30-025-41256

OXY Permian

OXY

Lea County, New Mexico
Lusk 28 West Fed Com 2H
Lusk 28 West Fed Com 2H

Wellbore #1

Design: Actual

Standard Survey Report

18 August, 2014

This survey is correct to the best of my knowledge and is supported by actual field data.

Notarized this date 4th of March, 2015.

Carrie Reed
Notary Signature
County of Midland
State of Texas

CARRIE REED
My Commission Expires
October 4, 2015

Scientific Drilling

www.scientificdrilling.com

Company:	OXY	Local Co-ordinate Reference:	Well Lusk 28 West Fed Com 2H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3583.6usft
Site:	Lusk 28 West Fed Com 2H	MD Reference:	RKB @ 3583.6usft
Well:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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	Lusk 28 West Fed Com 2H				
Site Position:		Northing:	592,050.40 usft	Latitude:	32° 37' 35.052 N
From:	Map	Easting:	672,261.69 usft	Longitude:	103° 46' 25.707 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well	Lusk 28 West Fed Com 2H					
Well Position	+N/-S	0.0 usft	Northing:	591,269.50 usft	Latitude:	32° 37' 27.489 N
	+E/-W	0.0 usft	Easting:	672,910.80 usft	Longitude:	103° 46' 18.184 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,558.6 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	05/28/14	7.34	60.45	48,539

Design	Actual				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	352.13

Survey Program		Date 06/18/14		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
110.0	14,380.0	1. SDI MWD (Wellbore #1)	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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
110.0	0.53	0.79	110.0	0.5	0.0	0.5	0.48	0.48	0.00
170.0	0.62	278.00	170.0	0.8	-0.3	0.9	1.27	0.15	-137.96
263.0	0.79	357.54	263.0	1.5	-0.8	1.6	0.98	0.18	85.53
337.0	0.44	344.64	337.0	2.3	-0.9	2.4	0.51	-0.47	-17.43
369.0	0.62	6.77	369.0	2.6	-0.9	2.7	0.84	0.56	69.16
458.0	0.62	11.95	458.0	3.6	-0.8	3.6	0.06	0.00	5.82
577.0	0.70	51.59	577.0	4.6	-0.1	4.6	0.38	0.07	33.31
667.0	0.62	65.48	667.0	5.2	0.8	5.0	0.20	-0.09	15.43
787.0	0.18	64.42	787.0	5.5	1.5	5.3	0.37	-0.37	-0.88

