



 west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Thursday, March 21, 2019
 WELL WORK PLUGGING PERMIT
 Coal Bed Methane Well Plugging

CNX GAS COMPANY LLC
 POST OFFICE BOX 1248

JANE LEW, WV 263786506

Re: Permit approval for MC34A
 47-051-01199-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
 Chief

Operator's Well Number: MC34A
 Farm Name: BAKER, DONALD RAY
 U.S. WELL NUMBER: 47-051-01199-00-00
 Coal Bed Methane Well Plugging
 Date Issued: 3/21/2019

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.

1) Date 20 18
2) Operator's 03/22/2019
Well No. MC34A
3) API Well No. 47-051 - 01199

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 x or Underground storage ____) Deep ____ / Shallow x

5) Location: Elevation 1254.15 Watershed Valley Run of Fish Creek
District Liberty County Marshall Quadrangle Glen Easton

6) Well Operator CNX Gas Company, LLC 7) Designated Agent Christopher Turner
Address 1000 Consol Energy Drive Address P.O. Box 1248
Canonsburg, PA 15317 Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified Name James Nicholson
Address P.O. Box 44
Moundsville, WV 26041
9) Plugging Contractor Name Plants & Goodwin
Address 1034 Route 44
Shinglehouse, PA 16748

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

MURRAY ENERGY (PARENT OF CONK OWNERS) STATES THERE WILL BE NO MINE THROUGH OF THIS WELL,

LATERAL MUST BE FILLED WITH A MINIMUM OF 6% GEL.

GEL -> FRESH WATER w/ A MINIMUM OF 6% BENTONITE @ WEIGHT,

J. M. M.

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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 *Jim Theobald* Date 11/27/18

03/22/2019

McLaughlin, Jeffrey W

From: Whetstone, Erika <ErikaWhetstone@cnx.com>
Sent: Thursday, February 14, 2019 3:29 PM
To: McLaughlin, Jeffrey W
Subject: MC34 Plugging Application

Hi Jeff,

We spoke a couple weeks ago regarding CNX's application to plug well MC34 (47-051-01198). There were 2 items that you requested: a 101C and also any directional surveys. We have not located a directional survey in our files, we could only find the gamma logs. Do they help you at all? I am not able to scan them but we do have multiple copies so I could certainly put them in the mail.

Also, we checked with our contact at Murray, Mason Smith, and he said that this well it is outside of their mine area so there will be no mine-by.

Erika

Erika Whetstone

CNX | Permitting Manager WV/OH

CNX Center | 1000 CONSOL Energy Drive | Canonsburg, PA 15317

(724) 485-4035 –w | (724) 317-2224 –m



cnx.com

"This communication, including any attachments, may contain confidential and privileged information that is subject to the CNX Resources Corporation Business Information Protection Policy. The information is intended solely for the use of the intended recipient(s). If you are not an intended recipient, you are prohibited from any use, distribution, or copying of this communication. If you have received this communication in error, please immediately notify the sender and then delete this communication in its entirety from your system."

Well: MC-34
County: Marshall

4705101199CP
API#: 47-051-01198
Municipality: Liberty

03/22/2019

MC-34 PLUGGING PROCEDURE

MC 34
Production Well:

1. Move rig and equipment on site and get rigged up
2. Load hole with ~~fresh water~~ **GEL - FRESH WATER w/ 6% BENTONITE (BY WEIGHT)** and run in well with sandline and find TD (around 1274')
3. Move wireline on location and rig up 7" bridge plug (Needs to fit 6.538" ID)
4. Run in well with bridge plug and set bridge plug 20' above coal seam at 1048' in 7" steel casing
5. Once plug is set pull out of hole and run tubing in well to 1048'
6. Move cementers on location and rig up on well
7. Fill well with cement (Class A w/3% CaCl) (1048'-surface)
8. Pull remaining tubing out of well
9. Install monument and name plate (**Must have Well Name (MC-34P), API#, Company Name and extend 72" above ground level**)
10. Rig down and move off location

MC 34P
Access Well:

1. Move rig and equipment on site and get rigged up
2. Load well with fresh water

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4705101199CP

API#: 47-051-01198

03/22/2019

Municipality: Liberty

Well: MC-34

County: Marshall

3. Run in well with sandline and find TD
4. TOOH and rig up wireline with gyro.
5. TIH with gyro and run down in curve in 4 ¾" hole. Find 5-10° inclination.
6. TOOH and rig down gyro.
7. Rig up tubing conveyed bridge plug. TIH and set bridge plug at 5-10° inclination of 4 ¾" hole.
8. Make sure tubing is free from bridge plug
9. Rig up cementers and cement from bridge plug to surface (Class A w/3% CaCl).
10. Once cement is to surface remove tubing
11. Install monument and name plate (**Must have Well Name (MC-34A), API#, Company Name and extend 72" above ground level**)
12. Rig down and move off location

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Alternate Method MC34

The following method describes a process to drain water and methane from the Pittsburgh coal seam ahead of mining operations. The drilling of two wells is required to complete this process. The first well will be used ONLY to access the Pittsburgh Seam and will intercept the second wellbore. The second well will be a vertical production hole. This well will be used to lift water to the surface and to collect the methane. This well will be equipped with a meter and connected to a sales pipeline. NOTE: The access well could be used at a later time for necessary cleanout or remedial work.

Access Hole

This hole will be drilled to a depth 200'- 300' above the Pittsburgh coal seam. Conductor, water/shale strata protection casing will be set in this hole. The water/shale strata protection string will be set at a depth of approximately 774'. All casing strings will be cemented to surface. The casing will be equipped with a shutoff valve at surface. An additional string of casing may be required to address unforeseen hole conditions. Where the casing ends and into the Pittsburgh Seam, CNX will utilize a blocking and sealing system to seal off water and gas from entering the borehole. The sealing system is a proprietary process developed by Schlumberger PermaBlok. This system has been proven most effective in stabilizing the formations and preventing migration and or inflow of water and gas.

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Production Well

This hole will be drilled to a depth of 250' below the Pittsburgh coal seam. Conductor, water protection and production casing will be set in this hole. The water protection string will be set at a depth of approximately 410'. An additional string may be required based on hole conditions. The production casing will be 7" and set at a depth 200' below the Pittsburgh coal seam. All casing strings will be cemented to surface. The 7" casing string will include two joints (60') of fiberglass. This fiberglass casing will be set across the Pittsburgh coal seam interval to facilitate future mining. A baffle will be included in the 7" casing string and will be placed approximately 10-20' below the Pittsburgh coal seam. The baffle will be knocked out at the conclusion of horizontal drilling

Directional Drilling Details

(LATERAL)

Horizontal drilling operations will begin in the access hole using a 4 3/4" bit, bent sub and motor. The plan is to exit the vertical casing, build an angle and continue drilling 4 3/4" vertical to approximately 400' above the coal where we will then build angle to 90-degrees and achieve a horizontal status. PermaBlok will be used to seal the coals and formations below the casing in the access hole. Once this is accomplished, we will penetrate the 7" string of fiberglass that is in the production hole. Upon penetration we will drill through and continue drilling until 2900'± of lateral section has been achieved. We will then trip back to approximately 400' short of the production hole and create a sidetrack at a 28° ± angle and drill 2200'±. We will then trip back to the production hole and create a sidetrack at a 60° ± angle and continue drilling until 2600'±. We will now trip back and create a sidetrack at a 36° ± angle to a distance of 2900'±.

CNX Resources Corporation
Well Bore Diagram
MC-34A

Date Updated: 9/5/2018 Date Drilled: _____

State: West Virginia API #: 47-051-01199
 County: Cameron Lease #: Baker
 Municipality: Liberty Permit #: MC-34A
 Current Completion: CBM

