

15-39241



Job Number: SVMO-140499
 Company: Yates Petroleum Corporation
 Lease/Well: Nucleus BGN Federal COM 1H
 Location: Eddy County, NM
 Rig Name: McVay #10
 RKB: 20'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.31°
 Grid: East To Grid North
 File name: Y:\WINSER~1\2014SU~1\YATES\MO\NUCLEU~1\1H.SVY
 Date/Time: 22-Apr-14 / 11:02
 Curve Name: Surface - 6000' M.D. (Rate Gyro)

NM OIL CONSERVATION
 ARTESIA DISTRICT
 SEP 09 2014
 RECEIVED

MS Survey

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 89.88°
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 6,000' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.

Kegan Reed
 MS Energy Services

4/20/14
 Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.55	234.54	100.00	-.28	-.39	-.39	.48	234.54	.55
200.00	.18	270.91	200.00	-.55	-.94	-.94	1.09	239.44	.42
300.00	.40	149.80	300.00	-.85	-.92	-.92	1.26	227.16	.52
400.00	.47	155.47	399.99	-1.53	-.57	-.58	1.63	200.60	.08
500.00	.45	168.96	499.99	-2.29	-.33	-.33	2.31	188.19	.11
600.00	.29	164.30	599.99	-2.92	-.19	-.19	2.92	183.64	.16
700.00	.02	298.07	699.99	-3.15	-.13	-.14	3.15	182.40	.30
800.00	.90	46.27	799.98	-2.60	.42	.41	2.63	170.83	.91
900.00	1.12	49.37	899.97	-1.42	1.73	1.73	2.24	129.41	.23

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	1.12	33.03	999.95	.03	3.00	3.00	3.00	89.34	.32
1100.00	1.39	51.85	1099.92	1.60	4.49	4.49	4.77	70.35	.49
1200.00	1.72	65.43	1199.89	2.98	6.81	6.81	7.43	66.39	.49
1300.00	1.78	57.59	1299.84	4.43	9.48	9.49	10.47	64.95	.25
1400.00	1.40	48.49	1399.80	6.08	11.71	11.72	13.19	62.58	.46
1500.00	1.20	47.26	1499.78	7.60	13.39	13.41	15.40	60.44	.20
1600.00	1.14	37.44	1599.76	9.10	14.77	14.79	17.34	58.37	.21
1700.00	.99	26.57	1699.74	10.66	15.76	15.78	19.03	55.93	.25
1800.00	.90	30.46	1799.73	12.11	16.54	16.57	20.50	53.80	.11
1900.00	.60	59.37	1899.72	13.05	17.39	17.42	21.75	53.11	.47
2000.00	.68	2.36	1999.71	13.91	17.87	17.90	22.64	52.10	.61
2100.00	.75	12.00	2099.70	15.14	18.03	18.06	23.55	49.97	.14
2200.00	.81	24.48	2199.70	16.43	18.46	18.49	24.71	48.33	.18
2300.00	.67	11.02	2299.69	17.65	18.86	18.90	25.83	46.91	.22
2400.00	.55	5.64	2399.68	18.70	19.02	19.06	26.67	45.49	.13
2500.00	.33	8.27	2499.68	19.46	19.11	19.15	27.27	44.48	.22
2600.00	.79	296.98	2599.67	20.06	18.54	18.58	27.31	42.74	.75
2700.00	.97	289.24	2699.66	20.65	17.12	17.17	26.82	39.67	.22
2800.00	.95	307.04	2799.65	21.43	15.66	15.71	26.54	36.16	.30
2900.00	.53	295.56	2899.64	22.13	14.58	14.63	26.50	33.39	.44
3000.00	1.25	277.35	2999.63	22.47	13.08	13.13	26.00	30.22	.76
3100.00	1.27	280.14	3099.60	22.80	10.91	10.96	25.28	25.57	.06
3200.00	1.28	279.57	3199.58	23.18	8.72	8.77	24.77	20.61	.02
3300.00	1.37	281.57	3299.55	23.61	6.45	6.50	24.47	15.27	.10
3400.00	1.31	286.55	3399.52	24.17	4.18	4.23	24.53	9.81	.13
3500.00	.79	272.95	3499.51	24.53	2.40	2.45	24.65	5.58	.57
3600.00	1.55	281.15	3599.49	24.83	.38	.43	24.83	.88	.78
3700.00	.79	261.38	3699.46	24.99	-1.63	-1.58	25.04	356.27	.85
3800.00	.83	265.68	3799.45	24.83	-3.03	-2.98	25.01	353.04	.07

