

30-015-44476

Schlumberger

Oxy Sunrise MDP1 8-5 Federal Com 5H Gyro+MWD 0-20,490' Survey Geodetic Report (Def Survey)



NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 14 2018

RECEIVED

Report Date: January 30, 2018 - 11:28 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 5H / Oxy Sunrise MDP1 8-5 Federal Com 5H
Well: Oxy Sunrise MDP1 8-5 Federal Com 5H
Borehole: Original Borehole
UWI / API#: Unknown / 30-015-44476
Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 5H Gyro+MWD 0-20,490'
Survey Date: January 10, 2018
Tort / AHD / DDI / ERD Ratio: 243.517' / 11616.338 ft / 6.760 / 1.153
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 36.79746", W 103° 47' 46.79446"
Location Grid N/E Y/X: N 446590.670 RUS, E 707391.400 ftUS
CRS Grid Convergence Angle: 0.2884 °
Grid Scale Factor: 0.99994067
Version / Patch: 2.10.696.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 1.531 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3569.300 ft above MSL
Seabed / Ground Elevation: 3542.800 ft above MSL
Magnetic Declination: 6.928 °
Total Gravity Field Strength: 998.4281mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48058.002 nT
Magnetic Dip Angle: 59.982 °
Declination Date: January 10, 2018
Magnetic Declination Model: HDGM 2017
North Reference: Grid North
Grid Convergence Used: 0.2884 °
Total Corr Mag North->Grid North: 6.6411 °
Local Coord Referenced To: Well Head

