

Schlumberger

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

December 1, 2016

NM OIL CONSERVATION

ARTIFICIAL LIFT

OXY USA INC
5 Greenway Plaza, Suite 110
Houston, TX 77046-052

MAR 03 2017

RECEIVED

Re:

CLIENT: OXY USA INC
WELL: CEDAR CANYON 28 FEDERAL COM 8H
FIELD: PIERCE CROSSING; BONE SPRING, EAST
RIG: H&P 636
COUNTY: Eddy
API NO: 30-015-43819-00-X1
JOB NO: 16MLD1411

29. 24S, 29E, Eddy NM
-32.19509 -104.16528

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>
Leslie Bullard FS	CEDAR CANYON 28 FEDERAL COM 8H Original Hole	286.00 Ft to 13417.00 Ft	October 22, 2016 to November 25, 2016	TelePacer SlimPulse

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

Cody Nelms
Field Service Manager

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

Well Reference:
29. 24S, 29E, Eddy NM
-32.19509 -104.16528

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 October 22, 2016 through November 25, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 286.00 feet to a depth of 13417.00 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 CEDAR CANYON 28 FEDERAL COM 8H Well (Original Hole) API No. 30-015-43819-00-X1 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
FS

Leslie Bullard

Subscribed and Sworn to before me this 1 day of December (month) 2016 (yr)

My Commission expires:

