west virginia department of environmental protection

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

June 21, 2016

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502358, 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.

James Martin
Chief

Operator's Well No: 516601
Farm Name: PETER, DONNA J.
API Well Number: 47-9502358
Permit Type: Horizontal 6A Well
Date Issued: 06/21/2016

API Number: _____

PERMIT CONDITIONS 4709502358

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. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. 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 one hundred (100) 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.

6. 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.

9. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

April 28, 2016

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

4709502358

Re: Casing change on WEU4 (516600, 516601)

Dear Mr. Smith,

EQT is requesting the 13 3/8" surface casing to be set at 750' KB, 50' below the coal at 696-700' KB. We will set the 9-5/8" intermediate string at 2865' KB, 50' below the base of the Gordon.

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

Sincerely,

Vicki Roark
Permitting Supervisor-WV

Enc.

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5/13

WW-6B
(04/15)

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API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

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

1) Well Operator:	EQT Production Company	306686	Tyler	Centerville	West Union
		Operator ID	County	District	Quadrangle

2) Operator's Well Number: 516601 Well Pad Name: WEU4

3) Farm Name/Surface Owner: Donna J. Peter Public Road Access: WV-18

4) Elevation, current ground: 1097 Elevation, proposed post-construction: 1079

5) Well Type (a) Gas x Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow x Deep _____
Horizontal x

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5-13-16

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6680', 54', 2747 PSI, Top of Marcellus 6649

8) Proposed Total Vertical Depth: 6680

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 14609

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11) Proposed Horizontal Leg Length: 6750

12) Approximate Fresh Water Strata Depths: 132,175,186,204

13) Method to Determine Fresh Water Depths: By Offset wells

14) Approximate Saltwater Depths: 1128,1219,1222

15) Approximate Coal Seam Depths: 230,281,696

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: _____

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(04/15)

API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	A-500	78.6	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	750	750	668 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2865	2865	1126 ft^3 / CTS
Production	5 1/2	New	P-110	20	14609	14609	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80° inclination	
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	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	Class H	1.07
Production	5 1/2	8 1/2	.361	12640	10112	Class H	1.07/1.86
Tubing	2 3/8	NA	.19	7700			
Liners							

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PACKERS

Kind:				
Sizes:				
Depths Set:				

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API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

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 3700'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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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 internal casing pressure is expected to be approximately 10000 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): No Additional

22) Area to be disturbed for well pad only, less access road (acres): No Additional 4709502358

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 solid body cent spaced every joint from production casing shoe to KOP

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

Conductor: Class A no additives
Surface (Type 1 Cement): 0-3% Calcium Chloride Used to speed the setting of cement slurries, .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 while rotating & reciprocating the drill string until cuttings diminish at surface.
Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
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.

*Note: Attach additional sheets as needed.

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Well 516601(WEU4H15)

EQT Production

West Union Quad

Tyler County, WV

Azimuth 336.8

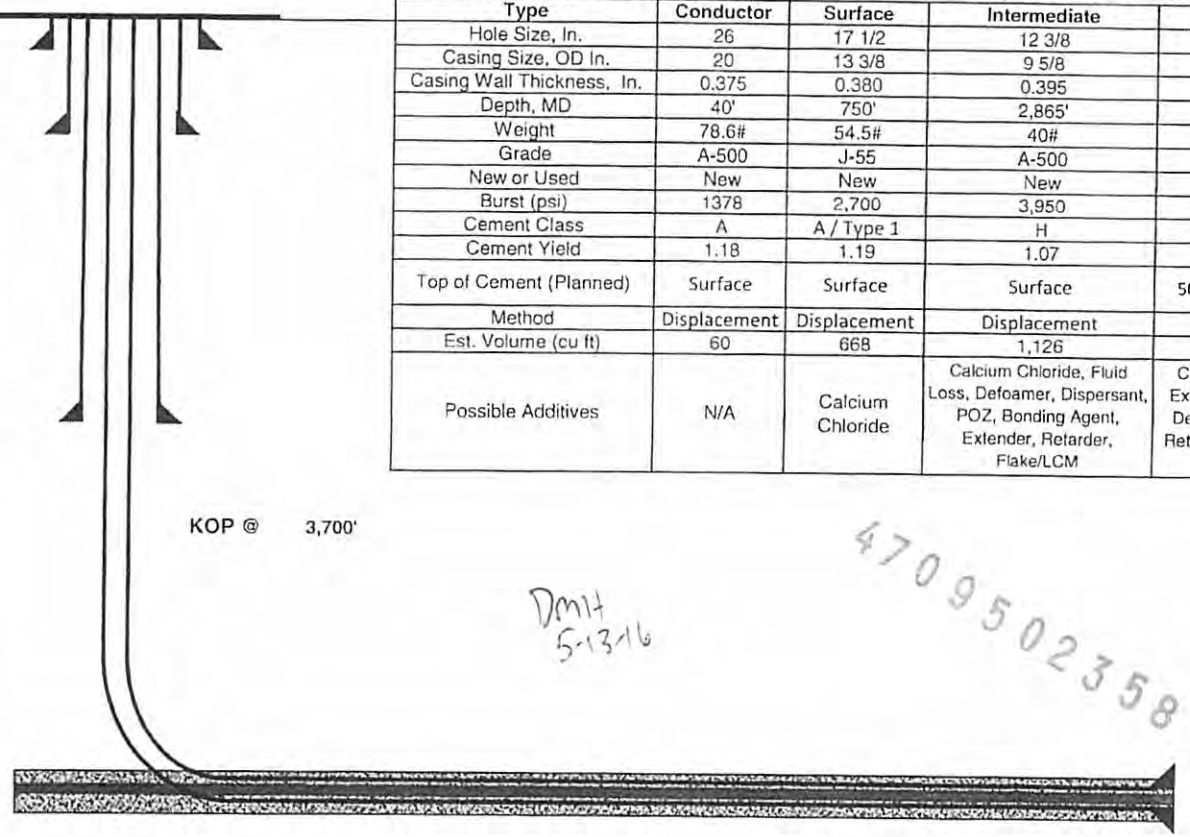
Vertical Section 6823

4709502358

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	40	
Base Fresh Water	204	
Surface Casing	750	
Base Red Rock	1101	
Maxton	1838	2037
Big Lime	2111	2395
Weir	2403	2450
Gantz	2490	2507
Fifty foot	2604	2659
Thirty foot	2690	2744
Gordon	2770	2815
Intermediate Casing	2865	
Forth Sand	2841	2903
Bayard	3011	3148
Warren	3374	3440
Speechley	3460	3574
Balltown A	3976	4088
Riley	4574	4864
Benson	4995	5058
Alexander	5242	5324
Sonyea	6328	6449
Middlesex	6449	6496
Genesee	6496	6570
Geneseo	6570	6605
Tully	6605	6626
Hamilton	6626	6649
Marcellus	6649	6702
Production Casing	14609 MD	
Onondaga	6702	

Casing and Cementing	Deepest Fresh Water: 204'			
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	26	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.	0.375	0.380	0.395	0.361
Depth, MD	40'	750'	2,865'	14,609'
Weight	78.6#	54.5#	40#	20#
Grade	A-500	J-55	A-500	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	3,950	12,640
Cement Class	A	A / Type 1	H	H
Cement Yield	1.18	1.19	1.07	1.07/1.86
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Method	Displacement	Displacement	Displacement	Displacement
Est. Volume (cu ft)	60	668	1,126	2,646
Possible Additives	N/A	Calcium Chloride	Calcium Chloride, Fluid Loss, Defoamer, Dispersant, POZ, Bonding Agent, Extender, Retarder, Flake/LCM	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent



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Proposed Well Work:
Drill and complete a new horizontal well in the Marcellus formation.
Drill the vertical to an approximate depth of 3700'.
Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

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WW-9
(4/16)

API Number 47 - 95 -
Operator's Well No. 516601

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Tributary of Camp Mistake Run Quadrangle West Union

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ☑ No ☐

Will a pit be used? Yes ☑ No ☐

If so, please describe anticipated pit waste: flowback and residual solids

Will a synthetic liner be used in the pit? Yes ☑ No ☐ If so, what ml.? 60

Proposed Disposal Method For Treated Pit Wastes:

☐ Land Application
■ Underground Injection (UIC Permit Number 0014, 8462, 4037)
■ Reuse (at API Number Various)
■ Off Site Disposal (Supply form WW-9 for disposal location)
☐ Other (Explain)

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Will closed loop system be used? If so, describe: Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud

Additives to be used in drilling medium? See Attached

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor

Subscribed and sworn before me this 11 day of May 20 16

Rebecca L Wanstreet Notary Public

My commission expires 4-7-20

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OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330
My commission expires April 07, 2020

WW-9 Attachment

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

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- Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

- Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

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Form WW-9

Operator's Well No. 516601

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed no additional Prevegetation pH 6.3

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

4709502358

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach:
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

Comments:

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Title: Oil + Gas Inspector Date: 5-13-16

Field Reviewed? (✓) Yes ( ) No

Form WW-9

W.H. ASH ET AL LEASE WEU4 WELLS

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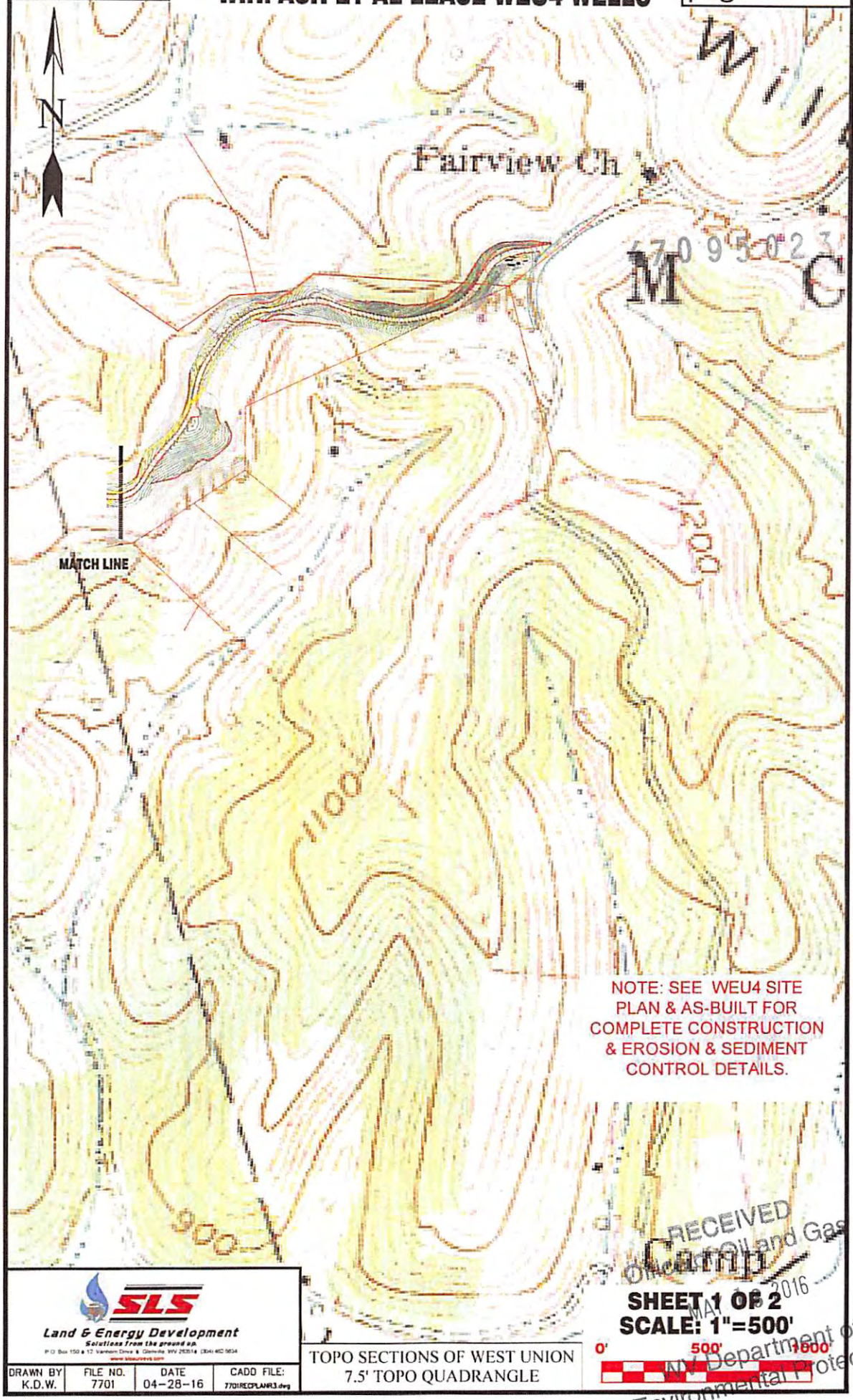

NOTE: SEE WEU4 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.

