Schlumberger

Oxy Nimitz MDP1 12 Federal 2H Gyro+MWD 0-20,424' Survey Geodetic Report

(Def Survey)

30-015-44580

Report Date:	May 30, 2018 - 09:25 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	357.101 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Nimitz MDP1 12 Federal 2H / Oxy Nimitz MDP1 12 Federal 2H	**TVD Reference Datum:**	RKB=26.5'
Well:	Oxy Nimitz MDP1 12 Federal 2H	**TVD Reference Elevation:**	3518.100 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3491.600 ft above MSL
UWI / API#:	Unknown / 30-015-44580	**Magnetic Declination:**	6.921 °
Survey Name:	Oxy Nimitz MDP1 12 Federal 2H Gyro+MWD 0-20,424'	**Total Gravity Field Strength:**	998.4310mgn (9.80665 Based)
Survey Date:	May 15, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	190.667 ° / 11085.541 ft / 6.630 / 1.095	**Total Magnetic Field Strength:**	48016.832 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.975 °
Location Lat / Long:	N 32° 13' 26.10364", W 103° 50' 14.01251"	**Declination Date:**	May 15, 2018
Location Grid N/E Y/X:	N 445549.240 ftUS, E 694750.860 ftUS	**Magnetic Declination Model:**	HDGM 2018
CRS Grid Convergence Angle:	0.2645 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99993605	**Grid Convergence Used:**	0.2645 °
Version / Patch:	2.10.720.0	**Total Corr Mag North->Grid North:**	6.6564 °
		Local Coord Referenced To:	Well Head

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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 ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	445549.24	694750.86	N 32 13 26.10	W 103 50 14.01
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	445549.24	694750.86	N 32 13 26.10	W 103 50 14.01
	80.41	0.23	225.13	80.41	-0.07	-0.08	-0.08	0.43	445549.16	694750.78	N 32 13 26.10	W 103 50 14.01
	172.79	0.43	229.22	172.79	-0.41	-0.43	-0.47	0.22	445548.81	694750.39	N 32 13 26.10	W 103 50 14.02
	265.34	0.50	233.11	265.34	-0.85	-0.90	-1.06	0.08	445548.34	694749.80	N 32 13 26.09	W 103 50 14.02
	357.77	0.36	245.04	357.76	-1.18	-1.27	-1.64	0.18	445547.97	694749.22	N 32 13 26.09	W 103 50 14.03
	450.32	0.43	267.22	450.31	-1.29	-1.41	-2.25	0.18	445547.83	694748.61	N 32 13 26.09	W 103 50 14.04
	542.80	0.85	274.63	542.78	-1.20	-1.37	-3.28	0.46	445547.87	694747.58	N 32 13 26.09	W 103 50 14.05
	635.32	0.13	261.33	635.30	-1.12	-1.33	-4.07	0.78	445547.91	694746.79	N 32 13 26.09	W 103 50 14.06
	727.88	0.02	180.15	727.86	-1.15	-1.36	-4.17	0.14	445547.88	694746.69	N 32 13 26.09	W 103 50 14.06
	820.40	0.04	205.08	820.38	-1.19	-1.41	-4.19	0.03	445547.83	694746.67	N 32 13 26.09	W 103 50 14.06
	914.92	0.02	68.30	914.90	-1.22	-1.43	-4.19	0.06	445547.81	694746.67	N 32 13 26.09	W 103 50 14.06
	1009.44	0.02	60.35	1009.42	-1.20	-1.42	-4.16	0.00	445547.82	694746.70	N 32 13 26.09	W 103 50 14.06
