



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

March 28, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4301460, 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: 502071 (V-2071)
Farm Name: MAYNARD, SHAROL
API Well Number: 47-4301460
Permit Type: Plugging
Date Issued: 03/28/2014

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.

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

1) Date: 3/11/2014
2) Operator's Well No. 502071 P&A
3) API Well No. 47-043-01460

4301460P
CK. 5134963
100

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

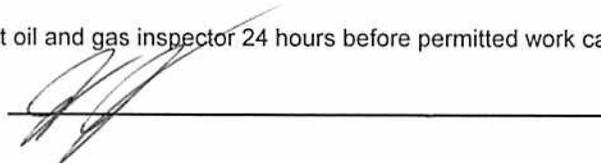
- 4) Well Type: Oil Gas X Liquid injection Waste disposal
(Is Gas, Production X or Underground storage) Deep Shallow X
- 5) Location: Elevation 986' Watershed East Fork of Twelvepole Creek
District Harts Creek County Lincoln Quadrangle Wilsondale, WV 7.5
- 6) Well Operator Chesapeake Appalachia, L.L.C. 7) Designated Agent Eric B. Gillespie
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 Ralph Triplett Name Chesapeake Appalachia, L.L.C.
Address 5539 McClellan Highway Address P.O. Box 18496
Branchland, WV 25506 Oklahoma City, OK 73154-0496

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

See Attached Sheet

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

Work Order approved by Inspector



Date 3-20-14

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502071 P&A PROCEDURE

- 1) Prepare road and location, MIRU service rig
- 2) Pull 5/8" rods and 2 3/8" tubing, RIH with tools to check TD at 1200'
- 3) Run W.S. to 1185', load hole with gel
- 4) Spot 100' cement plug 1185'-1085', pull W.S.
- 5) Attempt to pull 7" casing
 - A) If successful
 - a) Run W.S. to 1080', load hole with gel
 - b) Spot 100' cement plug 1080'-980'
 - c) Proceed to step #6
 - B) If unsuccessful
 - a) Run W.S. to 1080'
 - b) Spot 100' cement plug 1080'-980', pull W.S.
 - c) Cut 7" at free-point (approximately 850') and pull
 - d) Proceed to step #6
- 6) Run or pull W.S. to 850', load hole with gel
- 7) Spot 100' cement plug 850'-750', pull W.S. to 725'
- 8) Spot 125' cement plug 725'-600', pull W.S. to 475'
- 9) Spot 100' cement plug 475'-375', pull W.S. to 125'
- 10) Spot 125' cement plug 125' – surface
- 11) Pull W.S. and top off with cement
- 12) Erect monument and reclaim as prescribed by law



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Well 502071 PTA
API 47-043-01460P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

- Rotary
- Spudder
- Cable Tools
- Storage

Quadrangle NAUGATUCK

Permit No. WIN-1453 - Cancelled
new 1460

WELL RECORD

Oil or Gas Well Oil
(KIND)

Company <u>The Preston Oil Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>Charleston, West Virginia</u>	Size			
Farm <u>U.S. Co., WVa., Tr. #1</u> Acres <u>21,768.09</u>	16			Kind of Packer
Location (waters) <u>Last Cr. of 12 Hole Creek</u>	13			
Well No. <u>7-2-71</u> Elev. <u>963.56'</u>	10	<u>17'6"</u>	<u>17'6"</u>	Size of
District <u>Warta Creek</u> County <u>Lincoln</u>	8 1/4	<u>420</u>	<u>428</u>	Depth set
The surface of tract is owned in fee by	<u>7"</u>	<u>1037</u>	<u>1037</u>	
Mineral rights are owned by <u>U.F.G. Co</u>	5 3/16			Depth set
Address	4 1/2			
Drilling commenced <u>July 5, 1971</u>	3			Perf. top
Drilling completed <u>July 22, 1971</u>	2	<u>1213'</u>	<u>1213'</u>	Perf. bottom
Date Shot <u>7-29-71</u> From <u>1188</u> To <u>1198</u>	Liners Used			Perf. top
With <u>40 lbs. Glycerine</u>				Perf. bottom

