District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

Rec'd 7/14/2020 - NMOCD

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-46050	98094	BOBCAT DRAW-UPR WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
	GREEN WAVE 20-32 FED STATE COM	8H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3352.9

[10] Surface Location — SL

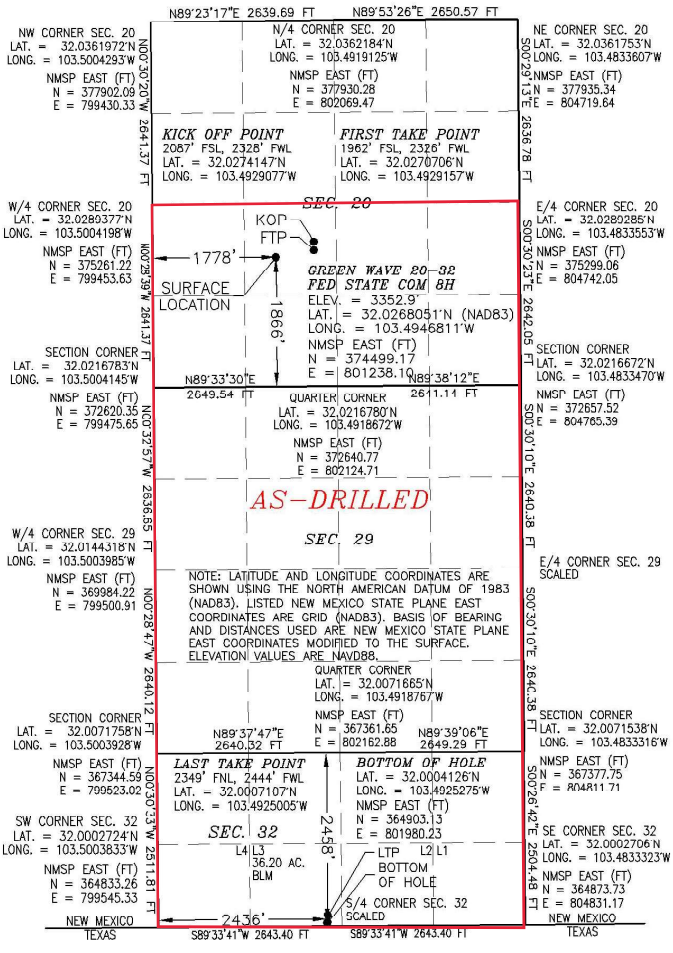
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	20	26 S	34 E		1866	SOUTH	1778	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	32	26 S	34 E		2458	NORTH	2436	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
1264.64			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Rebecca Deal — 5/13/2020
Signature — Date

Rebecca Deal, Regulatory Analyst
Printed Name

rebecca.deal@dvn.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 19, 2019
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number: EDMUND F. JARAMILLO, PLS 12797
SURVEY NO. 6404B

Intent [ ] As Drilled [XX]

Rec'd 7/14/2020 - NMOCD

API #
30-025-46050

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	GREEN WAVE 20-32 FED STATE COM	8H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
K	20	26S	34E		2087	SOUTH	2328	WEST	LEA

Latitude	Longitude	NAD
32.0274147	103.4929077	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
K	20	26S	34E		1962	SOUTH	2326	WEST	LEA

Latitude	Longitude	NAD
32.0270706	103.4929157	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	32	26S	34E	3	2349	NORTH	2444	WEST	LEA

Latitude	Longitude	NAD
32.0007107	103.4925005	83

Is this well the defining well for the Horizontal Spacing Unit? [Y]

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

KZ 06/29/2018

Rec'd 7/14/2020 - NMOCD

Total Directional Services, LLC
USA Operations

Final MWD Survey Certification

Lea County, New Mexico

Client: Devon Energy

Well Name: Green Wave 20-32 Fed State Com 8H - ST02

Total Job No: SW-190053

API No: 30-025-46050

Start Date: 12/28/2019

End Date: 2/3/2020

Measured Start Depth: 0 feet

Measured End Depth with PTB: 22870 feet

I, Blair Kenzle, MWD Operator, hereby certify that; I am employed by Total Directional Services, LLC and we conducted or supervised the taking of these open hole MWD surveys at the request of this client. This data is true, correct, complete and within the limitations of the tool as set forth by Total Directional Services, LLC. I am authorized and qualified to make this report and have reviewed this report and find that it conforms to the principals and procedures as set forth by Total Directional Services, LLC.

