



---

west virginia department of environmental protection

---

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: 47-8101298, 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-4  
Farm Name: CALLOWAY, WILLIAM & ALMA  
**API Well Number: 47-8101298**  
**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

---

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.



8012987

WW-4B  
Rev. 2/01

1) Date September 16th, 2015  
2) Operator's  
Well No. MM-4  
3) API Well No. 47-81 - 01298

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  / Liquid injection  / Waste disposal  /  
(If "Gas, Production  or Underground storage ) Deep  / Shallow
- 5) Location: Elevation 1,807.59' Watershed Marsh Fork  
District Trap Hill County Raleigh Quadrangle Eccles
- 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 9) Plugging Contractor 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 and tag bottom, TD 1239'  
 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 50% excess in cement, totaling 55cu.ft of expanding cement  
 Cement Blend (50/50 PozMix with 10% salt, 2% bentonite)  
 TOO H w/tubing, WOC for 4hrs minimum  
 RIH w/tubing, tag cement at or near 839' finish circulating cement to the surface with 80 cu.ft. of expanding cement  
 Install permanent marker and reclaim location to WVDEP specifications

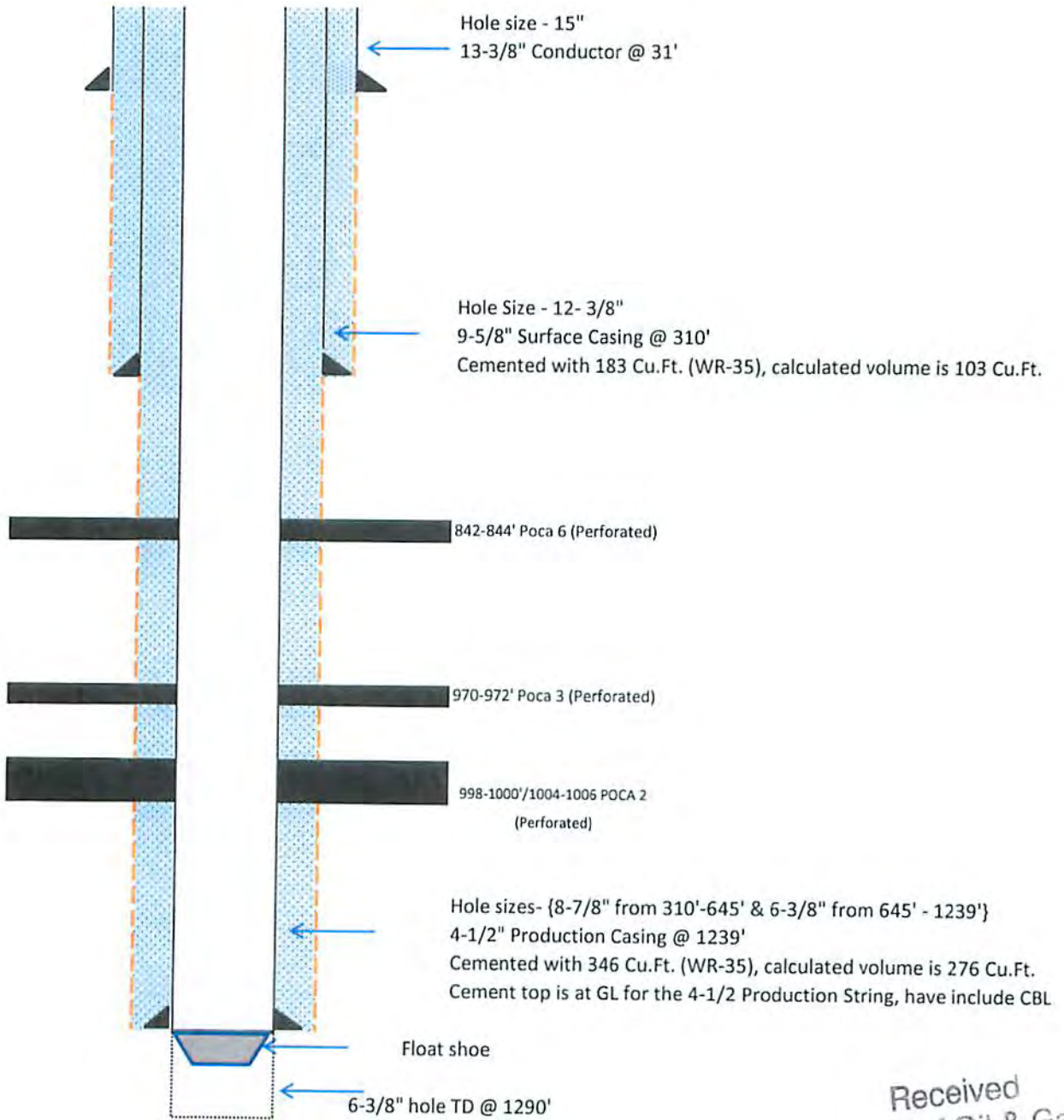
Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Received  
Office of Oil & Gas  
SEP 25 2015

