Schlumberger

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

30-015-44317

Well Reference:
S7, T24S, R31E, Eddy NM
N 32.22627 W -103.82536

I, Kurt Valentine certify that: I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of November 18, 2017 through December 18, 2017, conduct or supervise the taking of the SlimPulse surveys from a depth of 9955.00 feet to a depth of 14824.00 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 1H Well (Original Hole) API No. 30-015-44317 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.

Kurt Valentine

By
Kurt Valentine
FS

Subscribed and Sworn to before me this 3rd day of January (month) 2018 (yr)

My Commission expires:
12-20-2020

J Allemand (signature)
Notary Public

Adams County Colorado
(County State)

JENNIFER ALLEMAND
Notary Public
State of Colorado
Notary ID ...
My Commission Expires ...

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 20, 2017

OXY USA INC.

Re:

S7, T24S, R31E, Eddy NM
N 32.22627 W -103.82336

CLIENT: OXY USA INC.
WELL: Patton MDP1-18 Federal 1H
FIELD: Cotton Draw Bone Spring

RIG: HP 656
COUNTY: Eddy
API NO: 30-015-44317
JOB NO: 17MLD3191

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.

Name & Title of Surveyor	Drainhole Number	Surveyed Depths	Dates Performed	Type of Survey
Kurt Valentine FS	Patton MDP1-18 Federal 1H Original Hole	9955.00 Ft to 14824.00 Ft	November 18, 2017 to December 18, 2017	SlimPulse

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

Mike Stephens
Field Service Manager

Schlumberger

Oxy Patton MDP1 18 Federal 1H Gyro+MWD 0-14,880ft MD Survey
Geodetic Report
(Def Survey)

Report Date:	December 18, 2017 - 11:05 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	182.499 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Patton MDP1 18 Federal 1H / Oxy Patton MDP1 18 Federal 1H	**TVD Reference Datum:**	RKB=26.5'
Well:	Oxy Patton MDP1 18 Federal 1H	**TVD Reference Elevation:**	3557.100 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3530.600 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.957 °
Survey Name:	Oxy Patton MDP1 18 Federal 1H Gyro+MWD 0-14,880ft MD	**Total Gravity Field Strength:**	998.4281mgn (9.80665 Based)
Survey Date:	December 07, 2017	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	220.052 ° / 5746.533 ft / 6.272 / 0.571	**Total Magnetic Field Strength:**	48068.092 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.992 °
Location Lat / Long:	N 32° 13' 34.55711", W 103° 49' 24.10589"	**Declination Date:**	December 07, 2017
Location Grid N/E Y/X:	N 446423.550 ftUS, E 699033.750 ftUS	**Magnetic Declination Model:**	HDGM 2017
CRS Grid Convergence Angle:	0.2720 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99993757	**Grid Convergence Used:**	0.2720 °
Version / Patch:	2.10.565.0	**Total Corr Mag North->Grid North:**	6.6846 °
		Local Coord Referenced To:	Well Head

