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west virginia department of environmental protection

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

Jim Justice, Governor  
Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

September 7, 2017  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

BRC OPERATING COMPANY, LLC  
200 CRESCENT COURT, SUITE 1900

DALLAS, TX 75201

Re: Permit Modification Approval for WR INFANTRY 1-1H  
47-067-00948-00-00

**Modified Well Bore Path**

BRC OPERATING COMPANY, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before 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: WR INFANTRY 1-1H  
Farm Name: PLUM CREEK TIMBERLANDS LP  
U.S. WELL NUMBER: 47-067-00948-00-00  
Horizontal 6A / New Drill  
Date Issued: September 7, 2017

Promoting a healthy environment.

09/08/2017

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

1) Well Operator: BRC Operating Co., LLC 494489323 Nicholas Wilderne Mount Nebo, WV  
Operator ID County District Quadrangle

2) Operator's Well Number: WR Infantry 1-1H Well Pad Name: WR Pad 7

3) Farm Name/Surface Owner: WestRock/Weyerhaeuser Co. Public Road Access: WV DOT Infantry Rd.

4) Elevation, current ground: 2420 Elevation, proposed post-construction: 2420

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_  
Horizontal \_\_\_\_\_

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Middle Devonian / 7262'-7302' / 40' / 2800#

8) Proposed Total Vertical Depth: ~~7200~~ 7297' 225-17

9) Formation at Total Vertical Depth: Marcellus 7282'

10) Proposed Total Measured Depth: ~~14350~~ 14,184' 2528

11) Proposed Horizontal Leg Length: ~~7500~~ 6,500' 8-24-17 9-6-17 Don

12) Approximate Fresh Water Strata Depths: 2400'

13) Method to Determine Fresh Water Depths: WVGES

14) Approximate Saltwater Depths: 2578'

15) Approximate Coal Seam Depths: 224', 400', 631' to base at 780'

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

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

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WV Department of  
Environmental Protection

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WW-6B  
(04/15)

API NO. 47-057 - 00948  
OPERATOR WELL NO. WR Infantry 1-1H  
Well Pad Name: WR Pad 7

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	22	N	H-40	94.0	113	113	CTS, 120 cf
Fresh Water	18-5/8	N	K-55	87.5	2500/1400	2500/1400	CTS, 3138 cf
Intermed#1	13-3/8	N	K-55	54.5	5700	5700	CTS, 4082 cf
Intermed#2	9-5/8	N	L-80	47.0	6700	6700	CTS, 2380 cf
Intermed#3*	7-5/8	N	L-80	26.4	7269	869	72 cf
Production	5-1/2	N	P-110	23	14,184	14,184	CTS, 3537 cf
Liners	2-3/8	N	N-80	4.7		14,184	

*[Handwritten signature]*

3400 cf  
228  
8-24-17

*[Handwritten signature]*  
8-29-17

\* Contingent

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	22	26	.438			Class A	1.18
Fresh Water	18-5/8	24	.460	2250	50	HalCem	1.21
Intermed#1	13-3/8	17-1/2	.380	2730	1000	HalCem	1.21
Intermed#2	9-5/8	12.25	.472	6870	1500	VariCem/HalCem	1.61 Lead/1.07 Tail
Intermed#3	7-5/8	8-1/2	.328	6020		VariCem/HalCem	1.06 Tail
Production	5-1/2	8-1/2	.415	13580	2800	HalCem	1.29 Tail
Liners	2-3/8	4.67	.19	11200			

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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# BRC Operating

Location WV NAD 27 State Planes Slot WR Infranry 1-1H  
 Field Plum Creek Timberlands Well WR Infranry 1-1H  
 Installation Nichols County Wellbore WR Infranry 1-1H (Plan Revised 8/23/2017)

### Installation Data

Name	Latitude	Longitude	Northing	Easting
Nichols County	N38 11 27.18	W80 46 57.06	433705.00	2062505.00

Coordinate System West Virginia State Plane Zone, Southern

### Slot Data

Name	North [ft]	East [ft]	Latitude	Longitude	Northing	Easting
WR Infranry 1-1H	0.00 N	0.00 E	N38 11 27.18	W80 46 57.06	433705.00	2062505.00

