



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

October 07, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4105641, 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: VILLERS 2H
Farm Name: BRITON, KEVIN N. & JOANNA E.
API Well Number: 47-4105641
Permit Type: Plugging
Date Issued: 10/07/2013

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

4105641P

1) Date _____, 20_____
2) Operator's
Well No. Villers 2H
3) API Well No. 47-041 - 05641H

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ____ / Gas X / Liquid injection ____ / Waste disposal ____ /
(If "Gas, Production ____ or Underground storage ____) Deep ____ / Shallow ____

5) Location: Elevation 1,384' Watershed Unnamed Drain of West Fork River
District Freemans Creek County Lewis Quadrangle Weston

6) Well Operator Triana Energy, LLC 7) Designated Agent Rachelle King
Address 900 Virginia St., East Address 900 Virginia St., East
Charleston, WV 25301 Charleston, WV 25301

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Bill Hatfield (Billie.G.Hatfield@wv.gov) Name To be determined at a later date.
Address P.O. Box 522 Address _____
Buckhannon, WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:
See Attached Pages

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WV Department of
Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Bang Sathup Date 8-15-13

Villers #2 Plugging Procedure API# 47-041-05641 8/5/2013 by: Joe Law	
Day #1	MIRU two 500 bbl tanks, fill one with FW. Haul in 3,800' of 2-3/8", 8R, EUE tubing stacked in rows on a float. Inspect well head. Prepare location for service rig and cement trucks.
Day #2	MIRU Service Rig (Double Pole Style). Rig up stripper head. TIH w/ tubing open ended and tag kick plug cement at 3,625'. Pick up 1' and establish circulation.
Day #3	Cement trucks to be on location first thing in the morning. Set cement plugs and gel spacers per proposal, lay down tubing onto float while coming out of the hole. Be set up to reverse circulate if needed.
Day #4	Install monument. RDMO Service Rig. Haul out waste water to disposal. Remove all equipment from site. Begin site reclamation.

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PLUG #1 3625' - 3126'

PLUG #2 250' - SURFACE
3625 - 3300 = 325'
3300 - 250 = 3050'

6% GEL SPACER BETWEEN PLUGS

Villers #2

Plugging Materials List

API# 47-041-05641

8/5/2013

by: Joe Law

Materials Needed:

	From (ft)	To (ft)	Length (ft)	Hole Diameter (in)	Hole Capacity (bbl/ lin ft)	Fluid Req. (bbls)		(bbls)
Cement Plug #1	3625	3300	325	8.75	0.0744	24.17	Cement Total	42.76
Gel Spacer #1	3300	250	3050	8.75	0.0744	226.84	+ 10%	47.04
Cement Plug #2	250	0	250	8.75	0.0744	18.59		

This "Materials Needed" plan assumes that the kick plug will indeed be found at 3,625'

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4105641P

McLaughlin, Jeffrey W

From: Joe Law <jlaw@trianaenergy.com>
Sent: Wednesday, October 02, 2013 3:12 PM
To: McLaughlin, Jeffrey W
Cc: Mike Stratton
Subject: Triana Plugging Procedure Change for Villers #2

Jeff,
As per your recommendation, I propose the following procedural change to the already submitted Villers #2 plugging permit application.

The originally submitted plan outlines two separate cement plugs to be set, Plug #1 from 3625' to 3300', and Plug #2 from 250' to surface. The combined amount of cement needed to set these two plugs is 42.8 bbl; 24.2 bbl in Plug #1 and 18.6 bbl in Plug #2.

Upon doing some research, I discovered that a typical cement dry bulk truck can transport approximately 270 sks of dry cement. Assuming a yield of 1.18 ft³/sk, 270 sks of cement (one truck full) will make 56 bbl of cement. The original plan called for 42.8 bbl of cement, and one bulk truck full will make 56 bbl of cement, leaving 13.2 bbl of unused cement.

