



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

Tuesday, November 15, 2016
WELL WORK PERMIT
Coal Bed Methane Well / Plugging

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

Re: Permit approval for MM-12B
47-081-01501-00-00

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: MM-12B
Farm Name: J & N PROCESSING, LLC
U.S. WELL NUMBER: 47-081-01501-00-00
Coal Bed Methane Well / Plugging
Date Issued: 11/15/2016

Promoting a healthy environment.

11/18/2016

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.

1) Date October 18, 2016
2) Operator's
Well No. MM-12B
3) API Well No. 47-81 - 01501

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 2,055.85 Watershed Marsh Fork
District Trap Hill County Raleigh Quadrangle Arnett
- 6) Well Operator ARP Mountaineer Production, LLC 7) Designated Agent CT Corporation System
Address Park Place Corporate Centre One Address 5400 D Big Tyler Road
1000 Commerce Drive 4th Floor, Pittsburg, PA 15275 Charleston, West Virginia 25313
- 8) Oil and Gas Inspector to be notified Name Gary Kennedy
Address 252 Circle Avenue
Rainelle WV 25962
- 9) Plugging Contractor Name TBD
Address _____

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

- ★ Move in rig up workover rig, Lower tubing and tag bottom, TD 1325'
If fill is encountered, clean to as deep as reasonably achievable below lowermost coal. SPOT GEL
RIH with 2-3/8" tubing set off of bottom + or - two feet. Spot balanced plug using 50% excess in cement, totaling 193cu.ft of Class A cement.
TOOH w/tubing to be above cement plug, WOC for 4hrs minimum
RIH w/tubing, tag cement at or near 825', ADD CIA CEMENT IF NEEDED. Pump a 6% benonite gel spacer from 825' to 200'
Pump and circulate to surface a 200' (45cu.ct) Class A cement plug to the surface.
- ★ PULL 2 7/8" TUBING IF IT IS STILL REMAINING IN WELL.

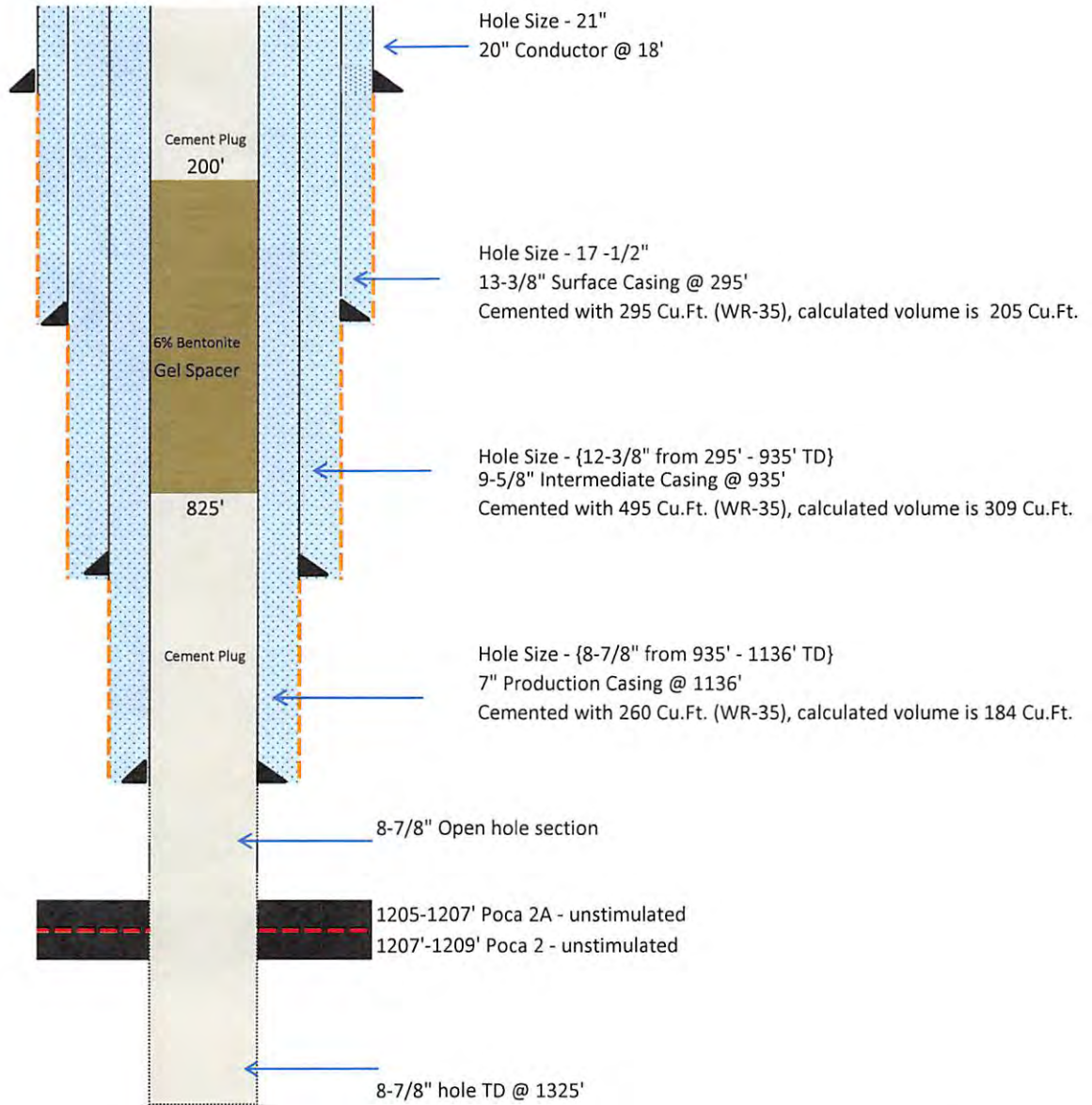
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Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector [Signature] Date 10/21/16

