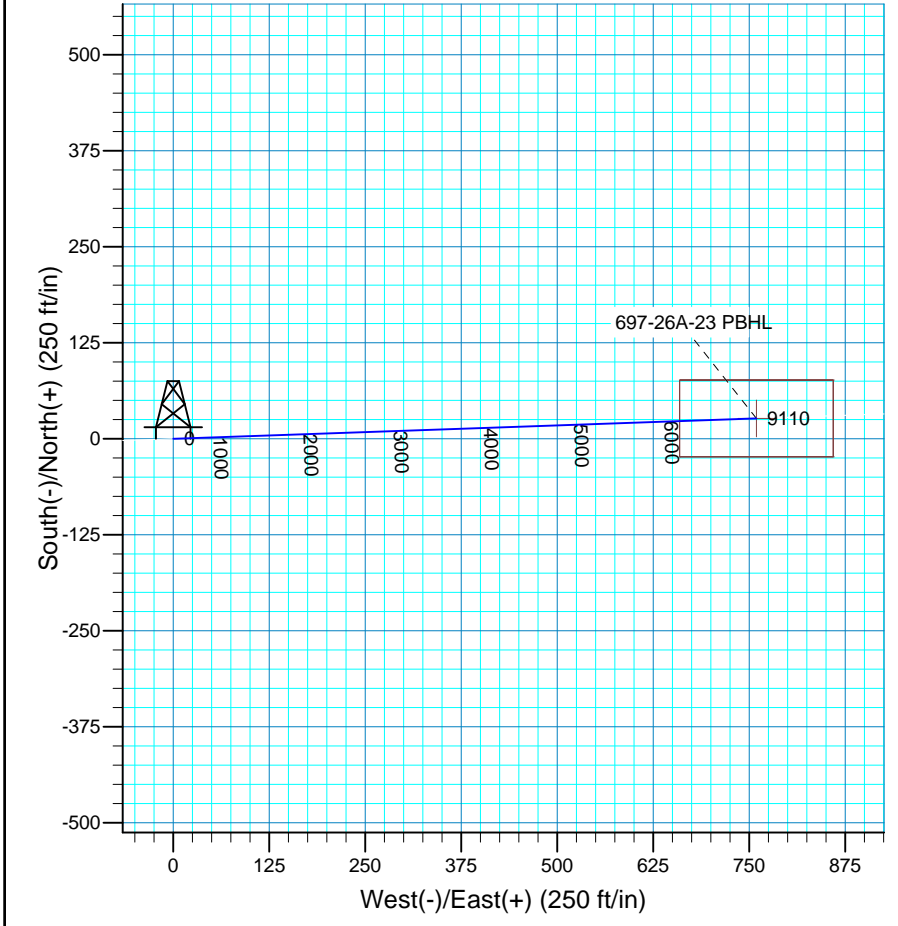
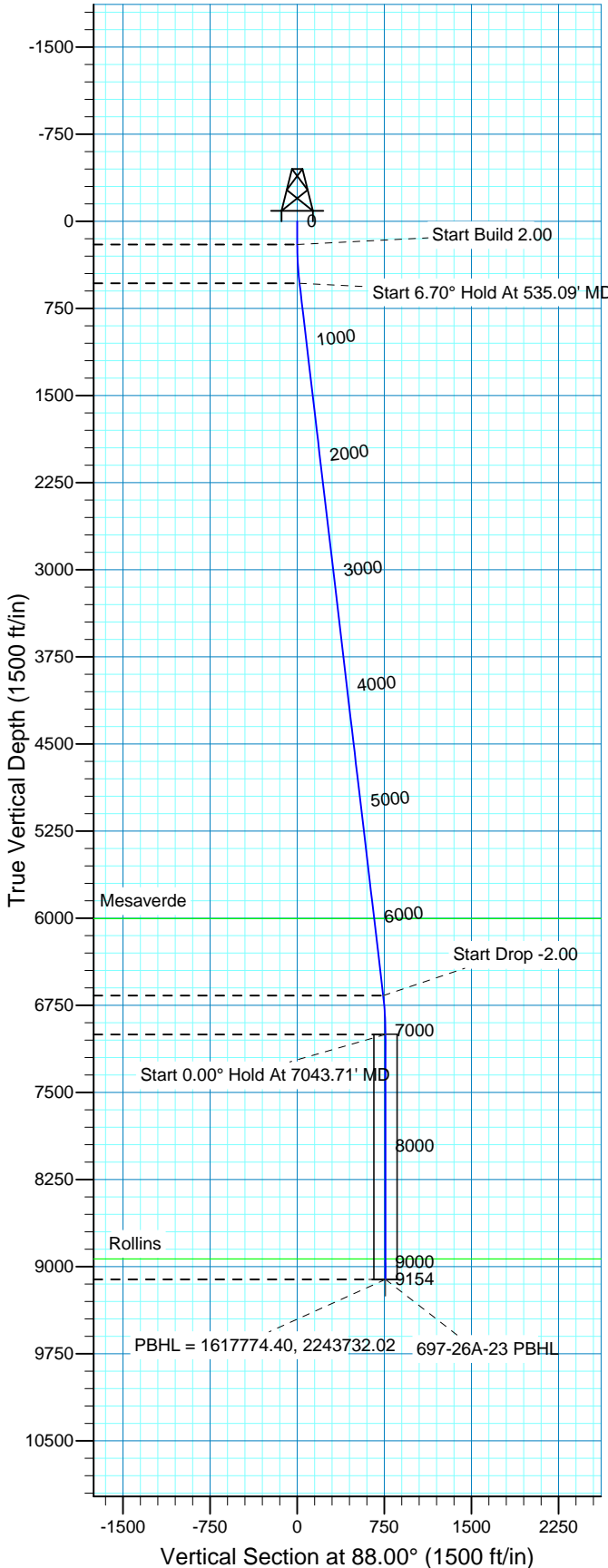


