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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

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

October 19, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8101301, issued to ARP MOUNTAINEER PRODUCTION, LLC, 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 all 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. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: MM-7  
Farm Name: YORK, RUTH  
**API Well Number: 47-8101301**  
**Permit Type: Plugging**  
Date Issued: 10/19/2015

## PERMIT CONDITIONS

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

### CONDITIONS

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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 September 16th, 2015  
2) Operator's  
Well No. MM-7  
3) API Well No. 47-81 - 01301

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 2,070.68 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 9) Plugging Contractor  
Name Gary Kennedy Name Universal Well Services  
Address Box 268 Address 14 Sewer Plant Road  
Nimitz WV, 25978 Buckhannon, WV 26201

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 1290' - 1470 <sup>(P.O.D.) ok</sup>  
If fill is encountered, clean to as deep as reasonably achievable below lowermost coal.  
RIH with 2-3/8" tubing set off of bottom + or - two feet. Spot balanced plug using 30% excess in cement, totaling 50cu.ft of expanding cement.  
Cement Blend (50/50 PozMix with 10% salt, 2% bentonite,)   
TOOH w/tubing to be above cement plug, WOC for 4hrs minimum  
RIH w/tubing, tag cement at or near 938', finish circulating cement to the surface, using 20% excess totaling 105cu.ft of expanding cement  
Install permanent marker and reclaim location to WVDEP specifications

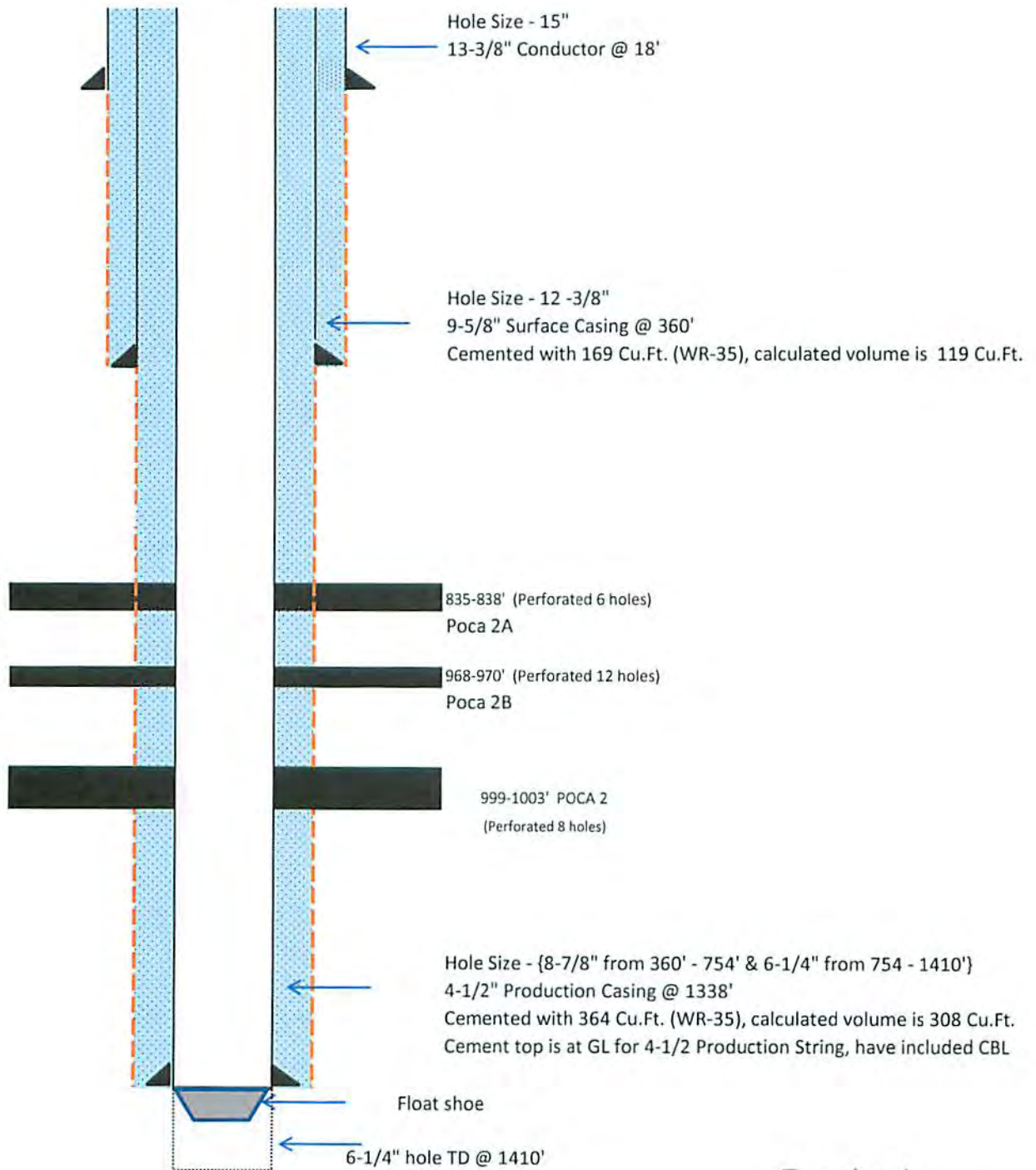
6% bcl between plugs.