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	446590.67	707391.40	N 32 13 36.80	W 103 47 46.79
	78.90	0.48	97.80	78.90	-0.04	-0.04	0.33	0.61	446590.63	707391.73	N 32 13 36.80	W 103 47 46.79
	171.30	0.37	95.37	171.30	-0.10	-0.13	1.01	0.12	446590.54	707392.41	N 32 13 36.80	W 103 47 46.78
	263.00	0.54	95.38	262.99	-0.15	-0.19	1.73	0.19	446590.48	707393.13	N 32 13 36.80	W 103 47 46.77
	354.60	0.80	91.60	354.59	-0.18	-0.25	2.80	0.29	446590.42	707394.20	N 32 13 36.79	W 103 47 46.76
	445.20	0.77	118.65	445.18	-0.46	-0.56	3.97	0.41	446590.11	707395.37	N 32 13 36.79	W 103 47 46.75
	536.50	0.56	114.52	536.47	-0.91	-1.04	4.91	0.24	446589.63	707396.31	N 32 13 36.79	W 103 47 46.74
	629.30	0.55	102.85	629.27	-1.17	-1.33	5.76	0.12	446589.34	707397.16	N 32 13 36.78	W 103 47 46.73
	721.20	0.64	103.19	721.16	-1.36	-1.54	6.69	0.10	446589.13	707398.09	N 32 13 36.78	W 103 47 46.72
	812.00	0.61	108.16	811.96	-1.60	-1.81	7.64	0.07	446588.86	707399.04	N 32 13 36.78	W 103 47 46.71
	903.50	0.33	132.48	903.46	-1.92	-2.14	8.30	0.37	446588.53	707399.70	N 32 13 36.78	W 103 47 46.70
	995.00	0.23	153.67	994.95	-2.25	-2.48	8.57	0.16	446588.19	707399.97	N 32 13 36.77	W 103 47 46.69
	1087.40	0.15	147.32	1087.35	-2.52	-2.75	8.72	0.09	446587.92	707400.12	N 32 13 36.77	W 103 47 46.69
	1179.40	0.16	136.55	1179.35	-2.71	-2.95	8.87	0.03	446587.73	707400.27	N 32 13 36.77	W 103 47 46.69
	1274.00	0.11	125.11	1273.95	-2.85	-3.09	9.04	0.06	446587.58	707400.44	N 32 13 36.77	W 103 47 46.69
	1368.50	0.07	129.39	1368.45	-2.94	-3.18	9.16	0.04	446587.49	707400.56	N 32 13 36.77	W 103 47 46.69
	1463.10	0.21	257.78	1463.05	-3.01	-3.26	9.03	0.27	446587.41	707400.43	N 32 13 36.76	W 103 47 46.69
	1557.70	0.28	276.16	1557.65	-3.04	-3.27	8.63	0.11	446587.40	707400.03	N 32 13 36.76	W 103 47 46.69
	1652.40	0.30	292.83	1652.35	-2.93	-3.15	8.18	0.09	446587.52	707399.58	N 32 13 36.77	W 103 47 46.70
	1747.00	0.25	311.18	1746.95	-2.70	-2.91	7.79	0.11	446587.76	707399.19	N 32 13 36.77	W 103 47 46.70
	1841.70	0.19	330.75	1841.65	-2.44	-2.64	7.56	0.10	446588.03	707398.96	N 32 13 36.77	W 103 47 46.71
	1936.50	0.21	317.13	1936.45	-2.18	-2.38	7.37	0.05	446588.29	707398.77	N 32 13 36.77	W 103 47 46.71
	2031.20	0.21	319.28	2031.15	-1.93	-2.12	7.13	0.01	446588.55	707398.53	N 32 13 36.78	W 103 47 46.71
	2125.90	0.19	317.40	2125.85	-1.69	-1.87	6.91	0.02	446588.80	707398.31	N 32 13 36.78	W 103 47 46.71
	2220.80	0.21	316.50	2220.75	-1.45	-1.63	6.69	0.02	446589.04	707398.09	N 32 13 36.78	W 103 47 46.72
	2315.40	0.18	310.06	2315.35	-1.23	-1.41	6.46	0.04	446589.26	707397.86	N 32 13 36.78	W 103 47 46.72
	2410.00	0.18	315.05	2409.95	-1.04	-1.21	6.24	0.02	446589.48	707397.64	N 32 13 36.79	W 103 47 46.72
	2504.70	0.09	200.60	2504.65	-1.01	-1.17	6.11	0.25	446589.50	707397.51	N 32 13 36.79	W 103 47 46.72
	2599.40	0.10	212.49	2599.35	-1.15	-1.31	6.03	0.02	446589.36	707397.43	N 32 13 36.78	W 103 47 46.72
	2694.10	0.12	218.21	2694.04	-1.30	-1.46	5.93	0.02	446589.21	707397.33	N 32 13 36.78	W 103 47 46.73
	2788.80	0.11	217.96	2788.74	-1.45	-1.61	5.81	0.01	446589.06	707397.21	N 32 13 36.78	W 103 47 46.73
	2883.40	0.11	224.55	2883.34	-1.59	-1.74	5.69	0.01	446588.93	707397.09	N 32 13 36.78	W 103 47 46.73
	2978.20	0.23	205.54	2978.14	-1.83	-1.98	5.55	0.14	446588.69	707396.95	N 32 13 36.78	W 103 47 46.73
	3073.10	0.17	193.07	3073.04	-2.14	-2.29	5.43	0.08	446588.38	707396.83	N 32 13 36.77	W 103 47 46.73
	3167.50	0.07	96.81	3167.44	-2.29	-2.43	5.46	0.20	446588.24	707396.86	N 32 13 36.77	W 103 47 46.73
	3262.30	0.07	112.89	3262.24	-2.31	-2.46	5.57	0.02	446588.21	707396.97	N 32 13 36.77	W 103 47 46.73
	3357.10	0.03	203.94	3357.04	-2.36	-2.51	5.61	0.08	446588.16	707397.01	N 32 13 36.77	W 103 47 46.73
	3451.80	0.05	293.48	3451.74	-2.36	-2.51	5.56	0.06	446588.16	707396.96	N 32 13 36.77	W 103 47 46.73
	3546.70	0.26	18.69	3546.64	-2.14	-2.29	5.60	0.27	446588.38	707396.99	N 32 13 36.77	W 103 47 46.73
