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**west virginia** department of environmental protection

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

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

June 02, 2016

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-8510279, 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: 513384  
Farm Name: TASCHLER, BRIAN ET AL  
**API Well Number: 47- 8510279**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 06/02/2016

**PERMIT CONDITIONS 4708510279**

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.

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**CONDITIONS**

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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.

4708510279

API NO. 47 - 085 - 0  
OPERATOR WELL NO. 513384  
Well Pad Name: AUB54

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

1) Well Operator: EQT Production Company  
Operator ID: 908686 County: 085 District: 4 Quadrangle: 224

2) Operator's Well Number: 513384 Well Pad Name: AUB54

3) Farm Name/Surface Owner: Brian Taschler et al Public Road Access: WV RT 47

4) Elevation, current ground: 1,216.0 Elevation, proposed post-construction: 1,200.0

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

(b) If Gas: Shallow  Deep   
Horizontal

6) Existing Pad? Yes or No: No

4708510279

*Michael Hoff*  
*2/19/16*

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):  
Target formation is Marcellus at a depth of 6627 with the anticipated thickness to be 54 feet and anticipated target pressure of 2190 PSI  
Top of Marcellus: 6603

8) Proposed Total Vertical Depth: 6627

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 12,825

11) Proposed Horizontal Leg Length: 5,237

12) Approximate Fresh Water Strata Depths: 130, 324

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

14) Approximate Saltwater Depths: 1,914

15) Approximate Coal Seam Depths: N/A

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

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

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WW - 6B  
(4/15)

4708510279

API NO 47 - 085 - 0  
OPERATOR WELL NO: 513384  
Well Pad Name: AUB54

CASING AND TUBING PROGRAM

18)

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: for Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu.Ft.)
Conductor	20	New	A-500	78.6	40	40	60 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	474	474	472 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	A-500	40	2,475	2,475	981 C.T.S.
Production	5 1/2	New	P-110	20	12,825	12,825	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

MDC  
2/19/16

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

Packers

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

Note 1: EQT plans to bring the TOC on the production casing cement job 500' above the top producing zone Gas

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

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4708510279 WV Department of Environmental Protection

06/03/2016

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.

The vertical drill to go down to an approximate depth of 4247'.

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

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

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

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2/19/16

21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 19.1

22) Area to be disturbed for well pad only, less access road (acres): 14.3

23) Describe centralizer placement for each casing string.

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

24) Describe all cement additives associated with each cement type. **Surface (Type 1 Cement):** 0-3% Calcium Chloride

Used to speed the setting of cement slurries.

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

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

**Production:**

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

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

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

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

60 % Calcuim Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures. **Surface:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating

one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5

minutes. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up.

**Intermediate:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at

surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance

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

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

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

the shakers every 15 minutes.

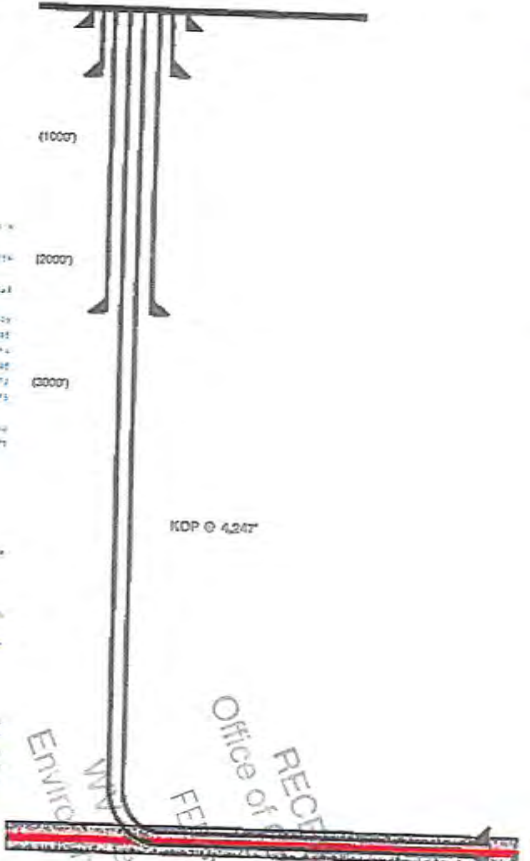
\*Note: Attach additional sheets as needed.

Well 513304 (AUB54W6)  
 EQT Production  
 Auburn  
 Ritchie

Pad Name  
 Address 022  
 Vertical Section 0228

West Virginia

TVD Depth (feet) or	Formation	Top (TVD)
250'		
500'		
750'		
1,000'		
1,250'		
1,500'		
1,750'		
2,000'		
2,250'		
2,500'		
2,750'		
3,000'		
3,250'		
3,500'		
3,750'		
4,000'		
4,250'		
4,500'		
4,750'		
5,000'		
5,250'		
5,500'		
5,750'		
6,000'		
6,250'		
6,500'		
6,750'		



Hole Size (inches)	Type	Size (inches)	WT (ppf)	Grade	Casing Wall Thickness	Depth (feet)	Top of Cement	Method
26"	Conductor	20"	78.6	A-500	0.375	40'	Surface	Displacement
17 1/2"	Surface	13 3/8"	54.5	J-55	0.38	474'	Surface	Displacement
12 1/4"	Intermediate	9 5/8"	40	A-500	0.355	2475'	Surface	Displacement
8 1/2"	Production Casing	5 1/2"	20	P-110	0.301	12825'	500' above top Producing Zone	Displacement

Proposed Well Work:  
 Drill and complete a new horizontal well in the Marcellus formation.  
 Drill the vertical to an approximate depth of 4267'  
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

ENVIRONMENTAL PROTECTION  
 DEPARTMENT OF  
 RECEIVED  
 Office of Oil and Gas  
 FEB 19 2016  
 523' Lateral

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west virginia department of environmental protection

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

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
dep.wv.gov

March 18, 2014

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

Re: Cement Variance Request

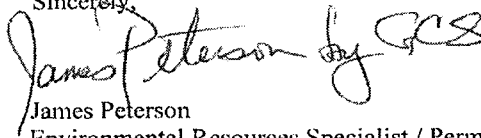
Dear Sir or Madam,

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

- Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

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

Sincerely,

  
James Peterson  
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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601 57<sup>th</sup> Street, SE  
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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 "I" Cement
  - 5.20 % Water
- 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

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### CONCLUSIONS OF LAW

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

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

### ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

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James Martin, Chief  
Office of Oil and Gas

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06/03/2016



August 3, 2015

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

Re: Casing Plan on Wells (AUB54 513880, 513882, 513884, 514041)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 474' KB, 150' deepest freshwater show. We will set the 9-5/8" intermediate string at 2475' KB, 50' below the base of the Weir formation.

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

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark  
Permitting Supervisor

Enc.

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WW-9  
(2/15)

Page 1 of 2  
API No. 47 - 085 - 0  
Operator's Well No. 513364

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 (HUC10) Left Fork & Brushy Fork of Gene Creek Quadrangle Auburn 7.5'

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 water & 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 \_\_\_\_\_ )

Will closed loop system be used? 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.

It 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.

- If oil based, what type? Synthetic, petroleum, etc Synthetic mud

Additives to be used in drilling medium? Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud - Barite, viscosifier, alkalinity control, lime, filtration control, defloculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-celco, carbonates.  
Oil based mud - synthetic base oil, emulsifier, salt, lime, viscosifier, alkalinity control, filtration control, defloculates, biodegradable oil lubricant, defoaming, carbonates.

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, Lho, 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.

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 [Signature]  
Company Official (Typed Name) Victoria J. Hoark  
Company Official Title Permitting Supervisor

Subscribed and sworn before me this 8 day of Jan, 20 16

My commission expires 8-24-22



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4708510279

Form WW-9

Operator's Well No. 513364

Proposed Revegetation Treatment: Acres Disturbed 19.1 Prevegetation pH 6.3

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

Fertilizer Amount 1/3 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

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: Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Hoff

Comments: Reseed & mulch any disturbed areas per WVDEP regulations. Maintain & upgrade E-n-s as necessary.

Title: Oil & Gas Inspector Date: 2/19/16

Field Reviewed? ( ) Yes ( ) No

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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

**LAD LIQUID ASSETS DISPOSAL INC.**

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

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

1487 Toms Run Road  
Holbrook, PA 15341  
724-627-7178 Plant  
724-499-5647 Office  
Greene County/Waynesburg  
Permit # TC-1009

**Waste Management - Meadowfill Landfill**

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

**Waste Management - Northwestern Landfill**

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

**BROAD STREET ENERGY LLC**

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

**TRIAD ENERGY**

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

**KING EXCAVATING CO.**

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

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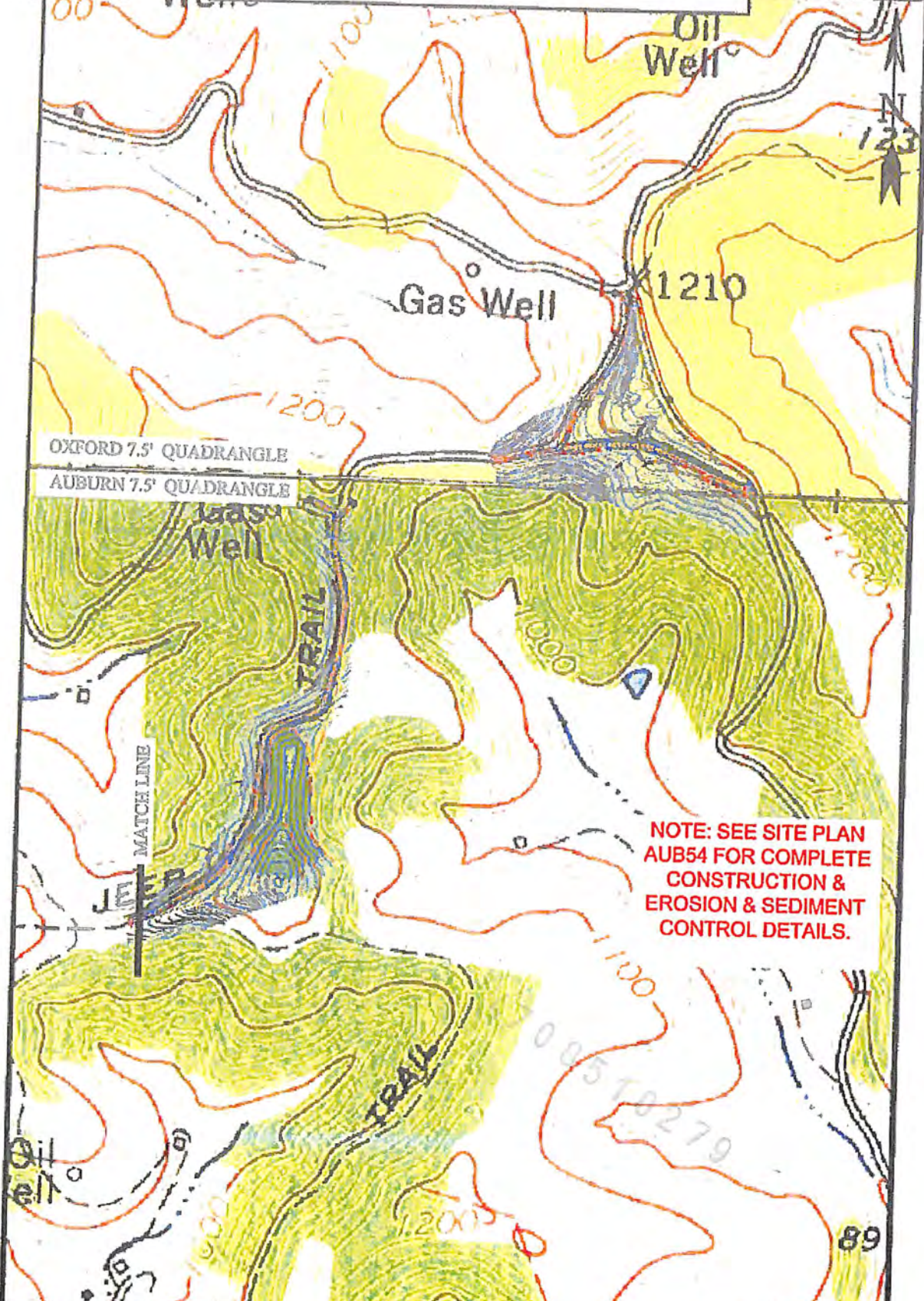
4708510

Form WW-9

# HALL LEASE AUB54 WELLS

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**NOTE: SEE SITE PLAN  
AUB54 FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS.**

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2/19/16

Professional Energy Consultants  
A DIVISION OF SHELCO GROUP, INC.

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609.426.0054 www.slsenergy.com

DRAWN BY: K.D.W. FILE NO.: 7580 DATE: 12-18-15 CADD FILE: [REDACTED]

TOPO SECTIONS OF AUBURN & OXFORD 7.5' TOPO QUADRANGLES

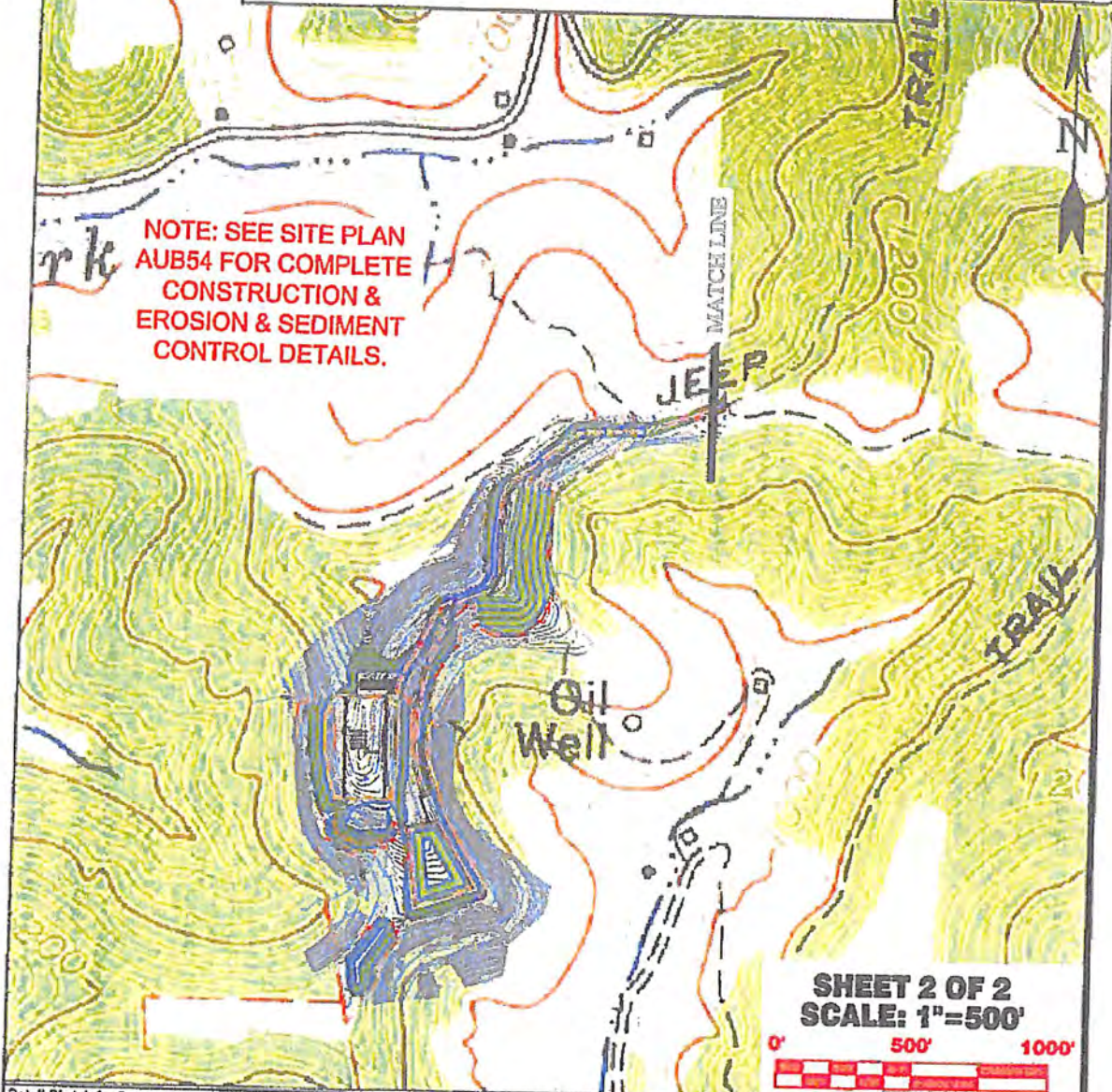
**SHEET 1 OF 2**  
**SCALE: 1"=500'**

0' 500' 1000'

