

Intent ☐ As Drilled ☒

API #
30-015-45202

Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: Poke Lake Unit 15 Twin Wells Ranch	Well Number 127H
--	--	---------------------

Kick Off Point (KOP)

UL P	Section 15	Township 24S	Range 31E	Lot	Feet 231	From N/S S	Feet 1117	From E/W E	County EDDY
Latitude 32.210746					Longitude 103.760756			NAD 83	

First Take Point (FTP)

UL A	Section 22	Township 24S	Range 31E	Lot	Feet 330	From N/S N	Feet 985	From E/W E	County EDDY
Latitude 32.209203					Longitude 103.760329			NAD 83	

Last Take Point (LTP)

UL P	Section 27	Township 24S	Range 31E	Lot	Feet 349	From N/S S	Feet 944	From E/W E	County EDDY
Latitude 32.182029					Longitude 103.760168			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number
----------------	----------------	-------------



June 20, 2019

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Eric Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of February 22, 2019 through March 16, 2019, conduct or supervise the taking of a SEDS MWD Original Hole Survey from a depth of 156feet to a depth of 7,994feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of XTO Energy Inc., for the PLU 15 Twin Wells Ranch #127H well, API #30-015-45202 in Eddy County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C..

A handwritten signature in black ink, appearing to read "Eric Estes", is written over a horizontal line.

Eric Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

**STRYKER ENERGY DIRECTIONAL SERVICES, LLC.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163**



June 20, 2019

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Terry West

Re: XTO Energy Inc.
PLU 15 Twin Wells Ranch #127H
Purple Sage; Wolfcamp
Eddy County, New Mexico
API# 30-015-45202

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, LLC. (P-5 #828149) Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Justin Amari	Original Hole	156ft. to 7,994ft.	02-22-19 to 03-16-19	MWD Survey

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Eric Estes

Enclosures
CC:

XTO Energy Inc.
Attn: Terry West
6401 Holiday Hill Rd. #5
Midland, Texas 79707

RRC\ XTO Energy Inc.\PLU 15 Twin Wells Ranch #127H\M191035

STRYKER ENERGY DIRECTIONAL SERVICES, LLC.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



MWD SURVEY CERTIFICATION
Gordon Technologies, LLC

State Of Texas

County Of Midland

I, Marcus Mitcham certify that; I am employed by Gordon Technologies, LLC.;
that I did on the day(s) of March 17, 2019 through May 6, 2019 conduct
or supervise the taking of a MWD survey from a depth of 9,071 feet to a depth of
23,210 feet; that the data is true, correct, complete and within the limitations of the
tool set forth by Gordon Technologies, LLC.; that I am authorized and qualified to make this report;
that this survey was conducted at the request of XTO Energy for the
PLU 15 Twin Wells Ranch 127H Well, A.P.I. No. 30-015-45202 in
Delaware Basin / Purple Sage WO Field and that I have reviewed this report and find that
it conforms to the principles and procedures set forth by Gordon Technologies, LLC.

Signature

MWD Coordinator

Title



Directional Survey Report

Company: **BOPCO LP (XTO Energy)**
 Well: **Poker Lake Unit 15 Twin Wells Ranch 127H**
 County: **Eddy**
 State: **New Mexico**
 Field: **Delaware Basin / Purple Sage WO**
 API: **30-015-45202**
 Rig: **Patterson 793**
 Service Co: **Gordon Technologies LLC**
 Job #: **GT 190247**
 Survey Calc: **Minimum Curvature**

Well Surface Location
 Latitude: **32.21089406**
 Longitude: **-103.76073678**
 Reference: **NAD 1927**
 Y (Northing): **440914.4**
 X (Easting): **677095.7**
 Field Engr: **Bryce Shambarger**

Report Date: **May 07 2019**
 Time: **12:05**
 Mag Reference: **Grid North**
 Mag Correction: **6.56**
 Vert Sect. Azi: **178.2**
 Perm Datum: **Mean Sea Level**
 Depth Ref: **Rotary Table**
 RKB Height: **19.5**
 GL Elev: **2894.7**