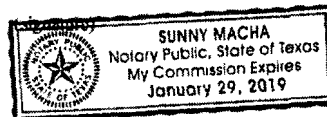
January 29, 2019

Sunny Macha

Notary Public

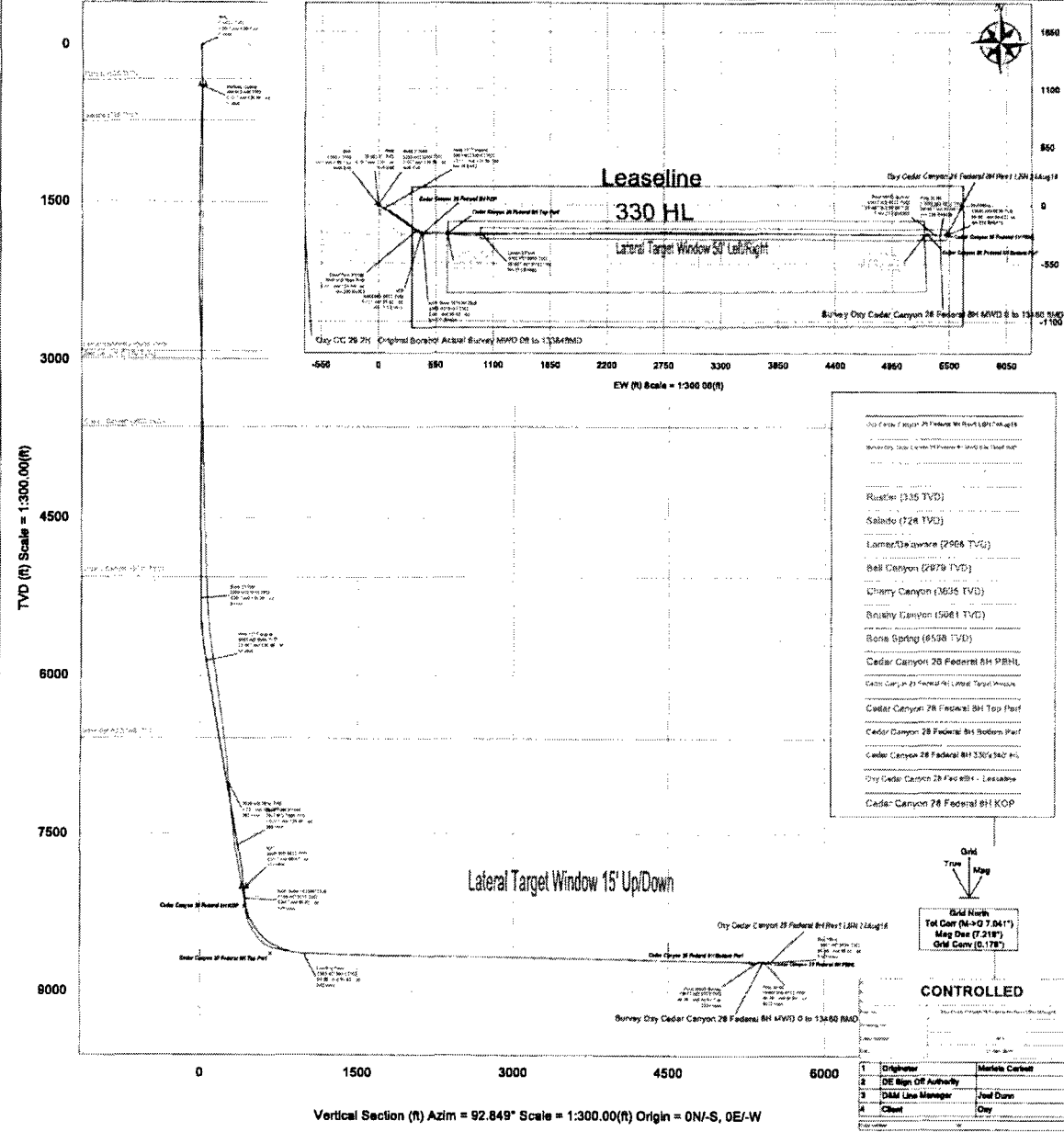
Texas

(County State)



$$RKB = 26.5 \text{ ft}$$

Borehole:				Well:		Field:		Structure:	
Original Borehole				Cedar Canyon 28 Federal SH		NM Eddy County (NAD 27)		Oxy Cedar Canyon 28 Federal SH	
Survey & Magnet Parameters Survey Method: NOBIS 2011 Date: 7/21/17 Time: 09:17 Operator: 72202 Survey Date: 13-Nov-2016 Time: 08:58 Operator: 001003									
Location Lat N 32 11 43.31 Long W 103 55 12.92									
Well Name 246854 29022 Depth 57.172'									
Well Name 295241 29022 Depth 6.909212'									
Structure Name Cedar Canyon 28 Federal SH Depth 70.250'									
Structure Name Oxy Cedar Canyon 28 Federal SH Depth 10.1646'									
Critical Points									
Location	Survey	Lat	Long	Depth	Survey	Lat	Long	Depth	Survey
Location	Survey	Lat	Long	Depth	Survey	Lat	Long	Depth	Survey
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	335.00	0.00	124.59	335.00	0.00	0.00	0.00	0.00	0.00
Surface Casing	490.00	0.00	124.59	490.00	0.00	0.00	0.00	0.00	0.00
Salado	728.00	0.00	124.59	728.00	0.00	0.00	0.00	0.00	0.00
Lamar/Delaware	2906.00	0.00	124.59	2906.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon	2979.00	0.00	124.59	2979.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon	3635.00	0.00	124.59	3635.00	0.00	0.00	0.00	0.00	0.00
Bruary Canyon	5061.00	0.00	124.59	5061.00	0.00	0.00	0.00	0.00	0.00
Build 27100	5293.00	0.00	124.59	5293.00	0.00	0.00	0.00	0.00	0.00
Hold 125 Tangent	5862.00	0.00	124.59	5862.00	0.00	0.00	0.00	0.00	0.00
Stone Spring	6618.00	12.00	124.59	6599.00	328.20	186.85	-124.72	180.88	32.11-41.082
Drop/Trip 2100	7647.00	12.00	124.59	7603.74	462.97	346.80	-248.03	356.81	32.11-39.876
ICP	8062.00	0.00	90.02	8077.41	154.65	154.65	-270.76	154.65	32.11-39.876
NOBIS 4052.42	5.00	90.02	8017.45	6041.65	425.88	-270.76	410.93	32.11-39.829	32.11-39.829
KGFP Build 107/100.5	8165.42	5.00	90.02	8117.07	5414.23	435.28	-270.76	418.84	32.11-39.629
Landing Point	9005.22	0.00	90.02	9040.00	6064.20	962.48	-270.76	962.23	32.11-39.610
Dist 6914	12800.75	6.99	90.02	07820.00	5744.20	5481.82	-272.51	5475.04	32.11-39.452





Survey Oxy Cedar Canyon 28 Federal 8H MWD 0 to 13460 ftMD Survey **Geodetic Report** (Def Survey)

