

Oilfield Services, Central U.S. Land
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)
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Schlumberger

30-015-44548

August 7, 2018

OXY USA Inc.

**NM OIL CONSERVATION
ARTESIA DISTRICT**

AUG 22 2018

RECEIVED

Re:

CLIENT: OXY USA Inc.
WELL: Mesa Verde BS Unit 19H
FIELD: Mesa Verde Bone Springs

RIG: HP 656
COUNTY: Eddy
API NO: 30-015-44548
JOB NO: 18MLD1240

13, 24S, 31E, Eddy NM
32.21058 103.73158

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Chris Heimann FE	Mesa Verde BS Unit 19H Original Hole	1082.00 Ft to 15246.00 Ft	July 16, 2018 to August 5, 2018	TelePacer SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Josh Rubash
Field Service Manager

Oxy Mesa Verde BS Unit 19H Gyro+MWD 0-15,291' MD Survey Geodetic Report (Def Survey)



Report Date: August 06, 2018 - 03:14 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Mesa Verde BS Unit 19H / Mesa Verde BS Unit 19H
 Well: Mesa Verde BS Unit 19H
 Borehole: Original Borehole
 UWI / API#: Unknown / 30-015-44548
 Survey Name: Oxy Mesa Verde BS Unit 19H Gyro+MWD 0-15,291' MD
 Survey Date: July 30, 2018
 Torq / AHD / DDI / ERD Ratio: 178.510° / 5590.322 ft / 6.162 / 0.538
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 12' 38.10001", W 103° 43' 53.69548"
 Location Grid N/E Y/X: N 440865.250 RUS, E 727447.100 RUS
 CRS Grid Convergence Angle: 0.3208°
 Grid Scale Factor: 0.99994876
 Version / Patch: 2.10.740.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 354.900° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3613.200 ft above MSL
 Seabed / Ground Elevation: 3586.700 ft above MSL
 Magnetic Declination: 6.817°
 Total Gravity Field Strength: 998.4260mgN (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47979.877 nT
 Magnetic Dip Angle: 59.920°
 Declination Date: July 30, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.3208°
 Total Corr Mag North→Grid: 6.4960°
 North:
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	440865.25	727447.10	N 32 12 38.10	W 103 43 53.70
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	440865.25	727447.10	N 32 12 38.10	W 103 43 53.70
	99.10	0.21	340.57	99.10	0.13	0.13	-0.04	0.29	440865.38	727447.06	N 32 12 38.10	W 103 43 53.70
	189.70	0.41	305.85	189.70	0.50	0.47	-0.36	0.29	440865.72	727448.74	N 32 12 38.10	W 103 43 53.70
