

Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

30-015-44338

Well Reference:

32.22367 -103.81525

I, Rasheed Atanda certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of September 07, 2017 through October 04, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 501.00 feet to a depth of 13752.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA INC. for the Parton MDP1 18 Federal 33H Well (Original Hole) API No. 30-015-44338 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Rasheed Atanda
FE

R. Atanda

Subscribed and Sworn to before me this 9th day of October (month) 2017 (yr)

My Commission expires:

Dec 20, 2020

J. Allemand

Notary Public

Adams County Colorado
(County State)

JENNIFER ALLEMAND
Notary Public
(signature) State of Colorado
Notary ID # 20164047962
My Commission Expires 12-20-2020



Oxy Patton MDP1 18 Federal 33H MWD 0-13,790' Survey Geodetic Report

(Def Survey)

Report Date: October 05, 2017 - 12:02 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Patton MDP1 18 Federal 33H / Oxy Patton MDP1 18 Federal 33H
 Well: Oxy Patton MDP1 18 Federal 33H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Patton MDP1 18 Federal 33H MWD 0-13,790'
 Survey Date: September 26, 2017
 Tort / AHD / DDI / ERD Ratio: 194.021 ° / 5855.284 ft / 6.246 / 0.659
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 13' 25.21760", W 103° 48' 54.21308"
 Location Grid N/E Y/X: N 445492.060 rUS, E 701606.010 rUS
 CRS Grid Convergence Angle: 0.2764 °
 Grid Scale Factor: 0.99993851
 Version / Patch: 2.10.544.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 171.661 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3559.700 ft above MSL
 Seabed / Ground Elevation: 3533.200 ft above MSL
 Magnetic Declination: 6.965 °
 Total Gravity Field Strength: 998.4277mgn (9 80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48088.901 nT
 Magnetic Dip Angle: 59.992 °
 Declination Date: September 26, 2017
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.2764 °
 Total Corr Mag North->Grid: 6.6885 °
 North: Well Head
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (rUS)	Easting (rUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	445492.06	701606.01	N 32 13 25.22	W 103 48 54.21
RKB	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	445492.06	701606.01	N 32 13 25.22	W 103 48 54.21
	501.00	0.38	273.54	501.00	-0.32	0.10	-1.57	0.08	445492.16	701604.44	N 32 13 25.22	W 103 48 54.23
	626.00	0.36	247.24	625.99	-0.31	-0.03	-2.35	0.14	445492.03	701603.66	N 32 13 25.22	W 103 48 54.24
	690.00	0.45	181.52	689.99	-0.01	-0.36	-2.54	0.70	445491.70	701603.47	N 32 13 25.21	W 103 48 54.24
	752.00	0.48	176.48	751.99	0.48	-0.86	-2.53	0.08	445491.20	701603.48	N 32 13 25.21	W 103 48 54.24
	816.00	0.35	159.22	815.99	0.94	-1.31	-2.44	0.28	445490.75	701603.57	N 32 13 25.20	W 103 48 54.24
	877.00	0.40	167.07	876.99	1.34	-1.69	-2.33	0.12	445490.37	701603.68	N 32 13 25.20	W 103 48 54.24
	1003.00	0.93	110.62	1002.98	2.27	-2.48	-1.27	0.62	445489.58	701604.74	N 32 13 25.19	W 103 48 54.23
	1051.00	0.55	97.86	1050.98	2.52	-2.65	-0.68	0.86	445489.41	701605.33	N 32 13 25.19	W 103 48 54.22
	1142.00	0.63	106.28	1141.97	2.85	-2.85	0.23	0.13	445489.21	701606.24	N 32 13 25.19	W 103 48 54.21
