

7012 MacCorkle Avenue, SE, Charleston, WV 25304 • (304)342-1400 • FAX (304)343-9031; www.potesta.com

# 13-087

November 5, 2013

Mr. Dan Wellings Doddridge County Floodplain Coordinator **Doddridge County Commission** 118 East Court Street West Union, West Virginia 26456

RE:

Floodplain Permit Application

**EQT Production Company** EQT WUE 6 Well Site

Doddridge County, West Virginia

POTESTA Project No. 0101-11-0147-603

Dear Mr. Wellings:

Potesta & Associates, Inc. (POTESTA) is pleased to submit this cover letter with the associated Floodplain Development Permit Application for the proposed West Union Well 6 Well Site. The proposed project will consist of construction of a well pad and construction of associated access road. Based on information presented on the site FIRM, this project is not located within FEMA Flood Zone. No fill shall be placed within the floodplain limits for this project.

Included with this letter is the permit application and site location map.

If you have any questions, please feel free to contact me at (304) 342-1400 or jmsmith@potesta.com, or Megan Landfried (EQT) at (304) 848-0061.

Sincerely,

POTESTA & ASSOCIATES, INC.

Staff Engineer II

JMS/clr

**Enclosures** 

Ms. Megan Landfried - EQT c:

POTESTA & ASSOCIATES, INC.

Charleston, West Virginia O Morgantown, West Virginia

Winchester, Virginia

17537

#13-087 WUE-6WEN Site

# DODDRIDGE COUNTY FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

#### **SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)**

- 1. No work may start until a permit is issued.
- 2. The permit may be revoked if any false statements are made herein.
- 3. If revoked, all work must cease until permit is re-issued.
- 4. Development shall not be used or occupied until a Certificate of Compliance is issued.
- 5. The permit will expire if no work is commenced within six months of issuance.
- **6.** Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
- 7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
- 8. I, THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE. TRUE AND ACCURATE.

APPLICANT'S SIGNATURE Mes E Son H

**SECTION 2: PROPOSE DEVELOPMENT (TO BE COMPLETED BY APPLICANT).** 

IF THE APPLICANT IS NOT A NATURAL PERSON, THE NAME, ADDRESS, AND TELEPHONE NUMBER OF A NATURAL PERSON WHO SHALL BE APPOINTED BY THE APPLICANT TO RECEIVE NOTICE PURSUANT TO ANY PROVISION OF THE CURRENT DODDRIDGE COUNTY FLOODPLAIN ORDINANCE.

**APPLICANT'S NAME: EQT Production Company** 

ADDRESS: 115 Professional Place, Bridgeport, WV 26330

**TELEPHONE NUMBER: 304-848-0061** 

**BUILDER'S NAME: EQT Production Company** 

ADDRESS: 115 Professional Place, Bridgeport, WV 26330

**TELEPHONE NUMBER: 304-848-0061** 

**ENGINEER'S NAME: POTESTA and Associates, Inc** 

ADDRESS: 7012 McCorkle Ave, SE Charleston, WV 25304

**TELEHONE NUMBER: 304-342-1400** 

#### **PROJECT LOCATION:**

NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Franklin L. Butler & Key Oil Co.,

ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Franklin L. Butler, 2567

Spring Hill Rd., Staunton, Virginia, 24401,

Key Oil Company, a West Virginia Corporation, 22 Garton Plaza, Weston, WV 26452

DISTRICT: West Union

DATE/FROM WHOM PROPERTY PURCHASED: Franklin L. Butler & Key Oil Company; June 30<sup>th</sup>, 2003 from; Ellen L. Barnes

LAND BOOK DESCRIPTION: BLUESTONE 86.09 AC

DEED BOOK REFERENCE: Deed Book 256 Page 324

TAX MAP REFERENCE: Tax Map 12 Parcel 71.1

EXISTING BUILDINGS/USES OF PROPERTY: Hunting Cabin and metal building

NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY\_N/A

ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY\_N/A

NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Franklin L. Butler & Key Oil Co.,
ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Franklin L. Butler, 2567
Spring Hill Rd., Staunton, Virginia, 24401,
Key Oil Company, a West Virginia Corporation, 22 Garton Plaza, Weston, WV 26452
DISTRICT: West Union
DATE/FROM WHOM PROPERTY PURCHASED: Franklin L. Butler & Key Oil Company; July 20th,
1994 from; Patrick D. Deem & Louis E. Enderle, Jr.
LAND BOOK DESCRIPTION: 15ac 80 p, Middle Island Creek
DEED BOOK REFERENCE: Deed Book 259 Page 275
TAX MAP REFERENCE: Tax Map 12 Parcel 64.1
EXISTING BUILDINGS/USES OF PROPERTY: N/A
NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT
PROPERTYN/A
ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE
SUBJECT PROPERTY_N/A
NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Phillis Marie Steele, executrix
of the William P. McCutchan Estate,
of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Phillis Marie Steele,
of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Phillis Marie Steele,  Executrix of the estate of William Paul McCutchan, 307 Wood Street, West Union, WV 26456
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of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Phillis Marie Steele,  Executrix of the estate of William Paul McCutchan, 307 Wood Street, West Union, WV 26456  DISTRICT: West Union  DATE/FROM WHOM PROPERTY PURCHASED: Leeman Maxwell III & Edna Maxwell, his wife
of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Phillis Marie Steele,  Executrix of the estate of William Paul McCutchan, 307 Wood Street, West Union, WV 26456  DISTRICT: West Union
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of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Phillis Marie Steele,  Executrix of the estate of William Paul McCutchan, 307 Wood Street, West Union, WV 26456  DISTRICT: West Union  DATE/FROM WHOM PROPERTY PURCHASED: Leeman Maxwell III & Edna Maxwell, his wife  LAND BOOK DESCRIPTION: Bluestone MH 123.38ac  DEED BOOK REFERENCE: Deed Book 123 Page 72  TAX MAP REFERENCE: Tax Map 16 Parcel 1
of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Phillis Marie Steele,  Executrix of the estate of William Paul McCutchan, 307 Wood Street, West Union, WV 26456  DISTRICT: West Union  DATE/FROM WHOM PROPERTY PURCHASED: Leeman Maxwell III & Edna Maxwell, his wife  LAND BOOK DESCRIPTION: Bluestone MH 123.38ac  DEED BOOK REFERENCE: Deed Book 123 Page 72
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Of the William P. McCutchan Estate,  ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANTPhillis Marie Steele,  Executrix of the estate of William Paul McCutchan, 307 Wood Street, West Union, WV 26456  DISTRICT: West Union  DATE/FROM WHOM PROPERTY PURCHASED:_Leeman Maxwell III & Edna Maxwell, his wife  LAND BOOK DESCRIPTION:Bluestone MH 123.38ac  DEED BOOK REFERENCE:_Deed Book 123 Page 72  TAX MAP REFERENCE:_Tax Map 16 Parcel 1  EXISTING BUILDINGS/USES OF PROPERTY:_Trailer - camp, storage container, bathhouse, trailer-storage, picnic shelter  NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT
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NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Charles Wellings, Jr &
Barbara L. Wellings
ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT Charles Wellings Jr. and
Barbara L. Wellings, HC 68 Box 3, West Union, WV 26456
DISTRICT: West Union
DATE/FROM WHOM PROPERTY PURCHASED: Charles Wellings, Jr.
LAND BOOK DESCRIPTION: BLUESTONE 650.84 AC (SURFACE)
DEED BOOK REFERENCE: Deed Book 240 Page 545
TAX MAP REFERENCE: Tax Map 16 Parcel 16
EXISTING BUILDINGS/USES OF PROPERTY: house — residence, 5 barns/storage buildings
NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT
PROPERTY_ Charles Wellings Jr.
ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE
SUBJECT PROPERTY Charles Wellings Jr., HC 68 Box 3, West Union, WV 26456

To avoid delay in processing the application, please provide enough information to easily identify the project location. Please see the attached map. No fill will be placed in or removed from any floodplain area for this Project.

#### **DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)**

#### A. STRUCTURAL DEVELOPMENT

	<u>AC</u>	IVITY				STRU	CTUR	AL TYPE
[X]	New Structi	ure			0	Reside	ential (	1 – 4 Family)
[]	Addition				()		•	more than 4 Family)
[]	Alteration				[X]	Non-r	esiden	tial (floodproofing)
[]	Relocation				[]	Comb	ined U	se (res. & com.)
[]	Demolition				[]	Replac	cemen	t
[]	Manufactu	red/Mo	bil Home					
В.	OTHER DE	<b>/EOPL</b> I	MENT ACTIV	/ITIES:				
[]	Fill	0	Mining	[X]	Drillin	g	0	Pipelining
	Grading		ć					,
[]		•	for STRUCTUF					-
[]	Watercourse Altercation (including dredging and channel modification)							
[]	Drainage Improvements (including culvert work)							
()	Road, Street, or Bridge Construction							
[]	Subdivision (including new expansion)							
[]	Individual V	Vater or	Sewer Syster	n				
[]	Other (plea	se speci	ify)					

#### C. STANDARD SITE PLAN OR SKETCH

- 1. SUBMIT ALL STANDARD SITE PLANS, IF ANY HAVE BEEN PREPARED.
- 2. IF STANDARD SITE PLANS HAVE NOT BEEN PREPARED:

  SKETCH ON A SEPARATE 8 ½ X 11 INCH SHEET OF PAPER THE SHAPE AND LOCATION OF THE LOT. SHOW THE LOCATION OF THE INTENDED CONSTRUCTION OR LAND USE INDICATING BUILDING SETBACKS, SIZE & HEIGHT. IDENTIFY EXISTING BUILDINGS, STRUCTURES OR LAND USES ON THE PROPERTY.
- 3. SIGN AND DATE THE SKETCH.

# ACTUAL TOTAL CONSTRUCTION COSTS OF THE COMPLETE DEVELOPMENT IRRESPECTIVE OF WHETHER ALL OR ANY PART OF THE SUBJECT PROPOSED CONSTRUCTION PROJECT IS WITHIN THE FLOODPLAIN \$1,475,000.00

#### D. ADJACENT AND/OR AFFECTED LANDOWNERS:

1. NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM) WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED).

NAME: LONE PINE OPERATING INC	NAME: I.L. Morris
ADDRESS: RT 5 BOX 436	ADDRESS:P.O. Box 397
SALEM, WV 26426	Glenville, WV 26351
NAME: Winnie J. Hackely, etal	NAME: Sue Ann Spiker
ADDRESS: 517 NORTH LAKE DR	ADDRESS: 166 Linden Lane
MONROE, NC 28112	Jane Lew, WV 26378
NAME: Karen M. Ireland Family Limited Pa	NAME:Carolyn E. Farr Irrevocable Trust
ADDRESS: 342 Ireland Road	ADDRESS: P.O. Box 1126
Pullman, WV 26421	Bridgeport, WV 26330
NAME: Franklin L. Butler	NAME: Key Oil Company
ADDRESS: 2567 Spring Hill Road	ADDRESS: 22 Garton Plaza
Staunton, VA 24401	Weston, WV 26452
NAME: James Terrance Robinson	NAME: Paul Eugene Cumpston
ADDRESS: 41 Escargot Xing	ADDRESS: 344 Blair Ave
Harrisville, WV 26362	Mineral Wells, WV 26150
NAME: Donivan L. Cumpston	NAME:Julia Ann Robinson Rogers
ADDRESS: Rt. 1 Box 419	ADDRESS:399 McDougal Drive
Greenwood, WV 26415	Pennsboro, WV 26415

NAME: Dodridge Count 4-H Association
ADDRESS:Rt. 2 Box 98
Salem, WV 26426
NAME:Ruth M. Davies Pierce, %Tom Davies
ADDRESS: 1104 Greenmont Circle
<u>Vienna, WV 26105</u>
E ADULT RESIDING IN EACH RESIDENCE ERTY AT THE TIME THE FLOODPLAIN PERMIT AND ADDRESS OF AT LEAST ONE ADULT PERTY THAT MAY BE AFFECTED BY FLOODING AS STUDY OR SURVEY.
NAME:
ADDRESS:

#### E. CONFIRMATION FORM

THE APPLICANT ACKNOWLEDGES, AGREES, AND CONFIRMS THAT HE/IT WILL PAY WITHIN 30 DAYS OF RECEIPT OF INVOICE BY THE COUNTY FOR ALL EXPENSES RELATIVE TO THE PERMIT APPLICATION PROCESS GREATER THAN THE REQUIRED DEPOSIT FOR EXPENSES INCLUDING:

- (A) PERSONAL SERVICE OF PROCESS BY THE DODDRIDGE COUNTY SHERIFF AT THE RATES PERMITTED BY LAW FOR SUCH SERVICE.
- (B) SERVICE BY CERTIFIED MAIL RETURN RECEIPT REQUESTED.
- (C) PUBLICATION.
- (D) COURT REPORTING SERVICES AT ANY HEARINGS REQUESTED BY THE APPLICANT.
- (E) CONSULTANTS AND/OR HEARING EXPERTS UTILIZED BY DODDRIDGE COUNTY FLOODPLAIN ADMINISTRATOR/MANAGER OR FLOODPLAIN APPEALS BOARD FOR REVIEW OF MATERIALS AND/OR TESTIMONY REGARDING THE EFFICACY OF GRANTING OR DENYING THE APPLICANT'S FLOODPLAIN PERMIT.

IAME (PRINT): Magan E. Landried	
IGNATURE: Might January DATE: 10/30//3	
After completing SECTION 2, APPLICANT should submit form to Floodplain Administrator/Manager or his/her representative for review.	
SECTION 3: FLOODPLAIN DETERMINATION (to be completed by Floodplain Administrator/Manager or his/her representative)	
THE PROPOSED DEVELOPMENT:	
HE PROPOSED DEVELOPMENT IS LOCATED ON:	
Parted: 120 + 140 Dated: 10/04/2011	<u> </u>
Is <u>NOT</u> located in a Specific Flood Hazard Area (Notify applicant that the application eview is complete and NO FLOOPLAIN DEVELOPMENT PERMIT IS REQUIRED).	
Is located in Special Flood Hazard Area.  FIRM zone designation	_
100-Year flood elevation is:NGVD (MS	L)
The proposed development is located in a floodway.  FBFM Panel No Dated	
See section 4 for additional instructions.	
SIGNED DATE	

# <u>SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Floodplain Administrator/Manager or his/her representative)</u>

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, lot dimensions 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 proffing 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 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
0	Plans showing the extent of watercourse relocation and/or landform alterations.
[]	Top of new fill elevationFt. NGVD (MSL).  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 floodplain 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.

9	SIGNED	DATE
V	with the pro	lain Administrator/Manager found that the above was not in conformance visions of the Doddridge County Floodplain Ordinance and/or denied that the applicant may complete an appealing process below.
,	APPEALS:	Appealed to the County Commission of Doddridge County? [] Yes {} No Hearing Date:
		County Commission Decision - Approved [] Yes [] No
(	CONDITIONS	;
-		
•		
-		
		UILT ELEVATIONS (To be submitted by APPLICANT before
Certific	cate of Co	mpliance is issued).
complet	ted by a regi	nation must be provided for project structures. This section must be stered professional engineer or a licensed land surveyor (or attach a application).
COMPL	ETE 1 OR 2 B	ELOW:
1	Actual (A	As-Built) Elevation of the top of the lowest floor (including basement or ace isFT. NGVD (MSL)

2	Actual (As Built) elevation of floodproofing isFT. NGVD (MSL)
Note: applica	Any work performed prior to submittal of the above information is at risk of the ant.
-	ON 7: COMPLIANCE ACTION (To be completed by the Floodplain nistrator/Manager or his/her representative).
as app	podplain Administrator/Manager or his/her representative will complete this section licable based on inspection of the project to ensure compliance with the Doddridge y Floodplain Ordinance.
INS	SPECTIONS:
	DATE:BY: DEFICIENCIES ? Y/N
co	MMENTS
	ON 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain nistrator/Manager or his/her representative).
Certifi	cate of Compliance issued: DATE:BY:

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

PERMIT DATE: 1/-/9-/3
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 Roll DATE 11-19-2013

PERMIT NUMBER: 13-087

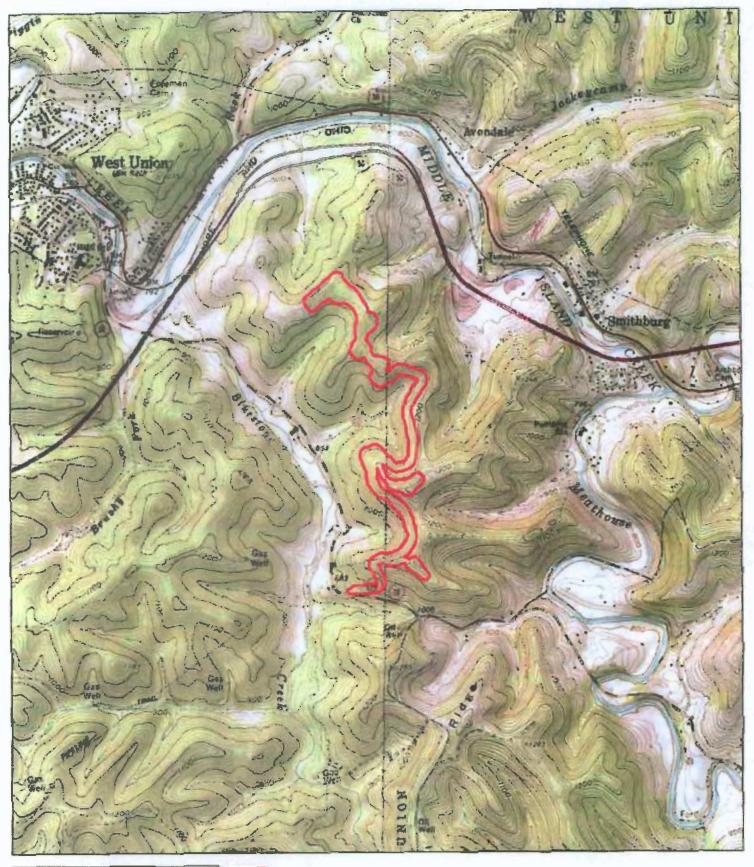


FIGURE 1
SITE LOCATION MAP
WELL SITE WEU 6
EQT
DODDRIDGE COUNTY,
WEST VIRGINIA

DATE: JULY 9, 2018
Q:(Projects/2011/11-0147 EQT Well Sites/Map Documents
RVFU9/WELI6\_FIG\_1.med

Area of Interest





		201
Permit #:		FLOOI
12 007	APPLICANT: I	EQT
13-087	1	115 PROFESSIONAL PLACE
		BRIDGEPORT, WV 26330
	_	MEGAN LANDFRIED
	LOCATION:	CE OWNER: F. BUTLER & KEY OIL, WILLIA
	<del>-</del>	C. WELLINGS, JR.
	_	D/B: 256/324,259/275,123/72,240
	-	T/M: 12/71.1, 12/64.1, 16/1, 16/
	DATE FILED:	11/6/2013
	IS IT IN THE FLOOD P	LAIN?: NO
	PERMIT APPROVED:	

<del>""                                   </del>	 	 	
PUBLICATION DATES:			

	CERTIFIED NOTICES:	Date Sent:	Notice Undeliverable:
1)			
2)			
,			
3)			

***		2012-2013 FIS	SCAL YEAR	
Permit #:		FLOOD PLAIN PERM	MIT INFORMATION	
13-087	APPLICANT:	EQT	CONTACT INFORMATION:	Work Nu
13-007		115 PROFESSIONAL PLACE		Cell Num
		BRIDGEPORT, WV 26330		email Ado
		MEGAN LANDFRIED		
	LOCATION:	CE OWNER: F. BUTLER & KEY OIL, WILLIAM MCCUTCH	ANRETURN MAILING ADDRESS:	
		C. WELLINGS, JR.		
		D/B: 256/324,259/275,123/72,240/16		
		T/M: 12/71.1, 12/64.1, 16/1, 16/16		
	DATE FILED:	11/6/2013		
	IS IT IN THE FLO	OOD PLAIN?: NO NO		
	PERMIT APPROV	/FD·		

#### **PUBLICATION DATES:**

	Date	Notice	Signed notice	DATE SERVED
CERTIFIED NOTICES:	Sent:	Undeliverable:	Returned:	BY SHERIFF:
1)				
2)				
3)				
4)				
5)				
6)				

	Date	Notice	Signed notice	DATE SERVED
CERTIFIED NOTICES:	Sent:	Undeliverable:	Returned:	BY SHERIFF:



#### Edwin Wriston <doddridgecountyfpm@gmail.com>

#### **EQT site on Middle Island Creek**

1 message

m b <miri beram@yahoo.com>

Mon, Apr 27, 2015 at 11:45 AM

Reply-To: m b <miri beram@yahoo.com>

To: Dodd Floodplain Manager <doddridgecountyfpm@gmail.com>

Cc: Gregory Robinson < wvrobby@hughes.net>, Ralph Sandora < ralphsandora@gmail.com>,

"ronleetravis@gmail.com" <ronleetravis@gmail.com>, "bshaw@court.state.wv.us"

<bshaw@court.state.wv.us>, Pat Heaster <patheaster@aol.com>

Mr. Wriston.

