

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

Thursday, January 31, 2019 WELL WORK PLUGGING PERMIT Vertical Plugging

CHESAPEAKE APPALACHIA, L.L.C. 6100 N. WESTERN AVE.

OKLAHOMA CITY, OK 73118

Re: Permit approval for 2082 47-023-00009-00-00

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: 2082

Farm Name: HEAVNER, OATHER & HAZE

U.S. WELL NUMBER: 47-023-00009-00-00

Vertical Plugging Date Issued: 1/31/2019

Promoting a healthy environment.



PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

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.
- 4. This well is under a consent order and must be plugged under the terms of that agreement.

WW-4B Rev. 2/01

1) Date 11-5	,	2018
2) Operator's		
Well No. 2528 7082		
3) API Well No. 47-023		- 00009

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

4)	APPLICATION FOR A PERM	III 10 FEOG AND ADANDON
- 1	Well Type: Oil/ Gas x/ Liquid	d injection/ Waste disposal/
	(If "Gas, Production or Und	derground storage) Deep/ Shallow
	027.50	Service Annual Control of the Contro
5)	Location: Elevation 837.59	Watershed Honoville WV
	District Milroy	County Grant Quadrangle Hopeville, WV
6)	Well Operator Chesapeake Appalachia, LLC	7) Designated Agent Eric Haskins - Manager Reg. Ops
	Address P.O. Box 18496	Address 14 Chesapeake Lane
	Oklahoma City, OK 73154-0496	Sayre, PA 18840
8)	Oil and Gas Inspector to be notified Name Bryan Harris	9) Plugging Contractor Name Chesapeake Appalachia, LLC
	Address P.O. Box 157	Address P.O. Box 18496
	Volga, WV 26238	Oklahoma City, OK 73154-0496
	See attached Noting INSPECTO	OR BAYAN HARRIS
		087
		087
		Office of Oil and Gas NOV 1 4 2018
8K	@ 3 ₄ - \$53-60	Office of Oil and Gas
Noti	Q 34 - 553-60	Office of Oil and Gas NOV 1 4 2018

SCOPE OF OPERATION

- 1. Safety is the highest priority. Control costs and avoid unnecessary expenditures.
- 2. TOOH with 2-3/8" tubing. Set CIBP above perfs. TIH w/ 2 3/8" tubing.
- 3. Pump required cement and gel plugs per WV DEP state requirements
- 4. Plant a well monument with WV State API number

PROCEDURE

- 1. Contact the BLM Inspector 48 hours prior to operations.
- Safety is the highest priority. Hold wellsite safety meetings prior to each significant operation. Review critical parameters and objectives as well as emergency action plans.
- MIRU construction equipment if necessary to repair road / location in order to get workover rig
 in. Remove any tanks, separators, well lines, meter runs, exc.
- 4. MIRU service rig & needed BOP equipment. NOTE: Blow down well to pit or tank.
- 5. TOOH with 8,316' of 2 3/8" tubing.
- 6. RIH w/ sandline tools and RIH w/ 5K CIBP & set @ 8,280'.
- TIH strapping 2 3/8" tubing & tag 5K CIBP @ 8,280". Load hole with 192 bbls of 6% gelled water or break surface with circulation.
- Pump 12 sks of Class A cement for 100' cement plug on top of CIBP, flush tubing with 33 bbls 6% gelled water. TOOH with 2 3/8" tubing to surface.
- ND BOP & 'B' Section. Weld on 5 ½" pull sub. RU casing jacks and remove slips. Work casing for free point and ensure casing is free no deeper than 8,100' (actual free point will determine point to cut casing, cut 100' above free point).
- NU 'B' Section & BOP. RU Wireline and cut 5 ½" casing @ 100' above free point. Pull and laydown casing.
- 11. TIH w/2 3/8" tubing to 50' inside of top of casing 5 1/2" stub (50' inside of 5 ½" casing).

 Circulate hole w/ 487 bbls of 6% gelled water. Pump-22 sks of Class A cement for 100' cement plug (50' inside of 5 ½" & 50' above casing stub), flush tubing with 33 bbls 6% gelled water.

gwar.