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 ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	446423.55	699033.75	N 32 13 34.56	W 103 49 24.11
	82.50	0.86	102.29	82.50	0.11	-0.13	0.60	1.04	446423.42	699034.35	N 32 13 34.56	W 103 49 24.10
	176.70	0.57	113.52	176.69	0.39	-0.47	1.73	0.34	446423.08	699035.48	N 32 13 34.55	W 103 49 24.09
	271.10	0.73	158.39	271.08	1.11	-1.22	2.38	0.55	446422.33	699036.13	N 32 13 34.54	W 103 49 24.08
	365.20	0.76	182.83	365.18	2.28	-2.40	2.57	0.34	446421.15	699036.32	N 32 13 34.53	W 103 49 24.08
	459.60	0.73	198.50	459.57	3.49	-3.59	2.35	0.22	446419.96	699036.10	N 32 13 34.52	W 103 49 24.08
	554.20	0.92	201.10	554.16	4.79	-4.87	1.88	0.20	446418.68	699035.63	N 32 13 34.51	W 103 49 24.08
	648.50	0.48	207.71	648.45	5.86	-5.93	1.42	0.47	446417.62	699035.17	N 32 13 34.50	W 103 49 24.09
	740.50	0.04	118.08	740.45	6.22	-6.28	1.27	0.52	446417.27	699035.02	N 32 13 34.49	W 103 49 24.09
	831.90	0.05	41.10	831.85	6.21	-6.27	1.33	0.06	446417.28	699035.08	N 32 13 34.50	W 103 49 24.09
	922.20	0.04	52.85	922.15	6.15	-6.22	1.38	0.02	446417.33	699035.13	N 32 13 34.50	W 103 49 24.09
	1014.00	0.03	59.00	1013.95	6.12	-6.19	1.43	0.01	446417.36	699035.18	N 32 13 34.50	W 103 49 24.09
	1105.20	0.09	355.41	1105.15	6.04	-6.11	1.44	0.09	446417.45	699035.19	N 32 13 34.50	W 103 49 24.09
	1196.50	0.06	11.07	1196.45	5.92	-5.99	1.44	0.04	446417.56	699035.19	N 32 13 34.50	W 103 49 24.09
	1288.20	0.05	33.54	1288.15	5.84	-5.91	1.47	0.03	446417.64	699035.22	N 32 13 34.50	W 103 49 24.09
	1379.80	0.06	14.30	1379.75	5.76	-5.83	1.51	0.02	446417.72	699035.26	N 32 13 34.50	W 103 49 24.09
	1471.30	0.11	348.98	1471.25	5.62	-5.69	1.50	0.07	446417.86	699035.25	N 32 13 34.50	W 103 49 24.09
	1563.30	0.05	357.38	1563.25	5.50	-5.57	1.49	0.07	446417.98	699035.24	N 32 13 34.50	W 103 49 24.09
	1658.00	0.12	333.04	1657.95	5.37	-5.44	1.44	0.08	446418.11	699035.19	N 32 13 34.50	W 103 49 24.09
	1752.30	0.08	353.03	1752.25	5.22	-5.28	1.39	0.06	446418.27	699035.14	N 32 13 34.50	W 103 49 24.09
	1846.50	0.09	345.28	1846.45	5.08	-5.15	1.36	0.02	446418.40	699035.11	N 32 13 34.51	W 103 49 24.09
	1941.30	0.05	7.57	1941.25	4.97	-5.03	1.35	0.05	446418.52	699035.10	N 32 13 34.51	W 103 49 24.09
	2036.10	0.07	354.94	2036.05	4.87	-4.94	1.35	0.03	446418.61	699035.10	N 32 13 34.51	W 103 49 24.09
	2130.80	0.08	346.42	2130.75	4.75	-4.81	1.33	0.02	446418.74	699035.07	N 32 13 34.51	W 103 49 24.09
	2225.50	0.11	335.39	2225.45	4.61	-4.67	1.27	0.04	446418.88	699035.02	N 32 13 34.51	W 103 49 24.09
	2320.20	0.12	328.61	2320.15	4.44	-4.50	1.18	0.02	446419.05	699034.93	N 32 13 34.51	W 103 49 24.09
