



Total Directional
Services, LLC

Well Operations

State of Texas Railroad Commission

Lea County, New Mexico

Client: Devon Energy (US)

Well Name: JAYHAWK 7-6 FED FEE COM 7H

Total Job No: 2019-121-126

API No: 30-025-45538

Start Depth: 120 feet MD

End Depth: 23,194 feet MD

Start Date: February 15, 2019

End Date: May 20, 2019

HOBBS OCD
FEB 19 2020
RECEIVED

I, Larry Garcia, certify that; I am employed by Total Directional Services, LLC. on 02/15/2019 through 05/20/2019. I conducted or supervised the taking of the MWD surveys from a measured depth of 120 feet to a measured depth of 23,194 feet. The 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 these surveys were conducted at the request of Devon Energy (US) for the well: JAYHAWK 7-6 FED FEE COM 7H, API No: 30-025-45538 in Lea County, New Mexico. I have reviewed this report and find that it conforms to the principals and procedures as set forth by Total Directional Services, LLC.

Date: 5/20/19

Signature: *Larry Garcia*

DIRECTIONAL SURVEY REPORT

Company name: Devon Energy

Start date: 2/15/2019

Well name: Jayhawk 7-6 FED FEE COM 7H

End date: 5/20/2019

Field: Wolfcamp

Proposed direction: 359.54

Rig: Cactus 126

Declination: 6.29

API/UWI: 30-025-45538

North Reference: Grid

State/Province: New Mexico

Latitude/Longitude: 32.0523883 / -103.5071905

County/Parish: Lea

KB: 3397.5

Location SouthEast New Mexico

SVY	Depth	Inc	Azm	TVD	NS	EW	VS	CD	CA	DLS	CL
Tiein	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	
1	124.00	0.50	149.50	124.00	-0.47	0.27	-0.47	0.54	149.50	0.40	124.00
2	216.00	0.80	146.60	215.99	-1.35	0.83	-1.35	1.58	148.32	0.33	92.00
3	307.00	0.90	147.80	306.98	-2.48	1.56	-2.50	2.93	147.82	0.11	91.00
4	399.00	1.00	147.20	398.97	-3.77	2.38	-3.79	4.46	147.71	0.11	92.00
5	490.00	1.00	145.90	489.96	-5.09	3.26	-5.12	6.05	147.40	0.02	91.00
6	582.00	1.00	139.60	581.94	-6.37	4.23	-6.40	7.65	146.43	0.12	92.00
7	674.00	1.00	139.40	673.93	-7.59	5.27	-7.63	9.24	145.23	0.00	92.00
8	765.00	1.30	139.00	764.91	-8.97	6.46	-9.03	11.06	144.23	0.33	91.00
9	838.00	1.30	138.30	837.89	-10.22	7.56	-10.28	12.71	143.50	0.02	73.00
10	965.00	1.00	107.80	964.87	-11.63	9.57	-11.71	15.06	140.55	0.53	127.00
11	1057.00	1.00	111.00	1056.85	-12.16	11.09	-12.25	16.46	137.65	0.06	92.00
12	1147.00	2.70	115.50	1146.80	-13.36	13.73	-13.47	19.16	134.21	1.89	90.00
13	1239.00	4.50	130.90	1238.62	-16.65	18.42	-16.80	24.83	132.12	2.20	92.00
14	1331.00	6.50	134.20	1330.19	-22.65	24.88	-22.85	33.64	132.31	2.20	92.00
15	1423.00	7.10	135.10	1421.54	-30.31	32.63	-30.57	44.53	132.89	0.66	92.00
16	1515.00	7.20	140.10	1512.83	-38.76	40.34	-39.08	55.94	133.86	0.68	92.00
17	1607.00	7.20	141.10	1604.10	-47.67	47.66	-48.05	67.40	135.01	0.14	92.00
18	1701.00	7.00	143.70	1697.38	-56.87	54.75	-57.31	78.94	136.09	0.40	94.00
19	1796.00	8.00	140.10	1791.57	-66.60	62.41	-67.10	91.28	136.86	1.16	95.00
20	1889.00	9.60	136.40	1883.47	-77.19	71.91	-77.76	105.50	137.03	1.82	93.00
21	1984.00	11.00	135.60	1976.94	-89.40	83.72	-90.07	122.48	136.88	1.48	95.00
22	2078.00	11.20	135.80	2069.18	-102.35	96.36	-103.12	140.57	136.73	0.22	94.00
23	2172.00	11.50	128.10	2161.35	-114.68	110.10	-115.56	158.97	136.17	1.64	94.00
24	2266.00	12.40	121.40	2253.31	-125.72	126.09	-126.73	178.05	134.92	1.76	94.00
25	2361.00	12.80	113.40	2346.03	-135.21	144.45	-136.37	197.86	133.11	1.88	95.00
26	2455.00	13.40	112.70	2437.59	-143.55	164.06	-144.86	218.00	131.19	0.66	94.00
27	2549.00	13.90	113.50	2528.93	-152.26	184.46	-153.73	239.18	129.54	0.57	94.00
28	2643.00	12.90	112.70	2620.37	-160.81	204.49	-162.45	260.15	128.18	1.08	94.00
29	2738.00	11.60	109.90	2713.21	-168.15	223.26	-169.94	279.50	126.99	1.50	95.00
30	2832.00	11.60	107.60	2805.29	-174.23	241.15	-176.16	297.51	125.85	0.49	94.00
31	2927.00	12.20	108.90	2898.25	-180.37	259.75	-182.45	316.24	124.78	0.69	95.00
32	3021.00	12.70	109.00	2990.03	-186.95	278.92	-189.18	335.78	123.83	0.53	94.00
33	3115.00	12.10	112.70	3081.84	-194.11	297.78	-196.50	355.46	123.10	1.06	94.00
34	3209.00	12.80	115.10	3173.63	-202.33	316.30	-204.87	375.48	122.61	0.93	94.00
35	3303.00	11.90	116.10	3265.46	-211.01	334.43	-213.69	395.44	122.25	0.98	94.00
36	3397.00	10.80	111.90	3357.62	-218.56	351.31	-221.38	413.75	121.89	1.46	94.00