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Well:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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)
878.0	0.35	39.55	878.0	5.8	1.9	5.5	0.22	0.19	-27.33
924.0	0.18	353.05	924.0	6.0	1.9	5.7	0.57	-0.37	-101.09
980.0	0.18	35.51	980.0	6.2	2.0	5.8	0.23	0.00	75.82
1,039.0	0.18	35.42	1,039.0	6.3	2.1	6.0	0.00	0.00	-0.15
1,130.0	0.00	349.71	1,130.0	6.4	2.2	6.1	0.20	-0.20	0.00
1,225.0	0.26	269.29	1,225.0	6.4	2.0	6.1	0.27	0.27	0.00
1,319.0	0.26	232.29	1,319.0	6.3	1.6	6.0	0.18	0.00	-39.36
1,413.0	0.18	277.38	1,413.0	6.2	1.3	5.9	0.20	-0.09	47.97
1,507.0	0.18	48.34	1,507.0	6.3	1.2	6.1	0.35	0.00	139.32
1,602.0	0.18	40.25	1,602.0	6.5	1.4	6.3	0.03	0.00	-8.52
1,696.0	0.26	109.95	1,696.0	6.5	1.7	6.2	0.28	0.09	74.15
1,790.0	0.44	23.38	1,790.0	6.8	2.1	6.5	0.53	0.19	-92.10
1,885.0	0.62	29.09	1,885.0	7.6	2.5	7.2	0.20	0.19	6.01
1,979.0	0.53	23.29	1,978.9	8.4	2.9	8.0	0.11	-0.10	-6.17
2,073.0	0.79	64.60	2,072.9	9.1	3.6	8.5	0.56	0.28	43.95
2,167.0	0.97	73.12	2,166.9	9.6	5.0	8.8	0.24	0.19	9.06
2,262.0	0.57	67.80	2,261.9	10.0	6.2	9.1	0.43	-0.42	-5.60
2,356.0	0.44	54.93	2,355.9	10.4	6.9	9.4	0.18	-0.14	-13.69
2,451.0	0.62	104.41	2,450.9	10.5	7.7	9.3	0.50	0.19	52.08
2,545.0	0.97	66.44	2,544.9	10.7	8.9	9.4	0.65	0.37	-40.39
2,639.0	0.53	37.70	2,638.9	11.4	9.9	9.9	0.60	-0.47	-30.57
2,733.0	0.35	14.68	2,732.9	12.0	10.3	10.5	0.26	-0.19	-24.49
2,828.0	0.88	34.10	2,827.9	12.9	10.8	11.3	0.59	0.56	20.44
2,878.0	1.14	17.84	2,877.9	13.6	11.1	12.0	0.77	0.52	-32.52
2,999.0	0.97	62.14	2,998.9	15.3	12.4	13.4	0.67	-0.14	36.61
3,030.0	0.97	42.10	3,029.9	15.6	12.8	13.7	1.09	0.00	-64.65
3,125.0	0.62	39.81	3,124.9	16.6	13.7	14.6	0.37	-0.37	-2.41
3,219.0	0.35	27.68	3,218.8	17.2	14.1	15.1	0.31	-0.29	-12.90
3,313.0	0.18	189.84	3,312.8	17.3	14.2	15.2	0.56	-0.18	172.51
3,408.0	0.35	278.33	3,407.8	17.2	13.9	15.2	0.40	0.18	91.04
3,502.0	0.26	213.57	3,501.8	17.1	13.5	15.1	0.35	-0.10	-68.77
3,596.0	0.44	204.70	3,595.8	16.8	13.3	14.8	0.20	0.19	-9.44
3,691.0	0.70	199.66	3,690.8	15.7	12.9	13.8	0.28	0.27	-5.09
3,785.0	0.79	215.24	3,784.8	14.8	12.3	12.8	0.23	0.10	16.36
3,879.0	1.14	228.76	3,878.8	13.5	11.3	11.8	0.44	0.37	14.40
3,974.0	1.49	228.76	3,973.8	12.0	9.6	10.6	0.37	0.37	-2.13
4,068.0	1.67	240.55	4,067.8	10.5	7.8	9.4	0.45	0.19	14.67
4,162.0	1.23	235.46	4,161.7	9.3	5.5	8.4	0.49	-0.47	-5.41
4,257.0	1.23	231.41	4,256.7	8.0	3.9	7.4	0.09	0.00	-4.26
4,431.0	0.97	242.22	4,430.7	6.2	1.1	6.0	0.19	-0.15	6.21
4,525.0	3.34	224.03	4,524.6	3.8	-1.5	4.0	2.59	2.52	-19.35
4,619.0	4.22	221.92	4,618.4	-0.7	-5.7	0.1	0.95	0.94	-2.24
4,713.0	4.46	220.67	4,712.1	-6.0	-10.4	-4.8	0.29	0.26	-1.12
4,808.0	4.57	220.52	4,806.8	-11.7	-15.3	-9.5	0.10	0.09	-0.37

