

30-015-44333

Schlumberger

Oxy Patton MDP1 18 Federal 3H Gyro+MWD 0-14,784' Survey Geodetic Report (Def Survey)



Report Date: November 07, 2017 - 02:14 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Patton MDP1 18 Federal 3H / Oxy Patton MDP1 18 Federal 3H
 Well: Oxy Patton MDP1 18 Federal 3H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Patton MDP1 18 Federal 3H Gyro+MWD 0-14,784'
 Survey Date: October 21, 2017
 Tort / AHD / DDI / ERD Ratio: 267.773' / 5673.991 ft / 6.351 / 0.567
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 13' 26.84840", W 103° 49' 9.95718"
 Location Grid N/E Y/X: N 445650.360 NUS, E 700252.810 NUS
 CRS Grid Convergence Angle: 0.2740°
 Grid Scale Factor: 0.99993801
 Version / Patch: 2.10.565.0
 Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 173.102° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3560.500 ft above MSL
 Seabed / Ground Elevation: 3534.000 ft above MSL
 Magnetic Declination: 6.963°
 Total Gravity Field Strength: 998.4276mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48081.366 nT
 Magnetic Dip Angle: 59.992°
 Declination Date: October 21, 2017
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.2740°
 Total Corr Mag North->Grid: 6.6887°
 North: 0.2740°
 Local Coord Referenced To: Well Head

