

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

October 9, 2017

OXY USA INC.

NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 04 2017

RECEIVED

Re:

CLIENT: OXY USA INC.
WELL: Patton MDP1 18 Federal 33H
FIELD: Cotton Draw; Bone Spring

RIG: H&P 639
COUNTY: Eddy
API NO: 30-015-44338
JOB NO: 17MLD1929

32.22367 -103.81525

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>
Rasheed Atanda FE	Patton MDP1 18 Federal 33H Original Hole	501.00 Ft to 13752.00 Ft	September 7, 2017 to October 4, 2017	TelePacer SlimPulse

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

Cody Nelms
Field Service Manager

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

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 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

R. Atanda

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

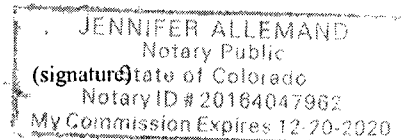
My Commission expires:

Dec 20, 2020

J. Allemand

Notary Public

Adams County Colorado
(County State)





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

(Def Survey)

Report Date:	October 05, 2017 - 12:02 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	171.661 ° (Grid North)
Field:	NM Eddy County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Patton MDP1 18 Federal 33H / Oxy Patton MDP1 18 Federal 33H	TVD Reference Datum:	RKB=26.5'
Well:	Oxy Patton MDP1 18 Federal 33H	TVD Reference Elevation:	3559,700 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3533,200 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.965 °
Survey Name:	Oxy Patton MDP1 18 Federal 33H MWD 0-13,790'	Total Gravity Field Strength:	998.4277mgn (9.80665 Based)
Survey Date:	September 26, 2017	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	194.021 ° / 5855.284 ft / 6.246 / 0.659	Total Magnetic Field Strength:	48068.901 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.992 °
Location Lat / Long:	N 32° 13' 25.21760", W 103° 48' 54.21306"	Declination Date:	September 26, 2017
Location Grid N/E Y/X:	N 445492.060 NUS, E 701606.010 NUS	Magnetic Declination Model:	HDGM 2017
CRS Grid Convergence Angle:	0.2764 °	North Reference:	Grid North
Grid Scale Factor:	0.99993851	Grid Convergence Used:	0.2764 °
Version / Patch:	2.10.544.0	Total Corr Mag North->Grid	6.6885 °
		North:	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	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	701612.66	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	18.80	-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	-8.80	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	701696.31	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	445559.36	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	701932.06	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	14.68	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	15.84	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	0.66	445755.36	702136.24	N 32 13 27.80	W 103 48 48.03
	7267.00	13.75	65.58	7198.59	-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
	7457.00	10.01	68.62	7384.62	-200.36	288.54	587.07	1.63	445780.59	702193.05	N 32 13 28.04	W 103 48 47.36
	7551.00	8.07	74.53	7477.45	-203.02	293.28	601.04	2.29	445785.33	702207.01	N 32 13 28.09	W 103 48 47.20
	7646.00	6.20	91.59	7571.72	-202.96	294.92	612.60	2.95	445786.96	702218.57	N 32 13 28.11	W 103 48 47.07
	7741.00	5.02										

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 26.57	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 20.78	W 103 48 46.17
	9618.00	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	444658.00	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 46.40
	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	656.43	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	702276.90	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	702296.01	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	702317.48	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 37.48	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-
	1	501.000	13790.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Patton MDP1 18 Federal 33H MWD 0-

