

Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit has been issued to ANTERO RESOURCES , and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #14-178 Mark West to Bobcat P/L

Date Approved: 04/14/2014

Expires: 04/14/2015

Issued to: Antero Resources

POC: Shay Marshall
303-357-6412

Company Address: 1615 Wynoop St
Denver, Co 80202

Project Address: Big Run Branch/Robinson Fork/ McClellan Dist.

Firm: 54017C0155C

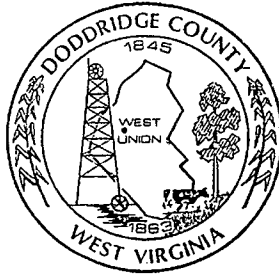
Lat/Long:

Purpose of development: Pipeline/Pad Construction

Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)

Date: 04/14/2014

For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2631, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456



Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit has been issued to ANTERO RESOURCES , and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #14-178 Mark West to Bobcat P/L

Date Approved: 04/14/2014

Expires: 04/14/2015

Issued to: Antero Resources

**POC: Shay Marshall
303-357-6412**

**Company Address: 1615 Wynoop St
Denver, Co 80202**

Project Address: Big Run Branch/Robinson Fork/ McClellan Dist.

Firm: 54017C0155C

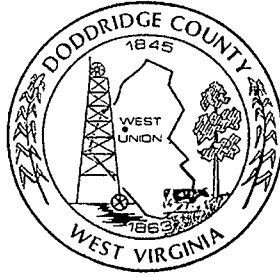
Lat/Long:

Purpose of development: Pipeline/Pad Construction

Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)

Date: 04/14/2014

For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2631, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456



Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit has been issued to ANTERO RESOURCES , and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #14-178 Mark West to Bobcat P/L

Date Approved: 04/14/2014

Expires: 04/14/2015

Issued to: Antero Resources

**POC: Shay Marshall
303-357-6412**

**Company Address: 1615 Wynoop St
Denver, Co 80202**

Project Address: Big Run Branch/Robinson Fork/ McClellan Dist.

Firm: 54017C0155C

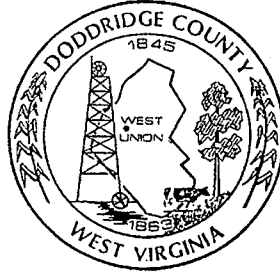
Lat/Long:

Purpose of development: Pipeline/Pad Construction

Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)

Date: 04/14/2014

For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2631, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456



Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit has been issued to ANTERO RESOURCES , and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #14-178 Mark West to Bobcat P/L

Date Approved: 04/14/2014

Expires: 04/14/2015

Issued to: Antero Resources

**POC: Shay Marshall
303-357-6412**

**Company Address: 1615 Wynoop St
Denver, Co 80202**

Project Address: Big Run Branch/Robinson Fork/ McClellan Dist.

Firm: 54017C0155C

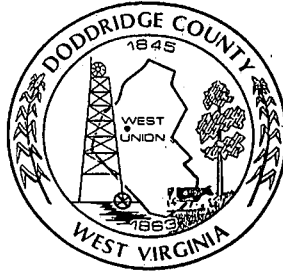
Lat/Long:

Purpose of development: Pipeline/Pad Construction

Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)

Date: 04/14/2014

For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2631, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456



Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit has been issued to ANTERO RESOURCES , and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #14-178 Mark West to Bobcat P/L

Date Approved: 04/14/2014

Expires: 04/14/2015

Issued to: Antero Resources

**POC: Shay Marshall
303-357-6412**

**Company Address: 1615 Wynoop St
Denver, Co 80202**

Project Address: Big Run Branch/Robinson Fork/ McClellan Dist.

Firm: 54017C0155C

Lat/Long:

Purpose of development: Pipeline/Pad Construction

Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)

Date: 04/14/2014

For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2631, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456

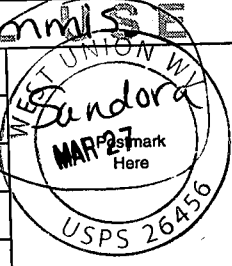
U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

7013 2250 0001 6914 8384

OFFICIAL USE

Postage	\$.48
Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.48



#14-178

Sent To Dean Pennington.....

Street, Apt. No., or PO Box No. 1203 East Run .

City, State, ZIP+4 West Union, WV 26456

PS Form 3800, August 2006 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: #14-178

Ronald and Rosetta Pratt
2661 WV Rt 23
Salem, WV 26426

2. Article Number
(Transfer from service label)

7013 2250 0001 6914 8360

COMPLETE THIS SECTION ON DELIVERY

A. Signature

x *Ronald Pratt*

Agent
 Addressee

B. Received by (Printed Name)

Ronald Pratt

C. Date of Delivery

3/28/14

D. Is delivery address different from item 1?

Yes

If YES, enter delivery address below:

No

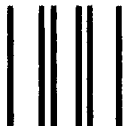
3. Service Type

- Certified Mail® Priority Mail Express™
 Registered Return Receipt for Merchandise
 Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4® in this box •

FILED

2014 MAR 31 PM 12:11
DEPT. OF CORRECTIONS
WITH A. ROGERS
COUNTY CLERK
DODD BRIDGE COUNTY, WV

Plam Co
County Courthouse
West Union
26956

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: #14-178

Dean Pennington
1203 East Run
West Union, WV 26456

2. Article Number
(Transfer from service label)

7013 2250 0001 6914 8384

PS Form 3811, July 2013

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Dean Pennington

Agent

Addressee

B. Received by (Printed Name)

Dean Pennington

C. Date of Delivery

3-28-14

- D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

Certified Mail®

Priority Mail Express™

Registered

Return Receipt for Merchandise

Insured Mail

Collect on Delivery

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

2014 MAR 31

2014 MAR 31

• Sender: Please print your name, address, and ZIP+4® in this box•

Ralph Sandora, Jr.
Doddrige Co. Flood Plain MGT
118 East Court St. , Room 102
West Union, WV 26456

3511 A. ROGERS
COUNTY CLERK
DODDRIDGE COUNTY, WV

2014 MAR 31 PM 12:10

FILED

6456129799





ANTERO RESOURCES CORPORATION
1625 17th STREET, SUITE 300
DENVER, COLORADO 80202

Vendor Name	Vendor No.	Date	Check Number	Check Total
DODDRIDGE COUNTY COMMISSION	43312	Mar-13-2014	51030	\$7,409.58

VOUCHER	VENDOR INV #	INV DATE	TOTAL AMOUNT	PRIOR PMTS & DISCOUNTS	NET AMOUNT
03-AP-8228	STTOBOBCATPL	03/13/14	7,409.58	0.00	7,409.58
FLOOD PLAIN PERMIT - MARKWEST TO BOBCAT PL					
TOTAL INVOICES PAID					7,409.58

14-178
Antero
Markwest to Bobcat
Pipeline

DETACH AND RETAIN FOR TAX PURPOSES

Doddridge County, West Virginia

RECEIPT NO: 1763

DATE: 2014/03/25

FROM: ANTERO

AMOUNT: \$ 7,409.58

SEVEN THOUSAND FOUR HUNDRED NINE DOLLARS AND 58 CENTS

FOR: #14-178 ANTERO MARKWEST TO BOBCAT PIPELINE

00000051030 FP-BUILDING PERMITS

020-318

TOTAL: \$7,409.58

MICHAEL HEADLEY

SHERIFF & TREASURER

MEC

CLERK

Customer Copy

Diane
This one has
Permit #

Legal Advertisement:
Doddridge County
Floodplain Permit Application

Please take notice that on the 25th day of March, 2014

**ANTERO RESOURCES APPALACHIAN CORPORATION –
MARKWEST TO BOBCAT #14-178**

filed an

application for a Floodplain Permit to develop land located at or
about: **SURFACE OWNERS: DEAN PENNINGTON, EAST RUN &
RONALD & ROSETTA PRATT , BIG RUN BRANCH/ROBINSON FORK
MCCLELLAN DISTRICT, D/B: 277/649 & 253/315, T/M 5-25-43.2 &
5-29-23 & 5-29-23.1**

The Application is on file with the Clerk of the County Court and
may be inspected or copied during regular business hours.

Any interested persons who desire to comment shall present
the same in writing by **April 14, 2014.**

Delivered to the:

Clerk of the County Court

118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk

Ralph Sandora, Jr. Doddridge County Flood Plain Manager

March 13, 2014

Antero Resources
1625 17th Street
Denver, Colorado 80202
Office 303.357.7310
Fax 303.357.7315

Doddridge County Commission
Attn: Doddridge County Floodplain Manager
118 East Court Street, Room 102
West Union, WV 26456

Doddridge County Floodplain Manager:

Antero Resources Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Markwest to Bobcat Pipeline project and equipment/valve pad. As shown on the enclosed design, Antero proposes to construct one 16" and one 20" steel, natural gas pipeline and one valve pad in Doddridge County, McCellan District. Per FIRM Map 54017C0155C, approximately 430 linear feet of the project will be located in the floodplain. Construction of the pipeline in the floodplain will be open cut and the surface will be restored to original conditions. The HECRAS study confirmed the construction of the equipment/valve pad will increase the 100-year flood elevation by a maximum of 0.4 ft.

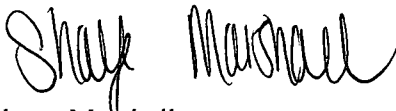
Attached you will find the following:

- Doddridge County Floodplain Permit Application and Required Permit Fee
- WV Flood Tool Map
- FIRM Map
- HECRAS Study

If you have any questions please feel free to contact me at (303) 357-6412.

Thank you in advance.

Sincerely,



Shaye Marshall
Permit Representative
Antero Resources Corporation

Enclosures

2014 MAR 14 PM 1:23
BETH A. ROGERS
COUNTY CLERK
DODDRIDGE COUNTY, WV

FILED

TRANSACTION REPORT

P. 01

MAR-26-2014 WED 11:31 AM

FOR: DODDRIDGE CO. CLERK

304 873 1840

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAR-26	11:30 AM	3048731600	36"	1	FAX TX	OK	946	
TOTAL :						36S	PAGES:	1

*Diane
This one has
Permit #*

Legal Advertisement:
Doddridge County
Floodplain Permit Application

Please take notice that on the 25th day of March, 2014
**ANTERO RESOURCES APPALACHIAN CORPORATION -
MARKWEST TO BOBCAT #14-178**
filed an
application for a Floodplain Permit to develop land located at or
about: **SURFACE OWNERS: DEAN PENNINGTON, EAST RUN &
RONALD & ROSETTA PRATT, BIG RUN BRANCH/ROBINSON FORK
MCCLELLAN DISTRICT, D/B: 277/649 & 253/315, T/M 5-25-43.2 &
5-29-23 & 5-29-23.1**

The Application is on file with the Clerk of the County Court and
may be inspected or copied during regular business hours.
Any Interested persons who desire to comment shall present
the same in writing by **April 14, 2014.**

Delivered to the:
Clerk of the County Court
118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk
Ralph Sandora, Jr. Doddridge County Flood Plain Manager

 **DAWOOD**
ENGINEERS - PLANNERS - SURVEYORS

11 Grandview Circle, PA 15317
P) 724.746.0730 • F) 724.746.0732

March 12, 2014

Doddridge County Commission
118 East Court Street
West Union, WV 26456

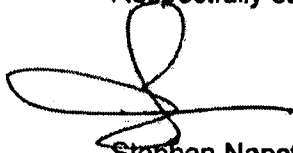
Re: Antero Resources Corporation
Markwest to Bobcat Floodplain Application

To Whom It May Concern:

On behalf of Antero Resources Corporation (Antero), Dawood Engineering, Inc. (Dawood) is submitting this letter and application materials pursuant to the requirements of the Doddridge County Floodplain Ordinance to request concurrence to complete a project in Doddridge County, West Virginia. Antero proposes the installation of one 16" and one 20" steel, natural gas pipelines to connect two metering stations. Respectively, 22,837 +/- lf and 19,612 +/- lf of pipeline will be used to connect the facilities. Six (6) roads will be crossed. 246 lf of the crossing at Big Run and 184 lf of the crossing at Robinson Fork will fall within the floodplain area for a total of approximately 430 lf. Construction of the pipeline within the floodplain will be by open cut, and the surface will be restored to original conditions. At Stream Crossing #2 an equipment pad will be constructed within the FEMA 100-year Floodplain. The construction of the pad will increase the 100-year flood elevation by a maximum of 0.4 ft. There has been no previous encroachments to the 100-year flood elevation in the vicinity. Construction is anticipated to begin in April 2014 and continue until July 2014 with an estimated total cost of construction within the floodplain of approximately \$1,361,915. Please see the attached project location maps and supporting documentation.

On behalf of Antero, Dawood is requesting your review and approval of the enclosed Floodplain Application. Please feel free to contact Stephen Napotnik with Dawood at 724-746-0730 or snapotnik@dawood.cc, or Luz Slauter with Antero Resources at 303-357-6834 or lslauter@anteroresources.com should you have any questions or comments.

Respectfully submitted,

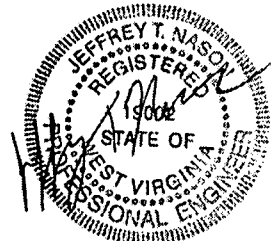


Stephen Napotnik
Asst. Project Manager

cc: Luz Slauter



Jeffrey Nason, P.E.
Project Manager





11 Grandview Circle, PA 15317
P) 724.746.0730 • F) 724.746.0732

March 12, 2014

Doddridge County Commission
118 East Court Street
West Union, WV 26456

Re: Antero Resources Corporation
Markwest to Bobcat Floodplain Application

To Whom It May Concern:

On behalf of Antero Resources Corporation (Antero), Dawood Engineering, Inc. (Dawood) is submitting this letter and application materials pursuant to the requirements of the Doddridge County Floodplain Ordinance to request concurrence to complete a project in Doddridge County, West Virginia. Antero proposes the installation of one 16" and one 20" steel, natural gas pipelines to connect two metering stations. Respectively, 22,837 +/- lf and 19,612 +/- lf of pipeline will be used to connect the facilities. Six (6) roads will be crossed. 246 lf of the crossing at Big Run and 184 lf of the crossing at Robinson Fork will fall within the floodplain area for a total of approximately 430 lf. Construction of the pipeline within the floodplain will be by open cut, and the surface will be restored to original conditions. At Stream Crossing #2 an equipment pad will be constructed within the FEMA 100-year Floodplain. The construction of the pad will increase the 100-year flood elevation by a maximum of 0.4 ft. There has been no previous encroachments to the 100-year flood elevation in the vicinity. Construction is anticipated to begin in April 2014 and continue until July 2014 with an estimated total cost of construction within the floodplain of approximately \$1,381,915. Please see the attached project location maps and supporting documentation.

On behalf of Antero, Dawood is requesting your review and approval of the enclosed Floodplain Application. Please feel free to contact Stephen Napotnik with Dawood at 724-746-0730 or snapotnik@dawood.cc, or Luz Slauter with Antero Resources at 303-357-6834 or lslauter@anteroresources.com should you have any questions or comments.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Stephen Napotnik", written over a horizontal line.

Stephen Napotnik
Asst. Project Manager

A handwritten signature in black ink, appearing to read "Jeffrey Nason", written over a horizontal line.

Jeffrey Nason, P.E.
Project Manager

cc: Luz Slauter

**SECTION 4: ADDITIONAL INFORMATION REQUIRED FOR DEVELOPMENT IN
SPECIAL FLOOD HAZARD AREA (To be completed by Floodplain
Administrator/Manager or his/her representative)**

The applicant must submit the documents checked below before the application can be processed.

- A plan showing the location of all existing structures, water bodies, adjacent roads and proposed development.
- Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, storage tanks, proposed elevation of lowest floor, (including basement or crawl space), types of water resistant materials used below the first floor, details of flood proofing of utilities located below the first floor and details of enclosures below the first floor. Also _____

- Subdivision or other development plans (If the subdivision or development exceeds 10 lots or 2 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
- Plans showing the extent of watercourse relocation and/or landform alterations.
- Top of new fill elevation _____ Ft. NGVD.
For floodproofing structures applicant must attach certification from registered engineer or architect.
- Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.
- Manufactured homes located in a Flood Hazard Area must have a West Virginia Contractor's License and a Manufactured Home Installation License as required by the Federal Emergency Management Agency (FEMA).
- Other: _____

SECTION 5: PERMIT DETERMINATION (To be completed by Floodplain

Administrator/Manager or his/her representative)

I have determined that the proposed activity **(type is or is not)** in conformance with provisions of the Floodplain Ordinance adopted by the County Commission of Doddridge County on May 21, 2013. The permit is issued subject to the conditions attached to and made part of this permit.

SIGNED _____ DATE _____

If the Floodplain Administrator/Manager found that the above was not in conformance with the provisions of the Doddridge County Floodplain Ordinance and/or denied that application, the applicant may appeal.

APPEALS: Appealed to the County Commission of Doddridge County? Yes No
Hearing Date: _____
County Commission Decision - Approved Yes No

CONDITIONS: _____

SECTION 6: AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Compliance is issued).

The following information must be provided for project structures. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application).

COMPLETE 1 OR 2 BELOW:

- 1 Actual (As-Built) Elevation of the top of the lowest floor (including basement or crawl space is _____ FT. NGVD.
- 2 Actual (As Built) elevation of floodproofing is _____ FT. NGVD.

Note: Any work performed prior to submittal of the above information is at risk of the applicant.

SECTION 7: COMPLIANCE ACTION (To be completed by the Floodplain Administrator/Manager or his/her representative).

The Floodplain Administrator/Manager or his/her representative will complete this section as applicable based on inspection of the project to ensure compliance with the Doddridge County Floodplain Ordinance.

INSPECTIONS:

DATE: _____ BY: _____
DEFICIENCIES ? Y/N

COMMENTS _____

SECTION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain Administrator/Manager or his/her representative).

Certificate of Compliance issued: DATE: _____ BY: _____

**CERTIFICATE OF COMPLIANCE
FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA
(OWNER MUST RETAIN)**

PERMIT NUMBER: _____

PERMIT DATE: _____

PURPOSE –

CONSTRUCTION LOCATION: _____

OWNER'S ADDRESS: _____

**THE FOLLOWING MUST BE COMPLETED BY THE FLOODPLAIN
ADMINISTRATOR/MANAGER OR HIS/HER AGENT.**

**COMPLIANCE IS HEREBY CERTIFIED WITH THE REQUIREMENT OF THE
FLOODPLAIN ORDINANCE ADOPTED BY THE COUNTY COMMISSION OF
DODDRIDGE COUNTY ON MAY 21, 2013.**

SIGNED _____ **DATE** _____

Doddridge County Flood Plain Application Fee Calculator (if in Flood Plain)**Markwest to Bobcat**

Estimated Construction Costs	\$1,381,915.00
Amount over \$100,000	\$1,281,915.00
Drilling Oil and Gas Well Fee	\$1,000.00
\$5 per \$1,000 over \$100,000	\$6,409.58
Amount Due with application	\$7,409.58

Antero
Markwest to Bobcat

Estimated Construction Costs:

Equipment*				\$959,300
Pipeline Work in Floodplain	LF	430	\$650.00	\$279,500.00
Silt Socks	LF	1420	\$7.00	\$9,940.00
Erosion Control Blanket	SY	635	\$5.00	\$3,175.00
Restoration of Disturbed Areas	AC	1	\$20,000.00	\$20,000.00
Earthwork	CY	4400	\$25.00	\$110,000.00
			Total Estimated Cost	<u>\$1,381,915</u>


*See attached Cost Estimate

WV Flood Map



This map is not the official regulatory FIRM or DFIRM. Its purpose is to assist with determining potential flood risk for the selected location.

Map Created on 3/12/2014

 Location of the mouse click

 **Flood Hazard Zone**
(1% annual chance floodplain)

User Notes:

Disclaimer:

The online map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. To obtain more detailed information in areas where Base Flood Elevations have been determined, users are encouraged to consult the latest Flood Profile data contained in the official flood insurance study. These studies are available online at www.msc.fema.gov.

WV Flood Tool is supported by FEMA, WV NFIP Office, and WV GIS Technical Center
(<http://www.MapWV.gov/flood>)

Flood Hazard Area: Selected site is **WITHIN** the FEMA 100-year floodplain.

Elevation: N/A

Location (long, lat): 80.579017 W, 39.340252 N

Location (UTM 17N): (536278, 4354620)

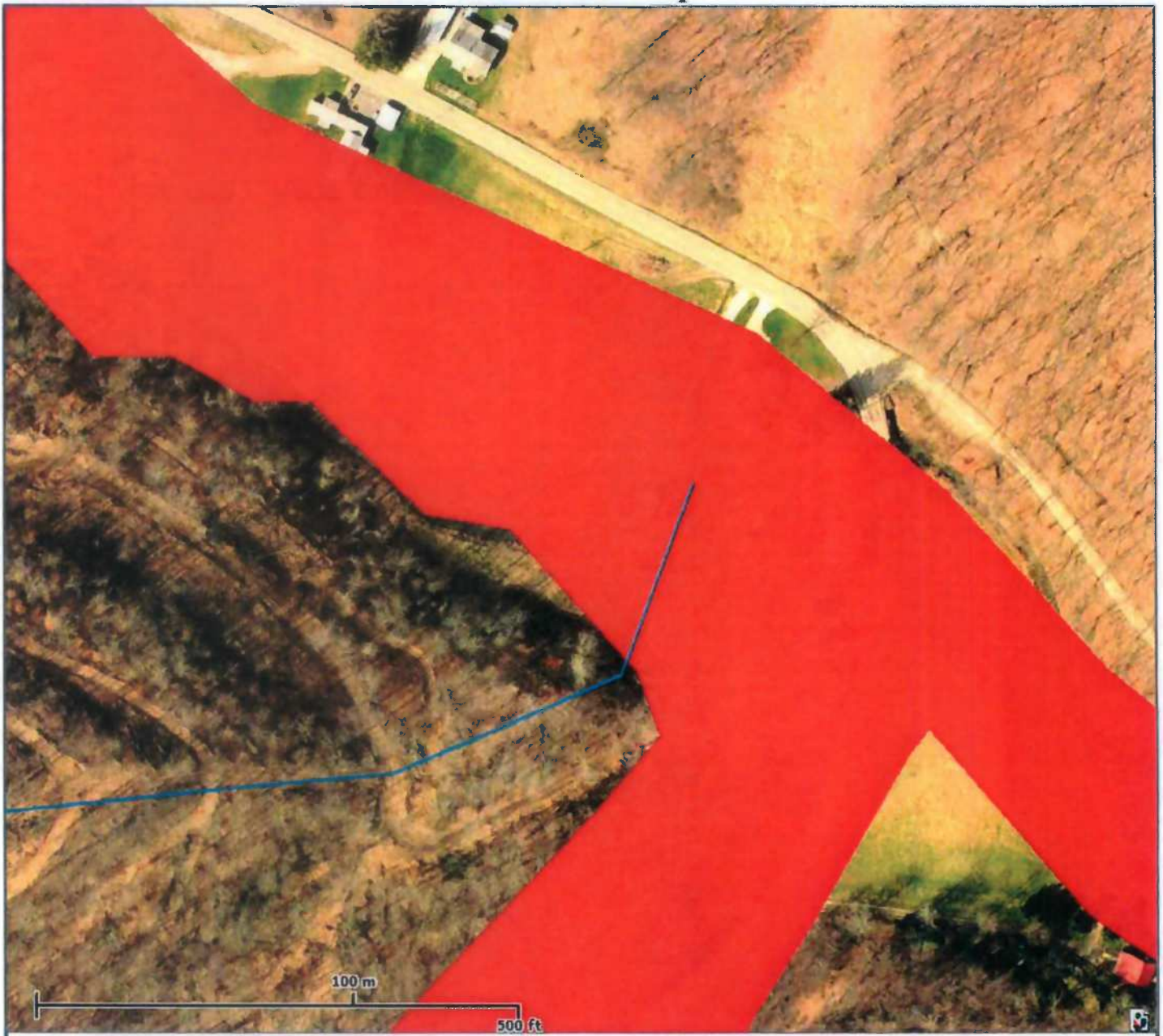
FEMA Issued Flood Map: 54017C0155C

Contacts: Doddridge County

CRS Information: No CRS information available

Parcel Number:

WV Flood Map



This map is not the official regulatory FIRM or DFIRM. Its purpose is to assist with determining potential flood risk for the selected location.

Map Created on 1/24/2014



Location of the mouse click



Flood Hazard Zone
(1% annual chance floodplain)

User Notes:

Disclaimer:

The online map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. To obtain more detailed information in areas where Base Flood Elevations have been determined, users are encouraged to consult the latest Flood Profile data contained in the official flood insurance study. These studies are available online at www.msc.fema.gov.

