



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

February 05, 2016

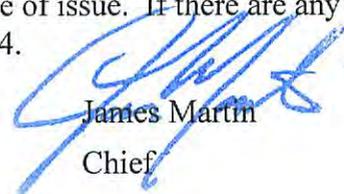
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-500789, issued to CHESAPEAKE APPALACHIA, L.L.C., 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: 802599 WO
Farm Name: STOLLINGS, PEARL, ETAL
API Well Number: 47-500789
Permit Type: Plugging
Date Issued: 02/05/2016

Promoting a healthy environment.

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.

500789P

FORM WW-4 (B)
Observe
File Copy
(Rev. 2/01)

1) Date: 1/11/2016
2) Operator's Well No. 802599 P&A
3) API Well No. 47-005-0789

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 _____
(Is Gas, Production X or Underground storage _____) Deep _____ Shallow X
- 5) Location: Elevation 1205' Watershed Big Horse Creek of Little Coal River
District Scott County Boone Quadrangle Mud, WV 7.5'
- 6) Well Operator Chesapeake Appalachia, L.L.C. 7) Designated Agent Jessica Greathouse
Address P.O. Box 18496 Address P.O. Box 6070
Oklahoma City, OK 73154-0496 Charleston, WV 25362
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Gary Kennedy Name Chesapeake Appalachia, L.L.C.
Address P.O. Box 268 Address P.O. Box 18496
Nimitz, WV 25978 Oklahoma City, OK 73154-0496

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

See Attached Sheet

OK JMM
per phone by Gary Kennedy.

CK 5314289
700
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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 _____ Date _____

PLUGGING PROCEDURE

Note: Well is caved at approximately 2150'.

- 1) Prepare road and location, MIRU Service Rig
 - 2) RIH with tools and check top of bridge at approximately 2150'
 - 3) TIH with W.S. to 2140', spot gel
 - 4) Spot 150' cement plug 2140'-1990', pull W.S.
 - 5) Attempt to pull 3"
 - A) If successful - proceed to step 6
 - B) If unsuccessful
 - a) Cut 3" at free-point (approximately 1745') and pull
 - b) Proceed to step 6
 - 6) Rip or shoot holes in 6 5/8" at approximately 1700'-1675'
 - 7) Run W.S. to 1810', spot gel
 - 8) Spot 200' cement plug 1810'-1610', pull W.S.
 - 9) RIH with tools to check TOC. If top of cement is below 1650', then add cement to top of plug
 - 10) Cut 6 5/8" at free-point (approximately 1250') and pull
 - 11) TIH with W.S. to 1250', spot gel
 - 12) Spot 100' cement plug 1250'-1150', pull W.S. to 1000'
 - 13) Spot 150' cement plug 1000'-850', pull W.S.
 - 14) RIH with tools to check TOC. If top of cement is below 900', then add cement to top of plug
- NOTE: If 6 5/8" is not free at 1200' or deeper, then shoot or rip holes in casing so plugs in steps 12 and 13 can be set. Then pull 6 5/8" from wherever free and spot 100' plug at cut.
- 15) Attempt to pull 8 1/4"
 - A) If successful
 - a) TIH with W.S. to 570', spot gel
 - b) Spot 100' cement plug 570'-470'
 - c) Proceed to step 16
 - B) If unsuccessful
 - a) TIH with W.S. to 570', spot gel
 - b) Spot 100' cement plug 570'-470', pull W.S.
 - c) Cut 8 1/4" at free-point (approximately 425') and pull (If unable to pull at least 400' of 8 1/4" then rip or shoot holes where plugs are to be spotted, and pull 8 1/4" from where free)
 - d) Proceed to step 16
 - 16) Pull or run W.S. to 425', spot gel
 - 17) Spot 150' cement plug 425'-275', pull W.S. to 100'
 - 18) Spot 100' cement plug 100' – surface
 - 19) Pull W.S. and top off with cement
 - 20) Erect monument and reclaim as prescribed by law

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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

