

# **Bridgeton Landfill, LLC**

## **Weekly Data Submittals**

**Week of November 2 - November 8, 2014**

**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**

**November 14, 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. LCS-1D, while operational at the time of inspection, has a broken transducer.

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 15- and 35-foot intervals in TMP-12 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 fluctuated over the past week up to 40 degrees, to end at approximately 44 degrees lower than the end of the previous week. Note that only one round of gas quality data could be collected during the week for GIW-9 due to a 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

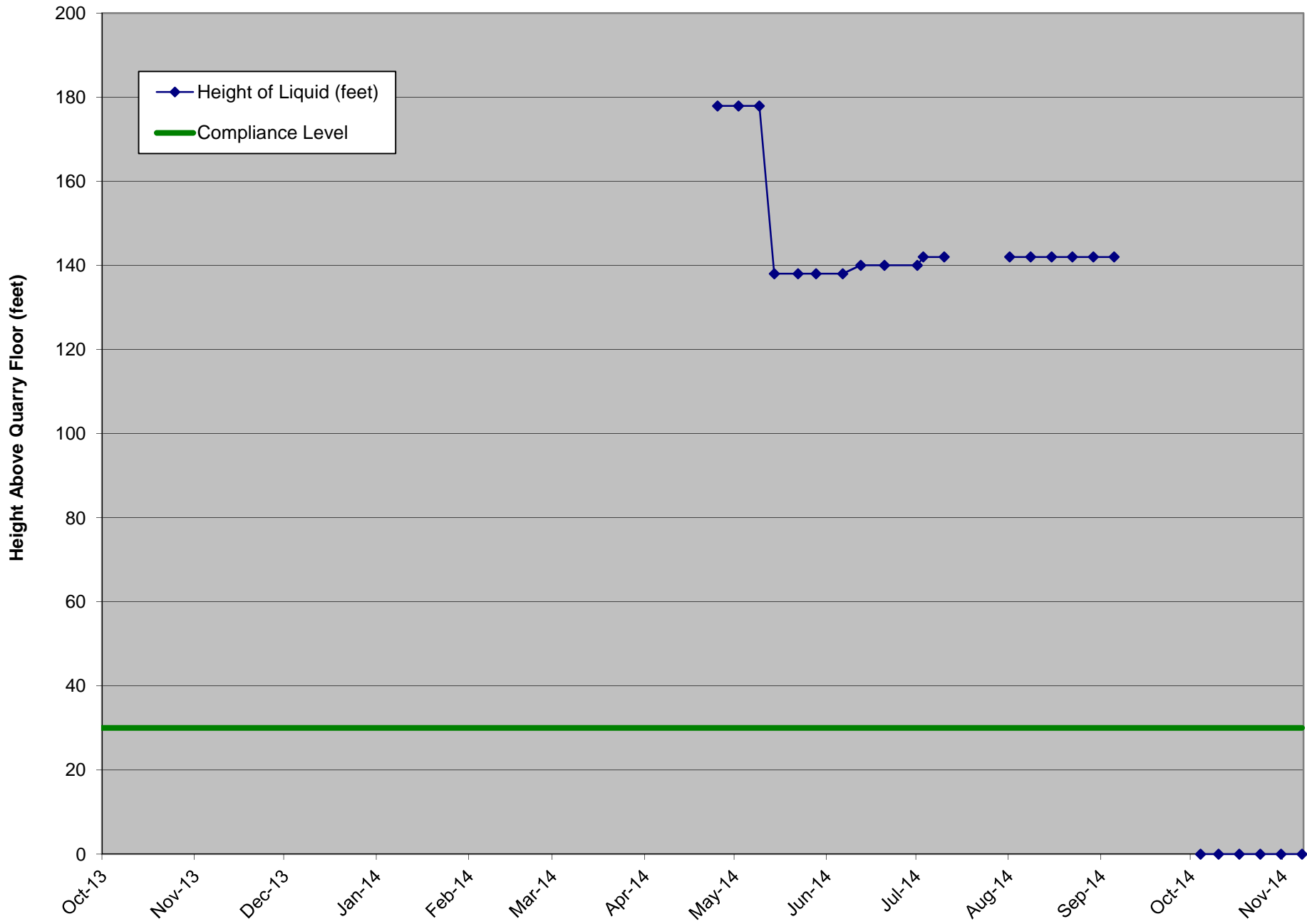
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**ATTACHMENT A**

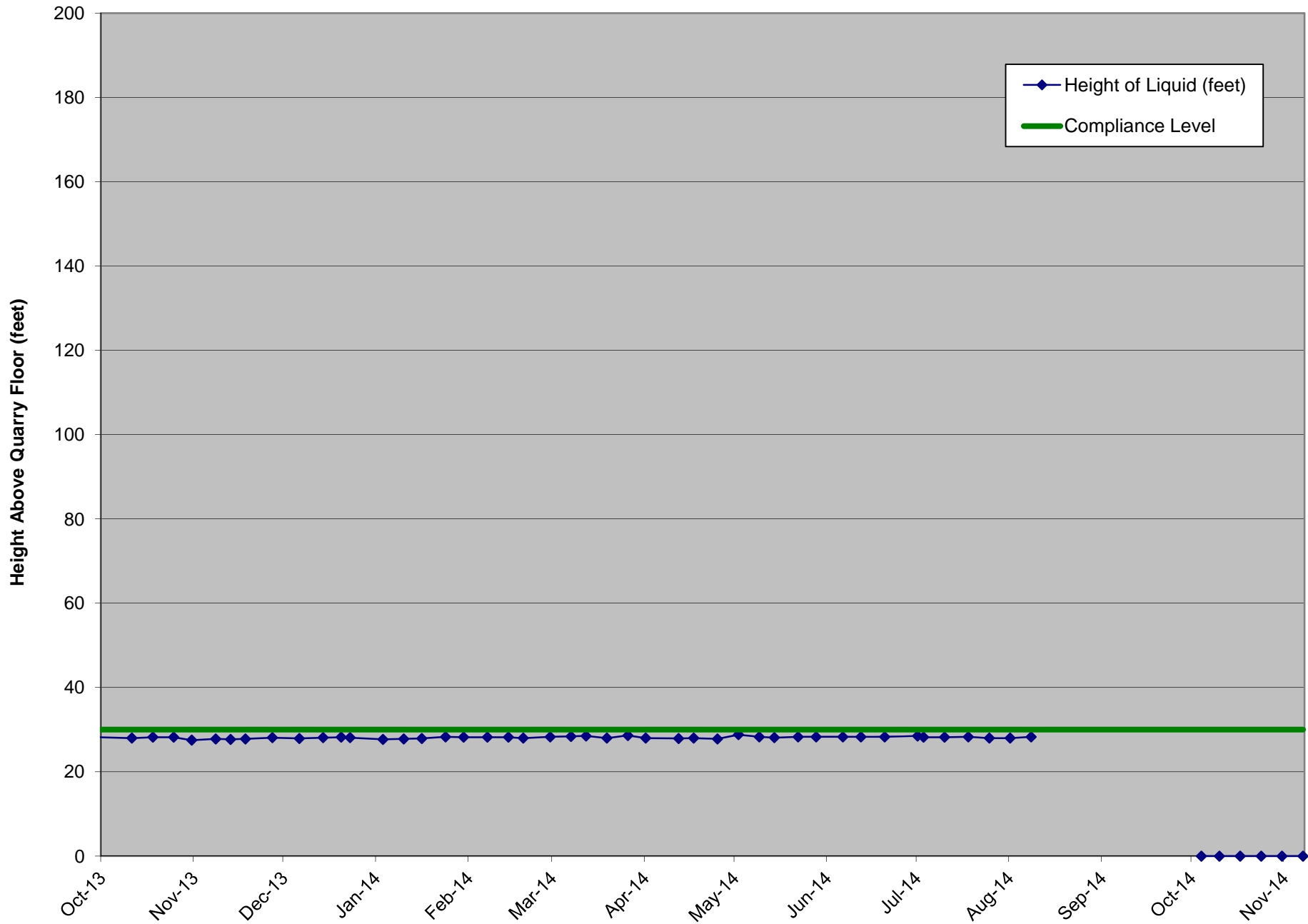
**LEACHATE LEVELS IN LEACHATE COLLECTION SUMPS**

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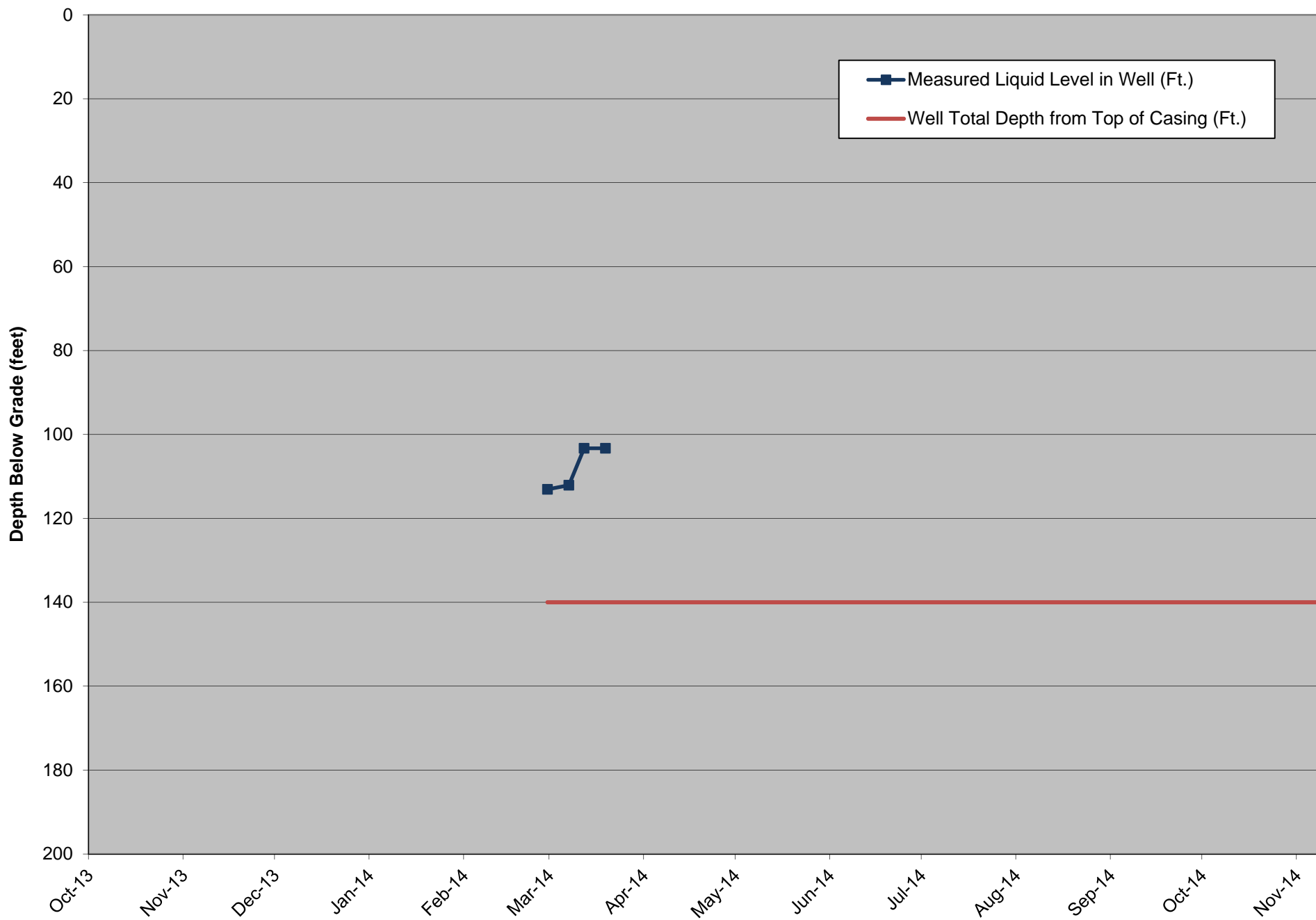
### LCS-1D Liquid Level Above Quarry Floor



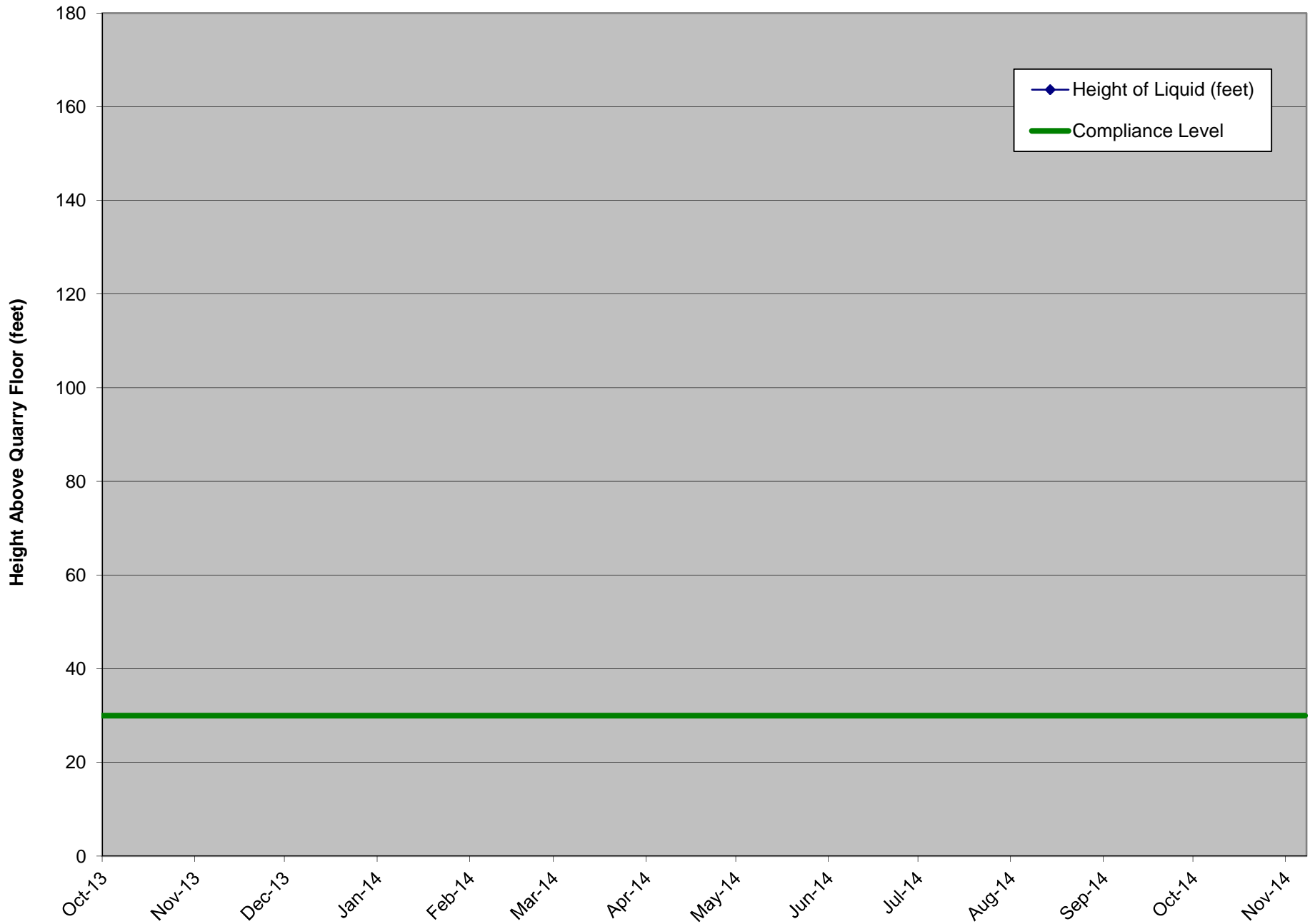
### LCS-2D Liquid Level Above Quarry Floor



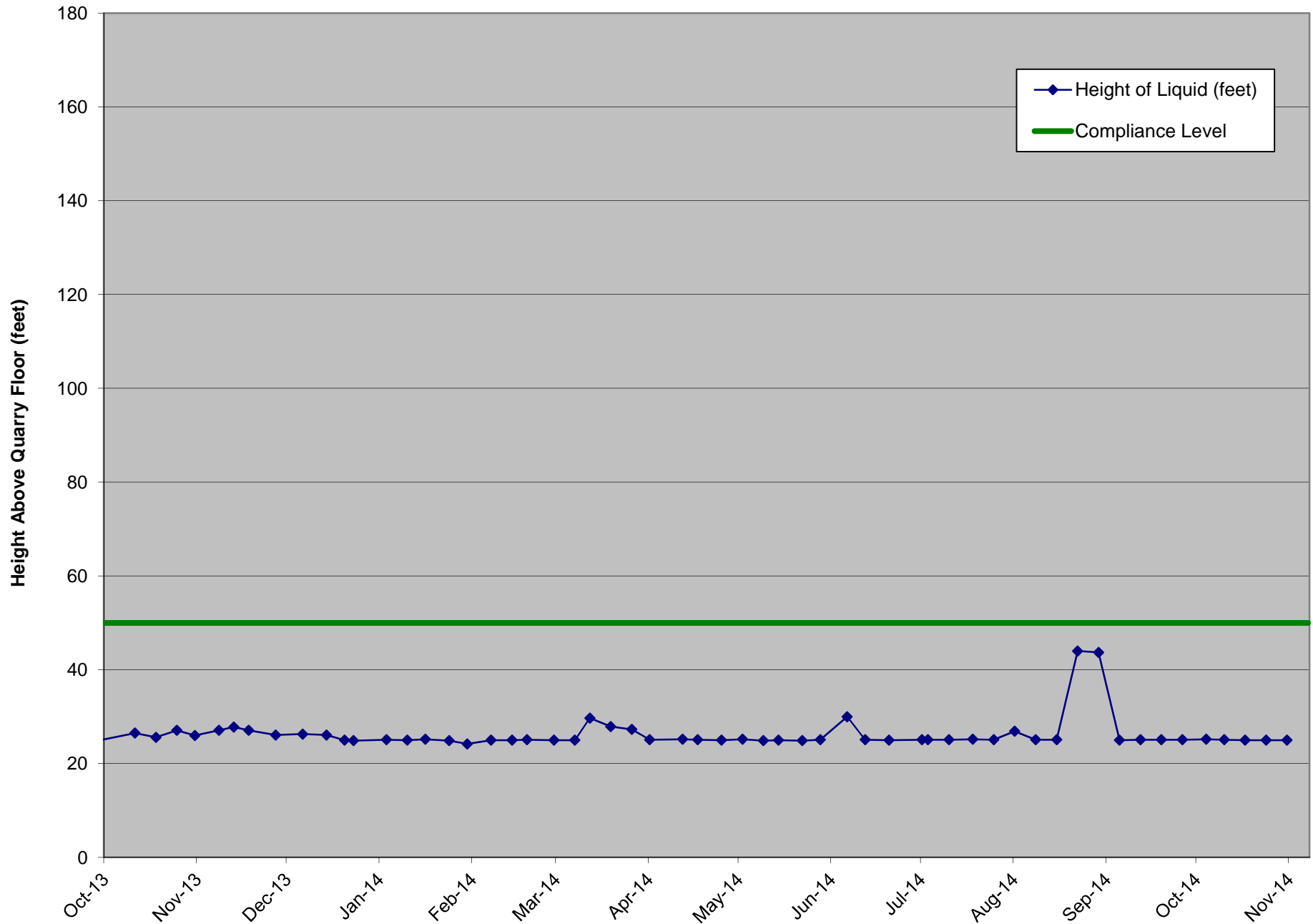
### LCS-3D Liquid Level Below Ground Surface



### LCS-4B Liquid Level Above Quarry Floor

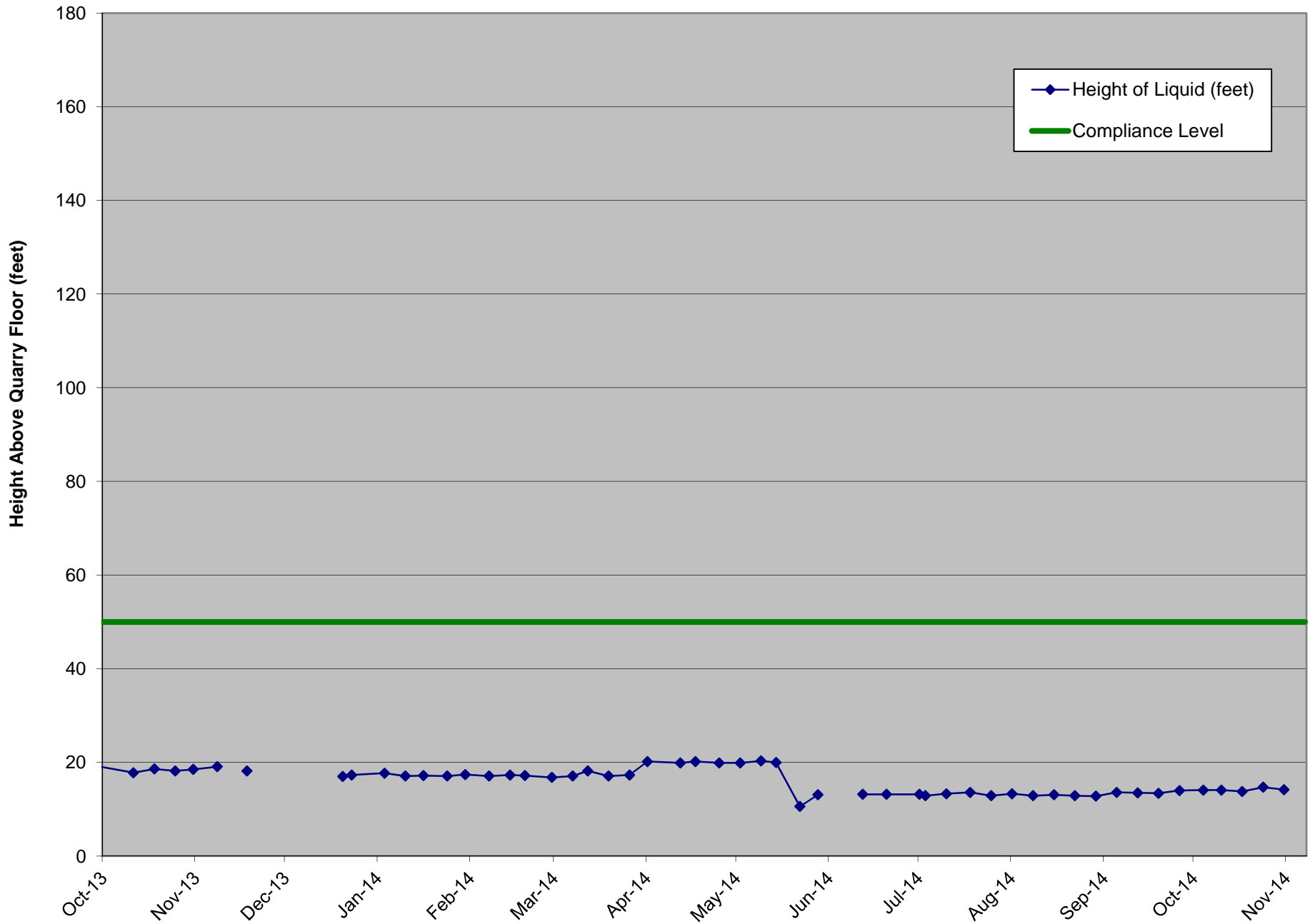


# LCS-5A Liquid Level Above Quarry Floor





### LCS-6B Liquid Level Above Quarry Floor



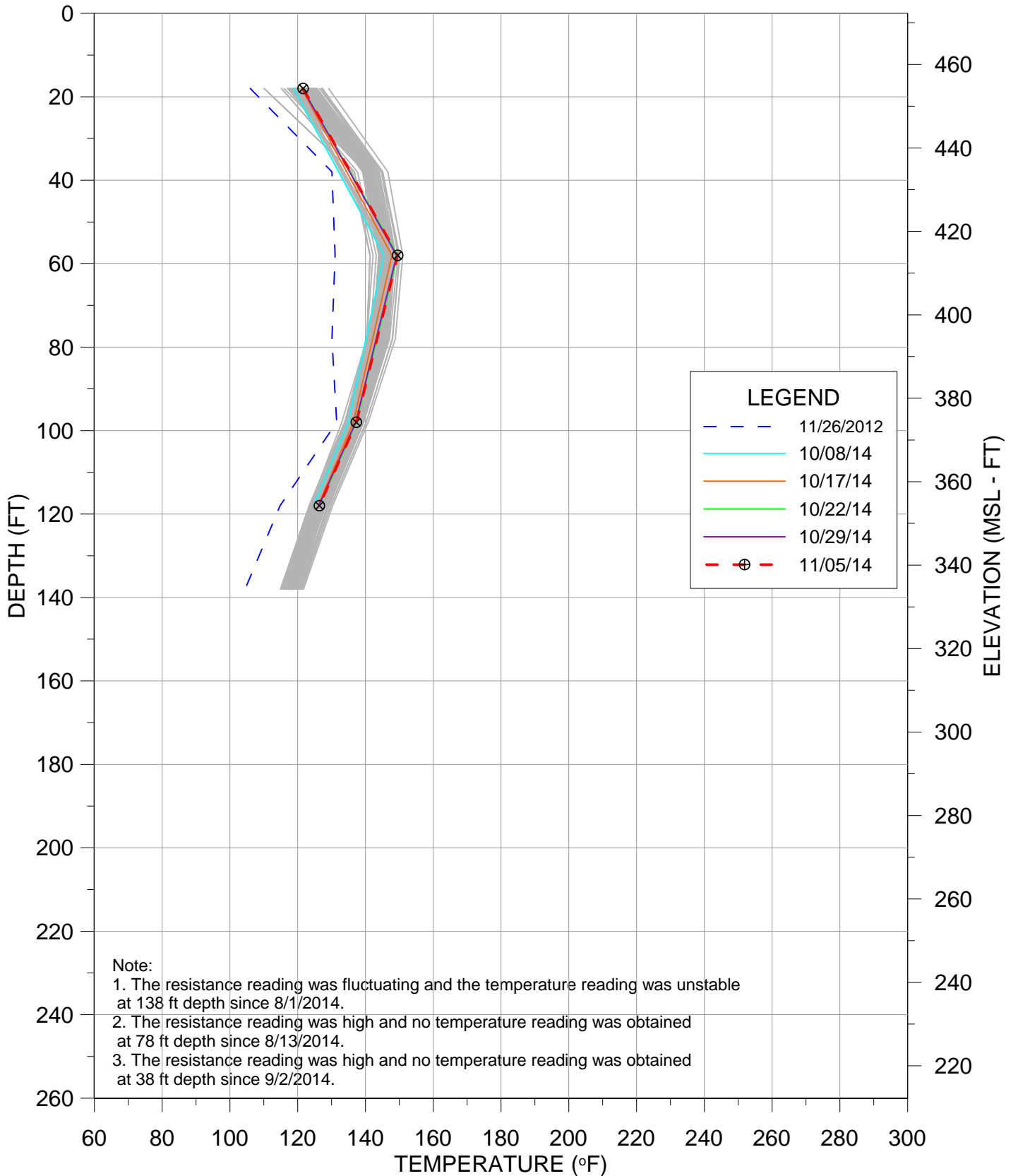
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**ATTACHMENT B**

