



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

July 17, 2014

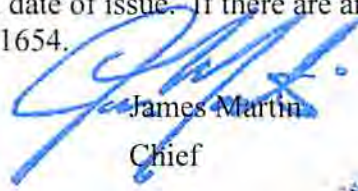
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-2900141, 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: 834412 (ALLISON HNK 3H M)

Farm Name: ALLISON, CAROLYN

API Well Number: 47-2900141

Permit Type: Plugging

Date Issued: 07/17/2014

Promoting a healthy environment.

07/18/2014

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.
4. During reclamation apply 4 tons of lime per acre.
5. During reclamation use straw instead mulch.

OK
JMM

29 00141 P

5817 Wylie Ridge
New Cumberland, WV 26047
May 22, 2014

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

To Whom It May Concern,

I am writing these two comments concerning the Plugging Permit for Allison HNK 4H M well in Hancock County, WV.

Upon reclaiming the area, we want 4 tons of lime per acre and the use of straw only for the mulch. The reasoning for straw only is that hay produces weeds when used as mulch.

Thank you.

Sincerely,



Carolyn Allison
Land Owner

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Environmental Protection

07/18/2014

2900141P

WW-4B
Rev. 2/01

1) Date May 12, 2014
2) Operator's
Well No. 834412
3) API Well No. 47-029 - 00141

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 ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1275' Watershed Upper Ohio South
District Clay County Hancock Quadrangle East Liverpool South

6) Well Operator Chesapeake Appalachia, LLC 7) Designated Agent Eric B. Gillespie
Address P.O. Box 1300 Address P.O. Box 6070
Jane Lew, WV 26378 Charleston, WV 25301

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Gayne Knitowski Name R & J Well Service
Address PO Box #2 Address P.O. Box 37
Moundsville, WV 26041 Hueysville, KY 41640

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

MIRU service rig & snubbing unit. NOTE: Blow down well to pit or tank. Load hole w/ 9.7 ppg brine (calculated 110 bbls). Observe well for 30 min to establish well is dead.
Release 5 1/2" x 2 3/8" AS-IX Packer. SOOH w/ 2 3/8" production tubing, gas lift valves and packer set at 4,141'. RU wireline unit and TIH w/ gauge ring & junk basket to KOP at 4,000'.
TOOH and lay down GR & JB. TIH w/ 5 1/2" 20 lb/l 8K CIBP and set at 4,000'. (Check CCL log to ensure there is not a collar present at set depth). RIF w/ 2 3/8" tubing to 8K CIBP
located at 4,000'. Circulate hole with 89 bbls of 6% gelled water or break surface with circulation. RU & Pump 12 sks of Class A cement (spot 100' cement on top of CIBP).
Flush tubing w/ 16 bbls of 6% gelled water. TOOH + 300' with 2 3/8" tubing. SD & WOC for 8 hours. TIH w/ 2 3/8" tubing and tag plug @ 3,900'. Plug must be at 3,900' or higher.
Add additional cement if needed. TOOH w/ 2 3/8" tubing to 1,325' and pump 12 sks of Class A cement (spot 100' for elevation plug - 1,225' to 1,325'). Flush tubing w/ 6 bbls of 6% gelled water.
TOOH + 300' with 2 3/8" tubing. SD & WOC for 8 hours. TIH w/ 2 3/8" tubing and tag plug @ 1,225'. Plug must be at 1,225' 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 12 sks of Class A cement for 100' surface cement plug. TOOH w/ tubing. Top off well with
required Class A cement as needed. 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.

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

Work order approved by inspector Gayne Knitowski Date 5/14/2014

07/18/2014

Driving Directions

Intersection of Filmore Street and W V 2 South Take W Virginia South for 1.5 miles. Turn Left onto Ballantyne Road for 1.2 miles turn Left onto Shady Glen Rd for 0.7 miles. Turn Right onto Bell Hill Road for 1.6 miles Bell Hill Road turns into Chapman Road. Access road will be located on the left. 40.521413, -80.917164.

SCOPE OF OPERATION

1. Safety is the highest priority. Control costs and avoid unnecessary expenditures.
2. TOOH with 2-3/8" tubing & packer.
3. Run in hole with wireline set 8K CIBP.
3. Pump required cement and gel plugs per WV DEP state requirements
4. Plant a well monument with WV State API number.

Procedure

1. **Contact the WV State Inspector 48 hours prior to operations.**
2. **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.
3. MIRU service rig & snubbing unit. **NOTE: Blow down well to pit or tank.**
4. Load hole w/ 9.7 ppg brine (calculated 110 bbls). Observe well for 30 min to establish well is dead.
5. Release 5 1/2" x 2 3/8" AS-IX Packer. SOOH w/ 2 3/8" production tubing, gas lift valves and packer set at 4,141'.
6. RU wireline unit and TIH w/ gauge ring & junk basket to KOP at 4,000'. TOOH and lay down GR & JB. TIH w/ 5 1/2" 20 lb/ft 8K CIBP and set at 4,000'. (Check CCL log to ensure there is not a collar present at set depth).
7. RIH w/ 2 3/8" tubing to 8K CIBP located at 4,000'. Circulate hole with 89 bbls of 6% gelled water or break surface with circulation.
8. RU & Pump 12 sks of Class A cement (spot 100' cement @ 3,900' or higher). Flush tubing w/ 16 bbls of 6% gelled water.
9. TOOH \pm 300' with 2 3/8" tubing. SD & WOC for 8 hours.
10. TIH w/ 2 3/8" tubing and tag plug @ 3,900'. Plug must be set at 3,900' or higher. Add additional cement if needed.

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11. TOOH w/ 2 3/8" tubing to 1,325' and pump 12 sks of Class A cement (spot 100' for elevation plug - 1,225' to 1,325'). Flush tubing w/ 6 bbls of 6% gelled water.
12. TOOH \pm 300' with 2 3/8" tubing. SD & WOC for 8 hours.
13. TIH w/ 2 3/8" tubing and tag plug @ 1,225'. Plug must be at 1,225' or higher; Add additional cement if needed.
14. TOOH w/ 2 3/8" tubing to 100' Pump 6 bbl of 6% gelled water or break circulation. Pump 12 sks of Class A cement for 100' surface cement plug, TOOH w/ tubing. 23. Top off well with required Class A cement as needed.
15. Install a 36 inch casing monument w/ 2" vent. Install a Aluminum plat monument with **ALL required WV dates and WV API number.**
16. RDMO all service equipment providers and reclaim location to WV State requirements.

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2900141P



Allison HNK 3H M
 Hancock County West Virginia
 API# 47-029-00141
 Plugging Procedure

Well Data

Location (Surface)	40.501514 Lat. -80.547351 Long.
TD	8,309'
PBTD	8,221'
Elevation	KB 1,275' GL 1,293'

Casing and Tubular Data

STRING	SIZE	WEIGHT/GRADE	DEPTH	ID	TOC
Surface	13 3/8"	54.5#	662'	12.615	Surface
Intermediate	9 5/8"	40# J-55	1,525'	8.835	Surface
Production	5 1/2"	20# P 110	8,309'	4.778	90'

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Capacities

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SIZE	WEIGHT	CAPACITY (CU FT/FT.)	CAPACITY (BBL/FT.)
5.5"	20#	0.1245	0.0222
2-3/8"	4.7#	0.1623	0.0038

07/18/2014

2900141A

Current Wellbore Schematic

WELL (PN): ALLISON HNK 3H M (834412)
 FIELD OFFICE: CANTON
 FIELD:
 STATE / COUNTY: WEST VIRGINIA / HANCOCK
 LOCATION: T/D CLAY, Q-EAST LIVERPOOL SOUTH
 ROUTE: OH-CAN-RT 002 - OH
 ELEVATION: GL: 1,275.0 KB: 1,293.0 KB Height: 18.0
 DEPTHS: TD: 8,309.0