Survey Tie In	MD	Inc	Azimuth	TVD	VS	Rectangular Offsets		Course		Temp	Closure		Source
						NS	EW	Length	DLS		Distance	Azimuth	
1	156.00	1.10	140.40	155.99	1.18	-1.15	0.95	156.00	0.71	0.00	1.50	140.40	SVYS.csv
2	217.00	1.40	150.10	216.98	2.30	-2.25	1.70	61.00	0.60	0.00	2.82	142.95	SVYS.csv
3	308.00	1.20	149.50	307.95	4.12	-4.04	2.74	91.00	0.22	0.00	4.88	145.86	SVYS.csv
4	398.00	0.80	165.20	397.94	5.56	-5.46	3.38	90.00	0.53	0.00	6.42	148.25	SVYS.csv
5	492.00	0.70	182.70	491.93	6.77	-6.66	3.52	94.00	0.26	0.00	7.53	152.18	SVYS.csv
6	586.00	0.60	208.20	585.92	7.77	-7.67	3.26	94.00	0.32	0.00	8.33	156.99	SVYS.csv
7	680.00	0.60	245.60	679.92	8.38	-8.31	2.58	94.00	0.41	0.00	8.70	162.77	SVYS.csv
8	774.00	0.40	257.80	773.92	8.63	-8.58	1.81	94.00	0.24	0.00	8.77	168.11	SVYS.csv
9	868.00	0.60	259.50	867.91	8.77	-8.74	1.00	94.00	0.21	0.00	8.80	173.46	SVYS.csv
10	1032.00	0.50	290.50	1031.91	8.62	-8.65	-0.51	164.00	0.19	0.00	8.66	183.39	SVYS.csv
11	1126.00	0.50	295.90	1125.90	8.28	-8.32	-1.27	94.00	0.05	0.00	8.42	188.64	SVYS.csv
12	1220.00	0.50	299.70	1219.90	7.87	-7.94	-1.99	94.00	0.04	0.00	8.19	194.07	SVYS.csv
13	1314.00	0.60	299.50	1313.89	7.40	-7.49	-2.78	94.00	0.11	0.00	7.99	200.32	SVYS.csv
14	1409.00	0.90	299.10	1408.89	6.76	-6.89	-3.86	95.00	0.32	0.00	7.89	209.27	SVYS.csv
15	1503.00	1.00	302.00	1502.87	5.93	-6.09	-5.20	94.00	0.12	0.00	8.01	220.48	SVYS.csv
16	1598.00	1.30	301.80	1597.85	4.87	-5.09	-6.82	95.00	0.32	0.00	8.51	233.29	SVYS.csv
17	1692.00	1.40	303.30	1691.83	3.62	-3.89	-8.69	94.00	0.11	0.00	9.52	245.86	SVYS.csv
18	1786.00	0.70	304.90	1785.81	2.62	-2.93	-10.12	94.00	0.75	0.00	10.53	253.82	SVYS.csv
19	1880.00	0.30	300.10	1879.81	2.14	-2.48	-10.80	94.00	0.43	0.00	11.08	257.06	SVYS.csv
20	1974.00	0.50	310.00	1973.81	1.74	-2.10	-11.33	94.00	0.22	0.00	11.52	259.52	SVYS.csv
21	2068.00	0.50	18.40	2067.80	1.08	-1.44	-11.51	94.00	0.60	0.00	11.60	262.86	SVYS.csv
22	2162.00	0.80	27.70	2161.80	0.12	-0.47	-11.08	94.00	0.34	0.00	11.09	267.56	SVYS.csv
23	2257.00	1.00	38.60	2256.78	-1.08	0.76	-10.25	95.00	0.28	0.00	10.28	274.25	SVYS.csv
24	2351.00	0.90	54.20	2350.77	-2.12	1.84	-9.14	94.00	0.29	0.00	9.32	281.35	SVYS.csv
25	2445.00	1.10	67.10	2444.76	-2.86	2.62	-7.71	94.00	0.32	0.00	8.14	288.76	SVYS.csv
26	2540.00	1.00	70.60	2539.74	-3.44	3.25	-6.09	95.00	0.13	0.00	6.90	298.08	SVYS.csv
27	2634.00	1.10	72.80	2633.73	-3.93	3.79	-4.45	94.00	0.11	0.00	5.85	310.38	SVYS.csv
28	2728.00	0.60	65.40	2727.72	-4.36	4.26	-3.14	94.00	0.54	0.00	5.29	323.56	SVYS.csv
29	2822.00	0.80	67.80	2821.71	-4.78	4.71	-2.09	94.00	0.21	0.00	5.15	336.09	SVYS.csv
30	2916.00	1.10	73.50	2915.70	-5.23	5.22	-0.62	94.00	0.33	0.00	5.25	353.26	SVYS.csv
31	3012.00	1.10	76.20	3011.68	-5.66	5.70	1.16	96.00	0.05	0.00	5.82	11.52	SVYS.csv
32	3105.00	1.30	75.90	3104.66	-6.07	6.17	3.05	93.00	0.22	0.00	6.88	26.32	SVYS.csv
33	3200.00	1.30	71.90	3199.63	-6.60	6.77	5.12	95.00	0.10	0.00	8.49	37.12	SVYS.csv
34	3295.00	1.70	69.60	3294.60	-7.35	7.59	7.47	95.00	0.43	0.00	10.65	44.52	SVYS.csv
35	3389.00	1.50	84.80	3388.56	-7.87	8.19	10.00	94.00	0.50	0.00	12.92	50.68	SVYS.csv
36	3483.00	1.50	99.00	3482.53	-7.71	8.11	12.44	94.00	0.39	0.00	14.85	56.90	SVYS.csv
37	3578.00	0.80	132.10	3577.51	-7.02	7.47	14.16	95.00	0.99	0.00	16.01	62.19	SVYS.csv
38	3672.00	1.50	220.90	3671.50	-5.66	6.10	13.84	94.00	1.79	0.00	15.12	66.22	SVYS.csv
39	3767.00	2.10	220.80	3766.45	-3.47	3.84	11.89	95.00	0.63	0.00	12.49	72.09	SVYS.csv
40	3861.00	2.20	209.90	3860.39	-0.66	0.97	9.86	94.00	0.45	0.00	9.91	84.36	SVYS.csv
41	3955.00	2.60	203.80	3954.30	2.79	-2.54	8.10	94.00	0.50	0.00	8.49	107.41	SVYS.csv
42	4049.00	2.20	202.30	4048.22	6.36	-6.16	6.56	94.00	0.43	0.00	9.00	133.21	SVYS.csv
43	4144.00	2.00	190.30	4143.16	9.65	-9.48	5.57	95.00	0.51	0.00	11.00	149.56	SVYS.csv
44	4238.00	2.80	182.50	4237.07	13.54	-13.39	5.18	94.00	0.92	0.00	14.35	158.86	SVYS.csv
45	4293.00	3.30	181.00	4292.00	16.46	-16.31	5.09	55.00	0.92	0.00	17.09	162.67	SVYS.csv
46	4419.00	3.90	178.60	4417.75	24.37	-24.22	5.13	126.00	0.49	0.00	24.76	168.04	SVYS.csv
47	4513.00	2.50	191.80	4511.60	29.56	-29.42	4.79	94.00	1.67	0.00	29.81	170.75	SVYS.csv
48	4607.00	2.00	234.20	4605.53	32.47	-32.39	3.04	94.00	1.80	0.00	32.53	174.63	SVYS.csv
49	4701.00	1.80	275.60	4699.49	33.20	-33.21	0.24	94.00	1.44	0.00	33.21	179.58	SVYS.csv
50	4796.00	1.90	305.20	4794.44	32.06	-32.15	-2.53	95.00	1.00	0.00	32.25	184.50	SVYS.csv
51	4891.00	2.10	302.20	4889.38	30.14	-30.32	-5.29	95.00	0.24	0.00	30.78	189.90	SVYS.csv
52	4985.00	1.60	311.10	4983.33	28.28	-28.54	-7.74	94.00	0.61	0.00	29.57	195.17	SVYS.csv