	1104.03	0.02	25.65	1104.01	-1.18	-1.39	-4.14	0.01	445547.85	694746.72	N 32 13 26.09	W 103 50 14.06
	1198.70	0.04	23.77	1198.68	-1.14	-1.35	-4.12	0.02	445547.89	694746.74	N 32 13 26.09	W 103 50 14.06
	1293.48	0.04	21.50	1293.46	-1.08	-1.29	-4.09	0.00	445547.95	694746.77	N 32 13 26.09	W 103 50 14.06
	1388.01	0.03	32.43	1387.99	-1.03	-1.23	-4.06	0.01	445548.01	694746.80	N 32 13 26.09	W 103 50 14.06
	1482.68	0.06	37.26	1482.66	-0.97	-1.17	-4.02	0.03	445548.07	694746.84	N 32 13 26.09	W 103 50 14.06
	1577.47	0.05	41.37	1577.45	-0.90	-1.10	-3.96	0.01	445548.14	694746.90	N 32 13 26.09	W 103 50 14.06
	1672.11	0.04	8.13	1672.09	-0.84	-1.04	-3.93	0.03	445548.20	694746.93	N 32 13 26.09	W 103 50 14.06
	1766.89	0.05	17.17	1766.87	-0.77	-0.97	-3.92	0.01	445548.27	694746.95	N 32 13 26.09	W 103 50 14.06
	1861.60	0.03	353.60	1861.58	-0.71	-0.90	-3.91	0.03	445548.34	694746.95	N 32 13 26.09	W 103 50 14.06
	1956.38	0.03	318.97	1956.36	-0.66	-0.86	-3.92	0.02	445548.38	694746.94	N 32 13 26.10	W 103 50 14.06
	2051.09	0.03	187.83	2051.07	-0.67	-0.87	-3.94	0.06	445548.37	694746.92	N 32 13 26.10	W 103 50 14.06
	2145.87	0.03	186.22	2145.85	-0.71	-0.92	-3.95	0.00	445548.32	694746.91	N 32 13 26.09	W 103 50 14.06
	2240.73	0.03	175.34	2240.71	-0.76	-0.97	-3.95	0.01	445548.27	694746.91	N 32 13 26.09	W 103 50 14.06
	2335.35	0.03	162.28	2335.33	-0.81	-1.01	-3.94	0.01	445548.23	694746.92	N 32 13 26.09	W 103 50 14.06
	2429.84	0.03	170.61	2429.82	-0.86	-1.06	-3.93	0.00	445548.18	694746.93	N 32 13 26.09	W 103 50 14.06
	2524.26	0.03	158.77	2524.24	-0.91	-1.11	-3.92	0.01	445548.13	694746.94	N 32 13 26.09	W 103 50 14.06
	2619.09	0.04	138.21	2619.07	-0.96	-1.16	-3.89	0.02	445548.08	694746.97	N 32 13 26.09	W 103 50 14.06
	2713.87	0.03	169.15	2713.85	-1.01	-1.21	-3.86	0.02	445548.03	694747.00	N 32 13 26.09	W 103 50 14.06
	2808.65	0.01	194.69	2808.63	-1.04	-1.24	-3.86	0.02	445548.00	694747.00	N 32 13 26.09	W 103 50 14.06
	2903.00	0.03	134.91	2902.98	-1.07	-1.26	-3.84	0.03	445547.98	694747.02	N 32 13 26.09	W 103 50 14.06
	2997.42	0.01	118.19	2997.40	-1.09	-1.28	-3.82	0.02	445547.96	694747.04	N 32 13 26.09	W 103 50 14.06
	3091.88	0.01	107.91	3091.86	-1.10	-1.29	-3.80	0.00	445547.95	694747.06	N 32 13 26.09	W 103 50 14.06
	3186.29	0.08	305.31	3186.27	-1.06	-1.26	-3.85	0.09	445547.98	694747.01	N 32 13 26.09	W 103 50 14.06
	3280.70	0.09	298.67	3280.68	-0.98	-1.18	-3.97	0.01	445548.06	694746.89	N 32 13 26.09	W 103 50 14.06
	3375.21	0.07	270.64	3375.19	-0.94	-1.15	-4.09	0.05	445548.09	694746.77	N 32 13 26.09	W 103 50 14.06
	3469.45	0.10	225.04	3469.43	-0.99	-1.20	-4.20	0.08	445548.04	694746.66	N 32 13 26.09	W 103 50 14.06
	3564.10	0.11	255.26	3564.08	-1.06	-1.28	-4.35	0.06	445547.96	694746.51	N 32 13 26.09	W 103 50 14.06