### Elevation Data

Slot - Mean Sea Level [ft]	Mean Sea Level - Mudline/Ground level [ft]	Slot - Mudline/Ground level [ft]
-0.00	0.00	0.00

## TARGET DATA

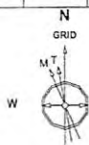
MD	Inc	Azi	TVD	North	East	Name	Position
7682.38	89.43	314.82	7297.00	N 479.04	W 482.04	LP TVD 7307	2062023.00 East : 434184.00 North
14183.63	89.43	313.43	7362.00	N 4960.38	W 5191.40	Proposed BHL	2057314.00 East : 438665.00 North

## WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	S 0.00	W 0.00	0.00	0.00
KOP	6611.50	-0.00	0.00	6611.50	S 0.00	W 0.00	0.00	0.00
End of Build	7681.50	89.43	314.82	7296.99	N 478.42	W 481.41	8.36	678.57
Target LP TVD 7307	7682.38	89.43	314.82	7297.00	N 479.04	W 482.04	0.00	679.45
End of Drop/Turn	9073.48	89.43	313.43	7310.88	N 1447.49	W 1480.51	0.10	2070.41
T.D. & Target Pro...BHL	14183.63	89.43	313.43	7362.00	N 4960.38	W 5191.40	0.00	7180.25

