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west virginia department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

## PERMIT MODIFICATION APPROVAL

January 19, 2016

EQT PRODUCTION COMPANY  
120 PROFESSIONAL PLACE  
BRIDGEPORT, WV 26330

Re: Permit Modification Approval for API Number 8510219, Well #: 515883

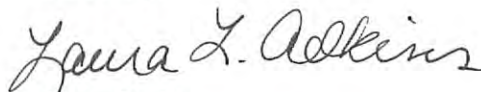
**Lateral path, SSP, Casing**

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

  
for Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas

Promoting a healthy environment.

01/22/2016

4708510219  
STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: EQT Production Company  
Operator ID 306686 County 085 District 2 Quadrangle 562

2) Operator's Well Number: 515883 Well Pad Name PUL96

3) Farm Name/Surface Owner: Wilson Public Road Access: 12/3

4) Elevation, current ground: 1,194.0 Elevation, proposed post-construction: 1,182.0

5) Well Type: (a) Gas  Oil  Underground Storage   
Other \_\_\_\_\_

(b) If Gas: Shallow  Deep   
Horizontal

6) Existing Pad? Yes or No: No

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):  
Target formation is Marcellus at a depth of 6417 with the anticipated thickness to be 50 feet and anticipated target pressure of 2190 PSI  
Top of Marcellus: 6397

8) Proposed Total Vertical Depth: 6417

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15180

11) Proposed Horizontal Leg Length: 7542

12) Approximate Fresh Water Strata Depths: 342,368,399,556, ,

13) Method to Determine Fresh Water Depth: By offset wells

14) Approximate Saltwater Depths: None found in offset well reports

15) Approximate Coal Seam Depths: None found

16) Approximate Depth to Possible Void (coal mine, karst, other): None reported

17) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No x

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

*Michael Jeff*  
*12-2-15*

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**CASING AND TUBING PROGRAM**

18)

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: for Drilling	INTERVALS: Left in Well	CEMENT: Fill- up (Cu.Ft.)
Conductor	20	New	A-500	78.6	40	40	60 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	656	656	623 C.T.S.
Coal	-	-	-	-	-	-	
Intermediate	9 5/8	New	A-500	40	2,567	2,567	1,011 C.T.S.
Production	5 1/2	New	P-110	20	15,180	15,180	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

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TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	0.375	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2,184	* See Note 2	1.19
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,950	3,160	* See Note 2	1.19
Production	5 1/2	8 1/2	0.361	12,640	10,112	-	1.07/1.86
Tubing							
Liners							

**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 500' above the top producing zone.

**Note 2:** Reference Variance 2014-17. (Attached)

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus formation.

Drill the vertical to an approximate depth of 3057'.

Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated treating pressures are expected to average approximately 8500 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres):

28.99

22) Area to be disturbed for well pad only, less access road (acres):

6.48

23) Describe centralizer placement for each casing string.

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One spaced every joint from production casing shoe to KOP

24) Describe all cement additives associated with each cement type.

**Surface (Type 1 Cement):** 0-3% Calcium Chloride

Used to speed the setting of cement slurries.

0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.

**Intermediate (Type 1 Cement):** 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.

**Production:**

**Lead (Type H Cement):** 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss/lengthens thickening time)

.15% SEC-10 (fluid loss) 50:50 POZ (extender)

**Tail (Type H Cement):** 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss)

.2% SEC-10 (Fluid loss). .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation.

60 % Calcuim Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures. **Surface:** 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. A constant rate of higher than expected cuttings volume likely indicates washouts 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

hole cleaning use a soap sweep or increase injection rate & foam concentration.

**Production:** Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume

Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across

the shakers every 15 minutes.

