

Oxy Patton MDP1 17 Federal 1H Gyro+MWD 0-15,025' Survey Geodetic

Report
(Def Survey)

30.015-44459



Report Date: February 09, 2018 - 09:56 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Patton MDP1 17 Federal 1H / Oxy Patton MDP1 17 Federal 1H
 Well: Oxy Patton MDP1 17 Federal 1H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Patton MDP1 17 Federal 1H Gyro+MWD 0-15,025'
 Survey Date: January 29, 2018
 Tort / AHD / DDI / ERD Ratio: 187.788' / 5677.789 ft / 6.205 / 0.568
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 13' 30.21743", W 103° 48' 20.35577"
 Location Grid N/E Y/X: N 446011.460 NUS, E 704511.860 NUS
 CRS Grid Convergence Angle: 0.2814°
 Grid Scale Factor: 0.99993959
 Version / Patch: 2.10 706.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 184.162° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB+26.5'
 TVD Reference Elevation: 3556.000 ft above MSL
 Seabed / Ground Elevation: 3529.500 ft above MSL
 Magnetic Declination: 6.928°
 Total Gravity Field Strength: 998.4287 mgn (9.80665 Based
 Gravity Model: GARM
 Total Magnetic Field Strength: 48050.789 nT
 Magnetic Dip Angle: 59.981°
 Declination Date: January 29, 2018
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.2814°
 Total Corr Mag North->Grid: 6.6468°
 North: 6.6468°
 Local Coord Referenced To: Well Head

