



Oxy Mesa Verde BS Unit 8 Gyro+MWD 0-20,430' Survey Geodetic Report

(Def Survey)

Report Date: February 28, 2018 - 12:54 PM
 Client: OXY
 Field: NM Lea County (NAD 83)
 Structure / Slot: Oxy Mesa Verde BS Unit 8 / Oxy Mesa Verde BS Unit 8
 Well: Oxy Mesa Verde BS Unit 8
 Borehole: Original Borehole
 UWI / API#: Unknown / 30-025-44184
 Survey Name: Oxy Mesa Verde BS Unit 8 Gyro+MWD 0-20,430'
 Survey Date: February 08, 2018
 Tort / AHD / DOI / ERD Ratio: 203.164' / 10534.459 ft / 6.823' / 1.012
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 12' 39.46399", W 103° 42' 5.70431"
 Location Grid N/E Y/X: N 441058 320 NUS, E 736724 090 NUS
 CRS Grid Convergence Angle: 0.3368°
 Grid Scale Factor: 0.99995281
 Version / Patch: 2.10.706.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 0.289° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3590.700 ft above MSL
 Seabed / Ground Elevation: 3564.200 ft above MSL
 Magnetic Declination: 6.851°
 Total Gravity Field Strength: 988.4309mg (9.80655 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48034.242 nT
 Magnetic Dip Angle: 59.936°
 Declination Date: February 08, 2018
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.3368°
 Total Corr Mag North-Grid: 6.5140°
 North: Well Head
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	441058.32	736724.09	N 32 12 39.46	W 103 42 5.70
	76.10	0.82	252.12	76.10	-0.17	-0.17	-0.52	1.08	441056.15	736723.57	N 32 12 39.46	W 103 42 5.71
	167.50	0.79	268.03	167.59	-0.40	-0.39	-1.77	0.25	441055.93	736722.32	N 32 12 39.46	W 103 42 5.72
	259.10	0.74	278.49	259.08	-0.38	-0.34	-2.99	0.13	441055.96	736721.10	N 32 12 39.46	W 103 42 5.74
	350.70	0.61	287.30	350.67	-0.15	-0.13	-4.04	0.20	441056.19	736720.05	N 32 12 39.46	W 103 42 5.75
	442.20	0.66	292.83	442.17	0.19	0.22	-4.89	0.09	441056.54	736719.10	N 32 12 39.47	W 103 42 5.76
	533.70	0.54	291.88	533.66	0.55	0.58	-5.88	0.13	441056.90	736718.21	N 32 12 39.47	W 103 42 5.77
	625.20	0.38	278.55	625.18	0.75	0.79	-6.58	0.21	441057.11	736717.51	N 32 12 39.47	W 103 42 5.78
	716.50	0.44	276.93	716.76	0.84	0.87	-7.23	0.07	441057.19	736716.86	N 32 12 39.47	W 103 42 5.79
	808.38	0.19	229.05	808.28	0.78	0.82	-7.89	0.37	441057.14	736716.40	N 32 12 39.47	W 103 42 5.79
	902.70	0.45	209.87	902.68	0.35	0.39	-7.99	0.29	441056.71	736715.10	N 32 12 39.47	W 103 42 5.80
	997.10	0.68	220.30	997.05	-0.40	-0.35	-8.54	0.27	441055.97	736715.55	N 32 12 39.46	W 103 42 5.80
	1091.40	0.57	202.31	1091.35	-1.26	-1.22	-9.08	0.24	441055.10	736715.01	N 32 12 39.45	W 103 42 5.81
	1185.80	0.76	182.52	1185.84	-2.32	-2.26	-9.29	0.31	441054.84	736714.80	N 32 12 39.44	W 103 42 5.81
	1280.30	0.98	160.28	1280.23	-3.69	-3.65	-9.05	0.41	441052.67	736714.04	N 32 12 39.43	W 103 42 5.81
	1374.80	1.40	146.35	1374.71	-5.39	-5.35	-8.14	0.55	441050.87	736713.85	N 32 12 39.41	W 103 42 5.80
	1469.30	1.83	138.11	1469.17	-7.47	-7.44	-6.49	0.62	441048.88	736712.60	N 32 12 39.39	W 103 42 5.78