	2414.90	0.12	328.90	2414.85	4.28	-4.33	1.08	0.00	446419.22	699034.83	N 32 13 34.51	W 103 49 24.09
	2509.70	0.07	344.95	2509.65	4.14	-4.19	1.01	0.06	446419.36	699034.76	N 32 13 34.52	W 103 49 24.09
	2604.50	0.27	343.08	2604.45	3.87	-3.92	0.93	0.21	446419.63	699034.68	N 32 13 34.52	W 103 49 24.10
	2699.30	0.07	325.93	2699.25	3.62	-3.66	0.84	0.22	446419.89	699034.59	N 32 13 34.52	W 103 49 24.10
	2793.90	0.07	341.85	2793.85	3.52	-3.55	0.79	0.02	446420.00	699034.54	N 32 13 34.52	W 103 49 24.10
	2888.80	0.07	320.25	2888.75	3.42	-3.46	0.73	0.03	446420.10	699034.48	N 32 13 34.52	W 103 49 24.10
	2983.60	0.05	336.83	2983.55	3.34	-3.37	0.68	0.03	446420.18	699034.43	N 32 13 34.52	W 103 49 24.10
	3078.30	0.05	322.67	3078.25	3.27	-3.30	0.64	0.01	446420.25	699034.39	N 32 13 34.52	W 103 49 24.10
	3172.90	0.04	324.03	3172.85	3.21	-3.24	0.59	0.01	446420.31	699034.34	N 32 13 34.52	W 103 49 24.10
	3267.90	0.04	292.42	3267.85	3.18	-3.20	0.54	0.02	446420.35	699034.29	N 32 13 34.53	W 103 49 24.10
	3362.70	0.03	301.20	3362.65	3.15	-3.18	0.49	0.01	446420.37	699034.24	N 32 13 34.53	W 103 49 24.10
	3457.60	0.03	290.59	3457.55	3.13	-3.16	0.44	0.01	446420.39	699034.19	N 32 13 34.53	W 103 49 24.10
	3552.50	0.12	90.50	3552.45	3.12	-3.15	0.52	0.16	446420.40	699034.27	N 32 13 34.53	W 103 49 24.10
	3647.50	0.30	109.36	3647.45	3.19	-3.23	0.85	0.20	446420.32	699034.60	N 32 13 34.53	W 103 49 24.10
	3742.30	0.25	86.57	3742.25	3.24	-3.30	1.30	0.13	446420.25	699035.05	N 32 13 34.52	W 103 49 24.09
	3837.20	0.08	84.64	3837.15	3.21	-3.28	1.57	0.18	446420.27	699035.32	N 32 13 34.52	W 103 49 24.09
	3932.00	0.30	102.50	3931.94	3.24	-3.33	1.88	0.24	446420.22	699035.63	N 32 13 34.52	W 103 49 24.08
	4026.90	0.07	90.56	4026.84	3.29	-3.38	2.18	0.24	446420.17	699035.93	N 32 13 34.52	W 103 49 24.08
	4121.80	0.09	56.53	4121.74	3.24	-3.34	2.30	0.05	446420.21	699036.05	N 32 13 34.52	W 103 49 24.08
	4216.70	0.26	66.03	4216.64	3.10	-3.22	2.56	0.18	446420.34	699036.31	N 32 13 34.53	W 103 49 24.08
	4311.50	0.07	73.59	4311.44	2.99	-3.11	2.81	0.20	446420.44	699036.56	N 32 13 34.53	W 103 49 24.07
	4406.40	0.07	72.57	4406.34	2.95	-3.08	2.92	0.00	446420.47	699036.67	N 32 13 34.53	W 103 49 24.07
	4501.20	0.08	36.25	4501.14	2.87	-3.01	3.01	0.05	446420.54	699036.76	N 32 13 34.53	W 103 49 24.07
	4595.90	0.15	31.93	4595.84	2.71	-2.85	3.12	0.07	446420.70	699036.87	N 32 13 34.53	W 103 49 24.07
	4690.40	0.04	77.82	4690.34	2.59	-2.74	3.22	0.13	446420.81	699036.97	N 32 13 34.53	W 103 49 24.07
	4785.20	0.04	69.24	4785.14	2.57	-2.72	3.28	0.01	446420.83	699037.03	N 32 13 34.53	W 103 49 24.07
