

#### 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

September 09, 2014

#### WELL WORK PLUGGING PERMIT

#### Plugging

This permit, API Well Number: 47-6101178, 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.

Chief

James Martin

Operator's Well No: 2032

Farm Name: BROWN, ALBERT CLARK

API Well Number: 47-6101178 Permit Type: Plugging

Date Issued: 09/09/2014

## **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.

WW-4B Rev. 2/01

1) Date August 11	, 2014
2) Operator's	
Well No. 912032	
3) API Well No. 47-1	61 - 01178

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

	evation 1873'	Watershed Booth 'Creek	
Di	strict Clinton	County Monongalia Quadrangle Gladesville	
) Well Operator	Chesapeake Appalachia, LLC	7) Designated Agent Eric B. Gillespie	
Address	D C D 4000	Address P.O. Box 6070	
110000	Jane Lew, WV 26378	Charleston, WV 25301	В
			Office
) Oil and Gas I	inspector to be notified	9) Plugging Contractor	AUG
Name Gayne K		Name R & J Well Service	AUG
Address PO	Box #2	Address P.O. Box 37	
Moi	indsville, WV 26041	Hueysville, KY 41640	
MIRU service rig & needed BOF 2 3/8" tubing, RIH w/ sandline to with circulation. Pump 9 sks of	equipment. NOTE: Blow down well to pit or tank. RU Lub ols w/ 5K CIBP & set @ 7,550°. TIH strapping 2 3/8° tubing Class A cement for 100° cement plug on top of CIBP, flush	nner of plugging this well is as follo pricator to pull and layout 1 way BP valve. Remove 1 way BP valve. TOOH with 7,58 g to PBTD of 7,550' & tag CIBP. Load hole with 120 bbts of 6% gelled water or break tubing with 29 bbts 6% gelled water. Pump 9 sks of Class A cement for 100' cement	5' of
MIRU service rig & needed BOF  2 3/8" (ubing, RIH w/ sandline to with circulation. Pump 9 sks of plug on top of CIBP, flush tubing	equipment. NOTE: Blow down well to pit or tank. RU Lub ols w/ 5K CIBP & set @ 7,550°. TIH strapping 2 3/8° tubing Class A cement for 100° cement plug on top of CIBP, flush with 29 bbls 6% gelled water. TOOH with 2 3/8° tubing to a Add additional cement if needed. ND 8OP & 'B' Section.	oricator to pull and layout 1 way BP valve. Remove 1 way BP valve. TOOH with 7,58 g to PBTD of 7,550' & fag CIBP. Load hole with 120 bbts of 6% gelled water or break tubing with 29 bbts 6% gelled water. Pump 9 sks of Class A cement for 100' cement surface. SD & WOC for 8 hours. RIH w/ sandline tools & fag plug @ 7,450' +/  Weld on 4 1/5" pull sub. RU casing jacks and remove slips. Work casing for free point	surface
MIRU service rig & needed BOF  2 3/8" tubing, RIH w/ sandline to with circulation. Pump 9 sks of plug on top of CIBP, flush tubing Plug must be at 7,450' or higher and ensure casing is free at or d	equipment. NOTE: Blow down well to pit or tank. RU Lub ols w/ 5K CIBP & set @ 7,550°. TiH strapping 2 3/8" tubing Class A cement for 100° cement plug on top of CIBP, flush with 29 bbls 5% galled water. TOOH with 2 3/8" fubing to a Add additional cement if needed. ND 8OP & 'B' Section. The seper than 6,500°. NU 'B' Section & BOP, RU Wireline and	oricator to pull and layout 1 way 8P valve. Remove 1 way 8P valve. TOOH with 7,58 g to PBTD of 7,550' & tag CIBP. Load hole with 120 bbls of 6% gelled water or break tubing with 29 bbls 6% gelled water. Pump 9 sks of Class A cement for 100' cement surface. SD & WOC for 8 hours. RIH w/ sandline tools & tag plug @ 7,450' */	surface
MIRU service rig & needed BOF 2 3/8" tubing. RIH w/ sandline to with circulation. Pump 9 sks of plug on top of CIBP, flush tubing Plug must be at 7,450' or higher and ensure casing is free at or d TIH w/ 2 3/8" tubing to 6,550' (50)	equipment. NOTE: Blow down well to pit or tank. RU Lub ols w/ 5K CIBP & set @ 7,550°. TIH strapping 2 3/8° tubing Class A cement for 100° cement plug on top of CIBP, flush with 29 bbls 6% gelled water. TOOH with 2 3/8° tubing to a Add additional cement if needed. ND BOP & 'B' Section. Note that 6,500°. NU 'B' Section & BOP, RU Wireline and the second of 4 ½° casing). Circulate hole w/ 161 bbls of 6% g	oricator to pull and layout 1 way BP valve. Remove 1 way BP valve. TOOH with 7,58 g to PBTD of 7,550' & tag CIBP. Load hole with 120 bbts of 6% gelled water or break tubing with 29 bbts 6% gelled water. Pump 9 sks of Class A cement for 100' cement surface. SD & WOC for 8 hours. RIH w/ sandline tools & tag plug @ 7,450' */  Weld on 4 1/3" pull sub. RU casing tacks and remove stips. Work casing for free point d cut 4 1/3" 10.5# casing @ 6,500'. Pull and laydown casing. (Note TOC @ 6,600' cat	surface
MIRU service rig & needed BOP  2 3/8" tubing. RIH w/ sandline to with circulation. Pump 9 sks of plug on top of CIBP, flush tubing Plug must be at 7,450' or higher and ensure casing is free at or d  TIH w/ 2 3/8" tubing to 6,550' (50) above casing stub), flush tubing	equipment. NOTE: Blow down well to pit or tank. RU Lub ols w/ 5K CIBP & set @ 7,550°. TIH strapping 2 3/8" tubing Class A cement for 100° cement plug on top of CIBP, flush with 29 bbls 6% gelled water. TOOH with 2 3/8" tubing to a Add additional cement if needed. ND 8OP & 'B' Section. Neeper than 6,500°. NU 'B' Section & BOP, RU Wireline and Inside of 4 1/4" casing). Circulate hole w/ 161 bbls of 6% gelled water. TOOH + 300° with 2 3/8" tubing the section of the sect	oricator to pull and layout 1 way BP valve. Remove 1 way BP valve. TOOH with 7,58 g to PBTD of 7,550' & fag CIBP. Load hole with 120 bbts of 6% gelled water or break tubing with 29 bbts 6% gelled water. Pump 9 sks of Class A cement for 100' cement surface. SD & WOC for 8 hours. RIH w/ sandline tools & fag plug @ 7,450' +/  Weld on 4 1/4" pull sub. RU casing jacks and remove slips. Work casing for free point d cut 4 1/4" 10.5# casing @ 6,500'. Pull and laydown casing. (Note TOC @ 6,600' cat gelled water. Pump 14 sks of Class A cement for 100' stub plug (50' inside of 4 1/4" & gelled water.	surface culated).

