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

January 15, 2016

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-3305873, issued to TRIANA ENERGY, LLC, 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: BRENNAN 3H
Farm Name: JANICE BRENNAN , TRUST A
API Well Number: 47-3305873
Permit Type: Horizontal 6A Well
Date Issued: 01/15/2016

API Number: 47 0 [illegible] 0 [illegible] 3

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

west virginia department of environmental protection

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

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

ORDER
ISSUED UNDER
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A

TO: Triana Energy, LLC
900 Virginia St. East, Suite 400
Charleston WV, 25301

DATE: January 13, 2016
ORDER NO.: 2016-W-1

INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Triana Energy LLC (hereinafter "Triana" or "Operator"), collectively the "Parties."

FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.

2. Triana is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 900 Virginia St. East, Suite 400, Charleston, West Virginia.

3. On August 5, 2015, Triana submitted a well work permit application identified as API# 47-033-05873. The proposed well is to be located on the Brennan Pad in Clay District of Harrison County, West Virginia.

4. On November 3, 2015, Triana requested a waiver for Wetland W, as outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-033-05873.

CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that "[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to...(3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing."

2. West Virginia Code §22-6A-2(a)(6) requires, in part, that "Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter."

3. West Virginia Code §22-6A-12(b) requires, in part, that "[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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."

ORDER

West Virginia Code §22-6A-12(b) requires, in part, that "[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland W, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-033-05873. The Office of Oil and Gas hereby **ORDERS** that Triana shall meet the following site construction and operational requirements for the Brennan well pad:

a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least a eighteen inches (18") in height;
b. Straw wattles shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
c. Wetland W shall have two rows of super silt fence (SF) in all areas draining into the wetland
d. All diversion ditches that feed the area where the wetland is located shall have a riprap aprons to aid in the removal of sediment.
e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½") rain within any twenty-four (24) hour period;
k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
l. All records from inspections shall be maintained on site for the life of the project and be available upon request.

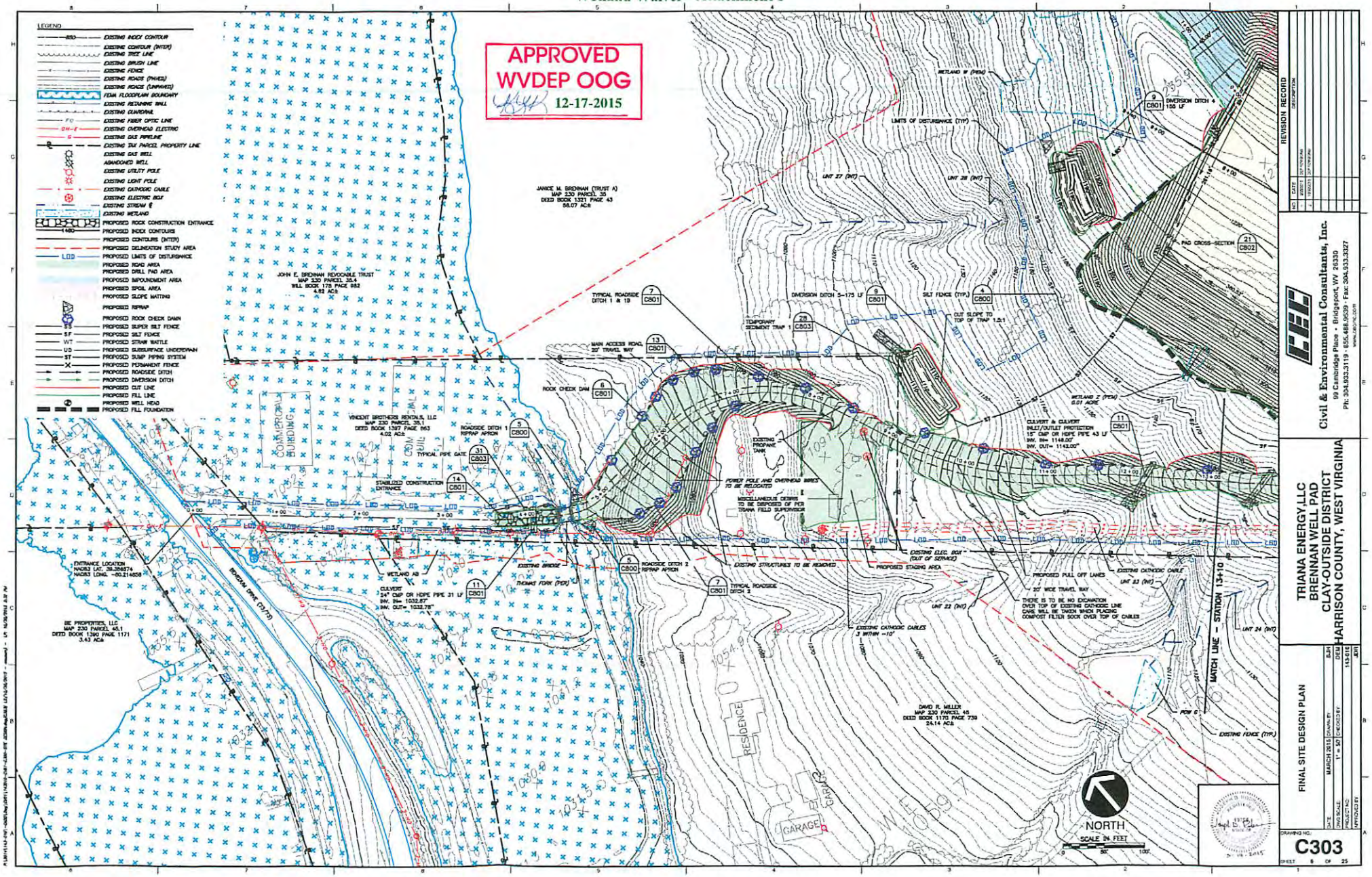
Thus ORDERED, the 13th day of January, 2016.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: _____
JAMES A. MARTIN, CHIEF

Wetland Waiver - Attachment 1



WW-6B
(12/14)

4703305073

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

1) Well Operator: Triana Energy, LLC	494486431	Harrison	Clay-Out	Rosemont
	Operator ID	County	District	Quadrangle

2) Operator's Well Number: Brennan 3H Well Pad Name: Brennan

3) Farm Name/Surface Owner: Janice M. Brennan Trust Public Road Access: CR 73/73 - Benedum Drive

4) Elevation, current ground: 1,233.2' Elevation, proposed post-construction: 1,230'

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

SDW
1/13/16

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Formation = Marcellus Shale, Depth = 7,690', Thickness = 130', Pressure = 5,000 psi

8) Proposed Total Vertical Depth: Onondaga/Huntersville Chert = 7,770'

9) Formation at Total Vertical Depth: Marcellus (pilot hole will advance into the Onondaga/Huntersville Chert)

10) Proposed Total Measured Depth: 15,500'.

11) Proposed Horizontal Leg Length: 6,800'

12) Approximate Fresh Water Strata Depths: 210', 670', 950'

13) Method to Determine Fresh Water Depths: Adjacent well records, WVGES Coal Mapping Project, WVDEP database of reported water occurence.

14) Approximate Saltwater Depths: None reported

15) Approximate Coal Seam Depths: 135, 210, 305, 385, 465, 510, 610, 630, 670

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

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No X

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

WW-6B
(12/14)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

4705305077

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	LS	55	60	60	CTS
Fresh Water	13-3/8"	New	H-40	48	1,025	1,025	CTS
Coal	NA						
Intermediate	9-5/8"	New	J-55	40	2,625	2,625	CTS
Production	5-1/2"	New	P-110	20	15,500	15,500	Top @ 4,925'
Tubing	2-3/8"	New	N-80	4.7	0	8,100	None
Liners							

SDW
1/13/16

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.25	340	N/A	Ready-mix concrete	N/A
Fresh Water	13-3/8"	17-1/2"	0.33	1,730	1,000	Class A, w/Additives	1.18 - 1.54
Coal	NA						
Intermediate	9-5/8"	12-3/8 - 12-1/4"	0.395	3,950	2,500	Class A, w/Additives	1.18 - 1.54
Production	5-1/2"	8-3/4 - 7-7/8"	0.361	12,640	10,000	Type 1, w/Additives	1.37 - 1.65
Tubing	2-3/8"	N/A	1.19	11,200	8,000	None	None
Liners							

PACKERS

Kind:	N/A			
Sizes:				
Depths Set:				

WW-6B
(12/14)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

Drill vertical hole into the Onondaga Formation to a TVD of 7,770', conduct survey, install cement plug back to kick-off point at 6,060', wait for cement to harden, drill deviated hole to TMD and set casing.

4703305077

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

Perforate the production casing and production zone with perforating guns at predetermined locations, isolate treatment zones in stages and perform high pressure slick-water fracture, introducing proppant to retain fractures. Maximum pressure should not exceed 10,000 psi, and the maximum rate should not exceed 100 bbl/minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 20.88 acres

22) Area to be disturbed for well pad only, less access road (acres): 9.62 acres

23) Describe centralizer placement for each casing string:

Centralizers will be used as needed. The number and type is dependent on hole conditions. Rigid-style centralizers will be used in the lateral and curve sections of the well bore.

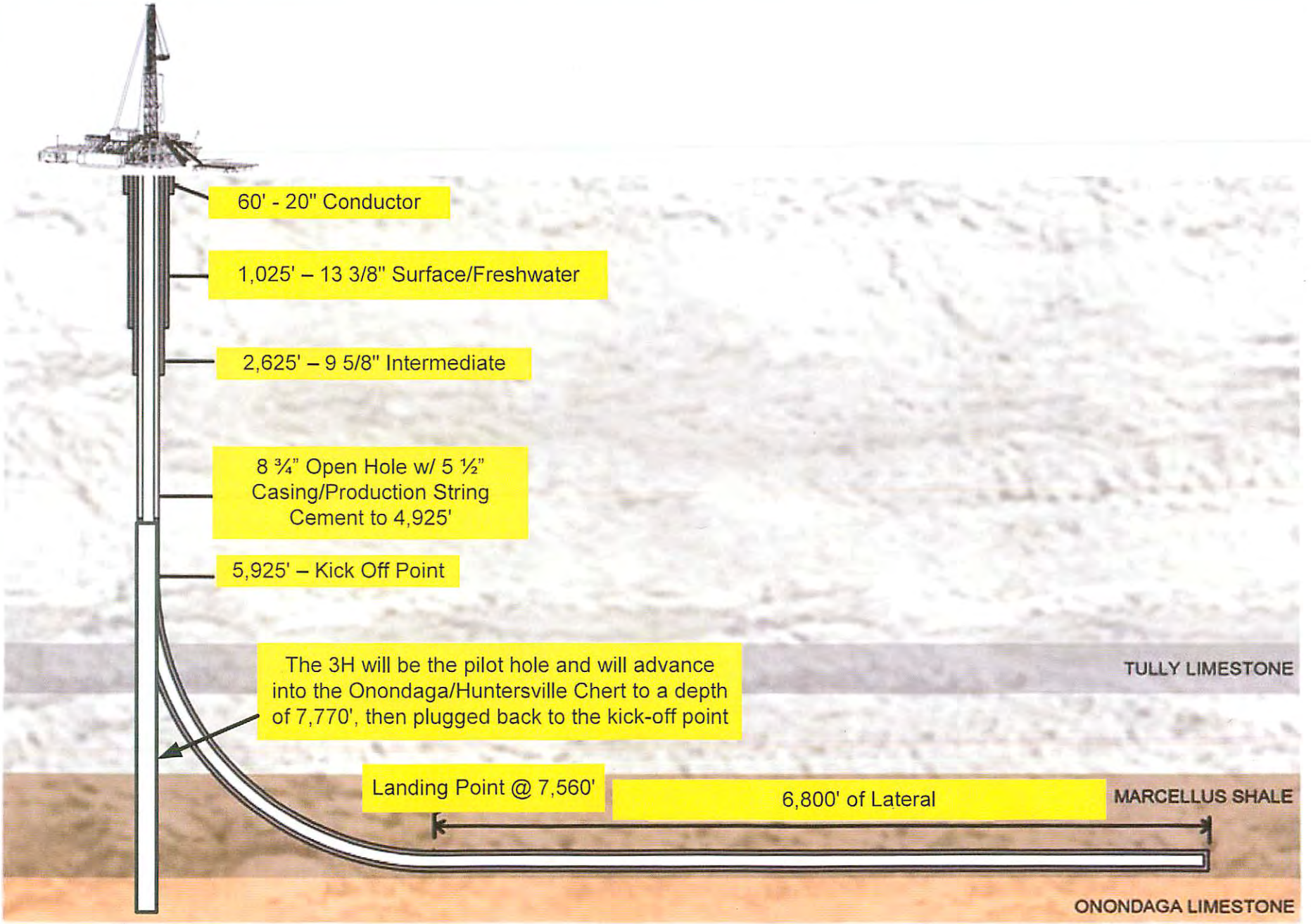
24) Describe all cement additives associated with each cement type:

Conductor - If pumped conventionally (wet hole) - Type 1 or Class A cement with 0-3% CaCl2 and up to 1/4# per sack of Flake type LCM.
Conductor - if grouted from surface (dry hole) - Typical "Ready Mix" from a construction plant with gravel aggregate.
Surface Casing - Class A cement with 3% CaCl2 and 1# per sack of Flake type LCM.
Intermediate Casing - Class A cement with 0-3% CaCl2 and a fluid loss/gas migration additive, an anti-foaming additive, and up to 1/2# per sack of Flake type LCM.
Production Casing - Class A 50:50 Poz mix (50% Class A cement/50% Fly Ash) with 2% bentonite gel, with a fluid loss/gas migration additive, a retarder additive and an anti-foaming additive.