API #: 4702900141
 Serial #: 141
 SPUD DATE: 4/29/2012
 RIG RELEASE: 5/16/2012
 1ST SALES GAS:
 1ST SALES OIL:
 CURRENT STATUS: W/O PIPELINE

*MOK
5/14/2014*

HORIZONTAL - Lateral, 5/8/2014 10:55:16 AM			Surface Casing; Set @ 662.0 ftKB; Original Hole - Pilot																											
MD (ftKB)	TVD (ftKB)	Vertical schematic (actual)	OD (in)	ID (in)	WtLen (bbl)	String Grade	Top Thread	Set Tension (kps)	Mud Weight	Depth Cut P...																				
3,052.0	3,051.6		13 3/8	12.615	54.50	Other																								
3,259.2	3,258.7		Intermediate Casing; Set @ 1,525.0 ftKB; Original Hole - Pilot																											
3,261.2	3,260.7		9 5/8	8.835	40.00	J-55																								
3,263.1	3,262.7		Production Casing; Set @ 8,309.0 ftKB; Lateral																											
3,470.0	3,469.5		5 1/2	4.778	20.00	P-110																								
3,676.8	3,676.3		Description: Surface Casing Cement																											
3,679.0	3,678.4		18.0-662.0																											
3,681.1	3,680.5		Top of Cement (ftKB): 18.0 Top Measurement Method:																											
3,744.1	3,743.5		<table border="1"> <thead> <tr> <th>Fluid</th> <th>Pump Start Date</th> <th>Amount (sacks)</th> <th>Class</th> <th>Dens (lb/gal)</th> <th>Vol Pumped (bbl)</th> <th>Yield (ft³/sack)</th> </tr> </thead> <tbody> <tr> <td>Lead</td> <td>4/30/2012</td> <td>620</td> <td></td> <td>15.60</td> <td>131.0</td> <td>1.19</td> </tr> </tbody> </table>								Fluid	Pump Start Date	Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)	Lead	4/30/2012	620		15.60	131.0	1.19						
Fluid	Pump Start Date		Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)																							
Lead	4/30/2012	620		15.60	131.0	1.19																								
3,807.1	3,806.5	Description: Intermediate Casing Cement																												
3,949.8	3,949.2	18.0-1,525.0																												
4,092.5	4,091.3	Top of Cement (ftKB): 18.0 Top Measurement Method:																												
4,094.5	4,093.2	<table border="1"> <thead> <tr> <th>Fluid</th> <th>Pump Start Date</th> <th>Amount (sacks)</th> <th>Class</th> <th>Dens (lb/gal)</th> <th>Vol Pumped (bbl)</th> <th>Yield (ft³/sack)</th> </tr> </thead> <tbody> <tr> <td>Lead</td> <td>5/3/2012</td> <td>570</td> <td>A</td> <td>15.60</td> <td>124.0</td> <td>1.22</td> </tr> </tbody> </table>								Fluid	Pump Start Date	Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)	Lead	5/3/2012	570	A	15.60	124.0	1.22							
Fluid	Pump Start Date	Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)																								
Lead	5/3/2012	570	A	15.60	124.0	1.22																								
4,096.5	4,095.2	Description: Production Casing Cement																												
4,097.1	4,095.8	90.0-8,309.0																												
4,097.8	4,096.5	Top of Cement (ftKB): 90.0 Top Measurement Method: Cement Bond Log																												
4,103.8	4,102.3	<table border="1"> <thead> <tr> <th>Fluid</th> <th>Pump Start Date</th> <th>Amount (sacks)</th> <th>Class</th> <th>Dens (lb/gal)</th> <th>Vol Pumped (bbl)</th> <th>Yield (ft³/sack)</th> </tr> </thead> <tbody> <tr> <td>Lead</td> <td>5/14/2012</td> <td>620</td> <td>Halcem</td> <td>14.20</td> <td>162.0</td> <td>1.47</td> </tr> <tr> <td>Tail</td> <td></td> <td>1,020</td> <td>Halcem</td> <td>15.60</td> <td>216.0</td> <td>1.19</td> </tr> </tbody> </table>								Fluid	Pump Start Date	Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)	Lead	5/14/2012	620	Halcem	14.20	162.0	1.47	Tail		1,020	Halcem	15.60	216.0	1.19
Fluid	Pump Start Date	Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)																								
Lead	5/14/2012	620	Halcem	14.20	162.0	1.47																								
Tail		1,020	Halcem	15.60	216.0	1.19																								
4,105.9	4,104.2	Tubing String: Packer Assembly - WL Set																												
4,110.9	4,109.2	Set Depth (ftKB)	Wellbore	Run Date	Pull Date	Cut Pull Date	Depth Cut Pull (ftKB)																							
4,111.9	4,110.1	4,141.4	Lateral	8/10/2012																										
4,120.7	4,118.7	Item Des	OD (in)	ID (in)	Drift (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Jts																			
4,129.6	4,127.3	Tubing Hanger	8 7/8					18.0	18.4	0.45	1																			
4,130.2	4,127.8	Tubing	2 7/8	2.441	2.347	6.50	L-80	18.4	976.2	957.79	30																			
4,130.9	4,128.5	Gas Lift Valve	2 7/8	2.441				976.2	980.3	4.10	1																			
4,134.5	4,131.0	Tubing	2 7/8	2.441	2.347	6.50	L-80	980.3	1,586.3	605.96	19																			
4,138.1	4,135.4	Gas Lift Valve	2 7/8	2.441				1,586.3	1,590.4	4.10	1																			
4,138.6	4,135.9	Tubing	2 7/8	2.441	2.347	6.50	L-80	1,590.4	2,004.1	413.70	13																			
4,139.1	4,136.3	Gas Lift Valve	2 7/8	2.441				2,004.1	2,008.2	4.10	1																			
4,140.3	4,137.4	Tubing	2 7/8	2.441	2.347	6.50	L-80	2,008.2	2,422.7	414.57	13																			
4,141.4	4,138.5	Gas Lift Valve	2 7/8	2.440				2,422.7	2,426.8	4.10	1																			
4,143.0	4,139.6	Tubing	2 7/8	2.441	2.347	6.50	L-80	2,426.8	2,840.7	413.90	13																			
4,144.0	4,140.0	Gas Lift Valve	2 7/8	2.440				2,840.7	2,844.8	4.10	1																			
4,145.0	4,141.0	Tubing	2 7/8	2.441	2.347	6.50	L-80	2,844.8	3,259.0	414.22	13																			
4,146.0	4,142.0	Gas Lift Valve	2 7/8	2.440				3,259.0	3,263.1	4.10	1																			
4,147.0	4,143.0	Tubing	2 7/8	2.441	2.347	6.50	L-80	3,263.1	3,676.9	413.77	13																			
4,148.0	4,144.0	Gas Lift Valve	2 7/8	2.440				3,676.9	3,681.0	4.10	1																			
4,149.0	4,145.0	Tubing	2 7/8	2.441	2.347	6.50	L-80	3,681.0	4,092.5	411.45	13																			
4,150.0	4,146.0	Gas Lift Valve	2 7/8	2.440				4,092.5	4,096.6	4.10	1																			
4,151.0	4,147.0	Profile Nipple; X	3 1/4	2.310				4,096.6	4,097.7	1.17	1																			
4,152.0	4,148.0	Tubing	2 7/8	2.441	2.347	6.50	L-80	4,097.7	4,129.6	31.86	1																			
4,153.0	4,149.0	On-Off Tool w/ X Profile	4 1/2	2.310				4,129.6	4,131.1	1.45	1																			
4,154.0	4,150.0	Packer: AS-IX	4 1/2	2.440				4,131.1	4,138.0	6.89	1																			
4,155.0	4,151.0	Profile Nipple: XN	3 1/4	2.250				4,138.0	4,139.3	1.27	1																			
4,156.0	4,152.0	Pup Joint	2 7/8	2.440		12.95	P-110	4,139.3	4,141.4	2.09	1																			
4,157.0	4,153.0	Pump-Off Sub	3.68	2.440				4,141.4	4,141.4	0.05	1																			
4,158.0	4,154.0	Perforations																												
4,159.0	4,155.0	Date	Zone	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Current Status																							
4,160.0	4,156.0	7/29/2012	WEST FALLS, Lateral	4,951.0	4,952.0	4.0																								
4,161.0	4,157.0	7/29/2012	WEST FALLS, Lateral	5,003.0	5,004.0	4.0																								
4,162.0	4,158.0	7/29/2012	WEST FALLS, Lateral	5,054.0	5,055.0	4.0																								
4,163.0	4,159.0	7/29/2012	WEST FALLS, Lateral	5,106.0	5,107.0	4.0																								
4,164.0	4,160.0	7/29/2012	WEST FALLS, Lateral	5,158.0	5,159.0	4.0																								
4,165.0	4,161.0	7/29/2012	WEST FALLS, Lateral	5,210.0	5,211.0	4.0																								
4,166.0	4,162.0	7/29/2012	WEST FALLS, Lateral	5,261.0	5,262.0	4.0																								
4,167.0	4,163.0	7/29/2012	WEST FALLS, Lateral	5,313.0	5,314.0	4.0																								
4,168.0	4,164.0	7/29/2012	WEST FALLS, Lateral	5,365.0	5,366.0	4.0																								
4,169.0	4,165.0	5 1/2 in; 20.00 lb/ft; P-110; 18.0 -8,309.0 ftKB																												