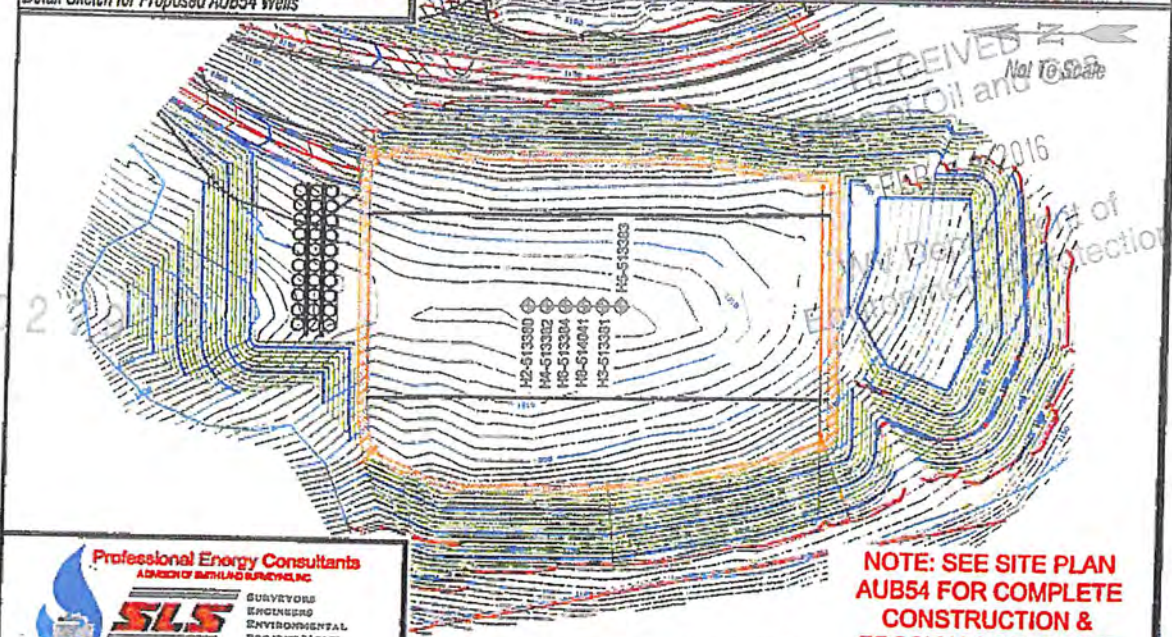
06/03/2016

470851027

# HALL LEASE AUB54 WELLS



Detail Sketch for Proposed AUB54 Wells



470851027

MDC  
2/19/16

**Professional Energy Consultants**  
A DIVISION OF BURNS & MCDONNELL, INC.

**SLS**

SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

604-445-8334  
www.slsurveyors.com

DRAWN BY: K.D.W.	FILE NO. 7580	DATE 12-18-15	CADD FILE: 7580AUB54ECON.dwg
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TOPO SECTION OF AUBURN 7.5'  
TOPO QUADRANGLE

**NOTE: SEE SITE PLAN AUB54 FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.**

06/03/2016

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# Site Specific Safety Plan

EQT AUB 54 Pad

Auburn Quadrant

Ritchie County, WV

For Wells:  513384  513380  513382  514041

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Prepared:

February 3, 2016

*[Signature]*  
 EQT Production  
*[Signature]*  
 Permitting Supervisor  
 Title  
 Date 2-12-16

*[Signature]*  
 WV Oil and Gas Inspector  
 Title  
 Date 2/19/16



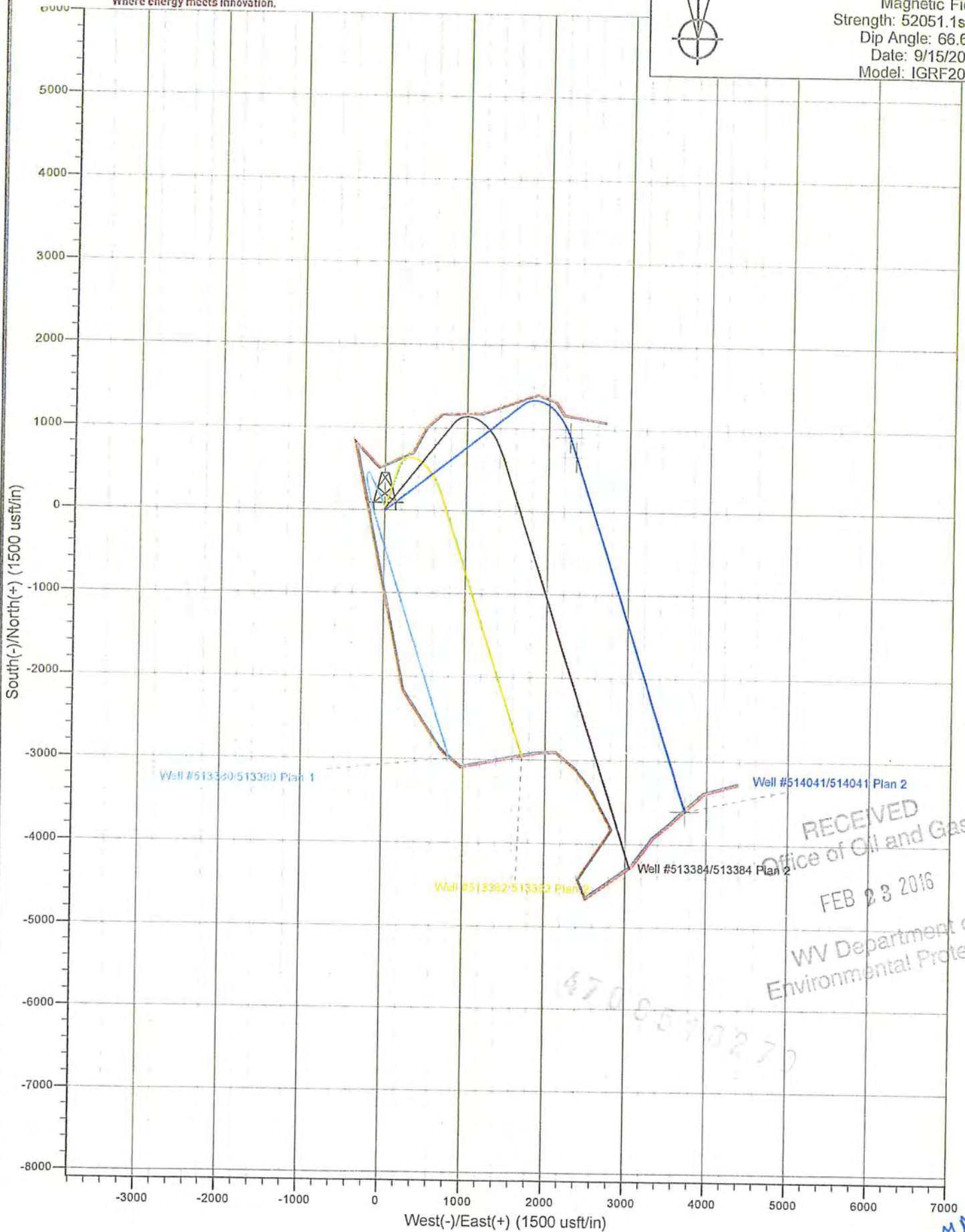


4708510279



Azimuths to Grid North  
True North: 0.86°  
Magnetic North: -7.52°  
Magnetic Field  
Strength: 52051.1snT  
Dip Angle: 66.60°  
Date: 9/15/2015  
Model: IGRF2015

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WV Department of  
Environmental Protection

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MDC  
1/28/16  
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WELL INFORMATION AND POTENTIAL WATER WELL SAMPLE DATA SHEET

OPERATOR: EQT Production Company

LEASE NAME AND NUMBER: AUB-54 Well Pad

COMMENTS

The initial field and/or mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 2500' of the proposed well site. (For location of each site see attached area map.)

INDIVIDUAL CONTACTED OR NOTIFIED

Site 1 Spacing 2460' Owner/Occupant: Ralph Blankenship
Address: 2051 Brushy fork Rd. Auburn, WV 26325 Ph: (304)-349-2487
Field Contact Date: 05/26/2015 Located: Yes Date Located: 05/26/2015 Source: Water Well
Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015
Comments: Tax Map 32, Par. 10 \*NOTE\* Mr. Blankenship has called us and requested an additional water well be tested at this location.
Lat: 39.122068
Long: 80.851818

Site: 2 Spacing 2260' Owner/Occupant: Ralph Blankenship
Address: 2051 Brushy fork Rd. Auburn, WV 26325 Ph: (304)-349-2487
Field Contact Date: 05/26/2015 Located: Yes Date Located: 05/26/2015 Source: Water Well
Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015
Comments: Tax Map 32, Par. 10
Lat: 39.122092
Long: 80.855927

Site: 3 Spacing 2335' Owner/Occupant: Lonis Kopf
Address: 2220 Brushy fork Rd. Auburn, WV 26325 Ph: (304)-349-4507
Field Contact Date: 06/09/2015 Located: Yes Date Located: 06/09/2015 Source: Water Well
Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015
Comments: Tax Map 32, Par. 11 \*NOTE\* Mr. Kopf has informed there are two water wells at this location.
Lat: 39.122294
Long: 80.852869

Site 4 Spacing 2245' Owner/Occupant: Patrick Lacey
Address: 2186 Brushy fork Rd. Auburn, WV 26325 Ph: (304)-349-4507
Field Contact Date: 06/09/2015 Located: Yes Date Located: 06/09/2015 Source: Water Well
Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015
Comments: Tax Map 32, Par. 11.1 \*NOTE\* Mr. Kopf was present while the Lacey's water well was located.
Lat: 39.122110
Long: 80.853336

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WV Department of Environmental Protection 06/03/2016

Site: 5 Spacing \_\_\_\_\_ Owner/Occupant: Gregory Adams  
Address: 109 south marion Ave. Hopewell, VA 23860 Ph: \_\_\_\_\_  
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 32, Parcel 16  
No response to certified letter as of 06/30/2015

Site: 6 Spacing \_\_\_\_\_ Owner/Occupant: Adams family Heirs  
Address: 120 Marlboro Dr. McMurray, PA 15317 Ph: \_\_\_\_\_  
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 32, Parcels 16 and 16.1  
No response to certified letter as of 06/30/2015

Site: 7 Spacing \_\_\_\_\_ Owner/Occupant: Brad and Dean Taschler  
Address: 795 Towamensing Rd. Lehighton, PA 18235 Ph: \_\_\_\_\_  
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 32, Parcel 17  
No response to certified letter as of 06/30/2015

Site: 8 Spacing \_\_\_\_\_ Owner/Occupant: Piney Holdings, INC.  
Address: P.O. Box 5026 Fairmont, WV 26555 Ph: \_\_\_\_\_  
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 32, Parcel 17.1  
No response to certified letter as of 06/30/2015

Site: 9 Spacing \_\_\_\_\_ Owner/Occupant: Donald and Tina Murphy  
Address: 289 Riddle Hill Rd. Auburn, WV 26325 Ph: \_\_\_\_\_  
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 37, Par. 1  
No response to certified letter as of 06/30/2015

Site: 10 Spacing \_\_\_\_\_ Owner/Occupant: Allen Merriman  
Address: 925 Riddle Hill Rd. Auburn, WV 26325 Ph: \_\_\_\_\_  
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 37, Par. 4  
No response to certified letter as of 06/30/2015  
\*NOTE\* Mr. Merriman has phoned in and does not have any water sources within 2500'

Site: 11 Spacing \_\_\_\_\_ Owner/Occupant: Kiedaisch and Summers Enterprises  
Address P.O. Box 254 Harrisville, WV 26362 Ph: \_\_\_\_\_  
Field Contact Date: NA Located: No Date Located: NA Source: Unknown  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 32, Par. 12  
No response to certified letter as of 06/30/2015

Site: 12 Spacing \_\_\_\_\_ Owner/Occupant: Ralph Blankenship  
Address: 2051 Brushy fork Rd. Auburn, WV 26325 Ph: (304)-349-2487  
Field Contact Date: 05/26/2015 Located: Yes Date Located: 7/29/2015 Source: Water Well  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st 05/26/2015 2nd 06/09/2015 Certified (3rd) 06/17/2015  
Comments: Tax Map 32, Par. 10  
Lat: 39.122391  
Long: 80.836668

Site: \_\_\_\_\_ Spacing \_\_\_\_\_ Owner/Occupant: \_\_\_\_\_  
Address: \_\_\_\_\_ Ph: \_\_\_\_\_  
Field Contact Date: \_\_\_\_\_ Located: \_\_\_\_\_ Date Located: \_\_\_\_\_ Source: \_\_\_\_\_  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
Comments: \_\_\_\_\_

Site: \_\_\_\_\_ Spacing \_\_\_\_\_ Owner/Occupant: \_\_\_\_\_  
Address \_\_\_\_\_ Ph: \_\_\_\_\_  
Field Contact Date: \_\_\_\_\_ Located: \_\_\_\_\_ Date Located: \_\_\_\_\_ Source: \_\_\_\_\_  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
Comments: \_\_\_\_\_

Site: \_\_\_\_\_ Spacing \_\_\_\_\_ Owner/Occupant: \_\_\_\_\_  
Address \_\_\_\_\_ Ph: \_\_\_\_\_  
Field Contact Date: \_\_\_\_\_ Located: \_\_\_\_\_ Date Located: \_\_\_\_\_ Source: \_\_\_\_\_  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
Comments: \_\_\_\_\_

Site \_\_\_\_\_ Spacing \_\_\_\_\_ Owner/Occupant: \_\_\_\_\_  
Address: \_\_\_\_\_ Ph: \_\_\_\_\_  
Field Contact Date \_\_\_\_\_ Located: \_\_\_\_\_ Date Located \_\_\_\_\_ Source \_\_\_\_\_  
If No. declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
Comments: \_\_\_\_\_