MM-12B
Plug and Abandon Schematic
API # 47-081-01501



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8101501P
 Woodford T7
 WV Oil & Gas Board website

WR-35
 Rev (8-10)

DATE: 03/29/2011
 API#: 47-081-01501

3/12/2011

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

Well Operator's Report of Well Work

Farm name: J&N Processing, LLC Operator Well No: MM-12B
 LOCATION: Elevation: 2,050 feet Quadrangle: Arnett
 District: Trap Hill County: Raleigh
 Latitude: 13179 Feet South of 37 Deg. 47 Min. 30 Sec.
 Longitude: 1330 Feet West of -81 Deg. 22 Min. 30 Sec.

Company: Vitravian Exploration, LLC

Address: <u>4 Waterway Square, Ste. 400 The Woodlands, TX. 77380</u>	Casing & Tubing	Used in drilling	Left in well	Content fill up Cu. Ft.
	<u>20"</u>	<u>18'</u>	<u>18'</u>	
	<u>13-3/8"</u>	<u>295'</u>	<u>295'</u>	<u>250 sks</u>
Agent:	<u>9-5/8"</u>	<u>941'</u>	<u>941'</u>	<u>420 sks</u>
Inspector:	<u>7"</u>	<u>1,136'</u>	<u>1,136'</u>	<u>220 sks</u>
Date Permit Issued: <u>07/17/2008</u>	<u>2-7/8"</u>		<u>1,203'</u>	
Date Well Work Commenced: <u>08/30/2008</u>				
Date Well Work Completed: <u>09/10/2008</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rlg				
Total Vertical Depth (ft): <u>1,325 ft</u>				
Total Measured Depth (ft): <u>1,325 ft</u>				
Fresh Water Depth (ft): <u>258 ft</u>				
Salt Water Depth (ft): <u>N/A</u>				
Is coal being mined in area (N/Y)? <u>Y</u>				
Coal Depths (ft.): <u>Lower Beckley - 827'; Poca 6 - 1033'</u>	<u>Poca 3 - 1167'</u>	<u>Poca 2A - 1205'</u>	<u>Poca 2 - 1207'</u>	
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

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 APR 05 2011

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OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Poca 2A Pay zone depth (ft) 1205' - 1207'
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow N/A Bbl/d
 Final open flow _____ MCF/d Final open flow N/A Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation Poca 2 Pay zone depth (ft) 1207' - 1209'
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow N/A Bbl/d
 Final open flow _____ MCF/d Final open flow N/A Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments 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.