Work order approved by inspector *Gary Kennedy* Date 9/24/15

10/23/2015

MM-4  
Plug and Abandon Schematic  
API # 47-081-01298



Received  
Office of Oil & Gas  
SEP 25 2015



8101298P

WR-35  
Rev (5-01)

DATE: March 11, 2005  
API #: 47-081-04285  
Office of Oil & Gas  
MAR 18 2005  
WV Department of Environmental Protection

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

Well Operator's Report of Well Work

Farm name: William and Alma Calloway Operator Well No.: MM-4

LOCATION: Elevation: 1870.59' Quadrangle: Eclet

District: Trap Hill County: Raleigh  
Latitude: 0 Feet South of 37 Deg. 46 Min. 40.29 Sec.  
Longitude: 0 Feet West of 81 Deg. 21 Min. 41.99 Sec.

Company: AMVEST Oil and Gas, Inc.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cn. Ft.
Address: <u>One Boar's Head Pointe</u>	16"	21'	21'	N/A
<u>Charlottesville, Virginia 22905</u>	13 3/8"	35'	35'	N/A
Agent: <u>Anthony A. Wilhoit</u>	9 5/8"	356'	356'	183
Inspector: <u>Richard Campbell</u>	4 1/2"	1207'	1207'	346
Date Permit Issued: <u>January 30, 2003</u>				
Date Well Work Commenced: <u>2/14/2003</u>				
Date Well Work Completed: <u>4/19/2003</u>				
Verbal Flushing:				
Date Permission granted on:				
Rotary x Cable <u>Rlg Horn #76</u>				
Total Depth (feet): <u>1280</u>				
Fresh Water Depth (ft.): <u>60' and 118'</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>408-410, 664-676, 843-845</u> <u>971-972, 998-1006</u>				

OPEN FLOW DATA

Producing formation Pocahontas #2 Seam Pay zone depth (ft) 998-1006  
 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 280 psig (surface pressure) after 24 Hours  
 Second producing formation Pocahontas #3 Seam Pay zone depth (ft) 971-972  
 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 280 psig (surface pressure) after 24 Hours  
 Third producing formation Pocahontas #6 Seam Pay zone depth (ft) 843-845  
 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 280 psig (surface pressure) after 24 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: [Signature]  
By: John E. Sinner Jr Explorator  
Date: 3/8/05

RAI 1298 C

Received: [Signature]  
Office of Oil & Gas

SEP 25 2015

10/23/2015

Well: MM-4  
Permit Number: 47-081-01288C  
District: Trap HES  
County: Raleigh

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

Date: 4/8/2003

MIRU HES and Key Energy Services to conduct 3-stage completion. GR/OCL/CBL ran 02/21/03.

**1<sup>st</sup> Stage - Poca #1A, 2B (1004.3-1005.5, 997.8-999.6')**

MIRU HES to stimulate Poca #2A, 2B intervals (1004.5-1006(7 shots) and 998-1000(13 shots). Tested lines to 4000 psi. Open frac valve and begin pumping 250 gal FE Acid and TW for breakdown. Formation broke 2301 psi. ISIP 1323 psi. BHTP 2323 psi. FG 2.33 psi/ft. N<sub>2</sub> volume factor 678 +/- scf/bbl. Treated intervals with 70Q foam frac per pump schedule. Flush with 100Q N<sub>2</sub>. ISIP 1323 psi, 5 min SIP 1111 psi. ATP 2400 psi. ATR 20 bpm down hole. Proppant concentrations 0.25 to 2.5 ppg down hole. RD HES.  
Materials used: 149 sks 16/30 sand; 170,000 scf N<sub>2</sub>.

