



west virginia department of environmental protection

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

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

August 28, 2015

WELL WORK PERMIT
Horizontal 6A Well

This permit, API Well Number: 47-9502281, 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: 512893
Farm Name: PETER, DONNA J.
API Well Number: 47-9502281
Permit Type: Horizontal 6A Well
Date Issued: 08/28/2015

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 6B
(4/15)

4709502281

API NO. 47 - 095 - _____
OPERATOR WELL NO. _____ 512893
Well Pad Name: _____ WEU4

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

1) Well Operator: EQT Production Company
Operator ID 306686 County 095 District 1 Quadrangle 671
2) Operator's Well Number: 512893 Well Pad Name WEU4
3) Farm Name/Surface Owner: Donna J. Peter Public Road Access: WV-18
4) Elevation, current ground: 1,098.0 Elevation, proposed post-construction: 1,078.0
5) Well Type: (a) Gas Oil Underground Storage
Other _____

(b) If Gas: Shallow Deep
Horizontal

Michael Goff
7/29/15

6) Existing Pad? Yes or No: No

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Target formation is Marcellus at a depth of 6680 with the anticipated thickness to be 54 feet and anticipated target pressure of 2747 PSI

8) Proposed Total Vertical Depth: 6680
9) Formation at Total Vertical Depth: Marcellus
10) Proposed Total Measured Depth: 10425
11) Proposed Horizontal Leg Length: 2,870
12) Approximate Fresh Water Strata Depths: 139,182,193,211
13) Method to Determine Fresh Water Depth: By offset wells
14) Approximate Saltwater Depths: 1135, 1226, 1229
15) Approximate Coal Seam Depths: 237,399,703
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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Environmental Protection

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WW - 6B
(4/15)

API NO. 47 - 095
OPERATOR WELL NO. 512893
Well Pad Name: WEU4

CASING AND TUBING PROGRAM

18)

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	361	361	336 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	A-500	40	3,024	3,024	1,202 C.T.S.
Production	5 1/2	New	P-110	20	10,425	10,425	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							

*MAC
7/28/15*

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	24	0.375	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2184	* See Note 2	1.21
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,950	3160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10112	-	1.27/1.86
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 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.

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

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WW - 6B
(10/14)

4709502281

API NO. 47 - 095
OPERATOR WELL NO. 512893
Well Pad Name: WEU4

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

Drill and complete a new horizontal well in the Marcellus formation. The vertical drill to go down to an approximate depth of 4684'.
Then kick off the horizontal leg into the Marcellus using a slick water frac.

MAG
7/28/15

20) Describe fracturing/slimulating 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 pressures 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.

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

19.18

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

13.17

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 1000' from KOP to Int csg shoe

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.

0.4% 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. 0.4% 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 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time.

0.3% CFR (dispersant). Makes cement easier to mix.

Tail (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time.

0.2-0.3% CFR (dispersant). This is to make the cement easier to mix.

60 % Calcium Carbonate. Acid solubility.

0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.

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. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, bring compressors back on and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up.

Intermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance hole cleaning use a soap sweep or increase injection rate & foam concentration.

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

Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

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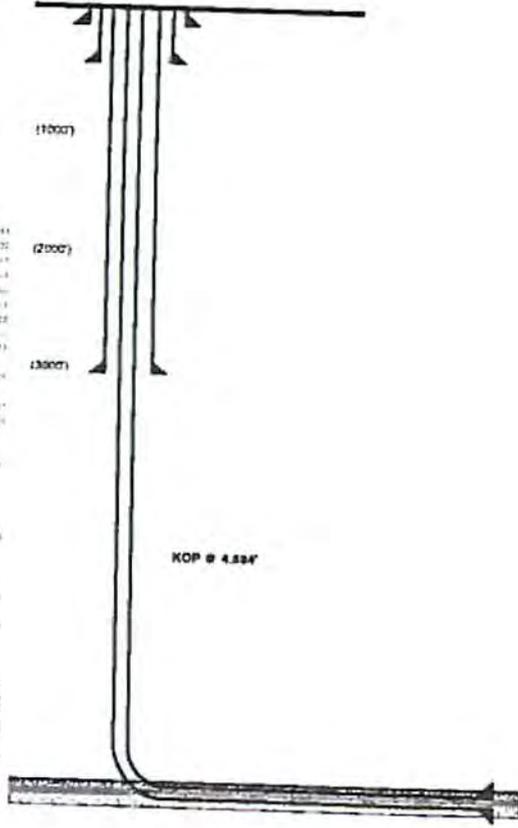
*Note: Attach additional sheets as needed.

4709502281

Well 512893(WEU4H4)
 EQT Production
 West Virginia
 Tyler

Actual
 Vertical Section

TVD Depth (feet)	Formation	Top (TVD)	Bottom (TVD)
250	Hard Rock	250	
500			
750			
1000			
1250	Flint Sandstone	1250	
1500			
1750			
2000	Marathon	2000	2044
2100	Big Ledge	2118	2430
2200	Wash	2210	2410
2250	Wash	2250	
2300	Wash	2300	
2400	Wash	2400	
2500	Wash	2500	
2600	Wash	2600	
2750	Wash	2750	
3000	Wash	3000	
3250	Wash	3250	
3500	Wash	3500	
3750	Wash	3750	
4000	Wash	4000	
4250	Wash	4250	
4500	Wash	4500	
4750	Wash	4750	
5000	Wash	5000	
5250	Wash	5250	
5500	Wash	5500	
5750	Wash	5750	
6000	Wash	6000	
6250	Wash	6250	
6500	Wash	6500	
6750	Wash	6750	
7000	Wash	7000	
7250	Wash	7250	
7500	Wash	7500	
7750	Wash	7750	



Well Case	Casing Type	Size (inches)	WT (ppf)/Grade
	Conductor	20	81#M-C-50
	Surface	13.375	54.5#J-55
	Production Casing	5.412	20#P-110

Lead curve @ 7.55° TVD / 10425' HMD
 Est TD @ 6.500° TVD / 10425' HMD
 2070' Lateral

Proposed Well Work
 Drill and complete a new horizontal well in the formation
 The vertical drill is to go down to an approximate depth of 4594'
 Then kick off the horizontal leg into the using a slick water frac

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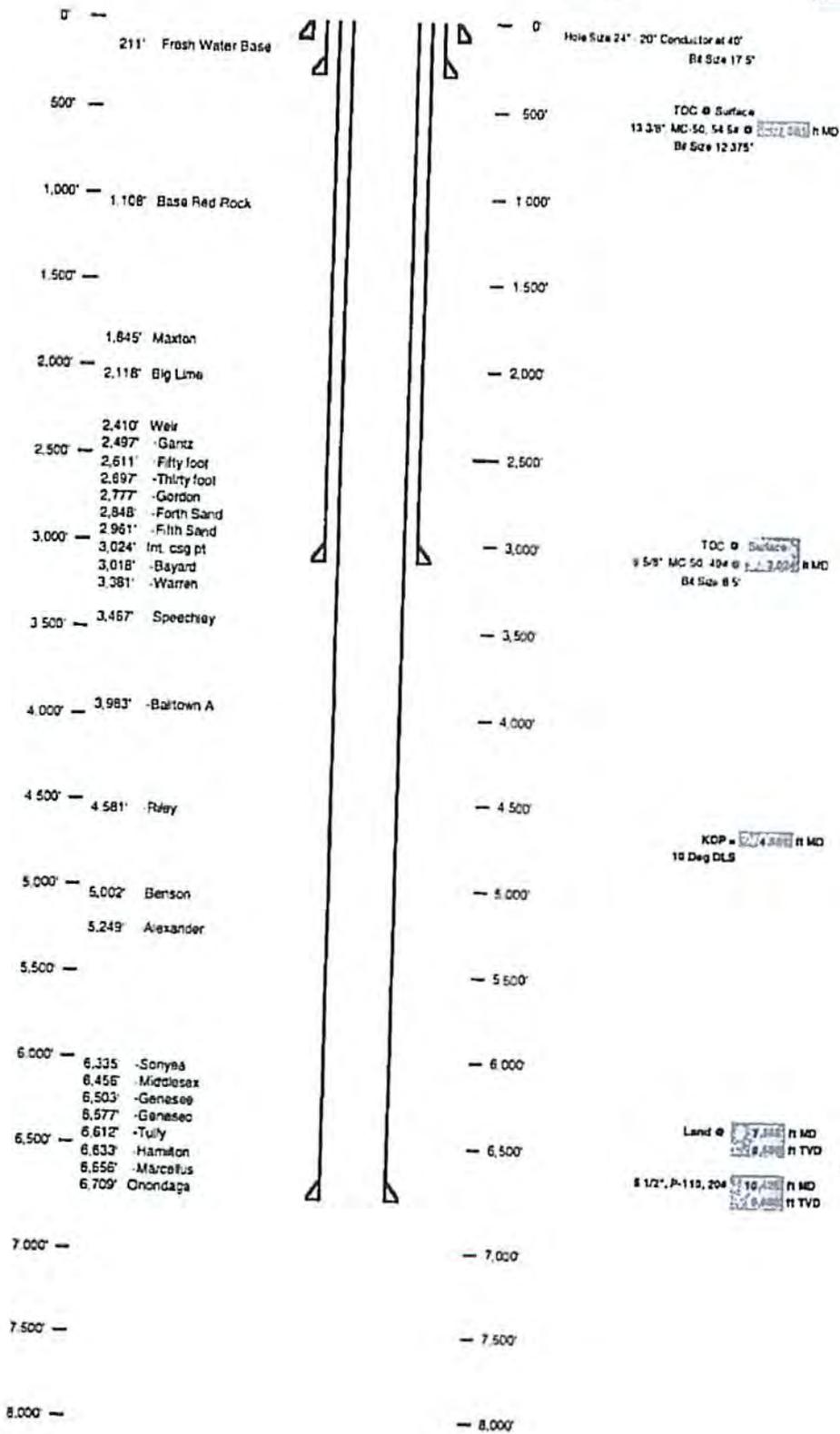
HAC
-1/29/15

Well Schematic
EQT Production

Well Name 512308(WELU45)
County Type
State West Virginia

Elevation KB
Target
Prospect
Azimuth
Vertical Section

1000'
Marcellus
325
3444



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601 57th Street, SE
Charleston, WV 25304
(304) 928-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Kandy 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

4709502281

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson
Environmental Resources Specialist / Permitting

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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
dep.wv.gov

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

**IN THE MATTER OF A VARIANCE FROM)
REGULATION 35 CSR § 4-11.4/11.5/14.1)
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE)
THE OPERATIONAL)
REGULATIONS OF CEMENTING OIL)
AND GAS WELLS)**

ORDER NO. 2014 - 17

4709502281

REPORT OF THE OFFICE

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

FINDINGS OF FACT

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

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Environmental Protection**

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

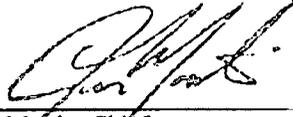
4709502281

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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



James Martin, Chief
Office of Oil and Gas

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JUN 25 2015
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May 12, 2015

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

4709502281

Re: Casing change on WEU4 (512890, 512891, 512893, 512894, 512895)

Dear Mr. Smith,

EQT is requesting the 13 3/8" surface casing to be set at 361' KB, 150' below the deepest fresh water. We will set the 9-5/8" intermediate string at 3024' KB, 50' below the base of the Fifth Sand.

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

Sincerely,

Vicki Roark
Permitting Supervisor-WV

Enc.

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WW-9
(2/15)

Page 1 of 2
API No. 47 - 095 - 02281
Operator's Well No. 512893

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) Tributary of Camp Mistake Run Quadrangle West Union 7.5'
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes x No

Will a pit be used? Yes: X No:

If so please describe anticipated pit waste: flowback water & residual solids

Will a synthetic liner be used in the pit? Yes X 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.

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

- 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, deflocculants, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates.
Oil based mud - synthetic base oil, emulsifier, salt, lime, viscosifier, alkalinity control, filtration control, deflocculants, 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, Lime, sawdust) n/a

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

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

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. Roark
Company Official Title Permitting Supervisor

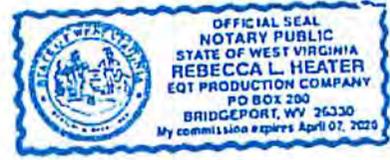
Subscribed and sworn before me this 29th day of July, 20 15

Rebecca L. Heater

Notary Public

My commission expires 4-7-20

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4709502281

Form WW-9

Operator's Well No. 512893

Proposed Revegetation Treatment: Acres Disturbed 19.18 Prevegetation pH 6.3

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

Fertilizer Amount 13 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 Huff

Comments: Aresced & Mulch any disturbed areas per WV DEP regulations Maintain & upgrade F.A.S as necessary.

Title: Oil & Gas Inspector Date: 7/28/15

Field Reviewed? (v) 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

4709502281

BROAD STREET ENERGY LLC

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

LAD LIQUID ASSETS DISPOSAL INC.

