Holden Mine Site

Performance Standards Verification 2020 Annual Compliance Assessment Report Addendum

Prepared for
Rio Tinto AUM Company

Prepared by Floyd|Snider

May 2021

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Seattle, Washington 98101 • tel: 206.292.2078

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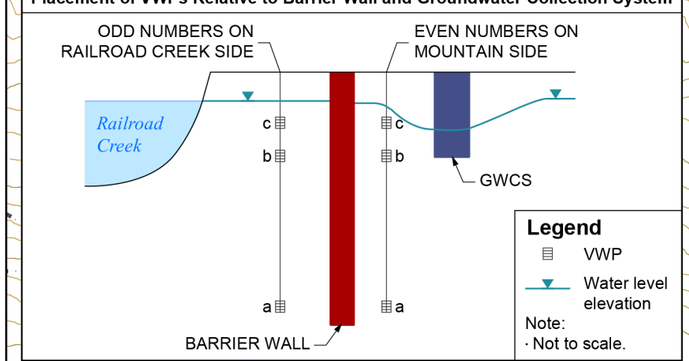
Figures

Legend

- Collection Sump
- Multiple Completion Vibrating Wire Piezometer
- Approximate Location of Subsurface Barrier Wall
- Groundwater Collection System Collection Pipe
- Cross Section Location
- 100-foot Elevation Index Contour

BW-VWP-61
BW-VWP-60
BW-VWP-63
BW-VWP-62
BW-VWP-64
BW-VWP-65
BW-VWP-67
BW-VWP-66
BW-VWP-69
BW-VWP-68
BW-VWP-71
BW-VWP-70
BW-VWP-72
BW-VWP-73
BW-VWP-74
BW-VWP-75
BW-VWP-76
BW-VWP-77
BW-VWP-78
BW-VWP-79
CS1
CS2
CS3
A
A'
B
B'
C
C'
D
D'
LOWER WEST AREA - WEST
LOWER WEST AREA - EAST
TP1-8D
HOLDEN VILLAGE
Railroad Creek
Forest Service Road 8301
TAILINGS PILE 1
TAILINGS PILE 2
TAILINGS PILE 3
WEST WASTE ROCK PILE
EAST WASTE ROCK PILE
Copper Creek
Holden Village Bypass Road
3600
3500
3400
3300
3200

Placement of VWPs Relative to Barrier Wall and Groundwater Collection System



Legend
- VWP
- Water level elevation

Note:
· Not to scale.

Notes:
· Even-numbered VWPs are located between the barrier wall and the GWCS collection pipe. Odd-numbered VWPs are located between the barrier wall and Railroad Creek, except BW-VWP-75, which is located between the wing section of the barrier wall and Copper Creek.
· Elevation contours provided by Stantec. Contours are shown in feet above mean sea level, Holden Mine Datum.

Abbreviations:
CS = Collection Sump
GWCS = Groundwater Collection System
VWP = Vibrating wire piezometer

N

0 175 350 700
Scale in Feet

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Figure 1
Vibrating Wire Piezometers

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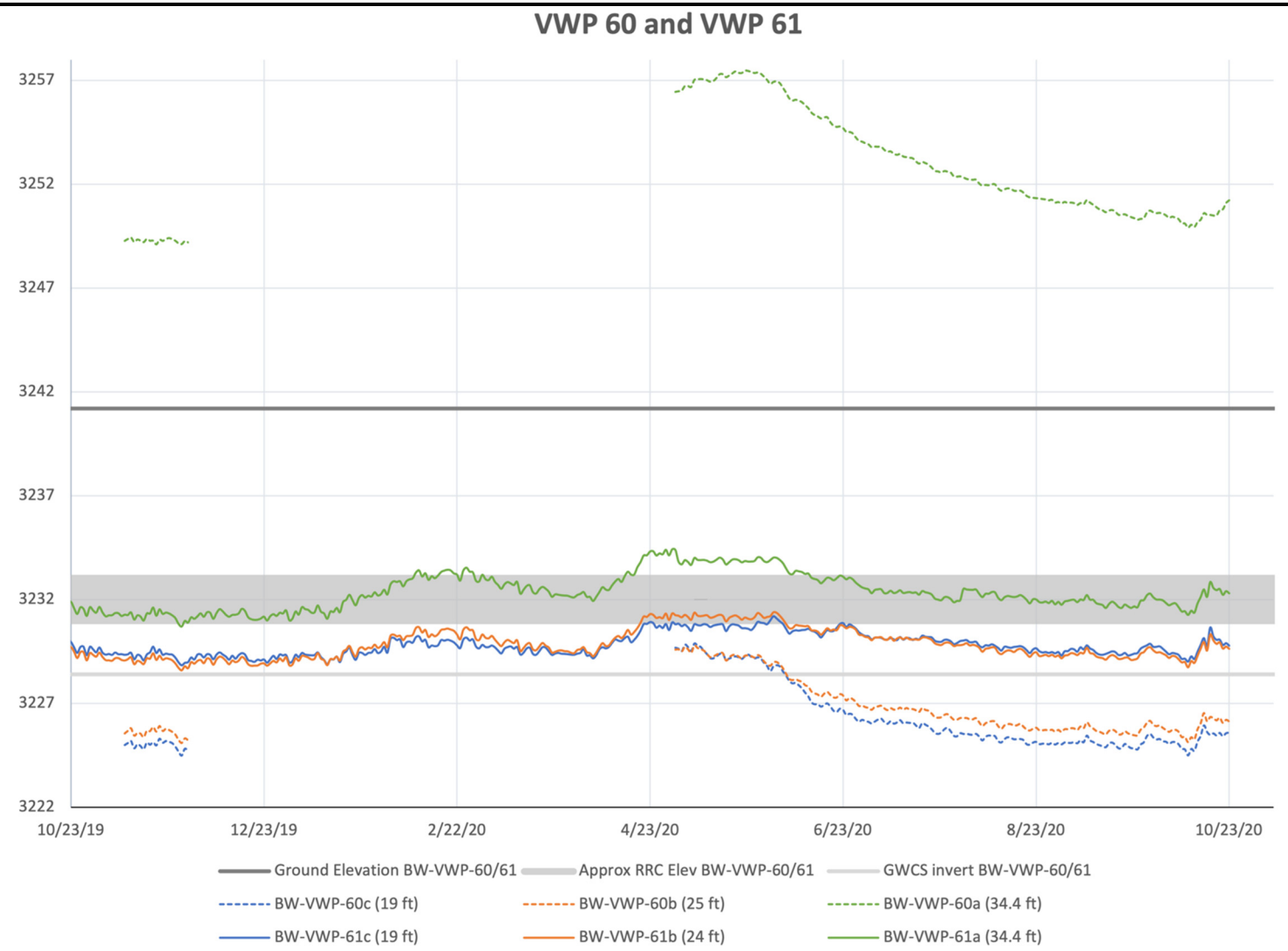

Notes:
- Approximate Railroad Creek (RRC) stage elevation range is based on typical bank elevation adjusted using stage fluctuation at STW-1.
- Cross-barrier head differences can be interpreted from this plot by comparing the dashed lines (VWP inside barrier wall, even-numbered) to the solid lines (VWP outside barrier wall, odd numbered) of the same color.

