

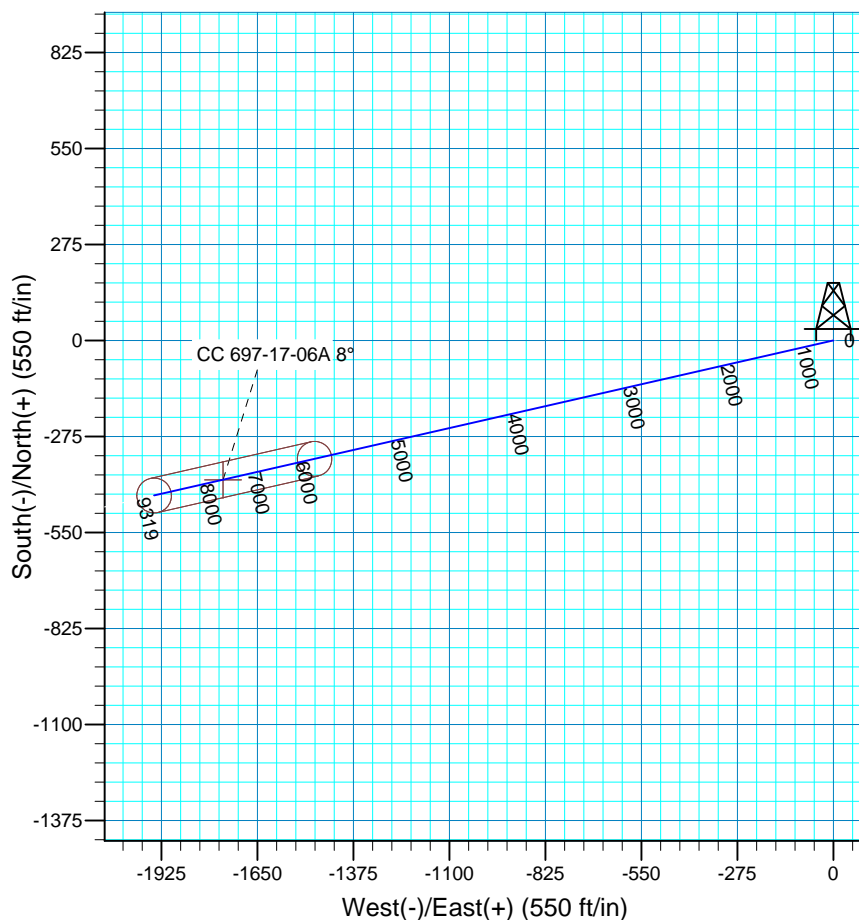
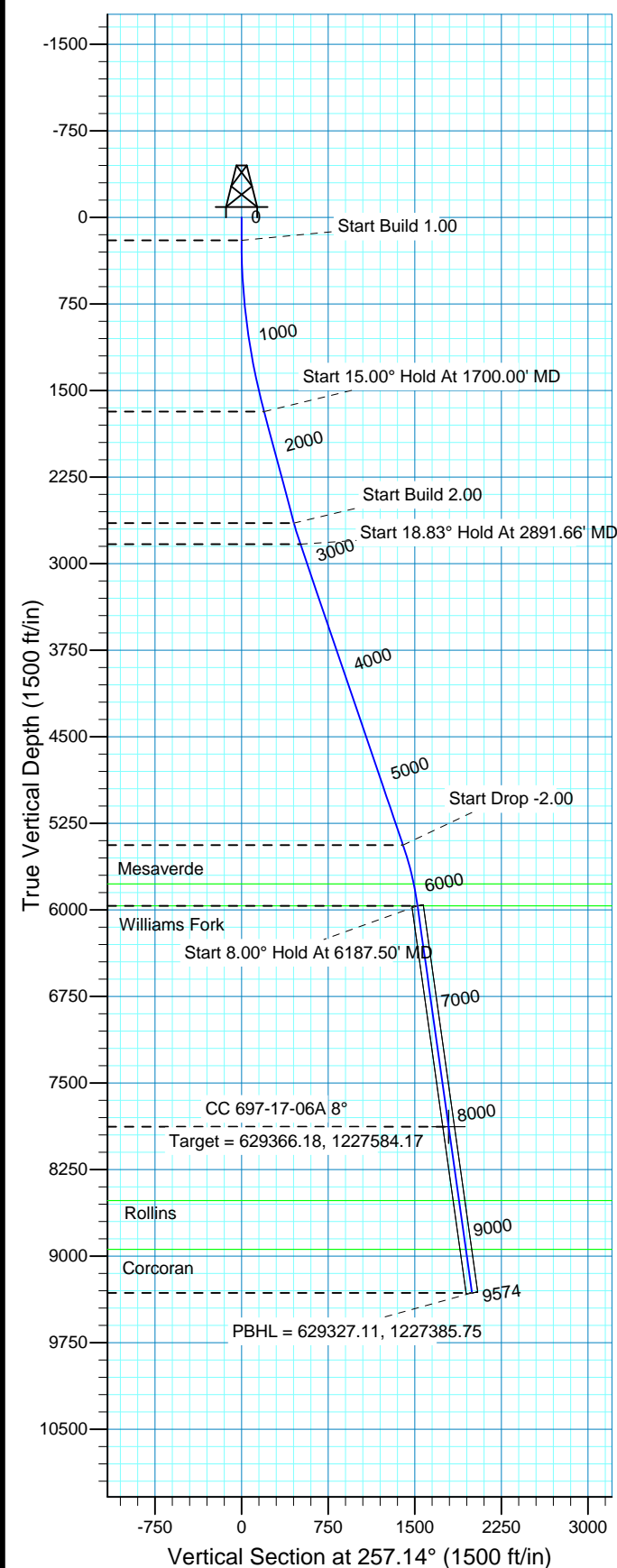
## WELL DETAILS: CC 697-17-06A

