

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)
Fax : (432) 742-5606 (Shared)

Schlumberger

July 27, 2018

Oxy USA Inc.
PO BOX 4294
HOUSTON, TX 77210

HOBBS OCD
NOV 06 2018
RECEIVED

18, 24S, 32E, Lea NM
N 32.21091 W -103.71479

Re:

CLIENT: Oxy USA Inc.
WELL: Mesa Verde BS Unit 13
FIELD: Mesa Verde Bone Spring

RIG: H&P 657
COUNTY: Lea
API NO: 30-025-44192
JOB NO: 18MLD3086

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>
Kristina Hansen FE	Mesa Verde BS Unit 13 Original Hole	1079.00 Ft to 15155.00 Ft	June 2, 2018 to July 3, 2018	TelePacer SlimPulse

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

BLAKE JONES
Field Service Manager

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

Well Reference:
18, 24S, 32E, Lea NM
N 32.21091 W -103.71479

I, Kristina Hansen certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of June 02, 2018 through July 03, 2018, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 1079.00 Ft.00 feet to a depth of 15155.00 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 13 Well (Original Hole) API No. 30-025-44192 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
Kristina Hansen
FE

Subscribed and Sworn to before me this 27th day of July (month) 2018 (yr)

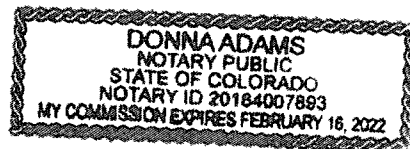
My Commission expires:

2-16-2022

D. Adams
Notary Public

(signature)

Adams County Colorado
(County State)