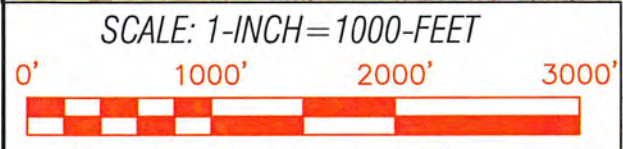
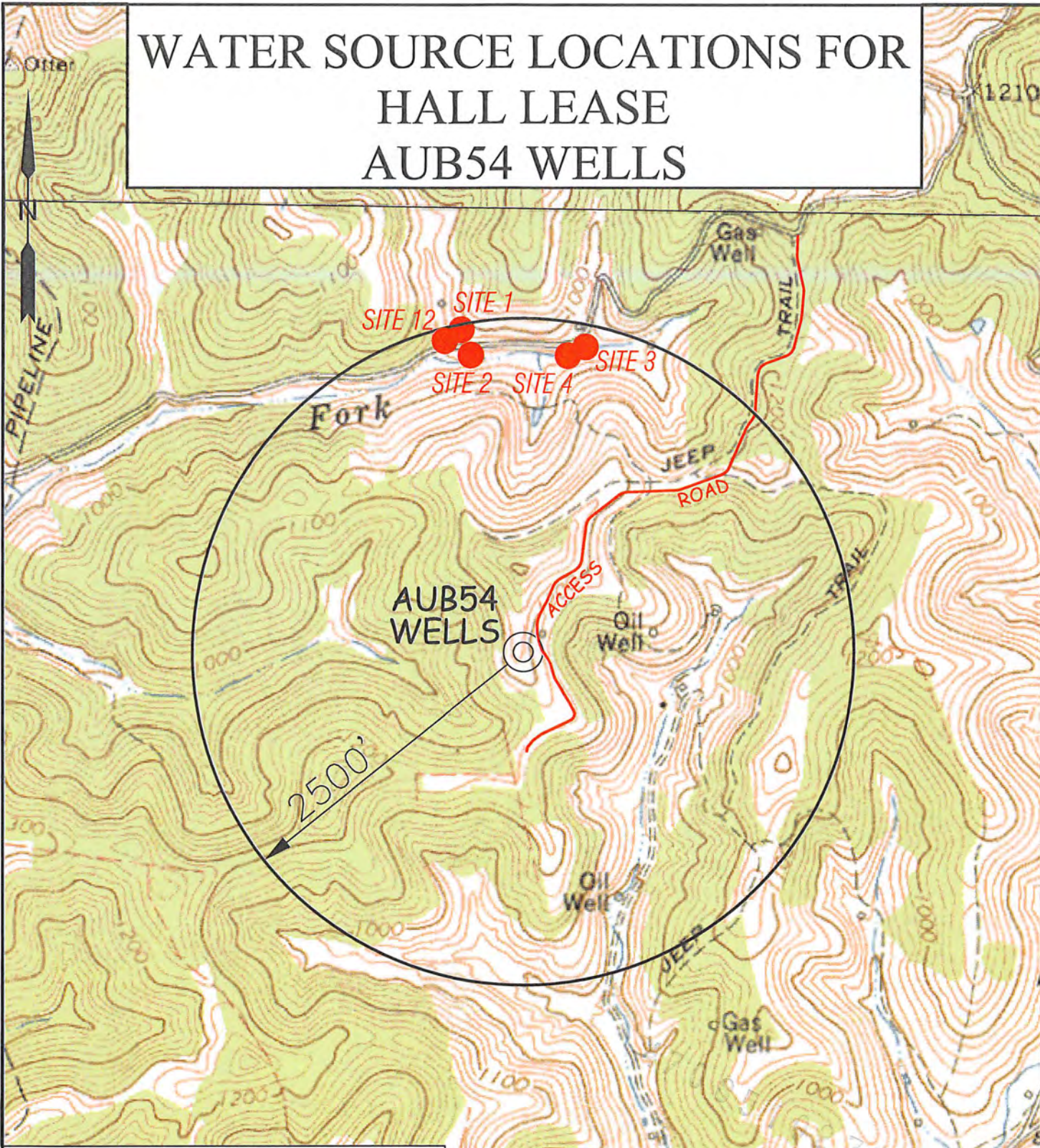
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WV Department of  
Environmental Protection

06/03/2016

# WATER SOURCE LOCATIONS FOR HALL LEASE AUB54 WELLS



RECEIVED  
LEGEND  
● WATER WELL

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A DIVISION OF SMITH LAND SURVEYING, INC.

**SLS**  
SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
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DRAWN BY: K.D.W. FILE NO: 7580 DATE: 08/12/15 CADD FILE: 7580AUB54WS.dwg

TOPO SECTION OF:  
AUBURN, WV 7.5' QUAD

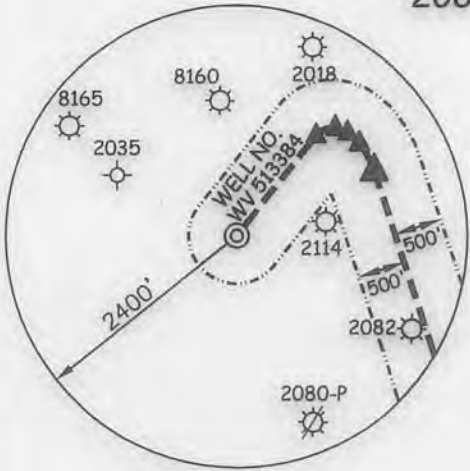
DISTRICT	COUNTY	TAX MAP-PARCEL NO.
UNION	RITCHIE	32-17

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

RECEIVED JAN 14 2016  
Office of Environmental Protection  
Department of Environmental Protection

06/03/2016

**EQT PRODUCTION COMPANY - HALL LEASE**  
**208 ACRES± - WELL NO. WV 513384**



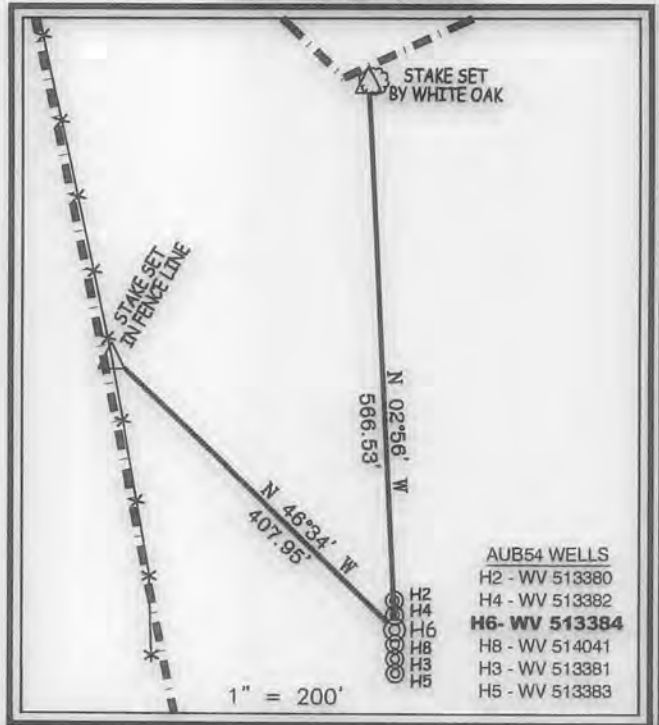
**NOTES ON SURVEY**

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.

ROYALTY OWNERS		
DONALD SHEETS ET AL	280 AC±	LEASE NO. 988339

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)		
NAD'27 S.P.C.(FT)	N. 227,270.04	E. 1,615,644.96
NAD'27 GEO.	LAT-(N) 39.116033	LONG-(W) 80.854637
NAD'83 UTM (M)	N. 4,329,672.64	E. 512,581.58
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 227,946.65	E. 1,617,077.50
NAD'27 GEO.	LAT-(N) 39.117950	LONG-(W) 80.849624
NAD'83 UTM (M)	N. 4,329,886.05	E. 513,014.55
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 222,965.90	E. 1,618,695.84
NAD'27 GEO.	LAT-(N) 39.104343	LONG-(W) 80.843659
NAD'83 UTM (M)	N. 4,328,376.95	E. 513,532.89

**REFERENCES**



A	BRIAN TASCHLER ET AL	200.665 AC±	TM 32-17
B	BRIAN TASCHLER ET AL	3.915 AC±	TM 32-17.2
C	BRIAN TASCHLER ET AL	109.81 AC±	TM 37-04.2
D	ALLEN M. MERRIMAN	12.962 AC±	TM 37-04
E	KIEDASCH & SUMMERS ENTERPRISES	40 AC±	
F	JERRY A. RIDDLER ET AL	130 AC±	
G	GERALDINE LUSK	82.21 AC±	
H	DENSEL R. HALL ET AL	2.41 AC±	
I	RUSSEL S. & CLARA A. BLIZARD	102.4 AC±	
J	VIOLET HARDBARGER	81.3 AC±	
K	BRIAN TASCHLER ET AL	110 AC±	
L	GREGORY ADAMS ET AL	100 AC±	
M	LOUIS J. KOPF	83.776 AC±	
N	NATHANAEL & SHELLY MASON	110.33 AC±	
O	RICHARD E. BLIZARD JR ET AL	43.092 AC±	
P	JANET G. BLIZARD ET AL	55.618 AC±	
Q	WV D.O.H.	0.108 AC±	

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 ENGINEERS  
 ENVIRONMENTAL  
 PROJECT MGMT.  
 (304) 462-5634 WWW.SLSURVEYS.COM



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*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE DECEMBER 17, 20 15  
 REVISED \_\_\_\_\_, 20 \_\_\_\_\_  
 OPERATORS WELL NO. WV 513384  
 API WELL NO. 47 - 085 - 1027/H6  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 7580P513384

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 \_\_\_\_\_ LIQUID GAS X INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_ IF "GAS" PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION: GROUND PROPOSED  
 ELEVATION 1,216' 1,200' WATERSHED LEFT FORK & BRUSHY FORK OF BONE CREEK  
 DISTRICT \_\_\_\_\_ UNION \_\_\_\_\_ COUNTY RITCHIE QUADRANGLE AUBURN 7.5'

SURFACE OWNER BRIAN TASCHLER ET AL ACREAGE 200.665±  
 ROYALTY OWNER KAYRON HALL ET AL ACREAGE 208± LEASE NO. 107848

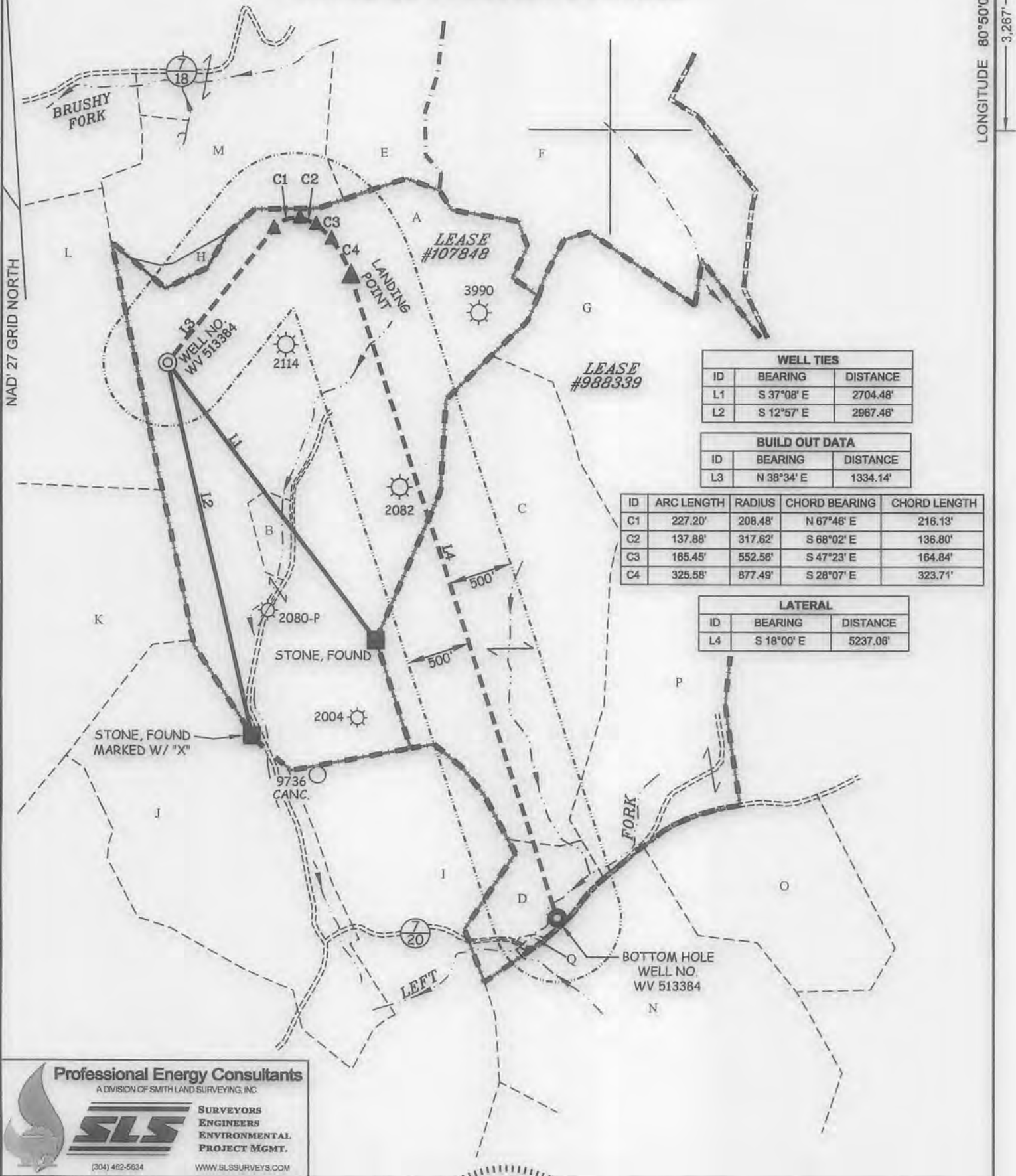
PROPOSED WORK:  
 DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_ OTHER \_\_\_\_\_  
 PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,603'

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

COUNTY NAME PERMIT

06/03/2016

**EQT PRODUCTION COMPANY - HALL LEASE**  
**208 ACRES±-WELL NO. WV 513384**



WELL TIES		
ID	BEARING	DISTANCE
L1	S 37°08' E	2704.48'
L2	S 12°57' E	2967.46'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 38°34' E	1334.14'

ID	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	227.20'	208.48'	N 67°46' E	216.13'
C2	137.88'	317.62'	S 68°02' E	136.80'
C3	165.45'	552.58'	S 47°23' E	164.84'
C4	325.58'	877.48'	S 28°07' E	323.71'

LATERAL		
ID	BEARING	DISTANCE
L4	S 18°00' E	5237.06'

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 PROJECT MGMT.

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(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'27 S.P.C.(FT)	N. 227,270.04	E. 1,615,644.96	
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LANDING POINT			
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BOTTOM HOLE			
NAD'27 S.P.C.(FT)	N. 222,965.90	E. 1,618,695.84	
NAD'27 GEO.	LAT-(N) 39.104343	LONG-(W) 80.843659	
NAD'83 UTM (M)	N. 4,328,376.95	E. 513,532.89	

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

C.V.M. 12-17-15

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

LEGEND	
LEASE LINE	---
SURFACE LINE	----
WELL LATERAL	—+—
OFFSET LINE	---+---
TIE LINE	—+—+—
CREEK	~ ~ ~
ROAD	==
FENCE LINE	—x—
STATE ROUTE	⊕
COUNTY ROUTE	⊙
PROPOSED WELL	⊕
EXISTING WELL	⊙
PERMITTED WELL	⊙
TAX MAP-PARCEL	00-00

SCALE 1" = 1000'

DATE DECEMBER 17, 2015

REVISED \_\_\_\_\_, 20\_\_\_\_

OPERATORS WELL NO. WV 513384

API WELL NO. 47 — 085 — 10279H6A

NO. STATE COUNTY PERMIT

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

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

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

COUNTY NAME PERMIT

06/03/2016

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

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

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

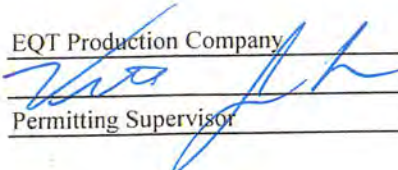
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<b>107848</b>	<b>Kayron Hall, et al (current royalty owner)</b>		<b>Min 1/8 pd</b>	
	William H. Hall, et ux (original Lessor)	J.M. Basom		LB29/430
	J.M. Basom	James Gartlan		LB57/540
	James Gartlan	The Philadelphia Co of West Virginia		LB57/542
	The Philadelphia Co of West Virginia	Pittsburgh and West Virginia Gas Co		LB55/359
	Pittsburgh and West Virginia Gas Co	Equitable Gas Company		DB126/473
	Equitable Gas Company	Equitrans, Inc		LB201/253
	Equitrans, Inc	Equitrans, L.P.		433/777 recorded in Tyler Co.
	Equitrans, L.P.	Equitable Production-Eastern States Inc		AB234/830
	Equitable Production-Eastern States Inc	Equitable Production Company		CB281/346 rec in Doddridge Co.
	Equitable Production Company	EQT Production Company		CB281/346 rec in Doddridge Co.
<b>988339</b>	<b>Donald Sheets et al (current royalty owner)</b>		<b>Min 1/8 pd</b>	
	Donald Sheets et al (original lessor)	EQT Production Company		OG253/1008

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

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

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

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

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

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Office of Oil and Gas  
JAN 14 2016  
WV Department of  
Environmental Protection





January 13, 2016

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

Re: AUB54 well pad, well number 513384  
Union District, Ritchie 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,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark  
Permitting Supervisor-WV

5700510279  
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Office of Oil and Gas  
JAN 14 2016  
WV Department of  
Environmental Protection

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

Date of Notice Certification: 1-11-16 API No. 47 - 085 - 0  
 Operator's Well No. 513384  
 Well Pad Name: AUB54

**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:	<u>WV</u>	UTM NAD 83 Easting:	<u>512,581.58</u>
County:	<u>Ritchie</u>	UTM NAD 83 Northing:	<u>4,329,672.64</u>
District:	<u>Union</u>	Public Road Access:	<u>WV RT 47</u>
Quadrangle:	<u>Auburn 7.5'</u>	Generally used farm name:	<u>Brian Taschler et al</u>
Watershed:	<u>Left Fork &amp; Brushy Fork of Bone Creek</u>		

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.