Date: 2/3/2020

Signed: Blair Kenzle

svy	depth	inc	azm	tvd	ns	ew	vs	dls
Tiein	0	0	0	0	0	0	0	0
1	117	0.1	62.1	117	0.05	0.09	-0.04	0.09
2	180	0.1	299.4	180	0.1	0.09	-0.09	0.28
3	275	0.1	216.7	275	0.07	-0.03	-0.08	0.14
4	371	0.01	279.8	371	0.01	-0.09	-0.02	0.1
5	466	0.1	185.3	466	-0.07	-0.1	0.06	0.11
6	561	0.3	178.1	561	-0.4	-0.1	0.39	0.21
7	656	0.4	182.8	656	-0.98	-0.11	0.97	0.11
8	751	0.5	189	750.99	-1.72	-0.19	1.7	0.12
9	778	0.5	191.8	777.99	-1.96	-0.24	1.93	0.09
10	905	0.6	181.1	904.99	-3.16	-0.36	3.13	0.11
11	1000	0.7	25.6	999.99	-3.14	-0.12	3.12	1.34
12	1095	2.1	348.4	1094.96	-0.91	-0.22	0.89	1.68
13	1190	2.7	345.8	1189.87	2.97	-1.12	-3.04	0.64
14	1285	2.8	345.3	1284.76	7.38	-2.26	-7.53	0.11
15	1379	3	345.9	1378.64	11.99	-3.44	-12.21	0.22
16	1475	2.9	344.7	1474.52	16.77	-4.69	-17.07	0.12
17	1570	2.5	357.8	1569.41	21.15	-5.4	-21.5	0.77
18	1665	2.5	0.1	1664.32	25.3	-5.48	-25.64	0.11
19	1760	2.5	356.8	1759.23	29.44	-5.59	-29.77	0.15
20	1855	2.1	357.2	1854.15	33.24	-5.79	-33.58	0.42
21	1950	2	345.6	1949.09	36.59	-6.29	-36.96	0.45
22	2045	1.9	346.3	2044.04	39.72	-7.08	-40.14	0.11
23	2140	4.3	355.4	2138.89	44.8	-7.73	-45.26	2.57
24	2236	7.3	356	2234.39	54.48	-8.45	-54.96	3.13
25	2331	7.3	358.5	2328.62	66.53	-9.03	-67.02	0.33
26	2426	7.2	358.2	2422.86	78.52	-9.37	-79	0.11
27	2521	7.1	358.3	2517.12	90.34	-9.73	-90.81	0.11
28	2616	7.1	356.8	2611.39	102.07	-10.24	-102.55	0.2
29	2712	7	357	2706.67	113.83	-10.87	-114.33	0.11
30	2806	6.9	356.5	2799.98	125.19	-11.52	-125.7	0.12
31	2902	6.7	355.4	2895.3	136.53	-12.32	-137.06	0.25
32	2997	6.5	355.8	2989.67	147.41	-13.16	-147.98	0.22
33	3092	7.9	14.6	3083.93	159.09	-11.91	-159.54	2.87
34	3188	9.4	27.4	3178.85	172.44	-6.63	-172.45	2.53
35	3283	10.7	35.8	3272.39	186.48	2.1	-185.8	2.06
36	3378	11.7	46.4	3365.59	200.28	14.23	-198.65	2.4
37	3474	12	55.3	3459.55	212.68	29.49	-209.87	1.93
38	3569	12.2	58.4	3552.44	223.56	46.16	-219.47	0.72
39	3664	12.1	58.6	3645.32	234	63.2	-228.61	0.11
40	3759	11.8	59.1	3738.26	244.18	80.04	-237.49	0.33

41	3855	11.8	59.6	3832.23	254.19	96.93	-246.21	0.11
42	3950	11.6	59.8	3925.26	263.91	113.56	-254.65	0.21
43	4045	11.3	60.4	4018.36	273.31	129.91	-262.8	0.34
44	4140	10.8	58.9	4111.6	282.51	145.62	-270.79	0.61
45	4235	10.5	58.8	4204.97	291.59	160.65	-278.72	0.32
46	4331	10.1	58.5	4299.42	300.52	175.31	-286.53	0.42
47	4426	9.6	56.7	4393.02	309.22	189.03	-294.17	0.62
48	4521	8.9	56.3	4486.78	317.64	201.77	-301.62	0.74
49	4617	8.4	53.8	4581.69	325.91	213.6	-308.97	0.65
50	4712	8.2	56.3	4675.7	333.76	224.84	-315.97	0.43
51	4807	8.9	53.9	4769.64	341.85	236.41	-323.16	0.83
52	4902	9.1	51.7	4863.47	350.84	248.25	-331.24	0.42
53	4998	8.9	56.1	4958.29	359.69	260.37	-339.15	0.75
54	5093	9.6	55.8	5052.05	368.24	273.02	-346.73	0.74
55	5189	9.5	55.2	5146.72	377.26	286.14	-354.74	0.15
56	5284	8.9	53.6	5240.5	386.09	298.5	-362.63	0.69
57	5379	9.4	52.9	5334.29	395.13	310.6	-370.73	0.54
58	5474	10.1	51	5427.92	405.06	323.26	-379.68	0.81
59	5569	10.1	50.3	5521.45	415.62	336.14	-389.24	0.13
60	5664	10.3	48.6	5614.95	426.56	348.92	-399.19	0.38
61	5760	10.2	55.2	5709.42	437.08	362.34	-408.68	1.23
62	5855	10.3	57.3	5802.9	446.47	376.4	-416.99	0.41
63	5950	10	57	5896.41	455.55	390.46	-424.99	0.32
64	6045	9.6	56	5990.03	464.47	403.95	-432.88	0.46
65	6140	9.6	56.2	6083.7	473.31	417.1	-440.71	0.04
66	6236	9.7	54.3	6178.34	482.48	430.32	-448.86	0.35
67	6331	9.4	52	6272.02	491.93	442.93	-457.34	0.51
68	6426	8.8	51.7	6365.83	501.21	454.74	-465.7	0.63
69	6521	10.3	55.8	6459.51	510.49	467.47	-474	1.73
70	6617	10.6	55.1	6553.92	520.36	481.81	-482.77	0.34
71	6711	10.4	53.8	6646.34	530.32	495.75	-491.66	0.33
72	6807	9.9	52.6	6740.84	540.45	509.3	-500.74	0.57
73	6902	9.8	52.8	6834.44	550.3	522.23	-509.6	0.11
74	6997	8.8	52.7	6928.19	559.59	534.45	-517.95	1.05
75	7092	6.2	58	7022.37	566.72	544.58	-524.29	2.83
76	7187	4	45.3	7116.99	571.77	551.29	-528.82	2.59
77	7282	3.7	27.4	7211.78	576.82	555.05	-533.58	1.3
78	7377	2.2	14.5	7306.65	581.31	556.92	-537.91	1.72
79	7473	1.1	15	7402.61	583.98	557.62	-540.53	1.15
80	7568	0.9	13.9	7497.6	585.58	558.03	-542.1	0.21
81	7663	0.5	22.3	7592.59	586.69	558.37	-543.17	0.43
82	7758	0.3	36.4	7687.59	587.28	558.68	-543.73	0.23