	1234.00	0.57	114.74	1233.97	3.31	-3.18	1.13	0.12	445488.88	701607.14	N 32 13 25.19	W 103 48 54.20
	1324.00	0.55	121.61	1323.96	3.84	-3.60	1.91	0.08	445488.46	701607.92	N 32 13 25.18	W 103 48 54.19
	1505.00	0.76	120.24	1504.95	5.14	-4.66	3.68	0.12	445487.40	701609.69	N 32 13 25.17	W 103 48 54.17
	1595.00	0.73	130.34	1594.94	5.95	-5.33	4.64	0.15	445486.73	701610.65	N 32 13 25.16	W 103 48 54.16
	1685.00	0.84	124.70	1684.93	6.83	-6.08	5.62	0.15	445485.98	701611.63	N 32 13 25.16	W 103 48 54.15
	1776.00	0.92	109.74	1775.92	7.63	-6.70	6.85	0.27	445485.36	701612.86	N 32 13 25.15	W 103 48 54.13
	1867.00	0.84	122.91	1866.91	8.41	-7.31	8.10	0.24	445484.75	701614.11	N 32 13 25.14	W 103 48 54.12
	1960.00	0.84	129.96	1959.90	9.37	-8.12	9.19	0.11	445483.94	701615.20	N 32 13 25.14	W 103 48 54.11
	2055.00	0.85	133.28	2054.89	10.44	-9.05	10.24	0.05	445483.01	701616.25	N 32 13 25.13	W 103 48 54.09
	2244.00	0.98	145.90	2243.87	12.99	-11.35	12.17	0.13	445480.71	701618.18	N 32 13 25.10	W 103 48 54.07
	2339.00	0.95	156.33	2338.85	14.49	-12.74	12.94	0.19	445479.32	701618.95	N 32 13 25.09	W 103 48 54.06
	2433.00	0.88	163.56	2432.84	15.95	-14.15	13.46	0.14	445477.91	701619.47	N 32 13 25.08	W 103 48 54.06
	2523.00	0.83	172.73	2522.83	17.29	-15.46	13.74	0.16	445476.60	701619.74	N 32 13 25.06	W 103 48 54.05
	2623.00	0.68	164.61	2622.82	18.60	-16.75	13.98	0.18	445475.31	701619.99	N 32 13 25.05	W 103 48 54.05
	2717.00	0.67	168.57	2716.82	19.70	-17.83	14.24	0.05	445474.24	701620.25	N 32 13 25.04	W 103 48 54.05
	2812.00	0.58	185.70	2811.81	20.72	-18.85	14.30	0.22	445473.21	701620.31	N 32 13 25.03	W 103 48 54.05
	2907.00	0.52	190.82	2906.81	21.60	-19.75	14.17	0.08	445472.31	701620.18	N 32 13 25.02	W 103 48 54.05
	3001.00	0.45	198.17	3000.80	22.33	-20.52	13.98	0.10	445471.54	701619.99	N 32 13 25.01	W 103 48 54.05
	3096.00	0.38	233.03	3095.80	22.82	-21.06	13.61	0.27	445471.00	701619.62	N 32 13 25.01	W 103 48 54.06
	3191.00	0.30	215.27	3190.80	23.15	-21.46	13.22	0.14	445470.60	701619.23	N 32 13 25.00	W 103 48 54.06
	3285.00	0.30	260.68	3284.80	23.33	-21.70	12.83	0.25	445470.36	701618.84	N 32 13 25.00	W 103 48 54.06
	3380.00	1.12	211.94	3379.79	24.04	-22.53	12.09	1.00	445469.54	701618.10	N 32 13 24.99	W 103 48 54.07
	3475.00	0.68	13.14	3474.79	24.23	-22.76	11.73	1.87	445469.30	701617.74	N 32 13 24.99	W 103 48 54.08
	3570.00	1.69	46.59	3569.77	22.90	-21.25	12.88	1.25	445470.81	701618.89	N 32 13 25.01	W 103 48 54.06
	3664.00	2.08	68.95	3663.72	21.72	-19.69	15.48	0.88	445472.37	701621.49	N 32 13 25.02	W 103 48 54.03
	3759.00	2.74	55.05	3758.63	20.33	-17.77	18.95	0.92	445474.29	701624.96	N 32 13 25.04	W 103 48 53.99
	3854.00	2.81	60.66	3853.52	18.48	-15.33	22.84	0.30	445476.74	701628.85	N 32 13 25.06	W 103 48 53.95
	3949.00	3.92	55.54	3948.36	16.21	-12.35	27.55	1.21	445479.71	701633.55	N 32 13 25.09	W 103 48 53.89
	4043.00	3.58	69.07	4042.16	14.16	-9.48	32.94	1.01	445482.58	701638.94	N 32 13 25.12	W 103 48 53.83
	4138.00	5.52	60.07	4136.85	11.83	-6.14	39.67	2.17	445485.92	701645.67	N 32 13 25.15	W 103 48 53.75
	4233.00	5.56	59.20	4231.41	8.39	-1.50	47.58	0.10	445490.56	701653.59	N 32 13 25.20	W 103 48 53.66