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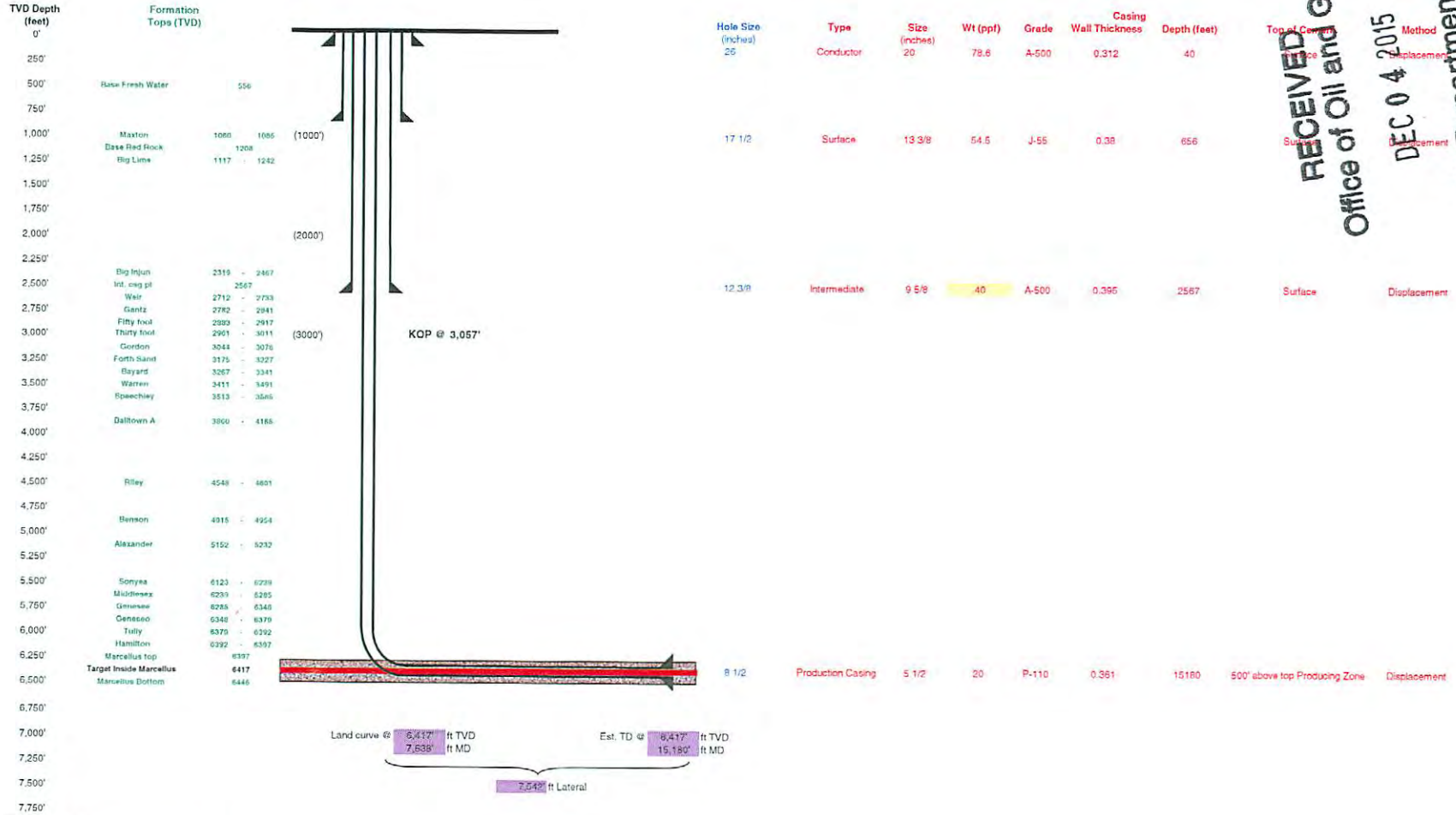
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\*Note: Attach additional sheets as needed.

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Well 515883(PUL96H1)  
EQT Production  
Pullman  
Ritchie West Virginia

Pad Name  
Azimuth 164.75  
Vertical Section 8757



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Method Displacement  
WV Department of Environmental Protection

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Proposed Well Work:  
Drill and complete a new horizontal well in the Marcellus formation.  
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Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.



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Earl Ray Tomblin, Governor  
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March 18, 2014

Nabors Completion & Production Services Company  
1380 Route 286 Hwy E #121  
Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal 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% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

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

Sincerely,

James Peterson  
Environmental Resources Specialist / Permitting

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(304) 926-0450  
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Earl Ray Tomblin, Governor  
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**BEFORE THE OFFICE OF OIL AND GAS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STATE OF WEST VIRGINIA**

**IN THE MATTER OF A VARIANCE FROM ) ORDER NO. 2014 - 17**  
**REGULATION 35 CSR § 4-11.4/11.5/14.1 )**  
**AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE )**  
**THE OPERATIONAL )**  
**REGULATIONS OF CEMENTING OIL )**  
**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 coal protection casing of oil and gas wells.

**FINDINGS OF FACT**

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
- 2% Calcium Chloride (Accelerator)
  - 0.25 % Super Flake (Lost Circulation)
  - 94% Type "1" Cement
  - 5.20 % Water
- 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

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**CONCLUSIONS OF LAW**

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

**ORDER**

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement 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 Martin, Chief  
Office of Oil and Gas

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# Site Specific Safety Plan

EQT PUL96 Pad

Pullman  
Ritchie County, WV

515883

For Wells:

Date Prepared:

November 24, 2015

[Signature]  
EQT Production  
Permitting Supervisor  
Title  
11-25-15  
Date

Michael Hoff  
WV Oil and Gas Inspector  
Title  
12-2-15  
Date

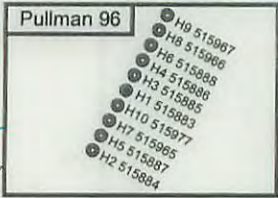
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01/22/2016

**WV 515883**  
**EQT Production Company**  
**Laurie Ann Haddox, et al**  
**360 Acres**

- ⊙ Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- ⑤ WV County Route
- ⑤ WV State Route

