



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

Promoting a healthy environment.

05/27/2016

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.

*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. 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 Terry Urban Name Chesapeake Appalachia, L.L.C.
 Address P.O. Box 1207 Address P.O. Box 18496
Clendenin, WV 25045 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 4/29/16

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Office of Oil and Gas

APR 29 2016

WV Department of
Environmental Protection

05/27/2016

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 1/2". TOC approximately 5600'
- 10) Cut 4 1/2" 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') and pull

SEE ATTACHED PREVIOUS WORK ORDER, DATED MARCH 16, 1992

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', spot gel
- 17) Spot 150' latex cement plug 2500'-2400', pull W.S. to 2100' AND CEL TO 2100'
- 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

Will 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.

[Handwritten Signature]
4/29/16

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APR 29 05/27/2016
WV Department 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 ~~well~~ monument as prescribed by law.

SCHINDLER
 SPEKE to RAB
 COAL AT 18'-23' deep
 48'-53'
 NO COAL REMOVED ON WELL RECORD
 195' 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.

RECEIVED

JUL 14 1983



IV-35 (Rev 8-81)

OIL & GAS DIVISION DEPT. OF MINES

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

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 Linden Rt., Box 3-A H. Daugherty ADDRESS Looneyville, WV 25259 PERMIT ISSUED 10-12-82 DRILLING COMMENCED 10-23-82 DRILLING COMPLETED 11-20-82

Table with 4 columns: Casing & Tubing Size, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-1/8, 13-1/8, 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2.

CLASS A w/ 3% CCl4 + 400 SKS 50/50 P22 5 HOURS BE CTS

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

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--)

Kan-3908

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APR 29 2016

WV Department of Environmental Protection 05/27/2016

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."

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Office of Oil and Gas
New York State Department of Environmental Protection
05/27/2016

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

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NOV 16 1982

INSPECTOR'S WELL REPORT

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

Permit No. 039-3908

Oil or Gas Well Gas
(KIND)

Company <u>Columbia Gas Co.</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address <u>Charleston, WVA</u>	Size			
Farm <u>Kani + Hocking Coal + Coke</u>	16			Kind of Packer
Well No. <u>26524</u>	13			
District <u>Malden</u> County <u>Kanawha</u>	10			Size of
Drilling commenced <u>10/24/82</u>	<u>9 5/8"</u>		<u>2015</u>	
Drilling completed _____ Total depth _____	0%			Depth set
Date shot _____ Depth of shot _____	53/16			
Initial open flow _____ /10ths Water in _____ Inch	<u>7"</u>		<u>5040</u>	Perf. top
Open flow after tubing _____ /10ths Merc. in _____ Inch	2			Perf. bottom
Volume _____ Cu. Ft.	Liners Used			Perf. top
Rock pressure _____ lbs. _____ hrs.				Perf. bottom
Oil _____ bbls., 1st 24 hrs.	CASING CEMENTED <u>9 5/8"</u> SIZE <u>2015</u> No. FT. <u>11/6/82</u> Date			
Fresh water _____ feet	NAME OF SERVICE COMPANY <u>Halliburton</u>			
Salt water _____ feet	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names John Kester Posher Cliff Hames

Ray Resources Rig #6

Remarks: 11/6/82 Ran 2015 Ft. of 9 5/8" casing, cemented with 400 sacks of 50/50 poz mix + 200 sacks Regular with 3% cc. by Halliburton

11/10/82 Running 5040 Ft of 7" casing cementing with 100 sacks of Regular 10% cc Halliburton

11/10/82
DATE

James H. Dougherty
DISTRICT WELL INSPECTOR

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. L. Stebbins*
 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."

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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
(KIND)

Company Columbia Gas
 Address Charleston, WVA
 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
8 1/4			
6 3/8			Depth set
5 3/16			
4 1/2"		6527	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED 4 1/2" 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: 11/20/82 Ran 6527 Ft. of 4 1/2" Pipe + Cemented with 100 sacks Neet. by Halliburton Plug Down 11:45 AM.

12/2/82
DATE

Homer H. Dougherty
DISTRICT WELL INSPECTOR

05/27/2016

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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 Kanawa & 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			Kind of Packer
16			
13			
10			Size of
8 1/4			
6 3/8			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 6 1/2" Bit. going to 6550 For T.D.

