

ACOUSTIC PRESSURE SURVEY BUILD UP TEST



QUALITY RESOURCES LTD.

Quality DINA 1-02-03-04

100/01-01-02-03-04W5

LICENSE: 1234567

FIELD: GOODSAND

FORMATION: DINA

TEST DATE: December 11, 2011

DISTRIBUTION: John Doe

PREPARED BY: Definitive Optimization

Definitive Optimization

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SAMPLE COMPANY

ACOUSTIC PRESSURE SURVEY (BUILD-UP)

SAMPLE 1-2-3-4

100/01-02-003-04W5/0

QUALITY

POOL: GOODSANDS

2011-DEC-13 TO 2011-DEC-20

TEST SUMMARY:

- An acoustic well sounder instrument was installed into the casing on 2011-12-13 at 13:04 hours. The fluid level was at 188.2 joints.
- The well was shut-in on 2011-12-13 at 13:04 hours to start the build-up.
- The build-up test was concluded on 2011-12-20 at 16:04 hours.
- A final bottomhole pressure of 8,810 kPa (absolute) was calculated at the mid-point of the producing interval after 7.1 days of shut-in.
- The rate of change in pressure during the last 8.0 hours of shut-in is 0.14 kPa/hr.

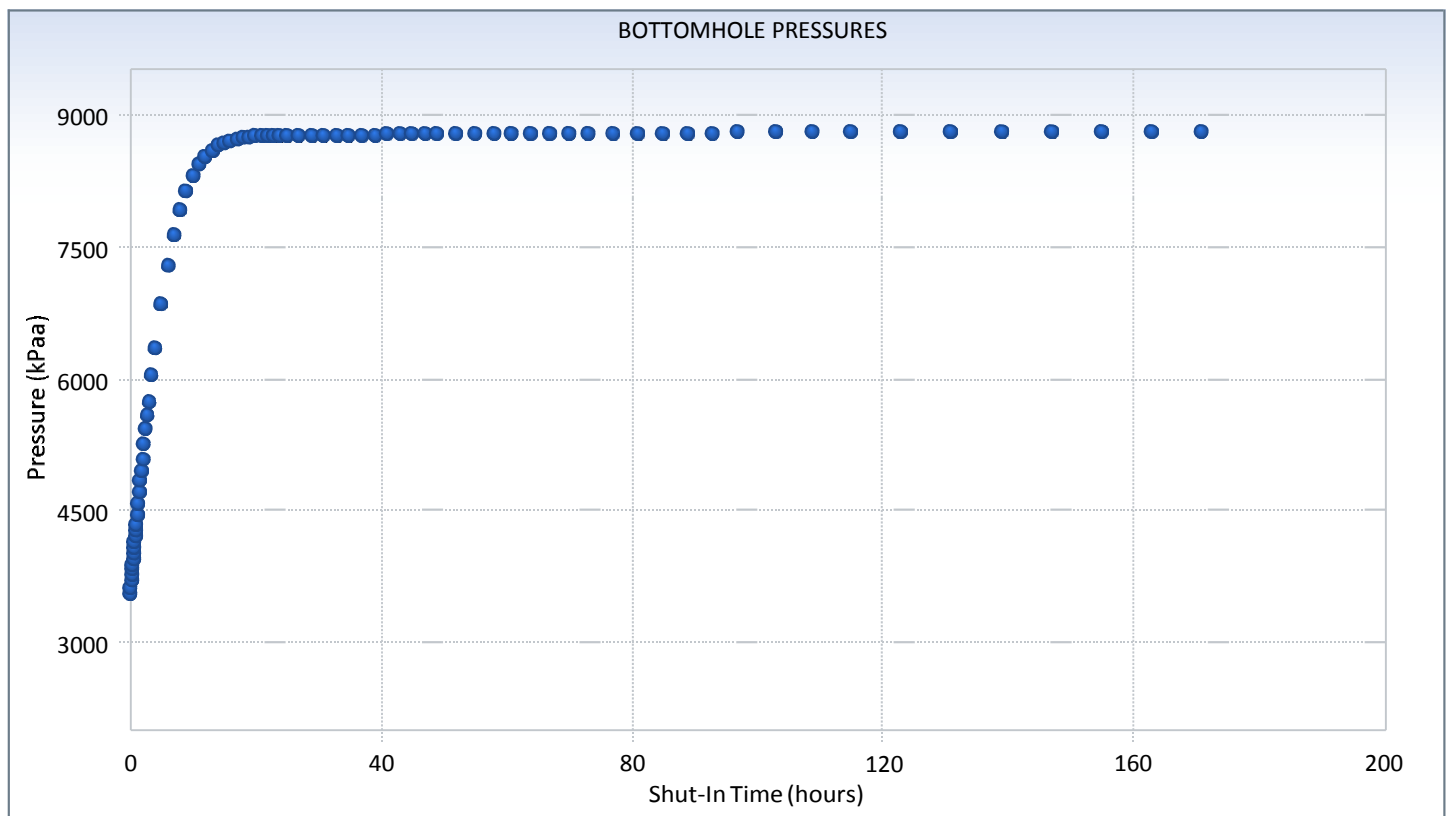
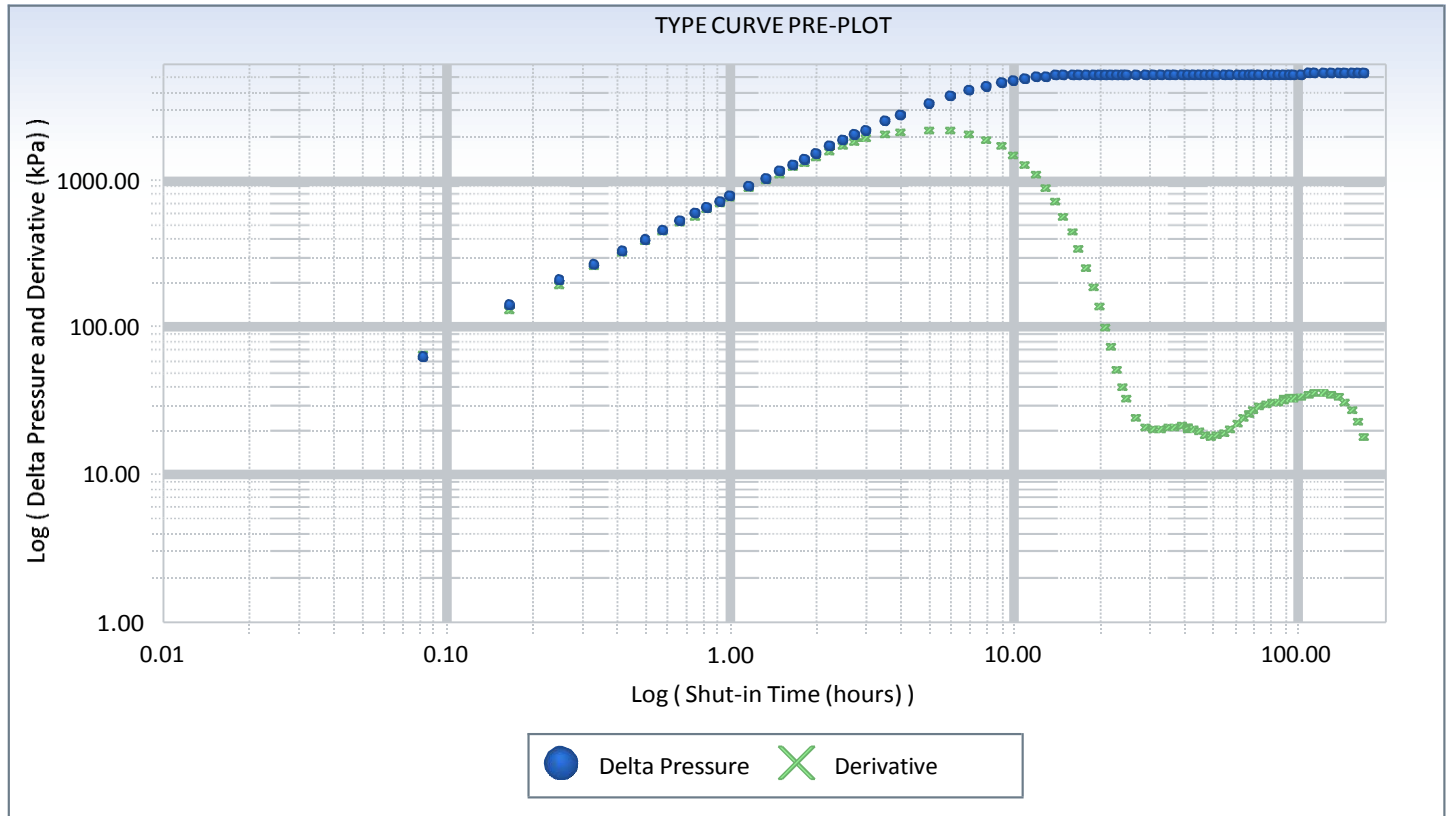
PRESSURE DATA CALCULATIONS:

