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

Earl Ray Tomblin , Governor
Randy C. Huffman , Cabinet Secretary
www.dep.wv.gov

Monday, October 17, 2016
WELL WORK PERMIT
Coal Bed Methane Well / Plugging - 2

ARP MOUNTAINEER PRODUCTION, LLC
PARK PLACE CORPORATE CENTER ONE
1000 COMMERCE DRIVE 4TH FLOOR
PITTSBURGH, PA 15275

Re: Permit approval for 120-141-001
47-109-02212-00-00

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: 120-141-001
Farm Name: PLUM CRK. TIMBERLANDS
U.S. WELL NUMBER: 47-109-02212-00-00
Coal Bed Methane Well / Plugging - 2
Date Issued: 10/17/2016

10902212P

PERMIT CONDITIONS

COALBED METHANE WELLS

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.
4. If this well is associated with a mine through by a coal operator, then the plugging methodology (work order) must have Mine Safety and Health Administration (MSHA) approval.

10902212P

WW-4B
Rev. 2/01

1) Date April 26th, 2016
2) Operator's Well No. Lasher 120-141-001
3) API Well No. 47- 109 - 02212

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ____/ Gas X / Liquid injection ____/ Waste disposal ____/
(If "Gas, Production ____ or Underground storage ____) Deep ____/ Shallow____

5) Location: Elevation 1,788.25 Watershed Marsh Fork
District Huff Creek County Wyoming Quadrangle Baileysville

6) Well Operator ARP Mountaineer Production, LLC
Address Park Place Corporate Centre One
1000 Commerce Drive 4th Floor, Pittsburg, PA 15275

7) Designated Agent CT Corporation System
Address 5400 D Big Tyler Road
Charleston, West Virginia 25313

8) Oil and Gas Inspector to be notified
BKF
Name Brian Ferguson
Address 708 Manor Drive Beckley, WV 25801

9) Plugging Contractor
Name C&J Energy Services
Address 580 Hawthorne Drive
Norton, VA 24273

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

Move in rig up work-over rig, Lower tubing and tag bottom, TD 1,710'

If fill is encountered, clean to as deep as reasonably achievable below lowermost coal. CLEAN TO PBTD. gwm

RIH with 2-3/8" tubing set off of bottom + or - two feet. Spot balanced plug using 25% excess in cement, totaling 67cu.ft of expanding cement.

CEMENT SLURRY BLEND : 50:50 CJ010 - 74 : CJ920 + 10% CJ111 (BWOW) + 2% CJ020 + 5lb/sk CJ611.

TOOH w/tubing to be above cement plug, WOC for 4hrs minimum

RIH w/tubing, tag cement at or near 1310', finish circulating cement to the surface, using 25% excess totaling 218cu.ft of expanding cement

Install permanent marker and reclaim location to WVDEP specifications

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

Work order approved by inspector Brian K Ferguson Date 6/23/16

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McLaughlin, Jeffrey W

From: McLaughlin, Jeffrey W
Sent: Monday, October 17, 2016 7:45 AM
To: 'Cooper, Jeffrey S'
Subject: RE: message

Jeff,

I talked with Larry Vanhoorebeke from C & J Energy Services last week and also took a look at the expansion test results that indicate a 0.134% circumferential expansion for a specific blend of slurry.
The blend is defined as 50:50 CJ010-74:CJ920 +10% CJ111 (BWOW) + 2% CJ020 + 5 LB/SK CJ611. It is my opinion that this blend meets the definition of an expanding cement as the term is used in the WV State Code.

Jeff, the permit in question should be approved and issued today.