WW-4B Rev. 2/01

1) Date August 11		2014
2) Operator's		
Well No. 912032	2	
3) API Well No.	47-061	- 01178

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

		PERMIT TO PLUG AND ABANDON
4)		quid injection/ Waste disposal/ Underground storage) Deep/ Shallow X
EV	Location: Elevation 1873	Watershed Booths Creek
5)	District Clinton	County Monongalia Quadrangle Gladesville
	Well Operator Chesapeake Appalachia, LLC	7) Designated Agent Eric B. Gillespie
6)	nerr operator	Address P.O. Box 6070
	Address P.O. Box 1300  Jane Lew, WV 26378	Charleston, WV 25301
8)	Oil and Gas Inspector to be notified Name Gayne Knitowski	9) Plugging Contractor  Name R&J Well Service
	Address PO Box #2	Address P.O. Box 37
	Moundsville, WV 26041	Hueysville, KY 41640
	TOOH + 300' With 2 3/8' tubing. SD & WOC for 8 hours. TH W/ 2 3/8' tubing & tag	plug @ 1,823'. Plug must be at 1,823' or higher, Add additional cement if needed.
		rump 32 sks of Class A cement for 100' surface cement plug, TOOH w/ tubing. Top off well with
	TOOH w/ 2 3/8" tubing to 100' Pump 6 bbl of 6% gelled water or break circulation. Prequired Class A cement as needed. Install a 36 inch casing monument w/-2" vent in	Pump 32 sks of Class A cement for 100' surface cement plug, TOOH w/ tubing. Top off well with estall a Aluminum plat monument with ALL required WV dates and WV API number.  Received Office of Oil & Gas

#### PROCEDURE

- Contact the WV State Inspector 48 hours prior to operations.
- Safety is the highest priority. Hold wellsite safety meetings prior to each significant operation. Review critical parameters and objectives as well as emergency action plans.
- MIRU construction equipment if necessary to repair road / location in order to get workover rig
  in. Remove any tanks, separators, well lines, meter runs, exc.
- 4. MIRU service rig & needed BOP equipment. NOTE: Blow down well to pit or tank.
- 5. RU Lubricator to pull and layout 1 way BP valve. Remove 1 way BP valve.
- 6. TOOH with 7,585' of 2 3/8" tubing.

