

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)
Well Reference:

Schlumberger

30-015-44338

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 Patton 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

RAT

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

My Commission expires:

Dec 01, 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

Scanned by

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 (MWD 33H)
Structure / Shot: Oxy Patton MDP1 18 Federal 33H / Oxy Patton MDP1 18 Federal 33H
Well: Original Borehole
Borehole: Unknown / Unknown
Survey Name: Oxy Patton MDP1 18 Federal 33H MWD 0-13.790°
Survey Date: September 26, 2017
Total / AHD / EOD / ERD Ratio: 194.021 / 5555.234 N / 6.246 / 0.658
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone US Feet
Location Lat / Long: N 32° 13' 25" 21760" W 103° 48' 54" 21306"
Location Offd NE Vix: N 445482.060 MWS E 701606.010 MWS
CRS Grid Convergence Angle: 0.2764°
Grid Scale Factor: 0.99993851
Version / Patch: 2.10.544.0

Survey / DLS Computation: Minimum Curvature / Lambert
Vertical Section Azimuth: 171.561° (Grid North)
Vertical Section Origin: 0.000 R 0.000 R
TVD Reference Elevation: 3559.700 R above MSL
Seashee / Ground Elevation: 3533.200 R above MSL
Magnetic Declination: 6.965°
Total Gravity Field Strength: 989.427 mgal (9.80665 Gauss)
Gravity Model: GRS91
Magnetic Field Strength: 48006.801 nT
Magnetic Dip Angle: 59.952°
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°
Local Coord Referenced To: Well Head