	3641.30	0.40	89.41	3641.24	-1.93	-2.09	5.99	0.42	446588.58	707397.39	N 32 13 36.78	W 103 47 46.72
	3735.90	0.28	153.98	3735.84	-2.12	-2.29	6.43	0.40	446588.38	707397.83	N 32 13 36.77	W 103 47 46.72
	3830.50	0.09	353.06	3830.44	-2.25	-2.42	6.52	0.39	446588.25	707397.92	N 32 13 36.77	W 103 47 46.72
	3925.20	0.22	107.66	3925.14	-2.23	-2.41	6.68	0.29	446588.26	707398.08	N 32 13 36.77	W 103 47 46.72
	4019.80	0.29	164.40	4019.74	-2.51	-2.69	6.92	0.26	446587.98	707398.32	N 32 13 36.77	W 103 47 46.71
	4114.40	0.34	257.14	4114.34	-2.80	-2.98	6.71	0.48	446587.69	707398.11	N 32 13 36.77	W 103 47 46.72
	4209.10	1.15	201.61	4209.03	-3.77	-3.93	6.09	1.05	446586.74	707397.49	N 32 13 36.76	W 103 47 46.72
	4303.90	2.94	186.69	4303.77	-7.08	-7.23	5.45	1.95	446583.44	707396.85	N 32 13 36.73	W 103 47 46.73
	4398.60	4.49	182.06	4398.26	-13.21	-13.35	5.04	1.67	446577.32	707396.44	N 32 13 36.67	W 103 47 46.74
	4493.30	5.43	181.22	4492.61	-21.40	-21.53	4.81	1.00	446569.14	707396.21	N 32 13 36.58	W 103 47 46.74
	4587.80	9.74	176.28	4586.26	-33.83	-33.98	5.23	4.61	446566.69	707396.83	N 32 13 36.46	W 103 47 46.74
	4682.30	13.90	171.75	4678.74	-52.99	-53.20	7.38	4.51	446537.47	707398.78	N 32 13 36.27	W 103 47 46.71
	4776.80	17.26	167.67	4769.76	-77.79	-78.14	12.00	3.74	446512.53	707400.40	N 32 13 36.02	W 103 47 46.66
	4871.40	16.26	165.77	4860.34	-104.16	-104.69	18.26	1.21	446585.99	707400.66	N 32 13 35.76	W 103 47 46.59
	4965.70	14.88	167.82	4951.18	-128.63	-129.32	24.06	1.58	446561.35	707415.46	N 32 13 35.52	W 103 47 46.52
	5060.40	14.29	165.81	5042.82	-151.69	-152.53	29.53	0.86	446538.15	707420.93	N 32 13 35.29	W 103 47 46.46
	5154.90	13.80	167.23	5134.50	-173.82	-174.82	34.92	0.66	446515.86	707426.31	N 32 13 35.07	W 103 47 46.40
	5249.50	12.35	167.60	5226.84	-194.58	-195.70	39.58	1.54	446494.98	707430.98	N 32 13 34.86	W 103 47 46.35
	5344.30	11.19	170.33	5319.45	-213.44	-214.67	43.31	1.36	446476.01	707434.70	N 32 13 34.67	W 103 47 46.30
	5439.00	11.34	170.01	5412.33	-231.58	-232.90	46.46	0.17	446457.78	707437.86	N 32 13 34.49	W 103 47 46.27
	5533.80	11.37	170.20	5505.27	-249.87	-251.29	49.67	0.05	446439.40	707441.07	N 32 13 34.31	W 103 47 46.23
	5628.30	11.39	169.78	5597.91	-268.14	-269.65	52.91	0.09	446421.04	707444.31	N 32 13 34.13	W 103 47 46.19
	5723.00	11.35	169.75	5690.75	-286.42	-288.02	56.23	0.04	446402.66	707447.83	N 32 13 33.94	W 103 47 46.16
	5817.80	11.38	170.34	5783.69	-304.72	-306.42	59.46	0.13	446384.27	707450.86	N 32 13 33.76	W 103 47 46.12
	5912.60	11.43	170.46	5876.62	-323.12	-324.91	62.59	0.06	446365.78	707453.98	N 32 13 33.58	W 103 47 46.08
	6007.30	11.19	171.76	5969.48	-341.38	-343.25	65.46	0.37	446347.44	707456.85	N 32 13 33.40	W 103 47 46.05
	6102.00	11.34	170.40	6062.36	-359.57	-361.53	68.33	0.32	446329.16	707459.72	N 32 13 33.22	W 103 47 46.02
	6196.70	11.28	170.56	6155.22	-377.80	-379.85	71.40	0.07	446310.85	707462.79	N 32 13 33.04	W 103 47 45.99
	6291.50	11.32	170.39	6248.18	-396.03	-398.16	74.47	0.05	446292.53	707465.87	N 32 13 32.85	W 103 47 45.95
	6386.30	11.38	170.05	6341.13	-414.33	-416.55	77.64	0.09	446274.15	707469.04	N 32 13 32.67	W 103 47 45.91
	6480.90	11.37	160.65	6433.88	-432.19	-434.54	82.35	1.96	446256.15	707473.74	N 32 13 32.49	W 103 47 45.86
	6575.80	11.28	158.87	6526.73	-449.46	-451.99	88.78	0.38	446238.71	707480.17	N 32 13 32.32	W 103 47 45.79
	6670.40	11.29	158.69	6512.53	-466.76	-469.29	95.49	0.32	446222.42	707486.96	N 32 13 32.14	W 103 47 45.71
	6765.00	10.95	159.09	6712.53	-483.40	-486.30	102.06	0.37	446204.40	707493.46	N 32 13 31.98	W 103 47 45.63
	6859.70	10.79	159.28	6805.53	-499.92	-503.00	108.41	0.17	446187.70	707499.80	N 32 13 31.81	W 103 47 45.58
	6954.40	10.58	159.58	6898.58	-516.19	-519.43	114.58	0.23	446171.27	707505.98	N 32 13 31.65	W 103 47 45.49
	7049.10	10.48	160.12									

