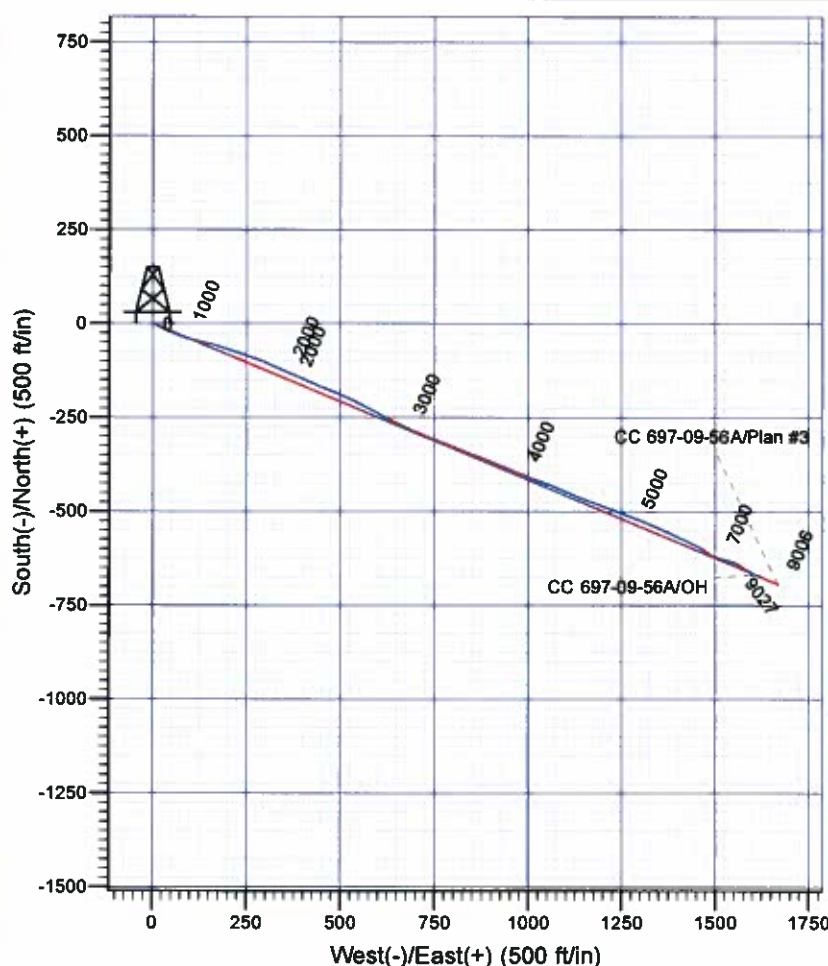