Can you please tell me if there is a floodplain permit issued to EQT for a site that is approximately 1200 feet upstream from

where Rock Run Rd & Smithton Rd. intersect? Please tell me the permit number.

This is a water withdrawal site and there is equipment in the floodplain. The map below from the WV Flood Tool shows the approximate location.

No evidence of Floodplain permit signage was apparent on 4-18-2015. There is signage posted that was issued by WV DEP for water withdrawal.

I would also like to know if additional permits were obtained from state & federal agencies.

This site has been in operation for awhile. To visit the site, a person has to walk upstream along the rail trail from the football field & the Water Treatment plant or downstream from the Smithton Depot.

### Please acknowledge receipt of this email.

### Respectfully, Mirijana Beram



#### 4 attachments



P4185875.JPG 3088K

P4185880.JPG 3067K





**P4185885.JPG** 2764K



**P4185890.JPG** 3200K



#### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SI: Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretory www.dep.wv.gov

October 21, 2014

#### WELL WORK PERMIT

#### Horizontal 6A Well

This permit, API Well Number: 47-1706572, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

Operator's Well No: 513342

Farm Name: BUTLER, FRANKLIN L. & KEY O

API Well Number: 47-1706572

Permit Type: Horizontal 6A Well

Date Issued: 10/21/2014

Promoting a healthy environment.

#### PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. <u>Failure to adhere to the specified permit</u> conditions may result in enforcement action.

#### **CONDITIONS**

- This proposed activity may require permit coverage from the United States Army Corps of Engineers
  (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed
  activity.
- 2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled Water Well Regulations, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
- Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

# STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS W.VA., CODE \$22-5A - WELL WORK PERMIT APPLICATION

				В	671	1
1) Well Operator: EQT Producti	оп Сотрану	Operator ID	County	Distret	Quadrangle	ı
		Operator to			•	
2) Operator's Well Number:	513342		_Well Pad Name	·	WEUB	
3) Form Name/Surface Owner : _	Franklin Butler & Ko	у О∄ Со	_Public Road Ac	cess	State Roule 18	•
4) Elevation, current ground:	1260' Eleva	tion, proposed p	ost-construction:	126	0*	
5) Well Type: (a) Gas	OifUn	nderground Stere	oge			
Othor						•
(b) If Gas:	Shallow .	Deep				
1	Honzontal					200
6) Existing Pad? Yes or No:	yes					DCN 9-14-2014
7) Proposed Target Formalion(s),	Depth(s), Anticipated Thic	knessos and As	sociated Pressur	e(s):		4-14-20
Target formation a Ataronius at	s plants of 6300 with the scool	peted thickness to b	e 57 feat and east	giated tespol p:	estable of 4651 PSc	
						•
6) Proposed Total Vertical Depth:			6,903			•
<ol><li>Formation at Total Vertical Dep</li></ol>			Marcosus			•
10) Proposed Total Measured Dep			13,281			•
11) Proposed Horizontal Leg Leng	ήh		4,530		<del></del>	•
12) Approximate Fresh Water Stra			353, 465, 508, <del>9</del> 6			•
13) Method to Determine Fresh W			By offset we	eus		•
14) Approximate Softwater Depths	l:		ione reported			•
15) Approximate Coal Seam Depti			188			•
16) Approximate Depth to Possible	a Void (coal mine, karst, of	thor):	<u> </u>	None r	ported	•
17) Does proposed well location	contain coal seams direct	tly overlying or				
adjacent to an active mine?						
(a) If Yes, provide Mine Info:	Name:					-
•	Depth::				<del>. ,</del>	•
	Seam:					-
	Owner;					•

Page 1 of 3

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WV Department of Environmental Protection

#### CASING AND TUBING PROGRAM

18) TYPE	Sizo	New	Grade	Weight per	FOOTAGE: for Drilling	INTERVALS: Leit in Woll	GEMENT: Fill- up (Cu.Fl.)	
	20	Used New	MC-60	81	40	40	C.T.S.	
Conductor	13 3/8	New	MC-50	54	1,131	1,131	C.T.S.	
resh Water	-		1 -	-	-		-	
Coal	9 5/8	New	MC-50	40	3,100	3,100	C.T.S.	
Intermediate	5 1/2	New	P-110	20	13,281	13,281	See Note 1	
Production Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than 10	.)
Liners								9-14-201
	Eisa"	T We	ilhora	Wall	Hurst.	Corren	2411.411.411.41	9-14
TYPE	Sizo		libore	Wall Thickness	Burst Pressure	Gomeni Type	Cement Yield (cu. lt /k)	9

TYPE	Sizo	<u> Diameter</u>	Wall Thickness	Burst Pressure	Cornent Type	Cement Yield (cu, It /k)
	20	24	0.375	•	Construction	1.18
Conductor	13 3/8	17 1/2	0.38	2,480	* Seo Note 2	1.21
Frosh Water			-	-	-	
Coal	g 5/8	12 3/8	0.395	3,590	* See Nate 2	1,21
Intermediate Production	5 1/2	8 1/2	0.361	12,640		1.27/1.86
Tubing						
l loors		l				

#### Packers

Kind:	N/A	
Sizes:	N/A	
Depths Set:	N/A	

Note 1: EQT plans to bring the TOC on the production casing cement job 1,000° above kick off point, which is at least 500° above the shallowest production zone, to avoid communication.

Note 2: Reference Variance 2014-17.

Page 2 of 3

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AUG 1 9 2014

WV Department of Environmental Protection



August 6, 2014

Mr. Gene Smith West Virginia Department of Environmental Protection Office of Oil and Gas 601 57th Street SE Charleston, WV 25304

Re: WEU6 (513342, 513344)

Dear Mr. Smith,

EQT is requesting the 13 3/8" surface casing to be set at approximately 1131' KB (100' below freshwater). 9 5/8" intermediate casing will be set 29' below the Bayard formation at 3100' KB based on casing points of existing wells (47-017-06323 & 47-017-06325) on the pad.

If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

Vicki Roark

Permitting Supervisor-WV

Enc.

~	^	

19) Describe proposed well work, including the drilling and plugging back of any pilot hol	<b>e</b> :
Ord and complete a new horizontal well in the Marcabus formation. The vertical drill to go down to an app	rodrate depth of 3399. Then
tack off the horizontal leg into the Marcellus using a slick water frac.	
20) Describe fracturing/stimulating methods in detail, including anticipated max pressure	
Hydractic fracturing is completed in accordance with state regulations using water recycled from previously fra- hestwarter sources. This water is mixed with send and a small percentage (see than 0.5%) of chemicals (incl	ctured wells and obtained from
gating agent, gel breaker, friction reducer, blockle, and scale hybbitur), referred to in the industry as a "slickee	ter completion. Maximum
endopated treating pressures are expected to average approximately 6500 pal, maximum anticipated treating	rates are expected to average
approximately 100 bpms. Steps lengths very from 150 to 300 feet. Average approximately 200,000 barrels of yeary from 100 mesh to 2040 mesh. Average approximately 200,000 pounds of sand per stage.	water per stage. Sand stage
21) Total area to be disturbed, including roads, stockpile area, pits, etc. (acres):	No additional distrubance
22) Area to be disturbed for well pad only, less access road (acres):	No additional distrubance
23) Describe centralizer placement for each casing string.	
<ul> <li>Surface: Bow spring contrafters - One at the shoe and one spaced every 500.</li> <li>Informediate: Bow spring contrafters- One cent at the shoe and one spaced every 500.</li> </ul>	γ.
Production: One spaced every 1000' from KOP to Int csg shoe	
24) Describe all seggest additions connected with each connect time.	Parantin B 38 Orbita - Orbital
24) Describe all cament additives associated with each cament type.  Surface [Type ]  Used to speed the setting of cament skimles.	Coment): 0-3% Calcium Chioride
0.4% flake. Loss Circulation Material (LCM) is used to combat the base of the coment sturry to a thi	
Intermediate (Type A Coment): 0-3% Calcium Chioride. Salt is used to shallow, low temperature forms sturies. 0.4% fisite. Loss Circulation Material (LCM) is used to combat the loss of whole drifting flu	
to a thief some.	as at contacts again, (rigt indica)
Production:	
Lend ITyme 1 Coment): 0.2-0.7% Lignorationate (Retarder). Lengthens thickening time.	
0.3% CFR (dispersant). Makes coment easier to mix.	
Tail (Type H Cement): 0.25-0.40% Lignosuffonate (Retarder). Langthens thickening time.	
0.2-0.3% CFR (dispersant). This is to make the comuni easier to mix.	
60 % Calculm Carbonata. Acid solubility.	
9.4-0.5% Halad (Buid loss). Reduces amount of water lost to formation.	
25) Dromound horabola conditioning proceedures. European Complete hale down (Associated by Lands)	AC AF
25) Proposed borehole conditioning procedures. Surface: Groutste hole dean (Approximately)	
one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continu	
minutes. To ensure that there is no fill, short bip two stands with no circulation. If there is fill, bring	
and circulate hole clean. A constant rate of higher than expected cuttings volume (likely indicates w	rashouts that will not clean up.
intermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint	until cuttings diminish at
surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes	. If foam drilling, to enhance
hale cleaning use a scap sweep or increase injection rute & foam concentration.	
Production: Pump marker sweep with out plug to determine actual hole washout. Calculate a gauge hole	es battams up valume.
Perform a cleanup cycle by pumping 3-6 bottoms up or until the shakers are clean. Check volume o	of cuttings coming across
the shakers every 15 minutes.	

\*Note: Attach additional sheets as needed.

Page 3 of 3

G Swall Company



wast virginia department of anytomicital protection

Officer of Did and Cap. 601 57th Street, SE Charleston, WY 23)64 5209 826-6489 5049 826-8482 for

Earl Bay Turchile, Heremore Randy C. Halfren, Unblest Secretary sice we are

March 18, 2014

Nabors Completion & Production Services Company 1380 Route 285 Nwy U #121 Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Modeni,

This agency is approving a variance request for the comern blend listed below to be used on surface and cost protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

Type 1 (2% Caleium Chhride-Acceleman, 0.25% Super Flake-Last Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feet free to contact me at 304-926-0499, cat. 1653.

Environmental Resources Specialist / Pennitting

Promoting a healthy environment

Received

Other Of Children in



west virginia department of anylogments) protection

Office of Off and Use 401 37" Spect, SE Charles WV 23304 (504) 828-9450 (504) 828-9450 (504) 828-9450

First Ray Trembile, Co Bandy C. Hullings, Cabinet Se

### BRFORK THE OFFICE OF OIL AND GAS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF WEST VIRGINIA

In the matter of a variance from Regulation 35 CSR § 4-11.4/11.5/14.1 And 35 CSR § 6-9.2.4. 4/5/80 of the Thir operational Regulations of Cementing Oil ORDER NO. 2014 - 17 AND GAS WELLS

#### REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and enal protection easing of oil and gas wells.

#### FINDINGS OF FACT

- 1.) Nations Completion & Production Services Co. proposes the following extremt blend:
  - = 2% Culcium Chloride (Accelement)
  - 0.25 % Super Flake (Lost Circulation)
     94% Type "I" Coment
     1.20 % Water
- Loboratory testing results indicate that the blend listed in Fact No.1 will active a 500
  psi compressive strength within 6 laura and a 2,435 psi compressive strength within 24
  hours.

Promoting a healthy environment.

Received

M. Och of Fiministralight beolegieu Officer of the Case

#### CONCLUSIONS OF LAW

Pursuant to Articles 6 and 6A, Chapter 22 of the Cude of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in add motice, and the persons interested therein, and jurisdiction to product at the heroisafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.b.8 the Chief of the Office of Oll and Gas may approve different coment bloods upon the well operator providing satisfactory proof that different coment types are adequate.

#### ORNER

It is ordered that Nobors Completion & Production Services Co, may use the coment blend listed in Findings of Fact No.1 for the comenting of surface and coal protection casing of oil and gas wells in the State as may be requested by all and gas operators. The waiting time on the coment blend shall be B terms. The coment blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the coment shurries meet the minimum weight specifications. A sample shall be culticated and, if after 8 hours the coment is not set up, additional time will be required. Nators Completion & Production Services Co. shall keep a recurd of censent blend jobs in which the content blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

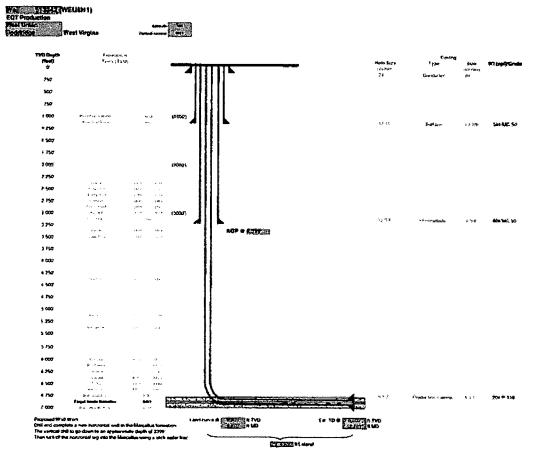
IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS DEPARTMENT OF ENVIRONMENTAL PROTECTION OF THE STATE OF WEST VIRGINIA

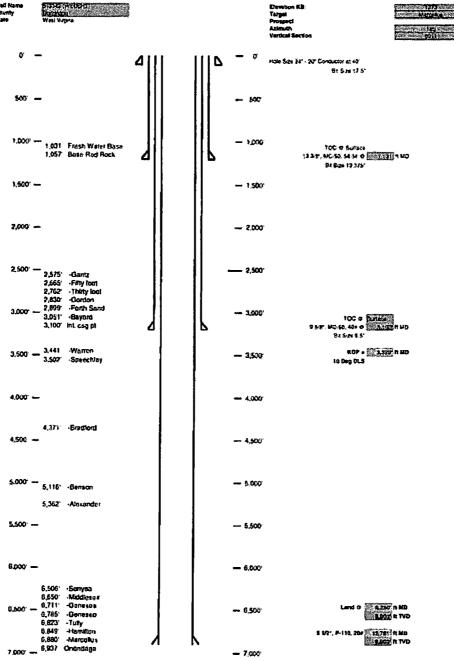
James Matrin, Chief Office of Oil and Gas

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Min Date of the control of the services



Received



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The second

ww-9 (5/13)

	Page	at	
<b>API No. 47</b>	017		0
Operator's	Well No.		513342

### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

#### Fluids/Cuttings Disposal & Reclamation Plan

Operator Name	EQT Production Co.		P Code	
	Bluestone Creek & Middle Island Cree	ık Quadrar	ngle <u>We</u>	st Union 7.5
	1260' County		District	West Union
	more than 5,000 bbls of water to			Yes x No
W레 a pit be used ? Yes	;No:X			
if so please des	cribe anticipated pit waste:			
•	liner be used in the pit? Yos	No	X If so, wh	nat ml.? 60
•	cosal Method For Treated Pit Wa: Land Application Underground Injection	stes: { UIC Permit Nun	nber <u>0014,</u>	00 PL 1 DL 1 B462, 4037
	Reuse (at API NumberOff Site Disposal (Supr	ply form WW-9 for		1
	Other (Explain			
	be used ? Yes. The closed loo	o avstem will remov	e drill cuttings from	the drilling
Will closed loop system	re then prepared for transportation to	an oll-site disposal	facility.	V-1110-1111-1111-111-111-111-111-111-111
Drilling medium antici	ipated for this well? Air, freshwate	er, oil based, etc.	As is used to drift the top-I	hole sections of the wellbore,
Committee and a second second	#==== ·-		Surface, intermediate, and	Pilot hale sections, water based
			mud is used to dril the cur	rve and fateral.
If of based,	what type? Synthetic, petroleum,	, etc		
Aidhiuea to he used in	drilling medium? MiLBAR, Vis	scositor, Alkalinity Cont	rol, Lime, Chloride S	alis,Rale Filtration Control
Cohomoulant Lubdonnt Ont	ement, Defoaming, Walnut Shell, X-Cide	. SOLTEX Tems. Of the	no listed chemicals th	ne following are
and a second section driving	on air Juhricant, determent, defoaming. 1	Water based fluids use	the following chemi	cais: MILDAN,
viscositer, alkalinity control, I	lime, chloride salts, rate filtration control,	dellocculant, hubricant,	. detergent, defoami	ng, wainut shell,
vide SOLTEX terms				Landlili
Drill cuttings disposal	method? Leave in pit, landfill, ren	noved olisite, etc.		n/a
	nd plan to solidity what medium will be us	od? (Coment, Line, so; 	ee Attached List	
<ul> <li>Landfill or of</li> </ul>	fsite name/permit number?	3	ee Attached List	
	and and agree to the terms and condition	s of the GENERAL W	ATER POLLUTION F	PERMIT Issued
	the and Oil and Car of the West Vitoiria (	Dopartment di Environ	Menia Florector i i	7 10 010 10 to to to to to
provisions of the permit are	enterceable by taw. Violations of any term	n or condition of the ge	neral permit and/or c	other applicable law
	y of law that I have personally examined a chments thereto and that, based on my in	nandry of those individu	ST2 SULLIGORATOR I dob	Stands in deduction
application form and all area	at the information is true, accurate, and co	omplete. I am aware th	at there are significa	nt penalties for
submilling talse information.	including the possibility of fine or impriso	onment,		
		1/1/	//	
Company Official Sign	<del></del>	Victoria	Roark	
Company Official (Type	ed Name)	Permitting Supe		
Company Official Title				
				<del></del>
Subscribed and sworn	before me this	cay of Ausu	41	, 20
11- 0	<b>-</b>		, r	Notary Public
-4	7/21/2018		-	
My commission expire	s 7/27/2018			
		internation of the second	S CALLO NOT NICHOL	Minimizer Session of the session of