Abbreviations: ft = Feet, GWCS = Groundwater Collection System, VWP = Vibrating wire piezometer

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Figure 2
Hydrograph of BW-VWP-60 and BW-VWP-61
(October 2019–October 2020)

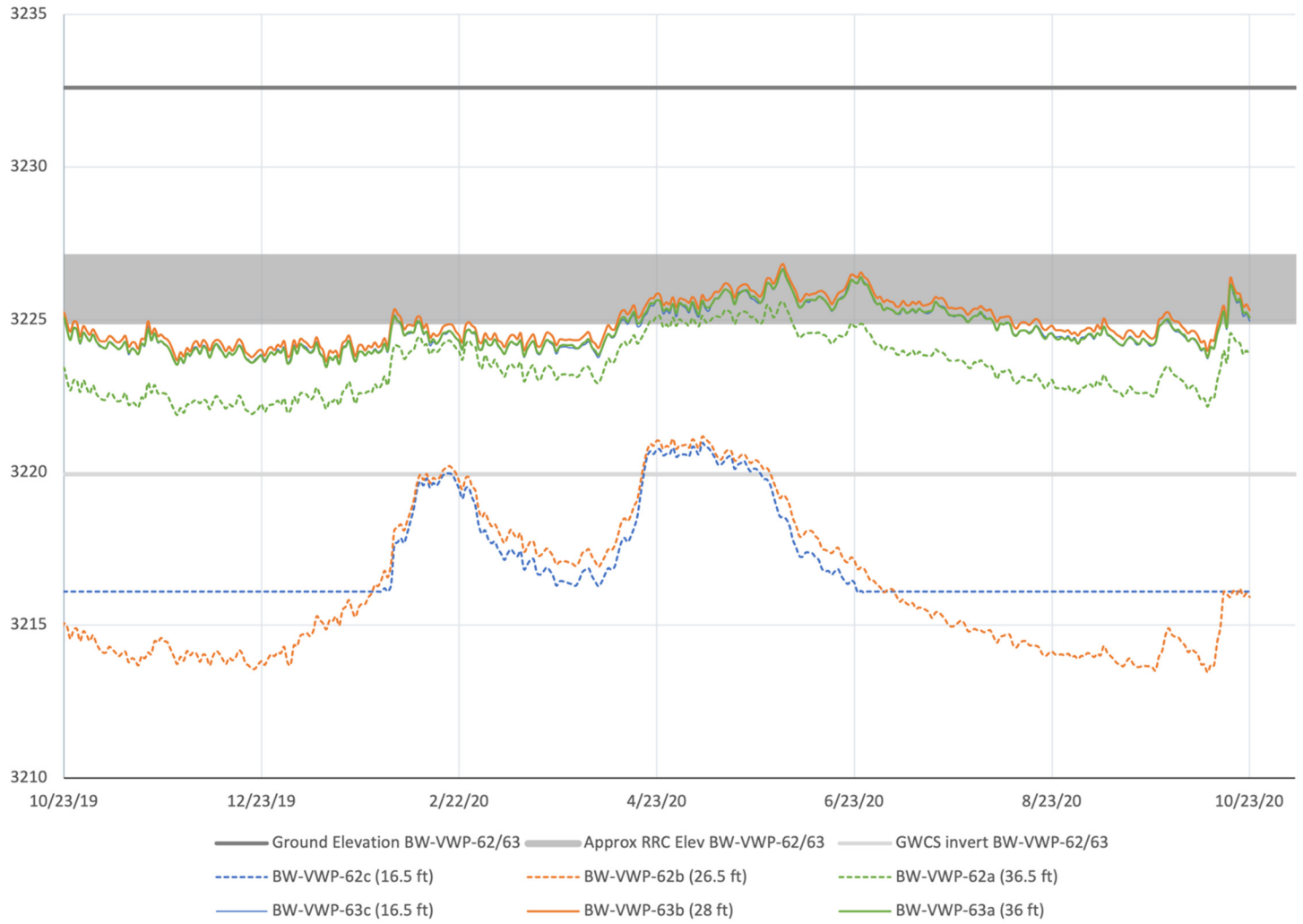

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Figure 3
Hydrograph of BW-VWP-62 and BW-VWP-63
(October 2019–October 2020)