**Provide Signature Page for
Directional Survey**

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	446011.46	704511.86	N 32 13 30.22	W 103 48 20.36
	83.00	0.35	273.31	83.00	0.00	0.01	-0.25	0.42	446011.47	704511.61	N 32 13 30.22	W 103 48 20.36
	143.00	0.49	313.66	143.00	-0.16	0.20	-0.62	0.53	446011.66	704511.24	N 32 13 30.22	W 103 48 20.36
	204.00	0.41	276.21	204.00	-0.33	0.41	-1.03	0.49	446011.87	704510.83	N 32 13 30.22	W 103 48 20.37
	266.00	0.23	295.93	266.00	-0.38	0.48	-1.36	0.34	446011.94	704510.50	N 32 13 30.22	W 103 48 20.37
	358.00	0.27	172.09	357.99	-0.24	0.35	-1.50	0.48	446011.81	704510.36	N 32 13 30.22	W 103 48 20.37
	449.00	0.28	223.17	448.99	0.14	-0.02	-1.62	0.26	446011.44	704510.24	N 32 13 30.22	W 103 48 20.37
	540.00	0.35	187.76	539.99	0.59	-0.46	-1.81	0.22	446011.00	704510.05	N 32 13 30.21	W 103 48 20.38
	631.00	0.56	171.19	630.99	1.30	-1.18	-1.78	0.27	44610.28	704510.08	N 32 13 30.21	W 103 48 20.38
	721.00	0.81	135.49	720.98	2.15	-2.06	-1.26	0.54	446009.40	704510.60	N 32 13 30.21	W 103 48 20.38
	813.00	1.69	93.60	812.96	2.57	-2.61	0.55	1.32	446008.85	704512.41	N 32 13 30.20	W 103 48 20.37
	904.00	3.79	75.71	903.85	1.60	-1.96	4.80	2.46	446009.50	704516.66	N 32 13 30.20	W 103 48 20.30
	996.00	6.38	74.62	995.48	-1.07	0.15	12.68	2.82	446011.61	704524.54	N 32 13 30.22	W 103 48 20.21
	1088.00	9.00	77.38	1086.65	-4.86	3.08	24.63	2.88	446014.54	704536.49	N 32 13 30.25	W 103 48 20.07
	1179.00	9.22	78.45	1176.50	-8.89	6.09	38.72	0.31	446017.55	704550.58	N 32 13 30.28	W 103 48 19.90
	1272.00	6.90	65.45	1268.58	-13.59	9.91	51.10	3.16	446021.37	704562.96	N 32 13 30.31	W 103 48 19.76
	1364.00	5.30	40.93	1360.08	-19.65	15.42	58.91	3.28	446026.87	704570.77	N 32 13 30.37	W 103 48 19.67
	1455.00	5.14	7.08	1450.72	-27.09	22.64	82.17	3.34	446034.10	704574.03	N 32 13 30.44	W 103 48 19.63
	1547.00	6.61	340.00	1542.25	-36.04	31.71	60.87	3.37	446043.16	704572.72	N 32 13 30.53	W 103 48 19.65
	1638.00	8.66	326.54	1632.45	-46.25	42.34	55.30	2.97	446053.80	704567.15	N 32 13 30.63	W 103 48 19.71
	1733.00	9.57	317.57	1726.25	-57.34	54.14	46.02	1.77	446065.60	704557.88	N 32 13 30.75	W 103 48 19.82
	1828.00	9.82	312.24	1819.90	-67.78	65.42	34.70	0.98	446076.87	704546.56	N 32 13 30.86	W 103 48 19.95
	1922.00	9.13	304.62	1912.62	-78.49	75.04	22.63	1.52	446086.50	704534.49	N 32 13 30.96	W 103 48 20.09
	2017.00	8.39	297.17	2006.51	-83.02	82.49	10.26	1.42	446093.94	704522.12	N 32 13 31.03	W 103 48 20.23
	2111.00	7.82	286.26	2099.58	-87.04	87.41	-1.98	1.74	446098.87	704509.88	N 32 13 31.08	W 103 48 20.37