Environmental Protection

			Operato	or's Well No.	51334
Proposed Revegetat	ion Trealment: A	cres Disturbed	no additional	Prevegelation pH	6.0
Lime	3	Tons/acre or	to correct to pH	6.5	
Fertilize typ	e				
Fertilizer An	mount	1/3(bs	a/acre (500 lbs minimum)		
Mulch	·	2	Tons/acre		
			Seed Mixtures		
Temporary			0.47	Permanent	
Seed Type KY-31	10s/ 40	acre	Seed Type Orchard Grass	lbs/a 15	cre
Alsike Clover	5		Alsike Clover	5	
Annual Rye	15				
Photocopied section	of involved 7.5' to	opographic she	et.		
Plan Approved by:	Dangin				
Comments;//	Suntain A	15 to 0	We Dop regulati	long	
		<u></u>			
Title: 0,1 +6	as Inst	pector	Date: 9-14	- 2011	
ield Reviewed?	( /	) }	/es (	) No	

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AUG 1 9 2014

WV Department of Environmental Protection

## EQT Production Water plan Offsite disposals for Marcellus wells

#### CWS TRUCKING INC.

P.O. Box 391 Williamstown, WV 26187 740-516-3586 Noble County/Noble Township Permit # 3390

#### LAD LIQUID ASSETS DISPOSAL INC.

226 Rankin Road Washington, PA 15301 724-350-2760 724-222-6080 724-229-7034 fax Ohio County/Wheeling Permit # USEPA WV 0014

#### TRI COUNTY WASTE WATER MANAGEMENT, INC.

1487 Toms Run Road Holbrook, PA 15341 724-627-7178 Plant 724-499-5847 Office Greene County/Waynesburg Permit # TC-1009

#### Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive Bridgeport, WV 26330 304-326-6027 Permit #SWF-1032-98 Approval #100785WV

#### Waste Management - Northwestern Landfill

512 E. Dry Road Parkersburg, WV 26104 304-428-0602 Permit #SWF-1025 WV-0109400 Approval #100833WV

#### **BROAD STREET ENERGY LLC**

37 West Broad Street Suite 1100 Columbus, Ohio 43215 740-516-5381 Washington County/Belpre Twp. Permit # 8462

#### TRIAD ENERGY

P.O. Box 430 Reno, OH 45773 740-516-6021 Well 740-374-2940 Reno Office Jennifer Nobel County/Jackson Township Permit # 4037

#### KING EXCAVATING CO.

Advanced Waste Services 101 River Park Drive New Castle, Pa. 16101 Facility Permit# PAR000029132

Received

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## Site Specific Safety Plan

### **EQT WEU 6 Pad**

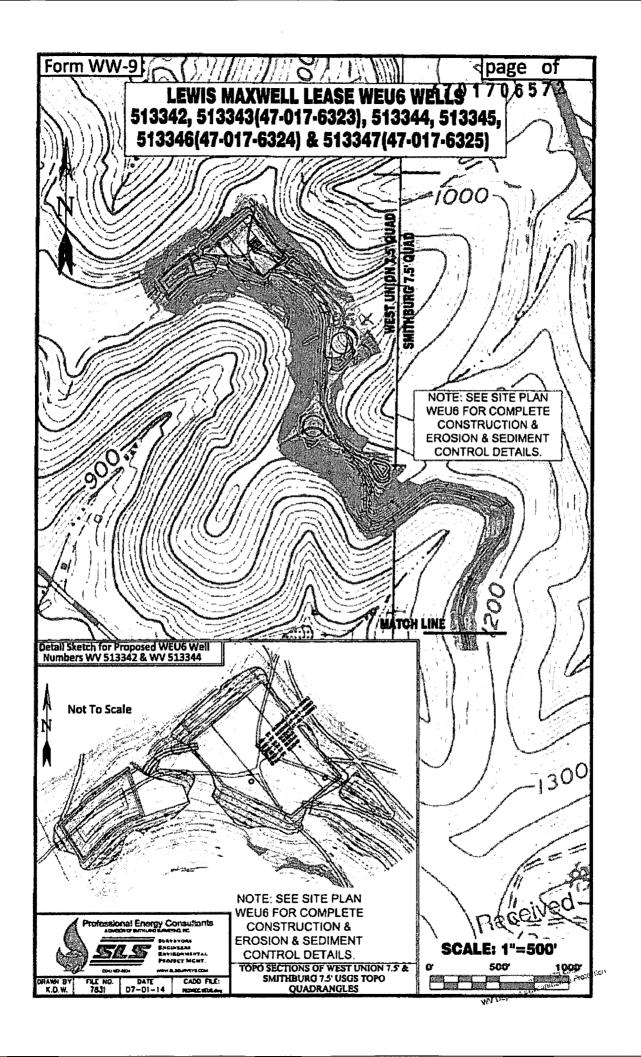
# West Union Doddridge County, WV

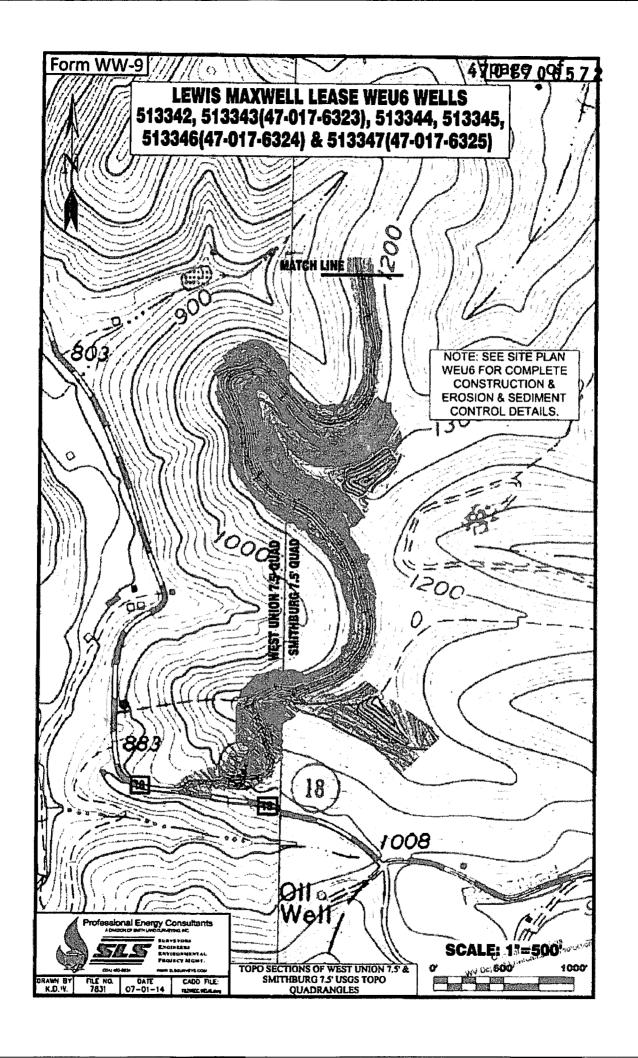
For	r Wells:
513342513344	and the second s
A Marian Company (1999)	
Date Prepare	
West At	WV Oil and Gas Inspector
Dekentline Species	
Heremitting Openiss	Title 4-14-2014
8-7-14	
Date	Date

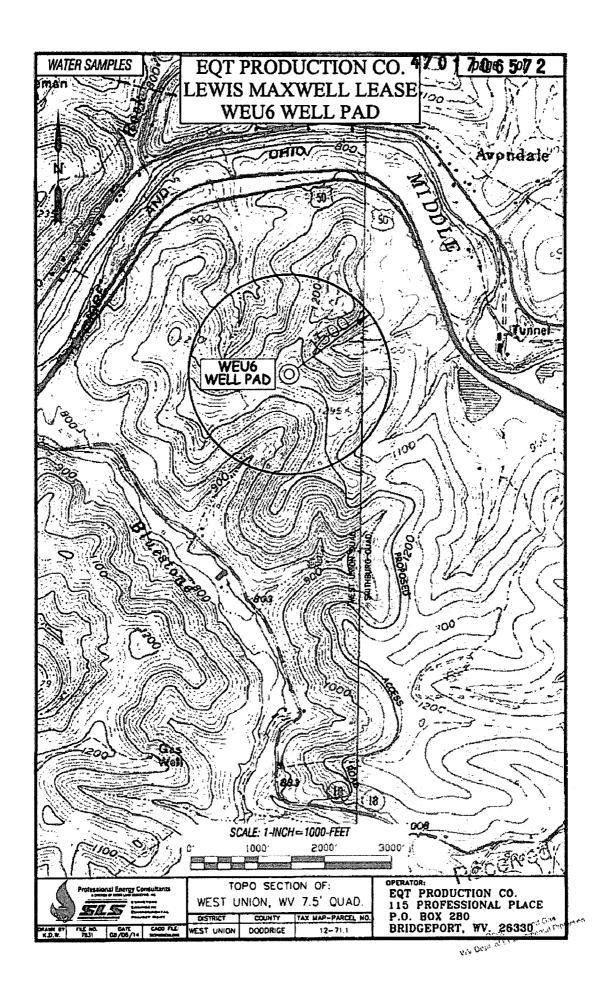
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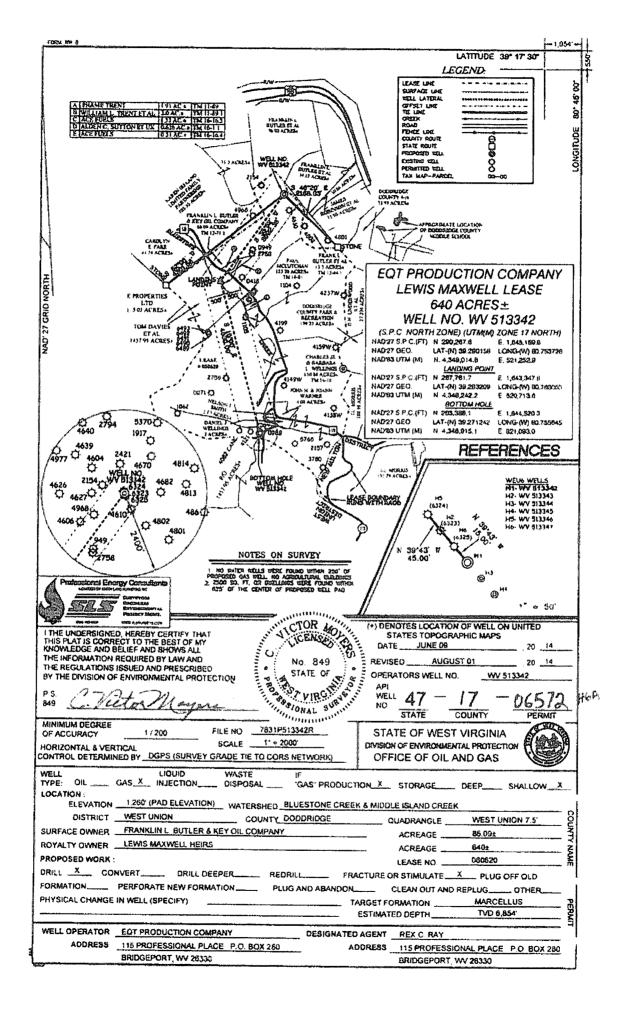
AUG 1 9 2014

WV Department of Environmental Protection











# Site Specific Safety Plan

# EQT WEU 6 Pad

# West Union Doddridge County, WV

For W	/ells;
513342513344	
And the control of th	
Date Prepared:	July 31, 2014
Alas It	Douglas Newly-
EQT Production	WV Oil and Gas Inspector
Dekenitting peauss	
Pekenitting peauss	Title 4.14-2014
8-7-14	Date
Dato	<b></b>

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# west virginia department of environmental protection



# Water Management Plan: Well Pad Overview

WEU6 Well Pad



WMP 02026
Plan Type: Well Pad

dipr aron

**EQT Production Company** 

County

Doddridge

This Water Management Plan governs all water withdrawals associated the identified well pad. This plan supercedes any previously approved water management plans issued for the following wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

WMP (old):	API Number,	We Name/Number	[n]	Longs	Status.
01441	047-017-06323	513343	39.290211	-80.753795	
01442	047-017-06324	513346	39.290262	-80.753829	
01443	047-017-06325	513347	39.290190	-80.753760	
	047-017-06572	513342	39.290158	-80.753726	
	047-017-06573	513344	39.290127	-80.753691	

The following water consumption estimates (in gallons) have been reported for this plan:

Construction	105,000
Dolling Activities	840,000
Hydraulic Fracture.	43,000,000
Post-Fracture.	420,000
Incidental Use-	105,000
Reclamation Autivites	42,000

Total Water for Well Pad 44,512,000

Est. Construction Start 12/2/2013

Est Reclamation End: 12/2/2018

APPROVED

By M. Collins at 1:48 pm, Sep 03, 2014

# west virginia department of environmental protection



# Water Management Plan: Primary Water Sources



WMP 02026

API/ID Number

see overview

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EQT Production Company

Plan Type: Well Pad

WEU6 Well Pad

## Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- •Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- •Minimum flows required by the Army Corps of Engineers; and
- •Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

For any sources identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for mutiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interepreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this water management plan.

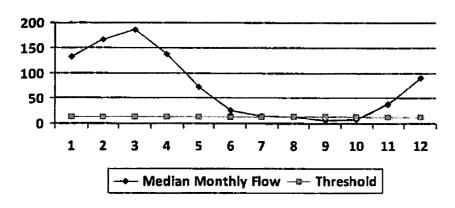
# **Source Summary**

WMP 02026	APT Norce (c) see overview	Operator	EQT Production Compa	any
Plan Type Well Pad		WEU6 Well F	Pad	
Stream/River				
Source Middle Island Creek @ T	ravis Truck Pad	Doddridge	Owner:	Michael J. Travi
	Max. dail,	rpurchase (gaf)	intske unitud». <b>39.308545</b>	intaka Longitude -80.781102
☐ Regulated Stream?	Ref Gauge ID. 3114	1500 M	INDDLE ISLAND CREEK AT	LITTLE, WV
Max. Pump rate (gpm): 4,200  OEP Comments	Min. Gauge Reading (cfs):	72.16	Min. Passby (c	fs) <b>28.33</b>
տ հայաս - Middle Island Creek @ Բ		Doddridge	Oraș	<b>William Whitehil</b> Infaia: congitude
	ार्था वर्षः <u>स्थ</u> ासः	g gerter killere attat i segulek a	39.298763	-80.760682
Tall Ragidlated Stress (1)	Ref Gauge ID 3114	1500 M	NODLE ISLAND CREEK AT	T LITTLE, WV
Max. Pump rate (gpm): 1,680  DEP Comments	Min. Gauge Reading (cfs):	62.89	Min. Passby (c	(fs) <b>26.43</b>
Middle Fork @ Maxson V	Withdrawal Site	Ritchie	Visitorii	Douglas L. Maxson
	lidae dorfy	r nia chuso (gul)	ਕਨਮਾਨ ਦਿਸ਼ਨ ਨ <b>39.144183</b>	168, 88, 10, 110, 110. -80,84664
CLR gulated Strong	Ref. Gaure ID 3155	i220 iOUTH FO	RK HUGHES RIVER BELC	OW MACFARLAN, W
Max. Pump rate (gpm): 1,680	Min. Gauge Reading (cfs):	36.74	Min. Passby (c	:{s} <b>2.45</b>

§ Sovret	Ohio River @	Select Energy	,			Pleasants	Owner	Select Energy
				Ma	ix, daily pi	archase (gal)	Intaké Latifud <b>39.346473</b>	e: Intake Longitude. -81.338727
🗷 Regulat	ed Stream? (	Ohio River Min	. Flow Ref G	auge ID	999999	8	Ohio River Station: R	lacine Dam
Max. Pum	p rate (gpm):	1,890	Min. Gauge	Reading	(cfs):	6,468.00	Min. Passby	(cfs)
	DEP Comm		•			National Wea ohrfc//flows.s	ather Service's Ohio html	River forecast
<b>⊕</b> <sup>1</sup> yout/₽	Ohio River @	) Westbrook T	rucking Site			Pleasants	Cod ( Stepi	hen R. and Janet Sue Westbrook
				िरीक्ष	ıx, daily pı	estata (gai)	listake Cititude <b>39.384455</b>	e - frtake Longitoder - <b>81.25645</b>
Cl Reguero	osteam." (	Ohio River Min	. Flow Ref G	auල• (Dr	999999	9 Ohio	River Station: Willow I	sland Lock & Dam
Max. Pum	prate (gpm):	1,890	Min. Gauge	Reading	(cfs):	6,468.00	Min. Passby	(cfs)
	DEP Comm					National Wea ohrfc//flows.s	ether Service's Ohio html	River forecast
<b>a</b> Sover €	Middle Island	d Creek @ Bar	nes Withdrawa	al Site		Doddridge	<sup>1</sup> tAres	Ellen L. Barnes
				र भी है।	z đại, t	प्रतिकास (१,४५)	ลายพฤ โอโสเเตี <b>39.29958</b>	en orda same ba -80.75694
(I) gegalab	ed Stream		Ret. G	<b>a</b> 19	311450	o N	IIDDLE ISLAND CREEK	AT LITTLE, WV
Max. Pumj	o rate (gpm): DEP Comm	<b>1,680</b>	Min Gauge	: Reading (	(cfs):	59.06	Min. Passby	(cfs) <b>26.39</b>

	WMP	02026	API/ID Number: see overview	Opiniston EQT Production	Company
	Plan Type:	Well Pad		WEU6 Well Pad	
Sourcel	D: <b>41985</b> So		Middle Island Creek @ Travis Truck Pad Michael J. Travis 01	Source Latitude: 39.308 Source Longitude: -80.78	<del>-</del>
	Drainage Area		122.83 County: Doddridge		
	idangered Specie		sel Stream? ZCC?		
☐ Re	gulated Stream?			Max, Pump rate (gpm):	4,200
Pr	oximate PSD?	West U	nion Municipal Water	Max. Simultaneous Tr	ucks: 10
<table-cell> Ga</table-cell>	ouged Stream?			Max. Truck pump rate (	gpm) 42 <b>0</b>
	Reference Gaug	311450	MIDDLE ISLAND CREEK AT LITTLE, WV	**************************************	
	Drainage Area (	sq. mi.)	458.00	Gauge Threshold (cfs):	45
Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)		
1	131.72	30.99	101.10		
2	165.69	30,99	135.07		
3	185,40	30 99	154.78		
4	137.68 72.63	30.99	107.05		
5	72.63 25.36	30.9 <del>9</del> 30.99	42.00 -5.26		
6		30.73	-3,20		
6 7	•	30.99	-16.27		
	14,35 11.82	30.99 30.99	-16,27 -18.81		
7	14,35				
7 8	14,35 11.82	30.99	18.81		
7 8 9	14,35 11.82 6.05	30.99 30.99	-18.81 -24.57		

# **Water Availability Profile**



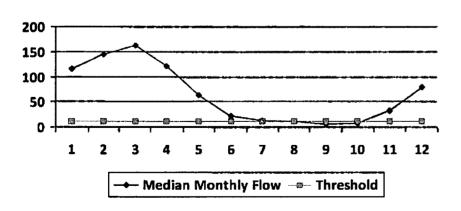
# Water Availability Assessment of Location