	1563.80	2.31	128.56	1563.61	-9.79	-9.77	-4.02	0.80	441046.55	736710.07	N 32 12 39.37	W 103 42 5.75
	1658.30	2.72	125.41	1658.02	-12.29	-12.28	-0.72	0.47	441044.04	736707.37	N 32 12 39.34	W 103 42 5.71
	1752.70	3.02	124.81	1752.30	-14.89	-15.00	3.14	0.32	441041.32	736704.23	N 32 12 39.32	W 103 42 5.67
	1847.20	3.20	123.71	1846.68	-17.85	-17.89	7.38	0.20	441038.43	736701.47	N 32 12 39.29	W 103 42 5.62
	1941.80	1.26	111.36	1941.18	-19.88	-19.73	10.55	2.10	441036.59	736700.04	N 32 12 39.27	W 103 42 5.58
	2036.30	0.19	75.97	2035.88	-20.01	-20.07	11.67	1.18	441035.25	736700.02	N 32 12 39.26	W 103 42 5.57
	2130.70	0.17	53.66	2130.08	-19.89	-19.85	11.93	0.08	441034.37	736700.22	N 32 12 39.27	W 103 42 5.57
	2225.20	0.18	43.08	2224.57	-19.71	-19.77	12.13	0.03	441033.55	736700.41	N 32 12 39.27	W 103 42 5.56
	2319.40	0.17	41.00	2318.77	-19.51	-19.57	12.32	0.01	441032.75	736700.63	N 32 12 39.27	W 103 42 5.56
	2413.50	0.17	67.44	2412.87	-19.35	-19.41	12.54	0.08	441032.91	736700.82	N 32 12 39.27	W 103 42 5.56
	2507.80	0.16	31.83	2507.17	-19.18	-19.26	12.74	0.11	441032.91	736701.08	N 32 12 39.27	W 103 42 5.56
	2602.10	0.15	34.83	2601.47	-18.97	-19.03	12.87	0.01	441032.91	736701.35	N 32 12 39.27	W 103 42 5.56
	2696.80	0.16	29.79	2696.17	-18.75	-18.82	13.01	0.02	441032.91	736701.62	N 32 12 39.27	W 103 42 5.56
	2790.00	0.16	30.47	2789.37	-18.52	-18.59	13.14	0.00	441032.91	736701.89	N 32 12 39.27	W 103 42 5.56
	2884.10	0.15	28.40	2883.47	-18.30	-18.37	13.28	0.02	441032.91	736702.16	N 32 12 39.27	W 103 42 5.56
	2978.70	0.14	314.37	2978.07	-18.11	-18.18	13.24	0.18	441032.91	736702.43	N 32 12 39.27	W 103 42 5.56
	3073.40	0.14	305.28	3072.77	-17.86	-18.02	13.06	0.01	441032.91	736702.70	N 32 12 39.27	W 103 42 5.56
	3168.00	0.15	306.33	3167.37	-17.81	-17.87	12.87	0.01	441032.91	736702.97	N 32 12 39.27	W 103 42 5.56
	3262.40	0.16	306.33	3261.77	-17.66	-17.72	12.67	0.01	441032.91	736703.24	N 32 12 39.27	W 103 42 5.56
	3356.80	0.17	299.51	3356.27	-17.51	-17.58	12.44	0.02	441032.91	736703.51	N 32 12 39.27	W 103 42 5.56
	3451.40	0.16	306.24	3450.77	-17.37	-17.43	12.21	0.02	441032.91	736703.78	N 32 12 39.27	W 103 42 5.56
	3546.00	0.12	324.38	3545.37	-17.21	-17.27	12.05	0.08	441032.91	736704.05	N 32 12 39.27	W 103 42 5.57
	3640.50	0.18	320.28	3639.87	-17.01	-17.07	11.90	0.06	441032.91	736704.32	N 32 12 39.27	W 103 42 5.57
	3735.00	0.20	320.79	3734.37	-16.77	-16.83	11.70	0.02	441032.91	736704.59	N 32 12 39.27	W 103 42 5.57
	3829.70	0.15	330.92	3829.07	-16.54	-16.60	11.53	0.06	441032.91	736704.86	N 32 12 39.27	W 103 42 5.57
	3924.00	0.15	171.36	3923.37	-16.55	-16.61	11.48	0.31	441032.91	736705.13	N 32 12 39.27	W 103 42 5.57
	4018.50	0.16	143.75	4017.87	-17.05	-17.11	11.78	0.47	441032.91	736705.40	N 32 12 39.27	W 103 42 5.57
	4113.00	0.18	170.15	4112.36	-17.66	-17.72	12.05	0.43	441032.91	736705.67	N 32 12 39.27	W 103 42 5.57
	4207.30	0.14	212.54	4206.66	-17.81	-17.87	12.02	0.02	441032.91	736705.94	N 32 12 39.27	W 103 42 5.57
