

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)

NM OIL CONSERVATION
ARTESIA DISTRICT

Schlumberger

OCT 18 2017

RECEIVED

Well Reference:
8. 19S. 29E, Eddy New Mexico
-32.67657 -104.08967

I, Nicholas Araujo certify that: I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of June 30, 2017 through August 08, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 405.00 feet to a depth of 19209.00 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 Turkey Track 9-10 State 32H ST01 Well (Side Track) API No. 30-015-44109-01 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.

Nicholas Araujo

By
Nicholas Araujo
FE

Subscribed and Sworn to before me this 25th day of August (month) 2017 (yr)

My Commission expires:

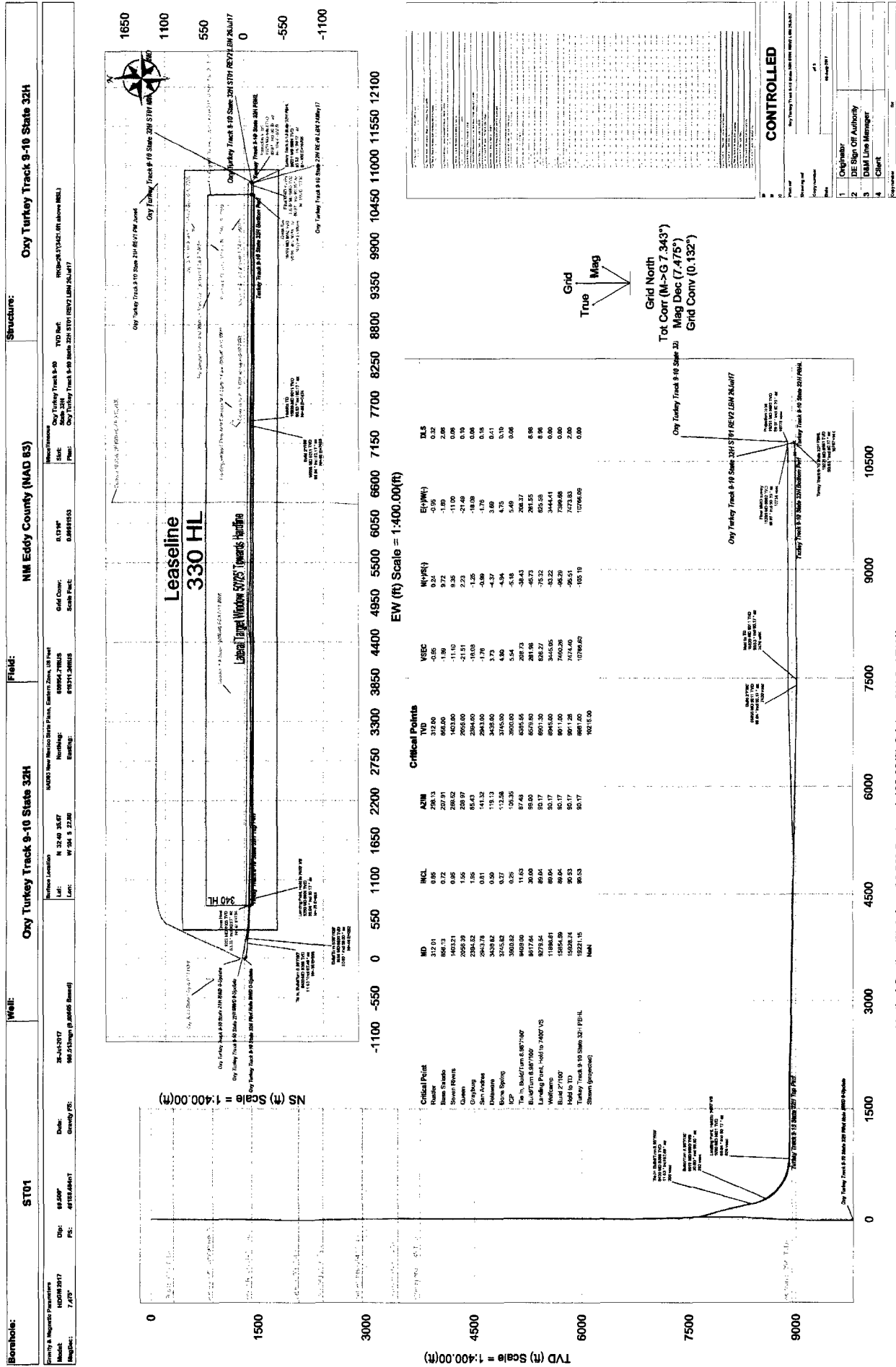
12-20-2020

J. Allemand

Notary Public

Adams County Colorado
(County State)

JENNIFER ALLEMAND
Notary Public
State of Colorado
(signature) ID # 20164047962
My Commission Expires 12-20-2020



Vertical Section (ft) Azim = 90.56° Scale = 1:400.00(ft) Origin = 0N/-S, 0E/-W

Oxy Turkey Track 9-10 State 32H ST01 MWD 0-19251 ftMD Survey Geodetic Report

(Def Survey)



Report Date: August 09, 2017 - 02:05 PM
Client: OXY
Field: NM Eddy County (NAD 83)

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 90.560 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft

Structure / Slot: Oxy Turkey Track 9-10 State 32H / Oxy Turkey Track 9-10 State 32H
TVD Reference Datum: RKB=26.5'

Well: Oxy Turkey Track 9-10 State 32H
TVD Reference Elevation: 3421.800 ft above MSL
Borehole: ST01
Seabed / Ground Elevation: 3395.100 ft above MSL
UWI / APW: Unknown / Unknown
Magnetic Declination: 7.476 °

