

Schlumberger

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

30-015-44298

Well Reference:
S7, T24S, R31E, Eddy NM
N 32.22627 W -103.82346

I, Andrie Poon certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of November 13, 2017 through December 06, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 740.00 feet to a depth of 19850.00 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 Palladium MDP1 7-6 Federal Com 1H Well (Original Hole) API No. 30-015-44298 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 Andrie Poon
Andrie Poon
FE

Subscribed and Sworn to before me this 15th day of December (month) 2017 (yr)

My Commission expires:

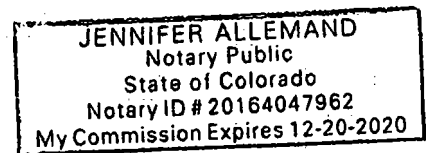
12-20-2020

J. Allemand

Notary Public

Adams County Colorado
(County State)

(signature)



NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 31 2018

RECEIVED

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

December 14, 2017

Oxy USA Inc.
5 Greenway Plaza, Suite 110
Houston, TX 77046

Re:

S7, T24S, R31E, Eddy NM
N 32.22627 W -103.82346

CLIENT: Oxy USA Inc.
WELL: Palladium MDP1 7-6 Federal Com 1H
FIELD: Cotton Draw Bone Spring

RIG: H&P 656
COUNTY: Eddy
API NO: 30-015-44298
JOB NO: 17MLD3190

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Andric Poon FE	Palladium MDP1 7-6 Federal Com 1H Original Hole	740.00 Ft to 19850.00 Ft	November 13, 2017 to December 6, 2017	TelePacer SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Mike Stephens
Field Service Manager

Oxy Palladium MDP1 7-6-Federal Com 1H Gyro+MWD 0-19890 fTMD Survey

Geodetic Report

(Per Survey)