	3658.58	0.08	249.28	3658.56	-1.10	-1.33	-4.50	0.03	445547.91	694746.36	N 32 13 26.09	W 103 50 14.06
	3753.10	0.11	252.13	3753.08	-1.15	-1.38	-4.65	0.03	445547.86	694746.21	N 32 13 26.09	W 103 50 14.07
	3942.10	0.07	232.34	3942.08	-1.26	-1.51	-4.91	0.03	445547.73	694745.95	N 32 13 26.09	W 103 50 14.07
	4036.38	0.03	281.35	4036.36	-1.28	-1.54	-4.98	0.06	445547.70	694745.88	N 32 13 26.09	W 103 50 14.07
	4130.85	0.05	332.25	4130.83	-1.24	-1.50	-5.03	0.04	445547.74	694745.83	N 32 13 26.09	W 103 50 14.07
	4225.27	0.02	316.31	4225.25	-1.19	-1.45	-5.06	0.03	445547.79	694745.80	N 32 13 26.09	W 103 50 14.07
	4319.76	0.02	65.28	4319.74	-1.17	-1.43	-5.05	0.03	445547.81	694745.81	N 32 13 26.09	W 103 50 14.07
	4414.26	0.07	91.86	4414.24	-1.17	-1.43	-4.98	0.06	445547.81	694745.88	N 32 13 26.09	W 103 50 14.07
	4508.82	0.05	85.00	4508.80	-1.17	-1.42	-4.88	0.02	445547.82	694745.98	N 32 13 26.09	W 103 50 14.07
	4603.44	0.04	79.03	4603.42	-1.17	-1.41	-4.81	0.01	445547.83	694746.05	N 32 13 26.09	W 103 50 14.07
	4698.25	0.03	62.41	4698.23	-1.15	-1.40	-4.75	0.01	445547.84	694746.11	N 32 13 26.09	W 103 50 14.07
	4792.91	0.04	67.93	4792.89	-1.13	-1.37	-4.70	0.01	445547.87	694746.16	N 32 13 26.09	W 103 50 14.07
	4887.45	0.05	59.20	4887.43	-1.10	-1.34	-4.63	0.01	445547.90	694746.23	N 32 13 26.09	W 103 50 14.07
	4981.84	0.04	55.01	4981.82	-1.07	-1.30	-4.57	0.01	445547.94	694746.29	N 32 13 26.09	W 103 50 14.07
	5076.38	0.04	55.51	5076.36	-1.03	-1.26	-4.52	0.00	445547.98	694746.34	N 32 13 26.09	W 103 50 14.07
	5171.00	0.02	65.48	5170.98	-1.01	-1.24	-4.48	0.02	445548.00	694746.38	N 32 13 26.09	W 103 50 14.06
	5265.60	0.30	2.10	5265.58	-0.75	-0.98	-4.45	0.31	445548.26	694746.41	N 32 13 26.09	W 103 50 14.06
	5360.37	1.09	322.22	5360.34	0.23	-0.02	-4.99	0.93	445549.22	694745.87	N 32 13 26.10	W 103 50 14.07
	5454.98	1.87	305.82	5454.92	1.94	1.59	-6.80	0.93	445550.83	694744.06	N 32 13 26.12	W 103 50 14.09
	5549.57	2.74	300.98	5549.43	4.16	3.66	-9.99	0.94	445552.90	694740.87	N 32 13 26.14	W 103 50 14.13
	5644.33	3.30	294.81	5644.06	6.69	5.97	-14.41	0.68	445555.21	694736.46	N 32 13 26.16	W 103 50 14.18
	5739.08	3.80	293.11	5738.63	9.34	8.35	-19.77	0.54	445557.59	694731.09	N 32 13 26.19	W 103 50 14.24
	5833.87	4.00	292.26	5833.20	12.12	10.83	-25.72	0.22	445560.07	694725.14	N 32 13 26.21	W 103 50 14.31
	5928.66	4.47	291.04	5927.73	15.02	13.41	-32.22	0.50	445562.65	694718.64	N 32 13 26.24	W 103 50 14.39
	6023.38	5.04	291.62	6022.12	18.25	16.27	-39.54	0.60	445565.51	694711.32	N 32 13 26.27	W 103 50 14.47
	6118.10	6.12	293.66	6116.39	22.23	19.83	-48.03	1.16	445569.07	694702.83	N 32 13 26.30	W 103 50 14.57
	6212.94	7.65	299.07	6210.55	27.84	24.93	-58.18	1.75	445574.16	694692.68	N 32 13 26.35	W 103 50 14.69
	6307.71	9.25	302.78	6304.29	35.62	32.12	-70.10	1.78	445581.35	694680.77	N 32 13 26.42	W 103 50 14.83
