

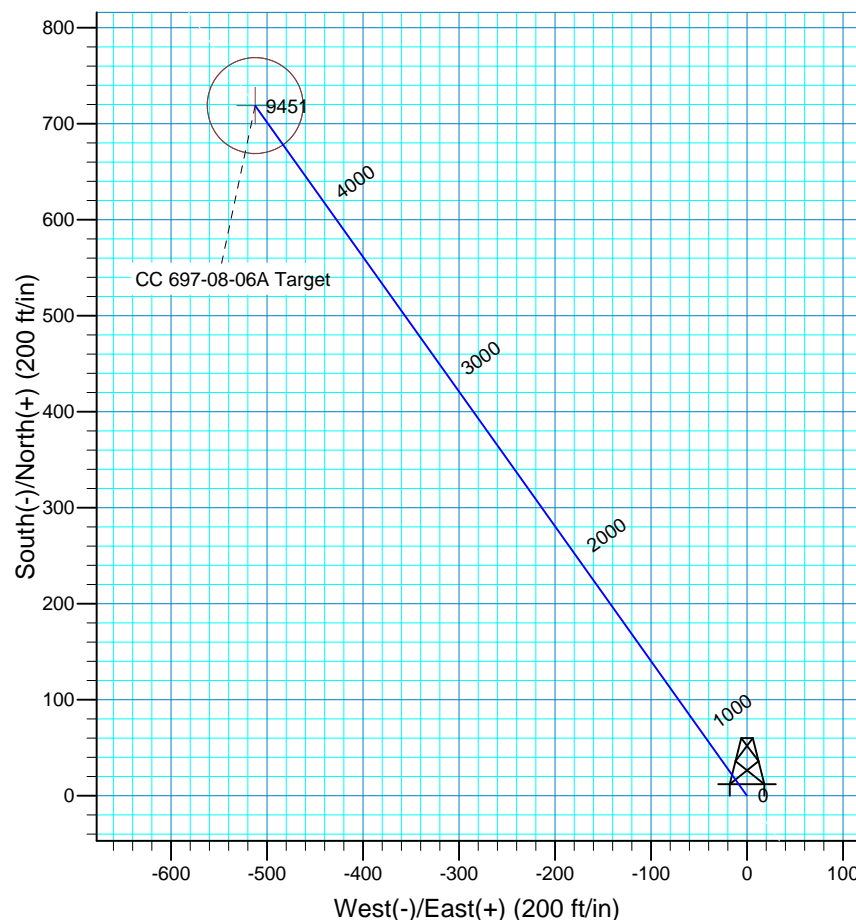
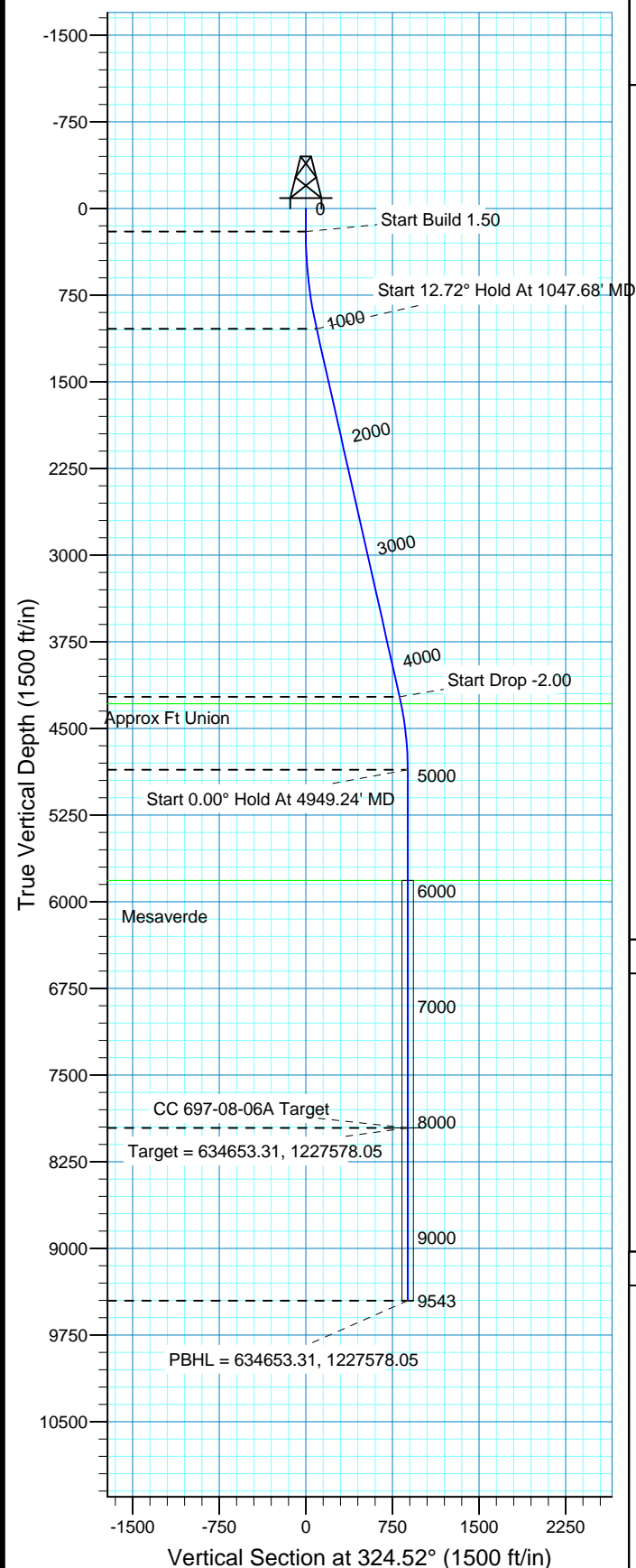
## WELL DETAILS: CC 697-08-06A

