



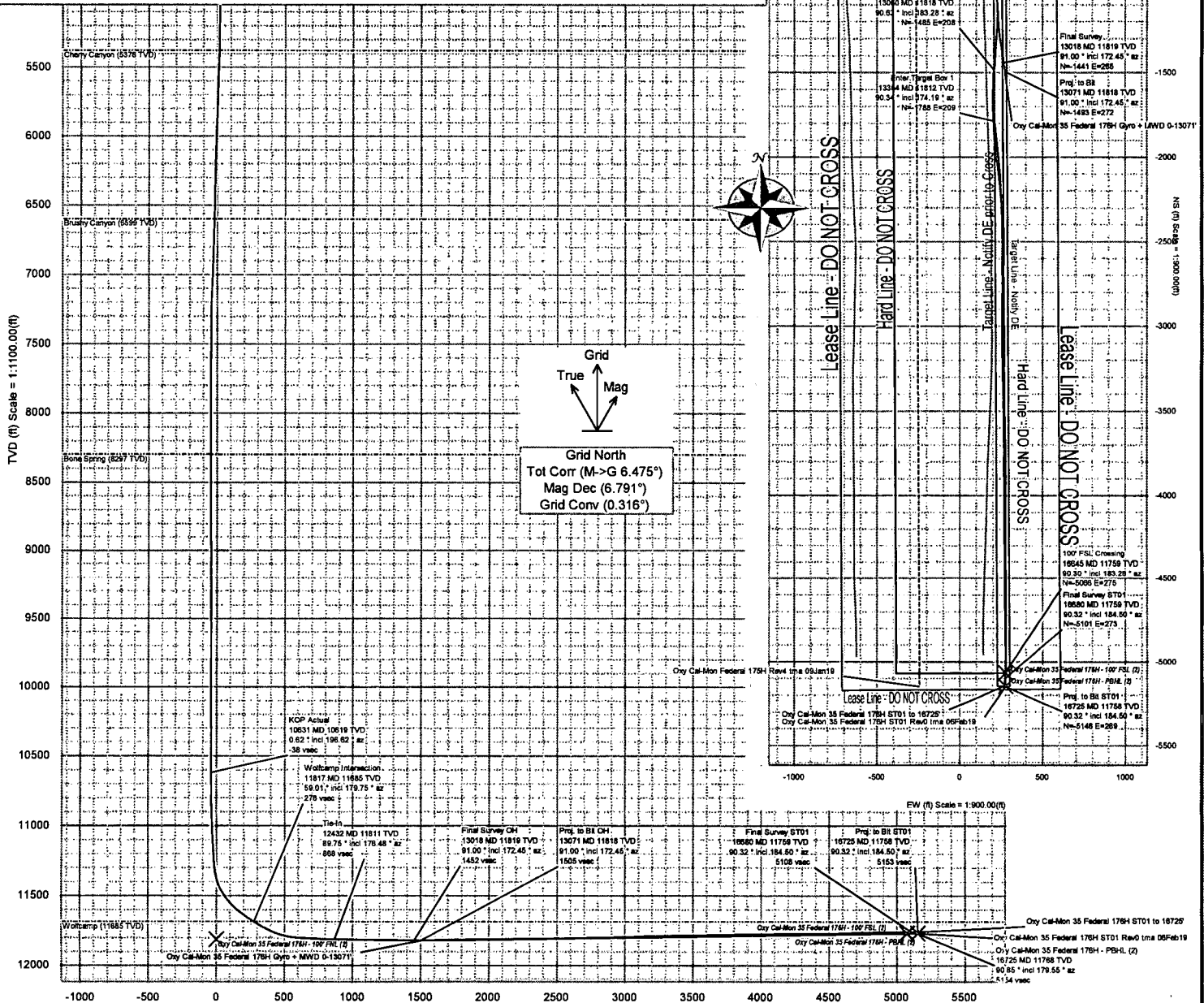
OXY



Borehole:	Well:	Field:	Structure:
ST01	Cal-Mon 35 Federal 176H	NM Eddy County (NAD 83)	Oxy Cal-Mon 35 Federal 176H

Gravity & Magnetic Parameters				Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	IGFR 1	Dip:	59.985°	Date:	06-Feb-2019	Lat:	N 32 16 4.34	Northing:	461668.668US	Grid Conv:	0.3157°	Spot:	Oxy Cal-Mon 35 Federal 176H	TVD Ref:	RKB=26.5(3497.5ft above MSL)
MagDec:	6.791°	FS:	48015.1nT	Gravity FS:	988.446mgm (8.80668 Based)	Lon:	W 103 44 30.83	Easting:	726133.168US	Scale Fact:	0.99994736	Plan:	Oxy Cal-Mon 35 Federal 176H ST01 to 16725		

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
100' FNL Crossing	11392.00	15.54	179.58	11377.81	0.00	10.82	201.13	16.27
Wolfcamp Intersection	11816.55	59.01	179.75	11685.00	276.66	-266.44	197.29	4.43
Tie-In	12432.00	89.75	176.48	11811.43	867.86	-857.56	214.73	
Exit Target Box 1	13060.47	90.63	183.28	11818.32	1493.97	-1484.95	207.93	2.70
Enter Target Box 1	13364.27	90.34	174.19	11812.46	1797.05	-1788.40	209.18	5.21
100' FSL Crossing	16645.40	90.30	183.28	11758.89	5073.86	-5066.41	274.95	3.53
Final Survey	16680.00	90.32	184.50	11758.70	5108.21	-5100.93	272.61	3.53
Proj. to BH	16725.00	90.32	184.50	11758.45	5152.81	-5145.79	269.08	0.00



Vertical Section (ft) Azim = 177.01° Scale = 1:1100.00(ft) Origin = 0N/-S, 0E/-W



Oxy Cal-Mon 35 Federal 176H ST01 to 16725' Survey Geodetic Report

(Def Survey)