MIRU HES and Key Energy Services to conduct 3-stage completion. GR/OCL/CBL ran 02/21/03.

**2<sup>nd</sup> Stage - Poca #3 (970.7-972.1)**

RU Key Energy and perforate Poca #3 interval under pressure using 3 1/8" HSC 970.7' - 972.1' (12 holes). All shots fired. RIH and set "Alpha" plug at 985.0' RD Key. RU HES. Pump 50 gal FE acid ahead of frac ball. Drop ball and pump 200 additional gal acid for break down. Break formation down with 10 bbls TW at 2450 psi. ISIP 1234 psi. BHTP 1500 psi. N<sub>2</sub> VF 641 scf/bbl. Treated with energized water frac per pump schedule. Flashed with 100Q foam. 5 min SIP 1095 psi. 10 min SIP 1034 psi. ATP 2500 psi. ATR 44 bpm down hole. Proppant concentrations 0.25 2.5 ppg down hole. RD HES Services.  
Materials used: 53 sks 16/30 sand; 87,000 scf N<sub>2</sub>.

**3<sup>rd</sup> Stage - Poca # (841.9' - 1844.2' (18 holes))**

RU Key Energy and perforate Poca #6 interval under pressure using 3 1/8" HSC 841.9' - 1844.2' (18 holes). All shots fired. RI hole and set plug at 900.0' RD Key. RU HES Services. Pump 50 gal FE acid ahead of frac ball. Drop ball and pump 200 additional gal acid and 8 bbl TW for break down. Break formation down at 2818 psi. ISIP 2340 psi. BHTP 2500 psi. N<sub>2</sub> VF 603 scf/bbl. 5 min SIP 2101 psi. 10 min SIP 1976 psi. ATP 2300 psi. ATR 84.5 bpm downhole. RD HES.  
Materials used: 164 sks 16/30 sand; 135,000 scf N<sub>2</sub>.

Formation	Top	Bottom
Clay	0	31
Sand and Shale	31	200
Sand	200	340
Shale	340	408
Coal	408	410
Sand	410	664
Coal	664	670
Shale	670	760
Sand	760	843
Coal	843	845
Sand and Shale	845	971
Coal	971	972
Shale	972	988
Coal	988	1008
Sand and Shale	1008	1083
Red Rock	1083	TD 1280

Received  
Office of Oil & Gas  
SEP 25 2015

*[Handwritten signature]*





H-WW

10/23/2015

8101298 P



WW-4A  
Revised 6-07

1) Date: September 16, 2015  
2) Operator's Well Number: MM 4  
3) API Well No.: 47 - 81 - 01288

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) (n) Coal Operator

(a) Name	<u>Charyl E Bailey</u> <input checked="" type="checkbox"/>	Name	<u>No Operator</u>
Address	<u>Po Box 149 Fairdale WV 26839</u>	Address	<u></u>
(b) Name	<u>Alma Calloway</u> <input checked="" type="checkbox"/>	(b) Coal Owner(a) with Declaration	<input checked="" type="checkbox"/>
Address	<u>Rockhouse Fork Rd. PO Box 40</u>	Name	<u>Maple Meadows Mining Company</u>
	<u>Glen Darrel WV 258440040</u>	Address	<u>999 Corporate Blvd, Linthicum Heights, MD 21091</u>
(c) Name	<u>Fairdale Firewill Baptist Church</u> <input checked="" type="checkbox"/>	Name	<u></u>
Address	<u>PO Box 367 Fairdale WV 25839</u>	Address	<u></u>
6) Inspector	<u>Garry Kennedy</u>	(c) Coal Lessee with Declaration	<input checked="" type="checkbox"/>
Address	<u>PO Box 268</u>	Name	<u>Maple Meadow Mining</u>
Telephone	<u>Nimitz WV 25976</u>	Address	<u>Company 999 Corporate Blvd, Linthicum Heights, MD 21091</u>
	<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.