<p>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:</p> <p><b>*PLEASE CHECK ALL THAT APPLY</b></p> <p><input type="checkbox"/> NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OR</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**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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**Certification of Notice is hereby given:**

THEREFORE, I *[Signature]*, 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  
By: Victoria J. Roark  
Its: Permitting Supervisor  
Telephone: 304-848-0076

Address: P.O. Box 280  
Bridgeport, WV 26330  
Facsimile: 304-848-0040  
Email: vroark@eqt.com



Subscribed and sworn before me this 8 day of Jan 2016

*[Signature]* Notary Public

My Commission Expires 8-24-22

**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](mailto:depprivacyofficer@wv.gov).

*[Faint handwritten number]*

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**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: 1-17-16 Date Permit Application Filed: 1-11-16

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 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 that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article 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; 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 construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (2) The 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 well which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field 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 article are in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained in the records of the sheriff. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not required 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 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: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: See Attached  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNERS(s) (Road and/or Other Disturbance)  
Name: See Attached  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: None  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments/Pits)  
Name: See Attached  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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WW6-A

**Surface Owners**

Brian Taschler et al  
795 Towamensing Rd.  
Leighton Pa 18235

6708510

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**Surface Owners Access/ Other Disturbance**

Brian Taschler et al  
795 Towamensing Rd.  
Leighton Pa 18235

Jerry Riddle  
2187 Riddle Hill Rd.  
Auburn WV 26325

Betty Jean Nutter  
2499 Glendale Road  
Cairo WV 26337

Kiedaisch & Summers ENT., LLC  
PO Box 254  
Harrisville, WV 26362

Louis and Linda Kopf  
2220 Brushy Fork Road  
Auburn WV 26325

Craig & Amy Williams  
6390 Rotherby Circle  
Hudson OH 44236

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**Surface Owners Pits or Impoundment**

Brian Taschler et al  
795 Towamensing Rd.  
Leighton Pa 18235

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**Coal Owners:**

Piney Holdings Inc ✓  
PO Box 5026  
Fairmont WV 26555

Eric Dean Goff ✓  
1661 Hazelgreen Rd  
Harrisville WV 26362

Richard L Hall ✓  
PO Box 112  
Kenna WV 25248

Danny Ray Hall ✓  
12052 Sheffield Rd  
Jacksonville FL 32226

Michael L Hall ✓  
12052 Sheffield Rd  
Jacksonville FL 32226

Byron G Hall ✓  
4005 Sayre Ave #8  
Parkersburg WV 26104

Ella Jean Goff Reed ✓  
1661 Hazelgreen Rd  
Harrisville WV 26362

Carla R Foster ✓  
35 Armin Rd  
Tijeras NM 87059

Thomas Guy Hall ✓  
12052 Sheffield Rd  
Jacksonville FL 32226

Gary Ronald Hall ✓  
12052 Sheffield Rd  
Jacksonville FL 32226

Donna Kayron Porter ✓  
12052 Sheffield Rd  
Jacksonville FL 32226

William Davis Hewitt ✓  
37 Willow Glen  
Atlanta GA 30342

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**Coal Owners:**

Union National Bank of West Virginia, Trustee  
PO Box 659  
Wichita Falls TX 76307

Haught Family Trust  
210 E Main St  
Harrisville WV 26362

Kayron B Hall  
12052 Sheffield Rd  
Jacksonville FL 32226

Susan Lee Hewitt  
50 Lamsden Ln  
Atlanta GA 30327

John Kerns Heirs Trust  
Union Nat'l Bank of Clarksburg  
PO Box 659  
Wichita Falls TX 76307

Elizabeth Hewitt Taylor Ventures LLC  
9925 Huntcliff Trace  
Atlanta GA 30350

470951627

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**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.

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](http://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.

**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.

47-0-05-10-270

**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

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.

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**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**

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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Notice is hereby given by:

Well Operator: EQT Production Company Address: 115 Professional Place P.O. Box 280  
Telephone: 304-848-0082 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](mailto:depprivacyofficer@wv.gov).

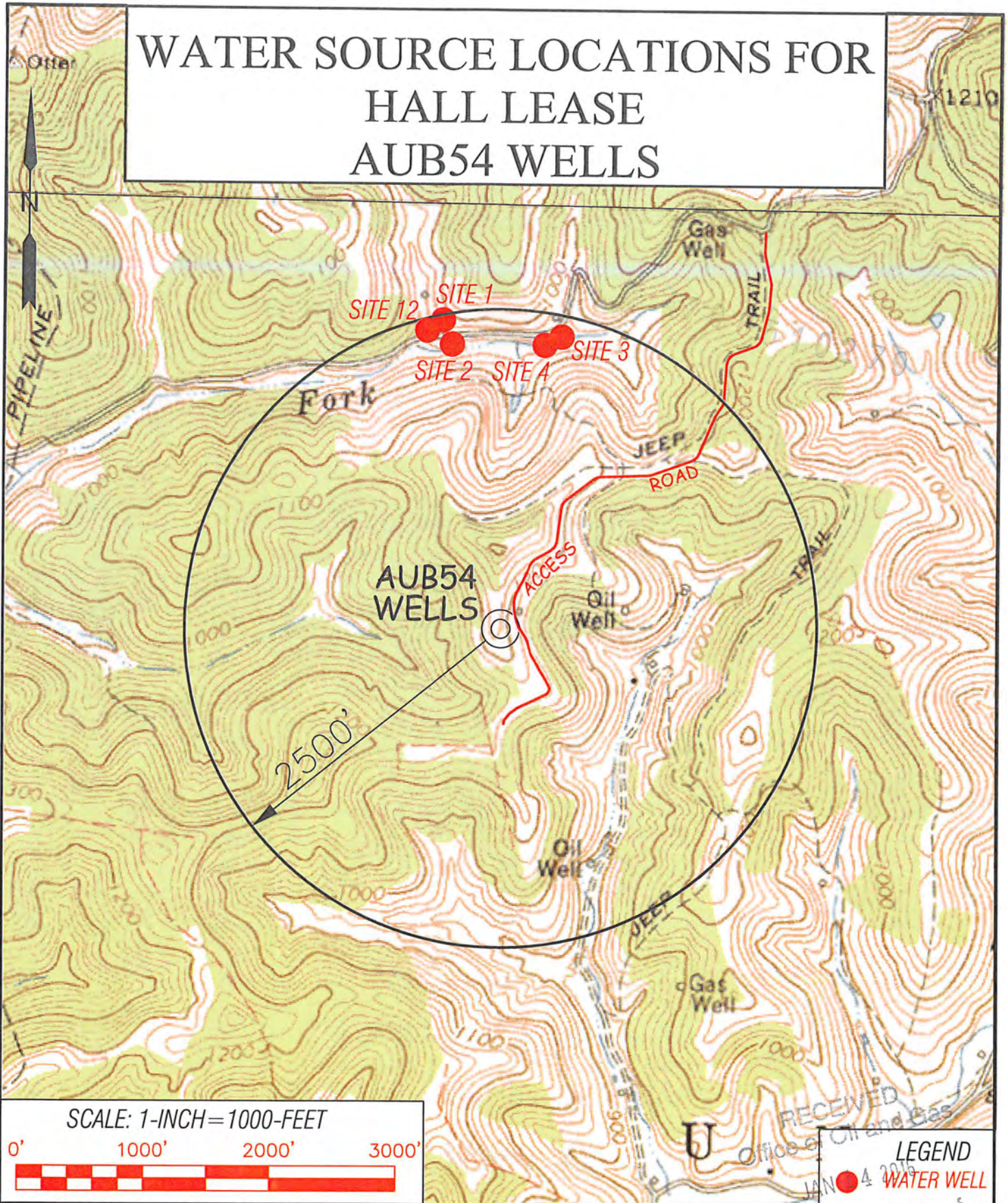
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.



*Victoria Roark*  
By: Victoria Roark  
Its: Permitting Supervisor  
Subscribed and sworn before me 8 day of Jan 2016  
*Pamela Sykes* Notary Public  
My Commission Expires 8-24-22

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# WATER SOURCE LOCATIONS FOR HALL LEASE AUB54 WELLS




SCALE: 1-INCH=1000-FEET



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LEGEND  
● WATER WELL

**Professional Energy Consultants**  
A DIVISION OF SMITH LAND SURVEYING, INC.



SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

ESPA-02-8804  
WWW.SLSURVEYS.COM

DRAWN BY: K.D.W. FILE NO: 7580 DATE: 08/12/15 CADD FILE: 7580AUB54WS.dwg

TOPO SECTION OF:  
AUBURN, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
UNION	RITCHIE	32-17

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

06/03/2016

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry.

Date of Notice: 2/5/2015

Date of Planned Entry: 2/13/2015

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

PERSONAL SERVICE     CERTIFIED MAIL     METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(S)

Name: Brian Taschler & Rochelle M. Taschler  
Address: 795 Towamensing Rd.  
Lehighton, PA 18235-5931

MINERAL OWNER(S)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER(S) OR LESSEE(S)

Coal Declaration pursuant to §22-6A-10 and §22-6-36 Not of Record

\*Please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.11613/-80.85453</u>
County: <u>Ritchie</u>	Public Road Access: <u>CR 7/18</u>
Dist/Map/Par: <u>Union / Map 32 / Parcel 17</u>	Watershed: <u>Little Kanawha</u>
Quadrangle: <u>Auburn</u>	Generally Used Farm Name: <u>Hall Lease</u>

Copies of the state Erosion and Sediment Control Manual and the statues and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Notice is hereby given by:

Well Operator: EQT Production Company  
Telephone: 304-848-0099  
Facsimile: 304-848-0040  
Email: eqtlandentrynotice@eqt.com

Address: 115 Professional Place, Bridgeport, WV 26330  
EQT Representative: Kathy Kugel

Signature: *Kathy Kugel*

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such a name, address and telephone number, as part of 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](mailto:depprivacyofficer@WV.gov).

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WW-6A5  
(1/12)

Operator Well No. 513384

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: 1-11-16 Date Permit Application Filed: 1-11-16

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: <u>See Attached</u>	Name: _____	0
Address: _____	Address: _____	0
_____	_____	0

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: <u>WV</u>	UTM NAD 83	Easting: <u>512,581.580000</u>
County: <u>Ritchie</u>		Northing: <u>4,329,672.640000</u>
District: <u>Union</u>	Public Road Access: _____	<u>WV RT 47</u>
Quadrangle: <u>Auburn 7.5'</u>	Generally used farm name: _____	<u>Brian Taschler et al</u>
Watershed: <u>Left Fork &amp; Brushy Fork of Bone Creek</u>		

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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: <u>EQT Production Company</u>	Address: <u>115 Professional Place, P.O. Box 280</u>
Telephone: <u>304-848-0082</u>	<u>Bridgeport, WV 26330</u>
Email: <u>vroark@eqt.com</u>	Facsimile: <u>304-848-0040</u>

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](mailto:depprivacyofficer@wv.gov).

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WW6-A

**Surface Owner**

Brian Taschler  
795 Towamensing Rd.  
Leighton Pa 18235

4700510270

**Surface Owner Access/ Other Disturbance**

Brian Taschler  
795 Towamensing Rd.  
Leighton Pa 18235

Jerry Riddle  
2187 Riddle Hill Rd.  
Auburn WV 26325

Betty Jean Nutter  
2499 Glendale Road  
Cairo WV 26337

Kiedaisch & Summers ENT., LLC  
Po Box 254  
Harrisville, WV 26362

Louis and Linda Kopf  
2220 Brushy Fork Road  
Auburn WV 26325

Craig & Amy Williams  
6390 Rotherby Circle  
Hudson OH 44236

**Surface Owner Pits or Impoundment**

Brian Taschler  
795 Towamensing Rd.  
Leighton Pa 18235

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470051000

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

January 4, 2016

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

Subject: DOH Permit for the AUB 54 Pad Site, Ritchie County

- |                  |                 |                 |
|------------------|-----------------|-----------------|
| 513379 AUB54 H1  | 513380 AUB54 H2 | 513381 AUB54 H3 |
| 513382 AUB54 H4  | 513383 AUB54 H5 | 513384 AUB54 H6 |
| 514040 AUB54 H7  | 514041 AUB54 H8 | 514042 AUB54 H9 |
| 514043 AUB54 H10 |                 |                 |

Dear Mr. Martin,

This well site will be accessed from Permit #03-2015-0567 issued to EQT Production Company for access to the State Road. The well site is located off of Ritchie County Route 7/13 SLS. Approved permit must be received before the start of construction.

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, P.E.  
Regional Maintenance Engineer  
Central Office O&G Coordinator

Cc: Nick Bumgardner  
EQT Production Company  
CH, OM, D-3, File

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**Anticipated Frac Additives**  
**Chemical Names and CAS numbers**

1706510270

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
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

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**EQT Production**  
**Hydraulic Fracturing Monitoring Plan**  
**Pad ID: AUB54**  
**Ritchie County, WV**

**1/4/2016**

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**WV Department of Environmental Protection**  
**Page 1 of 3**  
**06/03/2016**

## Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to establish a joint effort between EQT, the West Virginia Office of Oil and Gas (OOG), and local conventional well operators in the Ritchie County area. This plan applies to proposed wells on this pad: 513380, 513382, 513384 and 514041.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,600' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,200' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. The plan will further enable the participants to obtain data and information for a root cause analysis in the event communication between zones does occur during hydraulic fracturing.

These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

### 1. Communications with Conventional Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known conventional wells and well operators within 1,500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

Upon approval of this plan, EQT will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in **Attachment B**.

The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to EQT and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity
4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

### 2. Monitoring

EQT will conduct pressure monitoring on select conventional wells before, during, and after hydraulic fracturing of this pad. EQT has selected conventional wells which are directly above its lateral section and completed within the Alexander formation, at approximately 1,000' intervals. EQT will also monitor select conventional wells that lie within the 1500' area identified above. EQT will monitor the wells prior to, during and post fracturing. Wells selected for monitoring are identified in **Attachment A**.

The wells to be monitored are conventional wells operated by Energy Corporation of America (ECA) or EQT. EQT will install pressure transducers and Eagle Research RTU's to obtain real-time pressure readings on these conventional wells. These units will allow continuous sampling of pressure throughout the fracturing operations.

EQT will also utilize chemical tracers during our hydraulic fracturing. Each well will have two different tracers. Should communication occur, these different tracers may allow us to identify which well(s), and which part of the horizontal well may have communicated with the monitored conventional wells. These tracers will be placed into the fracturing fluid.

EQT will closely monitor drilling and hydraulic fracturing activities to identify any abnormalities related to geology such as loss of fluid circulation during drilling or pressure anomalies noted during fracturing.

This pad will be drilled and hydraulically fractured by EQT without any other modifications to our normal practices, unless communication is observed. These include casing and cementing practices, hydraulic fracturing volumes, pumping rates, drillout, and flowback timeframes. This will assist in establishing a baseline for future monitoring of activities in this area. Should communication be observed, EQT may vary the completion design on fracturing stages completed after the communication is observed.

### **3. Reporting**

EQT will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work on a regular and routine basis, upon request of OOG, or immediately in the event of any noted abnormalities.

Upon completion of the hydraulic fracturing and monitoring, EQT will provide a written report documenting the monitoring activities identified in this plan.