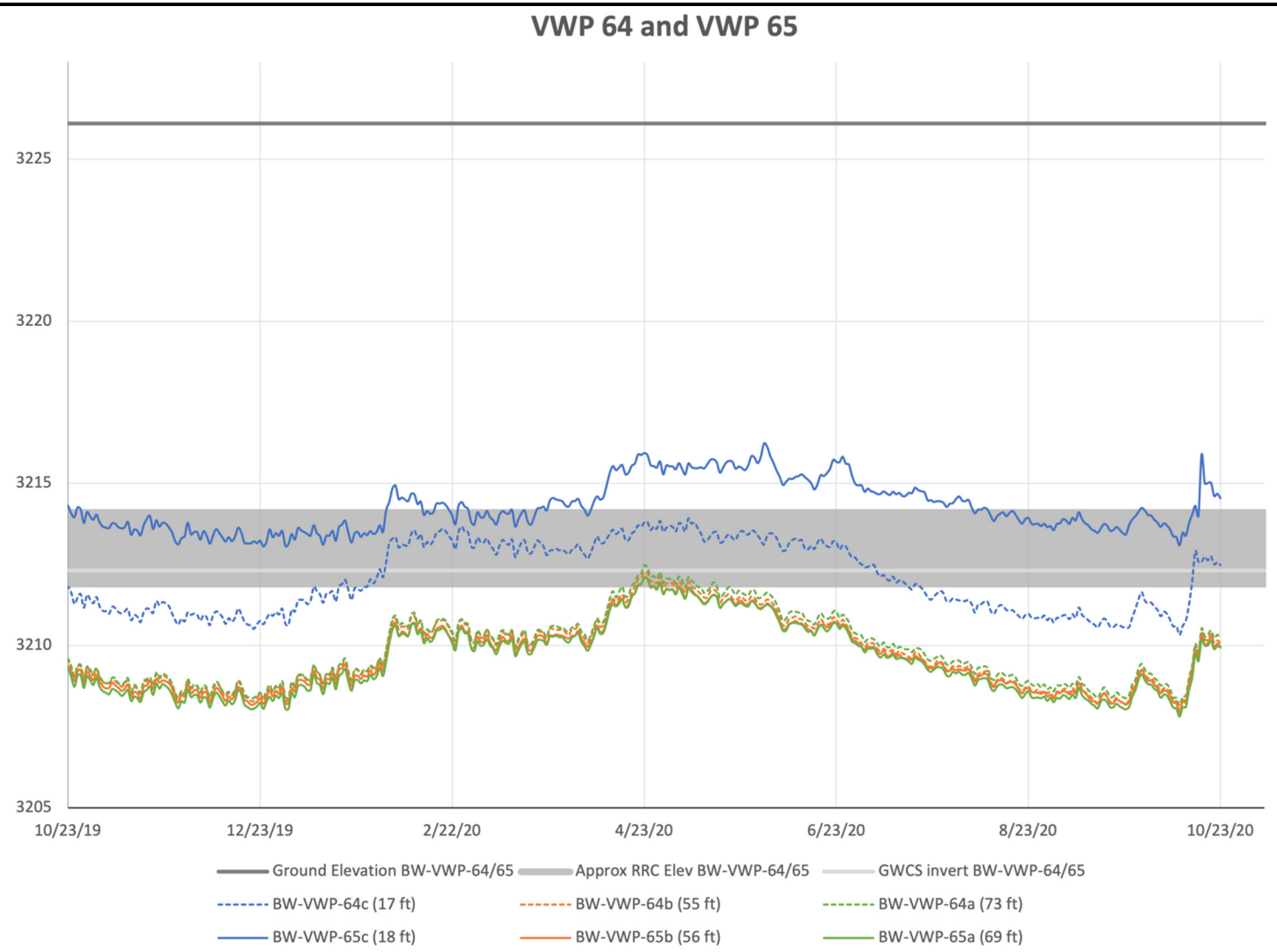

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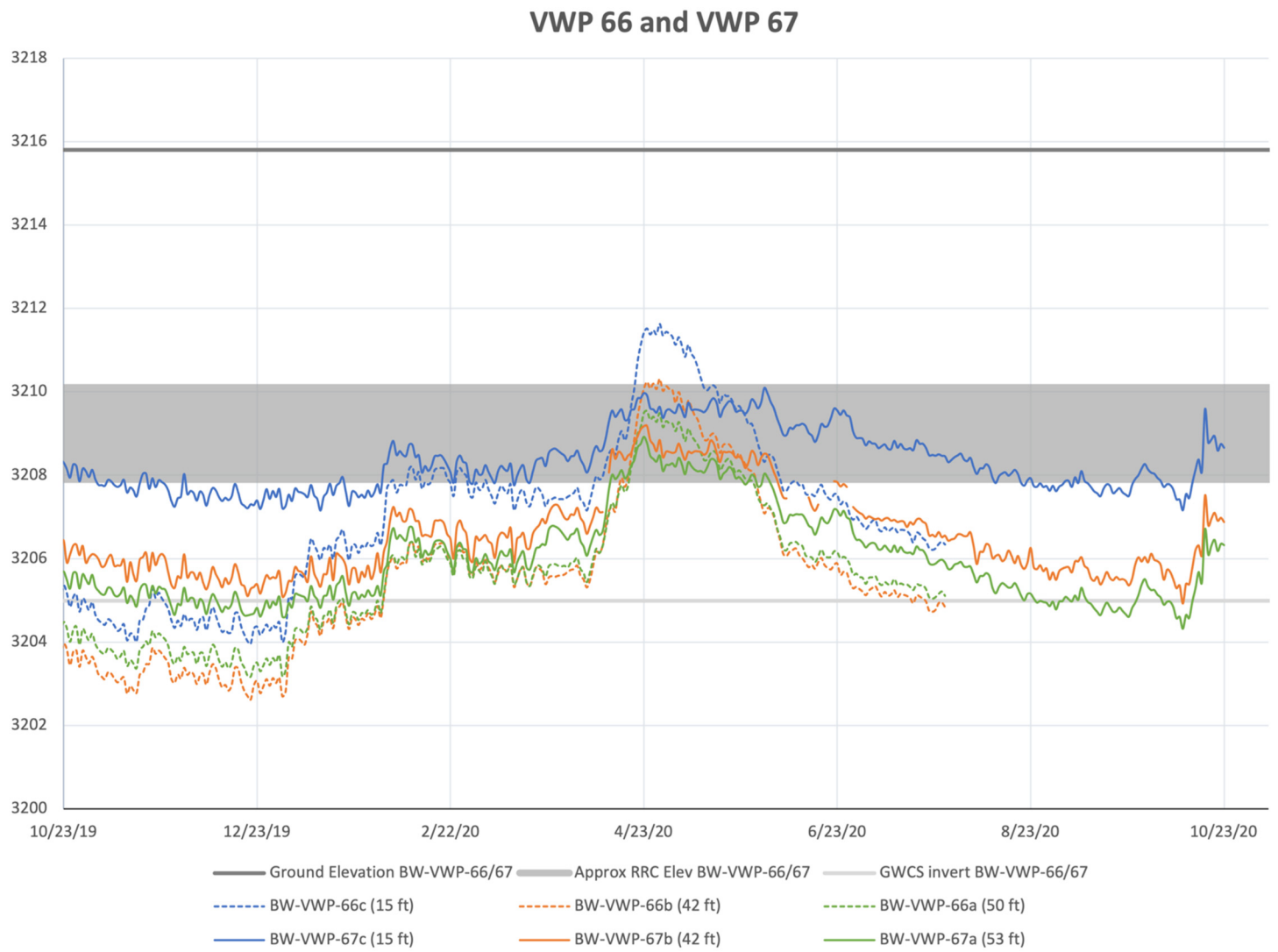
Figure 4
Hydrograph of BW-VWP-64 and BW-VWP-65
(October 2019–October 2020)



Notes:
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Figure 5
Hydrograph of BW-VWP-66 and BW-VWP-67
(October 2019–October 2020)

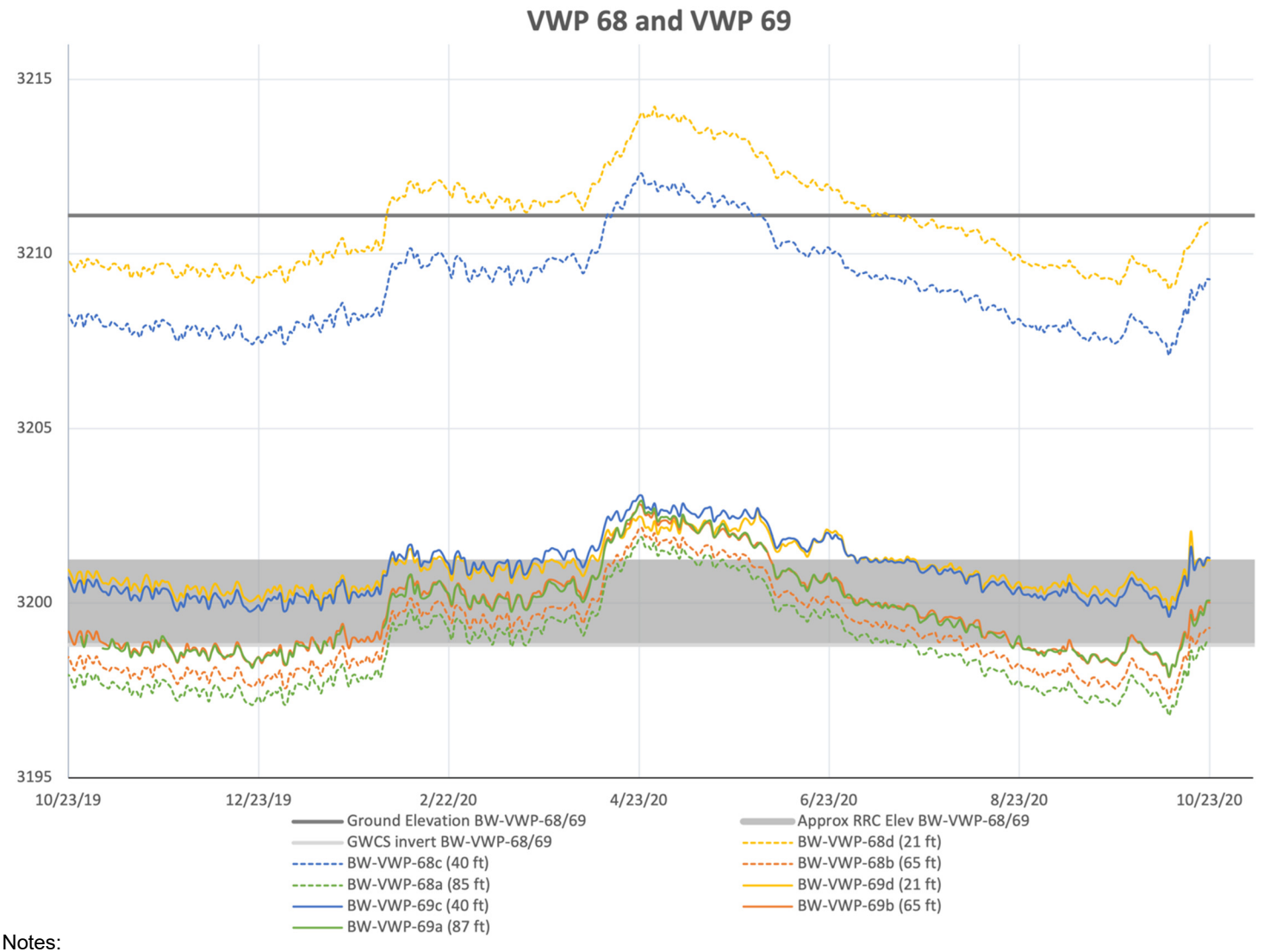

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Figure 6
Hydrograph of BW-VWP-68 and BW-VWP-69
(October 2019–October 2020)