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

TRIAD ENERGY

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

TRI COUNTY WASTE WATER MANAGEMENT, INC.

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

KING EXCAVATING CO.

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

Waste Management - Meadowfill Landfill

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

Waste Management - Northwestern Landfill

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

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Fairview Ch

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

Camp

SHEET 1 OF 2
SCALE: 1"=500'

0' 500' 1000'

Professional Energy Consultants
A DIVISION OF BETHUNE & BETHUNE, INC.



36 REVIEWS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT

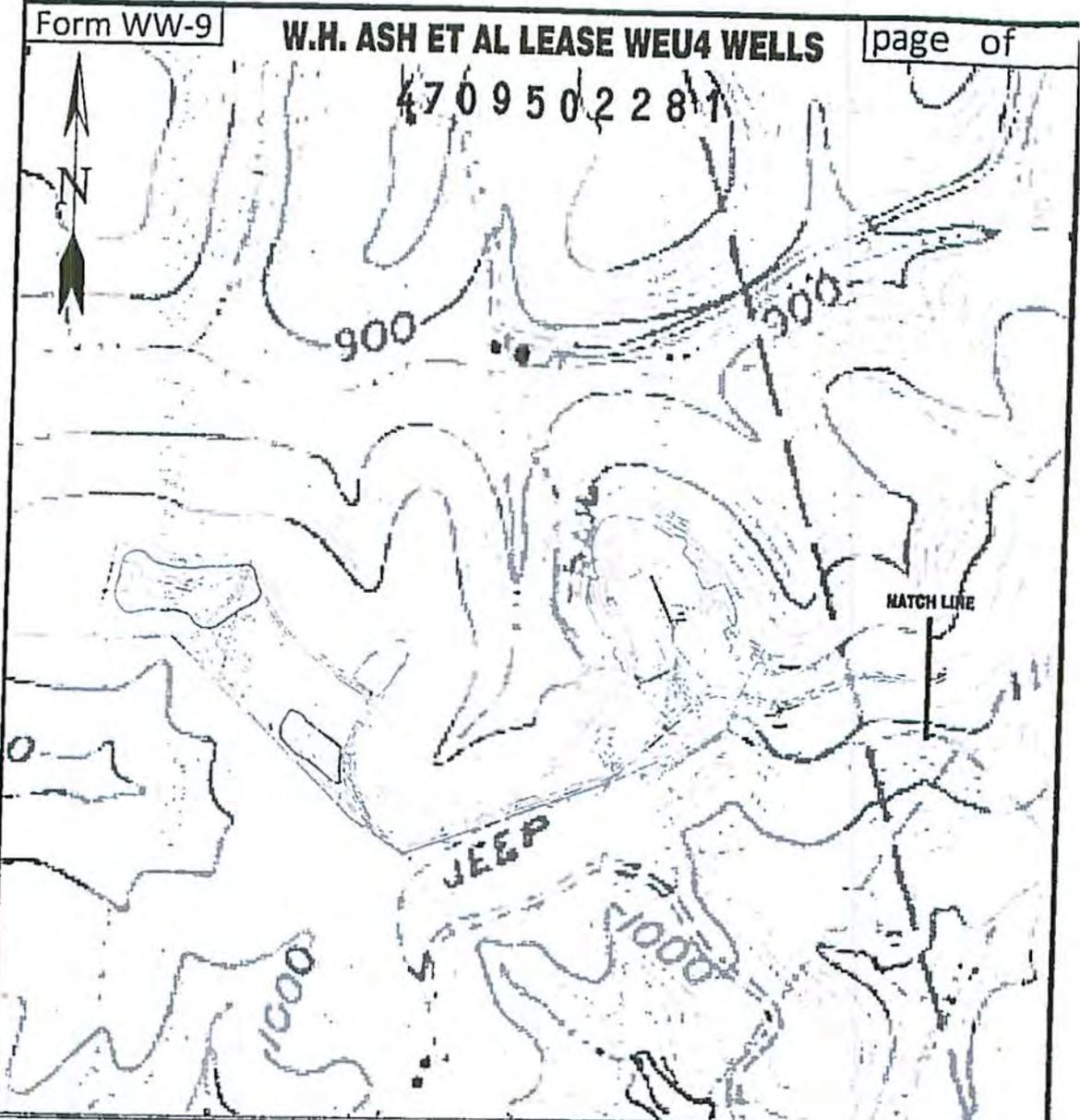
1-813-424-4444
WWW.SLSREVIEWS.COM

DRAWN BY K.D.W.	FILE NO. 7701	DATE 06-18-15	CADD FILE 770-RECPLAN2.dwg
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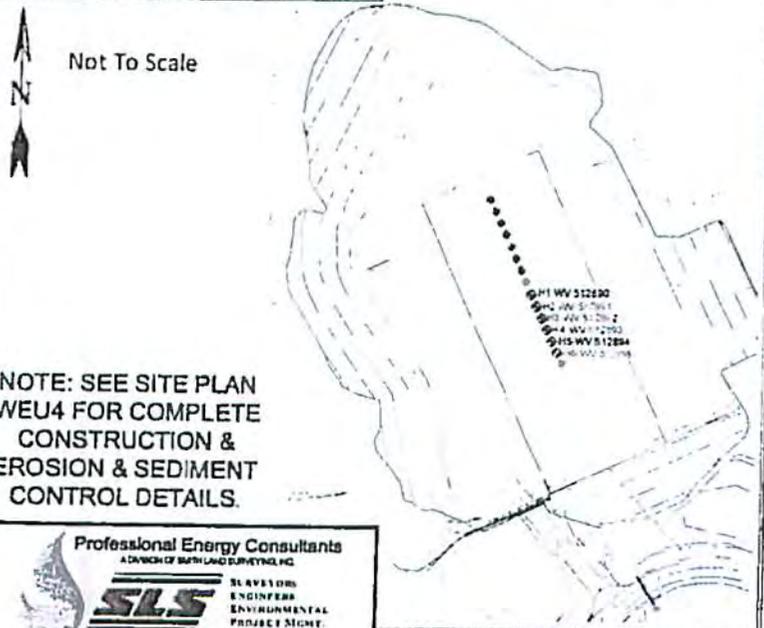
TOPO SECTIONS OF WEST UNION
7.5' TOPO QUADRANGLE

MAG
7/28/15

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Detail Sketch for Proposed WEU4 Wells



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

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

RECORDED
Office of Natural Gas
JUL 29 2015
WV Department of
Environmental Protection

MDG
7/28/15

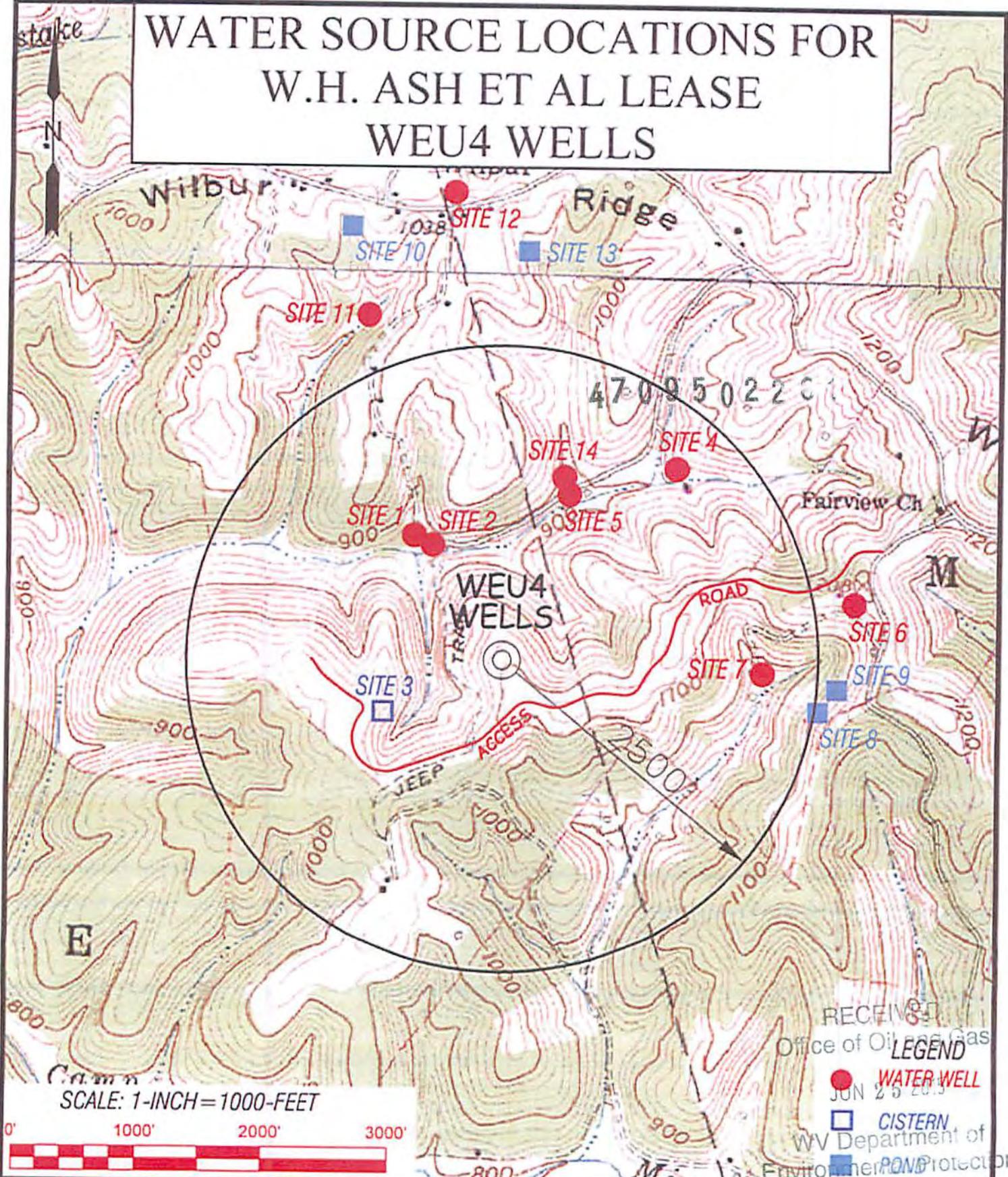
Professional Energy Consultants
A DIVISION OF BARTH LAND SURVEYING, INC.
SLS
SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MANAGERS
WWW.SLSURVEYING.COM
(304) 482-0376

DRAWN BY K.O.W.	FILE NO 7701	DATE 06-18-15	CADD FILE 7701 REC'D.dwg
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TOPO SECTIONS OF WEST UNION
7.5' TOPO QUADRANGLE

SHEET 2 OF 2
SCALE: 1"=500'

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



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LEGEND
● WATER WELL
□ CISTERN
WV Department of Environmental Protection

SCALE: 1-INCH=1000-FEET



Professional Energy Consultants <small>A DIVISION OF SOUTH LAND SURVEYING, INC.</small> SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT.		TOPO SECTION OF: WEST UNION, WV 7.5' QUAD		OPERATOR: EQT PRODUCTION COMPANY 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330		
		DISTRICT	COUNTY	TAX MAP-PARCEL NO.		
DRAWN BY K.D.W.	FILE NO. 7701	DATE 05/27/15	CADD FILE: 7701WV04.dwg	CENTERVILLE	TYLER	16-22



4709502281

Where energy meets innovation.™

Site Specific Safety Plan

EQT WEU 4 Pad

Alma
Tyler County, WV

512893

For Wells:

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Office of Oil and Gas

JUL 29 2015

Date Prepared:

May 6, 2015

WV Department of
Environmental Protection

[Signature]
EQT Production

[Signature]
WV Oil and Gas Inspector

Title

Title

Date

Date

6-23-15

7/28/15

ROYALTY OWNERS		
ROSA B. CRESS ET AL	47 AC±	LEASE NO. 126144

**EQT PRODUCTION COMPANY
W.H. ASH ET AL LEASE
152 ACRES±
WELL NO. WV 512893**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'27 S.P.C.(FT) N, 318,322.32 E, 1,626,591.04
 NAD'27 GEO. LAT-(N) 39.366447 LONG-(W) 80.820781
 NAD'83 UTM (M) N, 4,357,467.22 E, 515,453.34

LANDING POINT
 NAD'27 S.P.C.(FT) N, 317,914.15 E, 1,625,148.09
 NAD'27 GEO. LAT-(N) 39.365268 LONG-(W) 80.825863
 NAD'83 UTM (M) N, 4,357,335.52 E, 515,015.82