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WellID	Permit	Operator GGX	Operator DEP	Latitude	Longitude	Status	DatumEleva	TD SS	TD	Lateral Map Distance (ft)	SS Horiz	horiz - TD	Hypot Dist	Measured from well#
4708501657	01657	B E TALKINGTON	ROSS AND WHARTON GAS COMPANY, INC.	39.1054000000	-80.8523000000	GAS	870.0000	-985.0000	1855.0000	907.5600	-5445	7300	7356.199097	513380
4708501678	01678	J F DEEM O&G	DEEM, J. F. OIL & GAS, LLC	39.1066000000	-80.8370000000	DRY	905.0000	-966.0000	1871.0000	1311.6700	-5445	7316	7432.65324	514041
4708501709	01709	B E TALKINGTON	ROSS AND WHARTON GAS COMPANY, INC.	39.1065000000	-80.8474000000	GAS	1020.0000	-913.0000	1933.0000	599.8500	-5445	7378	7402.344495	513382
4708501723	01723	B E TALKINGTON	ROSS AND WHARTON GAS COMPANY, INC.	39.1085000000	-80.8424000000	GAS	1050.0000	-965.0000	2015.0000	66.5900	-5445	7460	7460.297194	514041
4708501746	01746	B E TALKINGTON	ROSS AND WHARTON GAS COMPANY, INC.	39.1140000000	-80.8445000000	GAS	930.0000	-916.0000	1846.0000	94.3900	-5445	7291	7291.610965	514041
4708501938	01938	B E TALKINGTON	POSTROCK EASTERN PRODUCTION LLC	39.1032000000	-80.8435000000	GAS	900.0000	-965.0000	1865.0000	418.5400	-5445	7310	7321.97212	513384
4708502004	02004	WILLARD E FERRELL	RITCHIE PETROLEUM CORP.	39.1084000000	-80.8494000000	GAS	1009.0000	-938.0000	1947.0000	209.8600	-5445	7392	7394.978379	513382
4708502018	02018	ALAMCO	TARGA DEVELOPMENT INC.	39.1215000000	-80.8518000000	GAS	990.0000	-1116.0000	2106.0000	1432.2100	-5445	7551	7685.624665	513384
4708502035	02035	ALAMCO	ALAMCO INC	39.1183000000	-80.8572000000	DRY	1095.0000	-945.0000	2040.0000	1089.8800	-5445	7485	7563.931743	513380
4708502057	02057	B E TALKINGTON	OPERATOR UNKNOWN	39.1054000000	-80.8393000000	DRY	926.0000	-1006.0000	1932.0000	570.3200	-5445	7377	7399.013036	514041
4708502080	02080	WV DEPT OF O & G	UNKNOWN -DEP PAID PLUGGING CONTRACT	39.1110000000	-80.8522000000	GAS-P	1000.0000	-1815.0000	2815.0000	205.1300	-5445	8260	8262.546721	513380
4708502082	02082	WILLARD E FERRELL	OPERATOR UNKNOWN	39.1138000000	-80.8486000000	GAS	1191.0000	-934.0000	2125.0000	213.5500	-5445	7570	7573.011528	513384
4708502101	02101	PURSLEYS PULLING	RITCHIE PETROLEUM CORP.	39.1206000000	-80.8435000000	GAS	950.0000	-977.0000	1927.0000	1172.9900	-5445	7372	7464.736401	514041
4708502114	02114	WILLARD E FERRELL	OPERATOR UNKNOWN	39.1161000000	-80.8516000000	GAS	1070.0000	-1160.0000	2230.0000	67.5400	-5445	7675	7675.29717	51382
4708503404	03404	TROY A BRADY	ROSS AND WHARTON GAS COMPANY, INC.	39.1088000000	-80.8554000000	GAS	967.0000	-967.0000	1934.0000	912.8700	-5445	7379	7435.252022	513380
4708503409	03409	TROY A BRADY	POSTROCK EASTERN PRODUCTION LLC	39.1016000000	-80.8395000000	GAS	953.0000	-3957.0000	4910.0000	1423.0900	-5445	10355	10452.33037	514041
4708503414	03414	TROY A BRADY	ROSS AND WHARTON GAS COMPANY, INC.	39.1035000000	-80.8476000000	GAS	852.0000	-1009.0000	1861.0000	1157.2400	-5445	7306	7397.083237	513384
4708503419	03419	TROY A BRADY	ROSS AND WHARTON GAS COMPANY, INC.	39.1056000000	-80.8441000000	GAS	897.0000	-635.0000	1532.0000	29.8200	-5445	6977	6977.063726	513384
4708503439	03439	TROY A BRADY	ROSS AND WHARTON GAS COMPANY, INC.	39.1101000000	-80.8449000000	GAS	917.0000	-974.0000	1891.0000	344.4000	-5445	7336	7344.079749	513384
4708503464	03464	TROY A BRADY	ROSS AND WHARTON GAS COMPANY, INC.	39.1124000000	-80.8400000000	GAS	936.0000	-968.0000	1904.0000	1136.1900	-5445	7349	7436.311499	514041
4708503998	03998	EPC	EQT PRODUCTION COMPANY	39.1166000000	-80.8462000000	GAS	0.0000	-2057.0000	2057.0000	80.2200	-5445	7502	7502.42889	514041
4708508160	08160	ALAMCO	SWN PRODUCTION COMPANY, LLC	39.1200000000	-80.8554000000	GAS	1103.0000	-1458.0000	2561.0000	1391.8500	-5445	8006	8126.086538	513384
4708509668	09668	ROSS & WHARTON	ROSS AND WHARTON GAS COMPANY, INC.	39.1035000000	-80.8487000000	GAS	846.0000	-4156.0000	5002.0000	1445.5400	-5445	10447	10546.53473	513384
4708509735	09735	ROSS MIKE	ROSS AND WHARTON GAS COMPANY, INC.	39.1090000000	-80.8396000000	TA	872.0000	-5118.0000	5990.0000	860.2600	-5445	11435	11467.31321	514041
4708530871	30871	PGH & WV GAS		39.1169000000	-80.8597000000	GAS	0.0000	-1982.0000	1982.0000	1412.1100	-5445	7427	7560.051829	513380

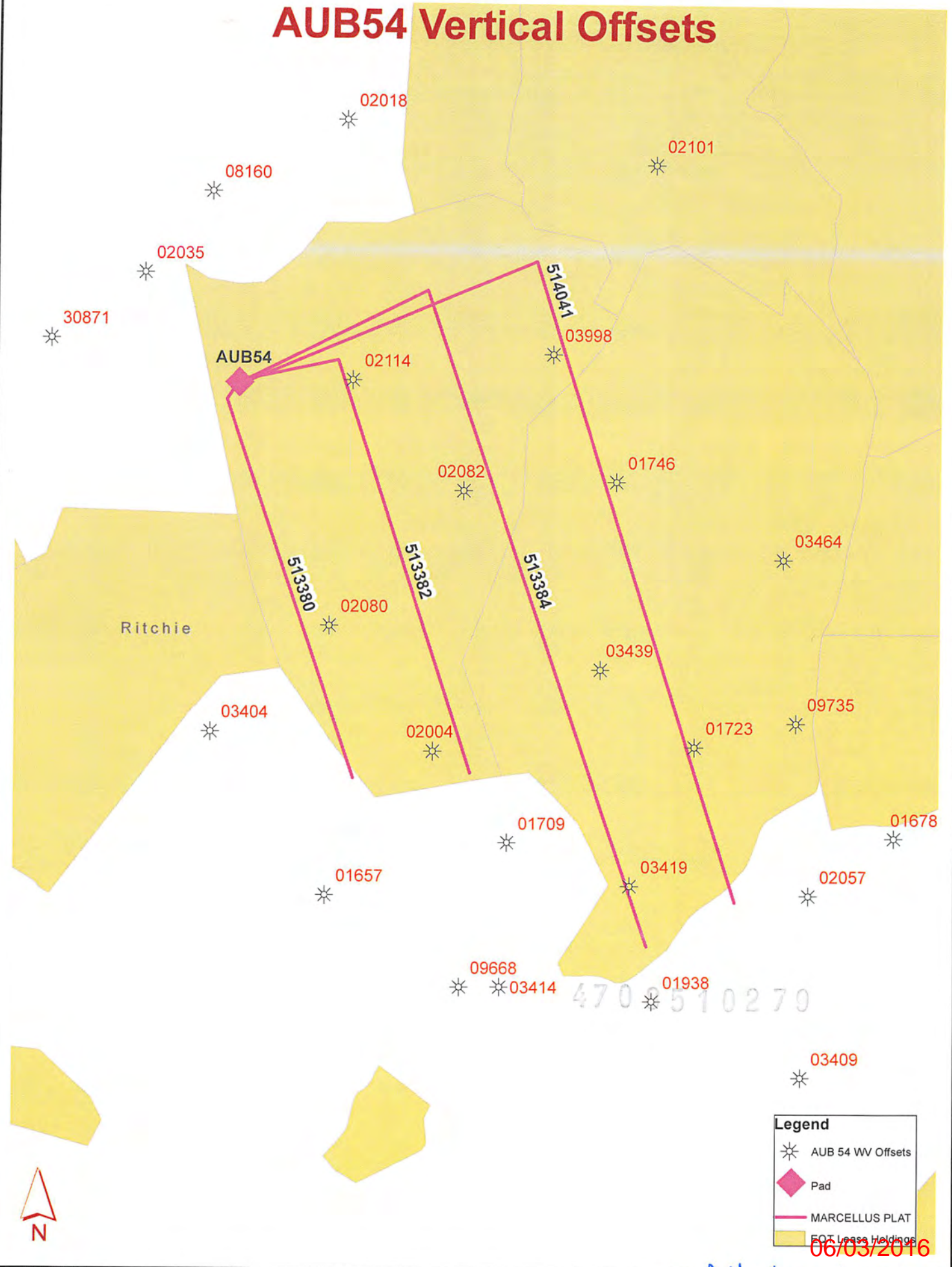
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Attachment A (1)

# AUB54 Vertical Offsets







625 Liberty Ave, Suite 1700  
Pittsburgh PA 15222  
www.eqt.com

TEL: (412) 395-3305  
FAX: (412) 395-2156

John Centofanti  
Corporate Director,  
Environmental Affairs

(date)

[Conventional Well Operator]  
[address]  
[state]

**RE: Ritchie County Hydraulic Fracturing Notice**

Dear Sir/Madam,

EQT has developed a Marcellus pad (Auburn 54 pad) located in Ritchie County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,600' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,200' TVD).

EQT anticipates conducting hydraulic fracturing at the Pennsboro 40 pad during the [first,second, third,fourth] quarter of [year]. We have identified conventional natural gas wells operated by your company within 1,500' (lateral distance) of our new/planned laterals. Plats for each well on this pad are attached.

We recommend that conventional well operators conduct the following activities before, during, and after fracturing operations:

1. Inspect surface equipment, prior to fracturing, to establish integrity and establish well conditions.
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas, or pressure.
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified.

Please feel free to contact me at 412-395-3305 with any questions or comments. You may also contact the West Virginia Office of Oil and Gas at 304-926-0440.

Sincerely,  
**EQT Production**

John Centofanti  
Corporate Director, Environmental Affairs

cc: James Martin, WV Office of Oil and Gas

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Attachment B

**PROJECT INFORMATION**

PROJECT NAME: AUB-54  
 TAX PARCELS:  
 UNION DISTRICT  
 MAP 10-32  
 SURFACE OWNER:  
 BRIAN TASCHLER ET AL  
 UNION DISTRICT  
 RITCHIE COUNTY, WV  
 TOTAL PROPERTY AREA: 204.58 +/- ACRES  
 OIL AND GAS ROYALTY OWNER:  
 DENISE MALL ET AL  
 UNION DISTRICT  
 RITCHIE COUNTY, WV  
 LEASE AREA: 208 +/- ACRES  
 LEASE AREA NO.: 107948

**SURFACE OWNER DISTURBANCE**

SURFACE OWNER	LIMIT OF DISTURBANCE
BRIAN TASCHLER ET AL	17.6 ACRES
KIEDAISCHI & SUMMERS ENTERPRISES	8.6 ACRES
LOUIS J. KOPY	0.6 ACRES
FERRY A. RIDDLE ET AL	2.3 ACRES

**SITE LOCATION:**  
 THE AUB-54 SITE IS LOCATED ON THE RIDGE SOUTH OF CO. RT. 7/18 APPROXIMATELY 1.13 MILES SOUTHEAST OF THE CO. RT. 7/18 AND CO. RT. 7/13 INTERSECTION.

**LOCATION COORDINATES**

AUB-54 SITE ENTRANCE  
 LATITUDE: 39.124631 LONGITUDE: -80.647280 (NAD 83)  
 AUB-54 CENTER OF WELL PAD  
 LATITUDE: 39.118949 LONGITUDE: -80.654494 (NAD 83)  
 AUB-54 FLOW CENTER OF FLOW BACK PIT  
 LATITUDE: 39.114875 LONGITUDE: -80.653466 (NAD 83)

**SITE DISTURBANCE COMPUTATIONS**

WELL PAD AREA & TANK BATTERY PAD = 5.8 ± ACRES  
 MAIN ACCESS AREA = 3.6 ± ACRES  
 STOCKPILE AREA = 8.4 ± ACRES  
 FLOW BACK PIT & MANGROVE AREA = 3.0 ± ACRES  
 CUT THRU AREA = 2.3 ± ACRES  
 TOTAL SITE DISTURBANCE = 29.1 ± ACRES

**ENTRANCE PERMIT**

EQT PRODUCTION COMPANY WILL OBTAIN AN ENCROACHMENT PERMIT (FORM M-100) 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 #152779000. 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 AN AREA THAT IS NOTED AS "Other Areas" and could be designated either Zone D or Zone X on Flood Insurance Rate Maps 54085C033C & 54085C029C dated February 2, 2012.

**ENVIRONMENTAL NOTES**

A WETLAND DELINEATION WAS PERFORMED ON 4-16-2015, 8-6-2015, AND 8-7-2015 BY POTESTA & ASSOCIATES, INC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE 8-17-2015 REPORT WAS PREPARED BY POTESTA & ASSOCIATES, INC. SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THIS REPORT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USE OF THE WVDGP. IT IS STRONGLY RECOMMENDED THAT THE APPROPRIATE AGENCIES BE CONSULTED IN AN EFFORT TO GAIN BETTER COMPREHENSION 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.

**GENERAL DESCRIPTION**

THE AUB-54 PAD AND PITS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

**RESTRICTIONS NOTES:**

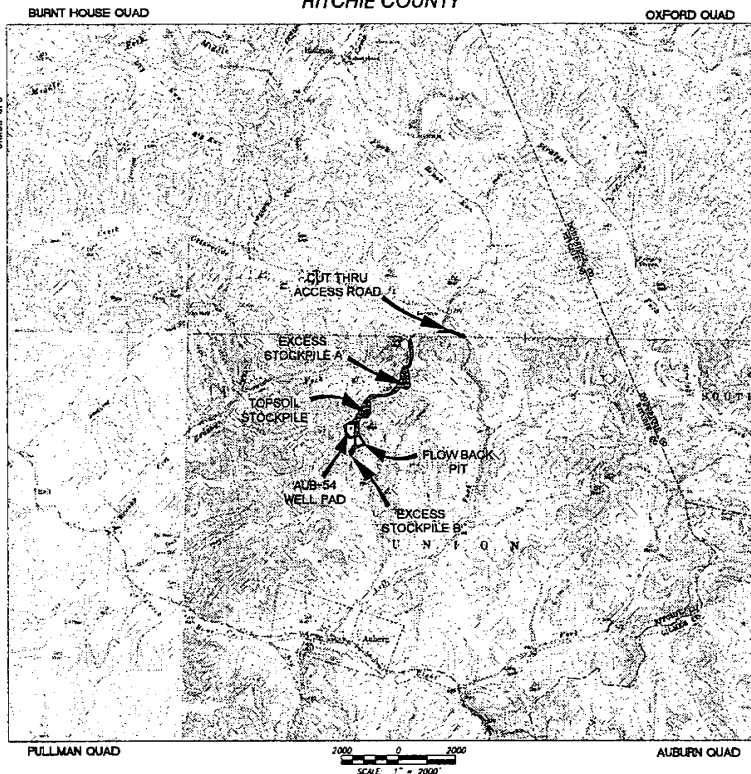
1. THERE ARE NO PERENNIAL STREAMS/WETLANDS/OTHER WATER BODIES WITHIN 100 FEET OF THE WELL PAD LOD.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE PAD AND LOD.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE PAD AND LOD.
4. THERE ARE NO KNOWN EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELLS/5 BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE PAD.