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
	7333.00	10.69	160.05	7270.68	-581.09	-585.01	138.77	0.07	446105.70	707530.17	N 32 13 31.00	W 103 47 45.21
	7427.80	10.70	159.37	7363.83	-597.42	-601.51	144.88	0.13	446089.20	707538.27	N 32 13 30.84	W 103 47 45.14
	7522.40	11.67	159.75	7456.63	-614.44	-618.70	151.28	1.03	446072.00	707542.67	N 32 13 30.67	W 103 47 45.07
	7617.20	12.70	160.46	7549.29	-637.07	-637.52	158.09	1.10	446053.19	707548.48	N 32 13 30.48	W 103 47 44.99
	7711.80	13.22	169.19	7641.49	-653.34	-657.95	163.59	2.14	446032.76	707554.98	N 32 13 30.28	W 103 47 44.93
	7806.10	13.05	169.88	7733.81	-674.41	-679.13	167.51	0.24	446011.58	707558.90	N 32 13 30.07	W 103 47 44.88
	7901.20	13.21	168.93	7825.94	-695.42	-700.25	171.46	0.28	445990.46	707562.85	N 32 13 29.86	W 103 47 44.84
	7995.90	13.21	168.82	7918.13	-716.54	-721.49	175.63	0.03	445969.23	707567.02	N 32 13 29.65	W 103 47 44.79
	8090.50	13.00	170.06	8010.27	-737.51	-742.57	179.57	0.37	445948.14	707570.96	N 32 13 29.44	W 103 47 44.75
	8185.10	13.12	169.08	8102.42	-758.42	-763.60	183.44	0.27	445927.12	707574.83	N 32 13 29.23	W 103 47 44.70
	8279.70	13.14	169.61	8194.55	-779.43	-784.71	187.41	0.13	445906.00	707578.80	N 32 13 29.02	W 103 47 44.66
	8374.30	13.11	170.51	8286.68	-800.48	-805.87	191.12	0.22	445884.85	707582.51	N 32 13 28.81	W 103 47 44.62
	8469.00	12.38	171.05	8379.05	-821.00	-826.49	194.47	0.78	445864.23	707585.86	N 32 13 28.61	W 103 47 44.58
	8563.30	12.77	172.18	8471.08	-841.22	-846.80	197.46	0.49	445843.92	707588.85	N 32 13 28.41	W 103 47 44.55
	8658.00	12.85	170.27	8563.43	-861.88	-867.55	200.66	0.46	445823.17	707592.05	N 32 13 28.20	W 103 47 44.51
	8752.80	12.06	171.61	8655.80	-881.93	-887.70	203.88	0.89	445803.03	707595.27	N 32 13 28.00	W 103 47 44.47
	8847.10	12.54	174.35	8748.13	-901.84	-907.67	206.33	0.80	445783.05	707597.72	N 32 13 27.81	W 103 47 44.45
	8941.90	12.57	173.15	8840.87	-922.25	-928.16	208.58	0.28	445762.57	707599.96	N 32 13 27.60	W 103 47 44.42
	9036.50	12.57	168.74	8933.00	-942.47	-948.47	211.82	1.01	445742.25	707603.20	N 32 13 27.40	W 103 47 44.38
	9131.30	12.79	163.84	9025.49	-962.52	-968.66	216.79	1.20	445722.07	707606.17	N 32 13 27.20	W 103 47 44.33
	9225.90	9.54	162.95	9118.29	-979.92	-986.21	222.03	3.44	445704.52	707613.42	N 32 13 27.03	W 103 47 44.27
	9320.50	5.52	159.04	9212.05	-991.56	-997.99	225.96	4.28	445682.78	707617.35	N 32 13 26.91	W 103 47 44.22
	9415.10	1.98	141.53	9306.44	-997.02	-1003.49	228.61	3.89	445661.25	707619.99	N 32 13 26.86	W 103 47 44.19
	9509.70	2.90	26.14	9400.99	-996.09	-1002.62	230.68	4.39	445638.11	707622.07	N 32 13 26.87	W 103 47 44.17
	9604.30	5.22	16.68	9495.35	-988.76	-996.35	232.87	2.54	445614.39	707624.35	N 32 13 26.93	W 103 47 44.14