	4301.90	0.17	208.82	4301.28	-18.03	-18.09	11.89	0.03	441032.91	736706.21	N 32 12 39.27	W 103 42 5.57
	4396.30	0.18	211.56	4395.66	-18.28	-18.34	11.74	0.01	441032.91	736706.48	N 32 12 39.27	W 103 42 5.57
	4490.70	0.19	220.49	4490.06	-18.53	-18.58	11.58	0.03	441032.91	736706.75	N 32 12 39.27	W 103 42 5.57
	4585.20	0.22	223.49	4584.56	-18.78	-18.83	11.34	0.03	441032.91	736707.02	N 32 12 39.27	W 103 42 5.57
	4679.10	0.19	228.94	4678.46	-19.01	-19.07	11.10	0.04	441032.91	736707.29	N 32 12 39.27	W 103 42 5.58
	4773.60	0.19	225.83	4772.86	-19.22	-19.28	10.87	0.01	441032.91	736707.56	N 32 12 39.27	W 103 42 5.58
	4868.10	0.11	203.14	4867.46	-19.42	-19.47	10.72	0.10	441032.91	736707.83	N 32 12 39.27	W 103 42 5.58
	4962.50	0.17	319.81	4961.88	-19.40	-19.45	10.59	0.25	441032.91	736708.10	N 32 12 39.27	W 103 42 5.58
	5056.90	0.13	199.70	5056.16	-19.39	-19.44	10.47	0.28	441032.91	736708.37	N 32 12 39.27	W 103 42 5.58
	5151.30	0.13	211.31	5150.66	-19.58	-19.64	10.37	0.03	441032.91	736708.64	N 32 12 39.27	W 103 42 5.58
	5245.80	0.15	207.84	5245.16	-19.78	-19.84	10.26	0.02	441032.91	736708.91	N 32 12 39.27	W 103 42 5.59
	5340.10	0.15	205.67	5339.46	-20.00	-20.05	10.15	0.00	441032.91	736709.18	N 32 12 39.26	W 103 42 5.59
	5434.60	0.15	205.87	5433.86	-20.23	-20.28	10.04	0.00	441032.91	736709.45	N 32 12 39.26	W 103 42 5.59
	5529.00	0.15	212.92	5528.36	-20.44	-20.49	9.91	0.02	441033.83	736709.00	N 32 12 39.26	W 103 42 5.59
	5623.60	0.16	218.62	5622.86	-20.65	-20.70	9.78	0.02	441033.62	736708.85	N 32 12 39.26	W 103 42 5.59
	5717.80	0.16	206.81	5717.16	-20.87	-20.92	9.62	0.03	441033.40	736708.71	N 32 12 39.26	W 103 42 5.59
	5812.20	0.16	196.38	5811.56	-21.11	-21.16	9.53	0.03	441033.16	736708.52	N 32 12 39.26	W 103 42 5.59
	5906.40	0.14	201.94	5905.76	-21.35	-21.40	9.45	0.03	441032.93	736708.34	N 32 12 39.25	W 103 42 5.60
	6000.80	0.14	112.01	6000.28	-21.60	-21.65	9.51	0.21	441034.78	736708.10	N 32 12 39.25	W 103 42 5.60
	6095.00	0.15	115.97	6094.36	-21.59	-21.64	9.73	0.02	441034.58	736707.82	N 32 12 39.25	W 103 42 5.60
	6189.40	0.14	117.14	6188.76	-21.70	-21.75	9.94	0.01	441034.57	736707.43	N 32 12 39.25	W 103 42 5.60
	6283.80	0.14	116.81	6283.16	-21.80	-21.85	10.15	0.00	441034.47	736707.24	N 32 12 39.25	W 103 42 5.59
	6378.10	0.15	125.81	6377.46	-21.93	-21.98	10.35	0.03	441034.34	736706.94	N 32 12 39.25	W 103 42 5.59
	6472.60	0.17	106.82	6471.96	-22.04	-22.09	10.58	0.06	441034.23	736706.67	N 32 12 39.24	W 103 42 5.58
	6567.00	0.17	119.41	6566.36	-22.15	-22.20	10.84	0.04	441034.12	736706.33	N 32 12 39.24	W 103 42 5.58
	6661.10	0.17	104.46	6660.46	-22.25	-22.30	11.10	0.05	441034.02	736706.19	N 32 12 39.24	W 103 42 5.58
	6755.30	0.18	134.83	6754.65	-22.37	-22.43	11.33	0.09	441033.89	736705.92	N 32 12 39.24	W 103 42 5.57
	6849.60	0.15	119.50	6848.95	-22.53	-22.59	11.53	0.05	441033.74	736705.62	N 32 12 39.24	W 103 42 5.57
	6944.00	0.16	48.55	6943.35	-22.60	-22.66	11.79	0.06	441033.76	7367050		

