



WATER PERMITS

JUN 17 1998

RECEIVED

BHP Copper

6 April 1998

Ms. Julie Collins
ADEQ Compliance Officer
Arizona Department of Environmental Quality
3033 N. Central Ave.
Phoenix, AZ 85012

Dear Ms. Collins,

In order to satisfy Part II.E.1.a of Aquifer Protection Permit #101704 (permit page 7), BHP Copper is submitting data demonstrating that hydraulic control was maintained during a 90-day pre-operational period. The pre-operational compliance test was conducted from November 8, 1997 until February 10, 1998. The attached information and graphs are based on two data sets. The first set is the electrical conductivity readings measured by field technicians on daily composite samples. The second set of data includes the elevation of the water table for four pairs of pumping and observation wells. These pairs are located in the four quadrants of the compliance test area and are representative of conditions in the field area. Each pair consists of a pumping well and an observation well located 50 feet to the east or west of the pumping well. The pairs are:

<u>Quadrant</u>	<u>Pumping Well</u>	<u>Observation Well</u>
Northwest	BHP4	OWB3
Northeast	BHP3	OWB1
Southwest	BHP5	OWB4
Southeast	BHP2	OWB5

The data for electrical conductivity was measured by hand. The samples were taken by two methods. The wells labeled as BHP2, BHP3, BHP4, and BHP5 were continuously running pumping wells. The samples on these wells were made from a 24-hour composite, with each individual sample being a 0.25 gallon sample taken every six hours. These samples were blended and a portion taken for analysis. Observation wells OWB1, OWB3, OWB4, and OWB5 did not have pumps in them during the test. These wells were sampled using a sample baler with a small pump attached to guarantee a good sample. The procedure for this sampling was to turn the pump

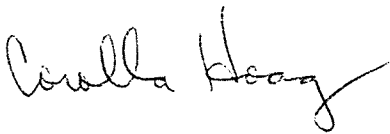
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1
8

on for five minutes and then let the sample collect for another two minutes before retrieving the baler. This sample was then analyzed. The conductivity readings were conducted on site with a YSI meter by the person doing the sampling.

The data for the water elevation levels was gathered electronically using the controllers in the well field on each individual well. The controllers upload this information continuously to the well field computer at the operator control room. The water levels of the individual wells were taken from 12 hour (12 o'clock to 12 o'clock) electronic shift files. Each well has an electronic file for each shift; these files contain readings taken every five minutes. The readings were averaged over the shift, and entered into a spread sheet.

Aberrations in the conductivity data are a result of operator error and instrument error including interference of hand-held radios used in the same room as the conductivity probe. Aberrations in the water level data are primarily a result of instrument error including maintenance problems with pressure transducers and temporary adjustments to the pumps. On OWB5, there is a period of missing or unreliable data between December 21 to December 29, 1997 caused by the malfunction of the pressure transducer in the well head. Replacements also malfunctioned, but a properly performing unit was eventually in place. If you have any questions about the data or graphs, please call me at (520) 868-5092. Thank you.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Corolla Hoag".

Ms. Corolla (Cori) Hoag

Attached: graphs showing electrical conductivity and water levels, and field measurements.

To: Corolla Hoag Sr. Geologist

CC: File

From: Michael Kline

Date: April 3, 1998

*This sheet only
for our files.
C.H.*

Compliance Test Report Information

Data for Compliance test and explanation

The data consists of two sets of readings. The first is the electrical conductivity. The second is elevation of water table for observation pairs in the well field. This is grouped into pairs corresponding to the four sides of the well field. These pairs are: North West (BHP4,OWB3), North East (BHP3,OWB1), South West (BHP5,OWB4), South East (BHP2,OWB5).

The Data for electrical conductivity was taken by hand. These samples were taken two ways. The wells labeled as BHP2, BHP3, BHP4, and BHP5 were used as continuously running pumping wells. The samples on these wells are made from a twenty four hour composite, with each individual sample being a ¼ gallon sample taken every 6 hours. These samples were blended, and a portion cut for analysis. The wells labeled as OWB1, OWB3, OWB4, and OWB5 did not have pumps in them during the test. These wells were sampled using a sample baler with a small pump attached to guarantee a good sample. The procedure for this sampling was to turn the pump on for five minutes and then let the sample set for another two before retrieving the baler. This sample was then analyzed. The analysis used for electrical conductivity was performed by the person doing the sampling. This was done on sight using the YSI meter located in the control room.

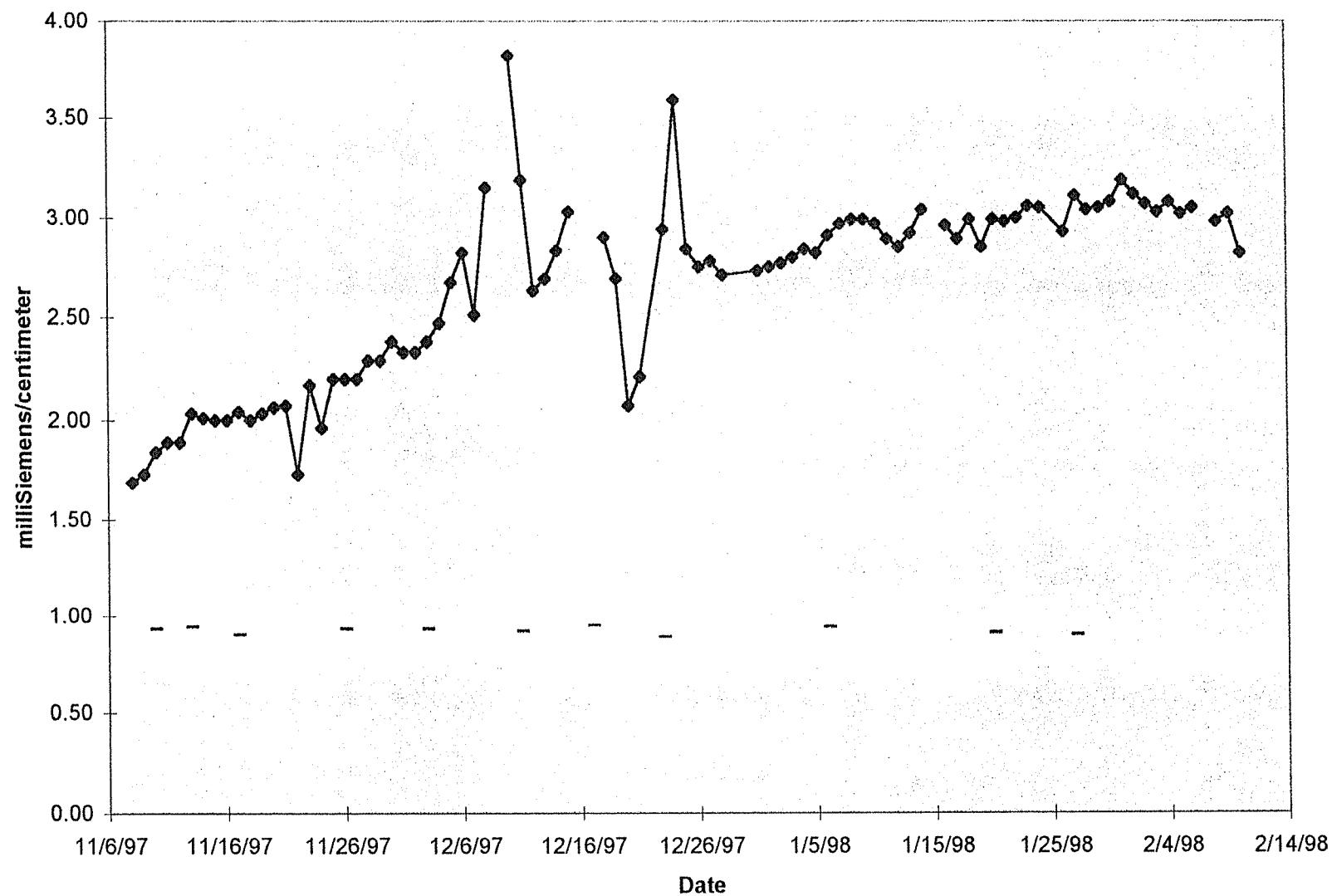
The data for the Water levels was gathered electronically using the controllers in the well field on each individual well. The controllers download this information continuously to the well field computer at the operator trailer. The water levels of the individual wells were taken from 12 hour (12 o'clock to 12 o'clock) shift files. Each well has its own individual file for each shift. These files contain readings taken every five minutes. These readings were averaged over the shift, and entered onto a spread sheet (d:\data\daily average.xls). This data was translated from depth of water table from surface to Elevation of water table using Excel.