+N/-S	+E/-W	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)	8393.00		
		Northing	Easting	Latitude	Longitude
0.00	0.00	629712.68	1229343.91	39° 31' 50.006 N	108° 13' 57.231 W
					Slot Q



Azimuths to True North  
Magnetic North: 10.63°

Magnetic Field  
Strength: 52398.1snT  
Dip Angle: 65.77°  
Date: 12/8/2009  
Model: IGRF2005-10



## FORMATION TOP DETAILS

TVDPathMDPath	Formation
5775.005994.57	Mesaverde
5965.006187.50	Williams Fork
8519.008766.60	Rollins
8942.009193.75	Corcoran

## Plan: Plan #1 (CC 697-17-06A/OH)

Created By: Rex Hall Date: 2009-12-09

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  
Local North: No north reference data is available

## 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	1700.00	15.00	257.14	1682.92	-43.46	-190.33	1.00	257.14	195.23	CC 697-17-06A 8°
4	2700.00	15.00	257.14	2648.85	-101.08	-442.66	0.00	0.00	454.05	
5	2891.66	18.83	257.14	2832.18	-113.49	-497.02	2.00	0.00	509.81	
6	5645.84	18.83	257.14	5438.91	-311.41	-1363.79	0.00	0.00	1398.90	
7	6187.50	8.00	257.14	5965.00	-339.35	-1486.14	2.00	180.00	1524.39	
8	8121.32	8.00	257.14	7880.00	-399.26	-1748.52	0.00	0.00	1793.53	CC 697-17-06A 8°
9	9574.46	8.00	257.14	9319.00	-444.28	-1945.68	0.00	0.00	1995.76	

# **OXY USA RMAT**

**Garfield County, CO NAD27**

**Cascade Creek 609-14 Pad**

**CC 697-17-06A - Slot Q**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**09 December, 2009**

# Scientific Drilling International

## Planning Report

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-17-06A - Slot Q
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Site:</b>	Cascade Creek 609-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-17-06A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