Downstream Demand (cfs): Pump rate (cfs): Headwater Safety (cfs): Ungauged Stream Safety (cfs):	3.02 0.00
Downstream Demand (cfs): Pump rate (cfs):	• • • •
Downstream Demand (cfs):	9.50
•	9.36
•	13.24
Upstream Demand (cfs):	6.55
Base Threshold (cfs):	12.07

<sup>&</sup>quot;Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the scream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

			350.00	- COUNTY			
	WMP 0	2026	API/ID Number:	see overview	€)gx enter	EQT Production	Company
	Plan Type: W	/ell Pad		V	VEU6 Well Pad		
Source II	D: <b>41986</b> Sou	irce Name Mido	lle Island Creek @ Rock	Run		e Latitude: 39.2987	
		Willia	am Whitehiil		Source	Longitude: -80.760	682
	HUC-8 Code:	5030201					
	Drainage Area (	[sq. mi.]; 107.	35 County: Do	oddrigge			
₩ En	dangered Species		•	- -			
	out Stream?	Tier 3?	C W				
		iller 3 ?	% WV	nr	May Pum	p rate (gpm):	1,680
	gulated Stream?				1910A. 7 Util		·
amm h	oximate PSD?	West Union	Municipal Water			Max. Simultaneous Tru	
📝 Ga	uged Stream?					Max. Truck pump rate (g)	om) 430
	Reference Gaug	3114500	MIDDLE ISLAND CRE	EK AT LITTLE, WV			
	Drainage Area (sq	ı. mi.) 45	8.00		Gauge T	hreshold (cfs):	45
	Median	Threshold	Estimated				
Month	monthly flow	(+ pump	<u>Available</u>				
	(cfs)		water (cfs)				
1	115.12	19.74	95.58				
2	144.81	19.74	125.27				
3 4	162.04 120.33	19.74 19.74	142.50 100.79				
5	63.47	19.74	43.93				
6	22.17	19.74	2,63				
	12.54	19.74	-7.00				
7			= =				
8	10.33	19.74	-9.21				
-		19.74 19.74	-9.21 -14.25				
8	10.33						
8	10.33 5.29	19.74	-14.25				

# **Water Availability Profile**



# Water Availability Assessment of Location

Base Threshold (cfs):	10.55
Upstream Demand (cfs):	2.81
Downstream Demand (cfs):	13.24
Pump rate (cfs):	3.74
Headwater Safety (cfs):	2.64
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	62,80
Passby at Location (cfs):	26.42

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

			<u> </u>	Detail			
	WMP 0	2026	API/ID Number:	see overview	Operator	EQT Production	оп Сотралу
p	Рас Туре: <b>W</b> o	ell Pad		W	EU6 Well Pad		
Source ID:	<b>41987</b> Sour		Fork @ Maxson Witl	ndrawal Site		te Latitude: 39.14	
		Dougla	s L. Maxson		Source	Longitude: -80.8	14664
)	HUC-8 Code:	5030203					
(	Drainage Area (s	sq. mi.): 16.99	County:	Ritchie			
<b>E</b> ndar	ngered Species?	Mussel Stre	am? ZC	<b>כ</b> יזי			
	Stream?	Tier 3?	· .	HP			
	ated Stream?	· i Hei 5;	· <b>V</b> V	nr	Max. Pum	p rate (gpm):	1,680
					TTIGAL F WITT	Max. Simultaneous	•
,	nate PSD?						
Gauge	ed Stream?					Max. Truck pump rate	a (gpin)
Rei	ference Gaug	3155220	SOUTH FORK HUGH	ES RIVER BELOW MAI	CFARLAN, WV		
Dra	ainage Area (sq.	mi.) 229.0	00		Gauge T	hreshold (cfs):	22
	Median	Threshold	Estimated				
Month m	nonthly flow	(+ pump	<u>Available</u>				
	(cfs)		water (cfs)				
1	47.72	6.19	41.62				
2	62.22 68.13	6.19	56.12				
3 4	38.52	6.19 6.19	62,04 32,42				
5	27.03	6.19	32.42 20.93				
6	14.52	6 19	8.42				
7	7.20	6.19	1.10				
8	4.16	6.19	-1,94				
9	5.00	6.19	-1-10				
10	5.43	6.19	-0.67				

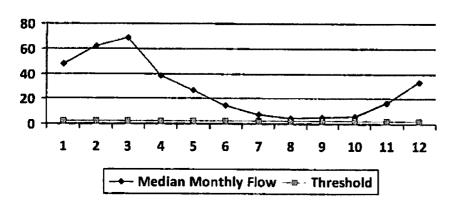
# **Water Availability Profile**

10.13

27,40

6.19

6.19



# Water Availability Assessment of Location

Min. Gauge Reading (cfs): Passby at Location (cfs):	36.74 2.45
Ungauged Stream Safety (cfs):	0.41
Headwater Safety (cfs):	0.41
Pump rate (cfs):	3.74
Downstream Demand (cfs):	0.00
Upstream Demand (cfs):	0.00
Base Threshold (cfs):	1.63

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value goes not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

11

12

1<del>6</del>.23

33.50

	WMP 0	2026	API/ID Number	see overview	Open at the	EQT Production	Company
	Plan Type: W	eli Pad		W	EU6 Well Pad		
ource II	D: <b>41988</b> Sou		liver @ Select Energy Energy			ce Latitude: 39.346 Longitude: -81.338	
	HUC-8 Code:	5030201					
	Drainage Area (	sq. mi.): 25000	County: Pl	leasants			
[] En	dangered Species?	Mussel Str	eani? 🗀 ZC	·ሮን			
	out Stream?	C. Tier 3?	1 ; W				
		Ohio River M		THE	Max. Pum	p rate (gpm):	1,890
· · · ·	gulated Stream?	Onto kiver ivi	in. rłow		Think I will	Max. Simustaneous To	
	oximate PSD?						
¥ Ga	uged Stream?					Max. Truck pump rate (p	(pm) (i
	Reference Gaug	999998	Ohio River Station: F	Racine Dam			
	Drainage Area (sq	. mi.) 25,00	0.00		Gauge T	hreshold (cls):	7216
	Median	Threshold	Estimated				
lonth	monthly flow	(+ pump	<u>Available</u>				
	(efs)		water (cfs)				
1	50,956.00	•	-				
2	54,858.00	•	•				
3 4	73,256.00 62,552.00	-	•				
5	43,151.00	•					
6	27,095.00	•	*				
7	17,840.00	•	*				
8	14,941.00	•	•				
9	14,272.00	•					
10	17,283.00	•	*				
11	29,325.00	•	и				
12	46,050.00	•					
	10.	later Availal	bility Profile		Water Ava	ilability Assessmen	t of Locatic
	V	utti Availai	omey a forme		Base Thre	shold (cfs);	
80000	0		ter we		Upstream	Demand (cfs):	0.0
60000	_				Downstrea	am Demand (cfs):	0.0
			ulated by the Arr	•	Pump rate	,	4.2
40000	U		eranteed flow re-		•	r Safety (cfs):	0.0
20000	0 +		20,744,00			•	
			a - o - o - o - o -		Ungauged	Stream Safety (cfs):	0.0

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

← Median Monthly Flow 🌞 Threshold

10 11 12

Min. Gauge Reading (cfs):
Passby at Location (cfs):

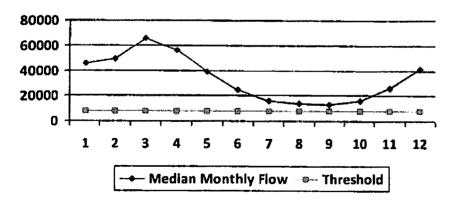
1

2

3

	WM	P 02026		API/ID Number	see overview	Governois	EQT Production	on Company
	Plan Type:	Well Pad				WEU6 Well Pad		
iource IC	); <b>41989</b> H <b>∪C-</b> 8 Code	Source Name		er @ Westbrool R. and Janet Su	=		ce Latitude: 39.3 Longitude: -81.2	
	<b>Dr</b> ainage Ar	ea (sq. mi.):	25000	County:	Pleasants			
	dangered Spac out Stream?	ies? 💆 M	ussel Strea er 3?	m?	ZCC? WHP			
☐ Reg	gul <b>ate</b> d Strean	n? Ohio	River Min.	Flow		Max. Pum	p rate (gpm):	1,890
🗀 Pro	ximate PSD?						Max. Simultaneous	Trucks: C
C Gau	uged Stream?						Max. Truck pump rate	e (g;sm) (
	Reference Gau Drainage Area	1.07	999 O 25,000.0		n: Willow Island Lock		hreshold (cfs):	6468
<u> Month</u>	Median monthly flow (cfs)	Thresho <u>(+ pump</u>		Estimated Avallable water (cfs)				
1	45,700.00	-		*				
2	49,200.00	*		•				
3 4	65,700.00 56,100.00	*		•				
5	38,700.00	*		•				
6	24,300.00	•		•				
7	16.000.00							
8	13,400.00	•		ж				
9	12,800.00	•		•				
10	15,500.00	•		•				
		•		×				
11 12	26,300.00 41,300.00			* *				

# **Water Availability Profile**



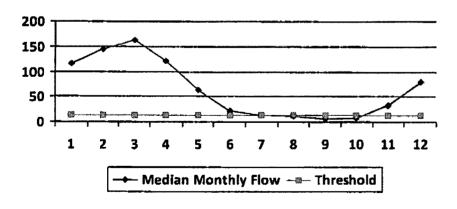
# Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs);	4.21
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs): Passby at Location (cfs):	-

<sup>&</sup>quot;Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

2000001.000000000	WMP	02026	API//D Number	see overview	Operator	EQT Production Company
	Plan Type: V	Veil Pad		WE	U6 Well Pad	
Source II			idle island Creek @ Barr n L. Barnes	nes Withdrawal Site		ce Latitude: 39.29958 Longitude: -80.75694
	HUC-8 Code: Drainage Area		7.08 County: Di	oddridge		
200.000	dangered Species out Stream?			CC?		
	gulated Stream?	water that we'r	•		Max. Pum	p rate (gpm): 1,680
<i>,,,,,</i>	eximate PSD?	West Unio	n			Max. Simultaneous Trucks: 0
e 2000 A	uged Stream?					Max Truck pump rate (gpm) C
	Reference Gaug Drainage Area (so	3114500 q. mi.) 4	MIDDLE ISLAND CRI 58.00		Gauge 1	hreshold (cfs): 45
Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)			
1	114.83	19.52	95.48			
2	144.45	19.52	125.09			
3 4	161.63 120.02	19.52 19.52	142.28 100.67			
5	63.31	19.52 19.52	43.96			
6	22.11	19.52	2.76			
7	12.51	19,52	-6.84			
8	10.30	19,52	-9.05			
9	5.28	19.52	· 1.4.08			
10	6.63	19.52	-12,72			
11	32.37	19.52	13.02			
12	79.10	19.52	59.75		•	

# **Water Availability Profile**



# Water Availability Assessment of Location

Ungauged Stream Safety (cfs):	2.63
Headwater Safety (cfs):	2.63
Pump rate (cfs):	3.74
Downstream Demand (cfs):	13.24
Upstream Demand (cfs):	0.00
Base Threshold (cfs):	10.52

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

# west virginia department of environmental protection



# Water Management Plan: Secondary Water Sources



WMP-02026

APIÃO Number

see overview

Operator

**EQT Production Company** 

Plan Type: W

Well Pad

WEU6 Well Pad

### Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

# **Centralized Freshwater Impoundment**

Source ID: 41994 Source Name

Davies Centralized Freshwater Impoundment

Source Lat:

39.269635

Source Long:

-80.77711

County

Doddridge

Max. Daily Purchase (gal)

**OFF Columents** 

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1083

WMP 02026 API/ID Number see overview Operator EQT Production Company
Plan Type: Well Pad WEU6 Well Pad

## Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- •For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- •For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

# **Ground Water**

Source ID: 41991 Source Name Maxson Property Test Well #1

Source Lat: 39.14472 Source Long: -80.84664 County Ritchie

Max. Daily Purchase (gal)

DEP Comments:

WMP-02026

API/ID Number

see overview

Ope, stor

**EQT Production Company** 

Plan Type,

Well Pad

WEU6 Well Pad

# Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

# Lake/Reservior

Source ID: 41992 Source Name

Pennsboro Lake

Source Lat:

39.281689

Source Long:

-80.925526

County

Ritchie

Max. Daily Purchase (gal)

DEP Comments:

Source ID: 41993 Source Name

Gilliland Reservoir

Source Lat:

39.265398

Source Long:

-80.971995

County

Ritchie

Max. Daily Purchase (gal)

OEP Comments:

WMP 02026	API/ID Number	see overview	Operator	EQT Production Company
Plan Type. Well Pad			WEU6 Well Pad	

### Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- •For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- •For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

# **Recycled Frac Water**

Source ID: 41995 Source Name Various

Source Lat: Source Long:

County

Max. Daily Purchase (gal)

DEP Comments: Sources may include, but are not limited to the WEU6 Well Pad.



# Site Specific Safety Plan

# **EQT WEU 6 Pad**

# West Union Doddridge County, WV

513342513344	For Wells:		
	Dale Prepared:	July 31, 2014	•
Eat Production persons		WV Oil and Gas Inspector	
file 8-7-14 Date	•	Title Date	

# TABLE OF CONTENTS

Section	Description	Pages
I	Contacts, Schedules & Meetings	3-8
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IV	Chemical Inventory & SDS	16
٧	BOP & Well Control	17-19
VI	Hydrogen Sulfide	20-22
VII	Collision Avoidance	24
IX	Deep Well Additional Requirements	25-27
x	Well Site Safety Plan Receipt Acknowledgement	28

# Section I: Contacts, Schedules and Meetings

	Leed Emergery Proposes Numbers
EQT Emergency Contact Information	Local Emergency Response Numbers
EQT 24-hour Number.	County Emergency Dispatch Center:
T-980-525-1750	Central Communications Center
FOT 5-14	EMERGENCY 9-1-1
EQT Environmental Department Dustin Howarth	EMERGENCY 10-digit 304.659.3770
•	Business # 304-659-3770(not manned 24/7)
O: 412.395.3930 C: 412.208.5768	John Dotson - Director
C; 412,200,5756	Primary Response Fire Department:
EQT Health and Safety Department	To be determined by the Dispatch Center
Brian Ely	EMERGENCY 9-1-1
C: 304.848.0067	EMERGENCY 10-digit 304.659,3770
0, 304,048,0007	CHERGENET TO-digit 304.855,5770
Scott M. Held (Secondary)	
O: 412.395.3124	Primary Response Law Enforcement Agency:
C: 724.705.4114	To be determined by the Dispatch Center
	EMERGENCY 9-1-1
	EMERGENCY 10-digit 304,659,3770
EQT Construction	
Superintendent Allen Mulcahy	Primary Response Ambulance Service:
PHONE: 304,348,5313	To be determined by the Dispatch Center
PHONE: 304,543,5400	EMERGENCY 9-1-1
	EMERGENCY 10-digit 304.659,3770
Phil Keeton, Mgr Construction Services	•
PHONE: 304,348,7605	County Emergency Services/Management (CES);
PHONE: 304,542.8914	Doddridge County Office of Emergency Management
	EMERGENCY 9-1-1
EQT Manager - Land	EMERGENCY 10-digit 304-873-3253
Jason Ranson, Regional Land Manager	BUSINESS PHONE: 304-203-5455 (cell)
PHONE: 304,348.5319	RI. Box # 57
PHONE: 304,543.9442	West Union, WV 26456
5	Oirector Pat Heaster
Bryant Bowman, Regional Land Manager	Asst, Director Mike Hamilton
PHONE: 304.348.3827	Nearby Hospital
PHONE: 304,550.8B21	United Hospital Center of Bridgeport
EQT Director - Geology	Emergency Room # 681, 342,1000
James Pancake, Director of Geology	327 Medical Park Dr. Clarksburg, WV 26330
PHONE: 412.395.3912	Distance from site: 39 Miles
1110116. 716.030,0016	Estimated travel lune: 56 Minutes

### **Drilling Operations Emergency Contact Information**

On-Site Drilling Specialist
EQT Corporation
TO BE DETERMINED

# Completions Operations Emer Contact Information

On-Site Completion Specialist EQT Corporation TO BE DETERMINED

EOT Drilling
James Rose, Director Drilling Engineering
PHONE: 412.395.2319
PHONE: 412 443.0282

Bradley Maddox, Mgr Drilling PHONE: 412,395,7053 PHONE: 412,208,5790

Drilling Contractor 1: TO BE DETERMINED

EQT Completions
James Abbott, Director Completions
PHONE: 412.553 5998
PHONE: 412.579.8949

Jim Helmick VP Completions PHONE: 412.395.5518 PHONE: 412,216,7608

Completions Contractor 1: TO BE DETERMINED

EOT Production (Midstream) Ken Kirk, EVP Production PHONE: 412.553,7836 PHONE: 304.552.3575

Greg Shockley, Director of Operations Midstream PHONE: 304.269.2061 PHONE: 304.266.5183

### **EQT Government and Community Relations**

Local Government: Nathanial Manchin, Mgr Community Relations

PHONE: 412,553,5702 PHONE: 304,543,5010

State Government: Stephen Perdue, WV Government Relations Mgr

PHONE: 304,348,3866 PHONE: 304,545,2622

### Local, State, and Federal Agency Numbers

### Local State Well inspector

WVDEP Office of Oil and Gas Douglas Newton 4060 Dulchman Road

Maclarian, WV 26148 Pollution and Emergency Spills 1-800-642-3074 304.932.8049 (Cell)

# USCG/ National Response Center (NRC):

800.424.8802

# CHEMTREC

Emergency: 600.424.9300 Business: 800.262.8200

# US DOT Pipeline and Hazardous Materials Safety

Administration (PHMSA) Haz-Mat: 800.467,4922

Pipeline: 202.366.4595

# Assigned Specialist Response Numbers

Primary Spill Response Company: Ryan Environmental, Inc. EMERGENCY PHONE: 800.649.5578

BUSINESS: 304.842.5578 Route 4 Box 280, 76E Bridgeport, WV 26330

# Secondary Spill Response Company:

Miller Environmental Inc, EMERGENCY PHONE 1-888-988-8655

1-304-292-8655

514 Hartman Run Road

Morgantown, WV 26505

## Primary Well Emergency Response Company:

Wild Well Control

**EMERGENCY PHONE: 281-784-4700** 

BUSINESS PHONE: 281-784-4700

2002 Oil Center Court

Houston, TX 77073

Michael Wilford/ PA Safety Coordinator

### Secondary Well Emergency Response Company:

EMERGENCY PHONE: 1-281-931-8884 or 800-256-9688

BUSINESS PHONE: same as above

10200 Bellaire Blvd. Houston, TX 77072

Primary Hazardous Waste Disposal Company: NAME: Ryan Environmental, Inc. EMERGENCY PHONE: 800.649.5578 **BUSINESS PHONE: 304.842.5578** ADDRESS Route 4 Box 260, 76E ADDRESS Bridgeport, WV 26330

Primary Hydrogen Sulfide (H2S) Company:
Salety Consultants; McCulley, Eastham, and Associates
EMERGENCY PHONE: 1-800-556-4227
CONTACT NAME/TITLE: Matt Boggs at 606-922-2066

### **Notification Methods**

Notification of the public will be made in conjunction with EQT personnel listed above and emergency first responders listed above in the event that they are affected by an event such as hydrogen sulfide releases, blow-outs and flaring. The public list is attached to the map listed in Section II: Maps and Diagrams and the procedures for notification, isolation zones, and evacuations are also listed in Section II: Maps and Diagrams.

