Bridgeton Landfill, LLC

Weekly Data Submittals

Week of October 26 - November 1, 2014

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**

November 7, 2014

Commentary on Data

Attachment A – Leachate Levels in Leachate Collection Sumps

LCS-1D, -5A, and -6B were partially or fully operational during the weekly reporting period.

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

The transducer melted in LCS-3D in March 2014 and is currently non-operational.

LCS-4B still exhibits excess pressure and liquid ejection, so it has not been fitted with a pump; however, the conditions are resulting in leachate removal from that location. Options for pumping from this location are currently under review.

Attachment B - Temperature Monitoring Probe Analytical Charts

The following TMPs indicated generally consistent profiles to previous observations: TMP-1, -2, -3, -4, -5, -6, -8, -9, -10, -11, -12, -14, -16, -17, and -18. However, it should be noted that the 100-foot interval of TMP-5 dropped approximately 9 degrees. In addition, the 40-, 60-, 80-, and 100-foot intervals for TMP-14 each increased slightly in the latest reading.

TMP-7, -7R, -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 the Gas Interceptor Wells (GIW)-2 through GIW-7, as well as GIW-10. Gas temperatures have dropped dramatically in these wells.

For the remaining six wells without a cooling system installed (GIW-1, -8, -9, -11, -12, and -13), with the exception of GIW-11, temperatures were trending steady to slightly lower from the beginning to the end of the week. Temperatures in GIW-11 declined, then increased over the past week to end at approximately 30 degrees higher than the end of the previous week. Note that gas quality data could not be collected during the week for GIW-9 due to broken pipe.

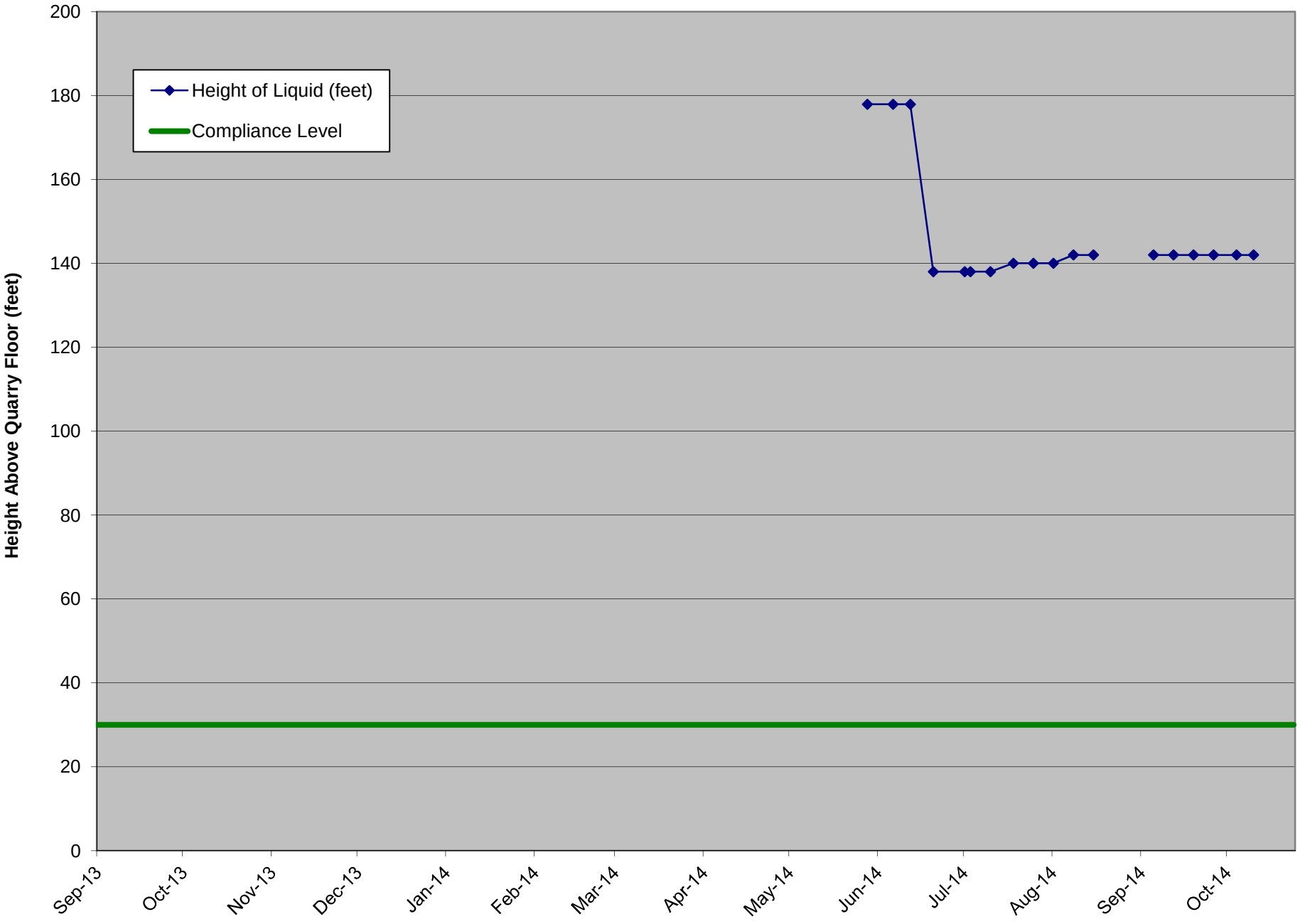
Attachment D – Neck Area Gas Extraction Well Data

Per request of MDNR, weekly gas quality data is being submitted for the following neck-area gas extraction wells (GEW)s:

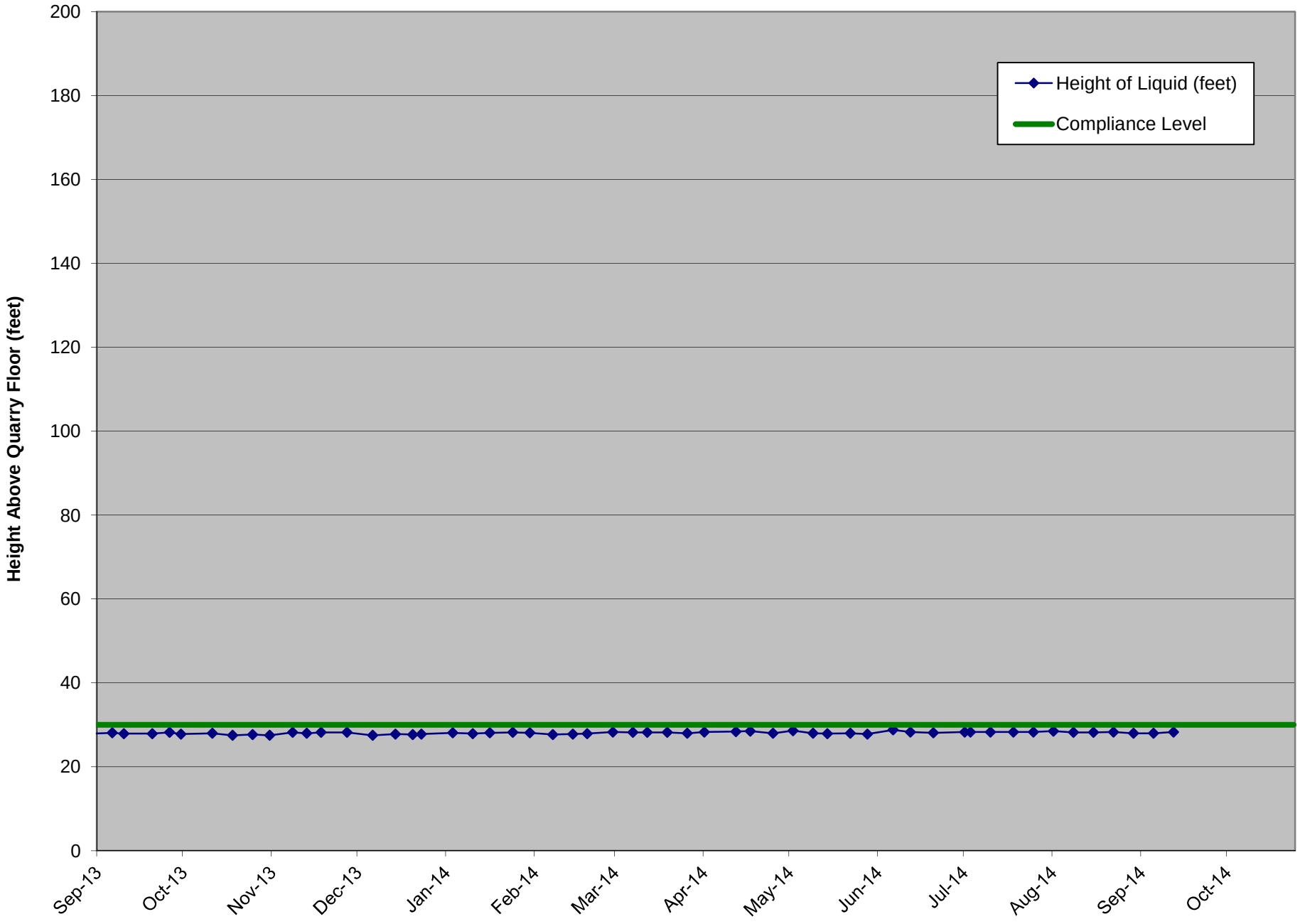
- GEW-08
- GEW-09
- GEW-10
- GEW-38
- GEW-39
- GEW-40
- GEW-55
- GEW-56R
- GEW-109
- GEW-110

ATTACHMENT A

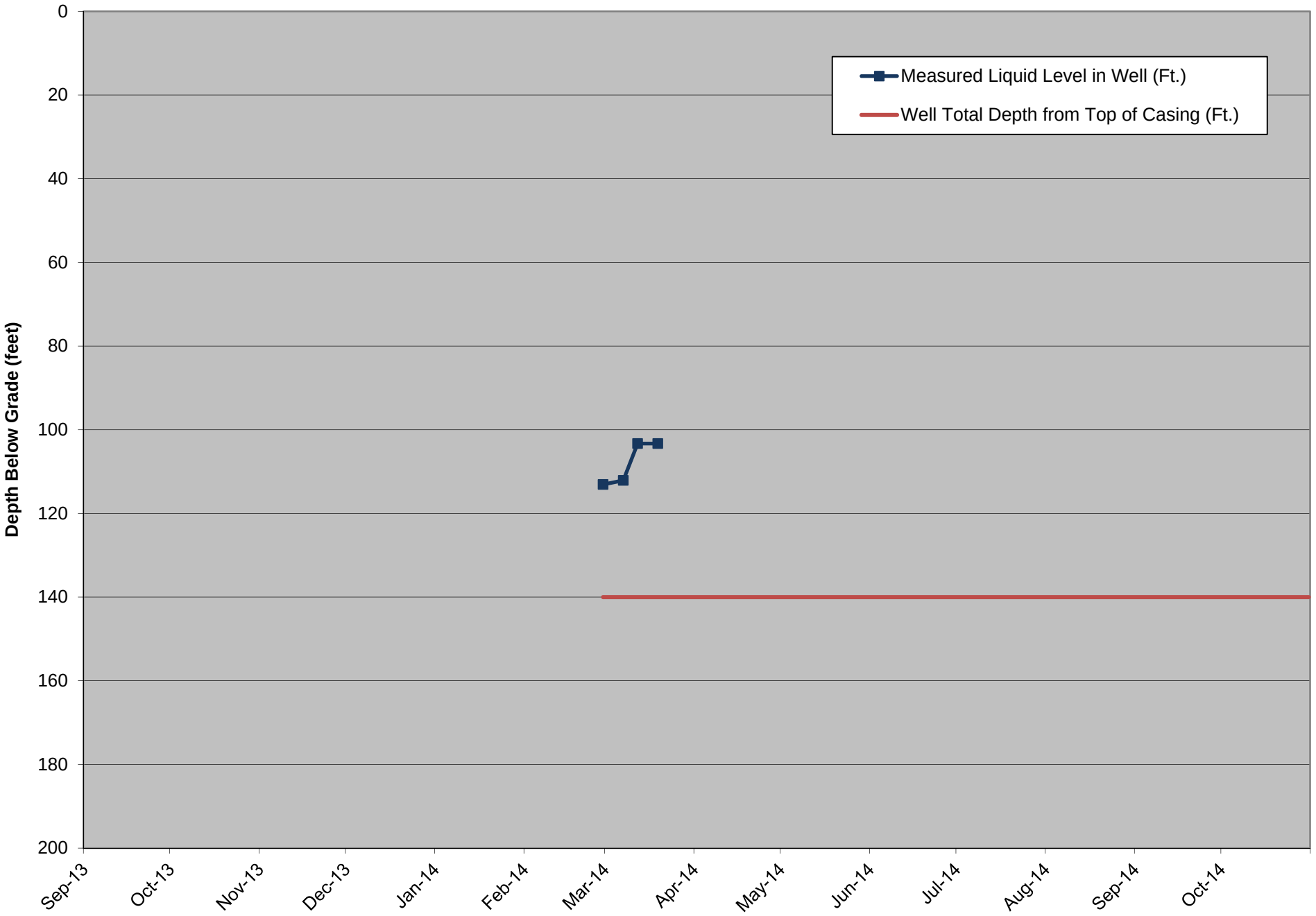
LEACHATE LEVELS IN LEACHATE COLLECTION SUMPS


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
Sep-13
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14

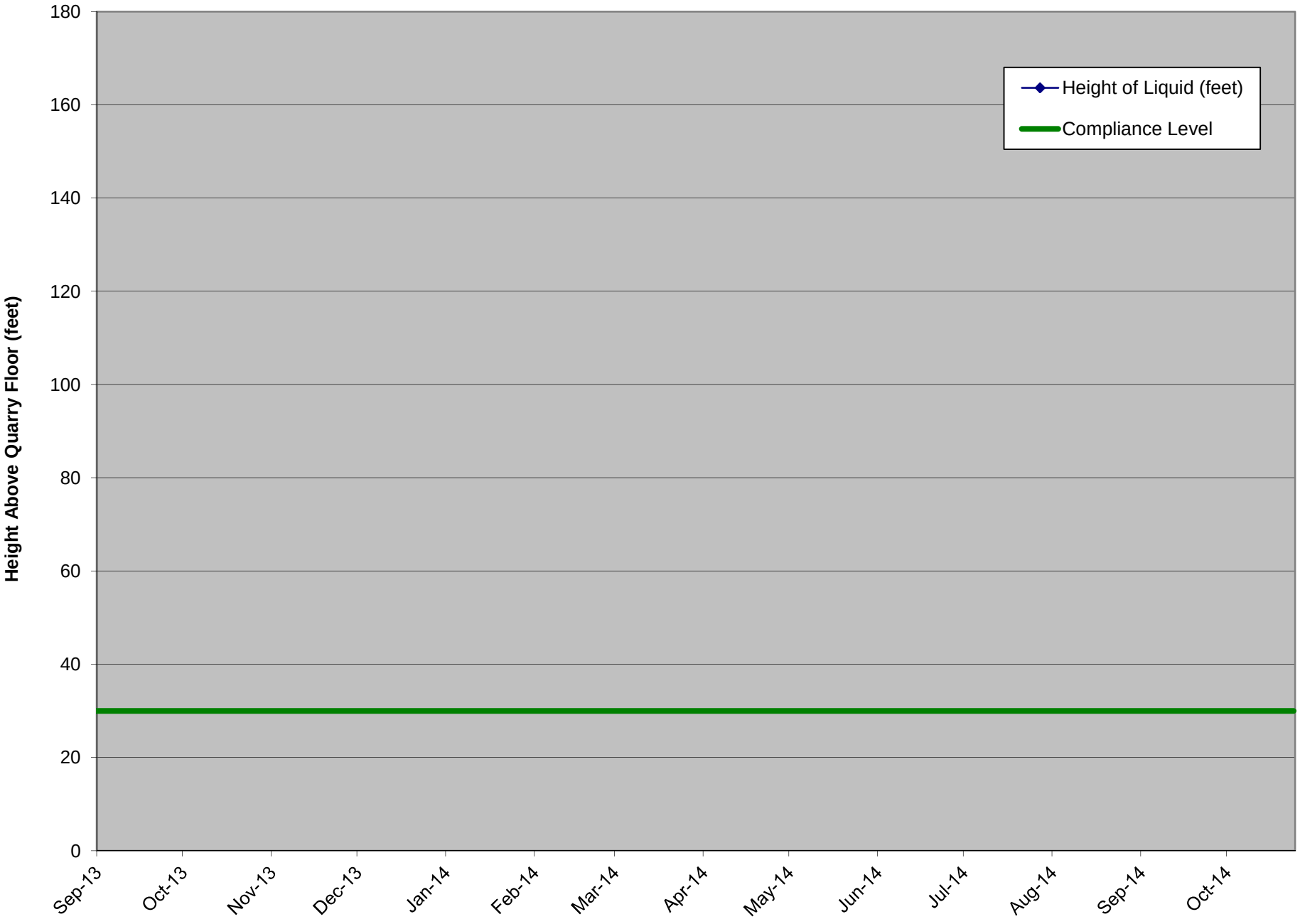
LCS-2D Liquid Level Above Quarry Floor



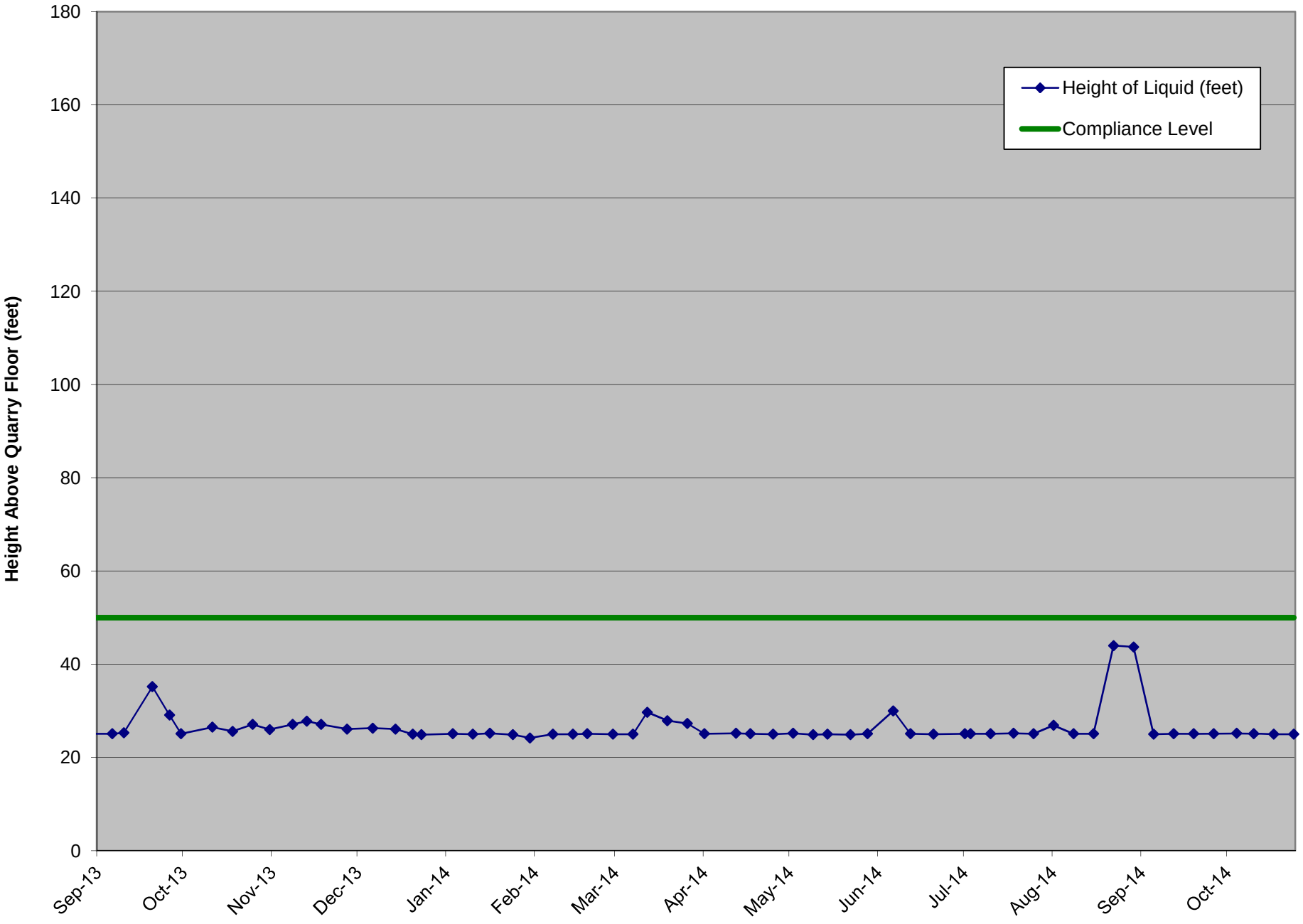
LCS-3D Liquid Level Below Ground Surface



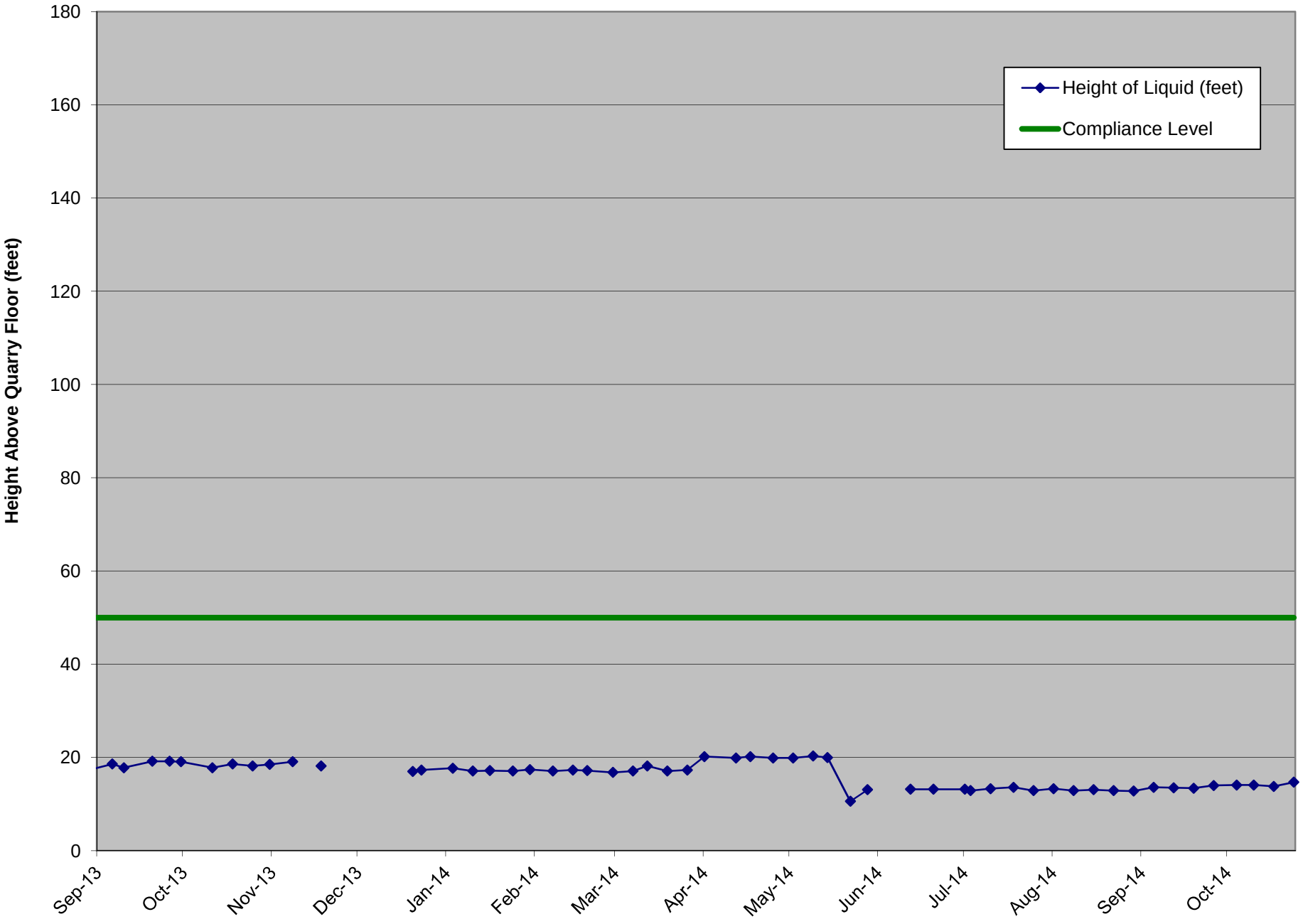
LCS-4B Liquid Level Above Quarry Floor



LCS-5A Liquid Level Above Quarry Floor



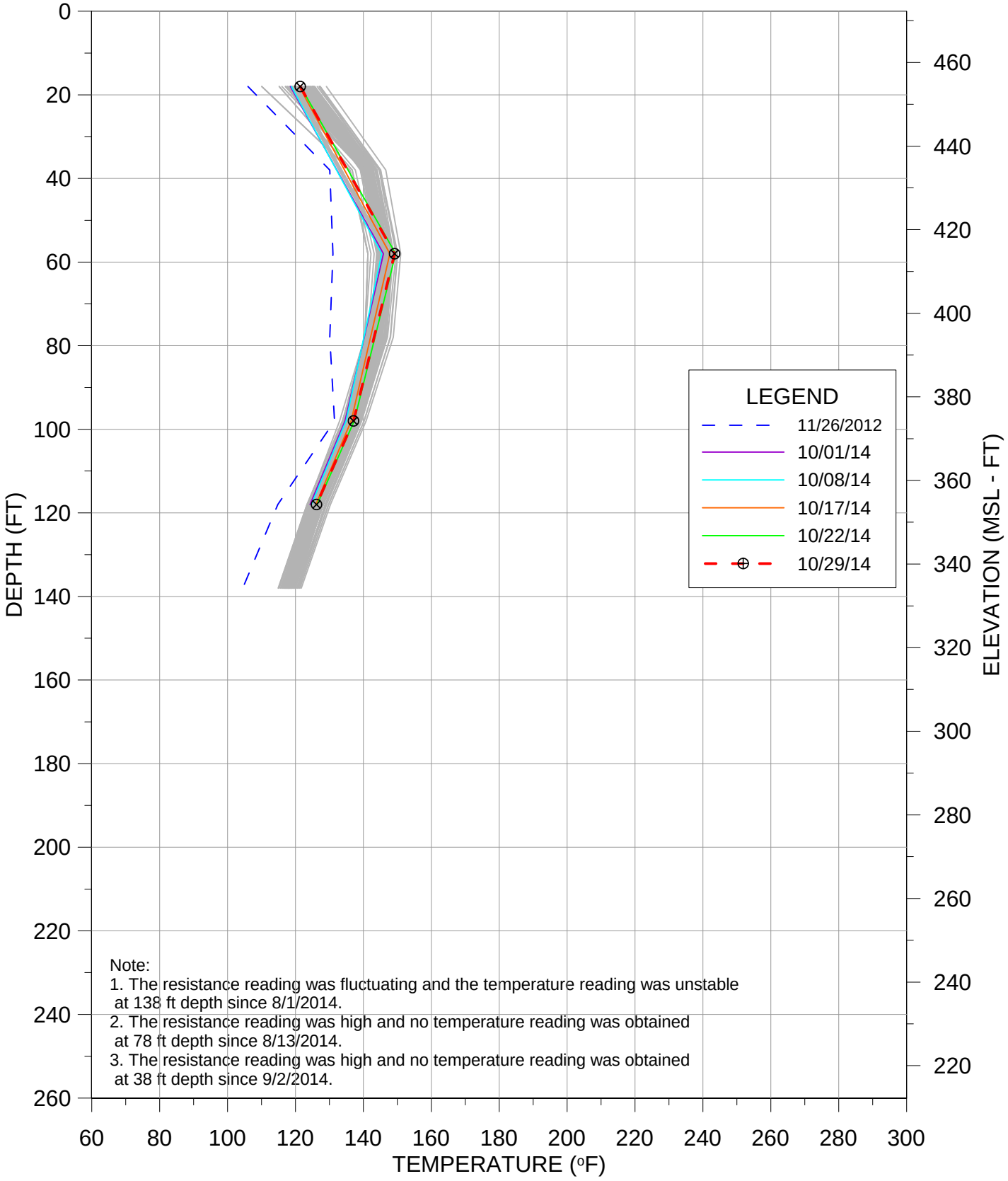
LCS-6B Liquid Level Above Quarry Floor



ATTACHMENT B

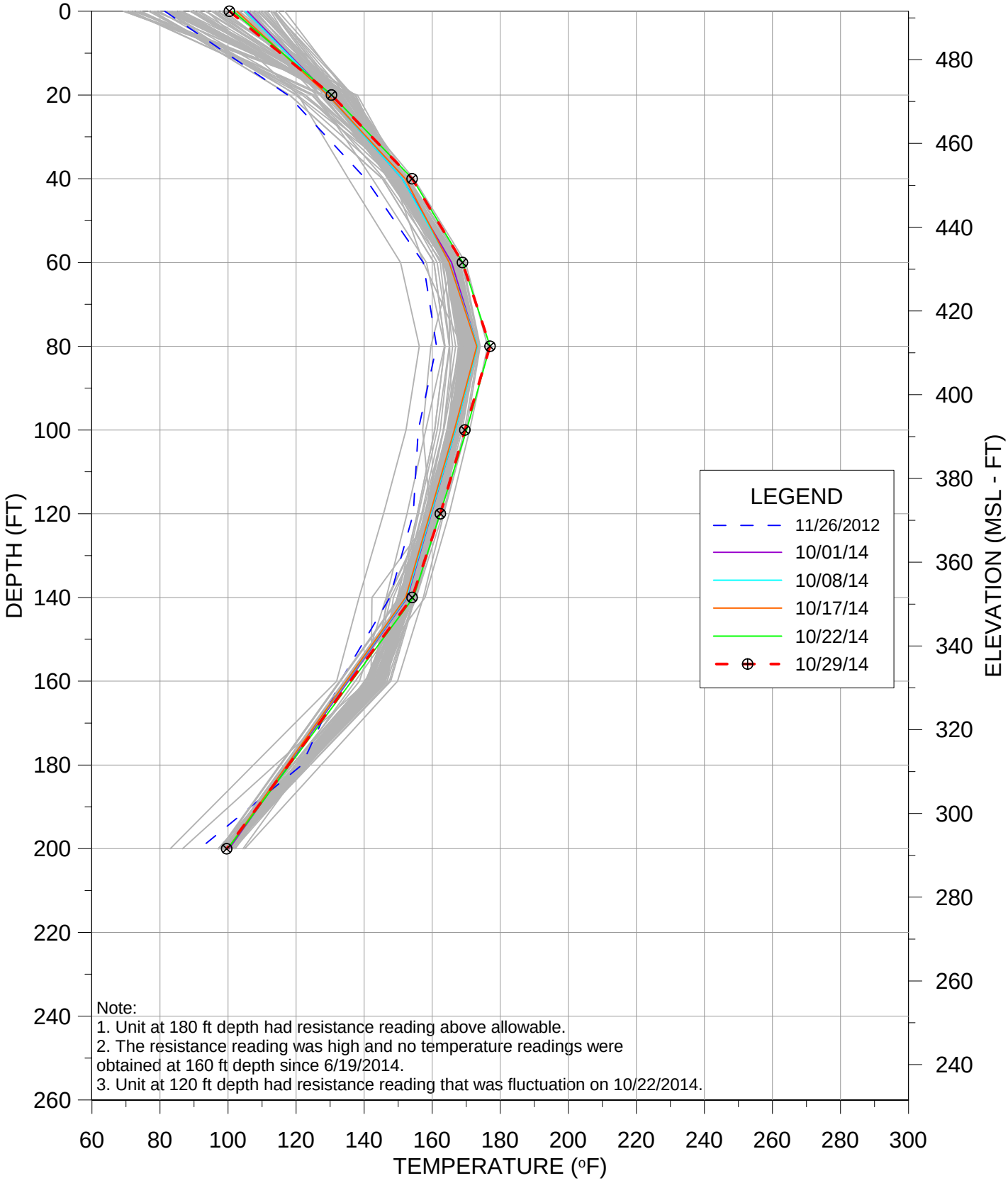
TEMPERATURE MONITORING PROBE ANALYTICAL CHARTS

TMP-1



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

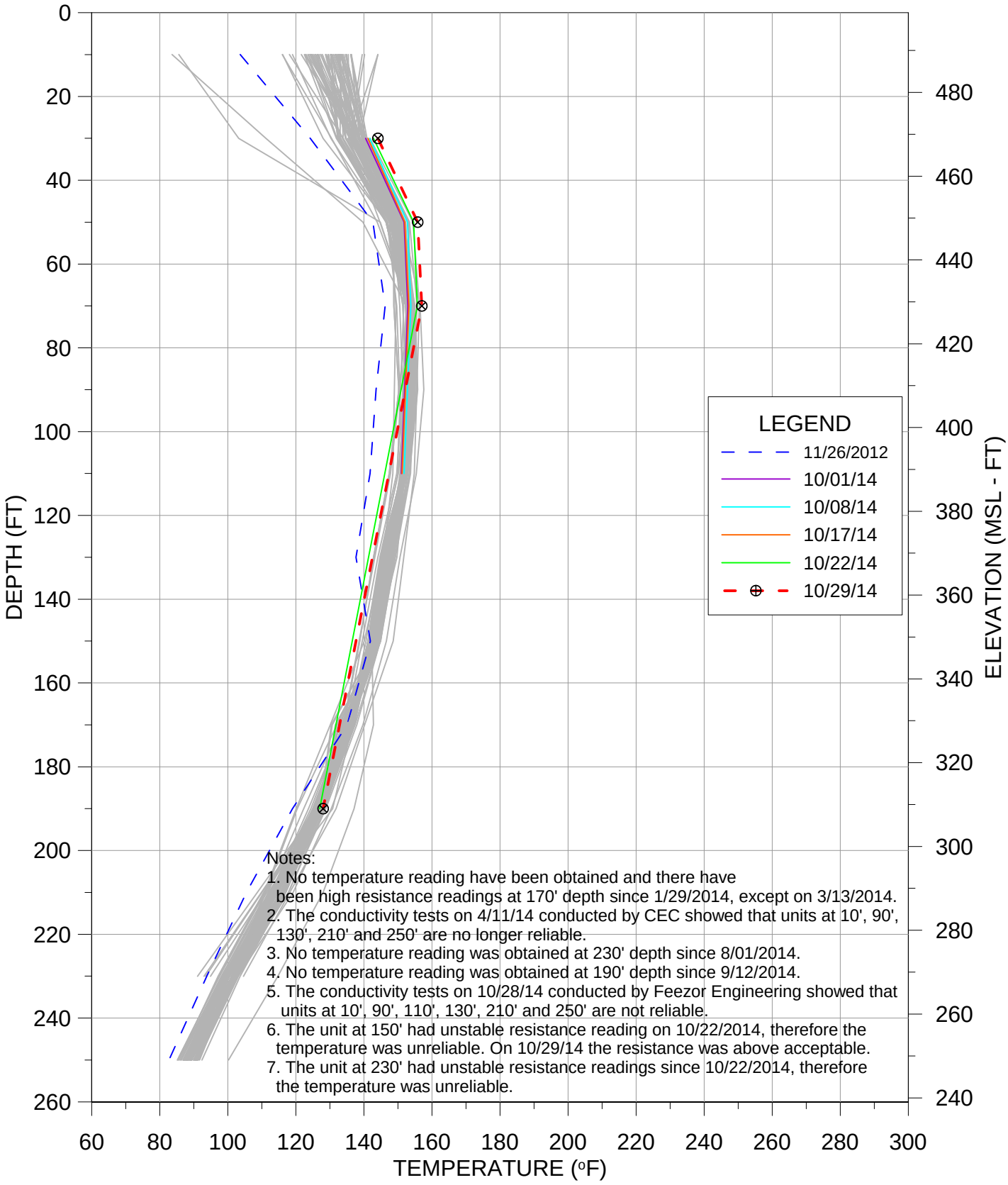
TMP-2



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 resistance reading that was fluctuation on 10/22/2014.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-3

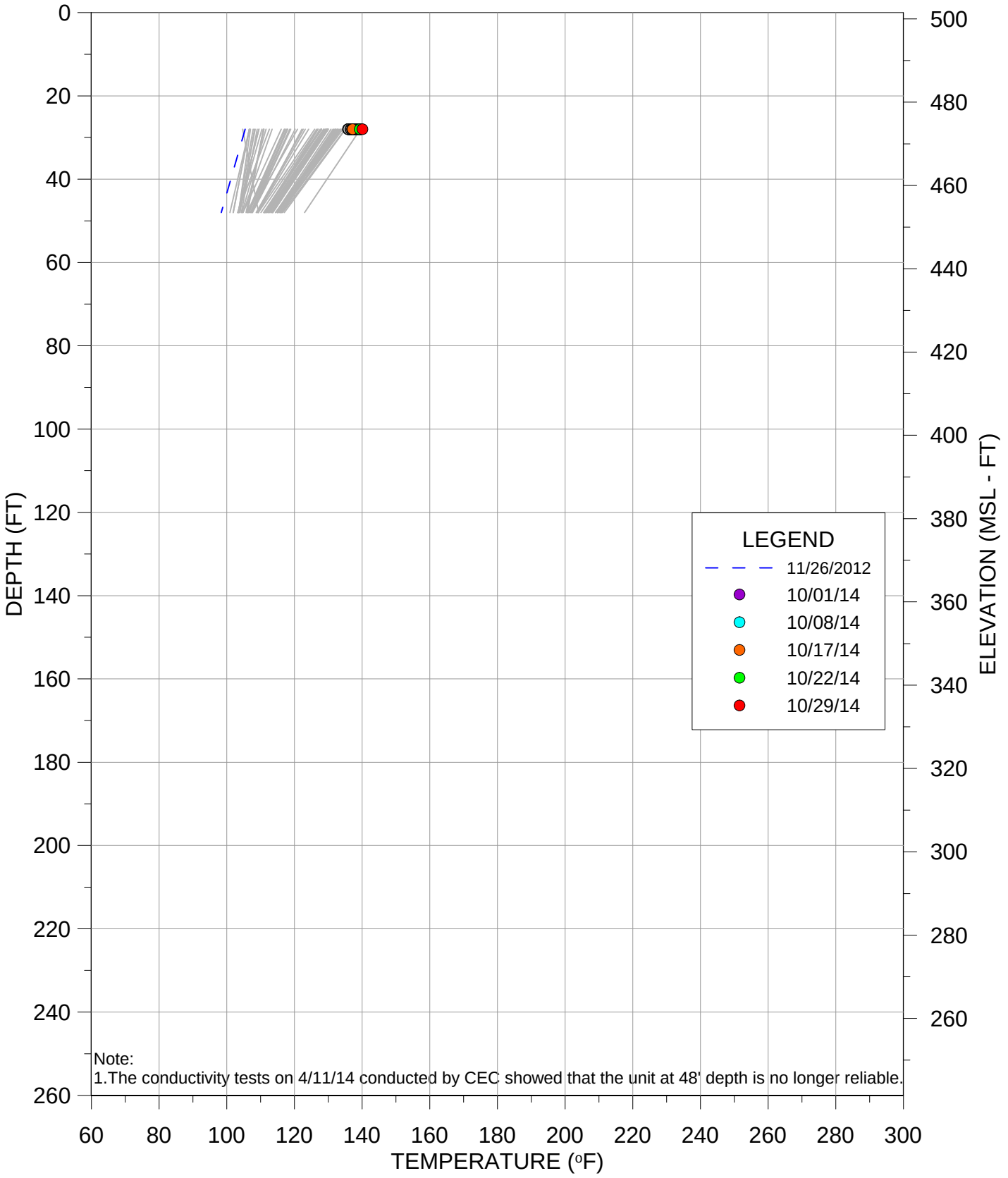


Notes:

1. No temperature reading have been obtained and there have been high resistance readings at 170' depth since 1/29/2014, except on 3/13/2014.
2. The conductivity tests on 4/11/14 conducted by CEC showed that units at 10', 90', 130', 210' and 250' are no longer reliable.
3. No temperature reading was obtained at 230' depth since 8/01/2014.
4. No temperature reading was obtained at 190' depth since 9/12/2014.
5. The conductivity tests on 10/28/14 conducted by Feezor Engineering showed that units at 10', 90', 110', 130', 210' and 250' are not reliable.
6. The unit at 150' had unstable resistance reading on 10/22/2014, therefore the temperature was unreliable. On 10/29/14 the resistance was above acceptable.
7. The unit at 230' had unstable resistance readings since 10/22/2014, therefore the temperature was unreliable.

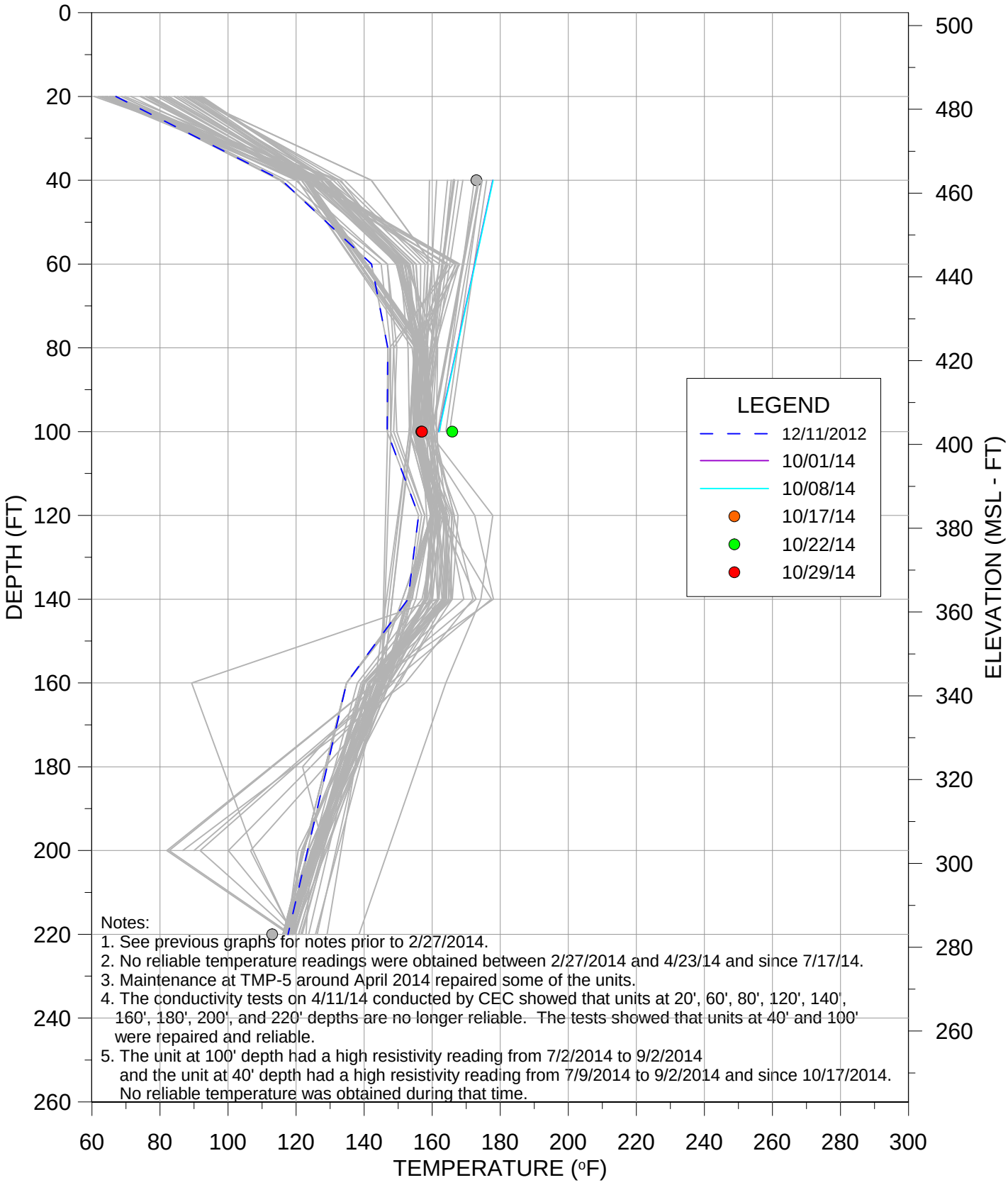
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-4



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

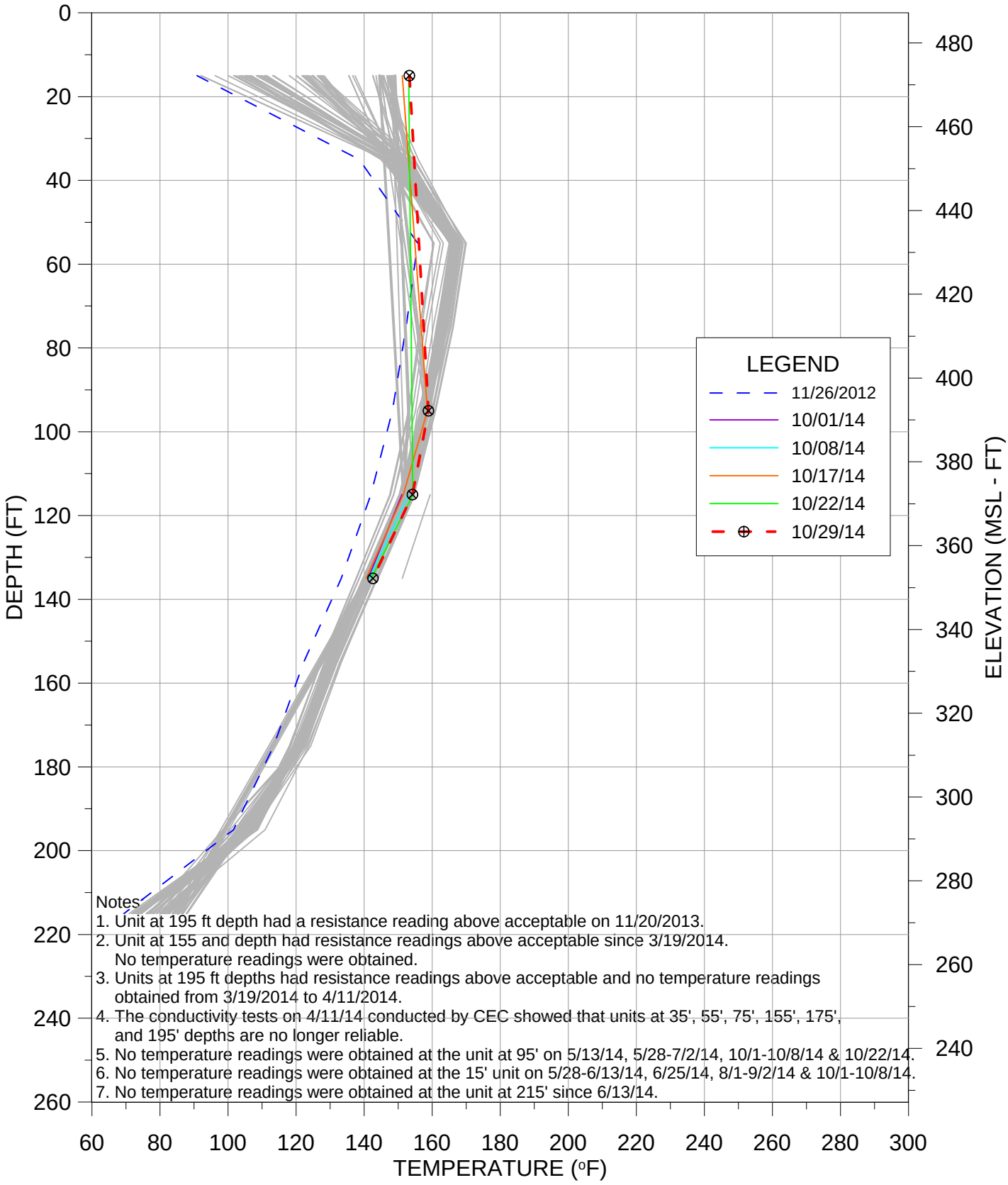
TMP-5



Notes:
1. See previous graphs for notes prior to 2/27/2014.
2. No reliable temperature readings were obtained between 2/27/2014 and 4/23/14 and since 7/17/14.
3. Maintenance at TMP-5 around April 2014 repaired some of the units.
4. The conductivity tests on 4/11/14 conducted by CEC showed that units at 20', 60', 80', 120', 140', 160', 180', 200', and 220' depths are no longer reliable. The tests showed that units at 40' and 100' were repaired and reliable.
5. The unit at 100' depth had a high resistivity reading from 7/2/2014 to 9/2/2014 and the unit at 40' depth had a high resistivity reading from 7/9/2014 to 9/2/2014 and since 10/17/2014. No reliable temperature was obtained during that time.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

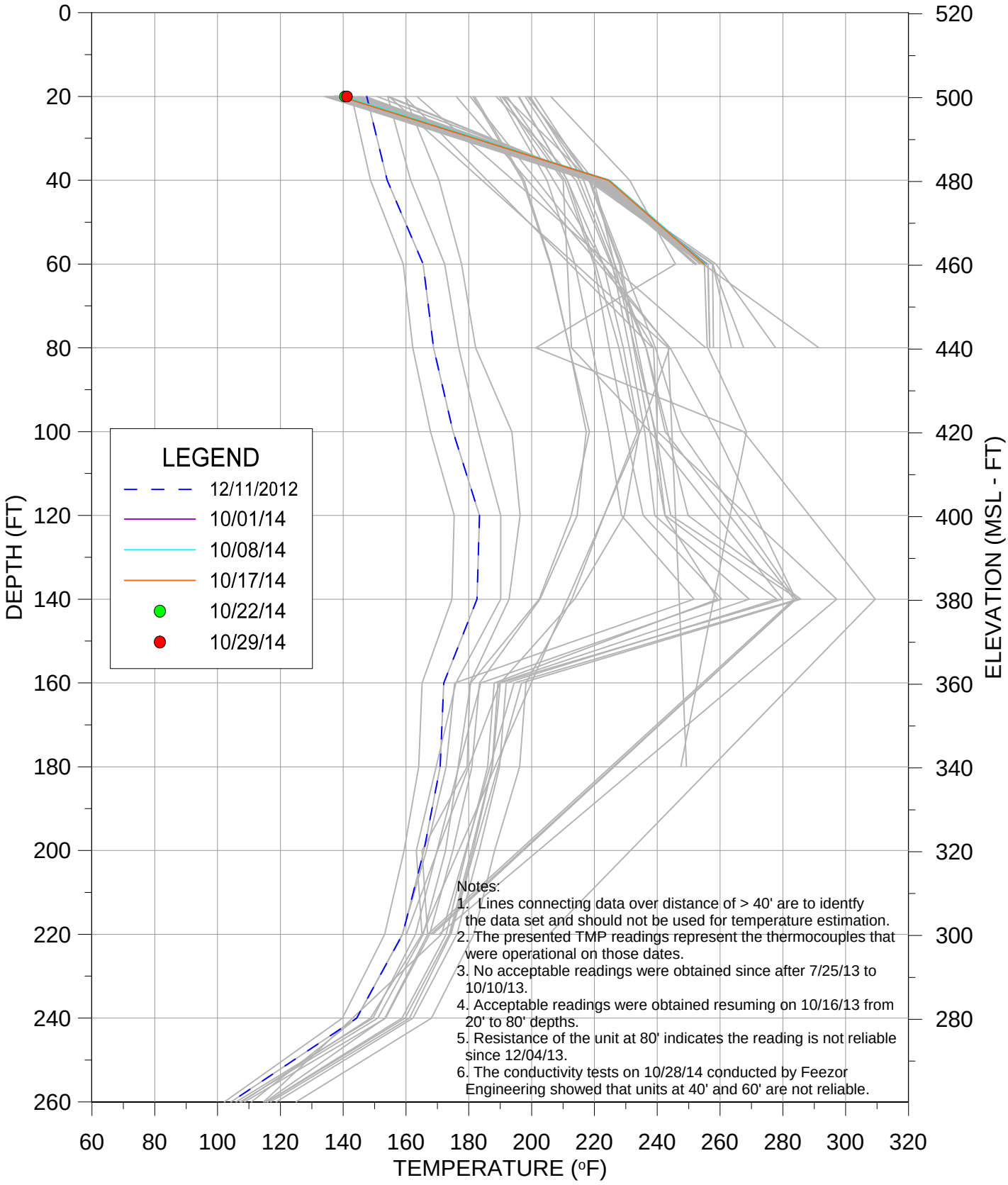
TMP-6



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 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.
6. No 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.
7. No temperature readings were obtained at the unit at 215' since 6/13/14.

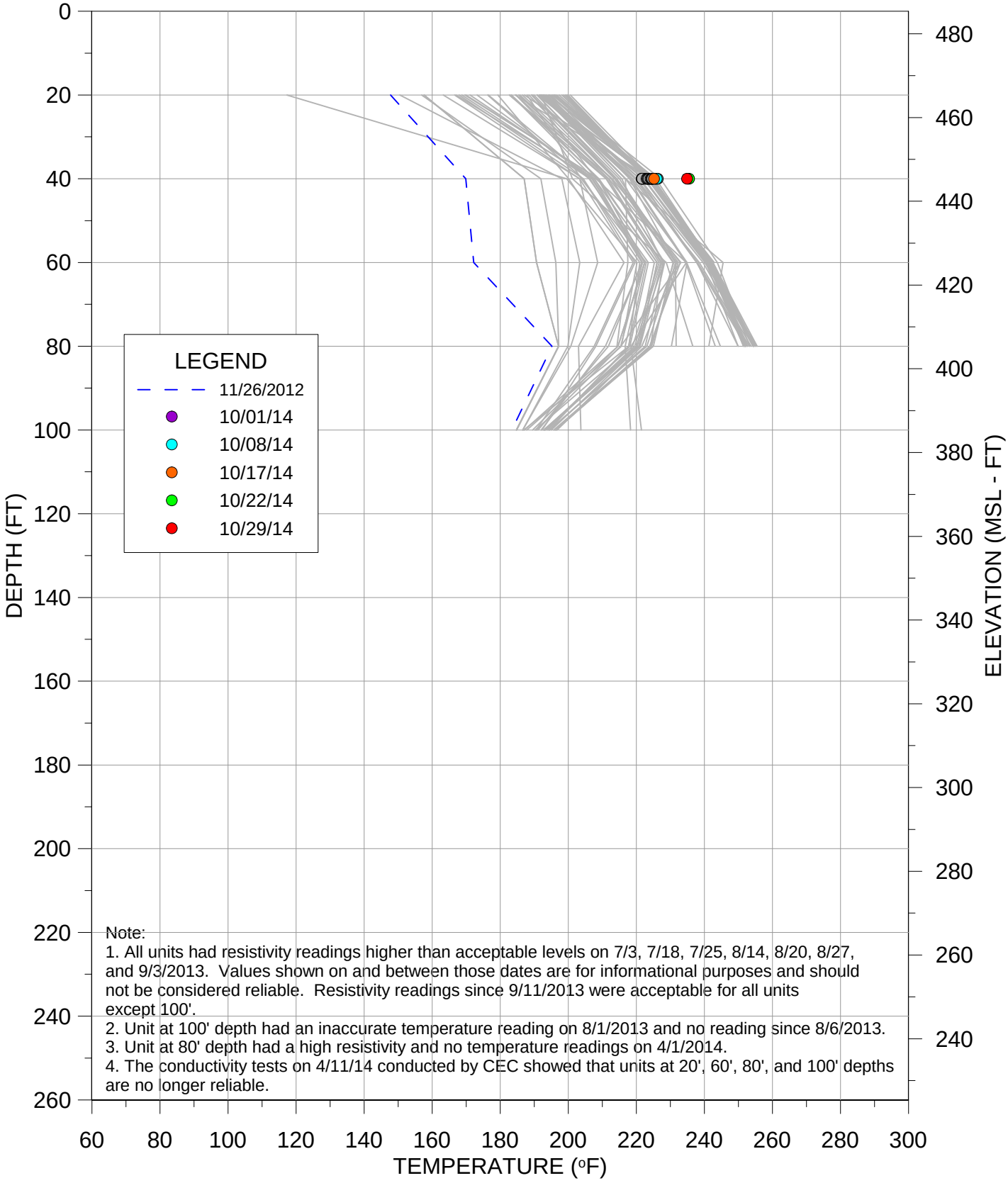
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-8



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

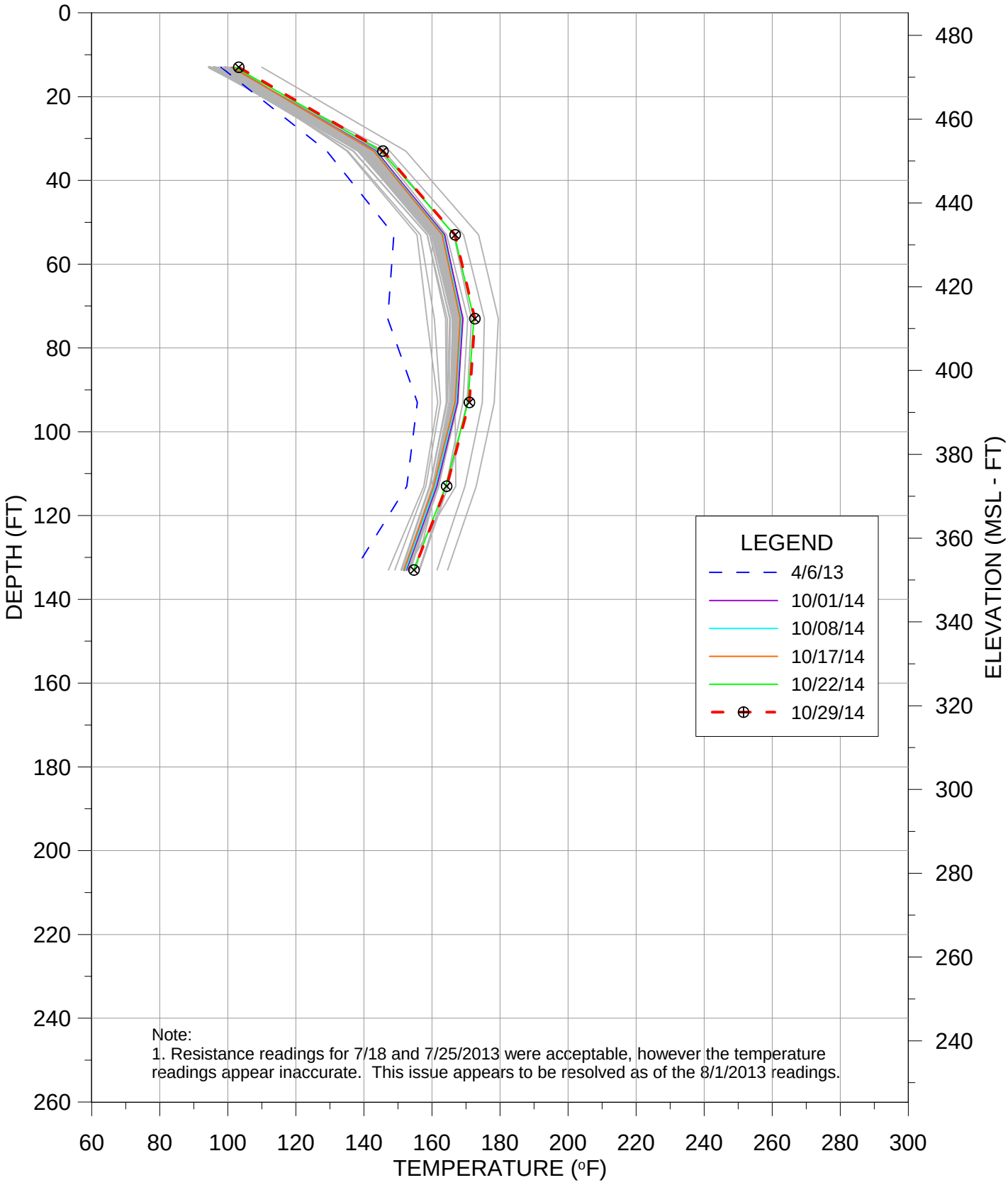
TMP-9



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.

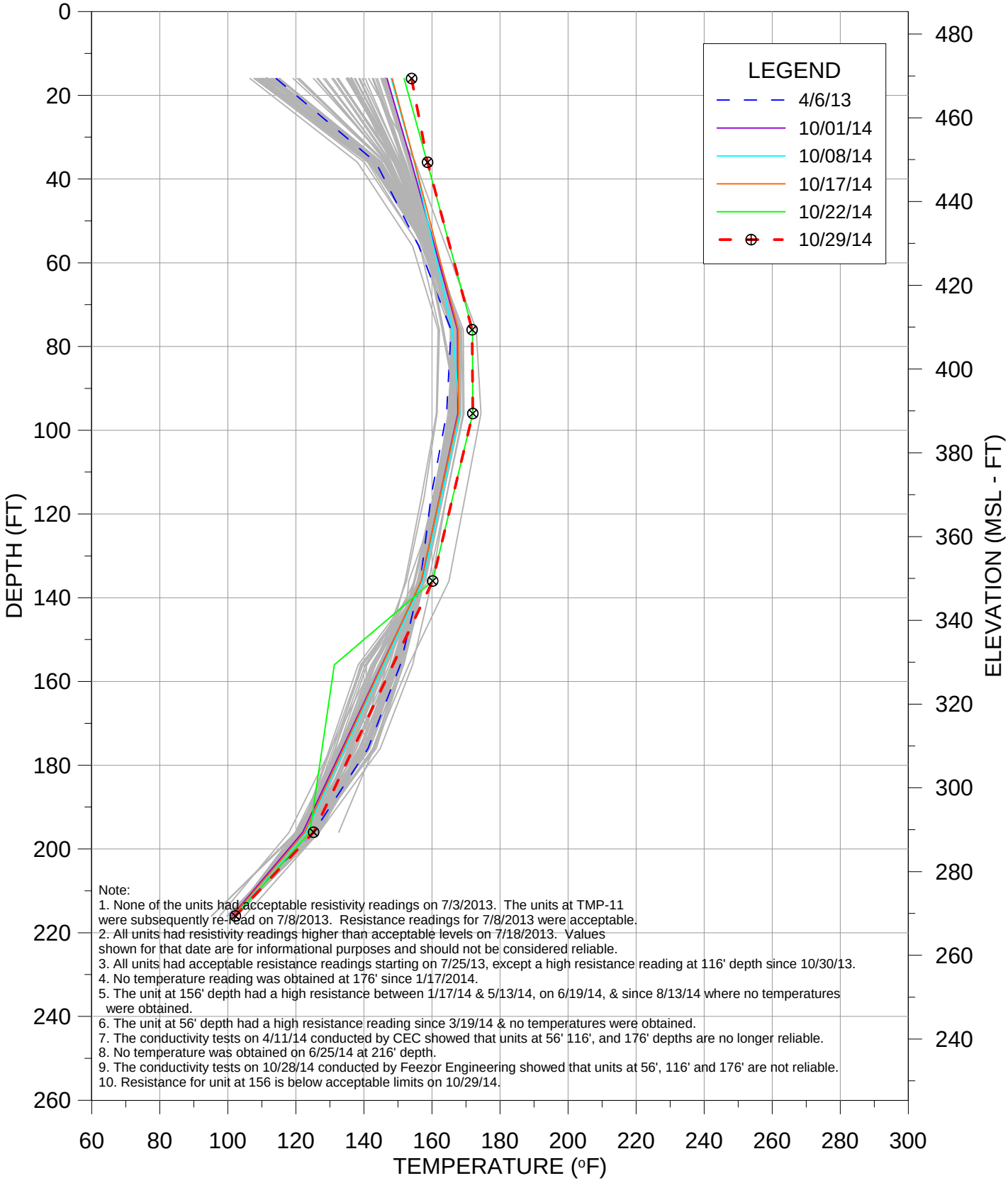
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-10



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

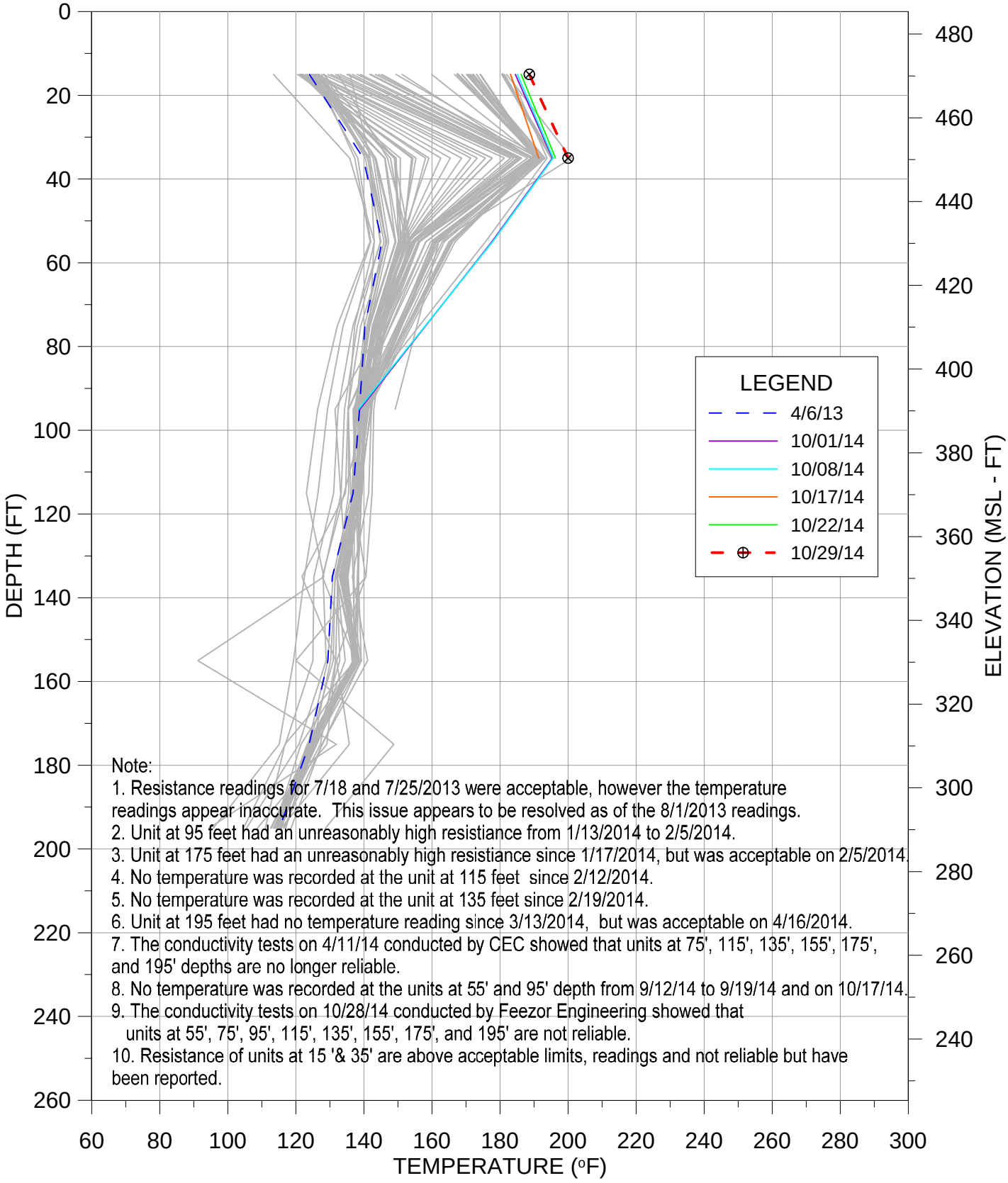
TMP-11



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 is below acceptable limits on 10/29/14.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

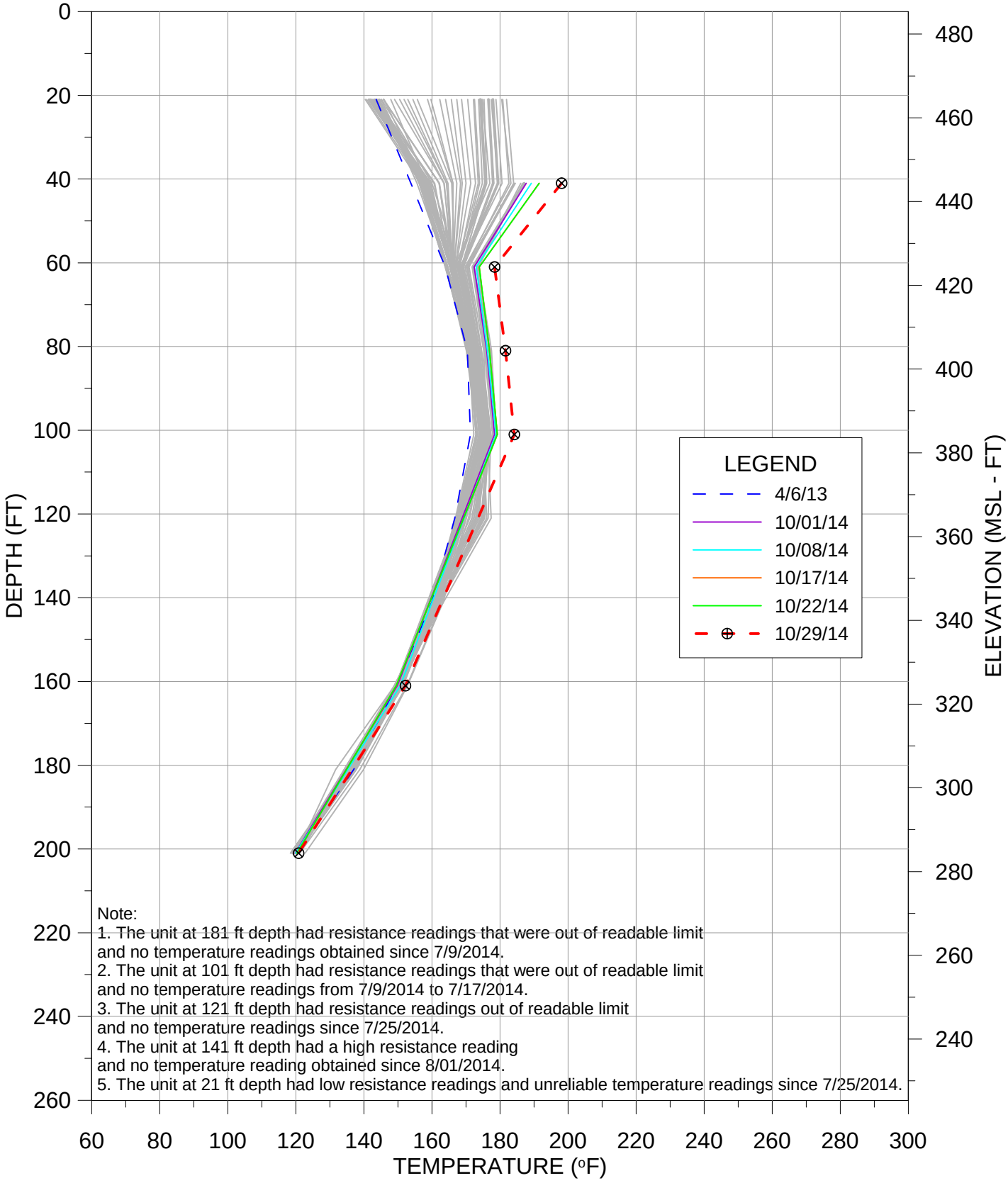
TMP-12



Note:
1. Resistance readings for 7/18 and 7/25/2013 were acceptable, however the temperature readings appear inaccurate. This issue appears to be resolved as of the 8/1/2013 readings.
2. Unit at 95 feet had an unreasonably high resistiance from 1/13/2014 to 2/5/2014.
3. Unit at 175 feet had an unreasonably high resistiance since 1/17/2014, but was acceptable on 2/5/2014.
4. No temperature was recorded at the unit at 115 feet since 2/12/2014.
5. No temperature was recorded at the unit at 135 feet since 2/19/2014.
6. Unit at 195 feet had no temperature reading since 3/13/2014, but was acceptable on 4/16/2014.
7. The conductivity tests on 4/11/14 conducted by CEC showed that units at 75', 115', 135', 155', 175', and 195' depths are no longer reliable.
8. No temperature was recorded at the units at 55' and 95' depth from 9/12/14 to 9/19/14 and on 10/17/14.
9. The conductivity tests on 10/28/14 conducted by Feezor Engineering showed that units at 55', 75', 95', 115', 135', 155', 175', and 195' are not reliable.
10. Resistance of units at 15 '& 35' are above acceptable limits, readings and not reliable but have been reported.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

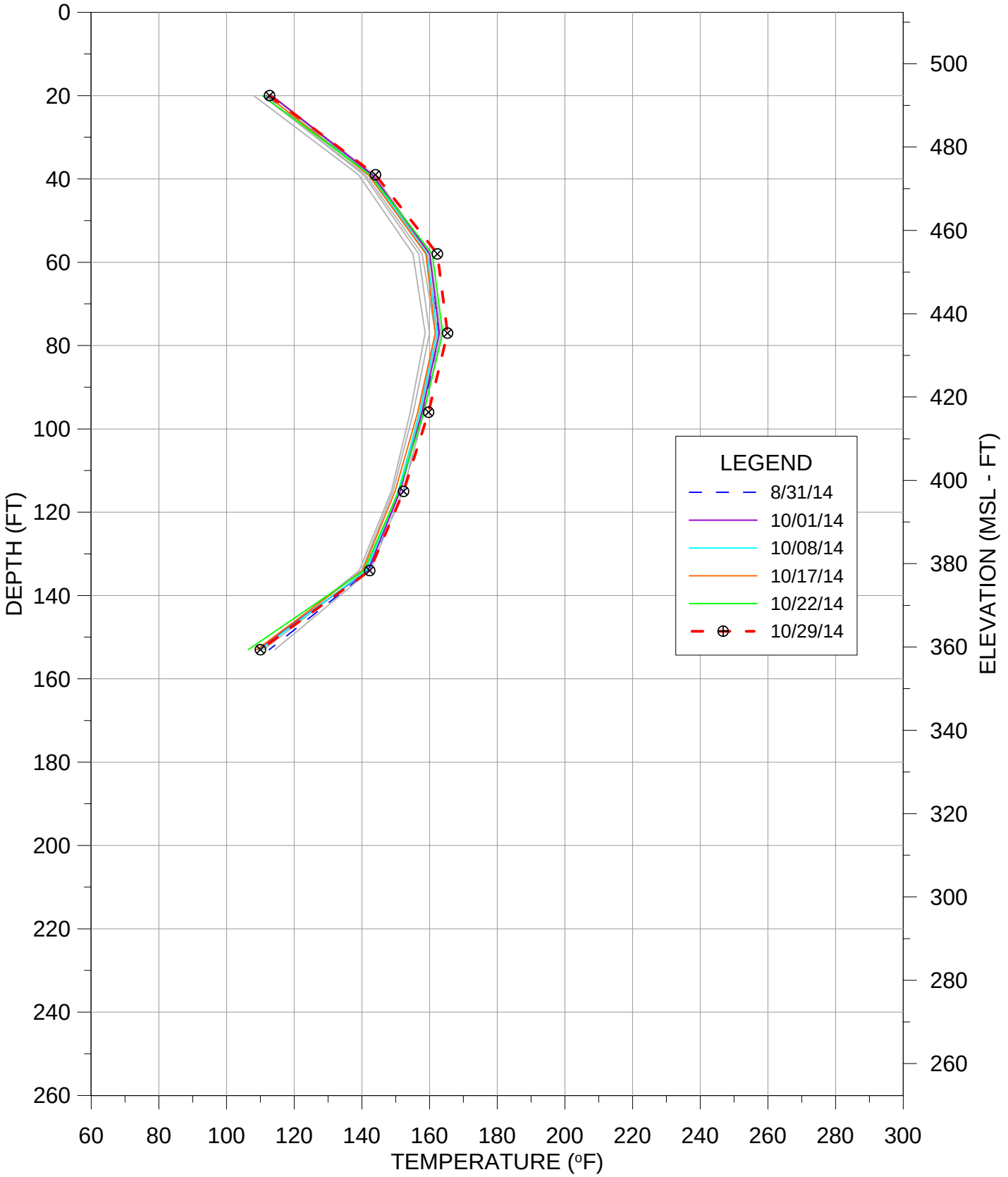
TMP-14



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.

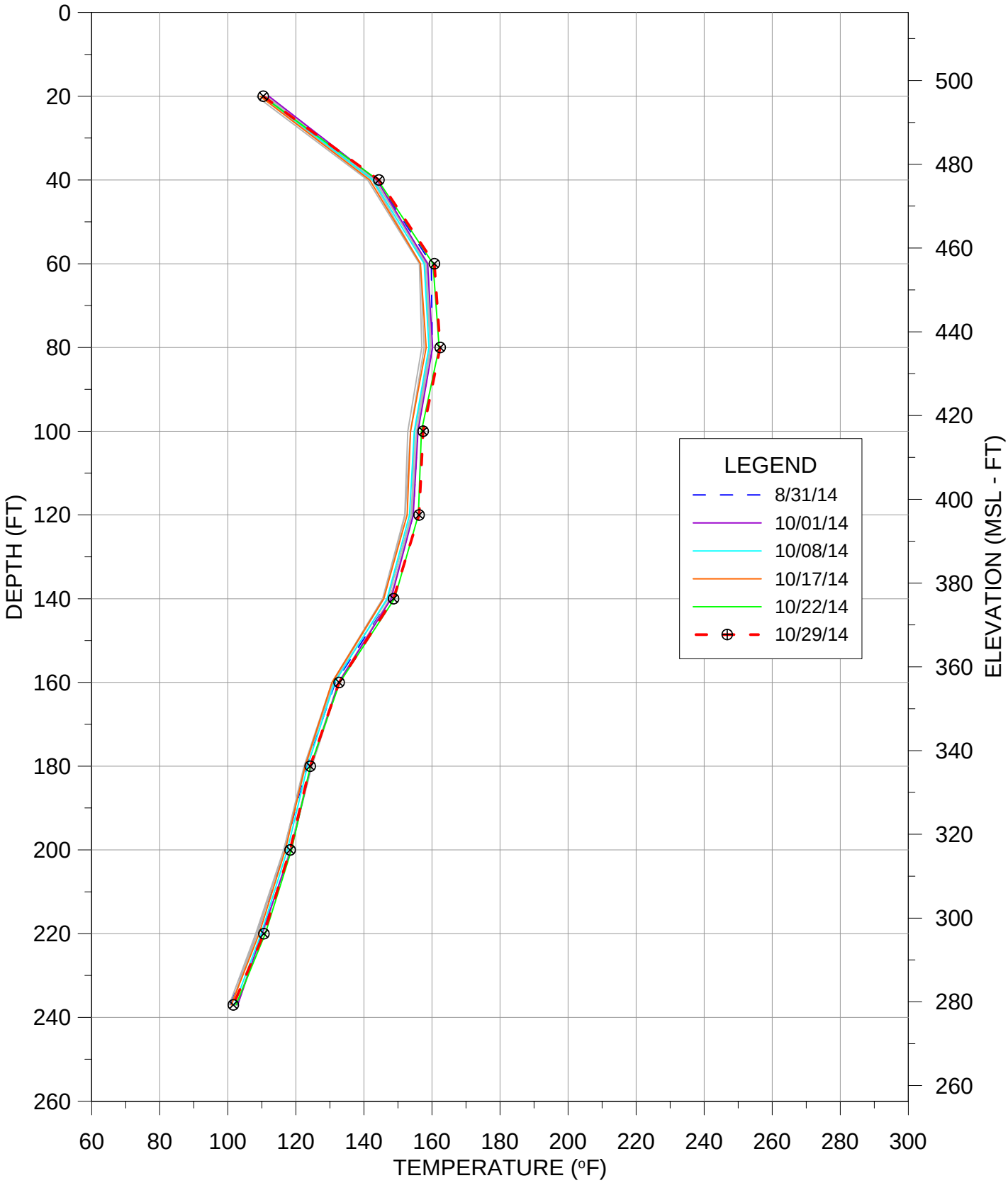
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-16



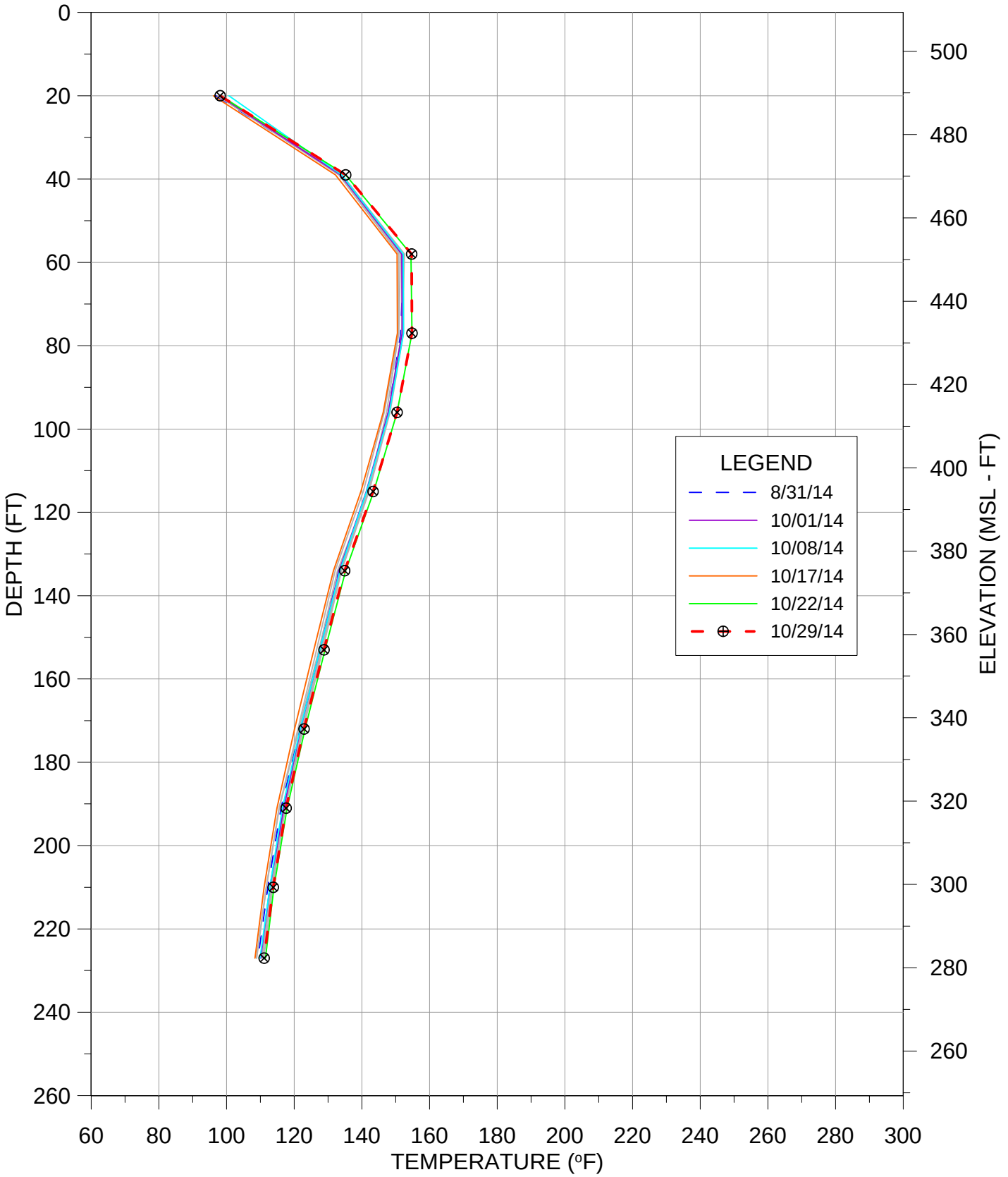
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-17



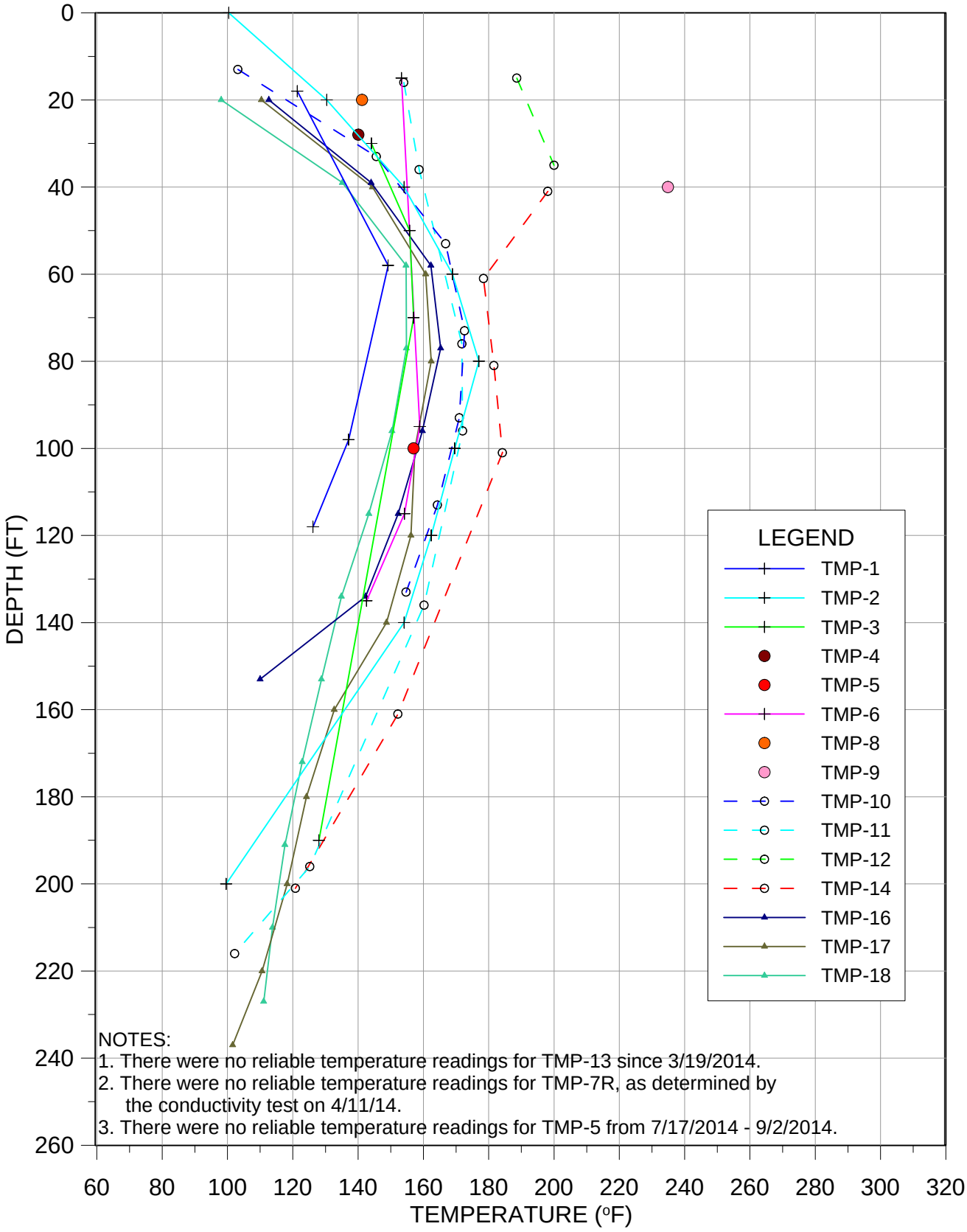
TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

TMP-18



TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

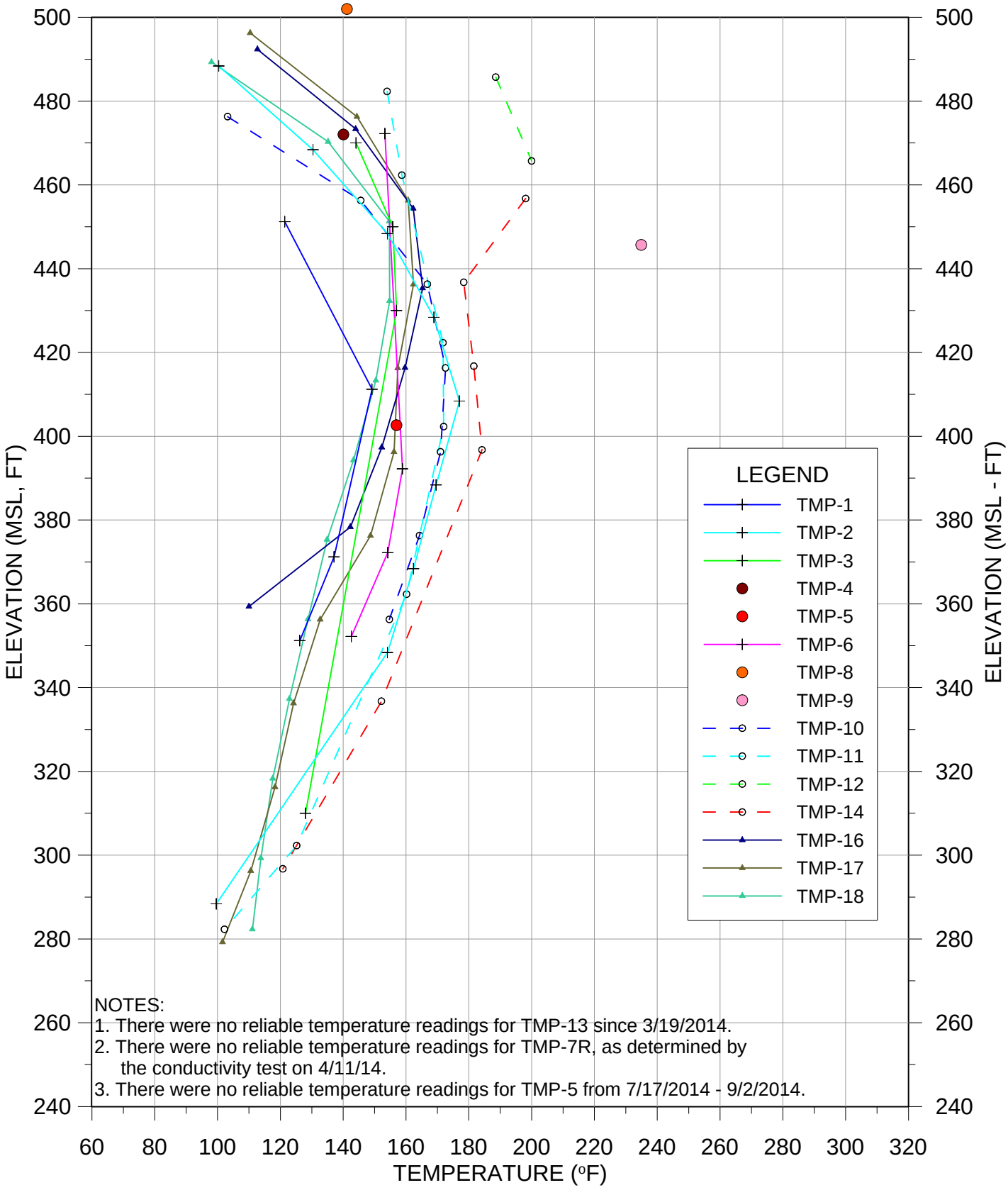
10/29/2014 -DEPTH



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 7/17/2014 - 9/2/2014.

TEMPERATURE VS ELEVATION
BRIDGETON LANDFILL

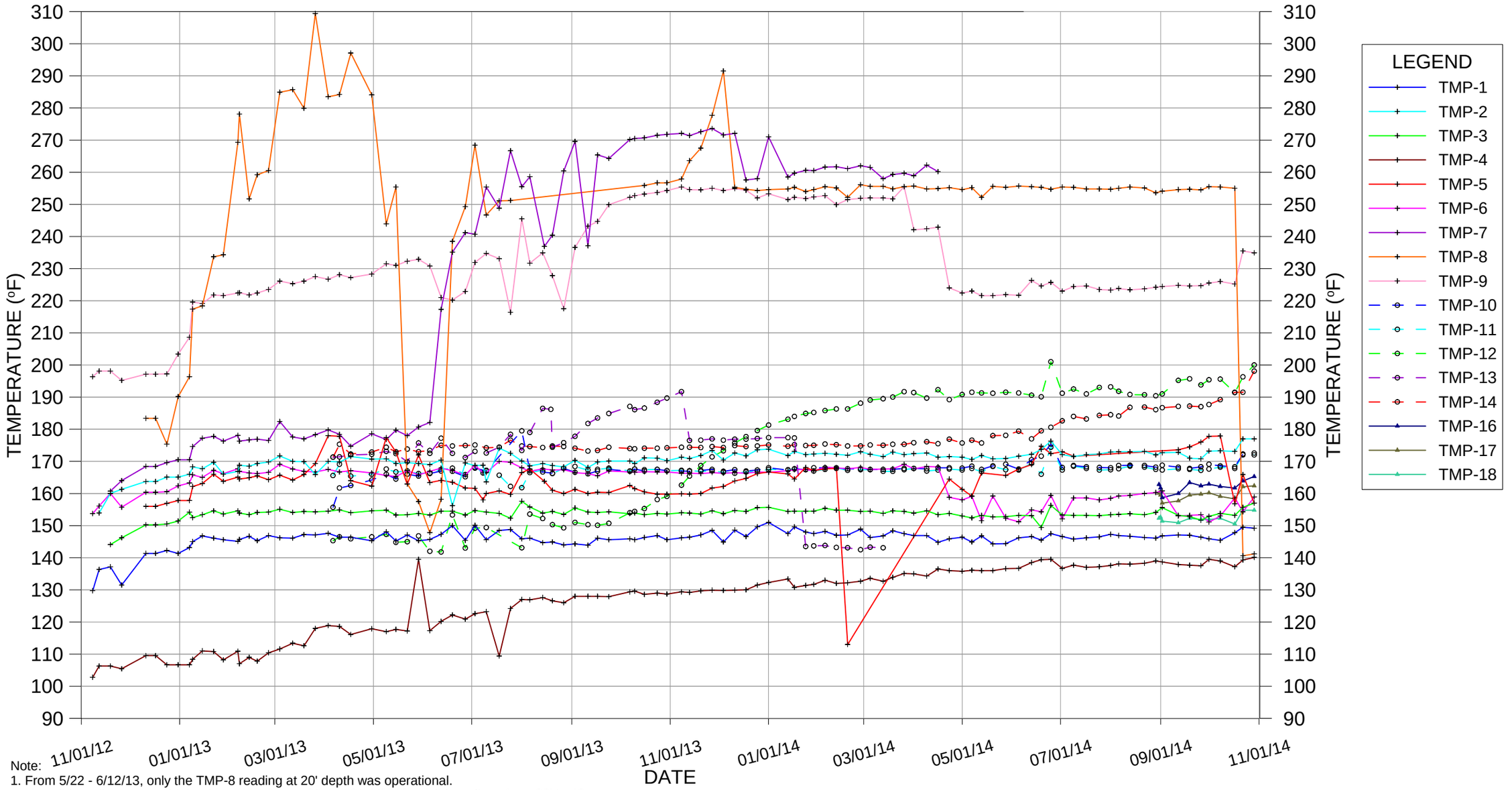
10/29/2014 - ELEVATION



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 7/17/2014 - 9/2/2014.

TEMPERATURE VS DEPTH
BRIDGETON LANDFILL

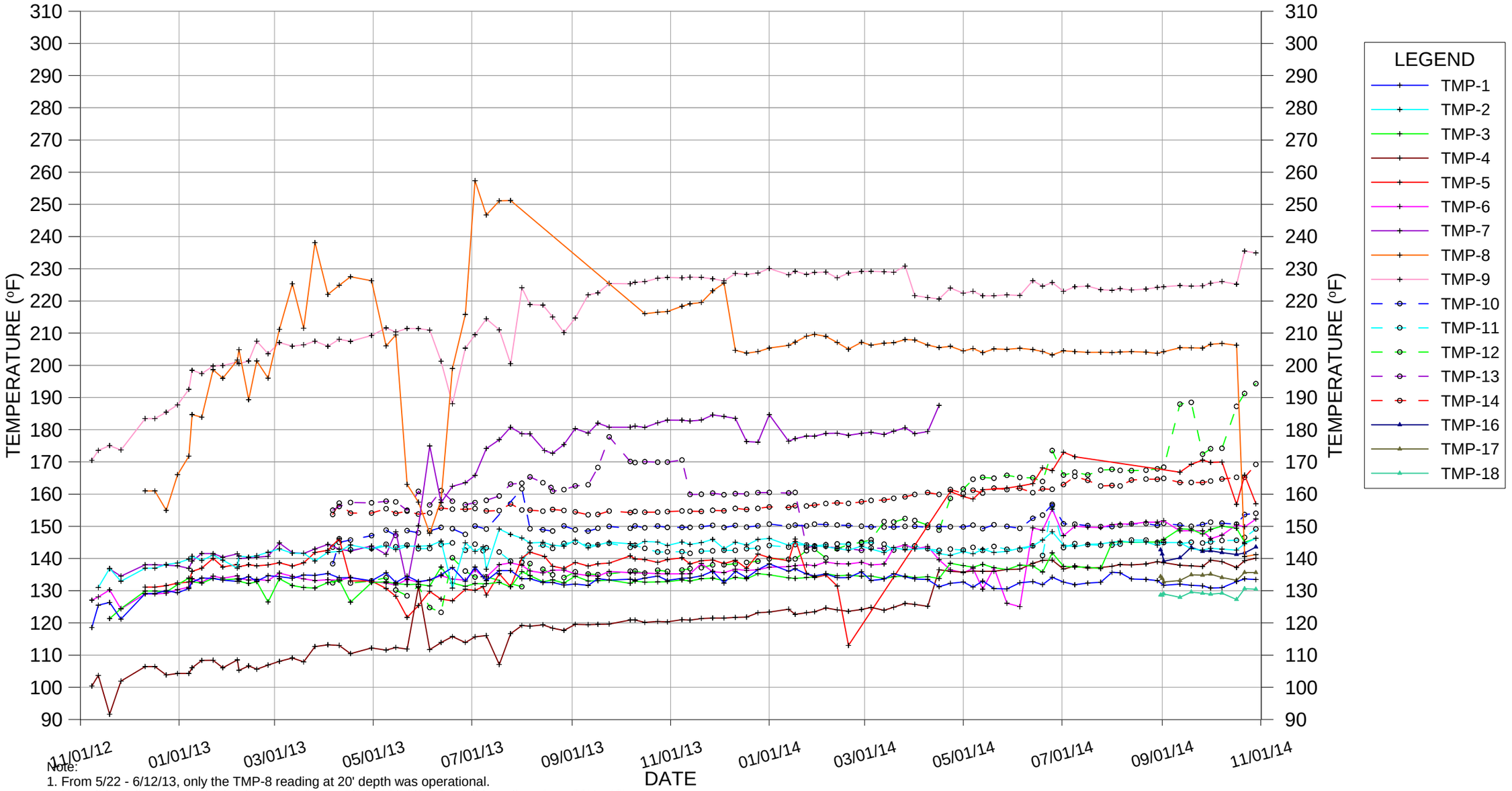
MAXIMUM TEMPERATURES



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:

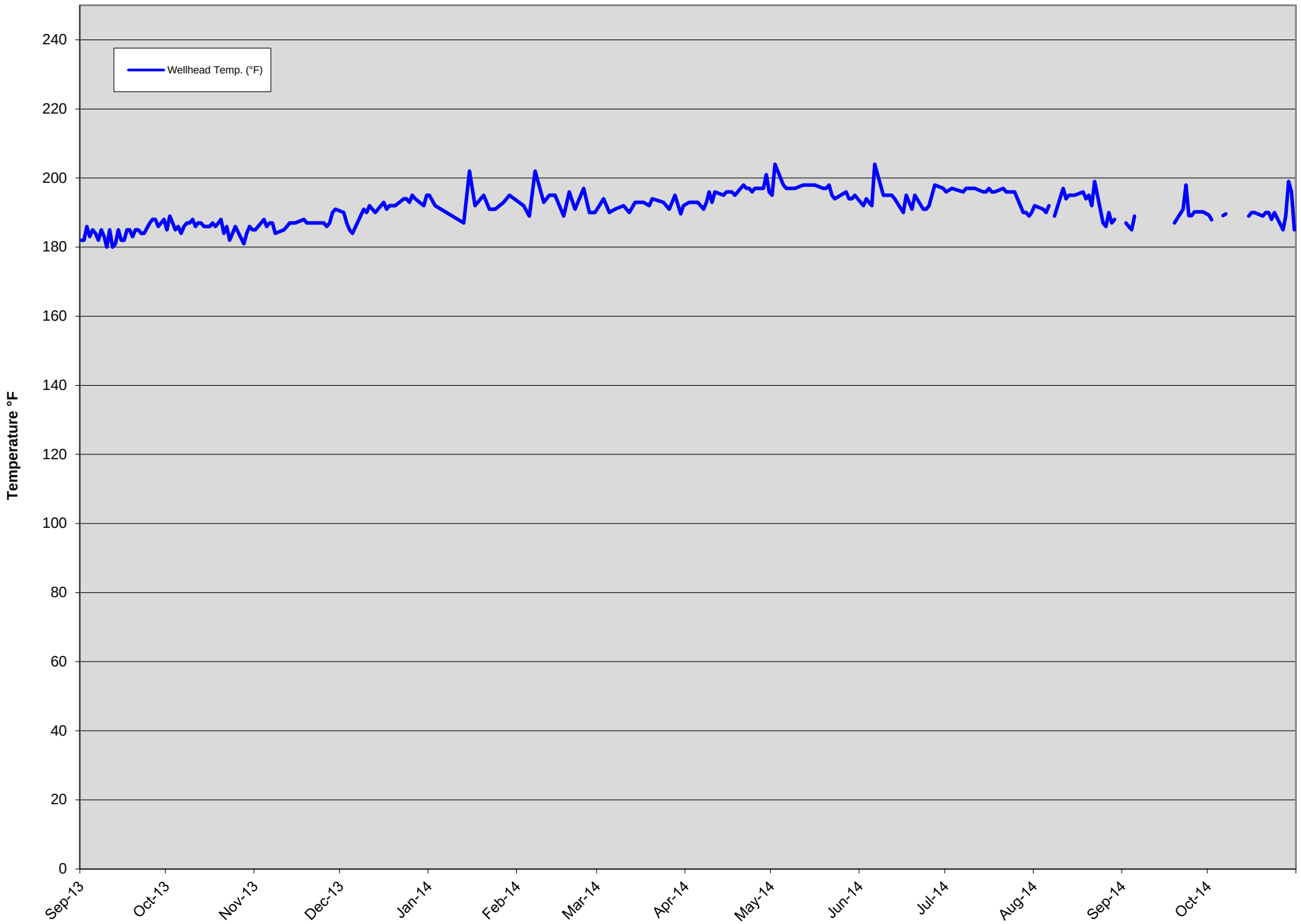
1. From 5/22 - 6/12/13, only the TMP-8 reading at 20' depth was operational.
   No valid readings were obtained for TMP-8 from 8/1 to 10/10/2013. Valid readings from 20' to 40' resumed on 10/16/2013.
2. A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more vaild readings.
3. No valid readings 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

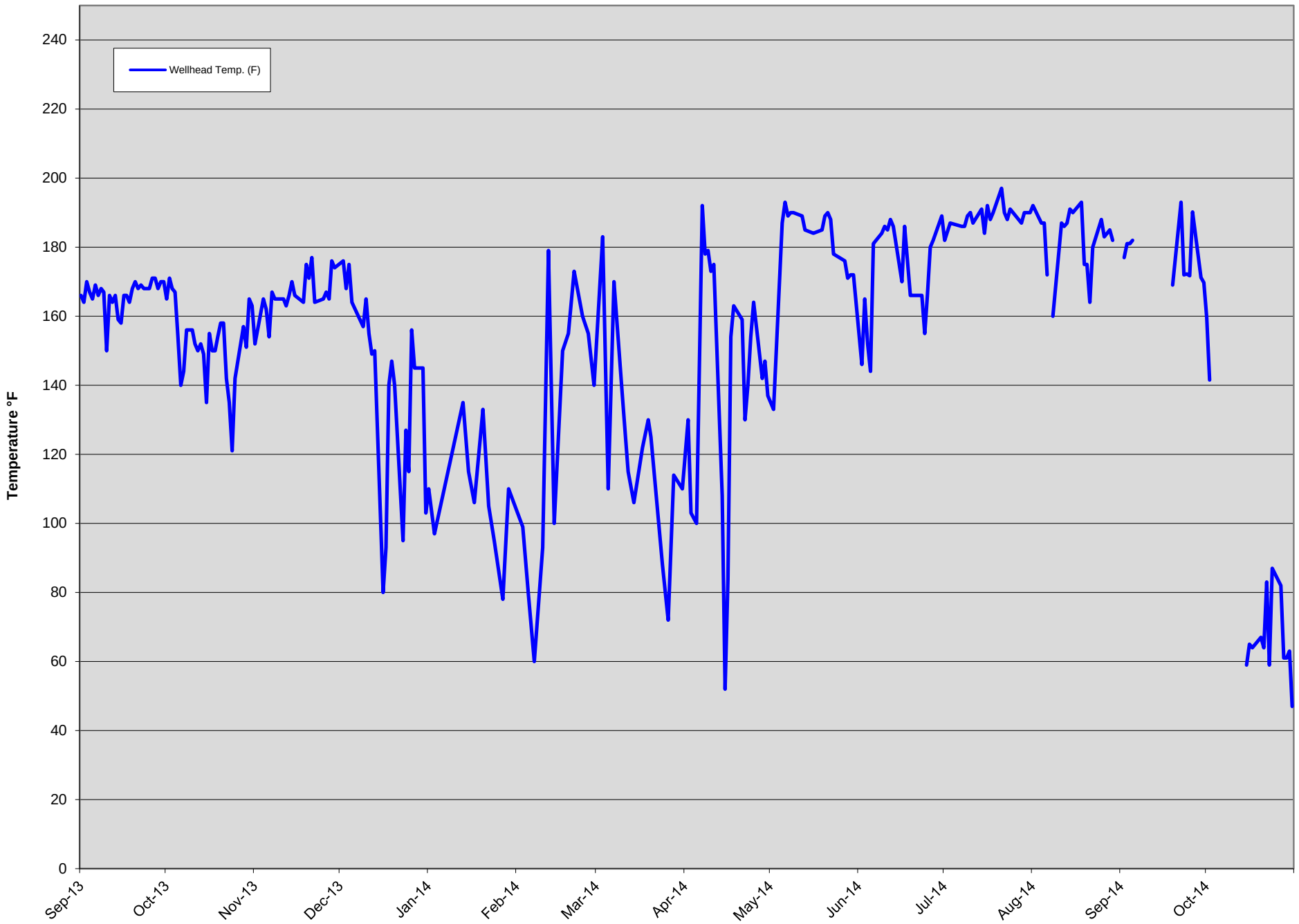
ATTACHMENT C

GAS INTERCEPTOR WELLHEAD TEMPERATURE GRAPHS

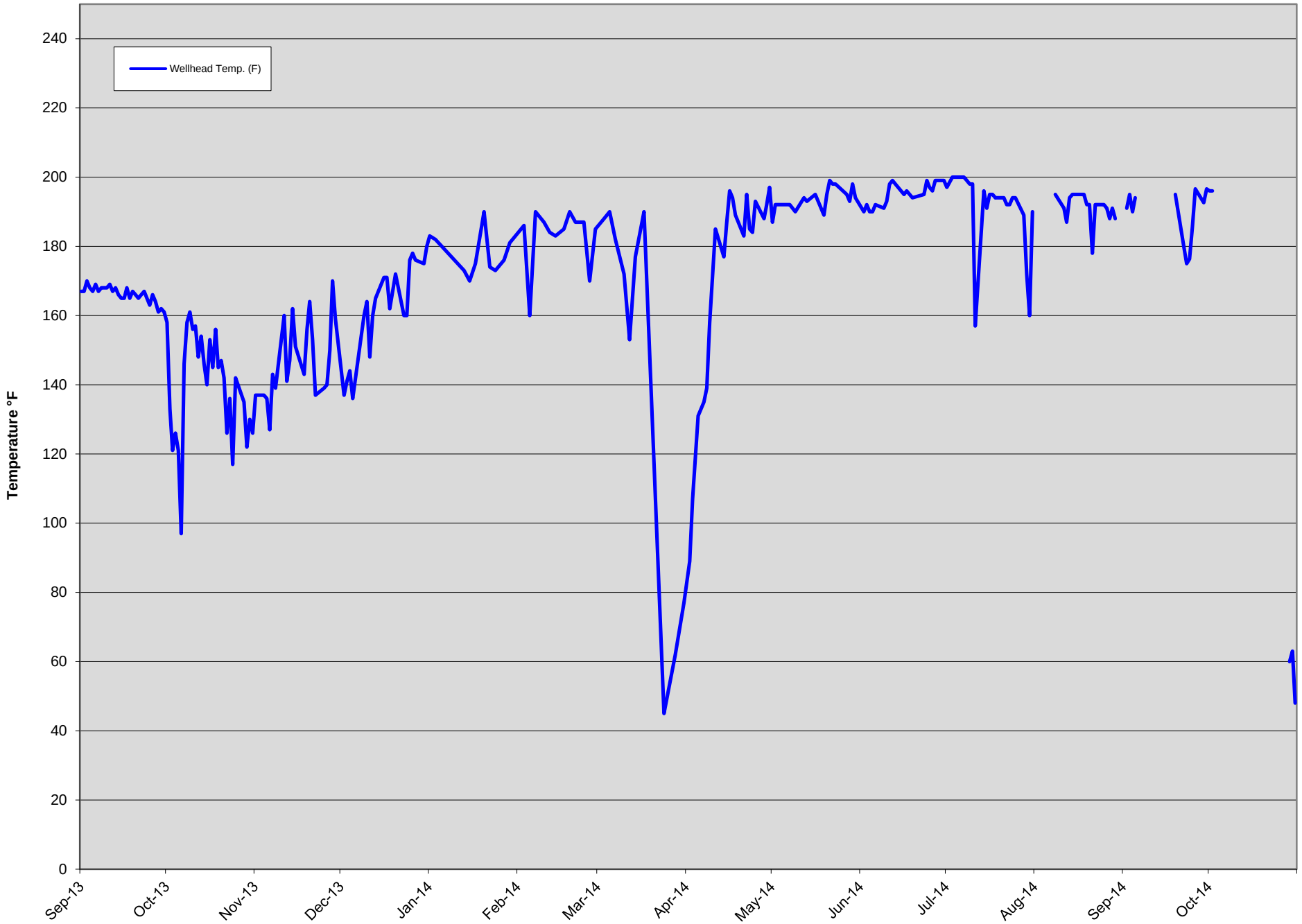
GIW-1 Wellhead Temperatures



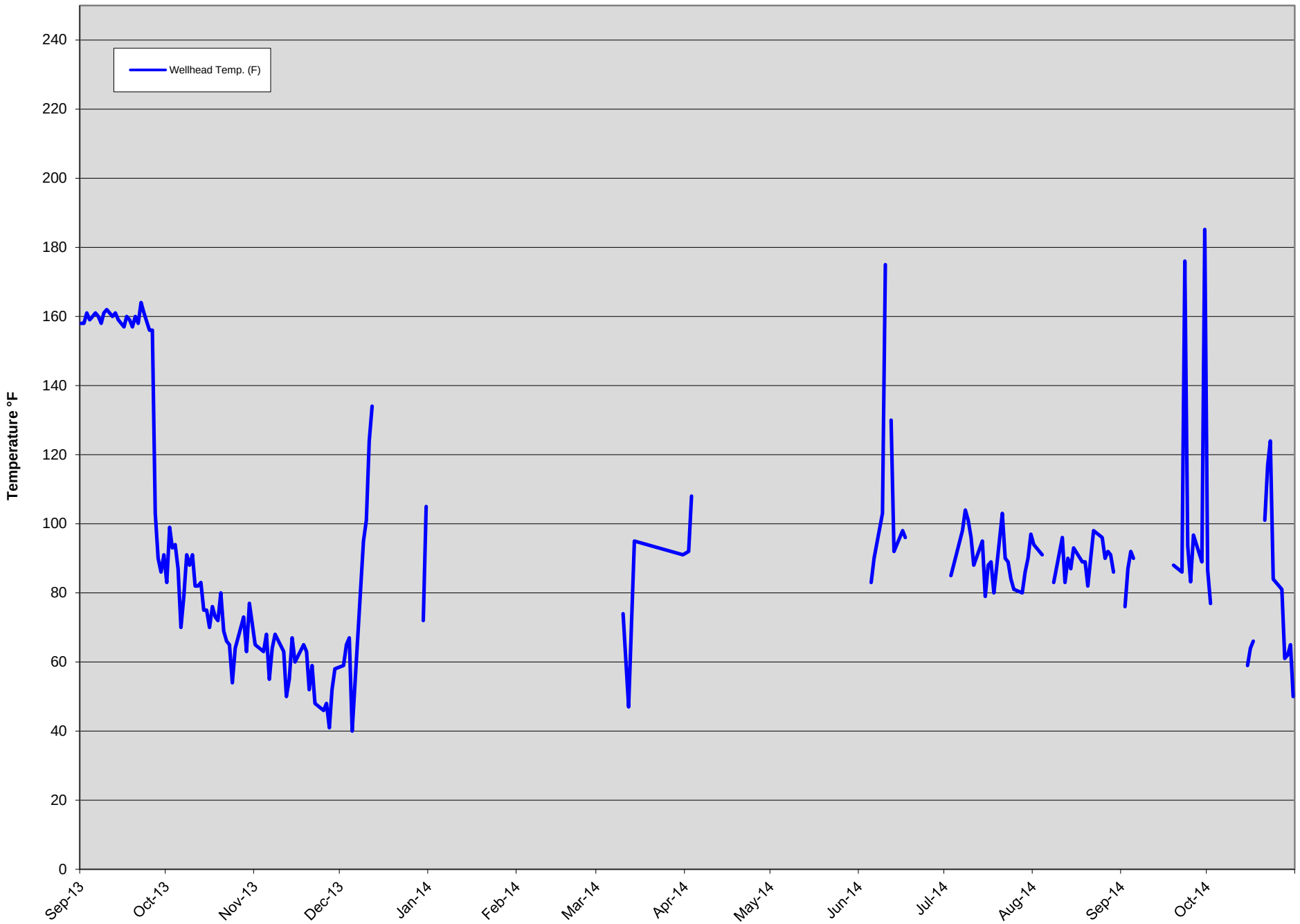
GIW-2 Wellhead Temperatures



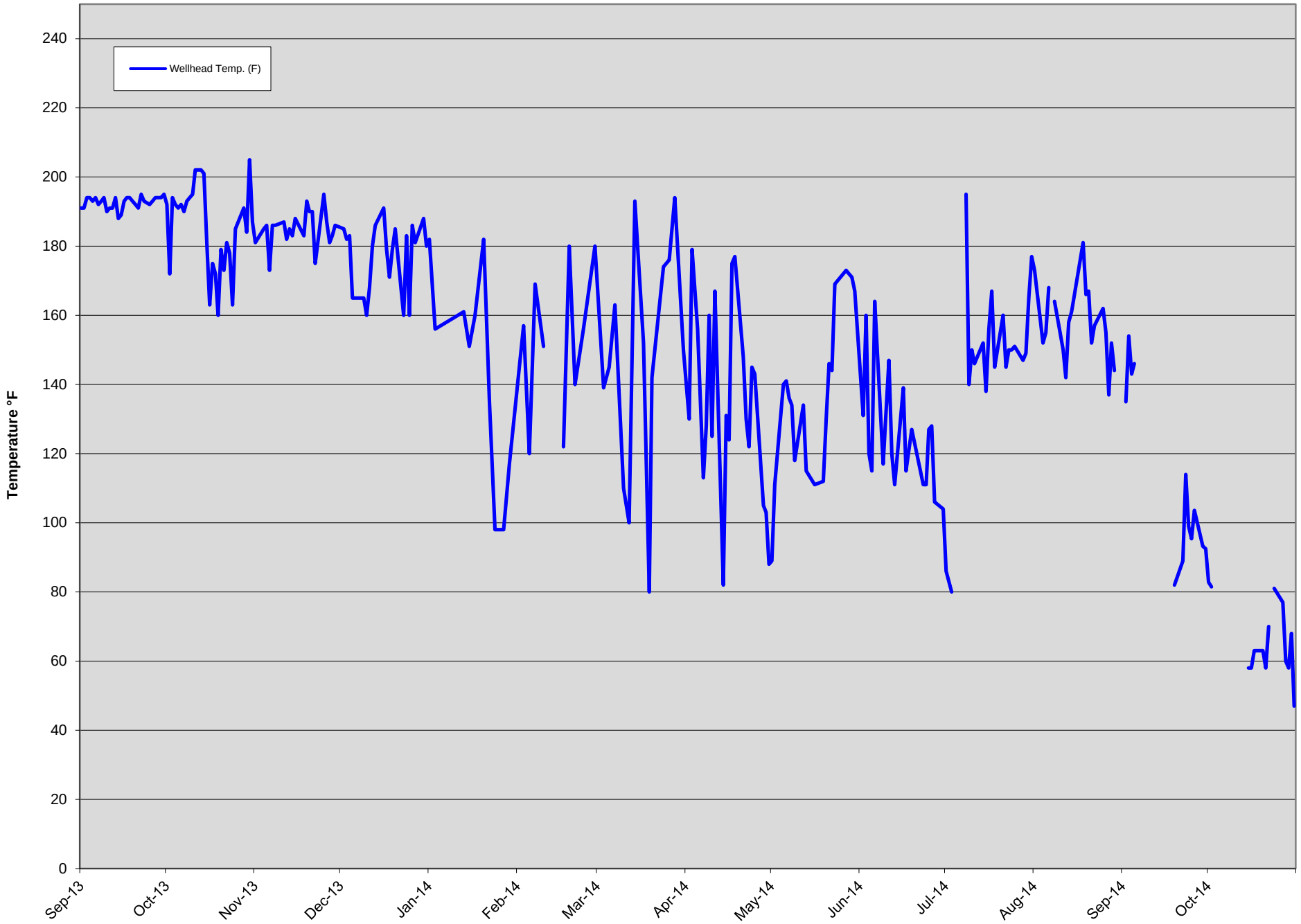
GIW-3 Wellhead Temperatures



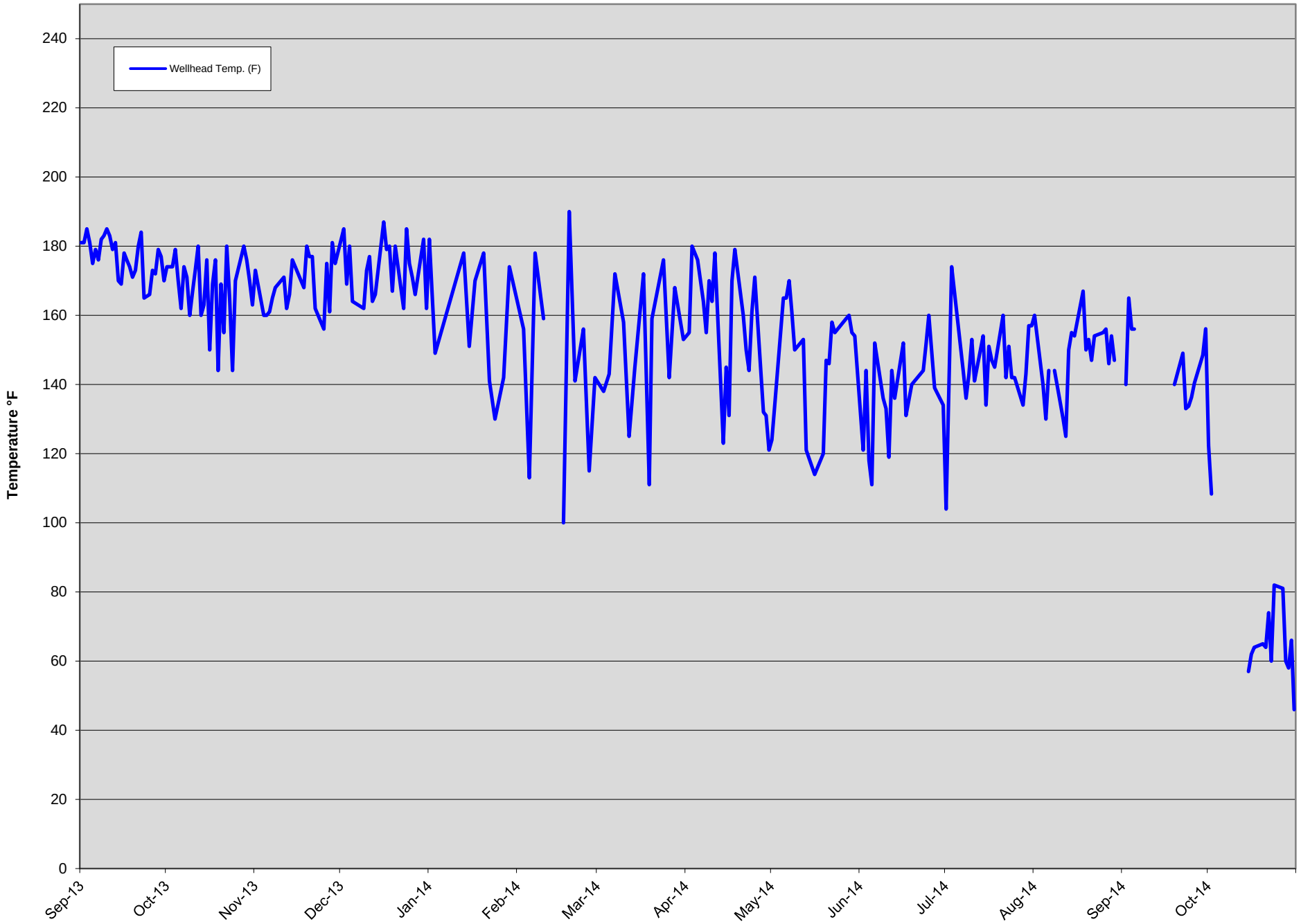
GIW-4 Wellhead Temperatures



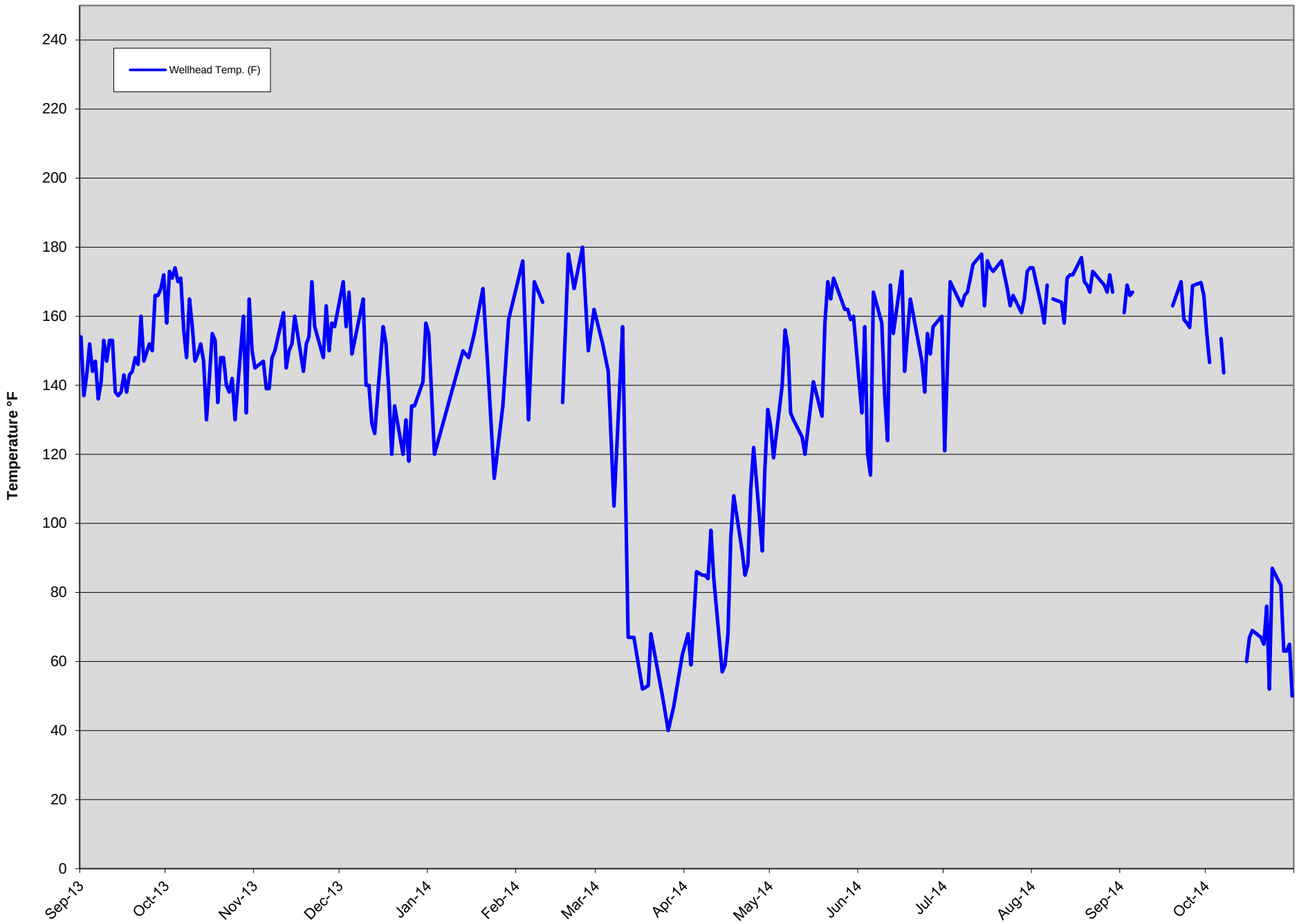
GIW-5 Wellhead Temperatures



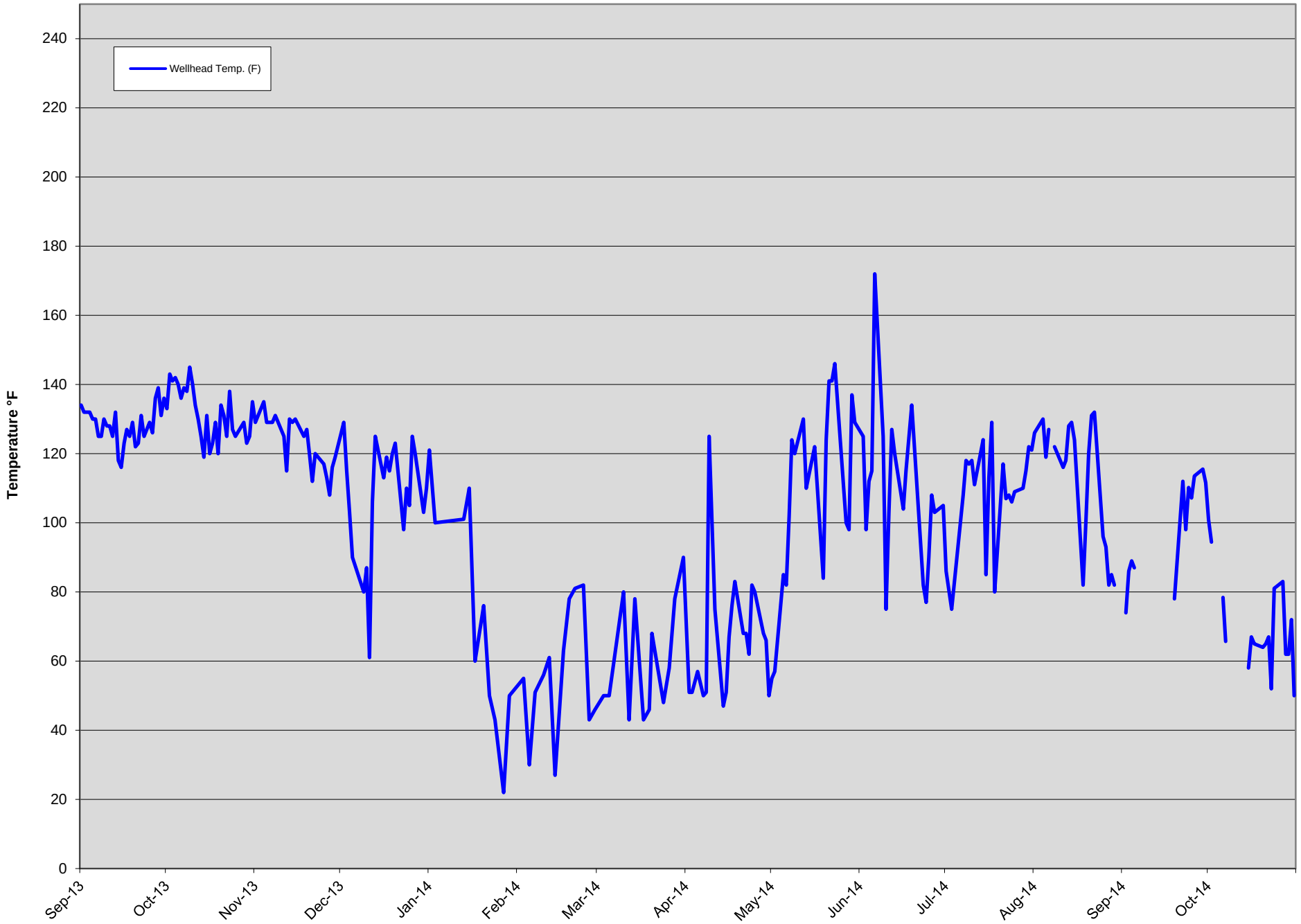
GIW-6 Wellhead Temperatures



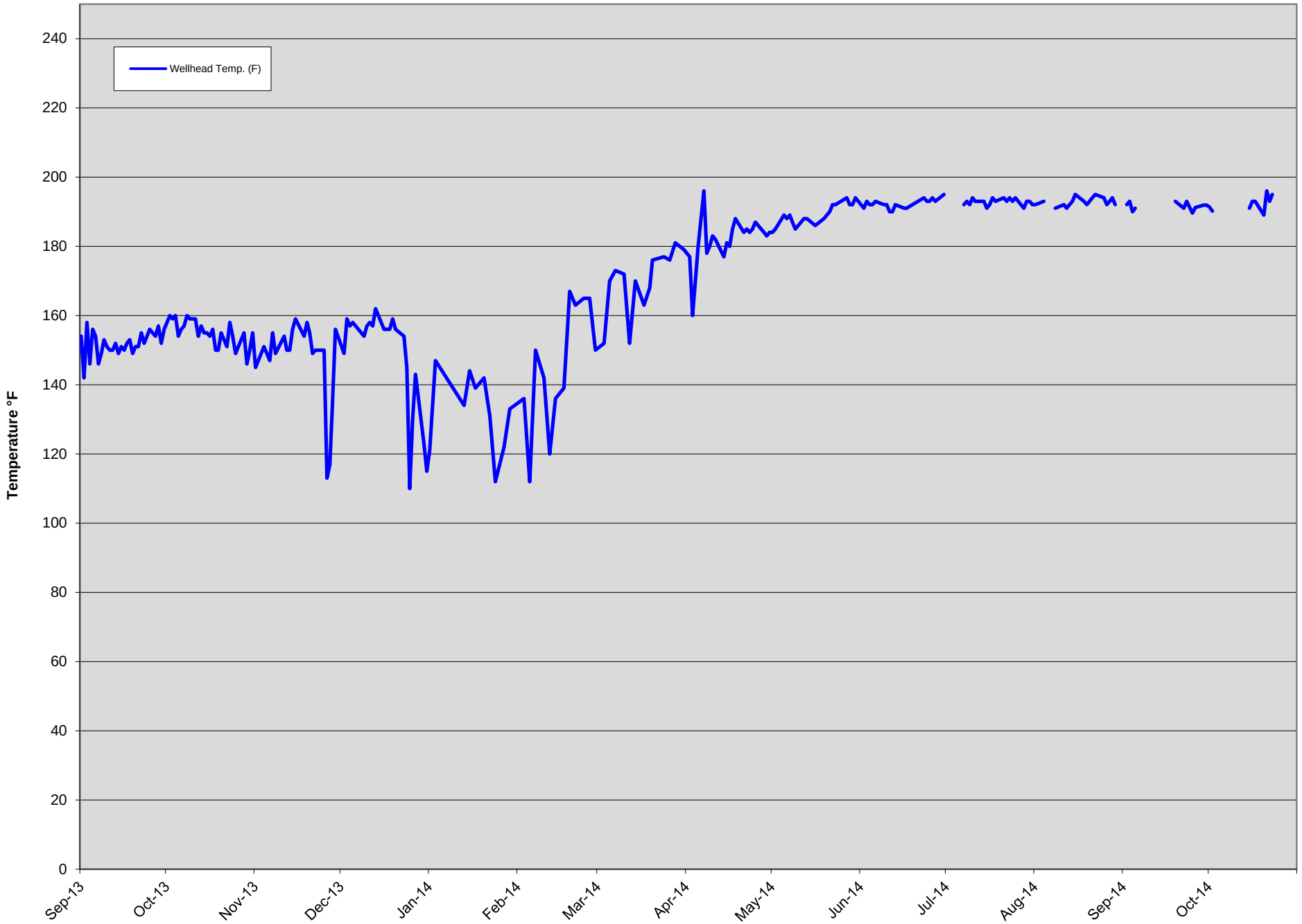
GIW-7 Wellhead Temperatures



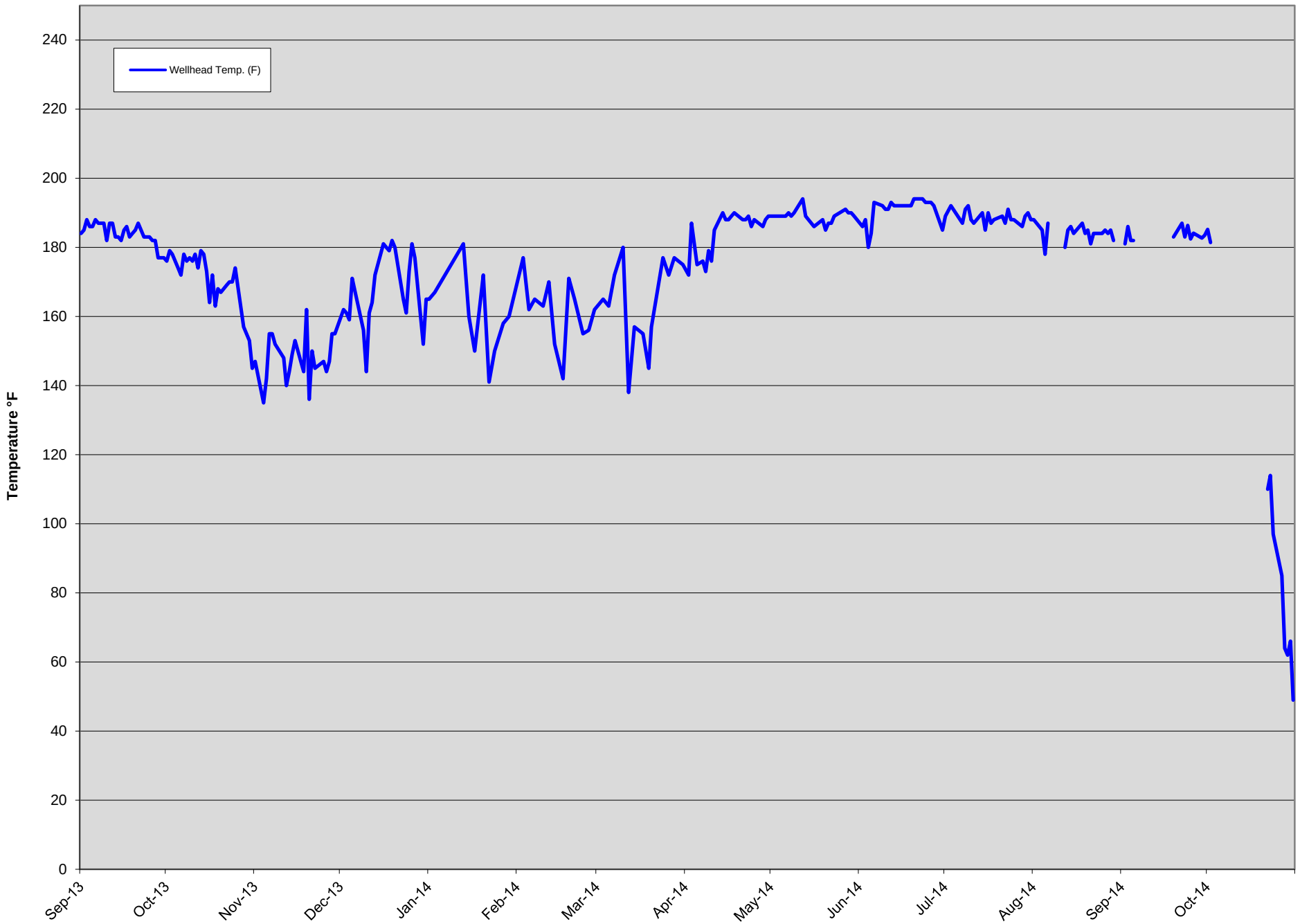
GIW-8 Wellhead Temperatures



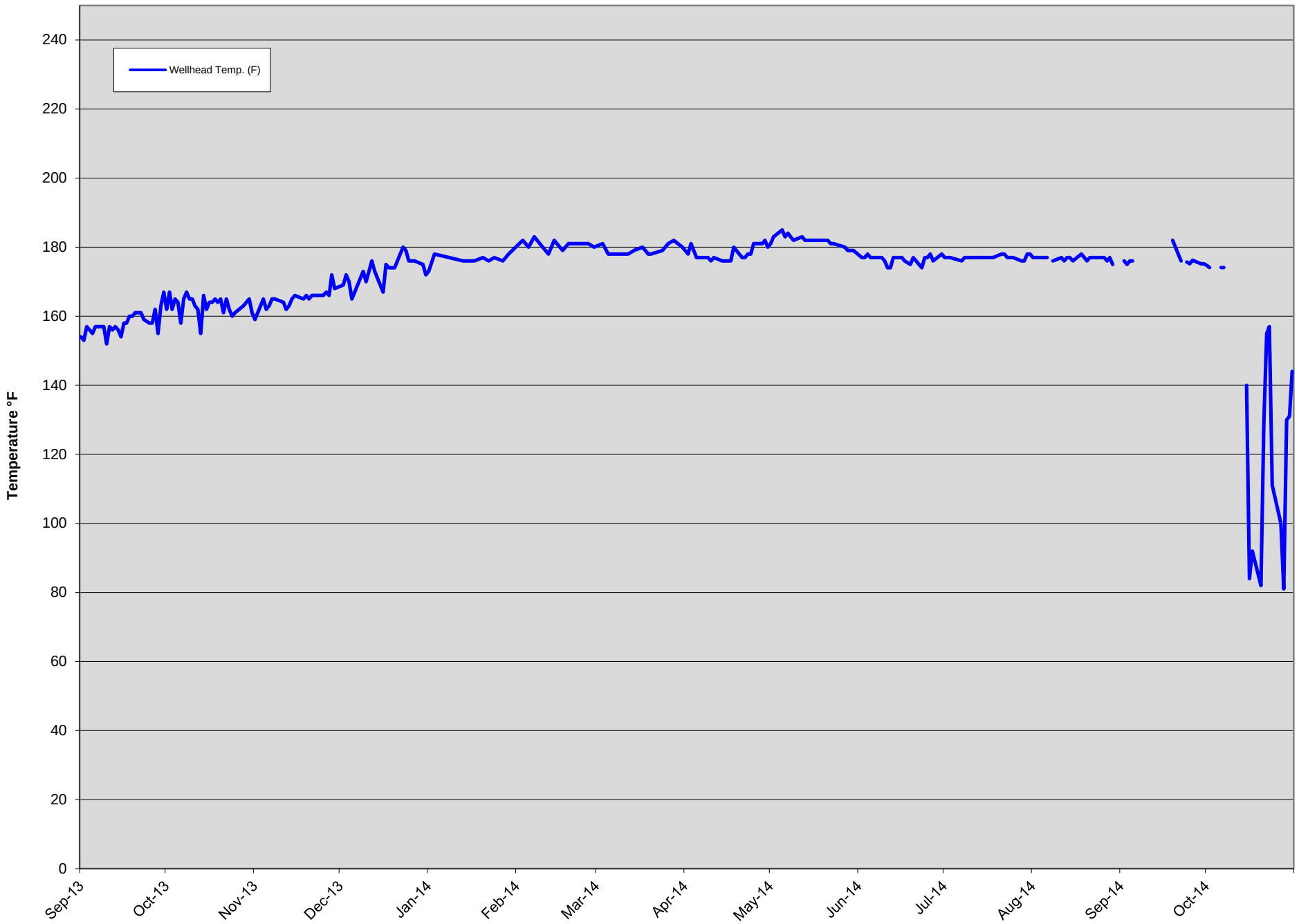
GIW-9 Wellhead Temperatures



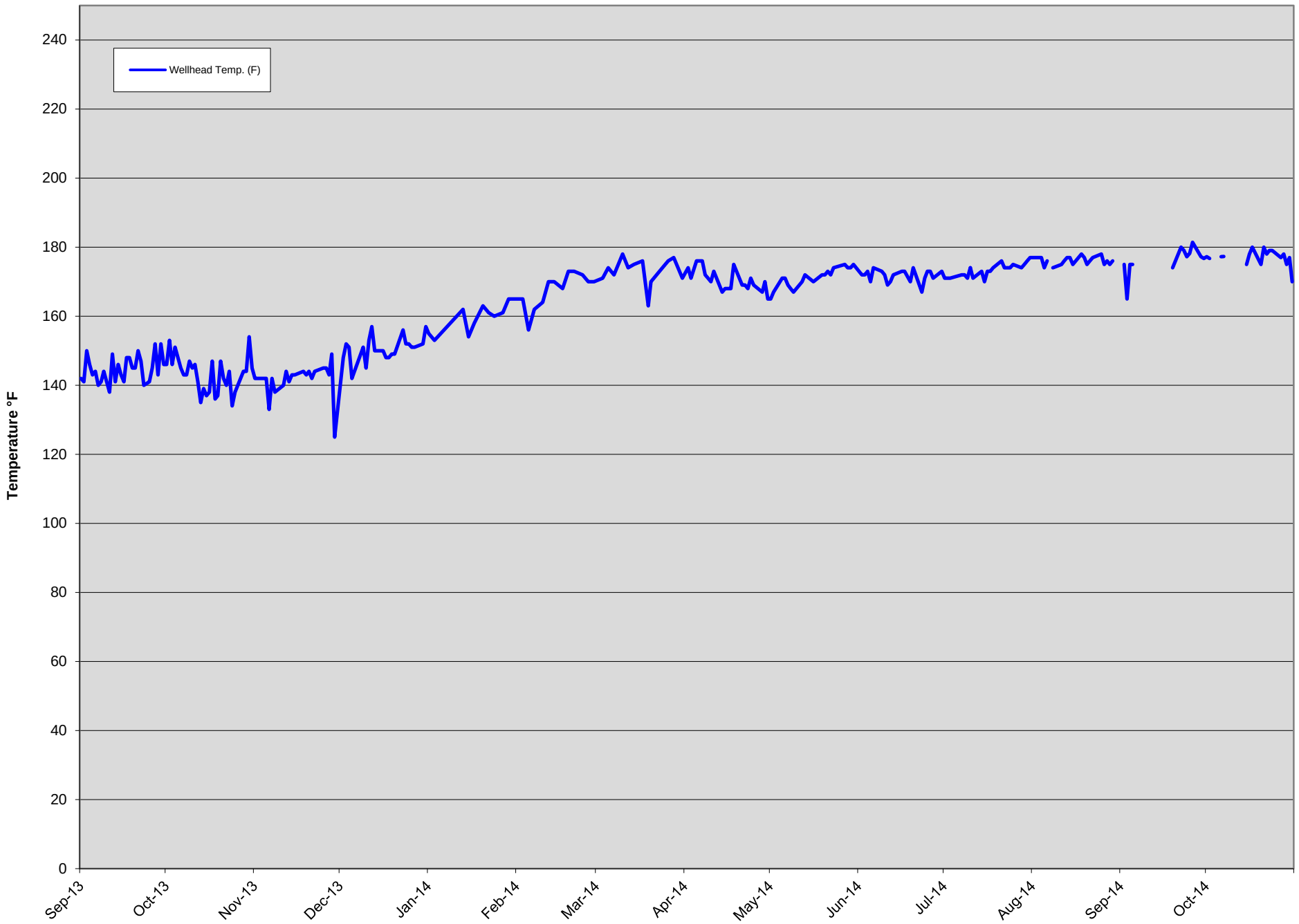
GIW-10 Wellhead Temperatures



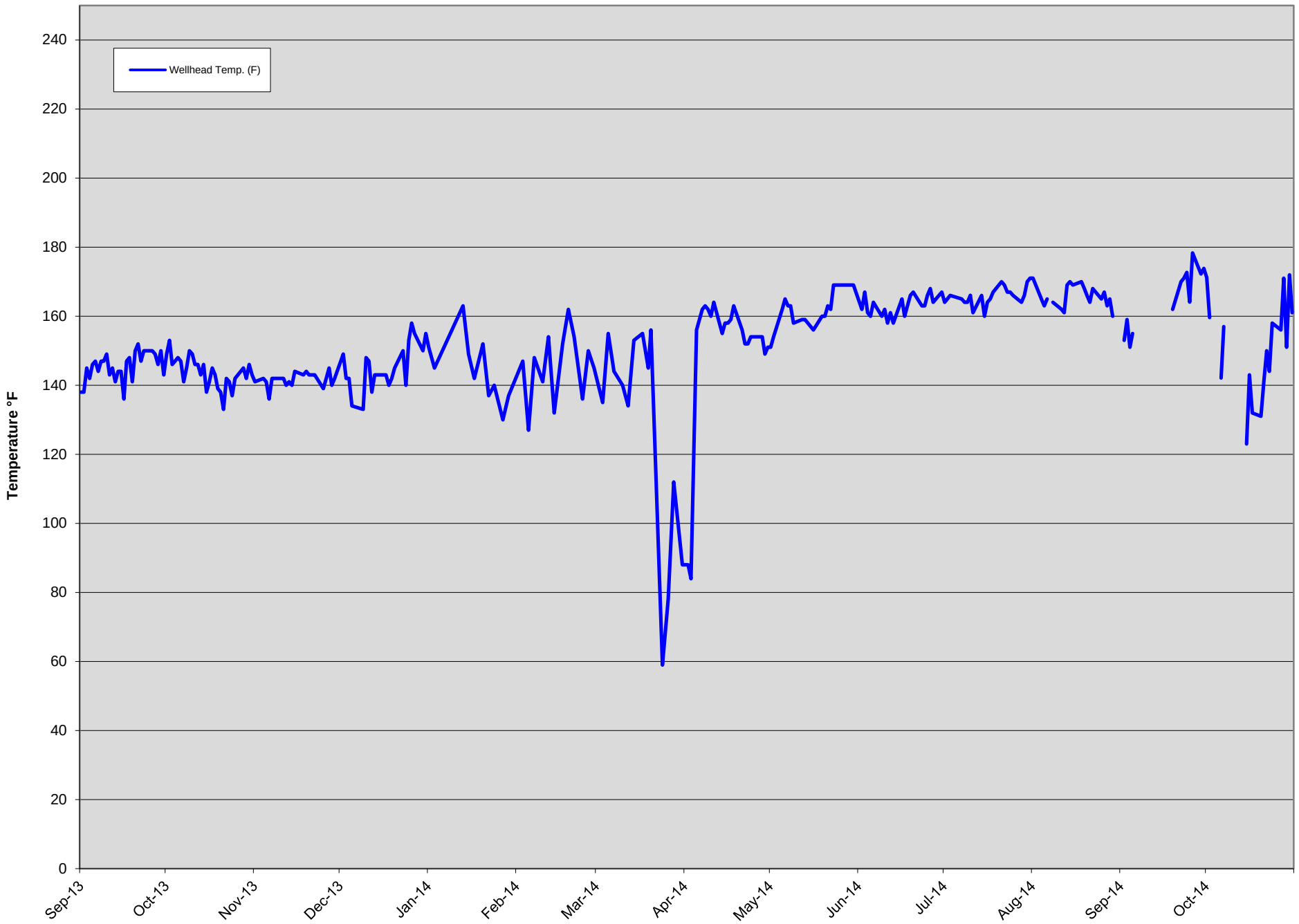
GIW-11 Wellhead Temperatures



GIW-12 Wellhead Temperatures



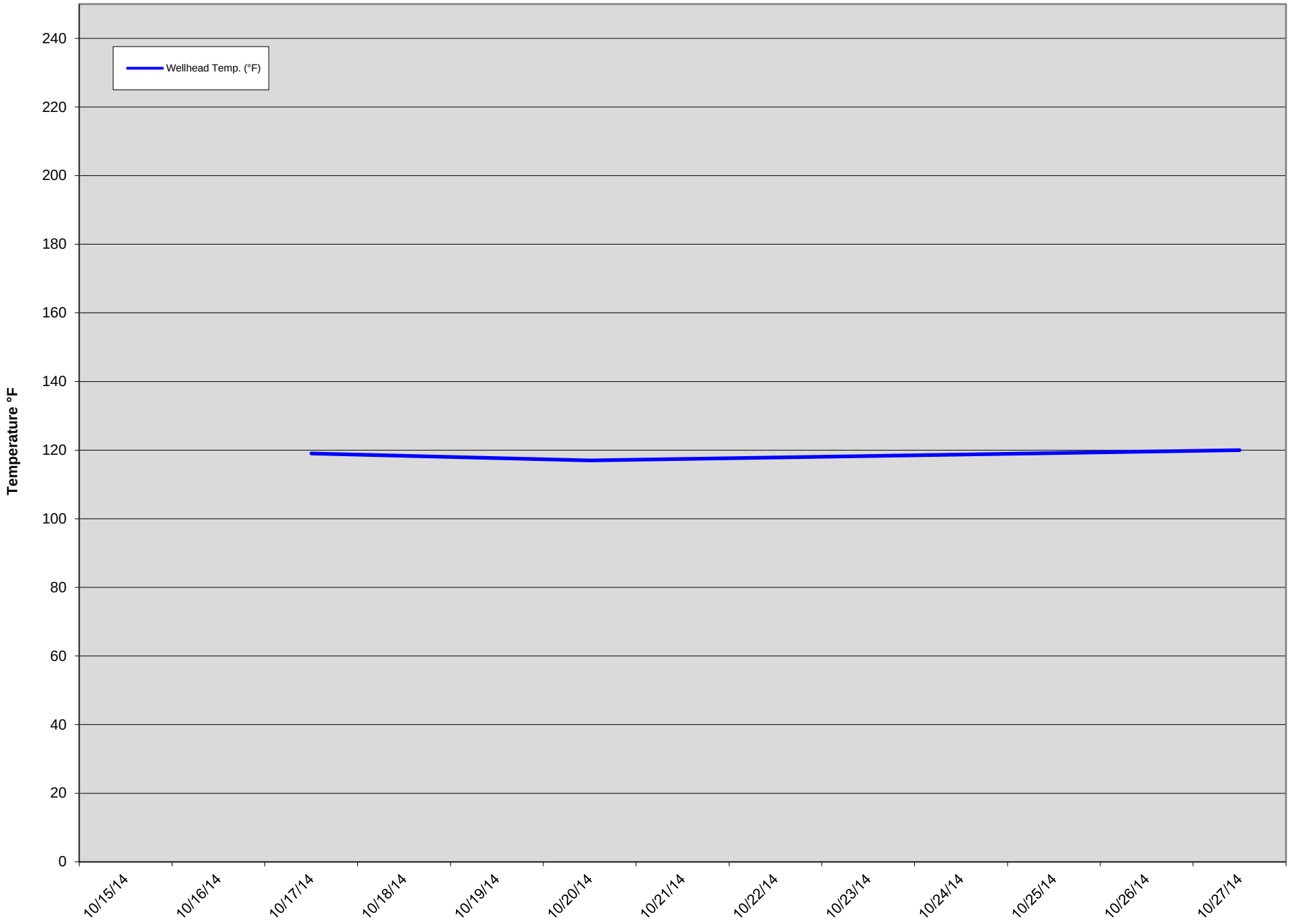
GIW-13 Wellhead Temperatures



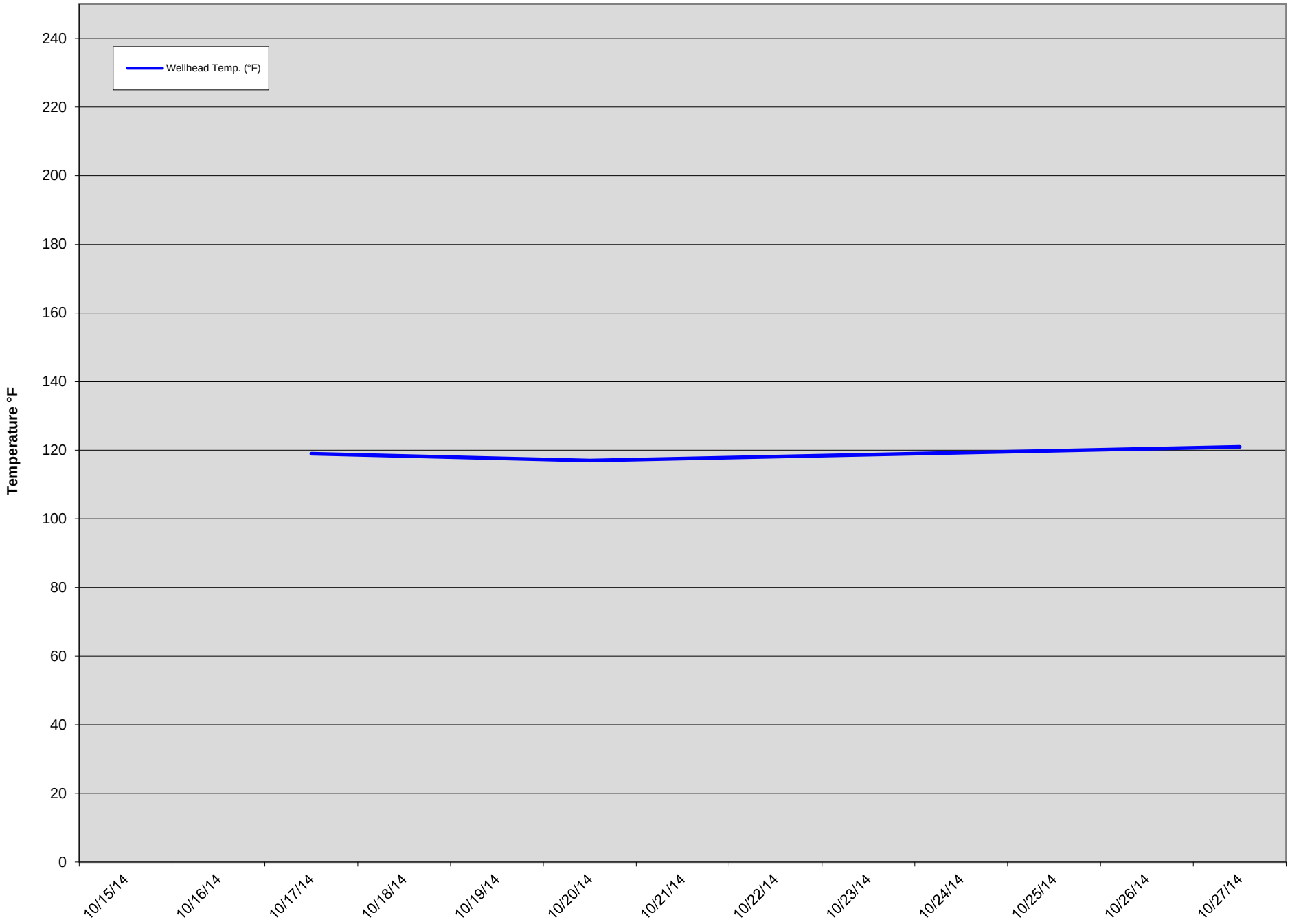
ATTACHMENT D

NECK-AREA GAS EXTRACTION WELL DATA

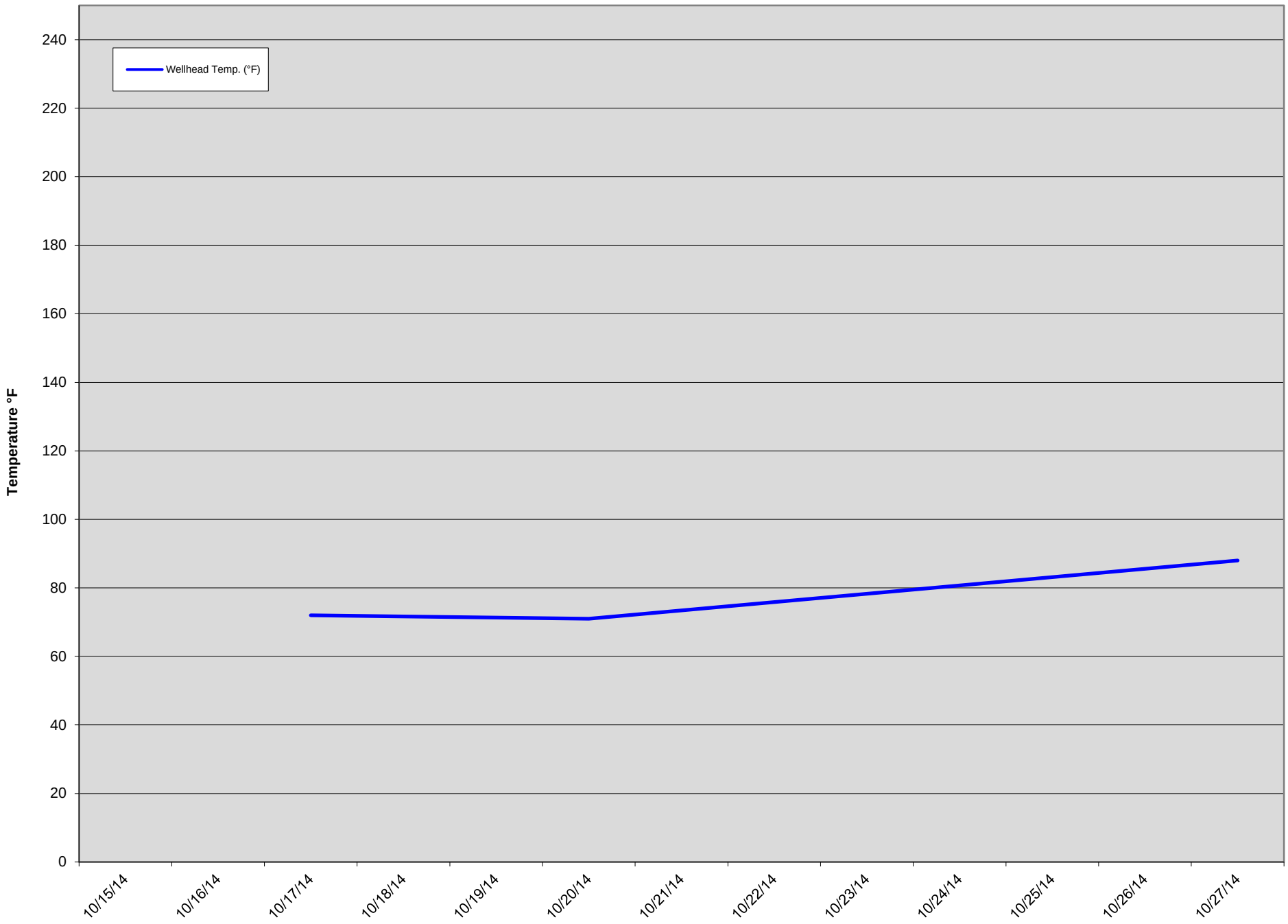
GEW-08 Wellhead Temperatures



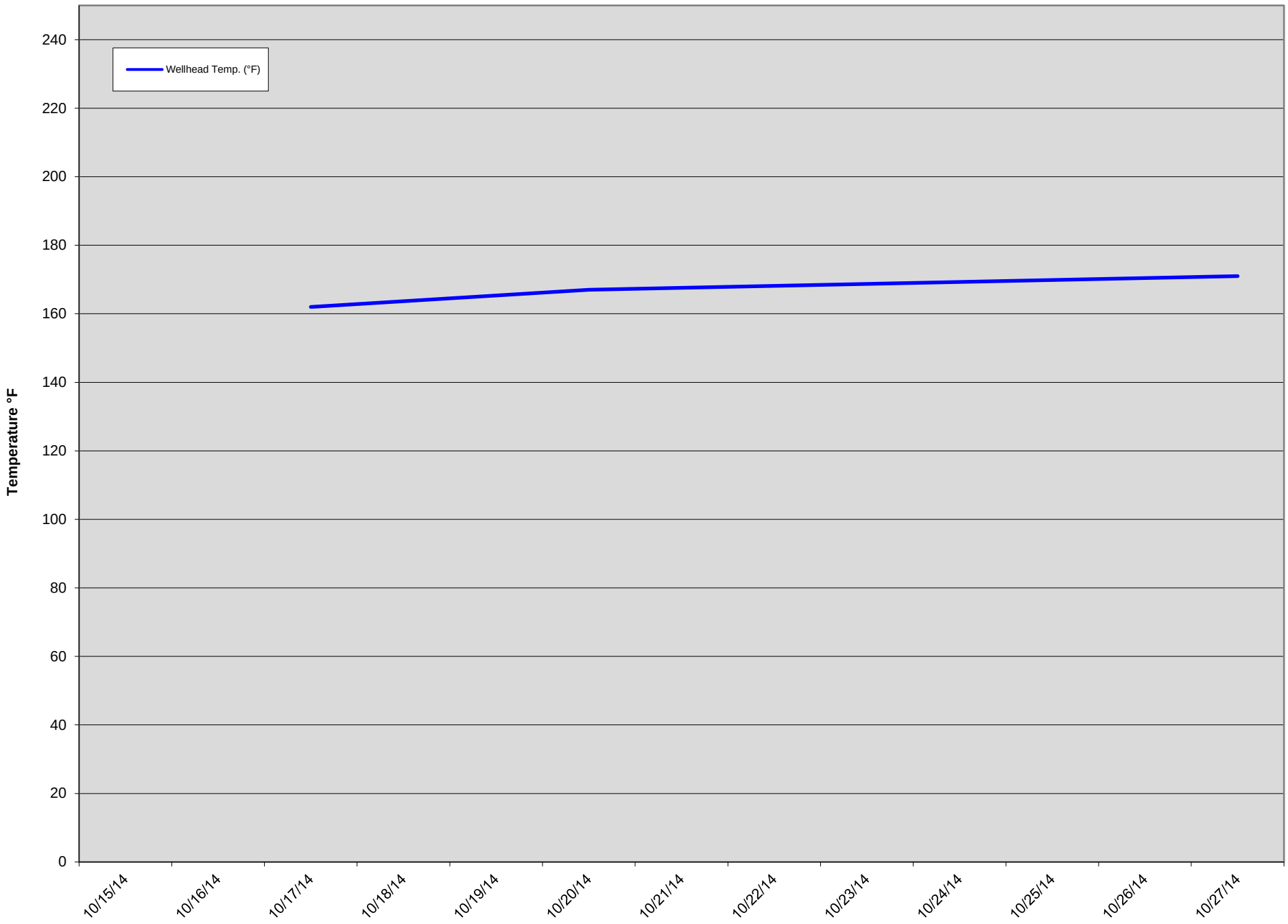
GEW-09 Wellhead Temperatures



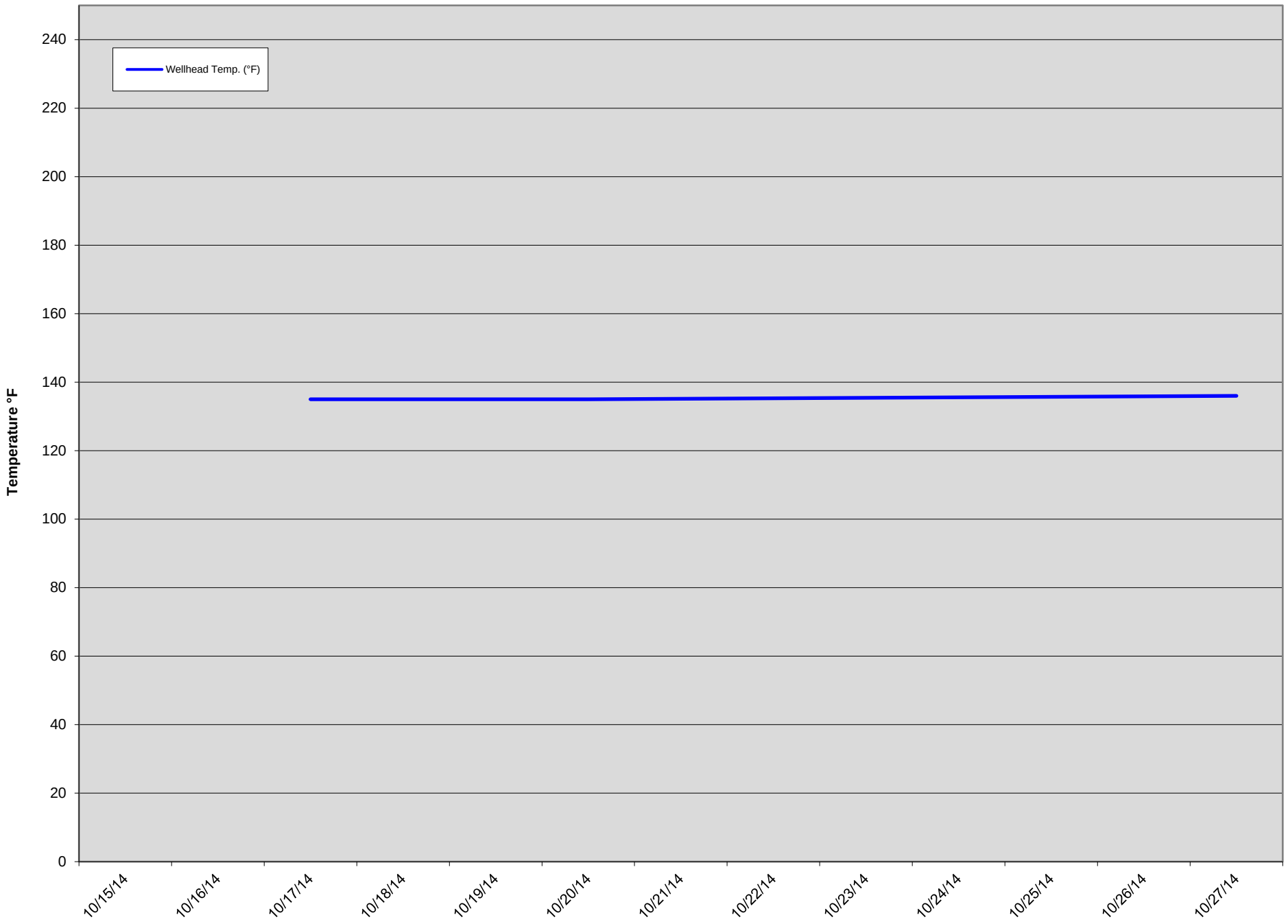
GEW-10 Wellhead Temperatures



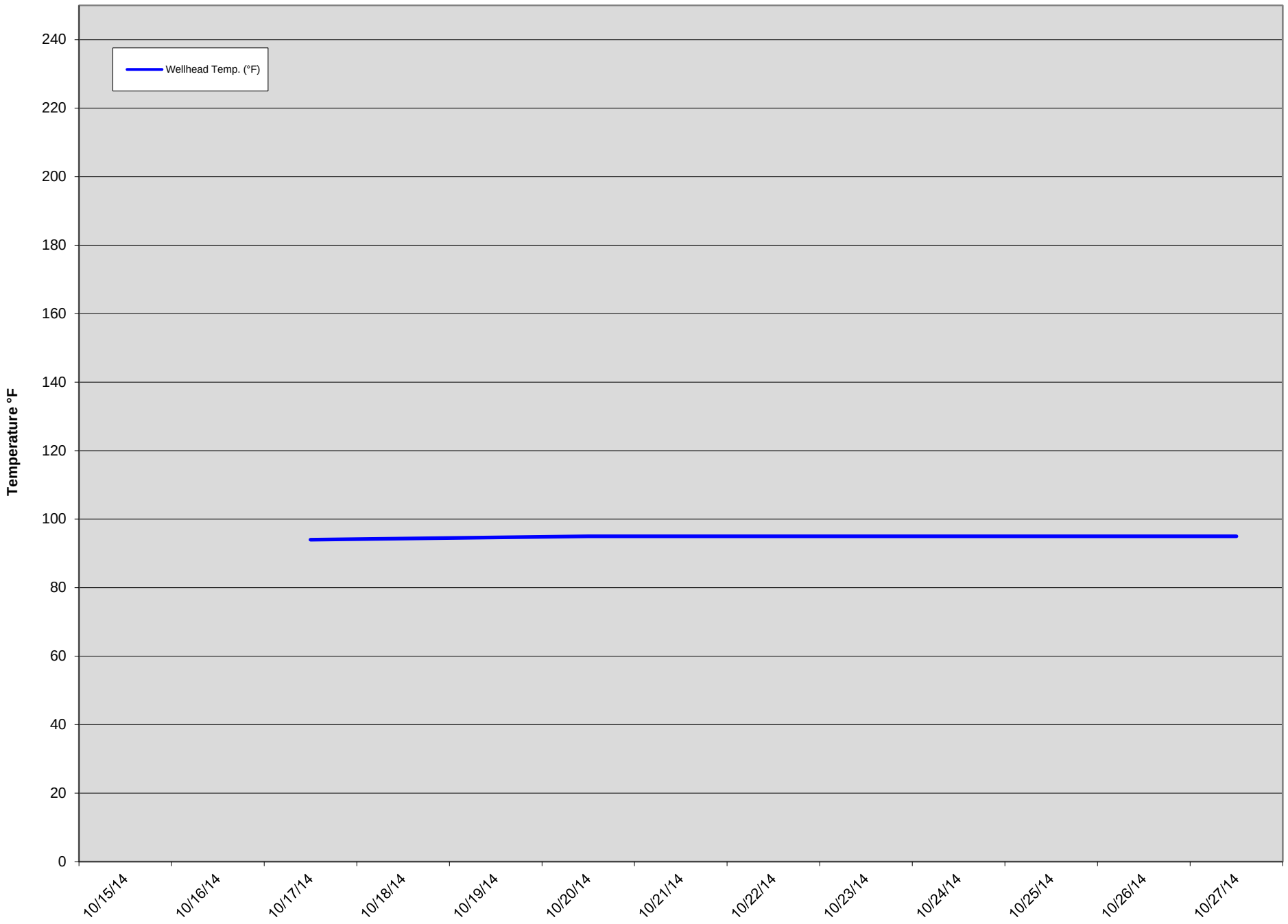
GEW-38 Wellhead Temperatures



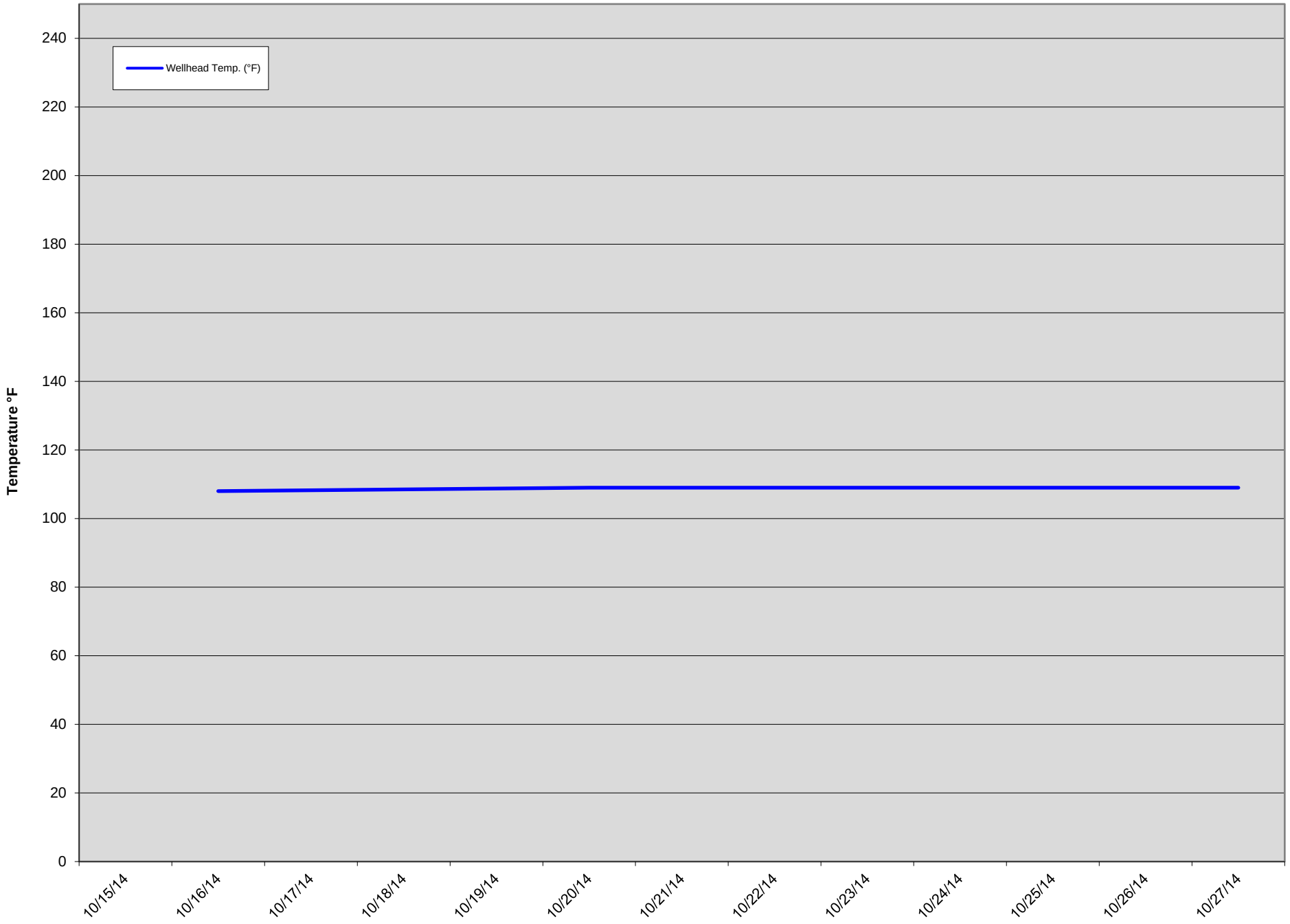
GEW-39 Wellhead Temperatures



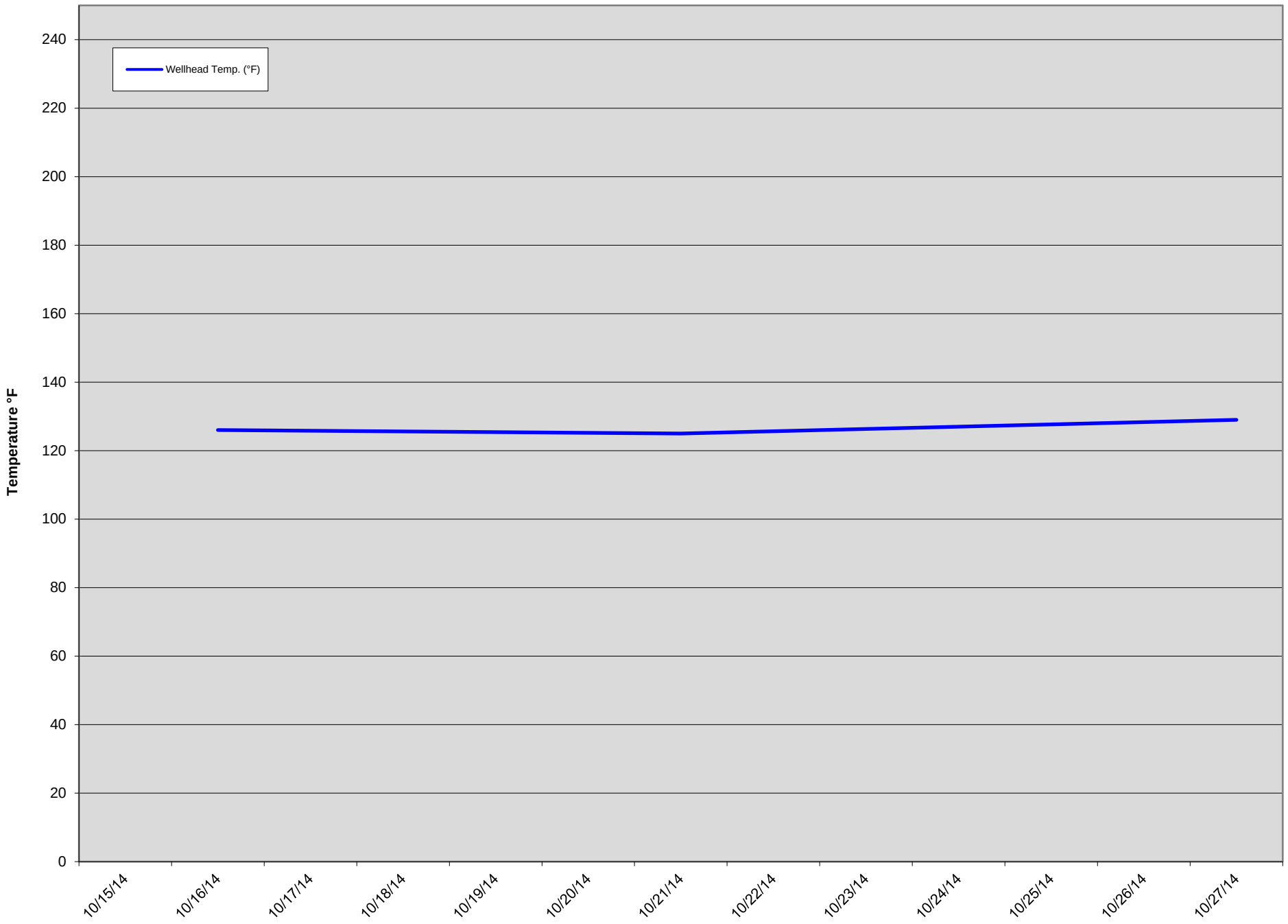
GEW-40 Wellhead Temperatures



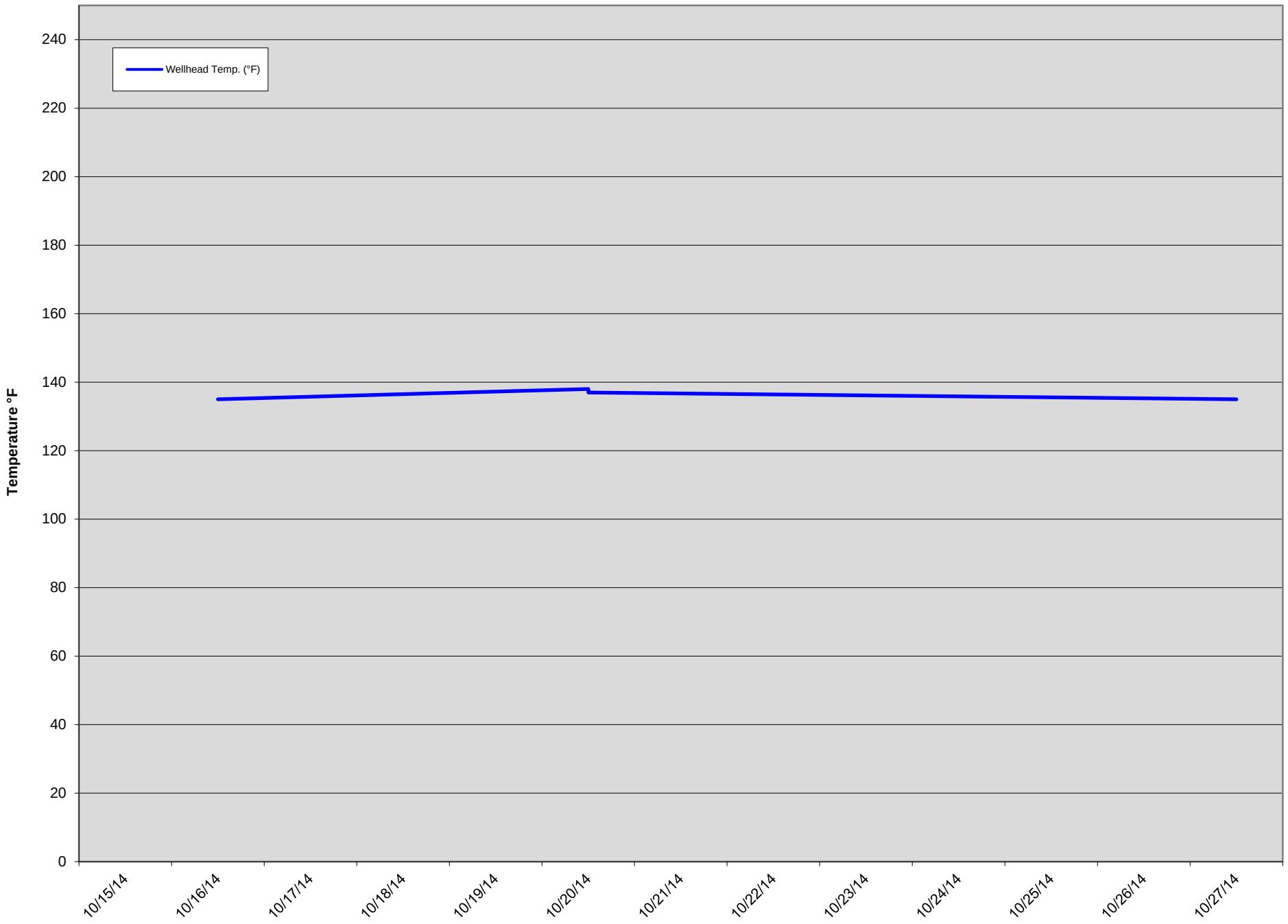
GEW-41R Wellhead Temperatures



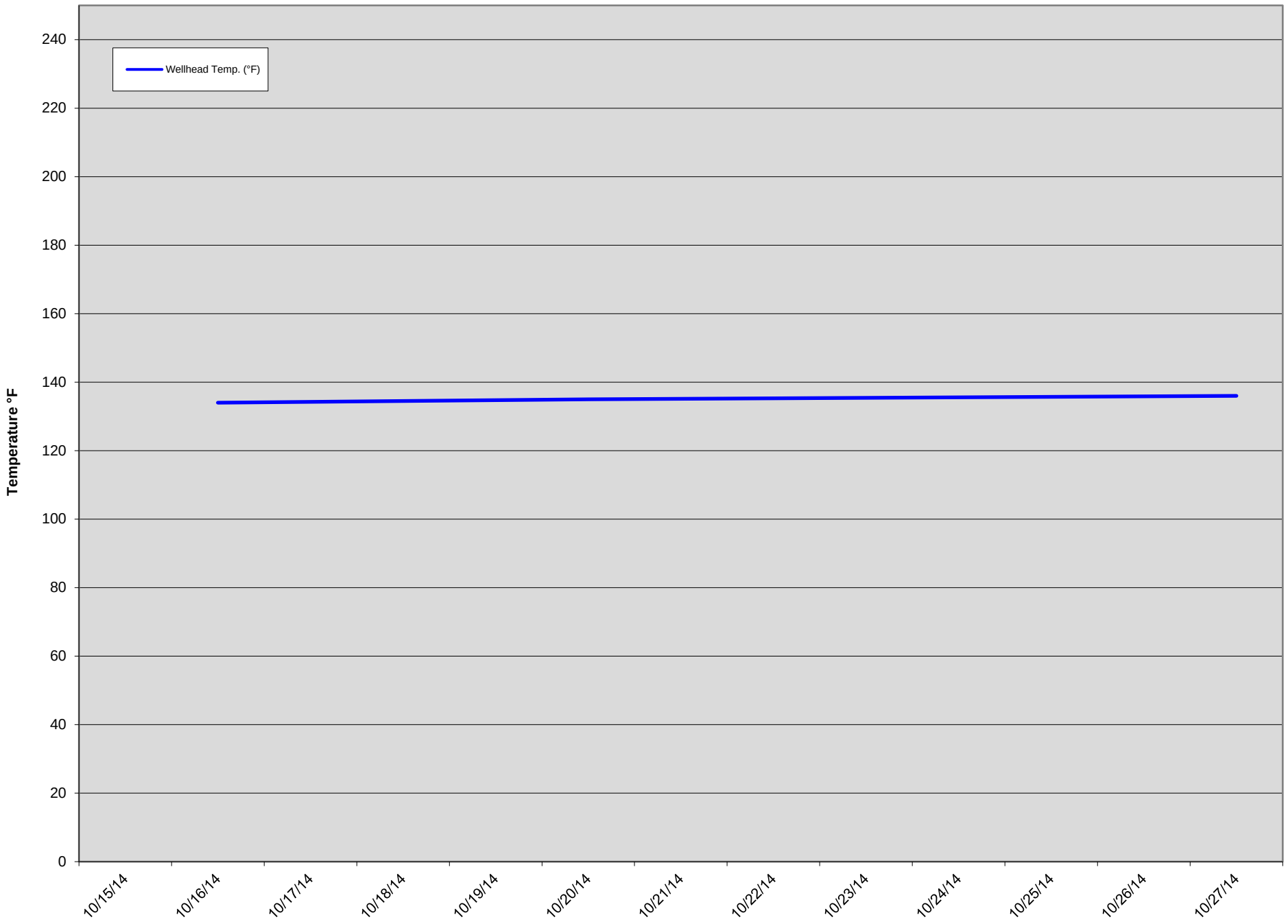
GEW-43R Wellhead Temperatures



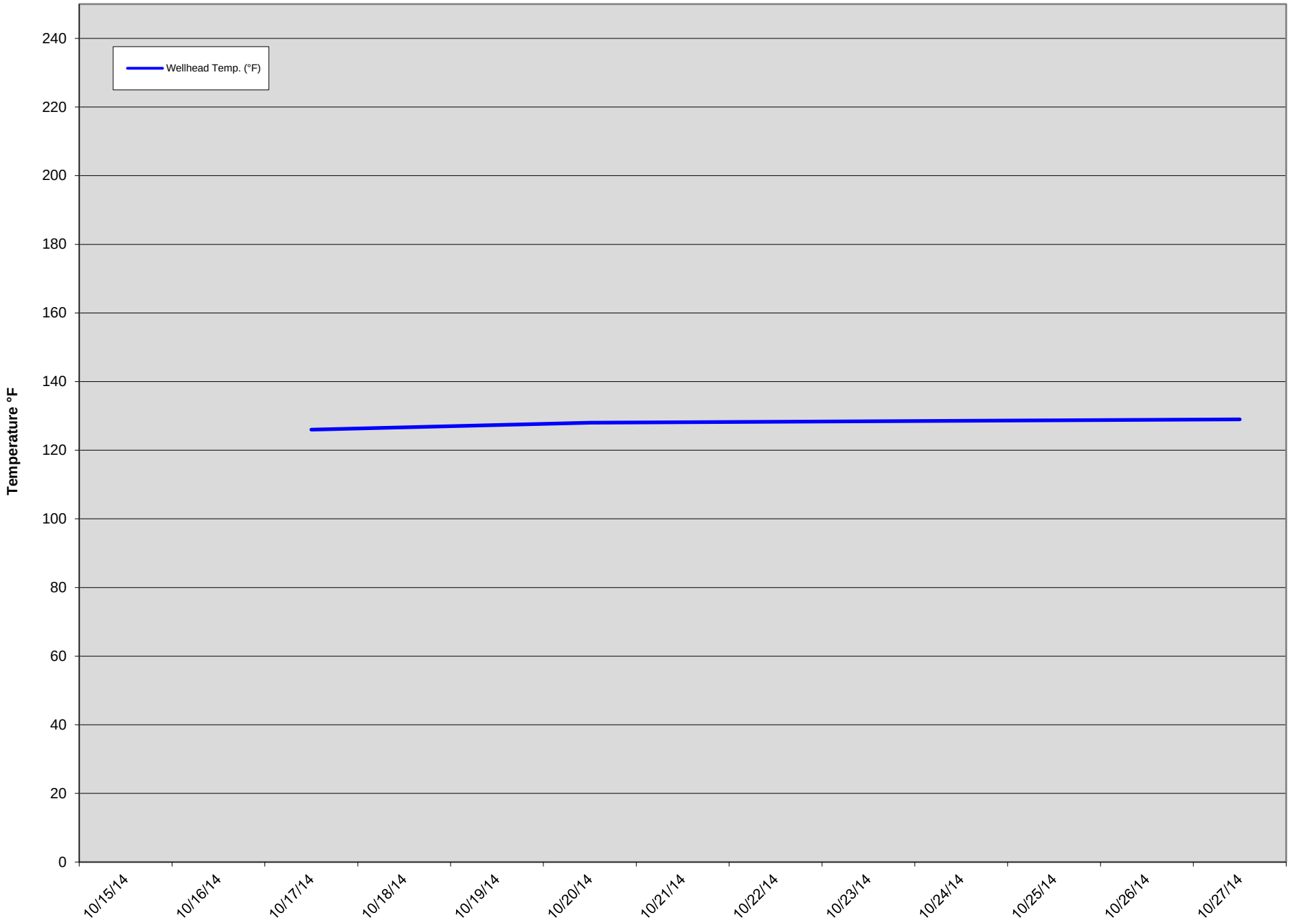
GEW-53 Wellhead Temperatures



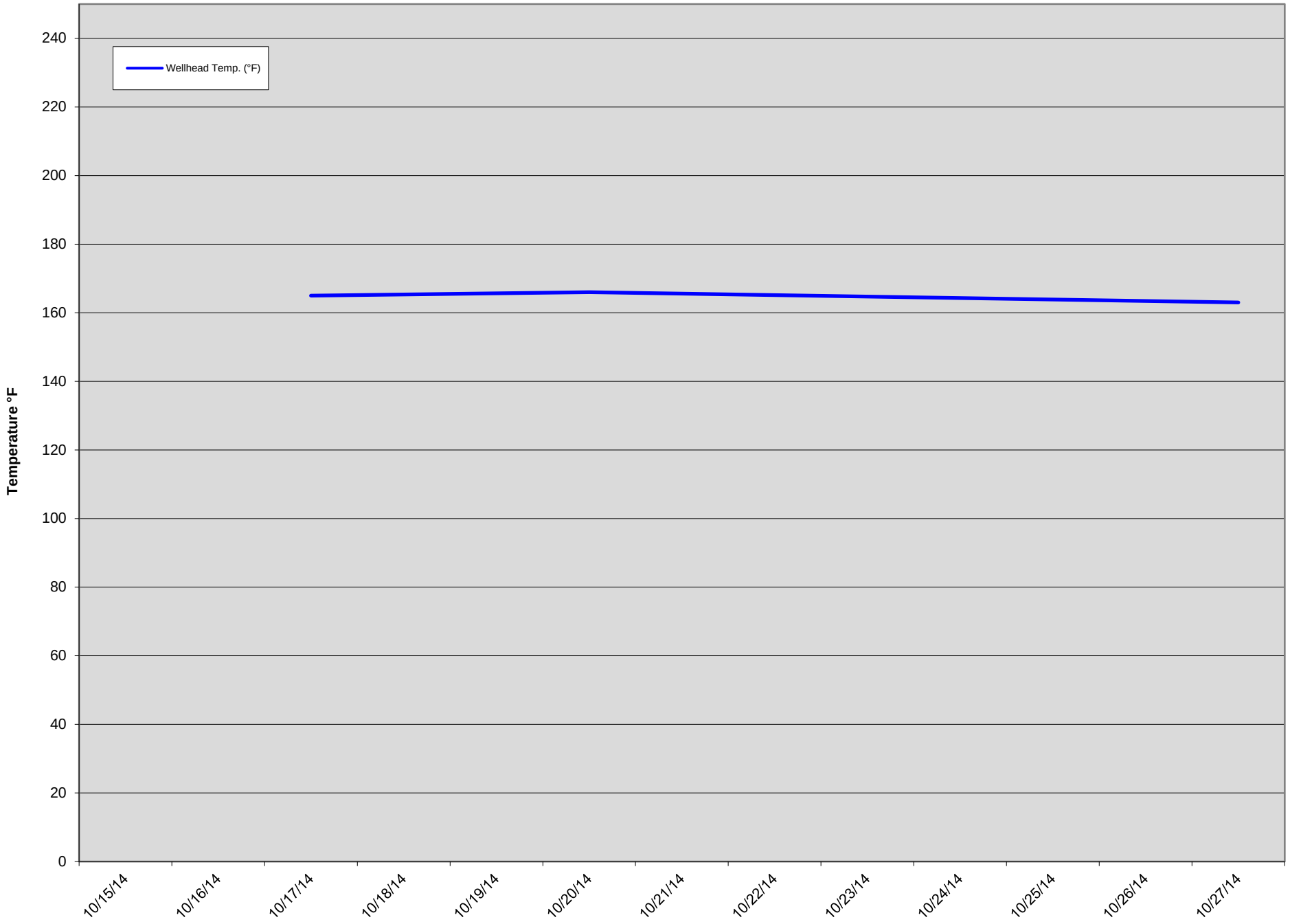
GEW-54 Wellhead Temperatures



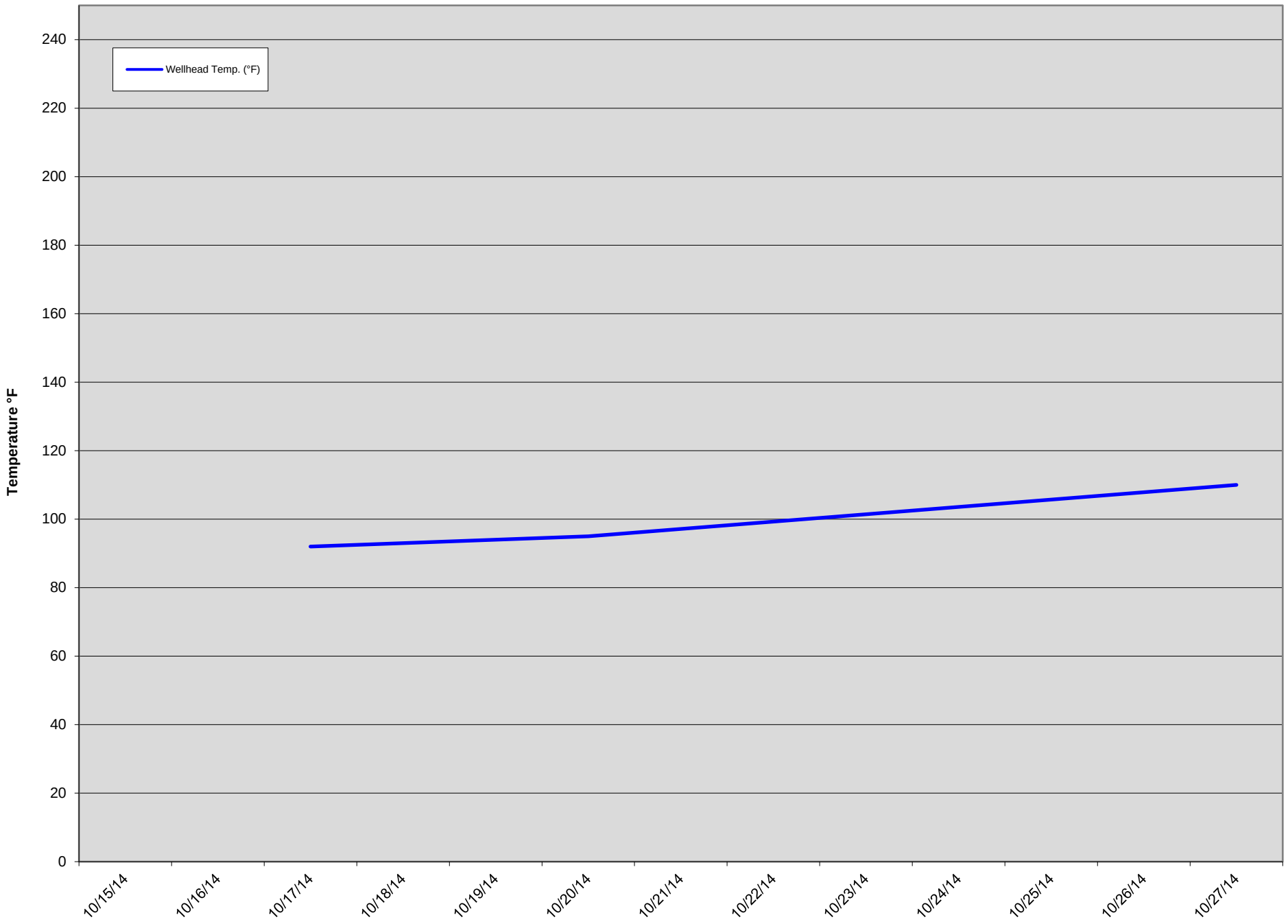
GEW-55 Wellhead Temperatures



GEW-56R Wellhead Temperatures



GEW-109 Wellhead Temperatures



GEW-110 Wellhead Temperatures