Comments	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(NUS)	(EUS)	(N/S ° ' ")	(E/W ° ' ")
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	445650.36	700252.81	N 32° 13' 26.85" W 103° 49' 9.96"	
	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	445650.36	700252.81	N 32° 13' 26.85" W 103° 49' 9.96"	
	94.73	0.65	340.03	94.73	-0.38	0.36	-0.13	0.95	445650.72	700252.68	N 32° 13' 26.85" W 103° 49' 9.96"	
	186.53	0.54	347.64	186.52	-1.31	1.28	-0.40	0.15	445651.64	700252.41	N 32° 13' 26.86" W 103° 49' 9.96"	
	277.88	0.21	20.35	277.87	-1.89	1.85	-0.44	0.42	445652.21	700252.37	N 32° 13' 26.87" W 103° 49' 9.96"	
	372.41	0.42	119.44	372.40	-1.84	1.85	-0.07	0.53	445652.21	700252.37	N 32° 13' 26.87" W 103° 49' 9.96"	
	468.08	0.57	136.03	468.07	-1.27	1.34	0.55	0.22	445651.70	700253.36	N 32° 13' 26.86" W 103° 49' 9.95"	
	560.73	0.63	141.76	560.71	-0.45	0.59	1.20	0.09	445650.95	700254.01	N 32° 13' 26.85" W 103° 49' 9.94"	
Last Gyro	624.27	0.70	151.35	624.25	0.21	-0.02	1.80	0.21	445650.34	700254.41	N 32° 13' 26.85" W 103° 49' 9.94"	
	722.00	0.35	185.44	721.97	1.06	-0.84	1.86	0.47	445649.52	700254.67	N 32° 13' 26.84" W 103° 49' 9.94"	
	799.00	0.06	174.33	798.97	1.33	-1.12	1.84	0.38	445649.24	700254.65	N 32° 13' 26.84" W 103° 49' 9.94"	
	960.00	0.00	266.32	959.97	1.41	-1.20	1.85	0.04	445649.16	700254.66	N 32° 13' 26.84" W 103° 49' 9.94"	
	1050.00	0.00	256.11	1049.97	1.41	-1.20	1.85	0.00	445649.16	700254.66	N 32° 13' 26.84" W 103° 49' 9.94"	
	1140.00	0.06	122.54	1139.97	1.44	-1.23	1.89	0.07	445649.13	700254.70	N 32° 13' 26.84" W 103° 49' 9.94"	
	1231.00	0.00	341.19	1230.97	1.47	-1.25	1.93	0.07	445649.11	700254.74	N 32° 13' 26.84" W 103° 49' 9.93"	
	1410.00	0.06	188.56	1409.97	1.56	-1.34	1.91	0.03	445649.02	700254.72	N 32° 13' 26.84" W 103° 49' 9.93"	
	1512.00	0.13	293.86	1511.97	1.58	-1.35	1.80	0.15	445649.01	700254.61	N 32° 13' 26.83" W 103° 49' 9.94"	
	1627.00	0.11	323.23	1626.97	1.39	-1.21	1.61	0.06	445649.15	700254.42	N 32° 13' 26.84" W 103° 49' 9.94"	
	1817.00	0.28	47.21	1816.97	0.96	-0.75	1.85	0.15	445649.61	700254.66	N 32° 13' 26.84" W 103° 49' 9.94"	
	1912.00	0.38	71.37	1911.97	0.76	-0.49	2.31	0.18	445649.87	700255.12	N 32° 13' 26.84" W 103° 49' 9.93"	
	2006.00	0.43	87.37	2005.97	0.73	-0.37	2.96	0.13	445649.99	700255.77	N 32° 13' 26.84" W 103° 49' 9.92"	
	2195.00	0.36	104.59	2194.96	1.00	-0.49	4.25	0.07	445649.87	700257.05	N 32° 13' 26.84" W 103° 49' 9.91"	
	2290.00	0.25	138.71	2289.96	1.28	-0.72	4.67	0.22	445649.64	700257.48	N 32° 13' 26.84" W 103° 49' 9.90"	
	2384.00	0.20	136.08	2383.96	1.58	-0.99	4.92	0.05	445649.37	700257.73	N 32° 13' 26.84" W 103° 49' 9.90"	
	2479.00	0.28	104.88	2478.96	1.80	-1.17	5.26	0.16	445649.19	700258.07	N 32° 13' 26.84" W 103° 49' 9.90"	
	2573.00	0.29	94.83	2572.96	1.93	-1.25	5.72	0.05	445649.11	700258.53	N 32° 13' 26.84" W 103° 49' 9.89"	
	2668.00	0.45	76.66	2667.96	1.94	-1.19	6.32	0.21	445649.17	700259.13	N 32° 13' 26.84" W 103° 49' 9.88"	
	2762.00	0.46	74.00	2761.95	1.64	-1.00	7.04	0.02	445649.36	700259.85	N 32° 13' 26.84" W 103° 49' 9.88"	
	2857.00	0.45	72.65	2856.95	1.71	-0.78	7.77	0.02	445649.58	700260.57	N 32° 13' 26.84" W 103° 49' 9.87"	
	2951.00	0.34	82.42	2950.95	1.64	-0.63	8.39	0.14	445649.73	700261.20	N 32° 13' 26.84" W 103° 49' 9.86"	
	3046.00	0.36	91.58	3045.95	1.68	-0.60	8.97	0.06	445649.76	700261.78	N 32° 13' 26.84" W 103° 49' 9.85"	
	3141.00	0.40	90.86	3140.95	1.77	-0.62	9.60	0.04	445649.74	700262.41	N 32° 13' 26.84" W 103° 49' 9.85"	
	3235.00	0.48	74.60	3234.94	1.75	-0.52	10.31	0.16	445649.84	700263.12	N 32° 13' 26.84" W 103° 49' 9.84"	
	3424.00	0.86	47.86	3423.93	0.99	0.44	11.90	0.18	445650.80	700264.71	N 32° 13' 26.85" W 103° 49' 9.82"	
	3519.00	0.68	59.28	3518.92	0.37	1.19	12.94	0.25	445651.55	700265.74	N 32° 13' 26.86" W 103° 49' 9.79"	
	3613.00	1.08	92.95	3612.91	0.24	1.50	14.43	0.64	445651.86	700267.24	N 32° 13' 26.86" W 103° 49' 9.77"	
	3708.00	1.46	106.54	3707.89	0.88	1.11	16.48	0.51	445651.47	700269.29	N 32° 13' 26.86" W 103° 49' 9.77"	