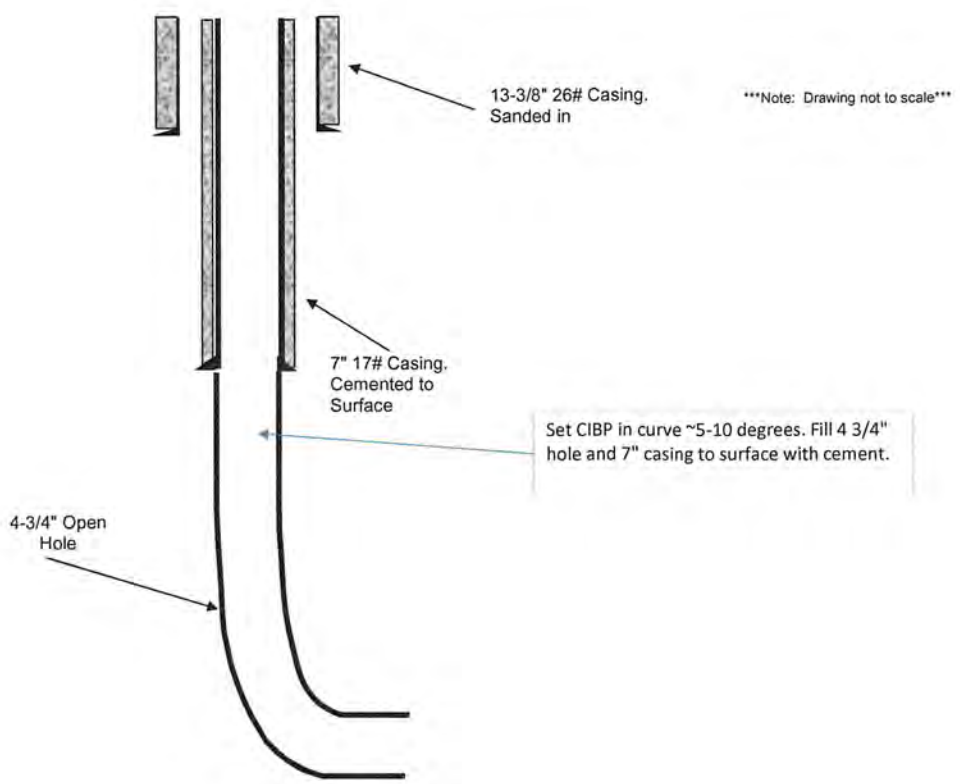
Elevations: 1254.15 GL

Cased Hole Depth (LD): _____ MD (KB)
 Cased Hole Depth (LD): _____ TVD (KB)

Top of Formation: _____ MD (KB)
 Top of Formation: _____ TVD (KB)

Casing

Conductor:	<u>13-3/8"</u>	Depth Set (GL):	<u>30'</u>	Grade and Weight:	<u>17#</u>	Hole Size:	<u>8-7/8"</u>
Surface:	<u>7"</u>	Depth Set (GL):	<u>774'</u>	Grade and Weight:	_____	Hole Size:	_____
Production:	_____	Depth Set (GL):	_____	Grade and Weight:	_____	Hole Size:	<u>4-3/4"</u>
Open Hole:	<u>4-3/4"</u>	Depth Set (GL):	_____	Grade and Weight:	_____		