Additional actions and precautions for the presence of hydrogen suffide are listed in Section V. Hydrogen Suffide.

Flaring notification procedures are listed in Section V: 80P and Well Control.

### Pre-Drill Meeting

A Pre-Drill Meeting will be held on location with the following personnel in attendance:

- · WV OOG Inspector and for Supervisor
- EQT Land Agent
- EQT Construction Specialist
- EQT Drilling Contractor Personnel, i.e. Tool Pusher, Driller(s), Safety Manager
- EQT On-Site Driffing Specialist and/or Supervisor

## Optional attendees may include:

- EQT Salety and Health Coordinator or designee, if available
- EQT Environmental Coordinator or designee, if available
- · EQT H2S Contractor representative, if in an H2S plan required zone.
- EQT Completions Personnel

### Safety Meetings

A completed and documented EQT Tailgate Safety Meeting (TSM) or Contractor Representative Tailgate Talk or Job Safety Analysis (JSA) is required prior to the beginning of each work shift during all phases of the operation. Copies of these forms should be logged and kept in a location on-site for periodic auditing by EQT or the contractor.

See the attached EOT Tailgate Safety Meeting (TSM) Form on the following pages

# EQT Tailgate Safety Meeting

Form Revision Date. 2/24/2014



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# **EQT Tailgate Safety Meeting**

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# Section II: Maps and Diagrams

### General Information Pertaining to well pad location:

WV- Doddridge County - West Union Site State, County and Municipality EOT WEU6 Pad Site Location Designation

765 WV Rt 18 South, West Union, WV 26456 Site Address assigned by County 9-1-1 US Rt. 50 and WV Rt 18 Nearest cross road(s)

NAD 83: 39.287296 / -80.764765

......

Access Road Coordinates

NAD 83: 39,290259 / -80,753570 Pad Site Coordinates

### Directions:

NORTH ON 1-78 TO EXIT 119 THEN TURN LEFT ONTO US RT 50 WEST THEN GO +/- 29 MILES THEN TURN LEFT ONTO HWY 18 THEN GO +/- 1.0 MILES AND PROPOSED LOCATION WILL BE ON RIGHT FOR THE WEU-6H2, H5.

### Maps:

Maps are included on the following pages for reference for the above described well location. The two types of maps included are:

- 1. Plan View Map
- 2. Topographical map with 1-mile safety radius

### Site Evacuation Plan:

### Assembly areas

- Each Site is responsible for identifying a designated assembly area for personnel to safely evacuate to in the event of an emergency.
- Evacuation in place may be most suitable for inclement weather but that decision shall be made by the On-Site Specialist or Emergency Coordinator (Examples: Near the access road, Site Location Sign, On-Site Specialist trailer)
- Assembly points should be determined so as to be upwind in consideration of the prevailing wind at the site.
- At a minimum, a secondary assembly area shall be determined. Secondary assembly points should be located to be 90 degrees to the prevailing wind.
- . Each determined assembly area shall be communicated to all personnel on the site,

### Affected and Unaffected areas

- The Emergency Coordinator, or their representative, will establish the emergency area as the affected area and order the evacuation of all non-essential personnel to the primary assembly area.
- . The purpose is to minimize the risk of exposure to all personnel.
- On-site rescuers and equipment should be staged in areas unaffected by the emergency.
- Off-site services and equipment summaned to the scene should be staged in great unaffected by the emergency.
- Only essential personnel, as determined by the Emergency Coordinator, shall be granted entry into the affected area(s) after an emergency has occurred.

### Evacuation

- In the event of an emergency all non-essential personnel shall immediately evacuate their work areas and report to the Assembly Area.
- . Evacuation must be quick as life safety may be of the essence.
- Personnel should evacuate to the assembly area via the quickest route. If that route is blocked or hazardous, another route should be taken.
- Personnel should make sure that their co-workers heard the call for evacuation and assure that no one is left behind.
- Only essential personnel required for process critical jobs can stay behind, all others shall evacuate. This decision shall be at the sole discretion of the Emergency Coordinator and in no means should life safety be jeopardized.

- Should the primary assembly area be unsuitable for evacuation, the alternate location shall be communicated to all personnel. The Emergency Coordinator or their designee is responsible for determining the safest assembly area.
- Accountability shall be verified as soon as possible by the Emergency Coordinator or their designee. Those who
  are unaccounted for shall be immediately reported to the Emergency Coordinator.
- If evacuation is required for the surrounding areas, notifications to all personnel listed on the attached Topographical and One-Mile Safety Buffer Map and contact list shall be made by the On-Site Emergency Coordinator or their designee with the assistance of the emergency first responders and the county LEPC or CES.
- Evacuation locations and assembly areas will be made with the coordination of local emergency first responders.

### Scene Access

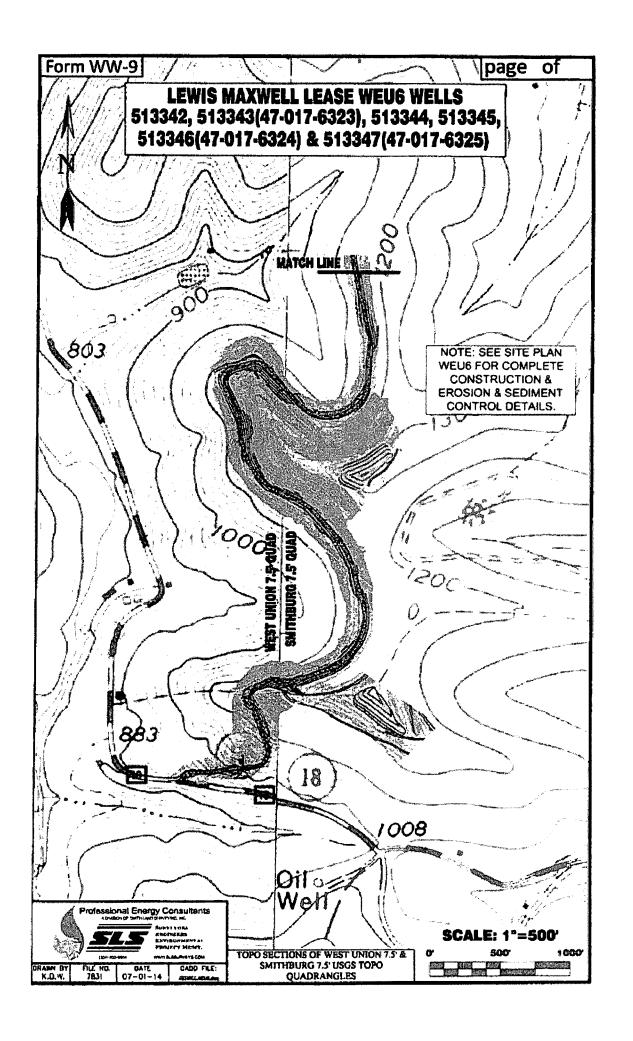
- · Access to the scene should be controlled at all times by the Emergency Coordinator or their representative.
- Access needs to be controlled to reduce life safety concerns as well as preserve evidence for investigation and root cause analysis.
- · Access should never be restricted in a way as to impede those who are evacuating in an emergency.
- The scene needs to be secured to prevent unauthorized entry by posting signs, tape, personnel, or other means at any and all access points.
- Unauthorized access into the affected area(s) is prohibited and calls for immediate removal from the site.

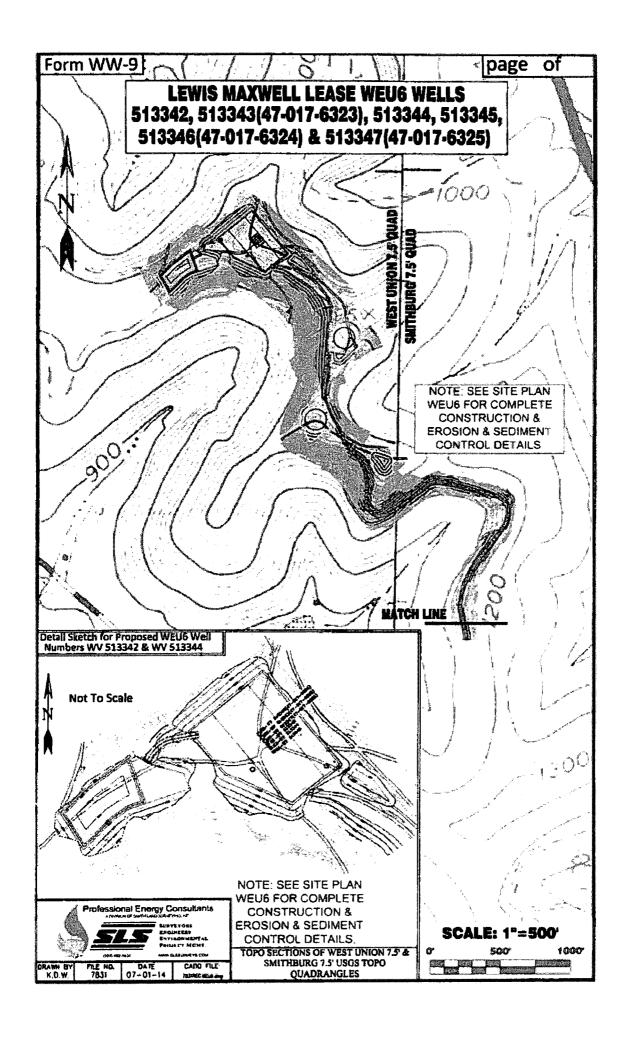
### Accountability

- The daily TSM or JSA shall be used to verify accountability for all personnel as soon as possible after an incident has occurred.
- A sign in and out sheet shall be used to account for personnel entering and exiting the area after an incident has occurred.
- All personnel unaccounted for shall be immediately reported to the Emergency Coordinator as well as emergency first responders.

See the attached West Virginia Rec Plans on the following pages for each well number listed on the permit cover page.

Plan View map notes:
This is a basic map of the site which shows the access road(s), nearby dwellings, and true north direction.
The prevailing wind direction for this area is from the southwest unless otherwise noted.
Flare lines, if needed, will be ran and installed as per procedure.

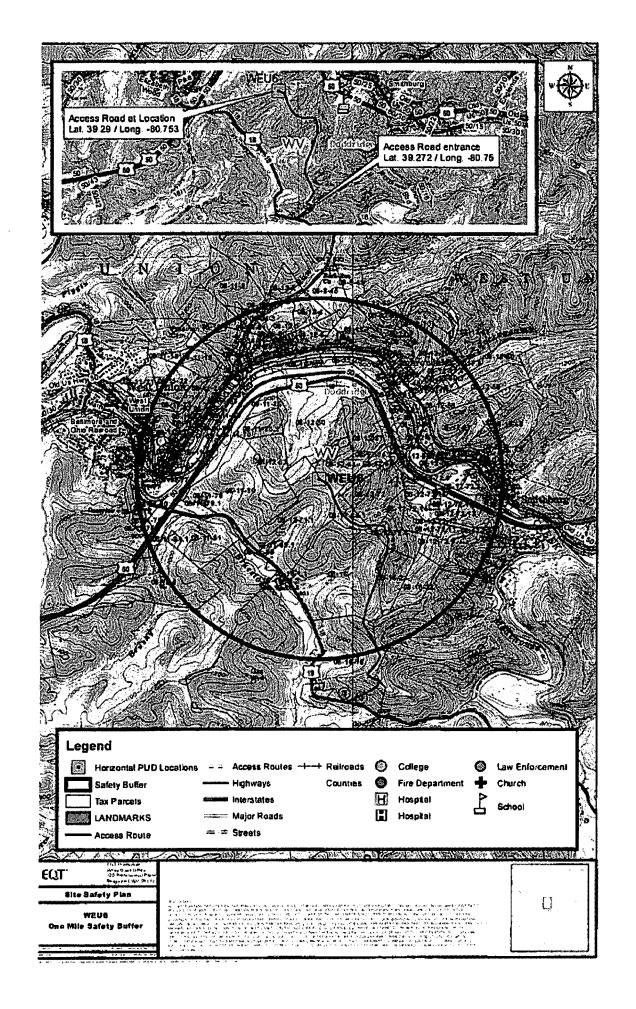




### Topographical map with 1-mile safety radius

See the attached topographical map on the following pages along with the attached list with emergency contact information

Topographical map with 1-mile safety radius map notes:
This is a basic map of the site which shows the topography of the area.
A defined 1-mile safety radius is shown on the map along with an attached list, if available, of the names, addresses and telephone numbers of residents, churches, schools and emergency facilities located within that one mile radius.
The map shows the nearby public route numbers and/or names



# WEU 6 PAD SITE SAFETY PLAN

MAP	TM/PARCEL	NAME	ADDRESS	PHONE
1	8-12-50	KEY OIL COMPANY	2567 SPRING HILL RO STAUNTON VA 24401	434-979-1380
2	8-12-51	FRANKLIN I, BUTLER	22 GARTON PLAZA WESTON WV 26452	304-269-2538
3	8-12-64	KEY OIL COMPANY	2567 SPRING HILL RD STAUNTON VA 24401	434-979-1380
4	8-12-54	KEY OIL COMPANY	2568 SPRING HILL RD STAUNTON VA 24401	434-979-1380
5	8-12-65	ELLA MARGARET ROBINSON	1117 € PENN AVE PENNSBORO WY 26415	304-659-2387
6	8-12-73	ELLA MARGARET ROBINSON	1 118 E PENN AVE PENNSBORO WY 26415	304-659-2388
7	B-12-72,4	DODDRIDGE COUNTY 4-H ASSOCIATION	RT 2 BOX 98 SALEM WY 25426	304-624-8650
8	8-12-72.10	DODDRIDGE COUNTY BOARD OF EDUCATION	SISTERSVILLE PIKE WEST UNION WV 26456	304-873-2300
9	8-12-72.14	DODDRIDGE COUNTY BOARD OF EDUCATION	SISTERSVILLE PIKE WEST UNION WV 26456	304-873-2300
10	8-12-72.11	DOODRIDGE COUNTY BOARD OF EDUCATION	SISTERSVILLE PIKE WEST UNION WV 26456	304-873-2300
11	8×12-72.12	DODDRIDGE COUNTY BOARD OF EDUCATION	SISTERSVILLE PIKE WEST UNION WV 26456	304-873-2300
12	8-12-72.13	DODDRIDGE COUNTY BOARD OF EDUCATION	SISTERSVILLE PIKE WEST UNION WV 26456	304-873-2300
13	8-12-72.16	TOWN OF WEST UNION	TOWN OF WEST UNION WV 26456	304-873-3379
14	8-12-72.2	WARREN E AND JUDY E BEE	RT 2 BOX 26 SALEM WV 26426	304-782-3126
15	8-12-72.1	WILLIAM H KNISELY (I)	S87 FRACTION RO WEST FINLEY PA 15377	NOT LISTED
16	8-17-72.8	WARREN & AND JUDY E BEE	RT 2 BOX 26 SALEM WV 26426	304-762-3126
17	8-12-8LANK		OWNERS IDENTIFIED BELOW	
18	B-12-77.5	AMCHAEL E MCCOMBS	RT 2 BOX 39 A WEST UNION WV 26456	104-873-2937
19	8-12-72.7	MICHAEL L MCCOMBS	RT 2 BOX 39 A WEST LINION WV 26457	304-673-2938
26	8-15-3	MARIE E GASSAWAY	618 FAIRVIEW AVE LEBANNON TN 37087	NOT LISTED

21	8-16-7	GERTRUDE ARBUTUS OOTSON	5814 CHURCH OR CHARLESTON WV 25906	304- <del>9</del> 26-6359
22	8-16-16	CHARLES IR AND BARBARA WELLINGS	HC 68 BOX 3 WEST UNION WV 26456	304-873-19 <del>99</del>
23	8-16-1	PAUL MCCUTCHAN	300 WOOD ST WEST UNION WY 26456	304-873-1849
24	8-16-21	WINNIE J. RICHARD L JR HACKLEY	517 WORTH LAKE DRIVE MONROE WC 28112	704-289-6250
25	8-16-22	WILLIAM H KNISELY ID	584 FRACTION RD WEST FINLEY PA 15377	NOT LISTED
26	8-12-64.1	FRANK L BUTLER	2567 SPRING HILL RD STAUNTON VA 24401	304-269-1828
27	8-12-71-1	FRANKLIN L BUTLER AND KEY OIL COMPANY	22 GARTON PLAZA WESTON WV 26452	304-259-1829
28	8-12-63	IRELAND KAREN M FAMILY UMITED	324 IRELAND RD PULLMAN WV 26421	304-349-2957
29	B-11-25.1	MARVIN L PHILLIPS	RT 1 BOX 270 PENNSBORD WV 26415	NOT USTED
30	8-11-25	IRELAND KAREN M FAMILY LIMITED	324 IRELAND RD PULLMAN WV 25421	304-349-2957
31	8-11-70	FOUR LEAF LAND COMPANY	PO BOX 341 WEST UNION WV 26456	304-873-2258
32	8-11-80	IRELAND KAREN M FAMILY LIMITED	324 IRELAND RD PULLMAN WV 26421	304-349-2957
33	8-11-79	B C RANDOLPH HICKMAN	CEMETERY ADDRESS NOT LISTED	NOT USTED
34	8-11-79.1	DANIEL I WELLINGS	HC 68 BDX S WEST UNION WV 26456	304-873-1999
35	8-11-89.1	WILLIAM LEE AND CHRISTINA TRENT	1 FIRST AMERICAN WAY WESTLAKE TX 76262	304-873-1122
36	8-11-89	PHAME TRENT	HC68 BOX 1 WEST UNION WV 26456	NOT LISTED
37	8-25-8	RUTH M DAVIES PIERCE	1104 GREENMONT CIRCLE VIENNA WV 26305	NOT LISTED
38	8-11-81	CAROLYN E IRREVOCABLE FARR	PO BOX 1124 BRIDGEPORT WV 26330	NOT LISTED
39	8-11-81.1	Waymond O !! And Deborah Cork	RT 5 BOX 112 SALEM WV 26426	304-782-3995
40	B-15-4	E PROPERTIES LTD	PO 80X 202 WEST UNION WY 26456	304-869-3256
41	8-16-1.1	ALDEN CARROLL "JOEY" SUTTON	HC 68 BOX 2A WEST UNION WV 26456	304-673-2094
42	8-16-16.3	ACE FUELS INC.	NM 5T RT BOX 3 WEST UNION WV 26456	NOT LISTED
43	8-15-16.4	ACE FUELS INC.	NM ST RT BOX 3 WEST UNION WV 26456	NOT LISTED