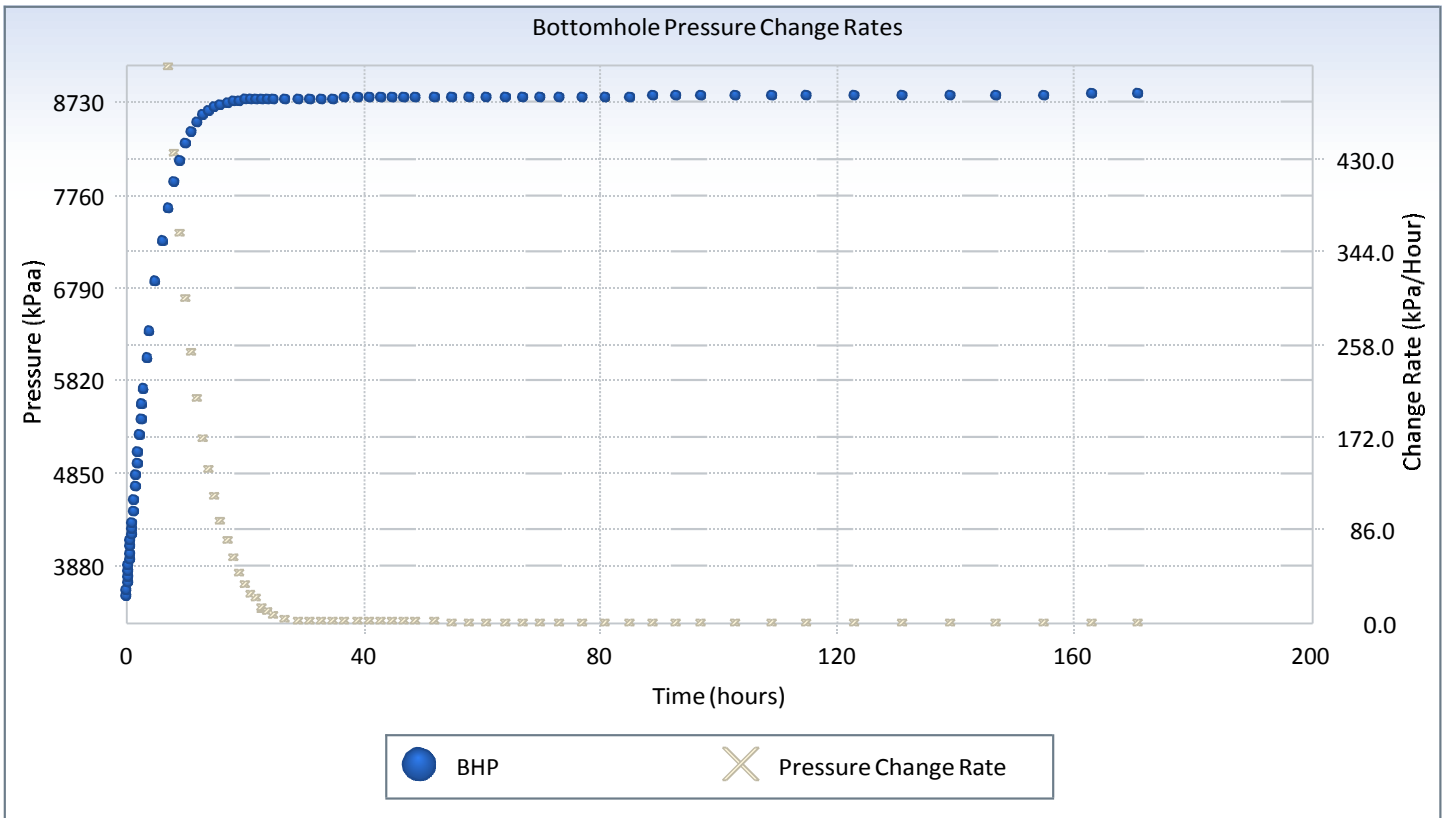
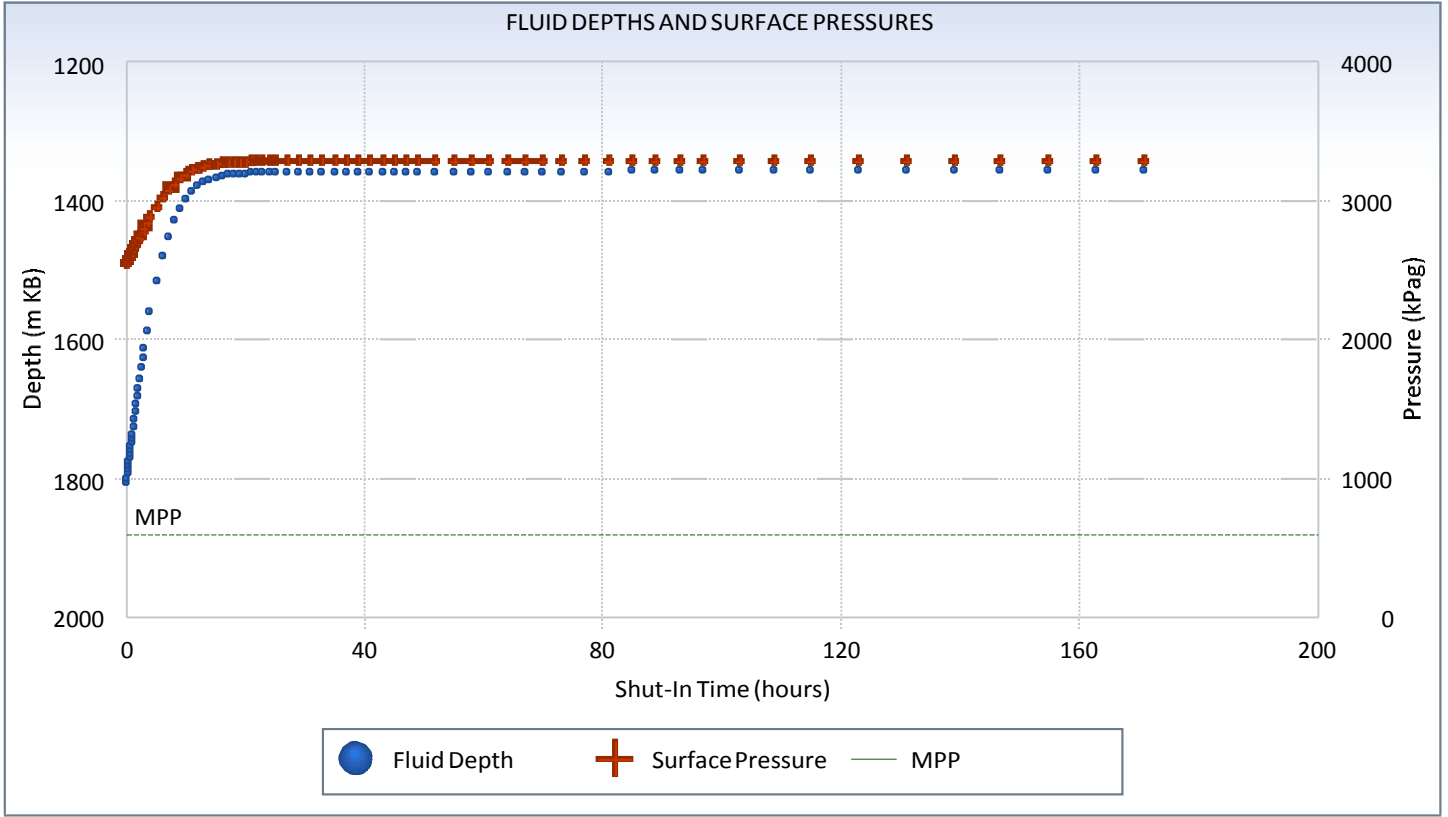
- The bottomhole pressures were calculated using the following information:

