

Results of Directional Survey

API number:	30-025-41083		
OGRID:		Operator:	OXY USA INC
		Property:	MADERA 35 FEDERAL # 1H

surface	ULSTR:	D	35	T	26S	R	34E
				400	FNL	329	FWL

BH Loc	ULSTR:	A	35	T	26S	R	34E
16830	MD	12495.6	TVD	368	FNL	329	FEL
						4951	FWL

Top Perf/OH	ULSTR:	D	35	T	26S	R	34E
12891	MD	12540.0	TVD	443	FNL	1016	FWL

Bot Perf/OH	ULSTR:	A	35	T	26S	R	34E
16272	MD	12507.9	TVD	352	FNL	887	FEL
						4393	FWL

	MD	N/S	E/W	VD
	12874	-44.49	670.79	12536.65
TOP PERFS/OH	12891	-42.74	687.37	12540.00
	12910	-40.79	705.89	12543.75
	16540	43.11	4332.33	12505.05
BOT PERFS/OH	16272	47.86	4064.41	12507.92
	16637	41.39	4429.30	12504.01

NEXT TO LAST	16782	35.25	4574.05	12498.42
LAST READING	16830	32.20	4621.87	12495.58
TD	16830	32.20	4621.87	12495.58

Surface Location	400	FN	329	FW
Projected BHL	368	FN	4951	FW
Location of				
Top Perfs/OH	443	FN	1016	FW
Bottom Perfs/OH	352	FN	4393	FW

SUMMARY of Subsurface Locations

Surface Location	D-35-26S-34E	400	FN	329	FW	Vert. Depth
Top Perfs/OH	D-35-26S-34E	443	FN	1016	FW	12540.00
Bottom Perfs/OH	A-35-26S-34E	352	FN	4393	FW	12507.92
Projected TD	A-35-26S-34E	368	FN	4951	FW	12495.58

OCT 07 2013



Scientific Drilling

HOBBS OCD

SEP 16 2013

RECEIVED

OXY

Lea County, New Mexico

Madera 35 Fed 1H

Madera 35 1H

Original Wellbore

Design: OH

Standard Survey Report

23 July, 2013



Scientific Drilling

www.scientificdrilling.com

Company:	OXY	Local Co-ordinate Reference:	Well Madera 35 1H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Site:	Madera 35 Fed 1H	MD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Well:	Madera 35 1H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassC

Project	Lea County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Madera 35 Fed 1H		
Site Position:		Northing:	367,007.20 usft
From:	Map	Easting:	774,519.80 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.006
		Longitude:	-103.448
		Grid Convergence:	0.47 °

Well	Madera 35 1H		
Well Position	+N/-S	0.00 usft	Northing: 367,007.20 usft
	+E/-W	0.00 usft	Easting: 774,519.80 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32.006
		Longitude:	-103.448
		Ground Level:	3,226.00 usft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2012	6/25/2013	7.37	59.91	48,267

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	11,203.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	89.72	

Survey Program	Date 7/23/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
34.00	882.00	MS Gyro (Pilot Wellpath)	SR Gyro MS	Surface Readout Gyro Multishot
977.00	11,203.00	SDI MWD (Pilot Wellpath)	SDI MWD	SDI MWD - Standard ver 1.0.1
11,263.00	16,830.00	Survey #1 (Original Wellbore)	SDI MWD	SDI MWD - Standard ver 1.0.1

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34.00	0.18	56.25	34.00	0.03	0.04	0.04	0.53	0.53	0.00
128.00	0.82	89.21	128.00	0.12	0.84	0.84	0.72	0.68	35.06
222.00	0.60	84.48	221.99	0.18	2.00	2.00	0.24	-0.23	-5.03
317.00	0.18	59.54	316.99	0.30	2.63	2.63	0.47	-0.44	-26.25
411.00	0.24	312.03	410.99	0.51	2.61	2.61	0.36	0.06	-114.37
506.00	0.40	292.46	505.98	0.77	2.15	2.16	0.20	0.17	-20.60
600.00	0.62	297.12	599.98	1.12	1.40	1.40	0.24	0.23	4.96
694.00	1.12	295.34	693.97	1.75	0.11	0.12	0.53	0.53	-1.89