	280.10	0.56	308.30	280.10	1.01	0.92	-0.98	0.17	440866.17	727446.12	N 32 12 38.11	W 103 43 53.71
	374.50	0.72	293.88	374.49	1.60	1.44	-1.89	0.22	440866.69	727445.21	N 32 12 38.11	W 103 43 53.72
	468.80	0.81	283.55	468.78	2.10	1.83	-3.08	0.17	440867.08	727444.02	N 32 12 38.12	W 103 43 53.73
	563.10	0.89	279.94	563.07	2.48	2.09	-4.29	0.14	440867.34	727442.81	N 32 12 38.12	W 103 43 53.75
	657.20	0.53	256.69	657.17	2.54	2.08	-5.27	0.31	440867.33	727441.83	N 32 12 38.12	W 103 43 53.76
	751.60	0.54	244.98	751.56	2.33	1.79	-6.10	0.12	440867.04	727441.00	N 32 12 38.12	W 103 43 53.77
	845.90	0.34	225.27	845.86	2.00	1.41	-6.70	0.26	440866.68	727440.40	N 32 12 38.11	W 103 43 53.77
Last Gyro	940.20	0.28	214.80	940.16	1.65	1.02	-7.03	0.09	440866.27	727440.07	N 32 12 38.11	W 103 43 53.78
	1009.60	0.28	226.84	1009.56	1.41	0.77	-7.25	0.08	440866.02	727439.85	N 32 12 38.11	W 103 43 53.78
	1082.00	0.11	201.77	1081.96	1.24	0.58	-7.41	0.26	440865.83	727439.69	N 32 12 38.11	W 103 43 53.78
	1177.00	0.06	314.08	1176.96	1.20	0.53	-7.48	0.15	440865.78	727439.62	N 32 12 38.11	W 103 43 53.78
	1271.00	0.06	225.06	1270.96	1.20	0.53	-7.55	0.09	440865.78	727439.55	N 32 12 38.11	W 103 43 53.78
	1365.00	0.06	250.70	1364.96	1.16	0.48	-7.63	0.03	440865.73	727439.47	N 32 12 38.11	W 103 43 53.78
	1460.00	0.06	281.37	1459.96	1.16	0.47	-7.73	0.03	440865.72	727439.38	N 32 12 38.11	W 103 43 53.78
	1554.00	0.06	183.82	1553.96	1.12	0.44	-7.78	0.10	440865.69	727439.32	N 32 12 38.10	W 103 43 53.78
	1655.00	0.00	176.87	1654.96	1.07	0.38	-7.78	0.06	440865.63	727439.32	N 32 12 38.10	W 103 43 53.78
	1844.00	0.06	122.15	1843.96	1.01	0.33	-7.70	0.03	440865.58	727439.40	N 32 12 38.10	W 103 43 53.78
	1939.00	0.06	220.47	1938.96	0.95	0.27	-7.69	0.10	440865.52	727439.41	N 32 12 38.10	W 103 43 53.78
	2033.00	0.06	322.63	2032.96	0.96	0.27	-7.75	0.10	440865.52	727439.35	N 32 12 38.10	W 103 43 53.78
	2128.00	0.06	269.47	2127.96	1.00	0.31	-7.83	0.06	440865.56	727439.27	N 32 12 38.10	W 103 43 53.78
	2222.00	0.06	200.02	2221.96	0.96	0.26	-7.89	0.07	440865.51	727439.21	N 32 12 38.10	W 103 43 53.78
	2317.00	0.06	43.26	2316.96	0.95	0.25	-7.88	0.12	440865.50	727439.22	N 32 12 38.10	W 103 43 53.78
	2411.00	0.06	105.29	2410.96	0.96	0.27	-7.80	0.07	440865.52	727439.30	N 32 12 38.10	W 103 43 53.78
	2506.00	0.06	80.62	2505.96	0.95	0.27	-7.70	0.03	440865.52	727439.40	N 32 12 38.10	W 103 43 53.78