25) Proposed borehole conditioning procedures:

Proposed bore hole conditioning procedures will depend on hole conditions. These may include, but are not limited to: weighted or high viscosity fluid sweeps, mud solvent fluid sweeps, surfactant sweeps, scouring sweeps, high-rate or extended circulation, pipe rotation and reciprocation, short trips and other appropriate methods.

*Note: Attach additional sheets as needed.



Casing Diagram

not to scale

Brennan 3H

Harrison County, WV

Triana Energy

WW-9
(2/15)

API Number 47 - _____ - _____
Operator's Well No. Brennan 3H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Triana Energy, LLC OP Code 494486431

Watershed (HUC 10) Thomas Fork of Booth's Creek Quadrangle Rosemont

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

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

SPW 7/15/2015

_____ Land Application
■ Underground Injection (UIC Permit Number 34-009-2-3823-00-00 - K&H UIC #2 4703305873)
_____ Reuse (at API Number _____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
■ Other (Explain Fairmont Brine - WVR00521948)

Will closed loop system be used? If so, describe: Yes, mud recycling with centrifuge and cuttings drier/shaker.

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

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

Additives to be used in drilling medium? Soap, potassium solution

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

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

-Landfill or offsite name/permit number? Waste Management - Meadowfill Landfill SWF-1032

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.

Received Office of Oil & Gas JUL 23 2015

RECEIVED Office of Oil & Gas JUL 23 2015

JUL 27 2015

Company Official Signature _____

Company Official (Typed Name) Walter C. Showen, III

Company Official Title Permitting Manager

WV Department of Environmental Protection

Received Office of Oil & Gas JUL 23 2015

Subscribed and sworn before me this 21st day of July, 20 15

Elizabeth Walker Notary Public

My commission expires 10-4-21

OFFICIAL SEAL
Notary Public, State Of West Virginia
ELIZABETH WALKER
1745 Brook Road
South Charleston WV 25309
My Commission Expires October 4, 2021

Form WW-9

Operator's Well No. Brennan 3H

Triana Energy, LLC

Proposed Revegetation Treatment: Acres Disturbed 20.88 +/- Prevegetation pH 4703305873

Lime 2 Tons/acre or to correct to pH approx. 7

Fertilizer type 10-20-20 or equivilant

Fertilizer amount 500 lbs/acre

Mulch 100 bales Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
30% Annual Ryegrass, 20% Pennate Orchard		30% Annual Ryegrass, 20% Pennate Orchard	
10% Alsike Clover, 10% Trefoil Norcen Empire		10% Alsike Clover, 10% Trefoil Norcen Empire	
15% Climax Timothy N.C., 15% Perennial Ryegrass		15% Climax Timothy N.C., 15% Perennial Ryegrass	

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments: Pre-seed/mulch as soon as reasonably possible per WV DEP regulation. Upgrade E&S as necessary per WVDEP E&S manual.

Received
Office of Oil & Gas
AUG 05 2015

Received
Office of Oil & Gas
JUL 23 2015

Title: OOG Inspector Date: 7/15/2015

Field Reviewed? (X) Yes ( ) No

RECEIVED
Office of Oil and Gas
JUL 27 2015
WV Department of
Environmental Protection

Triana Energy
Twenty-First Century Explorers

August 3, 2015

4703305873

Ms. Melanie Hankins
Environmental Technician
Office of Oil and Gas
West Virginia Department of Environmental Protection
601 57th Street, S. E.
Charleston, West Virginia 25304

Re: Triana Energy, LLC – Horizontal Well Work Permit Application
Brennan 3H Well, Harrison County, West Virginia - Plat Omission

Dear Ms. Hankins:

Enclosed please find the map showing possible water well locations, the authorization letter from the WV DOH, the Site Safety Plan, and the Water Management Plan Application for the proposed Brennan 3H horizontal well. These items were inadvertently left out of the package I delivered to you on July 31.

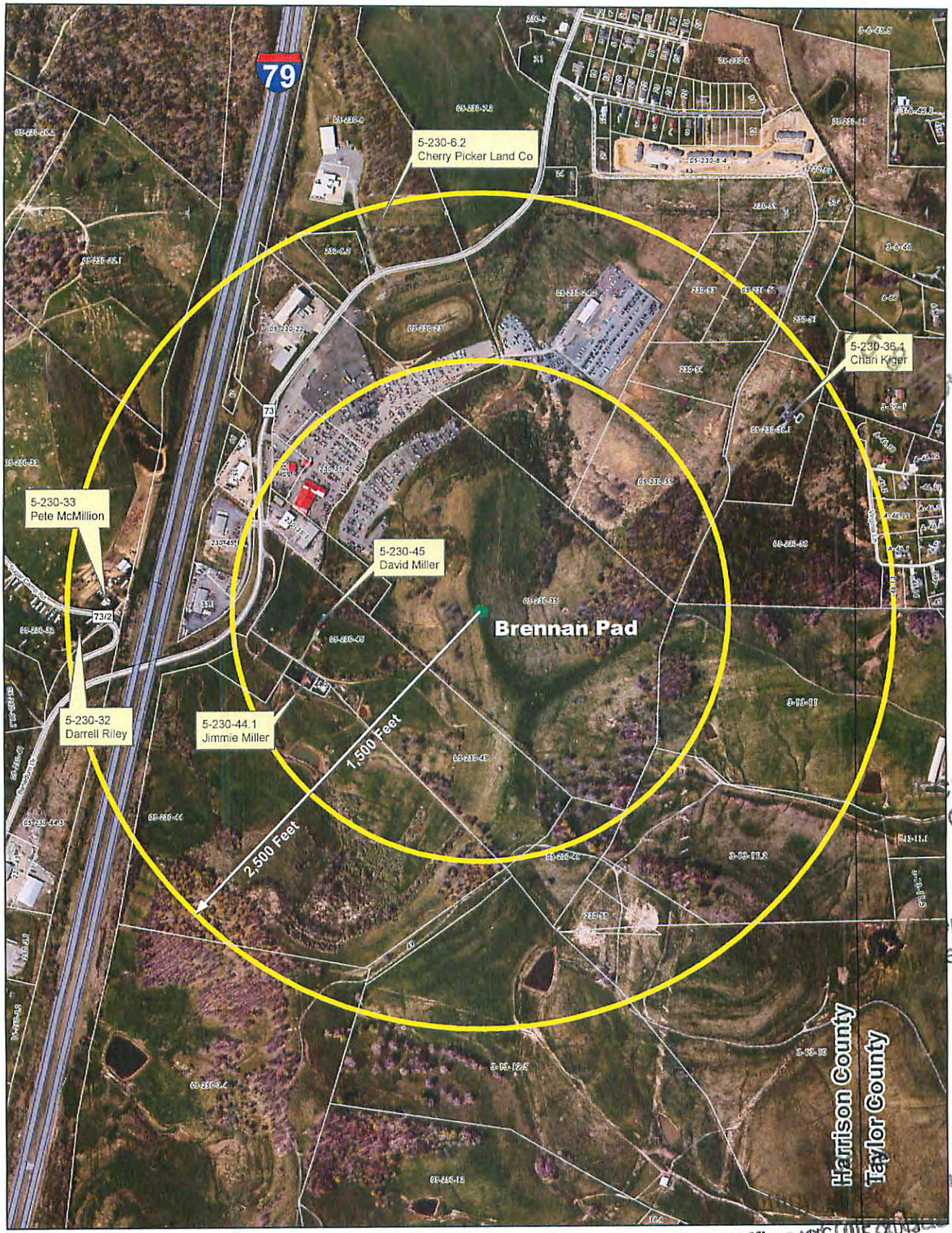
I'm sorry for any inconvenience. Please feel free to contact me should you have any questions or need additional information.

Sincerely,

Walter C. Showen, III
Manager, Permitting

Received
Office of Oil & Gas
AUG 05 2015

900 Virginia Street, East, Suite 400, Charleston, West Virginia 25301
Telephone/Fax: (304) 205-8503 ~ www.TrianaEnergy.com



Proposed surface location(s) and well bore(s) shown on this plat are subject to change

Triana Energy, LLC does not warrant nor guarantee the accuracy of the data shown herein. The information depicted herein is confidential and proprietary to Triana Energy, LLC and should not be used for any purpose other than for informational purposes. Any dissemination, copying or use of this map by anyone other than its intended recipient is unauthorized.

Brennan Pad
Possible Water Well Locations
Location

msexton 05/15/2015

N W E S

0 500 1,000 Feet

Clay-Outside District
Harrison County, WV
Rosemont 7.5' Quadrangle

Triana Energy

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4703305873

Triana Energy

Twenty-First Century Explorers

SDW
7/15/2015

4703305873

Triana Energy, LLC

Brennan 3H

Well Site Safety Plan

131 Auto Drive

Bridgeport, Harrison County, West Virginia

RECEIVED
Office of Oil and Gas

JUL 27 2015

WV Department of
Environmental Protection

Received
Office of Oil & Gas
JUL 23 2015

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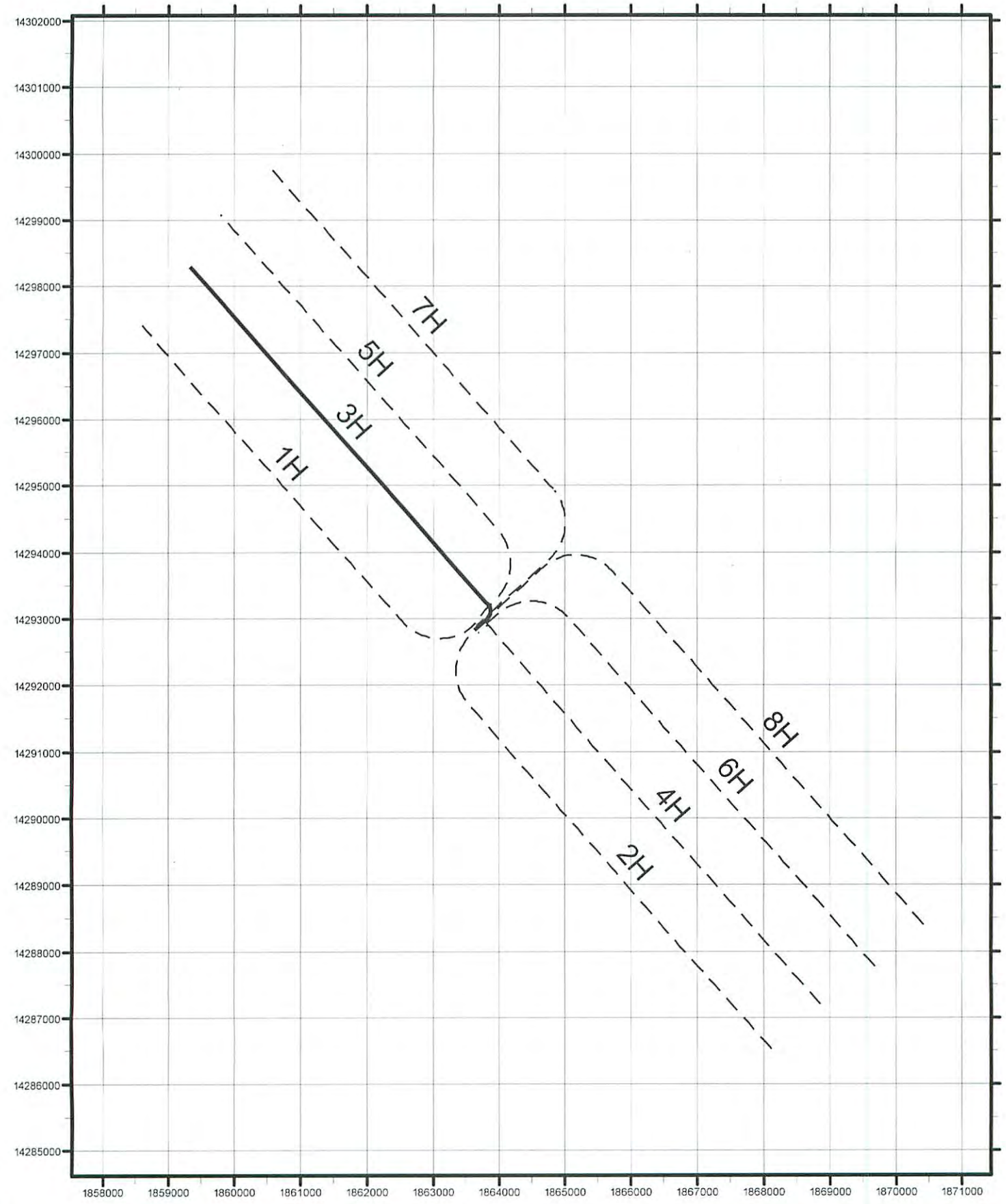
Office of Oil & Gas
AUG 05 2015