	3803.00	1.40	111.83	3802.86	1.92	0.34	18.72	0.15	445650.70	700271.53	N 32° 13' 26.85" W 103° 49' 9.74"	
	3897.00	1.68	130.98	3896.83	3.49	-1.00	20.62	0.62	445649.36	700273.63	N 32° 13' 26.84" W 103° 49' 9.71"	
	3992.00	2.14	148.51	3991.77	6.14	-3.42	22.80	0.78	445649.64	700275.61	N 32° 13' 26.81" W 103° 49' 9.69"	
	4181.00	2.54	150.41	4180.62	13.21	-10.07	26.71	0.22	445640.29	700279.52	N 32° 13' 26.75" W 103° 49' 9.65"	
	4240.00	2.41	150.46	4239.56	15.56	-12.29	27.97	0.22	445638.07	700280.78	N 32° 13' 26.73" W 103° 49' 9.63"	
	4440.00	0.34	148.91	4439.49	19.98	-16.46	30.35	1.04	445633.91	700283.16	N 32° 13' 26.68" W 103° 49' 9.60"	
	4535.00	0.08	200.20	4534.49	20.30	-16.76	30.47	0.31	445633.60	700283.28	N 32° 13' 26.68" W 103° 49' 9.60"	
	4629.00	0.16	309.81	4628.49	20.26	-16.74	30.35	0.21	445633.62	700283.16	N 32° 13' 26.68" W 103° 49' 9.60"	
	4724.00	0.16	260.50	4723.49	20.17	-16.67	30.12	0.14	445633.69	700282.92	N 32° 13' 26.68" W 103° 49' 9.61"	
	4819.00	0.13	261.36	4818.49	20.18	-16.71	29.88	0.03	445633.65	700282.69	N 32° 13' 26.68" W 103° 49' 9.61"	
	4913.00	0.13	301.00	4912.49	20.12	-16.67	29.68	0.09	445633.69	700282.49	N 32° 13' 26.68" W 103° 49' 9.61"	
5008.00	0.08	234.36	5007.49	20.08	-16.66	29.54	0.13	445633.71	700282.34	N 32° 13' 26.68" W 103° 49' 9.61"		
5102.00	0.13	292.89	5101.49	20.06	-16.65	29.38	0.12	445633.71	700282.19	N 32° 13' 26.68" W 103° 49' 9.62"		
5196.00	0.11	313.04	5195.49	19.94	-16.55	29.22	0.05	445633.81	700282.03	N 32° 13' 26.68" W 103° 49' 9.62"		
5291.00	0.13	250.91	5290.49	19.89	-16.52	29.05	0.13	445633.84	700281.86	N 32° 13' 26.68" W 103° 49' 9.62"		
5385.00	0.08	272.95	5384.49	19.90	-16.55	28.89	0.07	445633.81	700281.69	N 32° 13' 26.68" W 103° 49' 9.62"		
5480.00	0.06	155.54	5479.49	19.96	-16.61	28.85	0.14	445633.75	700281.66	N 32° 13' 26.68" W 103° 49' 9.62"		
5575.00	1.63	311.34	5574.48	19.01	-15.78	27.86	1.79	445634.58	700280.67	N 32° 13' 26.69" W 103° 49' 9.63"		
5669.00	4.24	310.91	5668.35	15.44	-12.62	24.23	2.78	445637.74	700277.04	N 32° 13' 26.72" W 103° 49' 9.68"		
5764.00	6.73	308.50	5762.90	8.87	-6.85	17.22	2.63	445643.51	700270.03	N 32° 13' 26.78" W 103° 49' 9.76"		
5859.00	5.28	308.00	5857.38	1.82	-0.70	9.42	1.53	445649.66	700262.23	N 32° 13' 26.84" W 103° 49' 9.85"		
5954.00	3.00	313.74	5952.13	-3.19	3.71	4.18	2.44	445654.07	700256.99	N 32° 13' 26.88" W 103° 49' 9.91"		
6048.00	1.88	10.65	6046.06	-6.40	8.77	2.65	2.67	445657.13	700255.46	N 32° 13' 26.92" W 103° 49' 9.93"		
6143.00	4.38	70.45	6140.93	-8.52	9.35	6.33	4.02	445659.71	700258.14	N 32° 13' 26.94" W 103° 49' 9.98"		
6237.00	9.16	80.22	6234.25	-9.69	11.83	17.09	5.21	445662.19	700260.90	N 32° 13' 26.96" W 103° 49' 9.76"		
6332.00	13.94	85.71	6327.30	-9.55	13.97	35.97	5.16	445664.33	700268.77	N 32° 13' 26.98" W 103° 49' 9.54"		
6425.00	17.37	83.69	6416.84	-8.89	16.33	60.84	3.73	445668.69	700313.75	N 32° 13' 27.01" W 103° 49' 9.25"		
6522.00	19.78	81.38	6508.78	-9.24	20.38	91.57	2.60	445670.74	700344.37	N 32° 13' 27.05" W 103° 49' 8.89"		
6616.00	20.86	76.62	6596.93	-11.03	26.07	123.70	1.54	445676.43	700376.50	N 32° 13' 27.10" W 103° 49' 8.52"		
6711.00	20.73	72.64	6585.76	-15.40	34.43	156.33	2.24	445684.78	700409.13	N 32° 13' 27.18" W 103° 49' 8.14"		
6806.00	20.52	66.80	6574.68	-23.13	46.00	187.69	2.18	445696.36	700440.49	N 32° 13' 27.29" W 103° 49' 7.77"		
6900.00	20.60	61.44	6562.70	-33.86	60.40	217.36	2.03	445710.76	700470.15	N 32° 13' 27.44" W 103° 49' 7.42"		
6995.00	18.81	59.28	6552.13	-46.21	76.22	245.21	2.00	445726.57	700498.00	N 32° 13' 27.59" W 103° 49' 7.10"		
7090.00	16.02	56.46	7042.40	-58.81	91.94	270.29	1.64	445742.30	700523.09	N 32° 13' 27.75" W 103° 49' 6.81"		
7185.00	16.02	53.48	7133.36	-71.71	107.64	292.75	1.82	445758.00	700545.09	N 32° 13' 27.90" W 103° 49' 6.54"		
7278.00	14.96	59.88	7223.95	-82.90	121.45	313.67	2.14	445771.80	700566.46	N 32° 13' 28.04" W 103° 49' 6.30"		
7374.00	13.72	68.68	7316.00	-90.54	131.70	334.77	2.64	445782.05	700587.58	N 32° 13' 28.14" W 103° 49' 6.05"		
7469.00	12.82	77.46	7408.47	-94.39	138.09	355.56	2.32	445788.44				