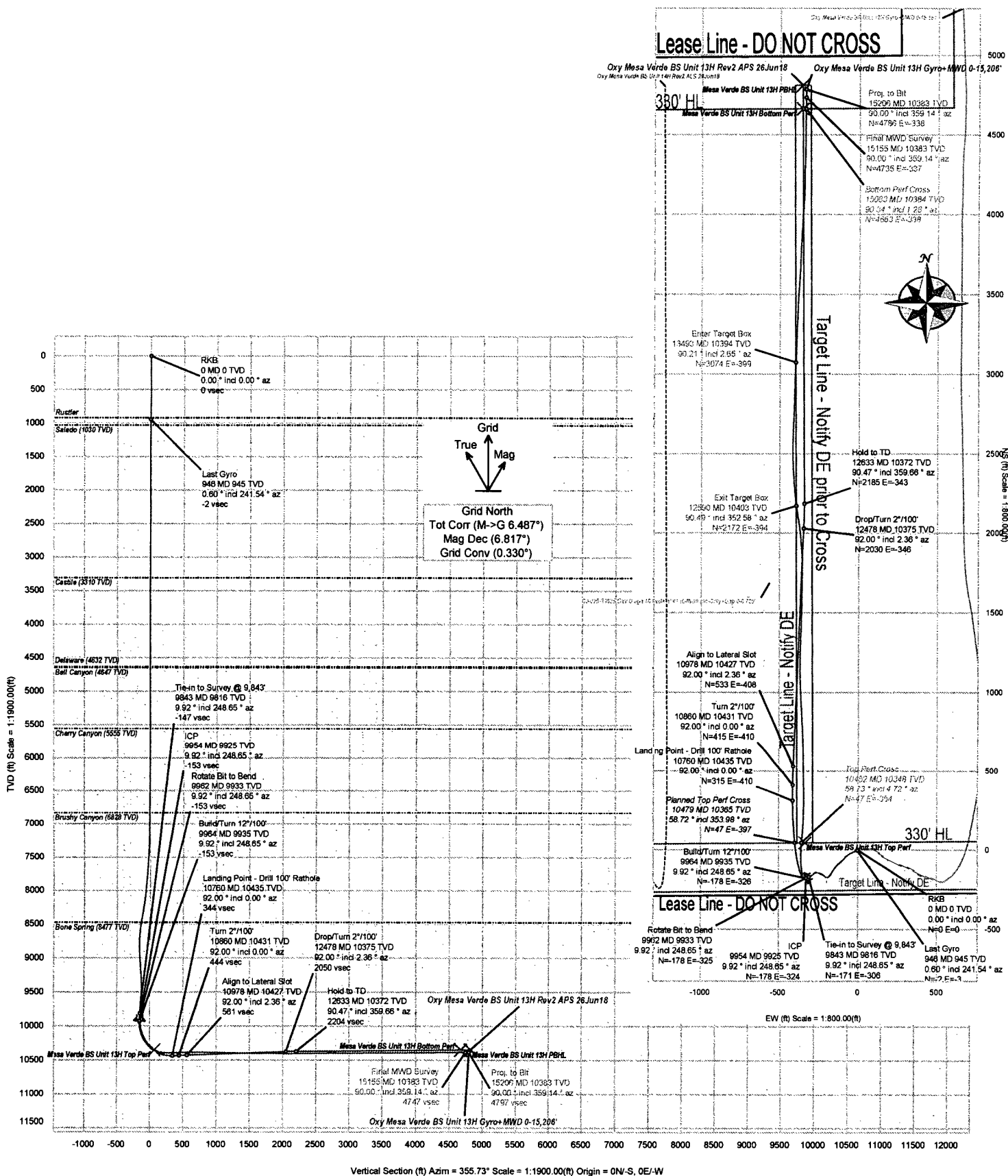




OXY



Borehole:		Well:	Field:	Structure:
Original Borehole		Oxy Mesa Verde BS Unit 13H	NM Lea County (NAD 83)	Oxy Mesa Verde BS Unit 13H
Gravity & Magnetic Parameters		Surface Location		Miscellaneous
Model:	HDGM 2018	Date:	26-Jun-2018	
MagDec:	6.817	PS:	47900.733mT	Gravity PS:
			908.422mgn (9,0065 Based)	
		Lat:	N 32 12 38.28	Northing:
			441014.195US	Grid Conv:
			0.3297	
		W:	103 42 53.24	Easting:
			732639.900US	Scale Fact:
			0.999995101	
		Shot:	Oxy Mesa Verde BS Unit 13H	TVD Ref:
		Plan:	Oxy Mesa Verde BS Unit 13H Rev2 APS 26Jun18	
			ROD=25.5' (3596.1ft above HSL)	



Oxy Mesa Verde BS Unit 13H Gyro+MWD 0-15,206' Survey Geodetic Report

(Def Survey)