Report Date:	November 27, 2016 - 08:38 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	92.849 ° (Grid North)
Field:	NM Eddy County (NAD 27)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Cedar Canyon 28 Federal 8H / Cedar Canyon 28 Federal #8H	TVD Reference Datum:	RKB
Well:	Cedar Canyon 28 Federal 8H	TVD Reference Elevation:	2975.800 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	2949.300 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	7.219 °
Survey Name:	Survey Oxy Cedar Canyon 28 Federal 8H MWD 0 to 13460 ftMD	Total Gravity Field Strength:	998.4646mgn (9.80665 Based)
Survey Date:	November 19, 2016	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	193.876 ° / 5559.975 ft / 6.222 / 0.638	Total Magnetic Field Strength:	48179.722 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.042 °
Location Lat / Long:	N 32° 11' 42.32136", W 103° 59' 55.00989"	Declination Date:	November 19, 2016
Location Grid N/E Y/X:	N 434854.560 RUS, E 603541.220 RUS	Magnetic Declination Model:	HDGM 2016
CRS Grid Convergence Angle:	0.1783 °	North Reference:	Grid North
Grid Scale Factor:	0.99992137	Grid Convergence Used:	0.1783 °
Version / Patch:	2.10.254.0	Total Corr Mag North-Grid North:	7.0410 °
		Local Coord Referenced To:	Structure Reference Point