Atmospheric Pressure	93.0 kPa
Formation Depth	1,879.70 m KB (TVD) / 1,879.75 m KB
Oil Gravity	35.40 °API
Water Gravity	1.050
Gas Gravity	0.700
Oil Production	1.24 m ³ /d
Water Production	16.46 m ³ /d
Gas Production	0.03 E ³ m ³ /d
Bottomhole Temperature	62.20 °C

ATTACHMENTS:

ACOUSTIC WELLSOUNDER PRESSURE SURVEY DATA
TYPE CURVE PRE-PLOT
BOTTOMHOLE PRESSURE VERSUS TIME
CASING PRESSURE VERSUS TIME
FLUID LEVEL VERSUS TIME
PRESSURE FILE (PAS FORMAT)





ACOUSTIC WELLSOUNDER PRESSURE SURVEY

COMPANY: SAMPLE COMPANY	POOL: GOODSANDS	U.W.I.: 100/01-02-003-04W5/0
FIELD: PROLIFIC	WELL STATUS: Pumping Oil	WELL NAME: SAMPLE 1-2-3-4
SHUT-IN: 2011-Dec-13 @ 13:04:32	LICENSE: 1234567	SURFACE LCN.: 02-02-003-04W5 (DEV)

ELEVATIONS:

Kelly Bushing (KB): 688.20 m
 Casing Flange (CF): 683.60 m
 KB to CF: 4.60 m

FLUID PROPERTIES:

Gas Gravity: 0.700
 Oil Gravity: 35.400 °API
 Water Gravity: 1.050

TEMPERATURES:

Surface: 0.00 °C
 Reservoir: 62.20 °C

PRODUCTION RATES:

Gas: 0.03 E³m³/d
 Oil: 1.24 m³/d
 Water: 16.46 m³/d

TUBING:

Total Joints: 196.000
 Tubing Bottom: 1880.50 m KB (MD)
 Average Joint Length: 9.571 m

PRODUCING INTERVAL:

Top: 1,878.45 m KB (TVD)
 1,878.50 m KB (MD)
 Bottom: 1,880.95 m KB (TVD)
 1,881.00 m KB (MD)
 Mid-Point: 1,879.70 m KB (TVD)
 1,879.75 m KB (MD)

NOTES:

All calculated depths have been corrected to True Vertical Depth.

