

Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22,095' Survey Geodetic Report

(Def Survey)



HOBBS OCD

JUL 27 2018

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Report Date: June 08, 2018 - 09:35 AM
 Client: OXY
 Field: NM Lea County (NAD 83)
 Structure / Slot: Oxy Mesa Verde BS Unit 2H / Oxy Mesa Verde BS Unit 2H
 Well: Oxy Mesa Verde BS Unit 2H
 Borehole: Original Borehole
 UWI / API#: Unknown / 30-025-44196
 Survey Name: Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22,095'
 Survey Date: May 16, 2018
 Tool / AHD / DDI / ERD Ratio: 246.781' / 10796.455 ft / 6.694 / 0.907
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Foot
 Location Lat / Long: N 32° 12' 39.21596" W 103° 41' 36.26034"
 Location Grid N/E Y/X: N 441046 220 ftUS E 739253 840 ftUS
 CRS Grid Convergence Angle: 0.3411°
 Grid Scale Factor: 0.99995395
 Version / Patch: 2.10.720.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 1.627° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3583.900 ft above MSL
 Seabed / Ground Elevation: 3557.400 ft above MSL
 Magnetic Declination: 6.817°
 Total Gravity Field Strength: 998.4322mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48003.450 nT
 Magnetic Dip Angle: 59.922°
 Declination Date: May 16, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.3411°
 Total Corr Mag North->Grid North: 6.4760°
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/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	441046.22	739253.84	N 32 12 39.22 W 103 41 36.26	
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	441046.22	739253.84	N 32 12 39.22 W 103 41 36.26	
	67.56	0.36	325.31	67.56	0.10	0.11	-0.07	0.88	441046.33	739253.77	N 32 12 39.22 W 103 41 36.26	
	159.78	0.68	334.26	159.78	0.82	0.84	-0.48	0.36	441047.00	739253.36	N 32 12 39.22 W 103 41 36.27	
	248.67	0.48	327.01	248.66	1.60	1.62	-0.91	0.24	441047.64	739252.93	N 32 12 39.23 W 103 41 36.27	
	341.27	0.48	316.94	341.26	2.19	2.23	-1.38	0.09	441048.45	739252.46	N 32 12 39.24 W 103 41 36.28	
	434.83	0.43	311.90	434.82	2.70	2.75	-1.91	0.07	441048.97	739251.93	N 32 12 39.24 W 103 41 36.28	
	529.01	0.49	284.85	528.83	3.02	3.09	-2.57	0.24	441049.31	739251.27	N 32 12 39.25 W 103 41 36.29	
	623.62	0.56	264.20	623.60	3.05	3.15	-3.42	0.21	441049.37	739250.42	N 32 12 39.25 W 103 41 36.30	
	718.69	0.52	244.39	718.66	2.79	2.92	-4.27	0.20	441049.14	739249.57	N 32 12 39.25 W 103 41 36.31	
	812.96	0.62	248.61	812.93	2.38	2.53	-5.12	0.11	441048.75	739248.72	N 32 12 39.24 W 103 41 36.32	
Last Gyro	920.39	0.32	299.05	920.38	2.28	2.44	-5.92	0.48	441048.66	739247.92	N 32 12 39.24 W 103 41 36.33	
	1057.00	0.39	350.96	1056.98	2.91	3.09	-6.33	0.23	441049.31	739247.51	N 32 12 39.25 W 103 41 36.33	
