

Schlumberger

Oxy Sunrise MDP1 8-5 Federal Com 3H Gyro+MWD 0-20,620' Survey Geodetic Report

(Def Survey)

30-015-44474



Report Date: January 29, 2018 - 12:00 PM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 3H / Oxy Sunrise MDP1 8-5 Federal Com 3H
Well: Oxy Sunrise MDP1 8-5 Federal Com 3H
Borehole: Original Borehole
UW / API#: Unknown / Unknown
Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 3H Gyro+MWD 0-20,620'
Survey Date: January 15, 2018
Tort / AHD / DDI / ERD Ratio: 263.148' / 11421.440 ft / 6.789' / 1.133
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 32.81017", W 103° 48' 4.56738"
Location Grid N/E Y/X: N 446280.150 ftUS, E 705865.760 ftUS
CRS Grid Convergence Angle: 0.2837°
Grid Scale Factor: 0.99994009
Version / Patch: 2.10.696.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.787° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3567.100 ft above MSL
Seabed / Ground Elevation: 3540.600 ft above MSL
Magnetic Declination: 6.929°
Total Gravity Field Strength: 998.4279mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48055.614 nT
Magnetic Dip Angle: 59.982°
Declination Date: January 15, 2018
Magnetic Declination Model: HDGM 2017
North Reference: Grid North
Grid Convergence Used: 0.2837°
Total Corr Mag North->Grid North: 6.6452°
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 RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	446280.15	705866.76	N 32 13 32.81	W 103 48 4.57
	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	446280.15	705866.76	N 32 13 32.81	W 103 48 4.57
	108.28	0.32	162.89	108.28	-0.22	-0.22	0.07	0.39	446279.93	705866.83	N 32 13 32.81	W 103 48 4.57
	198.16	0.76	207.34	198.16	-0.99	-0.99	-0.13	0.64	446279.16	705866.63	N 32 13 32.80	W 103 48 4.57
	288.55	1.54	222.24	288.53	-2.41	-2.42	-1.22	0.92	446277.73	705865.54	N 32 13 32.79	W 103 48 4.58
	379.96	1.69	225.26	379.90	-4.27	-4.28	-3.01	0.19	446275.87	705863.75	N 32 13 32.77	W 103 48 4.60
	470.81	1.42	224.44	470.72	-6.01	-6.02	-4.75	0.30	446274.13	705862.01	N 32 13 32.75	W 103 48 4.62
	561.61	0.99	214.62	561.50	-7.45	-7.47	-5.98	0.52	446272.68	705860.78	N 32 13 32.74	W 103 48 4.64
	659.30	0.77	215.54	659.18	-8.68	-8.70	-6.84	0.23	446271.45	705859.92	N 32 13 32.72	W 103 48 4.65
	753.74	0.51	219.48	753.61	-9.51	-9.54	-7.48	0.28	446270.61	705859.28	N 32 13 32.72	W 103 48 4.65
	848.31	0.13	190.70	848.18	-9.94	-9.97	-7.77	0.42	446270.18	705858.99	N 32 13 32.71	W 103 48 4.66
	942.74	0.07	168.19	942.61	-10.11	-10.13	-7.77	0.07	446270.02	705858.99	N 32 13 32.71	W 103 48 4.66
	1037.08	0.07	161.53	1036.95	-10.22	-10.25	-7.74	0.01	446269.91	705858.02	N 32 13 32.71	W 103 48 4.66
	1131.58	0.07	160.63	1131.45	-10.33	-10.35	-7.71	0.00	446269.80	705858.05	N 32 13 32.71	W 103 48 4.66
	1226.19	0.07	159.17	1226.06	-10.43	-10.46	-7.67	0.00	446269.69	705858.09	N 32 13 32.71	W 103 48 4.66
