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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

June 10, 2015

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-5101832, issued to SWN PRODUCTION COMPANY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: BONNETTE MSH 406H  
Farm Name: BONNETTE, ROBERT & LINDA

**API Well Number: 47-5101832**

**Permit Type: Horizontal 6A Well**

Date Issued: 06/10/2015

**Promoting a healthy environment.**

## 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.

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### 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 fifty (50) 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. 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.
8. 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.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

47051019074

WW-6B  
(10/14)

API NO. 47- 69 -  
OPERATOR WELL NO. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH Pad

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

1) Well Operator: SWN Production Co., LLC

<u>494512924</u>	<u>51-Marshall</u>	<u>5-Meade</u>	<u>681- Wileysville</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: Bonnette MSH 406H Well Pad Name: Bonnette MSH Pad

3) Farm Name/Surface Owner: Robert and Linda Bonnette Public Road Access: Fish Creek

4) Elevation, current ground: 1429.6 Elevation, proposed post-construction: 1429.6

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):  
Target Formation- Marcellus, Target Top TVD- 7074', Target Base TVD- 8024', Anticipated Thickness- 50', Associated Pressure- 4739

8) Proposed Total Vertical Depth: 7077'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13,500'

11) Proposed Horizontal Leg Length: 4662'

12) Approximate Fresh Water Strata Depths: 645'

13) Method to Determine Fresh Water Depths: from log analysis and nearby water wells

14) Approximate Saltwater Depths: 1104'

15) Approximate Coal Seam Depths: 1110'

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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Office of Oil and Gas

JUN 1 2015  
Page 1 of 3

WV Department of  
Environmental Protection

4705101832

WW-68  
(10/14)

API NO. 47-             
 OPERATOR WELL NO. Bonville MSH 428H  
 Well Pad Name: Bonville MSH 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	J-55	94#	100'	100' <i>JL</i>	CTS
Fresh Water	13 3/8"	New	J-55	54.5#	1480' <i>JL</i>	1480' <i>JL</i>	1050 ex/CTS
Coal	9 5/8"	New	J-55	40#	2757'	2757'	1000 ex/CTS
Intermediate	7"	New	P-110	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	P-110	20#	13,500'	13,500'	1000 ex/CTS
Tubing	2 3/8"	New	P-110	4.7#	Approx. 8183'	Approx. 8183'	
Liners							

*JL 1/29/15*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	0.020	Class A	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	0.020	Class A	1.19/50% Excess
Coal	9 5/8"	12 1/4"	0.395	3950	0.020	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	0.020	Class A	1.20/15% Excess
Production	5 1/2"	8 3/4"	0.361	12360	0.020	Class A	1.20/15% Excess
Tubing	2 3/8"	4.778"	0.190				
Liners							

**PACKERS**

Kind:	10K Arrowset AS1-X		
Sizes:	5 1/2"		
Depths Set.			

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Office of Oil & Gas

FEB 26 2015

Well Name: <b>Bonnette MSH 400H</b>				Drilling Rig	N/A
Formation: <b>Marcellus</b>				Directional	N/A
Drilling Engineer: <b>TBC</b>	County: <b>Marshall, W.V.</b>	Drilling Mud	Oil	Current Bar	N/A
Superintendent: <b>N.A.</b>	Surface Latitude: <b>39 71'50"</b>	Surface Longitude: <b>80 71'20"</b>	Current Lon	A Age	N/A
Asset Manager: <b>N.A.</b>	SN Latitude: <b>39 70'04"</b>	SN Longitude: <b>80 70'07"</b>	Wellhead	N/A	N/A
Geologist: <b>N.A.</b>	CB Elevator: <b>144'</b>	Ground Elevation: <b>142'</b>	API #	N/A	N/A
Land: <b>N.A.</b>					

**Wellhead Equipment**

Free Flow Position	
Turning Head	
1st Section	11' 0" DM
2nd Section	13' 0" DM

Space out such that Marking Cap is no more than 2' above grade.

**Casing Detail**

Section	Size	WT	Grade	Case	From	To
Surface	13.375	64.5 #	J-65	ST	0'	1,300'
Intens	9.625	40 #	J-65	LT	0'	2,757'
Prod	5.5	20 #	R 110	OB	0'	13,200'

Report any water or gas flows. Catch liquid sample possible.

**Casing Design**

Section	Size	ID	Code	Sur	Yrs	Min	Max
Surface	13.375	12.413	1153	27'	514	514	514
Intens	9.625	8.575	2575	53'	530	530	530
Prod	5.5	4.775	13250	125'	541	666	666

Surface Mudge for Anti-Collision purposes.

