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

Tuesday, April 21, 2020
WELL WORK PLUGGING PERMIT
Vertical Plugging

HG ENERGY, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for E. T. SPURLOCK 5
47-043-01473-00-00

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: E. T. SPURLOCK 5
Farm Name: BROYLES, SANDRA ROGERS
U.S. WELL NUMBER: 47-043-01473-00-00
Vertical Plugging
Date Issued: 4/21/2020

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47-043-01473P

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.

47-043-01473P

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WW-4B
Rev. 2/01

1) Date February 7, 2020
2) Operator's
Well No. E T Spurlock 5
3) API Well No. 47- 043 - 01473 P

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

5) Location: Elevation 768' Watershed Hayzlett Fork
District Duval County Lincoln Quadrangle Garrett's Bend 7.5'

6) Well Operator HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101

7) Designated Agent Diane White
Address 5260 Dupont Road
Parkersburg, WV 26101

8) Oil and Gas Inspector to be notified
Name Jeffery Smith
Address 5369 Big Tyler Road
Cross Lanes, WV 25313

9) Plugging Contractor
Name To Be Determined Upon Approval of the Permit
Address

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

Elev 768'

TD- 2328'

T'H, SPOT GEL

Cement Plug No 1 2250'-2150'

Cement Plug No 2 1865'-1710'

A Free point , cut & pull 4 1/2" - est 900' ? ≈1600'

Cement Plug No 3 950'-850' (adjust to cover casing cut)

Cement Plug No 4 210' - 0'

6% gel between cement plugs, erect monument with API #

8 5/8" - 161' -CTS

4 1/2 - 2139'

Berea 2262'-2286'

Big Injun 1760'-1815'

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IF 4½" FREEPOINT IS > 1100', THEN SET 100' PLUG ACROSS CASING CUT AND AN ADDITIONAL PLUG FROM 800' - 700' (ELEVATION PLUG). JNM

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

Work order approved by inspector Jeffrey Smith Date 3-19-20

FORM No. 989 1M;1/65 MFG. 7132

PRELIMINARY REPORT

47043.01473 P

PENNZOIL COMPANY

NEW WELL REPORT

LEASE No. 79582-50 240 ACRES — WORKING DISTRICT Southern Area

E. T. Spurlock FARM — WELL No. 5 N. S. 79 E. W. 73

Duval DISTRICT OR TOWNSHIP — Lincoln COUNTY — St. Albans QUAD.

LOCATION MADE August 2, 19 73 — DRILLING COMMENCED August 15, 19 73

DRILLING EQUIPMENT USED ☐ SPUDDER ☒ ROTARY — DRILLING COMPLETED August 19, 19 73

DRILLING EQUIPMENT FURNISHED BY F.W.A. Drilling Co. — TOTAL DEPTH 2325' SAND Berea

ELEVATION: FLOOR 780 — DRILLING CONTRACTOR FWA Drilling Co.

ELEVATION: GROUND 776.25 — WORK ORDER No. 70-2-3474-1

FORMATION RECORD

KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST	KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST
Rotary	0	7							
Clay	7	13							
Sand Rock	13	40							
Shale	40	128							
Sand & Shale	128	170							
Shale & Red Rk	170	367							
Shale & Sand	367	927							
Salt Sand (Shy)	927	1107							
Salt Sand	1107	1550							
Little Lime	1550	1578							
Pencil Cave	1578	1588							
Big Lime	1588	1760							
Big Injun	1760	1815							
Shale	1815	2262							
Berea	2262	2286							
Shale	2286	2325							
Total Depth		2325							
Logged to		2328							

(OVER)

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NEW WELL REPORT – CONTINUED

47-043-01473P

INITIAL TORPEDO RECORD	CASING AND TUBING RECORD						
	SIZE	PUT IN WELL			PULLED OUT		
		TRANSFER NO.	FEET	INCH	TRANSFER NO.	FEET	INCH
Date of Shot	8-5/8"		160	83			
Name of Torpedo Co.	4-1/2"		2317	12			
No. of Quarts							
Length of Shell							
Diameter of Shell							
Length of Anchor							
Top of Shot							
Bottom of Shot							
Feet of Fluid in Hole When Shot							
Results:							

INITIAL PRODUCTION FIRST 24 HOURS	PACKER RECORD			
	KIND	SIZE	DEPTH SET	DATE SET
Open Flow /10ths Water in ____ Inch	Steel Shoe (Larkin)	8-5/8"	161.50 (170KB)	8-15-73
____ /10ths Merc. in ____ Inch	Hall. Guide Shoe	4-1/2"	2319.32 (2327KB)	8-19-73
Volume ____ Cu. Ft.				
Rock Pressure ____ lbs. ____ hrs.				
Oil ____ bbls., First 24 hrs.				