Regards,

Jeff McLaughlin, B. S. Petroleum Eng.
Technical Analyst, Office of Oil & Gas
WV Dept. of Environmental Protection
Phone: 304-926-0499 ext. 1614

From: Cooper, Jeffrey S [mailto:JSCooper@atlasenergy.com]
Sent: Friday, October 14, 2016 4:20 PM
To: McLaughlin, Jeffrey W <Jeffrey.W.McLaughlin@wv.gov>
Subject: message

Hi Jeff,

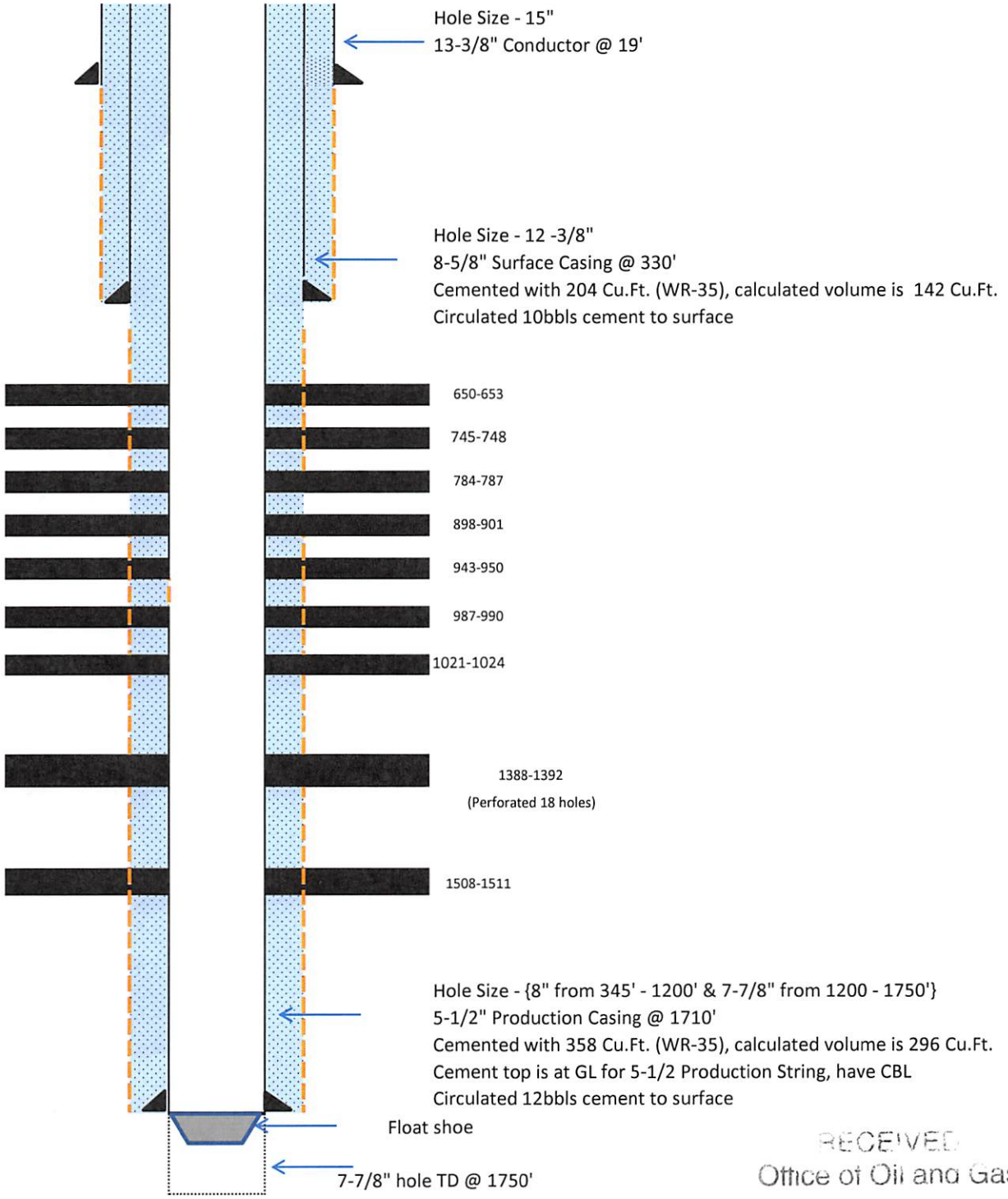
I got your voice message. We are using an expanding cement. I will specify on the WR38 when finished. Are you getting close to releasing the Lasher 1 permit API 02212?

Thanks!