	1320.64	0.07	167.85	1320.51	-10.55	-10.57	-7.63	0.01	446269.58	705858.13	N 32 13 32.71	W 103 48 4.66
	1414.99	0.06	167.23	1414.86	-10.65	-10.68	-7.61	0.01	446269.47	705858.15	N 32 13 32.70	W 103 48 4.66
	1509.27	0.08	164.69	1509.14	-10.76	-10.79	-7.58	0.02	446269.36	705858.18	N 32 13 32.70	W 103 48 4.66
	1603.54	0.08	171.11	1603.41	-10.89	-10.92	-7.55	0.01	446269.23	705858.21	N 32 13 32.70	W 103 48 4.66
	1698.00	0.09	166.12	1697.87	-11.03	-11.06	-7.53	0.01	446269.10	705858.23	N 32 13 32.70	W 103 48 4.66
	1792.38	0.07	166.84	1792.25	-11.16	-11.18	-7.50	0.02	446268.97	705858.26	N 32 13 32.70	W 103 48 4.66
	1886.68	0.08	160.91	1886.55	-11.27	-11.30	-7.46	0.01	446268.85	705858.30	N 32 13 32.70	W 103 48 4.66
	1981.06	0.08	143.15	1980.93	-11.39	-11.42	-7.40	0.03	446268.73	705858.36	N 32 13 32.70	W 103 48 4.65
	2075.47	0.09	160.50	2075.34	-11.51	-11.54	-7.34	0.03	446268.61	705858.42	N 32 13 32.70	W 103 48 4.65
	2170.01	0.07	86.69	2169.88	-11.58	-11.61	-7.25	0.10	446268.54	705858.51	N 32 13 32.70	W 103 48 4.65
	2264.48	0.07	89.28	2264.35	-11.58	-11.60	-7.14	0.00	446268.55	705858.62	N 32 13 32.70	W 103 48 4.65
	2358.76	0.07	85.16	2358.63	-11.57	-11.60	-7.02	0.01	446268.55	705858.74	N 32 13 32.70	W 103 48 4.65
	2453.29	0.08	80.55	2453.16	-11.56	-11.58	-6.90	0.01	446268.57	705858.86	N 32 13 32.70	W 103 48 4.65
	2547.64	0.07	91.32	2547.51	-11.55	-11.57	-6.78	0.02	446268.58	705858.98	N 32 13 32.70	W 103 48 4.65
	2642.13	0.07	84.95	2642.00	-11.54	-11.57	-6.66	0.01	446268.58	705860.10	N 32 13 32.70	W 103 48 4.65
	2736.52	0.07	83.21	2736.39	-11.53	-11.56	-6.55	0.00	446268.60	705860.21	N 32 13 32.70	W 103 48 4.64
	2830.96	0.09	71.22	2830.83	-11.50	-11.52	-6.42	0.03	446268.63	705860.34	N 32 13 32.70	W 103 48 4.64
	2925.26	0.08	95.35	2925.13	-11.48	-11.51	-6.28	0.04	446268.64	705860.48	N 32 13 32.70	W 103 48 4.64
	3019.73	0.09	86.56	3019.60	-11.49	-11.51	-6.15	0.02	446268.64	705860.62	N 32 13 32.70	W 103 48 4.64
	3113.98	0.10	81.84	3113.85	-11.47	-11.49	-5.99	0.01	446268.66	705860.77	N 32 13 32.70	W 103 48 4.64
	3208.16	0.08	345.31	3208.03	-11.40	-11.42	-5.93	0.14	446268.73	705860.84	N 32 13 32.70	W 103 48 4.64
	3302.51	0.08	329.38	3302.38	-11.27	-11.30	-5.98	0.02	446268.85	705860.78	N 32 13 32.70	W 103 48 4.64
	3396.77	0.08	329.98	3396.64	-11.16	-11.18	-6.04	0.00	446268.97	705860.72	N 32 13 32.70	W 103 48 4.64
	3491.14	0.09	320.25	3491.01	-11.05	-11.07	-6.12	0.02	446269.08	705860.64	N 32 13 32.70	W 103 48 4.64
	3585.49	0.05	10.99	3585.36	-10.95	-10.97	-6.16	0.07	446269.18	705860.60	N 32 13 32.70	W 103 48 4.64
	3679.91	0.06	354.27	3679.78	-10.86	-10.88	-6.16	0.02	446269.27	705860.60	N 32 13 32.70	W 103 48 4.64
	3774.44	0.08	343.22	3774.31	-10.75	-10.77	-6.18	0.03	446269.38	705860.58	N 32 13 32.70	W 103 48 4.64
