

30-015-44395

Schlumberger

Oxy Sunrise MDP1 8-5 Federal Com 2H Gyro+MWD 0-20,335' MD Survey Geodetic Report (Def Survey)



Report Date:	January 04, 2018 - 04:38 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	1.949 ° (Grid North)
Field:	NM Eddy County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Sunrise MDP1 8-5 Federal Com 2H / Oxy Sunrise MDP1 8-5 Federal Com 2H	TVD Reference Datum:	RKB=26.5'
Well:	Oxy Sunrise MDP1 8-5 Federal Com 2H	TVD Reference Elevation:	3555.900 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3529.400 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.940 °
Survey Name:	Oxy Sunrise MDP1 8-5 Federal Com 2H Gyro+MWD 0-20,335' MD	Total Gravity Field Strength:	998.4287mgn (9.80665 Based)
Survey Date:	December 11, 2017	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	249.744 ° / 11217.497 ft / 6.754 / 1.119	Total Magnetic Field Strength:	49066.134 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.985 °
Location Lat / Long:	N 32° 13' 30.21746", W 103° 48' 20.00652"	Declination Date:	December 11, 2017
Location Grid N/E Y/X:	N 446011.610 RUS, E 704541.860 RUS	Magnetic Declination Model:	HDGM 2017
CRS Grid Convergence Angle:	0.2814 °	North Reference:	Grid North
Grid Scale Factor:	0.9999396	Grid Convergence Used:	0.2814 °
Version / Patch:	2.10.565.0	Total Corr Mag North->Grid North:	6.6587 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	446011.61	704541.86	N 32 13 30.22	W 103 48 20.01
	41.20	0.28	167.68	41.20	-0.10	-0.10	0.02	0.68	446011.51	704541.88	N 32 13 30.22	W 103 48 20.01
	133.10	0.35	196.39	133.10	-0.59	-0.59	-0.01	0.19	446011.02	704541.85	N 32 13 30.21	W 103 48 20.01
	223.90	0.58	189.81	223.90	-1.31	-1.31	-0.17	0.26	446010.30	704541.69	N 32 13 30.20	W 103 48 20.01
	316.20	0.79	175.69	316.19	-2.41	-2.40	-0.20	0.29	446009.21	704541.66	N 32 13 30.19	W 103 48 20.01
	407.90	0.78	175.04	407.88	-3.65	-3.65	-0.10	0.01	446007.96	704541.76	N 32 13 30.18	W 103 48 20.01
	496.30	0.52	180.99	496.27	-4.69	-4.69	-0.05	0.29	446006.92	704541.81	N 32 13 30.17	W 103 48 20.01
	591.60	0.56	176.75	591.57	-5.55	-5.56	-0.03	0.06	446006.05	704541.83	N 32 13 30.16	W 103 48 20.01
	683.50	0.59	154.43	683.47	-6.42	-6.43	0.20	0.24	446005.18	704542.06	N 32 13 30.15	W 103 48 20.00
	774.80	0.80	157.31	774.76	-7.42	-7.44	0.65	0.23	446004.17	704542.51	N 32 13 30.14	W 103 48 20.00
	866.70	1.22	161.20	866.64	-8.92	-8.96	1.21	0.46	446002.65	704543.07	N 32 13 30.13	W 103 48 19.99
	958.20	1.50	164.41	958.12	-10.97	-11.04	1.85	0.32	446000.57	704543.71	N 32 13 30.11	W 103 48 19.99
