

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

June 20, 2019

OXY USA Inc
5 Greenway Plaza, Suite 110
Houston, TX 77046

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 10 2019

RECEIVED

Re:

17, 24S, 31E, Eddy NM
-32.22297 -103.79562

CLIENT: OXY USA Inc
WELL: Sunrise MDP1 8-5 Federal Com 175H
FIELD: Purple Sage Wolfcamp

RIG: H&P 617
COUNTY: Eddy
API NO: 30-015-45152
JOB NO: 19MLH0201

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>
Banks Kintang FE	Sunrise MDP1 8-5 Federal Com 175H Original Hole	831.00 Ft to 22341.00 Ft	May 31, 2019 to June 20, 2019	SlimPulse 3rd Party Corrected

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

Andrew Salomon
Field Service Manager

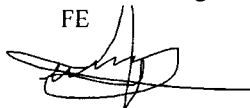
Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
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Geo Market Area: South West Texas Basin
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Schlumberger

Well Reference:
17, 24S, 31E, Eddy NM
-32.22297 -103.79562

I, Banks Kintang certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of May 31, 2019 through June 20, 2019, conduct or supervise the taking of the SlimPulse and 3rd Party Corrected surveys from a depth of 831.00 feet to a depth of 22341.00 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 Sunrise MDPI 8-5 Federal Com 175H Well (Original Hole) API No. 30-015-45152 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
Banks Kintang
FE



Subscribed and Sworn to before me this 25 day of June (month) 2019 (yr)

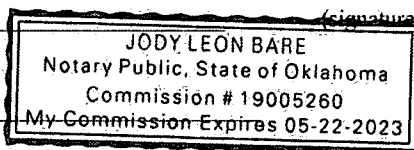
My Commission expires:

05-22-2023

Notary Public

(County State)

Jody L. Bare
Grady, OK



Oxy Sunrise MDP1 8-5 Federal Com 175H Gyro + IFR 0-22385'MD Survey Geodetic Report (Def Survey)



NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 10 2019
RECEIVED

Report Date: June 21, 2019 - 12:58 PM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 175H / Oxy Sunrise MDP1 8-5 Federal Com 175H
Well: Oxy Sunrise MDP1 8-5 Federal Com 175H
Borehole: Original Borehole
UWI / API#: Unknown / 30-015-45152
Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 175H Gyro + IFR 0-22385'MD
Survey Date: May 10, 2019
Tort / AHD / DDI / ERD Ratio: 352.668' / 11780.213 ft / 6.901 / 1.009
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 22.69350", W 103° 47' 44.21861"
Location Grid N/E Y/X: N 445266.540 RUS, E 707619.790 RUS
CRS Grid Convergence Angle: 0.2867°
Grid Scale Factor: 0.99994076
Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 0.140° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3574.500 ft above MSL
Seabed / Ground Elevation: 3548.000 ft above MSL
Magnetic Declination: 6.767°
Total Gravity Field Strength: 998.4270mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47925.100 nT
Magnetic Dip Angle: 59.911°
Declination Date: May 29, 2019
Magnetic Declination Model: IFR1
North Reference: Grid North
Grid Convergence Used: 0.2867°
Total Corr Mag North->Grid North: 6.4803°
Local Coord Referenced To: Well Head