Company:	OXY	Local Co-ordinate Reference:	Well Madera 35 1H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Site:	Madera 35 Fed 1H	MD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Well:	Madera 35 1H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
788.00	0.90	297.20	787.95	2.48	-1.37	-1.36	0.24	-0.23	1.98
882.00	0.63	299.58	881.95	3.07	-2.48	-2.46	0.29	-0.29	2.53
977.00	0.33	11.36	976.94	3.60	-2.88	-2.86	0.65	-0.32	75.56
1,037.00	0.31	47.82	1,036.94	3.88	-2.73	-2.71	0.34	-0.03	60.77
1,132.00	0.31	341.11	1,131.94	4.29	-2.62	-2.60	0.36	0.00	-70.22
1,604.00	0.88	327.14	1,603.91	8.55	-5.00	-4.96	0.12	0.12	-2.96
1,698.00	1.01	326.52	1,697.90	9.84	-5.85	-5.80	0.14	0.14	-0.66
1,886.00	1.36	342.43	1,885.86	13.35	-7.43	-7.37	0.25	0.19	8.46
1,981.00	0.70	346.03	1,980.85	14.99	-7.91	-7.84	0.70	-0.69	3.79
2,075.00	0.70	358.82	2,074.84	16.12	-8.06	-7.99	0.17	0.00	13.61
2,169.00	0.70	24.90	2,168.83	17.22	-7.84	-7.75	0.34	0.00	27.74
2,264.00	0.62	222.46	2,263.83	17.36	-7.94	-7.85	1.37	-0.08	-170.99
2,358.00	0.79	68.03	2,357.83	17.23	-7.68	-7.60	1.46	0.18	-164.29
2,452.00	1.19	84.43	2,451.81	17.57	-6.11	-6.02	0.52	0.43	17.45
2,546.00	1.49	93.52	2,545.79	17.59	-3.92	-3.83	0.39	0.32	9.67
2,640.00	2.02	91.24	2,639.74	17.48	-1.04	-0.95	0.57	0.56	-2.43
2,735.00	2.29	95.94	2,734.68	17.24	2.52	2.61	0.34	0.28	4.95
2,829.00	2.90	93.61	2,828.58	16.90	6.76	6.85	0.66	0.65	-2.48
2,923.00	3.30	96.13	2,922.44	16.46	11.83	11.91	0.45	0.43	2.68
3,014.00	3.25	100.42	3,013.29	15.72	16.97	17.04	0.27	-0.05	4.71
3,108.00	2.37	94.62	3,107.18	15.08	21.53	21.60	0.98	-0.94	-6.17
3,203.00	1.32	111.32	3,202.13	14.52	24.50	24.57	1.23	-1.11	17.58
3,297.00	0.62	115.10	3,296.12	13.91	25.97	26.04	0.75	-0.74	4.02
3,391.00	0.79	264.08	3,390.11	13.63	25.79	25.85	1.45	0.18	158.49
3,485.00	0.70	251.42	3,484.10	13.38	24.60	24.66	0.20	-0.10	-13.47
3,580.00	0.26	170.38	3,579.10	12.98	24.08	24.15	0.74	-0.46	-85.31
3,674.00	0.86	186.64	3,673.10	12.07	24.04	24.10	0.65	0.64	17.30
3,768.00	0.97	171.88	3,767.08	10.58	24.07	24.12	0.28	0.12	-15.70
3,863.00	0.79	152.45	3,862.07	9.21	24.49	24.53	0.36	-0.19	-20.45
3,957.00	1.14	97.17	3,956.06	8.51	25.71	25.75	1.01	0.37	-58.81
4,051.00	1.41	108.33	4,050.04	8.03	27.74	27.78	0.39	0.29	11.87
4,146.00	0.62	96.12	4,145.02	7.61	29.36	29.40	0.86	-0.83	-12.85
4,240.00	1.23	54.19	4,239.01	8.15	30.68	30.72	0.93	0.65	-44.61
4,334.00	1.58	72.47	4,332.98	9.13	32.74	32.78	0.60	0.37	19.45
4,428.00	0.35	328.85	4,426.97	9.76	33.82	33.87	1.81	-1.31	-110.23
4,523.00	0.35	280.95	4,521.97	10.07	33.39	33.44	0.30	0.00	-50.42
4,617.00	0.62	268.29	4,615.97	10.11	32.60	32.65	0.31	0.29	-13.47
4,712.00	0.35	269.26	4,710.96	10.09	31.80	31.84	0.28	-0.28	1.02
4,806.00	0.62	94.89	4,804.96	10.04	32.02	32.06	1.03	0.29	-185.50
4,900.00	1.32	77.31	4,898.95	10.24	33.58	33.63	0.80	0.74	-18.70
4,995.00	1.67	101.57	4,993.92	10.20	36.00	36.05	0.75	0.37	25.54
5,089.00	2.02	88.73	5,087.87	9.96	39.00	39.05	0.57	0.37	-13.66
5,183.00	0.26	122.13	5,181.85	9.88	40.84	40.89	1.92	-1.87	35.53