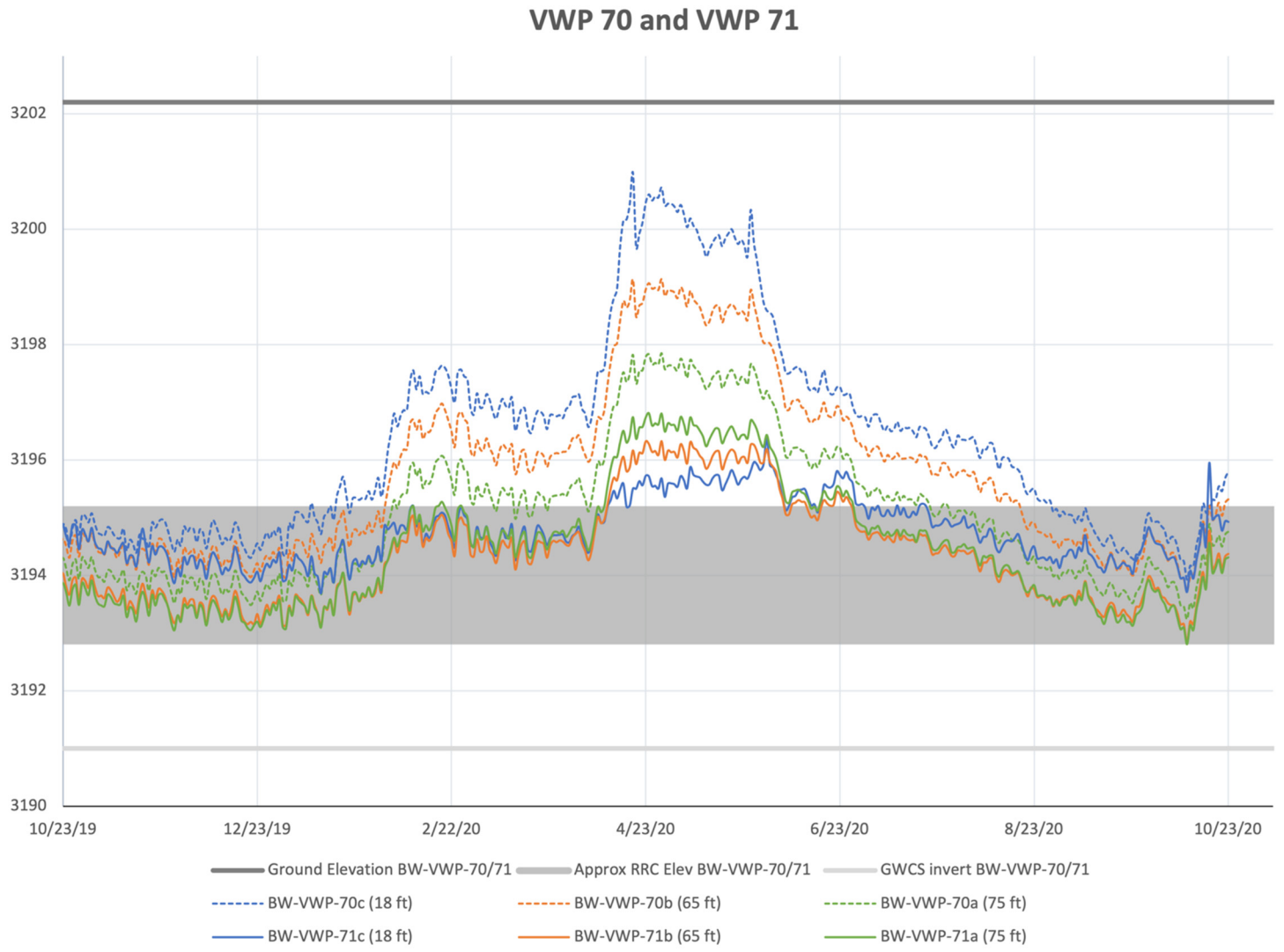

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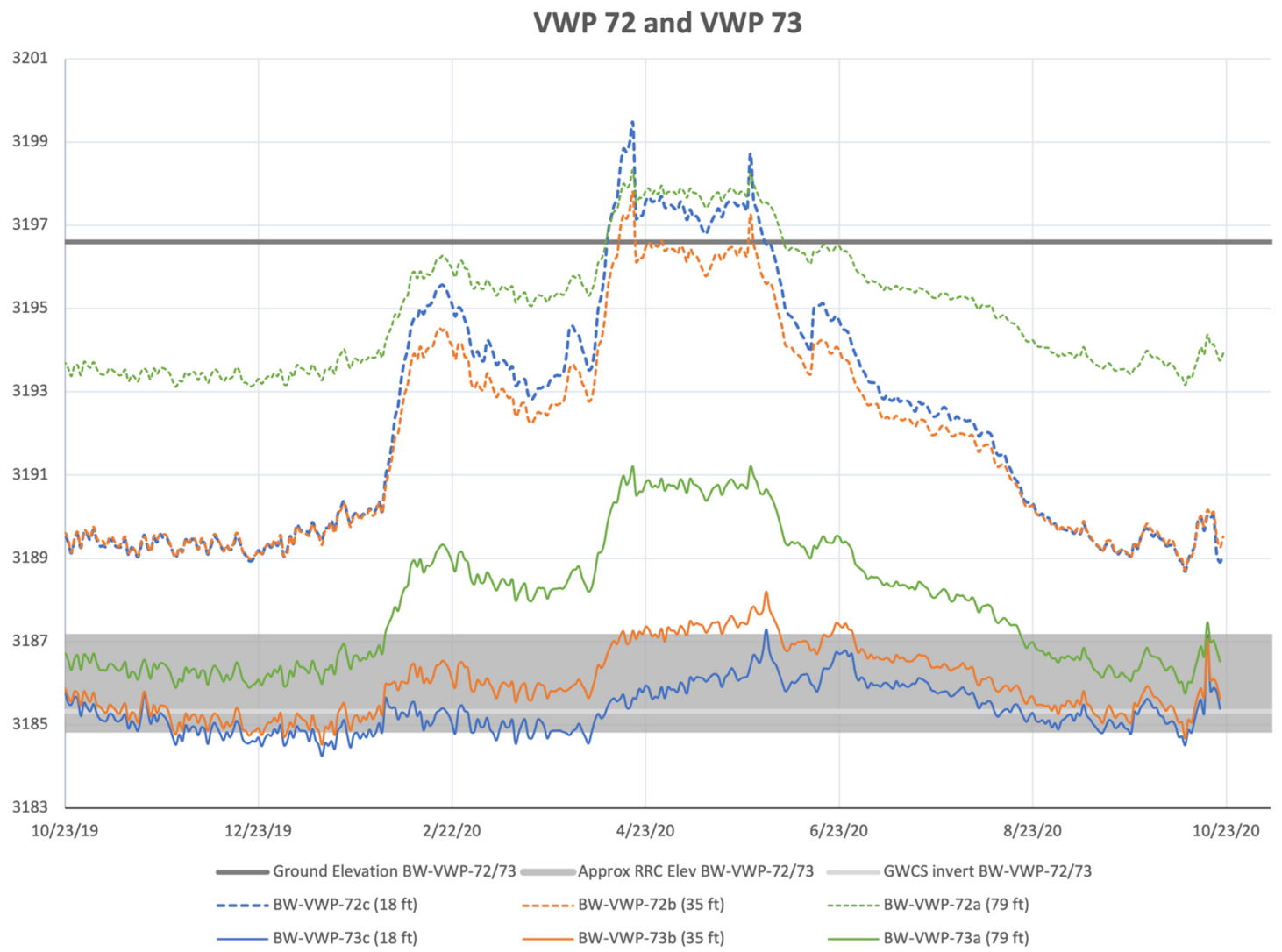
Figure 7
Hydrograph of BW-VWP-70 and BW-VWP-71
(October 2019–October 2020)