Attach copy of cementing record.
CASING CEMENTED 8" SIZE 428 No. Ft. 7-7-71 Date
Amount of cement used (bags) 75
Name of Service Co. Colliburton Co.
COAL WAS ENCOUNTERED AT 70 FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

WELL FRACTURED (DETAILS)
RESULT AFTER TREATMENT (Initial open Flow or bbls.) 40 bbls. 1st 24 hours
ROCK PRESSURE AFTER TREATMENT _____ HOURS
Fresh Water _____ Feet Salt Water _____ Feet
Producing Sand _____ Depth

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0'	17'			
Sand			17	25			
Slate			25	35			
Sand			35	60			
Slate			60	70			
Coal			70	73			
Broken Sand			73	140			
Slate			140	150			
Broken Sand			150	170			
Slate			170	220			
Sand			220	295			
Slate			295	350			
Sand			350	380			
Slate			380	620			
Sand			620	767	Water	640'	
Slate			767	801			
Salt Sand			801	1030	Oil	725'	
Slate & Shells			1030	1153	Water	901'	
Broken Sand			1153	1170	Water	980'	
Sand			1170	1203	Gas & Oil	1091 to 1193'	
TOTAL DEPTH				1203			

Received

MAR 18 2014

Office of Oil and Gas
WV Dept. of Environmental Protection
3 bailers per hr.

4 bailers per hr
Hole full

Logged 7-27-71
by So. Lamberger

Shot by Sore
5' Anchor

4301460P

WW4-A
Revised
2/01

1) Date: 3/11/2014
2) Operator's Well No. 502071 P&A
3) API Well No. 47-043-01460

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 Sharol J. Maynard
Address 198 12 Pole Creek
Wilsondale, WV 25699

5) Coal Operator
(a) Name Argus Energy WV, LLC
Address 9104 Twelve Pole Creek Road
Dunlow, WV 25511

(b) Name Ked and Gail Messer (Access road)
Address HC 73, Box 4105
Dingess, WV 25671

Coal Owner(s) with Declaration
(b) Name Poahontas Land Corporation
Address 800 Princeton Avenue
Bluefield, WV 24701

(c) Name _____
Address _____

Name _____
Address _____

6) Inspector Ralph Triplett
Address 5539 McClellan Highway
Branchland, WV 25506

Coal Lessee with Declaration
(c) Name Rockspring Development, Inc.
Address 400 Patterson Lane
Charleston, WV 25311

Telephone 304-389-0350

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

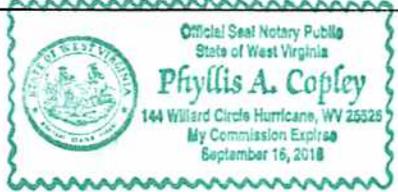
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

Received

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.

MAR 18 2014

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 17th day of March the year of 2014

Phyllis A. Copley Notary Public
September 16, 2018

My Commission Expires
Form WW-9

5134963
10000
4301460P

7012 3460 0000 4499 2524

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DINGESS WV 25671

OFFICIAL USE

Postage	\$ 1.40	0523	
Certified Fee	\$ 3.30	05	
Return Receipt Fee (Endorsement Required)	\$ 2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00		
Total Postage & Fees	\$ 7.40		03/17/2014

Sent To: **502071 P&A (Access Road)**
Ked & Gail Messer
HC 73, Box 4105
Dingess, WV 25671

PS Form 3800

7012 1640 0000 0167 9888

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WILSONDALE WV 25699

OFFICIAL USE

Postage	\$ 1.40	0523	
Certified Fee	\$ 3.30	05	
Return Receipt Fee (Endorsement Required)	\$ 2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00		
Total Postage & Fees	\$ 7.40		03/17/2014