11/17/82
DATE

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

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10/27 - 1982

INSPECTOR'S WELL REPORT

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

Permit No. 039-3908

Oil or Gas Well Gas
(KIND)

Company <u>Columbia Gas</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address <u>Charleston, WVA</u>	Size			
Farm <u>Kan. Hocking Coal + Coke</u>	<u>26"</u>		<u>36</u>	Kind of Packer
Well No. <u>20524</u>	<u>13 7/8"</u>		<u>85</u>	
District <u>Malden</u> County <u>Kanawha</u>	<u>10</u>			Size of
Drilling commenced <u>10/24/82</u>	<u>8 1/4</u>			Depth set
Drilling completed _____ Total depth _____	<u>6 3/16</u>			Perf. top _____
Date shot _____ Depth of shot _____	<u>3</u>			Perf. bottom _____
Initial open flow _____ /10ths Water in _____ Inch	<u>2</u>			Perf. top _____
Open flow after tubing _____ /10ths Merc. in _____ Inch	Liners Used			Perf. bottom _____
Volume _____ Cu. Ft.	CASING CEMENTED <u>13 7/8</u> SIZE <u>85</u> No. FT <u>10/26/82</u>			
Rock pressure _____ lbs. _____ hrs.	NAME OF SERVICE COMPANY <u>Halliburton</u>			
Oil _____ bbls., 1st 24 hrs.	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
Fresh water _____ feet _____ feet	_____ FEET _____ INCHES _____ FEET _____ INCHES			
Salt water _____ feet _____ feet	_____ 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 7/8" 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 pourtable steel Pipe.
Going to Run 9 5/8" Pipe 11/6/82

11/5/82
DATE

Thomas H. Dougherty
DISTRICT WELL INSPECTOR 11/27/2016

3903908P

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

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INSPECTOR'S WELL REPORT

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

Permit No. 039-3908

Oil or Gas Well Gas
(KIND)

Company <u>Columbia Gas Co</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address <u>Charleston, WVA.</u>	Size			
Farm <u>Kan. + Hocking Coal + Coke</u>	<u>20"</u>		<u>36'</u>	Kind of Packer
Well No. <u>20524</u>	<u>13 3/8"</u>		<u>85'</u>	
District <u>Malden</u> County <u>Kanawha</u>	10			Size of
Drilling commenced <u>10/22/82</u>	8 1/4			Depth set
Drilling completed _____ Total depth _____	6 3/16			
Date shot _____ Depth of shot _____	3			Perf. top
Initial open flow _____ /10ths Water in _____ Inch	2			Perf. bottom
Open flow after tubing _____ /10ths Merc. in _____ Inch	Liners Used			Perf. top
Volume _____ Cu. Ft.				Perf. bottom
Rock pressure _____ lbs. _____ hrs.	CASING CEMENTED <u>13 3/8"</u> SIZE <u>85</u> No. FT. <u>10/26/82</u> Date			
Oil _____ bbls., 1st 24 hrs.	NAME OF SERVICE COMPANY <u>Halliburton</u>			
Fresh water _____ feet _____ feet	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
Salt water _____ feet _____ feet	_____ FEET _____ INCHES FEET _____ INCHES			
	_____ FEET _____ INCHES FEET _____ INCHES			

Drillers' Names Pusher Cliff Hames

Ray Resources Rig #6

Remarks: 10/22/82 Moved 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

Homes H. Dougherty
DISTRICT WELL INSPECTOR

0527/2016

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 _____

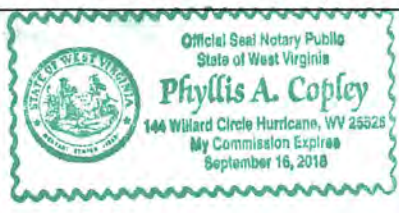
Coal Lessee with Declaration
(c) Name Upper Kanawha Development
Address 400 Patterson Lane, Suite 200
Charleston, WV 25311

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.