Notes:
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Figure 8
Hydrograph of BW-VWP-72 and BW-VWP-73
(October 2019–October 2020)

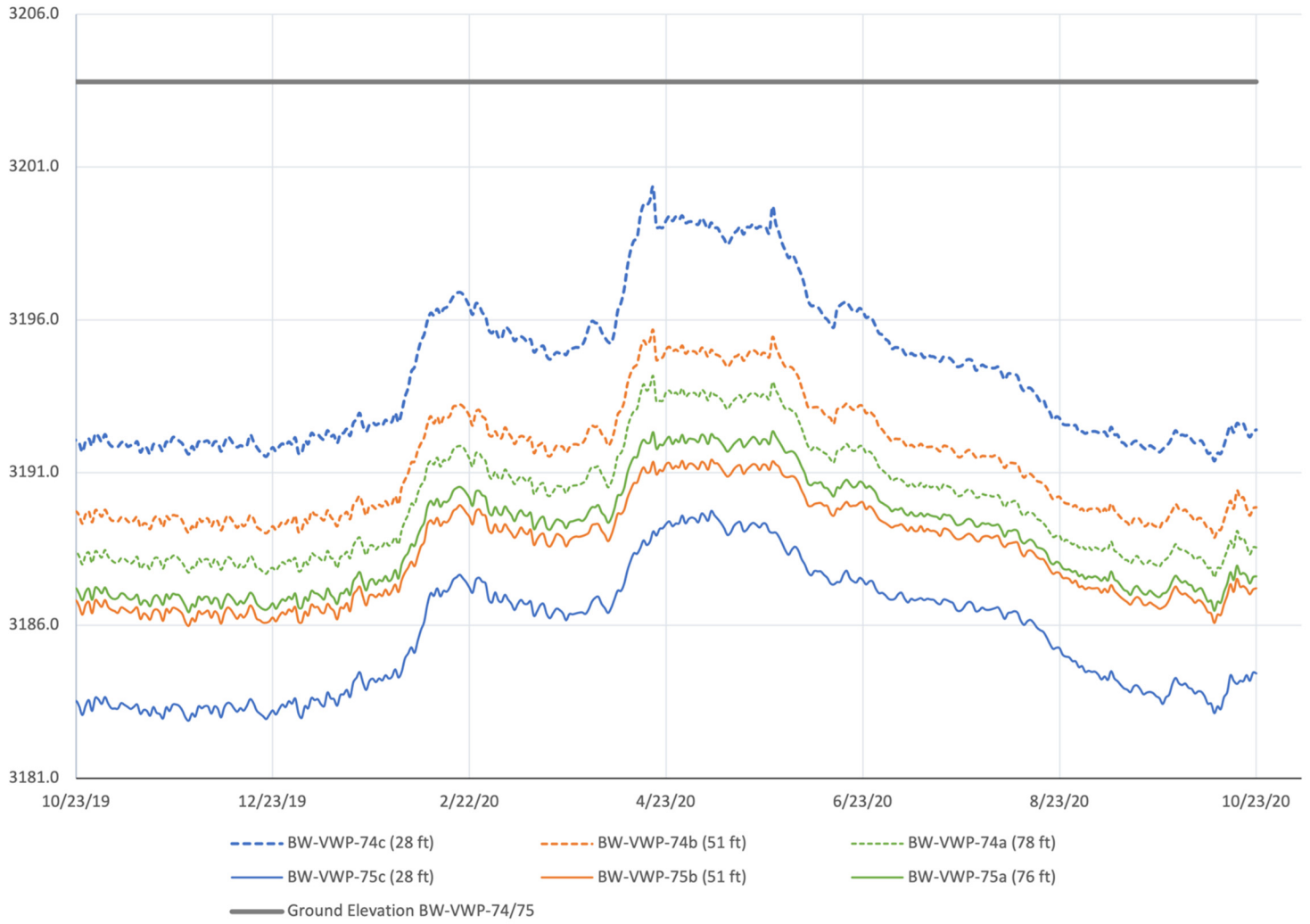

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Figure 9
Hydrograph of BW-VWP-74 and BW-VWP-75
(October 2019–October 2020)