	4880.00	0.08	22.33	4879.94	2.50	-2.64	3.33	0.06	446420.91	699037.08	N 32 13 34.53	W 103 49 24.07
	4974.40	0.05	64.60	4974.34	2.42	-2.57	3.40	0.06	446420.98	699037.15	N 32 13 34.53	W 103 49 24.07
	5069.00	0.08	23.12	5068.94	2.33	-2.49	3.46	0.06	446421.06	699037.21	N 32 13 34.53	W 103 49 24.07
	5163.80	0.04	53.84	5163.74	2.25	-2.41	3.51	0.05	446421.14	699037.26	N 32 13 34.53	W 103 49 24.07
	5258.40	0.04	56.41	5258.34	2.21	-2.37	3.57	0.00	446421.18	699037.32	N 32 13 34.53	W 103 49 24.06
	5352.90	0.04	38.83	5352.84	2.17	-2.33	3.62	0.01	446421.22	699037.37	N 32 13 34.53	W 103 49 24.06
	5447.50	0.04	36.26	5447.44	2.11	-2.27	3.66	0.00	446421.28	699037.41	N 32 13 34.53	W 103 49 24.06
	5542.10	0.03	46.72	5542.04	2.07	-2.23	3.69	0.01	446421.32	699037.44	N 32 13 34.53	W 103 49 24.06
	5636.50	0.04	53.73	5636.44	2.03	-2.19	3.74	0.01	446421.36	699037.49	N 32 13 34.54	W 103 49 24.06
	5731.30	0.21	47.68	5731.24	1.88	-2.06	3.89	0.18	446421.49	699037.64	N 32 13 34.54	W 103 49 24.06
	5826.00	0.13	104.47	5825.94	1.78	-1.97	4.13	0.19	446421.58	699037.87	N 32 13 34.54	W 103 49 24.06
	5920.70	2.18	200.02	5920.62	3.53	-3.69	3.61	2.32	446419.86	699037.36	N 32 13 34.52	W 103 49 24.06
	6015.50	5.25	205.82	6015.21	9.23	-9.29	1.11	3.26	446414.26	699034.86	N 32 13 34.47	W 103 49 24.09
	6110.30	8.66	199.53	6109.30	20.04	-19.92	-3.17	3.68	446403.63	699030.58	N 32 13 34.36	W 103 49 24.14
	6205.10	11.53	205.36	6202.62	35.60	-35.21	-9.62	3.21	446388.34	699024.13	N 32 13 34.21	W 103 49 24.22
	6299.80	11.89	205.01	6295.35	53.33	-52.60	-17.79	0.39	446370.95	699015.96	N 32 13 34.04	W 103 49 24.32
	6394.60	11.97	202.87	6388.11	71.57	-70.51	-25.74	0.47	446353.04	699008.01	N 32 13 33.86	W 103 49 24.41
	6489.30	11.96	196.10	6480.75	90.31	-88.99	-32.28	1.48	446334.57	699001.47	N 32 13 33.68	W 103 49 24.49
	6584.00	11.34	194.26	6573.50	108.96	-107.44	-37.30	0.76	446316.12	698996.46	N 32 13 33.50	W 103 49 24.55
	6678.80	11.05	194.46	6666.50	126.98	-125.27	-41.86	0.31	446298.29	698991.89	N 32 13 33.32	W 103 49 24.60
	6773.40	10.32	195.30	6759.46	144.11	-142.22	-46.36	0.79	446281.34	698987.39	N 32 13 33.15	W 103 49 24.65
	6868.20	10.35	196.31	6852.72	160.66	-158.59	-50.99	0.19	446264.97	698982.76	N 32 13 32.99	W 103 49 24.71
	6962.90	10.52	194.59	6945.85	177.37	-175.12	-55.56	0.37	446248.44	698978.19	N 32 13 32.83	W 103 49 24.76
	7057.60	10.27	194.14	7039.00	194.10	-191.67	-59.80	0.28	446231.89	698973.95	N 32 13 32.66	W 103 49 24.81
	7152.40	10.41	195.00	7132.26	210.73	-208.14	-64.08	0.22	446215.43	698969.67	N 32 13 32.50	W 103 49 24.86
	7247.10	10.48	193.30	7225.39	227.55	-224.78	-68.28	0.33	446198.78	698965.48	N 32 13 32.34	W 103 49 24.91