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2900141P

Current Wellbore Schematic

WELL (PN): ALLISON HNK 3H M (834412)
 FIELD OFFICE: CANTON
 FIELD:
 STATE / COUNTY: WEST VIRGINIA / HANCOCK
 LOCATION: T/D CLAY, Q-EAST LIVERPOOL SOUTH
 ROUTE: OH-CAN-RT 002 - OH
 ELEVATION: GL: 1,275.0 KB: 1,293.0 KB Height: 18.0
 DEPTHS: TD: 8,309.0

API #: 4702900141
 Serial #: 141
 SPUD DATE: 4/29/2012
 RIG RELEASE: 5/16/2012
 1ST SALES GAS:
 1ST SALES OIL:
 CURRENT STATUS: W/O PIPELINE

HORIZONTAL - Lateral, 5/8/2014 10:55:16 AM			Perforations					
MD (ftKB)	TVD (ftKB)	Vertical schematic (actual)	Date	Zone	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Current Status
3,052.0	3,051.6		7/29/2012	WEST FALLS, Lateral	5,417.0	5,418.0	4.0	
3,259.2	3,258.7		7/29/2012	WEST FALLS, Lateral	5,468.0	5,469.0	4.0	
3,261.2	3,260.7		7/29/2012	WEST FALLS, Lateral	5,520.0	5,521.0	4.0	
3,263.1	3,262.7		7/29/2012	WEST FALLS, Lateral	5,572.0	5,573.0	4.0	
3,470.0	3,469.5		7/29/2012	WEST FALLS, Lateral	5,624.0	5,625.0	4.0	
3,676.6	3,676.3		7/29/2012	WEST FALLS, Lateral	5,675.0	5,676.0	4.0	
3,679.0	3,678.4		7/29/2012	WEST FALLS, Lateral	5,727.0	5,728.0	4.0	
3,681.1	3,680.5		7/28/2012	WEST FALLS, Lateral	5,779.0	5,780.0	4.0	
3,744.1	3,743.5		7/28/2012	WEST FALLS, Lateral	5,831.0	5,832.0	4.0	
3,807.1	3,806.5		7/28/2012	WEST FALLS, Lateral	5,882.0	5,883.0	4.0	
3,949.8	3,949.2		7/28/2012	WEST FALLS, Lateral	5,934.0	5,935.0	4.0	
4,092.5	4,091.3		7/28/2012	WEST FALLS, Lateral	5,986.0	5,987.0	4.0	
4,094.5	4,093.2		7/28/2012	WEST FALLS, Lateral	6,038.0	6,039.0	4.0	
4,096.5	4,095.2		7/28/2012	WEST FALLS, Lateral	6,089.0	6,090.0	4.0	
4,097.1	4,095.8		7/28/2012	WEST FALLS, Lateral	6,141.0	6,142.0	4.0	
4,097.8	4,096.5		7/28/2012	WEST FALLS, Lateral	6,193.0	6,194.0	4.0	
4,103.8	4,102.3		7/28/2012	WEST FALLS, Lateral	6,245.0	6,247.0	4.0	
4,109.9	4,108.2		7/28/2012	WEST FALLS, Lateral	6,296.0	6,297.0	4.0	
4,110.9	4,109.2		7/28/2012	WEST FALLS, Lateral	6,348.0	6,349.0	4.0	
4,111.9	4,110.1		7/28/2012	WEST FALLS, Lateral	6,400.0	6,401.0	4.0	
4,120.7	4,118.7		7/28/2012	WEST FALLS, Lateral	6,452.0	6,453.0	4.0	
4,129.6	4,127.3		7/28/2012	WEST FALLS, Lateral	6,503.0	6,504.0	4.0	
4,130.2	4,127.9		7/28/2012	WEST FALLS, Lateral	6,555.0	6,556.0	4.0	
4,130.9	4,128.5		7/28/2012	WEST FALLS, Lateral	6,607.0	6,608.0	4.0	
4,134.5	4,131.3		7/28/2012	WEST FALLS, Lateral	6,659.0	6,660.0	4.0	
4,138.1	4,135.8		7/28/2012	WEST FALLS, Lateral	6,710.0	6,711.0	4.0	
4,138.6	4,135.6		7/28/2012	WEST FALLS, Lateral	6,762.0	6,763.0	4.0	
4,139.1	4,136.3		7/28/2012	WEST FALLS, Lateral	6,814.0	6,815.0	4.0	
4,140.3	4,137.4		7/28/2012	WEST FALLS, Lateral	6,866.0	6,867.0	4.0	
4,141.4	4,138.5		7/28/2012	WEST FALLS, Lateral	6,917.0	6,918.0	4.0	
4,546.3	4,478.6		7/28/2012	WEST FALLS, Lateral	6,969.0	6,970.0	4.0	
4,951.1	4,666.2		7/27/2012	WEST FALLS, Lateral	7,021.0	7,022.0	4.0	
4,951.6	4,666.2		7/27/2012	WEST FALLS, Lateral	7,073.0	7,074.0	4.0	
4,952.1	4,666.3		7/27/2012	WEST FALLS, Lateral	7,124.0	7,125.0	4.0	
4,977.5	4,671.8		7/27/2012	WEST FALLS, Lateral	7,176.0	7,177.0	4.0	
5,003.0	4,674.3		7/27/2012	WEST FALLS, Lateral	7,228.0	7,229.0	4.0	
5,003.4	4,674.3		7/27/2012	WEST FALLS, Lateral	7,280.0	7,281.0	4.0	
5,003.9	4,674.3		7/27/2012	WEST FALLS, Lateral	7,331.0	7,332.0	4.0	
5,029.0	4,675.6		7/27/2012	WEST FALLS, Lateral	7,383.0	7,384.0	4.0	
			7/27/2012	WEST FALLS, Lateral	7,435.0	7,436.0	4.0	
		7/27/2012	WEST FALLS, Lateral	7,487.0	7,488.0	4.0		
		7/27/2012	WEST FALLS, Lateral	7,537.0	7,538.0	4.0		
		7/27/2012	WEST FALLS, Lateral	7,590.0	7,591.0	4.0		
		7/27/2012	WEST FALLS, Lateral	7,642.0	7,643.0	4.0		
		7/27/2012	WEST FALLS, Lateral	7,694.0	7,695.0	4.0		
		7/26/2012	WEST FALLS, Lateral	7,745.0	7,746.0	4.0		
		7/26/2012	WEST FALLS, Lateral	7,797.0	7,798.0	4.0		
		7/26/2012	WEST FALLS, Lateral	7,849.0	7,850.0	4.0		
		7/26/2012	WEST FALLS, Lateral	7,901.0	7,902.0	4.0		
		7/26/2012	WEST FALLS, Lateral	7,952.0	7,953.0	4.0		
		7/26/2012	WEST FALLS, Lateral	8,004.0	8,005.0	4.0		
		7/26/2012	WEST FALLS, Lateral	8,056.0	8,057.0	4.0		
		7/26/2012	WEST FALLS, Lateral	8,108.0	8,109.0	4.0		
		7/26/2012	WEST FALLS, Lateral	8,159.0	8,160.0	4.0		
		5/25/2012	WEST FALLS, Lateral	8,211.0	8,212.0	4.0		