	4298.00	4.93	61.97	4296.14	6.24	1.42	52.75	1.04	445493.48	701658.76	N 32 13 25.23	W 103 48 53.60
	4426.00	4.91	58.74	4423.67	2.26	6.85	62.29	0.22	445498.91	701668.29	N 32 13 25.28	W 103 48 53.49
	4521.00	5.05	55.76	4518.31	-1.15	11.31	69.22	0.31	445503.37	701675.22	N 32 13 25.33	W 103 48 53.41
	4615.00	4.91	53.47	4611.95	-4.86	16.03	75.87	0.26	445508.09	701681.88	N 32 13 25.37	W 103 48 53.33
	4710.00	5.02	55.72	4706.60	-8.60	20.79	82.57	0.24	445512.85	701688.58	N 32 13 25.42	W 103 48 53.25
	4805.00	4.87	54.96	4801.24	-12.23	25.45	89.31	0.17	445517.51	701695.31	N 32 13 25.47	W 103 48 53.17
	4899.00	4.84	51.22	4894.91	-16.03	30.22	95.67	0.34	445522.28	701701.67	N 32 13 25.51	W 103 48 53.10
	4994.00	5.44	47.45	4989.52	-20.59	35.78	102.11	0.72	445527.84	701708.11	N 32 13 25.57	W 103 48 53.02
	5184.00	6.22	41.57	5178.54	-32.29	49.57	115.57	0.52	445541.63	701721.58	N 32 13 25.70	W 103 48 52.86
	5278.00	6.86	40.10	5271.93	-39.29	57.67	122.57	0.70	445549.73	701728.57	N 32 13 25.78	W 103 48 52.78
	5468.00	8.10	35.15	5460.31	-56.53	77.30	137.59	0.73	445569.36	701743.59	N 32 13 25.98	W 103 48 52.61
	5563.00	10.16	54.15	5554.12	-65.26	87.68	148.23	3.82	445579.74	701754.23	N 32 13 26.08	W 103 48 52.48
	5657.00	13.53	66.03	5646.12	-72.05	97.01	165.01	4.41	445589.06	701771.01	N 32 13 26.17	W 103 48 52.29
	5752.00	16.13	73.54	5737.96	-76.91	105.27	187.82	3.40	445597.32	701793.82	N 32 13 26.25	W 103 48 52.02
	5847.00	15.70	73.62	5829.32	-80.58	112.63	212.81	0.45	445604.68	701818.81	N 32 13 26.32	W 103 48 51.73
	5941.00	14.79	73.67	5920.01	-84.02	119.59	236.53	0.97	445611.64	701842.52	N 32 13 26.39	W 103 48 51.45
	6036.00	15.65	66.51	6011.68	-89.06	128.11	259.92	2.17	445620.16	701865.91	N 32 13 26.47	W 103 48 51.18
	6131.00	15.84	59.47	6103.13	-97.31	139.80	282.84	2.02	445631.85	701888.83	N 32 13 26.59	W 103 48 50.91
	6225.00	15.42	57.98	6193.65	-107.17	152.95	304.49	0.62	445645.00	701910.48	N 32 13 26.72	W 103 48 50.66
	6320.00	15.69	58.12	6285.17	-117.37	166.43	326.10	0.29	445658.48	701932.09	N 32 13 26.85	W 103 48 50.41
	6415.00	16.14	60.98	6376.53	-127.17	179.62	348.56	0.95	445671.67	701954.55	N 32 13 26.98	W 103 48 50.15
	6509.00	15.61	64.57	6466.95	-135.50	191.39	371.41	1.19	445683.43	701977.39	N 32 13 27.09	W 103 48 49.88
	6604.00	15.15	65.71	6558.55	-142.67	201.98	394.26	0.58	445694.03	702000.25	N 32 13 27.20	W 103 48 49.61
	6699.00	15.04	65.49	6650.27	-149.51	212.20	416.79	0.13	445704.25	702022.78	N 32 13 27.30	W 103 48 49.35
	6794.00	15.92	65.61	6741.82	-156.55	222.69	439.88	0.93	445714.74	702045.86	N 32 13 27.40	W 103 48 49.08
	6888.00	14.84	65.17	6832.45	-163.53	233.07	462.54	1.16	445725.12	702068.52	N 32 13 27.50	W 103 48 48.82
	6983.00	14.68	65.94	6924.32	-170.25	243.09	484.58	0.27	445735.13	702090.56	N 32 13 27.60	W 103 48 48.56
	7078.00	15.73	66.51	7015.99	-176.87	253.13	507.38	1.12	445745.17	702113.36	N 32 13 27.70	W 103 48 48.29
	7172.00	15.18	65.46	7106.59	-183.64	263.32	530.26	0.86	445755.36	702136.24	N 32 13 27.80	W 103 48 48.03
	7267.00	13.75	65.58	7198.58	-190.24	273.16	551.86	1.51	445765.20	702157.83	N 32 13 27.89	W 103 48 47.77
	7362.00	11.47	65.91	7291.28	-195.93	281.68	570.76	2.40	445773.72	702176.73	N 32 13 27.98	W 103 48 47.55