RECEIVED Office of Oil and Gas

NOV 1 4 2018

WV Department of Environmental Protection

- 12. TOOH w/ 2 3/8" tubing to 2,785' and Pump 32 sks of Class A cement for 100' elevation cement plug, flush tubing with 10 bbls 6% gelled water
- 13. TOOH w/ 2 3/8" tubing to 2,579' and Pump 32 sks of Class A cement for 100' intermediate
- 14. TOOH w/ 2 3/8" tubing to 1002 Pump 6-bbl of 6% gelled water or break circulation. Pump 29 sks of Class A cement for 1002 surface cement plug, TOOH w/ tubing.
- 15. Top off well with required Class A cement as needed.
- 16. RDMO all service equipment providers and reclaim location to BLM requirements.

SET MONUMENT PER WU STATE COOR,

RECEIVED Office of Oil and Gas

NOV 1 4 2018

WV Department of Environmental Protection

WELL DATA

Location (Surface)	Lat. 38.965631 Long79.3206731
--------------------	-------------------------------

CASING AND TUBULAR DATA

STRING	SIZE	WEIGHT/GRADE	DEPTH
Intermediate	9 5/8"	40 lb/ft; J-55 (Assumed)	2,529
Production	5 1/2"	17 lb/ft; N-80 (Assumed)	8,575

PRESSURE AND DIMENSIONAL DATA

SIZE	WEIGHT	GRADE	BURST	COLLAPSE	DRIFT
13 3/8"	48lb/ft	H-40	1,730	740	12.559"
9 5/8"	40 lb/ft	J-55	3,950	2,570	8.835"
5 1/2"	17 lb/ft	N-80	5,320	4,910	4.767"
2 3/8"	4.7 lb/ft	N-80	11,200	11.780	1.901"

CAPACITIES

SIZE	WEIGHT	CAPACITY (FT^3/FT.)	CAPACITY (BBL/FT,
13 3/8"	48lb/ft	0.8817	0.1570
9 5/8"	40 lb/ft	0.3575	0.0636
7 7/8"	Open Hole	0.3382	0.0583
5 1/2"	17.0 lb/ft	0.1305	0.0232
2 3/8"	4.7 lb/ft	0.0217	0.0039

WELLHEAD EQUIPMENT

COMPONENT	SIZE & RATING
Manufacturer	No Record
Tubing Spool	No Record
Casing Spool	No Record
Bradenhead	No Record

DRIVING DIRECTIONS

Contact Field Personnel

RECEIVED Office of Oil and Gas

NOV 1 4 2018

WV Department of Environmental Protection



IV-35 (Rev 8-81)

Stute of Mest Wirginia Department of Alines Dil und Cas Division

Date December 18, 1986 Operator's 1 - 2082 Well No._ Farm Oather Heavner #1 API No. 47 - 023 CONFIDENTIAL

WELL OPERATOR'S REPORT OF

WELL TYPE: Oil / Gas X / Liquid Injection (If "Gas," Production / Underground Valuation / Underground	und Storag	e/ Dee	p xxx Sha	11ow/)	
LOCATION: Elevation: Watershed	(M)	0			
District:County		Quadrangl	e		
ж.					
COMPANY Union Drilling, Inc.					
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201	Casing	Used in	Left	Cerent fill up	1
DESIGNATED AGENT Joseph C. Pettey	Tubing	Drilling	in Well	Cu. ft.	
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201	Size	17. 3.11			1
SURFACE COMER Oather Heavner, et.ux.	20-16 Cord.	17.00'	17.00		
ADDRESS Route 1, Box 243, Maysville, WV 26833	13-10"	265.40'	265.40	271 cf	
MINERAL RIGHTS CWNER same as surface	9 5/8	2529.67'	2529.65'	1109 cf	THE RE HOLD
ADDRESS	8 5/8				
OIL AND GAS INSPECTOR FOR THIS WORK	7				
Phil Tracy ADDRESS P.O. Box 2536, Elkins, WV	5 1/2	Lane !	8575.38	1179 cf	1
PERMIT 1550ED 8/13/86	4 1/2		1 = 1		
DRILLING COMMENCED 8/17/86	3	1	===1]
DRILLING COMPLETED 10/14/86	2 3/8"		8261.69		
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING, VERBAL PERMISSION OBTAINED ON	Liners used				
GEOLOGICAL TARGET FORMATION Oriskany		Dept	h 9000	feet	
Depth of completed well 8632 feet I	Rotary XXX	/ Cable	Tools		
Water strata depth: Fresh 117' feet;	Salt none	feet			
Coal seam depths:none	Is coal	being mine	ed in the	area? no	
OPEN FLOW DATA		Y			
Producing formation Oriskany	Pav	zone deni	h 8394	feet	
Gas: Initial open flow Did not togetf/d					
Final open flow 746 Mcf/d				Bb1/d	
Time of open flow between init				urs	RECEIVED Office of Oil and Gas
Static rock pressure 2546# psig(surface		The second second		rs shut in	NOV 1 4 2018
(If applicable due to multiple completion-					NOV 1 4 2018
Second producing formation		zone dept	:h	feet	WV Department of
	Oil: Ini		_	Bb1/d	Environmental Protection
	Oil: Fin			Bb1/d	
•		nal tests			