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	.92	278.02	3899.44	24.89	-4.55	-4.50	25.30	349.64	.21
4000.00	.49	249.74	3999.44	24.85	-5.75	-5.69	25.51	346.98	.54
4100.00	.67	251.42	4099.43	24.52	-6.70	-6.65	25.42	344.71	.18
4200.00	.95	270.37	4199.42	24.34	-8.08	-8.03	25.64	341.62	.38
4300.00	.94	302.24	4299.41	24.78	-9.61	-9.56	26.58	338.81	.52
4400.00	1.20	271.16	4399.39	25.24	-11.35	-11.29	27.67	335.79	.63
4500.00	1.28	264.58	4499.37	25.15	-13.51	-13.45	28.55	331.77	.16
4600.00	1.25	255.12	4599.34	24.77	-15.67	-15.62	29.31	327.68	.21
4700.00	1.16	254.03	4699.32	24.21	-17.70	-17.65	29.99	323.83	.09
4800.00	.63	233.19	4799.31	23.60	-19.11	-19.06	30.37	321.00	.61
4900.00	.73	189.52	4899.30	22.64	-19.66	-19.61	29.99	319.04	.51
5000.00	.42	234.15	4999.30	21.80	-20.06	-20.02	29.63	317.38	.52
5100.00	.58	190.57	5099.29	21.09	-20.45	-20.41	29.38	315.88	.40
5200.00	1.09	209.66	5199.28	19.76	-21.01	-20.97	28.85	313.24	.57
5300.00	1.01	252.43	5299.27	18.67	-22.33	-22.29	29.10	309.91	.77
5400.00	.93	262.75	5399.25	18.30	-23.97	-23.93	30.16	307.36	.19
5500.00	1.14	261.27	5499.24	18.05	-25.76	-25.72	31.45	305.02	.21
5600.00	.75	248.14	5599.22	17.66	-27.35	-27.31	32.55	302.84	.44
5700.00	.71	252.48	5699.22	17.22	-28.55	-28.51	33.34	301.11	.07
5800.00	.56	253.92	5799.21	16.90	-29.61	-29.57	34.09	299.72	.15
5900.00	.52	250.87	5899.21	16.62	-30.51	-30.47	34.74	298.58	.05
Last Survey Depth Recorded									
6000.00	.62	236.88	5999.20	16.17	-31.39	-31.35	35.31	297.26	.17

30-015-39241

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

NM OIL CONSERVATION

ARTESIA DISTRICT

SEP 09 2014

Well Name and Num: Nucleus BGN Fed Com #1H
Location: Sec 31, T19S, R30E
Operator: Yates
Drilling Contractor: McVay Drilling Company

RECEIVED

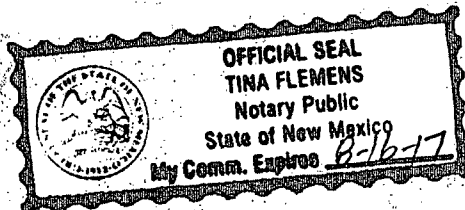
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.25	276	0.40	7210
0.10	510	0.40	7491
0.40	694	1.90	7823
1.70	1074	44.60	8246
1.00	1370	70.30	8550
0.50	1673	89.30	8849
0.60	2146	90.10	9228
0.92	2604	89.30	9417
0.82	3100	89.50	9892
1.18	3449	89.30	10276
0.60	3982	89.40	10557
0.90	4555	90.10	10940
0.70	5410	89.10	11507
0.40	5979	99.30	11982
0.80	6357	90.40	12352
0.70	6737	90.40	12740
0.40	6628		

By: Hunter Crane

Subscribed and sworn to before me this 5th day of May, 2014

Tina FLEMENS
Notary Public, Lea County, New Mexico





State of New Mexico
County of Eddy

I, Michael K. Baber, certify that: I am employed by Terra Directional Services LLC; that I did on the day(s) of 4/13/14 through 4/30/14 conduct or supervise the taking of a MWD survey from a depth of 100 feet to a depth 12837 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 Yates Petroleum for the Nucleus "BGN" Fed Com #1H Well API 30-015-39241 in Eddy 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 Brewer

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





Customer Name: Yates Petroleum
 Well Name: Nucleus BGN Fed Cor
 AFE/P.O. Number: 30-015-39241
 County/Parish: Eddy County, NM