WV Flood Tool is supported by FEMA, WV NFIP Office, and WV GIS Technical Center
(<http://www.MapWV.gov/flood>)

Flood Hazard Area:

Elevation:

Location (long, lat):

Location (UTM 17N):

FEMA Issued Flood Map:

Contacts:

CRS Information:

Parcel Number:

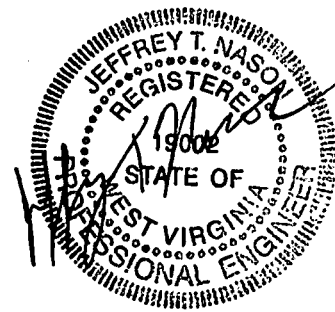
**DODDRIDGE COUNTY
FLOODPLAIN APPLICATION**

Prepared For



Luz Slauter, Environmental Supervisor
Antero Resources
1625 17th St,
Denver, CO 80202
Phone: 303-357-6834

Project:
MarkWest to Bobcat
Doddridge County, WV

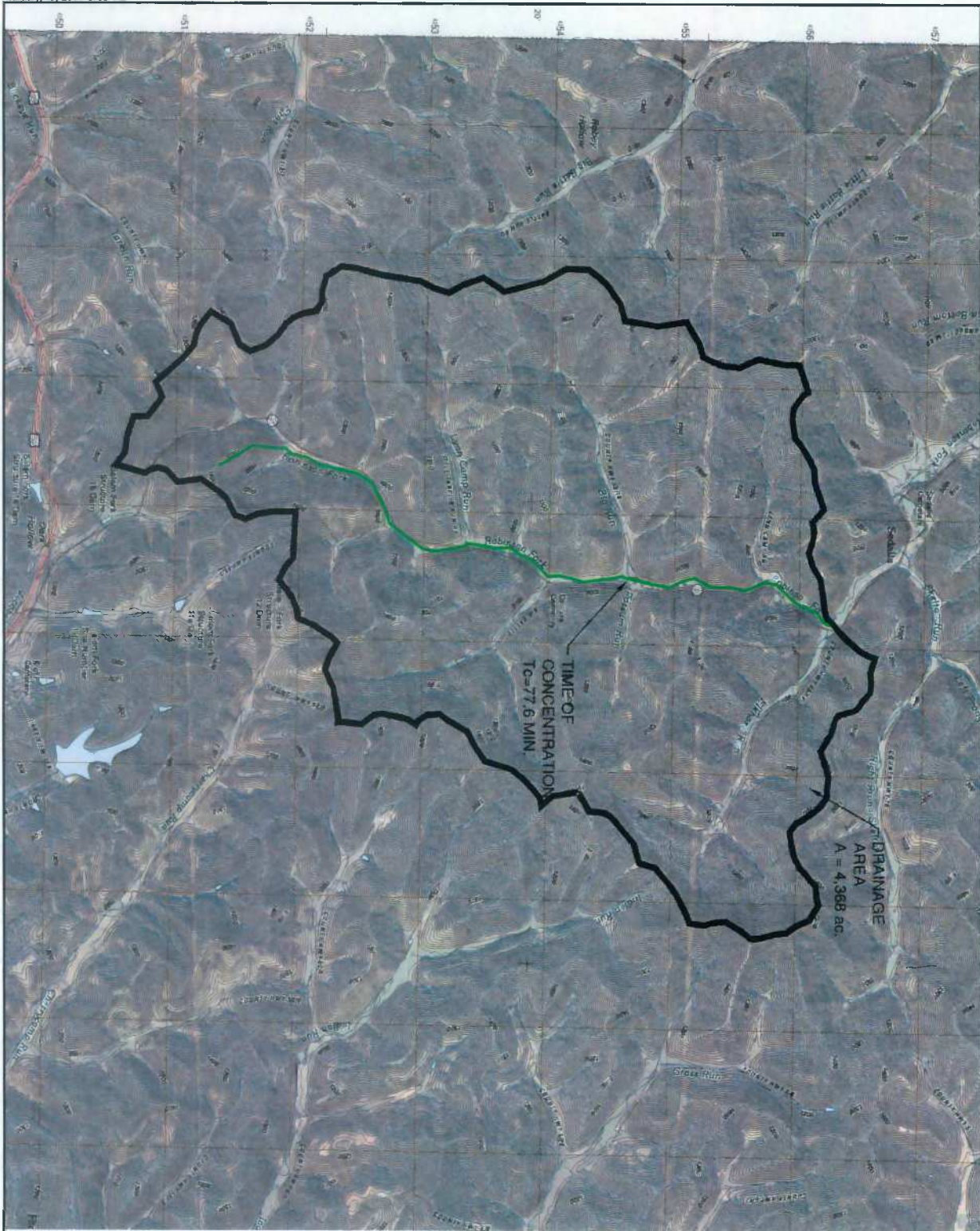


Prepared By



11 Grandview Circle, Suite 116, Canonsburg, PA 15317-9557
ph: (724) 746-0937 f: (724) 746-0732
Dawood Project No. 713001-08

Date: March 12, 2014




SCALE

DATE: FEBRUARY 19, 2014
 JOB NO.: 713009.01
 FILE NAME: LDP-PO-L001
 SCALE: 1"=24,000'
 SITE NAME:
 COUNTY: DODDRIDGE COUNTY
 MARKWEST TO BOBCAT


DRAINAGE AREA MAPS
 for
 FLOOD PLAIN

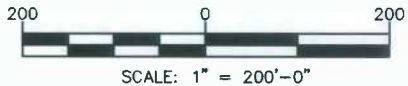
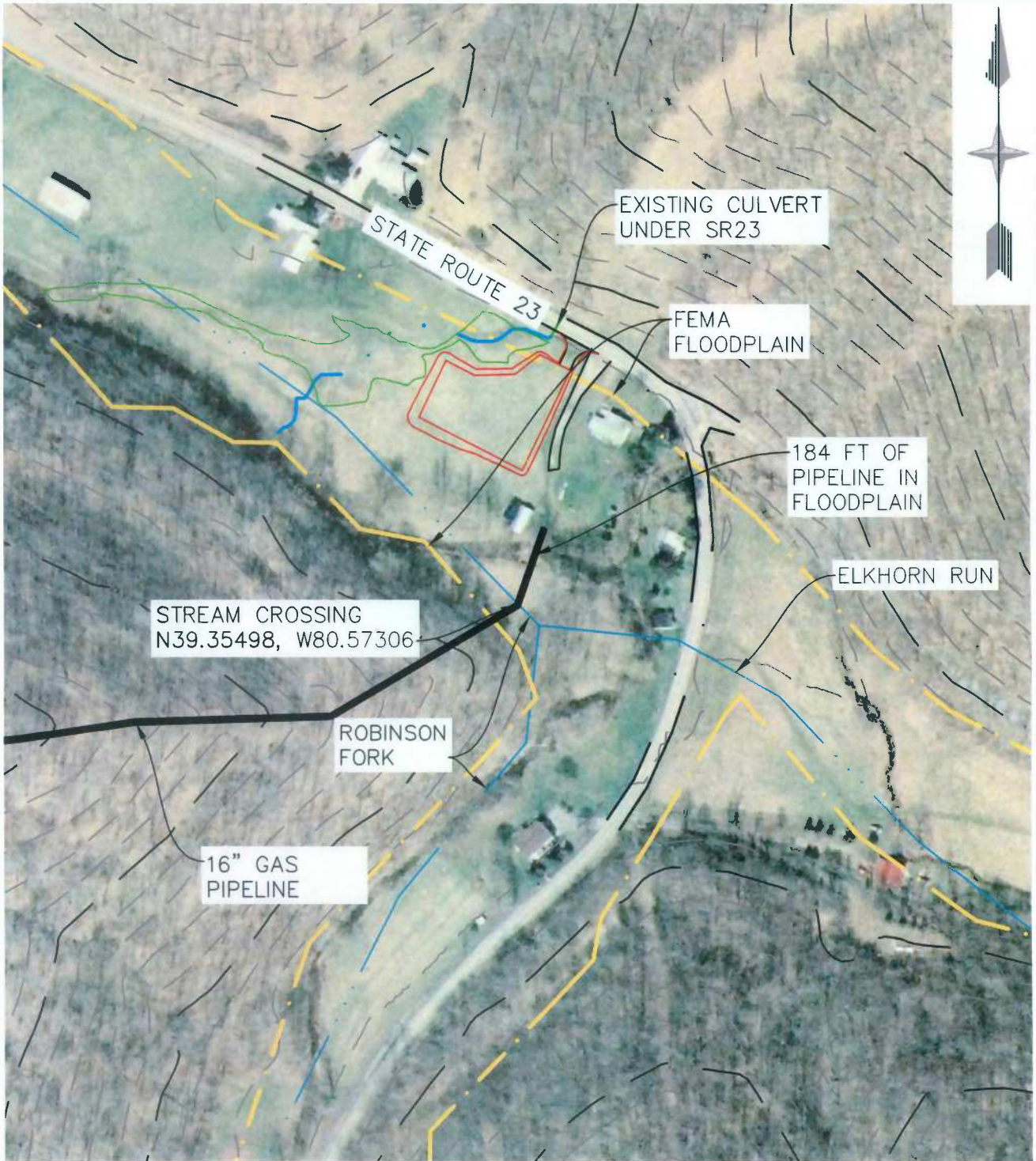
DOCUMENT PREPARED BY:



11 Grandview Circle
 Suite 116
 Chambersburg, PA 17312
 P: 717.662.0730
 F: 717.662.6732

DOCUMENT PREPARED FOR:





DOCUMENT PREPARED FOR:
ANTERO RESOURCES
 1625 17th Street
 Denver, Colorado 80202



DATE	FEBRUARY 19, 2014
JOB NO.	713009.01
FILE NAME	LDP-FL-GP01
SCALE	1" = 200'
PROJECT NAME	

DOCUMENT PREPARED BY:

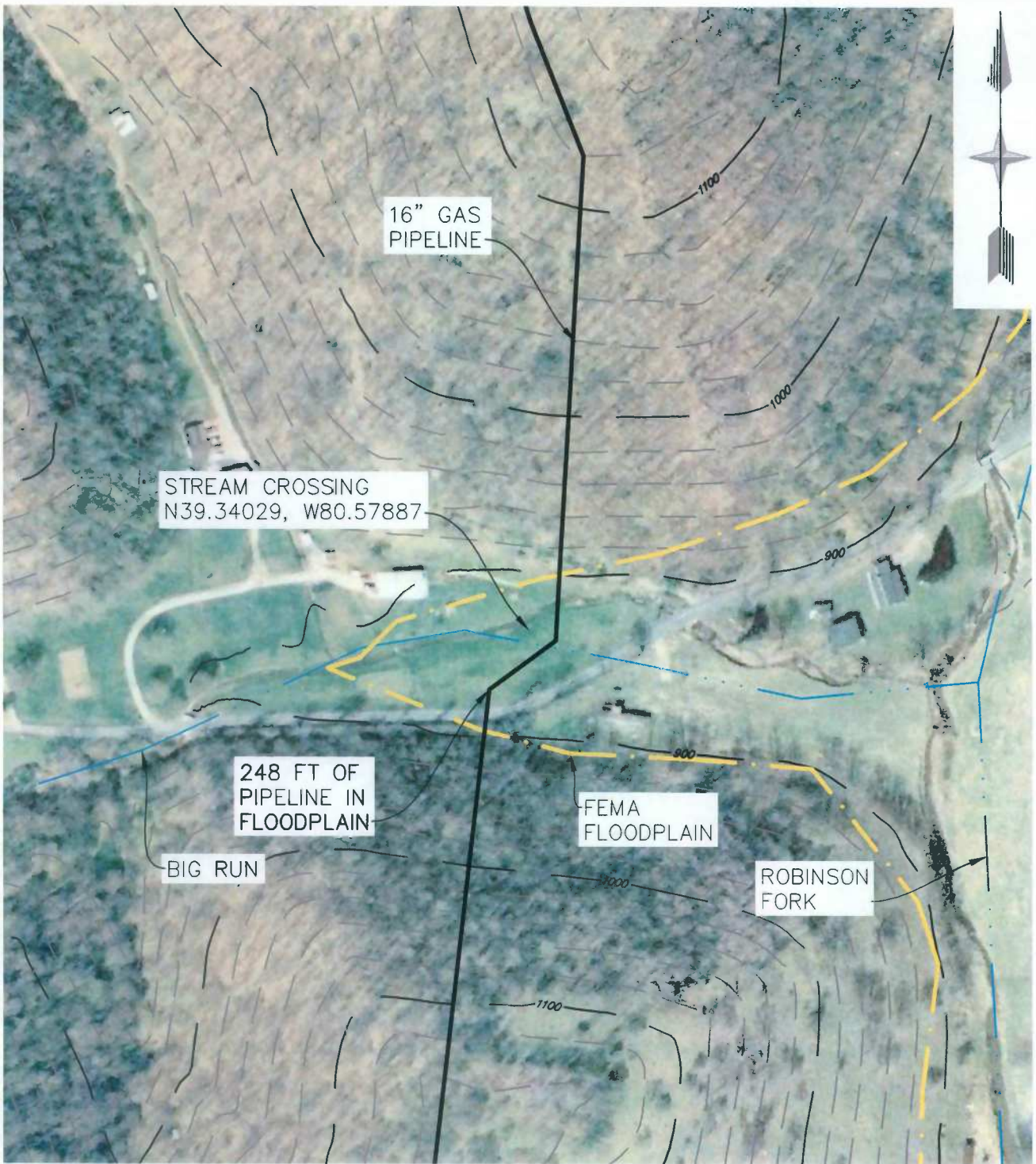


DAWOOD

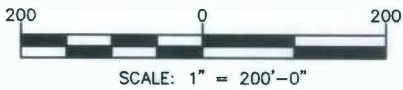
11 Grandview Circle
 Suite 116
 Canonsburg, PA 15317
 t: 724.746.0730
 f: 724.746.0732

MARKWEST TO
 BOBCAT
 FLOODPLAIN
 CROSSING #2

o:\2013\05S\713009-01\LD\FINAL\71300901-LDP-FL-GP01



O:\2013\JOBS\713009-01\LD\FINAL\71300901-LDP-FL-GP01



DOCUMENT PREPARED FOR:
ANTERO RESOURCES
 1625 17th Street
 Denver, Colorado 80202



DATE	MARCH 11, 2014
JOB NO.	713009.01
FILE NAME	LDP-FL-GP01
SCALE	1" = 200'
PROJECT NAME	

DOCUMENT PREPARED BY:

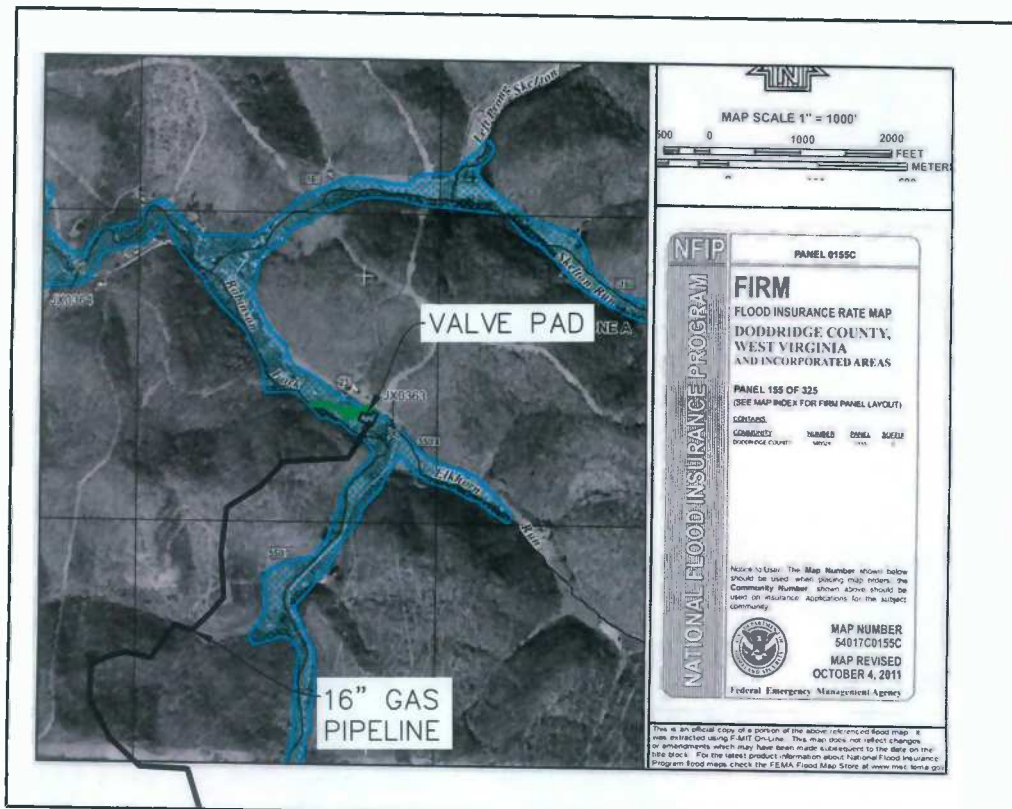


DAWOOD

11 Grandview Circle
 Suite 116
 Canonsburg, PA 15317
 t: 724.746.0730
 f: 724.746.0732

MARKWEST TO
 BOBCAT

FLOODPLAIN
 CROSSING #1



MAP SCALE 1" = 1000'

0 1000 2000 FEET
0 1000 2000 METERS

NFIP PANEL 0155C

FIRM
FLOOD INSURANCE RATE MAP
DODDRIDGE COUNTY,
WEST VIRGINIA
AND INCORPORATED AREAS

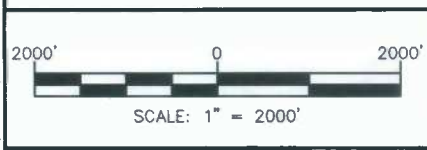
PANEL 155 OF 325
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTRACT NUMBER	COMMUNITY NUMBER	DATE	SCALE

Map Number shown below should be used when making map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
54017C0155C
MAP REVISED
OCTOBER 4, 2011
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It may be updated using E-BIT Online. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.mms.fema.gov



DOCUMENT PREPARED FOR:
ANTERO RESOURCES
1625 17th Street
Denver, Colorado 80202



DATE MARCH 11, 2014
JOB NO. 713009.01
FILE NAME LDP-FL-GP01
SCALE 1" = 2000'
PROJECT NAME

DOCUMENT PREPARED BY:



DAWOOD

11 Grandview Circle
Suite 116
Canonsburg, PA 15317
t: 724.746.0730
f: 724.746.0732

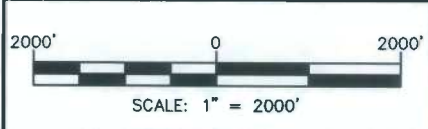
MARKWEST TO
BOBCAT

FLOODPLAIN
CROSSING #2

O:\2013\JOBS\713009-01\LD\FINAL\71300901-LDP-FL-GP01



O:\2013\JOBS\713009-01\LD\FINAL\71300901-LDP-FL-GP01



DOCUMENT PREPARED FOR:
ANTERO RESOURCES
 1625 17th Street
 Denver, Colorado 80202



DATE	MARCH 11, 2014
JOB NO.	713009.01
FILE NAME	LDP-FL-GP01
SCALE	1" = 2000'
PROJECT NAME	

DOCUMENT PREPARED BY:



DAWOOD

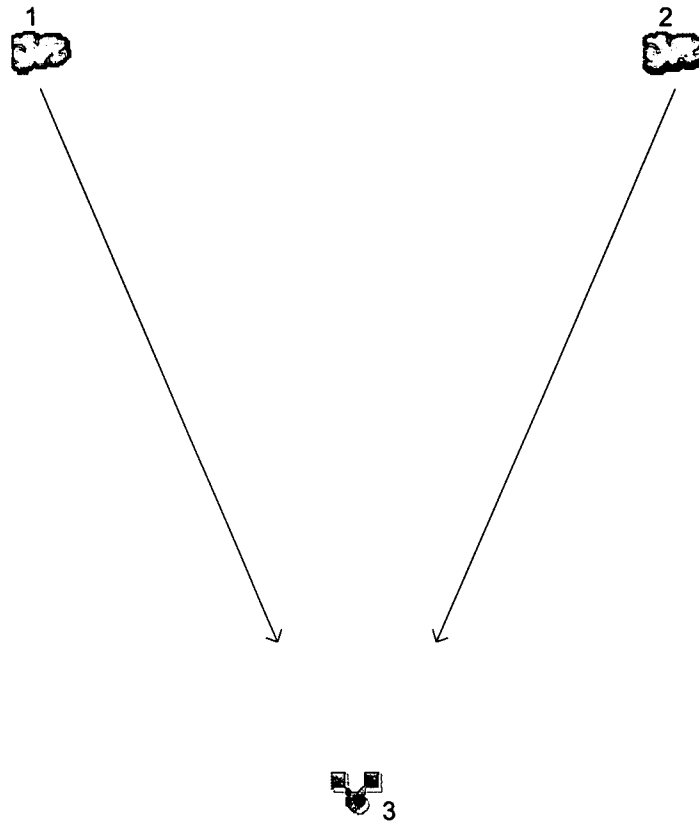
11 Grandview Circle
 Suite 116
 Canonsburg, PA 15317
 t: 724.746.0730
 f: 724.746.0732

MARKWEST TO
 BOBCAT
 FLOODPLAIN
 CROSSING #1

Hydraflow Data

Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3



Legend

Hyd. Origin	Description
1	SCS Runoff Area 1 (Elkhorn Run)
2	SCS Runoff Area 2 (Upper Robinson Fork)
3	Combine Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	----	197.81	344.61	-----	573.86	779.23	1084.57	1348.53	1627.46	Area 1 (Elkhorn Run)
2	SCS Runoff	----	474.53	819.58	-----	1366.58	1865.39	2613.74	3263.57	3951.83	Area 2 (Upper Robinson Fork)
3	Combine	1. 2	571.60	978.65	-----	1617.87	2202.79	3077.71	3835.42	4637.23	Area 1 + 2 Combined (Lower Robinso

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	197.81	2	736	1.151.136	---	---	---	Area 1 (Elkhorn Run)
2	SCS Runoff	474.53	2	764	5.006.500	---	---	---	Area 2 (Upper Robinson Fork)
3	Combine	571.60	2	760	6.157.636	1. 2	---	---	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 1 Year			Tuesday, 03 / 11 / 2014	

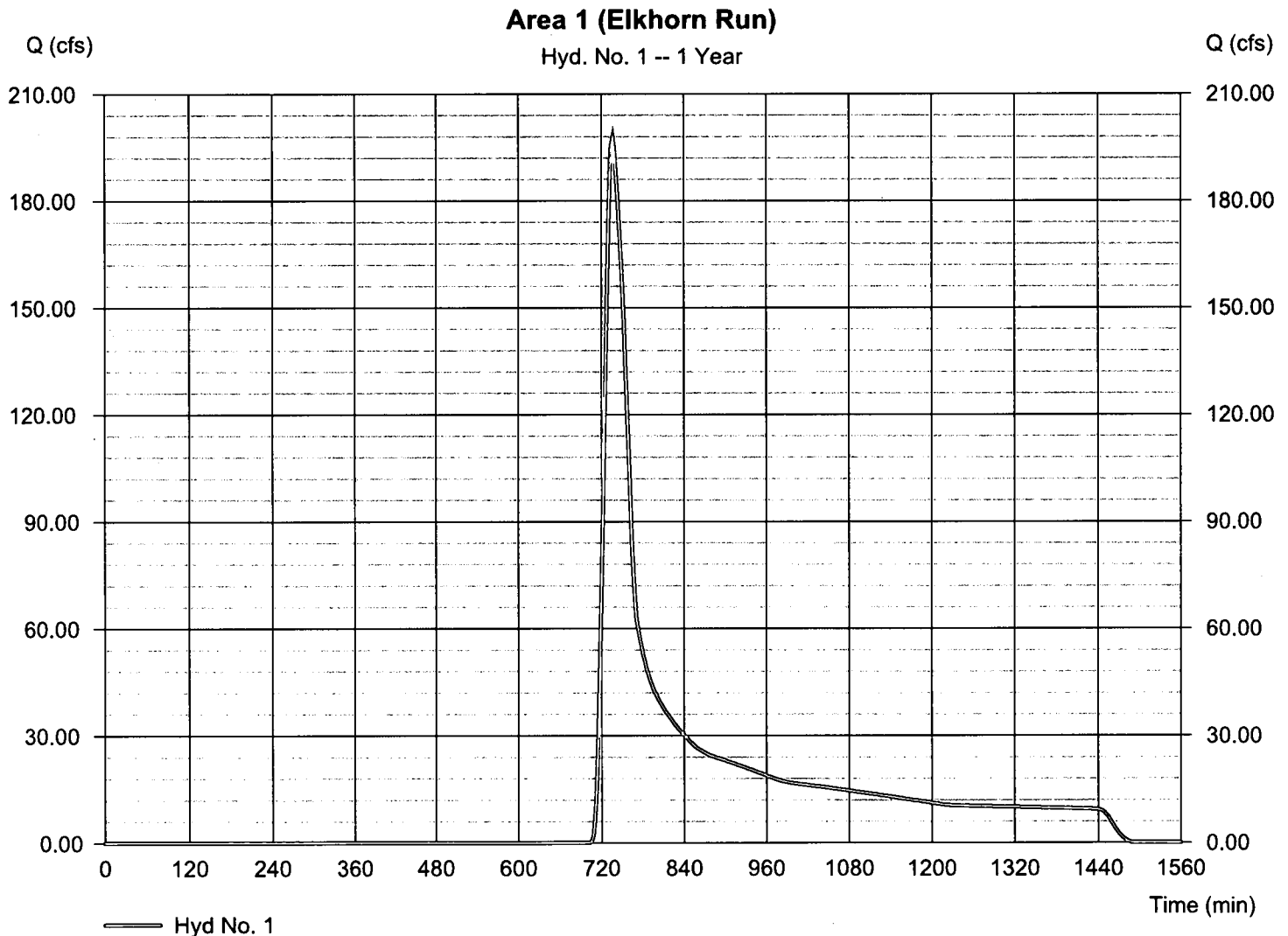
Hydrograph Report

Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type	= SCS Runoff	Peak discharge	= 197.81 cfs
Storm frequency	= 1 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 1,151.136 cuft
Drainage area	= 804.710 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 31.90 min
Total precip.	= 2.15 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



TR55 Tc Worksheet

Hyd. No. 1

Area 1 (Elkhorn Run)

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.38	0.00	0.00	
Land slope (%)	= 5.00	0.00	0.00	
Travel Time (min)	= 17.26	+ 0.00	+ 0.00	= 17.26
Shallow Concentrated Flow				
Flow length (ft)	= 1400.00	0.00	0.00	
Watercourse slope (%)	= 22.00	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=7.57	0.00	0.00	
Travel Time (min)	= 3.08	+ 0.00	+ 0.00	= 3.08
Channel Flow				
X sectional flow area (sqft)	= 8.00	0.00	0.00	
Wetted perimeter (ft)	= 6.47	0.00	0.00	
Channel slope (%)	= 2.60	0.00	0.00	
Manning's n-value	= 0.030	0.015	0.015	
Velocity (ft/s)	=9.23	0.00	0.00	
Flow length (ft)	((0})6416.0	0.0	0.0	
Travel Time (min)	= 11.58	+ 0.00	+ 0.00	= 11.58
Total Travel Time, Tc				31.90 min

Hydrograph Report

Hyd. No. 2

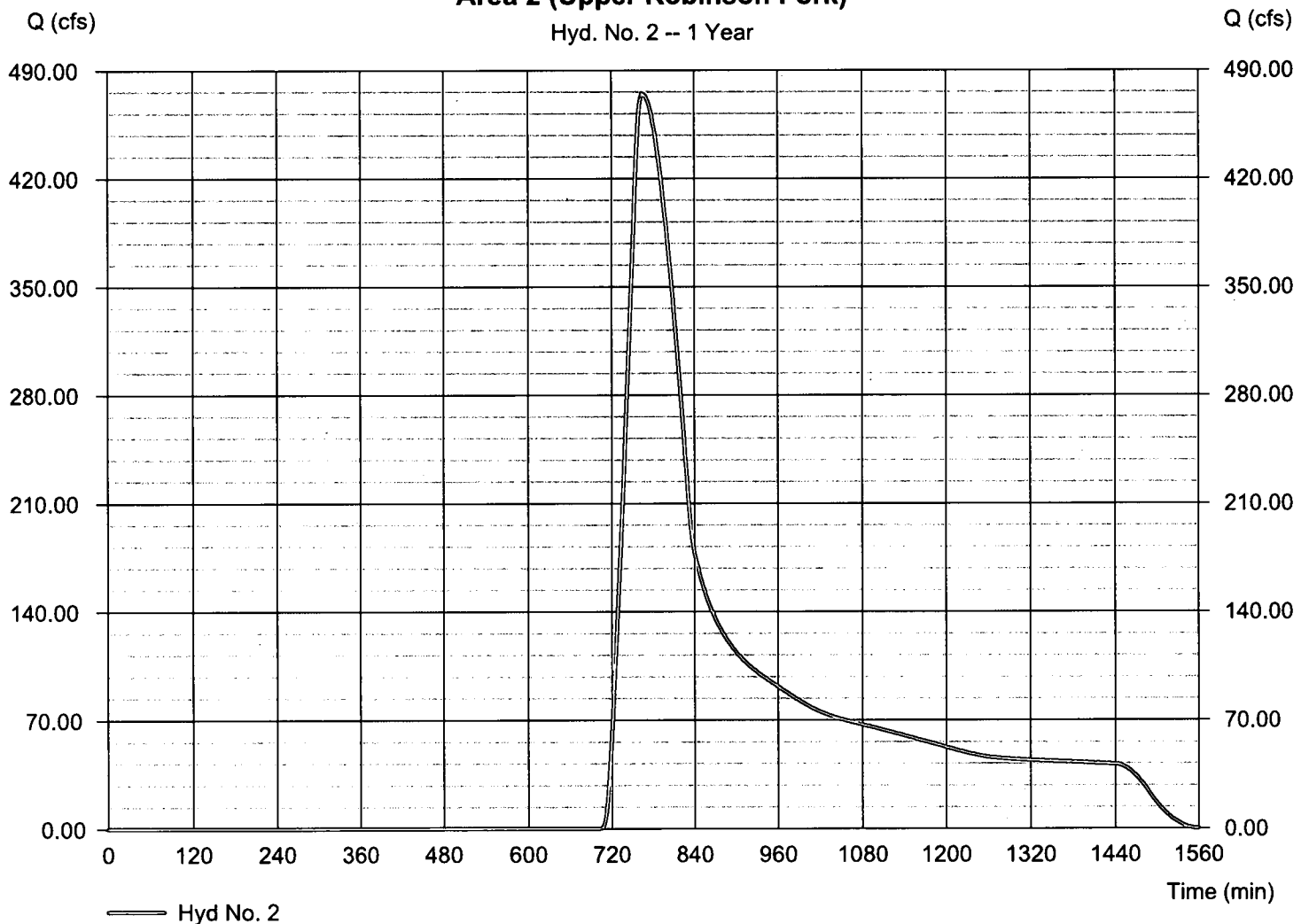
Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 474.53 cfs
Storm frequency	= 1 yrs	Time to peak	= 764 min
Time interval	= 2 min	Hyd. volume	= 5,006.500 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 2.15 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940

