



 west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, March 22, 2019

WELL WORK PLUGGING PERMIT
 Vertical Plugging

SHALE GAS PRODUCTION, LLC
 929 CHARLESTON ROAD

SPENCER, WV 25276

Re: Permit approval for Bess 1
 47-039-00425-00-00

This well work permit 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 any additional specific 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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of 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.

Per 35 CSR 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- 0450.

James A. Martin
 Chief

Operator's Well Number: Bess 1
 Farm Name: BESS, LAURA
 U.S. WELL NUMBER: 47-039-00425-00-00
 Vertical Plugging
 Date Issued: 3/22/2019

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.

03/22/2019

WW-4B
Rev. 2/01

- 1) Date _____, 20____
- 2) Operator's
Well No. Bess #1
- 3) API Well No. 47-039 - 00425

**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 / Liquid injection ____ / Waste disposal ____ /
(If "Gas, Production or Underground storage ____) Deep ____ / Shallow

5) Location: Elevation 768.4 Watershed Aarons Creek
District Union County Kanawha Quadrangle Charleston West

6) Well Operator Shale Gas Production LLC 7) Designated Agent J. Scott Freshwater
Address 929 Charleston Road Address 929 Charleston Road
Spencer, WV 25276 Spencer, WV 25276

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Terry Urban Name Contractor Services Inc. of WV
Address P.O. Box 1207 Address 929 Charleston Road
Clendenin, WV 25405 Spencer, WV 25276

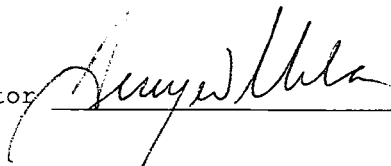
10) Work Order: The work order for the manner of plugging this well is as follows:
Prep location, move in, rig up. Pull tubing packer. If no release trip in hole with 1 1/2". Cement from bottom to packer depth. If packer released, recover 3 1/2", trip in hole with 1 1/2"; cement to bottom of 7"-1893. Trip in Hole with tubing-cement to cut point of 7", approx. 100' below. Cement to surface. Set plugs according to inspector. Trip out of hole with casing and lay down. Erect monument.

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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  Date 3-21-19

47-039-00425P
03/22/2019

06-10

WEST VIRGINIA DEPARTMENT OF MINES
OIL AND GAS DIVISION

Charleston N.W.

WELL RECORD

Permit No. *Kum-425*

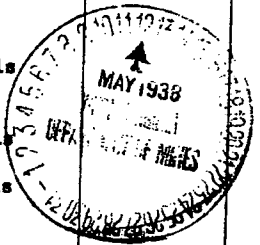
Oil or Gas Well
(Kind)

Company	Ajax Gas Company		
Address	P. O. Box 1606, Charleston, W. Va.		
Farm	Laura B. Bess	Acre	22
Location (waters)	Aaron's Creek		
Well No.	1	Elev.	768.4
District	Union	County	Kanawha
The surface of tract is owned in fee by Laura B. Bess Address Dunbar, W. Va.			
Mineral rights are owned by same Address			
Drilling commenced	Aug. 18, 1937		
Drilling completed	Nov. 26, 1937		
Date shot	Nov. 28, 1938	Depth of shot	
Open Flow	7/10ths Water in	2	Inch
	/10ths Merc. in		Inch
Volume	126,000	Cu. Ft.	
Rock Pressure	410	lbs.	24 hrs.
Oil		bbls., 1st 24 hrs.	
Fresh water		feet	feet
Salt water		feet	feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18			Hook Wall
10	17	17	Size of 3x6-5/8x16
8 1/2	618	none	
6 5/8	1893	1893	Depth set 3043
5 3/16			
3	4072	4072	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