	1148.00	0.06	115.98	1147.96	3.19	3.37	-6.34	0.47	441049.59	739247.50	N 32 12 39.25 W 103 41 36.33	
	1327.00	0.13	59.85	1326.98	3.26	3.43	-6.08	0.06	441049.65	739247.78	N 32 12 39.25 W 103 41 36.33	
	1418.00	0.13	291.13	1417.98	3.35	3.52	-6.08	0.26	441049.74	739247.78	N 32 12 39.25 W 103 41 36.33	
	1508.00	0.13	210.18	1507.96	3.29	3.47	-6.23	0.19	441049.69	739247.61	N 32 12 39.25 W 103 41 36.33	
	1693.00	0.11	303.85	1692.96	3.20	3.39	-6.48	0.09	441049.61	739247.36	N 32 12 39.25 W 103 41 36.34	
	1787.00	0.13	52.62	1786.96	3.32	3.50	-6.47	0.21	441049.72	739247.37	N 32 12 39.25 W 103 41 36.34	
	1881.00	0.11	222.68	1880.96	3.32	3.50	-6.45	0.25	441049.72	739247.39	N 32 12 39.25 W 103 41 36.34	
	1975.00	0.18	34.22	1974.96	3.37	3.56	-6.43	0.31	441049.78	739247.41	N 32 12 39.25 W 103 41 36.33	
	2069.00	0.11	271.40	2068.96	3.50	3.68	-6.44	0.27	441049.90	739247.40	N 32 12 39.25 W 103 41 36.33	
	2256.00	0.13	114.38	2255.96	3.41	3.60	-6.42	0.13	441049.82	739247.42	N 32 12 39.25 W 103 41 36.33	
	2350.00	0.11	147.97	2349.98	3.30	3.48	-6.28	0.08	441049.70	739247.56	N 32 12 39.25 W 103 41 36.33	
	2444.00	0.11	110.78	2443.96	3.19	3.37	-6.15	0.07	441049.59	739247.70	N 32 12 39.25 W 103 41 36.33	
	2538.00	0.18	213.35	2537.96	3.04	3.21	-6.14	0.25	441049.43	739247.70	N 32 12 39.25 W 103 41 36.33	
	2727.00	0.11	93.36	2726.96	2.78	2.96	-6.12	0.13	441049.18	739247.72	N 32 12 39.25 W 103 41 36.33	
	2821.00	0.18	85.65	2820.96	2.77	2.94	-5.89	0.07	441049.16	739247.95	N 32 12 39.25 W 103 41 36.33	
	3010.00	0.17	88.60	3009.96	2.76	2.91	-5.31	0.01	441049.13	739248.53	N 32 12 39.25 W 103 41 36.32	
	3105.00	0.20	133.27	3104.96	2.66	2.80	-5.05	0.15	441049.02	739248.78	N 32 12 39.24 W 103 41 36.32	
	3189.00	0.13	173.37	3188.96	2.44	2.58	-4.92	0.14	441048.80	739248.80	N 32 12 39.24 W 103 41 36.32	
	3294.00	0.18	268.02	3293.96	2.33	2.47	-5.04	0.23	441048.69	739248.80	N 32 12 39.24 W 103 41 36.32	
	3398.00	0.11	310.07	3397.96	2.38	2.53	-5.24	0.11	441048.75	739248.60	N 32 12 39.24 W 103 41 36.32	
	3483.00	0.23	229.09	3482.96	2.30	2.46	-5.45	0.25	441048.68	739248.39	N 32 12 39.24 W 103 41 36.32	
	3672.00	0.17	289.59	3671.96	2.13	2.30	-6.00	0.11	441048.52	739247.81	N 32 12 39.24 W 103 41 36.33	
	3861.00	0.17	201.24	3860.96	1.96	2.14	-6.37	0.13	441048.36	739247.47	N 32 12 39.24 W 103 41 36.33	
	3956.00	0.11	270.04	3955.96	1.82	2.01	-6.51	0.17	441048.23	739247.33	N 32 12 39.24 W 103 41 36.34	
	4051.00	0.22	163.34	4050.96	1.64	1.83	-6.55	0.29	441048.05	739247.29	N 32 12 39.23 W 103 41 36.34	
	4145.00	0.16	238.32	4144.96	1.40	1.59	-6.61	0.25	441047.81	739247.23	N 32 12 39.23 W 103 41 36.34	
	4240.00	0.16	145.15	4239.96	1.22	1.41	-6.65	0.24	441047.63	739247.19	N 32 12 39.23 W 103 41 36.34	
	4429.00	0.08	100.47	4428.96	0.99	1.17	-6.37	0.06	441047.39	739247.47	N 32 12 39.23 W 103 41 36.33	