Azimuths to True North  
 Magnetic North: 10.60°  
 Magnetic Field  
 Strength: 52382.4snT  
 Dip Angle: 65.76°  
 Date: 12/31/2009  
 Model: IGRF200510

WELL DETAILS: 697-26A-23

GL 8400' & RKB 24' @ 8424.00ft (H&P 324) 8400.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1617770.28	2242972.43	39° 29' 55.913 N	108° 10' 59.114 W	H



FORMATION TOP DETAILS	Plan: Plan #1 (697-26A-23/OH)
TVDPath MDPATH Formation 6004.00 6042.39 Mesaverde 8934.00 8977.71 Rollins	Created By: Rex Hall Date: 2010-02-10
	PROJECT DETAILS: Garfield County, CO NAD 83
	Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 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	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	535.09	6.70	88.00	534.32	0.68	19.56	2.00	88.00	19.57	
4	6708.62	6.70	88.00	6665.68	25.86	739.58	0.00	0.00	740.03	
5	7043.71	0.00	0.00	7000.00	26.55	759.14	2.00	180.00	759.60	
6	9153.71	0.00	0.00	9110.00	26.55	759.14	0.00	0.00	759.60	697-26A-23 PBHL



**Scientific Drilling**  
Rocky Mountain Operations

## **Marathon Oil Co.**

Garfield County, CO NAD 83  
697-26A Pad  
697-26A-23 - Slot H  
OH

Plan: Plan #1

## **Standard Planning Report**

10 February, 2010



<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well 697-26A-23 - Slot H
<b>Company:</b>	Marathon Oil Co.	<b>TVD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Project:</b>	Garfield County, CO NAD 83	<b>MD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Site:</b>	697-26A Pad	<b>North Reference:</b>	True
<b>Well:</b>	697-26A-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

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

<b>Site</b>	697-26A Pad, Sec 26 T6S R97W				
<b>Site Position:</b>	<b>Northing:</b>	1,617,794.11 ft	<b>Latitude:</b>	39° 29' 56.147 N	
<b>From:</b> Map	<b>Easting:</b>	2,242,966.23 ft	<b>Longitude:</b>	108° 10' 59.202 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	-1.69 °

<b>Well</b>	697-26A-23 - Slot H, 865' FNL & 1419' FWL				
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,617,770.28 ft	
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,242,972.43 ft	
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	8,400.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF200510	12/31/2009	(°)	(°)	(nT)
			10.60	65.76	52,382