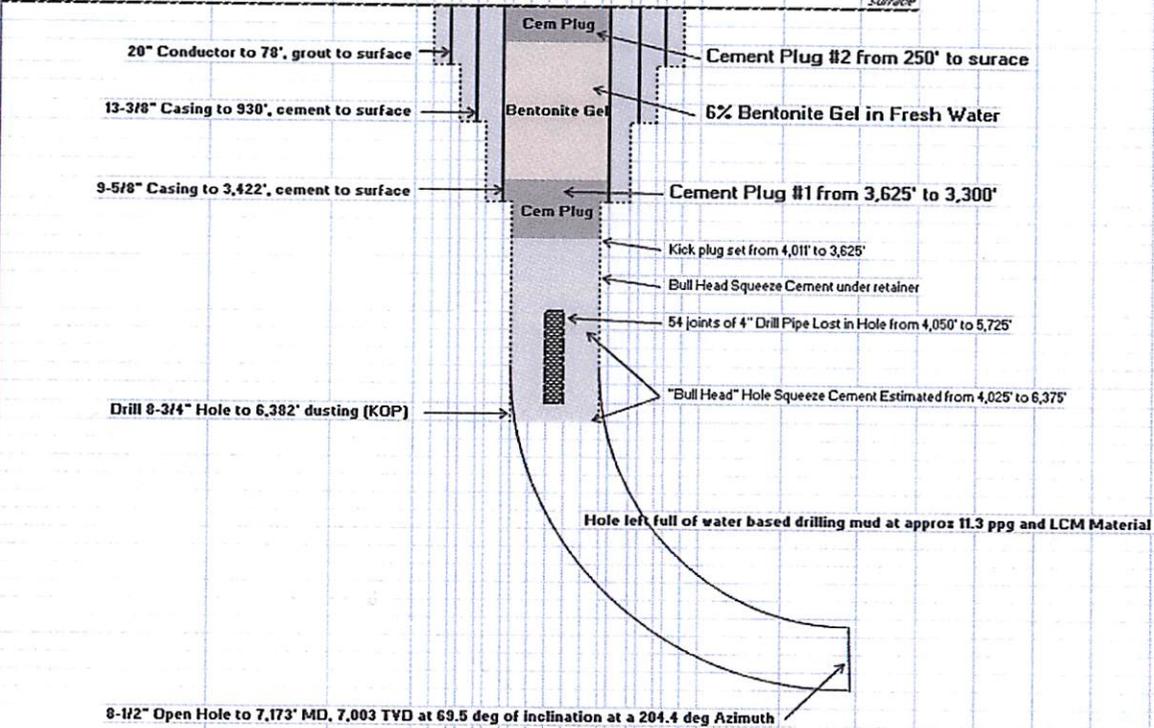
In order to insure a good seal at the 9-5/8" casing shoe, we propose extending Plug #1 by 13 bbls. This 13 bbls of extra cement will allow us to order out one full bulk truck of dry cement, and utilize it all in the well. Inside of the 9-5/8" casing, this extra 13 bbls of cement will fill up an additional 174' of casing, thus changing the depths of Plug #1 to 3625' - 3126', instead of stopping at 3300' as originally planned. We believe that this additional cement can only help in providing an effective seal.

Please contact me with any questions that you may have.

Respectfully,
Joe Law
Consulting Engineer
Triana Energy
(304) 517-9283

Villers #2
 Current Well Bore Status
 API# 47-041-05641
 8/5/2013
 by: Joe Law

Drawing not to scale



Drilled to KOP on air. From KOP to TD was drilled on water based mud from 11.0 - 12.4 ppg. Lost circulation at 7,173' MD, spotted several LCM pills with little success. Attempted to bull head squeeze cement into formation, discovered the lost circulation appeared to be at or near the intermediate casing shoe. Unintentionally cemented drill pipe into hole. Set a cement retainer in the 9-5/8" casing at 3,380' and pumped 312 bbls of cement at 15.5 ppg (calculated hole volume to drill pipe fish was approx 50 bbls). Drilled retainer and cement out to 3,475' and pressure tested to 975 psig on surface with fresh water (2,457 psig at the casing shoe). Continued to drill cement out to 4,025'. Set a kick plug from 4,011' to 3,625'.

B.S. 8-15-13

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41 05641P

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 10-27-11
API #: 47-041-05641-0000

Farm name: BRITON, KEVIN & JOANNA Operator Well No.: VILLERS 2H

LOCATION: Elevation: 1384' Quadrangle: Weston 7.5'

District: Freemans Creek County: Lewis
Latitude: 0 Feet South of 39.070785 Deg. Min. Sec.
Longitude 0 Feet West of -80.473584 Deg. Min. Sec.