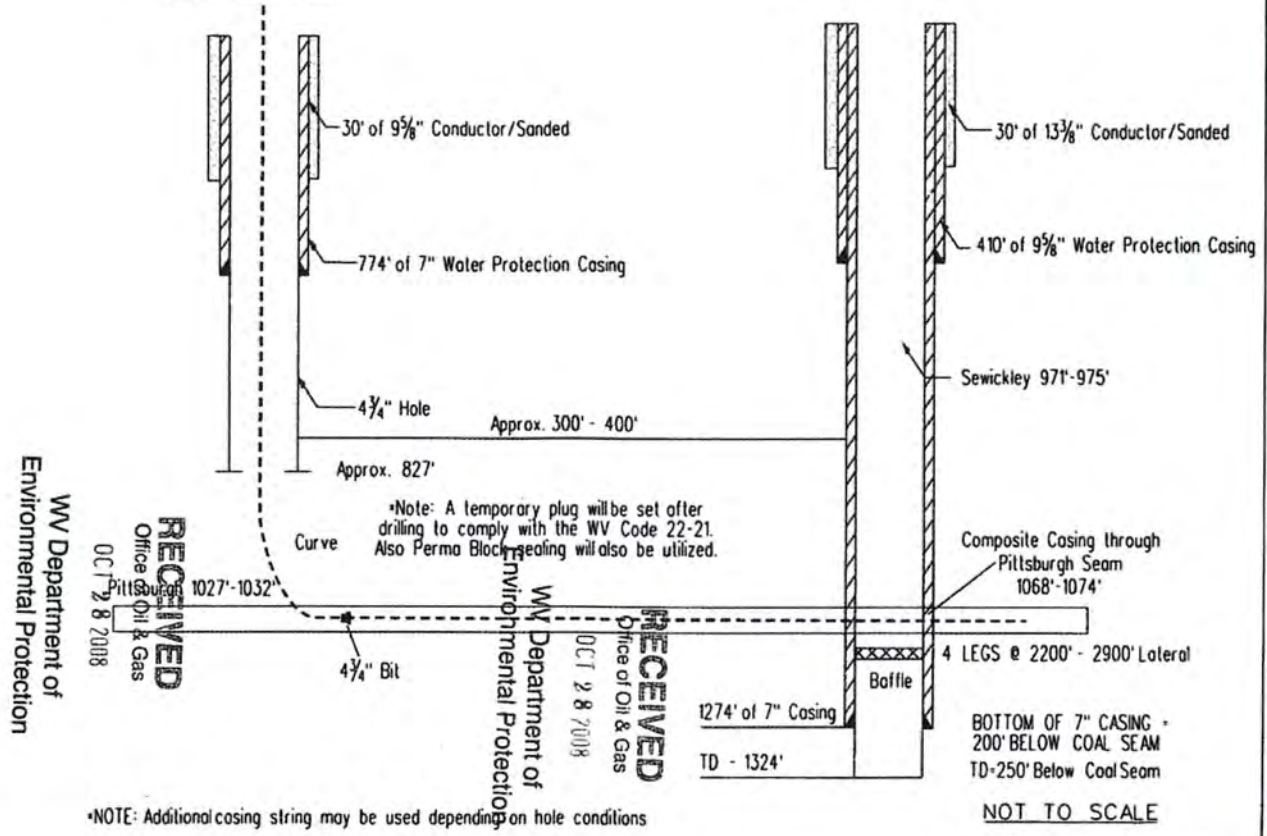


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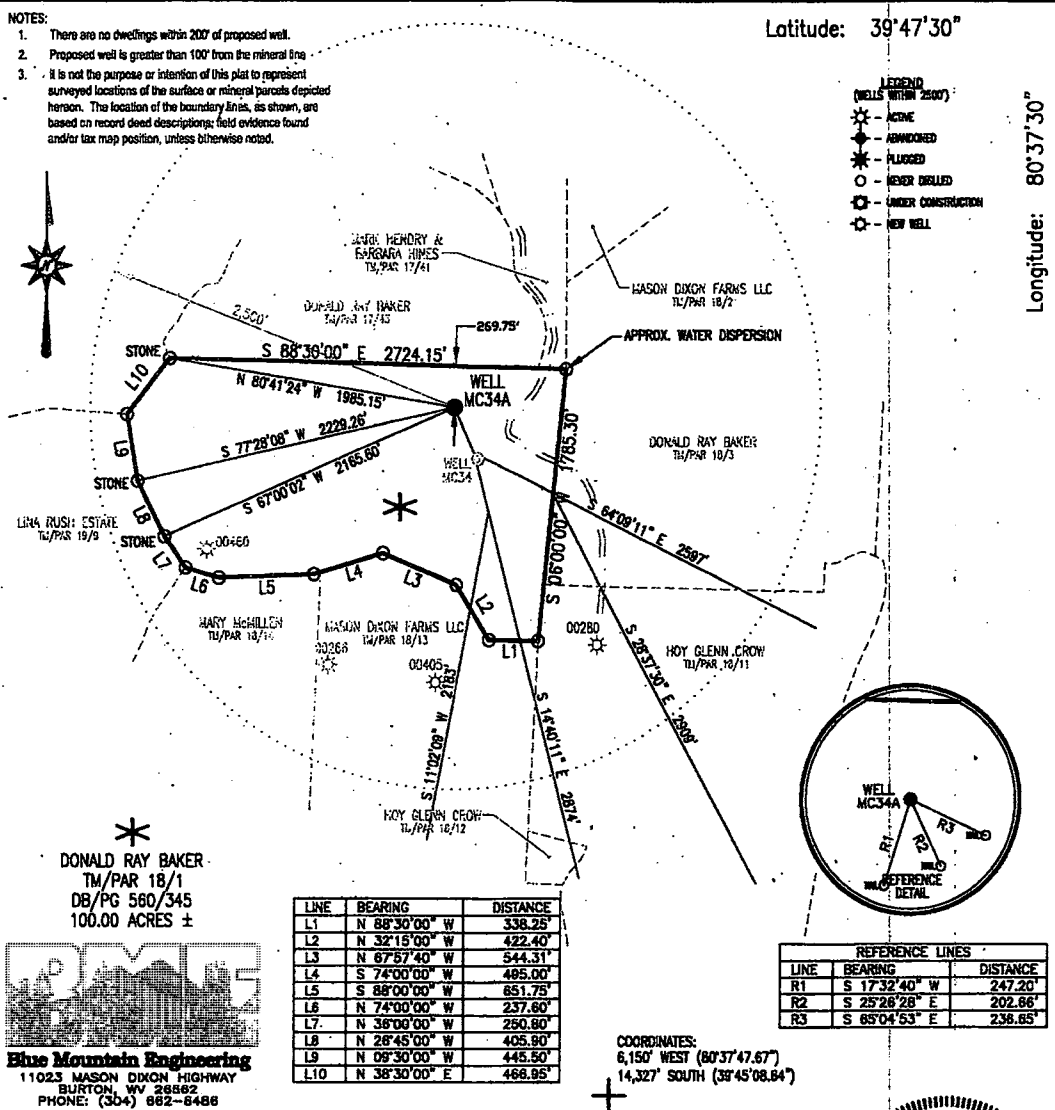
FIGURE 1
CNX GAS COMPANY LLC

51-01199C
ACCESS MC34A

51-01198C
PRODUCTION MC.34



51-01199



FILE #: MC34A
 DRAWING #: MC34A
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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 ENVIRONMENTAL PROTECTION.

Signed: _____
 R.P.E.: _____ L.L.S.: P.S. No. 2000

DATE: OCTOBER 21, 2008
 OPERATOR'S WELL #: MC34A
 API WELL #: 47 51 01199C
 STATE COUNTY PERMIT

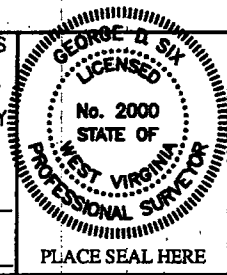
WELL TYPE: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: VALLEY RUN OF FISH CREEK ELEVATION: 1254.15'
 COUNTY/DISTRICT: MARSHALL/LIBERTY QUADRANGLE: GLEN EASTON, WV 7.5'
 SURFACE OWNER: DONALD RAY BAKER ACREAGE: 100.00±
 OIL & GAS ROYALTY OWNER: SEE ATTACHED ACREAGE: 100.00±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: PITTSBURGH ESTIMATED DEPTH: 1032±

WELL OPERATOR: CNX Gas Company LLC DESIGNATED AGENT: JOHN H. JOHNSTON
 Address: 2481 JOHN NASH BLVD. Address: BANK ONE CENTER, PO BOX 1588
 City: BLUEFIELD State: WV Zip Code: 24701 City: CHARLESTON State: WV Zip Code: 25326-1598



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 WV Department of Environmental Protection

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number
MC34A

3) API Well No.: 47 - 051 - 01199

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 Donald Ray Baker
Address RD 5 Box 100
Cameron, WV 26033
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector James Nicholson
Address P.O. Box 44
Moundsville WV 26041
Telephone 304-552-3874

5) (a) Coal Operator
Name McElroy Coal Company
Address 1000 Consol Energy Drive
Canonsburg, PA 15317
(b) Coal Owner(s) with Declaration
Name Consol RCPC LLC
Address 1000 Consol Energy Drive
Canonsburg, PA 15317
(c) Coal Lessee with Declaration
Name McElroy Coal Company
Address 1000 Consol Energy Drive
Canonsburg, PA 15317

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.

