

Results of Directional Survey

API number:	30-025-41559		
OGRID:		Operator:	COG PRODUCTION, LLC
		Property:	KING TUT FEDERAL # 3H

surface	ULSTR:	B	30	T 24S	R 32E
				190 FNL	2200 FEL

BH Loc	ULSTR:	O	31	T 24S	R 32E
18277	MD	8435.4	TVD	337 FSL	2126 FEL
4943 FNL					

Top Perf/OH	ULSTR:	B	30	T 24S	R 32E
8610	MD	8444.8	TVD	560 FNL	2183 FEL

Bot Perf/OH	ULSTR:	O	31	T 24S	R 32E
18158	MD	8435.3	TVD	456 FSL	2126 FEL
4824 FNL					

	MD	N/S	E/W	VD
	8580	-341.12	17.18	8436.18
TOP PERFS/OH	8610	-369.86	16.97	8444.75
	8612	-371.78	16.96	8445.32
	18080	-9835.88	72.94	8435.57
BOT PERFS/OH	18158	-9913.87	73.55	8435.30
	18174	-9929.87	73.68	8435.24

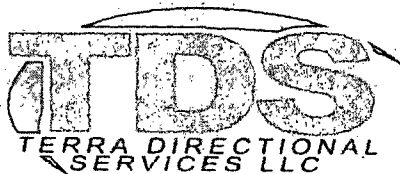
NEXT TO LAST	18230	-9985.87	73.97	8435.14
LAST READING	18277	-10032.87	74.30	8435.39
TD	18277	-10032.87	74.30	8435.39

Surface Location	190	FN	2200	FE
Projected BHL	10223	FN	2126	FE
Location of				
Top Perfs/OH	560	FN	2183	FE
Bottom Perfs/OH	10104	FN	2126	FE

SUMMARY of Subsurface Locations

Surface Location	B-30-24S-32E	190	FN	2200	FE	Vert. Depth
Top Perfs/OH	B-30-24S-32E	560	FN	2183	FE	8444.75
Bottom Perfs/OH	O-31-24S-32E	10104	FN	2126	FE	8435.30
Projected TD	O-31-24S-32E	10223	FN	2126	FE	8435.39

SEP 23 2014



HOBBS OCD
SEP 16 2014
RECEIVED

State of New Mexico
County of Lea

I, Michael K. Baber, certify that: I am employed by Terra Directional Services LLC; that I did on the day(s) of 03/13/14 through 04/14/14 conduct or supervise the taking of a MWD survey from a depth of 196 feet to a depth 18277 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Terra Directional Services LLC; that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho Oil & Gas for the King Tut Federal #3H Well API 30-025-41559 in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Terra Directional Services LLC.

Michael K. Baber
MWD Operations Manager

State of Texas
County of Brewster

Before me, a notary public, on this day personally appeared Michael K. Baber, known to me to be the person whose name is subscribed to the foregoing document and, being by me first duly sworn, declared that the statements therein contained are true and correct.


Notary Public's Signature



HOBBS OCD
SEP 16 2014

RECEIVED

Customer Name: Concho Oil & Gas
Well Name: King Tut Federal #3H
API Number: 30-025-41559
County / Parish: Lea County, NM

M.W.D. Operator: J. Burleson
Directional Driller: J. Barbre
Total Magnetic Correction: 7.05
Job #: NM-420

Vertical Section: 179.59

Tie In Survey(s) Provided By:

Surface

	Meas. Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	Dist	Angle	DLS
Tie - In										
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	196.00	0.60	44.00	196.00	-0.73	0.74	0.71	1.03	44.00	0.31
2	291.00	0.50	45.00	290.99	-1.38	1.39	1.35	1.94	44.21	0.11
3	383.00	0.40	66.30	382.99	-1.79	1.80	1.93	2.64	46.95	0.21
4	476.00	0.10	330.30	475.99	-1.99	2.00	2.19	2.97	47.51	0.45
5	568.00	0.40	35.90	567.99	-2.32	2.33	2.33	3.30	45.03	0.40
6	661.00	0.40	49.40	660.99	-2.79	2.81	2.77	3.95	44.64	0.10
7	753.00	0.30	82.50	752.98	-3.02	3.05	3.25	4.46	46.88	0.24
8	800.00	0.20	112.20	799.98	-3.01	3.03	3.45	4.60	48.70	0.34
9	944.00	0.20	218.20	943.98	-2.71	2.74	3.53	4.47	52.18	0.22
10	1036.00	0.10	197.10	1035.98	-2.51	2.54	3.41	4.25	53.32	0.12
11	1128.00	0.40	218.20	1127.98	-2.19	2.21	3.18	3.88	55.26	0.34
12	1221.00	0.10	200.90	1220.98	-1.86	1.88	2.95	3.50	57.57	0.33
13	1313.00	0.10	197.80	1312.98	-1.70	1.73	2.90	3.38	59.26	0.01
14	1405.00	0.10	122.20	1404.98	-1.59	1.61	2.95	3.35	61.39	0.13
15	1499.00	0.20	55.70	1498.98	-1.63	1.66	3.15	3.56	62.28	0.20
16	1594.00	0.20	49.10	1593.98	-1.83	1.86	3.41	3.89	61.44	0.02
17	1689.00	0.40	90.90	1688.98	-1.93	1.96	3.87	4.34	63.13	0.30
18	1783.00	0.50	56.30	1782.98	-2.15	2.18	4.54	5.04	64.31	0.30
19	1877.00	0.90	48.20	1876.97	-2.86	2.90	5.43	6.16	61.87	0.44
20	1972.00	1.10	40.40	1971.95	-4.05	4.09	6.58	7.75	58.10	0.25
21	2066.00	1.10	334.00	2065.94	-5.54	5.59	6.77	8.78	50.43	1.28
22	2161.00	1.50	346.30	2160.92	-7.58	7.62	6.07	9.74	38.55	0.51
23	2257.00	2.00	8.10	2256.87	-10.46	10.50	6.01	12.10	29.79	0.86
24	2351.00	1.30	15.70	2350.83	-13.10	13.15	6.53	14.68	26.41	0.78
25	2445.00	1.30	16.70	2444.81	-15.15	15.20	7.13	16.79	25.12	0.02
26	2540.00	1.90	22.00	2539.77	-17.63	17.69	8.03	19.43	24.40	0.65
27	2634.00	1.10	54.90	2633.74	-19.59	19.65	9.35	21.76	25.43	1.22
28	2728.00	0.40	54.30	2727.73	-20.29	20.36	10.35	22.84	26.95	0.74
29	2823.00	0.90	65.80	2822.72	-20.78	20.86	11.30	23.73	28.44	0.54
30	2917.00	0.60	87.70	2916.72	-21.10	21.19	12.47	24.58	30.47	0.44
31	3012.00	1.00	225.40	3011.71	-20.53	20.62	12.37	24.05	30.96	1.58
32	3105.00	1.10	225.70	3104.70	-19.35	19.43	11.16	22.41	29.86	0.11
33	3200.00	0.40	297.10	3199.69	-18.87	18.94	10.21	21.52	28.32	1.10
34	3295.00	0.40	343.50	3294.69	-19.34	19.41	9.82	21.76	26.83	0.33
35	3389.00	1.10	253.50	3388.68	-19.41	19.47	8.86	21.39	24.47	1.25
36	3483.00	1.10	268.30	3482.66	-19.14	19.19	7.09	20.46	20.29	0.30
37	3578.00	1.00	284.80	3577.65	-19.33	19.37	5.38	20.11	15.52	0.33
38	3671.00	1.10	298.50	3670.63	-19.98	20.01	3.81	20.37	10.79	0.29
39	3766.00	1.20	230.30	3765.62	-19.79	19.81	2.25	19.93	6.47	1.36
40	3860.00	1.80	214.50	3859.58	-17.96	17.96	0.65	17.97	2.08	0.77
41	3954.00	1.20	199.20	3953.55	-15.82	15.81	-0.51	15.82	358.16	0.76
42	4048.00	1.00	197.90	4047.53	-14.11	14.10	-1.08	14.15	355.61	0.21
43	4143.00	0.80	165.10	4142.52	-12.68	12.68	-1.17	12.73	354.73	0.57
43	4237.00	1.70	146.10	4236.50	-10.88	10.88	-0.22	10.89	358.83	1.04
44	4332.00	2.60	150.70	4331.43	-7.82	7.83	1.62	8.00	11.67	0.96
45	4426.00	2.20	170.90	4425.35	-4.17	4.19	2.95	5.13	35.10	0.99
46	4506.00	2.10	173.30	4505.30	-1.20	1.22	3.36	3.58	70.02	0.17
47	4618.00	2.10	171.80	4617.22	2.87	2.85	3.89	4.82	126.18	0.05
48	4713.00	0.80	211.10	4712.19	5.16	5.14	3.80	6.39	143.52	1.65