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 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

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 *AK #29-16*

Proposed Disposal Method For Treated Pit Wastes:
 Land Application *No Land Application*
 Underground Injection (UIC Permit Number _____)
 Reuse (at API Number _____)
 Off Site Disposal (Supply form WW-9 for disposal location)
 Other (Explain *Fluids will be hauled to a company junk battery PA*)

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*

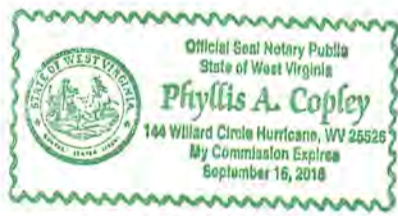
Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

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

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018

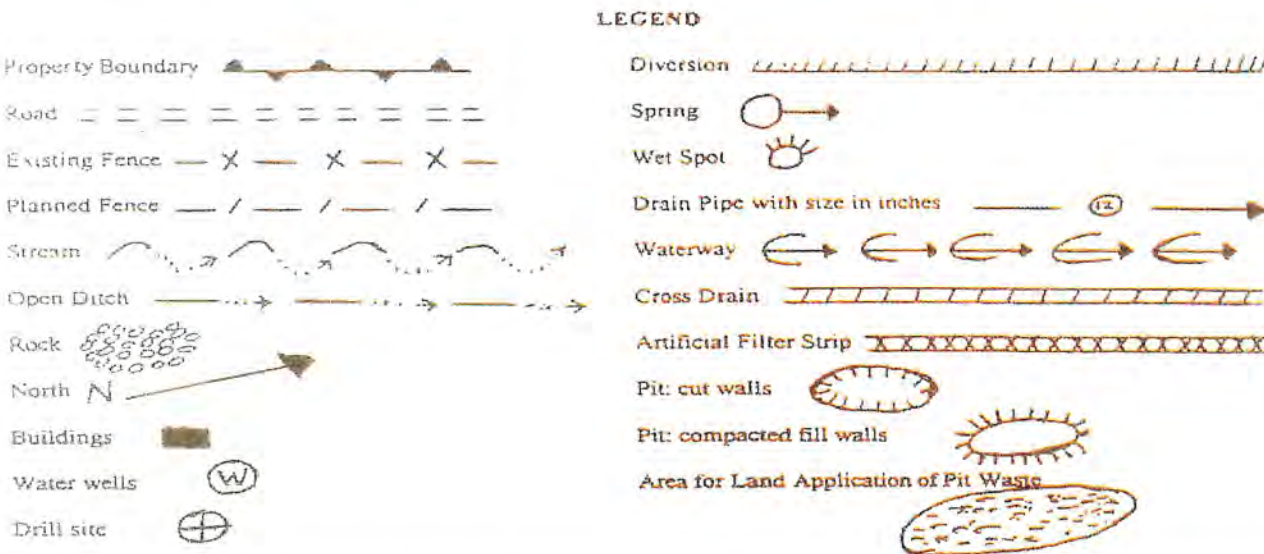


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Attachment #1

API #: 47-039-03908
 Operator's Well No. 820524 P&A



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

Creeping Red Fescue	68.60%
Wheat	14.76%
Annual Ryegrass	9.80%
Ladino Clover	3.21%

May 1st to September 30th

Creeping Red Fescue	68.60%
Wheat	17.18%
Annual Ryegrass	9.80%
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 [Signature]*

