

Schlumberger

Oxy Sunrise MDP1 8-5 Federal Com 4H Gyro+MWD 0-20405 ftMD Survey Geodetic Report (Def Survey)



30-015-44475

Report Date: January 02, 2018 - 09:06 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 4H / Oxy Sunrise MDP1 8-5 Federal Com 4H
Well: Oxy Sunrise MDP1 8-5 Federal Com 4H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 4H Gyro+MWD 0-20405 ftMD
Survey Date: December 18, 2017
Tort / AHD / DD1 / ERD Ratio: 234.295' / 11370.116 ft / 6.733' / 1.130
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 32.81020", W 103° 48' 3.86888"
Location Grid N/E Y/X: N 446280.450 RUS, E 705926.760 RUS
CRS Grid Convergence Angle: 0.2838°
Grid Scale Factor: 0.99994012
Version / Patch: 2.10.565.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 4.419° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3567.300 ft above MSL
Seabed / Ground Elevation: 3540.800 ft above MSL
Magnetic Declination: 6.936°
Total Gravity Field Strength: 998.4279mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48064.381 nT
Magnetic Dip Angle: 59.984°
Declination Date: December 18, 2017
Magnetic Declination Model: HDGM 2017
North Reference: Grid North
Grid Convergence Used: 0.2838°
Total Corr Mag North->Grid North: 6.6518°
Local Coord Referenced To: Well Head

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 29 2018

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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	446280.45	705926.76	N 32° 13' 32.81" W 103° 48' 3.87"	
	46.13	0.74	24.11	46.13	0.28	0.27	0.12	1.60	446280.72	705926.88	N 32° 13' 32.81" W 103° 48' 3.87"	
	126.89	0.78	24.12	126.88	1.29	1.25	0.56	0.05	446281.70	705927.32	N 32° 13' 32.82" W 103° 48' 3.86"	
	213.88	0.43	249.46	213.87	1.71	1.68	0.50	1.29	446282.13	705927.26	N 32° 13' 32.83" W 103° 48' 3.86"	
	305.43	1.42	220.48	305.41	0.65	0.69	-0.56	1.16	446281.14	705926.20	N 32° 13' 32.82" W 103° 48' 3.88"	
	400.41	1.66	225.16	400.35	-1.35	-1.17	-2.30	0.29	446279.28	705924.46	N 32° 13' 32.80" W 103° 48' 3.90"	
	492.80	1.50	220.07	492.71	-3.34	-3.04	-4.03	0.23	446277.41	705922.73	N 32° 13' 32.78" W 103° 48' 3.92"	
	587.66	1.90	216.90	587.53	-5.68	-5.25	-5.77	0.43	446275.20	705920.99	N 32° 13' 32.76" W 103° 48' 3.94"	
Last Gyro	683.39	1.92	206.17	683.20	-8.51	-7.96	-7.43	0.37	446272.49	705919.33	N 32° 13' 32.73" W 103° 48' 3.96"	