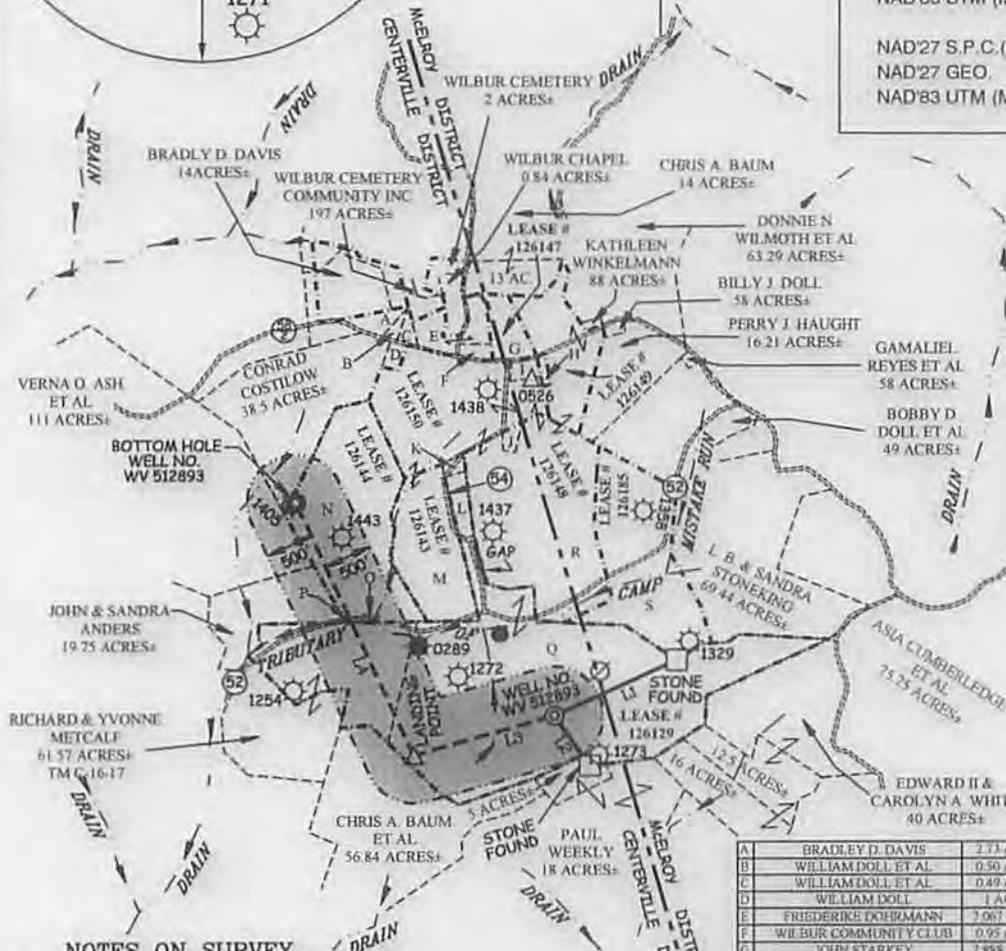
BOTTOM HOLE
 NAD'27 S.P.C.(FT) N, 320,515.26 E, 1,623,935.18
 NAD'27 GEO. LAT-(N) 39.372359 LONG-(W) 80.830269
 NAD'83 UTM (M) N, 4,358,121.78 E, 514,633.08

NAD'27 GRID NORTH



LEGEND

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



REFERENCES



LEASER	ACRES	TM C-16-14
A BRADLEY D. DAVIS	2.73 AC±	
B WILLIAM DOLL ET AL	0.50 AC±	
C WILLIAM DOLL ET AL	0.49 AC±	
D WILLIAM DOLL	1 AC±	
E FRIGIDERIKE DOHRMANN	7.067 AC±	
F WILBUR COMMUNITY CLUB	0.95 AC±	
G JOHN STARKEY	7.868 AC±	
H CHRIS A. BAUM ET AL	0.84 AC±	
I TERRY C. WEEKLY	1.183 AC±	
J RUTH G. & OLIN L. DOLL	1 AC±	
K GARY PROSSER	0.96 AC±	
L GARY & BARBARA PROSSER	2.30 AC±	
M HOWARD SHIRVER ET AL	24.84 AC±	
N CONRAD COSTILOW	46.17 AC±	TM C-16-14
O RICHARD & YVONNE METCALF	61.57 AC±	TM C-16-14.1
P JOHN & SANDRA ANDERS	0.09 AC±	TM C-16-14.2
Q DONNA J. PETER	113.4 AC±	TM C-16-22
R ELIZABETH ABRUZZIMO	109.94 AC±	
S L.B. & SANDRA STONEKING	42.86 AC±	

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.

CORNER TIES BEARING & DISTANCE	
L1	N 85°53' E 1378.97'
L2	S 34°38' E 631.81'

LATERAL PATH BEARING & DISTANCE	
L3	S 74°12' W 1499.57'
L4	N 25°00' W 2870.00'

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

 SURVEYORS
 ENGINEERS
 ENVIRONMENTAL
 PROJECT MGMT.
 (304) 452-6434
 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 JUNE 04, 20 15
 REVISED JUNE 18, 20 15
 OPERATORS WELL NO. WV 512893
 API WELL NO. 47-095-02281
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 7701P512893R
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

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

LOCATION:
 ELEVATION 1,098'(GROUND)1,078'(PROPOSED) WATERSHED TRIBUTARY OF CAMP MISTAKE RUN
 DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5'

SURFACE OWNER DONNA J. PETER ACREAGE 113.40±
 ROYALTY OWNER WACO OIL & GAS CO. INC. ET AL ACREAGE 152±
 PROPOSED WORK: LEASE NO. 126129
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE 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 6,696'

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

**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
<u>126129</u>			Min 1/8 pd	
	William A. Ash, et al	Equitable Gas Company		DB191/321
	Equitable Gas Company	Equitrans, Inc.		DB274/471
	Equitrans, Inc.	Equitable Production Company		DB398/640
	Equitable Production Company	EQT Production Company		DB281/346 Doddridge Co.
			Min 1/8 pd	
<u>126144</u>	Fanny Davis, et al	Equitable Gas Company		DB 191/511
	Equitable Gas Company	Equitrans, Inc.		DB274/471
	Equitrans, Inc.	Equitable Production Company		DB398/640
	Equitable Production Company	EQT Production Company		DB281/346 Doddridge Co.

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

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

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

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

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

Well Operator: EQT Production Company
By: [Signature]
Its: Permitting Supervisor

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JUL 29 2015
WV Department of Environmental Protection

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

Date of Notice Certification: _____

API No. 47 - 095 - 0
Operator's Well No. 512893
Well Pad Name: WEU4

Notice has been given:

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

State:	<u>WV</u>	UTM NAD 83 Easting:	<u>515,453.34</u>
County:	<u>Tyler</u>	UTM NAD 83 Northing:	<u>4,357,467.22</u>
District:	<u>Centerville</u>	Public Road Access:	<u>WV-18</u>
Quadrangle:	<u>West Union 7.5'</u>	Generally used farm name:	<u>Donna J. Peter</u>
Watershed:	<u>Tributary of Camp Mistake Run</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.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

*PLEASE CHECK ALL THAT APPLY

- NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
- NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
- NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OR
- WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
- NOTICE OF PLANNED OPERATION
- PUBLIC NOTICE
- NOTICE OF APPLICATION

OOG OFFICE USE ONLY

- RECEIVED/NOT REQUIRED
- RECEIVED
- RECEIVED/NOT REQUIRED
- RECEIVED
- RECEIVED
- RECEIVED

Required Attachments:

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

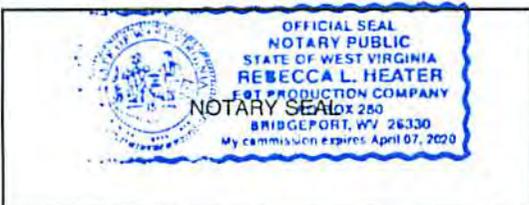
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Environmental Protection

Certification of Notice is hereby given:

THEREFORE, I *Victoria J. Roark*, 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 24 day of June, 2015
Rebecca L. Heater Notary Public
My Commission Expires 4-7-20

Oil and Gas Privacy Notice:

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

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WW-6A
(9-13)

API NO. 47 - 095 - 0
OPERATOR WELL NO. 512893
Well Pad Name: WEU4

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

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

Date of Notice: JUN 24 2015 Date Permit Application Filed: JUN 24 2015

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 other 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 owner of any 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 known to the applicant, the applicant may serve the documents required upon the person described in the records of the sheriff required to be filed in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be filed in the lands, chapter eleven-a of this code. (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 Information Statement to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

4709502281

SURFACE OWNER(S)
Name: Donna J Peter
Address: 733 Ridge Rd
Wilbur WV 26320

COAL OWNER OR LESSEE
Name: Nancy M. Ash or Heirs Assigns
Address: 101 Lake Village Road
Slidell LA 70461

Name: _____
Address: _____

See attached for additional coal owners.
 COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNERS(S) (Road and/or Other Disturbance)
Name: Donna J Peter
Address: 733 Ridge Rd
Wilbur WV 26320

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(S)
Name: Donna J Peter
Address: 733 Ridge Rd
Wilbur WV 26320

Name: L. Bruce and Sandra Jean Stoneking
Address: R.D. 1 Box BB
Elkins WV 26241
See attached for additional surface (road/ disturbance)

See attached for additional water purveyors
 OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

SURFACE OWNER(S) (Impoundments/Pits)
Name: Donna J Peter
Address: 733 Ridge Rd
Wilbur WV 26320

Address: JUN 25 2015

*Please attach additional forms if necessary

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WV Department of Environmental Protection

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/coal-and-gas/pages/default.aspx.

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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 activity. (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 (c), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

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

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

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Office of Oil and Gas

JUN 25 2015

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.

WV Department of
Environmental Protection

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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Office of Oil and Gas
JUN 25 2015
WV Department of
Environmental Protection

Notice is hereby given by:

Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: Vroark@eqt.com

Address: 115 Professional Place P.O. Box 280
Bridgeport, WV 26330
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.

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

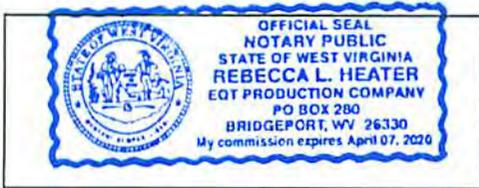
By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before on 24 day of June, 2015

Rebecca L. Heater Notary Public

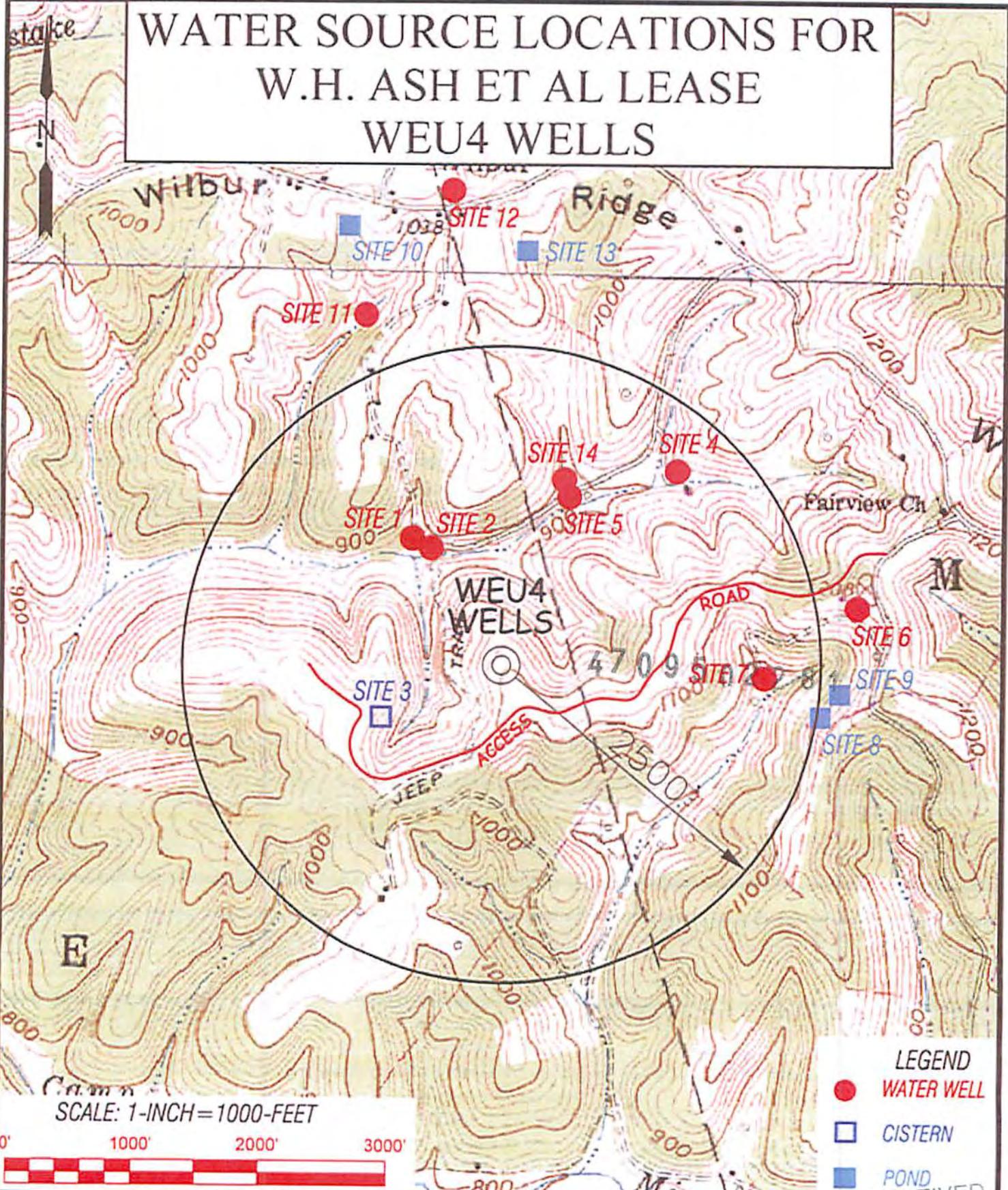
My Commission Expires 4-7-20



4709502281

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JUN 25 2015
WV Department of
Environmental Protection

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



- LEGEND**
- WATER WELL
 - ◻ CISTERN
 - ◻ POND

SCALE: 1-INCH=1000-FEET



Professional Energy Consultants
A DIVISION OF SMITH LINE SURVEYING, INC.