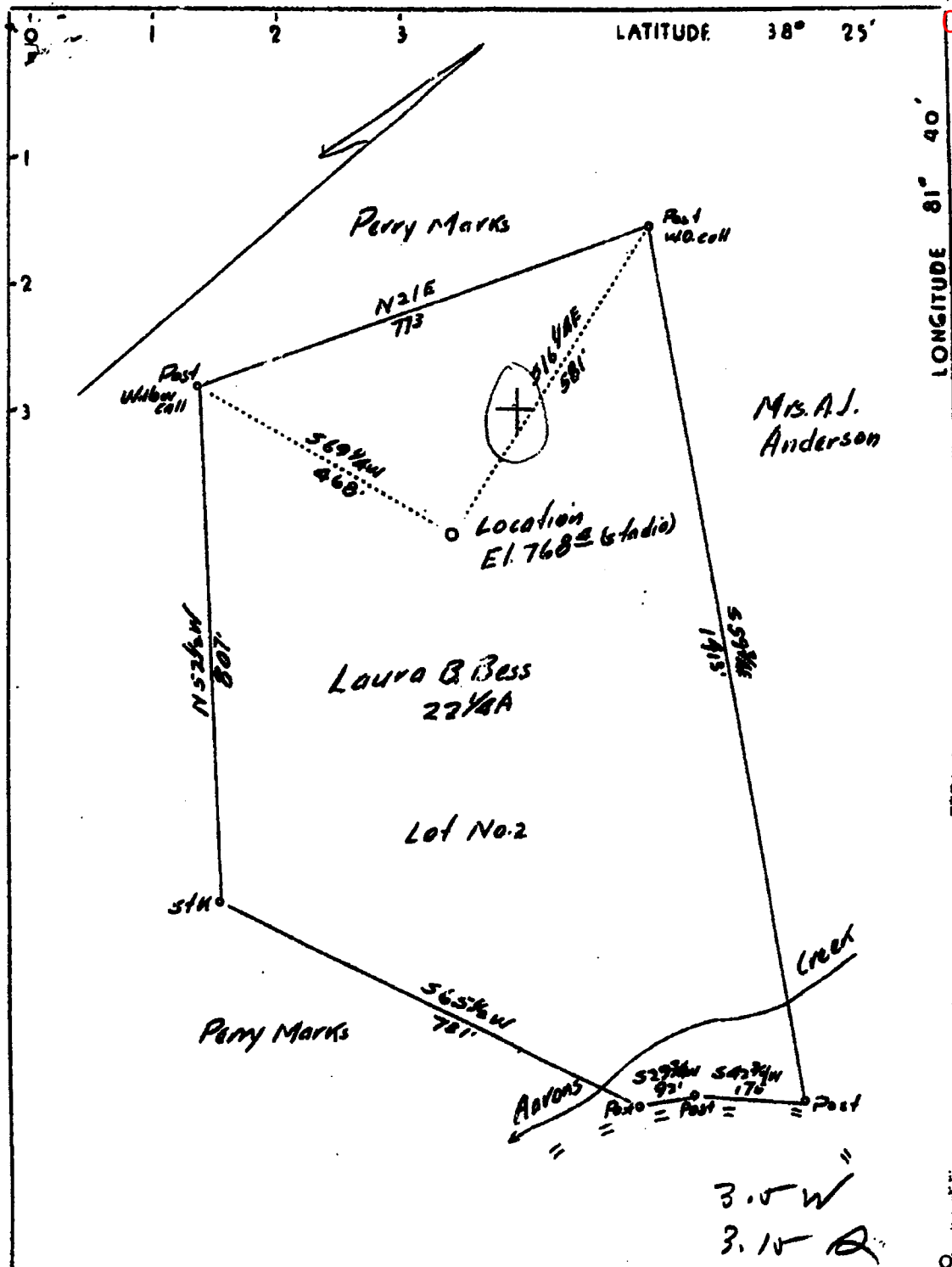
CASING CEMENTED	SIZE	No. FT.	Date
COAL WAS ENCOUNTERED AT	FEET	INCHES	
	FEET	INCHES	FEET
	FEET	INCHES	FEET

Formation	Color	Hard or Soft	Top	Bottom	Oil Gas or Water	Depth Found	Remarks
Surface			0	20			
Red Rock			20	40			
Blue Slate			40	175			
Sand			175	240			
Blue Slate			240	285			
Sand			285	320			
Slate and Shell			320	375			
Sand			375	543			
Slate			543	580	Water		
Sand			580	640	Gas		
Slate			640	685			
Sand			685	710	Gas		
Slate and Shale			710	790			
Sand			790	830			
Slate and Shale			830	967			
Gas Sand			967	1010			
Slate			1010	1020			
Lime Shell			1020	1030			
Slate			1030	1040			
Salt Sand			1040	1575			
Maxon bond			1575	1625	Water		
Slate			1625	1628			
Little Lime			1628	1628			
Pencil Cave			1660	1662			
Big Lime			1662	1832			
Big Injun			1832	1880			
Slate			1880	1883			
Lime Shell			1883	1903			
Sand			1903	1910			
Slate and Shells			1910	2290			
Brown Shale			2290	2300			
Berea Sand			2300	2315			
Slate and Shells			2315	2900			
Slate			2900	3025			
Slate and Shells			3025	3520			
Brown Shale			3520	3580			
Slate and Shell			3580	3790			
Brown Shale			3790	3825			
White Slate			3825	3855			
Brown Shale			3855	4000			