Area 2 (Upper Robinson Fork)

Hyd. No. 2 -- 1 Year



— Hyd No. 2

TR55 Tc Worksheet

Hyd. No. 2

Area 2 (Upper Robinson Fork)

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.56	0.00	0.00	
Land slope (%)	= 6.00	0.00	0.00	
Travel Time (min)	= 15.47	+ 0.00	+ 0.00	= 15.47
Shallow Concentrated Flow				
Flow length (ft)	= 307.00	1400.00	0.00	
Watercourse slope (%)	= 33.00	17.00	0.00	
Surface description	= Unpaved	Unpaved	Paved	
Average velocity (ft/s)	=9.27	6.65	0.00	
Travel Time (min)	= 0.55	+ 3.51	+ 0.00	= 4.06
Channel Flow				
X sectional flow area (sqft)	= 8.00	0.00	0.00	
Wetted perimeter (ft)	= 6.47	0.00	0.00	
Channel slope (%)	= 0.67	0.00	0.00	
Manning's n-value	= 0.030	0.015	0.015	
Velocity (ft/s)	=4.69	0.00	0.00	
Flow length (ft)	{{0}}16342.0	0.0	0.0	
Travel Time (min)	= 58.11	+ 0.00	+ 0.00	= 58.11
Total Travel Time, Tc				77.60 min

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

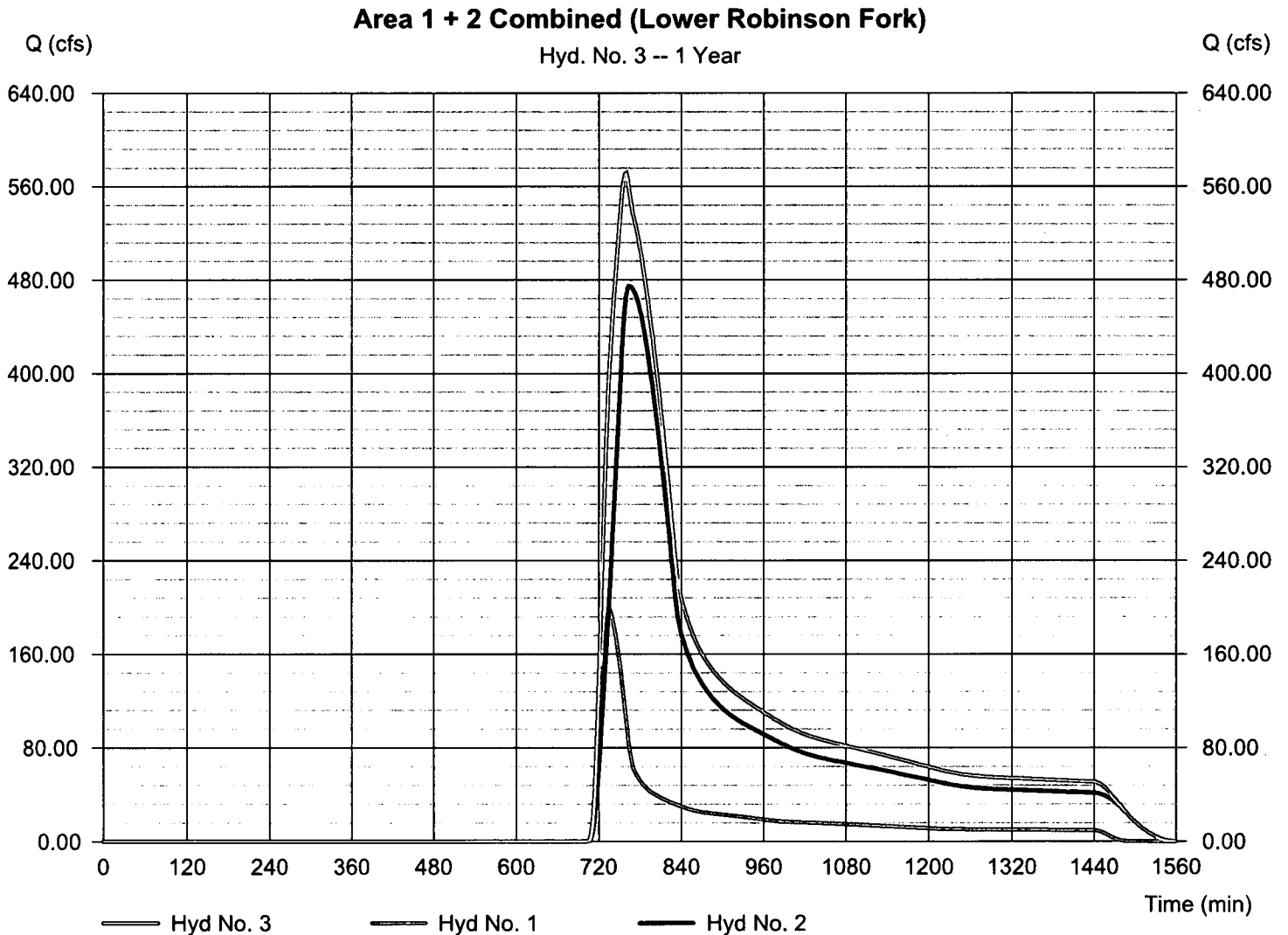
Tuesday, 03 / 11 / 2014

Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 1. 2

Peak discharge = 571.60 cfs
Time to peak = 760 min
Hyd. volume = 6.157.636 cuft
Contrib. drain. area = 4367.650 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	344.61	2	734	1.775.665	----	----	----	Area 1 (Elkhorn Run)
2	SCS Runoff	819.58	2	762	7.722.694	----	----	----	Area 2 (Upper Robinson Fork)
3	Combine	978.65	2	758	9.498.355	1. 2	----	----	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 2 Year			Tuesday, 03 / 11 / 2014	

Hydrograph Report

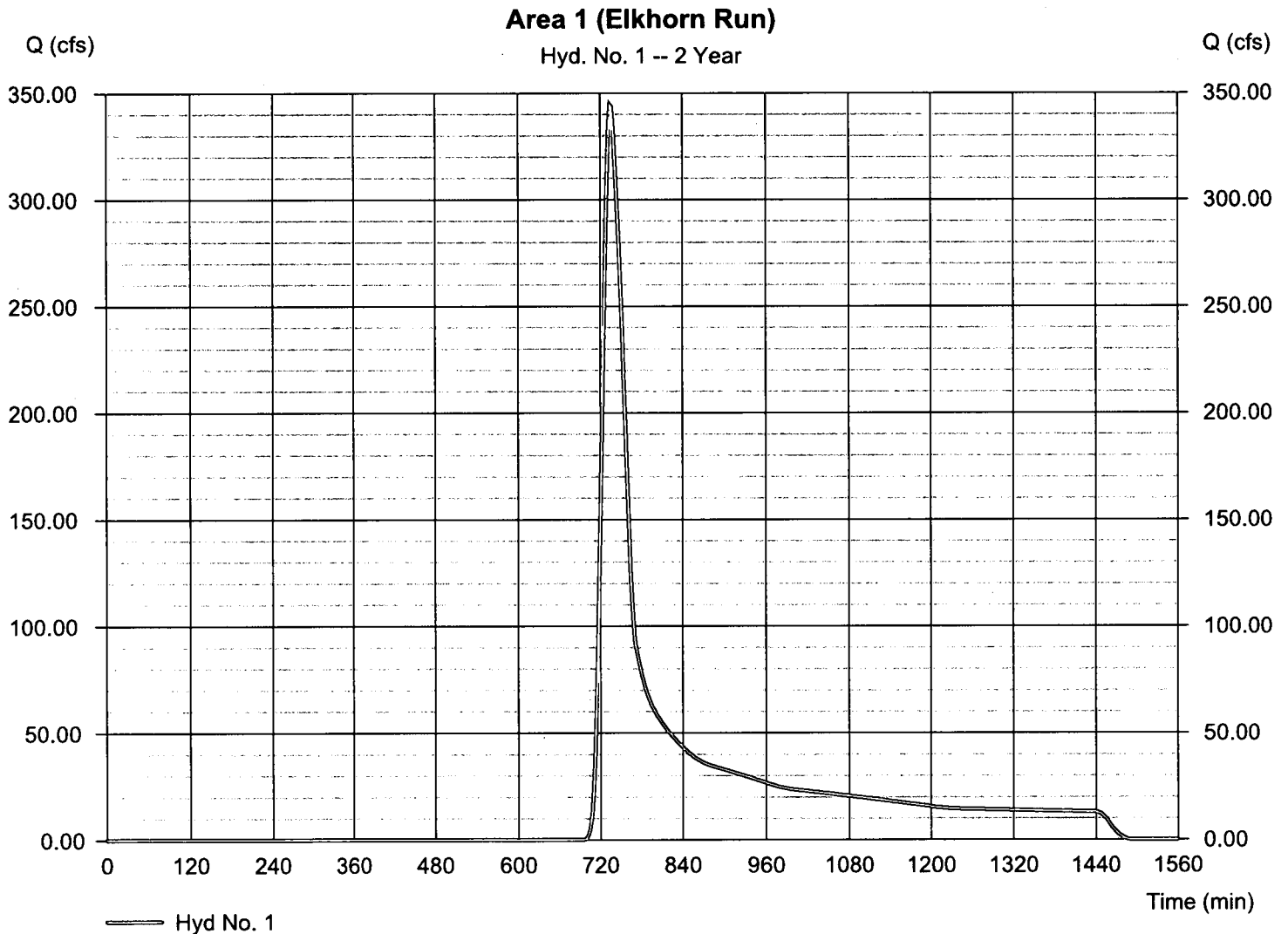
Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Time interval = 2 min
Drainage area = 804.710 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 2.56 in
Storm duration = 24 hrs

Peak discharge = 344.61 cfs
Time to peak = 734 min
Hyd. volume = 1,775.665 cuft
Curve number = 73*
Hydraulic length = 0 ft
Time of conc. (Tc) = 31.90 min
Distribution = Type II
Shape factor = 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

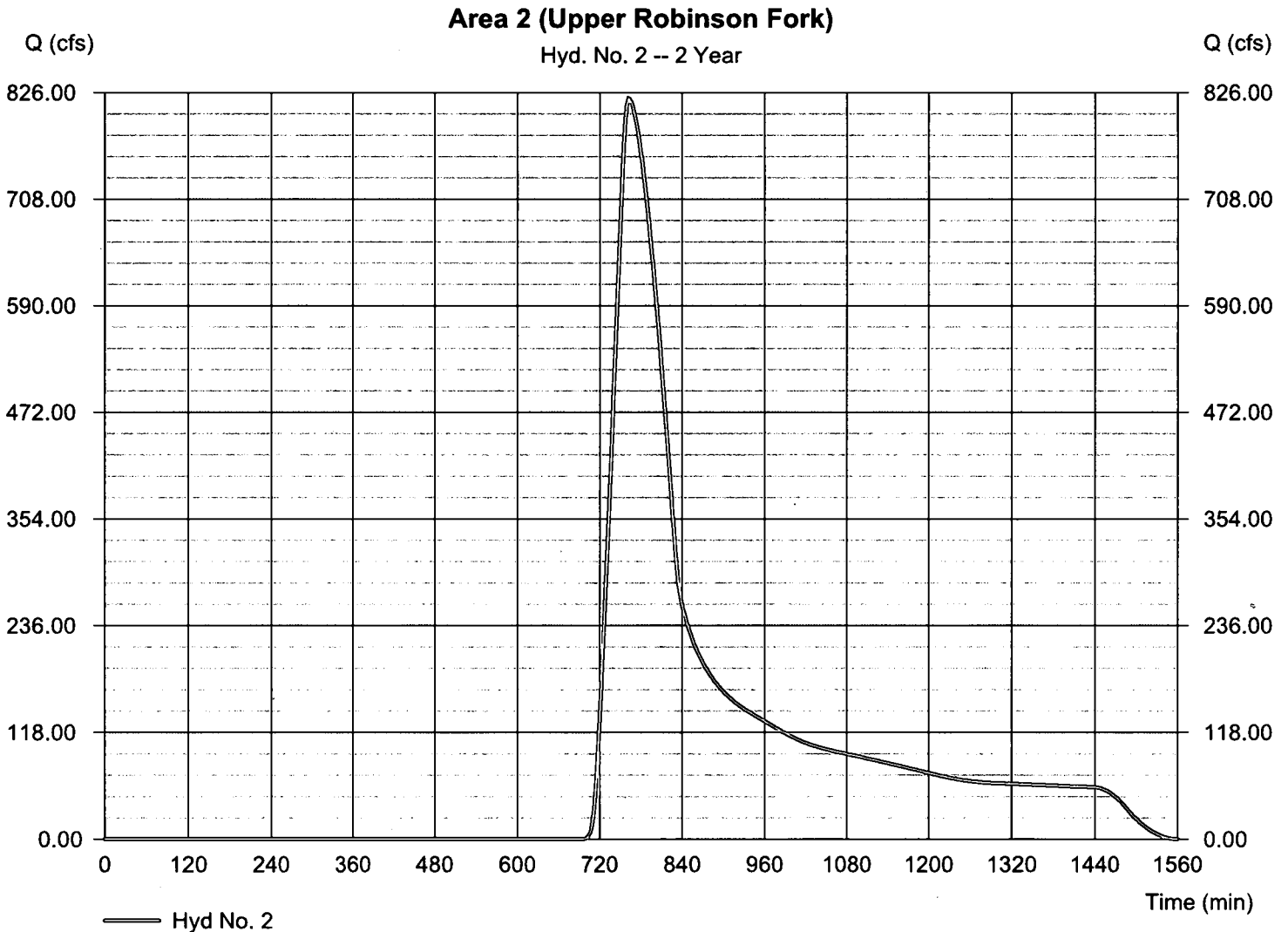
Tuesday, 03 / 11 / 2014

Hyd. No. 2

Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 819.58 cfs
Storm frequency	= 2 yrs	Time to peak	= 762 min
Time interval	= 2 min	Hyd. volume	= 7.722.694 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 2.56 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Tuesday, 03 / 11 / 2014

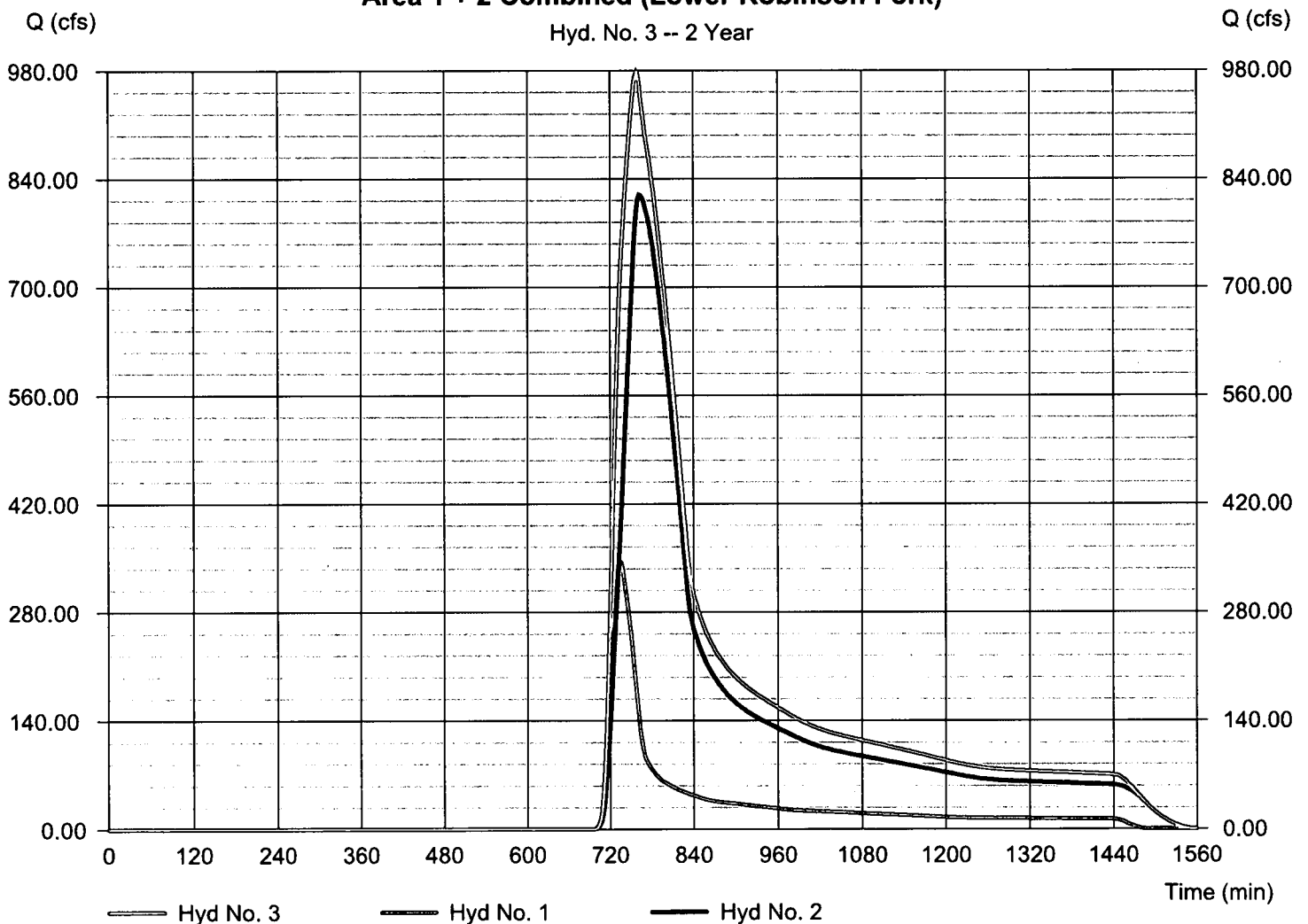
Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type	= Combine	Peak discharge	= 978.65 cfs
Storm frequency	= 2 yrs	Time to peak	= 758 min
Time interval	= 2 min	Hyd. volume	= 9.498.355 cuft
Inflow hyds.	= 1. 2	Contrib. drain. area	= 4367.650 ac

Area 1 + 2 Combined (Lower Robinson Fork)

Hyd. No. 3 -- 2 Year



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	573.86	2	734	2.719.381	----	----	----	Area 1 (Elkhorn Run)
2	SCS Runoff	1366.58	2	762	11.827.078	----	----	----	Area 2 (Upper Robinson Fork)
3	Combine	1617.87	2	758	14.546.466	1.2	----	----	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 5 Year			Tuesday, 03 / 11 / 2014	

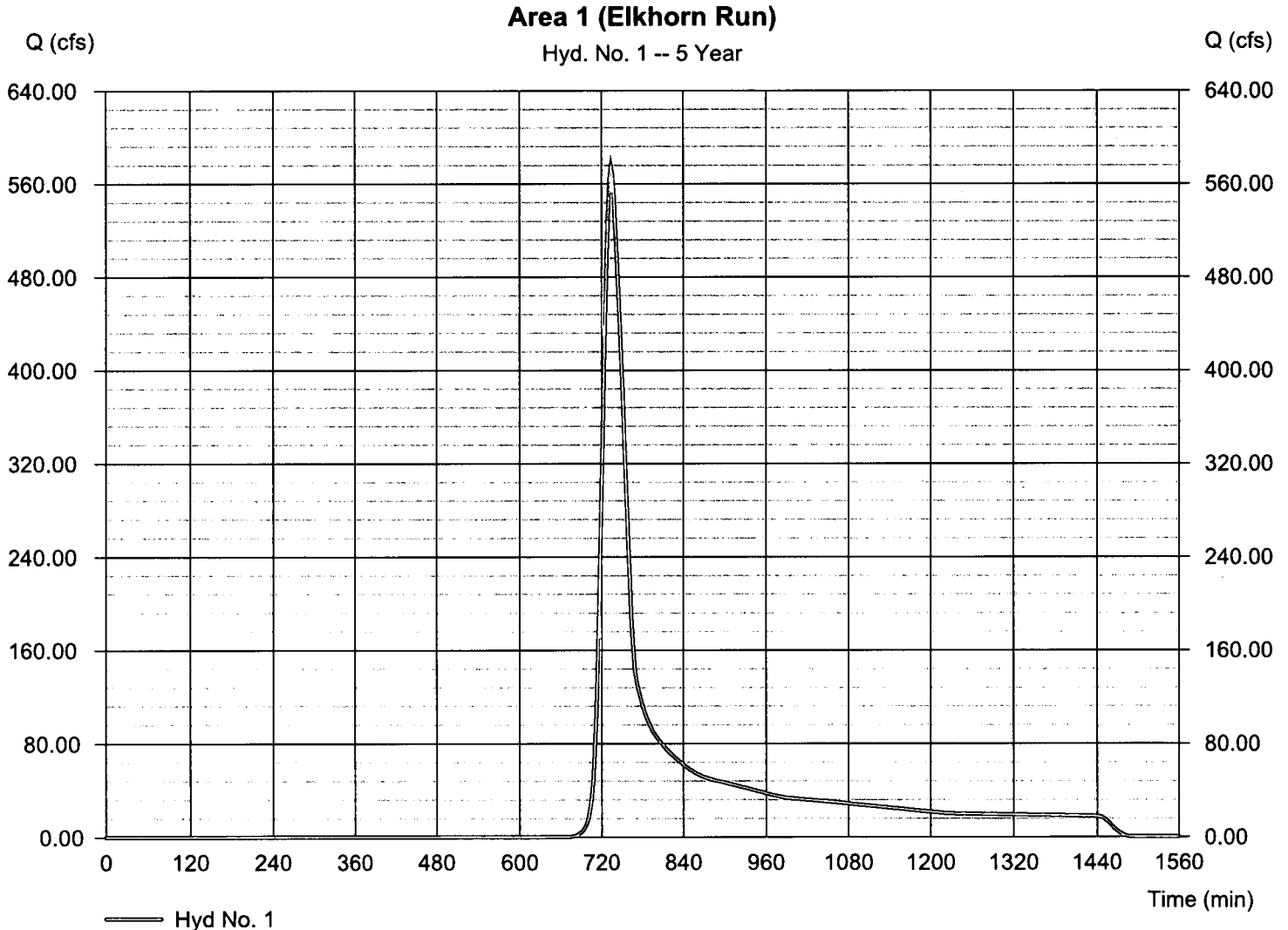
Hydrograph Report

Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type	= SCS Runoff	Peak discharge	= 573.86 cfs
Storm frequency	= 5 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 2,719.381 cuft
Drainage area	= 804.710 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 31.90 min
Total precip.	= 3.10 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



Hydrograph Report

Hyd. No. 2

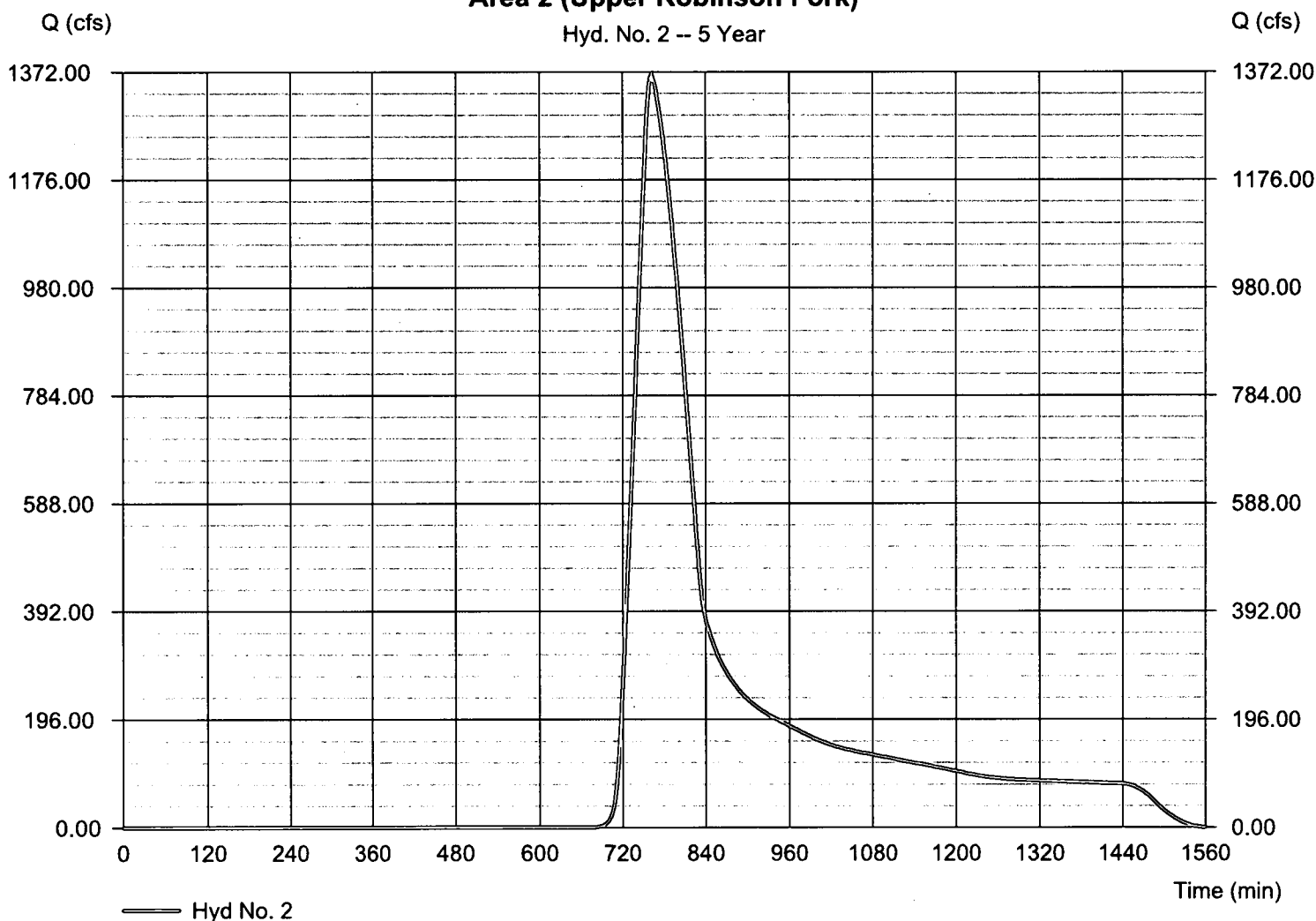
Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 1366.58 cfs
Storm frequency	= 5 yrs	Time to peak	= 762 min
Time interval	= 2 min	Hyd. volume	= 11.827.078 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 3.10 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940

Area 2 (Upper Robinson Fork)