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 ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	434854.56	603541.22	N 32 11 42.32	W 103 59 55.01
RKB	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	434854.56	603541.22	N 32 11 42.32	W 103 59 55.01
	286.00	0.68	323.92	285.99	-0.97	1.24	-0.91	0.26	434855.80	603540.31	N 32 11 42.33	W 103 59 55.02
	352.00	0.77	31.65	351.99	-1.00	1.94	-0.90	1.23	434856.50	603540.32	N 32 11 42.34	W 103 59 55.02
	443.00	1.60	243.72	442.98	-1.82	1.90	-1.72	2.52	434856.46	603539.50	N 32 11 42.34	W 103 59 55.03
	471.00	2.31	263.98	470.98	-2.71	1.66	-2.63	3.50	434856.22	603538.59	N 32 11 42.34	W 103 59 55.04
499.00	2.22	260.05	498.94	-3.80	1.51	-3.73	0.64	434856.07	603537.49	N 32 11 42.34	W 103 59 55.05	
535.00	2.24	263.74	534.91	-5.18	1.31	-5.12	0.40	434855.87	603536.10	N 32 11 42.33	W 103 59 55.07	
626.00	2.35	261.33	625.94	-8.76	0.84	-8.73	0.16	434855.40	603532.49	N 32 11 42.33	W 103 59 55.11	
672.00	2.37	259.36	671.80	-10.61	0.52	-10.60	0.18	434855.08	603530.63	N 32 11 42.33	W 103 59 55.13	
718.00	2.35	256.77	717.76	-12.44	0.13	-12.45	0.24	434854.69	603528.77	N 32 11 42.32	W 103 59 55.15	
768.00	2.57	258.15	767.72	-14.51	-0.33	-14.54	0.46	434854.23	603526.68	N 32 11 42.32	W 103 59 55.18	
901.00	1.80	266.25	900.62	-19.47	-1.08	-19.55	0.62	434853.48	603521.68	N 32 11 42.31	W 103 59 55.24	
993.00	0.48	335.23	992.60	-21.08	-0.83	-21.15	1.84	434853.73	603520.07	N 32 11 42.31	W 103 59 55.26	
1083.00	0.46	333.34	1082.60	-21.43	-0.16	-21.47	0.03	434854.40	603519.75	N 32 11 42.32	W 103 59 55.26	
1178.00	0.73	342.34	1177.59	-21.83	0.75	-21.82	0.30	434855.31	603519.40	N 32 11 42.33	W 103 59 55.28	
1273.00	0.84	353.66	1272.59	-22.16	2.02	-22.08	0.20	434856.58	603519.14	N 32 11 42.34	W 103 59 55.27	
1367.00	0.88	355.95	1366.57	-22.35	3.43	-22.21	0.06	434857.99	603519.01	N 32 11 42.36	W 103 59 55.27	
1462.00	1.08	356.59	1461.56	-22.54	5.05	-22.32	0.21	434859.61	603518.91	N 32 11 42.37	W 103 59 55.27	
1557.00	0.97	338.32	1556.55	-22.97	6.69	-22.67	0.36	434861.25	603518.55	N 32 11 42.39	W 103 59 55.27	
1652.00	1.23	303.54	1651.53	-24.18	8.00	-23.81	0.74	434862.56	603517.41	N 32 11 42.40	W 103 59 55.29	
1746.00	1.56	285.93	1745.50	-26.30	8.91	-25.89	0.57	434863.47	603515.34	N 32 11 42.41	W 103 59 55.31	
1839.00	1.08	294.55	1838.48	-28.34	9.82	-27.90	0.56	434864.18	603513.32	N 32 11 42.42	W 103 59 55.33	
1932.00	0.24	312.79	1931.47	-29.31	10.12	-28.84	0.92	434864.68	603512.38	N 32 11 42.42	W 103 59 55.35	
2025.00	0.42	258.75	2024.47	-29.79	10.18	-29.32	0.37	434864.74	603511.91	N 32 11 42.42	W 103 59 55.35	
2118.00	0.42	223.22	2117.47	-30.34	9.87	-29.88	0.28	434864.43	603511.34	N 32 11 42.42	W 103 59 55.36	
2213.00	1.23	128.97	2212.46	-29.74	8.97	-29.33	1.40	434863.53	603511.89	N 32 11 42.41	W 103 59 55.35	
2307.00	1.74	124.45	2306.43	-27.71	7.53	-27.37	0.56	434862.09	603513.85	N 32 11 42.40	W 103 59 55.33	
2402.00	2.24	114.42	2401.37	-24.75	5.95	-24.49	0.84	434860.51	603516.73	N 32 11 42.38	W 103 59 55.29	
2497.00	3.19	118.96	2496.26	-20.65	3.90	-20.49	1.02	434858.46	603520.74	N 32 11 42.36	W 103 59 55.25	
2592.00	3.38	130.94	2591.11	-18.08	0.79	-18.06	0.75	434855.35	603525.18	N 32 11 42.33	W 103 59 55.20	
2686.00	3.30	142.50	2684.95	-12.14	-3.18	-12.32	0.72	434851.38	603528.90	N 32 11 42.29	W 103 59 55.15	
2781.00	2.18	132.06	2779.84	-8.97	-6.56	-9.31	1.29	434848.00	603531.91	N 32 11 42.26	W 103 59 55.12	
2876.00	1.96	127.57	2874.78	-6.24	-8.76	-6.68	0.29	434845.80	603534.54	N 32 11 42.23	W 103 59 55.09	
2971.00	1.85	130.16	2969.72	-3.68	-10.74	-4.22	0.15	434843.82	603537.00	N 32 11 42.22	W 103 59 55.06	