Company:	OXY	Local Co-ordinate Reference:	Well Madera 35 1H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Site:	Madera 35 Fed 1H	MD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Well:	Madera 35 1H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassC

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,277.00	0.79	62.19	5,275.84	10.07	41.59	41.64	0.74	0.56	-63.77
5,320.00	0.26	86.27	5,318.84	10.22	41.95	42.00	1.31	-1.23	56.00
5,447.00	0.70	44.53	5,445.84	10.79	42.78	42.83	0.42	0.35	-32.87
5,541.00	0.79	41.10	5,539.83	11.69	43.61	43.67	0.11	0.10	-3.65
5,636.00	0.53	304.59	5,634.82	12.43	43.68	43.74	1.05	-0.27	-101.59
5,730.00	0.79	296.60	5,728.82	12.97	42.74	42.81	0.29	0.28	-8.50
5,824.00	0.88	301.52	5,822.81	13.63	41.55	41.61	0.12	0.10	5.23
5,919.00	0.88	288.42	5,917.80	14.25	40.23	40.30	0.21	0.00	-13.79
6,013.00	0.88	286.40	6,011.79	14.68	38.86	38.93	0.03	0.00	-2.15
6,108.00	0.88	271.90	6,106.77	14.91	37.43	37.50	0.23	0.00	-15.26
6,202.00	0.88	281.74	6,200.76	15.08	36.00	36.07	0.16	0.00	10.47
6,296.00	0.79	272.69	6,294.75	15.26	34.65	34.72	0.17	-0.10	-9.63
6,391.00	0.79	280.86	6,389.74	15.41	33.35	33.42	0.12	0.00	8.60
6,485.00	0.88	281.39	6,483.73	15.67	32.00	32.08	0.10	0.10	0.56
6,579.00	0.79	275.50	6,577.72	15.88	30.65	30.73	0.13	-0.10	-6.27
6,674.00	0.79	276.64	6,672.72	16.02	29.35	29.43	0.02	0.00	1.20
6,768.00	0.97	282.27	6,766.70	16.26	27.93	28.01	0.21	0.19	5.99
6,863.00	0.97	283.24	6,861.69	16.62	26.36	26.44	0.02	0.00	1.02
6,957.00	0.88	283.94	6,955.68	16.97	24.88	24.97	0.10	-0.10	0.74
7,051.00	0.88	294.84	7,049.67	17.45	23.53	23.61	0.18	0.00	11.60
7,146.00	0.79	288.74	7,144.66	17.97	22.25	22.33	0.13	-0.09	-6.42
7,240.00	1.06	283.06	7,238.65	18.37	20.79	20.87	0.30	0.29	-6.04
7,334.00	0.97	273.74	7,332.63	18.62	19.14	19.24	0.20	-0.10	-9.91
7,429.00	0.88	273.74	7,427.62	18.72	17.61	17.71	0.09	-0.09	0.00
7,523.00	1.14	271.11	7,521.60	18.79	15.96	16.05	0.28	0.28	-2.80
7,618.00	0.97	259.68	7,616.59	18.66	14.22	14.31	0.28	-0.18	-12.03
7,712.00	0.88	244.12	7,710.58	18.20	12.79	12.88	0.28	-0.10	-16.55
7,806.00	1.06	235.25	7,804.56	17.39	11.43	11.51	0.25	0.19	-9.44
7,900.00	1.06	242.02	7,898.55	16.49	9.94	10.02	0.13	0.00	7.20
7,995.00	1.14	216.00	7,993.53	15.31	8.61	8.69	0.53	0.08	-27.39
8,089.00	1.14	224.53	8,087.51	13.89	7.41	7.48	0.18	0.00	9.07
8,184.00	1.06	227.69	8,182.49	12.62	6.09	6.16	0.11	-0.08	3.33
8,278.00	1.14	215.21	8,276.48	11.27	4.91	4.97	0.27	0.09	-13.28
8,372.00	1.14	203.17	8,370.46	9.65	4.01	4.05	0.25	0.00	-12.81
8,467.00	1.32	196.40	8,465.44	7.73	3.33	3.36	0.24	0.19	-7.13
8,561.00	1.23	183.74	8,559.41	5.69	2.95	2.98	0.31	-0.10	-13.47
8,656.00	1.14	181.81	8,654.39	3.72	2.86	2.88	0.10	-0.09	-2.03
8,750.00	1.41	194.82	8,748.37	1.67	2.53	2.54	0.42	0.29	13.84
8,845.00	1.41	202.55	8,843.34	-0.54	1.78	1.78	0.20	0.00	8.14
8,939.00	1.32	193.68	8,937.31	-2.66	1.09	1.07	0.24	-0.10	-9.44
9,033.00	1.14	174.47	9,031.29	-4.64	0.92	0.90	0.48	-0.19	-20.44
9,128.00	1.14	177.59	9,126.27	-6.53	1.05	1.02	0.07	0.00	3.28
9,222.00	1.23	172.76	9,220.25	-8.46	1.22	1.17	0.14	0.10	-5.14