Report Date:	December 05, 2017 - 12:52 PM										
Client:	OXY										
Field:	NM Eddy County (NAD 83)										
Structure / Shot:	Oxy Palladium MDP1 7-6-Federal Com 1H / Oxy Palladium MDP1 7-6-Federal Com 1H										
Well:	Oxy Palladium MDP1 7-6-Federal Com 1H										
Borehole:	Original Borehole										
UWI / API#:	Unknown / Unknown										
Survey Name:	Oxy Palladium MDP1 7-6-Federal Com 1H Gyro+MWD 0-19890 fTMD										
Survey Date:	November 28, 2017										
Ton / AHD / DDI / ERD Ratio:	239.290' / 10945.492 ft / 6.715' / 1.089										
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet										
Location Lat / Long:	N 32° 13' 34.55713" W 102° 49' 24.45515"										
CRS Grid Convergence Angle:	0.2719 °										
Grid Scale Factor:	0.9993756										
Version / Patch:	2.10.565.0										
Comments											
SHL	(m)										
7553.00	12.02										
7549.00	12.99										
7544.00	14.03										
7269.00	14.45										
7174.00	14.50										
7080.00	14.39										
6985.00	14.47										
6890.00	14.25										
6796.00	14.34										
6701.00	14.50										
6606.00	14.40										
6511.00	14.41										
6417.00	14.52										
6322.00	14.54										
6227.00	14.61										
6133.00	14.66										
6038.00	12.02										
5943.00	9.84										
5848.00	7.26										
5754.00	5.46										
5659.00	3.50										
5564.00	1.25										
5375.00	320.53										
5280.00	244.40										
5185.00	5184.89										
5091.00	5090.89										
4902.00	4901.89										
4807.00	4808.89										
4713.00	4712.89										
4618.00	4617.89										
4523.00	4522.89										
4428.00	4427.89										
4333.00	4332.89										
4238.00	4237.89										
4143.00	4142.89										
4048.00	4047.89										
3953.00	3952.89										
3858.00	3857.89										
3763.00	3762.89										
3668.00	3667.89										
3573.00	3572.89										
3478.00	3477.89										
3383.00	3382.89										
3288.00	3287.89										
3193.00	3192.89										
3098.00	3097.89										
2999.00	2998.89										
2904.00	2903.89										
2809.00	2808.89										
2714.00	2713.89										
2619.00	2618.89										
2524.00	2523.89										
2429.00	2428.89										
2334.00	2333.89										
2239.00	2238.89										
2144.00	2143.89										
2049.00	2048.89										
1954.00	1953.89										
1859.00	1858.89										
1764.00	1763.89										
1669.00	1668.89										
1574.00	1573.89										
1479.00	1478.89										
1384.00	1383.89										
1289.00	1288.89										
1194.00	1193.89										
1099.00	1098.89										
999.00	998.89										
899.00	898.89										
799.00	798.89										
699.00	698.89										
599.00	598.89										
499.00	498.89										
399.00	398.89										
299.00	298.89										
199.00	198.89										
99.00	98.89										
0.00	0.00										
MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	North	East	Lat/Long	Long
7553.00	12.02	197.47	7502.80	-391.82	-327.80	-177.30	-183.44	446026.15	699820.32	32° 13' 30.83" N	103° 49' 26.61" W
7549.00	12.99	197.59	7411.03	-372.60	-351.64	-170.62	-170.62	446045.56	699825.46	32° 13' 30.83" N	103° 49' 26.61" W