	782.00	1.32	171.78	781.77	-11.15	-10.58	-8.00	1.13	446269.89	705918.76	N 32° 13' 32.71" W 103° 48' 3.96"	
	875.00	0.13	344.40	874.77	-12.10	-11.52	-7.87	1.56	446268.93	705918.89	N 32° 13' 32.70" W 103° 48' 3.96"	
	967.00	0.06	129.36	966.77	-12.03	-11.45	-7.87	0.20	446269.00	705918.90	N 32° 13' 32.70" W 103° 48' 3.96"	
	1060.00	0.06	137.61	1059.77	-12.09	-11.52	-7.79	0.01	446268.93	705918.97	N 32° 13' 32.70" W 103° 48' 3.96"	
	1152.00	0.11	138.21	1151.77	-12.18	-11.62	-7.70	0.05	446268.83	705919.06	N 32° 13' 32.70" W 103° 48' 3.96"	
	1245.00	0.06	21.40	1244.77	-12.20	-11.64	-7.63	0.16	446268.81	705919.13	N 32° 13' 32.70" W 103° 48' 3.96"	
	1337.00	0.06	299.17	1336.77	-12.13	-11.57	-7.65	0.09	446268.88	705919.11	N 32° 13' 32.70" W 103° 48' 3.96"	
	1430.00	0.11	177.02	1429.77	-12.20	-11.64	-7.69	0.16	446268.81	705919.07	N 32° 13' 32.70" W 103° 48' 3.96"	
	1522.00	0.11	229.80	1521.77	-12.35	-11.79	-7.75	0.11	446268.67	705919.01	N 32° 13' 32.69" W 103° 48' 3.96"	
	1617.00	0.06	58.03	1616.77	-12.38	-11.82	-7.78	0.18	446268.63	705918.98	N 32° 13' 32.69" W 103° 48' 3.96"	
	1709.00	0.06	99.48	1708.77	-12.36	-11.80	-7.69	0.05	446268.65	705919.07	N 32° 13' 32.69" W 103° 48' 3.96"	
	1806.00	0.06	284.11	1805.77	-12.35	-11.80	-7.69	0.12	446268.65	705919.07	N 32° 13' 32.69" W 103° 48' 3.96"	
	1900.00	0.06	25.90	1899.77	-12.30	-11.74	-7.72	0.10	446268.71	705919.04	N 32° 13' 32.69" W 103° 48' 3.96"	
	2089.00	0.06	157.38	2088.77	-12.30	-11.74	-7.63	0.06	446268.71	705919.13	N 32° 13' 32.69" W 103° 48' 3.96"	
	2184.00	0.06	301.21	2183.77	-12.32	-11.76	-7.66	0.12	446268.69	705919.10	N 32° 13' 32.69" W 103° 48' 3.96"	
	2278.00	0.06	139.85	2277.77	-12.33	-11.77	-7.67	0.13	446268.68	705919.09	N 32° 13' 32.69" W 103° 48' 3.96"	
	2372.00	0.08	272.81	2371.77	-12.37	-11.81	-7.70	0.14	446268.64	705919.06	N 32° 13' 32.69" W 103° 48' 3.96"	
	2467.00	0.06	237.42	2466.77	-12.40	-11.83	-7.81	0.05	446268.62	705918.95	N 32° 13' 32.69" W 103° 48' 3.96"	
	2561.00	0.06	86.14	2560.77	-12.42	-11.86	-7.80	0.12	446268.60	705918.96	N 32° 13' 32.69" W 103° 48' 3.96"	
	2655.00	0.13	101.14	2654.77	-12.43	-11.87	-7.85	0.08	446268.58	705919.11	N 32° 13' 32.69" W 103° 48' 3.96"	
	2750.00	0.08	252.68	2749.77	-12.46	-11.91	-7.61	0.21	446268.54	705919.15	N 32° 13' 32.69" W 103° 48' 3.96"	
	2836.00	0.06	42.88	2837.77	-12.44	-11.88	-7.66	0.07	446268.57	705919.10	N 32° 13' 32.69" W 103° 48' 3.96"	
