

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)



**NM OIL CONSERVATION**

ARTESIA DISTRICT

DEC 04 2017

RECEIVED

October 20, 2017

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

Re:

18, 24S, 31E, Eddy NM  
N 32.22418 W -103.80931

CLIENT: Oxy USA Inc  
WELL: Patton MDP1-18 Federal 5H  
FIELD: Cotton Draw Bone Spring

RIG: H&P 657  
COUNTY: Eddy  
API NO: 30-015-44272  
JOB NO: 17MLD3189

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 &amp; Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Aaron Simon FE	Patton MDP1-18 Federal 5H Original Hole	4250.00 Ft to 15077.00 Ft	October 12, 2017 to October 20, 2017	TelePacer SlimPulse

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

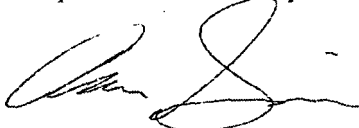
Field Service Manager

Schlumberger Drilling and Measurements  
Drilling Group  
Geo Market Area: South West Texas Basin  
7220 W I-H 20  
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Phone : (432) 742-5400 (Main)  
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# Schlumberger

Well Reference:  
18, 24S, 31E, Eddy NM  
N 32.22418 W -103.80931

I, Aaron Simon certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of October 12, 2017 through October 20, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 4250.00 feet to a depth of 15077.00 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 5H Well (Original Hole) API No. 30-015-44272 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedurcs as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By   
Aaron Simon  
FE

Subscribed and Sworn to before me this 23 day of October (month) 2017 (yr)

My Commission expires:  
12-20-2020

  
Notary Public  
Adams County Colorado  
(County State)

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

## Oxy Patton MDP1 18 Federal 5H Gyro+MWD 0-15,115' Survey Geodetic Report

(Def Survey)