Comments	MD	Incl	Azim	Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(m)	(°)	(°)	(m)	(m)	(m)	(m)	(m)	(m/1000)	(m)	(m)	(N/S ° °')	(E/W ° °')
	7415.60	0.17	59.66	7414.95	-21.78	-21.84	12.78	0.01	441034.48	736738.87	N 32 12 39.25 W 103 42 5.56		
	7509.90	0.15	83.54	7509.25	-21.65	-21.72	13.01	0.03	441034.61	736737.10	N 32 12 39.25 W 103 42 5.55		
	7604.10	0.36	193.81	7603.45	-21.88	-21.95	13.05	0.50	441034.37	736737.14	N 32 12 39.25 W 103 42 5.55		
	7698.10	1.69	194.54	7697.43	-23.51	-23.58	12.63	1.41	441032.74	736736.72	N 32 12 39.23 W 103 42 5.56		
	7792.20	2.98	193.33	7791.45	-27.24	-27.30	11.72	1.37	441029.02	736735.81	N 32 12 39.19 W 103 42 5.57		
	7886.70	4.50	194.36	7885.75	-33.23	-33.28	10.23	1.81	441023.04	736734.32	N 32 12 39.13 W 103 42 5.59		
	7980.90	5.82	196.38	7979.57	-41.40	-41.44	7.97	1.41	441014.88	736732.06	N 32 12 39.05 W 103 42 5.61		
	8075.40	8.52	196.33	8073.52	-51.16	-51.19	5.11	0.74	441005.13	736729.20	N 32 12 38.96 W 103 42 5.65		
	8169.90	7.80	193.58	8168.90	-62.35	-62.37	2.14	1.20	440993.98	736726.23	N 32 12 38.85 W 103 42 5.68		
	8263.80	8.23	192.81	8263.31	-75.01	-75.01	-0.82	0.88	440981.31	736723.27	N 32 12 38.72 W 103 42 5.72		
	8357.80	8.48	191.08	8357.31	-88.37	-88.36	-3.83	0.38	440967.97	736720.46	N 32 12 38.59 W 103 42 5.75		
	8451.90	7.97	188.27	8448.44	-101.63	-101.61	-5.80	0.67	440954.72	736718.19	N 32 12 38.46 W 103 42 5.78		
	8545.80	7.65	183.04	8539.47	-114.32	-114.29	-7.17	0.63	440942.04	736716.92	N 32 12 38.33 W 103 42 5.80		
	8640.10	7.88	178.11	8632.91	-127.04	-127.00	-7.29	0.74	440929.22	736715.80	N 32 12 38.21 W 103 42 5.80		
	8734.30	7.68	174.75	8726.25	-139.72	-139.69	-6.50	0.53	440916.64	736714.59	N 32 12 38.08 W 103 42 5.79		
	8828.50	7.08	171.52	8819.67	-151.69	-151.67	-5.07	0.77	440904.66	736713.02	N 32 12 37.96 W 103 42 5.77		
	8922.40	7.55	165.59	8912.81	-163.38	-163.35	-2.89	0.96	440892.92	736711.40	N 32 12 37.85 W 103 42 5.75		
	9016.80	7.37	162.66	9006.41	-175.13	-175.14	0.06	0.45	440881.19	736710.25	N 32 12 37.73 W 103 42 5.71		
	9111.10	5.20	163.38	9100.14	-184.98	-185.01	3.69	2.30	440871.32	736708.78	N 32 12 37.63 W 103 42 5.67		
	9205.50	3.08	152.39	9194.29	-191.32	-191.35	6.09	2.39	440864.88	736707.17	N 32 12 37.57 W 103 42 5.65		
	9300.10	2.43	96.80	9288.80	-193.79	-193.84	9.26	2.79	440862.49	736705.35	N 32 12 37.55 W 103 42 5.61		
	9394.80	2.42	58.63	9383.42	-192.96	-193.03	12.96	1.67	440863.30	736703.05	N 32 12 37.55 W 103 42 5.57		
	9489.20	2.86	38.86	9477.72	-190.01	-190.09	16.19	1.12	440866.24	736704.28	N 32 12 37.58 W 103 42 5.53		
	9583.60	4.63	42.64	9571.91	-185.29	-185.40	20.31	1.79	440870.93	736704.48	N 32 12 37.63 W 103 42 5.48		
	9677.80	6.30	44.31	9665.68	-178.78	-178.80	26.49	1.78	440877.43	736705.58	N 32 12 37.69 W 103 42 5.41		