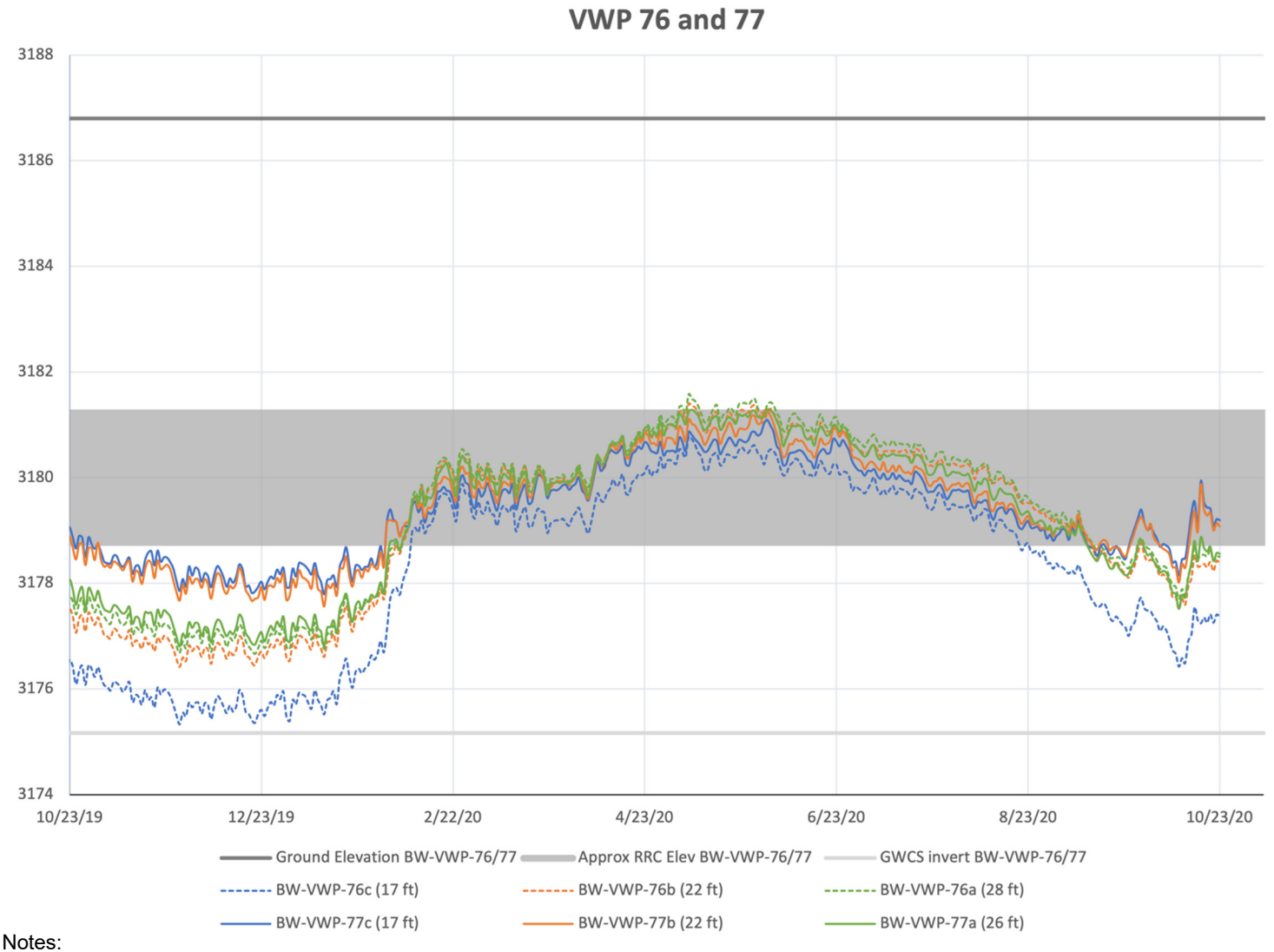

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Figure 10
Hydrograph of BW-VWP-76 and BW-VWP-77
(October 2019–October 2020)

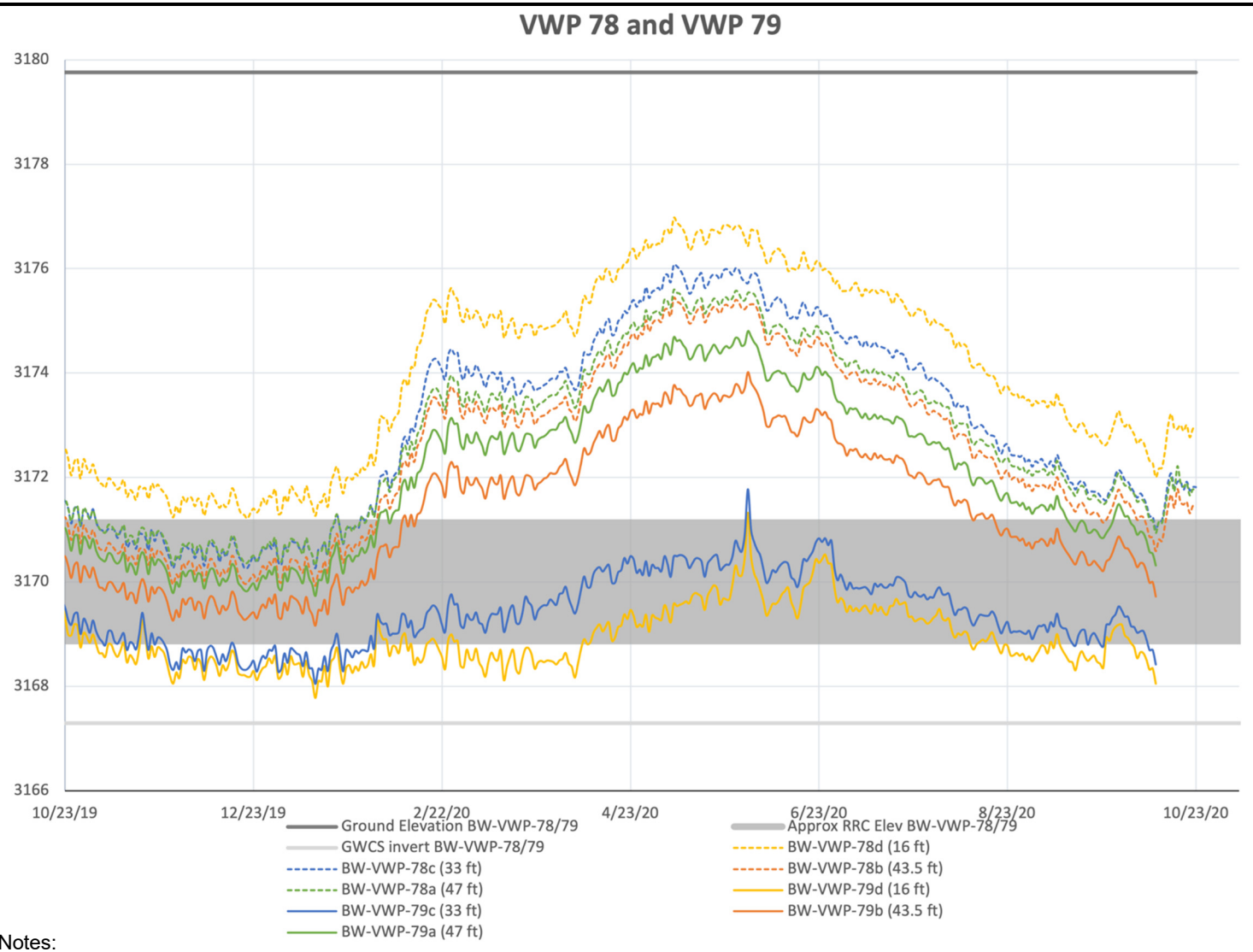

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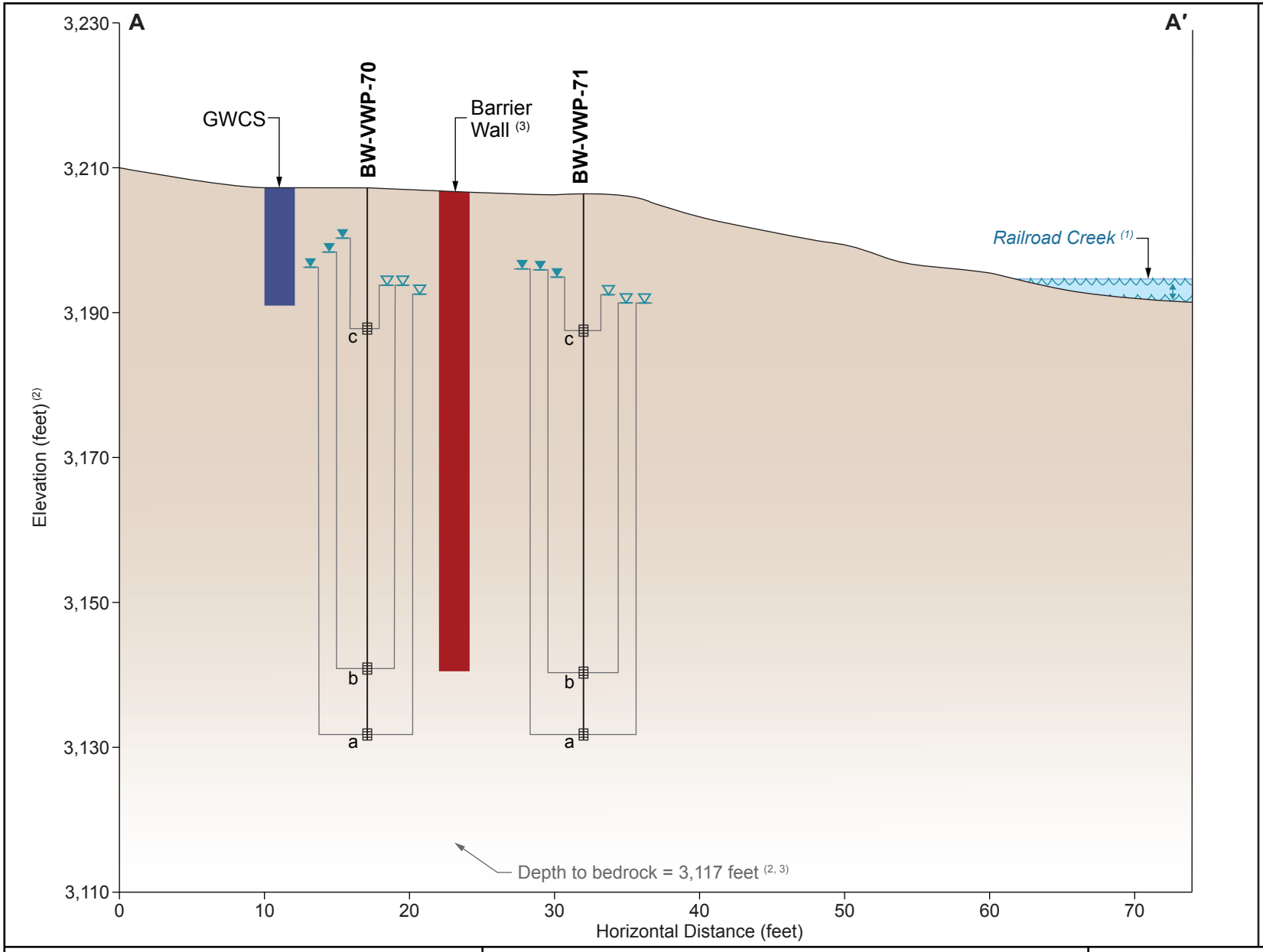
Figure 11
Hydrograph of BW-VWP-78 and BW-VWP-79
(October 2019–October 2020)