	3033.00	0.08	331.50	3032.77	-12.34	-11.79	-7.66	0.09	446268.66	705919.10	N 32° 13' 32.69" W 103° 48' 3.96"	
	3127.00	0.06	23.02	3126.77	-12.24	-11.68	-7.67	0.07	446268.77	705919.09	N 32° 13' 32.69" W 103° 48' 3.96"	
	3222.00	0.13	310.42	3221.77	-12.13	-11.57	-7.74	0.13	446268.88	705919.02	N 32° 13' 32.70" W 103° 48' 3.96"	
	3411.00	0.13	175.44	3410.77	-12.21	-11.64	-7.88	0.13	446268.81	705918.88	N 32° 13' 32.70" W 103° 48' 3.96"	
	3505.00	0.18	184.36	3504.77	-12.47	-11.90	-7.89	0.06	446268.56	705918.87	N 32° 13' 32.69" W 103° 48' 3.96"	
	3600.00	0.16	60.84	3599.76	-12.54	-11.98	-7.78	0.32	446268.47	705918.98	N 32° 13' 32.69" W 103° 48' 3.96"	
	3694.00	0.20	77.15	3693.76	-12.42	-11.88	-7.51	0.07	446268.57	705919.25	N 32° 13' 32.69" W 103° 48' 3.96"	
	3788.00	0.16	220.10	3787.76	-12.48	-11.94	-7.43	0.36	446268.51	705919.33	N 32° 13' 32.69" W 103° 48' 3.96"	
	3877.00	0.06	280.71	3876.76	-12.68	-12.13	-7.70	0.07	446268.32	705919.06	N 32° 13' 32.69" W 103° 48' 3.96"	
	4071.00	0.08	299.27	4070.76	-12.68	-12.09	-7.79	0.02	446268.36	705918.97	N 32° 13' 32.69" W 103° 48' 3.96"	
	4166.00	0.06	126.35	4165.76	-12.67	-12.11	-7.78	0.15	446268.34	705919.06	N 32° 13' 32.69" W 103° 48' 3.96"	
	4260.00	0.13	32.89	4259.76	-12.61	-12.06	-7.67	0.17	446268.39	705919.09	N 32° 13' 32.69" W 103° 48' 3.96"	
	4333.00	0.16	343.81	4332.76	-12.44	-11.89	-7.65	0.17	446268.56	705919.11	N 32° 13' 32.69" W 103° 48' 3.96"	
	4491.00	0.13	359.67	4490.76	-12.06	-11.50	-7.72	0.03	446268.95	705919.05	N 32° 13' 32.70" W 103° 48' 3.96"	
	4679.00	0.06	97.14	4678.76	-11.85	-11.30	-7.62	0.08	446269.15	705919.14	N 32° 13' 32.70" W 103° 48' 3.96"	
	4868.00	0.00	328.18	4867.76	-11.86	-11.31	-7.52	0.03	446269.14	705919.24	N 32° 13' 32.70" W 103° 48' 3.96"	
	4963.00	0.06	88.61	4962.76	-11.85	-11.31	-7.47	0.06	446269.14	705919.29	N 32° 13' 32.70" W 103° 48' 3.96"	
5151.00	0.06	76.06	5150.76	-11.81	-11.28	-7.28	0.01	446269.17	705919.48	N 32° 13' 32.70" W 103° 48' 3.95"		
5246.00	0.06	220.91	5245.76	-11.83	-11.31	-7.26	0.12	446269.14	705919.50	N 32° 13' 32.70" W 103° 48' 3.95"		
5340.00	0.08	213.83	5339.76	-11.93	-11.40	-7.33	0.02	446269.05	705919.43	N 32° 13' 32.70" W 103° 48' 3.95"		
5435.00	0.11	303.80	5434.76	-11.94	-11.40	-7.44	0.14	446269.05	705919.32	N 32° 13' 32.70" W 103° 48' 3.96"		
5529.00	0.40	195.86	5528.76	-12.22	-11.67	-7.61	0.47	446268.78	705919.15	N 32° 13' 32.70" W 103° 48' 3.96"		