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

Work order approved by inspector Gary Kennedy

Received  
Office of Oil & Gas  
SEP 25 2015

MM-7  
Plug and Abandon Schematic  
API # 47-081-01301



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Office of Oil & Gas

SEP 25 2015 *[Signature]*

11/10/15  
11/10/15



WR-35  
Rev (5-01)

DATE:  
API #: 47-081-01301C-F

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

Well Operator's Report of Well Work

Farm name: Ruth York Operator Well No.: MM7

LOCATION: Elevation: 1941.01 Quadrangle: Arnett

District: Trap Hill County: Raleigh  
Latitude: 0 Feet South of 37 Deg. 46 Min. 11.52 Sec.  
Longitude 0 Feet West of 81 Deg. 23 Min. 11.23 Sec.

Company: AMVEST Gas Resources, Inc.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>One Boar's Head Pointe</u>	<u>13 3/8"</u>	<u>18'</u>	<u>18'</u>	<u>N/A</u>
<u>Charlottesville, Virginia 22905</u>	<u>9 5/8"</u>	<u>395'</u>	<u>395'</u>	<u>168.74</u>
Agent: <u>Chris Butler</u>	<u>4 1/2"</u>	<u>1290'</u>	<u>1290'</u>	<u>364</u>
Inspector: <u>Richard Campbell</u>				
Date Permit Issued: <u>February 6, 2003</u>				
Date Well Work Commenced: <u>02/21/03</u>				
Date Well Work Completed: <u>02/28/03</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary x Cable Rig				
Total Depth (feet): <u>1410</u>				
Fresh Water Depth (ft.): <u>180', 285'</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>456-458, 708-712, 739-743</u>				
<u>836-839, 968-969, 1000-1004, 1073-1074</u>				

OPEN FLOW DATA

Producing formation Pocahontas #2 Pay zone depth (ft) 1134-1140  
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow N/A MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests N/A Hours  
Static rock Pressure 330 psig (surface pressure) after 24 Hours

Second producing formation Pocahontas #6 Pay zone depth (ft) 836-839  
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        Hours  
Static rock Pressure        psig (surface pressure) after        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: John F. Smuler VP-Exploration  
By: John F. Smuler  
Date: 1/18/06

Received  
Office of Oil & Gas  
SEP 25 2015

RECEIVED  
Office of Oil & Gas  
Office of Chief  
FEB 09 2006  
WV Department of  
Environmental Protection