Survey Name: Oxy Turkey Track 9-10 State 32H ST01 MWD 0-19251 ftMD
Total Gravity Field Strength: 998.5132mgm (9.80665 Based)
Gravity Model: GARM
Survey Date: July 22, 2017
Total Magnetic Field Strength: 48188.752 nT
Tort / AHD / DDI / ERD Ratio: 203.010' / 10875.593 ft / 6.678 / 1.213
Magnetic Dip Angle: 60.509 °
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Declination Date: July 22, 2017
Location Lat / Long: N 32° 40' 35.86540", W 104° 5' 22.80235"
Location Grid N/E Y/X: N 609954.710 NUS, E 616311.240 NUS
Magnetic Declination Model: HDGM 2017
CRS Grid Convergence Angle: 0.1316 °
North Reference: Grid North
Grid Scale Factor: 0.99991553
Grid Convergence Used: 0.1316 °
Version / Patch: 2.10.302.0
Total Corr Mag North-Grid North: 7.3442 °
Local Coord Referenced To: Well Head

Comments	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft/100ft)	(ftUS)	(ftUS)	(N/S ° ' ")	(E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	609954.71	616311.24	N 32 40 35.87	W 104 5 22.80
	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	609954.71	616311.24	N 32 40 35.87	W 104 5 22.80
	129.50	0.60	156.00	129.50	0.22	-0.49	0.22	0.58	609954.22	616311.46	N 32 40 35.86	W 104 5 22.80
	218.50	0.70	318.00	218.50	0.05	-0.51	0.05	1.44	609954.20	616311.29	N 32 40 35.86	W 104 5 22.80
	337.50	0.90	294.00	337.48	-1.30	0.41	-1.30	0.32	609955.12	616309.95	N 32 40 35.87	W 104 5 22.82
	393.50	0.70	349.00	393.48	-1.77	0.92	-1.76	1.36	609955.63	616309.48	N 32 40 35.87	W 104 5 22.82
	406.00	1.07	54.09	404.98	-1.60	1.05	-1.60	8.71	609955.76	616309.55	N 32 40 35.88	W 104 5 22.82
	589.00	1.75	348.14	588.93	-0.92	4.81	-0.87	0.89	609959.52	616310.37	N 32 40 35.71	W 104 5 22.81
	681.00	1.48	346.57	680.90	-1.51	7.34	-1.44	0.30	609982.05	616309.80	N 32 40 35.74	W 104 5 22.82
	772.00	1.11	2.40	771.87	-1.77	9.36	-1.68	0.56	609984.07	616308.58	N 32 40 35.78	W 104 5 22.82
	863.00	0.82	206.02	862.87	-2.02	9.66	-1.92	2.08	609984.37	616308.32	N 32 40 35.78	W 104 5 22.82
	955.00	1.31	269.47	954.85	-3.35	9.06	-3.26	1.30	609983.77	616307.98	N 32 40 35.78	W 104 5 22.84
	1046.00	0.81	283.74	1045.84	-5.02	9.20	-4.93	0.62	609983.91	616306.31	N 32 40 35.78	W 104 5 22.85
	1138.00	1.06	272.87	1137.83	-6.50	9.40	-6.41	0.33	609984.11	616304.83	N 32 40 35.78	W 104 5 22.88
	1324.00	0.96	266.61	1323.80	-9.78	9.39	-9.68	0.08	609994.10	616301.56	N 32 40 35.78	W 104 5 22.92
	1418.00	0.95	270.19	1417.78	-11.34	9.35	-11.25	0.06	609994.06	616299.99	N 32 40 35.78	W 104 5 22.93
	1512.00	0.95	275.81	1511.77	-12.90	9.43	-12.80	0.10	609994.14	616298.44	N 32 40 35.78	W 104 5 22.95
	1606.00	1.18	288.08	1605.76	-14.58	9.80	-14.48	0.33	609994.51	616296.76	N 32 40 35.78	W 104 5 22.97
	1700.00	1.05	285.86	1699.74	-16.35	10.04	-16.25	0.47	609994.75	616294.99	N 32 40 35.77	W 104 5 22.99
	1795.00	1.91	210.68	1794.71	-18.01	8.61	-17.92	1.85	609983.32	616293.32	N 32 40 35.75	W 104 5 23.01
	1889.00	1.58	208.46	1888.67	-19.40	6.13	-19.34	0.36	609980.84	616291.90	N 32 40 35.73	W 104 5 23.03
	1983.00	1.48	209.17	1982.63	-20.69	3.93	-20.55	0.11	609958.64	616290.89	N 32 40 35.70	W 104 5 23.04
	2077.00	1.57	206.92	2076.80	-21.78	1.74	-21.76	0.10	609956.45	616289.48	N 32 40 35.68	W 104 5 23.06
	2170.00	1.48	208.96	2169.57	-22.97	-0.40	-22.97	0.12	609954.31	616288.27	N 32 40 35.66	W 104 5 23.07
	2264.00	1.60	90.84	2263.55	-22.24	-1.46	-22.26	2.81	609953.25	616286.99	N 32 40 35.65	W 104 5 23.06
	2359.00	1.97	85.50	2358.50	-19.29	-1.35	-19.30	0.43	609953.36	616291.94	N 32 40 35.65	W 104 5 23.03
	2648.00	1.86	85.13	2647.40	-13.00	-0.84	-13.01	0.06	609953.87	616288.23	N 32 40 35.66	W 104 5 22.95
	2642.00	1.94	87.22	2641.35	-9.89	-0.63	-9.90	0.11	609954.08	616301.34	N 32 40 35.66	W 104 5 22.92
	2737.00	1.83	84.47	2736.30	-6.78	-0.40	-6.78	0.15	609954.31	616304.46	N 32 40 35.66	W 104 5 22.88
	2831.00	1.81	88.77	2830.25	-3.80	-0.25	-3.80	0.18	609954.46	616307.44	N 32 40 35.66	W 104 5 22.85
	2925.00	0.81	143.69	2924.23	-1.92	-0.78	-1.93	1.58	609953.93	616309.31	N 32 40 35.66	W 104 5 22.82
	3020.00	0.83	131.91	3019.22	-1.00	-1.78	-1.02	0.18	609952.93	616310.22	N 32 40 35.65	W 104 5 22.81
	3114.00	0.75	119.31	3113.21	0.05	-2.54	0.03	0.20	609952.17	616311.27	N 32 40 35.64	W 104 5 22.80