GL 8411' & RKB 30' @ 8441.00ft 8411.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 633919.36 1228068.51 39° 32' 31.185 N 108° 14' 15.119 W



Azimuths to True North  
Magnetic North: 10.79°

Magnetic Field  
Strength: 52514.9snT  
Dip Angle: 65.81°  
Date: 2008/10/15  
Model: IGRF2005-10



## FORMATION TOP DETAILS

TVDPath MDPPath Formation  
4286.00 4374.39 Approx Ft Union  
5816.00 5908.24 Mesaverde

Plan: Plan #3 (CC 697-08-06A/OH)

Created By: Rex Hall Date: 2010-06-24

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	1047.68	12.72	324.52	1040.74	76.28	-54.37	1.50	324.52	93.67	
4	4313.48	12.72	324.52	4226.45	661.63	-471.57	0.00	0.00	812.49	
5	4949.24	0.00	0.00	4857.00	718.84	-512.35	2.00	180.00	882.74	
6	8049.24	0.00	0.00	7957.00	718.84	-512.35	0.00	0.00	882.74	
7	9543.24	0.00	0.00	9451.00	718.84	-512.35	0.00	0.00	882.74	CC 697-08-06A Target



# **OXY USA RMAT**

**Garfield County, CO NAD27  
Cascade Creek 608-41 Pad  
CC 697-08-06A  
OH**

**Plan: Plan #3**

## **Standard Planning Report**

**24 June, 2010**



<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-08-06A
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Site:</b>	Cascade Creek 608-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-08-06A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3		

<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		

<b>Site</b>	Cascade Creek 608-41 Pad, SEction 8 T6S R97W		
<b>Site Position:</b>		<b>Northing:</b>	633,966.94 ft
<b>From:</b>	Map	<b>Easting:</b>	1,228,168.67 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in
		<b>Latitude:</b>	39° 32' 31.685 N
		<b>Longitude:</b>	108° 14' 13.859 W
		<b>Grid Convergence:</b>	-1.73 °

<b>Well</b>	CC 697-08-06A,		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	2008/10/15	10.79	65.81	52,515

<b>Design</b>	Plan #3			
<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	324.52

<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	
1,047.68	12.72	324.52	1,040.74	76.28	-54.37	1.50	1.50	0.00	324.52	
4,313.48	12.72	324.52	4,226.45	661.63	-471.57	0.00	0.00	0.00	0.00	
4,949.24	0.00	0.00	4,857.00	718.84	-512.35	2.00	-2.00	0.00	180.00	
8,049.24	0.00	0.00	7,957.00	718.84	-512.35	0.00	0.00	0.00	0.00	CC 697-08-06A Target
9,543.24	0.00	0.00	9,451.00	718.84	-512.35	0.00	0.00	0.00	0.00	

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-08-06A
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Site:</b>	Cascade Creek 608-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-08-06A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3		