Hyd. No. 2 -- 5 Year



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Tuesday, 03 / 11 / 2014

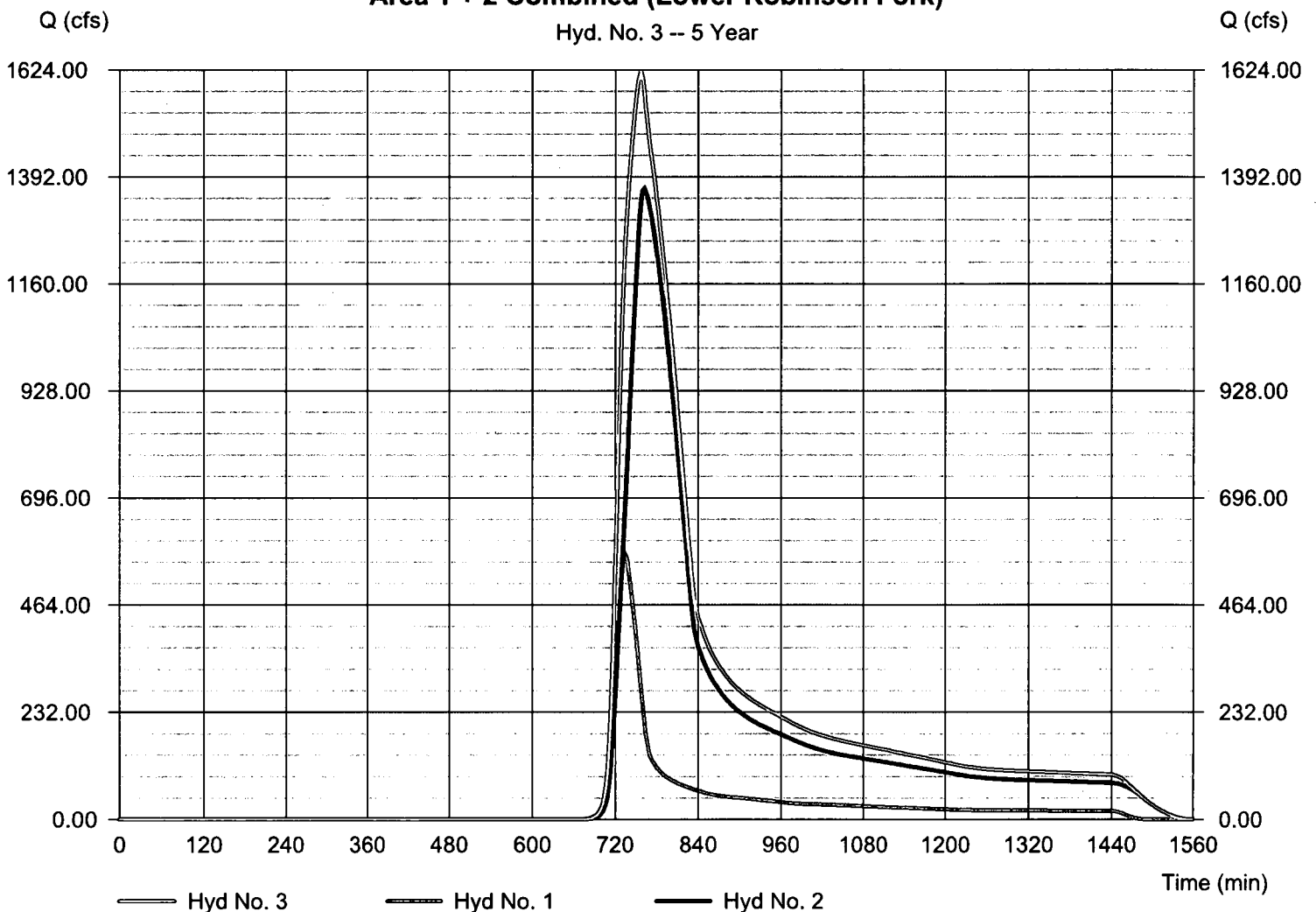
Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type	= Combine	Peak discharge	= 1617.87 cfs
Storm frequency	= 5 yrs	Time to peak	= 758 min
Time interval	= 2 min	Hyd. volume	= 14.546.466 cuft
Inflow hyds.	= 1. 2	Contrib. drain. area	= 4367.650 ac

Area 1 + 2 Combined (Lower Robinson Fork)

Hyd. No. 3 -- 5 Year



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	779.23	2	734	3.568.632	----	----	----	Area 1 (Elkhorn Run)
2	SCS Runoff	1865.39	2	762	15.520.635	----	----	----	Area 2 (Upper Robinson Fork)
3	Combine	2202.79	2	756	19.089.250	1. 2	----	----	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 10 Year			Tuesday, 03 / 11 / 2014	

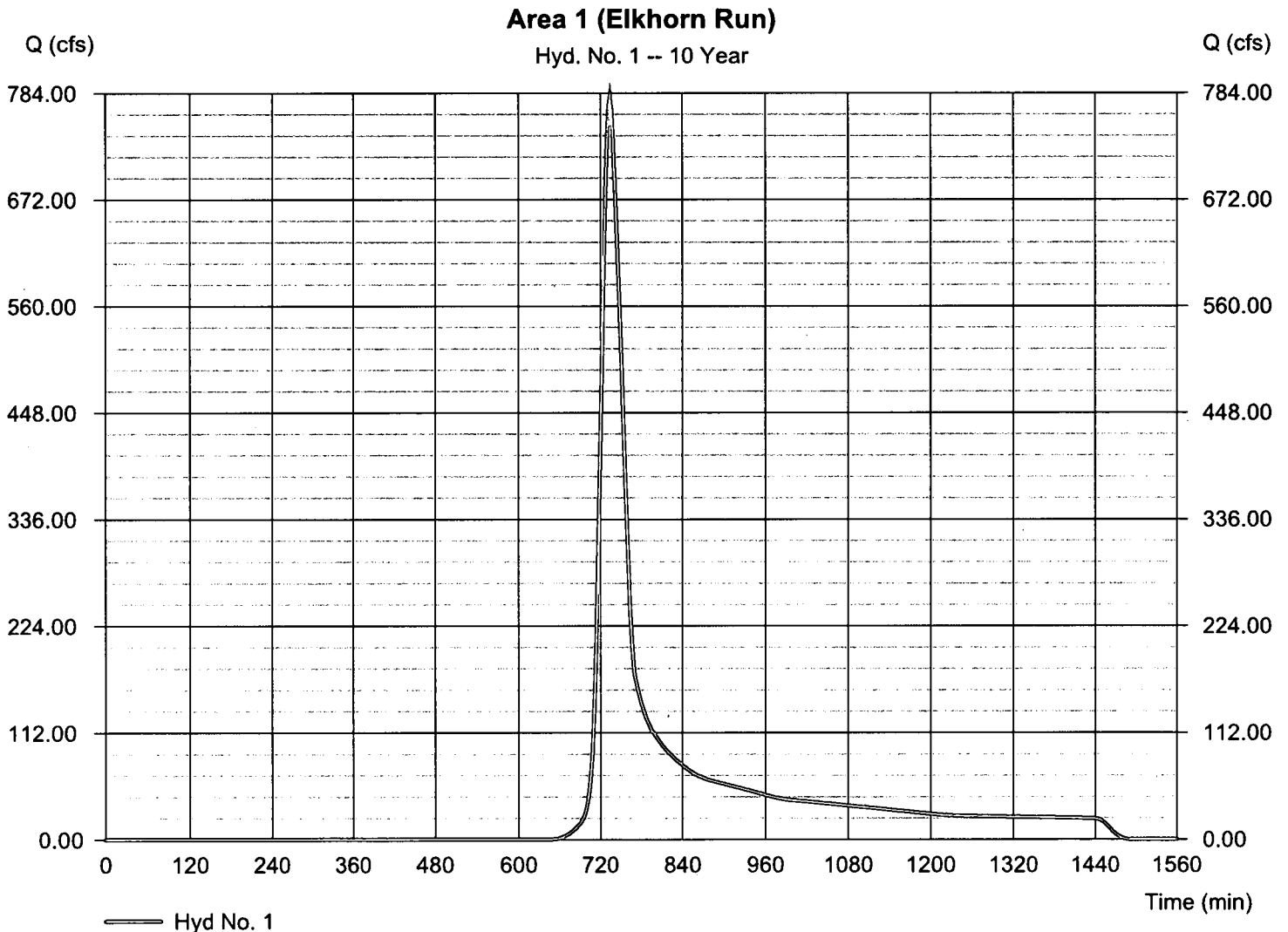
Hydrograph Report

Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type	= SCS Runoff	Peak discharge	= 779.23 cfs
Storm frequency	= 10 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 3,568.632 cuft
Drainage area	= 804.710 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 31.90 min
Total precip.	= 3.54 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



Hydrograph Report

Hyd. No. 2

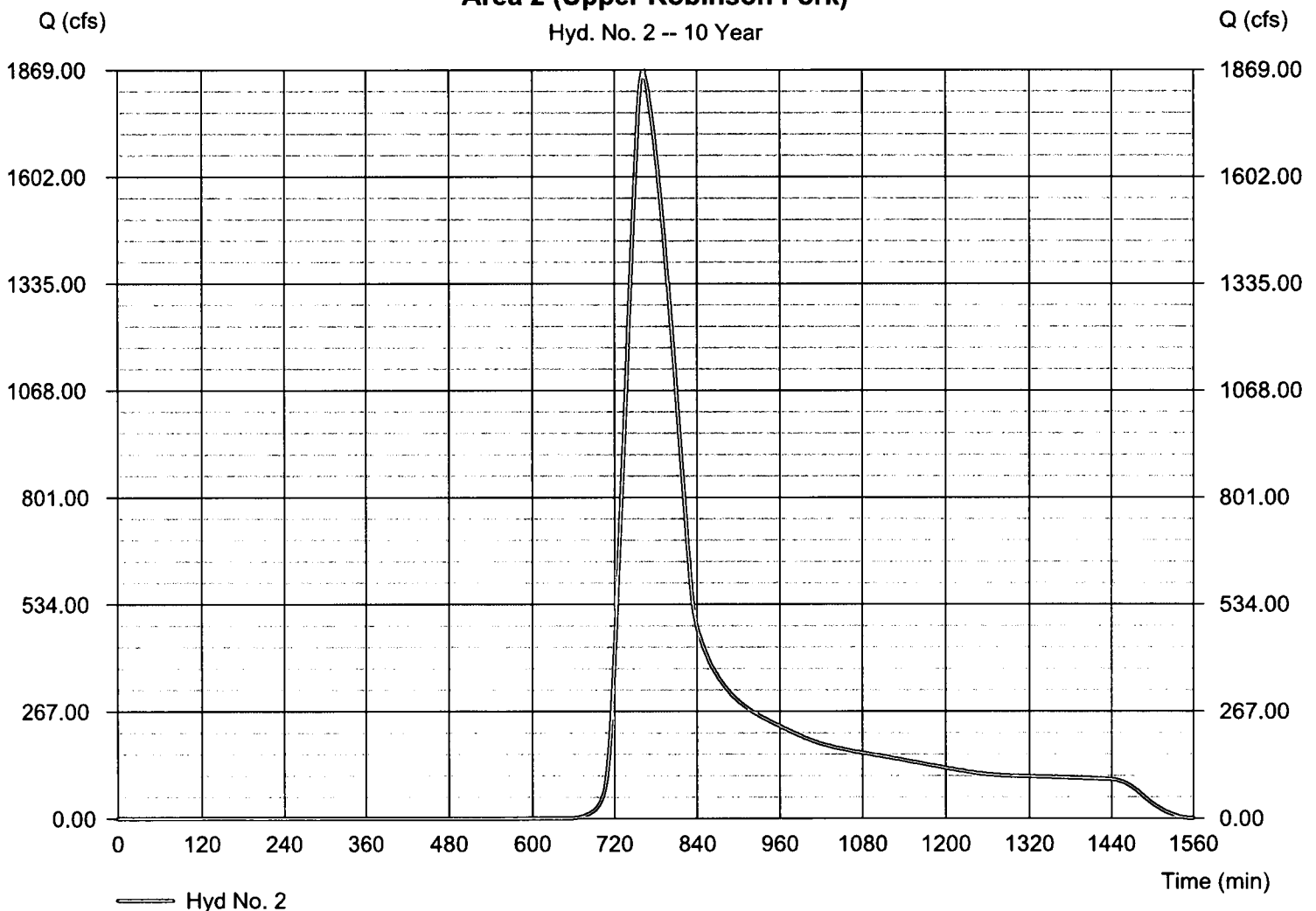
Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 1865.39 cfs
Storm frequency	= 10 yrs	Time to peak	= 762 min
Time interval	= 2 min	Hyd. volume	= 15,520.635 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 3.54 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940

Area 2 (Upper Robinson Fork)

Hyd. No. 2 -- 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Tuesday, 03 / 11 / 2014

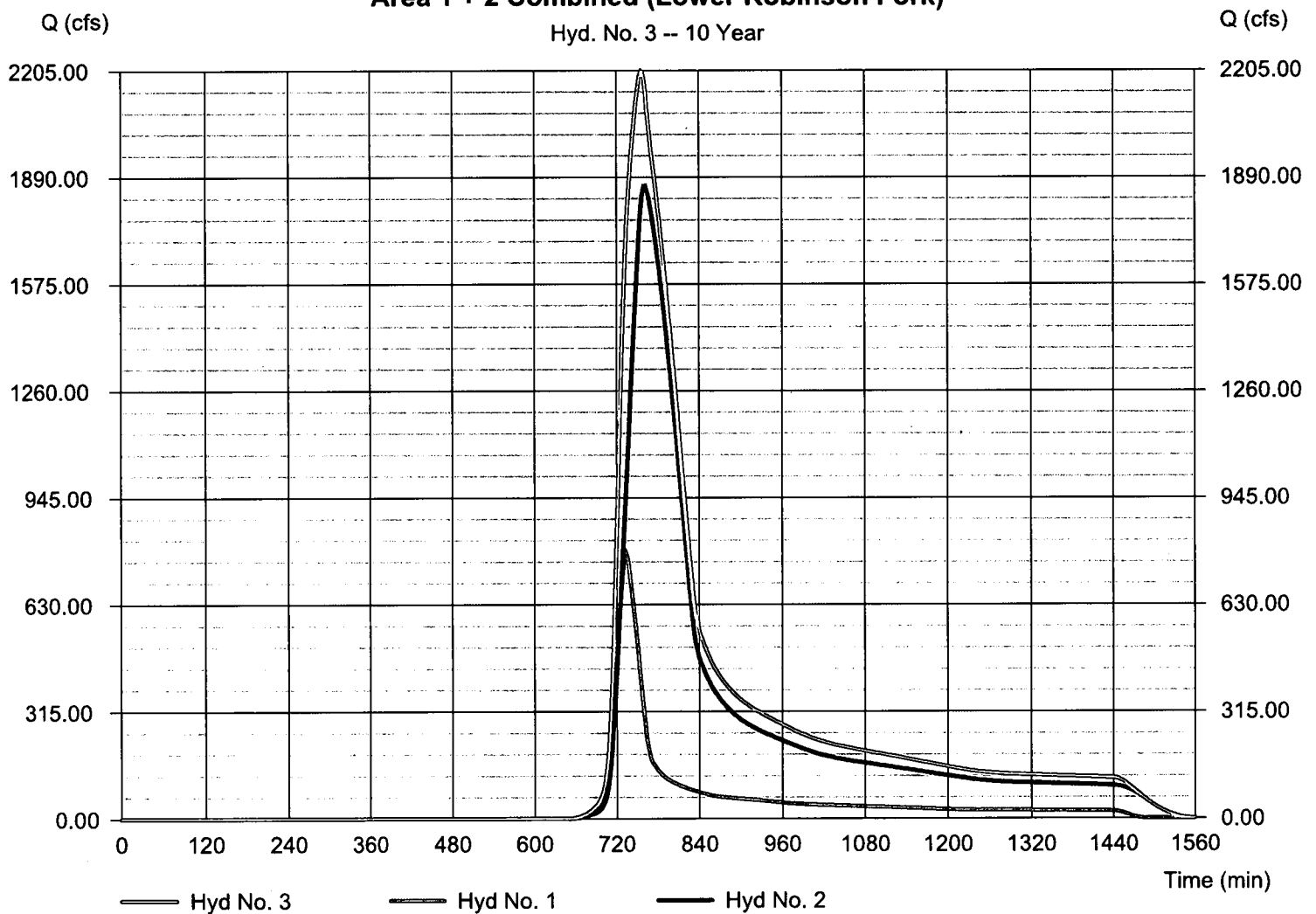
Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type	= Combine	Peak discharge	= 2202.79 cfs
Storm frequency	= 10 yrs	Time to peak	= 756 min
Time interval	= 2 min	Hyd. volume	= 19,089,250 cuft
Inflow hyds.	= 1. 2	Contrib. drain. area	= 4367.650 ac

Area 1 + 2 Combined (Lower Robinson Fork)

Hyd. No. 3 -- 10 Year



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1084.57	2	734	4.838.570	----	----	----	Area 1 (Elkhorn Run)
2	SCS Runoff	2613.74	2	760	21.043.802	----	----	----	Area 2 (Upper Robinson Fork)
3	Combine	3077.71	2	756	25.882.372	1. 2	----	----	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 25 Year			Tuesday, 03 / 11 / 2014	

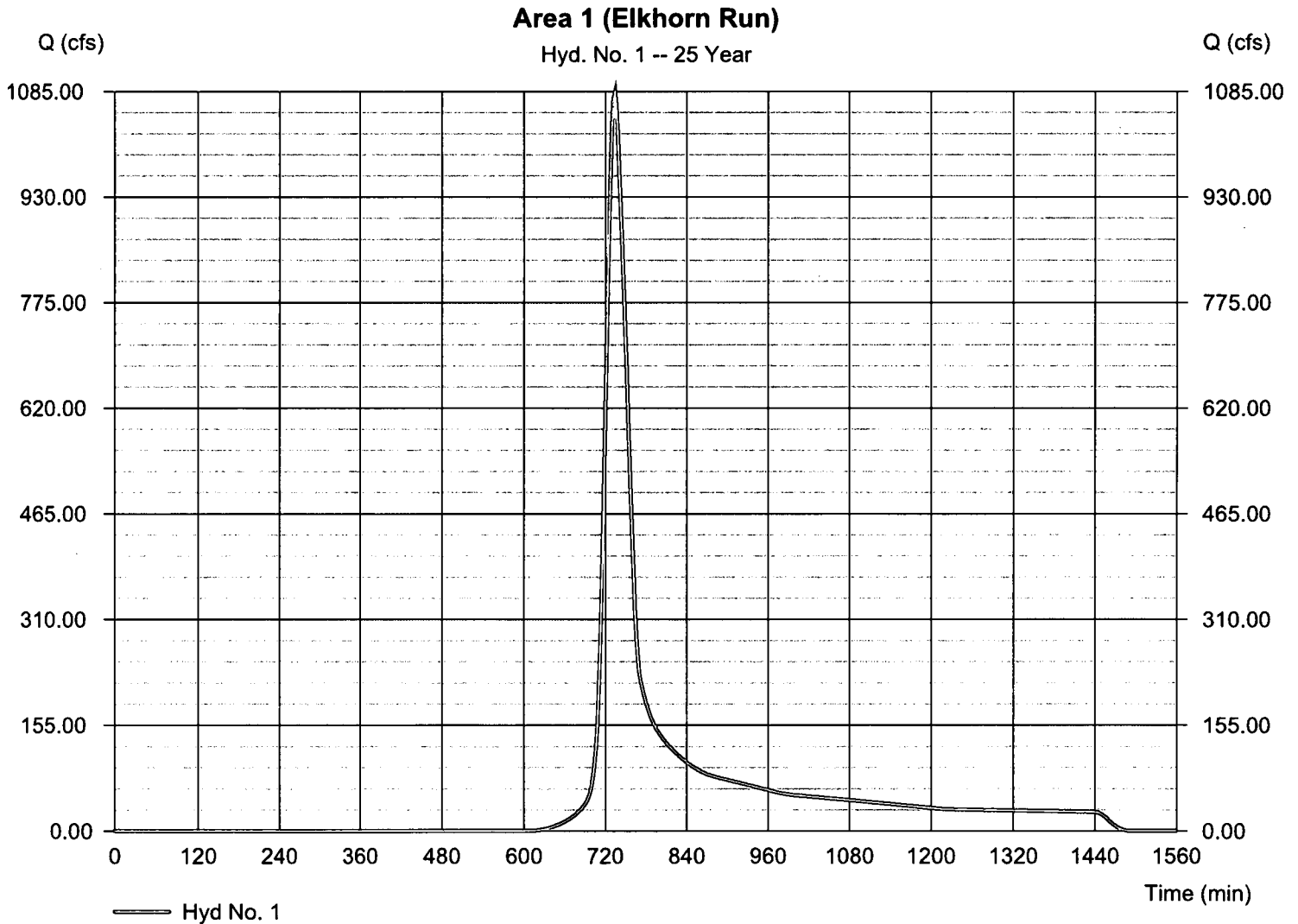
Hydrograph Report

Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type	= SCS Runoff	Peak discharge	= 1084.57 cfs
Storm frequency	= 25 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 4.838.570 cuft
Drainage area	= 804.710 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 31.90 min
Total precip.	= 4.15 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

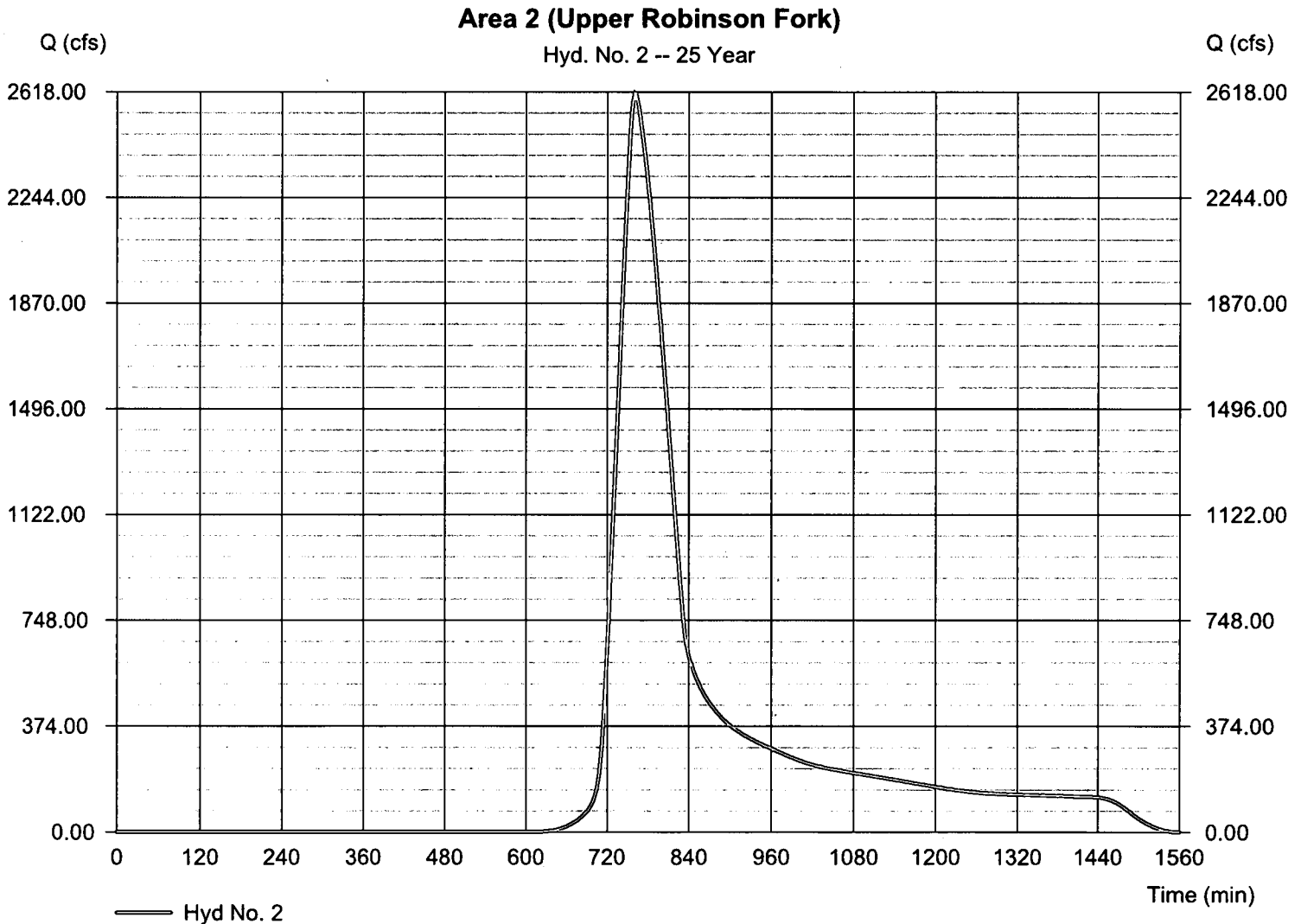
Tuesday, 03 / 11 / 2014

Hyd. No. 2

Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 2613.74 cfs
Storm frequency	= 25 yrs	Time to peak	= 760 min
Time interval	= 2 min	Hyd. volume	= 21,043.802 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 4.15 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Tuesday, 03 / 11 / 2014

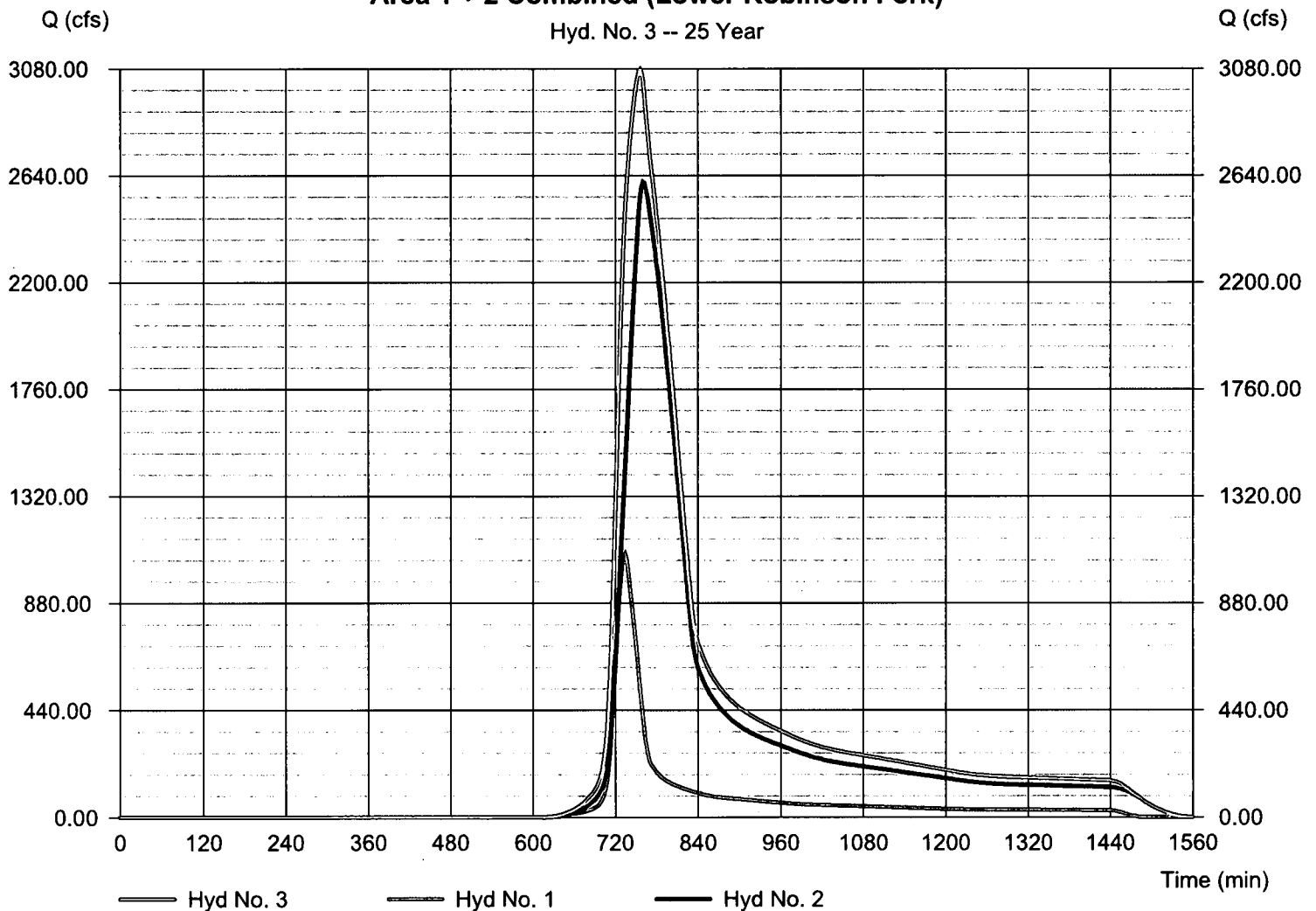
Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type	= Combine	Peak discharge	= 3077.71 cfs
Storm frequency	= 25 yrs	Time to peak	= 756 min
Time interval	= 2 min	Hyd. volume	= 25.882.372 cuft
Inflow hyds.	= 1. 2	Contrib. drain. area	= 4367.650 ac