83	7853	0.2	42.1	7782.59	587.6	558.93	-544.04	0.11
84	7948	0.1	108.8	7877.59	587.7	559.12	-544.12	0.19
85	8043	0.2	176	7972.59	587.5	559.21	-543.92	0.2
86	8139	0.3	193.1	8068.58	587.09	559.17	-543.51	0.13
87	8234	0.4	131	8163.58	586.63	559.36	-543.04	0.39
88	8329	0.6	169.8	8258.58	585.92	559.7	-542.31	0.4
89	8424	0.8	165.3	8353.57	584.79	559.96	-541.16	0.22
90	8519	0.9	162.2	8448.56	583.44	560.35	-539.78	0.12
91	8614	1	161.8	8543.55	581.94	560.84	-538.25	0.11
92	8709	1.1	161.2	8638.53	580.29	561.39	-536.57	0.11
93	8805	1.3	167.3	8734.51	578.36	561.93	-534.6	0.25
94	8900	1.3	161.1	8829.49	576.29	562.52	-532.49	0.15
95	8995	1.2	165.8	8924.47	574.3	563.11	-530.47	0.15
96	9090	1.2	171.3	9019.44	572.36	563.5	-528.49	0.12
97	9185	1.2	181.9	9114.42	570.38	563.62	-526.51	0.23
98	9280	1	183.1	9209.41	568.56	563.54	-524.7	0.21
99	9375	1	189.4	9304.39	566.91	563.36	-523.07	0.12
100	9471	1	206.2	9400.38	565.33	562.86	-521.54	0.3
101	9566	1	212.1	9495.36	563.89	562.05	-520.16	0.11
102	9661	0.8	213.4	9590.35	562.63	561.24	-518.97	0.21
103	9756	0.7	246.6	9685.34	561.85	560.35	-518.25	0.46
104	9851	0.8	245.2	9780.34	561.34	559.21	-517.83	0.11
105	9946	0.8	247.1	9875.33	560.8	558	-517.38	0.03
106	10041	1	245.4	9970.31	560.2	556.63	-516.89	0.21
107	10136	0.4	249	10065.31	559.73	555.57	-516.5	0.63
108	10232	0.8	326.4	10161.3	560.17	554.89	-516.99	0.85
109	10327	1.6	352.5	10256.28	562.04	554.35	-518.89	1
110	10422	1.7	2.1	10351.24	564.76	554.23	-521.62	0.31
111	10517	1.2	5.6	10446.21	567.16	554.37	-524	0.53
112	10612	1	1.4	10541.19	568.98	554.49	-525.8	0.23
113	10708	0.8	5	10637.18	570.49	554.57	-527.3	0.22
114	10803	0.7	344.7	10732.17	571.71	554.48	-528.52	0.3
115	10898	0.8	312.7	10827.17	572.72	553.83	-529.58	0.45
116	10993	1	302.4	10922.15	573.61	552.65	-530.56	0.27
117	11088	1	283.8	11017.14	574.25	551.14	-531.31	0.34
118	11183	1.4	257.6	11112.12	574.2	549.2	-531.4	0.7
119	11278	1.7	244.1	11207.09	573.33	546.8	-530.72	0.5
120	11374	2	246.6	11303.04	572.05	543.98	-529.65	0.32
121	11469	1.2	270.8	11398	571.4	541.47	-529.2	1.08
122	11564	0.9	292	11492.98	571.7	539.78	-529.61	0.51
123	11659	1.3	341.1	11587.97	573	538.74	-530.99	1.04
124	11755	1.4	338.1	11683.94	575.11	537.95	-533.16	0.13

125	11850	1.5	333	11778.91	577.3	536.95	-535.41	0.17
126	11945	1.7	324.4	11873.87	579.55	535.57	-537.76	0.33
127	12040	1.2	323.9	11968.84	581.5	534.16	-539.81	0.53
128	12135	0.9	329	12063.83	582.94	533.19	-541.33	0.33
129	12238	0.7	328	12166.82	584.17	532.44	-542.61	0.19
130	12326	1	300.5	12254.81	585.02	531.5	-543.52	0.57
131	12422	7.6	169.1	12350.55	579.2	531.98	-537.68	8.64
132	12517	23.3	179.1	12441.84	554.08	533.47	-512.52	16.7
133	12612	38.5	178.3	12523.12	505.45	534.65	-463.94	16.01
134	12707	42.7	178.3	12595.23	443.67	536.48	-402.2	4.42
135	12803	47.7	172.4	12662.88	375.87	542.15	-334.16	6.79
136	12898	52.4	178.7	12723.9	303.34	547.65	-261.42	7.09
137	12993	56.5	180.8	12779.13	226.07	547.96	-184.35	4.68
138	13088	63.2	181	12826.82	143.98	546.66	-102.59	7.05
139	13135	70.2	179.6	12845.4	100.84	546.45	-59.59	15.14
140	13183	77.7	179.9	12858.66	54.75	546.65	-13.61	15.64
141	13245	89	180.8	12865.83	-6.73	546.27	47.67	18.28
142	13312	90.6	178.6	12866.06	-73.73	546.62	114.5	4.06
143	13407	89.7	176.9	12865.81	-168.65	550.35	209.44	2.02
144	13502	89.5	177.1	12866.48	-263.52	555.32	304.41	0.3
145	13597	90.4	178.3	12866.56	-358.44	559.13	399.35	1.58
146	13693	91.1	179.3	12865.3	-454.41	561.14	495.2	1.27
147	13788	91.5	180.1	12863.15	-549.38	561.64	589.94	0.94
148	13883	91.2	182	12860.91	-644.33	559.9	684.5	2.02
149	13979	90.5	190.4	12859.48	-739.67	549.54	778.8	8.78
150	14074	91.2	194.4	12858.07	-832.43	529.15	869.76	4.27
151	14169	88.3	192.5	12858.49	-924.81	507.05	960.22	3.65
152	14264	88	189.6	12861.56	-1017.99	488.86	1051.78	3.07
153	14359	84.9	181.9	12867.45	-1112.24	479.36	1145.05	8.72
154	14423	85.5	178.5	12872.8	-1176.01	479.13	1208.62	5.38
155	14454	85.2	177.9	12875.32	-1206.89	480.1	1239.49	2.16
156	14549	92.6	177.6	12877.14	-1301.74	483.83	1334.35	7.8
157	14645	92.7	177.4	12872.7	-1397.54	488.01	1430.2	0.23
158	14740	92	177.2	12868.8	-1492.36	492.48	1525.08	0.77
159	14835	91.3	176.1	12866.07	-1587.15	498.03	1620.03	1.37
160	14930	90.3	173.1	12864.74	-1681.71	506.97	1714.99	3.33
161	15024	86.3	172.1	12867.53	-1774.87	519.07	1808.79	4.39
162	15037	84.6	170.7	12868.56	-1787.68	521.01	1821.71	16.92
163	15087	84.2	165.7	12873.44	-1836.37	531.18	1871.03	9.98
164	15119	87.2	166	12875.84	-1867.31	538.98	1902.47	9.42
165	15167	88	165.7	12877.85	-1913.81	550.7	1949.72	1.78
166	15214	90	168.5	12878.67	-1959.61	561.19	1996.17	7.32