### 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 1.50</b>									
300.00	1.50	324.52	299.99	1.07	-0.76	1.31	1.50	1.50	0.00
400.00	3.00	324.52	399.91	4.26	-3.04	5.23	1.50	1.50	0.00
500.00	4.50	324.52	499.69	9.59	-6.83	11.77	1.50	1.50	0.00
600.00	6.00	324.52	599.27	17.04	-12.14	20.92	1.50	1.50	0.00
700.00	7.50	324.52	698.57	26.61	-18.97	32.68	1.50	1.50	0.00
800.00	9.00	324.52	797.54	38.30	-27.29	47.03	1.50	1.50	0.00
900.00	10.50	324.52	896.09	52.09	-37.12	63.96	1.50	1.50	0.00
1,000.00	12.00	324.52	994.16	67.97	-48.45	83.47	1.50	1.50	0.00
1,047.68	12.72	324.52	1,040.74	76.28	-54.37	93.67	1.50	1.50	0.00
<b>Start 12.72° Hold At 1047.68' MD</b>									
1,100.00	12.72	324.52	1,091.78	85.66	-61.05	105.19	0.00	0.00	0.00
1,200.00	12.72	324.52	1,189.32	103.58	-73.83	127.20	0.00	0.00	0.00
1,300.00	12.72	324.52	1,286.87	121.51	-86.60	149.21	0.00	0.00	0.00
1,400.00	12.72	324.52	1,384.42	139.43	-99.38	171.22	0.00	0.00	0.00
1,500.00	12.72	324.52	1,481.97	157.35	-112.15	193.23	0.00	0.00	0.00
1,600.00	12.72	324.52	1,579.51	175.28	-124.93	215.24	0.00	0.00	0.00
1,700.00	12.72	324.52	1,677.06	193.20	-137.70	237.25	0.00	0.00	0.00
1,800.00	12.72	324.52	1,774.61	211.13	-150.48	259.26	0.00	0.00	0.00
1,900.00	12.72	324.52	1,872.16	229.05	-163.25	281.27	0.00	0.00	0.00
2,000.00	12.72	324.52	1,969.70	246.97	-176.03	303.28	0.00	0.00	0.00
2,100.00	12.72	324.52	2,067.25	264.90	-188.80	325.29	0.00	0.00	0.00
2,200.00	12.72	324.52	2,164.80	282.82	-201.58	347.30	0.00	0.00	0.00
2,300.00	12.72	324.52	2,262.35	300.74	-214.35	369.31	0.00	0.00	0.00
2,400.00	12.72	324.52	2,359.90	318.67	-227.13	391.33	0.00	0.00	0.00
2,500.00	12.72	324.52	2,457.44	336.59	-239.90	413.34	0.00	0.00	0.00
2,600.00	12.72	324.52	2,554.99	354.51	-252.68	435.35	0.00	0.00	0.00
2,700.00	12.72	324.52	2,652.54	372.44	-265.45	457.36	0.00	0.00	0.00
2,800.00	12.72	324.52	2,750.09	390.36	-278.23	479.37	0.00	0.00	0.00
2,900.00	12.72	324.52	2,847.63	408.29	-291.00	501.38	0.00	0.00	0.00
3,000.00	12.72	324.52	2,945.18	426.21	-303.78	523.39	0.00	0.00	0.00
3,100.00	12.72	324.52	3,042.73	444.13	-316.55	545.40	0.00	0.00	0.00
3,200.00	12.72	324.52	3,140.28	462.06	-329.33	567.41	0.00	0.00	0.00
3,300.00	12.72	324.52	3,237.82	479.98	-342.10	589.42	0.00	0.00	0.00
3,400.00	12.72	324.52	3,335.37	497.90	-354.88	611.43	0.00	0.00	0.00
3,500.00	12.72	324.52	3,432.92	515.83	-367.65	633.44	0.00	0.00	0.00
3,600.00	12.72	324.52	3,530.47	533.75	-380.43	655.45	0.00	0.00	0.00
3,700.00	12.72	324.52	3,628.01	551.68	-393.20	677.46	0.00	0.00	0.00
3,800.00	12.72	324.52	3,725.56	569.60	-405.98	699.47	0.00	0.00	0.00
3,900.00	12.72	324.52	3,823.11	587.52	-418.75	721.48	0.00	0.00	0.00
4,000.00	12.72	324.52	3,920.66	605.45	-431.53	743.49	0.00	0.00	0.00
4,100.00	12.72	324.52	4,018.21	623.37	-444.30	765.50	0.00	0.00	0.00
4,200.00	12.72	324.52	4,115.75	641.29	-457.07	787.51	0.00	0.00	0.00
4,300.00	12.72	324.52	4,213.30	659.22	-469.85	809.52	0.00	0.00	0.00
4,313.48	12.72	324.52	4,226.45	661.63	-471.57	812.49	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
4,374.39	11.50	324.52	4,286.00	672.04	-478.99	825.26	2.00	-2.00	0.00
<b>Approx Ft Union</b>									
4,400.00	10.98	324.52	4,311.12	676.10	-481.88	830.26	2.00	-2.00	0.00
4,500.00	8.98	324.52	4,409.60	690.22	-491.95	847.59	2.00	-2.00	0.00

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-08-06A
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Site:</b>	Cascade Creek 608-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-08-06A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3		