- Received Office of Oil & Gas
  - AUG 26 2014

- 7. RIH w/ sandline tools w/ 5K CIBP & set @ 7,550'.
- 8. TIH strapping 2 3/8" tubing to PBTD of 7,550' & tag CIBP.
- Load hole with 120 bbls of 6% gelled water or break surface with circulation.
- Pump 9 sks of Class A cement for 100' cement plug on top of CIBP, flush tubing with 29 bbls 6% gelled water.
- 11. TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours.
- RIH w/ sandline tools & tag plug @ 7,450° +/-. Plug must be at 7,450° or higher; Add additional cement if needed.
- ND BOP & 'B' Section. Weld on 4 ½" pull sub. RU casing jacks and remove slips. Work
  casing for free point and ensure casing is free at or deeper than 6,500".
- 14. NU 'B' Section & BOP. RU Wireline and cut 4 ½" 10.5# casing @ 6,500'. Pull and laydown casing. (Note TOC @ 6,600' calculated).
- 15. TIH w/ 2 3/8" tubing to 6,550' (50' inside of 4 ½" casing). Circulate hole w/ 161 bbls of 6% gelled water. Pump 14 sks of Class A cement for 100' stub plug (50' inside of 4 ½" & 50' above casing stub), flush tubing with 25 bbls 6% gelled water.
- 16.  $TOOH \pm 300$ ' with 2 3/8" tubing. SD & WOC for 8 hours.
- 17. TIH w/ 2 3/8" tubing & tag plug @ 6,450". Plug must be at 6,450" or higher; Add additional cement if needed.
- TOOH w/ 2 3/8" tubing to 2,202' and Pump 26 sks of Class A cement for 100' intermediate shoe cement plug, flush tubing with 9 bbls 6% gelled water

- 19. TOOH ± 300' with 2 3/8" tubing. SD & WOC for 8 hours.
- 20. TIH w/ 2 3/8" tubing & tag plug @ 2,102'. Plug must be at 2,102' or higher; Add additional cement if needed.
- TOOH w/ 2 3/8" tubing to 1,923' and Pump 32 sks of Class A cement for 100' Elevation cement plug, flush tubing with 8 bbls 6% gelled water
- 22. TOOH ± 300° with 2 3/8" tubing. SD & WOC for 8 hours.
- 23. TIH w/ 2 3/8" tubing & tag plug @ 1,823'. Plug must be at 1,823' or higher; Add additional cement if needed.
- TOOH w/ 2 3/8" tubing to 100' Pump 6 bbl of 6% gelled water or break circulation. Pump 32 sks of Class A cement for 100' surface cement plug, TOOH w/ tubing.
- Top off well with required Class A cement as needed.

A

- 26. Install a 36 inch casing monument\_w/2" vent. Install a Aluminum plat monument with ALL required WV dates and WV API number.
- RDMO all service equipment providers and reclaim location to WV State requirements.