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 ° ' ")
	7341.80	10.57	194.10	7318.50	244.52	-241.59	-72.37	0.18	446181.98	698961.38	N 32 13 32.17	W 103 49 24.96
	7436.50	10.50	193.75	7411.60	261.49	-258.39	-76.54	0.10	446165.17	698957.21	N 32 13 32.00	W 103 49 25.01
	7531.10	10.56	194.52	7504.61	278.42	-275.16	-80.76	0.16	446148.41	698952.99	N 32 13 31.84	W 103 49 25.06
	7625.90	10.49	194.88	7597.81	295.34	-291.91	-85.16	0.10	446131.66	698948.60	N 32 13 31.67	W 103 49 25.11
	7720.60	10.52	193.95	7690.92	312.24	-308.63	-89.45	0.18	446114.94	698944.30	N 32 13 31.51	W 103 49 25.16
	7815.40	10.05	194.73	7784.20	328.80	-325.03	-93.64	0.52	446098.54	698940.11	N 32 13 31.35	W 103 49 25.21
	7910.00	10.02	193.89	7877.35	344.94	-341.00	-97.72	0.16	446082.57	698936.04	N 32 13 31.19	W 103 49 25.26
	8004.80	9.69	195.70	7970.76	360.79	-356.69	-101.86	0.48	446066.88	698931.90	N 32 13 31.03	W 103 49 25.31
	8099.40	9.85	194.89	8063.98	376.44	-372.17	-106.09	0.22	446051.40	698927.67	N 32 13 30.88	W 103 49 25.36
	8194.20	9.87	195.54	8157.38	392.28	-387.84	-110.35	0.12	446035.74	698923.41	N 32 13 30.72	W 103 49 25.41
	8289.00	9.54	192.63	8250.83	407.93	-403.33	-114.25	0.62	446020.24	698919.51	N 32 13 30.57	W 103 49 25.46
	8383.50	9.36	195.12	8344.04	423.14	-418.39	-117.96	0.47	446005.19	698915.80	N 32 13 30.42	W 103 49 25.50
	8478.30	9.15	194.83	8437.61	438.02	-433.12	-121.90	0.23	445990.46	698911.86	N 32 13 30.28	W 103 49 25.55
	8572.90	9.54	195.50	8530.95	453.01	-447.95	-125.92	0.43	445975.63	698907.84	N 32 13 30.13	W 103 49 25.60
	8667.70	9.55	195.86	8624.44	468.32	-463.08	-130.17	0.06	445960.50	698903.59	N 32 13 29.98	W 103 49 25.65
	8762.30	8.98	195.16	8717.81	483.15	-477.76	-134.25	0.61	445945.83	698899.51	N 32 13 29.84	W 103 49 25.70
	8857.10	9.15	194.29	8811.42	497.75	-492.20	-138.04	0.23	445931.38	698895.72	N 32 13 29.69	W 103 49 25.74
	8951.80	8.85	196.10	8904.96	512.20	-506.50	-141.92	0.44	445917.09	698891.84	N 32 13 29.55	W 103 49 25.79
	9046.60	9.65	192.93	8998.53	527.10	-521.25	-145.72	1.00	445902.34	698888.04	N 32 13 29.41	W 103 49 25.83
	9141.30	8.81	187.85	9092.00	542.13	-536.17	-148.49	1.23	445887.42	698885.27	N 32 13 29.26	W 103 49 25.86
	9236.10	8.45	185.86	9185.73	556.31	-550.29	-150.19	0.49	445873.30	698883.57	N 32 13 29.12	W 103 49 25.88
	9330.80	8.46	185.35	9279.40	570.22	-564.15	-151.55	0.08	445859.44	698882.21	N 32 13 28.98	W 103 49 25.90
	9425.50	7.96	183.97	9373.13	583.73	-577.62	-152.65	0.57	445845.96	698881.11	N 32 13 28.85	W 103 49 25.91
	9520.30	9.33	186.72	9466.85	597.96	-591.80	-154.01	1.51	445831.78	698879.75	N 32 13 28.71	W 103 49 25.93
	9615.00	17.96	193.32	9558.79	619.99	-613.68	-158.28	9.25	445809.91	698875.48	N 32 13 28.49	W 103 49 25.98
	9709.70	29.09	200.68	9645.50	656.33	-649.54	-169.81	12.13	445774.05	698863.95	N 32 13 28.14	W 103 49 26.12
	9804.40	40.52	201.49	9723.13	707.46	-699.87	-189.27	12.08	445723.72	698844.49	N 32 13 27.64	W 103 49 26.35
Last Gyro	9899.20	54.66	200.52	9786.91	773.69	-765.07	-214.24	14.93	445658.53	698819.53	N 32 13 27.00	W 103 49 26.64
	9955.00	58.44	199.23	9817.66	818.11	-808.85	-230.05	7.04	445614.75	698803.71	N 32 13 26.56	W 103 49 26.83
	10050.00	62.16	194.28	9864.74	898.06	-887.84	-253.76	5.98	445535.77	698780.00	N 32 13 25.78	W 103 49 27.11
	10145.00	65.94	188.45	9906.34	982.40	-971.53	-270.51	6.80	445452.08	698763.25	N 32 13 24.96	W 103 49 27.31
	10239.00	74.37	174.70	9938.35	1070.46	-1059.58	-272.65	16.41	445364.03	698761.12	N 32 13 24.09	W 103 49 27.34
	10334.00	78.45	172.60	9960.67	1161.68	-1151.33	-262.43	4.80	445272.29	698771.34	N 32 13 23.18	W 103 49 27.22
	10429.00	82.18	179.46	9976.67	1254.66	-1244.68	-255.98	8.13	445178.95	698777.79	N 32 13 22.25	W 103 49 27.15
	10524.00	92.82	181.56	9980.81	1349.37	-1339.44	-256.83	11.42	445084.19	698776.94	N 32 13 21.32	W 103 49 27.17
	10663.00	91.27	182.57	9975.85	1488.27	-1478.26	-261.84	1.33	444945.39	698771.93	N 32 13 19.94	W 103 49 27.24