Area 1 + 2 Combined (Lower Robinson Fork)

Hyd. No. 3 -- 25 Year



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1348.53	2	734	5.943.369	----	----	----	Area 1 (Elkhorn Run)
2	SCS Runoff	3263.57	2	760	25.848.814	----	----	----	Area 2 (Upper Robinson Fork)
3	Combine	3835.42	2	756	31.792.194	1.2	----	----	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 50 Year			Tuesday, 03 / 11 / 2014	

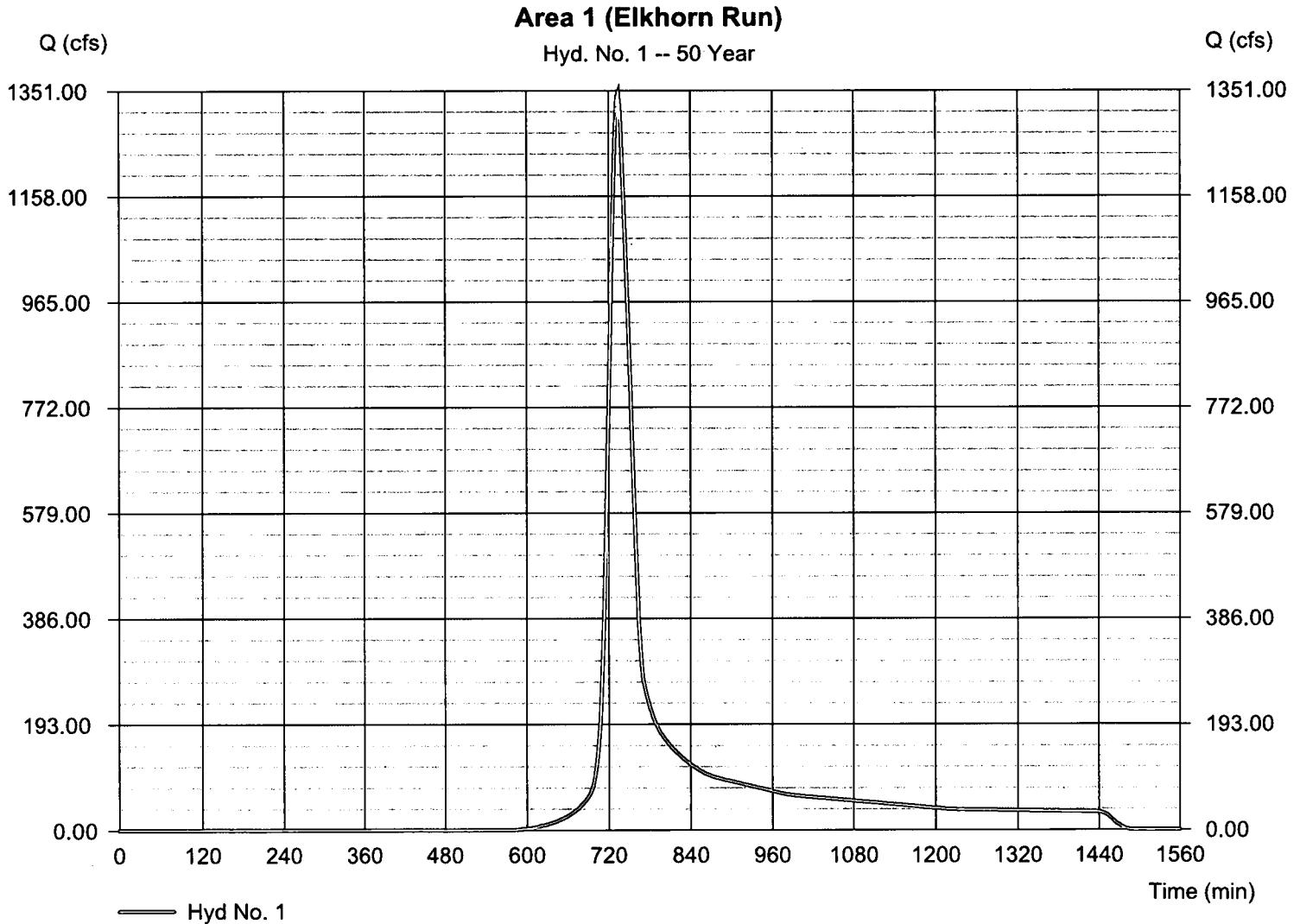
Hydrograph Report

Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type	= SCS Runoff	Peak discharge	= 1348.53 cfs
Storm frequency	= 50 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 5,943.369 cuft
Drainage area	= 804.710 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 31.90 min
Total precip.	= 4.65 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Tuesday, 03 / 11 / 2014

Hyd. No. 2

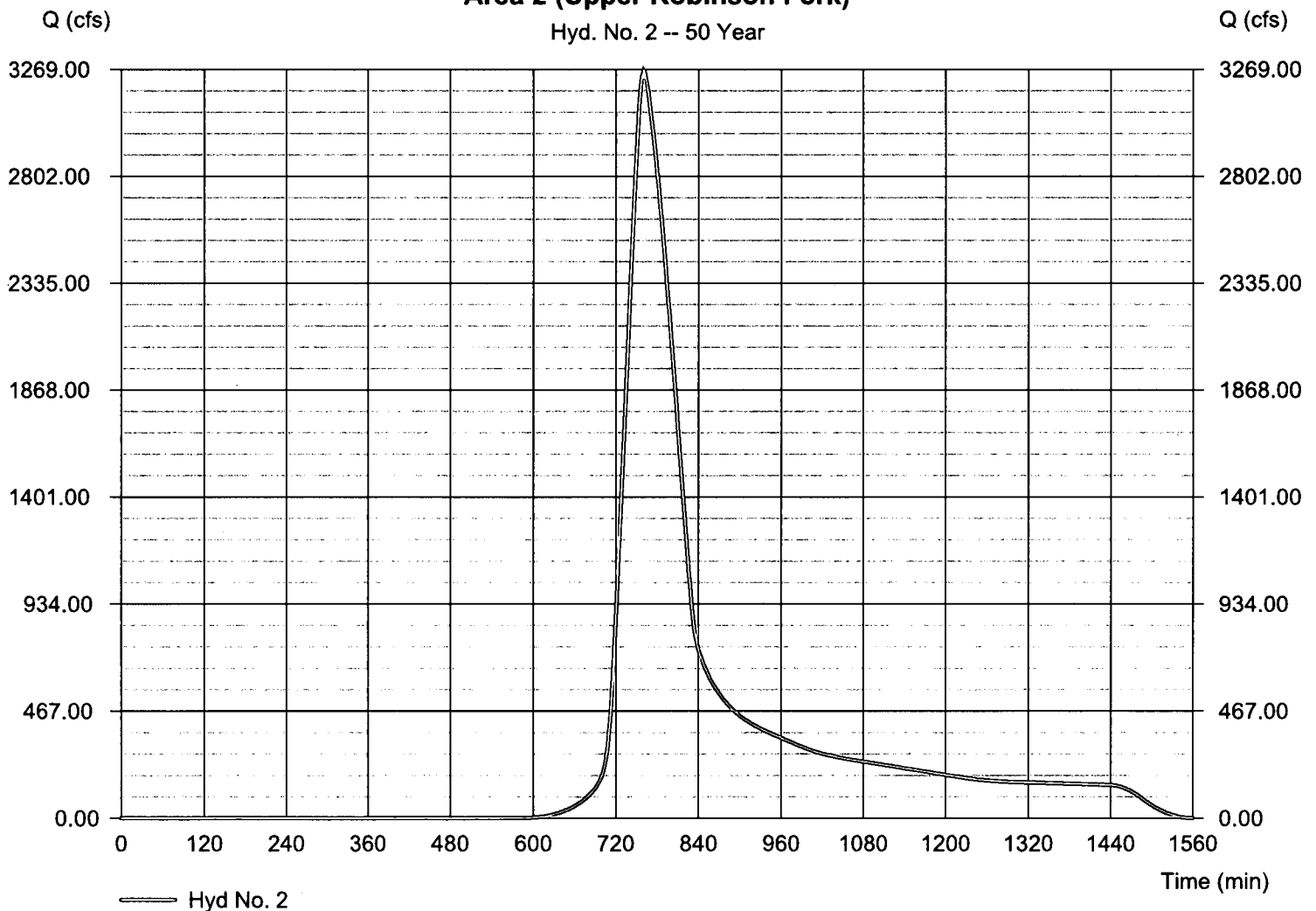
Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 3263.57 cfs
Storm frequency	= 50 yrs	Time to peak	= 760 min
Time interval	= 2 min	Hyd. volume	= 25.848.814 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 4.65 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940

Area 2 (Upper Robinson Fork)

Hyd. No. 2 -- 50 Year



Hydrograph Report

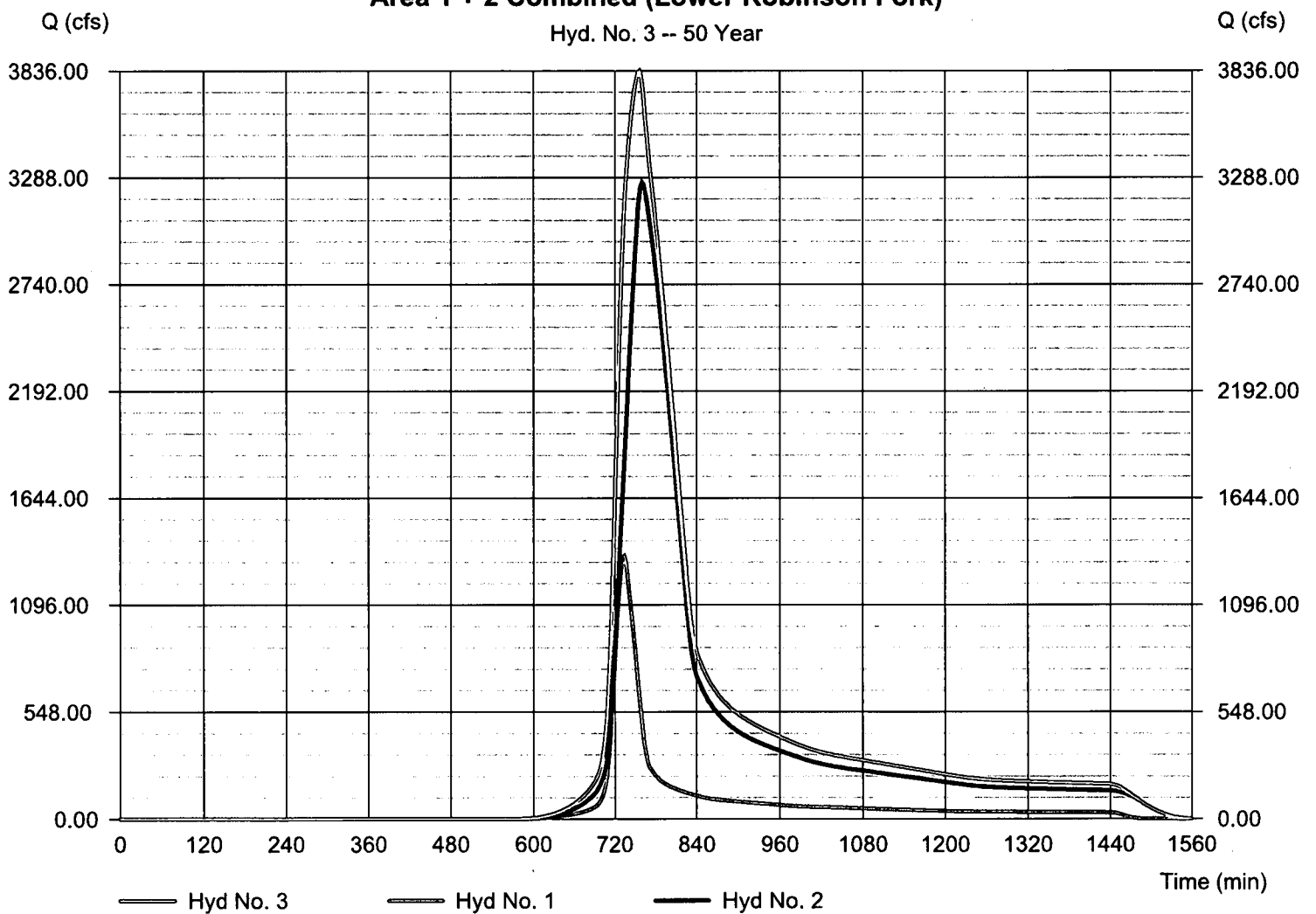
Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type	= Combine	Peak discharge	= 3835.42 cfs
Storm frequency	= 50 yrs	Time to peak	= 756 min
Time interval	= 2 min	Hyd. volume	= 31.792.194 cuft
Inflow hyds.	= 1. 2	Contrib. drain. area	= 4367.650 ac

Area 1 + 2 Combined (Lower Robinson Fork)

Hyd. No. 3 -- 50 Year



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1627.46	2	734	7.117.730	----	----	----	Area 1 (Elkhorn Run)
2	SCS Runoff	3951.83	2	760	30.956.314	----	----	----	Area 2 (Upper Robinson Fork)
3	Combine	4637.23	2	756	38.074.064	1.2	----	----	Area 1 + 2 Combined (Lower Robinso
HYDROFLOW FILE.gpw					Return Period: 100 Year		Tuesday, 03 / 11 / 2014		

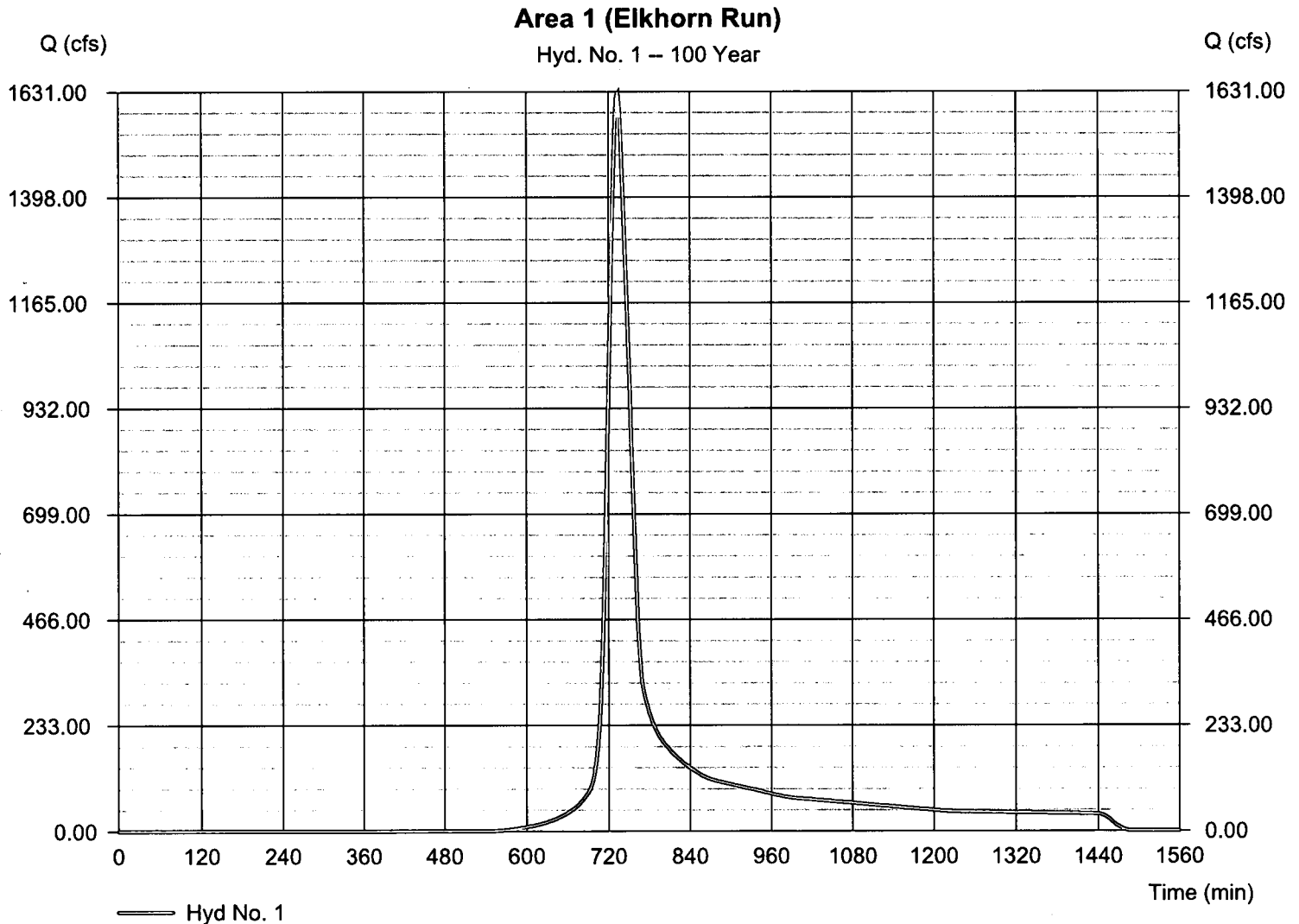
Hydrograph Report

Hyd. No. 1

Area 1 (Elkhorn Run)

Hydrograph type	= SCS Runoff	Peak discharge	= 1627.46 cfs
Storm frequency	= 100 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 7,117.730 cuft
Drainage area	= 804.710 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 31.90 min
Total precip.	= 5.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(13.400 x 78) + (7.600 x 30) + (91.550 x 71) + (2.920 x 82) + (44.000 x 43) + (645.240 x 76)] / 804.710



Hydrograph Report

Hyd. No. 2

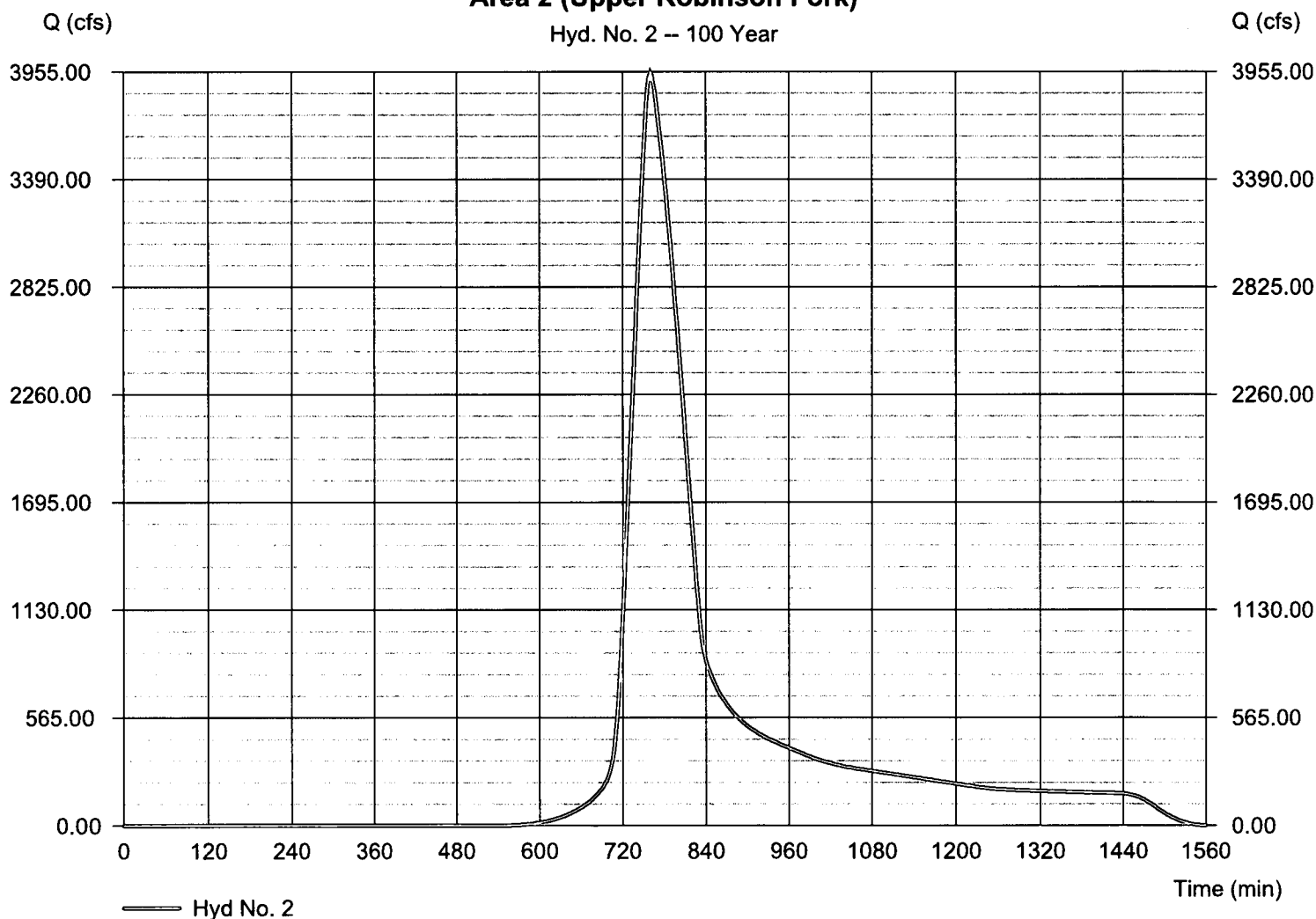
Area 2 (Upper Robinson Fork)

Hydrograph type	= SCS Runoff	Peak discharge	= 3951.83 cfs
Storm frequency	= 100 yrs	Time to peak	= 760 min
Time interval	= 2 min	Hyd. volume	= 30.956.314 cuft
Drainage area	= 3562.940 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 77.60 min
Total precip.	= 5.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(5.400 x 78) + (76.200 x 30) + (429.400 x 71) + (16.030 x 82) + (185.210 x 43) + (2850.700 x 76)] / 3562.940

Area 2 (Upper Robinson Fork)

Hyd. No. 2 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Tuesday, 03 / 11 / 2014

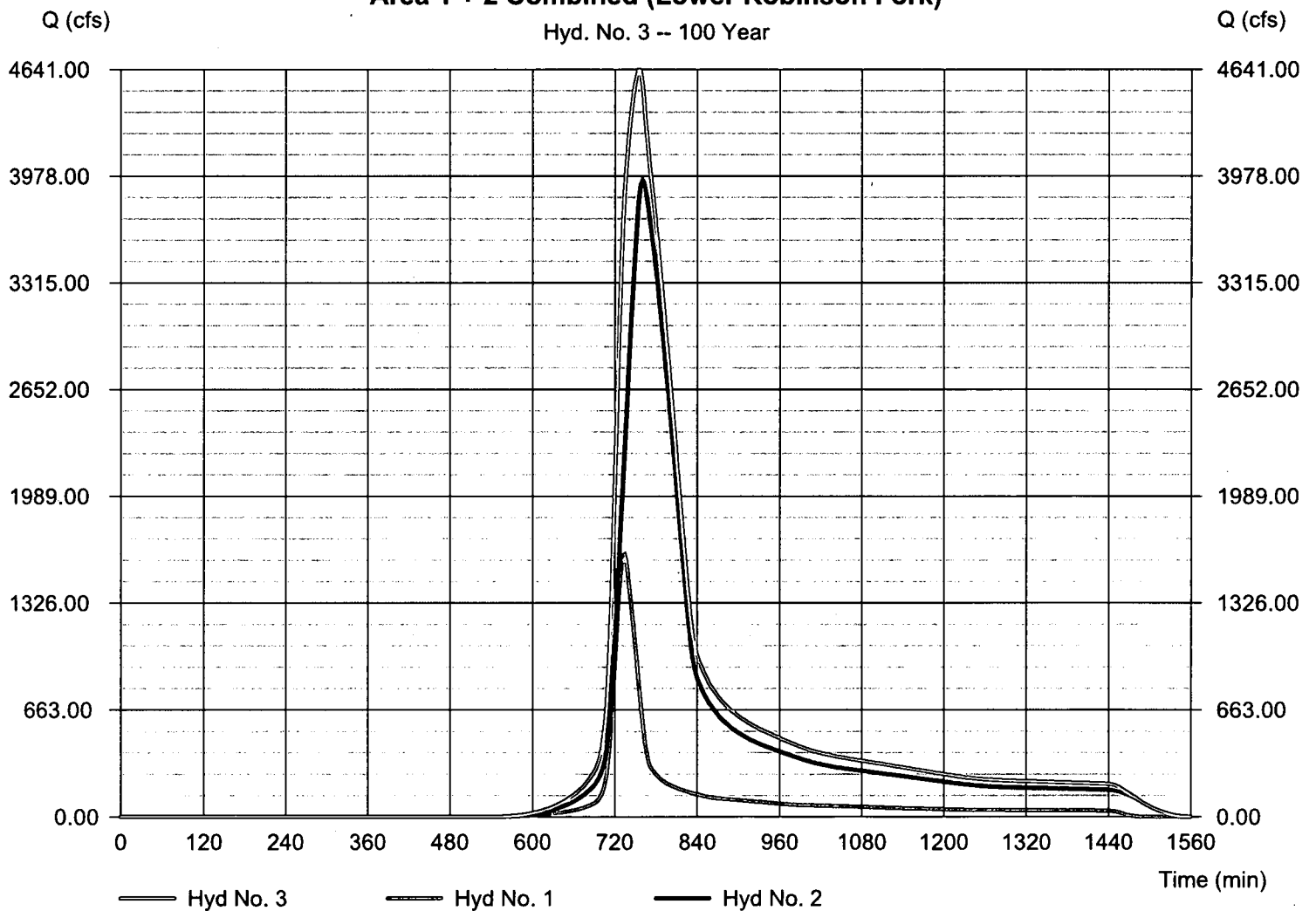
Hyd. No. 3

Area 1 + 2 Combined (Lower Robinson Fork)

Hydrograph type	= Combine	Peak discharge	= 4637.23 cfs
Storm frequency	= 100 yrs	Time to peak	= 756 min
Time interval	= 2 min	Hyd. volume	= 38.074.064 cuft
Inflow hyds.	= 1. 2	Contrib. drain. area	= 4367.650 ac

Area 1 + 2 Combined (Lower Robinson Fork)

Hyd. No. 3 -- 100 Year





SEAL	DATE	MARCH 11, 2014
	JOB NO.	713009.01
	FILE NAME	LDP-FL-ES01
	SCALE	1" = 30'
	SITE NAME	



COUNTY
 DODDRIDGE COUNTY

MARKWEST TO
 BOBCAT

CROSS-SECTION LOCATIONS
 for
 FLOODPLAIN PERMIT
 APPLICATION

DOCUMENT PREPARED BY:

11 Grandview Circle
 Suite 116
 Canonsburg, PA 15317
 T: 724.746.0730
 F: 724.746.0732

DOCUMENT PREPARED FOR:



METER PAD VOLUMES
CUT VOLUME = 0 C.Y.
FILL VOLUME = 4,400 C.Y.
NET VOLUME = 4,400 C.Y. FILL
TOPSOIL VOLUME = 910 C.Y.
STONE IMPORT = 673 C.Y.