37	3491.00	10.50	110.20	3450.00	-224.81	367.52	-227.75	430.82	121.45	0.46	94.00
38	3585.00	10.60	110.00	3542.41	-230.72	383.68	-233.79	447.71	121.02	0.11	94.00
39	3679.00	10.90	110.10	3634.76	-236.73	400.15	-239.94	464.93	120.61	0.32	94.00
40	3773.00	11.30	109.90	3727.00	-242.92	417.16	-246.26	482.73	120.21	0.43	94.00
41	3867.00	11.50	110.00	3819.15	-249.26	434.62	-252.74	501.03	119.83	0.21	94.00
42	3961.00	11.80	110.10	3911.21	-255.77	452.45	-259.39	519.74	119.48	0.32	94.00
43	4055.00	11.50	109.00	4003.27	-262.12	470.34	-265.89	538.45	119.13	0.40	94.00
44	4149.00	11.50	107.20	4095.39	-267.94	488.15	-271.85	556.85	118.76	0.38	94.00
45	4243.00	11.10	108.30	4187.56	-273.56	505.69	-277.61	574.94	118.41	0.48	94.00
46	4337.00	10.90	109.50	4279.84	-279.36	522.66	-283.55	592.64	118.12	0.32	94.00
47	4432.00	10.90	112.10	4373.12	-285.74	539.45	-290.06	610.45	117.91	0.52	95.00
48	4526.00	11.10	109.80	4465.40	-292.15	556.20	-296.61	628.26	117.71	0.51	94.00
49	4620.00	11.80	109.80	4557.53	-298.47	573.75	-303.07	646.75	117.48	0.74	94.00
50	4714.00	12.50	113.20	4649.42	-305.73	592.15	-310.48	666.42	117.31	1.06	94.00
51	4807.00	12.80	112.10	4740.16	-313.57	610.94	-318.47	686.72	117.17	0.41	93.00
52	4901.00	13.00	112.30	4831.79	-321.50	630.37	-326.55	707.63	117.02	0.22	94.00
53	4996.00	13.50	113.00	4924.26	-329.89	650.47	-335.10	729.34	116.89	0.55	95.00
54	5089.00	14.00	115.00	5014.60	-338.89	670.65	-344.26	751.41	116.81	0.74	93.00
55	5183.00	13.50	114.90	5105.90	-348.31	690.91	-353.85	773.74	116.75	0.53	94.00
56	5278.00	12.30	114.30	5198.50	-357.15	710.19	-362.84	794.94	116.70	1.27	95.00
57	5372.00	10.80	114.60	5290.60	-364.93	727.33	-370.76	813.74	116.64	1.60	94.00
58	5466.00	11.20	111.90	5382.87	-372.00	743.81	-377.96	831.64	116.57	0.69	94.00
59	5560.00	11.70	111.00	5475.00	-378.82	761.17	-384.92	850.23	116.46	0.56	94.00
60	5655.00	11.90	110.50	5567.99	-385.71	779.34	-391.95	869.56	116.33	0.24	95.00
61	5748.00	12.00	107.40	5658.98	-391.96	797.55	-398.35	888.66	116.17	0.70	93.00
62	5842.00	11.90	111.70	5750.94	-398.46	815.88	-405.00	907.98	116.03	0.95	94.00
63	5936.00	11.80	113.10	5842.94	-405.82	833.72	-412.50	927.24	115.95	0.32	94.00
64	6030.00	11.40	111.20	5935.02	-412.95	851.22	-419.77	946.10	115.88	0.59	94.00
65	6124.00	11.00	112.20	6027.23	-419.69	868.19	-426.65	964.31	115.80	0.47	94.00
66	6218.00	11.80	111.90	6119.37	-426.67	885.41	-433.76	982.85	115.73	0.85	94.00
67	6312.00	12.10	111.60	6211.34	-433.88	903.49	-441.12	1002.27	115.65	0.33	94.00
68	6406.00	11.70	110.20	6303.32	-440.80	921.59	-448.18	1021.59	115.56	0.52	94.00
69	6500.00	12.30	107.80	6395.26	-447.15	940.07	-454.68	1041.00	115.44	0.83	94.00
70	6594.00	12.30	107.40	6487.11	-453.20	959.16	-460.89	1060.84	115.29	0.09	94.00
71	6688.00	12.00	105.30	6579.00	-458.78	978.14	-466.61	1080.39	115.13	0.57	94.00
72	6782.00	11.50	103.90	6671.03	-463.61	996.66	-471.59	1099.21	114.95	0.61	94.00
73	6876.00	10.70	108.10	6763.27	-468.57	1014.05	-476.69	1117.08	114.80	1.21	94.00
74	6971.00	10.70	114.20	6856.62	-474.92	1030.48	-483.18	1134.65	114.74	1.19	95.00
75	7065.00	10.80	114.20	6948.97	-482.11	1046.47	-490.50	1152.19	114.74	0.11	94.00
76	7159.00	10.20	111.20	7041.40	-488.73	1062.26	-497.24	1169.30	114.71	0.86	94.00
77	7253.00	8.90	103.70	7134.10	-493.46	1077.09	-502.09	1184.75	114.61	1.91	94.00
78	7347.00	7.90	102.00	7227.09	-496.53	1090.47	-505.27	1198.20	114.48	1.10	94.00
79	7441.00	7.00	102.80	7320.30	-499.14	1102.38	-507.98	1210.12	114.36	0.96	94.00
80	7535.00	5.70	104.10	7413.72	-501.55	1112.49	-510.46	1220.32	114.27	1.39	94.00
81	7630.00	4.30	107.00	7508.35	-503.74	1120.47	-512.72	1228.50	114.21	1.50	95.00
82	7724.00	3.30	123.80	7602.15	-506.27	1126.09	-515.30	1234.66	114.21	1.58	94.00
83	7818.00	1.80	151.60	7696.06	-509.08	1129.04	-518.13	1238.51	114.27	2.02	94.00
84	7912.00	0.90	154.80	7790.03	-511.04	1130.06	-520.10	1240.24	114.33	0.96	94.00
85	8006.00	0.90	149.50	7884.02	-512.35	1130.75	-521.41	1241.41	114.38	0.09	94.00