FORM IV-35 (REVERSE)

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

Halliburton - frac - 11/29/86

8338/42 - Oriskany - 218,500# sand, 5000 gals methanol, 29,800 lbs of Potassium Chloride, and 2401 gals water

8348/52 8390/94

WELL LOG

		n	ELL LOG	
FORMATION	COLOR HARD OR SOFT	TOP FEET	BOITOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
	Red Rock	0	12	1" stream fresh water @117'
	Sand ·	12	53	
	Sand & Shale	53	125	
	Sand	125	302	
	Red Rock	302	386	·
	Sand & Shale	386	4786	
	Harrell Shale	7262	7672	
	Tully Horizon	7674	7955	
	Upper Marcellus	7956	7970	
	Purcell	7970	8048	•
	Lower Marcellus	8049	8088	•
	Tioga	8089	8091	
	Metabeutonite	8095	8097	į
•	Needmore	. 8103 ·	8228	
	Oriskany	8228	8428	
	Helderberg	8429	8632. TI	
	•			conditions · ···
				<u> </u>
			1	
	•	1	1	•
		1		
`. :			1	
			·	
			Į į	•
		1		į
		1		
		}]	,
			1	
]	1	•
		1 .]	

(Attach separate sheets as necessary)

	Union Drilling, Inc.	RECEIVED Office of Oil and Gas
We By:	Operator Ossal (Litty	NOV 1 4 2018
Date:	Joseph C. Pettey, Vice President of Production	on WV Demainment of Environmental retection
	12/18/86	Environ for Lai 7076011011

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 only, encountered in the drilling of a well."

