

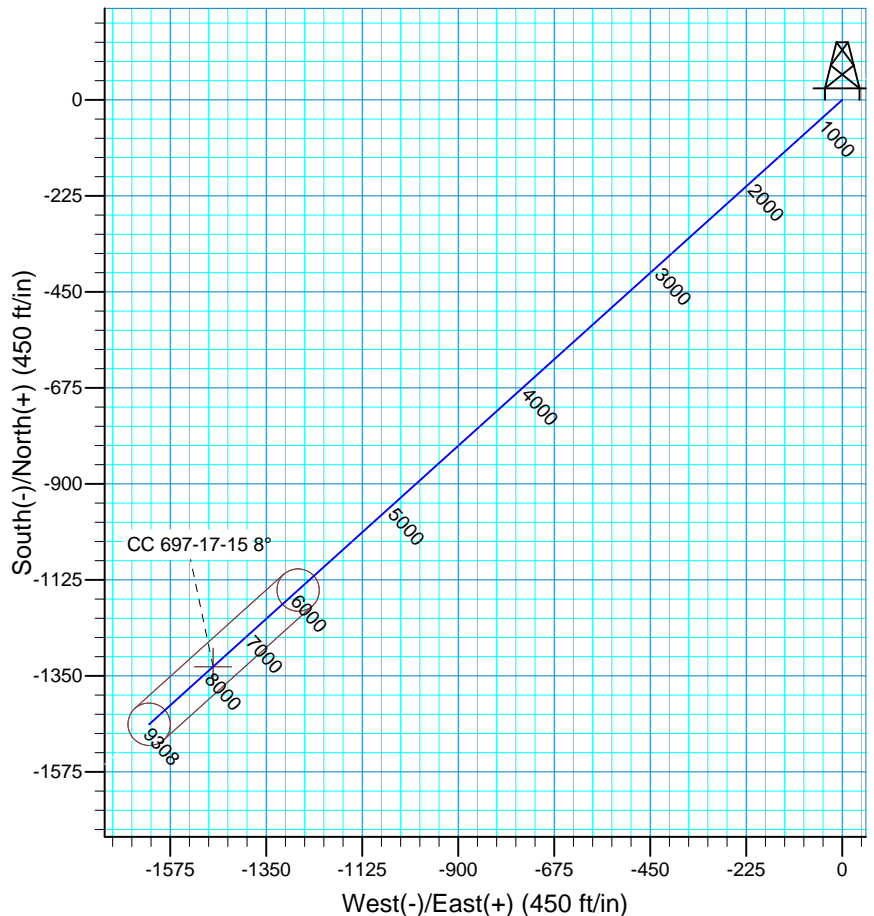
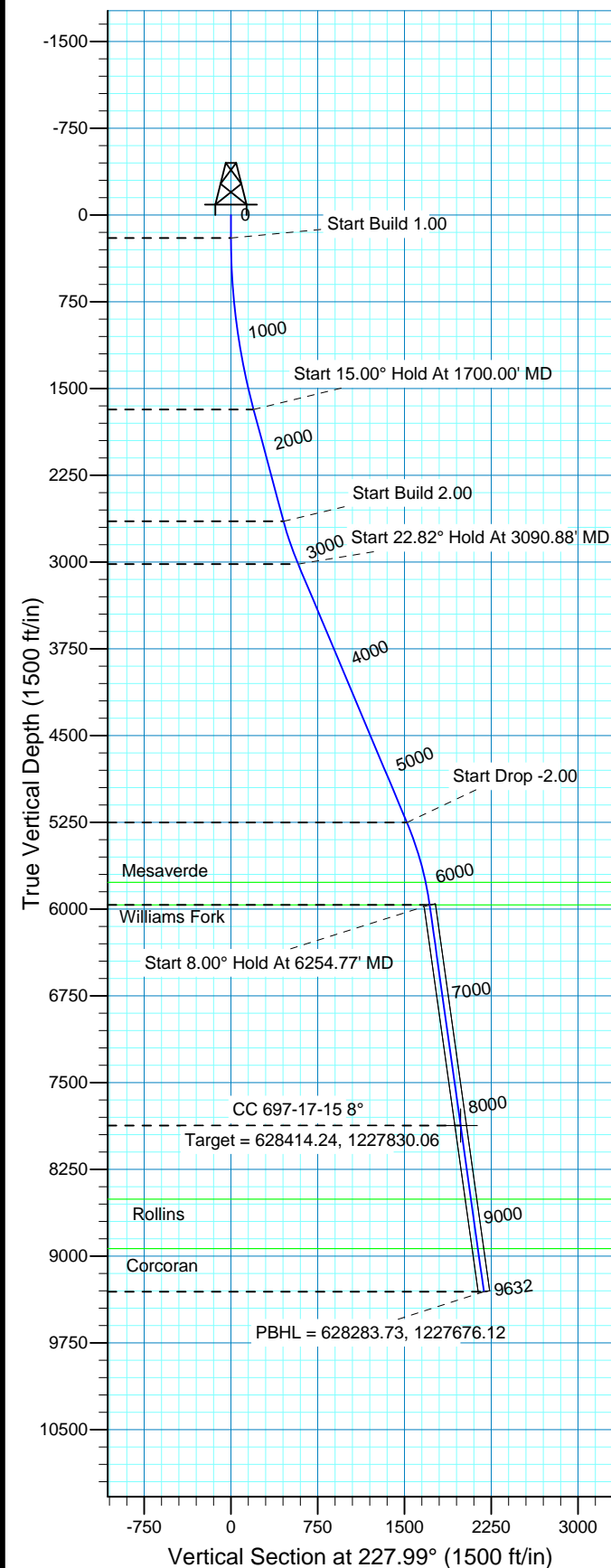
WELL DETAILS: CC 697-17-15