Jeff Cooper
Production Foreman
Atlas | Titan
2615 Steelsburg Highway
Cedar Bluff, VA 24609
Office 276-963-2979 x 243
Cell 276-971-3268

10902212P

Lasher 001
Plug and Abandon Schematic
API # 47-109-02212



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109022 12P

WR-35
Rev (5-01)

DATE: September 2, 2003
API # -109-02212

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

FARM NAME: Plum Creek Timberlands, L.P. **OPERATOR WELL NO.:** LASHER 001

LOCATION:
Elevation: 1,788.25' Quadrangle: Baileysville

District: Huff Creek County: Wyoming
Latitude: 7,488 Feet South of 37 Deg. 32 Min. 30 Sec.
Longitude: 13,455 Feet West of 81 Deg. 40 Min. 00 Sec.

Company: GeoMet Operating Company	Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. Ft.
Address: 5336 Stadium Trace Parkway, Suite 206 Birmingham, Alabama 35244	13-3/8"	18.65'	18.65'	
Agent: Gregg Cleary				
Inspector: Ronnie Scott	8-5/8"	331'	331'	137/Pumped 204
Date Permit Issued: December 12, 2002				
Date Well Work Commenced: December 30, 2002	5-1/2"	1709.45'	1709.45'	296/Pumped 358
Date Well Work Completed: April 17, 2003				
Verbal Plugging:				
Date Permission granted on:				
Rotary XXXX Cable Rig				
Total Depth (feet): 1710'				
Fresh Water Depth (feet): Unknown				
Salt Water Depth (feet): Unknown				
Is coal being mined in area (N/Y)? No				

Coal Depths (feet): 326, 327, 328, 330, 331, 348, 361, 363, 650, 651, 746, 747, 785, 786, 899, 948, 988, 989, 1023, 1294, 1389, 1390, 1393, 1395, 1443, 1444, 1508, 1509

OPEN FLOW DATA

Producing formation All Zones Commingled Pay zone depth (ft) _____
Gas: Initial Open Flow N/A MCF/d Oil: Initial Open Flow _____ Bbl/d
Final Open Flow N/A MCF/d Final Open Flow _____ Bbl/d
Time of Open Flow between initial and final tests N/A Hours
Static Rock Pressure 18 psig (surface pressure) after 96 Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

SIGNED: _____
BY: Andrea Smith
DATE: Sept. 2, 2003

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109 02212P

GeoMet Operating Company, Inc.
Perforation and Frac Volume Specification

Well Name LASHER 001 PBTD 1710'

Zone and Perforation Table

Frac			Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
Stage 1 Interval	1508	1511				
N2 Scf	315,000					18,000
Acid	250	15%				
Gel Volume	10,800	GAL				
ISIP	1833					
ATP	3775					
AIR	3955	BPM				
Stage 2 Interval	1388	1392			30,000	32,000
N2 Scf	370,000					
Acid	200	15%		1430'		
Gel Volume	10500	GAL		Before Frac		
ISIP	1402			Frac Balls on Plug		
ATP	3560			1150'		
AIR	18	BPM				
Stage 3 Interval	1021	1024			20,000	18,000
N2 Scf	184,000					
Acid	200	15%				
Gel Volume	6500	GAL		No Plug		
ISIP	2422					
ATP	2650					
AIR	22	BPM				
Stage 4 Interval	987	990			22,000	13,000
N2 Scf	224,000					
Acid	200	15%				
Gel Volume	7,000			No Plug		
ISIP	2240					
ATP	3480					
AIR	20	BPM				
Stage 5 Interval	898	901			18,000	20,000
N2 Scf	231,000					
Acid	450	15%		947' - 950'		
Gel Volume	6,500	GAL		Ball Out		
ISIP	1290			30 Balls On Plug		
ATP	2920			840'		
AIR	20	BPM				

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Well Name LASHER 001 PBTD 1710'

Zone and Perforation Table

			Ball Out	Bridge Plug	Est Sand	Actual Sand
Stage 6 Interval	745	748	yes	Set @	Weight	Weight
N2 Scf	211,000		784' - 787' Ball Out 700'		18,000	20,000
Acid	450	15%				
Gel Volume	6,300	GAL				
ISIP	1028					
ATP	2690					
AIR	25	BPM				
Stage 7 Interval	650	653			24,000	26,000
N2 Scf	144,000		No Plug			
Acid	200	15%				
Gel Volume	6,800	GAL				
ISIP	839					
ATP	1820					
AIR	25 BPM					
Stage 8 Interval						
N2 Scf						
Acid						
Gel Volume						
ISIP						
ATP						
AIR						
Stage 9 Interval						
N2 Scf						
Acid						
Gel Volume						
ISIP						
ATP						
AIR						
Stage 10 Interval						
N2 Scf						
Acid						
Gel Volume						
ISIP						
ATP						
AIR						

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109022121P

DRILL DATA HOLE – NOAH HORN WELL DRILLING, INC.