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3.15 R

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Company Ajax Gas Co.
 Address P.O. Box 1806, Charleston, W.Va.
 Farm Laura B. & B.F. Bess
 Tract 2 Acres 22.25 Lease No. _____
 Well (Farm) No. 1 Serial No. 5
 Elevation (Spirit Level) 768± (Stadia)
 Quadrangle Charleston **WS**
 County Kanawha District Union
 Engineer Robert S. Hyde
 Engineer's Registration No. 546
 File No. _____ Drawing No. _____
 Date July 7, 1937 Scale 1"=200'

STATE OF WEST VIRGINIA
 Department of Mines
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 File No. KHN-425

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

47-039-004258
03/22/2019

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number Bess # 1
Laura B. Bess
3) API Well No.: 47 - 039 - 00425

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

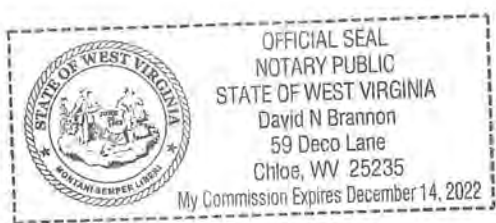
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Kenneth U Preece & Jennifer Cadle</u>	Name _____
Address <u>111 Oak Street</u>	Address _____
<u>Dunbar, WV 25064</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Terry Urban</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 1207</u>	Name _____
<u>Clendenin, WV 25405</u>	Address _____
Telephone <u>304-549-5915</u>	_____

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 Shale Gas Production LLC
 By: [Signature]
 Its: Managing Member
 Address 929 Charleston Road
Spencer, WV 25276
 Telephone 304-927-5228

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MAR 21 2019

Subscribed and sworn before me this 6th day of December 2018
David N. Brannon Notary Public
 My Commission Expires December 14, 2022

WV Department of Environmental Protection

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 depprivacyofficer@wv.gov.

SURFACE OWNER WAIVER

Operator's Well
Number

Bess #1

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.

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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.

MAR 21 2019

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.

WV Department of
Environmental Protection

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,


Signature

Date 1-5-19 Name _____
By _____
Its _____

Signature Date

WW-4B

03/22/2019

API No. 47-39-00425 P
 Farm Name Laura B. Bess
 Well No. Bess #1

**INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator ___ / owner ___ / lessee ___ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____

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By: _____

Its _____ MAR 21 2019

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*No Known operator, owner,
or lessee of workable
coalbed/seam on this tract.*

47-039-00425P
03/22/2019

WW-9
(5/16)

API Number 47 - 39 00425
Operator's Well No. Bess #1

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Shale Gas Production, LLC OP Code _____

Watershed (HUC 10) Aarons Fork Quadrangle Charleston West

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: brine, oil (above ground pit)

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: N/A

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

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

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

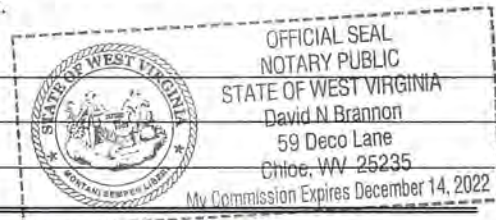
-Landfill or offsite name/permit number? _____

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 April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

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

Company Official Signature [Signature]
Company Official (Typed Name) J. Scott Freshwater
Company Official Title Managing Member



Subscribed and sworn before me this 6th day of December, 20 18

David N. Brannon Notary Public

My commission expires December 14, 2022

Proposed Revegetation Treatment: Acres Disturbed .5 Prevegetation pH 5.5

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type _____

Fertilizer amount 0.25 lbs/acre

Mulch Hay 3 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
Orchard grass	25
Red top clover	15

Seed Type	lbs/acre
Ladino Clover	5
KY 31	40

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *[Signature]*

Comments: _____

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WV Department of
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Title: Land Manager *[Signature]* Date: 3-21-19

