

Oilfield Services, Central U.S. Land
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

30-015-45078 NM OIL CONSERVATION
ARTESIA DISTRICT

October 8, 2018

NOV 02 2018

Oxy USA Inc.
PO BOX 4294
HOUSTON, TX 77210

RECEIVED

Re:

17, 24S, 31E, Eddy NM
N 32.22248 W -103.79561

CLIENT: Oxy USA Inc.
WELL: Patton MDP1 17 Federal 175H
FIELD: Purple Sage Wolfcamp

RIG: H&P 657
COUNTY: Eddy
API NO: 30-015-45078
JOB NO: 18MLD3878

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>
Kristina Hansen FE	Patton MDP1 17 Federal 175H Original Hole	793.00 Ft to 16349.00 Ft	August 18, 2018 to September 17, 2018	TelePacer/SlimPulse Third Party Corrected

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

Van Spinks
Field Service Manager

Schlumberger-Private

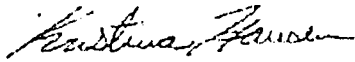
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Schlumberger

Well Reference:
17, 24S, 31E, Eddy NM
N 32.22248 W -103.79561

I, Kristina Hansen certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 18, 2018 through September 17, 2018, conduct or supervise the taking of the TelePacer/SlimPulse & Third Party Corrected surveys from a depth of 793.00 feet to a depth of 16349.00 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 MDPI 17 Federal 175H Well (Original Hole) API No. 30-015-45078 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
Kristina Hansen
FE



Subscribed and Sworn to before me this 8th day of October (month) 2018 (yr)

My Commission expires:

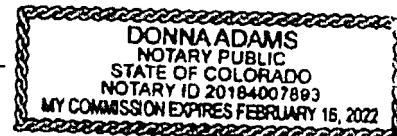
2-16-2022

D. Adams

(signature)

Notary Public

Adams County Colorado
(County State)



Oxy Patton MDP1 17 Federal 175H Gyro + MWD 0-16394' MD Survey

Geodetic Report

(Def Survey)



