



Project: GRAND VALLEY
Site: CASCADE CREEK 609-33 PAD
Well: CASCADE CREEK 697-09-48A
Wellbore: CASCADE CREEK 697-09-48A
Design: PLAN 2

OXY USA MID-CON

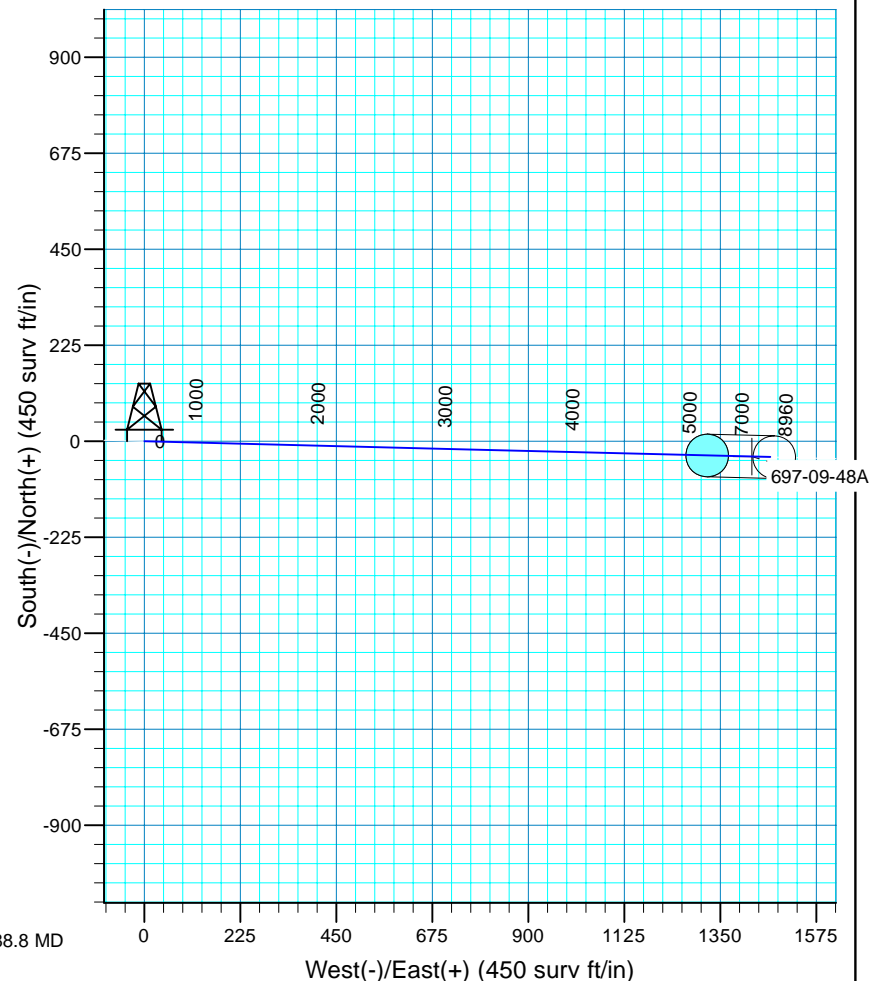
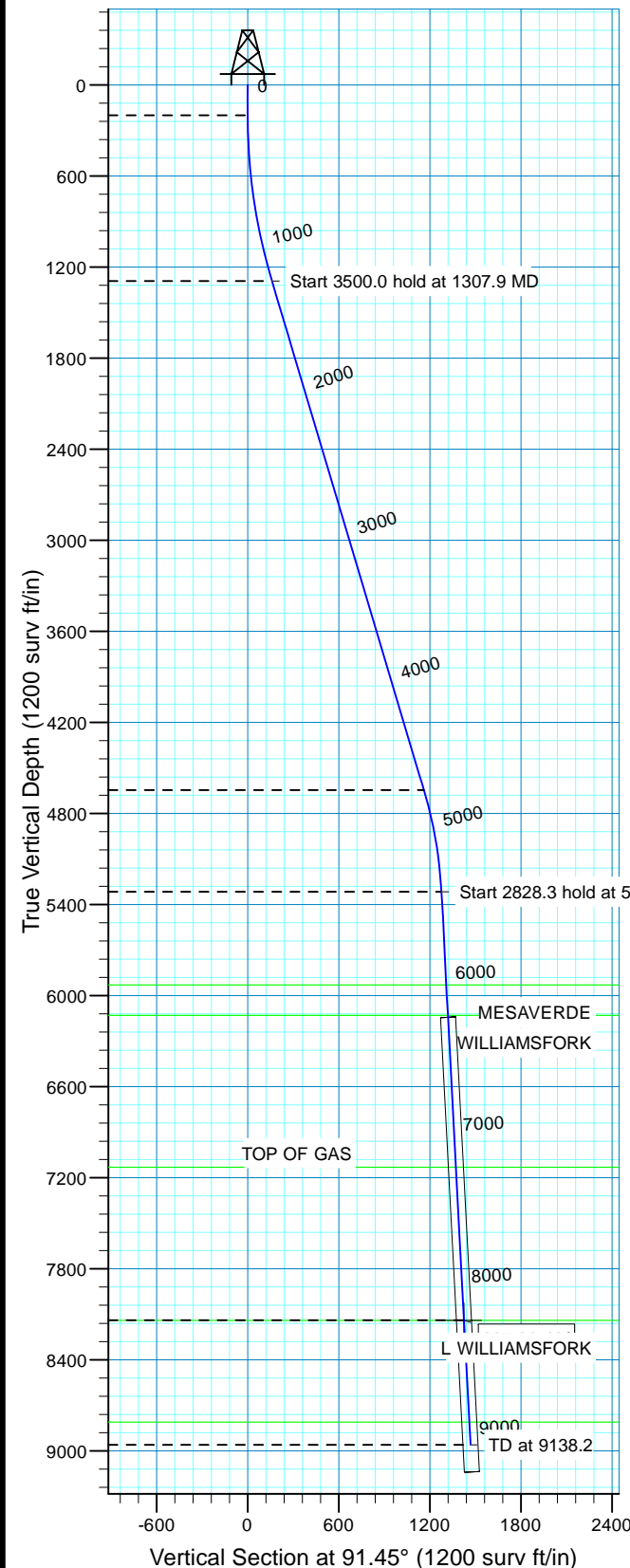
WELL DETAILS: CASCADE CREEK 697-09-48A