SLS
SURVEYING
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.

DRAWN BY: K.O.W.
FILE NO.: 7701
DATE: 05/27/15
CADD FILE: 7701WMCIA.dwg

TOPO SECTION OF:
WEST UNION, WV 7.5' QUAD

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

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

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Office of Oil and Gas
JUN 25 2015
WV Department of
Environmental Protection

4709502281

WW6-A

Additional Coal Owners

Rosemary Brandon
3013 Delaware Avenue
Kenner, LA 70065

Oletha G. Moore or Heirs and Assigns
2428 Dewey Ave
Munhall PA 15120

Surface Owners(road or other disturbance):

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

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

Richard and Yvonne Metcalf
128 Village Drive
Bridgeport WV 26330

Surface Owners(Pits or impoundments):

Richard and Yvonne Metcalf
128 Village Drive
Bridgeport WV 26330

Additional Water Purveyors

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

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

Received
Office of Oil & Gas
JUL 06 2017



SMITH LAND SURVEYING, INC.

P.O. BOX 150, GLENVILLE, WV 26351

(304) 462-6034 • FAX 402-6650

WELL INFORMATION AND POTENTIAL WATER WELL SAMPLE DATA SHEET

OPERATOR: EQT Production Company
LEASE NAME AND NUMBER: WEU-4

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 1220' Owner/Occupant: Donna Peter
 Address: 733 ridge rd. Wilbur, WV 26320 Ph: (304)-758-4495
 Field Contact Date: 04/23/2015 Located: Yes Date Located: 04/23/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.369336
Long : 80.823230
Tax Map 16, Parcel 22

Site: 2 Spacing 1075' Owner/Occupant: Donna Peter
 Address: 733 ridge rd. Wilbur, WV 26320 Ph: (304)-758-4495
 Field Contact Date: 04/23/2015 Located: Yes Date Located: 04/23/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.369112
Long : 80.822699
Tax Map 16, Parcel 22

Site: 3 Spacing 1030' Owner/Occupant: Donna Peter
 Address: 733 ridge rd. Wilbur, WV 26320 Ph: (304)-758-4495
 Field Contact Date: 04/23/2015 Located: Yes Date Located: 04/23/2015 Source: Spring
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.365439
Long : 80.823090
Tax Map 16, Parcel 22

Site: 4 Spacing 2050' Owner/Occupant: Bruce Stoncking
 Address: RR.1 Box 304 BB Elkins, WV 26241 Ph: _____
 Field Contact Date: 04/23/2015 Located: Yes Date Located: 04/23/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.370837
Long : 80.815910
Tax Map 21, Parcels 28 and 29

Office of Oil & Gas

JUL 06 2015

Site 5 Spacing 1425' Owner/Occupant Bruce Stoneking
 Address RR.1 Box 304 BB Elkins, WV 26241 Ph. _____
 Field Contact Date: 04/23/2015 Located: Yes Date Located: 04/23/2015 Source Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.370270
Long : 80.818867
Tax Map 21, Parcels 28 and 29

Site 6 Spacing 2830' Owner/Occupant Edward and Carolyn White
 Address 4316 Teen Barnes Rd. Jefferson, MD 21755 Ph: (301)-371-8521
 Field Contact Date: 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments Lat : 39.368035
Long : 80.810833
Tax Map 21, Parcel 38

Site 7 Spacing 2070' Owner/Occupant Edward and Carolyn White
 Address 4316 Teen Barnes Rd. Jefferson, MD 21755 Ph: (301)-371-8521
 Field Contact Date: 05/20/2015 Located: Yes Date Located: 05/20/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.366470
Long : 80.813358
Tax Map 21, Parcel 38

Site: 8 Spacing 2540' Owner/Occupant Edward and Carolyn White
 Address: 4316 Teen Barnes Rd. Jefferson, MD 21755 Ph. (301)-371-8521
 Field Contact Date: 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Pond
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.365666
Long : 80.811781
Tax Map 21, Parcel 38

Site: 9 Spacing 2665' Owner/Occupant: Edward and Carolyn White
 Address: 4316 Teen Barnes Rd. Jefferson, MD 21755 Ph: (301)-371-8521
 Field Contact Date: 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Pond
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.366163
Long : 80.811260
Tax Map 21, Parcel 38

Site 10 Spacing 3655' Owner/Occupant Frank and Elizabeth Abruzzo
 Address 91 Springhill Chapel Rd. Clarksburg, WV 26301 Ph: (304)-669-3893
 Field Contact Date 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Pond
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.376041
Long : 80.825199
Tax Map 16, Parcel 10

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Site: 11 Spacing 2950' Owner/Occupant Frank and Elizabeth Abruzzino
 Address: 91 Springhill Chapel Rd, Clarksburg, WV 26301 Ph: (304)-669-3892
 Field Contact Date: 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.374129
Long : 80.824661
Tax Map 16, Parcel 10

Site: 12 Spacing 3750' Owner/Occupant: Frank and Elizabeth Abruzzino
 Address: 91 Springhill Chapel Rd, Clarksburg, WV 26301 Ph: (304)-669-3892
 Field Contact Date: 05/20/2015 Located: Yes Date Located: 05/20/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.376858
Long : 80.822312
Tax Map 16, Parcel 10

Site: 13 Spacing 3260' Owner/Occupant: Frank and Elizabeth Abruzzino
 Address: 91 Springhill Chapel Rd, Clarksburg, WV 26301 Ph: (304)-669-3892
 Field Contact Date: 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Pond
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.375580
Long : 80.820202
Tax Map 16, Parcel 10

Site: 14 Spacing 1535' Owner/Occupant: Frank and Elizabeth Abruzzino
 Address: 91 Springhill Chapel Rd, Clarksburg, WV 26301 Ph: (304)-669-3892
 Field Contact Date 05/20/2015 Located: Yes Date Located 05/20/2015 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: Lat : 39.370659
Long : 80.819027
Tax Map 16, Parcel 10

Site: 15 Spacing _____ Owner/Occupant: Conrad Costlow
 Address: 13310 Middle island Rd, West Union, WV 26456 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 14

Site: 16 Spacing _____ Owner/Occupant John McDonald Jr.
 Address: HC 74 Box 34C Alma, WV 26320 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 21, Parcel 41

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 Office of Oil & Gas
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Site: 17 Spacing _____ Owner/Occupant: Paul Weckley (life)
 Address: 4500 Meelroy creek Rd. Alma, WV 26320 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 28

Site: 18 Spacing _____ Owner/Occupant: Chris and Herstine Baum
 Address: 7214 Ridgeview Dr. SE Waynesburg, OH 44688 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 23

Site: 19 Spacing _____ Owner/Occupant: Leona Lorkovich
 Address: 1719 Jackson St. Aliquippa, PA 15001 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 24

Site: 20 Spacing _____ Owner/Occupant: Stonewall Gas Company
 Address: 501 Martindale St. Ste. 500 Pittsburg, PA 15212 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 24.2

Site: 21 Spacing _____ Owner/Occupant: Richard Metcalf
 Address: 128 Village Dr. Bridgeport, WV 26330 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcels 14.1 and 17

Site: 22 Spacing _____ Owner/Occupant: John Anders
 Address: 804 Peters Run Rd. Wheeling, WV 26003 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 14.2

Site 23 Spacing _____ Owner/Occupant: Gary Prosser
 Address: HCR 74 Box 21 Wilbur, WV 26320 Ph: _____
 Field Contact Date N/A Located: No Date Located: N/A Source: Unknown
 If No. declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 15

Site 24 Spacing _____ Owner/Occupant: Howard and Shannon Shriver
 Address: HCR 74 Box 22A Alma, WV 26320 Ph: _____
 Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
 If No. declined by who _____ Letter/Notice Date: 1st 04/09/2015 2nd 04/23/2015 Certified (3rd) 04/17/2015
 Comments: No Response To Certified Letter As Of 05/29/2015
Tax Map 16, Parcel 16

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: _____

Received
Office of Oil & Gas
JUL 06 2015

WW-6A5
(1/12)

Operator Well No. 512893

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: JUN 24 2015 Date Permit Application Filed: JUN 24 2015

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

470950222
Name: Diane L Morgan and Glenn W Morgan
Address: 590 Isner Creek Rd
Elkins WV 26241

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: WV UTM NAD 83 Easting: 515,453.340000
County: Tyler Northing: 4,357,467.220000
District: Centerville Public Road Access: WV-18
Quadrangle: West Union 7.5' Generally used farm name: Donna J. Peter
Watershed: Tributary of Camp Mistake Run

This Notice Shall Include:

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

Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: vroark@eqt.com

Address: 115 Professional Place, P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040

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.

RECEIVED
Office of Oil and Gas
JUN 25 2015
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. 512893

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: JUN 24 2015 Date Permit Application Filed: JUN 24 2015

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.

4709302281

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: Donna J Peter
Address: 733 Ridge Rd
Wilbur WV 26320

Name: L. Bruce and Sandra Jean Stoneking
Address: R.D. 1 Box BB
Elkins WV 26241

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: WV UTM NAD 83 Easting: 515,453.340000
County: Tyler Northing: 4,357,467.220000
District: Centerville Public Road Access: WV-18
Quadrangle: West Union 7.5' Generally used farm name: Donna J. Peter
Watershed: Tributary of Camp Mistake Run

This Notice Shall Include:

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

Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: vroark@eqt.com

Address: 115 Professional Place, P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040

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.

RECEIVED
Office of Oil and Gas
JUN 25 2015
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. 512893

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: JUN 24 2015 Date Permit Application Filed: JUN 24 2015

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

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED 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: Richard and Yvonne Metcalf
Address: 128 Village Dr
Bridgeport WV 26330

Name: _____
Address: 4709502281

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>515,453.340000</u>
County:	<u>Tyler</u>		Northing:	<u>4,357,467.220000</u>
District:	<u>Centerville</u>	Public Road Access:	<u>WV-18</u>	
Quadrangle:	<u>West Union 7.5'</u>	Generally used farm name:	<u>Donna J. Peter</u>	
Watershed:	<u>Tributary of Camp Mistake Run</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.

Well Operator: EQT Production Company
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Email: vroark@eqt.com

Address: 115 Professional Place, P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040

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 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.