	2600.00	0.00	211.96	2599.96	0.95	0.28	-7.65	0.06	440865.53	727439.45	N 32 12 38.10	W 103 43 53.78
	2695.00	0.06	349.27	2694.96	1.00	0.32	-7.66	0.06	440865.57	727439.44	N 32 12 38.10	W 103 43 53.78
	2789.00	0.06	163.69	2788.96	1.00	0.33	-7.68	0.13	440865.58	727439.45	N 32 12 38.10	W 103 43 53.78
	2884.00	0.06	303.62	2883.96	0.99	0.30	-7.68	0.12	440865.55	727439.42	N 32 12 38.10	W 103 43 53.78
	2979.00	0.06	159.06	2978.96	0.97	0.29	-7.71	0.12	440865.54	727439.39	N 32 12 38.10	W 103 43 53.78
	3074.00	0.06	256.39	3073.96	0.91	0.23	-7.74	0.09	440865.48	727439.36	N 32 12 38.10	W 103 43 53.78
	3168.00	0.13	331.54	3167.96	1.01	0.31	-7.84	0.14	440865.56	727439.26	N 32 12 38.10	W 103 43 53.78
	3263.00	0.13	354.95	3262.96	1.21	0.51	-7.90	0.06	440865.76	727439.20	N 32 12 38.11	W 103 43 53.78
	3358.00	0.13	90.03	3357.96	1.31	0.62	-7.80	0.20	440865.87	727439.30	N 32 12 38.11	W 103 43 53.78
	3458.00	0.06	4.99	3457.96	1.35	0.67	-7.68	0.14	440865.92	727439.42	N 32 12 38.11	W 103 43 53.78
	3552.00	0.11	331.31	3551.96	1.48	0.80	-7.72	0.07	440866.05	727439.38	N 32 12 38.11	W 103 43 53.78
	3647.00	0.25	315.02	3646.96	1.73	1.03	-7.91	0.16	440866.28	727439.19	N 32 12 38.11	W 103 43 53.78
	3741.00	0.45	324.28	3740.95	2.20	1.47	-8.27	0.22	440866.72	727438.83	N 32 12 38.12	W 103 43 53.78
	3836.00	0.06	334.99	3835.95	2.57	1.82	-8.51	0.41	440867.07	727438.59	N 32 12 38.12	W 103 43 53.78
	3930.00	0.06	192.00	3929.95	2.55	1.80	-8.54	0.14	440867.05	727438.56	N 32 12 38.12	W 103 43 53.78
	4025.00	0.13	134.71	4024.95	2.41	1.66	-8.48	0.12	440866.91	727438.62	N 32 12 38.12	W 103 43 53.78
	4119.00	0.23	178.68	4118.95	2.14	1.40	-8.40	0.17	440866.84	727438.70	N 32 12 38.11	W 103 43 53.78
	4214.00	0.25	217.10	4213.95	1.79	1.04	-8.52	0.17	440866.29	727438.58	N 32 12 38.11	W 103 43 53.78
	4308.00	0.18	210.16	4307.95	1.52	0.75	-8.72	0.08	440866.00	727438.38	N 32 12 38.11	W 103 43 53.80
	4403.00	0.28	280.81	4402.95	1.46	0.66	-9.02	0.29	440865.91	727438.08	N 32 12 38.11	W 103 43 53.80
	4497.00	0.55	289.04	4496.95	1.71	0.85	-9.67	0.29	440866.10	727437.43	N 32 12 38.11	W 103 43 53.81
	4592.00	0.18	328.65	4591.95	2.03	1.13	-10.18	0.45	440866.38	727436.92	N 32 12 38.11	W 103 43 53.81
	4686.00	0.08	341.65	4685.95	2.23	1.32	-10.28	0.11	440866.57	727436.82	N 32 12 38.11	W 103 43 53.82