	4524.00	0.06	317.46	4523.96	1.01	1.20	-6.34	0.14	441047.42	739247.51	N 32 12 39.23 W 103 41 36.33	
	4713.00	0.08	276.78	4712.95	1.10	1.28	-6.53	0.03	441047.50	739247.31	N 32 12 39.23 W 103 41 36.34	
	4808.00	0.13	292.26	4807.95	1.14	1.33	-6.70	0.06	441047.55	739247.14	N 32 12 39.23 W 103 41 36.34	
	4997.00	0.11	345.29	4996.95	1.39	1.59	-6.94	0.06	441047.81	739246.90	N 32 12 39.23 W 103 41 36.34	
	5186.00	0.06	286.36	5185.95	1.59	1.79	-7.08	0.05	441048.01	739246.76	N 32 12 39.23 W 103 41 36.34	
	5281.00	0.11	220.31	5280.95	1.53	1.74	-7.19	0.11	441047.06	739246.65	N 32 12 39.23 W 103 41 36.34	
	5470.00	0.16	329.51	5469.95	1.61	1.83	-7.44	0.12	441048.05	739246.40	N 32 12 39.23 W 103 41 36.35	
	5565.00	0.13	65.16	5564.96	1.77	1.99	-7.41	0.23	441048.21	739246.43	N 32 12 39.24 W 103 41 36.35	
	5660.00	0.13	248.14	5659.95	1.78	1.99	-7.41	0.27	441048.21	739246.43	N 32 12 39.24 W 103 41 36.35	
	5754.00	0.13	5.70	5753.95	1.84	2.06	-7.50	0.24	441048.28	739246.34	N 32 12 39.24 W 103 41 36.35	
	5849.00	0.13	148.31	5848.95	1.86	2.07	-7.43	0.26	441048.29	739246.41	N 32 12 39.24 W 103 41 36.35	
	5944.00	0.13	268.85	5943.95	1.76	1.97	-7.49	0.24	441048.19	739246.35	N 32 12 39.24 W 103 41 36.35	
	6039.00	0.11	255.51	6038.95	1.73	1.95	-7.68	0.03	441048.17	739246.16	N 32 12 39.24 W 103 41 36.35	
	6133.00	0.13	17.38	6132.95	1.80	2.02	-7.74	0.22	441048.25	739246.10	N 32 12 39.24 W 103 41 36.35	
	6228.00	0.09	128.59	6227.95	1.87	2.09	-7.65	0.18	441048.31	739246.19	N 32 12 39.24 W 103 41 36.35	
	6323.00	0.17	294.20	6322.95	1.86	2.08	-7.74	0.26	441048.30	739246.10	N 32 12 39.24 W 103 41 36.35	
	6417.00	0.24	322.24	6416.95	2.04	2.27	-7.99	0.16	441048.49	739245.85	N 32 12 39.24 W 103 41 36.35	
	6512.00	0.08	221.75	6511.95	2.15	2.38	-8.16	0.29	441048.60	739245.68	N 32 12 39.24 W 103 41 36.35	
	6607.00	0.20	352.69	6606.95	2.26	2.49	-8.23	0.27	441048.71	739245.82	N 32 12 39.24 W 103 41 36.36	
	6701.00	0.06	203.95	6700.95	2.37	2.61	-8.27	0.27	441048.83	739245.57	N 32 12 39.24 W 103 41 36.36	
	6796.00	0.18	340.13	6795.95	2.47	2.71	-8.34	0.24	441048.93	739245.50	N 32 12 39.24 W 103 41 36.36	
	6895.00	0.18	231.54	6894.95	2.55	2.80	-8.67	0.15	441049.02	739245.17	N 32 12 39.24 W 103 41 36.36	
	7175.00	0.06	297.92	7174.95	2.40	2.66	-8.99	0.09	441048.88	739244.85	N 32 12 39.24 W 103 41 36.36	
	7269.00	0.11	293.92	7268.95	2.46	2.72	-9.12	0.05	441048.94	739244.72	N 32 12 39.24 W 103 41 36.37	
	7364.00	0.17	292.95	7363.95	2.55	2.81	-9.33	0.06	441049.03	739244.51	N 32 12 39.24 W 103 41 36.37	
	7459.00	0.25	255.88	7458.95	2.54	2.82	-9.66	0.10	441049.04	739244.18	N 32 12 39.24 W 103 41 36.37	
	7554.00	0.22	236.27	7553.95	2.38	2.68	-10.01	0.09	441048.88	739243.83	N 32 12 39.24 W 103 41 36.38	
	7648.00	0.13	193.08	7647.95	2.17	2.46	-10.10	0.16	441048.88	739243.65	N 32 12 39.24 W 103 41 36.38	