COMPANY: GEOMET OPERATING CO. **HOLE NO.: LASHER 001**

LOCATION: PAD FORK **DRILL: RIG # 23**

DATE STARTED: 12-30-2002 **DATE COMPLETED: 01-09-2003**

DEPTH		THICKNESS	STRATA	REMARKS
FROM	TO	FT.	DESCRIPTION	VOIDS, ETC
0.00	5.00	5.00	OVERBURDEN	
5.00	19.00	14.00	SANDY SHALE / SAND	
				18.65' W/ 13 3/8" CASING
19.00	30.00	11.00	SANDSTONE	
30.00	61.00	31.00	SAND / COAL STR / SANDY SHALE	
61.00	92.00	31.00	SANDY SHALE / SAND / COAL STR	
92.00	123.00	31.00	SAND / SANDY SHALE / SAND	
123.00	154.00	31.00	SANDSTONE	
154.00	185.00	31.00	SAND / SANDY SHALE / SAND	
185.00	215.00	30.00	SAND / COAL STR / SANDY SHALE	
215.00	245.00	30.00	SANDY SHALE / SAND	
245.00	275.00	30.00	SAND / SANDY SHALE	
275.00	305.00	30.00	SANDY SHALE	
305.00	335.00	30.00	SANDY SHALE / SAND	
335.00	345.00	10.00	SANDSTONE	331' W/ 8 5/8" CASING
345.00	365.00	20.00	SAND / SANDY SHALE / COAL STR	
365.00	395.00	30.00	SAND / SANDY SHALE	
395.00	425.00	30.00	SANDY SHALE / SAND STR	
425.00	455.00	30.00	SAND / SANDY SHALE	
455.00	485.00	30.00	SAND / COAL STR / SANDY SHALE	
485.00	515.00	30.00	SANDY SHALE	
515.00	545.00	30.00	SANDY SHALE / SAND / SANDY SHALE	
545.00	575.00	30.00	SANDY SHALE / SAND STR	
575.00	605.00	30.00	SANDY SHALE / SAND	
605.00	635.00	30.00	SAND / SANDY SHALE	
635.00	665.00	30.00	SANDY SHALE / COAL / SAND	
665.00	695.00	30.00	SAND / SANDY SHALE STR	
695.00	725.00	30.00	SAND / SANDY SHALE / SAND	
725.00	755.00	30.00	SAND / COAL STR / SANDY SHALE	
755.00	785.00	30.00	SANDY SHALE / SAND	
785.00	815.00	30.00	SAND / SANDY SHALE STR	
815.00	875.00	60.00	SANDY SHALE	
875.00	905.00	30.00	SANDY SHALE / COAL STR / SANDY SHALE	
905.00	935.00	30.00	SANDY SHALE / SAND	
935.00	965.00	30.00	SAND STR / COAL STR / SANDY SHALE	
965.00	995.00	30.00	SANDY SHALE / COAL STR / SANDY SHALE	
995.00	1025.00	30.00	SAND STR / SANDY SHALE / COAL	
1025.00	1055.00	30.00	SANDY SHALE / SAND STR / SANDY SHALE	
1055.00	1145.00	90.00	SAND / SANDY SHALE / SAND	
1145.00	1170.00	25.00	SAND / SANDY SHALE	
1170.00	1200.00	30.00	HARD SAND	
1200.00	1230.00	30.00	HARD SANDSTONE	