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 ° ' '')
	7946.00	7.91	128.41	7781.20	-76.09	127.52	420.53	2.56	445777.87	700673.32	N 32 13 28.09 W 103 49 5.05	
	7942.00	6.73	145.35	7874.44	-66.62	118.97	428.73	2.60	445769.32	700681.52	N 32 13 28.01 W 103 49 4.96	
	8007.00	5.80	133.91	7968.87	-57.97	111.06	435.36	1.83	445761.41	700688.14	N 32 13 27.93 W 103 49 4.88	
	8132.00	5.22	117.06	8063.44	-51.83	105.76	442.66	1.80	445756.12	700695.45	N 32 13 27.87 W 103 49 4.80	
	8226.00	4.06	92.87	8157.14	-48.88	103.65	449.80	2.39	445754.01	700702.58	N 32 13 27.85 W 103 49 4.72	
	8415.00	2.59	54.35	8345.84	-49.80	105.81	459.95	1.37	445756.16	700712.73	N 32 13 27.87 W 103 49 4.60	
	8510.00	2.81	57.32	8440.73	-51.84	108.31	463.65	0.27	445756.67	700716.43	N 32 13 27.90 W 103 49 4.55	
	8604.00	3.47	82.78	8534.60	-52.86	109.92	468.42	1.62	445760.27	700721.20	N 32 13 27.91 W 103 49 4.50	
	8699.00	4.44	107.29	8629.38	-51.37	109.19	474.78	2.03	445759.54	700727.58	N 32 13 27.91 W 103 49 4.42	
	8793.00	4.61	116.35	8723.08	-47.81	106.43	481.64	0.78	445756.78	700734.42	N 32 13 27.88 W 103 49 4.34	
	8888.00	4.22	101.76	8817.80	-44.60	104.02	488.48	1.25	445754.37	700741.26	N 32 13 27.85 W 103 49 4.27	
	8983.00	2.71	79.62	8912.63	-43.62	103.71	494.11	2.10	445754.07	700746.89	N 32 13 27.85 W 103 49 4.20	
	9078.00	2.69	74.66	9007.53	-44.08	104.71	498.47	0.25	445755.06	700751.25	N 32 13 27.86 W 103 49 4.15	
	9172.00	1.71	91.06	9101.46	-44.21	105.26	502.00	1.23	445755.62	700754.78	N 32 13 27.87 W 103 49 4.11	
	9267.00	2.87	108.43	9196.38	-43.00	104.49	505.68	1.41	445754.84	700758.45	N 32 13 27.86 W 103 49 4.06	
	9362.00	4.96	117.21	9291.15	-39.68	101.86	511.59	2.28	445752.21	700764.36	N 32 13 27.83 W 103 49 4.00	
	9461.00	7.92	124.11	9389.52	-32.80	96.07	521.04	3.09	445746.43	700773.82	N 32 13 27.77 W 103 49 3.89	
	9556.00	18.25	184.06	9482.27	-13.78	77.45	525.44	16.62	445727.80	700778.21	N 32 13 27.59 W 103 49 3.84	
	9650.00	22.97	150.27	9570.53	17.70	46.71	533.52	13.39	445697.07	700786.30	N 32 13 27.29 W 103 49 3.74	
	9745.00	34.02	150.90	9653.89	59.52	7.27	555.71	11.64	445657.63	700808.48	N 32 13 26.89 W 103 49 3.49	
	9840.00	40.89	165.88	9729.42	115.16	-46.28	576.29	11.87	445604.09	700829.06	N 32 13 26.36 W 103 49 3.25	
	9934.00	50.16	175.47	9795.28	181.96	-112.31	586.68	12.24	445538.05	700839.45	N 32 13 25.71 W 103 49 3.13	
	10029.00	56.64	178.89	9851.90	257.97	-168.43	590.33	7.41	445461.94	700843.10	N 32 13 24.96 W 103 49 3.10	
	10124.00	61.23	180.89	9900.92	338.74	-269.78	590.45	5.16	445380.60	700843.22	N 32 13 24.15 W 103 49 3.10	
	10218.00	67.94	180.05	9941.24	422.90	-354.63	589.77	7.18	445295.75	700842.55	N 32 13 23.31 W 103 49 3.11	
	10313.00	78.08	180.63	9968.96	512.91	-445.36	589.22	10.69	445205.02	700841.99	N 32 13 22.41 W 103 49 3.12	
	10408.00	88.11	180.63	9980.37	606.29	-539.55	588.19	10.56	445110.85	700840.96	N 32 13 21.48 W 103 49 3.14	
	10479.00	89.35	182.31	9981.94	676.51	-610.50	586.37	2.94	445039.90	700839.14	N 32 13 20.78 W 103 49 3.17	
	10554.00	88.18	183.64	9983.56	750.38	-685.38	582.47	2.36	444965.02	700835.25	N 32 13 20.04 W 103 49 3.22	
	10648.00	88.59	184.43	9986.20	842.63	-779.11	575.86	0.95	444871.30	700828.64	N 32 13 19.11 W 103 49 3.30	
	10743.00	88.56	184.72	9988.57	935.71	-873.78	568.29	0.31	444776.64	700821.06	N 32 13 18.18 W 103 49 3.39	
	10837.00	88.59	185.07	9990.90	1027.69	-967.41	560.27	0.37	444683.01	700813.04	N 32 13 17.25 W 103 49 3.49	
	10932.00	88.55	183.97	9993.28	1120.78	-1062.08	552.78	1.16	444588.35	700805.56	N 32 13 16.31 W 103 49 3.58	
	11026.00	88.62	182.79	9995.60	1213.25	-1155.89	547.24	1.26	444494.55	700800.02	N 32 13 15.38 W 103 49 3.65	
	11121.00	88.66	182.29	9997.85	1306.93	-1250.77	543.04	0.53	444399.67	700795.81	N 32 13 14.45 W 103 49 3.71	
	11215.00	88.62	181.01	10000.08	1399.86	-1344.70	540.33	1.36	444305.75	700793.11	N 32 13 13.52 W 103 49 3.74	
	11310.00	88.42	178.81	10002.54	1494.15	-1439.66	540.48	2.32	444210.79	700793.25	N 32 13 12.58 W 103 49 3.75	
	11404.00	88.62	177.44	10004.96	1587.76	-1533.58	543.55	1.47	444116.88	700796.33	N 32 13 11.65 W 103 49 3.72	
	11499.00	89.35	176.51	10006.65	1682.53	-1628.43	548.57	1.24	444022.04	700801.34	N 32 13 10.71 W 103 49 3.66	