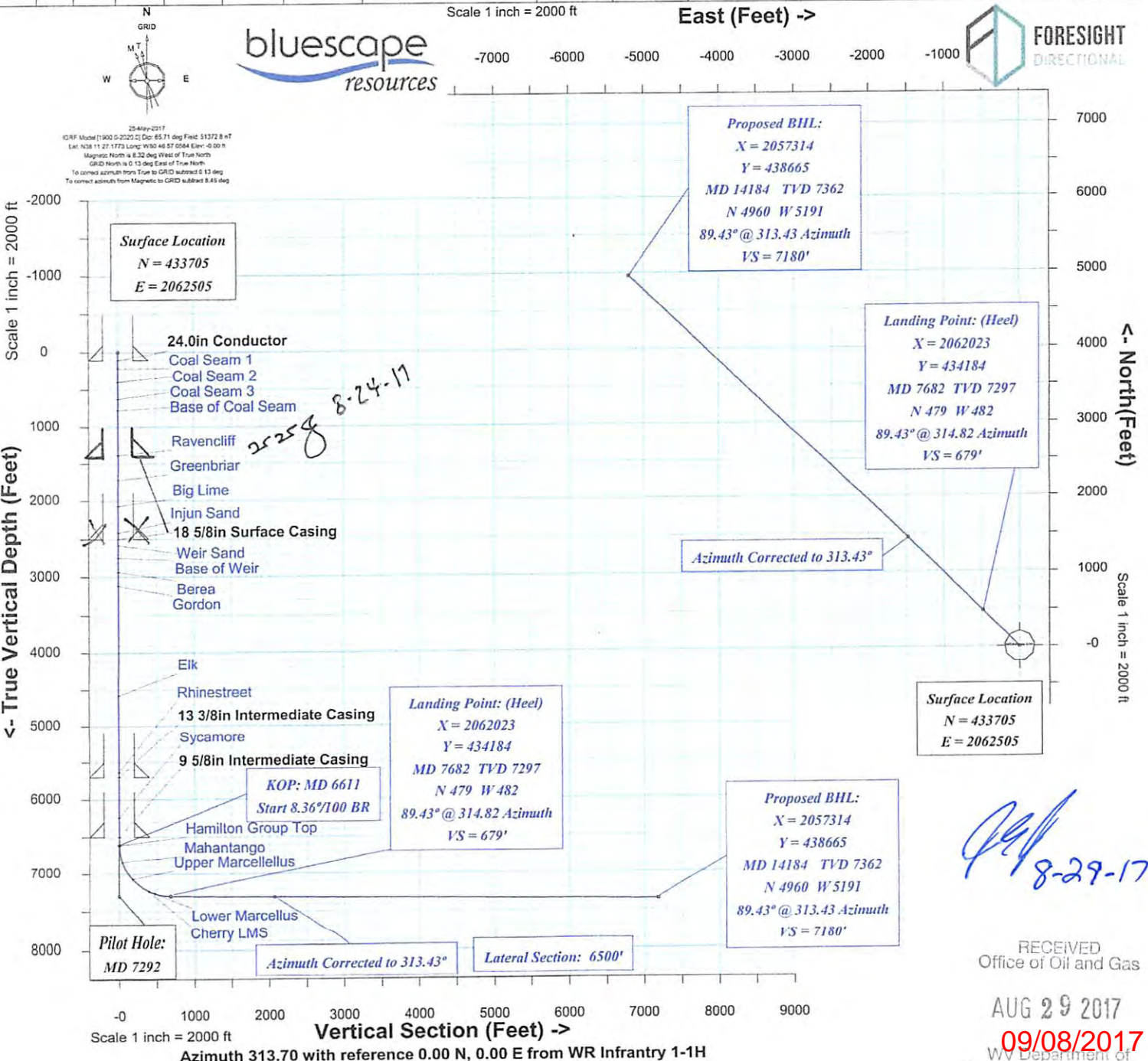
### WELLPATH COMMENTS

MD	TVD	Comment	Inc	Azi	North	East
224.00	224.00	Coal Seam 1	0.00	0.00	S 0.00	W 0.00
400.00	400.00	Coal Seam 2	0.00	0.00	S 0.00	W 0.00
631.00	631.00	Coal Seam 3	0.00	0.00	S 0.00	W 0.00
779.00	779.00	Base of Coal Seam	0.00	0.00	S 0.00	W 0.00
1388.00	1388.00	Ravenciff	0.00	0.00	S 0.00	W 0.00
1724.00	1724.00	Greenbriar	0.00	0.00	S 0.00	W 0.00
2072.00	2072.00	Big Lime	0.00	0.00	S 0.00	W 0.00
2421.00	2421.00	Injun Sand	0.00	0.00	S 0.00	W 0.00
2578.00	2578.00	Weir Sand	0.00	0.00	S 0.00	W 0.00
2747.00	2747.00	Base of Weir	0.00	0.00	S 0.00	W 0.00
2936.00	2936.00	Berea	0.00	0.00	S 0.00	W 0.00
3118.00	3118.00	Gordon	0.00	0.00	S 0.00	W 0.00
4579.00	4579.00	Elk	0.00	0.00	S 0.00	W 0.00
5634.00	5634.00	Rhinestreet	0.00	0.00	S 0.00	W 0.00
6242.00	6242.00	Sycamore	0.00	0.00	S 0.00	W 0.00
6610.00	6610.00	Hamilton Group Top	0.00	0.00	S 0.00	W 0.00
6840.93	6836.67	Mahantango	19.18	314.82	N 26.81	W 26.98
7113.90	7070.12	Upper Marcellus	41.99	314.82	N 124.06	W 124.84
7380.62	7229.12	Cherry LMS	64.28	314.82	N 273.54	W 275.25
7468.84	7262.19	Lower Marcellus	71.66	314.82	N 331.14	W 333.22



Scale 1 inch = 2000 ft

East (Feet) ->



*[Signature]*  
8-29-17

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Scale 1 inch = 2000 ft

Vertical Section (Feet) ->

Azimuth 313.70 with reference 0.00 N, 0.00 E from WR Infranry 1-1H

**HORIZONTAL GENERAL COMPLETION PLAN:** This well will be completed as a multi-stage horizontal well with multi-stage slickwater fracture stimulation.