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109 022 12P

PAGE 2
GEOMET OPERATING CO
LASHER 001

FROM	TO	FT.	DESCRIPTION
1230.00	1290.00	60.00	SAND / SANDY SHALE / COAL
1290.00	1320.00	30.00	SAND / SANDY SHALE / SAND
1320.00	1350.00	30.00	SANDY SHALE / SAND / SANDY SHALE
1350.00	1380.00	30.00	SAND / SANDY SHALE STR
1380.00	1410.00	30.00	COAL / SAND / SANDY SHALE / SAND
1410.00	1440.00	30.00	SAND / SANDY SHALE / COAL
1440.00	1470.00	30.00	SANDY SHALE / SAND
1470.00	1500.00	30.00	HARD SAND / SHALE STR
1500.00	1530.00	30.00	SANDY SHALE / SHALE
1530.00	1560.00	30.00	SHALE / HARD SAND / SHALE STR
1560.00	1590.00	30.00	SAND / SHALE STR
1590.00	1620.00	30.00	SAND / SANDY SHALE
1620.00	1650.00	30.00	SAND STR / SANDY SHALE / SHALE
1650.00	1680.00	30.00	SHALE / SANDY SHALE / SAND STR
1680.00	1710.00	30.00	SAND / SANDY SHALE / SHALE / SAND 1709.45' W/ 5 ½" CASING
1710.00	1740.00	30.00	SAND / SANDY SHALE / POSS. SHALE
1740.00	1750.00	10.00	SHALE OR SANDY SHALE

1750.00 FT. TOTAL DEPTH
18.65 FT. OF 13 3/8" CASING
331.00 FT. OF 8 5/8" CASING
1709.45 FT. OF 5 ½" CASING

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WELL PROFILE

Well Number Lasher #1

Date of Job 12-11-07 Reason for Job (e.g. completion, stuck pump) work-over

Conditions Found (e.g. coal fines on standing valve)

Rig Number and Operator L+D Rig #4 Anthony Thomas

CASING DETAIL

Surface Casing	Jts.	OD	#ft.	Grade - Set @
Intermediate Casing	Jts.	OD	#ft.	Grade - Set @
Production Casing	Jts. 5 1/2	OD	#ft.	Grade - Set @
Fiberglass Jt.				
Baffles @				

PERFORATION DETAIL (From Bottom Up)

Open Hole Section

@ SPF

TUBING DETAIL Size 2 3/8 Thread 8rd

Subs		
50	Joints	1573.90
1	Barrel SN	.85
1	Tail Joint	31.80
	Total	

EOT @ 1606.55

Pump Intake @

PUMP DESCRIPTION

- ☐ 30 Ring
- ☒ 1 1/2" insert
- ☐ Split Ring
- ☐ 60 Ring
- ☐ 1 25/32"
- ☐ Flanged Ring
- ☐ Stainless Steel
- ☐ Carbon Steel
- ☐ Pressure Activated (P.A.P.)

Comments

RODS Size 5/8 #Rods 62 Ponies 6'-4'-2'-2'-2'

RODS Size #Rods Ponies

MATERIAL DISPOSITION

Jts. Tubing left on location

Rods left on location

REMARKS

very thin scale on bottom 6 jnts tbng.

P3 Seam @

Squire Jim Yes No

TD @ 1708

PBTD @ 1708

Fill @ 0

Bottom Perf @ ?

Signature

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JUN 28 2016

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WW-4A
Revised 6-07

1) Date: April 26, 2016
2) Operator's Well Number
Lasher 120-141-001

3) API Well No.: 47 - 109 - 02212

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

4) Surface Owner(s) to be served:
(a) Name: Heartwood Forestland Fund IV.L.P.
Address: The Forestland Group,LLC
19045 Stone Mountain Road, Abingdon VA 24210

(b) Name
Address

(c) Name
Address

6) Inspector: Brian Ferguson
Address: 708 Manor Drive Beckley WV 25801
Telephone: 304-550-6265

5) (a) Coal Operator
Name: Riverside Energy Company, LLC
Address: 208 Business Street, Beckley, WV 25801

(b) Coal Owner(s) with Declaration
Name: Lasher LLC c/o Carl M. Geupel
Address: Four Crescent Street Northampton, MA 01060

Name
Address

(c) Coal Lessee with Declaration
Name: Riverside Energy Company, LLC
Address: 208 Business Street, Beckley, WV 25801