	9699.00	10.52	27.68	9589.13	-977.84	-984.55	238.23	5.79	445706.18	707629.61	N 32 13 27.04	W 103 47 44.08
	9793.60	18.25	28.37	9680.69	-956.61	-963.60	248.83	8.18	445727.13	707640.22	N 32 13 27.25	W 103 47 43.95
	9888.20	27.12	20.31	9767.90	-922.68	-930.04	262.93	9.68	445760.69	707654.31	N 32 13 27.58	W 103 47 43.79
	9982.40	35.46	8.05	9848.41	-875.07	-882.72	274.24	11.10	445808.01	707665.62	N 32 13 28.05	W 103 47 43.65
	10077.00	47.47	2.79	9919.19	-812.71	-820.48	279.80	13.21	445870.24	707671.18	N 32 13 28.66	W 103 47 43.59
	10171.70	61.52	357.96	9974.07	-735.87	-743.62	280.02	15.40	445947.09	707671.40	N 32 13 29.43	W 103 47 43.58
	10266.50	69.07	2.50	10013.68	-649.86	-657.59	280.46	9.07	446033.12	707671.85	N 32 13 30.28	W 103 47 43.57
	10361.00	77.15	6.30	10041.12	-559.65	-567.54	287.46	9.37	446123.17	707678.84	N 32 13 31.17	W 103 47 43.48
	10455.50	79.12	3.47	10060.56	-467.34	-475.41	295.32	3.60	446215.29	707686.71	N 32 13 32.08	W 103 47 43.38
	10516.00	83.14	4.15	10069.88	-407.63	-415.77	299.30	6.74	446274.92	707690.68	N 32 13 32.67	W 103 47 43.33
	10562.00	89.17	3.73	10072.97	-361.79	-370.01	302.45	13.14	446320.69	707693.83	N 32 13 33.12	W 103 47 43.30
	10610.00	88.62	2.65	10073.89	-313.82	-322.09	305.12	2.52	446368.60	707696.50	N 32 13 33.60	W 103 47 43.26
	10757.00	90.48	0.67	10075.05	-166.84	-175.17	309.38	1.85	446515.51	707700.76	N 32 13 35.05	W 103 47 43.20
	10852.00	89.11	358.69	10075.39	-71.90	-80.18	308.85	2.53	446610.49	707700.23	N 32 13 35.99	W 103 47 43.20
	10946.00	89.83	358.91	10076.26	21.99	13.79	306.88	0.80	446704.46	707698.26	N 32 13 36.92	W 103 47 43.22
	11131.00	90.00	359.50	10076.53	206.84	198.78	304.31	0.33	446889.43	707695.69	N 32 13 38.75	W 103 47 43.24
	11313.00	90.38	358.54	10075.93	388.66	380.75	301.20	0.57	447071.39	707692.58	N 32 13 40.55	W 103 47 43.27
	11404.00	91.58	358.39	10074.37	479.51	471.70	298.76	1.33	447162.34	707690.14	N 32 13 41.45	W 103 47 43.29
	11489.00	91.89	358.50	10071.80	564.35	556.63	296.46	0.39	447247.26	707687.84	N 32 13 42.29	W 103 47 43.31
	11675.00	90.38	357.72	10068.11	749.98	742.48	290.32	0.91	447433.11	707681.71	N 32 13 44.13	W 103 47 43.37
	11858.00	90.38	357.22	10066.90	932.51	925.30	282.25	0.27	447615.91	707673.63	N 32 13 45.94	W 103 47 43.45
	12042.00	89.31	356.01	10067.40	1115.83	1108.97	271.38	0.88	447799.57	707662.78	N 32 13 47.76	W 103 47 43.57
	12162.00	89.28	0.23	10068.87	1235.58	1228.87	267.45	3.52	447919.47	707658.83	N 32 13 48.94	W 103 47 43.61
	12325.00	89.52	1.73	10070.58	1398.56	1391.83	270.23	0.93	448082.42	707661.62	N 32 13 50.56	W 103 47 43.57
	12514.00	90.38	2.18	10070.75	1587.55	1580.72	276.68	0.51	448271.29	707668.06	N 32 13 52.43	W 103 47 43.48