Stimulations						
WEST FALLS, Stage 8, Slickwater Frac, 7/30/2012						
Min Top Depth	Max Btm Dept	Total Clean Vol	U Treat Avg (d)	Avg Treat Pres	Post ISIP (psi)	Min ISIP
4,951.0	5,314.0	7069.00	86.00	5,404.0	2,516.0	
Type	Sand Size	Amount	Units			
100 Mesh Sand	100 Mesh	2,745.0	lb			
100 Mesh Sand	100 Mesh	4,474.0	lb			
100 Mesh Sand	100 Mesh	8,059.0	lb			
100 Mesh Sand	100 Mesh	10,771.0	lb			
100 Mesh Sand	100 Mesh	20,819.0	lb			
Northern White Sand	20/40	42,330.0	lb			
Northern White Sand	20/40	155,858.0	lb			
Northern White Sand	20/40	241,295.0	lb			

5 1/2 in; 20.00
 lb/ft; P-110; 18.0
 -8,309.0 ftKB

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 July 18 2014
 West Virginia Department of Environmental Protection

07/18/2014

Current Wellbore Schematic

WELL (PN): ALLISON HNK 3H M (834412)
 FIELD OFFICE: CANTON
 FIELD:
 STATE / COUNTY: WEST VIRGINIA / HANCOCK
 LOCATION: T/D CLAY, Q-EAST LIVERPOOL SOUTH
 ROUTE: OH-CAN-RT 002 - OH
 ELEVATION: GL: 1,275.0 KB: 1,293.0 KB Height: 18.0
 DEPTHS: TD: 8,309.0

API #: 4702900141
 Serial #: 141
 SPUD DATE: 4/29/2012
 RIG RELEASE: 5/16/2012
 1ST SALES GAS:
 1ST SALES OIL:
 CURRENT STATUS: W/O PIPELINE

HORIZONTAL - Lateral, 5/8/2014 10:55:16 AM		Stimulations									
MD (ftKB)	TVD (ftKB)	Vertical schematic (actual)		WEST FALLS, Stage 7, Slickwater Frac, 7/29/2012							
3,052.0	3,051.6			Min Top Depth	Max Blm Dept.	Total Clean Vol.	Q Treat Avg (b)	Avg Treat Pres.	Post ISIP (psi)	Comment	
3,259.2	3,256.7			5,365.0	5,728.0	6749.00	87.00	5,248.0	2,353.0		
3,261.2	3,260.7			Type		Sand Size	Amount	Units			
3,263.1	3,262.7			100 Mesh Sand		100 Mesh	1,694.0	lb			
3,470.0	3,469.5			100 Mesh Sand		100 Mesh	5,075.0	lb			
3,676.6	3,676.3			100 Mesh Sand		100 Mesh	8,373.0	lb			
3,679.0	3,678.4			100 Mesh Sand		100 Mesh	10,210.0	lb			
3,681.1	3,680.5			100 Mesh Sand		100 Mesh	20,715.0	lb			
3,744.1	3,743.5			Northern White Sand		20/40	40,973.0	lb			
3,807.1	3,806.5			Northern White Sand		20/40	103,544.0	lb			
3,949.8	3,949.2			Northern White Sand		20/40	153,938.0	lb			
4,092.5	4,091.3			Northern White Sand		20/40	189,324.0	lb			
4,094.5	4,093.2			WEST FALLS, Stage 6, Slickwater Frac, 7/29/2012							
4,096.5	4,095.2			Min Top Depth	Max Blm Dept.	Total Clean Vol.	Q Treat Avg (b)	Avg Treat Pres.	Post ISIP (psi)	Comment	
4,097.1	4,095.8			6,193.0	6,142.0	7123.00	86.00	5,443.0	2,401.0		
4,097.8	4,096.5			Type		Sand Size	Amount	Units			
4,103.8	4,102.3			100 Mesh Sand		100 Mesh	2,039.0	lb			
4,109.9	4,108.2			100 Mesh Sand		100 Mesh	5,421.0	lb			
4,110.9	4,109.2			100 Mesh Sand		100 Mesh	10,121.0	lb			
4,111.9	4,110.1			100 Mesh Sand		100 Mesh	10,451.0	lb			
4,120.7	4,118.7			100 Mesh Sand		100 Mesh	18,915.0	lb			
4,129.6	4,127.3			Northern White Sand		20/40	40,629.0	lb			
4,130.2	4,127.9			Northern White Sand		20/40	104,342.0	lb			
4,130.9	4,128.5			Northern White Sand		20/40	163,920.0	lb			
4,134.5	4,131.9			Northern White Sand		20/40	181,540.0	lb			
4,138.1	4,135.4			WEST FALLS, Stage 5, Slickwater Frac, 7/28/2012							
4,138.6	4,135.9			Min Top Depth	Max Blm Dept.	Total Clean Vol.	Q Treat Avg (b)	Avg Treat Pres.	Post ISIP (psi)	Comment	
4,139.1	4,136.3			6,193.0	6,556.0	7697.00	83.00	6,948.0	2,527.0		
4,139.5	4,136.7	Type		Sand Size	Amount	Units					
4,140.3	4,137.4	100 Mesh Sand		100 Mesh	2,309.0	lb					
4,141.4	4,138.5	100 Mesh Sand		100 Mesh	5,472.0	lb					
4,143.3	4,139.7	100 Mesh Sand		100 Mesh	8,689.0	lb					
4,144.3	4,140.0	100 Mesh Sand		100 Mesh	9,836.0	lb					
4,146.3	4,142.0	100 Mesh Sand		100 Mesh	20,461.0	lb					
4,151.1	4,146.2	Northern White Sand		20/40	42,121.0	lb					
4,151.6	4,146.2	Northern White Sand		20/40	105,582.0	lb					
4,152.1	4,146.3	Northern White Sand		20/40	63,540.0	lb					
4,152.5	4,146.3	Northern White Sand		20/40	68,969.0	lb					
4,157.5	4,151.8	Northern White Sand		20/40	190,020.0	lb					
5,003.0	4,674.3	WEST FALLS, Stage 4, Slickwater Frac, 7/28/2012									
5,003.4	4,674.3	Min Top Depth	Max Blm Dept.	Total Clean Vol.	Q Treat Avg (b)	Avg Treat Pres.	Post ISIP (psi)	Comment			
5,003.9	4,674.3	6,607.0	6,970.0	7207.00	87.00	6,427.0	2,366.0				
5,029.0	4,675.6	Type		Sand Size	Amount	Units					
		100 Mesh Sand		100 Mesh	1,306.0	lb					
		100 Mesh Sand		100 Mesh	6,020.0	lb					
		100 Mesh Sand		100 Mesh	7,835.0	lb					
		100 Mesh Sand		100 Mesh	11,035.0	lb					
		100 Mesh Sand		100 Mesh	20,169.0	lb					
		Northern White Sand		20/40	39,745.0	lb					
		Northern White Sand		20/40	105,889.0	lb					
		Northern White Sand		20/40	153,353.0	lb					
		Northern White Sand		20/40	184,778.0	lb					
		WEST FALLS, Stage 3, Slickwater Frac, 7/28/2012									
		Min Top Depth	Max Blm Dept.	Total Clean Vol.	Q Treat Avg (b)	Avg Treat Pres.	Post ISIP (psi)	Comment			
		7,022.0	7,384.0	6739.00	86.00	6,209.0	2,239.0				
		Type		Sand Size	Amount	Units					
		100 Mesh Sand		100 Mesh	1,785.0	lb					
		100 Mesh Sand		100 Mesh	5,582.0	lb					
		100 Mesh Sand		100 Mesh	8,211.0	lb					
		100 Mesh Sand		100 Mesh	10,153.0	lb					
		100 Mesh Sand		100 Mesh	20,648.0	lb					
		Northern White Sand		20/40	41,230.0	lb					
		Northern White Sand		20/40	108,099.0	lb					
		Northern White Sand		20/40	20,441.0	lb					
		Northern White Sand		20/40	76,859.0	lb					
		Northern White Sand		20/40	183,409.0	lb					
		WEST FALLS, Stage 2, Slickwater Frac, 7/27/2012									
		Min Top Depth	Max Blm Dept.	Total Clean Vol.	Q Treat Avg (b)	Avg Treat Pres.	Post ISIP (psi)	Comment			
		7,435.0	7,798.0	6759.00	87.00	4,912.0	1,941.0				
		Type		Sand Size	Amount	Units					
		100 Mesh Sand		100 Mesh	1,850.0	lb					
		100 Mesh Sand		100 Mesh	5,002.0	lb					
		100 Mesh Sand		100 Mesh	10,995.0	lb					