Well Operator ARP MOUNTAINEER PRODUCTION, LLC  
 By: John W. Crook  
 Its: VP, Environmental Health & Safety  
 Address: Atlas Resource Partners, LP Park Plaza Corporate Center One  
1000 Commerce Drive 4th Floor Pittsburgh, PA 15275  
 Telephone: 412-200-7575

Subscribed and sworn before me this 21 day of September 2015  
Lauren A Skiba Notary Public  
 My Commission Expires October 2, 2011

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 [dannrlyacvoffler@wv.gov](mailto:dannrlyacvoffler@wv.gov).

COMMONWEALTH OF PENNSYLVANIA  
 Notarial Seal  
 Lauren A. Skiba, Notary Public  
 Findlay Twp., Allegheny County  
 My Commission Expires Oct. 2, 2011  
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Received  
 Office of Oil & Gas  
 SEP 25 2015



WW-9  
(2/15)

API Number 47 - 81 - 01298

Operator's Well No. MM-4

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name ARP Mountainear Production, LLC OP Code \_\_\_\_\_

Watershed (HUC 10) Marsh Fork Quadrangle Eoclea

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 80bbl 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: PTW

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

*No pit will be used  
PTW*

*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 \_\_\_\_\_

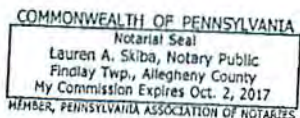
Company Official (Typed Name) John W. Crank

Company Official Title VP EHS

Subscribed and sworn before me this 21 day of September, 2015

Lauren A. Skiba Notary Public

My commission expires October 2, 2017



Received  
Office of Oil and Gas  
SEP 25 2015

8/012907

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
Tall Fescue or Orchard Grass	40
Annual Rye Grass	5