NO 2" VENT

J.W.M

Received Office of Oil & Gas

AUG 26 2014

## Received Office of Oil & Gas

AUG 26 2014

11-Oct-94 WR-35 API 01178 State of West Virginia Division of Environmental Protection Section of Oil and Gas 19 1994 Operator Well No.: 2031/100 of Oll & Gas Well Operator's Report of Well Work BROWN, ALBERT CLARK Farm name: Elevation: 1,873.00 Quadrangle: GLADESVILLE LOCATION: County: MONONGALIA CLINTON Latitude: 1460 Feet South of 39 Deg. 30Min. 0 Sec. Longitude 5500 Feet West of 79 Deg. 55 Min. 0 Sec. Company: ALAMCO, INC. P O BOX 1740 Cement Used in Left Casing Fill Up CLARKSBURG, WV 26302-1740 prilling | in Well Cu. Ft. Tubing Agent: MARTY L. PERRI Size 175 Sks. Inspector: RANDAL MICK 10/20/94 Permit Issued: 3461 2117 EL 3 346 11-3/4 Well work Commenced: 625 Sks Well work Completed: 738 Ft. 2152' 2152' 8-5/8 Verbal Plugging Permission granted on: 225 Sks4 Rotary X Cable Total Depth (feet) Cable 1008 358 Ft. 4-1/2 Fresh water depths (ft) 20': 140' Salt water depths (ft) 2017' Is coal being mined in area (Y/N)? N Coal Depths (ft): OPEN FLOW DATA Chert Pay zone depth (ft. Producing formation Gas: Initial open flow Odor MCF/d Oil: Initial open flow Final open flow 2090 MCF/d Final open flow Bb1/d Time of open flow between initial and final tests Hours psig (surface pressure) after Hours 72 Static rock Pressure 2950 Pay zone depth (ft) Second producing formation MCF/d Oil: Initial open flow Gas: Initial open flow\_ Final open flow Bb1/d MCF/d Final open flow Time of open flow between initial and final tests Hours psig (surface pressure) after Hours Static rock Pressure NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE. oNo FOI: ALAMCO, INC. the has R. Mark Hackett Date: 12/6/14

Formations: 0-2200' from Drillers Log Book - 2200' to TD from Gamma Ray Log

Top	Bottom	Type	Water, Coal, C	Gas	
0 140 441 680 718	140 441 680 718 942	SH SD & SH SH & RR Lime & SH Big Lime/Injun	Water: 20'; 1- Coal: None Oil: None	40' and 2017'	
942 1027	1027 1136	SH Weir	Gas Checks:		
1136 1255	1255 1780	SH SH & SD	2826' 3326'	N/S N/S	
1780 1993	1993 2625	SD SH	3855' 4354'	N/S N/S	
2625 2835	2835 7187	SP/Bltn SH	4856' 5357'	N/S N/S	
7187 7273 7478 7573 7586	7273 7478 7573 7586 7738	Tully L. SH Marcellus Onondaga Chert	5855' 6355' 7010' 7199'	N/S N/S N/S N/S N/S	Received Office of Oil & Gas
7738 7777 7834	7777 7834 8001 8001 8024	SH Oriskany Lime Drlg. TD Log TD	7566' 7721' 8001'	N/S N/S	AUG 26 2014

### Treatment and Perforations:

Stimulation: 12/01/94 Huntersville Chert

Perforations: (7590-7715') 27 Holes; WF-30 w/5% HCL throughout 15,000# 80/100, 60,000# 20/40; 1280 Bbls. Total Fluid

## **Current Wellbore Schematic**

WELL (PN): BROWN 8 (912032)
FIELD OFFICE: MARCELLUS SOUTH
FIELD:
STATE / COUNTY: WEST VIRGINIA / MONONGALIA
LOCATION: T/D CLINTON, Q-GLADESVILLE
ROUTE: CE-JLN-RT 334 - RUSSELL STORCH
ELEVATION: GL: 1,873.0 KB: 1,873.0 KB Height: 0.0
DEPTHS: TD: 8,001.0

API #: 4706101178 Serial #: 1178 SPUD DATE: 11/4/1994 RIG RELEASE: 11/17/1994 1ST SALES GAS: 12/28/1994 1ST SALES OIL: CURRENT STATUS: SHUTIN

VERTICAL - Original Hole, 8/7/2014 4:24:35 PM VERTICAL - Original Hole, 8/7/2014 4:24:35 PM Vertical schematic (proposed) Vertical schematic (actual) Back Pressure Valve: 2.00 in: 0.0 tir.B; 4/24/2014: Set to isolate leak at flange onnection of LMV and tubing head 100' Surf Cmf Plug 346.0 ftK urface Casing Cemen DO fike: 346 D fike \*\*\*\*\*\*\*\*\*\*\*\*\* Intermediate Casing Cement; 0.0 ftK8; 2.152.0 Cut and Pull 4 1/2" Csg @ 6.500/ kb. 100' Stub Plug from 6,450' - 6,550' kb Caculated TOC @ 6,600 00' Cement Plug from 7,450' - 7,550 CIBP set @ 7,550' Vb Received Office of Oil & Gas 2 3/8 in; 0.0-7,585.0 ftK8 AUG 26 2014 PERFS 7,590' - 7,715' Cement: 6,600.0 ftKB 7.953.0 HKE 4 1/2 in; 0.00 lb/ft; 0.0-7,953.0 ftKB 09/12/2014 Report Printed: 8/7/2014 Page: 1/1