WW-4A Revised 6-07

1)	Date:	11-5-2018	
2)	Operator	r's Well Number	
2528			

3) API Well No.: 47 -

- 00009

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

	Chile Heavines	Mana	Clyin Hosynor	
(a) Name	Elvin Heavner	Name	Elvin Heavner	
Address	2126 Jordan Run Rd.	Address	2126 Jordan Run Rd.	
21.37	Maysville, WV 26833		Maysville, WV 26833	
(b) Name			vner(s) with Declaration	
Address	-	Name Address		
		Address		
(c) Name		Name		
Address		Address		
Address				
3) Inspector	Bryan Harris	(c) Coal Le	ssee with Declaration	
Address	P.O. Box 157	Name		
	Volga, WV 26238	Address		
Telephone				
2.00				
Take notic	you are not required to take any action at all. te that under Chapter 22-6 of the West Virginia (Code, the undersigned well	operator proposes to file or has file	d this Notice and Application and
Take notic accompany Protection, the Applic		a well with the Chief of the d on the attached Applicate and or certified mail or de	ne Office of Oil and Gas, West Virgi ion and depicted on the attached For	nia Department of Environmental rm WW-6. Copies of this Notice,
Take notic accompany Protection, the Applic	te that under Chapter 22-6 of the West Virginia of	a well with the Chief of the don the attached Applicated or certified mail or delivery to the Chief.	ne Office of Oil and Gas, West Virgi ion and depicted on the attached For divered by hand to the person(s) na hia, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in
Take notic accompany Protection, the Applic	te that under Chapter 22-6 of the West Virginia of	a well with the Chief of the don the attached Applicated or certified mail or delivery to the Chief.	ne Office of Oil and Gas, West Virgi ion and depicted on the attached For divered by hand to the person(s) na hia, LLC	nia Department of Environmental rm WW-6. Copies of this Notice,
Take notic accompany Protection, the Applic	we that under Chapter 22-6 of the West Virginia Coying documents for a permit to plug and abandor, with respect to the well at the location describe ration, and the plat have been mailed by registe cumstances) on or before the day of mailing or de Well Operat By: Its:	a well with the Chief of the don the attached Applicated or certified mail or delivery to the Chief. Or Chesapeake Appalace	ne Office of Oil and Gas, West Virgi ion and depicted on the attached For divered by hand to the person(s) na hia, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in
Take notic accompany Protection, the Applic	the that under Chapter 22-6 of the West Virginia Coying documents for a permit to plug and abandor, with respect to the well at the location describe ration, and the plat have been mailed by registe cumstances) on or before the day of mailing or de Well Operat By:	or Chesapeake Appalace Marlene Williams Regulatory Analyst II P.O. Box 18496	ne Office of Oil and Gas, West Virging and depicted on the attached For Hivered by hand to the person(s) no think, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in
Take notic accompany Protection, the Applic	we that under Chapter 22-6 of the West Virginia Cying documents for a permit to plug and abandor, with respect to the well at the location describe ration, and the plat have been mailed by registe cumstances) on or before the day of mailing or de Well Operat By: Its: Address	a well with the Chief of the don the attached Applicated or certified mail or delivery to the Chief. Chesapeake Appalace Marlene Williams Regulatory Analyst II P.O. Box 18496 Oklahoma City, OK 7	ne Office of Oil and Gas, West Virging and depicted on the attached For Hivered by hand to the person(s) no think, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in
Take notic accompany Protection, the Applic	we that under Chapter 22-6 of the West Virginia Coying documents for a permit to plug and abandor, with respect to the well at the location describe ration, and the plat have been mailed by registe cumstances) on or before the day of mailing or de Well Operat By: Its:	or Chesapeake Appalace Marlene Williams Regulatory Analyst II P.O. Box 18496	ne Office of Oil and Gas, West Virging and depicted on the attached For Hivered by hand to the person(s) no think, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in
Take notic accompany Protection, the Applic certain circ	with respect to the well at the location describe ration, and the plat have been mailed by registe rumstances) on or before the day of mailing or describe By: Its: Address Telephone	or Chesapeake Appalace Marlene Williams Regulatory Analyst II P.O. Box 18496 Oklahoma City, OK 7 405-935-4158	ne Office of Oil and Gas, West Virging and depicted on the attached For Hivered by hand to the person(s) no think, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in DELYN SOLUTION OF THE SOLUTI
Take notic accompany Protection, the Applic certain circ	with respect to the well at the location describe ration, and the plat have been mailed by registe rumstances) on or before the day of mailing or describe By: Its: Address Telephone	or Chesapeake Appalace Marlene Williams Regulatory Analyst II P.O. Box 18496 Oklahoma City, OK 7 405-935-4158	the Office of Oil and Gas, West Virging and depicted on the attached For the diversed by hand to the person(s) has this, LLC	inia Department of Environmental rm WW-6. Copies of this Notice, amed above (or by publication in 13008670 13008670 1001721

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our epartment of 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.

RECEIVED Office of Oil and Gas

WW-9 (5/16)