RECEIVED
Office of Oil and Gas
JUN 25 2015
WV Department of
Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

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

June 23, 2015

4709502281

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

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

512890 WEU4H1	512891 WEU4H2	512892 WEU4H3
512893 WEU4H4	512894 WEU4H5	512895 WEU4H6
514052 WEU4H7	514053 WEU4H8	514054 WEU4H9
514055 WEU4H10		

Dear Mr. Martin,

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

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

Very Truly Yours,

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

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

RECEIVED
Office of Oil and Gas

JUN 26 2015

WV Department of
Environmental Protection

Anticipated Frac Additives
Chemical Names and CAS numbers

4. 2. 2015

<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

RECEIVED
Office of Oil and Gas
JUN 25 2015
WV Department of
Environmental Protection

PROJECT INFORMATION

PROJECT NAME: WEU4

TAX PARCEL:
MCELROY AND CENTERVILLE DISTRICTS
TYLER COUNTY, WV
TAX MAP 18 PARCEL 22

SURFACE OWNER:
DONNA J. PETER
TOTAL PROPERTY AREA: 113.44 ACRES
TAX MAP 18 PARCEL 22

L.B. & SANDRA STONEKING
TOTAL PROPERTY AREA: 69.441 ACRES
TAX MAP 21 PARCEL 28

RICHARD & YVONNE METCALF
TOTAL PROPERTY AREA: 81.573 ACRES
TM 18-17

Oil AND GAS RETAIL OPER:
PACO CO. & COMPANY, INC. ET AL.
WEST UNION DISTRICT
WOODRIDGE COUNTY, WV
TOTAL PROPERTY AREA: 152.8 ACRES

NOTE LOCATION:
THE WEU4 WELL SITE IS SITUATE ON THE WATERS OF CAMP MISTAKE RUN
APPROXIMATELY 0.58 MILES WEST OF COUNTY ROUTE 58
THE ENTRANCE IS LOCATED APPROXIMATELY 0.30 MILES SOUTHWEST FROM
THE INTERSECTION OF COUNTY ROUTE 82 AND COUNTY ROUTE 58

LOCATION COORDINATES

WEU4 SITE ENTRANCE
LATITUDE: 39.368229 LONGITUDE: -80.810071 (NAD 83 NORTH)

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

WEU4 PUMP PAD
LATITUDE: 39.365669 LONGITUDE: -80.820666 (NAD 83 NORTH)

WEU4 FLOWBACK PIT
LATITUDE: 39.365319 LONGITUDE: -80.821118 (NAD 83 NORTH)

WEU4 TRUCK PAD
LATITUDE: 39.364962 LONGITUDE: -80.821367 (NAD 83 NORTH)

WEU4 COMPLETION PIT MANIFOLD PAD
LATITUDE: 39.365409 LONGITUDE: -80.824945 (NAD 83 NORTH)

WEU4 COMPLETION PIT
LATITUDE: 39.365644 LONGITUDE: -80.825018 (NAD 83 NORTH)

SITE DISTURBANCE COMPUTATIONS

ACCESS ROAD NO. 1 & NO. 2 = 0.01 ACRES
STOCKPILE SITES 1 & 2 = 4.28 ACRES
RIG FOOTPRINT = 0.20 ACRES
MANIFOLD PAD & FLOWBACK PIT = 0.31 ACRES
COMPLETION PIT = 0.33 ACRES
TOTAL SITE DISTURBANCE = 19.18 ACRES

ENTRANCE PERMIT

EQT PRODUCTION COMPANY WILL OBTAIN AN ENTRANCE PERMIT (FORM
WM-106) 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 #150617603
IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE
PROJECT.

FLOODPLAIN NOTE

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN
FEMA FLOOD ZONE X, PER THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER
540600000, DATED MAY 3, 2010

ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PERFORMED ON APRIL 25-26, 2013 BY POTESTA AND ASSOCIATES, INC.
TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY
FOOTPRINT OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE MAY 20, 2013 REPORT PROJECT #
0101-11-147-15701 WAS PREPARED BY POTESTA AND ASSOCIATES, INC. DOCUMENTS 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 USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE APPROPRIATE AGENCIES
BE CONSULTED IN AN EFFORT TO OBTAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY
THIS REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE
DESIGNER 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
WETLANDS AND STREAM CROSSINGS.

HORIZONTAL & VERTICAL CONTROL

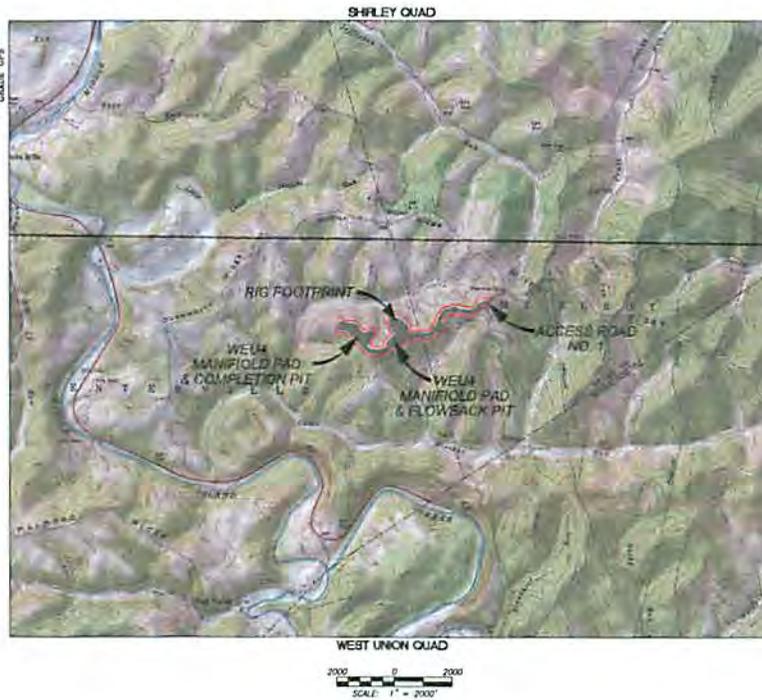
COORDINATES AND ELEVATIONS USED FOR ALL LAYOUTS AND DESIGNS WERE
BASED UPON MAPPING FURNISHED BY SMITH LAND SURVEYING.

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

WEU4 SITE PLAN EQT PRODUCTION COMPANY

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

GIBB, NORTH AND WEST WATERS
BEYOND MCELROY WATERS
EXPANDED BY SURVEY



WELL	DE	WELL STATUS	DEP.	LSR	LINE	NORTHING	EASTING
W1	512942	PROPOSED	47.295-22778	29.566413	80.822668	54199.48	109323.70
W2	512949	PROPOSED	47.295-22778	59.566456	80.820548	54195.43	109334.29
W3	512942	PROPOSED	47.295-22783	59.566568	80.820629	54191.42	109344.48
W4	512945	PROPOSED	47.295-22786	59.566728	80.820629	54195.43	109344.48
W5	512956	PROPOSED	47.295-22790	29.566401	80.822699	54253.40	109305.27
W6	512945	PROPOSED	47.295-22786	59.566451	80.820548	54195.43	109344.48
W7	512934	PROPOSED	47.295-22782	59.566413	80.822619	54199.48	109344.48
W8	512935	PROPOSED	47.295-22783	59.566456	80.820548	54195.43	109344.48
W9	512942	PROPOSED	47.295-22783	59.566568	80.820629	54191.42	109344.48
W10	512945	PROPOSED	47.295-22786	59.566728	80.820629	54195.43	109344.48
W11	512956	PROPOSED	47.295-22790	29.566401	80.822699	54253.40	109305.27
W12	512945	PROPOSED	47.295-22786	59.566451	80.820548	54195.43	109344.48
W13	512934	PROPOSED	47.295-22782	59.566413	80.822619	54199.48	109344.48
W14	512935	PROPOSED	47.295-22783	59.566456	80.820548	54195.43	109344.48
W15	512942	PROPOSED	47.295-22783	59.566568	80.820629	54191.42	109344.48
W16	512945	PROPOSED	47.295-22786	59.566728	80.820629	54195.43	109344.48

LIST OF DRAWINGS

- 1 - COVER SHEET
- 2 - NOTES
- 3 - OVERALL SHEET THICK & VOLUMES
- 4 - EXISTING UTILITY PLAN
- 5-7 - ACCESS ROAD PLAN
- 8 - RIG FOOTPRINT DET
- 10-11 - FLOWBACK PIT NO. 1 SECTIONS
- 12-13 - FLOWBACK PIT NO. 2 SECTIONS
- 14 - TYPICAL SECTIONS
- 15 - ACCESS ROAD NO. 1 PROFILE
- 18-20 - ACCESS ROAD NO. 1 SECTIONS
- 21 - ACCESS ROAD NO. 1 SECTIONS & ACCESS ROAD NO. 2 PROFILE & SECTIONS
- 22 - ACCESS ROAD COORDINATE LAYOUT
- 23 - 24 TOPSOIL STORAGE AREA PROFILES & SECTIONS
- 25 - SPOIL STORAGE AREA PROFILE & SECTIONS
- 28 - 29 - WEU4 RECLAMATION PLANS
- 30 - 31 - CONSTRUCTION DETAILS

APPROVED
WVDEP OOG

8/28/2015

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

OPERATOR
EQT PRODUCTION COMPANY
OPERATOR ID: 306698
115 PROFESSIONAL PLACE
P.O. BOX 190
BRIDGEPORT, WV 26330
PHONE: (304) 348-3870

ENGINEER
BKA&K ENGINEERS
248 NORTH TORNAO WAY
SUITE 1
METCALF, WV 26026
PHONE: (304) 768-3370

SURVEYOR
SMITH LAND SURVEYING, INC.
12 VANHOUSE DRIVE
P.O. BOX 150
GLAYVILLE, WV 26031
PHONE: (304) 482-0654

RIMMEL, KEEFER, KASH, LIP
248 NORTH TORNAO WAY, SUITE 1
METCALF, WEST VIRGINIA 26026
TEL: 304.768.3370
WWW.BKA&K.COM

BKA&K
ENGINEERS

Professional Energy Consultants
A DIVISION OF SLS CONSULTANTS, INC.
SLS
CONSULTANTS, INC.
1000 W. 10TH ST.
MIDLAND, TX 79701
TEL: 806.442.8144
WWW.SLSCONSULTANTS.COM

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATERS
PROFESSIONAL ENGINEER
JAMES W. SMITH
LICENSE NO. 10000

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

COVER SHEET
WEU4
MCELROY DISTRICT
CENTERVILLE DISTRICT
TYLER COUNTY, WV

DATE: 04/30/2015
SCALE: 1" = 2,000'
DESIGNED BY: NWH
FILE NO: J08
SHEET 1 OF 33
REV: 05/29/2015

RIG FOOTPRINT & FLOWBACK PIT NO. 1 LAYOUT

WEU4PROPOSED WELLS

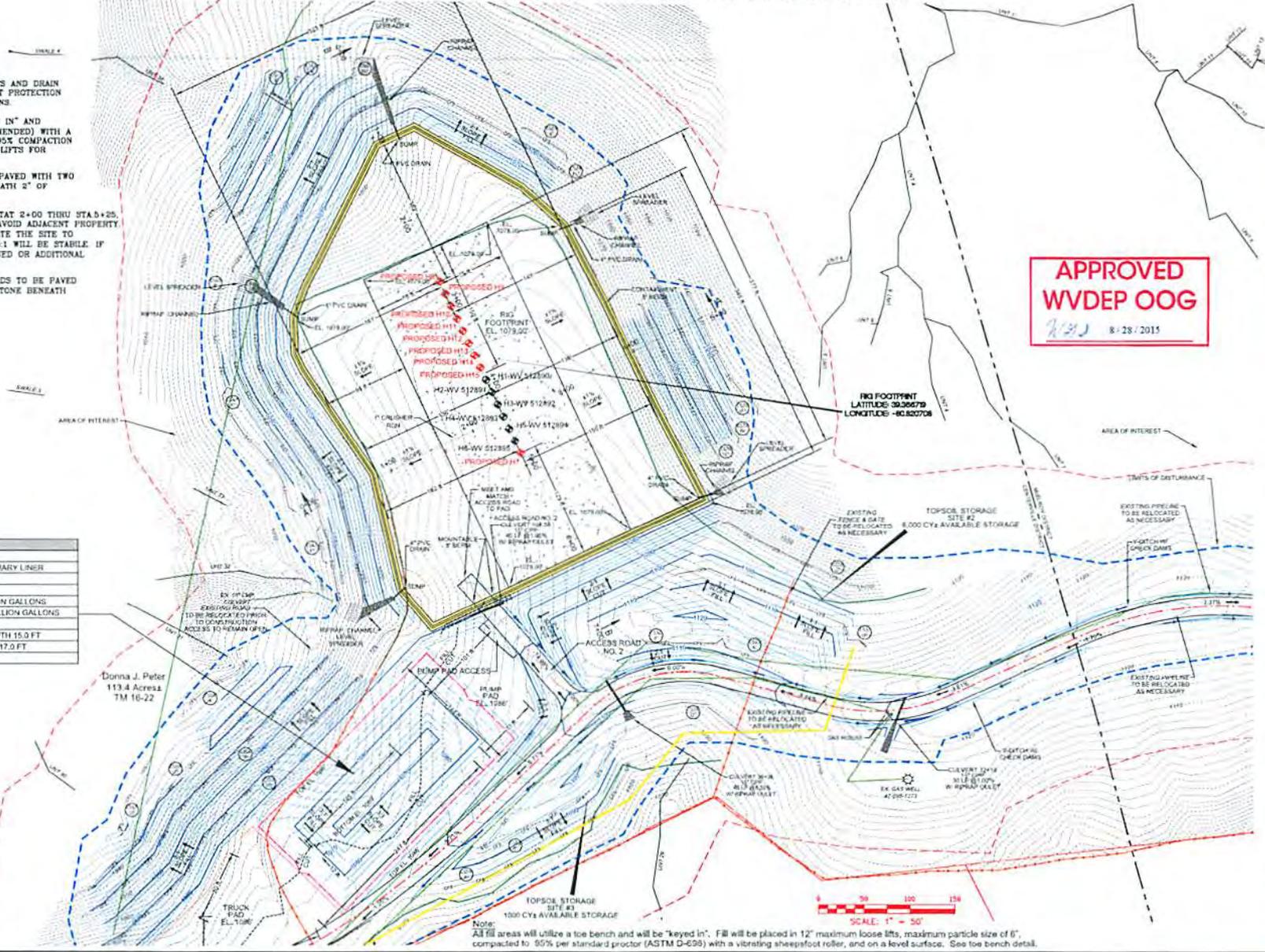
H1-WV 512890, H2-WV 512891, H3-WV 512892, H4-WV 512893, H5-WV 512894, H6-WV 512895