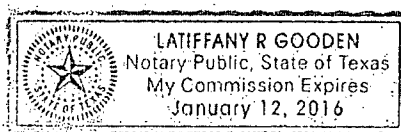
M.W.D. Operator: Bob Gary
 Directional Driller: Jack Chance
 Total Magnetic Correction: 7.31
 Job #: NM 428

Vertical Section: 89.88

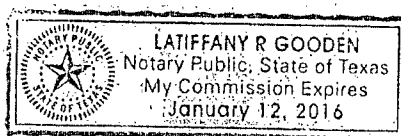
Tie In Survey(s) Provided By:

MS Survey

	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	100.00	0.55	234.54	100.00	-0.39	-0.28	-0.39	0.48	234.54	0.55
2	200.00	0.18	270.91	200.00	-0.94	-0.55	-0.94	1.09	239.44	0.42
3	300.00	0.40	149.80	300.00	-0.92	-0.85	-0.92	1.26	227.16	0.52
4	400.00	0.47	155.47	399.99	-0.58	-1.53	-0.57	1.63	200.60	0.08
5	500.00	0.45	168.96	499.99	-0.33	-2.29	-0.33	2.31	188.19	0.11
6	600.00	0.29	164.30	599.99	-0.19	-2.92	-0.19	2.92	183.64	0.16
7	700.00	0.02	298.07	699.99	-0.14	-3.15	-0.13	3.15	182.40	0.30
8	800.00	0.90	46.27	799.98	0.41	-2.60	0.42	2.63	170.83	0.91
9	900.00	1.12	49.37	899.97	1.73	-1.42	1.73	2.24	129.42	0.23
10	1000.00	1.12	33.03	999.95	3.00	0.03	3.00	3.00	89.34	0.32
11	1100.00	1.39	51.85	1099.92	4.49	1.60	4.49	4.77	70.35	0.49
12	1200.00	1.72	65.43	1199.89	6.81	2.98	6.81	7.43	66.39	0.49
13	1300.00	1.78	57.59	1299.84	9.49	4.43	9.48	10.47	64.95	0.25
14	1400.00	1.40	48.49	1399.80	11.72	6.08	11.71	13.19	62.58	0.46
15	1500.00	1.20	47.26	1499.78	13.41	7.60	13.39	15.40	60.44	0.20
16	1600.00	1.14	37.44	1599.76	14.79	9.10	14.77	17.34	58.37	0.21
17	1700.00	0.99	26.57	1699.74	15.78	10.66	15.76	19.03	55.93	0.25
18	1800.00	0.90	30.46	1799.73	16.57	12.11	16.54	20.50	53.80	0.11
19	1900.00	0.60	59.37	1899.72	17.42	13.05	17.39	21.75	53.11	0.47
20	2000.00	0.68	2.36	1999.71	17.90	13.91	17.87	22.64	52.10	0.61
21	2100.00	0.75	12.00	2099.70	18.06	15.14	18.03	23.55	49.97	0.14
22	2200.00	0.81	24.48	2199.70	18.49	16.43	18.46	24.71	48.33	0.18
23	2300.00	0.67	11.02	2299.69	18.90	17.65	18.86	25.83	46.91	0.22
24	2400.00	0.55	5.64	2399.68	19.06	18.70	19.02	26.67	45.49	0.13
25	2500.00	0.33	8.27	2499.68	19.15	19.46	19.11	27.27	44.48	0.22
26	2600.00	0.79	296.98	2599.67	18.58	20.06	18.54	27.31	42.74	0.75
27	2700.00	0.97	289.24	2699.66	17.17	20.65	17.12	26.82	39.67	0.22
28	2800.00	0.95	307.04	2799.65	15.71	21.43	15.66	26.54	36.16	0.30
29	2900.00	0.53	295.56	2899.64	14.63	22.13	14.58	26.50	33.39	0.44
30	3000.00	1.25	277.35	2999.63	13.13	22.47	13.08	26.00	30.22	0.76
31	3100.00	1.27	280.14	3099.60	10.96	22.80	10.91	25.28	25.57	0.06
32	3200.00	1.28	279.57	3199.58	8.77	23.18	8.72	24.77	20.61	0.02
33	3300.00	1.37	281.57	3299.55	6.50	23.61	6.45	24.47	15.27	0.10
34	3400.00	1.31	286.55	3399.52	4.23	24.17	4.18	24.53	9.81	0.13
35	3500.00	0.79	272.95	3499.51	2.45	24.53	2.40	24.65	5.58	0.57
36	3600.00	1.55	281.15	3599.49	0.43	24.83	0.38	24.83	0.88	0.78
37	3700.00	0.79	261.38	3699.46	-1.58	24.99	-1.63	25.04	356.27	0.85
38	3800.00	0.83	265.68	3799.45	-2.98	24.83	-3.03	25.01	353.04	0.07
39	3900.00	0.92	278.02	3899.44	-4.50	24.89	-4.55	25.30	349.64	0.21
40	4000.00	0.49	249.74	3999.44	-5.69	24.85	-5.75	25.51	346.98	0.54
41	4100.00	0.67	251.42	4099.43	-6.65	24.52	-6.70	25.42	344.71	0.18
42	4200.00	0.95	270.37	4199.42	-8.03	24.34	-8.08	25.64	341.62	0.38
43	4300.00	0.94	302.24	4299.41	-9.56	24.78	-9.61	26.58	338.81	0.52
44	4400.00	1.20	271.16	4399.39	-11.29	25.24	-11.35	27.67	335.79	0.63