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Well:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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)
4,902.0	4.48	226.05	4,900.5	-17.1	-20.4	-14.2	0.47	-0.10	5.88
4,998.0	4.48	220.98	4,994.2	-22.4	-25.4	-18.8	0.42	0.00	-5.41
5,090.0	4.48	226.76	5,088.0	-27.7	-30.5	-23.3	0.48	0.00	6.17
5,184.0	4.66	226.05	5,181.7	-32.9	-35.9	-27.7	0.20	0.19	-0.76
5,279.0	4.31	221.57	5,276.4	-38.2	-41.1	-32.3	0.52	-0.37	-4.72
5,373.0	4.31	223.77	5,370.1	-43.4	-45.8	-36.8	0.18	0.00	2.34
5,468.0	4.13	223.94	5,464.8	-48.5	-50.7	-41.1	0.19	-0.19	0.18
5,562.0	4.22	228.60	5,558.6	-53.2	-55.6	-45.1	0.37	0.10	4.96
5,656.0	4.13	230.71	5,652.3	-57.6	-60.6	-48.8	0.19	-0.10	2.24
5,750.0	4.48	230.89	5,746.1	-62.1	-66.3	-52.4	0.37	0.37	0.19
5,844.0	4.40	231.77	5,839.8	-66.6	-72.0	-56.2	0.11	-0.09	0.94
5,938.0	4.13	231.65	5,933.5	-71.0	-77.5	-59.7	0.29	-0.29	0.09
6,033.0	4.84	232.29	6,028.3	-75.5	-83.4	-63.4	0.75	0.75	0.46
6,127.0	5.01	217.79	6,121.9	-81.2	-89.0	-68.2	1.33	0.18	-15.43
6,221.0	4.84	223.33	6,215.6	-87.3	-94.2	-73.6	0.54	-0.18	5.89
6,316.0	4.75	225.17	6,310.2	-93.0	-99.8	-78.5	0.19	-0.09	1.94
6,410.0	4.84	222.89	6,403.9	-98.7	-105.2	-83.3	0.22	0.10	-2.43
6,504.0	4.57	226.58	6,497.6	-104.1	-110.7	-88.0	0.43	-0.29	3.93
6,598.0	4.84	225.26	6,591.3	-109.5	-116.2	-92.8	0.31	0.29	-1.40
6,693.0	4.75	228.07	6,685.9	-115.0	-122.0	-97.2	0.26	-0.09	2.96
6,788.0	4.57	226.05	6,780.6	-120.2	-127.6	-101.6	0.26	-0.19	-2.13
6,882.0	4.04	229.92	6,874.4	-124.9	-132.8	-105.6	0.64	-0.56	4.12
6,977.0	3.96	229.22	6,969.1	-129.2	-137.9	-109.1	0.10	-0.08	-0.74
7,071.0	4.13	228.78	7,062.9	-133.6	-142.9	-112.8	0.18	0.18	-0.47
7,165.0	3.78	223.68	7,156.7	-138.1	-147.6	-116.6	0.53	-0.37	-5.43
7,259.0	3.52	229.83	7,250.5	-142.2	-151.9	-120.0	0.50	-0.28	6.54
7,354.0	3.25	223.24	7,345.3	-146.0	-156.0	-123.3	0.50	-0.28	-6.94
7,449.0	2.99	218.32	7,440.2	-149.9	-159.4	-126.7	0.39	-0.27	-5.18
7,543.0	2.99	207.95	7,534.0	-154.0	-162.1	-130.4	0.57	0.00	-11.03
7,637.0	3.61	215.68	7,627.9	-158.6	-164.9	-134.5	0.81	0.66	8.22
7,732.0	3.52	218.93	7,722.7	-163.3	-168.5	-138.7	0.23	-0.09	3.42
7,825.0	3.43	217.62	7,815.5	-167.7	-172.0	-142.6	0.13	-0.10	-1.41
7,920.0	3.87	228.14	7,910.3	-172.2	-176.0	-146.4	0.73	0.46	8.97
8,014.0	3.52	224.56	8,004.1	-176.4	-180.4	-150.1	0.39	-0.37	-1.68
8,109.0	3.78	234.58	8,099.0	-180.3	-185.0	-153.3	0.72	0.27	10.55
8,203.0	3.61	233.26	8,192.8	-183.9	-189.9	-156.2	0.20	-0.18	-1.40
8,297.0	3.78	244.07	8,286.6	-187.0	-195.0	-158.5	0.76	0.18	11.50
8,391.0	3.08	236.69	8,380.4	-189.7	-199.9	-160.6	0.88	-0.74	-7.85
8,486.0	3.34	231.85	8,475.2	-192.9	-204.2	-163.1	0.40	0.27	-5.09
8,580.0	2.90	220.87	8,569.1	-196.3	-207.9	-166.0	0.79	-0.47	-11.68
8,674.0	3.08	218.67	8,663.0	-200.1	-211.1	-169.3	0.23	0.19	-2.34
8,689.0	2.81	217.35	8,678.0	-200.7	-211.5	-169.9	1.86	-1.80	-8.80
8,721.0	2.20	228.49	8,709.9	-201.8	-212.5	-170.8	2.27	-1.91	28.56