	6402.12	10.55	303.36	6397.29	45.16	40.98	-83.70	1.38	445590.21	694667.17	N 32 13 26.51	W 103 50 14.98
	6496.73	10.18	301.36	6490.35	54.99	50.09	-98.07	0.55	445599.33	694652.80	N 32 13 26.60	W 103 50 15.15
	6591.20	9.04	299.74	6583.50	63.69	58.12	-111.64	1.24	445607.35	694639.22	N 32 13 26.68	W 103 50 15.31
	6685.56	8.71	297.85	6676.73	71.34	65.13	-124.40	0.47	445614.37	694626.47	N 32 13 26.75	W 103 50 15.48
	6780.16	7.85	295.76	6770.34	78.10	71.29	-136.55	0.96	445620.52	694614.32	N 32 13 26.82	W 103 50 15.60
	6874.93	6.94	294.84	6864.32	83.87	76.50	-147.57	0.97	445625.74	694603.30	N 32 13 26.87	W 103 50 15.73
	6969.66	6.52	292.70	6958.40	88.86	80.98	-157.73	0.52	445630.22	694593.14	N 32 13 26.91	W 103 50 15.84
	7064.45	5.85	289.06	7052.64	92.99	84.64	-167.26	0.82	445633.87	694583.61	N 32 13 26.95	W 103 50 15.95
	7159.05	5.84	288.55	7146.75	96.55	87.74	-176.38	0.06	445636.98	694574.49	N 32 13 26.98	W 103 50 16.06
	7253.70	5.55	283.83	7240.93	99.63	90.37	-185.39	0.58	445639.60	694565.48	N 32 13 27.01	W 103 50 16.17

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 ° ' ")
	7348.29	5.88	280.13	7335.05	102.04	92.32	-194.60	0.52	445641.55	694556.27	N 32 13 27.03	W 103 50 16.27
	7443.03	5.50	276.86	7429.32	103.90	93.71	-203.88	0.53	445642.94	694546.99	N 32 13 27.04	W 103 50 16.38
	7537.66	5.47	272.78	7523.52	105.12	94.47	-212.89	0.41	445643.71	694537.98	N 32 13 27.05	W 103 50 16.49
	7632.20	4.92	287.40	7617.67	106.97	95.90	-221.26	1.51	445645.14	694529.61	N 32 13 27.06	W 103 50 16.58
	7727.01	4.82	309.54	7712.15	111.07	99.65	-228.21	1.97	445648.89	694522.66	N 32 13 27.10	W 103 50 16.66
	7821.75	4.93	317.11	7806.55	116.87	105.17	-234.05	0.69	445654.40	694516.82	N 32 13 27.15	W 103 50 16.73
	7916.59	5.25	316.58	7901.01	123.29	111.31	-239.81	0.34	445660.54	694511.07	N 32 13 27.22	W 103 50 16.80
	8011.28	4.63	314.84	7995.35	129.42	117.15	-245.50	0.67	445666.38	694505.38	N 32 13 27.27	W 103 50 16.86
	8106.06	4.31	311.77	8089.84	134.75	122.22	-250.87	0.42	445671.45	694500.01	N 32 13 27.32	W 103 50 16.93
	8200.67	6.06	294.96	8184.07	139.58	126.70	-258.05	2.43	445675.93	694492.83	N 32 13 27.37	W 103 50 17.01
	8295.41	7.32	272.08	8278.18	142.45	129.03	-268.61	3.08	445678.26	694482.26	N 32 13 27.39	W 103 50 17.13
	8390.00	7.47	264.91	8371.98	142.73	128.70	-280.76	0.99	445677.93	694470.12	N 32 13 27.39	W 103 50 17.27
	8484.67	8.32	270.32	8465.76	142.88	128.19	-293.74	1.19	445677.42	694457.14	N 32 13 27.39	W 103 50 17.42
	8579.23	7.87	287.04	8559.39	145.48	130.13	-306.77	2.53	445679.36	694444.11	N 32 13 27.41	W 103 50 17.58
	8673.60	6.58	306.38	8653.02	151.10	135.23	-317.31	2.90	445684.46	694433.58	N 32 13 27.46	W 103 50 17.70