Schlumberger**OXY**

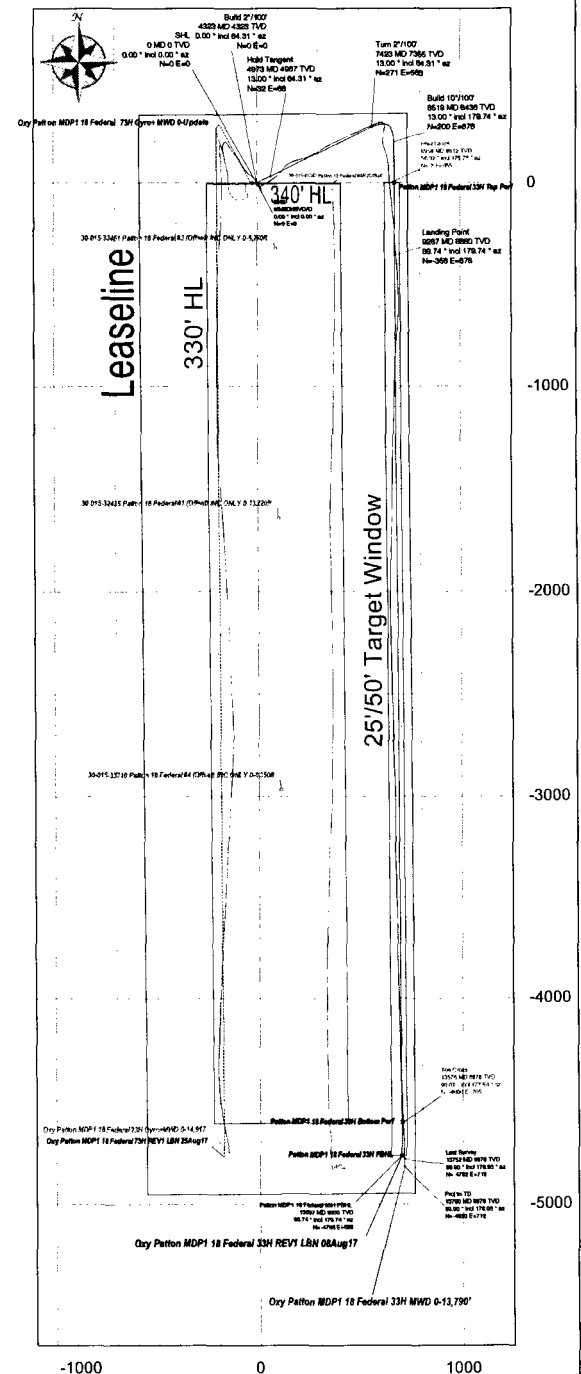
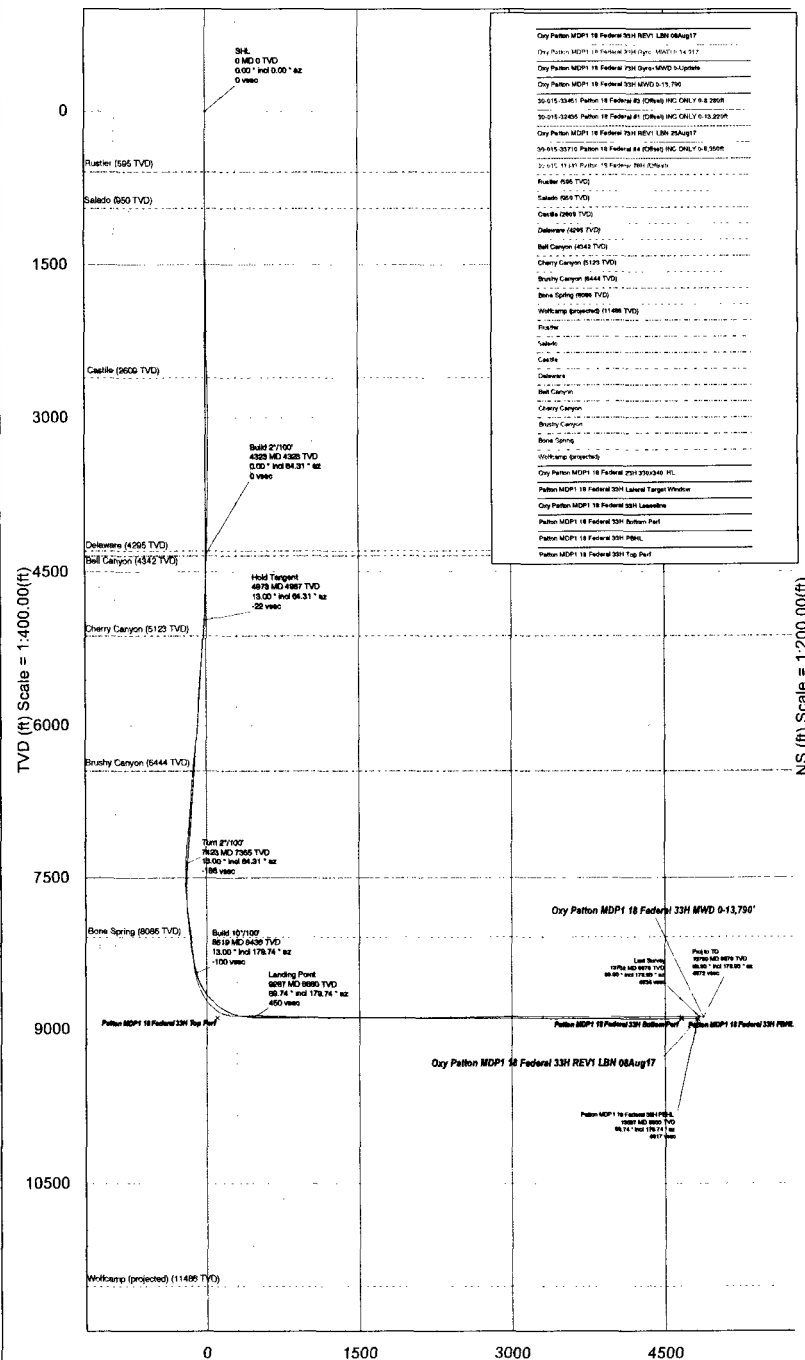
Borehole: Original Borehole Well: Oxy Patton MDP1 18 Federal 33H Field: NM Eddy County (NAD 83) Structure: Oxy Patton MDP1 18 Federal 33H