ACIDIZATION OR FRACTURING RECORD

DATE WELL ACIDIZED ____

DATE WELL FRACTURED ____

NAME OF COMPANY ____

(List below materials used in Acidizing or Fracturing, i.e., Sand, Crude Oil, Gasoline, Water, Kerosene, Mothballs, Acid, etc., giving gallons, barrels and pounds.)

Perfs: 2262' - 2272'

BREAKDOWN PRESSURE ____

PUMPING PRESSURE ____

AVERAGE PUMPING RATE/MINUTE ____

PUMPING TIME ____

RESULT AFTER TREATMENT } GAS ____ CU. FT.

OIL ____ BBLS.

ROCK PRESSURE AFTER TREATMENT ____ LBS.

CASING CEMENTED

8-5/8" SIZE 161.50 FT. 8-15-73 DAT

BAGS USED 150 Sks. Neat Cement 3% CC

4-1/2" SIZE 2319.32 FT. 8-19-73 DAT

BAGS USED 50 Sks. 50/50 Poz-Mix 2% CC

____ SIZE ____ FT. ____ DAT

BAGS USED ____

____ SIZE ____ FT. ____ DAT

BAGS USED ____

TOP DEPTH OF CEMENT SHOWN BY TEMPERATURE LOG

JUL 06 1012

REMARKS:

APPROVED

B.H. Palentine

SUPERINTENDENT

47-043-01473P

Check# 4524
2/7/2020
$100.00

WW-4A
Revised 6-07

1) Date: February 7, 2020
2) Operator's Well Number
E T Spurlock No. 5

3) API Well No.: 47 - 043 - 01473

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Sandra Rogers Broyles
Address: 1909 Garrett's Bend Road
Sod, WV 25564
(b) Name:
Address:
(c) Name:
Address:

6) Inspector: Jeffery Smith
Address: 5369 Big Tyler Road
Cross Lanes, WV 25313
Telephone: 681-313-6743

5) (a) Coal Operator
Name: NA
Address:

(b) Coal Owner(s) with Declaration
Name: NA
Address:
Name:
Address:

(c) Coal Lessee with Declaration
Name: NA
Address:

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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.

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
CASSIDY A. BOARDMAN
5301 13th Ave Vienna, WV 26105
My Commission Expires July 31, 2022

Well Operator: HG Energy, LLC
By: Diane White Diane White
Its: Agent
Address: 5260 Dupont Road
Parkersburg, WV 26101
Telephone: 304-420-1119

Subscribed and sworn before me this 7th day of February 2020
Cassidy Boardman Notary Public
My Commission Expires 7/31/2022

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.

47-043-01473P

WW-9
(5/16)

API Number 47 - 043 - 01473
Operator's Well No. _____

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

Operator Name HG Energy, LLC OP Code 494497948

Watershed (HUC 10) Hayzlett Fork Quadrangle Garrwtt's Bend 7.5'

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

Will a pit be used? Yes ☑ No ☐

If so, please describe anticipated pit waste: Fluids encountered while plugging the well

Will a synthetic liner be used in the pit? Yes ☑ No ☐ If so, what ml.? 20 mil

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 Any well effluent will be contained in tanks until disposed of off site at an approved disposal site.

Will closed loop system be used? If so, describe: No

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

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

Additives to be used in drilling medium? NA

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

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

-Landfill or offsite name/permit number? To be determined upon approval of the plugging permit

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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 Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

Subscribed and sworn before me this 7th day of February, 20 20

Cassidy Boardman Notary Public

My commission expires 7/31/2022

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
CASSIDY A. BOARDMAN
5301 13th Ave Vienna, WV 26105
My Commission Expires July 31, 2022

47-043-01473P

Form WW-9

Operator's Well No. ET Spurlock 5

Proposed Revegetation Treatment: Acres Disturbed 0.8 Acres Prevegetation pH

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10/20/20

Fertilizer amount 500 lbs/acre

Mulch Straw 2 Tons/acre

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Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

- Sediment Control Will Be In Place At All Times -

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: Jeffrey Smith

Comments: All sediment control to be removed prior to release.

Title: O.I & Gas Inspector Date: 3-20-20

Field Reviewed? (✓) Yes ( ) No

N/A

WW-9- GPP
Rev. 5/16

Page 1 of 2
API Number 47 - 043 - 01473
Operator's Well No.

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

Operator Name: HG Energy, LLC

Watershed (HUC 10): Hayzlett Fork Quad: Garrett's Bend 7.5'

Farm Name:

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

NA

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

NA

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

NA

4. Summarize all activities at your facility that are already regulated for groundwater protection.

NA

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

WW-9- GPP
Rev. 5/16

API Number 47 - 043 - 01473
Operator's Well No.

