



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, June 14, 2019
WELL WORK PERMIT
Vertical / Convert

HG ENERGY, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for C.B. CHAMBERS 8
47-087-02973-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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: C.B. CHAMBERS 8
Farm Name: WILLIAM R. ELMORE
U.S. WELL NUMBER: 47-087-02973-00-00
Vertical Convert
Date Issued: 6/14/2019

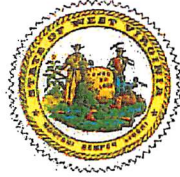
PERMIT CONDITIONS

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.

FORM WW-3 (B)
1/12



1) Date: 04/05/2019
 2) Operator's Well No. C. B. Chambers 8
 3) API Well No.: 47 - Roane - 02973
 State County Permit
 4) UIC Permit No. UIC2D0870985

**STATE OF WEST VIRGINIA
 NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
 FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**

5) WELL TYPE: Liquid Injection / Gas Injection (not storage) / Waste Disposal
 6) LOCATION: Elevation: 1021' Watershed: Rush Run
 District: Smithfield County Roane Quadrangle Looneyville 7.5'
 7) WELL OPERATOR: HG Energy, LLC 8) DESIGNATED AGENT Diane White
 Address 5260 Dupont Road Address 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101
 9) OIL & GAS INSPECTOR TO BE NOTIFIED 10) DRILLING CONTRACTOR
 Name Joe Taylor Name To Be Determined Upon Approval Of Permit
 Address 1478 Claylick Road Address _____
Ripley, WV 25271

11) PROPOSED WELL WORK Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation Convert
 Other physical change in well (specify) _____

12) GEOLOGIC TARGET FORMATION Big Injun Depth 2074 Feet (top) to 2102 Feet (bottom)

13) Estimated Depth of Completed Well, (or actual depth of existing well): 2147' Feet

14) Approximate water strata depths: Fresh NA Feet Salt NA Feet

15) Approximate coal seam depths: NA

16) Is coal being mined in the area? Yes _____ No _____

17) Virgin reservoir pressure in target formation 1250 psig Source Estimated

18) Estimated reservoir fracture pressure 2650 psig (BHFP)

19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 25 bbl Bottom hole pressure 2400 psi

20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES Fresh water, produced
water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery

21) FILTERS (IF ANY) Cartridge filters

22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL _____

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL -UP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well		
Conductor									Kinds
Fresh Water	8 5/8"	LS	17#	N		382'	382'	175 sks	Parmaco Tension Packer
Coal									Sizes
Intermediate									4" x 2"
Production	4 1/2"	J55	10.5#	N		2147'	2147'	50 sks	Depths set
Tubing	2 3/8"	J55	4.7#	N		2000'	2000'		2000'
Liners									Perforations
									Top <u>2074</u> Bottom <u>2098'</u>

24) APPLICANT'S OPERATING RIGHTS were acquired from CB Chambers et al
 by deed _____ / lease x / other contract _____ / dated 07/22/1909 of record in the
Roane County Clerk's office in Lease Book 16 Page 147

RECEIVED
 OFFICE OF OIL AND GAS
 APR 15 2019

JPD
 4-10-19

06/14/2019

McLaughlin, Jeffrey W

From: Diane White <dwhite@hgenergyllc.com>
Sent: Wednesday, June 05, 2019 11:52 AM
To: McLaughlin, Jeffrey W
Subject: FW: CB Chambers 8 Conversion

Jeff,
See Roger's response below. If you need more information please let me know and I'll talk with him again.
Thanks,
Diane

From: Roger L. Heldman <rheldman@hgenergyllc.com>
Sent: Tuesday, June 4, 2019 4:50 PM
To: Diane White <dwhite@hgenergyllc.com>
Subject: RE: CB Chambers 8 Conversion

Big Injun perforations 2074'-2098'

From: Roger L. Heldman <rheldman@hgenergyllc.com>
Sent: Tuesday, June 4, 2019 11:00 AM
To: Diane White <dwhite@hgenergyllc.com>
Subject: Re: CB Chambers 8 Conversion