	3868.77	0.07	350.78	3868.64	-10.63	-10.65	-6.21	0.01	446269.50	705860.55	N 32 13 32.71	W 103 48 4.64
	3963.33	0.07	334.78	3963.19	-10.52	-10.54	-6.24	0.02	446269.61	705860.52	N 32 13 32.71	W 103 48 4.64
	4057.77	0.07	335.67	4057.63	-10.41	-10.44	-6.29	0.00	446269.71	705860.47	N 32 13 32.71	W 103 48 4.64
	4152.07	0.09	330.17	4151.93	-10.30	-10.32	-6.35	0.02	446269.83	705860.41	N 32 13 32.71	W 103 48 4.64
	4246.47	0.07	258.64	4246.33	-10.24	-10.27	-6.45	0.10	446269.88	705860.31	N 32 13 32.71	W 103 48 4.64
	4340.85	0.11	254.43	4340.71	-10.28	-10.30	-6.59	0.04	446269.85	705860.17	N 32 13 32.71	W 103 48 4.64
	4435.43	0.14	273.81	4435.29	-10.29	-10.32	-6.79	0.05	446269.83	705859.97	N 32 13 32.71	W 103 48 4.65
	4529.63	0.07	273.07	4529.49	-10.28	-10.31	-6.97	0.07	446269.84	705859.79	N 32 13 32.71	W 103 48 4.65
	4624.18	0.09	236.79	4624.04	-10.32	-10.35	-7.09	0.06	446269.80	705859.67	N 32 13 32.71	W 103 48 4.65
	4718.68	0.11	228.06	4718.54	-10.42	-10.45	-7.22	0.03	446269.70	705859.54	N 32 13 32.71	W 103 48 4.65
	4813.17	0.13	251.60	4813.03	-10.51	-10.54	-7.39	0.05	446269.61	705859.37	N 32 13 32.71	W 103 48 4.65
	4907.45	0.09	292.02	4907.31	-10.52	-10.55	-7.56	0.09	446269.61	705859.20	N 32 13 32.71	W 103 48 4.66
	5002.02	0.07	280.73	5001.88	-10.48	-10.51	-7.68	0.03	446269.64	705859.08	N 32 13 32.71	W 103 48 4.66
	5096.19	0.05	257.12	5096.05	-10.48	-10.50	-7.78	0.03	446269.65	705858.98	N 32 13 32.71	W 103 48 4.66
	5190.65	0.12	169.34	5190.51	-10.58	-10.61	-7.80	0.14	446269.54	705858.96	N 32 13 32.71	W 103 48 4.66
	5285.12	0.13	168.21	5284.98	-10.78	-10.81	-7.76	0.01	446269.34	705859.00	N 32 13 32.70	W 103 48 4.66
	5379.45	0.13	161.73	5379.31	-10.99	-11.02	-7.71	0.02	446269.13	705859.06	N 32 13 32.70	W 103 48 4.66
	5473.88	0.04	194.61	5473.74	-11.12	-11.15	-7.68	0.10	446269.00	705859.08	N 32 13 32.70	W 103 48 4.66
	5568.21	0.07	200.66	5568.07	-11.21	-11.24	-7.71	0.03	446268.91	705859.05	N 32 13 32.70	W 103 48 4.66
	5662.55	0.06	208.16	5662.41	-11.31	-11.34	-7.75	0.01	446268.81	705859.01	N 32 13 32.70	W 103 48 4.66
	5757.05	0.07	225.03	5756.91	-11.39	-11.42	-7.82	0.02	446268.73	705858.94	N 32 13 32.70	W 103 48 4.66
	5851.57	0.08	234.80	5851.43	-11.47	-11.50	-7.91	0.02	446268.65	705858.85	N 32 13 32.70	W 103 48 4.66
	5945.87	0.07	234.41	5945.73	-11.54	-11.57	-8.01	0.01	446268.58	705858.75	N 32 13 32.70	W 103 48 4.66
	6040.34	1.04	198.87	6040.20	-12.39	-12.42	-8.34	1.04	446267.73	705858.42	N 32 13 32.69	W 103 48 4.67
	6134.73	2.90	203.32	6134.53	-15.38	-15.42	-9.56	1.98	446264.73	705857.20	N 32 13 32.66	W 103 48 4.68
	6229.31	4.86	205.87	6228.89	-21.18	-21.22	-12.25	2.08	446258.93	705854.51	N 32 13 32.60	W 103 48 4.71
	6323.67	7.15	208.62	6322.72	-29.91	-29.98	-18.81	2.45	446250.18	705849.95	N 32 13 32.51	W 103 48 4.76
	6418.17	9.19	207.20	6416.26	-41.76	-41.85	-23.08	2.17	446238.30	705843.68	N 32 13 32.40	W 103 48 4.84