	11593.00	88.58	176.59	10008.36	1776.34	-1722.24	554.22	0.84	443928.23	700807.00	N 32 13 9.78 W 103 49 3.60	
	11687.00	89.83	178.19	10008.78	1869.91	-1816.18	556.82	4.42	443834.29	700809.59	N 32 13 8.85 W 103 49 3.58	
	11782.00	89.38	178.92	10009.43	2057.94	-2005.13	560.49	0.91	443739.32	700810.90	N 32 13 7.91 W 103 49 3.57	
	11876.00	88.25	178.52	10011.39	2152.46	-2100.09	562.61	1.26	443645.35	700813.27	N 32 13 6.98 W 103 49 3.54	
	11971.00	91.93	178.19	10011.24	2246.05	-2194.03	565.31	3.93	443556.47	700815.39	N 32 13 6.04 W 103 49 3.53	
	12065.00	89.35	178.28	10010.18	2340.65	-2288.97	568.24	2.72	443461.53	700821.01	N 32 13 5.17 W 103 49 3.47	
	12160.00	90.00	179.39	10011.25	2435.27	-2377.93	572.08	0.68	443372.59	700824.85	N 32 13 4.30 W 103 49 3.44	
	12254.00	90.69	178.90	10010.69	2529.17	-2471.92	573.48	0.90	443287.61	700826.26	N 32 13 3.47 W 103 49 3.43	
	12348.00	90.62	178.89	10009.60	2616.68	-2566.89	575.31	0.07	443203.64	700828.09	N 32 13 2.64 W 103 49 3.41	
	12443.00	89.48	178.82	10008.52	2711.20	-2661.87	577.21	1.20	443118.67	700829.99	N 32 12 59.49 W 103 49 3.39	
	12538.00	90.48	179.14	10008.55	2805.70	-2756.85	578.90	1.11	443033.69	700831.68	N 32 12 58.55 W 103 49 3.38	
	12633.00	90.69	178.27	10008.59	2899.25	-2851.82	581.03	0.95	442949.72	700833.80	N 32 12 57.62 W 103 49 3.36	
	12728.00	90.07	177.52	10007.96	3093.91	-3045.76	584.52	1.02	442864.80	700837.29	N 32 12 56.68 W 103 49 3.32	
	12822.00	91.58	177.58	10006.61	3187.62	-3139.66	588.54	1.61	442780.90	700841.31	N 32 12 55.75 W 103 49 3.28	
	12917.00	92.06	176.19	10003.59	3282.36	-3234.47	593.69	1.55	442696.10	700846.47	N 32 12 54.82 W 103 49 3.23	
	13011.00	91.37	174.92	10000.78	3376.23	-3328.14	600.98	1.54	442611.23	700853.75	N 32 12 53.89 W 103 49 3.15	
	13106.00	91.00	174.79	9998.81	3471.16	-3422.74	609.49	0.41	442527.84	700862.27	N 32 12 52.95 W 103 49 3.05	
	13200.00	89.07	176.45	9996.76	3566.06	-3517.45	616.75	2.68	442443.13	700869.52	N 32 12 52.01 W 103 49 2.97	
	13295.00	89.76	179.25	9999.72	3659.73	-3611.37	620.27	3.07	442358.25	700873.04	N 32 12 51.08 W 103 49 2.94	
	13390.00	88.04	180.48	10001.54	3754.04	-3706.35	620.50	2.23	442273.45	700873.27	N 32 12 50.14 W 103 49 2.94	
	13484.00	86.83	181.83	10005.79	3848.01	-3801.23	618.59	1.91	442189.37	700871.36	N 32 12 49.21 W 103 49 2.97	
	13579.00	88.73	182.49	10009.47	3941.75	-3896.09	615.01	2.12	442104.52	700867.78	N 32 12 48.27 W 103 49 3.02	
	13674.00	91.93	183.80	10008.93	4034.29	-3989.93	609.85	3.68	442020.69	700862.62	N 32 12 47.34 W 103 49 3.08	
	13769.00	89.66	182.71	10007.61	4127.79	-4084.76	604.46	2.65	441936.86	700857.23	N 32 12 46.40 W 103 49 3.15	
	13863.00	89.55	182.43	10008.27	4221.49	-4179.66	600.20	0.32	441852.97	700852.97	N 32 12 45.46 W 103 49 3.20	
	13958.00	89.59	183.08	10008.97	4314.16	-4273.55	595.68	0.69	441769.08	700848.45	N 32 12 44.53 W 103 49 3.26	
	14053.00	89.76	183.15	10008.51	4407.71	-4368.41	590.52	0.19	441685.23	700843.29	N 32 12 43.59 W 103 49 3.33	
	14147.00	90.07	182.66	10009.79	4501.95	-4463.12	585.94	0.31	441601.33	700838.71	N 32 12 42.73 W 103 49 3.40	
	14242.00	89.52	180.39	10010.13	4596.93	-4557.16	579.44	2.48	441517.43	700833.21	N 32 12 41.80 W 103 49 3.48	
	14337.00	90.41	179.19	10010.18	4692.29	-4651.12	573.78	1.59	441433.56	700828.76	N 32 12 40.87 W 103 49 3.48	
	14431.00	90.07	177.02	10009.65	4787.04	-4745.12	568.98	1.73	441349.63	700824.31	N 32 12 39.94 W 103 49 3.44	
	14526.00	90.07	177.02	10009.61	4881.70	-4839.99	564.96	0.00	441265.68	700819.86	N 32 12 39.01 W 103 49 3.44	
	14621.00	90.07	177.02	10009.57	4976.36	-4934.74	560.94	0.00	441181.73	700815.41	N 32 12 38.08 W 103 49 3.44	
	14716.00	90.07	177.02	10009.53	5071.01	-5029.49	556.92	0.00	441097.78	700810.96	N 32 12 37.15 W 103 49 3.44	
	14811.00	90.07	177.02	10009.49	5165.66	-5124.24	552.90	0.00	441013.83	700806.51	N 32 12 36.22 W 103 49 3.44	
	14906.00	90.07	177.02	10009.45	5260.31	-5218.99	548.88	0.00	440929.88	700802.06	N 32 12 35.29 W 103 49 3.44	
	15001.00	90.07	177.02	10009.41	5354.96	-5313.74	544.86	0.00	440845.93	700797.61	N 32 12 34.36 W 103 49 3.44	
	15096.00	90.07	177.02	10009.37	5449.61	-540						