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

Site		Cascade Creek 609-14 Pad, Sec 9 T6S R97W			
Site Position:		Northing:	629,789.23 ft	Latitude:	39° 31' 50.765 N
From:	Map	Easting:	1,229,350.88 ft	Longitude:	108° 13' 57.172 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-1.72 °

Well	CC 697-17-06A - Slot Q					
Well Position	+N/-S	0.00 ft	Northing:	629,712.68 ft	Latitude:	39° 31' 50.006 N
	+E/-W	0.00 ft	Easting:	1,229,343.91 ft	Longitude:	108° 13' 57.231 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	8,393.00 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>
			(°)	(°)	(nT)
	IGRF2005-10	12/8/2009	10.63	65.77	52,398

<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	257.14

<b>Plan Sections</b>										
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	
1,700.00	15.00	257.14	1,682.92	-43.46	-190.33	1.00	1.00	0.00	257.14	CC 697-17-06A 8°
2,700.00	15.00	257.14	2,648.85	-101.08	-442.66	0.00	0.00	0.00	0.00	
2,891.66	18.83	257.14	2,832.18	-113.49	-497.02	2.00	2.00	0.00	0.00	
5,645.84	18.83	257.14	5,438.91	-311.41	-1,363.79	0.00	0.00	0.00	0.00	
6,187.50	8.00	257.14	5,965.00	-339.35	-1,486.14	2.00	-2.00	0.00	180.00	
8,121.32	8.00	257.14	7,880.00	-399.26	-1,748.52	0.00	0.00	0.00	0.00	CC 697-17-06A 8°
9,574.46	8.00	257.14	9,319.00	-444.28	-1,945.68	0.00	0.00	0.00	0.00	