Samuel Black
 Signature

3/29/2011
 Date

JHC

4/08/2011

11/18/2016

MM 12B

Formations Encountered:	Total Depth	Bottom Depth
Sandstone	0	85
Sandy-Shale	85	95
Sandstone	95	130
Sandy-Shale	130	147
Sandstone	147	476
Sandy-Shale	476	485
Sandstone	485	588
Siltstone	588	610
Possible Sewell Coal	610	614
Sandstone	614	796
Sandy-Shale	796	855
Sandstone	855	869
Shale	869	875
Sandstone	875	887
Possible Lower Beckley Coal	887	892
Sandstone	892	926
Shale	926	936
Sandstone	936	962
Sandy-Shale	962	965
Sandstone	965	1033
Possible Pocahontas 6 Coal	1033	1036
Shale	1036	1061
Sandstone	1061	1105
Shale	1105	1110
Sandstone	1110	1143
Sandy-Shale	1143	1146
Sandstone	1146	1162
Shale	1162	1167
Pocahontas 3 Coal	1167	1170
Shale	1170	1189
Sandstone	1189	1193
Shale	1193	1198
Sandstone	1198	1205
Pocahontas 2A Coal	1205	1207
Pocahontas 2 Coal	1207	1209
Shale	1209	1216
Sandstone	1216	1262
Sandy-Shale	1262	1277
Shale	1277	1287
Possible Pocahontas 1 Coal	1287	1289
Shale	1289	1305
Sandstone	1305	1325

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WV Department of
Environmental Protection 11/18/2016

8101501P

WW-4A
Revised 6-07

1) Date: October 18, 2016
2) Operator's Well Number
MM-12B
3) API Well No.: 47 - 81 - 01501

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:	5) (a) Coal Operator
(a) Name <u>Maple Meadow Land Company</u> ✓	Name <u>Rhino Eastern LLC</u> ✓
Address <u>838 Euclid Avenue</u>	Address <u>PO Box 260 Bolt, WV 25817</u>
<u>Lexington KY 40502</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Maple Meadow Land Company</u> ✓
	Address <u>838 Euclid Avenue</u>
	<u>Lexington KY 40502</u>
(c) Name _____	Name <u>Alpha Land and Reserves, LLC</u> ✓
Address _____	Address <u>Po Box 830</u>
	<u>Belfry Kentucky 41514</u>
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>252 Circle Avenue</u>	Name <u>Rhino Eastern LLC</u> ✓
<u>Rainelle WV 25882</u>	Address <u>PO Box 260 Bolt, WV 25817</u>
Telephone <u>304-382-8402</u>	

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.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
 January Joy Yurchak, Notary Public
 Findlay Twp., Allegheny County
 My Commission Expires Aug. 23, 2020
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Well Operator ARP Mountaineer Production, LLC
 By: Douglas S Byers
 Its: DOUGLAS S BYERS
 Address Park Place Corporate Center One
1000 Commerce Drive 4th Floor Pittsburgh, PA 15275
 Telephone 412-200-7575

Subscribed and sworn before me this 18th day of October, 2016
January Joy Yurchak Notary Public
 My Commission Expires 08-23-2020

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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 depprivacyofficer@wv.gov.

11/18/2016

8101501P

WW-9
(2/15)

API Number 47 - 81 - 01501
Operator's Well No. MM-12B

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) Marsh Fork Quadrangle Arnett

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: 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 *JK*
- 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 18th day of October, 20 16

January Joy Yurchak Notary Public

My commission expires 08-23-2020

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
January Joy Yurchak, Notary Public
Findlay Twp., Allegheny County
My Commission Expires Aug. 23, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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Form WW-9