	7743.00	0.24	308.56	7742.95	2.18	2.48	-10.37	0.34	441048.70	739243.47	N 32 12 39.24 W 103 41 36.38	
	7838.00	0.18	266.32	7837.95	2.29	2.59	-10.67	0.17	441048.81	739243.17	N 32 12 39.24 W 103 41 36.38	
	7932.00	0.09	222.94	7931.95	2.23	2.54	-10.87	0.14	441048.76	739242.98	N 32 12 39.24 W 103 41 36.39	

...Oxy Mesa Verde BS Unit 2H/Original Borehole/Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22,095'

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 ° ' '')
	8027.00	0.30	246.90	8026.95	2.07	2.39	-11.14	0.24	441048.61	739242.70	N 32 12 39.24 W 103 41 36.39	
	8122.00	0.22	219.77	8121.95	1.83	2.15	-11.48	0.15	441048.37	739242.36	N 32 12 39.24 W 103 41 36.39	
	8311.00	0.13	206.54	8310.94	1.35	1.68	-11.81	0.05	441047.90	739242.03	N 32 12 39.23 W 103 41 36.40	
	8501.00	0.08	304.17	8500.94	1.20	1.55	-11.99	0.08	441047.77	739241.65	N 32 12 39.23 W 103 41 36.40	
	8690.00	0.13	188.40	8689.94	1.04	1.39	-12.10	0.09	441047.61	739241.74	N 32 12 39.23 W 103 41 36.40	
	8879.00	0.16	82.04	8878.94	0.96	1.30	-11.90	0.14	441047.52	739241.94	N 32 12 39.23 W 103 41 36.40	
	8974.00	0.23	3.95	8973.94	1.22	1.55	-11.77	0.21	441047.77	739242.07	N 32 12 39.23 W 103 41 36.40	
	9163.00	0.85	84.84	9162.94	1.76	2.06	-10.35	0.45	441048.26	739243.49	N 32 12 39.24 W 103 41 36.39	
	9258.00	1.43	104.93	9257.92	1.57	1.82	-8.50	0.73	441048.04	739245.34	N 32 12 39.23 W 103 41 36.38	
	9352.00	2.83	124.40	9351.85	0.05	0.20	-5.45	1.66	441046.42	739248.39	N 32 12 39.22 W 103 41 36.32	
	9447.00	5.29	113.15	9446.01	-2.83	-2.85	0.51	2.71	441043.37	739253.55	N 32 12 39.19 W 103 41 36.25	
	9541.00	7.17	125.93	9540.05	-7.73	-7.99	9.24	2.47	441038.23	739263.08	N 32 12 39.14 W 103 41 36.15	
	9636.00	7.10	124.88	9634.32	-14.29	-14.83	18.86	0.16	441031.39	739272.70	N 32 12 39.07 W 103 41 36.04	
	9731.00	7.31	124.86	9728.57	-20.82	-21.64	28.64	0.22	441024.58	739282.48	N 32 12 39.00 W 103 41 35.93	
	9826.00	7.65	132.50	9822.76	-28.27	-29.37	38.26	1.11	441016.85	739292.10	N 32 12 38.92 W 103 41 35.82	
	9920.00	7.86	140.84	9915.90	-37.23	-38.98	46.93	1.22	441007.64	739300.77	N 32 12 38.83 W 103 41 35.72	
	10015.00	0.95	142.43	10010.11	-46.60	-48.17	54.54	0.98	440998.05	739308.37	N 32 12 38.74 W 103 41 35.63	
	10110.00	0.74	149.82	10104.43	-55.79	-57.55	60.84	0.95	440988.68	739314.68	N 32 12 38.64 W 103 41 35.56	
	10204.00	5.94	150.97	10197.86	-64.67	-66.57	65.98	0.86	440979.68	739319.81	N 32 12 38.55 W 103 41 35.50	
	10299.00	7.07	148.06	10292.25	-73.81	-75.87	71.39	1.22	440970.35	739325.22	N 32 12 38.46 W 103 41 35.43	
	10394.00	7.64	150.04	10386.44	-84.25	-86.49	77.65	0.83	440956.74	739331.48	N 32 12 38.36 W 103 41 35.38	
	10489.00	8.99	156.54	10480.42	-96.49	-98.91	83.84	1.57	440947.32	739337.67	N 32 12 38.23 W 103 41 35.29	
