



Project: GRAND VALLEY  
Site: CASCADE CREEK 609-33 PAD  
Well: CASCADE CREEK 697-09-29A  
Wellbore: CASCADE CREEK 697-09-29A  
Design: Plan 2

# OXY USA MID-CON

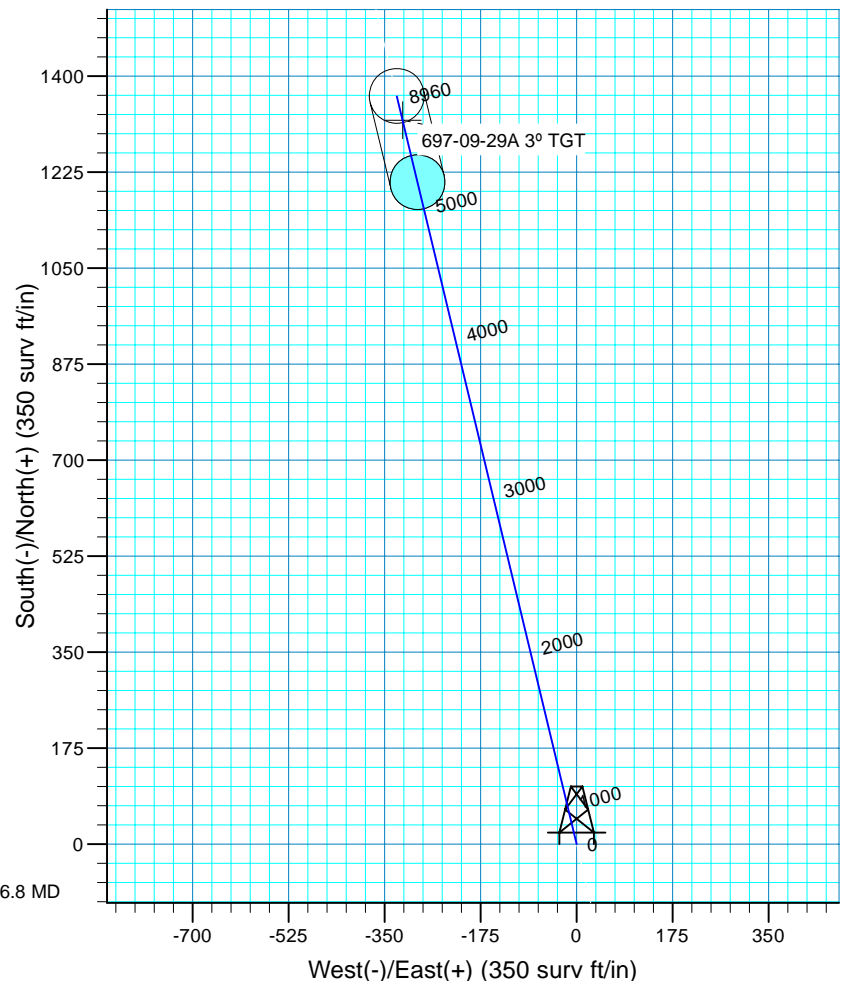
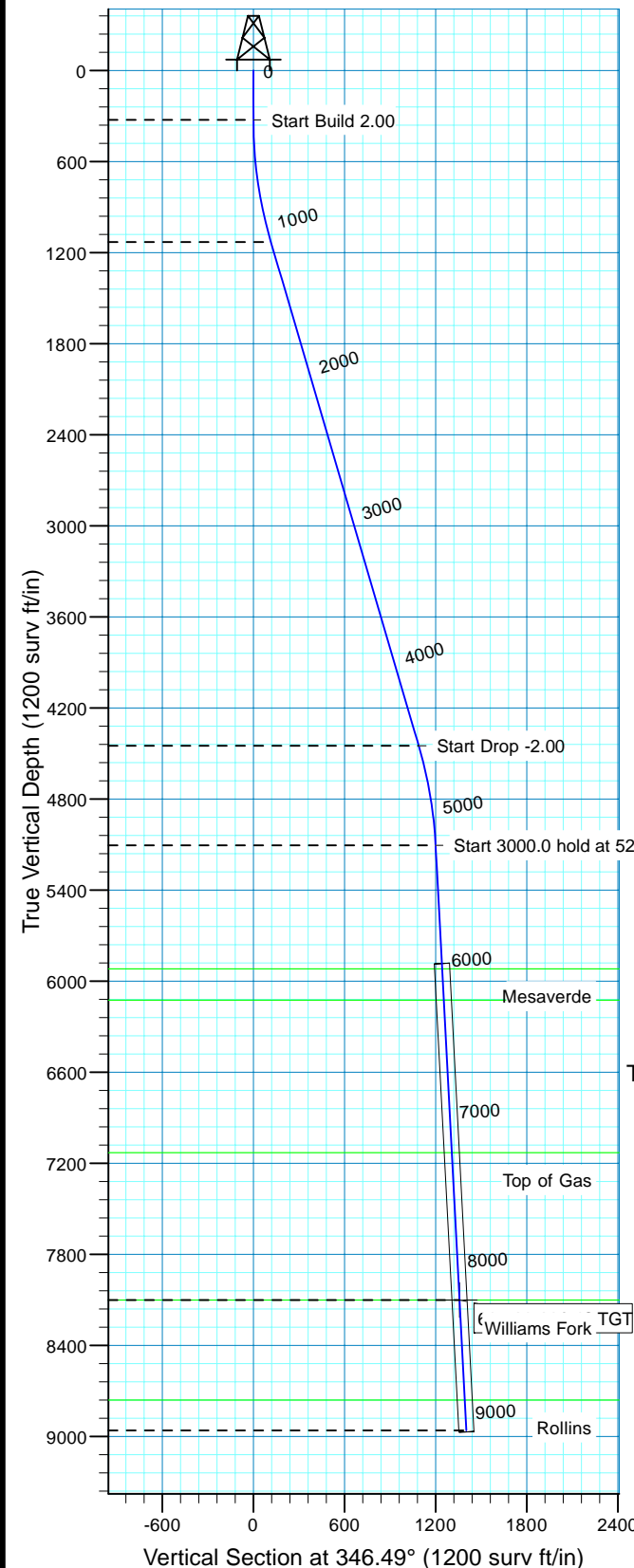
## WELL DETAILS: CASCADE CREEK 697-09-29A