**TEMPERATURE MONITORING PROBE ANALYTICAL CHARTS**

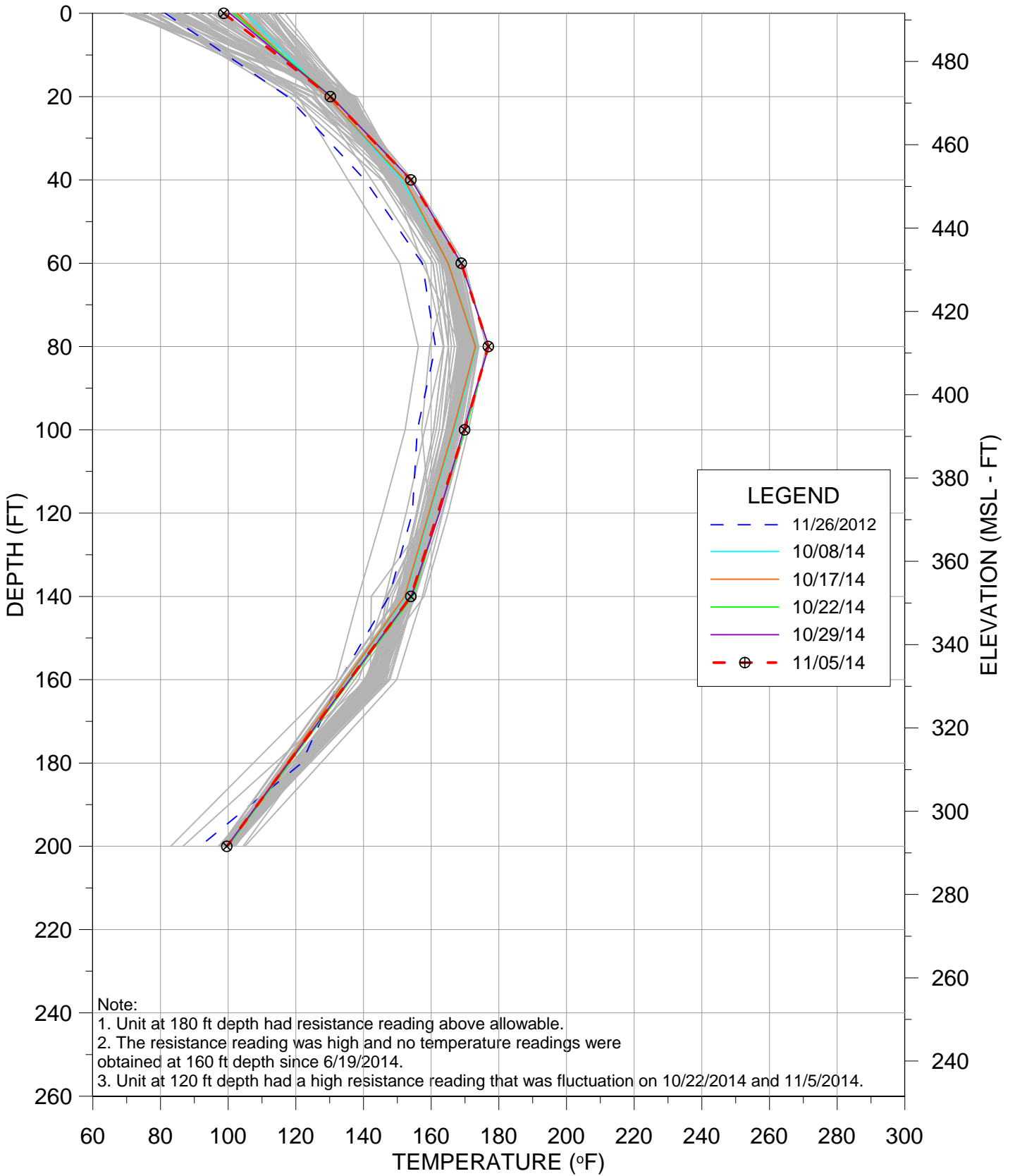
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# TMP-1



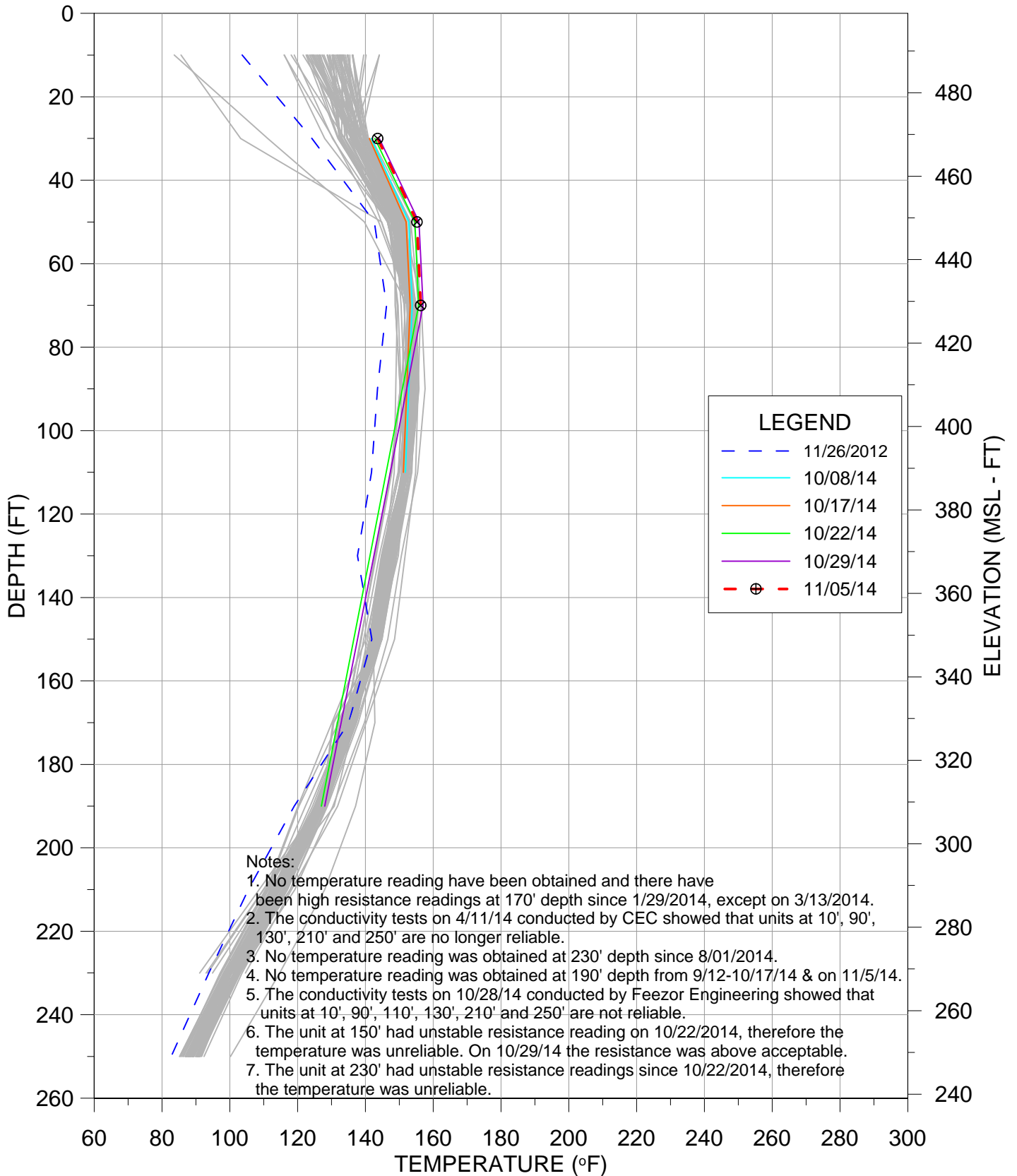
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-2



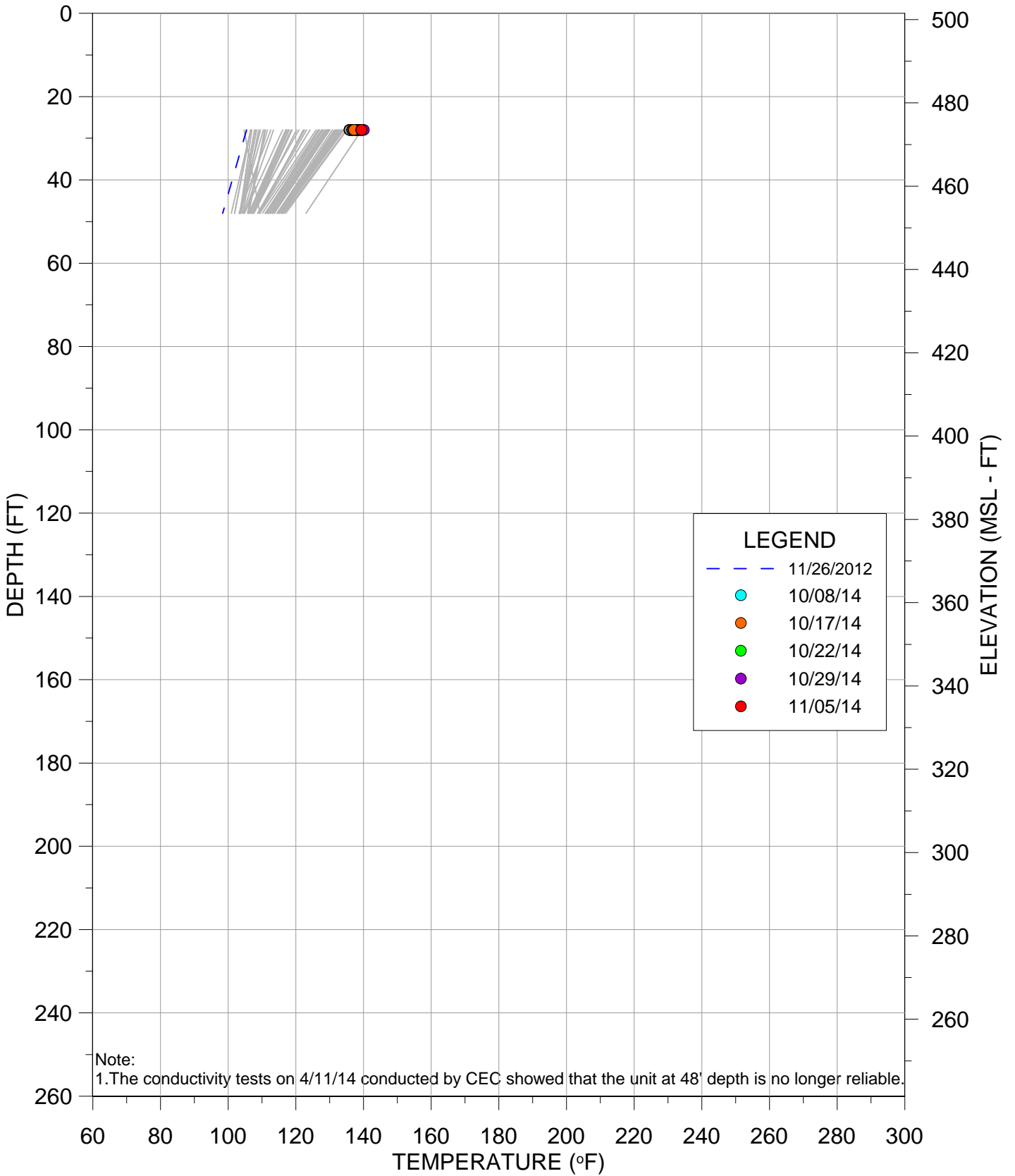
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-3



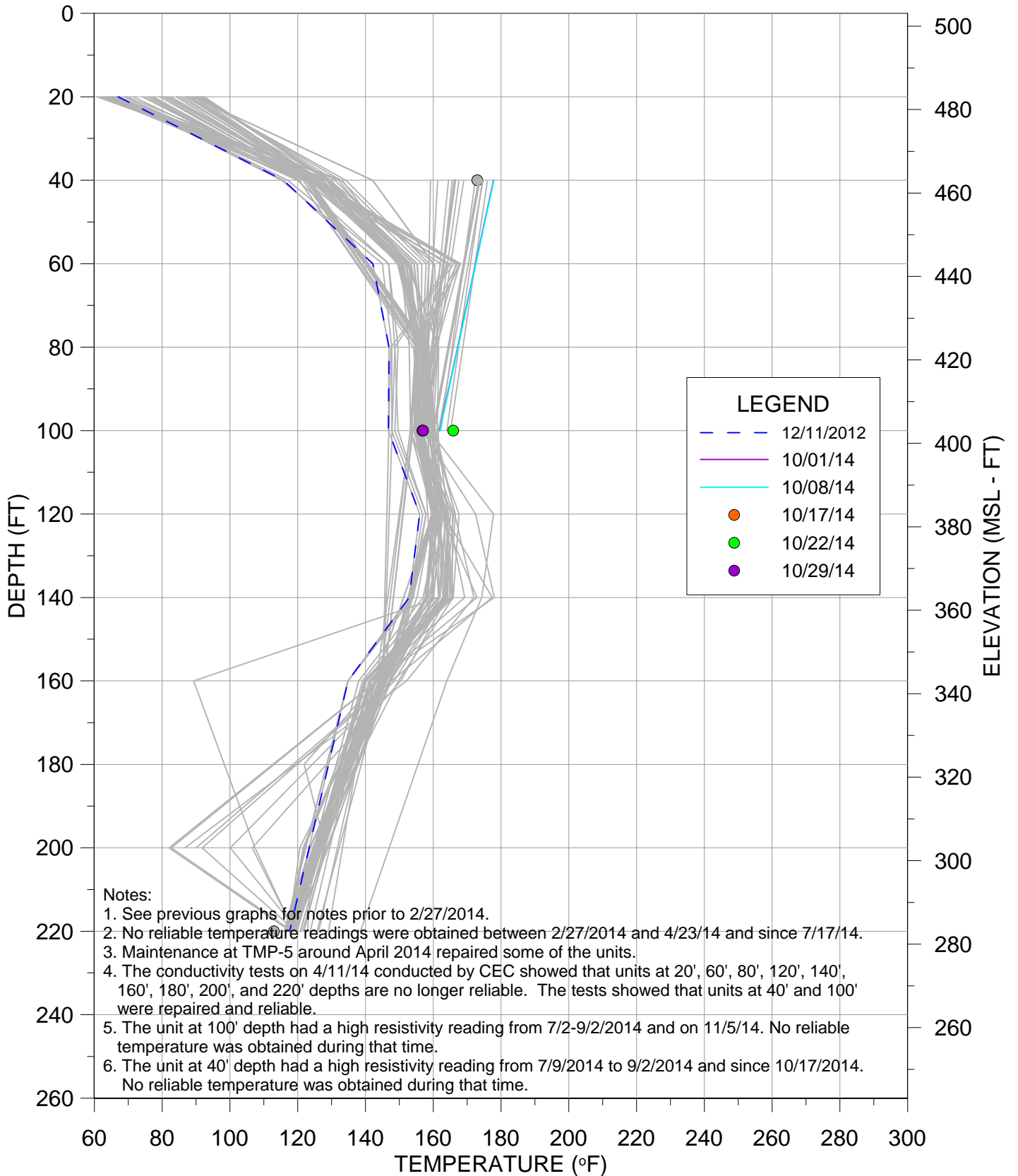
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-4



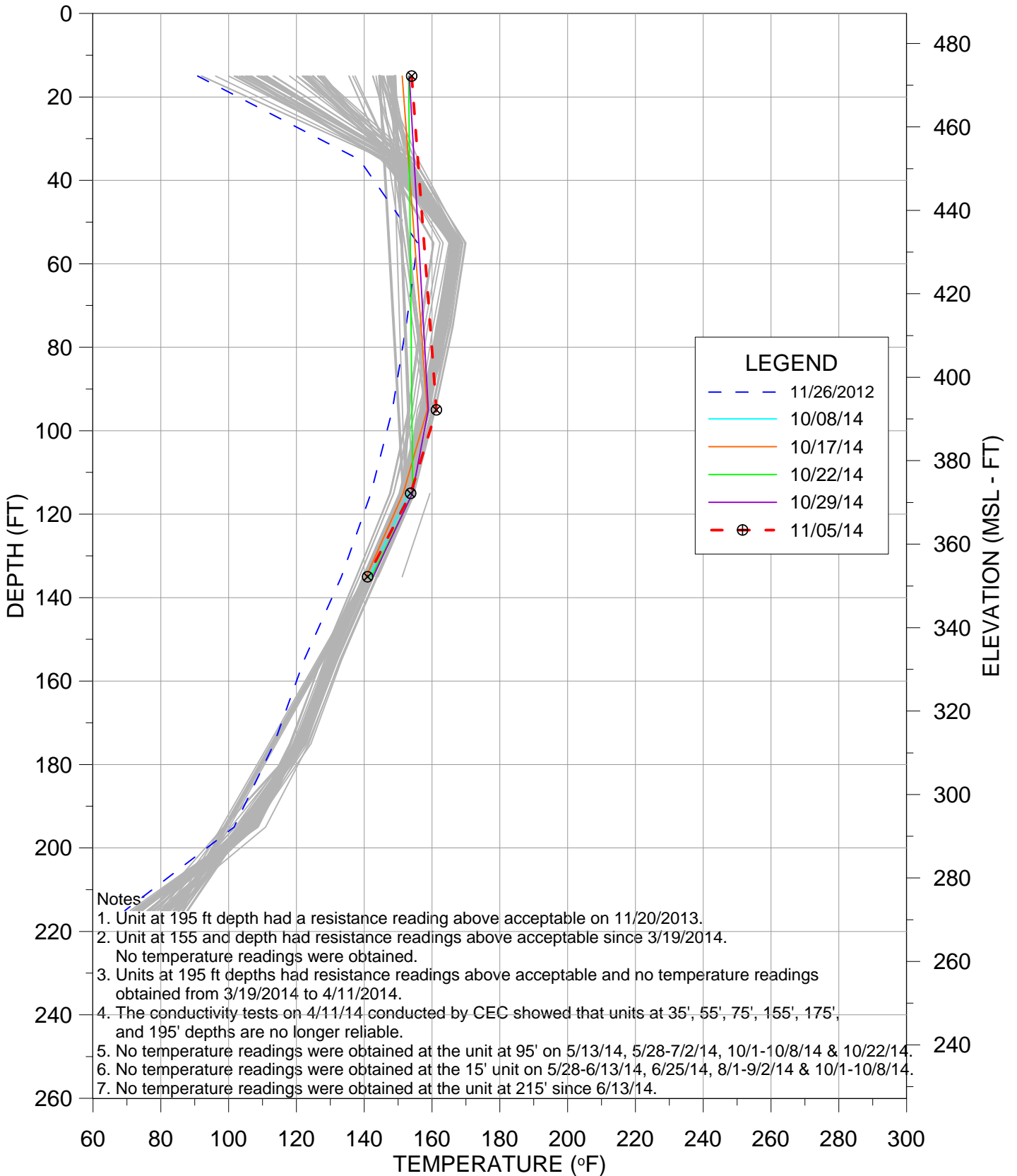
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-5