	3209.00	0.79	121.14	3208.20	1.18	-3.18	1.13	0.05	609951.63	616312.37	N 32 40 35.63	W 104 5 22.79
	3303.00	0.74	110.57	3302.19	2.29	-3.73	2.25	0.16	609950.98	616313.49	N 32 40 35.63	W 104 5 22.78
	3398.00	0.66	115.28	3397.18	3.38	-4.18	3.32	0.10	609950.53	616314.56	N 32 40 35.62	W 104 5 22.76
	3492.00	0.29	130.61	3491.18	4.04	-4.57	3.99	0.41	609950.14	616315.23	N 32 40 35.62	W 104 5 22.76
	3587.00	0.11	106.75	3586.18	4.31	-4.75	4.26	0.20	609949.98	616315.50	N 32 40 35.62	W 104 5 22.75
	3775.00	0.30	112.97	3774.18	4.94	-4.99	4.89	0.10	609949.72	616316.13	N 32 40 35.62	W 104 5 22.75
	3940.00	0.30	105.41	3939.18	5.26	-5.11	5.21	0.08	609949.45	616316.45	N 32 40 35.61	W 104 5 22.74
	3992.00	0.18	105.21	3991.18	5.87	-5.27	5.82	0.08	609949.44	616317.06	N 32 40 35.61	W 104 5 22.73
	4149.00	0.11	149.34	4148.17	6.19	-5.47	6.14	0.08	609949.24	616317.38	N 32 40 35.61	W 104 5 22.73
	4338.00	0.13	113.12	4337.17	6.48	-5.71	6.43	0.04	609949.00	616317.67	N 32 40 35.61	W 104 5 22.73
	4432.00	0.13	2.00	4431.17	6.58	-5.64	6.53	0.23	609949.07	616317.77	N 32 40 35.61	W 104 5 22.73
	4526.00	0.00	248.39	4525.17	6.59	-5.54	6.53	0.14	609949.17	616317.77	N 32 40 35.61	W 104 5 22.73
	4715.00	0.13	66.83	4714.17	6.78	-5.45	6.73	0.07	609949.26	616317.97	N 32 40 35.61	W 104 5 22.72
	4809.00	0.13	175.95	4808.17	6.89	-5.51	6.83	0.23	609949.20	616318.07	N 32 40 35.61	W 104 5 22.72
	4948.00	0.08	234.92	4947.17	6.84	-5.71	6.78	0.08	609949.00	616318.02	N 32 40 35.61	W 104 5 22.72
	5093.00	0.06	234.64	5092.17	6.72	-5.80	6.66	0.00	609948.93	616317.90	N 32 40 35.61	W 104 5 22.72
	5187.00	0.11	92.09	5186.17	6.77	-5.83	6.71	0.17	609948.88	616317.95	N 32 40 35.61	W 104 5 22.72
	5281.00	0.06	118.26	5280.17	6.90	-5.86	6.84	0.07	609948.85	616318.08	N 32 40 35.61	W 104 5 22.72
	5375.00	0.06	192.91	5374.17	6.93	-5.93	6.88	0.08	609948.78	616318.11	N 32 40 35.61	W 104 5 22.72
	5470.00	0.06	355.43	5469.17	6.92	-5.93	6.86	0.12	609948.78	616318.10	N 32 40 35.61	W 104 5 22.72
	5564.00	0.06	266.56	5563.17	6.88	-5.88	6.81	0.09	609948.83	616318.05	N 32 40 35.61	W 104 5 22.72
	5702.00	0.06	222.66	5701.17	6.74	-5.94	6.69	0.03	609948.77	616317.93	N 32 40 35.61	W 104 5 22.72
	5846.00	0.06	335.53	5845.17	6.66	-5.92	6.60	0.07	609948.79	616317.84	N 32 40 35.61	W 104 5 22.73
	5940.00	0.11	344.71	5939.17	6.62	-5.79	6.56	0.05	609948.92	616317.80	N 32 40 35.61	W 104 5 22.73
	6035.00	0.88	239.91	6034.17	5.98	-6.07	5.90	0.96	609948.64	616317.14	N 32 40 35.61	W 104 5 22.73
	6142.00	1.50	262.38	6141.15	3.87	-6.67	3.81	0.71	609948.04	616315.04	N 32 40 35.60	W 104 5 22.76
	6223.00	1.35	281.73	6222.12	1.88	-6.61	1.82	0.62	609948.10	616313.05	N 32 40 35.60	W 104 5 22.78
	6317.00	1.31	232.63	6316.10	-0.05	-7.04	-0.12	1.18	609947.67	616311.12	N 32 40 35.60	W 104 5 22.80
	6411.00	0.96	252.10	6410.08	-1.84	-7.94	-1.72	0.55	609946.77	616309.52	N 32 40 35.59	W 104 5 22.82
	6505.00	0.79	196.11	6504.07	-2.66	-8.80	-2.65	0.89	609945.91	616308.58	N 32 40 35.58	W 104 5 22.83
	6694.00	1.15	70.52	6693.06	-1.13	-9.42	-1.22	0.92	609945.29	616310.02	N 32 40 35.57	W 104 5 22.82
	6788.00	1.96	90.90	6787.02	1.38	-9.13	1.27	1.03	609945.68	616312.61	N 32 40 35.58	W 104 5 22.79
	6882.00	2.44	94.45	6880.95	4.97	-9.31	4.87	0.53	609945.40	616316.11	N 32 40 35.57	W 104 5 22.75
	6978.00	2.30	96.67	6976.87	8.82	-9.69	8.83	0.17	609945.02	616320.06	N 32 40 35.57	W 104 5 22.70
	7071.00	1.52	106.65	7069.82	11.96	-10.26	11.96	0.91	609944.45	616323.10	N 32 40 35.56	W 104 5 22.66
	7166.00	1.36	128.02	7164.79	14.07	-11.32	13.96	0.59	609943.39	616325.19	N 32 40 35.55	W 104 5 22.64
	7260.00	1.13	93.92	7258.77	15.88	-12.07	15.76	0.81	609942.84	616327.00	N 32 40 35.55	W 104 5 22.82
	7354.00	1.80	86.04	7352.74	18.28	-12.11	18.16	0.72	609942.60	616329.40	N 32 40 35.55	W 104 5 22.59
	7449.00	2.07	143.01	7447.69	20.82	-13.45	20.68	1.87	609941.26	616331.92	N 32 40 35.53	W 104 5 22.56
	7543.00	2.63	159.75	7541.61	22.62	-16.83	22.45	0.94	609937.88	616333.69	N 32 40 35.50	W 104 5 22.54
	7620.00	5.75	113.09	7618.42	26.81	-20.00	26.61	5.69	609934.71	616337		
	7653.00	11.47	102.14	7651.67	31.65	-21.34	31.35	17.69	609933.77	616342.58	N 32 40 35.48	W 104 5 22.47
	7697.00	14.72	102.58	7693.88	41.31	-23.48	41.08	7.39	609931.23	616352.32	N 32 40 35.43	W 10