	1052.90	1.53	165.03	1052.79	-13.36	-13.45	2.50	0.04	445998.16	704544.36	N 32 13 30.08	W 103 48 19.98
	1147.60	1.57	171.79	1147.45	-15.85	-15.96	3.02	0.20	445995.65	704544.88	N 32 13 30.06	W 103 48 19.97
	1242.00	0.91	167.89	1241.83	-17.85	-17.97	3.36	0.70	445993.64	704545.22	N 32 13 30.04	W 103 48 19.97
	1336.60	0.08	200.30	1336.42	-18.64	-18.77	3.49	0.89	445992.84	704545.35	N 32 13 30.03	W 103 48 19.97
	1431.10	0.09	204.33	1430.92	-18.77	-18.90	3.44	0.01	445992.71	704545.30	N 32 13 30.03	W 103 48 19.97
	1525.70	0.10	218.29	1525.52	-18.90	-19.03	3.36	0.03	445992.58	704545.22	N 32 13 30.03	W 103 48 19.97
	1620.60	0.10	196.82	1620.42	-19.05	-19.17	3.28	0.04	445992.44	704545.14	N 32 13 30.03	W 103 48 19.97
	1715.00	0.12	208.69	1714.82	-19.22	-19.34	3.21	0.03	445992.27	704545.07	N 32 13 30.03	W 103 48 19.97
	1809.70	0.13	214.22	1809.52	-19.40	-19.52	3.10	0.02	445992.10	704544.96	N 32 13 30.02	W 103 48 19.97
	1904.40	0.10	207.54	1904.22	-19.56	-19.68	3.00	0.03	445991.93	704544.86	N 32 13 30.02	W 103 48 19.97
	1999.10	0.07	199.33	1998.92	-19.69	-19.81	2.95	0.03	445991.81	704544.81	N 32 13 30.02	W 103 48 19.97
	2093.70	0.11	216.25	2093.52	-19.82	-19.93	2.87	0.05	445991.68	704544.73	N 32 13 30.02	W 103 48 19.97
	2188.20	0.11	225.06	2188.02	-19.96	-20.07	2.76	0.02	445991.54	704544.62	N 32 13 30.02	W 103 48 19.98
	2282.60	0.11	231.76	2282.42	-20.09	-20.19	2.62	0.01	445991.42	704544.48	N 32 13 30.02	W 103 48 19.98
	2377.30	0.11	251.32	2377.12	-20.18	-20.28	2.46	0.04	445991.34	704544.32	N 32 13 30.02	W 103 48 19.98
	2472.20	0.11	249.73	2472.02	-20.25	-20.34	2.29	0.00	445991.27	704544.15	N 32 13 30.02	W 103 48 19.98
	2566.70	0.10	239.14	2566.52	-20.33	-20.41	2.14	0.02	445991.20	704544.00	N 32 13 30.02	W 103 48 19.98
	2661.60	0.10	250.97	2661.42	-20.40	-20.48	1.99	0.02	445991.13	704543.85	N 32 13 30.01	W 103 48 19.98
	2756.20	0.12	249.24	2756.02	-20.47	-20.54	1.82	0.02	445991.07	704543.68	N 32 13 30.01	W 103 48 19.99
	2850.80	0.10	209.15	2850.62	-20.58	-20.65	1.68	0.08	445990.96	704543.54	N 32 13 30.01	W 103 48 19.99
	2945.30	0.09	227.55	2945.12	-20.70	-20.77	1.59	0.03	445990.84	704543.45	N 32 13 30.01	W 103 48 19.99
	3039.70	0.06	223.91	3039.52	-20.79	-20.86	1.50	0.03	445990.75	704543.36	N 32 13 30.01	W 103 48 19.99
	3134.30	0.07	158.35	3134.12	-20.88	-20.95	1.49	0.08	445990.67	704543.35	N 32 13 30.01	W 103 48 19.99
	3228.70	0.10	120.61	3228.52	-20.97	-21.04	1.58	0.06	445990.57	704543.44	N 32 13 30.01	W 103 48 19.99
	3323.30	0.11	248.48	3323.12	-21.05	-21.12	1.57	0.20	445990.50	704543.43	N 32 13 30.01	W 103 48 19.99
	3417.80	0.23	207.08	3417.62	-21.26	-21.32	1.40	0.17	445990.29	704543.26	N 32 13 30.01	W 103 48 19.99