Brennan 3H

Clay District
Harrison County, WV

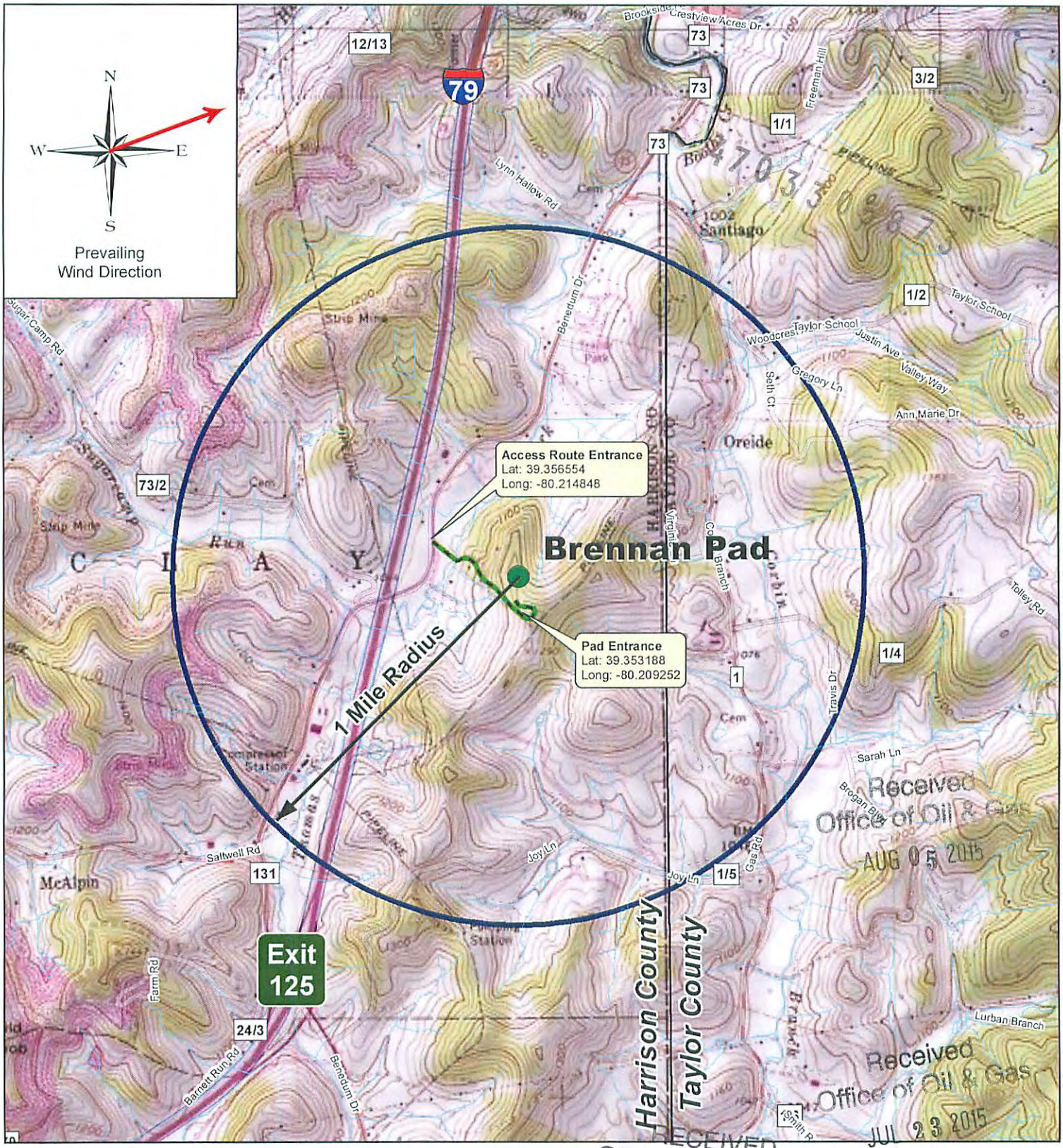
Coordinate System:
NAD 1983 UTM Zone 17 Feet
Grid Spacing: 1000'

N
W E
S

0 1,000 2,000 4,000 Feet

Triana Energy
Twenty-First Century Explorers

10/23/2015 3H.mxd



Proposed surface location(s) and well bore(s) shown on this plat are subject to change.

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Brennan Pad Location

msexton 04/11/2015

Clay-Outside District
Harrison County, WV
Rosemont 7.5' Quadrangle

0 1,000 2,000 Feet

Triana Energy

M:\GIS\Prospects\Bridgeport\dev\Pad K\SiteSafety\SiteSafety_Brennan_8x11_Topo.mxd

WW-6A1
(5/13)

Operator's Well No. Brennan 3H

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
58561	Leland H. Nixon et al	Hope Natural Gas	12.5%	617/312
48589	J.E. Core and Erma L. Core	Hope Natural Gas	12.5%	471/461
Partial Assignme	Dominion Transmission, Inc.	Triana Energy, LLC		1521/1290

4703305873

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

Received
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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.

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JUL 23 2015

Well Operator: Triana Energy, LLC
By: Walter C. Showen, III
Its: Permitting Manager

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JUL 27 2015
WV Department of
Environmental Protection

Dominion Transmission Predecessor Name Change Chain

A. Instrument:	**Confirmatory Deed** (Exhibit 4)
Dated:	April 1, 1965
Filed:	April 22, 1965
Recorded:	Deed Book 903, Page 179
Assignor:	Hope Natural Gas Company
Assignee:	Consolidated Gas Supply Corporation
Interests Assigned:	All of Assignor's real estate, which would include the Current Oil and Gas Lease, pursuant to a merger between the parties dated February 8, 1965.
B. Instrument:	**Assignment of Oil and Gas Leases** (Exhibit 5)
Dated:	March 1, 1984, effective January 1, 1984
Filed:	April 9, 1984
Recorded:	Deed Book 1136, Page 250
Assignor:	Consolidated Gas Supply Corporation
Assignee:	Consolidated Gas Transmission Corporation
Interests Assigned:	All of Assignor's interest in several leases, including the Current Oil and Gas Lease, pursuant to a Transfer Agreement and Plan of Reorganization dated April 10, 1980 between Consolidated Gas Supply Corporation, Consolidated Gas Transmission Corporation and Consolidated Natural Gas Company.
C. Instrument:	**Certificate of Amendment of Certificate of Incorporation** (Exhibit 6)
Dated:	January 13, 1988
Filed:	January 29, 1988
Recorded:	Incorporation Record 51, Page 795
Original Party:	Consolidated Gas Transmission Corporation
Surviving Party:	CNG Transmission Corporation
Purpose:	Consolidated Gas Transmission Corporation changed its name to CNG Transmission Corporation.

Dominion Transmission Predecessor Name Change Chain

D. Instrument:	**Certificate of Name Change** (Exhibit 7)
Dated:	May 10, 2000
Filed:	May 17, 2000
Recorded:	Incorporation Record 58, Page 362
Original Party:	CNG Transmission Corporation
Surviving Party:	Dominion Transmission, Inc.
Purpose:	To give notice that CNG Transmission Corporation changed its name to Dominion Transmission, Inc.
E. Instrument:	**Partial Assignment of Oil & Gas Leases** (Exhibit 8)
Dated:	October 22, 2013
Filed:	October 30, 2013
Recorded:	Deed Book 1521, Page 1290
Assignor:	Dominion Transmission, Inc.
Assignee:	Triana Energy, LLC

TRIANA ENERGY, LLC
NORTHERN BRENNAN UNIT NO. 3H

SURVEYED LONGITUDE 80°12'37.15" — 562'

LATITUDE: 39°22'30"

LONGITUDE: 80°12'30" — 7,314'

NOTES ON SURVEY

1. NO OCCUPIED DWELLINGS OR BUILDINGS 2500 SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY WITHIN 625' OF THE CENTER OF THE WELL PAD WERE OBSERVED.
2. NO WATER WELLS OR DEVELOPED SPRINGS USED FOR HUMAN OR DOMESTIC ANIMAL CONSUMPTION WERE FOUND WITHIN 250' OF THE WELL PAD.
3. SURFACE OWNERSHIP TAKEN FROM THE HARRISON COUNTY TAX ASSESSOR AND COUNTY CLERK OFFICES IN JULY, 2014.
4. WELL LATITUDE AND LONGITUDE FROM SURVEY GRADE OPUS SOLUTION DERIVED ON JULY 18, 2014.
5. TIES TO CORNERS AND REFERENCES BASED ON WV STATE PLANE COORDINATE SYSTEM, NAD '83 NORTH ZONE UNLESS OTHERWISE NOTED.
6. LEASE INFORMATION PROVIDED BY TRIANA ENERGY, LLC.

NORTHERN BRENNAN UNIT NO. 3H
NAD '83 UTM ZONE 17 COORDINATES (METERS)

SURFACE HOLE	LANDING POINT	BOTTOM HOLE
N. 4356461	N. 4356575	N. 4358128
E. 568037	E. 568098	E. 566728

OUTER LEASE BOUNDARY
LEASE TRACT
SURFACE BOUNDARY (approx.)
CREEK/STREAM
ROADS
PROPOSED LATERAL
500' LATERAL OFFSET
EXISTING GAS WELL (active)
EXISTING GAS WELL (plugged)
FOUND MONUMENT (as noted)

3H CURVE TABLE		
ID	RADIUS	ARC LENGTH
C1	148.41'	238.44'

3H LINE TABLE		
ID	BEARING	DISTANCE
L1	N 62°48' W	2083.00'
L2	N 00°16' E	1141.17'
L3	N 49°54' E	247.28'
L4	N 40°29' W	6797.46'

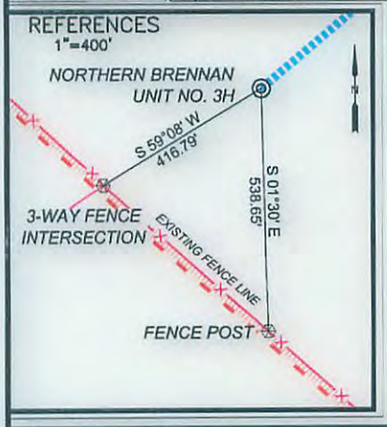
ROYALTY OWNERS TABLE NORTHERN BRENNAN UNIT NO. 3H		
LEASE NO.	LESSOR	LEASE AC.
58561	MERRION OIL AND GAS CORP., ET AL	211.75
48589	WEST VIRGINIA WESLEYAN COLLEGE, ET AL	140