WELL @ 8410.0surv ft (Original Well Elev) 8380.0  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 631282.80 1232473.339° 32' 6.44608° 13' 17.909 WCC#697-09-29A



Azimuths to True North  
Magnetic North: 10.53°

Magnetic Field  
Strength: 52332.0snT  
Dip Angle: 65.76°  
Date: 9/2/2010  
Model: IGRF200510



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
5920.0	6082.8	Mesaverde
6125.0	6288.1	Ohio Creek
7130.0	7294.4	Top of Gas
8101.3	8267.1	Williams Fork
8760.0	8926.7	Rollins

CASCADE CREEK 697-09-29A/CASCADE CREEK 697-09-29A

Created By: Ron Bevans Date: 2010-07-09

## PROJECT DETAILS: GRAND VALLEY

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: True

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
325.0	0.00	0.00	325.0	0.0	0.0	0.00	0.0	
1142.0	16.34	46.49	1131.0	112.5	-27.0	2.00	115.7	
4599.8	16.34	46.49	4449.1	1058.4	-254.4	0.00	1088.5	
5266.8	3.00	46.49	5105.1	1167.1	-280.5	2.00	200.3	
8266.8	3.00	46.49	8101.0	1319.7	-317.2	0.00	1035.7	697-09-29A 3° TGT
9126.9	3.00	46.49	8960.0	1363.5	-327.7	0.00	1402.3	