NOTE

1. ALL PROPOSED DRAINAGE CULVERTS AND DRAIN PIPES SHALL HAVE ADEQUATE OUTLET PROTECTION (RIP-RAP) AS SHOWN ON THESE PLANS.
2. ALL FILL AREAS SHALL BE "KEYED IN" AND COMPACTED IN 12" LIFTS (9" RECOMMENDED) WITH A VIBRATING SHEEPSFOOT ROLLER TO 95% COMPACTION PER STANDARD PROCTOR. MAXIMUM LIFTS FOR ROCK FILLS EQUAL 36".
3. ACCESS ROAD SURFACES TO BE PAVED WITH TWO 4" LIFTS OF #3-#6 LIMESTONE BENEATH 2" OF CRUSHER RUN LIMESTONE.
4. IN AREA OF ACCESS ROAD NO.1 STAT 2+00 THRU STA 5+25, ROAD CUT IS STEEPER THAN 2:1 TO AVOID ADJACENT PROPERTY. A GEOLOGIST SHALL FIELD INVESTIGATE THE SITE TO DETERMINE IF SLOPE AS SHOWN 1.75:1 WILL BE STABLE. IF NOT, ROAD WILL REQUIRE RE-DESIGNED OR ADDITIONAL STABILIZATION METHODS UTILIZED.
5. RIG FOOTPRINT AND MANIFOLD PADS TO BE PAVED WITH TWO 4" LIFTS OF #3-#6 LIMESTONE BENEATH 2" OF CRUSHER RUN LIMESTONE.

FLOWBACK PIT	
LINER SYSTEM	= 60 MIL TEXTURED PRIMARY LINER = 10 OZ. FLEX LINER
TOTAL VOLUME	= 5.135 AC FT 1.67 MILLION GALLONS
STORAGE VOLUME	= 3.911 AC FT 1.27 MILLION GALLONS
WATER SURFACE ELEVATION	= 1064 DEPTH 15.0 FT
TOP OF BEHM ELEVATION	= 1086 DEPTH 17.0 FT

APPROVED WVDEP OOG
8/28/2015



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

BRUCE KLEPER, P.E., L.P.
24 NORTH GRAND AVE., SUITE 1
FISHER, WEST VIRGINIA 25765
TEL: 336.783.3331 FAX: 336.783.3337
WWW.RK&K.COM

RK&K ENGINEERS

Professional Energy Consultants
A MEMBER OF SLS GROUP INC.
SLS
SPECIALTY SERVICES
PROJECT MGMT
WWW.SLSGROUP.COM
SLS 40-0164

THIS DOCUMENT WAS PREPARED BY SNAKE ENGINEERS FOR THE PRODUCTION COMPANY

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

DATE: 04/29/2015
SCALE: 1" = 50'
DESIGNED BY: JWH
FILE NO.: 208
SHEET 9 OF 33
REV: 08/25/2015

ACCESS ROAD NO. 1 PLAN

WELU4 PROPOSED WELLS

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

4709502281

MATCH LINE SHEET 6

L. & S. Sandra
Samsberg
47.98 Acres
T12-21-29

L. & S. Sandra
Samsberg
69.44 Acres
T12-21-29

George J. Peter
113.4 Acres
T12-21-22

George J. Peter
113.4 Acres
T12-21-22

Edward &
Catherine White
43 Acres
T12-21-35



- NOTES**
1. ALL PROPOSED DRAINAGE CURVES AND DRAIN PIPES SHALL HAVE ADEQUATE DRAINAGE PROFILES (GPI) AS SHOWN ON THESE PLANS.
 2. ALL FILL AREAS SHALL BE "KEYED IN" AND COMPACTED IN 12" LIFTS DISCONTINUED WITH A TYPICAL SUBMITTANT PROFILE TO MEET CONSTRUCTION PER STANDARD PROFILE WITHIN 10% FOR ROCK LISTS EQUAL OR
 3. ACCESS ROAD SURFACES TO BE PAVED WITH 180 # 1010 OF #4 CRUSHED GRANITE 2" TO EXCLUDE RUN ENTRAPMENT.
 4. IN AREA OF ACCESS ROAD NO. 1 STATE #100 THRU STA 5+25, ROADWAY IS DEEPER THAN 24" TO AVOID ADJACENT PROPERTY A GLOUCESTER SHALL FILL EXISTENTIAL THE SILL TO DRAINAGE IF PEOPLE AS SHOWN 1.75' WITH AN STAMPS. IF NOT ROAD WEA WAGGON BE-DESIGNED OR ADDITIONAL FAMILIARIZATION WITHIN LIMITED

RKX ENGINEERS
R. K. K...
ENGINEERS

SLS
Professional Energy Consultants
S. L. S...
CONSULTANTS

ACCESS ROAD NO. 1 PLAN
WELU4
ANKLNEY DISTRICT
CENTERVILLE DISTRICT
TYLER COUNTY WV

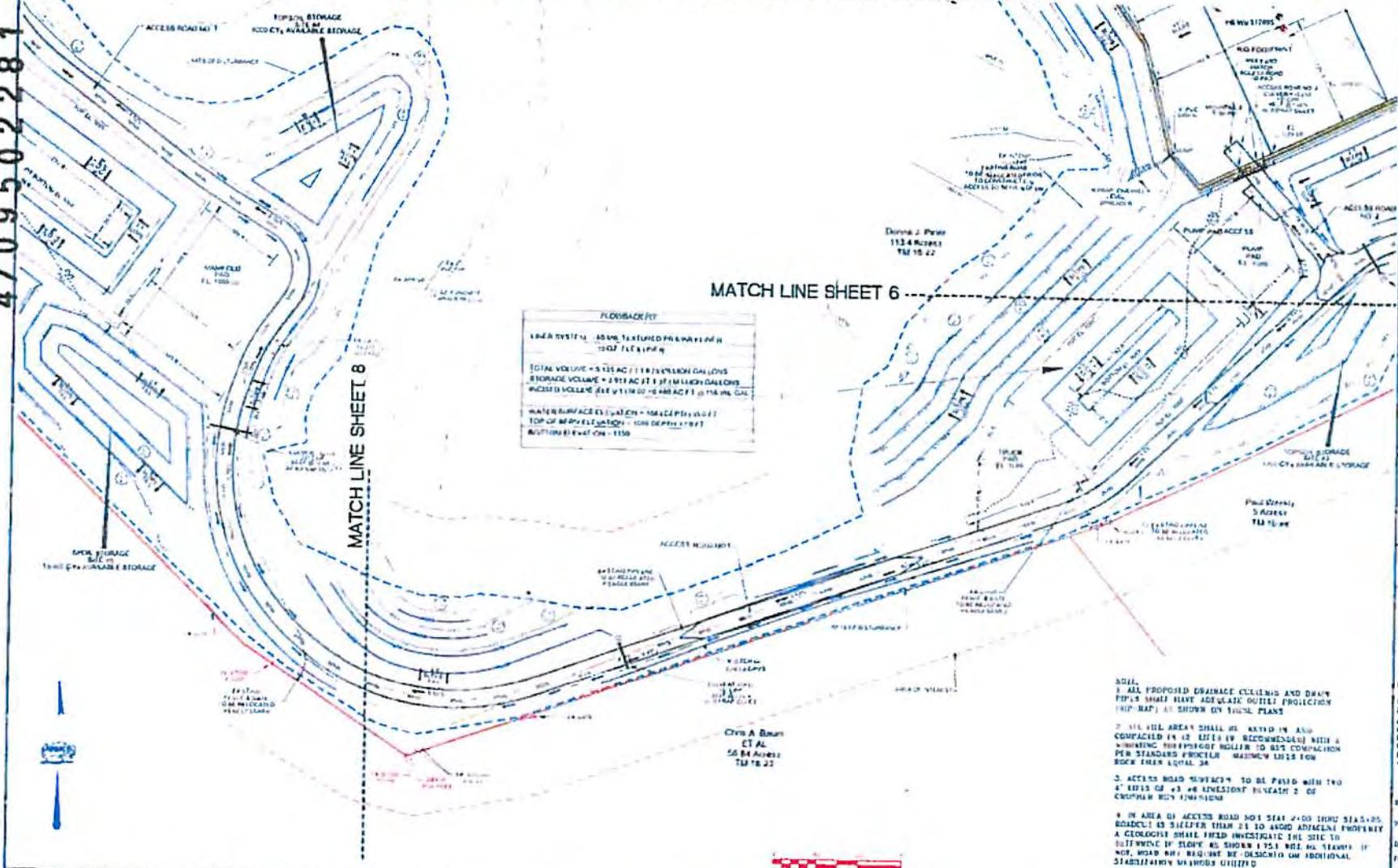
11/16/15
11/16/15

ACCESS ROAD NO. 1 CONCEPTUAL LAYOUT

WEU4 PROPOSED WELLS

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

4709502281



ARKX ENGINEERS
 R. J. KANE, P.E. & A. L. LIP
 20 NORTH HONOLULU BLVD
 SUITE 100 HONOLULU HI 96813
 TEL: 808.955.1234
 FAX: 808.955.1235
 WWW.ARKXENGINEERS.COM

Professional Energy Consultants
 SLS
 A Division of SLS Energy Services Inc.
 1000 W. 10th Street
 Suite 100
 Tulsa, Oklahoma 74103
 Tel: 918.436.1234
 Fax: 918.436.1235
 www.slsenergy.com

ACCESS ROAD NO. 1 PLAN
 WEU4
 WILCOX DISTRICT
 CENTERVILLE DISTRICT
 TYLER COUNTY WV

DATE: 04/26/2006
 PAGE: 1 OF 10
 DESIGNED BY: HWT
 PLOT NO: 206
 SHEET: 1 OF 10
 BY: GUY.2005

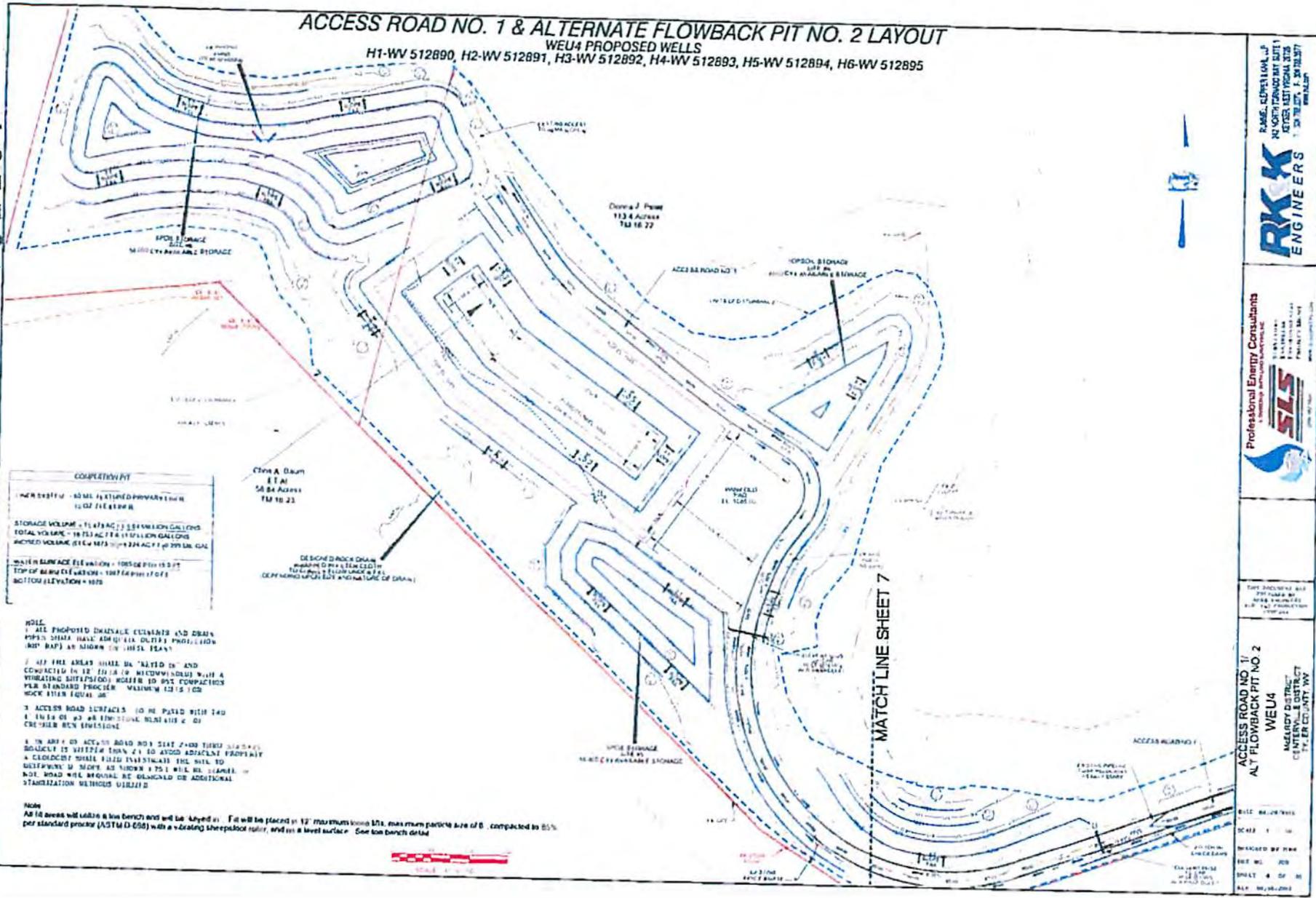
1. ALL PROPOSED DRAINAGE CULLETS AND DRAIN TIPS SHALL HAVE 12" SQUARE DRAIN PROTECTION (TRIP-RAP) AS SHOWN ON THESE PLANS.
2. ALL THE AREA SHALL BE KEPT IN AS-BUILT CONDITION IN 12" (OR RECOMMENDED) WITH A MINIMUM 1% SLOPE TOWARD DRAIN TO MEET CURRENT PER STANDARD PRACTICE. MAINTAIN UNITS FOR EACH AREA LOCAL 24.
3. ACCESS ROAD SURFACE TO BE PAVED WITH TWO (2) INCHES OF #4 CRACKED BITUMEN 2" OF CEMENT CONCRETE FINISH.
4. IN AREA OF ACCESS ROAD NOT SEAT 400 SHOU STAG-05, ROADWAY IS SLOPER THAN 2% TO AVOID ANTI-CREEP PROPERTY A GEOLOGIST SHALL FIELD INVESTIGATE THE SITE TO DETERMINE IF SLOPE IS SHOWN 1.75% NOT AS STAG-05. IF NOT, ROADWAY REQUIRE BE DESIGNED OR ADDITIONAL STABILIZATION METHODS UTILIZED.