53	5079.00	1.30	319.50	5077.30	26.55	-26.86	-9.42	94.00	0.39	0.00	28.47	199.32	SVYS.csv
54	5173.00	1.30	321.50	5171.28	24.87	-25.22	-10.77	94.00	0.05	0.00	27.42	203.13	SVYS.csv
55	5267.00	1.50	317.00	5265.25	23.09	-23.48	-12.28	94.00	0.24	0.00	26.50	207.60	SVYS.csv
56	5362.00	0.90	333.20	5360.23	21.48	-21.91	-13.46	95.00	0.72	0.00	25.71	211.57	SVYS.csv
57	5455.00	1.10	57.00	5453.22	20.35	-20.77	-13.04	93.00	1.45	0.00	24.53	212.12	SVYS.csv
58	5549.00	2.80	62.50	5547.16	18.89	-19.22	-10.25	94.00	1.82	0.00	21.78	208.07	SVYS.csv
59	5644.00	3.40	56.40	5642.02	16.40	-16.59	-5.84	95.00	0.72	0.00	17.59	199.40	SVYS.csv
60	5738.00	2.70	49.60	5735.89	13.55	-13.61	-1.84	94.00	0.84	0.00	13.73	187.68	SVYS.csv
61	5832.00	2.00	30.10	5829.81	10.77	-10.76	0.67	94.00	1.12	0.00	10.78	176.42	SVYS.csv
62	5927.00	2.10	18.00	5924.75	7.73	-7.67	2.04	95.00	0.47	0.00	7.93	165.08	SVYS.csv
63	6020.00	2.20	17.30	6017.68	4.44	-4.34	3.10	93.00	0.11	0.00	5.34	144.48	SVYS.csv
64	6114.00	2.30	12.20	6111.61	0.90	-0.78	4.03	94.00	0.24	0.00	4.11	100.89	SVYS.csv
65	6209.00	2.20	355.30	6206.54	-2.77	2.90	4.29	95.00	0.70	0.00	5.18	55.89	SVYS.csv
66	6302.00	2.20	335.20	6299.47	-6.19	6.30	3.39	93.00	0.83	0.00	7.16	28.29	SVYS.csv
67	6396.00	1.50	330.60	6393.42	-8.95	9.01	2.03	94.00	0.76	0.00	9.24	12.71	SVYS.csv
68	6491.00	1.10	301.30	6488.40	-10.55	10.57	0.64	95.00	0.80	0.00	10.59	3.48	SVYS.csv
69	6585.00	1.30	293.90	6582.38	-11.50	11.47	-1.10	94.00	0.27	0.00	11.52	354.51	SVYS.csv
70	6679.00	1.30	296.20	6676.35	-12.46	12.37	-3.03	94.00	0.06	0.00	12.74	346.22	SVYS.csv
71	6773.00	1.20	295.10	6770.33	-13.41	13.26	-4.88	94.00	0.11	0.00	14.13	339.79	SVYS.csv
72	6867.00	1.10	287.80	6864.31	-14.16	13.96	-6.63	94.00	0.19	0.00	15.45	334.58	SVYS.csv
73	6961.00	1.00	289.60	6958.30	-14.76	14.51	-8.26	94.00	0.11	0.00	16.70	330.33	SVYS.csv
74	7054.00	0.80	283.50	7051.28	-15.23	14.93	-9.66	93.00	0.24	0.00	17.78	327.10	SVYS.csv
75	7148.00	0.90	292.90	7145.27	-15.71	15.37	-10.98	94.00	0.18	0.00	18.89	324.46	SVYS.csv
76	7242.00	0.80	284.80	7239.26	-16.20	15.83	-12.29	94.00	0.17	0.00	20.04	322.16	SVYS.csv
77	7336.00	1.10	270.80	7333.25	-16.43	16.01	-13.83	94.00	0.40	0.00	21.15	319.17	SVYS.csv
78	7430.00	1.10	258.30	7427.23	-16.32	15.84	-15.62	94.00	0.25	0.00	22.24	315.40	SVYS.csv
79	7524.00	1.00	255.00	7521.22	-15.98	15.44	-17.29	94.00	0.12	0.00	23.18	311.76	SVYS.csv
80	7618.00	1.10	255.60	7615.20	-15.59	15.00	-18.96	94.00	0.11	0.00	24.18	308.36	SVYS.csv
81	7712.00	1.30	255.40	7709.18	-15.16	14.51	-20.86	94.00	0.21	0.00	25.41	304.82	SVYS.csv
82	7806.00	1.00	250.60	7803.16	-14.67	13.97	-22.67	94.00	0.33	0.00	26.63	301.64	SVYS.csv
83	7909.00	0.60	249.20	7906.15	-14.23	13.48	-24.02	103.00	0.39	0.00	27.54	299.30	SVYS.csv
84	7994.00	1.50	224.80	7991.14	-13.32	12.53	-25.22	85.00	1.16	0.00	28.16	296.42	SVYS.csv
85	8100.00	2.60	241.80	8097.07	-11.30	10.41	-28.32	106.00	1.17	0.00	30.17	290.19	GYRO.csv
86	8200.00	4.40	241.50	8196.88	-8.56	7.51	-33.69	100.00	1.80	0.00	34.51	282.57	GYRO.csv
87	8300.00	5.76	240.98	8296.48	-4.54	3.24	-41.45	100.00	1.36	0.00	41.57	274.48	GYRO.csv
88	8400.00	6.69	240.49	8395.89	0.46	-2.06	-50.91	100.00	0.93	0.00	50.95	267.68	GYRO.csv
89	8500.00	7.34	240.62	8495.14	6.13	-8.06	-61.54	100.00	0.65	0.00	62.07	262.54	GYRO.csv
90	8600.00	7.37	240.55	8594.32	12.06	-14.35	-72.69	100.00	0.03	0.00	74.09	258.83	GYRO.csv