WELL @ 8410.0 surf ft (Original Well Elev) 8380.0
+N/-S 0.0 +E/-W 0.0
Northing 631264.28 Easting 1232505.91
Latitude 39° 32' 6.273 N Longitude 108° 13' 17.486 W
Slot CC#697-09-48A



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				CASCADE CREEK 697-09-48A/CASCADE CREEK 697-09-48A				
				Created By: Ron Bevans Date: 2010-07-09				
				PROJECT DETAILS: GRAND VALLEY				
TVDPath	MDPath	Formation			Geodetic System: US State Plane 1927 (Exact solution)			
5930.0	6104.0	MESAVERDE			Datum: NAD 1927 (NADCON CONUS)			
6130.0	6304.3	WILLIAMSFORK			Ellipsoid: Clarke 1866			
7131.0	7306.7	TOP OF GAS			Zone: Colorado Central 502			
8140.0	8317.1	L WILLIAMSFORK			System Datum: Mean Sea Level			
8810.0	8988.0	ROLLINS			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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.0	
1307.9	16.62	91.45	1292.4	-4.0	159.5	1.50	159.5	
4807.9	16.62	91.45	4646.2	-29.3	1160.1	0.00	1160.5	
5488.8	3.00	91.45	5315.6	-32.2	1275.8	2.00	1276.2	
8317.1	3.00	91.45	8140.0	-36.0	1423.8	0.00	1424.2	697-09-48A
9138.2	3.00	91.45	8960.0	-37.0	1466.7	0.00	1467.2	



OXY USA MID-CON

GRAND VALLEY

CASCADE CREEK 609-33 PAD

CASCADE CREEK 697-09-48A - Slot CC#697-09-48A

CASCADE CREEK 697-09-48A

Plan: PLAN 2

Standard Planning Report - Geographic

03 September, 2010



OXY
Planning Report - Geographic

Database:	HOPSPP	Local Co-ordinate Reference:	Well CASCADE CREEK 697-09-48A - Slot CC#697-09-48A
Company:	OXY USA MID-CON	TVD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Project:	GRAND VALLEY	MD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Site:	CASCADE CREEK 609-33 PAD	North Reference:	True
Well:	CASCADE CREEK 697-09-48A	Survey Calculation Method:	Minimum Curvature
Wellbore:	CASCADE CREEK 697-09-48A		
Design:	PLAN 2		