Operator's Well No. MM-12B

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: _____

Title: Inspector

Date: 10/25/16

Field Reviewed? () Yes () No

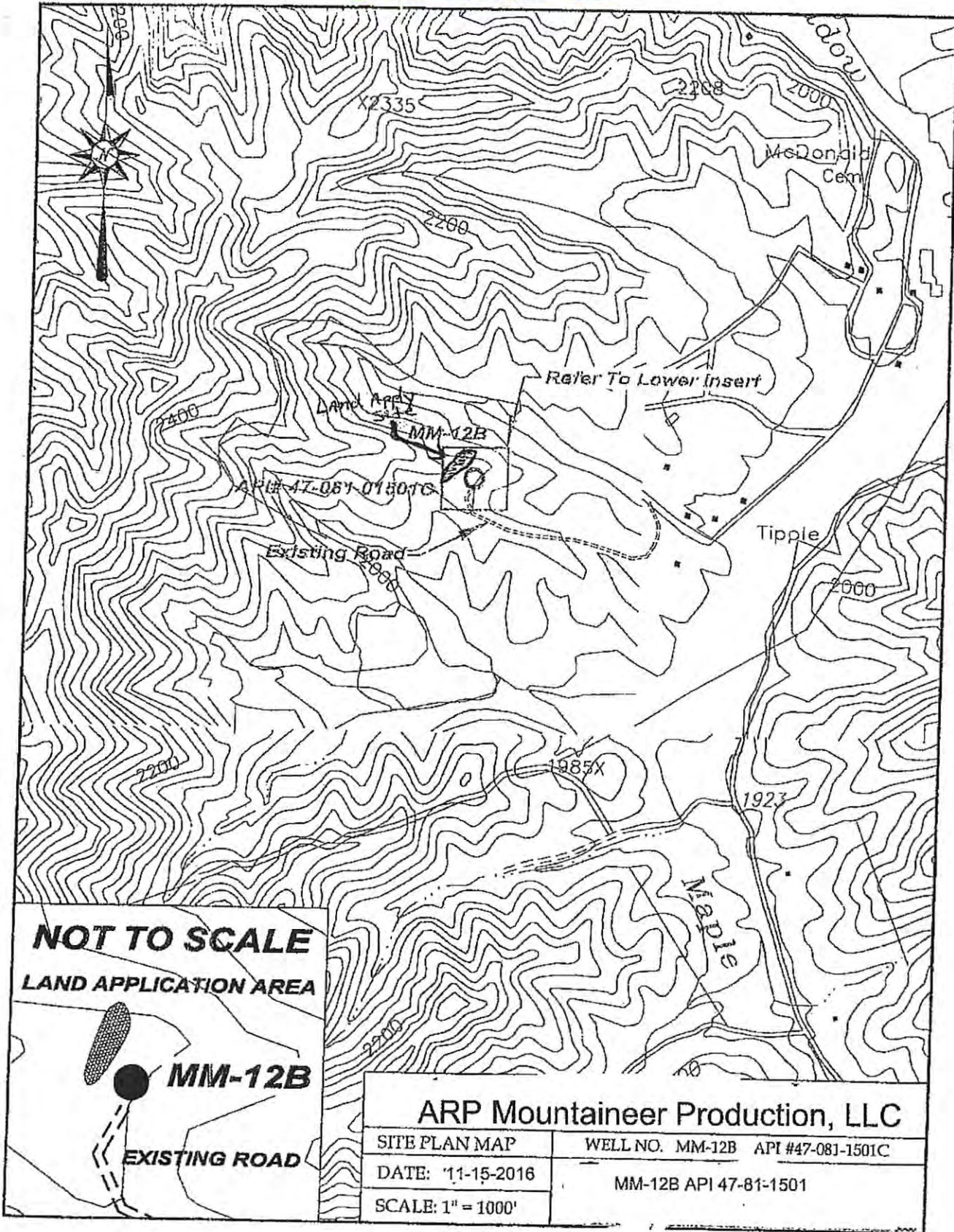
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LANA APPLICATION



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): Marsh Fork Quad: Arnett
Farm Name: J & N PROCESSING, LLC

- 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 the 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 operation, the portable 2" gasoline powered trash pump will be placed inside containment eliminating chances for potential spillage of gasoline onto the surface.

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

Closest Water Body - Maple Meadow Creek
Distance to Closest Water Body 1,500' +/-
Distance from Closest WHPA to Discharge Area - N/A

- 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.

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 groundwater protection. Current job procedures provide direction on how to prevent ground water contamination through proper work practices.