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

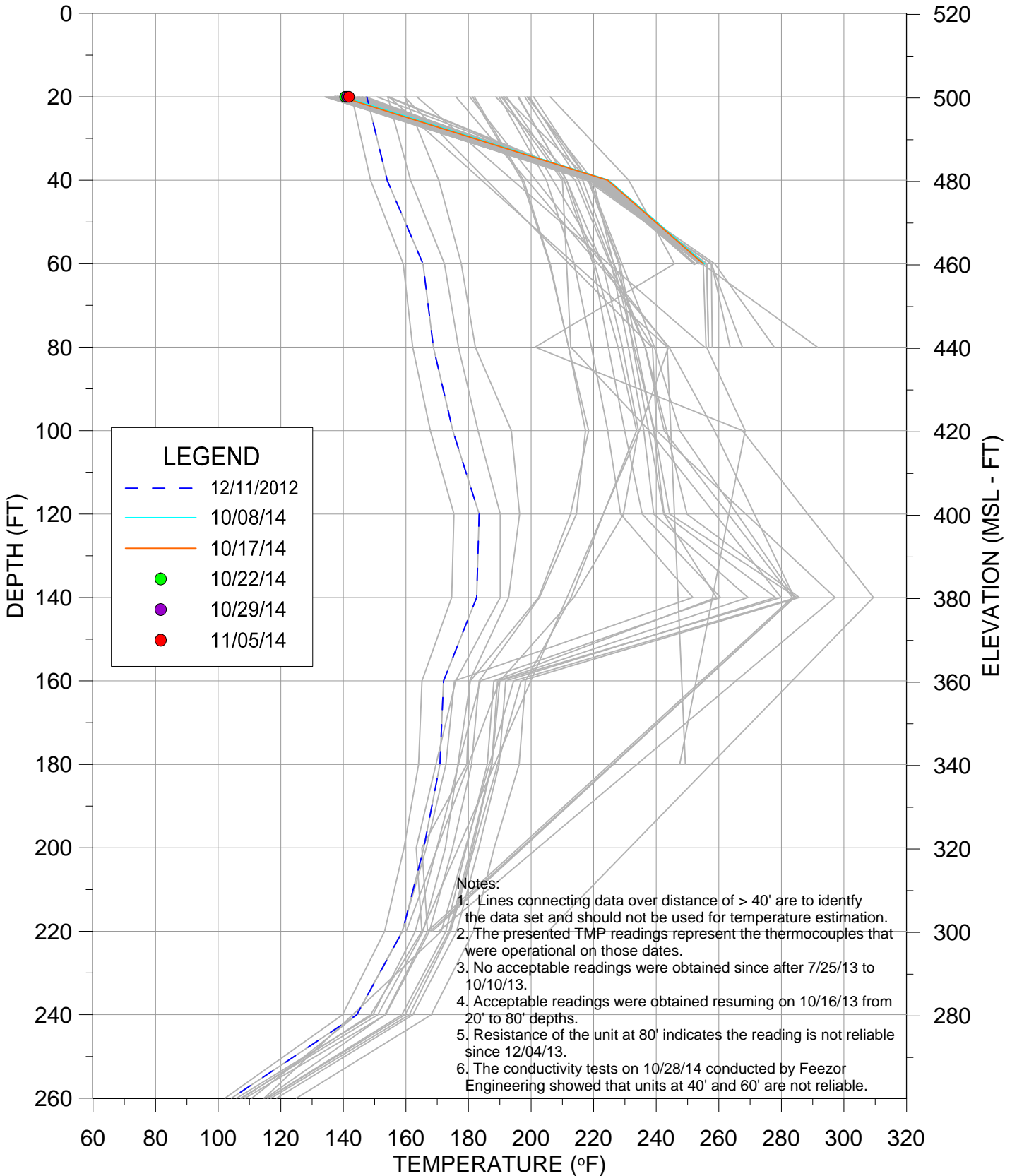
# TMP-6



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

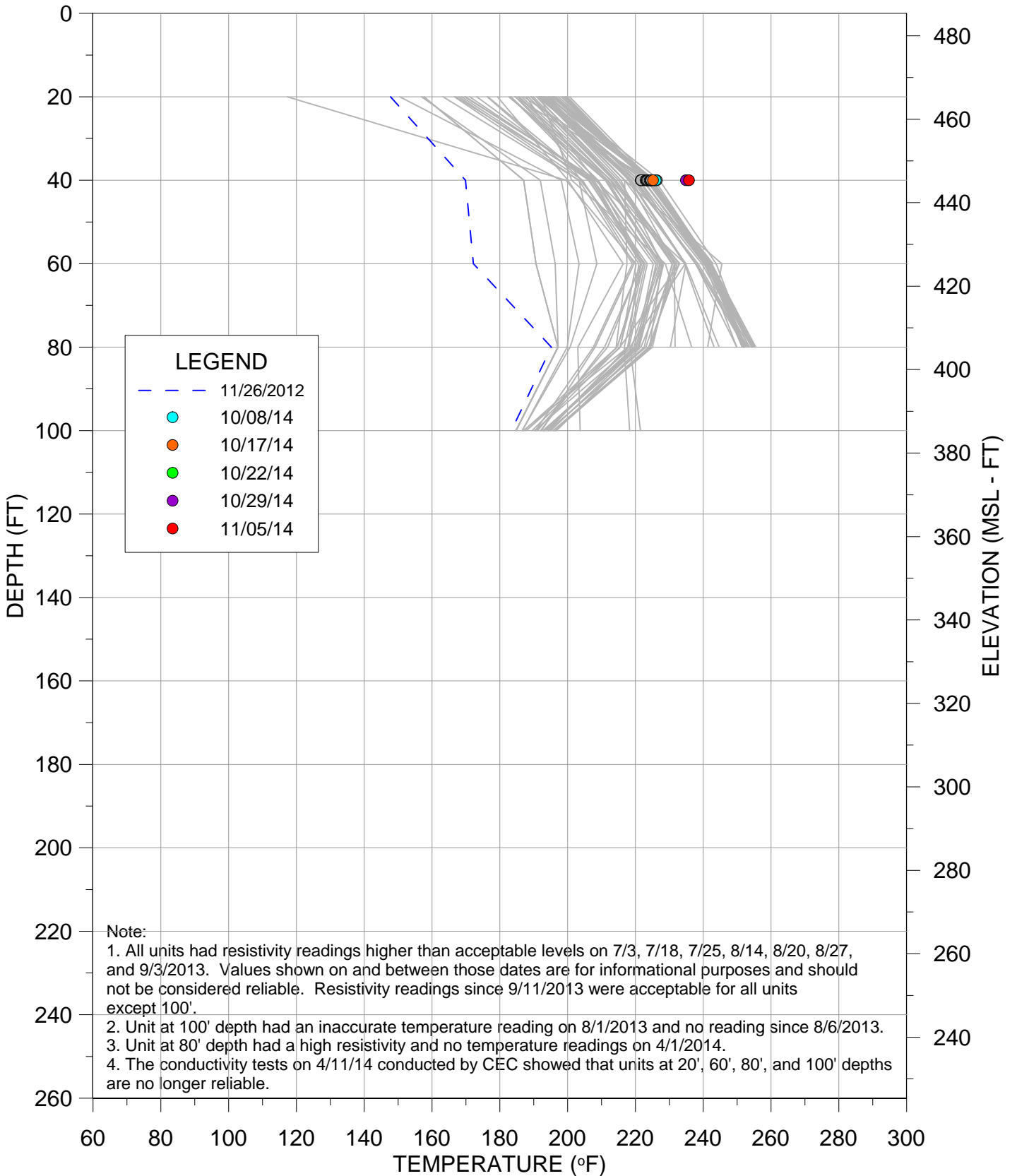


# TMP-8



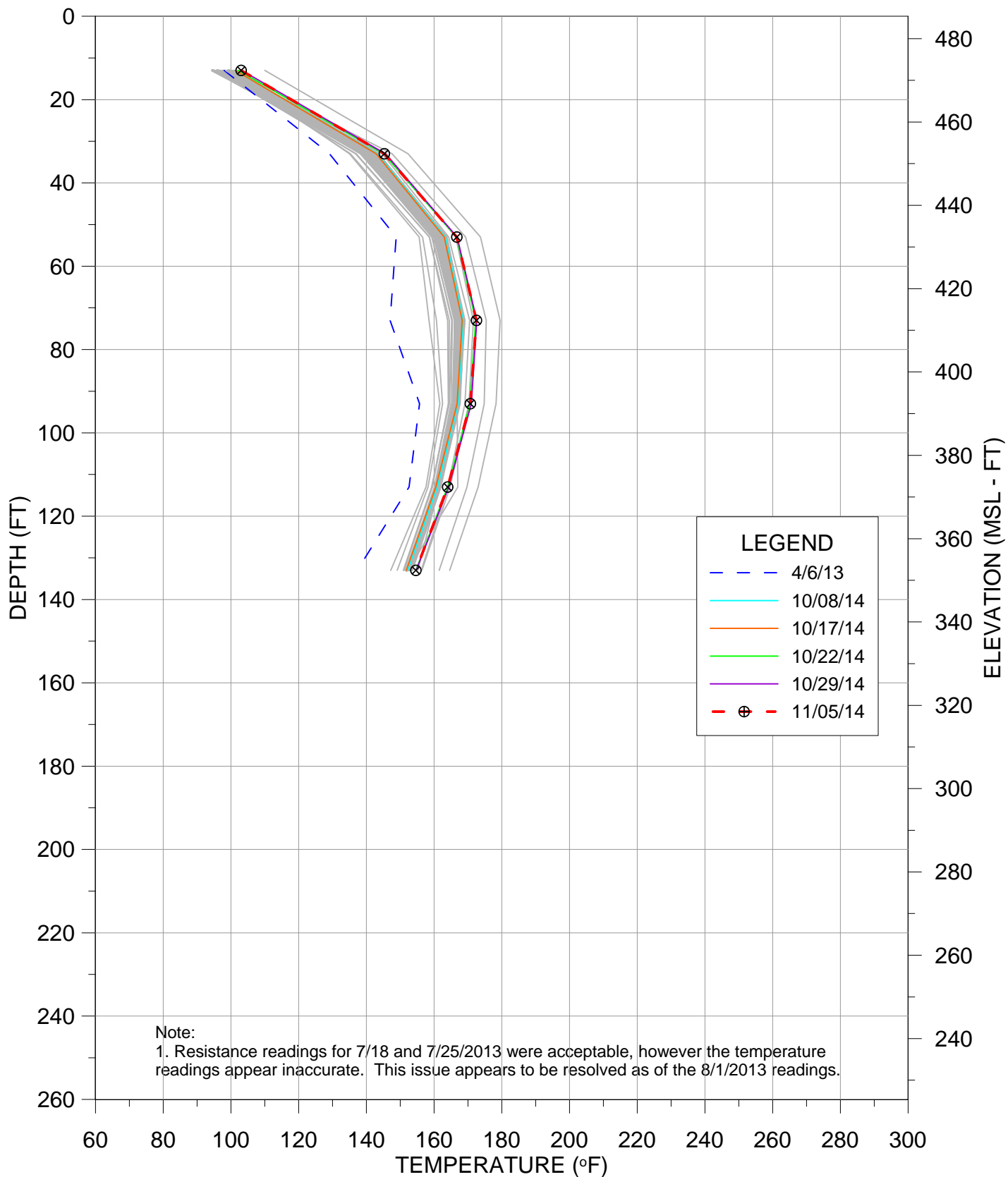
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-9



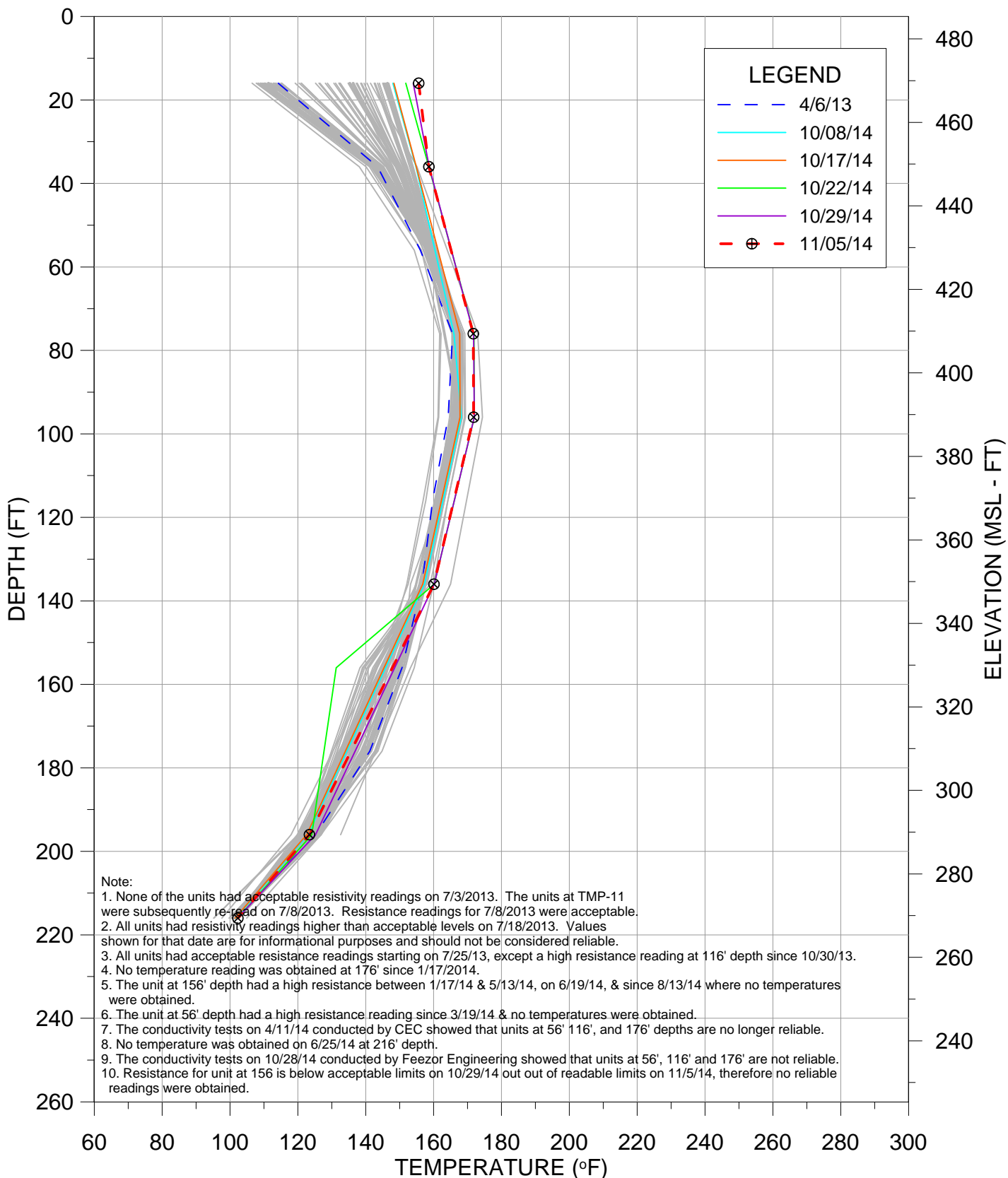
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-10



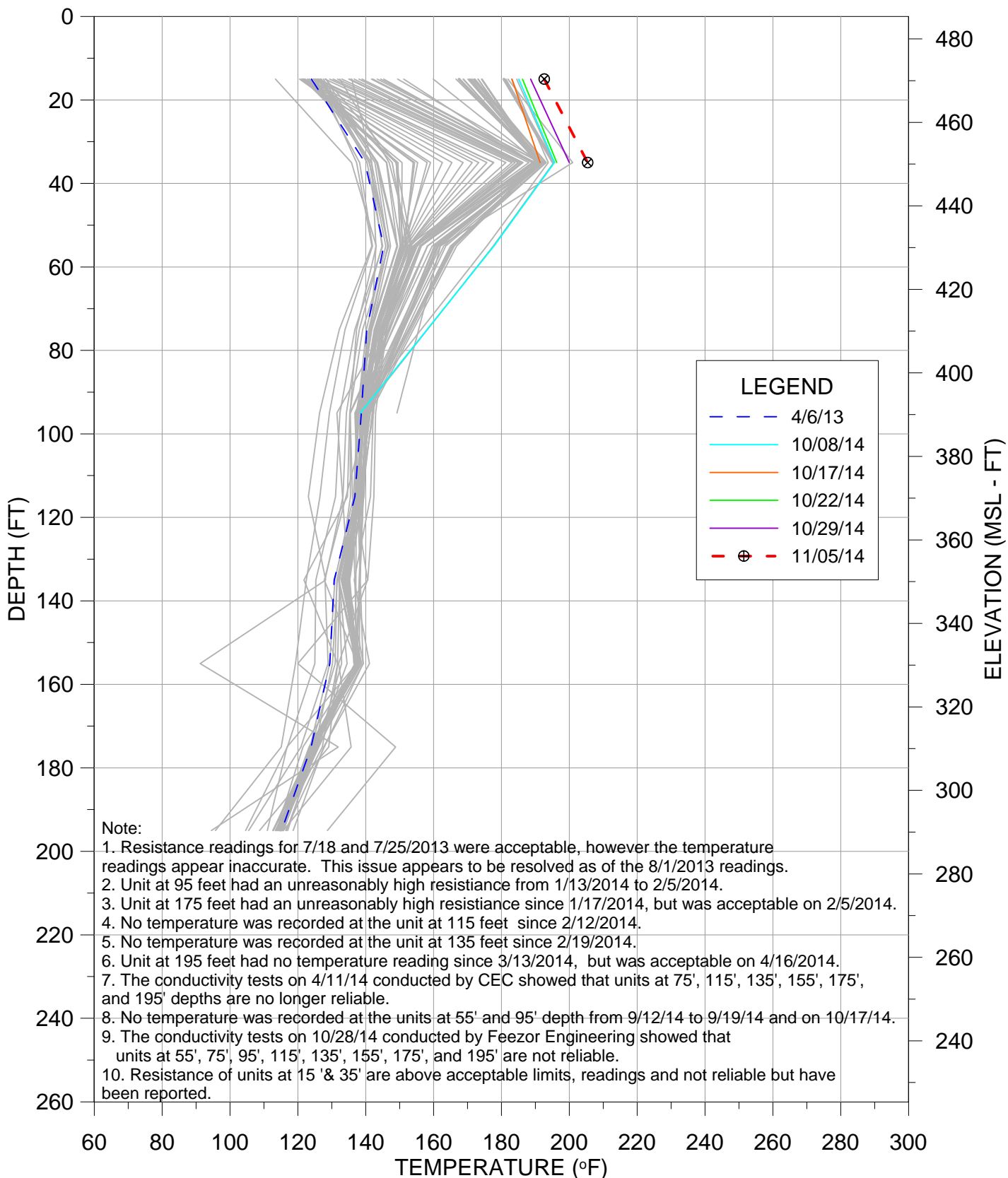
Note:  
1. Resistance readings for 7/18 and 7/25/2013 were acceptable, however the temperature readings appear inaccurate. This issue appears to be resolved as of the 8/1/2013 readings.

# TMP-11



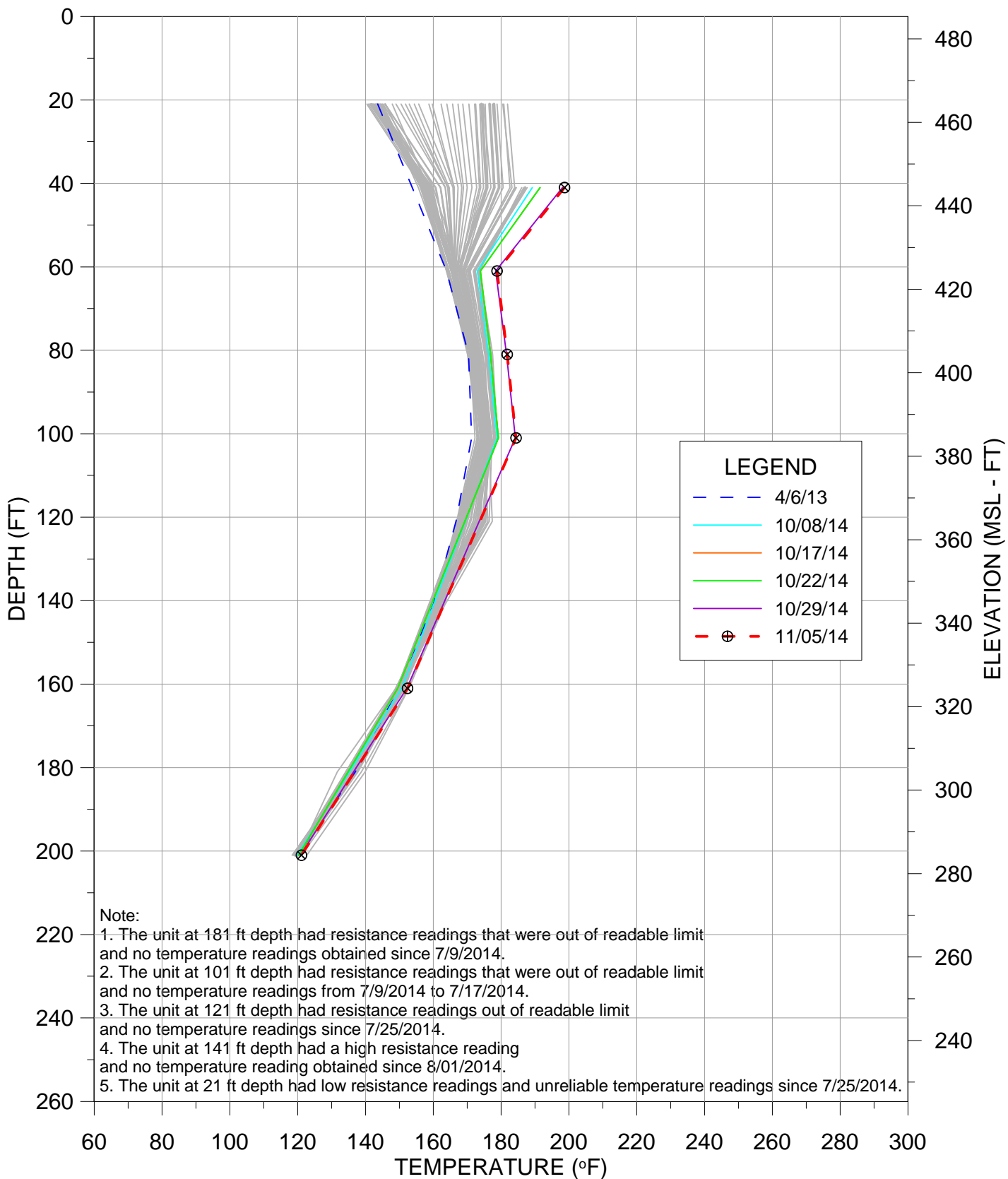
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-12



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

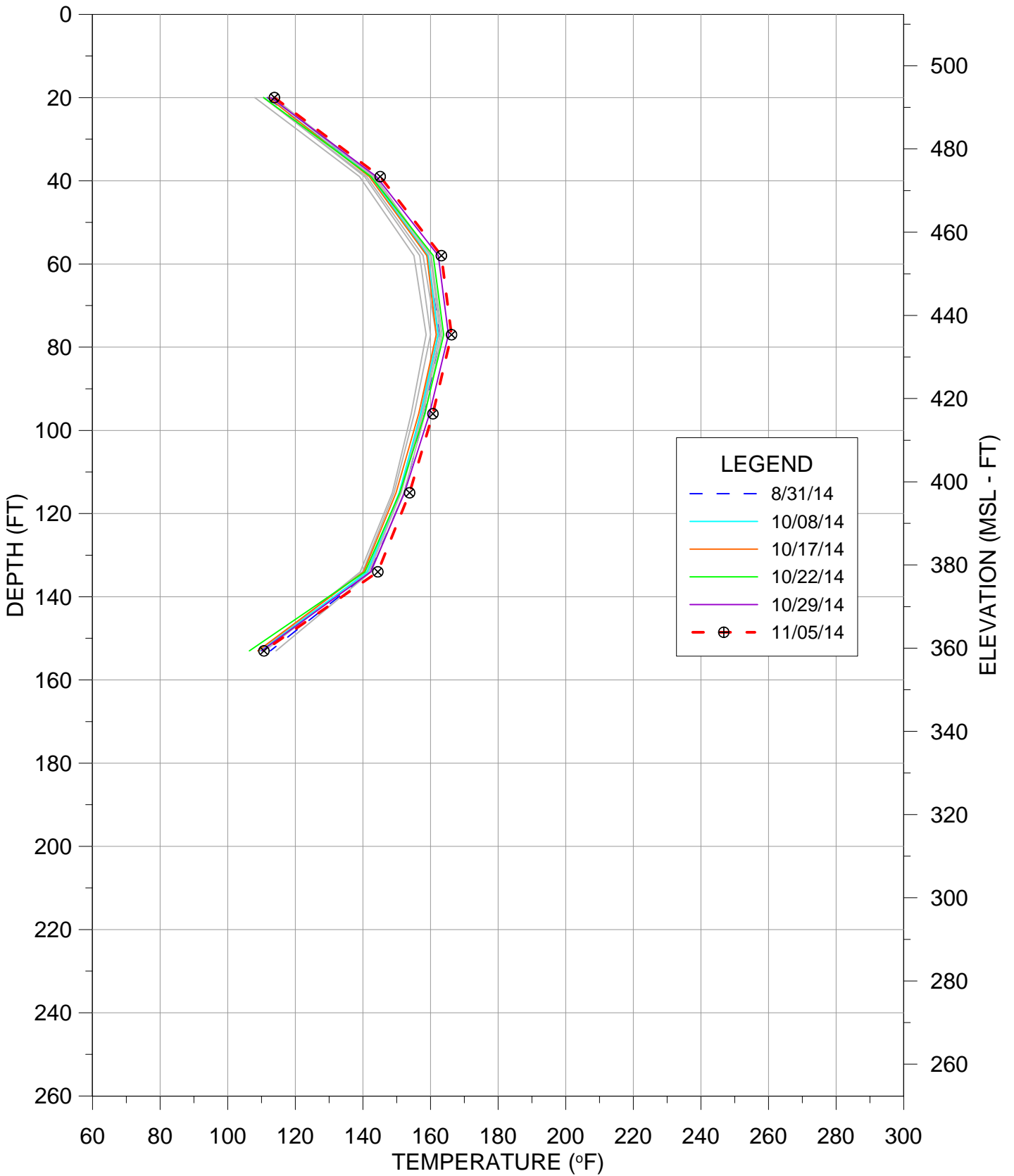
# TMP-14



**Note:**

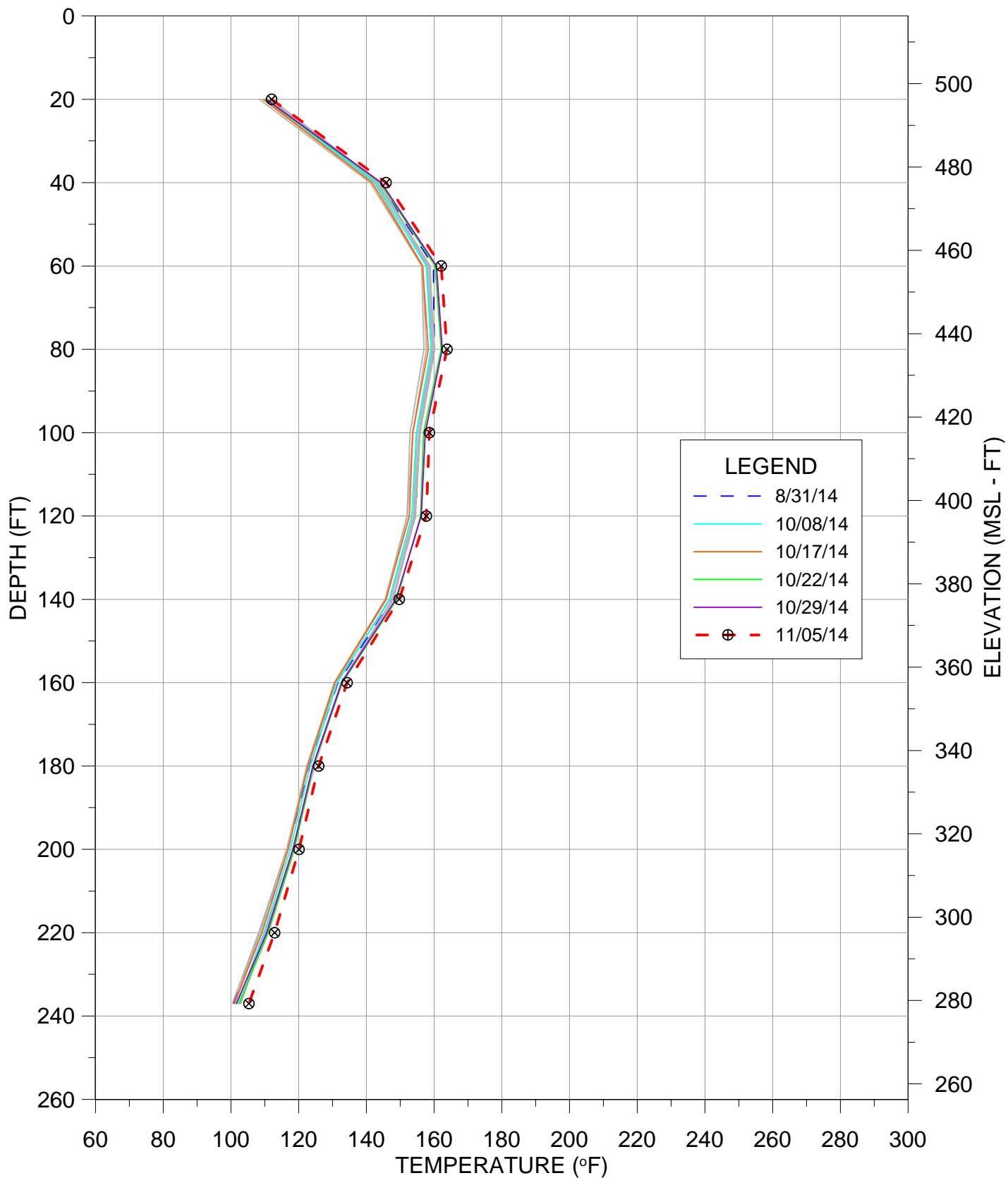
1. The unit at 181 ft depth had resistance readings that were out of readable limit and no temperature readings obtained since 7/9/2014.
2. The unit at 101 ft depth had resistance readings that were out of readable limit and no temperature readings from 7/9/2014 to 7/17/2014.
3. The unit at 121 ft depth 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.