	8768.01	7.06	309.07	8746.76	158.41	142.09	-326.17	0.61	445691.32	694424.72	N 32 13 27.52	W 103 50 17.80
	8862.47	7.72	310.67	8840.44	166.66	149.89	-335.48	0.73	445699.12	694415.40	N 32 13 27.60	W 103 50 17.91
	8956.92	7.44	315.61	8934.06	175.62	158.39	-344.57	0.75	445707.62	694406.31	N 32 13 27.69	W 103 50 18.02
	9051.26	6.76	314.11	9027.68	184.25	166.62	-352.83	0.75	445715.85	694398.05	N 32 13 27.77	W 103 50 18.11
	9145.72	8.74	314.72	9121.27	193.62	175.54	-361.93	2.10	445724.77	694388.96	N 32 13 27.86	W 103 50 18.22
	9240.39	10.81	313.84	9214.56	205.40	186.75	-373.44	2.19	445735.98	694377.44	N 32 13 27.97	W 103 50 18.35
	9334.92	11.13	313.57	9307.36	218.47	199.18	-386.44	0.34	445748.41	694364.44	N 32 13 28.09	W 103 50 18.50
	9429.74	9.63	314.33	9400.63	230.93	211.03	-398.75	1.59	445760.26	694352.14	N 32 13 28.21	W 103 50 18.64
	9524.56	7.91	314.81	9494.34	241.58	221.17	-409.05	1.82	445770.40	694341.83	N 32 13 28.31	W 103 50 18.76
	9619.44	16.23	333.15	9587.07	258.56	237.64	-419.69	9.55	445786.86	694331.19	N 32 13 28.47	W 103 50 18.89
	9714.14	22.40	335.65	9676.40	287.48	265.91	-433.12	6.57	445815.13	694317.76	N 32 13 28.75	W 103 50 19.04
Last Gyro	9811.95	30.28	346.87	9764.04	329.18	306.99	-446.44	9.50	445856.21	694304.45	N 32 13 29.16	W 103 50 19.19
	9866.00	34.51	350.65	9809.67	357.82	335.39	-452.03	8.67	445884.61	694298.86	N 32 13 29.44	W 103 50 19.26
	9960.00	45.88	351.47	9881.35	418.06	395.23	-461.39	12.11	445944.44	694289.50	N 32 13 30.04	W 103 50 19.36
	10055.00	56.38	353.38	9940.89	491.67	468.45	-471.03	11.16	446017.66	694279.86	N 32 13 30.76	W 103 50 19.47
	10149.00	65.60	354.20	9986.43	573.65	550.09	-479.89	9.84	446099.29	694271.00	N 32 13 31.57	W 103 50 19.57
	10244.00	75.52	354.32	10018.01	663.02	639.11	-488.84	10.44	446188.31	694262.06	N 32 13 32.45	W 103 50 19.67
	10338.00	75.07	355.72	10041.87	753.87	729.68	-496.73	1.52	446278.88	694254.16	N 32 13 33.35	W 103 50 19.76
	10432.00	78.49	359.21	10063.37	845.35	821.08	-500.76	5.13	446370.26	694250.14	N 32 13 34.25	W 103 50 19.80
	10527.00	89.55	0.52	10073.25	939.58	915.41	-500.97	11.72	446464.59	694249.93	N 32 13 35.18	W 103 50 19.79
	10587.00	89.86	359.83	10073.56	999.49	975.41	-500.78	1.26	446524.58	694250.11	N 32 13 35.78	W 103 50 19.79
	10686.00	90.17	358.79	10073.54	1098.41	1074.40	-501.98	1.10	446623.57	694248.92	N 32 13 36.76	W 103 50 19.80
	10780.00	89.31	358.40	10073.96	1192.38	1168.37	-504.28	1.00	446717.53	694246.61	N 32 13 37.69	W 103 50 19.82
	10875.00	88.07	357.98	10076.13	1287.34	1263.30	-507.28	1.38	446812.45	694243.61	N 32 13 38.63	W 103 50 19.85
	11064.00	88.25	359.52	10082.20	1476.15	1452.15	-511.40	0.82	447001.29	694239.49	N 32 13 40.50	W 103 50 19.89
	11159.00	88.35	0.57	10085.02	1570.99	1547.10	-511.33	1.11	447096.24	694239.57	N 32 13 41.44	W 103 50 19.88