3066.00	1.80	128.72	3064.88	-1.26	-12.66	-1.89	0.07	434841.90	603539.33	N 32 11 42.20	W 103 59 55.03	
3160.00	1.78	128.88	3158.83	1.12	-14.50	0.40	0.02	434840.06	603541.62	N 32 11 42.18	W 103 59 55.01	
3255.00	1.45	107.85	3253.59	3.48	-15.79	2.69	0.71	434838.77	603543.91	N 32 11 42.17	W 103 59 54.98	
3350.00	1.32	98.12	3348.57	5.73	-16.32	4.92	0.28	434838.24	603546.14	N 32 11 42.16	W 103 59 54.95	
3445.00	1.41	97.33	3443.54	7.98	-16.62	7.16	0.10	434837.94	603548.38	N 32 11 42.16	W 103 59 54.93	
3540.00	1.34	99.32	3538.51	10.25	-16.95	9.42	0.09	434837.61	603550.64	N 32 11 42.15	W 103 59 54.90	
3635.00	1.43	100.29	3633.48	12.53	-17.34	11.68	0.10	434837.22	603552.90	N 32 11 42.15	W 103 59 54.87	
3729.00	1.47	98.20	3727.45	14.89	-17.72	14.03	0.07	434836.84	603555.25	N 32 11 42.15	W 103 59 54.85	
3824.00	1.43	100.00	3822.42	17.28	-18.10	16.40	0.06	434836.46	603557.62	N 32 11 42.14	W 103 59 54.82	
3919.00	1.43	97.71	3917.39	19.64	-18.47	18.75	0.06	434836.09	603559.98	N 32 11 42.14	W 103 59 54.79	
4014.00	1.47	98.87	4012.36	22.03	-18.81	21.12	0.05	434835.75	603562.34	N 32 11 42.13	W 103 59 54.76	
4109.00	1.58	95.30	4107.33	24.55	-19.12	23.83	0.15	434835.44	603564.85	N 32 11 42.13	W 103 59 54.74	
4204.00	1.63	93.33	4202.29	27.21	-19.32	26.28	0.08	434835.24	603567.50	N 32 11 42.13	W 103 59 54.70	
4298.00	1.85	94.14	4296.25	29.90	-19.50	28.97	0.03	434835.06	603570.19	N 32 11 42.13	W 103 59 54.67	
4393.00	1.74	115.04	4391.21	32.81	-20.21	31.64	0.65	434834.38	603572.86	N 32 11 42.12	W 103 59 54.64	
4488.00	1.91	119.09	4486.16	35.36	-21.59	34.33	0.22	434832.97	603575.55	N 32 11 42.11	W 103 59 54.61	
4583.00	1.91	121.23	4581.11	38.17	-23.18	37.07	0.08	434831.38	603578.28	N 32 11 42.09	W 103 59 54.58	
4678.00	2.00	118.75	4676.06	41.06	-24.80	39.87	0.13	434829.77	603581.09	N 32 11 42.07	W 103 59 54.55	
4772.00	2.04	119.41	4770.00	44.03	-26.41	42.77	0.05	434828.16	603583.99	N 32 11 42.06	W 103 59 54.51	
4867.00	2.20	119.74	4864.93	47.17	-28.14	45.83	0.17	434826.42	603587.04	N 32 11 42.04	W 103 59 54.48	
4962.00	2.28	121.87	4959.86	50.44	-30.03	49.00	0.10	434824.53	603590.22	N 32 11 42.02	W 103 59 54.44	
5145.00	1.87	123.36	5142.74	56.17	-33.57	54.57	0.22	434821.00	603595.78	N 32 11 41.99	W 103 59 54.38	
5240.00	2.80	123.58	5237.66	59.57	-35.75	57.87	1.08	434818.82	603599.08	N 32 11 41.97	W 103 59 54.34	
5335.00	4.42	118.91	5332.46	64.93	-38.84	63.07	1.63	434815.72	603604.29	N 32 11 41.94	W 103 59 54.28	
5431.00	4.90	118.90	5428.14	71.93	-42.61	69.90	0.50	434811.95	603611.12	N 32 11 41.90	W 103 59 54.20	
5524.00	5.85	117.73	5520.79	79.80	-46.74	77.57	1.03	434807.82	603618.79	N 32 11 41.86	W 103 59 54.11	
5619.00	6.92	114.85	5615.14	89.50	-51.40	87.05	1.18	434803.17	603628.27	N 32 11 41.81	W 103 59 54.00	
5715.00	8.61	116.80	5710.26	101.43	-57.07	98.71	1.78	434797.50	603639.93	N 32 11 41.75	W 103 59 53.88	
5809.00	10.24	122.11	5802.99	115.15	-64.68	112.07	1.96	434789.88	603653.28	N 32 11 41.68	W 103 59 53.71	
5904.00	10.66	124.39	5896.41	130.01	-74.13	126.48	0.62	434780.43	603667.69	N 32 11 41.58	W 103 59 53.54	
5999.00	10.46	123.93	5889.81	144.88	-83.81	140.88	0.23	434770.66	603682.09	N 32 11 41.49	W 103 59 53.37	
6094.00	10.46	123.63	6083.23	159.67	-93.50	155.22	0.06	434761.07	603696.43	N 32 11 41.39	W 103 59 53.21	
6188.00	10.33	123.96	6175.68	174.22	-102.93	169.31	0.15	434751.64	603710.52	N 32 11 41.30	W 103 59 53.04	
6283.00	10.20	124.57	6269.16	188.67	-112.46	183.30	0.18	434742.11	603724.51	N 32 11 41.20	W 103 59 52.88	
6378.00	9.84	124.87	6362.71	202.71	-121.88	196.89	0.38	434732.69	603738.10	N 32 11 41.11	W 103 59 52.72	
6567.00	9.08	124.10	6549.14	229.15	-139.47	222.49	0.41	434715.10	603763.69	N 32 11 40.93	W 103 59 52.48	