BW-789

WELL RECORD

Permit No. _____ Oil or Gas Well Gas

Company UNITED FUEL GAS CO.,
 Address P.O. Box 1273, Charleston 25, W. Va.
 Farm Pearl Stollings, et al Acres 33
 Location (waters) Left Fk. of Horse Cr.
 Well No. 2599 Elev. 1200 Bar
 District Scott County Boone
 The surface of tract is owned in fee by _____
 Address _____
 Mineral rights are owned by A. E. Chambers
Danville Address West Virginia
 Drilling commenced 3-29-29
 Drilling completed 6-12-29
 Date Shot 6-12-29 From _____ To _____
 With 30 Cbs.
 Open Flow /10ths Water in _____ Inch
/10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock Pressure 445 lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water 400, 550 feet _____ feet
 Salt water 1115-1140 feet 1525-1550 feet

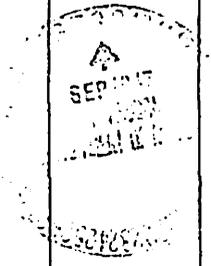
Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
10			Kind of Packer _____
15			Anchor _____
10			Size of _____
8 1/2	<u>517'</u>	<u>517'</u>	<u>3"X5-3/16 X 16"</u>
6 1/2	<u>1757'</u>	<u>1757'</u>	Depth set <u>2273'</u>
5 3/16			
3		<u>2476</u>	Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
 COAL WAS ENCOUNTERED AT 310 FEET 60 INCHES
360 FEET 96 INCHES FEET INCHES
 FEET INCHES FEET INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Soil & Clay			0	10			
Slate			10	120			
Sand			120	300			
Slate			300	310			
Coal			310	315			
Slate			315	325			
Sand			325	350			
Slate			350	360			
Coal			360	368			
Slate			368	394			
Sand			394	425	Water		
Slate			425	440			
Sand			440	460			
Slate & Shells			460	580			
Grey Lime			580	610			
Slate			610	615			
Black Lime			615	645			
Slate			645	655			
White Sand			655	900			
Slate & Shells			900	1015			
Salt Sand			1015	1100			
Slate			1100	1105			
Salt Sand			1105	1190	Water	1115 1140	Hole Full
Break			1190	1195			
Sand			1195	1235			
Slate & Shells			1235	1300			
Lime			1300	1315			
Salt Sand			1315	1625	Water	1525-1550	Hole Full
Slate & Red Rock			1625	1630			
Sand			1630	1655			
Blue Mud			1655	1675			
Lime			1675	1690			
Blue Mud			1690	1695			
Little Lime			1695	1715			
Pencil Cave			1715	1717			
Big Lime			1717	1934			
6-5/8" Casing				1754			
Hole Reduced at				1871			
Big Injun			1934	1980			

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Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
<hr/>							
Slate & Shells			1980	2050			
Squaw Shells			2050	2125			
Slate Shells			2125	2265			
Weir & Shells			2265	2290			
Slate & Shells			2290	2350			
Sand Broken			2350	2401			
Brown Shale			2401	2420			
Berea Grit			2420	2447			
Gas			2425'				
Gas			2460'				
Total Depth:			2460'				

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Date: September 5, 1947

APPROVED: UNITED FUEL GAS CO., Owner

By: *J. F. [Signature]*
 Chief Engineer (Title) *[Signature]*

WW4-A
Revised
2/01

1) Date: 1/11/2016
2) Operator's Well No. 802599 P&A
3) API Well No. 47-005-0789

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
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 Russell Silva and
Address Teresa Silva
5973 Dog Hollow Road
Morrisvale, WV 25565
(b) Name See Attached List for
Address Access Road Surface Owners
(c) Name _____
Address _____
6) Inspector Gary Kennedy
Address P.O. Box 268
Nimitz, WV 25978
Telephone 304-382-8402

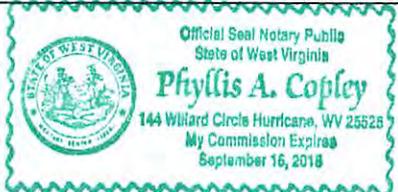
5) Coal Operator
(a) Name Hobet Mining, LLC
Address 63 Corporate Centre Drive Suite 416
Scott Depot, WV 25560
Coal Owner(s) with Declaration
(b) Name Russel Silva and
Address Teresa Silva
5973 Dog Hollow Road
Morrisvale, WV 25565
Name _____
Address _____
Coal Lessee with Declaration
(c) Name Robin Land Company, LLC
Address C/O Patriot Reserve Holdings, LLC
63 Corporate Centre Drive Suite 416
Scott Depot, WV 25560