On OWB5 there is a period of missing and corrupted data (12/21/97 to 12/29/97) this was caused by malfunction of pressure transducer in well head. A replacement was placed in within a day but this was also malfunctioning.

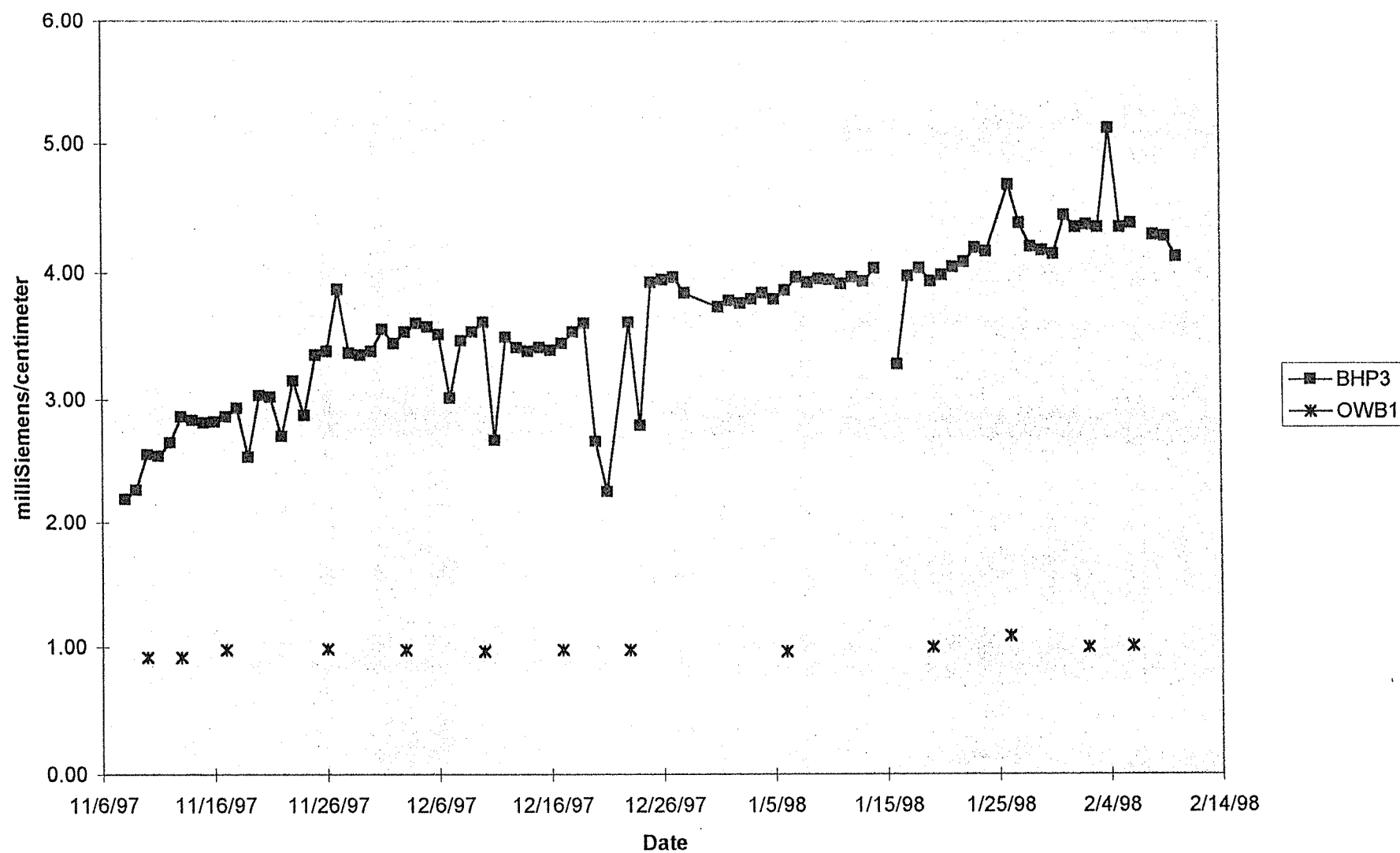
The following pages contain graphs of the electrical conductivity and the water table elevation versus time. Also included is a copy of the data for these graphs.

Michael Kline

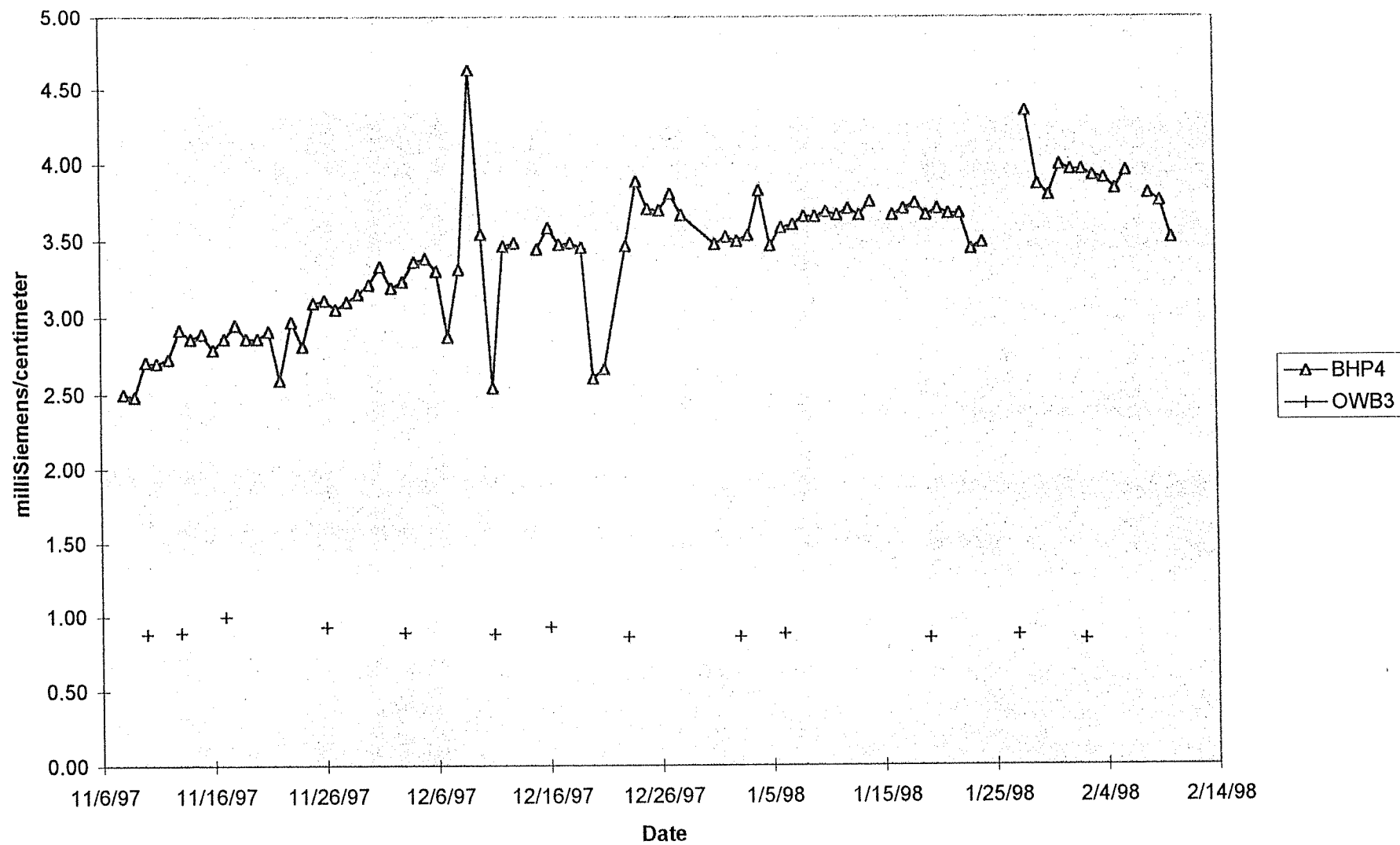
Electrical Conductivities for Observation Well Pair