+N/-S	+E/-W	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)	8393.00	Slot
0.00	0.00	Northing	Easting	U
		629697.71	1229343.93	
		39° 31' 49.858 N	108° 13' 57.225 W	



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
5769.006056.73	Mesaverde
5964.006254.77	Williams Fork
8508.008823.77	Rollins
8936.009255.97	Corcoran

Plan: Plan #1 (CC 697-17-15/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	227.99	1682.92	-130.67	-145.05	1.00	227.99	195.23	CC 697-17-15 8°
4	2700.00	15.00	227.99	2648.85	-303.91	-337.35	0.00	0.00	454.05	
5	3090.88	22.82	227.99	3018.35	-388.62	-431.38	2.00	0.00	580.62	
6	5513.89	22.82	227.99	5251.74	-1017.55	-1129.51	0.00	0.00	1520.26	
7	6254.77	8.00	227.99	5964.00	-1148.94	-1275.36	2.00	180.00	1716.57	
8	8181.52	8.00	227.99	7872.00	-1328.42	-1474.59	0.00	0.00	1984.72	CC 697-17-15 8°
9	9631.63	8.00	227.99	9308.00	-1463.50	-1624.53	0.00	0.00	2186.53	

OXY USA RMAT

Garfield County, CO NAD27

Cascade Creek 609-14 Pad

CC 697-17-15 - Slot U

OH

Plan: Plan #1

Standard Planning Report

09 December, 2009

Scientific Drilling International

Planning Report

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-17-15 - Slot U
Company:	OXY USA RMAT	TVD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Site:	Cascade Creek 609-14 Pad	North Reference:	True
Well:	CC 697-17-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Garfield County, CO NAD27		
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 609-14 Pad, Sec 9 T6S R97W		
Site Position:		Northing:	629,789.23 ft
From:	Map	Easting:	1,229,350.88 ft
Position Uncertainty:	0.00 ft	Slot Radius:	in
		Latitude:	39° 31' 50.765 N
		Longitude:	108° 13' 57.172 W
		Grid Convergence:	-1.72 °