SLS
Land & Energy Development
Solutions from the ground up.

DRAWN BY	FILE NO.	DATE	CADD FILE:
K.D.W.	7701	04-28-16	7701RECPLAN#3.dwg

TOPO SECTIONS OF WEST UNION 7.5' TOPO QUADRANGLE

SHEET 1 OF 2
SCALE: 1"=500'

0' 500' 1000'

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Form WW-9

W.H. ASH ET AL LEASE WEU4 WELLS

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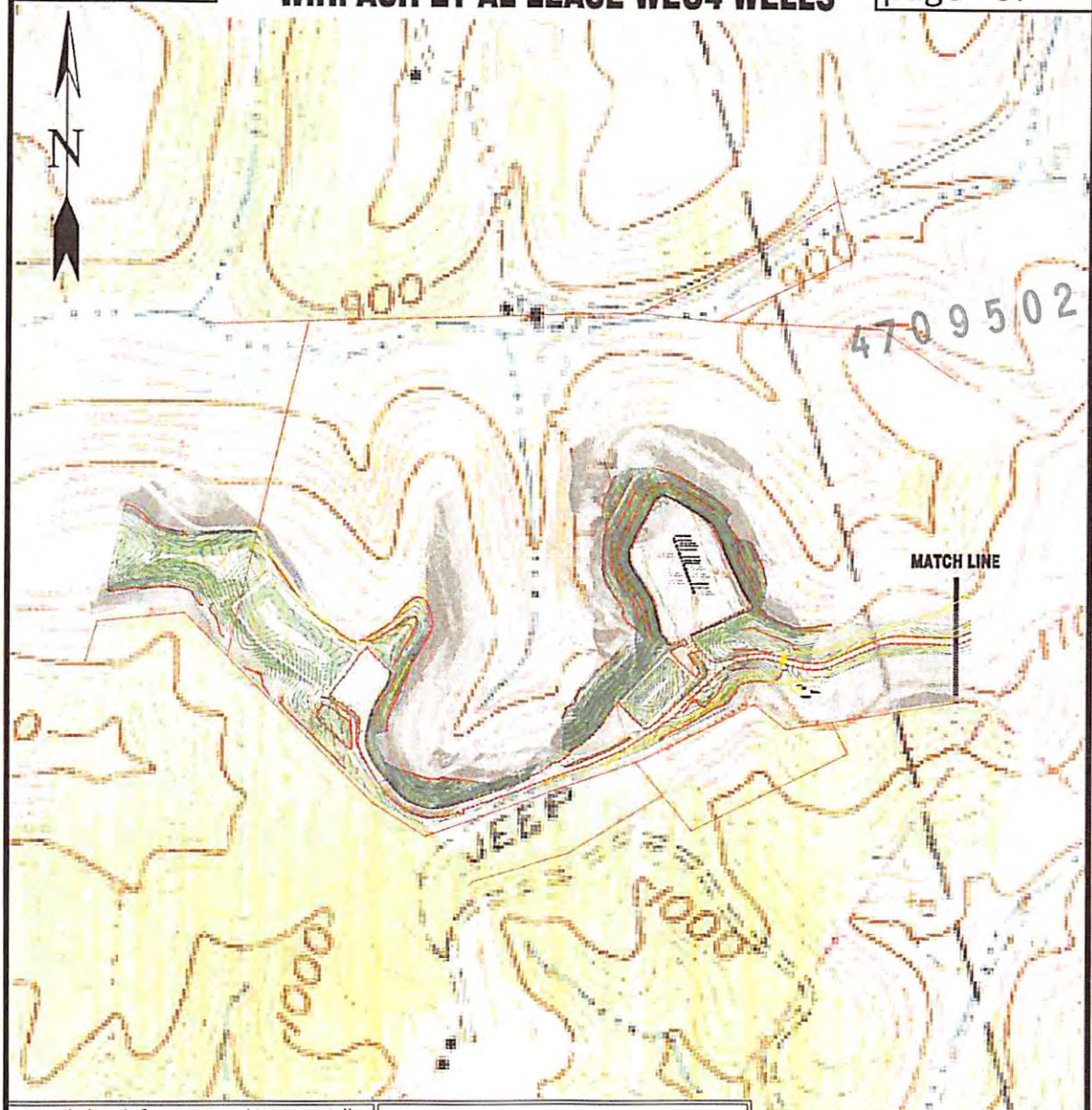

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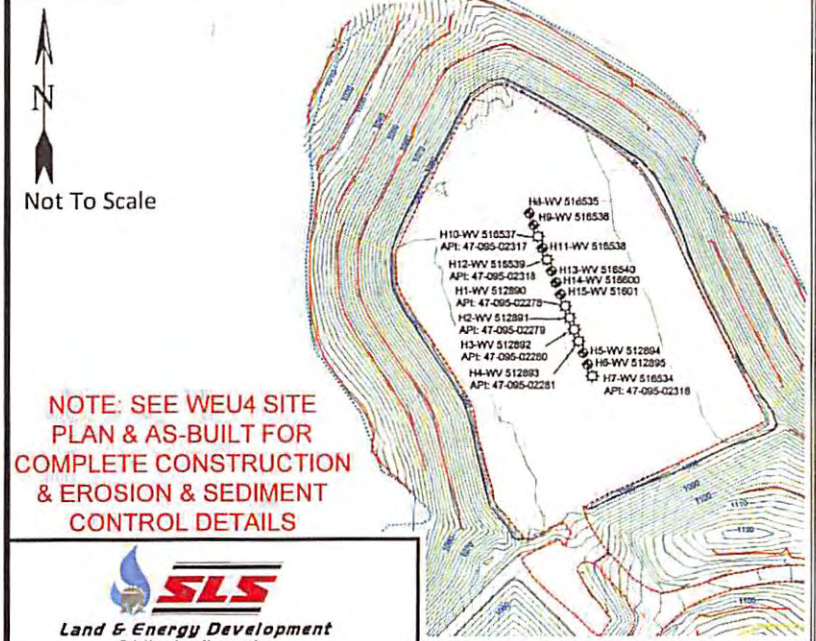
Detail Sketch for Proposed WEU4 Wells



NOTE: SEE WEU4 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS

NOTE: SEE WEU4 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.

SLS

Land & Energy Development

Solutions from the ground up.

P.O. Box 150 ▮ 12 Vanhorn Drive ▮ Glenville, WV 26351 ▮ (304) 462-5634

www.slsdivers.com

DRAWN BY	FILE NO.	DATE	CADD FILE:
K.D.W.	7701	04-28-16	7701RECPLAN3.dwg

TOPO SECTIONS OF WEST UNION 7.5' TOPO QUADRANGLE

SHEET 2 OF 2

SCALE: 1"=500'

0' 500' 1000'

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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

4709502359

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

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

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

TRI COUNTY WASTE WATER MANAGEMENT, INC.
1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County/Waynesburg
Permit # TC-1009

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

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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

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5-13-16

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west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
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Earl Ray Tomblin, Governor
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dep.wv.gov

47 095 02356

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 by CCS

James Peterson
Environmental Resources Specialist / Permitting

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601 57th Street, SE
Charleston, WV 25304
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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.

4709502356

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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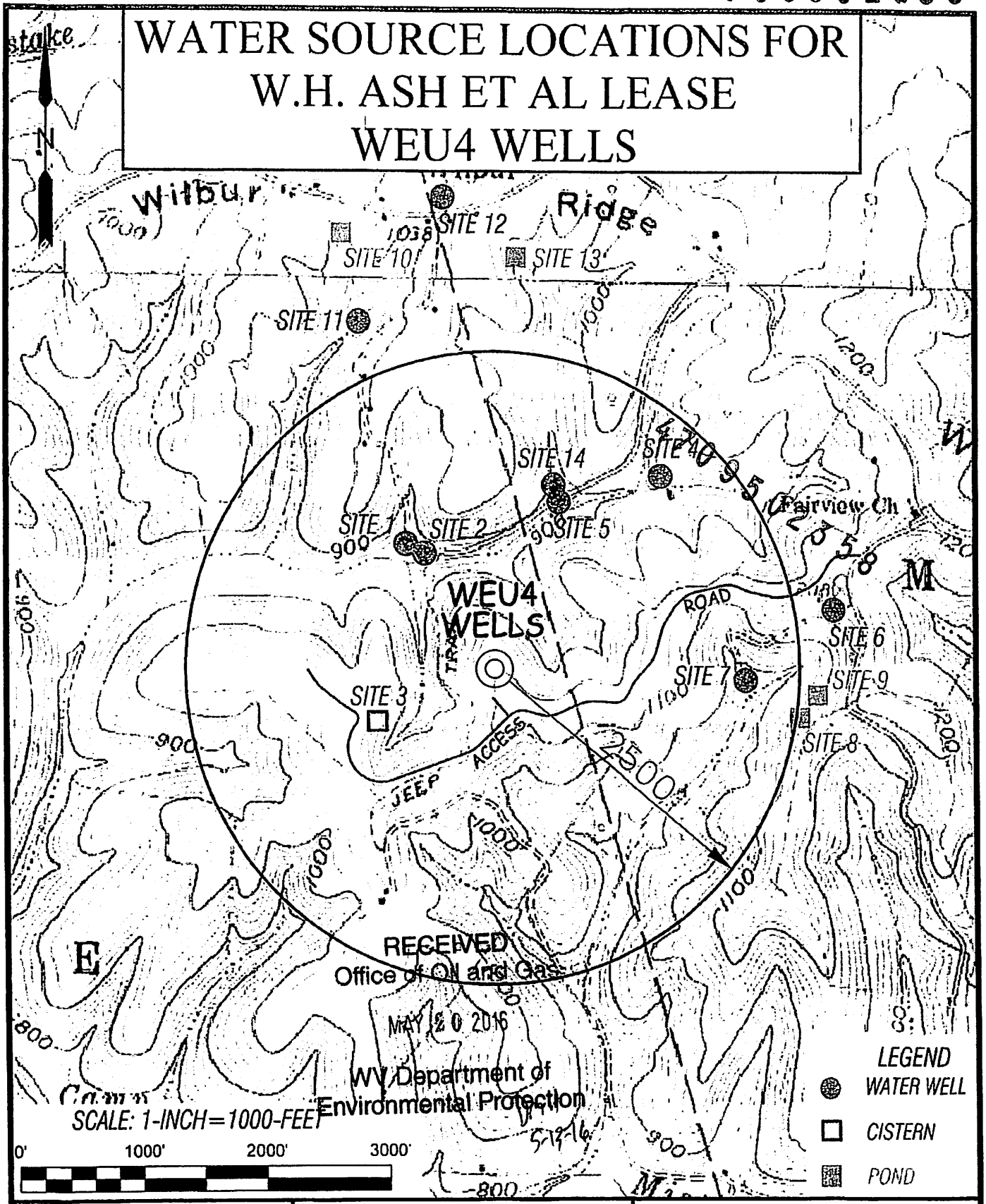
Environmental Protection