5623.00	1.98	181.82	5622.74	-14.17	-13.61	-7.75	1.70	446266.84	705919.01	N 32° 13' 32.68" W 103° 48' 3.96"		
5718.00	3.66	184.99	5717.62	-18.84	-18.27	-8.06	1.78	446262.18	705918.70	N 32° 13' 32.63" W 103° 48' 3.96"		
5812.00	5.44	180.55	5811.32	-26.28	-25.72	-8.37	1.93	446254.74	705918.39	N 32° 13' 32.56" W 103° 48' 3.97"		
5907.00	6.80	174.03	5905.78	-36.31	-35.81	-7.83	1.61	446244.64	705918.93	N 32° 13' 32.46" W 103° 48' 3.96"		
6001.00	8.12	168.43	5998.98	-48.17	-47.85	-5.92	1.60	446232.60	705920.84	N 32° 13' 32.34" W 103° 48' 3.94"		
6095.00	9.23	160.06	6091.91	-61.42	-61.44	-2.01	1.79	446219.01	705924.75	N 32° 13' 32.20" W 103° 48' 3.90"		
6190.00	10.63	151.54	6185.49	-75.72	-76.31	4.76	2.13	446204.14	705931.52	N 32° 13' 32.05" W 103° 48' 3.82"		
6284.00	11.92	144.63	6277.68	-90.46	-91.85	14.51	1.98	446188.61	705941.27	N 32° 13' 31.90" W 103° 48' 3.71"		
6379.00	12.08	144.49	6370.60	-105.62	-107.94	25.97	0.17	446172.52	705952.72	N 32° 13' 31.74" W 103° 48' 3.57"		
6473.00	12.11	142.73	6462.51	-120.53	-123.79	37.65	0.39	446156.65	705964.41	N 32° 13' 31.58" W 103° 48' 3.44"		
6568.00	11.80	140.14	6555.45	-134.92	-139.18	49.91	0.65	446141.28	705976.67	N 32° 13' 31.43" W 103° 48' 3.30"		
6756.00	11.55	135.05	6739.57	-160.95	-167.27	75.52	0.56	446113.19	706002.27	N 32° 13' 31.15" W 103° 48' 3.00"		
6851.00	11.77	135.03	6832.61	-173.46	-180.86	89.08	0.23	446099.60	706015.84	N 32° 13' 31.02" W 103° 48' 2.84"		
7040.00	11.76	134.41	7017.64	-198.38	-207.97	116.45	0.07	446072.92	706043.22	N 32° 13' 30.75" W 103° 48' 2.53"		
7134.00	12.22	135.40	7109.59	-211.06	-221.76	130.29	0.54	446058.70	706057.04	N 32° 13' 30.61" W 103° 48' 2.36"		
7228.00	12.40	134.49	7202.40	-224.22	-236.07	144.63	0.28	446044.40	706071.38	N 32° 13' 30.47" W 103° 48' 2.20"		
7323.00	12.44	133.45	7294.20	-237.09	-250.10	159.18	0.24	446030.36	706085.93	N 32° 13' 30.33" W 103° 48' 2.03"		
7512.00	12.96	130.87	7478.58	-262.50	-277.97	189.98	0.41	446002.50	706116.73	N 32° 13' 30.05" W 103° 48' 1.67"		
7607.00	12.77	131.95	7571.20	-275.23	-291.96	206.85	0.32	445988.51	706132.59	N 32° 13' 29.91" W 103° 48' 1.49"		
7701.00	12.76	130.54	7662.87	-287.68	-305.65	221.46	0.33	445974.82	706148.21	N 32° 13' 29.77" W 103° 48' 1.31"		
7795.00	12.71	131.06	7754.56	-299.97	-319.19	237.15	0.13	445961.28	706163.89	N 32° 13' 29.64" W 103° 48' 1.14"		
7890.00	12.79	130.30	7847.22	-312.37	-332.86	253.05	0.20	445947.61				

