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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Jim Justice , Governor  
Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Tuesday, October 24, 2017  
WELL WORK PERMIT  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for OCC A OHI 205H  
47-069-00241-00-00

This well work permit 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 any additional specific 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: OCC A OHI 205H  
Farm Name: BOARD OF COMMISSIONERS OF OHIO COUNTY  
U.S. WELL NUMBER: 47-069-00241-00-00  
Horizontal 6A / New Drill  
Date Issued: 10/24/2017

Promoting a healthy environment.

10/27/2017

# PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) 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

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1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

10/27/2017

## PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: SWN Production Co., LLC    494512924    069-Ohio    3- Liberty    648-Valley Grove  
Operator ID    County    District    Quadrangle

2) Operator's Well Number: OCC-A OHI 205H    Well Pad Name: OCC-A OHI PAD

3) Farm Name/Surface Owner: Board of Commission Ohio County    Public Road Access: Rodney's Point Run

4) Elevation, current ground: 1095.5'    Elevation, proposed post-construction: 1095.5'

5) Well Type (a) Gas     Oil    Underground Storage

Other

(b) If Gas Shallow     Deep

Horizontal

6) Existing Pad: Yes or No No 66-17

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation- Marcellus, Target Top TVD- 6216', Target Base TVD- 6254', Anticipated Thickness- 38' Associated Pressure- 4048

8) Proposed Total Vertical Depth: 6228'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15079'

11) Proposed Horizontal Leg Length: 8266.24'

12) Approximate Fresh Water Strata Depths: 432'

13) Method to Determine Fresh Water Depths: From salinity profile and nearby water wells

14) Approximate Saltwater Depths: 586' - checked with SWN Geology Dept. JA

15) Approximate Coal Seam Depths: 500'

16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine?    Yes    No

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

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4706900241

WW-6B  
(04/15)

API NO. 47- 069 -  
OPERATOR WELL NO. OCC-A OHI 205H  
Well Pad Name: OCC-A OHI PAD

18)

**CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	532'	532'	507 sx/CTS
Coal	9 5/8"	New	J-55	36#	1853'	1853'	705 sx/CTS
Intermediate	7"	New	J-55	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	15079'	15079'	lead 1034sx Tail 1904sx inside intermed
Tubing	2 3/8"	New	HCP-110	4.7#	Approx. 6228'	Approx. 6228'	
Liners							

*E. D. L. 6.6.17*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	3250	Class A	1.20/50% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/50% Excess
Tubing	2 3/8"	4.778"	0.190	Approx 8193'	Approx 8193'		
Liners							

**PACKERS**

Kind:	10K Arrowset AS-1X			
Sizes:	5 1/2"			
Depths Set:				

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and stimulate any potential zones between and including the Benson to Marcellus. \*\*If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface. Run casing not less than 20' below void nor more than 50' below void. (\*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. The well is produced through surface facilities consisting of high pressure production unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 80 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.9

22) Area to be disturbed for well pad only, less access road (acres): 3.0

23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

24) Describe all cement additives associated with each cement type:

See Attachment \*\*\*

25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of one bottoms up and continuing until operator is satisfied with borehole conditions.

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\*Note: Attach additional sheets as needed.

69-00241



SWN Production Company, LLC  
P O Box 12359  
Spring, Texas 77391-2359  
www.swn.com

June 5, 2017

Ms. Laura Adkins  
Office of Oil & Gas  
601 57<sup>th</sup> Street  
Charleston, WV 25304

**RE:** Proposed New Well: OCC-A OHI 205H

Dear Ms. Adkins

SWN has reviewed the area of the above mentioned well and discovered no shallow wells within 500' of the lateral. This well is situated on the OCC-A's property, in Valley Grove District, Ohio County, West Virginia.

If you have any questions or desire additional information, please me at 304-884-1614

Thank you.

Sincerely,

Dee Southall  
Regulatory Supervisor  
Southwestern Energy Production Company, LLC  
PO Box 1300  
Jane Lew, WV 26378

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## Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Surface	S001	accelerator	calcium chloride	10043-52-4
Intermediate	S001	accelerator	calcium chloride	10043-52-4
Kick Off Plug	D080	dispersant	sodium polynaphthalene sulfonate	9008-63-3
	D801	retarder	aromatic polymer derivative	proprietary
	D047	antifoam	polypropylene glycol	25322-69-4
Production-Lead	D167	fluid loss	aliphatic amide polymer	proprietary
	D154	extender	non-crystalline silica	7631-86-9
	D400	gas migration	boric acid	10043-35-3
	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgate)	8031-18-3
	D201	retarder	chrySTALLINE silica	14808-60-7
			metal oxide	proprietary
	D202	dispersant	sulphonated synthetic polymer	proprietary
formaldehyde (impurity)			proprietary	
Production-Tail	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgate)	8031-18-3
	D167	fluid loss	aliphatic amide polymer	proprietary
	D065	dispersant	sodium polynaphthalene sulfonate	9008-63-3
			sodium sulfate	7757-82-6
	D201	retarder	chrySTALLINE silica	14808-60-7
metal oxide			proprietary	
D153	anti-settling	chrySTALLINE silica	14808-60-7	

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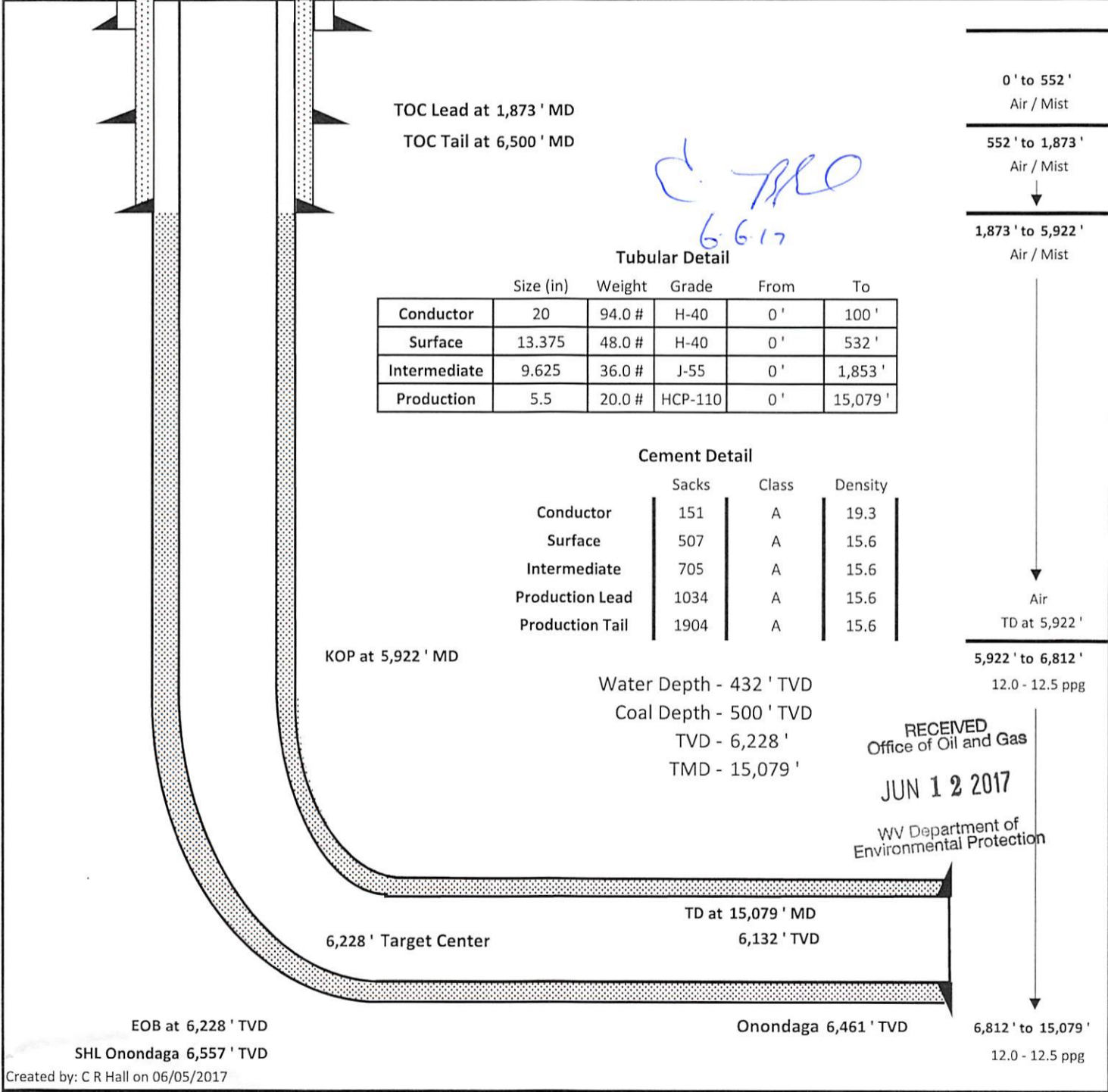
10/27/2017



69-00241

<b>Southwestern Energy Company</b>	<b>Proposed Drilling Program</b>
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<p>Well: OCC A OHI 205          Field: PANHANDLE FIELD          County: OHIO          SHL: 40.0794 Latitude -80.5980 Longitude          BHL: 40.1038 Latitude -80.6056 Longitude          KB Elev: 1,122 ft MSL</p>	<p>Re-entry Rig: TBD          Prospect: PANHANDLE          State: WV          GL Elev: 1,101 ft MSL</p>
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WW-9  
(4/16)

API Number 47 - 69 - \_\_\_\_\_  
Operator's Well No. OCC-A OHI 205H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Company, LLC OP Code 494512924

Watershed (HUC 10) Upper Ohio South Quadrangle Valley Grove

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: closed loop system in place at this time- cuttings will be taken to a permitted landfill

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number at next anticipated well, API # will be included with the WR-34/DDMR &/or permit addendum )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain flow back fluids will be put in steel tanks and reused or taken to a permitted disposal facility )

Will closed loop system be used? If so, describe: yes

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. air drill to KOP, fluid drill with SOBM from KOP to TD

-If oil based, what type? Synthetic, petroleum, etc. synthetic oil base

Additives to be used in drilling medium? see attached sheets

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)

-Landfill or offsite name/permit number? meadow SWF-1032, SS grading SWF-4902, Northwestern SWF-1025, Short Creek 1034/WV0109517/CID28726, Carbon Limestone 28726-CID28726

Arden Landfill 10072, American 02-12954, Country Wide 38390/CID38390, Pine Grove 13688

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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 Supervisor

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Subscribed and sworn before me this 2nd day of June

Brittany R Woody

My commission expires 11/27/2017



10/27/2017

69-00241

Form WW-9

Operator's Well No. OCC-A OHI 205H

SWN Production Company, LLC

Proposed Revegetation Treatment: Acres Disturbed 17.9 Prevegetation pH \_\_\_\_\_

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 3.0

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

**Temporary**

**Permanent**

Seed Type lbs/acre


Seed Type lbs/acre

**\*\*See Attachment**

**Attach:**

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:  6617

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: oil and gas inspector

Date: 6.6.17

Field Reviewed?  Yes  No

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**Drilling Mediums**

Synthetic Oil

Brine

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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# WVD Seeding Specification



To Order Seed contact Lyndsi Eddy Flippo office 570-996-4271 cell 501-269-5451 lyndsi\_eddy@swn.com (please allow 7 to 10 days for delivery)

NON-ORGANIC PROPERTIES	
Seed Mixture: ROW Mix	SWN Supplied
Orchardgrass	40%
Timothy	15%
Annual Ryegrass	15%
Brown Top Millet	5%
Red Top	5%
Medium Red Clover	5%
White Clover	5%
Birdsfoot Trefoil	5%
Rough Bluegrass	5%
<p style="color: red;">Apply @ 100lbs per acre April 16th- Oct. 14th</p> <p style="color: red;">Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat</p>	

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All legumes are  
innoculated at 5x normal  
rate

SOIL AMENDMENTS	
10-20-20 Fertilizer	*Apply @ 500lbs per Acre
Pelletized Lime	Apply @ 2 Tons per Acre
*unless otherwise dictated by soil test results	

Seeding Calculation Information:
1452' of 30' ROW/LOD is One Acre
871' of 50' ROW/LOD is One Acre
622' of 70' ROW/LOD is One Acre

Synopsis:
Every 622 linear feet in a 70' ROW/LOD, you should be using (2) 50lb bags of seed, (4) 50lb bags of fertilizer and (80) 50lb bags of Lime (2x seed in winter months + 50lb Winter Wheat/ac).

Special Considerations:
Landowner Special Considerations including CREP program participants require additional guidance that is not given here. Discuss these requirements with SWN supervision at the beginning of the project to allow time for special seed delivery.

ORGANIC PROPERTIES	
Seed Mixture: SWN Production Organic Mix	SWN Supplied
Organic Timothy	50%
Organic Red or White Clover	50%
OR	
Organic Perennial Ryegrass	50%
Organic Red or White Clover	50%
<p style="color: red;">Apply @ 100lbs per acre April 16th- Oct. 14th</p>	<p style="color: red;">Apply @ 200lbs per acre Oct. 15th- April 15th</p>
Organic Fertilizer @ 200lbs per Acre	Pelletized Lime @ 2 Tons per Acre

WETLANDS (delineated as jurisdictional wetlands)	
Seed Mixture: Wetland Mix	SWN Supplied
VA Wild Ryegrass	20%
Annual Ryegrass	20%
Fowl Bluegrass	20%
Cosmos 'Sensation'	10%
Redtop	5%
Golden Tickseed	5%
Maryland Senna	5%
Showy Tickseed	5%
Fox Sedge	2.5%
Soft Rush	2.5%
Woolgrass	2.5%
Swamp Verbena	2.5%
<p style="color: red;">Apply @ 25lbs per acre April 16th- Oct. 14th</p>	<p style="color: red;">Apply @ 50lbs per acre Oct. 15th- April 15th</p>
NO FERTILIZER OR LIME INSIDE WETLAND LIMITS	

17200-69

# MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



SWN Production Company, LLC  
179 Innovation Drive  
Jane Lew, West Virginia 26378

**API NO. 47-XXX-XXXXX**  
**WELL NAME: OCC-A OHI 205H**  
**Valley Grove QUAD**  
**Liberty DISTRICT**  
**Ohio COUNTY, WEST VIRGINIA**

Submitted by:

Dee Southall

Date: 6/2/2017

Title: Regulatory Supervisor

SWN Production Co., LLC

Approved by:

Date: 6.6.17

Title: Oil & Gas Inspector

Approved by:

Date: \_\_\_\_\_

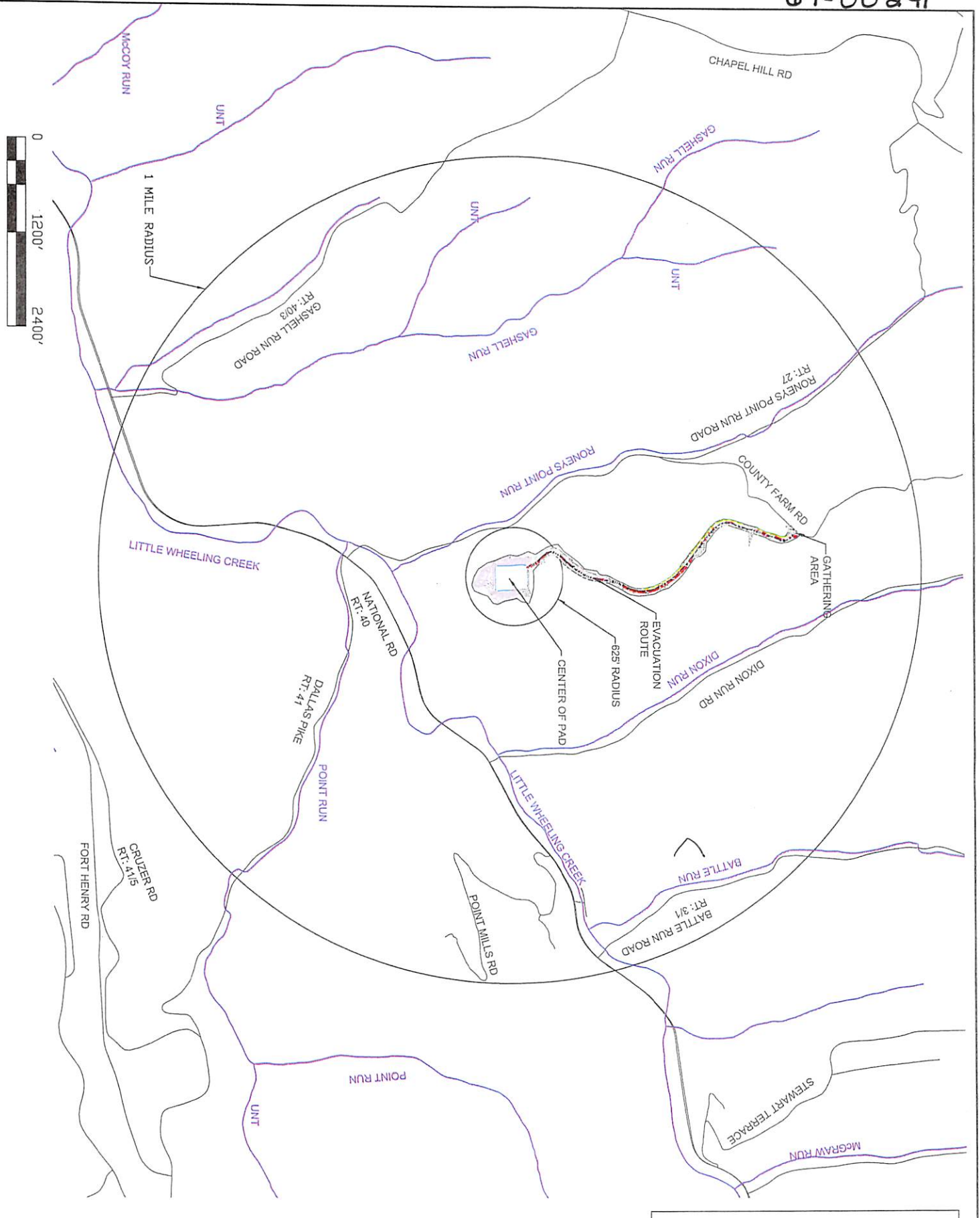
Title: \_\_\_\_\_

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**COORDINATES:**

SITE ENTRANCE (NAD83)	LAT: 40.089299
	LONG: 80.600353
CENTER OF PAD (NAD83)	LAT: 40.079288
	LONG: 80.598094
GATHERING AREA (NAD83)	LAT: 40.089299
	LONG: 80.600353
EXISTING WELL 3H (NAD83)	LAT: 40.079462
	LONG: 80.598107
API NUMBER: 069-00137	
EXISTING WELL 10H (NAD83)	LAT: 40.079502
	LONG: 80.598041
API NUMBER: 069-00096	

GRID NORTH  
UTM, NAD83 DATUM, ZONE 17, US FT

PREVAILING WINDS

PROJECT #: DATE: DRAWN BY: CHECKED BY:	16-78 2017-05-16 NLL MCH	NO. DATE REVISION	
		OCC A PAD "A" TRINIDAD/OBJECT WEST VIRGINIA	ELK LAKE SERVICES, LLC 280 Indian Springs Road, Suite 123 Indiana, PA 15701 Phone: (724) 463-7303
CLIENT:  Southwestern Energy Company P.O. Box 672625 Houston, TX 77267	TITLE: EVACUATION ROUTE/ PREVAILING WIND	PROJECT NO: EP2.1	



# ELK LAKE SERVICES, LLC

280 Indian Springs Road,  
Suite 123 Indiana, PA 15701  
Phone: (724) 463-7303

Latitude: 40°05'00" SURFACE HOLE 4114'

Latitude: 40°07'30"

BOTTOM HOLE 6230'

Longitude: 80°35'00" SURFACE HOLE 1426'

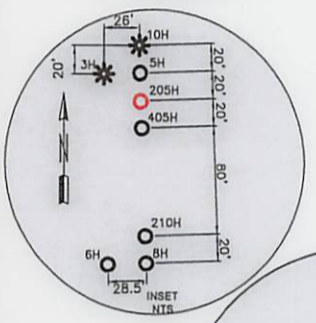
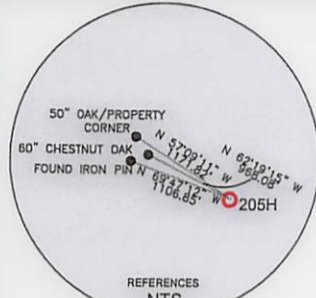
Longitude: 80°35'00" BOTTOM HOLE 7739'