Report Date: July 03, 2018 - 08:53 AM
Client: OXY
Field: NM Lea County (NAD 83)
Structure / Slot: Oxy Mesa Verde BS Unit 13H / Oxy Mesa Verde BS Unit 13H
Well: Oxy Mesa Verde BS Unit 13H
Borehole: Original Borehole
UWI / API#: Unknown / 30-025-44192
Survey Name: Oxy Mesa Verde BS Unit 13H Gyro+MWD 0-15,206'
Survey Date: June 26, 2018
Tort / AHD / DDI / ERD Ratio: 238.791' / 5404.352 ft / 6.276 / 0.519
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 12' 39.28215", W 103° 42' 53.24391"
Location Grid N/E Y/X: N 441014.190 RUS, E 732639.960 RUS
CRS Grid Convergence Angle: 0.3297°
Grid Scale Factor: 0.99995101
Version / Patch: 2.10.720.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 355.734° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3598.100 ft above MSL
Seabed / Ground Elevation: 3571.600 ft above MSL
Magnetic Declination: 6.817°
Total Gravity Field Strength: 998.4290mgN (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47990.733 nT
Magnetic Dip Angle: 59.921°
Declination Date: June 26, 2018
Magnetic Declination Model: HDGM 2018
North Reference: Grid North
Grid Convergence Used: 0.3297°
Total Corr Mag North->Grid North: 6.4873°
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 ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	441014.19	732639.96	N 32 12 39.28	W 103 42 53.24
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	441014.19	732639.96	N 32 12 39.28	W 103 42 53.24
	100.50	0.68	43.72	100.50	0.29	0.32	0.30	0.92	441014.51	732640.26	N 32 12 39.29	W 103 42 53.24
	193.50	0.49	32.17	193.49	0.98	1.05	0.90	0.24	441015.24	732640.86	N 32 12 39.29	W 103 42 53.23
	284.50	0.19	56.83	284.49	1.37	1.46	1.23	0.36	441015.65	732641.19	N 32 12 39.30	W 103 42 53.23
	379.50	0.06	153.37	379.49	1.40	1.51	1.38	0.22	441015.70	732641.34	N 32 12 39.30	W 103 42 53.23
	474.50	0.26	179.42	474.49	1.14	1.25	1.41	0.22	441015.44	732641.37	N 32 12 39.29	W 103 42 53.23
	569.50	0.55	217.14	569.49	0.58	0.67	1.14	0.40	441014.86	732641.10	N 32 12 39.29	W 103 42 53.23
	664.50	0.83	231.80	664.48	-0.14	-0.12	0.32	0.35	441014.07	732640.28	N 32 12 39.28	W 103 42 53.24
	758.50	0.87	233.95	758.47	-0.90	-0.96	-0.79	0.05	441013.23	732639.17	N 32 12 39.27	W 103 42 53.25
	853.50	0.80	236.55	853.46	-1.60	-1.75	-1.93	0.08	441012.44	732638.03	N 32 12 39.26	W 103 42 53.27
	945.50	0.60	241.54	945.45	-2.11	-2.34	-2.89	0.23	441011.85	732637.07	N 32 12 39.26	W 103 42 53.28
	1079.00	0.66	242.27	1078.95	-2.71	-3.03	-4.18	0.05	441011.16	732635.78	N 32 12 39.25	W 103 42 53.29
	1171.00	0.68	243.89	1170.94	-3.12	-3.51	-5.14	0.03	441010.68	732634.82	N 32 12 39.25	W 103 42 53.30
	1356.00	0.55	240.07	1355.93	-3.91	-4.44	-6.90	0.07	441009.75	732633.06	N 32 12 39.24	W 103 42 53.32
	1449.00	0.53	247.03	1448.93	-4.25	-4.83	-7.68	0.07	441009.36	732632.28	N 32 12 39.23	W 103 42 53.33
	1544.00	0.53	248.02	1543.92	-4.52	-5.17	-8.49	0.01	441009.02	732631.47	N 32 12 39.23	W 103 42 53.34