Schlumberger**OXY**

Borehole:

Well:

Field:

Structure:

Original Borehole

Oxy Patton MDP1 18 Federal 3H

NM Eddy County (NAD 83)

Oxy Patton MDP1 18 Federal 3H

Gravity & Magnetic Parameters

Model: MDM 2017 Dip: 88.892° Date: 21-Oct-2017
 MagDec: 6.863° PB: 48061.266m Gravity PB: 986.428mGal (9.80665 m/s²)

Borehole Location

NAD83 New Mexico State Plane, Eastern Zone, US Feet
 East: N 22.15 38.86 Northings: 448860.268US
 Lat: W 103.46 9.36 Eastings: 700563.211US
 Grid Conv: 0.274° Scale Factor: 0.99993601

Mnemonic

Oxy Patton MDP1 18 Federal 3H
 Oxy Patton MDP1 18 Federal 3H REV6 PM 27OCT17
 RKB=26.5(3660.28 above MSL)

Critical Point

Fraser 609.02
 Salado 965.03
 Castle 2961.05
 Delaware 4303.48
 Bell Canyon 4319.49
 JCP 4331.49
 Cherry Canyon 5087.51
 Tie in point, Build to 12" ING 5859.00
 Brushy Canyon 6522.74
 Hold 6647.61
 Drop to 7" ING 6957.33
 Bone Spring 8116.79
 Hold 8312.58
 KOP, Build and turn 10" DLS 9476.50
 Build and turn 10" DLS 9929.21
 Landing Point 10977.12
 Patton MDP1 18 Federal 3H PBHL 14859.33
 Workcamp NaN

MD

Fraser 609.02
 Salado 965.03
 Castle 2961.05
 Delaware 4303.48
 Bell Canyon 4319.49
 JCP 4331.49
 Cherry Canyon 5087.51
 Tie in point, Build to 12" ING 5859.00
 Brushy Canyon 6522.74
 Hold 6647.61
 Drop to 7" ING 6957.33
 Bone Spring 8116.79
 Hold 8312.58
 KOP, Build and turn 10" DLS 9476.50
 Build and turn 10" DLS 9929.21
 Landing Point 10977.12
 Patton MDP1 18 Federal 3H PBHL 14859.33
 Workcamp NaN

MCL

Fraser 609.02
 Salado 965.03
 Castle 2961.05
 Delaware 4303.48
 Bell Canyon 4319.49
 JCP 4331.49
 Cherry Canyon 5087.51
 Tie in point, Build to 12" ING 5859.00
 Brushy Canyon 6522.74
 Hold 6647.61
 Drop to 7" ING 6957.33
 Bone Spring 8116.79
 Hold 8312.58
 KOP, Build and turn 10" DLS 9476.50
 Build and turn 10" DLS 9929.21
 Landing Point 10977.12
 Patton MDP1 18 Federal 3H PBHL 14859.33
 Workcamp NaN

AZIM

Fraser 152.06
 Salado 256.11
 Castle 72.97
 Delaware 150.36
 Bell Canyon 150.33
 JCP 150.30
 Cherry Canyon 258.91
 Tie in point, Build to 12" ING 308.00
 Brushy Canyon 71.48
 Hold 75.50
 Drop to 7" ING 75.50
 Bone Spring 81.04
 Hold 90.00
 KOP, Build and turn 10" DLS 90.00
 Build and turn 10" DLS 176.25
 Landing Point 179.77
 Patton MDP1 18 Federal 3H PBHL 179.77
 Workcamp 11476.00

TVD

Fraser 609.00
 Salado 965.00
 Castle 2961.00
 Delaware 4303.00
 Bell Canyon 4319.00
 JCP 4331.00
 Cherry Canyon 5087.00
 Tie in point, Build to 12" ING 5857.38
 Brushy Canyon 6518.00
 Hold 6640.65
 Drop to 7" ING 6900.00
 Bone Spring 8139.00
 Hold 8271.43
 KOP, Build and turn 10" DLS 9428.68
 Build and turn 10" DLS 9831.74
 Landing Point 10000.00
 Patton MDP1 18 Federal 3H PBHL 10017.00
 Workcamp 11476.00

VSEC

Fraser 0.24
 Salado 1.56
 Castle 1.85
 Delaware 17.85
 Bell Canyon 18.26
 JCP 18.55
 Cherry Canyon 20.24
 Tie in point, Build to 12" ING 1.94
 Brushy Canyon 30.90
 Hold 34.75
 Drop to 7" ING 42.32
 Bone Spring 114.67
 Hold 120.12
 KOP, Build and turn 10" DLS 121.84
 Build and turn 10" DLS 121.84
 Landing Point 113.23
 Patton MDP1 18 Federal 3H PBHL 515.43
 Workcamp 4987.29

W(+)/B(-)