# Scientific Drilling International

## Planning Report

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-17-06A - Slot Q
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Site:</b>	Cascade Creek 609-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-17-06A	<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 1.00</b>									
300.00	1.00	257.14	299.99	-0.19	-0.85	0.87	1.00	1.00	0.00
400.00	2.00	257.14	399.96	-0.78	-3.40	3.49	1.00	1.00	0.00
500.00	3.00	257.14	499.86	-1.75	-7.66	7.85	1.00	1.00	0.00
600.00	4.00	257.14	599.68	-3.11	-13.61	13.96	1.00	1.00	0.00
700.00	5.00	257.14	699.37	-4.85	-21.26	21.80	1.00	1.00	0.00
800.00	6.00	257.14	798.90	-6.99	-30.60	31.39	1.00	1.00	0.00
900.00	7.00	257.14	898.26	-9.51	-41.64	42.71	1.00	1.00	0.00
1,000.00	8.00	257.14	997.40	-12.41	-54.36	55.76	1.00	1.00	0.00
1,100.00	9.00	257.14	1,096.30	-15.70	-68.77	70.54	1.00	1.00	0.00
1,200.00	10.00	257.14	1,194.93	-19.38	-84.86	87.05	1.00	1.00	0.00
1,300.00	11.00	257.14	1,293.26	-23.43	-102.63	105.27	1.00	1.00	0.00
1,400.00	12.00	257.14	1,391.25	-27.87	-122.06	125.21	1.00	1.00	0.00
1,500.00	13.00	257.14	1,488.87	-32.69	-143.16	146.85	1.00	1.00	0.00
1,600.00	14.00	257.14	1,586.11	-37.89	-165.92	170.19	1.00	1.00	0.00
1,700.00	15.00	257.14	1,682.92	-43.46	-190.33	195.23	1.00	1.00	0.00
<b>Start 15.00° Hold At 1700.00' MD</b>									
1,800.00	15.00	257.14	1,779.52	-49.22	-215.56	221.11	0.00	0.00	0.00
1,900.00	15.00	257.14	1,876.11	-54.98	-240.80	246.99	0.00	0.00	0.00
2,000.00	15.00	257.14	1,972.70	-60.75	-266.03	272.88	0.00	0.00	0.00
2,100.00	15.00	257.14	2,069.29	-66.51	-291.26	298.76	0.00	0.00	0.00
2,200.00	15.00	257.14	2,165.89	-72.27	-316.49	324.64	0.00	0.00	0.00
2,300.00	15.00	257.14	2,262.48	-78.03	-341.73	350.52	0.00	0.00	0.00
2,400.00	15.00	257.14	2,359.07	-83.79	-366.96	376.40	0.00	0.00	0.00
2,500.00	15.00	257.14	2,455.66	-89.55	-392.19	402.29	0.00	0.00	0.00
2,600.00	15.00	257.14	2,552.26	-95.32	-417.42	428.17	0.00	0.00	0.00
2,700.00	15.00	257.14	2,648.85	-101.08	-442.66	454.05	0.00	0.00	0.00
<b>Start Build 2.00</b>									
2,800.00	17.00	257.14	2,744.97	-107.21	-469.53	481.61	2.00	2.00	0.00
2,891.66	18.83	257.14	2,832.18	-113.49	-497.02	509.81	2.00	2.00	0.00
<b>Start 18.83° Hold At 2891.66' MD</b>									
2,900.00	18.83	257.14	2,840.08	-114.09	-499.64	512.50	0.00	0.00	0.00
3,000.00	18.83	257.14	2,934.72	-121.28	-531.11	544.78	0.00	0.00	0.00
3,100.00	18.83	257.14	3,029.37	-128.46	-562.58	577.06	0.00	0.00	0.00
3,200.00	18.83	257.14	3,124.01	-135.65	-594.05	609.35	0.00	0.00	0.00
3,300.00	18.83	257.14	3,218.66	-142.83	-625.53	641.63	0.00	0.00	0.00
3,400.00	18.83	257.14	3,313.31	-150.02	-657.00	673.91	0.00	0.00	0.00
3,500.00	18.83	257.14	3,407.95	-157.21	-688.47	706.19	0.00	0.00	0.00
3,600.00	18.83	257.14	3,502.60	-164.39	-719.94	738.47	0.00	0.00	0.00
3,700.00	18.83	257.14	3,597.25	-171.58	-751.41	770.75	0.00	0.00	0.00
3,800.00	18.83	257.14	3,691.89	-178.77	-782.88	803.03	0.00	0.00	0.00
3,900.00	18.83	257.14	3,786.54	-185.95	-814.35	835.32	0.00	0.00	0.00
4,000.00	18.83	257.14	3,881.18	-193.14	-845.83	867.60	0.00	0.00	0.00
4,100.00	18.83	257.14	3,975.83	-200.32	-877.30	899.88	0.00	0.00	0.00
4,200.00	18.83	257.14	4,070.48	-207.51	-908.77	932.16	0.00	0.00	0.00
4,300.00	18.83	257.14	4,165.12	-214.70	-940.24	964.44	0.00	0.00	0.00
4,400.00	18.83	257.14	4,259.77	-221.88	-971.71	996.72	0.00	0.00	0.00
4,500.00	18.83	257.14	4,354.42	-229.07	-1,003.18	1,029.00	0.00	0.00	0.00
4,600.00	18.83	257.14	4,449.06	-236.26	-1,034.65	1,061.29	0.00	0.00	0.00
4,700.00	18.83	257.14	4,543.71	-243.44	-1,066.13	1,093.57	0.00	0.00	0.00