Comments	MD	Incl	Azim GMD	TVD	VSEC	NS	EW	DLS	North	East	Latitude	Longitude
SHL	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(N)	(W)
RWB	0.00	0.00	0.00	26.50	0.00	0.00	0.00	N/A	445492.06	701606.01	N 32° 13' 25" 22"	W 103° 48' 54" 21"
	26.50	0.00	0.00	26.50	-0.32	0.10	-1.57	0.00	445492.06	701606.01	N 32° 13' 25" 22"	W 103° 48' 54" 21"
	501.00	0.36	273.54	501.00	-0.31	-0.35	2.35	0.14	445492.06	701606.01	N 32° 13' 25" 22"	W 103° 48' 54" 21"
	626.00	0.45	247.24	626.00	-0.01	-0.35	-2.54	0.70	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	698.00	0.46	181.52	699.99	0.46	-0.86	2.53	0.08	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	752.00	0.48	176.48	751.99	0.48	-1.31	2.44	0.29	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	816.00	0.45	159.22	815.99	0.44	-1.31	2.23	0.12	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	870.00	0.40	137.02	870.00	0.34	-1.89	2.48	0.27	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1003.00	0.83	110.62	1002.98	0.83	-2.48	2.77	0.42	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1051.00	0.52	87.52	1050.98	0.52	-3.25	3.25	0.13	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1142.00	0.63	106.28	1141.97	0.63	-3.18	3.18	0.12	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1234.00	0.57	114.74	1233.87	0.57	-3.18	3.18	0.12	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1324.00	0.55	121.61	1323.96	0.55	-3.50	1.81	0.06	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1505.00	0.76	120.24	1504.95	0.76	-4.66	3.69	0.12	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1595.00	0.73	130.34	1594.94	0.73	-5.33	4.64	0.15	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1685.00	0.84	124.70	1684.93	0.84	-6.08	5.62	0.15	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1776.00	0.82	109.74	1775.92	0.82	-7.31	6.85	0.27	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1867.00	0.84	122.91	1866.91	0.84	-8.12	8.19	0.24	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	1950.00	0.85	128.98	1950.00	0.85	-9.05	10.24	0.05	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2055.00	0.88	133.28	2054.89	0.88	-11.35	12.17	0.13	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2244.00	0.98	145.90	2243.85	0.98	-12.74	12.94	0.18	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2339.00	0.88	163.56	2338.85	0.88	-14.48	13.46	0.14	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2433.00	0.83	172.73	2432.84	0.83	-15.45	13.74	0.16	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2529.00	0.86	184.61	2528.82	0.86	-16.73	13.98	0.18	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2623.00	0.87	188.57	2622.82	0.87	-18.65	14.24	0.05	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2717.00	0.96	185.70	2716.82	0.96	-20.72	14.30	0.22	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	2807.00	0.96	190.82	2806.81	0.96	-21.60	14.17	0.08	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3001.00	0.45	198.17	3000.80	0.45	-20.52	13.98	0.10	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3096.00	0.36	223.03	3095.80	0.36	-21.46	13.22	0.14	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3191.00	0.30	215.27	3190.80	0.30	-21.70	12.83	0.25	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3286.00	0.30	280.64	3284.80	0.30	-21.70	12.83	0.25	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3380.00	1.12	211.94	3379.78	1.12	-22.53	12.09	1.00	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3475.00	0.88	113.14	3474.79	0.88	-22.78	11.73	1.87	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3570.00	1.89	46.59	3569.72	1.89	-21.20	12.68	1.25	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3665.00	2.80	68.52	3664.72	2.80	-19.59	16.48	0.82	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3760.00	2.41	80.62	3759.83	2.41	-18.48	22.82	0.10	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	3854.00	3.82	55.54	3853.52	3.82	-12.35	27.62	1.21	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4043.00	3.54	69.07	4042.76	3.54	-8.44	32.94	1.01	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4138.00	5.52	80.07	4138.05	5.52	-6.14	38.87	1.17	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4233.00	5.56	59.20	4231.41	5.56	-1.50	42.75	0.10	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4298.00	4.83	61.97	4296.14	4.83	6.24	52.75	0.44	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4428.00	4.81	56.74	4423.67	4.81	6.55	66.22	0.31	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4521.00	5.05	55.76	4518.31	5.05	11.31	69.22	0.22	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4615.00	4.81	53.47	4615.05	4.81	16.03	75.87	0.26	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4710.00	5.02	53.72	4706.60	5.02	20.79	82.57	0.24	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4805.00	4.87	54.96	4801.24	4.87	25.45	89.31	0.17	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	4899.00	5.44	47.45	4894.91	5.44	35.78	102.11	0.72	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5184.00	6.22	41.57	5178.54	6.22	48.57	115.57	0.52	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5278.00	8.86	40.10	5271.93	8.86	56.29	127.57	0.70	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5460.00	8.10	35.16	5460.31	8.10	77.00	137.59	0.73	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5593.00	10.16	54.16	5594.12	10.16	87.66	148.23	3.82	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5657.00	13.53	66.03	5648.12	13.53	97.01	169.01	4.41	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5841.00	18.13	73.54	5839.96	18.13	105.27	187.82	3.40	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	5941.00	15.70	72.82	5938.32	15.70	112.63	212.81	0.45	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6041.00	14.79	72.67	6038.01	14.79	119.59	238.32	0.97	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6134.00	13.82	69.51	6130.13	13.82	128.11	262.04	2.02	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6230.00	12.84	65.49	6228.52	12.84	132.95	284.16	0.62	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6320.00	11.82	58.12	6318.51	11.82	137.17	304.56	0.29	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6415.00	16.84	80.86	6413.51	16.84	179.82	348.56	1.18	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6509.00	15.61	64.57	6506.95	15.61	191.39	394.26	0.58	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6604.00	15.15	65.71	6604.55	15.15	212.80	394.26	0.13	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6699.00	15.04	85.48	6699.27	15.04	212.80	394.26	0.13	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6794.00	15.82	65.61	6791.42	15.82	222.89	429.88	0.83	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6894.00	14.84	65.17	6892.45	14.84	233.07	464.58	1.16	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	6994.00	14.68	65.94	6992.32	14.68	243.09	484.58	0.27	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	7079.00	15.73	66.51	7075.99	15.73	253.18	504.26	0.66	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	7172.00	15.18	65.46	7169.58	15.18	283.12	551.86	1.51	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	7265.00	13.75	65.56	7261.98	13.75	293.16	581.06	2.40	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	7359.00	11.47	65.91	7359.28	11.47	289.54	581.06	1.63	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	7453.00	10.01	66.62	7454.62	10.01	293.28	601.04	2.29	445491.70	701607.46	N 32° 13' 25" 21"	W 103° 48' 54" 24"
	7547.00	8.07	74.53	7547.45	8.07</							