SURFACE HOLE LOCATION (SHL):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,436,650.15
	EASTING: 534,271.74
LANDING POINT (LPL):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,437,044.11
	EASTING: 534,632.26
BOTTOM HOLE LOCATION (BHL):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,439,347.94
	EASTING: 533,614.44

GRID NORTH  
UTM, NAD83 DATUM, ZONE 17, US FT

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS			
TRACT	SURFACE OWNER / ROYALTY OWNER	TAX PARCEL	ACRES
1	BOARD OF COMMISSIONERS OF OHIO COUNTY (S/R)	3-113-3	262.850
2	SURFACE OWNER	TAX PARCEL	ACRES
3	BOARD OF COMMISSIONERS OF OHIO COUNTY	3-113-3-1	227.848
4	THOMAS R. AND SUE O. ABRAHAM, HIS WIFE	3-110-28	98.6780
5	JEAN P. AND L. P. LOUSTAU	3-110-27	50.865
6	CURTIS R. AND CAROLINE BYRUM, HUSBAND & WIFE	3-110-27-3	28.000
	CAROLINE LOUSTAU BYRUM	3-110-27-1	10.000

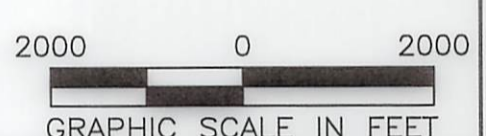
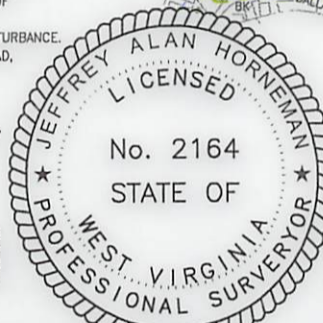
ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	TIMMY B. & AMY LYNN MINCH	6-13-5	181.800
B	CARL J. SHELLER	3-113-24	2.198
C	TIMMY B. & AMY LYNN MINCH	3-113-2	20.205
D	NATHAN CHARLES GORDON	3-113-2-1	1.268
E	JEFFREY R. BENNETT	3-113-2-2	1.268
F	PHILIP D. & ANNA C. MAXWELL	3-113-1	208.000
G	PHILIP D. & ANNA C. MAXWELL	3-113-1-2	25.698
H	OHIO COUNTY COMMISSION (CEMETERY)	3-110-23-3	8.000
I	ROBERT & BRIDGET WEIR	3-110-23-1	5.080
J	ERIC W. & JUDY L. WAGNER	3-110-23	162.724
K	GLEN L. & R. S. WALTERS	3-110-29	39.880
L	J. A. & D. A. KOCHY	3-110-29	50.000
M	MICHAEL R. & K. A. PARSONS	3-110-35-3	53.751
N	MICHAEL R. & K. A. PARSONS	3-110-27-2	0.135
O	BRUCE A. & BRENDA J. PARSONS	3-110-35	54.236
P	CHARLES & FLORA DIETRICH	3-110-35-1	2.02
Q	HARRY F., JR. & K. A. METZ	3-110-35-2	9.2
R	JOYCE KUMPL	3-110-40	2.850
S	CLARENCE A. & MILDRED L. WOOD	3-110-39-7	2.091
T	MICHELLE L. HORBATAK	3-110-26-7	0.010
U	MICHELLE L. HORBATAK	3-110-36-1	2.219
V	DAVID A. & FLORENCE D. BLOWERS	3-110-36-6	20.040
W	WALTER D. & D. A. BARTOLOVICH	3-110-28-2	12.130
X	ERIC W. & JUDY L. WAGNER	3-110-28-2	5.320
Y	HERMAN & MARTHA C. KRUPINSKI	3-110-28-5	1.162
Z	EVELYN E. SCHULTZ	3-110-28-4	1.135
AA	MICHAEL A. KUTHY & ZELDA E. HALL	3-110-28-3	0.992
AB	DAVID H. & DOROTHY L. NEWLAND	3-110-28-1	1.000
AC	LANCE H., JR. & SHAENAN G. MILLER	3-110-36	19.990
AD	RONALD W. HORNEMAN	3-113-36-5	20.000
AE	RONALD W. HORNEMAN	3-113-4-3	15.053
AF	RICHARD CLARK STEELE, JR. & ALEXANDRA MILENA PUSKARICH	3-113-4	1.056
AG	JOANN WANDERGRIFT	3-113-4-2	1.074
AH	JOANN WANDERGRIFT	3-113-4-1	1.465
AJ	DAVID W. STEVENSON ETAL	3-113-5	1.360
AK	JAMES ALAN STEVENSON	3-113-5-4	4.777
AL	KIMBERLY STEVENSON	3-113-5-1	0.604
AM	TYSON L. LOVERIDGE	3-113-6	0.546
AN	TYSON L. LOVERIDGE	3-113-6-4	0.210
AO	JAMES E., III & CHRISTINE WHEELER	3-113-6-2	0.296
AP	JOLLY W. WHEELER	3-113-12-3	0.968
AQ	STEVEN SHEARER	3-113-12-1	0.824
AR	JAMES C. & D. L. KNIGHT	3-113-13	5.000
AS	GARY L. & MARY C. DEMERSKI	3-113-14	0.561
AT	KATH E. & C. J. BARON	3-113-15	0.389
AV	HARRY E. & CHERYL L. HOLMAN	6-13-11	1.140
AW	HARRY E. & CHERYL L. HOLMAN	6-13-13	3.580
AX	GERALD T. & ANN MOORE	6-13-14	2.480
AY	GERALD T. & ANN MOORE	6-13-14-1	0.242
AZ	OHIO COUNTY COMMISSION	6-13-28	5.108
BA	JDS INVESTMENTS LLC	6-13-16	1.038
BB	MELODY GARRISON	6-13-33	23.550
BC	JANIE K. KUHN	6-13-34	0.204
BD	SUPERIOR INDUSTRIAL LAUNDRIES	6-130-26	1.060
BE	PAULA C. & ORION E. STEPHAN	6-130-25	0.305
BF	HAROLD B. & D. J. MOORE	6-130-24	0.360
BG	ROBERT B. & EVELYN M. CLARK	6-130-23	0.200
BH	MARVIN H. & K. L. SWAN	6-130-22	0.200
BI	PHK, LLC	6-130-21	0.450
BJ	TAMMY M. HAMMONS	6-130-20	0.350
BK	EDDIE L. & TRACEY L. MEDANIELS	6-130-19	0.770
BL	JUSTIN S. MARSH & ASHLEY L. FONNER	6-130-18-1	0.250
BM	HOLLY M. FLACK	6-130-18	0.223
BN	JOSEPH A. MCKENNA, III	6-130-17	0.550
BO	VALLEY COIN MACHINE COMPANY, LLC	6-130-16	1.113
BP	BOARD OF COMMISSIONERS OF OHIO COUNTY	6-130-13	0.1128
BQ	KENNETH L. NELSON	6-130-10	0.246
BR	JOHN A. AND C. M. HUNTER	6-130-11-1	0.820
BS	JOHN A. AND C. M. HUNTER	6-130-11	0.998
BT	JOHN A. AND C. M. HUNTER	6-130-12	0.333
BU	RANDY & BRENDA HANING	6-13-5-2	4.549
BV	BANDY DALE & BRENDA JOYCE HANING	6-13-5-1	0.217
BW	BOARD OF COMMISSIONERS OF OHIO COUNTY	6-13-10	1.800
BX	BARBARA A. SHORES	6-13-9	1.100
BY	JAMES R. AND DARLA J. HUGHES	6-13-8	0.340
BZ	TRACEY E. & JOHN P. KETRON	6-13-7	0.230
	ALFRED DERR	6-13-6	1.100
	VILLAGE OF VALLEY GROVE	6-130-27	0.030



- WELL RESTRICTIONS**
- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
  - NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
  - WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 531 FEET OF PROPOSED WELL.
  - PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS ARE WITHIN THE LIMITS OF DISTURBANCE.
  - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
  - NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

- NOTES ON SURVEY**
- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
  - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
  - ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



P.S. 2164

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL &amp; GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>COMPANY: SWN Production Company, LLC</p> <p>OCC A OHI</p> <p>OPERATOR'S WELL #: 205H</p> <p>API WELL #: 47 STATE 69 COUNTY PERMIT</p>
	<p>WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: UPPER OHIO SOUTH</p> <p>DISTRICT: LIBERTY COUNTY: OHIO COUNTY</p> <p>SURFACE OWNER: BOARD OF COMMISSIONERS OF OHIO COUNTY</p> <p>OIL &amp; GAS ROYALTY OWNER: BOARD OF COMMISSIONERS OF OHIO COUNTY</p> <p>DRILL <input checked="" type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input checked="" type="checkbox"/></p> <p>CONVERT <input type="checkbox"/> PLUG &amp; ABANDON <input type="checkbox"/> CLEAN OUT &amp; REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY)</p> <p>TARGET FORMATION: MARCELLUS</p>	<p>ELEVATION: 1095.5'</p> <p>QUADRANGLE: VALLEY GROVE</p> <p>ACREAGE: ±262.850</p> <p>ACREAGE: ±262.850</p> <p>ESTIMATED DEPTH: 6,228' TMD 15,079' TMD</p>

<p>WELL OPERATOR: SWN PRODUCTION COMPANY, LLC</p> <p>ADDRESS: P.O. BOX 1300</p> <p>CITY: JANE LEW STATE: WV ZIP CODE: 26378</p>	<p>DESIGNATED AGENT: DEE SOUTHALL</p> <p>ADDRESS: P.O. BOX 1300</p> <p>CITY: JANE LEW STATE: WV ZIP CODE: 26378</p>
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<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li>PROPOSED SURFACE HOLE / BOTTOM HOLE</li> <li>EXISTING / PRODUCING WELLHEAD</li> <li>LPL* LANDING POINT LOCATION</li> <li>EXISTING WATER WELL</li> <li>EXISTING SPRING</li> <li>SURVEYED BOUNDARY</li> <li>DRILLING UNIT</li> <li>LEASE BOUNDARY</li> <li>PROPOSED PATH</li> </ul>	<p><b>REVISIONS:</b></p> <p>DATE: 06-08-2017</p> <p>FILE NO: 16-78</p> <p>DRAWN BY: A. BLACK</p> <p>SCALE: 1" = 2000'</p> <p>DRAWING NO: 1</p> <p>WELL LOCATION PLAT 1</p>
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69-00241

WW-6A1  
(5/13)

Operator's Well No. OCC-A North OHI 205H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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SEE EXHIBIT "A"

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

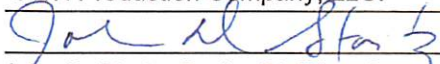
The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: SWN Production Company, LLC.  
 By:   
 Its: John D. Startz, Senior Staff Landman

**EXHIBIT "A"**

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by Chesapeake Appalachia, L.L.C., Operator  
 OCC-A North OHI 205H  
 Ohio County, West Virginia

TMP	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG
3-L13-3	727320-000	Board of Commissioners of Ohio County, aka The County Commission of Ohio County, West Virginia	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18%	804/711 885/272
3-L13-3-1	727320-000	Board of Commissioners of Ohio County, aka The County Commission of Ohio County, West Virginia	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18%	804/711 885/272
3-L10-26	725385-000	Thomas R Abraham and Sue O Abraham, his wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	793/499 885/260
3-L10-27	724933-000	Jean P Loustau and Louise P Loustau, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	790/238 885/248
3-L10-27-3	726616-000	Curtis R Byrum and Caroline Byrum, husband and wife	TRI-ENERGY INC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	788/683 798/653 885/272
3-L10-27-1	726616-000	Curtis R Byrum and Caroline Byrum, husband and wife	TRI-ENERGY INC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	788/683 798/653 885/272

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69-00241

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PAID-UP  
OIL & GAS LEASE

Lease No. 265402

08/08 - WV

This Lease, made this 12<sup>th</sup> day of November, 2008, by and between Jean P. Loustau and Louise P. Loustau, husband and wife, whose address is 344 Dixon Run Road, Triadelphia, West Virginia 26059, hereinafter collectively called "Lessor", and CHESAPEAKE APPALACHIA, L.L.C., an Oklahoma limited liability company, P.O. Box 6070, Charleston, WV 25362-0070, hereinafter called "Lessee".

WITNESSETH, that for and in consideration of the premises, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

**LEASING CLAUSE.** Lessor hereby leases exclusively to Lessee all the oil and gas including, but not limited to coal seam gas, coalbed methane gas, coalbed gas, methane gas, gob gas, occluded methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, gob area, mine-out area, coal seam, and all communicating zones, and their liquid gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, and from adjoining lands, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads, electric power and telephone facilities, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from neighboring lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment.

**DESCRIPTION.** The Leasehold is located in the District of Liberty, in the County of Ohio, in the State of West Virginia, and described as follows:

Property Tax Parcel Identification Number: L10/27

and is bounded formerly or currently as follows:

- On the North by lands of Kochy;
- On the East by lands of Parsons;
- On the South by lands of Abraham;
- On the West by lands of Byrum;

including lands acquired from William and Ida Matthews by virtue of deed dated October 15, 1958, and recorded in Deed Book 403, and described for the purposes of this agreement as containing a total of 50.865 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor. This Lease also covers and includes, in addition to that above described, all land, if any, contiguous or adjacent to or adjoining the land above described and (a) owned or claimed by Lessor, by limitation, prescription, possession, reversion or unrecorded instrument or (b) as to which Lessor has a preference right of acquisition. Lessor agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

**LEASE TERM.** This Lease shall remain in force for a primary term of five (5) years from 12:00 A.M. November 13, 2008 (effective date) to 11:59 P.M. November 11, 2013 (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/unitized therewith in search of oil, gas, or their constituents, or (ii) a well deemed by Lessee to be capable of production is located on the Leasehold or lands pooled/unitized therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/unitized therewith, or (iv) if the Leasehold or lands pooled/unitized therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

If there is any dispute concerning the extension of this Lease beyond the primary term by reason of any of the alternative mechanisms specified herein, the payment to the Lessor of the prescribed payments provided below shall be conclusive evidence that the Lease has been extended beyond the primary term.

**EXTENSION OF PRIMARY TERM.** Lessee has the option to extend the primary term of this Lease for one additional term of five (5) years from the expiration of the primary term of this Lease, said extension to be under the same terms and conditions as contained in this Lease. Lessee may exercise this option to extend this Lease if on or before the expiration date of the primary term of this Lease, Lessee pays or tenders to the Lessor or to the Lessor's credit an amount equal to the initial consideration given for the execution hereof. Exercise of this option is at Lessee's sole discretion and may be invoked by Lessee where no other alternative of the Lease Term clause extends this Lease beyond the primary term.

*Handwritten initials: JFB, JPL*

**NO AUTOMATIC TERMINATION OR FORFEITURE.**

(A) **CONSTRUCTION OF LEASE:** The language of this Lease (including, but not limited to, the Lease Term and Extension of Term clauses) shall never be read as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuation of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, frac, plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/unitized therewith (such activities shall include, but not be limited to, performing any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).

(B) **LIMITATION OF FORFEITURE:** This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and thereafter fails or refuses to satisfy or provide justification responding to Lessor's demand within 60 days from the receipt of such notice. If Lessee timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue in Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

**PAYMENTS TO LESSOR.** In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

(A) **DELAY RENTAL:** To pay Lessor as Delay Rental, after the first year, at the rate of five dollars (\$5.00) per net acre per year payable in advance. The parties hereto agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessor during the primary term hereof.

(B) **ROYALTY:** To pay Lessor as Royalty, less all taxes, assessments, and adjustments on production from the Leasehold, as follows:  
1. **OIL:** To deliver to the credit of Lessor, free of cost, a Royalty of the equal one-eighth (1/8) part of all oil and any constituents thereof produced and marketed from the Leasehold.  
2. **GAS:** To pay Lessor on actual volumes of gas sold from said land, one-eighth of the net amount realized by Lessee, computed at the wellhead. As used in this lease, the term "net amount realized by Lessee, computed at the wellhead" shall mean the gross proceeds received by Lessee from the sale of oil and gas minus post-production costs incurred by Lessee between the wellhead and the point of sale. As used in this Lease, the term "post-production costs" shall mean all costs and expenses of (a) treating and processing oil and/or gas, and (b) separating

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liquid hydrocarbons from gas, other than condensate separated at the well, and (c) transporting oil and/or gas, including but not limited to transportation between the wellhead and any production or treating facilities, and transportation to the point of sale, and (d) compressing gas for transportation and delivery purposes, and (e) metering oil and/or gas to determine the amount sold and/or the amount used by Lessee, and (f) sales charges, commissions and fees paid to third parties (whether or not affiliated) in connection with the sale of the gas, and (g) any and all other costs and expenses of any kind or nature incurred in regard to the gas, or the handling thereof, between the wellhead and the point of sale. Lessee may use its own pipelines and equipment to provide such treating, processing, separating, transportation, compression and metering services, or it may engage others to provide such services; and if Lessee uses its own pipelines and/or equipment, post-production costs shall include without limitation reasonable depreciation and amortization expenses relating to such facilities, together with Lessee's cost of capital and a reasonable return on its investment in such facilities. Prior to payment of royalty, Lessor may be required to execute a Division Order certifying Lessor's interest in production. Lessee may pay all taxes and fees levied upon the oil and gas as produced, including, without limitation, severance taxes and privilege and surveillance fees, and deduct a proportionate share of the amount so paid from any monies payable to Lessor hereunder. Lessee may withhold Royalty payment until such time as the total withheld exceeds fifty dollars (\$50.00).

(C) **DELAY IN MARKETING:** In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents, therefrom and there is no other basis for extending this Lease, Lessee shall pay after the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) **SHUT-IN:** In the event that production of oil, gas, or their constituents, is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/unitized therewith, Lessee shall thereafter, as Royalty for constructive production, pay a Shut-in Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or Lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-in, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-in Royalty.

(E) **DAMAGES:** Lessee will remove unnecessary equipment and materials and reclaim all disturbed lands at the completion of activities, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.

(F) **MANNER OF PAYMENT:** Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessor's last known address, and Lessee may withhold any payment pending notification by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.

(G) **CHANGE IN LAND OWNERSHIP:** Lessee shall not be bound by any change in the ownership of the Leasehold until furnished with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) **TITLE:** If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved.

(I) **LIENS:** Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasehold; and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessor or by any other lawful means.

(J) **CHARACTERIZATION OF PAYMENTS:** Payments set forth herein are covenants, not special limitations, regardless of the form in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment can never result in an automatic termination, expiration, cancellation, or forfeiture of this Lease. Lessor recognizes and acknowledges that oil and gas lease payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this Lease is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessor constitute full consideration for the Leasehold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor/oil and gas owner.

(K) **PAYMENT REDUCTIONS:** If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee.

**UNITIZATION AND POOLING.** Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee's pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Leasehold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acres ascribed to the Lease and the local property tax assessment calculation of the lands covered by the Lease, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

**FACILITIES.** Lessee shall not drill a well within 200 feet of any structure located on the Leasehold without Lessor's written consent. Lessor shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee's written consent. Lessor shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee's written consent.

**CONVERSION TO STORAGE.** Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor's proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/unitized therewith have permanently ceased production, Lessor shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasehold or lands pooled or unitized therewith for the underground storage of gas, or for the protection of stored gas will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

**TITLE AND INTERESTS.** Lessor hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after acquired title. Should any person having title to the Leasehold fail to execute this Lease, the Lease shall nevertheless be binding upon all persons who do execute it as Lessor.

**LEASE DEVELOPMENT.** There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension of term of this Lease. There shall be no Leasehold forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

**COVENANTS.** This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.

**RIGHT OF FIRST REFUSAL.** If at any time within the primary term of this lease or any continuation thereof, Lessor receives any bona fide offer, acceptable to Lessor, to grant an additional lease ("Top Lease") covering all or part of the Leasehold, Lessee shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessee's name, bonus consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form to be utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessee shall have fifteen (15) days after receipt from Lessor of a complete copy of any such offer to advise Lessor in writing of its election to enter into an oil and gas lease with Lessor on equivalent terms and

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conditions. If Lessee fails to notify Lessor within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer. Lessor shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.