**Directional Drilling Details**

Section	TMD	Inc.	Azimuth	TYD	SLR	DLS	NS-S	±E-W
Surface	3.00	1.00	3.30	0.33	0.00	0.00	3.00	0.00
Surf Cng	1.607	0.50	3.30	1.160	0.00	0.00	0.00	0.00
Surf	1.607	0.50	3.30	1.300	0.00	0.00	0.00	0.00
Int-2	2.75	0.50	3.30	2.330	0.00	0.00	0.00	0.00
Int-3	2.75	0.50	3.30	2.757	0.00	0.00	0.00	0.00
Int-4	1.65	0.50	3.30	2.657	0.00	0.00	0.00	0.00
Int-5	2.75	0.50	241.31	4.072	2.00	2.00	532.0	532.0
Int-6	2.75	0.50	241.31	4.072	0.00	0.00	1,243.0	1,243.0
Int-7	5.10	0.50	32.00	7.272	6.10	6.10	1,413.0	1,413.0
Int-8	13.370	0.50	32.00	7.272	0.00	0.00	2,127.0	1,962.0
VS Elev	11.00						4,808.0	5,182.50

Plan Desc: 10/17/14

**Logging Program**

Run	Log Type	Log
1	TSD	YF
2	TSD	TF

Major components of Surface

**Formation Depths (TYD)**

BASE BIG MUDA	2,617
GENESCO	6,690
TULLY	6,928
HAULTON	5,908
MARCELLUS	7,548
CHONDAGA	7,057

Geologic Target: 7,077 TYD @ 0 VS w/ 0.00 degrees/100 R Up dip

**Wellhead Equipment**

Free Flow Position	
Turning Head	
1st Section	11' 0" DM
2nd Section	13' 0" DM

Space out such that Marking Cap is no more than 2' above grade.

**Casing Detail**

Section	Size	WT	Grade	Case	From	To
Surface	13.375	64.5 #	J-65	ST	0'	1,300'
Intens	9.625	40 #	J-65	LT	0'	2,757'
Prod	5.5	20 #	R 110	OB	0'	13,200'

Report any water or gas flows. Catch liquid sample possible.

**Casing Design**

Section	Size	ID	Code	Sur	Yrs	Min	Max
Surface	13.375	12.413	1153	27'	514	514	514
Intens	9.625	8.575	2575	53'	530	530	530
Prod	5.5	4.775	13250	125'	541	666	666

Surface Mudge for Anti-Collision purposes.

**Directional Drilling Details**

Section	TMD	Inc.	Azimuth	TYD	SLR	DLS	NS-S	±E-W
Surface	3.00	1.00	3.30	0.33	0.00	0.00	3.00	0.00
Surf Cng	1.607	0.50	3.30	1.160	0.00	0.00	0.00	0.00
Surf	1.607	0.50	3.30	1.300	0.00	0.00	0.00	0.00
Int-2	2.75	0.50	3.30	2.330	0.00	0.00	0.00	0.00
Int-3	2.75	0.50	3.30	2.757	0.00	0.00	0.00	0.00
Int-4	1.65	0.50	3.30	2.657	0.00	0.00	0.00	0.00
Int-5	2.75	0.50	241.31	4.072	2.00	2.00	532.0	532.0
Int-6	2.75	0.50	241.31	4.072	0.00	0.00	1,243.0	1,243.0
Int-7	5.10	0.50	32.00	7.272	6.10	6.10	1,413.0	1,413.0
Int-8	13.370	0.50	32.00	7.272	0.00	0.00	2,127.0	1,962.0
VS Elev	11.00						4,808.0	5,182.50