4709502358

WATER SOURCE LOCATIONS FOR W.H. ASH ET AL LEASE WEU4 WELLS



Professional Energy Consultants SLS Surveyors Engineers Environmental Project Mgmt.	TOPO SECTION OF: WEST UNION, WV 7.5' QUAD		OPERATOR: EQT PRODUCTION COMPANY 115 PROFESIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330
	DISTRICT	COUNTY	TAX MAP-PARCEL NO.
DRAWN BY: K.D.W. / FILE NO.: 7701 / DATE: 05/11/16 / CADD FILE: 7701WSWEU4-R.dwg	CENTERVILLE	TYLER	16-22

Anticipated Frac Additives

Chemical Names and CAS numbers

Material	Ingredient	CAS Number
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

DMH
5-13-16

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EQT

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Site Specific Safety Plan

EQT WEU 4 Pad

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MAY 20 2016
WV Department of
Environmental Protection

Alma

Tyler County, WV

For Wells:

4709502358

Date Prepared: February 3, 2016

EQT Production

Permitting Supervisor
Title

5-10-16
Date

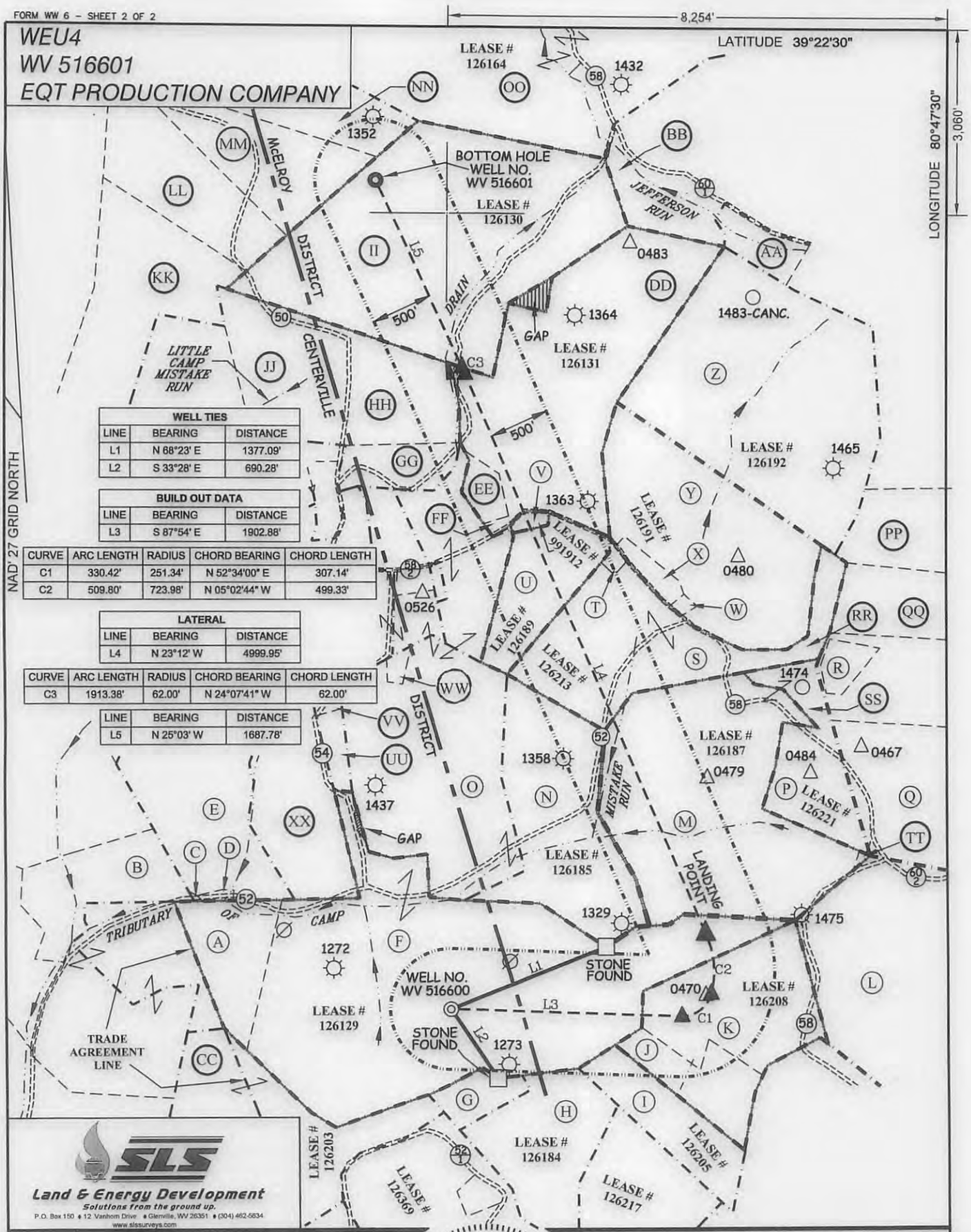
WV Oil and Gas Inspector

Oil + Gas Inspector
Title

5-13-16
Date

FORM WW 6 - SHEET 2 OF 2

WEU4
WV 516601
EQT PRODUCTION COMPANY



WELL TIES		
LINE	BEARING	DISTANCE
L1	N 68°23' E	1377.09'
L2	S 33°28' E	690.28'

BUILD OUT DATA		
LINE	BEARING	DISTANCE
L3	S 87°54' E	1902.88'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	330.42'	251.34'	N 52°34'00" E	307.14'
C2	509.80'	723.98'	N 05°02'44" W	499.33'

LATERAL		
LINE	BEARING	DISTANCE
L4	N 23°12' W	4999.95'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C3	1913.38'	62.00'	N 24°07'41" W	62.00'

LATERAL		
LINE	BEARING	DISTANCE
L5	N 25°03' W	1687.78'

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www.slssurveys.com

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 318,378.30	E. 1,626,569.47
NAD'27 GEO.	LAT-(N) 39.366599	LONG-(W) 80.820860
NAD'83 UTM (M)	N. 4,357,484.16	E. 515,446.48
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 318,992.87	E. 1,628,671.06
NAD'27 GEO.	LAT-(N) 39.368371	LONG-(W) 80.813460
NAD'83 UTM (M)	N. 4,357,682.09	E. 516,083.61
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 325,174.16	E. 1,625,961.52
NAD'27 GEO.	LAT-(N) 39.385231	LONG-(W) 80.823365
NAD'83 UTM (M)	N. 4,359,551.44	E. 515,226.72

VICTOR MOYERS
LICENSED
No. 849
STATE OF
WEST VIRGINIA
PROFESSIONAL SURVEYOR
C.V. Moyers 4-28-16

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- FENCE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- PLUGGED WELL
- STORAGE WELL
- CENTERVILLE DISTRICT TAX MAP-PARCEL C-00-00
- McELROY DISTRICT TAX MAP-PARCEL M-00-00

SCALE 1" = 1000'

DATE SEPTEMBER 03 , 20 15

REVISED APRIL 28 , 20 16

OPERATORS WELL NO. WV 516601

API WELL NO. 47 — 095 — 02358 H6A
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DIVISION OF
ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

COUNTY NAME

PERMIT

WELL OPERATOR EQT PRODUCTION COMPANY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

DESIGNATED AGENT REX C. RAY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

SLS
134568

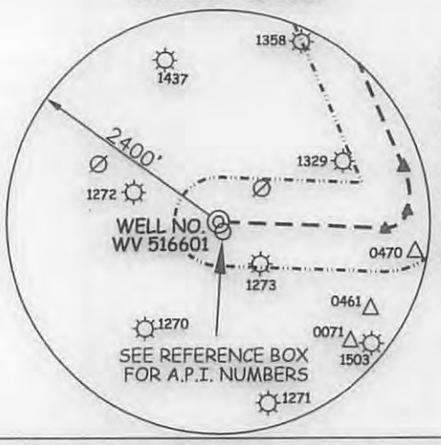
WEU4
WV 516601
EQT PRODUCTION COMPANY

8,254'

LATITUDE 39°22'30"

LONGITUDE 80°47'30"

3,000'



A	RICHARD & YVONNE METCALF	61.57 AC.±	TM C-16-17
B	JOHN ANDERS II	19.75 AC.±	TM C-16-21.1
C	JOHN ANDERS II	0.09 AC.±	TM C-16-14.2
D	RICHARD & YVONNE METCALF	0.61 AC.±	TM C-16-14.1
E	CONRAD COSTILOW	46.17 AC.±	TM C-16-14
F	DONNA PETER	113.4 AC.±	TM C-16-22
G	PAUL WEEKLY (LIFE)	5 AC.±	TM C-16-28
H	PAUL WEEKLY (LIFE)	18 AC.±	TM C-16-27
I	EDWARD & CAROLYN WHITE	16 AC.±	TM M-21-40
J	EDWARD & CAROLYN WHITE	12.50 AC.±	TM M-21-39
K	EDWARD & CAROLYN WHITE	40 AC.±	TM M-21-38
L	ASIA CUMBERLEDGE	75.75 AC.±	TM M-21-32
M	BRUCE & SANDRA STONEKING	69.44 AC.±	TM M-21-28
N	BRUCE & SANDRA STONEKING	42.86 AC.±	TM M-21-29
O	ELIZABETH ABRUZZINO	109.94 AC.±	TM C-16-10
P	GARY DAVENPORT	16 AC.±	TM M-21-25
Q	PEGGY WHITE	45.88 AC.±	TM M-21-23
R	ROGER FERGUSON	3.053 AC.±	TM M-21-17.1
S	BOBBY & RITA DOLL	49 AC.±	TM M-21-11
T	GAMALIEL REYES ET AL	0.58 AC.±	TM M-21-10
U	PERRY HAUGHT JR.	16.21 AC.±	TM M-21-08
V	BILLY JO DOLL	0.58 AC.±	TM M-21-9.1
W	LESTER HAUGHT	0.25 AC.±	TM M-21-12
X	PERRY HAUGHT JR.	2.48 AC.±	TM M-21-13.1
Y	DONNIE & KIM WILMOTH	52.52 AC.±	TM M-21-13
Z	DONNIE & KIM WILMOTH	73.39 AC.±	TM M-21-14
AA	BARBARA WILLIER	5.90 AC.±	TM M-18-21
BB	BARBARA WILLIER	14 AC.±	TM M-18-22.1
CC	CHRIS BAUM ET AL	56.84 AC.±	TM C-16-23
DD	DONNIE & KIM WILMOTH	63.29 AC.±	TM M-21-09
EE	KATHLEEN WINKELMAN	2.59 AC.±	TM M-21-9.2
FF	RANDY & CHARLEEN BYRD	0.88 AC.±	TM M-21-07
GG	CHRIS BAUM ET AL	13 AC.±	TM M-21-03
HH	CHRIS BAUM ET AL	14 AC.±	TM M-21-02
II	JAMES MEANS	90 AC.±	TM M-18-24
JJ	CHRIS BAUM ET AL	24 AC.±	TM M-21-01
KK	WILLIAM & MARY DANIELS	45.86 AC.±	TM C-13-07
LL	PAUL DOLVIN	21.66 AC.±	TM C-13-06
MM	CHRIS BAUM ET AL	22.31 AC.±	TM C-13-05
NN	CHRIS BAUM ET AL	28 AC.±	TM C-13-5.1
OO	CLYDE SECKMAN ESTATE	111.75 AC.±	TM M-18-23
PP	PAUL WEEKLY (LIFE)	36 AC.±	TM M-21-15
QQ	PAUL WEEKLY (LIFE)	36 AC.±	TM M-21-16
RR	DONNIE & KIM WILMOTH	7.50 AC.±	TM M-21-27
SS	PEGGY WHITE	5 AC.±	TM M-21-26
TT	TRUSTEES OF FAIRVIEW CHURCH	1 AC.±	TM M-21-24
UU	MARK & JOEL PROSSER	2.50 AC.±	TM C-16-15
VV	MARK & JOEL PROSSER	0.50 AC.±	TM C-16-12
WW	RUTH & OLIN DOLL	1 AC.±	TM M-21-31
XX	DAVID WOLFE	24.84 AC.±	TM C-16-16