167	15310	92.4	175.6	12876.66	-2054.6	574.46	2091.89	7.8
168	15405	89.3	171.1	12875.25	-2148.92	585.46	2186.76	5.75
169	15500	88.8	170.4	12876.83	-2242.67	600.73	2281.39	0.91
170	15596	89	168.8	12878.67	-2337.07	618.05	2376.83	1.68
171	15691	88.4	172.6	12880.82	-2430.78	633.4	2471.43	4.05
172	15786	88	172.8	12883.81	-2524.96	645.46	2566.25	0.47
173	15881	88.3	173	12886.88	-2619.18	657.2	2661.09	0.38
174	15976	88.4	173.7	12889.61	-2713.5	668.2	2755.97	0.74
175	16071	90.4	173.2	12890.61	-2807.87	679.03	2850.88	2.17
176	16167	92.4	174.2	12888.26	-2903.26	689.56	2946.79	2.33
177	16262	91.7	175.9	12884.86	-2997.84	697.75	3041.72	1.93
178	16357	89.7	178.5	12883.7	-3092.71	702.39	3136.67	3.45
179	16452	89.5	178.9	12884.36	-3187.68	704.55	3231.53	0.47
180	16547	90	180.7	12884.78	-3282.67	704.88	3326.29	1.97
181	16643	92	179.6	12883.1	-3378.65	704.63	3421.98	2.38
182	16738	91.7	179	12880.04	-3473.6	705.79	3516.74	0.71
183	16833	91.7	178.8	12877.22	-3568.54	707.61	3611.55	0.21
184	16929	91.6	178.3	12874.45	-3664.47	710.04	3707.39	0.53
185	17083	90.7	177.7	12871.36	-3818.34	715.41	3861.23	0.7
186	17178	88	177	12872.44	-3913.22	719.8	3956.18	2.94
187	17273	90.3	178.8	12873.85	-4008.14	723.28	4051.09	3.07
188	17369	87.8	177	12875.44	-4104.05	726.8	4146.99	3.21
189	17464	90.8	175.6	12876.6	-4198.83	732.93	4241.96	3.48
190	17559	89.4	178.9	12876.44	-4293.7	737.49	4336.91	3.77
191	17655	89.4	179.9	12877.44	-4389.69	738.49	4432.71	1.04
192	17750	89.2	180.7	12878.6	-4484.68	738	4527.39	0.87
193	17845	90.9	183.1	12878.52	-4579.62	734.85	4621.83	3.1
194	17940	91.3	185	12876.7	-4674.36	728.14	4715.8	2.04
195	18035	87.6	179.7	12877.61	-4769.23	724.24	4810.11	6.8
196	18131	86.8	179.1	12882.3	-4865.11	725.25	4905.79	1.04
197	18226	85.3	179.2	12888.84	-4959.87	726.65	5000.39	1.58
198	18321	87.7	176.9	12894.64	-5054.62	729.88	5095.12	3.5
199	18416	91.7	177.4	12895.14	-5149.48	734.6	5190.07	4.24
200	18512	91.4	178.1	12892.54	-5245.37	738.37	5285.97	0.79
201	18607	91.4	177.9	12890.22	-5340.29	741.69	5380.87	0.21
202	18702	89.9	177.5	12889.14	-5435.2	745.5	5475.8	1.63
203	18797	91.6	177.5	12887.9	-5530.1	749.64	5570.74	1.79
204	18893	91.5	177.8	12885.3	-5625.98	753.58	5666.65	0.33
205	18988	91.8	177.6	12882.57	-5720.87	757.39	5761.55	0.38
206	19083	88	174.4	12882.73	-5815.61	764.01	5856.52	5.23
207	19178	88.6	176.7	12885.55	-5910.27	771.38	5951.47	2.5
208	19274	88.1	176.5	12888.32	-6006.06	777.07	6047.42	0.56