# AUB-54 FINAL SITE PLAN

## EQT PRODUCTION COMPANY

PROPOSED WELL NUMBERS: H2-WV513380, H3-WV513381, H4-WV513382, H5-WV513383, H6-WV513384, AND H8-WV514041

SITUATE ON LEFT FORK & BRUSHY FORK OF BONE CREEK IN UNION DISTRICT, RITCHIE COUNTY



**LIST OF DRAWINGS**

- 1 - COVER SHEET
- 2 - NOTES
- 3 - OVERALL SHEET INDEX & VOLUMES
- 4 - PRELIMINARY SITE PLAN
- 5 - PRELIMINARY SITE PLAN
- 6 - PRELIMINARY SITE PLAN
- 7 - PRELIMINARY SITE PLAN
- 8 - PRELIMINARY SITE PLAN
- 9 - ACCESS ROAD PROFILES
- 10 - MAIN ACCESS CROSS SECTIONS
- 10 - FLOW BACK PIT AND CUT THRU ACCESS ROAD PROFILES
- 11 - STREAM IMPACTS
- 12 - MAIN ROAD CROSS SECTION
- 13 - MAIN ROAD CROSS SECTION
- 14 - FLOW BACK PIT AND CUT THRU CROSS-SECTIONS
- 15 - PAD AND PIT CROSS SECTIONS
- 16 - STOCKPILE CROSS SECTIONS
- 17 - PRELIMINARY RECLAMATION PLAN
- 18 - CONSTRUCTION DETAILS
- 19 - CONSTRUCTION DETAILS
- 20 - CONSTRUCTION DETAILS
- 21 - CONSTRUCTION DETAILS
- 22 - CONSTRUCTION DETAILS

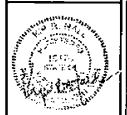
LEGEND	
EX. INDEX CONTOUR	PROP. INDEX CONTOUR
EX. INTERMEDIATE CONTOUR	PROP. INTERMEDIATE CONTOUR
EX. BOUNDARY LINE	PROP. GRADING LIMITS
EX. ROAD EDGE OF GRAVEL/DIRT	PROP. LIMITS OF DISTURBANCE
EX. ROAD EDGE OF PAVEMENT	PROP. WELL PAD
EX. ROAD CENTERLINE	PROP. WELL HEAD
EX. DITCHLINE	PROP. 4" PVC DRAIN PIPE
EX. CULVERT	PROP. SUMP DRAIN
EX. CONCRETE	PROP. CONFINEMENT BUSH
EX. FENCELINE	PROP. PIT/AMPHIBIOUS CL.
EX. GATE	PROP. PERIMETER SAFETY FENCE
EX. OVERHEAD UTILITY R/W	PROP. ACCESS GATE WITH EMERGENCY LIGHTING
EX. CITY TREE	
EX. POWER POLE	
EX. OVERHEAD UTILITY R/W	
EX. TELEPHONE LINE	
EX. GASLINE	PROP. ROCK CONSTRUCTION ENTRANCE
EX. GASLINE R/W	
EX. WATERLINE	
EX. WATER WELL	
EX. GAS WELL	
EX. TREELINE	PROP. ROAD EDGE OF GRAVEL
EX. RESPONSE TREE	PROP. ROAD CENTERLINE
EX. DELINEATED STREAM	PROP. V-DITCH W/ CHECK DAMS
EX. DELINEATED WETLAND	PROP. DITCH RZLEET CULVERT (DSC)
EX. BUILDING	PROP. RIP-RAP OUTLET PROTECTION
EX. BRIDGE	PROP. GUARDRAIL
100' WETLAND/STREAM BUFFER	PROP. COMPOST FILTER SOCK
	SECTION LINE
	MATCHLINE
	X-SECTION GRID INDEX
	X-SECTION GRID INTERMEDIATE
	X-SECTION PROPOSED GRADE
	X-SECTION EXISTING GRADE
	X-SECTION WATER SURFACE
	SPOT ELEVATION
	CENTER OF PAD

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.  
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**APPROVED**  
**WVDEP OOG**  
 6/2/2016

**OPERATOR**  
 EQT PRODUCTION COMPANY  
 OPERATOR ID: 308861  
 116 PROFESSIONAL PLACE  
 P.O. BOX 228  
 BRIDGEPORT, WV 26304  
 PHONE: (304) 348-3870

**ENGINEER/SURVEYOR**  
 SMITH LAND SURVEYING, INC.  
 12 VANDORF DRIVE  
 P.O. BOX 150  
 GLENVILLE, WV 26351  
 PHONE: (304) 452-5034



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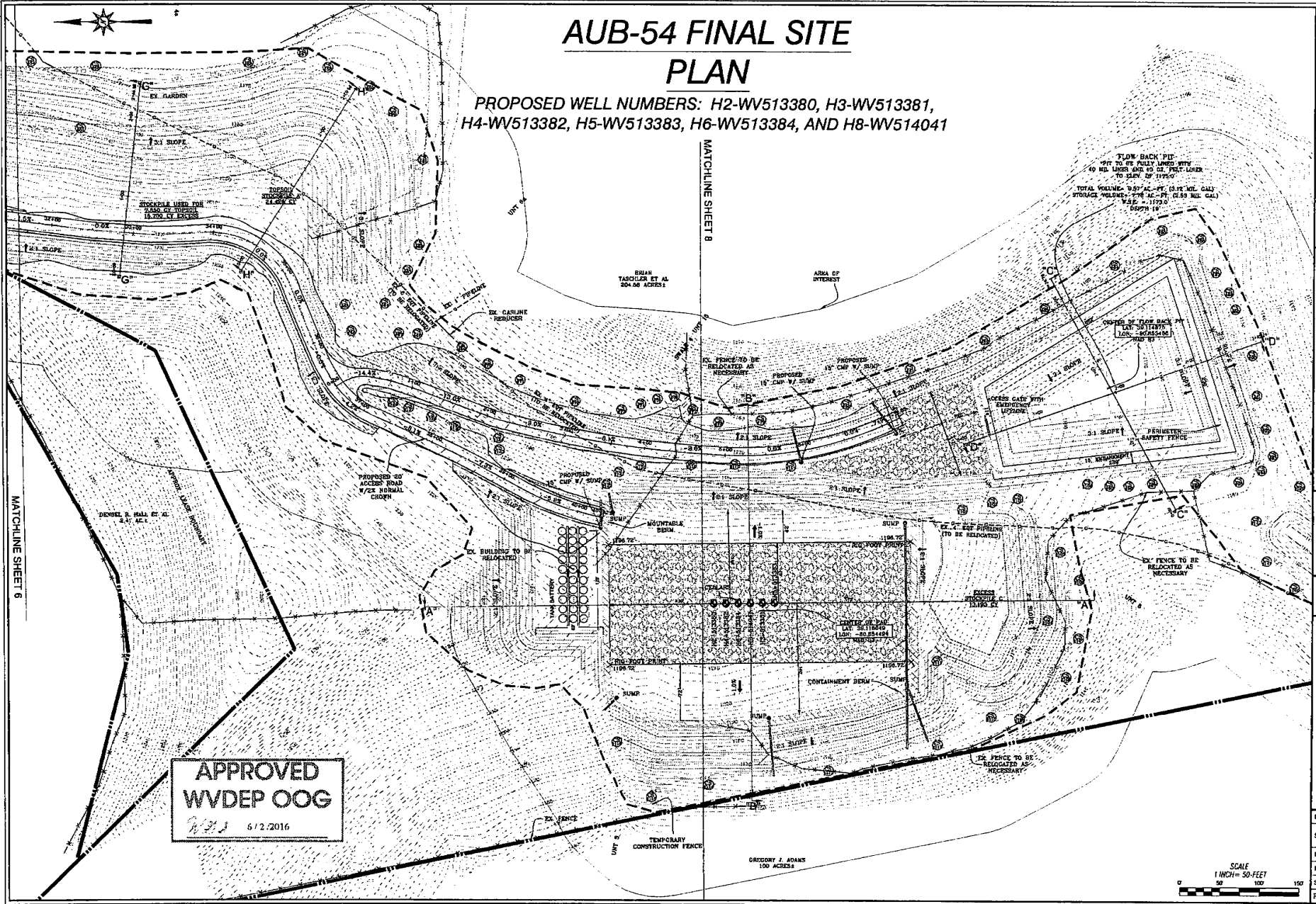
FOR: EQT PRODUCTION COMPANY

COVER SHEET  
**AUB-54 FINAL SITE PLAN**  
 UNION DISTRICT  
 RITCHIE COUNTY, WV

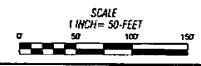
DATE: 11-6-15  
 SCALE: 1" = 2000'  
 DESIGNED BY: XLH  
 FILE NO. 7580  
 SHEET 1 OF 22  
 REV: 02-11-2016

# AUB-54 FINAL SITE PLAN

PROPOSED WELL NUMBERS: H2-WV513380, H3-WV513381, H4-WV513382, H5-WV513383, H6-WV513384, AND H8-WV514041



**APPROVED**  
WVDEP OOG  
6/2/2016



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

**AUB-54 FINAL SITE PLAN**  
UNION DISTRICT  
RITCHIE COUNTY, WV

DATE: 11-6-15  
SCALE: 1" = 50'  
DESIGNED BY: KJH  
FILE NO.: 7550  
SHEET 7 OF 22  
REV: 02-10-2016

**PROJECT INFORMATION**

PROJECT NAME: AUB-54  
 TAX PARCEL: UNION DISTRICT MAP 10-32  
 SURFACE OWNER: IRISAN TASCHEER ET AL UNION DISTRICT RITCHIE COUNTY, WV TOTAL PROPERTY AREA 204.58 +/- ACRES  
 OIL AND GAS ROYALTY OWNER: DONCEL HALL, ET AL UNION DISTRICT RITCHIE COUNTY, WV LEASE AREA 208 +/- ACRES LEASE AREA NO. 1070948

SURFACE OWNER DISTURBANCE	
SURFACE OWNER	LIMIT OF DISTURBANCE
IRISAN TASCHEER ET AL	17.6 ACRES
FRANCOIS & SUMMERS ENTERPRISES	0.6 ACRES
LOGAN J ROFF	0.6 ACRES
JERRY A. KIDDLE ET AL.	2.3 ACRES

# AUB-54 FINAL SITE PLAN

## EQT PRODUCTION COMPANY

PROPOSED WELL NUMBERS: H2-WV513380, H3-WV513381, H4-WV513382, H5-WV513383, H6-WV513384, AND H8-WV514041

SITUATE ON LEFT FORK & BRUSHY FORK OF BONE CREEK IN UNION DISTRICT, RITCHIE COUNTY

**LOCATION COORDINATES**

AUB-54 SITE ENTRANCE  
 LATITUDE 39.124823 LONGITUDE -80.647286 (NAD 83)  
 AUB-54 CENTER OF WELL PAD  
 LATITUDE 39.186949 LONGITUDE -80.854494 (NAD 83)  
 AUB-54 FLOW CENTER OF FLOW BACK PIT  
 LATITUDE 39.144675 LONGITUDE -80.853160 (NAD 83)

**SITE DISTURBANCE COMPUTATIONS**

WELL PAD AREA & TANK BATTERY PAD = 5.8 ± ACRES  
 MAIN ACCESS AREA = 9.0 ± ACRES  
 STOCKPILE AREA = 8.4 ± ACRES  
 FLOW BACK PIT & HANDOFF AREA = 3.0 ± ACRES  
 CUT THRU AREA = 2.3 ± ACRES  
 TOTAL SITE DISTURBANCE = 29.1 ± ACRES

**ENTRANCE PERMIT**

EQT PRODUCTION COMPANY WILL OBTAIN AN ENTRANCE PERMIT (FORM 60-105) 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 #126729990. 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 AN AREA THAT IS NOTED AS "Other Areas" and could be designated either Zone D or Zone X on Flood Insurance Rate Maps 540650025C & 540650025C dated February 2, 2012.

**ENVIRONMENTAL NOTES**

A WETLAND DELINEATION WAS PERFORMED ON 4-16-2015, 8-6-2015, AND 8-7-2015 BY POTESTA & ASSOCIATES, INC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE 8-17-2015 REPORT WAS PREPARED BY POTESTA & 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 APPOINTMENT AGENCIES BE CONSULTED IN AN EFFORT TO OBTAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO BEGINNING 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.

**GENERAL DESCRIPTION**

THE AUB-54 PAD AND PITS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

**RESTRICTIONS NOTES**

1. THERE ARE NO PERENNIAL STREAMS/WETLANDS/OTHER WATER BODIES WITHIN 100 FEET OF THE WELL PAD L&D.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE PAD AND L&D.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE PAD AND L&D.
4. THERE ARE NO KNOWN EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE PAD.



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- 22 - CONSTRUCTION DETAILS

LEGEND	
EX 1/8" INCH CONTOUR	PROF 1/8" INCH CONTOUR
EX INTERMEDIATE CONTOUR	PROF INTERMEDIATE CONTOUR
EX BOUNDARY LINE	PROF GRADING LIMITS
EX ROAD EDGE OF GRAVEL/PAV	PROF LIMITS OF DISTURBANCE
EX ROAD EDGE OF PAVEMENT	PROF WTA PAD
EX ROAD CENTERLINE	PROF WTA HEAD
EX DITCHLINE	PROP 4" PVC DRAIN PIPE
EX CULVERT	PROP DUMP DRAIN
EX CORROSION	PROP CONTAINMENT BERM
EX FENCELINE	PROP PERIMETER SAFETY FENCE
EX GATE	PROP ACCESS GATE WITH EMERGENCY LIFELINE
EX OVERHEAD UTILITY	
EX OVERHEAD UTILITY R/W	
EX POWER POLE	
EX C&G WIRE	
EX TELEPHONE LINE	
EX GASLINE	
EX GASLINE R/W	
EX WATERLINE	
EX WATER WELL	
EX GAS WELL	
EX TRESTLE	
EX REFERENCED TREE	
EX DELINEATED STREAM	
EX DELINEATED WETLAND	
EX BUILDING	
EX BRIDGE	
100' WETLAND/STREAM BUFFER	
PROF ROCK CONSTRUCTION ENTRANCE	
PROF ROAD EDGE OF GRAVEL	
PROF ROAD CENTERLINE	
PROF V-DITCH W/ CHECK DAMS	
PROF EDGE RELIEF CULVERT (S&C)	
PROF 8" X 4" INLET PROTECTION	
PROF CLABRAGE	
PROF COMPOST FILTER SOCK	
SECTION LINE	
WATERLINE	
X-SECTION GRID INDEX	
X-SECTION GRID INTERMEDIATE	
X-SECTION PROPOSED GRADE	
X-SECTION EXISTING GRADE	
X-SECTION WATER SURFACE	
SPOT ELEVATION	
CENTER OF PAD	

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*Michael Hoff*  
 2/19/16

**OPERATOR**  
 EQT PRODUCTION COMPANY  
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THIS DOCUMENT WAS PREPARED BY SMITH LAND SURVEYING FOR EQT PRODUCTION COMPANY

COVER SHEET  
**AUB-54 FINAL SITE PLAN**  
 UNION DISTRICT  
 RITCHIE COUNTY, WV

DATE: 11-6-15  
 SCALE: 1" = 2000'  
 DESIGNED BY: KJH  
 FILE NO: 7580  
 SHEET 1 OF 22  
 REV: 02-11-2016

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 WV Department of Environmental Protection

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# AUB-54 FINAL SITE PLAN EQT PRODUCTION COMPANY



SHEET 5



**AUB-54 COMPOST FILTER SOCK CALCULATIONS**

No.	Dia	Length (ft)
1	12	31
2	12	31
3	12	147
4	12	55
5	12	66
6	12	21
7	12	41
8	12	30
9	12	31
10	12	35
11	12	65
12	12	49
13	12	43
14	12	39
15	12	48
16	12	101
17	12	34
18	12	45
19	12	24
20	12	29
21	12	34
22	12	44
23	12	42
24	12	34
25	12	22
26	12	25
27	12	26
28	12	29
29	12	25
30	12	59