Company:	OXY	Local Co-ordinate Reference:	Well Madera 35 1H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Site:	Madera 35 Fed 1H	MD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Well:	Madera 35 1H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassC

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,317.00	1.32	177.06	9,315.23	-10.57	1.40	1.35	0.14	0.09	4.53	
9,411.00	1.41	175.92	9,409.20	-12.80	1.54	1.48	0.10	0.10	-1.21	
9,505.00	1.23	153.07	9,503.18	-14.85	2.08	2.01	0.59	-0.19	-24.31	
9,600.00	1.14	113.34	9,598.16	-16.14	3.41	3.33	0.85	-0.09	-41.82	
9,694.00	1.32	115.10	9,692.14	-16.97	5.25	5.16	0.20	0.19	1.87	
9,788.00	1.58	115.10	9,786.11	-17.98	7.40	7.31	0.28	0.28	0.00	
9,883.00	0.88	101.30	9,881.09	-18.67	9.30	9.21	0.79	-0.74	-14.53	
9,977.00	0.70	138.39	9,975.08	-19.24	10.39	10.30	0.56	-0.19	39.46	
10,072.00	0.88	221.45	10,070.07	-20.23	10.29	10.19	1.11	0.19	87.43	
10,166.00	1.85	229.89	10,164.04	-21.74	8.66	8.55	1.05	1.03	8.98	
10,260.00	1.14	181.02	10,258.01	-23.66	7.48	7.36	1.48	-0.76	-51.99	
10,355.00	0.79	130.22	10,353.00	-25.02	7.96	7.84	0.93	-0.37	-53.47	
10,449.00	1.41	139.01	10,446.98	-26.32	9.21	9.09	0.68	0.66	9.35	
10,543.00	2.02	142.44	10,540.94	-28.50	10.98	10.84	0.66	0.65	3.65	
10,637.00	1.06	144.54	10,634.91	-30.52	12.50	12.35	1.02	-1.02	2.23	
10,732.00	1.14	139.27	10,729.89	-31.96	13.62	13.47	0.14	0.08	-5.55	
10,826.00	1.67	174.34	10,823.86	-34.03	14.37	14.20	1.05	0.56	37.31	
10,920.00	1.85	168.63	10,917.82	-36.88	14.80	14.62	0.27	0.19	-6.07	
11,014.00	1.23	191.57	11,011.78	-39.35	14.90	14.71	0.92	-0.66	24.40	
11,108.00	1.23	202.55	11,105.76	-41.27	14.31	14.11	0.25	0.00	11.68	