44	8×12×7	HAROLD F ROBISON	9908 HORTON RD NEW HILL NC 27562	NOT LISTED
45	8-12-26	MELINDA SUE YOUNG	RT 2 BOX 3 WEST UNION WV 26456	304-873-1928
46	8-12-98	MELINDA SUE YOUNG	RT 2 BOX 3 WEST UNION WV 26456	304-873-1929
47	8-12-8	JOHN SAMUEL AND PEGGY JUNE SMITH	142 N SIXTH AVE PADEN CITY WV 26159	304-337-9067
48	B-12-27	LOUETTA BODE	RT 2 BOX 4 WEST UNION WV 26456	NOT USTED
49	8-12-28	GREGORY # AND MARTHA E CADE	RT 1 80X 3928 SALEM WV 26426	304-782-2202
50	8-12-29	raymond fraizer	1 FIRST AMERICAN WAY WESTLAKE TX 76262	NOT USTED
51	8-12-31	MARIE ADELENE HUSK	142 N SOITH AVE PADEN CITY WV 26159	NOT LISTED
52	8-12-30	RAYMOND FRAIZER	1 FIRST AMERICAN WAY WESTLAKE 1X 76262	NOT LISTED
53	8-12-33	MARIE ADELENE HUSK	142 N SIXTH AVE PADEN CITY WV 26159	NOT USTED
54	8-12-35	JOHN SAMUEL AND PEGGY JUNE SMITH	142 N SIXTH AVE PADEN CITY WY 26159	304-337-9067
55	8-12-37	JOHN SAMUEL AND PEGGY JUNE SMITH	143 N SIXTH AVE PADEN CITY WY 26159	304-337-9067
56	8-12-36	VICKI HOSKINSON	RT 2 BOX 9 WEST UNION WV 26456	304-873-1904
<b>S7</b>	8-12-34	VICKI HOSKINSON	RT 2 BOX 9 WEST UNION WV 26457	304-873-1904
58	8-12-32	ST RD COMM	NO ADDRESS FOUND	NOT LISTED
59	8-12-8	IOHN SAMUEL AND PEGGY IUNE SMITH	\$43 N SIXTH AVE PADEN CITY WV 26159	304-337-9067
60	8-12-40	DAVID A HOSKINSON	RT 2 BOX 9 WEST UNION WV 26456	304-873-1904
61	8-12-42	DAVID A HOSKINSON	RT 2 BOX 9 WEST UNION WV 26456	304-873-1904
62	8-12-49	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WY 25305	304-558-3111
63	8-12-47	STATE OF WVA ROAD COMM	NO ADDRESS FOUND	NOT LISTED
64	8-12-4 <del>5</del>	WEST VIRGINIA DEPT OF TRANS, DIV OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WV 25305	304-558-3111
65	8-12-43	TWANA P MCDANIEL	RT 2 BOX BA WEST UNION WV 26456	304-873-2454
66	B-12-45	WEST VIRGINIA DEPT OF TRANS, DIV OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WV 25305	304-558-3111

67	8-12-44	JOHN SAMUEL AND PEGGY JUNE SMITH	143 N SIXTH AVE PADEN CITY WV 26159	304- <b>33</b> 7- <b>9067</b>
68	8-12-41	TWANA P MCDANIEL	RT 2 BOX 8A WEST UNION WV 25456	304-873-2464
69	8-12-38	TWANA P MCDANIEL	RT 2 BOX 8A WEST UNION WV 25456	304-873-2464
70	8-12-39	TWANA P MCDANIEL	RT 2 BOX BA WEST LINION WV 26456	304-873-2454
71	8-12-10	JOHN SAMUEL AND PEGGY JUNE SMITH	143 N SIXTH AVE PADEN CITY WV 26159	304-337-9057
72	8-12-48	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WV 2530S	304-55B-3111
73	8-12-8LANK		OWNERS IDENTIFIED BELOW	
74	8-12-16	GEORGE A AND JANICE K BROOKS	2015 SMITHTON AD PO BOX 7 SMITHBURG WV 26436	304-873-2704
75	8-12-17	GEORGE M AND SANDRA WYCKOFF	RT 2 BOX 25A-1 WEST UNION WV 26456	304-873-1169
76	8-12-17.5	SCHAWN T WYCKOFF	RT 2 BOX 25AA WEST UNION WV 26456	NOT LISTED
77	B-12-17.4	GEORGE SCOTT WYCKOFF	RT 2 BOX 25A-1 WEST UNION WV 26456	304-873-2954
78	6-17-18	DOUGLAS CAND SUSAN E LANDERS	RT 2 BOX 25 A 2 WEST UNION WV 26456	304-873-2213
79	<b>8-12-55</b>	SUSAN ELAINE LANDERS AND KATHERYN JANE GARRISON	RT 2 BOX 25A2 WEST UNION WV 26456	датги том
80	8-12-17.1	NORTH COAST ENERGY	PO BOX 143 WEST UNION WV 26456	304-673-3590
81	B-12-17,6	GEORGE M AND SANDRA WYCKOFF	RT 2 BOX 25A-1 WEST UNION WV 26456	304-873-1169
82	8-12-16.1	RAYMOND FRAIZER	1 FIRST AMERICAN WAY WESTLAKE TX 76262	NOT LISTED
83	B-12-16	GEORGE A AND JANICE K BROOKS	2015 SMITHTON RD PO BOX 7 SMITHBURG WV 26436	304-873-2704
84	8-12-54	SAMUEL HILEMAN	RT 1 BOX 78 WEST UNION WV 26456	304-873-1082
85	8-12-66.2	ELLEN L HAMNES	1307 LIBERTY ST PARKERSBURG WV 26101	304-428-4486
86	8-12-53	ELLEN L BARNES	1308 LIBERTY ST PARKERSBURG WV 26101	304-428-4486
87	B-12-55	DONIVAN L CUMPSTON	RT 1 BOX 419 GREENWOOD WV 26415	NOT LISTED
88	B-12-57	VIRGIL J MAXINE SCHOOLCRAFT	RT 2 BOX 18 WEST UNION WV 25456	304-873-1760
83	8-12-60	VIRGIL J MAXINE SCHOOLCRAFT	RT 2 BOX 38 WEST UNION WV 26456	304-873-1760

90	B-12-59	SPENCER ENTERPRISES, LLC	PO BOX 143 WEST UNION WV 26456	3D4-873-1602		
91	8-12-67	RONALD B SPENCER	PD BOX 143 WEST UNION WV 25456	304-873-1554		
92	8-12-67.1	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WV 25305	304-558-3111		
93	8-12-66.1	DAVID E BOWYER	RT 1 BOX 459B SALEM WV 26426	304-782-3677		
94	8-12-66	ELLEN I, BARNES	1307 UBERTY ST PARKERSBURG WV 26101	304-428-4485		
95	8-12-57	SHIRLEY SHULTZ	PO BOX 504 BROADWAY VA 228L5	NOT LISTED		
96	B-12-51	Franklin & Butler	22 GARTON PLAZA WESTON WV 26452	NOT LISTED		
97	B-12×24	HARDLD F ROBISON	9908 HDRTON RD NEW HILL NC 27562	NOT LISTED		
98	8-12-13	ROSSIE AND EVA LOWERY	9909 HORTON RD NEW HILL NC 27562	919-362-7247		
99	09	•	NO OWNER COULD BE IDENTIFIED			
100	8-11-42	JUSTEN E AND MELISSA A HOLTZ	132 HOWELL ST WEST UNION WV 26456	304-873-2460		
101	8-11-42-1	JAMES D FRIEND	103 HOWELL ST WEST UNION WV 26456	304-873-3010		
102	8-11-44	JAMES E AND RUTH E MCELROY	113 HOWELL ST WEST UNION WV 26456	NOT LISTED		
103	8-11-45	rosalee 5 and onda L Wilson	93 WYNDHAM KNOB PARKERSBURG WV 26104	3D4-4B5-2056		
104	8-11-45	RICHARD M AND LORETTA C BOYCE	HC 67 80X 3 WEST UNION WV 26456	304-873-1355		
105	8-11-42.2	MARY WELCH	PO BOX 4308 PARKERSBURG WV 26104	304-428-9835		
106	B-11-47	RICHARD M AND LORETTA C BOYCE	HC 57 BOX 3 WEST UNION WV 26456	304-873-3797		
107	8-11-24.1	JOANN B WATERS	1805 WESTWOOD LN GEORGETOWN TX 78628	512-863-9799		
108	8-11-23	ANDREW G MANCUSO	PO BOX 51 WEST UNION WV 26456	304-873-1318		
109	B-11-22	KIMBERLY ANN WALKER	138 BAKER LN SISTERSVILLE WV 26175	NOTUSTED		
110	B-11-15	KIMBERLY ANN WALKER	139 BAKER LN SISTERSVILLE WV 26175	NOT LISTED		
111	B-11-24	CLARENCE RAY BONNELL	202 GEORGE ST WEST LINION WV 26456	NOT LISTED		
112	B-11-40	CLARENCE RAY BONNELL	203 GEORGE ST WEST UNION WV 26456	NOT LISTED		
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113	8-11-9	SHEILA IANE LYNCH BUCK	115 REYNOLDS ST SPENCER WV 25276	304-972-2793		
114	B-34-INSERT	OWNERS IDENT:FIED BELOW				
115	8-11-66	KAY DAVIS	HC 69 BOX 46B MIDDLEBOURNE WY 26149	304-758-4678		
116	8-21-65.1	KAY DAVIS	HC 69 BOX 458 MIDDLEBOURNE WV 26149	304-758-4678		
117	8-L1×65	KAY DAVIS	HC 69 BOX 468 MIDDLEBOURNE WV 26149	304-758-4678		
118	8-11-54	KAY DAVIS	HC 69 BOX 46B MIDDLEBOURNE WV 26149	304-758-467B		
119	8-11-63	KAY DAVIS	HC 69 BOX 46B MIDDLEBOURNE WV 26149	304-758-4678		
120	8-11-62	KAY DAVIS	HC 69 BOX 46B MIDDLEBOURNE WV 26149	304-758-457B		
121	B-11-51	NATIONS CREDIT FINANCIAL	111 VIRGINIA AVE FAIRMONT WV 26554	NOT LISTED		
122	8-11-60	KATHRYN J WEEKLEY	HC 67 BOX 10 WEST UNION WV 26456	304-873-2448		
123	B-11-59	KATHRYN J WEEKLEY	HC 67 BOX 10 WEST UNION WV 26456	304-873-2448		
124	8-11-58	OTIZOPES M TSNAL	RT I BOX 111 FAIRMONT WV 26554	304-534-404B		
125	8-11-57	PATRICK H BONNELL	3434 INDIAM FORK RD NEW MILTON WV 26411	304-873-3683		
126	8-11-56	ROBERT O BONNELL	HCR 67 BOX 8 WEST UNION WV 26456	304-873-2248		
127	8-11-55	ROBERT O SONNELL	HCR 67 BOX 8 WEST LINION WV 26456	304-873-2248		
128	8-11-54	NEVA I WELCH	RT 1 80X 187 WEST UNION WV 26456	NOT USTED		
129	8-11-53	SHELLY G BONNELL	HC 67 BOX 5 WEST UNION WV 26456	304-873-3672		
130	8-11-52	DANIEL LFRIEND	108 SISTERSVILLE PIKE WEST UNION WV 26456	304-873-18 <b>84</b>		
131	8-11-51	ROBERT L HALL	HC 67 BOX 4 WEST UNION WV 26456	304-873-1948		
132	B-11-90	ERIC AND FLORENCE WESCOTT	854 BENNETTS RUN RD LUMBERPORT WV 26386	304-783-4762		
133	B-11-49	NELLIE B DAUGHERTY	PO BOX 294 WEST UNION WV 26456	NOT LISTED		
134	8-11-48	nellie B daugherty	PO BOX 294 WEST UNION WV 26456	NOT LISTED		
135	8-11-67	LESLEY PARTITE	HC 67 BOX 1 WEST UNION WV 26456	304-873-2070		

136	8-11-68	EARL R AND MARY M DAUGHERTY	PO BOX 341 WEST UNION WV 26456	304-873-2258		
137	8-12-69.1	FRANKLIN L BUYLER	22 GARTON PLAZA WESTON WV 26452	304-269-2538		
138	8-11-25	HELEN BUFF	PO BOX 3003 HADDONFIELD NI 08033	NOT USTED		
139	8-11-25	HELEN BUFF	PO BOX 3003 HADDONFIELD NJ 08034	NOT USTED		
14D	8-13-69	FRANKLIN & BUTLER	22 GARTON PLAZA WESTON WV 26452	304-269-2538		
141	8-11-26	KAREN M IRELAND	342 IRELAND RD PULLMAN WV 26421	304-349-2957		
142	8-1125.1	MARVIN L PHILLIPS	254 PEACOCK IN FOLIANSBEE WV 26037	NOT USTED		
143	8-11-70	FOUR LEAF LAND COMPANY	PO BOX 341 WEST UNION WV 26436	304-873-2258		
144	8-12-63	KAREN M IRELAND	342 IRELAND RD PULLMAN WV 25421	304-349-2957		
145	B-11-80	KAREN M IRELAND	343 IRELAND RD PULLMAN WV 26421	304-349-2957		
146	8-34-IN5ERT	OWNERS IDENTIFIED BELOW				
147	B-12-1	EARLDENE SPENCER	PO BOX 143 WEST UNION WV 26456	304-873-1554		
148	8-12-4	SHARON E AND RONALD I WALKER	HC 67 BOX 28 WEST UNION WV 26456	304-873-2525		
149	<b>8</b> -32-6	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-352-7247		
150	8-8-45	TENSIL D DAVIS	HC 67 BOX 32A WEST UNION WV 26456	NOT LISTED		
151	E-12-7	HAROLD F ROBISON	9908 HORTON AD NEW HILL NE 27562	NOTLISTED		
152	8-12-23	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247		
153	8-12-24	HAROLD F ROBISON	9908 HORTON RD NEW HELL NC 27562	NOT USTED		
154	8-12- <del>9</del> 9	JOHN SAMUELAND PEGGY IUNE SMITH	142 N SINTH AVE PADEN CITY WV 26159	304-337-9067		
159	8-12- <del>9</del>	JOHN SAMUEL AND PEGGY JUNE SMITH	143 N SIXTH AVE PADEN CITY WV 26159	304-337-9067		
156	8-12-67	RONALD B SPENCER	PO 80X 143 WEST UNION WV 25456	304-873-1554		
157	8-12-67.1	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLDG S CHARLESTON WY 25305	304-558-3111		
158	8-12-74	WV RAILROAD MAINTENANCE AUTHORITY	PO BOX 470 MOOREFIELD WV 26836	304-538-2305		
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159	8-12-96	DALE KEPLINGER	384 FRONT ST WEST UNION WV 26456	304-673-1390		
160	5-12-6 <b>3.3</b>	SMITHBURG VOLUNTEER FIRE DEFT.	93 MARIE STREET WEST UNION WY 26456	304-873-1391		
161	8-12-68	SPENCER ENTERPRISES, LLC	PO BOX 143 WEST UNION WV 26456	304-873-1602		
162	8-12-68.2	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WV 25305	304-558-3111		
163	8-12-INSERT		OWNERS IDENTIFIED BELOW			
164	8-12-INSERT		OWNERS IDENTIFIED BELOW			
165	8-12-72.15	TOWN OF WEST UNION	TOWN OF WEST UNION WEST UNION WV 26458	304-873-3379		
166	8-12-72.3	ARTHUR L CALHOUN	BOX 6 SMITHBURG WV 26435	304-873-1309		
167	8-12-DASERT		OWNERS (DENTIFIED BELOW			
168	8-12-72.6	LARRY T AND THELMA F GONZALEZ	PO BOX 208 SMITHBURG WV 26436	304-873-3660		
169	8-12-95	DALE KEPLINGER	304 FRONT STREET WEST UNION WV 26456	304-873-1390		
170	B-12-74	WV RAILROAD MAINTENANCE AUTHORITY	PO BOX 470 MOOREFIELD WV 26836	304-538-2305		
171	8-12-73.1	TOWN OF WEST UNION	TOWN OF WEST UNION WEST UNION WV 26456	304-873-3379		
172	8-12-73	SPURLOCK ENTERPRISES	PO 60X 4010 CLARKSBURG WV 26302	NOT LISTED		
173	B-12-25	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLDG 5 CHARLESTON WV 25305	304-558-3311		
174	8-12-50	KEY GIL COMPANY	2567 SPRING HILL RD STAUNTON VA 24401	434-979-1380		
175	B-11-26	xaren m ireland	342 IRELAND RO PULLMAN WV 26421	304-349-2957		
176	8-11-25	HETEN BALL	EE080 UN CJ317NOCDAK E00E KOB O9	NOT USTED		
177	8-27-1	ROBERT ALLAN AND PATRICIA IRENE MARTIN	PO BOX SZ SMITHBURG WV 26436	304-873-1471		
178	8-27-1.1	JOSEPH LERDY TOWNER	PO BOX 21 SMITHBURG WV 26435	304-873-1089		
179	8-27-2	JOSEPH LEROY TOWNER	PO BOX 21 SMITHBURG WV 26436	304-873-1089		
180	8-27-3	MARK A AND APRIL L RICHARDS	RT 2 BOX 25A 3A WEST UNION WV 26456	304-65 <del>9</del> -3094		
181	8-27-4	MARK A AND AFRIL L BICHARDS	RT 2 80X 25A 3A WEST LINION WV 26456	304-659-3094		

182	B-27-5	ROSERT L AND MARTHA E MODRE	PO BOX 1 SMITHBURG WV 26436	304-873-2378
183	<b>3-27-</b> 6	SPENCER ENTERPRISES, LLC	PO BOX 143 WEST UHION WV 26456	304-873-1602
184	8-27-7	ANTHONY AND RHONDA GARVIN	PO BOX 2 SMITHBURG WV 26456	NOT USTED
185	8-27-7.1	DALE W KEPLINGER IŞ	304 FRONT STREET WEST UNION WV 26456	304-873-1390
196	8-27-7.2	DEUTSHE BANK NATIONAL TRUST COMPANY	PO BOX 24696 COLUMBUS OH 43224	
187	8-27-7.3	DEUTSHE BANK NATIONAL TRUST COMPANY	PO BOX 24695 COLUMBUS OH 43224	
188	8-27-7.4	ANTHONY AND RHONDA GARVIN	PO BOX 2 SMITHBURG WV 26456	NOT LISTED
189	8-27-8	KAREN COSBY ADAMS	PO BOX 42 SMITHBURG WV 26436	304-873-2670
190	8-27-8-1	DENVER W AND MARY COX	BOX 66 SMITHBURG WV 26436	304-873-1939
191	8-27-8-2	VIRGINIA MARGUERITE WILLIAMS	FO BOX 205 SMITHBURG WV 26436	304-873-2770
192	8-27-9	ALFRED L AND WILMA DOTSON	PO BOX 54 SMITHBURG WV 26436	304-873-3543
193	8-27-9.1	ALFRED L AND WILMA DOTSON	PO 80X 54 SMITHBURG WV 26436	304-873-3543
194	8-27-10	DENZIL AND KATHERYN CORK	PO BOX 35 SMITHBURG WV 26436	304-873-1229
195	8-27-11	JOSEPH L AND JENNY S DOTSON	PO 80X 113 SMTHBURG WV 26435	304-873-2182
195	B-27-12	VERNON LEROY RANDOLPH	PO BOX 12 SMITHBURG WV 25436	304-873-3189
197	B-2 <i>7</i> -13	CHARLES AND CAROLYN CHILDERS	RT 5 BOX 1320 SALEM WV 26426	304-782-1721
198	8-27-14	DEUTSHE BANK NATIONAL TRUST COMPANY	PO BOX 24696 COLUMBUS ON 43224	
199	8-27-15	GEORGE L GAGNON	RT 1 BOX 312 WEST UNION WV 26456	NOT LISTED
200	8-27-16	DONNA E AND DAVID D PARSONS	212 N PENN AVE MARRISVILLE WV 26362	304-643-2797
201	8-27-17	FREDA COX AND BARBARA AN SHAVATT	1026 BOOM CT ANNAPOUS MD 21401	301-445-5672
202	8-27-18	MATTHEW C AND TERESA L KIMBALL	PO BOX 131 SMITHBURG WV 26436	304-873-2588
203	8-27-19	DENVER F # AND PATRICIA STUBBS	PO BOX 24 SMITHBURG WV 26436	304-873-1543
204	8-27-20	VERNON LERGY RANDOLPH	PD BOX 12 SMITHBURG WV 26436	304-873-3169