Report Date: September 17, 2018 - 02:14 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Patton MDP1 17 Federal 175H / Patton MDP1 17 Federal 175H
 Well: Patton MDP1 17 Federal 175H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Patton MDP1 17 Federal 175H Gyro + MWD 0-16394' MD
 Survey Date: September 10, 2018
 Tort / AHD / DDI / ERD Ratio: 288 687' / 6021.328 n / 6 358 / 0 517
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 13' 20.91224" W 103° 47' 44.19371"
 Location Grid N/E V/X: N 445086 550 NUS, E 707622 830 NUS
 CRS Grid Convergence Angle: 0.2867°
 Grid Scale Factor: 0.9994076
 Version / Patch: 2.10.740.0
 Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 178.716° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3573.200 ft above MSL
 Seabed / Ground Elevation: 3540.700 ft above MSL
 Magnetic Declination: 6.856°
 Total Gravity Field Strength: 998.4271mg (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47877.704 nT
 Magnetic Dip Angle: 59.948°
 Declination Date: September 10, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.2867°
 Total Corr Mag North→Grid: 8.5694°
 North: Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	445080.55	707622.83	N 32 13 20.91	W 103 47 44.19
SHL	20.50	0.00	0.00	28.50	0.00	0.00	0.00	0.00	445080.55	707622.83	N 32 13 20.91	W 103 47 44.19
	98.50	0.15	278.95	98.50	-0.02	0.01	-0.09	0.21	445080.56	707622.74	N 32 13 20.91	W 103 47 44.19
	185.50	0.35	98.58	185.50	0.01	-0.01	0.08	0.57	445080.54	707622.89	N 32 13 20.91	W 103 47 44.19
	273.50	0.18	102.52	273.50	0.09	-0.08	0.46	0.19	445080.47	707623.29	N 32 13 20.91	W 103 47 44.19
	368.50	0.15	237.58	368.50	0.19	-0.18	0.50	0.32	445080.37	707623.33	N 32 13 20.91	W 103 47 44.19
	462.50	0.44	223.88	462.50	0.51	-0.50	0.14	0.32	445080.05	707622.97	N 32 13 20.91	W 103 47 44.19
	557.50	0.74	209.30	557.48	1.29	-1.30	-0.41	0.35	445080.25	707622.42	N 32 13 20.90	W 103 47 44.20
Last Gyro	651.50	0.98	211.95	651.48	2.47	-2.40	-1.13	0.24	445084.06	707621.70	N 32 13 20.89	W 103 47 44.21
	745.50	1.13	212.21	745.47	3.90	-3.94	-2.04	0.18	445082.81	707620.79	N 32 13 20.87	W 103 47 44.22
	793.00	1.59	208.49	792.95	4.88	-4.92	-2.61	0.09	445081.83	707620.22	N 32 13 20.86	W 103 47 44.22
	886.00	0.06	218.16	885.94	6.02	-6.09	-3.25	1.85	445080.48	707619.58	N 32 13 20.85	W 103 47 44.23
	1070.00	0.07	73.58	1069.94	9.07	-8.14	-3.20	0.07	445080.41	707619.83	N 32 13 20.85	W 103 47 44.23
	1209.00	0.07	22.84	1208.94	9.97	-8.04	-3.09	0.04	445081.11	707619.74	N 32 13 20.85	W 103 47 44.23
	1348.00	0.04	210.22	1348.94	9.93	-8.00	-3.08	0.08	445080.55	707619.75	N 32 13 20.85	W 103 47 44.23
	1533.00	0.04	324.92	1532.94	9.93	-8.00	-3.15	0.04	445080.55	707619.68	N 32 13 20.85	W 103 47 44.23
	1628.00	0.08	270.07	1627.94	9.90	-8.98	-3.22	0.05	445080.57	707619.61	N 32 13 20.85	W 103 47 44.23