	2206.00	7.46	277.13	2193.74	-88.71	89.99	-14.31	1.33	446101.44	704497.55	N 32 13 31.11	W 103 48 20.52
	2301.00	7.63	268.14	2287.92	-88.37	90.55	-26.73	1.25	446102.00	704485.13	N 32 13 31.11	W 103 48 20.66
	2395.00	7.88	260.10	2381.06	-86.15	89.24	-39.32	1.18	446100.69	704472.55	N 32 13 31.10	W 103 48 20.81
	2490.00	8.47	249.94	2475.10	-81.70	85.72	-52.30	1.64	446097.17	704459.56	N 32 13 31.07	W 103 48 20.96
	2585.00	8.40	249.09	2569.07	-75.88	80.84	-65.36	0.15	446092.30	704446.51	N 32 13 31.02	W 103 48 21.11
	2679.00	7.11	248.37	2662.21	-70.44	76.25	-77.18	1.38	446087.70	704434.68	N 32 13 30.98	W 103 48 21.25
	2774.00	5.17	250.84	2756.66	-66.19	72.87	-86.69	2.06	446084.13	704425.18	N 32 13 30.94	W 103 48 21.36
	2868.00	2.36	257.03	2850.45	-63.94	70.85	-92.58	3.02	446082.30	704419.29	N 32 13 30.92	W 103 48 21.43
	2963.00	0.32	281.06	2945.42	-63.40	70.46	-94.74	2.18	446081.92	704417.12	N 32 13 30.92	W 103 48 21.45
	3057.00	0.05	318.15	3039.42	-63.46	70.54	-95.03	0.30	446082.00	704416.84	N 32 13 30.92	W 103 48 21.46
	3152.00	0.08	287.33	3134.42	-63.50	70.59	-95.12	0.05	446082.05	704416.75	N 32 13 30.92	W 103 48 21.46
	3247.00	0.12	302.82	3229.42	-63.57	70.67	-95.27	0.05	446082.12	704416.60	N 32 13 30.92	W 103 48 21.46
	3342.00	0.17	311.41	3324.42	-63.70	70.81	-95.46	0.06	446082.27	704416.41	N 32 13 30.92	W 103 48 21.46
	3436.00	0.11	307.73	3418.42	-63.83	70.96	-95.63	0.06	446082.42	704416.23	N 32 13 30.92	W 103 48 21.46
	3531.00	0.02	148.31	3513.42	-63.87	71.00	-95.70	0.14	446082.46	704416.17	N 32 13 30.92	W 103 48 21.47
	3625.00	0.15	187.87	3607.42	-63.73	70.87	-95.70	0.14	446082.32	704416.16	N 32 13 30.92	W 103 48 21.47
	3720.00	0.04	233.43	3702.42	-63.59	70.72	-95.75	0.13	446082.18	704416.12	N 32 13 30.92	W 103 48 21.47
	3814.00	0.09	214.16	3796.42	-63.50	70.64	-95.82	0.06	446082.10	704416.05	N 32 13 30.92	W 103 48 21.47
	3909.00	0.10	222.63	3891.42	-63.37	70.52	-95.91	0.02	446081.98	704415.95	N 32 13 30.92	W 103 48 21.47
	4003.00	0.16	235.46	3985.42	-63.23	70.39	-96.08	0.07	446081.84	704415.79	N 32 13 30.92	W 103 48 21.47
	4098.00	0.09	241.60	4080.42	-63.10	70.27	-96.25	0.07	446081.73	704415.61	N 32 13 30.92	W 103 48 21.47
	4193.00	0.08	219.21	4175.42	-63.01	70.19	-96.36	0.04	446081.64	704415.51	N 32 13 30.92	W 103 48 21.47
	4253.00	0.10	236.32	4235.42	-62.94	70.13	-96.43	0.06	446081.58	704415.44	N 32 13 30.92	W 103 48 21.47
	4296.00	0.06	204.07	4278.42	-62.80	70.09	-96.47	0.14	446081.54	704415.40	N 32 13 30.92	W 103 48 21.47
	4482.00	0.18	84.41	4464.42	-62.86	70.02	-96.22	0.12	446081.48	704415.65	N 32 13 30.92	W 103 48 21.47