5 1/2 in; 20.00 lb/ft; P-110; 18.0 -8,309.0 ftKB

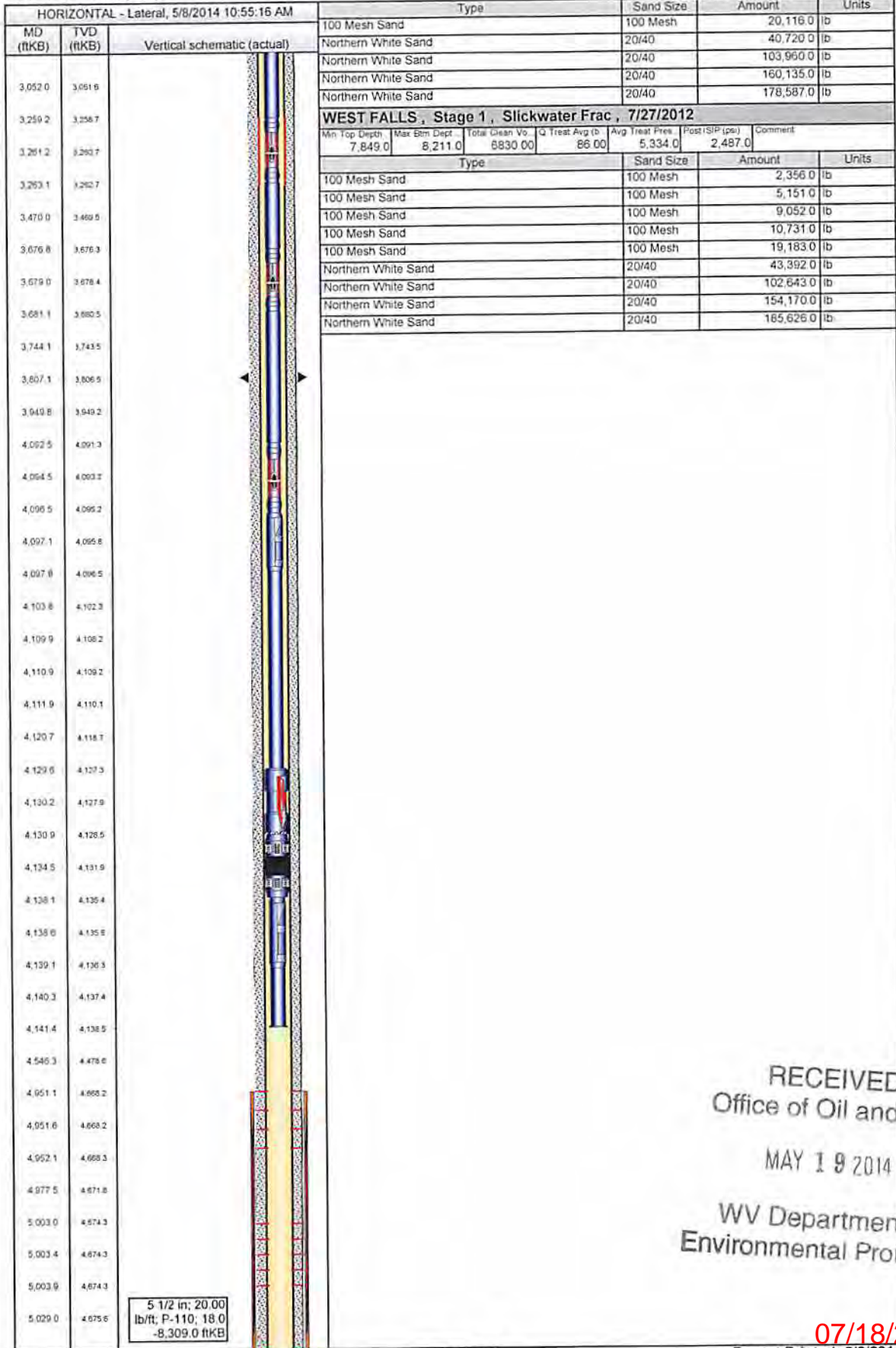
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Current Wellbore Schematic

WELL (PN): ALLISON HNK 3H M (834412)
 FIELD OFFICE: CANTON
 FIELD:
 STATE / COUNTY: WEST VIRGINIA / HANCOCK
 LOCATION: T/D CLAY, Q-EAST LIVERPOOL SOUTH
 ROUTE: OH-CAN-RT 002 - OH
 ELEVATION: GL: 1,275.0 KB: 1,293.0 KB Height: 18.0
 DEPTHS: TD: 8,309.0

API #: 4702900141
 Serial #: 141
 SPUD DATE: 4/29/2012
 RIG RELEASE: 5/16/2012
 1ST SALES GAS:
 1ST SALES OIL:
CURRENT STATUS: W/O PIPELINE