	4781.00	0.00	81.35	4780.95	2.29	1.38	-10.30	0.08	440866.63	727436.80	N 32 12 38.11	W 103 43 53.82
	4870.00	0.06	194.79	4869.95	2.20	1.28	-10.33	0.03	440866.53	727436.77	N 32 12 38.11	W 103 43 53.82
	5064.00	0.06	6.62	5063.95	2.20	1.29	-10.33	0.13	440866.54	727436.77	N 32 12 38.11	W 103 43 53.82
	5159.00	0.06	209.31	5158.95	2.21	1.29	-10.35	0.12	440866.54	727436.75	N 32 12 38.11	W 103 43 53.82
	5253.00	0.06	322.72	5252.95	2.21	1.29	-10.41	0.11	440866.54	727436.70	N 32 12 38.11	W 103 43 53.82
	5348.00	0.06	87.89	5347.95	2.25	1.33	-10.39	0.11	440866.58	727436.71	N 32 12 38.11	W 103 43 53.82
	5442.00	0.06	339.87	5441.95	2.29	1.38	-10.35	0.10	440866.63	727436.75	N 32 12 38.11	W 103 43 53.82
	5631.00	0.06	348.16	5630.95	2.52	1.60	-10.41	0.01	440866.85	727436.69	N 32 12 38.12	W 103 43 53.82
	5725.00	0.06	94.07	5724.95	2.58	1.66	-10.38	0.12	440866.91	727436.72	N 32 12 38.12	W 103 43 53.82
	5820.00	0.06	290.17	5819.95	2.60	1.68	-10.39	0.15	440866.93	727436.71	N 32 12 38.12	W 103 43 53.82
	6103.00	0.06	17.24	6102.95	2.86	1.94	-10.52	0.04	440867.19	727436.58	N 32 12 38.12	W 103 43 53.82
	6198.00	0.06	329.29	6197.95	2.97	2.04	-10.52	0.06	440867.29	727436.58	N 32 12 38.12	W 103 43 53.82
	6292.00	0.20	200.64	6291.95	2.87	1.93	-10.61	0.26	440867.18	727436.49	N 32 12 38.12	W 103 43 53.82
	6387.00	0.64	207.87	6386.94	2.27	1.31	-10.91	0.47	440866.56	727436.19	N 32 12 38.11	W 103 43 53.82
	6481.00	0.95	212.33	6480.93	1.21	0.18	-11.58	0.34	440865.43	727435.52	N 32 12 38.10	W 103 43 53.83
	6682.00	1.28	234.03	6681.90	-1.02	-2.27	-14.01	0.29	440862.98	727433.09	N 32 12 38.08	W 103 43 53.86
	6756.00	1.25	219.97	6755.88	-2.28	-3.67	-15.52	0.33	440861.58	727431.58	N 32 12 38.06	W 103 43 53.88
	6851.00	2.02	220.75	6850.84	-4.18	-5.74	-17.28	0.81	440859.51	727429.82	N 32 12 38.04	W 103 43 53.90
	6945.00	2.69	219.86	6944.76	-6.89	-8.88	-19.78	0.71	440856.57	727427.32	N 32 12 38.02	W 103 43 53.93
	7040.00	3.21	222.87	7039.63	-10.25	-12.34	-23.02	0.57	440852.91	727424.09	N 32 12 37.98	W 103 43 53.96
	7134.00	4.31	242.95	7133.43	-13.33	-15.88	-27.95	1.81	440849.37	727419.15	N 32 12 37.94	W 103 43 54.02
	7229.00	5.68	253.88	7228.07	-15.57	-18.81	-35.65	1.75	440846.44	727411.45	N 32 12 37.92	W 103 43 54.11
	7323.00	7.39	262.26	7321.46	-16.73	-20.92	-46.11	2.08	440844.34	727400.99	N 32 12 37.90	W 103 43 54.23
	7418.00	9.00	266.29	7415.49	-16.8							