	1733.00	0.45	266.54	1732.91	-4.78	-5.54	-10.04	0.09	441008.65	732629.92	N 32 12 39.23	W 103 42 53.36
	1827.00	0.30	283.92	1826.91	-4.69	-5.50	-10.65	0.20	441008.69	732629.31	N 32 12 39.23	W 103 42 53.37
	2017.00	0.17	339.90	2016.91	-4.27	-5.12	-11.23	0.13	441009.07	732628.73	N 32 12 39.23	W 103 42 53.37
	2111.00	0.13	2.89	2110.91	-4.03	-4.88	-11.27	0.08	441009.31	732628.69	N 32 12 39.23	W 103 42 53.38
	2206.00	0.25	34.02	2205.91	-3.76	-4.60	-11.15	0.16	441009.59	732628.81	N 32 12 39.24	W 103 42 53.37
	2395.00	0.46	80.02	2394.91	-3.36	-4.13	-10.17	0.18	441010.06	732629.79	N 32 12 39.24	W 103 42 53.36
	2585.00	0.06	150.89	2584.90	-3.37	-4.08	-9.37	0.23	441010.11	732630.59	N 32 12 39.24	W 103 42 53.35
	2677.00	0.06	157.12	2676.90	-3.46	-4.17	-9.33	0.01	441010.02	732630.63	N 32 12 39.24	W 103 42 53.35
	2772.00	0.08	121.90	2771.90	-3.55	-4.25	-9.26	0.05	441009.94	732630.70	N 32 12 39.24	W 103 42 53.35
	2866.00	0.06	132.14	2865.90	-3.62	-4.32	-9.16	0.03	441009.87	732630.80	N 32 12 39.24	W 103 42 53.35
	2960.00	0.00	190.70	2959.90	-3.66	-4.35	-9.13	0.06	441009.84	732630.83	N 32 12 39.24	W 103 42 53.35
	3055.00	0.00	214.90	3054.90	-3.66	-4.35	-9.13	0.00	441009.84	732630.83	N 32 12 39.24	W 103 42 53.35
	3149.00	0.06	121.04	3148.90	-3.69	-4.38	-9.09	0.06	441009.82	732630.87	N 32 12 39.24	W 103 42 53.35
	3243.00	0.08	109.31	3242.90	-3.74	-4.42	-8.98	0.03	441009.77	732630.98	N 32 12 39.24	W 103 42 53.35
	3432.00	0.11	98.69	3431.90	-3.84	-4.49	-8.68	0.02	441009.70	732631.28	N 32 12 39.24	W 103 42 53.35
	3527.00	0.06	197.16	3526.90	-3.90	-4.55	-8.60	0.14	441009.64	732631.36	N 32 12 39.24	W 103 42 53.34
	3621.00	0.08	291.04	3620.90	-3.92	-4.58	-8.68	0.11	441009.61	732631.28	N 32 12 39.24	W 103 42 53.35
	3810.00	0.08	228.55	3809.90	-3.94	-4.62	-8.90	0.04	441009.57	732631.06	N 32 12 39.24	W 103 42 53.35
	3999.00	0.00	285.93	3998.90	-4.02	-4.71	-9.00	0.04	441009.48	732630.96	N 32 12 39.24	W 103 42 53.35
	4188.00	0.08	231.94	4187.90	-4.10	-4.79	-9.10	0.04	441009.40	732630.86	N 32 12 39.24	W 103 42 53.35
	4283.00	0.06	157.48	4282.90	-4.18	-4.87	-9.14	0.09	441009.32	732630.82	N 32 12 39.23	W 103 42 53.35
	4377.00	0.00	230.32	4376.90	-4.23	-4.92	-9.12	0.06	441009.27	732630.84	N 32 12 39.23	W 103 42 53.35
	4471.00	0.08	115.16	4470.90	-4.26	-4.95	-9.06	0.09	441009.24	732630.90	N 32 12 39.23	W 103 42 53.35
	4566.00	0.06	138.95	4565.90	-4.33	-5.01	-8.97	0.04	441009.18	732630.99	N 32 12 39.23	W 103 42 53.35
	4661.00	0.00	160.11	4660.90	-4.37	-5.05	-8.93	0.06	441009.14	732631.03	N 32 12 39.23	W 103 42 53.35
	4755.00	0.06	108.37	4754.90	-4.39	-5.07	-8.89	0.06	441009.12	732631.07	N 32 12 39.23	W 103 42 53.35
	4850.00	0.06	343.51	4849.90	-4.36	-5.03	-8.85	0.11	441009.16	732631.11	N 32 12 39.23	W 103 42 53.35
	4944.00	0.06	156.85	4943.90	-4.36	-5.03	-8.85	0.13	441009.16	732631.11	N 32 12 39.23	W 103 42 53.35
	5038.00	0.06	75.23	5037.90	-4.40	-5.06	-8.78	0.08	441009.13	732631.18	N 32 12 39.23	W 103 42 53.35