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 ° ' ")
	8268.00	11.87	147.87	8216.69	-366.39	-391.21	307.03	1.31	445889.26	706233.77	N 32 13 28.92 W 103 48 0.32	
	8467.00	11.21	158.22	8401.88	-398.50	-424.74	324.19	1.15	445855.74	706250.93	N 32 13 28.59 W 103 48 0.12	
	8551.00	11.62	161.66	8494.03	-415.42	-442.21	330.56	0.85	445838.27	706257.30	N 32 13 28.42 W 103 48 0.05	
	8645.00	11.74	164.31	8586.08	-433.13	-460.40	336.12	0.58	445820.08	706262.86	N 32 13 28.24 W 103 47 59.98	
	8740.00	10.42	157.12	8679.31	-449.84	-477.62	342.08	2.01	445802.86	706268.82	N 32 13 28.07 W 103 47 59.91	
	8834.00	9.36	148.11	8771.92	-463.55	-491.95	349.42	1.99	445788.53	706276.16	N 32 13 27.93 W 103 47 59.83	
	8929.00	8.60	139.53	8865.76	-474.82	-503.91	358.11	1.62	445776.57	706284.85	N 32 13 27.81 W 103 47 59.73	
	9023.00	7.75	125.45	8956.81	-483.44	-513.29	367.57	1.77	445767.20	706294.31	N 32 13 27.71 W 103 47 59.62	
	9118.00	7.43	115.20	9052.98	-489.29	-519.97	376.08	2.00	445760.51	706304.81	N 32 13 27.65 W 103 47 59.50	
	9212.00	6.47	104.81	9146.30	-492.40	-523.91	388.70	1.68	445756.57	706315.43	N 32 13 27.58 W 103 47 59.37	
	9306.00	7.40	101.59	9239.61	-494.11	-526.48	399.75	1.07	445754.00	706326.48	N 32 13 27.58 W 103 47 59.25	
	9401.00	8.27	97.70	9333.72	-495.27	-528.63	412.51	1.07	445751.85	706339.24	N 32 13 27.56 W 103 47 59.10	
	9474.00	7.43	86.34	9406.04	-494.91	-529.03	422.42	2.41	445751.45	706349.16	N 32 13 27.55 W 103 47 58.98	
	9568.00	18.41	72.68	9497.54	-488.53	-524.21	442.73	12.04	445756.27	706369.46	N 32 13 27.60 W 103 47 58.75	
	9663.00	32.35	66.26	9583.17	-470.89	-509.43	480.51	14.94	445771.05	706407.24	N 32 13 27.75 W 103 47 58.30	
	9757.00	35.22	62.54	9661.30	-444.70	-486.80	527.59	3.76	445793.68	706454.32	N 32 13 27.97 W 103 47 57.76	
	9852.00	46.45	53.32	9733.13	-407.45	-453.47	579.73	13.39	445827.01	706506.45	N 32 13 28.29 W 103 47 57.15	
	9946.00	49.59	43.59	9796.08	-357.23	-407.13	631.80	8.38	445873.35	706558.52	N 32 13 28.75 W 103 47 56.54	
	10041.00	51.95	30.64	9856.31	-295.47	-348.59	675.92	10.84	445931.88	706602.64	N 32 13 29.33 W 103 47 56.02	
	10135.00	60.20	24.70	9908.76	-223.84	-279.53	711.91	10.22	446000.94	706638.63	N 32 13 30.01 W 103 47 55.60	
	10230.00	67.27	21.77	9950.78	-143.24	-201.28	745.43	7.94	446079.18	706672.15	N 32 13 30.78 W 103 47 55.20	
	10324.00	73.86	16.95	9982.05	-57.66	-117.70	774.72	8.51	446182.75	706701.43	N 32 13 31.61 W 103 47 54.88	