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 ° ° °)
	7890.00	8.93	259.96	7881.33	-15.35	-27.49	-135.32	0.73	440837.76	727311.79	N 32 12 37.84	W 103 43 55.27
	7985.00	8.78	256.38	7975.20	-17.06	-30.48	-149.63	0.60	440834.77	727297.48	N 32 12 37.81	W 103 43 55.44
	8080.00	8.66	255.85	8069.10	-19.26	-33.94	-163.61	0.15	440831.31	727283.50	N 32 12 37.77	W 103 43 55.60
	8174.00	8.44	256.05	8162.05	-21.44	-37.33	-177.17	0.24	440827.92	727269.94	N 32 12 37.74	W 103 43 55.76
	8268.00	8.52	253.61	8255.03	-23.86	-40.96	-190.54	0.39	440824.29	727256.57	N 32 12 37.71	W 103 43 55.92
	8363.00	8.20	251.20	8349.02	-26.84	-45.13	-203.71	0.50	440820.12	727243.41	N 32 12 37.66	W 103 43 56.07
	8457.00	8.18	250.09	8442.06	-30.14	-49.37	-216.34	0.17	440815.68	727230.77	N 32 12 37.62	W 103 43 56.22
Bone Spring Intersection	8468.00	8.16	250.27	8452.95	-30.54	-50.10	-217.81	0.31	440815.15	727229.30	N 32 12 37.62	W 103 43 56.23
	8518.00	8.06	251.12	8502.45	-32.27	-52.43	-224.47	0.31	440812.82	727222.65	N 32 12 37.59	W 103 43 56.31
	8552.00	8.06	250.40	8536.11	-33.43	-54.00	-228.97	0.30	440811.25	727218.15	N 32 12 37.58	W 103 43 56.36
	8646.00	8.16	248.20	8629.17	-37.00	-58.69	-241.37	0.35	440806.56	727205.74	N 32 12 37.53	W 103 43 56.51
	8741.00	7.04	239.74	8723.34	-41.41	-64.13	-252.66	1.66	440801.13	727194.46	N 32 12 37.48	W 103 43 56.64
	8835.00	7.85	234.15	8816.55	-47.14	-70.79	-262.84	1.16	440794.47	727184.28	N 32 12 37.41	W 103 43 56.76
	8929.00	8.63	238.64	8909.58	-53.55	-78.22	-274.06	1.08	440787.04	727173.05	N 32 12 37.34	W 103 43 56.89
	9024.00	7.66	240.90	9003.62	-59.28	-85.01	-285.68	1.08	440780.25	727161.43	N 32 12 37.27	W 103 43 57.03
	9118.00	7.33	246.78	9096.82	-63.69	-90.42	-296.67	0.89	440774.84	727150.45	N 32 12 37.22	W 103 43 57.15
	9213.00	7.15	251.57	9191.06	-66.94	-94.68	-307.84	0.66	440770.58	727139.27	N 32 12 37.18	W 103 43 57.28
	9307.00	8.03	254.60	9284.23	-69.46	-98.27	-319.72	1.03	440766.99	727127.39	N 32 12 37.15	W 103 43 57.42
	9401.00	6.92	259.25	9377.44	-71.19	-101.07	-331.62	1.34	440764.19	727115.50	N 32 12 37.12	W 103 43 57.56
	9496.00	6.15	263.75	9471.82	-71.86	-102.69	-342.30	0.97	440762.56	727104.82	N 32 12 37.10	W 103 43 57.69
KOP Actual	9590.00	5.90	270.66	9565.30	-71.47	-103.18	-352.14	0.82	440762.07	727094.98	N 32 12 37.10	W 103 43 57.80
	9672.00	6.11	284.36	9646.85	-69.60	-102.05	-360.58	1.76	440763.20	727086.54	N 32 12 37.11	W 103 43 57.80
	9861.00	10.41	347.51	9834.18	-49.27	-82.84	-374.05	4.96	440782.41	727073.07	N 32 12 37.30	W 103 43 58.05
100' FSL Cross	9906.00	18.26	351.90	9877.75	-38.18	-71.88	-375.92	17.59	440793.37	727071.20	N 32 12 37.41	W 103 43 58.08
	9956.00	27.02	353.83	9923.85	-18.96	-52.80	-378.25	17.59	440812.46	727068.87	N 32 12 37.60	W 103 43 58.10