	11348.00	88.38	359.39	10090.41	1759.67	1736.02	-511.39	0.62	447285.15	694239.50	N 32 13 43.30	W 103 50 19.87
	11538.00	87.76	359.30	10096.81	1949.41	1925.90	-513.56	0.33	447475.02	694237.33	N 32 13 45.18	W 103 50 19.89
	11632.00	87.97	359.49	10100.32	2043.27	2019.83	-514.55	0.30	447568.94	694236.34	N 32 13 46.11	W 103 50 19.89
	11727.00	87.69	359.69	10103.91	2138.11	2114.76	-515.23	0.36	447663.86	694235.66	N 32 13 47.05	W 103 50 19.90
	11822.00	87.80	0.31	10107.65	2232.92	2209.69	-515.23	0.66	447758.78	694235.66	N 32 13 47.99	W 103 50 19.89
	12011.00	88.25	359.42	10114.16	2421.58	2398.57	-515.68	0.53	447947.65	694235.21	N 32 13 49.86	W 103 50 19.89
	12106.00	88.80	359.40	10116.61	2516.48	2493.54	-516.66	0.58	448042.61	694234.24	N 32 13 50.80	W 103 50 19.89
	12200.00	89.38	0.60	10118.10	2610.34	2587.52	-516.68	1.42	448136.59	694234.24	N 32 13 51.73	W 103 50 19.89
	12295.00	89.86	359.69	10118.73	2705.20	2682.52	-516.42	1.08	448231.58	694234.48	N 32 13 52.67	W 103 50 19.88
	12390.00	89.52	359.74	10119.25	2800.10	2777.51	-516.89	0.36	448326.57	694234.01	N 32 13 53.61	W 103 50 19.88
	12484.00	89.48	0.54	10120.07	2893.97	2871.51	-516.66	0.85	448420.56	694234.23	N 32 13 54.54	W 103 50 19.87
	12579.00	90.07	359.67	10120.44	2988.83	2966.51	-516.49	1.11	448515.55	694234.41	N 32 13 55.48	W 103 50 19.87
	12674.00	90.03	0.75	10120.36	3083.69	3061.51	-516.14	1.14	448610.54	694234.76	N 32 13 56.42	W 103 50 19.86
	12768.00	90.10	359.54	10120.25	3177.56	3155.50	-515.90	1.29	448704.54	694234.99	N 32 13 57.35	W 103 50 19.85
	12862.00	89.90	359.34	10120.25	3271.48	3249.50	-516.82	0.30	448798.52	694234.08	N 32 13 58.28	W 103 50 19.85
	12957.00	90.72	359.75	10119.74	3366.39	3344.49	-517.57	0.97	448893.51	694233.32	N 32 13 59.22	W 103 50 19.86
	13051.00	90.07	360.00	10119.09	3460.28	3438.49	-517.78	0.74	448987.50	694233.12	N 32 14 0.15	W 103 50 19.86
	13240.00	89.76	359.52	10119.37	3649.07	3627.49	-518.57	0.30	449176.49	694232.33	N 32 14 2.02	W 103 50 19.85
	13335.00	90.31	359.60	10119.31	3743.99	3722.48	-519.30	0.59	449271.48	694231.60	N 32 14 2.96	W 103 50 19.86
	13524.00	89.69	359.63	10119.31	3932.80	3911.48	-520.57	0.33	449460.46	694230.33	N 32 14 4.83	W 103 50 19.86
	13618.00	90.00	359.20	10119.56	4026.73	4005.47	-521.53	0.56	449554.45	694229.37	N 32 14 5.76	W 103 50 19.87
	13807.00	89.79	0.14	10119.91	4215.53	4194.47	-522.62	0.51	449743.43	694228.28	N 32 14 7.63	W 103 50 19.87
	13996.00	90.24	0.26	10119.86	4404.26	4383.47	-521.96	0.25	449932.42	694228.94	N 32 14 9.50	W 103 50 19.85
	14185.00	89.86	0.37	10119.70	4592.96	4572.46	-520.92	0.21	450121.40	694229.98	N 32 14 11.37	W 103 50 19.83
	14279.00	89.90	359.67	10119.89	4686.84	4666.46	-520.89	0.75	450215.39	694230.01	N 32 14 12.30	W 103 50 19.83