**ARBITRATION.** In the event of a disagreement between Lessor and Lessee concerning this Lease, performance thereunder, or damages caused by Lessee's operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.

**ENTIRE CONTRACT.** The entire agreement between Lessor and Lessee is embodied herein. No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

**SURRENDER.** Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by recording a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon each surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient easements for then existing wells, pipelines, pole lines, roadways and other facilities on the lands surrendered.

**SUCCESSORS.** All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.

**FORCE MAJEURE.** All express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. When drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this Lease shall not terminate, in whole or in part, because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure.

**SEVERABILITY.** This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.

**COUNTERPARTS.** This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

REFERENCE ADDENDUM ATTACHED HERETO AND MADE A PART HEREOF.

IN WITNESS WHEREOF, Lessor hereunto sets hand and seal.

Witness [Signature] \_\_\_\_\_ (Seal)  
Witness [Signature] \_\_\_\_\_ (Seal)  
Witness \_\_\_\_\_ (Seal)  
Witness \_\_\_\_\_ (Seal)

Document prepared by: Chesapeake Appalachia, L.L.C., P. O. Box 6070, Charleston, West Virginia 25362-0070.

**ACKNOWLEDGMENT**

STATE OF West Virginia  
COUNTY OF Ohio

On this the 12 day of Nov, 2008, before me, the undersigned authority, personally appeared Jean P. Loustau and Louise P. Loustau, husband and wife, who, being duly sworn according to law, depose and say that they executed the foregoing instrument for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: Aug 14, 2008  
Signature/Notary Public: [Signature]  
Name/Notary Public (print): Keith J. Balaschak

Official Seal  
Notary Public, State of West Virginia  
Keith J. Balaschak  
1100 9th Street  
Vienna, WV 26105  
My commission expires August 14, 2008

**CORPORATE ACKNOWLEDGMENT**

STATE OF West Virginia )  
COUNTY OF Ohio ) SS:

On this the \_\_\_ day of \_\_\_\_\_, 2008, before me, the undersigned authority, personally appeared \_\_\_\_\_, who acknowledged himself to be the \_\_\_\_\_ of \_\_\_\_\_, and that he as such \_\_\_\_\_, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as a \_\_\_\_\_ corporation.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: \_\_\_\_\_  
Signature/Notary Public: \_\_\_\_\_  
Name/Notary Public (print): \_\_\_\_\_

Recorder: Return to Chesapeake Appalachia, L.L.C., Land Dept., P. O. Box 6070, Charleston, WV 25362-0070

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**ADDENDUM**

Attached to and made a part of that certain Oil and Gas Lease dated ~~November 12, 2008~~, by and between Jean P. Loustau and Louise P. Loustau, husband and wife, whose address is 344 Dixon Run Road, Triadelphia, West Virginia 26059, as Lessors, and Chesapeake Appalachia, L.L.C., as Lessee, covering land in the District of Liberty, County of Ohio, State of West Virginia.

**NOTWITHSTANDING** the forgoing provisions hereof, it is understood and agreed:

**(1) Location Approval Clause**

Provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations, Lessee and Lessor to mutually agree on all drill site, pipeline and access road locations, consent not to be unreasonably withheld, delayed or conditioned by Lessor.

**(2) Hold Harmless Clause**

Lessee agrees it will protect and save and keep Lessor harmless and indemnified against and from any penalty or damage or charges imposed for any violation of any laws or ordinances, whether occasioned by the neglect of Lessee or those holding under Lessee, and Lessee will at all times protect, indemnify and save and keep harmless the Lessor against and from any and all loss, damage or expense, including any injury to any person or property whomsoever or whatsoever arising out of or caused by any negligence of the Lessee or those holding under Lessee.

**(3) Reclamation Clause**

Lessee shall construct or install all well sites, access roads and pipeline right-of-ways in a manner which would minimize any related soil erosion. Further, any related surface reclamation shall be done in a manner which restores said land as nearly to original contours as reasonably practical.

**(4) Free Gas Clause**

**Annual Payment of 200 mcf X \$ sold in Lieu of Free Gas Clause:**

If, and only if, Lessor is entitled to receive free gas, whether by virtue of the ownership of the surface of the leased premises and either all the oil and gas underlying the same, or an undivided interest in the oil and gas underlying the same, or the express record title right to receive free gas, then upon approval of Lessor's written request for free gas, and after Lessor has obtained 100% written consent from all owners having the legal right to receive revenue from a productive well on the leased premises, and Lessor's execution of Lessee's Delivery of Free Gas and Overburn Gas Agreement, one (1) Lessor may lay a line to any one (1) producing gas well on the leased premises and take up to two hundred thousand (200,000) cubic feet of gas during any single twelve (12) month period for domestic use in one currently existing primary dwelling owned at all times by Lessor and located within a one thousand (1,000') foot radius from said well on the leased premises; subject, however to such well being capable of producing in commercial quantities and of commercial quality suitable for domestic use; the existence and availability of a local distribution company willing to administer, control, monitor, and service such free gas usage to the specifications and requirements of Lessee; and subject further to the use, maintenance, operation, production, limited deliverability, and right of shut-in and/or plugging and abandonment by Lessee of its well(s), equipment and pipelines on the leased premises. Lessor shall secure such gas by service line laid to and connected to such well on said leased premises in accordance with all applicable laws, rules and regulations, the point of connection to be designated by Lessee and Lessor shall assume the entire risk and all expenses associated with securing and using such gas and agrees, to the fullest extent of applicable law, to release and indemnify Lessee from and against any and all claims or causes of action arising therefrom or relating thereto. If Lessor in any year uses gas in excess of the quantity provided for herein, Lessor shall pay for all overburn gas at the current established retail rate in the area or at the rate charged by the local distribution company administering the free gas usage, but Lessee assumes no obligation to furnish Lessor with gas in excess of the quantity provided herein. The measurement and regulation of such gas shall be by meter regulators furnished by Lessor, subject to Lessee's approval, and set at the tap on the well. Notwithstanding the foregoing provisions, in the event the leased premises are made a part of a unit or pooled with other acreage and the well(s) has been drilled on another lease, the Lessor hereunder

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will not be entitled to use wellhead gas, free or otherwise. The rights granted herein related to free gas are not assignable or transferable to a party not currently owning an interest in the leasehold premises. Notwithstanding the foregoing, the specific terms and conditions of free gas use shall be governed and controlled by the Agreement for Delivery of Free Gas and Overburn Gas. Lessee shall be fully relieved of any further obligation to provide free gas or alternative payment to Lessor if any of the conditions provided hereinabove are not satisfied. At the time application is made for free gas, Lessee shall have the option to make an annual cash payment to the qualified applicant(s) equal to 200,000 cubic feet of gas multiplied by the average price received by Lessee during the preceding year of production in lieu of providing free gas and said sum shall thereafter permanently discharge Lessee's obligation under this lease to provide gas free of cost to Lessor, his successors, heirs and assigns.

**(5) Hunting Clause**

It is understood and agreed that the Lessee will not commence drilling operations 30 days prior to deer hunting season (a 2 week period beginning the first Monday following Thanksgiving Day). In the event Lessee is conducting drilling operations 30 days prior to hunting season, Lessee will be permitted to continue operations.

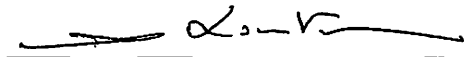
**(6) Gate Clause**

Upon the written request of Lessor, Lessee shall install at its sole cost and expense a gate at the entrance of any road constructed by Lessee on the leased premises provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations.

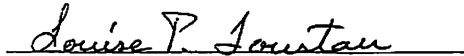
**(7) Water Damage Clause**

In the event any activity carried on by Lessee pursuant to the terms of this lease damages, disturbs, or injures Lessor's fresh water well or source located on these leased premises, Lessee shall at its sole cost and expense use its best efforts to correct any such damage, disturbance or injury.

**SIGNED FOR IDENTIFICATION:**



Jean P. Loustau



Louise P. Loustau

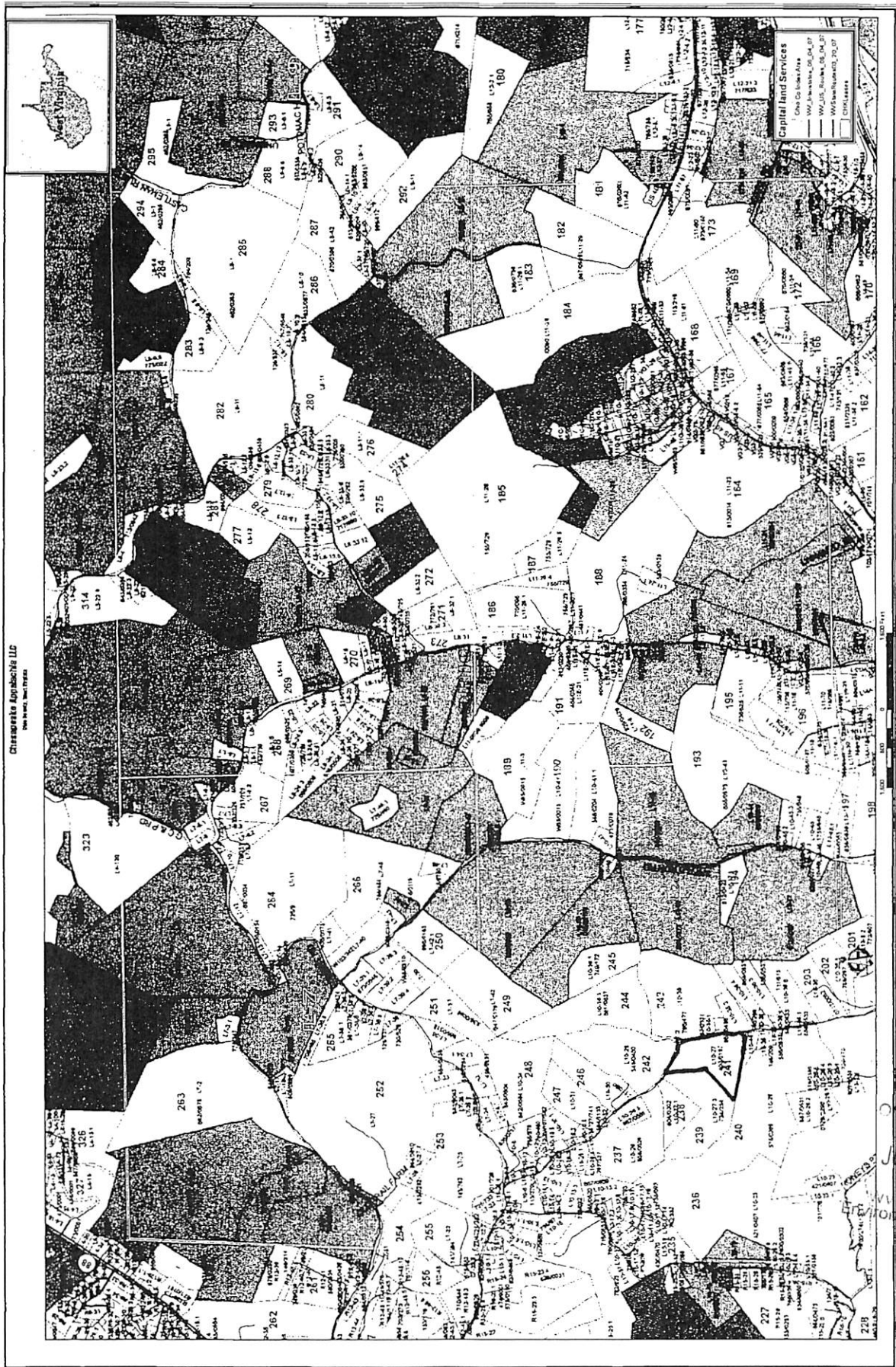
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10/27/2017



PAID-UP  
OIL & GAS LEASE

Lease No.

10223395

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08/08 - WV

This Lease, made this 16 day of March, 2009, by and between Thomas R. Abraham and Sue O. Abraham, his wife, whose address is RR2 Box 349, Triadelphia, West Virginia 26059 hereinafter collectively called "Lessor", and CHESAPEAKE APPALACHIA, L.L.C., an Oklahoma limited liability company, P.O. Box 6070, Charleston, WV 25362-0070, hereinafter called "Lessee".

WITNESSETH, that for and in consideration of the premises, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

**LEASING CLAUSE.** Lessor hereby leases exclusively to Lessee all the oil and gas including, but not limited to coal seam gas, coalbed methane gas, coalbed gas, methane gas, gob gas, occluded methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, gob area, mine-out area, coal seam, and all communicating zones, and their liquid gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, and from adjoining lands, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads, electric power and telephone facilities, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from neighboring lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment.

**DESCRIPTION.** The Leasehold is located in the District of Liberty, in the County of Ohio, in the State of West Virginia, and described as follows:

Property Tax Parcel Identification Number: L10/26

and is bounded formerly or currently as follows:

- On the North by lands of Byrum;
- On the East by lands of Multiple Parcels of Land;
- On the South by lands of Ohio County Commission;
- On the West by lands of Luchetti;

including lands acquired from Board of Trade building, Inc., by virtue of deed dated May 24, 1977, and recorded in Deed Book 578 at Page 269, and described for the purposes of this agreement as containing a total of 98.678 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor. This Lease also covers and includes, in addition to that above described, all land, if any, contiguous or adjacent to or adjoining the land above described and (a) owned or claimed by Lessor, by limitation, prescription, possession, reversion or unrecorded instrument or (b) as to which Lessor has a preference right of acquisition. Lessor agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

**LEASE TERM.** This Lease shall remain in force for a primary term of five (5) years from 12:00 A.M. \_\_\_\_\_ (effective date) to 11:59 P.M. \_\_\_\_\_ (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/unitized therewith in search of oil, gas, or their constituents, or (ii) a well deemed by Lessee to be capable of production is located on the Leasehold or lands pooled/unitized therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/unitized therewith, or (iv) if the Leasehold or lands pooled/unitized therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

If there is any dispute concerning the extension of this Lease beyond the primary term by reason of any of the alternative mechanisms specified herein, the payment to the Lessor of the prescribed payments provided below shall be conclusive evidence that the Lease has been extended beyond the primary term.

**EXTENSION OF PRIMARY TERM:** Lessee has the option to extend the primary term of this Lease for one additional term of five (5) years from the expiration of the primary term of this Lease, said extension to be under the same terms and conditions as contained in this Lease. Lessee may exercise this option to extend this Lease if, on or before the expiration date of the primary term of this Lease, Lessee pays or tenders to the Lessor or to the Lessor's credit an amount equal to the initial consideration given for the execution hereof. Exercise of this option is at Lessee's sole discretion and may be invoked by Lessee where no other alternative of the Lease Term clause extends this Lease beyond the primary term.

*Handwritten initials: PPK, SOA*

**NO AUTOMATIC TERMINATION OR FORFEITURE.**

**(A) CONSTRUCTION OF LEASE:** The language of this Lease (including, but not limited to, the Lease Term and Extension of Term clauses) shall never be read as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuation of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, frac, plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/unitized therewith (such activities shall include, but not be limited to, performing any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).

**(B) LIMITATION OF FORFEITURE:** This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and thereafter fails or refuses to satisfy or provide justification responding to Lessor's demand within 60 days from the receipt of such notice. If Lessee timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue in Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

**PAYMENTS TO LESSOR.** In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

**(A) DELAY RENTAL:** To pay Lessor as Delay Rental, after the first year, at the rate of five dollars (\$5.00) per net acre per year payable in advance. The parties hereto agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments to be made by Lessor during the primary term hereof.

**(B) ROYALTY:** To pay Lessor as Royalty, less all taxes, assessments, and adjustments on production from the Leasehold, as follows:

1. OIL: To deliver to the credit of Lessor, free of cost, a Royalty of the equal one-eighth (1/8) part of all oil and any constituents thereof produced and marketed from the Leasehold.

2. GAS: To pay Lessor on actual volumes of gas sold from said land, one-eighth of the net amount realized by Lessee, computed at the wellhead. As used in this lease, the term "net amount realized by Lessee, computed at the wellhead" shall mean the gross proceeds received by Lessee from the sale of oil and gas minus post-production costs incurred by Lessee between the wellhead and the point of sale. As used in this Lease, the term "post-production costs" shall mean all costs and expenses of (a) treating and processing oil and/or gas, and (b) separating

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liquid hydrocarbons from gas, other than condensate separated at the well, and (c) transporting oil and/or gas, including but not limited to transportation between the wellhead and any production or treating facilities, and transportation to the point of sale, and (d) compressing gas for transportation and delivery purposes, and (e) metering oil and/or gas to determine the amount sold and/or the amount used by Lessee, and (f) sales charges, commissions and fees paid to third parties (whether or not affiliated) in connection with the sale of the gas, and (g) any and all other costs and expenses of any kind or nature incurred in regard to the gas, or the handling thereof, between the wellhead and the point of sale. Lessee may use its own pipelines and equipment to provide such treating, processing, separating, transportation, compression and metering services, or it may engage others to provide such services; and if Lessee uses its own pipelines and/or equipment, post-production costs shall include without limitation reasonable depreciation and amortization expenses relating to such facilities, together with Lessee's cost of capital and a reasonable return on its investment in such facilities. Prior to payment of royalty, Lessor may be required to execute a Division Order certifying Lessor's interest in production. Lessee may pay all taxes and fees levied upon the oil and gas as produced, including, without limitation, severance taxes and privilege and surveillance fees, and deduct a proportionate share of the amount so paid from any monies payable to Lessor hereunder. Lessee may withhold Royalty payment until such time as the total withheld exceeds fifty dollars (\$50.00).

(C) **DELAY IN MARKETING:** In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents, therefrom and there is no other basis for extending this Lease, Lessee shall pay after the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) **SHUT-IN:** In the event that production of oil, gas, or their constituents, is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/unitized therewith, Lessee shall thereafter, as Royalty for constructive production, pay a Shut-in Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or Lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-in, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-in Royalty.

(E) **DAMAGES:** Lessee will remove unnecessary equipment and materials and reclaim all disturbed lands at the completion of activities, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.

(F) **MANNER OF PAYMENT:** Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessor's last known address, and Lessee may withhold any payment pending notification by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.

(G) **CHANGE IN LAND OWNERSHIP:** Lessee shall not be bound by any change in the ownership of the Leasehold until furnished with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) **TITLE:** If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved.

(I) **LIENS:** Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasehold; and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessor or by any other lawful means.

(J) **CHARACTERIZATION OF PAYMENTS:** Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment can never result in an automatic termination, expiration, cancellation, or forfeiture of this Lease. Lessor recognizes and acknowledges that oil and gas lease payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this Lease is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessor constitute full consideration for the Leasehold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor/oil and gas owner.

(K) **PAYMENT REDUCTIONS:** If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee.

**UNITIZATION AND POOLING.** Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee's pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Leasehold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acres ascribed to the Lease and the local property tax assessment calculation of the lands covered by the Lease, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

**FACILITIES.** Lessee shall not drill a well within 200 feet of any structure located on the Leasehold without Lessor's written consent. Lessor shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee's written consent. Lessor shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee's written consent.

**CONVERSION TO STORAGE.** Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor's proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/unitized therewith have permanently ceased production, Lessor shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasehold or lands pooled or unitized therewith for the underground storage of gas, or for the protection of stored gas will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

**TITLE AND INTERESTS.** Lessor hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after acquired title. Should any person having title to the Leasehold fail to execute this Lease, the Lease shall nevertheless be binding upon all persons who do execute it as Lessor.

**LEASE DEVELOPMENT.** There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension of term of this Lease. There shall be no Leasehold forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

**COVENANTS.** This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.

**RIGHT OF FIRST REFUSAL.** If at any time within the primary term of this lease or any continuation thereof, Lessor receives any bona fide offer, acceptable to Lessor, to grant an additional lease ("Top Lease") covering all or part of the Leasehold, Lessee shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessee's name, bonus consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessee shall have fifteen (15) days after receipt from Lessor of a complete copy of any such offer to advise Lessor in writing of its election to enter into an oil and gas lease with Lessor on equivalent terms and

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conditions. If Lessee fails to notify Lessor within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessor shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.

**ARBITRATION.** In the event of a disagreement between Lessor and Lessee concerning this Lease, performance thereunder, or damages caused by Lessee's operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.