209	19369	87.9	176.1	12891.63	-6100.81	783.2	6142.36	0.47
210	19464	89.2	176.3	12894.04	-6195.57	789.49	6237.32	1.38
211	19559	89.2	176.4	12895.36	-6290.36	795.54	6332.31	0.11
212	19654	92.1	178.5	12894.28	-6385.25	799.76	6427.24	3.77
213	19750	93.1	179.4	12889.93	-6481.13	801.52	6522.98	1.4
214	19845	89.7	178.3	12887.61	-6576.07	803.43	6617.8	3.76
215	19940	92.5	182.2	12885.78	-6671.02	803.02	6712.45	5.05
216	20036	88.3	181.3	12885.11	-6766.95	800.09	6807.89	4.47
217	20131	87.8	181.2	12888.35	-6861.87	798.01	6902.39	0.54
218	20226	89.3	181	12890.75	-6956.82	796.19	6996.94	1.59
219	20321	89.1	181.6	12892.08	-7051.79	794.04	7091.48	0.67
220	20416	89.1	182.5	12893.57	-7146.72	790.64	7185.88	0.95
221	20512	91.1	182.9	12893.4	-7242.6	786.12	7281.16	2.12
222	20607	90.9	182.3	12891.74	-7337.49	781.81	7375.46	0.67
223	20702	90.6	182.1	12890.5	-7432.41	778.16	7469.84	0.38
224	20797	89.3	181.4	12890.58	-7527.37	775.26	7564.31	1.55
225	20892	88	180.7	12892.82	-7622.32	773.52	7658.86	1.55
226	20987	92.2	181.9	12892.66	-7717.27	771.36	7753.39	4.6
227	21083	91.8	181.2	12889.31	-7813.18	768.77	7848.83	0.84
228	21178	90	180.2	12887.81	-7908.16	767.61	7943.45	2.17
229	21273	90.2	179.9	12887.65	-8003.15	767.53	8038.18	0.38
230	21368	89.5	179.3	12887.9	-8098.15	768.19	8132.95	0.97
231	21463	89.1	178.8	12889.06	-8193.13	769.76	8227.78	0.67
232	21558	88.2	178.5	12891.3	-8288.08	772	8322.63	1
233	21653	91.2	180.6	12891.79	-8383.06	772.75	8417.4	3.85
234	21749	88.5	179.9	12892.04	-8479.05	772.33	8513.09	2.91
235	21844	89.6	179.9	12893.62	-8574.03	772.49	8607.82	1.16
236	21939	92.1	179.7	12892.21	-8669.01	772.83	8702.56	2.64
237	22034	90.9	177.7	12889.72	-8763.95	774.98	8797.39	2.45
238	22130	92	178.5	12887.29	-8859.86	778.16	8893.27	1.42
239	22225	94.6	181.4	12881.82	-8954.69	778.25	8987.83	4.1
240	22320	95.6	182.1	12873.38	-9049.26	775.36	9081.93	1.28
241	22415	90.9	183.4	12867.99	-9143.97	770.81	9176.03	5.13
242	22510	87.5	183.2	12869.32	-9238.79	765.34	9270.17	3.59
243	22605	87.8	183.6	12873.22	-9333.55	759.71	9364.24	0.53
244	22700	86.6	183.6	12877.86	-9428.24	753.75	9458.22	1.26
245	22795	86.2	183.9	12883.82	-9522.85	747.55	9552.1	0.53
246	22817	86.2	184.1	12885.28	-9544.75	746.02	9573.82	0.91
PTB	22870	86.2	184.1	12888.79	-9597.5	742.24	9626.14	0

Final MWD Survey Certification

Lea County, New Mexico

Client: Devon Energy

Well Name: Green Wave 20-32 Fed State Com 8H - ST02

Total Job No: SW-190053

API No: 30-025-46050

Start Date: 12/28/2019

End Date: 2/3/2020

Measured Start Depth: 0 feet

Measured End Depth with PTB: 22870 feet

I, Blair Kenzle, MWD Operator, hereby certify that; I am employed by Total Directional Services, LLC and we conducted or supervised the taking of these open hole MWD surveys at the request of this client. This data is true, correct, complete and within the limitations of the tool as set forth by Total Directional Services, LLC. I am authorized and qualified to make this report and have reviewed this report and find that it conforms to the principals and procedures as set forth by Total Directional Services, LLC.

Date: 2/3/2020

Signed: Blair Kenzle

svy	depth	inc	azm	tvd	ns	ew	vs	dls
Tiein	0	0	0	0	0	0	0	0
1	117	0.1	62.1	117	0.05	0.09	-0.04	0.09
2	180	0.1	299.4	180	0.1	0.09	-0.09	0.28
3	275	0.1	216.7	275	0.07	-0.03	-0.08	0.14
4	371	0.01	279.8	371	0.01	-0.09	-0.02	0.1
5	466	0.1	185.3	466	-0.07	-0.1	0.06	0.11
6	561	0.3	178.1	561	-0.4	-0.1	0.39	0.21
7	656	0.4	182.8	656	-0.98	-0.11	0.97	0.11
8	751	0.5	189	750.99	-1.72	-0.19	1.7	0.12
9	778	0.5	191.8	777.99	-1.96	-0.24	1.93	0.09
10	905	0.6	181.1	904.99	-3.16	-0.36	3.13	0.11
11	1000	0.7	25.6	999.99	-3.14	-0.12	3.12	1.34
12	1095	2.1	348.4	1094.96	-0.91	-0.22	0.89	1.68
13	1190	2.7	345.8	1189.87	2.97	-1.12	-3.04	0.64
14	1285	2.8	345.3	1284.76	7.38	-2.26	-7.53	0.11
15	1379	3	345.9	1378.64	11.99	-3.44	-12.21	0.22
16	1475	2.9	344.7	1474.52	16.77	-4.69	-17.07	0.12
17	1570	2.5	357.8	1569.41	21.15	-5.4	-21.5	0.77
18	1665	2.5	0.1	1664.32	25.3	-5.48	-25.64	0.11
19	1760	2.5	356.8	1759.23	29.44	-5.59	-29.77	0.15
20	1855	2.1	357.2	1854.15	33.24	-5.79	-33.58	0.42
21	1950	2	345.6	1949.09	36.59	-6.29	-36.96	0.45
22	2045	1.9	346.3	2044.04	39.72	-7.08	-40.14	0.11
23	2140	4.3	355.4	2138.89	44.8	-7.73	-45.26	2.57
24	2236	7.3	356	2234.39	54.48	-8.45	-54.96	3.13
25	2331	7.3	358.5	2328.62	66.53	-9.03	-67.02	0.33
26	2426	7.2	358.2	2422.86	78.52	-9.37	-79	0.11
27	2521	7.1	358.3	2517.12	90.34	-9.73	-90.81	0.11
28	2616	7.1	356.8	2611.39	102.07	-10.24	-102.55	0.2
29	2712	7	357	2706.67	113.83	-10.87	-114.33	0.11
30	2806	6.9	356.5	2799.98	125.19	-11.52	-125.7	0.12
31	2902	6.7	355.4	2895.3	136.53	-12.32	-137.06	0.25
32	2997	6.5	355.8	2989.67	147.41	-13.16	-147.98	0.22
33	3092	7.9	14.6	3083.93	159.09	-11.91	-159.54	2.87
34	3188	9.4	27.4	3178.85	172.44	-6.63	-172.45	2.53
35	3283	10.7	35.8	3272.39	186.48	2.1	-185.8	2.06
36	3378	11.7	46.4	3365.59	200.28	14.23	-198.65	2.4
37	3474	12	55.3	3459.55	212.68	29.49	-209.87	1.93
38	3569	12.2	58.4	3552.44	223.56	46.16	-219.47	0.72
39	3664	12.1	58.6	3645.32	234	63.2	-228.61	0.11
40	3759	11.8	59.1	3738.26	244.18	80.04	-237.49	0.33