LATITUDE 39 - 15 - 00



**Notes:**  
 WV 515883 coordinates are  
 NAD 27 N: 262,458.95 E: 1,578,921.47  
 NAD 27 Lat: 39 21 10.42 Long: -80 98 60.96  
 NAD 83 UTM N: 4,340,205.69 E: 501,214.98  
 WV 515883 Landing Point coordinates are  
 NAD 27 N: 262,079.18 E: 1,578,863.85  
 NAD 27 Lat: 39 21 37.7 Long: -80 98 33.66  
 NAD 83 UTM N: 4,340,353.69 E: 500,685.50  
 WV 515883 Bottom Hole coordinates are  
 NAD 27 N: 255,702.65 E: 1,578,847.79  
 NAD 27 Lat: 39 19 24.91 Long: -80 98 59.61  
 NAD 83 UTM N: 4,338,147.04 E: 501,226.91  
 West Virginia Coordinate system of 1927 (North Zone).  
 Geographic coordinates are NAD27.  
 UTM coordinates are NAD83, Zone 17, Meters.  
 Plat orientation, corner and well ties are based upon the grid north meridian.  
 Well location references are based upon the grid north meridian.

**Well References**

**Pullman 96**  
**H1 515883**  
 47-85-01540

S 47°11'07" W  
 464.60'

S 87°39'19" E  
 142.16'

**WV 515883**  
**Landing Point**  
 N 75°48'40" W  
 2122.34'

N 09°52'14" E  
 1510.16'

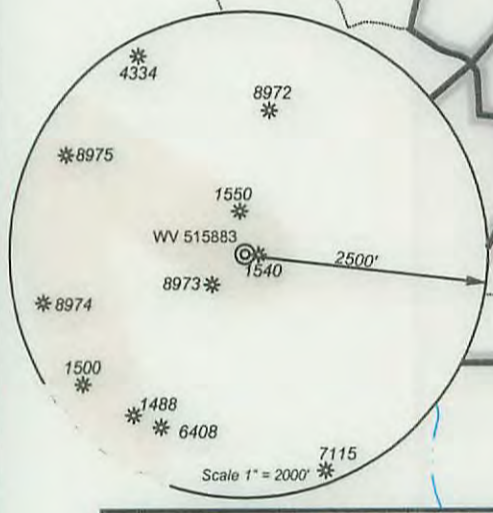
S 69°11'24" E  
 2496.30'

S 15°15'03" W  
 1542.14'

GRID NORTH

LONGITUDE 80 - 57 - 30

14190'



Lease No.	Name	Acres
919996	Darren M. Dodd, et al.	92
919998	Jean W. Moore	135
21592	Antereo Resources	14.75
919987	Arnold K. Richards, et ux	74
919993	James Douglas Wilson, et al.	63
919997	Arnold Richards	98
919994	S&R Gas Ventures, et al.	56
919988	William K. Wilson Trust	98

(⊙) Denotes Location of Well on United States Topographic Maps



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

*Dwayne A. Hall*  
 P.S. 2089SU



FILE NO: 243-14  
 DRAWING NO: 243-14 Pullman 96 H1.dwg  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: November 24 20 15  
 WV Department of Environmental Protection  
 OPERATOR'S WELL NO. 515883  
 API WELL NO. 47 - 85 - 10219 H/A  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: Original: 1194' Proposed: 1182' WATERSHED Goose Run of Rockcamp Run QUADRANGLE: Pullman  
 DISTRICT: Union COUNTY: Ritchie  
 SURFACE OWNER: James H. & Wilma J. Wilson ACREAGE: 40.089  
 ROYALTY OWNER: Laurie Ann Haddox, et al LEASE NO: 919995 ACREAGE: 360  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: TVD 6,396

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray  
 ADDRESS: PO Box 280 / 115 Professional Place ADDRESS: PO Box 280 / 115 Professional Place  
Bridgeport, WV 26330 Bridgeport, WV 26330