10/23/2015



Well: MM-7  
 Permit No: 47-081-01301C  
 District: Trap Hill  
 County: Raleigh

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

Date: 02/28/2003

MIRU Key Energy Surveys to conduct GR/CCL/CBL and perforate Poca 2-A and Poca 2-B intervals. Logger's TD 1338'. POOH and LD logging tools. Install 4 1/2' frac valve. Key Energy RIH with 3 1/8" HSC perforating gun to perforate Poca 2-B interval 998.9' - 100.3' (13 holes) and Poca 2-A interval 1002.4' - 1004.2 (10 holes) in FE Acid. POOH with perforating gun, all shots fired. RD Key. HES conducted Stepdown test with Shut In Capture - monitored pressure for approx. 4.0 hrs. RDMO HES and Key Energy Surveys. Shut well in and secure.



Date: 05/12/2005

Pocahontas #2 Perforate w/3-1/8" HSC w/16gm chrgs P-2 w/ [8 shots:(999.50-1003.75), 6 shots:(968.75-970.00)] & P-6 w/ [12 shots: (835.50-838.75)], rn pkr on 2-3/8 tbng set @ 925.64, Stimulate w/N<sub>2</sub> foam:

P-2 through tubing, Pbk (sf) @ 2125psi, Pressured out when proppant (16/30) reached formation - no proppant placed, Pump 65 Bbls (24 sand laden) @ 16BPM & 2462 psi, ISIP=2249 psi. Remvd pkr

P-6 through casing, Pbk (sf) @ 1890 psi, Pmpd 114 Bbls @ 20.3 BPM & 2761psi, plcd 58 sxs 16/30 prpnt, ISIP=2853 psi.

Formation	Top	Bottom	Remarks
Clay	0	7	
Sand and Shale	7	252	water @ 180'
Sand	252	350	water @ 285'
Shale	350	456	
Coal	456	458	
Sand	458	708	
Coal	708	712	
Shale	712	739	
Coal	739	743	
Sand	743	836	
Coal	836	839	
Sand and Shale	839	968	
Coal	968	969	
Shale	969	1000	
Coal	1000	1004	
Sand and Shale	1004	1073	
Coal	1073	1074	
Shale	1074	1120	
Redrock	1120	1244	
Shale	1244	1320	
Sand	1320	1410	
TD	1410		

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 Office of Oil & Gas

SEP 25 2015

10/23/2015





L-WW



WW-4A  
Revised 6-07

1) Date: September 18th 2015  
2) Operator's Well Number MM-7  
3) API Well No.: 47 - 81 - 01301

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>Walade York</u> ✓	Name <u>No coal operator</u>
Address <u>P.O. Box 224</u>	Address _____
<u>Fairdale, WV 25839</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration ✓
Address _____	Name <u>Maple Meadow Mining Company</u>
_____	Address <u>999 Corporate Blvd</u>
_____	<u>Linthicum Heights, MD 21091</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>Box 268</u>	Name _____
<u>Nirritz WV, 25978</u>	Address _____
Telephone <u>(304)-382-9402</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 reverse side. However, you are not required to take any action at all.

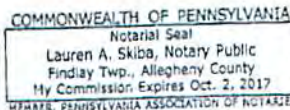
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental 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: John W. Crook   
 Its: VP, Environmental Health & Safety  
 Address Atlas Resource Partners, LP Park Place Corporate Center One  
1000 Commerce Drive 4th Floor Pittsburgh, PA 15275  
 Telephone 412-200-7675

Subscribed and sworn before me this 21 day of September 2015  
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 [depoprivacyofficer@wv.gov](mailto:depoprivacyofficer@wv.gov).