Report Date: February 13, 2019 - 10:13 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Cal-Mon 35 Federal 176H / Oxy Cal-Mon 35 Federal 176H
 Well: Cal-Mon 35 Federal 176H
 Borehole: ST01
 UWM / API#: Unknown / 30-015-45525
 Survey Name: Oxy Cal-Mon 35 Federal 176H ST01 to 16725'
 Survey Date: February 06, 2019
 Tort / AHD / DDI / ERD Ratio: 203.610' / 5513.393 ft / 6.201 / 0.467
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 16' 4.34028", W 103° 44' 30.93314"
 Location Grid N/E Y/X: N 481688.660 RUS, E 724133.160 RUS
 CRS Grid Convergence Angle: 0.3157°
 Grid Scale Factor: 0.99994736
 Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 176.920° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5
 Seabed / Ground Elevation: 3497.500 ft above MSL
 Magnetic Declination: 6.791°
 Total Gravity Field Strength: 998.4458mgm (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48015.100 nT
 Magnetic Dip Angle: 59.985°
 Declination Date: February 06, 2019
 Magnetic Declination Model: IIFR 1
 North Reference: Grid North
 Grid Convergence Used: 0.3157°
 Total Corr Mag North->Grid North: 6.4753°
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
WRP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	461688.66	724133.16	N 32° 16' 4.34"	W 103° 44' 30.93"
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	461688.66	724133.16	N 32° 16' 4.34 W 103° 44' 30.93	
	97.76	0.57	177.63	97.76	0.35	-0.35	0.01	0.80	461688.31	724133.17	N 32° 16' 4.34 W 103° 44' 30.93	
	184.64	0.95	174.64	184.63	1.51	-1.50	0.10	0.44	461687.16	724133.26	N 32° 16' 4.33 W 103° 44' 30.93	
	272.31	0.93	174.14	272.29	2.94	-2.93	0.24	0.02	461685.73	724133.40	N 32° 16' 4.31 W 103° 44' 30.93	
	366.28	0.90	171.53	366.25	4.44	-4.42	0.43	0.05	461684.24	724133.59	N 32° 16' 4.30 W 103° 44' 30.93	
	462.05	0.96	168.47	462.00	5.98	-5.95	0.70	0.08	461682.71	724133.86	N 32° 16' 4.28 W 103° 44' 30.93	
	556.08	0.96	167.72	556.02	7.54	-7.49	1.02	0.01	461681.17	724134.18	N 32° 16' 4.27 W 103° 44' 30.92	
	650.81	0.91	162.74	650.74	9.05	-8.99	1.42	0.10	461679.67	724134.57	N 32° 16' 4.25 W 103° 44' 30.92	
	745.63	0.92	159.59	745.55	10.51	-10.42	1.90	0.05	461678.24	724135.06	N 32° 16' 4.24 W 103° 44' 30.91	
Last Gyro	838.31	0.84	166.68	838.22	11.89	-11.78	2.32	0.15	461676.88	724135.48	N 32° 16' 4.22 W 103° 44' 30.91	
	1008.00	0.72	163.72	1007.89	14.15	-14.01	2.91	0.07	461674.65	724136.07	N 32° 16' 4.20 W 103° 44' 30.90	
	1100.00	0.17	178.72	1099.89	14.85	-14.70	3.07	0.61	461673.96	724136.23	N 32° 16' 4.19 W 103° 44' 30.90	
	1192.00	0.13	213.73	1191.89	15.07	-14.93	3.02	0.11	461673.73	724136.18	N 32° 16' 4.19 W 103° 44' 30.90	
	1392.00	0.29	217.89	1391.89	15.63	-15.52	2.58	0.08	461673.15	724135.74	N 32° 16' 4.19 W 103° 44' 30.90	
	1561.00	0.28	235.28	1560.88	16.17	-16.09	1.98	0.05	461672.57	724135.14	N 32° 16' 4.18 W 103° 44' 30.91	
	1656.00	0.09	288.99	1655.88	16.27	-16.20	1.72	0.25	461672.46	724134.88	N 32° 16' 4.18 W 103° 44' 30.91	
	1750.00	0.13	351.64	1749.88	16.13	-16.07	1.63	0.13	461672.59	724134.79	N 32° 16' 4.18 W 103° 44' 30.92	
	1845.00	0.22	8.15	1844.88	15.84	-15.78	1.64	0.11	461672.88	724134.80	N 32° 16' 4.18 W 103° 44' 30.92	
	1939.00	0.33	352.70	1938.88	15.40	-15.33	1.63	0.14	461673.33	724134.79	N 32° 16' 4.19 W 103° 44' 30.92	
	2034.00	0.42	2.79	2033.88	14.78	-14.71	1.61	0.12	461673.95	724134.77	N 32° 16' 4.19 W 103° 44' 30.92	
	2128.00	0.46	357.50	2127.88	14.06	-13.99	1.61	0.06	461674.67	724134.77	N 32° 16' 4.20 W 103° 44' 30.92	
	2222.00	0.61	355.18	2221.87	13.18	-13.12	1.56	0.16	461675.54	724134.72	N 32° 16' 4.21 W 103° 44' 30.92	
	2317.00	0.66	349.89	2316.87	12.13	-12.07	1.42	0.08	461676.59	724134.58	N 32° 16' 4.22 W 103° 44' 30.92	
	2506.00	0.95	347.43	2505.85	9.51	-9.47	0.88	0.15	461679.19	724134.04	N 32° 16' 4.25 W 103° 44' 30.92	
	2601.00	1.17	349.97	2600.83	7.77	-7.75	0.54	0.24	461680.91	724133.70	N 32° 16' 4.26 W 103° 44' 30.93	
	2696.00	1.39	349.91	2695.81	5.66	-5.66	0.17	0.23	461683.00	724133.33	N 32° 16' 4.28 W 103° 44' 30.93	
	2791.00	1.65	352.09	2790.77	3.15	-3.17	-0.22	0.28	461685.49	724132.94	N 32° 16' 4.31 W 103° 44' 30.94	
	2885.00	1.87	348.73	2884.73	0.29	-0.33	-0.70	0.26	461688.33	724132.46	N 32° 16' 4.34 W 103° 44' 30.94	
	2980.00	2.06	347.49	2979.67	-2.93	2.86	-1.38	0.20	461691.52	724131.78	N 32° 16' 4.37 W 103° 44' 30.95	
	3074.00	1.77	345.15	3073.62	-6.02	5.91	-2.11	0.32	461694.57	724131.05	N 32° 16' 4.40 W 103° 44' 30.96	
	3168.00	1.56	338.40	3167.58	-8.65	8.51	-2.96	0.31	461697.17	724130.20	N 32° 16' 4.42 W 103° 44' 30.97	