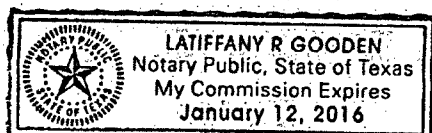
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49	4807.00	0.70	212.90	4806.18	6.20	-6.18	3.15	6.94	153.01	0.11
50	4901.00	0.90	217.40	4900.17	7.27	-7.25	2.39	7.63	161.77	0.22
51	4995.00	1.20	205.90	4994.16	8.73	-8.72	1.51	8.85	170.18	0.39
52	5090.00	1.00	276.70	5089.14	9.52	-9.52	0.25	9.52	178.49	1.35
53	5185.00	1.20	298.50	5184.13	8.94	-8.95	-1.45	9.07	189.18	0.48
54	5279.00	1.30	307.10	5278.10	7.81	-7.84	-3.16	8.45	201.97	0.23
55	5374.00	1.20	296.50	5373.08	6.71	-6.74	-4.91	8.34	216.07	0.26
56	5468.00	1.10	293.90	5467.06	5.89	-5.94	-6.62	8.89	228.10	0.12
57	5563.00	1.10	293.80	5562.04	5.14	-5.20	-8.28	9.78	237.88	0.00
58	5658.00	1.10	308.00	5657.03	4.20	-4.27	-9.84	10.72	246.53	0.29
59	5752.00	1.10	309.00	5751.01	3.07	-3.15	-11.25	11.68	254.37	0.02
60	5847.00	1.10	302.10	5845.99	2.00	-2.09	-12.73	12.90	260.68	0.14
61	5941.00	0.80	42.00	5939.98	1.03	-1.12	-13.06	13.10	265.09	1.56
62	6035.00	0.50	40.50	6033.98	0.23	-0.32	-12.35	12.36	268.51	0.32
63	6129.00	0.70	66.50	6127.97	-0.30	0.22	-11.56	11.56	271.08	0.35
64	6223.00	0.50	34.80	6221.97	-0.86	0.78	-10.80	10.83	274.15	0.40
65	6318.00	0.50	346.80	6316.96	-1.60	1.53	-10.66	10.76	278.16	0.43
66	6411.00	0.50	355.80	6409.96	-2.41	2.33	-10.78	11.03	282.19	0.08
67	6506.00	0.40	355.20	6504.96	-3.15	3.07	-10.84	11.26	285.83	0.11
68	6601.00	0.40	339.10	6599.96	-3.79	3.71	-10.98	11.59	288.68	0.12
69	6696.00	0.20	18.80	6694.95	-4.26	4.18	-11.05	11.81	290.72	0.29
70	6791.00	0.10	34.20	6789.95	-4.48	4.40	-10.95	11.80	291.92	0.11
71	6885.00	0.30	93.70	6883.95	-4.53	4.46	-10.66	11.55	292.70	0.28
72	6980.00	0.50	79.80	6978.95	-4.59	4.51	-10.00	10.97	294.29	0.23
73	7075.00	0.60	97.50	7073.95	-4.59	4.52	-9.10	10.16	296.43	0.21
74	7170.00	0.30	94.30	7168.94	-4.50	4.44	-8.36	9.46	297.97	0.32
75	7265.00	0.30	60.00	7263.94	-4.60	4.54	-7.89	9.11	299.93	0.19
76	7359.00	0.00	159.90	7357.94	-4.72	4.67	-7.68	8.99	301.29	0.32
77	7453.00	0.20	91.80	7451.94	-4.72	4.66	-7.52	8.84	301.81	0.21
78	7548.00	0.30	123.60	7546.94	-4.57	4.52	-7.14	8.45	302.32	0.18
79	7642.00	0.30	187.30	7640.94	-4.19	4.14	-6.97	8.11	300.70	0.34
80	7737.00	0.40	203.70	7735.94	-3.64	3.59	-7.13	7.99	296.70	0.15
81	7825.00	0.40	197.30	7823.94	-3.07	3.01	-7.35	7.94	292.30	0.05