	4576.00	0.08	343.47	4553.42	-62.94	70.10	-96.09	0.22	446081.56	704415.78	N 32 13 30.92	W 103 48 21.47
	4671.00	0.08	128.75	4653.42	-62.97	70.12	-96.06	0.16	446081.58	704415.81	N 32 13 30.92	W 103 48 21.47
	4765.00	0.06	238.82	4747.42	-62.90	70.06	-96.05	0.12	446081.51	704415.82	N 32 13 30.92	W 103 48 21.47
	4860.00	0.13	94.38	4842.42	-62.83	70.02	-95.98	0.19	446081.48	704415.88	N 32 13 30.91	W 103 48 21.47
	4954.00	0.08	230.83	4936.42	-62.83	69.97	-95.93	0.21	446081.43	704415.94	N 32 13 30.91	W 103 48 21.47
	5049.00	0.11	76.49	5031.42	-62.81	69.95	-95.89	0.20	446081.41	704415.97	N 32 13 30.91	W 103 48 21.47
	5143.00	0.08	138.18	5125.42	-62.79	69.93	-95.76	0.11	446081.38	704416.01	N 32 13 30.91	W 103 48 21.47
	5238.00	0.13	28.72	5220.42	-62.84	69.97	-95.66	0.18	446081.33	704416.12	N 32 13 30.91	W 103 48 21.47
	5332.00	0.06	84.07	5314.42	-62.95	70.07	-95.56	0.11	446081.43	704416.20	N 32 13 30.91	W 103 48 21.47
	5427.00	0.06	206.45	5409.42	-62.91	70.03	-95.54	0.11	446081.52	704416.30	N 32 13 30.92	W 103 48 21.46
	5522.00	0.00	290.90	5504.42	-62.87	69.99	-95.56	0.06	446081.44	704416.33	N 32 13 30.92	W 103 48 21.46
	5617.00	0.11	218.03	5599.42	-62.79	69.91	-95.61	0.12	446081.37	704416.25	N 32 13 30.91	W 103 48 21.46
	5711.00	0.08	129.11	5693.42	-62.67	69.80	-95.61	0.14	446081.25	704416.25	N 32 13 30.91	W 103 48 21.46
	5806.00	0.08	167.50	5788.42	-62.57	69.69	-95.55	0.06	446081.15	704416.32	N 32 13 30.91	W 103 48 21.46
	5901.00	0.08	207.27	5883.42	-62.45	69.57	-95.56	0.06	446081.02	704416.30	N 32 13 30.91	W 103 48 21.46
	5995.00	0.08	24.90	5977.42	-62.45	69.57	-95.57	0.17	446081.02	704416.30	N 32 13 30.91	W 103 48 21.46
	6090.00	0.06	193.87	6072.42	-62.46	69.58	-95.55	0.15	446081.04	704416.32	N 32 13 30.91	W 103 48 21.46
	6184.00	0.06	351.35	6166.42	-62.46	69.58	-95.57	0.13	446081.04	704416.30	N 32 13 30.91	W 103 48 21.46
	6279.00	0.08	308.98	6261.42	-62.55	69.67	-95.63	0.06	446081.13	704416.24	N 32 13 30.91	W 103 48 21.46
	6373.00	0.08	151.86	6355.42	-62.53	69.66	-95.65	0.17	446081.11	704416.22	N 32 13 30.91	W 103 48 21.47
	6468.00	0.08	49.37	6450.41	-62.52	69.64	-95.57	0.13	446081.10	704416.30	N 32 13 30.91	W 103 48 21.46
	6563.00	0.00	87.16	6545.41	-62.57	69.68	-95.52	0.08	446081.14	704416.35	N 32 13 30.91	W 103 48 21.46
	6657.00	0.00	96.25	6639.41	-62.57	69.68	-95.52	0.00	446081.14	704416.35	N 32 13 30.91	W 103 48 21.46
	6752.00	0.06	37.91	6734.41	-62.61	69.72	-95.49	0.06	446081.18	704416.38	N 32 13 30.91	W 103 48 21.46
	6846											