	3512.30	0.21	168.04	3512.12	-21.60	-21.66	1.35	0.16	445989.96	704543.21	N 32 13 30.00	W 103 48 19.99
	3606.80	0.09	125.53	3606.62	-21.81	-21.87	1.44	0.17	445989.74	704543.30	N 32 13 30.00	W 103 48 19.99
	3701.50	0.06	221.43	3701.32	-21.89	-21.96	1.47	0.12	445989.66	704543.33	N 32 13 30.00	W 103 48 19.99
	3796.30	0.13	235.08	3796.12	-21.99	-22.05	1.35	0.08	445989.56	704543.21	N 32 13 30.00	W 103 48 19.99
	3891.20	0.09	227.19	3891.02	-22.11	-22.16	1.21	0.04	445989.45	704543.07	N 32 13 30.00	W 103 48 19.99
	3985.90	0.10	205.54	3985.72	-22.23	-22.28	1.12	0.04	445989.33	704542.96	N 32 13 30.00	W 103 48 19.99
	4080.50	0.11	170.23	4080.32	-22.40	-22.45	1.10	0.07	445989.16	704542.96	N 32 13 30.00	W 103 48 20.00
	4175.00	0.17	347.77	4174.82	-22.35	-22.40	1.08	0.30	445989.21	704542.94	N 32 13 30.00	W 103 48 20.00
	4269.40	0.25	267.35	4269.22	-22.23	-22.27	0.85	0.29	445989.34	704542.71	N 32 13 30.00	W 103 48 20.00
	4364.10	0.21	234.38	4363.92	-22.35	-22.38	0.50	0.14	445989.23	704542.36	N 32 13 30.00	W 103 48 20.00
	4458.80	0.13	275.08	4458.62	-22.45	-22.48	0.25	0.15	445989.14	704542.11	N 32 13 30.00	W 103 48 20.00
	4553.40	0.10	36.00	4553.22	-22.38	-22.40	0.19	0.21	445989.21	704542.05	N 32 13 30.00	W 103 48 20.01
	4647.80	0.10	57.32	4647.62	-22.27	-22.29	0.31	0.04	445989.32	704542.17	N 32 13 30.00	W 103 48 20.00
	4742.40	0.12	37.70	4742.22	-22.14	-22.17	0.44	0.04	445989.45	704542.30	N 32 13 30.00	W 103 48 20.00
	4837.00	0.10	53.52	4836.82	-22.01	-22.04	0.57	0.04	445989.57	704542.43	N 32 13 30.00	W 103 48 20.00
	4931.60	0.09	73.05	4931.42	-21.93	-21.97	0.71	0.04	445989.64	704542.57	N 32 13 30.00	W 103 48 20.00
	5026.00	0.13	56.78	5025.82	-21.85	-21.89	0.87	0.05	445989.72	704542.73	N 32 13 30.00	W 103 48 20.00
	5120.40	0.10	58.59	5120.22	-21.74	-21.79	1.03	0.03	445989.83	704542.89	N 32 13 30.00	W 103 48 20.00
	5214.90	0.11	57.47	5214.72	-21.64	-21.69	1.17	0.01	445989.92	704543.03	N 32 13 30.00	W 103 48 19.99
	5309.40	0.15	49.40	5309.22	-21.51	-21.56	1.34	0.05	445990.05	704543.20	N 32 13 30.00	W 103 48 19.99
	5404.00	0.10	53.24	5403.82	-21.37	-21.43	1.50	0.05	445990.18	704543.36	N 32 13 30.01	W 103 48 19.99
	5498.50	0.10	63.03	5498.32	-21.28	-21.35	1.64	0.02	445990.26	704543.50	N 32 13 30.01	W 103 48 19.99
	5593.00	0.11	48.72	5592.82	-21.18	-21.25	1.79	0.03	445990.36	704543.65	N 32 13 30.01	W 103 48 19.99
	5687.50	0.12	85.12	5687.32	-21.10	-21.18	1.95	0.08	445990.43	704543.81	N 32 13 30.01	W 103 48 19.99
	5782.10	0.17	50.78	5781.91	-21.00	-21.09	2.16	0.10	445990.53	704544.02	N 32 13 30.01	W 103 48 19.98