**ENTIRE CONTRACT.** The entire agreement between Lessor and Lessee is embodied herein. No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

**SURRENDER.** Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by recording a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon each surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient easements for then existing wells, pipelines, pole lines, roadways and other facilities on the lands surrendered.

**SUCCESSORS.** All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.

**FORCE MAJEURE.** All express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. When drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this Lease shall not terminate, in whole or in part, because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure.

**SEVERABILITY.** This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.

**COUNTERPARTS.** This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

REFERENCE ADDENDUM ATTACHED HERETO AND MADE A PART HEREOF.

IN WITNESS WHEREOF, Lessor hereunto sets hand and seal.

Witness \_\_\_\_\_ Thomas R. Abraham \_\_\_\_\_ (Seal)

Witness \_\_\_\_\_ Sue O. Abraham \_\_\_\_\_ (Seal)

Witness \_\_\_\_\_ \_\_\_\_\_ (Seal)

Witness \_\_\_\_\_ \_\_\_\_\_ (Seal)

Document prepared by: Chesapeake Appalachia, L.L.C., P. O. Box 6070, Charleston, West Virginia 25362-0070.

**ACKNOWLEDGMENT**

STATE OF WEST VIRGINIA

COUNTY OF OHIO

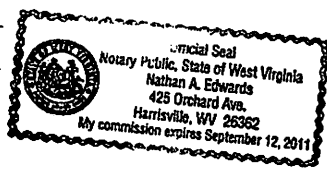
On this the 16 day of March, 2009, before me, the undersigned authority, personally appeared Thomas R. Abraham and Sue O. Abraham, his wife, who, being duly sworn according to law, depose and say that they executed the foregoing instrument for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: \_\_\_\_\_

Signature/Notary Public: [Signature]

Name/Notary Public (print): \_\_\_\_\_



Record & Return to:  
 Chesapeake Operating, Inc.  
 P.O. Box 18496  
 Oklahoma City, OK 73154

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conditions. If Lessee fails to notify Lessor within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessor shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.

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**SUCCESSORS.** All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.

**FORCE MAJEURE.** All express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. When drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this Lease shall not terminate, in whole or in part, because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure.

**SEVERABILITY.** This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.

**COUNTERPARTS.** This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

REFERENCE ADDENDUM ATTACHED HERETO AND MADE A PART HEREOF.

IN WITNESS WHEREOF, Lessor hereunto sets hand and seal.

Witness \_\_\_\_\_ Thomas R. Abraham \_\_\_\_\_ (Seal)  
 Thomas R. Abraham  
 Witness \_\_\_\_\_ Sue O. Abraham \_\_\_\_\_ (Seal)  
 Sue O. Abraham  
 Witness \_\_\_\_\_ \_\_\_\_\_ (Seal)  
 Witness \_\_\_\_\_ \_\_\_\_\_ (Seal)

Document prepared by: Chesapeake Appalachia, L.L.C., P. O. Box 6070, Charleston, West Virginia 25362-0070.

ACKNOWLEDGMENT

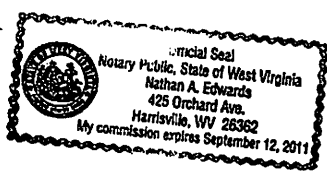
STATE OF WEST VIRGINIA

COUNTY OF OHIO

On this the 16 day of March, 2009, before me, the undersigned authority, personally appeared Thomas R. Abraham and Sue O. Abraham, his wife, who, being duly sworn according to law, depose and say that they executed the foregoing instrument for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: \_\_\_\_\_  
 Signature/Notary Public: [Signature]  
 Name/Notary Public (print): \_\_\_\_\_



Record & Return to:  
 Chesapeake Operating, Inc.  
 P.O. Box 18496  
 Oklahoma City, OK 73154

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ADDENDUM

Attached to and made a part of that certain Oil and Gas Lease dated 3/10/09 by and between Thomas R. Abraham and Sue O. Abraham, his wife, whose address is RR2 Box 349, Triadelphia, West Virginia 26059, as Lessors, and Chesapeake Appalachia, L.L.C., as Lessee, covering land in the District of Liberty, County of Ohio, State of West Virginia.

**NOTWITHSTANDING** the forgoing provisions hereof, it is understood and agreed:

(1) Provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations, Lessee and Lessor to mutually agree on all drill site, pipeline and access road locations, consent not to be unreasonably withheld, delayed or conditioned by Lessor.

(2) Lessee agrees it will protect and save and keep Lessor harmless and indemnified against and from any penalty or damage or charges imposed for any violation of any laws or ordinances, whether occasioned by the neglect of Lessee or those holding under Lessee, and Lessee will at all times protect, indemnify and save and keep harmless the Lessor against and from any and all loss, damage or expense, including any injury to any person or property whomsoever or whatsoever arising out of or caused by any negligence of the Lessee or those holding under Lessee.

(3) Lessee shall construct or install all well sites, access roads and pipeline right-of-ways in a manner which would minimize any related soil erosion. Further, any related surface reclamation shall be done in a manner which restores said land as nearly to original contours as reasonably practical.

(4) Lessee's operations on said land shall be in compliance with all applicable federal and state regulations.

(5) Provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations, Lessee agrees to pay Lessor at a reasonable rate for all surface damages caused by Lessee's operations to growing crops, trees, and timber.

(6) Upon Lessor's written request, Lessee shall at its sole cost, expense, and design install fencing for the protection of livestock around any well site(s), tank battery (ies) or facility (ies) installed on the leased premises by Lessee provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations.

(7) Upon the written request of Lessor, Lessee shall install at its sole cost and expense a gate at the entrance of any road constructed by Lessee on the leased premises provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations.

(8) It is agreed between the Lessor and Lessee that, notwithstanding any language herein to the contrary, all oil, gas or other proceeds accruing to the Lessor under this lease or by state law shall be without deduction, directly or indirectly, for the cost of producing, gathering, storing, separating, treating, dehydrating, compressing, processing, transporting, and marketing the oil, gas and other products produced hereunder to transform the product into marketable form; however, any such costs which result in enhancing the value of the marketable oil, gas or other products to receive a better price may be deducted from Lessor's share of production so long as they are based on Lessee's actual cost of such enhancements. However, in no event shall Lessor receive a price that is less than, or more than, the price received by Lessee.

(9) Notwithstanding anything herein contained to the contrary, Lessee agrees the herein described leased premises shall not be used for the purpose of gas storage as defined by the Federal Energy Regulatory Commission. Any reference to gas storage contained in this lease is hereby deleted. If Lessor wishes to enter into an agreement regarding gas storage using the leased premises with a third party, Lessor shall first give Lessee written notice of the identity of the third party, the price or the consideration for which the third

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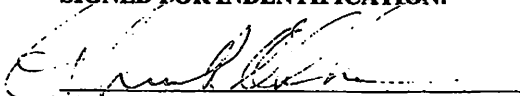


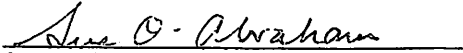
party is prepared to offer, the effective date and closing date of the transaction and any other information respecting the transaction which Lessee believes would be material to the exercise of the offering. Lessor does hereby grant Lessee the first option and right to purchase the gas storage rights by matching and tendering to the Lessor any third party's offering within 30 days of receipt of notice from Lessor.

(10) In the event any activity carried on by Lessee pursuant to the terms of this lease damages, disturbs, or injures Lessor's fresh water well or source located on these leased premises, Lessee shall at its sole cost and expense use its best efforts to correct any such damage, disturbance or injury.

(11) If, and only if, Lessor is entitled to receive free gas, whether by virtue of the ownership of the surface of the leased premises and either all the oil and gas underlying the same, or an undivided interest in the oil and gas underlying the same, or the express record title right to receive free gas, then upon approval of Lessor's written request for free gas, and after Lessor has obtained 100% written consent from all owners having the legal right to receive revenue from a productive well on the leased premises, and Lessor's execution of Lessee's Delivery of Free Gas and Overburn Gas Agreement, one (1) Lessor may lay a line to any one (1) producing gas well on the leased premises and take up to two hundred thousand (200,000) cubic feet of gas during any single twelve (12) month period for domestic use in one currently existing primary dwelling owned at all times by Lessor and located within a one thousand (1,000') foot radius from said well on the leased premises; subject, however to such well being capable of producing in commercial quantities and of commercial quality suitable for domestic use; the existence and availability of a local distribution company willing to administer, control, monitor, and service such free gas usage to the specifications and requirements of Lessee; and subject further to the use, maintenance, operation, production, limited deliverability, and right of shut-in and/or plugging and abandonment by Lessee of its well(s), equipment and pipelines on the leased premises. Lessor shall secure such gas by service line laid to and connected to such well on said leased premises in accordance with all applicable laws, rules and regulations, the point of connection to be designated by Lessee and Lessor shall assume the entire risk and all expenses associated with securing and using such gas and agrees, to the fullest extent of applicable law, to release and indemnify Lessee from and against any and all claims or causes of action arising therefrom or relating thereto. If Lessor in any year uses gas in excess of the quantity provided for herein, Lessor shall pay for all overburn gas at the current established retail rate in the area or at the rate charged by the local distribution company administering the free gas usage, but Lessee assumes no obligation to furnish Lessor with gas in excess of the quantity provided herein. The measurement and regulation of such gas shall be by meter regulators furnished by Lessor, subject to Lessee's approval, and set at the tap on the well. Notwithstanding the foregoing provisions, in the event the leased premises are made a part of a unit or pooled with other acreage and the well(s) has been drilled on another lease, the Lessor hereunder will not be entitled to use wellhead gas, free or otherwise. The rights granted herein related to free gas are not assignable or transferable to a party not currently owning an interest in the leasehold premises. Notwithstanding the foregoing, the specific terms and conditions of free gas use shall be governed and controlled by the Agreement for Delivery of Free Gas and Overburn Gas. Lessee shall be fully relieved of any further obligation to provide free gas or alternative payment to Lessor if any of the conditions provided hereinabove are not satisfied. At the time application is made for free gas, Lessee shall have the option to make an annual cash payment to the qualified applicant(s) of One Thousand and 00/100 Dollars (\$1,000.00) in lieu of providing free gas and said sum shall thereafter permanently discharge Lessee's obligation under this lease to provide gas free of cost to Lessor, his successors, heirs and assigns.

**SIGNED FOR IDENTIFICATION:**

  
Thomas R. Abraham

  
Sue O. Abraham

PATRICIA A FAHEY  
OHIO County 01:22:01 PM  
Instrument No 1838937  
Date Recorded 05/07/2009  
Document Type O&G/L  
Book-Page 793-499  
Recording Fee \$5.00  
Additional \$6.00

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OIL AND GAS LEASE (PAID-UP)

TriEnergy, Inc.  
Pennsylvania

69-00241

This Lease Agreement is made as of the 14<sup>th</sup> day of August, 20 08 between Curtis R. Byrum and Caroline Byrum, husband and wife of RR 2, Box 342A, Triadelphia, WV 26059 as Lessor, (whether one or more), and TriEnergy, Inc., P.O. Box 89, 412 Beaver Street, 2<sup>nd</sup> floor, Sewickley, PA 15143, as Lessee.

(1) LEASE - In consideration of the sum of One Dollar (\$1.00) in hand paid, the receipt of which is hereby acknowledged, and in further consideration of the covenants and agreements herein contained, Lessor hereby leases and lets exclusively to Lessee, its successors and assigns, for the purpose of exploring for, developing, producing and marketing oil and gas, including methane gas present in any coal seam, along with all hydrocarbon substances produced in association therewith, the following described land:

(2) DESCRIPTION - All that certain tract of land situate in the Liberty District, Ohio County, State of West Virginia being duly bounded and described as follows:

On the North by: Walters

On the East by: Loustau

On the South by: Shaffer

On the West by: Luchetti

Tax Parcel No: L10-27.3 (25 acres) & L10-27.1 (10 acres)

Containing 35 acres, more or less, being the same land conveyed and recorded in the records of said county in Book 724 & 604 respectively, Page 254 & 302 respectively. This lease includes any interest in said property which Lessor hereafter acquires by reversion, prescription or otherwise.

(3) TERM - Subject to the other provisions contained herein, this lease shall be in force for a primary term of five (5) years from the date of this lease and for so long thereafter as oil, gas or other substances covered hereby are produced in paying quantities from the leased premises or from lands pooled therewith or this lease is otherwise maintained pursuant to the provisions hereof.

(4) Royalty Payment - (a) For crude oil, including condensate, Lessee shall pay to the Lessor, as royalty, free of production cost, one-eighth (1/8th) of the proceeds realized by Lessee from the sale of all crude oil produced and sold from the leased premises. (b) For gas (including casing-head gas) and all other substances covered hereby, the royalty shall be one-eighth (1/8th) of the proceeds realized by Lessee from the sale thereof, with no deduction of any costs incurred by Lessee or its affiliates to gather, transport, compress, dehydrate or otherwise treat such gas prior to the point of custody transfer into pipelines or other facilities owned by a regulated utility or pipeline company or a non-affiliated third party.

If the Lessee chooses to make this leasehold part of a unit for an enhanced recovery project and surplus gas is marketed from that unit, then any payment for gas marketed shall be divided pro rata among the various Lessors in such unit in accordance with the number of acres each owns in said unit from which gas is taken in the recovery, provided however, that if Lessee produces or purchases gas outside the unit and uses it in said unit, then Lessee shall pay for gas marketed only to the extent that it exceeds the outside gas produced or purchased. Lessee may use gas produced from the leased premises, without charge, for injection into wells located on said leased premises or on a unit of which the leased premises is part, and for said purpose may commingle said gas with gas produced elsewhere.

(5) LESSOR'S INTEREST - If Lessor owns a less interest in the above-described land than the entire and undivided estate herein leased, then the royalties, shut-in royalties and rentals herein provided shall be paid by Lessee only in the proportion to which Lessor's interest bears to the whole and undivided estate. If the leased premises shall hereafter be subdivided, the premises shall nevertheless be developed and operated as one lease, and all royalties accruing hereunder shall be treated as an entirety, and shall be divided among and paid to such separate owners in the proportion that the acreage owned by each owner bears to the entire leased acreage.

(6) RENTAL PAYMENT - This lease is made on the condition that it will become null and void and all rights hereunder shall cease and terminate unless work for the drilling of a well is commenced on the leased premises or lands pooled herewith within one-hundred twenty (120) days from the date of this lease and prosecuted with due and reasonable diligence, or unless the Lessee shall pay to the Lessor, in advance, every twelve (12) months until work for the drilling of a well is commenced, the rate of Sixty and 00/100 Dollars (\$ 60.00) per net acre leased for each twelve (12) months during which the commencement of such work is delayed.

Payment or tender of all moneys due Lessor hereunder may be made by check or draft mailed or tendered to Lessor either:

(a) To the Lessor direct, at the address above stated;

(b) If the Lessor consists of two or more persons, then to Caroline Byrum, RR 2, Box 342A, Triadelphia, WV 26059, who is hereby appointed the agent of the Lessor to receive such payments;

(7) CONTINUING OPERATIONS - If, at the end of the primary term or any time thereafter, this lease is not being kept in force by any other provision hereof, but Lessee is then engaged in drilling, reworking or any other operation calculated to obtain production on the leased premises or lands pooled therewith, this lease shall remain in force as long as such operations are conducted in a reasonably prudent manner and, if such operations result in the production of any substance covered hereby, as long thereafter as production continues in paying quantities.

(8) POOLING - Lessee is hereby granted the right to pool or unitize the leased premises, or any part thereof, with any other property for the production of any substance covered hereby, so as to create one or more drilling or production units. Said drilling or production units shall not exceed six hundred forty (640) acres. In the event this lease is so unitized, the Lessor agrees to accept in lieu of the royalty herein before recited, such proportion of the royalty above provided as the acreage contributed by this lease bears to the total acreage comprising the unit.

Lessee shall create the unit by executing an instrument identifying and describing the pooled acreage and shall mail a copy thereof to the Lessor's last known address. Lessee shall have the recurring right to revise any unit formed hereunder either before or after commencement of production. In the event of a revision, Lessee shall execute a written instrument describing the revised unit and stating the effective date of the revision. Lessee shall mail a copy thereof to the Lessor's last known address and the proportion of unit production on which royalties are payable hereunder shall thereafter be adjusted accordingly. Lessee may terminate the unit by filing of record a written declaration describing the unit and stating the date of termination.

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Production, drilling or reworking operations anywhere on a unit which includes all or any part of the leased premises shall, except for the payment of royalties, be treated as if it were production drilling or reworking operations on the leased premises.

ZDR  
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~~(9) GAS STORAGE - Lessee shall have the exclusive right, upon written notice to the Lessor, to use any formation underlying the leased premises for the storage of gas and shall have all rights necessary to store and produce such stored gas. Lessee agrees to pay Lessor an annual rental of Two Dollars (\$2.00) per acre for all lands which Lessee wishes to use for the storage of gas payable in advance while the premises are so used and so long as storage payment is made all provisions of this lease shall remain in full effect.~~

~~Lessee further agrees to pay Lessor, as liquidated damages for the drilling, operation and maintenance of each well on the leased premises which is utilized for the storage of gas, as well as for the necessary or useful surface rights and privileges relating thereto, the sum of One Hundred Dollars (\$100.00) payable in one sum within three (3) months after each well now existing or hereafter drilled upon the leased premises is so utilized. Lessee agrees to give Lessor written notice of the use of the leased premises or any well drilled thereon for the storage of gas. The storage rights may be assigned or exercised in conjunction with other leases in the general vicinity.~~

(10) ANCILLARY RIGHTS - Lessor grants to the Lessee the right to ingress and egress over, under and through said leased premises with the right to transport by pipelines or otherwise, oil, gas, water and their constituents from the leased premises and other lands regardless of the source of such substances and the exclusive right of injecting water, air, brine, gas and other fluids into subsurface strata. The right of ingress and egress granted hereby shall apply to the entire leased premises not-with-standing any release or other termination affecting any portion thereof. The right of placing electric and telephone lines over the leased premises; the right to erect necessary buildings, tanks, towers, stations or other structures thereon; the right to use free from royalty sufficient oil, gas and water produced from the leased premises for all operations thereon (provided it finds water at its own expense); the right to subdivide and release the premises and the right to surrender this lease at any time and thereupon to be discharged from all obligations, covenants and conditions hereincontained.

When requested by Lessor in writing, Lessee shall bury its pipelines below plow depth in areas utilized for farming operations. No well shall be located within two hundred (200) feet from any house now on the leased premises without Lessor's consent and Lessee shall pay for damage caused by its operations to buildings and growing crops thereon. Lessee shall have the right to remove its fixtures, equipment and materials, including well casing, from the leased premises during the term of this lease and within a reasonable time thereafter.

(11) SHUT-IN ROYALTY - Notwithstanding anything herein to the contrary if all wells on the leased premises, or on a unit that includes all or a part of the leased premises, capable of producing gas in paying quantities are shut-in for a period of one year and there is no current production of oil or operations on said leased premises sufficient to keep this lease in force or when this lease is not otherwise kept in force by other provisions of this lease, the Lessee may maintain this lease in effect by tendering to Lessor a shut-in royalty equal to the delay rental provided for herein. Said shut-in gas royalty shall be paid or tendered to the Lessor on or before the end of each year in which the wells are shut-in. Upon payment of the shut-in gas royalty as provided herein, this lease will continue in force during all of the time or times while such wells are shut-in.

(12) TAXES - All taxes assessed or payable on the oil and gas or any increase in the real estate taxes, or taxes in lieu of real estate taxes, because of the oil and gas or operations under this lease shall be paid by the parties hereto in proportion to their interest.

(13) FORCE MAJEURE - When drilling or other operations are delayed or interrupted by storm flood, fire, or other acts of God, war, rebellion, insurrection, riot, strikes, differences with workmen or failure of carriers to transport or furnish facilities for transportation, or as a result of some law, order or regulation of the government, or as a result of shortage in material or equipment, or as a result of any cause whatsoever beyond the control of the Lessee, the time of such delay or interruptions shall not be counted against Lessee, anything in this lease to the contrary notwithstanding. This lease shall not be terminated in whole or in part, nor Lessee held liable in damages for failure to comply therewith if compliance is prevented by, or if such failure is the result of any such law, order, rule or regulation or any event beyond the control of the Lessee. If from such cause Lessee is prevented from conducting drilling or reworking operations on the leased premises or producing oil or gas from the leased premises, or lands pooled therewith, the time while the Lessee is so prevented shall not be counted against Lessee and this lease shall be extended for a period of time equal to that during which the Lessee is so prevented.