## **Current Wellbore Schematic**

WELL (PN): BROWN 8 (912032)
FIELD OFFICE: MARCELLUS SOUTH
FIELD:
STATE / COUNTY: WEST VIRGINIA / MONONGALIA
LOCATION: T/D CLINTON, Q-GLADESVILLE
ROUTE: CE-JLN-RT 334 - RUSSELL STORCH
ELEVATION: GL: 1,873.0 KB: 1,873.0 KB Height: 0.0
DEPTHS: TD: 8,001.0

API #: 4705101178 Serial #: 1178 SPUD DATE: 11/4/1994 RIG RELEASE: 11/17/1994 1ST SALES GAS: 12/28/1994 1ST SALES OIL: CURRENT STATUS: SHUTIN

VERT	ICAL - O	: 8,001.0 iniginal Hole, 8/7/2014 1:15:26 PM	Surface Casing; Set @ 346.0 ftKB ; Original Hole
MD	TVD	Vertical schematic (actual)	Set Tansan (kpa) Mua Wegnt
(tKB)	(ftKB)	Vertical sci initiatio (patenti)	
3000			Casing 11 3/4 0,0 346.0 346.00 Joints
200.0			Intermediate Casing; Set @ 2,152.0 ftKB; Original Hole
-100.0			Set Tension (such)
00		and the same of th	ttem Des OD (in) ID (in) Wt (tb/ft) Grade Thread Top (ft/RB) Btm (ft/RB) Len (ft)
0.2		Back Pressure XX Valve, 0.0-1.0	Casing 8 5/8 Joints
0.5		ftKB, 2.00 in;	Production Casing; Set @ 7,953.0 ftKB; Original Hole  Set Tempor (Note)  Set Tempor (Note)  Set Tempor (Note)
		leak at flange connection of	Det Too
11.7		LMV and tubing head.	
1.0			Casing 4 1/2 Joints
87.3			Description: Surface Casing Cement 0.0-346.0
173.5			Top of Cement (ftKB): 0.0 Top Measurement Method: Vol Pumped Yield
250.5			Fluid Pump Start Amount (sacks) Class Dens (tb/gal) (bbl) (ft²/sack)
346.1		11 3/4 in, 0.00 lb/ft, 0.0-346.0	Description: Intermediate Casing Cement
797,6		fiKB	0.0-2,152.0 Top Measurement Method:
1,2490			Pump Start Amount Vol Pumped Yield (19/sack)
1.700.5	1		1300
		8 5/8 in; 0.00 lb/ft: 0.0-2,152.0	Description: Production Casing Cement 6,600.0-7,953.0
2151.9	1	ftKB	Top of Cement (ftKB): 6.600.0 Top Measurement Method: Estimated Vol Pumped Yield
3.509.0	1		Fluid Date (sacks) Class Dens (lb/gal) (bbl) (ft²/sack)
4,607.9		1 1111	Tubing String: Tubing - Production Put Date Cut Put Date Depth Cut Put II
8,226.0	1		7,585.0 Onginal Hote 9/29/2008
2.584,0	4/1	(I)	
7,584.2	4		Tubing 23/8 0.0 7,584.0 7,584.0 240
7,584.5		<b>∄</b> Π≬	Perforations
7,584.7			Shot Dens
7 565.0			Date Zone Top (tk/B) Btm (tk/B) (shots/f) Current Status
7,586.2			11/30/1994 CHERT, Original Hole 7,590.0 7,715.0 Stimulations & Treatments
1000			CHERT Stage Number?> Acid Frac, 12/1/1994
7,687.	1		Man Top Dept. May film De Total Clean. Avg Treat Pr. O Teat Avg ( Post an 1997)
7.588	7		Sand Size Type Amount Conc (tb/gal)
7,523	9		
7.621	10		
7,652	4	d t	
7,683	æ	9	Received
7,714	9	12 m	Office of Oil & Gas
7,766	4		
7.857	7.9		AU 6 2 6 2014
7.929		4 1/2 in; 0.00	
8.00		tb/ft; 0.0-7,953.0 ft/KB	
6.10			
8.20	1.0		
6.30	1.0		Report Printed: 8/7/2014 09/12/2014
			Page: 1/1 Report Printed: 8/7/2014 U9/12/2012