Well	CC 697-17-15 - Slot U		
Well Position	+N/-S	0.00 ft	Northing: 629,697.71 ft
	+E/-W	0.00 ft	Easting: 1,229,343.93 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	39° 31' 49.858 N
		Longitude:	108° 13' 57.225 W
		Ground Level:	8,393.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	12/8/2009	10.63	65.77	52,398

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	227.99	

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	
1,700.00	15.00	227.99	1,682.92	-130.67	-145.05	1.00	1.00	0.00	227.99	CC 697-17-15 8°
2,700.00	15.00	227.99	2,648.85	-303.91	-337.35	0.00	0.00	0.00	0.00	
3,090.88	22.82	227.99	3,018.35	-388.62	-431.38	2.00	2.00	0.00	0.00	
5,513.89	22.82	227.99	5,251.74	-1,017.55	-1,129.51	0.00	0.00	0.00	0.00	
6,254.77	8.00	227.99	5,964.00	-1,148.94	-1,275.36	2.00	-2.00	0.00	180.00	
8,181.52	8.00	227.99	7,872.00	-1,328.42	-1,474.59	0.00	0.00	0.00	0.00	CC 697-17-15 8°
9,631.63	8.00	227.99	9,308.00	-1,463.50	-1,624.53	0.00	0.00	0.00	0.00	