86	8100.00	1.00	153.90	7978.00	-513.72	1131.48	-522.79	1242.64	114.42	0.13	94.00
87	8195.00	0.90	156.70	8072.99	-515.15	1132.14	-524.22	1243.84	114.47	0.12	95.00
88	8289.00	0.80	159.80	8166.98	-516.44	1132.66	-525.52	1244.84	114.51	0.12	94.00
89	8383.00	0.80	163.30	8260.97	-517.69	1133.08	-526.77	1245.74	114.56	0.05	94.00
90	8478.00	0.90	171.70	8355.96	-519.06	1133.38	-528.14	1246.58	114.61	0.17	95.00
91	8572.00	0.70	183.50	8449.95	-520.37	1133.45	-529.45	1247.19	114.66	0.27	94.00
92	8666.00	0.80	196.90	8543.94	-521.57	1133.22	-530.65	1247.49	114.71	0.21	94.00
93	8760.00	0.70	192.80	8637.94	-522.75	1132.90	-531.83	1247.69	114.77	0.12	94.00
94	8854.00	0.80	197.60	8731.93	-523.94	1132.58	-533.02	1247.90	114.83	0.13	94.00
95	8948.00	0.80	203.40	8825.92	-525.17	1132.12	-534.24	1248.00	114.89	0.09	94.00
96	9042.00	0.90	201.80	8919.91	-526.46	1131.58	-535.52	1248.05	114.95	0.11	94.00
97	9136.00	0.80	199.00	9013.90	-527.76	1131.10	-536.83	1248.16	115.01	0.12	94.00
98	9230.00	0.90	204.50	9107.89	-529.05	1130.58	-538.11	1248.24	115.08	0.14	94.00
99	9324.00	0.90	211.10	9201.88	-530.36	1129.89	-539.41	1248.17	115.14	0.11	94.00
100	9418.00	0.80	212.00	9295.87	-531.55	1129.16	-540.59	1248.02	115.21	0.11	94.00
101	9513.00	0.90	216.10	9390.86	-532.71	1128.37	-541.75	1247.80	115.27	0.12	95.00
102	9608.00	0.90	225.50	9485.84	-533.84	1127.40	-542.87	1247.40	115.34	0.16	95.00
103	9702.00	0.80	241.70	9579.83	-534.67	1126.29	-543.69	1246.76	115.39	0.28	94.00
104	9796.00	0.90	255.60	9673.82	-535.16	1125.00	-544.18	1245.80	115.44	0.24	94.00
105	9890.00	1.20	262.20	9767.81	-535.48	1123.31	-544.48	1244.41	115.49	0.34	94.00
106	9984.00	1.00	265.10	9861.79	-535.68	1121.52	-544.67	1242.88	115.53	0.22	94.00
107	10078.00	1.00	241.60	9955.78	-536.14	1119.98	-545.12	1241.69	115.58	0.43	94.00
108	10172.00	1.00	252.60	10049.76	-536.78	1118.47	-545.74	1240.61	115.64	0.20	94.00
109	10275.00	0.80	230.40	10152.75	-537.50	1117.06	-546.46	1239.65	115.70	0.39	103.00
110	10369.00	1.50	220.00	10246.73	-538.86	1115.77	-547.81	1239.08	115.78	0.77	94.00