Comments	MD	Incl	Azim	Chd	TVD	VSEC	NS	EW	DLS	Northng	Eastng	Latitude	Longitude
	(m)	(°)	(°)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(°W)	(°E)
	7030.00	7.03	175.06	7054.32	-101.52	275.81	275.81	628.67	628.67	628.67	628.67	32 12 27.81	103 48 46.86
	6020.00	7.05	180.43	7048.61	-105.96	263.90	263.90	620.12	620.12	620.12	620.12	32 12 27.88	103 48 46.87
	6120.00	7.59	184.27	6042.64	-150.07	251.90	251.90	620.61	620.61	620.61	620.61	32 12 27.88	103 48 46.88
	6215.00	7.25	181.04	6137.04	-148.31	239.77	239.77	620.94	620.94	620.94	620.94	32 12 27.85	103 48 46.90
	6309.00	6.55	193.57	6230.35	-135.69	228.67	228.67	624.48	624.48	624.48	624.48	32 12 27.45	103 48 46.93
	6404.00	6.74	185.76	6324.70	-125.49	217.65	217.65	617.67	617.67	617.67	617.67	32 12 27.34	103 48 46.96
	6516.00	8.39	179.65	6435.74	-111.40	203.46	203.46	619.94	619.94	619.94	619.94	32 12 27.20	103 48 46.99
	6611.00	7.85	181.61	6529.17	-98.07	182.58	182.58	624.01	624.01	624.01	624.01	32 12 26.89	103 48 46.93
	6706.00	24.30	159.63	6616.74	-56.50	150.33	150.33	630.09	630.09	630.09	630.09	32 12 26.87	103 48 46.80
	6804.00	32.78	172.57	6702.83	-10.12	104.99	104.99	635.52	635.52	635.52	635.52	32 12 26.87	103 48 46.80
	6899.00	46.85	177.06	6775.58	-50.47	44.51	44.51	651.66	651.66	651.66	651.66	32 12 26.87	103 48 46.80
	6994.00	63.01	175.13	6829.82	-32.55	127.79	127.79	657.07	657.07	657.07	657.07	32 12 26.87	103 48 46.80
	7088.00	80.53	173.63	6859.51	-21.62	66.83	66.83	665.83	665.83	665.83	665.83	32 12 26.87	103 48 46.80
	8123.00	90.54	175.05	6868.51	-11.11	354.01	354.01	665.83	665.83	665.83	665.83	32 12 26.87	103 48 46.80
	8215.00	90.54	175.05	6868.51	-11.11	354.01	354.01	665.83	665.83	665.83	665.83	32 12 26.87	103 48 46.80
	8309.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	8421.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	8516.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	8616.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	8717.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	8815.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	8916.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9016.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9116.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9216.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9316.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9416.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9516.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9616.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9716.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9816.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	9916.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10016.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10116.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10216.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10316.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10416.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10516.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10616.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10716.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10816.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	10916.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	11016.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	11116.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	11216.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	11316.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	11416.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	11516.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
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	11716.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
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	13916.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	14016.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	14116.00	80.49	176.62	6869.23	-59.47	454.45	454.45	669.84	669.84	669.84	669.84	32 12 26.87	103 48 46.80
	14216.00	80.49	176.62	6869.23	-								

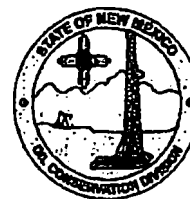
State of New Mexico
Energy, Minerals and Natural Resources Department

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.

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

RECEIVED

JUN 06 2018

OXY USA Inc.
Patton MDP1 18 Federal 33H
API No. 30-015-44338

DISTRICT II-ARTESIA O.C.D.

17-1/2" hole @ 667'
13-3/8" csg @ 656'
w/ 650sx-TOC-Surf Circ.