# TMP-16



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

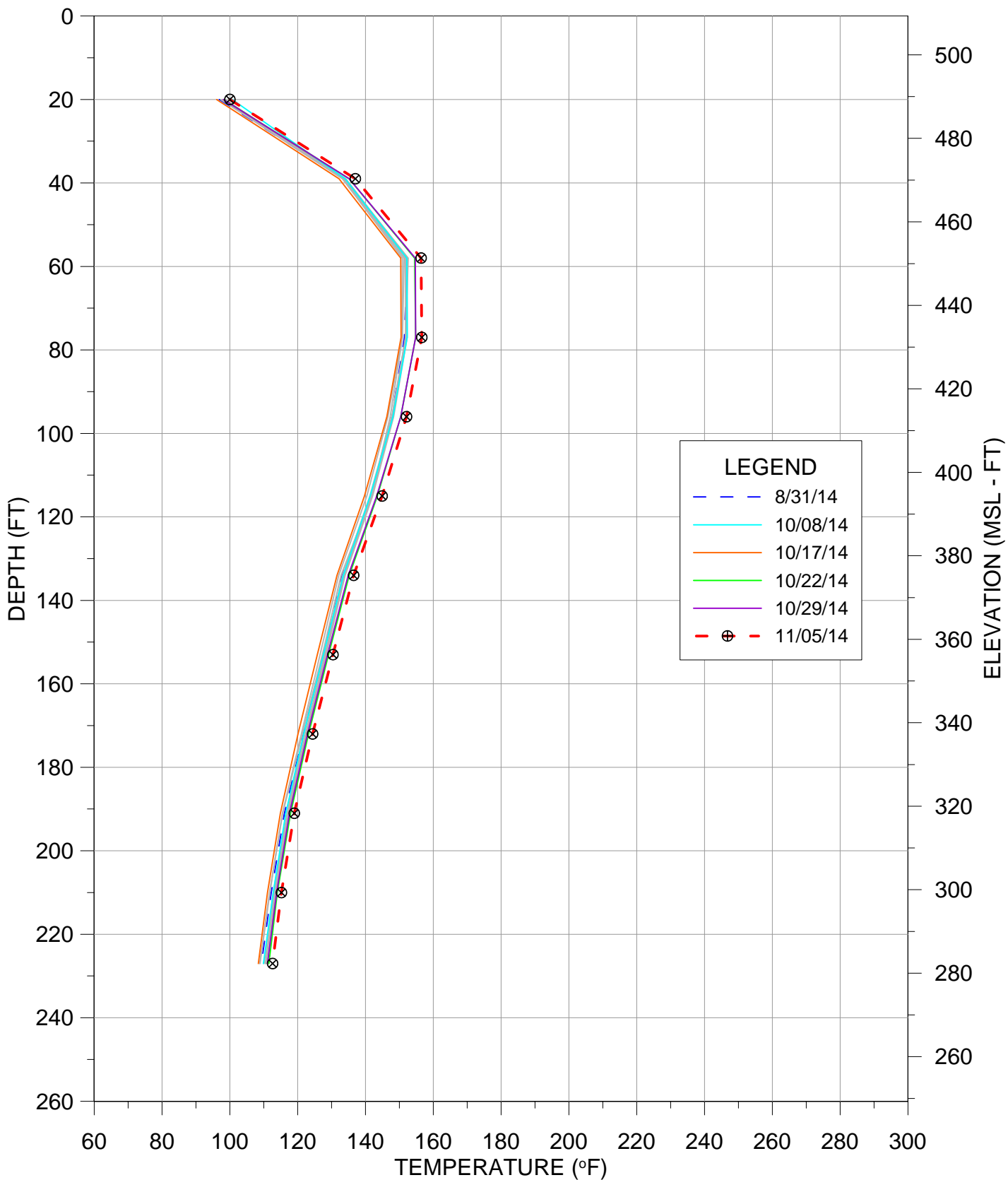
# TMP-17



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

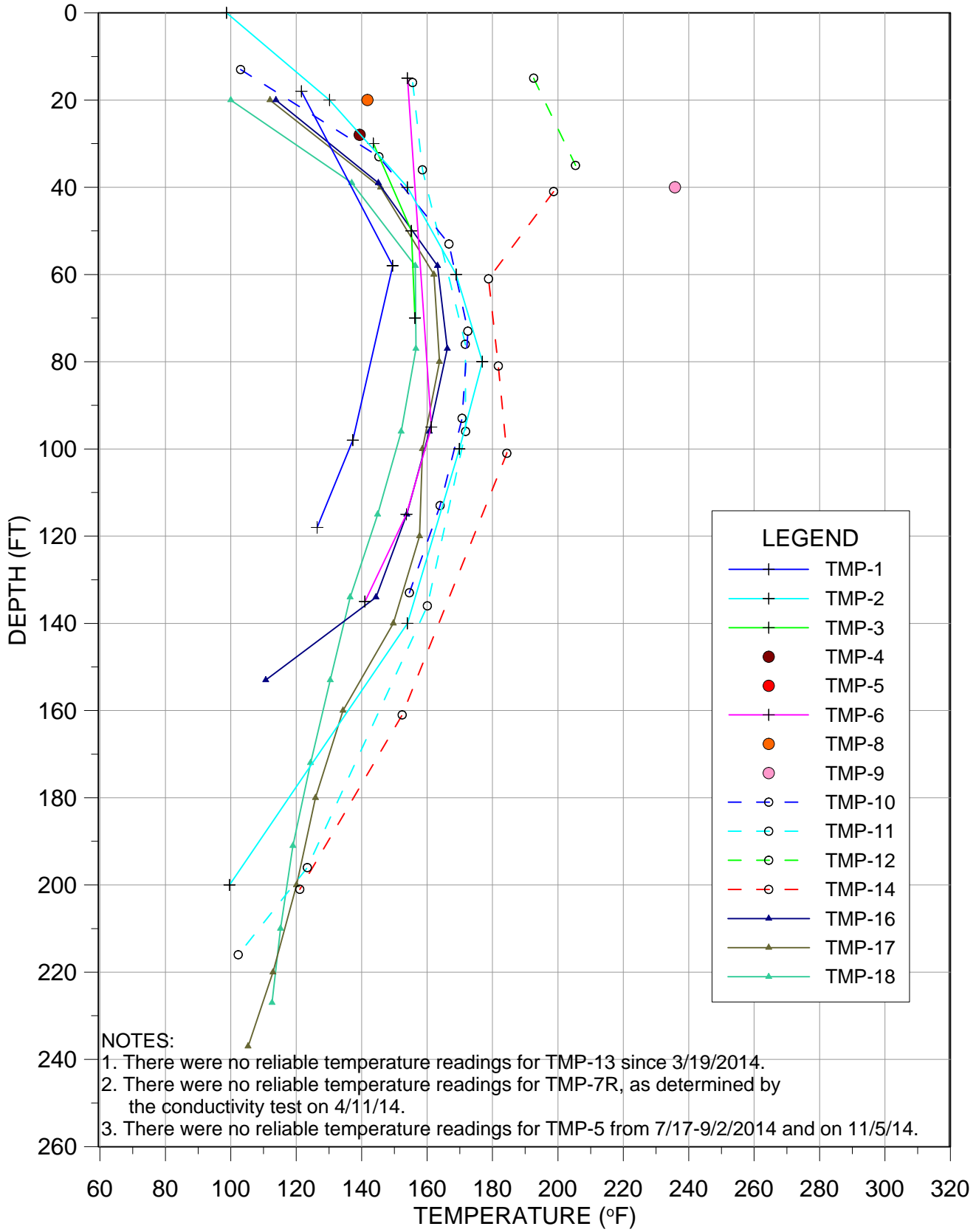


# TMP-18



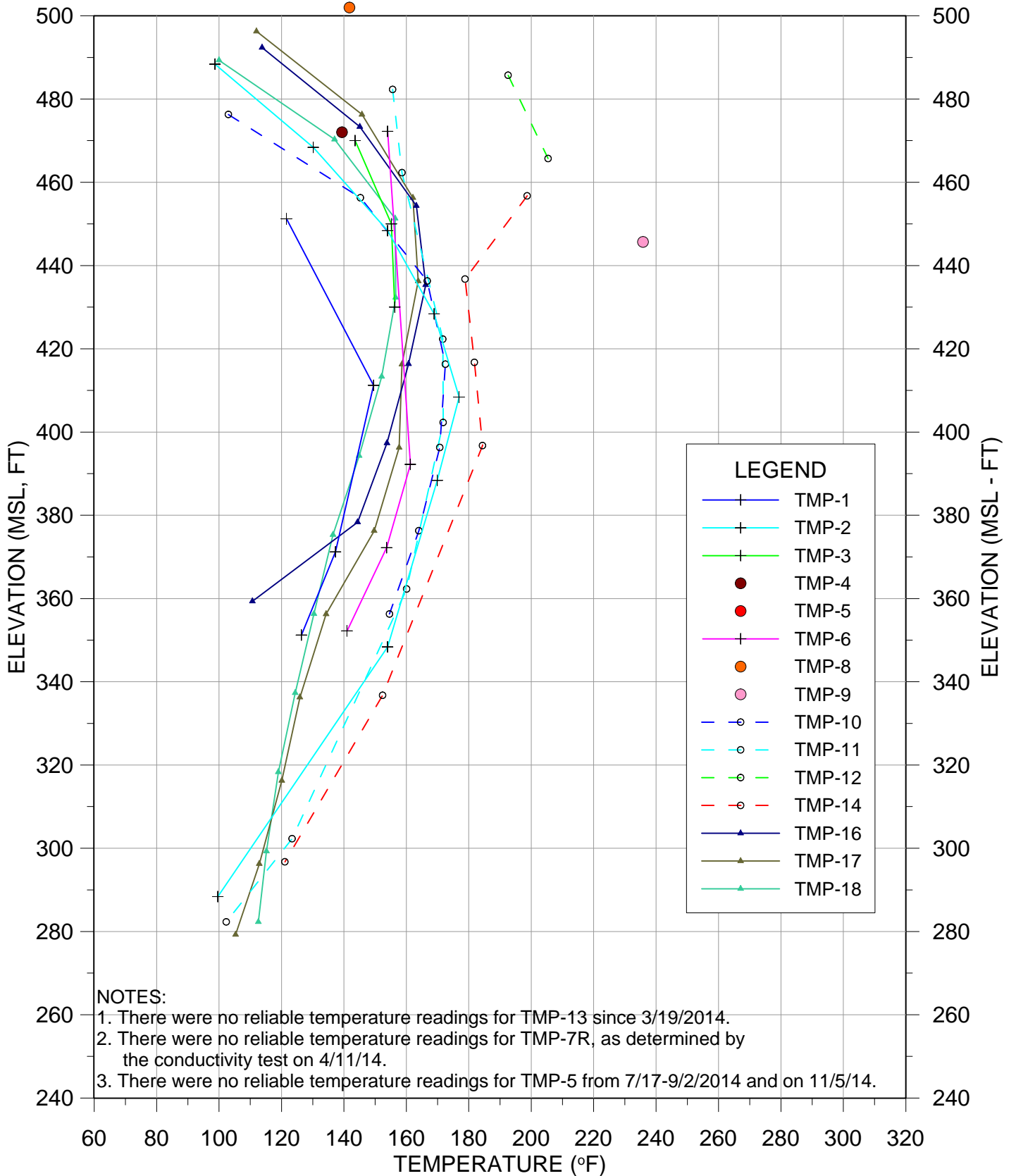
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 11/5/2014 -DEPTH



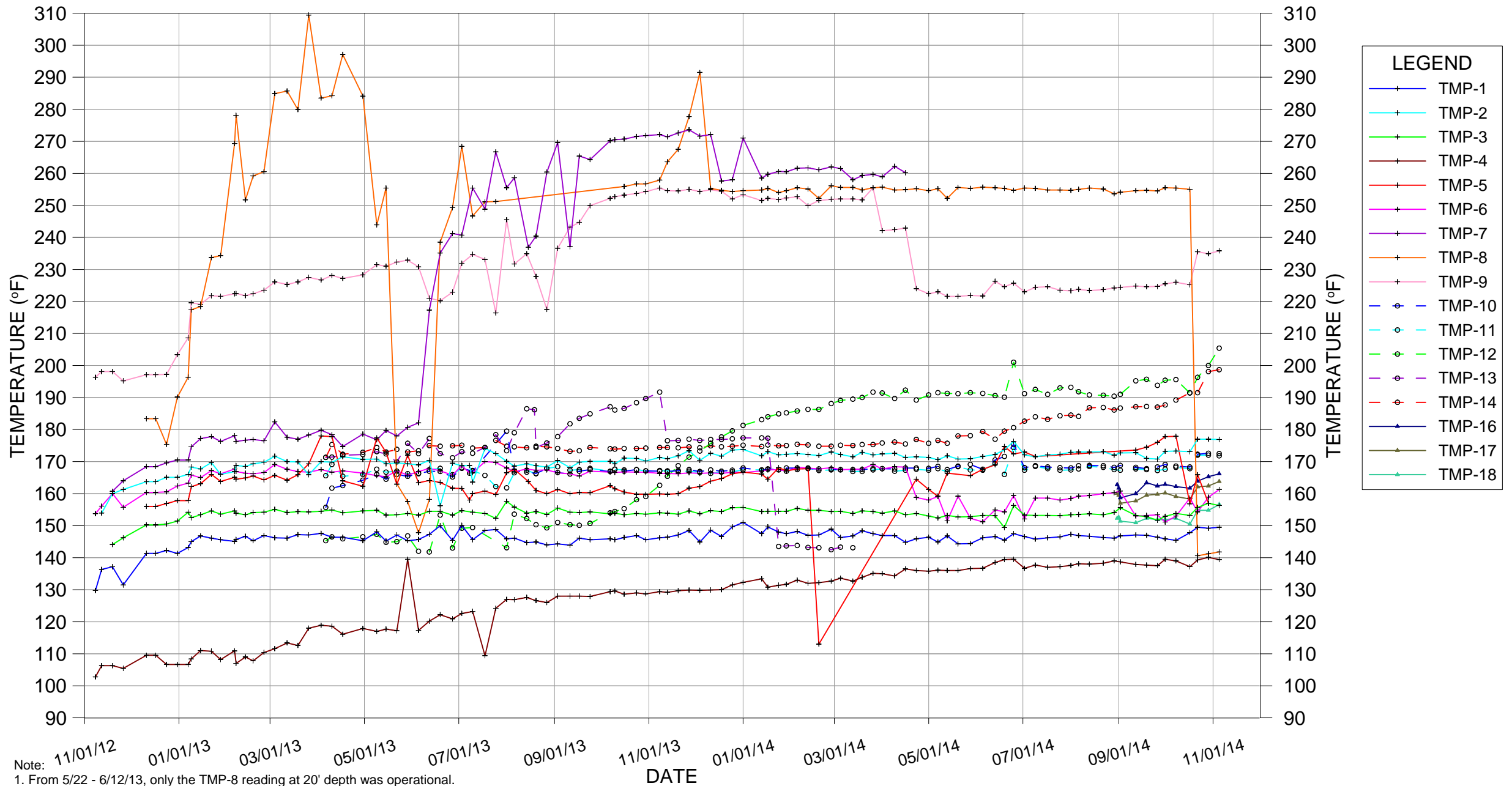
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 11/5/2014 - ELEVATION



TEMPERATURE VS ELEVATION  
BRIDGETON LANDFILL

# MAXIMUM TEMPERATURES

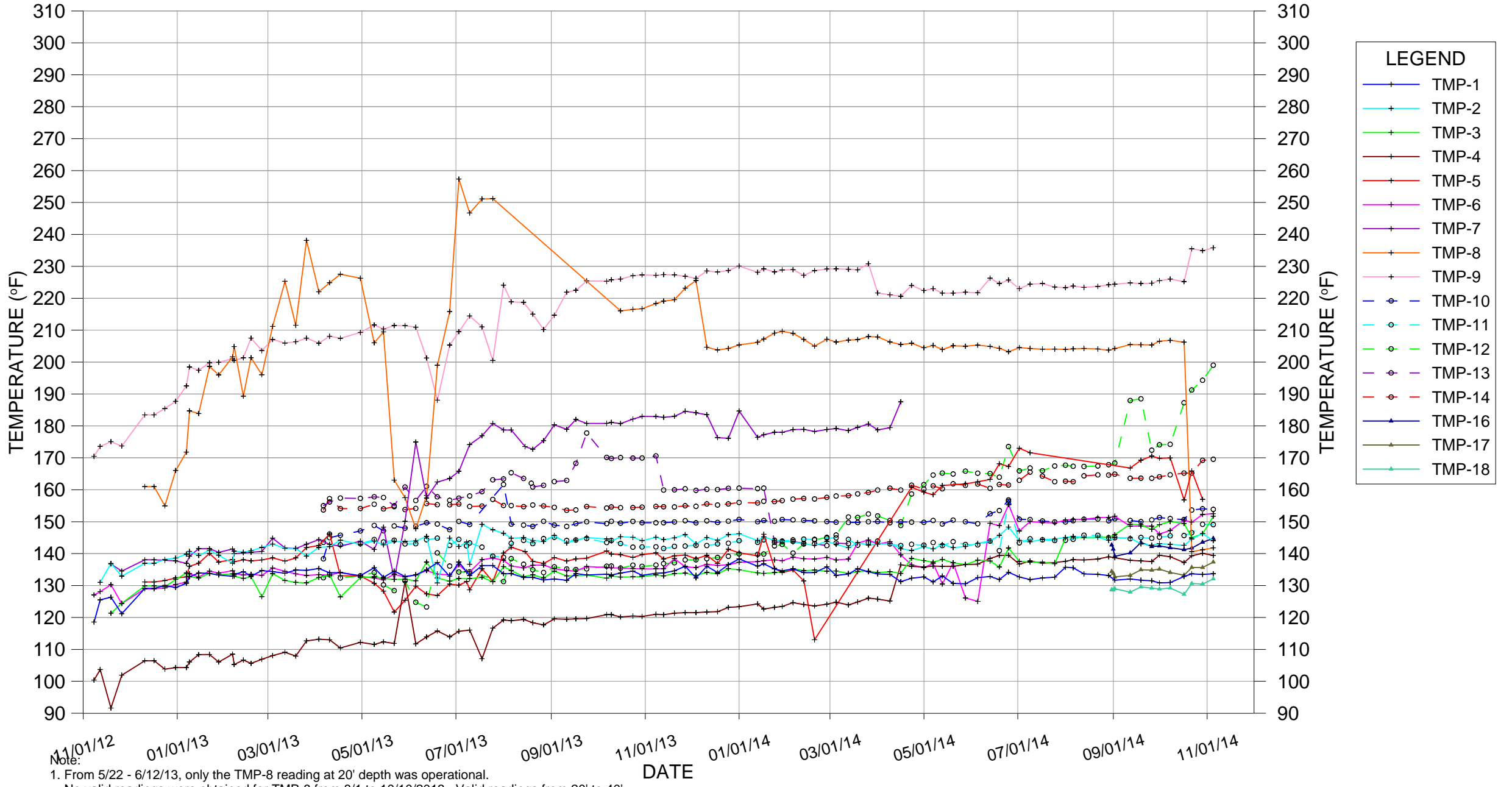


Note: 11/01/12 01/01/13 03/01/13 05/01/13 07/01/13 09/01/13 11/01/13 01/01/14 03/01/14 05/01/14 07/01/14 09/01/14 11/01/14

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



Note:

- 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.
- A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more valid readings.
- No valid readings were obtained for TMP-10 and TMP-12 on 7/18/2013 or 7/25/2013.
- 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