	9772.10	7.94	44.13	9759.24	-170.35	-170.52	34.64	1.74	440885.81	736708.73	N 32 12 37.77 W 103 42 5.31		
	9866.10	9.21	45.79	9852.18	-160.39	-160.62	44.55	1.38	440895.71	736709.84	N 32 12 37.87 W 103 42 5.20		
	9960.10	9.98	46.78	9944.88	-149.51	-149.79	55.88	0.84	440906.53	736707.97	N 32 12 37.98 W 103 42 5.08		
	10054.10	20.23	25.29	10035.67	-129.10	-129.45	68.80	12.25	440926.87	736702.89	N 32 12 38.18 W 103 42 4.91		
	10148.30	28.40	8.19	10121.45	-92.05	-92.44	78.98	11.37	440963.88	736700.07	N 32 12 38.54 W 103 42 4.79		
	10242.20	36.07	8.84	10199.90	-41.26	-41.70	87.13	10.34	441014.63	736698.11	N 32 12 39.05 W 103 42 4.68		
	10336.80	47.68	9.78	10268.41	-21.48	-20.99	97.95	10.27	441077.31	736695.37	N 32 12 39.67 W 103 42 4.56		
	10429.80	57.88	2.95	10325.24	95.77	95.24	105.81	12.28	441151.58	736692.99	N 32 12 40.40 W 103 42 4.47		
	10523.80	67.35	0.68	10368.43	178.11	178.87	108.48	10.30	441234.88	736689.58	N 32 12 41.22 W 103 42 4.43		
	10618.20	71.82	2.32	10378.31	205.51	204.98	109.18	16.09	441281.27	736685.28	N 32 12 41.49 W 103 42 4.42		
	10713.00	84.82	2.89	10397.82	227.22	226.55	113.36	13.84	441352.68	736681.44	N 32 12 42.39 W 103 42 4.36		
	10807.00	93.03	0.41	10389.40	384.09	383.52	116.86	10.08	441439.82	736678.94	N 32 12 43.25 W 103 42 4.33		
	10901.00	94.03	0.21	10384.81	456.98	456.38	116.25	1.40	441512.67	736684.34	N 32 12 43.87 W 103 42 4.32		
	10995.00	91.72	356.48	10385.78	638.58	638.03	111.00	2.41	441594.31	736683.58	N 32 12 45.77 W 103 42 4.37		
	11089.00	91.79	357.31	10382.62	741.35	740.83	105.42	0.81	441787.11	736682.91	N 32 12 46.79 W 103 42 4.43		
	11183.00	92.44	359.54	10379.63	822.24	821.73	103.20	2.87	441876.01	736682.28	N 32 12 47.99 W 103 42 4.48		
	11277.00	92.24	1.07	10375.88	914.15	913.65	103.69	1.68	441969.83	736682.77	N 32 12 48.80 W 103 42 4.44		
	11371.00	91.69	358.17	10372.79	1004.09	1003.59	103.09	3.28	442059.66	736682.17	N 32 12 49.39 W 103 42 4.44		
	11465.00	89.55	357.65	10371.79	1096.00	1095.52	99.73	2.39	442151.78	736682.82	N 32 12 50.30 W 103 42 4.47		
	11559.00	88.35	356.87	10373.52	1189.88	1189.39	95.24	1.52	442245.65	736681.93	N 32 12 51.23 W 103 42 4.51		
	11653.00	87.73	357.62	10376.73	1283.67	1283.23	90.73	1.03	442339.48	736681.81	N 32 12 52.16 W 103 42 4.56		
	11747.00	87.97	358.52	10380.28	1377.53	1377.11	87.56	0.99	442433.36	736681.65	N 32 12 53.09 W 103 42 4.59		
	11841.00	86.97	359.21	10384.41	1471.41	1470.99	85.70	1.29	442527.24	736680.79	N 32 12 54.01 W 103 42 4.61		
	11935.00	86.00	359.71	10382.70	1560.20	1559.80	83.92	0.81	442621.04	736680.01	N 32 12 55.88 W 103 42 4.61		
	12029.00	88.24	359.50	10385.78	1754.14	1753.75	83.27	0.34	442809.88	736680.36	N 32 12 56.81 W 103 42 4.62		
	12123.00	88.90	0.75	10388.13	1848.11	1847.72	83.48	1.50	442903.94	736680.57	N 32 12 57.74 W 103 42 4.61		