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S)	Longitude (E/W)
	8880.00	54.34	93.64	8776.36	443.88	-44.16	443.47	9.57	80980.55	616784.67	N 32 40 35.22	W 104 5 17.82
	8975.00	56.07	96.66	8833.57	521.62	-51.19	521.15	3.18	809903.53	616832.34	N 32 40 35.15	W 104 5 16.71
	9069.00	71.07	93.61	8875.30	605.29	-58.55	604.74	16.22	809896.16	616815.93	N 32 40 35.07	W 104 5 15.73
	9163.00	81.02	98.54	8897.85	686.38	-61.23	695.80	11.28	809883.49	617006.98	N 32 40 35.04	W 104 5 14.86
	9257.00	86.59	88.20	8908.09	789.76	-60.44	789.21	5.96	809894.27	617100.38	N 32 40 35.05	W 104 5 13.57
	9294.00	87.31	88.71	8910.06	826.69	-59.77	826.15	2.35	809894.95	617137.32	N 32 40 35.06	W 104 5 13.14
	9388.00	89.68	91.18	8912.54	920.64	-59.68	920.10	3.63	809895.04	617231.26	N 32 40 35.05	W 104 5 12.04
	9483.00	90.52	92.82	8912.39	1015.61	-63.00	1015.04	1.95	809881.72	617326.19	N 32 40 35.02	W 104 5 10.93
	9577.00	90.58	92.37	8911.49	1109.54	-67.25	1108.94	0.48	809887.46	617420.08	N 32 40 34.97	W 104 5 9.83
	9672.00	90.52	92.79	8910.58	1204.48	-71.53	1203.94	0.45	809883.19	617514.97	N 32 40 34.93	W 104 5 8.72
	9768.00	90.88	91.19	8909.45	1298.44	-74.79	1297.77	1.74	809879.93	617608.90	N 32 40 34.90	W 104 5 7.62
	9861.00	90.82	90.73	8908.22	1393.43	-76.38	1392.75	0.55	809878.33	617703.87	N 32 40 34.88	W 104 5 6.51
	9955.00	90.65	90.46	8907.18	1487.42	-77.36	1486.74	0.29	809877.36	617797.85	N 32 40 34.87	W 104 5 5.41
	10049.00	90.65	90.68	8906.11	1581.42	-78.29	1580.73	0.23	809876.42	617891.83	N 32 40 34.85	W 104 5 4.31
	10144.00	90.69	90.20	8905.00	1678.41	-79.02	1675.72	0.51	809875.89	617986.81	N 32 40 34.85	W 104 5 3.20
	10238.00	89.55	90.54	8904.81	1770.41	-79.83	1769.71	1.27	809875.09	618080.80	N 32 40 34.84	W 104 5 2.10
	10333.00	89.24	90.52	8905.81	1865.40	-80.51	1864.71	0.33	809874.21	618175.78	N 32 40 34.83	W 104 5 0.99
	10427.00	89.04	90.29	8907.22	1959.39	-81.17	1958.69	0.32	809873.54	618269.76	N 32 40 34.82	W 104 4 59.89
	10522.00	88.45	90.99	8909.30	2054.37	-82.23	2053.66	0.96	809872.48	618364.72	N 32 40 34.80	W 104 4 58.78
	10616.00	88.88	90.51	8911.87	2148.34	-83.48	2147.82	0.58	809871.25	618458.68	N 32 40 34.79	W 104 4 67.68
	10710.00	88.62	90.37	8913.80	2242.31	-84.19	2241.69	0.15	809870.53	618552.64	N 32 40 34.78	W 104 4 66.58
	10804.00	88.52	90.95	8916.25	2336.28	-85.27	2335.56	0.63	809869.45	618646.60	N 32 40 34.77	W 104 4 65.48
	10898.00	88.66	90.49	8918.56	2430.25	-86.45	2429.52	0.51	809868.27	618740.55	N 32 40 34.75	W 104 4 64.38
	10993.00	88.62	90.24	8920.82	2525.22	-87.05	2524.49	0.27	809867.66	618835.52	N 32 40 34.75	W 104 4 63.27
	11087.00	88.56	90.78	8923.13	2619.20	-87.89	2618.46	0.58	809866.83	618929.48	N 32 40 34.74	W 104 4 62.17
	11182.00	88.52	90.82	8925.65	2713.16	-89.22	2713.42	0.06	809865.50	619024.43	N 32 40 34.72	W 104 4 61.06
	11276.00	88.21	90.69	8928.23	2808.12	-90.45	2807.37	0.36	809864.26	619118.37	N 32 40 34.71	W 104 4 49.96
	11371.00	88.90	90.88	8930.63	2903.09	-91.74	2902.34	0.75	809862.98	619212.32	N 32 40 34.69	W 104 4 48.85
	11465.00	89.69	89.12	8931.78	2997.08	-91.72	2996.32	0.03	809863.00	619307.30	N 32 40 34.69	W 104 4 47.75
	11559.00	89.69	88.30	8932.29	3091.03	-93.61	3090.30	0.87	809865.11	619401.27	N 32 40 34.71	W 104 4 46.65
	11654.00	89.62	88.01	8932.85	3185.94	-96.55	3185.25	0.31	809868.17	619496.21	N 32 40 34.74	W 104 4 45.54
	11748.00	90.03	88.49	8933.15	3279.86	-93.88	3279.20	0.67	809871.04	619590.16	N 32 40 34.76	W 104 4 44.44
	11842.00	90.17	88.18	8932.99	3373.79	-90.93	3373.16	0.38	809873.79	619684.11	N 32 40 34.79	W 104 4 43.34
	11936.00	89.28	87.90	8933.44	3467.70	-77.70	3467.10	0.99	809877.02	619778.04	N 32 40 34.82	W 104 4 42.24
	12031.00	88.93	89.87	8934.92	3562.64	-75.85	3562.07	2.11	809878.87	619873.00	N 32 40 34.83	W 104 4 41.13
	12125.00	89.04	90.20	8936.59	3658.62	-75.91	3658.05	0.37	809878.81	619968.98	N 32 40 34.83	W 104 4 40.03
	12220.00	89.04	90.88	8938.18	3751.61	-78.79	3751.04	0.89	809877.53	620064.95	N 32 40 34.82	W 104 4 38.92
	12314.00	89.00	90.59	8939.79	3845.58	-77.88	3845.02	0.58	809876.74	620158.98	N 32 40 34.80	W 104 4 37.82