	10584.00	10.66	156.76	10574.11	-110.74	-113.34	90.07	1.13	440932.88	739343.90	N 32 12 38.09 W 103 41 35.22	
	10678.00	9.67	156.96	10666.72	-125.36	-128.15	96.39	0.42	440918.07	739350.23	N 32 12 37.94 W 103 41 35.15	
	10773.00	9.46	162.05	10760.40	-139.97	-142.92	101.92	0.92	440903.31	739355.76	N 32 12 37.80 W 103 41 35.08	
	10867.00	9.30	177.89	10853.16	-154.83	-157.86	104.58	2.74	440888.36	739358.42	N 32 12 37.65 W 103 41 35.05	
	10962.00	9.62	177.61	10946.87	-170.41	-173.47	105.20	0.34	440872.76	739359.03	N 32 12 37.49 W 103 41 35.05	
	10994.00	9.56	179.82	10978.42	-175.73	-178.79	105.32	1.17	440867.43	739359.15	N 32 12 37.44 W 103 41 35.05	
	11138.00	9.45	171.16	11120.45	-199.31	-202.43	107.17	1.00	440843.80	739361.01	N 32 12 37.21 W 103 41 35.03	
	11194.00	12.19	134.67	11175.51	-207.88	-211.14	112.09	12.90	440835.09	739365.92	N 32 12 37.12 W 103 41 34.97	
	11289.00	10.29	94.00	11268.83	-215.09	-218.80	127.71	8.39	440827.43	739381.55	N 32 12 37.04 W 103 41 34.79	
	11394.00	10.95	86.51	11362.20	-214.63	-218.84	145.18	1.61	440827.39	739399.02	N 32 12 37.04 W 103 41 34.59	
	11478.00	20.64	77.20	11452.58	-209.70	-214.62	170.31	10.62	440831.61	739424.15	N 32 12 37.08 W 103 41 34.29	
	11573.00	28.17	52.17	11539.24	-191.20	-197.08	204.49	13.31	440849.15	739458.32	N 32 12 37.25 W 103 41 33.89	
	11667.00	35.92	41.08	11618.92	-155.72	-162.60	240.21	10.33	440883.63	739494.04	N 32 12 37.59 W 103 41 33.48	
	11761.00	47.23	34.21	11689.17	-105.16	-113.09	277.86	12.95	440933.13	739531.69	N 32 12 38.08 W 103 41 33.03	
	11856.00	59.10	23.94	11746.11	-37.71	-46.65	314.20	15.17	440999.57	739568.02	N 32 12 38.74 W 103 41 32.81	
	11951.00	74.23	20.58	11783.64	43.72	33.88	347.01	16.25	441080.10	739600.83	N 32 12 39.53 W 103 41 32.22	
	12046.00	82.94	12.62	11802.46	133.54	122.99	373.47	12.30	441169.20	739627.29	N 32 12 40.41 W 103 41 31.91	
	12077.00	83.45	12.92	11806.13	163.74	153.01	380.27	1.91	441199.22	739634.09	N 32 12 40.71 W 103 41 31.82	
	12176.00	83.63	11.48	11817.27	260.44	249.15	401.06	1.46	441295.36	739654.88	N 32 12 41.66 W 103 41 31.58	
	12271.00	83.73	11.01	11827.73	353.53	341.76	419.47	0.50	441387.97	739673.29	N 32 12 42.57 W 103 41 31.35	
	12365.00	83.66	10.77	11838.05	445.75	433.51	437.12	0.26	441479.71	739690.94	N 32 12 43.48 W 103 41 31.14	
	12460.00	83.83	6.59	11848.41	539.45	526.84	451.37	4.38	441573.04	739705.19	N 32 12 44.40 W 103 41 30.97	
	12555.00	83.49	0.82	11858.90	633.78	621.02	457.47	6.05	441667.21	739711.29	N 32 12 45.33 W 103 41 30.89	
	12649.00	83.22	354.17	11869.79	726.83	714.25	453.39	7.03	441760.43	739707.21	N 32 12 46.26 W 103 41 30.93	
	12744.00	85.25	356.54	11879.34	820.78	808.45	445.74	3.28	441854.63	739699.56	N 32 12 47.19 W 103 41 31.02	