#### WELL DATA

Location (Surface)	Lat. 39.4957408 Long79.935714
--------------------	-------------------------------

## CASING AND TUBULAR DATA

STRING	SIZE	WEIGHT/GRADE	DEPTH
Surface	8 5/8"	Unknown; assume: 32 lb/ft;J-55	2,152'
Production	4 1/2"	Unknown; assume: 10.5 lb/ft;J-55	7,953

## PRESSURE AND DIMENSIONAL DATA

SIZE	WEIGHT	GRADE	BURST	COLLAPSE	DRIFT
8 5/8"	32 lb/ft (assumed)	J-55 (assumed)	3,930	2,530	7.796"
4 1/2"	10.5 lb/ft (assumed)	J-55 (assumed)	4,790	4,010	3.927"
2 3/8"	4.7 lb/ft	N-80	11,200	11,780	1.901"

### CAPACITIES

CAPACITY (FT^3/FT.) 0.3420 0.2046	0.0609
0.2046	
0.2046	0.0364
0.0895	0.0159
0.0217	0.0038
0.0217	1

## DRIVING DIRECTIONS

Contact Field Personnel

Office of Oil & Gas

AUG 26 2014

## SCOPE OF OPERATION

- Safety is the highest priority. Control costs and avoid unnecessary expenditures.
- 2. TIH with 2-3/8" tubing to 7,550".
- 3. Pump required cement and gel plugs per WV DEP state requirements
- 4. Plant a well monument with WV State API number

WW-4A Revised 6-07

1) Date:	August 11, 20	14			
2) Operator's Well Number 912032					
3) API Well No	: 47 -	061		01178	

#### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4)	Surface Own (a) Name	ner(s) to be served:	5) (a) Coal Operator Name
	Address	465-A Brown Herron Road	Address
		Morgantown, WV 26508	
	(b) Name	Kevin Britton	(b) Coal Owner(s) with Declaration
	Address	3417 Halleck Road	Name Ida Brown
		Morgantown, WV 26508	Address 465-A Brown Herron Road
			Morgantown, WV 26508
	(c) Name		Name
	Address		Address
6) ]	nspector	Gayne Knitowski	(c) Coal Lessee with Declaration
	Address	PO Box #2	Name
		Moundsville, WV 26041	Address
	Telephone	304-546-8171	

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

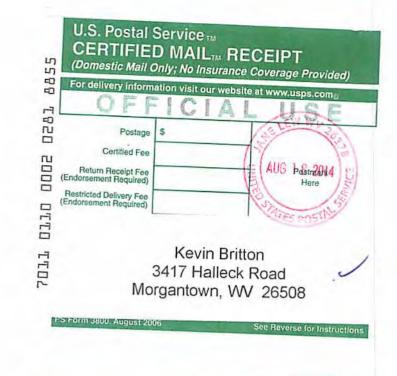
- The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

	Well Operator	Chesapeake Appalachia, LLC		Received Office of Oil & Gas
OFFICIAL SEAL Notary Public, State of West Virginia	By:	Dee Southall		0.0011
37/12/22-00/ 128	Its:	Regulatory Analyst II		AUG 26 2014
3302 Old Elkins Road	Address	P.O. Box 1300		
Buckhannon, WV 26201 My commission expires November 27, 2022		Jane Lew, wv 26378		
Lumman	Telephone	304-517-1416 EXT. 86024		
Subscribed and sworn before me this My Commission/Expires  Oil and Gas Privacy Notice	THO de	ay of August	Notary Public	

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.



U.S. Postal Service m CERTIFIED MAIL, RECEIPT (Domestic Mail Only; No Insurance Coverage Provided) 中日 287 EW WV Postage Certified Fee 2000 Postmark Return Receipt Fee (Endorsement Required) AUG 1 8 2014 Restricted Delivery Fee (Endorsement Required) 0770 Ida Brown 465-A Brown Herron Road Morgantown, WV 26508