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 the 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 the 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: Chesapeake Appalachia, L.L.C.
By: [Signature]
Its: Manager - Operations, Appalachia South
Address: P.O. Box 18496
Oklahoma City, OK 73154-0496
Telephone: 405-935-4073

Subscribed and sworn before me this 11th day of January the year of 2016
Phyllis A. Copley Notary Public
My Commission Expires September 16, 2018
Form WW-9

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API Number 47-005-0789
Operator's Well No. 802599 P&A

ACCESS ROAD SURFACE OWNERS

Greenbrier Land Company ✓
C/O Harper C. Evans ✓
18 Deere View CT
Fayetteville, WV 25840

William A. White Jr. ✓
144 Third Street West
Madison, WV 25130

William A. White ✓
379 Second Street
Madison, WV 25130

Robert F. Byus ✓
373 Second Street
Madison, WV 25130

James E. Byus ✓
110 Woodland Drive
Madison, WV 25130

Stephen K. Byus ✓
470 Third Street
Madison, WV 25130

D D Oil Company ✓
P.O. Box 406
Spencer, WV 25276

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Rev. 02/01

API Number 47-005-0789
Operator's Well No. 802599 P&A

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Chesapeake Appalachia, L.L.C. OP Code 494477557
Watershed Big Horse Creek of Little Coal River Quadrangle Mud, WV 7.5'
Elevation 1,205' County Boone District Scott

Description of anticipated Pit Waste: Plugging Returns/Cement

Will a synthetic liner be used in the pit? Yes 20 mil.

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 _____)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Swabbing
- Plugging
- Other (Explain _____)

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on December 31, 1999, 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 *David Gocke*

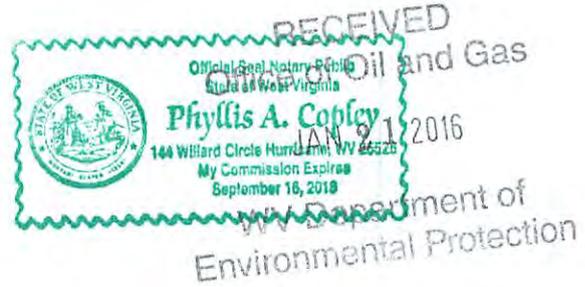
Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 11th day of January, 2016.

Phyllis A. Copley Notary Public.

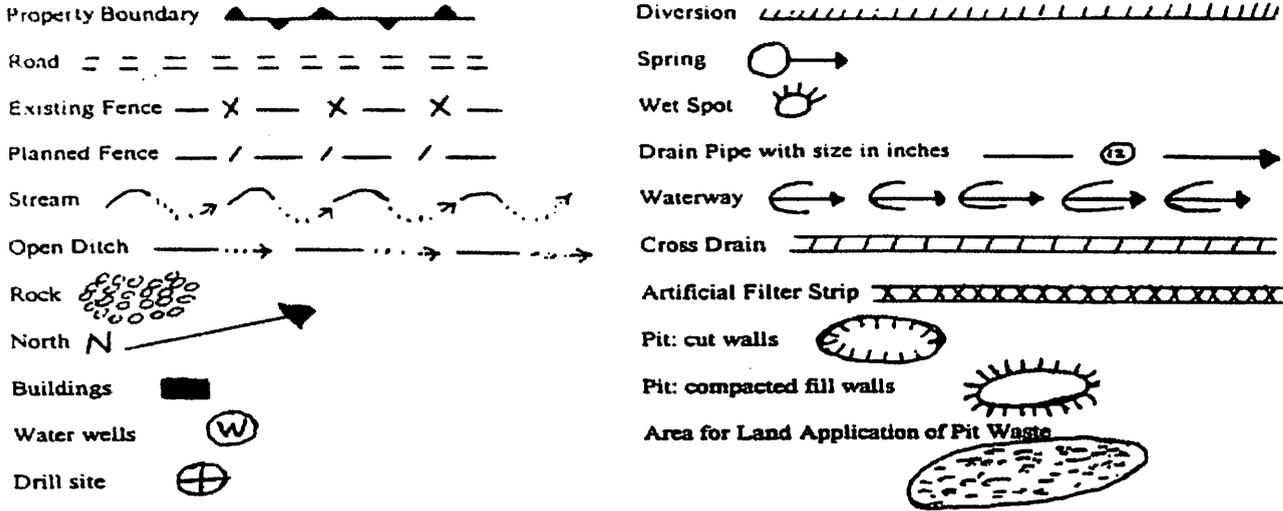
My Commission Expires September 16, 2018