NA

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

NA

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

NA

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

NA

Signature: Diane White

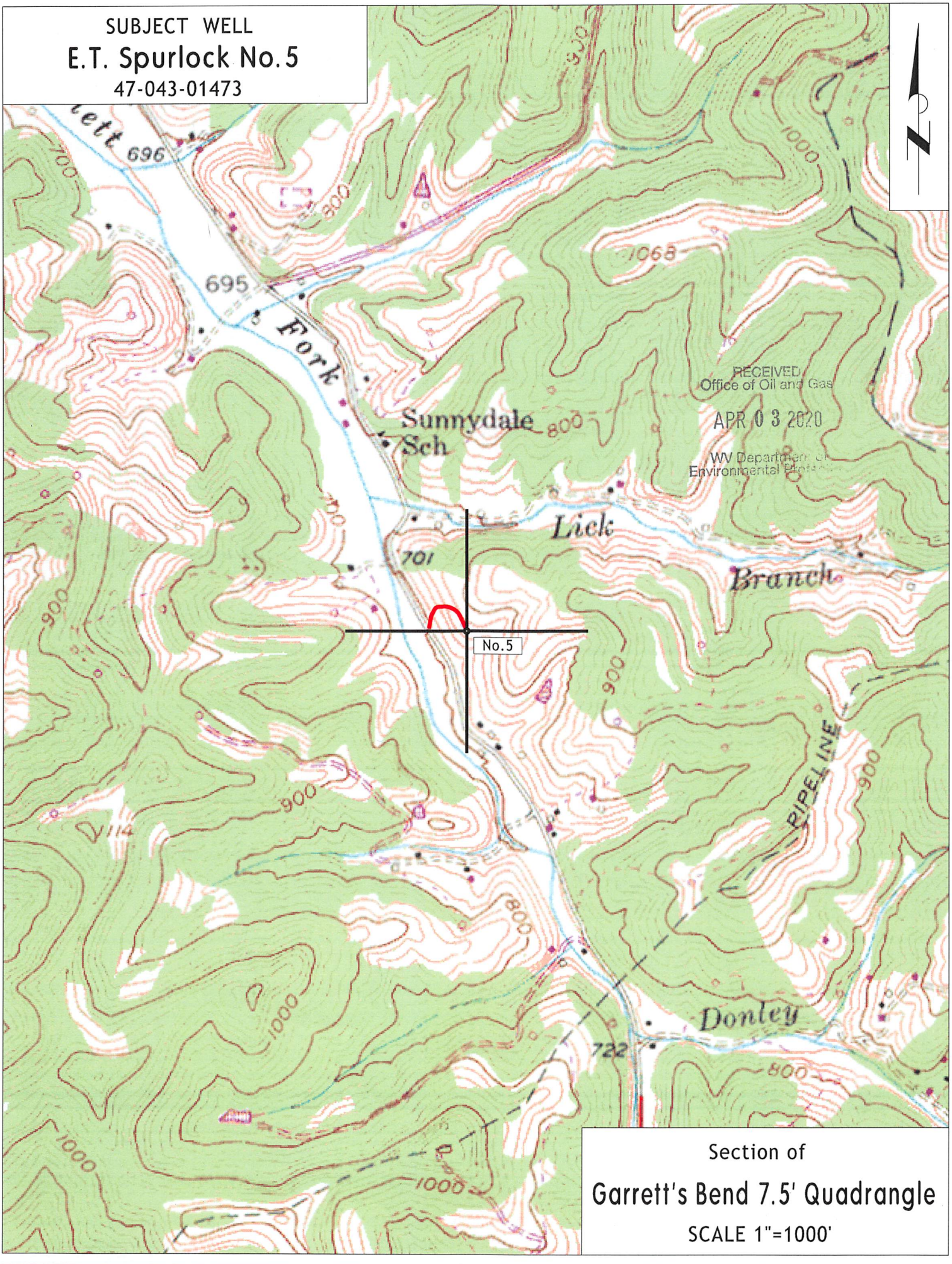
Date: 2-10-2020

47-043-01473P

SUBJECT WELL

E.T. Spurlock No. 5

47-043-01473



Section of

Garrett's Bend 7.5' Quadrangle

SCALE 1"=1000'

47-043-01473P

WW-7
5-02

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APR 03 2020

WV Department of
Environmental Protection

West Virginia Department of Environmental Protection
Office of Oil & Gas

WELL LOCATION FORM: GPS

API: 47- 043 - 01473 **WELL NO:** 5

FARM NAME: E.T. Spurlock

RESPONSIBLE PARTY NAME: HG Energy, LLC

COUNTY: Lincoln **DISTRICT:** Duval

QUADRANGLE: Garrett's Bend 7.5'

SURFACE OWNER: Sandra Rogers Broyles

ROYALTY OWNER: HG Energy, LLC et al.

UTM GPS NORTHING: 4,238,145

UTM GPS EASTING: 421,804 **GPS ELEVATION:** 234 m.

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit on the above well. The Office of Oil & 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	X	Post Processed Differential	X
		Real-Time Differential	___

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.

Diane White — Diane C. White — Designated Agent

Signature — Title

February 7, 2020

Date