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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)
8,752.0	3.67	250.31	8,740.9	-202.5	-213.9	-171.3	6.64	5.39	76.84
8,783.0	7.56	271.64	8,771.7	-202.6	-218.9	-171.2	13.57	11.90	69.45
8,814.0	12.12	278.48	8,802.3	-202.3	-222.2	-170.0	15.13	14.71	21.42
8,846.0	16.05	276.09	8,833.3	-201.3	-229.9	-167.9	12.41	12.28	-7.47
8,877.0	16.11	279.40	8,862.9	-200.1	-238.9	-165.5	7.35	6.65	10.68
8,909.0	16.99	291.44	8,893.3	-197.4	-248.7	-161.5	12.28	2.75	37.63
8,940.0	21.54	300.50	8,922.4	-192.8	-258.3	-155.4	13.02	8.23	29.23
8,971.0	23.39	311.48	8,951.0	-185.8	-267.8	-147.2	14.77	5.97	35.42
9,002.0	23.74	322.35	8,979.4	-176.8	-276.2	-137.2	14.05	1.13	35.06
9,034.0	24.17	332.71	9,008.7	-165.7	-283.1	-125.4	13.20	1.34	32.38
9,065.0	25.32	340.40	9,036.9	-153.8	-288.3	-112.9	11.02	3.71	24.81
9,097.0	26.29	349.98	9,065.7	-140.4	-291.8	-99.1	13.37	3.03	29.94
9,128.0	27.06	353.49	9,093.4	-126.6	-293.8	-85.2	5.89	2.55	11.32
9,160.0	30.34	355.87	9,121.5	-111.3	-295.2	-69.8	10.79	10.19	7.44
9,191.0	33.41	358.66	9,147.8	-95.0	-296.0	-53.5	11.00	9.90	9.06
9,223.0	38.49	0.00	9,174.0	-76.6	-296.2	-35.4	9.91	9.63	4.13
9,254.0	39.92	359.38	9,198.4	-57.5	-296.3	-16.4	11.13	11.06	-2.00
9,348.0	50.74	357.98	9,264.3	9.3	-297.9	50.0	11.56	11.51	-1.49
9,442.0	83.14	357.89	9,315.5	87.8	-300.7	128.2	13.19	13.19	-0.10
9,536.0	77.47	0.26	9,347.1	176.1	-302.1	215.8	15.43	15.24	2.52
9,567.0	82.75	1.58	9,352.4	206.6	-301.8	246.0	17.54	17.03	4.26
9,630.0	87.05	1.87	9,358.0	269.3	-299.8	307.8	6.83	6.83	0.14
9,647.0	88.97	1.76	9,358.9	286.3	-299.3	324.6	0.71	-0.47	0.53
9,679.0	88.88	1.49	9,360.6	318.2	-298.4	356.1	0.89	-0.28	-0.84
9,710.0	87.49	0.35	9,362.2	349.2	-297.9	386.7	4.17	1.97	-3.68
9,726.7	87.88	0.17	9,362.8	365.9	-297.8	403.2	2.47	2.22	-1.09
L 28 2H LP									
9,742.0	88.20	0.00	9,363.4	381.2	-297.8	418.4	2.47	2.22	-1.09
9,804.0	89.96	357.54	9,364.4	443.1	-299.1	479.9	4.66	2.84	-3.97
9,898.0	90.57	355.43	9,363.9	537.0	-304.9	573.6	2.34	0.65	-2.24
9,992.0	92.15	355.78	9,361.7	630.7	-312.1	667.4	1.72	1.68	0.37
10,086.0	90.40	356.48	9,359.6	724.4	-318.4	761.2	2.01	-1.86	0.74
10,180.0	90.13	357.10	9,359.2	818.3	-323.7	854.9	0.72	-0.29	0.66
10,275.0	90.75	354.99	9,358.4	913.0	-330.2	949.6	2.31	0.65	-2.22
10,369.0	90.40	354.20	9,357.5	1,006.6	-339.1	1,043.5	0.92	-0.37	-0.84
10,463.0	89.69	354.20	9,357.4	1,100.1	-348.8	1,137.5	0.76	-0.76	0.00
10,556.0	88.37	353.85	9,359.0	1,192.6	-358.3	1,230.4	1.47	-1.42	-0.38
10,650.0	90.22	354.29	9,360.2	1,286.1	-368.0	1,324.4	2.02	1.97	0.47
10,744.0	89.60	354.55	9,360.3	1,379.6	-377.1	1,418.3	0.72	-0.66	0.28
10,838.0	91.10	354.29	9,359.7	1,473.2	-386.3	1,512.2	1.62	1.60	-0.28
10,932.0	89.87	354.46	9,358.9	1,566.7	-395.5	1,606.1	1.32	-1.31	0.18
11,026.0	91.01	354.64	9,358.2	1,660.3	-404.4	1,700.0	1.23	1.21	0.19
11,121.0	90.84	354.02	9,356.7	1,754.8	-413.9	1,795.0	0.68	-0.18	-0.65
11,215.0	91.80	354.37	9,354.5	1,848.3	-423.3	1,888.9	1.09	1.02	0.37