1. Install frac valve and control equipment/casing pressure testing equipment.
2. MIRU work over unit
3. Pick-up BHA with bit, scraper and motor.
4. Run TCP gun to bottom of formation, positioned at TMD of ~~14,250'~~ 14,184'.
5. Position and fire gun into formation, 4 SPF and 90 degree phasing at 2' length.
6. RD.
7. Run to bottom of hole to check for residual cement and clean 5-1/2" casing out to float collar or within 10' of the float collar.
8. POOH and RU wire-line / electric line unit.
9. Run CBL with 1,000 to 2,500 psi to ensure accurate reading of the cement bond formation and pipe.
10. POOH with CBL.
11. Bleed down pressure.
12. POOH and RD work over unit.
13. RU coiled tubing unit.
14. TIH clean out casing and circulate with biocide treated water.
15. RU test pump and test casing to 20% above anticipated stimulation pressure. Hold for 15 minutes and chart pressure.
16. RU stimulation equipment and associated equipment necessary for stimulation operations.
17. Breakdown formation by individual stages.
18. Pull coiled tubing unit from well.
19. RD coiled tubing unit.
20. RD frac equipment.
21. RU wireline unit.
22. Run Gr and CBL from LP to top of cement.
23. Run GR to surface.
24. Go in hole with production packer.
25. Set packer.
26. Rd equipment.
27. RU 10,000 psi BOP.
28. RU work over unit.
29. GIH with 2-3/8" production tubing.
30. NU wellhead and pump out plug.
31. Initiate flowback.
32. Record flowback volumes and rates.
33. Maintain haul-off to disposal.

2578  
8-24-17  
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**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
Mead Westvaco	MWW Community Development and Land Management, LLC	BRC Operating Company, LLC	1/8	485 / 219

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**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

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.

Well Operator: BRC Operating Company, LLC  
 By: Chad A. Touchet  
 Its: Vice President

**Chad Touchet**

Digitally signed by Chad Touchet  
DN: cn=Chad Touchet, o=Bluescape Resources, ou,  
email=catouchet@bluescapedgroup.com,  
c=US  
Date: 2017.09.01 07:42:43 -05'00'

# WR 1-1H (47-067-00948) REVISED

**LINE LEGEND**

- LEASE BOUNDARY: - - - - -
- CREEK/STREAM: - - - - -
- PROPOSED LATERAL: - - - - -
- ROADS: - - - - -
- SURFACE BOUNDARY: - - - - -