Project	GRAND VALLEY, NORTH AMERICA		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado Central 502		

Site	CASCADE CREEK 609-33 PAD		
Site Position:		Northing:	0.00 surv ft
From:	None	Easting:	0.00 surv ft
Position Uncertainty:	0.0 surv ft	Slot Radius:	0.000 in
		Latitude:	0° 0' 0.000 N
		Longitude:	0° 0' 0.000 E
		Grid Convergence:	0.00 °

Well	CASCADE CREEK 697-09-48A - Slot CC#697-09-48A		
Well Position	+N/-S	0.0 surv ft	Northing: 631,264.28 surv ft
	+E/-W	0.0 surv ft	Easting: 1,232,505.91 surv ft
Position Uncertainty	0.0 surv ft	Wellhead Elevation:	30.0 surv ft
		Latitude:	39° 32' 6.273 N
		Longitude:	108° 13' 17.486 W
		Ground Level:	8,380.0 surv ft

Wellbore	CASCADE CREEK 697-09-48A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	9/2/2010	0.00	0.00	0

Design	PLAN 2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (surv ft)	+N/-S (surv ft)	+E/-W (surv ft)	Direction (°)
	0.0	0.0	0.0	91.45

Plan Sections										
Measured Depth (surv ft)	Inclination (°)	Azimuth (°)	Vertical Depth (surv ft)	+N/-S (surv ft)	+E/-W (surv ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,307.9	16.62	91.45	1,292.4	-4.0	159.5	1.50	1.50	0.00	91.45	
4,807.9	16.62	91.45	4,646.2	-29.3	1,160.1	0.00	0.00	0.00	0.00	
5,488.8	3.00	91.45	5,315.6	-32.2	1,275.8	2.00	-2.00	0.00	180.00	
8,317.1	3.00	91.45	8,140.0	-36.0	1,423.8	0.00	0.00	0.00	0.00	697-09-48A
9,138.2	3.00	91.45	8,960.0	-37.0	1,466.7	0.00	0.00	0.00	0.00	