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 ° ' ")
	7930.00	7.03	175.06	7854.32	-181.52	275.61	628.67	2.63	445767.65	702234.64	N 32 13 27.91	W 103 48 46.88
	8025.00	7.05	180.43	7948.61	-169.96	263.99	629.12	0.69	445756.03	702235.09	N 32 13 27.80	W 103 48 46.87
	8120.00	7.59	184.27	8042.84	-158.07	251.90	628.61	0.77	445743.94	702234.58	N 32 13 27.68	W 103 48 46.88
	8215.00	7.25	191.57	8137.04	-146.31	239.77	626.94	1.05	445731.81	702232.91	N 32 13 27.56	W 103 48 46.90
	8309.00	6.65	193.57	8230.35	-135.69	228.67	624.48	0.69	445720.71	702230.45	N 32 13 27.45	W 103 48 46.93
	8404.00	6.74	195.75	8324.70	-125.49	217.95	621.67	0.28	445710.00	702227.64	N 32 13 27.34	W 103 48 46.96
	8516.00	8.39	179.65	8435.74	-111.40	203.46	619.94	2.38	445695.50	702225.91	N 32 13 27.20	W 103 48 46.99
	8611.00	17.95	161.61	8528.17	-90.07	182.58	624.61	10.84	445674.63	702230.58	N 32 13 26.99	W 103 48 46.93
	8706.00	24.30	159.63	8616.74	-56.50	150.33	636.05	6.73	445642.38	702242.02	N 32 13 26.67	W 103 48 46.80
	8804.00	32.78	172.57	8702.83	-10.12	104.99	646.52	10.66	445597.05	702252.49	N 32 13 26.23	W 103 48 46.68
	8899.00	46.95	177.06	8775.58	50.47	44.51	651.66	15.21	445536.56	702257.63	N 32 13 25.63	W 103 48 46.62
	8994.00	63.01	175.13	8829.92	127.79	-32.85	657.07	16.99	445459.22	702263.04	N 32 13 24.86	W 103 48 46.57
	9088.00	80.53	173.63	8859.21	216.62	-121.34	665.83	18.70	445370.72	702271.80	N 32 13 23.99	W 103 48 46.47
	9183.00	90.65	175.05	8866.51	311.11	-215.48	675.16	10.76	445276.60	702281.12	N 32 13 23.05	W 103 48 46.37
	9332.00	90.34	175.98	8865.22	459.77	-364.01	686.81	0.66	445128.07	702292.77	N 32 13 21.58	W 103 48 46.24
	9427.00	88.45	176.62	8866.23	554.45	-458.81	692.94	2.10	445033.28	702298.90	N 32 13 20.64	W 103 48 46.17
	9616.00	88.07	183.15	8871.97	741.31	-647.61	693.32	3.46	444844.49	702299.28	N 32 13 18.78	W 103 48 46.18
	9711.00	87.87	184.33	8875.34	834.15	-742.35	687.12	1.26	444749.76	702293.09	N 32 13 17.84	W 103 48 46.26
	9805.00	89.55	183.39	8877.45	926.00	-836.11	680.80	2.05	444656.00	702286.77	N 32 13 16.91	W 103 48 46.34
	9900.00	89.35	181.46	8878.36	1019.32	-931.02	676.78	2.04	444561.10	702282.75	N 32 13 15.97	W 103 48 46.39
	9994.00	89.38	181.92	8879.41	1111.88	-1024.97	674.01	0.49	444467.16	702279.97	N 32 13 15.04	W 103 48 46.43
	10089.00	89.35	181.39	8880.46	1205.43	-1119.92	671.26	0.56	444372.21	702277.23	N 32 13 14.10	W 103 48 46.46
	10184.00	89.52	181.26	8881.40	1299.08	-1214.89	669.07	0.23	444277.24	702275.03	N 32 13 13.16	W 103 48 46.49
	10278.00	89.93	181.46	8881.85	1391.73	-1308.87	666.84	0.49	444183.28	702272.80	N 32 13 12.23	W 103 48 46.52
	10373.00	89.90	181.13	8881.99	1485.39	-1403.84	664.69	0.35	444088.31	702270.66	N 32 13 11.29	W 103 48 46.55
	10467.00	89.97	181.12	8882.09	1578.12	-1497.82	662.84	0.08	443994.33	702268.81	N 32 13 10.36	W 103 48 46.58