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 ° ' ")
RKB	0.00	0.00	0.14	0.00	0.00	0.00	0.00	N/A	445266.54	707619.79	N 32 13 22.69	W 103 47 44.22
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	445266.54	707619.79	N 32 13 22.69	W 103 47 44.22
	91.62	0.49	257.12	91.62	-0.06	-0.06	-0.27	0.75	445266.48	707619.52	N 32 13 22.69	W 103 47 44.22
	178.69	0.59	250.21	178.69	-0.30	-0.30	-1.06	0.14	445266.24	707618.73	N 32 13 22.69	W 103 47 44.23
	267.99	0.76	246.22	267.98	-0.70	-0.69	-2.03	0.20	445265.85	707617.76	N 32 13 22.69	W 103 47 44.24
	362.78	0.75	245.82	362.76	-1.21	-1.20	-3.17	0.01	445265.34	707616.62	N 32 13 22.68	W 103 47 44.26
	457.69	0.68	228.37	457.66	-1.84	-1.83	-4.16	0.24	445264.71	707615.63	N 32 13 22.68	W 103 47 44.27
	552.68	0.80	231.58	552.65	-2.63	-2.61	-5.10	0.13	445263.93	707614.69	N 32 13 22.67	W 103 47 44.28
	647.39	0.77	213.73	647.35	-3.57	-3.55	-5.97	0.26	445262.99	707613.82	N 32 13 22.66	W 103 47 44.29
Last Gyro	723.69	0.84	206.77	723.64	-4.50	-4.48	-6.51	0.16	445262.06	707613.28	N 32 13 22.65	W 103 47 44.29
	831.00	0.22	189.08	830.94	-5.40	-5.39	-6.90	0.59	445261.15	707612.90	N 32 13 22.64	W 103 47 44.30
	922.00	0.09	98.70	921.94	-5.59	-5.57	-6.85	0.26	445260.97	707612.94	N 32 13 22.64	W 103 47 44.30
	1012.00	0.16	143.29	1011.94	-5.70	-5.68	-6.71	0.13	445260.86	707613.08	N 32 13 22.64	W 103 47 44.30
	1103.00	0.13	177.62	1102.94	-5.90	-5.89	-6.63	0.10	445260.65	707613.16	N 32 13 22.64	W 103 47 44.30
	1285.00	0.16	205.02	1284.94	-6.34	-6.32	-6.73	0.04	445260.22	707613.06	N 32 13 22.63	W 103 47 44.30
	1467.00	0.03	326.61	1466.94	-6.53	-6.51	-6.86	0.10	445260.03	707612.93	N 32 13 22.63	W 103 47 44.30
	1650.00	0.05	63.45	1649.94	-6.45	-6.44	-6.81	0.03	445260.10	707612.98	N 32 13 22.63	W 103 47 44.30
	1832.00	0.19	279.39	1831.94	-6.37	-6.35	-7.04	0.13	445260.19	707612.75	N 32 13 22.63	W 103 47 44.30
	2014.00	0.02	284.68	2013.94	-6.31	-6.29	-7.37	0.09	445260.25	707612.42	N 32 13 22.63	W 103 47 44.30
	2106.00	0.10	291.78	2105.94	-6.28	-6.26	-7.46	0.09	445260.28	707612.33	N 32 13 22.63	W 103 47 44.31
	2201.00	0.16	252.36	2200.94	-6.29	-6.27	-7.66	0.11	445260.27	707612.13	N 32 13 22.63	W 103 47 44.31
	2391.00	0.06	291.22	2390.94	-6.33	-6.31	-8.01	0.06	445260.23	707611.78	N 32 13 22.63	W 103 47 44.31
	2485.00	0.13	171.98	2484.94	-6.42	-6.40	-8.04	0.18	445260.14	707611.75	N 32 13 22.63	W 103 47 44.31
	2675.00	0.24	196.66	2674.94	-7.02	-7.00	-8.12	0.07	445259.54	707611.67	N 32 13 22.62	W 103 47 44.31
	2770.00	0.13	245.61	2769.94	-7.25	-7.23	-8.28	0.19	445259.31	707611.51	N 32 13 22.62	W 103 47 44.32