111	10463.00	2.40	202.40	10340.68	-541.63	1114.22	-550.56	1238.89	115.92	1.14	94.00
112	10556.00	1.90	215.50	10433.61	-544.68	1112.59	-553.60	1238.76	116.08	0.75	93.00
113	10650.00	0.80	230.60	10527.58	-546.37	1111.18	-555.27	1238.24	116.18	1.22	94.00
114	10744.00	0.90	263.20	10621.57	-546.87	1109.94	-555.77	1237.35	116.23	0.52	94.00
115	10838.00	1.00	264.80	10715.56	-547.03	1108.39	-555.91	1236.03	116.27	0.11	94.00
116	10932.00	1.50	303.50	10809.54	-546.43	1106.54	-555.29	1234.11	116.28	1.01	94.00
117	11026.00	0.70	76.30	10903.53	-545.61	1106.07	-554.48	1233.33	116.26	2.17	94.00
118	11120.00	0.90	120.00	10997.52	-545.85	1107.27	-554.72	1234.50	116.24	0.66	94.00
119	11214.00	0.60	159.70	11091.51	-546.68	1108.08	-555.56	1235.60	116.26	0.62	94.00
120	11308.00	0.80	150.40	11185.51	-547.71	1108.58	-556.59	1236.50	116.29	0.24	94.00
121	11403.00	0.80	174.70	11280.50	-548.95	1108.97	-557.83	1237.40	116.34	0.35	95.00
122	11497.00	0.80	141.90	11374.49	-550.12	1109.43	-559.01	1238.33	116.37	0.48	94.00
123	11590.00	1.50	151.90	11467.47	-551.70	1110.40	-560.60	1239.91	116.42	0.78	93.00
124	11684.00	0.80	130.10	11561.45	-553.21	1111.49	-562.11	1241.55	116.46	0.87	94.00
125	11779.00	0.80	105.50	11656.44	-553.81	1112.63	-562.73	1242.84	116.46	0.36	95.00
126	11873.00	0.80	114.70	11750.43	-554.26	1113.86	-563.19	1244.14	116.46	0.14	94.00
127	11967.00	0.90	130.40	11844.42	-555.02	1115.02	-563.95	1245.52	116.46	0.27	94.00
128	12061.00	0.80	91.60	11938.41	-555.51	1116.24	-564.46	1246.83	116.46	0.61	94.00
129	12155.00	0.50	77.90	12032.41	-555.45	1117.29	-564.40	1247.74	116.43	0.36	94.00
130	12249.00	0.40	63.80	12126.40	-555.21	1117.99	-564.17	1248.26	116.41	0.16	94.00
131	12268.00	0.40	73.40	12145.40	-555.17	1118.11	-564.12	1248.35	116.41	0.35	19.00
132	12336.00	0.50	56.60	12213.40	-554.93	1118.59	-563.90	1248.68	116.39	0.24	68.00
133	12430.00	3.80	5.50	12307.33	-551.61	1119.23	-560.58	1247.78	116.24	3.73	94.00
134	12524.00	14.60	357.90	12399.98	-536.62	1119.09	-545.59	1241.10	115.62	11.54	94.00