FIELD GPS POINT
NAD83
N39.355572
W80.573186

PROPOSED METER PAD LOCATION
NAD83
N39.355679
W80.573204
ELEVATION: 857.0'

2:1 FILL SLOPE

EXISTING 100YR FLOOD BOUNDARY (FEMA AND HEC-RAS CONFIRMED)

WETLAND

EXISTING CULVERT UNDER SR23

EX. 100YR FLOOD ELEVATION = 856'
NEW FLOOD ELEVATION = 856.5'

STATE ROUTE 23

E&S LEGEND

Existing Meter Pad

- Existing Meter Pad Centerline
- Existing Meter Pad Edge of Pavement
- Existing Meter Pad Edge of Right-of-Way
- Existing Meter Pad Right-of-Way
- Existing Meter Pad Shoulder
- Existing Meter Pad Shoulder
- Existing Meter Pad Shoulder
- Existing Meter Pad Shoulder
- Existing Meter Pad Shoulder
- Existing Meter Pad Shoulder

Proposed Meter Pad

- Proposed Meter Pad Centerline
- Proposed Meter Pad Edge of Pavement
- Proposed Meter Pad Edge of Right-of-Way
- Proposed Meter Pad Right-of-Way
- Proposed Meter Pad Shoulder
- Proposed Meter Pad Shoulder
- Proposed Meter Pad Shoulder
- Proposed Meter Pad Shoulder
- Proposed Meter Pad Shoulder
- Proposed Meter Pad Shoulder

Proposed Meter Pad Construction

- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction

Proposed Meter Pad Construction

- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction

Proposed Meter Pad Construction

- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction

Proposed Meter Pad Construction

- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction

Proposed Meter Pad Construction

- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction
- Proposed Meter Pad Construction



DATE MARCH 11, 2014
JOB NO. 713009.01
FILE NAME LDP-FL-ES01
DRAWN BY GJM
CHECKED BY GJM
PROJECT NAME MARKWEST TO BOBCAT
COUNTY COONROCK COUNTY

PIPELINE PLAN
FOR
ANTERO RESOURCES

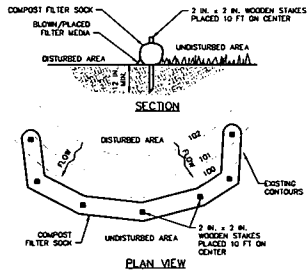
DOCUMENT PREPARED BY:

DAWOOD

2000 Good Hope Road
Etnah, PA 17025-0246
P: 717.732.8576
F: 717.728.8914

DOCUMENT PREPARED FOR:

Antero



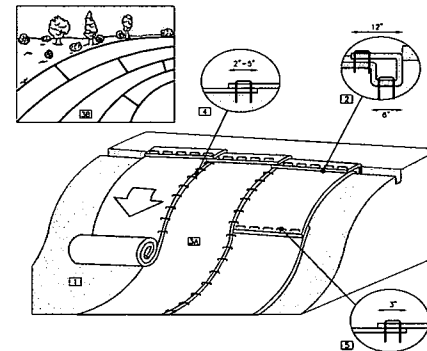
NOTES:

1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE CROWN HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS. PHOTOGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MESH SPREAD AS A SOIL SUPPLEMENT.

TABLE 4.2
COMPOST STANDARDS

ORGANIC MATTER CONTENT	ROCK-LOOK (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND FLOCCULATED
PH	3.5-5.0
MOISTURE CONTENT	30-50%
PARTICLE SIZE	80% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0% MAXIMUM

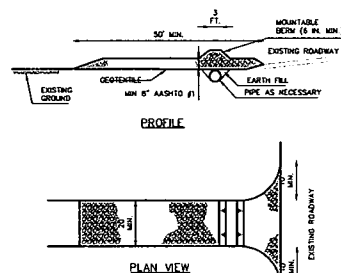
COMPOST FILTER SOCK
NOT TO SCALE



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (REPCS), INCLUDING ANY NECESSARY APPLICATION OF LIQUID FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE REPCS IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF REPCS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE REPCS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF REPCS BACK OVER THE SEED AND COMPACTED SOIL. SECURE REPCS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE REPCS.
3. ROLL THE REPCS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. REPCS WILL UNROLL WITH APPROPRIATE SOIL AGAINST THE SOIL SURFACE. ALL REPCS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL REPCS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON THE REPCS TYPE.
5. CONSECUTIVE REPCS SPACED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE REPCS WIDTH.

NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE REPCS.

SLOPE LINING
NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

- NOTES:**
- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
 - ROCKSET SHALL BE OVERLAP FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 - MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CURBPIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF BITCH BEING CROSSED.
 - MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SHEDDING THE DEPOSITS INTO ROADWAY DITCHES, CREEKS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



2000 Canal Road, Suite 1000
Denver, Colorado 80202
P: 303.733.2878
F: 717.726.8914



PIPELINE PLAN
FOR
ANTERO RESOURCES

DATE: MARCH 11, 2014
JOB NO.: 713000.01
FILE NAME: LOP-FL-E501
SCALE: AS NOTED
DRAWN BY: DSM
CHECKED BY: SM

PROJECT NAME:
MARKWEST TO BOBCAT

COUNTY:
DODDRIDGE COUNTY

HEC-RAS Summary Table

124-178

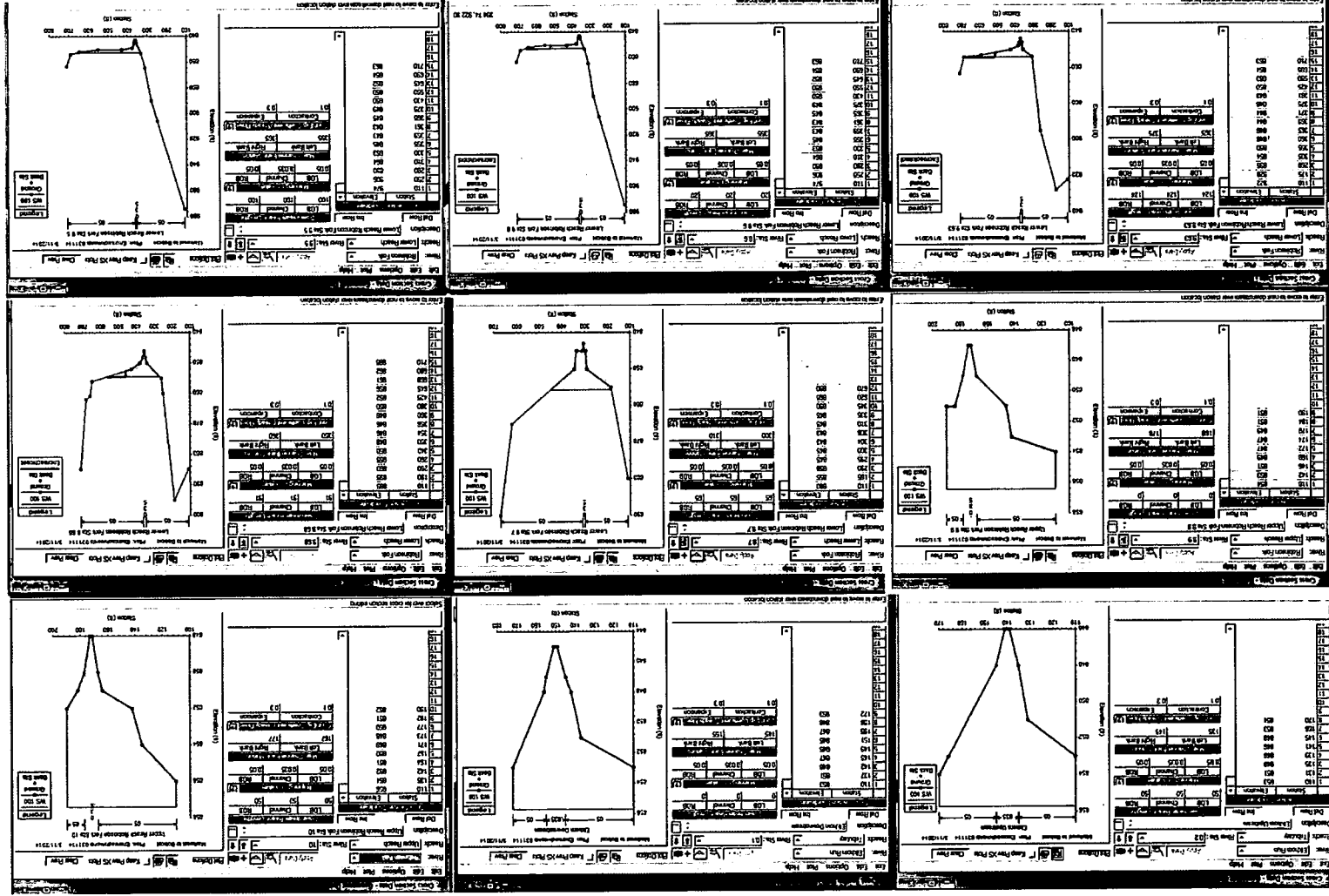
Antero
Markwest to Bobcat

HEC-RAS River Station	Station Location Description	Pre- Development 100-year Flood Elev. (ft)	Post Development 100-year Flood Elev. (ft)	Increase in 100-year Flood Elev. (ft)
9.7	At Existing Structure East of Pad	855.6	855.9	0.3
9.68	Through Pad	854.3	854.5	0.2
9.63	Through Pad	854.0	854.4	0.4
9.6	Through Pad	853.0	853.2	0.2
9.5	Beyond Pad Downstream	853.0	853.1	0.1

Note: The maximum increase in 100-year Flood Elevation is 0.4 ft. This amount is less than the allowable 1.0 ft increase and is therefore acceptable.

HEC-RAS Section Data

ACTRICE MATHEMATICS TO MODEL
FLOODING APPLICATION
MCA AND FIGURE
CROSS SECTION DATA
DANWOOD ENGINEERING, INC.



HEC-RAS Flow Data

File Options Help

Enter/Edit Number of Profiles (25000 max): Reach Boundary Conditions ...

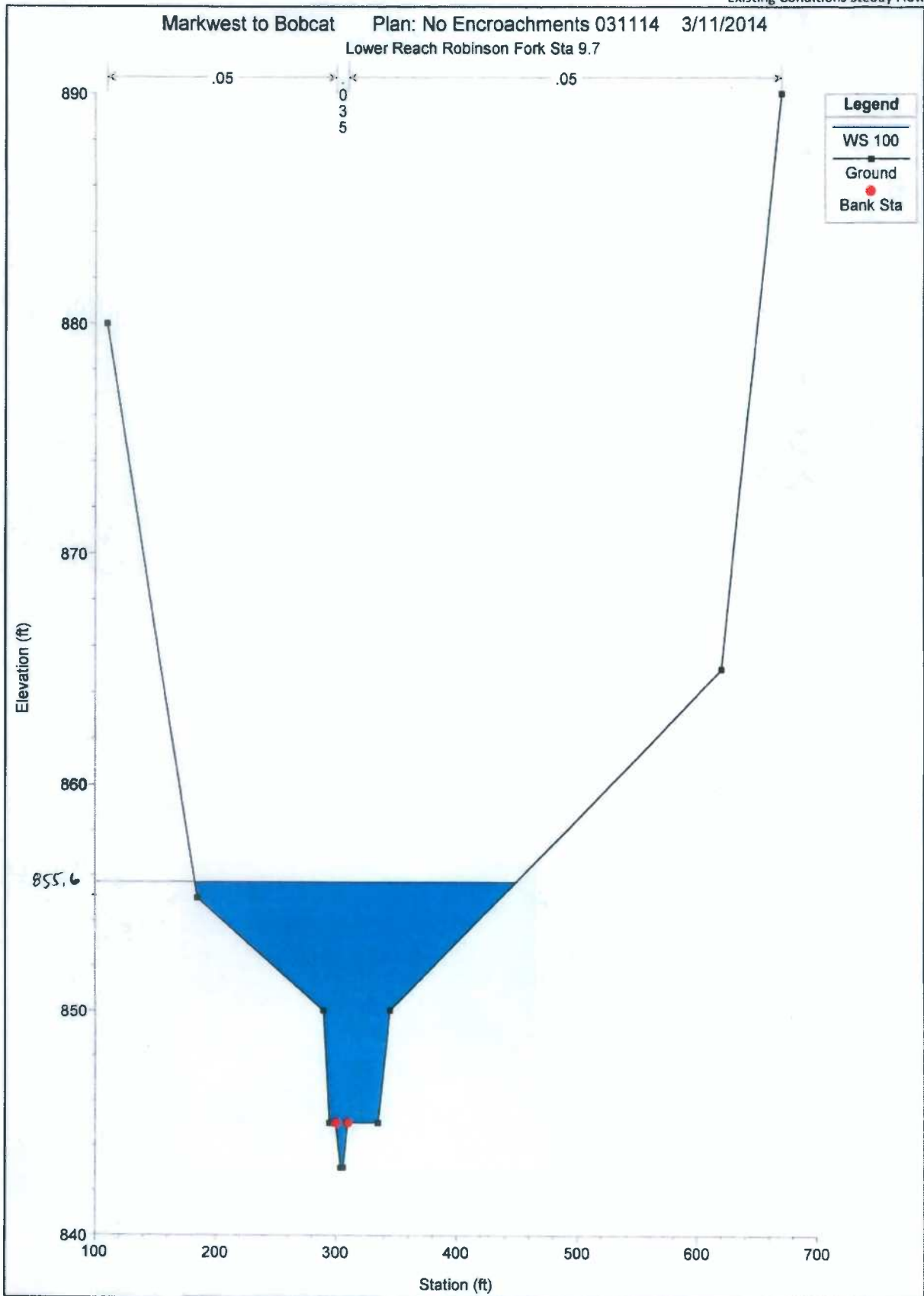
Locations of Flow Data Changes

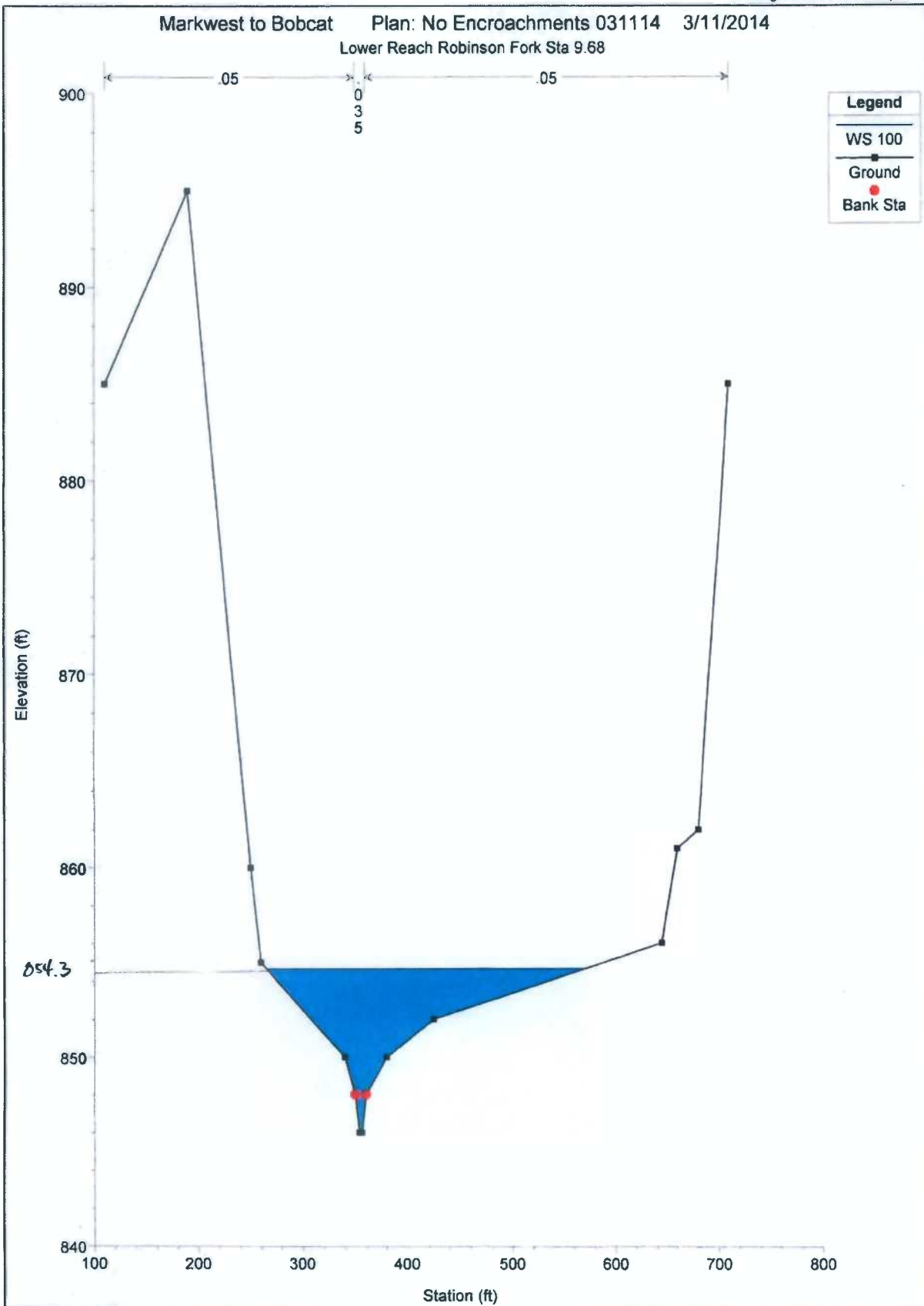
River:

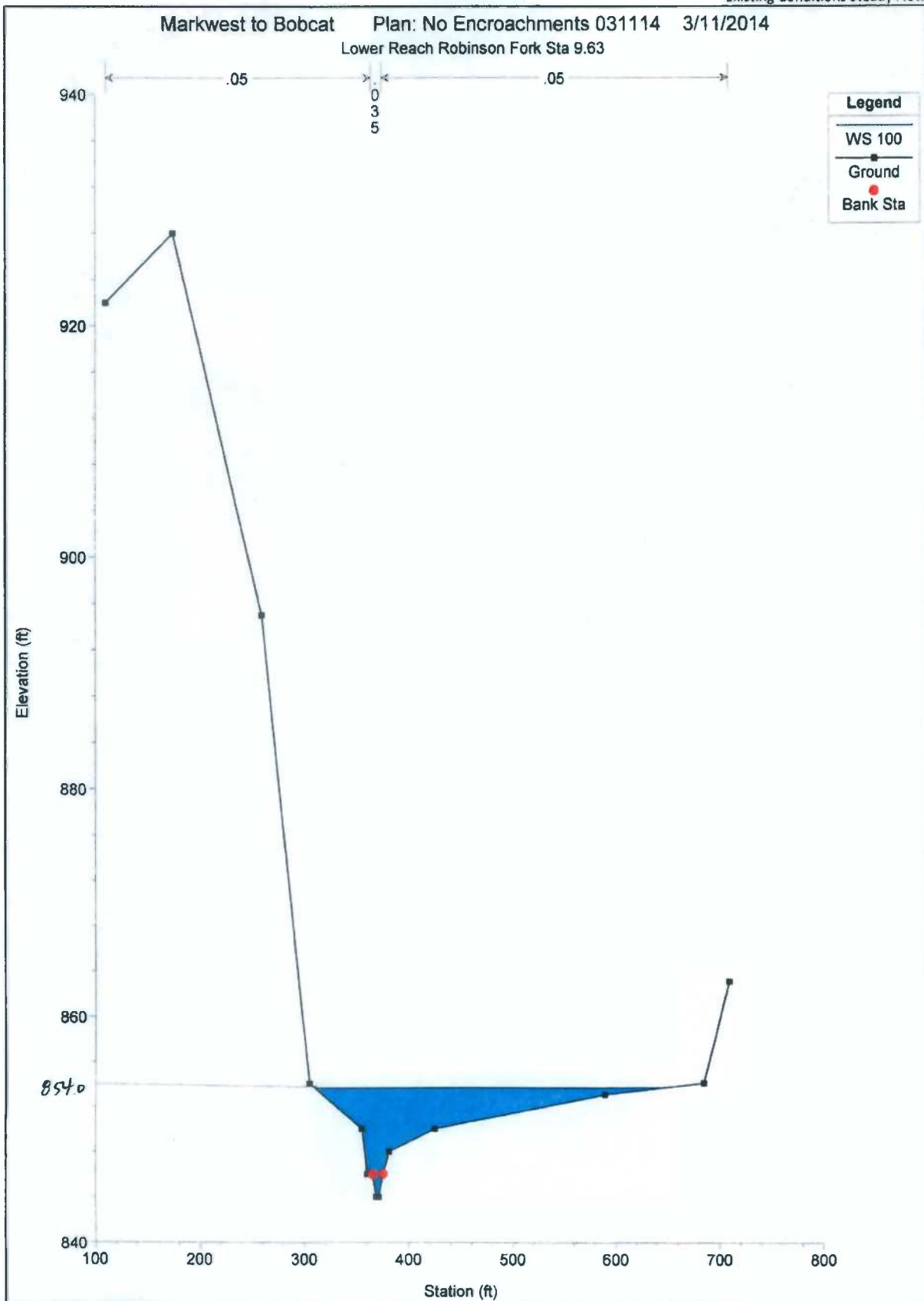
Reach: River Sta.:

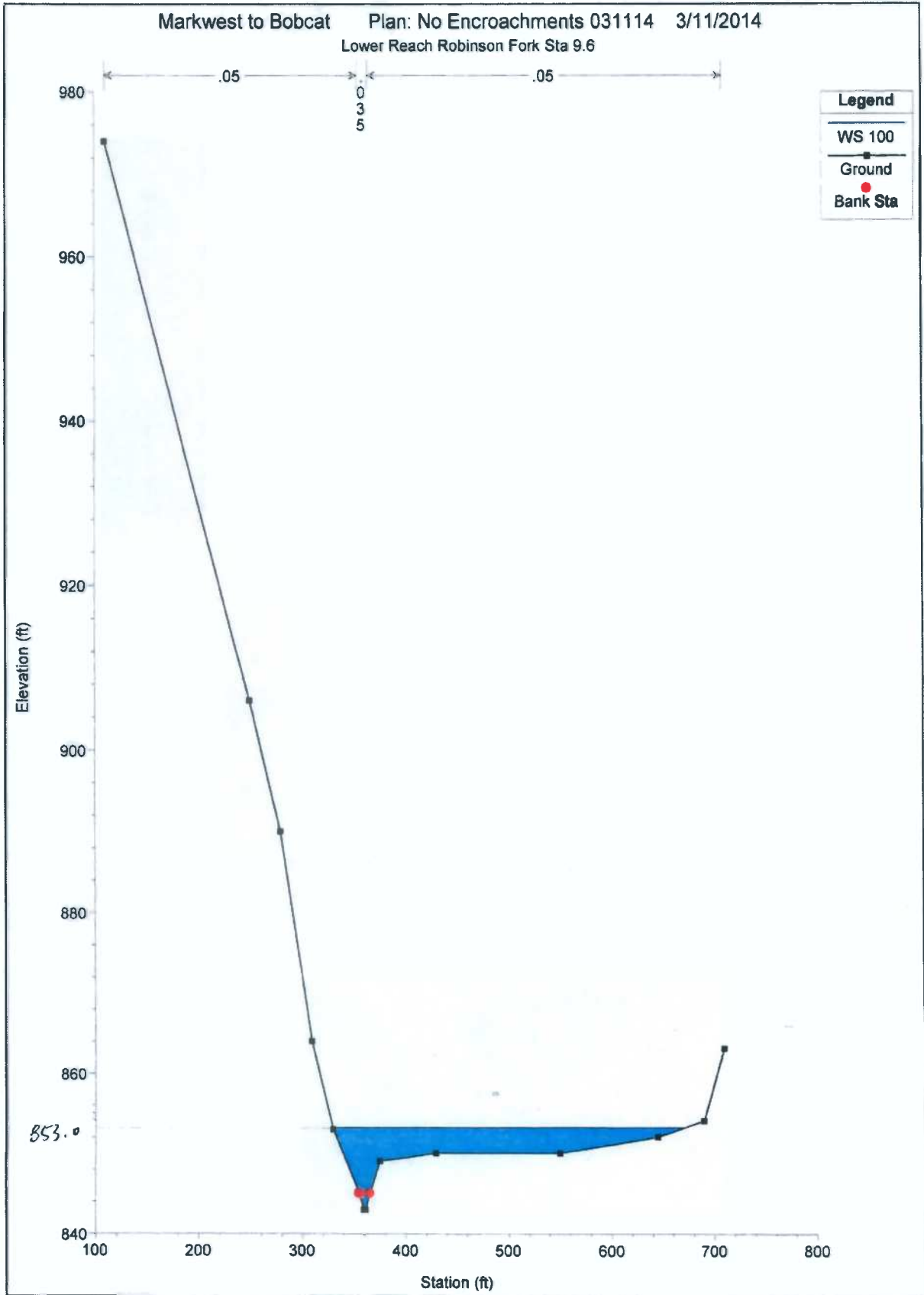
Flow Change Location			Profile Name and Flow Rate			
	River	Reach	RS	2	10	100
1	Elkhorn Run	Tributary	0.2	344	779	1627
2	Robinson Fork	Upper Reach	10	819	1865	3952
3	Robinson Fork	Lower Reach	9.7	979	2202	4637