	2864.00	0.09	305.06	2863.94	-7.25	-7.23	-8.44	0.12	445259.31	707611.35	N 32 13 22.62	W 103 47 44.32
	2959.00	0.05	158.79	2958.94	-7.25	-7.23	-8.48	0.14	445259.31	707611.31	N 32 13 22.62	W 103 47 44.32
	3053.00	0.32	226.28	3052.94	-7.47	-7.45	-8.66	0.32	445259.09	707611.13	N 32 13 22.62	W 103 47 44.32
	3148.00	0.20	348.50	3147.94	-7.49	-7.47	-8.88	0.48	445259.07	707610.91	N 32 13 22.62	W 103 47 44.32
	3338.00	0.16	323.69	3337.94	-6.95	-6.93	-9.11	0.05	445259.61	707610.69	N 32 13 22.63	W 103 47 44.33
	3527.00	0.16	329.50	3526.94	-6.51	-6.49	-9.40	0.01	445260.05	707610.39	N 32 13 22.63	W 103 47 44.33
	3622.00	0.47	322.02	3621.94	-6.09	-6.07	-9.70	0.33	445260.47	707610.09	N 32 13 22.63	W 103 47 44.33
	3716.00	0.08	114.19	3715.93	-5.82	-5.79	-9.88	0.58	445260.75	707609.91	N 32 13 22.64	W 103 47 44.33
	3810.00	0.26	67.79	3809.93	-5.76	-5.74	-9.62	0.23	445260.80	707610.17	N 32 13 22.64	W 103 47 44.33
	3999.00	0.12	320.61	3998.93	-5.45	-5.42	-9.35	0.17	445261.12	707610.44	N 32 13 22.64	W 103 47 44.33
	4188.00	0.08	122.57	4187.93	-5.37	-5.34	-9.37	0.10	445261.20	707610.42	N 32 13 22.64	W 103 47 44.33
	4283.00	0.22	192.65	4282.93	-5.58	-5.56	-9.35	0.22	445260.98	707610.44	N 32 13 22.64	W 103 47 44.33
	4377.00	0.05	229.61	4376.93	-5.78	-5.76	-9.42	0.19	445260.78	707610.37	N 32 13 22.64	W 103 47 44.33
	4566.00	0.16	317.28	4565.93	-5.64	-5.62	-9.66	0.09	445260.92	707610.13	N 32 13 22.64	W 103 47 44.33
	4661.00	0.20	149.95	4660.93	-5.69	-5.66	-9.67	0.38	445260.88	707610.12	N 32 13 22.64	W 103 47 44.33
	4755.00	0.13	143.39	4754.93	-5.92	-5.89	-9.52	0.08	445260.65	707610.27	N 32 13 22.64	W 103 47 44.33
	4945.00	0.05	20.10	4944.93	-6.01	-5.99	-9.37	0.09	445260.55	707610.42	N 32 13 22.63	W 103 47 44.33
	5132.00	0.12	311.69	5131.93	-5.80	-5.78	-9.48	0.06	445260.76	707610.31	N 32 13 22.64	W 103 47 44.33
	5227.00	0.17	232.09	5226.93	-5.82	-5.80	-9.67	0.20	445260.74	707610.12	N 32 13 22.64	W 103 47 44.33
	5321.00	0.23	223.97	5320.93	-6.05	-6.02	-9.91	0.07	445260.52	707609.88	N 32 13 22.63	W 103 47 44.33
	5416.00	0.14	181.39	5415.93	-6.30	-6.28	-10.05	0.17	445260.27	707609.74	N 32 13 22.63	W 103 47 44.34
	5511.00	0.06	252.83	5510.93	-6.43	-6.41	-10.10	0.14	445260.13	707609.69	N 32 13 22.63	W 103 47 44.34
	5605.00	1.58	137.34	5604.92	-7.40	-7.37	-9.27	1.71	445259.17	707610.52	N 32 13 22.62	W 103 47 44.33
	5700.00	4.70	136.81	5699.76	-11.19	-11.18	-5.71	3.28	445255.37	707614.08	N 32 13 22.58	W 103 47 44.29
	5794.00	7.45	139.49	5793.23	-18.62	-18.62	0.88	2.94	445247.92	707620.67	N 32 13 22.51	W 103 47 44.21