	10758.00	90.21	181.29	9974.62	1583.25	-1573.19	-265.04	1.75	444850.46	698768.73	N 32 13 19.00	W 103 49 27.28
	10853.00	90.55	178.67	9973.99	1678.15	-1668.18	-265.00	2.78	444755.47	698768.76	N 32 13 18.06	W 103 49 27.28
	10945.00	90.38	174.00	9973.25	1769.59	-1759.97	-259.12	5.08	444663.70	698774.64	N 32 13 17.15	W 103 49 27.22
	11042.00	89.83	174.67	9973.07	1865.61	-1856.49	-249.55	0.89	444567.18	698784.22	N 32 13 16.20	W 103 49 27.11
	11133.00	88.97	175.23	9974.02	1955.81	-1947.13	-241.54	1.13	444476.54	698792.23	N 32 13 15.30	W 103 49 27.03
	11232.00	87.77	178.56	9976.84	2054.28	-2045.93	-236.18	3.57	444377.75	698797.59	N 32 13 14.32	W 103 49 26.97
	11327.00	88.25	184.62	9980.14	2149.17	-2140.79	-238.81	6.40	444282.90	698794.95	N 32 13 13.39	W 103 49 27.00
	11516.00	90.24	180.71	9982.63	2338.11	-2329.53	-247.60	2.32	444094.17	698786.17	N 32 13 11.52	W 103 49 27.12
	11611.00	88.80	182.63	9983.43	2433.09	-2424.47	-250.36	2.53	443999.23	698783.40	N 32 13 10.58	W 103 49 27.15
	11706.00	89.28	183.47	9985.02	2528.07	-2519.33	-255.42	1.02	443904.39	698778.35	N 32 13 9.64	W 103 49 27.22
	11800.00	88.90	184.42	9986.51	2622.02	-2613.09	-261.88	1.09	443810.63	698771.88	N 32 13 8.71	W 103 49 27.30
	11895.00	88.45	185.06	9988.71	2716.92	-2707.74	-269.73	0.82	443715.99	698764.04	N 32 13 7.78	W 103 49 27.40
	12084.00	88.11	185.42	9994.38	2905.62	-2895.86	-286.98	0.26	443527.87	698746.78	N 32 13 5.92	W 103 49 27.61
	12179.00	88.59	184.92	9997.12	3000.48	-2990.44	-295.54	0.73	443433.31	698738.23	N 32 13 4.98	W 103 49 27.71
	12298.00	89.55	183.00	9999.05	3119.42	-3109.13	-303.76	1.80	443314.62	698730.01	N 32 13 3.81	W 103 49 27.81
	12463.00	93.34	177.68	9994.88	3284.16	-3273.99	-304.74	3.96	443149.77	698729.03	N 32 13 2.18	W 103 49 27.83
	12653.00	85.29	173.12	9997.16	3472.49	-3463.16	-289.53	4.87	442960.62	698744.24	N 32 13 0.30	W 103 49 27.67
	12748.00	80.05	172.81	10009.27	3565.38	-3556.64	-277.99	5.53	442867.14	698755.77	N 32 12 59.38	W 103 49 27.54
	12937.00	80.82	178.57	10040.70	3750.35	-3742.40	-264.00	3.03	442681.39	698769.76	N 32 12 57.54	W 103 49 27.39
	13032.00	85.63	180.41	10051.91	3844.53	-3836.70	-263.17	5.42	442587.10	698770.59	N 32 12 56.61	W 103 49 27.38
	13126.00	89.31	182.07	10056.06	3938.39	-3930.57	-265.21	4.29	442493.24	698768.56	N 32 12 55.68	W 103 49 27.41
	13221.00	89.28	180.59	10057.23	4033.36	-4025.53	-267.41	1.56	442398.28	698766.36	N 32 12 54.74	W 103 49 27.44
	13315.00	89.31	181.15	10058.38	4127.32	-4119.51	-268.84	0.60	442304.30	698764.93	N 32 12 53.81	W 103 49 27.46
	13409.00	89.38	181.36	10059.46	4221.29	-4213.48	-270.90	0.24	442210.34	698762.87	N 32 12 52.88	W 103 49 27.49
	13598.00	89.42	182.59	10061.44	4410.27	-4402.36	-277.41	0.65	442021.47	698756.36	N 32 12 51.01	W 103 49 27.58
	13692.00	89.62	183.04	10062.22	4504.26	-4496.24	-282.03	0.52	441927.60	698751.74	N 32 12 50.08	W 103 49 27.64
	13786.00	89.62	182.59	10062.85	4598.26	-4590.13	-286.64	0.48	441833.72	698747.13	N 32 12 49.15	W 103 49 27.70
	13880.00	89.76	180.43	10063.36	4692.24	-4684.09	-289.12	2.30	441739.77	698744.65	N 32 12 48.22	W 103 49 27.73
	13975.00	89.55	178.84	10063.93	4787.11	-4779.08	-288.51	1.69	441644.78	698745.25	N 32 12 47.28	W 103 49 27.73
	14069.00	90.03	177.05	10064.27	4880.81	-4873.01	-285.14	1.97	441550.85	698748.62	N 32 12 46.35	W 103 49 27.69
	14258.00	89.48	176.29	10065.08	5068.83	-5061.69	-274.17	0.50	441362.18	698759.60	N 32 12 44.48	W 103 49 27.58
	14446.00	91.17	176.89	10064.01	5255.82	-5249.35	-262.98	0.95	441174.54	698770.78	N 32 12 42.63	W 103 49 27.46
	14635.00	91.41	178.31	10059.76	5444.08	-5438.13	-255.07	0.76	440985.77	698778.69	N 32 12 40.76	W 103 49 27.38
Final MWD Survey	14824.00	91.24	178.74	10055.39	5632.57	-5627.02	-250.21	0.24	440796.90	698783.56	N 32 12 38.89	W 103 49 27.33
Proj. to bit	14880.00	91.24	178.74	10054.18	5688.44	-5682.99	-248.98	0.00	440740.93	698784.79	N 32 12 38.34	W 103 49 27.32