Date: *4-29-16*

Field Reviewed? () Yes () No

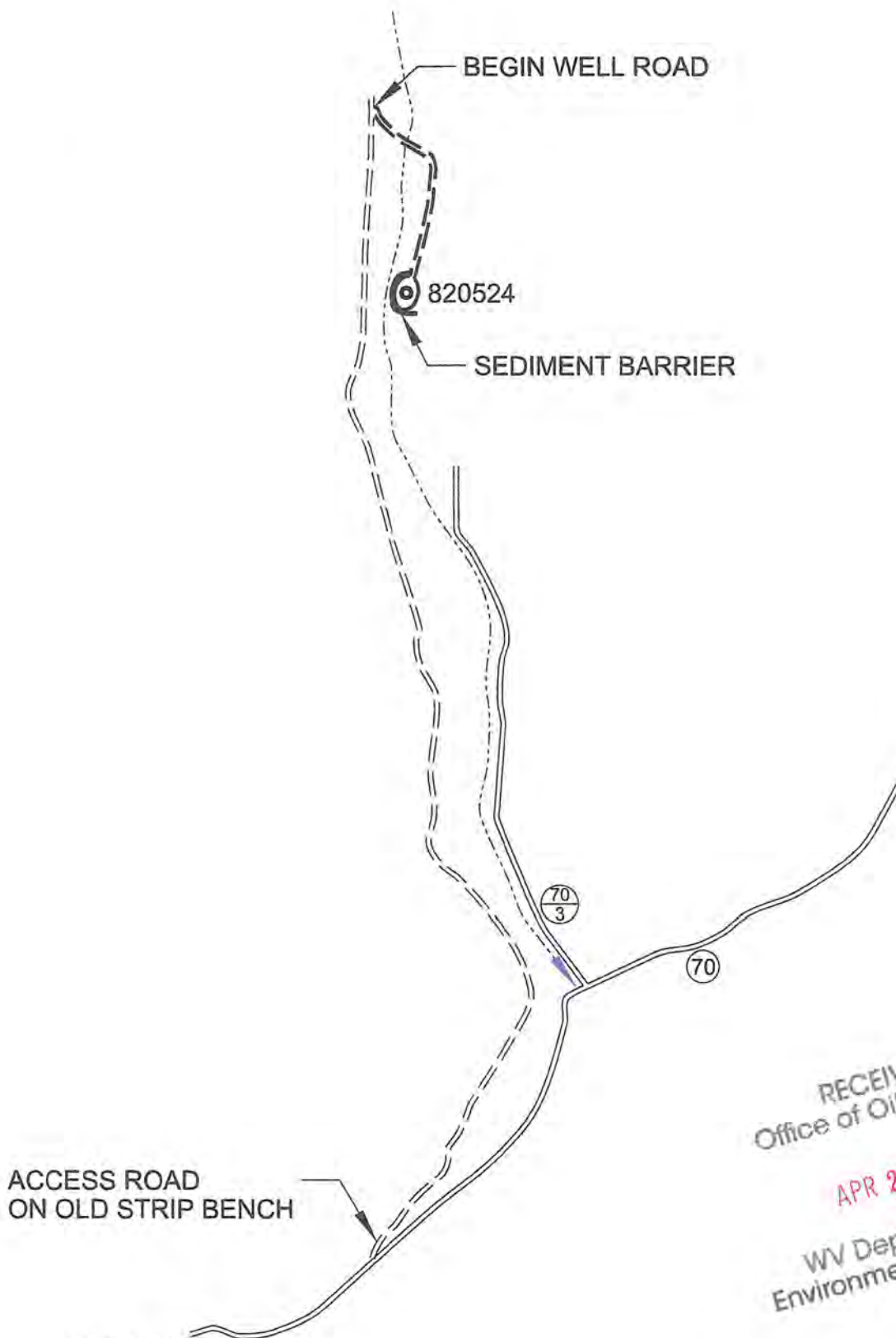
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CHESAPEAKE APPALACHIA, L.L.C.

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 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.