	12838.00	87.25	356.85	11885.49	914.22	902.08	440.33	2.15	441948.26	739694.15	N 32 12 48.12 W 103 41 31.07	
	12933.00	90.65	356.66	11887.23	1008.85	996.90	434.96	3.58	442043.07	739688.78	N 32 12 49.05 W 103 41 31.13	
	13028.00	90.41	356.40	11886.35	1103.47	1091.72	429.21	0.37	442137.89	739683.03	N 32 12 49.99 W 103 41 31.19	
	13122.00	90.76	356.01	11885.39	1107.04	1185.51	422.99	0.56	442231.68	739676.81	N 32 12 50.92 W 103 41 31.25	
	13216.00	89.97	356.17	11884.79	1290.60	1279.29	416.58	0.86	442325.45	739670.40	N 32 12 51.85 W 103 41 31.32	
	13311.00	90.21	355.74	11884.64	1385.14	1374.05	409.88	0.52	442420.21	739663.70	N 32 12 52.79 W 103 41 31.39	
	13406.00	89.69	354.53	11884.72	1479.53	1468.71	401.82	1.39	442514.86	739655.64	N 32 12 53.73 W 103 41 31.48	
	13500.00	83.86	356.71	11885.09	1573.00	1562.43	394.64	2.33	442608.57	739648.46	N 32 12 54.65 W 103 41 31.56	
	13595.00	85.97	356.38	11885.23	1667.63	1657.26	388.92	0.37	442703.40	739642.74	N 32 12 55.59 W 103 41 31.62	
	13689.00	89.62	355.91	11885.27	1761.20	1751.04	382.60	0.62	442797.18	739636.42	N 32 12 56.52 W 103 41 31.69	
	13783.00	90.38	357.46	11885.57	1854.85	1844.88	377.16	1.84	442891.01	739630.98	N 32 12 57.45 W 103 41 31.74	
	13878.00	90.10	358.08	11885.17	1949.63	1939.81	373.47	0.72	442985.93	739627.29	N 32 12 58.39 W 103 41 31.78	
	13972.00	89.59	358.31	11885.43	2043.46	2033.76	370.50	0.80	443079.88	739624.33	N 32 12 59.32 W 103 41 31.81	
	14066.00	89.66	358.55	11886.04	2137.31	2127.72	367.93	0.27	443173.84	739621.75	N 32 13 0.25 W 103 41 31.83	
	14160.00	90.00	358.95	11886.32	2231.19	2221.70	365.88	0.56	443267.81	739619.70	N 32 13 1.18 W 103 41 31.85	
	14255.00	90.10	358.49	11886.24	2326.07	2316.68	363.70	0.50	443362.78	739617.58	N 32 13 2.12 W 103 41 31.87	
	14350.00	88.90	359.80	11887.07	2420.94	2411.64	361.51	1.30	443457.75	739615.33	N 32 13 3.06 W 103 41 31.89	
	14444.00	90.62	358.78	11887.06	2514.82	2505.62	359.53	1.83	443551.72	739610.35	N 32 13 3.99 W 103 41 31.90	
	14538.00	89.86	358.20	11887.07	2608.67	2599.58	357.05	1.02	443645.68	739610.87	N 32 13 4.92 W 103 41 31.92	
	14633.00	89.45	358.28	11887.64	2703.51	2694.54	354.13	0.44	443740.63	739607.95	N 32 13 5.86 W 103 41 31.95	
	14728.00	87.90	357.79	11887.83	2798.29	2789.45	350.87	1.71	443835.54	739604.70	N 32 13 6.80 W 103 41 31.98	
	14822.00	89.35	358.17	11892.09	2892.07	2883.36	347.56	1.69	443929.45	739601.39	N 32 13 7.73 W 103 41 32.01	
	14916.00	89.35	358.31	11893.18	2985.90	2977.31	344.66	0.15	444023.39	739598.50	N 32 13 8.66 W 103 41 32.04	
	15011.00	89.38	358.21	11894.21	3080.73	3072.26	341.70	0.11	444118.34	739595.61	N 32 13 9.60 W 103 41 32.07	
	15105.00	89.93	358.73	11894.77	3174.58	3166.23	339.28	0.81	444212.30	739593.10	N 32 13 10.53 W 103 41 32.09	