OXY

Planning Report - Geographic

Database:	HOPSP	Local Co-ordinate Reference:	Well CASCADE CREEK 697-09-48A - Slot CC#697-09-48A
Company:	OXY USA MID-CON	TVD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Project:	GRAND VALLEY	MD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Site:	CASCADE CREEK 609-33 PAD	North Reference:	True
Well:	CASCADE CREEK 697-09-48A	Survey Calculation Method:	Minimum Curvature
Wellbore:	CASCADE CREEK 697-09-48A		
Design:	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	631,264.28	1,232,505.91	39° 32' 6.273 N	108° 13' 17.486 W	
100.0	0.00	0.00	100.0	0.0	0.0	631,264.28	1,232,505.91	39° 32' 6.273 N	108° 13' 17.486 W	
200.0	0.00	0.00	200.0	0.0	0.0	631,264.28	1,232,505.91	39° 32' 6.273 N	108° 13' 17.486 W	
300.0	1.50	91.45	300.0	0.0	1.3	631,264.21	1,232,507.21	39° 32' 6.273 N	108° 13' 17.470 W	
400.0	3.00	91.45	399.9	-0.1	5.2	631,263.99	1,232,511.13	39° 32' 6.272 N	108° 13' 17.420 W	
500.0	4.50	91.45	499.7	-0.3	11.8	631,263.63	1,232,517.66	39° 32' 6.270 N	108° 13' 17.336 W	
600.0	6.00	91.45	599.3	-0.5	20.9	631,263.13	1,232,526.80	39° 32' 6.268 N	108° 13' 17.219 W	
700.0	7.50	91.45	698.6	-0.8	32.7	631,262.48	1,232,538.54	39° 32' 6.265 N	108° 13' 17.069 W	
800.0	9.00	91.45	797.5	-1.2	47.0	631,261.69	1,232,552.86	39° 32' 6.261 N	108° 13' 16.886 W	
900.0	10.50	91.45	896.1	-1.6	63.9	631,260.75	1,232,569.77	39° 32' 6.257 N	108° 13' 16.670 W	
1,000.0	12.00	91.45	994.2	-2.1	83.4	631,259.67	1,232,589.25	39° 32' 6.252 N	108° 13' 16.421 W	
1,100.0	13.50	91.45	1,091.7	-2.7	105.5	631,258.46	1,232,611.29	39° 32' 6.247 N	108° 13' 16.140 W	
1,200.0	15.00	91.45	1,188.6	-3.3	130.1	631,257.10	1,232,635.86	39° 32' 6.240 N	108° 13' 15.826 W	
1,307.9	16.62	91.45	1,292.4	-4.0	159.5	631,255.48	1,232,665.20	39° 32' 6.233 N	108° 13' 15.451 W	
1,400.0	16.62	91.45	1,380.7	-4.7	185.8	631,254.02	1,232,691.51	39° 32' 6.226 N	108° 13' 15.114 W	
1,500.0	16.62	91.45	1,476.5	-5.4	214.4	631,252.45	1,232,720.07	39° 32' 6.219 N	108° 13' 14.750 W	
1,600.0	16.62	91.45	1,572.3	-6.1	243.0	631,250.87	1,232,748.62	39° 32' 6.212 N	108° 13' 14.385 W	
1,700.0	16.62	91.45	1,668.2	-6.9	271.6	631,249.29	1,232,777.18	39° 32' 6.205 N	108° 13' 14.020 W	
1,800.0	16.62	91.45	1,764.0	-7.6	300.2	631,247.71	1,232,805.73	39° 32' 6.198 N	108° 13' 13.655 W	
1,900.0	16.62	91.45	1,859.8	-8.3	328.8	631,246.13	1,232,834.29	39° 32' 6.191 N	108° 13' 13.290 W	
2,000.0	16.62	91.45	1,955.6	-9.0	357.4	631,244.56	1,232,862.84	39° 32' 6.184 N	108° 13' 12.925 W	
2,100.0	16.62	91.45	2,051.4	-9.7	386.0	631,242.98	1,232,891.40	39° 32' 6.177 N	108° 13' 12.560 W	
2,200.0	16.62	91.45	2,147.3	-10.5	414.5	631,241.40	1,232,919.95	39° 32' 6.169 N	108° 13' 12.195 W	
2,300.0	16.62	91.45	2,243.1	-11.2	443.1	631,239.82	1,232,948.51	39° 32' 6.162 N	108° 13' 11.830 W	
2,400.0	16.62	91.45	2,338.9	-11.9	471.7	631,238.24	1,232,977.06	39° 32' 6.155 N	108° 13' 11.465 W	