7544.00	14.03	198.59	7318.66	-351.64	-351.64	-165.41	-165.41	446065.72	699830.15	32° 13' 31.04" N	103° 49' 26.61" W
7269.00	14.45	198.34	7226.58	-329.63	-329.63	-134.49	-134.49	446088.94	699840.36	32° 13' 31.26" N	103° 49' 26.38" W
7174.00	14.50	198.95	7134.60	-307.36	-307.36	-111.99	-111.99	446111.44	699847.95	32° 13' 31.48" N	103° 49' 26.38" W
7080.00	14.39	198.70	7043.57	-285.39	-285.39	-89.78	-89.78	446136.63	699855.51	32° 13' 31.70" N	103° 49' 26.20" W
6985.00	14.47	198.90	6951.56	-263.21	-263.21	-67.36	-67.36	446161.04	699863.14	32° 13' 31.92" N	103° 49' 26.11" W
6890.00	14.25	198.07	6859.53	-241.30	-241.30	-45.23	-45.23	446185.20	699871.15	32° 13' 32.14" N	103° 49' 26.01" W
6796.00	14.34	205.35	6768.44	-220.24	-220.24	-23.00	-23.00	446198.53	699878.26	32° 13' 32.36" N	103° 49' 25.91" W
6701.00	14.50	205.80	6676.43	-199.21	-199.21	-1.29	-1.29	446220.86	699880.47	32° 13' 32.58" N	103° 49' 25.79" W
6606.00	14.40	205.26	6584.44	-178.12	-178.12	0.00	0.00	446242.25	699890.68	32° 13' 32.80" N	103° 49' 25.66" W
6511.00	14.41	205.68	6492.42	-157.08	-157.08	0.00	0.00	446263.59	699910.85	32° 13' 33.02" N	103° 49' 25.53" W
6417.00	14.52	205.85	6401.40	-136.24	-136.24	0.00	0.00	446284.73	699921.05	32° 13' 33.24" N	103° 49' 25.40" W
6322.00	14.54	206.04	6309.44	-115.12	-115.12	0.00	0.00	446306.16	699931.48	32° 13' 33.46" N	103° 49' 25.27" W
6227.00	14.61	208.69	6217.50	-94.22	-94.22	0.00	0.00	446327.59	699941.81	32° 13' 33.68" N	103° 49' 25.14" W
6133.00	14.66	212.88	6126.55	-73.19	-73.19	0.00	0.00	446347.78	699954.61	32° 13' 33.90" N	103° 49' 25.03" W
6038.00	12.02	214.63	6034.12	-52.17	-52.17	0.00	0.00	446368.01	699968.01	32° 13' 34.12" N	103° 49' 24.89" W
5943.00	9.84	215.78	5940.85	-31.17	-31.17	0.00	0.00	446388.24	699977.13	32° 13' 34.34" N	103° 49' 24.77" W
5848.00	7.26	218.17	5846.91	-10.17	-10.17	0.00	0.00	446408.47	699985.59	32° 13' 34.56" N	103° 49' 24.64" W
5754.00	5.46	219.46	5753.49	0.00	0.00	0.00	0.00	446428.70	699994.17	32° 13' 34.78" N	103° 49' 24.52" W
5659.00	3.50	222.48	5658.79	0.00	0.00	0.00	0.00	446448.93	699999.93	32° 13' 35.00" N	103° 49' 24.39" W
5564.00	1.25	226.24	5563.87	0.00	0.00	0.00	0.00	446469.18	699999.93	32° 13' 35.22" N	103° 49' 24.26" W
5375.00	320.53	5374.89	5374.89	0.00	0.00	0.00	0.00	446489.43	699999.93	32° 13' 35.44" N	103° 49' 24.13" W
5280.00	244.40	5278.89	5278.89	0.00	0.00	0.00	0.00	446509.68	699999.93	32° 13' 35.66" N	103° 49' 24.00" W
5185.00	5184.89	5184.89	5184.89	0.00	0.00	0.00	0.00	446529.93	699999.93	32° 13' 35.88" N	103° 49' 23.87" W
5091.00	5090.89	5090.89	5090.89	0.00	0.00	0.00	0.00	446550.18	699999.93	32° 13' 36.10" N	103° 49' 23.74" W
4902.00	4901.89	4901.89	4901.89	0.00	0.00	0.00	0.00	446570.43	699999.93	32° 13' 36.32" N	103° 49' 23.61" W
4807.00	4808.89	4808.89	4808.89	0.00	0.00	0.00	0.00	446590.68	699999.93	32° 13' 36.54" N	103° 49' 23.48" W
4713.00	4712.89	4712.89	4712.89	0.00	0.00	0.00	0.00	446610.93	699999.93	32° 13' 36.76" N	103° 49' 23.35" W
4618.00	4617.89	4617.89	4617.89	0.00	0.00	0.00	0.00	446631.18	699999.93	32° 13' 36.98" N	103° 49' 23.22" W
4523.00	4522.89	4522.89	4522.89	0.00	0.00	0.00	0.00	446651.43	699999.93	32° 13' 37.20" N	103° 49' 23.09" W