	5133.00	0.06	103.88	5132.90	-4.40	-5.06	-8.68	0.03	441009.13	732631.28	N 32 12 39.23	W 103 42 53.35
	5227.00	0.06	254.87	5226.90	-4.43	-5.09	-8.68	0.12	441009.10	732631.28	N 32 12 39.23	W 103 42 53.35
	5322.00	0.00	175.70	5321.90	-4.44	-5.10	-8.73	0.06	441009.09	732631.23	N 32 12 39.23	W 103 42 53.35
	5416.00	0.06	327.18	5415.90	-4.39	-5.06	-8.76	0.06	441009.13	732631.20	N 32 12 39.23	W 103 42 53.35
	5511.00	0.06	293.77	5510.90	-4.33	-5.00	-8.83	0.04	441009.19	732631.13	N 32 12 39.23	W 103 42 53.35
	5700.00	0.06	176.17	5699.90	-4.38	-5.06	-8.92	0.05	441009.13	732631.05	N 32 12 39.23	W 103 42 53.35
	5889.00	0.08	308.84	5888.90	-4.41	-5.09	-8.99	0.06	441009.10	732630.97	N 32 12 39.23	W 103 42 53.35
	6078.00	0.06	75.85	6077.90	-4.33	-5.01	-8.97	0.06	441009.18	732630.99	N 32 12 39.23	W 103 42 53.35
	6172.00	0.06	117.64	6171.90	-4.34	-5.02	-8.88	0.05	441009.17	732631.08	N 32 12 39.23	W 103 42 53.35
	6267.00	0.06	151.61	6266.90	-4.42	-5.08	-8.81	0.04	441009.11	732631.15	N 32 12 39.23	W 103 42 53.35
	6361.00	0.06	181.94	6360.90	-4.51	-5.18	-8.79	0.03	441009.01	732631.17	N 32 12 39.23	W 103 42 53.35
	6455.00	0.06	12.92	6454.90	-4.51	-5.18	-8.78	0.13	441009.01	732631.18	N 32 12 39.23	W 103 42 53.35
	6550.00	0.63	211.80	6549.90	-4.89	-5.57	-9.04	0.72	441008.62	732630.92	N 32 12 39.23	W 103 42 53.35
	6644.00	1.20	229.40	6643.89	-5.69	-6.65	-10.06	0.67	441007.54	732629.90	N 32 12 39.22	W 103 42 53.36
	6739.00	1.75	247.16	6738.86	-6.94	-7.86	-12.15	0.75	441006.33	732627.81	N 32 12 39.21	W 103 42 53.39
	6833.00	2.22	255.67	6832.80	-7.71	-8.87	-15.24	0.59	441005.32	732624.72	N 32 12 39.20	W 103 42 53.42
	6928.00	2.74	247.04	6927.71	-8.76	-10.21	-19.11	0.67	441003.98	732620.85	N 32 12 39.18	W 103 42 53.47
	7022.00	2.89	249.26	7021.60	-10.16	-11.93	-23.40	0.20	441002.26	732616.58	N 32 12 39.17	W 103 42 53.52
	7117.00	3.27	248.47	7116.46	-11.64	-13.77	-28.16	0.40	441000.42	732611.80	N 32 12 39.15	W 103 42 53.57
	7211.00	3.91	246.54	7210.28	-13.49	-16.03	-33.59	0.69	440998.16	732606.37	N 32 12 39.13	W 103 42 53.64
	7305.00	5.06	241.28	7303.99	-16.26	-19.30	-40.17	1.30	440994.88	732599.79	N 32 12 39.09	W 103 42 53.71
	7400.00	5.95	240.88	7398.55	-20.06	-23.71	-48.14	0.94	440990.48	732591.82	N 32 12 39.05	W 103 42 53.81
	7494.00	6.63	239.87	7491.98	-24.48	-28.80	-57.09	0.73	440985.39	732582.87	N 32 12 39.00	W 103 42 53.91
	7589.00	6.42	234.93	7586.37	-29.59	-34.61	-66.18	0.63	440979.58	732573.78	N 32 12 38.94	W 103 42 54.02
	7683.00	6.45	224.65	7679.78	-35.75	-41.38	-74.20	1.22	440972.81	732565.77	N 32 12 38.88	W 103 42 54.11
	7789.00	6.87	219.53	7785.06	-44.24	-50.51	-82.41	0.69	440963.68	732557.55	N 32 12 38.79	W 103 42 54.21
	7872.00	7.26	223.57	7867.43	-51.34	-58.14	-89.19	0.76	440956.05	732550.78	N 32 12 38.71	W 103 42 54.29
	7967.00	7.80	226.99	7961.61	-59.41	-66.88	-98.04	0.74	440947.31	732541.92	N 32 12 38.63	W 103 42 54.39
	8061.00	9.47	228.27	8054.55	-68.10	-76.38	-108.48	1.7				