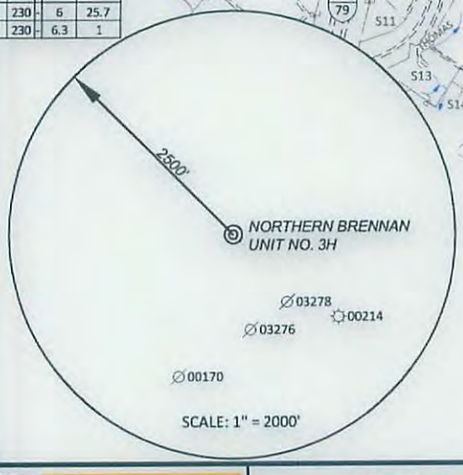
TAG	OWNER	TM-PAR	AC. ±
S1	CHALFONT WILLIAM B & SHARON L	230 - 7.2	27.23
S2	CHERRY PICKER LAND CO LLC	230 - 6.2	2.00
S3	BRENNAN JANICE M TRUST A	230 - 23	11.36
S4	CENTRAL HOLDINGS, LCC	230 - 47	0.97
S5	CENTRAL HOLDINGS LLC	230 - 22	4.475
S6	BRENNAN JOHN E REVOCABLE TRUST	230 - 35.4	4.62
S7	BRENNAN JOHN E ET AL	230 - 61	0.41
S8	BRENNAN JOHN E REVOCABLE TRUST	230 - 35.2	1.33
S9	BRENNAN JOHN E REVOCABLE TRUST	230 - 35.3	1.05
S10	BE PROPERTIES LLC	230 - 45.1	3.43
S11	BE PROPERTIES LLC	230 - 33.1	1.4
S12	VINCENT BROTHERS RENTALS LLC	230 - 35.1	4.02
S13	MCMILLION DANAL "PETE"	230 - 33	34.6
S14	MILLER JIMMIE G & TONI J	230 - 44.1	0.46
S15	MILLER JIMMIE G & TONI J	230 - 44.2	0.149
S16	BYRD RODGER S & DONNA D	230 - 31.4	1
S17	ROBERT B SKIDMORE ET AL	230 - 31.2	1
S18	DAYSPRING CAMP AND CONFERENCE CENTER INC	210 - 50.1	10.92
S19	DAYSPRING CAMP AND CONFERENCE CENTER INC	210 - 49	25.5
S20	DAYSPRING CAMP AND CONFERENCE CENTER INC	210 - 48	32.87
S21	DAYSPRING CAMP AND CONFERENCE CENTER INC	210 - 37	48.96
S22	RICHARDS MARK J ET AL	230 - 6	25.7
S23	RICHARDS MARK J ET AL	230 - 6.3	1

BRENNAN PAD LAYOUT

NOT TO SCALE

REFERENCES
1"=400'





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

SURFACE HOLE

NORTHERN BRENNAN UNIT NO. 3H
NAD '83 COORDINATES (FEET)

SURFACE HOLE	LANDING POINT	BOTTOM HOLE
N. 312179.16	N. 312551.38	N. 317721.94
E. 1767646.37	E. 1767852.35	E. 1763439.78
GEO. COORDINATES:	GEO. COORDINATES:	GEO. COORDINATES:
LAT. 39.354920	LAT. 39.355946	LAT. 39.370045
LON. -80.210320	LON. -80.209602	LON. -80.225354

99 Cambridge Place Bridgeport, WV 26330
Toll Free 855-488-9539
Fax 304-933-3327
Civil & Environmental Consultants, Inc.

DENNIS E. MILLER LICENSED No. 991 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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 rules issued and prescribed by the Division of Environmental Protection.

DATE DECEMBER 02, 2015
SCALE 1" = 1200' ACCURACY 1:2,500
OPERATORS WELL No. NORTHERN BRENNAN UNIT NO. 3H
47 - 033 - 05873 NCA
API No.

TYPE OF WELL:

GAS:
Production X Storage — *Deep — *Shallow —

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

PROPOSED WORK ON LOCATION:

Drill X Drill Deeper — Redrill — Convert —
Fracture/ Stimulate X *Plug off to Formation —
Perforate New Formation — Plug and Abandon —
Clean/ Replug — Other Than Above —
If "Other" Please see Details below—
DETAILS OF PROPOSED WORK —

*TARGET FORMATION MARCELLUS
ESTIMATED DEPTH TVD: 7,770'

WELL AREA & LOCATION INFORMATION:

ELEVATION SOURCE DGPS (OPUS)
ELEVATION 1233.2' (GROUND), 1230.0' (PROPOSED)
WATERSHED THOMAS FORK OF BOOTHS CREEK DISTRICT CLAY-OUTSIDE
COUNTY HARRISON TOPO QUAD ROSEMONT
SURFACE OWNER JANICE M. BRENNAN, TRUST A ACREAGE 56.07±
ROYALTY OWNER SEE ROYALTY OWNER TABLE ABOVE
LEASE ACREAGE 349.75 AC ±

WELL OPERATOR TRIANA ENERGY, LLC
ADDRESS 900 VIRGINIA ST. EAST SUITE 400
CHARLESTON, WV 25301

DESIGNATED AGENT WALTER C. SHOWEN, III
ADDRESS 900 VIRGINIA ST. EAST SUITE 400
CHARLESTON, WV 25301

P:\2014\143-010\-Survey\Dwg\Well Plats\143010-TRIANA_BRENNAN- WELL_PLAT-H3.dwg{H3} LS:(12/2/2015 - dmartinez) - LP: 12/2/2015 1:24 PM SURVEYED LATITUDE 39°21'17.71"

WW-6AC
(1/12)

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

Date of Notice Certification: _____

API No. 47- _____ - _____
Operator's Well No. Brennan 3H
Well Pad Name: Brennan

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

State:	West Virginia	UTM NAD 83 Easting:	568,037
County:	Harrison	Northing:	4,356,461
District:	Clay-Outside	Public Road Access:	CR 73/73 - Benedum Drive
Quadrangle:	Rosemont	Generally used farm name:	Brennan
Watershed:	Thomas Fork of Booth's Creek		

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY	OOG OFFICE USE ONLY
☐ 1. NOTICE OF SEISMIC ACTIVITY or ☐ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/ NOT REQUIRED
☑ 2. NOTICE OF ENTRY FOR PLAT SURVEY or ☐ NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
☐ 3. NOTICE OF INTENT TO DRILL or ☑ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or 4703305873 ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	☐ RECEIVED/ NOT REQUIRED
☑ 4. NOTICE OF PLANNED OPERATION	☐ RECEIVED
☑ 5. PUBLIC NOTICE	☐ RECEIVED
☑ 6. NOTICE OF APPLICATION	☐ RECEIVED

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JUL 27 2015
WV Department of Environmental Protection

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Office of Oil & Gas
JUL 23 2015

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.

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I Walter C. Showen, III, 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:	Triana Energy, LLC	Address:	900 Virginia Street East, Charleston, WV 25301
By:	Walter C. Showen, III		
Its:	Permitting Manager	Facsimile:	304-205-8503
Telephone:	304-205-8503	Email:	tshowen@trianaenergy.com

OFFICIAL SEAL
Notary Public, State Of West Virginia
ELIZABETH WALKER
1745 Dixie Road
South Charleston WV 25309
My Commission Expires October 4, 2021

Subscribed and sworn before me this 5th day of May, 2015

Elizabeth Walker Notary Public

My Commission Expires 10-4-21

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.

4703305873

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JUL 23 2015

WW-6A
(9-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

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

Date of Notice: 5/7/2015 **Date Permit Application Filed:** 7/22/2015

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 a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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Office of Oil and Gas
JUL 27 2015

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

☑ SURFACE OWNER(s)
Name: Janice M. Brennan Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098
Name:
Address:

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Vincent Brothers Rentals
Address: 107 Beechwood Drive
Shinnston, WV 26431
Name: Morrison CMS (Tenant of Vincent Brothers Rentals)
Address: 53 Auto Drive
Shinnston, WV 26431

☐ SURFACE OWNER(s) (Impoundments or Pits)
Name:
Address:

4703305877

☑ COAL OWNER OR LESSEE
Name: Janice M. Brennan Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098

☐ COAL OPERATOR
Name:
Address:

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: David R. Miller
Address: 163 Quarter Horse Drive
Shinnston, WV 26431

☑ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: Dominion Transmission, Inc.
Address: 445 West Main Street
Clarksburg, WV 26302-2400, ATTN: John Love

*Please attach additional forms if necessary

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JUL 23 2015

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JUL 27 2015

WV Department of Environmental Protection

WW-6A
(9-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

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

Date of Notice: 5/7/2015 **Date Permit Application Filed:** 7/22/2015

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 a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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Office of Oil and Gas
JUL 27 2015

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

4703008973

☐ SURFACE OWNER(s)
Name: _____
Address: _____

Name: _____
Address: _____

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Ricer Equipment (Tenant of Vincent Brothers Rentals)
Address: RR 2, Box 849A1
Shinnston, WV 26431

Name: Joseph R. & Charlotte A. Pyle (Tenants and Surface Owners)
Address: RR 2, Box 835
Shinnston, WV 26431

☐ SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

☐ COAL OWNER OR LESSEE
Name: _____
Address: _____

☐ COAL OPERATOR
Name: _____
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Jimmie G. & Toni J. Miller
Address: 180 Quarter Horse Drive
Shinnston, WV 26431

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

*Please attach additional forms if necessary

WV Department of Environmental Protection

Received
Office of Oil & Gas
JUL 23 2015

WW-6A
(9-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

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

Date of Notice: 5/7/2015 **Date Permit Application Filed:** 7/22/2015

4703305873

Notice of:

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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

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RECEIVED
Office of Oil and Gas
JUL 27 2015
WV Department of
Environmental Protection

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

☐ SURFACE OWNER(s)
Name: _____
Address: _____
_____
Name: _____
Address: _____
_____

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: _____
Address: _____
_____
Name: _____
Address: _____
_____

☐ SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____
_____

☐ COAL OWNER OR LESSEE
Name: _____
Address: _____
_____

☐ COAL OPERATOR
Name: _____
Address: _____
_____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Danal "Pete" McMillion
Address: 128 Sugar Camp Road
Shinnston, WV 26431

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

*Please attach additional forms if necessary

WW-70
Rev. 7/01

Affidavit of Personal Service

4703305873

State Of West Virginia

County Of Harrison

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

(1) Notice on Form WW-2(A) 15 / WW-3(A) __ / WW-4(A) __ / WW-5(A) __ / WW-6(A) ☑
(2) Application on Form WW-2(B) __ / WW-3(B) __ / WW-4(B) __ / WW-5(B) __ / WW-6(B) ☑
(3) Plat showing the well location on Form WW-6, and ☑
(4) Construction and Reclamation Plan on Form WW-9 ☑

--all with respect to operator's Well No. Brennan 3H located in Clay-Outside District, Harrison County, West Virginia, upon the person or organization named--

Dominion Transmission, Inc.

--by delivering the same in Harrison County, State of West Virginia on the 2nd day of April, 2015 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

4703305873

For an individual:
[ ] Handing it to him / her 15 / or, because he 15 / she 15 / refused to take it when offered it, by leaving it in his 15 / her 15 / presence.

[ ] Handing it to a member of his or her family above the age of 16 years named _____ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:
[ ] Handing it to _____, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:
[ ] Handing it to the general partner, named _____, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:
[☑] Handing it to the corporation's employee ☑ / officer 15 / director 15 / attorney in fact 15 / named Ronald Walden.

(Signature of person executing service)

Taken, subscribed and sworn before me this 19th day of August 2015.
My commission expires 10-4-21.

Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)

OFFICIAL SEAL
Notary Public, State Of West Virginia
ELIZABETH WALKER
1745 Brook Road
South Charleston WV 25309
My Commission Expires October 4, 2021

RECEIVED
Office of Oil and Gas
AUG 19 2015
WV Department of
Environmental Protection

WW-70
Rev. 7/01

Affidavit of Personal Service

4703305873 ✓

State Of West Virginia

County Of Harrison

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

(1) Notice on Form WW-2(A) 15 / WW-3(A) __ / WW-4(A) __ / WW-5(A) __ / WW-6(A) ☑
(2) Application on Form WW-2(B) __ / WW-3(B) __ / WW-4(B) __ / WW-5(B) __ / WW-6(B) ☑
(3) Plat showing the well location on Form WW-6, and ☑
(4) Construction and Reclamation Plan on Form WW-9 ☑

--all with respect to operator's Well No. Brennan 3H located in Clay-Outside District, Harrison County, West Virginia, upon the person or organization named--

Morrison CMS

--by delivering the same in Harrison County, State of West Virginia on the 19th day of May, 2015 in the manner specified below.

4703305873

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

[ ] Handing it to him / her 15 / or, because he 15 / she 15 / refused to take it when offered it, by leaving it in his 15 / her 15 / presence.