135	12618.00	27.70	354.70	12487.46	-502.88	1116.63	-511.83	1224.64	114.24	13.99	94.00
136	12712.00	38.20	356.00	12566.23	-451.99	1112.57	-460.91	1200.88	112.11	11.19	94.00
137	12806.00	46.50	357.50	12635.64	-388.82	1109.05	-397.71	1175.24	109.32	8.89	94.00
138	12900.00	51.70	1.00	12697.18	-317.82	1108.21	-326.71	1152.88	106.00	6.21	94.00
139	12994.00	59.80	1.90	12750.04	-240.21	1110.20	-249.12	1135.89	102.21	8.65	94.00
140	13089.00	72.00	0.40	12788.76	-153.68	1111.89	-162.60	1122.46	97.87	12.92	95.00
141	13183.00	79.50	359.80	12811.88	-62.64	1112.04	-71.56	1113.80	93.22	8.00	94.00
142	13277.00	87.30	359.40	12822.68	30.67	1111.38	21.74	1111.81	88.42	8.31	94.00
143	13356.00	89.90	358.50	12824.61	109.62	1109.94	100.71	1115.34	84.36	3.48	79.00
144	13396.00	91.10	359.60	12824.26	149.61	1109.27	140.70	1119.32	82.32	4.07	40.00
145	13490.00	88.70	358.70	12824.42	243.59	1107.88	234.69	1134.34	77.60	2.73	94.00
146	13584.00	88.40	358.70	12826.80	337.54	1105.75	328.65	1156.12	73.02	0.32	94.00
147	13678.00	87.40	354.20	12830.25	431.27	1099.93	422.43	1181.46	68.59	4.90	94.00
148	13772.00	87.10	354.00	12834.76	524.67	1090.28	515.90	1209.95	64.30	0.38	94.00
149	13866.00	86.30	352.80	12840.17	617.89	1079.50	609.20	1243.82	60.21	1.53	94.00
150	13960.00	87.40	354.00	12845.33	711.12	1068.71	702.52	1283.68	56.36	1.73	94.00
151	14054.00	89.50	357.80	12847.88	804.82	1061.99	796.27	1332.50	52.84	4.62	94.00
152	14148.00	90.20	358.60	12848.12	898.77	1059.04	890.24	1389.01	49.68	1.13	94.00
153	14242.00	90.60	1.70	12847.47	992.76	1059.29	984.22	1451.78	46.86	3.33	94.00
154	14336.00	89.40	358.60	12847.47	1086.75	1059.53	1078.20	1517.77	44.27	3.54	94.00
155	14430.00	90.40	1.30	12847.63	1180.74	1059.45	1172.19	1586.37	41.90	3.06	94.00
156	14524.00	88.30	358.70	12848.70	1274.72	1059.45	1266.17	1657.51	39.73	3.56	94.00
157	14618.00	87.70	358.00	12851.98	1368.62	1056.75	1360.09	1729.11	37.67	0.98	94.00
158	14712.00	91.30	358.20	12852.80	1462.55	1053.63	1454.04	1802.55	35.77	3.84	94.00
159	14806.00	89.60	357.70	12852.06	1556.48	1050.27	1548.00	1877.68	34.01	1.89	94.00
160	14900.00	88.80	357.60	12853.37	1650.39	1046.41	1641.94	1954.17	32.38	0.86	94.00
161	14995.00	89.10	358.40	12855.11	1745.32	1043.10	1736.89	2033.27	30.86	0.90	95.00
162	15089.00	90.50	359.50	12855.44	1839.30	1041.38	1830.88	2113.64	29.52	1.89	94.00
163	15183.00	92.10	0.70	12853.31	1933.27	1041.54	1924.84	2195.98	28.31	2.13	94.00
164	15277.00	91.00	359.80	12850.76	2027.23	1041.95	2018.80	2279.33	27.20	1.51	94.00
165	15371.00	90.50	0.10	12849.53	2121.22	1041.87	2112.79	2363.28	26.16	0.62	94.00
166	15465.00	89.90	359.40	12849.21	2215.22	1041.46	2206.79	2447.82	25.18	0.98	94.00
167	15559.00	90.40	0.40	12848.96	2309.22	1041.29	2300.78	2533.14	24.27	1.19	94.00
168	15654.00	92.00	1.80	12846.97	2404.17	1043.12	2395.72	2620.71	23.45	2.24	95.00
169	15747.00	91.30	1.00	12844.29	2497.11	1045.39	2488.63	2707.10	22.72	1.14	93.00
170	15841.00	91.50	2.30	12842.00	2591.04	1048.09	2582.54	2794.99	22.02	1.40	94.00
171	15935.00	89.70	4.70	12841.01	2684.85	1053.83	2676.30	2884.26	21.43	3.19	94.00
172	16029.00	89.40	4.90	12841.75	2778.51	1061.70	2769.90	2974.45	20.91	0.38	94.00
173	16124.00	90.70	3.70	12841.67	2873.24	1068.82	2864.57	3065.60	20.40	1.86	95.00
174	16217.00	89.50	3.80	12841.50	2966.04	1074.90	2957.32	3154.81	19.92	1.29	93.00
175	16312.00	89.70	2.00	12842.17	3060.91	1079.71	3052.15	3245.76	19.43	1.91	95.00
176	16406.00	91.60	1.80	12841.10	3154.85	1082.82	3146.06	3335.50	18.94	2.03	94.00
177	16500.00	88.70	359.40	12840.86	3248.83	1083.81	3240.02	3424.84	18.45	4.00	94.00
178	16595.00	93.10	359.50	12839.36	3343.79	1082.90	3334.99	3514.77	17.94	4.63	95.00
179	16688.00	89.50	359.50	12837.25	3436.75	1082.09	3427.95	3603.07	17.48	3.87	93.00
180	16782.00	90.20	6.10	12837.50	3530.58	1086.67	3521.74	3694.03	17.11	7.06	94.00
181	16876.00	91.00	9.90	12836.52	3623.64	1099.75	3614.70	3786.85	16.88	4.13	94.00
182	16971.00	89.10	5.80	12836.43	3717.73	1112.73	3708.68	3880.68	16.66	4.76	95.00
183	17065.00	87.00	1.80	12839.63	3811.44	1118.95	3802.34	3972.30	16.36	4.80	94.00