2,500.0	16.62	91.45	2,434.7	-12.6	500.3	631,236.67	1,233,005.62	39° 32' 6.148 N	108° 13' 11.100 W	
2,600.0	16.62	91.45	2,530.6	-13.4	528.9	631,235.09	1,233,034.17	39° 32' 6.141 N	108° 13' 10.736 W	
2,700.0	16.62	91.45	2,626.4	-14.1	557.5	631,233.51	1,233,062.73	39° 32' 6.134 N	108° 13' 10.371 W	
2,800.0	16.62	91.45	2,722.2	-14.8	586.1	631,231.93	1,233,091.28	39° 32' 6.127 N	108° 13' 10.006 W	
2,900.0	16.62	91.45	2,818.0	-15.5	614.7	631,230.35	1,233,119.84	39° 32' 6.119 N	108° 13' 9.641 W	
3,000.0	16.62	91.45	2,913.9	-16.2	643.3	631,228.78	1,233,148.39	39° 32' 6.112 N	108° 13' 9.276 W	
3,100.0	16.62	91.45	3,009.7	-17.0	671.9	631,227.20	1,233,176.95	39° 32' 6.105 N	108° 13' 8.911 W	
3,200.0	16.62	91.45	3,105.5	-17.7	700.4	631,225.62	1,233,205.50	39° 32' 6.098 N	108° 13' 8.546 W	
3,300.0	16.62	91.45	3,201.3	-18.4	729.0	631,224.04	1,233,234.06	39° 32' 6.091 N	108° 13' 8.181 W	
3,400.0	16.62	91.45	3,297.2	-19.1	757.6	631,222.46	1,233,262.62	39° 32' 6.084 N	108° 13' 7.816 W	
3,500.0	16.62	91.45	3,393.0	-19.9	786.2	631,220.89	1,233,291.17	39° 32' 6.077 N	108° 13' 7.451 W	
3,600.0	16.62	91.45	3,488.8	-20.6	814.8	631,219.31	1,233,319.73	39° 32' 6.069 N	108° 13' 7.087 W	
3,700.0	16.62	91.45	3,584.6	-21.3	843.4	631,217.73	1,233,348.28	39° 32' 6.062 N	108° 13' 6.722 W	
3,800.0	16.62	91.45	3,680.4	-22.0	872.0	631,216.15	1,233,376.84	39° 32' 6.055 N	108° 13' 6.357 W	
3,900.0	16.62	91.45	3,776.3	-22.7	900.6	631,214.57	1,233,405.39	39° 32' 6.048 N	108° 13' 5.992 W	
4,000.0	16.62	91.45	3,872.1	-23.5	929.2	631,213.00	1,233,433.95	39° 32' 6.041 N	108° 13' 5.627 W	
4,100.0	16.62	91.45	3,967.9	-24.2	957.7	631,211.42	1,233,462.50	39° 32' 6.034 N	108° 13' 5.262 W	
4,200.0	16.62	91.45	4,063.7	-24.9	986.3	631,209.84	1,233,491.06	39° 32' 6.027 N	108° 13' 4.897 W	
4,300.0	16.62	91.45	4,159.6	-25.6	1,014.9	631,208.26	1,233,519.61	39° 32' 6.019 N	108° 13' 4.532 W	
4,400.0	16.62	91.45	4,255.4	-26.4	1,043.5	631,206.68	1,233,548.17	39° 32' 6.012 N	108° 13' 4.167 W	
4,500.0	16.62	91.45	4,351.2	-27.1	1,072.1	631,205.11	1,233,576.72	39° 32' 6.005 N	108° 13' 3.802 W	
4,600.0	16.62	91.45	4,447.0	-27.8	1,100.7	631,203.53	1,233,605.28	39° 32' 5.998 N	108° 13' 3.437 W	
4,700.0	16.62	91.45	4,542.9	-28.5	1,129.3	631,201.95	1,233,633.83	39° 32' 5.991 N	108° 13' 3.073 W	
4,807.9	16.62	91.45	4,646.2	-29.3	1,160.1	631,200.25	1,233,664.63	39° 32' 5.983 N	108° 13' 2.679 W	
4,900.0	14.78	91.45	4,734.9	-29.9	1,185.0	631,198.87	1,233,689.52	39° 32' 5.977 N	108° 13' 2.361 W	
5,000.0	12.78	91.45	4,832.0	-30.5	1,208.8	631,197.56	1,233,713.29	39° 32' 5.971 N	108° 13' 2.057 W	
5,100.0	10.78	91.45	4,929.9	-31.0	1,229.2	631,196.43	1,233,733.67	39° 32' 5.966 N	108° 13' 1.797 W	
5,200.0	8.78	91.45	5,028.5	-31.5	1,246.2	631,195.50	1,233,750.62	39° 32' 5.962 N	108° 13' 1.580 W	
5,300.0	6.78	91.45	5,127.5	-31.8	1,259.7	631,194.75	1,233,764.13	39° 32' 5.958 N	108° 13' 1.408 W	