[ ] Handing it to a member of his or her family above the age of 16 years named _____ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

[ ] Handing it to _____, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

[☑] Handing it to the general partner, named Jeff Morrison, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

[15] Handing it to the corporation's employee 15 / officer 15 / director 15 / attorney in fact 15 / named _____.

_____
(Signature of person executing service)

Taken, subscribed and sworn before me this 19th day of August 2015.
My commission expires 10-4-21.

_____
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)

OFFICIAL SEAL
Notary Public, State Of West Virginia
ELIZABETH WALKER
1745 Brook Road
South Charleston WV 25309
My Commission Expires October 4, 2021

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Office of Oil and Gas

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WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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.

4705300587

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

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

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

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

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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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JUL 28 2015

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

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

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

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

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

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AUG 03 2015

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:

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JUL 27 2015
WV Department of
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JUL 23 2015

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

4703705873

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

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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.

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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.

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

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

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WW-6A
(8-13)

API NO. 47- _____ - _____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

Notice is hereby given by:

Well Operator: Triana Energy, LLC
Telephone: 304-205-8503
Email: tshowen@trianaenergy.com

Address: 900 Virginia Street East, Charleston, WV 25301
Facsimile: 304-205-8503

Oil and Gas Privacy Notice:

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

OFFICIAL SEAL
Notary Public, State Of West Virginia
ELIZABETH WALKER
1745 Brook Road
South Charleston WV 25309
My Commission Expires October 4, 2021

Subscribed and sworn before me this 5th day of May, 2015.

Elizabeth Walker Notary Public

My Commission Expires 10-4-21

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Environmental Protection

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JUL 23 2015

WW-6AW
(1-12)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A
The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

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Comment and Waiver Provisions
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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided,* That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

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Office of Oil & Gas
AUG 05 2015

VOLUNTARY STATEMENT OF NO OBJECTION

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

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JUL 27 2015

State:	West Virginia	UTM NAD 83 Easting:	568,037
County:	Harrison	Northing:	4,356,461
District:	Clay-Outside	Public Road Access:	CR 73/73 - Benedum Drive
Quadrangle:	Rosemont	Generally used farm name:	Brennan
Watershed:	Thomas Fork of Booth's Creek		

WV Department of
Environmental Protection

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

*Please check the box that applies	FOR EXECUTION BY A NATURAL PERSON
☐ SURFACE OWNER	Signature: _____
☐ SURFACE OWNER (Road and/or Other Disturbance)	Print Name: _____
☐ SURFACE OWNER (Impoundments/Pits)	Date: _____
☐ COAL OWNER OR LESSEE	FOR EXECUTION BY A CORPORATION, ETC.
☐ COAL OPERATOR	Company: _____
☐ WATER PURVEYOR	By: _____
☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	Its: _____
	Signature: _____
	Date: _____

Received
Office of Oil & Gas
JUL 23 2015

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.

WW-6A2
(1/12)

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

Notice Time Requirement: The notice shall be provided at least **THREE (3) DAYS** prior to commencement of the seismic activity.
Date of Notice: _____ **Date of Seismic Activity:** _____

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

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

Pursuant to West Virginia Code § 22-6A-10(j), (1) Prior to conducting any seismic activity for seismic exploration for natural gas to be extracted using horizontal drilling methods, the company or person performing the activity shall provide notice to Miss Utility of West Virginia Inc. and to all surface owners, coal owners and lessees, and natural gas storage field operators on whose property blasting, percussion or other seismic-related activities will occur. (2) The notice shall be provided at least three days prior to commencement of the seismic activity. (3) The notice shall also include a reclamation plan in accordance with the erosion and sediment control manual that provides for the reclamation of any areas disturbed as a result of the seismic activity, including filling of shotholes used for blasting. (4) Nothing in this subsection decides questions as to whether seismic activity may be secured by mineral owners, surface owners or other ownership interests.

4703305873

Notice is hereby provided to:

☐ MISS UTILITY OF WEST VIRGINIA INC.
Address: 900 Virginia Street East, Charleston, WV 25301

☐ SURFACE OWNER(s)
Name: _____
Address: _____
Name: _____
Address: _____

☐ COAL OWNER OR LESSEE
Name: _____
Address: _____

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

RECEIVED
Office of Oil and Gas
JUL 27 2015
WV Department of Environmental Protection

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-10(j), notice is hereby given that the undersigned well operator will be conducting seismic related activities for seismic exploration for natural gas to be extracted using horizontal drilling methods on the tract of land as follows:

State: West Virginia ;
County: _____ ;
District: Clay-Outside ;
Quadrangle: Rosemont ;
UTM Coordinate NAD83 Northing: _____ ;
UTM Coordinate NAD83 Easting: _____ ;
Public Road Access: CR 73/73 - Benedum Drive ;
Watershed: Thomas Fork of Booth's Creek ;
Generally used farm name: Brennan ;

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-10(j)(3), this notice shall include a reclamation plan in accordance with the erosion and sediment control manual that provides for the reclamation of any areas disturbed as a result of the seismic activity, including filling of shotholes used for blasting. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:
Well Operator: Triana Energy, LLC
Telephone: 304-205-8503
Email: tshowen@trianaenergy.com
Address: 900 Virginia Street East, Charleston, WV 25304
Facsimile: 304-205-8503

Received
Office of Oil & Gas
JUL 23 2015

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.

WW-6A3
(1/12)

Operator Well No. Brennan 1H, 2H, 3H, 4H, 5H, 6H, 7H, [illegible]

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

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

Date of Notice: 11/03/2014 **Date of Planned Entry:** 11/10/2014

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

☐ PERSONAL SERVICE ☒ REGISTERED MAIL ☐ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

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

Received
Office of Oil & Gas
AUG 05 2015

Notice is hereby provided to:

☒ SURFACE OWNER(s)
Name: Janice M. Brennan Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098
Name:
Address:
Name:
Address:

☒ COAL OWNER OR LESSEE
Name: Janice M. Brennan, Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098

4703305873

☒ MINERAL OWNER(s)
Name: West Virginia University Foundation, Inc.
Address: One Waterfront Place - 7th Floor
P.O. Box 1650, Morgantown, WV 26507-1650
*please attach additional forms if necessary

RECEIVED
Office of Oil and Gas
JUL 27 2015

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

State:	WV	Approx. Latitude & Longitude:	39.355053, -80.210201
County:	Harrison	Public Road Access:	State Route 73
District:	Clay-Outside	Watershed:	Thomas Run, Lower West Fork River
Quadrangle:	Rosemont	Generally used farm name:	Janice M. Brennan

WV Department of Environmental Protection

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

Notice is hereby given by:

Well Operator:	Triana Energy, LLC	Address:	900 Virginia Street East, Suite 400
Telephone:	304-205-8503		Charleston, WV 25301
Email:	tshowen@trianaenergy.com	Facsimile:	304-205-8503

Received
Office of Oil & Gas
JUL 23 2015

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.

WW-6A3
(1/12)

Operator Well No. Brennan 1H, 2H, 3H, 4H, 5H, 6H, 7H,

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

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry
Date of Notice: 11/03/2014 **Date of Planned Entry:** 11/10/2014

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

☐ PERSONAL SERVICE ☒ REGISTERED MAIL ☐ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

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

4103058 73

Received
Office of Oil & Gas
AUG 05 2015

Notice is hereby provided to:

☒ SURFACE OWNER(s)
Name: Janice M. Brennan Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098
Name:
Address:
Name:
Address:

☒ COAL OWNER OR LESSEE
Name: Janice M. Brennan, Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098

☒ MINERAL OWNER(s)
Name: West Virginia Wesleyan College
Address: Attn: Dr. Barry Pritts
59 College Avenue, Buckhannon, WV 26201
*please attach additional forms if necessary

RECEIVED
Office of Oil and Gas
JUL 27 2015
WV Department of Environmental Protection

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

State:	WV	Approx. Latitude & Longitude:	39.355053, -80.210001
County:	Harrison	Public Road Access:	State Route 73
District:	Clay-Outside	Watershed:	Thomas Fork, Lower West Fork River
Quadrangle:	Rosemont	Generally used farm name:	Janice M. Brennan

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

Notice is hereby given by:

Well Operator:	Triana Energy, LLC	Address:	900 Virginia Street East, Suite 400
Telephone:	304-205-8503		Charleston, WV 25301
Email:	tshowen@trianaenergy.com	Facsimile:	304-205-8503

Received
Office of Oil & Gas
JUL 23 2015

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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Office of Oil and Gas

OCT 06 2015

WV Department of
Environmental Protection

WW-6A4
(1/12)

Operator Well No. Brennan 3H

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

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

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 5/7/2015 **Date Permit Application Filed:** 7/22/2015

4703305873

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

☐ HAND DELIVERY ☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: Janice M. Brennan Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098

Name:
Address:

Notice is hereby given:

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

State: West Virginia
County: Harrison
District: Clay-Outside
Quadrangle: Rosemont
Watershed: Thomas Fork of Booth's Creek

UTM NAD 83 Easting: 568,037
Northing: 4,356,461
Public Road Access: CR 73/73 - Benedum Drive
Generally used farm name: Brennan

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: Triana Energy, LLC
Address: 900 Virginia Street East, Charleston, WV 25301
Telephone: 304-205-8503
Email: tshowen@trianaenergy.com
Facsimile: 304-205-8503

Authorized Representative: Walter C. Showen, III
Address: 900 Virginia Street East, Charleston, WV 25301
Telephone: 304-205-8503
Email: tshowen@trianaenergy.com
Facsimile: 304-205-8503

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.

WW-6A4W
(1/12)

Operator Well No. Brennan 3H

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

WAIVER

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

Surface Owner Waiver:
I, _____, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	West Virginia	UTM NAD 83	Easting:	568,037
County:	Harrison		Northing:	4,356,461
District:	Clay-Outside	Public Road Access:		CR 73/73 - Benedum Drive
Quadrangle:	Rosemont	Generally used farm name:		Brennan
Watershed:	Thomas Fork of Booth's Creek			

Name: _____
Address: _____
_____

Signature: _____
Date: _____

47033 0 8 3

Received
Office of Oil & Gas
AUG 05 2015

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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JUL 23 2015

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WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. Brennan 3H

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 5/11/2015 **Date Permit Application Filed:** 7/22/2015

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: Janice M. Brennan Trust A
Address: P.O. Box 98
Shinnston, WV 26431-0098

Name: _____
Address: _____

4703305013

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

State: West Virginia
County: Harrison
District: Clay-Outside
Quadrangle: Rosemont
Watershed: Thomas Fork of Booth's Creek

UTM NAD 83 Easting: 568,037
Northing: 4,356,461
Public Road Access: CR 73/73 - Benedum Drive
Generally used farm name: Brennan

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: Triana Energy, LLC
Telephone: 304-205-8503
Email: tshowen@trianaenergy.com

Address: 900 Virginia Street East, Charleston, WV 25301
Facsimile: 304-205-8503

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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Office of Oil and Gas
AUG 19 2015
WV Department of
Environmental Protection

WW-6RW
(1-12)

API NO. 47-_____-_____
OPERATOR WELL NO. Brennan 3H
Well Pad Name: Brennan

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

WELL LOCATION RESTRICTION WAIVER

The well operator, _____ is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), 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.

4703305877

WAIVER

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

Received
Office of Oil & Gas
AUG 05 2015

State:	West Virginia	UTM NAD 83 Easting:	
County:	Harrison	UTM NAD 83 Northing:	
District:	Clay-Outside	Public Road Access:	CR 73/73 - Benedum Drive
Quadrangle:	Rosemont	Generally used farm name:	Brennan
Watershed:	Thomas Fork of Booth's Creek		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED
*Please check all that apply

☐ EXISTING WATER WELLS 4703305877
☐ DEVELOPED SPRINGS
☐ DWELLINGS
☐ AGRICULTURAL BUILDINGS

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JUL 27 2015

FOR EXECUTION BY A NATURAL PERSON
Signature: _____
Print Name: _____
Date: _____

FOR EXECUTION BY A CORPORATION, ETC.
Company: _____
By: _____
Its: _____
Signature: _____
Date: _____

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AUG 05 2015

Well Operator: Triana Energy, LLC
By: _____
Its: _____
Signature: _____
Telephone: _____

WV Department of
Environmental Protection
Received
Office of Oil & Gas
JUL 23 2015

NOTARY SEAL

Subscribed and sworn before me this _____ day of _____

_____ Notary Public

My Commission Expires _____

Oil and Gas Privacy Notice:

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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

July 22, 2015

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

4703305873

Subject: DOH Permit for the Brennan Pad, Harrison County
Brennan 3H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #04-2015-0629 for the subject site to Triana Energy, LLC. for access to the State Road for the well site located off of Harrison County Route 73/73 SLS.

The operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT for DOH District 4 and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

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JUL 27 2015
WV Department of
Environmental Protection

Very Truly Yours,

Gary K. Clayton

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

Received
Office of Oil & Gas
JUL 23 2015

Received
Office of Oil & Gas
AUG 05 2015

Cc: Trip Showen
Triana Energy, LLC
CH, OM, D-4
File

Triana Energy, LLC
Hydraulic Fracturing Chemical Additives
2015

Hydrochloric Acid

Leb 10X – Gel Breaker

Silica Sand

EcoAcid CI

StimLube W

Unigel CMHPG Guar Product

*Safety Data Sheets included on compact disc

4703305873

Compliance Certification Form

PERMIT NO: 2015-644

4703305873

NAME OF PERMITTEE: Triana Energy, LLC

DATE OF ISSUANCE: July 21, 2015

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Pittsburgh District
Regulatory Branch, Room 2200
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Please note that your permitted activity is subject to compliance inspection by a U.S. Army Corps of Engineers Representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____
Signature of Permittee

RECEIVED
Office of Oil and Gas
JUL 27
WV Department of
Environmental Protection

The issuance of this Nationwide Permit will not relieve you of the responsibility to obtain any other required state, local, or Federal authorizations.

If you have any questions, please contact Matthew Gilbert at (412) 395-7189 or at matthew.c.gilbert@usace.army.mil. Please complete our customer survey online and provide us with feedback at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Sincerely,

4703305873

/signed/

Karen A. Kochenbach
Chief, Southern Section
Regulatory Branch

Copies Furnished
WVDEP
CEC Inc.

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Office of Oil and Gas
JUL 27 2015
WV Department of
Environmental Protection

DEPARTMENT OF THE ARMY
PITTSBURGH DISTRICT, CORPS OF ENGINEERS
WILLIAM S. MOORHEAD FEDERAL BUILDING
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

REPLY TO
ATTENTION OF

July 21, 2015

Operations Division
Regulatory Branch
2015-644

4703305873

Trip Showen
Triana Energy, LLC
900 Virginia Street, East
Suite 600
Charleston, West Virginia 26301

Dear Mr. Showen:

I refer to the pre construction notification received in this office May 20, 2015, regarding the Triana Energy, LLC, Brennan Well Pad Project. This project proposes the construction of a natural gas well pad with attendant facilities and an associated access road in Shinnston, Harrison County, West Virginia (39.355169/-80.210444). The project proposes permanent impacts to 33 linear feet of stream and temporary impacts to 45 linear feet of stream associated with construction of an access road, as well as 0.0133 acre of temporary impacts associated with grading for the proposed well pad.

Activities associated with projects of this type are authorized by Nationwide Permit No. 39, previously issued by the Corps of Engineers, for purposes of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act as published in the February 21, 2012 issue of the Federal Register.

Refer to http://www.lrp.usace.army.mil/Portals/72/docs/regulatory/publicnotices/PN12-16rev.pdf for a list of conditions which must be followed for the Nationwide Permit to be valid. Adherence to these conditions will permit you to proceed with the proposed project. **Please Note**, the enclosed Compliance Certification Form must be signed and returned to this office upon completion of the proposed work

The verification of this Nationwide Permit is valid until March 18, 2017 unless the Nationwide Permits are modified, suspended, or revoked. If project specifications are changed or work has not been initiated before March 18, 2017, please contact this office for further approval.

RECEIVED
Office of Oil and Gas

JUL 27 2015

WV Department of
Environmental Protection

11/3/14
Wetland and Perennial Stream Waiver Request

API Number: 3305873
Operator's Well Number: Brennan 3H

Well Operator: Triana Energy, LLC

Well Number: Brennan 3H Well Pad Name: Brennan

County, District, Quadrangle of Well Location: Harrison, Clay-Outside, Rosemont

Answer the questions below to request a waiver from West Virginia Department of Environmental Protection for any wetlands or perennial streams which lie within one hundred feet of proposed project Limit of Disturbance (LOD), which includes any erosion and sediment control devices to be used.

This waiver shall be requested pursuant to Chapter 22 Article 6A Section 12 of West Virginia Code, which states:

§22-6A-12(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.

§22-6A-12(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.

Answer in the space provided, or use additional pages as necessary to fully answer the questions below:

1. **Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.**

   The Brennan Well Pad project location is proposed to encompass a ridge-top meadow on private property high out of the floodplain. The proposed project involves construction to extend an existing access road from a public road and construction of a well pad to accommodate eight horizontal natural gas wells. The total limit of disturbance is 20.88 acres and will result in permanent impacts to 33 linear feet of one stream (UT-24) and 0.0133 acre of one wetland (Wetland Z), along with temporary impacts to 45 linear feet of the stream (UT-24). The limits of disturbance of the pad construction will also encroach on the 100-foot buffer of Wetland W. Triana Energy seeks a waiver from WVDEP for these impacts. The WVDNR has issued a Right of Entry for the impact to UT-24. The US Army Corps of Engineers has issued their concurrence that the project meets the authorization under Nationwide Permit No. 39.

2. **Justify the proposed activity by describing alternatives to this project that were considered.**

   a. Include a No-Action Alternative as to show "the future without the project"
   b. Location Alternatives must be shown
   c. Must demonstrate why a one hundred foot buffer cannot be maintained
   d. Describe how the proposed project is the least environmentally damaging practicable alternative

   See additional pages below

2. **Justify the proposed activity by describing the alternatives to this project that were considered.**
   a. Include a No-Action Alternative as to show "the future without the project"
   b. Location Alternatives must be shown
   c. Must demonstrate why a one hundred foot buffer cannot be maintained
   d. Describe how the proposed project is the least environmentally damaging practicable alternative

Triana Energy is an oil and natural gas exploration and production company primarily engaged in developing horizontal wells, extracting natural gas from the Marcellus Shale formation prevalent in north-central WV. Such extraction is restricted by the acquisition of mineral leases that provide the legal right to pursue the minerals. While horizontal drilling has led to great flexibility, efficiency and reduced environmental impact in the placement of surface well locations, operators are still constrained by the geographic borders of the mineral leases. West Virginia law requires that operators must only drill within the borders of their mineral leases. As such, Triana Energy must search for the most appropriate well pad location within that geographic boundary.

a) **No-Action Alternatives**: Triana Energy is under contractual obligation with the mineral lessors to actively pursue natural gas from formations under this well pad location. Further, The West Virginia Legislature has codified the importance of extracting natural gas, within the limits of the law, for the greater good and security of its citizens and the United States as a fuel and energy source. Should Triana Energy elect not to pursue this project, it would deny the individual mineral owners associated with this project their right to enjoy the benefits of their property. It would also reduce the amount of natural gas available for use by the citizens and industry of West Virginia.

b) **Location Alternatives must be shown:**
See enclosed map illustrating alternate locations considered for this project.

c) **Must demonstrate why a one hundred foot buffer cannot be maintained.**
Triana selected a ridgetop location to minimize environmental impact, while providing the greatest construction economy. The northern portion of the proposed well pad narrows considerably causing fills to extend further down the slope, in order to properly construct fill keys. This portion of the site will contain an above ground fresh water storage vessel. Above ground water containment was selected over an in-ground impoundment to reduce the overall environmental impact and aid in reclamation efficiencies. The construction design accommodates Wetland W by filling around it, instead of destroying it. Redundant erosion controls were added to the design at the request of the West Virginia Department of Environmental Protection.

d) **Describe how the proposed project is the least environmentally damaging practicable alternative.**
The ridgetop location selected for this project is comprised primarily of meadow, so Triana will avoid any impact to bat habitat and can minimize tree clearing and grubbing. A valley location also was evaluated, but impacts to floodplain and additional wetlands were likely, so Triana

3. **Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.**

Please refer to the Brennan Pad Construction Design Drawings for related areas. Drainage piping will be installed in Wetland Z (0.0133 acre) during the filling of this small wetland to allow water flow to continue and protect the integrity of the toe of this portion of the constructed well pad. Constructed drainage will connect to access road drainage and will remain part of the watershed drainage. As noted in the construction design drawings, Silt fence, Super Silt Fence and straw wattles will be employed on fill slopes and disturbed areas to control sedimentation and runoff. Redundant Super Silt Fence will be installed between the toe of the fill and Wetland W. Constructed surface drainage will channel surface flows away from Wetland W and into sedimentation control devices. Corrugated plastic pipe will channel water from UT-24 to allow for the construction of the access road extension. Silt fence and rock check dams will control sedimentation and prevent erosion during and after construction. Drainage outlets will flow over rip-rap aprons.

4. **Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.**
    a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect these wetlands and/or perennial streams for which the waiver is sought.

There is no preferred alternative location for this project. As shown on the attached map, several locations were evaluated prior to selecting the preferred project location. Those locations were rejected due to potential environmental impacts, construction difficulties, or conflicts with existing utilities.

Redundant Super Silt Fence will be installed around Wetland W, to protect it from sedimentation that could occur during construction of the well pad.

opted for a ridgetop location to avoid such potential impacts. In addition, Triana will utilize an existing bridge and partial access road, to minimize impacts to the stream, floodplain and habitat.

NO.	DATE	BY	REVISION

DESIGNED N/A
DRAWN JTS
CHECKED WCS
REVIEWED WCS
S.O.

DTI BRENNAN PAD
HARRISON COUNTY, WV

Triana Energy

Triana Energy, LLC
900 Virginia Street
Charleston, West Virginia 25301

Phone 304-380-0100
Fax 304-380-0149

DISCLAIMERS

Triana Energy, LLC does not warrant nor guarantee the accuracy of the data shown herein. The information depicted herein is confidential and proprietary to Triana Energy, LLC and should not be used for any purpose other than for informational purposes. Any dissemination, copying, or use of this map by anyone other than its intended recipient is unauthorized.

Proposed surface location(s) shown on this map are subject to change.

ALTERNATIVE ANALYSIS DRAWING

SCALE: 1"=400'

DATE: 12/1/2015

SHEET 1 OF 1

BRENNAN
FINAL SITE DESIGN, CONSTRU
EROSION & SEDIMENT CO
TRIANA ENERGY,

LAT./LONG: N 39° 21' 17.80" W 80° 1
(APPROXIMATE CENTER OF PRO

WEST VIRGINIA 811
CALL BEFORE YOU DIG!

MISS UTILITY OF WEST VIRGINIA ONE CALL WAS PERFORMED IN OCTOBER, 2014.

TICKET NUMBER- 1430081372

THE FOLLOWING UTILITY COMPANIES MAY BE PRESENT IN THE PROJECT AREA.

- FRONTIER COMMUNICATIONS (FORMERLY VERIZON)
- AT&T TRANSMISSION
- DOMINION TRANSMISSION CORPORATION
- LUMOS NETWORKS
- CLARKSBURG WATER BOARD
- PEOPLES GAS COMPANY WV LLC
- DOMINION HOPE
- FIRST ENERGY
- TRI-COUNTY ASSOCIATION

PROJECT OWNER/APPLICANT

TRIANA ENERGY, LLC
900 VIRGINIA ST., EAST
CHARLESTON, WV 25301
PH: (304) 205-8503 / (304) 549-2940
CONTACT: TRIP SHOWEN / JASON SMITHSON

CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
99 CAMBRIDGE PLACE
BRIDGEPORT, WV 26330
PH: (304) 933-3119
CONTACT: JOSEPH D. ROBINSON, P.E.