45	4500.00	1.28	264.58	4499.37	-13.45	25.15	-13.51	28.55	331.77	0.16
46	4600.00	1.25	255.12	4599.34	-15.62	24.77	-15.67	29.31	327.67	0.21
47	4700.00	1.16	254.03	4699.32	-17.65	24.21	-17.70	29.99	323.83	0.09
48	4800.00	0.63	233.19	4799.31	-19.06	23.60	-19.11	30.37	321.00	0.61
49	4900.00	0.73	189.52	4899.30	-19.61	22.64	-19.66	29.99	319.04	0.51
50	5000.00	0.42	234.15	4999.30	-20.02	21.80	-20.06	29.63	317.38	0.52
51	5100.00	0.58	190.57	5099.29	-20.41	21.09	-20.45	29.38	315.88	0.40
52	5200.00	1.09	209.66	5199.28	-20.97	19.76	-21.01	28.85	313.24	0.57
53	5300.00	1.01	252.43	5299.27	-22.29	18.67	-22.33	29.10	309.91	0.77
54	5400.00	0.93	262.75	5399.25	-23.93	18.30	-23.97	30.16	307.36	0.19
55	5500.00	1.14	261.27	5499.24	-25.72	18.05	-25.76	31.45	305.02	0.21
56	5600.00	0.75	248.14	5599.22	-27.31	17.66	-27.35	32.55	302.84	0.44
57	5700.00	0.71	252.48	5699.22	-28.51	17.22	-28.55	33.34	301.11	0.07
58	5800.00	0.56	253.92	5799.21	-29.57	16.90	-29.61	34.09	299.72	0.15
59	5900.00	0.52	250.87	5899.21	-30.47	16.62	-30.51	34.74	298.58	0.05
60	6000.00	0.62	236.88	5999.20	-31.35	16.17	-31.39	35.31	297.26	0.17
61	6073.00	0.40	253.20	6072.20	-31.93	15.89	-31.96	35.69	296.43	0.36
62	6167.00	0.40	244.40	6166.19	-32.54	15.65	-32.57	36.14	295.66	0.07
63	6262.00	0.70	237.90	6261.19	-33.33	15.20	-33.36	36.66	294.49	0.32
64	6357.00	0.80	258.30	6356.18	-34.47	14.75	-34.51	37.53	293.15	0.30
65	6452.00	1.10	240.40	6451.17	-35.92	14.17	-35.95	38.64	291.51	0.44
66	6547.00	0.40	194.30	6546.16	-36.79	13.40	-36.82	39.18	289.99	0.92
67	6642.00	0.40	225.80	6641.16	-37.11	12.84	-37.14	39.30	289.08	0.23
68	6737.00	0.70	190.60	6736.16	-37.46	12.04	-37.49	39.37	287.81	0.46
69	6828.00	0.40	211.90	6827.15	-37.73	11.23	-37.76	39.39	286.56	0.39
70	6923.00	0.40	146.20	6922.15	-37.72	10.67	-37.75	39.23	285.78	0.46
71	7019.00	1.20	104.50	7018.14	-36.57	10.14	-36.59	37.97	285.49	0.98
72	7113.00	0.90	108.90	7112.12	-34.92	9.65	-34.94	36.25	285.45	0.33
73	7208.00	0.40	145.30	7207.12	-34.02	9.14	-34.04	35.25	285.03	0.66