	5876.80	0.10	46.43	5876.61	-20.85	-20.94	2.33	0.07	445990.67	704544.19	N 32 13 30.01	W 103 48 19.98
	5971.40	0.09	87.32	5971.21	-20.78	-20.88	2.46	0.07	445990.73	704544.34	N 32 13 30.01	W 103 48 19.98
	6065.90	0.28	194.58	6065.71	-21.00	-21.10	2.48	0.34	445990.51	704544.34	N 32 13 30.01	W 103 48 19.98
	6160.40	2.85	198.24	6160.17	-23.48	-23.55	1.68	2.72	445988.06	704543.54	N 32 13 29.98	W 103 48 19.99
	6254.80	5.57	198.20	6254.31	-30.14	-30.14	-0.48	2.88	445981.48	704541.38	N 32 13 29.92	W 103 48 20.01
	6349.30	8.55	193.42	6348.08	-41.43	-41.33	-3.54	3.21	445970.28	704538.32	N 32 13 29.81	W 103 48 20.05
	6443.90	10.91	185.69	6441.32	-57.25	-57.08	-6.06	2.85	445954.53	704535.80	N 32 13 29.65	W 103 48 20.08

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6538.50	12.67	179.20	6539.92	-76.55	-76.36	-6.81	2.33	445935.25	704535.05	N 32 13 29.46 W	103 48 20.09
	6633.10	15.02	174.64	6625.77	-99.08	-98.95	-5.52	2.74	445912.67	704536.34	N 32 13 29.24 W	103 48 20.06
	6727.80	16.21	170.28	6716.98	-124.19	-124.19	-2.14	1.76	445887.42	704539.72	N 32 13 28.99 W	103 48 20.04
	6822.70	15.35	164.76	6808.30	-149.17	-149.37	3.40	1.62	445862.25	704545.26	N 32 13 28.74 W	103 48 19.98
	6917.30	13.37	159.27	6899.95	-171.23	-171.68	10.56	2.54	445839.94	704552.42	N 32 13 28.52 W	103 48 19.89
	7011.90	11.58	143.07	6992.34	-188.72	-189.51	20.14	4.14	445822.11	704562.00	N 32 13 28.34 W	103 48 19.78
	7106.60	11.88	124.96	7085.10	-201.42	-202.69	33.83	3.88	445808.93	704575.89	N 32 13 28.21 W	103 48 19.62
	7201.30	13.05	109.18	7177.59	-209.89	-211.78	51.91	3.79	445799.84	704593.77	N 32 13 28.12 W	103 48 19.41
	7296.00	14.52	110.94	7269.56	-216.92	-219.54	73.10	1.61	445792.09	704614.96	N 32 13 28.04 W	103 48 19.17
	7390.70	16.23	117.02	7360.88	-226.40	-229.79	95.98	2.48	445781.83	704637.83	N 32 13 27.94 W	103 48 18.90
	7485.40	16.94	121.08	7451.64	-238.72	-242.93	119.59	1.43	445768.70	704661.44	N 32 13 27.81 W	103 48 18.63
	7580.10	17.66	124.64	7542.06	-253.20	-258.22	143.22	1.35	445753.41	704685.07	N 32 13 27.66 W	103 48 18.35
	7674.60	18.53	126.98	7631.88	-269.56	-275.40	167.01	1.20	445736.23	704708.86	N 32 13 27.48 W	103 48 18.08
	7769.20	18.83	128.47	7721.50	-287.27	-293.94	190.97	0.60	445717.69	704732.82	N 32 13 27.30 W	103 48 17.80
	7863.80	18.93	128.41	7811.01	-305.48	-312.97	214.95	0.11	445698.66	704756.80	N 32 13 27.11 W	103 48 17.52
	7958.30	18.42	128.46	7900.54	-323.47	-331.78	238.65	0.54	445679.85	704780.50	N 32 13 26.92 W	103 48 17.25
	8052.70	17.21	125.19	7990.41	-340.00	-349.10	261.74	1.66	445662.53	704803.59	N 32 13 26.75 W	103 48 16.98