Received  
 Office of Oil & Gas  
 SEP 25 2015

WW-9  
(2/15)

API Number 47 - 81 - 01301  
Operator's Well No. MM-7

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

*No pit will be used.*

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: 97W

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_ )

*All pits must be lined with a minimum of 20 mil thickness synthetic liner.*

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? \_\_\_\_\_

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 [Signature]

Company Official (Typed Name) John W Crook

Company Official Title VP EHS

Subscribed and sworn before me this 21 day of September, 20 15

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

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Office of Oil & Gas  
SEP 25 2015



**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: *Guy Kennedy*

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: *Inspector*

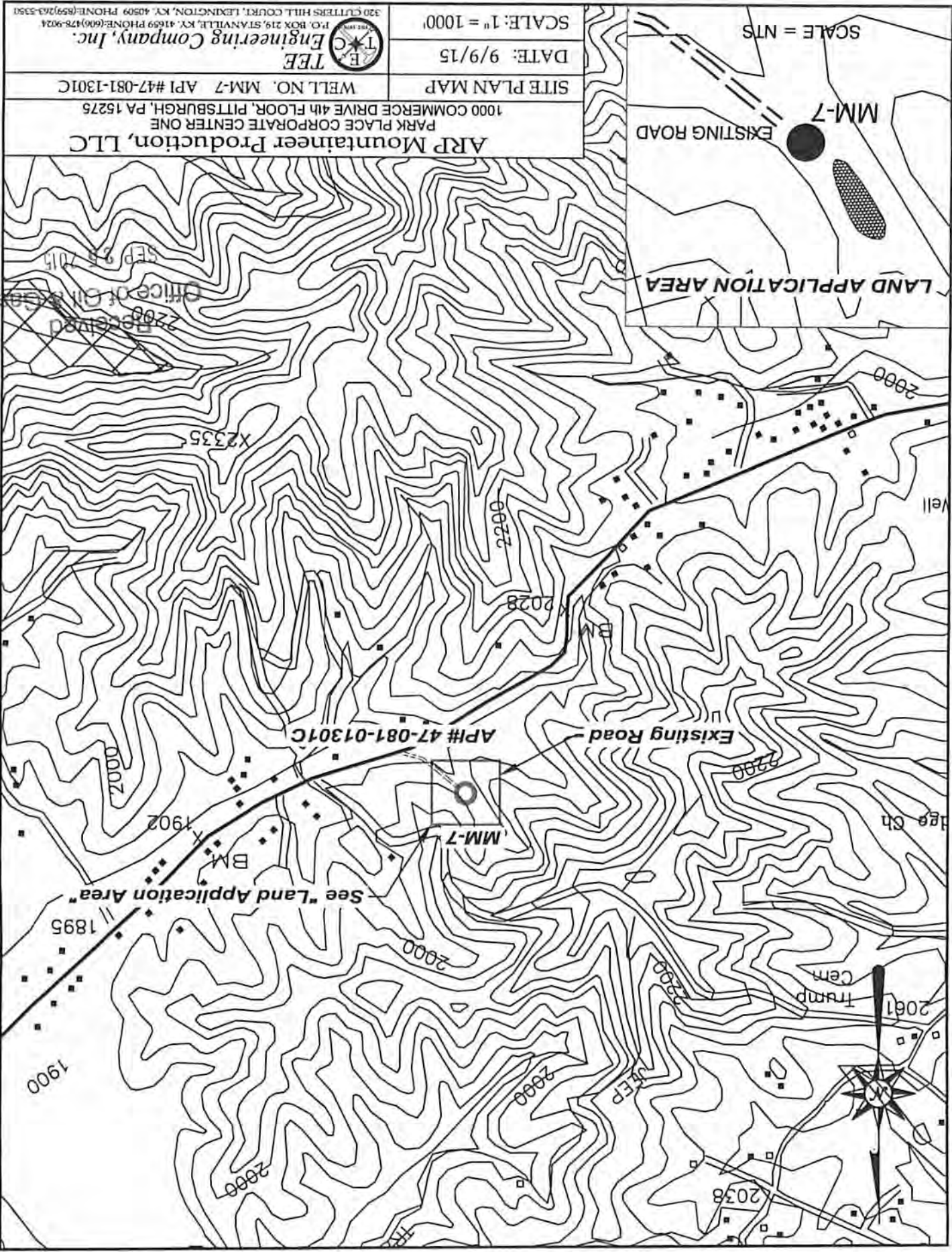
Date: *9/29/15*

Field Reviewed? ( ) Yes ( ) No

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Office of Oil & Gas  
SEP 25 2015