Received Office of Oil & Gas

AUG 26 2014

WW-9 Rev. 5/08

Page		of	
API Number 47 - 061	- 4	01178	
Operator's Well No. 91203			

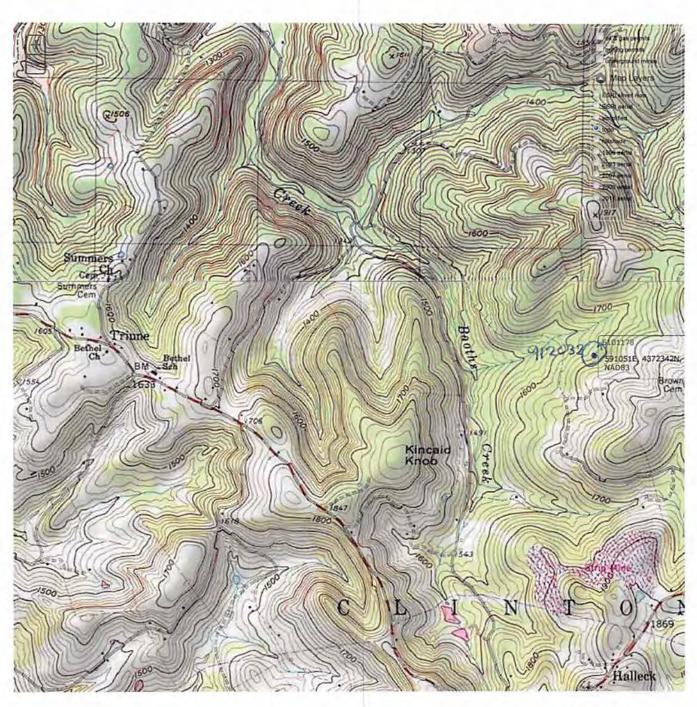
# STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

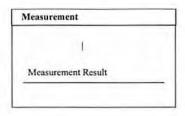
Operator Name Ches	apeake Appalachia, LLC	OP Code 494477557	
Watershed Booths Cre	eek	Quadrangle Gladesville	
Elevation 1873	County Monongalia	District Clinton	_
Description of antici	pated Pit Waste: Water from plugging process		
Will a synthetic line	be used in the pit? yes 20 mt .		
Proposed Disposal N	Method For Treated Pit Wastes:  Land Application		
x	Underground Injection (UIC Permit)	Number 2D0072539/2D0413175/2D0610306/2D0610317	)
		ed well, API# will be included on the WR34/∨ permit addendum	
	Off Site Dispposal (Supply form WW Other (Explain flowback will be put in	V-9 for disposal location) steel tanks and reused or taken to permitted disposal fac	ility
Proposed Work For	Which Pit Will Be Used:		
Troposed Work For	Drilling	Swabbing	
	Workover	Plugging	
	Other (Explain_		
I certify ur application form ar obtaining the inform	n lead to enforcement action.  Inder penalty of law that I have personally all attachments thereto and that, based nation, I believe that the information is training false information, including the possibil		itted on this ponsible for
Company Official (	Typed Name) Dee Southall		of Oil & Gas
Company Official T	Regulatory Analyst II	AUI	3 26 2014
	16		-
Subscribed and swo	rn before me this day of	lugust, 20_14	
Butte	my Elloody	Notory Public	
	(1)22122	Notary Public, S BRITTAN	CIAL SEAL State of West Virginia Y R WOODY
My commission exp	rires III A I d d	Buckhann	Elkins Road ion, WV 26201
		Timmet.	2/2014

		EGEND		
Property Bound	ary A	Diversion LL		HILLIAN HILL
Road = = .	= = = = = = = =	Spring O	->	
	_ × _ × _ × _	Wet Spot	4	
Planned Fence	_/_/_	Drain Pipe with	size in inches	— ® —
Stream /.	7 7 7	Waterway (	· C · C	$\Rightarrow \Leftrightarrow \Leftrightarrow \Leftrightarrow$
Open Ditch -	—···> —···> —···>	Cross Drain		
Rock 8888	Po _	Artificial Filter	Strip XXXX	XXXXXXXXXXXX
North N		Pit: cut walls	£3	
Buildings [		Pit: compacted i	fill walls	Willey.
Water wells	(W)	Area for Land	Application of Pi	t Waste
Drill site	$\oplus$		6	
	tion Treatment: Acres Disturbed  Tons/acre or to correct to pH	CE	Prevegetation pH	
Fertilizer (		acre (500 lbs minim	um)	
Mulch_Hay	/Straw Tons/ac	cre		
92270		N.C.		
	Seed	Mixtures		
40.00	Area I	0	Area	
Seed Type			ed Type	lbs/acre
Orchard Grass	20	Orchard Grass	20	
Red Top	15	Red Top	15	
White Clover	15	White Clover	15	
				Received
				Office of Oil & Ga
Attach:	, location,pit and proposed area for land appl	leation		AUG 26 2014
Drawing(s) of road	, location,pit and proposed area for land appr	ication.		110 90 1014
Photocopied section	n of involved 7.5' topographic sheet.			
	M NICH			
Plan Approved by:	Hayney Mik			
Comments:				
Oil and Can la	penactor		12-11	
Title: Oil and Gas I	Ispecial	Date: 8 14	1017	
Field Reviewed?	( × )Yes (	) No		