Attachment #1

API #: 47-005-0789
 Operator's Well No. 802599 P&A

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.1

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 Tons/acre (500 lbs minimum)

Mulch Weed Free Straw 2 Tons/acre

Seed Mixtures

October 1st to April 30th		May 1st to September 30th	
Creeping Red Fescue	68.60%	Creeping Red Fescue	68.60%
Wheat	14.76%	Wheat	17.18%
Annual Ryegrass	9.80%	Annual Ryegrass	9.80%
Ladino Clover	3.21%	Ladino Clover	4.97%

Total seeding will be 50 lbs/acre

Attach:
 Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Title: _____

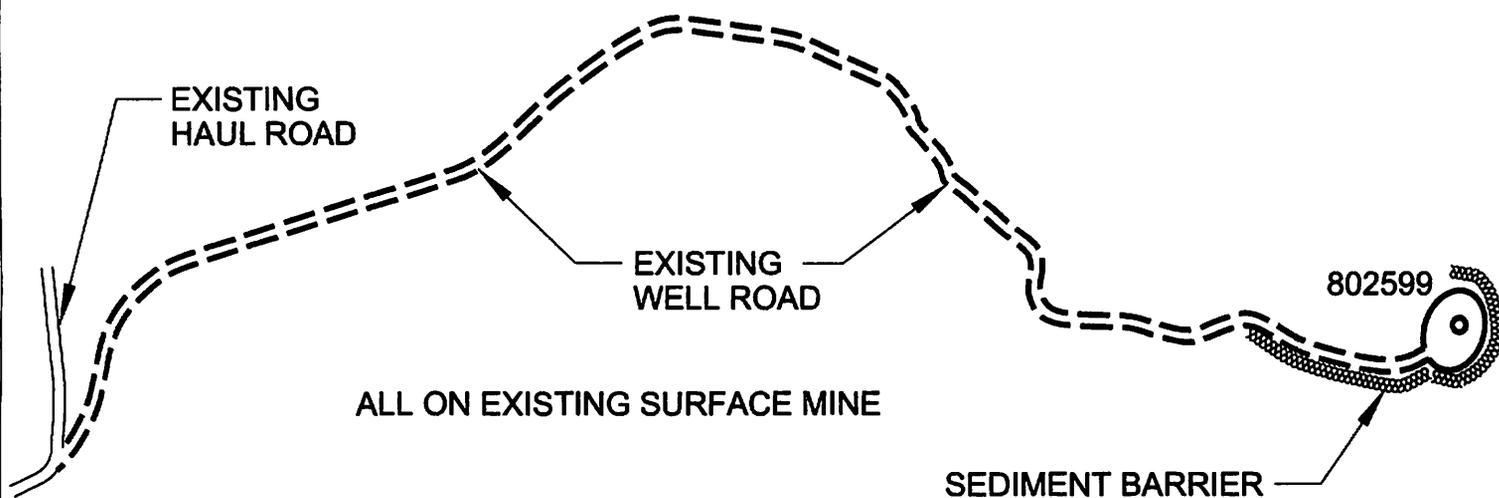
Date: _____

Field Reviewed? () Yes () No

CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM
WELL LOCATION 802599

API 47-005-00789



GENERAL NOTES

This drawing is a schematic representation of the well site and access road. Proposed structures such as well site, drilling pit, roadways, culverts, sediment barriers, etc. are shown in approximate pre-planning configurations.