91	8700.00	7.39	240.32	8693.49	18.04	-20.69	-83.86	100.00	0.04	0.00	86.38	256.14	GYRO.csv
92	8800.00	7.30	241.77	8792.67	23.88	-26.88	-95.05	100.00	0.21	0.00	98.78	254.21	GYRO.csv
93	8887.00	7.52	239.42	8878.95	29.08	-32.39	-104.82	87.00	0.43	0.00	109.71	252.83	GYRO.csv
94	9071.00	5.00	235.80	9061.83	39.17	-43.02	-121.82	184.00	1.39	106.29	129.19	250.55	MWD Run 1
95	9166.00	4.30	230.10	9156.52	43.59	-47.63	-127.98	95.00	0.88	106.29	136.55	249.58	MWD Run 1
96	9260.00	3.20	254.20	9250.32	46.40	-50.61	-133.21	94.00	2.02	113.43	142.50	249.20	MWD Run 1
97	9354.00	2.90	299.60	9344.20	45.80	-50.15	-137.80	94.00	2.52	113.43	146.64	250.00	MWD Run 1
98	9449.00	1.40	267.80	9439.14	44.55	-49.01	-141.05	95.00	1.96	113.43	149.32	250.84	MWD Run 1
99	9543.00	2.40	310.80	9533.09	43.23	-47.76	-143.69	94.00	1.78	113.43	151.42	251.61	MWD Run 2
100	9638.00	2.10	328.60	9628.02	40.37	-44.98	-146.10	95.00	0.80	113.43	152.87	252.89	MWD Run 2
101	9731.00	2.00	344.30	9720.96	37.31	-41.96	-147.42	93.00	0.61	113.43	153.28	254.11	MWD Run 2
102	9825.00	1.50	33.20	9814.92	34.71	-39.35	-147.20	94.00	1.62	113.43	152.36	255.03	MWD Run 2
103	9920.00	1.70	66.90	9909.88	33.18	-37.76	-145.22	95.00	1.00	120.57	150.05	255.42	MWD Run 2
104	10014.00	2.50	63.70	10003.82	31.82	-36.30	-142.10	94.00	0.86	120.57	146.66	255.67	MWD Run 2
105	10108.00	4.80	58.40	10097.62	29.02	-33.34	-136.91	94.00	2.47	120.57	140.91	256.32	MWD Run 2
106	10203.00	8.00	47.20	10192.02	22.70	-26.76	-128.67	95.00	3.60	127.71	131.42	258.25	MWD Run 2
107	10297.00	6.80	39.80	10285.24	14.25	-18.04	-120.31	94.00	1.63	127.71	121.65	261.47	MWD Run 2
108	10391.00	8.00	48.20	10378.46	5.88	-9.40	-111.87	94.00	1.72	134.86	112.26	265.20	MWD Run 2
109	10486.00	8.30	55.90	10472.50	-2.03	-1.15	-101.26	95.00	1.19	134.86	101.27	269.35	MWD Run 2
110	10581.00	7.30	66.60	10566.63	-7.92	5.09	-90.05	95.00	1.85	134.86	90.19	273.24	MWD Run 2
111	10675.00	6.20	98.60	10660.01	-9.20	6.70	-79.54	94.00	4.11	142.00	79.82	274.82	MWD Run 2
112	10770.00	7.10	127.70	10754.39	-4.54	2.34	-69.82	95.00	3.63	142.00	69.86	271.92	MWD Run 2
113	10864.00	8.40	135.30	10847.53	4.19	-6.09	-60.39	94.00	1.76	142.00	60.70	264.24	MWD Run 2
114	10958.00	7.60	127.40	10940.62	13.15	-14.75	-50.63	94.00	1.44	142.00	52.73	253.76	MWD Run 2
115	11053.00	8.50	124.30	11034.68	21.26	-22.52	-39.84	95.00	1.05	149.14	45.76	240.52	MWD Run 2
116	11148.00	7.00	121.60	11128.81	28.58	-29.51	-29.10	95.00	1.62	149.14	41.45	224.61	MWD Run 2
117	11241.00	6.90	121.50	11221.13	34.77	-35.40	-19.51	93.00	0.11	149.14	40.42	208.87	MWD Run 2
118	11336.00	10.20	118.30	11315.06	42.12	-42.37	-7.24	95.00	3.51	149.14	42.98	189.70	MWD Run 2
119	11430.00	12.60	113.50	11407.20	50.68	-50.40	9.49	94.00	2.74	156.29	51.29	169.33	MWD Run 2
120	11524.00	12.40	110.50	11498.98	58.89	-58.03	28.35	94.00	0.72	156.29	64.58	153.96	MWD Run 2
121	11618.00	11.70	108.40	11590.91	66.01	-64.57	46.85	94.00	0.88	156.29	79.77	144.04	MWD Run 2
122	11712.00	11.10	109.20	11683.05	72.54	-70.55	64.44	94.00	0.66	156.29	95.55	137.59	MWD Run 2
123	11807.00	9.60	110.50	11776.50	78.83	-76.33	80.49	95.00	1.60	156.29	110.93	133.48	MWD Run 2
124	11901.00	7.60	114.10	11869.44	84.52	-81.62	93.51	94.00	2.20	156.29	124.12	131.12	MWD Run 2
125	11995.00	7.90	115.30	11962.58	90.17	-86.92	105.03	94.00	0.36	156.29	136.33	129.61	MWD Run 2