Comments	MD	Incl	Azimuth	TWD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft/100ft)	(ftUS)	(ftUS)	(N+...)	(E+...)
	7319.00	0.08	163.54	7319.41	62.47	69.57	-85.31	0.08	446081.02	704115.56	N 32 13 30.81	W 103 48 21.46
	7413.00	0.08	223.12	7395.41	62.35	69.43	-85.33	0.08	446080.91	704116.51	N 32 13 30.81	W 103 48 21.46
	7508.00	0.06	30.58	7490.41	62.35	69.43	-85.35	0.15	446080.90	704116.51	N 32 13 30.81	W 103 48 21.46
	7603.00	0.06	120.29	7595.41	62.32	69.43	-85.28	0.09	446080.92	704116.58	N 32 13 30.81	W 103 48 21.46
	7792.00	0.06	276.09	7774.41	62.32	69.43	-85.20	0.03	446080.87	704116.67	N 32 13 30.81	W 103 48 21.46
	7868.00	0.06	30.34	7868.41	62.32	69.43	-85.17	0.06	446080.91	704116.69	N 32 13 30.81	W 103 48 21.46
	8075.00	0.08	127.70	8057.41	62.44	69.51	-85.09	0.05	446080.98	704116.78	N 32 13 30.81	W 103 48 21.46
	8170.00	0.08	171.81	8152.41	62.35	69.42	-85.07	0.06	446080.96	704116.89	N 32 13 30.81	W 103 48 21.46
	8254.00	0.13	245.43	8246.41	62.25	69.32	-85.00	0.17	446080.78	704116.86	N 32 13 30.81	W 103 48 21.46
	8359.00	0.13	168.42	8341.41	62.26	69.34	-85.12	0.17	446080.50	704116.75	N 32 13 30.81	W 103 48 21.46
	8454.00	0.13	124.86	8436.41	62.66	69.30	-85.12	0.22	446080.76	704116.75	N 32 13 30.81	W 103 48 21.46
	8548.00	0.43	224.94	8530.41	62.66	69.32	-85.17	0.20	446080.59	704116.86	N 32 13 30.81	W 103 48 21.46
	8738.00	3.22	220.08	8720.36	62.66	69.32	-85.17	2.84	446080.28	704116.73	N 32 13 30.81	W 103 48 21.46
	8832.00	4.78	222.29	8814.12	62.66	69.32	-85.17	1.87	446077.58	704116.73	N 32 13 30.81	W 103 48 21.46
	8927.00	5.76	224.39	8908.72	62.66	69.32	-85.17	1.07	446077.07	704116.73	N 32 13 30.81	W 103 48 21.46
	9022.00	6.88	228.61	9000.13	62.66	69.32	-85.17	1.37	446068.73	704116.73	N 32 13 30.81	W 103 48 21.46
	9117.00	9.49	225.30	9097.15	62.66	69.32	-85.17	1.81	446050.18	704116.73	N 32 13 30.81	W 103 48 21.46
	9211.00	11.17	223.94	9188.62	62.66	69.32	-85.17	1.81	446050.18	704116.73	N 32 13 30.81	W 103 48 21.46
	9306.00	12.04	221.74	9282.68	62.66	69.32	-85.17	1.81	446050.18	704116.73	N 32 13 30.81	W 103 48 21.46
	9479.00	11.64	220.69	9350.00	62.66	69.32	-85.17	1.81	446050.18	704116.73	N 32 13 30.81	W 103 48 21.46
	9574.00	18.51	215.00	9451.15	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	9658.00	22.23	216.66	9527.05	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	9753.00	24.44	212.44	9627.05	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	9853.00	34.81	209.92	9709.52	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	9952.00	43.30	209.29	9783.23	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10047.00	51.09	207.15	9847.05	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10142.00	60.27	203.96	9900.57	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10236.00	68.18	194.59	9941.16	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10331.00	74.97	182.55	9970.18	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10425.00	83.65	180.29	9982.06	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10466.00	93.10	181.22	9978.14	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10561.00	88.76	180.13	9973.77	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10650.00	89.66	180.13	9974.25	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10750.00	89.31	181.41	9975.10	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10845.00	88.07	181.62	9976.44	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	10940.00	88.21	181.62	9977.87	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11034.00	89.07	181.19	9979.28	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11128.00	88.24	181.17	9979.66	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11223.00	88.24	181.25	9980.66	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11318.00	89.24	181.13	9983.35	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11412.00	89.21	181.13	9984.62	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11507.00	89.11	179.52	9986.01	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11602.00	89.11	179.54	9987.49	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11696.00	89.32	179.31	9988.61	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11791.00	89.59	178.25	9989.91	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11886.00	89.73	178.54	9993.35	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	11981.00	89.66	178.69	9990.41	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12076.00	89.66	179.10	9990.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12171.00	89.72	178.24	9991.49	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12266.00	89.52	178.88	9992.74	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12361.00	88.59	179.03	9994.48	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12456.00	88.73	179.03	9994.94	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12551.00	88.73	179.03	9995.41	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12646.00	88.73	179.03	9995.88	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12741.00	88.73	179.03	9996.35	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12836.00	88.73	179.03	9996.82	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	12931.00	88.73	179.03	9997.29	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13026.00	88.73	179.03	9997.76	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13121.00	88.73	179.03	9998.23	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13216.00	88.73	179.03	9998.70	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13311.00	88.73	179.03	9999.17	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13406.00	88.73	179.03	9999.64	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13501.00	88.73	179.03	9999.91	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13596.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13691.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13786.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13881.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	13976.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14071.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14166.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14261.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14356.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14451.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14546.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14641.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14736.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	W 103 48 21.46
	14831.00	88.73	179.03	9999.98	62.66	69.32	-85.17	5.38	446024.16	704116.73	N 32 13 30.81	