	1722.00	0.04	199.58	1721.94	9.93	-8.01	-3.28	0.06	445080.54	707619.55	N 32 13 20.85	W 103 47 44.23
	1911.00	0.13	303.75	1910.94	9.87	-8.95	-3.48	0.08	445080.80	707619.35	N 32 13 20.85	W 103 47 44.23
	2099.00	0.08	314.87	2098.94	9.85	-8.74	-3.75	0.03	445080.81	707619.08	N 32 13 20.86	W 103 47 44.24
	2288.00	0.08	317.32	2287.94	9.80	-8.55	-3.93	0.00	445081.00	707618.90	N 32 13 20.86	W 103 47 44.24
	2477.00	0.08	357.28	2476.94	9.73	-8.32	-4.03	0.03	445081.23	707618.80	N 32 13 20.86	W 103 47 44.24
	2571.00	0.04	71.51	2570.94	9.15	-8.24	-4.00	0.08	445081.31	707618.83	N 32 13 20.86	W 103 47 44.24
	2685.00	0.04	151.82	2684.94	9.17	-8.26	-3.95	0.05	445081.29	707618.88	N 32 13 20.86	W 103 47 44.24
	2760.00	0.04	124.03	2759.94	9.22	-8.31	-3.91	0.02	445081.24	707618.92	N 32 13 20.86	W 103 47 44.24
	2854.00	0.04	182.95	2853.94	9.27	-8.38	-3.88	0.04	445081.19	707618.95	N 32 13 20.86	W 103 47 44.24
	2948.00	0.08	115.28	2947.84	9.34	-8.42	-3.83	0.08	445081.13	707618.10	N 32 13 20.86	W 103 47 44.24
	3137.00	0.04	196.10	3136.84	9.48	-8.54	-3.73	0.04	445081.01	707618.10	N 32 13 20.86	W 103 47 44.24
	3326.00	0.02	358.93	3325.94	9.59	-8.57	-3.74	0.03	445080.98	707618.09	N 32 13 20.86	W 103 47 44.24
	3514.00	0.07	245.07	3513.94	9.50	-8.59	-3.85	0.04	445080.96	707618.08	N 32 13 20.86	W 103 47 44.24
	3695.00	0.02	211.87	3684.94	9.56	-8.65	-3.94	0.04	445080.91	707618.89	N 32 13 20.86	W 103 47 44.24
	3798.00	0.02	169.12	3797.94	9.60	-8.69	-3.95	0.01	445080.88	707618.88	N 32 13 20.86	W 103 47 44.24
	3880.00	0.02	236.23	3885.94	9.65	-8.74	-3.97	0.01	445080.81	707618.86	N 32 13 20.86	W 103 47 44.24
	4174.00	0.10	113.06	4173.84	9.74	-8.82	-3.85	0.06	445080.73	707618.98	N 32 13 20.85	W 103 47 44.24
	4385.00	0.02	212.01	4384.94	9.83	-8.92	-3.71	0.05	445080.63	707619.12	N 32 13 20.85	W 103 47 44.24
	4505.00	0.02	193.61	4504.84	9.88	-8.96	-3.73	0.00	445080.59	707619.10	N 32 13 20.85	W 103 47 44.24
	4648.00	0.04	308.92	4645.94	9.87	-8.95	-3.77	0.04	445080.60	707619.06	N 32 13 20.85	W 103 47 44.24
	4787.00	0.02	187.19	4786.94	9.88	-8.95	-3.81	0.04	445080.60	707619.02	N 32 13 20.85	W 103 47 44.24
	4929.00	1.18	277.71	4928.93	9.66	-8.78	-3.28	0.84	445080.78	707617.55	N 32 13 20.86	W 103 47 44.28
	5024.00	2.59	264.05	5023.87	9.68	-8.57	-8.39	1.54	445080.08	707614.44	N 32 13 20.85	W 103 47 44.29
	5213.00	4.87	244.59	5212.47	9.30	-9.75	-19.89	1.36	445076.80	707602.94	N 32 13 20.82	W 103 47 44.43
	5307.00	7.37	233.75	5305.93	14.39	-19.03	-26.30	2.92	445071.52	707594.48	N 32 13 20.76	W 103 47 44.52
	5401.00	8.38	230.98	5399.04	22.04	-22.91	-38.54	1.15	445063.64	707584.29	N 32 13 20.69	W 103 47 44.64
	5498.00	5.34	224.35	5493.35	29.37	-30.43	-47.01	3.30	445058.12	707575.82	N 32 13 20.81	W 103 47 44.74
	5684.00	0.25	194.87	5681.07	35.88	-37.09	-53.23	2.73	445048.47	707569.60	N 32 13 20.55	W 103 47 44.82
	5779.00	0.04	45.48	5776.07	36.06	-37.26	-53.26	0.30	445048.28	707569.57	N 32 13 20.55	W 103 47 44.82