I will check when I get back. I would have thought pets were on well record

Roger Heldman

On Jun 4, 2019, at 9:25 AM, Diane White <dwhite@hgenergyllc.com> wrote:

Roger,
Jeff has a question about the perforations on the CB Chambers 8 – specifically the Big Injun I think. He wants to know where they are.
If you won't be in the office today, can you give me a call or you can give Jeff a call.
Thanks,
Diane

Diane C. White

<image001.jpg>

HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
304-420-1119 (O)
304-482-0108 (C)
dwhite@hgenergyllc.com

[08-78]

WELL OPERATOR'S REPORT 42
OF

47-087-2973

DEVELOPMENT, TRANSPORT AND/OR STORAGE OF HYDROCARBONS

WELL TYPE: Oil ___ / Gas ___ / Liquid Injection X / Waste Disposal ___
(If "Gas", Production ___ / Underground storage ___ / Deep ___ / Shallow ___)

LOCATION: Elevation: 1021.14' Watershed: Rush Run
District: Smithfield County: Roane Quadrangle: Walton 15' **06/14/2019**

WELL OPERATOR Pennzoil Company DESIGNATED AGENT James A. Crews
Address P. O. Box 1588 Address P. O. Box 1588
Parkersburg, WV 26101 Parkersburg, WV 26101

PERMITTED WORK: Drill XX / Convert ___ / Drill deeper ___ / Re-drill ___
Plug off old formation ___ / Perforate new formation ___
Other physical change in well (specify) _____

Fracture or stimulate
FEB 1 1980

PERMIT ISSUED ON 5-30, 19 79

OIL & GAS INSPECTOR Richard Morris
Name Richard Morris
Address Grantsville, WV

(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED

GEOLOGICAL TARGET FORMATION: Injun Depth 2128 feet

Depth of completed well, 2147 feet Rotary X / Cable Tools ___

Water strata depth: Fresh, ___ feet; salt, ___ feet.

Coal seam depths: ___ Is coal being mined in the area? No

Work was commenced 6-23-, 19 79, and completed 8-21, 19 79

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling	Left in well		
Conductor									Minds
Fresh water									
Coal	8-5/8					382	382	175 sks	Sizes
Intermediate									
Production	4-1/2					2147	2147	50 sks	Deaths set
String									
liners									Perforations:
									Top Bottom

OPEN FLOW DATA

Producing formation Water Injection Pay zone depth _____ feet

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 measurement) after _____ hours

[if applicable due to multiple completion--]

Second producing formation _____ Pay zone depth _____ feet

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 measurement) after _____ hours

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OFFICE OF OIL AND GAS
APR 10 1980

Injun 21281

LSU

FORM IV-35
(Reverse)

[08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Fractured w/750 gals. 15% HCL, 114BW, 1000# 20/40 sd.

06/14/2019

WELL LOG

FORMATION	Color	Hard or Soft	42 Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Shale & Silts			0	283	
Sand			288	303	
Shale & Silts			303	565	
Sand			565	588	
Shale			588	712	
Sand			712	826	
Sand			826	855	
Shale			855	901	
Sand			901	1032	
Shale			1032	1048	
Sand			1048	1068	
Shale			1068	1093	
Sand			1093	1126	
Shale			1126	1136	
Sand			1136	1159	
Shale			1159	1169	
Sand			1169	1210	
Shale			1210	1322	
Sandstone			1322	1436	
Shale			1436	1461	
Sand			1461	1500	
Shale			1500	1530	
Sandstone			1530	1554	
Shale			1554	1620	
Salt Sand			1620	1944	
Big Lime			1944	2056	
Keener			2056	2074	
Big Injun			2074	2102	
Shale			2102	2147	
Total Depth				2147	

(Attach separate sheets to complete as necessary.)

Pennzoil Company
Well Operator

By Ernest A. Lucas

DES Civil Engineering Dept.

NOTE: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed geological record of all formations, including coal, encountered in the drilling of a well."

✓

WW-2B1
(5-12)

Well No. C. B. Chambers 8

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis and contractor chosen to collect sample.