# Scientific Drilling International

## Planning Report

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-17-06A - Slot Q
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Site:</b>	Cascade Creek 609-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-17-06A	<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)
4,800.00	18.83	257.14	4,638.35	-250.63	-1,097.60	1,125.85	0.00	0.00	0.00
4,900.00	18.83	257.14	4,733.00	-257.81	-1,129.07	1,158.13	0.00	0.00	0.00
5,000.00	18.83	257.14	4,827.65	-265.00	-1,160.54	1,190.41	0.00	0.00	0.00
5,100.00	18.83	257.14	4,922.29	-272.19	-1,192.01	1,222.69	0.00	0.00	0.00
5,200.00	18.83	257.14	5,016.94	-279.37	-1,223.48	1,254.97	0.00	0.00	0.00
5,300.00	18.83	257.14	5,111.59	-286.56	-1,254.95	1,287.26	0.00	0.00	0.00
5,400.00	18.83	257.14	5,206.23	-293.75	-1,286.43	1,319.54	0.00	0.00	0.00
5,500.00	18.83	257.14	5,300.88	-300.93	-1,317.90	1,351.82	0.00	0.00	0.00
5,600.00	18.83	257.14	5,395.52	-308.12	-1,349.37	1,384.10	0.00	0.00	0.00
5,645.84	18.83	257.14	5,438.91	-311.41	-1,363.79	1,398.90	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,700.00	17.75	257.14	5,490.33	-315.20	-1,380.37	1,415.90	2.00	-2.00	0.00
5,800.00	15.75	257.14	5,586.08	-321.61	-1,408.46	1,444.71	2.00	-2.00	0.00
5,900.00	13.75	257.14	5,682.78	-327.28	-1,433.28	1,470.17	2.00	-2.00	0.00
5,994.57	11.86	257.14	5,775.00	-331.94	-1,453.71	1,491.13	2.00	-2.00	0.00
<b>Mesaverde</b>									
6,000.00	11.75	257.14	5,780.31	-332.19	-1,454.80	1,492.24	2.00	-2.00	0.00
6,100.00	9.75	257.14	5,878.55	-336.34	-1,472.98	1,510.89	2.00	-2.00	0.00
6,187.50	8.00	257.14	5,965.00	-339.35	-1,486.14	1,524.39	2.00	-2.00	0.00
<b>Start 8.00° Hold At 6187.50' MD - Williams Fork</b>									
6,200.00	8.00	257.14	5,977.38	-339.74	-1,487.84	1,526.13	0.00	0.00	0.00
6,300.00	8.00	257.14	6,076.41	-342.83	-1,501.40	1,540.05	0.00	0.00	0.00
6,400.00	8.00	257.14	6,175.43	-345.93	-1,514.97	1,553.97	0.00	0.00	0.00
6,500.00	8.00	257.14	6,274.46	-349.03	-1,528.54	1,567.88	0.00	0.00	0.00
6,600.00	8.00	257.14	6,373.49	-352.13	-1,542.11	1,581.80	0.00	0.00	0.00
6,700.00	8.00	257.14	6,472.52	-355.23	-1,555.68	1,595.72	0.00	0.00	0.00
6,800.00	8.00	257.14	6,571.54	-358.33	-1,569.24	1,609.63	0.00	0.00	0.00
6,900.00	8.00	257.14	6,670.57	-361.42	-1,582.81	1,623.55	0.00	0.00	0.00
7,000.00	8.00	257.14	6,769.60	-364.52	-1,596.38	1,637.47	0.00	0.00	0.00
7,100.00	8.00	257.14	6,868.62	-367.62	-1,609.95	1,651.39	0.00	0.00	0.00
7,200.00	8.00	257.14	6,967.65	-370.72	-1,623.52	1,665.30	0.00	0.00	0.00
7,300.00	8.00	257.14	7,066.68	-373.82	-1,637.08	1,679.22	0.00	0.00	0.00
7,400.00	8.00	257.14	7,165.70	-376.91	-1,650.65	1,693.14	0.00	0.00	0.00
7,500.00	8.00	257.14	7,264.73	-380.01	-1,664.22	1,707.06	0.00	0.00	0.00
7,600.00	8.00	257.14	7,363.76	-383.11	-1,677.79	1,720.97	0.00	0.00	0.00
7,700.00	8.00	257.14	7,462.78	-386.21	-1,691.36	1,734.89	0.00	0.00	0.00
7,800.00	8.00	257.14	7,561.81	-389.31	-1,704.93	1,748.81	0.00	0.00	0.00
7,900.00	8.00	257.14	7,660.84	-392.41	-1,718.49	1,762.73	0.00	0.00	0.00
8,000.00	8.00	257.14	7,759.86	-395.50	-1,732.06	1,776.64	0.00	0.00	0.00
8,100.00	8.00	257.14	7,858.89	-398.60	-1,745.63	1,790.56	0.00	0.00	0.00
8,121.32	8.00	257.14	7,880.00	-399.26	-1,748.52	1,793.53	0.00	0.00	0.00
<b>Target = 629366.18, 1227584.17 - CC 697-17-06A 8° - CC 697-17-06A 8°</b>									
8,200.00	8.00	257.14	7,957.92	-401.70	-1,759.20	1,804.48	0.00	0.00	0.00
8,300.00	8.00	257.14	8,056.94	-404.80	-1,772.77	1,818.39	0.00	0.00	0.00
8,400.00	8.00	257.14	8,155.97	-407.90	-1,786.33	1,832.31	0.00	0.00	0.00
8,500.00	8.00	257.14	8,255.00	-410.99	-1,799.90	1,846.23	0.00	0.00	0.00
8,600.00	8.00	257.14	8,354.02	-414.09	-1,813.47	1,860.15	0.00	0.00	0.00
8,700.00	8.00	257.14	8,453.05	-417.19	-1,827.04	1,874.06	0.00	0.00	0.00
8,766.60	8.00	257.14	8,519.00	-419.25	-1,836.07	1,883.33	0.00	0.00	0.00
<b>Rollins</b>									
8,800.00	8.00	257.14	8,552.08	-420.29	-1,840.61	1,887.98	0.00	0.00	0.00
8,900.00	8.00	257.14	8,651.10	-423.39	-1,854.17	1,901.90	0.00	0.00	0.00
9,000.00	8.00	257.14	8,750.13	-426.49	-1,867.74	1,915.82	0.00	0.00	0.00