Plan Desc: 10/17/14

**Logging Program**

Run	Log Type	Log
1	TSD	YF
2	TSD	TF

Major components of Surface

**Formation Depths (TYD)**

BASE BIG MUDA	2,617
GENESCO	6,690
TULLY	6,928
HAULTON	5,908
MARCELLUS	7,548
CHONDAGA	7,057

Geologic Target: 7,077 TYD @ 0 VS w/ 0.00 degrees/100 R Up dip

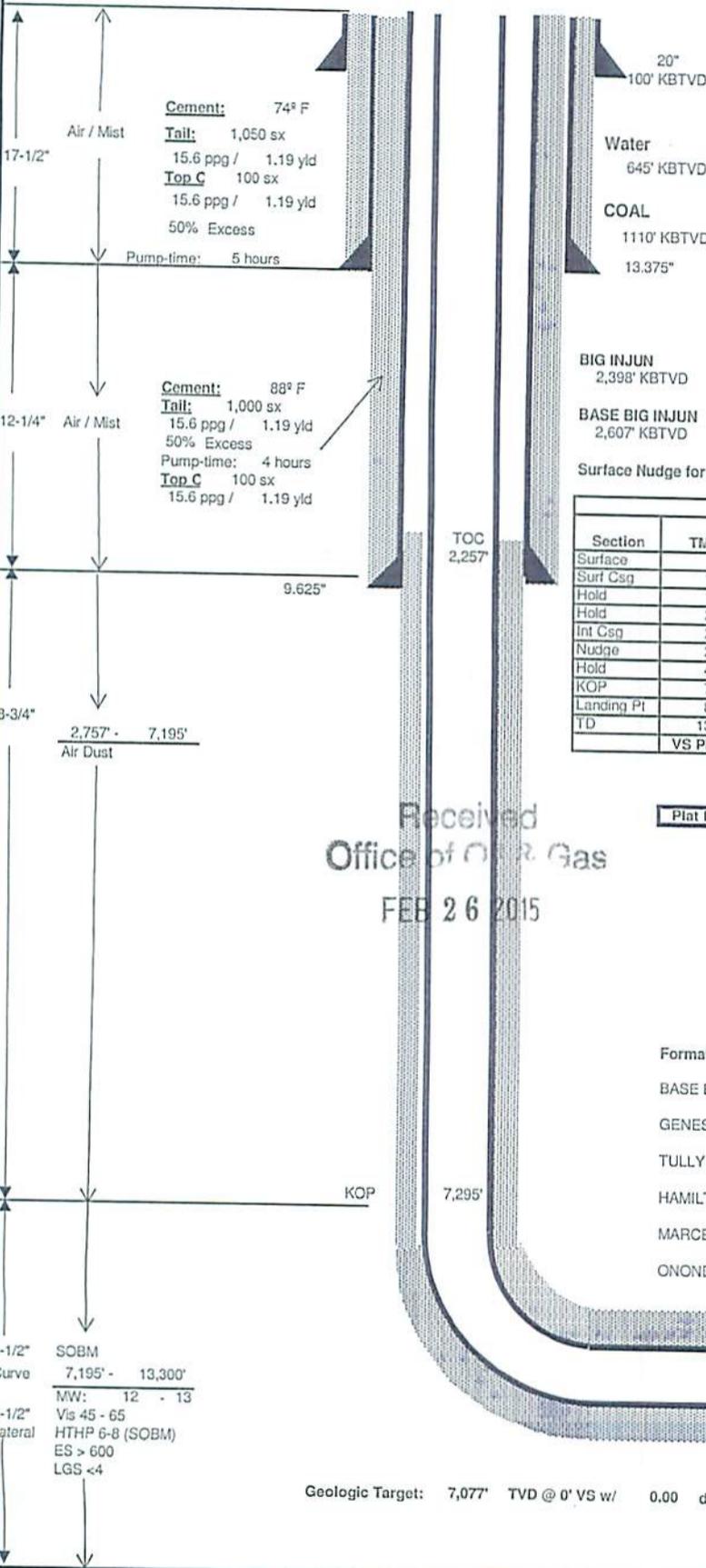
meat: 120' #  
 65' 1.100 #  
 1500' 1.20 #/ft  
 6' 1.380 #  
 1500' 1.20 #/ft  
 5% Closure  
 no-time 5 hours

PH: 6.5'  
 TV: 13,200'  
 TV: 2,077'  
 Inc: 90.00 deg

**Gyro the 1st well on the pad at KOP. Ensure all Surveys are referenced to Grid North!!**

**Received**  
Office of Oil & Gas  
FEB 26 2015

Well Name: <b>Bonnette MSH 406H</b>		Drilling Rig: <b>N/A</b>
Drilling Engineer: <b>TBD</b>	Formation: <b>Marcellus</b>	Directional Drilling: <b>N/A</b>
Superintendent: <b>N/A</b>	County, State: <b>Marshall, WV</b>	Drilling Mud: <b>N/A</b>
Asset Manager: <b>N/A</b>	Surface Latitude: <b>39.721506</b>	Cement Surface: <b>N/A</b>
Geologist: <b>N/A</b>	Surface Longitude: <b>-80.712011</b>	Cement Lining: <b>N/A</b>
Land: <b>N/A</b>	BH Latitude: <b>39.708384</b>	Wellhead: <b>N/A</b>
	BH Longitude: <b>-80.706078</b>	AFE #: <b>N/A</b>
	KB Elevation: <b>1448'</b>	
	Ground Elevation: <b>1428'</b>	



Wellhead Equipment	
Tree Description	
Tubing Head **	Blanking Cap
'B' Section	11" x 5M 16" 10M
'A' Section	9-5/8" SC 11" 5M