	6512.49	11.14	207.01	6509.09	-56.55	-56.67	-30.66	2.07	446223.48	705836.10	N 32 13 32.25	W 103 48 4.93
	6606.78	12.47	204.25	6601.39	-73.92	-74.07	-38.98	1.53	446206.09	705827.78	N 32 13 32.08	W 103 48 5.03
	6701.10	11.93	204.50	6693.58	-92.05	-92.22	-47.20	0.58	446187.9	705819.56	N 32 13 31.90	W 103 48 5.12
	6795.63	12.03	202.55	6788.05	-110.01	-110.21	-55.03	0.44	446169.95	705813.72	N 32 13 31.72	W 103 48 5.21
	6890.09	11.71	206.81	6878.49	-127.62	-127.86	-63.13	0.99	446152.30	705803.63	N 32 13 31.65	W 103 48 5.31
	6984.50	11.69	204.96	6970.94	-144.81	-145.08						

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 + ° ' ")
	7268.02	11.99	207.71	7248.36	-197.40	-197.76	-96.66	0.77	446082.40	705769.89	N 32 13 30.86 W 103 48	5.71
	7362.42	11.92	205.63	7340.71	-214.84	-215.23	-105.65	0.46	446064.93	705761.11	N 32 13 30.69 W 103 48	5.81
	7456.96	12.08	206.98	7433.19	-232.42	-232.85	-114.37	0.34	446047.31	705752.40	N 32 13 30.51 W 103 48	5.91
	7551.49	11.83	205.18	7525.67	-249.98	-250.43	-122.98	0.47	446029.73	705743.79	N 32 13 30.34 W 103 48	6.01
	7645.90	12.00	206.30	7618.04	-267.50	-267.99	-131.44	0.30	446012.16	705735.33	N 32 13 30.16 W 103 48	6.11
	7740.36	11.88	206.82	7710.46	-284.95	-285.47	-140.18	0.17	445994.70	705726.59	N 32 13 29.99 W 103 48	6.22
	7834.88	11.95	206.32	7802.94	-302.37	-302.92	-148.91	0.13	445977.24	705717.86	N 32 13 29.82 W 103 48	6.32
	7929.22	11.97	204.78	7895.24	-319.97	-320.56	-157.34	0.34	445959.61	705709.43	N 32 13 29.65 W 103 48	6.42
	8023.74	11.86	207.93	7987.72	-337.42	-338.04	-166.00	0.70	445942.13	705700.77	N 32 13 29.47 W 103 48	6.52
	8118.06	11.67	206.07	8080.06	-354.52	-355.17	-174.73	0.45	445925.00	705692.04	N 32 13 29.30 W 103 48	6.62
	8212.58	11.83	205.45	8172.60	-371.83	-372.51	-183.09	0.22	445907.66	705683.68	N 32 13 29.13 W 103 48	6.72
	8307.07	11.66	212.82	8265.12	-388.56	-389.28	-192.43	1.60	445890.89	705674.34	N 32 13 28.97 W 103 48	6.83
	8401.44	10.77	224.55	8357.70	-402.82	-403.58	-203.79	2.59	445876.59	705666.99	N 32 13 28.83 W 103 48	6.96
	8495.77	11.38	222.37	8450.27	-415.93	-416.74	-216.24	0.78	445863.44	705658.53	N 32 13 28.70 W 103 48	7.11
	8590.29	11.10	219.15	8542.98	-429.83	-430.68	-228.27	0.73	445849.49	705650.50	N 32 13 28.56 W 103 48	7.25
	8684.85	11.11	220.94	8635.77	-443.73	-444.62	-239.99	0.36	445835.55	705642.78	N 32 13 28.42 W 103 48	7.39
	8779.29	11.18	218.68	8728.43	-457.71	-458.64	-251.67	0.47	445821.53	705635.10	N 32 13 28.28 W 103 48	7.52
	8873.72	11.29	214.58	8821.05	-472.42	-473.40	-262.84	0.85	445806.78	705627.44	N 32 13 28.14 W 103 48	7.65
	8968.08	11.04	205.34	8913.63	-488.16	-489.17	-271.75	1.91	445791.01	705619.03	N 32 13 27.98 W 103 48	7.76
	9062.42	10.36	202.25	9006.33	-504.15	-505.19	-278.83	0.94	445774.99	705610.95	N 32 13 27.82 W 103 48	7.84