# **OXY USA MID-CON**

**GRAND VALLEY**

**CASCADE CREEK 609-33 PAD**

**CASCADE CREEK 697-09-29A - Slot CC#697-09-29A**

**CASCADE CREEK 697-09-29A**

**Plan: Plan 2**

## **Standard Planning Report - Geographic**

**03 September, 2010**

**OXY**  
Planning Report - Geographic

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well CASCADE CREEK 697-09-29A - Slot CC#697-09-29A
<b>Company:</b>	OXY USA MID-CON	<b>TVD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Project:</b>	GRAND VALLEY	<b>MD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Site:</b>	CASCADE CREEK 609-33 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CASCADE CREEK 697-09-29A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CASCADE CREEK 697-09-29A		
<b>Design:</b>	Plan 2		

<b>Project</b>	GRAND VALLEY, NORTH AMERICA		
<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 609-33 PAD		
<b>Site Position:</b>		<b>Northing:</b>	0.00 surv ft
<b>From:</b>	None	<b>Easting:</b>	0.00 surv ft
<b>Position Uncertainty:</b>	0.0 surv ft	<b>Slot Radius:</b>	0.000 in
		<b>Latitude:</b>	0° 0' 0.000 N
		<b>Longitude:</b>	0° 0' 0.000 E
		<b>Grid Convergence:</b>	0.00 °

<b>Well</b>	CASCADE CREEK 697-09-29A - Slot CC#697-09-29A		
<b>Well Position</b>	<b>+N/-S</b>	0.0 surv ft	<b>Northing:</b> 631,282.81 surv ft
	<b>+E/-W</b>	0.0 surv ft	<b>Easting:</b> 1,232,473.33 surv ft
<b>Position Uncertainty</b>	0.0 surv ft	<b>Wellhead Elevation:</b>	30.0 surv ft
		<b>Latitude:</b>	39° 32' 6.446 N
		<b>Longitude:</b>	108° 13' 17.909 W
		<b>Ground Level:</b>	8,380.0 surv ft

<b>Wellbore</b>	CASCADE CREEK 697-09-29A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	User Defined	9/2/2010	0.00	0.00	0

<b>Design</b>	Plan 2				
<b>Audit Notes:</b>					
<b>Version:</b>	2	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(surv ft)	(surv ft)	(surv ft)	(°)	
	0.0	0.0	0.0	346.49	

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(surv ft)	(°)	(°)	(surv ft)	(surv ft)	(surv ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
325.0	0.00	0.00	325.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,142.0	16.34	346.49	1,131.0	112.5	-27.0	2.00	2.00	0.00	346.49	
4,599.8	16.34	346.49	4,449.1	1,058.4	-254.4	0.00	0.00	0.00	0.00	
5,266.8	3.00	346.49	5,105.1	1,167.1	-280.5	2.00	-2.00	0.00	180.00	
8,266.8	3.00	346.49	8,101.0	1,319.7	-317.2	0.00	0.00	0.00	0.00	697-09-29A 3° TGT
9,126.9	3.00	346.49	8,960.0	1,363.5	-327.7	0.00	0.00	0.00	0.00	

# OXY

## Planning Report - Geographic

<b>Database:</b>	HOPSP	<b>Local Co-ordinate Reference:</b>	Well CASCADE CREEK 697-09-29A - Slot CC#697-09-29A
<b>Company:</b>	OXY USA MID-CON	<b>TVD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Project:</b>	GRAND VALLEY	<b>MD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Site:</b>	CASCADE CREEK 609-33 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CASCADE CREEK 697-09-29A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CASCADE CREEK 697-09-29A		
<b>Design:</b>	Plan 2		