205	8-27-21	VERNON LERDY RANDOLPH	PO BOX 12 SMITHBURG WV 26436	304-873-3189
206	8-27-22	DEUTSHE BANK NATIONAL TRUST COMPANY	PO BOX 24696 COLUMBUS OH 43224	
207	8-27-23	SAMUEL HILEMAN	RT 1 BOX 78 WEST UNION WV 26456	304-873-1082
208	8-27-24	MARK 8 SMITH	PO BOX 213 SMITHBURG WV 25436	NOT LISTED
209	8-27-25	GERAL W JR AND CRYSTAL MARIE KNICELEY	PO 80X 83 SMITHBURG WV 26436	304-666-1031
210	8-27-26	DDDDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX & WEST UNION WV 26456	304-873-1663
211	8-27-26.1	DODDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX 8 WEST UNION WV 26436	304-873-1663
212	8-27-26-2	DODDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX & WEST UNION WY 26456	304-873-1663
213	8-27-6.3	DODDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX & WEST UNION WV 25456	304-873-1663
214	8-27-6.4	DODDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX & WEST UNION WV 26456	304-873-1663
215	8-27-6.5	DODORIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX B WEST UNION WV 26456	304-873-1663
216	8-27-6.6	DODDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX 8 WEST UNION WV 26456	304-873-1663
217	8-27-27	SUZETTA L AND JEREMY D CAMPBELL	210 JULIEANNE ST SMITHBURG WV 26435	<b>304-666-</b> 1045
218	8-27-27.1	TRUSTEES OF THE SMITHBURG U M CHURCH	SMITHBURG WV 26436	304-263-2788
219	8-27-28	CHURCH U B SMITHBURG WV	SMITBURG WV 26436	304-263-2788
220	8-27-28-1	É U B CHURCH	SMITHBURG WW 28438	NOT LISTED
221	8-27-29	VERNON LERGY RANDOLPH	PO BOX 12 SMITHBURG WV 26436	304-873-3189
222	8-27-30	METHODIST CHURCH OF SMITHBURG	SMITBURG WV 26436	304-263-2788
223	8-27-31	WILLIAM W AND RORMA SUTTON	PO BOX 13 SMITHBURG WV 26436	304-873-2518
224	8-27-32	WILLIAM W AND NORMA SUTTON	PO 80X 13 SMITHBURG WV 26436	304-873-2518
225	8-27-33	BOBBY LAND TAMMEY JONES	PO BOX 54 WEST UNION WV 26436	NOT LISTED
226	8-27-34	WILLIAM I PRATT	PO BOX 124 SMITHBURG WV 26436	304-873-2554
127	8-27-35	DOIDDRIDGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX 8 WEST UNION WV 26456	304-873-1663

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228	8-27-36	KITTY ROSE PARSONS	5920 HWY 79 GUSTONKY 40142	502-966-8950
229	8-27-36.1	ALICE ELIZABETH SWISHER	PD 80X 102 WEST UNION WY 25456	NOT LISTED
230	8-27-37	BOARD OF EDUCATION	SISTERSVILLE PIKE WEST UNION WV 26456	304-873-2300
231	8-27-38	SAMUELS AND WAYNETTA D RICHARDS	PO BOX 93 SMITBURG WV 26436	304-873-1899
232	8,27-39	GERAL W JR AND CRYSTAL MARIE KNICELEY	PO BOX 92 SMITBURG WY 26436	304-666-1031
233	8-27-40	CLEM & AND LOIS E MURPHY	RT 2 BOX 61 WEST UNION WV 26456	304-873-1362
234	8-27-41	CHARLES JR AND CAROLYN CHILDERS	PO BOX 56 SMITHBURG WV 26436	304-873-2276
235	6-27-42	SPENCER ENTERPRISES, LLC	PO BOX 143 WEST UNION WV 26456	304-873-1602
236	8-27-42	HARLIN ADAMS	RT 1 BOX 158 SALEM WV 25926	304-782-2773
237	8-27-43	TRUSTEES OF WESLEYAN METHODIST	SMITBURG WV 26436	304-263-2788
238	B-27-44	TERRY O AND EDITH WISE	PO BOX 572 CLAY WV 25043	304 854 -1359
235	8-27-44.1	ROCK RUN ALLENGHENY WESLEYAN CHURCH	PD BOX 72 SMITBURG WV 26436	NOT USTED
240	8-27-45	JANET DAVID (WHITEHAIR)	PO BOX 174 WEST UNION WV 26456	NOT USTED
241	B-27-46	CRYSTAL MOORE / WVHDF	614 VIRGINIA ST EAST CHARLESTON WV 25301	304-391-8600
242	8-27-47	CRYSTAL MOORE / WVHDF	824 VIRGINIA ST EAST CHARLESTON WV 25301	304-391-8600
243	6-27-48	иозинот и инот	PO 80X 82 5MITHBURG WV 26436	NOT USTED
244	8-27-49	EFFIE HEFLIN C/O JAMES HEFLIN	131 ALLENS RUN RD DAV/SVILLE WV 26142	104-485-6669
245	B-27-50	STATE OF WV ROAD COMM	STATE CAPITOL BLDG 5 CHARLESTON WV 25305	304-558-3311
246	8-27-51	DODDRINGE COUNTY PARK AND RECREATION COMMISSION	NM ST RT BOX 8 WEST UNION WY 26456	304-873-1663
247	8-34-7	GAIL L AND GLENDA JO LAMBERT	RT 2 80% 166 WEST UNION WW 26456	304-873-2624
248	8-34-3	SPENCER ENTERPRISES, LLC	PO BOX 143 WEST UNION WV 26456	304-873-1602
249	B-34-4	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WY 26456	304-873-2576
250	8-34-5	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576

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251	8-34-6	W W HRS GASKINS AND JUSTIN HENDERSON	PO BOX 100 MEADOWBROOK WV 26104	304-592-1802
252	8-34-7	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
253	6-34-8	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
254	8-34- <del>9</del>	ROY F RUPPERT C/O R MICHAEL RUPPERT	122 TIGHTSI LAN LOUDON 1N 37774	304-458-1274
255	8-34-10	KAY ĐAVIS	HC 69 BOX 468 MIDDLEBOURNE WV 26149	304-758-4678
256	8-34-11	KAY DAVIS	HC 69 BOX 46B MIDDLEBOURNE WY Z6149	304-758-4678
257	8-34-12	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
258	8-34-19	WVA DEPT OF HIGHWAYS	STATE CAPITOL BLOG S CHARLESTON WV 25305	304-558-3111
259	8-34-14	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247
260	8-34-15	WILLIAM GEORGE WHITEHILL	CP STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
261	8-34-16	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26455	304-873-2576
262	8-13-17	ROSSIE AND EVA LOWERY	9908 HDRTON RD NEW HILL NC 27562	919-362-7247
263	8-34-15	GLIVE F AND C UNDERWOOD	RT 2 6DX 304 SALEW WV 26426	304-782-4265
264	8-34-18	JUANITA MCCLAIN	139 GREEN ST CLARKSBURG WV 26301	304-622-2911
265	8-34-19	KAY DAVIS	HC 69 BOX 468 MIDDLEBOURNE WV 26149	304-758-4678
266	8-34-20	OVID LEE PERNELL AND JENNIFER DOTSON	HC 67 BOX 17C WEST UNION WV 26456	304-873-2773
257	8-34-21	OVID LEE PERNELL AND JENNIFER DOTSON	HC 67 BOX 17C WEST UNION WV 26456	304-873-2773
268	B-34-22	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
269	8-34-23	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
270	B-34·24	WELLAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
271	8-34-25	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247
272	8-34-26	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
273	B-34-27	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576

274	8-34-28	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247
275	8-34-29	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247
276	B-34-30	ROSSIE AND EVA LOWERY	9908 HORTON RO NEW HILL NC 27562	919-362-7247
277	8-34-31	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247
278	8-34-32	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
279	8-34-33	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 25456	304-873-2576
280	J-34-34	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
281	8-34-35	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
282	8-34-36	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
283	8-34-37	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
284	8-34-38	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
285	8-34-39	ROY F RUPPERT C/O R MICHAEL RUPPERT	122 TIGHTSI LAN LOUDON TN 37774	304-458-1274
286	B-34-40	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
287	8-34-41	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
288	8-34-42	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2578
289	B-34-43	WILLIAM GEORGE WHIYEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2578
290	8-34-44	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
291	8-34-45	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 24 WEST UNION WV 26456	304-873-2576
292	B-34-46	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
293	8-34-47	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
294	8-34-48	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
295	8-34-49	WILLIAM GEORGE WHITEHILL	E P STAR ROUTE BOX 14 WEST UNION WV 28456	304-673-2576
296	8-34-50	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOK 14 WEST UNION WV 26456	304-873-2576

297	8-34-51	WILLIAM GEORGE WHITEHILL	CP STAR ROUTE BOX 14 WEST UNION WY 26456	304-873-2576
298	8-34-52	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WY 28456	304-873-2576
299	8-34-53	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
300	B-34-53.1	CHERYL L BRUNNER	HC 67 BOX 20 WEST UNION WY 28456	304-873-1440
301	8-34-54	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
302	8-34-55	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
303	<b>8</b> -34-56	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
304	<b>8</b> -34-57	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WY 26456	304-873-2576
305	8-34-59	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
306	8-34-59	GAIL & AND GLENDA JO LAMBERT	RT 2 BOX 166 WEST UNION WY 26456	304-873-2524
307	8-34-60	GAIL E AND GLENDA 10 LAMBERT	RT 2 BOX 166 WEST NOIN WY 26456	304-873-2524
308	8-34-61	GAILL AND GLENDA JO LAMBERT	RT 2 BOX 166 WEST UNION WY 26458	304-873-2624
309	8-34-62	WILLIAM GEORGE WHITEHILL	CP STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
310	8-14-63	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
311	8-34-64	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
312	8-34-65	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
313	8-34-66	WIELIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
314	8-34-67	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
315	8-34-68	Alihatikw adrojo malliw	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
316	8-34-69	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
317	B-34-70	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UPION WV 26455	304-873-2576
31B	8-34-71	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
319	8-34-72	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26455	304-873-2576

320	8-34-73	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 10 WEST UNION WV 28456	304-873-2576
321	8-34-74	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
322	8-34-75	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 25456	304-873-2576
323	8-34-76	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
324	8-34-77	WILLIAM GEORGE WHITEHILL	CP STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
325	8-34-78	WILLIAM GEORGE WHITEHILL	CP STAR ROUTE BOX 14 WEST UNION WV 26436	304-873-2576
326	8-34-79	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
327	8-34-80	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 25456	304-873-2576
328	8-34-81	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BDX 14 WEST UNION WV 25456	304-873-2576
329	8-34-82	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
330	8-34-83	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
331	8- <b>34</b> -84	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
332	8-34-85	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
333	8-34-85	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
334	8-34-67	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
335	8-34-88	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
336	8-34-69	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
337	8-34-90	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
338	8-34-91	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 28456	304-873-2576
339	8-34-92	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 24 WEST UNION WV 26456	304-673-2576
340	8-34-93	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
341	8-34-94	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
342	8-34-95	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576

343	8-34-96	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
344	8-35-97	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
345	8-34-98	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7247
346	8-34-99	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-973-2576
347	8-34-100	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
34B	8-34-101	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
349	8-34-102	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
350	8-34-103	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
351	8-34-104	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-879-2576
352	8-34-105	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
353	8-34-106	ROSSIE AND EVA LOWERY	9908 HORTON RD NEW HILL NC 27562	919-362-7747
354	8-34-107	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
355	8-34-109	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
356	6-34-109	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
357	8-34-110	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
358	8-34-111	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
359	8-34-112	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
360	8-34-113	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WV 26456	304-873-2576
361	8-34-114	WILLIAM GEORGE WHITEHILL	C P STAR ROUTE BOX 14 WEST UNION WY 26456	304-873-2576
362	B-34-115	DVID LEE PERHELL AND JENNIFER DOTSON	HC 67 BOX 17C WEST UNION WV 26456	304-873-2773
363	8-34-116	W W HRS GASKINS AND JUSTIN HENDERSON	PO 80X 100 MEADOWBROOK WV 26104	304-592-1802

# Section III: Well Work

This Attached Plan will be reviewed with all employees on the work site prior to beginning their work. Any required changes will be inserted into this Plan and made a part of the Plan after being approved by WVOOG.

## Documentation

A safety training attendance sheet must be completed for all EQT required training. Originals must be submitted to the EHAS Department and copies of the attendance sheets shall be on-site to serve as documentation of training.

# Plan Assimilation and Dissemination

- The Supervisor of Environmental and Safety Drilling, or their designee, shall be responsible for providing a copy
  of this plan to the local emergency planning committee (LEPC) or county emergency services (CES) office within
  at least 7 days from land disturbance or well work.
  - o The LEPC or CES representative will sign a receipt (See Appendices) documenting this.
- A copy of this Plan will be available in the following locations:
  - o In the on-site madbox
  - o In the On-Site Drilling or Completions Specialist office.
  - West Virginia DEP Office of Oil and Gas
  - e LEPC or CES
  - Office of the assigned Environmental and Safety Coordinators
  - Blectronically in EQT Well File Library (as part of the permit document).

# Personal Protective Equipment (PPE)

- . At a minimum, all personnel on-site shall wear the following PPE:
  - o Hardhat
  - o Safety glasses with side shields
  - o Hard toe bools
- Additional PPE may be required based on unique job hazards such as:
  - o Flame Resistance Clothing (FRC)
  - a High visibility vest
  - Hearing Protection
- Additional PPE may be assigned dependent on the site conditions and shall be the discretion of the on-site specialist and the Environmental and Safety Department.
- . All additional PPE requirements will be communicated to all personnel

# **Detail of Well Work, Drilling Operations**

- 1. Review partinent well data.
- 2. MIRU drilling rig.
- 3. Install riser and air bowl.
- 4. Drill surface or mine string hole to required depth on air / foam / water based mud.
  - . Mine string must not be more than 100' deeper than mine void.
  - . Surface casing must be set at least 30' below the deepest fresh water.
- 5. Run casing to programed depth. Centralize per requirements.
- 6. Coment to surface per regulation.
- 7. WOC 8 hrs.
- 8. MIRU ELU and run bond log.
- 9. Pressure test casing to 20% over Maximum Anticipated Surface Pressure (MASP).
- 10 If separate mine string was required, prepare riser for the dnilling of fresh water protective hole section as follows:
  - a TIH with drilling assembly.
  - b. Orifl out mine string and to section TD.
  - c. Run water protective string (surface casing) to prescribed depth per regulation.
  - d. Cement casing to surface per regulation.
  - e. Pressure test casing to 20% over MASP.
  - f WOC 8 hrs.
- 11. MIRU ELU and run bond log.
- 12. Install and test wellhead per manufacturer's specification.

- 13. Install BOP stack.
- 14. Test BOP's
  - Annular Preventer to 70% MAWP
  - Ram Preventers to 80% MAWP
- 15. MU drilling assembly
- 16. Drill out surface casing and to planned section TD.
- 17. Run intermediate casing to programmed depth.
- 18. Cement intermediate casing to surface per regulation.
- 19. Pressure Test casing 20% over MASP
- 20. WOC 8 hrs.
- 21, MIRU ELU and run bond log.
- 22. MU drilling assembly
- 23. Drill out easing. Perform formation integrity test to adequate pressure gradient.
- 24. Unil production hole to KOP. Trip for directional drilling assembly.
- 25. MU directional assembly. TiH and doll curve and lateral section of production hole with drilling assembly changes as necessary to achieve the planned wellbore trajectory.
- 26. Run production casing to programmed depth.
- 27. Cement production casing per regulation. Planned TOC will be 500' above the intermediate casing shoe.
- 28, WOC 8 hrs.
- 29. Nipple down BOP's and install tubing head. Test tubing head voids per manufacturers recommendation.
- 30. Install dry hole llange. RDMO drilling rigs.

# First Stage Completion Work

- 1. Move in and rig up to run bond log from attainable total depth to above cement top
- 2. Install 10k frac valve.

## Fracture Stimulation

- Install two 10K frac valves with a flow cross between them, and a goathead with frac iron. Rig up frac from and test surface equipment.
- 4. Open well and test production casing; open the toe papper,
- 5. Rig up wire (ine and pump down plug and guns to perforate Stage one. Pump down operations are run under lubricator and pressure contro).
- 6. Frac stage one.
- Rig up wire line and pump down plug and guns to perforate subsequent atages. Pump down operations are run
  under fubricator and pressure control.
- 8. Set plug, perforate and frac subsequent stages.
- Rig down frac equipment and secure location. Lubricate Back Pressure Valve into B section. Remove one 10K frac valve and flow cross. Install dry hole tree as second barrier.

# Frac Isolation Plug Drill Out Procedure

- Install annular bop, pipe and blind rams. Rig up Snubbing unit and service rig, or coiled tubing unit. Install flow cross and flow back equipment and pressure test, Remove back pressure valve.
- 11. Run in hole with tubing and bottomhole assembly and drill all plugs. Returns are taken to the gas separator, gas buster and/or tanks/pits. Gas is sent down sales line or flared. Pressures are maintained at levels below the operating pressure of snubbing unit components.
- 12. Rig down snubbing unit and rig or coiled tubing unit.
- 13. Flow back well with gas to sales or flare until well is stabilized.
- 14. Install Back pressure valve and remove frac valves, Install production tree and lubricate out Back pressure valve. Turn over to production.

# **Production Operations**

- 15. Install containment, production equipment, metering equipment, and tankage per program.
- 16. Test safety systems.
- 17. Tum well to sales,

# Section IV: Chemical Inventory & SDS

# Safety Data Sheets (SDS):

SDS for all materials and chemicals on-site will be maintained and readily available at the well site. Copies of these SDS will be kept in the EQT On-site Offices, or be available on-line and be the responsibility of the EQT On-site Specialist. An electronic copy of the Anticipated SDS will be submitted to the Department as well.

# **Mud Information**

Mud Usage			
Mix Mud Amount	2000 - 3500 bbls		
Mud Weights	8.5 - 14.8 ppg		
Volume Mixing Water	275 - 2750 bbls		

There will be one induction style mud hopper on location for mixing the fluid.

Below table contains the inventory of on-site materials for mixing mud.