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 lb/ft; P-110; 18.0
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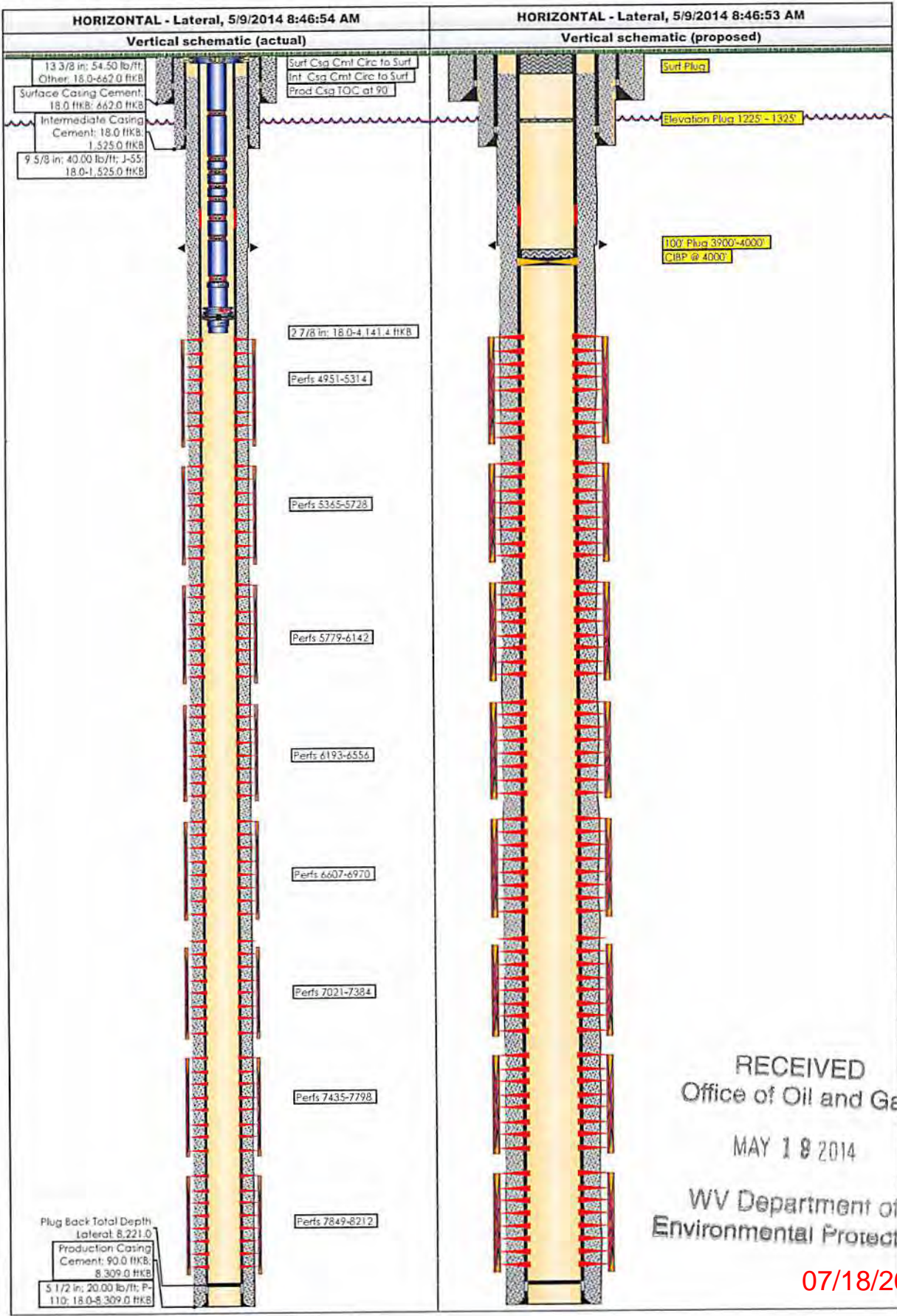
07/18/2014

Proposed Plugging Wellbore Schematic

WELL (PN): ALLISON HNK 3H M (834412)
 STATE / COUNTY: WEST VIRGINIA / HANCOCK
 FIELD:
 LOCATION: T/D CLAY, Q-EAST LIVERPOOL SOUTH
 ELEVATION: GL: 1,275.0 KB: 1,293.0 KB HEIGHT: 18.0
 DEPTHS: TD: 8,309.0

MJK
5/14/2014

API #: 470290014101
 SPUD DATE: 4/29/2012
 RIG RELEASE: 5/16/2012
 1ST SALES GAS:
 1ST SALES OIL:
 CURRENT STATUS: W/O PIPELINE



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WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 11-28-2012
API #: 47-029-00141

Farm name: Allison HNK 3H M Operator Well No.: 834412

LOCATION: Elevation: 1275' Quadrangle: East Liverpool South

District: Clay County: Hancock
Latitude: 1520' Feet South of 40 Deg. 32 Min. 30 Sec.
Longitude: 14800' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	13 3/8"	662'	662'	735 Cu. Ft.
Agent: Eric Gillespie	9 5/8"	1525'	1525'	696 Cu. Ft.
Inspector: Bill Hendershot	5 1/2"	8309'	8309'	2122 Cu. Ft.
Date Permit Issued: 1-18-2012				
Date Well Work Commenced: 4-29-2012				
Date Well Work Completed: 7-30-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 8175' (cement plug @ 3720'-5175')				
Total Measured Depth (ft): 8309'				
Fresh Water Depth (ft.): 500'				
Salt Water Depth (ft.): 795'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 585'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation West Falls Pay zone depth (ft) 4,850'-5085'

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 1,161* MCF/d Final open flow 5 Bbl/d *Calculated
Time of open flow between initial and final tests 239 Hours
Static rock Pressure 3,001* psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments 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.

Marlow Williams
Signature

12-3-2012
Date

07/18/2014

Vertical

Formation/Lithology	TVD Top	MD Top	TVD Bottom
Pennsylvanian Unconsolidated	0'	0'	615'
Big Injun SS	615'	615'	690'
Shale	690'	690'	1300'
Berea SS	1300'	1300'	1375'
Shale	1375'	1375'	3800'
Java Shale	3800'	3800'	4200'
West Falls Fm.	4200'	4200'	4950'
Tully Limestone	4950'	4950'	4988'
Hamilton Shale	4988'	4988'	5070'
Marcellus Shale	5070'	5070'	5100'
Onondaga Limestone	5100'	5100'	
Pilot TD			5175'

Horizontal (from Mudlogs)

Pennsylvanian Unconsolidated	0'	0'	615'
Big Injun SS	615'	615'	690'
Shale	690'	690'	1300'
Berea SS	1300'	1300'	1375'
Shale	1375'	1375'	3800'
Java Shale	3800'	3800'	4200'
West Falls Fm.	4550'	5096'	
Well TD			4618'
Tully Limestone	Not Penetrated	Not Penetrated	Not Penetrated
Hamilton Shale	Not Penetrated	Not Penetrated	Not Penetrated
Marcellus Shale	Not Penetrated	Not Penetrated	Not Penetrated
Onondaga Limestone	Not Penetrated	Not Penetrated	Not Penetrated

Were core samples taken? Yes No

Were cuttings caught during drilling? Yes

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See attached)

Plug Back Details Including Plug Type and Depth(s): (cement plug @ 3720'-5175')

Formations Encountered: Surface:	Top Depth	/	Bottom
-------------------------------------	-----------	---	--------

(See attached)

PERFORATION RECORD ATTACHMENT

Well Number and Name: 834412 Allison HNK 3HM

PERFORATION RECORD			STIMULATION RECORD						
Date	Interval Perforated		Date	Interval Treated		Fluid		Propping Agent	
	From	To		Type	Amount	Type	Am		
7/27/2012	7,849	8,212	7/27/2012	7,849	8,212	Sik Wtr	5,777	Sand	5
7/27/2012	7,435	7,798	7/27/2012	7,435	7,798	Sik Wtr	5,739	Sand	5
7/28/2012	7,021	7,384	7/28/2012	7,021	7,384	Sik Wtr	5,949	Sand	5
7/28/2012	6,607	6,970	7/28/2012	6,607	6,970	Sik Wtr	6,397	Sand	5
7/28/2012	6,193	6,558	7/28/2012	6,193	6,558	Sik Wtr	6,627	Sand	5
7/29/2012	5,779	6,142	7/29/2012	5,779	6,142	Sik Wtr	6,423	Sand	5
7/29/2012	5,365	5,728	7/29/2012	5,365	5,728	Sik Wtr	5,896	Sand	5
7/30/2012	4,951	5,314	7/30/2012	4,951	5,314	Sik Wtr	6,248	Sand	5

WW-4A
Revised 6-07

1) Date: May 12, 2014
2) Operator's Well Number
834412
3) API Well No.: 47 - 029 - 00141

STATE OF WEST VIRGINIA
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:	5) (a) Coal Operator
(a) Name <u>Carolyn Allison, Trustee</u>	Name _____
Address <u>5817 Wylie Ridge Road</u>	Address _____
<u>New Cumberland, WV 26047</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Gayne Knitowski</u>	(c) Coal Lessee with Declaration
Address <u>PO Box #2</u>	Name _____
<u>Moundsville, WV 26041</u>	Address _____
Telephone <u>304-546-8171</u>	_____

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 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
 By: [Signature]
 Its: Regulatory Analyst II
 Address P.O. Box 1300
Jane Lew, wv 26378
 Telephone 304-517-1416 EXT. 86024

RECEIVED
Office of Oil and Gas

Subscribed and sworn before me this 14th day of May
Brittany R. Woody
My Commission Expires 11/27/22



Oil and Gas Privacy Notice

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 depprivacyofficer@wv.gov.