Company: TRIANA ENERGY LLC

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
900 VIRGINIA ST E CHARLESTON, WV 25301	20", 78 ppf	73'	73'	236
Agent: Rachelle King	13-3/4", 54.5 ppf	931'	919'	855
Inspector: Tim Bennett	9-5/8", 40 ppf	3422'	3410'	1419
Date Permit Issued: 8-11-10				
Date Well Work Commenced: 8-12-10				
Date Well Work Completed: 9-21-10				
Verbal Plugging: 9/17/10				
Date Permission granted on: 9/17/10				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7019'				
Total Measured Depth (ft): 7241'				
Fresh Water Depth (ft.): 30', 445'				
Salt Water Depth (ft.): 1551'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): n/a				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation n/a Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

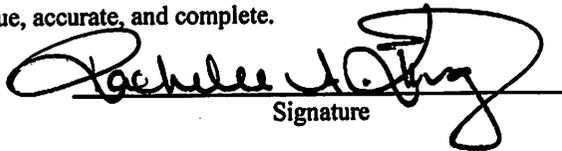
Static rock Pressure _____ psig (surface pressure) after _____ Hours

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WV Department of
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the 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.


Signature

11-18-11
Date

WR-35

API# 47-041-05641-0000

Coal, water and gas check depths taken from driller's log.
 Formation depths down to KOP taken from TVD Gamma Ray Log of pilot hole (47-041-05614).
 Formation depths from KOP to TD are MD from the MWD GR and the mudlog.

Strata	Depths	Remarks
Sub Base	0' -- 12'	
Sand and Shale	12' -- 610'	FW @ 30'; 445'
Salt Sands	610' -- 1240'	
Shale	1240' -- 1492'	
Lower Maxton	1492' -- 1590'	SW @ 1551' - damp
Big Lime	1590' -- 1670'	
Big Injun	1670' -- 1741'	
Sand and Shale	1741' -- 2017'	
50 foot	2017' -- 2057'	
Sand and Shale	2057' -- 2149'	
Gordon	2149' -- 2285'	
Shale	2285' -- 2416'	
5th Sand	2416' -- 2440'	
Sand and Shale	2440' -- 4444'	
Benson	4444' -- 4466'	
Sand and Shale	4466' -- 4795'	
Alexander	4795' -- 4836'	
Sand and Shale	4836' -- 5948'	
Sycamore Grit	5948' -- 5997'	
Shale	5997' -- 6354'	KOP = 6354'
Shale and siltstone	6354' -- 6823'	
Burkett	6823' -- 6844'	
Tully	6844' -- 6898'	
Shale	6898' -- 7059'	
Marcellus	7059' -- 7241'	
TD	7241'	

Total Depth of	7019' TVD
Horizontal	
Well:	7241' TMD

Well Logged by: Stratagraph/Sperry

4105641F

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number
Villers 2H

3) API Well No.: 47 - 041 - 05641H

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Kevin Gritton</u> ✓	Name <u>None of record</u>
Address <u>P.O. Box 23</u>	Address _____
<u>Weston, WV 26452</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>See Attachment (3 owners)</u> ✓
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Barry Stollings (Barry.W.Stollings@wv.gov)</u> ✓	(c) Coal Lessee with Declaration
Address <u>28 Conifer Drive</u>	Name <u>None of record</u>
<u>Bridgeport, WV 26330</u>	Address _____
Telephone <u>C: (304) 552-4194 O: (304) 855-5401</u>	

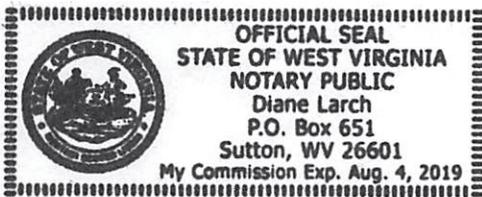
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 WV Department of
 Environmental Protection

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Triana Energy, LLC
 By: Rachelle King *Rachelle King*
 Its: Director of Regulatory Affairs
 Address 900 Virginia Street East
Charleston, WV 25301
 Telephone 304-205-8560

Subscribed and sworn before me this 8th day of August, 2013
Diane Larch Notary Public
 My Commission Expires August 4, 2019

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.

(b) Coal Owner(s) with Declaration

✓	Name: Donna Diehm Address: 1970 Outer Drive Mansfield OH 44905
✓	Name: William Donaldson Address: 73 Sherman Avenue Mansfield OH 44906
✓	Name: James Donaldson Address: 42 Sherman Avenue Mansfield OH 44906

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Environmental Protection

AUG 15 2013

Operator's Well
Number

Villers 2H

WV Department of Environmental Protection
INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

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

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) 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.

Comments must be in writing. Your comments must 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.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

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.