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COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Douglas E. Smith, Notary Public
Cecil Twp., Washington County
My Commission Expires Dec. 6, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Well Operator CNX Gas Company, LLC
By: Raymond Hoon
Its: Permitting Supervisor
Address 1000 Consol Energy Drive
Canonsburg, PA 15370
Telephone 724-485-3540

WV Department of
Environmental Protection

Subscribed and sworn before me this 6th day of November 2018
Douglas E. Smith Notary Public
My Commission Expires 12-6-2020

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.

03/22/2019

WW-9
(5/16)

API Number 47 - 051 - 01199
Operator's Well No. _____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company, LLC OP Code 494458046

Watershed (HUC 10) Valley Run of Fish Creek Quadrangle Glen Easton

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: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Waste Management or Ryan Environmental will use vacuum trucks, and properly dispose of any fluid or waste returns)

Will closed loop system be used? If so, describe: no

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. na

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? na

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. na

-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 April 1, 2016, 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 *Raymond Hoon*
Company Official (Typed Name) Raymond Hoon
Company Official Title Permitting Supervisor

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Subscribed and sworn before me this 6th day of November, 2018

Douglas E. Smith

Notary Public
COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Douglas E. Smith, Notary Public
Cecil Twp., Washington County
My Commission Expires Dec. 6, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

My commission expires 12-6-2020

Proposed Revegetation Treatment: Acres Disturbed less than 1 acre Prevegetation pH _____

Lime 2-3 Tons/acre or to correct to pH _____

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch hay or straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
<u>Tall Fescue</u>	<u>40</u>	<u>Tall Fescue</u>	<u>40</u>
<u>Landino Clover</u>	<u>5</u>	<u>Landino Clover</u>	<u>5</u>

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Jim Michael*

Comments: _____

Title: *O. & Gas Inspector*

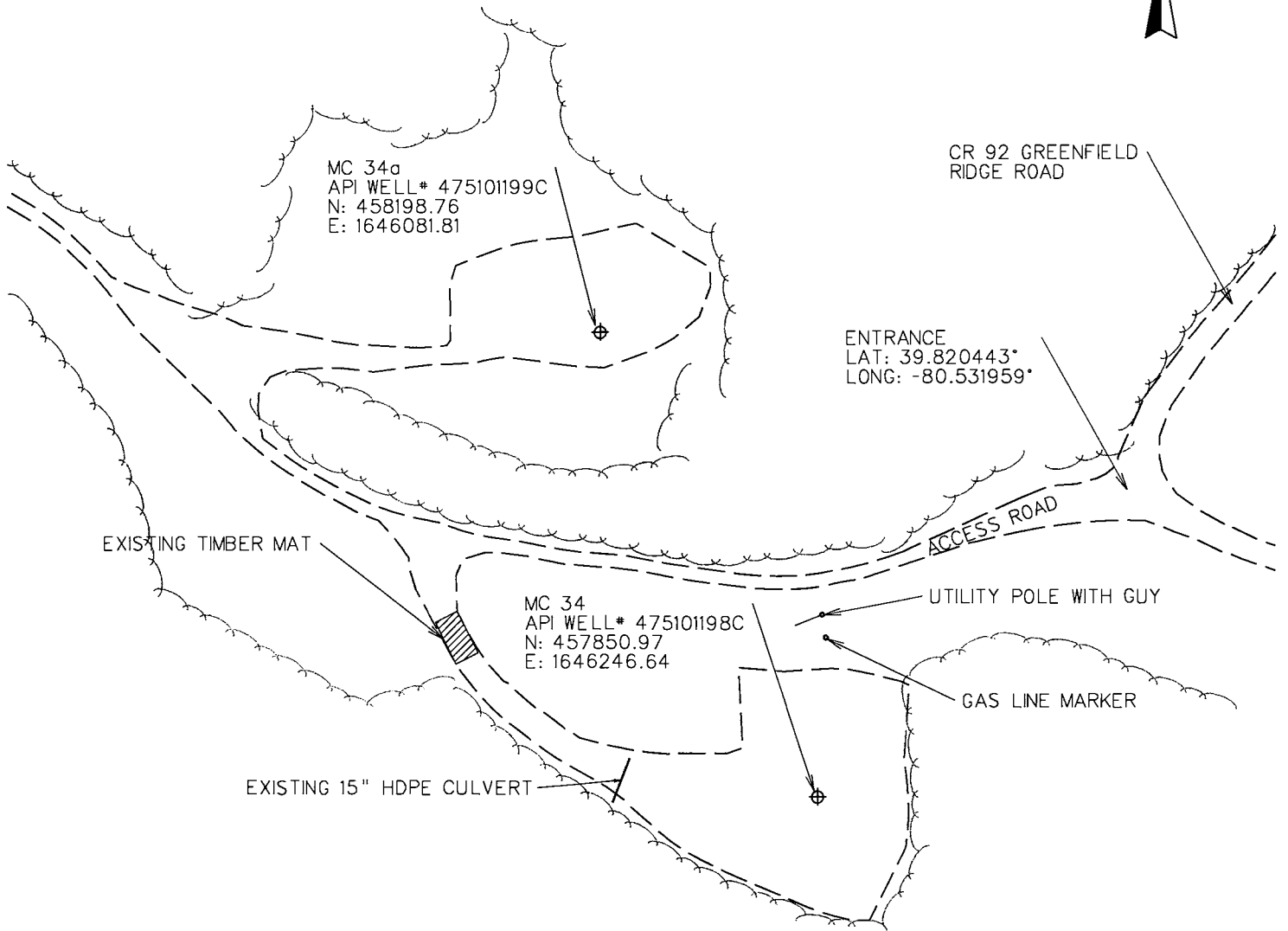
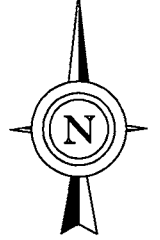
Date: *11/27/18*