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

(1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
(2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator: ARP Mountaineer Production, LLC
By: DOUGLAS S. BYERS
Its: Manager, Environmental & Regulatory Affairs
Address: Atlas Resource Partners, LP Park PLace Corporate Center One
1000 Commerce Drive 4th Floor Pittsburgh, PA 15275
Telephone: 412-489-0311

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Office of Oil and Gas
JUN 27 2016
WV Department of Environmental Protection

Subscribed and sworn before me this 16 day of May 2016
Lauren A. Skiba
Notary Public
My Commission Expires October 2, 2017

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Lauren A. Skiba, Notary Public
Findlay Twp., Allegheny County
My Commission Expires Oct. 2, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

109 02212P
BKF

WW-9
(2/15)

API Number 47 - 109 - 02212
Operator's Well No. Lasher 120-141-001

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name ARP Mountaineer Production, LLC OP Code _____

Watershed (HUC 10) Pad Fork Quadrangle Baileysville

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 ☑ R.S.

If so, please describe anticipated pit waste: Water and Cement to be collected into a skidded 80 bbl open top tank

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 _____

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, 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? _____

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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 Douglas S Byers

Company Official (Typed Name) DOUGLAS S. BYERS

Company Official Title MANAGER, Environmental & Regulatory Affairs

Subscribed and sworn before me this 16 day of May, 20 16

Lauren A Skiba Notary Public

My commission expires October 2, 2017

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Lauren A. Skiba, Notary Public
Findlay Twp., Allegheny County
My Commission Expires Oct. 2, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

109022122P

Form WW-9

Operator's Well No. Lasher 120-141-001

ARP Mountaineer Production, LLC

Proposed Revegetation Treatment: Acres Disturbed 0.5 Prevegetation pH 5-6.5

Lime 2 Tons/acre or to correct to pH 6

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue or Orchard Grass	40		
Annual Rye Grass	5		

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.

Plan Approved by: [signature]

Comments:

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WV Department of
Environmental Protection

Title: OOG Inspector Date: 6/23/16

Field Reviewed? ( ) Yes (X) No

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WW-9- GPP
Rev. 5/16

API Number 47 - 109 - 02212
Operator's Well No. Lasher 001

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

Operator Name: ARP Mountaineer Production, LLC

Watershed (HUC 10): Pad Fork Quad: Baileysville

Farm Name: Plum Creek Timberlands

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

Waste water that is collected into portable tank will be treated and ground disbursed using a 2" portable gasoline powered trash pump.

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

While in operations the portable 2" gasoline powered trash pump will be placed inside containment eliminating chances for potential release of gasoline onto surface area.

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

1 - Closest water body - Pad Fork of Little Huff Creek.
2 - Distance to closest water body 3,400' +/- to the Lasher 001 wellhead.
3 - Distance from closest WHPA to discharge area - Not applicable.

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

Not applicable.

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

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WW-9- GPP
Rev. 5/16

API Number 47 - 109 - 02212
Operator's Well No. Lasher 001

Not applicable.

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

No wastes will be used for deicing, ice control, structural fills, road base or other uses.

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

All employees will be trained on their responsibility to ensure protection. The current job procedures provide directions on how to prevent ground water containment through proper work practice.

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

During the plugging and abandonment activities, the site will be inspected to ensure that all elements and equipment of the sites ground water protection program are in place, properly functioning and appropriately managed.