41	3855	11.8	59.6	3832.23	254.19	96.93	-246.21	0.11
42	3950	11.6	59.8	3925.26	263.91	113.56	-254.65	0.21
43	4045	11.3	60.4	4018.36	273.31	129.91	-262.8	0.34
44	4140	10.8	58.9	4111.6	282.51	145.62	-270.79	0.61
45	4235	10.5	58.8	4204.97	291.59	160.65	-278.72	0.32
46	4331	10.1	58.5	4299.42	300.52	175.31	-286.53	0.42
47	4426	9.6	56.7	4393.02	309.22	189.03	-294.17	0.62
48	4521	8.9	56.3	4486.78	317.64	201.77	-301.62	0.74
49	4617	8.4	53.8	4581.69	325.91	213.6	-308.97	0.65
50	4712	8.2	56.3	4675.7	333.76	224.84	-315.97	0.43
51	4807	8.9	53.9	4769.64	341.85	236.41	-323.16	0.83
52	4902	9.1	51.7	4863.47	350.84	248.25	-331.24	0.42
53	4998	8.9	56.1	4958.29	359.69	260.37	-339.15	0.75
54	5093	9.6	55.8	5052.05	368.24	273.02	-346.73	0.74
55	5189	9.5	55.2	5146.72	377.26	286.14	-354.74	0.15
56	5284	8.9	53.6	5240.5	386.09	298.5	-362.63	0.69
57	5379	9.4	52.9	5334.29	395.13	310.6	-370.73	0.54
58	5474	10.1	51	5427.92	405.06	323.26	-379.68	0.81
59	5569	10.1	50.3	5521.45	415.62	336.14	-389.24	0.13
60	5664	10.3	48.6	5614.95	426.56	348.92	-399.19	0.38
61	5760	10.2	55.2	5709.42	437.08	362.34	-408.68	1.23
62	5855	10.3	57.3	5802.9	446.47	376.4	-416.99	0.41
63	5950	10	57	5896.41	455.55	390.46	-424.99	0.32
64	6045	9.6	56	5990.03	464.47	403.95	-432.88	0.46
65	6140	9.6	56.2	6083.7	473.31	417.1	-440.71	0.04
66	6236	9.7	54.3	6178.34	482.48	430.32	-448.86	0.35
67	6331	9.4	52	6272.02	491.93	442.93	-457.34	0.51
68	6426	8.8	51.7	6365.83	501.21	454.74	-465.7	0.63
69	6521	10.3	55.8	6459.51	510.49	467.47	-474	1.73
70	6617	10.6	55.1	6553.92	520.36	481.81	-482.77	0.34
71	6711	10.4	53.8	6646.34	530.32	495.75	-491.66	0.33
72	6807	9.9	52.6	6740.84	540.45	509.3	-500.74	0.57
73	6902	9.8	52.8	6834.44	550.3	522.23	-509.6	0.11
74	6997	8.8	52.7	6928.19	559.59	534.45	-517.95	1.05
75	7092	6.2	58	7022.37	566.72	544.58	-524.29	2.83
76	7187	4	45.3	7116.99	571.77	551.29	-528.82	2.59
77	7282	3.7	27.4	7211.78	576.82	555.05	-533.58	1.3
78	7377	2.2	14.5	7306.65	581.31	556.92	-537.91	1.72
79	7473	1.1	15	7402.61	583.98	557.62	-540.53	1.15
80	7568	0.9	13.9	7497.6	585.58	558.03	-542.1	0.21
81	7663	0.5	22.3	7592.59	586.69	558.37	-543.17	0.43
82	7758	0.3	36.4	7687.59	587.28	558.68	-543.73	0.23

83	7853	0.2	42.1	7782.59	587.6	558.93	-544.04	0.11
84	7948	0.1	108.8	7877.59	587.7	559.12	-544.12	0.19
85	8043	0.2	176	7972.59	587.5	559.21	-543.92	0.2
86	8139	0.3	193.1	8068.58	587.09	559.17	-543.51	0.13
87	8234	0.4	131	8163.58	586.63	559.36	-543.04	0.39
88	8329	0.6	169.8	8258.58	585.92	559.7	-542.31	0.4
89	8424	0.8	165.3	8353.57	584.79	559.96	-541.16	0.22
90	8519	0.9	162.2	8448.56	583.44	560.35	-539.78	0.12
91	8614	1	161.8	8543.55	581.94	560.84	-538.25	0.11
92	8709	1.1	161.2	8638.53	580.29	561.39	-536.57	0.11
93	8805	1.3	167.3	8734.51	578.36	561.93	-534.6	0.25
94	8900	1.3	161.1	8829.49	576.29	562.52	-532.49	0.15
95	8995	1.2	165.8	8924.47	574.3	563.11	-530.47	0.15
96	9090	1.2	171.3	9019.44	572.36	563.5	-528.49	0.12
97	9185	1.2	181.9	9114.42	570.38	563.62	-526.51	0.23
98	9280	1	183.1	9209.41	568.56	563.54	-524.7	0.21
99	9375	1	189.4	9304.39	566.91	563.36	-523.07	0.12
100	9471	1	206.2	9400.38	565.33	562.86	-521.54	0.3
101	9566	1	212.1	9495.36	563.89	562.05	-520.16	0.11
102	9661	0.8	213.4	9590.35	562.63	561.24	-518.97	0.21
103	9756	0.7	246.6	9685.34	561.85	560.35	-518.25	0.46
104	9851	0.8	245.2	9780.34	561.34	559.21	-517.83	0.11
105	9946	0.8	247.1	9875.33	560.8	558	-517.38	0.03
106	10041	1	245.4	9970.31	560.2	556.63	-516.89	0.21
107	10136	0.4	249	10065.31	559.73	555.57	-516.5	0.63
108	10232	0.8	326.4	10161.3	560.17	554.89	-516.99	0.85
109	10327	1.6	352.5	10256.28	562.04	554.35	-518.89	1
110	10422	1.7	2.1	10351.24	564.76	554.23	-521.62	0.31
111	10517	1.2	5.6	10446.21	567.16	554.37	-524	0.53
112	10612	1	1.4	10541.19	568.98	554.49	-525.8	0.23
113	10708	0.8	5	10637.18	570.49	554.57	-527.3	0.22
114	10803	0.7	344.7	10732.17	571.71	554.48	-528.52	0.3
115	10898	0.8	312.7	10827.17	572.72	553.83	-529.58	0.45
116	10993	1	302.4	10922.15	573.61	552.65	-530.56	0.27
117	11088	1	283.8	11017.14	574.25	551.14	-531.31	0.34
118	11183	1.4	257.6	11112.12	574.2	549.2	-531.4	0.7
119	11278	1.7	244.1	11207.09	573.33	546.8	-530.72	0.5
120	11374	2	246.6	11303.04	572.05	543.98	-529.65	0.32
121	11469	1.2	270.8	11398	571.4	541.47	-529.2	1.08
122	11564	0.9	292	11492.98	571.7	539.78	-529.61	0.51
123	11659	1.3	341.1	11587.97	573	538.74	-530.99	1.04
124	11755	1.4	338.1	11683.94	575.11	537.95	-533.16	0.13