Schlumberger

OXY



Borehole:

Well:

Field:

Structure:

Original Borehole

Oxy Patton MDP1 17 Federal 1H

NM Eddy County (NAD 83)

Oxy Patton MDP1 17 Federal 1H

Gravity & Magnetic Parameters

Model: HOGM 2017 Dep: 89 881 Date: 29-Jan-2018
 MagDec: 6.928 FS: 48050 78mT Gravity FS: 998 429mg (9 90645 Based)

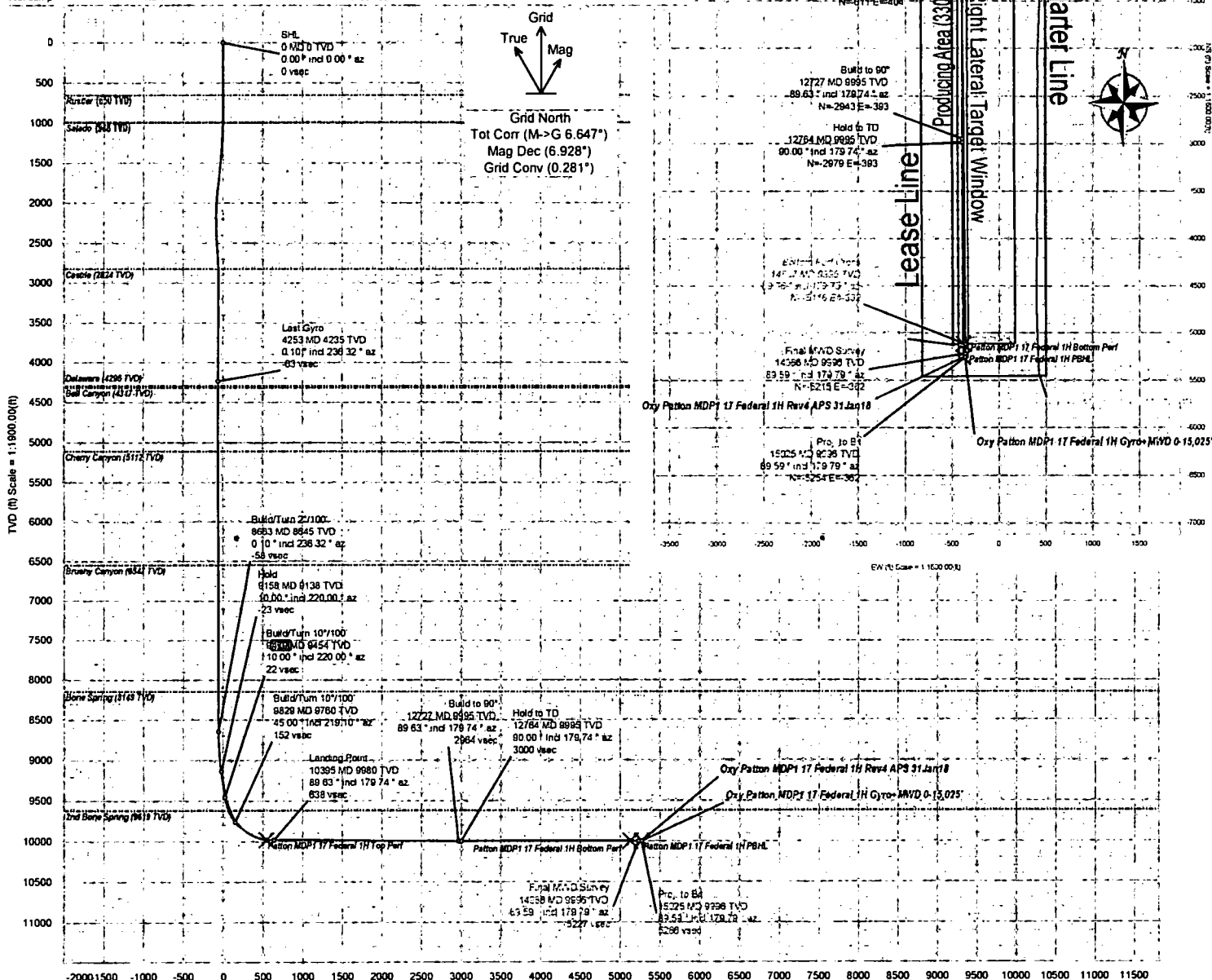
Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Lat: N 32 13 30.22 Northing: 448211.44RUS Grid Conv: 0.2814
 Lon: W 103 48 20.38 Easting: 794511.85RUS Scale Fact: 0.99993959