Signature: Rody Atkins

Date: 9-26-2016

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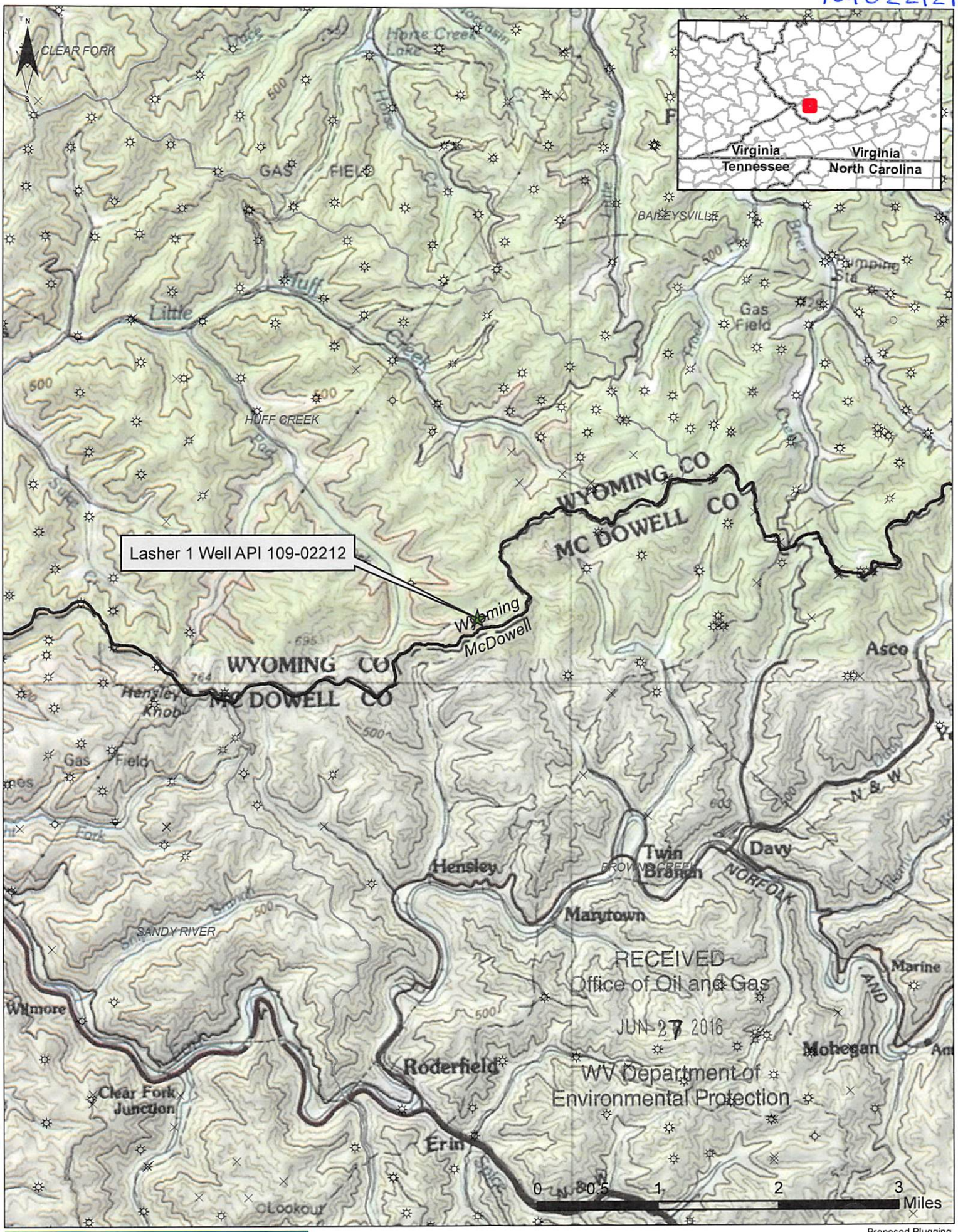

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Atlas Resource Partners, L.P.

Lasher 1 Well API 109-02212

Proposed Plugging
Well:Lasher 1 Well API 109-02212
General Location Map
Date 3/2/2016

109 02212P

WW-7
8-30-06

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

API: 47-109-02212 **WELL NO.:** 1

FARM NAME: Plum Creek Timberlands

RESPONSIBLE PARTY NAME: ARP Mountaineer Production, LLC

COUNTY: Wyoming **DISTRICT:** Huff Creek

QUADRANGLE: Baileysville

SURFACE OWNER: Heartwood Forestland Fund IV.L.P. The Forestland Group,LLC 19045 Stone Mountain Road, Abingdon VA 24210

ROYALTY OWNER: Lasher LLC

UTM GPS NORTHING: 4151101

UTM GPS EASTING: 438809 **GPS ELEVATION:** 1788.25'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

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

Survey grade GPS X : Post Processed Differential X

Real-Time Differential ____

Mapping Grade GPS X : Post Processed Differential ____

Real-Time Differential X

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4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Rocky Stilwell — Signature

Regulatory Compliance Specialist — Title

4/26/2016 — Date