Company:	OXY	Local Co-ordinate Reference:	Well Lusk 28 West Fed Com 2H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3583.6usft
Site:	Lusk 28 West Fed Com 2H	MD Reference:	RKB @ 3583.6usft
Well:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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)
11,309.0	90.66	354.11	9,352.5	1,941.8	-432.7	1,982.8	1.24	-1.21	-0.28
11,403.0	89.43	353.67	9,352.4	2,035.3	-442.7	2,076.7	1.39	-1.31	-0.47
11,497.0	88.46	353.85	9,354.2	2,128.7	-452.9	2,170.7	1.05	-1.03	0.19
11,591.0	87.58	353.49	9,357.4	2,222.1	-463.3	2,264.6	1.01	-0.94	-0.38
11,685.0	89.25	353.93	9,360.0	2,315.5	-473.6	2,358.5	1.84	1.78	0.47
11,779.0	89.16	354.64	9,361.3	2,409.0	-483.0	2,452.4	0.76	-0.10	0.76
11,874.0	89.09	354.72	9,362.3	2,503.6	-491.8	2,547.3	0.56	0.56	0.08
11,968.0	91.71	354.64	9,361.1	2,597.2	-500.5	2,641.2	2.15	2.15	-0.09
12,062.0	91.19	355.69	9,358.7	2,690.8	-508.4	2,735.1	1.25	-0.55	1.12
12,156.0	89.78	356.31	9,357.9	2,784.6	-515.0	2,828.8	1.64	-1.50	0.66
12,250.0	90.84	357.38	9,357.4	2,878.4	-520.1	2,922.5	1.59	1.13	1.12
12,344.0	90.92	356.66	9,356.0	2,972.3	-525.1	3,016.2	0.75	0.09	-0.74
12,439.0	89.43	355.60	9,355.7	3,067.1	-531.5	3,110.9	1.92	-1.57	-1.12
12,533.0	91.36	356.22	9,355.1	3,160.8	-538.2	3,204.7	2.16	2.05	0.66
12,627.0	90.66	355.43	9,353.4	3,254.5	-545.0	3,298.5	1.12	-0.74	-0.84
12,722.0	90.13	355.87	9,352.7	3,349.3	-552.2	3,393.3	0.73	-0.56	0.46
12,815.0	90.22	355.60	9,352.5	3,442.0	-559.1	3,486.1	0.31	0.10	-0.29
12,909.0	91.71	355.78	9,350.9	3,535.7	-566.2	3,580.0	1.60	1.59	0.19
13,004.0	91.54	356.48	9,348.2	3,630.5	-572.6	3,674.7	0.76	-0.18	0.74
13,099.0	91.28	356.57	9,345.8	3,725.3	-578.4	3,769.4	0.29	-0.27	0.09
13,193.0	90.13	355.69	9,344.7	3,819.0	-584.7	3,863.1	1.54	-1.22	-0.94
13,288.0	90.75	355.25	9,344.0	3,913.7	-592.2	3,958.0	0.80	0.65	-0.46
13,382.0	90.22	354.72	9,343.2	4,007.4	-600.4	4,051.9	0.80	-0.56	-0.56
13,476.0	90.66	354.02	9,342.4	4,100.9	-609.6	4,145.8	0.88	0.47	-0.74
13,522.0	90.92	354.29	9,341.8	4,146.7	-614.3	4,191.7	0.81	0.57	0.59
13,599.0	90.04	354.48	9,341.2	4,223.3	-621.9	4,268.7	1.16	-1.14	0.22
13,694.0	89.34	354.99	9,341.7	4,317.9	-630.6	4,363.6	0.92	-0.74	0.56
13,789.0	89.96	354.64	9,342.3	4,412.5	-639.2	4,458.5	0.75	0.65	-0.37
13,884.0	88.37	354.90	9,343.6	4,507.1	-647.9	4,553.4	1.70	-1.67	0.27
13,978.0	88.11	354.29	9,346.5	4,600.6	-656.7	4,647.2	0.71	-0.28	-0.65
14,073.0	88.20	353.23	9,349.6	4,695.0	-667.0	4,742.1	1.12	0.09	-1.12
14,167.0	89.52	353.05	9,351.5	4,788.3	-678.2	4,836.1	1.42	1.40	-0.19
14,213.9	89.74	353.01	9,351.8	4,834.9	-683.9	4,883.0	0.47	0.46	-0.08
L28 2H LTP									
14,262.0	89.96	352.97	9,351.9	4,882.8	-689.8	4,931.1	0.47	0.46	-0.08
14,331.0	90.22	352.97	9,351.8	4,951.1	-698.3	5,000.1	0.38	0.38	0.00
SDI MWD									
14,374.5	90.22	352.97	9,351.8	4,994.3	-703.8	5,043.6	0.00	0.00	0.00
L28 2H BHL									
14,380.0	90.22	352.97	9,351.8	4,999.7	-704.3	5,049.1	0.00	0.00	0.00
BR Projection									

