-591.60	-293.79	660.53	0.00	0.00	0.00
6,000.00	7.02	206.39	5,959.47	-602.54	-299.22	672.74	0.00	0.00	0.00
6,100.00	7.02	206.39	6,058.72	-613.49	-304.64	684.96	0.00	0.00	0.00
6,200.00	7.02	206.39	6,157.97	-624.43	-310.07	697.18	0.00	0.00	0.00
6,300.00	7.02	206.39	6,257.22	-635.37	-315.50	709.40	0.00	0.00	0.00
6,400.00	7.02	206.39	6,356.47	-646.32	-320.93	721.61	0.00	0.00	0.00
6,500.00	7.02	206.39	6,455.73	-657.26	-326.36	733.83	0.00	0.00	0.00
6,536.55	7.02	206.39	6,492.00	-661.26	-328.35	738.30	0.00	0.00	0.00
Mesaverde									
6,600.00	7.02	206.39	6,554.98	-668.21	-331.79	746.05	0.00	0.00	0.00
6,695.74	7.02	206.39	6,650.00	-678.69	-336.99	757.75	0.00	0.00	0.00
Start Drop -2.00									
6,700.00	6.93	206.39	6,654.23	-679.15	-337.22	758.26	2.00	-2.00	0.00
6,800.00	4.93	206.39	6,753.69	-688.41	-341.81	768.60	2.00	-2.00	0.00
6,900.00	2.93	206.39	6,853.45	-694.55	-344.86	775.46	2.00	-2.00	0.00
7,000.00	0.93	206.39	6,953.38	-697.57	-346.36	778.83	2.00	-2.00	0.00
7,046.62	0.00	0.00	7,000.00	-697.91	-346.53	779.21	2.00	-2.00	0.00
Start 0.00° Hold At 7046.62' MD									
7,100.00	0.00	0.00	7,053.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,200.00	0.00	0.00	7,153.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,300.00	0.00	0.00	7,253.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,400.00	0.00	0.00	7,353.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,500.00	0.00	0.00	7,453.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,600.00	0.00	0.00	7,553.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,700.00	0.00	0.00	7,653.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,800.00	0.00	0.00	7,753.38	-697.91	-346.53	779.21	0.00	0.00	0.00
7,900.00	0.00	0.00	7,853.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,000.00	0.00	0.00	7,953.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,100.00	0.00	0.00	8,053.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,200.00	0.00	0.00	8,153.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,300.00	0.00	0.00	8,253.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,400.00	0.00	0.00	8,353.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,500.00	0.00	0.00	8,453.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,600.00	0.00	0.00	8,553.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,700.00	0.00	0.00	8,653.38	-697.91	-346.53	779.21	0.00	0.00	0.00
8,800.00	0.00	0.00	8,753.38	-697.91	-346.53	779.21	0.00	0.00	0.00

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well 596-32C-27 - Slot G
Company:	Marathon Oil Co.	TVD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Project:	Garfield County, CO NAD 83	MD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Site:	596-32C Pad	North Reference:	True
Well:	596-32C-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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)
8,900.00	0.00	0.00	8,853.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,000.00	0.00	0.00	8,953.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,100.00	0.00	0.00	9,053.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,189.62	0.00	0.00	9,143.00	-697.91	-346.53	779.21	0.00	0.00	0.00
Cameo									
9,200.00	0.00	0.00	9,153.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,300.00	0.00	0.00	9,253.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,400.00	0.00	0.00	9,353.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,500.00	0.00	0.00	9,453.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,600.00	0.00	0.00	9,553.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,679.62	0.00	0.00	9,633.00	-697.91	-346.53	779.21	0.00	0.00	0.00
Rollins									
9,700.00	0.00	0.00	9,653.38	-697.91	-346.53	779.21	0.00	0.00	0.00
9,744.62	0.00	0.00	9,698.00	-697.91	-346.53	779.21	0.00	0.00	0.00
PBHL = 1642243.24, 2240288.80 - 596-32C-27 - 596-32C-27									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
596-32C-27 - hit/miss target - Shape	0.00	0.00	9,698.00	-697.91	-346.53	1,642,243.24	2,240,288.80	39° 33' 56.867 N	108° 11' 42.652 W
- plan hits target center - Rectangle (sides W100.00 H200.00 D0.00)									
596-32C-27 Drilling Target - plan misses target center by 98.49ft at 7046.00ft MD (6999.38 TVD, -697.91 N, -346.53 E) - Point	0.00	0.00	7,000.00	-657.92	-256.53	1,642,280.55	2,240,379.94	39° 33' 57.262 N	108° 11' 41.503 W

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
9,189.62	9,143.00	Cameo		0.00		
6,536.55	6,492.00	Mesaverde		0.00		
9,679.62	9,633.00	Rollins		0.00		
4,771.32	4,740.00	Wasatch G		0.00		
5,178.37	5,144.00	Ft. Union		0.00		

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well 596-32C-27 - Slot G
Company:	Marathon Oil Co.	TVD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Project:	Garfield County, CO NAD 83	MD Reference:	GL 8333' & RKB 24' @ 8357.00ft (H&P 324)
Site:	596-32C Pad	North Reference:	True
Well:	596-32C-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
138.65	138.65	0.46	0.41	Start 61.35 hold at 138.65 MD
200.00	200.00	0.93	0.41	Start DLS 2.00 TFO -157.80
320.03	320.00	-0.49	-0.53	Start Build 1.00
821.78	820.05	-35.81	-18.05	Start 7.02° Hold At 821.78' MD
6,695.74	6,650.00	-678.69	-336.99	Start Drop -2.00
7,046.62	7,000.00	-697.91	-346.53	Start 0.00° Hold At 7046.62' MD
9,744.62	9,698.00	-697.91	-346.53	PBHL = 1642243.24, 2240288.80