01/22/2016

**WV 515883**  
**EQT Production Company**  
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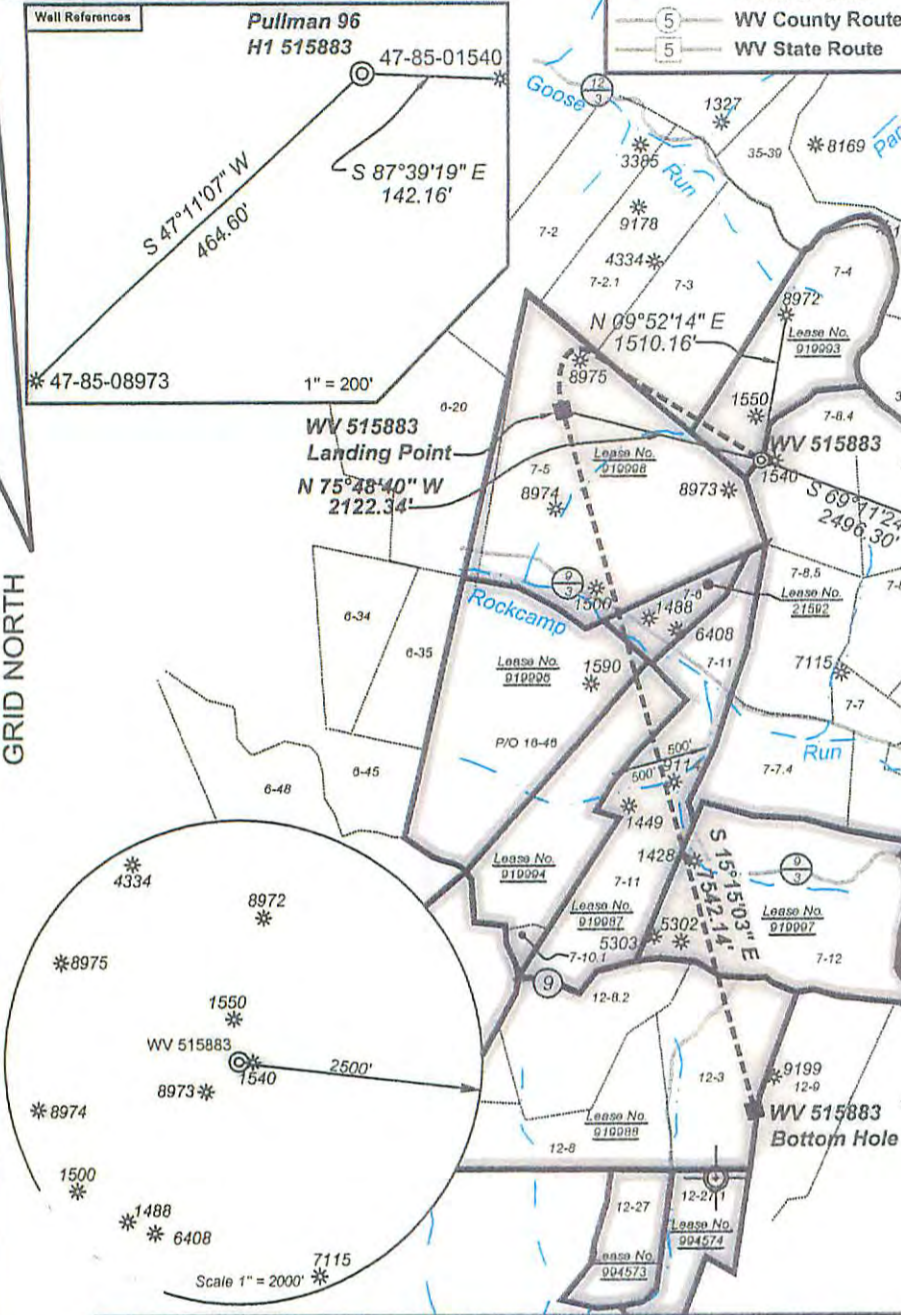
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- Pullman 96**
- H9 515967
  - H8 515966
  - H6 515988
  - H4 515986
  - H3 515985
  - H1 515883
  - H10 515977
  - H7 515965
  - H5 515987
  - H2 515984

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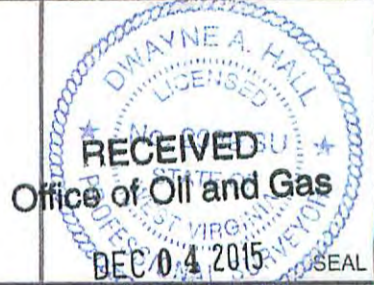


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 ADDRESS: PO Box 280 / 115 Professional Place ADDRESS: PO Box 280 / 115 Professional Place  
Bridgeport, WV 26330 Bridgeport, WV 26330

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 12-2-15

HGA  
 MOD

01/22/2016

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<b>919995</b>			Min 1/8 pd	
	James A. Wilson, et ux	R. W. Richards		LB79/542
	R. W. Richards	J. E. Richards and C. W. Richards		LB80/78
	J. E. Richards and C. W. Richards	Bolyard Oil & Gas, LTD		LB169/136
	Bolyard Oil & Gas, LTD	Sheffield Exploration Co.		LB189/521
	Sheffield Exploration Co.	M. S. Oil Co. (69.513% of working interest) and Applied Mechanics Corp. (30.487% of working interest)		LB208/268
	M. S. Oil Co. (69.513%)	Applied Mechanics, et al		LB222/836
	Applied Mechanics, et al	FS Limited Partnership		AB274/80
	FS Limited Partnership	EQT Production Co.		AB274/102
<b>919993</b>			Min 1/8 pd	
	Effie E. Wilson and James Wilson	J.E. Richards		LB79/346
	J.E. Richards	J. E. Richards and C.W. Richards		LB79/407
	J.E. Richards and C.W. Richards	P.O. Burgy, B.S. Marshall, L.B.		LB81/279
	P.O. Burgy, B.S. Marshall, L.B.	Burgy & Rollo Riggs		LB123/303
	Burgy & Rollo Riggs	J. E. Richards and C.W. Richards		LB206/8
	J. E. Richards and C.W. Richards	Applied Mechanics, et al		AB274/80
	Applied Mechanics, et al	FS Limited Partnership		AB274/102
	FS Limited Partnership	EQT Production Co.		
<b>10-7-3</b>			N/A	
	Virginia Annabelle Day, aka Virginia Annabelle Wilson	EQT Production Co.		340/806
<b>919998</b>			Min 1/8 pd	
	Robert D. Elder, et ux	N.M. Welch		LB81/521
	N.M. Welch	Ohio-West Virginia Oil & Gas Co.		LB81/546
	Ohio-West Virginia Oil & Gas Co.	N.M. Welch		LB82/425
	N.M. Welch	J. E. Richards and C.W. Richards		LB82/500
	J. E. Richards and C.W. Richards	Applied Mechanics, et al		LB206/8
	Applied Mechanics, et al	FS Limited Partnership		AB274/80
	FS Limited Partnership	EQT Production Co.		AB274/102