	15200.00	89.76	358.39	11895.03	3269.45	3261.20	336.89	0.40	444307.26	739590.72	N 32 13 11.47 W 103 41 32.11	
	15295.00	90.31	358.31	11894.97	3364.29	3356.10	334.16	0.59	444402.22	739587.98	N 32 13 12.41 W 103 41 32.14	
	15389.00	88.62	358.41	11895.85	3458.13	3450.11	331.47	1.80	444496.17	739585.29	N 32 13 13.34 W 103 41 32.16	
	15484.00	88.52	357.54	11898.22	3552.91	3545.02	328.11	0.92	444591.07	739581.94	N 32 13 14.27 W 103 41 32.20	
	15578.00	91.10	356.65	11899.53	3646.61	3638.89	323.35	2.90	444			

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	18507.00	89.76	359.44	11869.21	6572.27	6566.67	290.43	0.36	447612.57	739544.26	N 32 13 44.18	W 103 41 32.42
	18601.00	89.21	358.26	11870.05	6666.15	6666.65	288.54	1.38	447708.55	739542.37	N 32 13 45.11	W 103 41 32.44
	18696.00	88.80	357.24	11871.70	6760.82	6755.56	284.81	1.16	447801.45	739539.64	N 32 13 46.05	W 103 41 32.48
	18790.00	87.97	356.35	11874.35	6854.55	6849.37	279.56	1.29	447895.26	739533.39	N 32 13 46.97	W 103 41 32.53
	18885.00	87.70	356.91	11877.94	6949.12	6944.14	273.08	0.65	447990.02	739527.81	N 32 13 47.91	W 103 41 32.59
	18979.00	89.69	358.30	11880.08	7042.85	7038.02	270.05	2.68	448083.91	739523.88	N 32 13 48.84	W 103 41 32.63
	19074.00	90.00	358.39	11880.34	7137.70	7132.98	267.31	0.34	448178.66	739521.14	N 32 13 49.78	W 103 41 32.65
	19168.00	90.76	358.55	11879.72	7231.55	7226.95	264.80	0.83	448272.82	739518.63	N 32 13 50.71	W 103 41 32.68
	19263.00	91.44	0.10	11877.89	7326.46	7321.92	263.68	1.79	448367.79	739517.51	N 32 13 51.65	W 103 41 32.68
	19357.00	91.27	1.37	11875.67	7420.42	7415.88	264.89	1.36	448461.75	739518.71	N 32 13 52.58	W 103 41 32.66
	19452.00	91.41	1.51	11873.45	7515.39	7510.83	267.27	0.21	448556.69	739521.10	N 32 13 53.52	W 103 41 32.63
	19546.00	91.41	1.64	11871.14	7608.36	7604.76	269.86	0.14	448650.62	739523.68	N 32 13 54.45	W 103 41 32.59
	19640.00	91.51	1.72	11868.74	7703.33	7698.69	272.61	0.14	448744.54	739526.44	N 32 13 55.38	W 103 41 32.55
	19829.00	91.51	1.94	11863.78	7892.26	7887.53	278.65	0.12	448933.37	739532.47	N 32 13 57.25	W 103 41 32.47
	19923.00	91.48	1.88	11861.31	7986.23	7981.45	281.61	0.28	449027.29	739535.44	N 32 13 58.18	W 103 41 32.43
	20018.00	91.41	1.77	11858.91	8081.20	8076.38	284.47	0.12	449122.21	739538.30	N 32 13 59.11	W 103 41 32.39
	20112.00	90.89	1.73	11857.02	8175.18	8170.32	287.34	0.55	449216.14	739541.17	N 32 14 0.04	W 103 41 32.35
	20301.00	89.55	1.80	11856.30	8364.17	8359.22	293.16	0.71	449405.04	739546.99	N 32 14 1.91	W 103 41 32.27
	20395.00	89.86	1.87	11856.78	8458.17	8453.17	296.17	0.34	449498.99	739550.00	N 32 14 2.84	W 103 41 32.23
	20490.00	89.59	1.32	11857.24	8553.17	8548.13	298.82	0.64	449593.94	739552.64	N 32 14 3.78	W 103 41 32.19
	20585.00	89.69	1.88	11857.84	8648.17	8643.09	301.47	0.60	449688.90	739555.30	N 32 14 4.72	W 103 41 32.15