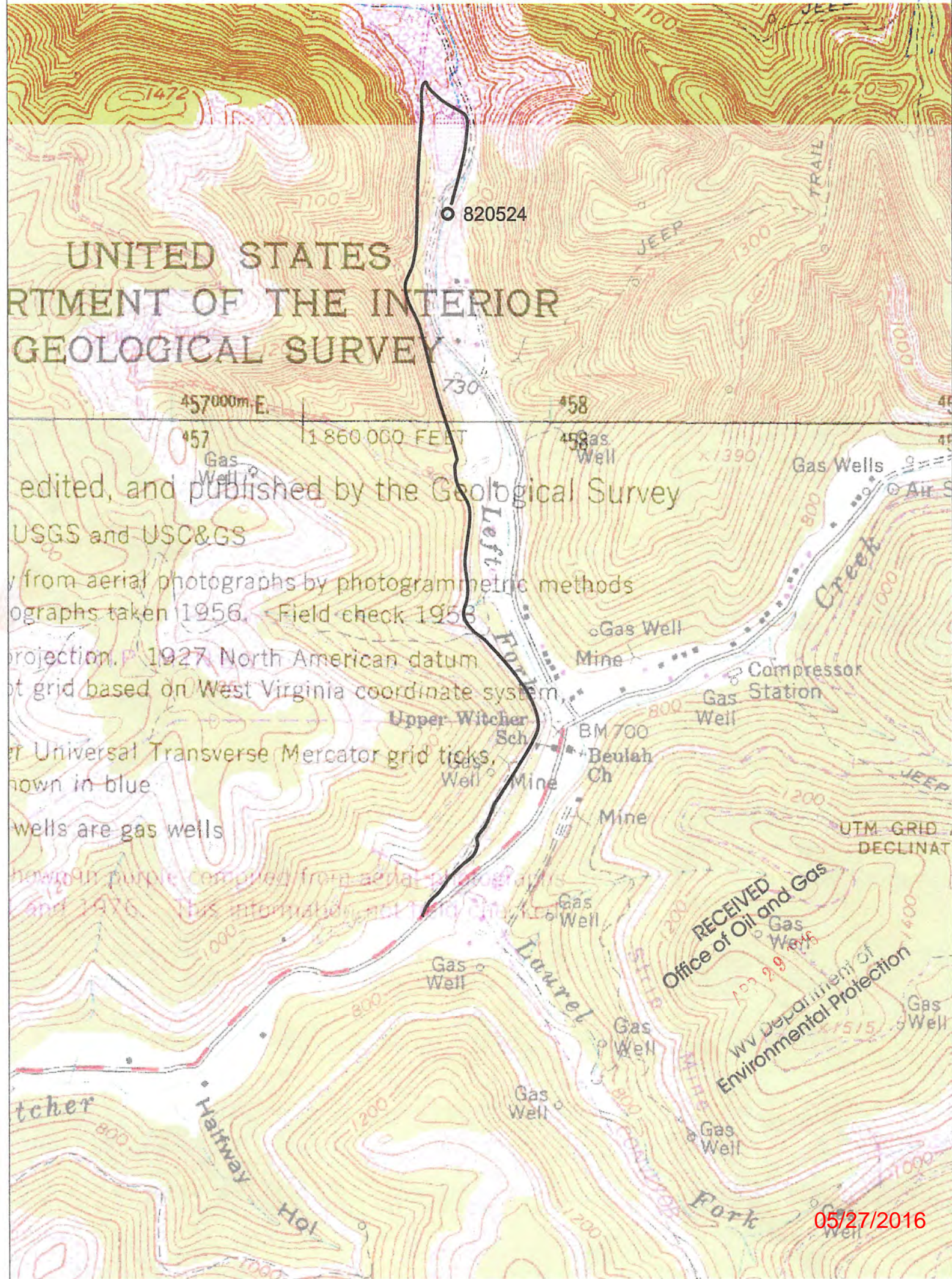
Permanent seeding: See Attachment #1.

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CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND WELL LOCATION 820524

API 47-039-03908



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

457000m E. 1:860 000 FEET
edited, and published by the Geological Survey
USGS and USC&GS

from aerial photographs by photogrammetric methods
photographs taken 1956. Field check 1958
projection. 1927 North American datum
of grid based on West Virginia coordinate system.
er Universal Transverse Mercator grid ticks,
shown in blue
wells are gas wells

new in purple compiled from aerial photographs
and 1976. This information is for
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NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°17'30"

7,128'

LONGITUDE 81°27'30"

13,328'

NORTH

NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

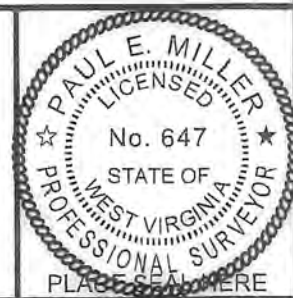
WELL SITE
STATE PLANE WV SOUTH ZONE NAD 1927 N - 457,315.190 : E - 1,861,276.518
LATITUDE: (N) 38.2549293° LONGITUDE: (W) 81.4831078°
UTM NAD83 17 - 84W TO 78W, METERS N - 4,234,222.156 : E - 457,745.623

(+) 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



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.