WVDOH

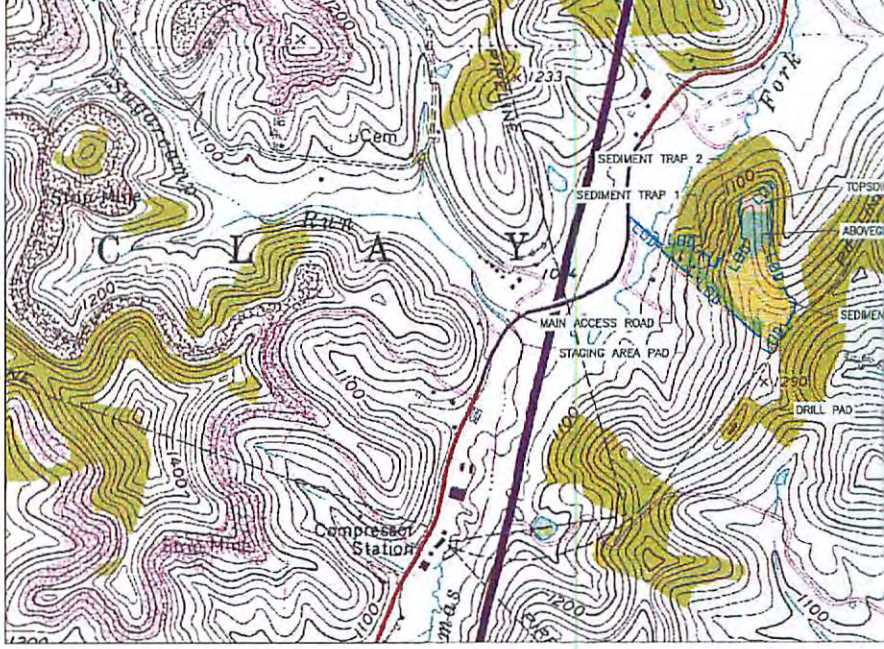
DISTRICT FOUR
PH: (304) 842-1550
CONTACT: DISTRICT MANAGER
RAY URSE

SPILL HOTLINE

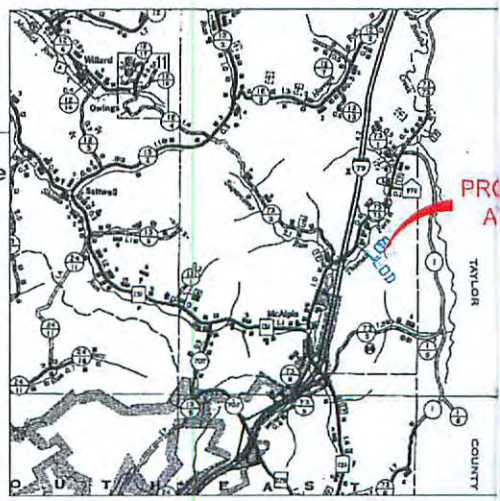
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP)
PH: (800) 642-3074

NATIONAL RESPONSE CENTER
PH: (800) 424-8802

LOCAL EMERGENCY SERVICES		
	NAME	TELEPHONE NO.
AMBULANCE		911
HOSPITAL EMERGENCY ROOM	UNITED HOSPITAL CENTER	(304) 342-1000
FIRE DEPARTMENT		911
POLICE DEPARTMENT		911
POISON CONTROL CENTER	WEST VIRGINIA POISON CENTER	(800) 222-1222



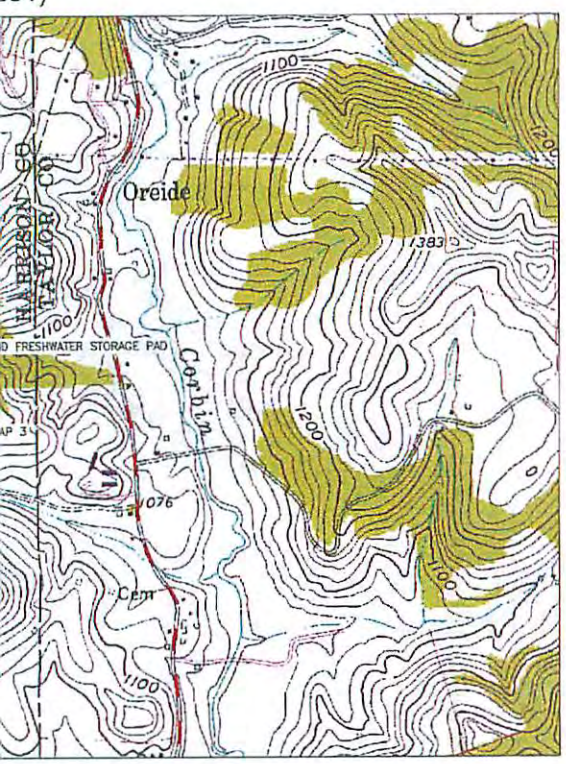
LOCATION MAP
ROSEMONT USGS 7.5' QUAD
SCALE IN FEET
0 1000 2000
1 INCH = 1000 FEET



VICINITY MAP
HARRISON COUNTY ROAD MAP
SCALE IN FEET
0 1 MILES 2 MILES
1 INCH = 1 MILE

CTION PLANS, & TROL PLANS LLC

39.19"
ECT)



NORTH

SITE LOCATIONS WV83-NF (WEST VIRGINIA NORTH ZONE)		
	LATITUDE	LONGITUDE
CENTROID OF PAD	39.354467	-80.210044

SITE LOCATIONS UTM83-17 (WEST VIRGINIA NORTH ZONE)		
	NORTHING	EASTING
CENTROID OF PAD	4356413.1342	558061.4716

FLOOD PLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	YES
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	YES
HEC-RAS STUDY COMPLETED:	YES
FLOODPLAIN SHOWN ON DRAWINGS:	YES
FIRM MAP NUMBER(S) FOR SITE:	54033C0177D
ACREAGE OF CONSTRUCTION IN FLOODPLAIN:	0.32

AFFECTED TAX PARCELS:

CLAY-OUTSIDE DISTRICT - HARRISON COUNTY, WV

TAX MAP 230 - PARCEL 35.1
VINCENT BROTHERS RENTALS, LLC
DB 1397, PG 663
4.02 ACRES±
(AFFECTED AREA FROM MAIN ACCESS ROAD= 1.71 ACRES)
(AFFECTED AREA FROM SEDIMENT TRAP 1= 0.07 ACRES)
(AFFECTED AREA FROM STAGING AREA= 0.30 ACRES)

TAX MAP 230 - PARCEL 35
JANICE M. BRENNAN (TRUST)
DB 1321, PG 43
56.07 ACRES±
(AFFECTED AREA FROM MAIN ACCESS ROAD= 2.85 ACRES)
(AFFECTED AREA FROM MAIN DRILL PAD= 9.62 ACRES)
(AFFECTED AREA FROM SEDIMENT TRAP 1= 0.56 ACRES)
(AFFECTED AREA FROM SEDIMENT TRAP 2 = 0.47 ACRES)
(AFFECTED AREA FROM SEDIMENT TRAP 3 = 0.60 ACRES)
(AFFECTED AREA FROM ABOVEGROUND FRESHWATER STORAGE PAD= 3.19 ACRES)
(AFFECTED AREA FROM TOPSOIL PILE = 1.46 ACRES)

TAN MAP 230 - PARCEL 45
DAVID R. MILLER
DEED BOOK 1170 PAGE 739
24.14 ACRES±
(AFFECTED AREA FROM MAIN ACCESS ROAD= 0.01 ACRES)

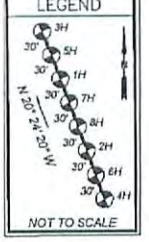
WV DEPARTMENT OF HIGHWAYS
(AFFECTED AREA FROM MAIN ACCESS ROAD= 0.04 ACRES)

SITE DISTURBANCE:

MAIN ACCESS ROAD	=	4.61 AC
WELL PAD	=	9.62 AC
STAGING AREA	=	0.30 AC
SEDIMENT TRAP 1	=	0.63 AC
SEDIMENT TRAP 2	=	0.47 AC
SEDIMENT TRAP 3	=	0.60 AC
ABOVEGROUND FRESHWATER STORAGE PAD	=	3.19 AC
TOPSOIL PILE	=	1.46 AC
TOTAL	=	20.88 AC
TOTAL WOODED AREA	=	1.95 AC

SDW
7/15/2015

WELL LEGEND



PLAN REPRODUCTION WARNING
THE PLANS HAVE BEEN CREATED ON ANSI D (22" X 34") SHEETS. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.
THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES.
WARNING: INFORMATION MAY BE LOST IN COPYING AND/OR GRAY SCALE PLOTTING.

SHEET INDEX	
SHEET 1 OF 23	COVER SHEET
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SHEETS 6-8 OF 23	FINAL SITE DESIGN PLAN
SHEETS 9-15 OF 23	PROFILES & CROSS SECTIONS
SHEETS 16-20 OF 23	CONSTRUCTION DETAILS
SHEETS 21-23 OF 23	RECLAMATION PLAN

NORTH

JOSEPH D. ROBINSON REGISTERED

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
344 Cambridge Place - Bridgeport, WV 26330
Ph: 304.933.3119 · 855.488.9539 · Fax: 304.933.3327
www.cecinc.com

Received
Office of Oil & Gas
AUG 05 2015
RECEIVED
Office of Oil and Gas
JUN 30 2015
WV Department of
Environmental Protection

TRIANA ENERGY,LLC
BRENNAN WELL PAD
CLAY-OUTSIDE DISTRICT
HARRISON COUNTY, WEST VIRGINIA

COVER SHEET

DRAWN BY:	BJH
CHECKED BY:	DEM
	JDR
MARCH 2015	
AS SHOWN	
T NO:	143-010
ED BY:	

0330 5873

BRENNAN
FINAL SITE DESIGN, CONSTRUCTION PLANS, & EROSION & SEDIMENT CONTROL PLANS
TRIANA ENERGY, LLC

LAT./LONG: N 39° 21' 17.80" W 80° 12' 39.19"
(APPROXIMATE CENTER OF PROJECT)

WEST VIRGINIA 811
CALL BEFORE YOU DIG!

MISS UTILITY OF WEST VIRGINIA ONE CALL WAS PERFORMED IN OCTOBER, 2014.

TICKET NUMBER- 1430081372

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- CLARKSBURG WATER BOARD
- PEOPLES GAS COMPANY WV LLC
- DOMINION HOPE
- FIRST ENERGY
- TRI-COUNTY ASSOCIATION

PROJECT OWNER/APPLICANT

TRIANA ENERGY, LLC
900 VIRGINIA ST., EAST
CHARLESTON, WV 25301
PH: (304) 205-8503 / (304) 549-2940
CONTACT: TRIP SHOWEN / JASON SMITHSON

CIVIL ENGINEER

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99 CAMBRIDGE PLACE
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WVDOH

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SPILL HOTLINE

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PH: (800) 424-8802

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POLICE DEPARTMENT		911
POISON CONTROL CENTER	WEST VIRGINIA POISON CENTER	(800) 222-1222

LOCATION MAP
ROSEMONT USGS 7.5' QUAD
SCALE IN FEET
0 1000 2000
1 INCH = 1000 FEET

NORTH

VICINITY MAP
HARRISON COUNTY ROAD MAP
SCALE IN FEET
0 1 MILES 2 MILES
1 INCH = 1 MILE

NORTH

AFFECTED TAX PARCELS:

CLAY-OUTSIDE DISTRICT - HARRISON COUNTY, WV

TAX MAP 230 - PARCEL 35.1
VINCENT BROTHERS RENTALS, LLC
DB 1397, PG 663
4.02 ACRES ±
(AFFECTED AREA FROM MAIN ACCESS ROAD = 1.71 ACRES)
(AFFECTED AREA FROM SEDIMENT TRAP 1 = 0.07 ACRES)
(AFFECTED AREA FROM STAGING AREA = 0.30 ACRES)

TAX MAP 230 - PARCEL 35
JANICE M. BRENNAN (TRUST)
DB 1321, PG 43
58.07 ACRES ±
(AFFECTED AREA FROM MAIN ACCESS ROAD = 2.85 ACRES)
(AFFECTED AREA FROM MAIN DRILL PAD = 9.62 ACRES)
(AFFECTED AREA FROM SEDIMENT TRAP 1 = 0.56 ACRES)
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TAN MAP 230 - PARCEL 43
DAVID R. MILLER
DEED BOOK 1170 PAGE 739
24.14 ACRES ±
(AFFECTED AREA FROM MAIN ACCESS ROAD = 0.01 ACRES)

WV DEPARTMENT OF HIGHWAYS
(AFFECTED AREA FROM MAIN ACCESS ROAD = 0.04 ACRES)

SITE DISTURBANCE:

MAIN ACCESS ROAD	=	4.61 AC
WELL PAD	=	9.62 AC
STAGING AREA	=	0.30 AC
SEDIMENT TRAP 1	=	0.63 AC
SEDIMENT TRAP 2	=	0.47 AC
SEDIMENT TRAP 3	=	0.60 AC
ABOVEGROUND FRESHWATER STORAGE PAD	=	3.19 AC
TOPSOIL PILE	=	1.46 AC
TOTAL	=	20.88 AC
TOTAL WOODED AREA	=	1.95 AC