82	7886.00	1.10	171.80	7884.93	-2.28	2.23	-7.33	7.66	286.93	1.24
83	7918.00	3.20	164.80	7916.91	-1.12	1.07	-7.05	7.13	278.59	6.60
84	7949.00	5.50	164.20	7947.82	1.15	-1.20	-6.42	6.53	259.42	7.42
85	7980.00	7.80	163.40	7978.60	4.61	-4.65	-5.41	7.13	229.37	7.43
86	8012.00	10.10	162.70	8010.21	9.38	-9.41	-3.96	10.21	202.83	7.20
87	8043.00	12.00	165.10	8040.64	15.10	-15.12	-2.32	15.29	188.73	6.30
88	8075.00	14.40	167.50	8071.79	22.21	-22.22	-0.61	22.22	181.56	7.69
89	8106.00	17.70	167.70	8101.58	30.59	-30.59	1.23	30.61	177.69	10.65
90	8138.00	20.80	168.90	8131.78	40.94	-40.92	3.36	41.06	175.30	9.77
91	8169.00	23.90	170.50	8160.45	52.55	-52.52	5.46	52.80	174.06	10.19
92	8201.00	27.00	171.40	8189.34	66.15	-66.09	7.62	66.53	173.43	9.76
93	8232.00	30.00	172.10	8216.58	80.80	-80.73	9.74	81.32	173.12	9.74
94	8266.00	33.20	173.10	8245.54	98.48	-98.40	12.02	99.13	173.03	9.54
95	8297.00	37.00	175.40	8270.90	116.22	-116.13	13.79	116.94	173.23	12.98
96	8328.00	41.20	177.50	8294.95	135.74	-135.64	14.99	136.46	173.70	14.20
97	8360.00	45.50	179.10	8318.22	157.69	-157.59	15.62	158.36	174.34	13.87
98	8391.00	48.80	179.70	8339.30	180.42	-180.31	15.86	181.00	174.97	10.74
99	8423.00	51.60	179.50	8359.78	205.00	-204.89	16.03	205.52	175.53	8.76
100	8455.00	54.50	179.40	8379.01	230.57	-230.46	16.28	231.03	175.96	9.07
101	8486.00	58.50	179.30	8396.12	256.42	-256.30	16.57	256.84	176.30	12.91
102	8517.00	62.40	179.40	8411.40	283.38	-283.26	16.88	283.77	176.59	12.58
103	8549.00	66.90	179.60	8425.10	312.29	-312.17	17.13	312.64	176.86	14.07
104	8580.00	71.20	180.20	8436.18	341.23	-341.12	17.18	341.55	177.12	13.99
105	8612.00	75.60	180.60	8445.32	371.89	-371.78	16.96	372.16	177.39	13.80
106	8644.00	81.20	180.50	8451.75	403.22	-403.11	16.66	403.45	177.63	17.50
107	8660.00	83.90	180.50	8453.83	419.08	-418.97	16.52	419.30	177.74	16.88
108	8736.00	90.30	179.10	8457.67	494.94	-494.83	16.79	495.12	178.06	8.62
109	8830.00	90.70	178.80	8456.85	588.93	-588.81	18.51	589.10	178.20	0.53
110	8925.00	88.50	179.40	8457.51	683.92	-683.79	20.00	684.08	178.32	2.40
111	9019.00	88.80	179.70	8459.73	777.89	-777.76	20.74	778.04	178.47	0.45
112	9114.00	90.60	180.00	8460.23	872.89	-872.76	20.99	873.01	178.62	1.92