	9156.84	10.65	200.46	9099.17	-520.18	-521.22	-285.09	0.46	445758.96	705602.89	N 32 13 27.67 W 103 48	7.92
	9217.74	10.46	197.51	9192.04	-536.68	-537.75	-288.76	0.83	445748.43	705594.82	N 32 13 27.53 W 103 48	7.96
	9315.00	10.94	187.27	9284.31	-553.48	-554.59	-297.58	0.31	445730.60	705586.70	N 32 13 27.39 W 103 48	8.06
	9409.00	6.09	148.33	9406.61	-571.26	-572.37	-297.61	8.84	445707.81	705569.17	N 32 13 27.16 W 103 48	8.06
	9503.00	11.90	132.60	9499.42	-582.11	-583.19	-287.85	6.66	445697.00	705578.93	N 32 13 27.05 W 103 48	7.95
	9597.00	16.90	120.05	9590.48	-595.60	-596.60	-268.87	6.24	445683.59	705597.91	N 32 13 26.92 W 103 48	7.73
	9751.00	20.31	97.73	9679.65	-604.75	-605.65	-240.84	8.33	445674.54	705625.94	N 32 13 26.83 W 103 48	7.41
	9846.00	28.58	80.05	9766.17	-603.18	-603.93	-202.00	11.54	445676.25	705664.77	N 32 13 26.84 W 103 48	6.95
	10035.00	47.63	56.22	9914.98	-556.26	-556.62	-97.94	12.58	445723.56	705768.82	N 32 13 27.31 W 103 48	5.74
	10129.00	57.63	42.21	9972.15	-507.48	-507.64	-42.09	15.88	445772.54	705824.67	N 32 13 27.79 W 103 48	5.09
	10224.00	64.53	27.39	10018.26	-439.49	-439.47	4.85	15.44	445840.71	705871.61	N 32 13 28.46 W 103 48	4.54
	10318.00	71.79	11.96	10053.38	-357.71	-357.58	33.81	17.06	445922.59	705900.57	N 32 13 29.27 W 103 48	4.19
	10413.00	84.34	359.96	10073.06	-265.64	-265.48	43.20	18.07	446014.68	705909.95	N 32 13 30.18 W 103 48	4.08
	10507.00	89.56	357.27	10078.06	-171.84	-171.69	40.92	6.24	446108.47	705907.68	N 32 13 31.11 W 103 48	4.10
	10601.00	92.17	354.32	10075.60	-9.28	-9.18	28.98	2.42	446270.98	705895.73	N 32 13 32.72 W 103 48	4.23
	10695.00	92.20	354.09	10068.36	179.68	179.72	9.80	0.12	446459.85	705876.56	N 32 13 34.59 W 103 48	4.44
	10789.00	92.20	354.43	10064.75	273.17	273.18	0.41	0.36	446553.31	705867.17	N 32 13 35.51 W 103 48	4.55
	10883.00	92.17	356.08	10061.16	366.81	366.78	-7.36	1.75	446646.91	705859.40	N 32 13 36.44 W 103 48	4.63
	10977.00	91.58	359.53	10058.09	460.69	460.65	-10.96	3.72	446740.77	705855.80	N 32 13 37.37 W 103 48	4.67
	11071.00	90.65	1.60	10056.24	555.65	555.62	-10.02	2.39	446835.74	705856.74	N 32 13 38.31 W 103 48	4.65
	11165.00	90.62	1.01	10055.20	649.61	649.59	-7.88	0.63	446929.70	705858.88	N 32 13 39.24 W 103 48	4.62
	11259.00	90.55	1.54	10054.23	744.58	744.56	-5.77	0.56	447024.66	705860.99	N 32 13 40.18 W 103 48	4.59
	11353.00	90.62	1.33	10053.27	838.53	838.53	-3.41	0.24	447118.62	705863.35	N 32 13 41.11 W 103 48	4.56
	11447.00	90.45	0.68	10052.39	932.51	932.51	-1.78	0.74	447212.60	705864.98	N 32 13 42.04 W 103 48	4.53
	11541.00	90.72	1.05	10051.42	1027.49	1027.49	-0.36	0.50	447307.58	705866.40	N 32 13 42.98 W 103 48	4.51
	11635.00	90.69	1.18	10050.26	1121.45	1121.47	1.47	0.14	447401.55	705868.23	N 32 13 43.91 W 103 48	4.49