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 318,378.30	E. 1,626,569.47
NAD'27 GEO.	LAT-(N) 39.366599	LONG-(W) 80.820860
NAD'83 UTM (M)	N. 4,357,484.16	E. 515,446.48
	LANDING POINT	
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NAD'83 UTM (M)	N. 4,357,682.09	E. 516,083.61
	BOTTOM HOLE	
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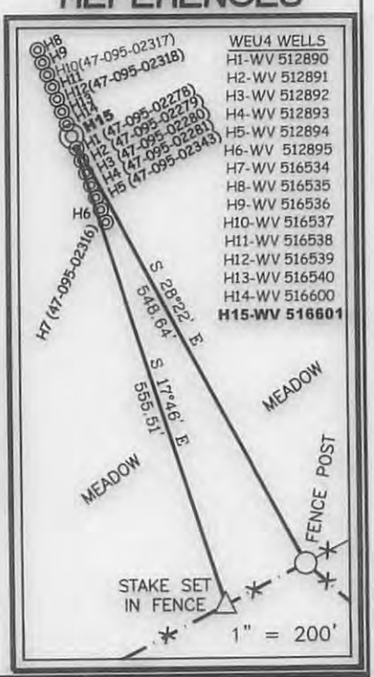
NAD'83 UTM (M)	N. 4,359,551.44	E. 515,226.72

REFERENCES



ROYALTY OWNERS		
ROXIE DAVIS ET AL	53 AC.±	LEASE NO. 126208
JERRY RAY BROWN ET AL	76 AC.±	LEASE NO. 126187
BRC APPALACHIAN MINERALS, LLC ET AL	55 AC.±	LEASE NO. 126213
PERRY J. HAUGHT JR.	16 AC.±	LEASE NO. 126189
BILLY JO DOLL	0.58 AC.±	LEASE NO. 991912
CNX GAS COMPANY	66 AC.±	LEASE NO. 126131
GEORGE BIRKLEIN ET AL	90 AC.±	LEASE NO. 126130

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NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.

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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 849 C. Victor Moyers

C. VICTOR MOYERS LICENSED No. 849 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE SEPTEMBER 03 , 20 15

REVISED APRIL 28 , 20 16

OPERATORS WELL NO. WV 516601

API WELL NO. 47 — 095 — 02358 H6A
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 7701P516601R

SCALE SEE NOTE 2

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION :

PAD ELEVATION 1,079' WATERSHED TRIBUTARY OF CAMP MISTAKE RUN

DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5'

SURFACE OWNER DONNA J. PETER ACREAGE 113.40±

ROYALTY OWNER WACO OIL & GAS CO. INC. ET AL ACREAGE 152±

LEASE NO. 126129

PROPOSED WORK :

DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___

PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION MARCELLUS

ESTIMATED DEPTH 6,6[illegible]0

COUNTY NAME

PERMIT

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

SLS

134568

WW-6A1
(5/13)

Operator's Well No. 516601

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
See Attached				

4709502350

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

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Environmental Protection

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: Victoria Roark
Its: Permitting Supervisor

WW-6A1 attachment Operator's Well No. 516601

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
126129	**Waco Oil & Gas Co. Inc., et al (current royalty owner)**		***	
	Willam H. Ash, et ux, et al (original lessor)	Equitable Gas Company		LB191/321
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans, Inc.	Equitrans, LP		DB 433/777
	Equitrans, LP	EQT Production Company		DB 396/640
	Equitrans, LP	EQT Production Company		OG 440/107
126208	**Roxie Davis, et al (current royalty owner)**		***	
	Lucy Davis, et al. (original lessor)	Equitable Gas Company		DB 197/551
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777
	Equitrans, L.P.	EQT Production Company		DB 396/640
126187	**Jerry Ray Brown, et al (current royalty owner)**		***	
	Addie Keys, et al (original lessor)	Equitable Gas Company		DB 195/475
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777
	Equitrans, L.P.	EQT Production Company		DB 396/640
	Formations below the base of the Fifth Sand			
126213	**BRC Appalachian Minerals I LLC, et al (current royalty owner)**		***	
	Carrie Robinson & J.B. Robinson (original lessor)	Hope Natural Gas Company		DB 70/483
	Hope Natural Gas Company	Consolidated Gas Supply Corporation		DB 169/225
	Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation		DB 249/287
	Consolidated Gas Transmission Corporation	CNG Development Company		DB 253/57
	CNG Development Company	Dominion Exploration & Production, Inc		name change (filed with secretary of state May 10, 2000)
	Dominion Exploration & Production, Inc	CNX Gas Company LLC		384/191 name change
	CNX Gas Company LLC	EQT Production Company		525/244
126189	**Perry J. Haught, Jr. (current royalty owner)**		***	
	Lawrence E. Keys, et ux (original lessor)	Equitable Gas Company		DB 195/479
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777
	Equitrans, L.P.	EQT Production Company		DB 396/640
991912	**Billy Jo Doll (current royalty owner)**		min pd 1/8th	
	Billy Jo Doll (original lessor)	EQT Production Company		DB 402/337
126131	**CNX Gas Company, LLC (current royalty owner)**		***	
	Walton E. Smith, Jr., et ux (original lessor)	Equitable Gas Company		DB 211/555
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777
	Equitrans, L.P.	EQT Production Company		DB 396/640
126130	**George Berklein, et al (current royalty owner)**		***	
	Donald Underwood, et al. (original lessor)	Equitable Gas Company		DB 191/313
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777
	Equitrans, L.P.	EQT Production Company		DB 396/640

*** We will pay one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducing the amount to be paid to or set aside for the owner of the oil or gas in place, on all such oil or gas to be extracted, produced, or marketed from the well..

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Office of Oil and Gas
MAY 13 2016
WV Department of Environmental Protection
4705102358

April 28, 2016

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

4709502350

Re: WEU4 well pad, well number 516601
Centerville District, Tyler County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. 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.

Sincerely,

Vicki Roark
Permitting Supervisor-WV

RECEIVED
Office of Oil and Gas
MAY 13 2016
WV Department of
Environmental Protection

EQT Production 115 Professional Place I P.O. Box 280 I Bridgeport, WV 26330
T 304.848.0000 I F 304.848.0040 I www.eqt.com

WW-6AC
(1/12)

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

Date of Notice Certification: 5/11/16

API No. 47- 95 - 4709502355
Operator's Well No. 516601
Well Pad Name: WEU4

Notice has been given:
Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	West Virginia	UTM NAD 83 Easting:	515443.06
County:	Tyler	Northing:	4357484.162
District:	Centerville	Public Road Access:	WV-18
Quadrangle:	West Union	Generally used farm name:	Donna J. Peter
Watershed:	Tributary of Camp Mistake Run		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY	OOG OFFICE USE ONLY
☐ 1. NOTICE OF SEISMIC ACTIVITY or ☒ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/ NOT REQUIRED
☐ 2. NOTICE OF ENTRY FOR PLAT SURVEY or ☒ NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
☒ 3. NOTICE OF INTENT TO DRILL or ☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	☐ RECEIVED/ NOT REQUIRED
☒ 4. NOTICE OF PLANNED OPERATION	☐ RECEIVED
☒ 5. PUBLIC NOTICE	☐ RECEIVED
☒ 6. NOTICE OF APPLICATION	☐ RECEIVED

Required Attachments:
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

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Environmental Protection

WW-6AC
(1/12)

Certification of Notice is hereby given:

4709502358

THEREFORE, I _____, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	EQT Production Company	Address:	115 Professional Place PO Box 280
By:	Victoria Roark		Bridgeport WV 26330
Its:	Permitting Supervisor	Facsimile:	304-848-0041
Telephone:	304-848-0076	Email:	vroark@eqt.com

NOTARY SEAL
OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330
My commission expires April 07, 2020

Subscribed and sworn before me this 11 day of May 2016.

Rebecca L Wanstreet Notary Public

My Commission Expires 4-7-20

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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WW-6A
(9-13)

API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 5/11/16 **Date Permit Application Filed:** 5/11/16

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Notice of:

☑ PERMIT FOR ANY WELL WORK

☐ CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

☐ PERSONAL SERVICE

☐ REGISTERED MAIL

☑ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to:

☑ SURFACE OWNER(s)
Name: See Attached
Address: _____

Name: _____
Address: _____

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: See Attached
Address: _____

Name: _____
Address: _____

☑ SURFACE OWNER(s) (Impoundments or Pits)
Name: See Attached
Address: _____

☑ COAL OWNER OR LESSEE
Name: See Attached
Address: _____

☐ COAL OPERATOR
Name: _____
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See Attached
Address: _____

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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Surface Owners:

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

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Surface Owners(road or other disturbance):

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

L. Bruce and Sandra Jean Stoneking
RR1 Box 304-BB
Elkins WV 26241

4709502358

James B. and Brenda J. Stoneking
2 Deerhaven Drive
Wheeling WV 26241

Diane L. Morgan and Glenn W. Morgan
590 Isner Creek Road
Elkins WV 26241

Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330

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Surface Owners(Pits or impoundments):

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330

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Coal Owner

Rosemary Brandon
3913Delaware Avenue
Kenner, LA 70065

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Owners of Water Wells

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

Bruce Stoneking
R.D. 1 Box BB
Elkins WV 26241

Frank and Elizabeth Abruzzino
91 Springhill Chapel Road
Clarksburg, WV 26301

4709502355

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WW-6A
(8-13)

API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:
Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions
Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:
Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

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Water Testing Laboratories:
Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:
Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

WW-6A
(8-13)

API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

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Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

(1) The proposed well work will constitute a hazard to the safety of persons;
(2) The plan for soil erosion and sediment control is not adequate or effective;
(3) Damage would occur to publicly owned lands or resources; or
(4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WW-6A
(8-13)

API NO. 47- 95 -
OPERATOR WELL NO. 516601
Well Pad Name: WEU4

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330
My commission expires April 07, 2020

Subscribed and sworn before me this 11 day of May 2016.