	10418.00	77.52	10.42	10005.31	32.18	-29.27	796.21	7.77	446251.19	706722.92	N 32 13 32.48 W 103 47 54.60	
	10513.00	77.80	6.04	10025.62	124.75	62.58	809.49	4.51	446343.01	706736.20	N 32 13 33.39 W 103 47 54.44	
	10608.00	87.59	3.02	10037.69	218.85	156.37	818.89	10.78	446436.81	706743.60	N 32 13 34.32 W 103 47 54.35	
	10650.00	88.49	2.61	10039.12	260.81	198.30	818.96	2.35	446478.73	706745.67	N 32 13 34.39 W 103 47 54.32	
	10775.00	89.38	2.07	10041.44	385.71	323.17	824.06	0.83	446603.60	706750.77	N 32 13 35.97 W 103 47 54.26	
	10870.00	89.33	359.84	10042.51	480.52	418.14	825.64	2.35	446698.57	706752.35	N 32 13 36.91 W 103 47 54.23	
	10964.00	89.38	0.17	10043.57	574.24	512.14	825.65	0.36	446792.55	706752.36	N 32 13 37.84 W 103 47 54.23	
	11058.00	89.38	0.55	10044.59	668.00	606.13	826.24	0.40	446886.54	706752.95	N 32 13 38.77 W 103 47 54.22	
	11152.00	90.39	0.47	10044.78	761.78	700.12	827.08	1.08	446980.53	706753.79	N 32 13 39.70 W 103 47 54.20	
	11247.00	89.27	359.38	10045.06	856.48	795.12	826.95	1.65	447075.52	706753.66	N 32 13 40.64 W 103 47 54.20	
	11341.00	89.27	359.49	10046.26	950.12	889.11	826.03	0.12	447169.50	706752.73	N 32 13 41.57 W 103 47 54.20	
	11436.00	89.33	0.10	10047.42	1044.80	984.10	825.69	0.65	447264.49	706752.39	N 32 13 42.51 W 103 47 54.20	
	11530.00	89.27	359.51	10048.57	1138.49	1078.09	825.37	0.83	447358.48	706752.08	N 32 13 43.44 W 103 47 54.20	
	11624.00	89.33	359.13	10049.72	1232.11	1172.08	824.25	0.41	447452.46	706750.96	N 32 13 44.37 W 103 47 54.21	
	11719.00	89.16	359.97	10050.97	1326.76	1267.07	823.50	0.90	447547.44	706750.21	N 32 13 45.31 W 103 47 54.21	
	11813.00	90.39	359.89	10051.34	1420.47	1361.06	823.39	1.31	447641.43	706750.10	N 32 13 46.24 W 103 47 54.21	
	11908.00	89.72	358.56	10051.25	1515.07	1456.05	822.10	1.57	447736.18	706748.81	N 32 13 47.18 W 103 47 54.21	
	12002.00	89.44	1.00	10051.93	1608.70	1550.04	821.01	1.67	447830.39	706747.71	N 32 13 48.11 W 103 47 54.22	
	12097.00	90.28	1.94	10052.17	1703.52	1645.02	822.70	2.13	447925.37	706749.41	N 32 13 49.05 W 103 47 54.20	
	12285.00	90.45	0.11	10050.97	1891.18	1832.96	826.06	0.98	448113.31	706752.77	N 32 13 50.91 W 103 47 54.15	
	12380.00	90.62	0.02	10050.08	1985.90	1927.97	826.17	0.20	448208.30	706752.88	N 32 13 51.85 W 103 47 54.14	
	12474.00	92.53	0.41	10047.50	2079.61	2021.93	826.52	2.07	448302.26	706753.23	N 32 13 52.78 W 103 47 54.13	