**WR INFANTRY 1-1H LANDING POINT**

STATE PLANE COORDINATES SOUTH ZONE -NAD 27  
(N) 434184  
(E) 2062023

L & L DECIMAL NAD 27  
38.19220  
80.78419

UTM (NAD 83) ZONE 17 METERS  
4227175.10  
518914.17

**WR INFANTRY 1-1H BOTTOM HOLE**

STATE PLANE COORDINATES SOUTH ZONE -NAD 27  
(N) 438665  
(E) 2057314

L & L DECIMAL NAD 27  
38.20453  
80.80054

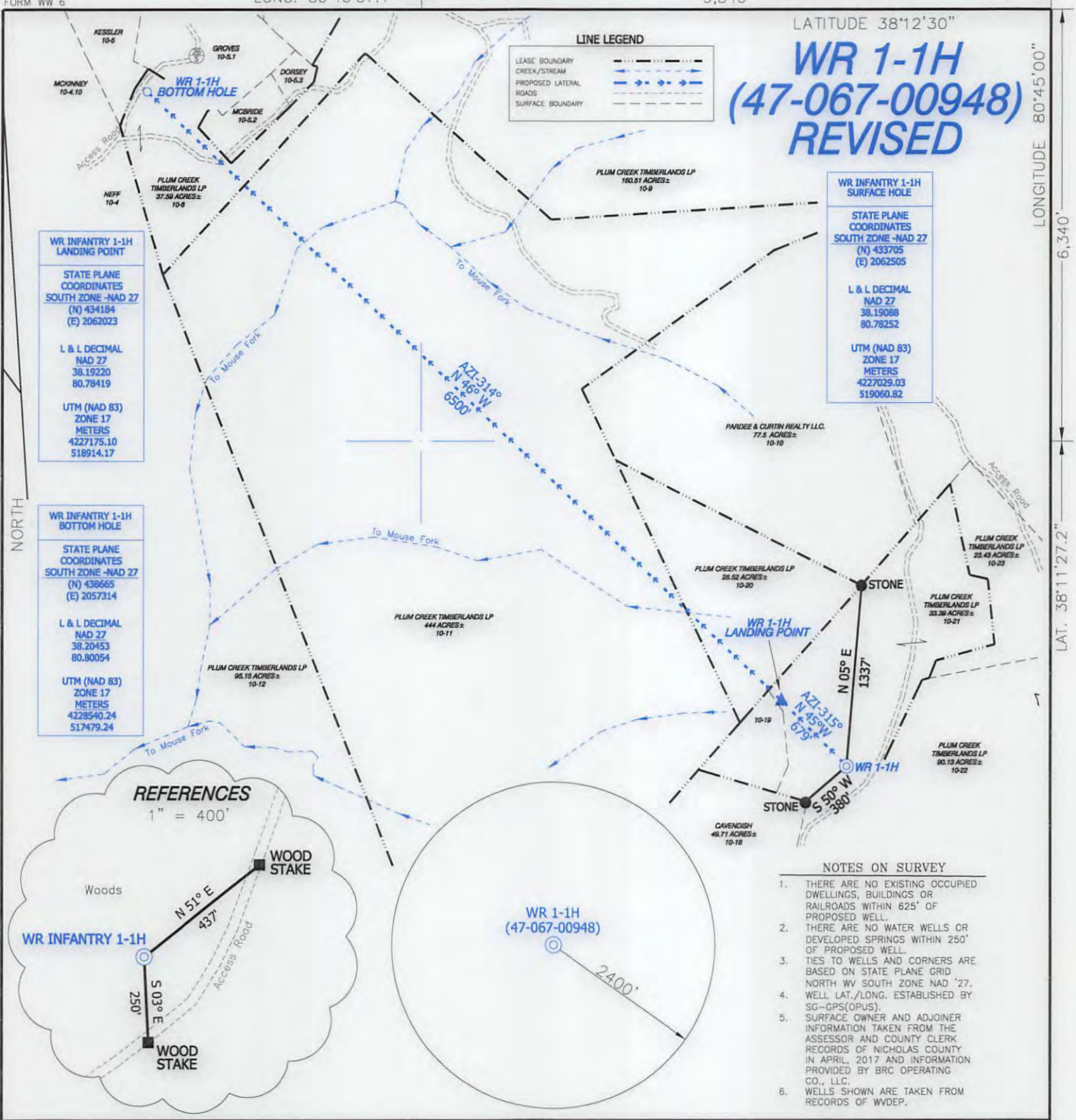
UTM (NAD 83) ZONE 17 METERS  
4228540.24  
517479.24

**WR INFANTRY 1-1H SURFACE HOLE**

STATE PLANE COORDINATES SOUTH ZONE -NAD 27  
(N) 433705  
(E) 2062505

L & L DECIMAL NAD 27  
38.19088  
80.78252

UTM (NAD 83) ZONE 17 METERS  
4227029.03  
519060.82



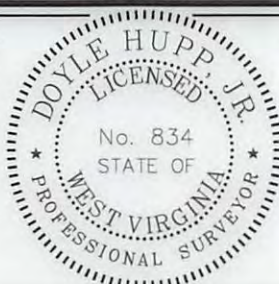
### REFERENCES

1" = 400'



- NOTES ON SURVEY**
1. THERE ARE NO EXISTING OCCUPIED DWELLINGS, BUILDINGS OR RAILROADS WITHIN 625' OF PROPOSED WELL.
  2. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
  3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WY SOUTH ZONE NAD '27, WELL LAT./LONG. ESTABLISHED BY SG-GPS(OPUS).
  4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF NICHOLAS COUNTY IN APRIL, 2017 AND INFORMATION PROVIDED BY BRC OPERATING CO., LLC.
  5. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

DATE AUGUST 22, 20 17

OPERATORS WELL NO. WR 1-1H

API REVISED H6A

WELL NO. 47-067-00948

STATE COUNTY PERMIT

MOD

P.S. 834

*Doyle Hupp, Jr.*

**HUPP Surveying & Mapping**  
P.O. Box 647 Grantsville, WV 26147  
(304) 354-7035 EMAIL: hupp@frontiernet.net

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2550 (BK83-78)