	12408.00	89.07	90.68	8941.37	3939.58	-79.02	3939.00	0.12	809875.70	620249.90	N 32 40 34.79	W 104 4 36.72
	12503.00	89.00	91.08	8942.97	4034.57	-80.48	4033.97	0.41	809874.26	620344.86	N 32 40 34.78	W 104 4 35.61
	12597.00	88.93	90.71	8944.67	4128.55	-81.91	4127.94	0.38	809872.81	620438.83	N 32 40 34.76	W 104 4 34.51
	12692.00	89.07	89.56	8946.33	4223.53	-82.13	4222.93	1.22	809872.58	620533.80	N 32 40 34.75	W 104 4 33.40
	12787.00	87.94	89.46	8948.80	4318.48	-81.32	4317.89	1.19	809873.39	620628.76	N 32 40 34.76	W 104 4 32.29
	12881.00	88.80	86.08	8951.48	4412.32	-77.87	4411.77	3.71	809877.05	620722.63	N 32 40 34.79	W 104 4 31.19
	12975.00	88.38	84.82	8953.79	4505.91	-70.21	4505.44	1.41	809884.50	620816.59	N 32 40 34.87	W 104 4 30.10
	13069.00	88.11	85.72	8956.67	4599.47	-62.46	4599.08	1.00	809882.25	620908.62	N 32 40 34.94	W 104 4 29.00
	13164.00	87.59	86.80	8960.23	4694.13	-66.27	4693.80	1.26	809886.44	621004.64	N 32 40 35.00	W 104 4 27.89
	13258.00	87.56	89.53	8964.21	4787.98	-53.26	4787.66	2.90	809901.45	621098.49	N 32 40 35.03	W 104 4 26.79
	13353.00	89.14	92.00	8966.95	4882.91	-54.53	4882.61	3.09	809900.18	621193.42	N 32 40 35.01	W 104 4 25.68
	13447.00	91.82	92.83	8965.37	5071.78	-62.50	5071.41	1.48	809892.22	621288.21	N 32 40 34.93	W 104 4 24.57
	13542.00	91.68	92.95	8962.49	5165.66	-67.23	5165.25	0.20	809887.48	621383.21	N 32 40 34.88	W 104 4 23.47
	13636.00	91.93	92.32	8959.53	5259.55	-71.55	5259.10	0.72	809883.16	621478.04	N 32 40 34.88	W 104 4 22.38
	13730.00	91.61	92.49	8956.60	5354.46	-75.54	5353.97	0.38	809879.18	621568.89	N 32 40 34.83	W 104 4 21.28
	13825.00	91.82	92.07	8953.70	5448.37	-79.27	5447.85	0.56	809875.44	621658.82	N 32 40 34.76	W 104 4 20.17
	13919.00	92.07	92.52	8950.35	5543.27	-83.08	5542.72	0.52	809871.64	621758.82	N 32 40 34.75	W 104 4 19.07
	14014.00	92.47	89.85	8942.02	5637.13	-87.78	5636.56	1.38	809870.51	621853.48	N 32 40 34.67	W 104 4 17.96
	14108.00	92.47	89.85	8938.71	5731.08	-91.35	5730.51	1.38	809869.59	621948.13	N 32 40 34.67	W 104 4 16.86
	14203.00	91.86	89.57	8935.16	5825.99	-86.98	5825.42	0.11	809867.76	622042.85	N 32 40 34.67	W 104 4 15.75
	14297.00	91.86	89.57	8935.16	5919.91	-86.48	5919.35	0.71	809868.23	622136.15	N 32 40 34.67	W 104 4 14.65
	14391.00	91.44	89.81	8929.71	6016.81	-85.48	6016.27	0.26	809869.25	622230.08	N 32 40 34.67	W 104 4 13.55
	14485.00	91.92	90.09	8926.96	6108.27	-85.38	6108.27	0.59	809869.34	622324.98	N 32 40 34.68	W 104 4 12.45
	14579.00	91.72	89.98	8920.96	6202.77	-85.50	6202.23	0.12	809869.22	622418.98	N 32 40 34.67	W 104 4 11.34
	14674.00	91.93	89.74	8917.96	6296.66	-85.50	6296.13	0.34	809869.45	622512.93	N 32 40 34.67	W 104 4 10.25
	14768.00	91.98	90.11	8914.77	6391.66	-85.50	6391.13	0.12	809869.22	622606.84	N 32 40 34.67	W 104 4 9.14
	14863.00	91.86	89.52	8911.61	6486.61	-85.27	6486.08	0.34	809869.45	622700.76	N 32 40 34.67	W 104 4 8.04
	14957.00	91.86	89.52	8908.55	6581.56	-85.14	6581.03	0.39	809869.57	622794.67	N 32 40 34.67	W 104 4 6.94
	15051.00	91.86	89.52	8905.48	6676.49	-84.84	6676.98	0.63	809869.88	622888.57	N 32 40 34.67	W 104 4 5.84
	15145.00	91.86	89.52	8902.41	6771.42	-84.15	6771.92	0.13	809870.57	622982.44	N 32 40 34.67	W 104 4 4.73
	15240.00	91.86	89.52	8899.34	6866.35	-82.88	6866.82	0.03	809871.84	623076.32	N 32 40 34.68	W 104 4 3.63
	15334.00	91.89	89.58	8896.27	6961.28	-81.53	6961.71	0.00	809873.19	623170.21	N 32 40 34.69	W 104 4 2.52
	15428.00	91.89	89.58	8893.20	7056.21	-80.28	7056.66	0.21	809873.70	623264.10	N 32 40 34.69	W 104 4 1.42
	15522.00	91.89	89.58	8890.13	7151.14	-78.93	7151.59	0.00	809874.46	623358.00	N 32 40 34.70	W 104 4 0.31
	15616.00	91.89	89.58	8887.06	7246.07	-77.58	7246.52	0.00	809875.22	623451.90	N 32 40 34.70	W 104 4 0.20
	15710.00	91.89	89.58	8884.00	7341.00	-76.23	7341.45	0.00	809876.00	623545.80	N 32 40 34.70	W 104 4 0.09
	15804.00	91.89	89.58	8881.00	7436.00	-74.88	7436.40	0.00	809876.78	623639.70	N 32 40 34.70	W 104 4 0.00
	15898.00	91.89	89.58	8878.00	7531.00	-73.53	7531.35	0.00	809877.56	623733.60	N 32 40 34.70	W 104 4 0.00
	15992.00	91.89	89.58	8875.00	7626.00	-72.18	7626.30	0.00	8098			