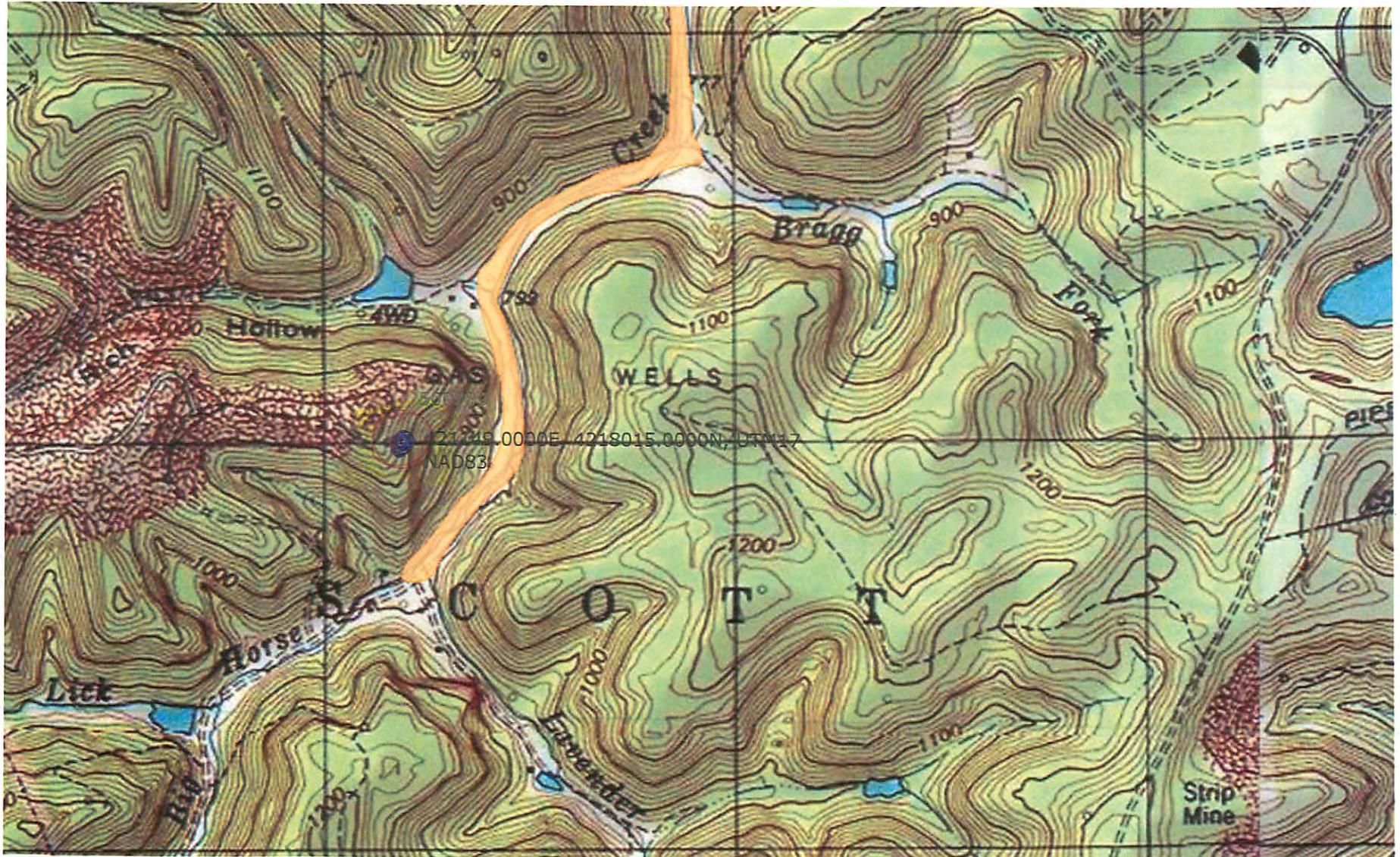
All culvert pipes will be a minimum of 15 inches in diameter. All culvert pipes installed will be accompanied by an entrance sump with dimensions no less than 3 feet (width) x 3 feet (length) x 4 feet (deep). Culverts will be installed at an angle to ensure proper flow. The out fall of culverts will be protected from erosion and sedimentation using large rocks or other sediment controls deemed necessary in the prevention of erosion and sedimentation. Storm water from the ditches to the culverts will be directed to stable natural vegetative areas. Where culverts are not practical, operator will have other sediment control in place to minimize erosion sedimentation.

Cross drains, broad based dips, water bars, and diversion ditches, will be employed during the construction phase. These erosion and sediment control structures will be used to control erosion and sedimentation during the construction phase, where applicable, and in areas that will allow. These structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1.