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05/17/2014

Carolyn Allison, Trustee
5817 Wylie Ridge Road
New Cumberland, WV 26047

PS Form 3800, August 2006 See Reverse for Instructions

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WV Department of
Environmental Protection

07/18/2014

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, LLC OP Code 494477557

Watershed Upper Ohio South Quadrangle East Liverpool South

Elevation 1275' County Hancock District Clay

Description of anticipated Pit Waste: Water from plugging process

Will a synthetic liner be used in the pit? yes 20 MIL

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 2D0072539/2D0413175/2D0610306/2D0610317)
- Reuse (at API Number at next anticipated well, API# will be included on the WR34/&or permit addendum)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain flowback will be put in steel tanks and reused or taken to permitted disposal facility)

Proposed Work For Which Pit Will Be Used:

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

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, 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) Dee Southall

Company Official Title Regulatory Analyst II

Subscribed and sworn before me this 14th day of May, 2014

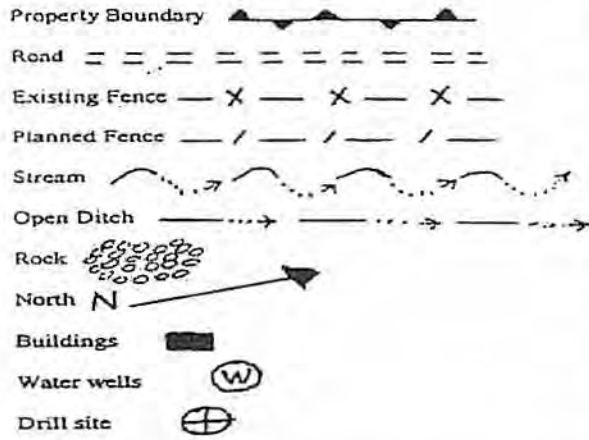
Brittany R Woody
Notary Public

My commission expires 11/27/22

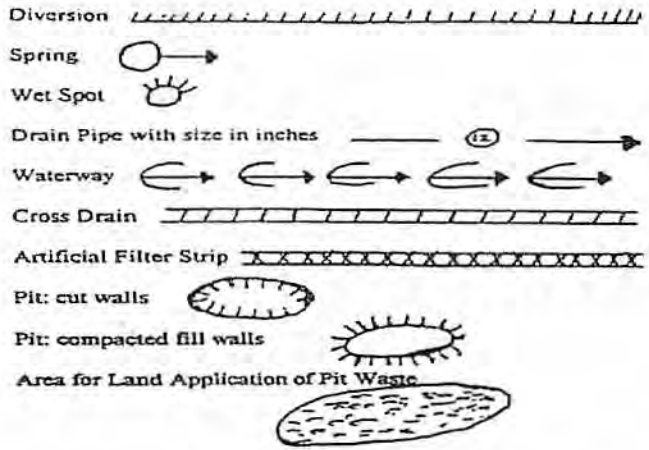
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Office of Oil and Gas
MAY 19 2014

OFFICIAL SEAL
Notary Public, State of West Virginia
BRITTANY R WOODY
3302 Old Elkins Road
Buckhannon, WV 26201
My commission expires November 27, 2022

07/18/2014



LEGEND



Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime ^{as determined by pH test min. 2} 4 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) ⁵⁰⁰ _____ lbs/acre (500 lbs minimum)

Mulch ^{Hay/Straw} STRAW ONLY Tons/acre

JWM

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
Orchard Grass	20		Orchard Grass	20	
Red Top	15		Red Top	15	
White Clover	15		White Clover	15	

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Gayne Knitowski

Comments: _____

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Title: Oil and Gas Inspector

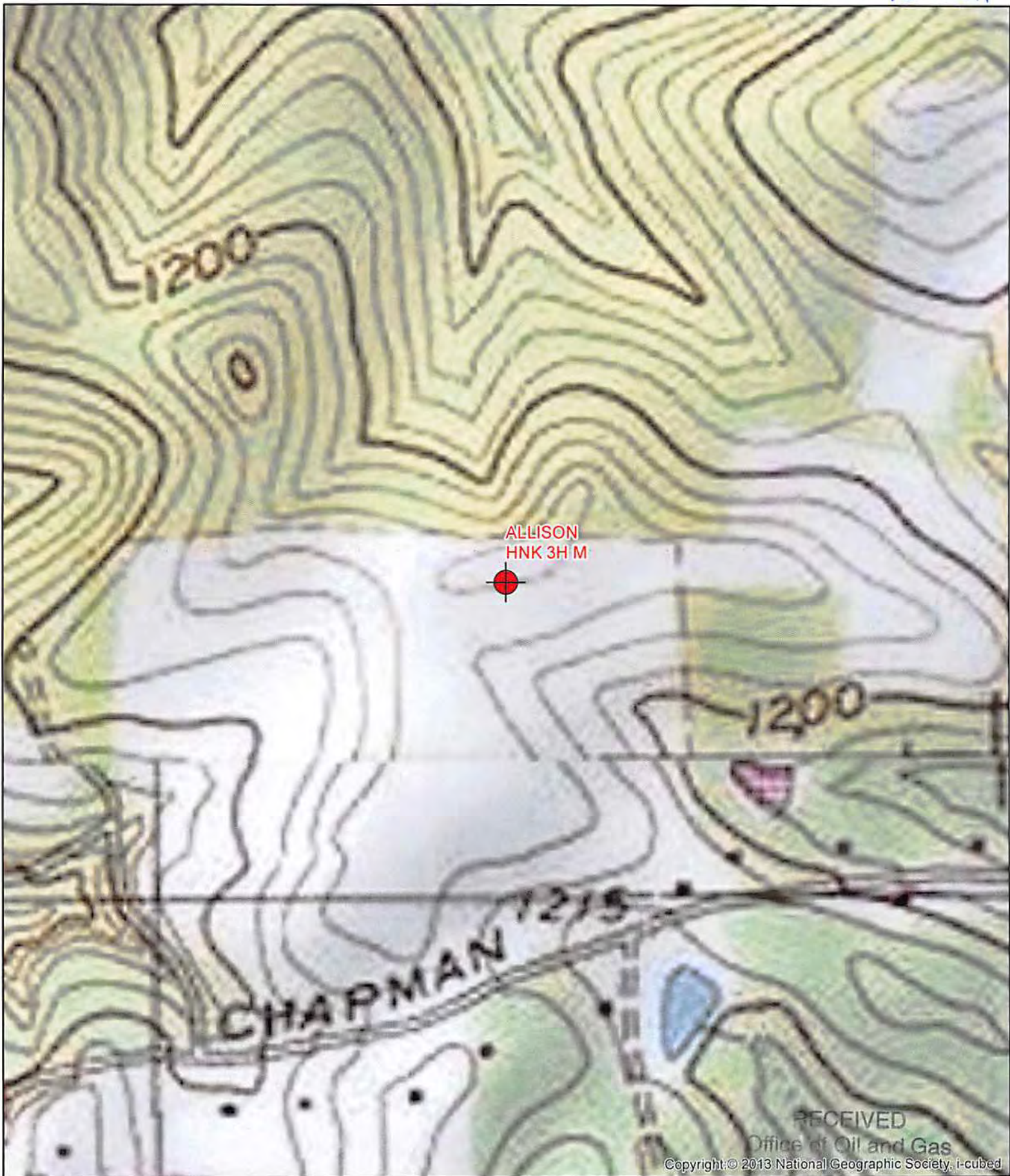
Date: 5/14/2014

MAY 18 2014

Field Reviewed? Yes No

WV Department of
Environmental Protection

2900141P

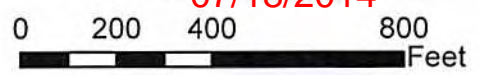


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Well: Allison HNK 3H M
 Permit : 4702900141
 Quad: East Liverpool South
 District: Clay
 County: Hancock
 State: WV

Geographic NAD83 UTM 17N
 Latitidue 40.501580
 Longitude -80.547143
UTM NAD83 (Meters)
 538371.5 E
 4483528.6 N

MAY 18 2014
 WV Department of
 Environmental Protection
 Chesapeake
 07/18/2014



WW-7

8-30-06



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

API:47-029-00141

WELL NO.: 834412

FARM NAME: Allison, Carolyn

RESPONSIBLE PARTY NAME: Chesapeake Appalachia, LLC

COUNTY: Hancock DISTRICT: Clay

QUADRANGLE: East Liverpool South

SURFACE OWNER: Carolyn Allison

ROYALTY OWNER: Carolyn Allison

UTM GPS NORTHING: 4483528.6

UTM GPS EASTING: 538371.5

GPS ELEVATION: 1275'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS ____ : Post Processed Differential ____
Real-Time Differential ____

Mapping Grade GPS ____ : Post Processed Differential ____
Real-Time Differential ____

4. Letter size copy of the topography map showing the well location.

I, the undersigned, hereby certify this data 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 Office of Oil and Gas.