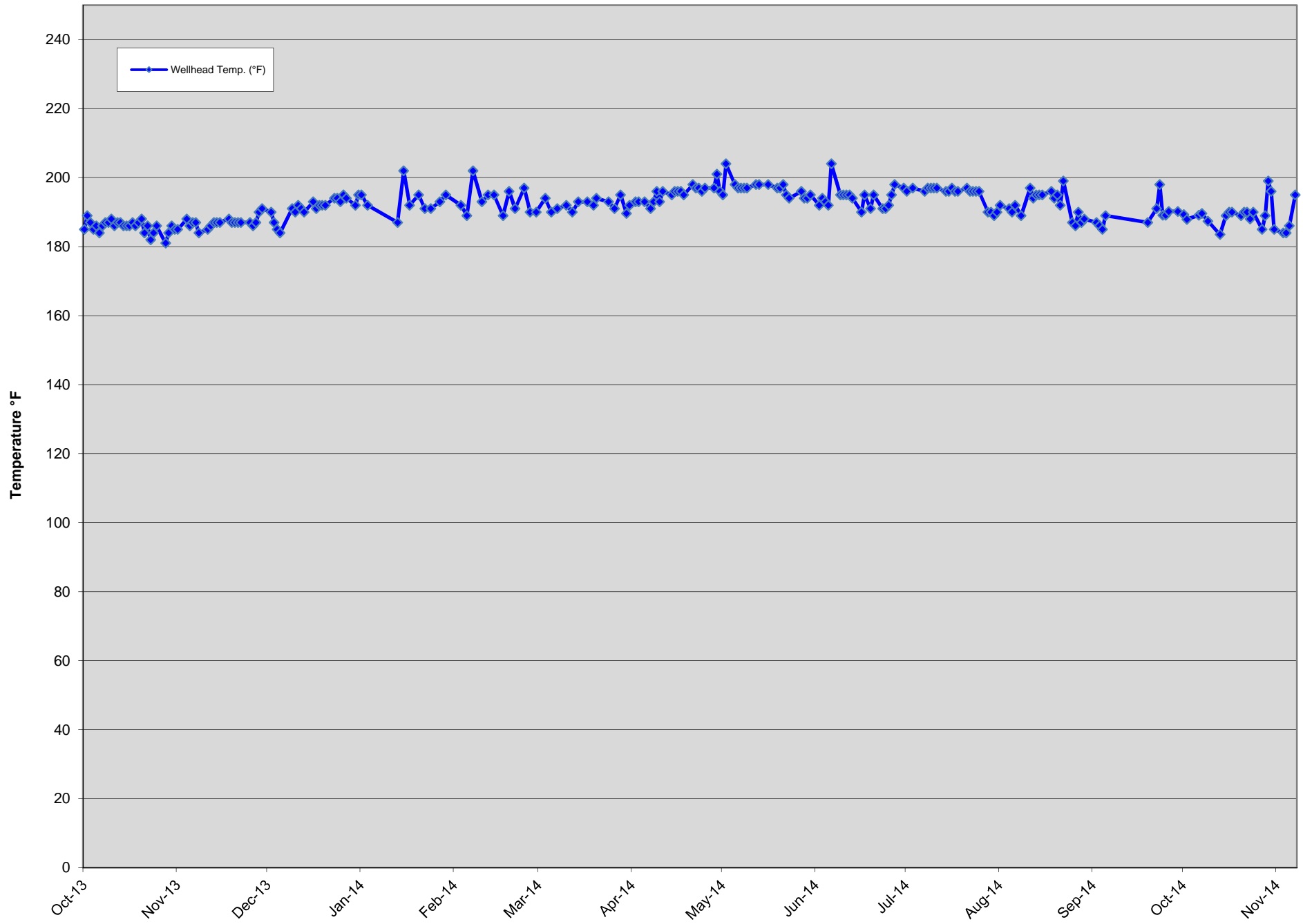
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**ATTACHMENT C**

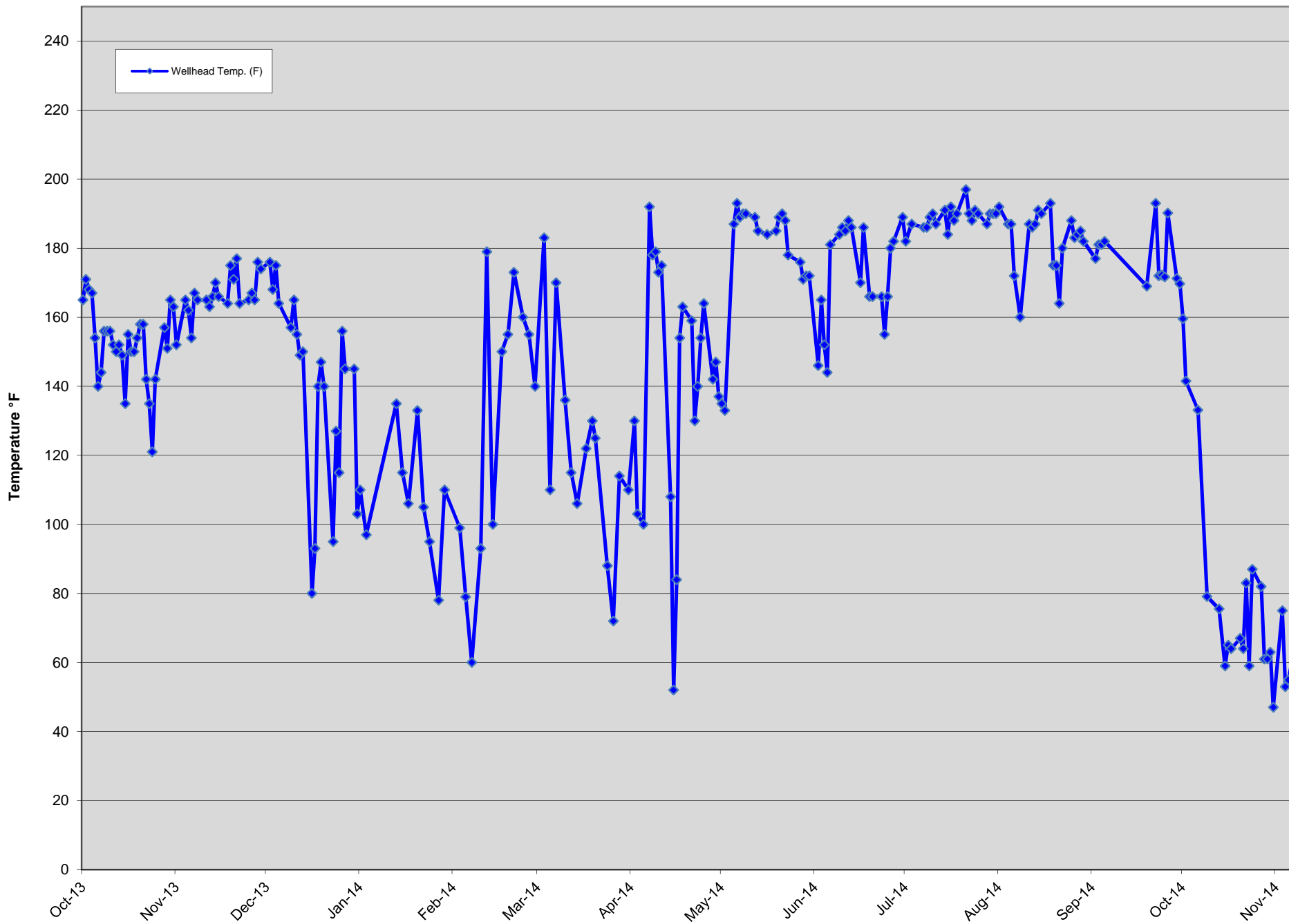
**GAS INTERCEPTOR WELLHEAD TEMPERATURE GRAPHS**

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# GIW-1 Wellhead Temperatures