	8147.20	15.31	118.61	8081.13	-353.26	-363.14	284.13	2.80	445648.50	704825.97	N 32 13 26.61 W	103 48 16.72
	8241.50	13.10	111.67	8172.55	-362.46	-373.04	304.99	2.95	445638.59	704846.83	N 32 13 26.51 W	103 48 16.48
	8336.20	10.78	104.59	8265.20	-368.02	-379.24	323.54	2.89	445632.39	704865.38	N 32 13 26.45 W	103 48 16.26
	8430.80	8.43	94.20	8358.48	-370.23	-381.98	339.02	3.08	445629.66	704880.86	N 32 13 26.42 W	103 48 16.08
	8525.40	7.27	79.26	8452.20	-369.19	-381.37	351.82	2.47	445630.26	704893.66	N 32 13 26.43 W	103 48 15.93
	8620.20	7.27	63.06	8546.25	-364.97	-377.53	363.06	2.16	445634.10	704904.90	N 32 13 26.46 W	103 48 15.80
	8714.70	6.76	47.60	8640.05	-358.19	-371.07	372.50	2.06	445640.56	704914.33	N 32 13 26.53 W	103 48 15.69
	8809.30	6.03	36.44	8734.06	-350.21	-363.32	379.56	1.52	445648.31	704921.40	N 32 13 26.60 W	103 48 15.61
	8903.80	6.39	28.58	8828.01	-341.41	-354.71	385.03	0.98	445656.92	704926.86	N 32 13 26.69 W	103 48 15.54
	8998.50	6.72	23.89	8922.09	-331.56	-345.02	389.79	0.66	445666.62	704931.63	N 32 13 26.78 W	103 48 15.49
	9093.10	7.10	16.78	9016.00	-320.78	-334.36	393.72	0.99	445677.27	704935.56	N 32 13 26.89 W	103 48 15.44
	9187.80	7.91	8.08	9109.89	-308.64	-322.30	396.33	1.47	445689.33	704938.16	N 32 13 27.01 W	103 48 15.41
	9282.40	8.69	2.36	9203.50	-295.02	-308.72	397.53	1.20	445702.91	704939.37	N 32 13 27.14 W	103 48 15.40
	9376.80	9.84	0.85	9296.67	-279.83	-293.53	397.95	1.25	445718.10	704939.78	N 32 13 27.29 W	103 48 15.39
	9471.20	9.75	359.94	9389.70	-263.77	-277.47	398.06	0.19	445734.16	704939.89	N 32 13 27.45 W	103 48 15.39
	9565.80	8.75	354.23	9483.07	-248.64	-262.30	397.33	1.43	445749.33	704939.18	N 32 13 27.60 W	103 48 15.40
	9660.50	13.94	359.56	9575.89	-230.09	-243.71	396.52	5.59	445767.91	704938.35	N 32 13 27.79 W	103 48 15.40
	9755.10	22.75	353.98	9665.60	-200.53	-214.07	394.51	9.49	445797.56	704936.34	N 32 13 28.08 W	103 48 15.43
	9849.80	31.15	344.13	9749.98	-158.98	-172.20	385.87	10.02	445839.42	704927.70	N 32 13 28.49 W	103 48 15.52
	9944.50	41.29	344.00	9826.28	-105.80	-118.47	370.52	10.71	445893.15	704912.35	N 32 13 29.03 W	103 48 15.70
	10030.10	50.46	350.24	9892.10	-40.21	-52.34	355.69	10.78	445959.27	704897.53	N 32 13 29.68 W	103 48 15.87
Last Gyro	10133.60	65.10	357.70	9942.40	38.71	26.91	347.74	16.85	446038.51	704889.58	N 32 13 30.47 W	103 48 15.96
	10228.00	74.92	358.74	9974.64	127.13	115.47	345.02	10.45	446127.07	704886.85	N 32 13 31.34 W	103 48 15.98
	10320.00	82.48	357.53	9992.65	217.08	205.57	342.07	8.32	446217.16	704883.91	N 32 13 32.23 W	103 48 16.01