	12609.00	91.07	0.72	10069.54	1682.54	1675.68	279.68	1.70	448366.25	707670.47	N 32 13 53.36	W 103 47 43.45
	12798.00	91.07	1.79	10066.01	1871.50	1864.60	283.22	0.57	448555.15	707674.61	N 32 13 55.23	W 103 47 43.39
	12988.00	90.10	1.22	10064.07	2061.49	2054.52	288.21	0.59	448745.06	707678.60	N 32 13 57.11	W 103 47 43.32
	13083.00	90.72	1.03	10063.39	2156.48	2149.50	290.08	0.68	448840.04	707681.46	N 32 13 58.05	W 103 47 43.29
	13177.00	90.58	1.50	10062.33	2250.48	2243.47	292.15	0.52	448934.00	707683.54	N 32 13 59.98	W 103 47 43.26
	13271.00	91.03	1.99	10061.01	2344.47	2337.42	295.02	0.71	449027.94	707686.40	N 32 13 59.91	W 103 47 43.22
	13365.00	90.79	1.91	10059.51	2438.45	2431.35	298.21	0.27	449121.87	707689.60	N 32 14 0.84	W 103 47 43.18
	13460.00	90.93	1.99	10058.09	2533.44	2526.28	301.45	0.17	449216.80	707692.83	N 32 14 1.78	W 103 47 43.14
	13554.00	90.89	2.44	10056.60	2627.42	2620.20	305.08	0.48	449310.71	707696.46	N 32 14 2.71	W 103 47 43.09
	13648.00	90.83	2.29	10055.19	2721.40	2714.11	308.96	0.17	449404.62	707700.34	N 32 14 3.64	W 103 47 43.04
	13742.00	89.52	1.54	10054.90	2815.39	2808.06	312.10	1.61	449498.55	707703.48	N 32 14 4.57	W 103 47 43.00
	13836.00	91.65	0.27	10053.94	2909.38	2902.03	313.58	2.64	449592.52	707704.96	N 32 14 5.50	W 103 47 42.97
	14025.00	88.52	359.39	10053.66	3098.27	3091.01	313.02	1.72	449781.49	707704.40	N 32 14 7.37	W 103 47 42.97
	14119.00	90.55	359.99	10054.42	3192.21	3185.00	312.51	2.25	449875.47	707703.89	N 32 14 8.30	W 103 47 42.97
	14307.00	92.93	358.10	10048.71	3379.93	3372.86	309.38	1.62	450063.32	707700.76	N 32 14 10.16	W 103 47 43.00
	14495.00	93.65	356.53	10037.92	3567.10	3560.34	300.59	0.92	450250.79	707691.97	N 32 14 12.01	W 103 47 43.09
	14684.00	93.06	355.76	10026.86	3754.94	3748.59	287.91	0.51	450439.03	707679.29	N 32 14 13.88	W 103 47 43.22
	14778.00	92.41	355.26	10022.38	3848.31	3842.19	280.56	0.87	450532.62	707671.94	N 32 14 14.80	W 103 47 43.30
	14872.00	91.75	355.90	10018.96	3941.75	3935.85	273.32	0.98	450626.28	707664.70	N 32 14 15.73	W 103 47 43.38
	14966.00	90.79	357.42	10016.88	4035.38	4029.68	267.84	1.91	450720.08	707659.23	N 32 14 16.96	W 103 47 43.44
	15061.00	89.62	358.90	10016.54	4130.21	4124.61	264.79	1.99	450815.02	707656.18	N 32 14 18.00	W 103 47 43.47
	15154.00	89.97	0.87	10016.87	4223.17	4217.60	264.69	2.26	450908.01	707656.07	N 32 14 18.52	W 103 47 43.47
	15248.00	89.76	1.23	10017.10	4317.16	4311.58	266.49	0.36	451001.99	707657.88	N 32 14 19.48	W 103 47 43.44
	15342.00	90.17	1.97	10017.15	4411.16	4405.55	269.12	0.90	451095.95	707660.50	N 32 14 20.35	W 103 47 43.40
	15530.00	89.55	359.91	10017.61	4599.14	4593.51	272.20	1.15	451283.90	707663.58	N 32 14 22.24	W 103 47 43.36
	15719.00	89.83	359.86	10018.63	4788.08	4782.51	271.82	0.14	451472.88	707663.20	N 32	