Field Reviewed? () Yes () No

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470 5101199CP

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DRAWINGS TO ACCOMPANY FORM WW-9

CNX GAS COMPANY LLC

1000 CONSOL ENERGY DRIVE

CANONSBURG, PA 15317

WATERSHED: VALLEY RUN OF FISH CREEK

DISTRICT: LIBERTY

COUNTY: MARSHALL

QUADRANGLE: GLEN EASTON

WELL NO.: MC 34 & MC 34a

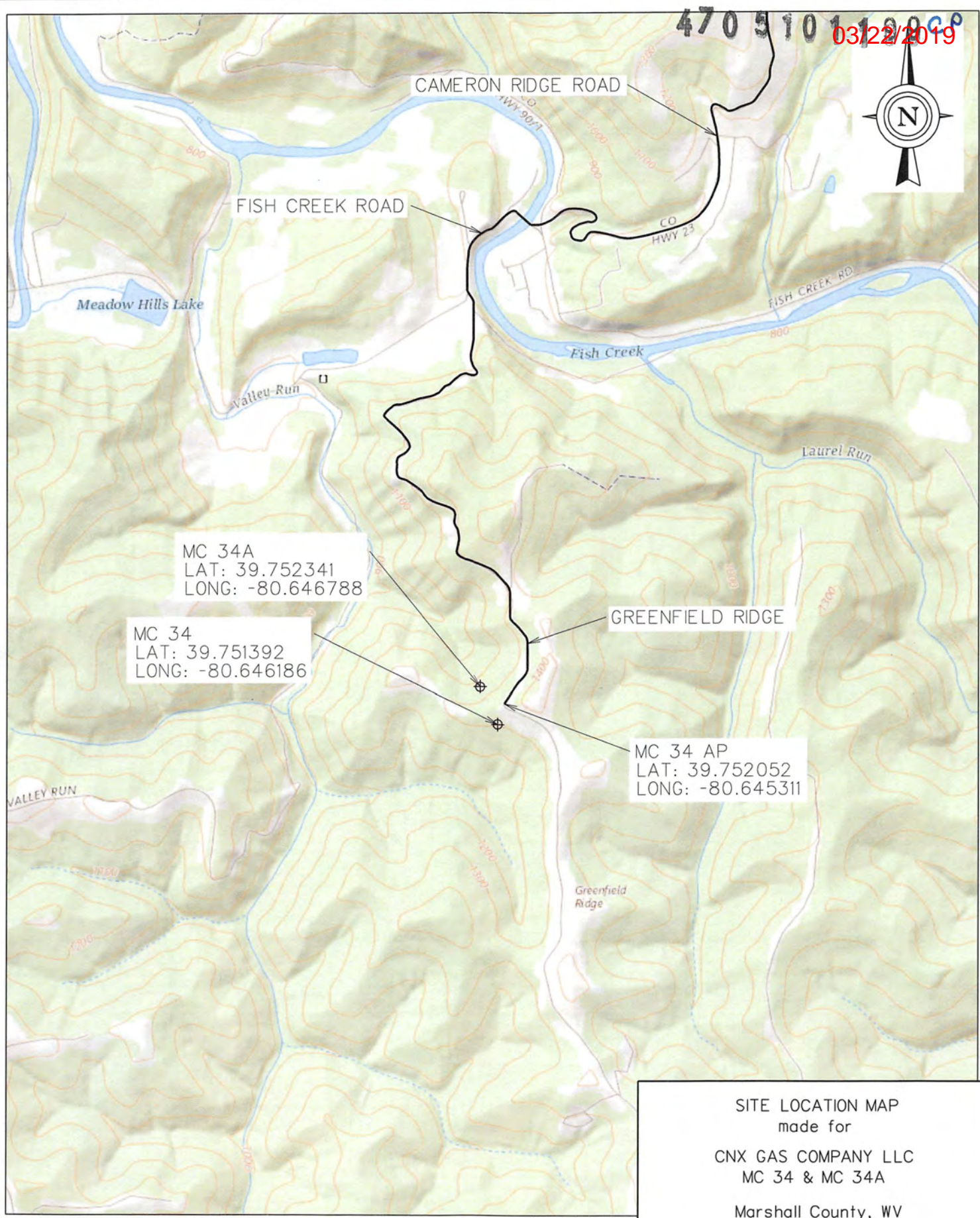
DATE: 10/30/2018

LENGEND

--- EXISTING ROAD

0 100 ft.
SCALE:

THIS PLAN IS FOR THE PLUGGING OF
AN EXISTING WELL. ENTIRE LENGTH OF
ACCESS IS EXISTING WELL ROAD.
ROCK WILL BE USED WHERE NECESSARY.



MC 34A
LAT: 39.752341
LONG: -80.646788

MC 34
LAT: 39.751392
LONG: -80.646186

MC 34 AP
LAT: 39.752052
LONG: -80.645311

REFERENCES: MAGERY PROVIDED BY USGS:
CAMERON, WV QUADRANGLE;
STATE 7.5 MINUTE SERIES



SITE LOCATION MAP
made for
CNX GAS COMPANY LLC
MC 34 & MC 34A
Marshall County, WV
prepared by
STAHL SHEAFFER ENGINEERING
6000 Town Center Blvd., Suite 215
Canonsburg, PA. 15317
Phone: 724.960.1111 Fax: 724.960.1162

WW-7
8-30-06



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

API: 47-51-01199C WELL NO.: MC34A
 FARM NAME: N/A
 RESPONSIBLE PARTY NAME: CNX Gas Company LLC
 COUNTY: Marshall DISTRICT: Liberty
 QUADRANGLE: Glen Easton, WV 7.5'
 SURFACE OWNER: Donald Ray Baker
 ROYALTY OWNER: _____
 UTM GPS NORTHING: 4400229.72
 UTM GPS EASTING: 530258.75 GPS ELEVATION: 384.6m (1261.5')

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 _____: Post Processed Differential _____
 Real-Time Differential _____

Mapping Grade GPS : Post Processed Differential _____
 Real-Time Differential

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.

[Signature] Supervisor - PERMITTING 11-6-18
 Signature Title Date

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