OXY

Planning Report - Geographic

Database:	HOPSPP	Local Co-ordinate Reference:	Well CASCADE CREEK 697-09-48A - Slot CC#697-09-48A
Company:	OXY USA MID-CON	TVD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Project:	GRAND VALLEY	MD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Site:	CASCADE CREEK 609-33 PAD	North Reference:	True
Well:	CASCADE CREEK 697-09-48A	Survey Calculation Method:	Minimum Curvature
Wellbore:	CASCADE CREEK 697-09-48A		
Design:	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	
5,400.0	4.78	91.45	5,227.0	-32.1	1,269.8	631,194.19	1,233,774.17	39° 32' 5.956 N	108° 13' 1.279 W	
5,488.8	3.00	91.45	5,315.6	-32.2	1,275.8	631,193.86	1,233,780.18	39° 32' 5.954 N	108° 13' 1.202 W	
5,500.0	3.00	91.45	5,326.8	-32.2	1,276.4	631,193.83	1,233,780.77	39° 32' 5.954 N	108° 13' 1.195 W	
5,600.0	3.00	91.45	5,426.7	-32.4	1,281.6	631,193.54	1,233,785.99	39° 32' 5.953 N	108° 13' 1.128 W	
5,700.0	3.00	91.45	5,526.5	-32.5	1,286.9	631,193.25	1,233,791.22	39° 32' 5.951 N	108° 13' 1.061 W	
5,800.0	3.00	91.45	5,626.4	-32.6	1,292.1	631,192.96	1,233,796.45	39° 32' 5.950 N	108° 13' 0.995 W	
5,900.0	3.00	91.45	5,726.3	-32.8	1,297.3	631,192.67	1,233,801.67	39° 32' 5.949 N	108° 13' 0.928 W	
6,000.0	3.00	91.45	5,826.1	-32.9	1,302.6	631,192.39	1,233,806.90	39° 32' 5.947 N	108° 13' 0.861 W	
6,100.0	3.00	91.45	5,926.0	-33.0	1,307.8	631,192.10	1,233,812.12	39° 32' 5.946 N	108° 13' 0.794 W	
6,104.0	3.00	91.45	5,930.0	-33.0	1,308.0	631,192.08	1,233,812.33	39° 32' 5.946 N	108° 13' 0.791 W	
MESAVERDE										
6,200.0	3.00	91.45	6,025.8	-33.2	1,313.0	631,191.81	1,233,817.35	39° 32' 5.945 N	108° 13' 0.727 W	
6,300.0	3.00	91.45	6,125.7	-33.3	1,318.3	631,191.52	1,233,822.57	39° 32' 5.944 N	108° 13' 0.661 W	
6,304.3	3.00	91.45	6,130.0	-33.3	1,318.5	631,191.51	1,233,822.80	39° 32' 5.943 N	108° 13' 0.658 W	
WILLIAMSFORK										
6,400.0	3.00	91.45	6,225.6	-33.4	1,323.5	631,191.23	1,233,827.80	39° 32' 5.942 N	108° 13' 0.594 W	
6,500.0	3.00	91.45	6,325.4	-33.6	1,328.7	631,190.94	1,233,833.02	39° 32' 5.941 N	108° 13' 0.527 W	
6,600.0	3.00	91.45	6,425.3	-33.7	1,334.0	631,190.65	1,233,838.25	39° 32' 5.940 N	108° 13' 0.460 W	
6,700.0	3.00	91.45	6,525.2	-33.8	1,339.2	631,190.36	1,233,843.48	39° 32' 5.938 N	108° 13' 0.394 W	
6,800.0	3.00	91.45	6,625.0	-34.0	1,344.4	631,190.08	1,233,848.70	39° 32' 5.937 N	108° 13' 0.327 W	
6,900.0	3.00	91.45	6,724.9	-34.1	1,349.6	631,189.79	1,233,853.93	39° 32' 5.936 N	108° 13' 0.260 W	
7,000.0	3.00	91.45	6,824.7	-34.2	1,354.9	631,189.50	1,233,859.15	39° 32' 5.934 N	108° 13' 0.193 W	
7,100.0	3.00	91.45	6,924.6	-34.3	1,360.1	631,189.21	1,233,864.38	39° 32' 5.933 N	108° 13' 0.126 W	
7,200.0	3.00	91.45	7,024.5	-34.5	1,365.3	631,188.92	1,233,869.60	39° 32' 5.932 N	108° 13' 0.060 W	
7,300.0	3.00	91.45	7,124.3	-34.6	1,370.6	631,188.63	1,233,874.83	39° 32' 5.930 N	108° 12' 59.993 W	
7,306.7	3.00	91.45	7,131.0	-34.6	1,370.9	631,188.61	1,233,875.18	39° 32' 5.930 N	108° 12' 59.988 W	
TOP OF GAS										
7,400.0	3.00	91.45	7,224.2	-34.7	1,375.8	631,188.34	1,233,880.06	39° 32' 5.929 N	108° 12' 59.926 W	
7,500.0	3.00	91.45	7,324.1	-34.9	1,381.0	631,188.05	1,233,885.28	39° 32' 5.928 N	108° 12' 59.859 W	
7,600.0	3.00	91.45	7,423.9	-35.0	1,386.3	631,187.76	1,233,890.51	39° 32' 5.926 N	108° 12' 59.792 W	
7,700.0	3.00	91.45	7,523.8	-35.1	1,391.5	631,187.48	1,233,895.73	39° 32' 5.925 N	108° 12' 59.726 W	
7,800.0	3.00	91.45	7,623.7	-35.3	1,396.7	631,187.19	1,233,900.96	39° 32' 5.924 N	108° 12' 59.659 W	
7,900.0	3.00	91.45	7,723.5	-35.4	1,402.0	631,186.90	1,233,906.18	39° 32' 5.923 N	108° 12' 59.592 W	
8,000.0	3.00	91.45	7,823.4	-35.5	1,407.2	631,186.61	1,233,911.41	39° 32' 5.921 N	108° 12' 59.525 W	
8,100.0	3.00	91.45	7,923.2	-35.7	1,412.4	631,186.32	1,233,916.63	39° 32' 5.920 N	108° 12' 59.459 W	
8,200.0	3.00	91.45	8,023.1	-35.8	1,417.7	631,186.03	1,233,921.86	39° 32' 5.919 N	108° 12' 59.392 W	
8,300.0	3.00	91.45	8,123.0	-35.9	1,422.9	631,185.74	1,233,927.09	39° 32' 5.917 N	108° 12' 59.325 W	
8,317.1	3.00	91.45	8,140.0	-36.0	1,423.8	631,185.69	1,233,927.98	39° 32' 5.917 N	108° 12' 59.314 W	
L WILLIAMSFORK										
8,400.0	3.00	91.45	8,222.8	-36.1	1,428.1	631,185.45	1,233,932.31	39° 32' 5.916 N	108° 12' 59.258 W	
8,500.0	3.00	91.45	8,322.7	-36.2	1,433.4	631,185.17	1,233,937.54	39° 32' 5.915 N	108° 12' 59.191 W	
8,600.0	3.00	91.45	8,422.6	-36.3	1,438.6	631,184.88	1,233,942.76	39° 32' 5.913 N	108° 12' 59.125 W	
8,700.0	3.00	91.45	8,522.4	-36.5	1,443.8	631,184.59	1,233,947.99	39° 32' 5.912 N	108° 12' 59.058 W	
8,800.0	3.00	91.45	8,622.3	-36.6	1,449.1	631,184.30	1,233,953.21	39° 32' 5.911 N	108° 12' 58.991 W	
8,900.0	3.00	91.45	8,722.1	-36.7	1,454.3	631,184.01	1,233,958.44	39° 32' 5.909 N	108° 12' 58.924 W	
8,988.0	3.00	91.45	8,810.0	-36.8	1,458.9	631,183.76	1,233,963.04	39° 32' 5.908 N	108° 12' 58.866 W	
ROLLINS										
9,000.0	3.00	91.45	8,822.0	-36.9	1,459.5	631,183.72	1,233,963.67	39° 32' 5.908 N	108° 12' 58.858 W	
9,100.0	3.00	91.45	8,921.9	-37.0	1,464.7	631,183.43	1,233,968.89	39° 32' 5.907 N	108° 12' 58.791 W	
9,138.2	3.00	91.45	8,960.0	-37.0	1,466.7	631,183.32	1,233,970.89	39° 32' 5.906 N	108° 12' 58.765 W	