	11729.00	90.17	0.71	10049.55	1216.43	1216.45	3.03	0.74	447496.52	705869.79	N 32 13 44.85 W 103 48	4.46
	11823.00	90.14	1.19	10049.29	1310.41	1310.44	4.59	0.51	447590.51	705871.35	N 32 13 45.78 W 103 48	4.44
	11917.00	89.62	1.20	10049.49	1405.38	1405.42	6.57	0.55	447685.48	705873.33	N 32 13 46.72 W 103 48	4.41
	12011.00	89.76	0.84	10050.00	1499.36	1499.40	8.25	0.41	447779.46	705875.01	N 32 13 47.65 W 103 48	4.38
	12105.00	89.79	0.86	10050.37	1593.34	1593.39	9.64	0.04	447873.44	705876.40	N 32 13 48.59 W 103 48	4.36
	12199.00	89.62	0.13	10051.34	1782.32	1782.38	11.27	0.40	448062.42	705878.03	N 32 13 50.45 W 103 48	4.33
	12293.00	89.59	0.57	10052.65	1971.31	1971.37	12.43	0.23	448251.40	705879.19	N 32 13 52.32 W 103 48	4.31
	12387.00	89.76	0.74	10053.18	2065.30	2065.36	13.50	0.26	448345.38	705880.26	N 32 13 53.25 W 103 48	4.29
	12481.00	89.48	359.75	10053.80	2159.29	2159.36	13.91	1.09	448439.37	705880.66	N 32 13 54.18 W 103 48	4.28
	12575.00	89.93	0.40	10054.29	2254.29	2254.35	14.03	0.83	448534.36	705880.79	N 32 13 55.12 W 103 48	4.27
	12669.00	89.97	0.54	10054.38	2348.28	2348.35	14.80	0.15	448628.36	705881.56	N 32 13 56.05 W 103 48	4.26
	12763.00	89.69	0.41	10054.94	2537.27	2537.34	16.37	0.16	448817.34	705883.13	N 32 13 57.92 W 103 48	4.23
	12857.00	89.90	0.60	10055.27	2631.26	2631.34	17.20	0.30	448911.33	705883.96	N 32 13 58.85 W 103 48	4.22
	12951.00	92.51	358.16	10051.30	2820.18	2820.26	15.15	1.89	449100.23	705881.91	N 32 14 0.72 W 103 48	4.23
	13045.00	90.24	358.50	10049.02	2915.12	2915.18	12.39	2.42	449195.15	705879.15	N 32 14 1.66 W 103 48	4.26
	13139.00	90.27	358.71	10048.60	3009.09	3009.15	10.10	0.23	449289.12	705876.86	N 32 14 2.59 W 103 48	4.28
	13233.00	90.21	359.08	10048.21	3103.08	3103.13	8.29	0.40	449383.09	705875.04	N 32 14 3.52 W 103 48	4.29
	13327.00	90.14	358.63	10047.92	3198.07	3198.11	6.39	0.48	449478.07	705873.15	N 32 14 4.46 W 103 48	4.31
	13421.00	90.45	358.30	10047.43	3292.04	3292.08	3.87	0.48	449572.03	705870.63	N 32 14 5.39 W 103 48	4.33
	13515.00	90.86	357.51	10045.28	3479.93	3479.94	-3.00	0.47	449759.87	705863.76	N 32 14 7.24 W 103 48	4.40
	13609.00	92.65	351.47	10042.37	3574.43	3574.41	-12.11	6.63	449854.34	705854.65	N 32 14 8.18 W 103 48	4.50
	13703.00	91.41	352.32	10039.04	3667.48	3667.41	-25.36	1.60	449947.33	705841.40	N 32 14 9.10 W 103 48	4.65
	13797.00	90.62	357.12	10037.37	3761.07	3760.97	-34.00	5.17	450040.88	705832.76	N 32 14 10.03 W 103 48	4.75
	13891.00	91.68	355.81	10035.47	3855.89	3855.76	-39.86	1.77	450135.68	705826.90	N 32 14 10.96 W 103 48	4.81
	13985.00	90.82	350.82	10033.42	3949.23	3949.07	-50.80	5.39	450228.98	705815.97	N 32 14 11.89 W 103 48	4.93
	14079.00	88.78	354.16	10033.76	4043.45	4043.24	-63.21	4.13	450323.14	705803.55	N 32 14 12.82 W 103 48	5.07
	14173.00	87.18	358.73	10037.10	4137.20	4136.97	-69.04	5.14	450416.88	705797.73	N 32 14 13.75 W 103 48	5.13