113	9208.00	91.00	179.90	8458.91	966.87	-966.75	21.07	966.98	178.75	0.44
114	9302.00	92.30	179.90	8456.21	1060.83	-1060.71	21.24	1060.92	178.85	1.38
115	9396.00	89.30	180.40	8454.90	1154.81	-1154.69	20.99	1154.88	178.96	3.24
116	9491.00	90.00	182.00	8455.48	1249.76	-1249.66	19.00	1249.80	179.13	1.84
117	9585.00	90.80	181.80	8454.82	1343.68	-1343.61	15.88	1343.70	179.32	0.88
118	9679.00	92.70	181.20	8451.95	1437.58	-1437.52	13.43	1437.59	179.46	2.12
119	9773.00	91.30	180.90	8448.67	1531.49	-1531.45	11.70	1531.49	179.56	1.52
120	9868.00	92.00	180.30	8445.93	1626.44	-1626.40	10.71	1626.44	179.62	0.97
121	9962.00	90.10	180.80	8444.21	1720.40	-1720.38	9.81	1720.41	179.67	2.09
122	10057.00	90.20	179.90	8443.96	1815.40	-1815.38	9.23	1815.40	179.71	0.95
123	10151.00	91.60	180.10	8442.49	1909.38	-1909.36	9.23	1909.38	179.72	1.50
124	10246.00	93.20	179.90	8438.51	2004.29	-2004.28	9.23	2004.30	179.74	1.70
125	10341.00	92.60	180.00	8433.70	2099.17	-2099.15	9.31	2099.17	179.75	0.64
126	10435.00	90.50	180.30	8431.16	2193.12	-2193.11	9.06	2193.13	179.76	2.26
127	10530.00	91.60	179.40	8429.42	2288.10	-2288.09	9.31	2288.11	179.77	1.50
128	10624.00	88.70	179.70	8429.17	2382.09	-2382.08	10.05	2382.10	179.76	3.10
129	10726.00	90.70	178.80	8429.71	2484.08	-2484.06	11.39	2484.09	179.74	2.15
130	10808.00	90.60	178.60	8428.78	2566.07	-2566.04	13.25	2566.07	179.70	0.27
131	10903.00	88.80	178.40	8429.27	2661.04	-2661.00	15.73	2661.05	179.66	1.91
132	10997.00	88.60	177.70	8431.41	2754.99	-2754.92	18.93	2754.99	179.61	0.77
133	11091.00	89.80	177.40	8432.72	2848.92	-2848.82	22.95	2848.92	179.54	1.32
134	11185.00	88.80	178.20	8433.87	2942.86	-2942.75	26.56	2942.87	179.48	1.36
135	11280.00	90.00	178.60	8434.86	3037.83	-3037.70	29.21	3037.84	179.45	1.33
136	11374.00	90.50	178.30	8434.45	3131.81	-3131.67	31.75	3131.83	179.42	0.62
137	11469.00	90.00	179.80	8434.04	3226.80	-3226.65	33.33	3226.82	179.41	1.66
138	11563.00	89.70	179.40	8434.28	3320.80	-3320.65	33.98	3320.82	179.41	0.53
139	11657.00	90.00	179.10	8434.53	3414.80	-3414.64	35.21	3414.82	179.41	0.45
140	11751.00	90.70	180.30	8433.95	3508.80	-3508.63	35.70	3508.81	179.42	1.48
141	11846.00	89.80	180.20	8433.54	3603.79	-3603.63	35.29	3603.80	179.44	0.95
142	11940.00	90.10	179.80	8433.62	3697.79	-3697.63	35.29	3697.80	179.45	0.53
143	12034.00	90.90	180.90	8432.80	3791.77	-3791.62	34.72	3791.78	179.48	1.45
144	12129.00	90.70	181.20	8431.48	3886.73	-3886.60	32.98	3886.74	179.51	0.38