	3357.00	0.77	339.21	3356.54	-12.30	12.09	-4.35	0.42	461700.74	724128.81	N 32° 16' 4.46 W 103° 44' 30.98	
	3451.00	0.53	346.92	3450.53	-13.33	13.10	-4.68	0.27	461701.76	724128.48	N 32° 16' 4.47 W 103° 44' 30.99	
	3546.00	0.40	331.88	3545.53	-14.06	13.82	-4.93	0.19	461702.48	724128.23	N 32° 16' 4.48 W 103° 44' 30.99	
	3640.00	0.29	57.56	3639.53	-14.48	14.24	-4.89	0.51	461702.90	724128.27	N 32° 16' 4.48 W 103° 44' 30.99	
	3735.00	0.98	126.52	3734.52	-14.08	13.88	-4.03	0.96	461702.54	724129.13	N 32° 16' 4.48 W 103° 44' 30.98	
	3829.00	1.89	134.44	3828.49	-12.42	12.32	-2.28	0.99	461700.98	724130.88	N 32° 16' 4.46 W 103° 44' 30.96	
	3924.00	2.25	133.78	3923.43	-9.91	9.93	0.19	0.38	461698.59	724133.35	N 32° 16' 4.44 W 103° 44' 30.93	
	4018.00	2.93	139.46	4017.34	-6.65	6.83	3.08	0.77	461695.49	724136.24	N 32° 16' 4.41 W 103° 44' 30.90	
	4112.00	3.47	141.52	4111.19	-2.43	2.78	6.41	0.59	461691.44	724139.57	N 32° 16' 4.37 W 103° 44' 30.86	
	4207.00	4.05	142.96	4205.98	2.70	-2.15	10.22	0.62	461686.51	724143.38	N 32° 16' 4.32 W 103° 44' 30.81	
	4301.00	4.05	141.90	4299.75	8.17	-7.41	14.27	0.08	461681.25	724147.43	N 32° 16' 4.27 W 103° 44' 30.77	
	4396.00	2.91	154.92	4394.57	13.15	-12.24	17.36	1.45	461676.42	724150.52	N 32° 16' 4.22 W 103° 44' 30.73	
	4491.00	1.97	169.39	4489.49	17.01	-16.03	18.69	1.18	461672.63	724151.84	N 32° 16' 4.18 W 103° 44' 30.72	
	4586.00	0.18	181.83	4584.47	18.78	-17.78	18.98	1.89	461670.88	724152.14	N 32° 16' 4.16 W 103° 44' 30.71	
	4680.00	0.11	133.43	4678.47	18.99	-17.99	19.04	0.14	461670.67	724152.20	N 32° 16' 4.16 W 103° 44' 30.71	
	4689.00	0.21	198.62	4687.47	19.44	-18.44	19.06	0.10	461670.22	724152.22	N 32° 16' 4.16 W 103° 44' 30.71	
	4963.00	0.16	212.87	4961.47	19.71	-18.72	18.94	0.07	461669.94	724152.10	N 32° 16' 4.15 W 103° 44' 30.71	
	5057.00	0.16	40.26	5055.47	19.72	-18.73	18.95	0.34	461669.93	724152.11	N 32° 16' 4.15 W 103° 44' 30.71	
	5152.00	0.32	288.15	5150.47	19.53	-18.54	18.78	0.43	461670.12	724151.94	N 32° 16' 4.16 W 103° 44' 30.72	
	5340.00	1.98	50.00	5338.43	17.39	-16.29	20.77	1.15	461672.37	724153.93	N 32° 16' 4.18 W 103° 44' 30.69	
	5528.00	4.69	61.60	5526.10	12.15	-10.55	30.02	1.48	461678.11	724163.18	N 32° 16' 4.23 W 103° 44' 30.58	
	5623.00	5.74	64.89	5620.70	8.70	-6.68	37.74	1.15	461681.98	724170.90	N 32° 16' 4.27 W 103° 44' 30.49	
	5717.00	6.44	69.08	5714.17	5.32	-2.81	46.92	0.88	461685.85	724180.08	N 32° 16' 4.31 W 103° 44' 30.39	
	5811.00	6.89	70.81	5807.54	2.15	0.93	57.17	0.52	461689.59	724190.33	N 32° 16' 4.35 W 103° 44' 30.27	
	5905.00	6.77	70.56	5900.87	-0.98	4.63	67.72	0.13	461693.29	724200.88	N 32° 16' 4.38 W 103° 44' 30.14	
	5999.00	6.61	71.23	5994.23	-4.00	8.21	78.07	0.19	461696.87	724211.23	N 32° 16' 4.42 W 103° 44' 30.02	
	6094.00	6.46	69.93	6088.61	-7.04	11.80	88.27	0.22	461700.46	724221.42	N 32° 16' 4.45 W 103° 44' 29.90	
	6188.00	6.32	72.74	6182.03	-9.86	15.15	98.17	0.36	461703.81	724231.33	N 32° 16' 4.48 W 103° 44' 29.79	
6282.00	6.14	75.38	6275.47	-12.13	17.96	107.98	0.36	461706.62	724241.13	N 32° 16' 4.51 W 103° 44' 29.67		
6377.00	6.34	75.88	6369.91	-14.15	20.52	117.98	0.22	461709.18	724251.14	N 32° 16' 4.54 W 103° 44' 29.56		
6471.00	6.75	79.06	6463.30	-15.90	22.83	128.44	0.58	461711.49	724261.59	N 32° 16' 4.56 W 103° 44' 29.44		
6566.00	6.73	77.41	6557.64	-17.58	25.11	139.35	0.20	461713.77	724272.51	N 32° 16' 4.58 W 103° 44' 29.31		
6660.00	6.58	71.67	6651.01	-19.91	28.00	149.84	0.73	461716.66	724282.99	N 32° 16' 4.61 W 103° 44' 29.19		
6755.00	6.16	67.36	6745.42	-23.05	31.67	159.71	0.67	461720.33	724292.86	N 32° 16' 4.64 W 103° 44' 29.07		
6944.00	5.77	69.21	6933.40	-29.33	38.95	177.95	0.23	461727.61	724311.10	N 32° 16' 4.72 W 103° 44' 28.86		
7038.00	6.33	62.76	7026.88	-32.89	43.00	186.98	0.94	461731.66	724320.13	N 32° 16' 4.76 W 103° 44' 28.75		
7132.00	5.68	61.04	7120.36	-37.04	47.62	195.66	0.72	461736.28	724328.81	N 32° 16' 4.80 W 103° 44' 28.65		
7227.00	3.78	60.72	7215.03	-40.48	51.43	202.50	2.00	461740.09	724335.65	N 32° 16' 4.84 W 103° 44' 28.57		
7415.00	0.66	49.70	7402.87	-43.87	55.16	208.73	1.67	461743.82	724341.88	N 32° 16' 4.87 W 103° 44' 28.50		
7510.00	0.13	305.91	7497.87	-44.27	55.58	209.06	0.74	461744.24	724342.21	N 32° 16' 4.88 W 103° 44' 28.49		
7604.00	0.05	230.15	7591.87	-44.31	55.62	208.95	0.14	461744.27	724342.09	N 32° 16' 4.88 W 103° 44' 28.50		
7698.00	0.73	285.73	7685.86	-44.48	55.75	208.34	0.75	461744.41	724341.49	N 32° 16' 4.88 W 103°		