	14267.00	86.59	2.71	10040.57	4231.10	4230.88	-67.85	4.49	450510.77	705791.91	N 32 14 14.68 W 103 48	5.11
	14361.00	91.00	2.34	10040.91	4325.08	4325.78	-63.67	2.57	450605.66	705785.91	N 32 14 15.62 W 103 48	5.06
	14455.00	89.24	358.39	10040.71	4419.86	4419.65	-66.87	4.60	450699.63	705780.69	N 32 14 16.55 W 103 48	5.05
	14549.00	89.21	0.01	10041.99	4514.84	4514.73	-64.40	1.71	450794.60	705780.37	N 32 14 17.49 W 103 48	5.06
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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	OLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	19734.00	89.59	359.79	10048.90	9046.99	9047.01	-11.83	0.30	455326.80	705854.94	N 32 15 2.33 W 103 48 4.18	
	19828.00	89.93	0.96	10047.30	9140.98	9141.00	-11.21	1.30	455420.59	705855.55	N 32 15 3.26 W 103 48 4.17	
	19923.00	90.17	0.48	10047.21	9235.97	9235.99	-10.02	0.56	455515.57	705856.74	N 32 15 4.20 W 103 48 4.15	
	20017.00	89.31	0.02	10047.64	9329.96	9329.99	-9.61	1.04	455609.56	705857.15	N 32 15 5.13 W 103 48 4.14	
	20112.00	89.90	0.26	10048.29	9424.96	9424.99	-9.37	0.67	455704.55	705857.39	N 32 15 6.07 W 103 48 4.13	
	20206.00	89.76	0.34	10048.57	9518.95	9518.98	-8.88	0.17	455798.55	705857.88	N 32 15 7.00 W 103 48 4.12	
	20300.00	89.76	0.74	10048.97	9612.94	9612.98	-8.00	0.43	455892.54	705858.76	N 32 15 7.93 W 103 48 4.11	
	20395.00	89.76	0.36	10049.37	9707.93	9707.98	-7.08	0.40	455987.52	705859.68	N 32 15 8.87 W 103 48 4.09	
	20489.00	90.17	359.16	10049.42	9801.93	9801.97	-7.48	1.35	456081.52	705859.28	N 32 15 9.80 W 103 48 4.09	
Final MWD	20580.00	89.31	1.21	10049.84	9892.92	9892.97	-7.18	2.44	456172.50	705859.58	N 32 15 10.70 W 103 48 4.08	
Proj. to Bit	20620.00	89.31	1.21	10050.32	9932.91	9932.95	-6.34	0.00	456212.49	705860.42	N 32 15 11.10 W 103 48 4.07	

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 3H Gyro+MWD 0-20,620'
	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 3H Gyro+MWD 0-20,620'
	1	26.500	9217.740	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 3H
	1	9217.740	20620.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 3H

Schlumberger

OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Sunrise MDP1 8-5 Federal Com 3H	NM Eddy County (NAD 83)	Oxy Sunrise MDP1 8-5 Federal Com 3H

Gravity & Magnetic Parameters Model: HDGM 2017 Dip: 59.982° Date: 15-Jan-2018 MagDec: 6.929° FS: 48066.614nT Gravity FS: 998.428mgh (9.80665 Based)	Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet Lat: N 32 13 32.81 Northing: 446280.15RUS Grid Conv: 0.2837° Lon: W 103 48 4.67 Easting: 705866.76RUS Scale Fact: 0.99994009	Miscellaneous Slot: 8-5 Federal Com TVD Ref: RKB=26.5' (3567.1ft above MSL) Plan: Oxy Sunrise MDP1 8-5 Federal Com 3H REV1 LBN 21Nov17
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