CHESAPEAKE ENERGY CORPORATION - EASTERN DIVISION
P.O. BOX 579 - 8165 COURT AVENUE - HAMLIN, WV 25523
304 824-5141 - FAX 304 824-2247

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CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND
WELL LOCATION 802599

API 47-005-00789

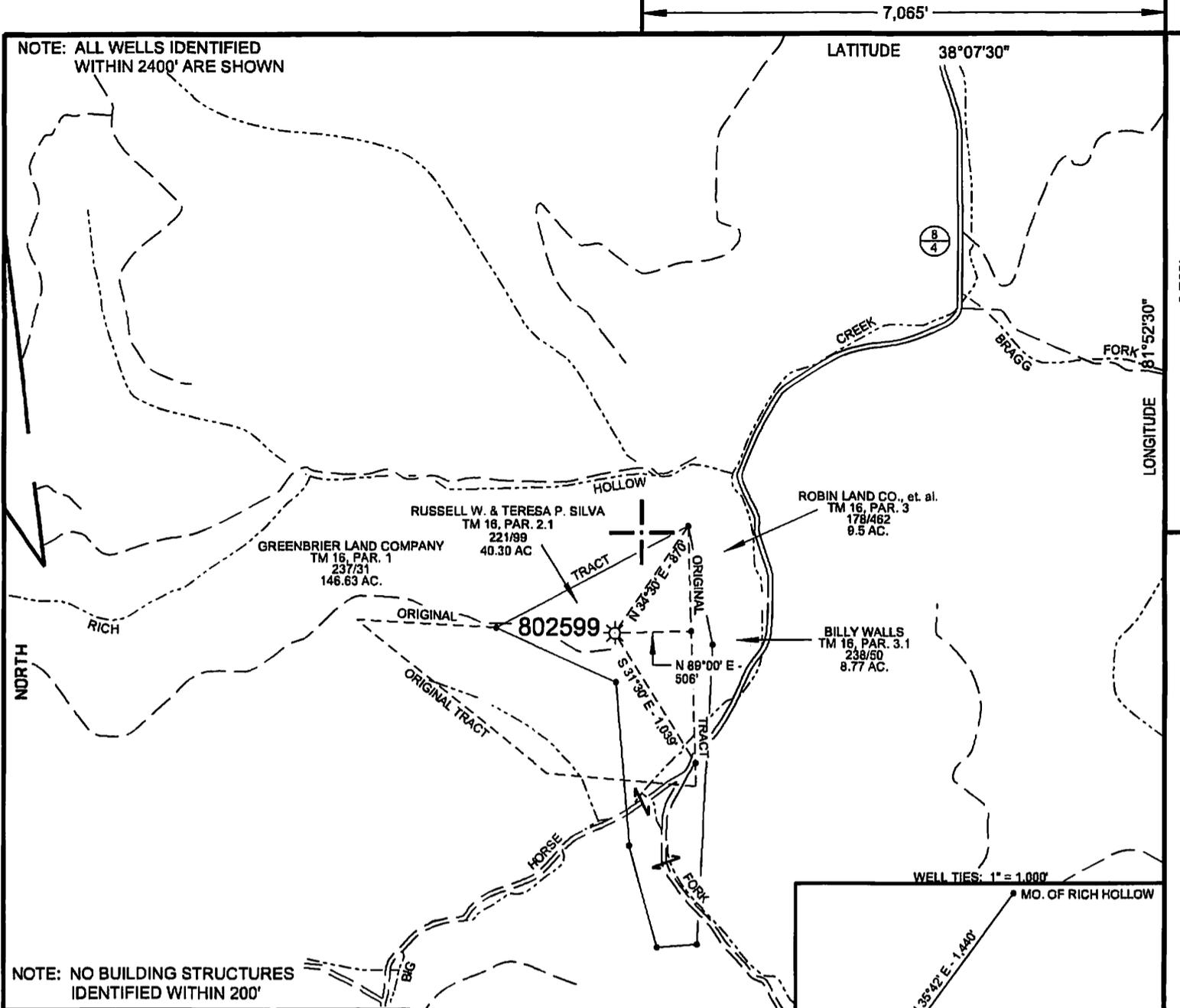


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FORM WW-6

COUNTY NAME
PERMIT