	12217.00	88.79	1.48	10400.04	1943.08	1942.68	85.31	0.78	442998.90	736680.40	N 32 12 58.68 W 103 42 4.58		
	12311.00	88.83	1.32	10402.00	2037.04	2036.63	87.59	0.15	443092.85	736681.68	N 32 12 59.81 W 103 42 4.55		
	12405.00	88.97	1.46	10403.80	2131.01	2130.58	89.87	0.21	443186.80	736681.98	N 32 13 0.54 W 103 42 4.51		
	12499.00	88.76	0.84	10405.68	2224.98	2224.55	91.76	0.70	443280.78	736681.54	N 32 13 1.47 W 103 42 4.48		
	12593.00	89.66	0.71	10408.27	2413.85	2413.51	94.31	0.48	443374.67	736681.40	N 32 13 3.34 W 103 42 4.44		
	12687.00	90.28	1.88	10408.32	2507.94	2507.48	96.44	1.41	443468.56	736680.52	N 32 13 4.27 W 103 42 4.41		
	12781.00	90.07	1.36	10408.03	2601.81	2601.44	99.10	0.60	443562.74	736682.18	N 32 13 5.20 W 103 42 4.37		
	12875.00	89.93	0.28	10408.03	2696.81	2696.43	100.45	1.15	443752.82	736682.64	N 32 13 6.14 W 103 42 4.35		
	12969.00	90.41	359.25	10407.47	2885.89	2885.43	99.68	0.60	443941.61	736682.76	N 32 13 8.01 W 103 42 4.35		
	13063.00	88.14	358.62	10409.86	3074.81	3074.37	96.17	1.25	444130.54	736682.05	N 32 13 9.88 W 103 42 4.37		
	13157.00	90.79	357.18	10410.74	3168.72	3168.29	92.72	3.21	444324.45	736681.61	N 32 13 10.81 W 103 42 4.41		
	13251.00	90.76	355.40	10409.45	3263.47	3263.08	86.58	1.87	444518.24	736681.06	N 32 13 11.75 W 103 42 4.47		
	13345.00	90.72	355.67	10408.24	3357.14	3356.78	78.26	0.29	444712.84	736680.33	N 32 13 12.67 W 103 42 4.55		
	13439.00	90.76	356.38	10405.80	3445.47	3445.19	64.51	0.15	444907.14	736679.60	N 32 13 14.54 W 103 42 4.71		
	13533.00	90.79	357.42	10404.53	3539.24	3538.99	58.61	2.17	445095.33	736678.70	N 32 13 15.47 W 103 42 4.77		
	13627.00	90.78	358.30	10403.24	3734.18	3733.94	55.89	1.98	445283.04	736677.99	N 32 13 16.41 W 103 42 4.80		
	13721.00	90.86	1.17	10400.58	3822.15	3821.91	56.67	1.00	445478.04	736678.75	N 32 13 18.27 W 103 42 4.78		
	13815.00	90.78	1.35	10397.88	4111.10	4110.85	60.82	0.10	445666.88	736678.81	N 32 13 20.14 W 103 42 4.72		
	13909.00	90.79	1.41	10396.57	4205.08	4204.81	63.08	0.05	445850.92	736678.17	N 32 13 21.07 W 103 42 4.68		
	14003.00	90.79	1.20	10393.98	4394.03	4393.74	67.39	0.11	446034.85	736679.48	N 32 13 22.94 W 103 42 4.62		
	14097.00	90.31	1.34	10392.15	4582.99	4582.69	71.58	0.28	446218.78	736679.68	N 32 13 24.81 W 103 42 4.56		
	14191.00	90.31	2.69	10391.63	4677.94	4677.63	74.82	1.42	446402.72	736679.00	N 32 13 25.74 W 103 42 4.51		
	14285.00	89.83	2.81	10391.52	4771.88	4771.52	79.43	0.53	446590.58	736678.03	N 32 13 26.67 W 103 42 4.45		
	14379.00	89.97	2.48	10391.68	4865.78	4865.42	83.81	0.38	446778.44	736677.00	N 32 13 27.61 W 103 42 4.40		
	14473.00	90.05	1.28	10391.68	4959.74	4959.38	88.68	1.50	446966.34	736676.00	N 32 13 28.54 W 103 42 4.35		
	14567.00	90.24	0.24	10391.46	5053.75	5053.35	88.12	1.10	447154.13	736675.00	N 32 13 29.48 W 103 42 4.32		
	14661.00	89.17	356.89</										