12-1/4" hole @ 4380'
9-5/8" csg @ 4365'
w/ 1350sx-TOC-Surf Circ.

8-1/2" hole @ 13790'
5-1/2" csg @ 13770'
w/ 1480sx-TOC-1300' Calc.

2-7/8" tbg & pkr @ 8446'

Perfs @ 9060-13553'

TD- 13790'M 8878"V

WEATHERFORD SLS

COMPANY: OXY USA, INC.
 WELL: PATTON MDP1 18 FEDERAL 33H
 LOCATION: 335' FNL & 2082' FEL, SEC. 18, T-24S, R-31E
 COUNTY: EDDY STATE: NEW MEXICO
 GL: 3533.2 KB: 3559.7
 Start Date 09/06/2017 End Date 10/08/2017
 Start Depth 667' End Depth 13790'
 API NO: 300154433800000
 FILE: OXY-PATTON-MDP1-18-FEDERAL-33H.mhw
 LOGGERS: THOMAS L. RAWLS, CRAIG W. HARRIS
 GEOLOGIST: DENNIS LEE

Sand	Dolo	Lime	Chert	Anhydrite
Shale	Carb Sh	Salt	Granite	Siltstone
Coal	Bentonite	Granite Wash	Quartz Wash	
Carb Wash	Conglomerate	Cement		

ACCESSORIES

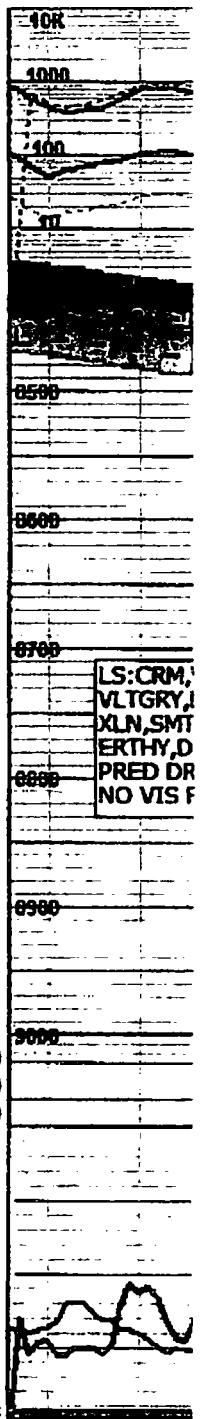
GLAUC'C	PYRITE	FOSSILS	OOLITES	FRACTURES
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HW ----- 1 to 10000
 C1 -----
 C2 -----
 C3 -----
 IC4 -----
 NC4 -----

Horz -----
 Rop ----- 1 to 2.5
 Gamma ----- 1 to 150

CUT (P F G)
 FLU 0-100% (P F G)
 POR (P F G)

SLIDE



LS: CRM,
 VLTGRY,
 XLN, SMT
 ERTHY, D
 PRED DR
 NO VIS F

WEATHERFORD SLS

COMPANY: OXY USA, INC.
 WELL: PATTON MDP1 18 FEDERAL 33H
 LOCATION: 335' FNL & 2062' FEL, SEC. 18, T-24S, R-31E
 COUNTY: EDDY STATE: NEW MEXICO
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 Start Date 09/06/2017 End Date 10/08/2017
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 API NO: 300154433800000
 FILE: OXY-PATTON-MDP1-18-FEDERAL-33H.mlw
 LOGGERS: THOMAS L. RAWLS, CRAIG W. HARRIS
 GEOLOGIST: DENNIS LEE

Sand	Dolo	Lime	Chert	Anhydrite
Shale	Carb Sh	Salt	Granite	Siltstone
Coal	Bentonite	Granite Wash	Quartz Wash	
Carb Wash	Conglomerate	Cement		