Sent To: **502071 P&A**
Sharol J. Maynard
198 12 Pole Creek
Wilsondale, WV 25699

PS Form 3800

7012 1640 0000 0167 9978

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DUNLOW WV 25511

OFFICIAL USE

Postage	\$ 1.40	0523	
Certified Fee	\$ 3.30	05	
Return Receipt Fee (Endorsement Required)	\$ 2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00		
Total Postage & Fees	\$ 7.40		03/17/2014

Sent To: **502071**
Argus Energy-WV, LLC
9104 Twelve Pole Creek Road
Dunlow, WV 25511

PS Form 3800

7012 3460 0000 4499 2517

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BLUEFIELD WV 24701

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Return Receipt Fee (Endorsement Required)	\$ 2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00		
Total Postage & Fees	\$ 7.40		03/17/2014

Sent To: **502071 P&A**
Pocahontas Land Corp.
800 Princeton Avenue
Bluefield, WV 24701

PS Form 3800

7012 1640 0000 0167 9895

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CHARLESTON WV 25311

OFFICIAL USE

Postage	\$ 1.40	0523	
Certified Fee	\$ 3.30	05	
Return Receipt Fee (Endorsement Required)	\$ 2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00		
Total Postage & Fees	\$ 7.40		03/17/2014

Sent To: **502071 P&A**
Rockspring Development, Inc.
400 Patterson Lane
Charleston, WV 25311

PS Form 3800

Received

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Office of Oil and Gas
WV Dept. of Environmental Protection

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 East Fork of Twelvepole Creek Quadrangle Wilsondale, WV 7.5'
Elevation 986' County Lincoln District Harts Creek

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*

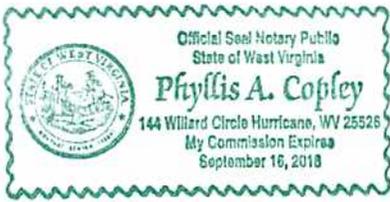
Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 17th day of March, 2014.

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018



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Attachment #1

API #: 47-043-01460
Operator's Well No. 502071 P&A

LEGEND

- Property Boundary
- Road
- Existing Fence
- Planned Fence
- Stream
- Open Ditch
- Rock
- North
- Buildings
- Water wells
- Drill site

- Diversion
- Spring
- Wet Spot
- Drain Pipe with size in inches
- Waterway
- Cross Drain
- Artificial Filter Strip
- Pit: cut walls
- Pit: compacted fill walls
- Area for Land Application of Pit Waste

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 TON lbs/acre (500 lbs minimum)

Mulch Hay 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	ORCHARD GRASS	15
ALSIKE CLOVER	5	ALSIKE CLOVER	5
ANNUAL RYE	15		

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: inspector OOG

Date: ~~3-24-14~~ 3-24-14

Field Reviewed? Yes No

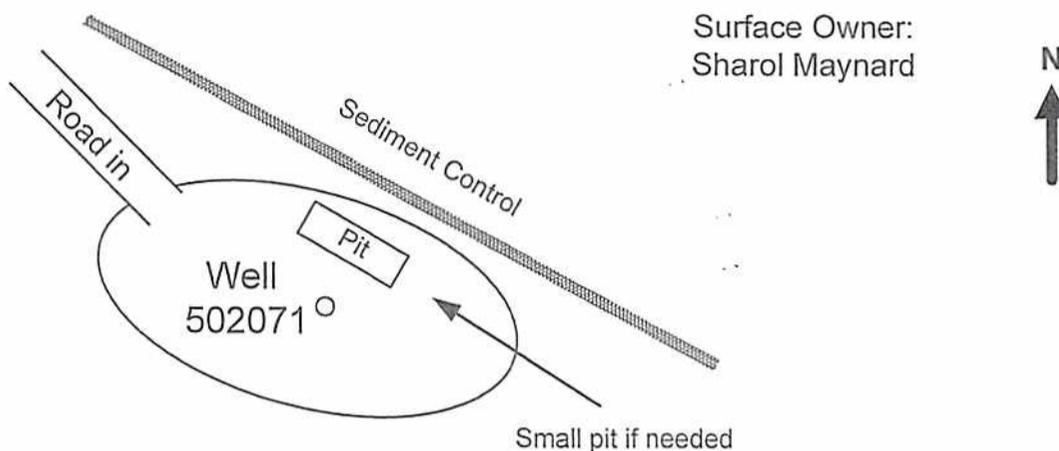
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 WV Department of
 Environmental Protection

Diagram of Well 502071

API 47-043-1460

Field Office - Branchland

County -Lincoln



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 and 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 areas that will allow. These structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1

Site Plan

Prepared by: Kris Aldridge
Date: 3/11/2014

No Scale

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CHESAPEAKE APPALACHIA, L.L.C.

4301460P

Topographic Map of Access and Well

Location 502071

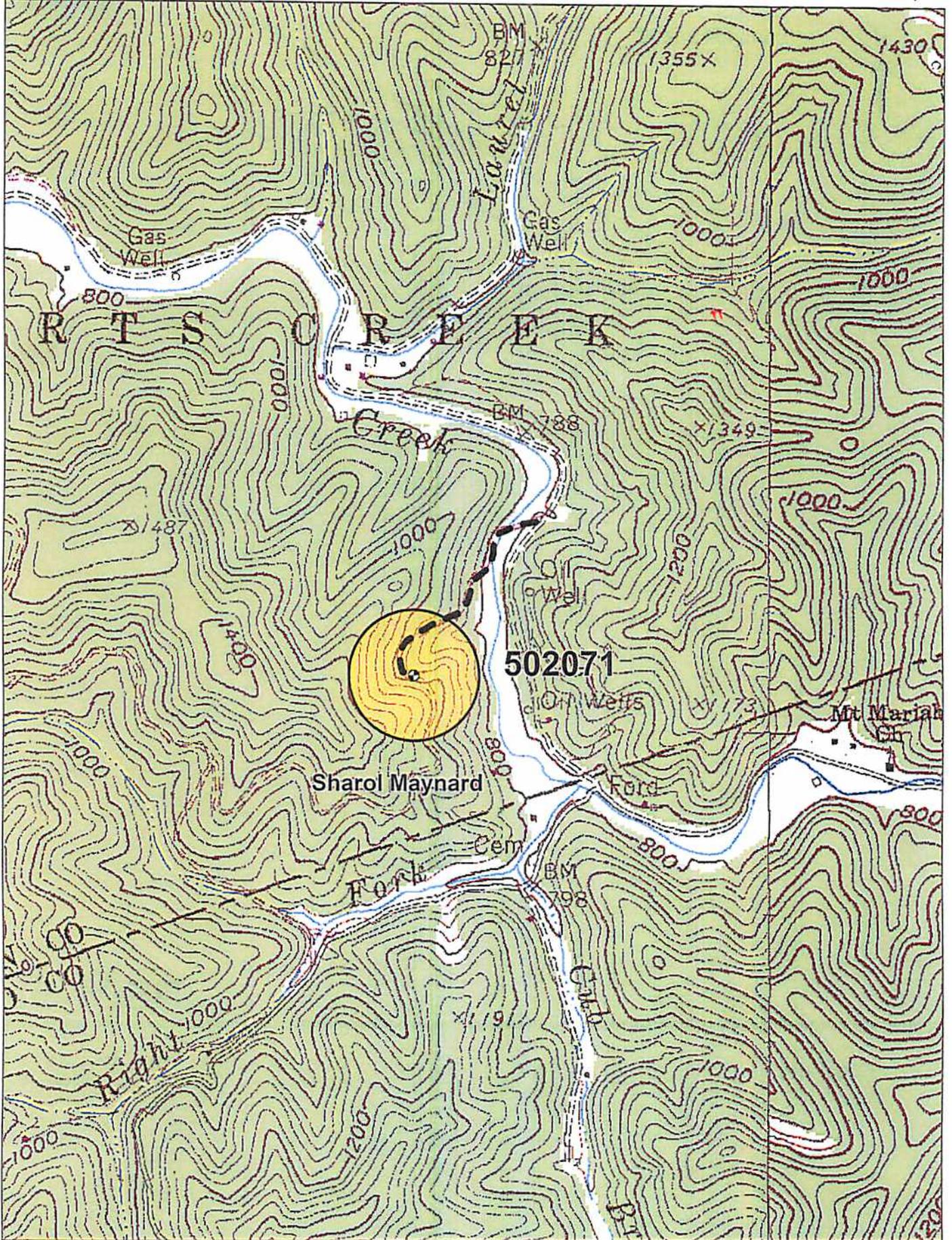
API 47-043-1460

Field Office - Branchland

County - Lincoln



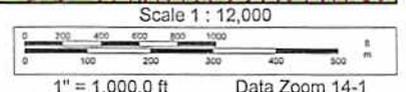
XMap© 7



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www.delorme.com

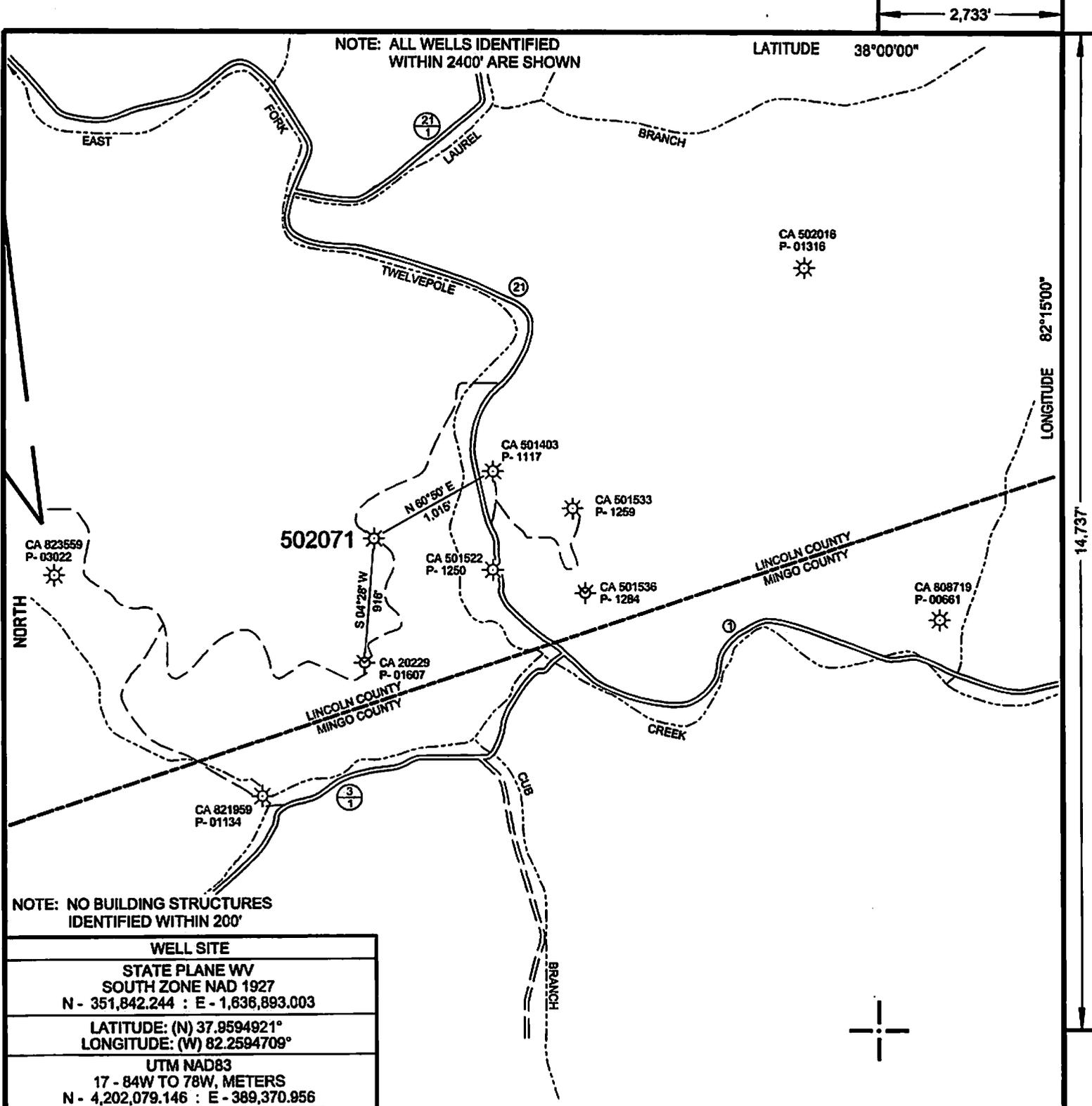


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Chesapeake Energy Corporation - Eastern Division
 P.O. Box 579 • 8165 Court Avenue • Hamlin, WV 25523
 304.824.5141 • fax 304.824.2247

Office of Oil and Gas
 WV Dept. of Environmental Protection



NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°00'00"

LONGITUDE 82°15'00"

NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

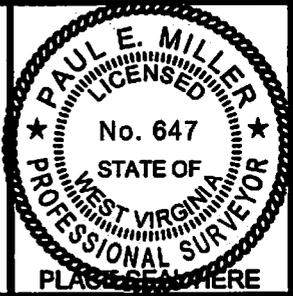
WELL SITE
STATE PLANE WV SOUTH ZONE NAD 1927 N - 351,842.244 : E - 1,836,893.003
LATITUDE: (N) 37.9594921° LONGITUDE: (W) 82.2594709°
UTM NAD83 17 - 84W TO 78W, METERS N - 4,202,079.146 : E - 389,370.956

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.	CA502071P&A.DGN
DRAWING NO.	CA502071P&A
SCALE	1" = 1000'
MINIMUM DEGREE OF ACCURACY	1:200
PROVEN SOURCE OF ELEVATION	MAPPING GRADE GPS

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) Paul E. Miller
R.P.E. _____ L.L.S. 647



STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION		DATE <u>MARCH 4</u> , 20 <u>14</u>
		OPERATOR'S WELL NO. <u>502071</u>
		API WELL NO. _____
		<u>47</u> <u>043</u> <u>01460 P</u>
		STATE COUNTY PERMIT