Oxy Turkey Track 9-10 State 32H Pilot Hole Survey Report

Report Date:	July 10, 2017 - 09:13 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	90.560 ° (Grid North)
Field:	NM Eddy County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Turkey Track 9-10 State 32H / Oxy Turkey Track 9-10 State 32H	TVD Reference Datum:	RKB=28.5'
Well:	Oxy Turkey Track 9-10 State 32H	TVD Reference Elevation:	3421.600 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3395.100 ft above MSL
UWI / AP#:	Unknown / Unknown	Magnetic Declination:	7.482 °
Survey Name:	Oxy Turkey Track 9-10 State 32H Pilot Hole MWD 0-Update	Total Gravity Field Strength:	998.5132mgN (9.80665 Based)
Survey Date:	June 27, 2017	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	49.860 ° / 187.845 ft / 3.972 / 0.018	Total Magnetic Field Strength:	48197.614 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.511 °
Location Lat / Long:	N 32° 40' 35.66540", W 104° 5' 22.80235"	Declination Date:	June 27, 2017
Location Grid N/E Y/X:	N 809954.710 ftUS, E 618311.240 ftUS	Magnetic Declination Model:	HDGM 2017
CRS Grid Convergence Angle:	0.1316 °	North Reference:	Grid North
Grid Scale Factor:	0.99991553	Grid Convergence Used:	0.1316 °
Version / Patch:	2.10.254.0	Total Corr Mag North->Grid North:	7.3502 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (N/S ft)	EW (E/W ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
SHL	0.00	0.00	0.00	0.00	0.00	N 0.00	E 0.00	0.00	0.00	N/A	0M
RKB	26.50	0.00	0.00	26.50	0.00	N 0.00	E 0.00	0.00	0.00	0.00	156M
	129.50	0.60	158.00	129.50	0.22	S 0.49	E 0.22	0.54	156.00	0.58	319M
	218.50	0.70	318.00	218.50	0.05	S 0.51	E 0.05	0.52	174.99	1.44	294M
	337.50	0.90	294.00	337.48	-1.30	N 0.41	W 1.30	1.36	287.40	0.32	349M
	393.50	0.70	349.00	393.48	-1.77	N 0.92	W 1.76	1.99	297.59	1.36	54.09M
	406.00	1.07	54.09	404.98	-1.70	N 1.05	W 1.69	1.99	301.94	8.71	348.14M
	589.00	1.75	348.14	588.93	-0.92	N 4.81	W 0.87	4.89	349.70	0.89	346.57M
	681.00	1.48	348.57	680.90	-1.51	N 7.34	W 1.44	7.48	348.91	0.30	2.4M
	772.00	1.11	2.40	771.87	-1.77	N 9.36	W 1.68	9.51	349.86	0.56	206.02M
	863.00	0.82	206.02	862.87	-2.02	N 9.66	W 1.92	9.85	348.74	2.08	269.47M
	955.00	1.31	269.47	954.85	-3.35	N 9.06	W 3.26	9.63	340.18	1.30	283.74M
	1046.00	0.81	283.74	1045.84	-5.02	N 9.20	W 4.93	10.44	331.82	0.62	272.87M
	1138.00	1.06	272.87	1137.83	-6.50	N 9.40	W 6.41	11.38	325.70	0.33	266.61M
	1324.00	0.96	266.61	1323.80	-9.78	N 9.39	W 9.68	13.49	314.12	0.08	270.19M
	1418.00	0.95	270.19	1417.78	-11.34	N 9.35	W 11.25	14.63	309.73	0.06	275.81M
	1512.00	0.95	275.81	1511.77	-12.90	N 9.43	W 12.80	15.90	306.37	0.10	288.08M
	1608.00	1.16	288.08	1605.76	-14.58	N 9.80	W 14.48	17.49	304.09	0.33	265.88M
	1700.00	1.05	265.86	1699.74	-16.35	N 10.04	W 16.25	19.10	301.71	0.47	210.66M
	1795.00	1.91	210.66	1794.71	-18.01	N 8.61	W 17.92	19.89	295.67	1.65	208.46M
	1889.00	1.58	208.46	1888.67	-19.40	N 6.13	W 19.34	20.29	287.58	0.36	209.17M