ACCESSORIES

GLAUC'C	PYRITE	FOSSILS	OOLITES	FRACTURES
---------	--------	---------	---------	-----------

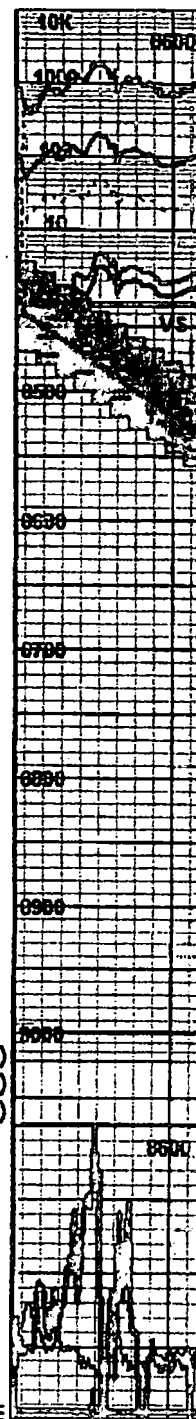
HW ----- 1 to 10000

C1 _____
 C2 _____
 C3 -----
 IC4 _____
 NC4 _____

Horz _____
 Rop _____ 1 to 2.5
 Gamma _____ 1 to 150

CUT (PFG)
 FLU 0-100% (PFG)
 POR (PFG)

SLIDE





Weatherford®

Surface Logging Systems

10000 Pilot/P.O. Box 80531
Midland, TX/Midland, TX
79706/79708
432.581.8892 Main
432.581.8895 Fax

Logging Personnel:

THOMAS L. RAWLS

CRAIG W. HARRIS

Unit No.: SLS - 078

Rig: H&P 639

Filename: OXY-PATTON-MDP1-18-FEDERAL-33H.mfw

COMPANY: OXY USA, INC.

WELL: PATTON MDP1 18 FEDERAL 33H

FIELD: SAND DUNES MDP1

COUNTY: EDDY STATE: NEW MEXICO

LOCATION: 335' FNL & 2062' FEL, SEC. 18, T-24S, R-31E

Spud Date: 08/15/2017

Started: 09/08/2017 At: 667'

Ended: 10/08/2017 At: 13790'

Api No.: 300154433800000

G.L.: 3533.2'

K.B.: 3559.7'

Geologist: DENNIS LEE

Abbreviations:

NB...New Bit	DST...Drill Stem Test
CO...Circ Out	DS...Directional Survey
NR...No Returns	CG...Connection gas
TG...Trip Gas	LAT...Logged After Trip
WOB...Wt on Bit	PP...Pump Pressure
RPM...Rev/Min	SPM...Strokes/Min
SG...Survey Gas	DTG...Down Time Gas

Mud Data

Lithology Symbols:

	Anhydrite		Salt		Granite
	Siltstone		Chert		Sandstone
	Dolomite		Conglomerate		Limestone
	Coal		Shale		Bentonite
	Carb Shale		Granite Wash		Quartz Wash
	Red Sh		Org Sh		Green Sh
	Cust Sh1		Cust Sh2		Cust Sh3
	Cust Sh4		Cust Sh5		Cust Sh6

Amalgams

Gas Chromatograph Analysis:

TG	-----
C1	-----
C2	-----
C3	-----
IC4	-----
NC4	-----
IC5	-----
NC5	-----



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Logging Personnel:

THOMAS L. RAWLS

CRAIG W. HARRIS

Unit No.: SLS - 078

Rig: H&P 639

Filename: OXY-PATTON-MDP1-18-FEDERAL-33H.mlw

COMPANY: OXY USA, INC.

WELL: PATTON MDP1 18 FEDERAL 33H

FIELD: SAND DUNES MDP1

COUNTY: EDDY STATE: NEW MEXICO

LOCATION: 335' FNL & 2062' FEL, SEC. 18, T-24S, R-31E

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	Coal		Shale		Bentonite
	Carb Shale		Granite Wash		Quartz Wash
	Red Sh		Org Sh		Green Sh
	Cust Sh1		Cust Sh2		Cust Sh3
	Cust Sh4		Cust Sh5		Cust Sh6

Accessories

Gas Chromatograph Analysis:

TG	-----
C1	_____
C2	_____
C3	-----
IC4	_____
NC4	_____
IC5	_____
NC5	-----