Comments	MD (ft)	Incl (°)	Azim Grd (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	8548.00	0.03	240.21	8535.84	-43.95	55.15	206.90	0.29	461743.81	724340.05	N 32 16 4.87	W 103 44 28.52
	8737.00	0.41	247.73	8724.84	-43.71	54.87	206.23	0.20	461743.53	724339.38	N 32 16 4.87	W 103 44 28.53
	8926.00	0.67	149.22	8913.84	-42.51	53.66	206.17	0.44	461742.32	724339.32	N 32 16 4.86	W 103 44 28.53
	9114.00	0.20	327.87	9101.83	-41.82	53.00	206.56	0.46	461741.65	724339.71	N 32 16 4.85	W 103 44 28.52
	9303.00	0.17	265.77	9290.83	-42.10	53.26	206.11	0.10	461741.91	724339.26	N 32 16 4.86	W 103 44 28.53
	9492.00	1.15	232.20	9479.82	-41.02	52.07	204.33	0.54	461740.73	724337.48	N 32 16 4.84	W 103 44 28.55
	9586.00	0.14	29.53	9573.81	-40.58	51.59	203.64	1.36	461740.25	724336.79	N 32 16 4.84	W 103 44 28.56
	9775.00	0.16	206.87	9762.81	-40.54	51.56	203.63	0.16	461740.22	724336.78	N 32 16 4.84	W 103 44 28.56
	9964.00	0.40	110.76	9951.81	-40.05	51.09	204.13	0.24	461739.75	724337.28	N 32 16 4.83	W 103 44 28.55
	10058.00	0.21	100.55	10045.81	-39.88	50.94	204.61	0.21	461739.60	724337.76	N 32 16 4.83	W 103 44 28.55
	10247.00	0.31	170.73	10234.81	-39.29	50.38	205.03	0.16	461739.03	724338.18	N 32 16 4.83	W 103 44 28.54
	10341.00	0.90	155.14	10328.80	-38.35	49.45	205.38	0.65	461738.11	724338.53	N 32 16 4.82	W 103 44 28.54
	10436.00	0.25	112.17	10423.80	-37.57	48.70	205.89	0.78	461737.36	724339.04	N 32 16 4.81	W 103 44 28.53
	10530.00	0.36	329.27	10517.80	-37.74	48.88	205.93	0.62	461737.53	724339.08	N 32 16 4.81	W 103 44 28.53
	10631.00	0.62	196.62	10618.79	-37.51	48.62	205.61	0.89	461737.28	724338.76	N 32 16 4.81	W 103 44 28.54
	10725.00	0.52	216.43	10712.79	-36.70	47.79	205.21	0.23	461736.45	724338.36	N 32 16 4.80	W 103 44 28.54
	10819.00	0.85	205.48	10806.78	-35.76	46.82	204.66	0.38	461735.48	724337.81	N 32 16 4.79	W 103 44 28.55
	10914.00	1.19	187.84	10901.77	-34.17	45.21	204.22	0.48	461733.87	724337.37	N 32 16 4.78	W 103 44 28.55
	11009.00	2.58	192.10	10986.71	-31.06	42.66	203.62	1.57	461730.72	724336.77	N 32 16 4.75	W 103 44 28.56
	11104.00	3.25	150.99	11091.58	-26.30	37.24	202.64	0.60	461725.90	724335.79	N 32 16 4.70	W 103 44 28.57
	11198.00	3.11	184.99	11185.44	-21.19	32.09	201.91	0.38	461720.75	724335.06	N 32 16 4.65	W 103 44 28.58
	11259.00	3.14	185.83	11246.35	-17.90	28.78	201.60	0.09	461717.44	724334.75	N 32 16 4.61	W 103 44 28.58
	11288.00	3.04	187.15	11275.31	-16.36	27.22	201.12	0.42	461715.88	724334.57	N 32 16 4.60	W 103 44 28.59
	11383.00	14.08	179.91	11369.10	-2.30	13.13	201.12	11.65	461701.78	724334.27	N 32 16 4.46	W 103 44 28.59
100' FNL Crossing	11392.00	15.54	179.58	11377.81	0.00	10.82	201.13	16.27	461699.48	724334.28	N 32 16 4.44	W 103 44 28.59
	11478.00	29.52	178.05	11457.04	32.85	-22.03	201.94	16.27	461686.63	724335.09	N 32 16 4.11	W 103 44 28.58
	11573.00	39.93	181.25	11535.02	86.81	-76.06	202.07	11.12	461612.60	724335.22	N 32 16 3.58	W 103 44 28.58
	11668.00	51.58	182.22	11601.19	154.50	-143.96	199.96	12.28	461544.71	724333.11	N 32 16 2.90	W 103 44 28.61
	11762.00	56.95	181.24	11656.08	230.50	-220.20	197.68	5.77	461468.47	724330.83	N 32 16 2.15	W 103 44 28.65
Wolfcamp Intersection	11816.55	59.01	179.75	11685.00	276.66	-266.44	197.29	4.43	461422.23	724330.44	N 32 16 1.69	W 103 44 28.65
	11857.00	60.54	178.68	11705.36	311.58	-301.39	197.77	4.43	461387.29	724330.92	N 32 16 1.35	W 103 44 28.65
	11953.00	64.83	180.40	11749.41	396.76	-386.66	198.43	4.74	461302.02	724331.58	N 32 16 0.50	W 103 44 28.65
	12049.00	75.71	179.90	11781.77	486.85	-476.89	198.21	11.34	461211.80	724331.36	N 32 15 59.61	W 103 44 28.66
	12144.00	84.14	178.03	11798.37	580.23	-570.32	199.92	9.08	461118.37	724333.07	N 32 15 58.69	W 103 44 28.64
	12208.00	87.52	176.61	11803.03	644.05	-634.07	202.90	5.73	461054.63	724336.05	N 32 15 58.06	W 103 44 28.61
	12243.00	87.38	178.49	11804.58	679.01	-669.00	204.40	5.38	461019.70	724337.55	N 32 15 57.71	W 103 44 28.60
	12337.00	87.28	176.25	11808.96	772.90	-762.79	208.70	2.38	460925.91	724341.85	N 32 15 56.78	W 103 44 28.55
	12432.00	89.75	176.48	11811.43	867.86	-857.56	214.73	2.61	460831.15	724347.87	N 32 15 55.84	W 103 44 28.49
	12527.00	88.62	176.83	11812.78	962.85	-952.39	220.27	1.25	460736.32	724353.42	N 32 15 54.90	W 103 44 28.43
	12712.00	89.72	178.42	11815.46	1147.81	-1137.20	227.93	1.05	460551.52	724361.08	N 32 15 53.08	W 103 44 28.35
	12743.00	89.93	180.62	11815.55	1178.77	-1168.20	228.19	7.13	460520.53	724361.34	N 32 15 52.77	W 103 44 28.35
	12807.00	90.52	184.72	11815.30	1242.43	-1232.11	225.21	6.47	460456.61	724358.36	N 32 15 52.14	W 103 44 28.39
	12902.00	88.07	183.11	11816.47	1336.71	-1326.87	218.73	3.09	460361.86	724351.87	N 32 15 51.20	W 103 44 28.47
	12996.00	89.55	184.64	11818.42	1429.99	-1420.63	212.37	2.26	460268.10	724345.52	N 32 15 50.27	W 103 44 28.55
Exit Target Box 1	13060.47	90.63	183.28	11819.32	1493.97	-1484.95	207.93	2.70	460203.79	724341.07	N 32 15 49.64	W 103 44 28.61
	13091.00	91.14	182.63	11817.85	1524.33	-1515.43	206.35	2.70	460173.31	724339.50	N 32 15 49.33	W 103 44 28.63
	13186.00	91.24	181.00	11815.88	1618.96	-1610.36	203.34	1.72	460078.39	724336.49	N 32 15 48.39	W 103 44 28.67
	13280.00	91.38	178.46	11813.73	1712.82	-1704.33	203.79	2.71	459984.42	724336.94	N 32 15 47.46	W 103 44 28.67
Enter Target Box 1	13364.27	90.34	174.19	11812.46	1797.05	-1788.40	209.18	5.21	459900.36	724342.33	N 32 15 46.63	W 103 44 28.61
	13375.00	90.21	173.65	11812.41	1807.77	-1799.07	210.32	5.21	459889.69	724343.47	N 32 15 46.53	W 103 44 28.60
	13474.00	90.55	173.90	11811.75	1906.62	-1897.48	221.06	0.43	459791.28	724354.20	N 32 15 45.55	W 103 44 28.48
	13569.00	90.72	174.09	11810.70	2001.49	-1991.95	230.99	0.27	459696.82	724364.14	N 32 15 44.62	W 103 44 28.37
	13663.00	90.72	175.01	11809.52	2095.40	-2085.52	239.92	0.98	459603.26	724373.07	N 32 15 43.69	W 103 44 28.27
	13757.00	90.34	176.60	11808.65	2189.37	-2179.26	246.80	1.74	459509.52	724379.94	N 32 15 42.76	W 103 44 28.20
	13852.00	90.62	177.21	11807.85	2284.37	-2274.12	251.92	0.71	459414.67	724385.07	N 32 15 41.82	W 103 44 28.15
	13947.00	91.24	178.41	11806.31	2379.34	-2369.03	255.55	1.42	459319.76	724388.70	N 32 15 40.88	W 103 44 28.11
	14041.00	90.72	179.65	11804.70	2473.26	-2463.00	257.15	1.43	459225.79	724390.29	N 32 15 39.95	W 103 44 28.10
	14230.00	91.58	180.08	11800.91	2661.97	-2651.96	257.59	0.51	459036.84	724390.74	N 32 15 38.09	W 103 44 28.10
	14325.00	91.41	180.56	11798.43	2756.77	-2746.93	257.06	0.54	458941.88	724390.21	N 32 15 37.15	W 103 44 28.12
	14420.00	90.58	180.15	11796.78	2851.59	-2841.91	256.47	0.97	458846.90	724389.62	N 32 15 36.21	W 103 44 28.13
	14514.00	91.96	180.65	11794.70	2945.39	-2935.88	255.82	1.56	458752.94	724388.96	N 32 15 35.28	W 103 44 28.14
	14609.00	91.62	180.04	11791.73	3040.17	-3030.83	255.24	0.73	458657.99	724388.39	N 32 15 34.34	W 103 44 28.16
	14704.00	91.48	179.47	11789.16	3135.02	-3125.80	255.65	0.62	458563.03	724388.80	N 32 15 33.40	W 103 44 28.16
	14893.00	91.31	178.12	11784.56	3232.86	-3314.70	259.62	0.72	458374.14	724392.77	N 32 15 31.53	W 103 44 28.12
	14987.00	90.72	177.43	11782.89	3417.83	-3408.61	263.27	0.97	458280.24	724396.42	N 32 15 30.60	W 103 44 28.09
	15082.00	91.10	177.48	11781.39	3512.82	-3503.50	267.49	0.40	458185.35	724400.64	N 32 15 29.66	W 103 44 28.04
	15177.00	91.20	178.35	11779.48	3607.78	-3598.42	270.95	0.92	458090.44	724404.09	N 32 15 28.72	W 103 44 28.01
	15271.00	90.93	179.01	11777.73	3701.72	-3692.38	273.11	0.76	457996.48	724406.26	N 32 15 27.79	W 103 44 27.99
	15365.00	91.37	179.07	11775.84	3795.64	-3786.35	274.69	0.47	457902.52	724407.83	N 32 15 26.86	W 103 44 27.98
	15460.00	90.17	179.76	11774.57	3890.54	-3881.33	275.66	1.46	457807.54	724408.80	N 32 15 25.92	W 103 44 27.97
	15649.00	91.34	180.14	11772.08	4079.25	-4070.31	275.82	0.65	457618.57	724408.97	N 32 15 24.05	W 103 44 27.98
	15744.00	90.89	181.24	11770.23	4174.03	-4165.28	274.68	1.25	457523.60	724407.82	N 32 15 23.11	W 103 44 28.00
	15839.00	89.72	180.10	11769.72	4268.82	-4260.27	273.57	1.72	457428.62	724406.71	N 32 15 22.17	W 103 44 28.02
	15933.00	89.17	178.81	11770.63	4362.72	-4354.26	274.46	1.49	457334.64	724407.61	N 32 15 21.24	W 103 44 28.02
	16028.00	90.84	178.90	11770.63	4457.66	-4449.24	276.36	1.76	457239.66	724409.50	N 32 15 20.30	W 103 44 28.00
	16122.00	91.67	179.08	11768.57	4551.58	-4543.20	278.					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
		1	838.310	10530.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS			Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-	
		1	10530.000	11198.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG			Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-	
		1	11198.000	12432.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS			Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-	
		1	12432.000	13375.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS			ST01 / Oxy Cal-Mon 35 Federal 176H ST01 to 16725'	
		1	13375.000	16725.000	Act Stns	30.000	30.000	NAL_MWD_IFR1			ST01 / Oxy Cal-Mon 35 Federal 176H ST01 to 16725'	

Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071' Survey Geodetic Report

(Def Survey)



Report Date: February 13, 2019 - 08:14 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Cal-Mon 35 Federal 176H / Oxy Cal-Mon 35 Federal 176H
Well: Cal-Mon 35 Federal 176H
Borehole: Original Hole
UW / API#: Unknown / 30-015-45525
Survey Name: Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'
Survey Date: January 15, 2019
Tort / AHD / DDI / ERD Ratio: 159.865' / 1860.025 ft / 5.517 / 0.157
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 16' 4.34028", W 103° 44' 30.93314"
Location Grid N/E Y/X: N 461688.660 RUS, E 724133.160 RUS
CRS Grid Convergence Angle: 0.3157°
Grid Scale Factor: 0.99994736
Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 176.920° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3497.500 ft above MSL
Seabed / Ground Elevation: 3471.000 ft above MSL
Magnetic Declination: 6.791°
Total Gravity Field Strength: 998.4458mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48015.100 nT
Magnetic Dip Angle: 59.985°
Declination Data: January 15, 2019
Magnetic Declination Model: IFR1
North Reference: Grid North
Grid Convergence Used: 0.3157°
Total Corr Mag North->Grid North: 6.4753°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
WRP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	461688.66	724133.16	N 32° 16' 4.34"	W 103° 44' 30.93"
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	461688.66	724133.16	N 32° 16' 4.34"	W 103° 44' 30.93"
	97.76	0.57	177.63	97.76	0.35	-0.35	0.01	0.80	461688.31	724133.17	N 32° 16' 4.34"	W 103° 44' 30.93"
	184.64	0.95	174.64	184.63	1.51	-1.50	0.10	0.44	461687.16	724133.26	N 32° 16' 4.33"	W 103° 44' 30.93"
	272.31	0.93	174.14	272.29	2.94	-2.93	0.24	0.02	461685.73	724133.40	N 32° 16' 4.31"	W 103° 44' 30.93"
	366.28	0.90	171.53	366.25	4.44	-4.42	0.43	0.05	461684.24	724133.59	N 32° 16' 4.30"	W 103° 44' 30.93"
	462.05	0.96	168.47	462.00	5.98	-5.95	0.70	0.08	461682.71	724133.86	N 32° 16' 4.28"	W 103° 44' 30.93"
	556.08	0.96	167.72	556.02	7.54	-7.49	1.02	0.01	461681.17	724134.18	N 32° 16' 4.27"	W 103° 44' 30.92"
	650.81	0.91	162.74	650.74	9.05	-8.99	1.42	0.10	461679.67	724134.57	N 32° 16' 4.25"	W 103° 44' 30.92"
	745.63	0.92	159.59	745.55	10.51	-10.42	1.90	0.05	461678.24	724135.06	N 32° 16' 4.24"	W 103° 44' 30.91"
Last Gyro	838.31	0.84	166.68	838.22	11.89	-11.78	2.32	0.15	461676.88	724135.48	N 32° 16' 4.22"	W 103° 44' 30.91"
	1008.00	0.72	163.72	1007.89	14.15	-14.01	2.91	0.07	461674.65	724136.07	N 32° 16' 4.20"	W 103° 44' 30.90"
	1100.00	0.17	178.72	1099.89	14.85	-14.70	3.07	0.61	461673.96	724136.23	N 32° 16' 4.19"	W 103° 44' 30.90"
	1192.00	0.13	213.73	1191.89	15.07	-14.93	3.02	0.11	461673.73	724136.18	N 32° 16' 4.19"	W 103° 44' 30.90"
	1392.00	0.29	217.89	1391.89	15.63	-15.52	2.58	0.08	461673.15	724135.74	N 32° 16' 4.19"	W 103° 44' 30.90"
	1561.00	0.28	235.28	1560.88	16.17	-16.09	1.98	0.05	461672.57	724135.14	N 32° 16' 4.18"	W 103° 44' 30.91"
	1656.00	0.09	288.99	1655.88	16.27	-16.20	1.72	0.25	461672.46	724134.88	N 32° 16' 4.18"	W 103° 44' 30.91"
	1750.00	0.13	351.64	1749.88	16.13	-16.07	1.63	0.13	461672.59	724134.79	N 32° 16' 4.18"	W 103° 44' 30.92"
	1845.00	0.22	8.15	1844.88	15.84	-15.78	1.64	0.11	461672.88	724134.80	N 32° 16' 4.18"	W 103° 44' 30.92"
	1939.00	0.33	352.70	1938.88	15.40	-15.33	1.63	0.14	461673.33	724134.79	N 32° 16' 4.19"	W 103° 44' 30.92"
	2034.00	0.42	2.79	2033.88	14.78	-14.71	1.61	0.12	461673.95	724134.77	N 32° 16' 4.19"	W 103° 44' 30.92"
	2128.00	0.46	357.50	2127.88	14.06	-13.99	1.61	0.06	461674.67	724134.77	N 32° 16' 4.20"	W 103° 44' 30.92"
	2222.00	0.61	355.18	2221.87	13.18	-13.12	1.56	0.16	461675.54	724134.72	N 32° 16' 4.21"	W 103° 44' 30.92"
	2317.00	0.66	349.89	2316.87	12.13	-12.07	1.42	0.08	461676.59	724134.58	N 32° 16' 4.22"	W 103° 44' 30.92"
	2506.00	0.95	347.43	2505.85	9.51	-9.47	0.88	0.15	461679.19	724134.04	N 32° 16' 4.25"	W 103° 44' 30.92"
	2601.00	1.17	349.97	2600.83	7.77	-7.75	0.54	0.24	461680.91	724133.70	N 32° 16' 4.26"	W 103° 44' 30.93"
	2696.00	1.39	349.91	2695.81	5.66	-5.66	0.17	0.23	461683.00	724133.33	N 32° 16' 4.28"	W 103° 44' 30.93"
	2791.00	1.65	352.09	2790.77	3.15	-3.17	-0.22	0.28	461685.49	724132.94	N 32° 16' 4.31"	W 103° 44' 30.94"
	2885.00	1.87	348.73	2884.73	0.29	-0.33	-0.70	0.26	461688.33	724132.46	N 32° 16' 4.34"	W 103° 44' 30.94"
	2980.00	2.06	347.49	2979.67	-2.93	2.86	-1.38	0.20	461691.52	724131.78	N 32° 16' 4.37"	W 103° 44' 30.95"
	3074.00	1.77	345.15	3073.62	-6.02	5.91	-2.11	0.32	461694.57	724131.05	N 32° 16' 4.40"	W 103° 44' 30.96"
	3168.00	1.56	338.40	3167.58	-8.65	8.51	-2.96	0.31	461697.17	724130.20	N 32° 16' 4.42"	W 103° 44' 30.97"