47 039 03908 P
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS ___ 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 APPALACHIA, L.L.C. PO BOX 6070, CHARLESTON, WV 25362

FORM WW-6

COUNTY NAME

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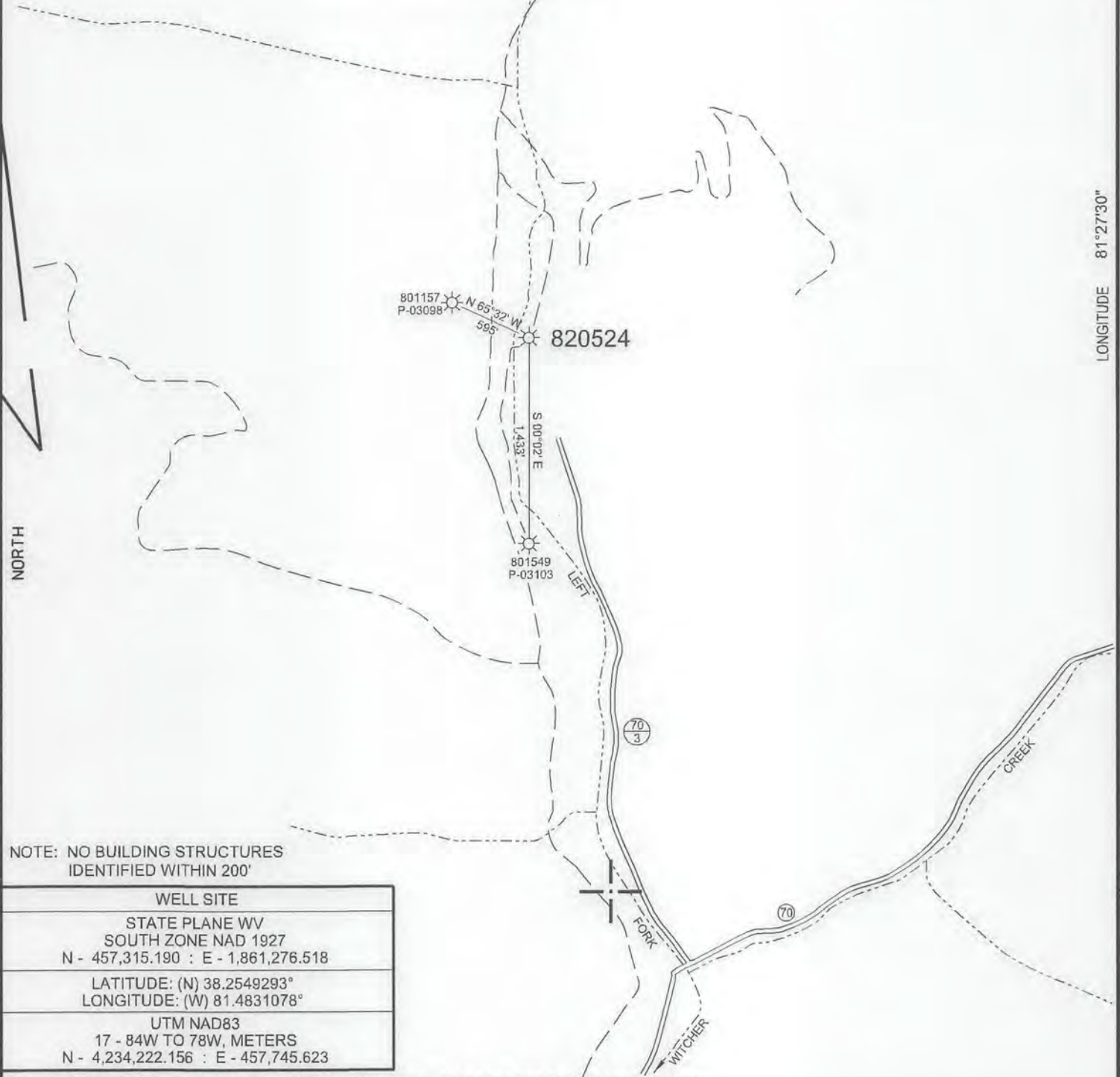
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