NO.	TEST		JOINTS		SURFACE PRESSURE (kPaa)	GAS COLUMN			OIL COLUMN			EMULSION COLUMN			PRESSURE @ MPP (kPaa)
	TIME (hours)	DATE	TIME	TO LIQUID		HEIGHT (m)	GRADIENT (kPa/m)	PRESSURE (kPa)	HEIGHT (m)	GRADIENT (kPa/m)	PRESSURE (kPa)	HEIGHT (m)	GRADIENT (kPa/m)	PRESSURE (kPa)	
1	0.000	2011-Dec-13	13:04:32	188.21	2549.4	1801.3	0.237	426.1	72.6	7.793	565.5	1.2	9.944	12.4	3553.4
2	0.083	2011-Dec-13	13:09:30	187.64	2557.4	1795.8	0.237	426.3	72.6	7.794	565.5	6.8	9.945	67.1	3616.3
3	0.166	2011-Dec-13	13:14:30	186.90	2566.0	1788.8	0.238	426.2	72.5	7.795	565.5	13.8	9.945	137.1	3694.8
4	0.249	2011-Dec-13	13:19:30	186.29	2572.3	1783.0	0.239	426.0	72.5	7.796	565.5	19.6	9.946	194.9	3758.7
5	0.333	2011-Dec-13	13:24:30	185.72	2580.0	1777.5	0.240	426.2	72.5	7.797	565.6	25.1	9.946	249.6	3821.3
6	0.416	2011-Dec-13	13:29:30	185.18	2587.1	1772.3	0.241	426.2	72.5	7.797	565.6	30.3	9.947	301.3	3880.2
7	0.499	2011-Dec-13	13:34:30	184.54	2594.7	1766.2	0.241	426.2	72.5	7.798	565.6	36.4	9.947	362.1	3948.6
8	0.583	2011-Dec-13	13:39:30	184.00	2601.6	1761.0	0.242	426.2	72.5	7.799	565.6	41.6	9.947	413.8	4007.3
9	0.666	2011-Dec-13	13:44:30	183.36	2609.4	1754.9	0.243	426.2	72.5	7.800	565.7	47.7	9.948	474.7	4076.0
10	0.749	2011-Dec-13	13:49:30	182.75	2616.5	1749.1	0.244	426.1	72.5	7.801	565.7	53.5	9.948	532.5	4140.9
11	0.833	2011-Dec-13	13:54:30	182.21	2624.3	1743.9	0.244	426.3	72.5	7.801	565.7	58.7	9.949	584.2	4200.5
12	0.916	2011-Dec-13	13:59:30	181.60	2631.6	1738.1	0.245	426.2	72.5	7.802	565.8	64.5	9.949	642.0	4265.6
13	0.999	2011-Dec-13	14:04:30	181.06	2638.9	1732.9	0.246	426.3	72.5	7.803	565.8	69.7	9.950	693.7	4324.7
14	1.166	2011-Dec-13	14:14:30	179.88	2653.6	1721.6	0.248	426.2	72.5	7.805	565.8	81.0	9.950	806.3	4451.9
15	1.333	2011-Dec-13	14:24:30	178.76	2668.1	1710.9	0.249	426.2	72.5	7.806	565.8	91.7	9.951	912.9	4573.0
16	1.499	2011-Dec-13	14:34:30	177.58	2682.7	1699.6	0.251	426.0	72.5	7.808	565.9	103.0	9.952	1025.5	4700.1
17	1.666	2011-Dec-13	14:44:30	176.43	2697.1	1688.6	0.252	425.9	72.5	7.809	565.9	114.0	9.953	1135.1	4824.0
18	1.833	2011-Dec-13	14:54:30	175.28	2711.5	1677.6	0.254	425.7	72.5	7.811	566.0	125.1	9.954	1244.8	4948.0
19	1.999	2011-Dec-13	15:04:30	174.17	2725.7	1666.9	0.255	425.5	72.5	7.812	566.0	135.8	9.955	1351.3	5068.7
20	2.249	2011-Dec-13	15:19:30	172.57	2746.9	1651.6	0.258	425.4	72.4	7.815	566.1	151.0	9.956	1503.6	5242.0
21	2.499	2011-Dec-13	15:34:30	170.98	2767.7	1636.4	0.260	425.1	72.4	7.817	566.2	166.3	9.957	1655.9	5415.0
22	2.749	2011-Dec-13	15:49:30	169.51	2788.4	1622.3	0.262	425.1	72.4	7.819	566.3	180.4	9.958	1796.1	5575.8
23	2.999	2011-Dec-13	16:04:30	168.07	2808.7	1608.6	0.264	425.0	72.4	7.820	566.4	194.1	9.959	1933.2	5733.4
24	3.499	2011-Dec-13	16:34:30	165.26	2848.5	1581.7	0.269	424.7	72.4	7.824	566.6	221.0	9.961	2201.4	6041.3
25	3.999	2011-Dec-13	17:04:30	162.65	2887.1	1556.6	0.273	424.6	72.4	7.827	566.7	246.1	9.962	2451.5	6329.9
26	4.999	2011-Dec-13	18:04:30	158.02	2960.4	1512.3	0.281	424.6	72.4	7.832	567.0	290.4	9.965	2893.7	6845.7
27	5.999	2011-Dec-13	19:04:30	154.25	3026.6	1476.3	0.288	425.2	72.4	7.836	567.2	326.4	9.968	3253.8	7272.7
28	6.999	2011-Dec-13	20:04:30	151.22	3084.0	1447.3	0.294	425.9	72.4	7.838	567.4	355.4	9.970	3543.6	7621.0