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,



Date 8/14/13 Name _____
By _____
Its _____

Signature Date

Signature Date

4105641P

WW-9
Rev. 5/08

Page 1 of 2
API Number 47 - 41 - 05641
Operator's Well No. Villers 2H

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Triana Energy, LLC OP Code 494486431

Watershed Unnamed Drain of West Fork River Quadrangle Weston

Elevation 1,384' County Lewis District Freemans Creek

Description of anticipated Pit Waste: None. Will use tanks.

Will a synthetic liner be used in the pit? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number Probably 2D0190460)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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

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

Company Official Signature *Rachelle King*

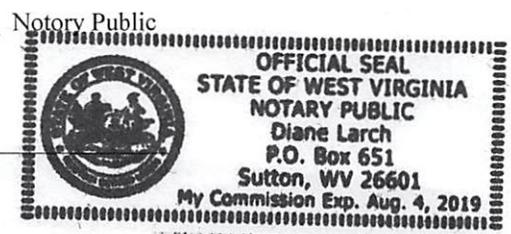
Company Official (Typed Name) Rachelle King

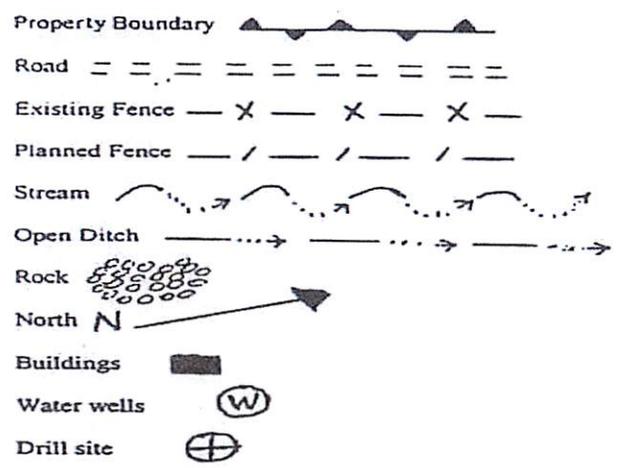
Company Official Title Director of Regulatory Affairs

Subscribed and sworn before me this 8th day of August, 20 13

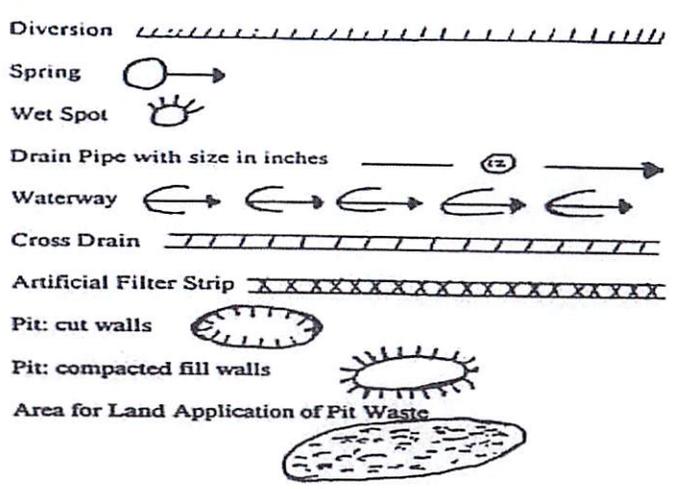
Diane Larch

My commission expires August 4, 2019





LEGEND



Proposed Revegetation Treatment: Acres Disturbed less than 1 acre Prevegetation pH 7.0
 Lime 2 Tons/acre or to correct to pH 7.0
 Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)
 Mulch 100 - 40 lb. bales = 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
Meadow Mix		100	Pasture Mix		100

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Attach:
 Drawing(s) of road, location, pit and proposed area for land application.
 Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bruce Shilling
 Comments: _____