<b>Report Date:</b> October 21, 2017 - 07:39 PM <b>Client:</b> OXY <b>Field:</b> NM Eddy County (NAD 83)	<b>Survey / DLS Computation:</b> Minimum Curvature / Lubinski <b>Vertical Section Azimuth:</b> 188.350 ° (Grid North) <b>Vertical Section Origin:</b> 0.000 ft, 0.000 ft	
<b>Structure / Slot:</b> Oxy Patton MDP1 18 Federal 5H / Oxy Patton MDP1 18 Federal 5H <b>Wall:</b> Oxy Patton MDP1 18 Federal 5H <b>Borehole:</b> Original Borehole <b>UWI / API#:</b> Unknown / Unknown <b>Survey Name:</b> Oxy Patton MDP1 18 Federal 5H Gyro+MWD 0-15,115' <b>Survey Date:</b> October 16, 2017 <b>Tort / AHD / DDI / ERD Ratio:</b> 227.230 ° / 5976.217 ft / 6.312 / 0.597 <b>Coordinate Reference System:</b> NAD83 New Mexico State Plane, Eastern Zone, US Feet <b>Location Lat / Long:</b> N 32° 13' 27.05012", W 103° 48' 33.52449" <b>Location Grid N/E Y/X:</b> N 445685.860 ftUS, E 703382.250 ftUS <b>CRS Grid Convergence Angle:</b> 0.2794 ° <b>Grid Scale Factor:</b> 0.99993916 <b>Version / Patch:</b> 2.10.565.0	<b>TVD Reference Datum:</b> RKB=26.5' <b>TVD Reference Elevation:</b> 3550.300 ft above MSL <b>Seabed / Ground Elevation:</b> 3523.800 ft above MSL <b>Magnetic Declination:</b> 6.956 ° <b>Total Gravity Field Strength:</b> 968.4289mgm (9.80665 Based) <b>Gravity Model:</b> GARM <b>Total Magnetic Field Strength:</b> 48083.065 nT <b>Magnetic Dip Angle:</b> 59.989 ° <b>Inclination Date:</b> October 16, 2017 <b>Magnetic Declination Model:</b> HDGM 2017 <b>North Reference:</b> Grid North <b>Grid Convergence Used:</b> 0.2794 ° <b>Total Corr Mag North-&gt;Grid North:</b> 6.6765 ° <b>Local Coord Referenced To:</b> Well Head	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (m)	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	445685.86	703382.25	N 32 13 27.05 W 103 48 33.52	
	99.52	0.14	245.77	99.52	0.07	-0.05	-0.11	0.14	445685.81	703382.14	N 32 13 27.05 W 103 48 33.53	
	192.02	0.14	292.62	192.02	0.10	-0.05	-0.32	0.12	445685.81	703381.93	N 32 13 27.05 W 103 48 33.53	
	284.52	0.04	273.54	284.52	0.07	-0.01	-0.45	0.11	445685.85	703381.80	N 32 13 27.05 W 103 48 33.53	
	377.02	0.31	125.77	377.02	0.19	-0.15	-0.28	0.37	445685.71	703381.87	N 32 13 27.05 W 103 48 33.53	
	469.52	0.73	139.89	469.52	0.70	-0.75	0.30	0.47	445685.11	703382.55	N 32 13 27.04 W 103 48 33.52	
	562.02	0.86	151.52	562.01	1.64	-1.81	1.01	0.22	445684.05	703383.26	N 32 13 27.03 W 103 48 33.51	
	654.52	0.86	152.72	654.50	2.76	-3.04	1.66	0.02	445682.82	703383.51	N 32 13 27.02 W 103 48 33.51	
	747.02	0.64	155.98	746.99	3.76	-4.13	2.19	0.24	445681.73	703384.44	N 32 13 27.01 W 103 48 33.50	
	841.49	0.27	189.29	841.45	4.43	-4.83	2.37	0.47	445681.03	703384.62	N 32 13 27.00 W 103 48 33.50	
	904.52	0.22	220.94	904.48	4.68	-5.06	2.26	0.23	445680.80	703384.51	N 32 13 27.00 W 103 48 33.50	
	968.93	0.22	224.23	968.89	4.98	-5.33	2.02	0.01	445680.53	703384.27	N 32 13 27.00 W 103 48 33.50	
	1093.41	0.21	231.54	1093.37	5.26	-5.57	1.76	0.03	445680.29	703384.01	N 32 13 26.99 W 103 48 33.50	