Seed Type	lbs/acre

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

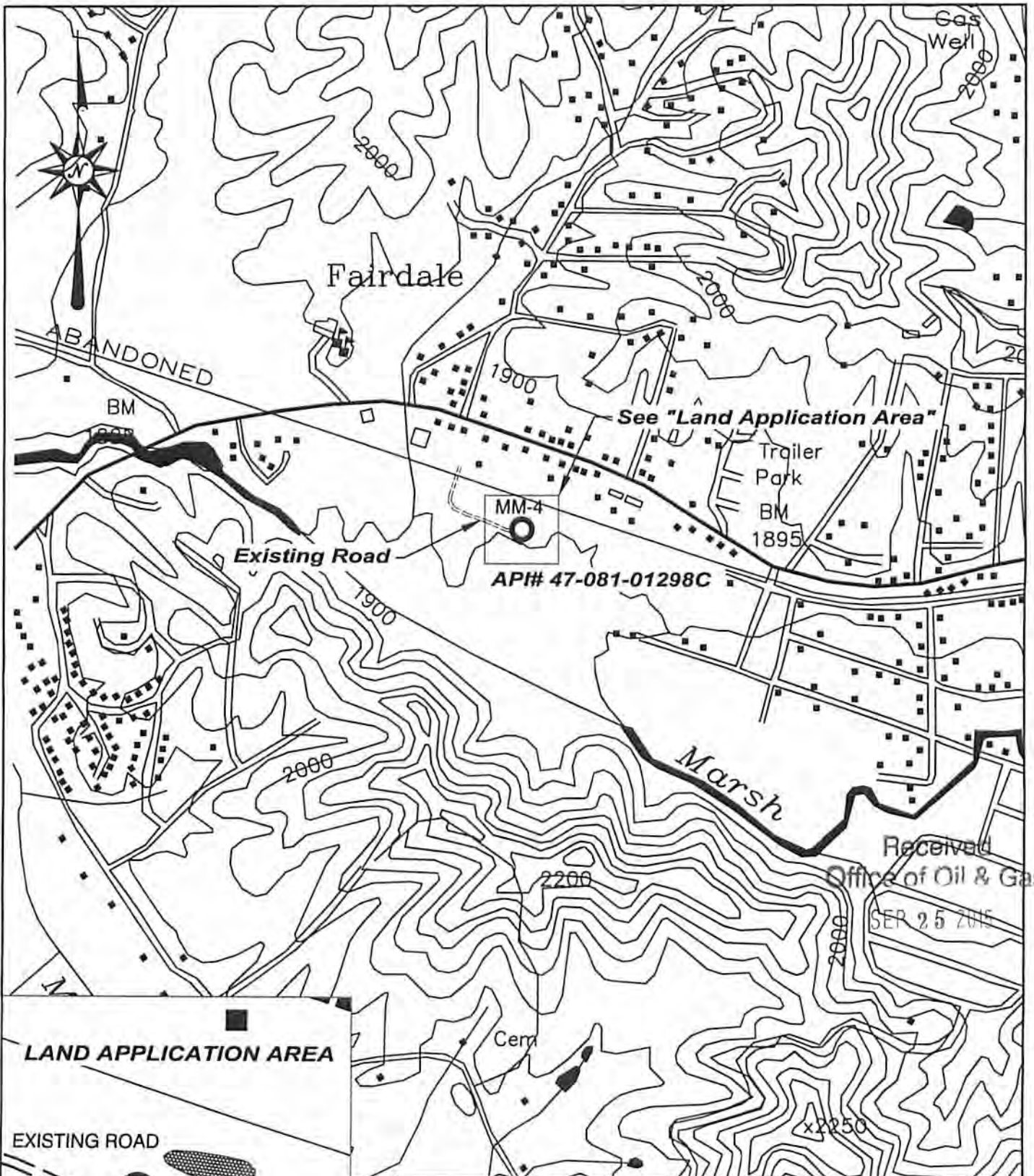
Date: 9/24/15

Field Reviewed? ( ) Yes ( ) No

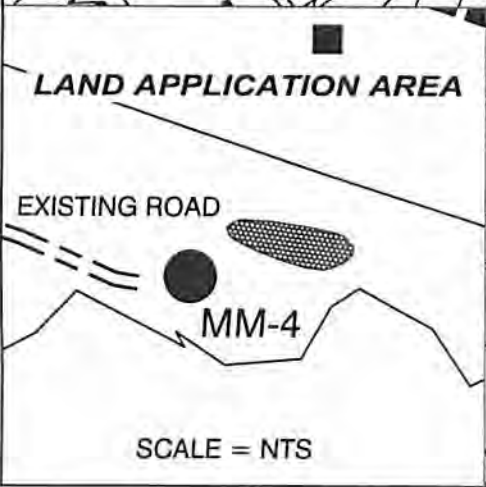
Received Office of Oil & Gas SEP 25 2015