184	17159.00	85.80	359.10	12845.54	3905.24	1119.69	3896.13	4062.59	16.00	3.14	94.00
185	17253.00	88.90	356.60	12849.88	3999.06	1116.17	3989.97	4151.90	15.59	4.23	94.00
186	17347.00	90.60	356.30	12850.29	4092.87	1110.35	4083.83	4240.81	15.18	1.84	94.00
187	17441.00	89.50	356.50	12850.21	4186.69	1104.44	4177.69	4329.91	14.78	1.19	94.00
188	17535.00	91.70	356.00	12849.23	4280.47	1098.30	4271.52	4419.13	14.39	2.40	94.00
189	17629.00	91.10	355.90	12846.93	4374.21	1091.66	4365.31	4508.38	14.01	0.65	94.00
190	17724.00	89.20	356.70	12846.68	4469.01	1085.53	4460.15	4598.96	13.65	2.17	95.00
191	17818.00	91.10	357.10	12846.43	4562.87	1080.45	4554.04	4689.04	13.32	2.07	94.00
192	17912.00	89.50	357.30	12845.94	4656.75	1075.85	4647.96	4779.41	13.01	1.72	94.00
193	18006.00	92.30	359.40	12844.47	4750.68	1073.15	4741.92	4870.38	12.73	3.72	94.00
194	18100.00	88.50	357.10	12843.81	4844.61	1070.28	4835.87	4961.43	12.46	4.73	94.00
195	18194.00	94.00	359.90	12841.76	4938.51	1067.82	4929.78	5052.64	12.20	6.56	94.00
196	18288.00	93.10	359.80	12835.94	5032.33	1067.57	5023.60	5144.32	11.98	0.96	94.00
197	18382.00	94.60	0.20	12829.63	5126.12	1067.57	5117.38	5236.10	11.76	1.65	94.00
198	18477.00	89.50	358.70	12826.23	5221.02	1066.66	5212.29	5328.86	11.55	5.60	95.00
199	18571.00	87.70	359.40	12828.53	5314.97	1065.10	5306.25	5420.64	11.33	2.05	94.00
200	18665.00	87.80	359.90	12832.22	5408.90	1064.53	5400.18	5512.66	11.13	0.54	94.00
201	18759.00	91.10	0.60	12833.12	5502.88	1064.94	5494.15	5604.98	10.95	3.59	94.00
202	18853.00	92.60	1.40	12830.08	5596.81	1066.57	5588.07	5697.53	10.79	1.81	94.00
203	18947.00	92.50	0.40	12825.90	5690.71	1068.05	5681.95	5790.07	10.63	1.07	94.00
204	19041.00	91.10	359.50	12822.95	5784.66	1067.97	5775.90	5882.42	10.46	1.77	94.00
205	19135.00	90.20	359.20	12821.88	5878.64	1066.90	5869.89	5974.67	10.29	1.01	94.00
206	19229.00	89.80	358.60	12821.88	5972.63	1065.10	5963.88	6066.85	10.11	0.77	94.00
207	19323.00	91.90	0.70	12820.49	6066.60	1064.52	6057.86	6159.29	9.95	3.16	94.00