Rebecca L Wanstreet Notary Public

My Commission Expires 4-7-20

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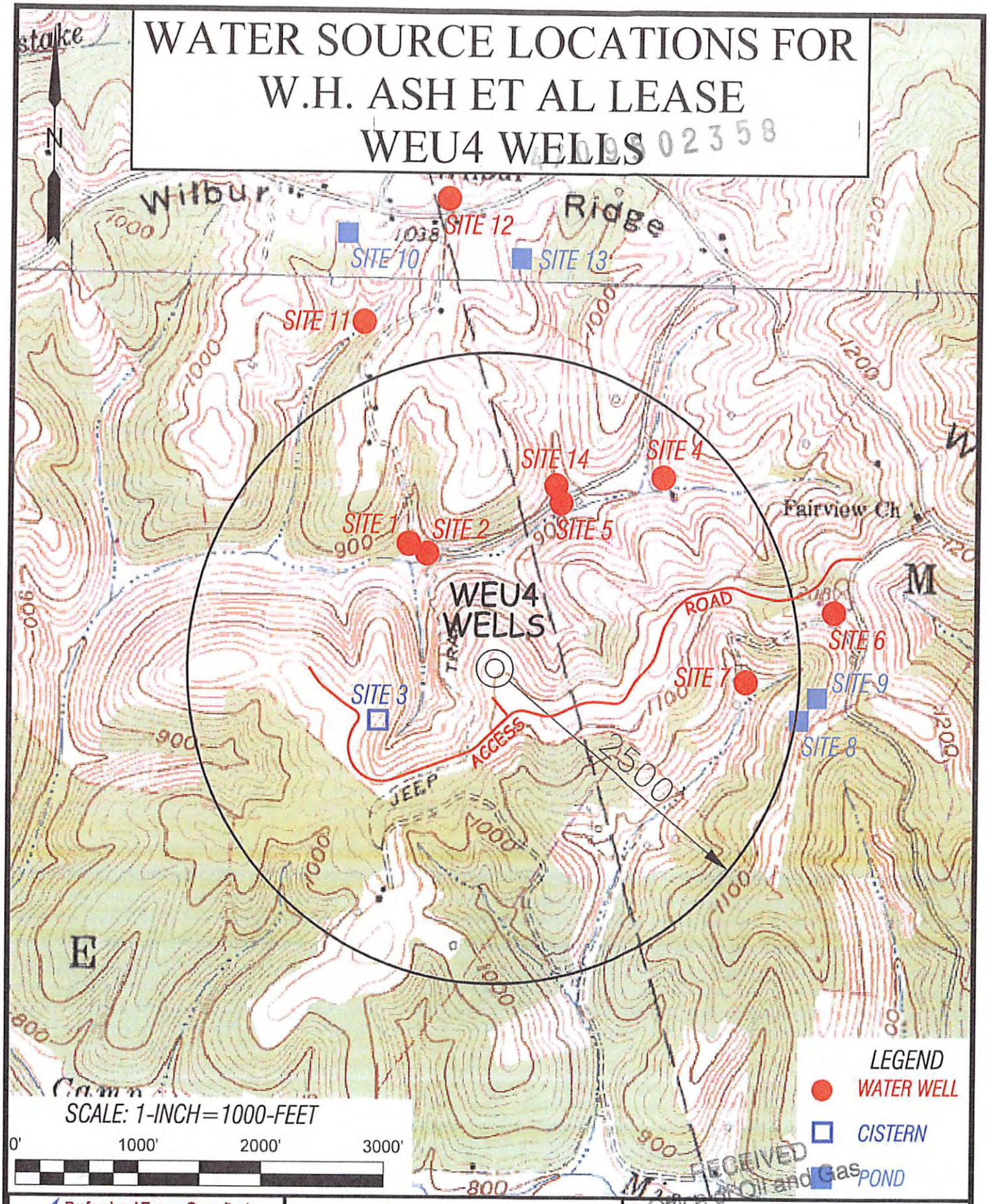
WATER SOURCE LOCATIONS FOR W.H. ASH ET AL LEASE WEU4 WELLS



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Professional Energy Consultants	TOPO SECTION OF:	OPERATOR:
A DIVISION OF SMITH LAND SURVEYING, INC SLS SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT. (304) 462-5634 WWW.SLSSURVEYS.COM	WEST UNION, WV 7.5' QUAD	EQT PRODUCTION COMPANY 115 PROFESIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

DRAWN BY	FILE NO.	DATE	CADD FILE:
K.D.W.	7701	05/11/16	7701WSWEU4-R.dwg

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
CENTERVILLE	TYLER	16-22

WW-6A4
(1/12)

Operator Well No. 516601

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.
Date of Notice: 04/09/2016 **Date Permit Application Filed:** 04/19/2016

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

☐ HAND DELIVERY ☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED

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Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided,* That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however,* That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: See Attached
Address:

Name: See Attached
Address:

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	West Virginia	UTM NAD 83 Easting:	515443.06
County:	Tyler	Northing:	4357484.162
District:	Centerville	Public Road Access:	WV-18
Quadrangle:	West Union	Generally used farm name:	Donna J. Peter
Watershed:	Tributary of Camp Mistake Run		

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator:	EQT Production Company	Authorized Representative:	Victoria Roark
Address:	115 Professional Place PO Box 280	Address:	115 Professional Place PO Box 280
	Bridgeport WV 26330		Bridgeport WV 26330
Telephone:	304-848-0076	Telephone:	304-848-0076
Email:	vroark@eqt.com	Email:	vroark@eqt.com
Facsimile:	304-848-0041	Facsimile:	304-848-0041

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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Surface Owners:

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

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Surface Owners(road or other disturbance):

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

L. Bruce and Sandra Jean Stoneking
RR1 Box 304-BB
Elkins WV 26241

James B. and Brenda J. Stoneking
2 Deerhaven Drive
Wheeling WV 26241

Diane L. Morgan and Glenn W. Morgan
590 Isner Creek Road
Elkins WV 26241

Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330

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Return Receipt (hardcopy)
Return Receipt (electronic)
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Adult Signature Required
Adult Signature Restricted Delivery
Postage
Postmark Here

Donna J Peter
733 Ridge Rd
Wilbur WV 26320
WEU4 H14/15 Notice of Intent

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Return Receipt (hardcopy)
Return Receipt (electronic)
Certified Mail Restricted Delivery
Adult Signature Required
Adult Signature Restricted Delivery
Postage
Postmark Here

L. Bruce and
Sandra Jean Stoneking
RR1 Box 304-BB
Elkins WV 26241
WEU4 H14/15 Notice of Intent

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James B. and
Brenda J. Stoneking
2 Deerhaven Drive
Wheeling WV 26241
WEU4 H14/15 Notice of Intent

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Diane L. Morgan and
Glenn W. Morgan
590 Isner Creek Road
Elkins WV 26241

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Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330
WEU4 H14/15 Notice of Intent

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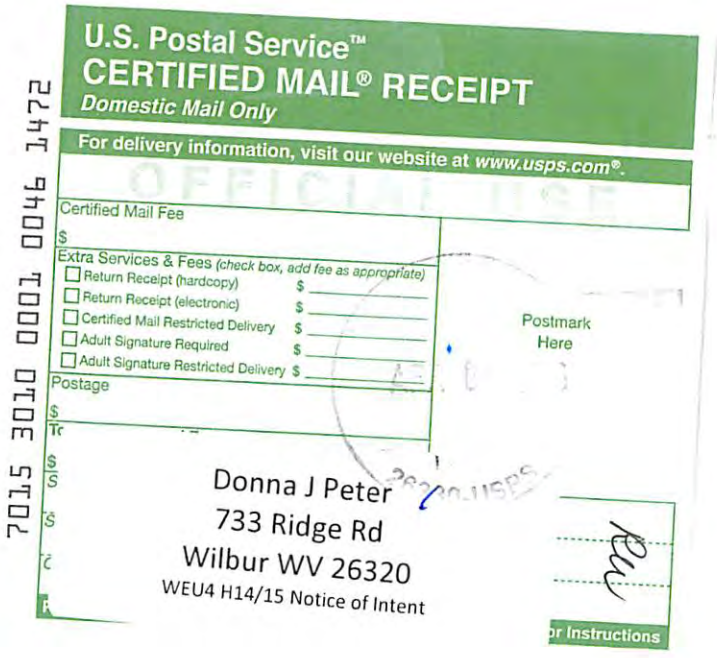
MAY 13 2016
WV Department of
Environmental Protection

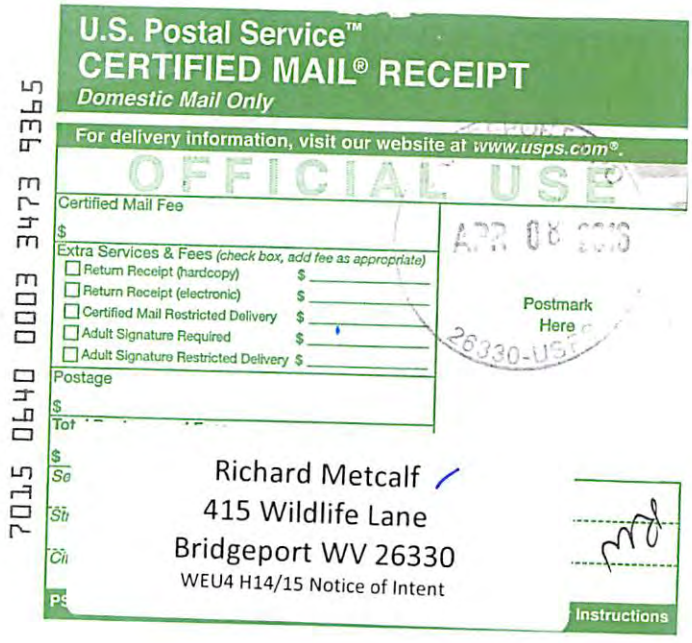
Surface Owners(Pits or impoundments):

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330

4709502355





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MAY 13 2016
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. 516601

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 5/11/16 **Date Permit Application Filed:** 5/11/16

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: See Attached
Address:

Name: See Attached
Address:

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	West Virginia	UTM NAD 83 Easting:	515443.06
County:	Tyler	Northing:	4357484.162
District:	Centerville	Public Road Access:	WV-18
Quadrangle:	West Union	Generally used farm name:	Donna J. Peter
Watershed:	Tributary of Camp Mistake Run		

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator:	EQT Production Company	Address:	115 Professional Place PO Box 280
Telephone:	304-848-0076		Bridgeport WV 26330
Email:	vroark@eqt.com	Facsimile:	304-848-0041

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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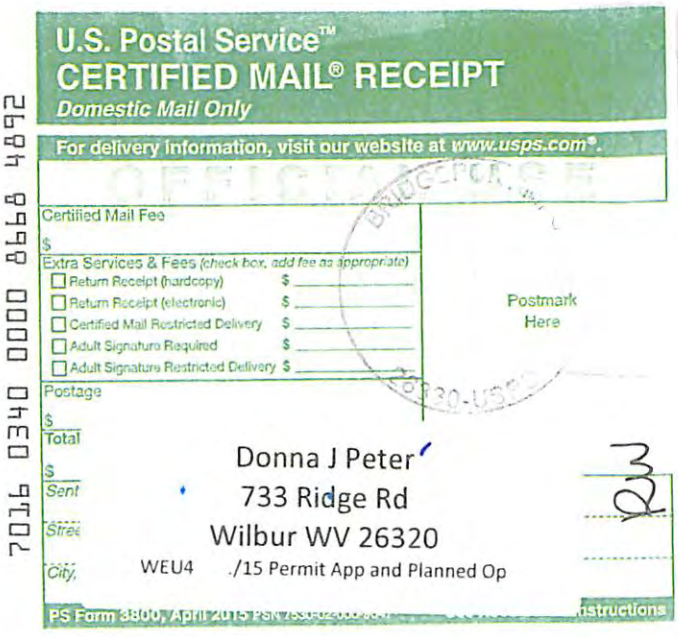
Surface Owners:

Donna J Peter
733 Ridge Rd
Wilbur WV 26320



7016 0340 0000 8668 4892

4709502358

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Environmental Protection

Surface Owners(road or other disturbance):

Donna J Peter
733 Ridge Rd
Wilbur WV 26320

L. Bruce and Sandra Jean Stoneking
RR1 Box 304-BB
Elkins WV 26241

James B. and Brenda J. Stoneking
2 Deerhaven Drive
Wheeling WV 26241

Diane L. Morgan and Glenn W. Morgan
590 Isner Creek Road
Elkins WV 26241

Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330

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Donna J Peter
733 Ridge Rd
Wilbur WV 26320
WEU4 ./15 Permit App and Planned Op
PS Form 3800, April 2015

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L. Bruce and
Sandra Jean Stoneking
RR1 Box 304-BB
Elkins WV 26241
WEU4 I 15 Permit App and Planned Op
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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7016 0340 0000 8668 4861
James B. and
Brenda J. Stoneking
2 Deerhaven Drive
Wheeling WV 26241
WEU4 H /15 Permit App Planned
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Diane L. Morgan and
Glenn W. Morgan
590 Isner Creek Road
Elkins WV 26241
WEU4 15 Permit App and Planned Op

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Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330
WEU4 H /15 Permit App and Planned Op
PS Form

Surface Owners(Pits or impoundments):

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733 Ridge Rd
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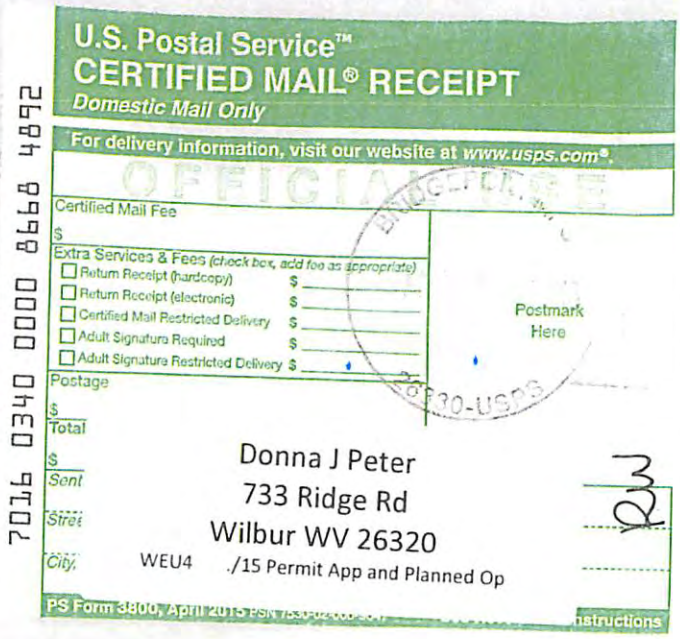
Richard Metcalf
415 Wildlife Lane
Bridgeport WV 26330

4709502350



RECEIVED
Office of Oil and Gas
MAY 13 2016
WV Department of
Environmental Protection

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

Revised September 4, 2015

7095023 58

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the WEU 4 Well Pad, Tyler County

512890 WEU4H1	512891 WEU4H2	512892 WEU4H3
512893 WEU4H4	512894 WEU4H5	512895 WEU4H6
516534 WEU4H7	516535 WEU4H8	516536 WEU4H9
516537 WEU4H10	516538 WEU4H11	516539 WEU4H12
516540 WEU4H13	516600 WEU4H14	516601 WEU4H15

Dear Mr. Martin,

This well site will be accessed from DOH Permit #06-2015-0241 issued to EQT Production Company for access to the State Road for a well site located off of Tyler County Route 58 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton

Gary K. Clayton P.E.
Regional Maintenance Engineer
Central Office Oil & Gas Coordinator

Cc: Nick Bumgardner
EQT Production Company
CH, OM, D-6
File

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MAY 13 2016
WV Department of
Environmental Protection

Anticipated Frac Additives

Chemical Names and CAS numbers

Material	Ingredient	CAS Number
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

4709502356

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WV Department of
Environmental Protection

RIG FOOTPRINT & FLOWBACK PIT NO. 1 LAYOUT

WEU4PROPOSED WELLS

H1-WV 512890, H2-WV 512891, H3-WV 512892, H4-WV 512893, H5-WV 512894, H6-WV 512895

NOTE:

1. ALL PROPOSED DRAINAGE CULVERTS AND DRAIN PIPES SHALL HAVE ADEQUATE OUTLET PROTECTION (RIP-RAP) AS SHOWN ON THESE PLANS.

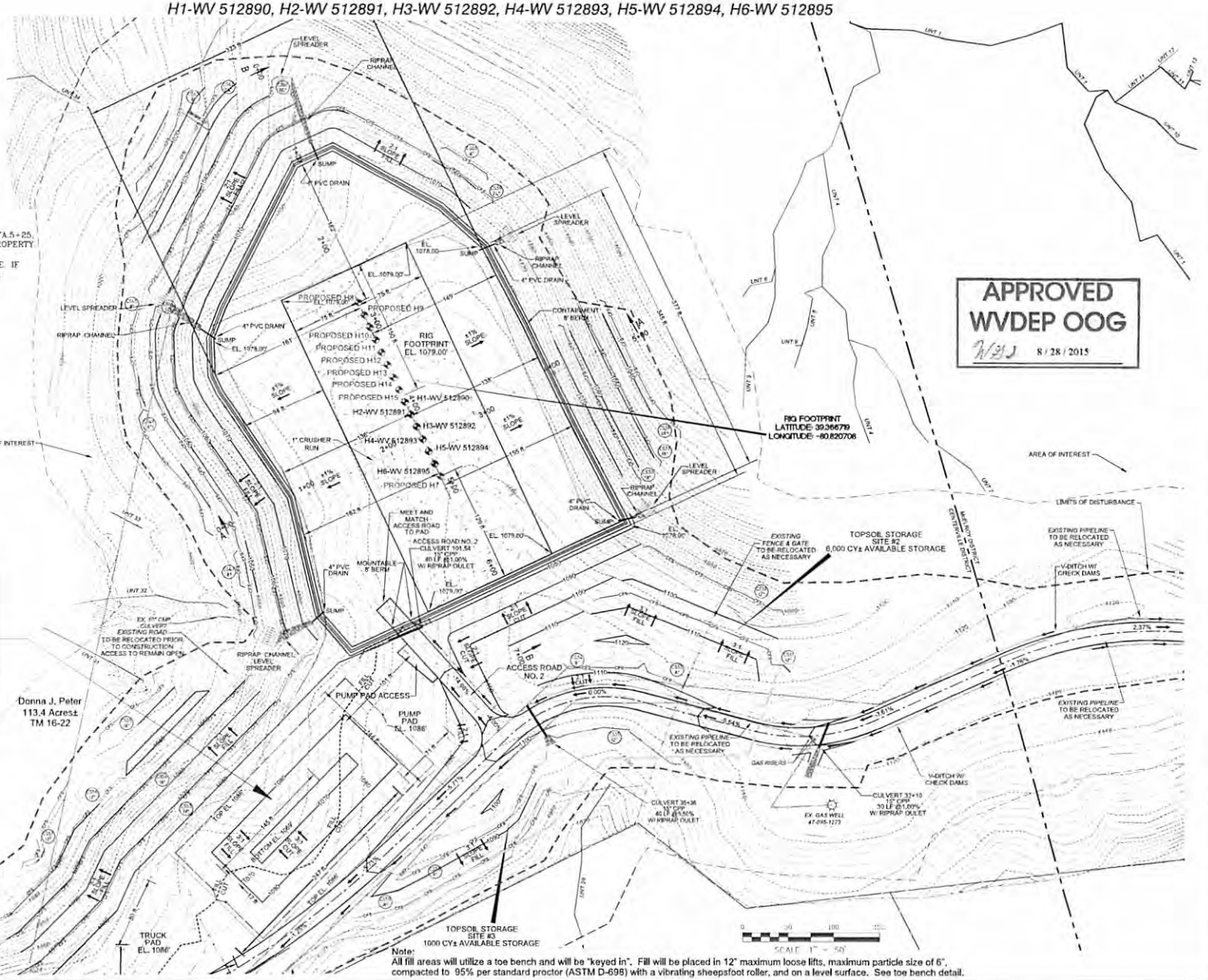
2. ALL FILL AREAS SHALL BE "KEYED IN" AND COMPACTED IN 12" LIFTS (9" RECOMMENDED) WITH A VIBRATING SHEEPSFOOT ROLLER TO 95% COMPACTION PER STANDARD PROCTER. MAXIMUM LIFTS FOR ROCK FILLS EQUAL 36"

3. ACCESS ROAD SURFACES TO BE PAVED WITH TWO 4" LIFTS OF #3-#6 LIMESTONE BENEATH 2" OF CRUSHER RUN LIMESTONE.

4. IN AREA OF ACCESS ROAD NO.1 STAT 2+00 THRU STA.5+25, ROADCUT IS STEEPER THAN 2:1 TO AVOID ADJACENT PROPERTY. A GEOLOGIST SHALL FIELD INVESTIGATE THE SITE TO DETERMINE IF SLOPE AS SHOWN 1.75:1 WILL BE STABILE. IF NOT, ROAD WILL REQUIRE RE-DESIGNED OR ADDITIONAL STABILIZATION METHODS UTILIZED.

5. RIG FOOTPRINT AND MANIFOLD PADS TO BE PAVED WITH TWO 4" LIFTS OF #3-#6 LIMESTONE BENEATH 2" OF CRUSHER RUN LIMESTONE.

FLOWBACK PIT	
LINER SYSTEM	- 60 MIL TEXTURED PRIMARY LINER - 10 OZ. FLEX LINER
TOTAL VOLUME = 5.135 AC FT 1.67 MILLION GALLONS	
STORAGE VOLUME = 3.911 AC FT 1.27 MILLION GALLONS	
WATER SURFACE ELEVATION = 1084 DEPTH 15.0 FT	
TOP OF BERM ELEVATION = 1086 DEPTH 17.0 FT	



APPROVED
WVDEP OOG
8 / 28 / 2015

Note:
All fill areas will utilize a toe bench and will be "keyed in". Fill will be placed in 12" maximum loose lifts, maximum particle size of 6", compacted to 95% per standard proctor (ASTM D-698) with a vibrating sheepsfoot roller, and on a level surface. See toe bench detail.