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 ° ' '')
	8757.00	7.36	121.56	6737.18	252.64	-154.25	245.28	0.93	434700.32	603786.48	N 32 11 40.79 W	103 59 52.16
	8857.00	6.75	120.47	6836.43	263.47	-160.58	255.80	0.62	434693.99	603797.00	N 32 11 40.72 W	103 59 52.04
	8905.00	6.39	120.29	6884.11	268.34	-163.36	260.54	0.75	434691.21	603801.74	N 32 11 40.70 W	103 59 51.88
	8951.00	5.60	115.97	6929.86	272.66	-165.67	264.75	1.87	434688.91	603805.95	N 32 11 40.67 W	103 59 51.94
	7046.00	4.72	115.10	7024.47	280.51	-169.43	272.42	0.94	434685.15	603813.62	N 32 11 40.64 W	103 59 51.85
	7140.00	5.74	124.16	7118.08	288.10	-173.71	279.81	1.39	434680.87	603821.01	N 32 11 40.59 W	103 59 51.78
	7235.00	7.85	126.38	7212.41	297.57	-180.22	288.97	2.24	434674.35	603830.16	N 32 11 40.53 W	103 59 51.65
	7330.00	7.38	127.13	7306.57	308.02	-187.76	299.05	0.51	434666.82	603840.25	N 32 11 40.45 W	103 59 51.54
	7424.00	7.58	128.92	7399.77	318.02	-195.29	308.69	0.33	434658.28	603849.89	N 32 11 40.38 W	103 59 51.42
	7519.00	6.66	127.41	7494.04	327.62	-202.58	317.94	0.99	434652.00	603859.14	N 32 11 40.31 W	103 59 51.32
	7614.00	8.70	130.31	7588.18	337.86	-210.57	327.80	2.19	434644.00	603868.99	N 32 11 40.23 W	103 59 51.20
	7709.00	10.28	125.48	7681.88	350.62	-220.26	340.09	1.79	434634.32	603881.29	N 32 11 40.13 W	103 59 51.08
	7803.00	9.87	116.91	7774.44	364.96	-228.90	354.02	1.83	434625.68	603895.21	N 32 11 40.05 W	103 59 50.90
	7898.00	9.54	109.36	7868.08	379.95	-235.19	368.71	1.38	434619.39	603909.90	N 32 11 39.98 W	103 59 50.73
	7959.00	10.90	106.04	7928.11	390.41	-238.48	379.02	2.43	434616.12	603920.21	N 32 11 39.95 W	103 59 50.61
	8078.00	12.91	119.82	8044.57	413.24	-248.14	401.40	2.89	434606.44	603942.59	N 32 11 39.85 W	103 59 50.35
	8172.00	7.43	96.89	8137.09	428.69	-254.07	416.58	7.12	434600.51	603957.77	N 32 11 39.78 W	103 59 50.17
	8265.00	10.44	111.09	8228.96	442.70	-257.82	430.42	3.99	434596.76	603971.60	N 32 11 39.76 W	103 59 50.01
	8286.00	11.71	105.18	8249.57	448.59	-259.07	434.25	8.10	434595.52	603975.43	N 32 11 39.74 W	103 59 49.87
	8384.00	19.14	84.69	8344.04	472.26	-260.18	459.90	9.29	434594.40	604001.08	N 32 11 39.73 W	103 59 49.67
	8431.00	25.81	88.91	8387.45	490.12	-259.28	477.82	14.59	434595.30	604019.00	N 32 11 39.74 W	103 59 49.46
	8477.00	31.10	91.08	8427.88	512.00	-259.31	499.73	11.72	434595.27	604040.91	N 32 11 39.74 W	103 59 49.20
	8570.00	44.14	93.87	8501.39	568.63	-261.96	556.30	14.14	434592.62	604087.47	N 32 11 39.71 W	103 59 48.55
	8663.00	58.82	98.19	8559.30	640.94	-269.84	628.31	15.98	434584.74	604169.48	N 32 11 39.63 W	103 59 47.71
	8724.00	68.93	95.85	8596.22	695.44	-276.47	682.54	17.25	434578.11	604223.71	N 32 11 39.56 W	103 59 47.08