Gravity & Magnetic Parameters: Model: HGM 3017 Dip: 88.992° Date: 28-Sep-2017 Surface Location: NAD83 New Mexico State Plane, Eastern Zone, US Foot Lat: N 28 10 36.22 Northing: 445,892.28708 East Conv: 0.2764° Easting: 701806.01708 Scale Fact: 0.99993661 Station: Oxy Patton MDP1 18 Federal 33H TVD Ref: RKB-26.5' (2656.78 above MBL) Mag Dec: 6.965° FB: 48095.50107 Gravity FB: 989.433mgals (9.80665 Secs) Lon: W 103 48 54.31 Ending: 701806.01708 Scale Fact: 0.99993661 Plan: Oxy Patton MDP1 18 Federal 33H REV1 LBN 08Aug17

Critical Point	MD	INCL	AZM	TVL	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	565.00	0.00	64.31	565.00	0.00	0.00	0.00	0.00
Salado	650.00	0.00	64.31	650.00	0.00	0.00	0.00	0.00
Castle	2606.00	0.00	64.31	2606.00	0.00	0.00	0.00	0.00
Delaware	4295.00	0.00	64.31	4295.00	0.00	0.00	0.00	0.00
Build 271007	4323.00	0.00	64.31	4323.00	0.00	0.00	0.00	0.00
Ball Canyon	4342.00	0.38	64.31	4342.00	-0.02	0.09	0.09	2.00
Hold Target	4972.08	13.00	64.31	4972.08	-21.60	31.83	66.16	2.00
Cherry Canyon	5123.65	13.00	64.31	5123.65	-32.61	47.40	90.53	0.00
Brushy Canyon	6444.40	13.00	64.31	6444.40	-123.55	179.50	373.35	0.00
Turn 271007	7422.89	13.00	64.31	7354.54	-185.24	270.72	562.78	0.00
Bone Spring	8163.37	8.01	150.81	8096.00	-162.74	261.73	683.56	2.00
Build 1071007	8519.16	13.00	176.74	8435.94	-99.87	200.00	675.84	2.00
Landing Point	9296.56	86.74	179.74	8890.00	450.29	-355.67	678.38	10.00
Patton MDP1 18 Federal 33H PBHL	13967.02	86.74	179.74	8600.00	4815.07	-4785.04	666.56	0.00
Whitcamp (projected)	NaN	NaN	NaN	11496.00	NaN	NaN	NaN	NaN

Grid
True
Mag

Grid North
Tot Corr (M-G 6.889°)
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)