	1983.00	1.48	209.17	1982.63	-20.59	N 3.93	W 20.55	20.92	280.82	0.11	208.92M
	2077.00	1.57	208.92	2076.60	-21.78	N 1.74	W 21.76	21.83	274.57	0.10	209.96M
	2170.00	1.46	209.96	2169.57	-22.97	S 0.40	W 22.67	22.97	289.00	0.12	90.84M
	2264.00	1.50	90.84	2263.55	-22.24	S 1.46	W 22.26	22.30	286.25	2.81	85.5M
	2359.00	1.97	85.50	2358.50	-19.29	S 1.35	W 19.30	19.35	286.00	0.43	85.13M
	2548.00	1.86	85.13	2547.40	-13.00	S 0.84	W 13.01	13.04	286.33	0.06	87.22M
	2642.00	1.94	87.22	2641.35	-9.89	S 0.63	W 9.90	9.92	286.37	0.11	84.47M
	2737.00	1.83	84.47	2736.30	-6.78	S 0.40	W 6.78	6.80	286.59	0.15	89.77M
	2831.00	1.81	89.77	2830.25	-3.80	S 0.25	W 3.80	3.81	286.18	0.18	143.09M
	2925.00	0.81	143.09	2924.23	-1.92	S 0.78	W 1.93	2.08	247.88	1.58	131.91M
	3020.00	0.83	131.91	3019.22	-1.00	S 1.78	W 1.02	2.05	209.68	0.18	119.31M
	3114.00	0.75	119.31	3113.21	0.05	S 2.54	E 0.03	2.54	179.41	0.20	121.14M
	3209.00	0.79	121.14	3208.20	1.16	S 3.18	E 1.13	3.38	160.47	0.05	110.57M
	3303.00	0.74	110.57	3302.19	2.29	S 3.73	E 2.25	4.36	148.89	0.16	115.28M
	3398.00	0.66	115.28	3397.18	3.36	S 4.18	E 3.32	5.34	141.54	0.10	130.61M
	3492.00	0.29	130.61	3491.18	4.04	S 4.57	E 3.99	6.06	138.85	0.41	106.75M
	3587.00	0.11	106.75	3586.18	4.31	S 4.75	E 4.26	6.38	138.10	0.20	112.97M
	3775.00	0.30	112.97	3774.18	4.94	S 4.99	E 4.89	6.99	135.62	0.10	105.41M
	3840.00	0.30	105.41	3839.18	5.26	S 5.11	E 5.21	7.29	134.43	0.06	105.21M
	3992.00	0.18	105.21	3991.18	5.87	S 5.27	E 5.82	7.85	132.17	0.08	149.34M
	4149.00	0.11	149.34	4148.17	6.19	S 5.47	E 6.14	8.22	131.70	0.08	113.12M
	4338.00	0.13	113.12	4337.17	6.48	S 5.71	E 6.43	8.60	131.61	0.04	2M
	4432.00	0.13	2.00	4431.17	6.58	S 5.64	E 6.53	8.63	130.84	0.23	248.39M
	4526.00	0.00	248.39	4525.17	6.59	S 5.54	E 6.53	8.56	130.29	0.14	65.83M
	4715.00	0.13	65.83	4714.17	6.78	S 5.45	E 6.73	8.66	129.01	0.07	175.96M
	4809.00	0.13	175.96	4808.17	6.89	S 5.51	E 6.83	8.78	128.89	0.23	234.92M
	4948.00	0.06	234.92	4947.17	6.84	S 5.71	E 6.78	8.87	130.09	0.08	234.94M
	5093.00	0.06	234.94	5092.17	6.72	S 5.80	E 6.66	8.83	131.04	0.00	92.09M
	5187.00	0.11	92.09	5186.17	6.77	S 5.83	E 6.71	8.89	130.99	0.17	118.28M
	5281.00	0.06	118.28	5280.17	6.90	S 5.86	E 6.84	9.01	130.56	0.07	192.91M
	5375.00	0.06	192.91	5374.17	6.93	S 5.93	E 6.88	9.08	130.77	0.08	355.43M
	5470.00	0.06	355.43	5469.17	6.92	S 5.93	E 6.86	9.07	130.82	0.12	266.56M
	5564.00	0.06	266.56	5563.17	6.86	S 5.88	E 6.81	9.00	130.82	0.09	222.66M
	5702.00	0.06	222.66	5701.17	6.74	S 5.94	E 6.89	8.94	131.61	0.03	335.53M
	5846.00	0.06	335.53	5845.17	6.86	S 5.92	E 6.80	8.87	131.90	0.07	344.71M
	5940.00	0.11	344.71	5939.17	6.82	S 5.79	E 6.56	8.75	131.45	0.05	239.91M
	6035.00	0.88	239.91	6034.17	5.96	S 6.07	E 5.90	8.47	135.80	0.96	262.38M
	6142.00	1.50	262.38	6141.15	3.87	S 6.67	E 3.81	7.68	150.29	0.71	281.73M
	6223.00	1.35	281.73	6222.12	1.88	S 6.61	E 1.82	6.86	164.62	0.62	232.63M
	6317.00	1.31	232.63	6316.10	-0.05	S 7.04	W 0.12	7.04	180.96	1.18	252.1M