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	88.00

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	
535.09	6.70	88.00	534.32	0.68	19.56	2.00	2.00	0.00	88.00	
6,708.62	6.70	88.00	6,665.68	25.86	739.58	0.00	0.00	0.00	0.00	
7,043.71	0.00	0.00	7,000.00	26.55	759.14	2.00	-2.00	0.00	180.00	
9,153.71	0.00	0.00	9,110.00	26.55	759.14	0.00	0.00	0.00	0.00	697-26A-23 PBHL

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well 697-26A-23 - Slot H
<b>Company:</b>	Marathon Oil Co.	<b>TVD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Project:</b>	Garfield County, CO NAD 83	<b>MD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Site:</b>	697-26A Pad	<b>North Reference:</b>	True
<b>Well:</b>	697-26A-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
<b>Start Build 2.00</b>									
300.00	2.00	88.00	299.98	0.06	1.74	1.75	2.00	2.00	0.00
400.00	4.00	88.00	399.84	0.24	6.97	6.98	2.00	2.00	0.00
500.00	6.00	88.00	499.45	0.55	15.68	15.69	2.00	2.00	0.00
535.09	6.70	88.00	534.32	0.68	19.56	19.57	2.00	2.00	0.00
<b>Start 6.70° Hold At 535.09' MD</b>									
600.00	6.70	88.00	598.79	0.95	27.13	27.15	0.00	0.00	0.00
700.00	6.70	88.00	698.11	1.36	38.80	38.82	0.00	0.00	0.00
800.00	6.70	88.00	797.43	1.76	50.46	50.49	0.00	0.00	0.00
900.00	6.70	88.00	896.74	2.17	62.12	62.16	0.00	0.00	0.00
1,000.00	6.70	88.00	996.06	2.58	73.79	73.83	0.00	0.00	0.00
1,100.00	6.70	88.00	1,095.38	2.99	85.45	85.50	0.00	0.00	0.00
1,200.00	6.70	88.00	1,194.69	3.40	97.11	97.17	0.00	0.00	0.00
1,300.00	6.70	88.00	1,294.01	3.80	108.77	108.84	0.00	0.00	0.00
1,400.00	6.70	88.00	1,393.33	4.21	120.44	120.51	0.00	0.00	0.00
1,500.00	6.70	88.00	1,492.64	4.62	132.10	132.18	0.00	0.00	0.00
1,600.00	6.70	88.00	1,591.96	5.03	143.76	143.85	0.00	0.00	0.00
1,700.00	6.70	88.00	1,691.28	5.44	155.43	155.52	0.00	0.00	0.00
1,800.00	6.70	88.00	1,790.59	5.84	167.09	167.19	0.00	0.00	0.00
1,900.00	6.70	88.00	1,889.91	6.25	178.75	178.86	0.00	0.00	0.00
2,000.00	6.70	88.00	1,989.23	6.66	190.41	190.53	0.00	0.00	0.00
2,100.00	6.70	88.00	2,088.54	7.07	202.08	202.20	0.00	0.00	0.00
2,200.00	6.70	88.00	2,187.86	7.48	213.74	213.87	0.00	0.00	0.00
2,300.00	6.70	88.00	2,287.18	7.88	225.40	225.54	0.00	0.00	0.00
2,400.00	6.70	88.00	2,386.49	8.29	237.07	237.21	0.00	0.00	0.00
2,500.00	6.70	88.00	2,485.81	8.70	248.73	248.88	0.00	0.00	0.00
2,600.00	6.70	88.00	2,585.13	9.11	260.39	260.55	0.00	0.00	0.00
2,700.00	6.70	88.00	2,684.44	9.51	272.05	272.22	0.00	0.00	0.00
2,800.00	6.70	88.00	2,783.76	9.92	283.72	283.89	0.00	0.00	0.00
2,900.00	6.70	88.00	2,883.08	10.33	295.38	295.56	0.00	0.00	0.00
3,000.00	6.70	88.00	2,982.39	10.74	307.04	307.23	0.00	0.00	0.00
3,100.00	6.70	88.00	3,081.71	11.15	318.71	318.90	0.00	0.00	0.00
3,200.00	6.70	88.00	3,181.03	11.55	330.37	330.57	0.00	0.00	0.00
3,300.00	6.70	88.00	3,280.34	11.96	342.03	342.24	0.00	0.00	0.00
