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

May 24, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3903908, 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 penalities 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: 20524
Farm Name: KANAWHA & HOCKING C & C
API Well Number: 47-3903908
Permit Type: Plugging
Date Issued: 05/24/2016

Promoting a healthy environment.

3903908 P

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.

3903908P

$100.00
ck #6002112

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

1) Date: 4/26/2016
2) Operator's Well No. 820524 P&A
3) API Well No. 47-039-03908

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 738' Watershed Left Fork of Witcher Creek
District Cabin Creek County Kanawha Quadrangle Quick, WV 7.5'

6) Well Operator Chesapeake Appalachia, L.L.C.
Address P.O. Box 18496
Oklahoma City, OK 73154-0496

7) Designated Agent Jessica Greathouse
Address P.O. Box 6070
Charleston, WV 25362

8) Oil and Gas Inspector to be notified
Name Terry Urban
Address P.O. Box 1207
Clendenin, WV 25045

9) Plugging Contractor
Name Chesapeake Appalachia, L.L.C.
Address P.O. Box 18496
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 Terry Urban Date 4-29-16

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Office of Oil and Gas

APR 29 2016

WV Department of
Environmental Protection

API Number: 47-039-03908 P

Operator's Well Number: 820524

PLUGGING PROCEDURE

1) Prepare road and location, MIRU service rig
2) Kill well with fluid
3) Install BOP if needed.
4) Pull 2 3/8" tubing leaving packer in well
5) Set cement retainer at approximately 6300'. (This may be ran on wireline or tubing)
6) Sting into cement retainer to establish injection rate
7) Pump latex cement plug from 6300' to perforations at 6507'
8) Sting out of cement retainer and spot 100' latex cement plug 6300'-6200', pull W.S.
9) Run CBL to find cement top on backside of 4 ½". TOC approximately 5600'
10) Cut 4 ½" at free-point (approximately 100' above TOC) and pull
11) TIH with W.S. to cut at approximately 5500', spot gel
12) Spot 150' latex cement plug 5500'-5350', pull W.S. to 5125'
13) Spot 325' latex cement plug 5125'-4800', pull W.S.
14) WOC, RIH with tools to check TOC. If top of plug is below 4825', then add to top of plug.
15) Cut 7" at free-point (approximately ~~2500'~~ 3900' gwm SEE ATTACHED PREVIOUS WORK ORDER. DATED MARCH 16, 1992) and pull

NOTE: If 7"x 9" packer at 2004' cannot be pulled then perforate 7" at 2200', set a cement retainer at 2100'; then pump latex cement plug through retainer. After stinging out of retainer, spot latex cement from 2100'-1900', pull W.S. and then pull 7" from where free. Proceed to step 19

16) TIH with W.S. to ~~2500'~~ 3900', spot gel
17) Spot 150' latex cement plug ~~2500'-2400'~~ 3900 3750', pull W.S. to ~~2100'~~ 3600' AND CEL TO 2200'
18) Spot 150' cement plug 2100'-1950', pull W.S. to 1350'
19) Spot 100' cement plug 1350'-1250', pull W.S. to 750'
20) Spot 150' cement plug 750'-600', pull W.S. to 280' - Elevation
21) Spot 280' cement plug 280'-surface
22) Pull W.S. and top off with cement
23) Set monument and reclaim as prescribed by law

Well set to Surface

NOTE: State Completion Report shows only 200 sacks of cement for 9 5/8" casing. The correct amount of cement pumped was 600 sacks and circulated to surface.

4-29-16

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Office of Oil and Gas
APR 29 2016
WV Department of
Environmental Protection

3903908 P

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Office of Oil & Gas
Permitting
MAR 16 92
WV Division of
Environmental Protection

039-3908

10) Work Order (Well No. 20524)

1. Set blanking plug in permanent packer at 6473' i.e. (Permanent Mechanical Bridge Plug).

2. Pull 2-3/8" tubing and inspect.

3. Run 2-3/8" tubing to 6470', load hole with 6% gel.

4. Spot 250' latex cement plug 6470' - 6220'.

5. Pull 2-3/8" tubing.

6. Free-point and cut 4-1/2" casing (approx. 5200').

7. Pull 4-1/2" casing.

8. Re-run 2-3/8" tubing to 5250', load hole with 6% gel.

9. Spot 350' latex cement 5250' - 4900'.

10. Pull 2-3/8" tubing.

11. Free-point and cut 7" casing (approx. 3900').

12. Pull 7" casing.

13. Re-run 2-3/8" tubing to 3950', load hole with 6% gel.

14. Spot 250' latex cement plug 3950' - 3700'.

15. Pull 2-3/8" tubing to 2070'.

16. Spot 200' cement plug 2070' - 1870'.

17. Pull 2-3/8' tubing.

18. Leave [redacted] monument as prescribed by law.

SCHINDLER
SPOKE to ROB [redacted]
COAL AT [redacted]' 18'-23'; DUP 48'-53'
NO COAL REPORTED ON WELL RECORD
95 CTS
OK.