	1187.93	0.21	229.95	1187.89	5.51	-5.79	1.49	0.01	445680.07	703383.74	N 32 13 26.99 W 103 48 33.51	
	1282.45	0.21	234.51	1282.41	5.76	-6.00	1.21	0.02	445679.86	703383.46	N 32 13 26.99 W 103 48 33.51	
	1376.99	0.22	236.42	1376.95	6.00	-6.20	0.92	0.01	445679.66	703383.17	N 32 13 26.99 W 103 48 33.51	
	1471.43	0.22	239.50	1471.39	6.24	-6.39	0.61	0.01	445679.47	703382.86	N 32 13 26.99 W 103 48 33.52	
	1565.79	0.23	238.74	1565.75	6.47	-6.58	0.30	0.01	445679.28	703382.55	N 32 13 26.98 W 103 48 33.52	
	1660.16	0.20	234.33	1660.12	6.71	-6.78	0.00	0.04	445679.08	703382.25	N 32 13 26.98 W 103 48 33.52	
	1754.70	0.22	236.71	1754.66	6.94	-6.97	-0.29	0.02	445678.89	703381.96	N 32 13 26.98 W 103 48 33.53	
	1849.14	0.20	245.57	1849.10	7.15	-7.14	-0.59	0.04	445678.72	703381.66	N 32 13 26.98 W 103 48 33.53	
	1943.61	0.22	244.21	1943.57	7.34	-7.29	-0.90	0.02	445678.57	703381.35	N 32 13 26.98 W 103 48 33.54	
	2038.05	0.23	241.92	2038.01	7.56	-7.46	-1.23	0.01	445678.40	703381.02	N 32 13 26.98 W 103 48 33.54	
	2132.43	0.21	240.76	2132.39	7.77	-7.63	-1.55	0.02	445678.23	703380.70	N 32 13 26.97 W 103 48 33.54	
	2226.70	0.22	246.37	2226.65	7.98	-7.79	-1.87	0.02	445678.07	703380.38	N 32 13 26.97 W 103 48 33.55	
	2321.22	0.21	240.00	2321.17	8.18	-7.95	-2.18	0.03	445677.91	703380.07	N 32 13 26.97 W 103 48 33.55	
	2415.66	0.20	248.17	2415.61	8.37	-8.09	-2.48	0.03	445677.77	703379.77	N 32 13 26.97 W 103 48 33.55	
	2510.06	0.23	242.95	2510.01	8.56	-8.24	-2.81	0.04	445677.62	703379.44	N 32 13 26.97 W 103 48 33.56	
	2604.39	0.23	245.17	2604.34	8.78	-8.41	-3.15	0.01	445677.45	703379.10	N 32 13 26.97 W 103 48 33.56	
	2698.66	0.20	248.11	2698.61	8.96	-8.55	-3.47	0.03	445677.31	703378.78	N 32 13 26.97 W 103 48 33.57	
	2793.26	0.21	250.62	2793.21	9.13	-8.67	-3.79	0.01	445677.19	703378.46	N 32 13 26.96 W 103 48 33.57	
	2887.85	0.23	243.34	2887.80	9.32	-8.81	-4.12	0.04	445677.05	703378.13	N 32 13 26.96 W 103 48 33.57	
	2982.12	0.21	241.54	2982.07	9.53	-8.98	-4.44	0.02	445676.88	703377.81	N 32 13 26.96 W 103 48 33.58	
	3076.51	0.20	251.95	3076.46	9.70	-9.11	-4.75	0.04	445676.75	703377.50	N 32 13 26.96 W 103 48 33.58	
	3171.02	0.21	261.38	3170.97	9.77	-9.13	-5.08	0.11	445676.73	703377.17	N 32 13 26.96 W 103 48 33.58	
	3265.46	0.27	265.85	3265.41	9.81	-9.11	-5.47	0.09	445676.75	703376.78	N 32 13 26.96 W 103 48 33.59	
	3359.99	0.23	249.52	3359.94	9.95	-9.19	-5.87	0.09	445676.67	703376.38	N 32 13 26.96 W 103 48 33.59	
	3454.42	0.22	250.92	3454.37	10.12	-9.32	-6.22	0.01	445676.54	703376.03	N 32 13 26.96 W 103 48 33.60	
	3548.79	0.23	255.44	3548.74	10.28	-9.43	-6.57	0.02	445676.43	703375.68	N 32 13 26.96 W 103 48 33.60	
	3643.22	0.24	256.55	3643.16	10.43	-9.52	-6.95	0.01	445676.34	703375.30	N 32 13 26.96 W 103 48 33.61	
	3737.73	0.22	245.62	3737.67	10.60	-9.64	-7.31	0.05	445676.22	703374.94	N 32 13 26.96 W 103 48 33.61	
	3832.03	0.23	254.13	3831.97	10.78	-9.77	-7.65	0.04	445676.09	703374.60	N 32 13 26.95 W 103 48 33.61	
	3926.65	0.24	265.17	3926.59	10.83	-9.77	-8.03	0.13	445676.09	703374.22	N 32 13 26.95 W 103 48 33.62	