208	19417.00	90.40	359.80	12818.60	6160.58	1064.93	6151.83	6251.95	9.81	1.86	94.00
209	19512.00	91.50	359.90	12817.03	6255.57	1064.68	6246.82	6345.52	9.66	1.16	95.00
210	19605.00	89.80	358.00	12815.97	6348.54	1062.98	6339.80	6436.91	9.51	2.74	93.00
211	19699.00	91.40	359.50	12814.99	6442.50	1060.93	6433.78	6529.27	9.35	2.33	94.00
212	19793.00	89.40	357.90	12814.33	6536.47	1058.80	6527.76	6621.67	9.20	2.72	94.00
213	19888.00	89.20	358.40	12815.49	6631.41	1055.73	6622.72	6714.92	9.05	0.57	95.00
214	19982.00	90.70	357.30	12815.57	6725.34	1052.20	6716.68	6807.15	8.89	1.98	94.00
215	20075.00	90.30	358.30	12814.76	6818.27	1048.63	6809.63	6898.43	8.74	1.16	93.00
216	20169.00	85.40	356.40	12818.29	6912.07	1044.29	6903.46	6990.51	8.59	5.59	94.00
217	20263.00	86.90	356.90	12824.60	7005.69	1038.81	6997.13	7082.29	8.43	1.68	94.00
218	20358.00	87.90	357.80	12828.91	7100.49	1034.43	7091.96	7175.45	8.29	1.42	95.00
219	20453.00	88.30	357.70	12832.06	7195.37	1030.70	7186.86	7268.81	8.15	0.43	95.00
220	20547.00	90.00	358.20	12833.45	7289.29	1027.34	7280.81	7361.33	8.02	1.89	94.00
221	20642.00	89.30	356.90	12834.03	7384.20	1023.28	7375.75	7454.76	7.89	1.55	95.00
222	20736.00	90.60	359.10	12834.12	7478.14	1020.00	7469.71	7547.38	7.77	2.72	94.00
223	20830.00	90.00	358.80	12833.62	7572.12	1018.27	7563.70	7640.28	7.66	0.71	94.00
224	20924.00	91.00	359.30	12832.80	7666.10	1016.72	7657.69	7733.23	7.55	1.19	94.00
225	21018.00	91.30	358.70	12830.92	7760.07	1015.08	7751.67	7826.17	7.45	0.71	94.00
226	21111.00	91.90	0.70	12828.32	7853.02	1014.59	7844.62	7918.29	7.36	2.24	93.00
227	21205.00	90.40	1.70	12826.43	7946.98	1016.56	7938.56	8011.73	7.29	1.92	94.00
228	21300.00	90.00	1.80	12826.10	8041.93	1019.46	8033.49	8106.29	7.22	0.43	95.00
229	21394.00	91.40	3.80	12824.95	8135.81	1024.05	8127.32	8200.00	7.17	2.60	94.00
230	21488.00	91.20	3.10	12822.82	8229.61	1029.70	8221.08	8293.78	7.13	0.77	94.00
231	21582.00	89.80	1.20	12822.00	8323.54	1033.23	8314.97	8387.42	7.08	2.51	94.00
232	21676.00	88.90	359.70	12823.07	8417.52	1033.97	8408.95	8480.79	7.00	1.86	94.00