	5889.00	9.17	136.90	5887.23	-28.80	-28.83	10.06	1.85	445237.71	707629.85	N 32 13 22.41	W 103 47 44.10
	5984.00	9.94	132.14	5980.91	-39.81	-39.86	21.31	1.16	445226.69	707641.10	N 32 13 22.30	W 103 47 43.97
	6078.00	9.34	129.88	6073.58	-50.11	-50.19	33.18	0.75	445216.35	707652.97	N 32 13 22.20	W 103 47 43.84
	6267.00	9.60	120.39	6260.02	-67.86	-68.00	58.54	0.84	445198.55	707678.33	N 32 13 22.02	W 103 47 43.54
	6457.00	8.85	119.79	6447.56	-83.07	-83.28	84.89	0.40	445183.27	707704.68	N 32 13 21.87	W 103 47 43.24
	6551.00	8.75	120.38	6540.45	-90.25	-90.48	97.34	0.14	445176.06	707717.12	N 32 13 21.79	W 103 47 43.09
	6646.00	8.78	122.36	6634.34	-97.75	-98.02	109.69	0.32	445168.53	707729.48	N 32 13 21.72	W 103 47 42.95
	6741.00	8.49	125.67	6728.27	-105.70	-105.99	121.51	0.60	445160.55	707741.30	N 32 13 21.64	W 103 47 42.81
	6835.00	8.84	129.72	6821.19	-114.33	-114.65	132.71	0.75	445151.89	707752.49	N 32 13 21.55	W 103 47 42.68
	6929.00	8.56	132.74	6914.11	-123.67	-124.02	143.40	0.57	445142.53	707763.18	N 32 13 21.46	W 103 47 42.56
	7024.00	8.21	124.15	7008.10	-132.25	-132.62	154.21	1.37	445133.82	707773.99	N 32 13 21.37	W 103 47 42.43
	7118.00	8.45	109.15	7101.12	-138.25	-138.66	166.29	2.32	445127.89	707786.07	N 32 13 21.31	W 103 47 42.29
	7213.00	9.55	98.08	7194.96	-141.61	-142.06	180.68	2.15	445124.49	707800.46	N 32 13 21.28	W 103 47 42.12
	7307.00	10.02	91.59	7287.59	-142.90	-143.38	196.58	1.27	445123.17	707816.36	N 32 13 21.27	W 103 47 41.94
	7497.00	10.16	75.02	7474.68	-140.08	-140.65	229.56	1.16	445125.90	707849.33	N 32 13 21.29	W 103 47 41.55
	7591.00	9.58	78.39	7567.28	-136.89	-137.49	245.36	0.63	445129.06	707865.13	N 32 13 21.32	W 103 47 41.37
	7686.00	9.24	76.86	7661.01	-133.53	-134.17	260.53	0.44	445132.38	707880.30	N 32 13 21.35	W 103 47 41.19
	7780.00	9.03	77.03	7753.81	-130.12	-130.80	275.07	0.23	445135.75	707894.84	N 32 13 21.35	W 103 47 41.02
	7970.00	9.12	75.70	7941.44	-122.99	-123.73	304.19	0.12	445142.92	707923.96	N 32 13 21.49	W 103 47 40.68
	8065.00	9.06	75.22	8035.24	-119.18	-119.96	318.72	0.10	445146.58	707938.49	N 32 13 21.49	W 103 47 40.52
	8160.00	8.77	69.08	8129.10	-114.66	-115.47	332.71	1.05	445151.08	707952.48	N 32 13 21.53	W 103 47 40.35
	8254.00	8.13	60.95	8222.08	-108.84	-109.68	345.22	1.44	445156.86	707964.99	N 32 13 21.59	W 103 47 40.21
	8349.00	7.73	53.49	8316.17	-101.75	-102.62	356.23	1.16	445163.93	707976.00	N 32 13 21.66	W 103 47 40.08
	8538.00	7.06	31.95	8503.64	-84.29	-85.20	372.59	1.50	445181.35	707992.36	N 32 13 21.83	W 103 47 39.89
	8632.00	6.68	21.26	8596.97	-74.28	-75.20	377.63	1.42	445191.34	707997.40	N 32 13 21.93	W 10