WAC
 7/25/14

4709502281

ACCESS ROAD NO. 1 & ALTERNATE FLOWBACK PIT NO. 2 LAYOUT

WEU4 PROPOSED WELLS
H1-WV 512890, H2-WV 512891, H3-WV 512892, H4-WV 512893, H5-WV 512894, H6-WV 512895



COMPLETMENT	
WATER SYSTEM	10 MGAL 15 MINUTE PRIMARY TANK 12 OF 150 GPM
STORAGE VOLUME	11,473 AC 2.25 INCHES GALLONS
TOTAL VOLUME	18,753 AC 2.4 INCHES GALLONS
DESIGN VOLUME	81,617 (10.24 AC @ 200 GPM GAL)
WATER SURFACE ELEVATION = 1085.00 (15.0 FT)	
TOP OF BENCH ELEVATION = 1087.00 (17.0 FT)	
BOTTOM ELEVATION = 1070	

- NOTE:**
1. ALL PROPOSED DRAINAGE ELEMENTS AND DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THE 1988 ILLINOIS EARTH SHAKING ACT.
 2. ALL FILL AREAS SHALL BE "LIFTED IN" AND COMPACTED IN 12" LIFTS (OR EQUIVALENT) WITH A VIBRATING STEEL-DRUM ROLLER TO 95% COMPACTION PER STANDARD PRACTICE - MAXIMUM 12" IS COMPACTION EQUAL OR.
 3. ACCESS ROAD SURFACES TO BE PAVED WITH 140 LBS PER CU YD OF EMULSION BITUMENS OR OTHER BEN MIXTURE.
 4. IN AREAS OF ACCESS ROAD NOT SET 7" OR THEREABOUTS, SURFACE IS VIBRATED TO 2" TO AVOID ADJACENT PROPERTY - CLOSURE OF SHALL BE IN PLACE UNTIL THE SOIL IS UNIFORM IN MOISTURE AND 75% WET BULG DENSITY - NO ROAD WHEEL SHOULD BE DRIVEN OR ADDITIONAL STABILIZATION WITHOUT VIBRATION.

NOTE:
All fill areas will utilize a low borch and will be layered in 12" maximum loose lifts, max. max particle size of 6", compacted to 95% per standard practice (ASTM D-1556) with a vibrating steel-drum roller, and on a level surface. See low borch detail.



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PH: 972.443.1111
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DATE: 05/05/10
PROJECT NO.: 10000000000000000000
SHEET NO.: 10000000000000000000

ACCESS ROAD NO. 1
ALT FLOWBACK PIT NO. 2
WEU4
MAGERY DISTRICT
CENTRAL DISTRICT
TYLER COUNTY, WV

DATE: 05/05/10
SCALE: 1" = 100'
DRAWN BY: JMM
CHECKED BY: JMM
DATE: 05/05/10
SHEET: 4 OF 10
REV: 05/05/10

Handwritten: MKG 7/20/10

4709502281

RIG FOOTPRINT & FLOWBACK PIT NO. 1 LAYOUT

WEU4 PROPOSED WELLS
 H1-WW 512890, H2-WW 512891, H3-WW 512892, H4-WW 512893, H5-WW 512894, H6-WW 512895

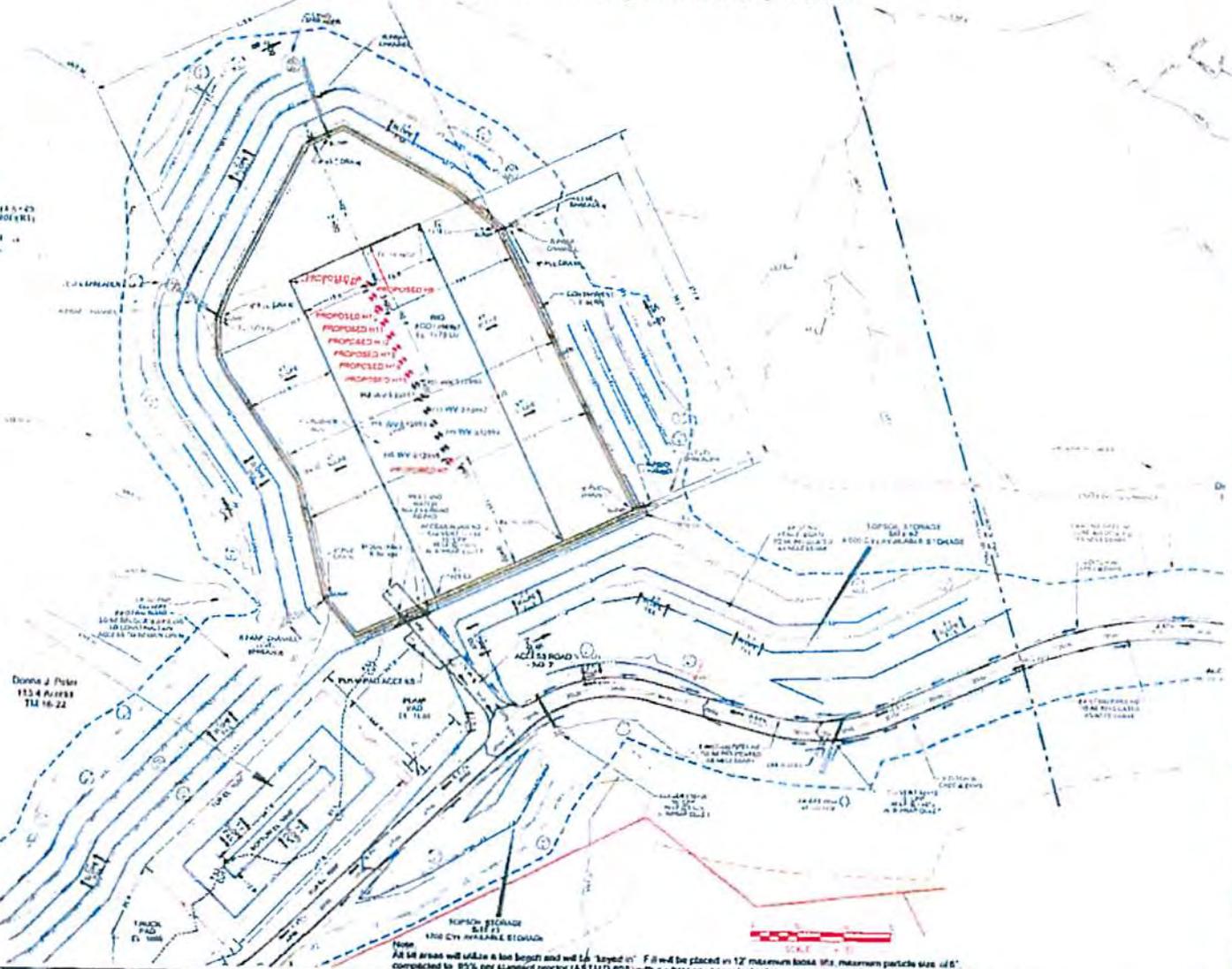
1. ALL PROPOSED DRAINAGE DITCHES AND DRAIN PIPES SHALL HAVE ADEQUATE SLOPE PROFILES (SEE MAP AS SHOWN ON THESE PLANS)
2. ALL FILL AREAS SHALL BE PAVED IN AND COMPACTED IN 2 LIFTS (AS RECOMMENDED) WITH A VIBRATING STEELFOOT ROLLER TO 95% COMPACTION PER STANDARD PROCTOR MAXIMUM LIMIT FOR ROCK 7513 LEVEL 3B
3. AFTER THE ROAD SURFACES TO BE PAVED WITH IN 2 LIFTS OF 2.5" (MINIMUM) DENTALS OF CRUSHED RIM FINE SILENT
4. IN AREA OF ACTIVE ROAD NOT BEING PAVED (SEE SHEET 20) PROJECT IS WASTEFUL THAN TO AVOID ADJACENT PROPERTY A GEOLOGIST SHALL (BEING INVESTIGATE) THE SITE TO DETERMINE IF SOLE AS SHOWN IS 25% OR MORE NOT. ROAD MAY BE REQUIRED BE DESIGNER OR ADDITIONAL STABILIZATION MEASURES (SEE SHEET 20)
5. RIG FOOTPRINT AND MANHOLE PADS TO BE PAVED WITH IN 2 LIFTS OF 2.5" (MINIMUM) DENTALS OF CRUSHED RIM FINE SILENT

FLOWBACK

THE SYSTEM IS DESIGNED TO HOLD 100% OF THE RIG

TOTAL VOLUME = 3,935 AC FT 187 MILLION GALLONS
 STORAGE VOLUME = 3,935 AC FT 177 MILLION GALLONS

WATER SURFACE ELEVATION = 1064.00 DEPTH 10.00 FT
 TOP OF BEAM ELEVATION = 1054.00 DEPTH 10.00 FT



Note: All fill areas will utilize a top layer and well in a 12" maximum below the maximum particle size of 8" and 1/2" maximum diameter. The maximum diameter of the material placed in the pits and flowback pits shall be 8" and 1/2" maximum diameter. The maximum diameter of the material placed in the pits and flowback pits shall be 8" and 1/2" maximum diameter.