Scientific Drilling International

Planning Report

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-17-15 - Slot U
Company:	OXY USA RMAT	TVD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Site:	Cascade Creek 609-14 Pad	North Reference:	True
Well:	CC 697-17-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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
Start Build 1.00									
300.00	1.00	227.99	299.99	-0.58	-0.65	0.87	1.00	1.00	0.00
400.00	2.00	227.99	399.96	-2.34	-2.59	3.49	1.00	1.00	0.00
500.00	3.00	227.99	499.86	-5.26	-5.83	7.85	1.00	1.00	0.00
600.00	4.00	227.99	599.68	-9.34	-10.37	13.96	1.00	1.00	0.00
700.00	5.00	227.99	699.37	-14.59	-16.20	21.80	1.00	1.00	0.00
800.00	6.00	227.99	798.90	-21.01	-23.32	31.39	1.00	1.00	0.00
900.00	7.00	227.99	898.26	-28.59	-31.73	42.71	1.00	1.00	0.00
1,000.00	8.00	227.99	997.40	-37.32	-41.43	55.76	1.00	1.00	0.00
1,100.00	9.00	227.99	1,096.30	-47.21	-52.41	70.54	1.00	1.00	0.00
1,200.00	10.00	227.99	1,194.93	-58.26	-64.67	87.05	1.00	1.00	0.00
1,300.00	11.00	227.99	1,293.26	-70.46	-78.21	105.27	1.00	1.00	0.00
1,400.00	12.00	227.99	1,391.25	-83.80	-93.02	125.21	1.00	1.00	0.00
1,500.00	13.00	227.99	1,488.87	-98.29	-109.10	146.85	1.00	1.00	0.00
1,600.00	14.00	227.99	1,586.11	-113.91	-126.45	170.19	1.00	1.00	0.00
1,700.00	15.00	227.99	1,682.92	-130.67	-145.05	195.23	1.00	1.00	0.00
Start 15.00° Hold At 1700.00' MD									
1,800.00	15.00	227.99	1,779.52	-148.00	-164.28	221.11	0.00	0.00	0.00
1,900.00	15.00	227.99	1,876.11	-165.32	-183.51	246.99	0.00	0.00	0.00
2,000.00	15.00	227.99	1,972.70	-182.64	-202.74	272.88	0.00	0.00	0.00
2,100.00	15.00	227.99	2,069.29	-199.97	-221.97	298.76	0.00	0.00	0.00
2,200.00	15.00	227.99	2,165.89	-217.29	-241.20	324.64	0.00	0.00	0.00
2,300.00	15.00	227.99	2,262.48	-234.61	-260.43	350.52	0.00	0.00	0.00
2,400.00	15.00	227.99	2,359.07	-251.94	-279.66	376.40	0.00	0.00	0.00
2,500.00	15.00	227.99	2,455.66	-269.26	-298.89	402.29	0.00	0.00	0.00
2,600.00	15.00	227.99	2,552.26	-286.58	-318.12	428.17	0.00	0.00	0.00
2,700.00	15.00	227.99	2,648.85	-303.91	-337.35	454.05	0.00	0.00	0.00
Start Build 2.00									
2,800.00	17.00	227.99	2,744.97	-322.35	-357.82	481.61	2.00	2.00	0.00
2,900.00	19.00	227.99	2,840.07	-343.04	-380.78	512.51	2.00	2.00	0.00
3,000.00	21.00	227.99	2,934.04	-365.93	-406.19	546.71	2.00	2.00	0.00
3,090.88	22.82	227.99	3,018.35	-388.62	-431.38	580.62	2.00	2.00	0.00
Start 22.82° Hold At 3090.88' MD									
3,100.00	22.82	227.99	3,026.76	-390.99	-434.01	584.16	0.00	0.00	0.00
3,200.00	22.82	227.99	3,118.93	-416.95	-462.82	622.94	0.00	0.00	0.00
3,300.00	22.82	227.99	3,211.10	-442.90	-491.64	661.72	0.00	0.00	0.00
3,400.00	22.82	227.99	3,303.28	-468.86	-520.45	700.50	0.00	0.00	0.00
3,500.00	22.82	227.99	3,395.45	-494.82	-549.26	739.28	0.00	0.00	0.00
3,600.00	22.82	227.99	3,487.63	-520.77	-578.07	778.06	0.00	0.00	0.00
3,700.00	22.82	227.99	3,579.80	-546.73	-606.89	816.84	0.00	0.00	0.00
3,800.00	22.82	227.99	3,671.98	-572.68	-635.70	855.62	0.00	0.00	0.00
3,900.00	22.82	227.99	3,764.15	-598.64	-664.51	894.40	0.00	0.00	0.00
4,000.00	22.82	227.99	3,856.33	-624.60	-693.32	933.18	0.00	0.00	0.00
4,100.00	22.82	227.99	3,948.50	-650.55	-722.14	971.96	0.00	0.00	0.00
4,200.00	22.82	227.99	4,040.67	-676.51	-750.95	1,010.74	0.00	0.00	0.00
4,300.00	22.82	227.99	4,132.85	-702.47	-779.76	1,049.52	0.00	0.00	0.00
4,400.00	22.82	227.99	4,225.02	-728.42	-808.57	1,088.30	0.00	0.00	0.00
4,500.00	22.82	227.99	4,317.20	-754.38	-837.38	1,127.08	0.00	0.00	0.00
4,600.00	22.82	227.99	4,409.37	-780.34	-866.20	1,165.86	0.00	0.00	0.00
4,700.00	22.82	227.99	4,501.55	-806.29	-895.01	1,204.64	0.00	0.00	0.00