3,400.00	6.70	88.00	3,379.66	12.37	353.69	353.91	0.00	0.00	0.00
3,500.00	6.70	88.00	3,478.98	12.78	365.36	365.58	0.00	0.00	0.00
3,600.00	6.70	88.00	3,578.29	13.19	377.02	377.25	0.00	0.00	0.00
3,700.00	6.70	88.00	3,677.61	13.59	388.68	388.92	0.00	0.00	0.00
3,800.00	6.70	88.00	3,776.93	14.00	400.35	400.59	0.00	0.00	0.00
3,900.00	6.70	88.00	3,876.24	14.41	412.01	412.26	0.00	0.00	0.00
4,000.00	6.70	88.00	3,975.56	14.82	423.67	423.93	0.00	0.00	0.00
4,100.00	6.70	88.00	4,074.88	15.22	435.33	435.60	0.00	0.00	0.00
4,200.00	6.70	88.00	4,174.19	15.63	447.00	447.27	0.00	0.00	0.00
4,300.00	6.70	88.00	4,273.51	16.04	458.66	458.94	0.00	0.00	0.00
4,400.00	6.70	88.00	4,372.83	16.45	470.32	470.61	0.00	0.00	0.00
4,500.00	6.70	88.00	4,472.14	16.86	481.99	482.28	0.00	0.00	0.00
4,600.00	6.70	88.00	4,571.46	17.26	493.65	493.95	0.00	0.00	0.00
4,700.00	6.70	88.00	4,670.78	17.67	505.31	505.62	0.00	0.00	0.00
4,800.00	6.70	88.00	4,770.10	18.08	516.98	517.29	0.00	0.00	0.00
4,900.00	6.70	88.00	4,869.41	18.49	528.64	528.96	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well 697-26A-23 - Slot H
<b>Company:</b>	Marathon Oil Co.	<b>TVD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Project:</b>	Garfield County, CO NAD 83	<b>MD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Site:</b>	697-26A Pad	<b>North Reference:</b>	True
<b>Well:</b>	697-26A-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
5,000.00	6.70	88.00	4,968.73	18.90	540.30	540.63	0.00	0.00	0.00
5,100.00	6.70	88.00	5,068.05	19.30	551.96	552.30	0.00	0.00	0.00
5,200.00	6.70	88.00	5,167.36	19.71	563.63	563.97	0.00	0.00	0.00
5,300.00	6.70	88.00	5,266.68	20.12	575.29	575.64	0.00	0.00	0.00
5,400.00	6.70	88.00	5,366.00	20.53	586.95	587.31	0.00	0.00	0.00
5,500.00	6.70	88.00	5,465.31	20.94	598.62	598.98	0.00	0.00	0.00
5,600.00	6.70	88.00	5,564.63	21.34	610.28	610.65	0.00	0.00	0.00
5,700.00	6.70	88.00	5,663.95	21.75	621.94	622.32	0.00	0.00	0.00
5,800.00	6.70	88.00	5,763.26	22.16	633.60	633.99	0.00	0.00	0.00
5,900.00	6.70	88.00	5,862.58	22.57	645.27	645.66	0.00	0.00	0.00
6,000.00	6.70	88.00	5,961.90	22.97	656.93	657.33	0.00	0.00	0.00
6,042.39	6.70	88.00	6,004.00	23.15	661.87	662.28	0.00	0.00	0.00
<b>Mesaverde</b>									
6,100.00	6.70	88.00	6,061.21	23.38	668.59	669.00	0.00	0.00	0.00
6,200.00	6.70	88.00	6,160.53	23.79	680.26	680.67	0.00	0.00	0.00
6,300.00	6.70	88.00	6,259.85	24.20	691.92	692.34	0.00	0.00	0.00
6,400.00	6.70	88.00	6,359.16	24.61	703.58	704.01	0.00	0.00	0.00
6,500.00	6.70	88.00	6,458.48	25.01	715.24	715.68	0.00	0.00	0.00
6,600.00	6.70	88.00	6,557.80	25.42	726.91	727.35	0.00	0.00	0.00
6,700.00	6.70	88.00	6,657.11	25.83	738.57	739.02	0.00	0.00	0.00
6,708.62	6.70	88.00	6,665.68	25.86	739.58	740.03	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,800.00	4.87	88.00	6,756.58	26.19	748.78	749.24	2.00	-2.00	0.00