	10561.00	89.97	181.55	8882.14	1670.78	-1591.80	660.65	0.46	443900.36	702266.62	N 32 13 9.44	W 103 48 46.61
	10656.00	89.83	181.44	8882.31	1764.38	-1686.76	658.17	0.19	443805.40	702264.14	N 32 13 8.50	W 103 48 46.65
	10750.00	89.59	181.63	8882.78	1856.99	-1780.73	655.66	0.33	443711.44	702261.63	N 32 13 7.57	W 103 48 46.68
	10939.00	90.10	181.65	8883.30	2043.13	-1969.65	650.25	0.27	443522.53	702256.22	N 32 13 5.70	W 103 48 46.75
	11128.00	90.41	177.95	8882.45	2230.19	-2158.61	650.91	1.96	443333.58	702256.88	N 32 13 3.83	W 103 48 46.76
	11222.00	90.45	178.30	8881.75	2323.59	-2252.56	653.98	0.37	443239.64	702259.95	N 32 13 2.90	W 103 48 46.73
	11411.00	90.55	179.27	8880.10	2511.12	-2441.51	657.99	0.52	443050.71	702263.96	N 32 13 1.03	W 103 48 46.69
	11505.00	90.28	178.97	8879.42	2604.32	-2535.50	659.43	0.43	442956.73	702265.40	N 32 13 0.10	W 103 48 46.68
	11600.00	90.45	178.65	8878.81	2698.58	-2630.47	661.41	0.38	442861.75	702267.37	N 32 12 59.16	W 103 48 46.66
	11694.00	90.69	177.76	8877.88	2791.97	-2724.42	664.35	0.98	442767.81	702270.32	N 32 12 58.23	W 103 48 46.63
	11883.00	90.38	178.66	8876.11	2979.72	-2913.32	670.25	0.50	442578.93	702276.22	N 32 12 56.36	W 103 48 46.58
	12072.00	90.03	180.93	8875.44	3166.81	-3102.30	670.93	1.22	442389.95	702276.90	N 32 12 54.49	W 103 48 46.58
	12166.00	89.69	178.62	8875.67	3259.86	-3196.30	671.30	2.48	442295.97	702277.27	N 32 12 53.56	W 103 48 46.58
	12355.00	89.55	178.79	8876.92	3447.43	-3385.24	675.57	0.12	442107.03	702281.54	N 32 12 51.69	W 103 48 46.54
	12450.00	88.97	179.02	8878.15	3541.66	-3480.22	677.39	0.66	442012.06	702283.35	N 32 12 50.75	W 103 48 46.52
	12544.00	90.07	179.00	8878.94	3634.89	-3574.20	679.01	1.17	441918.09	702284.98	N 32 12 49.82	W 103 48 46.51
	12639.00	90.58	179.05	8878.40	3729.10	-3669.18	680.63	0.54	441823.11	702286.59	N 32 12 48.88	W 103 48 46.50
	12828.00	89.97	179.06	8877.49	3916.53	-3858.15	683.74	0.32	441634.15	702289.71	N 32 12 47.01	W 103 48 46.47
	13017.00	89.55	178.56	8878.28	4104.05	-4047.11	687.67	0.35	441445.21	702293.64	N 32 12 45.14	W 103 48 46.44
	13206.00	90.03	178.79	8878.97	4291.64	-4236.06	692.04	0.28	441256.27	702298.01	N 32 12 43.27	W 103 48 46.40
	13300.00	90.17	178.38	8878.81	4384.95	-4330.03	694.36	0.46	441162.31	702300.33	N 32 12 42.34	W 103 48 46.37
	13489.00	90.10	177.27	8878.36	4572.86	-4518.89	701.53	0.59	440973.46	702307.50	N 32 12 40.47	W 103 48 46.30
	13678.00	89.93	177.91	8878.31	4760.84	-4707.72	709.48	0.35	440784.64	702315.45	N 32 12 38.60	W 103 48 46.22
Last Survey	13752.00	89.90	178.93	8878.42	4834.33	-4781.69	711.52	1.38	440710.67	702317.49	N 32 12 37.87	W 103 48 46.20
Proj to TD	13790.00	89.90	178.93	8878.49	4872.02	-4819.69	712.23	0.00	440672.68	702318.20	N 32 12 37.49	W 103 48 46.19