WELL TYPE: OIL <input checked="" type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION _____ WASTE DISPOSAL _____ (IF "GAS,") PRODUCTION <input checked="" type="checkbox"/> STORAGE _____ DEEP _____ SHALLOW <input checked="" type="checkbox"/>		
LOCATION: ELEVATION <u>988'</u> WATER SHED <u>EAST FORK OF TWELVEPOLE CREEK</u>		
DISTRICT <u>HART'S CREEK</u> COUNTY <u>LINCOLN</u>		
QUADRANGLE <u>WILSONDALE, WV 7.5'</u>		
SURFACE OWNER <u>SHAROL MAYNARD</u> ACREAGE <u>--</u>		
OIL & GAS ROYALTY OWNER <u>CHESAPEAKE APPALACHIA, L.L.C.</u> LEASE ACREAGE <u>--</u>		
LEASE NO. _____ FEE LAND _____		
PROPOSED WORK: DRILL <input type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____		
PLUG AND ABANDON <input checked="" type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/>		
TARGET FORMATION _____ ESTIMATED DEPTH _____		
WELL OPERATOR <u>CHESAPEAKE APPALACHIA, L.L.C.</u> DESIGNATED AGENT <u>ERIC B. GILLESPIE</u>		
ADDRESS <u>P.O. BOX 18498, OKLAHOMA CITY, OK 73154-0498</u> ADDRESS <u>CHESAPEAKE APPALACHIA, L.L.C. PO BOX 6070, CHARLESTON, WV 25362</u>		

FORM WW-6

COUNTY NAME

PERMIT