JAN 3 0 2019

_00009 API Number 47 - 023 Operator's Well No. 2528

WV Department of

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

Operator Name Chesapeake Appalachia, LLC	
To be a second of the second o	OP Code
Watershed (HUC 10) Quadrang	le
Do you anticipate using more than 5,000 bbls of water to complete the propose Will a pit be used? Yes No	d well work? Yes No No
If so, please describe anticipated pit waste:	
If so, please describe anticipated pit waste: Will a synthetic liner be used in the pit? Yes No	If so, what ml.?
Proposed Disposal Method For Treated Pit Wastes:	
Land Application (if selected provide a completed for	orm WW-9-GPP)
Underground Injection (UIC Permit Number	
Reuse (at API Number	In antina 1
Other (Explain Chesapous with not use pits and briends to million banks. Chesapous a pharas to	contract Eco-First Environmental Sovice to dispose of the Bulda at the appropriate off-site facility.
Will closed loop system be used? If so, describe: No	
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshw	rater, oil based, etc.
-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.	
-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 Cas of any load of	
West Virginia solid waste facility. The notice shall be provided within 24 hours	of rejection and the permittee shall also disclose
West Virginia solid waste facility. The notice shall be provided within 24 hours where it was properly disposed. I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or condition or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment.	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain
West Virginia solid waste facility. The notice shall be provided within 24 hours where it was properly disposed. I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Departmer provisions of the permit are enforceable by law. Violations of any term or cond or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain
I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or conduction or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature Marlene Williams	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain. I am aware that there are significant penaltic
I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or conduction or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature Marlene Williams	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain. I am aware that there are significant penaltic.
West Virginia solid waste facility. The notice shall be provided within 24 hours where it was properly disposed. I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or condition or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Regulatory Analyst II	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain. I am aware that there are significant penaltic.
West Virginia solid waste facility. The notice shall be provided within 24 hours where it was properly disposed. I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or condition or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Regulatory Analyst II	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain. I am aware that there are significant penaltic.
West Virginia solid waste facility. The notice shall be provided within 24 hours where it was properly disposed. I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or condition can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Regulatory Analyst II Subscribed and swom before me this Attachment Subscribed and swom before me this Attachment Subscribed Subscribed and Swom before me this Attachment Subscribed	EGENERAL WATER POLLUTION PERMIT is at of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain. I am aware that there are significant penaltic.
West Virginia solid waste facility. The notice shall be provided within 24 hours where it was properly disposed. I certify that I understand and agree to the terms and conditions of the on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department provisions of the permit are enforceable by law. Violations of any term or conditions or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inquiry of the information, I believe that the information is true, accurate, and complete submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Regulatory Analyst II	GENERAL WATER POLLUTION PERMIT is not of Environmental Protection. I understand that ition of the general permit and/or other applicable am familiar with the information submitted on ose individuals immediately responsible for o btain. I am aware that there are significant penaltic states of the p

Operator's Well No	2528

0.75	1.15 Preveg etation p	
Lime 0.75 Tons/acre or to con	ect to pH	
Fertilizer type 19-19-19		
Fertilizer amount 350	lbs/acre	
Mulch_ 1.5(promatrix)	Tons/acre	
	Seed Mixtures	
Temporary	Perm	anent
Seed Type lbs/acre	Seed Type	lbs/acre
Dats / Annual Rye 50lbs/acre	Advanced Landscape	Blend 300 lbs/acre
aps(s) of road, location, pit and proposed area for la	nd application (unless engineered plans inclurovide water volume, include dimensions (L	ading this info have been , W, D) of the pit, and dime
Iaps(s) of road, location, pit and proposed area for larvided). If water from the pit will be land applied, who, and area in acres, of the land application area	rovide water volume, include dimensions (L	nding this info have been, W, D) of the pit, and dim
Iaps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, www. W), and area in acres, of the land application area thotocopied section of involved 7.5' topographic she	rovide water volume, include dimensions (L	ading this info have been b, W, D) of the pit, and dim
Maps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, w, W), and area in acres, of the land application area hotocopied section of involved 7.5' topographic she land Approved by:	rovide water volume, include dimensions (L	ading this info have been b, W, D) of the pit, and dim
Iaps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, w, W), and area in acres, of the land application area hotocopied section of involved 7.5' topographic she land Approved by:	rovide water volume, include dimensions (L	uding this info have been, W, D) of the pit, and dim
laps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, www. W), and area in acres, of the land application area notocopied section of involved 7.5' topographic she an Approved by:	rovide water volume, include dimensions (L	uding this info have been, W, D) of the pit, and dim
laps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, www. W), and area in acres, of the land application area notocopied section of involved 7.5' topographic she an Approved by:	rovide water volume, include dimensions (L	uding this info have been, W, D) of the pit, and dim
Iaps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, www. W), and area in acres, of the land application area notocopied section of involved 7.5' topographic she land Approved by:	rovide water volume, include dimensions (L	uding this info have been, W, D) of the pit, and dim
Iaps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, w, W), and area in acres, of the land application area hotocopied section of involved 7.5' topographic she land Approved by:	rovide water volume, include dimensions (L	uding this info have been, W, D) of the pit, and dim
Maps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, w, W), and area in acres, of the land application area hotocopied section of involved 7.5' topographic she land Approved by:	rovide water volume, include dimensions (L	uding this info have been
Iaps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied, w, W), and area in acres, of the land application area hotocopied section of involved 7.5' topographic she land Approved by:	rovide water volume, include dimensions (L	, W, D) of the pit, and dim
Maps(s) of road, location, pit and proposed area for larovided). If water from the pit will be land applied,, W), and area in acres, of the land application area hotocopied section of involved 7.5' topographic she lan Approved by:	rovide water volume, include dimensions (L	RECEIV
	rovide water volume, include dimensions (L	, W, D) of the pit, and dim

