Bridgeton Landfill, LLC

Weekly Data Submittal

Week of January 11, 2015 – January 17, 2015

Required by Section 52.F of Agreed Order, Case No. 13SL-CC01088
Effective May 13, 2013

Contents:

Provided Separately:

- **Leachate Level in Leachate Collection Sump Raw Data Excel Spreadsheet**
- **Temperature Monitoring Probe Raw Data Excel Spreadsheet**
- **Gas Interceptor Well Reading Raw Data Excel Spreadsheet**
- **Neck-Area Gas Extraction Well Data Excel Spreadsheet**
- **North Quarry Gas Extraction Well Data Excel Spreadsheet**

January 23, 2015

Commentary on Data

Attachment A – Leachate Levels in Leachate Collection Sumps

Leachate Collection Sump (LCS)-1D, -3D, -4B, -5A, and -6B were partially or fully operational during the weekly reporting period. Several wells have level transducer(s) that are being calibrated.

The pump in LCS-2D was off during the weekly monitoring event due to an "over current" error.

Attachment B - Temperature Monitoring Probe Analytical Charts

The following TMPs indicated generally consistent profiles to previous observations: TMP-1, -2, -3, -4, -6, -8, -9, -10, -11, -14, -16, -17, and -18.

TMP-5, -7, -7R, -12, -13, and -15 have been removed from the presentation based on unreliable thermocouple measurements or other documented issues.

Attachment C - Gas Interceptor Wellhead Temperature Graphs

There are currently water circulation cooling loops installed in seven Gas Interceptor Wells (GIWs) (GIW-2 through GIW-7, as well as GIW-10). Wellhead gas temperatures in these wells are all in the low to mid 40-50°F range.

For the remaining six wells without a cooling system installed (GIW-1, -8, -9, -11, -12, and -13), with the exception of GIW-01 and -11, gas temperatures were generally consistent over the past week as well as compared to prior weeks. GIW-01 experienced a temperature decrease of approximately 20 degrees, which is likely due to its proximity to GIW series wells with cooling loops installed. GIW-11 has been experiencing 20-30 degree fluctuations in gas temperature, which is likely due to its proximity to GIW series wells with cooling loops installed.

Attachment D – Neck Area Gas Extraction Well Data

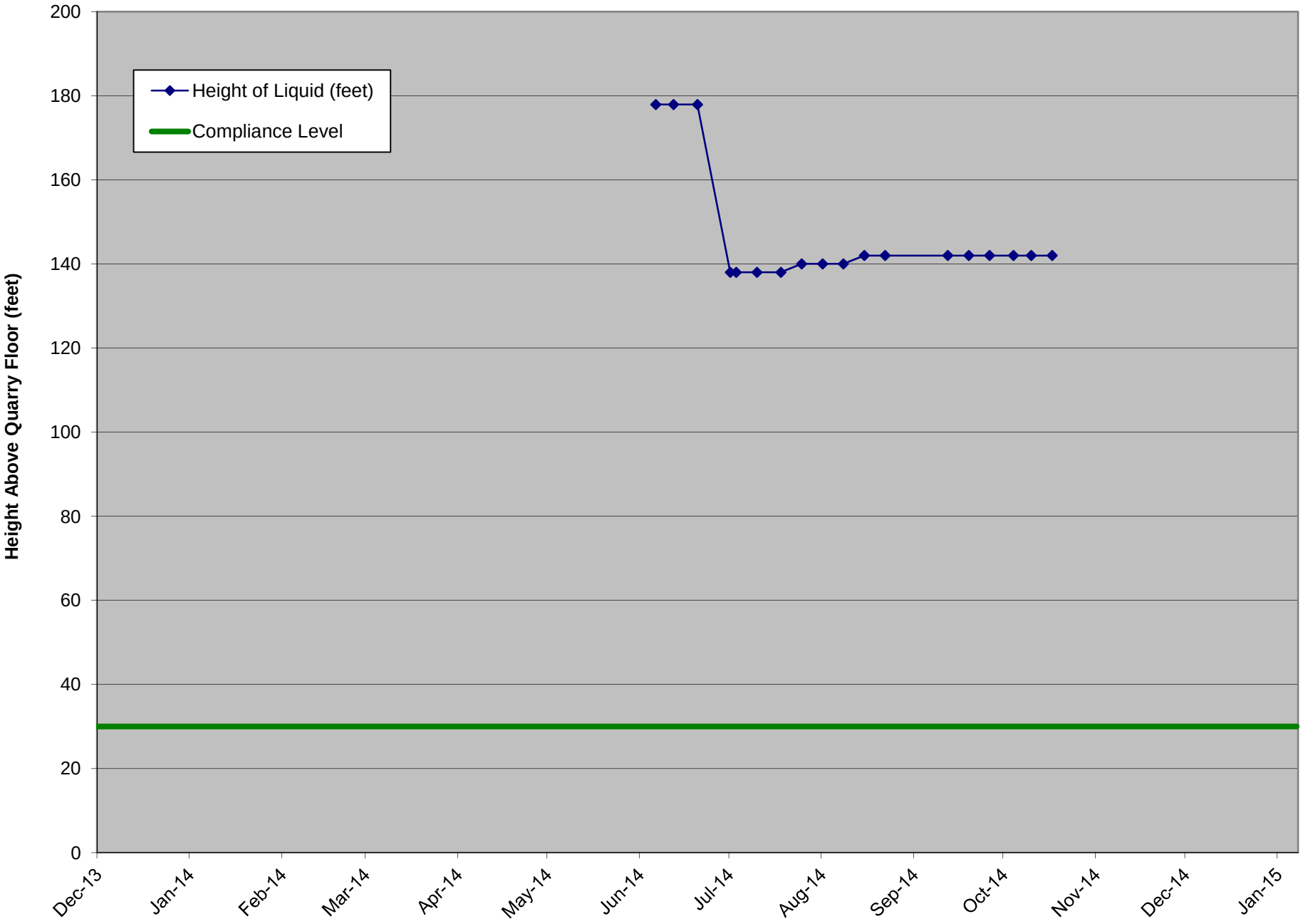
Weekly gas temperature data is being collected for select gas extraction wells (GEWs) located in the neck area of the landfill. These wells include GEW-08, -09, -10, -38, -39, -40, -41R, -43R, -53, -54, -55, -56R, -109, and -110. Over the past week all 14 wells were monitored and all well temperatures were consistent in comparison to prior weeks, with the exception of GEW-109 which experienced an increase in temperature over the past week, followed by a slight decrease. This fluctuation is within the historical gas temperature norms for this well.

Attachment E – North Quarry Gas Extraction Well Data

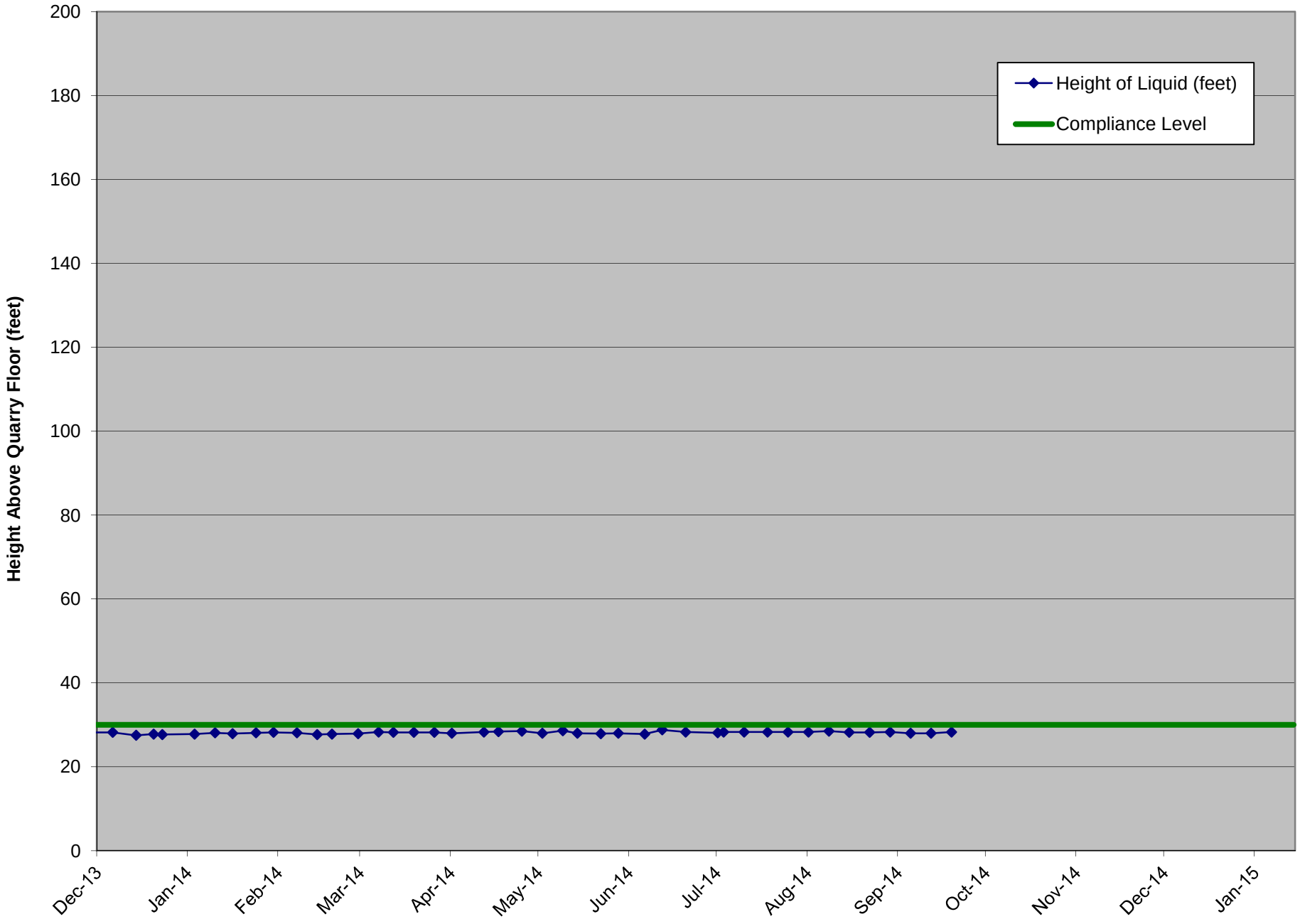
Weekly gas temperature data is being collected for select gas extraction wells (GEWs) located in the north quarry of the landfill. These wells include GEW-02, -03, -05, -42R, -45R, -46R, -47R, -48 and -49. These wells will be monitored and reported on in a similar fashion to that of the neck area GEWs per the letter January 16, 2015 transmitted agreement letter to MDNR. This reporting will continue until proposed TMP-24 and -26 are installed and routine monitoring is established and reported in future Weekly Data Submitals.

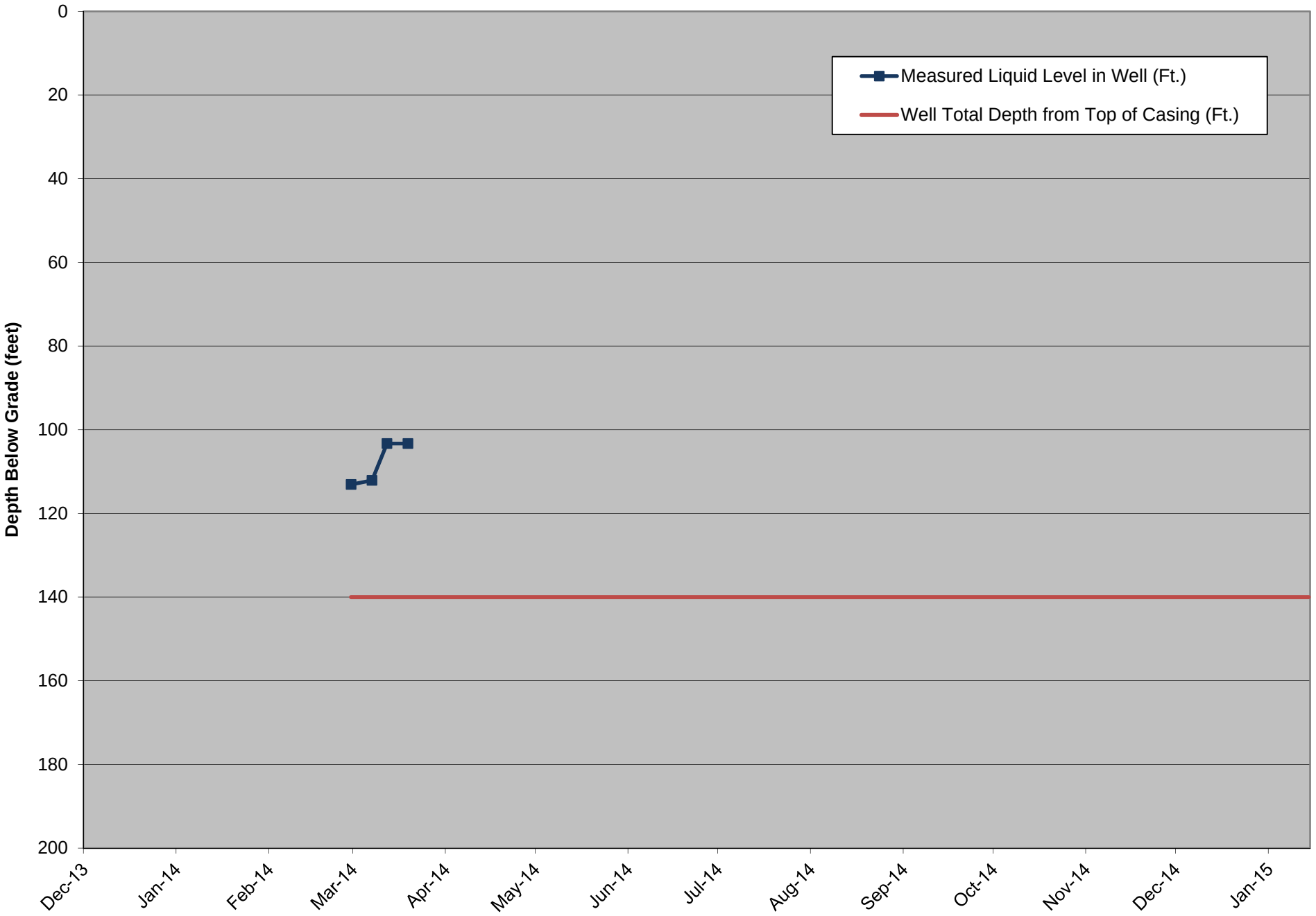
ATTACHMENT A

LEACHATE LEVELS IN LEACHATE COLLECTION SUMPS

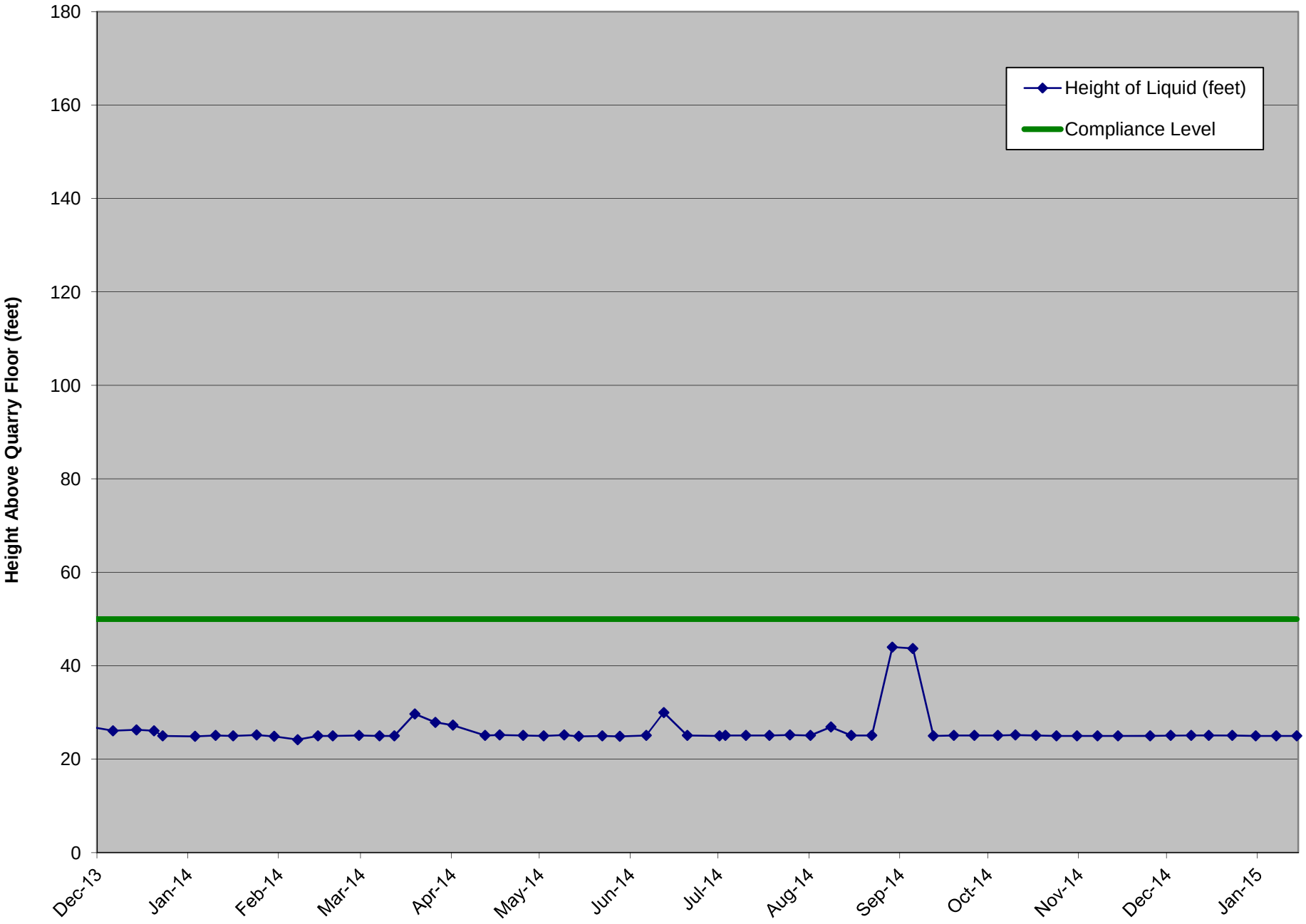

LCS-1D Liquid Level Above Quarry Floor
Height Above Quarry Floor (feet)
200
180
160
140
120
100
80
60
40
20
0
Height of Liquid (feet)
Compliance Level
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15

LCS-2D Liquid Level Above Quarry Floor

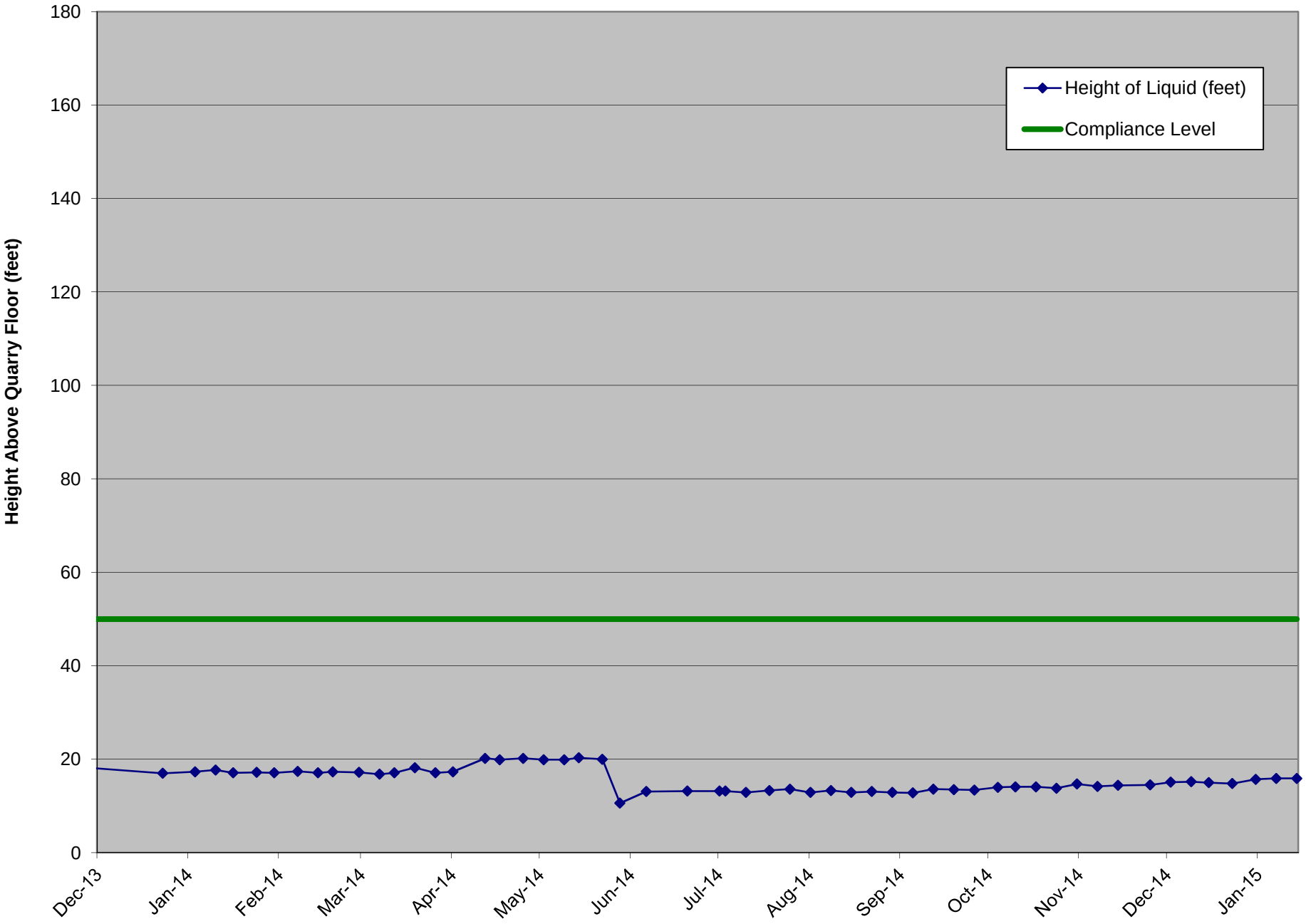



LCS-3D Liquid Level Below Ground Surface
Depth Below Grade (feet)
0
20
40
60
80
100
120
140
160
180
200
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Measured Liquid Level in Well (Ft.)
Well Total Depth from Top of Casing (Ft.)

LCS-5A Liquid Level Above Quarry Floor



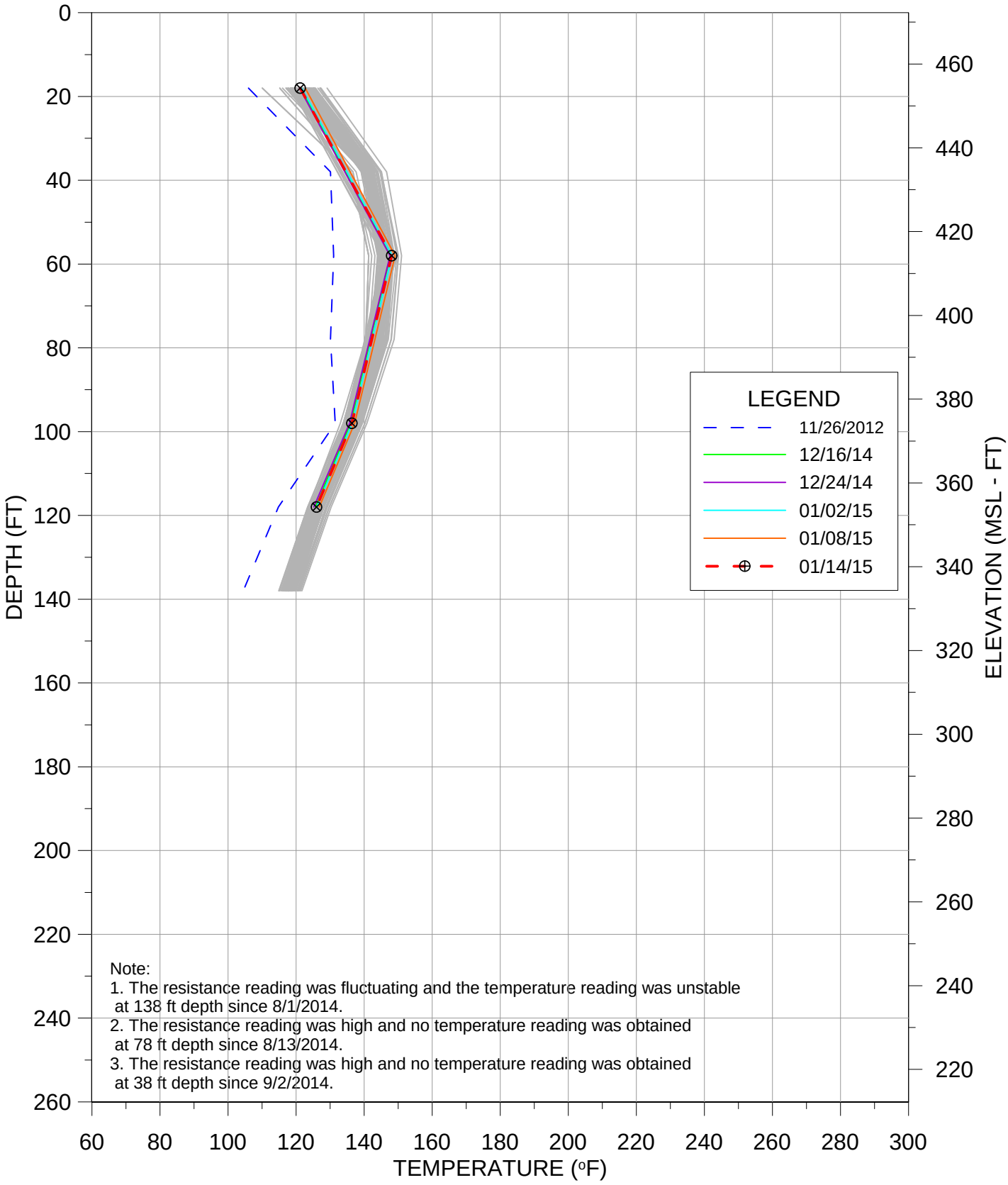
LCS-6B Liquid Level Above Quarry Floor



ATTACHMENT B

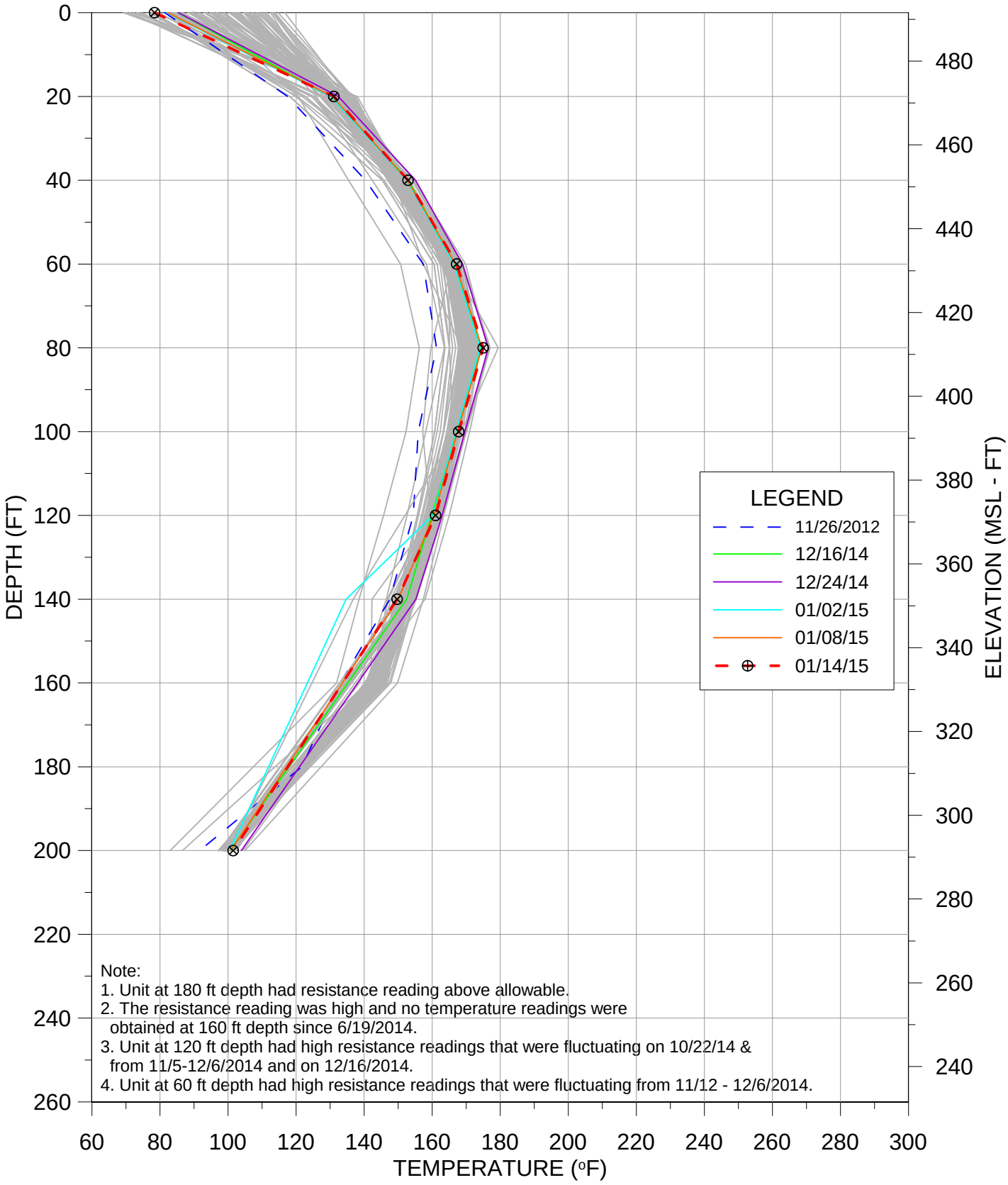
TEMPERATURE MONITORING PROBE ANALYTICAL CHARTS

TMP-1



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

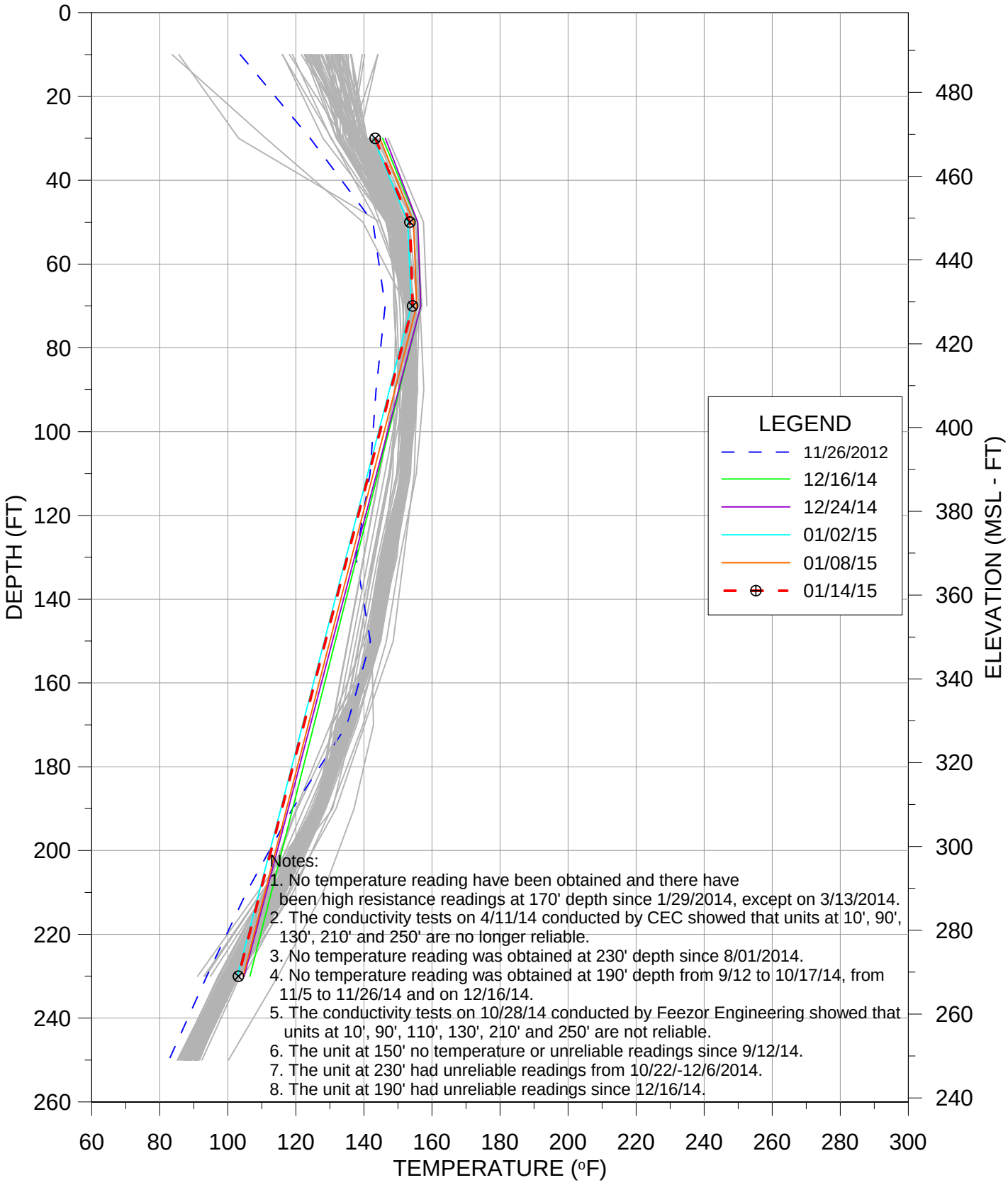
TMP-2



Note:
1. Unit at 180 ft depth had resistance reading above allowable.
2. The resistance reading was high and no temperature readings were obtained at 160 ft depth since 6/19/2014.
3. Unit at 120 ft depth had high resistance readings that were fluctuating on 10/22/14 & from 11/5-12/6/2014 and on 12/16/2014.
4. Unit at 60 ft depth had high resistance readings that were fluctuating from 11/12 - 12/6/2014.

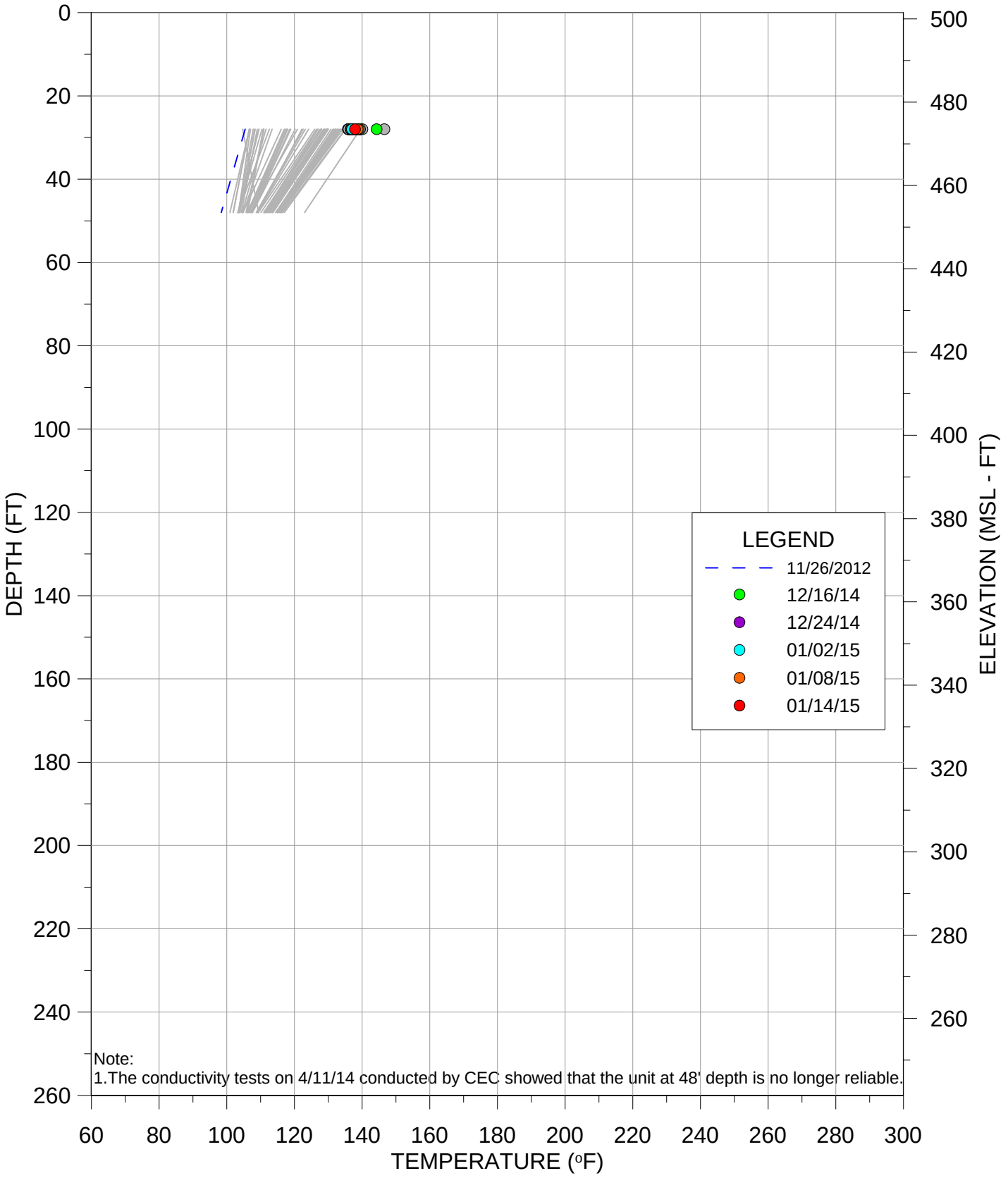
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-3



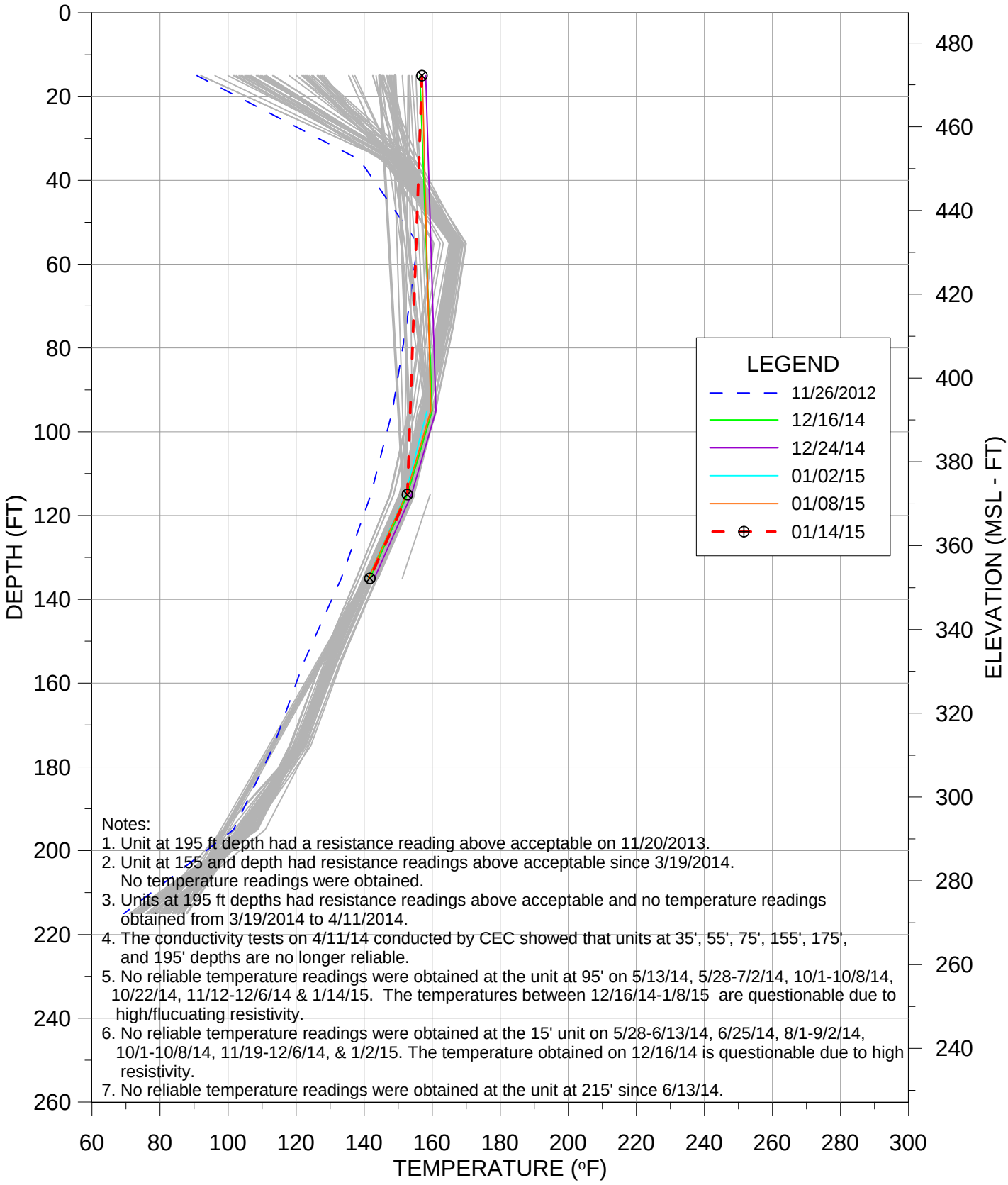
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-4



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-6

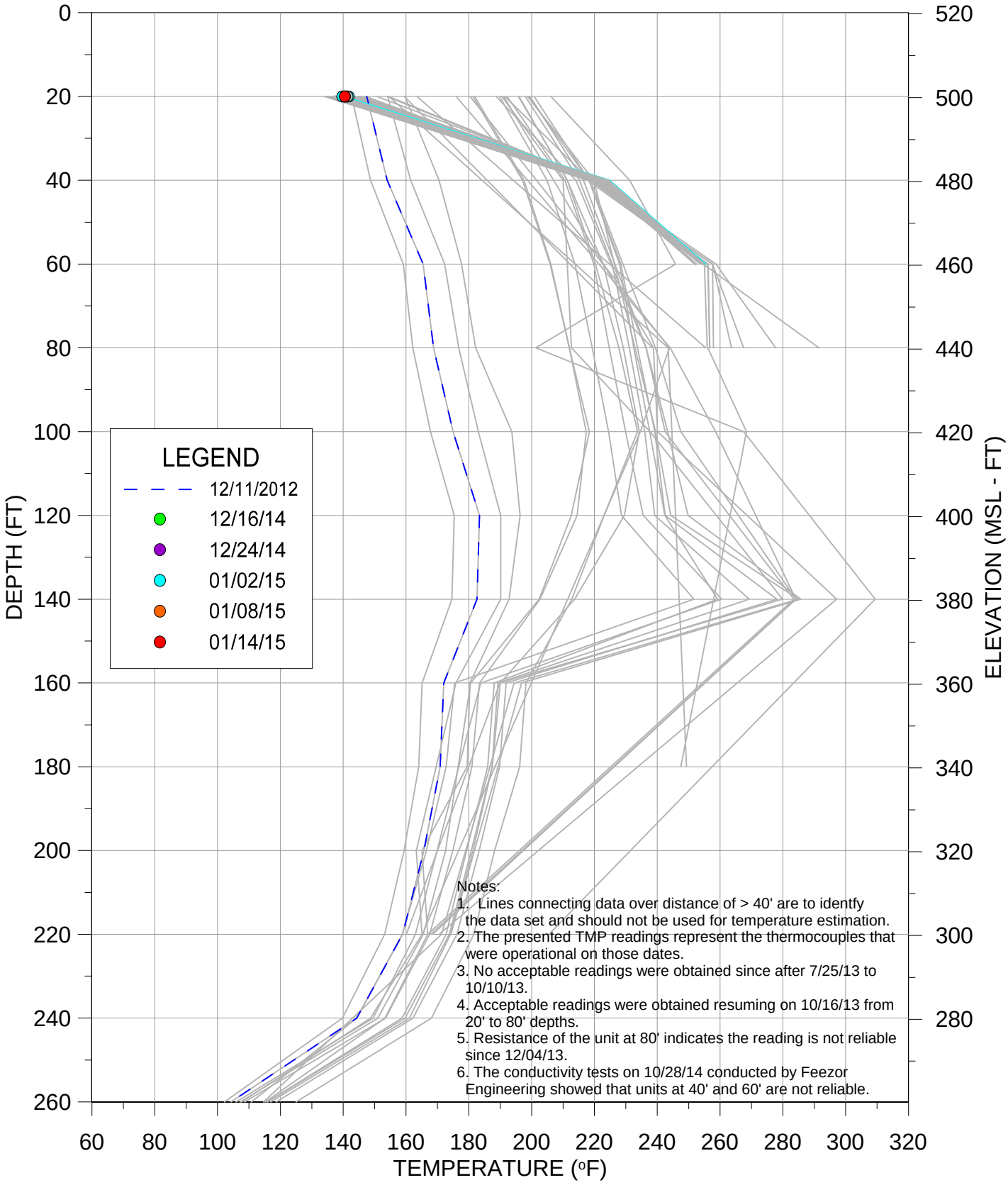


Notes:

1. Unit at 195 ft depth had a resistance reading above acceptable on 11/20/2013.
2. Unit at 155 and depth had resistance readings above acceptable since 3/19/2014. No temperature readings were obtained.
3. Units at 195 ft depths had resistance readings above acceptable and no temperature readings obtained from 3/19/2014 to 4/11/2014.
4. The conductivity tests on 4/11/14 conducted by CEC showed that units at 35', 55', 75', 155', 175', and 195' depths are no longer reliable.
5. No reliable temperature readings were obtained at the unit at 95' on 5/13/14, 5/28-7/2/14, 10/1-10/8/14, 10/22/14, 11/12-12/6/14 & 1/14/15. The temperatures between 12/16/14-1/8/15 are questionable due to high/flucuating resistivity.
6. No reliable temperature readings were obtained at the 15' unit on 5/28-6/13/14, 6/25/14, 8/1-9/2/14, 10/1-10/8/14, 11/19-12/6/14, & 1/2/15. The temperature obtained on 12/16/14 is questionable due to high resistivity.
7. No reliable temperature readings were obtained at the unit at 215' since 6/13/14.

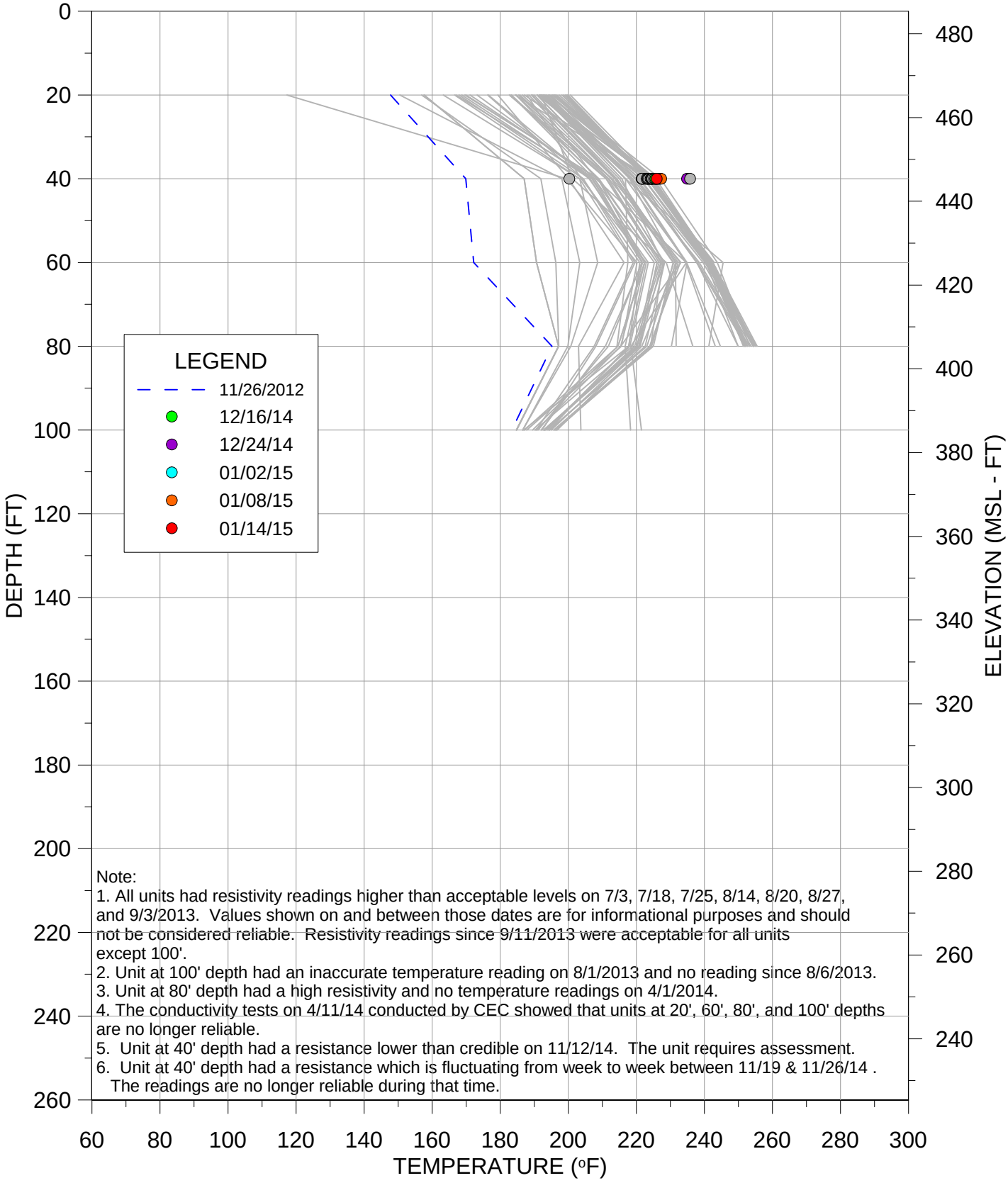
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-8



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

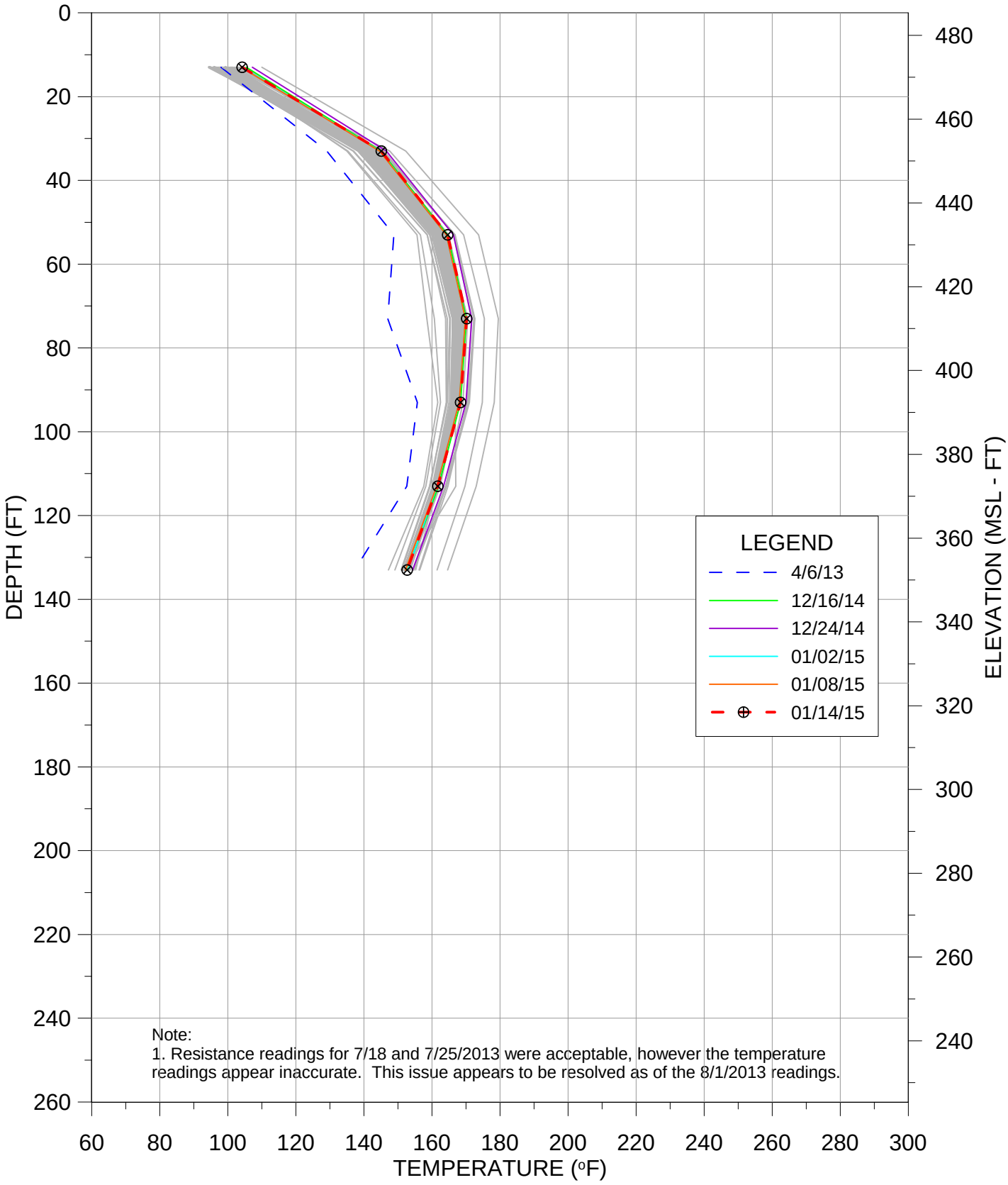
TMP-9



Note:
1. All units had resistivity readings higher than acceptable levels on 7/3, 7/18, 7/25, 8/14, 8/20, 8/27, and 9/3/2013. Values shown on and between those dates are for informational purposes and should not be considered reliable. Resistivity readings since 9/11/2013 were acceptable for all units except 100'.
2. Unit at 100' depth had an inaccurate temperature reading on 8/1/2013 and no reading since 8/6/2013.
3. Unit at 80' depth had a high resistivity and no temperature readings on 4/1/2014.
4. The conductivity tests on 4/11/14 conducted by CEC showed that units at 20', 60', 80', and 100' depths are no longer reliable.
5. Unit at 40' depth had a resistance lower than credible on 11/12/14. The unit requires assessment.
6. Unit at 40' depth had a resistance which is fluctuating from week to week between 11/19 & 11/26/14 . The readings are no longer reliable during that time.

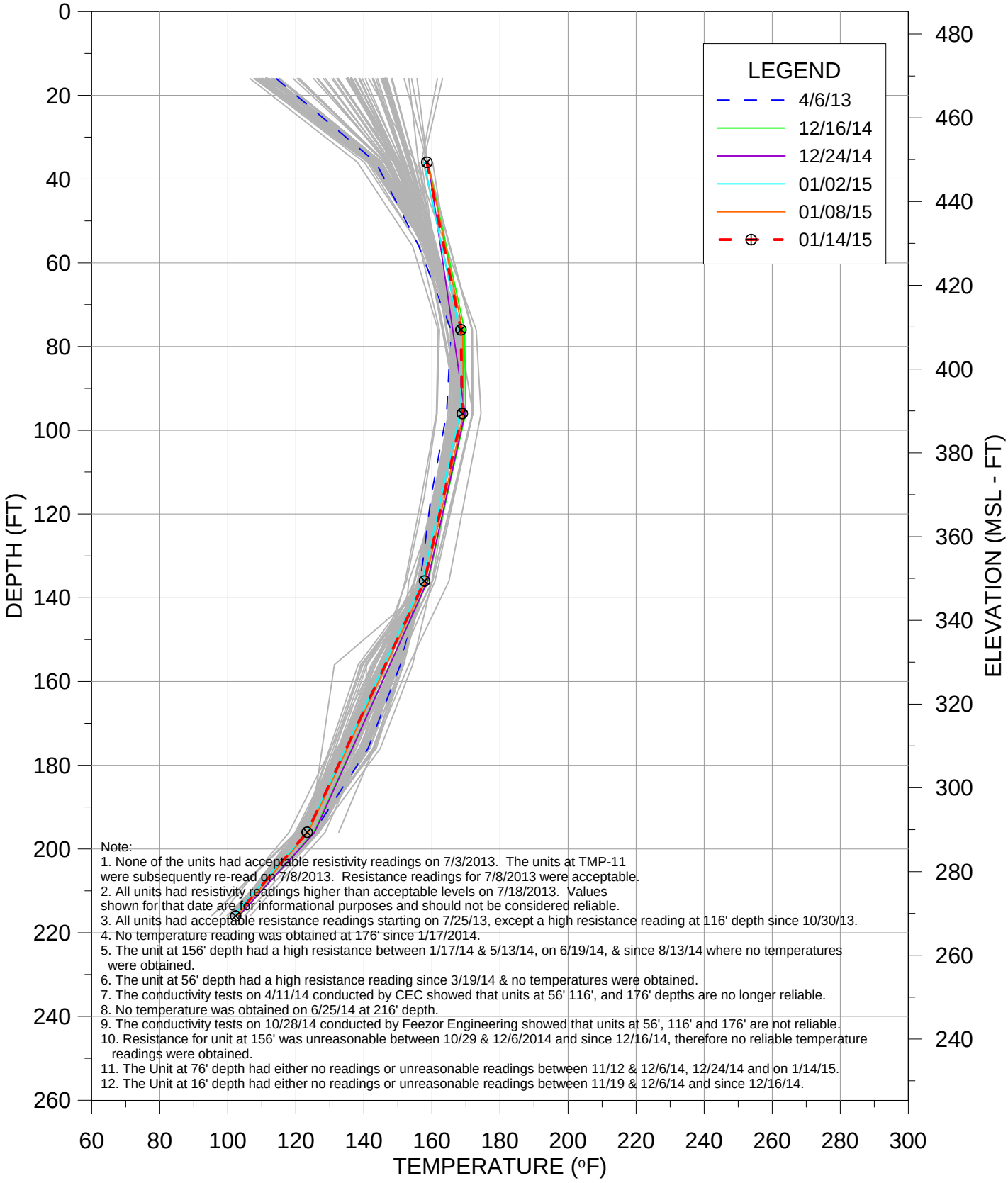
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-10



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

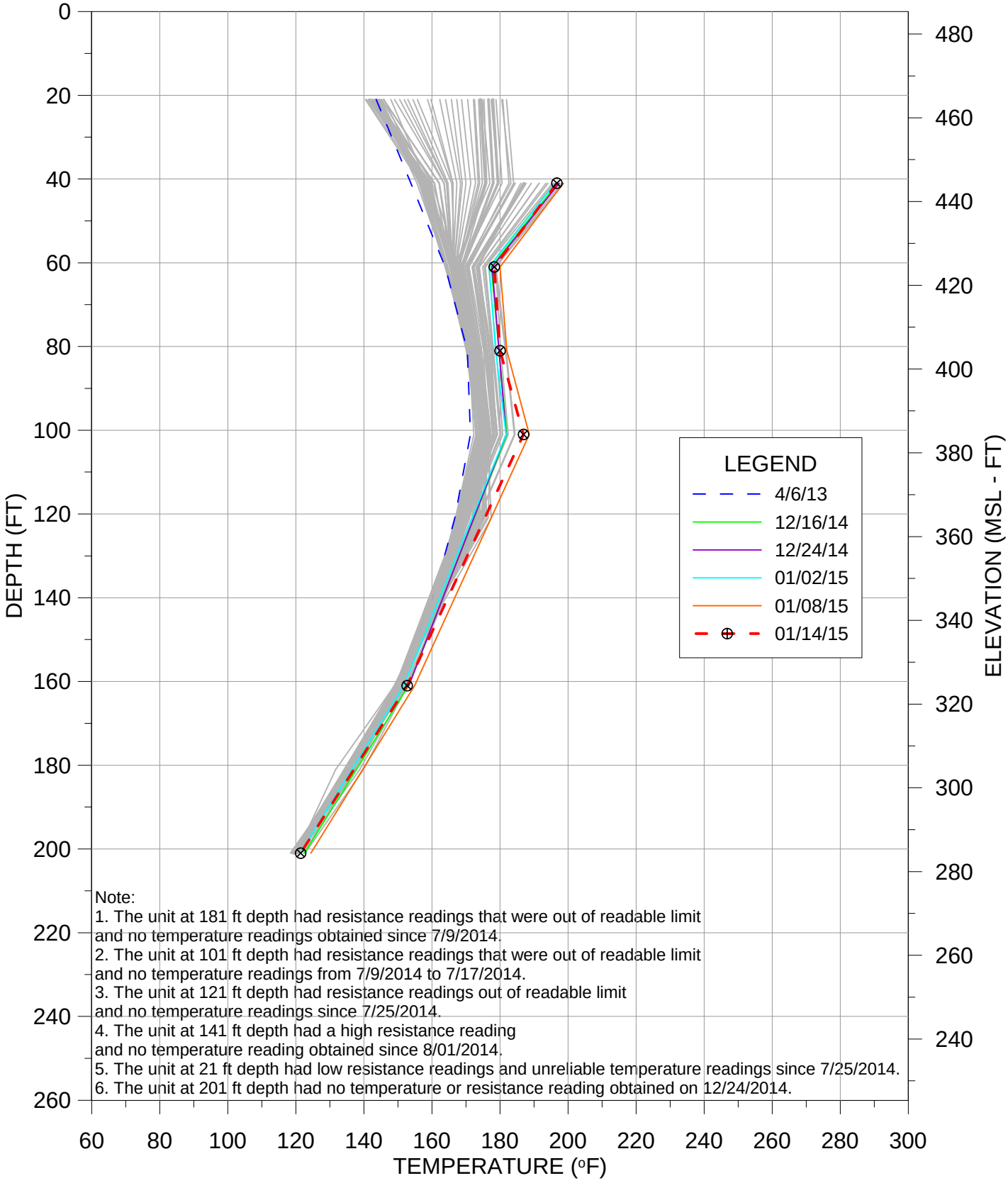
TMP-11



Note:
1. None of the units had acceptable resistivity readings on 7/3/2013. The units at TMP-11 were subsequently re-read on 7/8/2013. Resistance readings for 7/8/2013 were acceptable.
2. All units had resistivity readings higher than acceptable levels on 7/18/2013. Values shown for that date are for informational purposes and should not be considered reliable.
3. All units had acceptable resistance readings starting on 7/25/13, except a high resistance reading at 116' depth since 10/30/13.
4. No temperature reading was obtained at 176' since 1/17/2014.
5. The unit at 156' depth had a high resistance between 1/17/14 & 5/13/14, on 6/19/14, & since 8/13/14 where no temperatures were obtained.
6. The unit at 56' depth had a high resistance reading since 3/19/14 & no temperatures were obtained.
7. The conductivity tests on 4/11/14 conducted by CEC showed that units at 56' 116', and 176' depths are no longer reliable.
8. No temperature was obtained on 6/25/14 at 216' depth.
9. The conductivity tests on 10/28/14 conducted by Feezor Engineering showed that units at 56', 116' and 176' are not reliable.
10. Resistance for unit at 156' was unreasonable between 10/29 & 12/6/2014 and since 12/16/14, therefore no reliable temperature readings were obtained.
11. The Unit at 76' depth had either no readings or unreasonable readings between 11/12 & 12/6/14, 12/24/14 and on 1/14/15.
12. The Unit at 16' depth had either no readings or unreasonable readings between 11/19 & 12/6/14 and since 12/16/14.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

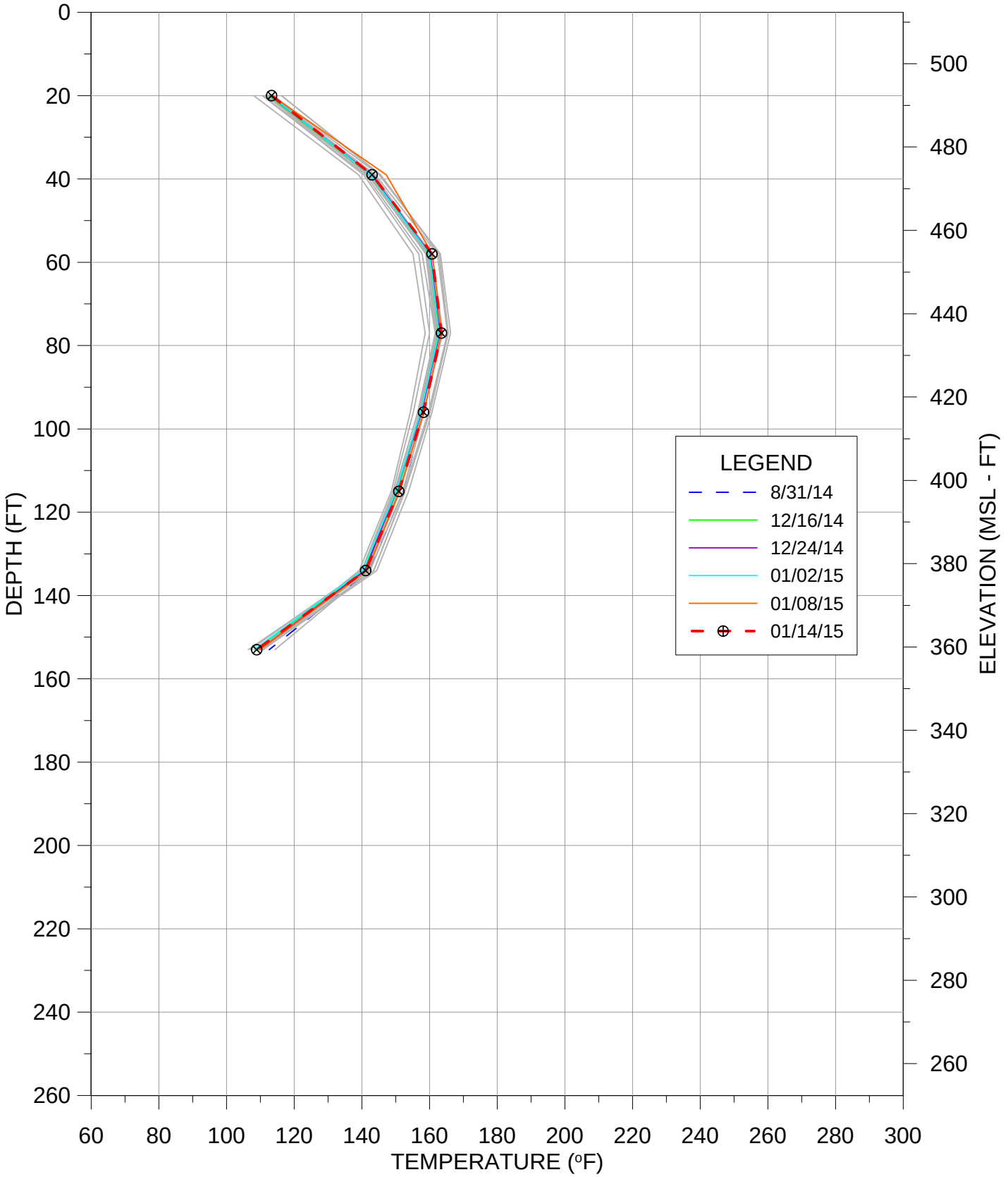
TMP-14



Note:
1. The unit at 181 ft depth had resistance readings that were out of readable limit and no temperature readings obtained since 7/9/2014.
2. The unit at 101 ft depth had resistance readings that were out of readable limit and no temperature readings from 7/9/2014 to 7/17/2014.
3. The unit at 121 ft depth had resistance readings out of readable limit and no temperature readings since 7/25/2014.
4. The unit at 141 ft depth had a high resistance reading and no temperature reading obtained since 8/01/2014.
5. The unit at 21 ft depth had low resistance readings and unreliable temperature readings since 7/25/2014.
6. The unit at 201 ft depth had no temperature or resistance reading obtained on 12/24/2014.

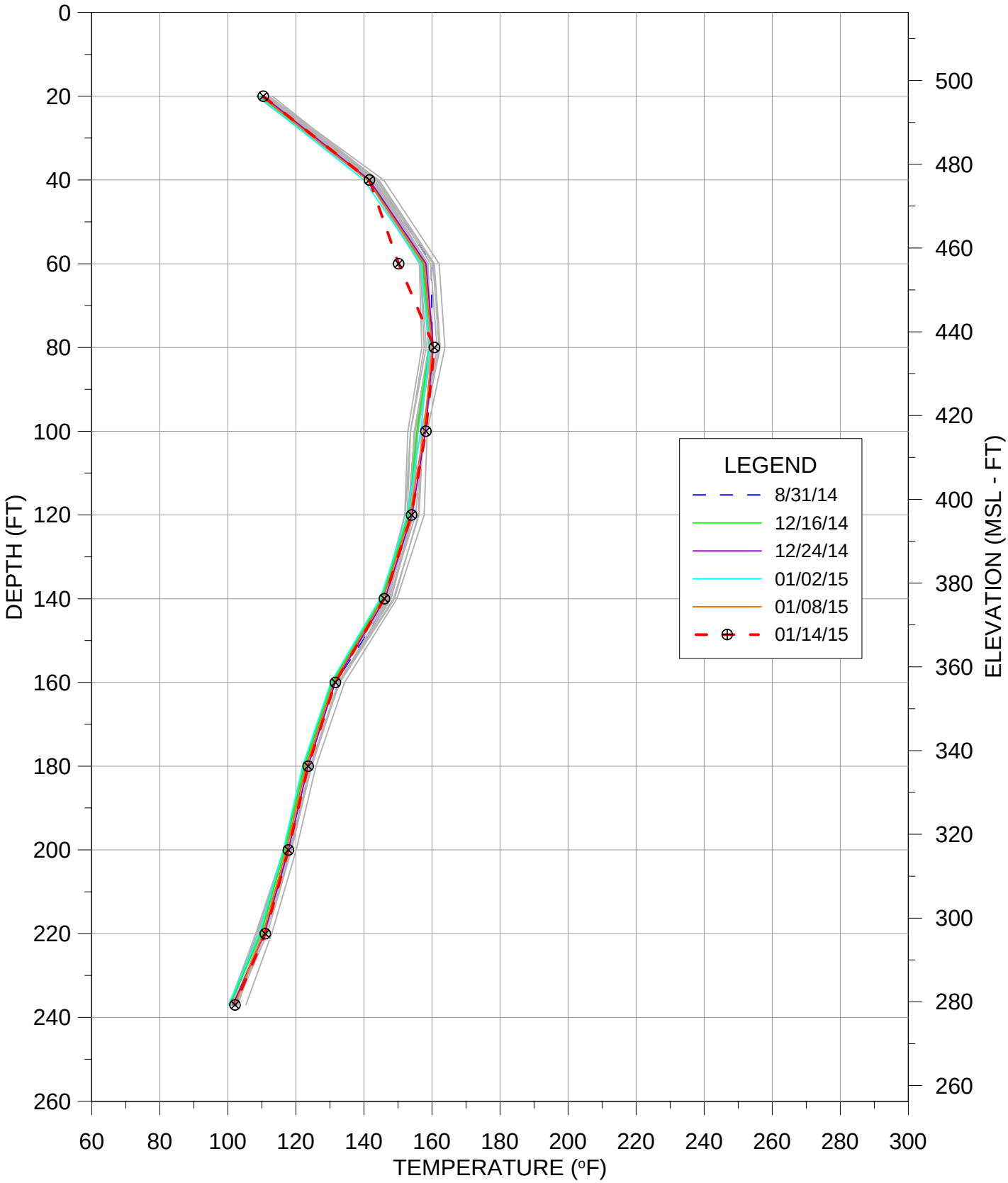
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-16



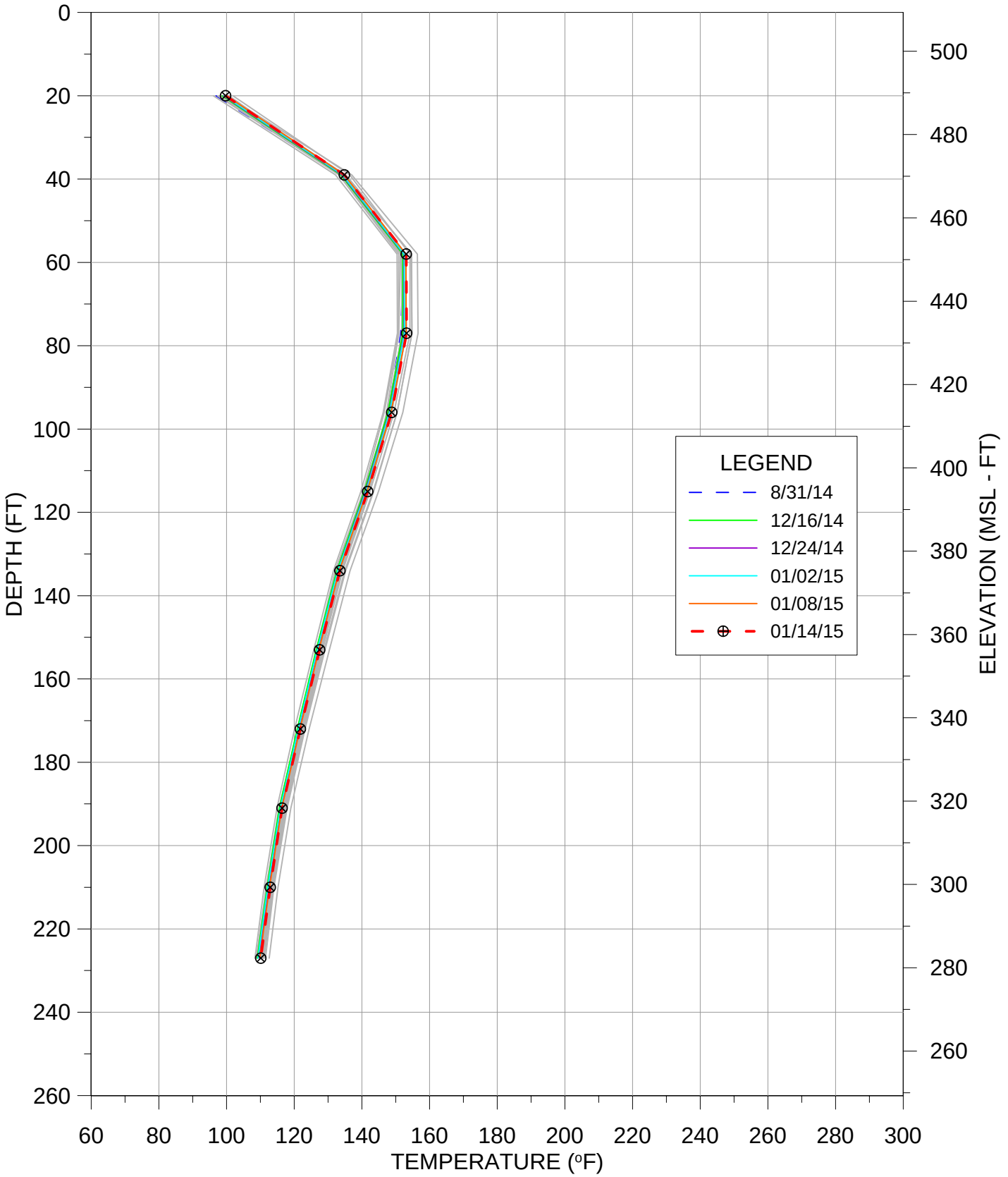
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-17



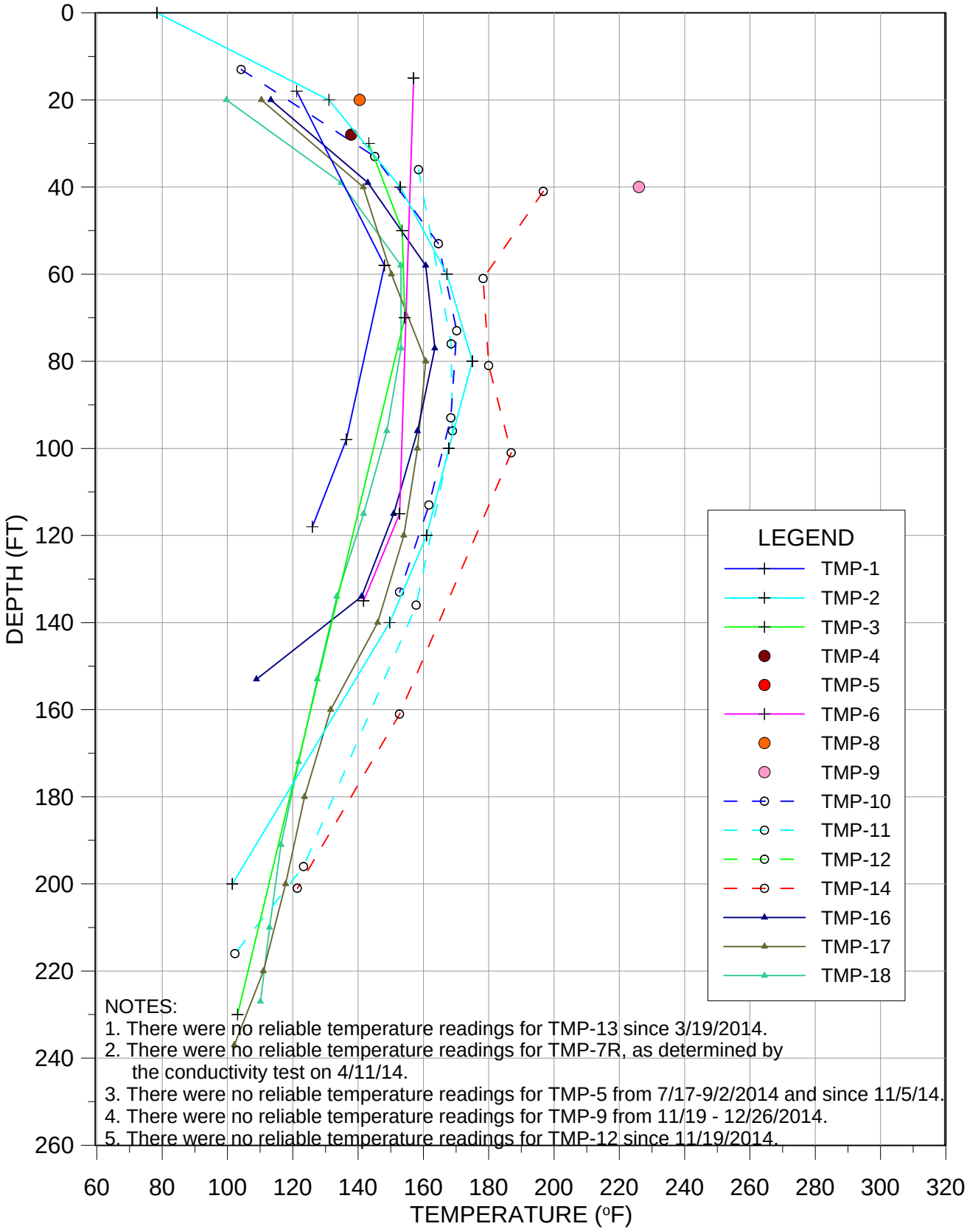
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-18



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

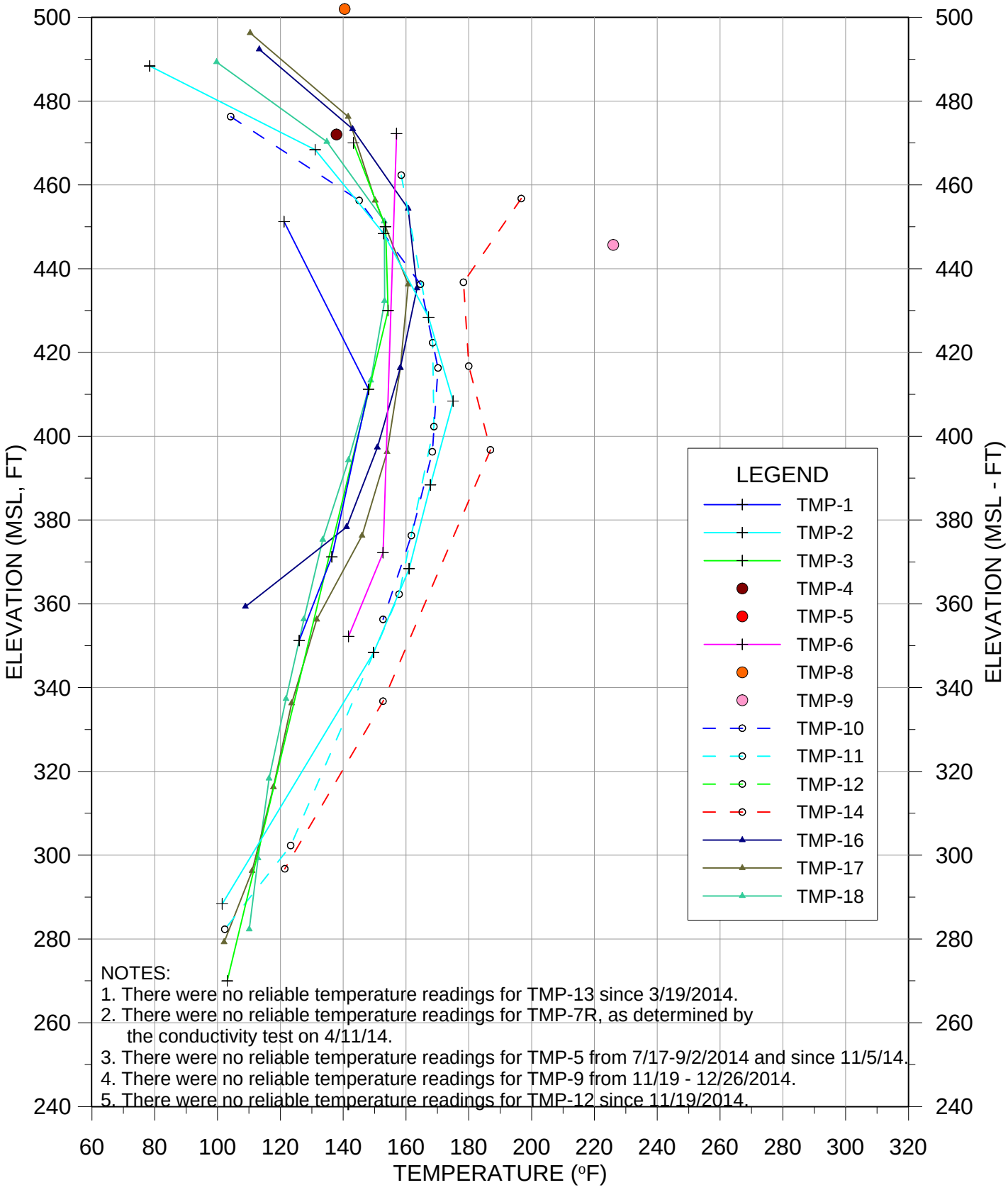
1/14/2015 -DEPTH



NOTES:
1. There were no reliable temperature readings for TMP-13 since 3/19/2014.
2. There were no reliable temperature readings for TMP-7R, as determined by the conductivity test on 4/11/14.
3. There were no reliable temperature readings for TMP-5 from 7/17-9/2/2014 and since 11/5/14.
4. There were no reliable temperature readings for TMP-9 from 11/19 - 12/26/2014.
5. There were no reliable temperature readings for TMP-12 since 11/19/2014.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

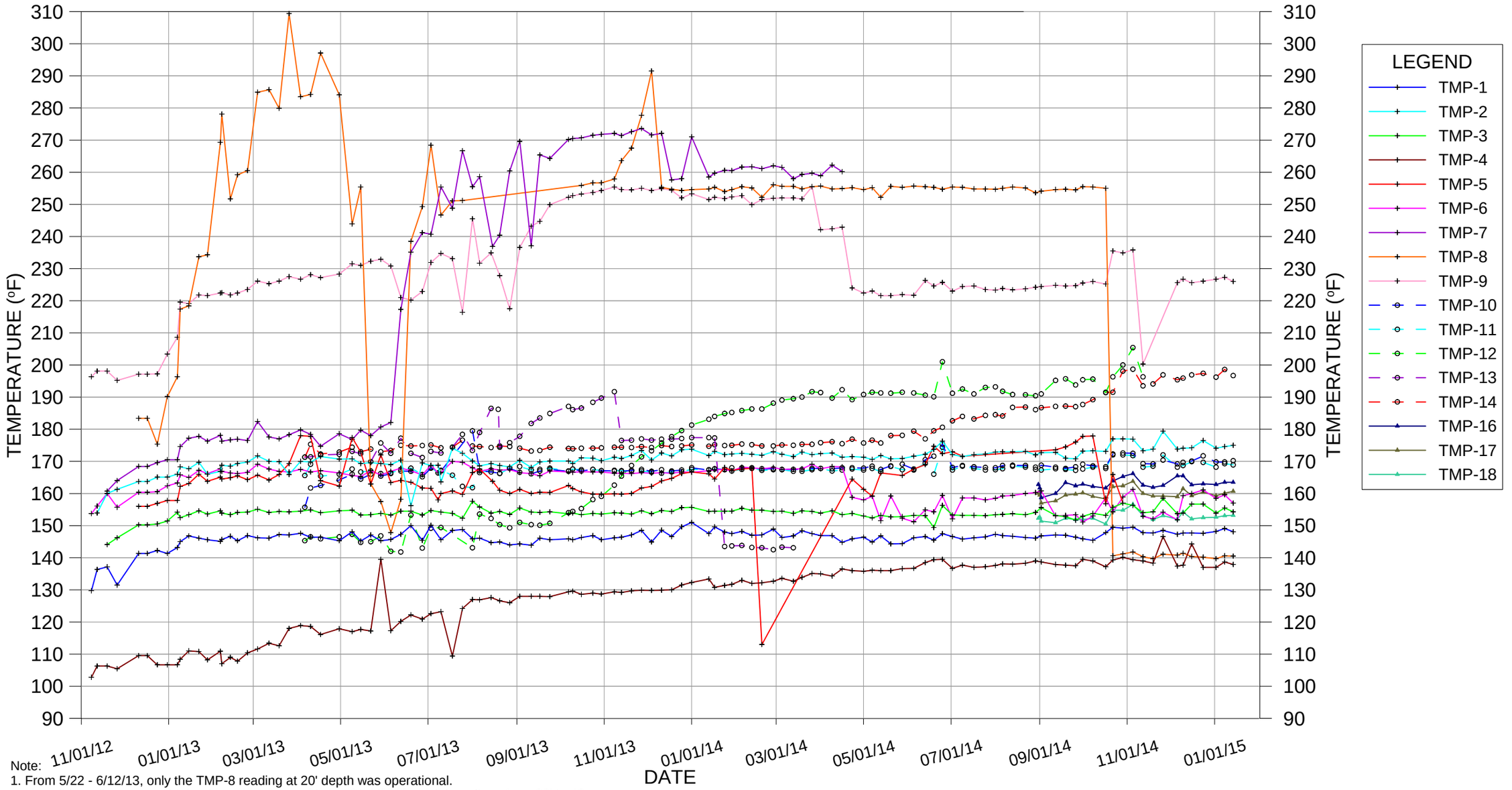
1/14/2015 - ELEVATION



NOTES:
1. There were no reliable temperature readings for TMP-13 since 3/19/2014.
2. There were no reliable temperature readings for TMP-7R, as determined by the conductivity test on 4/11/14.
3. There were no reliable temperature readings for TMP-5 from 7/17-9/2/2014 and since 11/5/14.
4. There were no reliable temperature readings for TMP-9 from 11/19 - 12/26/2014.
5. There were no reliable temperature readings for TMP-12 since 11/19/2014.

TEMPERATURE VS ELEVATION
BRIDGETON LANDFILL

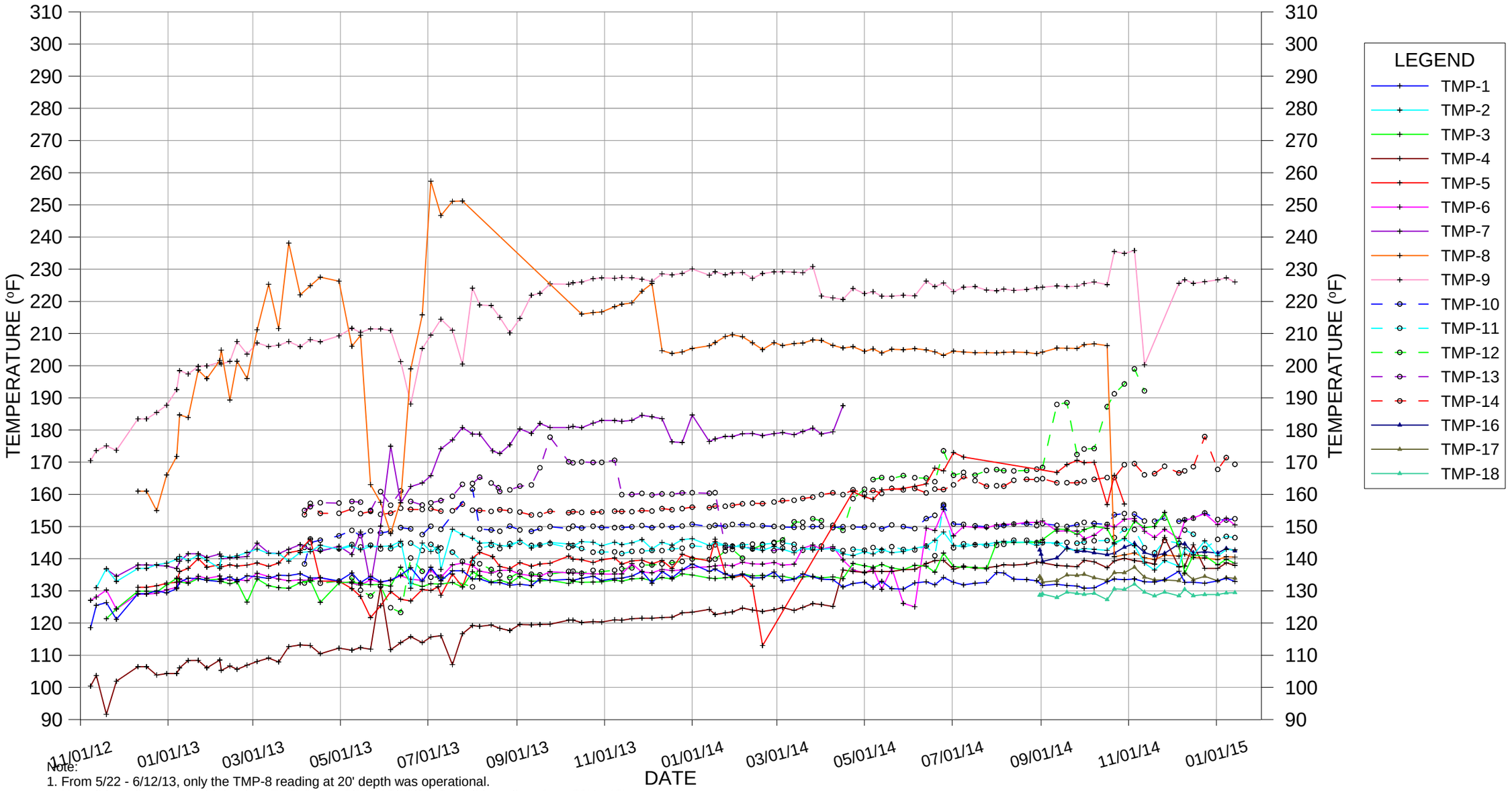
MAXIMUM TEMPERATURES



Note:
1. From 5/22 - 6/12/13, only the TMP-8 reading at 20' depth was operational. No valid readings were obtained for TMP-8 from 8/1 to 10/10/2013. Valid readings from 20' to 40' resumed on 10/16/2013.
2. A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more vaild readings.
3. No valid readings were obtained for TMP-10 and TMP-12 on 7/18/2013 or 7/25/2013.
4. End terminals were replaced just prior to the 8/6/2013 readings with type T Omega connectors (part # SMPW-CC-T-M) on all TMPs except for TMP-8.

TEMPERATURE VS TIME
BRIDGETON LANDFILL

AVERAGE TEMPERATURES



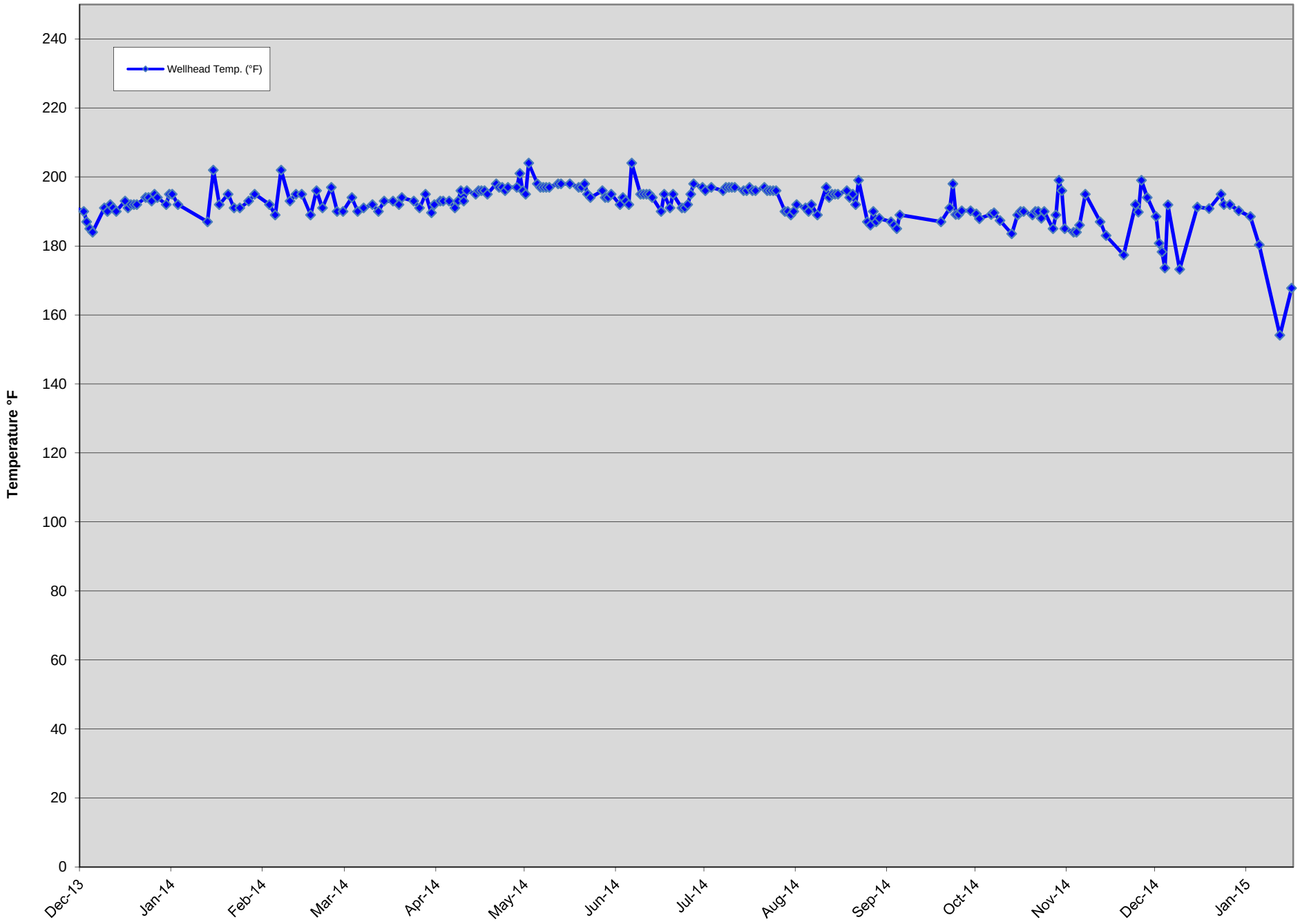
Note:
1. From 5/22 - 6/12/13, only the TMP-8 reading at 20' depth was operational.
   No valid readings were obtained for TMP-8 from 8/1 to 10/10/2013. Valid readings from 20' to 40' resumed on 10/16/2013.
2. A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more vaild readings.
3. No valid readings were obtained for TMP-10 and TMP-12 on 7/18/2013 or 7/25/2013.
4. End terminals were replaced just prior to the 8/6/2013 readings with type T Omega connectors (part # SMPW-CC-T-M) on all TMPs except for TMP-8.

TEMPERATURE VS TIME
BRIDGETON LANDFILL

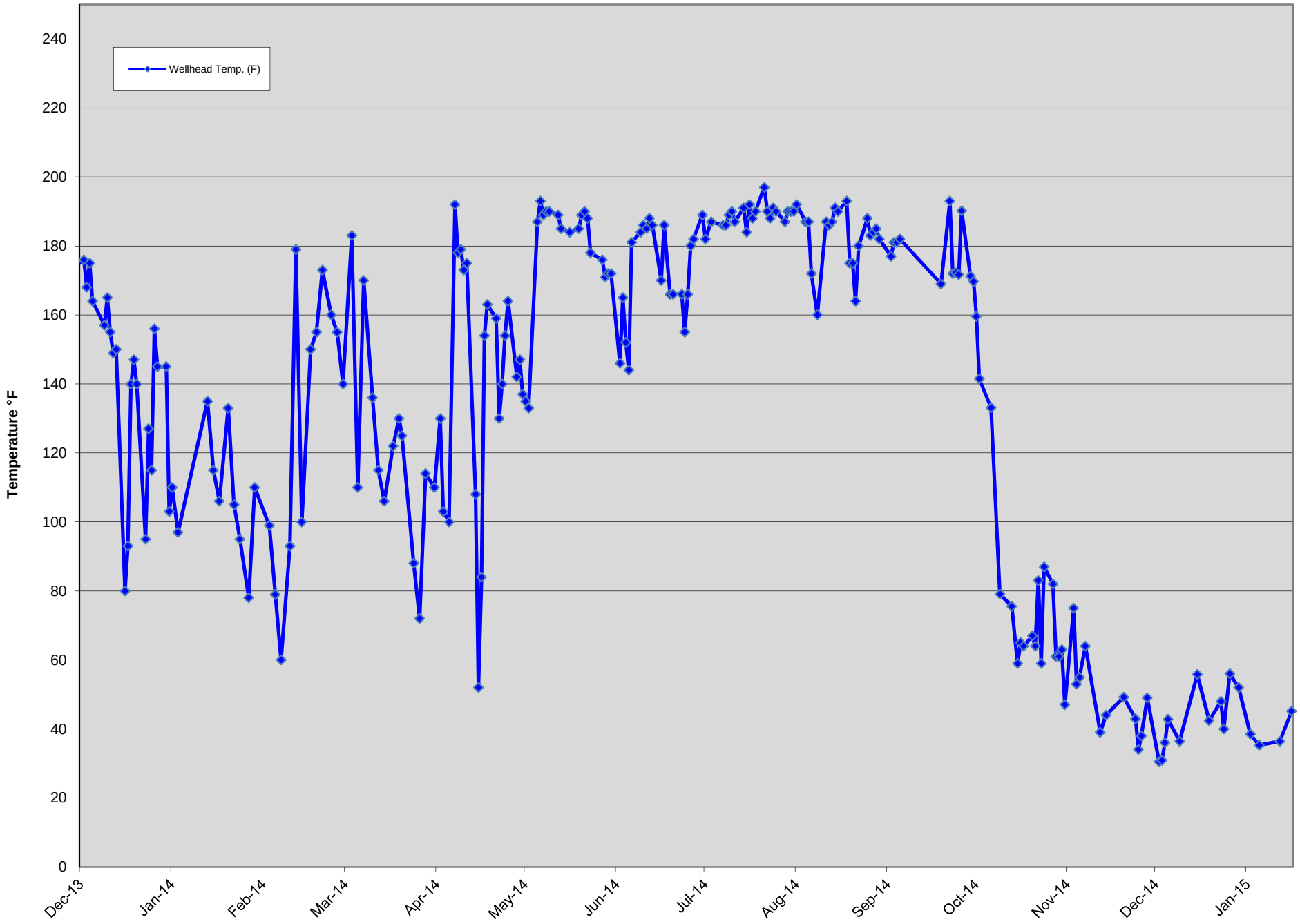
ATTACHMENT C

GAS INTERCEPTOR WELLHEAD TEMPERATURE GRAPHS

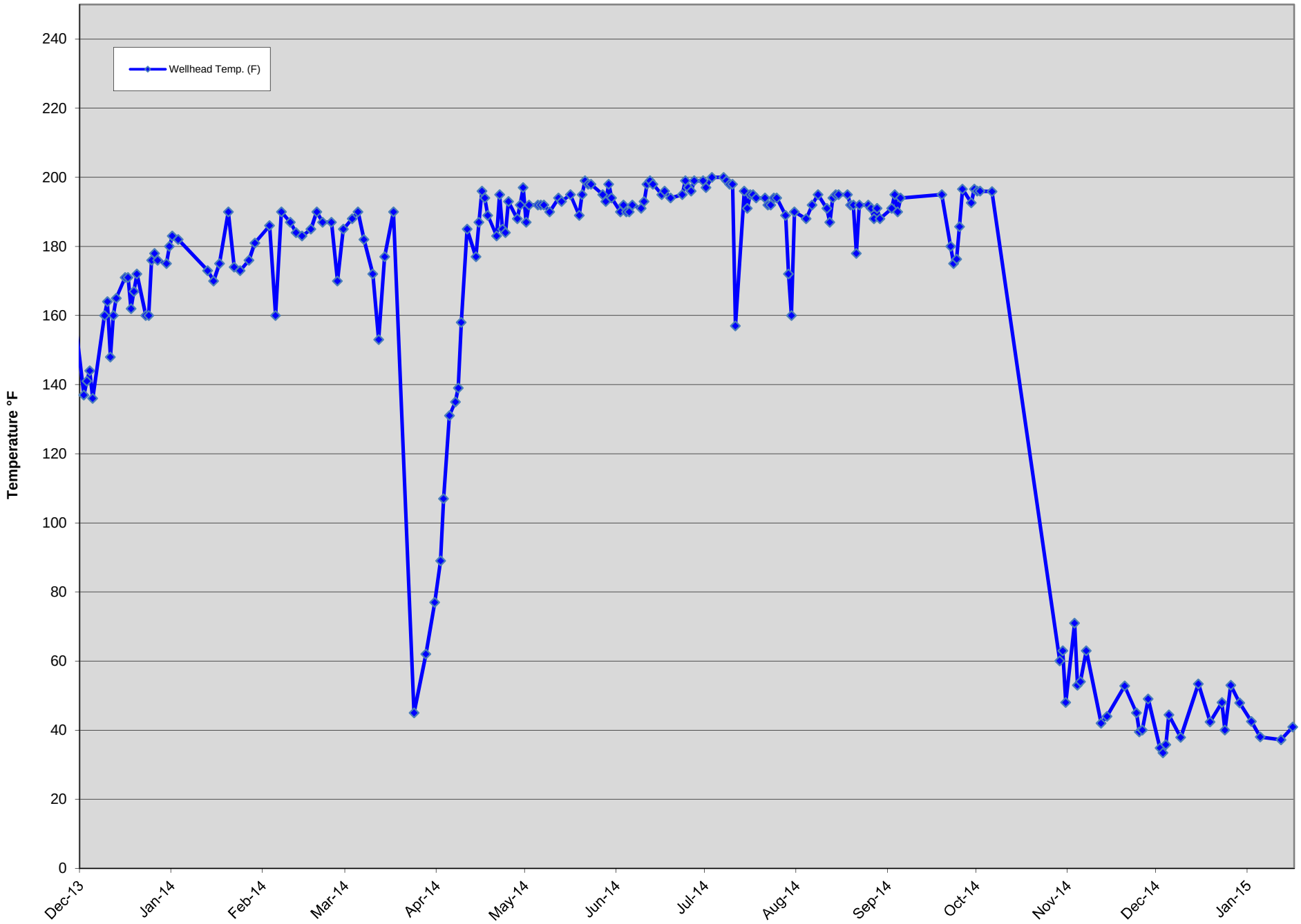
GIW-1 Wellhead Temperatures



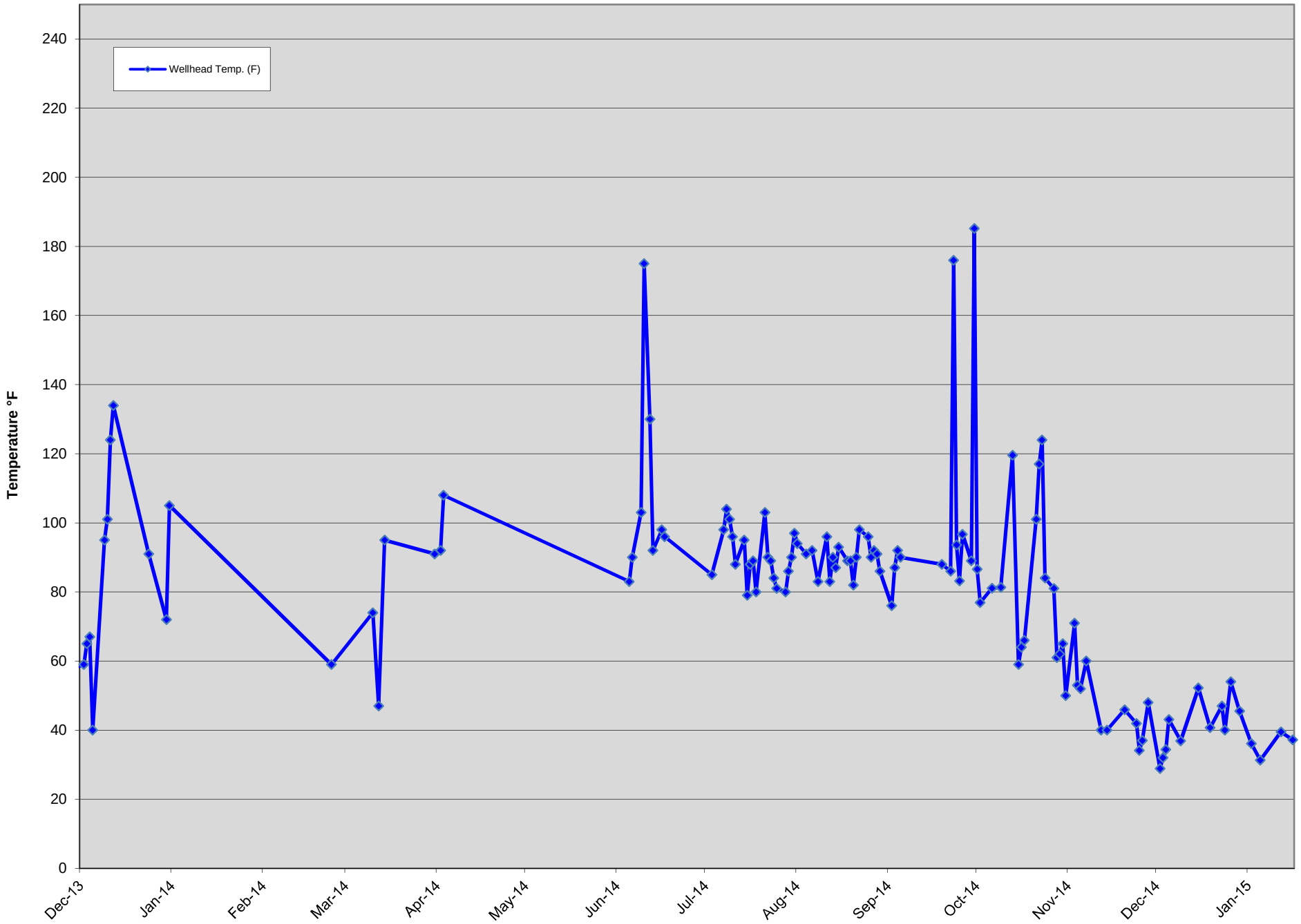
GIW-2 Wellhead Temperatures



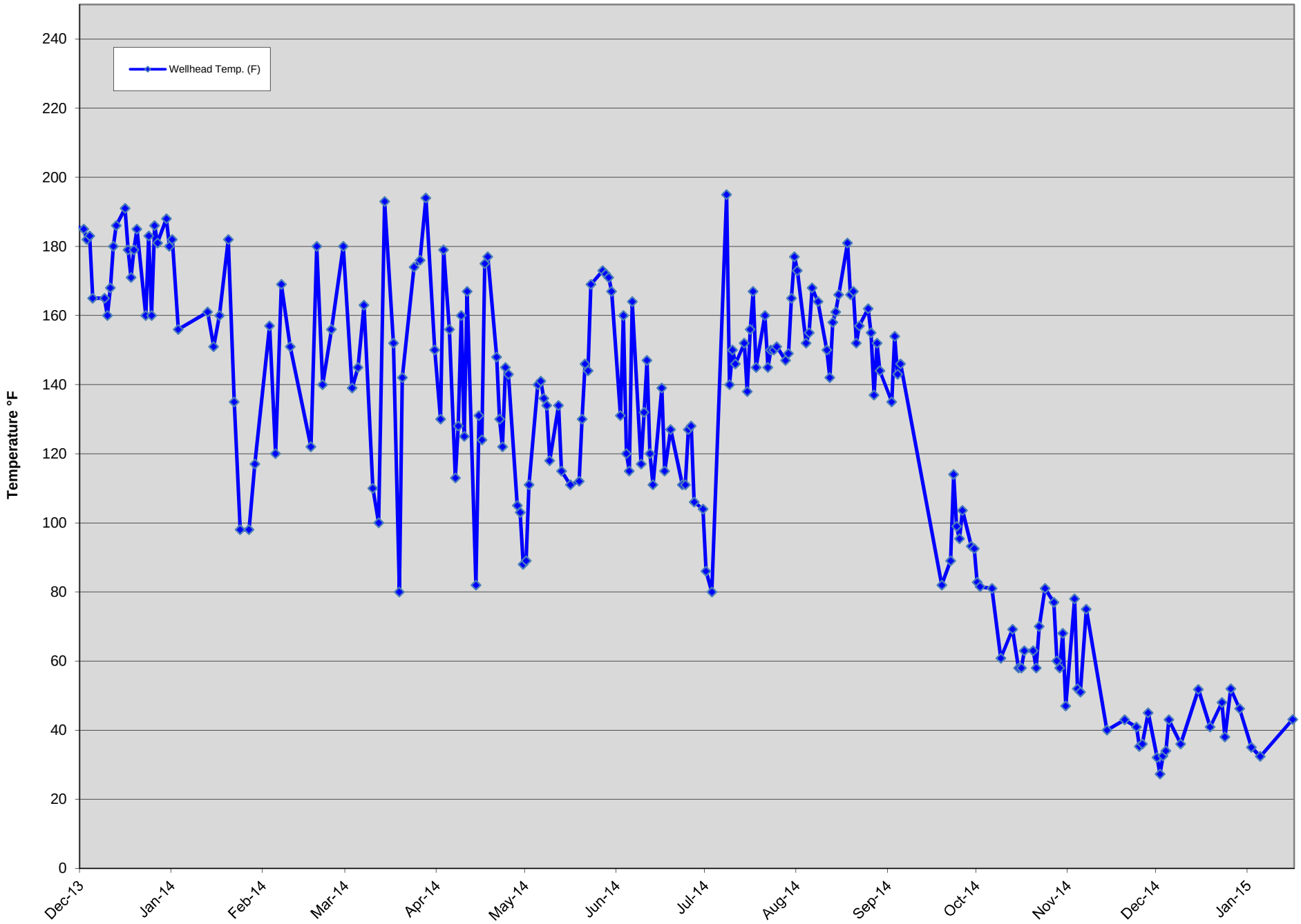
GIW-3 Wellhead Temperatures



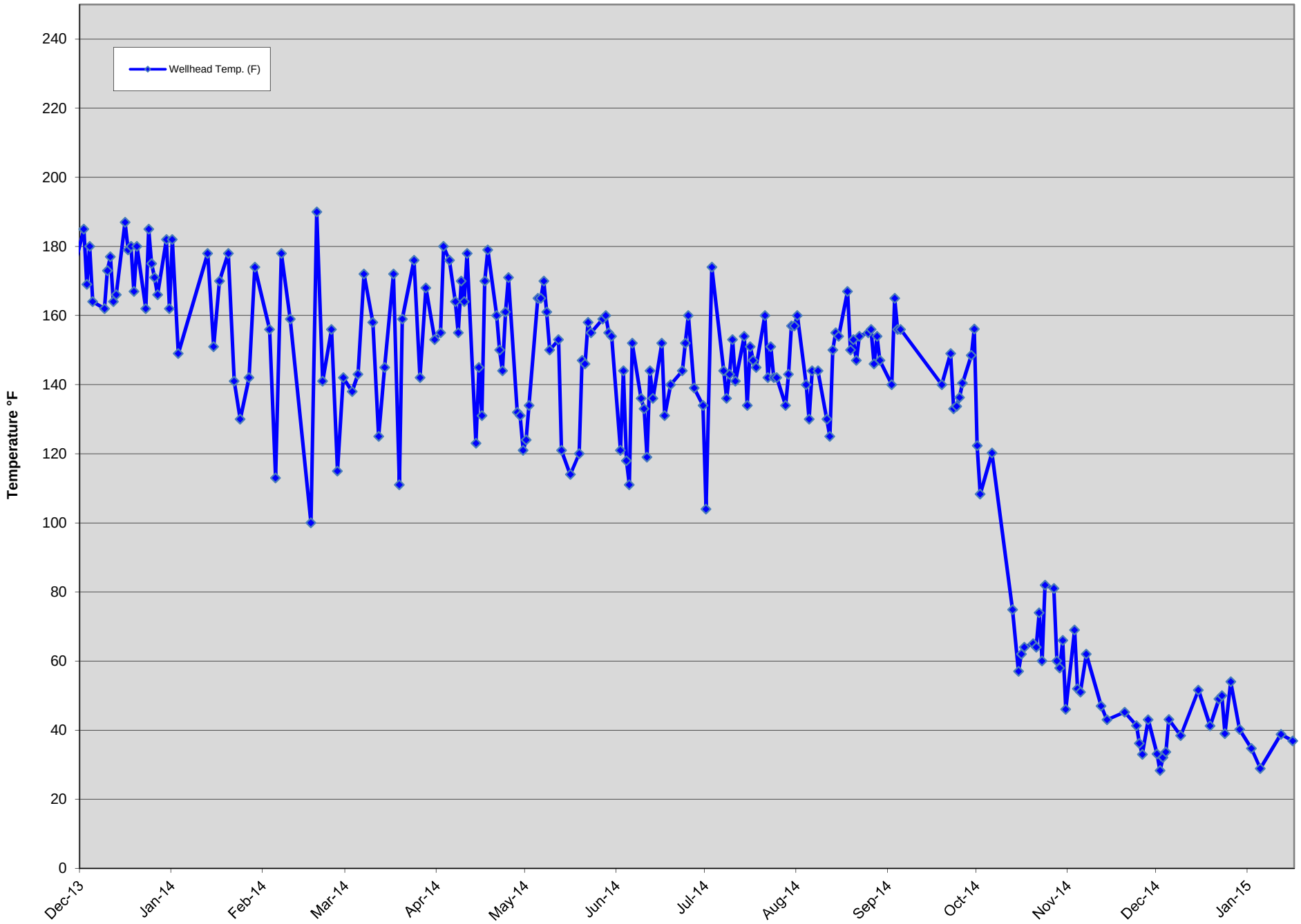
GIW-4 Wellhead Temperatures



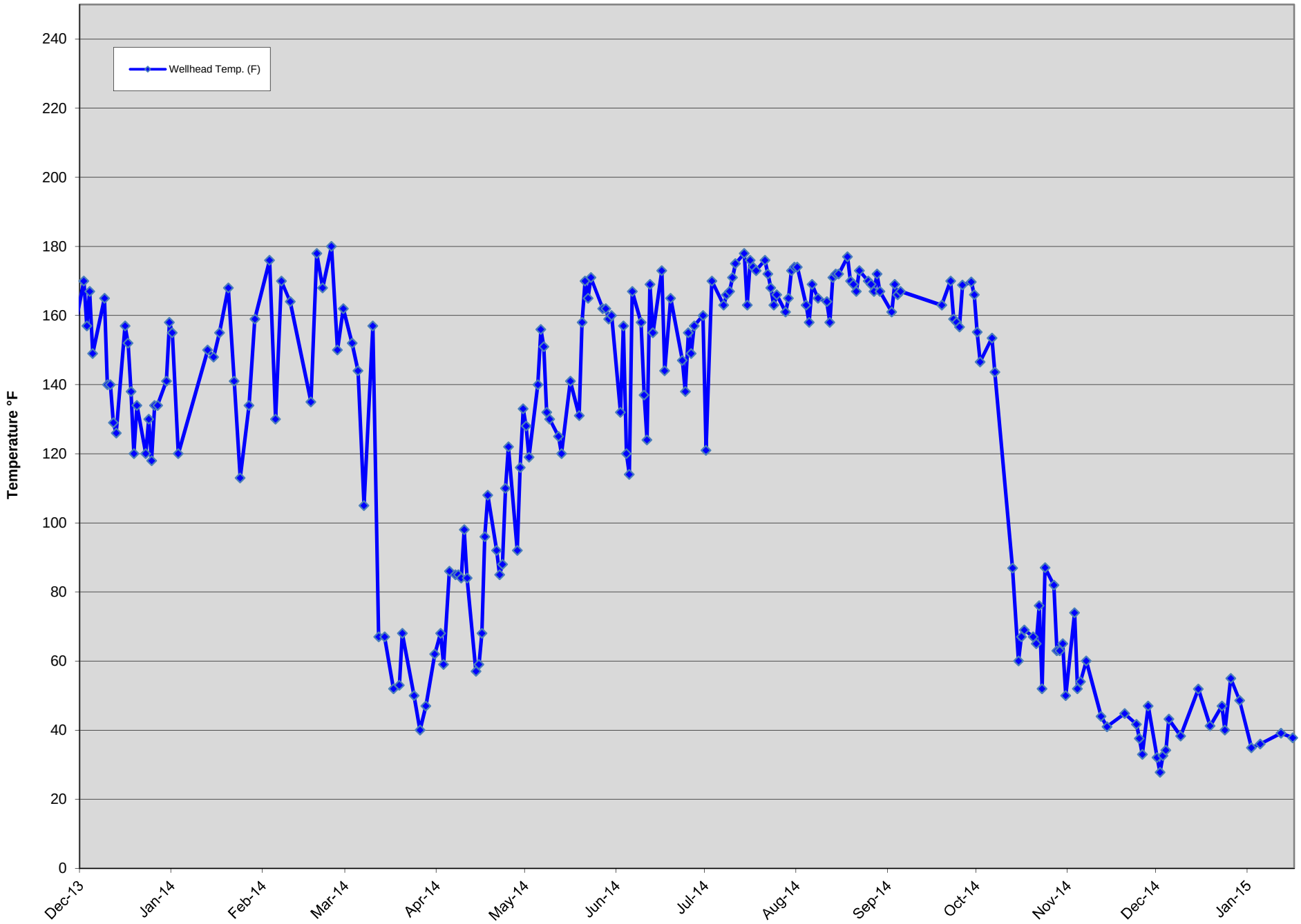
GIW-5 Wellhead Temperatures



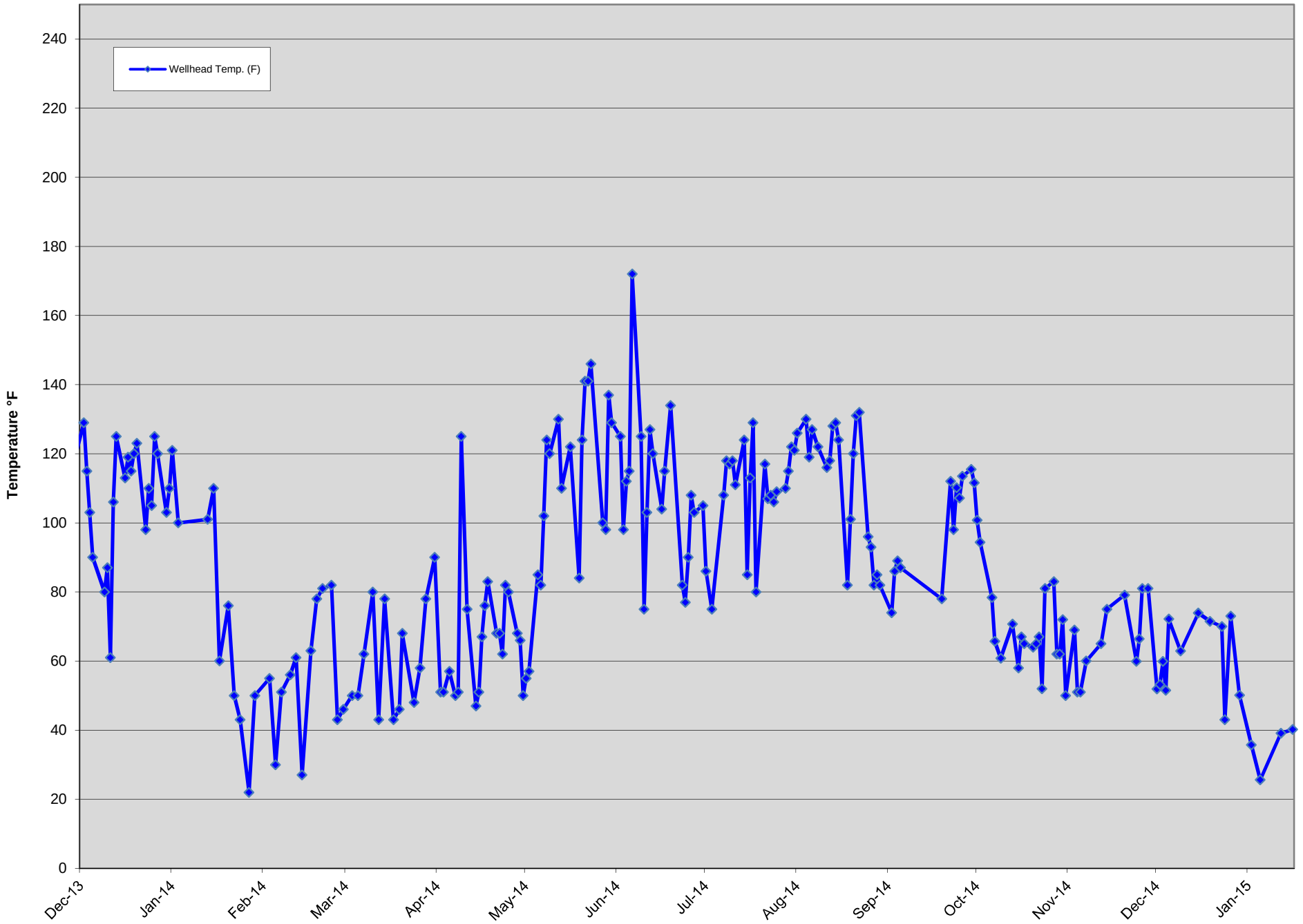
GIW-6 Wellhead Temperatures



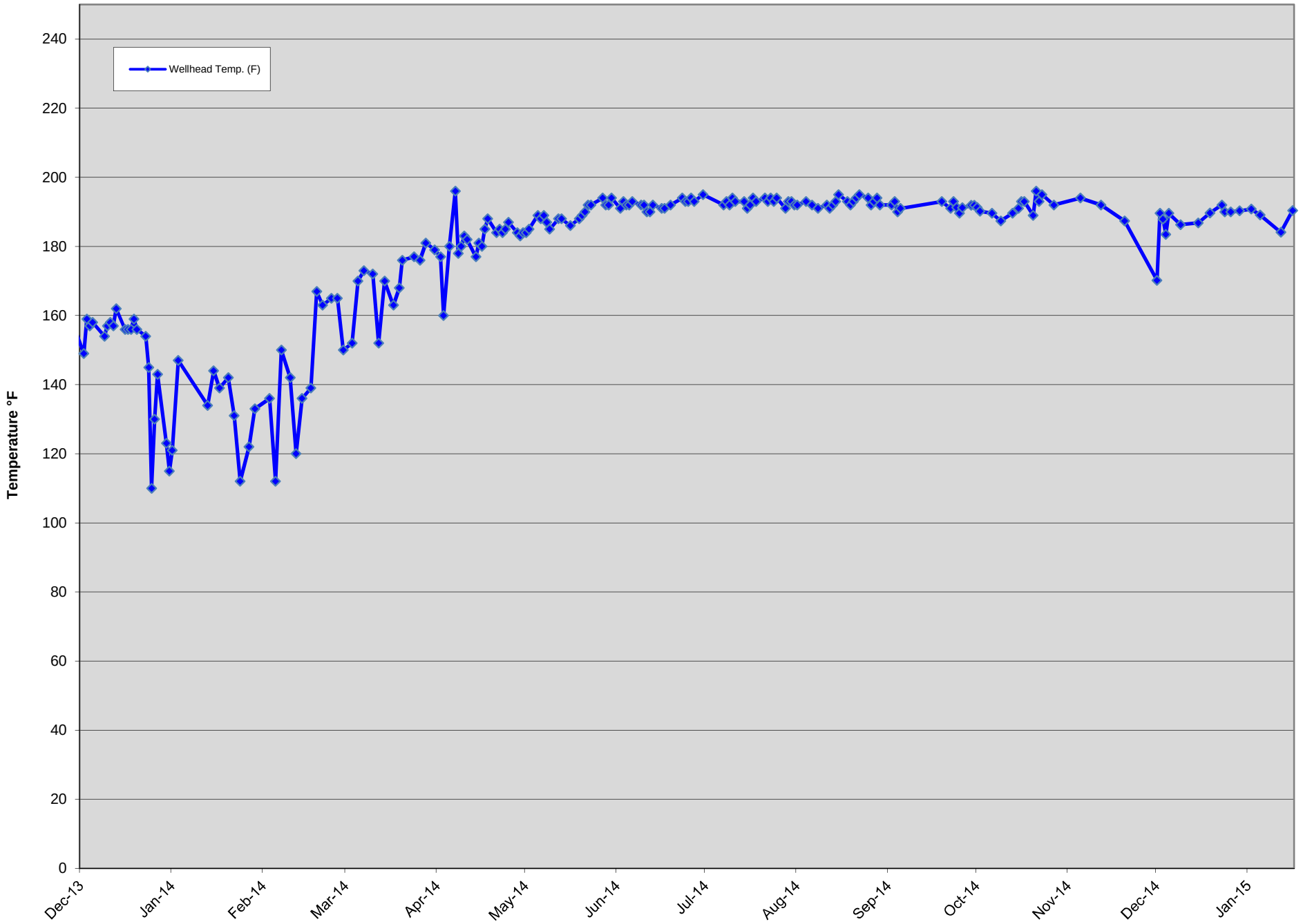
GIW-7 Wellhead Temperatures



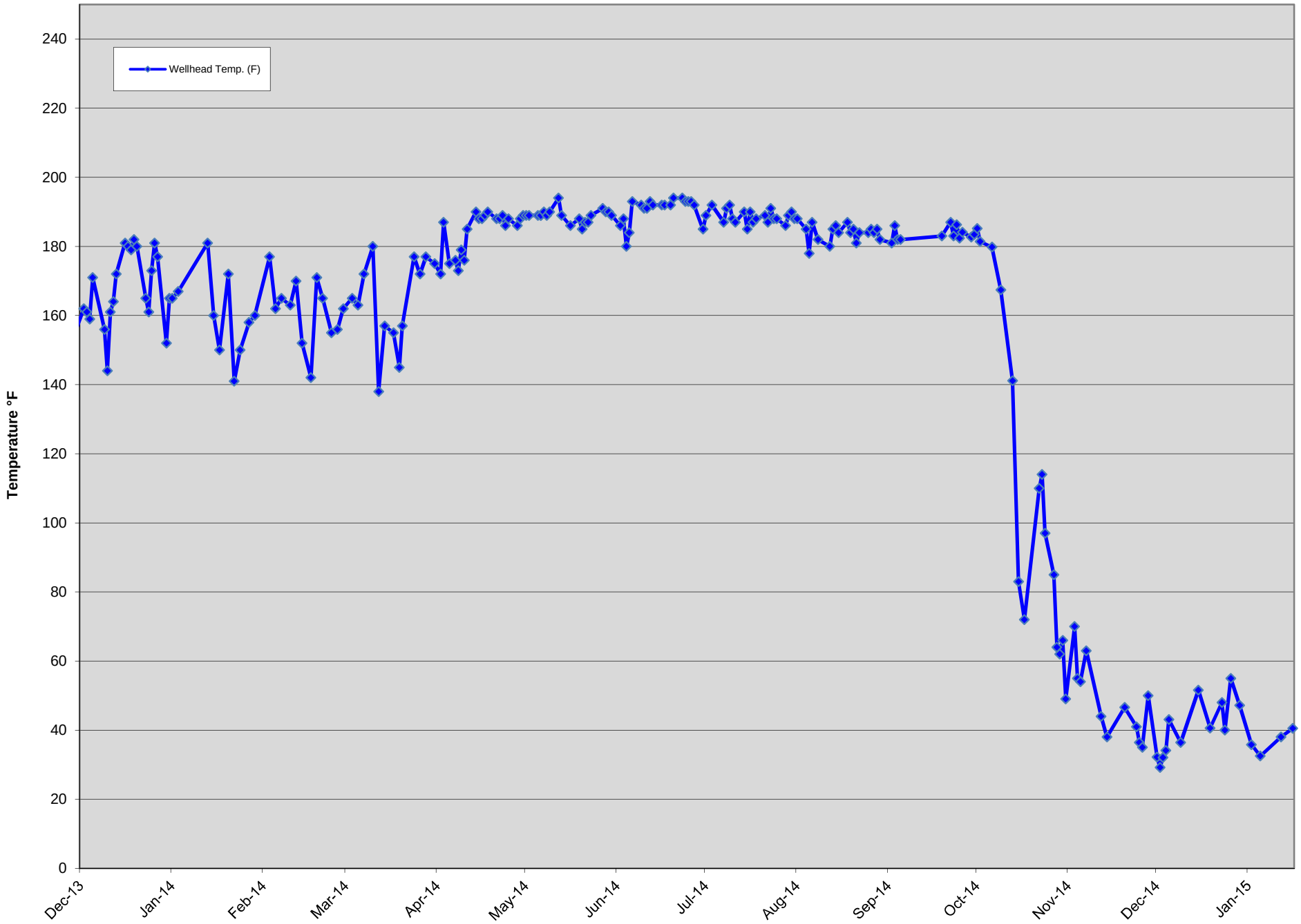
GIW-8 Wellhead Temperatures



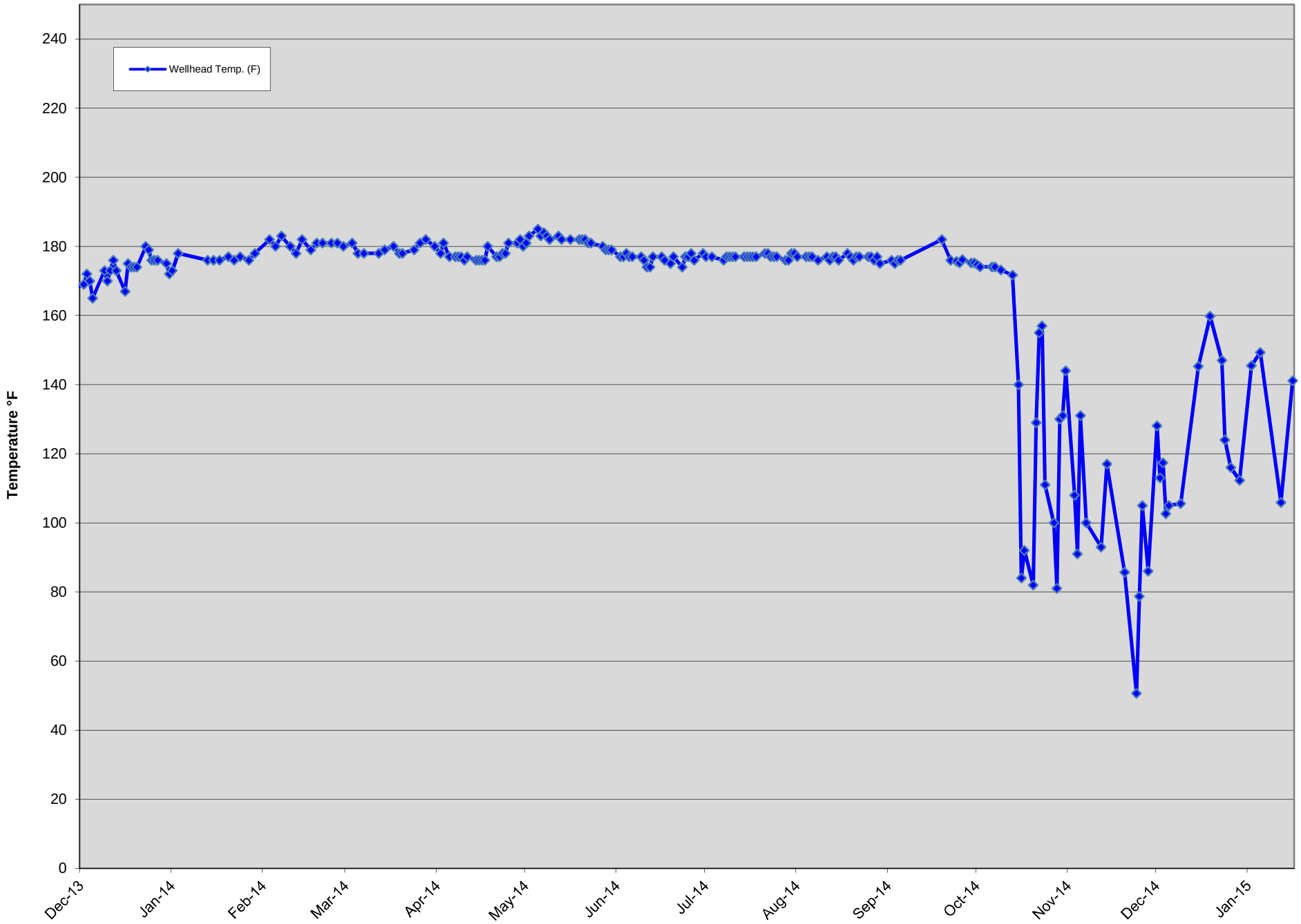
GIW-9 Wellhead Temperatures



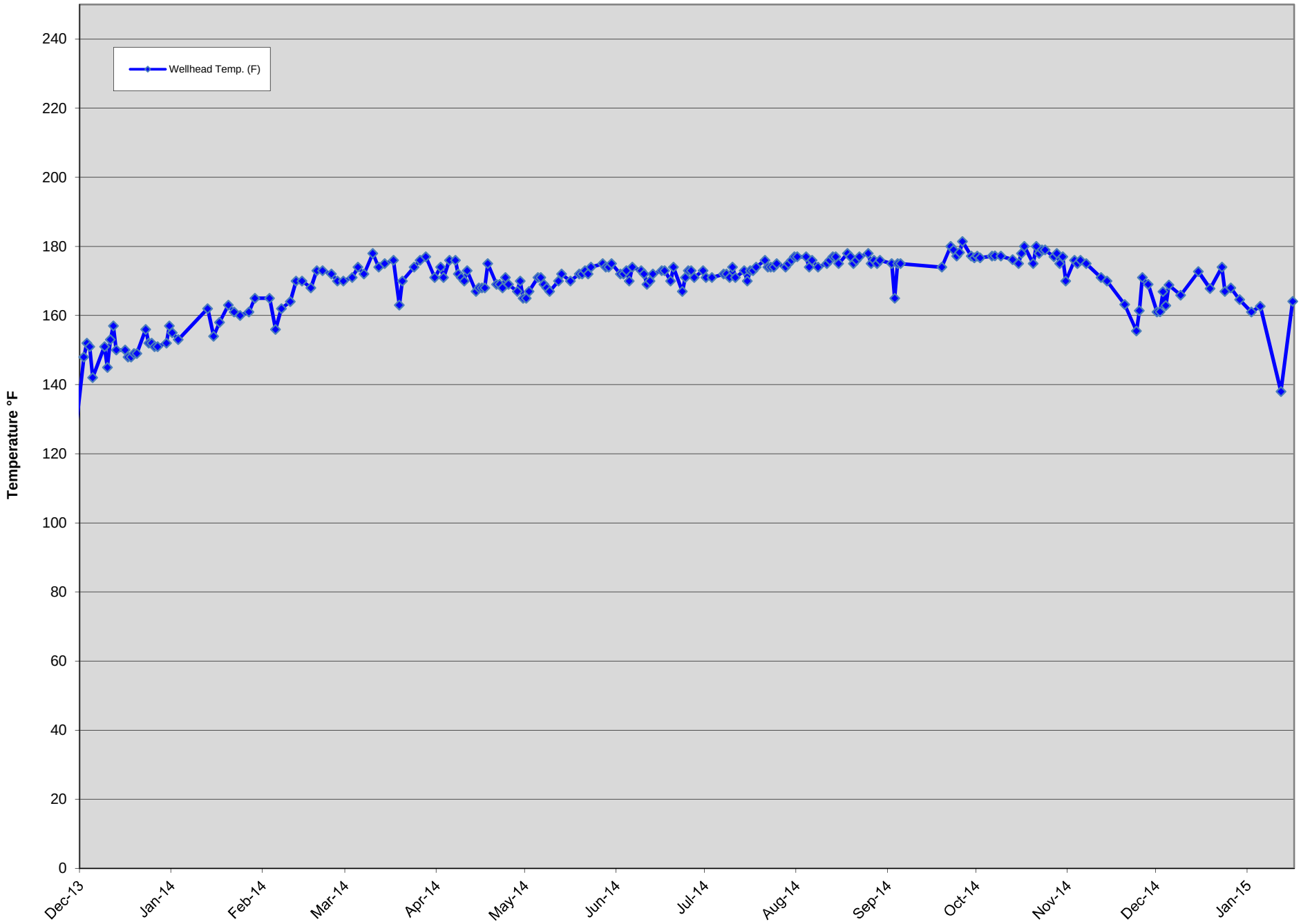
GIW-10 Wellhead Temperatures



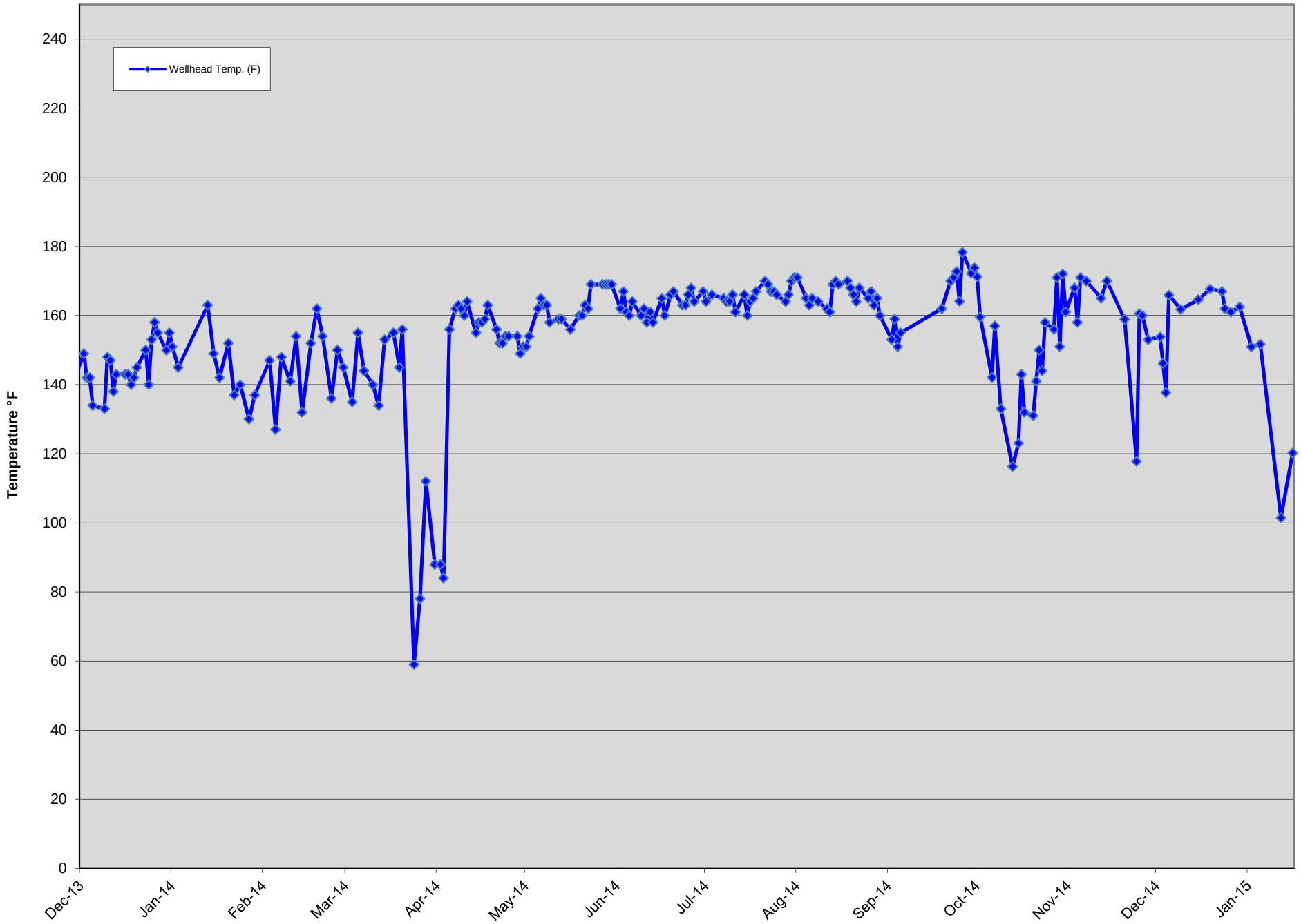
GIW-11 Wellhead Temperatures



GIW-12 Wellhead Temperatures



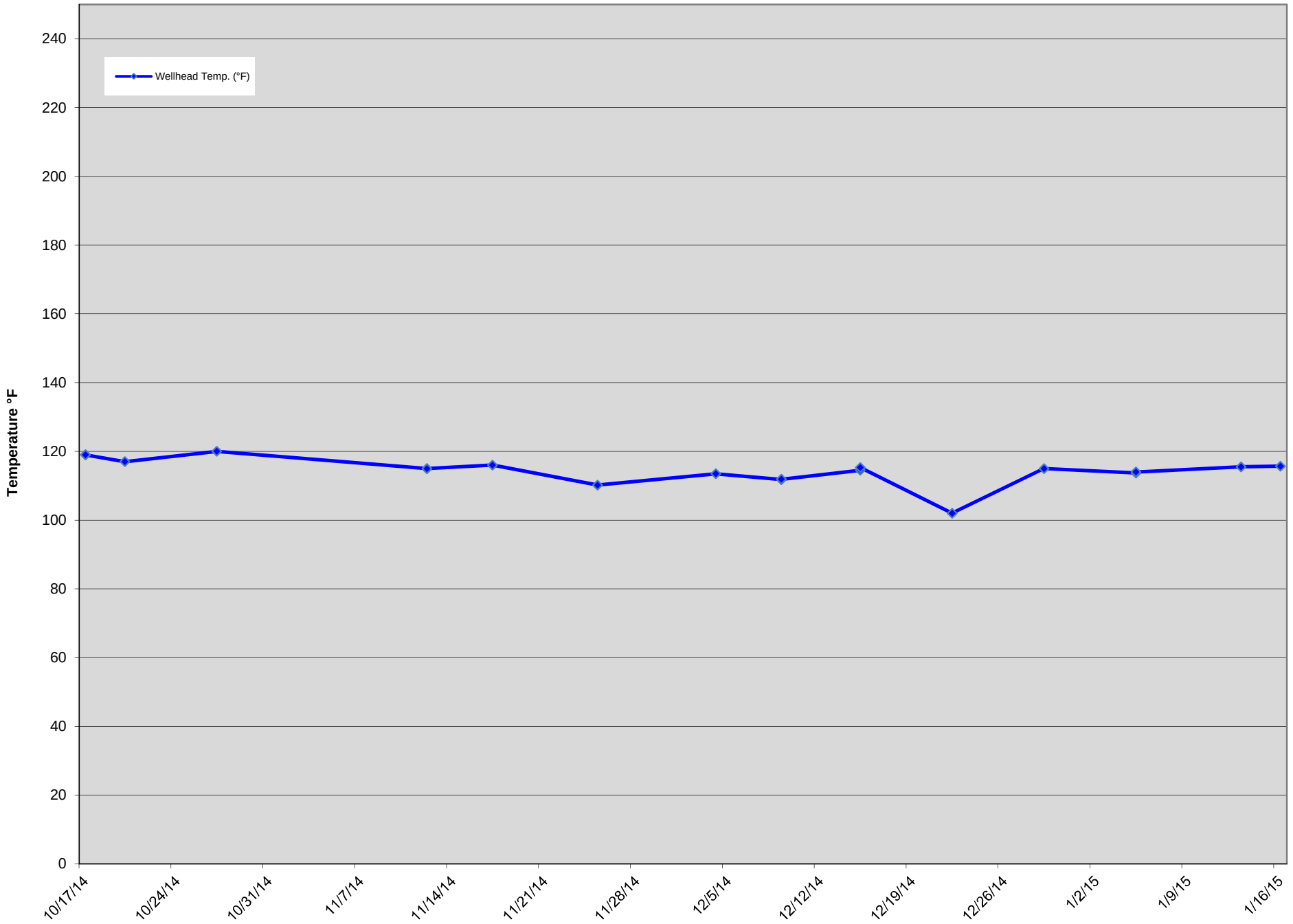
GIW-13 Wellhead Temperatures



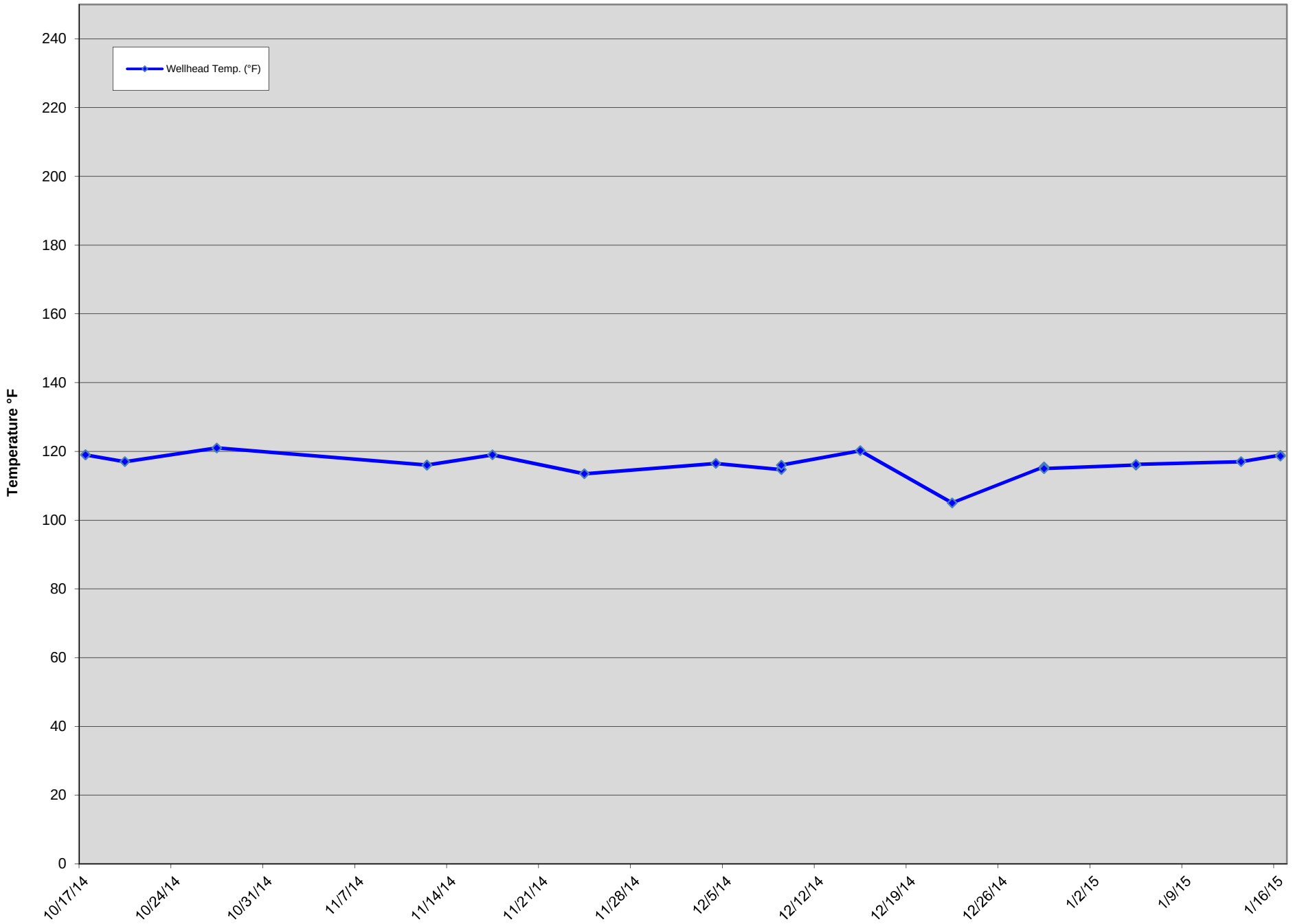
ATTACHMENT D

NECK-AREA GAS EXTRACTION WELL DATA

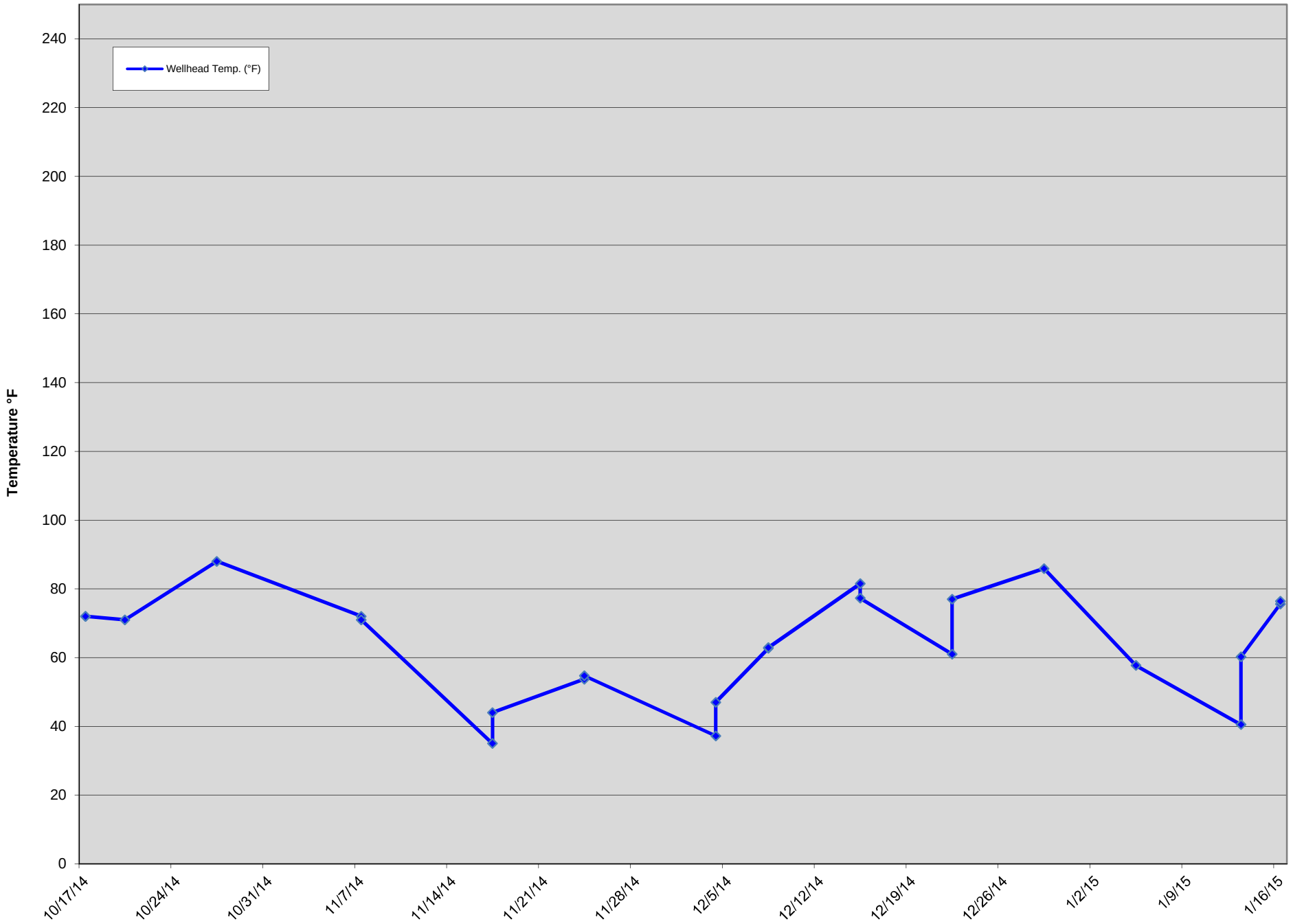
GEW-08 Wellhead Temperatures



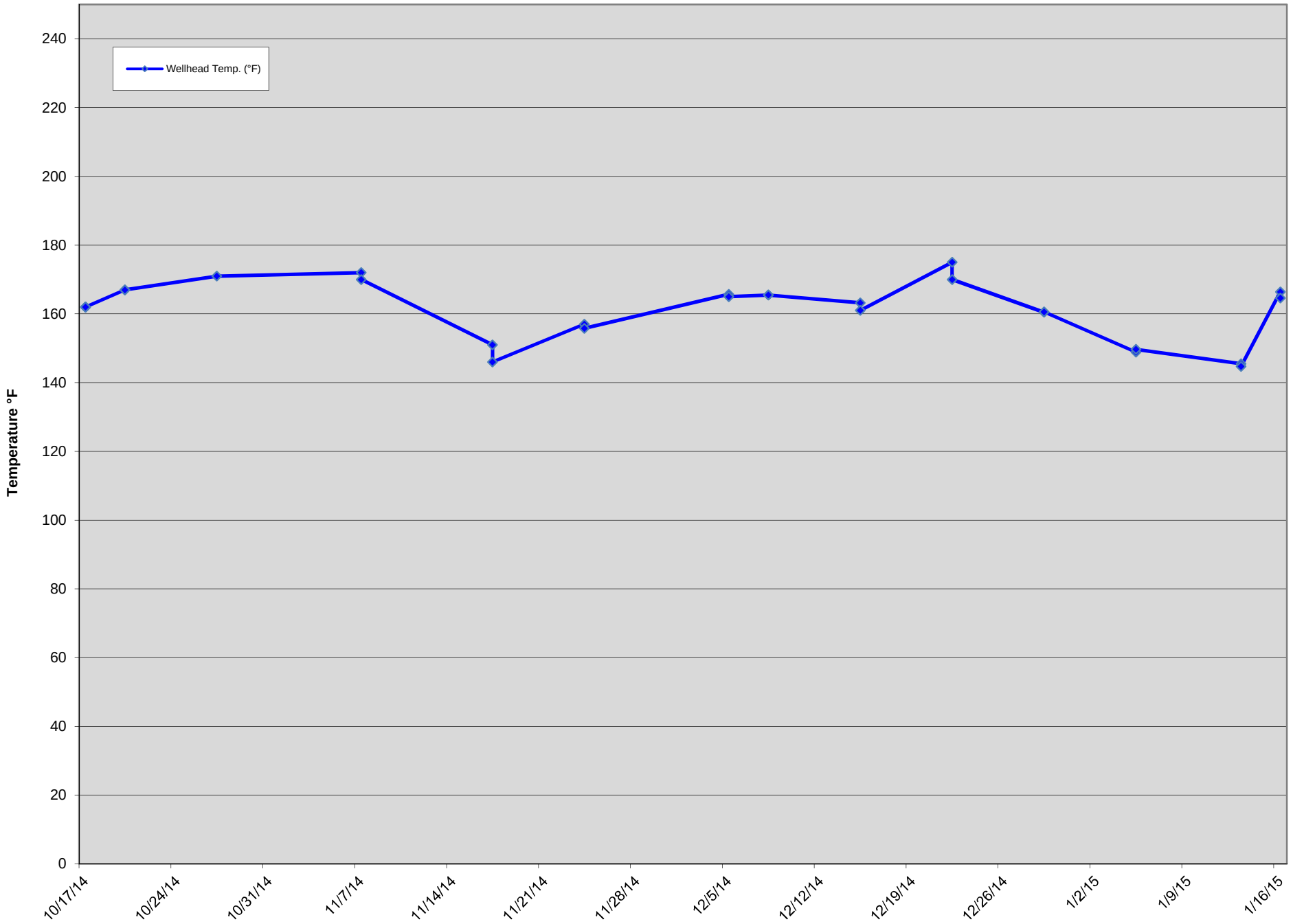
GEW-09 Wellhead Temperatures



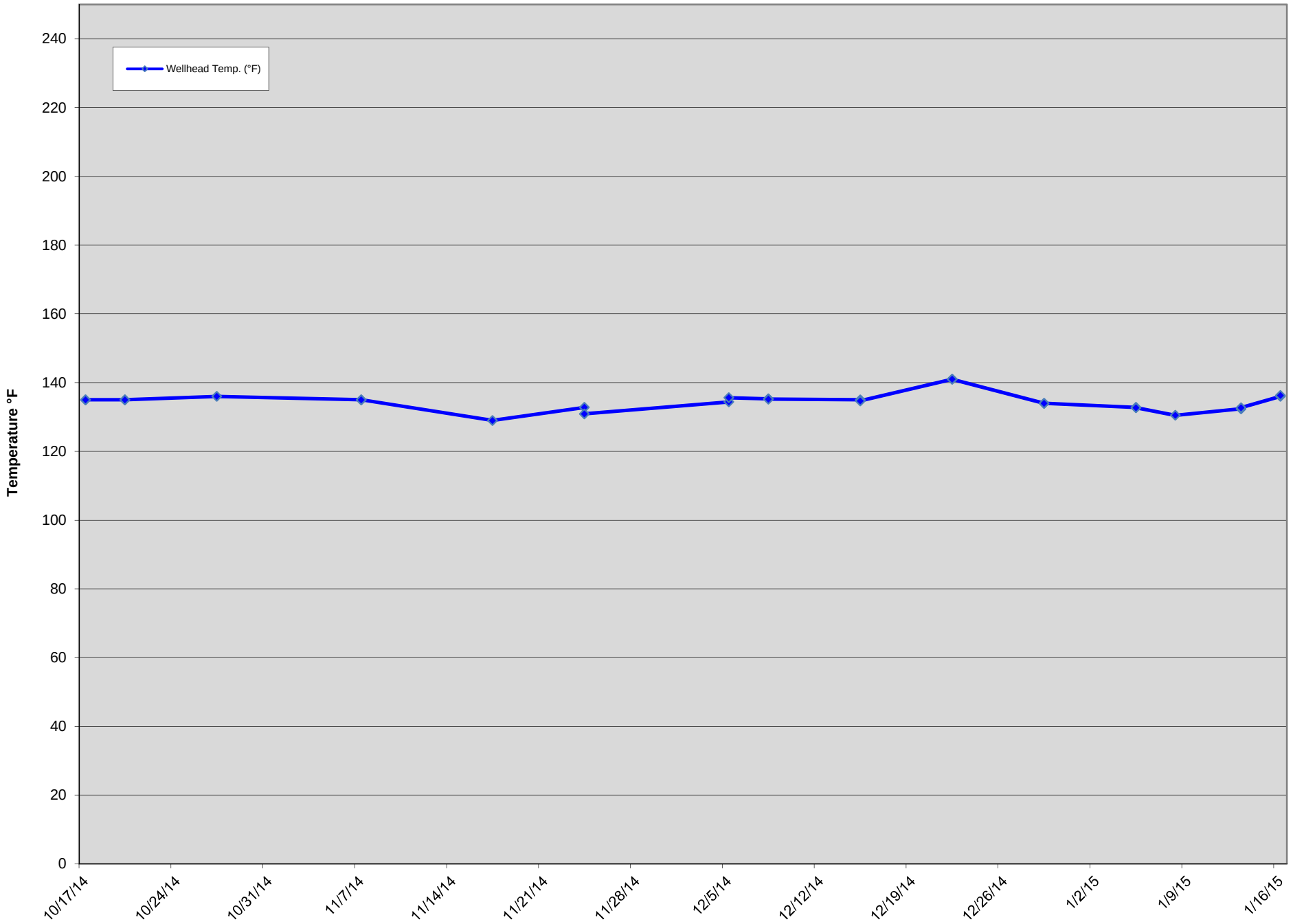
GEW-10 Wellhead Temperatures



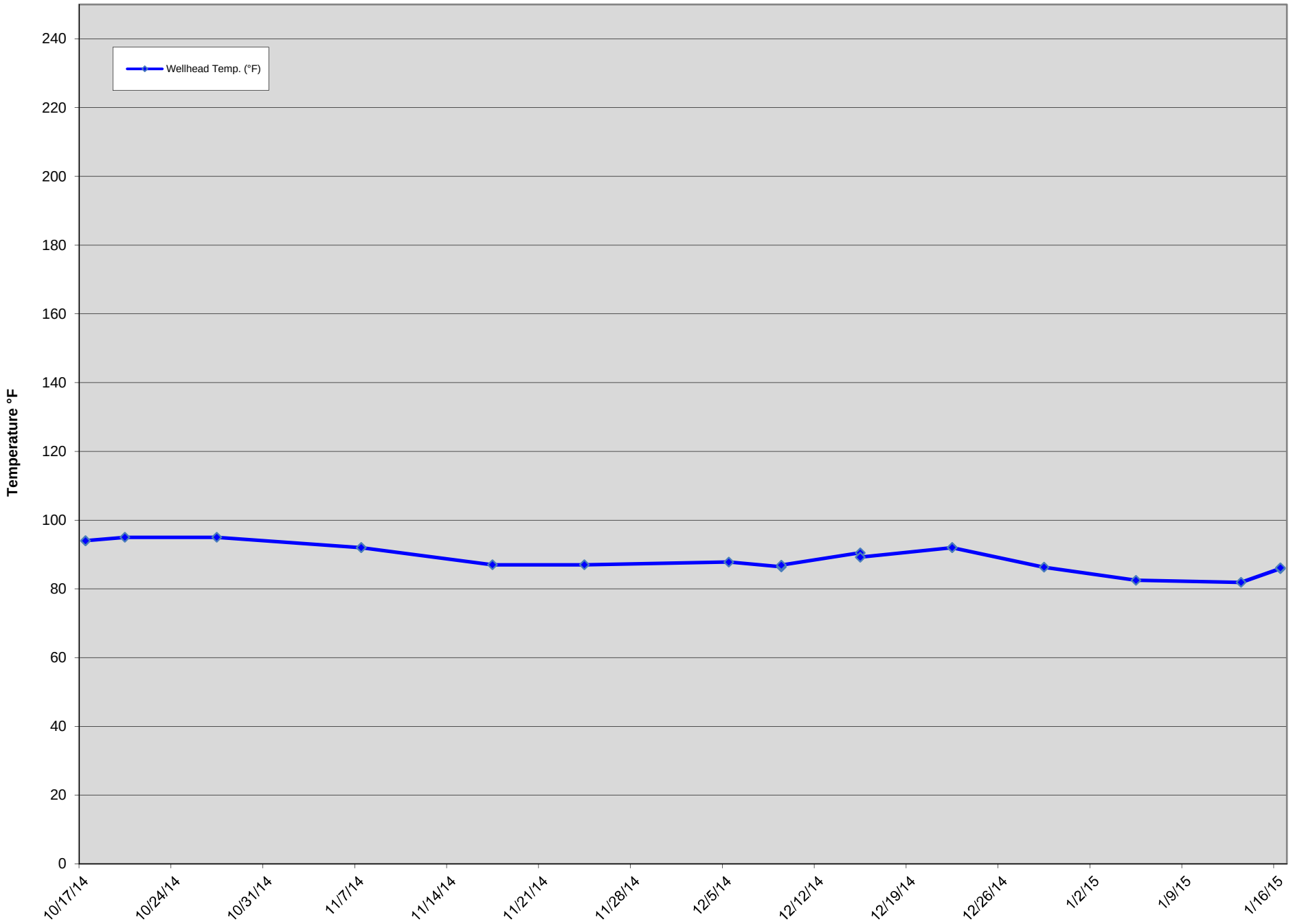
GEW-38 Wellhead Temperatures



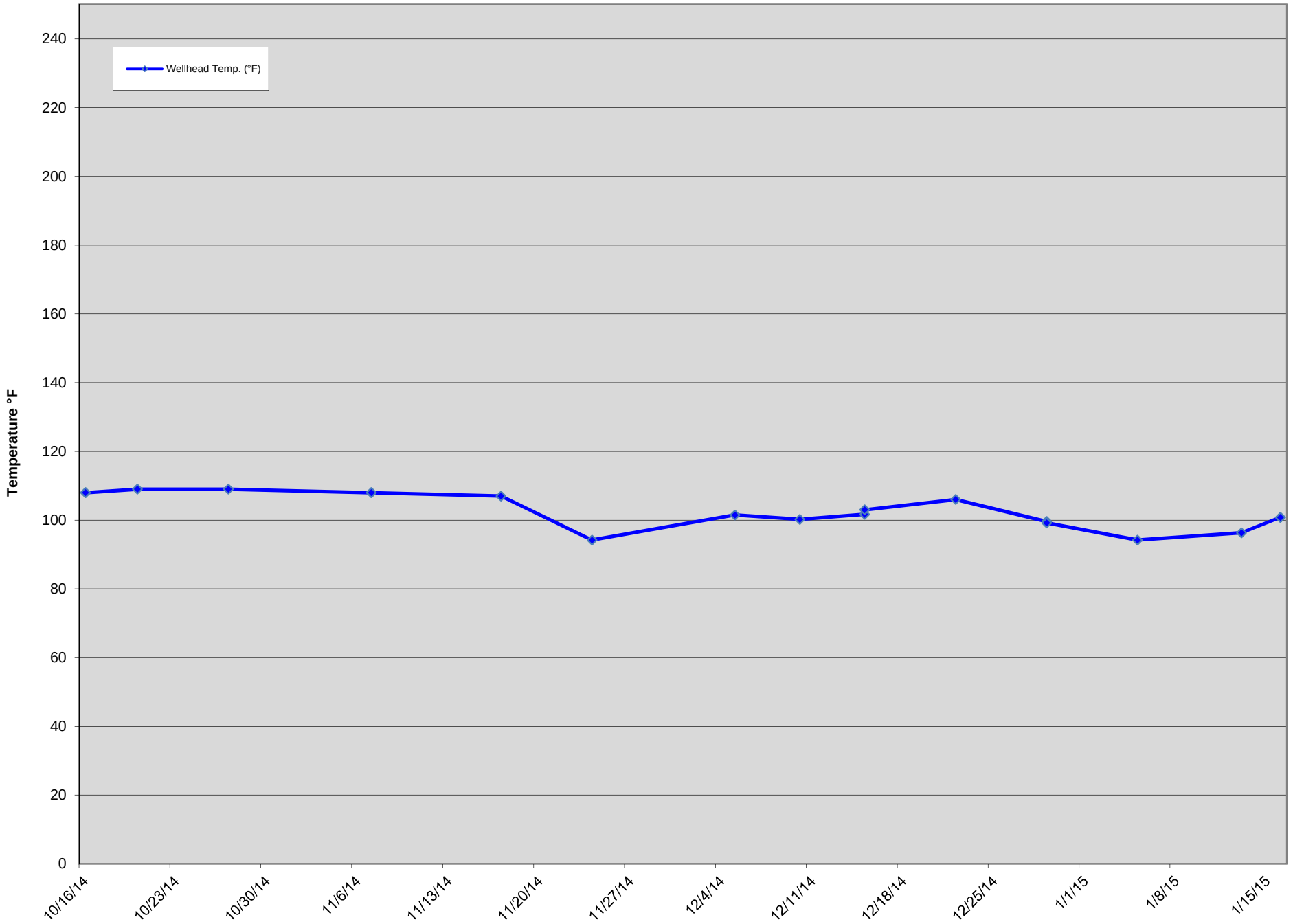
GEW-39 Wellhead Temperatures



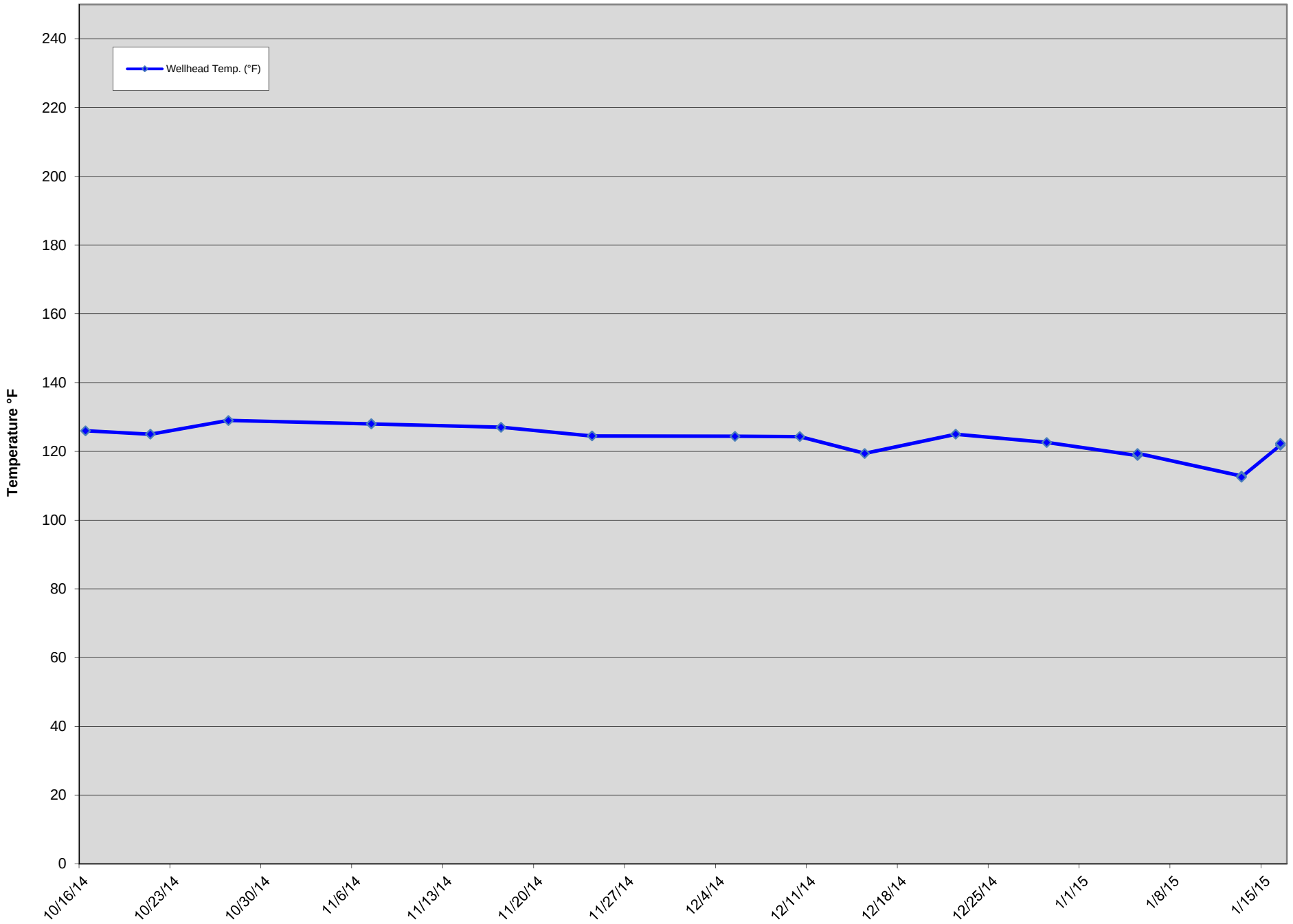
GEW-40 Wellhead Temperatures



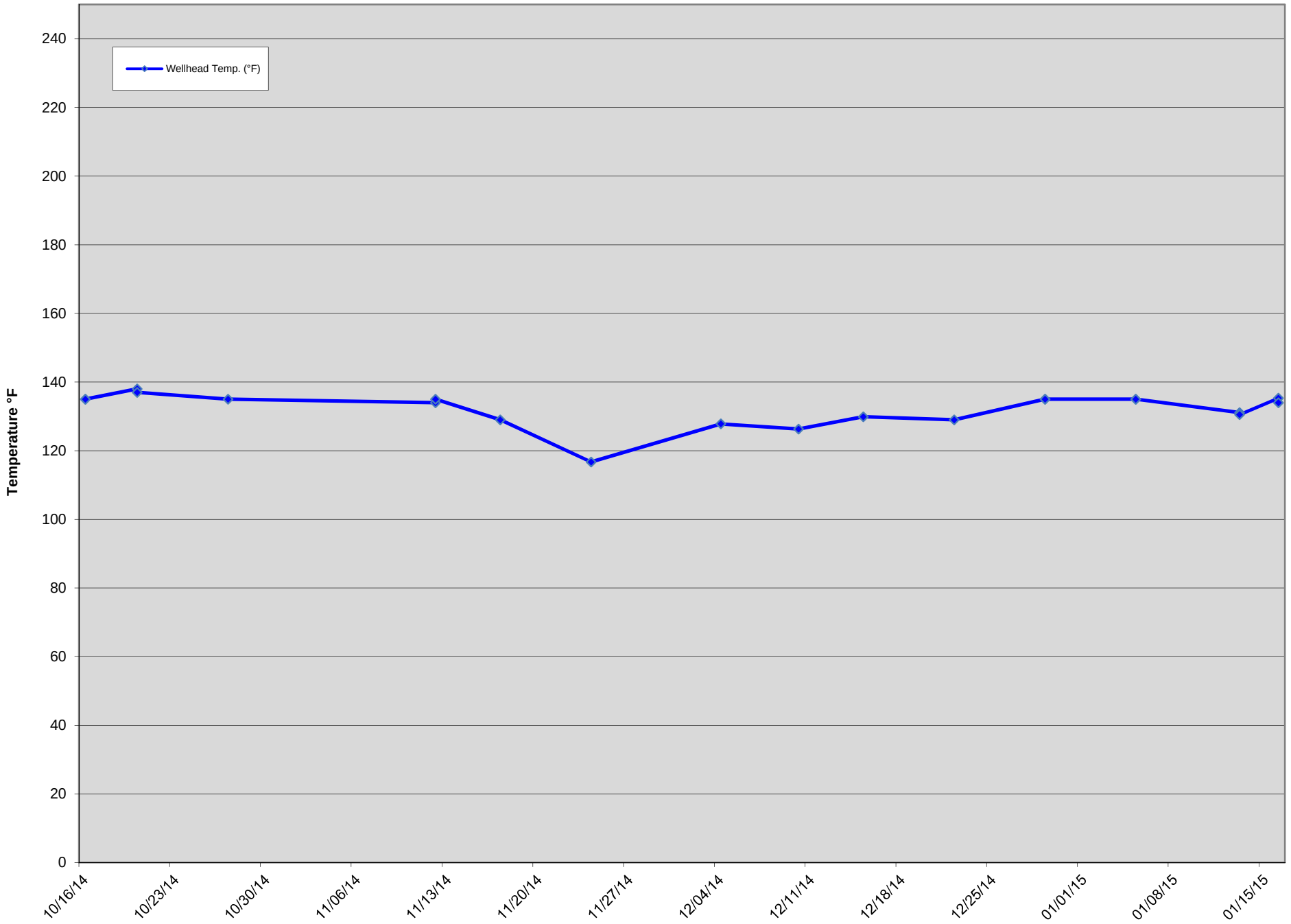
GEW-41R Wellhead Temperatures



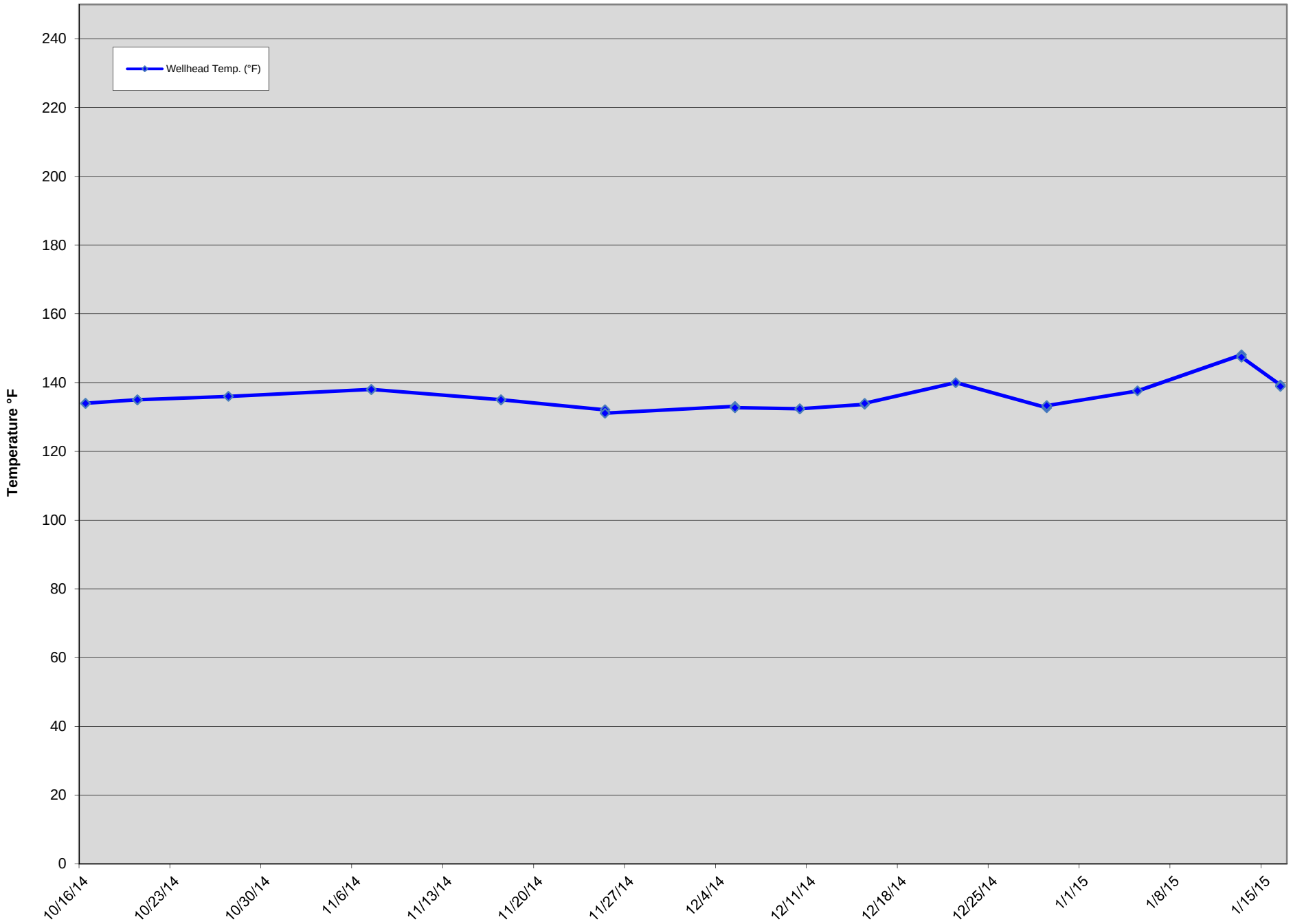
GEW-43R Wellhead Temperatures



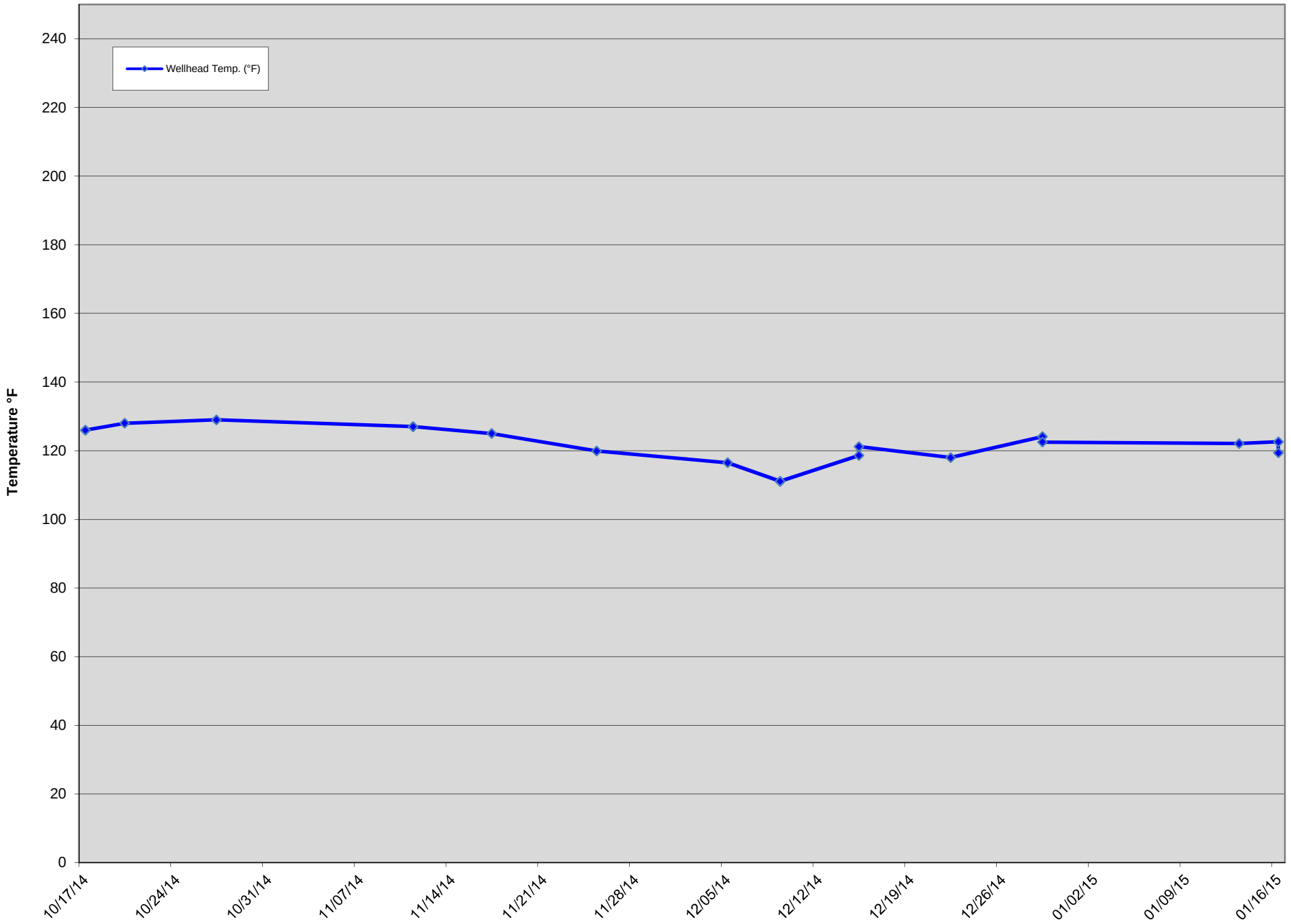
GEW-53 Wellhead Temperatures



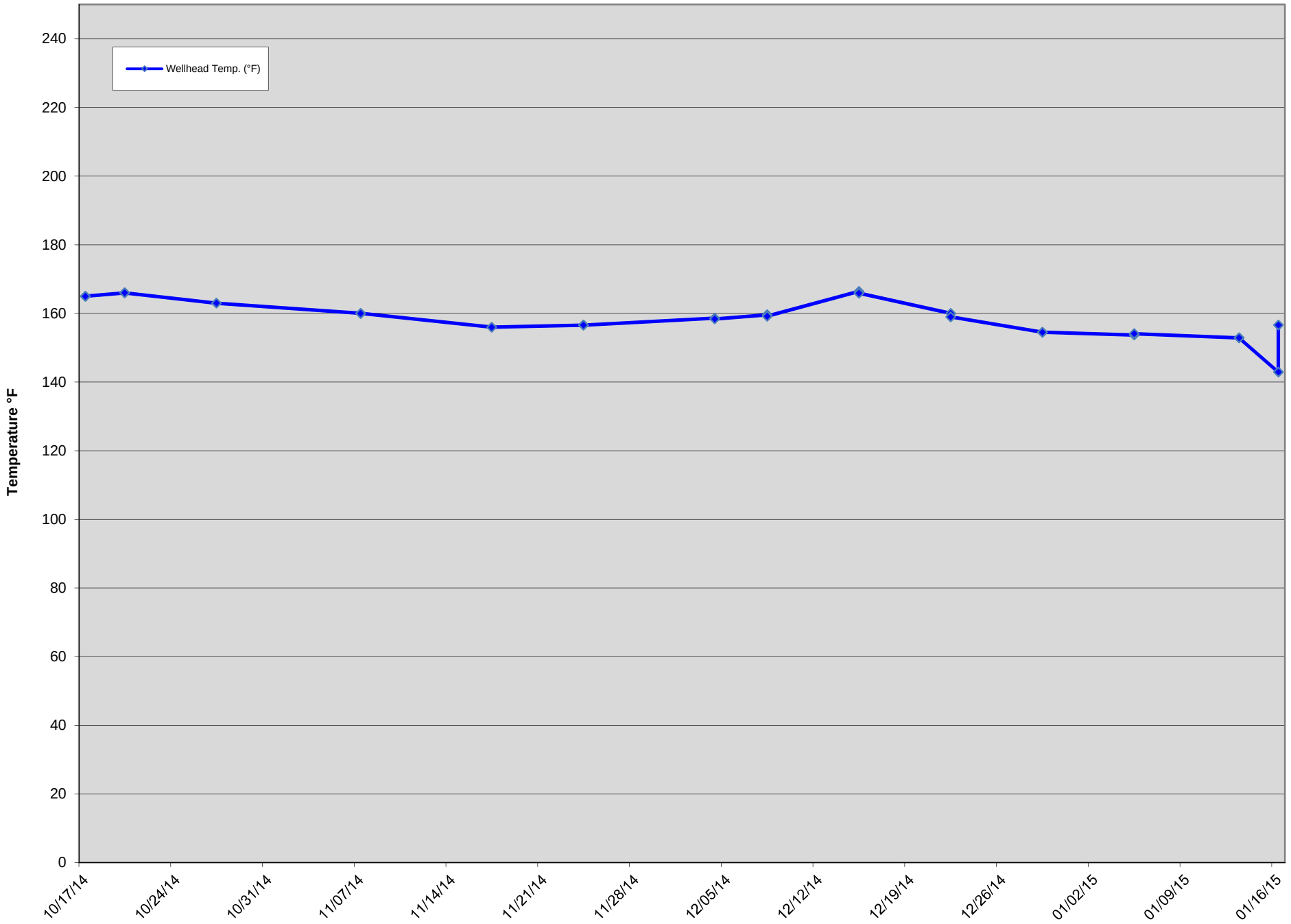
GEW-54 Wellhead Temperatures



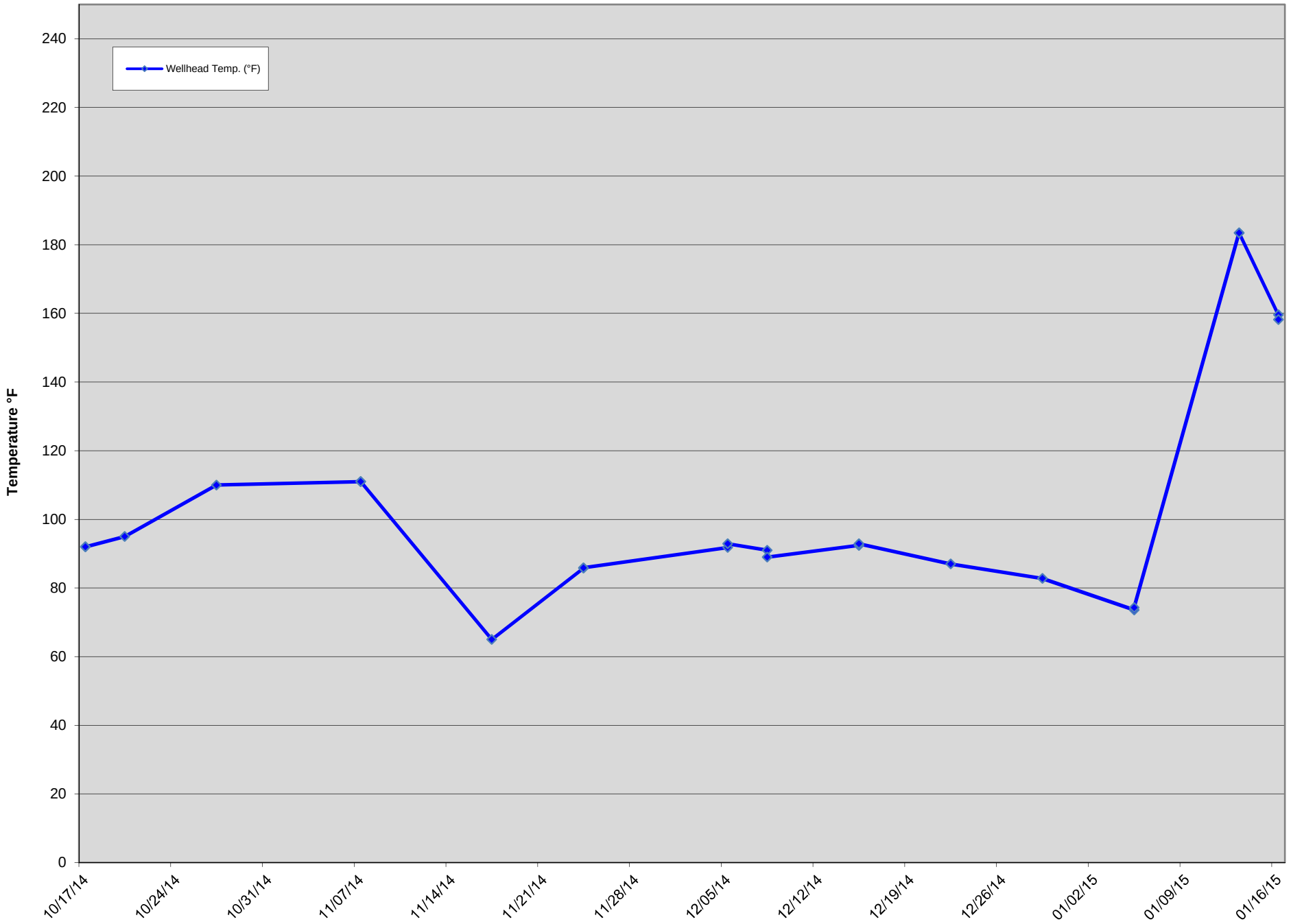
GEW-55 Wellhead Temperatures



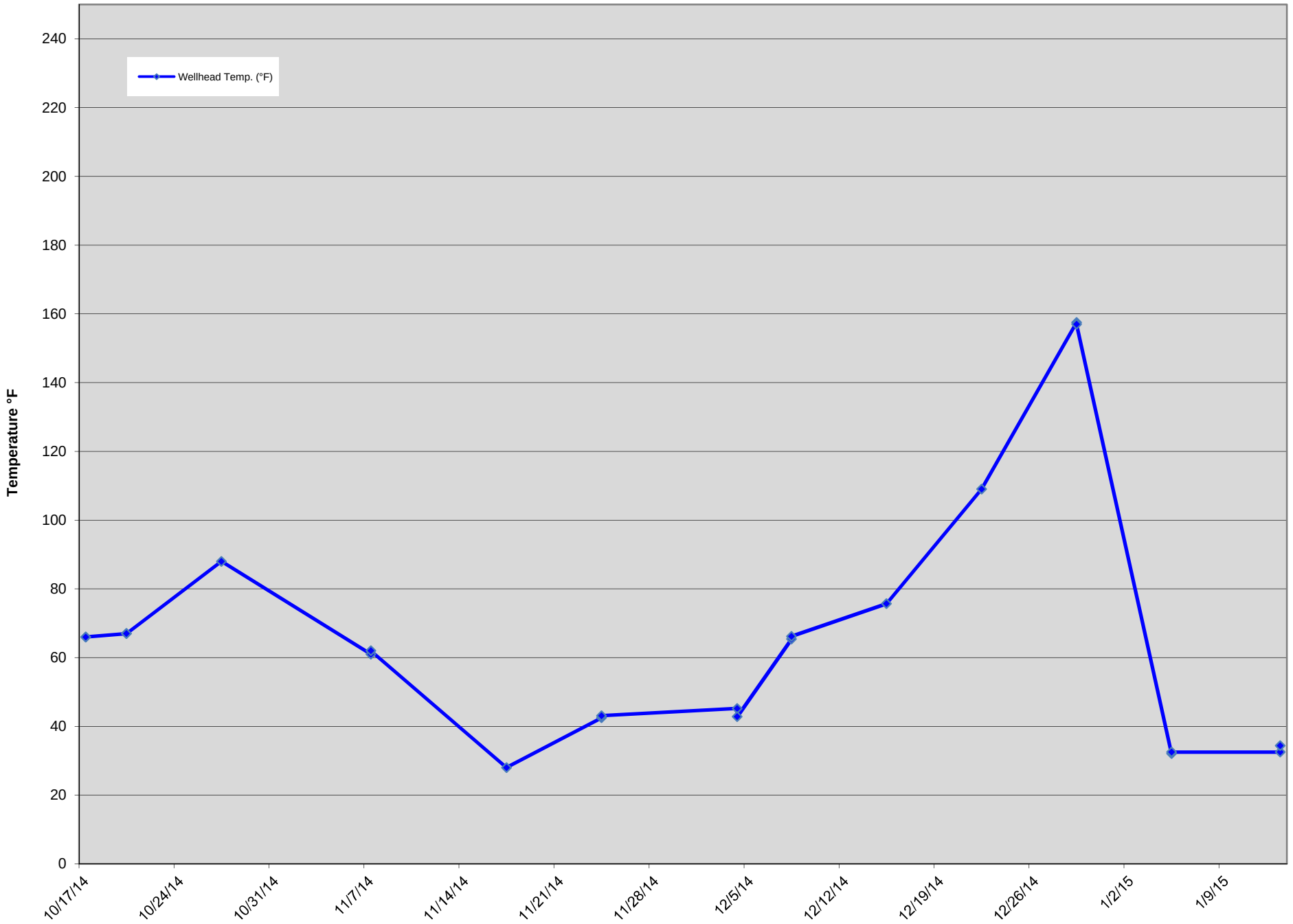
GEW-56R Wellhead Temperatures



GEW-109 Wellhead Temperatures



GEW-110 Wellhead Temperatures



ATTACHMENT E

NORTH QUARRY GAS EXTRACTION WELL DATA

Weekly North Quarry GEW Wellhead Data

Point Name	Date	CH_4	CO_2	O_2	Bal	Init Temp	Init Static Press
		(% by volume)				°F	" H_2O
GEW-002	1/13/2015 10:54	54.1	39.1	0	6.8	120.2	-0.2
GEW-003	1/13/2015 10:57	56.3	39.3	0	4.4	27.2	0.29
GEW-003	1/13/2015 10:59	55.7	40.8	0	3.5	40.5	0.2
GEW-004	1/13/2015 11:02	49.4	38.6	0	12	112.3	-0.04
GEW-005	1/13/2015 11:10	45.5	36	0	18.5	94.4	-0.08
GEW-042R	1/13/2015 10:25	57.3	37.8	0	4.9	38.5	-0.08
GEW-045R	1/13/2015 10:37	53.4	37.5	0	9.1	56.2	-2.25
GEW-045R	1/13/2015 10:41	53.5	37	0	9.5	57.3	-1.62
GEW-046R	1/13/2015 10:44	42.5	34.7	0	22.8	86.8	-0.15
GEW-047R	1/13/2015 11:07	41.8	35.8	0	22.4	110.9	-0.04
GEW-048	1/13/2015 11:12	55.6	39.7	0	4.7	100.4	-0.04
GEW-049	1/13/2015 10:58	41	37.5	0	21.5	104.7	-0.17