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 ° ' ")
Final MWD	20434.00	99.08	355.43	9941.98	9491.82	9490.31	183.27	2.16	456180.40	707574.65	N 32 15 10.89	W 103 47 44.11
Survey												
Proj. to Bit	20490.00	99.08	355.43	9933.14	9546.80	9545.43	178.86	0.00	456235.52	707570.25	N 32 15 11.24	W 103 47 44.16

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 5H Gyro+MWD 0-20,490'
	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 5H Gyro+MWD 0-20,490'
	1	26.500	10455.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 5H Gyro+MWD 0-20,490'
	1	10455.500	20490.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 5H



Vertical Section (ft) Azim = 1.53° Scale = 1:1900.00(ft) Origin = 0N-S, 0E-W

Grid North
Tot Corr (M->G 6.641')
Mag Dec (6.928')
Grid Conv (0.286')

Vertical Section (ft) Azim = 1.53° Scale = 1:1900.00(ft) Origin = 0N-S, 0E-W

Plan View (ft) Scale = 1:2000.00(ft)

Wellbore Path Data (Approximate):

Depth (ft)	MD (ft)	Azimuth (°)
0	0	0.00
1000	1000	166.00
2000	2000	166.00
3000	3000	166.00
4000	4000	166.00
5000	5000	166.00
6000	6000	166.00
7000	7000	166.00
8000	8000	166.00
9000	9000	166.00
10000	10000	166.00
11000	11000	166.00
11500	11500	166.00