	4021.20	0.25	227.05	4021.14	10.97	-9.86	-8.37	0.25	445676.00	703373.88	N 32 13 26.95 W 103 48 33.62	
	4115.73	0.25	268.86	4115.67	11.16	-10.00	-8.73	0.19	445675.86	703373.52	N 32 13 26.95 W 103 48 33.63	
	4211.84	0.25	311.14	4211.78	11.08	-9.87	-9.09	0.19	445675.99	703373.16	N 32 13 26.95 W 103 48 33.63	
Last Gyro	4250.00	0.13	326.90	4249.94	11.01	-9.78	-9.18	0.34	445676.08	703373.07	N 32 13 26.95 W 103 48 33.63	
	4434.00	0.16	341.02	4433.94	10.62	-9.36	-9.38	0.03	445676.50	703372.87	N 32 13 26.96 W 103 48 33.63	
	4484.00	0.20	32.91	4483.94	10.48	-9.22	-9.35	0.32	445676.64	703372.90	N 32 13 26.96 W 103 48 33.63	
	4578.00	0.18	190.55	4577.94	10.48	-9.23	-9.29	0.40	445676.63	703372.96	N 32 13 26.96 W 103 48 33.63	
	4673.00	0.20	206.22	4672.94	10.79	-9.52	-9.39	0.06	445676.34	703372.86	N 32 13 26.96 W 103 48 33.63	
	4767.00	0.20	201.96	4766.94	11.10	-9.82	-9.53	0.02	445676.04	703372.73	N 32 13 26.95 W 103 48 33.64	
	4862.00	0.16	130.54	4861.94	11.33	-10.06	-9.49	0.22	445675.80	703372.76	N 32 13 26.95 W 103 48 33.64	
	5051.00	0.13	201.22	5050.94	11.68	-10.43	-9.36	0.09	445675.43	703372.89	N 32 13 26.95 W 103 48 33.63	
	5240.00	0.29	220.99	5239.94	12.29	-10.99	-9.75	0.09	445674.87	703372.50	N 32 13 26.94 W 103 48 33.64	
	5334.00	0.16	68.97	5333.94	12.43	-11.13	-9.79	0.47	445674.73	703372.46	N 32 13 26.94 W 103 48 33.64	
	5524.00	0.20	178.57	5523.93	12.63	-11.36	-9.53	0.16	445674.50	703372.72	N 32 13 26.94 W 103 48 33.64	
	5618.00	0.20	355.17	5617.93	12.63	-11.36	-9.54	0.43	445674.50	703372.71	N 32 13 26.94 W 103 48 33.64	
	5713.00	0.18	9.81	5712.93	12.32	-11.05	-9.53	0.06	445674.81	703372.72	N 32 13 26.94 W 103 48 33.64	
	5807.00	0.18	153.47	5806.93	12.29	-11.04	-9.44	0.36	445674.82	703372.61	N 32 13 26.94 W 103 48 33.63	
	5902.00	0.33	225.67	5901.93	12.63	-11.36	-9.57	0.34	445674.50	703372.68	N 32 13 26.94 W 103 48 33.64	
	5995.00	0.79	144.14	5994.93	13.30	-12.07	-9.38	0.87	445673.79	703372.87	N 32 13 26.93 W 103 48 33.63	
	6090.00	0.52	84.19	6089.92	13.67	-12.56	-8.57	0.73	445673.30	703373.68	N 32 13 26.93 W 103 48 33.62	
	6184.00	0.64	38.50	6183.92	13.11	-12.10	-7.82	0.49	445673.76	703374.43	N 32 13 26.93 W 103 48 33.62	
	6279.00	1.60	25.73	6278.90	11.38	-10.49	-6.91	1.04	445673.37	703375.34	N 32 13 26.95 W 103 48 33.61	
	6373.00	2.96	15.02	6372.82	7.72	-6.97	-5.72	1.51	445678.89	703376.53	N 32 13 26.98 W 103 48 33.59	
	6467.00	4.34	11.42	6466.63	1.76	-1.13	-4.38	1.49	445684.73	703377.87	N 32 13 27.04 W 103 48 33.58	
	6562.00	5.18	358.34	6561.31	-6.05	6.68	-3.80	1.44	445692.54	703378.45	N 32 13 27.12 W 103 48 33.57	
	6656.00	6.40	347.91	6654.83	-15.14	16.04	-5.02	1.71	445701.90	703377.23	N 32 13 27.21 W 103 48 33.58	
	6751.00	7.50	340.58	6749.13	-25.59	27.07	-8.19	1.49	445712.92	703374.06	N 32 13 27.32 W 103 48 33.62	
	6845.00	8.49	335.92	6842.22	-36.88	39.19	-13.06	1.26	445725.04	703369.19	N 32 13 27.44 W 103 48 33.67	
	6940.00	9.48	328.52	6936.05	-48.80	52.26	-20.00	1.60	445738.12	703362.25	N 32 13 27.57 W 103 48 33.75	
	7034.00	11.93	314.11	7028.43	-60.43	65.63	-31.03	3.84	44			