Company:	OXY	Local Co-ordinate Reference:	Well Lusk 28 West Fed Com 2H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3583.6usft
Site:	Lusk 28 West Fed Com 2H	MD Reference:	RKB @ 3583.6usft
Well:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	CompassC

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
14,331.0	9,351.8	4,951.1	-698.3	SDI MWD
14,380.0	9,351.8	4,999.7	-704.3	Bit Projection

Checked By: _____ Approved By: _____ Date: _____

OXY Permian

Scientific Drilling

T C M

Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.04°

To convert a Magnetic Direction to a Grid Direction, Add 7.04°
To convert a True Direction to a Grid Direction, Subtract 0.30°

Magnetic Field
Strength: 48539.0snT
Dip Angle: 60.45°
Date: 05/29/2014
Model: IGRF2010

RKB @ 3583.6usft
Gr @ 3558.6

Lusk 28 West Fed Com 2H
Lusk 28 West Fed Com 2H
Northing: 591289.50
Easting: 672910.80
Design #3

WELL DETAILS Lusk 28 West Fed Com 2H
Ground Level: 3558.6

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	591289.50	672910.80	32° 37' 27.480 N	103° 46' 18.164 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
4400.0	0.00	0.00	4400.0	0.0	0.0	0.00	0.00	0.0	
4600.0	4.00	226.50	4599.8	-4.8	-3.1	2.00	226.50	-4.1	
8796.0	4.00	226.50	8775.6	-305.9	-216.9	0.00	0.00	-174.2	
9714.7	90.37	355.16	9372.7	366.5	-298.2	10.00	128.57	402.9	
14201.1	90.37	355.16	9343.6	4835.8	-676.9	0.00	0.00	4882.828	2H LTP
14361.7	90.37	355.16	9342.6	4995.9	-690.5	0.00	0.00	5043.4	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
L28 2H BHL	9342.6	4995.9	-690.5	596285.38	672220.34
L28 2H LTP	9343.6	4835.8	-676.9	596125.30	672233.90
L 28 2H LP	9372.7	366.5	-298.2	591654.99	672612.60

SITE DETAILS:
Lusk 28 West Fed Com 2H
Site Centre Northing: 592050.40
Easting: 672261.69

Positional Uncertainty: 0.0
Convergence: 0.30
Local North: Grid

PROJECT DETAILS:
Lea County, New Mexico
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level