10/23/2015





Received  
Office of Oil & Gas  
SEP 25 2015

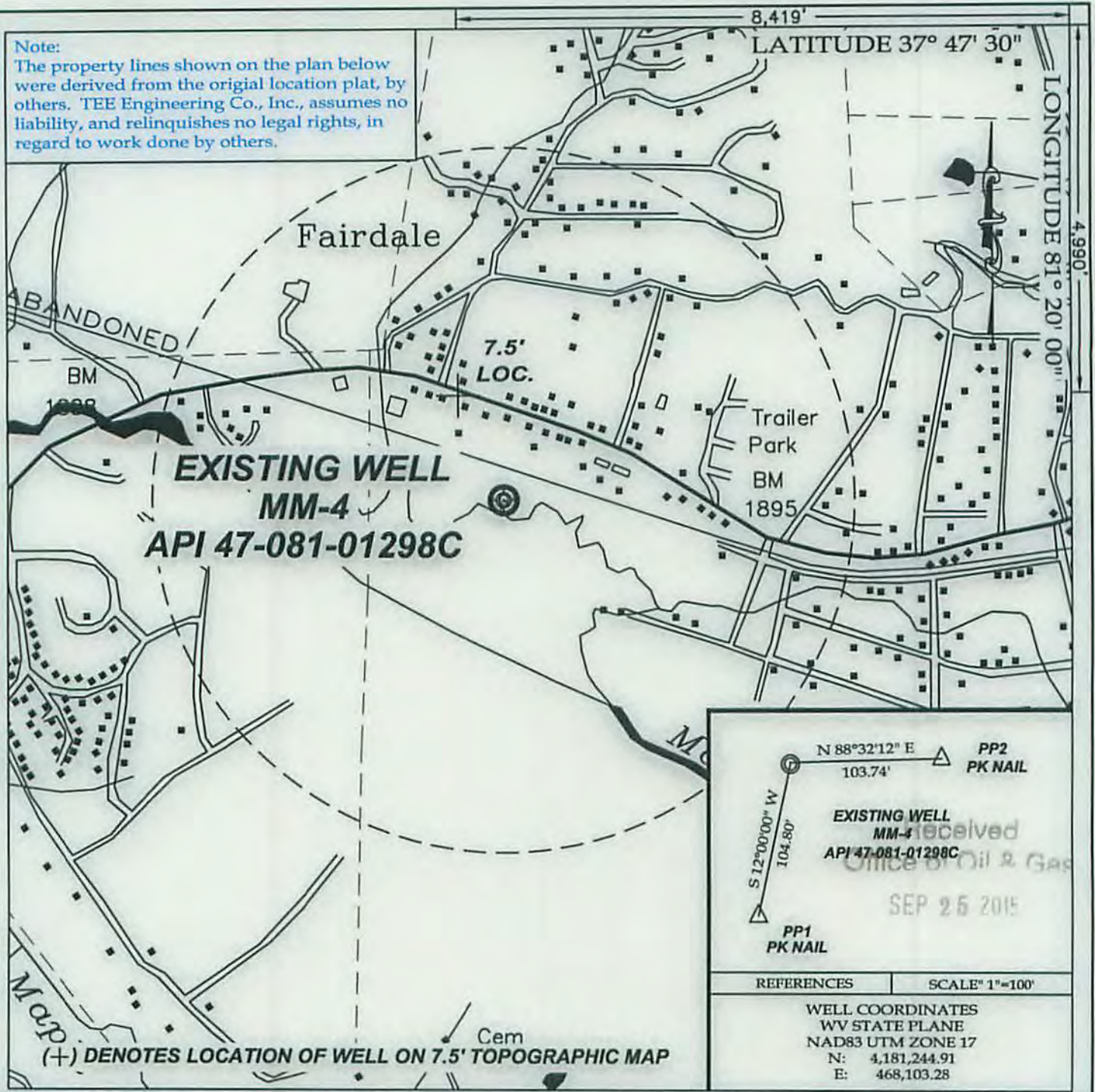


<b>ARP Mountaineer Production, LLC</b> PARK PLACE CORPORATE CENTER ONE 1000 COMMERCE DRIVE 4th FLOOR, PITTSBURGH, PA 15275	
SITE PLAN MAP	WELL NO. MM-4 API #47-081-1298C
DATE: 9/9/15	 <b>TEE Engineering Company, Inc.</b> P.O. BOX 219, STANVILLE, KY, 41659 PHONE: (606)478-5024 320 CUTTERS HILL COURT, LEXINGTON, KY, 40509 PHONE: (859)263-5350
SCALE: 1" = 1000'	

10/23/2015



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.



**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-4

FILE NO. 1883-00

DRAWING NO. ARP MM-4 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-4

API WELL NO. 47 - 081 - 01298C  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1,888.67' NORTHING 4181244.91 EASTING 468103.28 ZONE 17 NAD83 UTM  
DISTRICT TRAP HILL WATER SHED MARSH FORK  
QUADRANGLE ECCLES COUNTY RALEIGH

SURFACE OWNER WILLIAM & ALMA CALLOWAY ACREAGE 40.05  
CBM ROYALTY OWNER ROBERT C. CROUCH et al LEASE ACREAGE 28  
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) \_\_\_\_\_