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 ° ' ")
	8534.00	9.63	210.97	8517.69	-138.00	-150.89	-167.74	1.91	440863.31	732472.23	N 32 12 37.80 W 103 42 55.21	
	8629.00	7.49	217.46	8611.63	-149.11	-162.62	-175.60	2.47	440851.58	732464.37	N 32 12 37.68 W 103 42 55.30	
	8723.00	6.19	236.14	8704.97	-156.18	-170.31	-183.53	2.72	440843.89	732456.44	N 32 12 37.61 W 103 42 55.39	
	8817.00	4.36	265.36	8798.58	-158.71	-173.42	-191.31	3.40	440840.78	732448.66	N 32 12 37.58 W 103 42 55.48	
	8912.00	3.84	295.34	8893.35	-157.16	-172.35	-197.78	2.29	440841.85	732442.19	N 32 12 37.59 W 103 42 55.56	
	9006.00	5.80	312.26	8987.01	-152.16	-167.81	-204.14	2.55	440846.39	732435.83	N 32 12 37.63 W 103 42 55.63	
	9101.00	7.41	304.56	9081.38	-144.84	-161.11	-212.74	1.93	440853.09	732427.23	N 32 12 37.70 W 103 42 55.73	
	9195.00	8.06	296.29	9174.53	-137.69	-154.75	-223.64	1.37	440859.45	732416.33	N 32 12 37.76 W 103 42 55.86	
	9290.00	9.40	295.11	9268.43	-130.49	-148.51	-236.64	1.42	440865.69	732403.33	N 32 12 37.83 W 103 42 56.01	
	9384.00	9.19	285.37	9361.20	-124.21	-143.26	-250.83	1.69	440870.94	732389.15	N 32 12 37.88 W 103 42 56.17	
	9479.00	7.65	255.67	9455.22	-122.76	-142.81	-264.28	4.79	440871.38	732375.70	N 32 12 37.88 W 103 42 56.33	
	9573.00	6.54	226.96	9548.52	-127.21	-148.02	-274.25	3.91	440866.18	732365.72	N 32 12 37.83 W 103 42 56.45	
	9667.00	7.88	227.27	9641.78	-134.57	-156.04	-282.90	1.43	440858.15	732357.08	N 32 12 37.75 W 103 42 56.55	
	9762.00	9.35	237.91	9735.71	-142.22	-164.56	-294.22	2.28	440849.64	732345.75	N 32 12 37.67 W 103 42 56.68	
	9843.00	9.92	248.65	9815.57	-147.34	-170.80	-306.30	2.32	440843.60	732333.68	N 32 12 37.61 W 103 42 56.82	
	9993.00	10.93	290.03	9963.30	-145.29	-170.43	-331.73	4.93	440843.77	732308.25	N 32 12 37.61 W 103 42 57.12	
	10063.00	15.10	331.90	10031.63	-134.19	-160.09	-342.28	14.32	440854.11	732297.70	N 32 12 37.72 W 103 42 57.24	
	10157.00	20.69	348.43	10121.10	-106.48	-132.98	-351.39	7.98	440881.21	732288.59	N 32 12 37.99 W 103 42 57.34	
	10252.00	31.40	356.46	10206.36	-64.95	-91.71	-356.30	11.85	440922.49	732283.68	N 32 12 38.39 W 103 42 57.40	
	10347.00	43.35	359.70	10281.72	-7.46	-34.19	-358.01	12.74	440980.01	732281.97	N 32 12 38.96 W 103 42 57.41	
	10442.00	56.82	4.64	10342.56	64.70	38.41	-354.95	14.72	441052.59	732285.03	N 32 12 39.68 W 103 42 57.37	
	10536.00	74.75	5.26	10380.96	148.97	123.46	-347.55	19.08	441137.65	732292.43	N 32 12 40.52 W 103 42 57.28	