Title: inspector Date: 8-15-13

Field Reviewed? Yes No

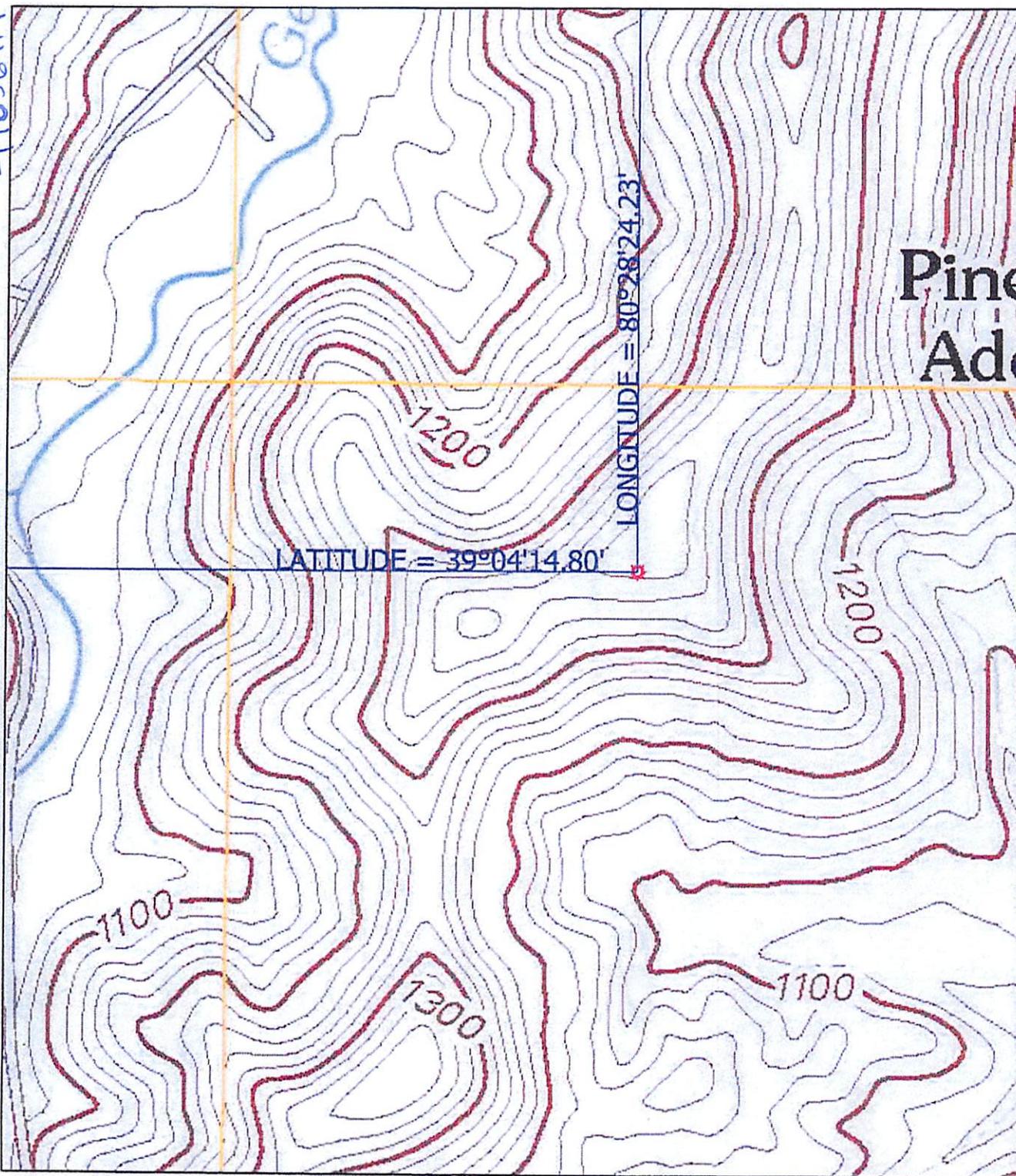
TOPOGRAPHY MAP SHOWING VILLERS 2H

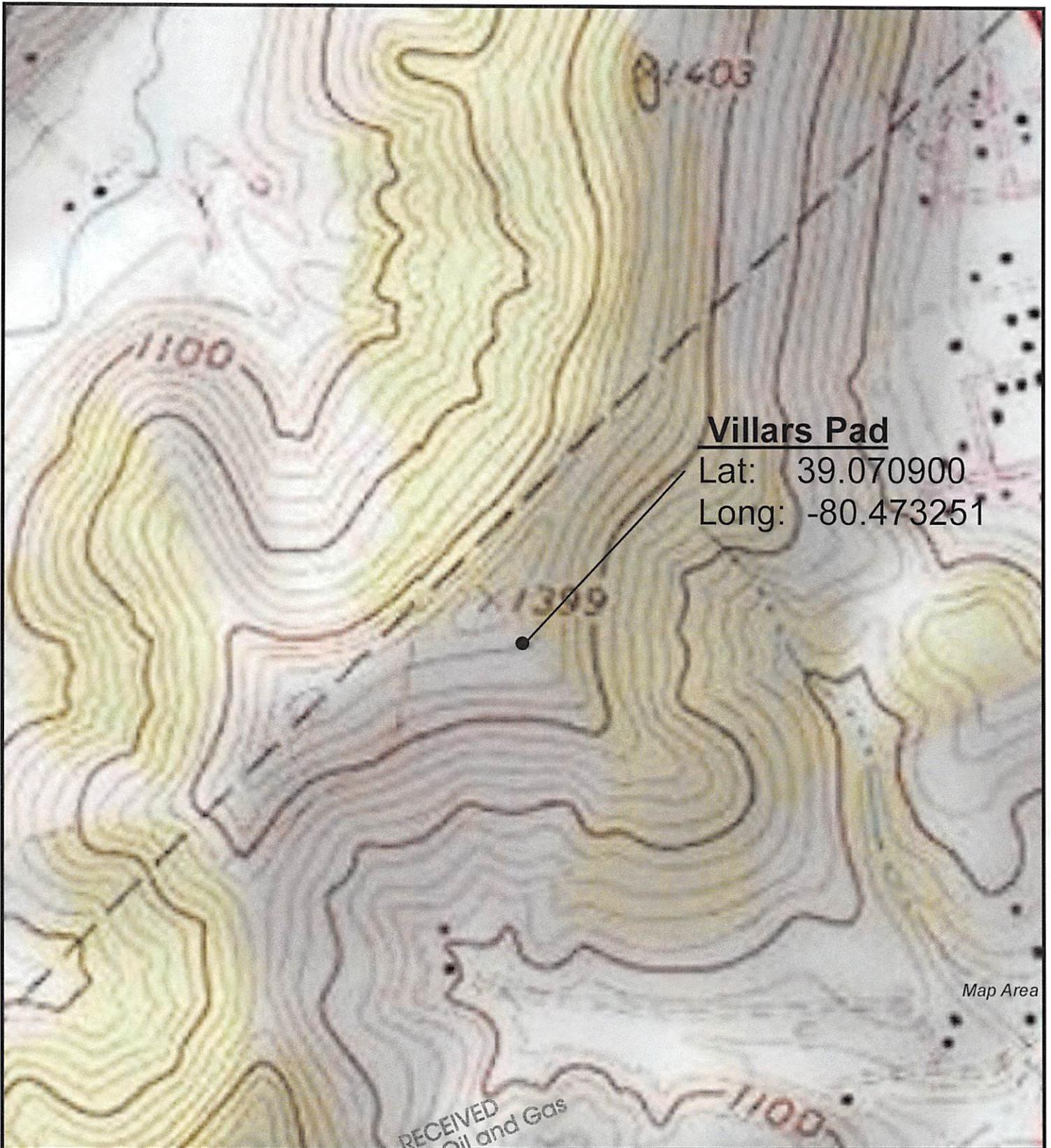
QUADRANGLE SHOWN: WESTON
LOCATION SHOWN: VILLERS 2H

B.S. 8-15-13

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SCALE 1" = 600'



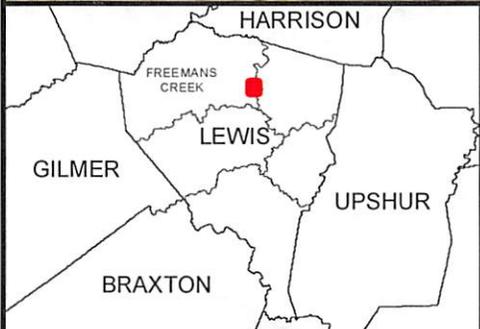


Villars Pad

Lat: 39.070900

Long: -80.473251

Map Area



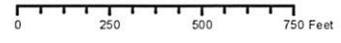
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**Villars Pad
Location**

Proposed surface location(s) and well bore(s) shown on this plate 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 the intended recipient is unauthorized.

WV DEPARTMENT OF
Environmental Protection

Lewis County, WV
Freemans Creek District



WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-4105641 WELL NO.: 2H

FARM NAME: Villers

RESPONSIBLE PARTY NAME: Triana Energy, LLC, contact Michael Stratton

COUNTY: Lewis DISTRICT: Freeman's Creek

QUADRANGLE: Weston

SURFACE OWNER: Kevin N. and Joanna E. Briton

ROYALTY OWNER: Garnet Villers

UTM GPS NORTHING: 4324762.93

UTM GPS EASTING: 545554.12 GPS ELEVATION: 464.67

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS : Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

- Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

[Signature]
Signature

Engineer
Title

9-16-13
Date

Received

SEP 16 2013

Office of Oil and Gas
WV Dept. of Environmental Protection