	5968.00	1.98	17.71	5965.03	32.93	-34.11	-52.22	1.03	445052.45	707570.01	N 32 13 20.56	W 103 47 44.80
	6062.00	4.10	19.29	6058.89	28.24	-29.39	-50.62	2.26	445059.17	707572.22	N 32 13 20.62	W 103 47 44.78
6157.00	7.96	19.46	6153.52	20.46	-21.53	-47.84	1.96	445065.02	707574.99	N 32 13 20.70	W 103 47 44.75	
6251.00	9.13	12.40	6248.85	9.95	-10.94	-44.43	1.83	445075.61	707578.40	N 32 13 20.81	W 103 47 44.71	
6345.00	12.13	7.59	6339.85	-3.25	2.33	-41.04	1.71	445088.88	707581.70	N 32 13 20.94	W 103 47 44.67	
6534.00	12.48	5.14	6525.59	-37.44	36.68	-35.18	1.60	445123.21	707587.85	N 32 13 21.28	W 103 47 44.60	
6629.00	12.48	5.14	6518.41	-57.50	56.78	-32.94	0.60	445143.33	707589.86	N 32 13 21.48	W 103 47 44.57	
6723.00	11.97	2.42	6710.28	-77.32	76.63	-31.62	0.82	445163.16	707591.21	N 32 13 21.67	W 103 47 44.56	
6817.00	12.23	0.33	6802.19	-97.00	96.33	-31.15	0.54	445182.87	707591.08	N 32 13 21.87	W 103 47 44.55	
6911.00	12.89	0.05	6893.94	-117.44	116.77	-31.08	0.71	445203.31	707591.75	N 32 13 22.07	W 103 47 44.55	
7006.00	12.89	0.05	6893.94	-117.44	116.77	-31.08	0.71	445203.31	707591.75	N 32 13 22.07	W 103 47 44.55	
7100.00	12.12	357.33	7078.55	-157.80	157.22	-31.98	0.33	445243.78	707590.85	N 32 13 22.47	W 103 47 44.56	
7194.00	12.42	358.78	7170.41	-177.87	177.17	-33.01	0.34	445263.71	707589.82	N 32 13 22.67	W 103 47 44.57	
7289.00	13.09	355.86	7263.08	-198.82	198.10	-34.30	0.74	445284.84	707588.47	N 32 13 22.87	W 103 47 44.58	
7383.00	13.54	355.97	7334.54	-220.45	219.70	-35.90	0.48	445306.23	707586.63	N 32 13 23.07	W 103 47 44.60	
7478.00	14.40	358.39	7468.72	-243.38	242.58	-37.43	0.91	445329.11	707585.40	N 32 13 23.31	W 103 47 44.62	
7568.00	15.89	355.14	7468.72	-243.38	242.58	-37.43	0.91	445329.11	707585.40	N 32 13 23.31	W 103 47 44.62	
7761.00	15.79	352.69	7719.38	-262.40	261.56	-41.08	0.81	445378.09	707581.75	N 32 13 23.60	W 103 47 44.65	
7855.00	15.87	350.78	7710.02	-283.69	282.71	-47.52	0.56	445403.87	707579.00	N 32 13 24.05	W 103 47 44.69	
7950.00	16.05	349.08	7901.38	-309.50	308.42	-52.08	0.71	445429.24	707575.32	N 32 13 24.31	W 103 47 44.73	
8044.00	14.88	344.06	7991.14	-334.14	333.98	-57.18	1.33	445479.49	707565.65	N 32 13 24.80	W 103 47 44.84	
8232.00	12.63	341.35	8287.00	-458.71	457.18	-74.56	0.79	445543.68	707561.07	N 32 13 25.44	W 103 47 45.04	
8327.00	12.63	341.35	8287.00	-458.71	457.18	-74.56	0.79	445543.68	707561.07	N 32 13 25.44	W 103 47 45.04	
8421.00	12.95	338.00	8358.67	-478.37	478.68	-81.79	0.86	445563.18	707561.04	N 32 13 25.63	W 103 47 45.12	
8610.00	12.83	335.30	8542.91	-517.44	515.38	-90.50	0.32	445601.88	707562.34	N 32 13 26.02	W 103 47 45.31	
8799.00	11.31	336.87	8772.72	-553.90	551.47	-114.55	0.82	445637.99	707568.29	N 32 13 26.37	W 103 47 45.49	
8894.00	9.88	338.93	8821.09	-570.29	567.72	-121.17	1.46	445654.23	707561.07	N 32 13 26.54	W 103 47 45.57	