	10631.00	89.11	1.50	10394.26	241.94	217.10	-342.07	15.61	441231.28	732297.91	N 32 12 41.45 W 103 42 57.21	
	10685.00	91.31	1.36	10394.07	295.67	271.08	-340.72	4.08	441285.25	732299.25	N 32 12 41.98 W 103 42 57.19	
	10814.00	91.86	358.48	10390.50	424.26	400.02	-340.90	2.27	441414.18	732299.07	N 32 12 43.26 W 103 42 57.18	
	11003.00	90.83	359.38	10386.06	612.91	588.93	-344.43	0.72	441603.09	732295.55	N 32 12 45.13 W 103 42 57.21	
	11192.00	88.76	356.51	10386.74	801.74	777.77	-351.21	1.87	441791.92	732288.77	N 32 12 47.00 W 103 42 57.28	
	11287.00	89.18	357.66	10388.44	896.70	872.63	-356.04	1.29	441886.78	732283.94	N 32 12 48.02 W 103 42 57.33	
	11381.00	88.59	356.38	10390.27	990.65	966.49	-360.92	1.50	441980.63	732279.05	N 32 12 48.87 W 103 42 57.38	
	11570.00	88.86	359.85	10394.48	1179.42	1155.31	-367.14	1.84	442169.44	732272.84	N 32 12 50.52 W 103 42 57.44	
	11758.00	89.28	2.42	10397.53	1366.54	1343.23	-363.41	1.38	442357.35	732276.56	N 32 12 52.59 W 103 42 57.38	
	11947.00	89.28	0.94	10399.91	1554.50	1532.13	-357.87	0.78	442546.24	732282.10	N 32 12 54.46 W 103 42 57.31	
	12136.00	91.13	0.85	10399.23	1742.73	1721.10	-354.92	0.98	442735.20	732285.06	N 32 12 56.33 W 103 42 57.26	
	12230.00	89.90	359.54	10398.39	1836.44	1815.09	-354.60	1.91	442829.18	732285.38	N 32 12 57.26 W 103 42 57.25	
	12324.00	87.42	355.33	10400.59	1930.34	1908.94	-358.81	5.20	442923.03	732281.17	N 32 12 58.19 W 103 42 57.29	
	12418.00	89.45	353.45	10403.15	2024.27	2002.44	-367.99	2.94	443016.53	732271.99	N 32 12 59.12 W 103 42 57.39	
	12513.00	90.34	349.51	10403.33	2118.99	2096.38	-382.06	4.25	443110.46	732257.92	N 32 13 0.05 W 103 42 57.55	
	12607.00	90.52	353.26	10402.62	2212.70	2189.30	-396.14	3.99	443203.38	732243.84	N 32 13 0.97 W 103 42 57.71	
	12702.00	90.86	355.73	10401.48	2307.66	2283.84	-405.25	2.62	443297.92	732234.73	N 32 13 1.90 W 103 42 57.81	
	12796.00	90.62	356.11	10400.26	2401.65	2377.60	-411.94	0.48	443391.67	732228.04	N 32 13 2.83 W 103 42 57.88	
	12891.00	90.93	359.36	10398.98	2496.57	2472.50	-415.69	3.44	443486.57	732224.29	N 32 13 3.77 W 103 42 57.92	
	13079.00	90.52	2.18	10396.60	2683.81	2660.45	-413.17	1.52	443674.51	732226.81	N 32 13 5.63 W 103 42 57.87	
	13173.00	91.44	2.09	10394.99	2777.21	2754.37	-409.67	0.98	443768.42	732230.31	N 32 13 6.56 W 103 42 57.83	
	13361.00	89.21	1.26	10393.92	2984.19	2942.27	-404.17	1.27	443956.31	732235.81	N 32 13 8.42 W 103 42 57.75	