	3357.00	0.77	339.21	3356.54	-12.30	12.09	-4.35	0.42	461700.74	724128.81	N 32° 16' 4.46"	W 103° 44' 30.98"
	3451.00	0.53	346.92	3450.53	-13.33	13.10	-4.68	0.27	461701.76	724128.48	N 32° 16' 4.47"	W 103° 44' 30.99"
	3546.00	0.40	331.88	3545.53	-14.06	13.82	-4.93	0.19	461702.48	724128.23	N 32° 16' 4.48"	W 103° 44' 30.99"
	3640.00	0.29	57.56	3639.53	-14.48	14.24	-4.89	0.51	461702.90	724128.27	N 32° 16' 4.48"	W 103° 44' 30.99"
	3735.00	0.98	126.52	3734.52	-14.08	13.88	-4.03	0.96	461702.54	724129.13	N 32° 16' 4.48"	W 103° 44' 30.98"
	3829.00	1.89	134.44	3828.49	-12.42	12.32	-2.28	0.99	461700.98	724130.88	N 32° 16' 4.46"	W 103° 44' 30.96"
	3924.00	2.25	133.78	3923.43	-9.91	9.93	0.19	0.38	461698.59	724133.35	N 32° 16' 4.44"	W 103° 44' 30.93"
	4018.00	2.93	139.46	4017.34	-6.65	6.83	3.08	0.77	461695.49	724136.24	N 32° 16' 4.41"	W 103° 44' 30.90"
	4112.00	3.47	141.52	4111.19	-2.43	2.78	6.41	0.59	461691.44	724139.57	N 32° 16' 4.37"	W 103° 44' 30.86"
	4207.00	4.05	142.96	4205.98	2.70	-2.15	10.22	0.62	461686.51	724143.38	N 32° 16' 4.32"	W 103° 44' 30.81"
	4301.00	4.05	141.90	4299.75	8.17	-7.41	14.27	0.08	461681.25	724147.43	N 32° 16' 4.27"	W 103° 44' 30.77"
	4396.00	2.91	154.92	4394.57	13.15	-12.24	17.36	1.45	461676.42	724150.52	N 32° 16' 4.22"	W 103° 44' 30.73"
	4491.00	1.97	169.39	4489.49	17.01	-16.03	18.69	1.18	461672.63	724151.84	N 32° 16' 4.18"	W 103° 44' 30.72"
	4586.00	0.18	181.83	4584.47	18.78	-17.78	18.98	1.89	461670.88	724152.14	N 32° 16' 4.16"	W 103° 44' 30.71"
	4680.00	0.11	133.43	4678.47	18.99	-17.99	19.04	0.14	461670.67	724152.20	N 32° 16' 4.16"	W 103° 44' 30.71"
	4869.00	0.21	198.62	4867.47	19.44	-18.44	19.06	0.10	461670.22	724152.22	N 32° 16' 4.16"	W 103° 44' 30.71"
	4963.00	0.16	212.87	4961.47	19.71	-18.72	18.94	0.07	461669.94	724152.10	N 32° 16' 4.15"	W 103° 44' 30.71"
	5057.00	0.16	40.26	5055.47	19.72	-18.73	18.95	0.34	461669.93	724152.11	N 32° 16' 4.15"	W 103° 44' 30.71"
	5152.00	0.32	288.15	5150.47	19.53	-18.54	18.78	0.43	461670.12	724151.94	N 32° 16' 4.16"	W 103° 44' 30.72"
	5340.00	1.98	50.00	5338.43	17.39	-16.29	20.77	1.15	461672.37	724153.93	N 32° 16' 4.18"	W 103° 44' 30.69"
	5528.00	4.69	61.60	5526.10	12.15	-10.55	30.02	1.48	461678.11	724163.18	N 32° 16' 4.23"	W 103° 44' 30.58"
	5623.00	5.74	64.89	5620.70	8.70	-6.68	37.74	1.15	461681.98	724170.90	N 32° 16' 4.27"	W 103° 44' 30.49"
	5717.00	6.44	69.08	5714.17	5.32	-2.81	46.92	0.88	461685.85	724180.08	N 32° 16' 4.31"	W 103° 44' 30.39"
	5811.00	6.89	70.81	5807.54	2.15	0.93	57.17	0.52	461689.59	724190.33	N 32° 16' 4.35"	W 103° 44' 30.27"
	5905.00	6.77	70.56	5900.87	-0.98	4.83	67.72	0.13	461693.29	724200.88	N 32° 16' 4.38"	W 103° 44' 30.14"
	5999.00	6.81	71.23	5994.23	-4.00	8.21	78.07	0.19	461696.87	724211.23	N 32° 16' 4.42"	W 103° 44' 30.02"
	6094.00	6.46	69.93	6088.61	-7.04	11.80	88.27	0.22	461700.46	724221.42	N 32° 16' 4.45"	W 103° 44' 29.90"
	6188.00	6.32	72.74	6182.03	-9.86	15.15	98.17	0.36	461703.81	724231.33	N 32° 16' 4.48"	W 103° 44' 29.79"
	6282.00	6.14	75.38	6275.47	-12.13	17.96	107.98	0.36	461706.62	724241.13	N 32° 16' 4.51"	W 103° 44' 29.67"
	6377.00	6.34	75.88	6369.91	-14.15	20.52	117.98	0.22	461709.18	724251.14	N 32° 16' 4.54"	W 103° 44' 29.56"
	6471.00	6.75	79.06	6463.30	-15.90	22.83	128.44	0.58	461711.49	724261.59	N 32° 16' 4.56"	W 103° 44' 29.44"
	6566.00	6.73	77.41	6557.64	-17.58	25.11	139.35	0.20	461713.77	724272.51	N 32° 16' 4.58"	W 103° 44' 29.31"
	6660.00	6.58	71.67	6651.01	-19.91	28.00	149.84	0.73	461716.66	724282.99	N 32° 16' 4.61"	W 103° 44' 29.19"
	6755.00	6.16	67.36	6745.42	-23.05	31.67	159.71	0.67	461720.33	724292.66	N 32° 16' 4.64"	W 103° 44' 29.07"
	6844.00	5.77	69.21	6833.40	-29.33	38.95	177.95	0.23	461727.61	724311.10	N 32° 16' 4.72"	W 103° 44' 28.86"
	7038.00	6.33	62.76	7026.88	-32.89	43.00	186.98	0.94	461731.66	724320.13	N 32° 16' 4.76"	W 103° 44' 28.75"
	7132.00	5.68	61.04	7120.36	-37.04	47.62	195.66	0.72	461736.28	724328.81	N 32° 16' 4.80"	W 103° 44' 28.65"
	7227.00	3.78	60.72	7215.03	-40.48	51.43	202.50	2.00	461740.09	724335.65	N 32° 16' 4.84"	W 103° 44' 28.57"
	7315.00	0.66	49.70	7302.87	-43.87	55.16	208.73	1.67	461743.82	724341.88	N 32° 16' 4.87"	W 103° 44' 28.50"
	7510.00	0.13	305.91	7497.87	-44.27	55.58	209.06	0.74	461744.24	724342.21	N 32° 16' 4.88"	W 103° 44' 28.49"
	7604.00	0.05	230.15	7591.87	-44.31	55.62	208.95	0.14	461744.27			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8548.00	0.03	240.21	8535.84	-43.95	55.15	206.90	0.29	461743.81	724340.05	N 32 16 4.87	W 103 44 28.52
	8737.00	0.41	247.73	8724.84	-43.71	54.87	206.23	0.20	461743.53	724339.38	N 32 16 4.87	W 103 44 28.53
	8926.00	0.67	149.22	8913.84	-42.51	53.66	206.17	0.44	461742.32	724339.32	N 32 16 4.86	W 103 44 28.53