Planned Survey										
Measured Depth (surv ft)	Inclination (°)	Azimuth (°)	Vertical Depth (surv ft)	+N/-S (surv ft)	+E/-W (surv ft)	Map Northing (surv ft)	Map Easting (surv ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	631,282.81	1,232,473.33	39° 32' 6.446 N	108° 13' 17.909 W	
100.0	0.00	0.00	100.0	0.0	0.0	631,282.81	1,232,473.33	39° 32' 6.446 N	108° 13' 17.909 W	
200.0	0.00	0.00	200.0	0.0	0.0	631,282.81	1,232,473.33	39° 32' 6.446 N	108° 13' 17.909 W	
300.0	0.00	0.00	300.0	0.0	0.0	631,282.81	1,232,473.33	39° 32' 6.446 N	108° 13' 17.909 W	
325.0	0.00	0.00	325.0	0.0	0.0	631,282.81	1,232,473.33	39° 32' 6.446 N	108° 13' 17.909 W	
400.0	1.50	346.49	400.0	1.0	-0.2	631,283.77	1,232,473.13	39° 32' 6.456 N	108° 13' 17.912 W	
500.0	3.50	346.49	499.9	5.2	-1.2	631,288.04	1,232,472.24	39° 32' 6.498 N	108° 13' 17.925 W	
600.0	5.50	346.49	599.6	12.8	-3.1	631,295.72	1,232,470.63	39° 32' 6.573 N	108° 13' 17.948 W	
700.0	7.50	346.49	698.9	23.8	-5.7	631,306.80	1,232,468.32	39° 32' 6.682 N	108° 13' 17.982 W	
800.0	9.50	346.49	797.8	38.2	-9.2	631,321.27	1,232,465.30	39° 32' 6.824 N	108° 13' 18.026 W	
900.0	11.50	346.49	896.1	55.9	-13.4	631,339.11	1,232,461.57	39° 32' 6.999 N	108° 13' 18.081 W	
1,000.0	13.50	346.49	993.8	77.0	-18.5	631,360.29	1,232,457.14	39° 32' 7.207 N	108° 13' 18.145 W	
1,100.0	15.50	346.49	1,090.6	101.3	-24.3	631,384.80	1,232,452.03	39° 32' 7.448 N	108° 13' 18.220 W	
1,142.0	16.34	346.49	1,131.0	112.5	-27.0	631,396.08	1,232,449.67	39° 32' 7.558 N	108° 13' 18.254 W	
1,200.0	16.34	346.49	1,186.6	128.4	-30.9	631,412.05	1,232,446.33	39° 32' 7.715 N	108° 13' 18.303 W	
1,300.0	16.34	346.49	1,282.6	155.7	-37.4	631,439.59	1,232,440.58	39° 32' 7.985 N	108° 13' 18.387 W	
1,400.0	16.34	346.49	1,378.5	183.1	-44.0	631,467.13	1,232,434.83	39° 32' 8.256 N	108° 13' 18.471 W	
1,500.0	16.34	346.49	1,474.5	210.4	-50.6	631,494.67	1,232,429.08	39° 32' 8.526 N	108° 13' 18.555 W	
1,600.0	16.34	346.49	1,570.5	237.8	-57.1	631,522.21	1,232,423.33	39° 32' 8.797 N	108° 13' 18.639 W	
1,700.0	16.34	346.49	1,666.4	265.2	-63.7	631,549.75	1,232,417.57	39° 32' 9.067 N	108° 13' 18.722 W	
1,800.0	16.34	346.49	1,762.4	292.5	-70.3	631,577.29	1,232,411.82	39° 32' 9.337 N	108° 13' 18.806 W	
1,900.0	16.34	346.49	1,858.4	319.9	-76.9	631,604.83	1,232,406.07	39° 32' 9.608 N	108° 13' 18.890 W	
2,000.0	16.34	346.49	1,954.3	347.2	-83.4	631,632.37	1,232,400.32	39° 32' 9.878 N	108° 13' 18.974 W	
2,100.0	16.34	346.49	2,050.3	374.6	-90.0	631,659.91	1,232,394.57	39° 32' 10.148 N	108° 13' 19.058 W	
2,200.0	16.34	346.49	2,146.2	401.9	-96.6	631,687.45	1,232,388.82	39° 32' 10.419 N	108° 13' 19.142 W	
2,300.0	16.34	346.49	2,242.2	429.3	-103.2	631,714.99	1,232,383.06	39° 32' 10.689 N	108° 13' 19.226 W	
2,400.0	16.34	346.49	2,338.2	456.6	-109.7	631,742.53	1,232,377.31	39° 32' 10.960 N	108° 13' 19.310 W	