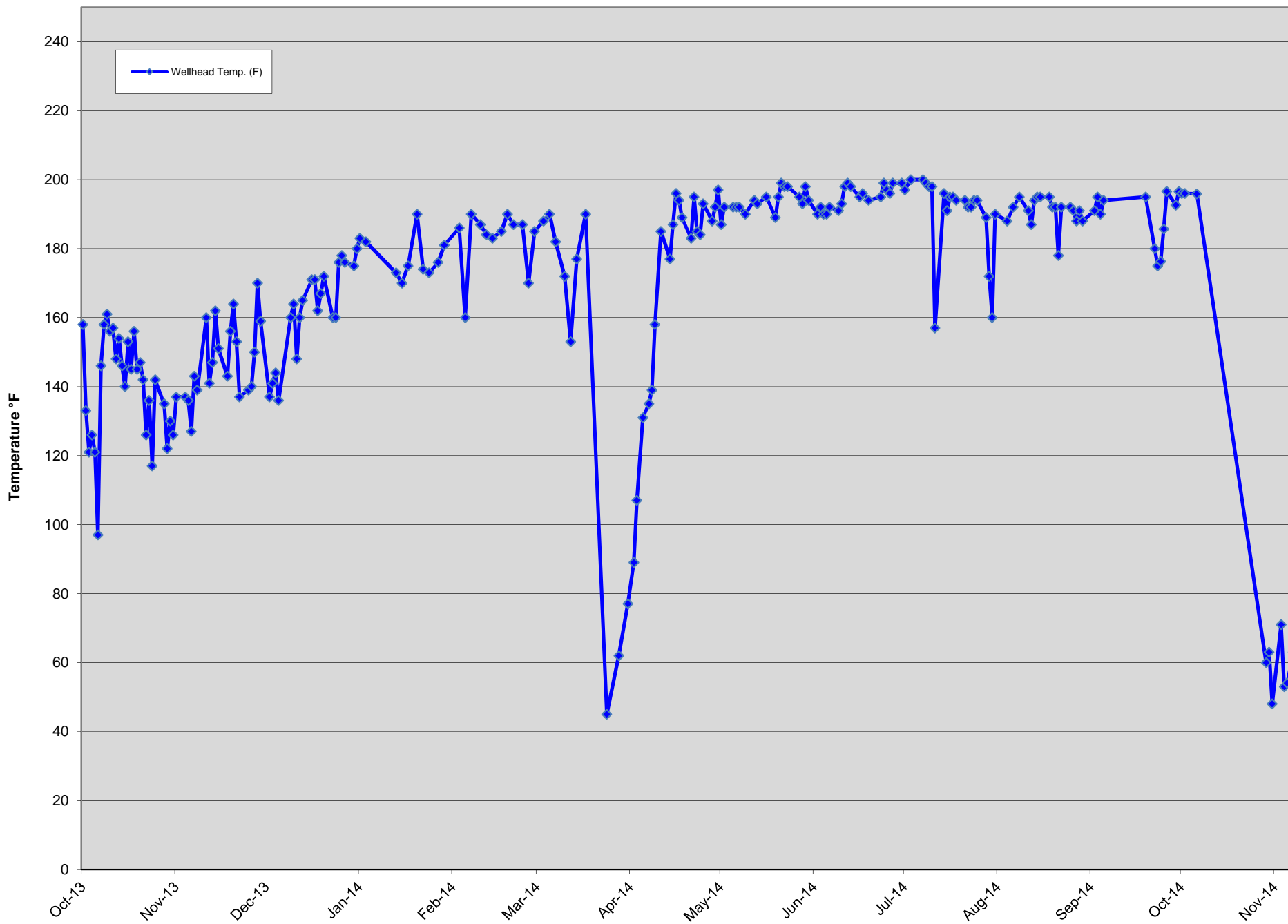


# GIW-2 Wellhead Temperatures

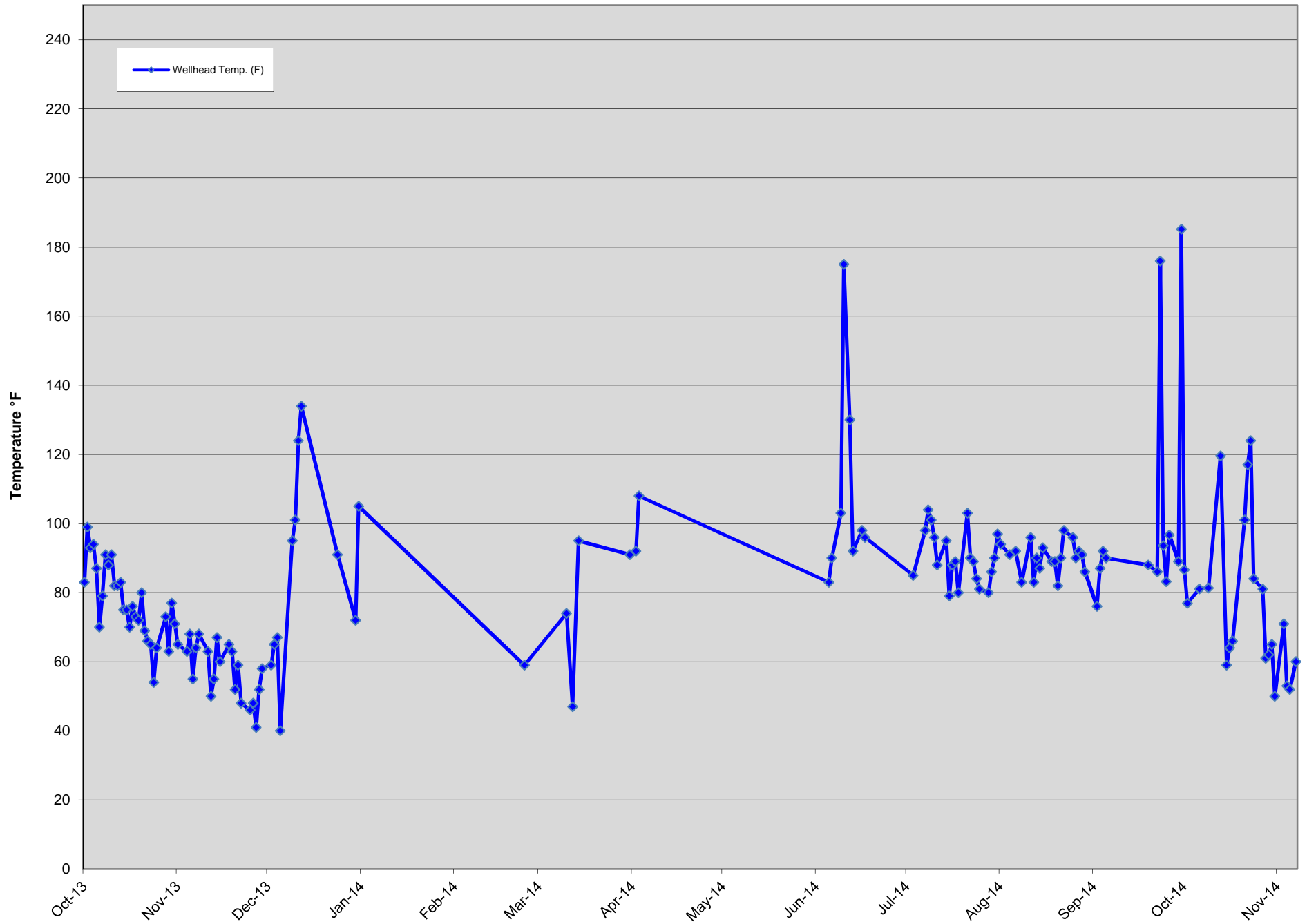




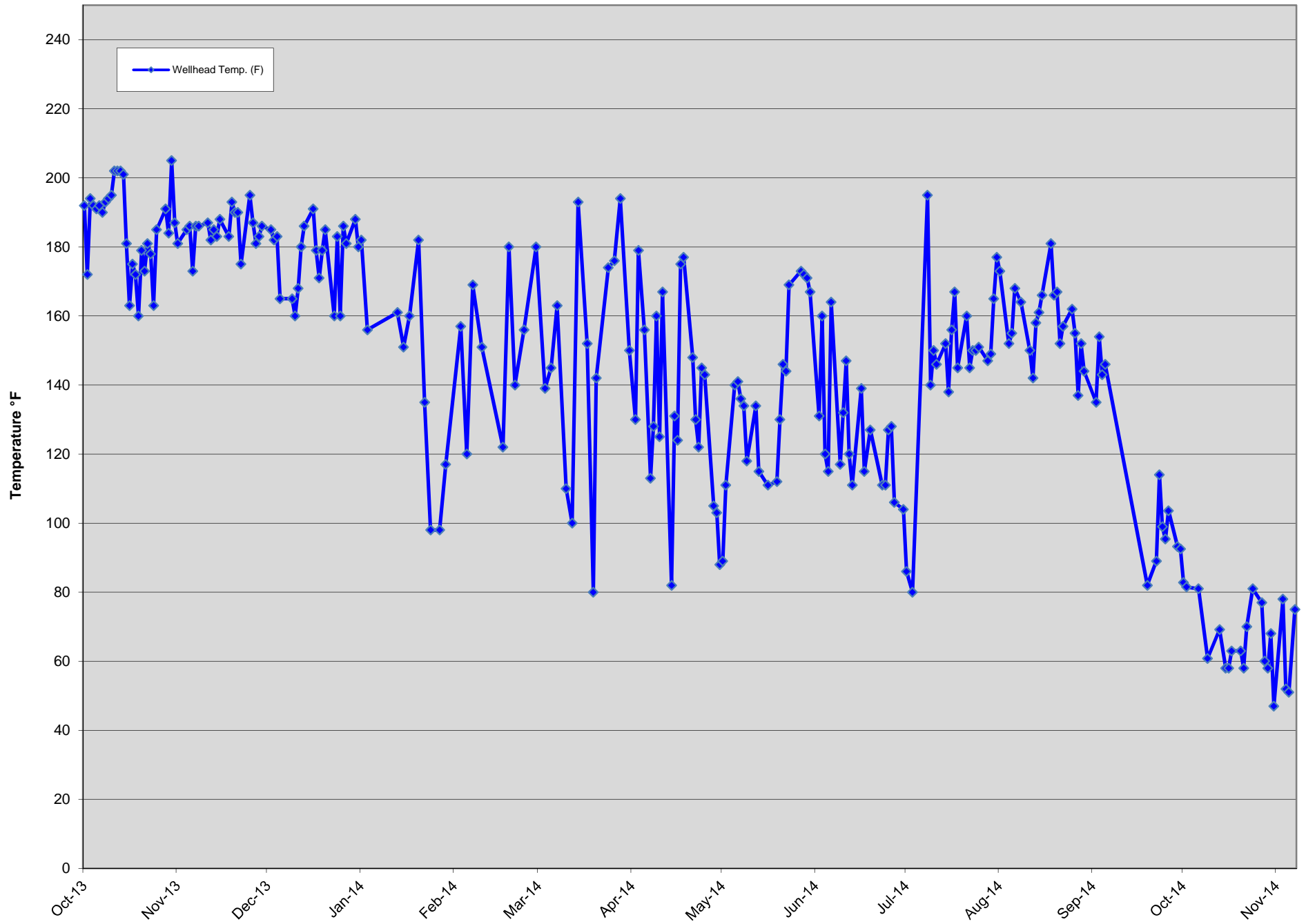
### GIW-3 Wellhead Temperatures



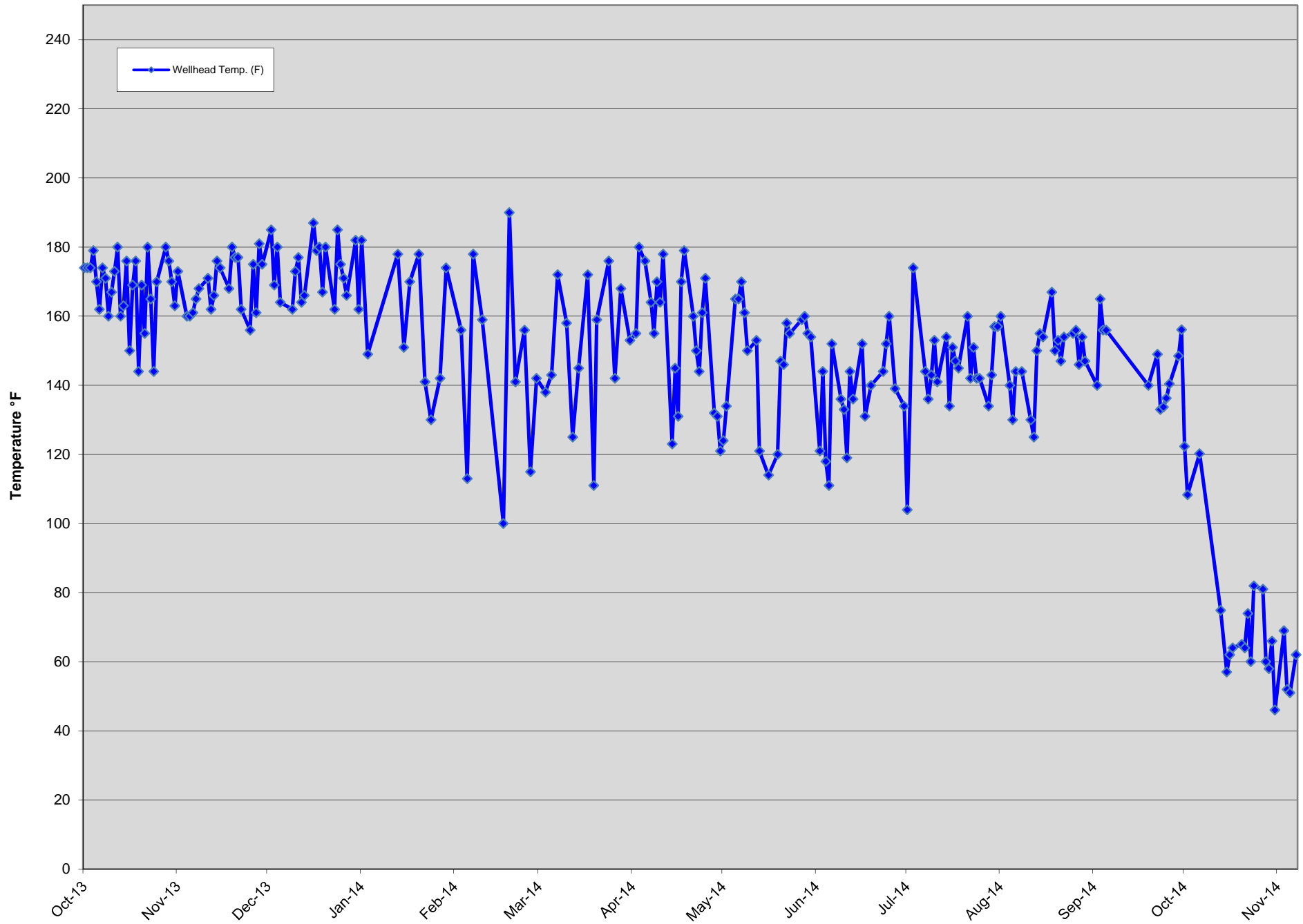
# GIW-4 Wellhead Temperatures



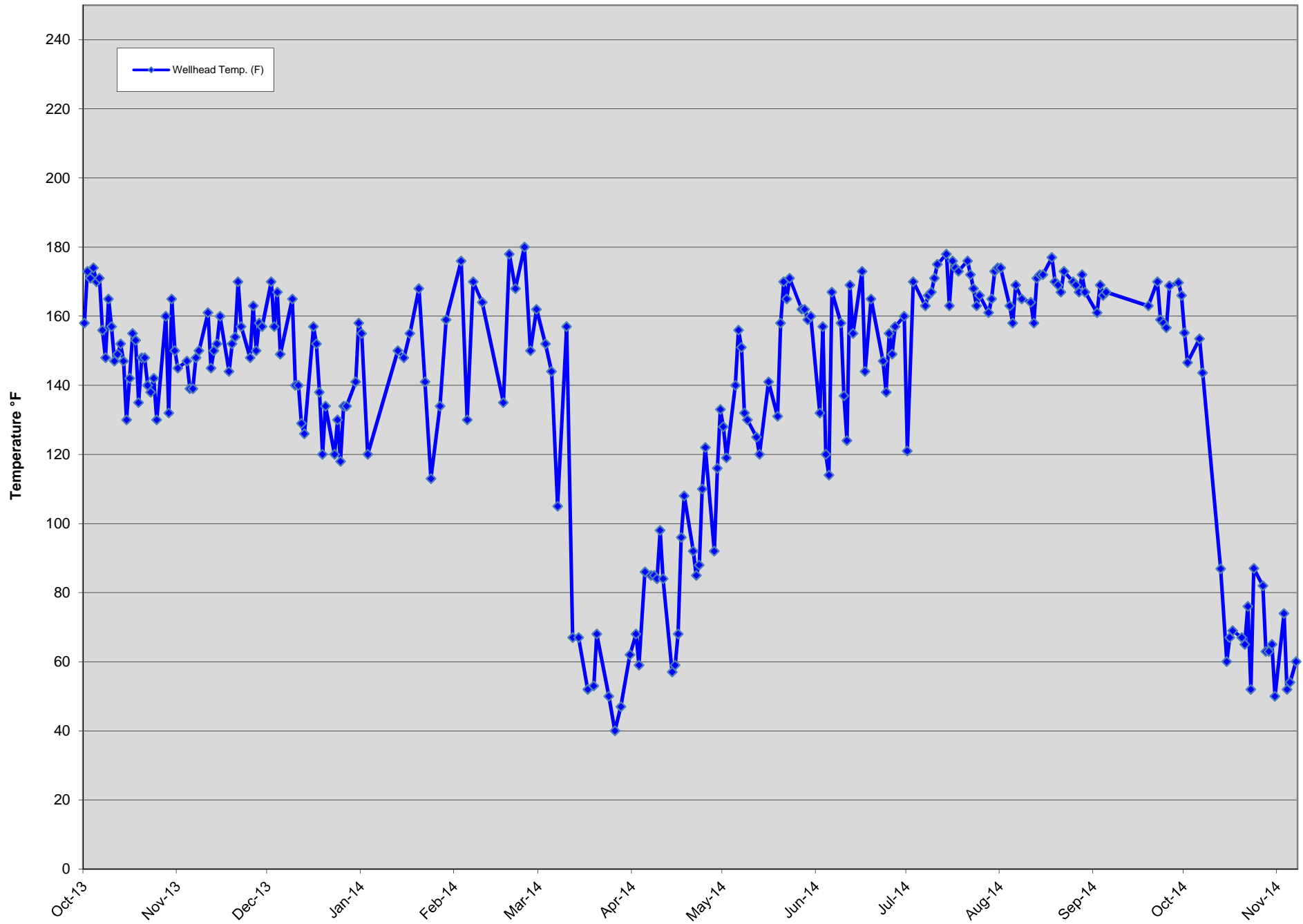
# GIW-5 Wellhead Temperatures



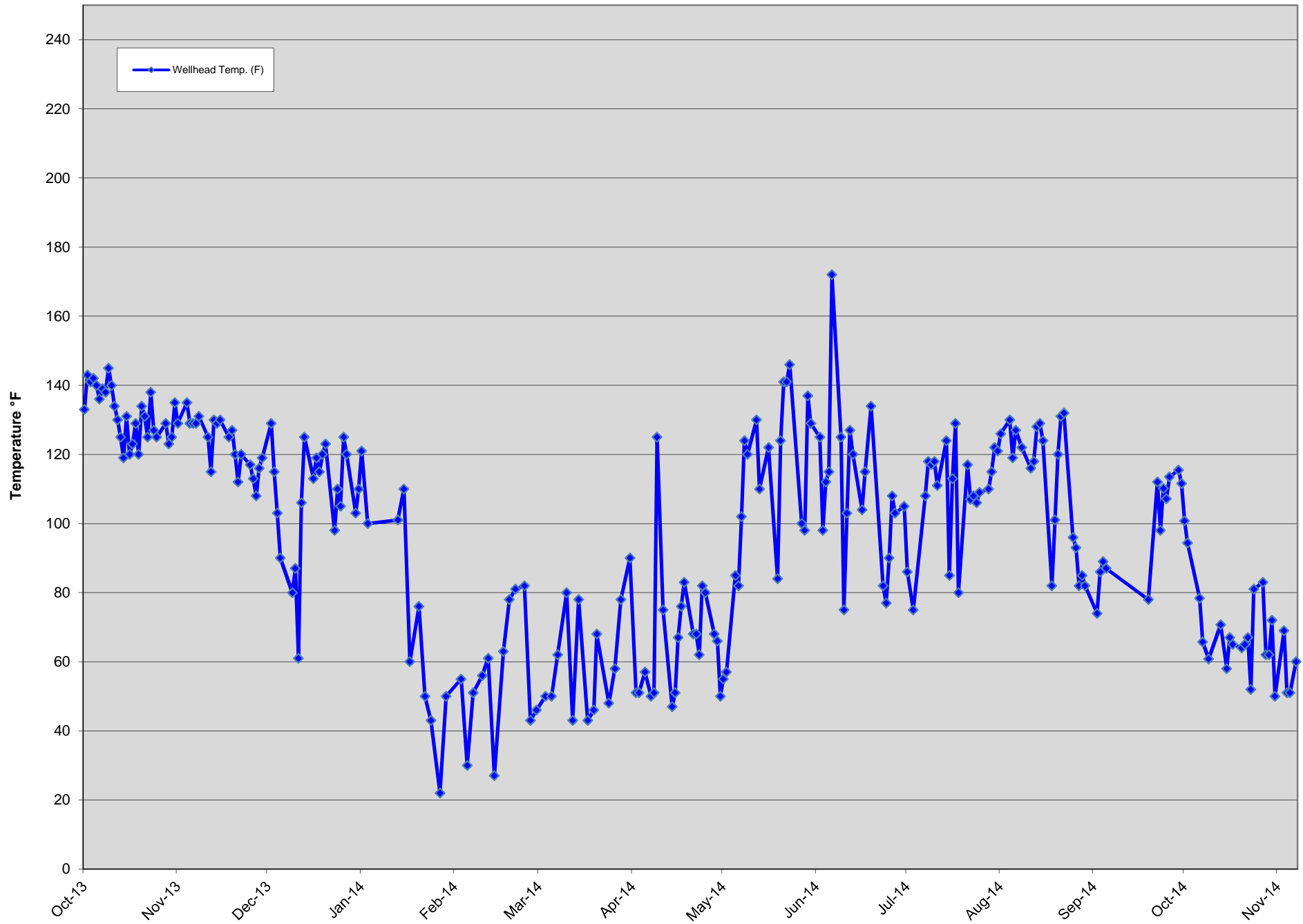
# GIW-6 Wellhead Temperatures



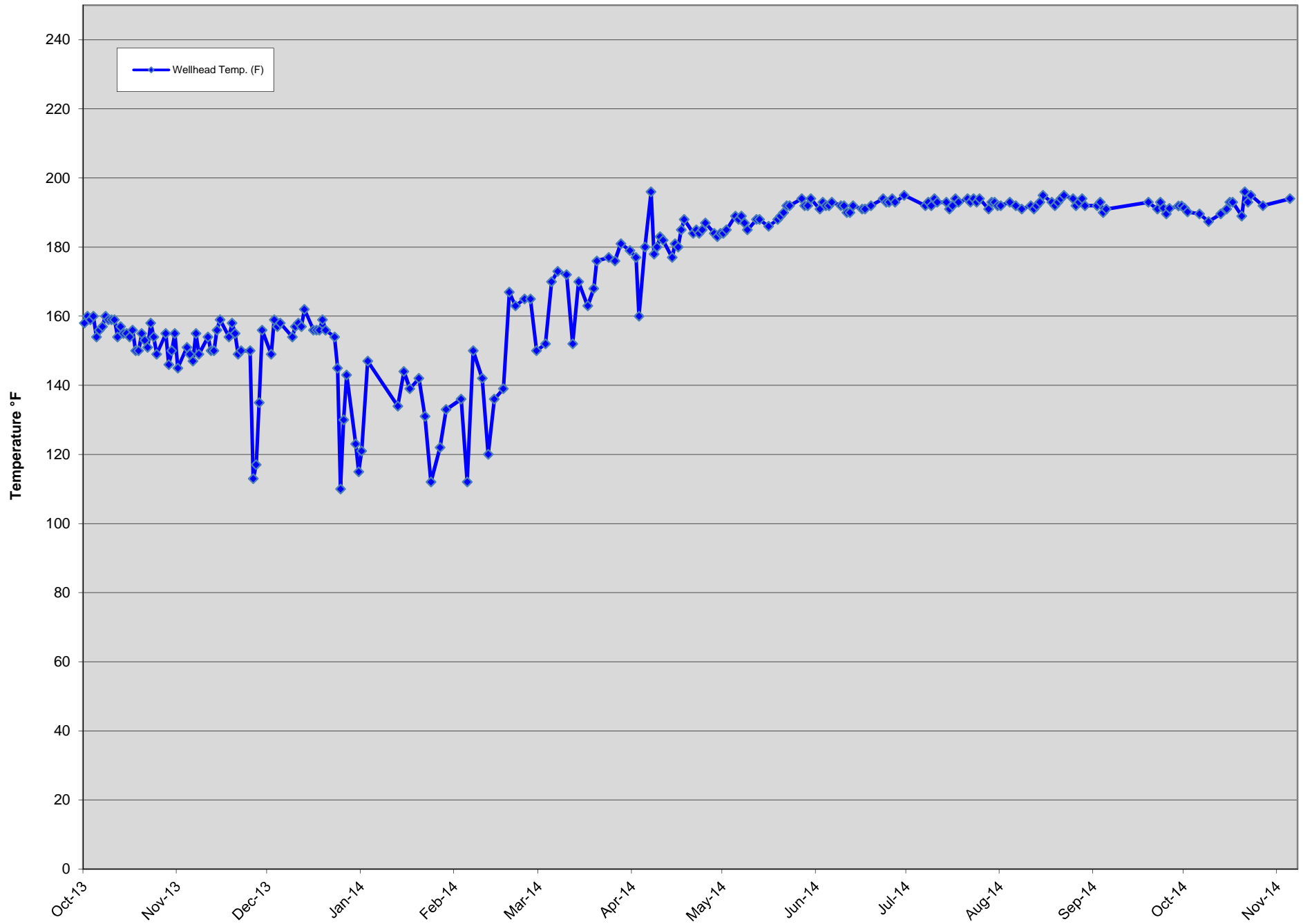
# GIW-7 Wellhead Temperatures



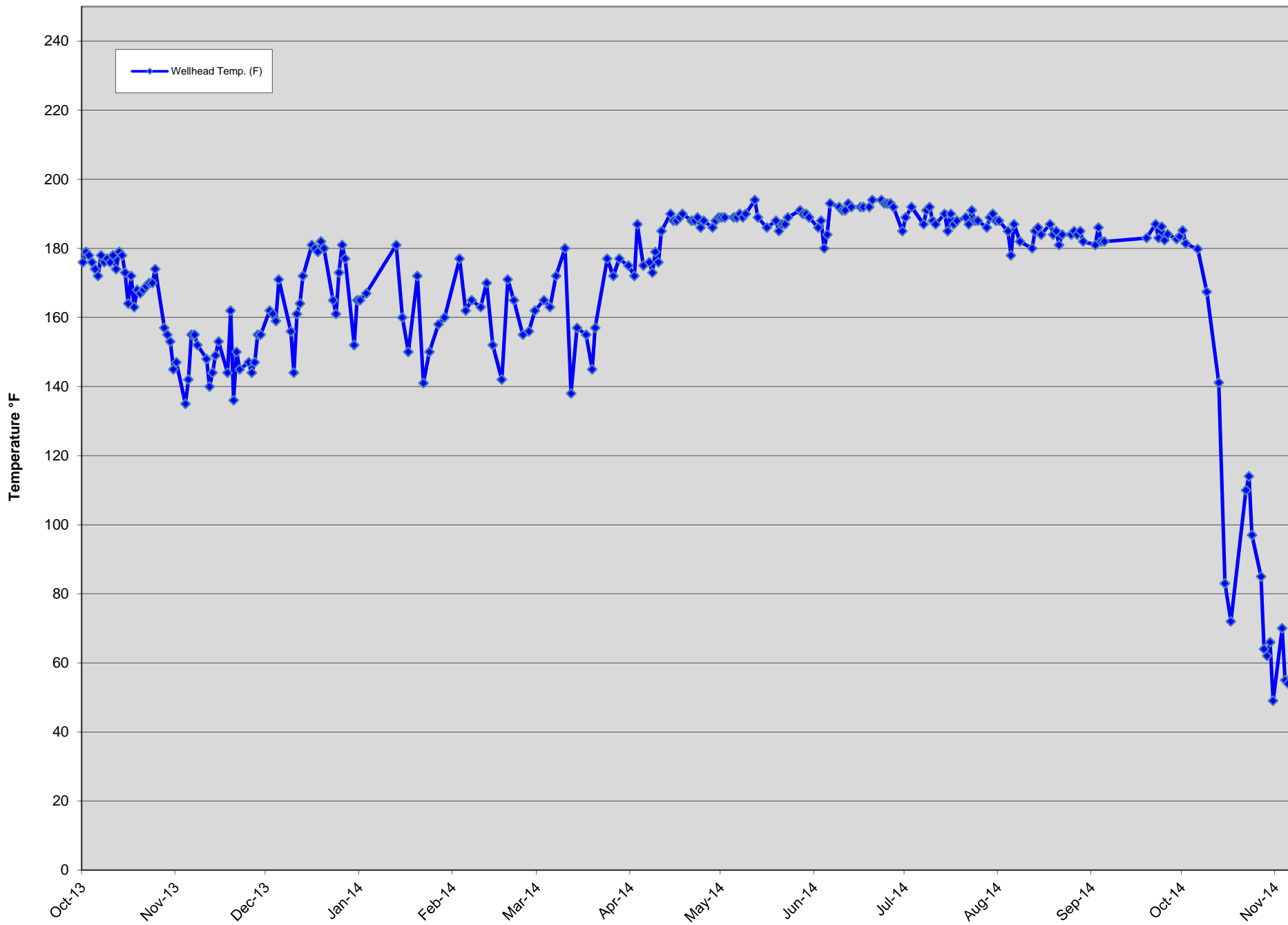
# GIW-8 Wellhead Temperatures



# GIW-9 Wellhead Temperatures

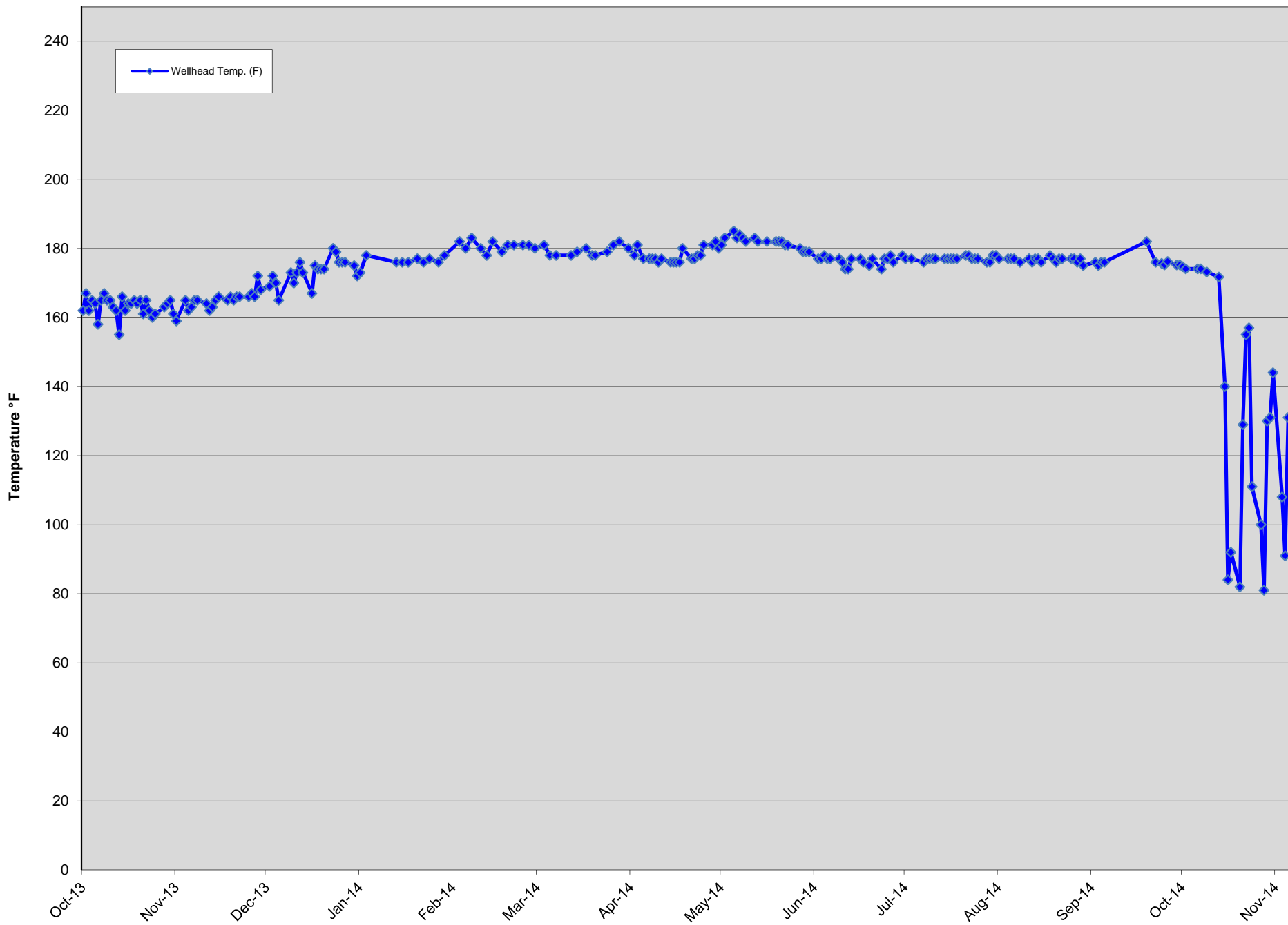


# GIW-10 Wellhead Temperatures

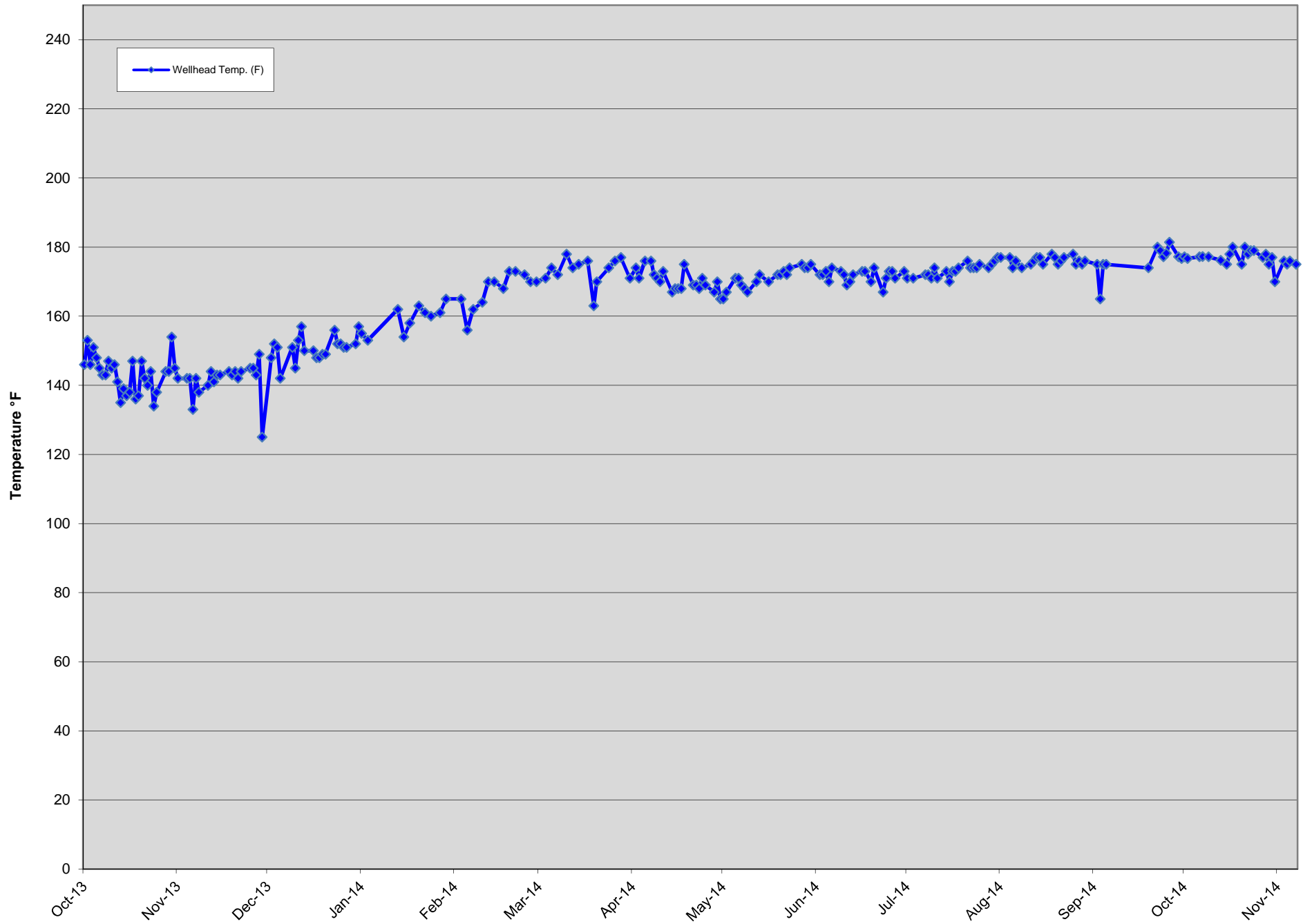




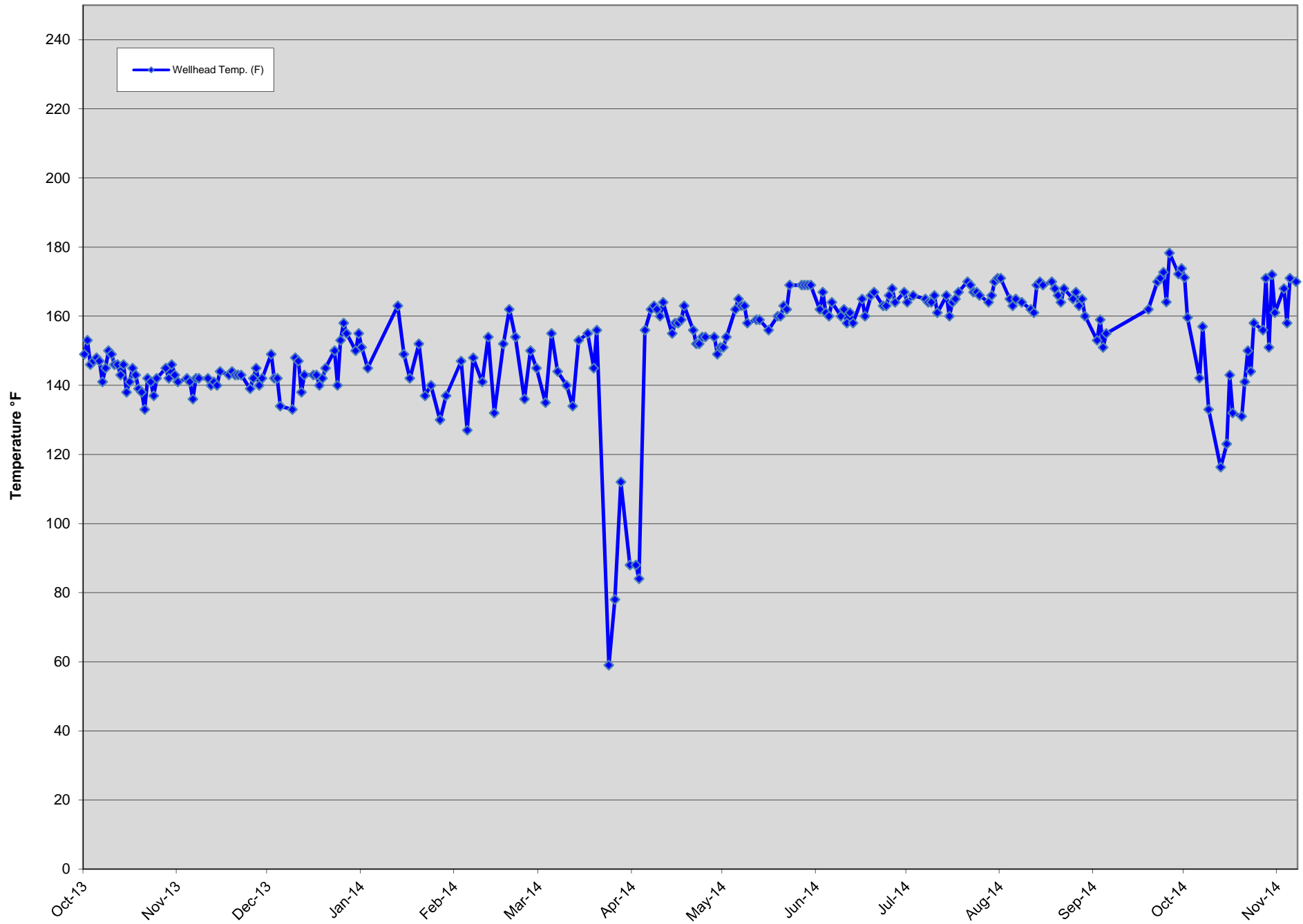
# GIW-11 Wellhead Temperatures



# GIW-12 Wellhead Temperatures



# GIW-13 Wellhead Temperatures



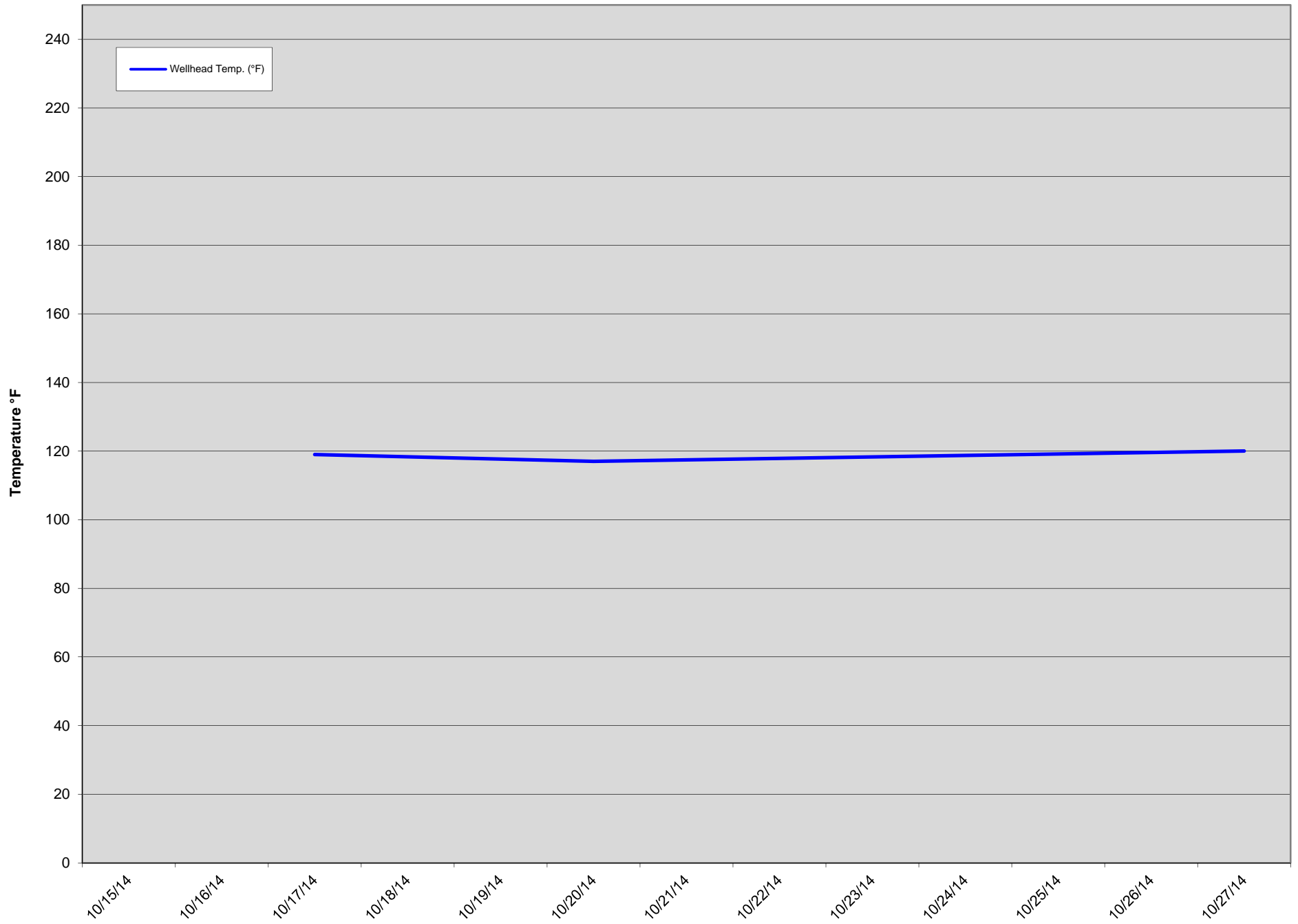
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**ATTACHMENT D**