	9114.00	0.20	327.87	9101.83	-41.82	53.00	206.56	0.46	461741.65	724339.71	N 32 16 4.85	W 103 44 28.52
	9303.00	0.17	265.77	9290.83	-42.10	53.26	206.11	0.10	461741.91	724339.26	N 32 16 4.86	W 103 44 28.53
	9492.00	1.15	232.20	9479.82	-41.02	52.07	204.33	0.54	461740.73	724337.48	N 32 16 4.84	W 103 44 28.55
	9586.00	0.14	29.53	9573.81	-40.58	51.59	203.64	1.36	461740.25	724336.79	N 32 16 4.84	W 103 44 28.56
	9775.00	0.16	205.87	9762.81	-40.54	51.56	203.63	0.16	461740.22	724336.78	N 32 16 4.84	W 103 44 28.56
	9964.00	0.40	110.76	9951.81	-40.05	51.09	204.13	0.24	461739.75	724337.28	N 32 16 4.83	W 103 44 28.55
	10058.00	0.21	100.55	10045.81	-39.88	50.94	204.61	0.21	461739.60	724337.76	N 32 16 4.83	W 103 44 28.55
	10247.00	0.31	170.73	10234.81	-39.29	50.38	205.03	0.16	461739.03	724338.18	N 32 16 4.83	W 103 44 28.54
	10341.00	0.90	155.14	10328.80	-38.35	49.45	205.38	0.65	461738.11	724338.53	N 32 16 4.82	W 103 44 28.54
	10436.00	0.25	112.17	10423.80	-37.57	48.70	205.89	0.78	461737.36	724339.04	N 32 16 4.81	W 103 44 28.53
	10530.00	0.36	329.27	10517.80	-37.74	48.88	205.93	0.62	461737.53	724339.08	N 32 16 4.81	W 103 44 28.53
KOP Actual	10631.00	0.62	198.62	10618.79	-37.51	48.62	205.61	0.89	461737.28	724338.76	N 32 16 4.81	W 103 44 28.54
	10725.00	0.52	216.43	10712.79	-36.70	47.79	205.21	0.23	461736.45	724338.36	N 32 16 4.80	W 103 44 28.54
	10819.00	0.85	205.48	10806.78	-35.76	46.82	204.66	0.38	461735.48	724337.81	N 32 16 4.79	W 103 44 28.55
	10914.00	1.19	187.84	10801.77	-34.17	45.21	204.22	0.48	461733.87	724337.37	N 32 16 4.78	W 103 44 28.55
	11009.00	2.68	192.10	10996.71	-31.06	42.06	203.62	1.57	461730.72	724336.77	N 32 16 4.75	W 103 44 28.56
	11104.00	3.25	190.99	11091.58	-26.30	37.24	202.54	0.60	461725.90	724335.79	N 32 16 4.70	W 103 44 28.57
	11198.00	3.11	184.99	11185.44	-21.19	32.09	201.91	0.38	461720.75	724335.06	N 32 16 4.65	W 103 44 28.58
	11259.00	3.14	185.83	11246.35	-17.90	28.78	201.60	0.09	461717.44	724334.75	N 32 16 4.61	W 103 44 28.58
	11288.00	3.04	187.15	11275.31	-16.36	27.22	201.42	0.42	461715.88	724334.57	N 32 16 4.60	W 103 44 28.59
100' FNL	11383.00	14.08	179.91	11369.10	-2.30	13.13	201.12	11.65	461701.78	724334.27	N 32 16 4.44	W 103 44 28.59
	11478.00	29.52	178.05	11457.04	32.85	0.00	201.94	16.27	461699.48	724334.28	N 32 16 4.44	W 103 44 28.59
	11573.00	39.93	181.25	11535.02	86.81	-76.06	202.07	11.12	461686.63	724335.09	N 32 16 4.11	W 103 44 28.58
Exit Target Box	11636.00	47.65	181.93	11580.47	130.23	-119.61	200.85	12.28	461612.60	724335.22	N 32 16 3.58	W 103 44 28.58
	11668.00	51.58	182.22	11601.19	154.50	-143.96	199.96	12.28	461569.06	724333.99	N 32 16 3.15	W 103 44 28.60
	11762.00	56.95	181.24	11656.08	230.50	-220.20	197.68	5.77	461544.71	724333.11	N 32 16 2.90	W 103 44 28.61
Wolfcamp Intersection	11816.55	59.01	179.75	11885.00	276.66	-266.44	197.29	4.43	461422.23	724330.44	N 32 16 1.69	W 103 44 28.65
	11857.00	60.54	178.68	11705.36	311.58	-301.39	197.77	4.43	461387.29	724330.92	N 32 16 1.35	W 103 44 28.65
	11953.00	64.83	180.40	11749.41	396.76	-386.66	198.43	4.74	461302.02	724331.58	N 32 16 0.50	W 103 44 28.65
	12049.00	75.71	179.90	11781.77	486.85	-478.89	198.21	11.34	461211.80	724331.36	N 32 15 59.61	W 103 44 28.66
	12144.00	84.14	178.03	11798.37	580.23	-570.32	199.92	9.08	461118.37	724333.07	N 32 15 58.69	W 103 44 28.64
Enter Target Box	12208.00	87.52	176.61	11803.03	644.05	-634.07	202.90	5.73	461054.63	724336.05	N 32 15 58.06	W 103 44 28.61
	12220.00	87.47	177.25	11803.55	656.04	-646.04	203.54	5.38	461042.66	724336.69	N 32 15 57.94	W 103 44 28.60
	12243.00	87.38	178.49	11804.58	679.01	-669.00	204.40	5.38	461019.70	724337.55	N 32 15 57.71	W 103 44 28.60
	12337.00	87.28	176.25	11808.96	772.90	-762.79	208.70	2.38	460925.91	724341.85	N 32 15 56.78	W 103 44 28.55
	12432.00	89.75	176.48	11811.43	867.88	-857.56	214.73	2.61	460831.15	724347.87	N 32 15 55.84	W 103 44 28.49
	12527.00	88.62	176.83	11812.78	962.85	-952.39	220.27	1.25	460736.32	724353.42	N 32 15 54.90	W 103 44 28.43
	12717.00	89.96	178.18	11815.13	1152.81	-1142.18	228.54	1.00	460546.54	724361.68	N 32 15 53.03	W 103 44 28.34
	12907.00	88.10	170.15	11818.35	1342.40	-1331.01	247.83	4.34	460357.72	724380.98	N 32 15 51.16	W 103 44 28.13
	12932.00	88.48	170.27	11819.10	1367.22	-1355.64	252.08	1.59	460333.10	724385.23	N 32 15 50.91	W 103 44 28.08
	13001.00	90.99	171.85	11819.42	1435.85	-1423.79	262.80	4.30	460264.95	724395.95	N 32 15 50.24	W 103 44 27.96
Final Survey	13018.00	91.00	172.45	11819.12	1452.79	-1440.63	265.12	3.53	460248.11	724398.27	N 32 15 50.07	W 103 44 27.94
Proj. to Bit	13071.00	91.00	172.45	11818.20	1505.62	-1493.16	272.08	0.00	460195.58	724405.23	N 32 15 49.55	W 103 44 27.86