Certified Laboratory Name Sturm Environmental Labs
Sampling Contractor Sturm Environmental Labs

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APR 15 2019

Well Operator HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101
Telephone 304-420-1119

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

* William R. Elmore
4043 Clay Road
Spencer WV 25276

SEE TOPO MAP FOR LOCATION OF WATER WELL

JTB
4-10-19

06/14/2019

WW-9
(2/15)

API Number 47 - 087 - 02973

Operator's Well No. C. B. Chambers 8

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) Rush Run Quadrangle Looneyville 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: NA

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain We don't anticipate any fluids or cuttings for disposal but if there are any, they would be stored for offsite disposal)

10 TANKS.

Will closed loop system be used? If so, describe: NA

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? Will be determined upon approval of permit and if needed

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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 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 Diane White

Company Official (Typed Name) Diane White

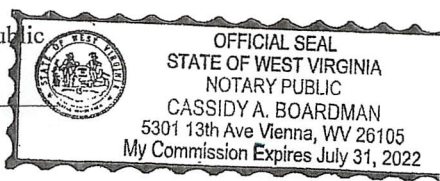
Company Official Title Agent

Subscribed and sworn before me this 5th day of April, 2019

Cassidy Boardman Notary Public

My commission expires 2/31/2022

50/4-19-19



Form WW-9

Operator's Well No. C. B. Chambers 8

HG Energy, LLC

Proposed Revegetation Treatment: Acres Disturbed 0.3 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

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 Maintained At All Times****

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.

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Plan Approved by: Joe Taylor