Miscellaneous

Spot: Oxy Patton MDP1 17 Federal 1H RKB-26.5' (3556ft above MSL)
 Plan: Oxy Patton MDP1 17 Federal 1H Rev4 APS 31-Jan-18
 Dry Surveys MDP1 17 Federal 1H Rev4 APS 31-Jan-18

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Rustler	650 01	0 58	181 43	650 00	1 48	-1 38	-1 73	0 54
Salado	988 47	6 17	74 87	988 00	-0 80	-0 07	11 88	2 82
Caselle	2841 52	3 15	254 17	2824 00	-84 35	71 17	-91 35	3 02
Tie In	4253 00	0 10	236 32	4235 42	-82 94	70 13	-96 43	
Delaware	4312 58	0 10	236 32	4295 00	-82 88	70 07	-96 52	0 00
Bell Canyon	4334 58	0 10	236 32	4317 00	-82 88	70 05	-96 55	0 00
PTB	4410 00	0 10	236 32	4392 42	-82 78	69 97	-96 68	0 00
Cherry Canyon	5129 58	0 10	236 32	5112 00	-82 00	69 28	-97 70	0 00
Brushy Canyon	6564 59	0 10	236 32	6547 00	-80 47	67 88	-99 79	0 00
Bone Spring	8186 59	0 10	236 32	8149 00	-58 75	66 34	-102 11	0 00
Build/Turn 2°/100'	8982 59	0 10	236 32	8645 00	-58 22	65 86	-102 83	0 00
Hold	9157 79	10 00	220 00	9137 67	-23 01	32 80	-130 90	2 00
Build/Turn 10°/100'	9479 47	10 00	220 00	9454 48	22 27	-10 19	-168 81	0 00
2nd Bone Spring	9653 87	27 44	219 28	9619 00	67 77	-53 23	-202 25	10 00
Build/Turn 10°/100'	9829 49	45 00	218 10	9780 12	152 42	-133 36	-267 54	10 00
Planned Top Perf Cross	10295 85	81 29	185 11	9872 16	539 67	-512 03	-399 42	10 00
Landing Point	10394 98	89 83	179 74	9980 00	838 32	-810 64	-403 57	10 00
Build to 90°	12727 22	89 83	179 74	9994 88	2963 57	-2942 81	-393 00	0 00
Hold to TD	12763 75	90 00	179 74	9995 00	3000 00	-2979 35	-393 83	1 00
Planned Bottom Perf Cross	14900 58	90 00	179 74	9995 00	5130 48	-5116 15	-383 10	0 00
Patton MDP1 17 Federal 1H PBHL	15040 58	90 00	179 74	9995 00	5270 04	-5256 15	-382 46	0 00
Wolfcamp	NaN	NaN		11534 00				



Vertical Section (ft) Azim = 184.16° Scale = 1:1900.00(ft) Origin = 0N-S, 0E-W