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	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Oxy Patton MDP1 18 Federal 33H MWD 0- 13,790'
	1	26.500	501.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Patton MDP1 18 Federal 33H MWD 0- Original Borehole / Oxy Patton
	1	501.000	13790.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	MDP1 18 Federal 33H MWD 0-

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



August 3, 2017

Oxy USA Inc.
Attn: Ms. Sarah Mitchell

ADMINISTRATIVE NON-STANDARD LOCATION

Administrative Order NSL-7561

Oxy USA Inc.
OGRID 16696
Patton MDP1 18 Federal Well No. 33H
API No. 30-015-44338

Non-Standard Location

Proposed Location:

	<u>Footages</u>	<u>Unit</u>	<u>Sec.</u>	<u>Tsp</u>	<u>Rge</u>	<u>County</u>
Surface	335' FNL & 2062' FEL	B	18	24S	31E	Eddy
Penetration Point	340' FNL & 1385' FEL	B	18	24S	31E	Eddy
Final perforation	340' FSL & 1385' FEL	O	18	24S	31E	Eddy
Terminus	180' FSL & 1385' FEL	O	18	24S	31E	Eddy

Proposed Project Area:

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

Reference is made to your application received on July 11, 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.

Administrative Order NSL-7561
Oxy USA Inc.
August 3, 2017
Page 2 of 2

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 Oxy USA, Inc. is seeking this location for optimal development of the Bone Spring formation that involve drilling six wells per section versus four wells per section. Next, increasing density will optimize recoverable reserves. Further, any reduction in well spacing will result in untapped reserves being left in the reservoir resulting in 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.

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

Schlumberger**OXY**

Borehole:

Original Borehole

Well:

Oxy Patton MDP1 18 Federal 33H

Field:

NM Eddy County (NAD 83)

Structure:

Oxy Patton MDP1 18 Federal 33H

Gravity & Magnetic Parameters

 Model: HDGM 2017
 MagDec: 6.965°

 Dip: 59.99°
 FS: 48088.301nT

 Date: 26-Sep-2017
 Gravity FS: 998.428mgal (9.80665 Based)

Surface Location

 Lat: N 32 13 25.22
 Lon: W 103 48 54.21

NAD83 New Mexico State Plane, Eastern Zone, US Feet

 Northing: 445492.06RUS
 Easting: 701606.01RUS

Grid Conv:

 Grid Conv: 0.2764°
 Scale Fact: 0.99993851

Miscellaneous

 Shot: Oxy Patton MDP1
 Plan: Oxy Patton MDP1 18 Federal 33H

TVD Ref:

 RKB=26.5' (3559.78 above MSL)
 Oxy Patton MDP1 18 Federal 33H REV1 LBN 08Aug17

Critical Point

 SHL
 Rustler
 Salado
 Cattle
 Delaware
 Build 2 /100'
 Bell Canyon
 Hold Target
 Cherry Canyon
 Brushy Canyon
 Turn 2 /100'
 Bone Spring
 Build 10 /100'
 Landing Point
 Patton MDP1 18 Federal 33H PBHL
 Wolfcamp (projected)

MD

 0.00
 596.00
 953.00
 2610.00
 4296.00
 4323.00
 4342.00
 4972.98
 5132.65
 6488.40
 7422.89
 8163.37
 8519.16
 9286.56
 13607.02
 NaN

INCL

 0.00
 0.00
 0.00
 0.00
 0.00
 0.00
 0.36
 13.00
 13.00
 13.00
 13.00
 8.01
 15.00
 89.74
 89.74
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AZIM

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 64.31
 64.31
 64.31
 64.31
 64.31
 64.31
 150.81
 179.74
 173.74
 173.74
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Critical Points

 TVD
 0.00
 596.00
 953.00
 2603.00
 4296.00
 4323.00
 4342.00
 4967.42
 5123.00
 6444.00
 7354.54
 8086.00
 8435.94
 8860.00
 8900.00
 11486.00

VSEC

 0.00
 0.00
 0.00
 0.00
 0.00
 0.00
 -0.02
 -21.06
 -32.61
 -123.55
 -156.24
 -162.74
 39.87
 450.29
 4816.97

N(°)S(°)

 0.00
 0.00
 0.00
 0.00
 0.00
 0.00
 0.03
 31.83
 47.40
 179.60
 270.72
 261.73
 200.00
 -355.67
 4766.04

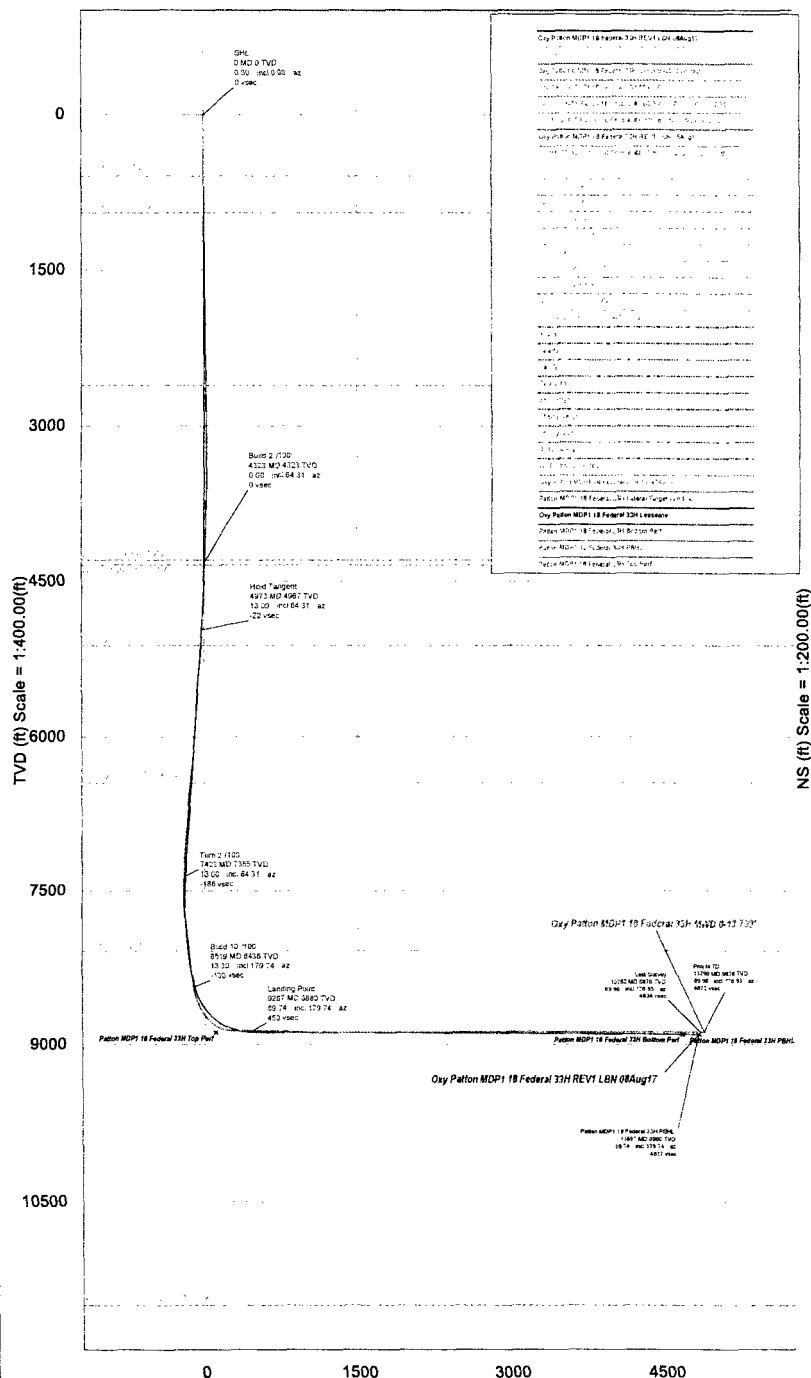
E(°)W(°)