11,203.00	1.58	215.38	11,200.73	-43.28	13.16	12.95	0.49	0.37	13.51	
11,263.00	1.49	140.06	11,260.72	-44.56	13.18	12.97	3.13	-0.15	-125.53	
11,295.00	4.04	115.01	11,292.68	-45.35	14.47	14.25	8.63	7.97	-78.28	
11,326.00	3.96	121.34	11,323.60	-46.37	16.38	16.15	1.45	-0.26	20.42	
11,357.00	3.69	121.08	11,354.53	-47.44	18.14	17.91	0.87	-0.87	-0.84	
11,452.00	3.52	110.44	11,449.35	-50.04	23.50	23.25	0.73	-0.18	-11.20	
11,546.00	2.37	105.17	11,543.22	-51.56	28.08	27.82	1.26	-1.22	-5.61	
11,641.00	2.20	104.38	11,638.15	-52.52	31.74	31.48	0.18	-0.18	-0.83	
11,672.00	2.11	109.21	11,669.12	-52.86	32.85	32.59	0.65	-0.29	15.58	
11,704.00	2.29	108.60	11,701.10	-53.26	34.02	33.75	0.57	0.56	-1.91	
11,735.00	3.08	118.70	11,732.07	-53.85	35.33	35.07	2.96	2.55	32.58	
11,766.00	4.66	114.93	11,763.00	-54.78	37.21	36.94	5.16	5.10	-12.16	
11,798.00	6.16	100.51	11,794.85	-55.64	40.07	39.80	6.29	4.69	-45.06	
11,829.00	7.83	96.38	11,825.62	-56.18	43.81	43.53	5.62	5.39	-13.32	
11,861.00	8.35	95.77	11,857.30	-56.66	48.28	48.01	1.65	1.63	-1.91	
11,892.00	8.00	82.85	11,887.99	-56.62	52.67	52.39	6.02	-1.13	-41.68	
11,933.00	8.18	85.31	11,928.58	-56.02	58.40	58.13	0.95	0.44	6.00	
11,964.00	7.74	92.25	11,959.28	-55.92	62.69	62.41	3.41	-1.42	22.39	
11,996.00	9.67	93.22	11,990.91	-56.16	67.52	67.25	6.05	6.03	3.03	
12,027.00	12.57	95.33	12,021.33	-56.62	73.48	73.21	9.44	9.35	6.81	
12,059.00	16.36	94.89	12,052.31	-57.33	81.44	81.16	11.85	11.84	-1.38	
12,090.00	18.73	95.06	12,081.87	-58.14	90.75	90.47	7.65	7.65	0.55	
12,122.00	20.58	92.34	12,112.00	-58.82	101.49	101.20	6.45	5.78	-8.50	
12,153.00	22.42	92.16	12,140.84	-59.27	112.84	112.55	5.94	5.94	-0.58	