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northings (ft)	Easting (ft)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8916.00	7.92	351.00	8879.01	-41.53	-42.45	378.50	1.31	445224.09	707998.27	N 32 13 22.25	W 103 47 39.82
	9026.00	7.50	344.71	8888.01	-27.13	-28.04	375.43	0.86	445238.50	707995.19	N 32 13 22.40	W 103 47 39.85
	9103.00	6.92	339.17	9064.41	-17.95	-18.86	372.45	1.18	445247.68	707992.22	N 32 13 22.49	W 103 47 39.88
	9197.00	5.63	329.86	9157.84	-8.68	-9.58	368.12	1.74	445256.96	707987.89	N 32 13 22.58	W 103 47 39.93
	9292.00	5.23	320.40	9252.42	-1.33	-2.21	363.02	1.03	445264.33	707982.79	N 32 13 22.65	W 103 47 39.99
	9481.00	9.48	341.97	9439.85	20.10	19.24	352.71	2.64	445285.78	707972.48	N 32 13 22.87	W 103 47 40.11
	9576.00	9.13	343.85	9533.60	34.77	33.92	348.19	0.49	445300.46	707967.96	N 32 13 23.01	W 103 47 40.16
	9671.00	9.18	348.96	9627.39	49.44	48.59	344.64	0.86	445315.13	707964.41	N 32 13 23.16	W 103 47 40.20
	9766.00	9.20	357.68	9721.18	64.46	63.62	342.88	1.46	445330.16	707962.65	N 32 13 23.31	W 103 47 40.22
	9955.00	8.84	356.86	9907.84	94.05	93.22	341.48	0.20	445359.75	707961.25	N 32 13 23.60	W 103 47 40.24
	10050.00	10.01	349.19	10001.56	109.45	108.62	339.53	1.80	445375.15	707959.30	N 32 13 23.75	W 103 47 40.26
	10144.00	10.62	339.61	10094.05	125.58	124.76	334.98	1.93	445391.30	707954.75	N 32 13 23.91	W 103 47 40.31
	10239.00	9.75	327.32	10187.56	140.54	139.74	327.58	2.46	445406.27	707947.35	N 32 13 24.06	W 103 47 40.40
	10334.00	8.80	316.72	10281.33	152.58	151.80	318.26	2.05	445418.33	707938.03	N 32 13 24.18	W 103 47 40.51
	10428.00	8.39	315.91	10374.27	162.72	161.96	308.56	2.45	445428.49	707928.33	N 32 13 24.28	W 103 47 40.62
	10522.00	7.63	308.77	10467.35	171.53	170.80	298.92	1.33	445437.33	707918.69	N 32 13 24.37	W 103 47 40.73
	10617.00	7.93	312.37	10561.48	179.87	179.16	289.16	0.60	445445.69	707908.93	N 32 13 24.45	W 103 47 40.84
	10711.00	7.98	330.27	10654.59	189.89	189.20	281.13	2.63	445455.73	707900.90	N 32 13 24.55	W 103 47 41.00
	10806.00	8.02	339.79	10748.67	201.82	201.15	275.57	1.39	445467.67	707895.35	N 32 13 24.67	W 103 47 41.04
	10994.00	7.34	320.26	10835.01	223.34	222.69	263.36	1.43	445489.22	707883.14	N 32 13 24.88	W 103 47 41.14
	11096.00	9.28	308.69	11035.95	233.46	232.85	252.77	2.50	445499.37	707872.55	N 32 13 24.98	W 103 47 41.26
	11243.00	15.81	316.59	11178.37	255.39	254.83	229.74	4.58	445521.35	707849.51	N 32 13 25.20	W 103 47 41.53
	11337.00	23.89	328.27	11267.74	280.89	280.37	210.89	9.54	445546.89	707830.66	N 32 13 25.46	W 103 47 41.75
	11432.00	34.13	335.98	11350.74	321.66	321.20	188.86	11.45	445587.72	707809.64	N 32 13 25.86	W 103 47 41.99
	11527.00	40.47	339.67	11426.28	374.92	374.51	168.27	7.07	445641.03	707788.05	N 32 13 26.39	W 103 47 42.24