Scientific Drilling International

Planning Report

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-17-15 - Slot U
Company:	OXY USA RMAT	TVD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Site:	Cascade Creek 609-14 Pad	North Reference:	True
Well:	CC 697-17-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	22.82	227.99	4,593.72	-832.25	-923.82	1,243.42	0.00	0.00	0.00
4,900.00	22.82	227.99	4,685.89	-858.20	-952.63	1,282.20	0.00	0.00	0.00
5,000.00	22.82	227.99	4,778.07	-884.16	-981.45	1,320.98	0.00	0.00	0.00
5,100.00	22.82	227.99	4,870.24	-910.12	-1,010.26	1,359.76	0.00	0.00	0.00
5,200.00	22.82	227.99	4,962.42	-936.07	-1,039.07	1,398.54	0.00	0.00	0.00
5,300.00	22.82	227.99	5,054.59	-962.03	-1,067.88	1,437.32	0.00	0.00	0.00
5,400.00	22.82	227.99	5,146.77	-987.99	-1,096.70	1,476.09	0.00	0.00	0.00
5,500.00	22.82	227.99	5,238.94	-1,013.94	-1,125.51	1,514.87	0.00	0.00	0.00
5,513.89	22.82	227.99	5,251.74	-1,017.55	-1,129.51	1,520.26	0.00	0.00	0.00
Start Drop -2.00									
5,600.00	21.10	227.99	5,331.61	-1,039.10	-1,153.43	1,552.46	2.00	-2.00	0.00
5,700.00	19.10	227.99	5,425.51	-1,062.09	-1,178.96	1,586.81	2.00	-2.00	0.00
5,800.00	17.10	227.99	5,520.56	-1,082.88	-1,202.03	1,617.87	2.00	-2.00	0.00
5,900.00	15.10	227.99	5,616.64	-1,101.44	-1,222.63	1,645.59	2.00	-2.00	0.00
6,000.00	13.10	227.99	5,713.62	-1,117.73	-1,240.72	1,669.95	2.00	-2.00	0.00
6,056.73	11.96	227.99	5,769.00	-1,125.97	-1,249.86	1,682.25	2.00	-2.00	0.00
Mesaverde									
6,100.00	11.10	227.99	5,811.40	-1,131.76	-1,256.29	1,690.90	2.00	-2.00	0.00
6,200.00	9.10	227.99	5,909.84	-1,143.49	-1,269.31	1,708.43	2.00	-2.00	0.00
6,254.77	8.00	227.99	5,964.00	-1,148.94	-1,275.36	1,716.57	2.00	-2.00	0.00
Start 8.00° Hold At 6254.77' MD - Williams Fork									
6,300.00	8.00	227.99	6,008.79	-1,153.15	-1,280.04	1,722.86	0.00	0.00	0.00
6,400.00	8.00	227.99	6,107.82	-1,162.47	-1,290.38	1,736.78	0.00	0.00	0.00
6,500.00	8.00	227.99	6,206.85	-1,171.78	-1,300.72	1,750.70	0.00	0.00	0.00
6,600.00	8.00	227.99	6,305.87	-1,181.10	-1,311.06	1,764.61	0.00	0.00	0.00
6,700.00	8.00	227.99	6,404.90	-1,190.41	-1,321.40	1,778.53	0.00	0.00	0.00
6,800.00	8.00	227.99	6,503.93	-1,199.73	-1,331.74	1,792.45	0.00	0.00	0.00
6,900.00	8.00	227.99	6,602.96	-1,209.04	-1,342.08	1,806.37	0.00	0.00	0.00
7,000.00	8.00	227.99	6,701.98	-1,218.36	-1,352.42	1,820.28	0.00	0.00	0.00
7,100.00	8.00	227.99	6,801.01	-1,227.67	-1,362.76	1,834.20	0.00	0.00	0.00
7,200.00	8.00	227.99	6,900.04	-1,236.99	-1,373.10	1,848.12	0.00	0.00	0.00
7,300.00	8.00	227.99	6,999.06	-1,246.30	-1,383.44	1,862.04	0.00	0.00	0.00
7,400.00	8.00	227.99	7,098.09	-1,255.62	-1,393.78	1,875.95	0.00	0.00	0.00
7,500.00	8.00	227.99	7,197.12	-1,264.93	-1,404.12	1,889.87	0.00	0.00	0.00
7,600.00	8.00	227.99	7,296.14	-1,274.25	-1,414.46	1,903.79	0.00	0.00	0.00
7,700.00	8.00	227.99	7,395.17	-1,283.57	-1,424.80	1,917.70	0.00	0.00	0.00
7,800.00	8.00	227.99	7,494.20	-1,292.88	-1,435.14	1,931.62	0.00	0.00	0.00
7,900.00	8.00	227.99	7,593.22	-1,302.20	-1,445.48	1,945.54	0.00	0.00	0.00
8,000.00	8.00	227.99	7,692.25	-1,311.51	-1,455.82	1,959.46	0.00	0.00	0.00
8,100.00	8.00	227.99	7,791.28	-1,320.83	-1,466.16	1,973.37	0.00	0.00	0.00
8,181.52	8.00	227.99	7,872.00	-1,328.42	-1,474.59	1,984.72	0.00	0.00	0.00
Target = 628414.24, 1227830.06 - CC 697-17-15 8° - CC 697-17-15 8°									
8,200.00	8.00	227.99	7,890.30	-1,330.14	-1,476.50	1,987.29	0.00	0.00	0.00
8,300.00	8.00	227.99	7,989.33	-1,339.46	-1,486.84	2,001.21	0.00	0.00	0.00
8,400.00	8.00	227.99	8,088.36	-1,348.77	-1,497.18	2,015.13	0.00	0.00	0.00
8,500.00	8.00	227.99	8,187.38	-1,358.09	-1,507.52	2,029.04	0.00	0.00	0.00
8,600.00	8.00	227.99	8,286.41	-1,367.40	-1,517.86	2,042.96	0.00	0.00	0.00
8,700.00	8.00	227.99	8,385.44	-1,376.72	-1,528.20	2,056.88	0.00	0.00	0.00
8,800.00	8.00	227.99	8,484.46	-1,386.03	-1,538.54	2,070.79	0.00	0.00	0.00
8,823.77	8.00	227.99	8,508.00	-1,388.25	-1,541.00	2,074.10	0.00	0.00	0.00
Rollins									
8,900.00	8.00	227.99	8,583.49	-1,395.35	-1,548.88	2,084.71	0.00	0.00	0.00
9,000.00	8.00	227.99	8,682.52	-1,404.66	-1,559.22	2,098.63	0.00	0.00	0.00