4428.00	4427.89	4427.89	4427.89	0.00	0.00	0.00	0.00	446671.68	699999.93	32° 13' 37.42" N	103° 49' 22.96" W
4333.00	4332.89	4332.89	4332.89	0.00	0.00	0.00	0.00	446691.93	699999.93	32° 13' 37.64" N	103° 49' 22.83" W
4238.00	4237.89	4237.89	4237.89	0.00	0.00	0.00	0.00	446712.18	699999.93	32° 13' 37.86" N	103° 49' 22.70" W
4143.00	4142.89	4142.89	4142.89	0.00	0.00	0.00	0.00	446732.43	699999.93	32° 13' 38.08" N	103° 49' 22.57" W
4048.00	4047.89	4047.89	4047.89	0.00	0.00	0.00	0.00	446752.68	699999.93	32° 13' 38.30" N	103° 49' 22.44" W
3953.00	3952.89	3952.89	3952.89	0.00	0.00	0.00	0.00	446772.93	699999.93	32° 13' 38.52" N	103° 49' 22.31" W
3858.00	3857.89	3857.89	3857.89	0.00	0.00	0.00	0.00	446793.18	699999.93	32° 13' 38.74" N	103° 49' 22.18" W
3763.00	3762.89	3762.89	3762.89	0.00	0.00	0.00	0.00	446813.43	699999.93	32° 13' 38.96" N	103° 49' 22.05" W
3668.00	3667.89	3667.89	3667.89	0.00	0.00	0.00	0.00	446833.68	699999.93	32° 13' 39.18" N	103° 49' 21.92" W
3573.00	3572.89	3572.89	3572.89	0.00	0.00	0.00	0.00	446853.93	699999.93	32° 13' 39.40" N	103° 49' 21.79" W
3478.00	3477.89	3477.89	3477.89	0.00	0.00	0.00	0.00	446874.18	699999.93	32° 13' 39.62" N	103° 49' 21.66" W
3383.00	3382.89	3382.89	3382.89	0.00	0.00	0.00	0.00	446894.43	699999.93	32° 13' 39.84" N	103° 49' 21.53" W
3288.00	3287.89	3287.89	3287.89	0.00	0.00	0.00	0.00	446914.68	699999.93	32° 13' 40.06" N	103° 49' 21.40" W
3193.00	3192.89	3192.89	3192.89	0.00	0.00	0.00	0.00	446934.93	699999.93	32° 13' 40.28" N	103° 49' 21.27" W
3098.00	3097.89	3097.89	3097.89	0.00	0.00	0.00	0.00	446955.18	699999.93	32° 13' 40.50" N	103° 49' 21.14" W
2999.00	2998.89	2998.89	2998.89	0.00	0.00	0.00	0.00	446975.43	699999.93	32° 13' 40.72" N	103° 49' 21.01" W
2904.00	2903.89	2903.89	2903.89	0.00	0.00	0.00	0.00	446995.68	699999.93	32° 13' 40.94" N	103° 49' 20.88" W
2809.00	2808.89	2808.89	2808.89	0.00	0.00	0.00	0.00	447015.93	699999.93	32° 13' 41.16" N	103° 49' 20.75" W
2714.00	2713.89	2713.89	2713.89	0.00	0.00	0.00	0.00	447036.18	699999.93	32° 13' 41.38" N	103° 49' 20.62" W
2619.00	2618.89	2618.89	2618.89	0.00	0.00	0.00	0.00	447056.43	699999.93	32° 13' 41.60" N	103° 49' 20.49" W
2524.00	2523.89	2523.89	2523.89	0.00	0.00	0.00	0.00	447076.68	699999.93	32° 13' 41.82" N	103° 49' 20.36" W
2429.00	2428.89	2428.89	2428.89	0.00	0.00	0.00	0.00	447096.93	699999.93	32° 13' 42.04" N	103° 49' 20.23" W
2334.00	2333.89	2333.89	2333.89	0.00	0.00	0.00	0.00	447117.18	699999.93	32° 13' 42.26" N	103° 49' 20.10" W
2239.00	2238.89	2238.89	2238.89	0.00	0.00	0.00	0.00	447137.43	699999.93	32° 13' 42.48" N	103° 49' 19.97" W
2144.00	2143.89	2143.89	2143.89	0.00	0.00	0.00	0.00	447157.68	699999.93	32° 13' 42.70" N	103° 49' 19.84" W
2049.00	2048.89	2048.89	2048.89	0.00	0.00	0.00	0.00	447177.93	699999.93	32° 13' 42.92" N	103° 49' 19.71" W
1954.00	1953.89	1953.89	1953.89	0.00	0.00	0.00	0.00	447198.18	699999.93	32° 13' 43.14" N	103° 49' 19.58" W
1859.00	1858.89	1858.89	1858.89	0.00	0.00	0.00	0.00	447218.43	699999.93	32° 13' 43.36" N	103° 49' 19.45" W
1764.00	1763.89	1763.89	1763.89	0.00	0.00	0.00	0.00	447238.68	699999.93	32° 13' 43.58" N	103° 49