**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	6.98	324.52	4,508.63	701.53	-500.01	861.48	2.00	-2.00	0.00
4,700.00	4.98	324.52	4,608.08	710.02	-506.06	871.91	2.00	-2.00	0.00
4,800.00	2.98	324.52	4,707.83	715.68	-510.09	878.86	2.00	-2.00	0.00
4,900.00	0.98	324.52	4,807.77	718.50	-512.10	882.32	2.00	-2.00	0.00
4,949.24	0.00	0.00	4,857.00	718.84	-512.35	882.74	2.00	-2.00	0.00
<b>Start 0.00° Hold At 4949.24' MD</b>									
5,000.00	0.00	0.00	4,907.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,100.00	0.00	0.00	5,007.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,200.00	0.00	0.00	5,107.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,300.00	0.00	0.00	5,207.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,400.00	0.00	0.00	5,307.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,500.00	0.00	0.00	5,407.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,600.00	0.00	0.00	5,507.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,700.00	0.00	0.00	5,607.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,800.00	0.00	0.00	5,707.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,900.00	0.00	0.00	5,807.76	718.84	-512.35	882.74	0.00	0.00	0.00
5,908.24	0.00	0.00	5,816.00	718.84	-512.35	882.74	0.00	0.00	0.00
<b>Mesaverde</b>									
6,000.00	0.00	0.00	5,907.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,100.00	0.00	0.00	6,007.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,200.00	0.00	0.00	6,107.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,300.00	0.00	0.00	6,207.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,400.00	0.00	0.00	6,307.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,500.00	0.00	0.00	6,407.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,600.00	0.00	0.00	6,507.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,700.00	0.00	0.00	6,607.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,800.00	0.00	0.00	6,707.76	718.84	-512.35	882.74	0.00	0.00	0.00
6,900.00	0.00	0.00	6,807.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,000.00	0.00	0.00	6,907.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,100.00	0.00	0.00	7,007.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,200.00	0.00	0.00	7,107.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,300.00	0.00	0.00	7,207.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,400.00	0.00	0.00	7,307.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,500.00	0.00	0.00	7,407.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,600.00	0.00	0.00	7,507.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,700.00	0.00	0.00	7,607.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,800.00	0.00	0.00	7,707.76	718.84	-512.35	882.74	0.00	0.00	0.00
7,900.00	0.00	0.00	7,807.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,000.00	0.00	0.00	7,907.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,049.24	0.00	0.00	7,957.00	718.84	-512.35	882.74	0.00	0.00	0.00
<b>Target = 634653.31, 1227578.05 - CC 697-08-06A Target</b>									
8,100.00	0.00	0.00	8,007.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,200.00	0.00	0.00	8,107.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,300.00	0.00	0.00	8,207.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,400.00	0.00	0.00	8,307.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,500.00	0.00	0.00	8,407.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,600.00	0.00	0.00	8,507.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,700.00	0.00	0.00	8,607.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,800.00	0.00	0.00	8,707.76	718.84	-512.35	882.74	0.00	0.00	0.00
8,900.00	0.00	0.00	8,807.76	718.84	-512.35	882.74	0.00	0.00	0.00
9,000.00	0.00	0.00	8,907.76	718.84	-512.35	882.74	0.00	0.00	0.00
9,100.00	0.00	0.00	9,007.76	718.84	-512.35	882.74	0.00	0.00	0.00
9,200.00	0.00	0.00	9,107.76	718.84	-512.35	882.74	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.16 Multi-User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-08-06A
<b>Company:</b>	OXY USA RMAT	<b>TVD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Project:</b>	Garfield County, CO NAD27	<b>MD Reference:</b>	GL 8411' & RKB 30' @ 8441.00ft
<b>Site:</b>	Cascade Creek 608-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-08-06A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3		

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)
9,300.00	0.00	0.00	9,207.76	718.84	-512.35	882.74	0.00	0.00	0.00
9,400.00	0.00	0.00	9,307.76	718.84	-512.35	882.74	0.00	0.00	0.00
9,500.00	0.00	0.00	9,407.76	718.84	-512.35	882.74	0.00	0.00	0.00
9,543.24	0.00	0.00	9,451.00	718.84	-512.35	882.74	0.00	0.00	0.00
PBHL = 634653.31, 1227578.05									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
CC 697-08-06A Target	0.00	0.00	7,957.00	718.84	-512.35	634,653.31	1,227,578.05	39° 32' 38.290 N	108° 14' 21.659 W
- plan hits target center									
- Circle (radius 50.00)									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,374.39	4,286.00	Approx Ft Union		0.00	
5,908.24	5,816.00	Mesaverde		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
200.00	200.00	0.00	0.00	Start Build 1.50
1,047.68	1,040.74	76.28	-54.37	Start 12.72° Hold At 1047.68' MD
4,313.48	4,226.45	661.63	-471.57	Start Drop -2.00
4,949.24	4,857.00	718.84	-512.35	Start 0.00° Hold At 4949.24' MD
8,049.24	7,957.00	718.84	-512.35	Target = 634653.31, 1227578.05
9,543.24	9,451.00	718.84	-512.35	PBHL = 634653.31, 1227578.05