233	21770.00	89.50	0.50	12824.38	8511.51	1034.13	8502.94	8574.11	6.93	1.06	94.00
234	21865.00	89.00	359.90	12825.62	8606.50	1034.46	8597.92	8668.45	6.85	0.82	95.00
235	21958.00	89.60	360.00	12826.76	8699.50	1034.38	8690.91	8760.78	6.78	0.65	93.00
236	22052.00	89.50	1.50	12827.50	8793.48	1035.61	8784.89	8854.26	6.72	1.60	94.00
237	22146.00	89.70	358.60	12828.15	8887.47	1035.69	8878.87	8947.61	6.65	3.09	94.00
238	22240.00	91.20	0.20	12827.42	8981.46	1034.71	8972.86	9040.86	6.57	2.33	94.00
239	22334.00	91.10	1.00	12825.53	9075.43	1035.69	9066.82	9134.34	6.51	0.86	94.00
240	22428.00	91.70	1.60	12823.23	9169.38	1037.83	9160.75	9227.92	6.46	0.90	94.00
241	22522.00	92.30	2.40	12819.95	9263.26	1041.10	9254.61	9321.58	6.41	1.06	94.00
242	22617.00	90.80	0.30	12817.38	9358.19	1043.34	9349.52	9416.18	6.36	2.72	95.00
243	22711.00	90.70	360.00	12816.15	9452.19	1043.59	9443.50	9509.62	6.30	0.34	94.00
244	22805.00	90.30	358.80	12815.33	9546.17	1042.60	9537.50	9602.94	6.23	1.35	94.00
245	22899.00	89.30	358.20	12815.66	9640.14	1040.14	9631.48	9696.09	6.16	1.24	94.00
246	22993.00	88.40	358.00	12817.55	9734.07	1037.03	9725.43	9789.15	6.08	0.98	94.00
247	23087.00	88.20	357.50	12820.33	9827.95	1033.34	9819.34	9882.13	6.00	0.57	94.00
248	23142.00	88.50	357.10	12821.92	9882.87	1030.75	9874.28	9936.48	5.95	0.91	55.00
PTB	23194.00	88.50	357.10	12823.28	9934.79	1028.12	9926.21	9987.84	5.91	0.00	52.00