2,500.0	16.34	346.49	2,434.1	484.0	-116.3	631,770.07	1,232,371.56	39° 32' 11.230 N	108° 13' 19.394 W	
2,600.0	16.34	346.49	2,530.1	511.3	-122.9	631,797.61	1,232,365.81	39° 32' 11.500 N	108° 13' 19.478 W	
2,700.0	16.34	346.49	2,626.0	538.7	-129.5	631,825.15	1,232,360.06	39° 32' 11.771 N	108° 13' 19.562 W	
2,800.0	16.34	346.49	2,722.0	566.1	-136.0	631,852.69	1,232,354.30	39° 32' 12.041 N	108° 13' 19.645 W	
2,900.0	16.34	346.49	2,818.0	593.4	-142.6	631,880.23	1,232,348.55	39° 32' 12.311 N	108° 13' 19.729 W	
3,000.0	16.34	346.49	2,913.9	620.8	-149.2	631,907.77	1,232,342.80	39° 32' 12.582 N	108° 13' 19.813 W	
3,100.0	16.34	346.49	3,009.9	648.1	-155.8	631,935.31	1,232,337.05	39° 32' 12.852 N	108° 13' 19.897 W	
3,200.0	16.34	346.49	3,105.8	675.5	-162.3	631,962.85	1,232,331.30	39° 32' 13.123 N	108° 13' 19.981 W	
3,300.0	16.34	346.49	3,201.8	702.8	-168.9	631,990.39	1,232,325.54	39° 32' 13.393 N	108° 13' 20.065 W	
3,400.0	16.34	346.49	3,297.8	730.2	-175.5	632,017.93	1,232,319.79	39° 32' 13.663 N	108° 13' 20.149 W	
3,500.0	16.34	346.49	3,393.7	757.5	-182.1	632,045.47	1,232,314.04	39° 32' 13.934 N	108° 13' 20.233 W	
3,600.0	16.34	346.49	3,489.7	784.9	-188.6	632,073.01	1,232,308.29	39° 32' 14.204 N	108° 13' 20.317 W	
3,700.0	16.34	346.49	3,585.6	812.3	-195.2	632,100.55	1,232,302.54	39° 32' 14.474 N	108° 13' 20.401 W	
3,800.0	16.34	346.49	3,681.6	839.6	-201.8	632,128.09	1,232,296.78	39° 32' 14.745 N	108° 13' 20.485 W	
3,900.0	16.34	346.49	3,777.6	867.0	-208.4	632,155.63	1,232,291.03	39° 32' 15.015 N	108° 13' 20.569 W	
4,000.0	16.34	346.49	3,873.5	894.3	-214.9	632,183.17	1,232,285.28	39° 32' 15.285 N	108° 13' 20.652 W	
4,100.0	16.34	346.49	3,969.5	921.7	-221.5	632,210.71	1,232,279.53	39° 32' 15.556 N	108° 13' 20.736 W	
4,200.0	16.34	346.49	4,065.4	949.0	-228.1	632,238.25	1,232,273.78	39° 32' 15.826 N	108° 13' 20.820 W	
4,300.0	16.34	346.49	4,161.4	976.4	-234.7	632,265.79	1,232,268.02	39° 32' 16.097 N	108° 13' 20.904 W	
4,400.0	16.34	346.49	4,257.4	1,003.7	-241.2	632,293.33	1,232,262.27	39° 32' 16.367 N	108° 13' 20.988 W	
4,500.0	16.34	346.49	4,353.3	1,031.1	-247.8	632,320.87	1,232,256.52	39° 32' 16.637 N	108° 13' 21.072 W	
4,599.8	16.34	346.49	4,449.1	1,058.4	-254.4	632,348.34	1,232,250.78	39° 32' 16.907 N	108° 13' 21.156 W	
4,700.0	14.34	346.49	4,545.7	1,084.2	-260.6	632,374.30	1,232,245.36	39° 32' 17.162 N	108° 13' 21.235 W	
4,800.0	12.34	346.49	4,643.0	1,106.6	-265.9	632,396.88	1,232,240.65	39° 32' 17.383 N	108° 13' 21.304 W	
4,900.0	10.34	346.49	4,741.1	1,125.7	-270.5	632,416.11	1,232,236.63	39° 32' 17.572 N	108° 13' 21.362 W	
5,000.0	8.34	346.49	4,839.7	1,141.5	-274.3	632,431.99	1,232,233.31	39° 32' 17.728 N	108° 13' 21.411 W	
5,100.0	6.34	346.49	4,938.9	1,153.9	-277.3	632,444.49	1,232,230.70	39° 32' 17.851 N	108° 13' 21.449 W	