**RECEIVED**  
**Office of Oil and Gas**  
**DEC 04 2015**  
**WV Department of Environmental Protection**

919996

Ruby Dotson, et al	J. E. Richards	Min 1/8 pd	LB80/449
J. E. Richards	J. E. Richards and C. W. Richards		LB80/455
J. E. Richards and C. W. Richards	Applied Mechanics, et al		LB206/8
Applied Mechanics, et al	FS Limited Partnership		AB274/80
FS Limited Partnership	EQT Production Co.		AB274/102

21592

Lillie McDonald, et al	Shenandoah Energy Co.	Min 1/8 pd	LB148/765
Shenandoah Energy Co.	Gene Stalnaker		LB152/486
Gene Stalnaker	Angus Energy, Inc.		LB212/137
Angus Energy, Inc.	Stalnaker Energy Corp. (Name Change)		CB6/225
Stalnaker Energy Corp.	Antero Resources Corp.		LB264/875
Antero Resources Corp.	EQT Production Co.		286/990

919994

Ethel M. Turner, widow	J. E. Richards	Min 1/8 pd	LB80/451
J. E. Richards	J. E. Richards and C. W. Richards		LB80/455
J. E. Richards and C. W. Richards	Applied Mechanics, et al		LB206/8
Applied Mechanics, et al	FS Limited Partnership		AB274/80
FS Limited Partnership	EQT Production Co.		AB274/102

919987

A. H. Hodge and Ona Hodge	J. E. Richards	Min 1/8 pd	LB80/449
J. E. Richards	J. E. Richards and C. W. Richards		LB80/455
J. E. Richards and C. W. Richards	Bolyard Oil & Gas, LTD		LB169/310
Bolyard Oil & Gas, LTD	Sheffield Exploration Co.		LB189/521
Sheffield Exploration Co.	M. S. Oil Co. (69.513% of working interest) and Applied Mechanics Corp. (30.487% of working interest)		LB208/268
M. S. Oil Co. (69.513%)	Applied Mechanics, et al		LB222/836
Applied Mechanics, et al	FS Limited Partnership		AB274/80
FS Limited Partnership	EQT Production Co.		AB274/102

919997

Pearl Hutchinson, et al	J. E. Richards	Min 1/8 pd	LB80/447
J. E. Richards	J. E. Richards and C. W. Richards		LB80/455
J. E. Richards and C.W. Richards	Applied Mechanics, et al		LB206/8
Applied Mechanics, et al	FS Limited Partnership		AB274/80
FS Limited Partnership	EQT Production Co.		AB274/102

919988

Min 1/8 pd

Arden Wilson, et ux	J. E. Richards	LB81/515
J. E. Richards	J. E. Richards and C. W. Richards	LB80/455
J. E. Richards and C.W. Richards	Applied Mechanics, et al	LB206/8
Applied Mechanics, et al	FS Limited Partnership	AB274/80
FS Limited Partnership	EQT Production Co.	AB274/102

Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company  
 By:   
 Its: Permitting Supervisor

**RECEIVED**  
**Office of Oil and Gas**  
 DEC 04 2015  
 WV Department of  
 Environmental Protection  
 12/22/2016

**MEMORANDUM OF  
SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT**

**1. NAME AND ADDRESS OF GRANTOR:**

Virginia Annabelle Day, a/k/a Virginia Annabelle Wilson  
4101 County Road 282  
Auxvasse, Missouri 65231

TRICENTRAL RECORDS  
RITCHIE COUNTY OFFICE OF  
DEEDS AND RECORDS  
DATE RECORDED: 11/16/2015  
RECORDING FEE: \$10.00  
APPROXIMATE PAGE: 2  
BOOK: 340-341  
RECORDED FOR: 810.00  
APPROXIMATE: 2/1/15

**2. NAME AND ADDRESS OF GRANTEE:**

EQT Production Company  
625 Liberty Avenue  
Suite 1700  
Pittsburgh, PA 15222

**3. SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT REFERENCE:**

A SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT ("Agreement") dated the 2nd day of November, 2015, was entered into for good and valuable consideration by and between Virginia Annabelle Day, a/k/a Virginia Annabelle Wilson, a married woman dealing in her sole and separate property ("Grantor", whether one or more) and EQT Production Company ("Grantee"). Upon completion of any wellbore within the subsurface area underlying the Property (as defined in Section 4), this subsurface easement in the area of the wellbore and the one hundred (100') feet on each side of the wellbore that parallels it shall become an exclusive right of way and easement in that area. The final wellbore locations are as described in a final, as-built map(s) to be filed as a part of an affidavit in the aforesaid Clerk's Office following the completion of the following well(s) located on Grantee's PUL96 well pad. If an as-built map is not available for a wellbore within the subsurface area underlying the Property, any third-party with the right to operate within such area may contact Grantee's land department for a copy of such as-built map. Grantee shall provide notice of additional wellbores located within the subsurface area underlying the Property by filing an amendment, affidavit or other appropriate document.