126	12089.00	9.10	104.80	12055.55	95.24	-91.58	118.05	94.00	2.08	156.29	149.41	127.80	MWD Run 2
127	12184.00	10.00	102.70	12149.24	99.45	-95.31	133.36	95.00	1.02	156.29	163.92	125.55	MWD Run 2
128	12249.00	9.20	105.50	12213.33	102.41	-97.94	143.88	65.00	1.42	142.00	174.05	124.24	MWD Run 3
129	12297.00	13.90	115.60	12260.35	106.21	-101.46	152.78	48.00	10.62	142.00	183.40	123.59	MWD Run 3
130	12344.00	20.30	119.00	12305.25	112.99	-107.86	165.01	47.00	13.78	149.14	197.14	123.17	MWD Run 3
131	12391.00	24.80	119.90	12348.64	122.35	-116.73	180.70	47.00	9.60	149.14	215.12	122.86	MWD Run 3
132	12438.00	29.30	124.30	12390.49	134.31	-128.13	198.76	47.00	10.47	149.14	236.48	122.81	MWD Run 3
133	12486.00	33.90	129.40	12431.37	150.06	-143.26	218.82	48.00	11.08	142.00	261.54	123.21	MWD Run 3
134	12533.00	36.40	139.70	12469.83	169.63	-162.23	237.98	47.00	13.68	142.00	288.02	124.28	MWD Run 3
135	12580.00	38.80	150.80	12507.11	193.64	-185.75	254.21	47.00	15.27	142.00	314.84	126.16	MWD Run 3
136	12627.00	39.60	158.70	12543.56	220.86	-212.58	266.84	47.00	10.75	149.14	341.17	128.54	MWD Run 3
137	12675.00	41.60	169.30	12580.04	251.06	-242.53	275.37	48.00	14.95	149.14	366.94	131.37	MWD Run 3
138	12722.00	46.60	177.20	12613.81	283.59	-274.96	279.11	47.00	15.80	149.14	391.79	134.57	MWD Run 3
139	12769.00	51.90	180.60	12644.49	319.17	-310.54	279.75	47.00	12.53	149.14	417.96	137.99	MWD Run 3
140	12801.00	54.70	181.20	12663.61	344.80	-336.19	279.34	32.00	8.88	149.14	437.10	140.28	MWD Run 3
141	12895.00	56.40	182.30	12716.78	422.16	-413.66	276.97	94.00	2.05	156.29	497.82	146.20	MWD Run 4
142	12941.00	58.90	181.80	12741.39	460.93	-452.49	275.58	46.00	5.51	163.43	529.80	148.66	MWD Run 4
143	12988.00	61.40	180.90	12764.79	501.62	-493.24	274.62	47.00	5.57	163.43	564.54	150.89	MWD Run 4
144	13035.00	67.30	179.70	12785.12	543.95	-535.59	274.41	47.00	12.76	163.43	601.80	152.87	MWD Run 4
145	13082.00	71.90	178.20	12801.50	587.98	-579.62	275.23	47.00	10.23	163.43	641.65	154.60	MWD Run 4
146	13129.00	75.50	177.30	12814.69	633.08	-624.69	277.00	47.00	7.88	163.43	683.35	156.09	MWD Run 4
147	13176.00	79.00	176.40	12825.06	678.90	-670.45	279.52	47.00	7.68	163.43	726.39	157.37	MWD Run 4
148	13224.00	83.40	176.50	12832.40	726.30	-717.79	282.46	48.00	9.17	170.57	771.36	158.52	MWD Run 4
149	13318.00	92.20	181.30	12836.01	820.11	-811.58	284.25	94.00	10.66	170.57	859.92	160.70	MWD Run 4
150	13412.00	90.80	180.60	12833.55	913.96	-905.53	282.69	94.00	1.67	177.71	948.63	162.66	MWD Run 4
151	13507.00	91.00	179.70	12832.06	1008.90	-1000.52	282.44	95.00	0.97	177.71	1039.62	164.24	MWD Run 4
152	13601.00	89.60	179.10	12831.57	1102.87	-1094.51	283.43	94.00	1.62	177.71	1130.61	165.48	MWD Run 4
153	13695.00	87.50	176.20	12833.94	1196.82	-1188.38	287.28	94.00	3.81	184.86	1222.61	166.41	MWD Run 4
154	13789.00	90.70	179.70	12835.42	1290.78	-1282.29	290.64	94.00	5.04	177.71	1314.81	167.23	MWD Run 4
155	13883.00	91.90	179.70	12833.29	1384.72	-1376.26	291.13	94.00	1.28	184.86	1406.71	168.06	MWD Run 4
156	13977.00	89.70	182.20	12831.98	1478.59	-1470.22	289.57	94.00	3.54	184.86	1498.47	168.86	MWD Run 4
157	14071.00	89.80	181.90	12832.39	1572.38	-1564.16	286.21	94.00	0.34	184.86	1590.13	169.63	MWD Run 4
158	14165.00	88.40	181.20	12833.86	1666.21	-1658.11	283.67	94.00	1.67	184.86	1682.20	170.29	MWD Run 4
159	14259.00	89.20	181.50	12835.83	1760.04	-1752.07	281.45	94.00	0.91	192.00	1774.53	170.87	MWD Run 4
160	14353.00	91.00	182.40	12835.67	1853.84	-1846.01	278.25	94.00	2.14	192.00	1866.86	171.43	MWD Run 4
161	14447.00	91.00	182.20	12834.03	1947.58	-1939.92	274.48	94.00	0.21	192.00	1959.24	171.95	MWD Run 4
162	14540.00	91.00	182.20	12832.40	2040.34	-2032.83	270.91	93.00	0.00	192.00	2050.81	172.41	MWD Run 4