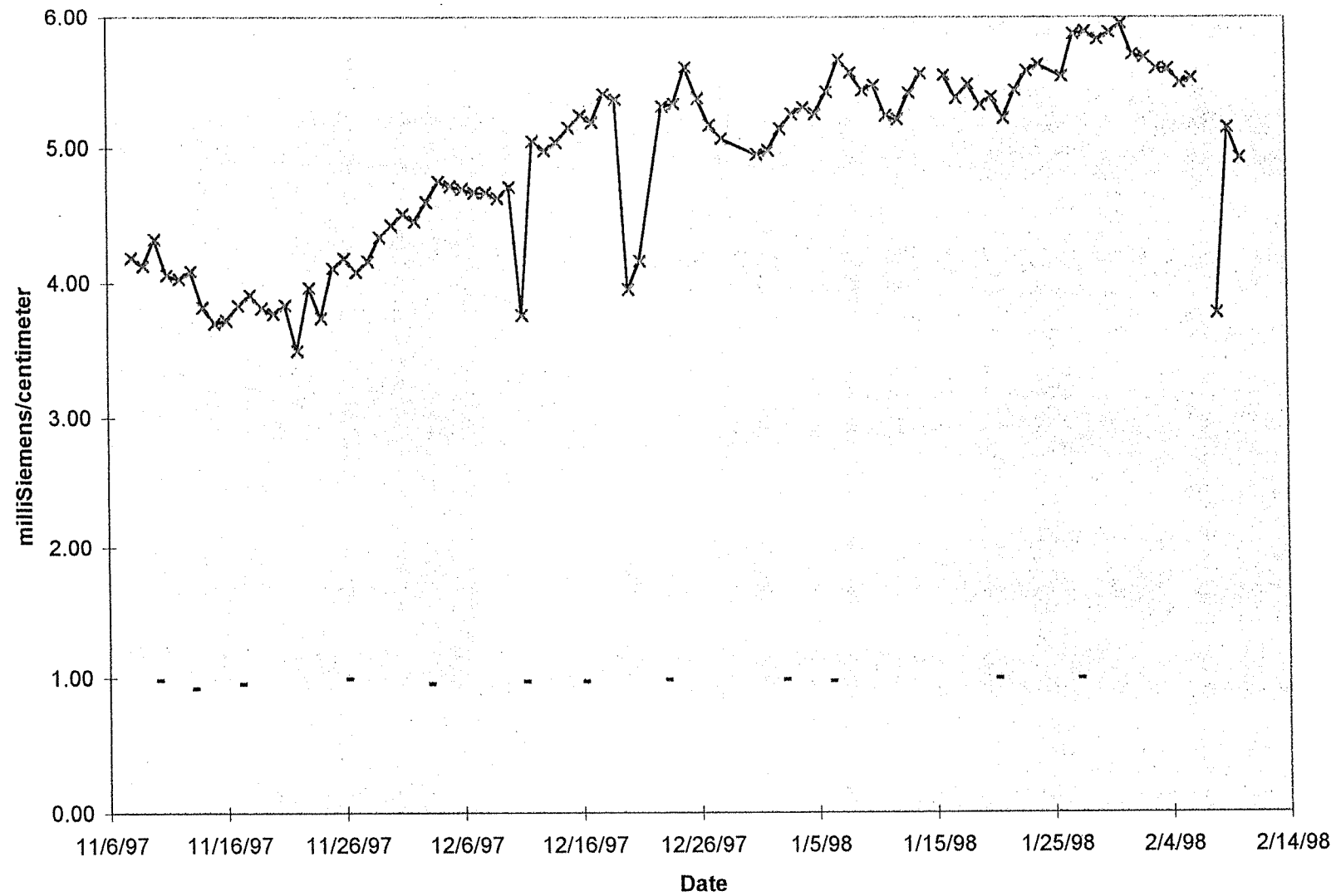
Electrical Conductivities for Observation Well Pair



Electrical Conductivities for Observation Well Pair



Electrical Conductivities for Observation Well Pair



Electrical Conductivity Readings

in milliSiemens/centimeter

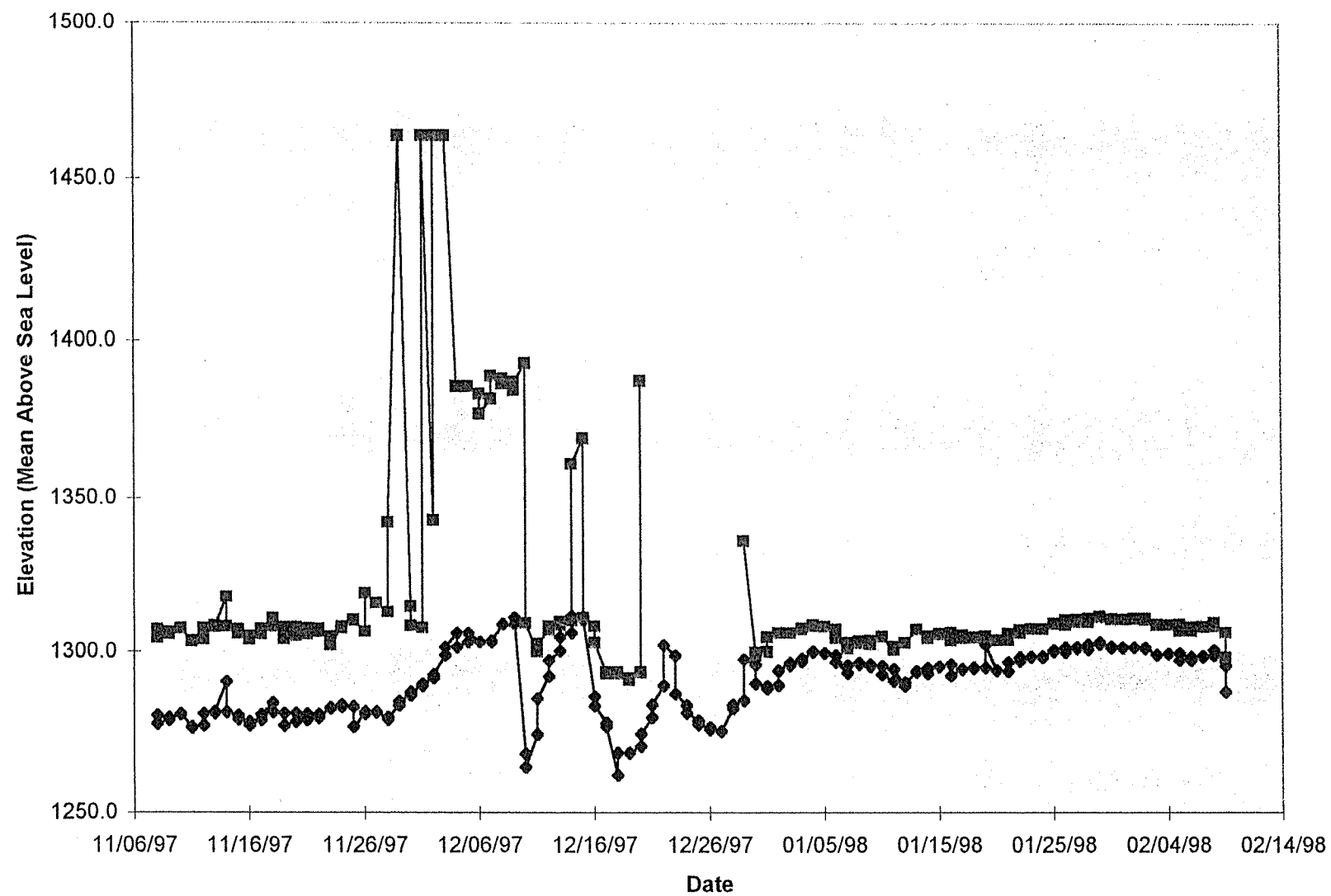
Date	BHP5	OWB1	OWB2	OWB3	OWB4	OWB5	OWB6
11/8/97	4.19		1.89				
11/9/97	4.13		1.96				
11/10/97	4.33	0.92	1.87	0.88	0.98	0.93	0.91
11/11/97	4.06		1.94				
11/12/97	4.03		1.86				
11/13/97	4.09	0.92	1.95	0.89	0.92	0.94	0.87
11/14/97	3.82		1.91				
11/15/97	3.70		2.13				
11/16/97	3.72		1.86				
11/17/97	3.83	0.98	1.88	1.00	0.95	0.90	0.92
11/18/97	3.91		1.88				
11/19/97	3.81						
11/20/97	3.77		1.93				
11/21/97	3.83		1.92				
11/22/97	3.50						
11/23/97	3.96		1.91				
11/24/97	3.74						
11/25/97	4.11						
11/26/97	4.18	0.99	1.91	0.93	0.99	0.93	0.92
11/27/97	4.08						
11/28/97	4.16						
11/29/97	4.34						
11/30/97	4.43						
12/1/97	4.51						
12/2/97	4.46						
12/3/97	4.60	0.98	1.89	0.89	0.95	0.93	0.85
12/4/97	4.75						
12/5/97	4.72		1.91				
12/6/97	4.70						
12/7/97	4.67						
12/8/97	4.67		1.98				
12/9/97	4.63						
12/10/97	4.71	0.97	1.88				
12/11/97	3.76			0.88	0.97	0.92	0.93
12/12/97	5.05		1.93				
12/13/97	4.98						
12/14/97	5.04						
12/15/97	5.15						
12/16/97	5.24			0.93	0.97		
12/17/97	5.19	0.98	1.92			0.95	0.89
12/18/97	5.40						
12/19/97	5.36		2.15				
12/20/97	3.95						
12/21/97	4.16						
12/23/97	5.31	0.98		0.86	0.98	0.89	0.89
12/24/97	5.33						
12/25/97	5.61						
12/26/97	5.37		1.87				
12/27/97	5.17						
12/28/97	5.07						

Electrical Conductivity Readings

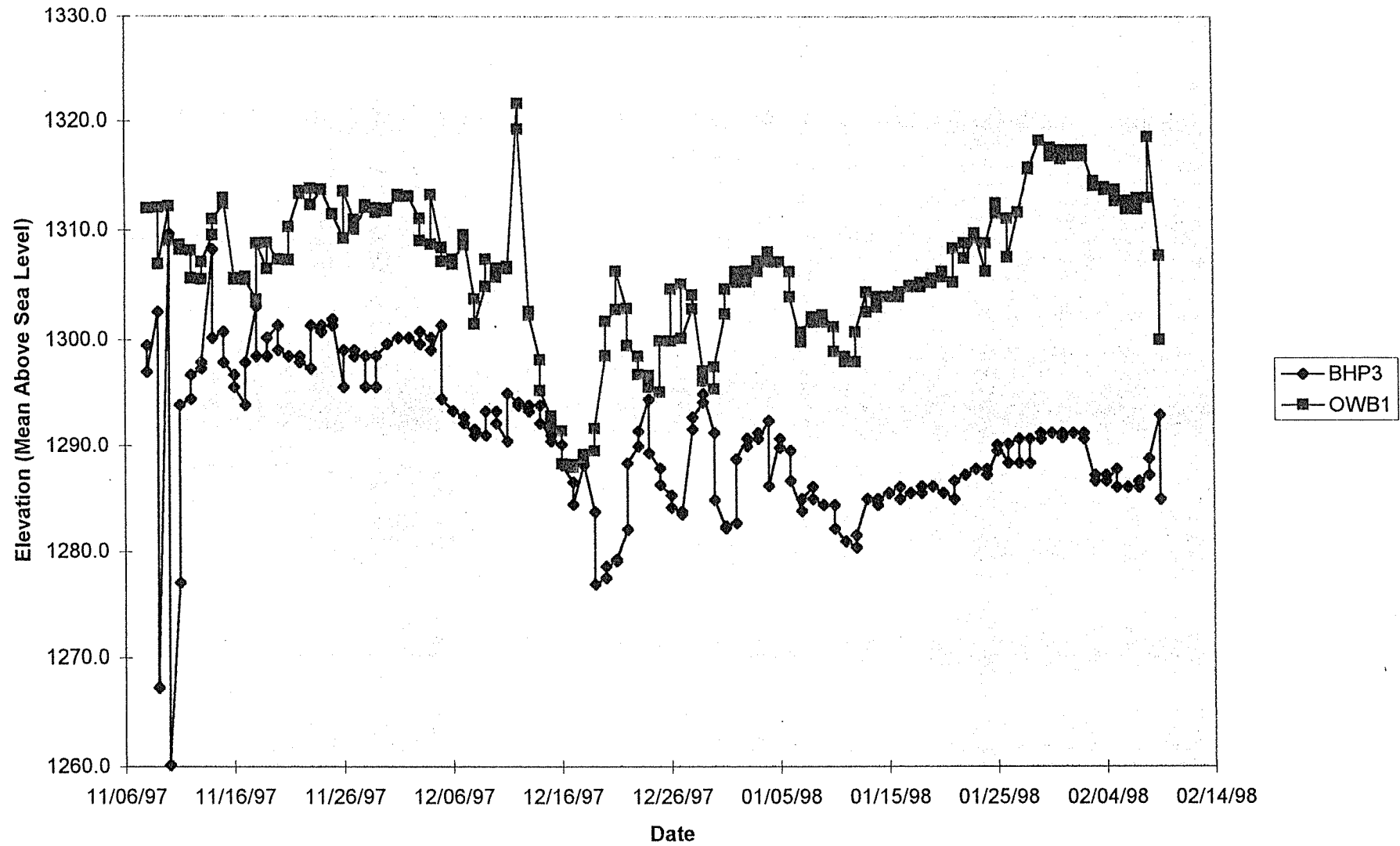
in milliSiemens/centimeter

12/31/97	4.95						
1/1/98	4.98						
1/2/98	5.14			0.86	0.98		
1/3/98	5.25						
1/4/98	5.30						
1/5/98	5.25		1.90				
1/6/98	5.42	0.97		0.88	0.97	0.94	0.90
1/7/98	5.67						
1/8/98	5.57						
1/9/98	5.43		1.88				
1/10/98	5.47						
1/11/98	5.24						
1/12/98	5.21		1.90				
1/13/98	5.41						
1/14/98	5.56						
1/15/98							
1/16/98	5.55						
1/17/98	5.37						
1/18/98	5.48						
1/19/98	5.32	1.00	1.90	0.85			
1/20/98	5.38				0.99	0.91	0.87
1/21/98	5.22						
1/22/98	5.43						
1/23/98	5.58		1.87				
1/24/98	5.63						
1/26/98	5.54	1.09	1.87				
1/27/98	5.87			0.87	0.99	0.90	
1/28/98	5.89		1.91				
1/29/98	5.83						
1/30/98	5.88						0.89
1/31/98	5.95						
2/1/98	5.71						
2/2/98	5.69	1.00	1.82	0.84			
2/3/98	5.60						
2/4/98	5.60						
2/5/98	5.49						
2/6/98	5.53	1.01					
2/7/98							
2/8/98	3.77						
2/9/98	5.15						
2/10/98	4.92						

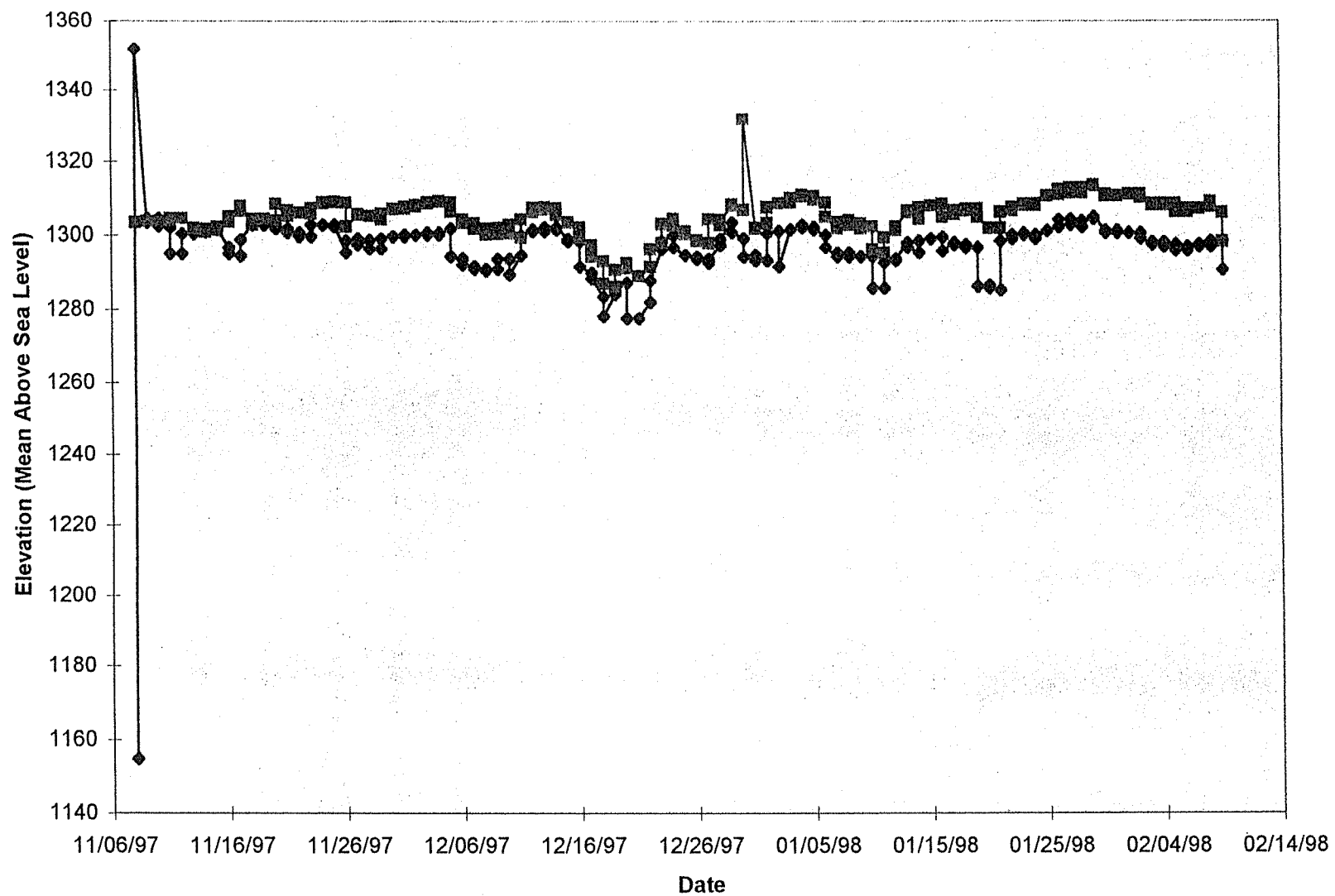
Water Level of Observation Pair



Water Level of Observation Pair



Water Level of Observation Pair



12 Hour Averages

DATE	BHP4	OWB3
11/08/97	1271.3	1318.4
11/08/97	1270.2	1318.4
11/09/97	1274.0	1316.5
11/09/97	1277.9	1314.6
11/10/97	1274.8	1317.7
11/10/97	1284.9	1317.7
11/11/97	1275.8	1317.7
11/11/97	1266.8	1320.8
11/12/97	1170.7	1318.4
11/12/97	1170.7	1318.4
11/13/97	1205.5	1318.4
11/13/97	1214.3	1316.0
11/14/97	1212.3	1287.7
11/14/97	1276.9	1304.1
11/15/97	1277.4	1314.9
11/15/97	1274.9	1315.9
11/16/97	1272.9	1317.7
11/16/97	1272.0	1318.5
11/17/97	1269.7	1320.1
11/17/97	1276.5	1320.5
11/18/97	1281.0	1315.2
11/18/97	1276.2	1315.5
11/19/97	1276.0	1315.9
11/19/97	1277.1	1315.5
11/20/97	1278.1	1314.5
11/20/97	1276.7	1318.3
11/21/97	1275.1	1316.0
11/21/97	1275.6	1318.6
11/22/97	1275.6	1316.6
11/22/97	1274.0	1316.1
11/23/97	1273.5	1316.1
11/23/97	1278.3	1303.0
11/24/97	1278.3	1305.9
11/24/97	1278.3	1304.6
11/25/97	1278.3	1304.8
11/25/97	1270.9	1304.7
11/26/97	1263.6	1297.2
11/26/97	1275.1	1298.5
11/27/97	1275.3	1301.8
11/27/97	1273.1	1301.6
11/28/97	1274.7	1301.6
11/28/97	1272.0	1299.4
11/29/97	1272.0	1300.0
11/29/97	1274.8	1302.4
11/30/97	1276.5	1303.0
11/30/97	1277.6	1303.2
12/01/97	1278.3	1303.6
12/01/97	1278.7	1303.8
12/02/97	1279.0	1304.0
12/02/97	1279.0	1305.0
12/03/97	1279.0	1304.2
12/03/97	1279.1	1304.6
12/04/97	1279.1	1304.8

12 Hour Averages

DATE	BHP4	OWB3
12/04/97	1279.2	1304.4
12/05/97	1284.4	1308.0
12/05/97	1274.0	1301.0
12/06/97	1273.8	1300.2
12/06/97	1273.3	1300.0
12/07/97	1273.3	1299.6
12/07/97	1274.8	1299.8
12/08/97	1273.8	1299.4
12/08/97	1273.8	1299.6
12/09/97	1274.1	1299.6
12/09/97	1277.7	1301.6
12/10/97	1278.7	1301.6
12/10/97	1276.1	1299.8
12/11/97	1281.4	1300.0
12/11/97	1286.9	1304.4
12/12/97	1287.4	1305.4
12/12/97	1284.9	1304.4
12/13/97	1284.8	1307.2
12/13/97	1284.8	1307.8
12/14/97	1283.0	1308.2
12/14/97	1282.0	1305.0
12/15/97	1281.1	1304.0
12/15/97	1281.2	1301.4
12/16/97	1280.0	1300.9
12/16/97	1278.9	1297.5
12/17/97	1282.5	1293.9
12/17/97	1274.3	1291.6
12/18/97	1271.5	1289.8
12/18/97	1273.8	1286.7
12/19/97	1269.5	1286.4
12/19/97	1270.1	1286.4
12/20/97	1270.4	1287.6
12/20/97	1270.9	1288.0
12/21/97	1271.4	1287.9
12/21/97	1271.8	1287.9
12/22/97	1272.3	1294.0
12/22/97	1272.7	1299.8
12/23/97	1284.0	1315.5
12/23/97	1284.6	1301.4
12/24/97	1289.2	1303.5
12/24/97	1289.2	1301.1
12/25/97	1282.6	1297.8
12/25/97	1281.4	1296.9
12/26/97	1280.7	1296.1
12/26/97	1280.0	1344.7
12/27/97	1279.4	1292.3
12/27/97	1281.9	1295.0
12/28/97	1285.3	1301.3
12/28/97	1286.9	1316.3
12/29/97	1286.8	1303.6
12/29/97	1282.3	1304.3
12/30/97	1280.5	1299.8
12/30/97	1278.0	1296.6

12 Hour Averages

DATE	BHP4	OWB3
12/31/97	1277.7	1295.4
12/31/97	1277.5	1295.2
01/01/98	1278.0	1298.7
01/01/98	1287.2	1303.1
01/02/98	1287.7	1305.3
01/02/98	1275.7	1304.6
01/03/98	1291.7	1305.6
01/03/98	1291.7	1306.1
01/04/98	1290.4	1307.3
01/04/98	1289.1	1306.3
01/05/98	1289.1	1305.9
01/05/98	1288.4	1306.3
01/06/98	1287.9	1305.7
01/06/98	1284.7	1302.7
01/07/98	1280.1	1298.9
01/07/98	1282.6	1300.5
01/08/98	1283.8	1301.1
01/08/98	1283.3	1320.1
01/09/98	1281.9	1300.1
01/09/98	1282.4	1299.1
01/10/98	1281.9	1299.5
01/10/98	1281.7	1298.7
01/11/98	1285.7	1302.3
01/11/98	1285.7	1297.3
01/12/98	1290.4	1297.9
01/12/98	1288.7	1298.7
01/13/98	1288.7	1302.5
01/13/98	1288.7	1302.7
01/14/98	1288.7	1302.1
01/14/98	1288.7	1303.5
01/15/98	1288.7	1304.4
01/15/98	1288.7	1304.3
01/16/98	1287.9	1304.9
01/16/98	1286.8	1303.5
01/17/98	1286.8	1304.3
01/17/98	1287.5	1318.3
01/18/98	1287.5	1304.3
01/18/98	1287.4	1304.4
01/19/98	1287.4	1304.4
01/19/98	1286.9	1304.5
01/20/98	1288.1	1304.5
01/20/98	1278.9	1303.4
01/21/98	1278.9	1303.5
01/21/98	1281.4	1306.0
01/22/98	1281.2	1305.9
01/22/98	1281.9	1306.5
01/23/98	1282.6	1307.1
01/23/98	1282.2	1306.7
01/24/98	1282.6	1306.7
01/24/98	1281.5	1306.9
01/25/98	1281.2	1313.1
01/25/98	1281.2	1313.3
01/26/98	1281.2	1312.5

12 Hour Averages

DATE	BHP4	OWB3
01/26/98	1281.2	1313.9
01/27/98	1281.2	1314.3
01/27/98	1290.7	1310.1
01/28/98	1290.4	1309.9
01/28/98	1288.6	1311.1
01/29/98	1289.3	1311.5
01/29/98	1290.0	1311.9
01/30/98	1289.8	1311.9
01/30/98	1289.8	1311.5
01/31/98	1289.5	1311.5
01/31/98	1290.2	1311.5
02/01/98	1289.8	1311.9
02/01/98	1289.8	1311.9
02/02/98	1289.8	1312.1
02/02/98	1287.9	1311.1
02/03/98	1285.2	1308.9
02/03/98	1284.9	1308.9
02/04/98	1284.9	1308.7
02/04/98	1284.7	1308.7
02/05/98	1283.9	1308.7
02/05/98	1283.3	1306.9
02/06/98	1283.3	1306.9
02/06/98	1283.5	1307.9
02/07/98	1283.5	1307.9
02/07/98	1283.5	1307.9
02/08/98	1284.0	1308.3
02/08/98	1289.7	1311.5
02/09/98	1280.1	1306.1
02/09/98	1271.1	1299.1

12 Hour Averages

DATE	BHP3	OWB1
11/08/97	1299.5	1312.0
11/08/97	1297.0	1312.0
11/09/97	1302.6	1312.0
11/09/97	1267.3	1306.9
11/10/97	1309.7	1312.2
11/10/97	1260.2	1309.0
11/11/97	1277.0	1308.6
11/11/97	1293.9	1308.2
11/12/97	1294.5	1308.1
11/12/97	1296.8	1305.6
11/13/97	1297.3	1305.5
11/13/97	1297.9	1307.1
11/14/97	1308.3	1309.5
11/14/97	1300.2	1311.0
11/15/97	1300.8	1312.5
11/15/97	1297.9	1312.9
11/16/97	1296.8	1305.5
11/16/97	1295.6	1305.6
11/17/97	1293.9	1305.7
11/17/97	1297.9	1305.5
11/18/97	1303.1	1303.7
11/18/97	1298.5	1308.8
11/19/97	1298.5	1306.5
11/19/97	1300.2	1308.8
11/20/97	1301.4	1307.3
11/20/97	1299.1	1307.3
11/21/97	1298.5	1307.3
11/21/97	1298.5	1310.3
11/22/97	1298.5	1313.3
11/22/97	1297.9	1313.6
11/23/97	1297.3	1313.8
11/23/97	1301.4	1312.3
11/24/97	1300.8	1313.7
11/24/97	1301.4	1313.7
11/25/97	1301.4	1311.5
11/25/97	1301.9	1311.5
11/26/97	1295.6	1309.3
11/26/97	1299.1	1313.6
11/27/97	1299.1	1311.0
11/27/97	1298.5	1310.1
11/28/97	1298.5	1312.1
11/28/97	1295.6	1312.3
11/29/97	1295.6	1312.0
11/29/97	1298.5	1311.6
11/30/97	1299.6	1311.8
11/30/97	1299.6	1311.9
12/01/97	1300.2	1313.1
12/01/97	1300.2	1313.2
12/02/97	1300.2	1313.1
12/02/97	1300.2	1313.1

12 Hour Averages

DATE	BHP3	OWB1
12/03/97	1299.6	1311.1
12/03/97	1300.8	1309.0
12/04/97	1300.2	1308.7
12/04/97	1299.1	1313.3
12/05/97	1301.4	1308.4
12/05/97	1294.5	1307.1
12/06/97	1293.3	1306.9
12/06/97	1293.3	1307.3
12/07/97	1292.7	1308.6
12/07/97	1292.1	1309.5
12/08/97	1291.0	1303.7
12/08/97	1291.6	1301.4
12/09/97	1291.0	1304.9
12/09/97	1293.3	1307.3
12/10/97	1293.3	1306.5
12/10/97	1292.1	1305.7
12/11/97	1290.4	1306.7
12/11/97	1295.0	1306.5
12/12/97	1294.1	1321.6
12/12/97	1293.8	1319.2
12/13/97	1293.3	1302.6
12/13/97	1293.8	1302.2
12/14/97	1293.8	1298.1
12/14/97	1292.1	1295.2
12/15/97	1291.0	1292.8
12/15/97	1290.4	1291.7
12/16/97	1290.1	1291.4
12/16/97	1288.1	1288.2
12/17/97	1286.5	1287.9
12/17/97	1284.4	1288.2
12/18/97	1288.1	1288.8
12/18/97	1288.3	1289.1
12/19/97	1283.7	1289.5
12/19/97	1276.9	1291.6
12/20/97	1277.5	1298.5
12/20/97	1278.6	1301.7
12/21/97	1279.1	1302.8
12/21/97	1279.3	1306.2
12/22/97	1282.1	1302.8
12/22/97	1288.3	1299.4
12/23/97	1289.9	1298.4
12/23/97	1291.4	1296.7
12/24/97	1294.4	1296.6
12/24/97	1289.3	1295.5
12/25/97	1287.9	1295.1
12/25/97	1286.3	1299.8
12/26/97	1285.3	1299.8
12/26/97	1284.1	1304.6
12/27/97	1283.8	1305.0
12/27/97	1283.5	1300.1

12 Hour Averages

DATE	BHP3	OWB1
12/28/97	1291.6	1302.8
12/28/97	1292.7	1304.1
12/29/97	1294.1	1297.1
12/29/97	1294.9	1296.1
12/30/97	1291.2	1295.3
12/30/97	1284.9	1297.4
12/31/97	1282.2	1302.3
12/31/97	1282.4	1304.6
01/01/98	1282.7	1305.3
01/01/98	1288.7	1306.2
01/02/98	1290.7	1306.2
01/02/98	1290.0	1305.3
01/03/98	1291.2	1306.2
01/03/98	1290.7	1307.1
01/04/98	1292.4	1308.0
01/04/98	1286.2	1307.1
01/05/98	1290.7	1307.1
01/05/98	1289.8	1307.1
01/06/98	1289.5	1306.2
01/06/98	1286.7	1303.9
01/07/98	1283.8	1299.8
01/07/98	1285.0	1300.7
01/08/98	1286.1	1302.1
01/08/98	1285.0	1301.6
01/09/98	1284.4	1301.6
01/09/98	1284.4	1302.2
01/10/98	1284.4	1301.1
01/10/98	1282.2	1298.9
01/11/98	1281.0	1298.4
01/11/98	1281.0	1297.9
01/12/98	1280.4	1297.9
01/12/98	1281.5	1300.7
01/13/98	1285.0	1304.3
01/13/98	1285.0	1302.5
01/14/98	1284.4	1303.0
01/14/98	1285.0	1303.9
01/15/98	1285.5	1303.9
01/15/98	1285.5	1303.9
01/16/98	1286.1	1304.3
01/16/98	1285.0	1303.9
01/17/98	1285.5	1304.8
01/17/98	1285.5	1304.9
01/18/98	1285.5	1304.8
01/18/98	1286.1	1305.2
01/19/98	1286.1	1305.2
01/19/98	1286.1	1305.6
01/20/98	1285.5	1306.2
01/20/98	1285.5	1305.7
01/21/98	1285.0	1305.3
01/21/98	1286.7	1308.3

12 Hour Averages

DATE	BHP3	OWB1
01/22/98	1287.2	1308.8
01/22/98	1287.2	1307.4
01/23/98	1287.8	1309.2
01/23/98	1287.8	1309.7
01/24/98	1287.8	1306.2
01/24/98	1287.2	1308.8
01/25/98	1289.5	1312.5
01/25/98	1290.1	1311.5
01/26/98	1288.4	1311.1
01/26/98	1290.2	1307.5
01/27/98	1290.7	1311.6
01/27/98	1288.4	1311.6
01/28/98	1288.4	1315.7
01/28/98	1290.7	1315.6
01/29/98	1290.7	1318.2
01/29/98	1291.2	1318.2
01/30/98	1291.2	1317.5
01/30/98	1291.2	1316.8
01/31/98	1291.2	1317.3
01/31/98	1290.8	1316.5
02/01/98	1291.2	1316.8
02/01/98	1291.2	1317.3
02/02/98	1291.2	1316.8
02/02/98	1290.7	1317.3
02/03/98	1286.7	1314.1
02/03/98	1287.2	1314.5
02/04/98	1287.2	1313.7
02/04/98	1286.7	1313.9
02/05/98	1287.8	1313.7
02/05/98	1286.1	1312.7
02/06/98	1286.1	1312.7
02/06/98	1286.1	1311.9
02/07/98	1286.1	1311.9
02/07/98	1286.7	1312.9
02/08/98	1287.2	1312.9
02/08/98	1288.8	1318.5
02/09/98	1292.9	1307.7
02/09/98	1285.0	1300.0

12 Hour Averages

DATE	BHP5	OWB4
11/08/97	1154.97	1303.454
11/08/97	1351.91	1303.454
11/09/97	1303.65	1303.749
11/09/97	1304.72	1303.749
11/10/97	1304.72	1303.749
11/10/97	1302.58	1303.719
11/11/97	1302.11	1304.11
11/11/97	1295.09	1304.5
11/12/97	1295.09	1304.5
11/12/97	1300.44	1304.5
11/13/97	1300.97	1301.853
11/13/97	1300.44	1301.691
11/14/97	1300.97	1301.605
11/14/97	1300.97	1300.762
11/15/97	1301.51	1301.38
11/15/97	1301.51	1302.124
11/16/97	1296.7	1303.551
11/16/97	1295.09	1304.99
11/17/97	1294.56	1306.381
11/17/97	1298.84	1307.844
11/18/97	1303.11	1302.806
11/18/97	1302.91	1304.294
11/19/97	1302.9	1304.219
11/19/97	1302.91	1304.406
11/20/97	1302.91	1303.957
11/20/97	1301.84	1308.387
11/21/97	1301.84	1305.148
11/21/97	1300.77	1306.67
11/22/97	1300.77	1305.962
11/22/97	1299.7	1306
11/23/97	1299.7	1305.655
11/23/97	1302.91	1307.153
11/24/97	1302.91	1308.567
11/24/97	1302.91	1308.884
11/25/97	1302.37	1308.9
11/25/97	1302.9	1309.031
11/26/97	1295.42	1308.625
11/26/97	1298.61	1302.342
11/27/97	1299.16	1305.61
11/27/97	1297.56	1305.483
11/28/97	1298.63	1305.163
11/28/97	1296.49	1305.096
11/29/97	1296.48	1304.237
11/29/97	1299.16	1305.734
11/30/97	1299.69	1306.977
11/30/97	1299.7	1307.049
12/01/97	1299.69	1307.17
12/01/97	1300.23	1307.595
12/02/97	1300.23	1307.8
12/02/97	1300.23	1308.03

12 Hour Averages

DATE	BHP5	OWB4
12/03/97	1300.23	1308.563
12/03/97	1300.77	1308.793
12/04/97	1300.77	1308.938
12/04/97	1300.23	1309.175
12/05/97	1301.84	1308.9
12/05/97	1294.35	1306.313
12/06/97	1293.81	1304.224
12/06/97	1292.21	1303.25
12/07/97	1291.67	1303.127
12/07/97	1290.99	1301.669
12/08/97	1290.46	1301.669
12/08/97	1290.99	1300.21
12/09/97	1290.99	1300.407
12/09/97	1293.64	1301.889
12/10/97	1293.6	1302.79
12/10/97	1289.4	1300.432
12/11/97	1294.7	1299.354
12/11/97	1300	1304.275
12/12/97	1301.06	1306.199
12/12/97	1301.59	1307.401
12/13/97	1301.06	1306.878
12/13/97	1302.12	1307.449
12/14/97	1301.59	1307.186
12/14/97	1302.12	1305.386
12/15/97	1298.94	1303.52
12/15/97	1298.41	1303.446
12/16/97	1298.41	1302.049
12/16/97	1291.52	1299.455
12/17/97	1289.93	1297.242
12/17/97	1288.34	1294.219
12/18/97	1283.53	1292.871
12/18/97	1278.27	1286.862
12/19/97	1284.1	1286.089
12/19/97	1285.16	1290.625
12/20/97	1287.28	1292.506
12/20/97	1277.74	1291.14
12/21/97	1277.74	1288.807
12/21/97	1277.74	1288.909
12/22/97	1281.98	1291.413
12/22/97	1287.81	1296.234
12/23/97	1296.29	1297.817
12/23/97	1298.41	1303.065
12/24/97	1300	1304.393
12/24/97	1296.82	1302.525
12/25/97	1294.7	1300.21
12/25/97	1294.7	1300.947
12/26/97	1294.17	1298.512
12/26/97	1293.64	1298.369
12/27/97	1292.58	1297.853
12/27/97	1293.64	1304.188

12 Hour Averages

DATE	BHP5	OWB4
12/28/97	1297.35	1302.79
12/28/97	1298.94	1304.08
12/29/97	1303.44	1307.984
12/29/97	1300.77	1308.292
12/30/97	1299.16	1306.814
12/30/97	1294.17	1331.709
12/31/97	1293.11	1301.654
12/31/97	1294.7	1301.775
01/01/98	1293.12	1303.131
01/01/98	1300.54	1307.552
01/02/98	1301.07	1308.485
01/02/98	1291.53	1308.549
01/03/98	1301.6	1308.762
01/03/98	1301.6	1309.93
01/04/98	1302.66	1310.8
01/04/98	1302.13	1310.37
01/05/98	1302.13	1310.37
01/05/98	1301.6	1309.5
01/06/98	1300.01	1308.63
01/06/98	1296.83	1304.85
01/07/98	1294.18	1301.67
01/07/98	1295.24	1303.41
01/08/98	1295.24	1303.85
01/08/98	1294.18	1302.7
01/09/98	1294.18	1302.98
01/09/98	1294.18	1301.67
01/10/98	1294.18	1302.11
01/10/98	1285.7	1296.06
01/11/98	1285.7	1295.15
01/11/98	1292.59	1299.3
01/12/98	1293.12	1301.24
01/12/98	1293.65	1302.11
01/13/98	1297.89	1306.45
01/13/98	1296.83	1306.02
01/14/98	1295.24	1304.28
01/14/98	1298.42	1307.32
01/15/98	1298.95	1307.76
01/15/98	1298.95	1307.76
01/16/98	1299.48	1308.19
01/16/98	1295.77	1304.72
01/17/98	1297.89	1306.45
01/17/98	1297.36	1305.47
01/18/98	1297.36	1306.45
01/18/98	1296.54	1306.9
01/19/98	1296.54	1306.9
01/19/98	1286.23	1304.69
01/20/98	1286.5	1301.64
01/20/98	1285.7	1301.67
01/21/98	1285.17	1301.67
01/21/98	1298.42	1306.07

12 Hour Averages

DATE	BHP5	OWB4
01/22/98	1298.95	1306.5
01/22/98	1300.01	1307.36
01/23/98	1300.01	1308.22
01/23/98	1300.54	1307.79
01/24/98	1300.01	1307.79
01/24/98	1298.95	1308.22
01/25/98	1301.07	1310.37
01/25/98	1301.07	1310.37
01/26/98	1302.13	1310.8
01/26/98	1304.12	1312.09
01/27/98	1304.25	1312.52
01/27/98	1302.66	1311.23
01/28/98	1302.13	1311.23
01/28/98	1303.72	1312.52
01/29/98	1304.25	1312.95
01/29/98	1304.78	1313.38
01/30/98	1301.07	1310.8
01/30/98	1300.54	1310.37
01/31/98	1300.54	1310.37
01/31/98	1301.07	1310.37
02/01/98	1300.54	1310.8
02/01/98	1300.54	1310.8
02/02/98	1300.54	1310.8
02/02/98	1298.95	1309.94
02/03/98	1297.36	1308.22
02/03/98	1297.89	1307.82
02/04/98	1296.83	1307.79
02/04/98	1297.89	1308.22
02/05/98	1297.36	1308.22
02/05/98	1295.77	1306.07
02/06/98	1295.77	1306.07
02/06/98	1296.83	1306.93
02/07/98	1296.83	1306.93
02/07/98	1297.36	1306.93
02/08/98	1296.83	1307.36
02/08/98	1298.29	1308.74
02/09/98	1298.42	1305.64
02/09/98	1290.47	1297.9

12 Hour Averages

DATE	BHP2	OWB5
11/08/97	1277.4	1304.4
11/08/97	1280.0	1307.0
11/09/97	1279.3	1306.3
11/09/97	1278.7	1305.7
11/10/97	1280.3	1307.3
11/10/97	1280.5	1307.5
11/11/97	1276.2	1303.2
11/11/97	1276.5	1303.5
11/12/97	1276.9	1303.9
11/12/97	1280.5	1307.5
11/13/97	1280.8	1307.8
11/13/97	1281.2	1308.2
11/14/97	1290.6	1317.6
11/14/97	1281.0	1308.0
11/15/97	1280.0	1307.0
11/15/97	1278.8	1305.8
11/16/97	1277.9	1304.9
11/16/97	1276.9	1303.9
11/17/97	1278.6	1305.6
11/17/97	1280.3	1307.3
11/18/97	1283.9	1310.9
11/18/97	1281.0	1308.0
11/19/97	1280.8	1307.8
11/19/97	1277.0	1304.0
11/20/97	1278.1	1305.1
11/20/97	1280.8	1307.8
11/21/97	1278.6	1305.6
11/21/97	1280.5	1307.5
11/22/97	1280.3	1307.3
11/22/97	1279.3	1306.3
11/23/97	1282.4	1304.7
11/23/97	1282.2	1302.1
11/24/97	1282.7	1307.9
11/24/97	1283.2	1307.4
11/25/97	1282.7	1310.4
11/25/97	1276.7	1310.0
11/26/97	1280.5	1306.4
11/26/97	1281.2	1318.8
11/27/97	1281.0	1315.7
11/27/97	1281.2	1315.7
11/28/97	1278.8	1312.7
11/28/97	1279.6	1342.0
11/29/97	1283.2	1463.2
11/29/97	1284.3	1463.2
11/30/97	1286.3	1314.6
11/30/97	1287.2	1308.3
12/01/97	1289.4	1307.7
12/01/97	1289.9	1463.2
12/02/97	1291.8	1342.8
12/02/97	1292.7	1463.2

12 Hour Averages

DATE	BHP2	OWB5
12/03/97	1298.9	1463.2
12/03/97	1301.6	1463.2
12/04/97	1306.1	1385.7
12/04/97	1301.6	1385.7
12/05/97	1303.2	1385.7
12/05/97	1306.1	1385.7
12/06/97	1303.2	1383.4
12/06/97	1303.2	1377.2
12/07/97	1303.2	1381.9
12/07/97	1303.5	1389.1
12/08/97	1308.8	1388.1
12/08/97	1309.0	1386.6
12/09/97	1309.0	1384.6
12/09/97	1311.2	1387.1
12/10/97	1268.3	1393.0
12/10/97	1264.2	1309.2
12/11/97	1274.2	1300.1
12/11/97	1285.3	1302.5
12/12/97	1292.2	1307.0
12/12/97	1297.3	1308.1
12/13/97	1300.4	1308.6
12/13/97	1304.7	1309.6
12/14/97	1306.2	1310.1
12/14/97	1311.7	1361.0
12/15/97	1311.5	1369.3
12/15/97	1310.1	1311.0
12/16/97	1285.9	1308.1
12/16/97	1283.0	1302.9
12/17/97	1277.8	1293.5
12/17/97	1276.6	1293.1
12/18/97	1261.7	1293.1
12/18/97	1268.6	1293.4
12/19/97	1268.6	1291.0
12/19/97	1268.6	1291.5
12/20/97	1270.6	1293.3
12/20/97	1274.5	1387.4
12/21/97	1279.5	
12/21/97	1283.3	
12/22/97	1289.3	
12/22/97	1302.1	
12/23/97	1298.8	
12/23/97	1286.8	
12/24/97	1283.3	
12/24/97	1280.8	
12/25/97	1278.5	
12/25/97	1277.2	
12/26/97	1276.4	
12/26/97	1275.8	
12/27/97	1275.3	
12/27/97	1275.3	

12 Hour Averages

DATE	BHP2	OWB5
12/28/97	1282.2	
12/28/97	1283.4	
12/29/97	1284.8	
12/29/97	1297.7	1336.0
12/30/97	1295.9	1299.6
12/30/97	1290.1	1298.7
12/31/97	1289.2	1299.9
12/31/97	1288.5	1304.8
01/01/98	1289.5	1306.1
01/01/98	1294.1	1306.1
01/02/98	1296.6	1306.1
01/02/98	1295.8	1306.1
01/03/98	1297.0	1307.0
01/03/98	1297.8	1307.7
01/04/98	1299.9	1308.6
01/04/98	1300.2	1308.2
01/05/98	1299.7	1308.2
01/05/98	1299.7	1307.9
01/06/98	1299.0	1307.2
01/06/98	1296.8	1304.5
01/07/98	1293.4	1301.0
01/07/98	1295.8	1302.9
01/08/98	1296.6	1303.3
01/08/98	1296.1	1302.6
01/09/98	1296.1	1302.4
01/09/98	1295.4	1303.6
01/10/98	1295.6	1304.9
01/10/98	1292.9	1305.0
01/11/98	1290.8	1300.6
01/11/98	1294.5	1301.8
01/12/98	1289.4	1302.9
01/12/98	1290.3	1302.9
01/13/98	1293.7	1307.1
01/13/98	1293.9	1307.4
01/14/98	1293.2	1304.5
01/14/98	1294.9	1305.2
01/15/98	1295.4	1305.6
01/15/98	1295.4	1305.9
01/16/98	1296.1	1306.3
01/16/98	1292.5	1303.8
01/17/98	1294.6	1305.4
01/17/98	1294.6	1304.4
01/18/98	1294.9	1304.7
01/18/98	1295.1	1304.5
01/19/98	1295.1	1304.5
01/19/98	1302.3	1305.1
01/20/98	1294.2	1303.7
01/20/98	1294.2	1303.7
01/21/98	1293.9	1303.7
01/21/98	1296.8	1305.9