145	12223.00	89.60	181.30	8431.23	3980.69	-3980.57	30.92	3980.69	179.55	1.18
146	12318.00	87.50	181.40	8433.63	4075.61	-4075.51	28.69	4075.61	179.60	2.21
147	12412.00	88.20	181.30	8437.16	4169.50	-4169.42	26.47	4169.50	179.64	0.75
148	12507.00	90.80	181.00	8437.99	4264.45	-4264.39	24.57	4264.46	179.67	2.75
149	12602.00	90.40	180.50	8436.99	4359.43	-4359.37	23.32	4359.43	179.69	0.67
150	12696.00	90.10	179.80	8436.58	4453.42	-4453.37	23.08	4453.43	179.70	0.81
151	12790.00	90.60	179.20	8436.01	4547.42	-4547.36	23.90	4547.43	179.70	0.83
152	12885.00	91.10	178.50	8434.60	4642.40	-4642.33	25.81	4642.41	179.68	0.91
153	12980.00	90.10	179.20	8433.60	4737.38	-4737.31	27.71	4737.39	179.66	1.28
154	13074.00	90.50	179.40	8433.11	4831.38	-4831.30	28.86	4831.39	179.66	0.48
155	13168.00	89.30	179.60	8433.28	4925.38	-4925.29	29.68	4925.38	179.65	1.29
156	13263.00	89.00	179.50	8434.69	5020.37	-5020.28	30.43	5020.37	179.65	0.33
157	13357.00	90.90	179.00	8434.77	5114.36	-5114.27	31.66	5114.37	179.65	2.09
158	13452.00	90.40	178.30	8433.69	5209.34	-5209.23	33.89	5209.34	179.63	0.91
159	13547.00	90.30	178.10	8433.11	5304.31	-5304.19	36.88	5304.31	179.60	0.24
160	13641.00	89.60	178.30	8433.19	5398.29	-5398.14	39.83	5398.29	179.58	0.77
161	13736.00	89.90	178.00	8433.61	5493.25	-5493.09	42.90	5493.26	179.55	0.45
162	13831.00	90.30	178.20	8433.44	5588.22	-5588.03	46.05	5588.22	179.53	0.47
163	13925.00	89.50	177.90	8433.60	5682.19	-5681.98	49.25	5682.19	179.50	0.91
164	14020.00	90.00	178.30	8434.02	5777.15	-5776.93	52.40	5777.16	179.48	0.67
165	14114.00	90.70	179.10	8433.45	5871.14	-5870.90	54.53	5871.15	179.47	1.13
166	14209.00	90.10	179.90	8432.78	5966.13	-5965.89	55.36	5966.15	179.47	1.05
167	14303.00	90.10	179.60	8432.62	6060.13	-6059.89	55.77	6060.15	179.47	0.32
168	14397.00	90.20	179.20	8432.37	6154.13	-6153.88	56.75	6154.15	179.47	0.44
169	14492.00	89.50	179.40	8432.62	6249.13	-6248.88	57.91	6249.14	179.47	0.77
170	14586.00	90.10	179.30	8432.95	6343.13	-6342.87	58.98	6343.14	179.47	0.65
171	14681.00	89.70	179.80	8433.11	6438.13	-6437.87	59.73	6438.14	179.47	0.67
172	14776.00	90.50	179.10	8432.95	6533.13	-6532.86	60.64	6533.14	179.47	1.12
173	14870.00	89.70	179.70	8432.78	6627.12	-6626.85	61.62	6627.14	179.47	1.06
174	14965.00	90.90	180.40	8432.29	6722.12	-6721.85	61.54	6722.13	179.48	1.46
175	15052.00	90.10	181.60	8431.53	6809.09	-6808.83	60.02	6809.10	179.49	1.66
176	15147.00	89.20	182.10	8432.11	6904.01	-6903.78	56.95	6904.01	179.53	1.08