	14469.00	89.79	359.92	10120.41	4876.62	4856.46	-521.57	0.14	450405.38	694229.33	N 32 14 14.18	W 103 50 19.82
	14564.00	90.03	0.25	10120.56	4971.50	4951.46	-521.42	0.43	450500.37	694229.47	N 32 14 15.12	W 103 50 19.82
	14658.00	89.42	359.53	10121.01	5065.38	5045.46	-521.60	1.00	450594.37	694229.29	N 32 14 16.05	W 103 50 19.81
	14752.00	89.69	359.70	10121.74	5159.29	5139.45	-522.24	0.34	450688.35	694228.66	N 32 14 16.98	W 103 50 19.82
	14942.00	89.86	0.07	10122.48	5349.06	5329.45	-522.62	0.21	450878.34	694228.28	N 32 14 18.86	W 103 50 19.81
	15131.00	89.86	0.41	10122.95	5537.78	5518.45	-521.83	0.18	451067.32	694229.07	N 32 14 20.73	W 103 50 19.79
	15320.00	90.17	359.11	10122.90	5726.57	5707.44	-522.62	0.71	451256.31	694228.28	N 32 14 22.60	W 103 50 19.79
	15415.00	89.31	359.00	10123.33	5821.51	5802.43	-524.18	0.91	451351.28	694226.71	N 32 14 23.54	W 103 50 19.80
	15510.00	90.28	358.89	10123.67	5916.46	5897.41	-525.93	1.03	451446.26	694224.96	N 32 14 24.48	W 103 50 19.82
	15604.00	89.48	359.10	10123.86	6010.41	5991.39	-527.58	0.88	451540.24	694223.31	N 32 14 25.41	W 103 50 19.83
	15794.00	90.14	359.74	10124.49	6200.25	6181.38	-529.51	0.48	451730.21	694221.39	N 32 14 27.29	W 103 50 19.85
	15889.00	89.62	359.73	10124.69	6295.15	6276.38	-529.94	0.55	451825.21	694220.95	N 32 14 28.23	W 103 50 19.85
	16078.00	90.65	359.73	10124.25	6483.95	6465.37	-530.84	0.54	452014.19	694220.06	N 32 14 30.10	W 103 50 19.85
	16173.00	91.31	359.39	10122.62	6578.85	6560.36	-531.56	0.78	452109.16	694219.33	N 32 14 31.04	W 103 50 19.85
	16362.00	90.72	0.22	10119.28	6767.60	6749.32	-532.21	0.54	452298.12	694218.69	N 32 14 32.91	W 103 50 19.85
	16551.00	89.97	359.43	10118.14	6956.38	6938.32	-532.79	0.58	452487.10	694218.11	N 32 14 34.78	W 103 50 19.84
	16646.00	89.90	0.07	10118.25	7051.28	7033.32	-533.20	0.68	452582.09	694217.70	N 32 14 35.72	W 103 50 19.84
	16835.00	90.31	359.48	10117.90	7240.07	7222.31	-533.94	0.38	452771.08	694216.95	N 32 14 37.59	W 103 50 19.84
	16930.00	90.14	359.64	10117.53	7334.99	7317.31	-534.67	0.25	452866.07	694216.22	N 32 14 38.53	W 103 50 19.84
	17119.00	89.79	0.30	10117.64	7523.75	7506.31	-534.77	0.40	453055.05	694216.13	N 32 14 40.40	W 103 50 19.84
	17308.00	89.76	359.91	10118.38	7712.49	7695.31	-534.42	0.21	453244.04	694216.47	N 32 14 42.27	W 103 50 19.82
	17403.00	90.52	0.30	10118.15	7807.35	7790.30	-534.25	0.90	453339.03	694216.65	N 32 14 43.21	W 103 50 19.81
	17592.00	90.17	359.74	10117.01	7996.10	7979.30	-534.18	0.35	453528.01	694216.71	N 32 14 45.08	W 103 50 19.80
	17687.00	90.03	0.02	10116.85	8090.99	8074.30	-534.38	0.33	453623.01	694216.51	N 32 14 46.02	W 103 50 19.80
	17877.00	89.48	359.29	10117.66	8280.80	8264.29	-535.53	0.48	453812.99	694215.37	N 32 14 47.90	W 103 50 19.80