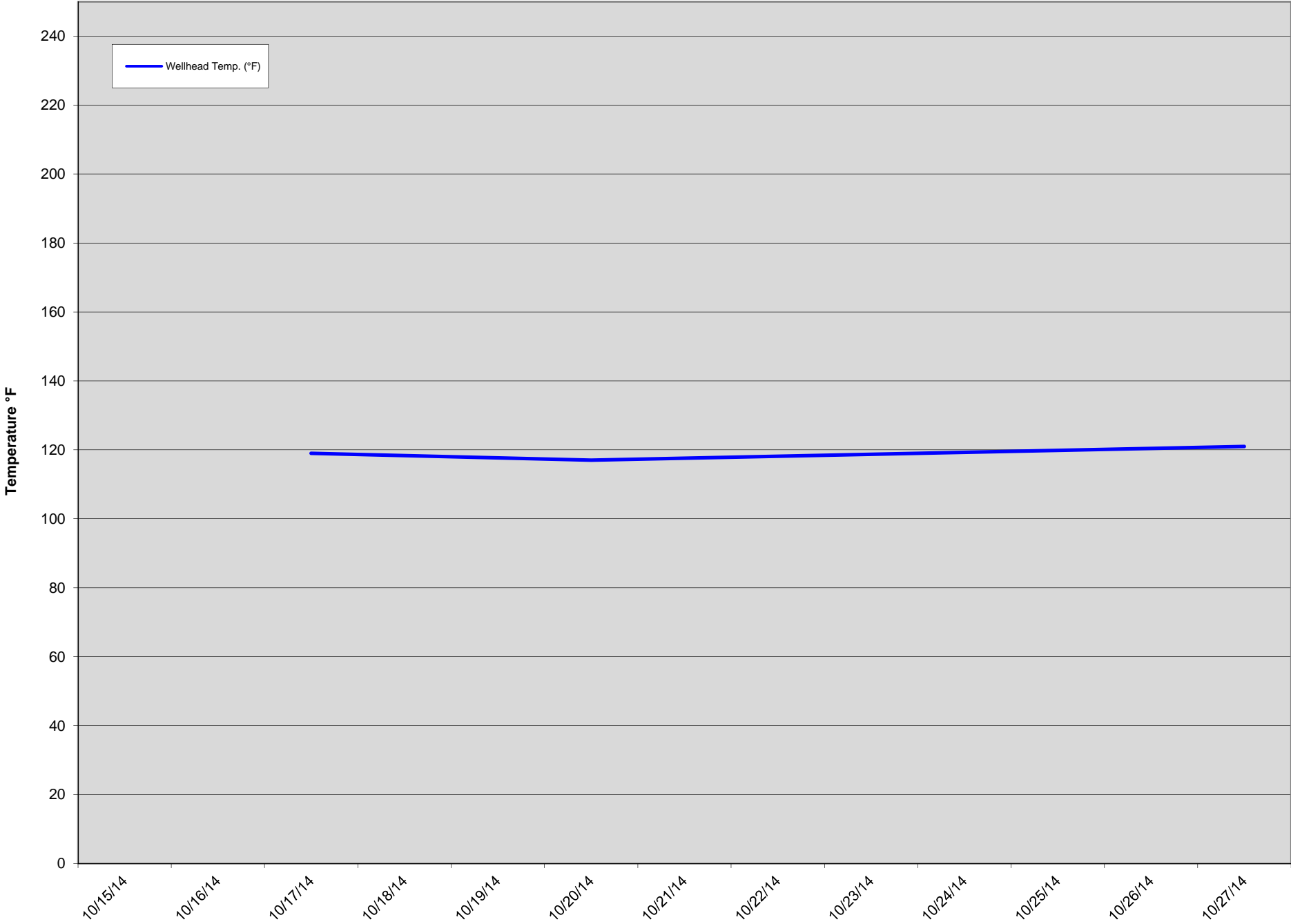
**NECK-AREA GAS EXTRACTION WELL DATA**

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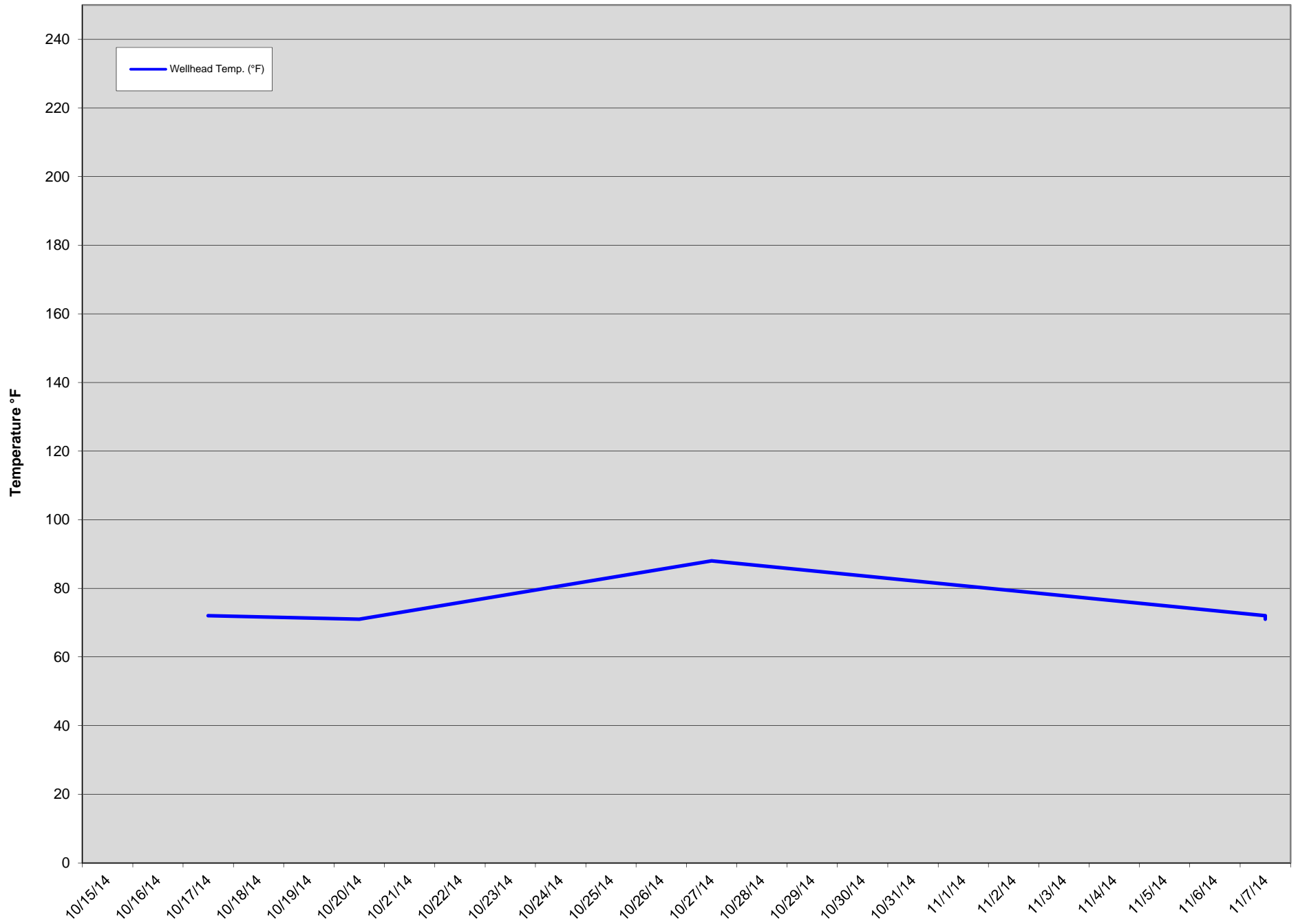
# GEW-08 Wellhead Temperatures