PROVEN SOURCE OF ELEVATION SG-GPS (OPUS) SCALE 1" = 1000'

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

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

LOCATION : ELEVATION 2,420' WATERSHED MOUSE FORK OF HOMINY CREEK

DISTRICT WILDERNESS COUNTY NICHOLAS QUADRANGLE MT. NEBO

SURFACE OWNER PLUM CREEK TIMBERLANDS LP ACREAGE 33.39±

ROYALTY OWNER MEADWESTVACO CORP., et al LEASE ACREAGE 552.79± **09/08/2017**

PROPOSED WORK : LEASE NO. \_\_\_\_\_

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER \_\_\_\_\_

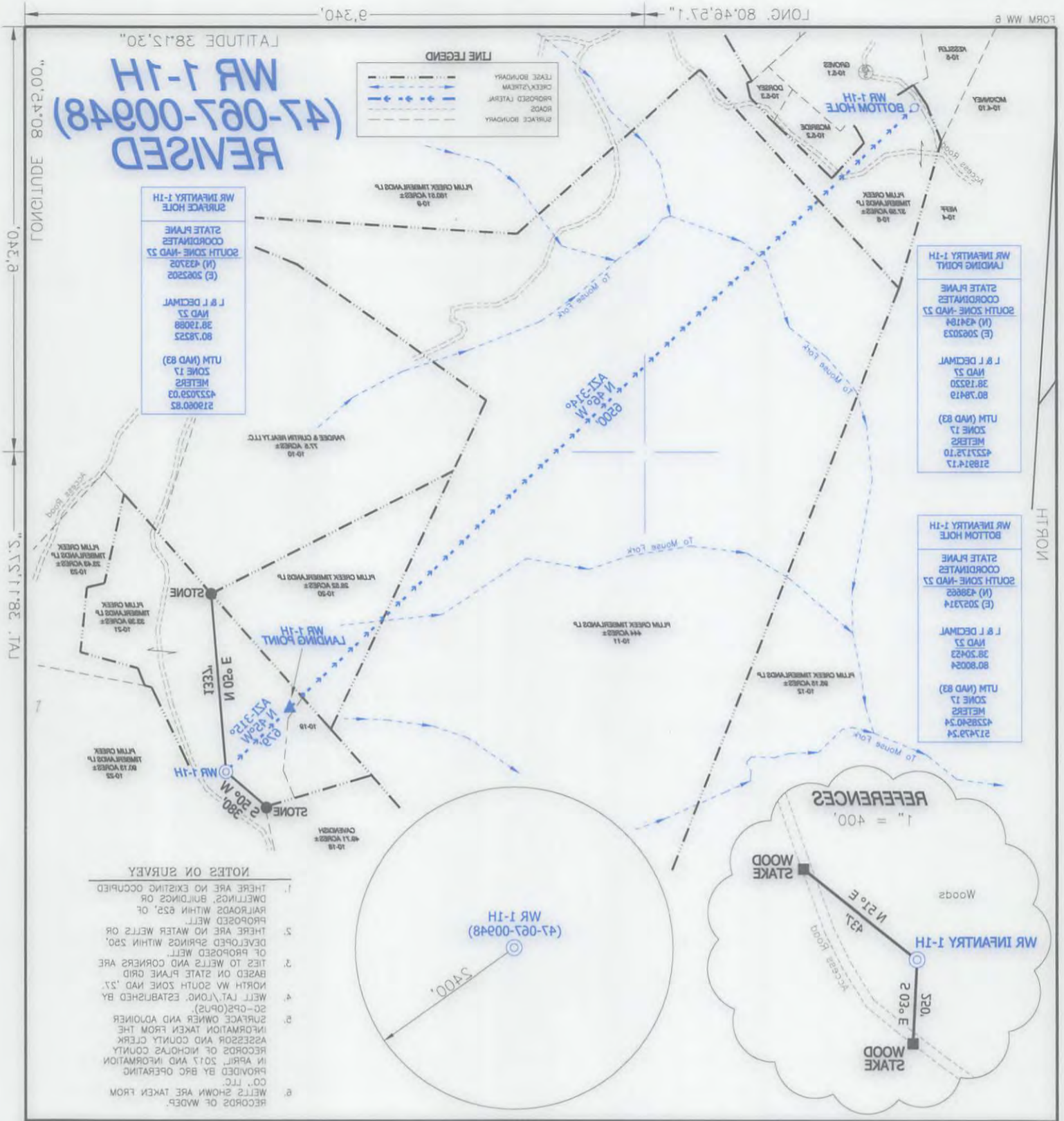
PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION MARCELLUS