	13456.00	90.03	2.84	10394.55	3058.60	3037.21	-400.77	1.87	444051.24	732239.21	N 32 13 9.36 W 103 42 57.71	
	13550.00	90.48	2.35	10394.14	3151.93	3131.11	-396.52	0.71	444145.14	732243.46	N 32 13 10.29 W 103 42 57.65	
	13645.00	90.69	1.08	10393.17	3246.41	3228.06	-393.67	1.35	444240.09	732246.31	N 32 13 11.23 W 103 42 57.61	
	13738.00	90.76	3.47	10391.99	3338.79	3318.97	-389.98	2.57	444332.99	732250.00	N 32 13 12.15 W 103 42 57.56	
	13833.00	89.83	1.73	10391.50	3433.10	3413.87	-385.67	2.08	444427.88	732254.31	N 32 13 13.08 W 103 42 57.50	
	13927.00	90.65	3.91	10391.11	3526.37	3507.75	-381.05	2.48	444521.76	732258.93	N 32 13 14.01 W 103 42 57.44	
	14116.00	89.28	2.76	10391.22	3713.71	3696.42	-370.06	0.95	444710.42	732269.92	N 32 13 15.88 W 103 42 57.30	
	14210.00	90.72	1.94	10391.22	3807.08	3790.34	-366.20	1.76	444804.33	732273.78	N 32 13 16.81 W 103 42 57.25	
	14305.00	91.07	3.60	10389.74	3901.35	3885.21	-361.81	1.79	444899.20	732278.37	N 32 13 17.75 W 103 42 57.19	
	14493.00	89.55	3.46	10388.72	4087.80	4072.85	-350.04	0.81	445086.83	732289.94	N 32 13 19.60 W 103 42 57.05	
	14682.00	91.17	359.78	10387.53	4275.56	4261.73	-344.69	2.13	445275.70	732295.28	N 32 13 21.47 W 103 42 56.97	
	14777.00	90.28	2.26	10386.33	4370.14	4356.70	-343.00	2.77	445370.87	732296.97	N 32 13 22.41 W 103 42 56.94	
	14871.00	90.58	1.13	10385.63	4463.63	4450.65	-340.22	1.24	445464.62	732299.75	N 32 13 23.34 W 103 42 56.91	
	14966.00	90.58	359.66	10384.68	4558.31	4545.64	-339.57	1.55	445559.80	732300.41	N 32 13 24.28 W 103 42 56.89	
	15060.00	90.45	1.97	10383.82	4651.93	4639.62	-338.23	2.46	445653.58	732301.75	N 32 13 25.21 W 103 42 56.87	
Final MWD Survey	15155.00	90.00	359.14	10383.45	4746.58	4734.61	-337.31	3.02	445748.56	732302.67	N 32 13 26.15 W 103 42 56.85	
Proj. to Bit	15206.00	90.00	359.14	10383.45	4797.49	4785.60	-338.08	0.00	445799.55	732301.90	N 32 13 26.65 W 103 42 56.86	

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 13H Gyro+MWD 0-15,206'
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Mesa Verde BS Unit 13H Gyro+MWD 0-15,206'
	1	26.500	945.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Mesa Verde BS Unit 13H Gyro+MWD 0-945,500'
	1	945.500	15206.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Mesa Verde BS Unit 13H Gyro+MWD 0-15206'

...Oxy Mesa Verde BS Unit 13H\Original Borehole\Oxy Mesa Verde BS Unit 13H Gyro+MWD 0-15,206'

OXY USA Inc.
Mesa Verde BS Unit 13H
API No. 30-025-44192