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177	15242.00	89.90	182.70	8432.85	6998.89	-6998.69	52.98	6998.89	179.57	0.97
178	15337.00	88.50	181.70	8434.18	7093.78	-7093.61	49.33	7093.78	179.60	1.81
179	15431.00	88.60	181.20	8436.56	7187.70	-7187.55	46.95	7187.70	179.63	0.54
180	15526.00	89.80	178.90	8437.89	7282.68	-7282.53	46.87	7282.68	179.63	2.73
181	15620.00	90.10	178.70	8437.97	7376.67	-7376.51	48.84	7376.67	179.62	0.38
182	15715.00	90.90	178.60	8437.14	7471.65	-7471.48	51.08	7471.65	179.61	0.85
183	15809.00	90.70	179.70	8435.83	7565.64	-7565.46	52.47	7565.64	179.60	1.19
184	15904.00	90.20	180.10	8435.08	7660.63	-7660.45	52.64	7660.64	179.61	0.67
185	15997.00	90.80	179.80	8434.27	7753.63	-7753.45	52.72	7753.63	179.61	0.72
186	16092.00	88.80	179.10	8434.60	7848.62	-7848.44	53.63	7848.62	179.61	2.23
187	16186.00	88.40	179.10	8436.90	7942.59	-7942.40	55.10	7942.59	179.60	0.43
188	16280.00	89.10	178.70	8438.95	8036.56	-8036.36	56.91	8036.56	179.59	0.86
189	16375.00	90.20	178.90	8439.53	8131.55	-8131.34	58.90	8131.55	179.58	1.18
190	16469.00	90.20	179.40	8439.20	8225.55	-8225.32	60.29	8225.55	179.58	0.53
191	16564.00	91.20	179.70	8438.04	8320.54	-8320.31	61.04	8320.54	179.58	1.10
192	16657.00	90.10	179.60	8436.98	8413.53	-8413.30	61.61	8413.53	179.58	1.19
193	16756.00	92.20	179.40	8435.00	8512.50	-8512.27	62.47	8512.50	179.58	2.13
194	16850.00	93.00	179.20	8430.73	8606.40	-8606.17	63.62	8606.40	179.58	0.88
195	16945.00	89.70	180.40	8428.50	8701.36	-8701.13	63.95	8701.36	179.58	3.70
196	17040.00	88.90	180.50	8429.66	8796.34	-8796.12	63.20	8796.34	179.59	0.85
197	17134.00	88.50	180.50	8431.79	8890.31	-8890.09	62.38	8890.31	179.60	0.43
198	17229.00	88.70	180.60	8434.11	8985.27	-8985.06	61.47	8985.27	179.61	0.24
199	17323.00	91.30	179.80	8434.11	9079.25	-9079.05	61.14	9079.25	179.61	2.89
200	17418.00	91.20	179.50	8432.04	9174.23	-9174.02	61.72	9174.23	179.61	0.33
201	17513.00	90.50	179.20	8430.63	9269.22	-9269.01	62.80	9269.22	179.61	0.80
202	17608.00	89.50	178.40	8430.63	9364.21	-9363.98	64.79	9364.21	179.60	1.35
203	17702.00	89.10	179.10	8431.78	9458.19	-9457.95	66.84	9458.19	179.60	0.86
204	17797.00	90.10	179.40	8432.44	9553.18	-9552.94	68.08	9553.18	179.59	1.10
205	17891.00	89.20	179.00	8433.01	9647.18	-9646.93	69.40	9647.18	179.59	1.05
206	17985.00	88.90	178.70	8434.57	9741.16	-9740.90	71.28	9741.16	179.58	0.45
207	18080.00	89.90	179.30	8435.57	9836.15	-9835.88	72.94	9836.15	179.58	1.23
208	18174.00	90.50	179.80	8435.24	9930.14	-9929.87	73.68	9930.14	179.57	0.83
209	18230.00	89.70	179.60	8435.14	9986.14	-9985.87	73.97	9986.14	179.58	1.47
PTB	18277.00	89.70	179.60	8435.39	10033.14	-10032.87	74.30	10033.14	179.58	0.00



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