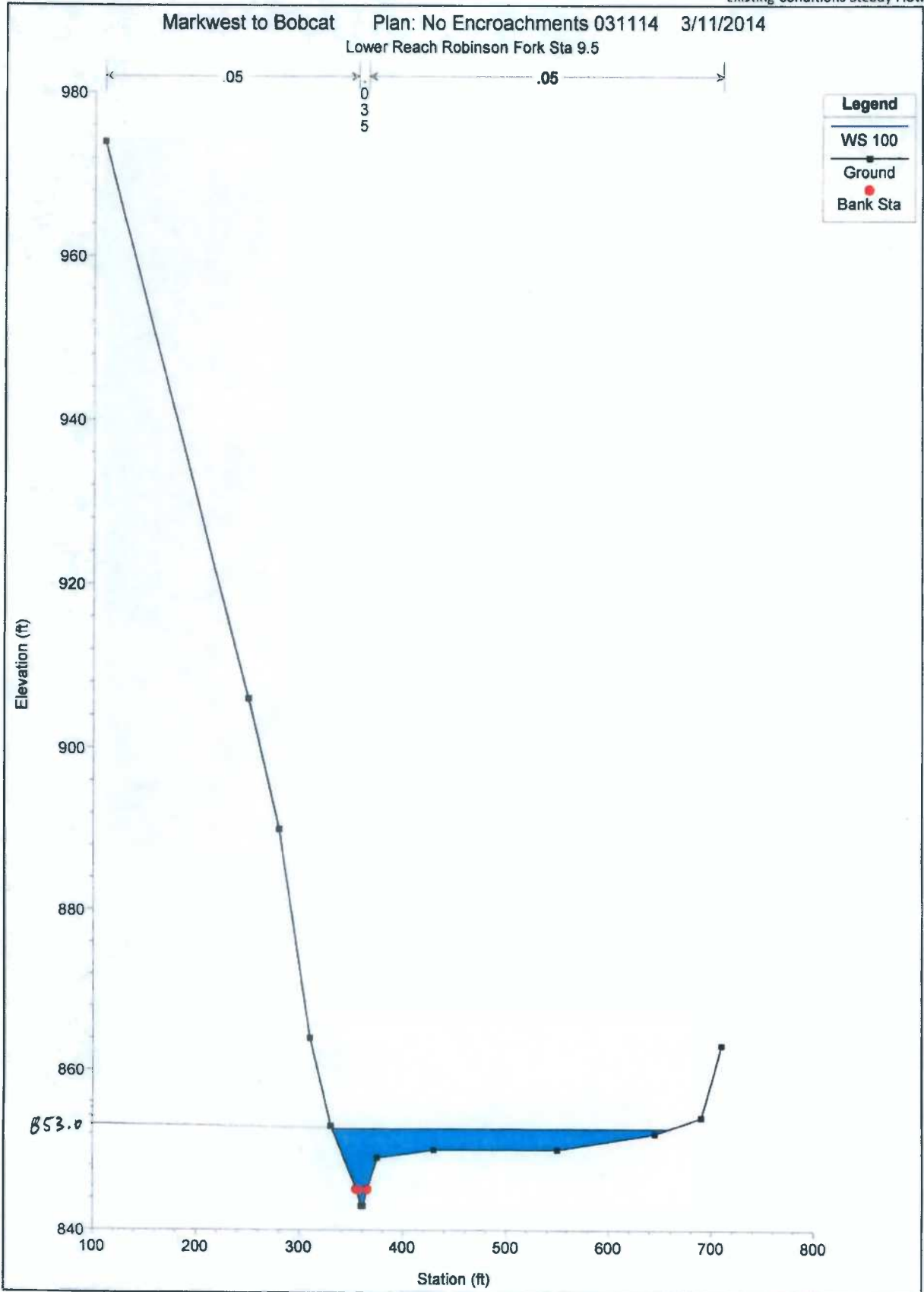
HEC-RAS Existing Conditions Profiles

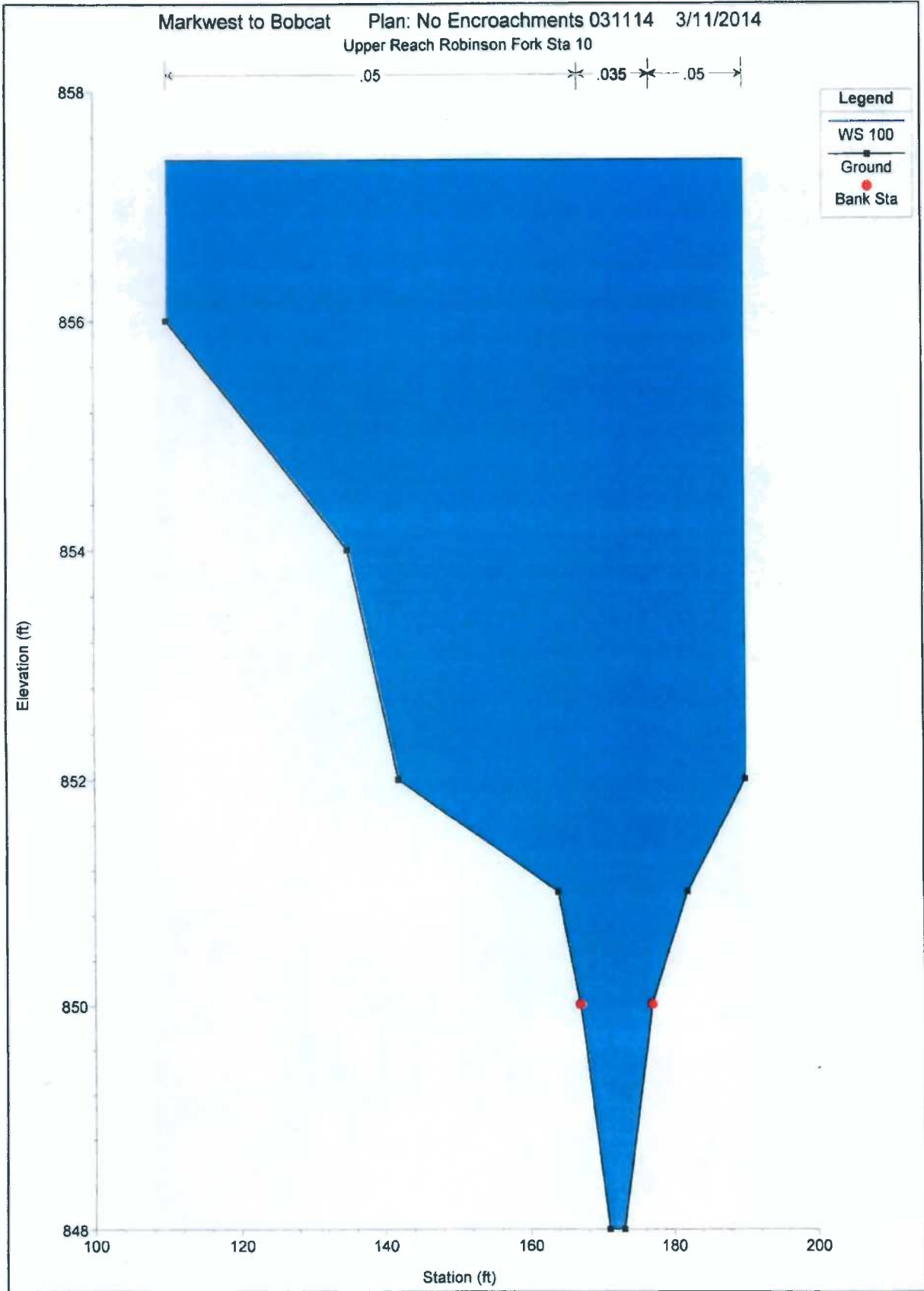


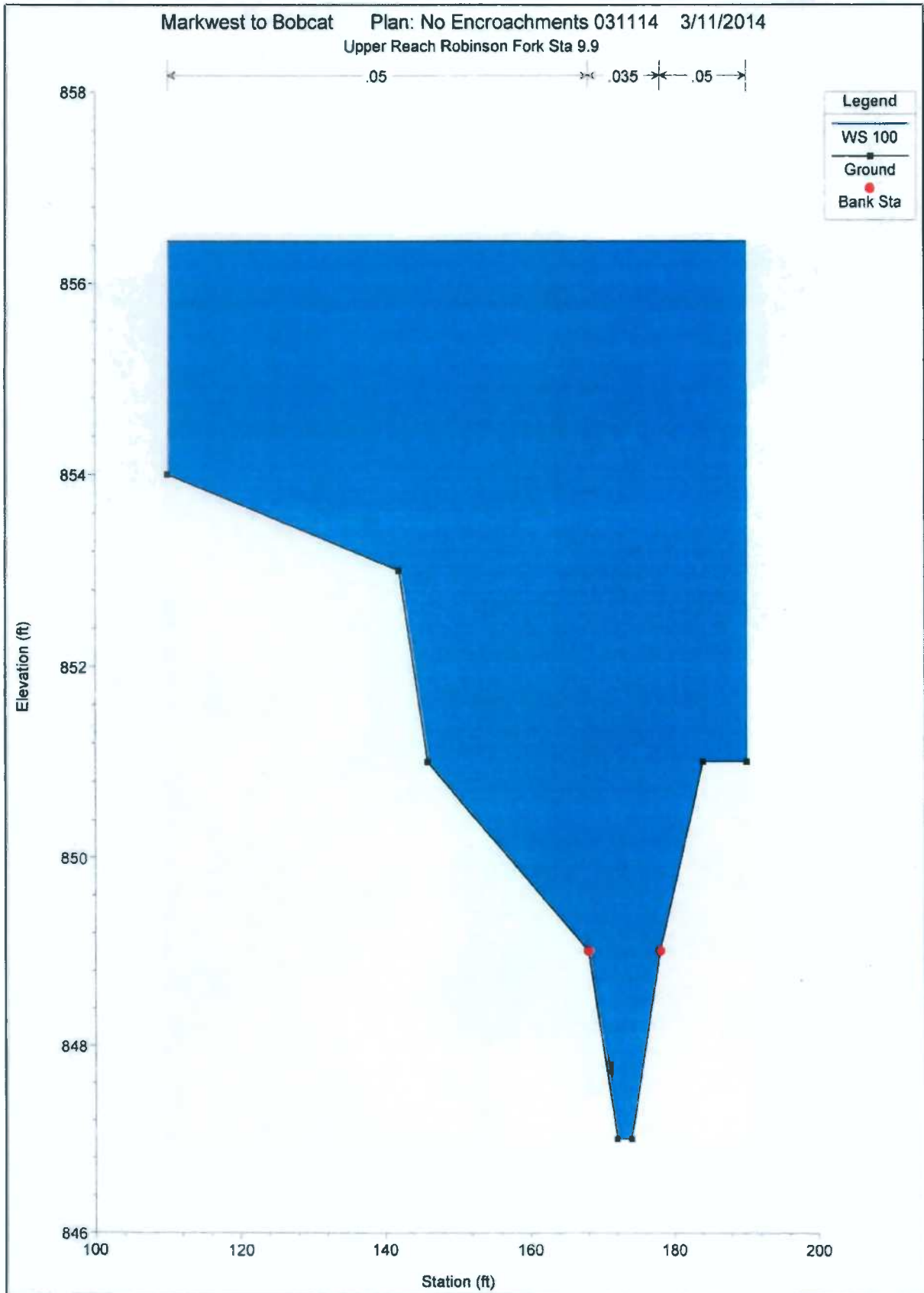


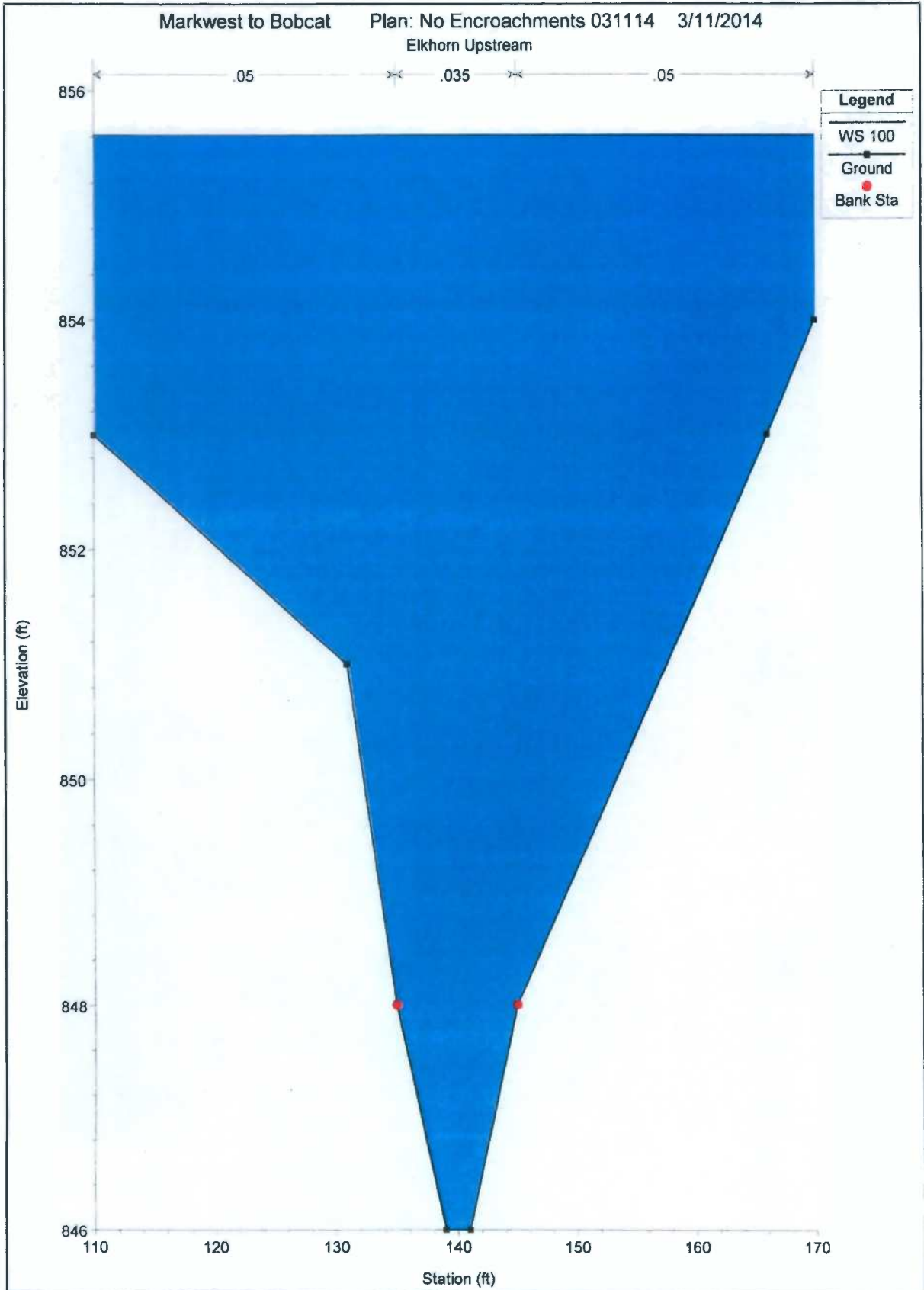


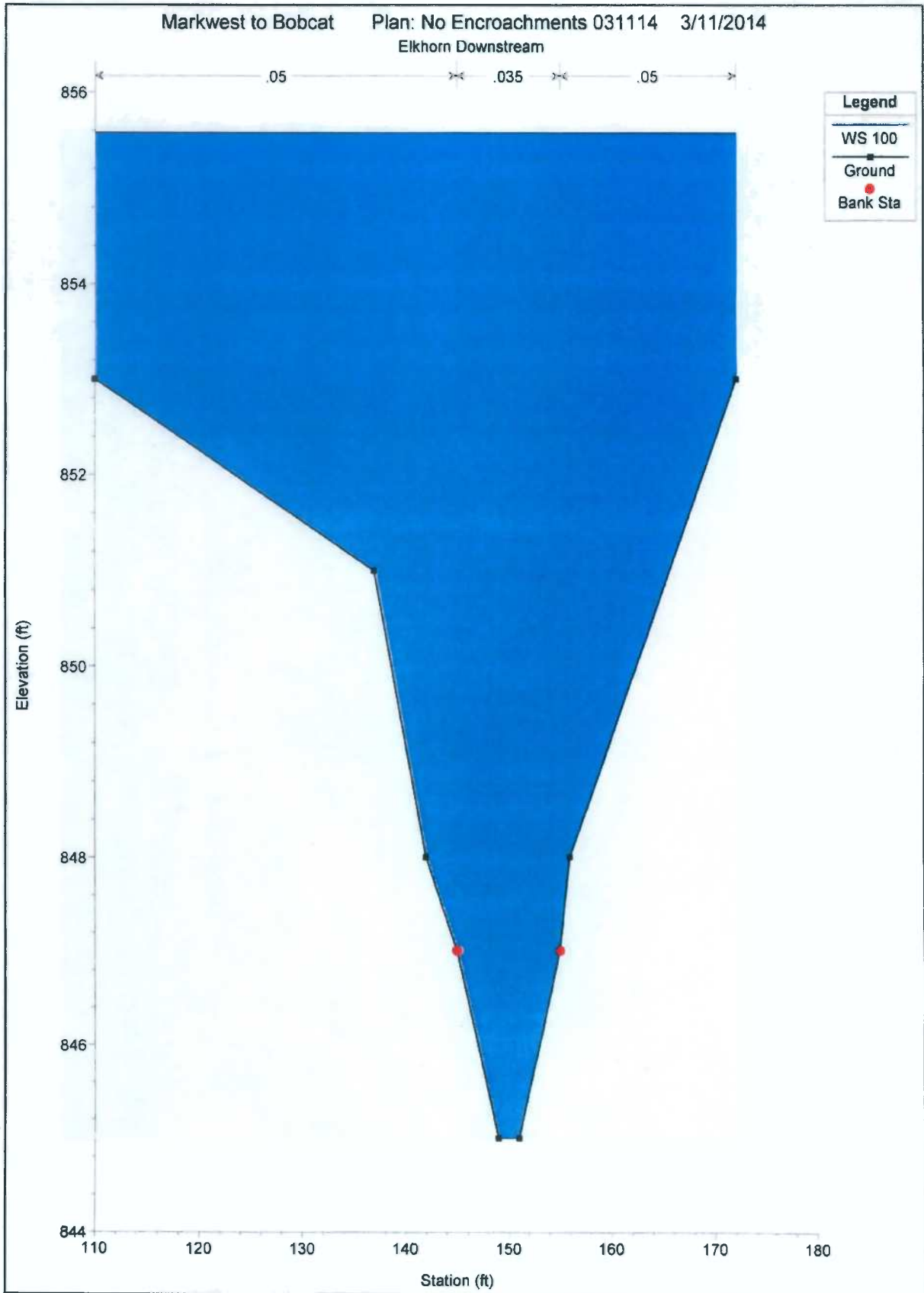




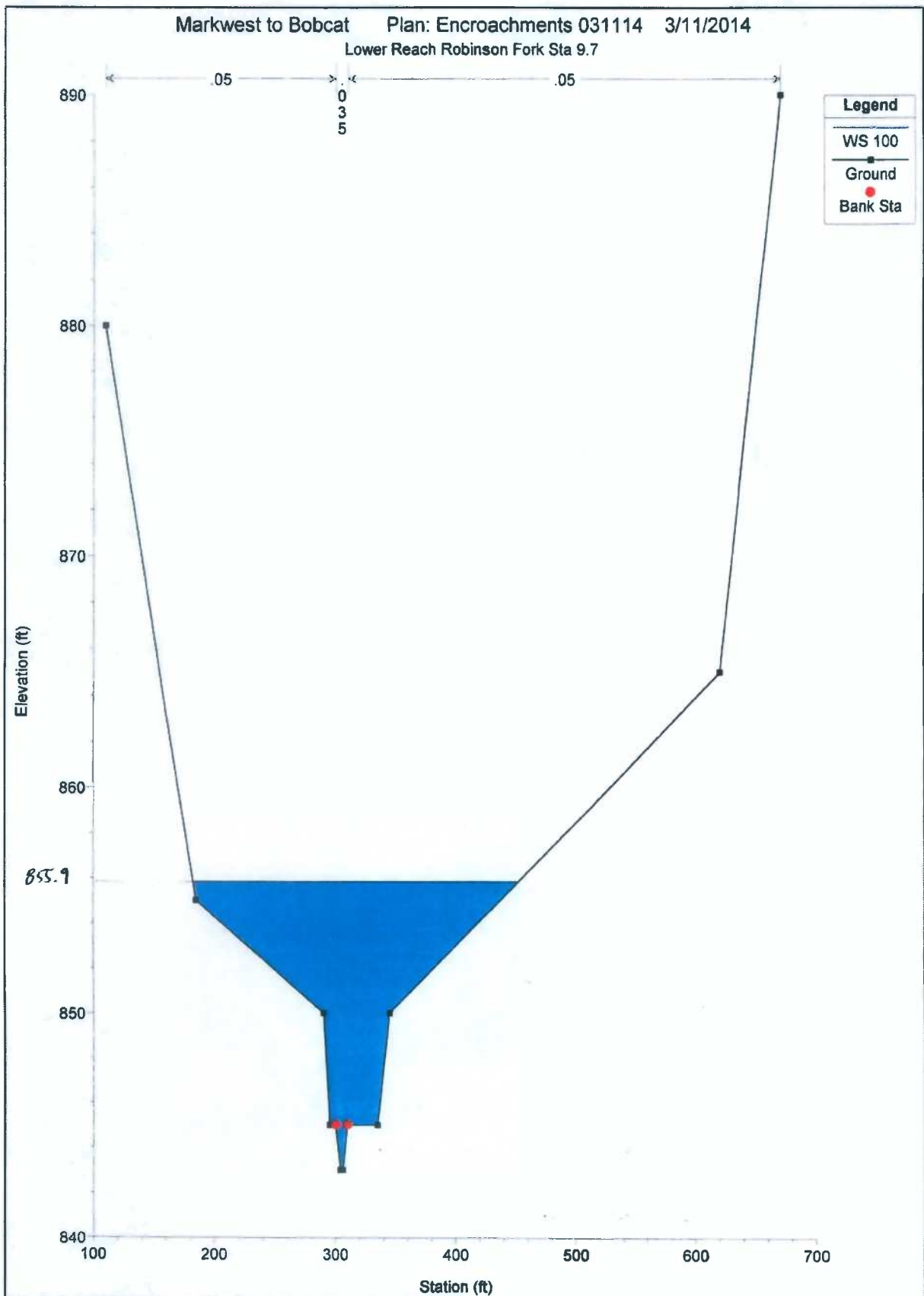


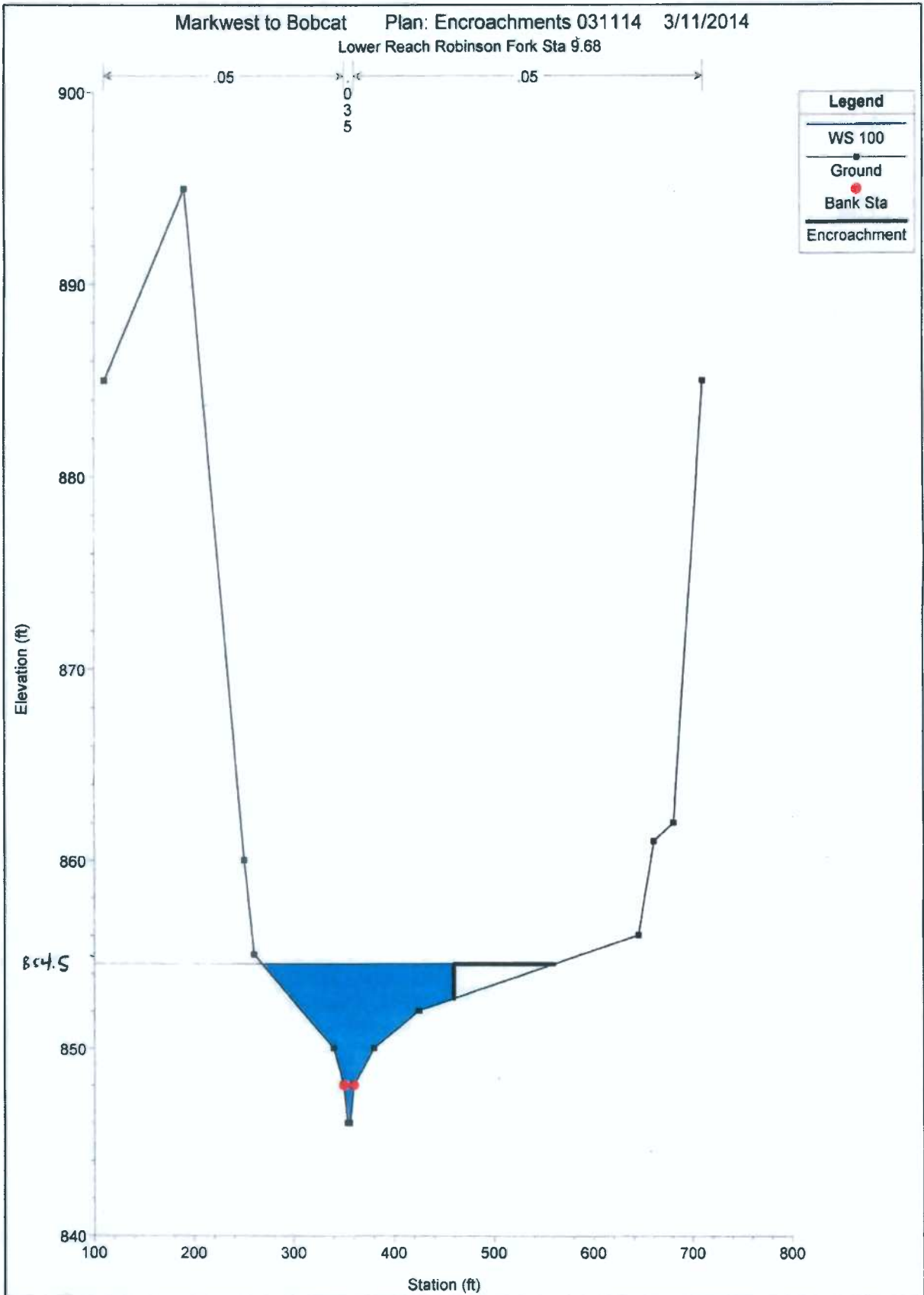


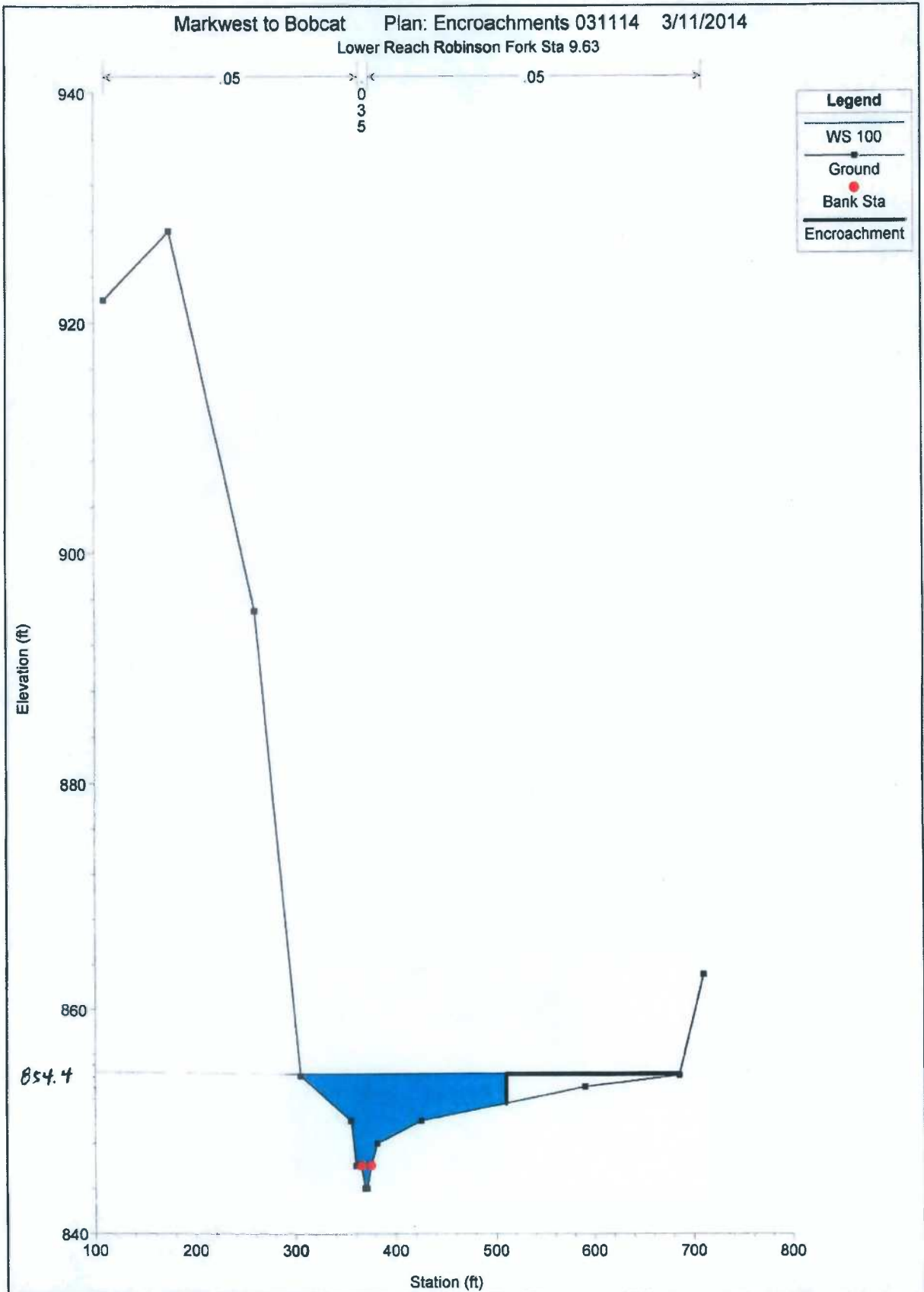


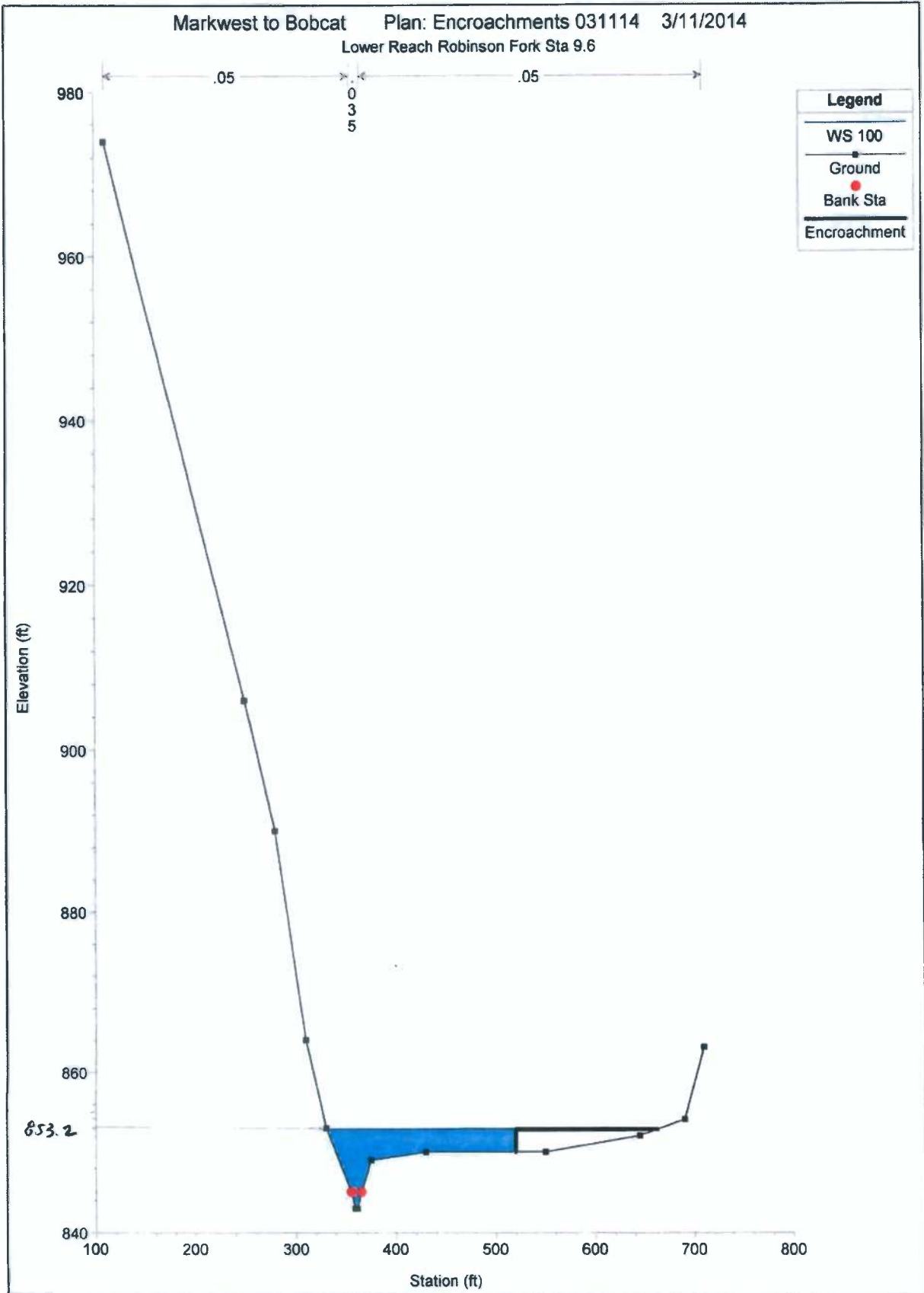


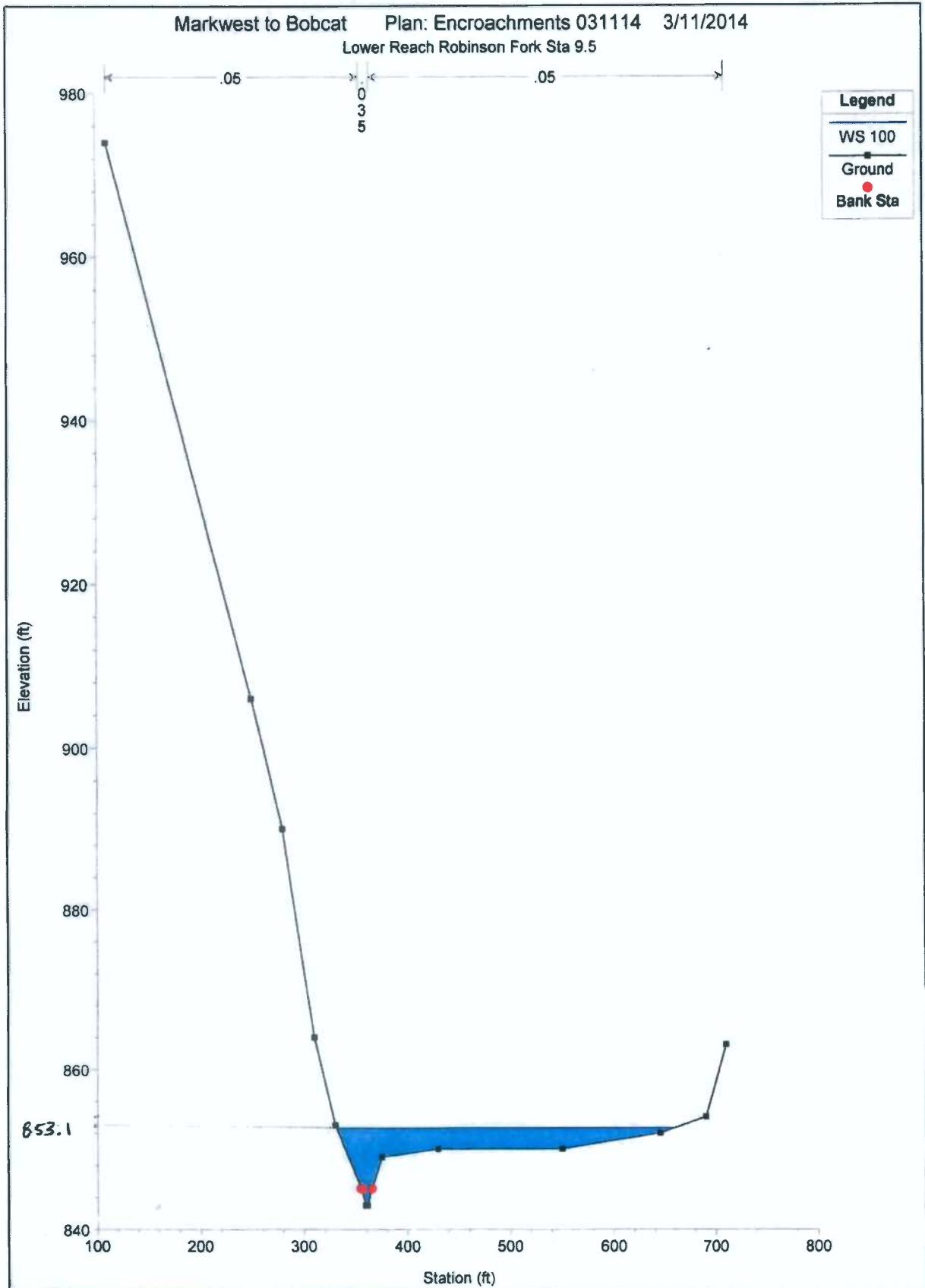
HEC-RAS Post-Development Profiles

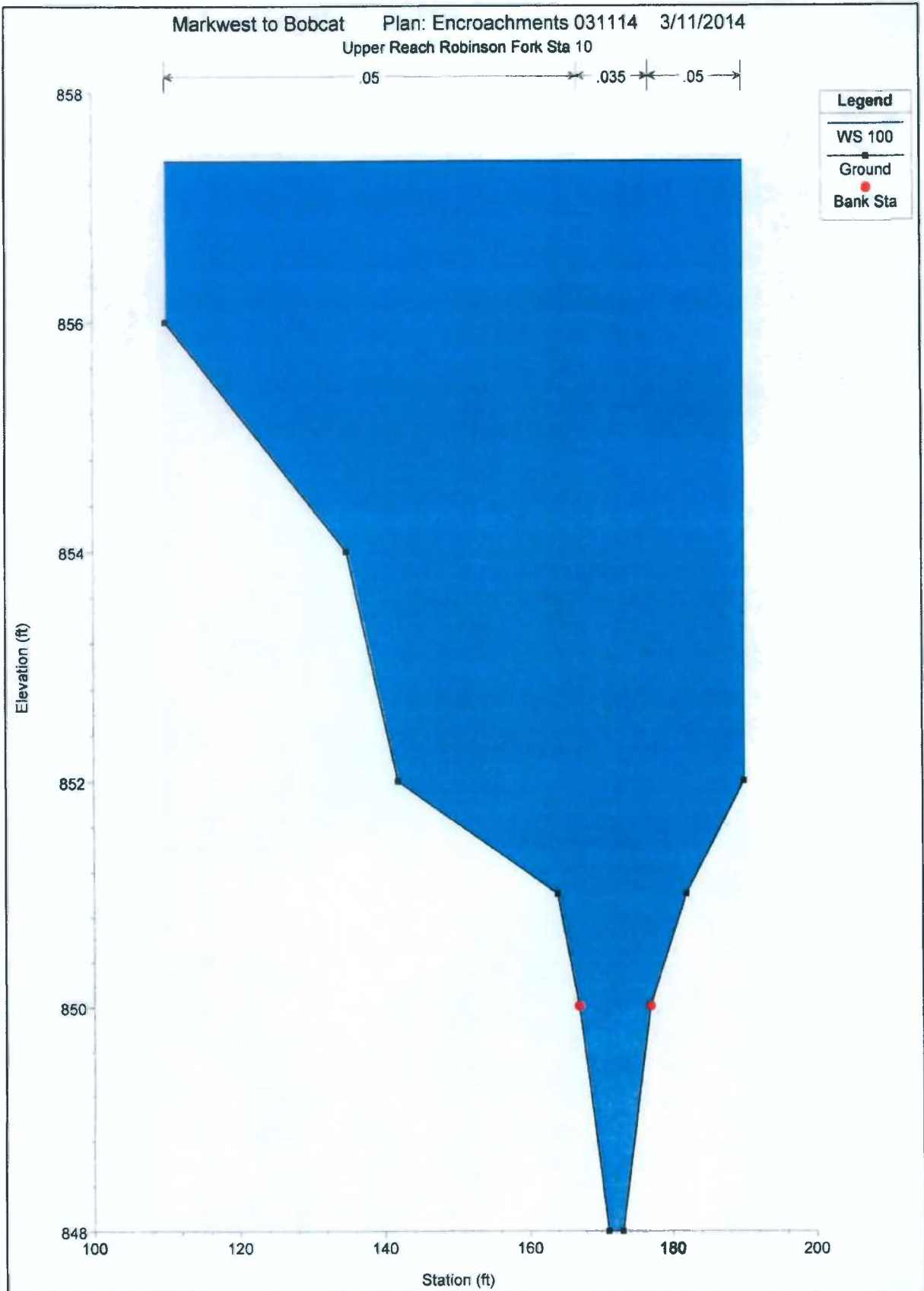


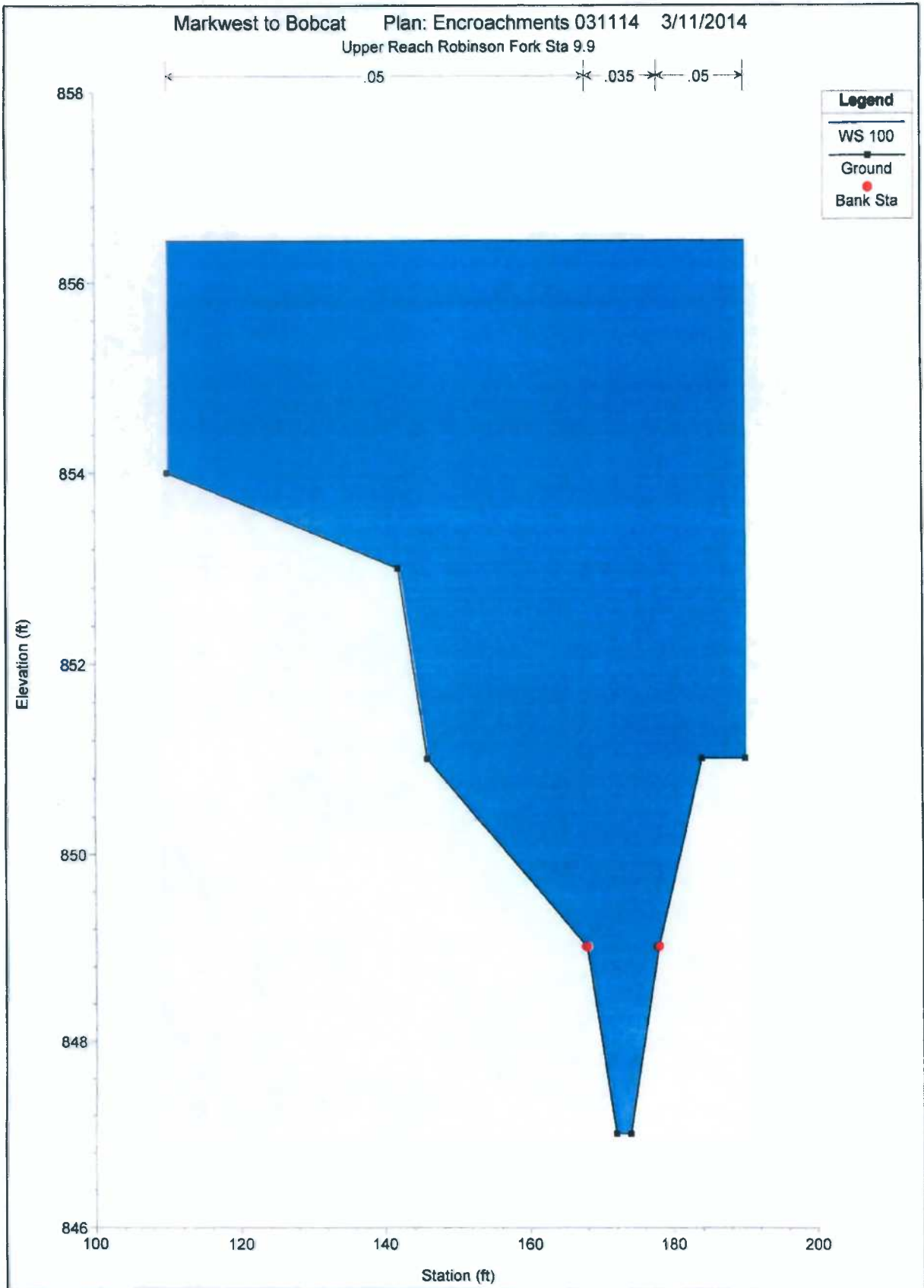


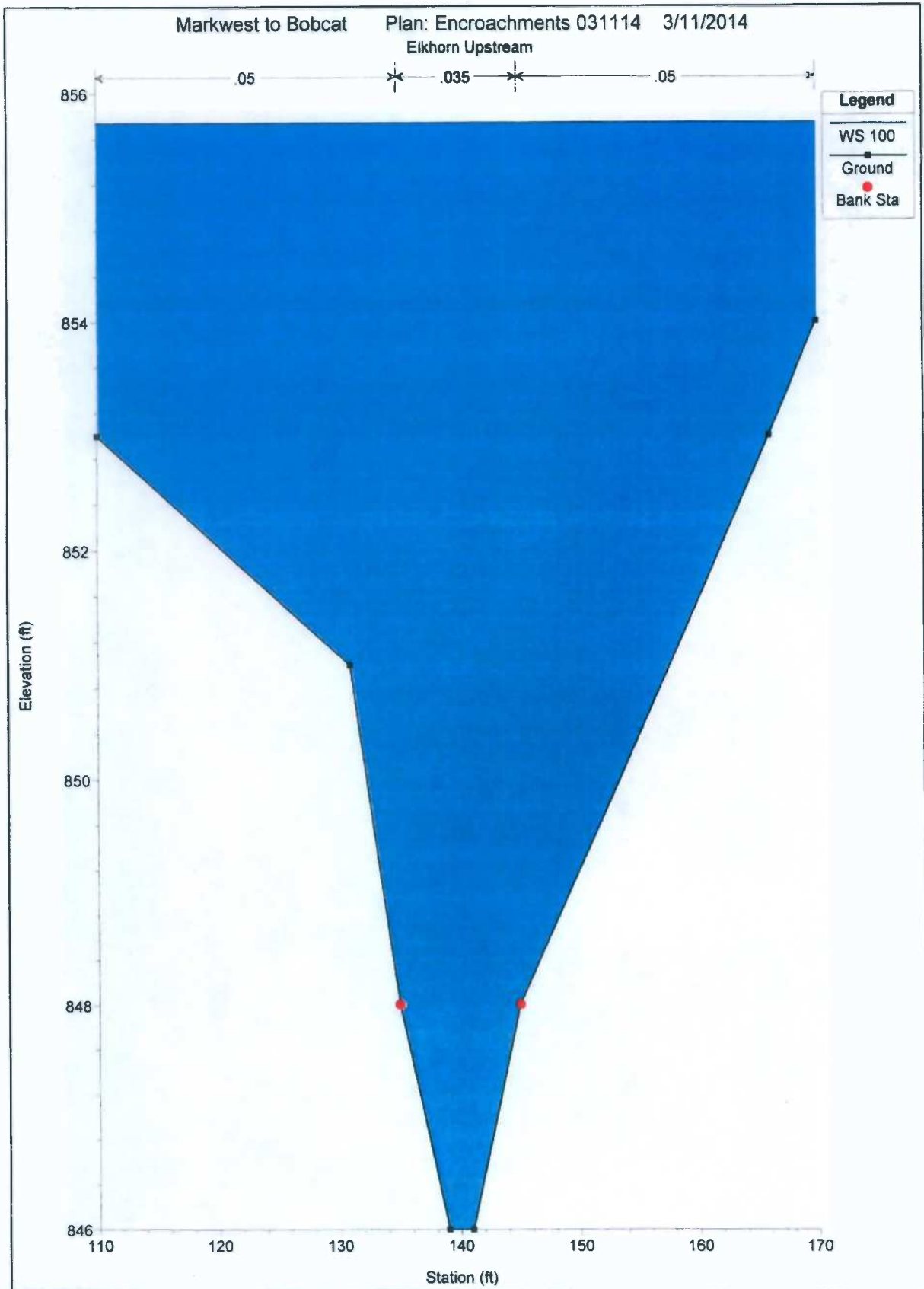


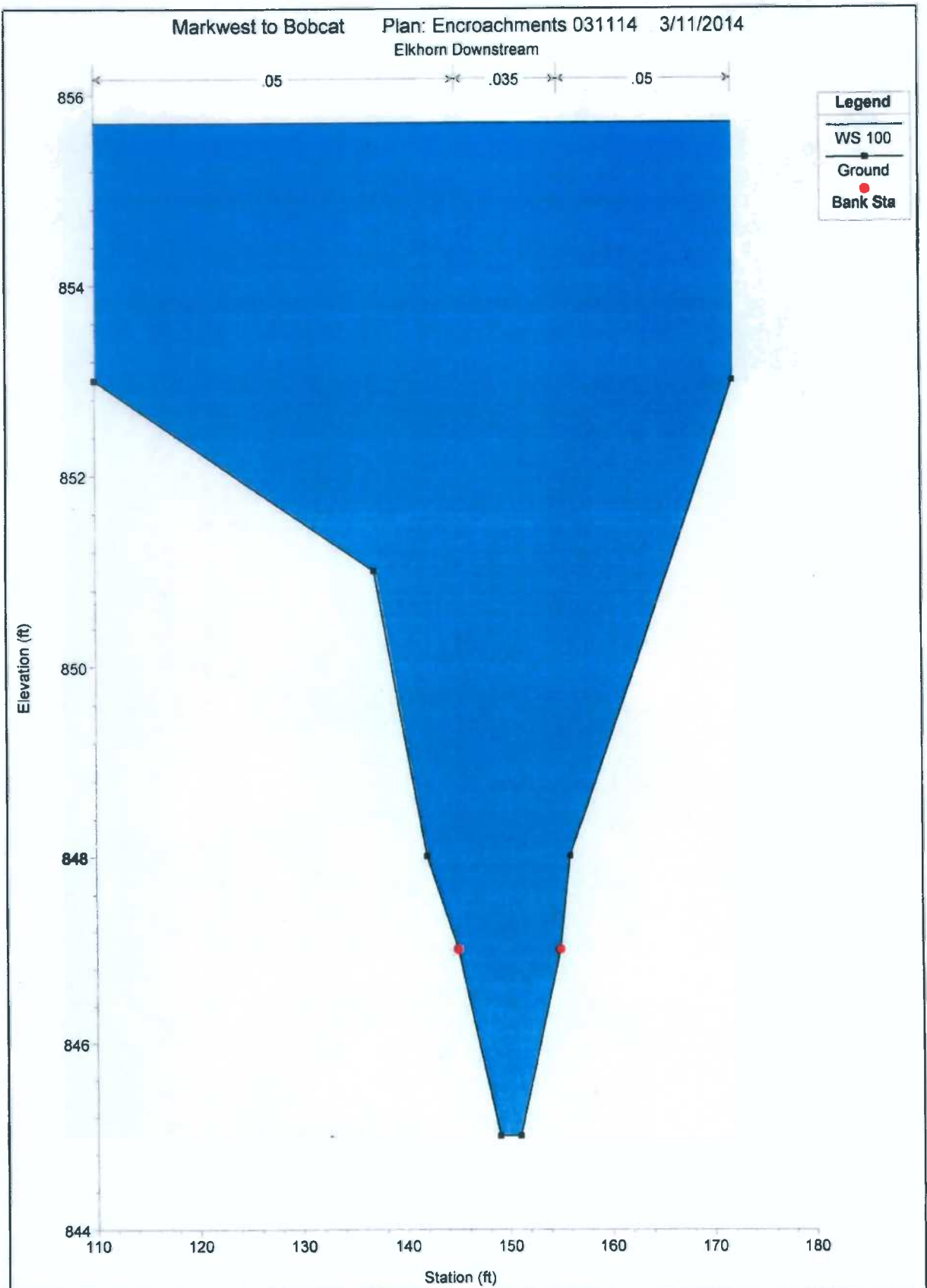












Supporting Cost Estimate Data



Quote ANT011314-S

P.O. Box 1028
 Bridgeport, WV 26330
 304-623-0020

Customer Information	
Name	Antero Resources
Contact	Bill Prehn Karl Rydjord

Date 1/13/2014

QTY	DESCRIPTION	AMOUNT
	Seladia Station	
1	8 x 12 EQT-Style GC Building Per EQT Specification ABB 8206 Gas Chromatograph Spectrasensors SS500 Moisture Analyzer Detronics PIR9400 Gas Detector Eagle /5 RTU UPS Cabinet Misc Conduit, Tubing, and Fittings	\$ 144,500.00
1	Measurement & Regulation Setting per EQT Specification 12" Measurement Skid 12" Sick Maihak USM 8" Regulation Skid 8" Fisher EWT + V200 10" Filter Skid 10" Shawndra Filter R100-TBA-WN-100 Pipe, Valves, and Fittings per EQT AML Siemens Pressure Transmitters Mustang & Pony 100' Heat Trace Tubing Flow Calibration @ CEESI 8 Hour Hydrotest 100% X-Ray Sandblast & Paint per EQT Specification	\$ 779,950.00
1	12" Downstream Actuated Ball Valve **may or may not be required** TriVaco	\$ 34,850.00

SUBTOTAL	\$959,300.00
----------	--------------

NOTES

1. Please estimate 22-24 weeks delivery, after drawing approval.
2. This quote does not include any site work/installation or delivery to site.
3. This quote is based on preliminary design information and may be subject to revision based on final design.