Company:	OXY	Local Co-ordinate Reference:	Well Madera 35 1H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Site:	Madera 35 Fed 1H	MD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Well:	Madera 35 1H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,185.00	24.89	93.57	12,170.15	-59.92	125.66	125.37	7.92	7.72	4.41
12,216.00	26.73	94.27	12,198.06	-60.84	139.13	138.83	6.02	5.94	2.26
12,248.00	29.55	94.18	12,226.27	-61.95	154.18	153.87	8.81	8.81	-0.28
12,279.00	32.54	91.81	12,252.83	-62.77	170.14	169.83	10.42	9.65	-7.65
12,310.00	34.47	88.91	12,278.68	-62.87	187.25	186.94	8.09	6.23	-9.35
12,342.00	37.55	88.29	12,304.56	-62.41	206.05	205.74	9.69	9.63	-1.94
12,373.00	42.12	88.38	12,328.36	-61.83	225.90	225.59	14.74	14.74	0.29
12,405.00	46.34	91.81	12,351.29	-61.89	248.21	247.90	15.16	13.19	10.72
12,437.00	49.24	91.99	12,372.78	-62.68	271.89	271.58	9.07	9.06	0.56
12,468.00	52.14	91.11	12,392.42	-63.32	295.87	295.55	9.61	9.35	-2.84
12,500.00	56.89	90.40	12,410.99	-63.66	321.91	321.60	14.95	14.84	-2.22
12,531.00	60.15	89.70	12,427.18	-63.68	348.35	348.03	10.69	10.52	-2.26
12,563.00	62.17	89.53	12,442.61	-63.49	376.38	376.06	6.33	6.31	-0.53
12,594.00	64.63	88.47	12,456.49	-63.01	404.09	403.77	8.50	7.94	-3.42
12,626.00	66.83	87.77	12,469.65	-62.05	433.24	432.93	7.16	6.88	-2.19
12,657.00	68.59	87.59	12,481.40	-60.89	461.90	461.60	5.70	5.68	-0.58
12,712.00	73.25	83.99	12,499.38	-57.05	513.71	513.43	10.49	8.47	-6.55
12,744.00	75.27	84.52	12,508.06	-53.97	544.36	544.09	6.51	6.31	1.66
12,777.00	76.59	86.62	12,516.09	-51.50	576.27	576.01	7.36	4.00	6.36
12,809.00	77.29	86.36	12,523.32	-49.59	607.38	607.13	2.33	2.19	-0.81
12,842.00	78.52	85.31	12,530.23	-47.25	639.56	639.32	4.86	3.73	-3.18
12,874.00	78.35	84.60	12,536.65	-44.49	670.79	670.57	2.24	-0.53	-2.22
12,910.00	78.88	83.37	12,543.75	-40.79	705.89	705.68	3.66	1.47	-3.42
12,942.00	81.60	83.81	12,549.18	-37.27	737.22	737.03	8.61	8.50	1.38
12,975.00	87.41	86.10	12,552.34	-34.39	769.93	769.75	18.91	17.61	6.94
13,007.00	91.01	88.21	12,552.78	-32.80	801.88	801.71	13.04	11.25	6.59
13,091.00	90.48	90.14	12,551.69	-31.59	885.86	885.69	2.38	-0.63	2.30
13,187.00	89.60	89.17	12,551.62	-31.01	981.86	981.69	1.36	-0.92	-1.01
13,284.00	89.43	87.86	12,552.44	-28.50	1,078.82	1,078.67	1.36	-0.18	-1.35
13,381.00	89.08	88.12	12,553.70	-25.10	1,175.75	1,175.61	0.45	-0.36	0.27
13,478.00	89.34	86.89	12,555.04	-20.87	1,272.65	1,272.53	1.30	0.27	-1.27
13,575.00	90.92	87.42	12,554.82	-16.06	1,369.52	1,369.43	1.72	1.63	0.55
13,672.00	90.66	89.17	12,553.48	-13.17	1,466.47	1,466.39	1.82	-0.27	1.80
13,768.00	91.71	89.26	12,551.50	-11.86	1,562.44	1,562.36	1.10	1.09	0.09
13,865.00	90.04	89.35	12,550.01	-10.68	1,659.41	1,659.34	1.72	-1.72	0.09
13,962.00	90.48	88.56	12,549.57	-8.91	1,756.40	1,756.33	0.93	0.45	-0.81
14,058.00	91.28	89.09	12,548.10	-6.95	1,852.36	1,852.31	1.00	0.83	0.55
14,153.00	91.80	88.29	12,545.55	-4.77	1,947.30	1,947.26	1.00	0.55	-0.84
14,250.00	92.59	87.59	12,541.83	-1.29	2,044.17	2,044.14	1.09	0.81	-0.72
14,347.00	92.51	88.65	12,537.52	1.89	2,141.02	2,141.00	1.09	-0.08	1.09
14,445.00	92.15	89.96	12,533.53	3.08	2,238.93	2,238.92	1.39	-0.37	1.34
14,541.00	92.86	89.44	12,529.34	3.58	2,334.83	2,334.82	0.92	0.74	-0.54
14,580.00	91.10	84.34	12,527.99	5.69	2,373.74	2,373.74	13.83	-4.51	-13.08