Spot Surface Plug 100'-0

*Note: State Completion Report shows only 200 sacks of cement for 9-5/8" casing. The correct amount of cement pumped was 600 sacks and circulated to surface.

Well 820524
API 47-039-03908 P
Page 1 of 2

RECEIVED
JUL 14 1983
OIL & GAS DIVISION
DEPT. OF MINES

IV-35
(Rev 8-81)

Date July 12, 1983
Operator's
Well No. 20524
Farm Kanawha Hocking C.& C.Co.
API No. 47- - 039 - 3908

State of West Virginia
Department of Mines
Oil and Gas Division

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___/ Gas X / Liquid Injection ___/ Waste Disposal ___/
(If "Gas," Production ___/ Underground Storage ___/ Deep X / Shallow ___/)

LOCATION: Elevation: 700.44 Watershed Left Fork of Witcher Creek
District: Cabin Creek County Kanawha Quadrangle Quick

COMPANY Columbia Gas Transmission Corporation
ADDRESS 1700 MacCorkle Ave., Charleston, WV
DESIGNATED AGENT James L. Weekley
ADDRESS 1700 MacCorkle Ave., Charleston, WV
SURFACE OWNER Kanawha and Hocking Coal & Coke Co.
ADDRESS P.O. Box 70194-T, Cleveland, OH. 44190
MINERAL RIGHTS OWNER Same as above
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK Homer H. Daugherty ADDRESS Linden Rt., Box 3-A Looneyville, WV 25259
PERMIT ISSUED 10-12-82
DRILLING COMMENCED 10-23-82
DRILLING COMPLETED 11-20-82
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-~~16~~ Cond.	22'	22'	108 cu.ft.
13-~~10~~"	77'	77'	149 cu.ft.
9 5/8	2021'	2021'	200 sks.
8 5/8			
7	5024'	5024'	119 cu.ft.
5 1/2			
4 1/2	6517'	6517'	119 cu.ft.
3			
2			
Liners used			

CLASS A +/- 3% CaCl2 + 400 SKS 50/50 POZ 5 MOVED BZ CTS

GEOLOGICAL TARGET FORMATION Clinton Depth 6500' feet
Depth of completed well 6534' feet Rotary X / Cable Tools
Water strata depth: Fresh - feet; Salt feet
Coal seam depths: - Is coal being mined in the area?

OPEN FLOW DATA
Producing formation Clinton Pay zone depth 6495-6513' feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 1,040 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 6 hours
Static rock pressure 1620 psig (surface measurement) after hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

Kan-3908

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Office of Oil and Gas
APR 29 2016
WV Department of
Environmental Protection

Well 820524
API 47-039-03908 P
page 2 of 2

FORM IV-35
(REVERSE)

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

Acidized Clinton 2-2-83 with 1500 Gallons 6% Mud Acid
Test after acidizing (6 hours) 809 Mcf
Perforated from 6495-6507' with 25 shots.
Fractured Clinton 2-9-83 with 500 gallons mud acid, 750 bbls. treating fluid, 30# gel system, and 22,000# 20/40 sand.
Test 6 hours after fracture 1,040 Mcf

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Gravel	0	30	
Shale, grey	30	153	
Sand	153	206	
Shale	206	290	
Shale	290	540	
Sand	540	1160	
Shale	1160	1200	
White Sand	1200	1263	
Shale	1263	1490	
Lime	1490	1680	
Sand	1680	2025	
Shale	2025	4860	
Lime	4860	4960	
Sand	4960	5030	
Lime	5030	5260	
Sand	5260	5480	
Shale	5480	5509	
Lime	5509	5348	
Sand and Shale	5348	6212	
Shale	6212	6434	
Sand	6434	6507	
Shale	6507	6534	
Total Depth		6534'	

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation
Well Operator
By: [signature]
Date: 7-12-83

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

RECEIVED
Office of Oil and Gas
JUL 18 '83
WV Department of
Environmental Protection

39 03908P

GG-11

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

RECEIVED
NOV 16 1982
OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 039-3908

Oil or Gas Well (KIND) Gas

Company Columbia Gas Co.
Address Charleston, W.V.A.
Farm Kan. + Hocking Coal + Coke
Well No. 26524
District Malden County Kanawha
Drilling commenced 10/24/82
Drilling completed ____ Total depth ____
Date shot ____ Depth of shot ____
Initial open flow ____ /10ths Water in ____ Inch
Open flow after tubing ____ /10ths Merc. in ____ Inch
Volume ____ Cu. Ft.
Rock pressure ____ lbs. ____ hrs.
Oil ____ bbls., 1st 24 hrs.
Fresh water ____ feet ____ feet
Salt water ____ feet ____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
9 5/8"		2015	
8¼			Depth set
5 3/16			
7"		5040	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED 9 5/8" SIZE 2015 No. FT. 11/6/82 Date
NAME OF SERVICE COMPANY Halliburton
COAL WAS ENCOUNTERED AT ____ FEET ____ INCHES
____ FEET ____ INCHES ____ FEET ____ INCHES
____ FEET ____ INCHES ____ FEET ____ INCHES

Drillers' Names John Koster Posher Cliff Hames
Ray Resources Rig #6

Remarks: 11/6/82 Ran 2015 ft. of 9 5/8" Casing, Cemented with 460 Sacks of 50/50 pozmix + 200 Sacks Regular with 3% C.C. by Halliburton

11/10/82 Running 5040 ft of 7" Casing Cementing with 100 Sacks of Regular 1% CC Halliburton

11/10/82
DATE

Homer H. Dougherty
DISTRICT WELL INSPECTOR

FORM IV-35
(REVERSE)

3903908 P

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

Acidized Clinton 2-2-83 with 1500 Gallons 6% Muc Acid
Test after acidizing (6 hours) 809 Mcf
Perforated from 6495-6507' with 25 shots.
Fractured Clinton 2-9-82 with 500 gallons mud acid, 750 bbls. treating fluid,
30# gel system, and 22,000# 20/40 sand.
Test 6 hours after fracture 1,040 Mcf

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Gravel	0	30	
Shale, grey	30	153	
Sand	153	206	
Shale	206	290	
Shale	290	540	
Sand	540	1160	
Shale	1160	1200	
White Sand	1200	1263	
Shale	1263	1490	
Lime	1490	1680	
Sand	1680	2025	
Shale	2025	4860	
Lime	4860	4960	
Sand	4960	5030	
Lime	5030	5260	
Sand	5260	5480	
Shale	5480	5509	
Lime	5509	5348	
Sand and Shale	5348	6212	
Shale	6212	6434	
Sand	6434	6507	
Shale	6507	6534	
Total Depth		6534'	

Coal 5ft
18'-23' Deep
49'-53'

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation
Well Operator

By: J. Littlebley

Date: 7-12-83

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

3903908P

DG-11

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

RECEIVED
DEC - 7 1982
OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 039-3908

Oil or Gas Well (KIND)

Company Columbia Gas
Address Charleston, W.Va.
Farm Kan. + Hocking Coal & Coke
Well No. 20524
District Malden County Kanawha
Drilling commenced 10/24/82
Drilling completed 11/20/82 Total depth
Date shot Depth of shot
Initial open flow /10ths Water in Inch
Open flow after tubing /10ths Merc. in Inch
Volume Cu. Ft.
Rock pressure lbs. hrs.
Oil bbls., 1st 24 hrs.
Fresh water feet feet
Salt water feet feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8¼			
6⅝			Depth set
5 3/16			
4	4½"	6527	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED 4½" SIZE 6527 No. FT. 11/20/82 Date
NAME OF SERVICE COMPANY Halliburton
COAL WAS ENCOUNTERED AT FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

Drillers' Names John Nester Pusher Cliff Hames
Ray Resources Rig #6
Remarks:
11/26/82 Ran 6527 Ft. of 4½" Pipe + Cemented with 100 Sacks Neet. by Halliburton Plug Down 11:45 A.M.

12/2/82
DATE

Homer H. Doughetts
DISTRICT WELL INSPECTOR

3903908 P

DO-11

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

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OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 039-3908

Oil or Gas Well Gas (KIND)

Company Columbia Gas Co.
Address Charleston
Farm Kanawha & Hocking Coal + Coke
Well No. 20524
District Malden County Kanawha
Drilling commenced 10/24/82
Drilling completed ____ Total depth ____
Date shot ____ Depth of shot ____
Initial open flow ____ /10ths Water in ____ Inch
Open flow after tubing ____ /10ths Merc. in ____ Inch
Volume ____ Cu. Ft.
Rock pressure ____ lbs ____ hrs.
Oil ____ bbls., 1st 24 hrs.
Fresh water ____ feet ____ feet
Salt water ____ feet ____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8¼			
6¼			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED ____ SIZE ____ No. FT. ____ Date
NAME OF SERVICE COMPANY
COAL WAS ENCOUNTERED AT ____ FEET ____ INCHES
____ FEET ____ INCHES ____ FEET ____ INCHES
____ FEET ____ INCHES ____ FEET ____ INCHES

Drillers' Names John Nester Pusher Cliff Hames
Rag Resources Rig #6
Remarks:
11/17/82 6420 ft Deep converting over to fluid to Drill Formation With Drilling with 6¼" Bit. going to 6550 For T.D.

11/17/82
DATE

DISTRICT WELL INSPECTOR

3903908P

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STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

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NOV 9 - 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 039-3908

Oil or Gas Well Gas
(KIND)

Company Columbia Gas

Address Charleston, W.V.A.

Farm Kan. Hocking Coal + Coke

Well No. 20524

District Malden County Kanawha

Drilling commenced 10/24/82

Drilling completed _____ Total depth _____

Date shot _____ Depth of shot _____

Initial open flow _____ /10ths Water in _____ Inch

Open flow after tubing _____ /10ths Merc. in _____ Inch

Volume _____ Cu. Ft.

Rock pressure _____ lbs. _____ hrs.

Oil _____ bbls., 1st 24 hrs.

Fresh water _____ feet _____ feet

Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16 26"		36	Kind of Packer
13 3/8"		85	
10			Size of
8 1/4			
6 5/8			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED 13 3/8 SIZE 85 No. FT. 10/26/82 Date

NAME OF SERVICE COMPANY Halliburton

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Drillers' Names John Nesten Pusher Cliff Hames

Ray Resources Rig #6

Remarks: 10/24/82 Set 36 ft. of 20" Conductor Pipe Cemented with 90 S
10/26/82 Ran 85 Ft. of 13 3/8" Cemented Bottom with 125 Sacks
& Top with 35 Sacks All by Halliburton
11/5/82 1888 ft. Deep Drilling on Fluid with 12 1/4" Bit in Hole
Cleaning out pour table steel Pit.
Going to Run 9 5/8" Pipe 11/6/82

11/5/82
DATE

Homer H. Dougherty
DISTRICT WELL INSPECTOR

3903908P

B-3

OG.11

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

RECEIVED
NOV 1 - 1982
OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 039-3908

Oil or Gas Well Gas
(KIND)

Company Columbia Gas Co
Address Charleston, WVA.
Farm Kan. + Hocking Coal + Coke
Well No. 20524
District Malden County Kanawha
Drilling commenced 10/22/82
Drilling completed ____ Total depth ____
Date shot ____ Depth of shot ____
Initial open flow ____ /10ths Water in ____ Inch
Open flow after tubing ____ /10ths Merc. in ____ Inch
Volume ____ Cu. Ft.
Rock pressure ____ lbs. ____ hrs.
Oil ____ bbls., 1st 24 hrs.
Fresh water ____ feet ____ feet
Salt water ____ feet ____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
20"		36'	Kind of Packer
13 3/8 ~~16~~		85'	
10			Size of
8¼			
6⅝			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED 13 3/8" SIZE 85 No. FT. 10/26/82 Date
NAME OF SERVICE COMPANY Halliburton
COAL WAS ENCOUNTERED AT ____ FEET ____ INCHES
____ FEET ____ INCHES ____ FEET ____ INCHES
____ FEET ____ INCHES ____ FEET ____ INCHES

Drillers' Names Pusher Cliff Hames
Ray Resources Rig #6

Remarks: 10/22/82 Moovedd on + Rigged up + Spudded on 10/23/82
10/24/82 Set 36 ft. of 20" Conductor Cemented with 90 Sacks Regular by Halliburton
10/26/82 Ran 85 ft. 13 3/8" Cemented with 160 Sacks of Regular by Halliburton
10/28/82 454 ft. Deep Drilling on Fluid Having some Loss of Circulation going to Run Lost Circulation Material

10/28/82
DATE

Homer W. Dougherty
DISTRICT WELL INSPECTOR

3903908 P

WW4-A
Revised
2/01

1) Date: 4/26/2016
2) Operator's Well No. 820524 P&A
3) API Well No. 47-039-03908

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: Blackhawk Land & Resources
Address: Attention: Walter Gore
100 Technology Drive
South Charleston, WV 25309

(b) Name
Address

(c) Name
Address

5) Inspector: Terry Urban
Address: P.O. Box 1207
Clendenin, WV 25045

Telephone: 304-549-5915

5) Coal Operator
(a) Name: Upper Kanawha Development
Address: 400 Patterson Lane, Suite 200
Charleston, WV 25311

Coal Owner(s) with Declaration
(b) Name: Blackhawk Land & Resources
Address: Attention: Walter Gore
100 Technology Drive
South Charleston, WV 25309

Name
Address

Coal Lessee with Declaration
(c) Name: Upper Kanawha Development
Address: 400 Patterson Lane, Suite 200
Charleston, WV 25311

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.

Official Seal Notary Public
State of West Virginia
Phyllis A. Copley
144 Willard Circle Hurricane, WV 25526
My Commission Expires
September 16, 2018

Well Operator: Chesapeake Appalachia, L.L.C.
By:
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 26th day of April the year of 2016
Phyllis A. Copley Notary Public
My Commission Expires September 16, 2018

Received
APR 27 2016
Office of Oil and Gas
Environmental Protection

Form WW-9

3903908 P

Rev. 02/01

API Number 47-039-03908
Operator's Well No. 820524 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 Left Fork of Witcher Creek Quadrangle Quick, WV 7.5'

Elevation 738' County Kanawha District Cabin Creek

Description of anticipated Pit Waste: Plugging Returns/Cement

Will a synthetic liner be used in the pit? Yes

Proposed Disposal Method For Treated Pit Wastes:

- ~~X~~ Land Application No Land Application
- ___ Underground Injection (UIC Permit Number___)
- ___ Reuse (at API Number___)
- ___ Off Site Disposal (Supply form WW-9 for disposal location)
- X Other (Explain Fluids will be hauled to a company tank battery TPW

Proposed Work For Which Pit Will Be Used:

- ___ Drilling
- ___ Workover
- ___ Swabbing
- X 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

Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 26th day of April, 2016.

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018

Official Seal Notary Public
State of West Virginia
Phyllis A. Copley
144 Willard Circle Hurricane, WV 25526
My Commission Expires
September 16, 2018

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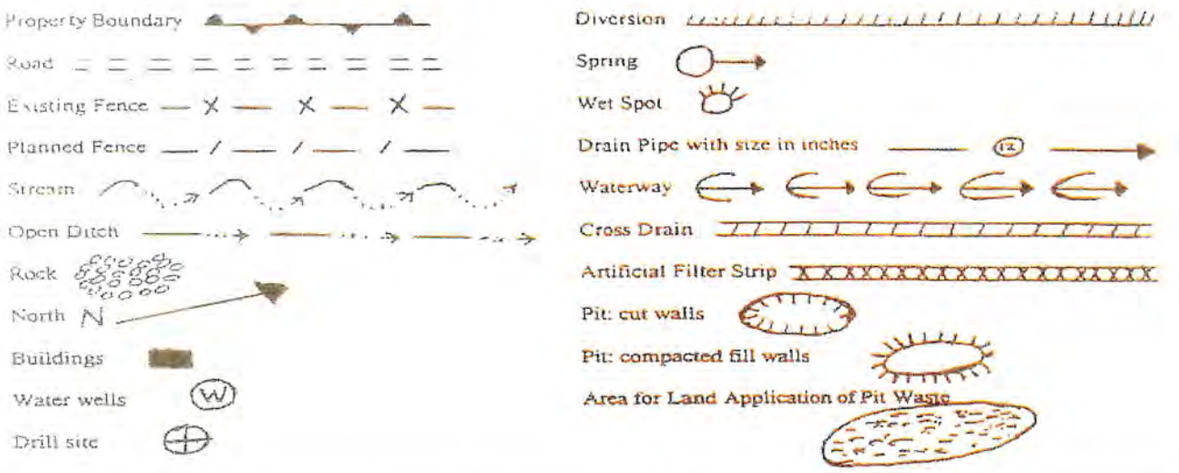
Attachment #1

API #: 47-039-03908
Operator's Well No. 820524 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: [signature]

Title: Inspector Oil & Gas

Date: 4-29-16

Field Reviewed? (✓) Yes ( ) No

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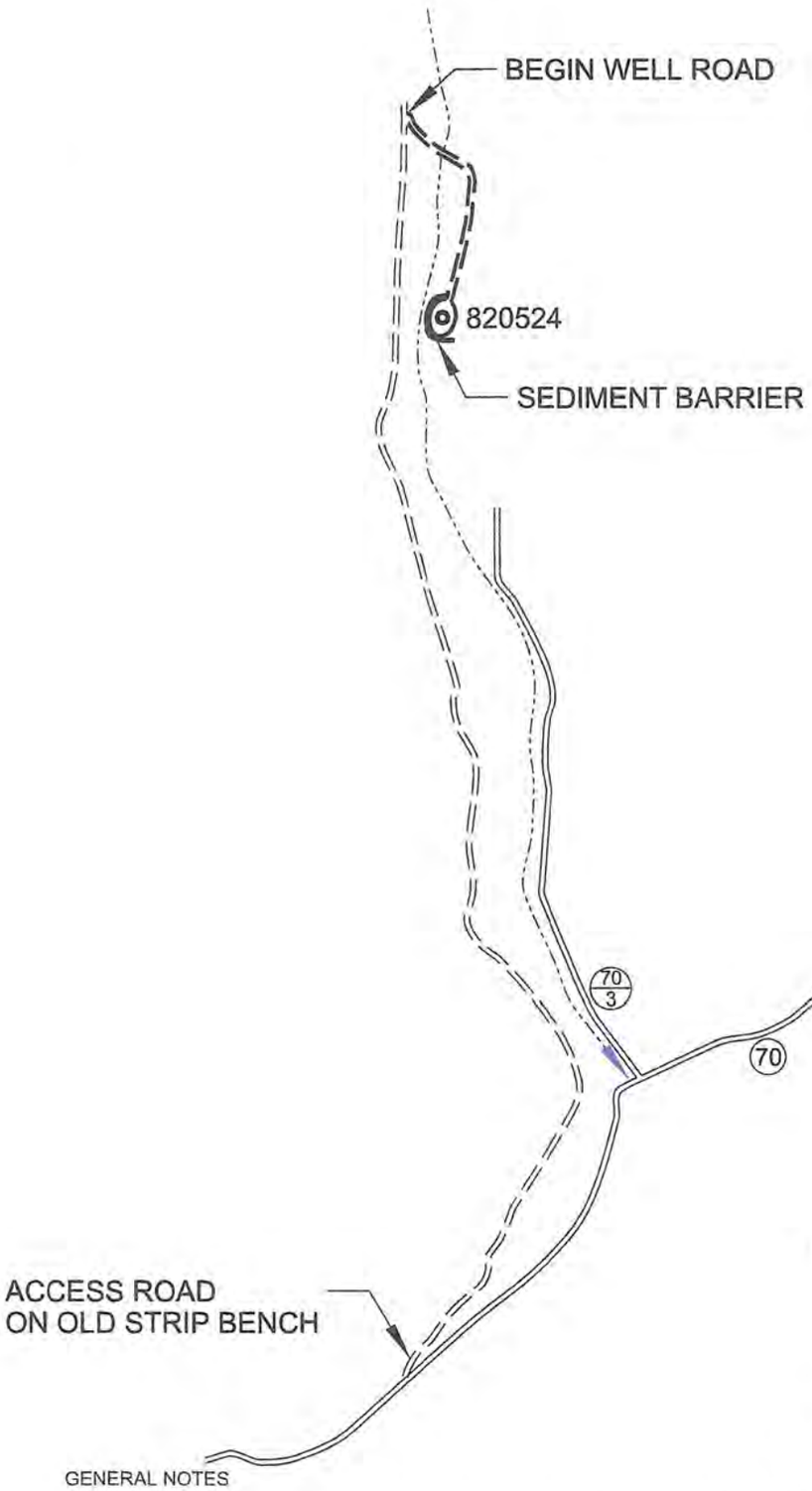
CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM
WELL LOCATION 820524

API 47-039-03908



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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 show in approximate pre-planning configurations.

All culvert pipes will be a minimum of 15 inches in diameter. all culvert pipes installed will be accomanied 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 roacks of 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 contruction 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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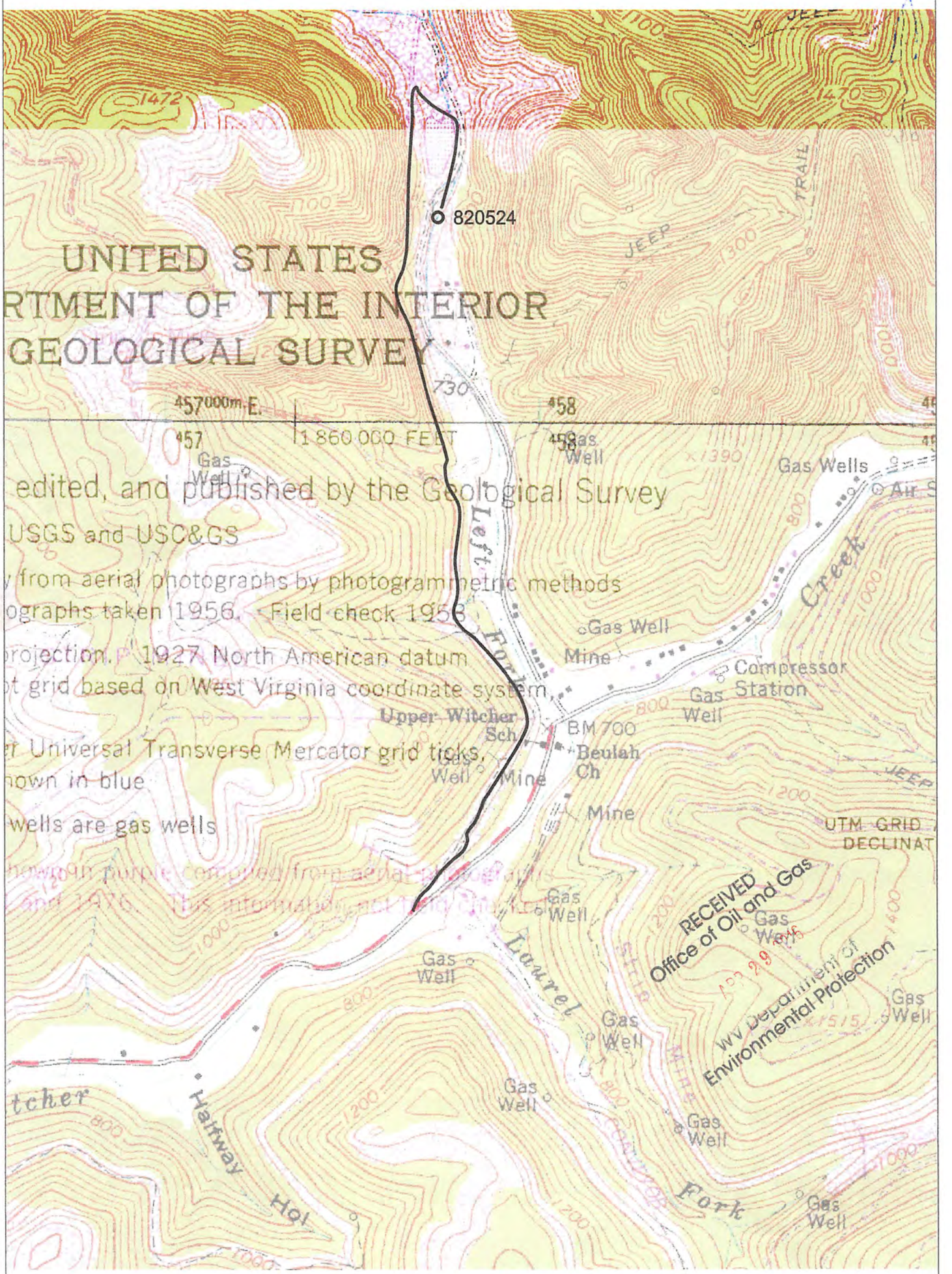
CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND WELL LOCATION 820524

API 47-039-03908



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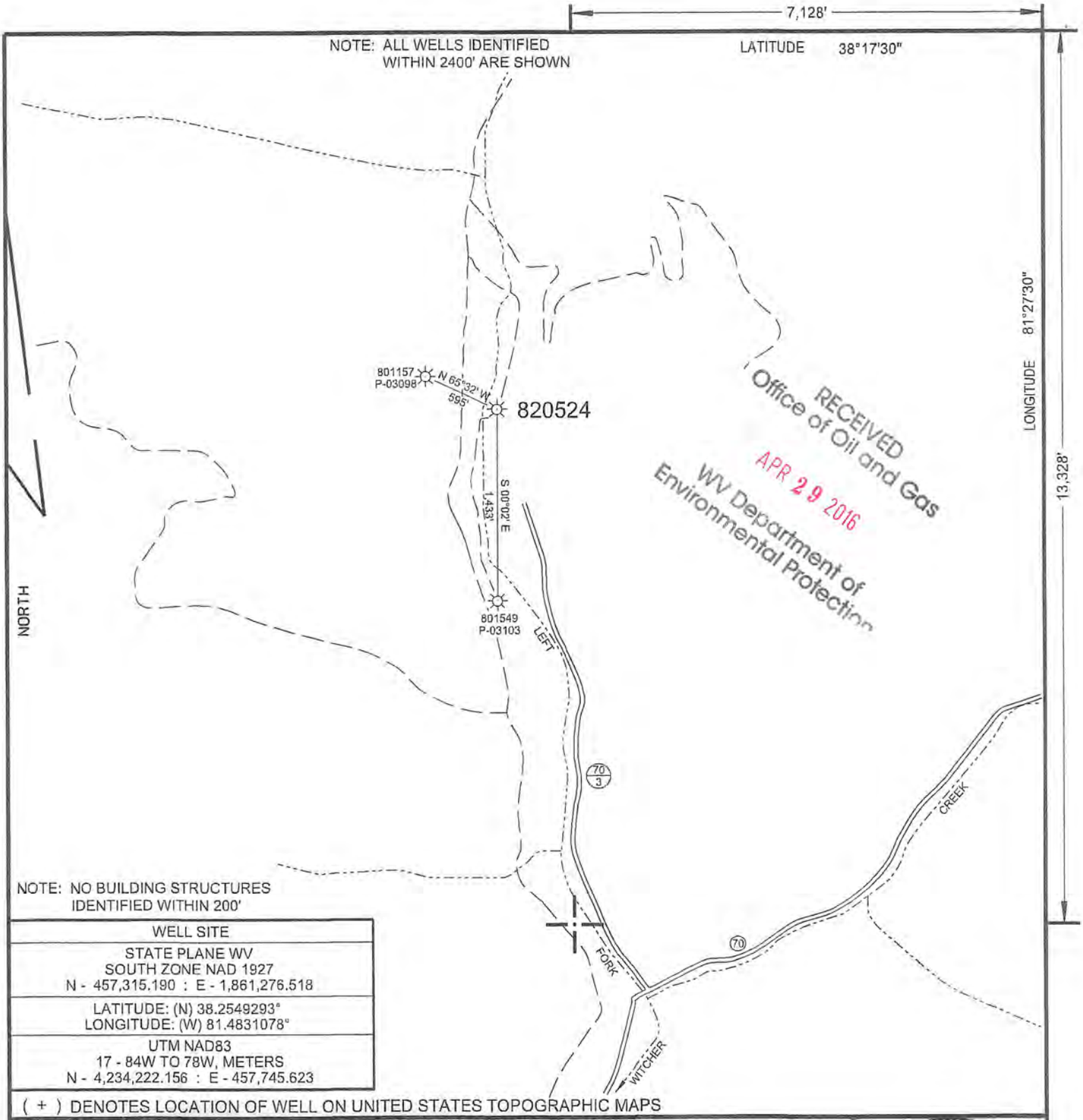


NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

WELL SITE
STATE PLANE WV SOUTH ZONE NAD 1927 N - 457,315.190 : E - 1,861,276.518
LATITUDE: (N) 38.2549293° LONGITUDE: (W) 81.4831078°
UTM NAD83 17 - 84W TO 78W, METERS N - 4,234,222.156 : E - 457,745.623

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

FILE NO. 820524P&A.DGN
DRAWING NO. 820524 P&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

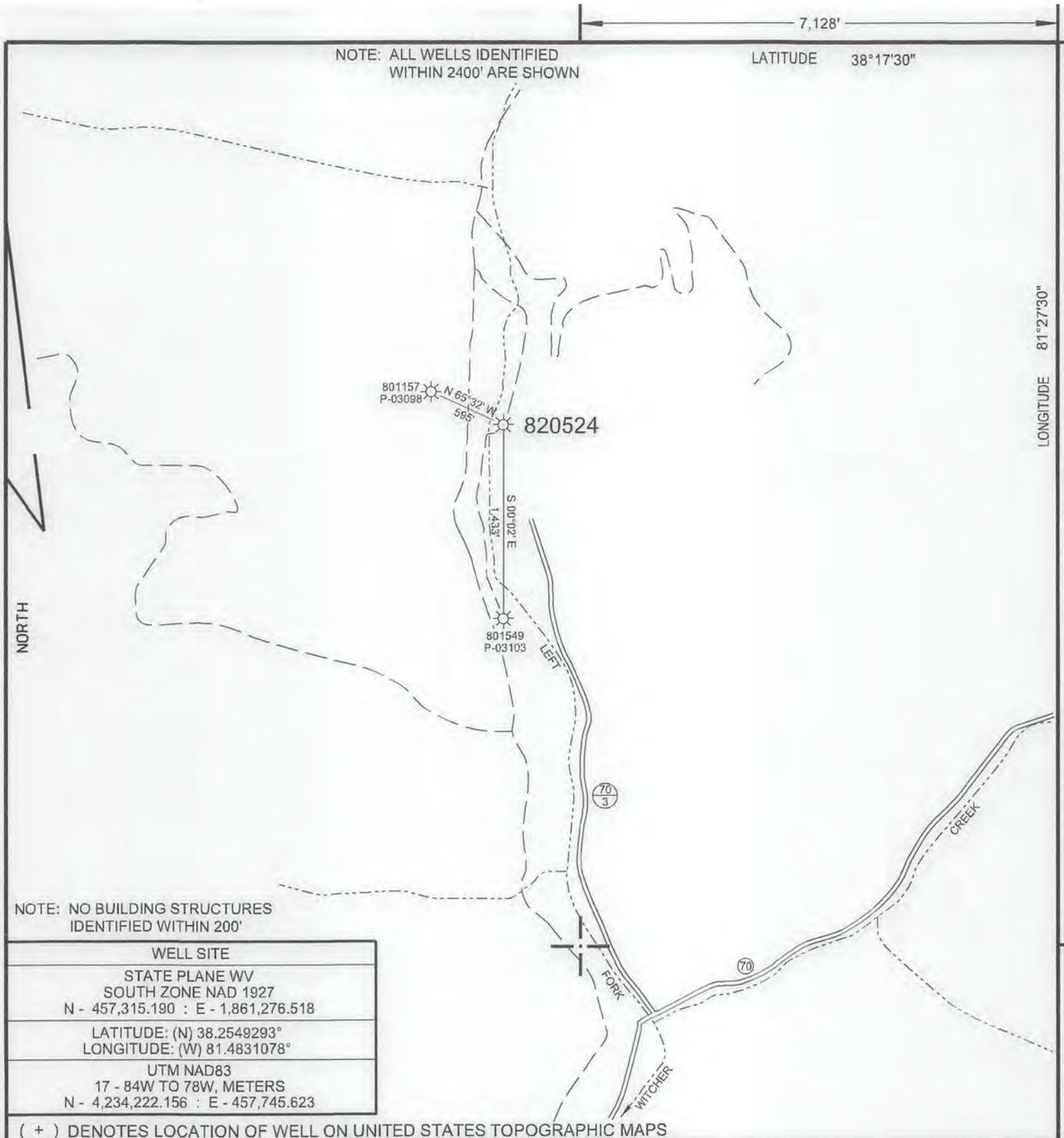
PAUL E. MILLER LICENSED No. 647 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR
PLACE SEAL HERE

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE APRIL 15, 20 16
OPERATOR'S WELL NO. 820524
API WELL NO.
47 (STATE) 039 (COUNTY) 03908 P (PERMIT)

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 738' WATER SHED LEFT FORK OF WITCHER CREEK
DISTRICT CABIN CREEK COUNTY KANAWHA
QUADRANGLE QUICK, WV 7.5'
SURFACE OWNER BLACKHAWK LAND & RESOURCES ACREAGE 545.3
OIL & GAS ROYALTY OWNER CABOT OIL & GAS CORPORATION LEASE ACREAGE 545.3
LEASE NO. 1-190651-002
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON X CLEAN OUT AND REPLUG ___
TARGET FORMATION _____ ESTIMATED DEPTH _____
WELL OPERATOR CHESAPEAKE APPALACHIA, L.L.C. DESIGNATED AGENT JESSICA GREATHOUSE
ADDRESS P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496 ADDRESS CHESAPEAKE APPLACHIA, L.L.C. PO BOX 6070, CHARLESTON, WV 25362

FORM WW-6
COUNTY NAME
PERMIT



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