WW-9- GPP Rev. 5/16

N/A

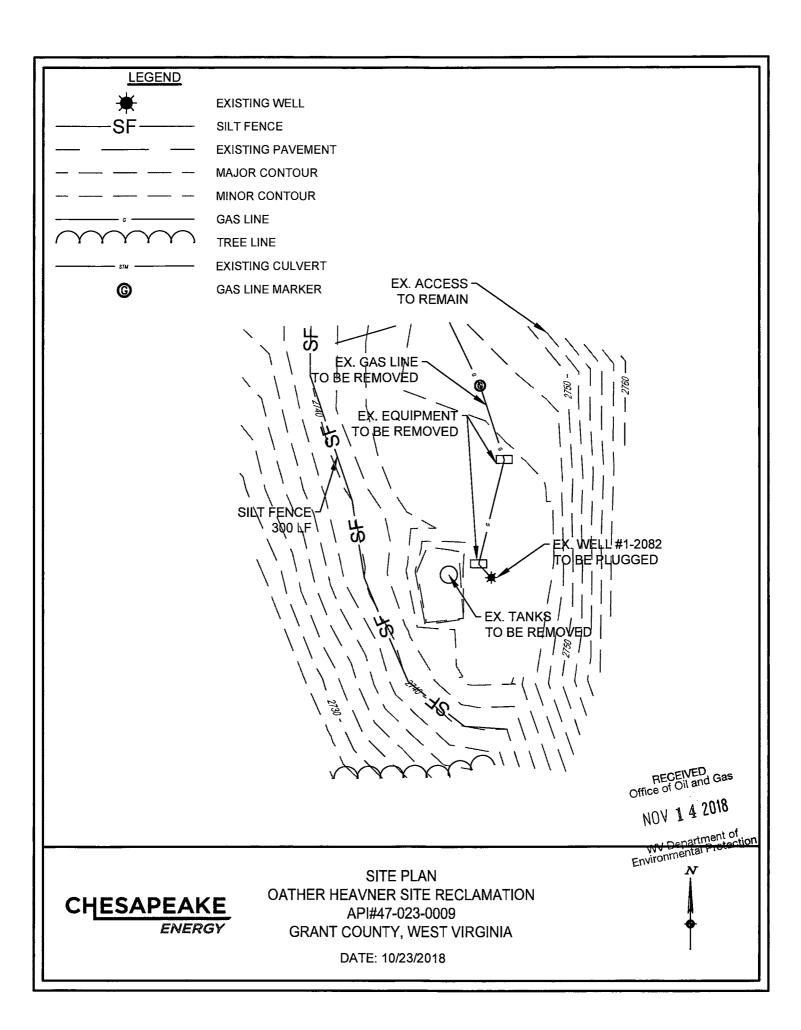
	Pag	e 8	of	10
API Number 47	- 023		00009	
Operator's Well	No.	2528		