8988.00	9.98	339.34	8813.68	-585.58	582.87	-126.94	0.13	445669.38	707495.90	N 32 13 26.69	W 103 47 45.64	
9177.00	11.40	344.46	9099.40	-610.11	616.18	-137.70	0.99	445702.69	707485.13	N 32 13 27.02	W 103 47 45.78	
9271.00	11.18	353.90	9191.58	-637.25	634.24	-141.18	2.00	445720.76	70			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLB (°/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° °')	Longitude (E/W ° °')
	9743.00	9.43	40.23	9853.99	-725.17	722.77	-115.12	2.54	445808.28	707507.72	N 32 13 28.07	W 103 47 43.27
	9932.00	9.39	73.76	9840.84	-739.87	738.00	-91.74	2.91	445824.50	707531.10	N 32 13 28.22	W 103 47 48.22
	10027.00	9.18	95.47	9834.75	-740.53	738.88	-77.49	3.28	445825.49	707545.34	N 32 13 28.33	W 103 47 45.05
	10121.00	9.54	105.89	10027.51	-737.35	736.14	-62.95	1.84	445822.84	707580.28	N 32 13 28.20	W 103 47 44.88
	10216.00	9.53	107.57	10121.19	-732.49	731.61	-47.48	0.29	445818.11	707575.35	N 32 13 28.15	W 103 47 44.70
	10310.00	9.27	117.85	10213.94	-726.31	725.74	-33.35	1.77	445812.25	707580.48	N 32 13 28.10	W 103 47 44.54
	10404.00	9.43	122.98	10306.69	-718.31	718.04	-20.19	0.93	445804.55	707602.85	N 32 13 28.02	W 103 47 44.39
	10498.00	9.30	126.93	10399.44	-709.28	709.29	-7.85	0.70	445795.79	707615.18	N 32 13 27.93	W 103 47 44.24
	10687.00	9.90	139.85	10585.61	-687.18	687.69	15.03	1.18	445774.20	707637.66	N 32 13 27.72	W 103 47 43.98
	10782.00	8.54	146.68	10879.59	-674.84	675.55	24.17	1.84	445762.08	707647.00	N 32 13 27.60	W 103 47 43.87
	10877.00	7.91	152.98	10773.61	-662.97	663.84	31.02	1.18	445750.34	707653.85	N 32 13 27.48	W 103 47 43.79
	10971.00	8.83	160.84	10868.61	-650.28	651.26	36.33	1.56	445737.77	707659.15	N 32 13 27.35	W 103 47 43.73
	11069.00	8.55	163.72	10904.18	-644.78	645.79	38.07	1.38	445732.30	707660.90	N 32 13 27.30	W 103 47 43.71
KOP Actual	11196.00	7.85	170.17	11089.27	-618.70	619.85	44.15	0.61	445706.38	707668.98	N 32 13 27.04	W 103 47 43.64
	11290.00	22.26	169.43	11179.80	-594.65	595.89	48.54	15.32	445682.40	707671.38	N 32 13 26.81	W 103 47 43.59
	11385.00	30.82	173.95	11284.79	-552.70	554.08	54.39	9.04	445640.57	707677.22	N 32 13 26.39	W 103 47 43.52
	11480.00	33.09	175.81	11344.58	-501.29	502.74	58.94	4.82	445589.26	707681.76	N 32 13 25.88	W 103 47 43.48
Top Perf Cross	11575.00	39.73	173.95	11420.02	-443.73	445.28	64.14	5.03	445531.80	707686.96	N 32 13 25.32	W 103 47 43.42
	11595.00	41.54	174.64	11429.20	-430.74	432.32	65.39	9.61	445518.84	707688.22	N 32 13 25.19	W 103 47 43.41
	11669.00	46.30	178.07	11487.57	-378.57	380.20	68.48	9.61	445468.73	707691.32	N 32 13 24.87	W 103 47 43.37
	11764.00	61.62	175.95	11542.00	-301.02	302.73	72.95	14.19	445389.28	707695.78	N 32 13 23.90	W 103 47 43.33
	11859.00	76.64	178.75	11578.76	-212.55	214.34	77.23	16.12	445309.87	707700.05	N 32 13 23.03	W 103 47 43.28
Wellcamp Intersection	11869.00	77.39	178.83	11578.00	-202.81	204.60	77.43	7.55	445291.13	707700.28	N 32 13 22.63	W 103 47 43.28