(14) DEFAULT - No default shall be declared against the Lessee for failure to make payment or perform any conditions provided for herein unless the Lessee shall refuse or neglect to pay or perform the same for forty-five (45) days after having received written notice from Lessor via certified US Mail of any possible breach of this Lease and the terms contained herein.

(15) SUCCESSORS AND ASSIGNS - All covenants and conditions between the parties hereto shall extend to their heirs, executors, successors and assigns and the Lessor hereby warrants and agrees to defend the title to the leased premises, but no change or division in ownership of the leased premises shall operate to enlarge the obligations or diminish the rights of the Lessee. Lessor agrees that the Lessee, at its option, may pay, discharge or redeem any taxes, mortgages or other liens existing, levied or assessed on or against the premises, and in the event it exercises such option, it shall be subrogated to the rights of any holder or holders thereof and may reimburse itself by applying any royalty or rentals accruing hereunder to the discharge of any such taxes, mortgages or other liens.

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~~(16) OPTION TO RENEW - Lessor further covenants that it will not grant an oil and gas lease or similar right for oil and gas covering the premises herein leased, or any portion thereof to any other party during the primary term of the lease, and Lessee is hereby granted the right or option to extend the term of this lease for an additional five (5) year term commencing for a period ending sixty (60) days after the initial primary term of this lease at the rate of \$60.00 per net acre "paid-up" for such additional five (5) year term.~~

(17) ARBITRATION - Any question concerning this lease or performance thereunder shall be ascertained and determined by three disinterested arbitrators, one thereof to be appointed by the Lessor, one by the Lessee and the third by the two so appointed as aforesaid, and the award of such three persons shall be final and conclusive. The cost of such arbitration will be borne equally by the parties.

(18) ACCEPTANCE - This lease shall be deemed to be accepted by the Lessee upon execution by the undersigned duly authorized official of the Lessee.

(19) WAIVER IN WRITING - The failure of either party to enforce or exercise any provision of this lease shall not constitute or be considered as a waiver of the provision in the future unless the same is expressed in writing and signed by the respective parties.

(20) Free Gas - If there is sufficient gas produced from the premises upon which a well drilled hereunder is located over and above the amount required for operations by the Lessee hereunder, the Lessor owning the parcel of property upon which said well is located may use gas for domestic purposes, free of charge, in appliances furnished by said Lessor upon the premises subject to this lease, not to exceed 300,000 cubic feet of gas per annum. The necessary facilities, including meter, regulator, lines and connections shall be furnished and installed at the expense of the Lessor at the place of or near to the well and of the kind designated by Lessee. The use of gas thereunder shall be wholly at the risk of Lessor and without any liability to the Lessee for any accident or damage caused thereby, nor shall Lessee be liable for any shortage or failure in the supply of gas for said domestic use. Any gas used by the Lessor in excess of said annual amount shall be paid for at the prevailing field rate.

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(21) The location of any well, access road or pipeline shall be mutually agreed upon by Lessor and Lessee, which consent shall not be unreasonably withheld by Lessor.  
(22) Lessee shall indemnify and hold Lessor harmless from and against any and all direct and indirect liability, loss, cost, injury, damages, and expenses (including Attorney's fees) to any person or property arising from or in connection with the performance of it's drilling and production operations and any damages or injury by or arising from any act of negligence, omission, or default of the Lessee in connection with it's drilling and production operations on Lessor's property.

(23) Ground to be restored as near as possible to its original condition, as existed prior to drilling operations.

(24) In the event any activity carried on by Lessee, pursuant to the Lease, disturbs, injures, or damages fresh water source or well on the premises, Lessee shall, at its sole cost and expense, use its best efforts to repair or correct any such disturbance, injury, or damage.

(25) All access roads used by the Lessee pursuant to its drilling and producing operations on the leased premises shall be kept in a passable condition, free of significant ruts. Lessee shall utilize shale, gravel, or crushed stone and sluice pipes, where necessary, to maintain the condition of the roads. Upon request of Lessor, Lessee shall erect and maintain a gate on any access road used by Lessee. If the gate is locked, a key shall be furnished to the Lessor.

(26) Lessor hereby warrants that Lessor is not currently receiving any bonus, rental, production royalty as the result of any prior oil and gas lease covering any or all of the subject premises, and that there are no commercially producing wells currently existing on the subject premises, or upon other lands within the boundaries of a drilling or production unit utilizing all or a part of the subject premises.

(27) PAID-UP LEASE - Lessor hereby acknowledges receipt of payment in advance of all rentals set forth in Paragraph 6 herein above which are or may become due and payable for the five (5) years of the term set forth in Paragraph 3 herein above, and this Oil and Gas Lease is therefore paid up through said five (5) year term.

(28) Drill Site Fee - For each and every well drilled on Lessor's premises by Lessee, Lessee agrees to pay Lessor a drill site fee of Two Thousand Five Hundred Dollars (\$2,500.00). This drill site fee shall be paid to Lessor within 30 days of completion of any well(s).

(29) Lessor may elect, if not connecting for the use of natural gas as provided for under Article/Paragraph 20 of the Lease, to receive "in lieu of" the allotment of natural gas, a "cash equivalency" payment based upon the volume of natural gas as set forth in Article/Paragraph 20 of the Lease, not to exceed 300,000 cubic feet, times the annualized wellhead price for the gas sold from a well drilled upon the leased premises for each calendar year. Lessor must notify Lessee of their intent in writing for each year in which Lessor desires to be paid for any unused "free gas" within sixty (60) days of the anniversary date of the lease or Lessor shall forfeit the ability to receive such "cash equivalency" for said calendar year but may still use the "free gas" provided herein for such calendar year per Article/Paragraph 20 of the Lease. Said payment for unused "free gas" shall be made annually by Lessee on or before the end of the first quarter of each calendar year.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals.

WITNESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Curt R Byrum  
Lessor: Curtis R. Byrum  
Social Security No. 233-86-2013  
Phone No. 304-547-1077  
Caroline J. Byrum  
Lessor: Caroline Byrum  
Social Security No. 233 98 0294  
Phone No. 304 547-1077

State of West Virginia )  
County of Ohio )

ss:

On the 14th day of AUGUST in the year 2008, before me, the undersigned, a Notary Public in and for said state, personally appeared Curtis R. Byrum and Caroline Byrum, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: Mar. 02, 2014



Prepared by: Richard Repasky

Approved by: \_\_\_\_\_

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DO NOT RECORD

PAID-UP  
OIL & GAS LEASE

Lease No. 1-301762-000

03/10 - WV

This Lease, made this 28th day of April, 2010, by and between The Board of Commissioners of Ohio County, State of West Virginia, Suite 215, Wheeling, WV 26003, hereinafter collectively called "Lessor," and CHESAPEAKE APPALACHIA, L.L.C., an Oklahoma limited liability company, P.O. Box 18496, Oklahoma City, Oklahoma 73154-0496, hereinafter called "Lessee."

WITNESSETH, that for and in consideration of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

**LEASING CLAUSE.** Lessor hereby leases exclusively to Lessee all the oil and gas (including, but not limited to coal seam gas, coalbed methane gas, coalbed gas, methane gas, gob gas, occluded methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, gob area, mined-out area, coal seam, and all communicating zones), and their liquid gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, and from adjoining lands, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads, electric power and telephone facilities, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from neighboring lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment.

**DESCRIPTION.** The Leasehold is located in the District of Liberty, in the County of Ohio, in the State of West Virginia, and described as follows:

Property Tax Parcel Identification Number: L13-3

Property Tax Parcel Identification Number: L13-3.1

and is bounded formerly or currently as follows:

- On the North by lands of Board of Commissioners;
- On the East by lands of Several Small Tracts;
- On the South by lands of Several Small Tracts;
- On the West by lands of Several Small Tracts;

and is bounded formerly or currently as follows:

- On the North by lands of Thomas Abraham;
- On the East by lands of Robin Rios;
- On the South by lands of Board of Commissioners;
- On the West by lands of Philip Maxwell;

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including lands acquired from Eva Pauline Schmulbach and Edward L. Yager, Executor of the Last Will and Testament of Henry Schmulbach by virtue of deed dated March 10, 1917, and recorded in Deed Book 157, at Page 146, and lands acquired from Circuit Court of Ohio County by virtue of deed dated March 24, 1945, and recorded in Deed Book 279, at Page 61, and including lands acquired from The West Virginia Farm Management Commission by virtue of deed dated September 9, 1980, and recorded in Deed Book 601, at Page 533, and described for the purposes of this agreement as containing a total of 490.50 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor. This Lease also covers and includes, in addition to that above described, all land, if any, contiguous or adjacent to or adjoining the land above described and (a) owned or claimed by Lessor, by limitation, prescription, possession, reversion or unrecorded instrument or (b) as to which Lessor has a preference right of acquisition. Lessor agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

**LEASE TERM.** This Lease shall remain in force for a primary term of five (5) years from 12:00 A.M. April 28, 2010 (effective date) to 11:59 P.M. April 28, 2015 (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/unitized therewith in search of oil, gas, or their constituents, or (ii) a well deemed by Lessee to be capable of production is located on the Leasehold or lands pooled/unitized therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/unitized therewith, or (iv) if the Leasehold or lands pooled/unitized therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

If there is any dispute concerning the extension of this Lease beyond the primary term by reason of any of the alternative mechanisms specified herein, the payment to the Lessor of the prescribed payments provided below shall be conclusive evidence that the Lease has been extended beyond the primary term.

**EXTENSION OF PRIMARY TERM.** Lessee has the option to extend the primary term of this Lease for one additional term of Two (2) years from the expiration of the primary term of this Lease; said extension to be under the same terms and conditions as contained in this Lease. Lessee may exercise this option to extend this Lease if on or before the expiration date of the primary term of this Lease, Lessee pays or tenders to the Lessor or to the Lessor's credit an amount equal to the initial consideration given for the execution hereof. Exercise of this option is at Lessee's sole discretion and may be invoked by Lessee where no other alternative of the Lease Term clause extends this Lease beyond the primary term.

**NO AUTOMATIC TERMINATION OR FORFEITURE.**

(A) **CONSTRUCTION OF LEASE:** The language of this Lease (including, but not limited to, the Lease Term and Extension of Term clauses) shall never be read as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuation of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, frac, plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/unitized therewith (such activities shall include, but not be limited to, performing any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).

(B) **LIMITATION OF FORFEITURE:** This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and thereafter fails or refuses to satisfy or provide justification responding to Lessor's demand within 60 days from the receipt of such notice. If Lessee timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue in Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

**PAYMENTS TO LESSOR.** In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

(A) **DELAY RENTAL:** To pay Lessor as Delay Rental, after the first year, at the rate of twenty-five dollars (\$25.00) per net acre per year payable in advance. The parties hereto agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessor during the primary term hereof.

(B) **ROYALTY:** To pay Lessor as Royalty, less all taxes, assessments, and adjustments on production from the Leasehold, as follows:

*[Handwritten initials]*

*[Handwritten initials]*

10/27/2017



1. OIL: To deliver to the credit of Lessor, free of cost, a Royalty of the equal eighteen percent (18%) part of all oil and any constituents thereof produced and marketed from the Leasehold.

2. GAS: To pay Lessor on actual volumes of gas sold from said land, eighteen percent (18%) of the gross amount realized by Lessee, calculated at the wellhead. ~~As used in this lease, the term "net amount realized by Lessee, computed at the wellhead" shall mean the gross proceeds received by Lessee from the sale of oil and gas minus post-production costs incurred by Lessee between the wellhead and the point of sale. As used in this Lease, the term "post-production costs" shall mean all costs and expenses of (a) treating and processing oil and/or gas, and (b) separating liquid hydrocarbons from gas, other than condensate separated at the well, and (c) transporting oil and/or gas, including but not limited to transportation between the wellhead and any production or treating facilities, and transportation to the point of sale, and (d) compressing gas for transportation and delivery purposes, and (e) motoring oil and/or gas to determine the amount sold and/or the amount used by Lessee, and (f) sales charges, commissions and fees paid to third parties (whether or not affiliated) in connection with the sale of the gas, and (g) any and all other costs and expenses of any kind or nature incurred in regard to the gas, or the handling thereof, between the wellhead and the point of sale. Lessee may use its own pipelines and equipment to provide such treating, processing, separating, transportation, compression and motoring services, or it may engage others to provide such services; and if Lessee uses its own pipelines and/or equipment, post-production costs shall include without limitation reasonable depreciation and amortization expenses relating to such facilities, together with Lessee's cost of capital and a reasonable return on its investment in such facilities. Prior to payment of royalty, Lessor may be required to execute a Division Order certifying Lessor's interest in production. Lessee may pay all taxes and fees levied upon the oil and gas as produced, including, without limitation, severance taxes and privilege and surveillance fees, and deduct a proportionate share of the amount so paid from any monies payable to Lessor hereunder. Lessee may withhold Royalty payment until such time as the total withheld exceeds fifty dollars (\$50.00).~~

(C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that is awaiting completion, or that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents, therefrom, and there is no other basis for extending this Lease, Lessee shall pay after the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) SHUT-IN: In the event that production of oil, gas, or their constituents, is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/unitized therewith, Lessee shall thereafter, as Royalty for constructive production, pay a Shut-in Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or Lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-in, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-in Royalty.

(E) DAMAGES: Lessee will remove unnecessary equipment and materials and reclaim all disturbed lands at the completion of activities, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.

(F) MANNER OF PAYMENT: Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessor's last known address, and Lessee may withhold any payment pending notification by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.

(G) CHANGE IN LAND OWNERSHIP: Lessee shall not be bound by any change in the ownership of the Leasehold until furnished with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) TITLE: If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved.

(I) LIENS: Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasehold; and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessor or by any other lawful means. In the event the leased lands are encumbered by a prior mortgage, then, notwithstanding anything contained herein to the contrary, Lessee shall have the right to suspend the payment of any royalties due hereunder, without liability for interest, until such time as Lessor obtains at its own expense a subordination of the mortgage in a form acceptable to Lessee.

(J) CHARACTERIZATION OF PAYMENTS: Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment can never result in an automatic termination, expiration, cancellation, or forfeiture of this Lease. Lessor recognizes and acknowledges that oil and gas lease payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this Lease is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessor constitute full consideration for the Leasehold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor/oil and gas owner.

(K) PAYMENT REDUCTIONS: If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee.

UNITIZATION AND POOLING. Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee's pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Leasehold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acres ascribed to the Lease, and the local property tax assessment calculation of the lands covered by the Lease, or the deeded acreage amount, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

FACILITIES. Lessee shall not drill a well on the Leasehold within 200 feet of any structure located on the Leasehold without Lessor's written consent. Lessor shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee's written consent. Lessor shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee's written consent.

CONVERSION TO STORAGE. ~~Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor's proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/unitized therewith have permanently ceased production, Lessor shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasehold or lands pooled or unitized therewith for the underground storage of gas, or for the protection of stored gas will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.~~

DISPOSAL AND INJECTION WELLS. Lessor hereby grants to Lessee the right to drill wells and/or re-enter existing wells, including necessary location, roadway and pipeline easements and rights of way, on any part of the Leasehold or lands pooled or unitized therewith, for the disposal and/or injection into any subsurface strata, other than a potable water strata, of air, gas, brine, completion and production fluids, waste water and any hydrocarbon related substances from any source, including, but not limited to wells on the Leasehold or lands pooled or unitized therewith and any properties and lands outside the Leasehold or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessee for purposes as herein provided. If, at the expiration of the primary term, Lessee is disposing and/or injecting into any subsurface strata underlying the Leasehold or lands pooled or unitized therewith or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein and no other payments are being made to Lessor as prescribed hereunder, Lessee shall pay to Lessor the sum of one thousand dollars (\$1,000.00) per year, proportionately reduced to Lessor's ownership in the Leasehold and surface as it bears to the full and undivided estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as to terms and provisions contained herein applicable to disposal and injection wells, shall continue annually thereafter for so



long as necessary and required by Lessee for purposes as herein provided and until all disposal and/or injection wells located on the Leasehold or on lands pooled or unitized therewith are plugged and abandoned. Lessor agrees that if required by Lessee, regulatory agency or governmental authority having jurisdiction, Lessor shall enter a separate Disposal and Injection Agreement with Lessee for the purposes as herein provided.

~~TITLE AND INTERESTS. Lessor hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after-acquired title. Should any person having title to the Leasehold fail to execute this Lease, the Lease shall nevertheless be binding upon all persons who do execute it as Lessor.~~

~~LEASE DEVELOPMENT. There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension of term of this Lease. There shall be no Leasehold forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.~~

~~COVENANTS. This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.~~

~~RIGHT OF FIRST REFUSAL. If at any time within the primary term of this lease or any continuation or extension thereof, Lessor receives any bona fide offer, acceptable to Lessor, to grant an additional lease ("Top Lease") covering all or part of the Leasehold, Lessee shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessee's name, bonus consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form to be utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessee shall have fifteen (15) days after receipt from Lessor of a complete copy of any such offer to advise Lessor in writing of its election to enter into an oil and gas lease with Lessor on equivalent terms and conditions. If Lessee fails to notify Lessor within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessor shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.~~

~~ARBITRATION. In the event of a disagreement between Lessor and Lessee concerning this Lease or the associated Order of Payment, performance thereunder, or damages caused by Lessee's operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. Arbitration shall be the exclusive remedy and cover all disputes, including but not limited to, the formation, execution, validity and performance of the Lease and Order of Payment. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.~~

~~ENTIRE CONTRACT. The entire agreement between Lessor and Lessee is embodied herein, in the Exhibit attached hereto, and in the associated Order of Payment (if any). No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.~~

~~TITLE CURATIVE. Lessor agrees to execute affidavits, ratifications, amendments, permits and other instruments as may be necessary to carry out the purpose of this lease.~~

~~SURRENDER. Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by recording a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon each surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient easements for then existing wells, pipelines, pole lines, roadways and other facilities on the lands surrendered.~~

~~SUCCESSORS. All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.~~

~~FORCE MAJEURE. All express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. When drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this Lease shall not terminate, in whole or in part, because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure.~~

~~SEVERABILITY. This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.~~

~~COUNTERPARTS. This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.~~

See Exhibit "A & B" attached hereto and made a part hereof.

IN WITNESS WHEREOF, Lessor & Lessee hereunto sets hand and seal.

The Board of Commissioners of Ohio County, Lessor

*Randy Wharton*  
Randy Wharton, President (Seal)

*Gregory L. Stewart*  
Gregory L. Stewart, County Administrator (Seal)

Chesapeake Appalachia, L.L.C., Lessee

By: *Lester A. Zilkus* (Seal)  
Lester A. Zilkus  
Title: Vice President, Land Eastern Division

Office of Oil and Gas

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West Virginia Department of Environmental Protection

Witness \_\_\_\_\_

Witness \_\_\_\_\_

Witness *Louis Cottam* \_\_\_\_\_

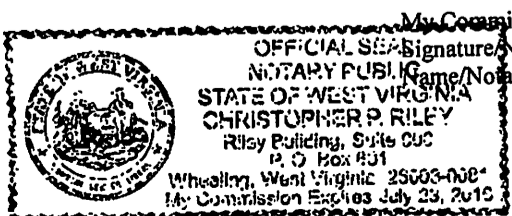
Document prepared by: Chesapeake Appalachia, L.L.C., 6100 N. Western Avenue, Oklahoma City, Oklahoma 73118.

CORPORATE ACKNOWLEDGMENT

STATE OF WEST VIRGINIA )  
 ) SS:  
COUNTY OF OHIO )

On this the 28<sup>th</sup> day of April, 2010, before me, the undersigned authority, personally appeared Randy Wharton, who acknowledged himself to be the president of the Ohio County Commission, and that he as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Commission by himself as its president.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.