**4. DESCRIPTION OF PREMISES:** That certain tract or parcel of land containing Sixty-One (61.0) acres, more or less, located Union District, in Ritchie County, West Virginia, being the same lands conveyed to Grantor by Deed dated the 18<sup>th</sup> day of September, 1952, of record in the Office of the Clerk of the County Commission of Ritchie County, West Virginia in **Deed Book 128**, at **Page 151**, and also by Deeds dated the 7<sup>th</sup> day of November, 2014 and the 5<sup>th</sup> day of October, 2015, recorded in the office of the Clerk of the County Commission of Ritchie County, West Virginia in **Deed Book 331**, at **Page 1081**, and **Deed Book 340**, at **Page 456**. ("the Property").

**5. TERM:** The Agreement shall run with the land and shall remain in full force and effect until released and relinquished by the Grantee back to the Grantor, in writing.

(REMAINDER OF PAGE LEFT BLANK INTENTIONALLY)

**RECEIVED**  
**Office of Oil and Gas**  
**DEC 04 2015**  
**016273018**  
**WV Department of**  
**Environmental Protection**

IN WITNESS WHEREOF, the parties have signed their names hereto as of the date of the Agreement referenced in Section 3 above.

**GRANTOR:**

**GRANTEE:**

EQT Production Company

Virginia Annabelle Day  
Virginia Annabelle Day, a/k/a  
Virginia Annabelle Wilson

John W. Damato  
By: John W. Damato  
Its: Attorney in fact

STATE OF Missouri;

COUNTY OF Boone;

I, Brittany Festog, a Notary Public, in and for said State and County, do hereby certify that Virginia Day/Wilson, personally known to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person in the State and County aforesaid, and acknowledged and delivered the said instrument to be their free act and deeds for uses and purposes therein set forth.

Given under my hand this 02 day of November, 2015.

My Commission expires: 2-4-2019.



Brittany Festog  
Notary Public

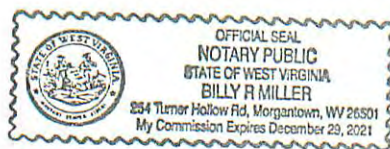
**STATE OF WEST VIRGINIA;**

**COUNTY OF HARRISON:**

I, Billy R. Miller, a Notary Public, in and for said State and County, do hereby certify that John W. Damato, personally known to be the same person whose name is subscribed to the foregoing instrument and the Attorney in fact of EQT Production Company, appeared before me this day in person in the State and County aforesaid, and acknowledged and delivered the said instrument to be his free act and deed for uses and purposes therein set forth on behalf of said company.