Comments: _____

Title: 006 Inspector

Date: 4-10-19

Field Reviewed? Yes

No

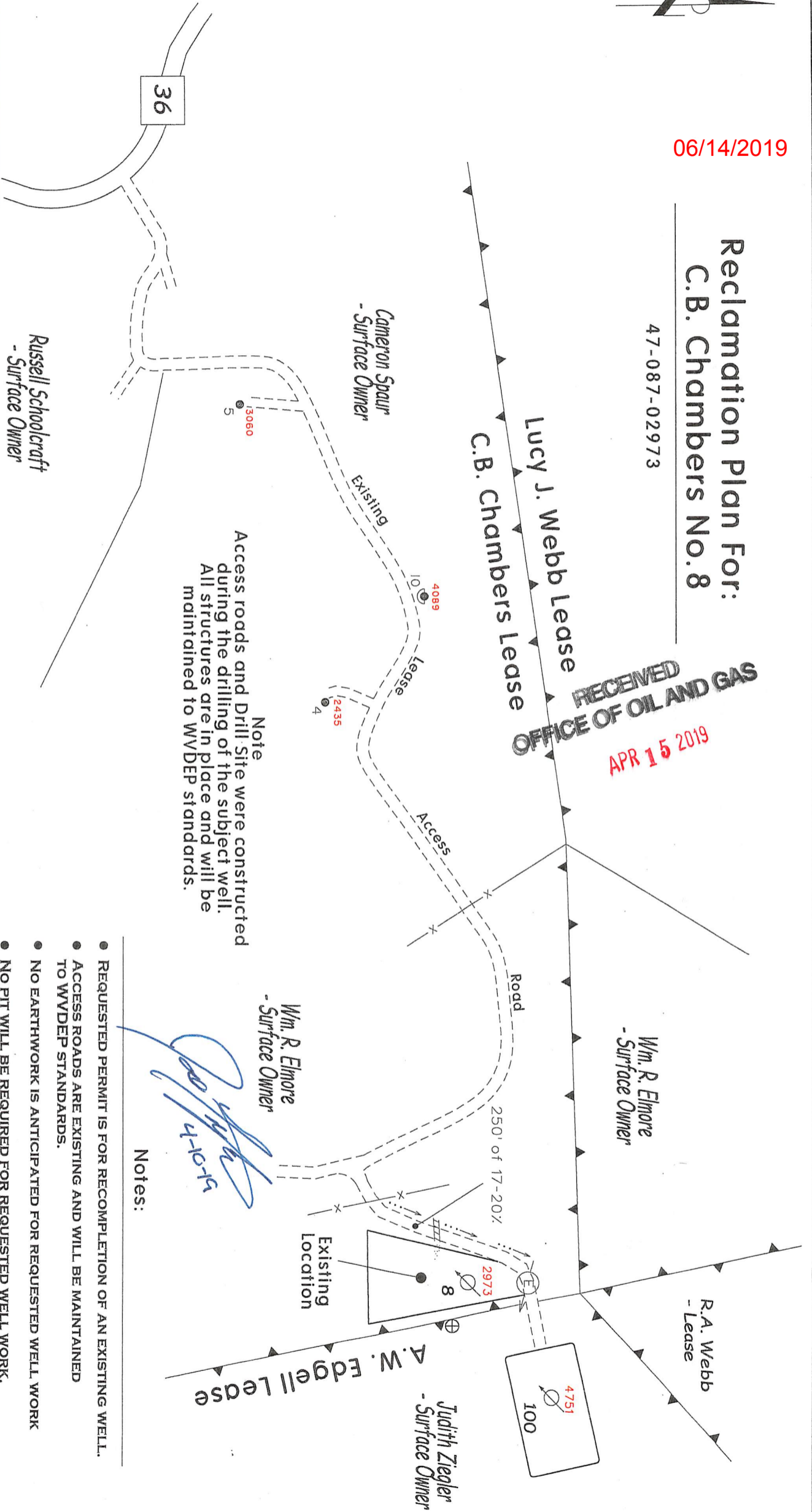


06/14/2019

47-087-02973

Reclamation Plan For: C.B. Chambers No.8

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APR 15 2019



Note
Access roads and Drill Site were constructed during the drilling of the subject well. All structures are in place and will be maintained to WVDOP standards.

Notes:

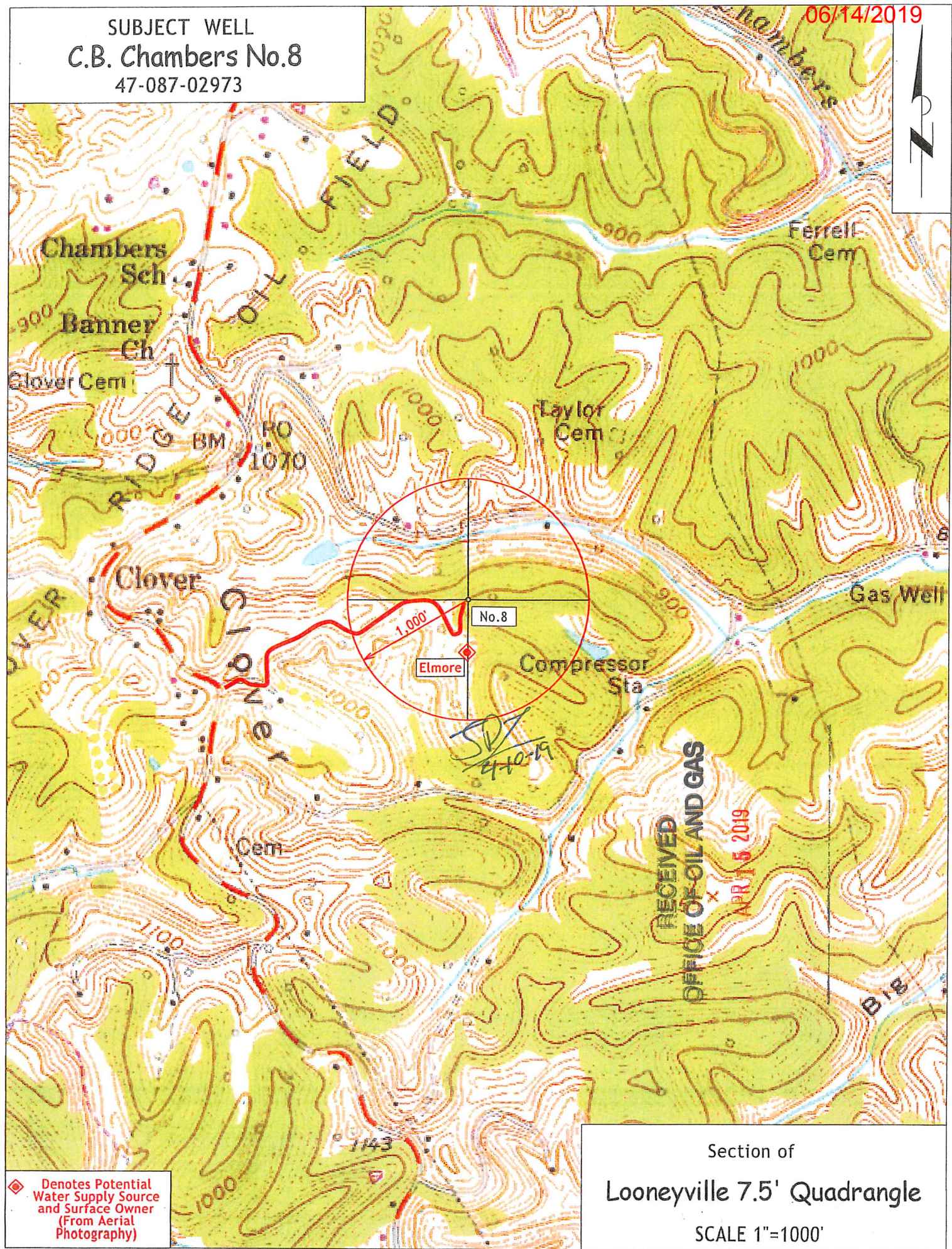
Wm. R. Elmore
4-10-19

- REQUESTED PERMIT IS FOR RECOMPLETION OF AN EXISTING WELL.
- ACCESS ROADS ARE EXISTING AND WILL BE MAINTAINED TO WVDOP STANDARDS.
- NO EARTHWORK IS ANTICIPATED FOR REQUESTED WELL WORK.
- NO PIT WILL BE REQUIRED FOR REQUESTED WELL WORK.
- ANY DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- DRAWING NOT TO SCALE.

NOTE
REFER TO THE WVDOP
EROSION AND SEDIMENT CONTROL
FIELD MANUAL VER. MAY 2012 FOR
BMPs CONTROLLING EROSION AND
SEDIMENT FROM SOIL-DISTURBING
OPERATIONS.