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DL8 (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	19944.00	89.59	357.86	10401.48	9569.63	9569.43	64.83	1.11	450645.28	736788.91	N 32 14 14.35	W 103 42 4.29
	20133.00	89.66	358.36	10402.37	9778.50	9778.33	58.62	0.29	450634.16	736782.71	N 32 14 19.22	W 103 42 4.35
	20322.00	89.80	357.98	10402.76	9967.37	9967.23	52.59	0.20	451023.08	736776.68	N 32 14 18.09	W 103 42 4.41
Final MWD	20391.00	89.79	357.42	10402.95	10035.30	10035.17	49.82	0.83	451092.00	736773.91	N 32 14 18.77	W 103 42 4.44
Proj. to Bit	20430.00	89.79	357.42	10403.09	10075.25	10075.13	48.06	0.00	451130.98	736772.15	N 32 14 19.16	W 103 42 4.46

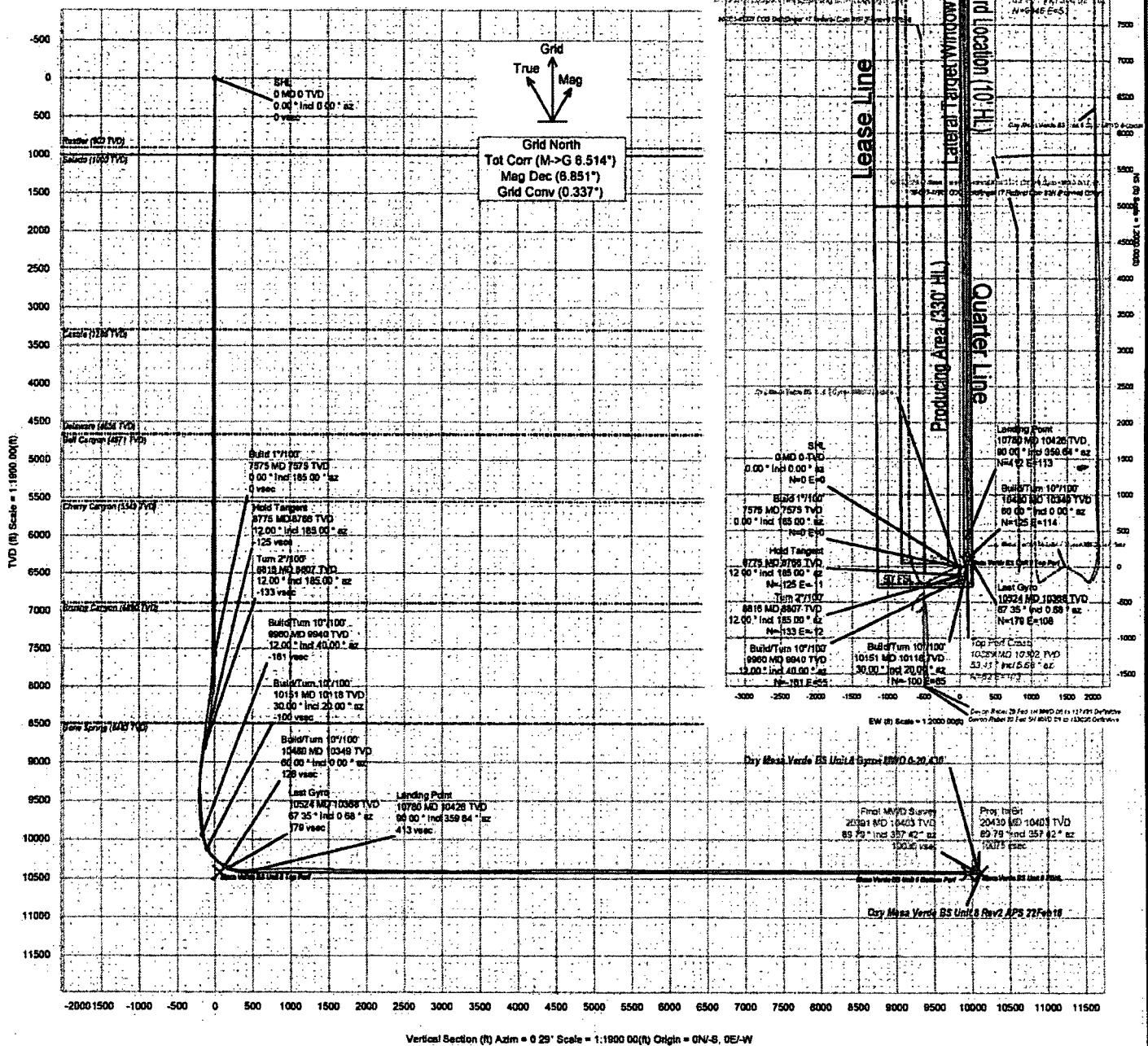
Survey Type: Def Survey

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 Mesa Verde BS Unit 8 Gyro+MWD 0-20.430'
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Mesa Verde BS Unit 8 Gyro+MWD 0-20.430'
	1	26.500	10523.800	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Mesa Verde BS Unit 8 Gyro+MWD 0-10523.800'
	1	10523.800	20430.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Mesa Verde BS Unit 8 Gyro+MWD 0-20430.000'



HOBBS OCD
JUL 26 2018
RECEIVED



Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

Well Reference:
17.24S, 32E, Lea NM
-32.21096 -103.70168

I, Leslie Bullard certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of February 17, 2018 through February 28, 2018, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 10552.00 feet to a depth of 20391.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA Inc. for the Mesa Verde BS Unit 8H Well (Original Hole) API No. 30-025-44184 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Leslie Bullard
FE

Leslie Bullard

Subscribed and Sworn to before me this 2nd day of March (month) 2018 (yr)

My Commission expires:

12-20-2020

J. Allemand
Notary Public

Adams County Colorado
(County State)

JENNIFER ALLEMAND (signature) Notary Public State of Colorado Notary ID # 20164047962 My Commission Expires 12-20-2020
--