Handwritten initials



ARP Mountaineer Production, LLC  
 PARK PLACE CORPORATE CENTER ONE  
 1000 COMMERCE DRIVE 4th FLOOR, PITTSBURGH, PA 15275  
 WELL NO. MM-7 API #47-081-1301C

Engineering Company, Inc.  
 T.E.E.  
 P.O. BOX 219, STANVILLE, KY 41659 PHONE: (606) 478-9024  
 320 CUTTERS HILL COURT, LEXINGTON, KY 40509 PHONE: (859) 263-5350

SCALE = NTS  
 MM-7  
 EXISTING ROAD  
 LAND APPLICATION AREA

SCALE: 1" = 1000'  
 DATE: 9/9/15

SITE PLAN MAP

10/23/2015

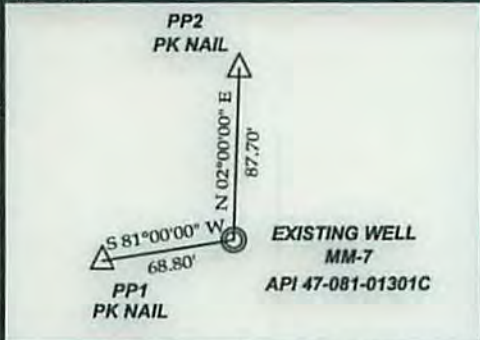
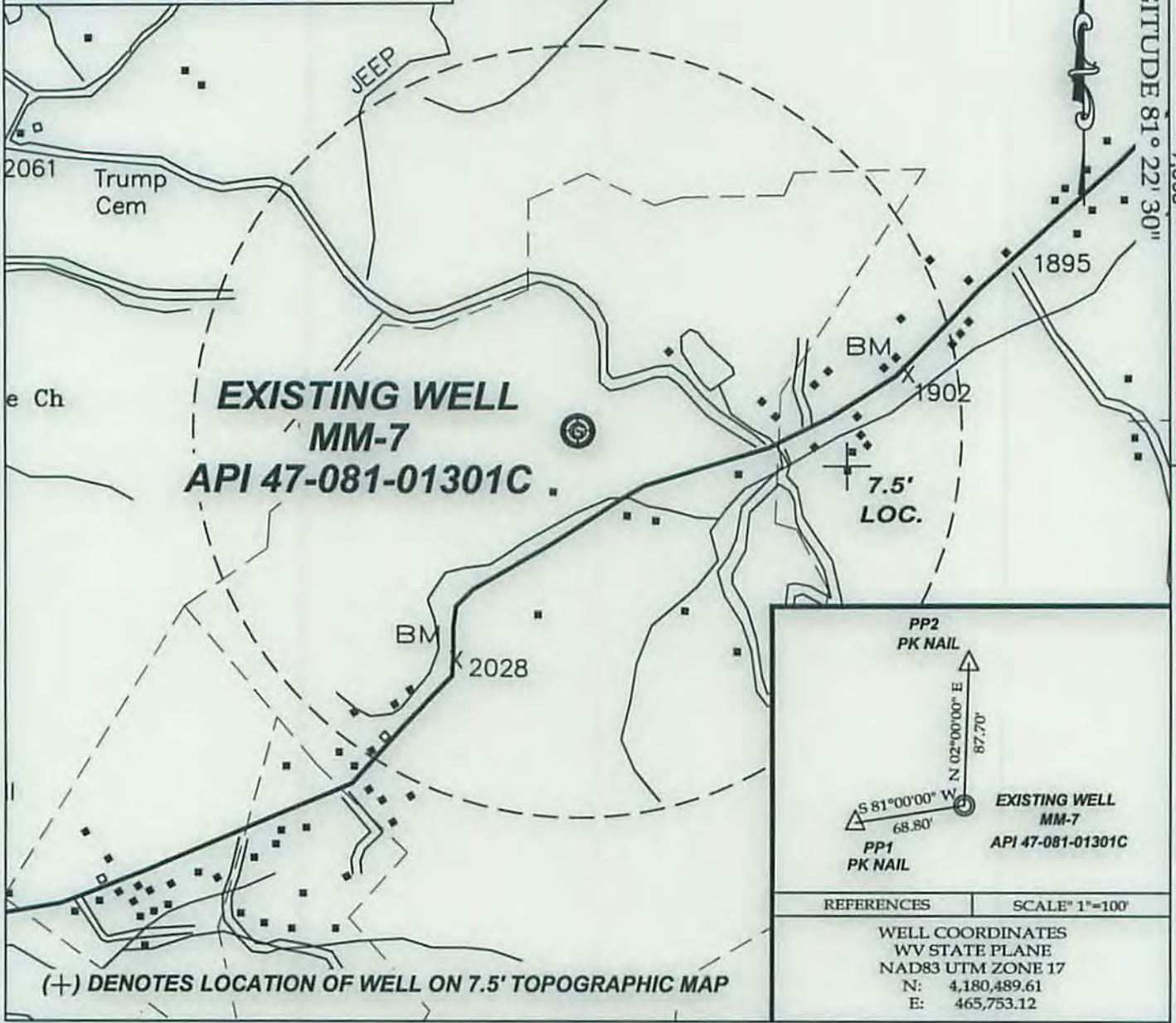
8/13017