	10050.00	30.68	358.28	10006.18	26.35	-7.58	-381.27	4.51	440857.67	727065.85	N 32 12 38.05	W 103 43 58.13
	10144.00	37.44	357.88	10084.01	78.88	45.01	-383.05	7.20	440910.26	727064.07	N 32 12 38.57	W 103 43 58.15
	10239.00	44.11	354.63	10155.92	140.88	106.88	-387.21	7.37	440972.10	727059.91	N 32 12 39.18	W 103 43 58.20
	10333.00	48.96	354.29	10220.56	209.06	174.74	-393.81	5.17	441039.98	727053.32	N 32 12 39.85	W 103 43 58.27
	10427.00	51.61	355.54	10280.62	281.38	246.76	-400.20	3.00	441112.00	727046.92	N 32 12 40.56	W 103 43 58.34
	10522.00	64.93	356.30	10330.47	381.96	327.18	-405.90	14.04	441192.41	727041.23	N 32 12 41.36	W 103 43 58.40
	10617.00	83.24	355.90	10386.41	452.91	417.93	-412.10	19.28	441283.16	727035.02	N 32 12 42.26	W 103 43 58.46
	10711.00	86.05	355.85	10365.18	546.48	511.27	-418.83	2.99	441376.49	727028.29	N 32 12 43.18	W 103 43 58.54
	10755.00	85.67	355.43	10368.36	590.36	555.03	-422.17	1.29	441420.25	727024.96	N 32 12 43.62	W 103 43 58.57
	10850.00	88.73	355.96	10374.65	685.14	645.55	-429.28	1.25	441514.77	727017.84	N 32 12 44.55	W 103 43 58.65
	10944.00	88.07	355.68	10378.92	779.03	734.20	-436.13	1.46	441608.41	727011.00	N 32 12 45.48	W 103 43 58.72
	11039.00	88.87	356.09	10383.11	873.92	837.88	-442.94	1.33	441703.07	727004.19	N 32 12 46.42	W 103 43 58.80
	11134.00	89.24	356.11	10388.34	968.84	932.58	-449.39	2.49	441797.78	726997.73	N 32 12 47.35	W 103 43 58.87
	11228.00	89.62	356.34	10387.27	1062.81	1026.37	-455.58	0.47	441891.57	726991.54	N 32 12 48.28	W 103 43 58.93
	11322.00	89.59	355.73	10387.92	1156.79	1120.15	-462.08	0.65	441985.34	726985.04	N 32 12 49.21	W 103 43 59.00
	11417.00	89.62	359.29	10388.57	1251.67	1215.04	-468.21	3.75	442080.22	726980.92	N 32 12 50.15	W 103 43 59.04
	11511.00	90.96	359.96	10388.10	1345.35	1309.03	-468.82	1.59	442174.21	726980.30	N 32 12 51.08	W 103 43 59.04
	11606.00	89.59	0.37	10387.64	1439.94	1404.03	-468.55	1.51	442269.20	726980.58	N 32 12 52.02	W 103 43 59.03
	11700.00	89.24	0.72	10388.60	1533.48	1498.02	-465.66	0.53	442363.19	726981.47	N 32 12 52.95	W 103 43 59.02
	11795.00	89.62	0.66	10389.55	1627.99	1593.01	-464.51	0.40	442458.17	726982.61	N 32 12 53.89	W 103 43 59.00
	11889.00	89.66	1.13	10390.14	1721.48	1686.99	-463.04	0.50	442552.15	726984.08	N 32 12 54.82	W 103 43 58.98
	11983.00	89.59	0.59	10390.75	1814.97	1780.88	-461.63	0.58	442646.14	726985.49	N 32 12 55.75	W 103 43 58.95
	12078.00	89.93	359.98	10391.15	1909.55	1875.88	-461.16	0.74	442741.13	726986.96	N 32 12 56.69	W 103 43 58.94
	12173.00	89.79	359.39	10391.38	2004.21	1970.88	-461.68	0.64	442836.12	726988.44	N 32 12 57.63	W 103 43 58.94
	12268.00	89.90	359.43	10391.64	2098.92	2065.97	-462.66	0.12	442931.11	726989.46	N 32 12 58.57	W 103 43 58.95
	12362.00	90.03	359.90	10391.70	2192.59	2159.67	-463.21	0.52	443025.10	726993.91	N 32 12 59.50	W 103 43 58.95