	12568.00	89.94	358.49	10045.45	2174.22	2116.89	825.61	3.39	448397.21	706752.32	N 32 13 53.72 W 103 47 54.14	
	12663.00	89.83	357.76	10045.64	2267.65	2210.84	822.53	0.79	448491.16	706749.24	N 32 13 54.65 W 103 47 54.17	
	12757.00	89.83	358.18	10045.92	2361.06	2304.78	819.20	0.45	448585.09	706745.91	N 32 13 55.58 W 103 47 54.20	
	12845.00	89.72	357.75	10046.66	2457.86	2402.66	812.53	0.24	448772.96	706739.24	N 32 13 57.44 W 103 47 54.27	
	13038.00	90.00	358.77	10046.89	2641.32	2586.62	809.67	1.13	448866.91	706736.38	N 32 13 58.37 W 103 47 54.29	
	13134.00	89.94	358.30	10046.94	2735.82	2681.59	807.24	0.50	448961.67	706733.95	N 32 13 59.30 W 103 47 54.32	
	13228.00	89.05	357.22	10047.76	2829.18	2775.51	803.57	1.49	449055.79	706730.28	N 32 14 0.23 W 103 47 54.35	
	13323.00	90.11	358.70	10048.46	2923.57	2870.44	800.19	1.92	449150.71	706726.90	N 32 14 1.17 W 103 47 54.39	
	13417.00	90.06	358.39	10048.32	3017.07	2964.41	797.80	0.33	449244.68	706724.51	N 32 14 2.10 W 103 47 54.41	
	13512.00	89.94	359.08	10048.32	3111.61	3059.39	795.70	0.74	449339.65	706722.41	N 32 14 3.04 W 103 47 54.43	
	13606.00	89.78	358.34	10048.55	3205.14	3153.36	793.59	0.81	449433.62	706720.30	N 32 14 3.97 W 103 47 54.45	
	13700.00	89.72	358.08	10048.96	3298.59	3247.32	790.65	0.28	449527.57	706717.36	N 32 14 4.90 W 103 47 54.48	
	13795.00	90.11	358.70	10049.10	3393.06	3342.28	787.98	0.77	449622.52	706714.69	N 32 14 5.84 W 103 47 54.50	
	13889.00	89.94	359.02	10049.06	3486.62	3436.26	786.11	0.39	449716.50	706712.82	N 32 14 6.77 W 103 47 54.52	
	13984.00	89.83	359.25	10049.25	3581.21	3531.25	784.68	0.27	449811.48	706711.39	N 32 14 7.71 W 103 47 54.53	
	14172.00	90.06	358.95	10049.43	3768.40	3719.22	781.73	0.45	449999.44	706708.44	N 32 14 9.57 W 103 47 54.55	
	14361.00	90.00	359.79	10049.33	3956.67	3908.21	779.65	0.20	450188.42	706706.38	N 32 14 11.44 W 103 47 54.57	
	14550.00	90.28	359.25	10048.87	4144.98	4097.20	778.06	0.32	450377.40	706704.78	N 32 14 13.31 W 103 47 54.57	
	14644.00	90.17	358.53	10048.50	4238.54	4191.18	776.24	0.77	450471.37	706702.96	N 32 14 14.24 W 103 47 54.59	
	14739.00	91.46	358.57	10047.15	4333.03	4286.14	773.84	1.36	450566.33	706700.55	N 32 14 15.18 W 103 47 54.61	
	14833.00	90.17	358.41	10045.81	4426.51	4380.10	771.36	1.38	450660.28	706698.07	N 32 14 16.11 W 103 47 54.64	
	14928.00	89.83	358.74	10045.81	4521.02	4475.07	769.00	0.50	450755.24	706695.71	N 32 14 17.05 W 103 47 54.65	