74	7303.00	1.20	143.20	7302.11	-33.24	8.07	-33.26	34.22	283.64	0.84
75	7397.00	1.10	136.00	7396.09	-32.03	6.63	-32.04	32.72	281.70	0.19
76	7491.00	0.40	127.90	7490.08	-31.14	5.78	-31.15	31.69	280.52	0.75
77	7586.00	0.40	128.20	7585.08	-30.62	5.37	-30.63	31.10	279.95	0.00
78	7681.00	0.60	115.60	7680.07	-29.91	4.95	-29.92	30.33	279.40	0.24
79	7776.00	1.20	149.30	7775.06	-28.96	3.88	-28.97	29.23	277.64	0.82
80	7823.00	1.90	156.00	7822.04	-28.39	2.75	-28.40	28.53	275.53	1.54
81	7852.00	2.00	170.10	7851.03	-28.11	1.81	-28.12	28.17	273.69	1.69
82	7884.00	4.00	104.30	7882.99	-26.94	0.99	-26.94	26.96	272.09	11.45
83	7916.00	8.60	85.90	7914.79	-23.47	0.88	-23.47	23.48	272.15	15.52
84	7947.00	10.80	85.50	7945.35	-18.26	1.27	-18.26	18.30	273.99	7.10
85	7979.00	13.70	84.70	7976.61	-11.49	1.86	-11.50	11.65	279.19	9.08
86	8011.00	17.20	83.60	8007.45	-3.01	2.74	-3.02	4.08	312.20	10.98
87	8042.00	19.80	82.90	8036.85	6.76	3.90	6.75	7.79	59.99	8.42
88	8074.00	23.20	82.20	8066.62	18.39	5.42	18.37	19.16	73.56	10.66
89	8120.00	29.20	81.00	8107.87	38.47	8.41	38.45	39.36	77.66	13.09
90	8151.00	32.40	79.40	8134.50	54.11	11.12	54.09	55.22	78.38	10.65
91	8183.00	36.20	80.60	8160.93	71.88	14.24	71.85	73.24	78.79	12.06
92	8215.00	40.10	82.90	8186.09	91.44	17.06	91.40	92.98	79.43	12.97
93	8246.00	44.60	84.70	8209.00	112.20	19.30	112.16	113.81	80.23	15.03
94	8278.00	48.60	85.90	8230.98	135.37	21.20	135.33	136.98	81.10	12.79
95	8310.00	52.60	89.00	8251.29	160.07	22.28	160.02	161.56	82.07	14.57
96	8341.00	55.80	91.50	8269.42	185.20	22.16	185.16	186.48	83.18	12.22
97	8373.00	58.60	93.60	8286.76	212.07	20.96	212.02	213.06	84.36	10.34
98	8405.00	61.70	94.30	8302.68	239.75	19.04	239.71	240.46	85.46	9.87
99	8436.00	65.20	94.50	8316.54	267.39	16.91	267.35	267.89	86.38	11.31
100	8468.00	68.00	94.70	8329.24	296.65	14.56	296.62	296.98	87.19	8.77
101	8500.00	70.30	94.50	8340.63	326.45	12.16	326.43	326.66	87.87	7.21
102	8531.00	72.90	94.80	8350.42	355.76	9.77	355.74	355.88	88.43	8.44