OXY
Planning Report - Geographic

Database:	HOPSP	Local Co-ordinate Reference:	Well CASCADE CREEK 697-09-48A - Slot CC#697-09-48A
Company:	OXY USA MID-CON	TVD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Project:	GRAND VALLEY	MD Reference:	WELL @ 8410.0surv ft (Original Well Elev)
Site:	CASCADE CREEK 609-33 PAD	North Reference:	True
Well:	CASCADE CREEK 697-09-48A	Survey Calculation Method:	Minimum Curvature
Wellbore:	CASCADE CREEK 697-09-48A		
Design:	PLAN 2		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(surv ft)	(surv ft)	(surv ft)	(surv ft)	(surv ft)		
697-09-48A	357.00	91.45	8,140.0	-36.0	1,423.8	631,185.69	1,233,927.98	39° 32' 5.917 N	108° 12' 59.314 W
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth	Vertical Depth					
(surv ft)	(surv ft)	Name	Lithology	Dip	Dip Direction	
				(°)	(°)	
6,104.0	5,930.0	MESAVERDE		0.00		
6,304.3	6,130.0	WILLIAMSFORK		0.00		
7,306.7	7,131.0	TOP OF GAS		0.00		
8,317.1	8,140.0	L WILLIAMSFORK		0.00		
8,988.0	8,810.0	ROLLINS		0.00		