Company:	OXY	Local Co-ordinate Reference:	Well Madera 35 1H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Site:	Madera 35 Fed 1H	MD Reference:	RKB @ 3250.00usft (RKB - M35Fed1H)
Well:	Madera 35 1H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	CompassC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,677.00	90.84	85.75	12,526.35	14.07	2,470.36	2,470.40	1.48	-0.27	1.45
14,774.00	91.98	86.45	12,523.96	20.67	2,567.10	2,567.17	1.38	1.18	0.72
14,870.00	90.92	88.65	12,521.53	24.77	2,662.98	2,663.07	2.54	-1.10	2.29
14,967.00	92.68	91.63	12,518.48	24.53	2,759.92	2,760.00	3.57	1.81	3.07
15,064.00	91.63	91.19	12,514.83	22.15	2,856.82	2,856.89	1.17	-1.08	-0.45
15,123.00	91.71	90.23	12,513.11	21.42	2,915.79	2,915.86	1.63	0.14	-1.63
15,187.00	91.01	89.96	12,511.60	21.31	2,979.77	2,979.84	1.17	-1.09	-0.42
15,284.00	89.60	89.96	12,511.08	21.38	3,076.76	3,076.83	1.45	-1.45	0.00
15,380.00	90.48	89.61	12,511.01	21.74	3,172.76	3,172.83	0.99	0.92	-0.36
15,477.00	90.66	90.58	12,510.05	21.58	3,269.76	3,269.82	1.02	0.19	1.00
15,574.00	90.75	89.35	12,508.85	21.64	3,366.75	3,366.81	1.27	0.09	-1.27
15,671.00	89.96	90.93	12,508.25	21.40	3,463.74	3,463.80	1.82	-0.81	1.63
15,768.00	91.54	87.68	12,506.98	22.57	3,560.71	3,560.78	3.73	1.63	-3.35
15,864.00	91.10	88.38	12,504.77	25.87	3,656.63	3,656.71	0.86	-0.46	0.73
15,962.00	90.48	88.29	12,503.42	28.72	3,754.57	3,754.67	0.64	-0.63	-0.09
16,058.00	90.13	88.12	12,502.91	31.73	3,850.53	3,850.64	0.41	-0.36	-0.18
16,155.00	89.96	87.33	12,502.83	35.58	3,947.45	3,947.58	0.83	-0.18	-0.81
16,251.00	89.25	88.21	12,503.49	39.31	4,043.37	4,043.52	1.18	-0.74	0.92
16,348.00	89.60	88.91	12,504.47	41.75	4,140.34	4,140.49	0.81	0.36	0.72
16,443.00	89.96	89.61	12,504.83	42.98	4,235.33	4,235.49	0.83	0.38	0.74
16,540.00	89.78	90.23	12,505.05	43.11	4,332.33	4,332.48	0.67	-0.19	0.64
16,637.00	91.45	91.81	12,504.01	41.39	4,429.30	4,429.45	2.37	1.72	1.63
16,734.00	92.33	92.43	12,500.81	37.80	4,526.18	4,526.31	1.11	0.91	0.64
16,782.00	93.39	93.66	12,498.42	35.25	4,574.05	4,574.17	3.38	2.21	2.56
MWD Survey									
16,830.00	93.39	93.66	12,495.58	32.20	4,621.87	4,621.97	0.00	0.00	0.00
Bit Projection - PBHL M35Fed1H									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,782.00	12,498.42	35.25	4,574.05	MWD Survey
16,830.00	12,495.58	32.20	4,621.87	Bit Projection

Checked By: _____ Approved By: _____ Date: _____