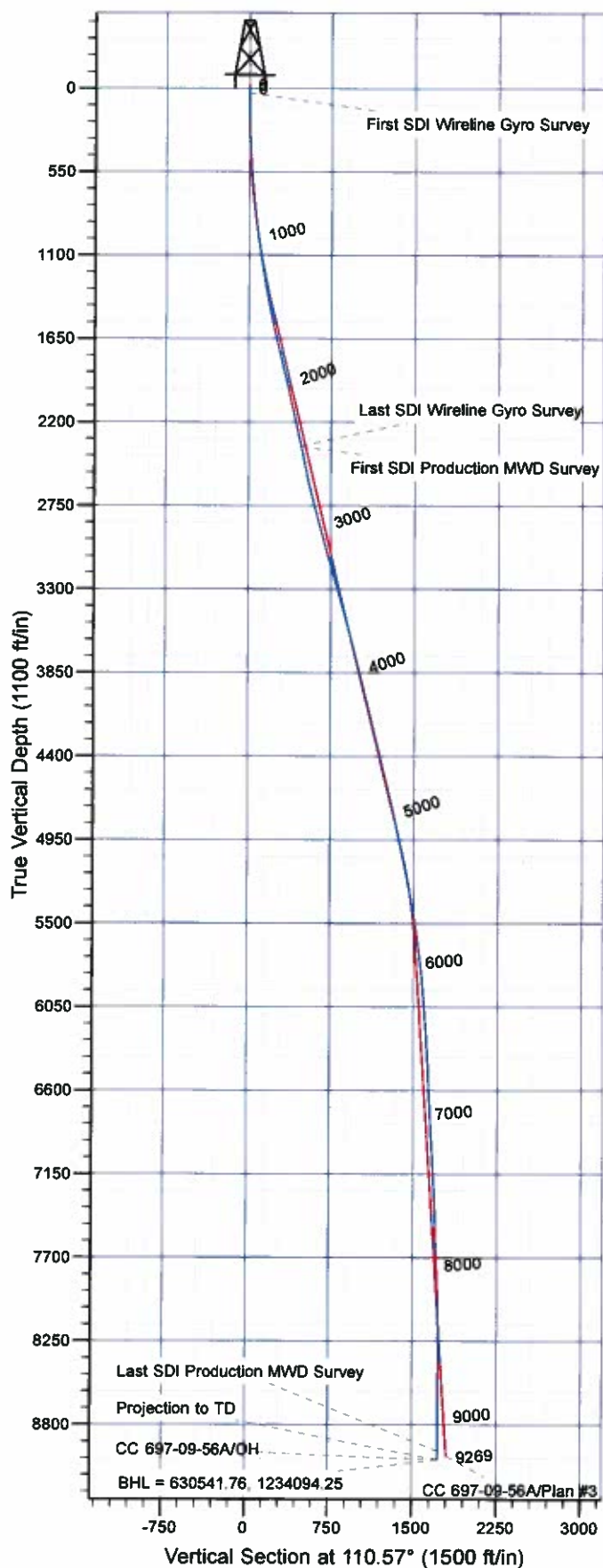