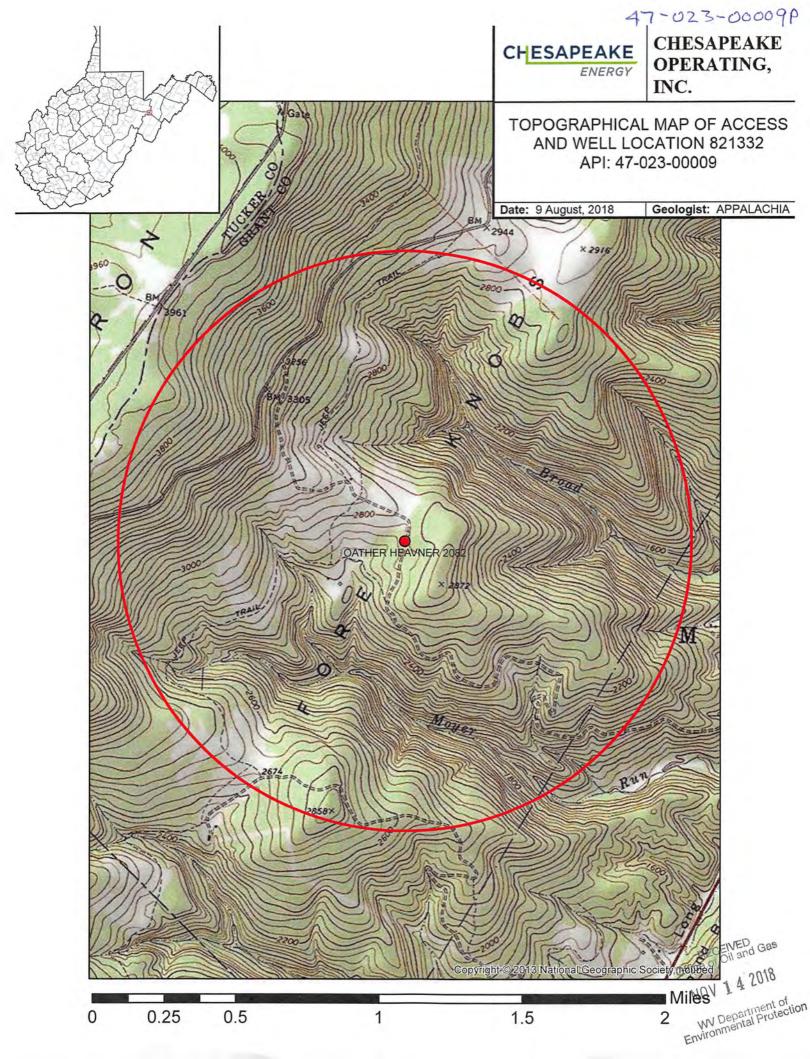
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS GROUNDWATER PROTECTION PLAN

Vatershed (HUC 10):	Quad: Hopeville, WV
arm Name: Oather Heavner	
. List the procedures used for the treatment and dis groundwater.	scharge of fluids. Include a list of all operations that could contaminate the
See attached	
. Describe procedures and equipment used to protect	ct groundwater quality from the list of potential contaminant sources above.
 List the closest water body, distance to closest v discharge area. 	water body, and distance from closest Well Head Protection Area to the
. Summarize all activities at your facility that are all	ready regulated for groundwater protection.
	RECEIVED Office of Oil and
	NOV 1 4 20
	MUV 3 -
	WV Deparmental Pro

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

/W-9- GPP ev. 5/16	NA	Page 9 of 10 API Number 47 - 023 - 00009 Operator's Well No. 2528
		Operator's well No. 2328
Provide a statement that n	o waste material will be used for deicing	g or fill material on the property.
Describe the groundwate provide direction on how	r protection instruction and training to to prevent groundwater contamination.	be provided to the employees. Job procedures shall
Provide provisions and fro	equency for inspections of all GPP elements	ents and equipment.
		RECEIVED Office of Oil and Gas
gnature:		NOV 1 4 2018
Pate:		WV Department of Environmental Protection





WW-7 8-30-06



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

_{API:} 47-023-00009	WELL NO.:	2082
FARM NAME: Oather Heav	ner	
RESPONSIBLE PARTY NAME: C	hesapeake Appa	lachia, LLC
COUNTY: Grant	DISTRICT: M	
QUADRANGLE: Hopeville, V	VV	
SURFACE OWNER: Elvin Hea		
ROYALTY OWNER: Elvin He		
UTM GPS NORTHING: 431431		
UTM GPS EASTING: 645509.4	46 GPS ELEVA	TION: 837.59
above well. The Office of Oil and Gas the following requirements: 1. Datum: NAD 1983, Zone: 1 height above mean sea leve 2. Accuracy to Datum – 3.05 i 3. Data Collection Method: Survey grade GPS × : Post Proc	17 North, Coordinate Units: r l (MSL) – meters. meters	
	e Differential	
Mapping Grade GPS: Post P	rocessed Differential	
Real-7	Γime Differential	
4. Letter size copy of the top I the undersigned, hereby certify this d belief and shows all the information re prescribed by the Office of Oil and Ga	quired by law and the regula	y knowledge and
Martine Williams	Regulatory Analyst II	11-15-2018
Signature	Title	Date