Signature

Date

S/13/14

Title

Regulatory Affairs
WV Department of Environmental Protection

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MAY 19 2014

07/18/2014

2906141A



Danielle Southall
Regulatory Analyst II

CK 5157728
100-0008

May 16, 2014

Mr. Jeff McLaughlin
WV Department of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

Re: Plugging Permit for well #834412 Allison HNK 3H M

Dear Jeff:

Enclosed please find a Plugging Permit Application for the above captioned well. This well is situated on in Clay District, Hancock County, West Virginia.

If you have any questions or require additional information, please do not hesitate to contact me at (304) 517-1416.

Sincerely,

Chesapeake Appalachia, LLC

Dee Southall

Enclosures

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Environmental Protection

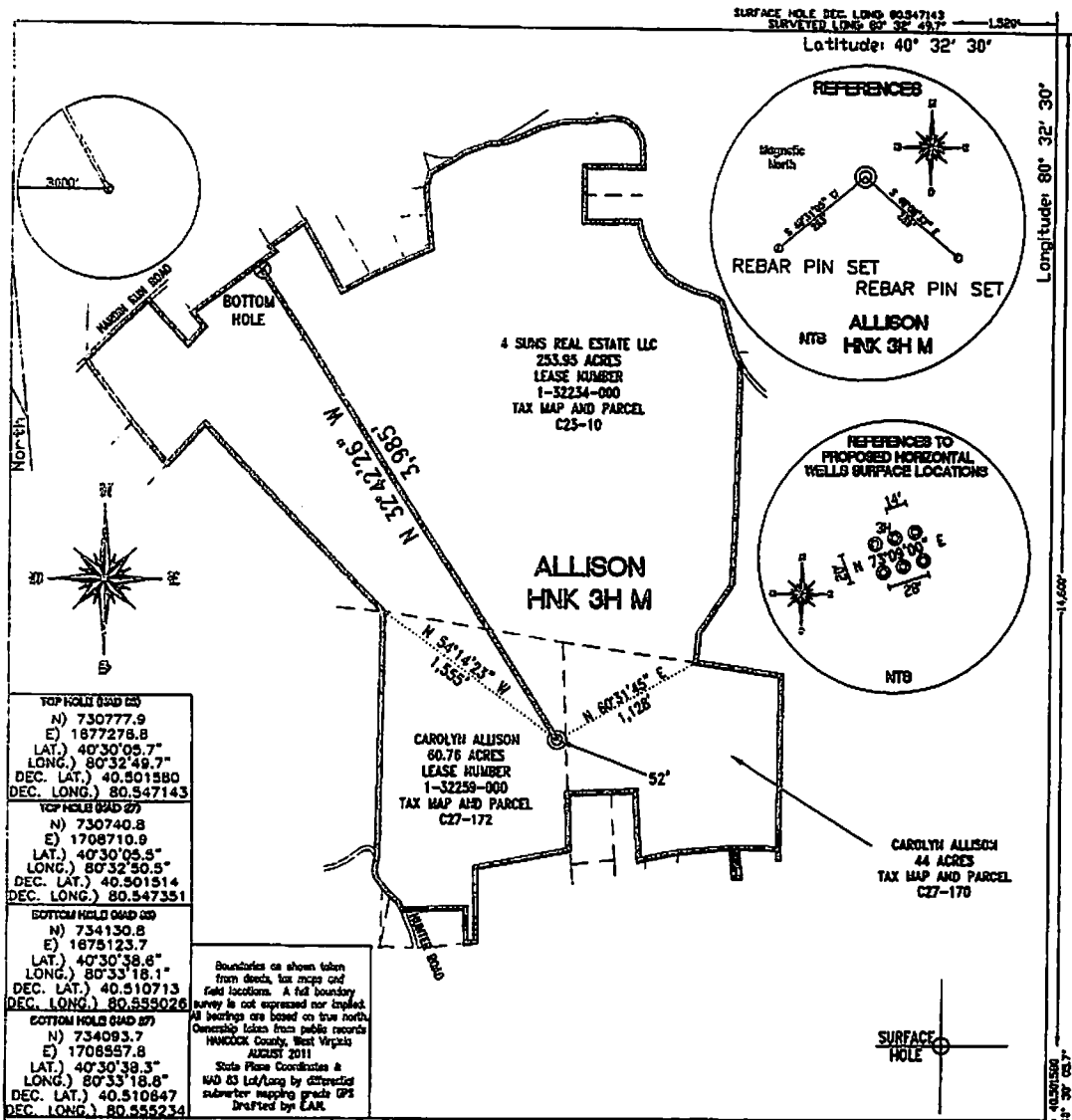
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MAY 19 2014

WV Department of
Environmental Protection

07/18/2014

2900141P



<p>TOP HOLE (ROAD 27) N) 730777.9 E) 1877278.8 LAT.) 40°30'08.7" LONG.) 80°32'48.7" DEC. LAT.) 40.501580 DEC. LONG.) 80.547143</p>
<p>TOP HOLE (ROAD 27) N) 730740.8 E) 1708710.9 LAT.) 40°30'05.5" LONG.) 80°32'50.5" DEC. LAT.) 40.501514 DEC. LONG.) 80.547351</p>
<p>BOTTOM HOLE (ROAD 27) N) 734130.8 E) 1875123.7 LAT.) 40°30'38.8" LONG.) 80°33'18.1" DEC. LAT.) 40.510713 DEC. LONG.) 80.558026</p>
<p>BOTTOM HOLE (ROAD 27) N) 734093.7 E) 1708857.8 LAT.) 40°30'39.3" LONG.) 80°33'18.8" DEC. LAT.) 40.510847 DEC. LONG.) 80.555234</p>

Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records HANCOCK County, West Virginia AUGUST 2011 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS Drafted by CAR.

FILE #: CHE 089
 DRAWING #: 1812
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE SUBMETER MAPPING OF ELEVATION: 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: *[Signature]*
 L.L.S. #2124 ; Ernest J. Benchek III

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

DATE: SEPTEMBER 20, 2011

OFFICE OF OIL & GAS
 601 5TH STREET
 CHARLESTON, WV 25304

OPERATOR'S WELL #: ALLISON HNK 3H M

API WELL #: 47 29 00141H
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep Gas Liquid Injection Storage Shallow

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1275'

COUNTY/DISTRICT: HANCOCK / CLAY QUADRANGLE: EAST LIVERPOOL SOUTH

SURFACE OWNER: CAROLYN ALLISON ACREAGE: 60.76 +/-

OIL & GAS ROYALTY OWNER: CAROLYN ALLISON ACREAGE: 314.71 +/-

LEASE NUMBERS:

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: West Falls ESTIMATED DEPTH: TVD: 5,140' TMD: 8,500'

WELL OPERATOR: CHESAPEAKE APPALACHIA, LLC. DESIGNATED AGENT: ERIC GILLESPIE

ADDRESS: PO BOX 18496 ADDRESS: PO BOX 6070

CITY: OKLAHOMA CITY STATE: OK ZIP CODE: 73154-0496 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

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 Office of Oil and Gas
 MAY 1 9 2014
 Department of Environmental Protection

07/18/2014