4. The downstream actuated ball valve may or may not be required and will be removed from quote if deemed unnecessary by EQT.

TOTAL	\$ 959,300.00
--------------	----------------------

STATE OF WEST VIRGINIA,
COUNTY OF DODDRIDGE, TO WIT

I, Virginia Nicholson, Editor of THE
HERALD RECORD, a weekly newspaper
published regularly, in Doddridge County,
West Virginia, Do Hereby Certify Upon
Oath That the Accompanying Legal Notice
Entitled:

Floodplain Permit
Bobcat # 14-178

was published in said paper for *2*

successive weeks beginning with the issue
of *April 1st* 2014 and

ending with the issue of

April 8th 2014 and

that said notice contains *189*

WORD SPACE at *115* cents a word

amounts to the sum of \$ *27.74*

FOR FIRST PUBLICATION, SECOND
PUBLICATION IS 75% OF THE FIRST
PUBLICATION

\$ *16.31*
and each publication thereafter

\$ *38.05* TOTAL

EDITOR
Virginia Nicholson

SWORN TO AND SUBSCRIBED
BEFORE ME THIS THE *10th* DAY
OF *April* 2014

NOTARY PUBLIC
Laura Adams

LEGAL ADVERTISEMENT
Doddridge County
Floodplain Permit Application
Please take notice that on the 25th day of March, 2014
ANTERO RESOURCES, APPALACHIAN
CORPORATION - MARKWEST TOBOCAT #14-178
filed an application for a Floodplain Permit to develop
land located at or about: SURFACE OWNERS: DEAN
PENNINGTON, EAST RUN & RONALD & ROSETTA
PRATT, BIG RUN BRANCH/ROBINSON FORK
MCCELLEAN DISTRICT, D/B: 277/649 & 253/315, T/M
S-25-43, S-29-23 & S-29-23
The Application is on file with the Clerk of the County
Court and may be inspected or copied during regular
business hours. Any interested persons who desire to
comment shall present the same in writing by April 14,
2014.
Delivered to the:
Clerk of the County Court
118 E. Court Street, West Union, WV 26456
Beth A. Rogers, Doddridge County Clerk
Ralph Sandora, Jr., Doddridge County Flood Plain
Manager
4-1-2xb