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 ° ' '')
	7600.00	22.19	270.51	7563.25	-83.05	113.70	-202.79	2.16	445799.55	703179.47	N 32 13 28.18 W 103 48 35.88	
	7695.00	21.09	265.55	7651.56	-76.81	112.53	-237.78	2.25	445798.39	703144.49	N 32 13 28.18 W 103 48 36.29	
	7789.00	20.94	267.10	7739.33	-66.98	107.47	-271.02	3.23	445793.32	703111.25	N 32 13 28.13 W 103 48 36.67	
	7883.00	21.01	247.60	7827.13	-52.27	97.30	-302.98	3.61	445783.15	703079.29	N 32 13 28.03 W 103 48 37.05	
	7978.00	19.88	238.00	7916.17	-33.10	82.24	-332.43	3.72	445768.10	703049.84	N 32 13 27.88 W 103 48 37.39	
	8073.00	17.56	238.69	8006.14	-13.49	66.23	-358.38	2.45	445752.09	703023.89	N 32 13 27.72 W 103 48 37.69	
	8167.00	14.41	243.83	8096.50	2.19	53.70	-381.00	3.67	445739.56	703001.28	N 32 13 27.60 W 103 48 37.96	
	8262.00	10.79	251.04	8189.20	12.98	45.60	-400.02	4.15	445731.45	702982.25	N 32 13 27.52 W 103 48 38.18	
	8356.00	7.09	262.59	8282.05	18.59	41.99	-414.10	4.38	445727.85	702968.17	N 32 13 27.49 W 103 48 38.34	
	8451.00	5.11	282.80	8375.52	19.86	42.77	-424.05	3.04	445728.03	702958.23	N 32 13 27.49 W 103 48 38.46	
	8545.00	5.39	312.92	8470.14	17.03	46.10	-431.36	2.91	445731.96	702950.91	N 32 13 27.53 W 103 48 38.54	
	8734.00	5.09	339.74	8558.38	4.63	60.02	-440.77	1.29	445745.87	702941.51	N 32 13 27.67 W 103 48 38.65	
	8828.00	5.37	341.00	8751.99	-2.94	68.09	-443.64	0.32	445753.94	702938.63	N 32 13 27.75 W 103 48 38.68	
	8923.00	6.15	326.90	8846.51	-10.70	76.55	-447.87	1.69	445762.41	702934.41	N 32 13 27.83 W 103 48 38.73	
	9017.00	7.54	319.94	8939.84	-18.57	85.49	-454.59	1.72	445771.35	702927.69	N 32 13 27.92 W 103 48 38.81	
	9112.00	8.65	311.12	9033.89	-26.58	94.96	-463.98	1.75	445780.82	702918.30	N 32 13 28.01 W 103 48 38.92	
	9206.00	8.85	304.61	9126.80	-33.60	103.72	-475.26	1.07	445788.57	702907.02	N 32 13 28.10 W 103 48 39.05	
	9300.00	9.34	289.97	9219.62	-39.61	111.64	-487.82	0.94	445797.49	702894.46	N 32 13 28.18 W 103 48 39.20	
	9395.00	10.50	293.42	9313.20	-44.70	118.93	-502.44	1.70	445804.78	702879.84	N 32 13 28.25 W 103 48 39.37	
	9477.00	11.19	284.44	9393.74	-47.49	123.88	-517.00	2.22	445809.73	702865.28	N 32 13 28.30 W 103 48 39.54	
	9571.00	15.36	238.67	9485.45	-40.49	119.67	-536.53	11.65	445805.52	702845.75	N 32 13 28.26 W 103 48 39.76	
	9666.00	18.81	222.56	9576.30	-19.77	101.83	-557.65	6.13	445787.69	702824.63	N 32 13 28.08 W 103 48 40.01	
	9760.00	30.03	216.32	9661.76	13.65	71.62	-581.92	12.23	445757.47	702800.37	N 32 13 27.79 W 103 48 40.29	
	9855.00	40.94	214.75	9739.00	62.67	26.75	-613.84	11.52	445712.61	702768.45	N 32 13 27.34 W 103 48 40.67	
	9949.00	48.26	210.89	9805.90	122.74	-28.73	-649.45	8.30	445657.13	702732.84	N 32 13 26.80 W 103 48 41.09	