**AUB-54 COMPOST FILTER SOCK CALCULATIONS**

No.	Dia	Length (ft)
31	12	89
32	12	143
33	12	20
34	12	32
35	12	25
36	12	21
37	12	15
38	12	25
39	12	26
40	12	23
41	12	26
42	12	21
43	12	43
44	12	39
45	12	89
46	12	16
47	12	16
48	12	45
49	12	25
50	12	31
51	12	40
52	12	31
53	12	28
54	12	26
55	12	27
56	12	154
57	12	26
58	12	37
59	12	27
60	12	58

**AUB-54 COMPOST FILTER SOCK CALCULATIONS**

No.	Dia	Length (ft)
61	12	141
62	12	27
63	12	24
64	12	39
65	12	27
66	12	22
67	12	29
68	12	20
69	12	51
70	12	42
71	12	47
72	12	59
73	12	57
74	12	25
75	12	24
76	12	26
77	12	57
78	12	25
79	12	33
80	12	211
81	12	111
82	12	16
83	12	86
84	12	110
85	12	31
86	12	22
87	12	26
88	12	20
89	12	36
90	12	71

**AUB-54 COMPOST FILTER SOCK CALCULATIONS**

No.	Dia	Length (ft)
91	12	52
92	12	53
93	12	19
94	12	21
95	12	40
96	12	62
97	12	40
98	12	31
99	12	25
100	12	28
101	12	47
102	12	29
103	12	21
104	12	28
105	12	40
106	12	45
107	12	22
108	12	28
109	12	32
110	12	56
111	12	219
112	12	22
113	12	88
114	12	68
115	12	26
116	12	13
117	12	44
118	12	55
119	12	87
120	12	35

**AUB-54 COMPOST FILTER SOCK CALCULATIONS**

No.	Dia	Length (ft)
121	12	19
122	12	55
123	12	19
124	12	32
125	12	44
126	12	21
127	12	24
128	12	34
129	12	33
130	12	21
131	12	34
132	12	36
133	12	39
134	12	24
135	12	19
136	12	17
137	12	199
138	12	52
139	12	60
140	12	62
141	12	64
142	12	24
143	12	29
144	12	21
145	12	26
146	12	17
147	12	16
148	12	61
149	12	134
150	12	19

**COMPOST FILTER SOCK TOTALS**

Dia	Total Length
12"	150 2063
18"	6 90
24"	24 576

**LAND USE PERFORMANCE DATA**

NAME	VOLUME (CY)
A	24 825
TOTAL	24 825

**STREAM CHANNELS**

UNIT #	LENGTH
1	67
2	47
3	52

**POST AUB-54 COMPOST FILTER SOCK TOTALS WITH SEPARATION**

DESCRIPTION	CUR (CY)	FILL (CY)	TOPSOIL (CY)	SPUR (CY)	ROW (CY)	MAINTENANCE (CY)	WIDTH OF ROAD (FT)
ACTUAL AND PROPOSED TOTALS	3,224	8,272	5,461	507	---	125	600
ROAD ACCESS ROAD	5,575	54,894	1,720	8,420	176	---	136
ROAD SIDE DRAINAGE	2,344	1,074	821	883	---	---	---
4000 RACKETS	11,942	30,162	2,195	8,780	---	---	---
TRUCK RACKETS	11,162	41	1,429	12,518	---	---	---
TOTAL ROAD	30,227	88,863	5,322	18,510	---	---	---
TOTAL GRADDED TOPSOIL (CY)	---	---	18,424	---	---	---	---
TOTAL REQUIRED TOPSOIL (CY)	---	---	23,551	---	---	---	---
TOTAL AVAILABLE TOPSOIL (CY)	---	---	24,425	---	---	---	---
TOTAL REQUIRED TOPSOIL (CY)	---	---	31,579	---	---	---	---
TOTAL AVAILABLE TOPSOIL (CY)	---	---	39,091	---	---	---	---

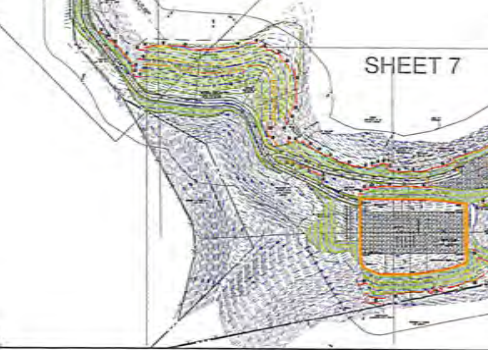
**FROM BULK PI COMBINATION SCHEDULE VOLUME SUMMARY**

ELEVATION	BARRIS	GAUGING	ROW FT
2150	0	0.00	0.00
2154	2388.8	122,347.5	0.249
2160	6,818.8	205,212.4	0.657
2167	12,504.5	404,578.9	1.475
2184	16,844.2	786,295.4	2.124
2186	21,319.3	1,026,114.2	3.036
2189	26,427.8	1,361,510.5	4.176
2190	42,841.2	1,728,426.7	5.450
2172	53,844.6	2,293,967.8	4.546
2174	67,028.8	2,824,177.9	6.830
2176	74,290.2	3,129,126.4	6.520



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SHEET 6



SHEET 7



SHEET 8

MDC  
2/19/16



THIS DOCUMENT WAS  
PREPARED BY JIMMY  
LAND SURVEYING  
FOR EQT PRODUCTION  
COMPANY

AUB-54 FINAL  
SITE PLAN  
UNION DISTRICT  
RITCHIE COUNTY, WV

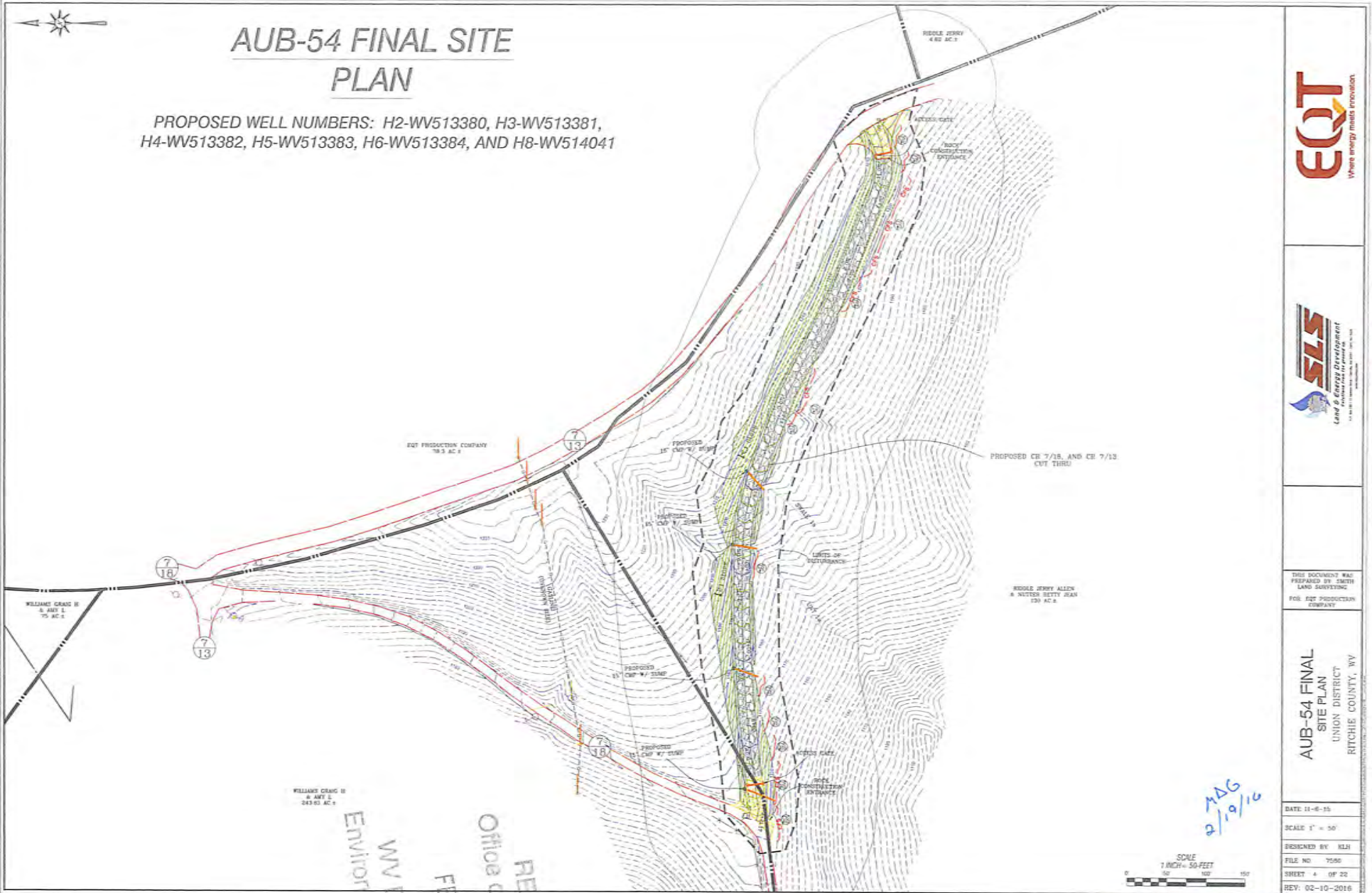
DATE 01-05-15  
SCALE 1" = 200'  
DESIGNED BY KJH  
FILE NO 7550  
SHEET 9 OF 22  
REV 02-10-2016

4708510279



# AUB-54 FINAL SITE PLAN

PROPOSED WELL NUMBERS: H2-WV513380, H3-WV513381, H4-WV513382, H5-WV513383, H6-WV513384, AND H8-WV514041



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

AUB-54 FINAL SITE PLAN UNION DISTRICT RITCHIE COUNTY, WV

DATE: 11-6-15  
SCALE: 1" = 50'  
DESIGNED BY: KJH  
FILE NO: 7500  
SHEET 4 OF 22  
REV: 02-10-2016

*MAG  
2/10/16*

*May need additional*

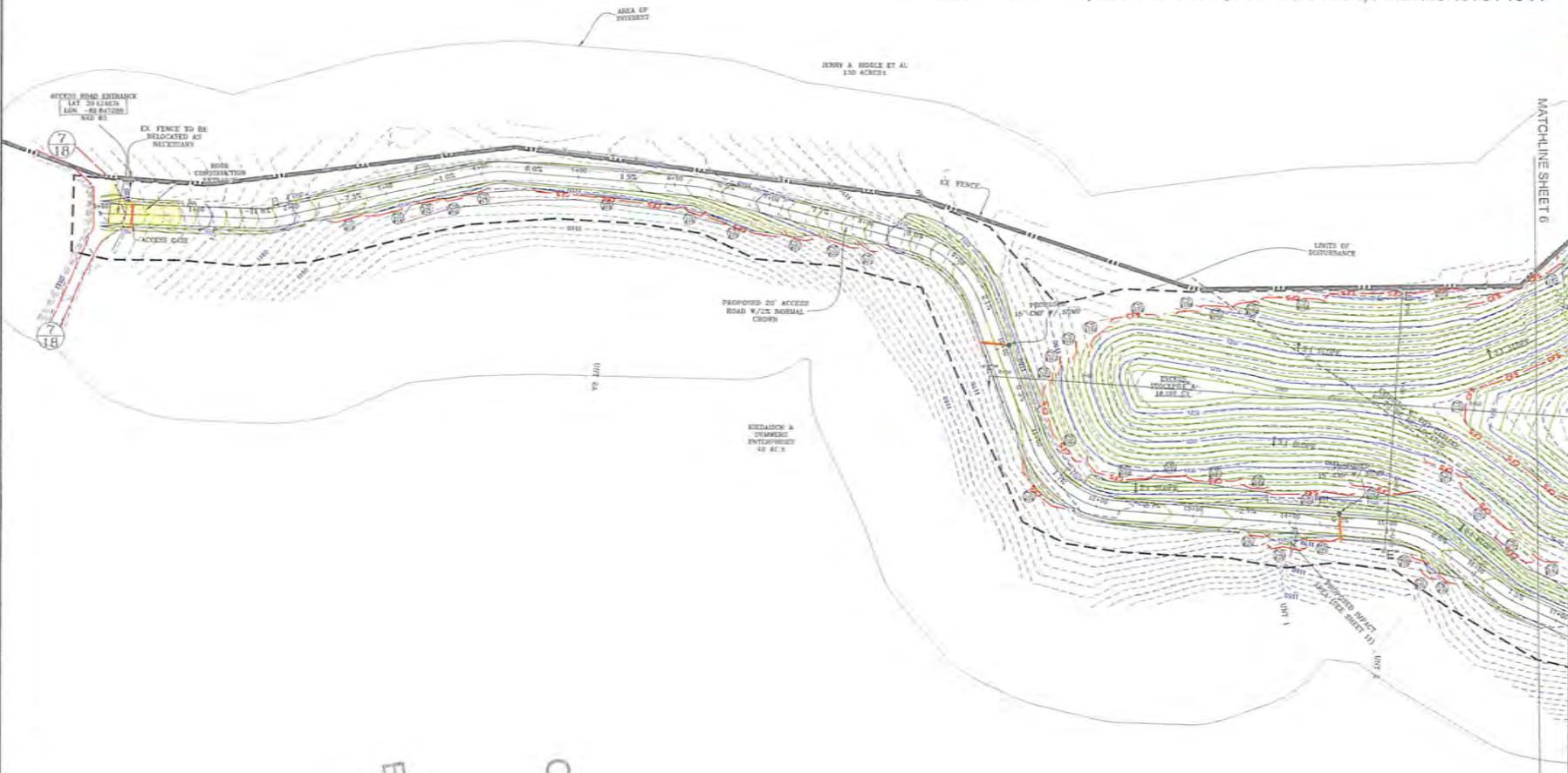
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MATCHLINE SHEET 6

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AUB-54 FINAL SITE PLAN  
UNION DISTRICT  
RITCHIE COUNTY, WV

DATE 11-6-15  
SCALE 1" = 50'  
DESIGNED BY KJA  
FILE NO 7580  
SHEET 5 OF 22  
REV 02-10-2016



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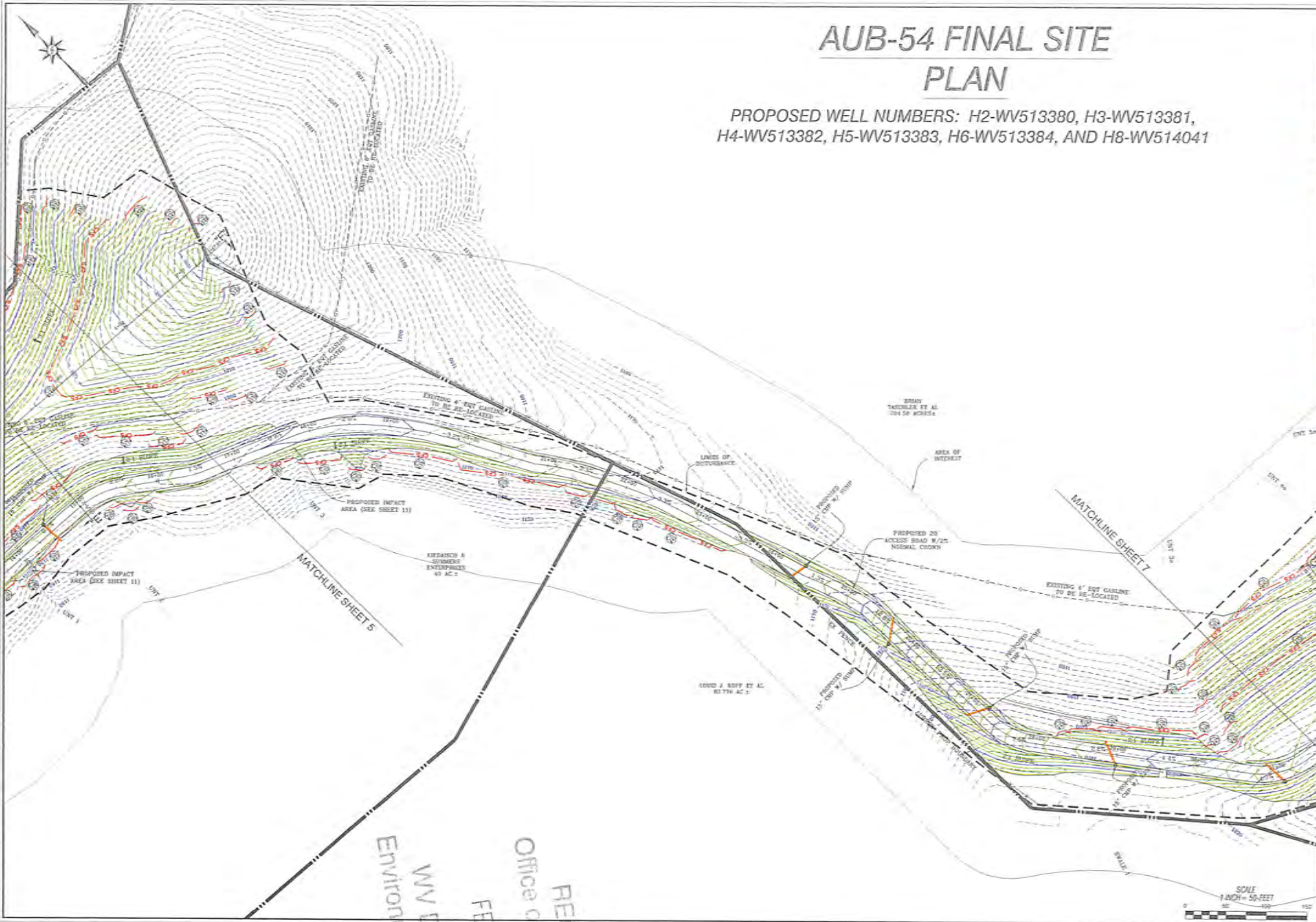
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AUB-54 FINAL SITE PLAN  
UNION DISTRICT  
RITCHIE COUNTY, WV