# Scientific Drilling International

## Planning Report

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-17-06A - Slot Q
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
<b>Site:</b>	Cascade Creek 609-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-17-06A	<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)
9,100.00	8.00	257.14	8,849.16	-429.58	-1,881.31	1,929.73	0.00	0.00	0.00
9,193.75	8.00	257.14	8,942.00	-432.49	-1,894.03	1,942.78	0.00	0.00	0.00
<b>Corcoran</b>									
9,200.00	8.00	257.14	8,948.19	-432.68	-1,894.88	1,943.65	0.00	0.00	0.00
9,300.00	8.00	257.14	9,047.21	-435.78	-1,908.45	1,957.57	0.00	0.00	0.00
9,400.00	8.00	257.14	9,146.24	-438.88	-1,922.01	1,971.48	0.00	0.00	0.00
9,500.00	8.00	257.14	9,245.27	-441.98	-1,935.58	1,985.40	0.00	0.00	0.00
9,574.46	8.00	257.14	9,319.00	-444.28	-1,945.68	1,995.76	0.00	0.00	0.00
<b>PBHL = 629327.11, 1227385.75</b>									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
CC 697-17-06A 8°	-8.00	257.14	7,880.00	-399.26	-1,748.52	629,366.19	1,227,584.18	39° 31' 46.060 N	108° 14' 19.547 W
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 50.00)									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,994.57	5,775.00	Mesaverde		0.00	
6,187.50	5,965.00	Williams Fork		0.00	
8,766.60	8,519.00	Rollins		0.00	
9,193.75	8,942.00	Corcoran		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 1.00
1,700.00	1,682.92	-43.46	-190.33	Start 15.00° Hold At 1700.00' MD
2,700.00	2,648.85	-101.08	-442.66	Start Build 2.00
2,891.66	2,832.18	-113.49	-497.02	Start 18.83° Hold At 2891.66' MD
5,645.84	5,438.91	-311.41	-1,363.79	Start Drop -2.00
6,187.50	5,965.00	-339.35	-1,486.14	Start 8.00° Hold At 6187.50' MD
8,121.32	7,880.00	-399.26	-1,748.52	Target = 629366.18, 1227584.17
9,574.46	9,319.00	-444.28	-1,945.68	PBHL = 629327.11, 1227385.75