My Commission Expires: July 23, 2016  
Signature: *Christopher P. Riley*  
Notary Public (print): Christopher P. Riley

STATE OF WEST VIRGINIA )  
 ) SS:  
COUNTY OF OHIO )

On this the 28<sup>th</sup> day of April, 2010, before me, the undersigned authority, personally appeared Gregory L. Stewart, who acknowledged himself to be the County Administrator of the Ohio County Commission, and that he as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Commission by himself as County Administrator.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.  
OFFICIAL SEAL  
NOTARY PUBLIC  
STATE OF WEST VIRGINIA  
CHRISTOPHER P. RILEY  
Riley Building, State Capitol  
P. O. Box 831  
Wheeling, West Virginia 26003-0081  
My Commission Expires July 23, 2016  
My Commission Expires: July 23, 2016  
Signature/Notary Public: [Signature]  
Name/Notary Public (print): Christopher P. Riley

STATE OF WEST VIRGINIA Oklahoma )  
 ) SS:  
COUNTY OF ~~OHIO~~ Oklahoma )

On this the 3 day of May, 2010, before me, the undersigned authority, personally appeared Goster A. Zittkus, who acknowledged himself to be the Vice President Land of Chesapeake Appalachia, L.L.C., and that he as such Vice President Land being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the company by himself as its Vice President Land.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY SEAL  
LORRIE L. COTTAM  
Notary Public  
State of Oklahoma  
Commission # 04010317 Expires 11/15/12

My Commission Expires: 11/15/12  
Signature/Notary Public: [Signature]  
Name/Notary Public (print): Lorrie L. Cottam

Recorder: Return to Chesapeake Appalachia, L.L.C., Land Dept., P.O. Box 18496, Oklahoma City, Oklahoma 73154-0496.

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WV Department of  
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**EXHIBIT "A"**

Attached to and made a part of that certain Oil and Gas Lease dated April 28<sup>th</sup>, 2010, by and between **The Board of Commissioners of Ohio County**, of 1500 Chapline Street, Suite 215, Wheeling, WV 26003, as Lessors, and **CHESAPEAKE APPALACHIA, LLC.**, an Oklahoma limited liability company, P.O. Box 18496, Oklahoma City, Oklahoma 73154-0496, as Lessee, covering land in the Triadelphia District, County of Ohio, State of West Virginia.

Notwithstanding anything to the contrary provided for in the foregoing lease form, it is agreed and understood:

**1. Conflict Between Terms**

In the event of a conflict or inconsistency between the printed terms of this Lease and the terms of this Addendum, the terms of this Addendum shall take precedence, control, and be deemed to supersede the printed terms of the Lease.

**2. Indemnify and Hold Harmless**

Lessee shall indemnify and hold Lessor harmless from any and all liability, liens, demands, judgments, suits, and claims of any kind or character arising out of, in connection with, or relating to Lessee's operations under the terms of this Lease, including, but not limited to, environmental issues, claims for injury to or death of any persons, or damage, loss or destruction of any property, real or personal, under any theory of tort, contract, or strict liability. Lessee further covenants and agrees to defend any suits brought against Lessor on any claims, and to pay any judgment against Lessor resulting from any suit or suits, together with all costs and expenses relating to any claims, including attorney's fees and costs of defense, arising out of any activities, operations, or use of the Leased Premises undertaken under the terms of this lease. Lessor, if it so elects, shall have the right to participate, at its sole expense, in its defense in any suit or suits in which it may be a party, without relieving Lessee of the obligation to defend Lessor. Lessor shall be named as an additional insured on Lessee's liability insurance policy. Prior to the commencement of drilling operations, Lessee shall provide to Lessor, a certificate of coverage for liability, workman's compensation and disability insurance.

Lessee assumes full responsibility and liability for the acts and omissions of all of its servants, agents, employees, invitees, contractors, subcontractors and any other person, firm or corporation which may act on or come on the Leased Premises at the direction of and on behalf of Lessee in connection with the rights herein granted and the operations conducted by Lessee on Lessor's property.

Lessee shall indemnify, protect, defend and hold Lessor harmless of and from any and all claims, suits, penalties, fines, prosecutions, statutory recoveries (whether civil or criminal), remedial costs, losses, settlements and governmental actions which arise out of or are occasioned by the operations or activities of Lessee, its agents, employees, servants, contractors or any person acting under its direction or control under or in connection with this Lease including, without limitation, wages due any person providing work or services on the Leased Premises and any mechanics' or other liens arising therefrom, any resulting nuisance and any resulting liability for air, water, solid wastes or other pollution, including, without limitation, any violation of any environmental statutes, laws, rules, regulations, decrees, or orders. Lessee's duty to indemnify the Lessor includes all liability arising out of or from any failure to comply with federal and/or state safety laws and all Environmental Laws, including but not limited to RCRA and CERCLA (and as they may be reauthorized and/or amended), and all other federal and state laws, including the common law that apply to oil and gas exploration, drilling, development, production, treatingment, storage, disposal, transportation, marketing, processing, abandonment, and related activities at any site on the Leased Premises.

**3. Timber Clause**

Lessee and Lessor agree that prior to the removal of any and all marketable timber resulting from Lessee's operations under the terms of this lease, an appraisal of the timber value shall be performed by an independent, qualified third party forester, and Lessee shall pay Lessor the appraised value of the timber prior to harvesting. Said forester shall be selected by the Lessor with the expense to be borne by the Lessee.

**4. Clean Up Premises**

Within ninety (90) days after the completion of all well(s) upon each well pad or upon the abandonment of any well drilled on the Leased Premises, Lessee shall clean up the well site and remove from the Leased Premises any and all oil spills, junk material, pieces of iron, pipes, steel and other debris and

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foreign materials; and Lessee shall level all mounds, fill all pits, and other excavations; and Lessee shall remove all deleterious materials, including oil base mud, and substances that might cause injury to persons or the Leased Premises; and Lessee shall return the top soil, which was previously removed and stacked; and Lessee shall spread such top soil uniformly over the drill site location; and Lessee shall restore such location to as near its original condition as is practicable except for the minimum amount of surface necessary to conduct Lessee's operations. In addition to the foregoing, Lessee shall not bury on the Leased Premises any junk material, as described above, except for the pit liner and drilling mud residue utilized in Lessee's drilling operations, provided such disposal is permitted and meets the compliance standards set forth in this Addendum.

Lessee, at its sole expense, will restore the surface of the Leased Premises used by Lessee or its agents, contractors and employees, to as near its original condition as is reasonably practicable within ninety (90) days after the completion of all well(s) upon each well pad, except the minimum amount necessary around a wellhead for operations and will root plow, disc and seed such areas with a seed mix specified by the Lessor.

Lessee shall have the right at any time within ninety (90) days after the plugging and abandonment or permanent cessation of production, but not thereafter, to remove any property and fixtures placed on the Leased Premises and if Lessee fails to remove such property and fixtures then they shall be deemed to have been abandoned by Lessee and Lessor may take possession thereof and dispose of the same as Lessor sees fit; provided, however, Lessee shall not be relieved of its liability to plug any well so abandoned. Lessee shall reimburse Lessor for all costs incurred by Lessor in connection with the removal and disposal of all property and fixtures which are not removed by Lessee within the time frame provided for herein. Lessee shall not, without the written consent of Lessor, remove any fences or gates constructed by Lessee.

**5. Pugh Clause**

If the Leasehold covered by this Oil and Gas Lease covers more than fifty (50) net acres and more than ~~seventy percent (70%)~~ <sup>thirty percent (30%)</sup> of the Leasehold covered by this Oil and Gas Lease is not included in the production unit established by Lessee, this lease shall automatically terminate six (6) months ("Extended Term") after the expiration of the primary term or any extension provided herein, insofar and only insofar as to all Leasehold outside the production unit established by Lessee for a well, provided if the Lessee, its successors or assigns shall be engaged in operations for the drilling, completing or testing of a new well or wells or the drilling, completing, testing, or deepening of an existing well or wells on the leased premises or on lands with which said Leasehold or a portion hereof have been included in a production unit, then this Oil and Gas Lease shall continue in full force and effect until such drilling, completing, testing or deepening operations have been completed.

*Handwritten initials/signature*

**6. Damage Clause**

Any and all damages to the surface of the Leased Premises shall be paid for by Lessee based on the current value at the time of damage for all surface damages caused by Lessee's operations to improvements, landscaping, growing crops, trees and timber.

**7. Minimize Soil Erosions**

In exercising its rights hereunder, the Lessee shall conduct itself in accordance with the best practices of a reasonably prudent operator in conformity with all applicable laws, rules, regulations, and requirements. Lessee will plan surface operations in a manner that will reduce or minimize the intrusion to surface usage, and Lessee shall construct or install all well sites, access roads and pipeline right-of-ways in a manner which would minimize any related soil erosion. In the event that such an intrusion or related soil erosion cannot be avoided, Lessee shall compensate Lessor for the damage or loss of growing crops, trees and timber at current market value. Lessee shall repair or remediate any soil erosion migration to lands of others from drilling activity.

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**8. Fence Clause**

Unless waived in writing by the Lessor, Lessee shall at its sole cost, expense, design and installation for the protection of the public around any well site(s), tank battery (ies) or facility (ies) installed on the Leased Premises by Lessee, provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations.

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**9. No Other Minerals**

This Lease shall cover only oil and gas, coalbed methane and related hydrocarbons that may be produced through the well bore; and all other minerals, including, but not limited to, lignite, coal, uranium, sulphur, gravel, copper, and metallic ores are not included in this Lease.

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**10. Ad Valorem Taxes**

Lessee shall pay a proportionate share (based on royalty allocation) of any increase in ad valorem taxes attributable to, or resulting from, the assessment of oil and gas due to production from the Leasehold and said payment shall be due 30 days from receipt of the notice of tax levied.

**11. Pipeline**

During initial construction of any permitted pipeline on the Lessor's Property, the trenching shall be done by double ditching in such a manner so that the top twelve (12) inches of soil will be separated from the balance of the dirt removed in making the ditch or trench for installation of the pipeline. In backfilling after installation of the pipeline, the topsoil first removed shall be used as cover soil in such a manner so as to result in it being returned to the top of the ditch as top soil. Lessee shall bury or have buried its pipeline facilities at least three (3) feet below the surface of the Leased Premises and a minimum of five (5) feet below any road crossing. The pipeline shall not be placed within any road but may be parallel and along the berm or ditchline, except where necessary to cross a road. The pipeline must be installed and maintained to such depths and standards so as to accommodate and not interfere with the Lessor's use of the Lessor's Property, including timbering and harvesting. Lessee shall place signs at reasonable intervals requested by the Lessor that alert others to the presence of the pipeline. Such signs shall include the Lessee's name and a toll-free telephone number of Lessee that a person may call for assistance. In addition, during backfill of the pipeline excavation, "Buried Pipeline" warning tape shall be buried one (1) foot above the pipeline to warn future excavators of the presence of the pipeline. Lessee shall be responsible for obtaining permits, licenses, and other approvals from any governmental authority or regulatory agencies necessary for the construction, installation, maintenance, or repair of the Licensee's pipeline or the transportation of gas through such pipeline.

**12. Special Warranty Title**

Lessor warrants its belief that the title is good, and Lessee agrees that no claims will be made against Lessor pertaining to warranty of title. Lessee shall have no right to withhold payments to Lessor in the event of a claim or cloud on the said title until the issue has been judicially determined. Except as expressly stated above in this paragraph, this Lease is granted without warranty, of any nature, including title to the Lessor's Property, either express or implied. Nothing herein contained shall be or be deemed to be, on the part of Lessor, a covenant or warranty of title or quiet enjoyment, express or implied.

**13. Legal Construction and Prudent Operator**

This Lease has been delivered and shall be deemed to have been made in Ohio County, West Virginia. It shall be construed under the laws of the State of West Virginia, without giving effect to any conflicts-of-law principles, and the reasonable-prudent-operator rule shall be applicable to this Lease with respect to the Lessee's performance of all express and implied covenants in this Lease. Lessee will use its best efforts to secure a market for production from any well on the Leased Premises or lands pooled with the leasehold. This Lease shall not be strictly construed against or in favor of either party nor shall it be construed against or in favor of forfeiture or termination. The headings of the various paragraphs and parts of the Lease and the Addendum have been inserted only for the purpose of convenience, and are not part of this Agreement and shall not be deemed in any manner to modify, explain, qualify, or restrict any of the provisions of this Agreement. This Lease may not be changed or modified except by an instrument signed by the parties' duly authorized representatives. No waiver by either party of any failure or refusal of the other party to comply with any of its obligations shall be deemed a waiver of any other or subsequent failure or refusal so to comply. Any party's failure to insist on compliance or enforcement of any provision of this Agreement shall not affect its validity or enforceability, constitute an estoppel, or constitute waiver of future enforcement of that provision or of any other provision of this Lease. The waiver of or by any party of a breach or violation of any provision of this Lease shall not operate or be construed as a waiver of any subsequent breach or violation.

**14. Release of Lease**

Upon termination, expiration, or surrender of this lease, in whole or in part, and upon written request by the Lessor, Lessee shall provide Lessor with a copy of an appropriate release of Lease suitable for recording within sixty (60) days of Lessor's written request.

**15. Audit Clause**

Lessee further grants to Lessor the right annually to examine, audit, or inspect books, records, and accounts of Lessee pertinent to the purpose of verifying the accuracy of the reports and statements furnished to Lessor, and for checking the amount of payments lawfully due the Lessor under the under the terms of this lease. In exercising this right, Lessor shall give reasonable notice to Lessee of its intended

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audit and such audit shall be conducted during normal business hours at the office of Lessee at the sole cost and expense of Lessor.

#### **16. Disposal or Injection Wells**

Lessee is not granted any right whatsoever to use the Leasehold, or any portion thereof, for construction of any disposal well for any type of foreign matter or material, saltwater injection well, or the construction of brine disposal facilities. The disposal and injection well clause in the Lease shall be deleted in its entirety.

#### **17. Compliance**

A material inducement for Lessor to the grant of this Lease is Lessee's agreement that all operations conducted by Lessee, its agents, servants, employees, contractors, permittees, successors or assigns on the Leased Premises shall be conducted in compliance with all applicable laws, statutes, rules and regulations of any governmental authority having jurisdiction including, without limitation, all safety regulations and requirements and all environmental laws, statutes, rules and regulations of any federal, state or local authority at any time applicable to the Lessee's operations on the Leased Premises, including, without limitation Lessee's obligation to reclaim the Leased Premises. Lessee, and its contractors, shall conduct themselves in accordance with the best practices of a reasonably prudent operator in conformity with all applicable laws, rules, regulations, and requirements. All laws, regulations, rules, and requirements regarding protection of the public health, water supply, and natural resources shall be strictly followed.

Without limitation of the foregoing, Lessee shall not use the Lessor's Property in any manner that violates any federal, state or local law, regulation, rule or ordinance or which constitutes a public or private nuisance. Lessee shall not locate, place, generate, store, manufacture, use, or dispose of on or about such right of way any chemical, pollutant, toxic substance, hazardous material, waste, or other substance that is the subject of any federal, state or local law, regulation, rule, or ordinance pertaining to public health, safety, or to the protection of conservation of the environment.

The provisions of this paragraph shall survive the termination or expiration of this Lease in perpetuity.

#### **18. Gross Royalty Clause**

The Lessee shall deliver to the credit of the Lessor free of cost, in the pipeline to which it may connect its wells, the equal EIGHTEEN PERCENT (18.00%) part of all oil produced and sold from the Leased Premises, and shall pay Lessor EIGHTEEN PERCENT (18.00%) of the proceeds of all gas produced and sold from the Leased Premises, payable monthly. Notwithstanding any language herein to the contrary, all oil, gas, or other proceeds accruing to the Lessor under this lease or by state law shall be without deduction, directly or indirectly, for the cost of extracting (including any severance taxes), producing, gathering, separating, treating, dehydrating, compressing, processing, transporting, and marketing the oil, gas and other products produced hereunder.

Notwithstanding anything herein to the contrary, Lessee shall pay the royalty on the fair market value in an arm's length transaction, free of cost and without any deductions whatsoever. If gas is sold at a price lower than the fair market value in an arm's length transaction, or used internally by Lessee (other than as a fuel in connection with the production thereof), then in that event, the royalty due shall be calculated based upon an arm's length sale of gas produced to unaffiliated parties for the applicable month in the open market, comparable in terms of quality and quantity, and in closest proximity to the Leased Premises.

Such royalty is to include all oil and gas, including all its constituents and any other by-products produced and saved from the Leased Premises. Lessee shall make and shall be liable for the payment of royalties hereunder irrespective of the failure or bankruptcy of any third party crude oil or gas purchaser, and irrespective of the execution by Lessor of a division order or any similar agreement in favor of any such third party purchaser.

#### **19. Limits on Shut-in & Delay in Marketing**

This lease may not be maintained in force for any continuous period of time longer than three consecutive years after the expiration of the primary term solely by the provision of the shut-in royalty clause. The shut-in status of any well shall persist only so long as it is necessary to correct, through the exercise of good faith and due diligence, the condition giving rise to the shut-in of the well. In exercising its shut-in rights, Lessee shall act as a reasonably prudent operator and will take into proper account the Lessor's interests when shutting in a well and restoring production. Lessee shall make an annual

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shut-in payment of \$25.00 per acre for every year that Lessor is shut-in as contemplated by Paragraph (D) under the Payments to Lessor heading of the Lease. This Lease may not be extended and maintained under the Delay in Marketing clause for longer than three (3) years after expiration of the primary term or any extended term, without the advance, written agreement of the Lessor, which may be given or withheld in the Lessor's sole and absolute discretion.

#### **20. Payment of Signing Bonus**

Within thirty days after this Lease has been signed by Lessor, Lessee shall pay Lessor the signing bonus as provided for in the Order of Payment.

#### **21. Commencement of Operations**

With respect to the Lease Term, commencement of operations shall be defined as Lessee having secured a drilling permit from the State and further entering upon the herein described premises with equipment necessary to build any access road(s) for the drilling of a well subsequently followed by a drilling rig for the spudding of the well to be drilled.

#### **22. Unitization**

In exercising its rights under the Unitization and Pooling clause in the Lease, the Lessee shall at all times act in conformity with, and abide by, the covenant of good faith and fair dealing. Any conflict or inconsistency concerning the acres ascribed to the Lease may also be resolved by survey under the Unitization and Pooling clause.

#### **23. Water**

Lessee shall not drill water wells on the Leased Premises or use any water from or beneath the Leased Premises, without the advance written permission of the Lessor, which may be given or withheld in Lessor's sole and absolute discretion. Lessee shall take all reasonable and adequate measures to protect fresh water sources from all adverse impacts from Lessee's operations and activities, including any springs, ponds, and streams, which may be located on the Leased Premises. Without limitation of the foregoing or of any other provision of the Lease, Lessee shall conduct its operations on the Leased Premises in such a manner to prevent the contamination or other loss of any and all water in, on, or under the Leased Premises, including, without limitation, any and all water bearing aquifers or water bearing strata or formations. Further, Lessee shall prevent any contamination of the Leased Premises from saltwater pollution or any other contaminating substances flowing over or seeping onto the Leased Premises as a result of Lessee's operations and activities hereunder. Should contamination or other loss of water occur arising out of any operations undertaken under the Lease, Lessee shall take immediate action as may be required to remedy such contamination or loss.

#### **24. Independent Contractor**

Lessee is and shall, at all times, operate as an independent contractor and not as an agent, representative, or employee of the Lessor. The Lessor and Lessee are not in a partnership with each other. Nothing in this Lease shall be construed or operate to create any employment, joint venture, agency, partnership, or joint enterprise between the Lessor and the Lessee. Lessee is responsible for its own costs and expenses in executing, implementing, and performing under this Lease. Neither the Lessee nor any of its employees or contractors shall be deemed an employee, agent, servant, or joint employee of the Lessor. The Lessee shall have the sole and exclusive right to control the details of any work performed by its employees or contractors. Lessee shall have complete and sole discretion to hire, fire, discipline, evaluate, manage, train, maintain records of hours, handle payroll, provide insurance, and determine all of the terms and conditions of employment for its employees.