ESTIMATED DEPTH TVD- 7,297'-7,362' MD- 14,184'

WELL OPERATOR BRC OPERATING CO., LLC DESIGNATED AGENT CHUCK BRIGHTMAN

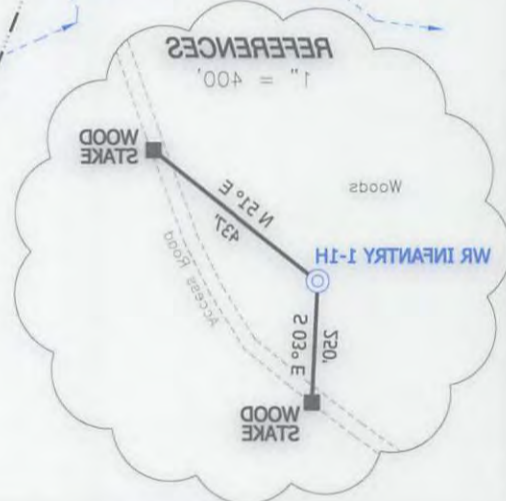
ADDRESS 200 CRESCENT COURT, SUITE 1900 DALLAS, TX 75201 ADDRESS 44 SUNDAY RD. HICO, WV 25884

COUNTY NAME PERMIT



**NOTES ON SURVEY**

1. THERE ARE NO EXISTING OCCUPIED DWELLINGS, BUILDINGS OR RAILROADS WITHIN 650' OF PROPOSED WELL.
2. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH W/ SOUTH ZONE -NAD 83.
4. WELL LOCATION ESTABLISHED BY SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF NICHOLS COUNTY IN APRIL 2017 AND INFORMATION PROVIDED BY BRC OPERATING CO., LLC.
5. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP.



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

FILE NO. W2550 (BK83-78)  
SCALE 1" = 1000'

DATE AUGUST 22, 2017

WR 1-1H (47-067-00948) REVISED

PERMIT MOD



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P. 834  
P. 834  
HUPP Surveying & Mapping  
P.O. Box 647 Grantsville, WV 26147  
(304) 324-7025 EMAIL: hupp@frontier.net

WELL OPERATOR BRC OPERATING CO., LLC  
ADDRESS 200 CRESCENT COURT, SUITE 1900 DALLAS, TX 75201  
DESIGNATED AGENT CHUCK BRIGHTMAN

ROYALTY OWNER MEADWESTVACO CORP., et al  
SURFACE OWNER PLUM CREEK TIMBERLANDS LP  
DISTRICT WILDERNESS COUNTY NICHOLAS QUADRANGLE MT. NEBO  
LOCATION: ELEVATION 2,420' WATERSHED MOUSE FORK OF HOMINY CREEK

WELL TYPE: OIL GAS X INJECTION LIQUID WASTE IF "GAS" PRODUCTION X STORAGE DEEP SHALLOW X

PROPOSED WORK: DRILL X CONVERT X DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION MARCELLUS ESTIMATED DEPTH TD-237'-7.362', MD-14184'

PERMIT

COUNTY NAME

STATE OF WEST VIRGINIA

09/08/2017



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: 8-22-17 Date Permit Application Filed: \_\_\_\_\_

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.