**OXY**  
Planning Report - Geographic

<b>Database:</b>	HOPSP	<b>Local Co-ordinate Reference:</b>	Well CASCADE CREEK 697-09-29A - Slot CC#697-09-29A
<b>Company:</b>	OXY USA MID-CON	<b>TVD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Project:</b>	GRAND VALLEY	<b>MD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Site:</b>	CASCADE CREEK 609-33 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CASCADE CREEK 697-09-29A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CASCADE CREEK 697-09-29A		
<b>Design:</b>	Plan 2		

Planned Survey										
Measured Depth (surv ft)	Inclination (°)	Azimuth (°)	Vertical Depth (surv ft)	+N/-S (surv ft)	+E/-W (surv ft)	Map Northing (surv ft)	Map Easting (surv ft)	Latitude	Longitude	
5,200.0	4.34	346.49	5,038.5	1,162.9	-279.5	632,453.59	1,232,228.80	39° 32' 17.940 N	108° 13' 21.477 W	
5,266.8	3.00	346.49	5,105.1	1,167.1	-280.5	632,457.77	1,232,227.93	39° 32' 17.981 N	108° 13' 21.489 W	
5,300.0	3.00	346.49	5,138.3	1,168.8	-280.9	632,459.47	1,232,227.57	39° 32' 17.998 N	108° 13' 21.494 W	
5,400.0	3.00	346.49	5,238.2	1,173.9	-282.1	632,464.60	1,232,226.50	39° 32' 18.048 N	108° 13' 21.510 W	
5,500.0	3.00	346.49	5,338.0	1,179.0	-283.3	632,469.72	1,232,225.43	39° 32' 18.099 N	108° 13' 21.526 W	
5,600.0	3.00	346.49	5,437.9	1,184.0	-284.6	632,474.84	1,232,224.36	39° 32' 18.149 N	108° 13' 21.541 W	
5,700.0	3.00	346.49	5,537.7	1,189.1	-285.8	632,479.97	1,232,223.29	39° 32' 18.199 N	108° 13' 21.557 W	
5,800.0	3.00	346.49	5,637.6	1,194.2	-287.0	632,485.09	1,232,222.22	39° 32' 18.250 N	108° 13' 21.572 W	
5,900.0	3.00	346.49	5,737.5	1,199.3	-288.2	632,490.21	1,232,221.15	39° 32' 18.300 N	108° 13' 21.588 W	
6,000.0	3.00	346.49	5,837.3	1,204.4	-289.5	632,495.34	1,232,220.08	39° 32' 18.350 N	108° 13' 21.604 W	
6,082.8	3.00	346.49	5,920.0	1,208.6	-290.5	632,499.58	1,232,219.20	39° 32' 18.392 N	108° 13' 21.617 W	
<b>Mesaverde</b>										
6,100.0	3.00	346.49	5,937.2	1,209.5	-290.7	632,500.46	1,232,219.01	39° 32' 18.400 N	108° 13' 21.619 W	
6,200.0	3.00	346.49	6,037.1	1,214.6	-291.9	632,505.58	1,232,217.94	39° 32' 18.451 N	108° 13' 21.635 W	
6,288.1	3.00	346.49	6,125.0	1,219.1	-293.0	632,510.09	1,232,217.00	39° 32' 18.495 N	108° 13' 21.649 W	
<b>Ohio Creek</b>										
6,300.0	3.00	346.49	6,136.9	1,219.7	-293.1	632,510.71	1,232,216.87	39° 32' 18.501 N	108° 13' 21.651 W	
6,400.0	3.00	346.49	6,236.8	1,224.8	-294.3	632,515.83	1,232,215.80	39° 32' 18.551 N	108° 13' 21.666 W	
6,500.0	3.00	346.49	6,336.6	1,229.8	-295.6	632,520.95	1,232,214.73	39° 32' 18.602 N	108° 13' 21.682 W	
6,600.0	3.00	346.49	6,436.5	1,234.9	-296.8	632,526.07	1,232,213.66	39° 32' 18.652 N	108° 13' 21.697 W	
6,700.0	3.00	346.49	6,536.4	1,240.0	-298.0	632,531.20	1,232,212.59	39° 32' 18.702 N	108° 13' 21.713 W	
6,800.0	3.00	346.49	6,636.2	1,245.1	-299.2	632,536.32	1,232,211.52	39° 32' 18.752 N	108° 13' 21.729 W	