DATE 11-6-15  
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DESIGNED BY: RLH  
FILE NO. 7560  
SHEET 6 OF 22  
REV 02-10-2016

MAG  
2/19/16

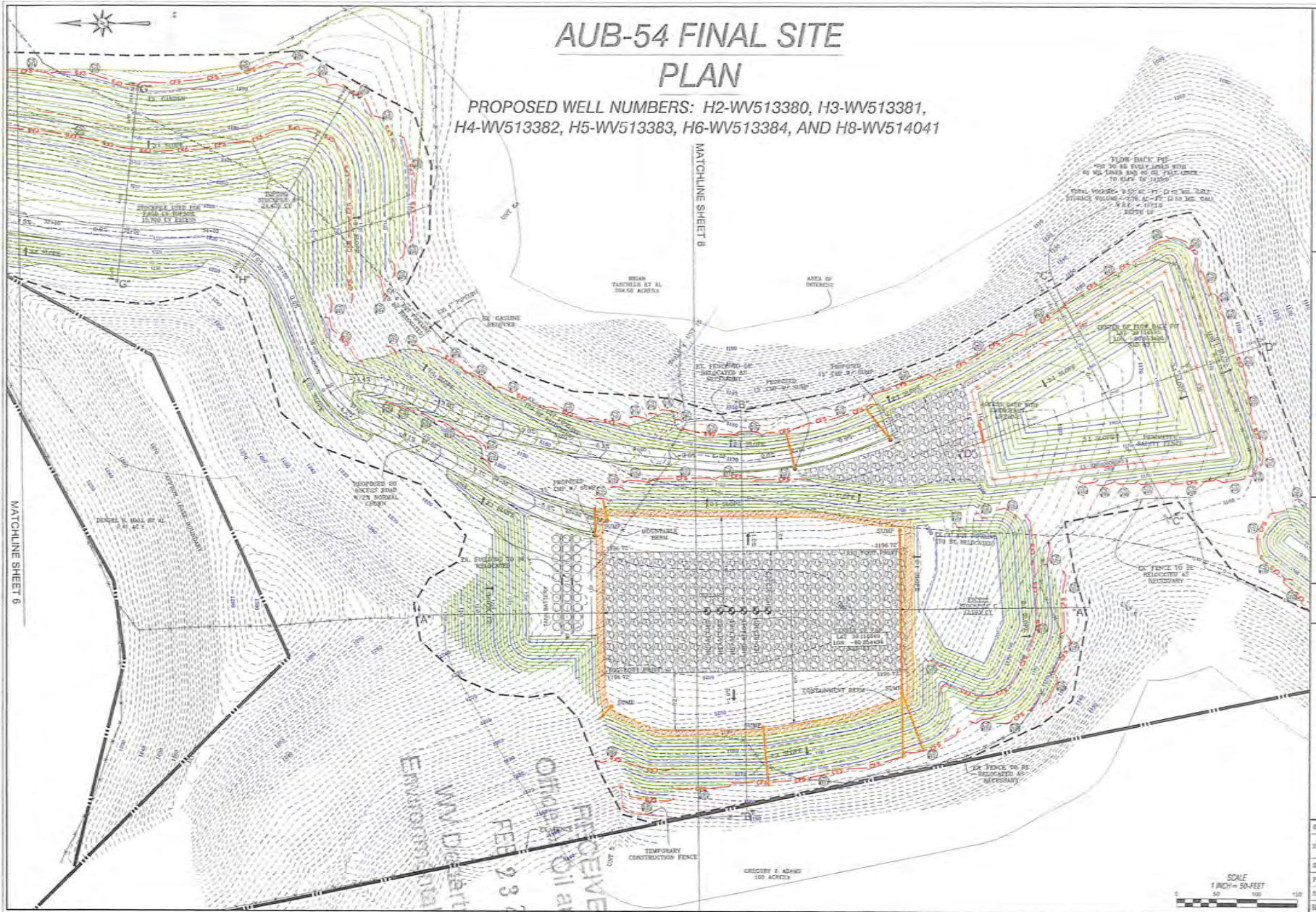


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THIS DOCUMENT WAS PREPARED BY SUTHE LAND SURVEYING COMPANY FOR EQT PRODUCTION COMPANY

**AUB-54 FINAL SITE PLAN**  
UNION DISTRICT  
RITCHIE COUNTY, WV

DATE 11-9-15  
SCALE 1" = 50'  
DESIGNED BY JKH  
FILE NO 7580  
SHEET 7 OF 23  
REV 02-10-2016

4708510279

MAG 01/16



# AUB-54 FINAL SITE PLAN

PROPOSED WELL NUMBERS: H2-WV513380, H3-WV513381, H4-WV513382, H5-WV513383, H6-WV513384, AND H8-WV514041



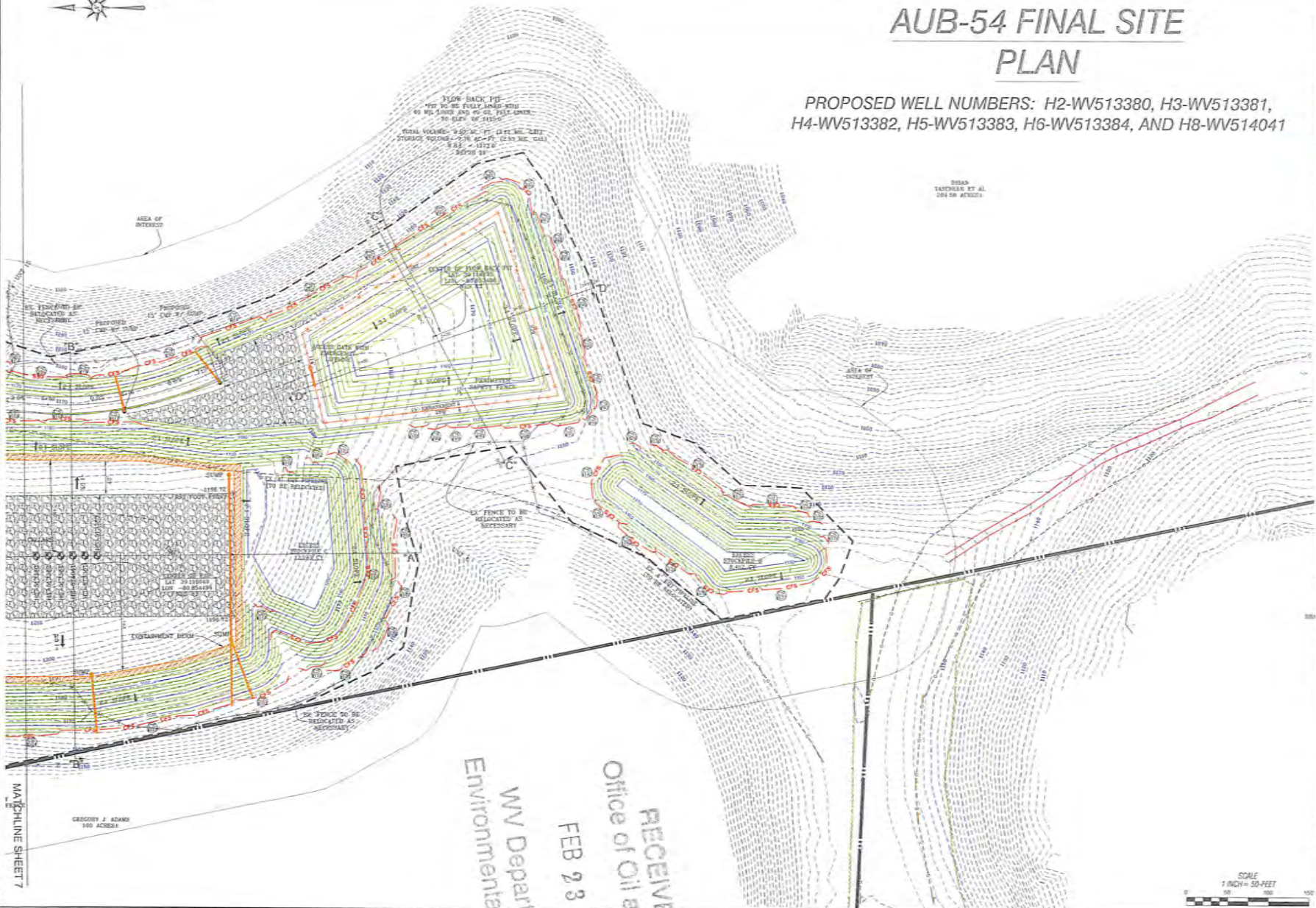
4708510279

THIS DOCUMENT WAS PREPARED BY: DITCH LAND SURVEYING FOR EXT PRODUCTION COMPANY

AUB-54 FINAL SITE PLAN UNION DISTRICT RITCHIE COUNTY, WV

DATE 11-6-15  
SCALE 1" = 50'  
DESIGNED BY: RLH  
FILE NO: 7580  
SHEET 8 OF 22  
REV 02-10-2016

MJC  
01/19/16



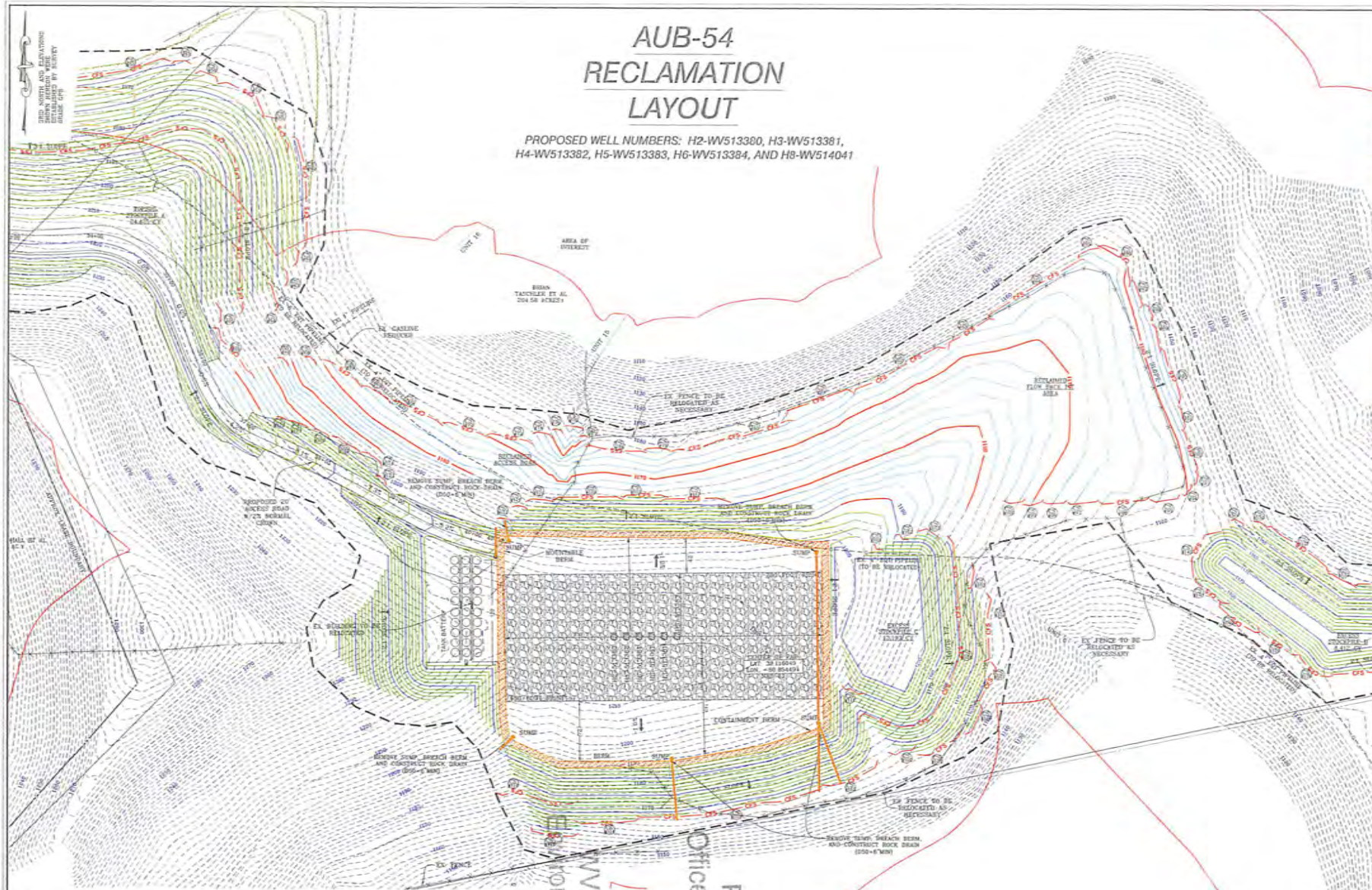
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FEB 23 2016  
WV Department of  
Environmental Protection



MAINTENANCE ROAD

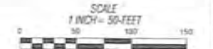
# AUB-54 RECLAMATION LAYOUT

PROPOSED WELL NUMBERS: H2-WV513380, H3-WV513381,  
H4-WV513382, H5-WV513383, H6-WV513384, AND H8-WV514041



NOTE  
ANY AREAS BACKFILLED DURING RECLAMATION WILL BE COMPLETED USING A MINIMUM 24" LIFT THICKNESS AND WILL BE COMPACTED TO AT LEAST 90% OF THE STANDARD PROCTOR (ASTM D-698)

SITE RECLAMATION NARRATIVE  
WITHIN SIX MONTHS OF THE EXPIRATION OF APPROVAL OF THIS WELL PLAN, THE SITE SHALL BE RESTORED AND RESTORED TO A PRE-CONSTRUCTION CONDITION. THE ASSESS AND PLAN FOR THE GROUNDWATER DEWATERING SYSTEM. ALL EXISTING BARRIERS SHALL BE REPECTED, REPAIR AND REPLACED AS NECESSARY BEFORE RECLAMATION CAN BEGIN. THE SITE SHALL BE REVEGETATED AS INDICATED ON THE PLAN TO PRE-CONSTRUCTION GRADES. UPON COMPLETION OF GRADING, THE SITE SHALL BE SEEDED AND MULCHED PER THE REVEGETATION DETAILS ON SHEET 14.



THIS DOCUMENT WAS PREPARED BY SLS LAND SURVEYING FOR EQT PRODUCTION COMPANY

AUB-54 RECLAMATION  
SITE PLAN  
UNION DISTRICT  
RITCHIE COUNTY, WV

DATE 11-6-15  
SCALE 1" = 50'  
DESIGNED BY: KJH  
FILE NO. 7560  
SHEET 17 OF 22  
REV. 02-10-2016

MAG  
2/19/16

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