SITE LOCATIONS WV83-NF (WEST VIRGINIA NORTH ZONE)		
	LATITUDE	LONGITUDE
CENTROID OF PAD	39.354487	-80.210044

SITE LOCATIONS UTM83-17 (WEST VIRGINIA NORTH ZONE)		
	NORTHING	EASTING
CENTROID OF PAD	4356413.1342	568061.4715

WELL LEGEND

NOT TO SCALE

FLOOD PLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	YES
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	YES
HEC-RAS STUDY COMPLETED:	YES
FLOODPLAIN SHOWN ON DRAWINGS:	YES
FIRM MAP NUMBER(S) FOR SITE:	54033C0177D
ACREAGE OF CONSTRUCTION IN FLOODPLAIN:	0.32

PLAN REPRODUCTION WARNING

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SHEETS 9-11 OF 25	WELL PAD PROFILES & SECTIONS
SHEETS 12-14 OF 25	ACCESS ROAD PROFILES & SECTIONS
SHEETS 15 OF 25	SUMP 1 TO SUMP 2 PROFILE
SHEETS 16 OF 25	WATER TANK PAD PROFILES & SECTIONS
SHEETS 17 OF 25	TOPSOIL PILE PROFILES & SECTIONS
SHEETS 18-22 OF 25	CONSTRUCTION DETAILS
SHEETS 23-25 OF 25	RECLAMATION PLAN

APPROVED
WVDEP OOG
10 / 8 / 2015

REVISION RECORD

NO	DATE	DESCRIPTION

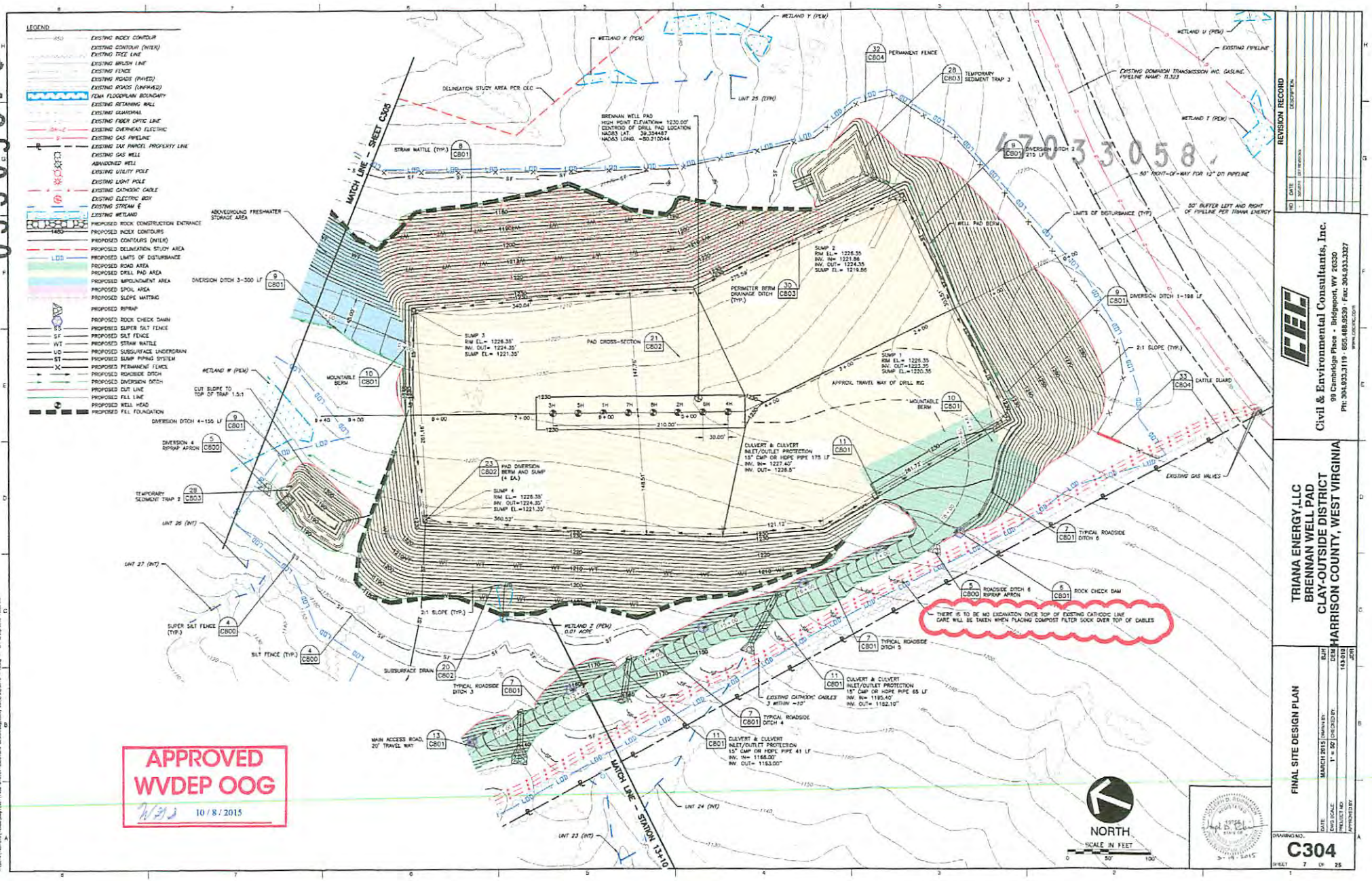
CEC
Civil & Environmental Consultants, Inc.
99 Cambridge Place - Bridgeport, WV 26330
Ph: 304.933.3119 · 855.488.9539 · Fax: 304.933.3327
www.cecinc.com

TRIANA ENERGY, LLC
BRENNAN WELL PAD
CLAY-OUTSIDE DISTRICT
HARRISON COUNTY, WEST VIRGINIA

COVER SHEET

DATE:	MARCH 2015	DRAWN BY:	BJH
DWG SCALE:	AS SHOWN	CHECKED BY:	DEM
PROJECT NO:	143-019	APPROVED BY:	JDR

DRAWING NO.: C000
SHEET 1 OF 25


LEGEND
EXISTING INDEX CONTOUR
EXISTING CONTOUR (INTER)
EXISTING TREE LINE
EXISTING BRUSH LINE
EXISTING FENCE
EXISTING ROADS (PAVED)
EXISTING ROADS (UNPAVED)
FEMA FLOODPLAIN BOUNDARY
EXISTING RETAINING WALL
EXISTING GUARDWALL
EXISTING FIBER OPTIC LINE
EXISTING OVERHEAD ELECTRIC
EXISTING GAS PIPELINE
EXISTING TAX PARCEL PROPERTY LINE
EXISTING GAS WELL
ABANDONED WELL
EXISTING UTILITY POLE
EXISTING LIGHT POLE
EXISTING CATHODIC CABLE
EXISTING ELECTRIC BOX
EXISTING STREAM
EXISTING WETLAND
PROPOSED ROCK CONSTRUCTION ENTRANCE
PROPOSED INDEX CONTOURS
PROPOSED CONTOURS (INTER)
PROPOSED DELINEATION STUDY AREA
PROPOSED LIMITS OF DISTURBANCE
PROPOSED ROAD AREA
PROPOSED DRILL PAD AREA
PROPOSED IMPOUNDMENT AREA
PROPOSED SPOIL AREA
PROPOSED SLOPE MATTING
PROPOSED RIPRAP
PROPOSED ROCK CHECK DAMS
PROPOSED SUPER SILT FENCE
PROPOSED SILT FENCE
PROPOSED STRAW WATTLE
PROPOSED SUBSURFACE UNDERDRAIN
PROPOSED SUMP PIPING SYSTEM
PROPOSED PERMANENT FENCE
PROPOSED ROADSIDE DITCH
PROPOSED DIVERSION DITCH
PROPOSED CUT LINE
PROPOSED FILL LINE
PROPOSED WELL HEAD
PROPOSED FILL FOUNDATION
DELINEATION STUDY AREA PER CEC
BRENNAN WELL PAD
HIGH POINT ELEVATION= 1230.00'
CENTROID OF DRILL PAD LOCATION
NAD83 LAT. 39.304487
NAD83 LONG. -80.210044
WETLAND Y (PEM)
WETLAND X (PEM)
WETLAND U (PEM)
WETLAND T (PEM)
WETLAND W (PEM)
WETLAND Z (PEM) 0.01 ACRE
EXISTING PIPELINE
EXISTING DOMINION TRANSMISSION INC. GASLINE PIPELINE NAME: TL323
50' RIGHT-OF-WAY FOR 12" DTI PIPELINE
50' BUFFER LEFT AND RIGHT OF PIPELINE PER TRIANA ENERGY
LIMITS OF DISTURBANCE (TYP)
MATCH LINE - SHEET C305
MATCH LINE - STATION 13+10
ABOVEGROUND FRESHWATER STORAGE AREA
DIVERSION DITCH 3-300 LF
DIVERSION DITCH 4-135 LF
DIVERSION DITCH 2 215 LF
DIVERSION DITCH 1-198 LF
STRAW WATTLE (TYP.)
MOUNTABLE BERM
CUT SLOPE TO TOP OF TRAP 1.5:1
DIVERSION 4 RIPRAP APRON
TEMPORARY SEDIMENT TRAP 2
TEMPORARY SEDIMENT TRAP 3
PERMANENT FENCE
PERIMETER BERM DRAINAGE DITCH (TYP.)
WELL PAD BERM
PAD CROSS-SECTION
PAD DIVERSION BERM AND SUMP (4 EA.)
SUMP 1 RIM EL.= 1226.35 INV. OUT=1223.35 SUMP EL.=1220.35
SUMP 2 RIM EL.= 1226.55 INV. IN= 1221.86 INV. OUT= 1224.35 SUMP EL.= 1219.86
SUMP 3 RIM EL.= 1226.35' INV. OUT= 1224.35' SUMP EL.= 1221.35'
SUMP 4 RIM EL.= 1226.35' INV. OUT=1224.35' SUMP EL.=1221.35'
APPROX. TRAVEL WAY OF DRILL RIG
CULVERT & CULVERT INLET/OUTLET PROTECTION 15" CMP OR HDPE PIPE 175 LF INV. IN= 1227.40' INV. OUT= 1226.5'
CULVERT & CULVERT INLET/OUTLET PROTECTION 15" CMP OR HDPE PIPE 65 LF INV. IN= 1185.40' INV. OUT= 1182.10'
CULVERT & CULVERT INLET/OUTLET PROTECTION 15" CMP OR HDPE PIPE 41 LF INV. IN= 1168.00' INV. OUT= 1163.00'
CATTLE GUARD
EXISTING GAS VALVES
TYPICAL ROADSIDE DITCH 6
ROADSIDE DITCH 6 RIPRAP APRON
ROCK CHECK DAM
THERE IS TO BE NO EXCAVATION OVER TOP OF EXISTING CATHODIC LINE CARE WILL BE TAKEN WHEN PLACING COMPOST FILTER SOCK OVER TOP OF CABLES
TYPICAL ROADSIDE DITCH 5
TYPICAL ROADSIDE DITCH 4
TYPICAL ROADSIDE DITCH 3
EXISTING CATHODIC CABLES 3' WITHIN +10'
SUPER SILT FENCE (TYP.)
SILT FENCE (TYP.)
SUBSURFACE DRAIN
MAIN ACCESS ROAD, 20' TRAVEL WAY
2:1 SLOPE (TYP.)
UNIT 26 (INT)
UNIT 27 (INT)
UNIT 24 (INT)
UNIT 23 (INT)
NORTH
SCALE IN FEET
0
50'
100'
APPROVED
WVDEP OOG
10/8/2015
4703305873
REVISION RECORD
NO. DATE DESCRIPTION
Civil & Environmental Consultants, Inc.
99 Cambridge Place - Bridgeport, WV 26330
PH: 304.933.3119 - 855.488.9539 - Fax: 304.933.3327
www.cecinc.com
TRIANA ENERGY, LLC
BRENNAN WELL PAD
CLAY-OUTSIDE DISTRICT
HARRISON COUNTY, WEST VIRGINIA
FINAL SITE DESIGN PLAN
DATE: MARCH 2015
DWG SCALE: 1" = 50'
PROJECT NO: 143.018
DRAWN BY: BJH
CHECKED BY: DEM
APPROVED BY: JDR
DRAWING NO. C304
SHEET 7 OF 25