	10415.00	89.76	355.93	9999.07	311.40	300.13	336.66	7.84	446311.72	704878.50	N 32 13 33.17 W	103 48 16.07
	10449.00	89.97	355.24	9999.15	345.19	334.03	334.04	2.12	446345.62	704875.88	N 32 13 33.51 W	103 48 16.10
	10531.00	90.31	352.35	9998.95	426.35	415.54	325.18	3.55	446427.12	704867.02	N 32 13 34.31 W	103 48 16.20
	10626.00	90.17	351.74	9998.56	519.94	509.62	312.03	0.66	446521.20	704853.87	N 32 13 35.25 W	103 48 16.35
	10720.00	90.00	354.90	9998.42	612.86	602.97	301.10	3.37	446614.54	704842.94	N 32 13 36.17 W	103 48 16.47
	10815.00	90.03	356.73	9998.39	707.31	697.72	294.17	1.93	446709.28	704836.01	N 32 13 37.11 W	103 48 16.54
	10910.00	90.10	356.63	9998.28	801.91	792.56	288.67	0.13	446804.12	704830.51	N 32 13 38.05 W	103 48 16.60
	11004.00	90.24	358.44	9998.01	895.63	886.46	284.62	1.93	446898.02	704826.47	N 32 13 38.96 W	103 48 16.64
	11099.00	90.24	357.97	9997.61	990.43	981.42	281.65	0.49	446992.97	704823.49	N 32 13 39.91 W	103 48 16.67
	11193.00	90.17	358.48	9997.27	1084.23	1075.37	278.74	0.55	447086.91	704820.58	N 32 13 40.84 W	103 48 16.70
	11288.00	90.21	0.42	9996.96	1179.13	1170.36	277.83	2.04	447181.90	704819.67	N 32 13 41.78 W	103 48 16.71
	11383.00	90.31	4.96	9996.52	1274.10	1265.23	282.28	4.78	447276.76	704824.12	N 32 13 42.72 W	103 48 16.65
	11477.00	90.38	8.26	9996.06	1367.77	1358.59	293.10	3.51	447370.12	704834.94	N 32 13 43.65 W	103 48 16.52
	11572.00	90.41	8.97	9995.30	1462.30	1452.75	305.69	1.36	447464.27	704847.53	N 32 13 44.58 W	103 48 16.36
	11667.00	90.38	5.19	9994.65	1557.05	1547.21	315.75	1.87	447558.72	704857.59	N 32 13 45.51 W	103 48 16.24
	11761.00	90.45	5.41	9993.97	1650.89	1640.80	324.43	0.25	447652.31	704866.27	N 32 13 46.44 W	103 48 16.14
	11856.00	89.79	4.85	9993.77	1745.74	1735.42	332.93	0.91	447746.92	704874.77	N 32 13 47.37 W	103 48 16.03
	11951.00	89.79	4.83	9994.12	1840.62	1830.08	340.94	0.02	447841.58	704882.78	N 32 13 48.31 W	103 48 15.93
	12045.00	89.79	3.54	9994.46	1934.54	1923.83	347.80	1.37	447935.32	704889.64	N 32 13 49.24 W	103 48 15.85
	12140.00	89.86	3.15	9994.75	2029.51	2018.67	353.35	0.42	448030.15	704895.18	N 32 13 50.18 W	103 48 15.78
	12239.00	89.79	2.40	9995.33	2218.49	2207.44	362.50	0.40	448128.92	704904.33	N 32 13 52.04 W	103 48 15.66
	12424.00	90.03	1.16	9995.48	2313.49	2302.40	365.45	1.33	448313.86	704907.28	N 32 13 52.98 W	103 48 15.62
	12613.00	89.93	0.86	9995.54	2502.46	2491.37	368.78	0.17	448502.82	704910.62	N 32 13 54.85 W	103 48 15.57
	12707.00	90.03	0.52	9995.58	2585.36	2585.36	369.91	0.38	448596.81	704911.75	N 32 13 55.78 W	103 48 15.55