Legend

- Spring Water Level Readings
- Fall Water Level Readings
- Vibrating Wire Piezometer

Notes:

- VWP water level elevations correspond to maximum and minimum water level measurements between October 23, 2019 and October 23, 2020. The maximum and minimum water levels were observed in April (spring) and October (fall), respectively, 2020.
1. Approximate Railroad Creek stage elevation based on typical bank elevation adjusted using stage fluctuation at STW-1.
2. Feet above mean sea level, Holden Mine Datum.
3. Approximate depth to bedrock and approximate barrier wall depth are based on drawings in Volume 2 of the 2016 Construction Report (Stantec 2017).

Abbreviations:
GWCS = Groundwater Collection System
VWP = Vibrating wire piezometer

Horizontal Scale in Feet
0’ 5’ 10’
0’ 10’ 20’
Vertical Scale in Feet
Vertical Exaggeration = 2x

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Figure 12
BW-VWP-70 and BW-VWP-71
Cross Section and Water Level Elevations

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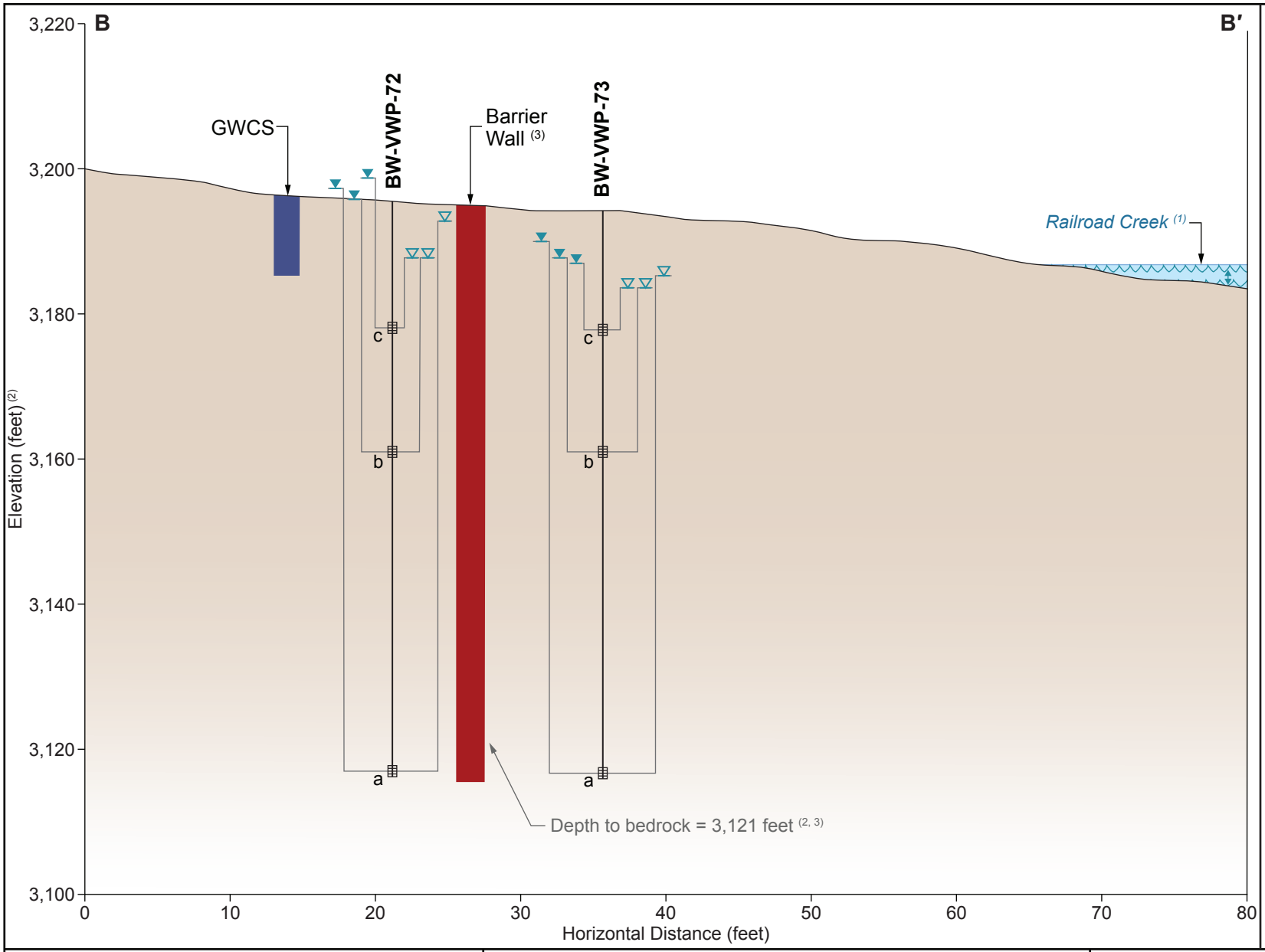

Legend

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- Fall Water Level Readings
- Vibrating Wire Piezometer

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Vertical Scale in Feet
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Figure 13
BW-VWP-72 and BW-VWP-73
Cross Section and Water Level Elevations