	11621.00	51.34	342.95	11491.60	438.76	438.41	146.85	11.83	445704.92	707766.63	N 32 13 27.02	W 103 47 42.48
	11716.00	60.88	346.14	11544.53	514.65	514.34	125.98	10.42	445780.85	707745.76	N 32 13 27.78	W 103 47 42.72
Wolffcamp Intersection	11802.45	67.71	348.22	11582.00	590.52	590.25	108.75	8.19	445856.76	707728.53	N 32 13 28.53	W 103 47 42.92
LL Crossed	11805.00	67.91	348.27	11582.96	592.83	592.57	108.26	8.19	445859.07	707728.05	N 32 13 28.55	W 103 47 42.92
	11811.00	68.39	348.41	11585.20	598.28	598.02	107.14	8.19	445864.52	707726.92	N 32 13 28.61	W 103 47 42.94
	11905.00	70.81	352.25	11617.97	685.07	684.85	92.37	4.61	445951.35	707712.15	N 32 13 29.47	W 103 47 43.10
100' FSL Crossed	11914.00	71.65	352.66	11620.87	693.52	693.30	91.25	10.32	445959.80	707711.03	N 32 13 29.55	W 103 47 43.12
	11999.00	79.67	356.34	11641.91	775.39	775.19	83.41	10.32	446041.69	707703.19	N 32 13 30.36	W 103 47 43.20
	12094.00	90.40	0.22	11650.12	869.83	869.64	80.60	12.00	446136.13	707700.38	N 32 13 31.29	W 103 47 43.23
	12193.00	89.53	0.11	11650.18	968.83	968.64	80.88	0.89	446235.12	707700.67	N 32 13 32.27	W 103 47 43.22
	12288.00	91.91	358.09	11648.98	1063.80	1063.61	79.39	3.29	446330.08	707699.18	N 32 13 33.21	W 103 47 43.23
	12382.00	88.33	353.81	11648.79	1157.51	1157.33	72.75	5.94	446423.80	707692.54	N 32 13 34.14	W 103 47 43.30
	12477.00	87.89	351.03	11651.84	1251.59	1251.45	60.23	2.95	446517.81	707680.02	N 32 13 35.07	W 103 47 43.44
	12666.00	88.57	353.10	11657.51	1438.62	1438.54	34.15	1.14	446704.99	707653.94	N 32 13 36.93	W 103 47 43.74
	12761.00	88.74	353.34	11659.74	1532.90	1532.85	22.94	0.31	446799.30	707642.73	N 32 13 37.86	W 103 47 43.86
Exit Target Box	12832.00	89.86	354.57	11660.61	1603.48	1603.45	15.47	2.34	446869.89	707635.25	N 32 13 38.56	W 103 47 43.95
	12855.00	90.22	354.97	11660.60	1626.38	1626.35	13.37	2.34	446892.79	707633.16	N 32 13 38.79	W 103 47 43.97
	12949.00	90.29	355.45	11660.18	1720.03	1720.02	5.52	0.52	446986.46	707625.31	N 32 13 39.71	W 103 47 44.05
	13044.00	91.35	355.45	11658.82	1814.70	1814.71	-2.02	1.12	447081.14	707617.18	N 32 13 40.65	W 103 47 44.14
	13139.00	91.46	355.37	11656.49	1909.35	1909.38	-9.62	0.14	447175.80	707610.18	N 32 13 41.59	W 103 47 44.22
	13234.00	91.28	357.03	11654.22	2004.10	2004.14	-15.91	1.76	447270.56	707603.88	N 32 13 42.53	W 103 47 44.29
	13328.00	91.22	359.00	11652.17	2098.00	2098.06	-19.16	2.10	447364.47	707600.63	N 32 13 43.45	W 103 47 44.32
	13422.00	90.80	358.31	11650.51	2191.96	2192.02	-21.37	0.86	447458.42	707598.42	N 32 13 44.38	W 103 47 44.34
	13516.00	91.32	0.14	11648.77	2285.92	2285.99	-22.64	2.02	447552.39	707597.15	N 32 13 45.31	W 103 47 44.35
	13611.00	90.98	359.43	11646.86	2380.90	2380.97	-23.00	0.83	447647.36	707596.79	N 32 13 46.25	W 103 47 44.35