125	11850	1.5	333	11778.91	577.3	536.95	-535.41	0.17
126	11945	1.7	324.4	11873.87	579.55	535.57	-537.76	0.33
127	12040	1.2	323.9	11968.84	581.5	534.16	-539.81	0.53
128	12135	0.9	329	12063.83	582.94	533.19	-541.33	0.33
129	12238	0.7	328	12166.82	584.17	532.44	-542.61	0.19
130	12326	1	300.5	12254.81	585.02	531.5	-543.52	0.57
131	12422	7.6	169.1	12350.55	579.2	531.98	-537.68	8.64
132	12517	23.3	179.1	12441.84	554.08	533.47	-512.52	16.7
133	12612	38.5	178.3	12523.12	505.45	534.65	-463.94	16.01
134	12707	42.7	178.3	12595.23	443.67	536.48	-402.2	4.42
135	12803	47.7	172.4	12662.88	375.87	542.15	-334.16	6.79
136	12898	52.4	178.7	12723.9	303.34	547.65	-261.42	7.09
137	12993	56.5	180.8	12779.13	226.07	547.96	-184.35	4.68
138	13088	63.2	181	12826.82	143.98	546.66	-102.59	7.05
139	13135	70.2	179.6	12845.4	100.84	546.45	-59.59	15.14
140	13183	77.7	179.9	12858.66	54.75	546.65	-13.61	15.64
141	13245	89	180.8	12865.83	-6.73	546.27	47.67	18.28
142	13312	90.6	178.6	12866.06	-73.73	546.62	114.5	4.06
143	13407	89.7	176.9	12865.81	-168.65	550.35	209.44	2.02
144	13502	89.5	177.1	12866.48	-263.52	555.32	304.41	0.3
145	13597	90.4	178.3	12866.56	-358.44	559.13	399.35	1.58
146	13693	91.1	179.3	12865.3	-454.41	561.14	495.2	1.27
147	13788	91.5	180.1	12863.15	-549.38	561.64	589.94	0.94
148	13883	91.2	182	12860.91	-644.33	559.9	684.5	2.02
149	13979	90.5	190.4	12859.48	-739.67	549.54	778.8	8.78
150	14074	91.2	194.4	12858.07	-832.43	529.15	869.76	4.27
151	14169	88.3	192.5	12858.49	-924.81	507.05	960.22	3.65
152	14264	88	189.6	12861.56	-1017.99	488.86	1051.78	3.07
153	14359	84.9	181.9	12867.45	-1112.24	479.36	1145.05	8.72
154	14423	85.5	178.5	12872.8	-1176.01	479.13	1208.62	5.38
155	14454	85.2	177.9	12875.32	-1206.89	480.1	1239.49	2.16
156	14549	92.6	177.6	12877.14	-1301.74	483.83	1334.35	7.8
157	14645	92.7	177.4	12872.7	-1397.54	488.01	1430.2	0.23
158	14740	92	177.2	12868.8	-1492.36	492.48	1525.08	0.77
159	14835	91.3	176.1	12866.07	-1587.15	498.03	1620.03	1.37
160	14930	90.3	173.1	12864.74	-1681.71	506.97	1714.99	3.33
161	15024	86.3	172.1	12867.53	-1774.87	519.07	1808.79	4.39
162	15037	84.6	170.7	12868.56	-1787.68	521.01	1821.71	16.92
163	15087	84.2	165.7	12873.44	-1836.37	531.18	1871.03	9.98
164	15119	87.2	166	12875.84	-1867.31	538.98	1902.47	9.42
165	15167	88	165.7	12877.85	-1913.81	550.7	1949.72	1.78
166	15214	90	168.5	12878.67	-1959.61	561.19	1996.17	7.32