	12897.00	89.93	0.71	9995.64	2786.39	2775.35	371.95	0.11	448786.78	704913.79	N 32 13 57.66 W	103 48 15.52
	13086.00	90.00	1.65	9995.76	2975.37	2964.31	375.84	0.50	448975.73	704917.68	N 32 13 59.53 W	103 48 15.46
	13180.00	90.00	359.60	9995.76	3069.34	3058.30	376.87	2.18	449069.71	704918.70	N 32 14 0.46 W	103 48 15.44
	13369.00	89.62	358.63	9996.39	3258.11	3247.27	373.95	0.55	449258.68	704915.79	N 32 14 2.33 W	103 48 15.47
	13558.00	89.52	358.47	9997.80	3446.77	3436.20	369.17	0.10	449447.60	704911.00	N 32 14 4.20 W	103 48 15.51
	13652.00	89.93	358.76	9998.26	3540.61	3530.17	366.89	0.53	449541.56	704908.73	N 32 14 5.13 W	103 48 15.53
	13752.00	90.79	359.40	9997.63	3640.48	3630.16	365.29	1.07	449641.54	704907.13	N 32 14 6.12 W	103 48 15.55
	13847.00	91.55	359.62	9995.69	3735.37	3725.13	364.48	0.83	449736.51	704906.31	N 32 14 7.06 W	103 48 15.55
	13941.00	92.96	0.36	9991.99	3829.24	3819.06	364.46	1.69	449830.43	704906.30	N 32 14 7.99 W	103 48 15.55
	14035.00	92.06	359.14	9987.87	3923.08	3912.96	364.05	1.61	449924.33	704905.89	N 32 14 8.92 W	103 48 15.54
	14224.00	90.03	355.28	9984.42	4111.36	4101.66	354.85	2.31	450113.02	704896.69	N 32 14 10.79 W	103 48 15.64
	14318.00	90.00	357.38	9984.40	4204.90	4195.47	348.83	2.23</				

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 ° ' '')
	17905.00	90.07	358.97	10028.25	7788.11	7780.90	344.36	0.32	453792.03	704886.20	N 32 14 47.19	W 103 48 15.55
	18000.00	90.41	358.93	10027.85	7882.98	7875.89	342.62	0.36	453887.01	704884.46	N 32 14 48.13	W 103 48 15.57
	18189.00	89.72	358.56	10027.64	8071.69	8064.84	338.48	0.41	454075.95	704880.32	N 32 14 50.00	W 103 48 15.60
	18378.00	90.45	358.86	10027.36	8260.38	8253.79	334.23	0.42	454264.89	704876.06	N 32 14 51.87	W 103 48 15.64
	18473.00	90.41	359.30	10026.64	8355.26	8348.78	332.70	0.47	454359.87	704874.54	N 32 14 52.81	W 103 48 15.66
	18662.00	91.17	0.53	10024.04	8544.12	8537.75	332.42	0.76	454548.83	704874.26	N 32 14 54.68	W 103 48 15.65
	18757.00	91.20	0.95	10022.07	8639.08	8632.72	333.65	0.44	454643.80	704875.49	N 32 14 55.62	W 103 48 15.63
	18851.00	90.89	0.90	10020.36	8733.05	8726.70	335.16	0.33	454737.76	704877.00	N 32 14 56.55	W 103 48 15.60
	18946.00	91.13	0.74	10018.68	8828.01	8821.67	336.52	0.30	454832.73	704878.36	N 32 14 57.49	W 103 48 15.58
	19040.00	91.03	0.95	10016.91	8921.98	8915.65	337.91	0.25	454926.70	704879.75	N 32 14 58.42	W 103 48 15.56
	19135.00	90.65	0.21	10015.52	9016.94	9010.63	338.87	0.88	455021.68	704880.71	N 32 14 59.36	W 103 48 15.55
	19229.00	91.00	0.69	10014.16	9110.90	9104.62	339.61	0.63	455115.66	704881.45	N 32 15 0.29	W 103 48 15.53