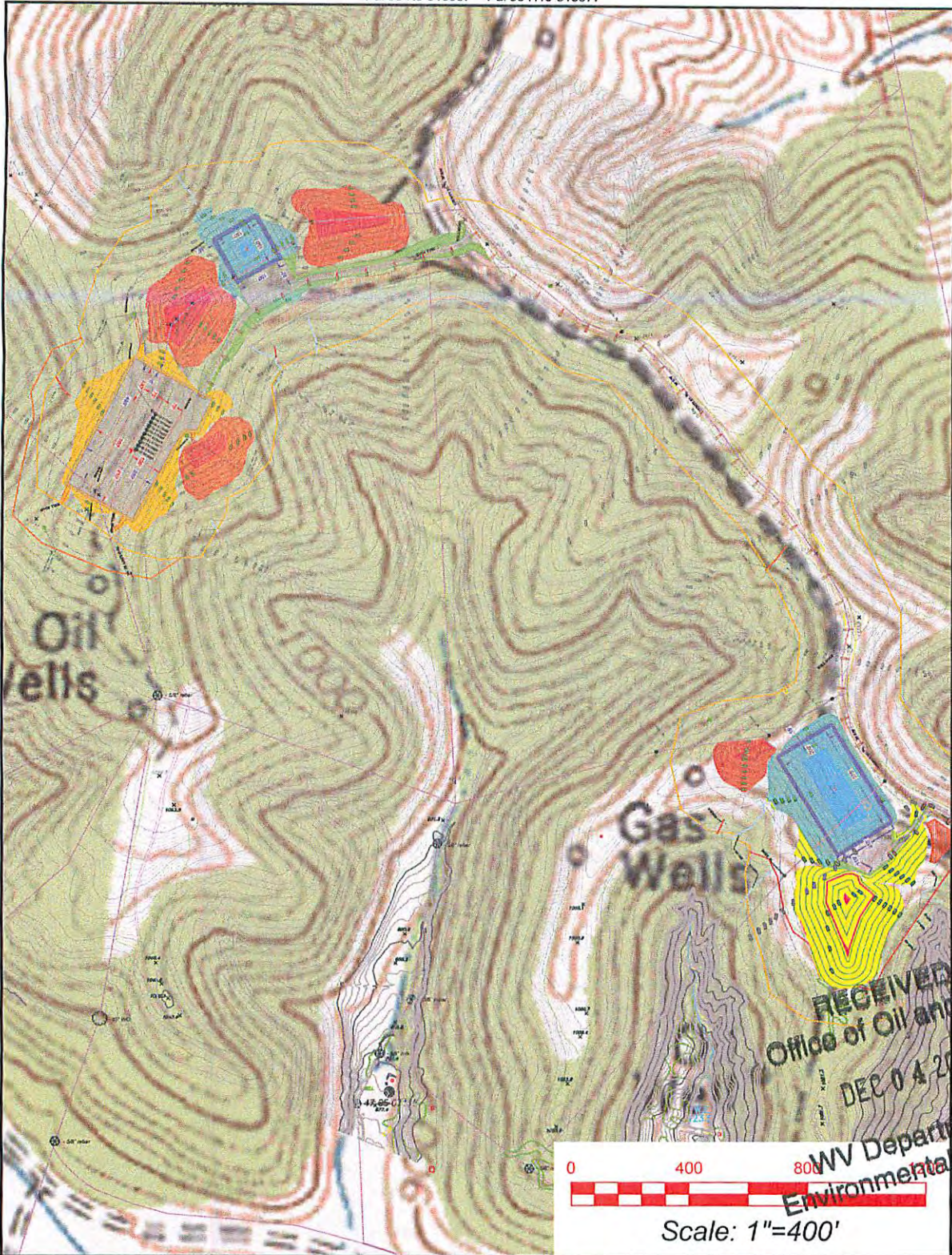
Given under my hand this 3rd day of November, 2015.

My Commission expires: December 29, 2021.



Billy R. Miller  
Notary Public

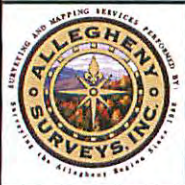




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WV Department of  
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Pullman 7.5' USGS QUADRANGLE		Proposed Disturbance Area	
Projected culvert inventory. (for bid purposes only)		Well Site Location	See Site Plan
15" minimum diameter culverts	See Site Plan	Proposed Access Road	See Site Plan
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance	See Site Plan
DRAWN BY: Dale Tomlin PS	DATE: December 30, 2014	FILE NO. 243-14	DRAWING FILE NO. 243-14 Rec Plan

Note: SEE SITE PLAN OF PULLMAN 96 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
1-800-482-8606  
Birch River Office Phone: (304) 649-8606 Fax: (304) 649-8608  
237 Birch River Road P.O. Box 438 Birch River, WV 26610