6,900.00	2.87	88.00	6,856.35	26.42	755.54	756.00	2.00	-2.00	0.00
7,000.00	0.87	88.00	6,956.29	26.54	758.81	759.27	2.00	-2.00	0.00
7,043.71	0.00	0.00	7,000.00	26.55	759.14	759.60	2.00	-2.00	0.00
<b>Start 0.00° Hold At 7043.71' MD</b>									
7,100.00	0.00	0.00	7,056.29	26.55	759.14	759.60	0.00	0.00	0.00
7,200.00	0.00	0.00	7,156.29	26.55	759.14	759.60	0.00	0.00	0.00
7,300.00	0.00	0.00	7,256.29	26.55	759.14	759.60	0.00	0.00	0.00
7,400.00	0.00	0.00	7,356.29	26.55	759.14	759.60	0.00	0.00	0.00
7,500.00	0.00	0.00	7,456.29	26.55	759.14	759.60	0.00	0.00	0.00
7,600.00	0.00	0.00	7,556.29	26.55	759.14	759.60	0.00	0.00	0.00
7,700.00	0.00	0.00	7,656.29	26.55	759.14	759.60	0.00	0.00	0.00
7,800.00	0.00	0.00	7,756.29	26.55	759.14	759.60	0.00	0.00	0.00
7,900.00	0.00	0.00	7,856.29	26.55	759.14	759.60	0.00	0.00	0.00
8,000.00	0.00	0.00	7,956.29	26.55	759.14	759.60	0.00	0.00	0.00
8,100.00	0.00	0.00	8,056.29	26.55	759.14	759.60	0.00	0.00	0.00
8,200.00	0.00	0.00	8,156.29	26.55	759.14	759.60	0.00	0.00	0.00
8,300.00	0.00	0.00	8,256.29	26.55	759.14	759.60	0.00	0.00	0.00
8,400.00	0.00	0.00	8,356.29	26.55	759.14	759.60	0.00	0.00	0.00
8,500.00	0.00	0.00	8,456.29	26.55	759.14	759.60	0.00	0.00	0.00
8,600.00	0.00	0.00	8,556.29	26.55	759.14	759.60	0.00	0.00	0.00
8,700.00	0.00	0.00	8,656.29	26.55	759.14	759.60	0.00	0.00	0.00
8,800.00	0.00	0.00	8,756.29	26.55	759.14	759.60	0.00	0.00	0.00
8,900.00	0.00	0.00	8,856.29	26.55	759.14	759.60	0.00	0.00	0.00
8,977.71	0.00	0.00	8,934.00	26.55	759.14	759.60	0.00	0.00	0.00
<b>Rollins</b>									
9,000.00	0.00	0.00	8,956.29	26.55	759.14	759.60	0.00	0.00	0.00
9,100.00	0.00	0.00	9,056.29	26.55	759.14	759.60	0.00	0.00	0.00
9,153.71	0.00	0.00	9,110.00	26.55	759.14	759.60	0.00	0.00	0.00
<b>PBHL = 1617774.40, 2243732.02 - 697-26A-23 PBHL</b>									

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well 697-26A-23 - Slot H
<b>Company:</b>	Marathon Oil Co.	<b>TVD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Project:</b>	Garfield County, CO NAD 83	<b>MD Reference:</b>	GL 8400' & RKB 24' @ 8424.00ft (H&P 324)
<b>Site:</b>	697-26A Pad	<b>North Reference:</b>	True
<b>Well:</b>	697-26A-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
697-26A-23 PBHL - hit/miss target - Shape - plan hits target center - Rectangle (sides W100.00 H200.00 D0.00)	0.00	0.00	9,110.00	26.55	759.14	1,617,774.40	2,243,732.02	39° 29' 56.175 N	108° 10' 49.429 W

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,042.39	6,004.00	Mesaverde		0.00		
8,977.71	8,934.00	Rollins		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.00	200.00	0.00	0.00	Start Build 2.00	
535.09	534.32	0.68	19.56	Start 6.70° Hold At 535.09' MD	
6,708.62	6,665.68	25.86	739.58	Start Drop -2.00	
7,043.71	7,000.00	26.55	759.14	Start 0.00° Hold At 7043.71' MD	
9,153.71	9,110.00	26.55	759.14	PBHL = 1617774.40, 2243732.02	