167	15310	92.4	175.6	12876.66	-2054.6	574.46	2091.89	7.8
168	15405	89.3	171.1	12875.25	-2148.92	585.46	2186.76	5.75
169	15500	88.8	170.4	12876.83	-2242.67	600.73	2281.39	0.91
170	15596	89	168.8	12878.67	-2337.07	618.05	2376.83	1.68
171	15691	88.4	172.6	12880.82	-2430.78	633.4	2471.43	4.05
172	15786	88	172.8	12883.81	-2524.96	645.46	2566.25	0.47
173	15881	88.3	173	12886.88	-2619.18	657.2	2661.09	0.38
174	15976	88.4	173.7	12889.61	-2713.5	668.2	2755.97	0.74
175	16071	90.4	173.2	12890.61	-2807.87	679.03	2850.88	2.17
176	16167	92.4	174.2	12888.26	-2903.26	689.56	2946.79	2.33
177	16262	91.7	175.9	12884.86	-2997.84	697.75	3041.72	1.93
178	16357	89.7	178.5	12883.7	-3092.71	702.39	3136.67	3.45
179	16452	89.5	178.9	12884.36	-3187.68	704.55	3231.53	0.47
180	16547	90	180.7	12884.78	-3282.67	704.88	3326.29	1.97
181	16643	92	179.6	12883.1	-3378.65	704.63	3421.98	2.38
182	16738	91.7	179	12880.04	-3473.6	705.79	3516.74	0.71
183	16833	91.7	178.8	12877.22	-3568.54	707.61	3611.55	0.21
184	16929	91.6	178.3	12874.45	-3664.47	710.04	3707.39	0.53
185	17083	90.7	177.7	12871.36	-3818.34	715.41	3861.23	0.7
186	17178	88	177	12872.44	-3913.22	719.8	3956.18	2.94
187	17273	90.3	178.8	12873.85	-4008.14	723.28	4051.09	3.07
188	17369	87.8	177	12875.44	-4104.05	726.8	4146.99	3.21
189	17464	90.8	175.6	12876.6	-4198.83	732.93	4241.96	3.48
190	17559	89.4	178.9	12876.44	-4293.7	737.49	4336.91	3.77
191	17655	89.4	179.9	12877.44	-4389.69	738.49	4432.71	1.04
192	17750	89.2	180.7	12878.6	-4484.68	738	4527.39	0.87
193	17845	90.9	183.1	12878.52	-4579.62	734.85	4621.83	3.1
194	17940	91.3	185	12876.7	-4674.36	728.14	4715.8	2.04
195	18035	87.6	179.7	12877.61	-4769.23	724.24	4810.11	6.8
196	18131	86.8	179.1	12882.3	-4865.11	725.25	4905.79	1.04
197	18226	85.3	179.2	12888.84	-4959.87	726.65	5000.39	1.58
198	18321	87.7	176.9	12894.64	-5054.62	729.88	5095.12	3.5
199	18416	91.7	177.4	12895.14	-5149.48	734.6	5190.07	4.24
200	18512	91.4	178.1	12892.54	-5245.37	738.37	5285.97	0.79
201	18607	91.4	177.9	12890.22	-5340.29	741.69	5380.87	0.21
202	18702	89.9	177.5	12889.14	-5435.2	745.5	5475.8	1.63
203	18797	91.6	177.5	12887.9	-5530.1	749.64	5570.74	1.79
204	18893	91.5	177.8	12885.3	-5625.98	753.58	5666.65	0.33
205	18988	91.8	177.6	12882.57	-5720.87	757.39	5761.55	0.38
206	19083	88	174.4	12882.73	-5815.61	764.01	5856.52	5.23
207	19178	88.6	176.7	12885.55	-5910.27	771.38	5951.47	2.5
208	19274	88.1	176.5	12888.32	-6006.06	777.07	6047.42	0.56

209	19369	87.9	176.1	12891.63	-6100.81	783.2	6142.36	0.47
210	19464	89.2	176.3	12894.04	-6195.57	789.49	6237.32	1.38
211	19559	89.2	176.4	12895.36	-6290.36	795.54	6332.31	0.11
212	19654	92.1	178.5	12894.28	-6385.25	799.76	6427.24	3.77
213	19750	93.1	179.4	12889.93	-6481.13	801.52	6522.98	1.4
214	19845	89.7	178.3	12887.61	-6576.07	803.43	6617.8	3.76
215	19940	92.5	182.2	12885.78	-6671.02	803.02	6712.45	5.05
216	20036	88.3	181.3	12885.11	-6766.95	800.09	6807.89	4.47
217	20131	87.8	181.2	12888.35	-6861.87	798.01	6902.39	0.54
218	20226	89.3	181	12890.75	-6956.82	796.19	6996.94	1.59
219	20321	89.1	181.6	12892.08	-7051.79	794.04	7091.48	0.67
220	20416	89.1	182.5	12893.57	-7146.72	790.64	7185.88	0.95
221	20512	91.1	182.9	12893.4	-7242.6	786.12	7281.16	2.12
222	20607	90.9	182.3	12891.74	-7337.49	781.81	7375.46	0.67
223	20702	90.6	182.1	12890.5	-7432.41	778.16	7469.84	0.38
224	20797	89.3	181.4	12890.58	-7527.37	775.26	7564.31	1.55
225	20892	88	180.7	12892.82	-7622.32	773.52	7658.86	1.55
226	20987	92.2	181.9	12892.66	-7717.27	771.36	7753.39	4.6
227	21083	91.8	181.2	12889.31	-7813.18	768.77	7848.83	0.84
228	21178	90	180.2	12887.81	-7908.16	767.61	7943.45	2.17
229	21273	90.2	179.9	12887.65	-8003.15	767.53	8038.18	0.38
230	21368	89.5	179.3	12887.9	-8098.15	768.19	8132.95	0.97
231	21463	89.1	178.8	12889.06	-8193.13	769.76	8227.78	0.67
232	21558	88.2	178.5	12891.3	-8288.08	772	8322.63	1
233	21653	91.2	180.6	12891.79	-8383.06	772.75	8417.4	3.85
234	21749	88.5	179.9	12892.04	-8479.05	772.33	8513.09	2.91
235	21844	89.6	179.9	12893.62	-8574.03	772.49	8607.82	1.16
236	21939	92.1	179.7	12892.21	-8669.01	772.83	8702.56	2.64
237	22034	90.9	177.7	12889.72	-8763.95	774.98	8797.39	2.45
238	22130	92	178.5	12887.29	-8859.86	778.16	8893.27	1.42
239	22225	94.6	181.4	12881.82	-8954.69	778.25	8987.83	4.1
240	22320	95.6	182.1	12873.38	-9049.26	775.36	9081.93	1.28
241	22415	90.9	183.4	12867.99	-9143.97	770.81	9176.03	5.13
242	22510	87.5	183.2	12869.32	-9238.79	765.34	9270.17	3.59
243	22605	87.8	183.6	12873.22	-9333.55	759.71	9364.24	0.53
244	22700	86.6	183.6	12877.86	-9428.24	753.75	9458.22	1.26
245	22795	86.2	183.9	12883.82	-9522.85	747.55	9552.1	0.53
246	22817	86.2	184.1	12885.28	-9544.75	746.02	9573.82	0.91
PTB	22870	86.2	184.1	12888.79	-9597.5	742.24	9626.14	0