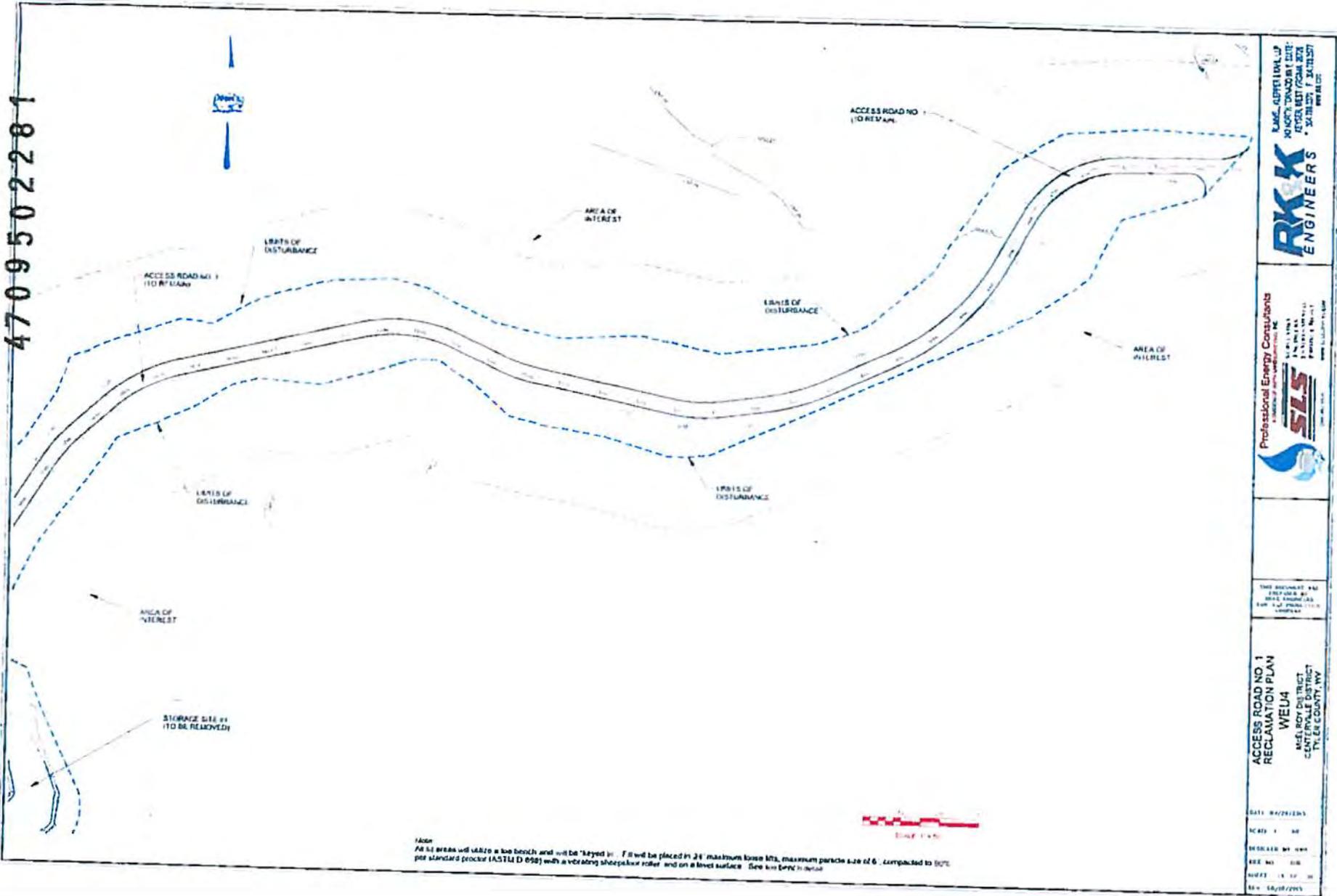
NAMEL CLIFF LUKALIC
 10 NORTH DUNDAS STREET WEST
 SUITE 1000
 MISSISSAUGA, ONTARIO L4X 1L7
 CANADA
 TEL: 905.277.1347
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RIG FOOTPRINT & FLOWBACK PIT NO. 1
 WEU4
 WELLSBORO DISTRICT
 CENTREVILLE DISTRICT
 TYLER COUNTY, WV

DATE: 06/16/2015
 SHEET: 1 OF 1
 DRAWN BY: JMM
 CHECKED BY: JMM
 SCALE: AS SHOWN
 BY: JMM

4709502281



Note:
 All fill areas will utilize a base bench and will be keyed in. Fill will be placed in 24" maximum loose lifts, maximum particle size of 6", compacted to 90% per standard proctor (ASTM D 998) with a vibrating sheepsfoot roller and on a level surface. See also SPEC. to detail.

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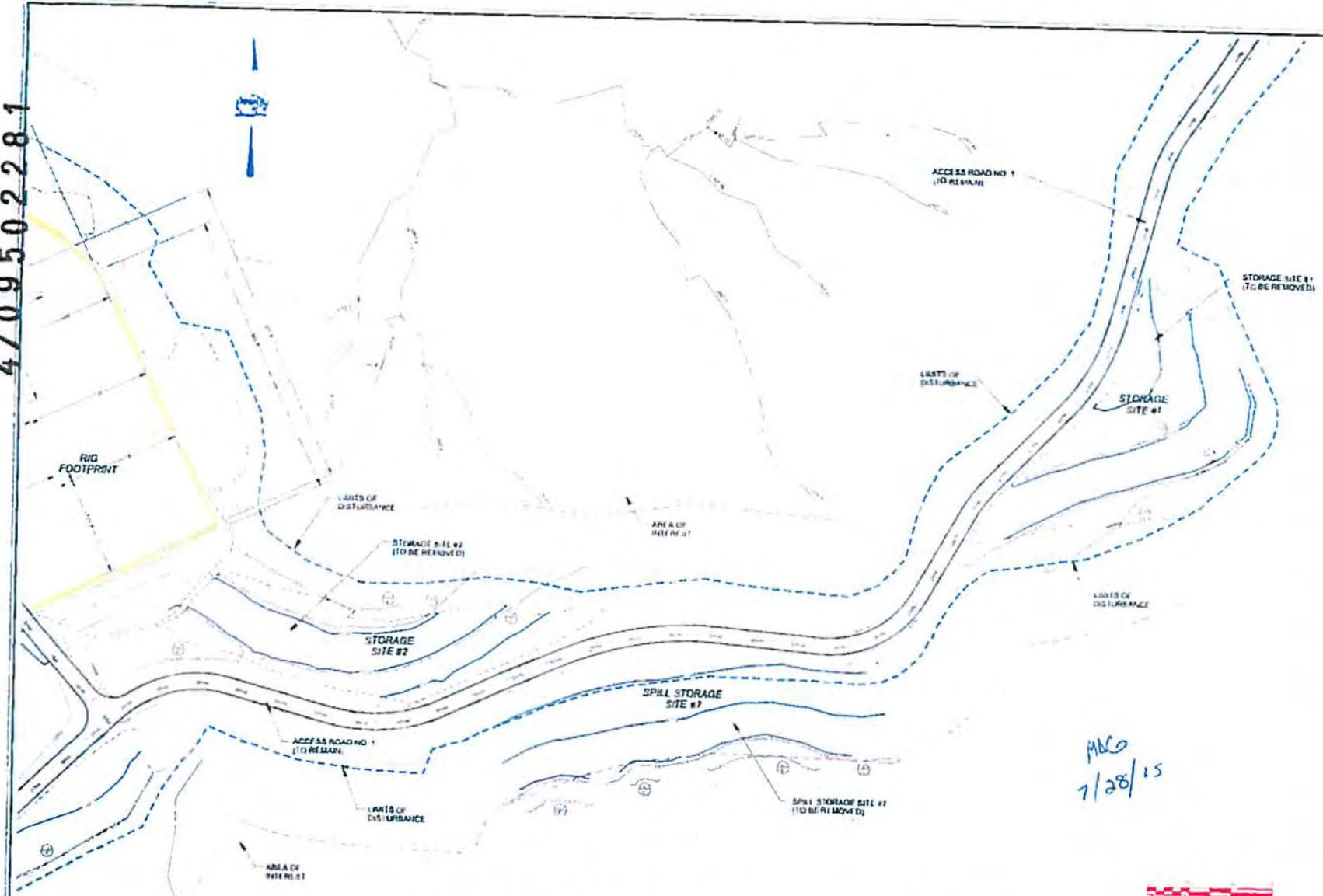
THIS DOCUMENT HAS
 BEEN REVIEWED BY
 REXX ENGINEERS
 AND IS IN ACCORDANCE
 WITH THE RECLAMATION
 ACT.

ACCESS ROAD NO. 1
 RECLAMATION PLAN
 WEU4
 MESAEROY DISTRICT
 CENTRALVILLE DISTRICT
 TYLER COUNTY, WV

DATE: 04/29/2005
 SCALE: 1" = 40'
 DESIGNED BY: REX
 DRAWN BY: REX
 CHECKED BY: REX
 DATE: 04/29/2005
 BY: 10/10/2005

MOC
7/2/04

4709502281



NOTE:
 All fill areas will receive a low bench and will be "loped" in. It will be placed in 24" maximum loose lifts, maximum particle size of 8", compacted to 90% per standard proctor (ASTM D 1558) with a vibrating sheepfoot roller, and on a level surface. See low bench detail.

MCO
 7/28/15

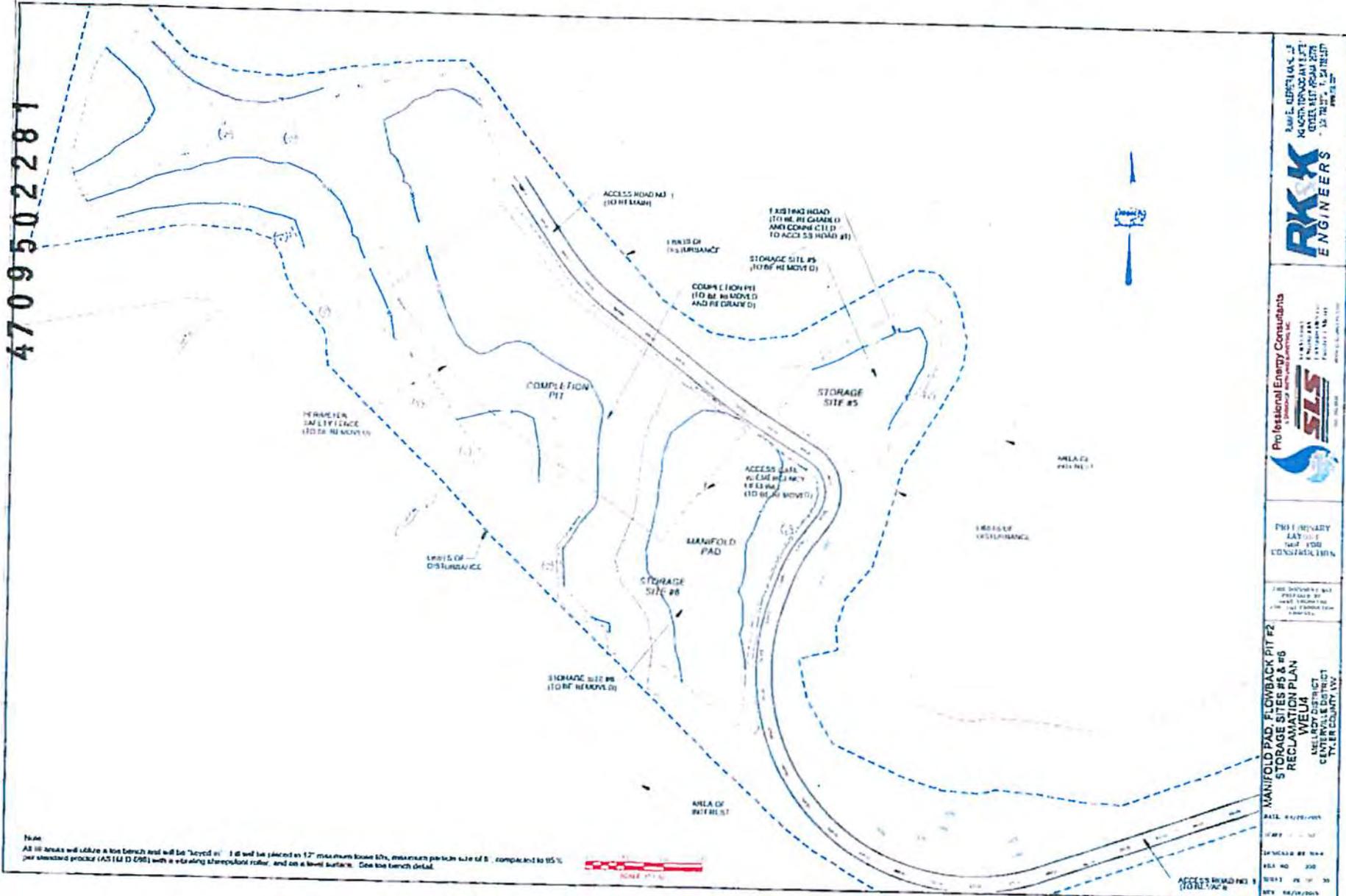
RKX
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STORAGE SITES #1 & #2
 RECLAMATION PLAN
 WELU4
 ALBERTON DISTRICT
 COLUMBIAN COUNTY, WV

DATE: 8/20/14
 SCALE: 1" = 50'
 SHEET NO. 04
 TOTAL NO. SHEETS: 04
 DATE: 8/20/14

4709502281



Note:
 All oil tanks will utilize a fire trench and will be "keyed in" and will be placed on 12" maximum loose fill, maximum permeable side of 8" compacted to 95% per standard practice (ASTM D 698) with a vibrating sheepsfoot roller, and on a level surface. See the trench detail.



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PROVISIONAL
 LAYOUT FOR
 CONSTRUCTION

DATE: 04/20/2011
 DRAWN BY: [illegible]
 CHECKED BY: [illegible]
 SCALE: AS SHOWN

**MANIFOLD PAD, FLOWBACK PIT #2,
 STORAGE SITES #5 & #6
 RECLAMATION PLAN
 WELLS**
 WELLS DISTRICT
 CENTRAL DISTRICT
 WELLS COUNTY, TN

DATE: 04/20/2011
 DRAWN BY: [illegible]
 CHECKED BY: [illegible]
 SCALE: AS SHOWN

MAG
 7/24/15