163	14634.00	89.20	178.70	12832.24	2134.25	-2126.81	270.17	94.00	4.19	192.00	2143.90	172.76	MWD Run 4
164	14729.00	88.70	177.00	12833.98	2229.23	-2221.73	273.74	95.00	1.86	199.14	2238.53	172.98	MWD Run 4
165	14823.00	91.40	178.90	12833.90	2323.21	-2315.65	277.10	94.00	3.51	192.00	2332.17	173.18	MWD Run 4
166	14917.00	90.90	177.80	12832.01	2417.19	-2409.59	279.80	94.00	1.29	199.14	2425.78	173.38	MWD Run 4
167	15011.00	90.30	176.00	12831.03	2511.16	-2503.45	284.89	94.00	2.02	199.14	2519.60	173.51	MWD Run 4
168	15105.00	90.90	177.00	12830.04	2605.11	-2597.26	290.63	94.00	1.24	199.14	2613.47	173.62	MWD Run 4
169	15199.00	90.90	176.60	12828.57	2699.07	-2691.11	295.87	94.00	0.43	199.14	2707.32	173.73	MWD Run 4
170	15293.00	90.30	177.60	12827.58	2793.05	-2784.98	300.63	94.00	1.24	199.14	2801.16	173.84	MWD Run 4
171	15388.00	91.20	177.50	12826.34	2888.03	-2879.88	304.69	95.00	0.95	192.00	2895.96	173.96	MWD Run 4
172	15482.00	92.20	178.80	12823.55	2981.99	-2973.79	307.72	94.00	1.74	199.14	2989.67	174.09	MWD Run 4
173	15576.00	90.10	180.60	12821.66	3075.93	-3067.76	308.21	94.00	2.94	199.14	3083.20	174.26	MWD Run 4
174	15670.00	90.30	186.60	12821.33	3169.47	-3161.53	302.31	94.00	6.39	199.14	3175.95	174.54	MWD Run 4
175	15764.00	87.50	185.00	12823.14	3262.61	-3255.02	292.82	94.00	3.43	199.14	3268.16	174.86	MWD Run 4
176	15858.00	86.80	183.00	12827.81	3356.01	-3348.67	286.27	94.00	2.25	206.29	3360.88	175.11	MWD Run 4
177	15952.00	87.50	179.60	12832.49	3449.74	-3442.51	284.14	94.00	3.69	206.29	3454.22	175.28	MWD Run 4
178	16047.00	87.10	178.50	12836.96	3544.62	-3537.39	285.71	95.00	1.23	206.29	3548.91	175.38	MWD Run 4
179	16141.00	87.00	178.30	12841.80	3638.50	-3631.23	288.33	94.00	0.24	206.29	3642.66	175.46	MWD Run 4
180	16235.00	88.20	178.30	12845.74	3732.41	-3725.11	291.12	94.00	1.28	206.29	3736.47	175.53	MWD Run 4
181	16328.00	88.70	178.90	12848.25	3825.38	-3818.05	293.39	93.00	0.84	206.29	3829.30	175.61	MWD Run 4
182	16421.00	88.70	181.00	12850.36	3918.30	-3911.02	293.47	93.00	2.26	206.29	3922.01	175.71	MWD Run 4
183	16515.00	89.10	179.90	12852.17	4012.21	-4004.99	292.73	94.00	1.24	206.29	4015.68	175.82	MWD Run 4
184	16608.00	90.40	178.90	12852.57	4105.19	-4097.98	293.71	93.00	1.76	206.29	4108.50	175.90	MWD Run 4
185	16702.00	90.30	178.80	12852.00	4199.18	-4191.96	295.59	94.00	0.15	213.43	4202.37	175.97	MWD Run 4
186	16796.00	90.20	179.60	12851.59	4293.16	-4285.95	296.91	94.00	0.86	213.43	4296.22	176.04	MWD Run 4
187	16890.00	89.40	179.60	12851.92	4387.14	-4379.95	297.56	94.00	0.85	213.43	4390.05	176.11	MWD Run 4
188	16983.00	89.70	181.00	12852.65	4480.07	-4472.94	297.08	93.00	1.54	213.43	4482.80	176.20	MWD Run 4
189	17077.00	88.40	179.70	12854.21	4573.98	-4566.92	296.50	94.00	1.96	213.43	4576.54	176.29	MWD Run 4
190	17172.00	92.10	179.90	12853.79	4668.93	-4661.91	296.83	95.00	3.90	213.43	4671.35	176.36	MWD Run 4
191	17265.00	91.80	179.60	12850.63	4761.84	-4754.85	297.24	93.00	0.46	213.43	4764.13	176.42	MWD Run 4
192	17359.00	93.10	180.70	12846.61	4855.70	-4848.76	296.99	94.00	1.81	213.43	4857.85	176.49	MWD Run 4
193	17484.00	95.40	181.60	12837.35	4980.18	-4973.38	294.49	125.00	1.98	213.43	4982.09	176.61	MWD Run 5
194	17579.00	90.00	183.00	12832.87	5074.79	-5068.16	290.68	95.00	5.87	206.29	5076.49	176.72	MWD Run 5
195	17673.00	88.90	179.80	12833.78	5168.63	-5162.12	288.39	94.00	3.60	213.43	5170.17	176.80	MWD Run 5
196	17768.00	89.10	180.40	12835.43	5263.56	-5257.10	288.22	95.00	0.67	213.43	5265.00	176.86	MWD Run 5
197	17862.00	89.30	179.60	12836.75	5357.51	-5351.09	288.22	94.00	0.88	220.57	5358.85	176.92	MWD Run 5
198	17956.00	90.00	181.50	12837.32	5451.42	-5445.08	287.32	94.00	2.15	220.57	5452.66	176.98	MWD Run 5