	15117.00	90.00	0.70	10046.09	4709.38	4664.06	768.08	1.04	450944.22	706694.79	N 32 14 18.92 W 103 47 54.66	
	15205.00	90.17	0.22	10045.82	4896.83	4855.05	769.59	0.27	451132.20	706696.30	N 32 14 20.78 W 103 47 54.63	
	15400.00	89.50	0.22	10046.09	4991.67	4947.05	769.95	0.71	451227.19	706696.66	N 32 14 21.72 W 103 47 54.62	
	15589.00	92.69	0.70	10042.48	5180.16	5135.98	771.47	1.71	451416.11	706696.18	N 32 14 23.59 W 103 47 54.59	
	15683.00	91.12	358.62	10039.35	5273.77	5229.92	770.91	2.77	451510.05	706697.62	N 32 14 24.52 W 103 47 54.59	
	15778.00	90.50	358.35	10038.01	5368.26	5324.88	768.40	0.71	451605.00	706695.11	N 32 14 25.46 W 103 47 54.62	
	15872.00	90.22	359.55	10037.42	5461.82	5418.86	766.68	1.31	451698.97	706693.39	N 32 14 26.39 W 103 47 54.63	
	15967.00	90.34	359.18	10036.95	5556.45	5513.85	765.62	0.41	451793.96	706692.33	N 32 14 27.33 W 103 47 54.64	
	16061.00	89.21	358.11	10037.32	5649.97	5607.82	763.40	1.66	451887.92	706690.11	N 32 14 28.26 W 103 47 54.66	
	16155.00	89.61	359.38	10038.29	5743.51	5701.79	761.34	1.42	451981.89	706688.05	N 32 14 29.19 W 103 47 54.68</	

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 ° ' ")
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Survey Type: Def Survey

Survey Error Model: ISOWSA 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	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 4H Gyro+MWD 0-20405 ftMD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 4H Gyro+MWD 0-20405 ftMD
	1	26.500	683.390	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 4H
	1	683.390	20405.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 4H

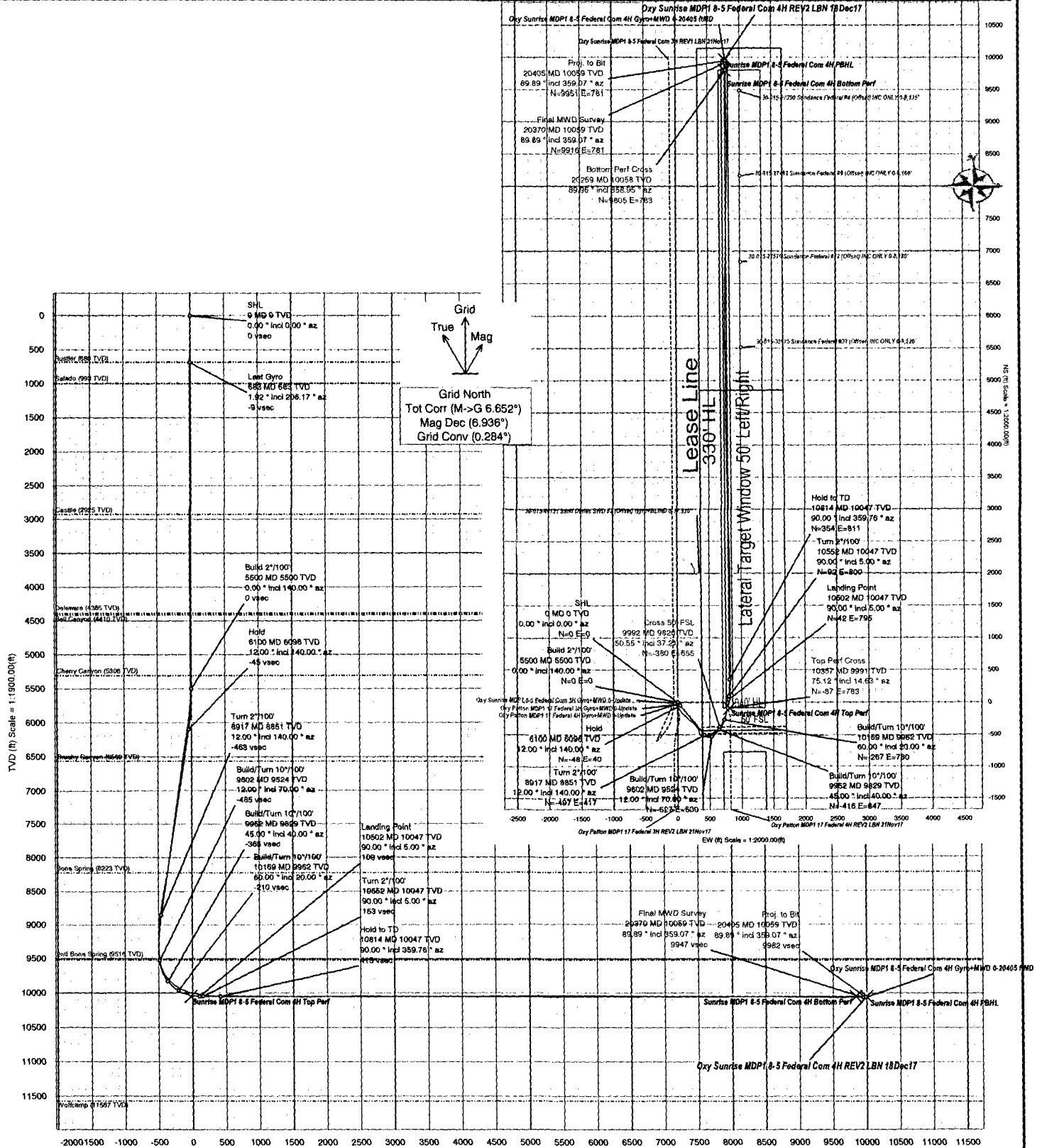
Schlumberger

OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Sunrise MDP1 8-5 Federal Com 4H	NM Eddy County (NAD 83)	Oxy Sunrise MDP1 8-5 Federal Com 4H

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: HD3M 2017 Dip: 59.964° Date: 19-Dec-2017	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Oxy Sunrise MDP1
MagDec: 6.936° FB: 48064.361nT Gravity FB: 998.428mg (9.80665 Based)	Lat: N 32 13 32.81 Northing: 448280.458US Grid Conv: 0.2638°	8-5 Federal Com TVD Ref: RKB=26.5' (357.3ft above MSL)
	Lon: W 103 48 3.87 Easting: 705926.768US Scale Fact: 0.99994012	Plan: Oxy Sunrise MDP1 8-5 Federal Com 4H REV2 LBN 18Dec17



Vertical Section (ft) Azim = 4.42° Scale = 1:1900.00(ft) Origin = DN-S, OE-W