Survey Type: Def Survey

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

Survey Program:

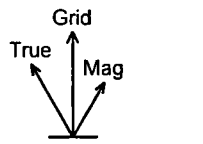
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Patton MDP1 18 Federal 1H Gyro+MWD 0-14,880ft MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Patton MDP1 18 Federal 1H Gyro+MWD 0-14,880ft MD
	1	26.500	9899.200	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Patton MDP1 18 Federal 1H Gyro+MWD
	1	9899.200	14880.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Patton MDP1 18 Federal 1H Gyro+MWD

Schlumberger

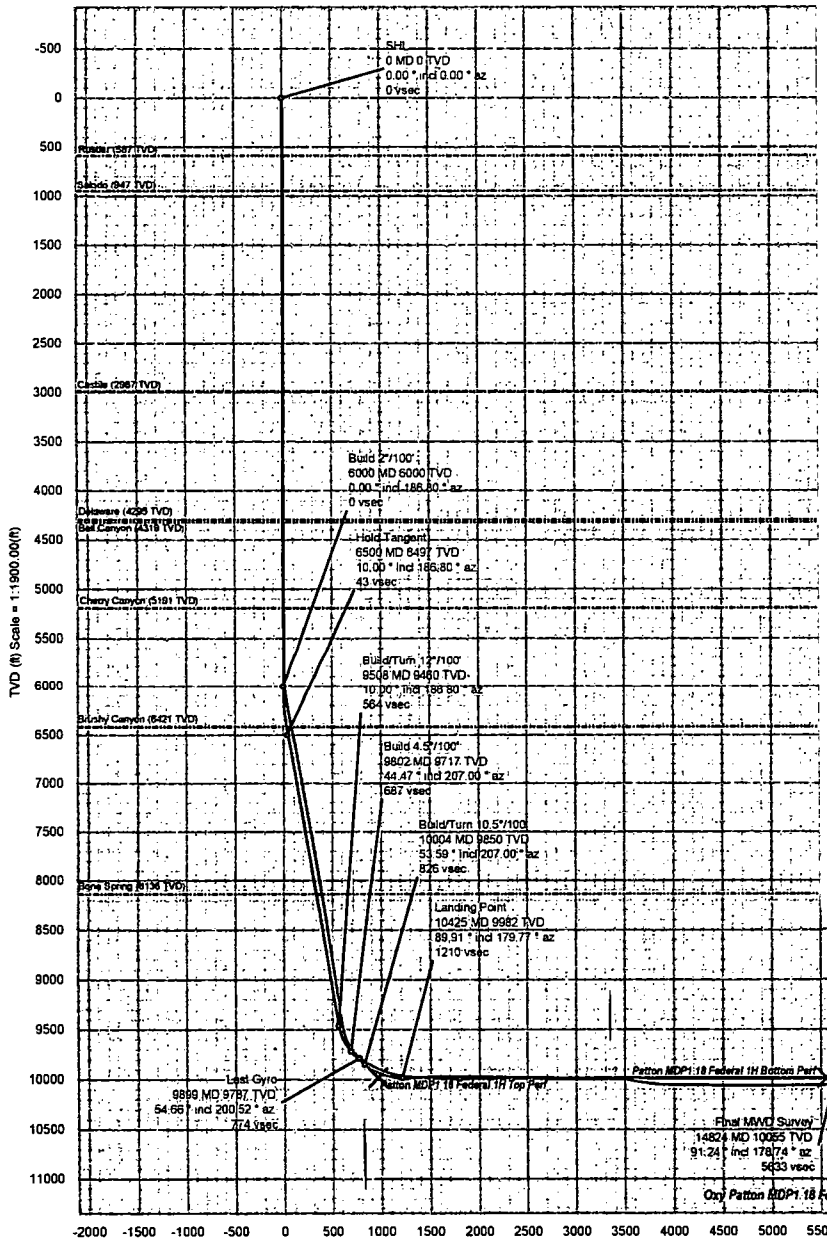
OXY

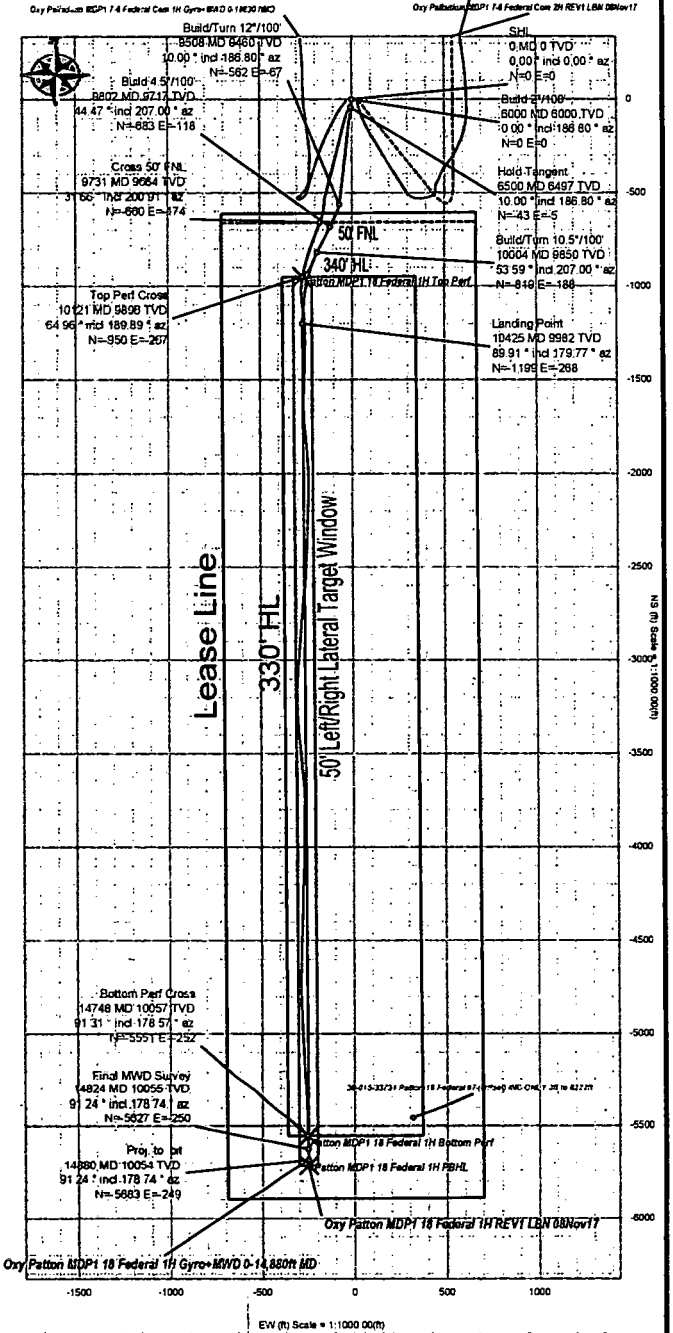
Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Patton MDP1 18 Federal 1H	NM Eddy County (NAD 83)	Oxy Patton MDP1 18 Federal 1H

Gravity & Magnetic Parameters				Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous		
Model:	HDGM 2017	Dip: 59.992°	Date: 07-Dec-2017	Lat:	N 32 13 34.56	Northing: 446423.56ftUS	Grid Conv: 0.272°		Slot:	Oxy Patton MDP1 18 Federal 1H	TVD Ref: RKB=26.5'(3557.1ft above MSL)
MagDec:	6.957°	FS: 48068.092nT	Gravity FS: 998.428mgn (9.80665 Based)	Lon:	W 103 49 24.11	Easting: 699033.75ftUS	Scale Fact: 0.99993757		Plan:	Oxy Patton MDP1 18 Federal 1H REV1 LBN 08Nov17	



Grid North
Tot Corr (M->G 6.685°)
Mag Dec (6.957°)
Grid Conv (0.272°)





Vertical Section (ft) Azim = 182.50° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W