199	18050.00	89.90	182.80	12837.40	5545.19	-5539.01	283.79	94.00	1.39	213.43	5546.28	177.07	MWD Run 5
200	18143.00	88.60	180.40	12838.62	5638.01	-5631.96	281.20	93.00	2.93	213.43	5638.98	177.14	MWD Run 5
201	18237.00	88.30	179.70	12841.16	5731.93	-5725.93	281.11	94.00	0.81	220.57	5732.82	177.19	MWD Run 5
202	18331.00	90.60	181.30	12842.06	5825.84	-5819.91	280.29	94.00	2.98	220.57	5826.65	177.24	MWD Run 5
203	18416.00	90.20	181.00	12841.47	5910.73	-5904.89	278.59	85.00	0.59	213.43	5911.46	177.30	MWD Run 6
204	18510.00	89.60	181.20	12841.64	6004.60	-5998.87	276.78	94.00	0.67	213.43	6005.25	177.36	MWD Run 6
205	18604.00	88.70	180.50	12843.03	6098.49	-6092.85	275.39	94.00	1.21	213.43	6099.07	177.41	MWD Run 6
206	18699.00	86.70	177.20	12846.84	6193.39	-6187.73	277.29	95.00	4.06	220.57	6193.94	177.43	MWD Run 6
207	18792.00	87.10	177.50	12851.87	6286.24	-6280.50	281.59	93.00	0.54	220.57	6286.81	177.43	MWD Run 6
208	18887.00	87.00	175.40	12856.76	6381.07	-6375.19	287.46	95.00	2.21	220.57	6381.66	177.42	MWD Run 6
209	18981.00	90.70	176.60	12858.65	6474.96	-6468.92	294.01	94.00	4.14	220.57	6475.60	177.40	MWD Run 6
210	19075.00	91.30	176.20	12857.01	6568.90	-6562.72	299.91	94.00	0.77	227.71	6569.57	177.38	MWD Run 6
211	19169.00	91.60	175.60	12854.63	6662.80	-6656.45	306.63	94.00	0.71	220.57	6663.51	177.36	MWD Run 6
212	19263.00	93.00	176.30	12850.86	6756.64	-6750.14	313.27	94.00	1.66	213.43	6757.40	177.34	MWD Run 6
213	19357.00	92.40	176.60	12846.43	6850.50	-6843.85	319.08	94.00	0.71	220.57	6851.28	177.33	MWD Run 6
214	19451.00	90.30	180.80	12844.21	6944.44	-6937.77	321.21	94.00	4.99	220.57	6945.21	177.35	MWD Run 6
215	19546.00	93.50	183.20	12841.06	7039.16	-7032.64	317.90	95.00	4.21	227.71	7039.83	177.41	MWD Run 6
216	19640.00	90.00	180.90	12838.19	7132.88	-7126.52	314.54	94.00	4.45	213.43	7133.46	177.47	MWD Run 7
217	19735.00	89.20	181.00	12838.86	7227.77	-7221.50	312.97	95.00	0.85	220.57	7228.28	177.52	MWD Run 7
218	19829.00	88.40	179.90	12840.82	7321.68	-7315.48	312.23	94.00	1.45	220.57	7322.14	177.56	MWD Run 7
219	19923.00	88.10	179.40	12843.70	7415.60	-7409.43	312.80	94.00	0.62	227.71	7416.03	177.58	MWD Run 7
220	20016.00	88.20	179.20	12846.70	7508.54	-7502.38	313.94	93.00	0.24	227.71	7508.94	177.60	MWD Run 7
221	20110.00	87.90	180.30	12849.90	7602.44	-7596.32	314.35	94.00	1.21	0.00	7602.82	177.63	MWD Run 7
222	20204.00	87.20	180.10	12853.91	7696.30	-7690.23	314.02	94.00	0.77	206.29	7696.64	177.66	MWD Run 8
223	20297.00	86.90	179.00	12858.70	7789.15	-7783.10	314.75	93.00	1.22	220.57	7789.47	177.68	MWD Run 8
224	20391.00	86.60	178.70	12864.03	7882.99	-7876.93	316.63	94.00	0.45	220.57	7883.30	177.70	MWD Run 8
225	20486.00	88.20	179.10	12868.34	7977.88	-7971.82	318.45	95.00	1.74	220.57	7978.17	177.71	MWD Run 8
226	20579.00	92.40	180.60	12867.85	8070.82	-8064.79	318.70	93.00	4.80	227.71	8071.09	177.74	MWD Run 8
227	20673.00	88.70	179.50	12866.95	8164.75	-8158.77	318.62	94.00	4.11	227.71	8164.99	177.76	MWD Run 8