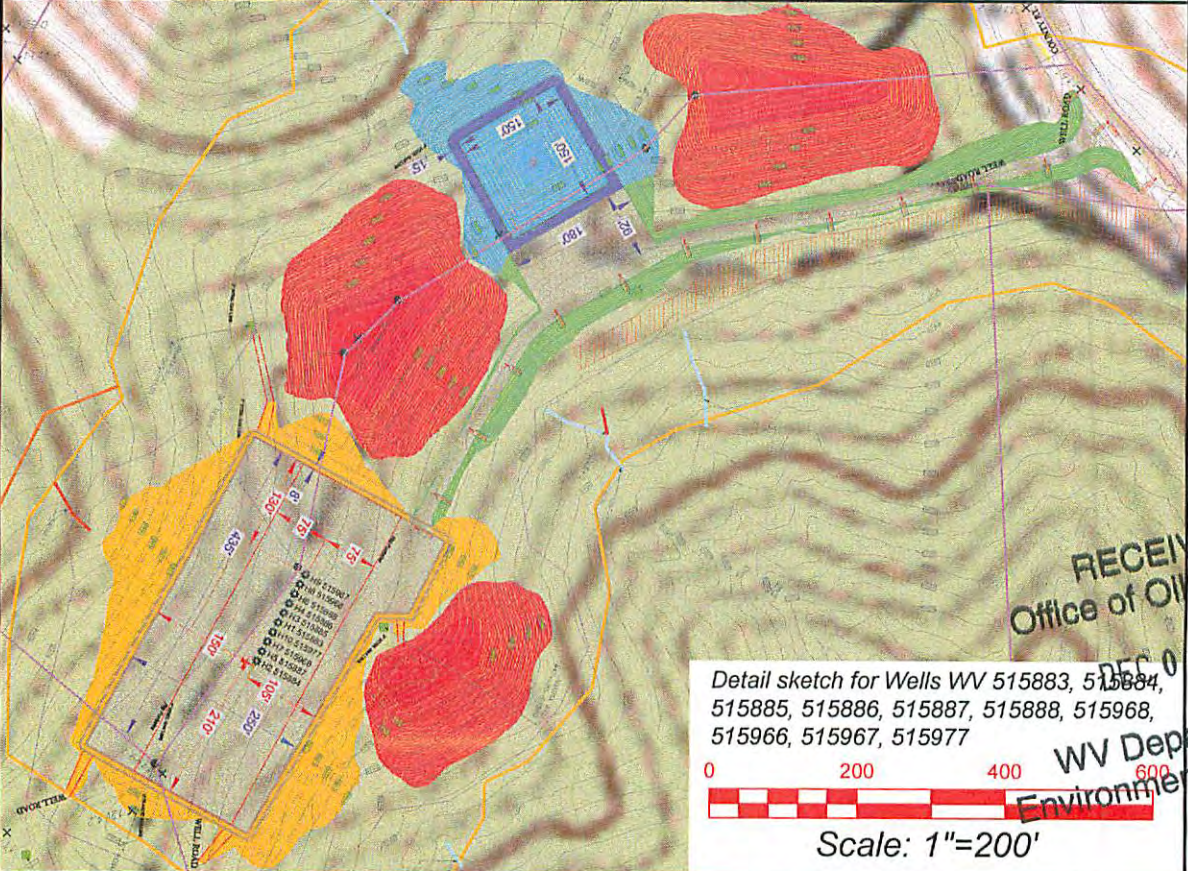
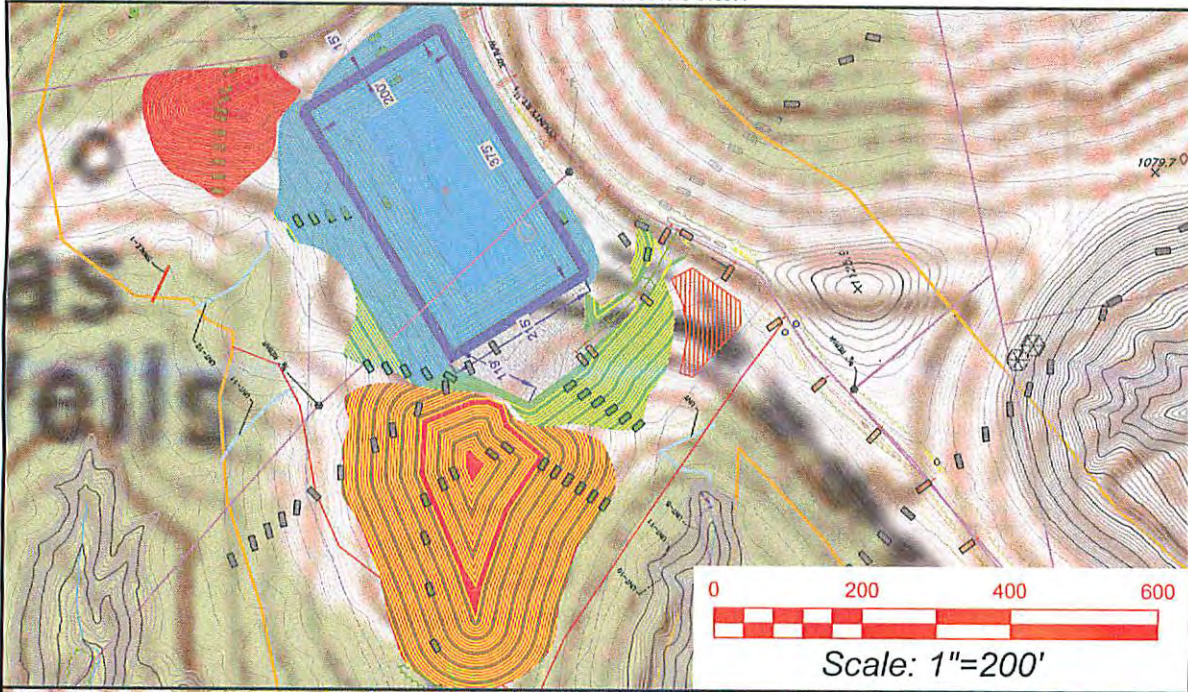
01/22/2016

WW-9

Pul 96 H1-515883 Pul 96 H2-515884 Pul 96 H3-515885 Pul 96 H4-515886  
Pul 96 H5-515887 Pul 96 H6-515888 Pul 96 H7-515968 Pul 96 H8-515966  
Pul 96 H9-515967 Pul 96 H10-515977

4708510219 PAGE 2 OF 2

not



Detail sketch for Wells WV 515883, 515884, 515885, 515886, 515887, 515888, 515968, 515966, 515967, 515977

Pullman 7.5' USGS QUADRANGLE		Proposed Disturbance Area	
Projected culvert inventory. (for bid purposes only)	Well Site Location	See Site Plan	
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 237 Birch River Road P.O. Box 438 Birch River, WV 26610

01/22/2016