	13705.00	91.39	358.27	11644.92	2474.86	2474.92	-24.88	1.31	447741.31	707594.91	N 32 13 47.18	W 103 47 44.36
	13800.00	90.32	0.25	11643.50	2569.83	2569.90	-26.11	2.37	447836.28	707593.68	N 32 13 48.12	W 103 47 44.37
	13894.00	90.05	1.21	11643.20	2663.82	2663.89	-24.91	1.06	447930.27	707594.88	N 32 13 49.05	W 103 47 44.35
	13989.00	90.80	1.68	11642.49	2758.79	2758.86	-22.52	0.93	448025.23	707597.27	N 32 13 49.99	W 103 47 44.32
	14083.00	90.15	1.46	11641.71	2852.76	2852.82	-19.94	0.73	448119.18	707599.85	N 32 13 50.92	W 103 47 44.28
	14178.00	90.25	359.09	11641.38	2947.75	2947.81	-19.49	2.50	448214.17	707600.31	N 32 13 51.86	W 103 47 44.27
	14273.00	90.53	359.11	11640.74	3042.74	3042.80	-20.98	0.30	448309.15	707598.81	N 32 13 52.80	W 103 47 44.29
	14367.00	90.56	359.03	11639.84	3136.71	3136.78	-22.50	0.09	448403.13	707597.29	N 32 13 53.73	W 103 47 44.30
	14461.00	90.49	358.57	11638.98	3230.68	3230.75	-24.47	0.49	448497.10	707595.32	N 32 13 54.66	W 103 47 44.32
	14556.00	90.22	358.52	11638.39	3325.65	3325.72	-26.88	0.29	448592.06	707592.91	N 32 13 55.60	W 103 47 44.34
	14651.00	89.74	357.76	11638.42	3420.59	3420.67	-29.97	0.95	448687.00	707589.82	N 32 13 56.54	W 103 47 44.37
	14745.00	89.02	359.38	11639.44	3514.54	3514.63	-32.31	1.89	448780.96	707587.48	N 32 13 57.47	W 103 47 44.39
	14839.00	89.50	0.64	11640.66	3608.53	3608.62	-32.30	1.43	448874.94	707587.49	N 32 13 58.40	W 103 47 44.38
	14934.00	89.15	0.70	11641.78	3703.52	3703.61	-31.19	0.37	448969.92	707588.61	N 32 13 59.34	W 103 47 44.37
	15123.00	88.50	359.48	11645.65	3892.48	3892.56	-30.89	0.73	449158.87	707588.90	N 32 14 1.21	W 103 47 44.35
	15218.00	88.53	0.75	11648.11	3987.44	3987.53	-30.70	1.34	449253.83	707589.09	N 32 14 2.15	W 103 47 44.34
	15312.00	89.81	2.16	11649.47	4081.40	4081.49	-28.31	2.03	449347.78	707591.48	N 32 14 3.08	W 103 47 44.31
	15406.00	89.08	2.48	11650.39	4175.33	4175.40	-24.51	0.85	449441.69	707595.28	N 32 14 4.01	W 103 47 44.26
	15501.00	88.02	1.88	11652.79	4270.24	4270.30	-20.89	1.28	449536.58	707598.90	N 32 14 4.95	W 103 47 44.21
	15595.00	89.46	3.85	11654.86	4364.10	4364.16	-16.20	2.60	449630.43	707603.59	N 32 14 5.88	W 103 47 44.15
	15785.00	90.12	6.99	11655.55	4553.27	4553.28	1.75	1.69	449819.54	707621.54	N 32 14 7.75	W 103 47 43.93
Enter Target Box	15801.00	90.00	7.27	11655.54	4569.15	4569.16	3.73	1.89	449835.42	707623.52	N 32 14 7.91	W 103 47 43.91
	15879.00	89.39	8.61	11655.95	4646.43	4646.41	14.50	1.89	449912.86	707634.29	N 32 14 8.67	W 103 47 43.78
	15974.00	89.98	5.09	11657.38	4740.75	4740.70	25.83	3.74	450006.95	707645.82	N 32 14 9.60	W 103 47 43.64
	16069.00	88.71	1.45	11659.39	4835.57	4835.51	31.25	3.83	450101.75	707651.04	N 32 14 10.54	W 103 47 43.57
	16164.00	89.63	359.57	11660.76	4930.55	4930.49	32.09	2.20	450			