#### **25. Insurance**

As a condition precedent to the commencement and continuation of operations hereunder, Lessee shall arrange for the maintenance of the following insurance coverages:

A. Such pollution liability insurance as shall protect the Lessor, the Lessee, and its contractors, if any, from claims of environmental impairment and pollution that may arise during the performance of this lease with limits of not be less than \$1,000,000.00 per occurrence and \$2,000,000.00 in the aggregate;

B. Commercial general public liability (including contractual liability) and property damage insurance with each underlying limit being not less than (a) Two Million Dollars in respect of bodily injury to or death of one person, (b) Five Million Dollars in respect of bodily injury to or death of more

than one person in any one occurrence, and (c) One Million Dollars in respect of damage to or destruction of property;

C. Employers liability insurance protecting against employee claims for bodily injury, "Mandolidis" and/or deliberate intention actions and all other employee claims against employers with each underlying limit being not less than Two Million Dollars per person and Five Million Dollars for each occurrence;

D. Automobile bodily injury liability insurance and automobile property damage liability insurance in an amount of not less than Two Million Dollars combined;

E. Workers' Compensation insurance, occupational diseases insurance, unemployment compensation and all other insurance coverages for occupational injury, disease or hazards as required by the laws and regulations applicable to and covering personnel on the Leased Premises.

All insurance coverages required in this Lease shall be with a reputable insurer, licensed to do business in the State of West Virginia. All policies or certificates of insurance obtained shall name Lessor as an additional named insured and shall contain a provision for notice to Lessor of any overdue or unpaid insurance premium and thirty (30) days advance notice to Lessor of any proposed cancellation or substantial change in coverage. Every insurance policy shall contain a waiver of subrogation by the insurer against Lessor, its heirs, successors and assigns. Each policy of insurance shall be written as an occurrence contract unless the policy is available only on a claims made basis, in which case such insurance policy shall be maintained for a period of two years after the insured permanently vacates the Leased Premises. Copies of all certificates and policies which provide the insurance coverages hereunder, including, but not limited to, copies of any bonds which may be required for such coverages, must be furnished to Lessor before the Lessee enters the Leased Premises and thereafter upon the request by Lessor. It is understood and agreed, however, that the minimum limits of coverage set forth above are not intended and will in no manner limit the recoveries of Lessor under any of the indemnity provisions of this Lease but serve only as surety therefor.

If at any time any of these insurance coverages shall cease to be in force and effect, then, in addition to any of its other rights, Lessor may give written demand to Lessee to suspend all operations hereunder until such insurance coverages shall be reinstated; provided that Lessor's failure to so serve any such written demand shall not be deemed a waiver or in any manner release or relieve Lessee of any of its obligations under this Lease. Insurance may be met by a combination of primary, excess, and self insurance.

## 26. Assignment

This Lease shall not be assigned, hypothecated, sold or otherwise transferred, or subleased, in whole or in part, to any other party without the written consent of the Lessor, consent not to be unreasonably withheld, delayed or conditioned by the Lessor. The Lessor shall respond to Lessee, in writing via certified mail, return receipt requested, within 10 days after Lessee requests such consent. If Lessor fails to respond as required, consent shall be presumed. However, consent of the Lessor shall not be required in the event of an assignment by Lessee:

- a. to an affiliate, subsidiary, or internal partners;
- b. in consequence of a merger or amalgamation;
- c. of all or substantially all of its assets to a third party; or
- d. to Statoil USA Onshore Properties Inc.

In the event Lessor consents to any such assignment, transfer or sublease, Lessee shall not be released from its liability, duties, obligations and responsibilities hereunder, and shall be responsible to Lessor for any payments due or specific performance hereunder arising.

## 27. No Surface Operations

Notwithstanding anything to the contrary herein, Lessee shall not have the right to conduct surface operations, construct surface locations, construct pipelines, construct access roads, and/or install any other facilities on the acreage depicted in RED on the map attached as Exhibit "A" hereto without the prior written consent of Lessor, which may be withheld or given in the Lessor's sole discretion. Lessee shall have the right to conduct surface operations on the remainder of the herein described Leased Premises as provided in this Addendum.

## 28. Notices

All notices, payments, and other correspondence provided for in this Lease Agreement shall be given as follows:

Lessor: The Ohio County Commission  
1500 Chapline Street, Room 215  
Wheeling, WV 26003

Attention: Gregory L. Stewart, County Administrator  
Phone – (304)234-3893  
Fax – (304)234-3826

Lessee: Chesapeake Appalachia, L.L.C.  
6100 N. Western Ave.  
P.O. Box 18496  
Oklahoma City, Oklahoma 73154-0496

Attention: Land Manager, Eastern Division – Central District  
VP-Land, Eastern Division  
Phone – 405-848-8000  
Fax – 405-849-3950

**29. Additional Conditions**

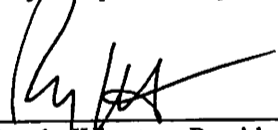
Lessor’s execution and delivery of this Lease is contingent upon the Lessee’s entering into separate, contemporaneous leases, subject to title confirmation as provided for by the Order of Payment, for (i) approximately 927.53 acres from the Ohio County Commission at the Airport, (ii) approximately 463.81003 acres from the Ohio County Commission at the Highlands, and (iii) approximately 433.16893 acres from the Ohio County Development Authority at the Highlands Development. Each such lease shall be a separate lease. In consideration for, and as a condition of, this Lease, the Lessee’s performance of each and all of its obligations hereunder shall be guaranteed by the Lessee’s parent company, Chesapeake Energy Corporation.

**30. Recording**

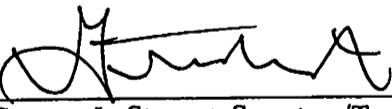
This Agreement or a memorandum of this Agreement may be recorded as a public record in the real property records of Ohio County, West Virginia.

**IN WITNESS WHEREOF**, Lessor and Lessee are signing this Exhibit “A” Addendum with the intent to be legally bound.

**THE COUNTY COMMISSION OF OHIO COUNTY, STATE OF WEST VIRGINIA**, a statutory and public corporation, Lessor

By:  (Seal)  
Randy Wharton, President

Dated: \_\_\_\_\_

By:  (Seal)  
Gregory L. Stewart, Secretary/Treas.

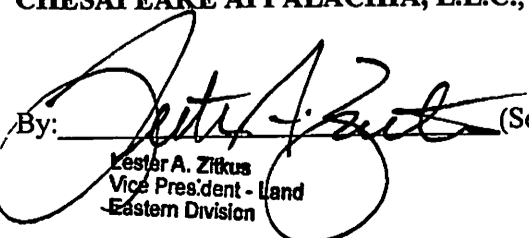
Date: 4/28/10

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[Signatures Continued on Following Page]

**CHESAPEAKE APPALACHIA, L.L.C.**, Lessee

10/27/2017

By:  (Seal)  
Lester A. Zirkus  
Vice President - Land  
Eastern Division



Title: \_\_\_\_\_

Date: 5-4-10

**CORPORATE ACKNOWLEDGMENT**

STATE OF WEST VIRGINIA )

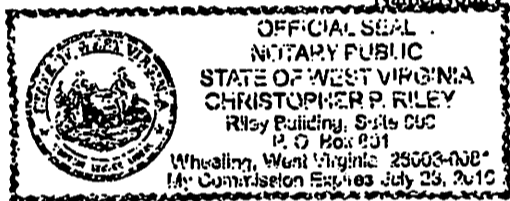
) SS:

COUNTY OF OHIO )

On this the 28<sup>th</sup> day of April, 2010, before me, the undersigned authority, personally appeared <sup>Randy Warner</sup> ~~David J. Sims~~, who acknowledged himself to be the president of the Ohio County Development Authority, and that he as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Authority by himself as its president.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: July 23, 2016  
Signature/Notary Public: \_\_\_\_\_  
Name/Notary Public (print): Christopher P. Riley



STATE OF WEST VIRGINIA )

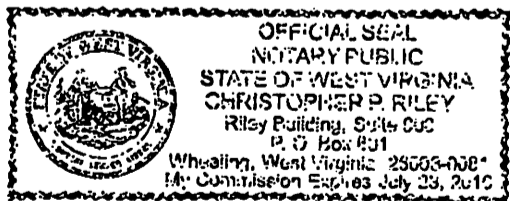
) SS:

COUNTY OF OHIO )

On this the 28<sup>th</sup> day of April, 2010, before me, the undersigned authority, personally appeared Gregory L. Stewart, who acknowledged himself to be the secretary-treasurer of the Ohio County Development Authority, and that he as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Authority by himself as its secretary-treasurer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: July 23, 2016  
Signature/Notary Public: \_\_\_\_\_  
Name/Notary Public (print): Christopher P. Riley



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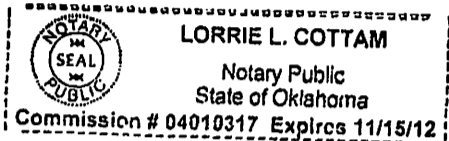
STATE OF ~~WEST VIRGINIA~~ Oklahoma )

) SS:

COUNTY OF ~~OHIO~~ Oklahoma )

On this the 3<sup>rd</sup> day of May, 2010, before me, the undersigned authority, personally appeared Lester A. Zatkus who acknowledged himself to be the Vice President Land of Chesapeake Appalachia, L.L.C., and that he as such Vice President Land, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the company by himself as its Vice President Land.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.



My Commission Expires: 11/15/12  
Signature/Notary Public: Lorrie L. Cottam  
Name/Notary Public (print): Lorrie L. Cottam

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Department of  
Environmental Protection

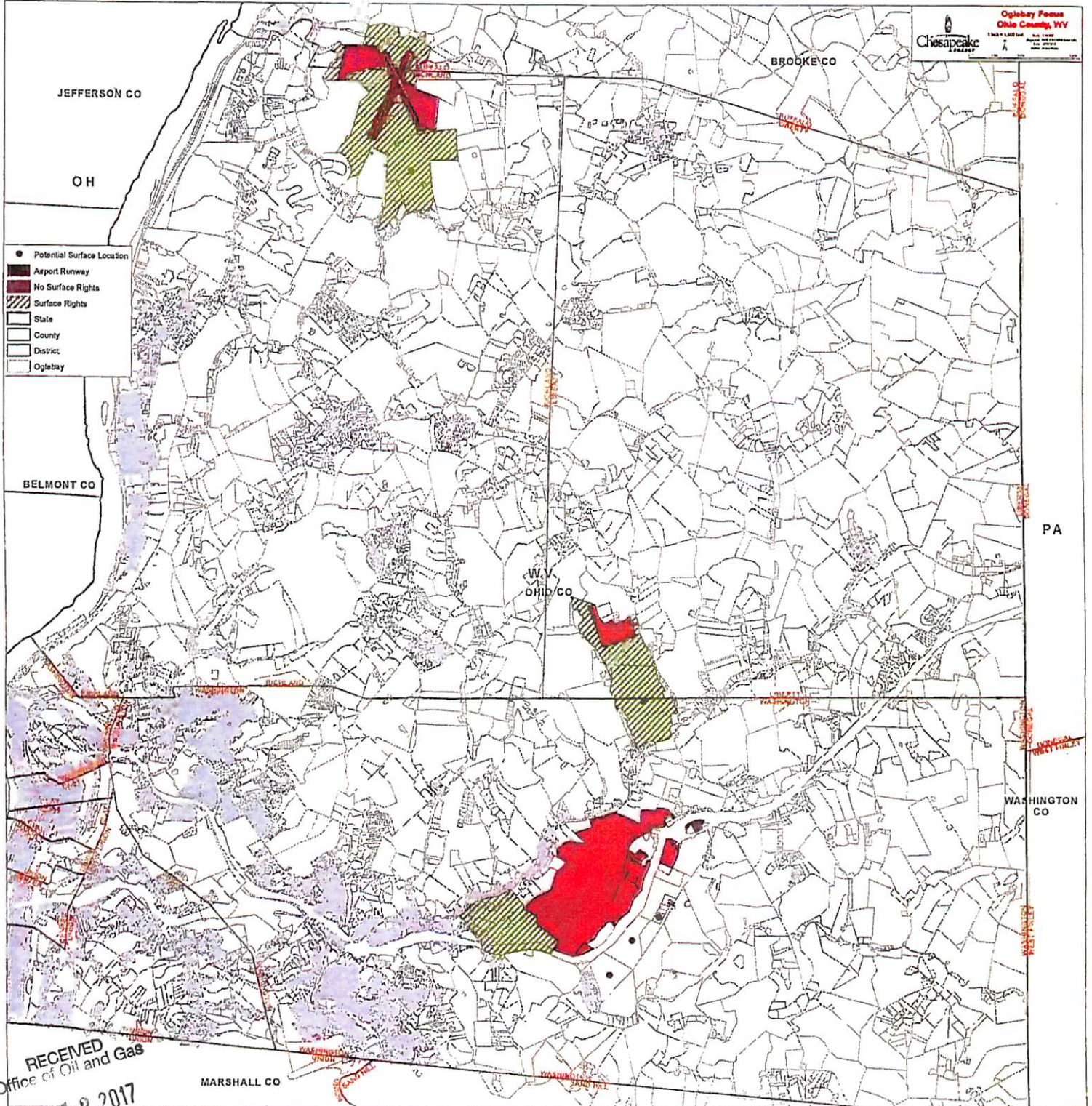
10/27/2017

This Document Prepared By: Chesapeake Appalachia, L.L.C.



EXHIBIT "B"

Attached to and made a part of that certain Oil and Gas Lease dated April 28<sup>th</sup>, 2010, by and between The Board of Commissioners of Ohio County, of 1500 Chapline Street, Suite 215, Wheeling, WV 26003, as Lessors, and CHESAPEAKE APPALACHIA, LLC., an Oklahoma limited liability company, P.O. Box 18496, Oklahoma City, Oklahoma 73154-0496, as Lessee, covering land in the Triadelphia District, County of Ohio, State of West Virginia.



10/27/2017



**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE CERTIFICATION**

Date of Notice Certification: 6/9/11

API No. 47- 069 - \_\_\_\_\_  
Operator's Well No. OCC-A OHI 205H  
Well Pad Name: OCC-A OHI PAD

**Notice has been given:**

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>534271.74</u>
County: <u>069-Ohio</u>	Northing: <u>4436650.15</u>
District: <u>Liberty</u>	Public Road Access: <u>Rodneys Point Run</u>
Quadrangle: <u>Valley Grove</u>	Generally used farm name: <u>OCC-A OHI</u>
Watershed: <u>Upper Ohio South</u>	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**Required Attachments:**

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

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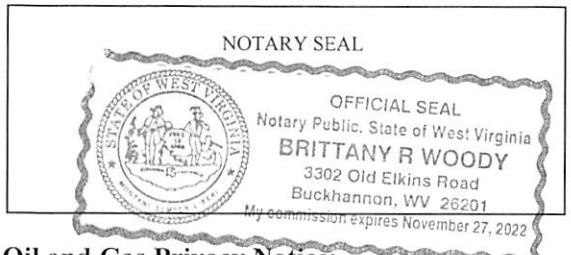
JUN 12 2017

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**Certification of Notice is hereby given:**

THEREFORE, I \_\_\_\_\_, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>SWN Production Co., LLC</u>	Address:	<u>P.O. Box 1300</u>
By:	<u>Dee Southall</u>		<u>Jane Lew, WV 26378</u>
Its:	<u>Regulatory Supervisor</u>	Facsimile:	_____
Telephone:	<u>304-884-1614</u>	Email:	<u>Dee_Southall@swn.com</u>



Subscribed and sworn before me this 2nd day of June 2017.

Brittany R Woody Notary Public

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 telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

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**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION**

**Notice Time Requirement:** notice shall be provided no later than the filing date of permit application.

**Date of Notice:** 4/9/17 **Date Permit Application Filed:** 4/9/17

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

**Delivery method pursuant to West Virginia Code § 22-6A-10(b)**

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice  WSSP Notice  E&S Plan Notice  Well Plat Notice is hereby provided to:

SURFACE OWNER(s)  
 Name: Board of Commission Ohio County  
 Address: 1500 Chapline St Ste 215  
Wheeling, WV 26003  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
 Name: Alliance Resources GP, LLC  
 Address: 2596 Battle Run Road  
Triadelphia, WV 26059  
 COAL OPERATOR  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
 Name: See Attachment #1  
 Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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**10/27/2017**



Attachment #1 69-00241

**OCC A OHI Pad - Water Purveyors w/in 1500'**

**Sources**

**Landowner**

**Address**

Barbara Shores

1705 Point Run Road, Triadelphia WV 26059 2 Well



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10/27/2017

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

**This Notice Shall Include:**

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Well Location Restrictions**

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

**Water Well Testing:**

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

**Water Testing Laboratories:**

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

**Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:**

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

**Written Comment:**

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**



**Time Limits and Methods for Filing Comments.**

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

**Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

**Permit Denial or Condition**

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

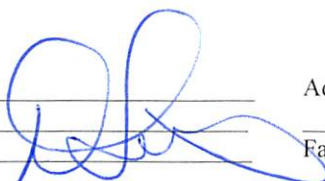
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Environmental Protection

WW-6A  
(8-13)

API NO. 47- 069 - 00241  
OPERATOR WELL NO. OCC-A OHI 205H  
Well Pad Name: OCC-A OHI PAD

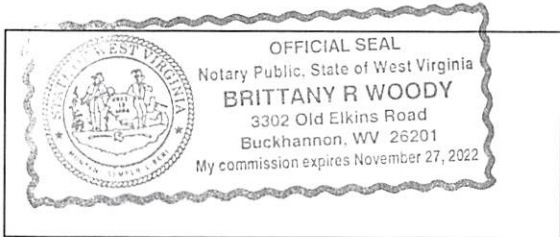
**Notice is hereby given by:**

Well Operator: SWN Production Co., LLC Address: P.O. Box 1300  
Telephone: 304-884-1614 Jane Lew, WV 26378  
Email: Dee\_Southall@swn.com Facsimile: \_\_\_\_\_



**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



Subscribed and sworn before me this 2nd day of June 2017.  
Brittany R Woody Notary Public  
My Commission Expires 11/27/22

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Environmental Protection

10/27/2017

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF INTENT TO DRILL**

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

**Notice Time Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

**Date of Notice:** 06/02/2017      **Date Permit Application Filed:** 4/9/17

**Delivery method pursuant to West Virginia Code § 22-6A-16(b)**

HAND DELIVERY       CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

**Notice is hereby provided to the SURFACE OWNER(s):**

Name: Board of Commission Ohio County  
Address: 1500 Chapline St. Ste 215  
Wheeling, WV 26003

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>534,271.74</u>
County:	<u>Ohio</u>		Northing:	<u>4,436,650.15</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Roney's Point Run</u>	
Quadrangle:	<u>Valley Grove</u>	Generally used farm name:	<u>OCC A OHI</u>	
Watershed:	<u>Upper Ohio South</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: SWN Production Company, LLC  
Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Telephone: 304-517-6603  
Email: Michael\_Yates@swn.com  
Facsimile: 304-884-1691

Authorized Representative: Mike Yates  
Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Telephone: 304-517-6603  
Email: Michael\_Yates@swn.com  
Facsimile: 304-884-1691

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF PLANNED OPERATION**

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 06/02/2017      **Date Permit Application Filed:** 5/19/17

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

- CERTIFIED MAIL                               HAND  
RETURN RECEIPT REQUESTED                      DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**  
(at the address listed in the records of the sheriff at the time of notice):

Name: <u>Board of Commission Ohio County</u>	Name: _____
Address: <u>1500 Chapline St. Ste 215</u>	Address: _____
<u>Wheeling, WV 26003</u>	

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>534,271.74</u>
County: <u>Ohio</u>		Northing: <u>4,436,650.15</u>
District: <u>Liberty</u>	Public Road Access: <u>Roney's Point Run</u>	
Quadrangle: <u>Valley Grove</u>	Generally used farm name: <u>OCC A OHI</u>	
Watershed: <u>Upper Ohio South</u>		

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: <u>SWN Production Company, LLC</u>	Address: <u>PO Box 1300, 179 Innovation Drive</u>
Telephone: <u>304-517-6603</u>	<u>Jane Lew, WV 26378</u>
Email: <u>Michael_Yates@swn.com</u>	Facsimile: <u>304-884-1691</u>

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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10/27/2017

4706900241



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110  
Charleston, West Virginia 25305-0430 • (304) 558-3505

Jim Justice  
Governor

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

June 2, 2017

James A. Martin, Chief  
Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

Subject: DOH Permit for the OCC-A Pad, Ohio County

OCC-A OHI 205H  
47-069-00241

Dear Mr. Martin,

The West Virginia Division of Highways has transferred permit #06-2011-0363 to Southwestern Energy for access to the State Road for the well site located off of Ohio County HARP Route 911.