103	8566.00	76.20	95.40	8359.74	389.35	6.77	389.34	389.40	89.00	9.57
104	8597.00	78.50	94.50	8366.53	419.48	4.17	419.47	419.49	89.43	7.94
105	8629.00	80.00	94.00	8372.50	450.83	1.84	450.82	450.83	89.77	4.93
106	8661.00	80.90	93.40	8377.80	482.31	-0.20	482.31	482.31	90.02	3.37
107	8692.00	83.00	92.40	8382.15	512.96	-1.75	512.97	512.97	90.20	7.49
108	8754.00	88.20	91.90	8386.90	574.71	-4.07	574.72	574.73	90.41	8.43
109	8849.00	89.30	91.90	8388.97	669.63	-7.22	669.64	669.68	90.62	1.16
110	8943.00	89.90	91.00	8389.63	763.59	-9.60	763.61	763.67	90.72	1.15
111	9037.00	89.60	90.80	8390.04	857.57	-11.07	857.60	857.67	90.74	0.38
112	9133.00	89.60	90.10	8390.71	953.56	-11.83	953.59	953.67	90.71	0.73
113	9228.00	90.10	90.50	8390.96	1048.56	-12.32	1048.59	1048.66	90.67	0.67
114	9322.00	89.40	90.80	8391.37	1142.55	-13.39	1142.58	1142.66	90.67	0.81
115	9417.00	89.30	90.10	8392.45	1237.54	-14.14	1237.57	1237.65	90.65	0.74
116	9512.00	90.90	90.30	8392.28	1332.54	-14.47	1332.57	1332.65	90.62	1.70
117	9607.00	90.90	89.90	8390.79	1427.52	-14.63	1427.56	1427.63	90.59	0.42
118	9702.00	90.70	89.60	8389.46	1522.51	-14.22	1522.55	1522.61	90.54	0.38
119	9797.00	90.10	90.10	8388.80	1617.51	-13.97	1617.54	1617.60	90.49	0.82
120	9892.00	89.50	88.90	8389.13	1712.51	-13.14	1712.54	1712.59	90.44	1.41
121	9987.00	89.50	88.90	8389.96	1807.49	-11.32	1807.52	1807.55	90.36	0.00
122	10082.00	89.30	88.70	8390.95	1902.47	-9.33	1902.49	1902.51	90.28	0.30
123	10177.00	89.00	88.30	8392.36	1997.43	-6.84	1997.45	1997.46	90.20	0.53
124	10272.00	89.30	89.00	8393.77	2092.39	-4.60	2092.41	2092.41	90.13	0.80
125	10367.00	89.00	89.40	8395.18	2187.38	-3.28	2187.39	2187.39	90.09	0.53
126	10462.00	89.60	90.30	8396.34	2282.37	-3.03	2282.38	2282.38	90.08	1.14
127	10557.00	89.40	90.50	8397.17	2377.36	-3.69	2377.37	2377.38	90.09	0.30
128	10652.00	90.30	89.60	8397.42	2472.36	-3.78	2472.37	2472.37	90.09	1.34
129	10747.00	90.40	89.00	8396.84	2567.35	-2.61	2567.36	2567.36	90.06	0.64
130	10842.00	90.40	89.00	8396.18	2662.34	-0.96	2662.34	2662.35	90.02	0.00
131	10937.00	90.10	89.60	8395.76	2757.33	0.20	2757.34	2757.34	90.00	0.71
132	11032.00	89.30	89.40	8396.26	2852.33	1.03	2852.33	2852.33	89.98	0.87
133	11127.00	89.50	89.00	8397.25	2947.31	2.36	2947.32	2947.32	89.95	0.47
134	11222.00	89.40	88.70	8398.17	3042.29	4.27	3042.29	3042.30	89.92	0.33
135	11317.00	88.30	89.80	8400.07	3137.27	5.51	3137.26	3137.27	89.90	1.64
136	11412.00	89.20	90.50	8402.15	3232.24	5.26	3232.24	3232.24	89.91	1.20
137	11507.00	89.10	90.30	8403.56	3327.23	4.60	3327.22	3327.23	89.92	0.24
138	11602.00	88.60	90.10	8405.46	3422.21	4.27	3422.20	3422.21	89.93	0.57
139	11697.00	89.40	90.30	8407.12	3517.19	3.93	3517.19	3517.19	89.94	0.87
140	11792.00	89.30	89.20	8408.20	3612.18	4.35	3612.18	3612.18	89.93	1.16
150	11887.00	90.30	89.80	8408.53	3707.18	5.18	3707.17	3707.18	89.92	1.23
151	11982.00	89.30	89.20	8408.86	3802.17	6.01	3802.17	3802.17	89.91	1.23
152	12075.00	90.00	89.60	8409.43	3895.17	6.98	3895.16	3895.17	89.90	0.87
153	12167.00	89.30	89.20	8409.99	3987.16	7.94	3987.15	3987.16	89.89	0.88
154	12260.00	90.40	89.20	8410.23	4080.15	9.24	4080.14	4080.15	89.87	1.18
155	12352.00	90.00	88.90	8409.91	4172.14	10.77	4172.13	4172.14	89.85	0.54
156	12445.00	90.60	89.60	8409.43	4265.13	11.98	4265.12	4265.14	89.84	0.99
157	12537.00	90.70	89.80	8408.38	4357.13	12.47	4357.11	4357.13	89.84	0.24
158	12631.00	90.30	90.60	8407.56	4451.12	12.14	4451.11	4451.12	89.84	0.95
159	12723.00	88.90	89.90	8408.20	4543.12	11.74	4543.10	4543.12	89.85	1.70
160	12771.00	88.20	89.60	8409.42	4591.10	11.95	4591.08	4591.10	89.85	1.59
PTB	12837.00	88.20	89.60	8411.49	4657.07	12.41	4657.05	4657.07	89.85	0.00