	6411.00	0.96	252.10	6410.08	-1.64	S 7.94	W 1.72	8.12	192.24	0.55	196.11M
	6505.00	0.79	196.11	6504.07	-2.56	S 8.80	W 2.65	9.19	198.76	0.89	70.52M
	6694.00	1.15	70.52	6693.06	-1.13	S 9.42	W 1.22	9.50	187.40	0.92	90.9M
	6788.00	1.96	90.90	6787.02	1.36	S 9.13	E 1.27	9.22	172.07	1.03	94.45M
	6882.00	2.44	94.45	6880.95	4.97	S 9.31	E 4.87	10.51	162.37	0.53	96.67M
	6978.00	2.30	96.67	6976.87	8.92	S 9.69	E 8.83	13.11	137.68	0.17	106.65M
	7071.00	1.52	106.65	7069.82	11.86	S 10.26	E 11.86	15.69	130.87	0.91	128.02M
	7166.00	1.38	128.02	7164.79	14.07	S 11.32	E 13.96	17.97	129.04	0.59	93.92M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (N/S ft)	EW (E/W ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	7260.00	1.13	93.92	7258.77	15.88	S 12.07	E 15.76	19.85	127.45	0.81	89.04M
	7354.00	1.80	89.04	7352.74	18.28	S 12.11	E 18.16	21.83	123.89	0.72	143.01M
	7449.00	2.07	143.01	7447.69	20.82	S 13.45	E 20.88	24.68	123.04	1.87	159.75M
	7543.00	2.63	159.75	7541.61	22.62	S 16.83	E 22.45	28.06	126.88	0.94	176.48M
	7637.00	2.96	176.48	7635.50	23.56	S 21.28	E 23.35	31.59	132.35	0.93	175.9M
	7731.00	3.11	175.90	7729.37	23.93	S 26.24	E 23.68	35.35	137.94	0.16	170.91M
	7826.00	2.71	170.91	7824.25	24.52	S 31.03	E 24.22	39.36	142.03	0.50	169.72M
	7921.00	2.13	169.72	7919.16	25.23	S 34.99	E 24.89	42.94	144.57	0.61	156.89M
	8015.00	1.07	156.89	8013.13	25.91	S 37.51	E 25.54	45.39	145.75	1.18	245.89M
	8110.00	0.23	245.69	8108.12	26.09	S 38.41	E 25.72	46.22	146.19	1.15	306.57M
	8204.00	1.18	306.57	8202.11	25.14	S 37.91	E 24.77	45.28	146.84	1.16	299.03M
	8298.00	2.23	299.03	8296.07	22.75	S 36.44	E 22.39	42.77	148.43	1.14	297.14M
	8393.00	3.15	297.14	8390.96	18.79	S 34.36	E 18.45	39.00	151.76	0.97	301.31M
	8488.00	3.42	301.31	8485.81	14.02	S 31.69	E 13.71	34.53	156.61	0.38	304.16M
	8582.00	3.72	304.16	8579.62	9.07	S 28.52	E 8.79	29.85	162.87	0.37	304.43M
	8771.00	4.21	304.43	8768.17	-1.80	S 21.16	W 2.00	21.25	185.41	0.26	305.15M
	8865.00	4.42	305.15	8861.91	-7.64	S 17.12	W 7.81	18.82	204.52	0.23	304.91M
	8959.00	3.35	304.91	8955.69	-12.89	S 13.47	W 13.03	18.73	224.05	1.14	299.54M
	9068.00	0.85	299.54	9064.61	-16.23	S 11.24	W 16.34	19.84	235.47	2.30	349.69M
	9183.00	0.06	349.69	9179.60	-16.99	S 10.76	W 17.09	20.20	237.80	0.71	20.99M
	9243.00	0.06	20.99	9239.60	-16.88	S 10.70	W 17.09	20.18	237.94	0.05	214.08M
	9337.00	0.11	214.06	9333.60	-17.02	S 10.73	W 17.12	20.21	237.92	0.18	222.88M
	9431.00	0.08	222.88	9427.60	-17.11	S 10.86	W 17.22	20.35	237.76	0.04	6.76M
	9620.00	0.06	6.76	9616.60	-17.19	S 10.85	W 17.29	20.42	237.89	0.07	339.81M
	9808.00	0.18	339.81	9804.60	-17.28	S 10.48	W 17.38	20.30	238.92	0.07	189.7M
	9997.00	0.06	189.70	9993.60	-17.40	S 10.30	W 17.50	20.31	239.53	0.12	345.41M
	10091.00	0.11	345.41	10087.60	-17.43	S 10.26	W 17.53	20.32	239.67	0.18	308.3M
	10186.00	0.17	308.30	10182.50	-17.57	S 10.08	W 17.67	20.34	240.28	0.11	61.31M
	10246.00	0.00	61.31	10242.50	-17.64	S 10.03	W 17.74	20.38	240.52	0.28	

Survey Type: