

# **Bridgeton Landfill, LLC**

## **Weekly Data Submittal**

**Week of February 1, 2015 – February 7, 2015**

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

### **Contents:**

**Attachment A – Leachate Levels in Leachate Collection Sumps**

**Attachment B – Temperature Monitoring Probe Analytical Charts**

**Attachment C – Gas Interceptor Wellhead Temperature Graphs**

**Attachment D – Neck-Area Gas Extraction Wellhead Temperature Graphs**

### **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**

**February 13, 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 non-functional or 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, -18, -21, -22, -23, -24, -26, -28, and -29. However, it should be noted that the 18-foot interval in TMP-11 increased slightly in the latest reading.

TMP-25 and -27 have been installed and added to the routine monitoring schedule.

TMP-5, -7, -7R, -12, -13, and -15 have been removed from the presentation based on unreliable thermocouple measurements or other documented issues. TMP readings for evaluation of the Heat Extraction System are attached, but not evaluated in this commentary.

### **Attachment C - Gas Interceptor Wellhead Temperature Graphs**

There are currently water circulation cooling loops (Heat Extraction System) installed in seven Gas Interceptor Wells (GIWs) (GIW-02 through GIW-07, 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-01, -08, -09, -11, -12, and -13), with the exception of GIW -11, gas temperatures were generally consistent over the past week as well as compared to prior weeks. 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 and/or low gas flows.

### **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-008, -009, -010, -038, -039, -040, -041R, -043R, -053, -054, -055, -056R, -109, and -110. Over the past week all 14 wells were monitored and all well temperatures were consistent in comparison to prior weeks. Temperature fluctuations experienced are within the historical gas temperature norms for these wells. GEW-054 decreased by 5 degrees from last week's 153.7 F reading, however remains above the 145 F threshold for North Quarry wells, and therefore will be included in February SUMMA sampling for CO.

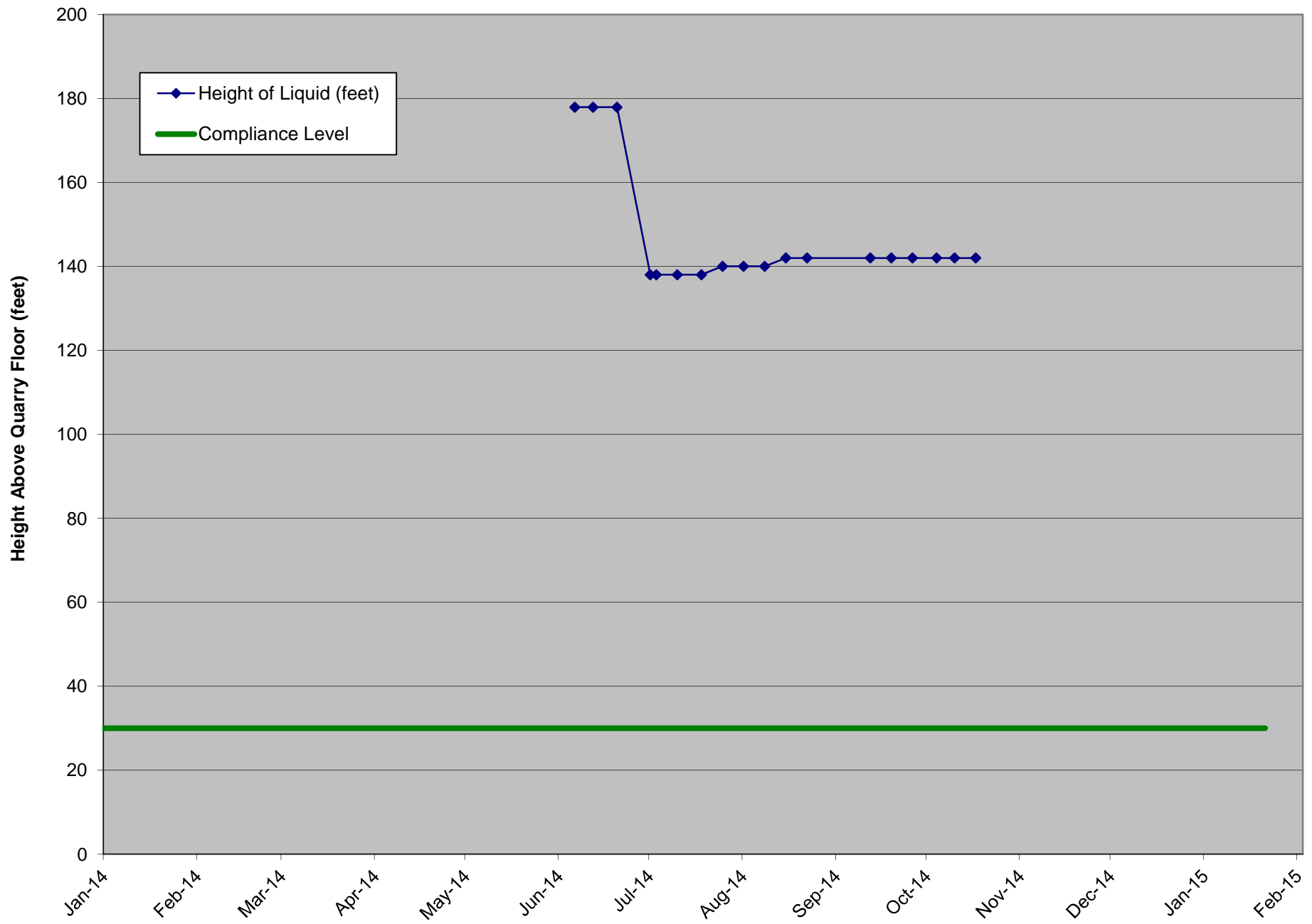
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## **ATTACHMENT A**

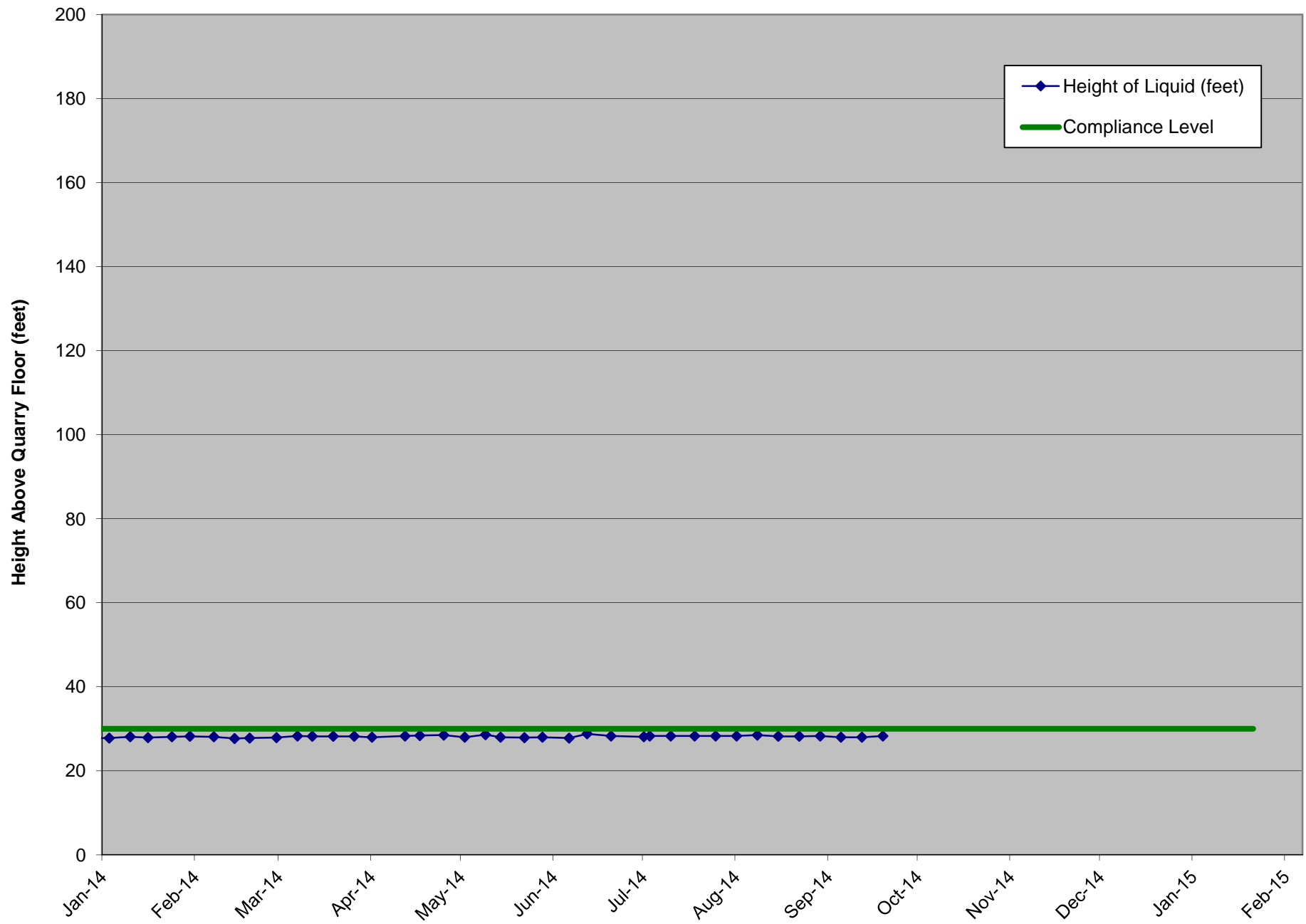
### **LEACHATE LEVELS IN LEACHATE COLLECTION SUMPS**

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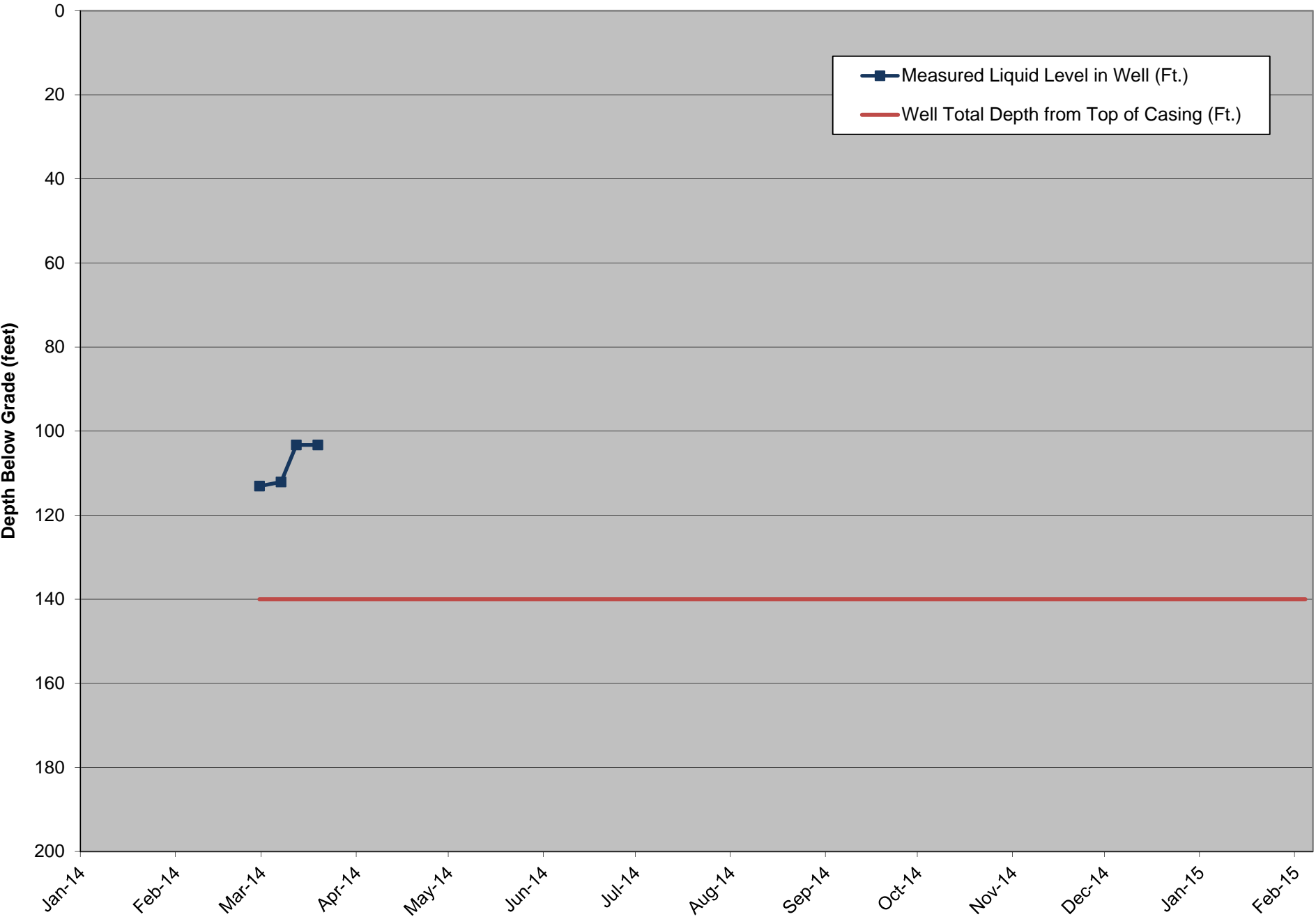
LCS-1D Liquid Level Above Quarry Floor



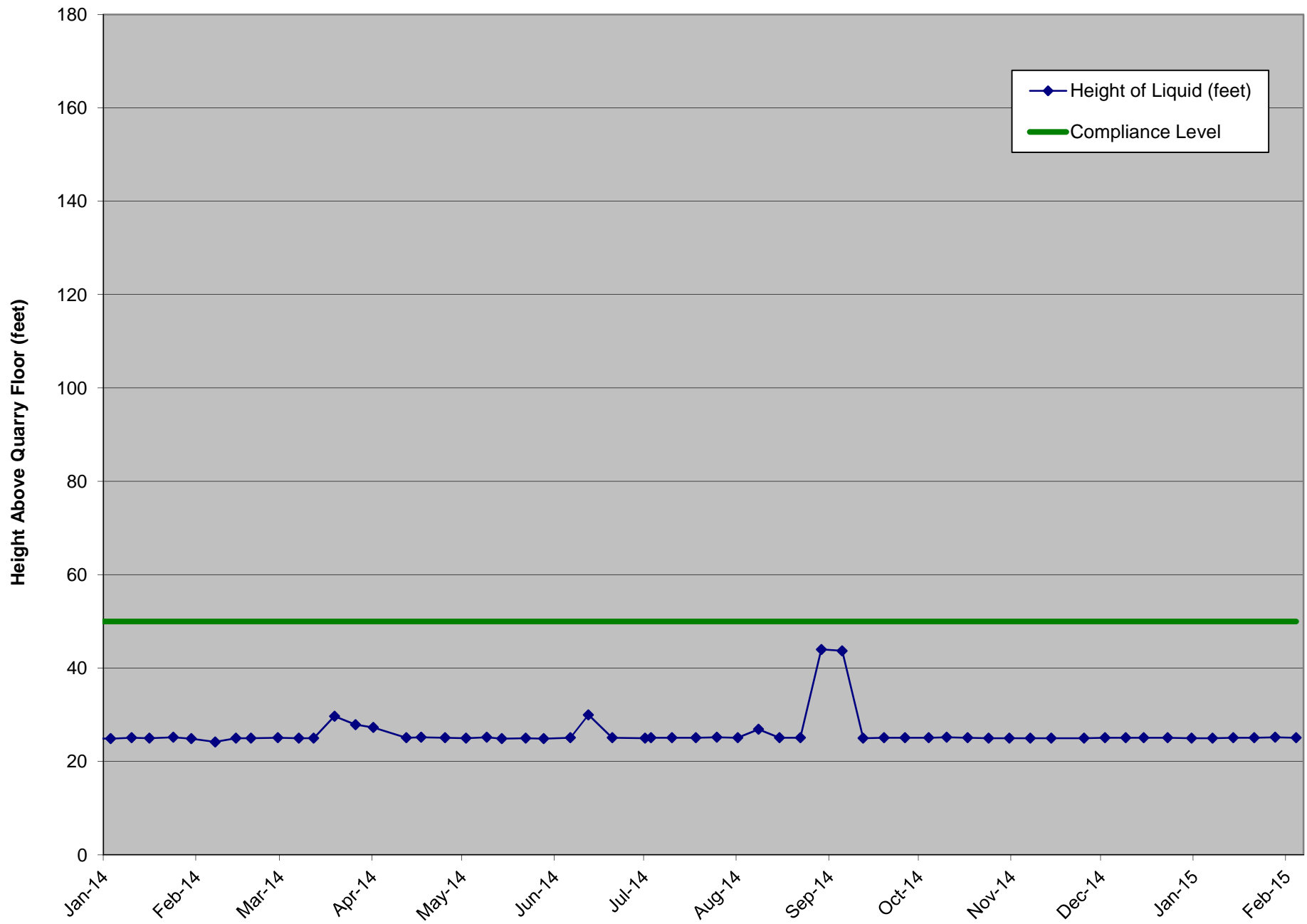
# LCS-2D Liquid Level Above Quarry Floor



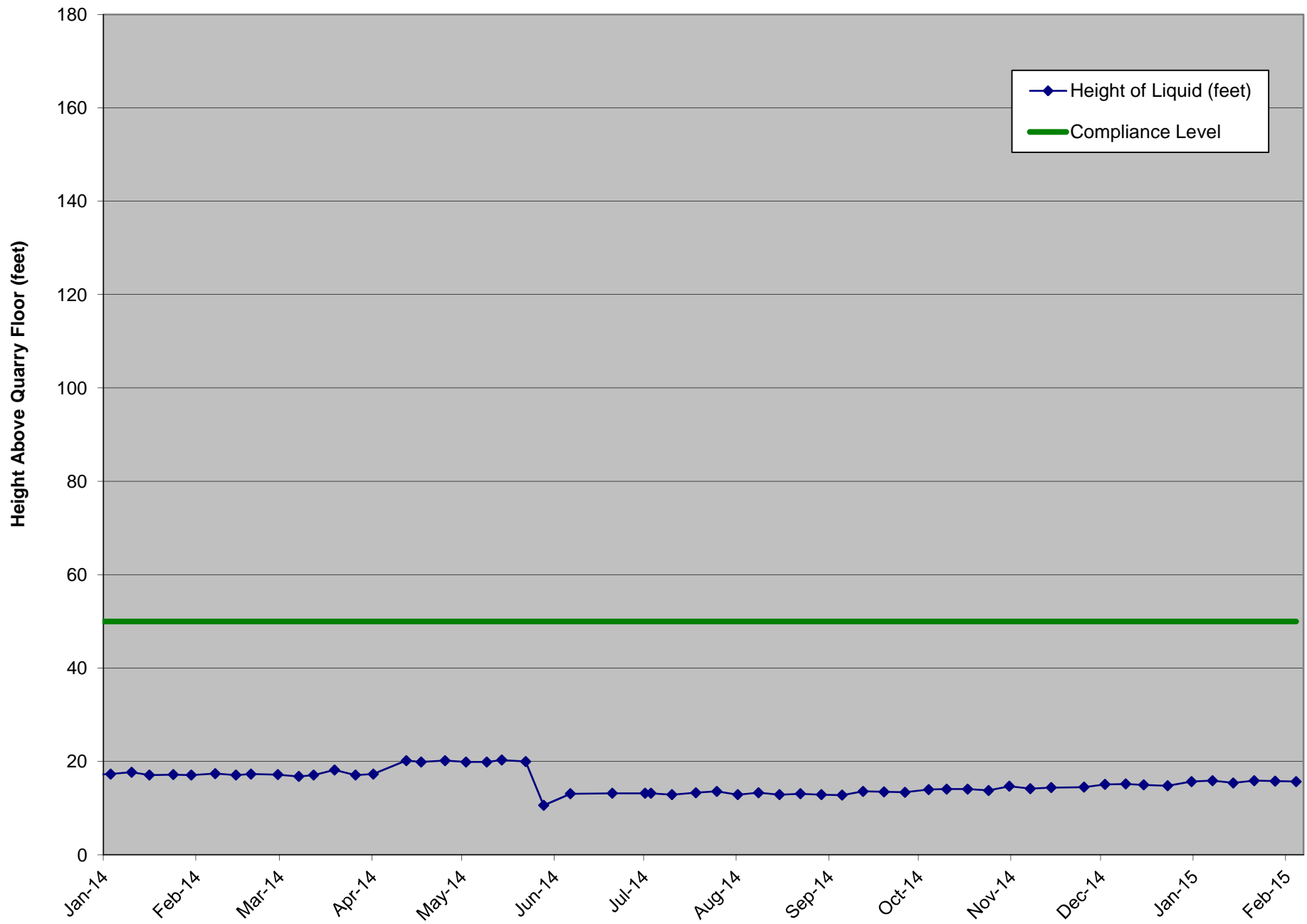
LCS-3D Liquid Level Below Ground Surface



LCS-5A Liquid Level Above Quarry Floor



# LCS-6B Liquid Level Above Quarry Floor





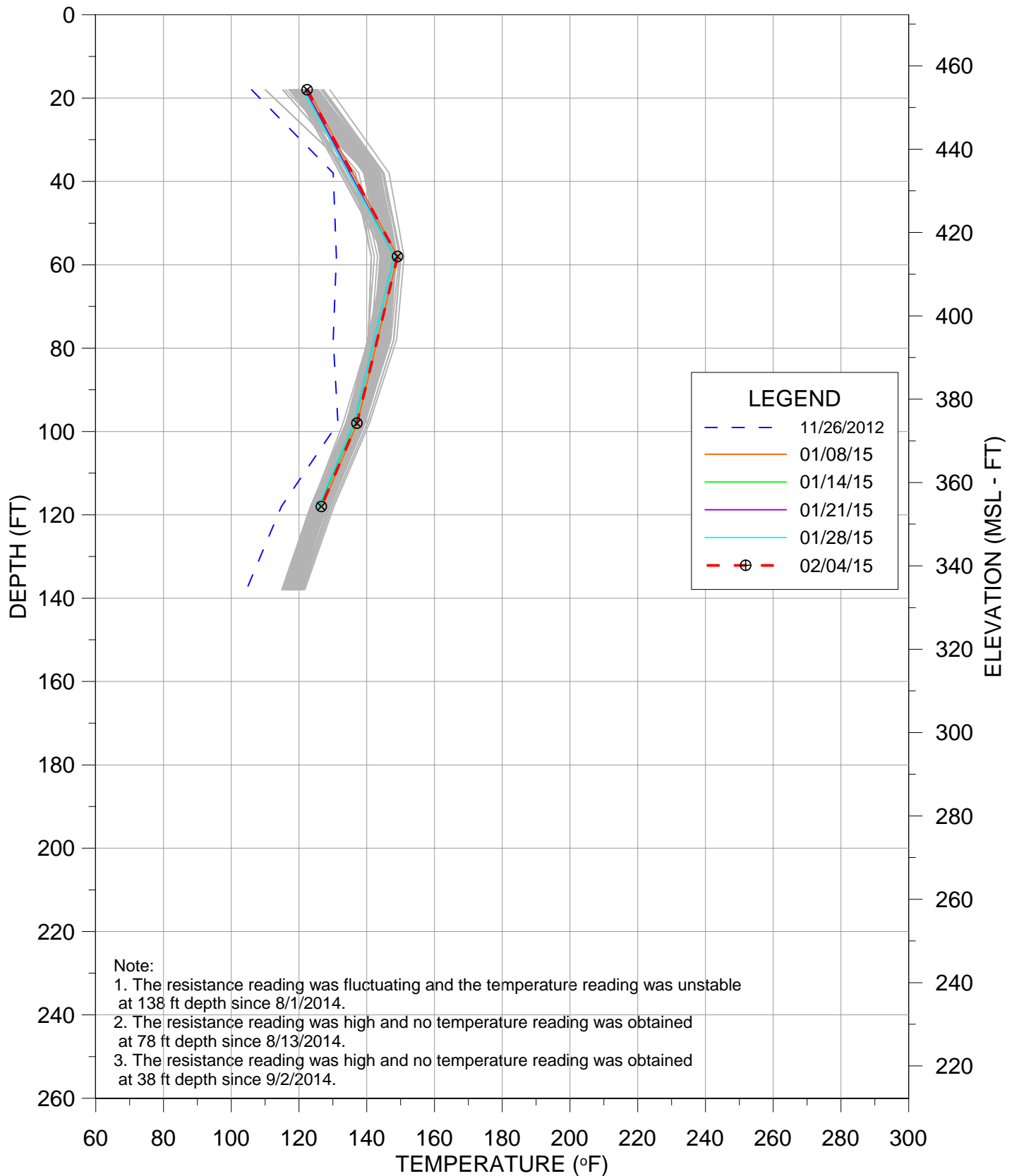
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**ATTACHMENT B**

**TEMPERATURE MONITORING PROBE ANALYTICAL CHARTS**

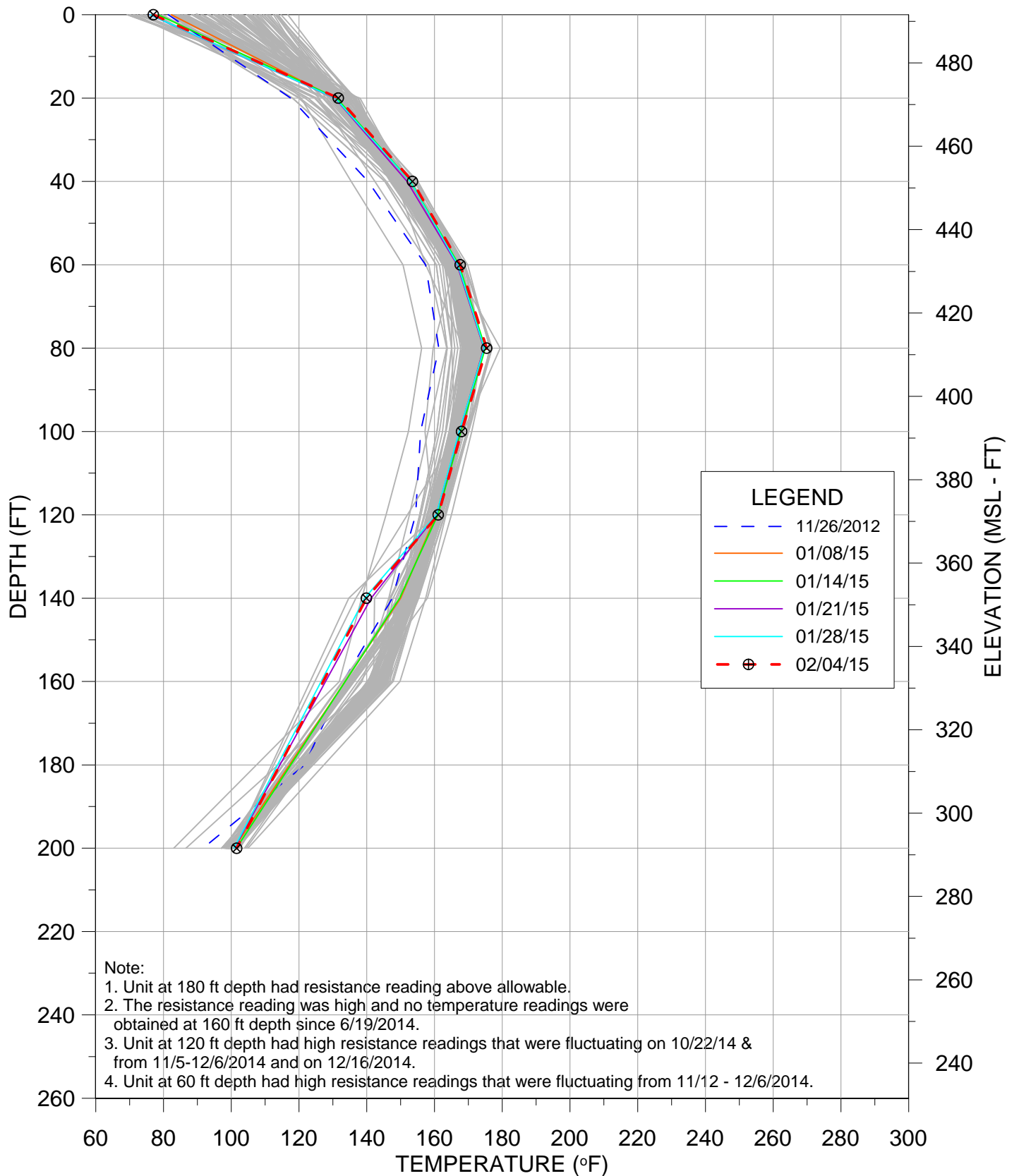
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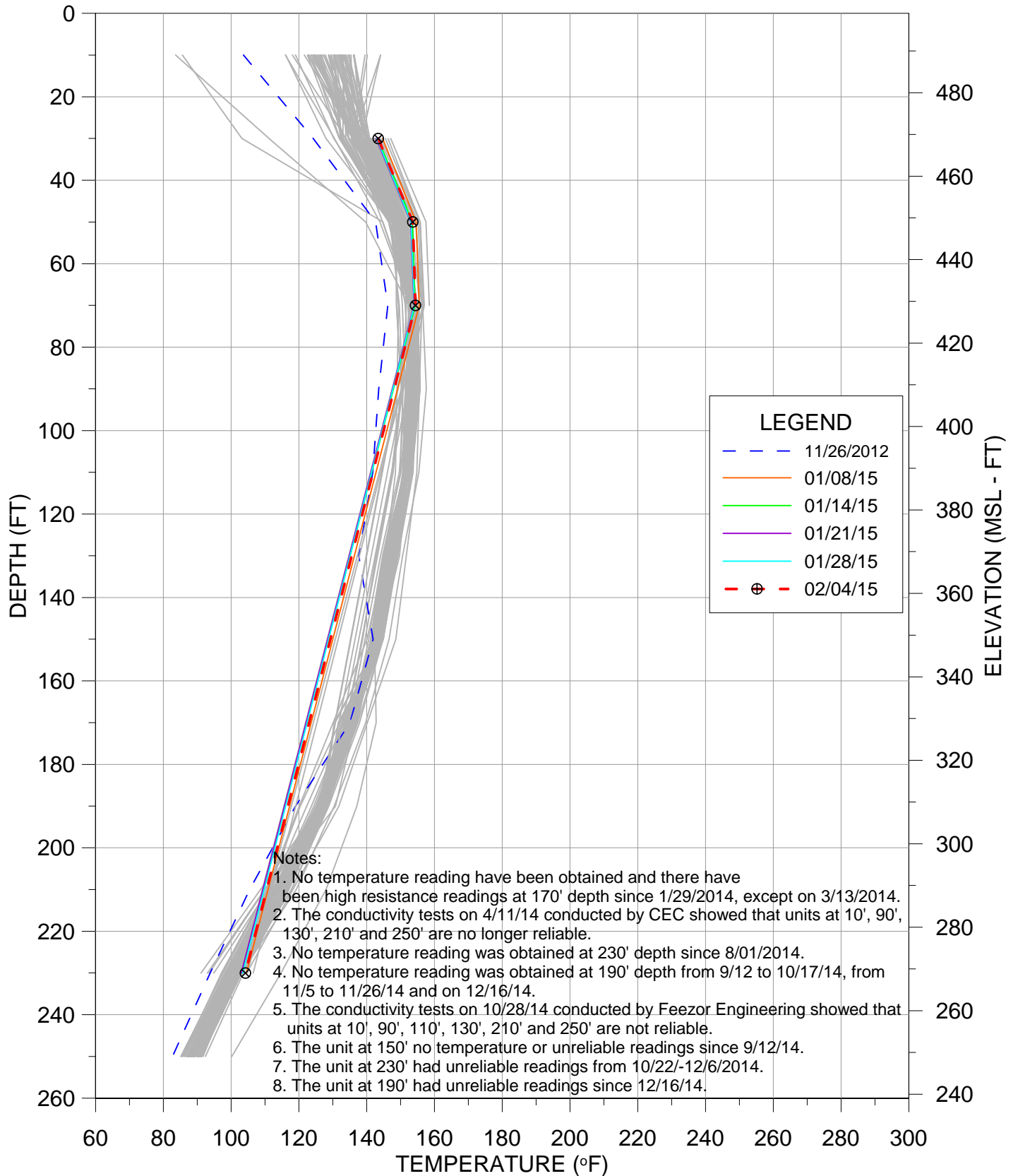


TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-2

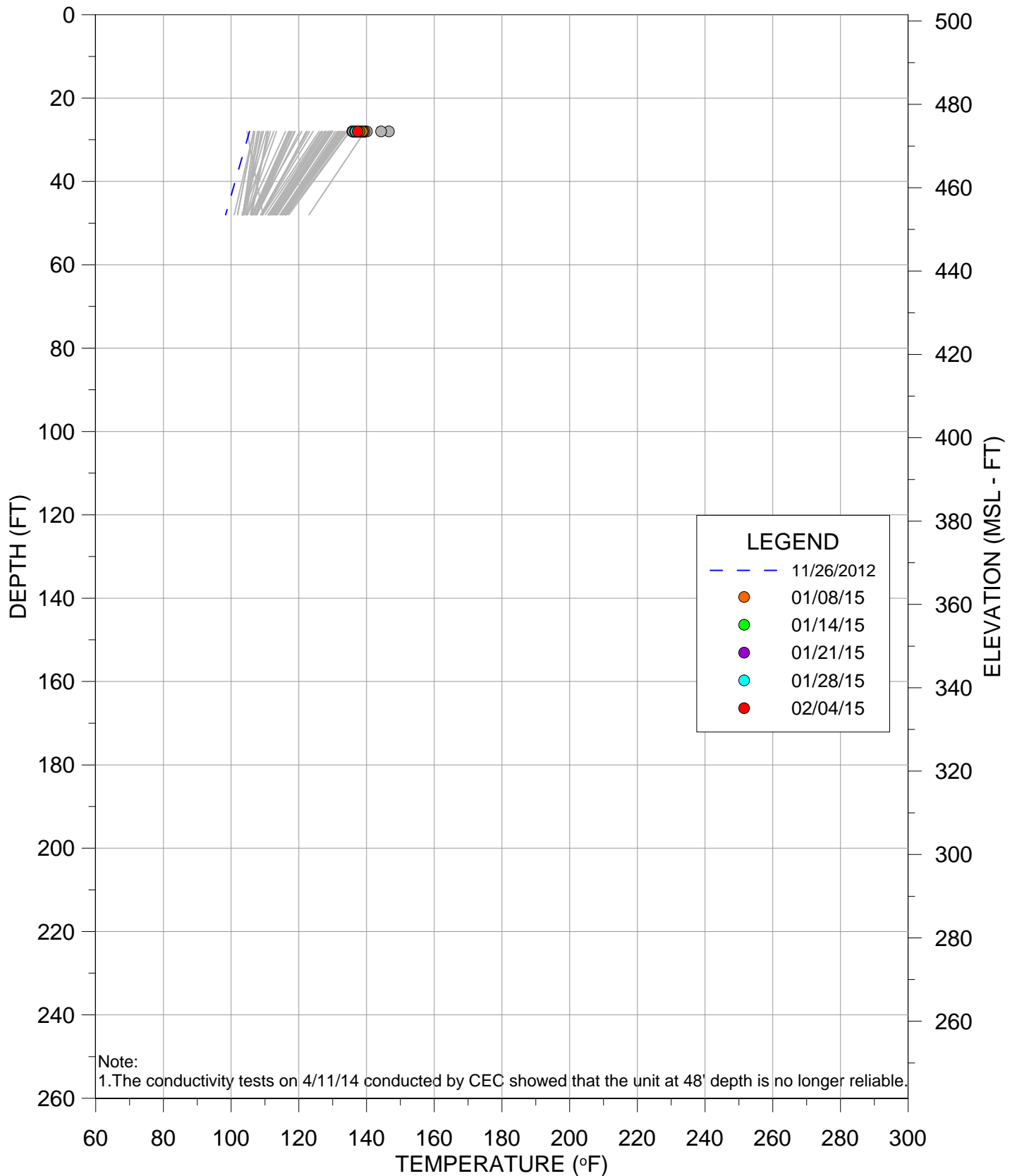


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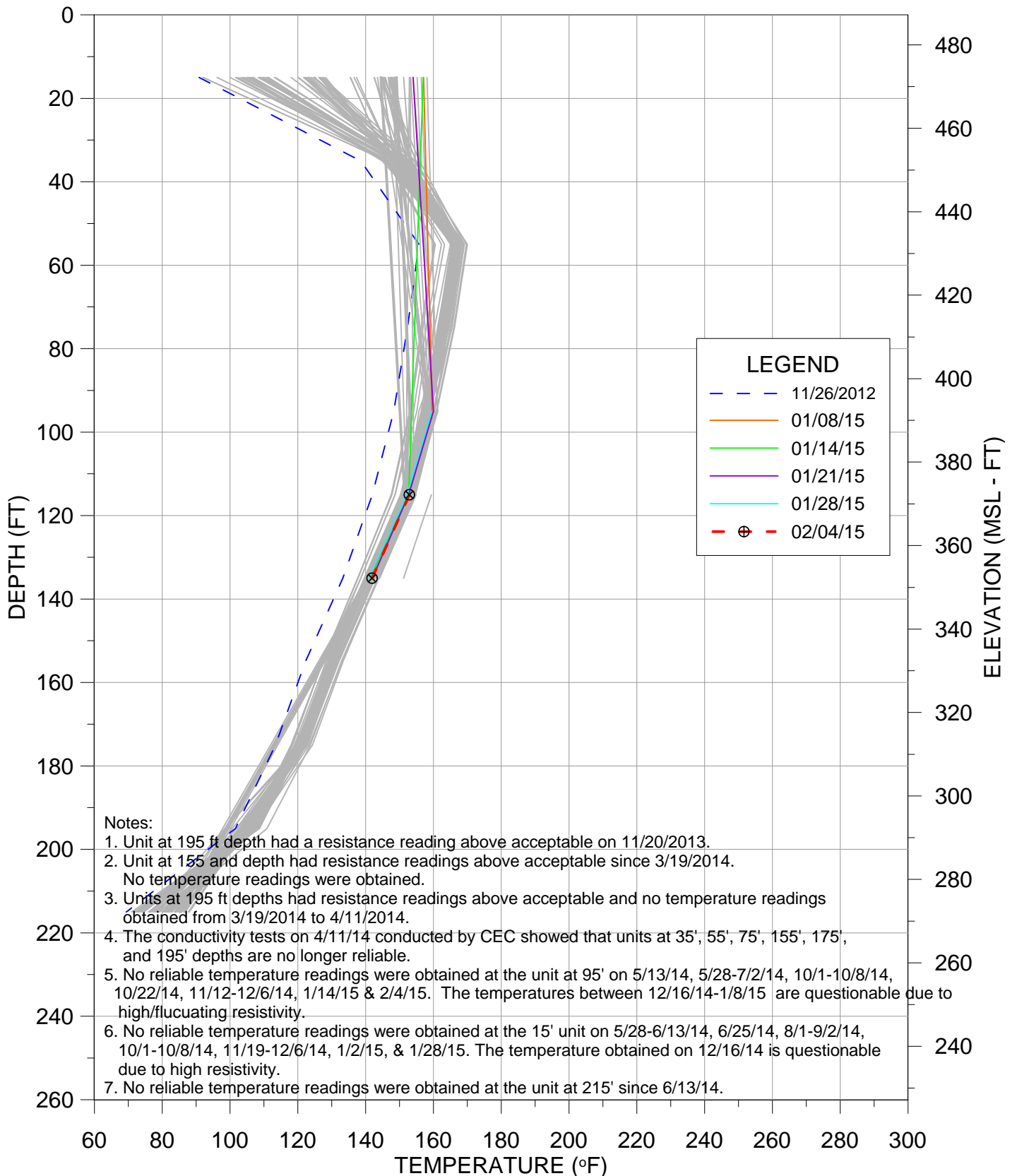
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-4



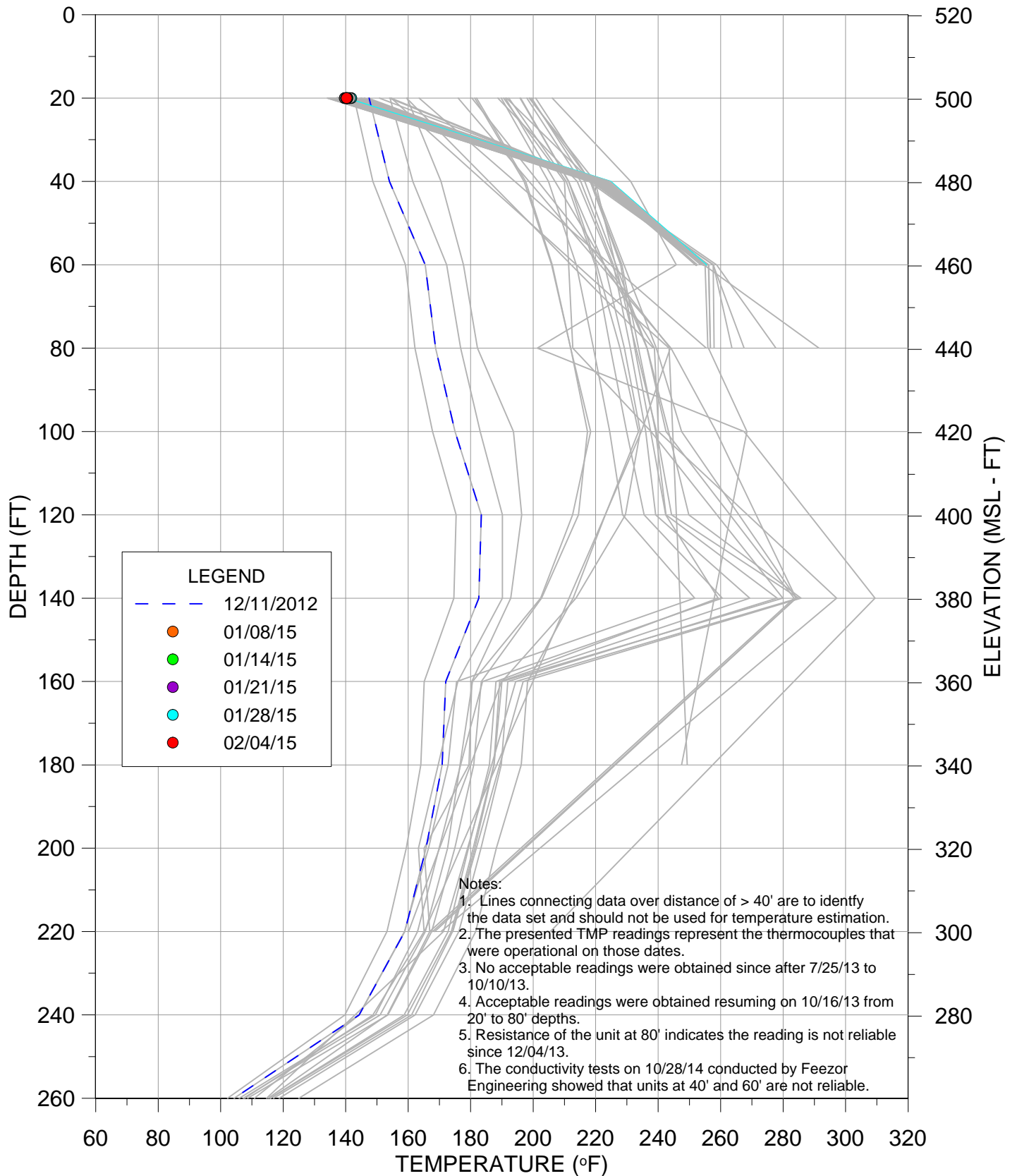
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-6



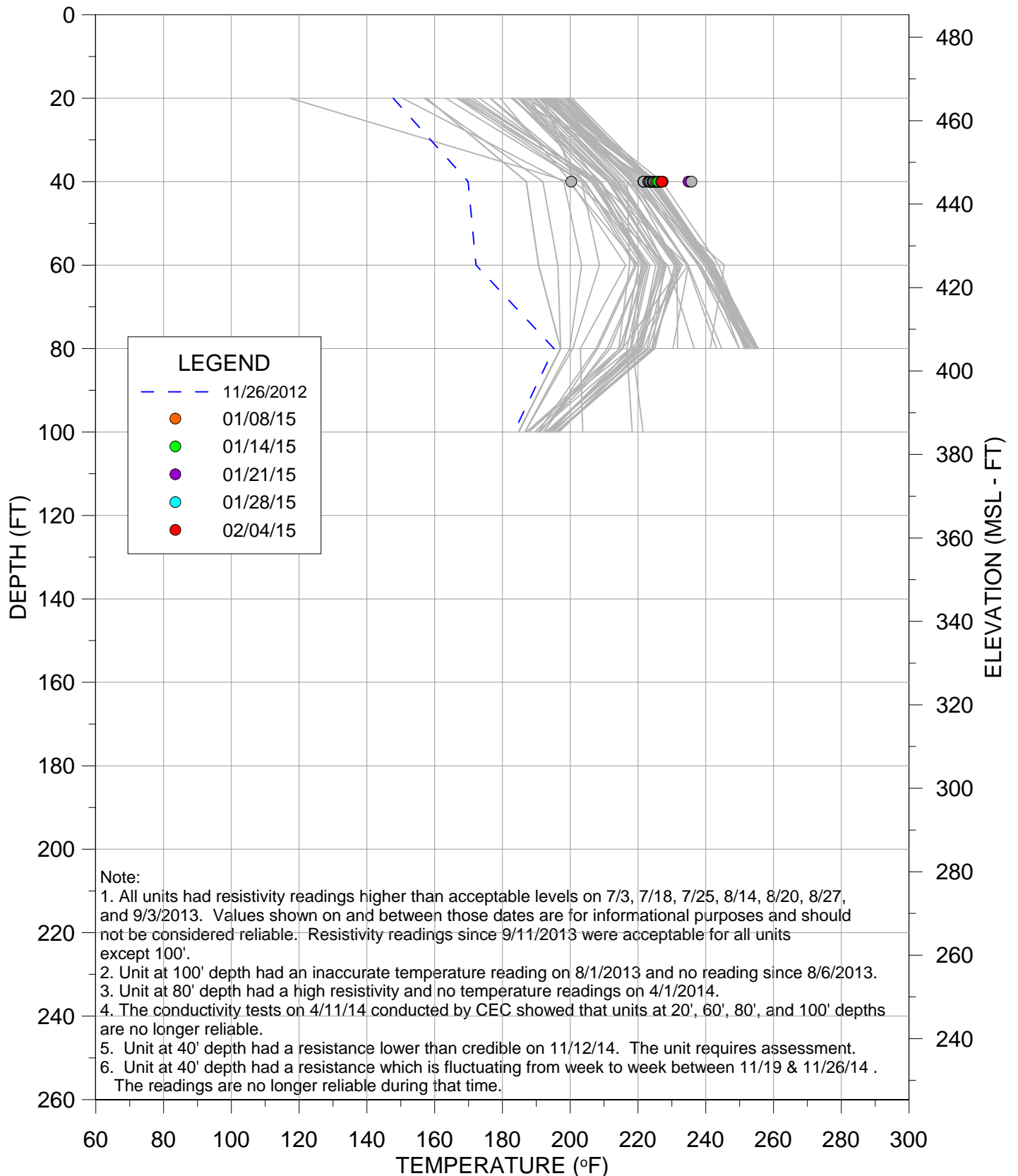
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-8



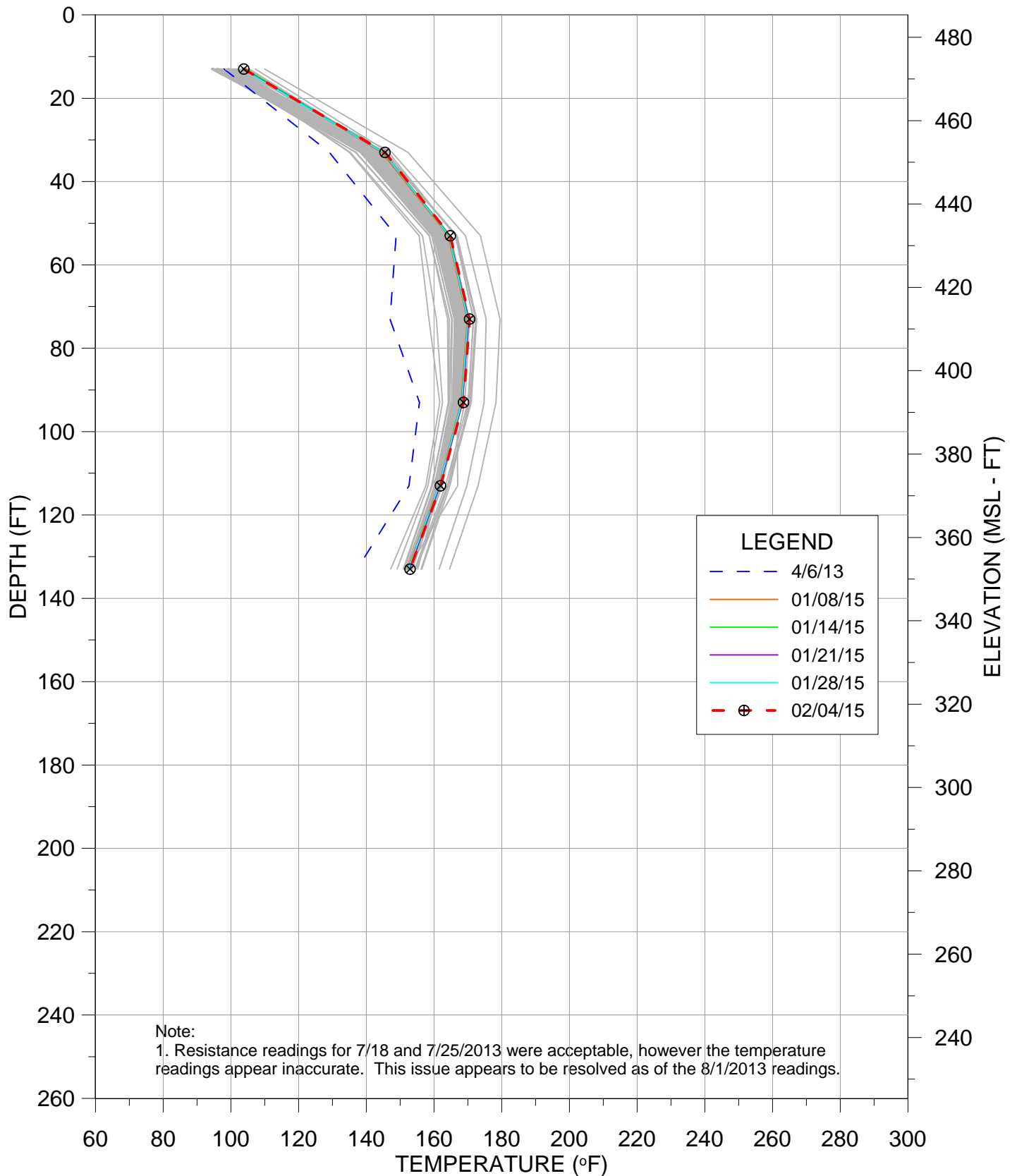
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-9



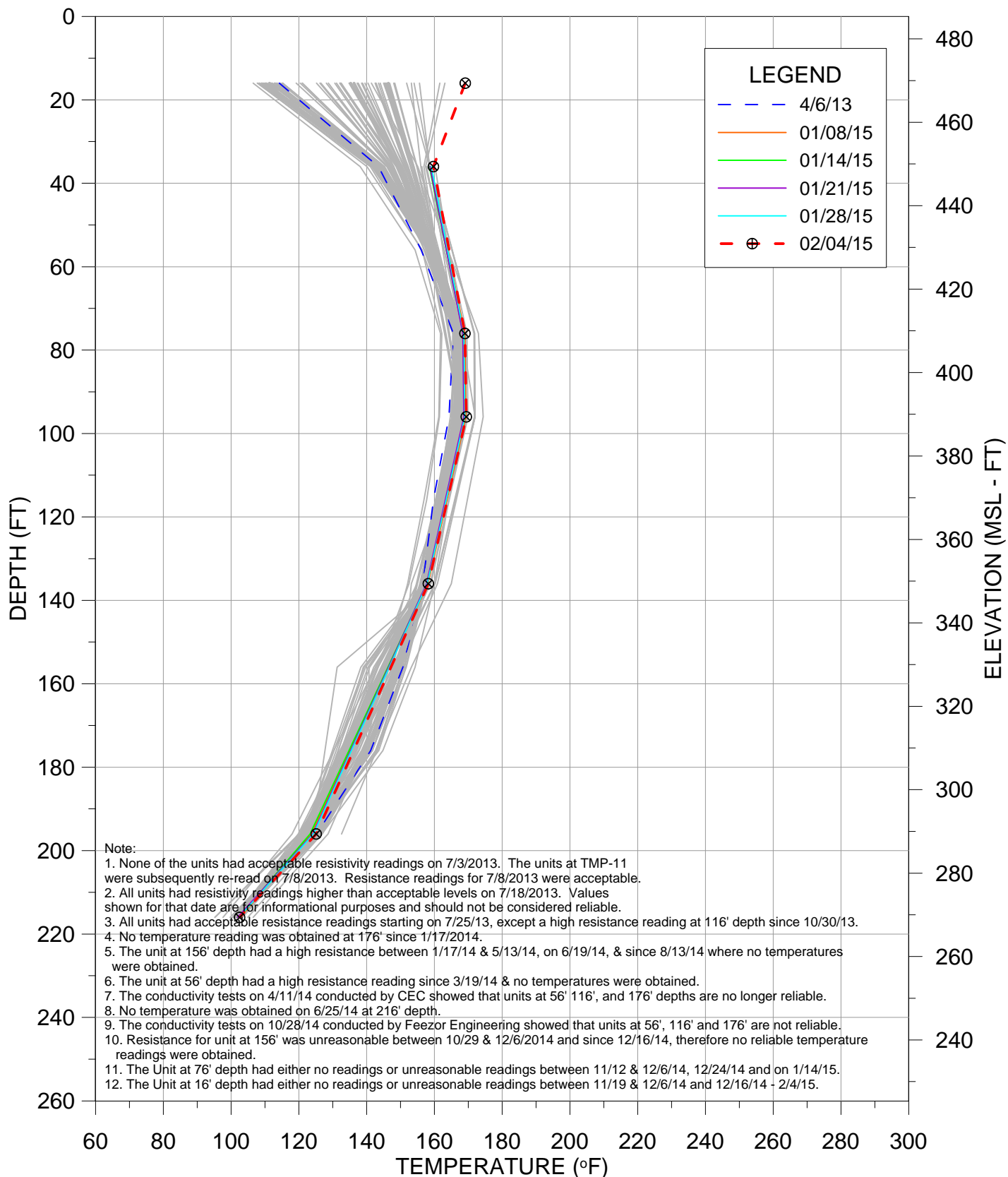


# TMP-10



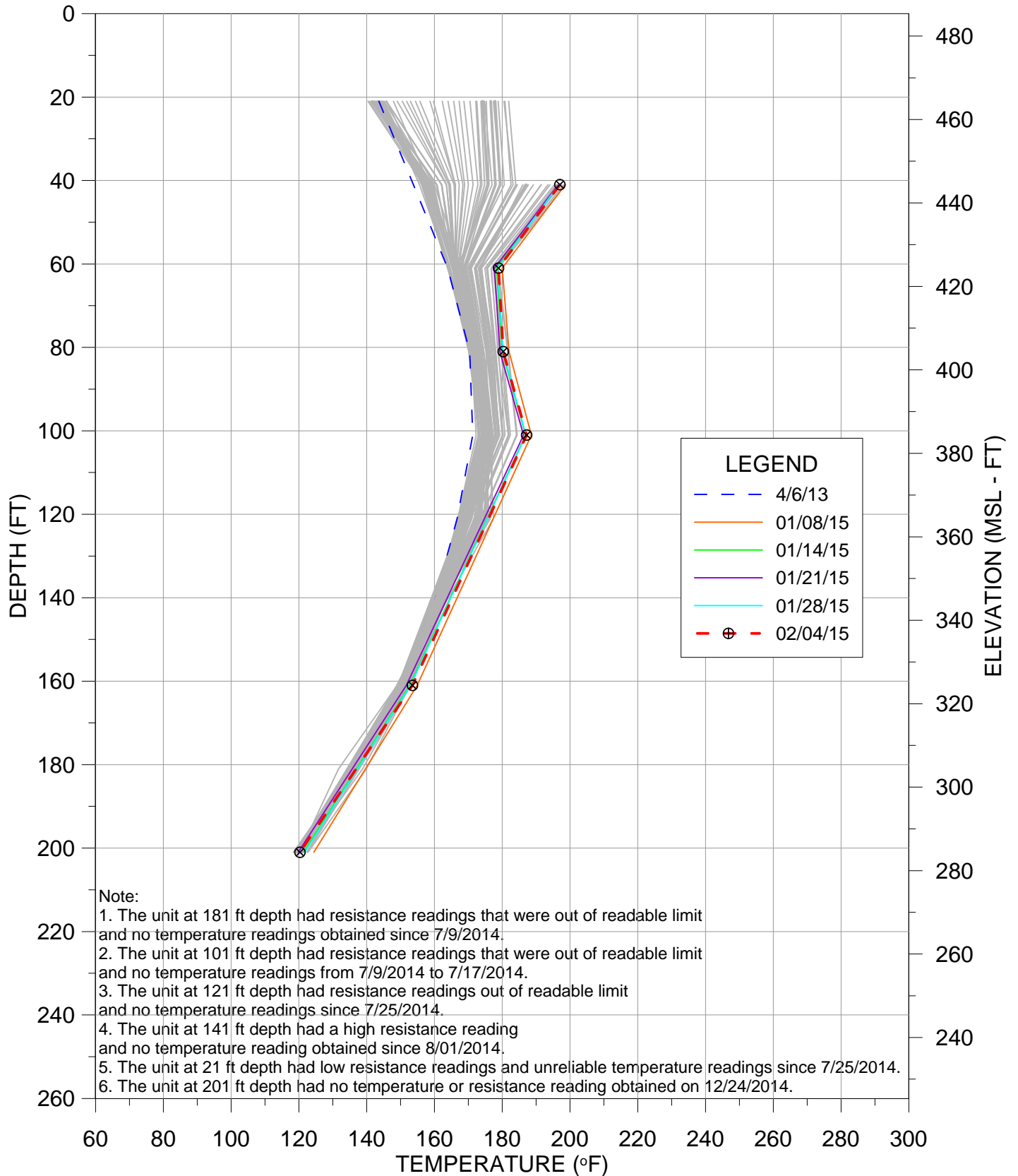
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-11

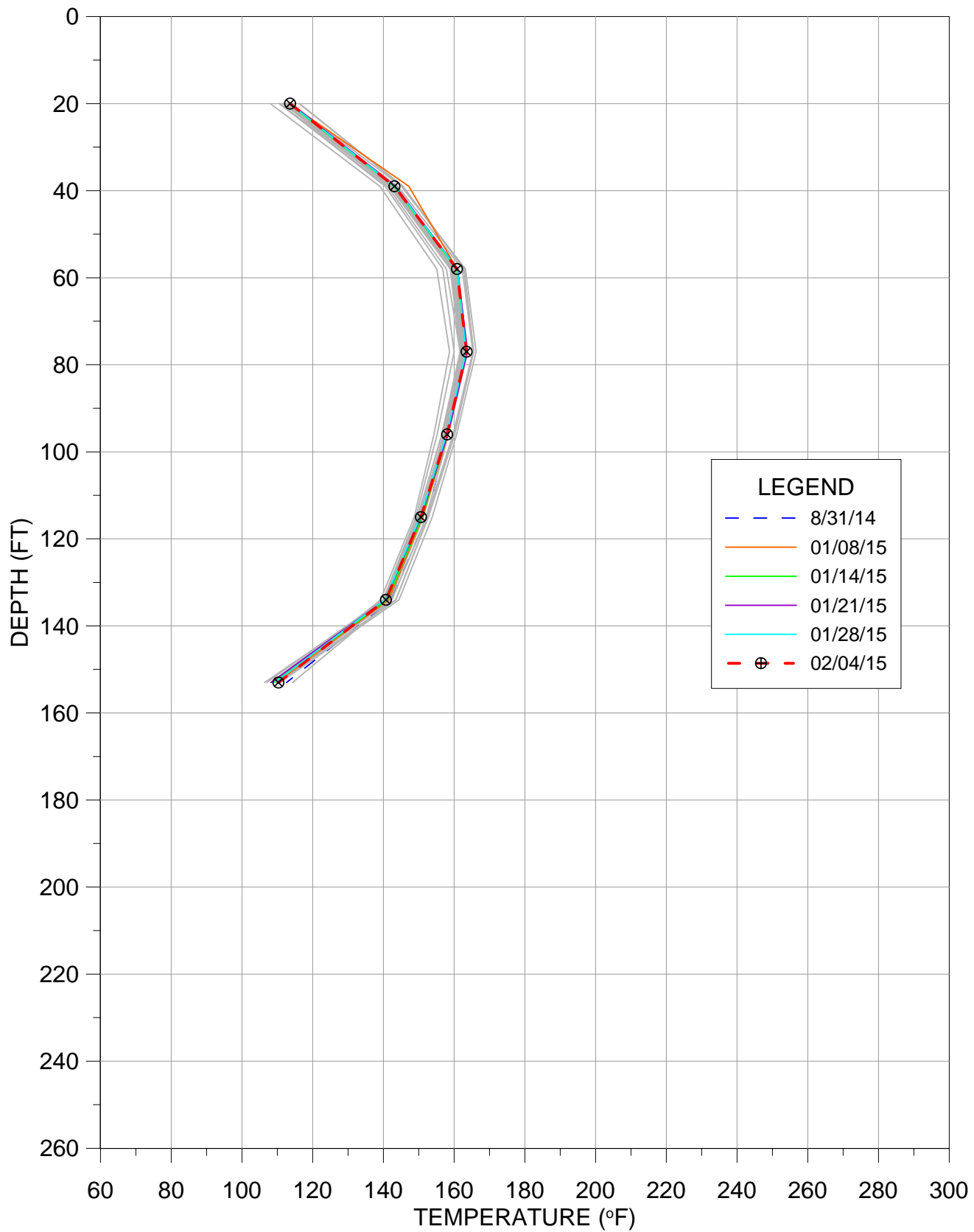


TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-14

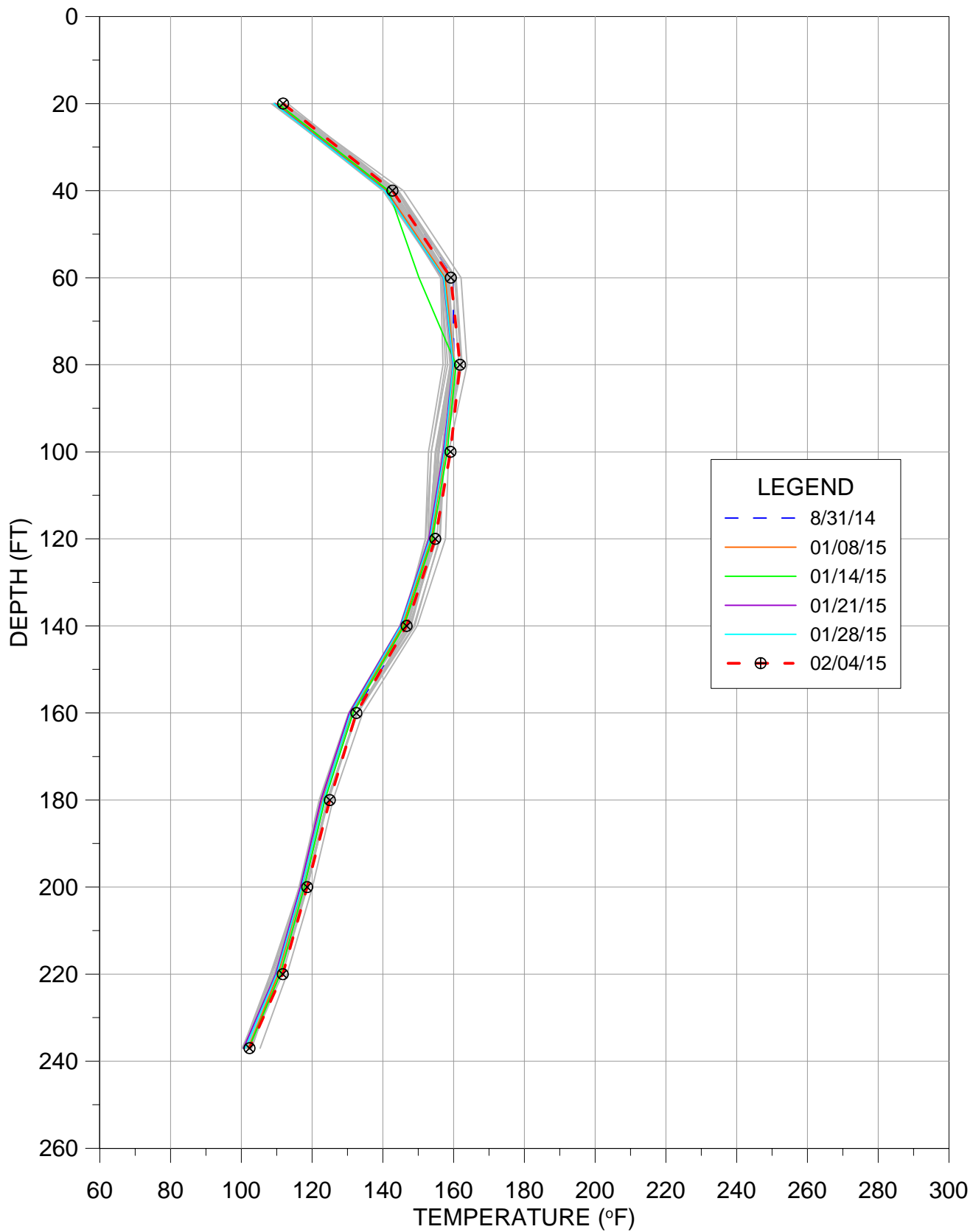


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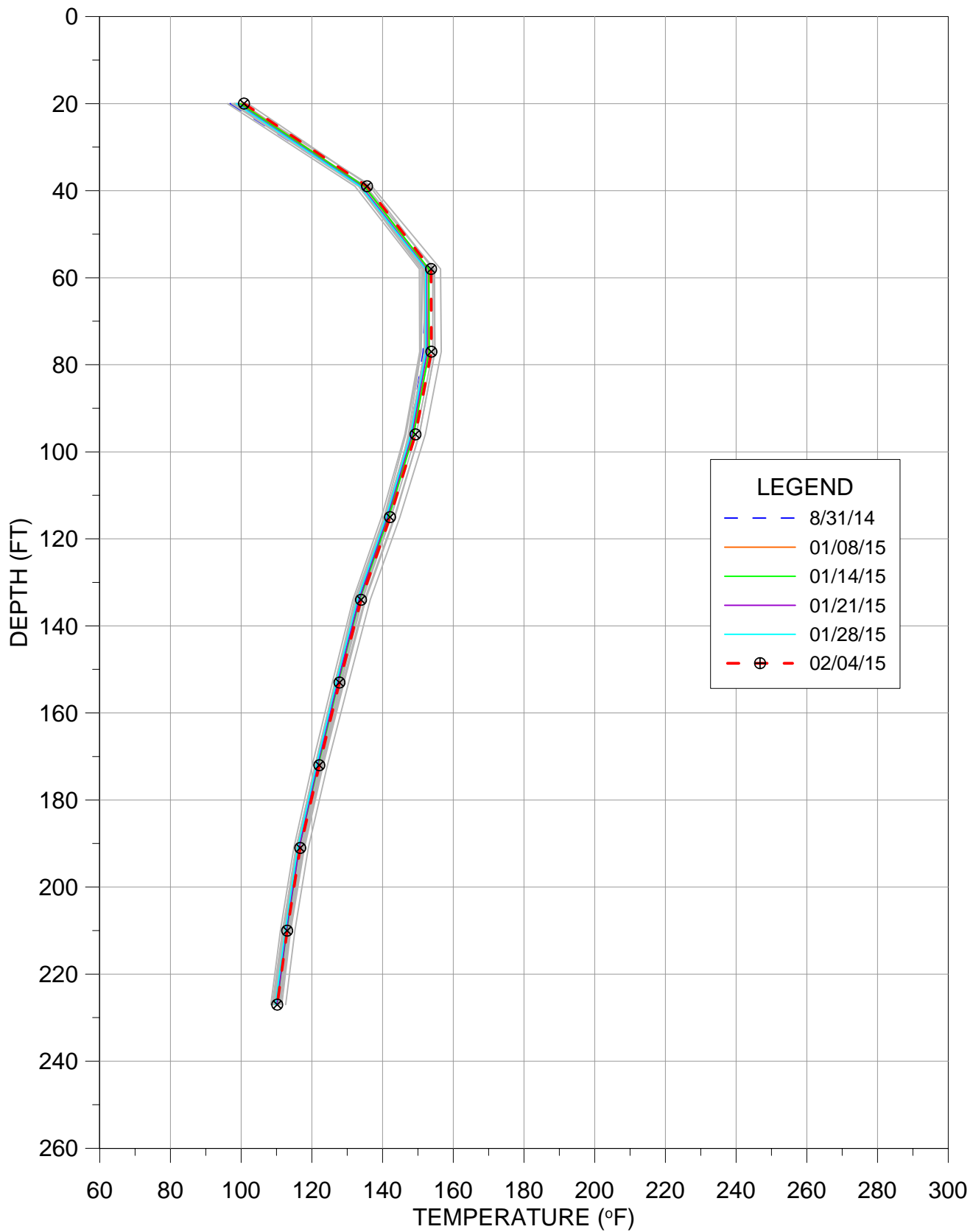
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-17



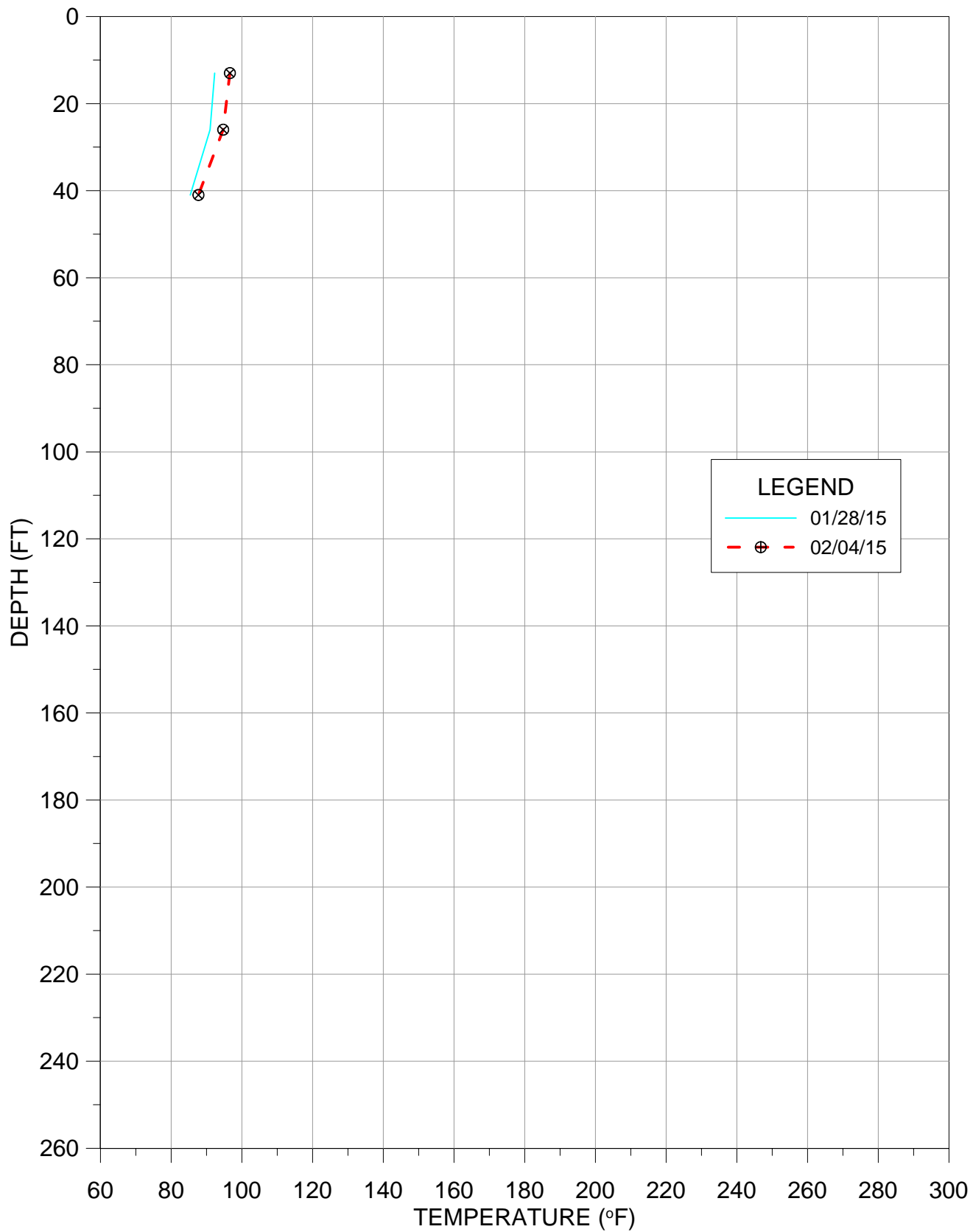
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-18



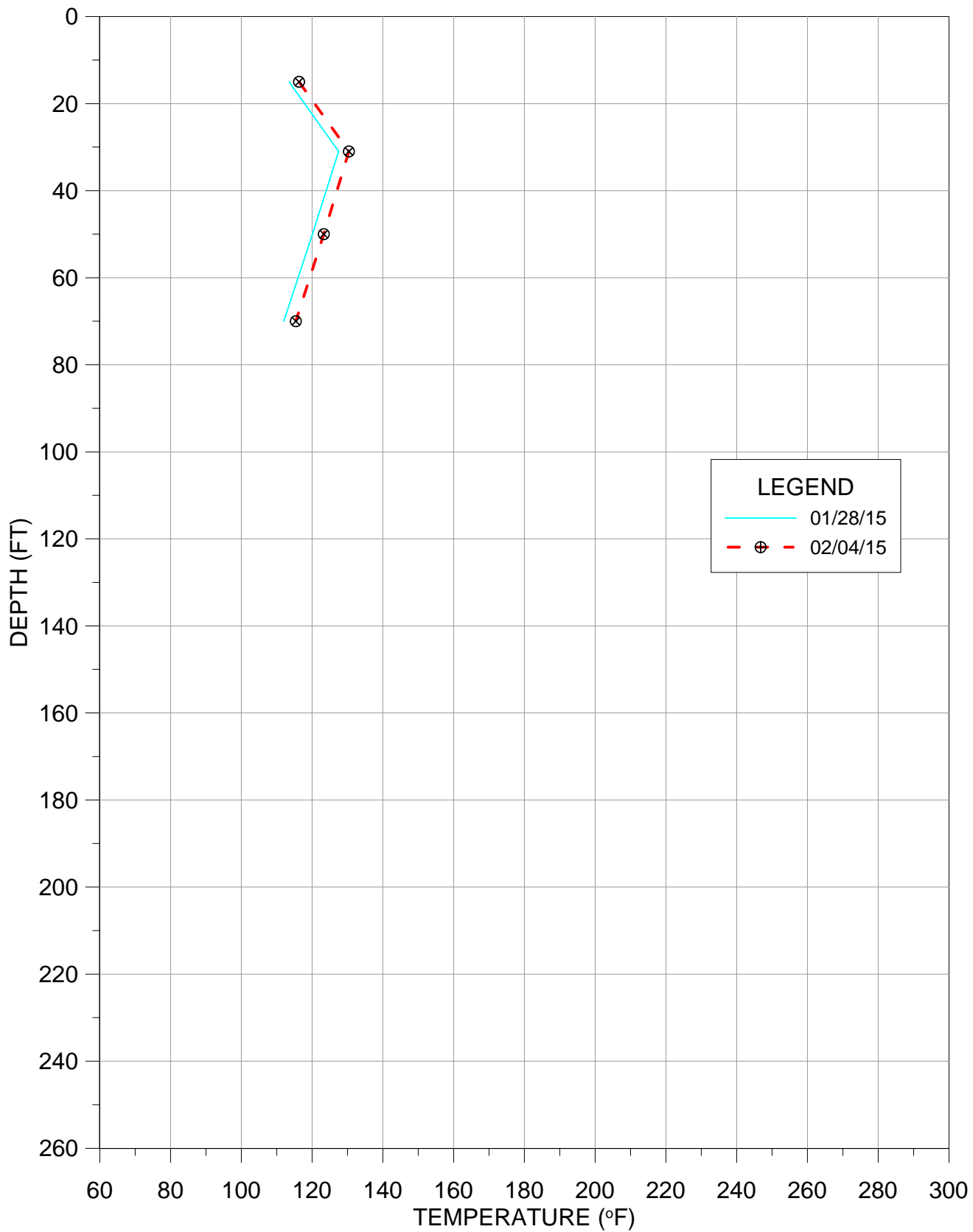
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-21



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

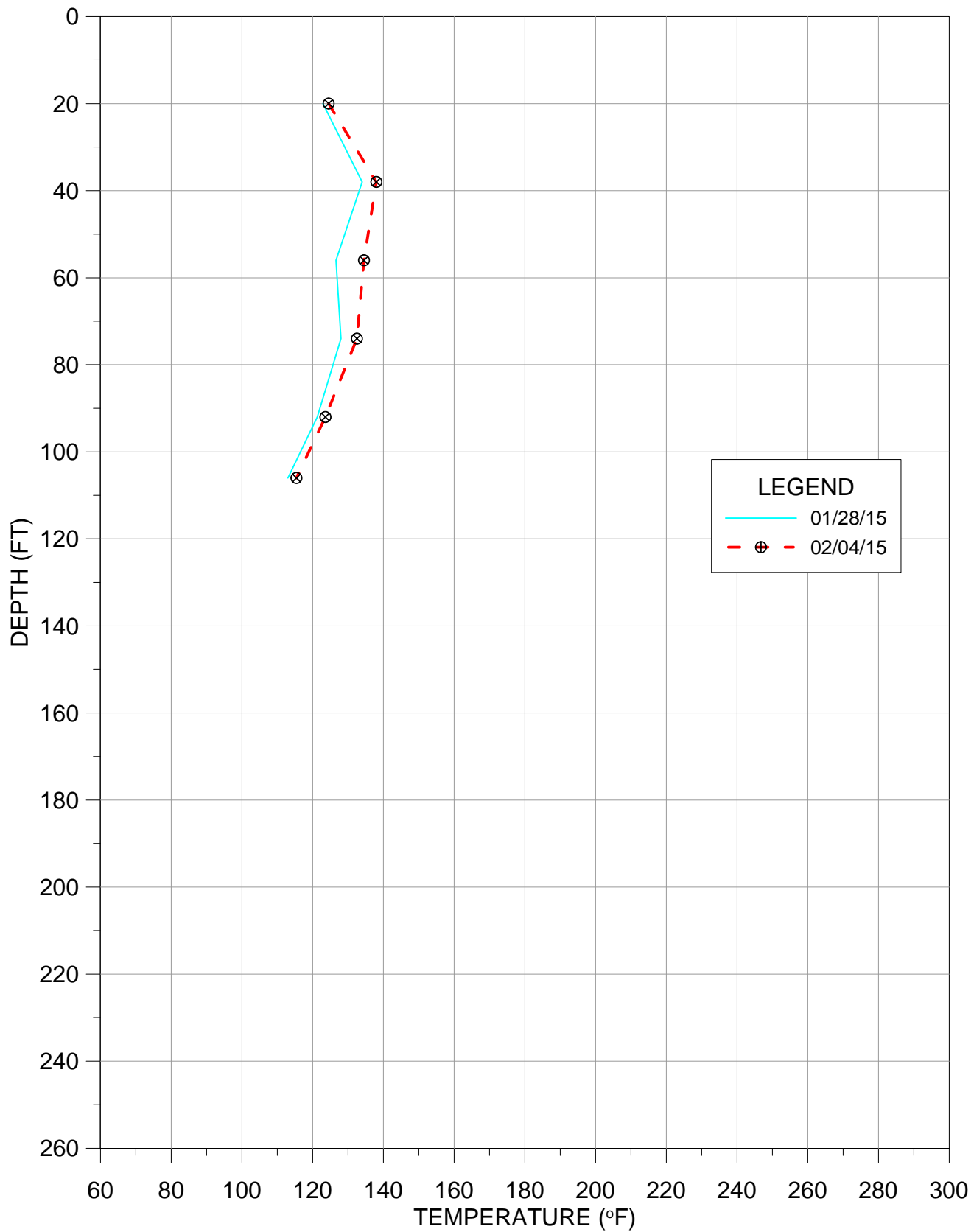
# TMP-22



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

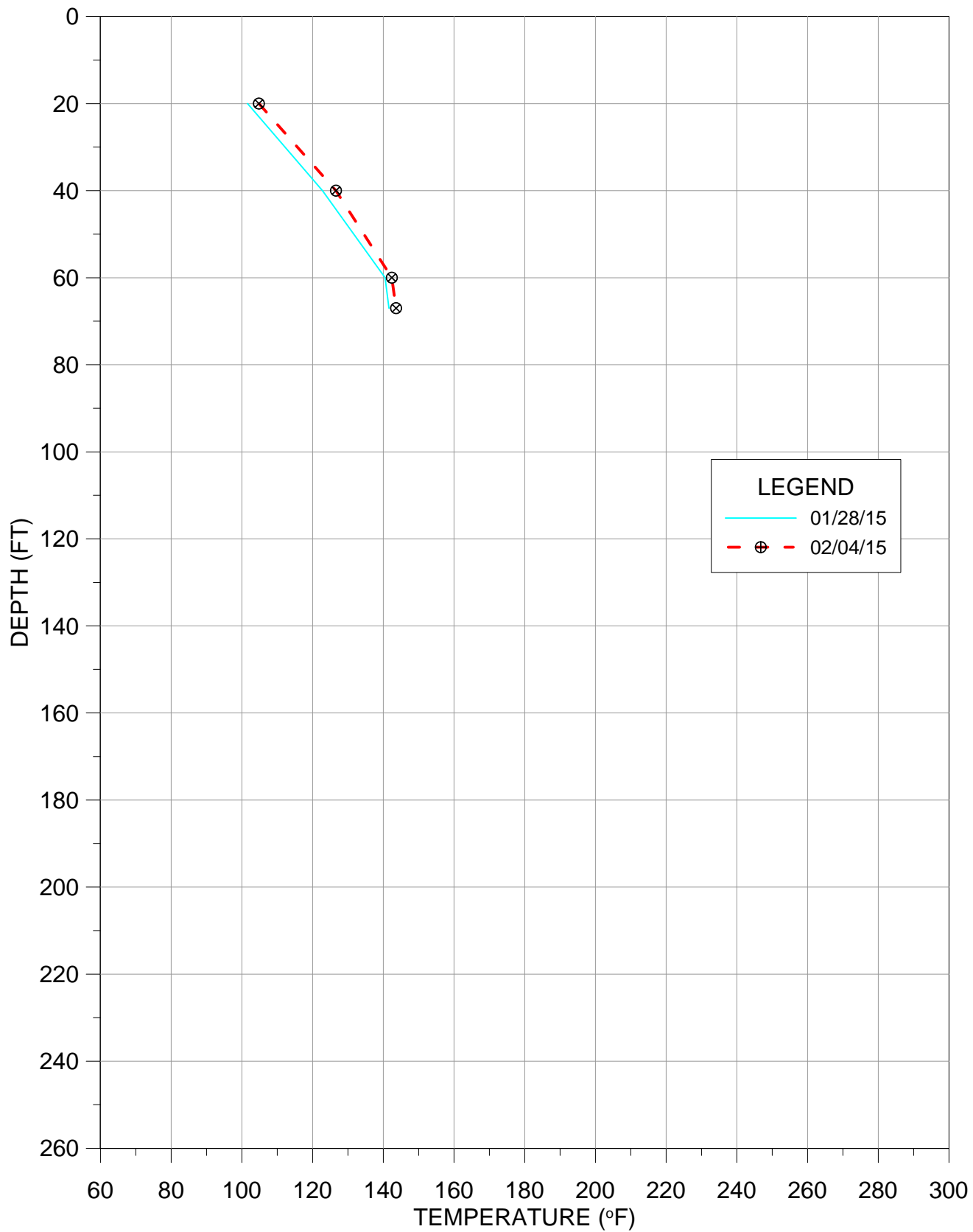


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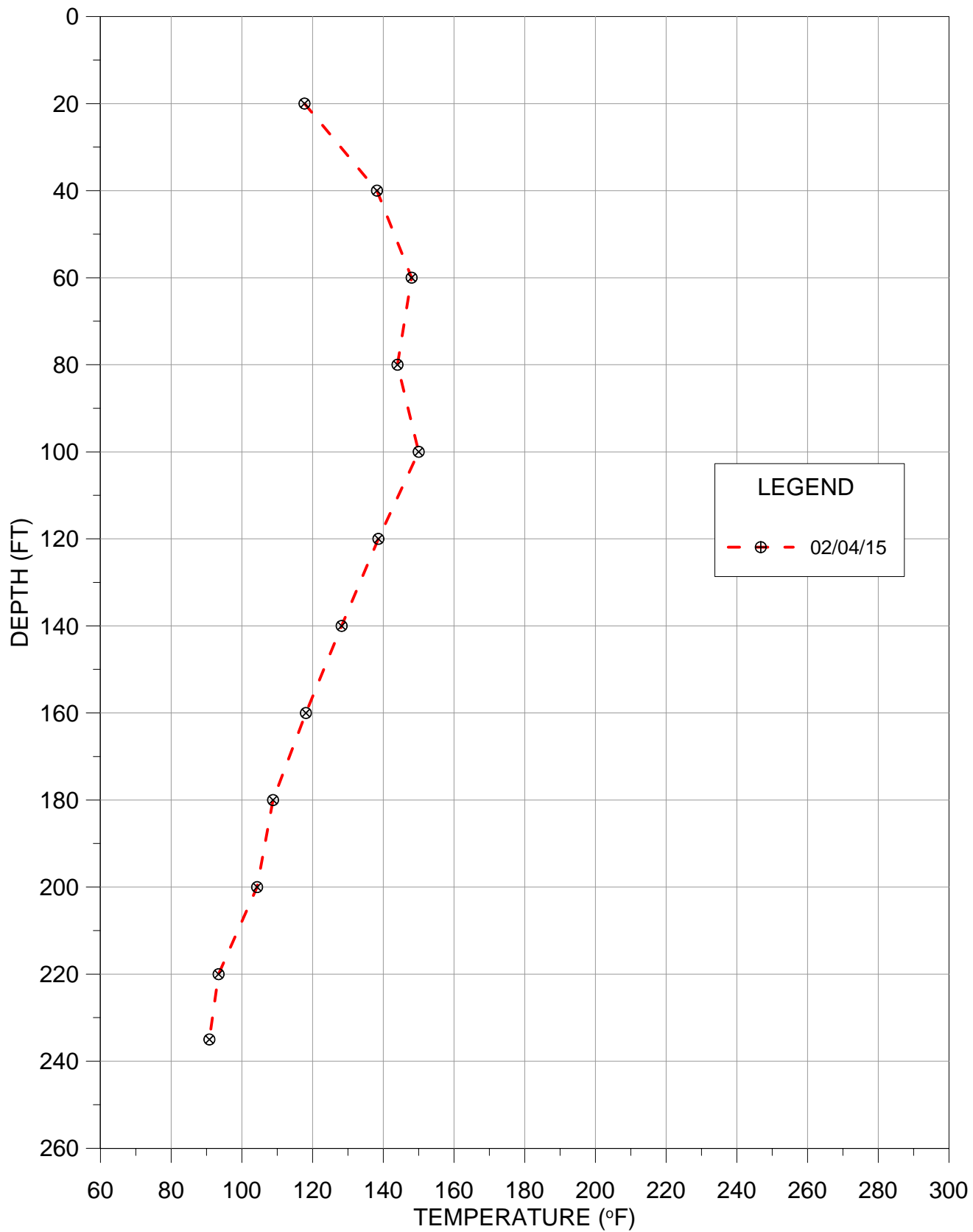
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-24



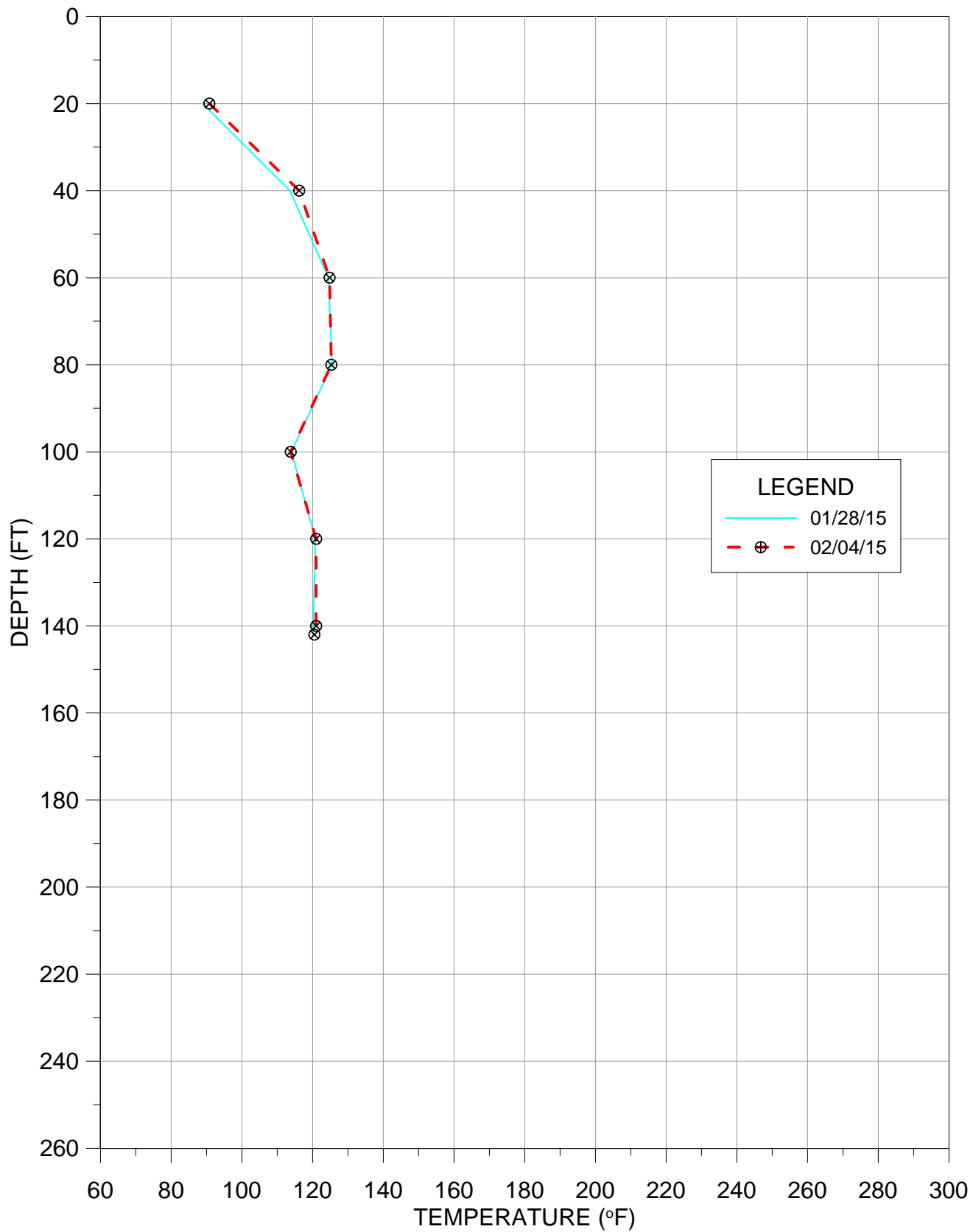
TEMPERATURE VS DEPTH  
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# TMP-25



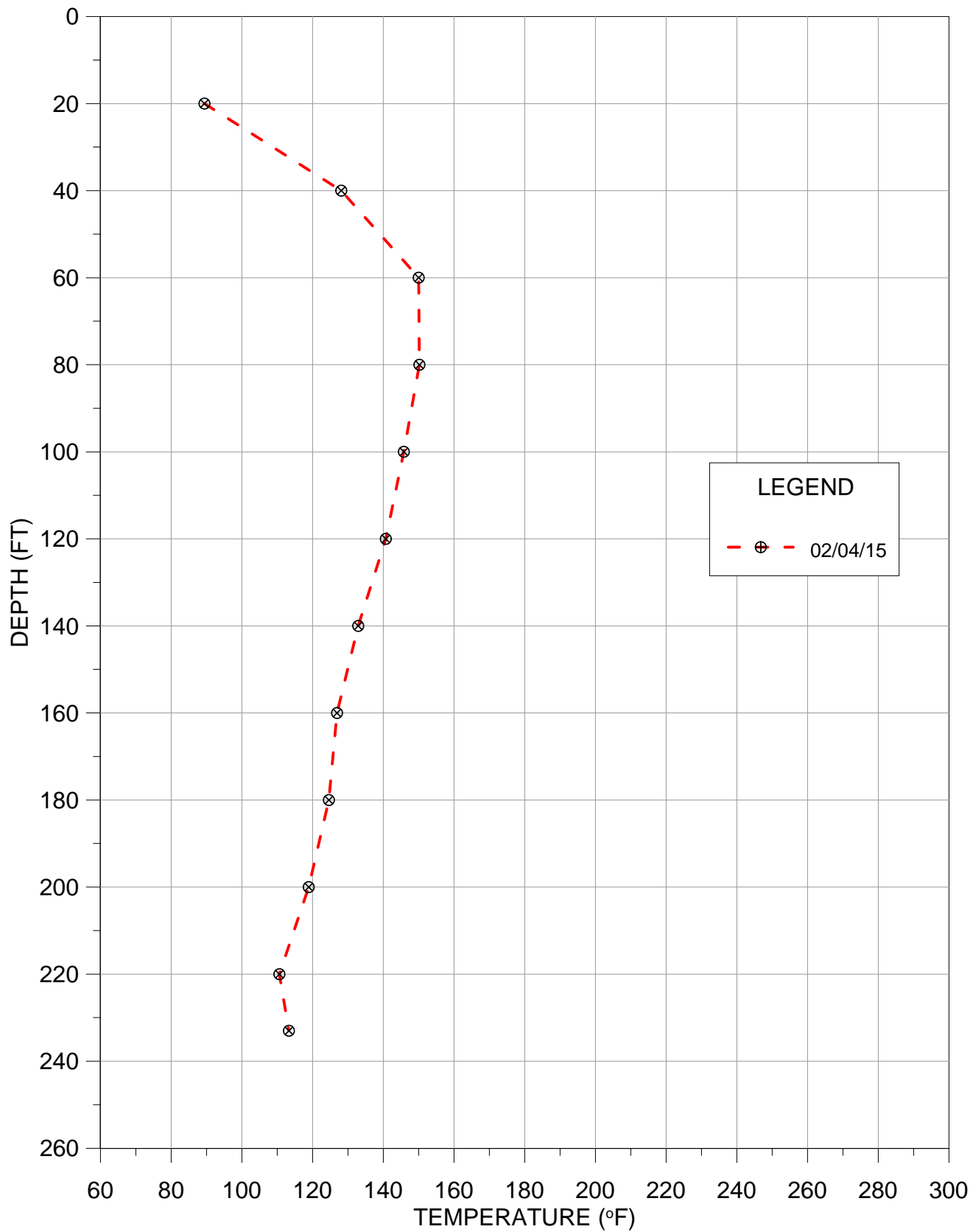
TEMPERATURE VS DEPTH  
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# TMP-26



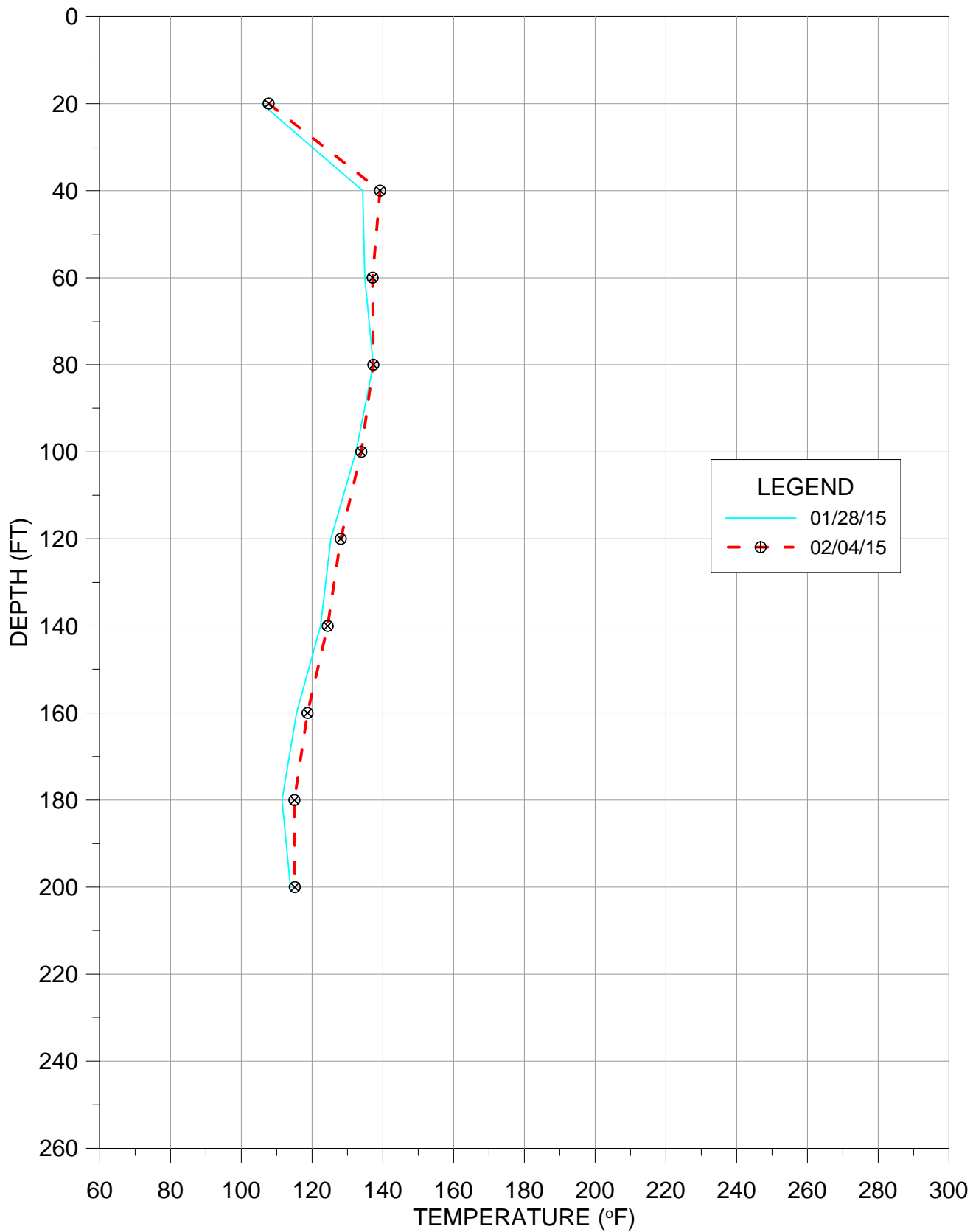
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-27



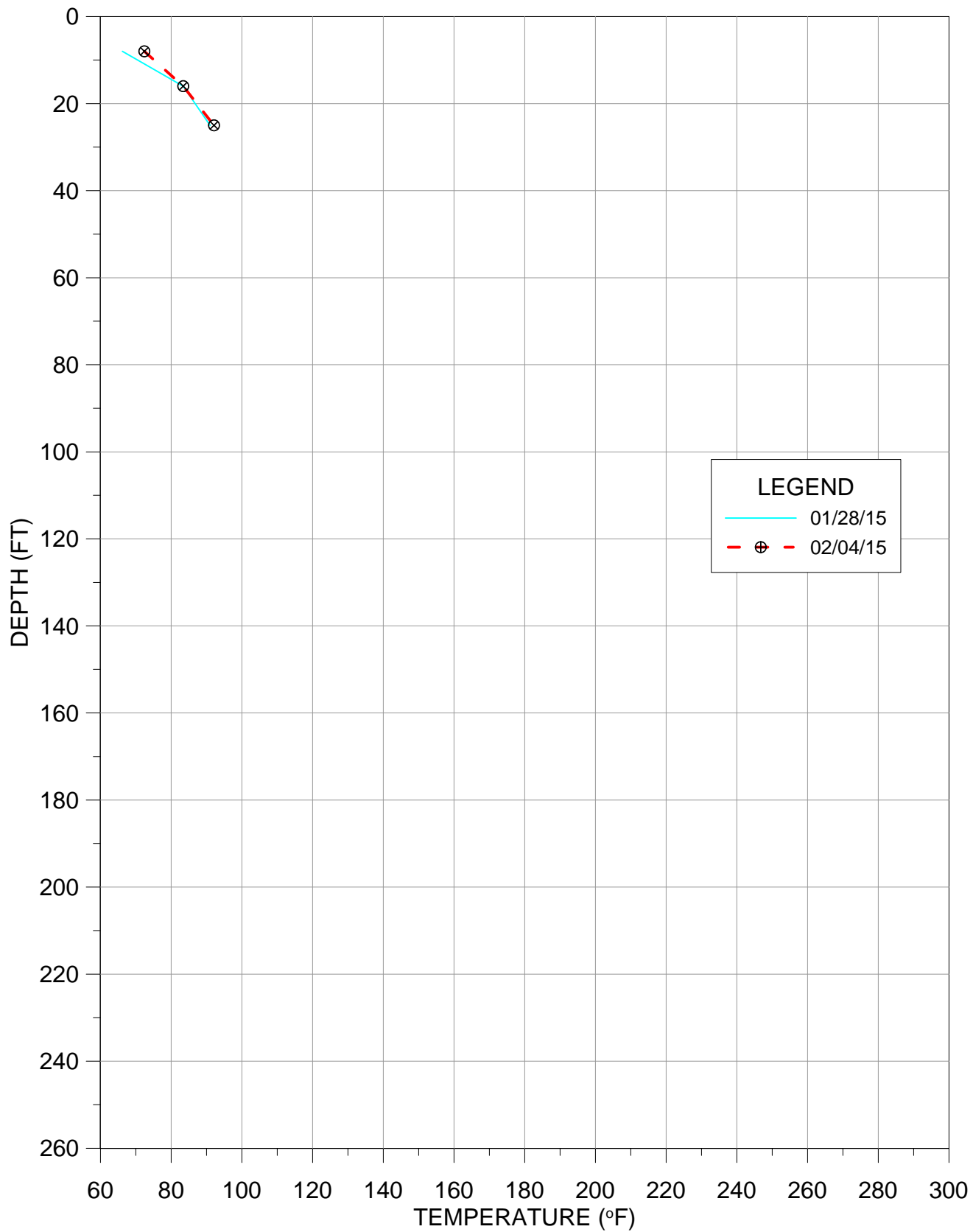
LEGEND  
- x - 02/04/15

# TMP-28



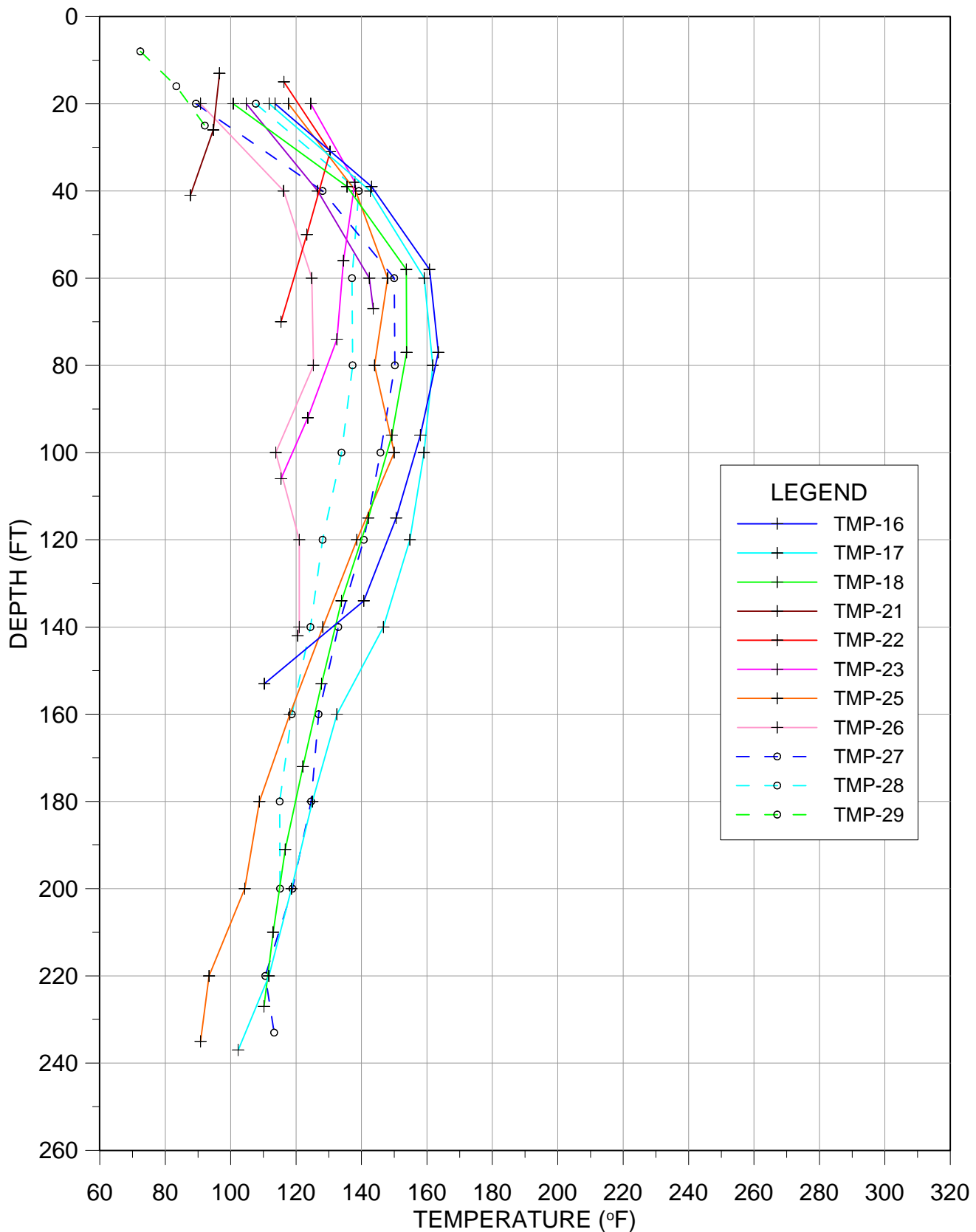
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-29



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

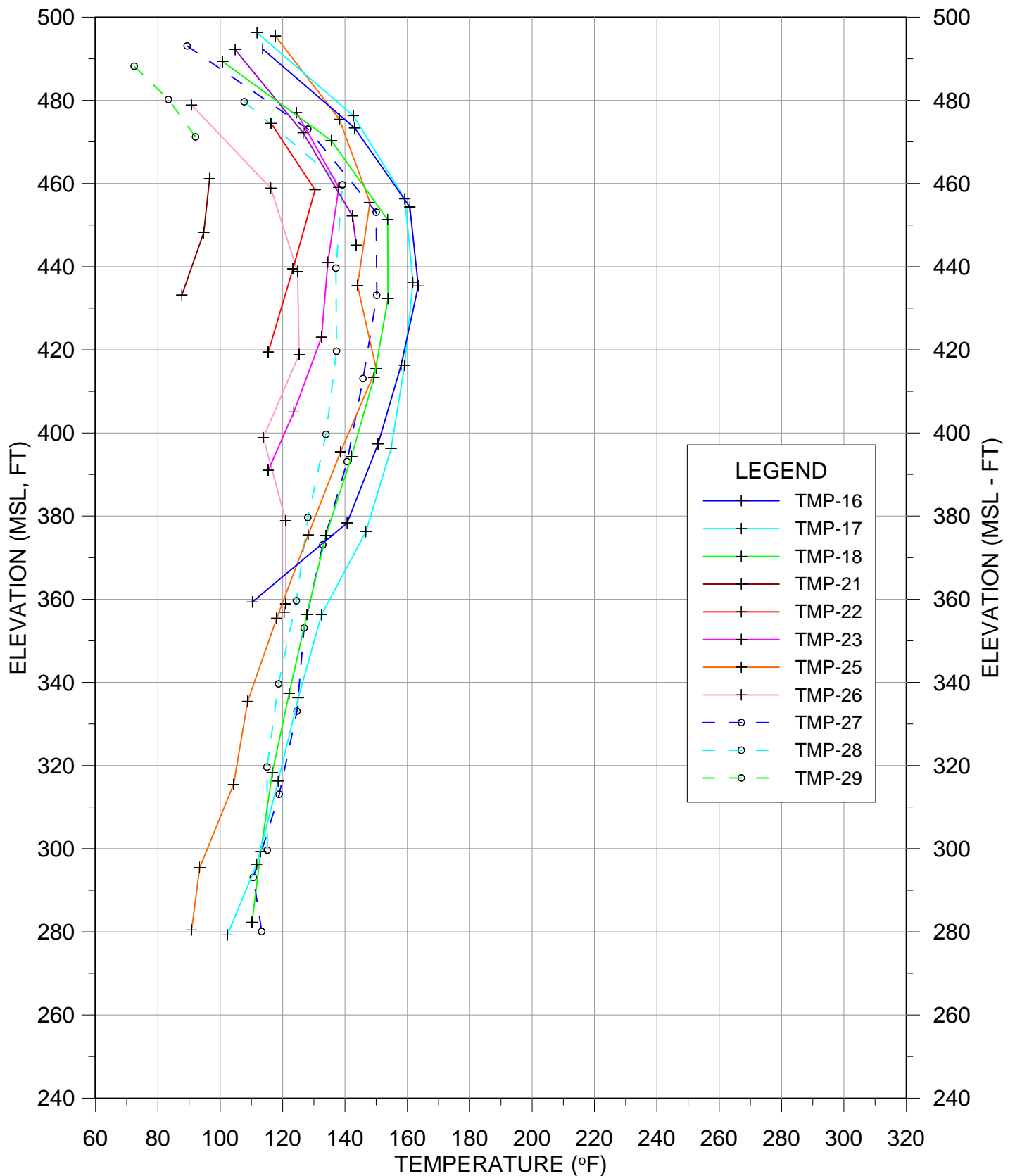
# 2/4/2015 - NORTH QUARRY



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

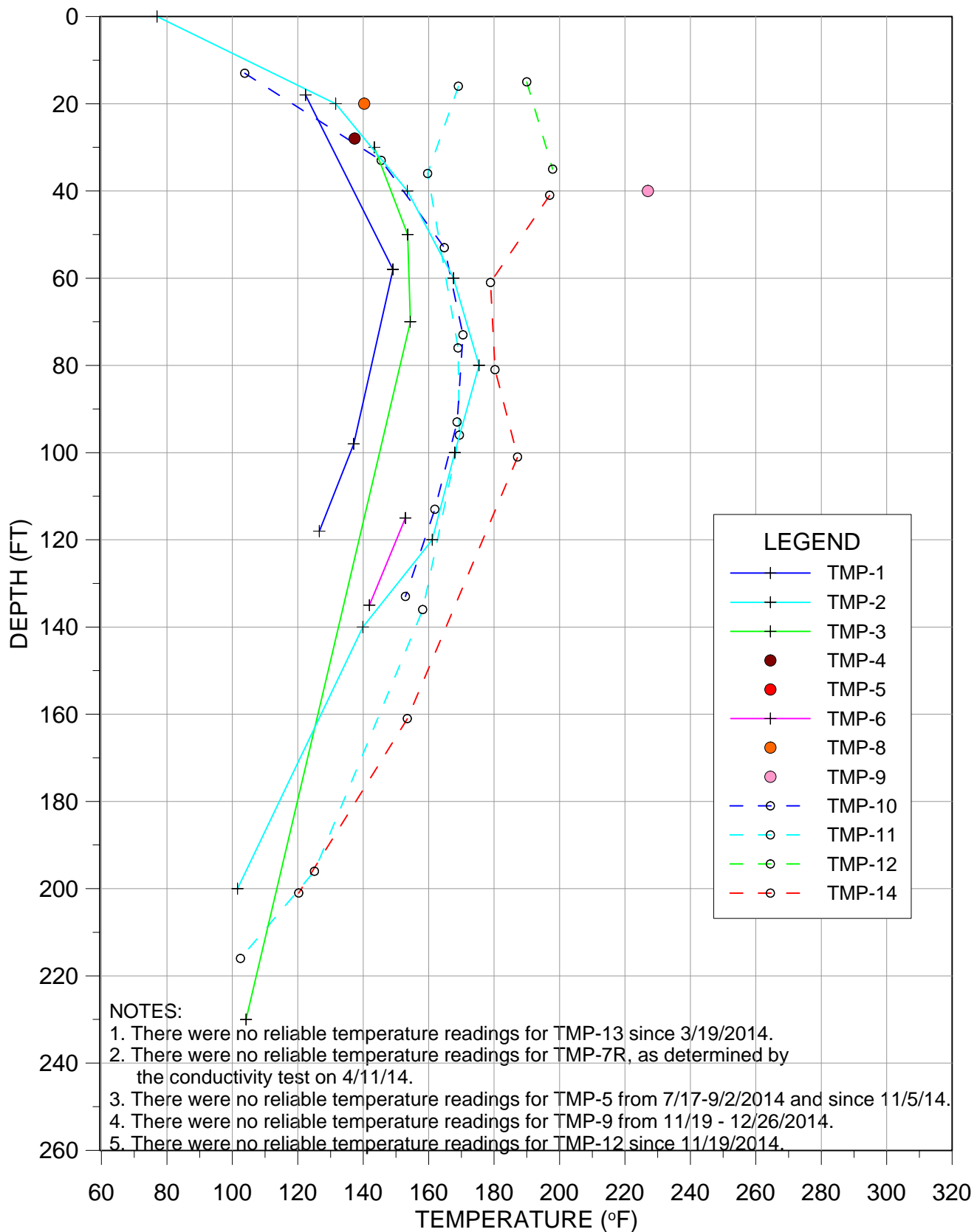


# 2/4/2015 - NORTH QUARRY



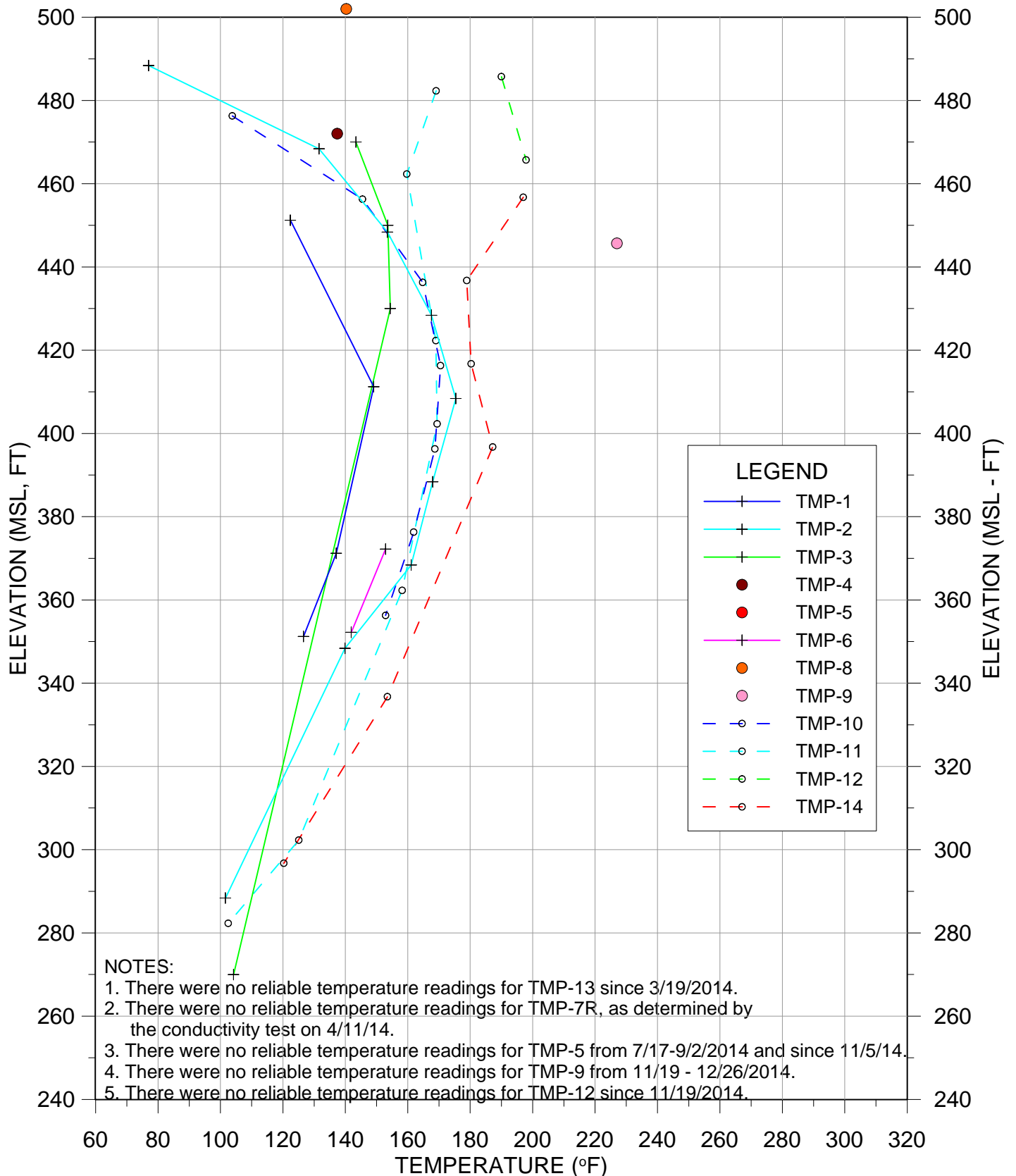
TEMPERATURE VS ELEVATION  
BRIDGETON LANDFILL

# 2/4/2015



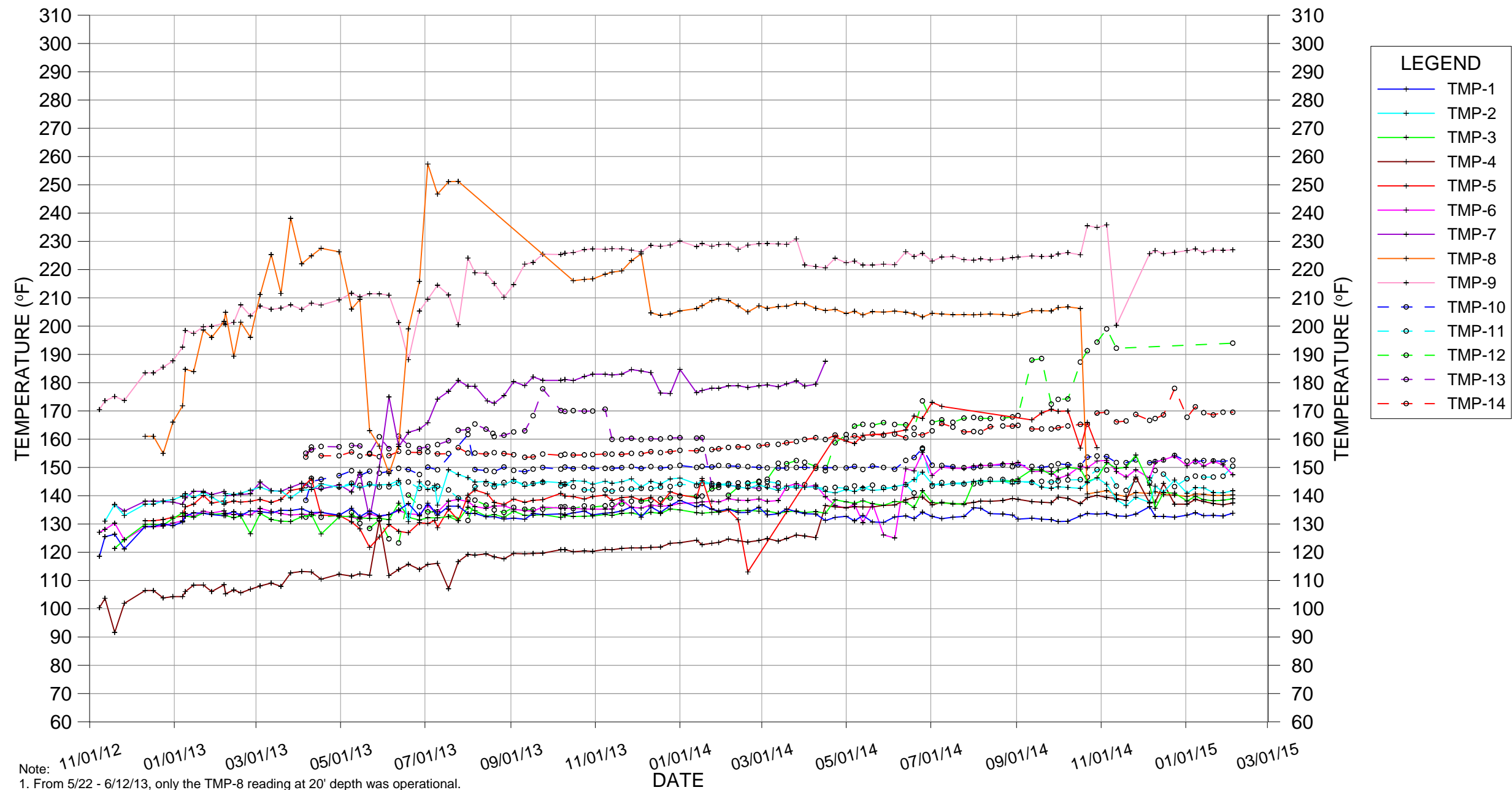
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 2/4/2015



TEMPERATURE VS ELEVATION  
BRIDGETON LANDFILL

# AVERAGE TEMPERATURES



Note: 11/01/12 01/01/13 03/01/13 05/01/13 07/01/13 09/01/13 11/01/13 01/01/14 03/01/14 05/01/14 07/01/14 09/01/14 11/01/14 01/01/15 03/01/15

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.

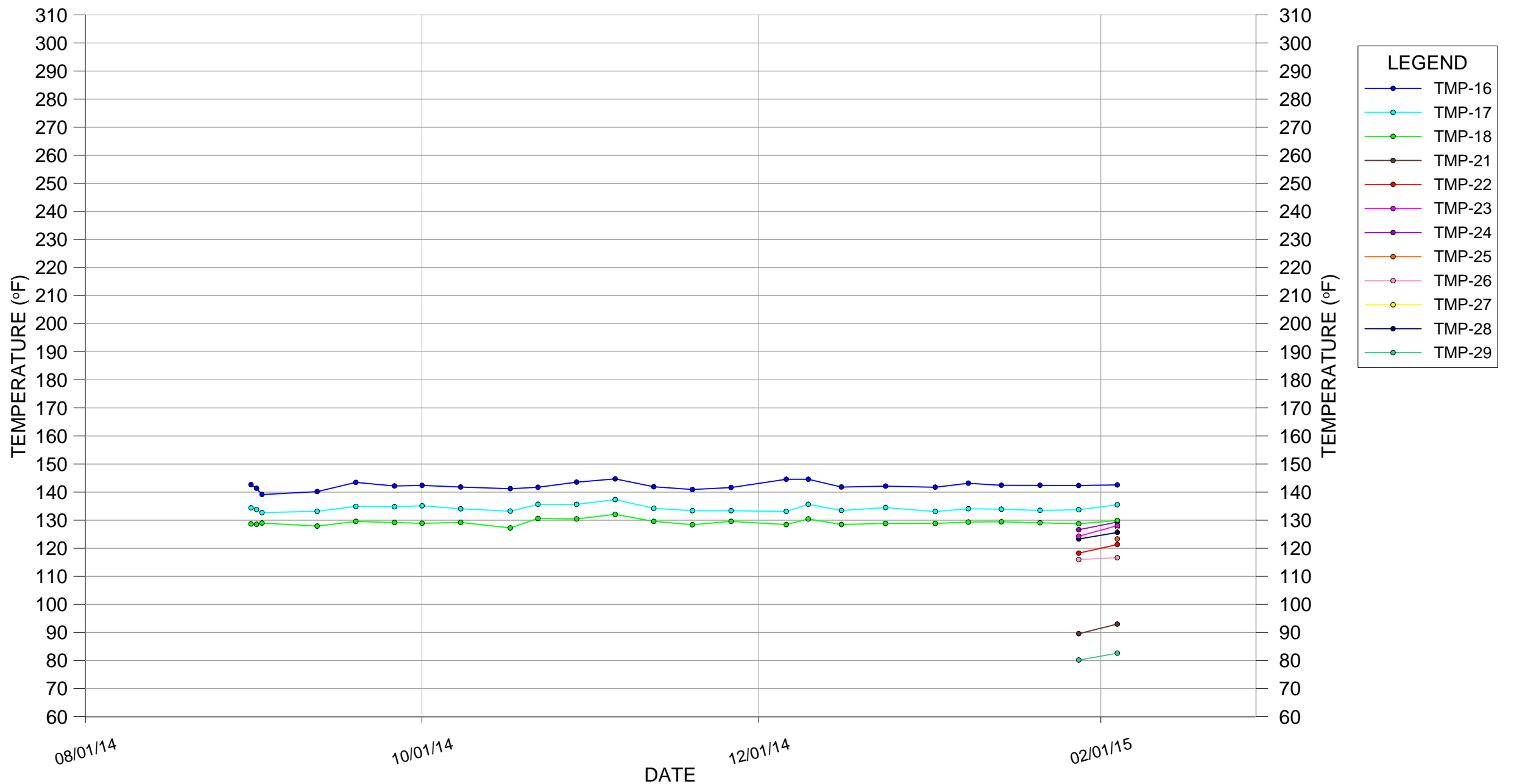
2. A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more valid readings.

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.

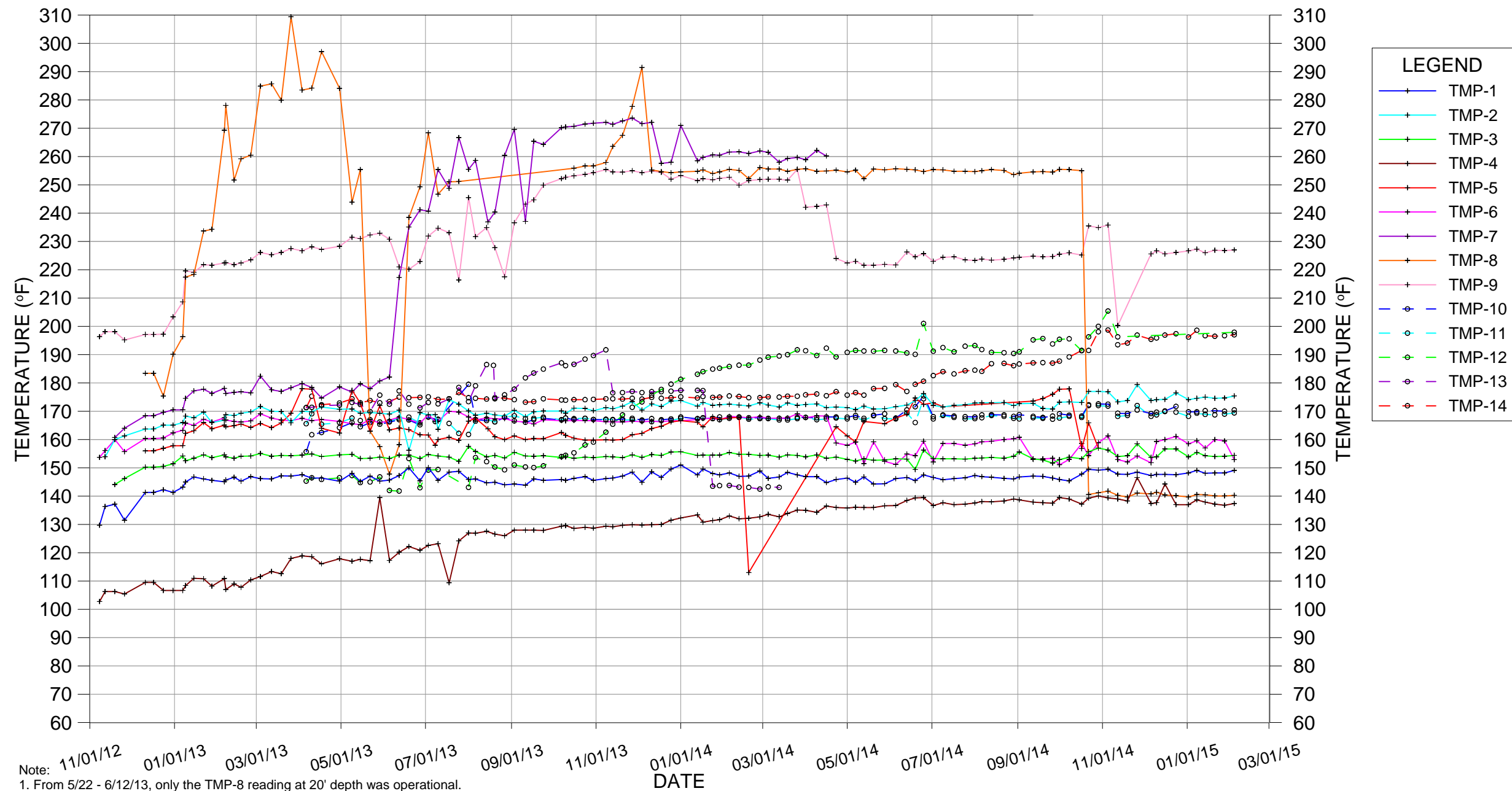
TEMPERATURE VS TIME  
BRIDGETON LANDFILL

# AVERAGE TEMPERATURES - NORTH QUARRY



TEMPERATURE VS TIME  
BRIDGETON LANDFILL

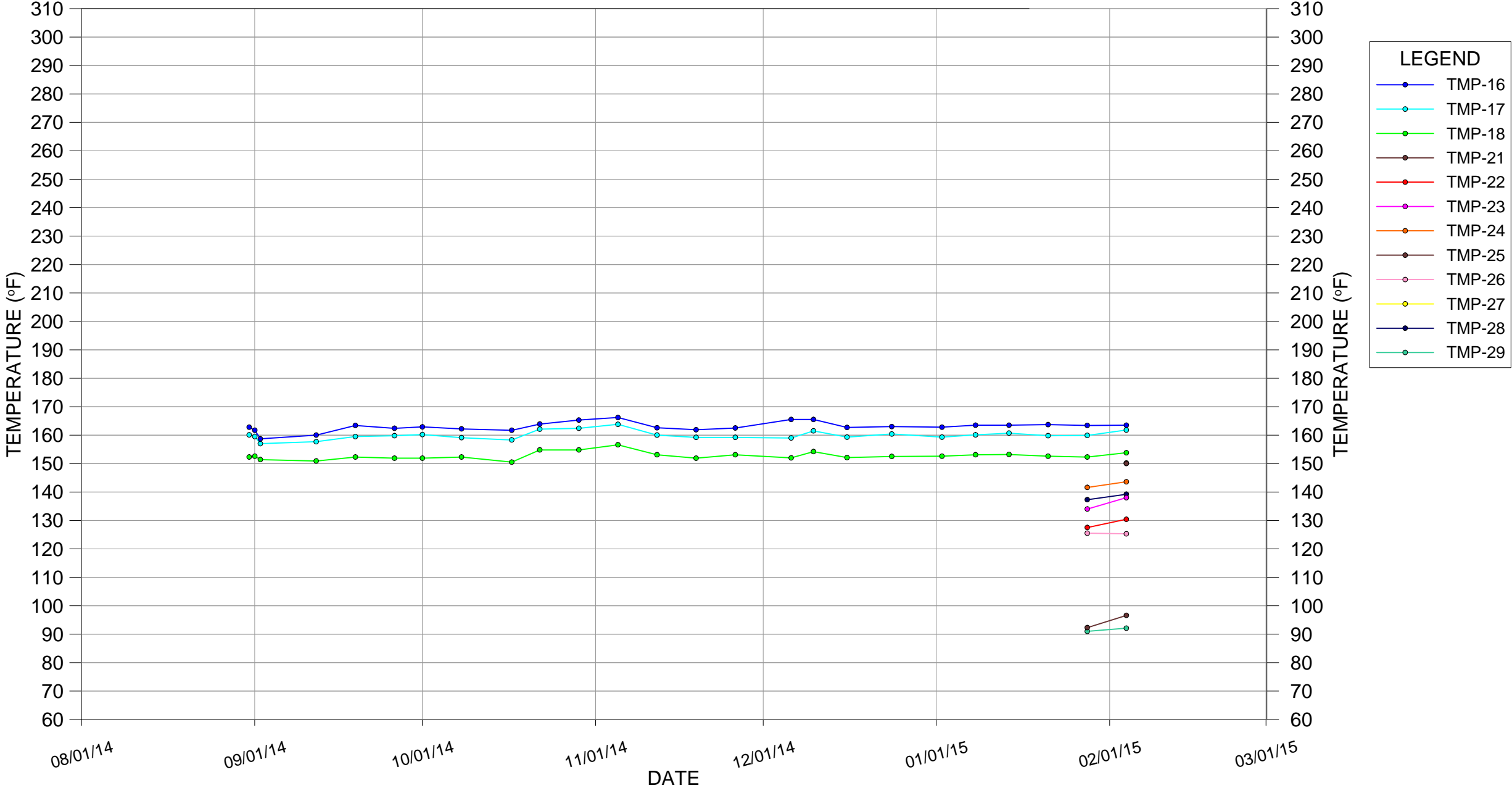
# MAXIMUM TEMPERATURES



- 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 valid 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

# MAXIMUM TEMPERATURES - NORTH QUARRY



TEMPERATURE VS TIME  
BRIDGETON LANDFILL

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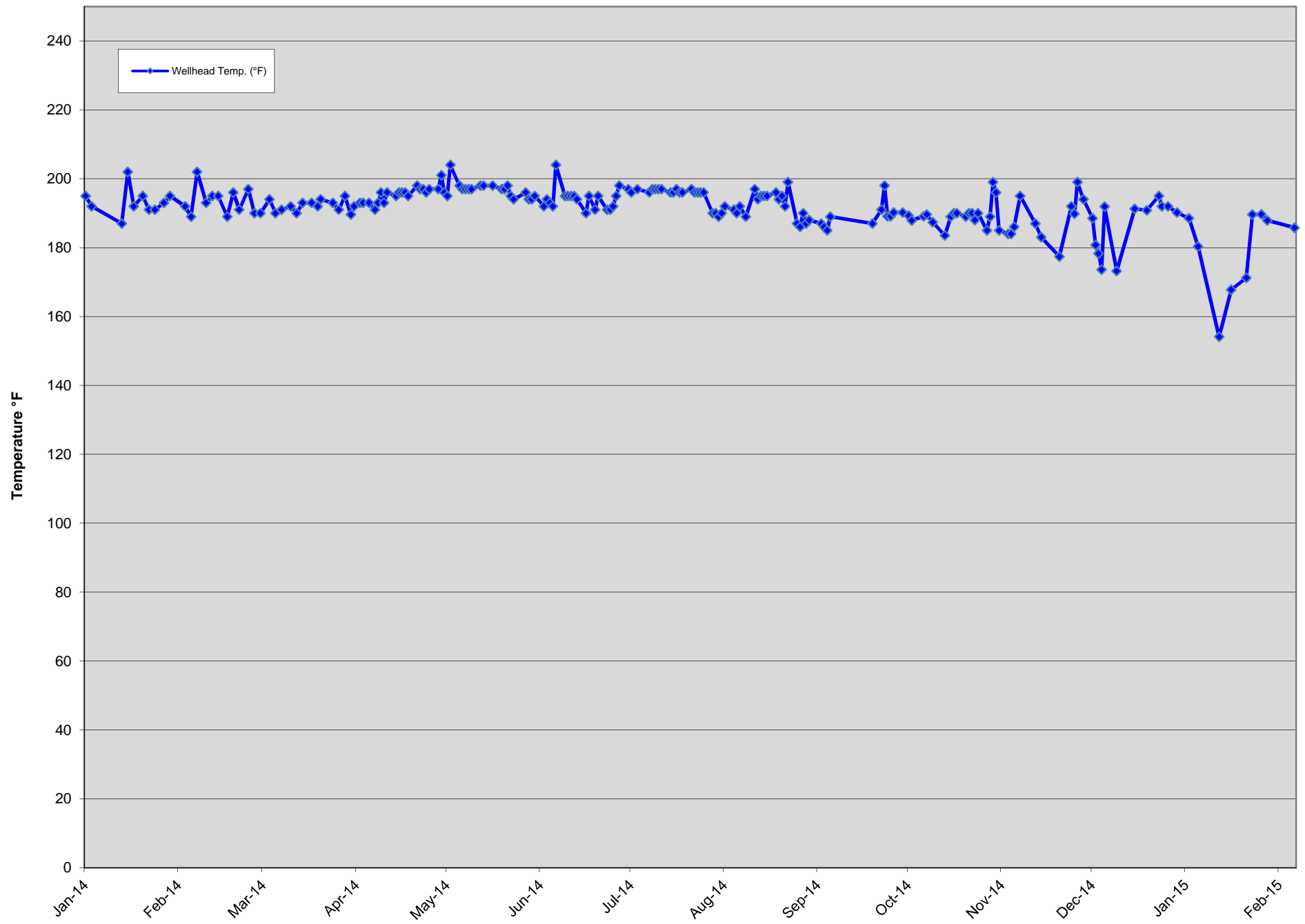
**ATTACHMENT C**

**GAS INTERCEPTOR WELLHEAD TEMPERATURE GRAPHS**

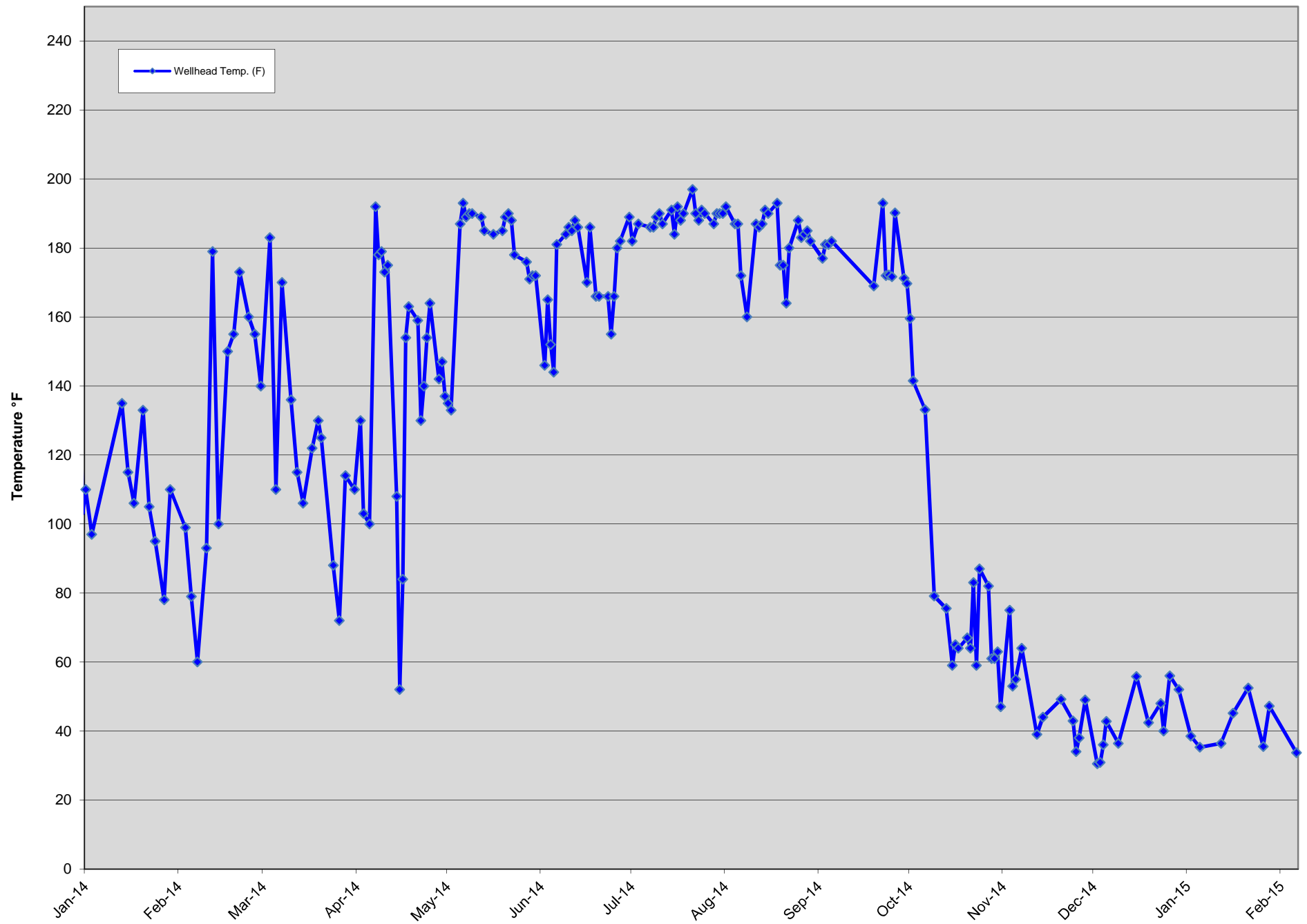
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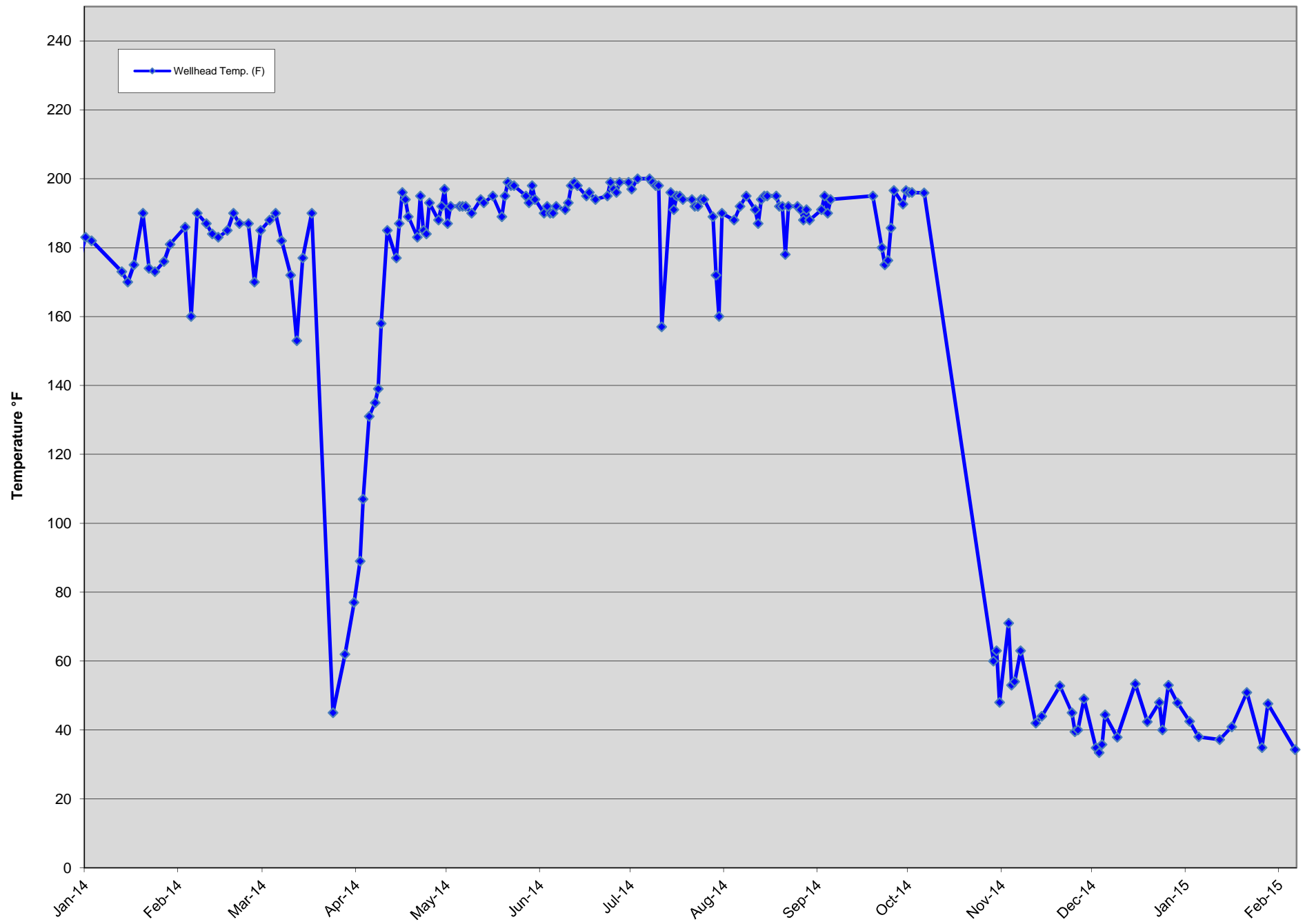
## GIW-1 Wellhead Temperatures



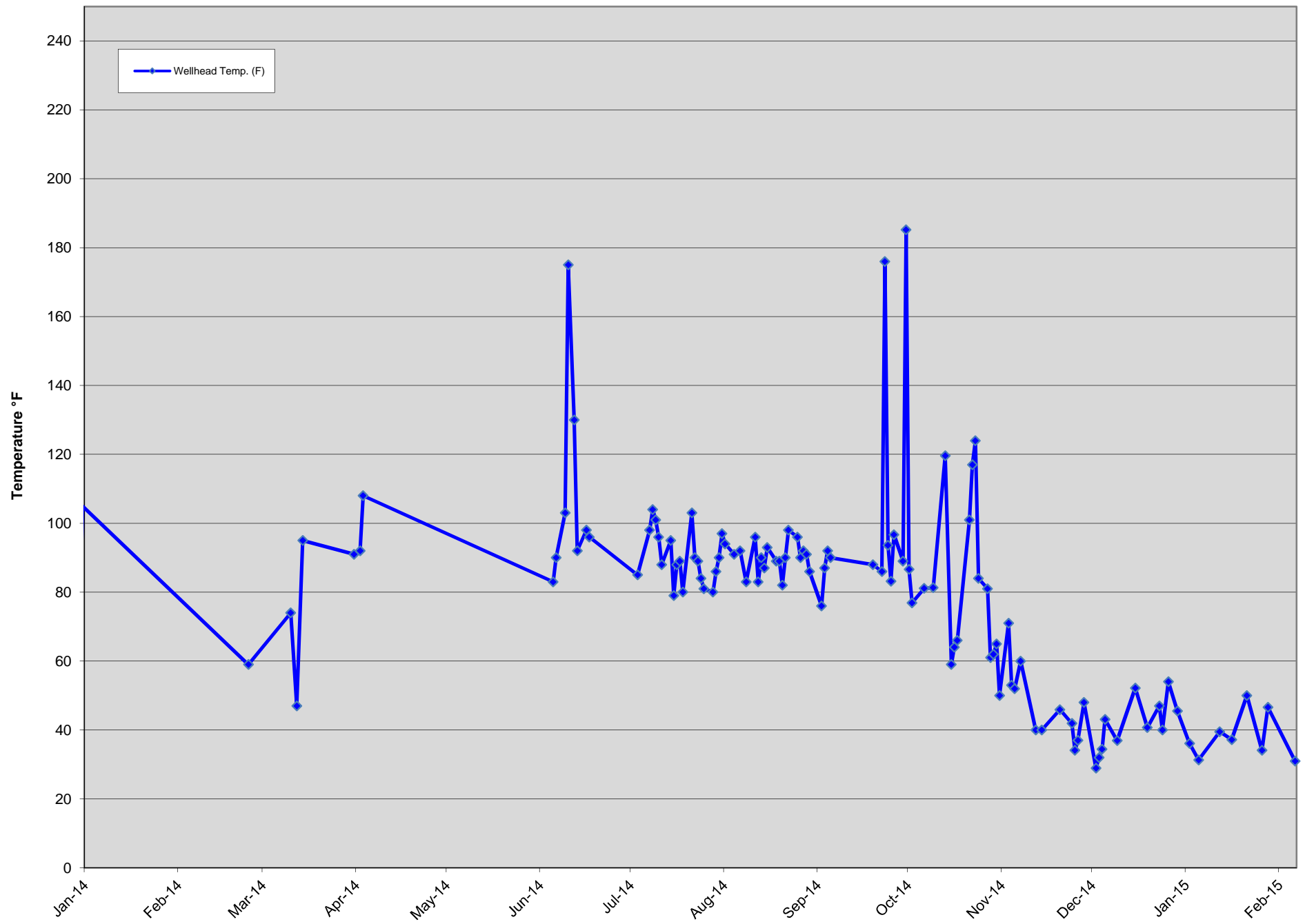
## GIW-2 Wellhead Temperatures



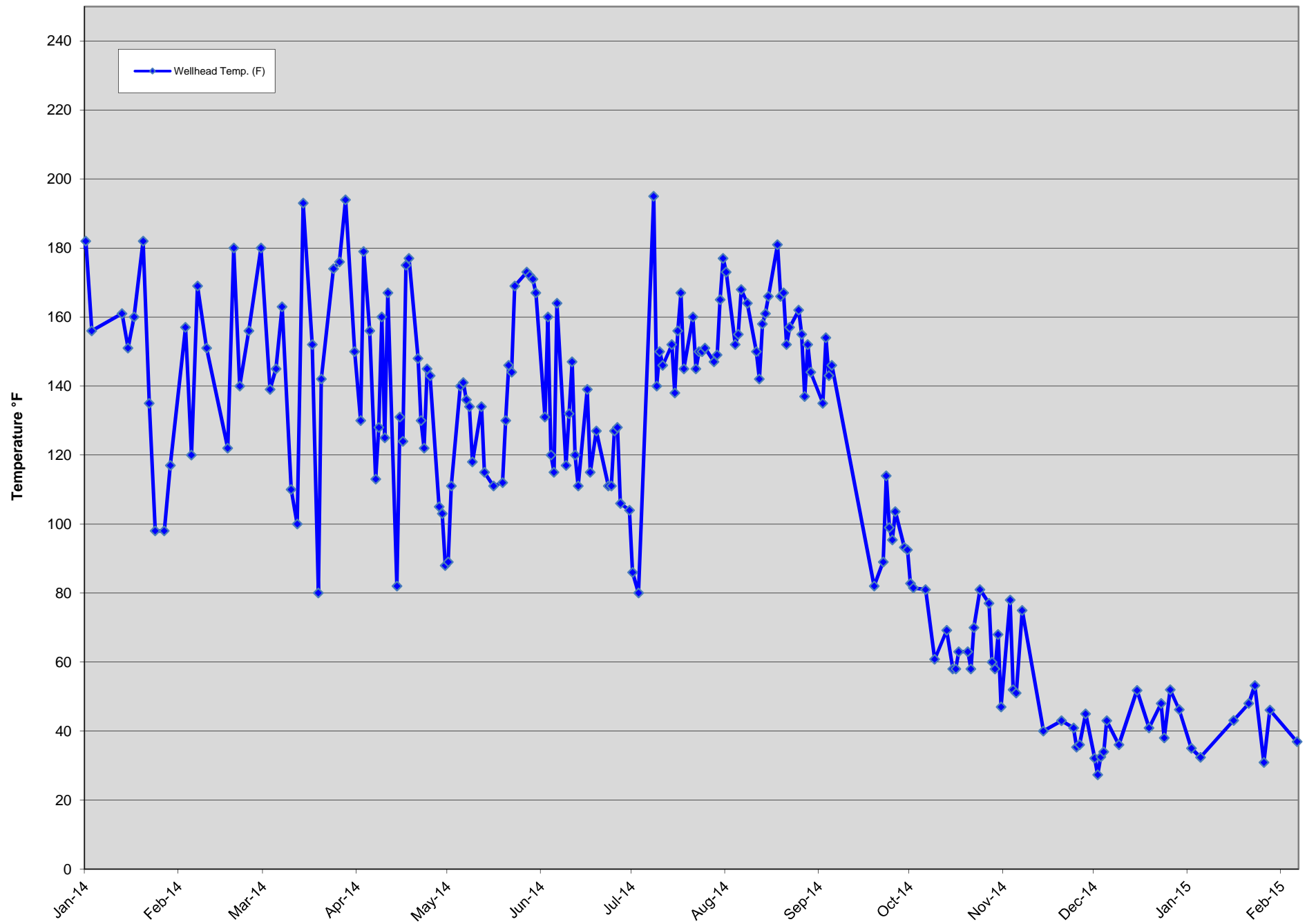
# GIW-3 Wellhead Temperatures



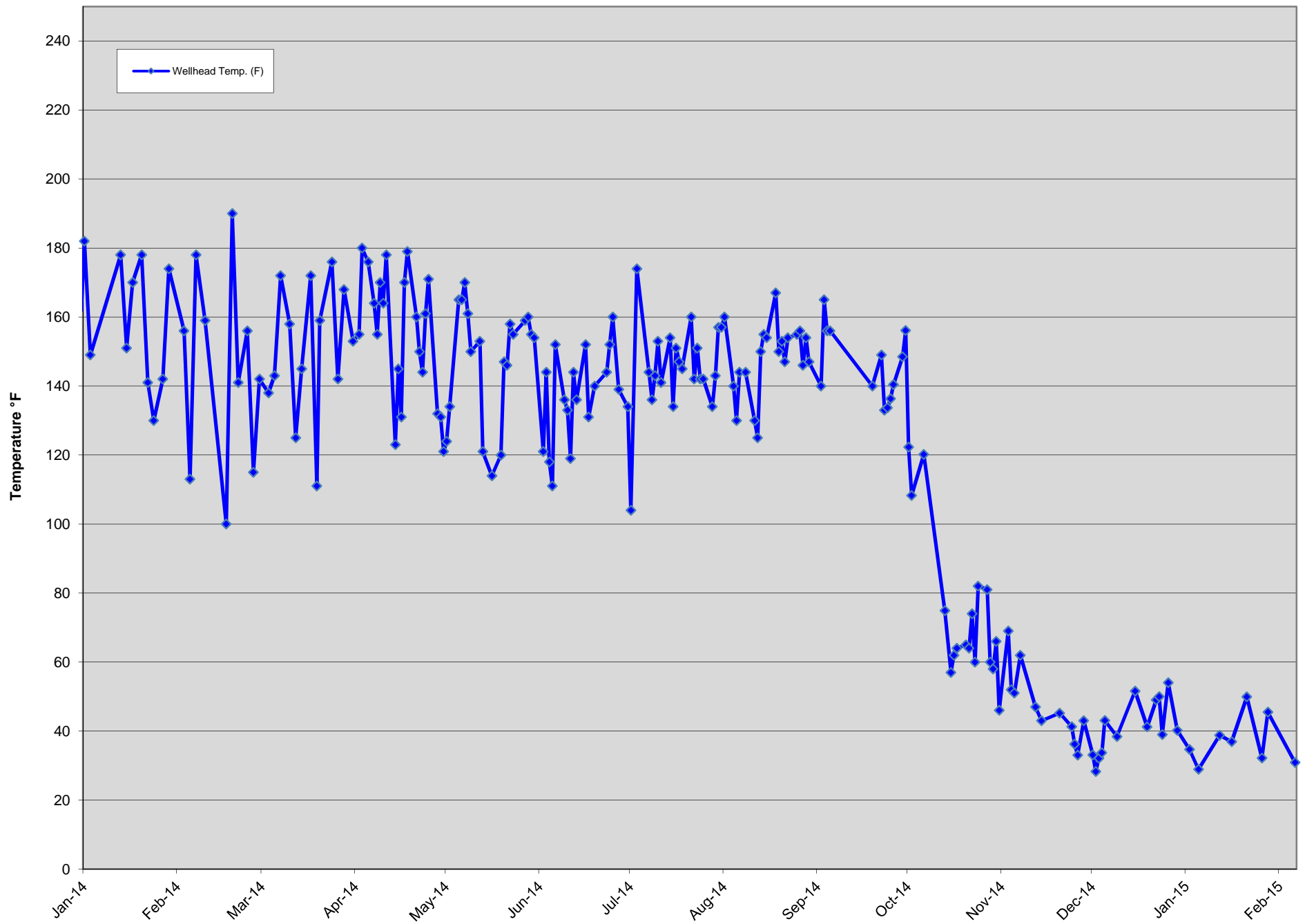
## GIW-4 Wellhead Temperatures



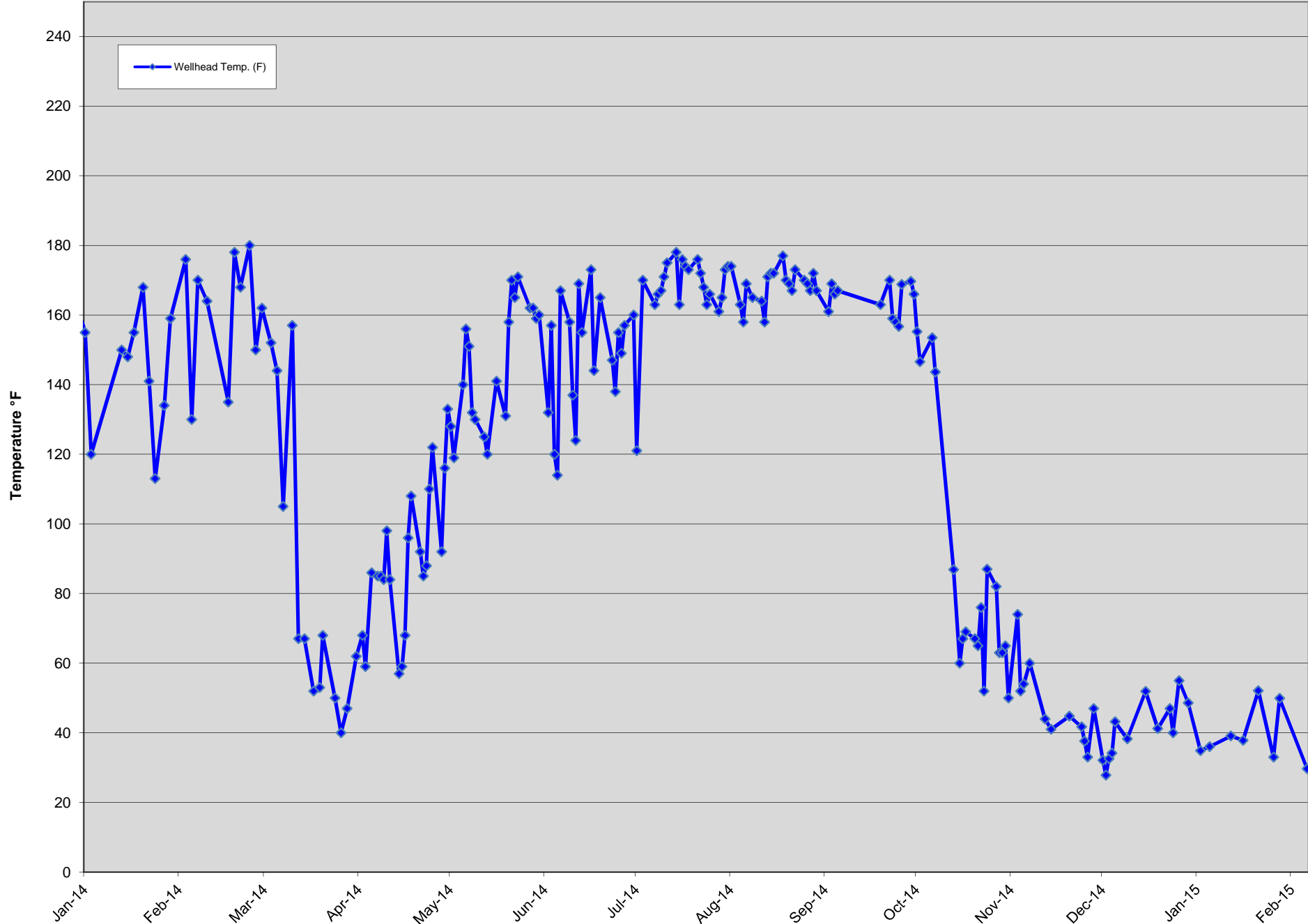
GIW-5 Wellhead Temperatures



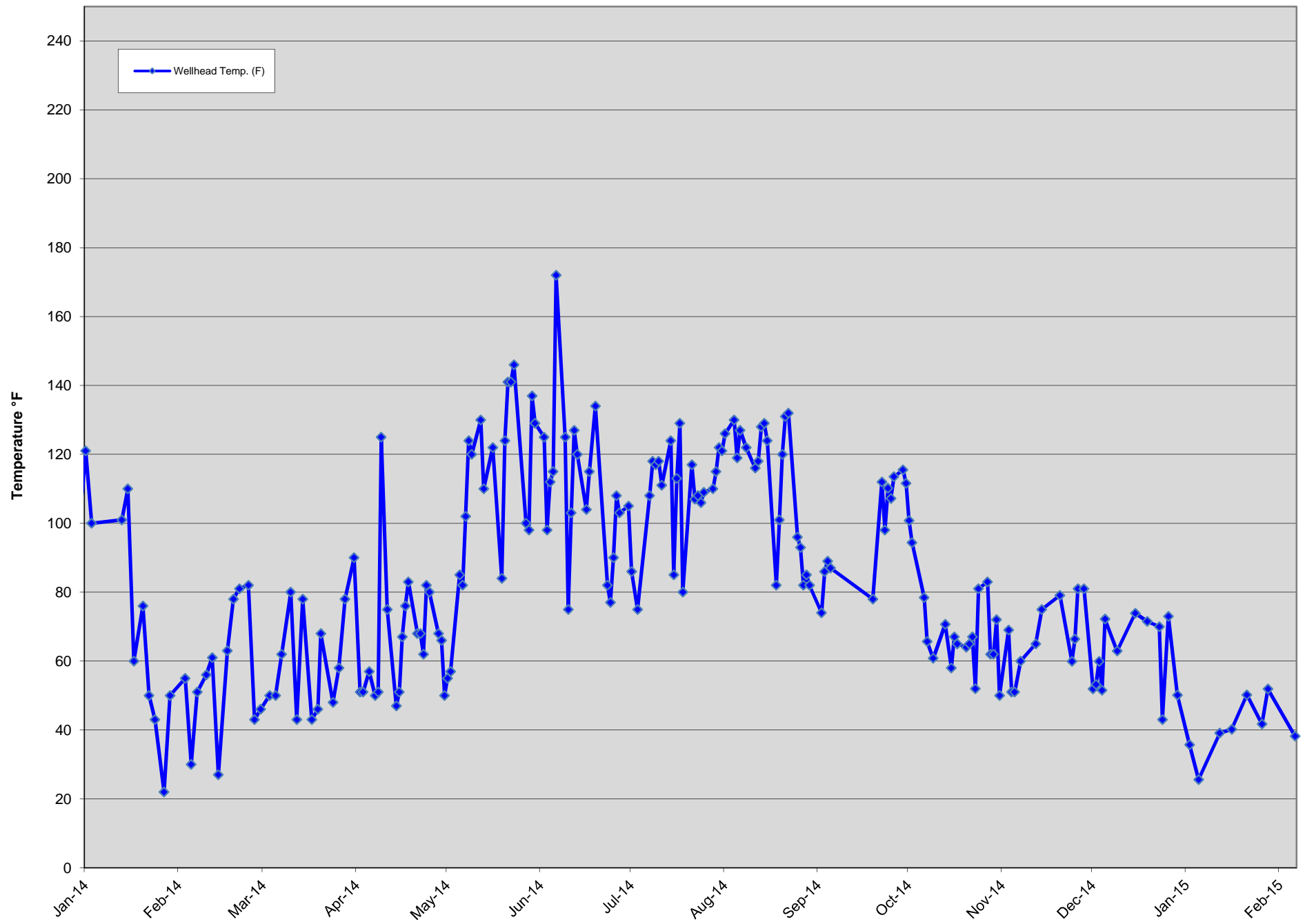
# GIW-6 Wellhead Temperatures



GIW-7 Wellhead Temperatures

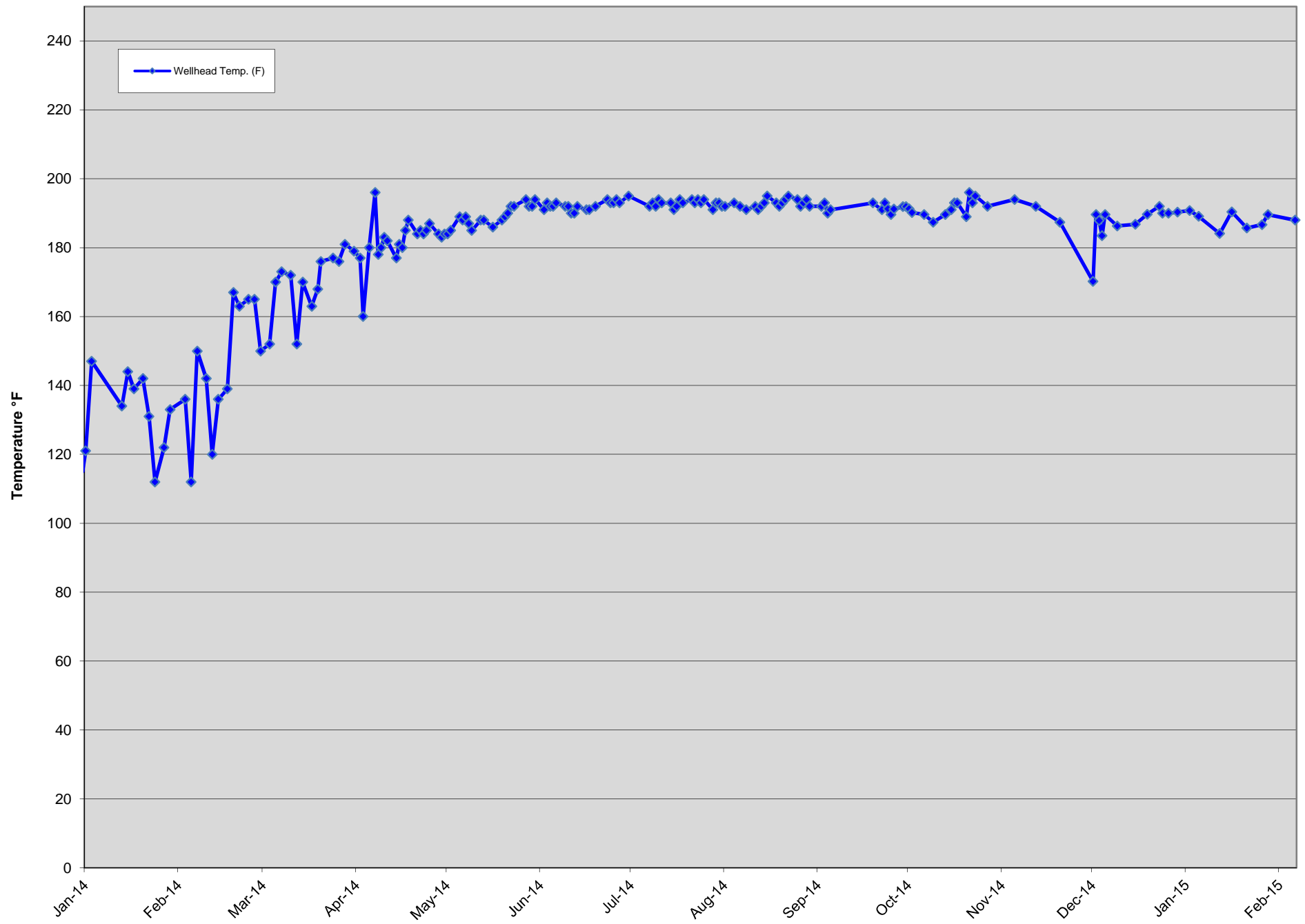


## GIW-8 Wellhead Temperatures

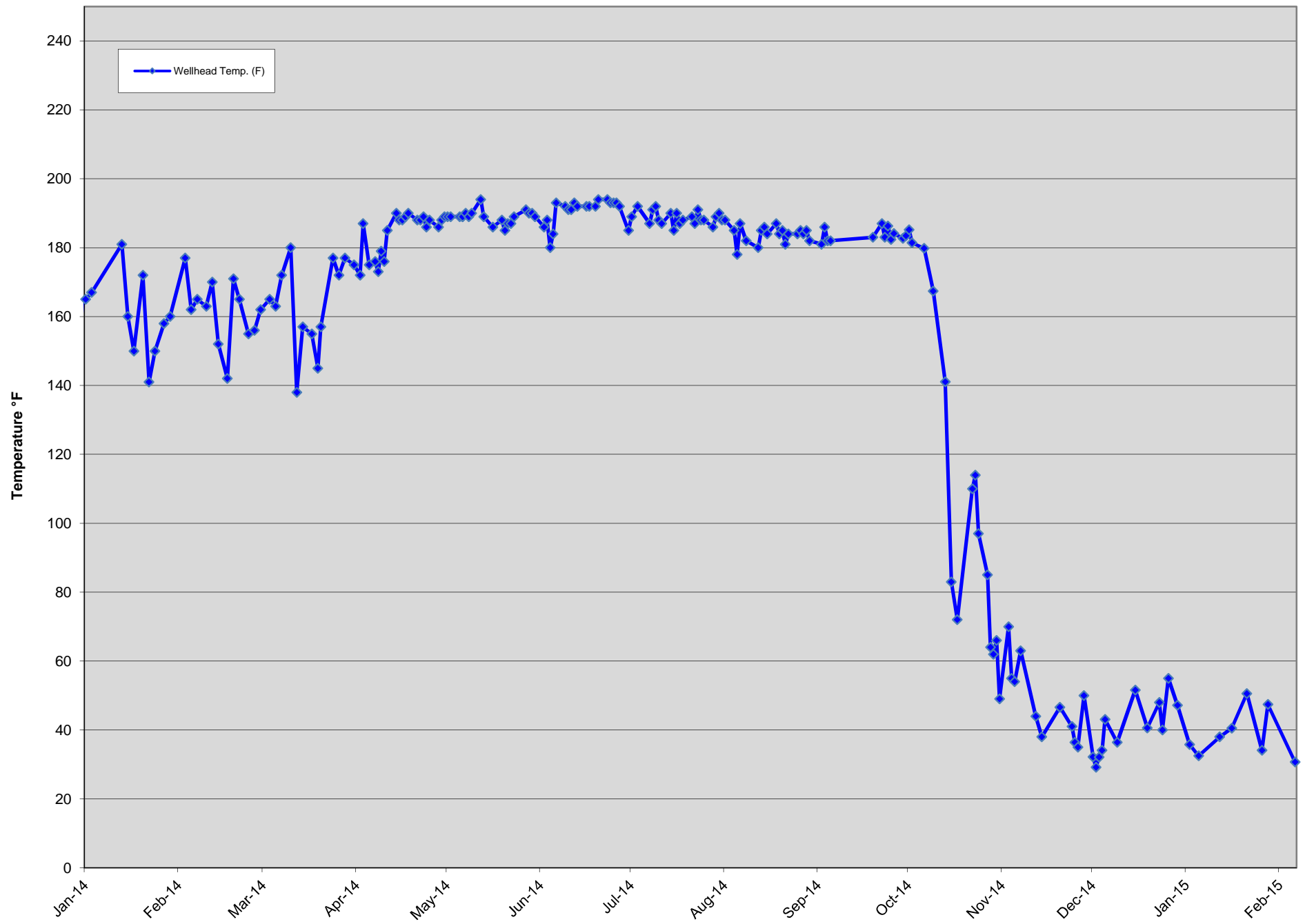




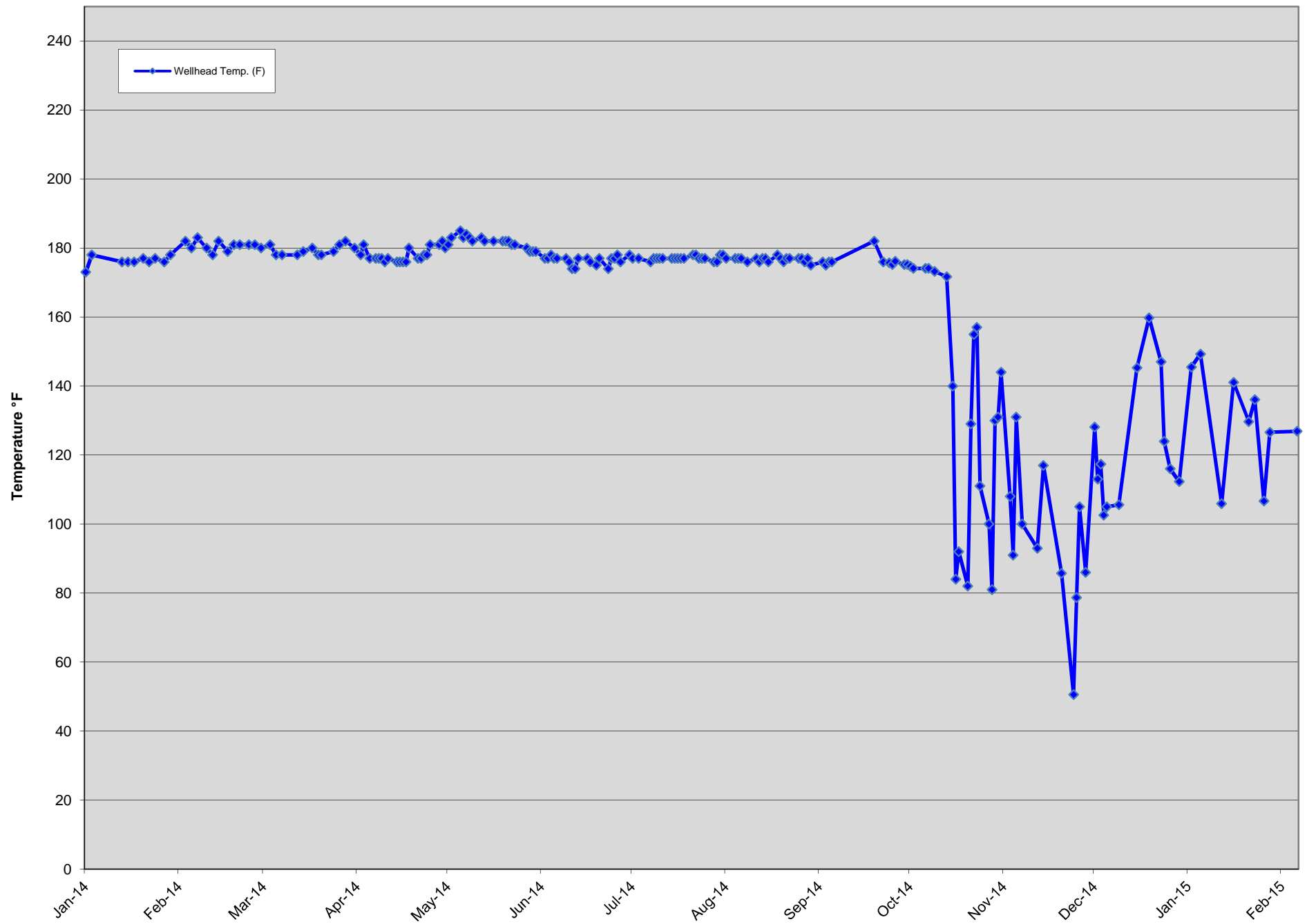
## GIW-9 Wellhead Temperatures



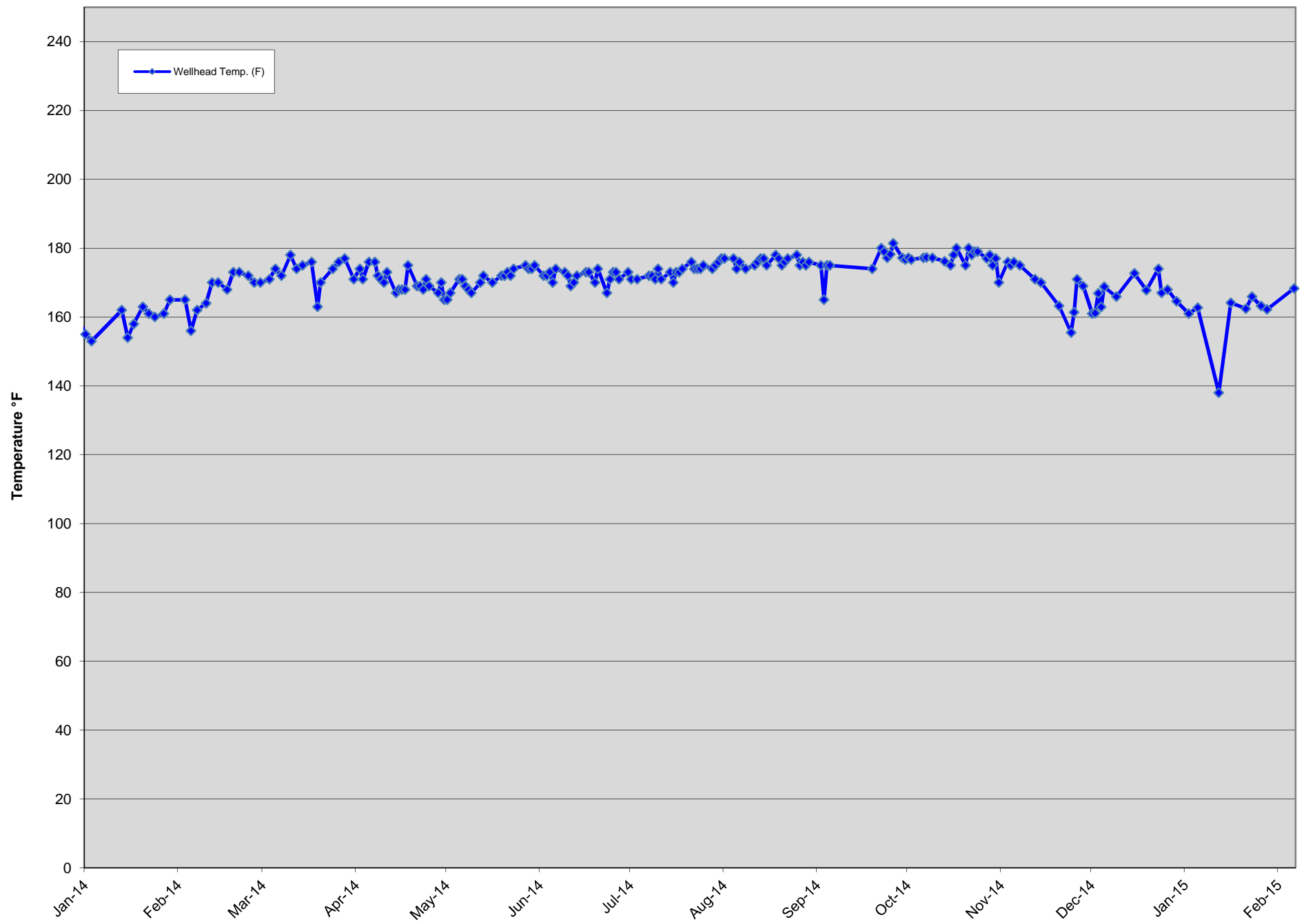
# GIW-10 Wellhead Temperatures



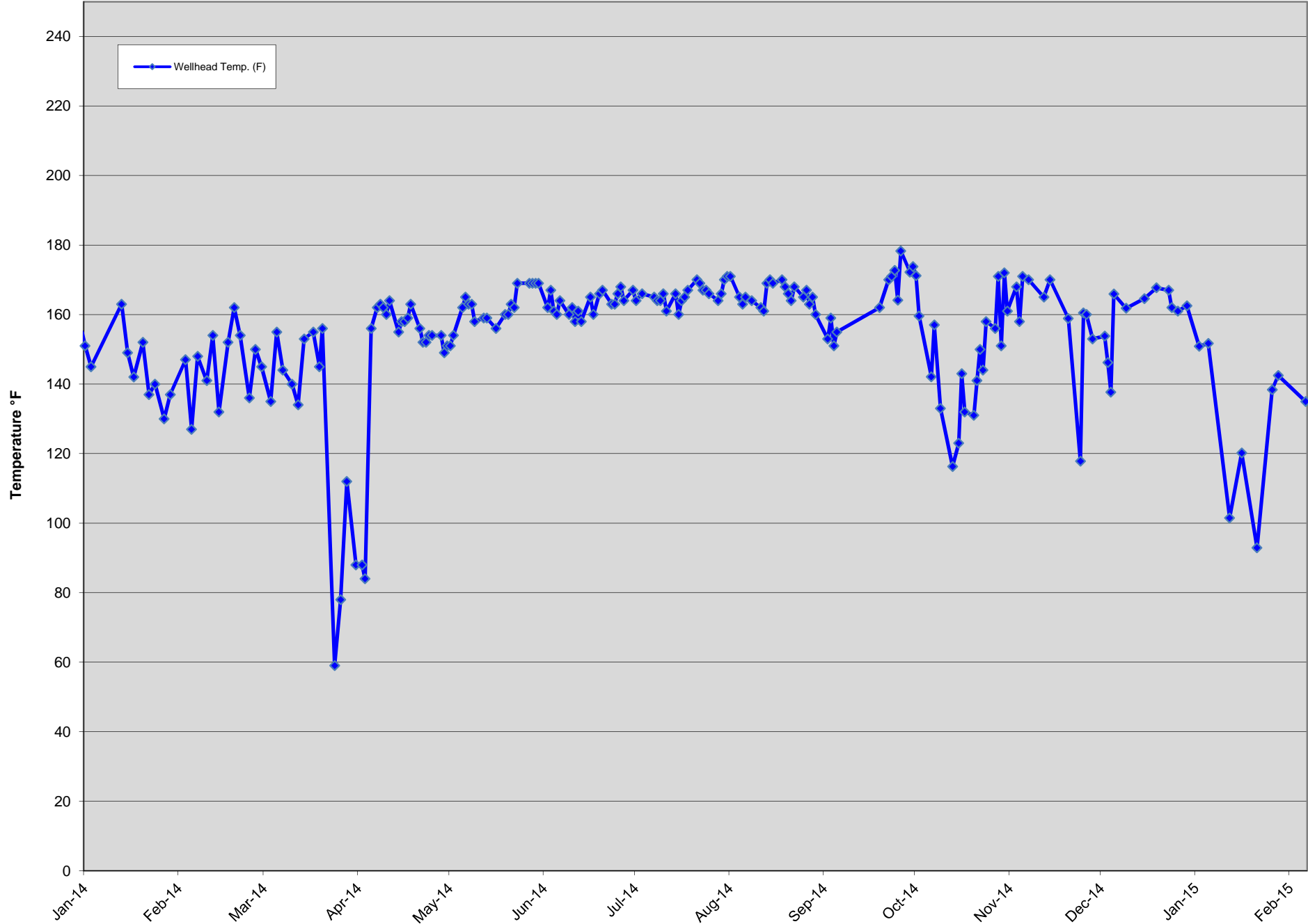
GIW-11 Wellhead Temperatures



GIW-12 Wellhead Temperatures



GIW-13 Wellhead Temperatures



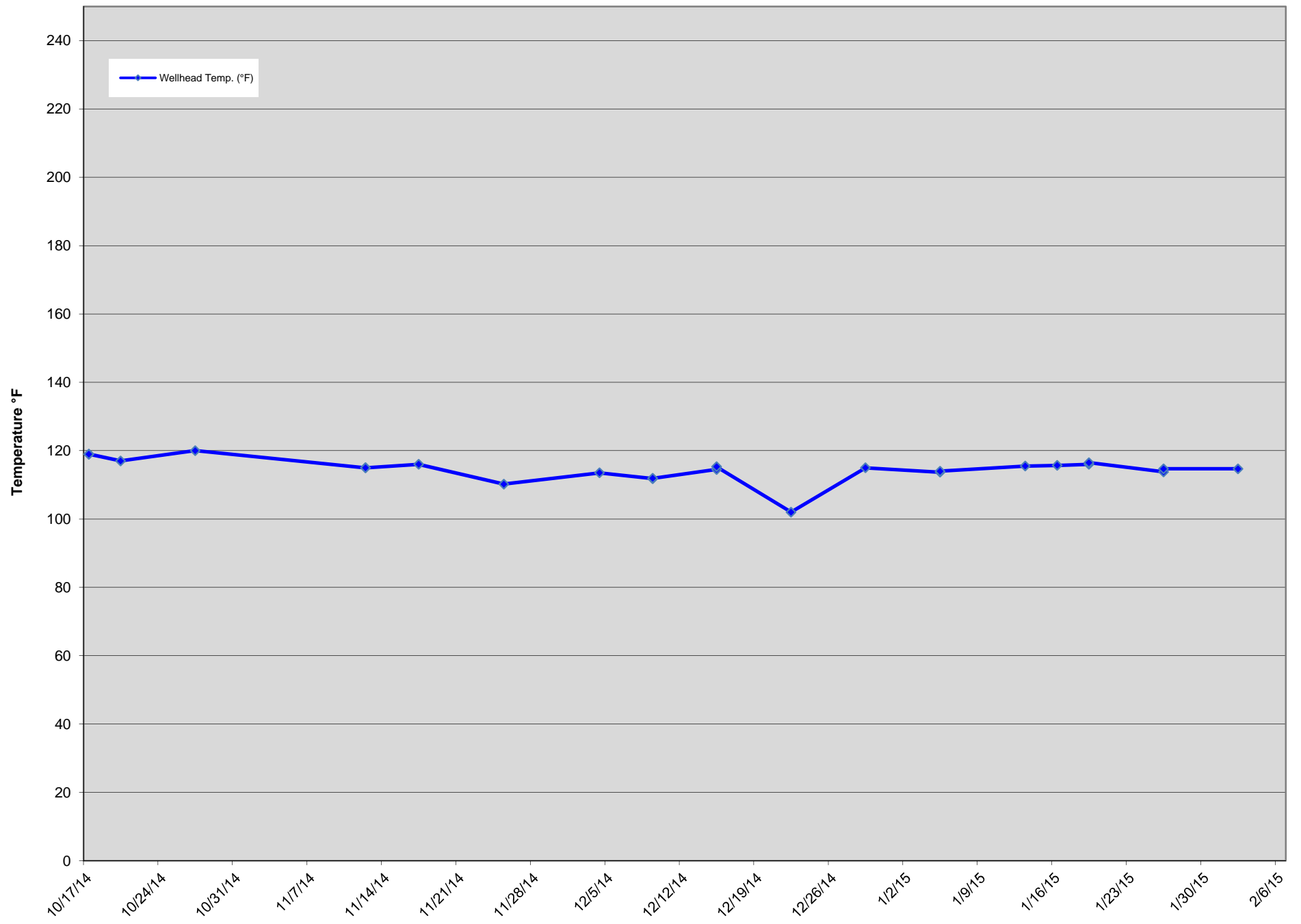
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**ATTACHMENT D**

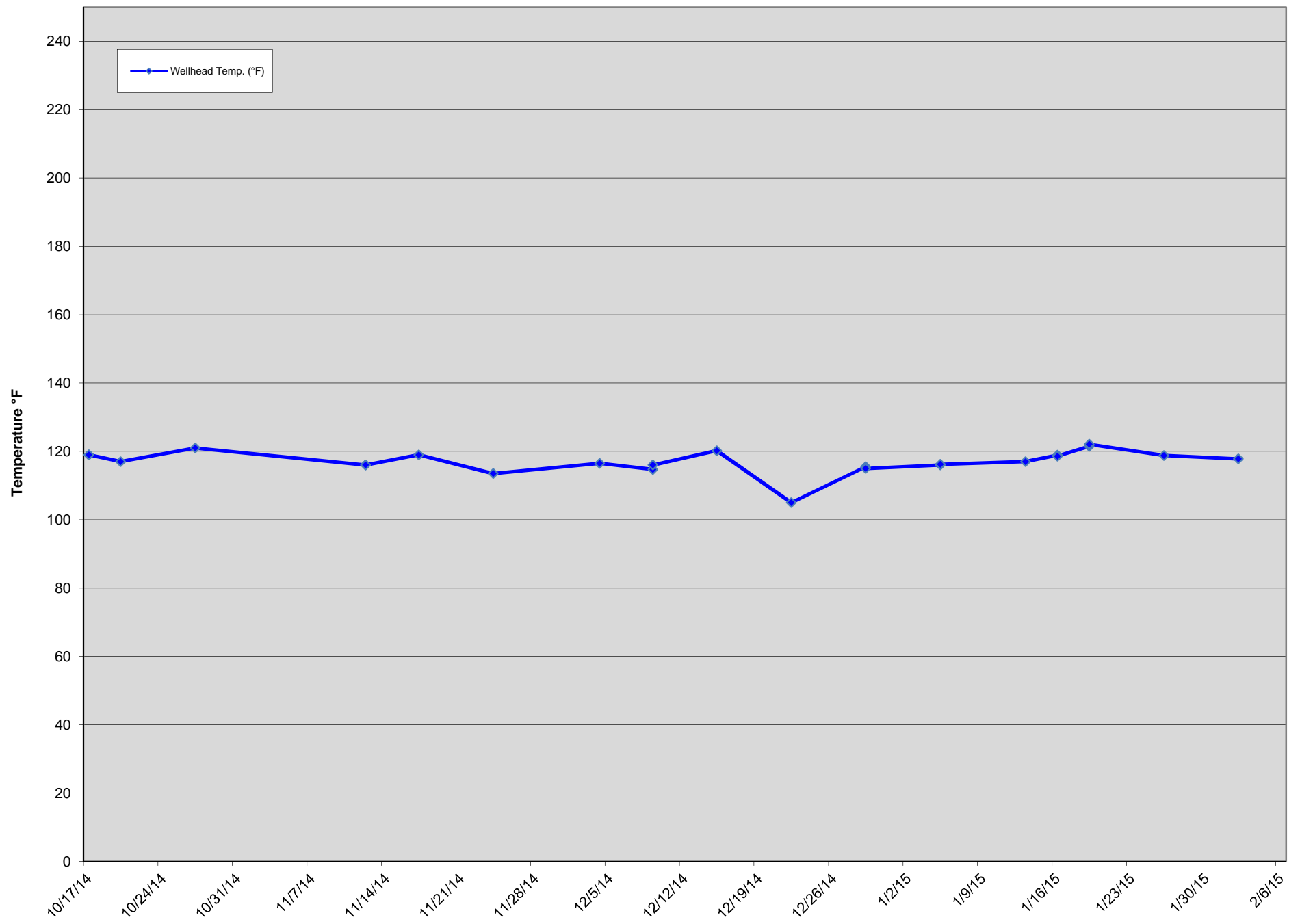
**NECK-AREA GAS EXTRACTION WELL DATA**

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## GEW-008 Wellhead Temperatures

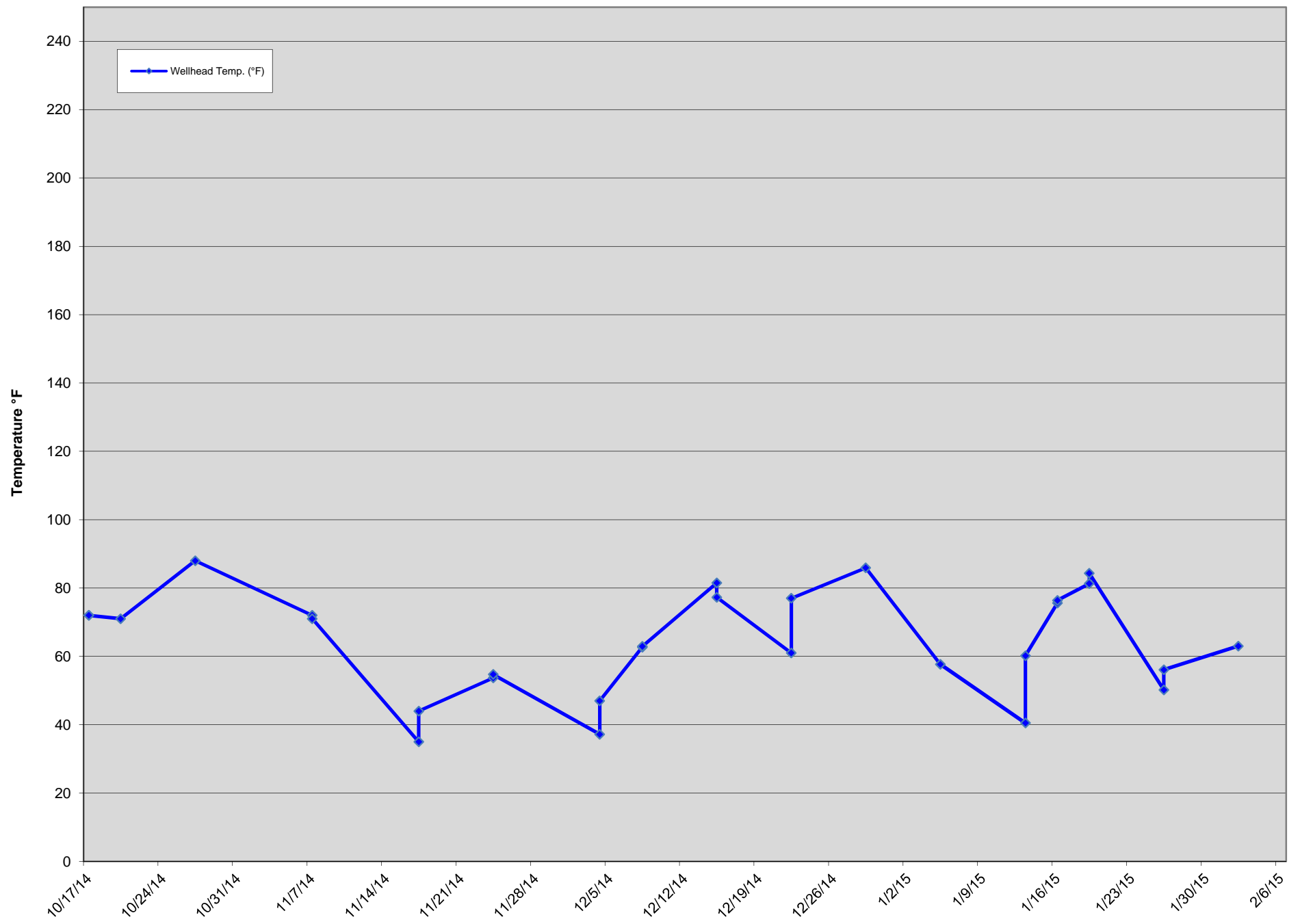


GEW-009 Wellhead Temperatures

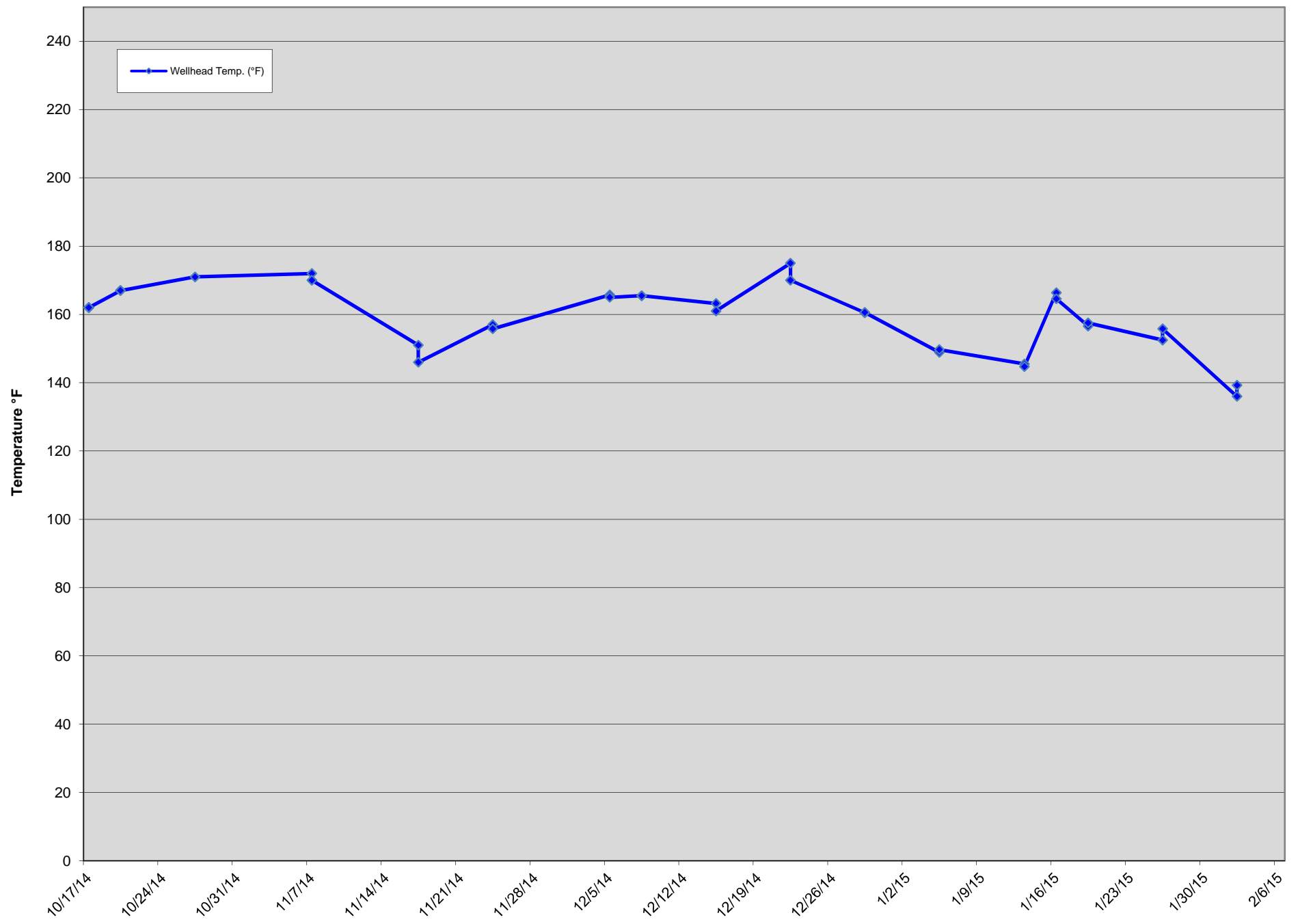




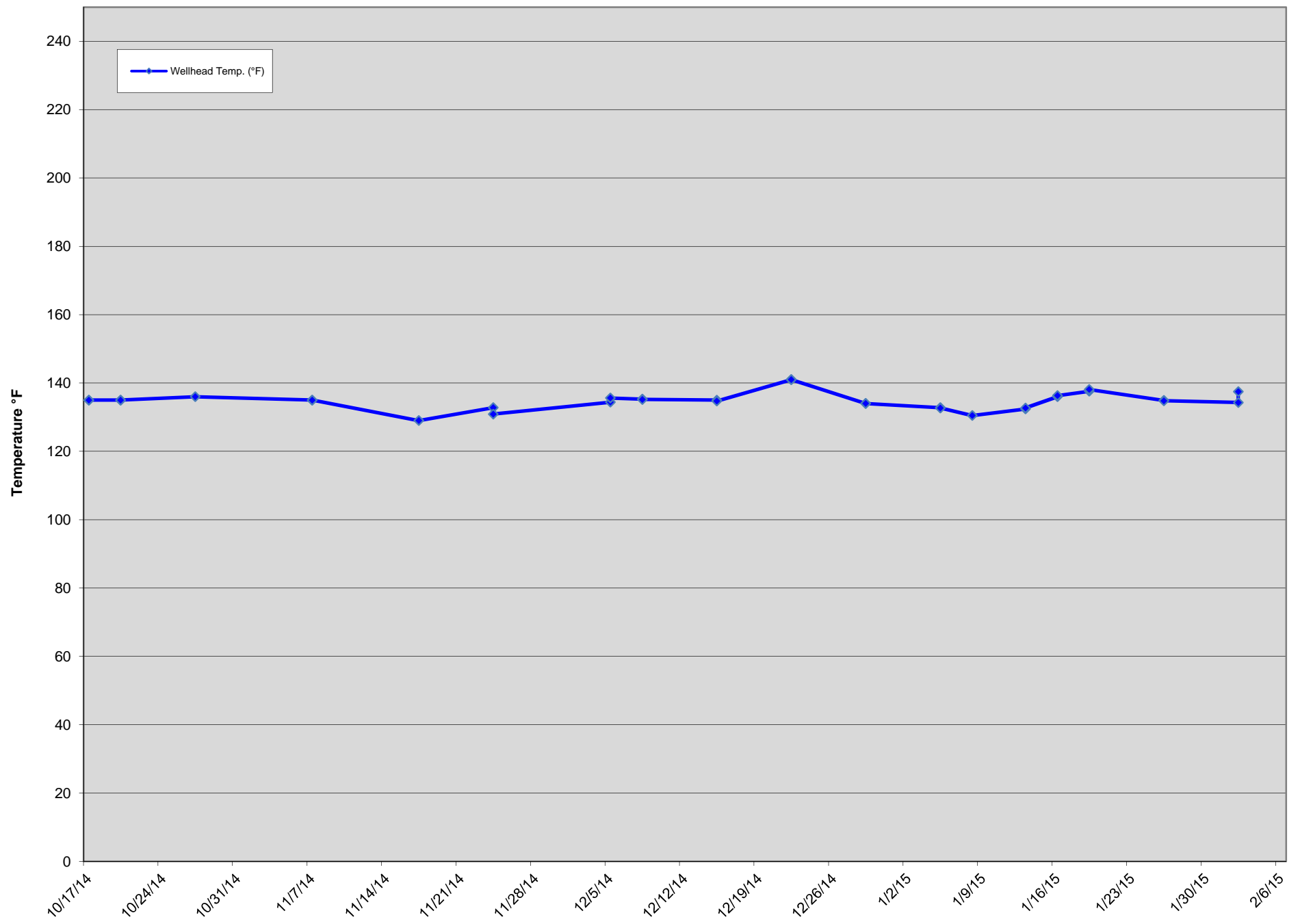
**GEW-010 Wellhead Temperatures**



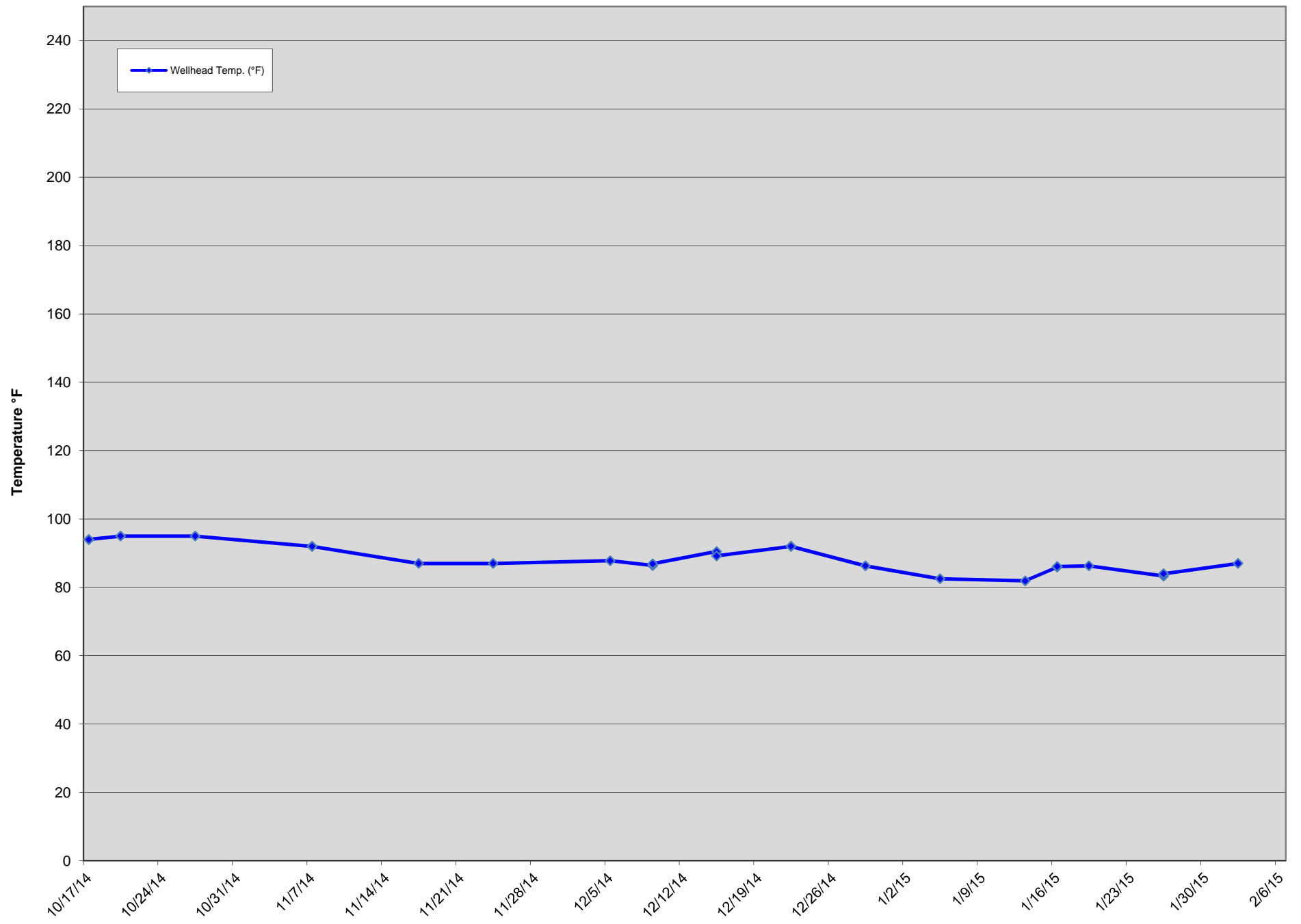
GEW-038 Wellhead Temperatures



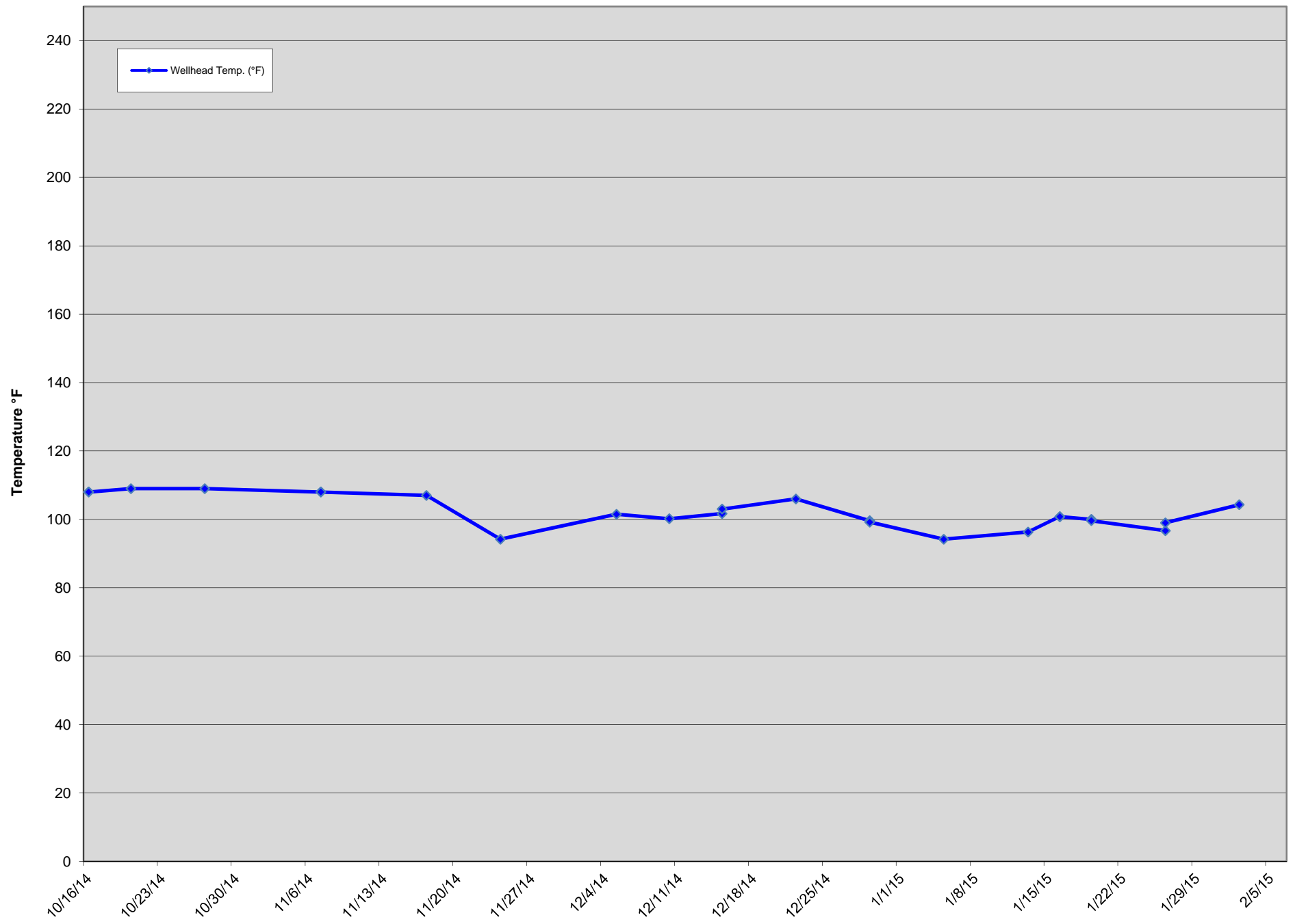
## GEW-039 Wellhead Temperatures



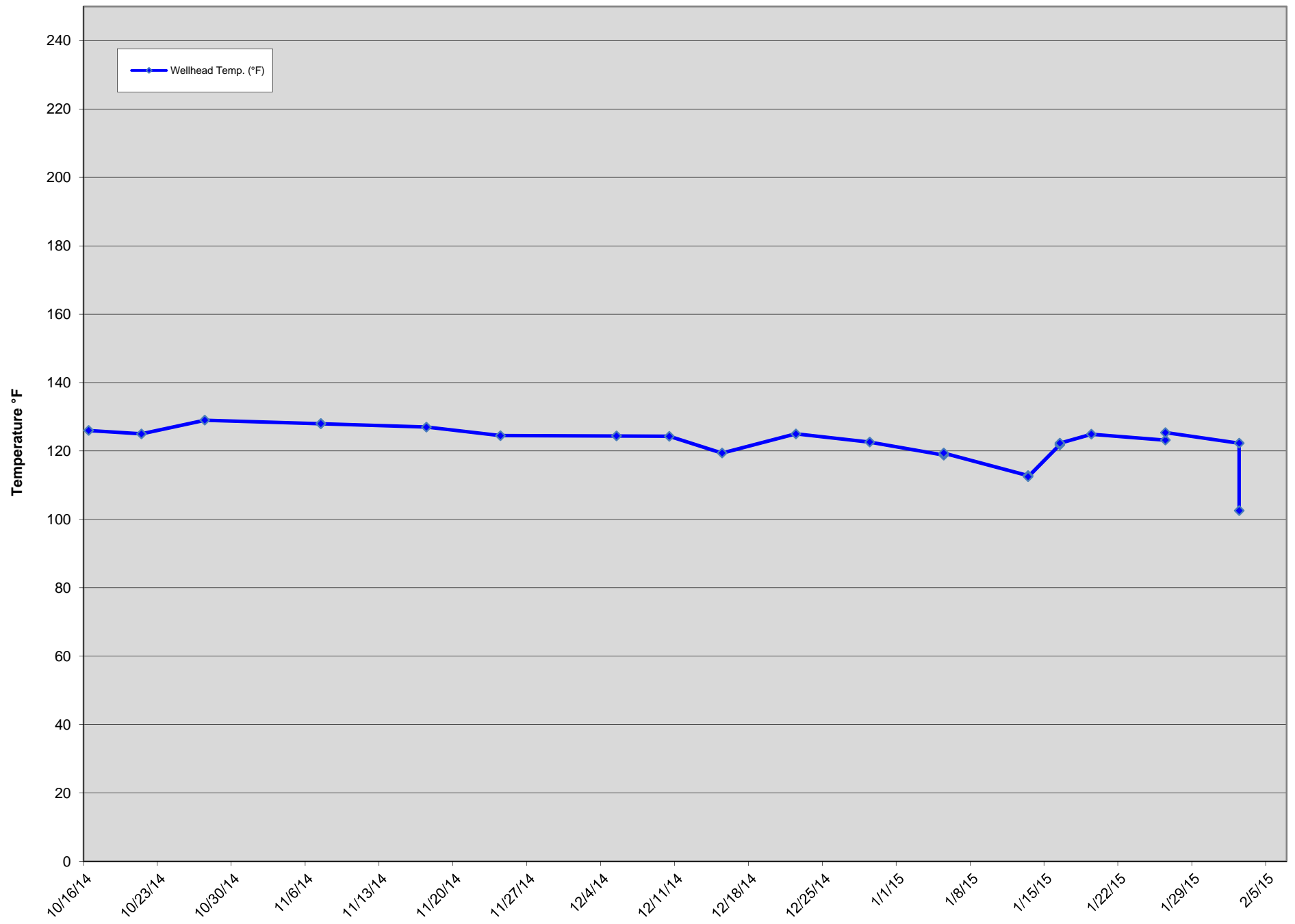
GEW-040 Wellhead Temperatures



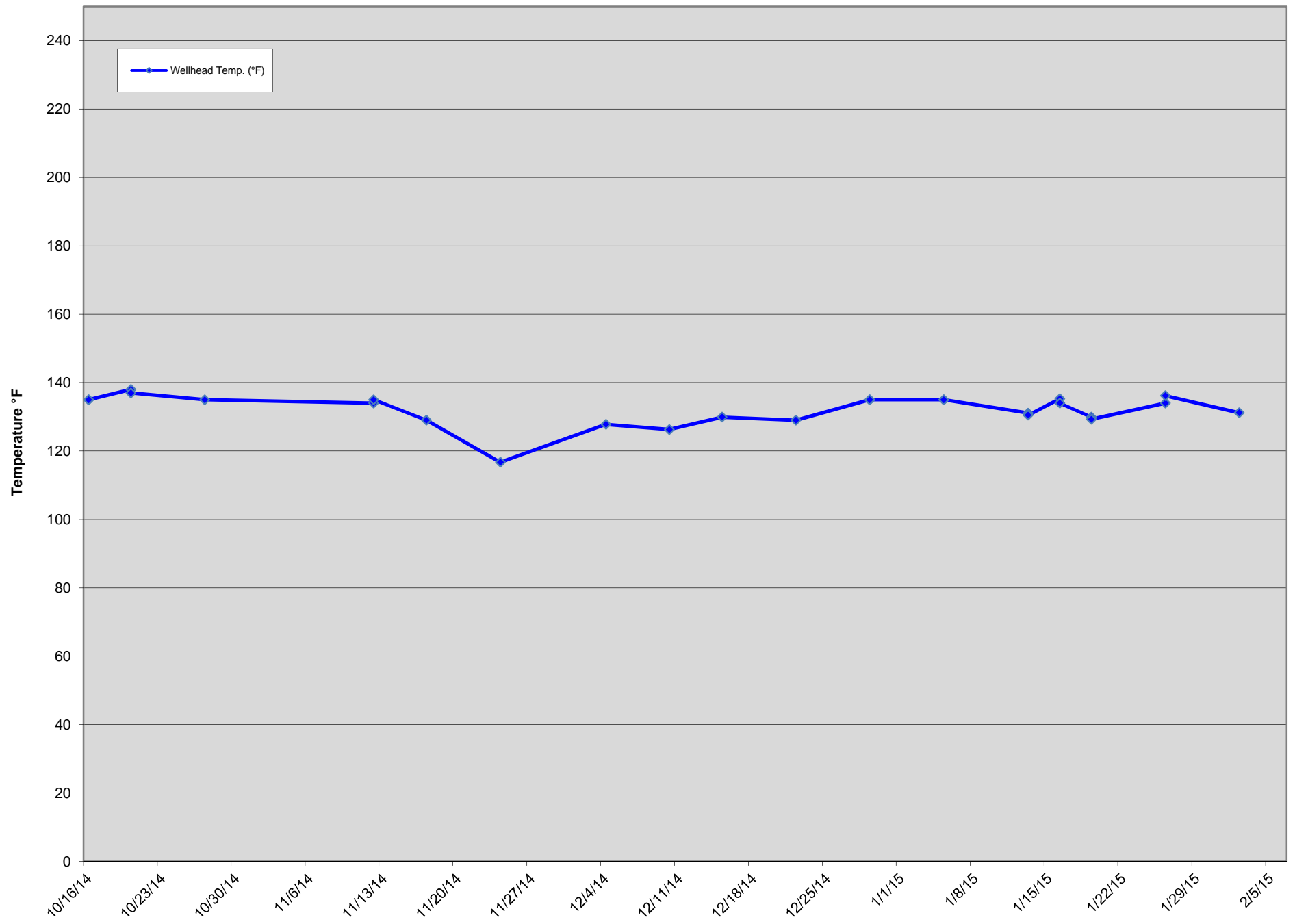
## GEW-041R Wellhead Temperatures



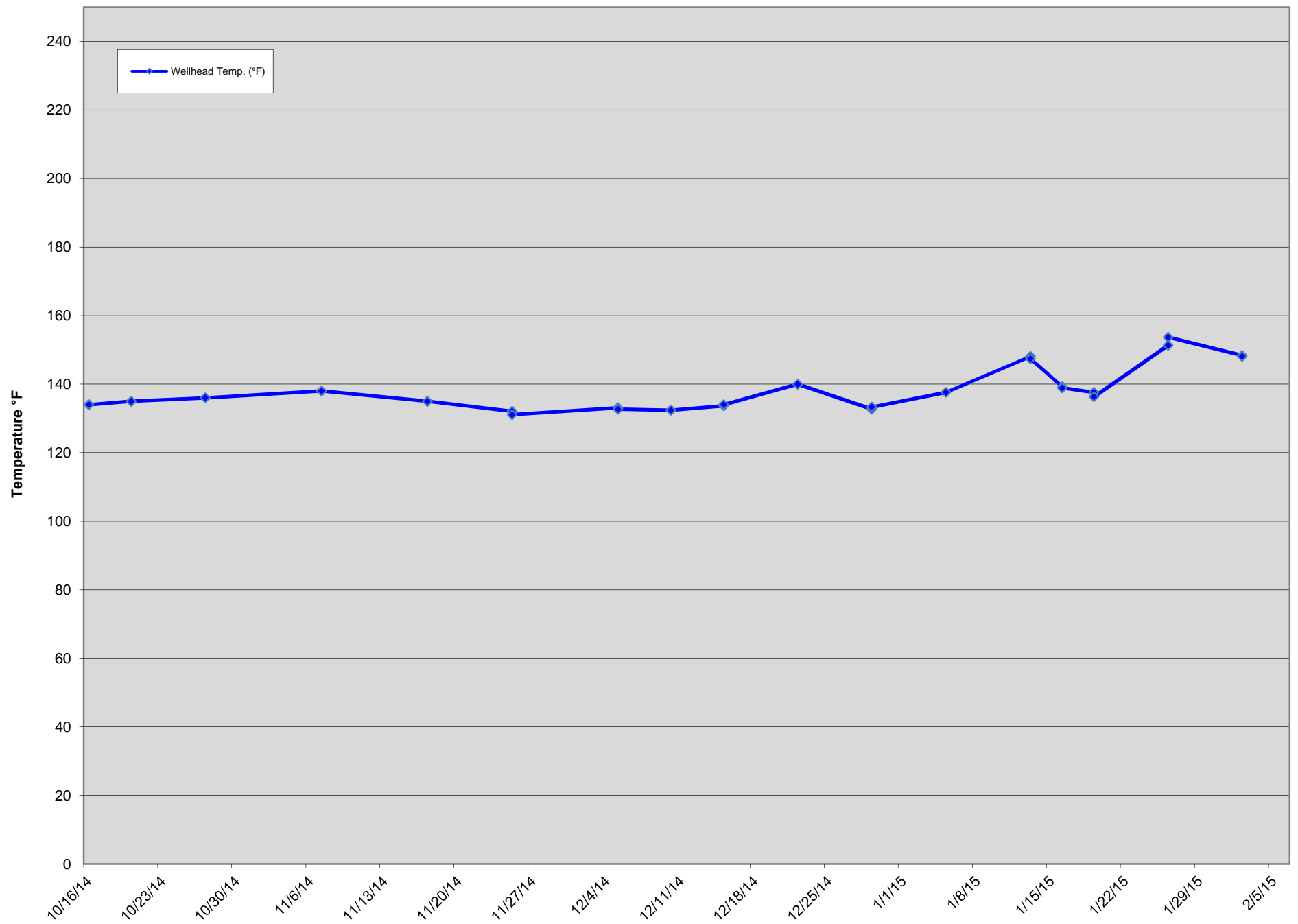
## GEW-043R Wellhead Temperatures



## GEW-053 Wellhead Temperatures

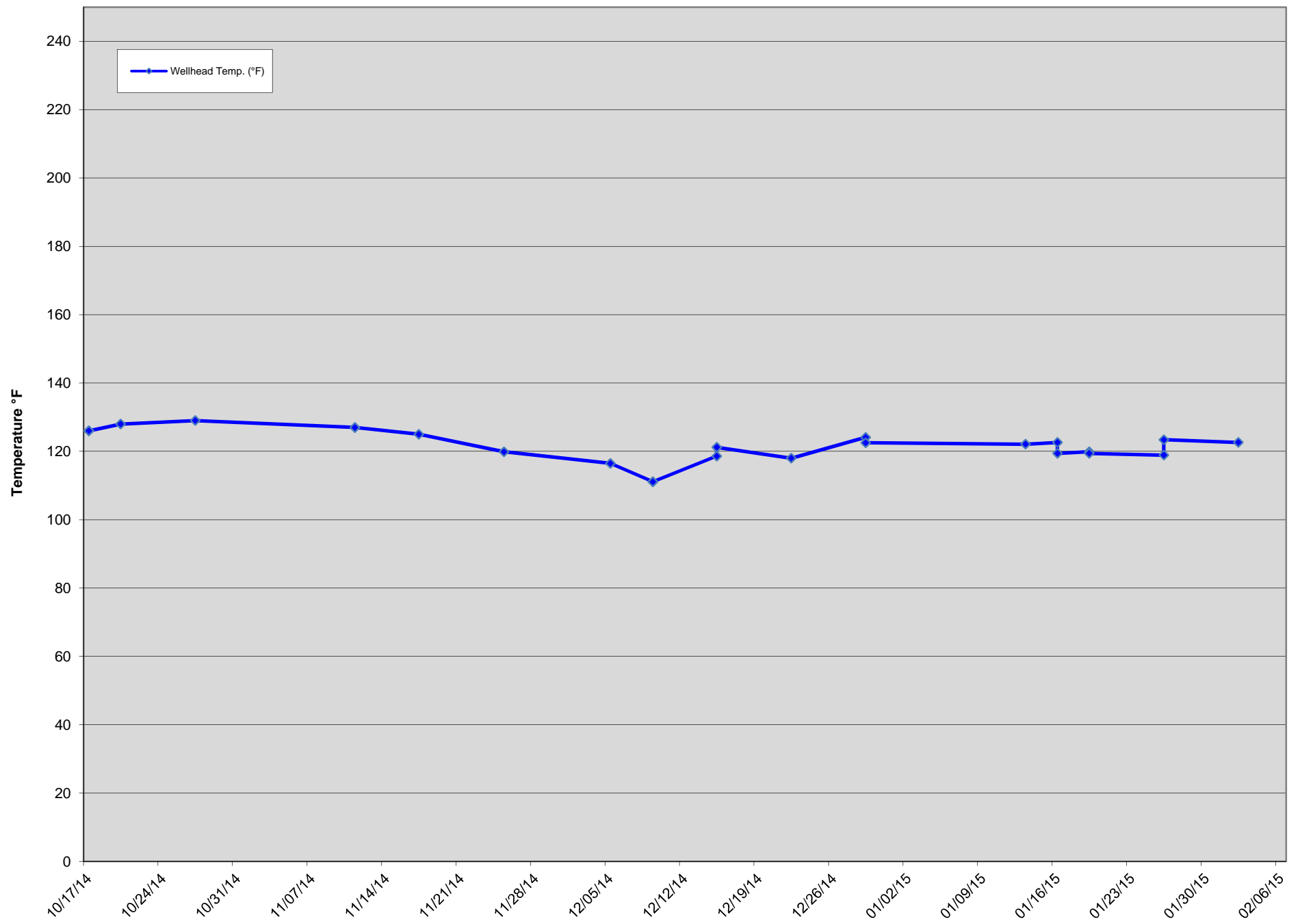


## GEW-054 Wellhead Temperatures

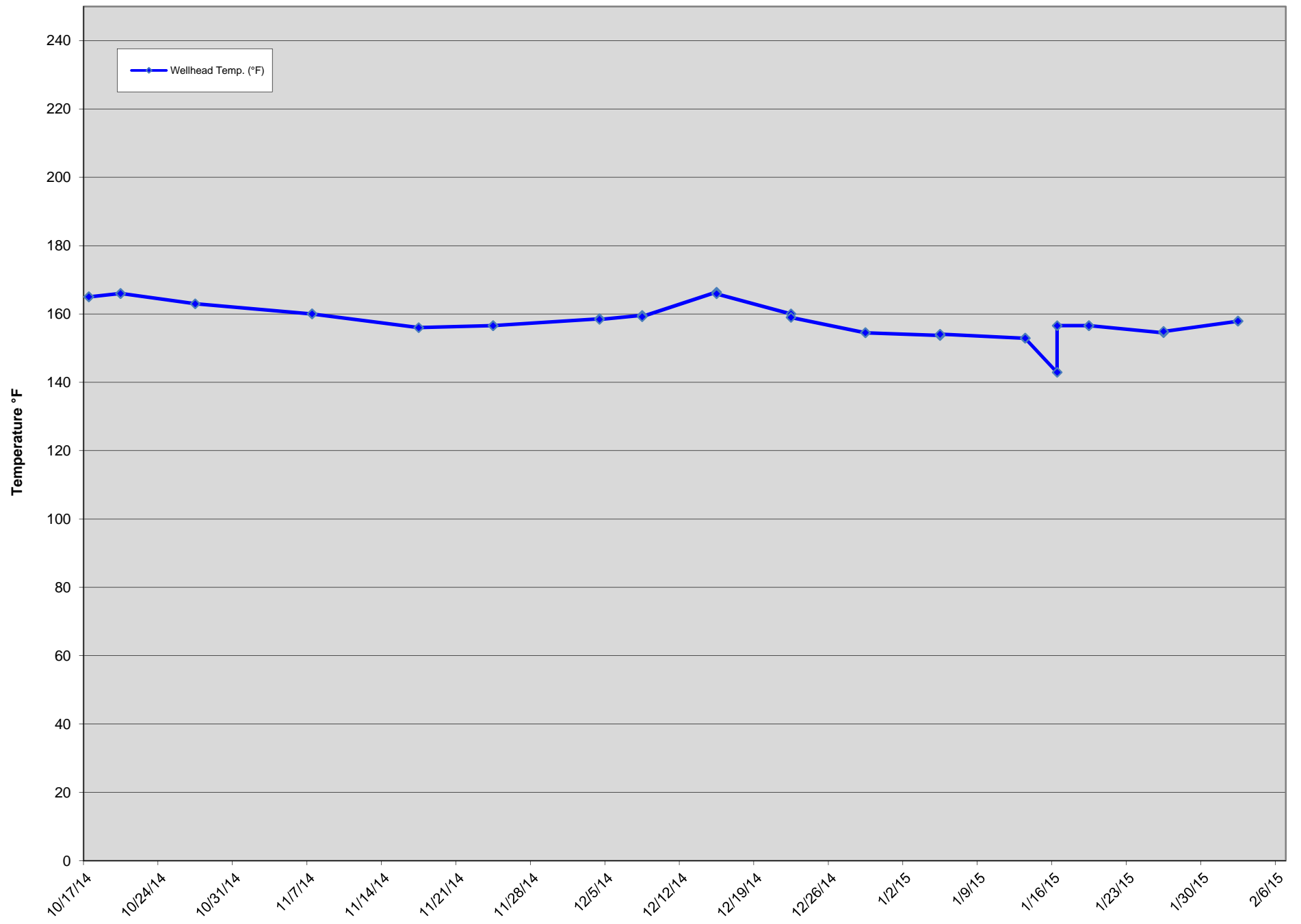




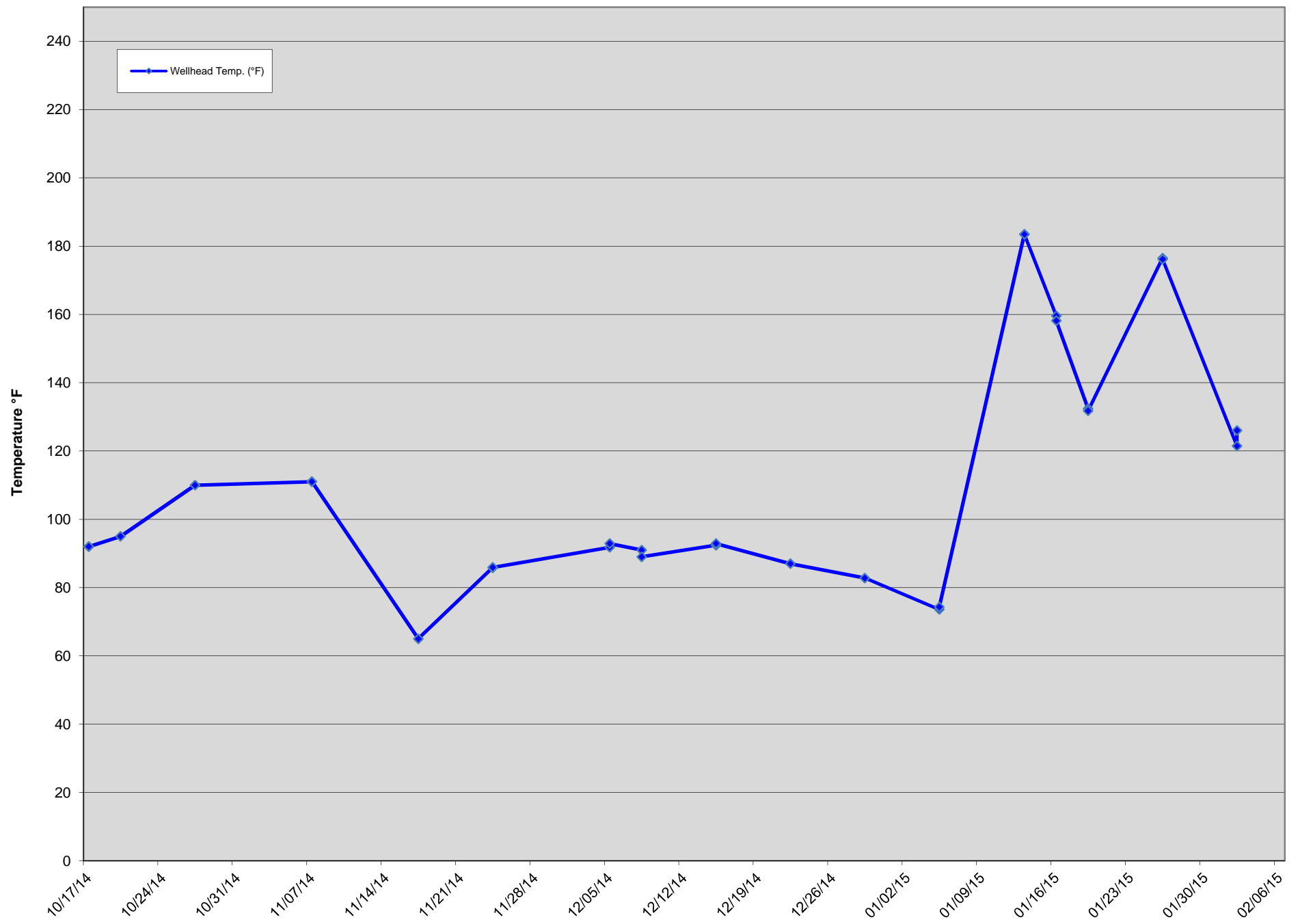
## GEW-055 Wellhead Temperatures



GEW-056R Wellhead Temperatures



**GEW-109 Wellhead Temperatures**



GEW-110 Wellhead Temperatures