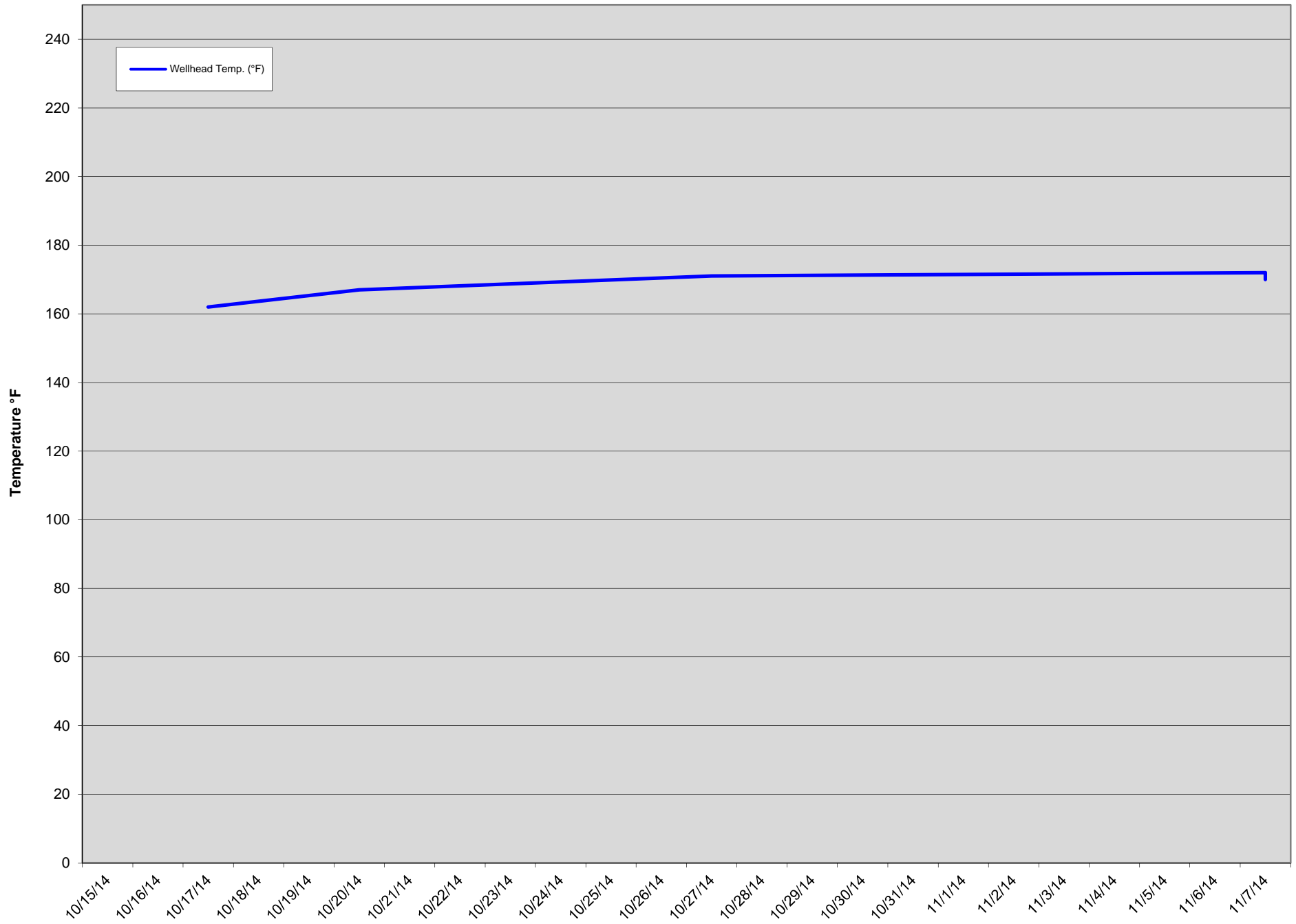
# GEW-09 Wellhead Temperatures



# GEW-10 Wellhead Temperatures

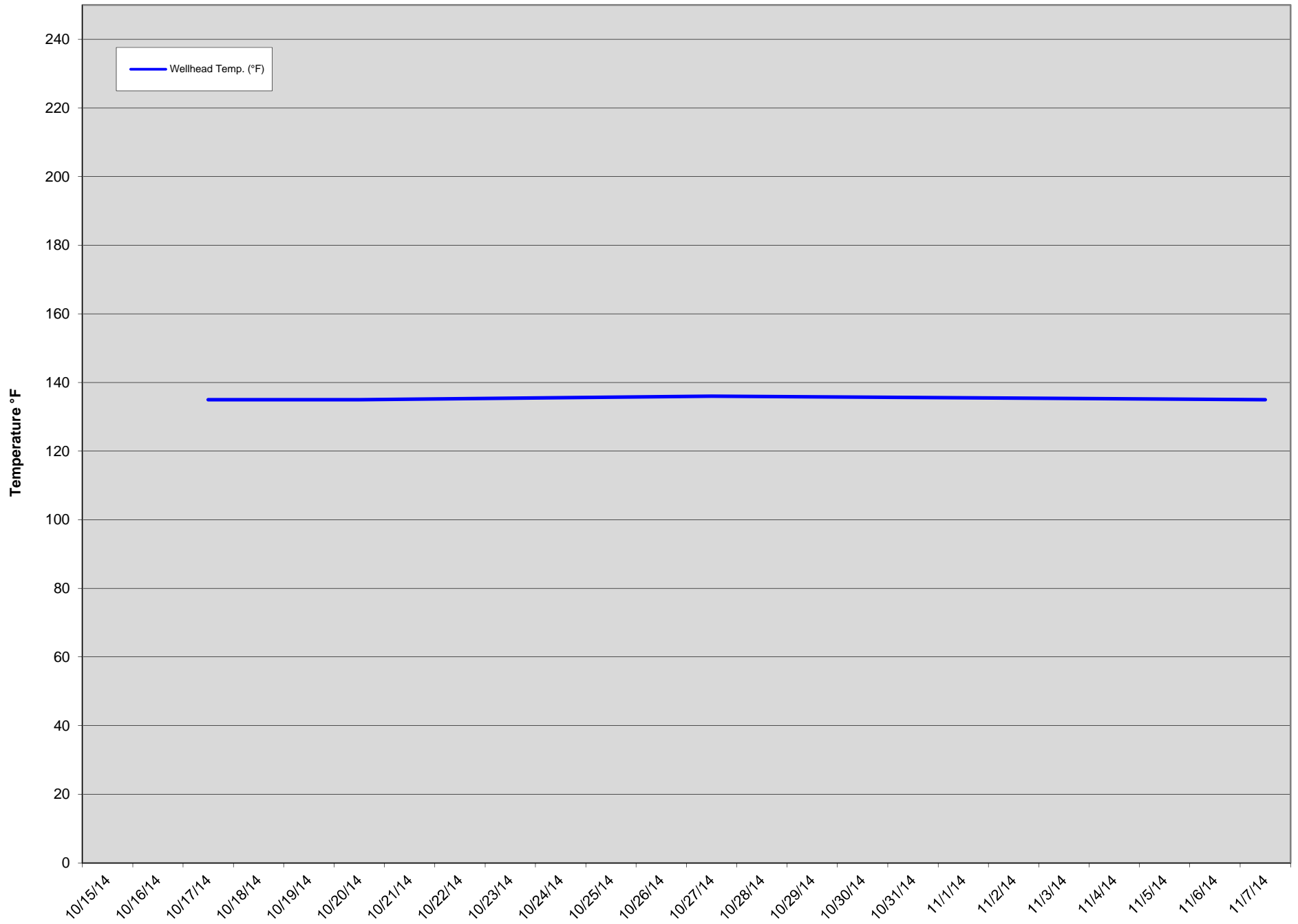


# GEW-38 Wellhead Temperatures

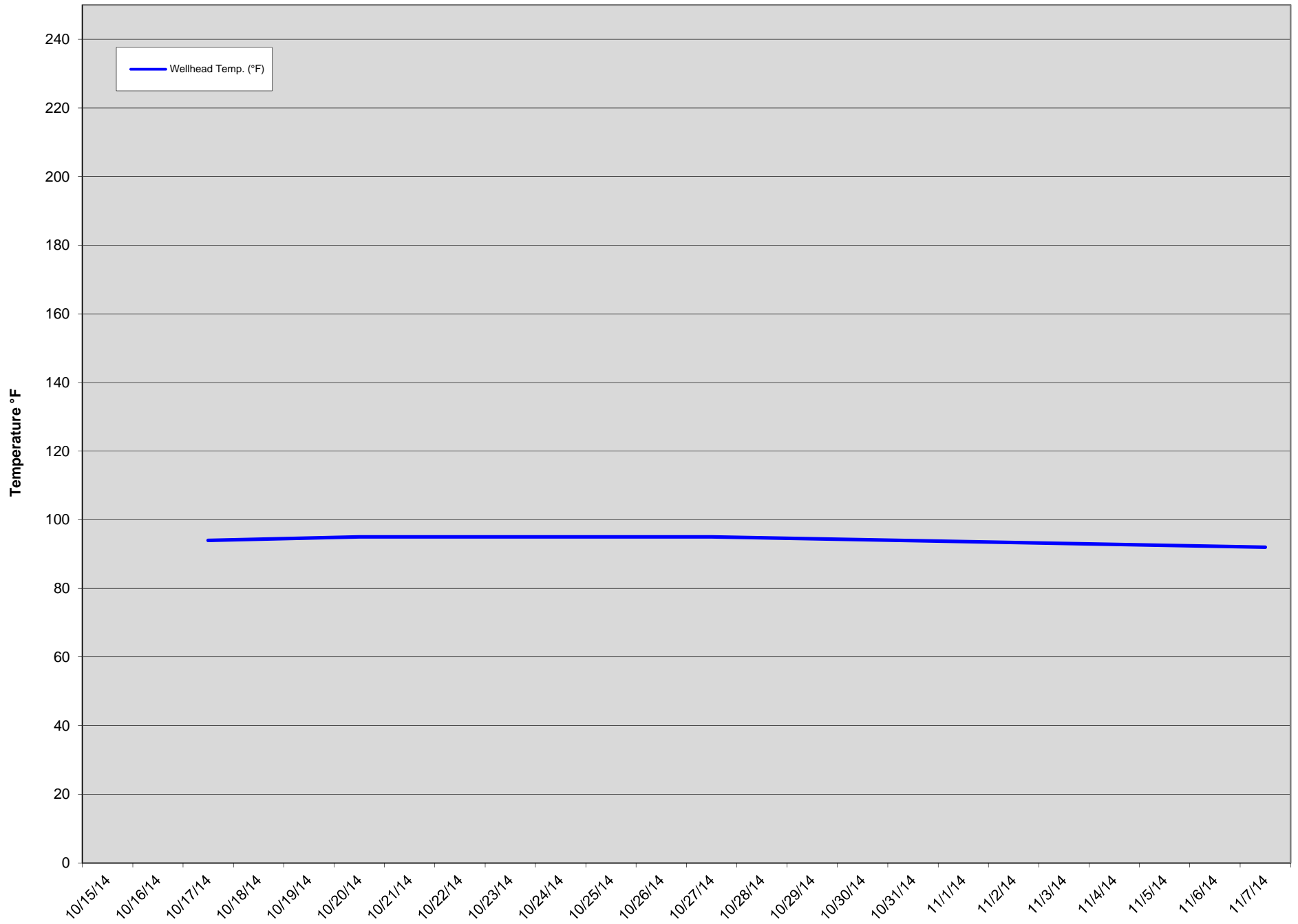




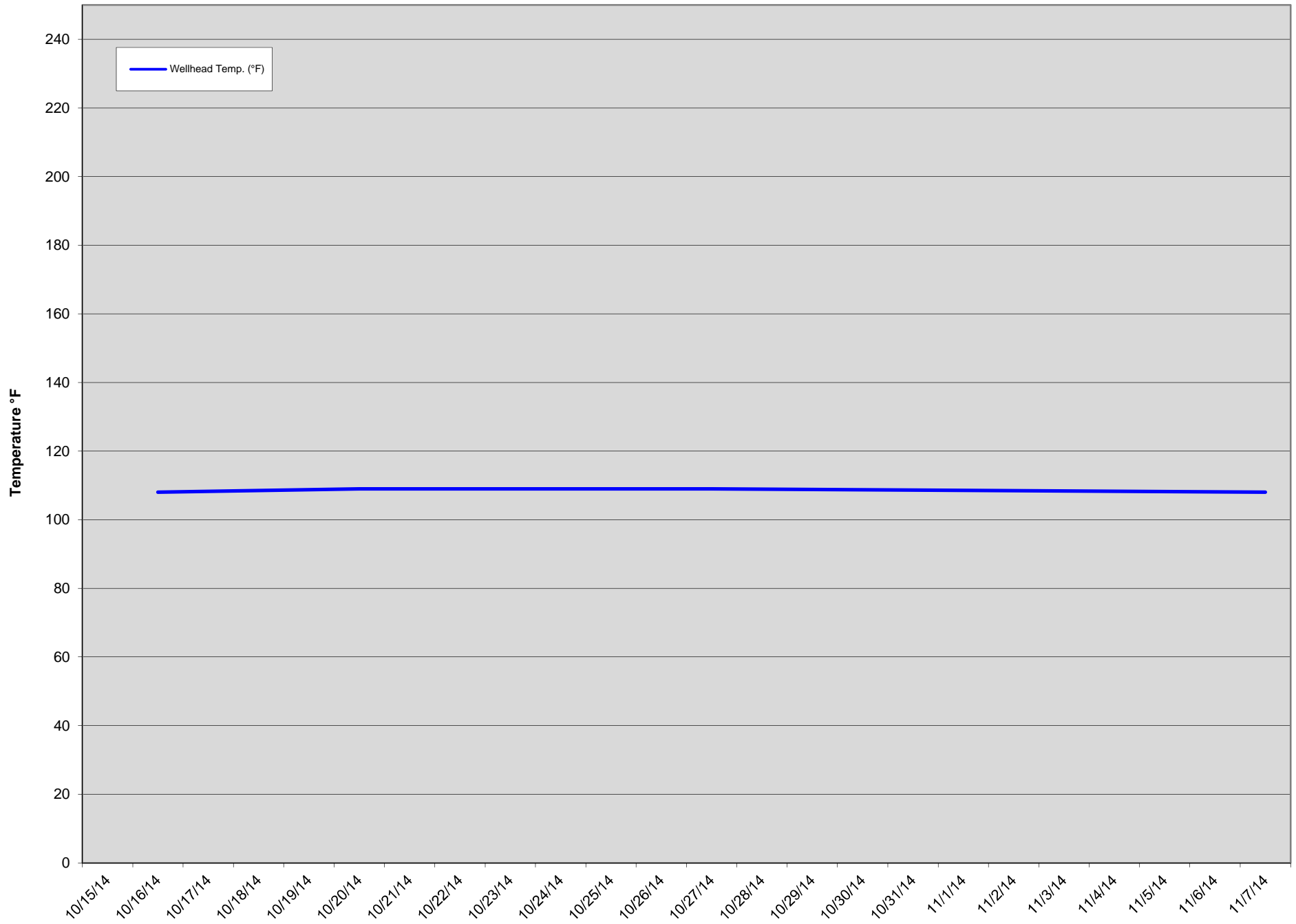
# GEW-39 Wellhead Temperatures



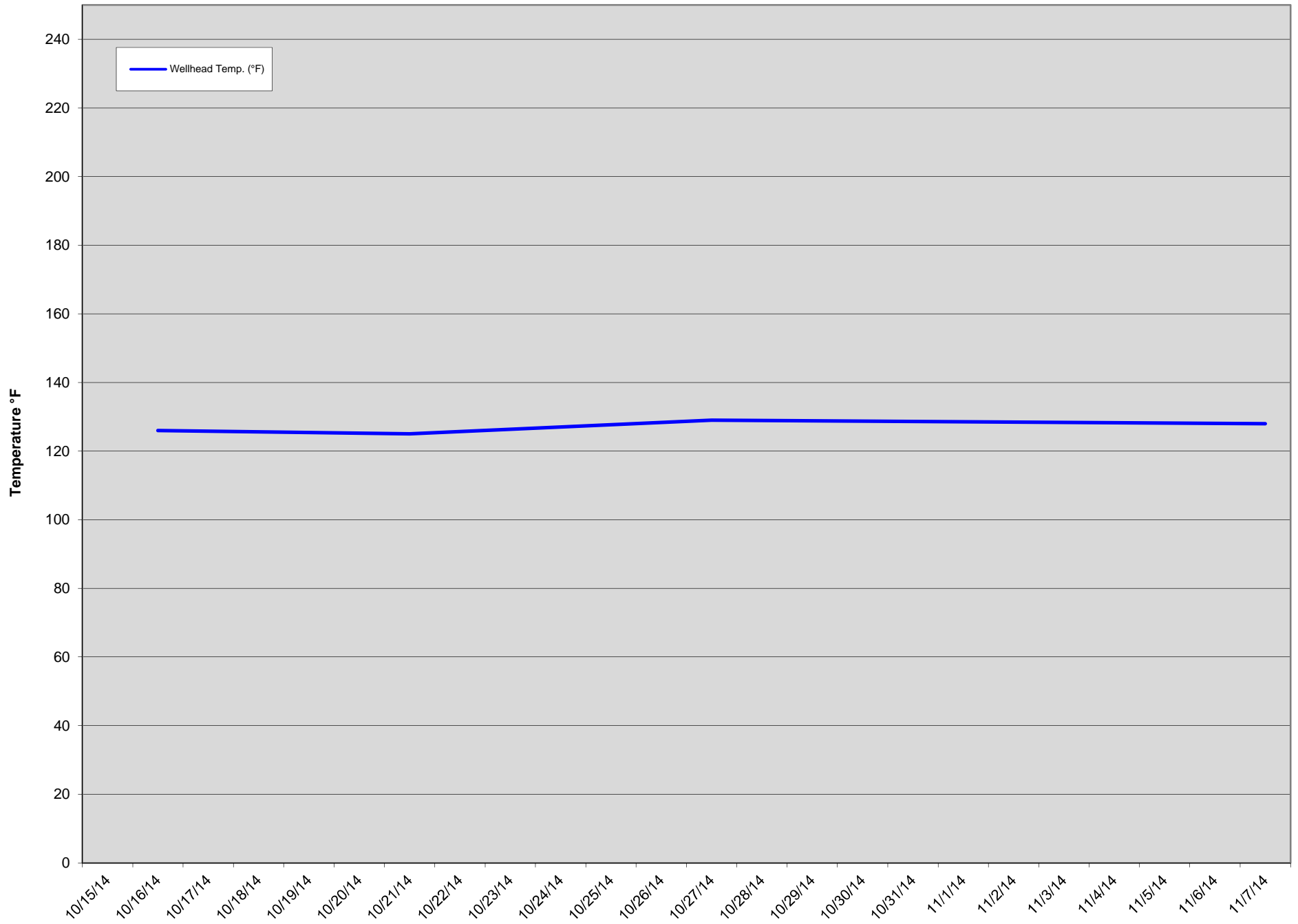
# GEW-40 Wellhead Temperatures



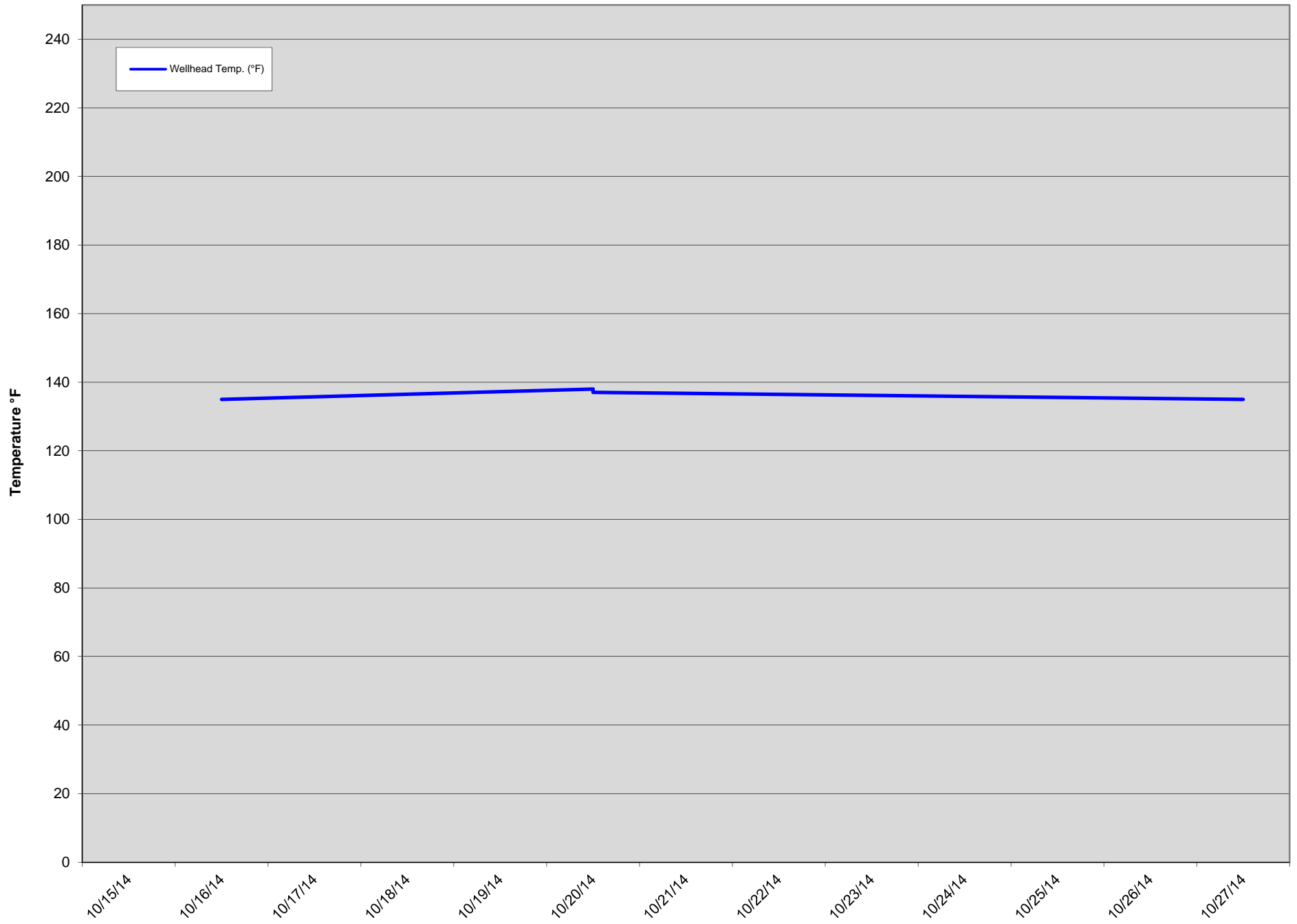
# GEW-41R Wellhead Temperatures



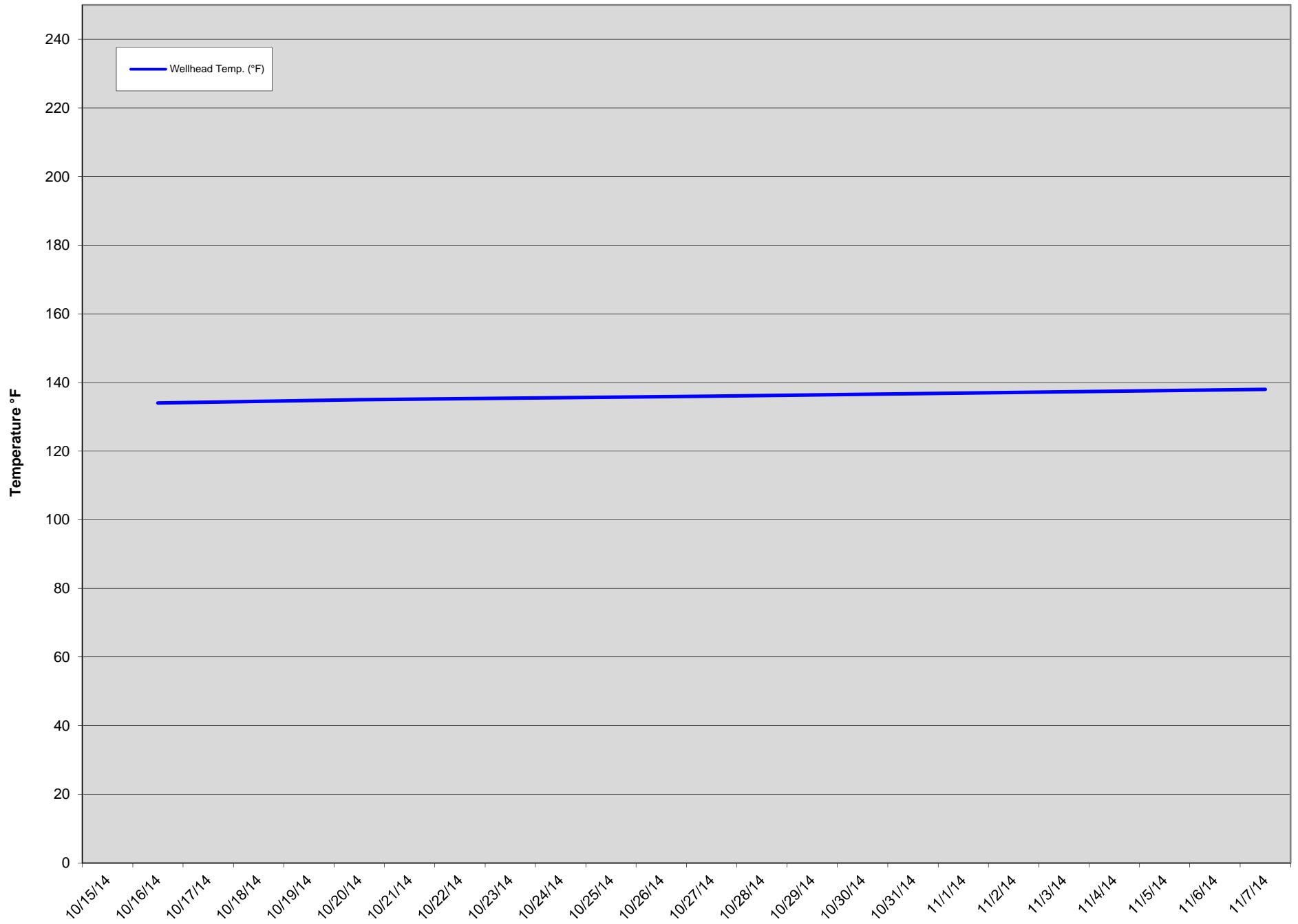
# GEW-43R Wellhead Temperatures



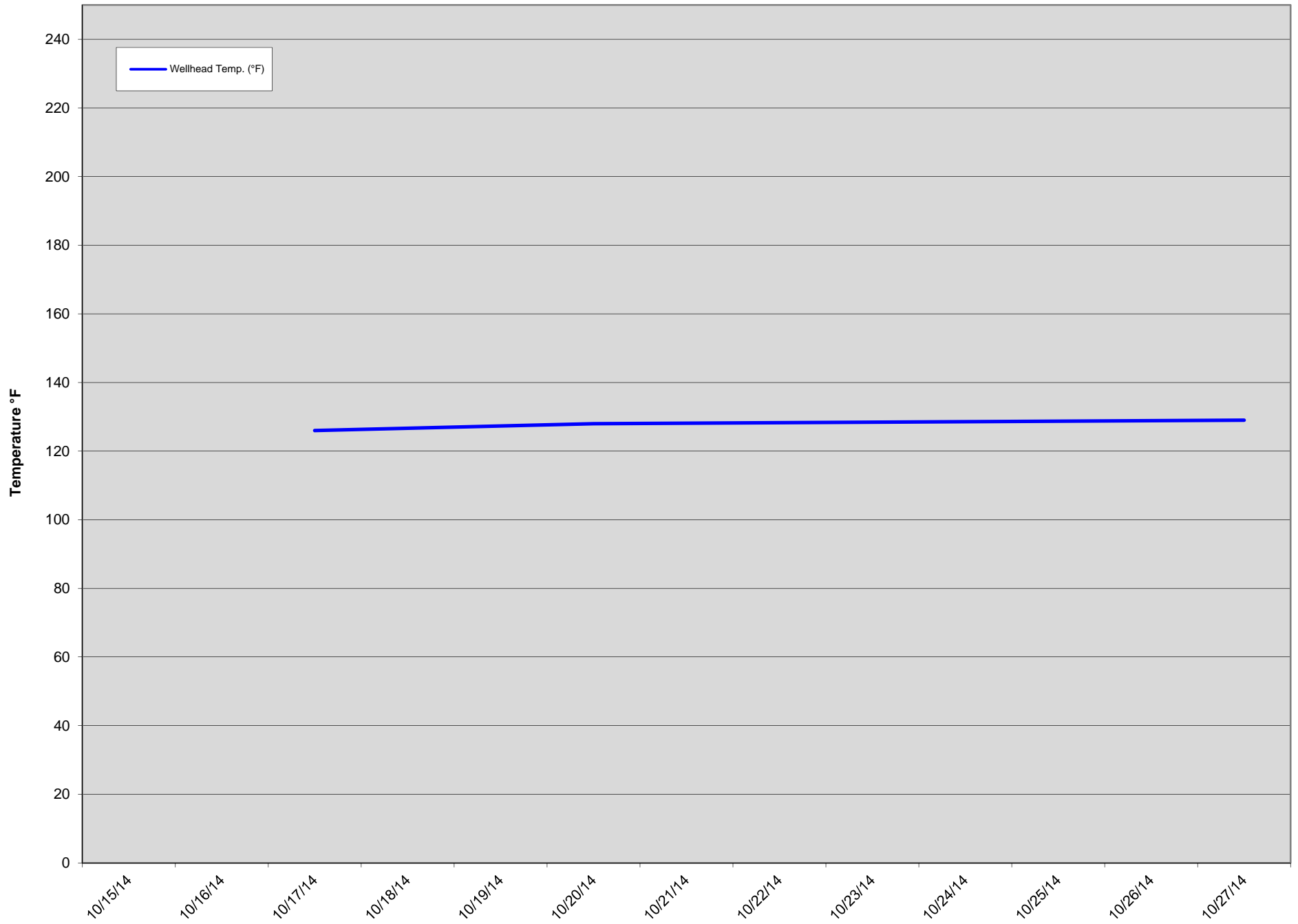
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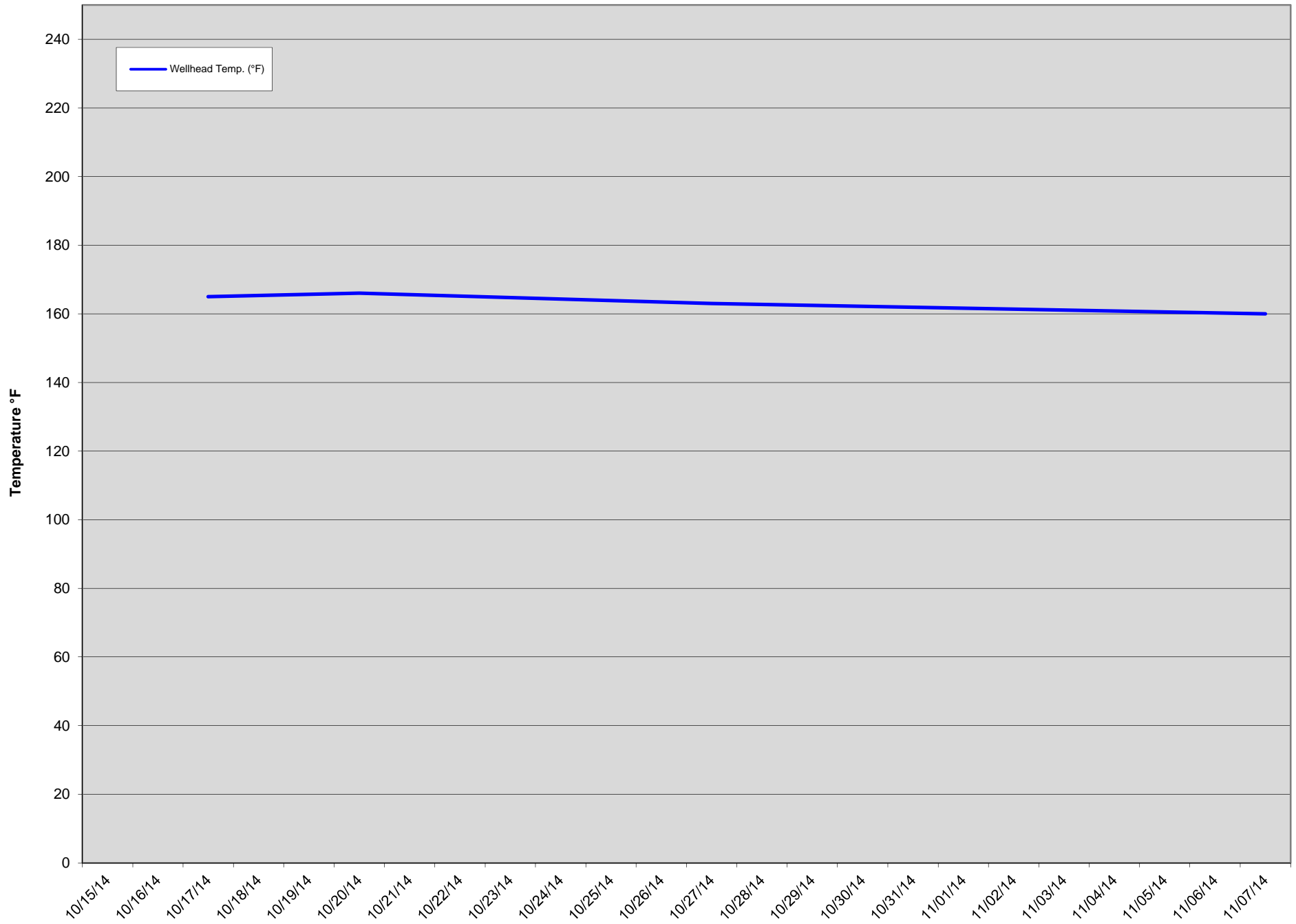
# GEW-54 Wellhead Temperatures



# GEW-55 Wellhead Temperatures

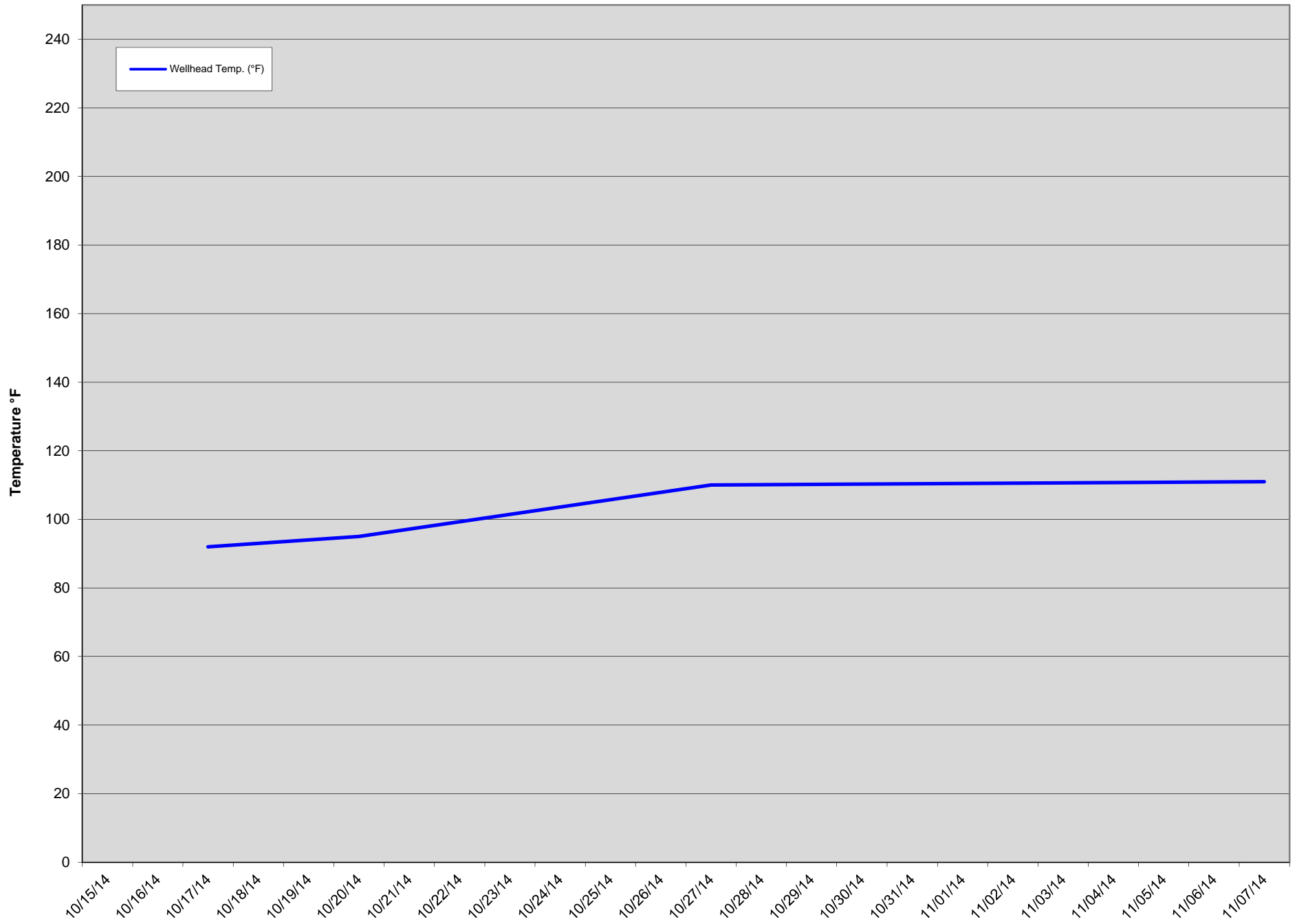


# GEW-56R Wellhead Temperatures





# GEW-109 Wellhead Temperatures



# GEW-110 Wellhead Temperatures