RK&K ENGINEERS
RUMMEL, KLEPPER & KAHL, LLP
242 NORTH TORNADO WAY, SUITE 1
KEYSER, WEST VIRGINIA 26726
T - 304.788.3370 F - 304.788.3377
www.rkk.com

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.
SLS SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT.
(304) 462-8634
WWW.SLSSURVEYS.COM

THIS DOCUMENT WAS PREPARED BY RK&K ENGINEERS FOR EQT PRODUCTION COMPANY

RIG FOOTPRINT & FLOWBACK PIT NO. 1
WEU4
McELROY DISTRICT
CENTERVILLE DISTRICT
TYLER COUNTY, WV

DATE: 04/29/2015
SCALE: 1" = 50'
DESIGNED BY: HWH
FILE NO. JOB
SHEET 9 OF 33
REV: 08/25/2015

WEU4 SITE PLAN
EQT PRODUCTION COMPANY

SITUATE ON THE WATERS OF CAMP MISTAKE RUN IN MCELROY AND CENTERVILLE DISTRICTS, TYLER COUNTY, WEST VIRGINIA

PROJECT INFORMATION

PROJECT NAME: WEU4

TAX PARCEL:
MCELROY AND CENTERVILLE DISTRICTS
TYLER COUNTY, WV
TAX MAP 16 PARCEL 22

SURFACE OWNER:
DONNA J. PETER
TOTAL PROPERTY AREA: 113.44± ACRES
TAX MAP 16 PARCEL 22

L.B. & SANDRA STONEKING
TOTAL PROPERTY AREA: 69.44± ACRES
TAX MAP 21 PARCEL 28

RICHARD & YVONNE METCALF
TOTAL PROPERTY AREA: 61.57± ACRES
TM 16-17

OIL AND GAS ROYALTY OWNER:
WACO OIL & GAS CO. INC. ET AL
WEST UNION DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA: 152 ± ACRES

SITE LOCATION:
THE WEU4 WELL SITE IS SITUATE ON THE WATERS OF CAMP MISTAKE RUN APPROXIMATELY 0.58 MILES WEST OF COUNTY ROUTE 58. THE ENTRANCE IS LOCATED APPROXIMATELY 0.30 MILES SOUTHWEST FROM THE INTERSECTION OF COUNTY ROUTE 62 AND COUNTY ROUTE 58.

LOCATION COORDINATES

WEU4 SITE ENTRANCE
LATITUDE: 39.369229 LONGITUDE: -80.810071 (NAD 83 NORTH)

WEU4 RIG FOOTPRINT
LATITUDE: 39.366719 LONGITUDE: -80.820708 (NAD 83 NORTH)

WEU4 PUMP PAD
LATITUDE: 39.365689 LONGITUDE: -80.820669 (NAD 83 NORTH)

WEU4 FLOWBACK PIT
LATITUDE: 39.365316 LONGITUDE: -80.821116 (NAD 83 NORTH)

WEU4 TRUCK PAD
LATITUDE: 39.364962 LONGITUDE: -80.821587 (NAD 83 NORTH)

WEU4 COMPLETION PIT MANIFOLD PAD
LATITUDE: 39.365408 LONGITUDE: -80.824945 (NAD 83 NORTH)

WEU4 COMPLETION PIT
LATITUDE: 39.365684 LONGITUDE: -80.825816 (NAD 83 NORTH)

SITE DISTURBANCE COMPUTATIONS

ACCESS ROAD NO. 1 & NO. 2 = 6.01± ACRES
STOCKPILE SITES 1-6 = 4.28± ACRES
RIG FOOTPRINT = 3.25 ACRES
MANIFOLD PAD & FLOWBACK PIT = 2.31± ACRES
COMPLETION PIT = 3.33± ACRES
TOTAL SITE DISTURBANCE = 19.18± ACRES

ENTRANCE PERMIT

EQT PRODUCTION COMPANY WILL OBTAIN AN ENTRANCE PERMIT (FORM MM-109) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

MISS UTILITY STATEMENT

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #132816253. IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT.

FLOODPLAIN NOTE

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN FEMA FLOOD ZONE X, PER THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 54095C0300C, DATED MAY 3, 2010.

ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PERFORMED ON APRIL 25-26, 2013 BY POTESTA AND ASSOCIATES, INC TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE MAY 29, 2013 REPORT PROJECT # 0101-11-147-15701 WAS PREPARED BY POTESTA AND ASSOCIATES, INC. SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

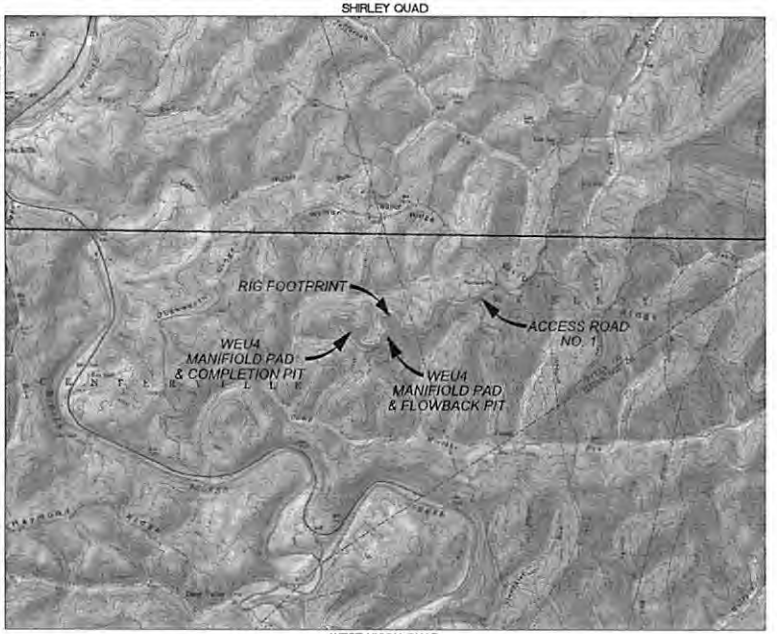
HORIZONTAL & VERTICAL CONTROL

COORDINATES AND ELEVATIONS USED FOR ALL LAYOUTS AND DESIGNS WERE BASED UPON MAPPING FURNISHED BY SMITH LAND SURVEYING.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two business days before you dig in the state of West Virginia.
IT'S THE LAW!!

GRID NORTH AND ELEVATIONS SHOWN HEREON ARE ESTABLISHED BY SURVEY GRADE GPS

SHIRLEY QUAD



WEST UNION QUAD

2000 0 2000
SCALE: 1" = 2000'

WEU-4 NAD 83 WELL LOCATIONS

WELL	WV	WELL STATUS	API	LAT	LON	NORTHING	EASTING
H1	512890	PROPOSED	47-095-02278	39.366643	80.820668	518599.60	1595153.70
H2	512891	PROPOSED	47-095-02279	39.366606	80.820668	518585.60	1595159.09
H3	512892	PROPOSED	47-095-02280	39.366566	80.820629	518571.40	1595164.48
H4	512893	PROPOSED	47-095-02281	39.366528	80.820604	518557.41	1595169.88
H5	512894	PROPOSED		39.366490	80.820589	518543.41	1595175.27
H6	512895	PROPOSED		39.366452	80.820569	518529.41	1595180.66
H7	516554	PROPOSED		39.366415	80.820549	518515.41	1595186.05
H8	516535	PROPOSED		39.366968	80.820827	518518.57	1595090.56
H9	516536	PROPOSED		39.366930	80.820807	518497.58	1595095.95
H10	516537	PROPOSED		39.366892	80.820787	518483.58	1595101.34
H11	516538	PROPOSED		39.366854	80.820767	518469.58	1595106.73
H12	516539	PROPOSED		39.366795	80.820747	518455.58	1595112.13
H13	516540	PROPOSED		39.366566	80.820629	518371.40	1595144.48
H14		PROPOSED		39.366719	80.820708	518427.59	1595122.91
H15		PROPOSED		39.366681	80.820688	518413.59	1595128.30

LIST OF DRAWINGS

1 - COVER SHEET
2 - NOTES
3 - OVERALL SHEET INDEX & VOLUMES
4 - EXISTING UTILITY PLAN
5-7 - ACCESS ROAD PLAN
9 - RIG FOOTPRINT DET
10-11 - FLOWBACK PIT NO. 1 SECTIONS
12-13 - FLOWBACK PIT NO. 2 SECTIONS
14 - TYPICAL SECTIONS
15 - ACCESS ROAD NO. 1 PROFILE
16-20 - ACCESS ROAD NO. 1 SECTIONS
21 - ACCESS ROAD NO. 1 SECTIONS & ACCESS ROAD NO. 2 PROFILE & SECTIONS
22 - ACCESS ROAD COORDINATE LAYOUT
23 - 24 TOPSOIL STORAGE AREAS PROFILES & SECTIONS
25 - SPOIL STORAGE AREA PROFILE & SECTIONS
26 - 29 - WEU4 RECLAMATION PLANS
30 - 33 - CONSTRUCTION DETAILS

APPROVED
WVDEP OOG
8/28/2015

DISTURBED AREA BY PROPERTY OWNER	
PROPERTY OWNER	DISTURBED AREA
L.B. & SANDRA STONEKING	0.42 AC.
RICHARD & YVONNE METCALF	2.25 AC.
DONNA J. PETER	20.08 AC.
TOTAL	22.75 AC.

OPERATOR
EQT PRODUCTION COMPANY
OPERATOR ID: 306686
115 PROFESSIONAL PLACE
P.O. BOX 280
BRIDGEPORT, WV 26330
PHONE: (304) 848-3870

ENGINEER
RK&K ENGINEERS
242 NORTH TORNADO WAY
SUITE 1
KEYSER, WV 26726
PHONE: (304) 788-3370

SURVEYOR
SMITH LAND SURVEYING, INC
12 VANHORN DRIVE
P.O. BOX 150
GLENVILLE, WV 26351
PHONE: (304) 462-5634

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www.rkk.com
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DANIEL G. VANGILDER
ASSOCIATE
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

THIS DOCUMENT WAS PREPARED BY RK&K ENGINEERS FOR: EQT PRODUCTION COMPANY

COVER SHEET
WEU4
McELROY DISTRICT
CENTERVILLE DISTRICT
TYLER COUNTY, WV

DATE: 04/30/2015
SCALE: 1" = 2,000'
DESIGNED BY: HWH
FILE NO: JOB
SHEET 1 OF 33
REV.: 08/25/2015

WEU-4 AS-BUILT SITE PLAN
EQT PRODUCTION COMPANY

PERMITTED WELLS: API# 47-095-02278, 47-095-002279, 47-095-02280, 47-095-02281, 47-095-02316, 47-095-02317, 47-095-02318 AND 47-095-02343
PROPOSED WELL NUMBERS: H6-WV512895, H8-WV516535, H9-WV516536, H11-WV516538, H13-WV516540, H14-WV516600 AND H15-WV516601

SITUATE ON WATERS OF CAMP MISTAKE RUN IN MCELROY AND CENTER DISTRICTS, TYLER COUNTY, WEST VIRGINIA

PROJECT INFORMATION

PROJECT NAME: WEU-4 AS BUILT SITE PLAN

TAX PARCEL
CENTERVILLE DISTRICT
MAP 16
MCELROY DISTRICT
MAP 21

SURFACE OWNER
L. B. & SANDRA STONEKING
MCELROY DISTRICT
TYLER COUNTY, WV
TOTAL PROPERTY AREA: 59.44± ACRES

DONNA J. PETER
MCELROY & CENTERVILLE DISTRICT
TYLER COUNTY, WV
TOTAL PROPERTY AREA: 113.4± ACRES

RICHARD & YVONNE METCALF
CENTERVILLE DISTRICT
TYLER COUNTY, WV
TOTAL PROPERTY AREA: 61.57± ACRES

OIL AND GAS ROYALTY OWNER
WACO OIL & GAS COMPANY, INC. ETAL
CENTERVILLE DISTRICT
TYLER COUNTY, WV
TOTAL PROPERTY AREA: 152± ACRES

SITE LOCATION

THE WEU-4 SITE IS NORTH OF CAMP MISTAKE OFF COUNTY ROUTE 58. THE ENTRANCE TO THE SITE IS APPROXIMATELY 0.13 MILE SOUTH WEST OF COUNTY ROUTE 58 AND COUNTY ROUTE 60/2 INTERSECTION.