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: Rocky Skelwell

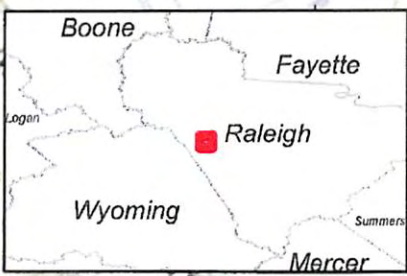
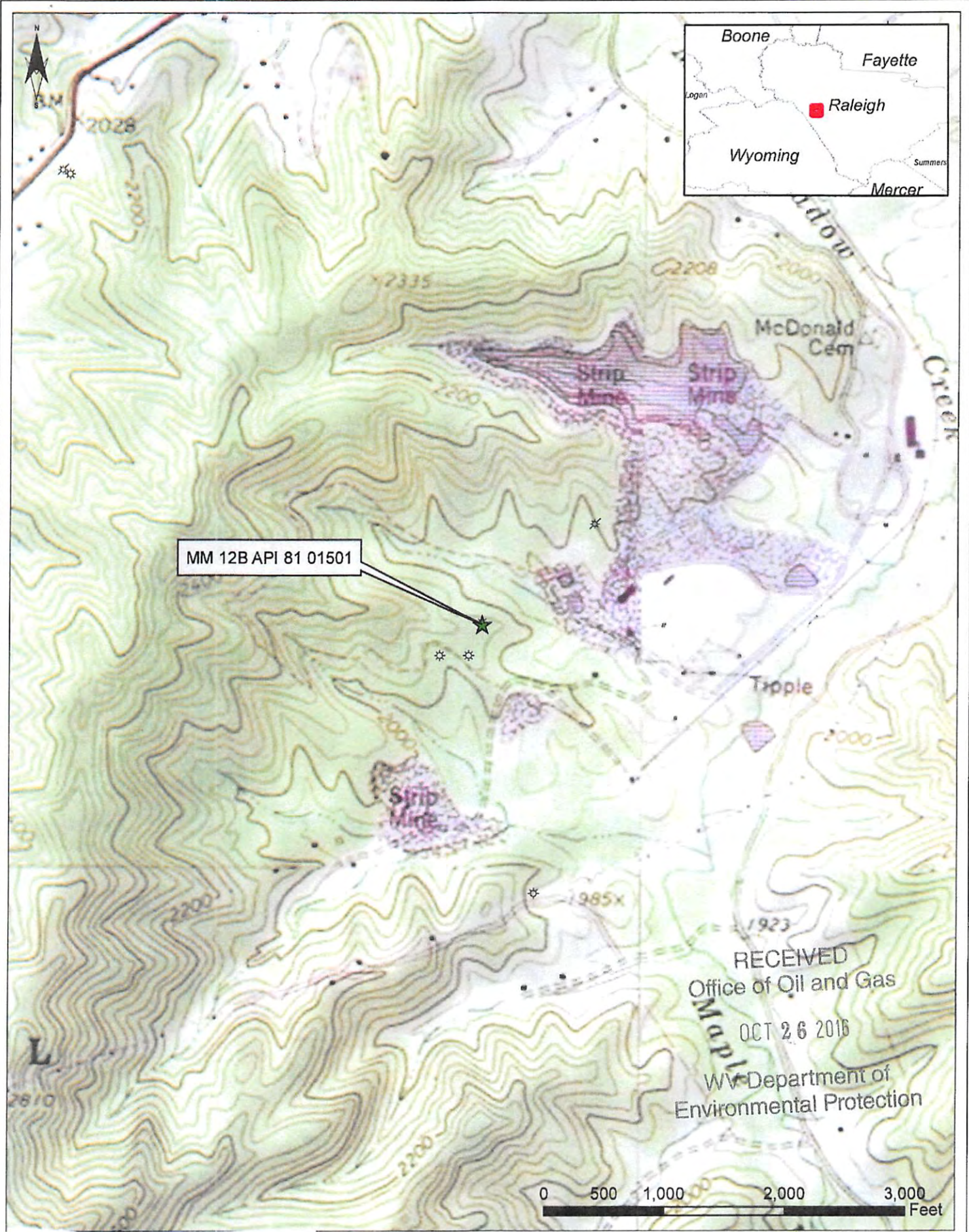
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JK



MM 12B API 81 01501

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0 500 1,000 2,000 3,000
 Feet

MM 12B API 81 01501

JHK

Proposed Plugging
 Well: MM 12B API 81 01501
 General Location Map
 Date: 9/22/16

11/18/2016

WW-7
8-30-06



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

API: 47-81-01501 WELL NO.: MM 12B
FARM NAME: J & N Processing, LLC
RESPONSIBLE PARTY NAME: ARP Mountaineer Production, LLC
COUNTY: Raleigh DISTRICT: Trap Hill
QUADRANGLE: Arnett
SURFACE OWNER: Maple Meadow Land Company
ROYALTY OWNER: .Maple Meadow Land Company / Alpha Land and Reserves, LLC
UTM GPS NORTHING: 4178766.60
UTM GPS EASTING: 466578.01 GPS ELEVATION: 2,055.85

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:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS : Post Processed Differential
Real-Time Differential
Mapping Grade GPS : Post Processed Differential
Real-Time Differential

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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 Athel Regulatory Compliance Specialist 10-18-2016
Signature Title Date

8101501P



11/18/2016