Fraser -0.05
 Salado -1.34
 Castle -0.51
 Delaware -14.43
 Bell Canyon -14.94
 JCP -15.12
 Cherry Canyon -18.81
 Tie in point, Build to 12" ING -0.81
 Brushy Canyon 35.74
 Hold 42.32
 Drop to 7" ING 114.67
 Bone Spring 120.12
 Hold 121.84
 KOP, Build and turn 10" DLS 121.84
 Build and turn 10" DLS 121.84
 Landing Point 113.23
 Patton MDP1 18 Federal 3H PBHL 515.43
 Workcamp 4987.29

E(+)/W(-)

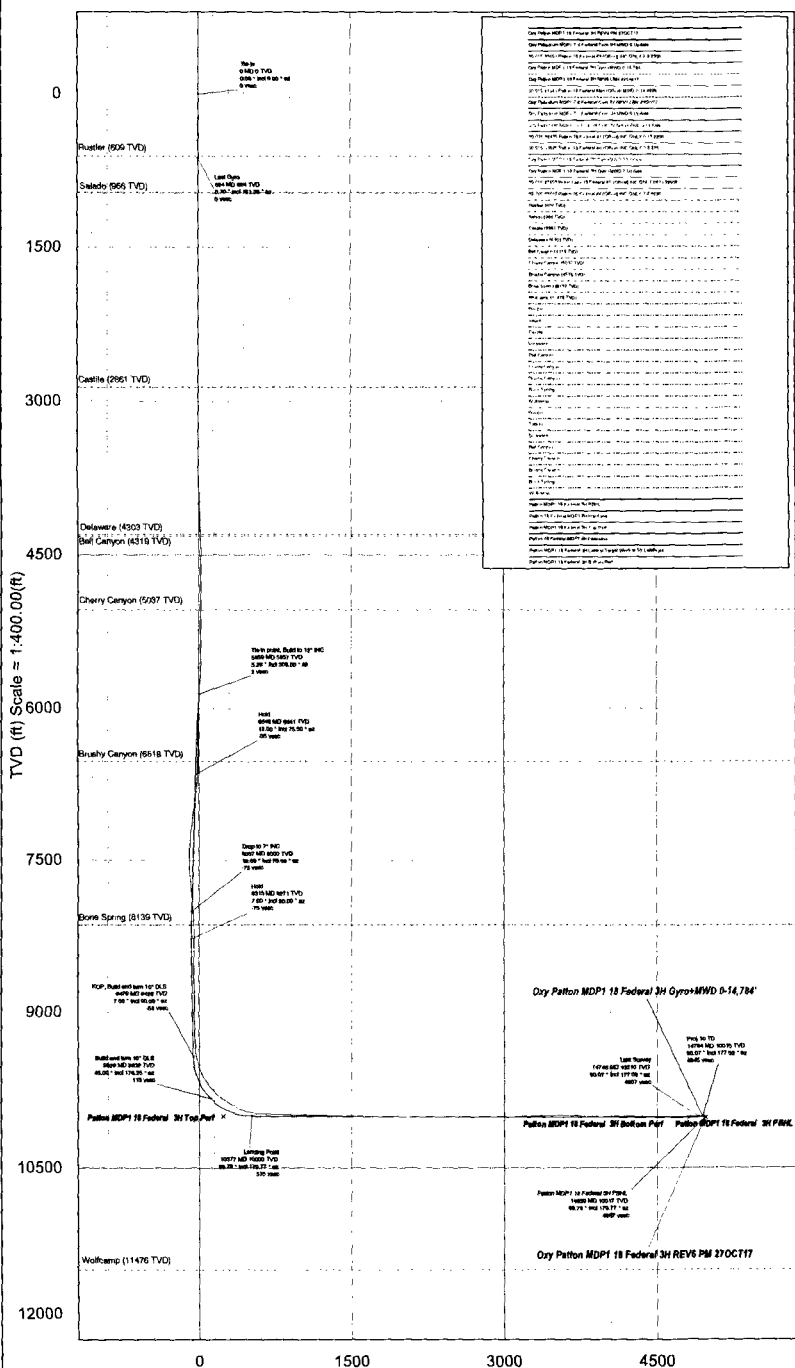
Fraser 1.62
 Salado 1.89
 Castle 7.64
 Delaware 29.15
 Bell Canyon 29.36
 JCP 29.54
 Cherry Canyon 29.54
 Tie in point, Build to 12" ING 9.45
 Brushy Canyon 38.10
 Hold 60.55
 Drop to 7" ING 340.29
 Bone Spring 395.90
 Hold 394.80
 KOP, Build and turn 10" DLS 328.89
 Build and turn 10" DLS 328.89
 Landing Point 328.89
 Patton MDP1 18 Federal 3H PBHL 578.85
 Workcamp 598.59