6,900.0	3.00	346.49	6,736.1	1,250.2	-300.5	632,541.44	1,232,210.45	39° 32' 18.803 N	108° 13' 21.744 W	
7,000.0	3.00	346.49	6,836.0	1,255.3	-301.7	632,546.57	1,232,209.38	39° 32' 18.853 N	108° 13' 21.760 W	
7,100.0	3.00	346.49	6,935.8	1,260.4	-302.9	632,551.69	1,232,208.31	39° 32' 18.903 N	108° 13' 21.775 W	
7,200.0	3.00	346.49	7,035.7	1,265.5	-304.1	632,556.81	1,232,207.24	39° 32' 18.954 N	108° 13' 21.791 W	
7,294.4	3.00	346.49	7,130.0	1,270.3	-305.3	632,561.65	1,232,206.23	39° 32' 19.001 N	108° 13' 21.806 W	
<b>Top of Gas</b>										
7,300.0	3.00	346.49	7,135.6	1,270.6	-305.4	632,561.94	1,232,206.17	39° 32' 19.004 N	108° 13' 21.807 W	
7,400.0	3.00	346.49	7,235.4	1,275.6	-306.6	632,567.06	1,232,205.10	39° 32' 19.054 N	108° 13' 21.822 W	
7,500.0	3.00	346.49	7,335.3	1,280.7	-307.8	632,572.18	1,232,204.03	39° 32' 19.105 N	108° 13' 21.838 W	
7,600.0	3.00	346.49	7,435.1	1,285.8	-309.0	632,577.31	1,232,202.96	39° 32' 19.155 N	108° 13' 21.853 W	
7,700.0	3.00	346.49	7,535.0	1,290.9	-310.2	632,582.43	1,232,201.89	39° 32' 19.205 N	108° 13' 21.869 W	
7,800.0	3.00	346.49	7,634.9	1,296.0	-311.5	632,587.55	1,232,200.82	39° 32' 19.255 N	108° 13' 21.885 W	
7,900.0	3.00	346.49	7,734.7	1,301.1	-312.7	632,592.67	1,232,199.75	39° 32' 19.306 N	108° 13' 21.900 W	
8,000.0	3.00	346.49	7,834.6	1,306.2	-313.9	632,597.80	1,232,198.68	39° 32' 19.356 N	108° 13' 21.916 W	
8,100.0	3.00	346.49	7,934.5	1,311.3	-315.1	632,602.92	1,232,197.61	39° 32' 19.406 N	108° 13' 21.932 W	
8,200.0	3.00	346.49	8,034.3	1,316.3	-316.4	632,608.04	1,232,196.54	39° 32' 19.457 N	108° 13' 21.947 W	
8,266.8	3.00	346.49	8,101.0	1,319.7	-317.2	632,611.46	1,232,195.83	39° 32' 19.490 N	108° 13' 21.958 W	
<b>697-09-29A 3° TGT</b>										
8,267.1	3.00	346.49	8,101.3	1,319.8	-317.2	632,611.48	1,232,195.82	39° 32' 19.490 N	108° 13' 21.958 W	
<b>Williams Fork</b>										
8,300.0	3.00	346.49	8,134.2	1,321.4	-317.6	632,613.17	1,232,195.47	39° 32' 19.507 N	108° 13' 21.963 W	
8,400.0	3.00	346.49	8,234.0	1,326.5	-318.8	632,618.29	1,232,194.40	39° 32' 19.557 N	108° 13' 21.978 W	
8,500.0	3.00	346.49	8,333.9	1,331.6	-320.0	632,623.41	1,232,193.33	39° 32' 19.607 N	108° 13' 21.994 W	
8,600.0	3.00	346.49	8,433.8	1,336.7	-321.2	632,628.54	1,232,192.26	39° 32' 19.658 N	108° 13' 22.010 W	
8,700.0	3.00	346.49	8,533.6	1,341.8	-322.5	632,633.66	1,232,191.19	39° 32' 19.708 N	108° 13' 22.025 W	
8,800.0	3.00	346.49	8,633.5	1,346.9	-323.7	632,638.78	1,232,190.12	39° 32' 19.758 N	108° 13' 22.041 W	
8,900.0	3.00	346.49	8,733.4	1,352.0	-324.9	632,643.90	1,232,189.05	39° 32' 19.809 N	108° 13' 22.056 W	
8,926.7	3.00	346.49	8,760.0	1,353.3	-325.2	632,645.27	1,232,188.77	39° 32' 19.822 N	108° 13' 22.061 W	
<b>Rollins</b>										
9,000.0	3.00	346.49	8,833.2	1,357.1	-326.1	632,649.03	1,232,187.98	39° 32' 19.859 N	108° 13' 22.072 W	
9,100.0	3.00	346.49	8,933.1	1,362.1	-327.4	632,654.15	1,232,186.91	39° 32' 19.909 N	108° 13' 22.088 W	