Note:  
The property lines shown on the plan below were derived from the original location plat, by others. TEE Engineering Co., Inc., assumes no liability, and relinquishes no legal rights, in regard to work done by others.

LATITUDE 37° 47' 30"

LONGITUDE 81° 22' 30"



REFERENCES	SCALE 1"=100'
WELL COORDINATES WV STATE PLANE NAD83 UTM ZONE 17 N: 4,180,489.61 E: 465,753.12	

(+) DENOTES LOCATION OF WELL ON 7.5' TOPOGRAPHIC MAP

**TEE Engineering Company, Inc.**  
P.O. BOX 219, STANVILLE, KY. 41659 PHONE: (606)478-9024  
320 CUTTERS HILL COURT, LEXINGTON, KY. 40509 PHONE: (859)263-5350  
**ARP Mountaineer Production, LLC**  
Well No. **MM-7**  
FILE NO. 1883-00  
DRAWING NO. MM-7 PLUGGING PLAT  
SCALE: 1" = 1,000'  
MIN. DEGREE OF ACCURACY 1 : 2,500  
PROVEN SOURCE OF ELEVATION  
GPS STATION TEC-1 (ELEV. 2406.60)

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

*Don F. Blackburn*  
(SIGNATURE)

R.P.E. \_\_\_\_\_ R.P.S. 1008



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

DATE SEPTEMBER 9, 2015  
OPERATOR'S WELL NO. MM-7  
API WELL NO. 47 - 081 - 01301C PERMIT

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

LOCATION: ELEVATION 1,946.71' NORTHING 4180489.61 EASTING 465753.12 ZONE 17 NAD83 UTM  
DISTRICT TRAP HILL WATER SHED MARSH FORK  
QUADRANGLE ARNETT COUNTY RALEIGH

SURFACE OWNER RUTH YORK ACREAGE 107  
CBM ROYALTY OWNER CROOKET MANKIN et al LEASE ACREAGE 371.88  
LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL \_\_\_\_\_ CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR  
STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_ PEFORATE NEW  
FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION POCAHONTAS - 2 ESTIMATED DEPTH 1,410'  
WELL OPERATOR ARP MOUNTAINEER PRODUCTION, LLC DESIGNATED AGENT CT CORPORATION SYSTEM  
ADDRESS PARK PLACE CORPORATE CENTER ONE ADDRESS 5400 D BIG TYLER ROAD  
1000 COMMERCE DRIVE 4th FLOOR, PITTSBURGH, PA 15275 CHARLESTON, WV 25313

10/23/2015