	11953.00	83.70	179.51	11581.79	-120.00	121.78	78.63	7.55	445208.33	707701.45	N 32 13 22.11	W 103 47 43.27
	12036.00	91.45	178.38	11595.30	-37.15	38.89	81.62	10.08	445125.54	707704.44	N 32 13 21.29	W 103 47 43.24
	12141.00	98.61	177.09	11596.81	87.75	-85.80	87.61	4.38	445020.75	707710.44	N 32 13 20.26	W 103 47 43.18
	12238.00	87.53	178.92	11601.41	162.59	-160.56	92.57	0.68	444928.00	707715.40	N 32 13 19.32	W 103 47 43.13
	12425.00	91.86	182.89	11602.42	351.42	-349.42	92.88	3.80	444737.15	707715.71	N 32 13 17.45	W 103 47 43.13
	12520.00	86.66	180.51	11601.99	446.27	-444.38	90.07	4.20	444642.21	707712.89	N 32 13 16.51	W 103 47 43.17
	12615.00	91.45	181.57	11601.90	541.18	-539.34	88.34	3.14	444547.25	707711.17	N 32 13 15.57	W 103 47 43.20
	12709.00	89.45	181.11	11601.18	635.07	-633.30	88.14	2.18	444452.29	707708.97	N 32 13 14.64	W 103 47 43.23
	12804.00	88.15	181.11	11603.15	726.97	-726.26	84.20	1.37	444356.33	707707.13	N 32 13 13.70	W 103 47 43.25
	12899.00	91.17	181.78	11603.71	824.85	-823.22	81.92	3.25	444263.38	707704.75	N 32 13 12.78	W 103 47 43.29
	12993.00	89.90	180.36	11602.83	918.76	-917.19	80.19	2.01	444169.41	707703.01	N 32 13 11.83	W 103 47 43.31
	13181.00	87.97	180.03	11606.33	1168.68	-1165.15	79.55	1.04	443981.47	707702.37	N 32 13 9.97	W 103 47 43.33
	13372.00	92.34	180.48	11605.81	1297.54	-1288.10	78.73	2.30	443790.33	707701.56	N 32 13 8.08	W 103 47 43.35
	13561.00	88.99	175.71	11604.28	1486.44	-1484.90	85.04	3.20	443501.74	707707.87	N 32 13 6.21	W 103 47 43.29
	13658.00	88.90	177.80	11606.38	1581.35	-1579.72	90.42	2.22	443306.92	707713.24	N 32 13 5.28	W 103 47 43.23
	13750.00	89.28	177.03	11607.85	1675.32	-1673.61	94.66	0.91	443113.04	707717.48	N 32 13 4.35	W 103 47 43.19
	13845.00	90.28	179.40	11608.22	1770.30	-1768.56	97.62	2.71	442918.10	707720.44	N 32 13 3.41	W 103 47 43.16
	13940.00	89.00	180.84	11608.81	1865.27	-1863.55	97.42	2.03	442723.11	707720.24	N 32 13 2.47	W 103 47 43.17
	14034.00	87.25	180.90	11611.85	1959.15	-1957.49	95.99	1.68	442528.18	707718.82	N 32 13 1.54	W 103 47 43.19
	14129.00	87.46	180.70	11616.27	2053.98	-2052.38	94.67	0.31	442334.30	707717.49	N 32 13 0.60	W 103 47 43.21
	14318.00	91.45	182.73	11616.07	2242.87	-2241.24	89.01	2.37	442145.45	707711.84	N 32 12 58.73	W 103 47 43.29
	14413.00	91.48	184.67	11615.64	2337.27	-2336.00	82.88	2.04	441950.69	707705.71	N 32 12 57.79	W 103 47 43.37
	14507.00	88.50	182.23	11615.61	2430.94	-2429.82	77.23	4.05	441760.05	707700.05	N 32 12 56.87	W 103 47 43.44
	14602.00	87.59	181.51	11616.60	2525.74	-2524.71	74.13	1.27	441565.88	707696.96	N 32 12 55.93	W 103 47 43.48
	14696.00	86.35	181.80	11623.77	2619.48	-2618.54	71.42	1.35	441372.48	707694.24	N 32 12 55.00	W 103 47 43.51
	14885.00	86.59	180.50	11632.11	2808.11	-2807.30	67.63	1.37	441179.42	707690.48	N 32 12 53.13	W 103 47 43.57