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	NAL_NSG+MSHOT-Depth Only	Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'
	1	26.500	26.500	Act Stns	30.000	NAL_NSG+MSHOT-Depth Only	Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'
	1	26.500	838.310	Act Stns	30.000	NAL_NSG+MSHOT	Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'
	1	838.310	10530.000	Act Stns	30.000	NAL_MWD_IFR1+MS	Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'
	1	10530.000	11198.000	Act Stns	30.000	NAL_MWD_PLUS_0.5_DEG	Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'
	1	11198.000	13071.000	Act Stns	30.000	NAL_MWD_IFR1+MS	Original Hole / Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'

...Cal-Mon 35 Federal 176H\Original Hole\Oxy Cal-Mon 35 Federal 176H Gyro + MWD 0-13071'

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		7. If Unit or CA/Agreement, Name and/or No.
2. Name of Operator OXY USA INCORPORATED		8. Well Name and No. CAL-MON 35 FEDERAL 176H
Contact: SARAH CHAPMAN E-Mail: SARAH_CHAPMAN@OXY.COM		9. API Well No. 30-015-45525-00-X1
3a. Address 5 GREENWAY PLAZA SUITE 110 HOUSTON, TX 77046-0521	3b. Phone No. (include area code) Ph: 713-350-4997	10. Field and Pool or Exploratory Area WILDCAT-WOLFCAMP
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 35 T23S R31E NENE 110FNL 580FEL 32.267872 N Lat, 103.741928 W Lon		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Spud 14-3/4" hole 12/30/18, drill to 858'. RIH & set 10-3/4" 45.5# J-55 BTC csg @ 848', pump 25bbl FWS then cmt w/ 850sxs (206bbl) class C w/ additives 14.8ppg 1.35 yield. Full returns throughout job, circ 454sxs (110 ccl) cmt to surface. WOC 12/31/18 RD & rig release. David Mervine was notified of intent to spud, cmt and run csg prior to job.

RECEIVED

APR 05 2019

DISTRICT II-ARTESIA O.C.D.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #449626 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 01/11/2019 (19PP0726SE)	
Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 01/08/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED	JONATHON SHEPARD Title PETROLEUM ENGINEER	Date 02/01/2019
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Revisions to Operator-Submitted EC Data for Sundry Notice #449626

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	DRG SR	DRG SR
Lease:	NMNM19199	NMNM19199
Agreement:		
Operator:	OXY USA INC P.O. BOX 4294 HOUSTON, TX 77210 Ph: 713-350-4997	OXY USA INCORPORATED 5 GREENWAY PLAZA SUITE 110 HOUSTON, TX 77046-0521 Ph: 713.350.4816
Admin Contact:	SARAH CHAPMAN REGULATORY SPECIALIST E-Mail: SARAH_CHAPMAN@OXY.COM Cell: 281-642-5503 Ph: 713-350-4997	SARAH CHAPMAN REGULATORY SPECIALIST E-Mail: SARAH_CHAPMAN@OXY.COM Cell: 281-642-5503 Ph: 713-350-4997
Tech Contact:	DAVID STEWART SR REGULATORY ADVISOR E-Mail: DAVID_STEWART@OXY.COM Ph: 432-685-5717	DAVID STEWART REGULATORY ADVISOR E-Mail: david_stewart@oxy.com Ph: 432.685.5717
Location:		
State:	NM	NM
County:	EDDY	EDDY
Field/Pool:	WILDCAT WOLFCAMP	WILDCAT-WOLFCAMP
Well/Facility:	CAL MON 35 FEDERAL 176H Sec 35 T23S R31E Mer NMP NENE 110FNL 580FEL 32.267872 N Lat, 103.741925 W Lon	CAL-MON 35 FEDERAL 176H Sec 35 T23S R31E NENE 110FNL 580FEL 32.267872 N Lat, 103.741928 W Lon

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. CAL-MON 35 FEDERAL 176H
2. Name of Operator OXY USA INCORPORATED		9. API Well No. 30-015-45525-00-X1
3a. Address 5 GREENWAY PLAZA SUITE 110 HOUSTON, TX 77046-0521	3b. Phone No. (include area code) Ph: 713-350-4997	10. Field and Pool or Exploratory Area WILDCAT-WOLFCAMP
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 35 T23S R31E NENE 110FNL 580FEL 32.267872 N Lat, 103.741928 W Lon		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Drilling Operations
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

1/23/19 RU BOP, test to 5000# high 250# low, good test. Test 10-3/4" csg to 1500# for 30 minutes, good test. RIH & drill new formation to 878', perform FIT test EMW=10.0ppg 1000#, good test. Drill 9-7/8" hole to 10625'. RIH & set 7-5/8" 26.4# L80 BTC csg @ 10609', DVT @ 4979', ACP @ 4985', pump 40bbl tuned spacer then cmt w/ 490sxs (257bbl) class H w/ additives 10.2ppg 2.95 yield followed by 180sxs (46bbl) class H w/ additives 13.2ppg 1.44 yield, no returns. Inflate ACP to 2000#, open DVT, circ thru DVT, 20sxs cmt to surface. Pump 2nd stage w/ 1540sxs (513bbl) class H w/ additives 12.9ppg 1.87 yield, full returns throughout job, circ 150sxs cmt to surface. BLM on site to witness cmt job, WOC.

Test 7-5/8" csg to 3500# for 30 minutes, good test. RIH & drill new formation to 10635' perform FIT test EMW=10.4ppg 2150#, good test, Drill 6-3/4" hole to 16725'/11758'V. RIH & set 4-1/2" 13.5# P-110 DQX from 16715'-11785', crossover at 11785' and run 5-1/2" P-110 SF TORQ from 11785'-surface,

14. I hereby certify that the foregoing is true and correct. Electronic Submission #455592 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 02/22/2019 (19PP1123SE)	
Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 02/22/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED	JONATHON SHEPARD Title PETROLEUM ENGINEER	Date 02/27/2019
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #455592 that would not fit on the form

32. Additional remarks, continued

pump 20bbl tunes spacer then cmt w/ 900sxs (218bbl) class C w/ additives 13.5ppg 1.36 yield. Full returns throughout job, eat TOC @ 10105'. 2/15/19 RD, install nightcap & rig release.

Revisions to Operator-Submitted EC Data for Sundry Notice #455592

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	DRG SR	DRG SR
Lease:	NMNM19199	NMNM19199
Agreement:		
Operator:	OXY USA INC. P.O. BOX 4294 HOUSTON, TX 77210 Ph: 713-350-4997	OXY USA INCORPORATED 5 GREENWAY PLAZA SUITE 110 HOUSTON, TX 77046-0521 Ph: 713.350.4816
Admin Contact:	SARAH CHAPMAN REGULATORY SPECIALIST E-Mail: SARAH_CHAPMAN@OXY.COM Cell: 281-642-5503 Ph: 713-350-4997	SARAH CHAPMAN REGULATORY SPECIALIST E-Mail: SARAH_CHAPMAN@OXY.COM Cell: 281-642-5503 Ph: 713-350-4997
Tech Contact:	DAVID STEWART SR. REGULATORY ADVISOR E-Mail: DAVID_STEWART@OXY.COM Ph: 432-685-5717	DAVID STEWART REGULATORY ADVISOR E-Mail: david_stewart@oxy.com Ph: 432.685.5717
Location:		
State:	NM	NM
County:	EDDY	EDDY
Field/Pool:	WILDCAT WOLFCAMP	WILDCAT-WOLFCAMP
Well/Facility:	CAL-MON 35 FEDERAL 176H Sec 35 T23S R31E NENE 110FNL 580FEL 32.267872 N Lat, 103.741928 W Lon	CAL-MON 35 FEDERAL 176H Sec 35 T23S R31E NENE 110FNL 580FEL 32.267872 N Lat, 103.741928 W Lon