	12457.00	89.86	359.62	10391.79	2287.25	2254.97	-463.61	0.34	443120.10	726993.52	N 32 13 0.44	W 103 43 58.94
	12551.00	90.76	0.17	10391.28	2380.89	2346.97	-463.78	1.12	443214.09	726993.34	N 32 13 1.37	W 103 43 58.94
	12646.00	91.00	359.41	10389.82	2475.54	2443.95	-464.13	0.84	443309.07	726993.00	N 32 13 2.31	W 103 43 58.94
	12740.00	90.69	359.90	10388.44	2569.20	2537.94	-464.69	0.62	443403.05	726992.43	N 32 13 3.24	W 103 43 58.94
	12835.00	92.41	359.64	10385.87	2663.82	2632.90	-465.08	1.83	443498.01	726992.05	N 32 13 4.18	W 103 43 58.94
	12930.00	90.69	0.09	10383.30	2758.43	2727.88	-465.30	1.87	443592.97	726991.83	N 32 13 5.12	W 103 43 58.93
	13119.00	90.45	0.37	10381.42	2946.60	2916.85	-464.54	0.20	443781.95	726992.58	N 32 13 6.99	W 103 43 58.91
	13213.00	90.14	0.09	10380.93	3040.19	3010.85	-464.16	0.44	443875.94	726993.96	N 32 13 7.92	W 103 43 58.90
	13308.00	90.34	359.78	10380.53	3134.82	3105.85	-464.27	0.39	443970.93	726992.85	N 32 13 8.86	W 103 43 58.90
	13402.00	89.88	359.12	10380.37	3228.53	3189.84	-465.17	0.87	444064.92	726991.85	N 32 13 9.79	W 103 43 58.90
	13497.00	91.48	1.50	10379.26	3323.09	3294.82	-464.66	3.03	444159.90	726992.47	N 32 13 10.73	W 103 43 58.89
	13686.00	90.52	359.46	10375.96	3511.15	3483.78	-463.08	1.19	444348.84	726994.05	N 32 13 12.60	W 103 43 58.86
	13875.00	90.21	0.03	10374.76	3699.47	3672.77	-463.92	0.34	444537.82	726993.21	N 32 13 14.47	W 103 43 58.86
	14064.00	90.07	0.30	10374.29	3887.67	3861.77	-463.37	0.16	444726.81	726993.75	N 32 13 16.34	W 103 43 58.84
	14254.00	88.97	358.58	10375.89	4077.06	4051.74	-465.23	1.07	444916.78	726991.89	N 32 13 18.22	W 103 43 58.85
	14348.00	90.00	0.40	10376.73	4170.75	4145.73	-466.07	2.22	445010.76	726991.06	N 32 13 19.15	W 103 43 58.85
	14443.00	89.41	0.98	10377.22	4265.26	4240.72	-464.92	0.87	445105.75	726992.20	N 32 13 20.09	W 103 43 58.83
	14538.00	92.10	2.35	10375.97	4359.58	4335.68	-462.16	3.18	445200.68	726994.96	N 32 13 21.03	W 103 43 58.79
	14633.00	87.22	359.96	10376.53	4453.98	4430.61	-460.25	5.72	445295.52	726996.88	N 32 13 21.97	W 103 43 58.76
	14728.00	88.69	359.54	10379.92	4548.57	4525.54	-460.66	1.61	445390.55	726998.46	N 32 13 22.91	W 103 43 58.76
	14822.00	91.13	355.59	10380.07	4642.45	4619.43	-464.66	4.94	445484.43	726992.47	N 32 13 23.83	W 103 43 58.80
	14917.00	91.20	358.30	10378.14	4737.41	4714.17	-471.37	0.75	445579.17	726997.75	N 32 13 24.77	W 103 43 58.88
	15011.00	91.20	358.33	10378.17	4831.30	4808.04	-475.76	2.18	445673.04	726997.37	N 32 13 25.70	W 103 43 58.92
	15106.00	91.17	357.54	10374.21	4926.15	4902.96	-479.16	0.85	445767.95	726997.96	N 32 13 26.64	W 103 43 58.95
100' FNL Cross	15211.00	91.25	357.55	10371.99	5031.01	5007.84	-483.66	0.07	445872.83	726993.		