	20679.00	90.03	1.79	11858.07	8742.17	8737.05	304.48	0.37	449782.85	739558.31	N 32 14 5.65	W 103 41 32.11
	20774.00	89.62	0.64	11858.36	8837.16	8832.02	306.49	1.29	449877.62	739560.32	N 32 14 6.59	W 103 41 32.08
	20868.00	89.90	1.57	11858.75	8931.16	8926.00	308.31	1.03	449971.79	739562.13	N 32 14 7.52	W 103 41 32.05
	20962.00	90.31	1.92	11858.58	9025.16	9019.96	311.17	0.57	450065.74	739564.99	N 32 14 8.45	W 103 41 32.01
	21057.00	89.69	0.88	11858.58	9120.15	9114.93	313.49	1.27	450160.71	739567.32	N 32 14 9.39	W 103 41 31.98
	21151.00	89.90	1.40	11858.91	9214.15	9208.01	315.36	0.60	450254.69	739569.19	N 32 14 10.32	W 103 41 31.95
	21246.00	89.79	1.71	11859.17	9309.15	9303.87	317.94	0.35	450349.65	739571.76	N 32 14 11.26	W 103 41 31.91
	21341.00	89.90	1.67	11859.43	9404.15	9398.83	320.74	0.12	450444.60	739574.56	N 32 14 12.20	W 103 41 31.87
	21530.00	89.93	1.59	11859.71	9503.15	9503.75	326.12	0.05	450633.51	739579.94	N 32 14 14.07	W 103 41 31.80
	21624.00	89.90	2.08	11859.85	9607.15	9601.71	329.13	0.52	450727.46	739582.95	N 32 14 15.00	W 103 41 31.76
	21719.00	89.90	2.19	11860.01	9702.14	9706.64	332.67	0.12	450822.39	739586.49	N 32 14 15.94	W 103 41 31.71
	21814.00	89.86	2.16	11860.21	9877.14	9871.57	336.27	0.05	450917.32	739590.09	N 32 14 16.88	W 103 41 31.66
	22003.00	89.90	359.66	11860.61	10066.11	10060.53	339.27	1.32	451106.27	739593.10	N 32 14 18.74	W 103 41 31.61
Final MWD Surveys	22052.00	89.97	359.80	11860.60	10115.08	10109.53	339.04	0.32	451155.27	739592.87	N 32 14 19.23	W 103 41 31.61
Proj. to Bit	22095.00	89.97	359.80	11860.69	10158.06	10152.53	338.89	0.00	451198.26	739592.72	N 32 14 19.65	W 103 41 31.61

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	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22.095'
	1	26.500	26.500	Act Stns	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22.095'
	1	26.500	920.390	Act Stns	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22.095'
	1	920.390	22095.000	Act Stns	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Mesa Verde BS Unit 2H Gyro+MWD 0-22.095'

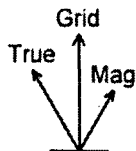
Schlumberger

OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Mesa Verde BS Unit 2H	NM Lea County (NAD 83)	Oxy Mesa Verde BS Unit 2H

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: HGM 2018 MagDec: 8.917° FB: 48003.49mT Date: 16 May 2019 Gravity FA: 968.432mg (8.80889 Secs)	NAD83 New Mexico State Plane, Eastern Zone, US Feet Lat: N 32 12 38.22 Lon: W 103 41 58.29 Nothing: 441048.22703 Easting: 138253.84615 Scale Fact: 0.99996395	Sat: Oxy Mesa Verde BS Unit 2H Plan: Oxy Mesa Verde BS Unit 2H Rev5 APS 31May18 TVD Ref: RKB=26.5' (3883 ft above MSL)



Grid North
Tot Corr (M->G 6.476°)
Mag Dec (0.817°)
Grid Conv (0.341°)