	8755.00	71.76	95.13	8596.65	724.60	-279.26	711.60	9.39	434575.32	604252.76	N 32 11 39.54 W	103 59 46.74
	8787.00	73.87	94.70	8606.10	755.15	-281.89	742.06	6.72	434572.70	604283.22	N 32 11 39.51 W	103 59 46.39
	8817.00	77.55	94.56	8613.51	784.21	-284.23	771.03	12.27	434570.35	604312.19	N 32 11 39.48 W	103 59 46.05
	8848.00	79.92	94.31	8619.56	814.60	-286.58	801.34	7.69	434568.00	604342.50	N 32 11 39.46 W	103 59 45.70
	8875.00	80.78	93.62	8624.09	841.21	-288.42	827.89	4.06	434566.16	604369.05	N 32 11 39.44 W	103 59 45.39
	8910.00	82.38	91.90	8629.21	875.83	-290.09	862.47	6.67	434564.50	604403.62	N 32 11 39.42 W	103 59 44.98
	8941.00	85.28	88.88	8632.54	906.61	-290.29	893.29	13.46	434564.29	604434.44	N 32 11 39.42 W	103 59 44.63
	9012.00	85.84	86.63	8638.04	977.12	-287.52	964.01	3.26	434567.06	604505.16	N 32 11 39.45 W	103 59 43.80
	9105.00	87.87	87.02	8643.14	1069.46	-282.38	1058.73	2.22	434572.20	604587.86	N 32 11 39.49 W	103 59 42.72
	9188.00	89.18	90.24	8645.54	1162.16	-280.18	1148.66	3.74	434574.43	604680.78	N 32 11 39.51 W	103 59 41.64
	9291.00	88.76	89.36	8647.21	1255.01	-279.83	1242.84	1.05	434574.75	604783.76	N 32 11 39.51 W	103 59 40.56
	9383.00	88.62	88.70	8649.31	1346.78	-278.27	1334.80	0.73	434576.31	604875.71	N 32 11 39.53 W	103 59 39.49
	9478.00	88.56	88.95	8651.60	1439.53	-276.37	1427.55	0.28	434578.21	604968.66	N 32 11 39.54 W	103 59 38.41
	9569.00	89.28	89.17	8653.35	1532.31	-274.84	1520.52	0.81	434579.74	605061.82	N 32 11 39.55 W	103 59 37.33
	9662.00	88.07	89.14	8655.51	1625.09	-273.47	1613.49	1.30	434581.11	605154.58	N 32 11 39.57 W	103 59 36.24
	9755.00	88.45	89.38	8658.33	1717.86	-272.27	1706.44	0.48	434582.31	605247.52	N 32 11 39.57 W	103 59 35.16
	9849.00	89.79	89.20	8659.77	1811.67	-271.11	1800.42	1.44	434583.48	605341.49	N 32 11 39.58 W	103 59 34.07
	10036.00	89.83	88.57	8660.39	1908.22	-267.47	1897.38	0.34	434587.11	605528.44	N 32 11 39.61 W	103 59 31.89
	10129.00	89.00	89.04	8661.34	2090.98	-265.53	2080.35	1.03	434589.05	605621.40	N 32 11 39.63 W	103 59 30.81
	10222.00	88.90	88.88	8663.05	2183.76	-263.92	2173.32	0.13	434590.66	605714.37	N 32 11 39.64 W	103 59 29.73
	10315.00	88.83	89.11	8664.89	2276.53	-262.37	2266.29	0.16	434592.21	605807.33	N 32 11 39.65 W	103 59 28.65
	10409.00	88.80	89.21	8666.83	2370.32	-260.99	2360.26	0.11	434593.59	605901.29	N 32 11 39.67 W	103 59 27.55
	10501.00	88.93	88.92	8668.68	2462.10	-259.49	2452.23	0.35	434595.09	605993.25	N 32 11 39.68 W	103 59 26.48
	10595.00	89.45	88.97	8669.98	2555.87	-257.76	2546.21	0.58	434596.82	606087.22	N 32 11 39.69 W	103 59 25.39
	10688.00	89.55	88.79	8670.80	2648.64	-256.94	2638.18	0.22	434598.64	606180.19	N 32 11 39.71 W	103 59 24.31
	10780.00	89.76	88.99	8671.35	2740.42	-254.16	2731.16	0.32	434600.42	606272.16	N 32 11 39.72 W	103 59 23.24