	18066.00	90.76	359.54	10117.26	8469.64	8453.28	-537.46	0.69	454001.96	694213.44	N 32 14 49.77	W 103 50 19.82
	18255.00	90.72	359.90	10114.82	8658.43	8642.26	-538.38	0.19	454190.93	694212.52	N 32 14 51.64	W 103 50 19.82
	18444.00	91.27	359.79	10111.54	8847.18	8831.23	-538.89	0.30	454379.89	694212.00	N 32 14 53.51	W 103 50 19.81
	18539.00	90.21	358.98	10110.31	8942.10	8926.21	-539.91	1.40	454474.86	694210.98	N 32 14 54.45	W 103 50 19.82
	18633.00	89.14	359.82	10110.85	9036.02	9020.20	-540.90	1.45	454568.85	694210.00	N 32 14 55.38	W 103 50 19.83
	18822.00	89.17	359.94	10113.63	9224.77	9209.18	-541.29	0.07	454757.82	694209.60	N 32 14 57.25	W 103 50 19.82
	18916.00	88.90	359.77	10115.22	9318.65	9303.17	-541.53	0.34	454851.80	694209.37	N 32 14 58.18	W 103 50 19.82
	19011.00	89.00	359.73	10116.96	9413.53	9398.15	-541.84	0.11	454946.77	694208.95	N 32 14 59.12	W 103 50 19.82
	19200.00	89.31	359.47	10119.75	9602.33	9587.13	-543.26	0.21	455135.73	694207.63	N 32 15 0.99	W 103 50 19.82
	19295.00	89.28	359.40	10120.91	9697.25	9682.12	-544.20	0.08	455230.72	694206.70	N 32 15 1.93	W 103 50 19.83
	19485.00	90.24	359.87	10121.71	9887.06	9872.11	-545.41	0.56	455420.70	694205.49	N 32 15 3.81	W 103 50 19.83
	19580.00	89.86	359.91	10121.63	9981.95	9967.11	-545.59	0.40	455515.69	694205.30	N 32 15 4.75	W 103 50 19.83
	19674.00	90.38	359.60	10121.43	10075.84	10061.11	-545.99	0.64	455609.68	694204.90	N 32 15 5.68	W 103 50 19.83
	19863.00	90.31	358.91	10120.29	10264.71	10250.08	-548.45	0.37	455798.65	694202.44	N 32 15 7.55	W 103 50 19.85
	20052.00	90.45	359.91	10119.04	10453.55	10439.07	-550.40	0.53	455987.62	694200.50	N 32 15 9.42	W 103 50 19.86
	20240.00	90.72	359.29	10117.12	10641.36	10627.05	-551.71	0.36	456175.59	694199.19	N 32 15 11.28	W 103 50 19.87
Final MWD Survey	20384.00	90.45	358.82	10115.65	10785.26	10771.03	-554.08	0.38	456319.55	694196.81	N 32 15 12.71	W 103 50 19.89

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 ° ' ")
Proj. to Bit	20424.00	90.45	358.82	10115.34	10825.24	10811.02	-554.91	0.00	456359.54	694195.99	N 32 15 13.10	W 103 50 19.89

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 (in)	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 Nimitz MDP1 12 Federal 2H Gyro+MWD 0-20,424'
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Nimitz MDP1 12 Federal 2H Gyro+MWD 0-20,424'
	1	26.500	9811.950	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Nimitz MDP1 12 Federal 2H Gyro+MWD
	1	9811.950	20424.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Nimitz MDP1 12 Federal 2H Gyro+MWD

Schlumberger

OXY

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Nimitz MDP1 12 Federal 2H	NM Eddy County (NAD 83)	Oxy Nimitz MDP1 12 Federal 2H

Gravity & Magnetic Parameters

Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet

Miscellaneous