	10044.00	52.70	208.86	9866.34	190.91	-92.28	-685.90	4.96	445593.59	702696.39	N 32 13 26.17 W 103 48 41.51	
	10138.00	55.64	208.01	9921.36	262.48	-159.29	-722.18	3.21	445526.58	702660.12	N 32 13 25.51 W 103 48 41.94	
	10232.00	66.68	195.67	9968.77	342.30	-235.56	-752.24	16.41	445450.31	702630.06	N 32 13 24.76 W 103 48 42.29	
	10327.00	77.88	186.14	9995.70	432.45	-324.20	-769.08	15.16	445361.68	702613.22	N 32 13 23.88 W 103 48 42.50	
	10421.00	90.38	174.92	10005.32	524.74	-417.37	-769.84	17.81	445268.52	702612.46	N 32 13 22.96 W 103 48 42.51	
	10516.00	95.89	176.82	10000.13	617.32	-511.94	-763.00	6.13	445173.95	702619.29	N 32 13 22.02 W 103 48 42.44	
	10572.00	93.30	177.65	9995.64	672.08	-567.69	-760.31	4.86	445118.21	702621.99	N 32 13 21.47 W 103 48 42.41	
	10668.00	91.55	180.40	9991.67	784.75	-681.58	-758.72	3.47	445024.32	702623.59	N 32 13 20.54 W 103 48 42.39	
	10761.00	90.93	179.88	9989.61	858.75	-756.56	-758.95	0.85	444929.35	702623.35	N 32 13 19.90 W 103 48 42.40	
	10855.00	89.45	181.56	9989.30	951.91	-850.54	-760.13	2.38	444835.37	702622.17	N 32 13 18.67 W 103 48 42.42	
	10950.00	89.59	181.14	9990.09	1046.20	-945.51	-762.37	0.47	444740.41	702619.93	N 32 13 17.73 W 103 48 42.45	
	11044.00	89.65	181.84	9990.71	1138.52	-1039.48	-764.81	0.75	444646.45	702617.49	N 32 13 16.80 W 103 48 42.49	
	11139.00	89.45	180.76	9991.45	1233.80	-1134.45	-768.97	1.15	444551.48	702615.33	N 32 13 15.86 W 103 48 42.52	
	11233.00	89.59	178.62	9992.24	1326.72	-1228.44	-766.46	2.28	444457.50	702615.84	N 32 13 14.93 W 103 48 42.52	
	11327.00	89.52	178.84	9992.97	1419.40	-1322.41	-764.37	0.25	444363.53	702617.92	N 32 13 14.00 W 103 48 42.50	
	11422.00	89.62	179.43	9993.68	1513.17	-1417.40	-762.94	0.63	444268.55	702619.36	N 32 13 13.06 W 103 48 42.49	
	11516.00	89.48	179.24	9995.15	1606.84	-1505.38	-760.76	0.13	444080.58	702621.54	N 32 13 11.20 W 103 48 42.47	
	11705.00	89.42	179.32	9996.07	1792.65	-1700.37	-759.56	0.11	443985.60	702622.73	N 32 13 10.26 W 103 48 42.46	
	11894.00	89.45	179.09	9997.93	1979.24	-1889.34	-756.94	0.12	443796.64	702625.36	N 32 13 8.39 W 103 48 42.44	
	12083.00	89.59	179.86	9999.51	2165.96	-2078.32	-755.21	0.41	443607.67	702627.09	N 32 13 6.52 W 103 48 42.43	
	12177.00	89.62	179.41	10000.16	2258.88	-2172.32	-754.61	0.48	443513.68	702627.69	N 32 13 5.59 W 103 48 42.43	
	12272.00	89.48	178.89	10000.91	2352.65	-2267.31	-753.20	0.57	443418.70	702629.10	N 32 13 4.65 W 103 48 42.42	
	12461.00	89.52	178.88	10002.56	2539.07	-2456.26	-749.52	0.02	443229.75	702632.77	N 32 13 2.78 W 103 48 42.39	
	12649.00	89.66	178.58	10003.90	2724.42	-2644.21	-745.36	0.18	443041.81	702636.94	N 32 13 0.92 W 103 48 42.35	
	12838.00	89.45	178.70	10005.37	2910.71	-2833.15	-740.87	0.13	442852.88	702641.42	N 32 12 59.05 W 103 48 42.31	
	13027.00	89.28	179.46	10007.47	3097.23	-3022.12	-737.84	0.41	442663.93	702644.46	N 32 12 57.18 W 103 48 42.28	
	13216.00	89.48	179.16	10009.51	3283.87	-3211.09	-735.56	0.19	442474.97	702646.73	N 32 12 55.31 W 103 48 42.27	
	13404.00	89.35	178.90	10011.43	3469.38	-3399.05	-732.38	0.15	442287.02	702649.92	N 32 12 53.45 W 103 48 42.24	
	13499.00	89.21	179.20	10012.62	3563.12	-3494.03	-730.80	0.35	442192.05	702651.49	N 32 12 52.51 W 103 48 42.23	
	13593.00	89.76	179.34	10013.47	3655.94	-3588.02	-729.61	0.60	442098.06	702652.69	N 32 12 51.58 W 103 48 42.22	
	13688.00	89.38	178.96	10014.18	3749.71	-3683.01	-728.20	0.57	442003.08	702654.10	N 32 12 50.64 W 103 48 42.21	
	13782.00	89.17	178.19	10015.37	3842.34	-3776.97	-725.86	0.85	441909.13	702656.44	N 32 12 49.71 W 103 48 42.19	
	13876.00	90.07	178.23	10015.99	3934.87	-3870.92	-722.92	0.96	441815.18	702659.37	N 32 12 48.78 W 103 48 42.16	
	13971.00	89.69	179.57	10016.19	4028.58	-3965.90	-722.10	1.47	441720.21	702661.19	N 32 12 47.84 W 103 48 42.14	
	14065.00	90.17	181.89	10016.31	4121.74	-4059.89	-722.30	2.52	441626.23	702660.00	N 32 12 46.91 W 103 48 42.16	
	14160.00	90.10	181.31	10016.08	4216.08	-4154.85	-724.95	0.61	441531.27	702657.35	N 32 12 45.97 W 103 48 42.20	
	14254.00	90.41	181.26	10015.67	4309.37	-4248.83	-727.06	0.33	441437.30	702655.24	N 32 12 45.04 W 103 48 42.23	
	14348.00	89.79	181.44	10015.50	4402.67	-4342.80	-729.27	0.69	441343.33	702653.02	N 32 12 44.11 W 103 48 42.26	
	14443.00	89.97	181.74	10015.70	4497.01	-4437.76	-731.91	0.37	441248.38	702650.99	N 32 12 43.17 W 103 48 42.30	
	14538.00	90.89	181.21	10014.98	4591.32	-4532.73	-734.35	1.12	441153.42	702647.04	N 32 12 42.23 W 103 48 42.33	
	14632.00	89.76	180.99	10014.45	4684.56	-4627.71	-736.16	1.22	441059.45	702646.14	N 32 12 41.30 W 103 48 42.36	
	14727.00	90.45	181.03	10014.28	4778.79	-4721.69	-737.83	0.73	440964.47	702644.46	N 32 12 40.36 W 103 48 42.38	
	14821.00	89.89	180.54	10014.17	4871.97	-4815.68	-739.12	0.96	440870.48	702643.18	N 32 12 39.43 W 103 48 42.40	
	14915.00	90.03	182.07	10014.40	4965.25	-4909.65	-741.26	1.67	440776.52	702641.03	N 32 12 38.50 W 103 48 42.43	
	15010.00	89.28	182.32	10014.97	5059.70	-5004.58	-744.90	0.83	440681.59	702637.50	N 32 12 37.57 W 103 48 42.46	
	15077.00	89.55	182.12	10015.65	5126.32	-5071.53	-747.50	0.50	440614.65	702634.80	N 32 12 36.90 W 103 48 42.51	
Last Survey Proj. to TD	15115.00	89.55	182.12	10015.95	5164.09	-5109.50	-748.90	0.00	440576.68	702633.40	N 32 12 36.53 W 103 48 42.53	

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 5H Gyro+MWD 0-15,115'
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Patton MDP1 18 Federal 5H Gyro+MWD 0-15,115'
	1	26.500	4211.840	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Patton MDP1 18 Federal 5H Gyro+MWD