DLS

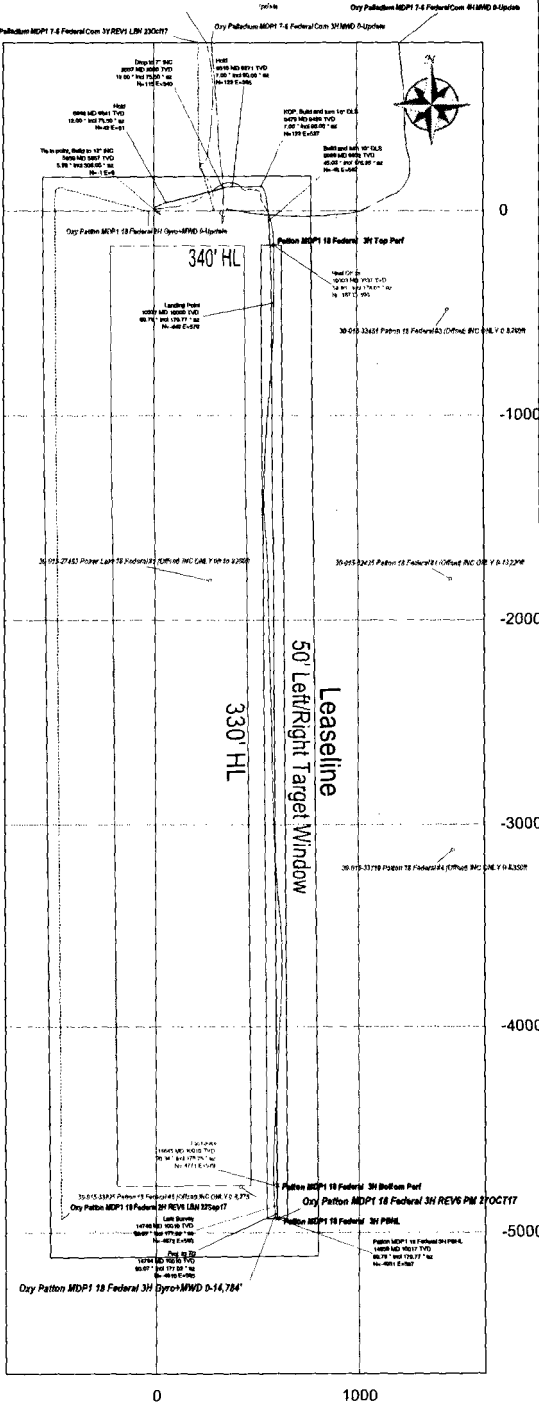
Fraser 0.38
 Salado 0.00
 Castle 0.34
 Delaware 1.04
 Bell Canyon 1.04
 JCP 1.04
 Cherry Canyon 0.12
 Tie in point, Build to 12" ING 0.00
 Brushy Canyon 2.00
 Hold 2.00
 Drop to 7" ING 0.00
 Bone Spring 2.00
 Hold 2.00
 KOP, Build and turn 10" DLS 0.00
 Build and turn 10" DLS 0.00
 Landing Point 0.00
 Patton MDP1 18 Federal 3H PBHL 0.00
 Workcamp 0.00

Grid
 True
 Mag

Grid North
 Tot Corr (M->G 6.689°)
 Mag Dec (6.963°)
 Grid Conv (0.274°)



NS (ft) Scale = 1:200.00(ft)



Vertical Section (ft) Azim = 173.10° Scale = 1:400.00(ft) Origin = ON-/S, OE-/W

EW (ft) Scale = 1:200.00(ft)

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



April 21, 2017

Oxy USA Inc.
Attn: Mr. David Stewart

ADMINISTRATIVE NON-STANDARD LOCATION

Administrative Order NSL-7523

Oxy USA Inc.
OGRID 16696
Patton MDP1 18 Federal Well No. 3H
API No. 30-015-Pending

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 04 2017

Non-Standard Location

RECEIVED

Proposed Location:

	<u>Footages</u>	<u>Unit</u>	<u>Sec.</u>	<u>Tsp</u>	<u>Rge</u>	<u>County</u>
Surface	170' FNL & 1928' FWL	C	18	24S	31E	Eddy
Penetration Point	340' FNL & 2505' FWL	C	18	24S	31E	Eddy
Final perforation	340' FSL & 2505' FWL	N	18	24S	31E	Eddy
Terminus	180' FSL & 2505' FWL	N	18	24S	31E	Eddy

Proposed Project Area:

<u>Description</u>	<u>Acres</u>	<u>Pool</u>	<u>Pool Code</u>
E/2 W/2 of Section 18	160	Cotton Draw; Bone Spring	13367

Reference is made to your application received on March 17, 2017.

You have requested to drill this horizontal well at an unorthodox oil well location described above in the referenced pool or formation. This location is governed by statewide Rule 19.15.15.9.A NMAC, which provides for 40-acre units, with wells located at least 330 feet from a unit outer boundary, and Rule 19.15.16.14.B(2) NMAC concerning directional wells in designated project areas. This location is unorthodox because portions of the proposed completed interval are closer to outside boundaries of the proposed project area than any location that would be a standard location under the applicable pool rules.

Your application has been duly filed under the provisions of Division Rules 19.15.15.13 NMAC and 19.15.4.12.A (2) NMAC.

It is our understanding that the Applicant is seeking this location to develop Section 18 for efficient spacing of horizontal wells and thereby preventing waste.

It is also understood that you have given due notice of this application to all operators or owners who are "affected persons," as defined in Rule 19.15.4.12 A (2) NMAC, in all adjoining units towards which the proposed location encroaches.

Pursuant to the authority conferred by Division Rule 19.15.15.13 (B) NMAC, the above-described unorthodox location is hereby approved.

The above approvals are subject to your being in compliance with all other applicable Division rules, including, but not limited to Division Rule 19.15.5.9 NMAC.

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.



DAVID R. CATANACH

Director

DRC/lrl

cc: Oil Conservation Division – Artesia District Office
Bureau of Land Management – Carlsbad Field Office