LOCATION COORDINATES

WEU-4 SITE ENTRANCE
LATITUDE: 39.359173 LONGITUDE: -80.810214 (NAD 83);
LATITUDE: 4 357 772 LONGITUDE: 516 353 (UTM NAD 83 METERS)

WEU-4 CENTER OF WELL PAD
LATITUDE: 39.366539 LONGITUDE: -80.820845 (NAD 83)
LATITUDE: 4 357 477 LONGITUDE: 515 448 (UTM NAD 83 METERS)

WEU-4 FLOW CENTER OF FLOW BACK PIT
LATITUDE: 39.365395 LONGITUDE: -80.821621 (NAD 83);
LATITUDE: 4 357 350 LONGITUDE: 515 433 (UTM NAD 83 METERS)

WEU-4 FLOW CENTER OF COMPLETION PIT
LATITUDE: 39.365901 LONGITUDE: -80.825772 (NAD 83);
LATITUDE: 4 357 406 LONGITUDE: 515 024 (UTM NAD 83 METERS)

SITE DISTURBANCE COMPUTATIONS

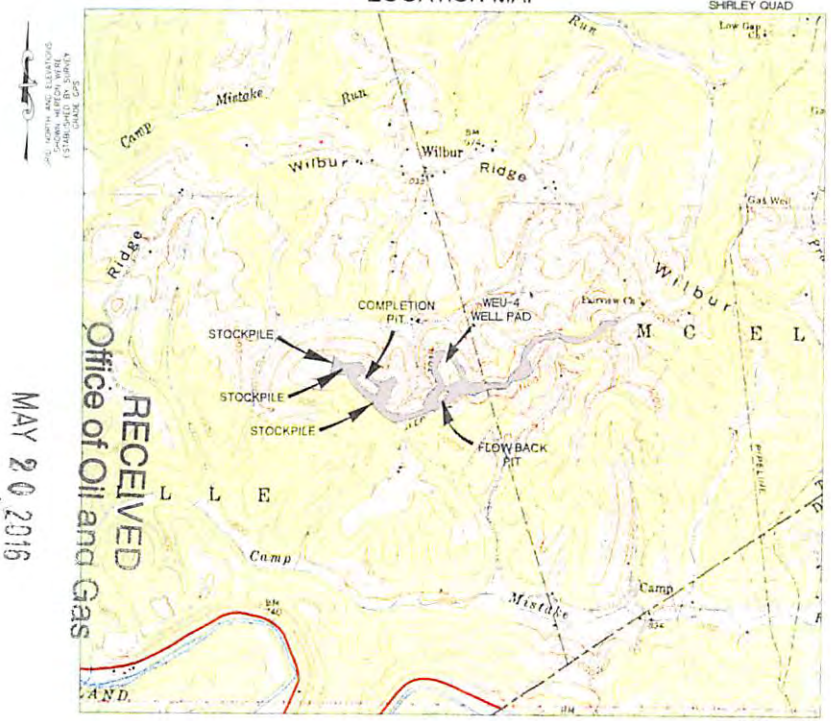
TOTAL AS-BUILT DISTURBANCE = 35.8± ACRES

GENERAL DESCRIPTION

THE WEU-4 PAD AND PITS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV Chapter 24-C)
Requires that you call two business days before you dig in the state of West Virginia
IT'S THE LAW!!

LOCATION MAP



SCALE: 1"=1000'

LIST OF DRAWINGS

1. COVER SHEET
2. INDEX SHEET
3. WEU-4 ACCESS ROAD
4. WEU-4 FLOWBACK PIT / PAD
5. WEU-4 ACOMPLETION PIT / STOCKPILE
6. ACCESS ROAD PROFILE
7. ACCESS ROAD PROFILE, FLOW BACK PIT AND COMPLETION PIT PROFILES

LEGEND

LIMITS OF DISTURBANCE
COMPOST FILTER SOCK
AS-BUILT LOD
EX. ROAD EDGE OF GRAVEL/DIRT
EX. ROAD EDGE OF PAVEMENT
EX. ROAD CENTERLINE
EX. DITCHLINE
EX. CULVERT
EX. FENCELINE
EX. GATE
EX. OVERHEAD UTILITY
EX. OVERHEAD UTILITY R/W
EX. POWER POLE
EX. GUY WIRE
EX. TELEPHONE LINE
EX. GASLINE
EX. GASLINE R/W
EX. WATERLINE
EX. STRUCTURE
EX. PIPELINE MARKER
RIG FOOTPRINT
EDGE OF GRAVEL PAD
EDGE OF BERM
EX. SUPER SILT FENCE
EX. REINFORCED SILT FENCE
TOP BERM
GRAVEL
RIP RAP
ORIGINAL GROUND 2' CONTOURS
AS-BUILT 2' CONTOURS
PHOTO NUMBER & LOCATION
AS-BUILT WELL LOCATIONS
PROPOSED WELL LOCATIONS
SPOT ELEVATIONS
MATCHLINE

RECEIVED
Office of Oil and Gas
MAY 20 2016
WV Department of Environmental Protection

4709502358

Dm4
5-13-16

REVISION	DATE	DESCRIPTION	BY
1	5/31/16	ADDED TYPICAL CELLAR DETAIL	WV
2	6/10/16	ADDED WELL INFORMATION	K.E.S.

EQT — Where energy meets innovation

SLS — Land & Energy Development

THIS DOCUMENT WAS PREPARED BY SMITH LAND SURVEYING, INC. FOR EQT

RIP R. PLAIL — REGISTERED — 15176 — STATE OF WEST VIRGINIA — SURVEYOR

WEU-4
AS-BUILT SITE PLAN

THIS DOCUMENT WAS PREPARED BY SMITH LAND SURVEYING, INC. FOR EQT PRODUCTION COMPANY

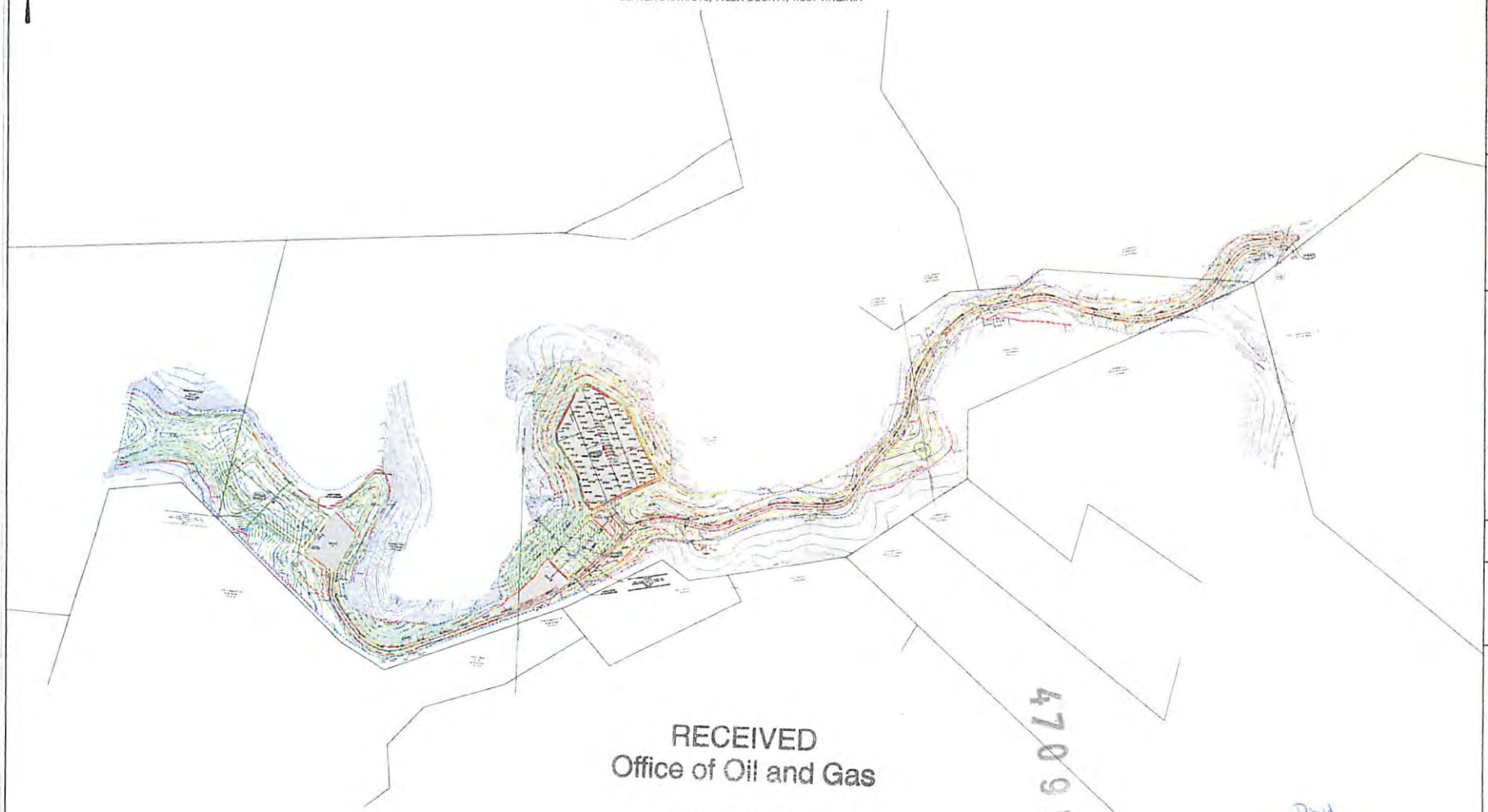
DATE	03/02/2016
EQT	
SCALE	1" = 1000'
DESIGNED BY	K.E.S.
FILE NO.	7701
SHEET	1 OF 7

4709502358

WEU-4 AS BUILT SITE PLAN

SITUATE ON WATERS OF CAMP MISTAKE RUN IN MCELROY AND CENTER DISTRICTS, TYLER COUNTY, WEST VIRGINIA

GRID NORTH AND SURVEYED ELEVATIONS SHOWN HEREON WERE ESTABLISHED BY DGPS SURVEY GRADE



SURVEY NOTE

1. THE CERTIFICATION OF THIS DRAWING APPLIES ONLY TO THE TOPOGRAPHIC MAPPING AS GENERATED FROM THE FIELD DATA OBTAINED AT THE TIME OF THE FIELD SURVEY ON 11/17/15, 11/25/15, 12/12/15, 12/14/15, 12/16/15, 12/20/15, 12/21/15, 1/11/16, 2/05/16 & 2/26/16

SCALE
1 INCH = 200 FEET
0 200 400 600

RECEIVED
Office of Oil and Gas
MAY 20 2016
WV Department of Environmental Protection

4709502358

REVISION	DATE	DESCRIPTION	BY
1	3/31/16	ADDED TYPICAL CELLAR DETAIL	WW
2	5/10/16	ADDED WELL INFORMATION	KES

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Where energy meets innovation

SLS
Land & Energy Development
Solutions from the ground up.

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WEU-4
AS-BUILT SITE PLAN

THIS DOCUMENT WAS PREPARED BY SMITH LAND SURVEYING, INC FOR EQT PRODUCTION COMPANY

DATE 03/02/2016
EQT
SCALE 1" = 200'
DESIGNED BY K.E.S.
FILE NO 7701
SHEET 2 OF 7
STIU
7701 WEU4 ASBUILTS.dwg

4709502358