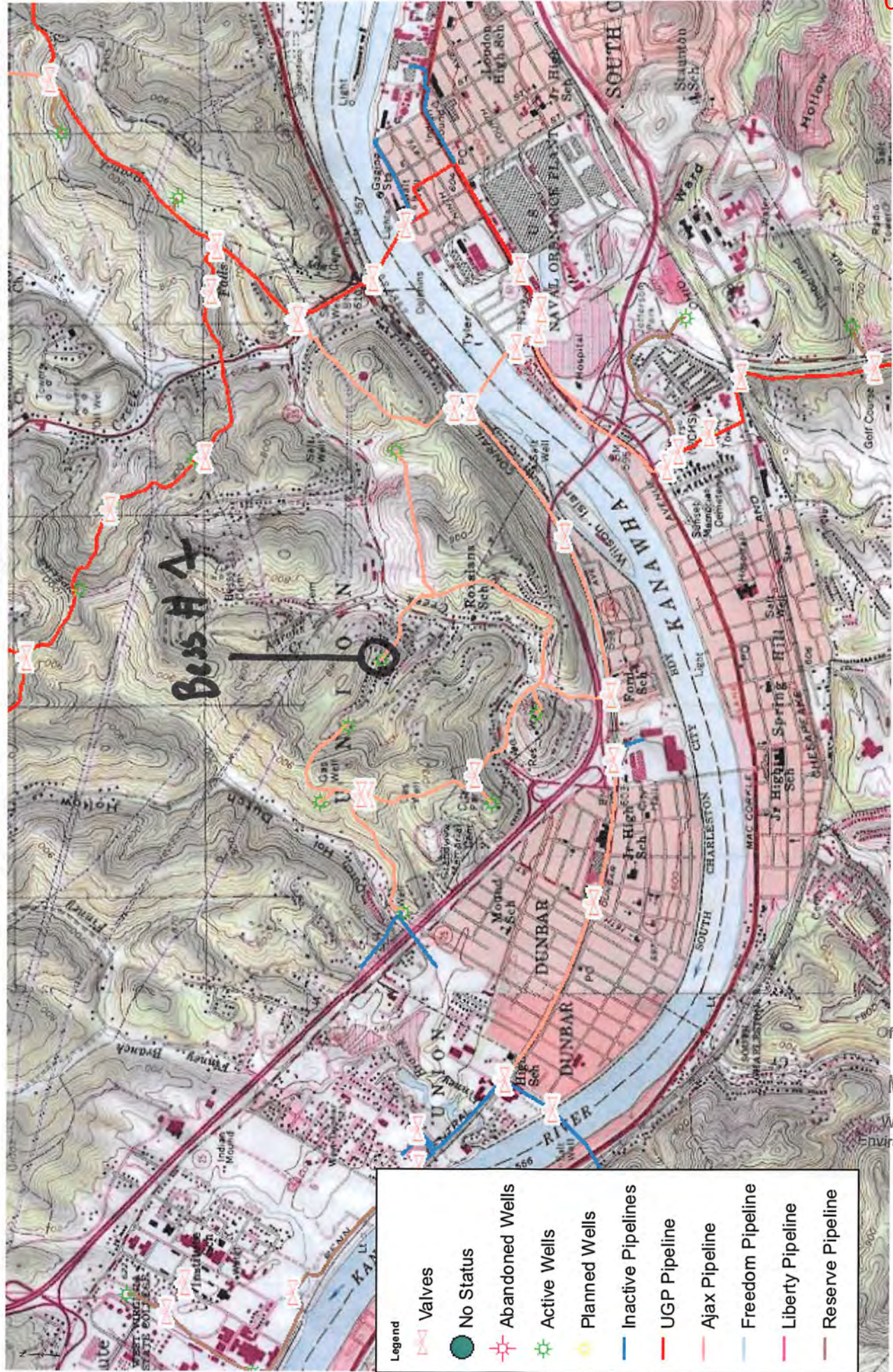
Field Reviewed? () Yes () No

47-039-00425P

03/22/2019

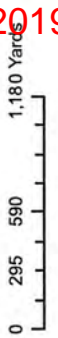


03/22/2019



Legend	
	Valves
	No Status
	Abandoned Wells
	Active Wells
	Planned Wells
	Inactive Pipelines
	UGP Pipeline
	Ajax Pipeline
	Freedom Pipeline
	Liberty Pipeline
	Reserve Pipeline

SCALE



CREATED BY	Administrator
DATE	2/28/2018
DETAILS	Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere Projection: Mercator Auxiliary Sphere Datum: WGS 1984
SCALE	1:35,496

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MAR 21 2019
Bess #1
WV Department of Environmental Protection

TITLE

WW-7
8-30-06



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

API: 47-39-00425 WELL NO.: BESS 1

FARM NAME: Laura B. Bess

RESPONSIBLE PARTY NAME: Shale Gas Production, LLC

COUNTY: Kanawha DISTRICT: Union

QUADRANGLE: Charleston West

SURFACE OWNER: Kenneth U Preece & Jennifer Cadle

ROYALTY OWNER: Bess heirs

UTM GPS NORTHING: 4247276

UTM GPS EASTING: ~~563760.3~~ 436239 GPS ELEVATION: 768.4

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:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

4. 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.

Day Ogden
Signature

Land Manager
Title

02/28/2018
Date

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