06/14/2019

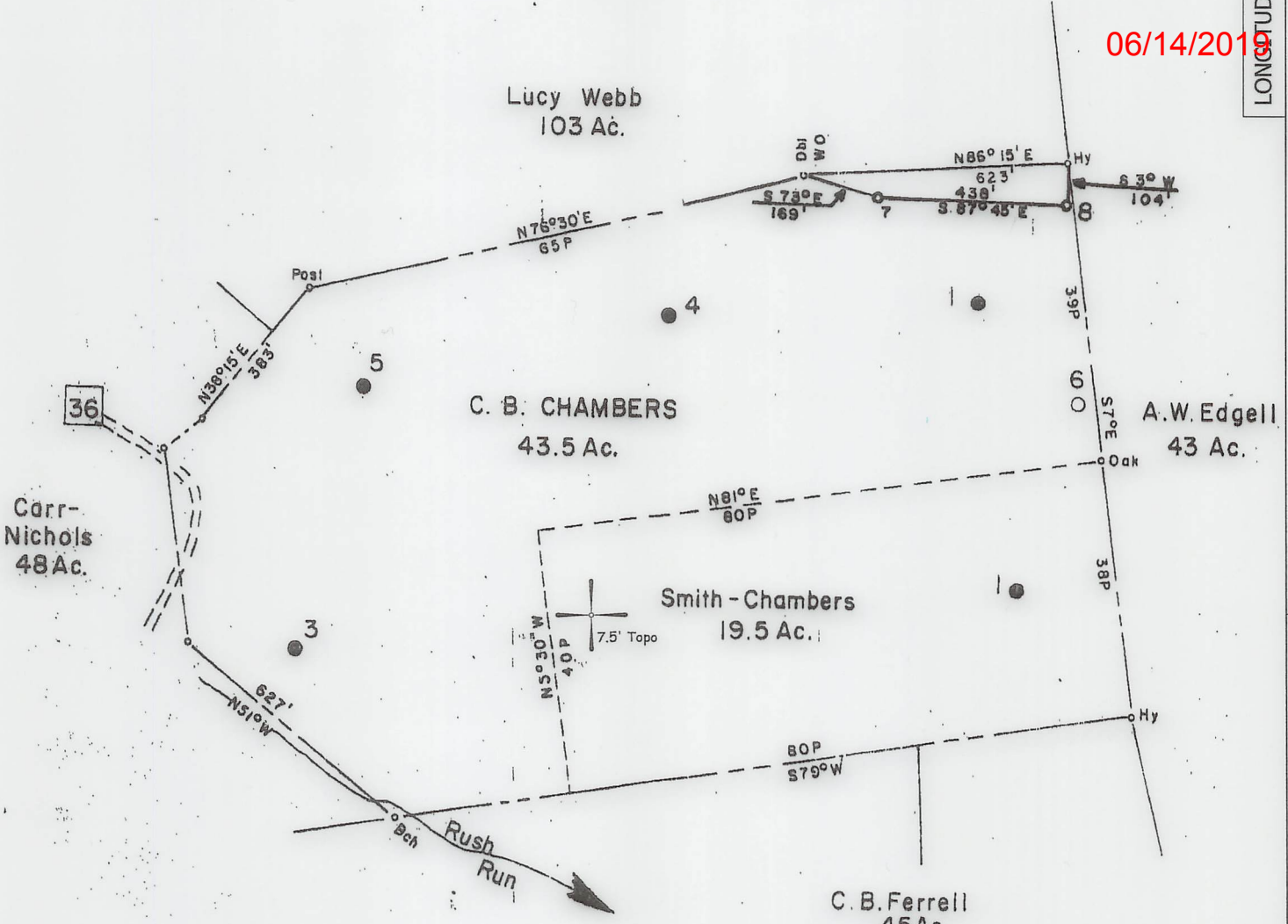
SUBJECT WELL
C.B. Chambers No.8
47-087-02973



◆ Denotes Potential Water Supply Source and Surface Owner (From Aerial Photography)

Section of
Looneyville 7.5' Quadrangle
SCALE 1"=1000'

06/14/2019



UTM COORDINATES

N - 4,286,079 m.
E - 475,773 m.

NOTE

- 1 - The permit application accompanying this plat is for a recompletion of an existing well.
- 2 - The drawing shown hereon is from the original drilling permit application, plat dated 5/25/1979 by Curtis A. Lucas, PS. Present plat has been updated to reflect as-drilled Lat./Long. and current surface ownership.

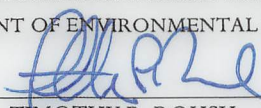
FILE NO. _____

SCALE 1" = 400'

MINIMUM DEGREE OF ACCURACY _____

PROVEN SOURCE OF ELEVATION WVDEP Records

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

(SIGNED) 
TIMOTHY P. ROUSH PS 793



WEST VIRGINIA
Division of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25301



DATE April 3, 2019
FARM C.B. Chambers No.8
API WELL NO. 47 - 087 - 02973 S

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

LOCATION: ELEVATION 1,021.14' WATERSHED Rush Run
DISTRICT Smithfield COUNTY Roane
QUADRANGLE Looneyville 7.5'

SURFACE OWNER William R. Elmore ACREAGE 8.46 Ac.
OIL & GAS ROYALTY OWNER HG Energy, LLC et al. LEASE ACREAGE 43.5 Ac.

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
STIMULATE PLUG OFF OLD FORMATION ___ PERFORATE NEW
FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Run Tubing and Packer and Put on Injection

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION Big Injun ESTIMATED DEPTH 2,147'

WELL OPERATOR HG Energy LLC. DESIGNATED AGENT Diane White
ADDRESS 5260 DuPont Road ADDRESS 5260 DuPont Road
Parkersburg, WV 26101 Parkersburg, WV 26101