591051 € 4372342 N



09/12/2014

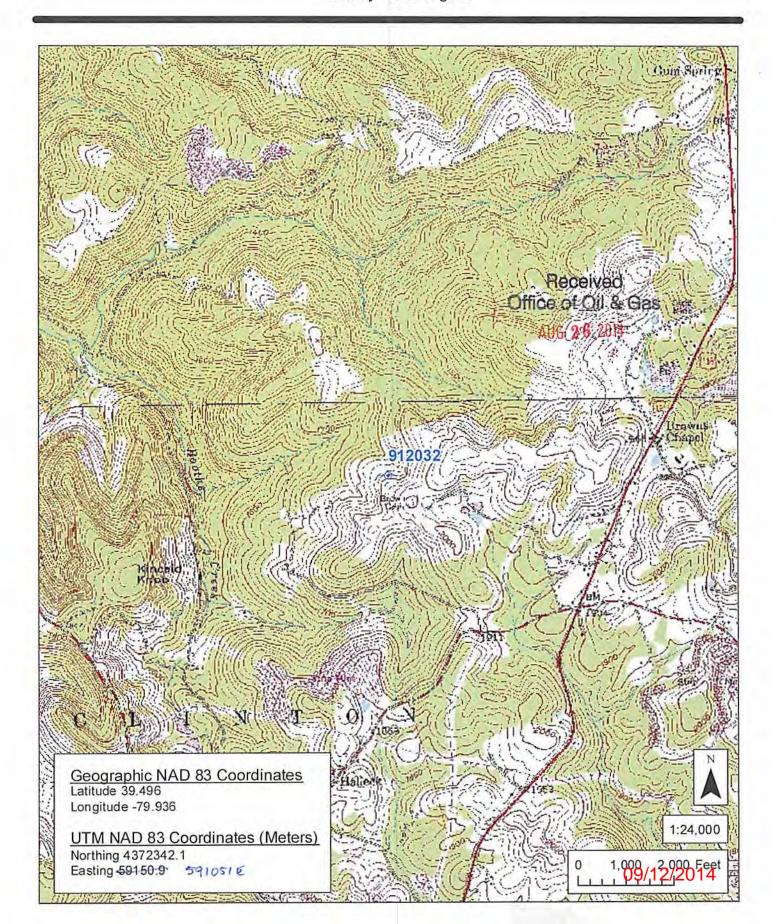
## CHESAPEAKE APPALACHIA, L.L.C.

Topographical Map of Well 912032 (Brown 8)

API = 47-61-1178

Field Office - Jane Lew

County - Monongalia



API:47-061-01178



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

WELL NO.: 912032

FARM NAME: Brown, Albert Clark	
	II.C
RESPONSIBLE PARTY NAME: Chesapeake Appalachia, 1	<u>ubc</u>
COUNTY: Monongalia DISTRICT: Clinton	
QUADRANGLE: Gladesville	
SURFACE OWNER: Ida Brown	211
ROYALTY OWNER: Please see Attachment #1	Received Office of Oil & Gas
UTM GPS NORTHING: 4372342.1	AUG 26 2014
UTM GPS EASTING: 591050.9	
GPS ELEVATION: 1873'	
The Responsible Party named above has chosen to submit GPS of preparing a new well location plat for a plugging permit or assignabove well. The Office of Oil and Gas will not accept GPS coord the following requirements:  1. Datum: NAD 1983, Zone: 17 North, Coordinate Unit height above mean sea level (MSL) – meters.  2. Accuracy to Datum – 3.05 meters  3. Data Collection Method: Survey grade GPS: Post Processed Differential	the well location.  of my knowledge and
Date	09/12/2014