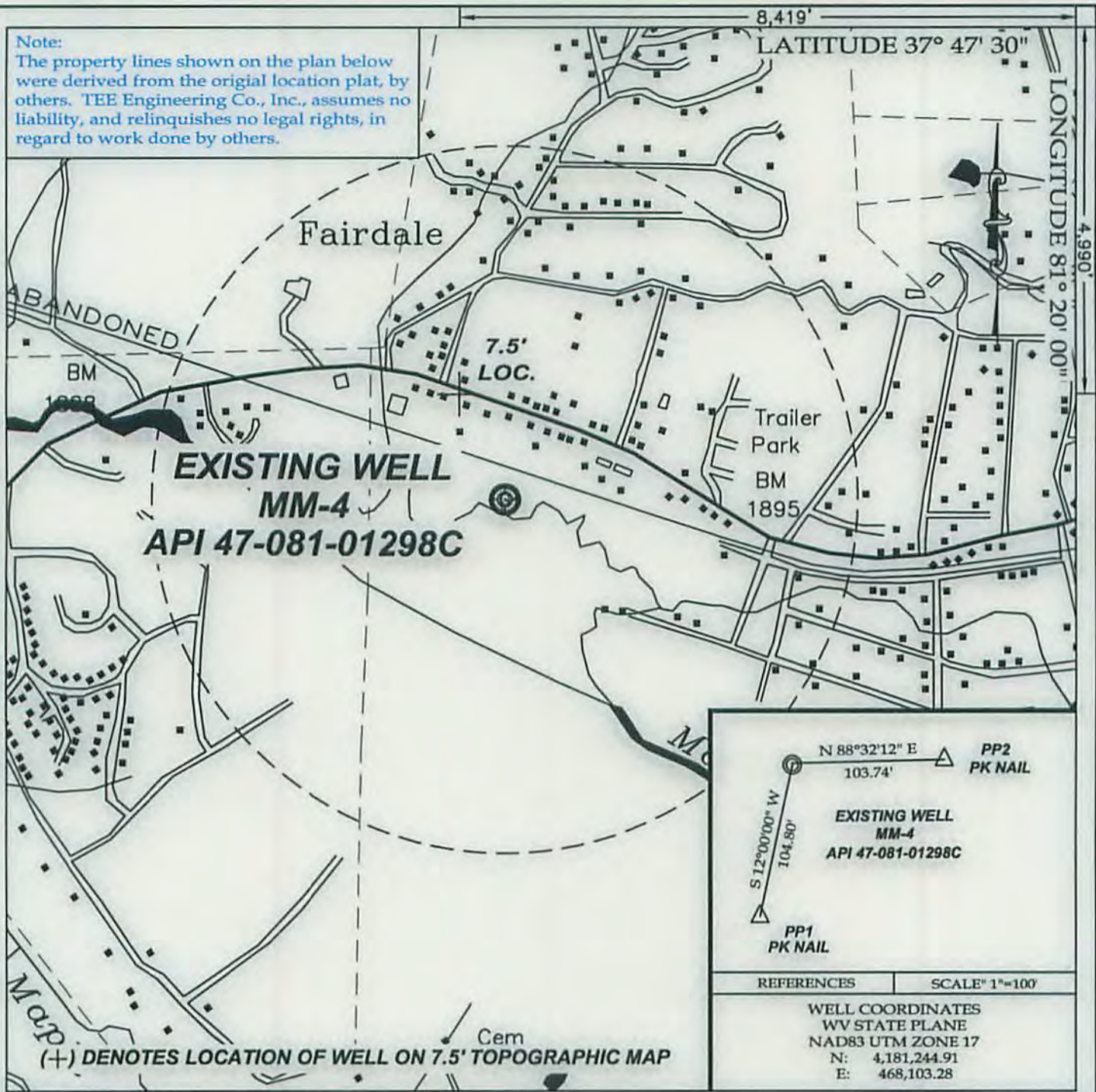
PLUG AND ABANDON  CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION POCAHONTAS - 2 ESTIMATED DEPTH 1,280'  
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



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.



**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-4

FILE NO. 1883-00  
 DRAWING NO. ARP MM-4 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-4  
 API WELL NO. 47 - 081 - 01298C  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1,888.67 NORTHING 4181244.91 EASTING 468103.28 ZONE 17 NAD83 UTM  
 DISTRICT TRAP HILL WATER SHED MARSH FORK  
 QUADRANGLE ECCLES COUNTY RALEIGH

SURFACE OWNER WILLIAM & ALMA CALLOWAY ACREAGE 40.05  
 CBM ROYALTY OWNER ROBERT C. CROUCH et al LEASE ACREAGE 280.883  
 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 1,280'  
 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