228	20767.00	89.10	179.30	12868.76	8258.71	-8252.75	319.60	94.00	0.48	227.71	8258.93	177.78	MWD Run 8
229	20861.00	89.30	182.70	12870.07	8352.58	-8346.71	317.96	94.00	3.62	227.71	8352.76	177.82	MWD Run 8
230	20954.00	88.10	183.70	12872.18	8445.20	-8439.54	312.77	93.00	1.68	213.43	8445.33	177.88	MWD Run 9
231	21048.00	87.50	180.70	12875.79	8538.89	-8533.39	309.16	94.00	3.25	220.57	8538.99	177.93	MWD Run 9
232	21142.00	88.90	180.90	12878.74	8632.74	-8627.33	307.85	94.00	1.50	220.57	8632.82	177.96	MWD Run 9
233	21236.00	89.80	179.40	12879.81	8726.68	-8721.32	307.61	94.00	1.86	220.57	8726.74	177.98	MWD Run 9
234	21330.00	89.90	179.60	12880.05	8820.65	-8815.31	308.43	94.00	0.24	227.71	8820.71	178.00	MWD Run 9
235	21424.00	89.40	179.20	12880.63	8914.63	-8909.31	309.41	94.00	0.68	227.71	8914.68	178.01	MWD Run 9
236	21518.00	89.40	179.60	12881.61	9008.60	-9003.30	310.40	94.00	0.43	227.71	9008.65	178.03	MWD Run 9
237	21612.00	89.40	180.60	12882.60	9102.55	-9097.29	310.23	94.00	1.06	220.57	9102.58	178.05	MWD Run 10
238	21706.00	88.50	180.20	12884.32	9196.46	-9191.27	309.58	94.00	1.05	220.57	9196.48	178.07	MWD Run 10
239	21799.00	87.30	179.00	12887.73	9289.37	-9284.20	310.22	93.00	1.82	220.57	9289.38	178.09	MWD Run 11
240	21893.00	89.80	180.10	12890.10	9383.30	-9378.16	310.96	94.00	2.91	220.57	9383.32	178.10	MWD Run 11
241	21985.00	90.90	180.60	12889.54	9475.23	-9470.16	310.40	92.00	1.31	234.86	9475.24	178.12	MWD Run 11
242	22079.00	93.90	180.90	12885.61	9569.05	-9564.05	309.17	94.00	3.21	227.71	9569.05	178.15	MWD Run 11
243	22174.00	94.50	179.90	12878.65	9663.72	-9658.80	308.51	95.00	1.23	220.57	9663.72	178.17	MWD Run 12
244	22268.00	93.10	178.60	12872.42	9757.49	-9752.58	309.74	94.00	2.03	227.71	9757.49	178.18	MWD Run 12
245	22362.00	91.90	177.50	12868.32	9851.40	-9846.43	312.93	94.00	1.73	227.71	9851.40	178.18	MWD Run 12
246	22456.00	90.00	176.60	12866.76	9945.36	-9940.29	317.77	94.00	2.24	227.71	9945.36	178.17	MWD Run 12
247	22549.00	88.10	174.20	12868.30	10038.23	-10032.96	325.23	93.00	3.29	234.86	10038.23	178.14	MWD Run 12
248	22642.00	88.40	174.10	12871.14	10130.95	-10125.44	334.70	93.00	0.34	234.86	10130.97	178.11	MWD Run 12
249	22736.00	88.40	173.30	12873.77	10224.63	-10218.83	345.01	94.00	0.85	234.86	10224.65	178.07	MWD Run 12
250	22830.00	89.20	173.70	12875.74	10318.29	-10312.21	355.65	94.00	0.95	234.86	10318.34	178.02	MWD Run 12
251	22924.00	89.20	173.70	12877.05	10411.99	-10405.63	365.96	94.00	0.00	227.71	10412.06	177.99	MWD Run 12
252	23018.00	90.10	173.60	12877.62	10505.69	-10499.05	376.36	94.00	0.96	234.86	10505.79	177.95	MWD Run 12
253	23073.00	90.10	174.30	12877.53	10560.54	-10553.74	382.16	55.00	1.27	234.86	10560.66	177.93	MWD Run 12
254	23112.00	90.50	174.30	12877.32	10599.45	-10592.55	386.03	39.00	1.03	234.86	10599.58	177.91	MWD Run 12
255	23157.00	90.70	174.40	12876.85	10644.34	-10637.33	390.46	45.00	0.50	234.86	10644.49	177.90	MWD Run 12
PTB	23210.00	90.70	174.40	12876.20	10697.22	-10690.07	395.63	53.00	0.00	234.90	10697.39	177.88	MWD Run 12