	14979.00	92.41	178.80	11631.29	2902.07	-2901.27	68.37	4.54	440985.48	707691.20	N 32 12 52.20	W 103 47 43.57
	15073.00	90.00	177.98	11629.31	2998.04	-2998.20	71.17	2.65	440791.53	707694.00	N 32 12 51.27	W 103 47 43.54
	15168.00	89.21	178.20	11629.97	3091.00	-3090.97	78.00	2.05	440597.82	707698.62	N 32 12 50.33	W 103 47 43.49
	15263.00	92.24	177.83	11628.77	3185.93	-3184.92	80.94	3.82	440403.83	707703.77	N 32 12 49.39	W 103 47 43.44
	15357.00	87.67	177.20	11628.86	3279.88	-3278.81	85.02	4.70	440209.84	707707.84	N 32 12 48.46	W 103 47 43.40
	15452.00	87.49	178.16	11632.52	3374.89	-3373.85	88.86	1.09	440015.11	707711.88	N 32 12 47.53	W 103 47 43.36
	15546.00	87.59	178.23	11636.96	3468.70	-3467.52	91.82	0.13	439820.24	707714.84	N 32 12 46.60	W 103 47 43.33
	15640.00	89.31	178.64	11639.10	3562.67	-3561.44	94.38	1.88	439625.32	707717.21	N 32 12 45.67	W 103 47 43.30
	15735.00	88.45	178.94	11640.98	3657.65	-3656.40	98.39	0.96	439430.37	707719.21	N 32 12 44.73	W 103 47 43.28
	15830.00	89.21	179.26	11642.90	3752.62	-3751.37	97.88	0.87	439235.41	707720.71	N 32 12 43.78	W 103 47 43.27
	15924.00	90.07	180.01	11643.49	3848.61	-3847.37	98.48	1.21	439040.42	707721.30	N 32 12 42.86	W 103 47 43.27
	16019.00	89.93	180.48	11643.49	3944.57	-3943.37	98.07	0.52	438845.43	707720.90	N 32 12 41.82	W 103 47 43.28
	16113.00	88.83	179.42	11644.67	4039.54	-4034.35	98.16	1.78	438650.44	707720.20	N 32 12 40.99	W 103 47 43.29
	16208.00	89.66	180.22	11645.92	4130.51	-4129.34	98.45	1.94	438455.46	707721.28	N 32 12 40.05	W 103 47 43.29
Bottom Perf Cross	16247.00	90.29	180.31	11645.87	4169.50	-4168.34	98.27	1.13	438260.48	707721.10	N 32 12 39.06	W 103 47 43.29
	18302.00	90.90	180.43	11645.30	4224.47	-4223.34	97.92	1.13	438065.47	707720.75	N 32 12 39.12	W 103 47 43.30
Final MWD Surveys	18349.00	90.48	180.32	11644.73	4271.45	-4270.33	97.81	0.92	437870.48	707720.44	N 32 12 38.65	W 103 47 43.31
Proj to Bit	18394.00	90.48	180.32	11644.35	4316.43	-4315.33	97.38	0.00	437675.48	707720.19	N 32 12 38.21	W 103 47 43.31

Survey Type: Def Survey

Survey Error Model: ISCV/SA Rev 0 *** 3-D 95 000% Confidence 2.7855 sigmas
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	1/98.425	30.000	30.000 NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Patton MDP1 17 Federal 175H Gyro + MWD 0-16394' MD
	1	25.500	26.500	Act Sns	30.000	30.000 NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Patton MDP1 17 Federal 175H Gyro + MWD 0-16394' MD
	1	25.500	745.500	Act Sns	30.000	30.000 NAL_NSG+MSHOT	Original Borehole / Oxy Patton MDP1 17 Federal 175H Gyro +
	1	745.500	18394.000	Act Sns	30.000	30.000 NAL_MWD_IFR1+MS	Original Borehole / Oxy Patton MDP1 17 Federal 175H Gyro +

...Patton MDP1 17 Federal 175H\Original Borehole\Oxy Patton MDP1 17 Federal 175H Gyro + MWD 0-16394' MD



Vertical Section (ft) Azim = 178.72° Scale = 1:2200 00(ft) Origin = 0N-S, 0E-W