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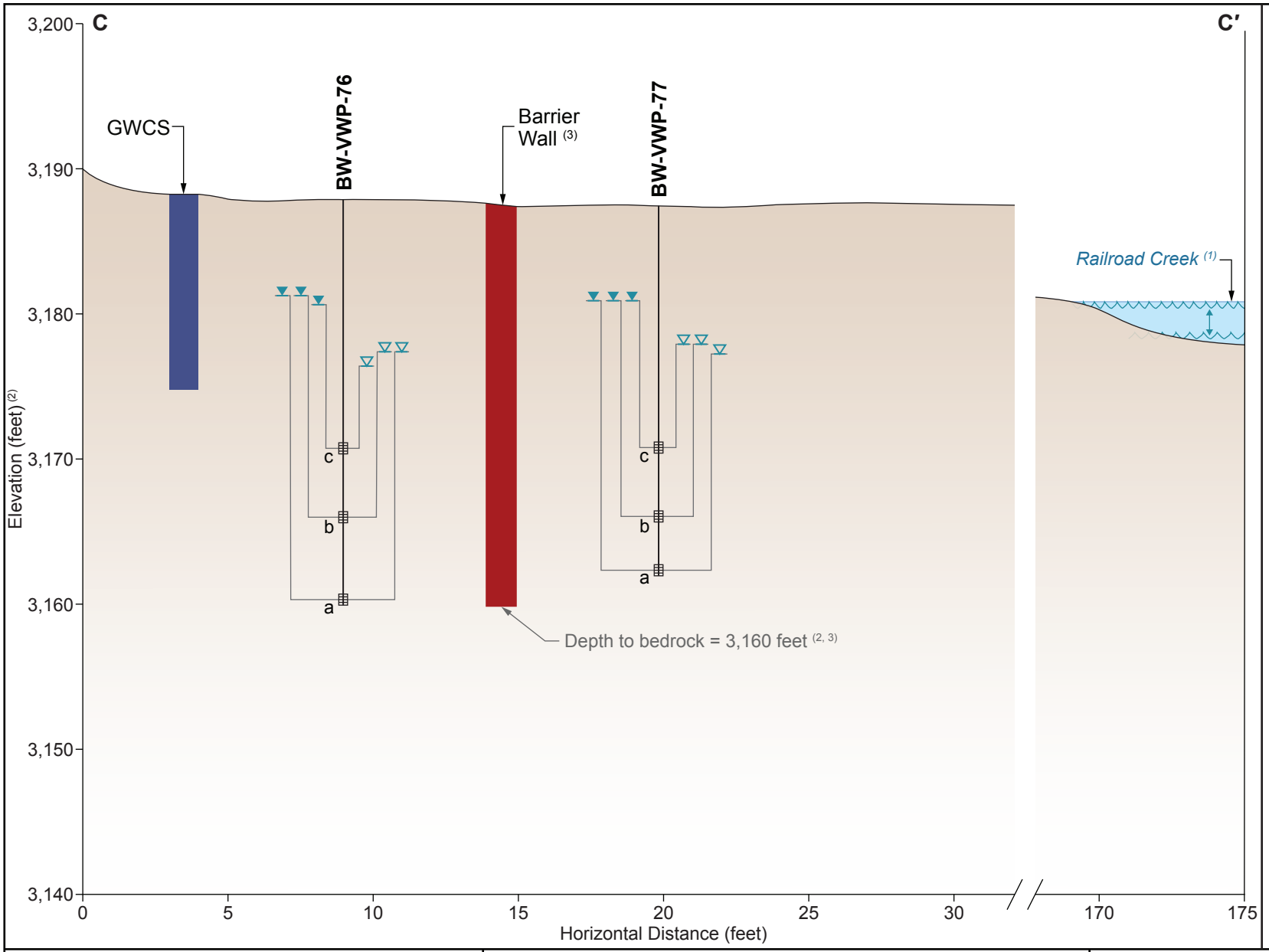

Legend

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- Fall Water Level Readings
- Vibrating Wire Piezometer

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Horizontal Scale in Feet
0’ 2.5’ 5’
0’ 5’ 10’
Vertical Scale in Feet
Vertical Exaggeration = 2x

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Figure 14
BW-VWP-76 and BW-VWP-77
Cross Section and Water Level Elevations

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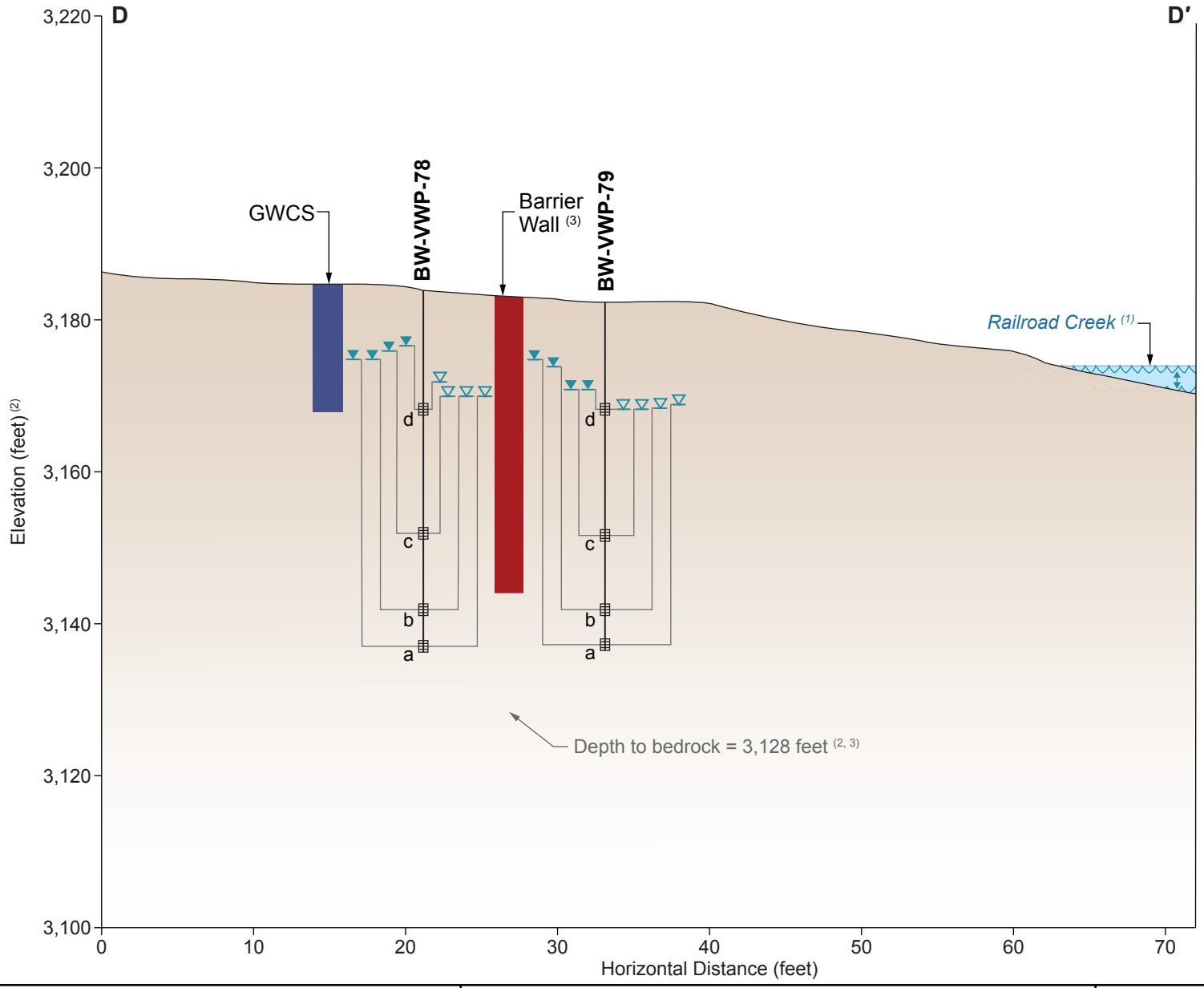

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Figure 15
BW-VWP-78 and BW-VWP-79
Cross Section and Water Level Elevations

I:\GIS\Projects\RT-Holden\AI\ACAR Addendum 2020\Cross Sections\Figure 15 BW-VWP-78 and BW-VWP-79 Cross Section and Water Level Elevations.ai
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