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

SURFACE OWNER(s)

Name: Weyerhaeuser Company  
Address: 14410 Seneca Trail North  
Lewisburg, WV 24901

Name: Weyerhaeuser Company  
Address: 220 Occidental Ave. South  
Seattle, Washington 98104

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: Highland Mineral Resources, LLC / Legal Dept.  
Address: Five Concourse Parkway, Suite 1650  
Atlanta, Georgia 30328

COAL OPERATOR

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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AUG 29 2017

09/08/2017  
WV Department of  
Environmental Protection

AUG 29 2017

**Notice is hereby given:**

WV Department of  
Environmental Protection

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.

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 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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**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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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.

**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:

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

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Environmental Protection

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.**

### **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.

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.

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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WV Department of  
Environment **09/08/2017**

WW-6A  
(8-13)

API NO. 47- 067 - 00948  
OPERATOR WELL NO. WR Infantry 1-1H R  
Well Pad Name: WR Pad 7

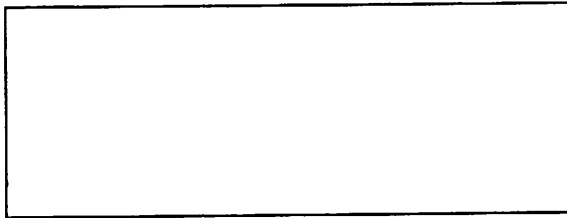
**Notice is hereby given by:**

Well Operator: BRC Operating Company, LLC  
Telephone: 817-739-4410 (C) 469-398-2232 (O)  
Email: catouchet@bluescapedgroup.com

Address: 200 Crescent Court, Suite 1900  
Dallas, Texas 75201  
Facsimile: \_\_\_\_\_

**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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

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WV Department of  
Environmental Protection

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**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:** 08/22/2017      **Date Permit Application Filed:** \_\_\_\_\_

**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: Weyerhaeuser Company  
Address: 14410 Seneca Trail North  
Lewisburg, WV 24901

Name: Weyerhaeuser Company-Energy and Natural Resources  
Address: 220 Occidental Ave. South  
Seattle, Washington 98104

**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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>519061</u>
County:	<u>Nicholas</u>		Northing:	<u>4227029</u>
District:	<u>Wilderness</u>	Public Road Access:	<u>Bruce Rd. (WV County Route 26)</u>	
Quadrangle:	<u>Mount Nebo</u>	Generally used farm name:	<u>Mead Westvaco</u>	
Watershed:	<u>Hominy Creek</u>			

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: BRC Operating Company, LLC  
Address: 220 Crescent Court, Suite 1900  
Dallas, Texas 75201  
Telephone: 817-739-4410 (C) 469-398-2232 (O)  
Email: catouchet@bluescapedgroup.com  
Facsimile: \_\_\_\_\_

Authorized Representative: Chuck Brightman  
Address: P.O. Box 231  
Hico, WV 25854  
Telephone: 304-880-8121  
Email: cabrightman@live.com  
Facsimile: N/A

**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](mailto:depprivacyofficer@wv.gov).

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**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:** 08/22/2017      **Date Permit Application Filed:** \_\_\_\_\_

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

CERTIFIED MAIL                       HAND  
RETURN RECEIPT REQUESTED              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: Weyerhaeuser Company  
Address: 14410 Seneca Trail North  
Lewisburg, WV 24901

Name: Weyerhaeuser Company-Energy and Natural Resources  
Address: 220 Occidental Ave. South  
Seattle, Washington 98104

**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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>519061</u>
County:	<u>Nicholas</u>		Northing:	<u>4227029</u>
District:	<u>Wilderness</u>	Public Road Access:	<u>Bruce Rd. (WV County Rt. 26)</u>	
Quadrangle:	<u>Mount Nebo</u>	Generally used farm name:	<u>Mead Westvaco</u>	
Watershed:	<u>Hominy Creek</u>			

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: BRC Operating Company, LLC  
Telephone: 817-739-4410 (C) 469-398-2232 (O)  
Email: calouchet@bluescapedgroup.com

Address: 200 Crescent Court, Suite 1900  
Dallas, Texas 75201  
Facsimile: 682-626-3153

**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](mailto:depprivacyofficer@wv.gov).

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