OXY



Borehole:

Well:

Field:

Structure:

Original Borehole

Mesa Verde 8S Unit 19H**NM Eddy County (NAD 83)**

Oxy Mesa Verde BS Unit 19H

Gravity & Magnetic Parameters

Model:	HQGM 2018	Dip:	68.92°	Date:	30-Jul-2018
MagDec:	8.917°	FS:	47878.877mT	Gravity FS:	898.428mgn (8.80468 Gauss)

Surface Location

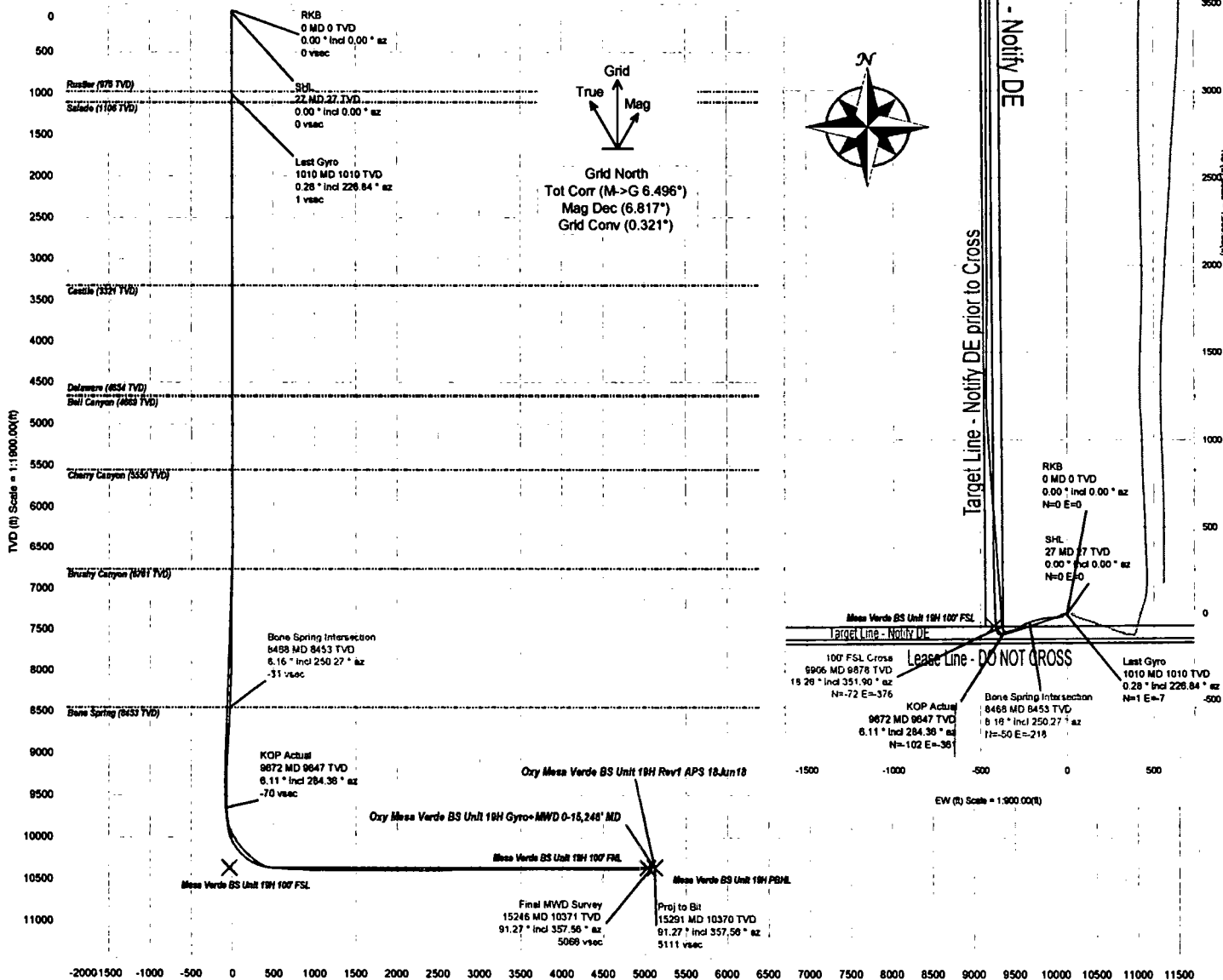
Lat:	N 22 12 38.10	Northing:	440868.25715	Grid Conv:	0.3208'
Lon:	W 103 43 53.70	Easting:	727447.17115	Scale Fact:	0.99994

Miscellaneous

Shot: Mesa Verde BS TVD Ref: RCB=28.6' (3813.2ft above MSL)
 Plan: Cxy Mesa Verde BS Unit 19H Gyro=MWD 0-15,291' MD

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00
Last Gyro	1009.60	0.28	226.84	1009.56	1.41	0.77	-7.25	0.08
Bone Spring Intersection	8468.00	8.18	250.27	8452.95	-30.54	-50.10	-217.81	0.31
KOP Actual	9872.00	6.11	284.36	9646.85	-69.60	-102.05	-360.58	1.76
100' FSL Cross	9906.00	18.26	351.90	9877.75	-38.18	-71.88	-375.92	17.59
100' FNL Cross	15211.00	91.25	357.55	10371.99	5031.01	5007.84	-483.66	0.07
Final MWD Survey	15246.00	91.27	357.56	10371.22	5065.96	5042.80	-485.15	0.07
Proj to Bit	15291.00	91.27	357.56	10370.23	5110.91	5087.75	-487.06	0.00



Vertical Section (ft) Azim = 354.90° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W