NO.	TEST			JOINTS	SURFACE	GAS COLUMN			OIL COLUMN			EMULSION COLUMN			PRESSURE
	TIME					TO	PRESSURE	HEIGHT	GRADIENT	PRESSURE	HEIGHT	GRADIENT	PRESSURE	HEIGHT	
	(hours)	DATE	TIME	LIQUID	(kPaa)	(m)	(kPa/m)	(kPa)	(m)	(kPa/m)	(kPa)	(m)	(kPa/m)	(kPa)	@ MPP
29	7.999	2011-Dec-13	21:04:30	148.76	3132.0	1423.7	0.300	426.6	72.4	7.840	567.6	379.0	9.971	3778.7	7904.9
30	8.999	2011-Dec-13	22:04:30	146.88	3171.1	1405.7	0.304	427.3	72.4	7.842	567.8	397.0	9.972	3958.8	8124.9
31	9.999	2011-Dec-13	23:04:30	145.44	3201.9	1392.0	0.307	427.9	72.4	7.843	567.9	410.7	9.973	4096.1	8293.8
32	10.999	2011-Dec-14	00:04:30	144.33	3225.5	1381.3	0.310	428.2	72.4	7.843	568.0	421.4	9.974	4203.0	8424.6
33	11.999	2011-Dec-14	01:04:30	143.53	3243.2	1373.6	0.312	428.6	72.4	7.844	568.0	429.0	9.974	4279.3	8519.1
34	12.999	2011-Dec-14	02:04:30	142.89	3256.4	1367.5	0.313	428.7	72.4	7.844	568.1	435.1	9.975	4340.4	8593.5
35	13.999	2011-Dec-14	03:04:30	142.47	3265.9	1363.6	0.315	428.9	72.4	7.845	568.1	439.1	9.975	4380.1	8643.1
36	14.999	2011-Dec-14	04:04:30	142.15	3272.8	1360.5	0.315	429.0	72.4	7.845	568.2	442.2	9.975	4410.6	8680.6
37	16.000	2011-Dec-14	05:04:31	141.96	3277.8	1358.7	0.316	429.2	72.4	7.845	568.2	444.0	9.975	4428.9	8704.1
38	16.999	2011-Dec-14	06:04:30	141.80	3281.4	1357.2	0.316	429.2	72.4	7.845	568.2	445.5	9.975	4444.2	8723.0
39	17.999	2011-Dec-14	07:04:30	141.68	3283.9	1355.9	0.317	429.2	72.4	7.845	568.2	446.7	9.975	4456.4	8737.8
40	18.999	2011-Dec-14	08:04:30	141.61	3285.8	1355.3	0.317	429.3	72.4	7.845	568.2	447.4	9.975	4462.5	8745.8
41	19.999	2011-Dec-14	09:04:30	141.55	3287.2	1354.7	0.317	429.3	72.4	7.845	568.2	448.0	9.975	4468.6	8753.4
42	20.999	2011-Dec-14	10:04:30	141.52	3288.3	1354.4	0.317	429.4	72.4	7.845	568.2	448.3	9.975	4471.7	8757.7
43	21.999	2011-Dec-14	11:04:30	141.52	3289.2	1354.4	0.317	429.6	72.4	7.845	568.2	448.3	9.975	4471.7	8758.6
44	22.999	2011-Dec-14	12:04:30	141.48	3289.6	1354.1	0.317	429.5	72.4	7.845	568.2	448.6	9.975	4474.7	8762.0
45	23.999	2011-Dec-14	13:04:30	141.48	3289.6	1354.1	0.317	429.5	72.4	7.845	568.2	448.6	9.975	4474.7	8762.0
46	24.999	2011-Dec-14	14:04:30	141.48	3289.3	1354.1	0.317	429.5	72.4	7.845	568.2	448.6	9.975	4474.7	8761.8
47	26.999	2011-Dec-14	16:04:30	141.48	3289.8	1354.1	0.317	429.5	72.4	7.845	568.2	448.6	9.975	4474.7	8762.3
48	28.999	2011-Dec-14	18:04:30	141.46	3289.1	1353.9	0.317	429.4	72.4	7.845	568.2	448.8	9.976	4476.7	8763.4
49	30.999	2011-Dec-14	20:04:30	141.45	3290.4	1353.8	0.317	429.6	72.4	7.845	568.2	448.9	9.976	4477.6	8765.8
50	32.999	2011-Dec-14	22:04:30	141.45	3290.8	1353.7	0.317	429.6	72.4	7.845	568.2	449.0	9.976	4478.5	8767.1
51	35.000	2011-Dec-15	00:04:31	141.44	3290.2	1353.6	0.317	429.5	72.4	7.845	568.2	449.0	9.976	4479.4	8767.4
52	37.000	2011-Dec-15	02:04:31	141.43	3290.8	1353.5	0.317	429.5	72.4	7.845	568.2	449.1	9.976	4480.3	8768.9
53	39.000	2011-Dec-15	04:04:31	141.42	3290.3	1353.4	0.317	429.4	72.4	7.845	568.2	449.2	9.976	4481.2	8769.2
54	41.000	2011-Dec-15	06:04:31	141.41	3290.0	1353.4	0.317	429.4	72.4	7.845	568.2	449.3	9.976	4482.1	8769.7