	19324.00	90.82	0.48	10012.66	9205.86	9199.60	340.58	0.29	455210.63	704882.42	N 32 15 1.23	W 103 48 15.51
	19417.00	91.31	1.44	10010.93	9298.83	9292.57	342.14	1.16	455303.60	704883.97	N 32 15 2.15	W 103 48 15.49
	19512.00	91.82	2.80	10008.33	9393.79	9387.47	345.65	1.53	455398.49	704887.49	N 32 15 3.09	W 103 48 15.44
	19606.00	91.24	1.61	10005.82	9487.75	9481.36	349.26	1.41	455492.38	704891.10	N 32 15 4.02	W 103 48 15.40
	19700.00	92.10	2.02	10003.08	9581.71	9575.27	352.24	1.01	455586.28	704894.08	N 32 15 4.95	W 103 48 15.36
	19795.00	90.96	359.64	10000.55	9676.65	9670.22	353.61	2.78	455681.23	704895.45	N 32 15 5.89	W 103 48 15.34
	19889.00	91.20	357.19	9998.77	9770.45	9764.16	351.02	2.62	455775.16	704892.85	N 32 15 6.82	W 103 48 15.36
	20078.00	91.13	357.06	9994.93	9868.74	9862.88	341.54	0.08	455963.87	704883.38	N 32 15 8.68	W 103 48 15.46
	20172.00	91.17	357.30	9993.05	10052.40	10046.75	336.91	0.26	456057.73	704878.75	N 32 15 9.61	W 103 48 15.51
	20266.00	91.07	357.65	9991.21	10146.09	10140.64	332.77	0.39	456151.62	704874.61	N 32 15 10.54	W 103 48 15.55
Last MWD Survey Proj. to bit	20296.00	91.10	357.69	9990.64	10176.00	10170.61	331.55	0.17	456181.59	704873.39	N 32 15 10.84	W 103 48 15.56
	20335.00	91.10	357.69	9989.89	10214.89	10209.57	329.98	0.00	456220.54	704871.82	N 32 15 11.23	W 103 48 15.58

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	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 2H Gyro+MWD 0-20,335' MD
	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 2H Gyro+MWD 0-20,335' MD
	1	26.500	10228.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 2H
	1	10228.000	20335.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 2H

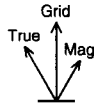
Schlumberger

OXY

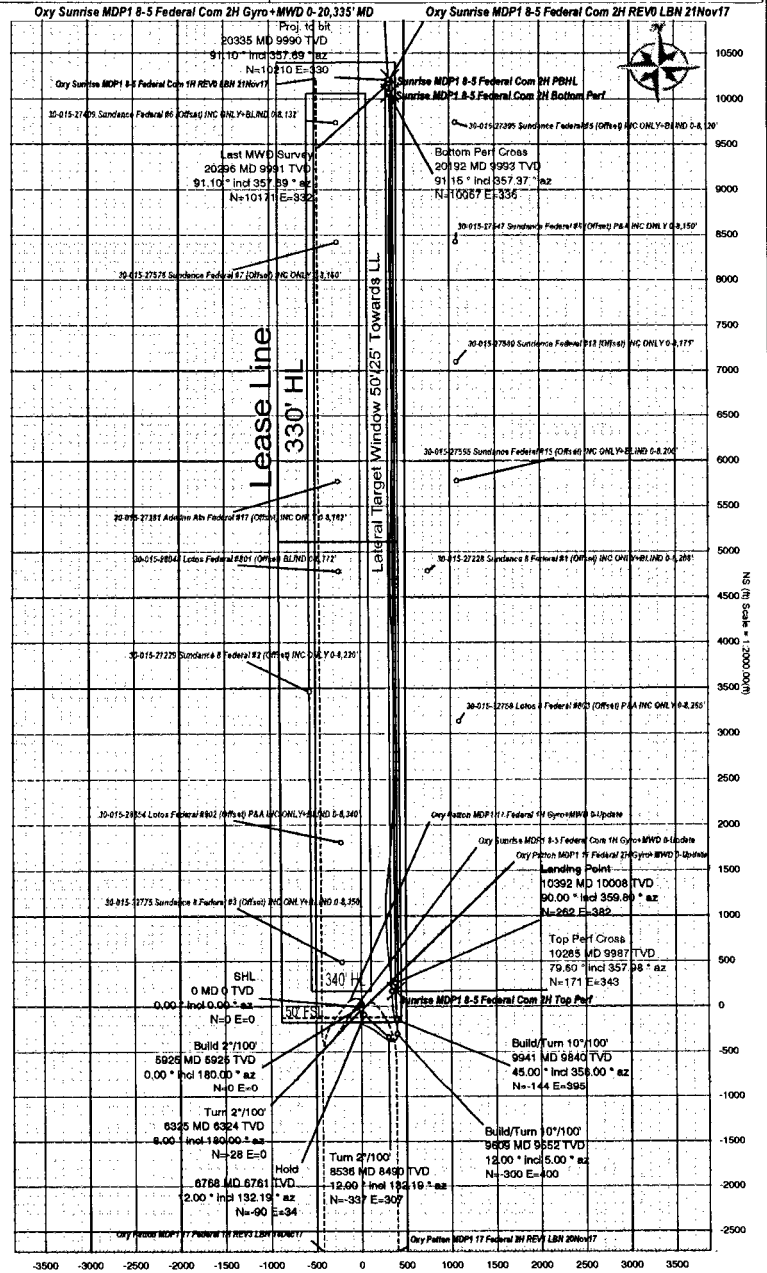
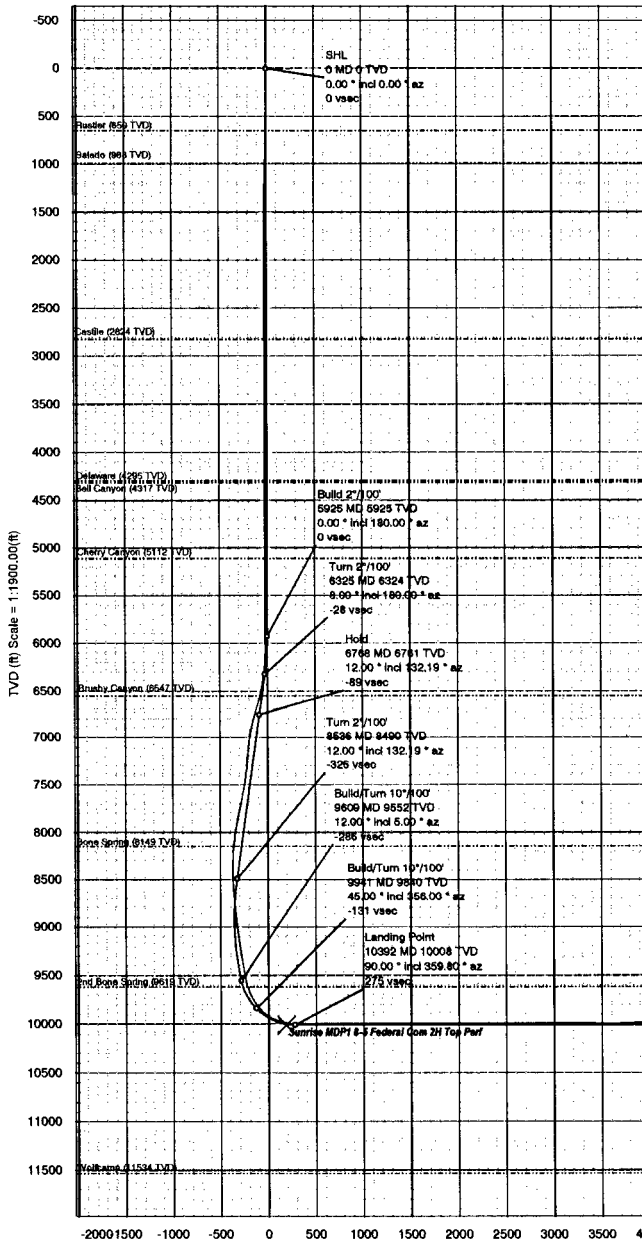


Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Sunrise MDP1 8-5 Federal Com 2H	NM Eddy County (NAD 83)	Oxy Sunrise MDP1 8-5 Federal Com 2H

Gravity & Magnetic Parameters	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous
Model: HD08 2017 Dip: 58.985° Date: 11-Dec-2017 MagDec: 6.94° FS: 49066.134nT Gravity FS: 998.429mg (0.9066 Based)	Lat: N 32 13 30.22 Northing: 448011.811RUS Grid Conv: 0.2814° Lon: W 109 48 20.01 Easting: 704541.861RUS Scale Fact: 0.9999306		Plan: Oxy Sunrise MDP1 8-5 Federal Com 2H REV0 LBN 21Nov17 Slot: 8-5 Federal Com 2H Rev0 LBN 21Nov17 RKB=26.5' (3688.0ft above MSL)



Grid North
Tot Corr (M→G 6.659°)
Mag Dec (6.940°)
Grid Conv (0.281°)



Vertical Section (ft) Azim = 1.95° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W