The operator has signed an OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton  
Regional Maintenance Engineer  
Central Office Oil & Gas Coordinator

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WV Department of  
Environmental Protection

Cc: Brittany Woody  
Southwestern Energy  
CH, OM, D-6  
File

69-00241

Product Name	Product Use	Chemical Name	CAS Number
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
A264 (Schlumberger)	Corrosion Inhibitor	Methanol	67-56-1
		Aliphatic Acids	Proprietary
		Prop-2-yn-1-ol	107-19-7
		Aliphatic Alcohols, Ethoxylated #1	Proprietary
Myacide GA 25 (Schlumberger)	Biocide	Water	7732-18-5
		Glutaral	111-30-8
Scale Inhibitor B317 (Schlumberger)	Scale Inhibitor	Trisodium Ortho Phosphate	7601-54-9
		Ethane-1,2-diol	107-21-1
H215 (Schlumberger)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
J218 (Schlumberger)	Breaker	Diammonium Peroxidisulphate	7727-54-0
EB-Clean* J475 (Schlumberger)	Breaker	Diammonium Peroxidisulphate	7727-54-0
Water Gelling Agent J580 (Schlumberger)	Gel	Carbohydrate Polymer	Proprietary
Friction Reducer J609W (Schlumberger)	Friction Reducer	Ammonium Sulfate	7783-20-2
		Urea	57-13-6
Crosslinker J610 (Schlumberger)	Crosslinker	Potassium Hydroxide	1310-58-3
		Aliphatic Polyol	Proprietary
Iron Stabilizer L58 (Schlumberger)	Iron Stabilizer	Sodium Erythorbate	6381-77-7
40/70-Mesh Sand S012 (Schlumberger)	Sand	Crystalline Silica	14808-60-7
Sand S100 (Schlumberger)	Sand	Crystalline Silica	14808-60-7
EC6486A (Nalco Champion)	Scale Inhibitor	Ammonium Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
SSA-2 (Halliburton)	Sand	Crystalline Silica	14808-60-7
FR-76 (Halliburton)	Friction Reducer	Inorganic salt	64742-47-8
		Hydrotreated light petroleum distillate	
LCA-1 (Halliburton)		Hydrotreated light petroleum distillate	Proprietary
SP BREAKER (Halliburton)	Breaker	Sodium Persulfate	7775-27-1

10/27/2017



69-00241

Product Name	Product Use	Chemical Name	CAS Number
HAI-150E (Halliburton)	Corrosion Inhibitor	Methanol	NA
		Aliphatic Acids	
		Prop-2-yn-1-ol	
		Aliphatic Alcohols, Ethoxylated #1	
Hydrochloric Acid 10-30% (Halliburton)		Hydrochloric Acid	7647-01-0
WG-36 Gelling Agent (Halliburton)	Gel	Polysaccharide	9000-30-0
BC-140C (Halliburton)	Crosslinker		NA

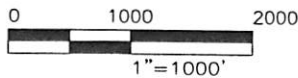
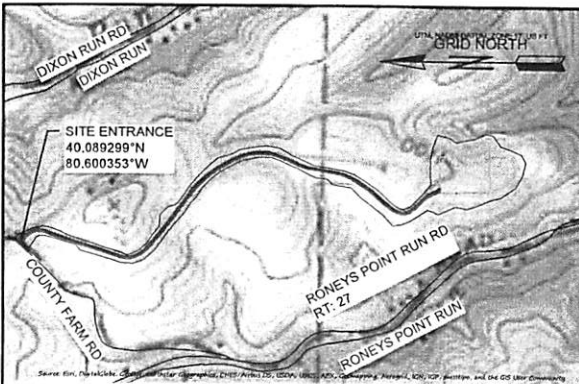
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WV Department of  
Environmental Protection

10/27/2017

# OCC A OHI PAD "A" CONSTRUCTION AND RECLAMATION PLAN AS-BUILT TRIADELPHIA DISTRICT OHIO COUNTY, WV MAY 2017



GRID NORTH  
UTM NAD83 DATUM, GCS NAD 83, US FT

**WVDEP OOG  
ACCEPTED AS-BUILT**

*WJL* 6/30/2017

**LOD**

TOTAL DISTURBED AREA: 17.9 ACRES  
ROAD DISTURBED AREA: 2.4 ACRES  
PAD DISTURBED AREA: 3.0 ACRES

**COORDINATES:**

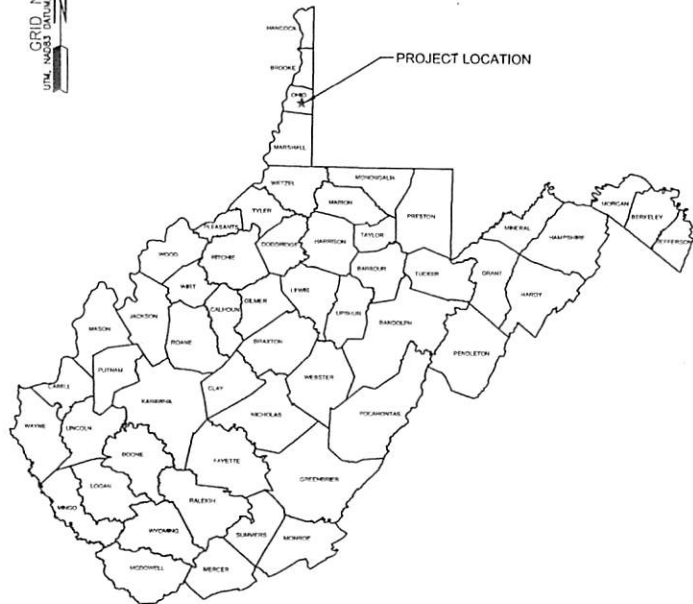
**SITE ENTRANCE ( NAD83 )**  
LAT: 40.089299  
LONG: 80.600353

**CENTER OF PAD ( NAD83 )**  
LAT: 40.079288  
LONG: 80.598094

**GATHERING AREA ( NAD83 )**  
LAT: 40.089299  
LONG: 80.600353

**EXISTING WELL 3H ( NAD83 )**  
LAT: 40.079462  
LONG: 80.598107  
API NUMBER: 069-00137

**EXISTING WELL 10H ( NAD83 )**  
LAT: 40.079502  
LONG: 80.598041  
API NUMBER: 069-00096



- SHEET INDEX**
- TS1. TITLE SHEET
  - EP2.1 EVACUATION ROUTE/PREVAILING WIND
  - EP2.2 EVACUATION ROUTE/PREVAILING WIND
  - AS3.1 ASBUILT OVERVIEW
  - AS3.2 ASBUILT
  - AS3.3 ASBUILT
  - AS3.4 ASBUILT
  - AS3.5 ASBUILT
  - AS3.6 ASBUILT
  - AS3.7 ASBUILT
  - AS3.8 ASBUILT
  - AS3.9 ASBUILT
  - ASR4.1 ACCESS ROAD PROFILE
  - ASR4.2 ACCESS ROAD PROFILE
  - ASR4.3 ACCESS ROAD PROFILE
  - MRD5.1 RECLAMATION PLAN OVERVIEW
  - MRD5.2 RECLAMATION PLAN
  - MRD5.3 RECLAMATION PLAN
  - MRD5.4 RECLAMATION PLAN
  - MRD5.5 RECLAMATION PLAN
  - MRD5.6 RECLAMATION PLAN
  - MRD5.7 RECLAMATION PLAN
  - MRD5.8 RECLAMATION PLAN
  - MRD5.9 RECLAMATION PLAN
  - MRD6.1 RECLAMATION DETAILS
  - MRD6.2 RECLAMATION DETAILS
  - MRD6.3 RECLAMATION DETAILS

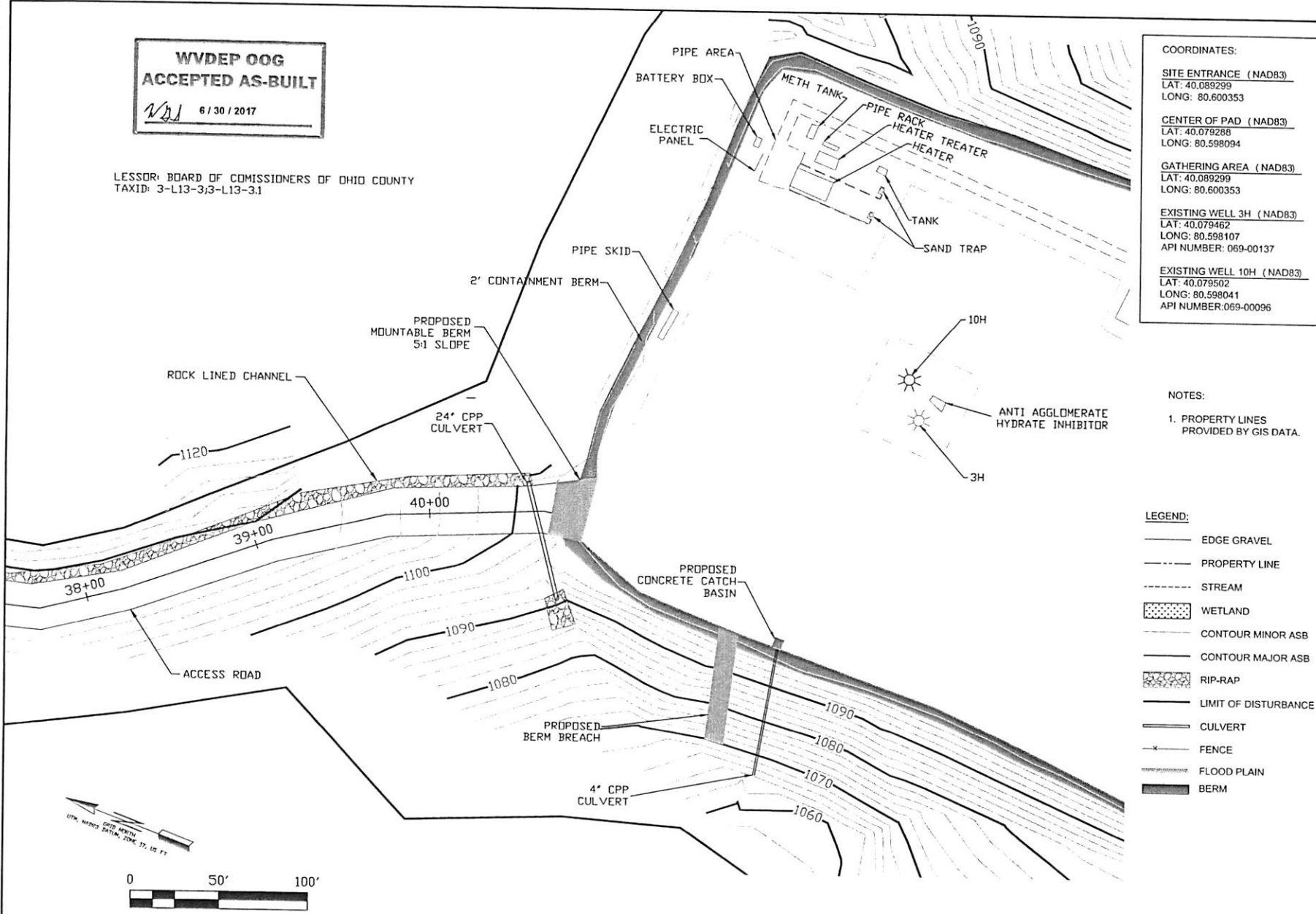
ENGINEER'S ESTIMATE OF QUANTITIES		
WELL PAD DATA		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
24" MOUNTABLE BERM 5:1	35	LF
FILL FOR BERM 5:1	840	CF
EROSION & SEDIMENT CONTROL ITEMS		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
ROCK LINED DITCH	50	LF
CLASS C RIP RAP	68	TN
OUTLET PROTECTION/ROCK APRON SUMP	2	EA
OUTLET PROTECTION/ROCK APRON SUMP ROCK: CLASS C	2.4	TN
OUTLET PROTECTION/ROCK APRON SUMP ROCK: GEOTEXTILE	3.6	SY
UNDERDRAIN ITEMS		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
3'X3'X3' CONCRETE CATCH BASIN	1	EA

REVISION									
DEP. REVISIONS									
NO.	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE
PROJECT #:		16-78							
DATE:		2017-05-16							
DRAWN BY:		NLL							
CHECKED BY:		MCH							
<b>ELK LAKE SERVICES, LLC</b>					280 Indiana Springs Road, Suite 123 Indiana, PA 15701 Phone: (724) 463-7303				
Southwestern Energy Southwestern Energy Company P O Box 672025 Houston, TX 77207									
OCC A PAD "A" TRIADELPHIA DISTRICT OHIO COUNTY WEST VIRGINIA									
TITLE SHEET									
SHEET NO.									
TS1									

**WVDEP OOG  
ACCEPTED AS-BUILT**

*WJ* 6/30/2017

LESSOR: BOARD OF COMMISSIONERS OF OHIO COUNTY  
TAXID: 3-L13-3,3-L13-3.1



**COORDINATES:**

<b>SITE ENTRANCE (NAD83)</b>
LAT: 40.089299
LONG: 80.600353
<b>CENTER OF PAD (NAD83)</b>
LAT: 40.079288
LONG: 80.598094
<b>GATHERING AREA (NAD83)</b>
LAT: 40.089299
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LAT: 40.079502
LONG: 80.598041
API NUMBER: 069-00096

**NOTES:**

1. PROPERTY LINES PROVIDED BY GIS DATA.

**LEGEND:**

	EDGE GRAVEL
	PROPERTY LINE
	STREAM
	WETLAND
	CONTOUR MINOR ASB
	CONTOUR MAJOR ASB
	RIP-RAP
	LIMIT OF DISTURBANCE
	CULVERT
	FENCE
	FLOOD PLAIN
	BERM

NO.	DATE	REVISION
#1	6/28/17	DEP REVISIONS
PROJECT #: 16-78		
DATE: 2017-05-16		
DRAWN BY: NLL		
CHECKED BY: MCH		



**ELK LAKE SERVICES, LLC**  
280 Indian Springs Road, Suite 123  
Indiana, PA 15701  
Phone: (724) 463-7303

**SWN**  
Southwestern Energy  
Southwestern Energy Company  
P.O. Box 672025  
Houston, TX 77287

PROJECT: OCC A PAD "A"  
TRIADELPHIA DISTRICT  
OHIO COUNTY  
WEST VIRGINIA

TITLE: AS-BUILT

SHEET NO: AS3.8

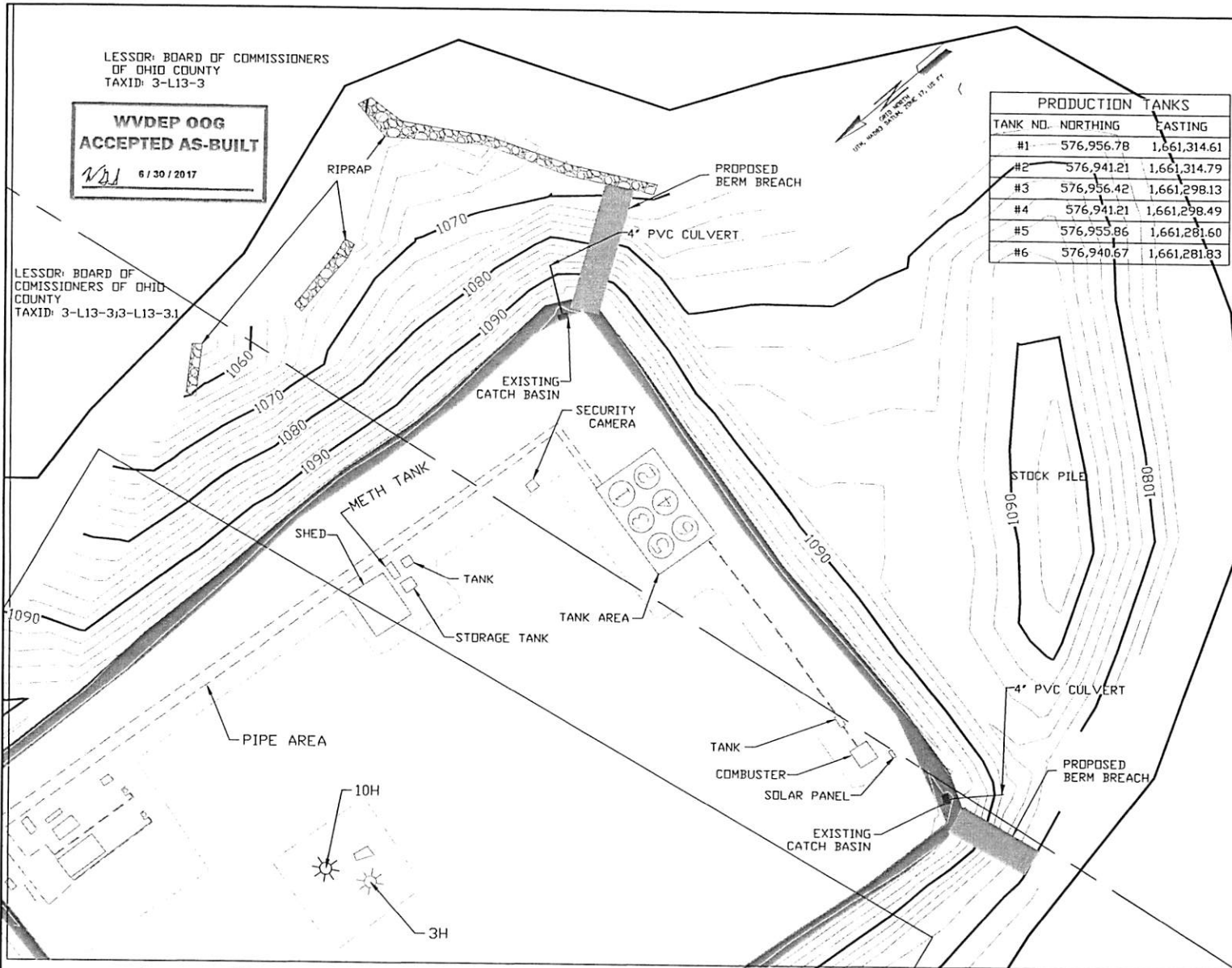




LESSOR: BOARD OF COMMISSIONERS  
OF OHIO COUNTY  
TAXID: 3-L13-3

**WVDEP OOG  
ACCEPTED AS-BUILT**  
*WJL* 6/30/2017

LESSOR: BOARD OF  
COMMISSIONERS OF OHIO  
COUNTY  
TAXID: 3-L13-3;3-L13-3.1



PRODUCTION TANKS		
TANK NO.	NORTHING	EASTING
#1	576,956.78	1,661,314.61
#2	576,941.21	1,661,314.79
#3	576,956.42	1,661,298.13
#4	576,941.21	1,661,298.49
#5	576,955.86	1,661,281.60
#6	576,940.67	1,661,281.83

**COORDINATES:**

SITE ENTRANCE (NAD83)  
LAT: 40.089299  
LONG: 80.600353

CENTER OF PAD (NAD83)  
LAT: 40.079288  
LONG: 80.598094

GATHERING AREA (NAD83)  
LAT: 40.089299  
LONG: 80.600353

EXISTING WELL 3H (NAD83)  
LAT: 40.079462  
LONG: 80.598107  
API NUMBER: 069-00137

EXISTING WELL 10H (NAD83)  
LAT: 40.079502  
LONG: 80.598041  
API NUMBER: 069-00096

**NOTES:**

1. PROPERTY LINES PROVIDED BY GIS DATA.

**LEGEND:**

- EDGE GRAVEL
- - - PROPERTY LINE
- - - - - STREAM
- ▨ WETLAND
- - - - - CONTOUR MINOR ASB
- - - - - CONTOUR MAJOR ASB
- ▨ RIP-RAP
- LIMIT OF DISTURBANCE
- CULVERT
- FENCE
- - - - - FLOOD PLAIN
- ▨ BERM

NO.	DATE	REVISION
#1	02/20/17	DEP REVISIONS

PROJECT #: 16-78  
DATE: 2017-05-16  
DRAWN BY: NLL  
CHECKED BY: MCH



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Indiana, PA 15701  
Phone: (724) 463-7303

**SWM** Southwestern Energy  
Southwestern Energy Company  
P.O. Box 672825  
Houston, TX 77287

PROJECT: OCC A PAD "A"  
TRIADAPHA DISTRICT  
OHIO COUNTY  
WEST VIRGINIA

FILE: AS-BUILT

SHEET NO.: AS.3.9