**OXY**  
Planning Report - Geographic

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well CASCADE CREEK 697-09-29A - Slot CC#697-09-29A
<b>Company:</b>	OXY USA MID-CON	<b>TVD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Project:</b>	GRAND VALLEY	<b>MD Reference:</b>	WELL @ 8410.0surv ft (Original Well Elev)
<b>Site:</b>	CASCADE CREEK 609-33 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CASCADE CREEK 697-09-29A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CASCADE CREEK 697-09-29A		
<b>Design:</b>	Plan 2		

Planned Survey										
Measured Depth (surv ft)	Inclination (°)	Azimuth (°)	Vertical Depth (surv ft)	+N/-S (surv ft)	+E/-W (surv ft)	Map Northing (surv ft)	Map Easting (surv ft)	Latitude	Longitude	
9,126.9	3.00	346.49	8,960.0	1,363.5	-327.7	632,655.53	1,232,186.62	39° 32' 19.923 N	108° 13' 22.092 W	

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (surv ft)	+N/-S (surv ft)	+E/-W (surv ft)	Northing (surv ft)	Easting (surv ft)	Latitude	Longitude	
697-09-29A 3° TGT - plan hits target center - Circle (radius 50.0)	357.00	346.49	8,101.0	1,319.7	-317.2	632,611.46	1,232,195.83	39° 32' 19.490 N	108° 13' 21.958 W	

Formations							
Measured Depth (surv ft)	Vertical Depth (surv ft)	Name	Lithology	Dip (°)	Dip Direction (°)		
6,082.8	5,920.0	Mesaverde		0.00			
6,288.1	6,125.0	Ohio Creek		0.00			
7,294.4	7,130.0	Top of Gas		0.00			
8,267.1	8,101.3	Williams Fork		0.00			
8,926.7	8,760.0	Rollins		0.00			