CHAIN ADS REFERENCE CONTRACTOR	THE PROPERTY OF THE PROPERTY O	Nº Possible &	PCVP2-Separate
Product name	General Description	inventory	Persage Size
ALDISCIDG G	bacteria prevention	0-33	5 galipn can
BARAMOE	fluid loss additive	0 - 100	50 lb sack
SARACARI 30. 150, 600	fost circulation material	0 - 150	SO FB Tack
BARACOR 700	compaign estabatos	D-4	SS guillen drum
BARA-DEFOAM W300	mud defoamer	0 - 32	Sgallon san
BARAZAN-D PLUS	vistosifier	0 - 60	75 lb sack
BARCHIRE	lost circulation material	0 · 1C0	23 lb sech
BAROID 41	tverghting agent	0 - 10	bulk tores
BARO-SEAL COARSE	fost ctroulation material	B - 100	SO ID 196k
bicarbonate of socia	estuum control	0 - 49	30 lb sark
calctum chinn de ploy/des	salinity control	D · 160	5015 sage
Causaig soda	pH/alkalinity control	0-60	SO ID SACK
enue acid	pH/sDully control	0 - 25	35 lb sack
DEKTAIO LT	fluid loss activive	0 - 103	30 1b saca
DRILTREAT	:vetting egent/emultifier	3. (6	S gailon can
62-MUD	shale mhiblion	5 LD	3 gation can
GELTONE V	wiscosifier	0.50	30 lb sagt
LE SLIFERIMIA	garyistige	0 · #6	\$5 gallen stum
tura:	physikelinery control	0 - 50	no to sack
N-SEAL	lost carculation material	0 - 100	10 lb tack
MIS-WEE	iubneam	9 - 10	a gation Lah
OMC 42	mud conditioner	0.4	55 gallon drum
PAC-L	fluid loss additive	d - <b>90</b>	SOlbseck
QUIK-THIN PLUS	mud thiories	0 . 150	30 ib eark
RKSMOO L	mud conditioner	D- II	35 gallon drum
RM 63	mud randitioner	0-8	33 gailen <del>dr</del> um
sods Ash	çalsizən control	0 - 25	30 Ip sacs
sodium chloride	salinity cuntrul	0 - 30	2,000 to sec i;
STEFLSEAL 400	last circulation muterial	0 - 700	10 lb wck
SUSPENIONE	suspension agent	0 - 100	SO I b sack
SynOH	tasse oil	0 - 130	k5/5 (42 gal)
WALL-NUT MEDIUM	lost circulation material	0 - 130	50 lb sack
ZECGEL	utscosifier	0 - 1CO	50 lb sack

# Section V: BOP and Well Control

# BOP equipment and assembly installation schedule:

Size (in)	Operation	Hole Section	Ivee	Pressure Class	Test Pressure (psl)	Testing Frequency
13-5/8*	Drilling	intermediate	Annular	3M	2100	Initial
13-5/8"	Orllling	Pilot	Annular	ME	2100	Initial, Weekly, Trip
13-5/8"	Drilling	Production	Annular	5M	3500	initial, Weekly, Trip
13-5/8"	Drilling	Production	B∦nd	5M	4000	Initial, Weekly, Trip
13-5/8*	Drilling	Production	Pipe	5M	4000	initial, Weekly, Trip
7-1/16"	Completions	Production	Cameron U's	5M	5000	initial
13-5/B"	Drilling	Pilot (Onondaga Tag)	Annular	5M	4000	initial, Weckly, Trip

**Wellhoad Detail** 

Size (in)	Туре	M.A.W.P. (psi)
13-3/8' SOW x 13-5/8" 5M	Multi-bowl Well Head	5,000
13-5/8* 5M x 7-1/16 10M	Tubing Head	10,000
2-1/16* 5M	Christmas Tree	5,000

# Well Control Trained Personnel:

- Drilling
  - o EQT On-Site Specialist 2 on rolating hitches.
  - o Contract Group's Too! Pusher & Drillers
- Completions & Production
  - o EOT On-Site Specialist

# **Notification Procedure**

# Significant Event Notifications

- A detailed record of significant drilling events will be recorded in the EQT Production Wall Log Book.
- In addition to the record above, the local inspector of the WV DEP Office of Oil and Gas and Supervisor of EH&S
  will be notified by the EQT On-Site Specialist for the following events:
  - o Lost Circulation
  - Encounter of Hydrogen Sulfide Gas
    - Immediate notification is required of any reading of Hydrogen Suifide Gas greater than 10ppm
  - o Fluid Entry
  - o Abnormal Pressures
  - o Blow-outs
  - Significant kicks
- Contact Information can be found in Section II

# **Emergency Notifications**

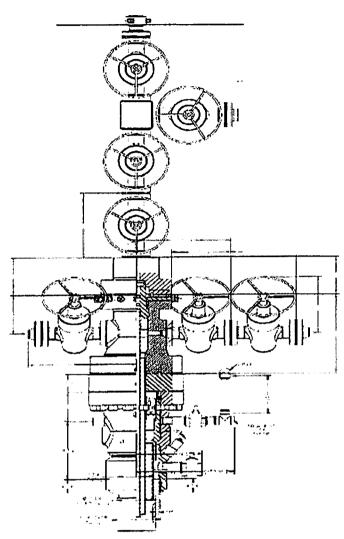
 In the event emergency response personnel and residents surrounding the work site are affected by specific events during the operation they must be notified as soon as possible by the On-site Specialist or their designae.

# Flaring Notifications

 The local fire department(s) and/or county dispatch centers must be notified immediately prior to the ignition of a flare.

# Well Head Assembly Design

Written Description:
Multi-bowl wellhead assembly with a 13 3/8° 5M x 13 3/8° SOW wellhead. A 13 5/8° 5M x 11° 5M DSA is used between the wellhead and tubing head. The tubing head is 11° 5M x 7 1/16° 10M. The tree is 2 1/16° 5M. Picture of stack up



# Well Kill Killing Operations

In a well control situation, all influxes are to be handled using the Wait-and-Weight Method or the Driller's Method. With the Wait-and-Weight Method, the influx is circulated out while kill weight mud is simultaneously circulated down the drill pipe and up the annulus. The heavy mud is circulated to the bit at a slow kill rate, and the drill pipe pressure is maintained according to a prepared table that gives drill pipe pressure for the corresponding strokes of kill mud pumped.

The Driller's Method is accomplished in two circulations using constant drill pipe pressure and maintaining constant pump speed. The drill pipe pressure is kept constant by adjusting the choke. Once the annulus is clear of the influx, the mud weight is adjusted to kill-weight. The kill-weight mud is then circulated to the bit using constant pump speed and drill pipe pressure step-down plan. When kill-weight mud has reached the bit, the FCP is maintained until the heavy mud has reached the surface.

# Section VI: Hydrogen Sulfide

# Purpose

The purpose of this plan is to insure the safety of the all on-site personnel as well as those residents in close proximity. Hazards associated with the possibility of H2S encounters and the warning signs of H<sub>2</sub>S exposure will be covered.

## Scope

The policy is to consider every encounter with H<sub>2</sub>S as potentially tethal until proven otherwise. Upon encountering H<sub>2</sub>S, EQT employees or contractors(s) will determine the concentration of H<sub>2</sub>S.

## General Information

- immediately upon suspicion or odor of H<sub>2</sub>S on location the concentration shall be determined using properly functioning single or multi-gas detection devices which have a sensor calibrated to detect the presence of H<sub>2</sub>S gas.
  - All readings should be documented along with the time they were obtained
  - All areas having a reading of greater than 10 ppm H<sub>2</sub>S shall be evacuated until the area has been cleared of H<sub>2</sub>S or properly trained personnel equipped with appropriate PPE arrive on location.
  - H,S deadens the sense of smell; the presence or absence of H,S odor is not an acceptable means for determining the presence of gas.
  - Never walk upwind or uphill lowards any suspected source of H<sub>2</sub>S; approach using a cross wind approach.
- Identity wind direction and evacuate personnel upwind and uphill of the leak; H,S is heavier than air and will settle
  in low-lying areas.
- If necessary, the wall will be shut in and the work will be stopped until adequate safety personnel and equipment have arrived on site.
- No work will take place until the appropriate personnel and equipment are in place,
- The primary considerations at this time will be:
  - 6 H<sub>2</sub>S concentration
  - a Gas Volume
  - Weather Conditions
  - o Dwellings in the area.

# Personal Protective Equipment

- The EOT H<sub>2</sub>S contractor will have an emergency trailer with SCBA's, additional gas detection equipment and
  other instrumentation and PPE required for appropriate response.
- All personnel on location; all personnel monitoring adjacent to the location; or all personnel associated with the
  operation, will be equipped with personal H<sub>2</sub>S monitors.
- There will be a H<sub>2</sub>S monitor located at the flow line exit, during the drilling of this well, as well as on the Rig Floor.
- This PPE shall be in addition to the PPE requirements listed in Section 1.0

# Training

- Only personnel whom have been properly trained; or are qualified in the hazards of H<sub>2</sub>S, will be allowed on location during operations that have encountered, or projected to encounter H<sub>2</sub>S.
- There will be a safety briefing prior to start of each shift or tower and hazards and currently readings of H<sub>2</sub>S will be documented on a TSM or JSA.

# Briefing (Assembly) Areas

- Refer to Section III for specifics on Primary and Secondary Assembly Areas.
- Specific considerations for H<sub>2</sub>S should include:
  - Windsacks or streamers for indication of wind direction.
  - a Being upwind of harmful levels of H.S.
  - o Avoiding low lying areas
  - o Being upwind
- Signage will be utilized along the location road, or any other entrances to the location, if H<sub>2</sub>S is encountered.

# H<sub>2</sub>S Response Team Contractors

See Section II: Assigned Specialist Response Numbers for contact information.

## Personnel

· See Section III: Accountability for information.

# Emergency numbers

· See Section II emergency for contact information.

### Site Access

· See Section III: Site Access for information.

## **Notifications**

- The EOT H<sub>2</sub>S Contractor will be notified at the following intervals if operations are occurring on a suspected H<sub>2</sub>S location:
  - o Pre-Spud Meeting
  - Spud Date
  - o Bottom of 9 5/8\*
  - o 1000' Above Onondaga

# Protection Zone Plans

# **Emergency Protection Zone Plan**

- In the event of an emergency on the well site, the Emergency Coordinator, or his designee, shall determine
  protective zones to limit the risk of exposure to workers, local responders, and residents surrounding the work
  area.
- Life safety, impacts to the environment, and property conservation are priorities.
- The Emergency Coordinator shall determine these zones based on the following information on the scene:
  - a Magnitude of the incident
  - o Wind Direction
  - o MSDS of applicable materials
  - Current and forecasted weather conditions
  - o Topegraphy and land conditions
  - o Other influences specific to the incident
- Once established, these zones will be maintained until a determination is made by the Emergency Coordinator to after or discontinue them.

# Flowback Condensate Protection Zone Plan

- A pre-job meeting or contact will be performed with all parties prior to startup.
- Equipment and operational guidelines are:
  - o Permit entry only 30" radius around gas buster tanks.
  - o Signs posted around well site.
  - o Gas detectors and condensate sticks will be on location and used.
  - Approved vendors only for condensate transfer to pre-approved sites.
  - o Emergency response plan reviewed for either WV or PA operations.
  - o EQT On-Site Completion Specialist (OCS) will be notified immediately of any liquids on the ground
  - o Only approved companies and vacuum trucks to be used to pick up fluids.
  - o LEL meter usage verified and to be checked.
  - o All ignition sources around well site will be reviewed.

# HYDROGEN SULFIDE ACCESS CONTROL FORM FOR CONTRACTORS, WORKERS, VISITORS

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# Section VII: Flaring

# Flaring Operations

# Drilling

# Flare Line Installation

The BOP equipment will all be located on the surface. The choke line coming off the stack will lead into a 5,000 psi choke manifold with 2 adjustable chokes. The 7" blools line will divert any gas 50-75" away from rig substructure. Bloole line will be properly anchored with stakes or buried and will be set up so that gas can be vented. There will be a clearing of 25' for the gas to be vented. Duration of flare is expected to be ~ 7 days, depending on actual test results.

# Ignition Methods and

- 1. Primary Vent
- 2. Backup Marine Ilare pisto!

# Notification

Notification of a Flare will be given to the local Fire Department and/or 911 center, if possible. Refer to Section 3.0 for contact information.

# Completions

# Flare Line Installation

The Flare Stacks will be positioned in a safe area at least 25" away from pit liners, trees and any other hazardous sites. The Flowback configuration consist of in order: 71/16" 10m frac valve: Flow Cross with 41/16" wing valve: 3" 5 valve choke manifold; 3" line with junk calcher; 1440 psi horizontal test separator and 2" 1502 pipe to 4" x 40' vertical Flare Stack. Flowline will be properly anchored and tethered. Duration of tlare is expected to be ~ 7 days, depending on actual test results.

Ignition Methods

- Primary --Pitot Light
   Backup -- Marine Ilare pistol

# Notification

Notification of a Flare will be given to the local Fire Department and/or 911 center, if possible. Refer to Section II for contact information.

# **Section VII: Collision Avoidance**

Collision avoidance is managed by utilizing gyro tools, downhole steering tools (MWD/EM), and anti-collision software by engineers. Two drilling scenarios that occur are normal pad drilling and return to pad drilling. Normal pad drilling is defined when a top hole rig drills each well on the pad down to kick off point (KOP) and then a bottom hole rig moves onto the pad after the top-hole rig moves off and drills the curve and lateral sections. Normal pad drilling can also be defined when a bottom hole rig moves to a pad and drills each well on the pad from surface to TD (Grassroots Well). Return to pad drilling is a scenario where a top-hole rig or a bottom hole rigs returns to a pad to drill additional well(s) that currently have producing (live) wells on the pad. In each scenario gyro tools, MWD/EM tools, and anti-collision processes are utilized to mitigate the risk of downhole collisions.

# **Normal Pad Drilling**

In this scenario a top-hole or bottom hole rig will move on a pad and drill each well to KOP. At KOP of each well a gyro will be run to confirm the position of the hole. When the bottom hole rig moves onto the pad, once the top-hole rig has moved off, anti-collision is run on each well and the most efficient well path with the lowest risk of collision is designed and selected by engineers to be executed in the drilling plan utilizing directional drilling and anti-collision software. Directional bottom hole assemblies (BHA) are run in the hole and used to drill the well from vertical to horizontal. Gyros are taken as needed to steer the well until the well is comfortably away from the other wells and the risk of collision is eliminated. Surveys utilizing MWD/EM tools are taken from that point on to the total depth of the well is achieved. While directionally drilling the well, anti-collision software is utilized and separation factors are analyzed. During this scenario, if two wells come with 10 feet or a separation factor of 1.5, each survey is monitored closely and anti-collision is run after each survey until the wells are clear of a collision risk.

# Return to Pad Drilling

In this scenario a top-hole rig or bottom hole rig will move on a pad that currently has producing (live) wells on the pad. Prior to drilling additional wells on the pad the existing wells on the pad are analyzed. Engineers evaluate how the existing wells walk in the vertical part of the well and prepare preliminary directional plans to mitigate downhole collisions. After the rig moves on the pad and starts drilling, gyro surveys are taken several times from surface to KOP. After each gyro is taken, the surveys are analyzed by engineers and anti-collision is run to ensure current well path is not in the direction of a producing well(s). Frequency of gyros is determined by engineers and the position of the hole as it relates to existing wells on the pad. Directional BHAs are run in the hole and used to drill the well from vertical to horizontal. Gyros are taken as needed to steer the well until the well is comfortably away from the other wells and the risk of collision is eliminated. Surveys utilizing MWD/EM tools are taken from that point on to the total depth of the well is achieved. While directionally drilling the well, anti-collision software is utilized and separation factors are analyzed. During this scenario, the well is surveyed from surface to TD as it is drilled and if two wells come with 14 feet or a separation factor of 2.0, each survey is monitored closely and anti-collision is run after each survey until the wells are dear of a collision risk.

# Section IX: Deep Well Additional Requirements

# **Formations**

See the attached WV Geological Prognosis on the following pages for each well listed on the permit cover page which lists anticipated freshwater, saltwater, oil and gas, hydrogen suitide, their zones, high pressure and volume zones and their expected depths

# WEST YIRDHA GEDE DOUGAL PROSPERS WEST WAS DEBES OF THE COMMENT OF

1940 GL 1943129 II 1943347.0 1944370.5 Recommender

TVD: 6903 TVD: 6903 #536

Proposed Logging Suite:

Recommended Gas Topis

1800-2050, PBID: Inter Cup 15, 5400, 4100, 5350, 4000, Glus tool at any mana void. Classific curring any into all agosficant powerships when when you have too

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# Casing and Cementing

# SEE ATTACHED DOCUMENTS FOR EACH WELL

# Casing and Cementing notes:

- All cement volumes are typical, actual conditions may dictate changes in geometry.
  All casing and cament meet API standards, but are not API monogrammed.
  Mine strings will be run as required by geologic conditions.
  Full BOP pressure lests on installation, function test daily, blind ram test on trips.

Well Number: 513342 (WEU6H1)

Casing and Cemer	Deepest Fresh Water: 1,031*				
		Mine			
Туре	Conductor	Protection	Surface	Intermediate	Production
Hole Size, In	24		17 1/2	12 3/8	8 1/2
Casing Size, OD in.	20		13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0,635	*	0.380	0,395	0.361
Depth, MD	4D'	•	1,131'	3,100'	13,281
Depth, TVD	40'	<del>-</del>	1,131'	3,100	6.903
Centralizers Used	Yes	- <del> </del>	Yes	Yes	Yes
Weight/Grade	81#/MC-50	•	54#/MC-50	40#/MC-50	20#/P-110
New or Used	New		New	New	New
Pressure Testing	-	-	20% Greater than exp Pressure	20% Greater than exp. Pressure	20% greater than exp. fracture pressure
After Fracture Pressure Testing	7	-	•	•	20% greater than exp. shu pressure
ID, m	19.25	•	12,615	8.835	4,778
Burst (psi)	•	-	2,480	3.590	12.640
Collapse (psi)	*		1,110	2,470	11,100
Tension (mibs)	•	4	455	456	587
Cement Class			*	*	н
Coment Type	Construction	· ·	1	*	
Cement Yield	1,18		1.21	1.21	1.27/1.86
Meets API Slandards		•	Yes	Yes	Yes
WOC Time		·	Min, 8 hrs	Min. 8 hrs	Min 8 hrs
Top of Cement (Planned)	Surface		Surface	Surface	3,300°
Fill (fL)	40'	•	1,131	3,100	9,481'
Percent Excess	•	7	20	20	10
Est. Volume (cu (i)	38	1	977	1,207	2,392
Est. Volume (BBLS)	7	·	174	215	426

# Flaring Activities

See also Section VII: Flaring for additional information and details.



Where energy meets innovation:

# WELL SITE SAFETY PLAN RECEIPT ACKNOWLEDGMENT

This form letter is to be signed by the LEPC or CES representative to indicate they have received the Site Safety Plan for the following well site location and understand its use:

Site Location (Copied from Section iii):

WV- Doddridge County -- West Union Site State, County and Municipality

785 WV Rt 18 South, West Union, WV 26456 Site Address assigned by County 9-1-1

NAO 83: 39.287296 / -80.764765 Access Road Coordinates EQT WEU6 Pad Site Location Designation

US Rt. 50 and WV Rt 16 Nearest cross road(s)

NAD 83: 39.290259 / -80.753570 Pad Site Coordinates

I have received my copy of the Well Site Satety Plan for the above described location. I understand that this is a reference tool for emergency response and it is my responsibility to read and understand the Plan.

LCEP or CES Representative (printed)	EQT Representative (printed)
Representative Affiliation and Title	EOT Environmental and Salety title
Representative Signature	EQT Environmental and Safety Signature
Dala	Date