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 0.00
 0.00
 0.00
 0.00
 0.00
 0.06
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 562.78
 563.56
 675.84
 678.38
 696.56

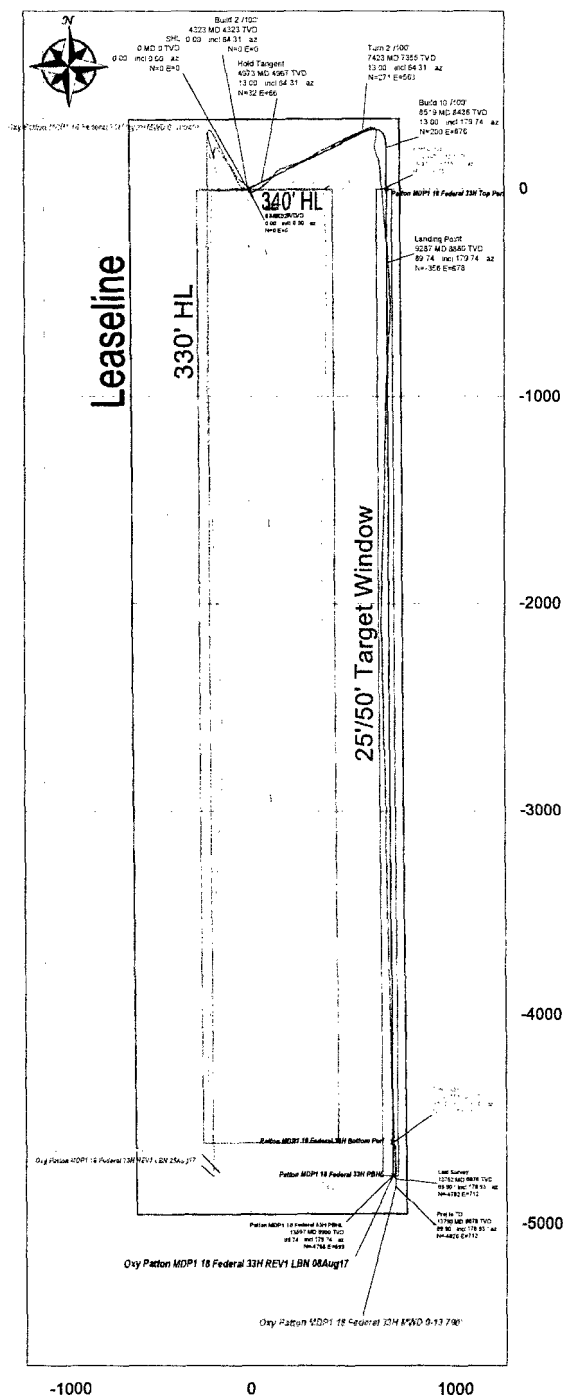
DLS

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 0.00
 0.00
 0.00
 0.00
 2.00
 2.00
 0.00
 0.00
 0.00
 2.00
 10.00
 0.00

 Grid
 True
 Mag

 Grid North
 Tot Corr (M->G 6.689°)
 Mag Dec (6.965°)
 Grid Conv (0.276°)


Vertical Section (ft) Azim = 171.66° Scale = 1:400.00(ft) Origin = 0N/-S, 0E/-W



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