Scientific Drilling
Rocky Mountain Operations

Company: OXY USA R/MAT
Project: Garfield County, CO NAD27
Site: Cascade Creek 609-33 Pad
Well: CC 697-09-56A
Wellbore: OH
Design: OH



Well Details: CC 697-09-56A

+N/-S	+E/-W	North	East	Latitude	Longitude	Slot
0.00	0.00	631256.87	1232518.95	38° 32' 6.204 N	108° 13' 17.317 W	V

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well CC 697-09-56A - Slot V, True North
Vertical (TVD) Reference: GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Section (VS) Reference: Slot - V(0.00N, 0.00E)
Measured Depth Reference: GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Calculation Method: Minimum Curvature

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

Plan: OH

10:47, August 10 2011
Created By: Janie Cooke

OXY USA RMAT

Garfield County, CO NAD27

Cascade Creek 609-33 Pad

CC 697-09-56A - Slot V

OH

Design: OH

Standard Survey Report

10 August, 2011





Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-56A - Slot V
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Site:	Cascade Creek 609-33 Pad	MD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Well:	CC 697-09-56A	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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 609-33 Pad, Sec 9 T6S R97W				
Site Position:		Northing:	631,314.66 usft	Latitude:	39° 32' 6.734 N
From:	Map	Easting:	1,232,383.54 usft	Longitude:	108° 13' 19.067 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.72 °

Well	CC 697-09-56A - Slot V					
Well Position	+N/-S	0.00 ft	Northing:	631,256.87 usft	Latitude:	39° 32' 6.204 N
	+E/-W	0.00 ft	Easting:	1,232,518.94 usft	Longitude:	108° 13' 17.317 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	8,381.00 ft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2009/12/31	10.62	65.78	52,397

Design	OH
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	110.57

Survey Program		Date	2011/08/10		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
30.00	2,418.00	Survey #2 - Wireline Gyro (OH)	Standard Keeper 103	Standard Wireline Keeper ver 1.0.3	
2,418.00	2,518.00	Survey #1 - Surface MWD (OH)	MWD-SDI	MWD - Standard ISCWSA	
2,424.00	9,269.00	Survey #3 - Production MWD (OH)	MWD-SDI	MWD - Standard ISCWSA	

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
30.00	0.19	11.42	30.00	0.05	0.01	-0.01	0.63	0.63	0.00
First SDI Wireline Gyro Survey									
55.00	0.28	7.35	55.00	0.15	0.03	-0.03	0.37	0.36	-16.28
80.00	0.40	13.63	80.00	0.30	0.05	-0.05	0.50	0.48	25.12
105.00	0.40	37.91	105.00	0.45	0.13	-0.04	0.67	0.00	97.12
130.00	0.37	70.38	130.00	0.54	0.26	0.05	0.87	-0.12	129.88
155.00	0.69	107.33	155.00	0.53	0.48	0.26	1.81	1.28	147.80
180.00	1.29	123.76	179.99	0.33	0.86	0.69	2.63	2.40	65.72



Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-56A - Slot V
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Whi Mtn 272)
Site:	Cascade Creek 609-33 Pad	MD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Whi Mtn 272)
Well:	CC 697-09-56A	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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)
205.00	1.85	123.07	204.98	-0.05	1.43	1.35	2.24	2.24	-2.76
230.00	2.35	117.53	229.97	-0.51	2.22	2.26	2.16	2.00	-22.16
255.00	2.73	114.94	254.94	-1.00	3.21	3.36	1.59	1.52	-10.36
280.00	3.02	114.18	279.91	-1.52	4.36	4.61	1.17	1.16	-3.04
305.00	3.32	115.63	304.87	-2.10	5.61	5.99	1.24	1.20	5.80
330.00	3.59	117.28	329.83	-2.77	6.96	7.49	1.15	1.08	6.60
355.00	3.79	118.76	354.78	-3.53	8.38	9.08	0.89	0.80	5.92
380.00	3.85	120.40	379.72	-4.35	9.83	10.73	0.50	0.24	6.56
405.00	3.97	119.86	404.66	-5.21	11.30	12.41	0.50	0.48	-2.16
430.00	4.26	118.32	429.60	-6.08	12.87	14.18	1.24	1.16	-6.16
455.00	4.64	119.07	454.52	-7.01	14.57	16.10	1.54	1.52	3.00
480.00	5.22	117.76	479.43	-8.03	16.46	18.23	2.36	2.32	-5.24
505.00	5.55	117.78	504.32	-9.12	18.54	20.56	1.32	1.32	0.08
530.00	5.70	117.52	529.20	-10.26	20.71	22.99	0.61	0.60	-1.04
555.00	5.74	116.35	554.07	-11.39	22.93	25.47	0.49	0.16	-4.68
580.00	5.78	115.88	578.95	-12.49	25.18	27.96	0.25	0.16	-1.88
605.00	5.97	116.06	603.82	-13.61	27.48	30.51	0.76	0.76	0.72
630.00	6.18	116.18	628.68	-14.78	29.86	33.15	0.84	0.84	0.48
655.00	6.49	115.75	653.52	-15.99	32.34	35.89	1.25	1.24	-1.72
680.00	7.18	114.36	678.35	-17.24	35.03	38.86	2.84	2.76	-5.56
705.00	7.83	114.16	703.13	-18.59	38.01	42.12	2.60	2.60	-0.80
730.00	8.32	114.52	727.88	-20.03	41.21	45.62	1.97	1.96	1.44
755.00	8.55	115.12	752.61	-21.57	44.54	49.28	0.99	0.92	2.40
780.00	8.82	114.96	777.33	-23.17	47.96	53.04	1.08	1.08	-0.64
805.00	9.04	114.48	802.02	-24.79	51.48	56.91	0.93	0.88	-1.92
830.00	9.27	113.48	826.70	-26.41	55.12	60.88	1.12	0.92	-4.00
855.00	9.14	112.17	851.38	-27.96	58.80	64.88	0.99	-0.52	-5.24
880.00	8.69	112.22	876.08	-29.42	62.39	68.75	1.80	-1.80	0.20
905.00	8.76	111.59	900.79	-30.84	65.91	72.54	0.47	0.28	-2.52
930.00	9.24	109.99	925.48	-32.23	69.56	76.45	2.17	1.92	-6.40
955.00	9.76	107.34	950.14	-33.54	73.47	80.57	2.72	2.08	-10.60
980.00	10.24	107.04	974.76	-34.83	77.62	84.91	1.93	1.92	-1.20
1,005.00	10.67	107.08	999.35	-36.16	81.96	89.44	1.72	1.72	0.16
1,030.00	10.92	107.08	1,023.90	-37.53	86.43	94.11	1.00	1.00	0.00
1,055.00	11.36	106.30	1,048.43	-38.92	91.06	98.93	1.86	1.76	-3.12
1,080.00	12.14	105.78	1,072.91	-40.32	95.95	104.00	3.15	3.12	-2.08
1,105.00	12.46	105.75	1,097.33	-41.77	101.08	109.31	1.28	1.28	-0.12
1,130.00	12.65	106.11	1,121.74	-43.26	106.30	114.73	0.82	0.76	1.44
1,155.00	12.92	105.33	1,146.12	-44.76	111.63	120.24	1.28	1.08	-3.12
1,180.00	13.17	104.02	1,170.47	-46.19	117.09	125.85	1.55	1.00	-5.24
1,205.00	13.39	102.99	1,194.80	-47.53	122.67	131.55	1.29	0.88	-4.12
1,230.00	13.30	102.69	1,219.13	-48.81	128.30	137.27	0.45	-0.36	-1.20
1,255.00	13.30	102.46	1,243.46	-50.07	133.91	142.96	0.21	0.00	-0.92



Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-56A - Slot V
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Site:	Cascade Creek 609-33 Pad	MD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Well:	CC 697-09-56A	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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)
1,280.00	13.66	102.05	1,267.77	-51.30	139.61	148.73	1.49	1.44	-1.64
1,305.00	13.86	102.50	1,292.05	-52.57	145.42	154.61	0.91	0.80	1.80
1,330.00	13.81	103.73	1,316.33	-53.92	151.24	160.54	1.19	-0.20	4.92
1,355.00	13.85	105.07	1,340.60	-55.41	157.03	166.48	1.29	0.16	5.36
1,380.00	14.11	105.79	1,364.86	-57.02	162.85	172.50	1.25	1.04	2.88
1,405.00	14.53	106.03	1,389.08	-58.71	168.79	178.66	1.70	1.68	0.96
1,430.00	14.67	106.40	1,413.28	-60.47	174.85	184.94	0.67	0.56	1.48
1,455.00	14.61	107.27	1,437.46	-62.30	180.89	191.25	0.91	-0.24	3.48
1,480.00	15.17	107.78	1,461.63	-64.24	187.02	197.66	2.30	2.24	2.04
1,505.00	15.82	107.39	1,485.72	-66.25	193.39	204.33	2.63	2.60	-1.56
1,530.00	16.51	106.67	1,509.73	-68.29	200.04	211.28	2.87	2.76	-2.88
1,555.00	17.14	107.20	1,533.66	-70.40	206.96	218.50	2.59	2.52	2.12
1,580.00	17.64	108.11	1,557.52	-72.67	214.08	225.96	2.28	2.00	3.64
1,605.00	17.91	108.75	1,581.32	-75.08	221.32	233.59	1.33	1.08	2.56
1,630.00	17.82	109.33	1,605.12	-77.58	228.57	241.26	0.80	-0.36	2.32
1,655.00	18.18	109.48	1,628.89	-80.15	235.86	248.98	1.45	1.44	0.60
1,680.00	18.15	109.46	1,652.65	-82.75	243.21	256.77	0.12	-0.12	-0.08
1,705.00	17.97	108.90	1,676.41	-85.29	250.53	264.52	1.00	-0.72	-2.24
1,730.00	18.21	108.94	1,700.18	-87.81	257.87	272.28	0.96	0.96	0.16
1,755.00	18.52	109.40	1,723.91	-90.40	265.31	280.16	1.37	1.24	1.84
1,780.00	18.62	109.24	1,747.60	-93.03	272.82	288.11	0.45	0.40	-0.64
1,805.00	18.83	110.39	1,771.28	-95.75	280.37	296.14	1.70	0.84	4.60
1,830.00	18.63	111.24	1,794.96	-98.60	287.88	304.17	1.35	-0.80	3.40
1,855.00	18.35	112.68	1,818.67	-101.57	295.23	312.09	2.14	-1.12	5.76
1,880.00	18.11	113.13	1,842.41	-104.61	302.43	319.91	1.11	-0.96	1.80
1,905.00	17.98	114.04	1,866.18	-107.71	309.53	327.64	1.24	-0.52	3.64
1,930.00	17.97	114.99	1,889.96	-110.91	316.55	335.34	1.17	-0.04	3.80
1,955.00	18.06	114.96	1,913.74	-114.17	323.56	343.05	0.36	0.36	-0.12
1,980.00	18.24	115.20	1,937.49	-117.48	330.61	350.81	0.78	0.72	0.96
2,005.00	18.42	114.26	1,961.22	-120.76	337.75	358.65	1.38	0.72	-3.76
2,030.00	18.33	113.42	1,984.95	-123.95	344.96	366.52	1.12	-0.36	-3.36
2,055.00	18.11	113.22	2,008.70	-127.04	352.14	374.33	0.91	-0.88	-0.80
2,080.00	17.79	113.30	2,032.48	-130.09	359.22	382.02	1.28	-1.28	0.32
2,105.00	17.56	112.72	2,056.30	-133.05	366.20	389.61	1.16	-0.92	-2.32
2,130.00	17.10	113.31	2,080.16	-135.97	373.06	397.05	1.97	-1.84	2.36
2,155.00	16.96	112.91	2,104.07	-138.84	379.79	404.36	0.73	-0.56	-1.60
2,180.00	16.20	113.06	2,128.03	-141.62	386.36	411.49	3.04	-3.04	0.60
2,205.00	16.29	113.59	2,152.03	-144.39	392.78	418.47	0.69	0.36	2.12
2,230.00	16.62	113.63	2,176.01	-147.23	399.27	425.54	1.32	1.32	0.16
2,255.00	17.16	113.82	2,199.93	-150.15	405.92	432.80	2.17	2.16	0.76
2,280.00	17.28	113.71	2,223.81	-153.13	412.69	440.19	0.50	0.48	-0.44
2,305.00	17.08	113.54	2,247.69	-156.09	419.46	447.56	0.82	-0.80	-0.68
2,330.00	16.70	113.45	2,271.61	-158.99	426.12	454.81	1.52	-1.52	-0.36
2,355.00	16.53	112.65	2,295.57	-161.79	432.70	461.96	1.14	-0.68	-3.20



Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-56A - Slot V
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Whit Mtn 272)
Site:	Cascade Creek 609-33 Pad	MD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Whit Mtn 272)
Well:	CC 697-09-56A	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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)
2,380.00	16.43	112.54	2,319.54	-164.51	439.25	469.04	0.42	-0.40	-0.44
2,405.00	16.12	112.42	2,343.54	-167.19	445.72	476.05	1.25	-1.24	-0.48
2,418.00	15.73	112.32	2,356.04	-168.55	449.02	479.61	3.01	-3.00	-0.77
Last SDI Wireline Gyro Survey									
2,424.00	16.61	111.87	2,361.80	-169.18	450.57	481.28	14.81	14.67	-7.50
First SDI Production MWD Survey									
2,469.00	15.91	112.00	2,405.00	-173.89	462.25	493.88	1.56	-1.56	0.29
2,518.00	15.70	112.14	2,452.15	-178.90	474.62	507.22	0.44	-0.43	0.29
2,577.00	15.74	111.34	2,508.94	-184.82	489.47	523.20	0.37	0.07	-1.36
2,672.00	17.50	114.41	2,599.97	-195.41	514.48	550.34	2.07	1.85	3.23
2,767.00	20.93	117.49	2,689.67	-209.15	542.55	581.45	3.76	3.61	3.24
2,861.00	20.05	117.75	2,777.72	-224.41	571.70	614.10	0.94	-0.94	0.28
2,956.00	19.61	117.05	2,867.09	-239.24	600.31	646.10	0.53	-0.46	-0.74
3,051.00	20.75	117.32	2,956.26	-254.21	629.47	678.65	1.20	1.20	0.28
3,145.00	20.49	115.82	3,044.23	-269.02	659.07	711.57	0.63	-0.28	-1.60
3,240.00	21.90	113.71	3,132.81	-283.39	690.26	745.82	1.69	1.48	-2.22
3,335.00	20.84	112.92	3,221.28	-297.09	722.05	780.40	1.16	-1.12	-0.83
3,429.00	21.37	110.72	3,308.97	-309.66	753.47	814.23	1.01	0.56	-2.34
3,524.00	21.72	111.87	3,397.33	-322.34	785.97	849.11	0.58	0.37	1.21
3,619.00	20.66	111.60	3,485.91	-335.05	817.87	883.45	1.12	-1.12	-0.28
3,714.00	20.58	111.78	3,574.82	-347.42	848.95	916.90	0.11	-0.08	0.19
3,808.00	19.43	111.43	3,663.15	-359.26	878.85	949.05	1.23	-1.22	-0.37
3,903.00	18.11	111.07	3,753.10	-370.34	907.34	979.61	1.39	-1.39	-0.38
3,998.00	19.17	112.83	3,843.11	-381.70	935.49	1,009.96	1.26	1.12	1.85
4,092.00	17.94	112.83	3,932.22	-393.31	963.06	1,039.85	1.31	-1.31	0.00
4,187.00	19.35	111.25	4,022.24	-404.69	991.22	1,070.21	1.58	1.48	-1.66
4,282.00	18.38	110.37	4,112.13	-415.61	1,019.93	1,100.93	1.06	-1.02	-0.93
4,376.00	17.59	110.64	4,201.54	-425.77	1,047.11	1,129.95	0.85	-0.84	0.29
4,471.00	18.84	112.94	4,291.78	-436.81	1,074.67	1,159.63	1.52	1.32	2.42
4,565.00	18.47	113.36	4,380.84	-448.63	1,102.32	1,189.67	0.42	-0.39	0.45
4,660.00	16.80	112.31	4,471.37	-459.81	1,128.84	1,218.42	1.79	-1.76	-1.11
4,755.00	18.82	110.90	4,561.81	-470.49	1,155.86	1,247.47	2.17	2.13	-1.48
4,850.00	18.73	109.76	4,651.76	-481.12	1,184.53	1,278.05	0.40	-0.09	-1.20
4,944.00	16.18	109.23	4,741.42	-490.53	1,211.10	1,306.24	2.72	-2.71	-0.56
5,039.00	16.00	110.90	4,832.70	-499.56	1,235.83	1,332.56	0.52	-0.19	1.76
5,134.00	16.88	110.90	4,923.82	-509.15	1,260.95	1,359.45	0.93	0.93	0.00
5,228.00	15.21	109.32	5,014.15	-518.10	1,285.33	1,385.42	1.84	-1.78	-1.68
5,323.00	16.27	112.13	5,105.59	-527.24	1,309.42	1,411.19	1.37	1.12	2.96
5,418.00	15.12	113.71	5,197.05	-537.24	1,333.09	1,436.86	1.29	-1.21	1.66
5,512.00	13.81	114.06	5,288.07	-546.74	1,354.56	1,460.30	1.40	-1.39	0.37
5,607.00	13.19	113.80	5,380.44	-555.74	1,374.83	1,482.44	0.66	-0.65	-0.27
5,702.00	12.49	115.56	5,473.07	-564.54	1,394.02	1,503.50	0.84	-0.74	1.85
5,796.00	11.87	115.65	5,564.95	-573.11	1,411.90	1,523.25	0.66	-0.66	0.10



Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-56A - Slot V
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Site:	Cascade Creek 609-33 Pad	MD Reference:	GL 8381' & RKB 5' @ 8386.00ft (Wht Mtn 272)
Well:	CC 697-09-56A	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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)
5,891.00	9.94	116.00	5,658.23	-580.94	1,428.08	1,541.15	2.03	-2.03	0.37
5,986.00	9.15	115.29	5,751.91	-587.76	1,442.28	1,556.84	0.84	-0.83	-0.75
6,081.00	8.53	115.21	5,845.78	-593.99	1,455.49	1,571.39	0.65	-0.65	-0.08
6,176.00	6.42	121.27	5,939.97	-599.74	1,466.40	1,583.63	2.37	-2.22	6.38
6,270.00	6.24	124.61	6,033.40	-605.37	1,475.10	1,593.75	0.44	-0.19	3.55
6,365.00	5.89	125.58	6,127.87	-611.14	1,483.31	1,603.47	0.38	-0.37	1.02
6,460.00	5.01	125.93	6,222.44	-616.41	1,490.64	1,612.18	0.93	-0.93	0.37
6,554.00	4.66	111.78	6,316.11	-620.24	1,497.50	1,619.96	1.32	-0.37	-15.05
6,649.00	3.96	104.75	6,410.84	-622.51	1,504.26	1,627.08	0.92	-0.74	-7.40
6,744.00	4.22	106.33	6,505.60	-624.32	1,510.79	1,633.83	0.30	0.27	1.66
6,838.00	3.61	109.84	6,599.38	-626.30	1,516.89	1,640.23	0.70	-0.65	3.73
6,933.00	3.78	105.27	6,694.18	-628.14	1,522.72	1,646.34	0.36	0.18	-4.81
7,027.00	3.43	107.30	6,787.99	-629.79	1,528.40	1,652.24	0.40	-0.37	2.16
7,122.00	5.54	102.81	6,882.70	-631.65	1,535.58	1,659.62	2.25	2.22	-4.73
7,217.00	4.75	104.04	6,977.31	-633.63	1,543.87	1,668.07	0.84	-0.83	1.29
7,311.00	4.04	113.27	7,071.04	-635.88	1,550.69	1,675.24	1.06	-0.76	9.82
7,406.00	3.78	116.08	7,165.82	-638.58	1,556.58	1,681.70	0.34	-0.27	2.96
7,500.00	3.61	114.68	7,259.62	-641.17	1,562.05	1,687.74	0.20	-0.18	-1.49
7,595.00	3.52	125.31	7,354.44	-644.11	1,567.15	1,693.54	0.70	-0.09	11.19
7,690.00	3.17	127.07	7,449.28	-647.38	1,571.62	1,698.88	0.38	-0.37	1.85
7,784.00	2.81	123.73	7,543.15	-650.22	1,575.61	1,703.62	0.43	-0.38	-3.55
7,879.00	2.37	132.87	7,638.05	-652.85	1,578.99	1,707.70	0.63	-0.46	9.62
7,973.00	3.96	116.35	7,731.91	-655.62	1,583.32	1,712.73	1.93	1.69	-17.57
8,068.00	3.34	116.08	7,826.71	-658.29	1,588.75	1,718.75	0.65	-0.65	-0.28
8,163.00	2.55	112.66	7,921.59	-660.32	1,593.18	1,723.62	0.85	-0.83	-3.60
8,257.00	2.02	132.08	8,015.51	-662.24	1,596.34	1,727.25	0.99	-0.56	20.66
8,352.00	1.32	147.81	8,110.47	-664.28	1,598.17	1,729.68	0.87	-0.74	16.56
8,447.00	1.23	170.40	8,205.45	-666.22	1,598.92	1,731.06	0.53	-0.09	23.78
8,541.00	1.67	210.13	8,299.42	-668.40	1,598.40	1,731.34	1.14	0.47	42.27
8,636.00	0.79	245.99	8,394.40	-669.86	1,597.11	1,730.64	1.19	-0.93	37.75
8,730.00	1.14	23.71	8,488.40	-669.27	1,596.89	1,730.23	1.92	0.37	146.51
8,825.00	1.41	43.66	8,583.37	-667.56	1,598.08	1,730.74	0.54	0.28	21.00
8,920.00	0.70	38.74	8,678.36	-666.26	1,599.25	1,731.38	0.75	-0.75	-5.18
9,014.00	0.62	258.64	8,772.35	-665.91	1,599.11	1,731.13	1.32	-0.09	-149.04
9,109.00	0.62	250.73	8,867.35	-666.18	1,598.12	1,730.30	0.09	0.00	-8.33
9,213.00	1.06	231.84	8,971.34	-666.96	1,596.83	1,729.37	0.49	0.42	-18.16
Last SDI Production MWD Survey									
9,269.00	1.06	231.84	9,027.33	-667.60	1,596.02	1,728.83	0.00	0.00	0.00
Projection to TD - BHL = 630541.76, 1234094.25									



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Well:	CC 697-09-56A	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
30.00	30.00	0.05	0.01	First SDI Wireline Gyro Survey
2,418.00	2,356.04	-168.55	449.02	Last SDI Wireline Gyro Survey
2,424.00	2,361.80	-169.18	450.57	First SDI Production MWD Survey
9,213.00	8,971.34	-666.96	1,596.83	Last SDI Production MWD Survey
9,269.00	9,027.33	-667.60	1,596.02	Projection to TD
9,269.00	9,027.33	-667.60	1,596.02	BHL = 630541.76, 1234094.25

Checked By: _____ Approved By: _____ Date: _____