Scientific Drilling International

Planning Report

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Company:	OXY USA RMAT	TVD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8393' & RKB 30' @ 8423.00ft (H&P 330)
Site:	Cascade Creek 609-14 Pad	North Reference:	True
Well:	CC 697-17-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	227.99	8,781.55	-1,413.98	-1,569.56	2,112.55	0.00	0.00	0.00
9,200.00	8.00	227.99	8,880.57	-1,423.29	-1,579.90	2,126.46	0.00	0.00	0.00
9,255.97	8.00	227.99	8,936.00	-1,428.51	-1,585.69	2,134.25	0.00	0.00	0.00
Corcoran									
9,300.00	8.00	227.99	8,979.60	-1,432.61	-1,590.24	2,140.38	0.00	0.00	0.00
9,400.00	8.00	227.99	9,078.63	-1,441.92	-1,600.58	2,154.30	0.00	0.00	0.00
9,500.00	8.00	227.99	9,177.65	-1,451.24	-1,610.92	2,168.22	0.00	0.00	0.00
9,600.00	8.00	227.99	9,276.68	-1,460.55	-1,621.26	2,182.13	0.00	0.00	0.00
9,631.63	8.00	227.99	9,308.00	-1,463.50	-1,624.53	2,186.53	0.00	0.00	0.00
PBHL = 628283.73, 1227676.12									

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
CC 697-17-15 8° - plan hits target center - Circle (radius 50.00)	-8.00	227.99	7,872.00	-1,328.42	-1,474.59	628,414.24	1,227,830.06	39° 31' 36.728 N	108° 14' 16.044 W

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,056.73	5,769.00	Mesaverde		0.00	
6,254.77	5,964.00	Williams Fork		0.00	
8,823.77	8,508.00	Rollins		0.00	
9,255.97	8,936.00	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	-130.67	-145.05	Start 15.00° Hold At 1700.00' MD
2,700.00	2,648.85	-303.91	-337.35	Start Build 2.00
3,090.88	3,018.35	-388.62	-431.38	Start 22.82° Hold At 3090.88' MD
5,513.89	5,251.74	-1,017.55	-1,129.51	Start Drop -2.00
6,254.77	5,964.00	-1,148.94	-1,275.36	Start 8.00° Hold At 6254.77' MD
8,181.52	7,872.00	-1,328.42	-1,474.59	Target = 628414.24, 1227830.06
9,631.63	9,308.00	-1,463.50	-1,624.53	PBHL = 628283.73, 1227676.12