	10874.00	89.45	90.82	8672.00	2834.29	-254.01	2825.16	1.97	434600.57	606366.15	N 32 11 39.72 W	103 59 22.14
	10967.00	89.35	90.75	8672.97	2927.23	-255.28	2918.14	0.13	434599.30	606459.13	N 32 11 39.70 W	103 59 21.08
	11061.00	89.59	90.70	8673.84	3021.18	-256.47	3012.13	0.26	434598.11	606553.11	N 32 11 39.69 W	103 59 19.97
	11154.00	88.97	91.05	8675.01	3114.10	-257.89	3105.11	0.77	434596.69	606646.08	N 32 11 39.67 W	103 59 18.89
	11248.00	90.45	91.04	8675.49	3208.04	-259.80	3199.09	1.57	434594.98	606740.08	N 32 11 39.65 W	103 59 17.79
	11341.00	88.42	90.46	8676.40	3300.97	-260.82	3292.08	2.27	434593.76	606833.03	N 32 11 39.64 W	103 59 16.71
	11434.00	87.42	90.85	8679.78	3393.84	-261.72	3385.01	1.09	434592.86	606925.96	N 32 11 39.63 W	103 59 15.63
	11527.00	89.52	90.78	8683.07	3486.71	-262.88	3477.94	1.19	434591.70	607018.88	N 32 11 39.61 W	103 59 14.55
	11620.00	90.07	90.74	8684.22	3579.64	-264.12	3570.92	1.67	434590.47	607111.86	N 32 11 39.60 W	103 59 13.47
	11807.00	88.14	90.54	8687.14	3768.47	-268.20	3757.88	1.04	434588.38	607298.80	N 32 11 39.57 W	103 59 11.29
	11899.00	89.59	90.54	8688.96	3858.37	-267.07	3849.86	1.58	434587.51	607390.77	N 32 11 39.56 W	103 59 10.22
	11993.00	89.55	90.75	8689.86	3952.30	-268.13	3943.85	0.23	434586.45	607484.75	N 32 11 39.54 W	103 59 9.13
	12087.00	90.72	90.98	8689.44	4046.24	-269.55	4037.84	1.27	434585.03	607578.73	N 32 11 39.53 W	103 59 8.03
	12180.00	88.35	90.19	8690.20	4139.16	-270.50	4130.82	2.69	434584.08	607671.71	N 32 11 39.51 W	103 59 6.95
	12273.00	89.04	90.49	8692.32	4232.05	-271.05	4223.79	0.81	434583.53	607764.67	N 32 11 39.51 W	103 59 5.87
	12367.00	86.90	90.81	8695.65	4325.91	-271.95	4317.72	2.28	434582.63	607858.80	N 32 11 39.48 W	103 59 4.78
	12461.00	88.07	90.29	8699.77	4419.73	-272.69	4411.63	1.29	434581.89	607952.49	N 32 11 39.48 W	103 59 3.68
	12553.00	87.18	88.56	8703.58	4511.48	-271.77	4503.54	2.11	434582.82	608044.40	N 32 11 39.49 W	103 59 2.61
	12646.00	88.14	88.83	8706.57	4604.19	-269.85	4596.46	2.13	434584.93	608137.31	N 32 11 39.51 W	103 59 1.53
	12740.00	89.38	88.70	8707.78	4697.84	-267.82	4690.44	0.29	434586.96	608231.28	N 32 11 39.53 W	103 59 0.44
	12833.00	89.93	91.16	8708.34	4790.81	-267.51	4783.43	2.71	434587.07	608324.26	N 32 11 39.52 W	103 59 59.36
	12927.00	89.97	90.83	8708.43	4884.76	-269.14	4877.41	0.35	434585.44	608418.24	N 32 11 39.50 W	103 59 58.26
	13020.00	89.90	90.83	8708.53	4977.70	-270.49	4970.40	0.08	434584.09	608511.22	N 32 11 39.49 W	103 59 57.18
	13114.00	89.88	91.04	8708.89	5071.65	-272.02	5064.39	0.34	434582.56	608605.20	N 32 11 39.47 W	103 59 56.09
	13207.00	90.00	90.79	8709.17	5164.80	-273.51	5157.38	0.45	434581.07	608698.18	N 32 11 39.45 W	103 59 55.01
	13300.00	88.78	91.05	8710.17	5257.54	-275.00						