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	19381.00	90.97	358.00	11660.07	8142.09	8142.01	42.66	0.28	453408.05	707662.45	N 32 14 43.26	W 103 47 43.25
	19476.00	91.80	354.94	11657.77	8236.85	8236.79	36.81	3.34	453502.82	707656.60	N 32 14 44.19	W 103 47 43.31
	19570.00	91.28	356.03	11655.24	8330.51	8330.46	29.42	1.28	453596.49	707649.21	N 32 14 45.12	W 103 47 43.39
	19731.00	90.53	0.90	11652.70	8491.37	8491.33	25.11	3.06	453757.35	707644.90	N 32 14 46.71	W 103 47 43.43
	19854.00	90.89	358.68	11651.17	8614.35	8614.32	24.66	1.83	453880.33	707644.44	N 32 14 47.93	W 103 47 43.43
	20043.00	90.41	355.62	11649.03	8803.06	8803.05	15.26	1.64	454069.05	707635.05	N 32 14 49.80	W 103 47 43.53
	20137.00	91.34	356.16	11647.59	8896.79	8896.79	8.52	1.14	454162.79	707628.31	N 32 14 50.73	W 103 47 43.60
	20232.00	91.51	354.13	11645.23	8991.39	8991.42	0.49	2.14	454257.41	707620.28	N 32 14 51.66	W 103 47 43.69
Exit Target Box 2	20388.00	95.01	354.72	11636.36	9146.34	9146.40	-14.65	2.27	454412.38	707605.14	N 32 14 53.20	W 103 47 43.86
	20421.00	95.75	354.84	11633.27	9179.05	9179.12	-17.64	2.27	454445.10	707602.15	N 32 14 53.52	W 103 47 43.89
	20515.00	96.37	359.32	11623.34	9272.37	9272.45	-22.40	4.78	454538.42	707597.39	N 32 14 54.45	W 103 47 43.94
	20610.00	94.40	3.37	11614.42	9366.90	9366.98	-20.18	4.72	454632.95	707599.61	N 32 14 55.38	W 103 47 43.91
Enter Target Box 2	20668.00	91.94	4.89	11611.21	9424.67	9424.73	-16.01	4.98	454690.70	707603.78	N 32 14 55.95	W 103 47 43.86
	20705.00	90.37	5.85	11610.47	9461.50	9461.56	-12.55	4.98	454727.52	707607.24	N 32 14 56.32	W 103 47 43.81
	20799.00	91.89	3.94	11608.61	9555.16	9555.19	-4.53	2.60	454821.15	707615.26	N 32 14 57.24	W 103 47 43.71
	20894.00	91.10	2.57	11606.13	9649.98	9650.01	0.86	1.66	454915.96	707620.65	N 32 14 58.18	W 103 47 43.65
	20989.00	91.37	1.93	11604.09	9744.89	9744.91	4.59	0.73	455010.85	707624.38	N 32 14 59.12	W 103 47 43.60
	21083.00	91.51	2.51	11601.72	9838.80	9838.81	8.23	0.63	455104.75	707628.02	N 32 15 0.05	W 103 47 43.55
	21273.00	90.85	2.84	11597.61	10028.57	10028.56	17.10	0.39	455294.49	707636.89	N 32 15 1.93	W 103 47 43.43
	21462.00	90.96	2.81	11594.83	10217.34	10217.31	26.41	0.06	455483.22	707646.20	N 32 15 3.79	W 103 47 43.32
	21557.00	91.17	3.73	11593.06	10312.18	10312.14	31.83	0.99	455578.04	707651.62	N 32 15 4.73	W 103 47 43.25
	21745.00	90.17	359.27	11590.86	10500.07	10500.01	36.75	2.43	455765.91	707656.54	N 32 15 6.59	W 103 47 43.18
	21839.00	92.75	0.05	11588.47	10594.02	10593.97	36.19	2.87	455859.86	707655.98	N 32 15 7.52	W 103 47 43.18
	21934.00	91.47	358.73	11584.97	10688.95	10688.89	35.18	1.93	455954.78	707654.97	N 32 15 8.46	W 103 47 43.19
	22028.00	90.58	357.86	11583.29	10782.88	10782.84	32.38	1.32	456048.72	707652.17	N 32 15 9.39	W 103 47 43.21
Wolfcamp Intersection	22160.76	90.53	359.03	11582.00	10915.57	10915.54	28.78	0.88	456181.41	707648.57	N 32 15 10.70	W 103 47 43.25
	22217.00	90.51	359.53	11581.49	10971.81	10971.77	28.08	0.88	456237.64	707647.87	N 32 15 11.26	W 103 47 43.25
100' FNL Crossed	22290.69	90.39	359.08	11580.91	11045.49	11045.45	27.18	0.64	456311.32	707646.97	N 32 15 11.99	W 103 47 43.26
Final MWD	22341.00	90.30	358.77	11580.61	11095.78	11095.75	26.24	0.64	456361.61	707646.03	N 32 15 12.48	W 103 47 43.27
Proj to TD	22385.00	90.30	358.77	11580.38	11139.77	11139.74	25.30	0.00	456405.60	707645.08	N 32 15 12.92	W 103 47 43.27

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 Sunrise MDP1 8-5 Federal Com 175H Gyro + IFR 0-22385'MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 175H Gyro + IFR 0-22385'MD
	1	26.500	723.690	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 175H
	1	723.690	22385.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 175H

...Original Borehole/Oxy Sunrise MDP1 8-5 Federal Com 175H Gyro + IFR 0-22385'MD