55	43.000	2011-Dec-15	08:04:31	141.40	3290.7	1353.3	0.317	429.4	72.4	7.845	568.2	449.4	9.976	4483.0	8771.3
56	45.000	2011-Dec-15	10:04:31	141.39	3291.4	1353.2	0.317	429.5	72.4	7.845	568.2	449.5	9.976	4483.9	8773.0
57	47.000	2011-Dec-15	12:04:31	141.38	3291.7	1353.1	0.317	429.5	72.4	7.845	568.2	449.6	9.976	4484.8	8774.2
58	49.000	2011-Dec-15	14:04:31	141.37	3291.8	1353.0	0.317	429.5	72.4	7.845	568.2	449.7	9.976	4485.7	8775.3
59	52.000	2011-Dec-15	17:04:31	141.36	3291.8	1352.9	0.317	429.5	72.4	7.845	568.2	449.8	9.976	4486.6	8776.1
60	55.000	2011-Dec-15	20:04:31	141.35	3291.9	1352.8	0.317	429.5	72.4	7.845	568.2	449.9	9.976	4487.5	8777.2
61	58.000	2011-Dec-15	23:04:31	141.34	3291.3	1352.7	0.317	429.3	72.4	7.845	568.2	449.9	9.976	4488.5	8777.3
62	61.000	2011-Dec-16	02:04:31	141.33	3291.6	1352.6	0.317	429.4	72.4	7.845	568.2	450.0	9.976	4489.4	8778.5
63	64.000	2011-Dec-16	05:04:31	141.32	3291.8	1352.5	0.317	429.4	72.4	7.845	568.2	450.1	9.976	4490.3	8779.7
64	67.000	2011-Dec-16	08:04:31	141.31	3291.2	1352.5	0.317	429.2	72.4	7.845	568.2	450.2	9.976	4491.2	8779.8
65	70.000	2011-Dec-16	11:04:31	141.30	3291.9	1352.4	0.317	429.3	72.4	7.845	568.2	450.3	9.976	4492.1	8781.5
66	73.000	2011-Dec-16	14:04:31	141.29	3291.2	1352.2	0.317	429.2	72.4	7.845	568.2	450.5	9.976	4493.8	8782.4
67	77.000	2011-Dec-16	18:04:31	141.27	3291.4	1352.0	0.317	429.1	72.4	7.845	568.2	450.6	9.976	4495.5	8784.2
68	81.000	2011-Dec-16	22:04:31	141.25	3291.8	1351.9	0.317	429.2	72.4	7.845	568.2	450.8	9.976	4497.1	8786.3
69	85.000	2011-Dec-17	02:04:31	141.23	3291.3	1351.7	0.317	429.0	72.4	7.846	568.2	451.0	9.976	4498.8	8787.4
70	89.000	2011-Dec-17	06:04:31	141.22	3291.8	1351.5	0.317	429.0	72.4	7.846	568.2	451.1	9.976	4500.4	8789.4
71	93.000	2011-Dec-17	10:04:31	141.20	3291.5	1351.4	0.317	429.0	72.4	7.846	568.2	451.3	9.976	4502.1	8790.8
72	97.000	2011-Dec-17	14:04:31	141.18	3292.0	1351.2	0.317	429.0	72.4	7.846	568.2	451.5	9.976	4503.8	8793.0
73	103.000	2011-Dec-17	20:04:31	141.16	3291.3	1351.0	0.317	428.8	72.4	7.846	568.2	451.6	9.976	4505.4	8793.8
74	109.000	2011-Dec-18	02:04:31	141.15	3291.8	1350.9	0.317	428.9	72.4	7.846	568.2	451.8	9.976	4507.1	8796.0
75	115.000	2011-Dec-18	08:04:31	141.13	3291.3	1350.7	0.317	428.7	72.4	7.846	568.2	452.0	9.976	4508.8	8797.0
76	123.000	2011-Dec-18	16:04:31	141.10	3291.3	1350.4	0.317	428.7	72.4	7.846	568.2	452.2	9.976	4511.4	8799.6
77	131.000	2011-Dec-19	00:04:31	141.08	3291.2	1350.2	0.317	428.6	72.4	7.846	568.2	452.5	9.976	4514.0	8802.0
78	139.000	2011-Dec-19	08:04:31	141.05	3292.0	1349.9	0.317	428.6	72.4	7.846	568.2	452.7	9.976	4516.5	8805.3
79	147.000	2011-Dec-19	16:04:31	141.03	3291.3	1349.8	0.317	428.4	72.4	7.846	568.2	452.9	9.976	4518.2	8806.2
80	155.000	2011-Dec-20	00:04:31	141.02	3291.9	1349.6	0.317	428.5	72.4	7.846	568.2	453.1	9.976	4519.7	8808.3
81	163.000	2011-Dec-20	08:04:31	141.00	3291.5	1349.5	0.317	428.4	72.4	7.846	568.2	453.2	9.976	4521.1	8809.2
82	171.000	2011-Dec-20	16:04:31	140.99	3291.4	1349.3	0.317	428.3	72.4	7.846	568.2	453.3	9.976	4522.4	8810.4