Casing Detail					
	Size	Wt	Grd	Cor	
Surface	13.375	54.5 #	J-55	ST	From: 0' To: 1,168' 700'
Interm	9.625	40 #	J-55	LT	0' 2,757'
Prod	5.5	20 #	P-110	GB	0' 13,300'

Casing Design					
	Size	ID	Coll	Bur	
Surface	13.375	12.615	1130	274	Tens 514 MU torq 5140
Interm	9.625	8.835	2570	395	520 5200
Prod	5.5	4.778	12200	123	641 8530

Directional Drilling Details							
Section	TMD	Inc.	Azimuth	TVD	BUR	DLS	
Surface	0.00'	0.00	0.00	0.00'	0.00	0.00	N-S 0.0' +E-W 0.0'
Surf Csg	1,160'	0.00	0.00	1,160'	0.00	0.00	0.0' 0.0'
Hold	1,500'	0.00	0.00	1,500'	0.00	0.00	0.0' 0.0'
Hold	2,000'	0.00	0.00	2,000'	0.00	0.00	0.0' 0.0'
Int Csg	2,757'	0.00	0.00	2,757'	0.00	0.00	0.0' 0.0'
Nudge	2,857'	0.00	0.00	2,857'	0.00	0.00	0.0' 0.0'
Hold	4,759'	38.03	241.31	4,622'	2.00	2.00	-292.0' -533.6'
KOP	7,295'	38.03	241.31	6,620'	0.00	0.00	-1,042.0' -1,904.1'
Landing Pt	8,138'	90.00	132.99	7,077'	6.16	12.00	-1,610.0' -1,793.1'
TD	13,300'	90.00	132.99	7,077'	0.00	0.00	-5,129.8' -1,982.8'
VS Plane	132.99						VS Len: 4,948.20' Lateral Length ==> 5,162.00'

Plat Date 10/1/14

Logging Program		
Run	Log Type	Int
1	TBD	TE
2	TBD	TE

Mudlogger operational at Surface

Formation Depths (TVD)	
BASE BIG INJUN	2,607'
GENESEO	6,890'
TULLY	6,928'
HAMILTON	6,968'
MARCELLUS	7,048'
ONONDAGA	7,097'

ment: 125° F  
 ad: 1,190 sx  
 1.6 ppg / 1.20 yd  
 ll: 1,360 sx  
 1.6 ppg / 1.20 yd  
 5% Excess  
 mp-time: 5 hours

Geologic Target: 7,077' TVD @ 0' VS w/ 0.00 degrees/100 ft Up-dip

PB 5.5"  
 TV 13,300'  
 TV 7,077'  
 Inc 90.00 deg

**Gyro the 1st well on the pad at KOP.  
 Ensure all Surveys are referenced to Grid North!!**

Drawn by: **TBD**  
 Date: **10/15/2014**

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 Office of Oil & Gas  
 FEB 26 2015

WW-6B  
(10/14)

API NO. 47- 69 -  
OPERATOR WELL NO. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH Pad

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): 13.4

22) Area to be disturbed for well pad only, less access road (acres): 11.6

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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Office of Oil & Gas  
FEB 26 2015

\*Note: Attach additional sheets as needed.

SLB Cement Additives

\*\*\*Ref: 2013-78

	Product Name	Product Use	Chemical Name	CAS Number
Surface	D046	antifoam	Fuller's earth (attapulgit)	8031-18-3
			Polypropylene glycol	25322-69-4
	D130	polyester flake - lcm	polyethylene terephthalate	25038-59-9
	S001	calcium chloride	calcium chloride	10043-52-4
		SPACER		
Intermediate	D130	polyester flake - lcm	polyethylene terephthalate	25038-59-9
	D020	bentonite extender	bentonite	1302-78-9
	D046	antifoam	Fuller's earth (attapulgit)	8031-18-3
			Polypropylene glycol	25322-69-4
	D130	polyester flake - lcm	polyethylene terephthalate	25038-59-9
	D044	granulated salt	sodium chloride	7647-14-5
	D153	Anti-Settling Agent	chrystalline silica	14808-60-7
	SPACER			
	D020	bentonite extender	bentonite	1302-78-9
	D130	polyester flake - lcm	polyethylene terephthalate	25038-59-9
Kick Off Plug	D080	cement liquid dispersant	product classified as non-hazardous.	
	D801	mid-temp retarder	product classified as non-hazardous	
	D047	antifoam agent	polypropylene glycol	25322-69-4
		SPACER		
	B389	MUDPUSH* Express	Carbohydrate	proprietary
	D206	Antifoaming Agent	Silica Organic Polymer	proprietary
	D031	barite	barium sulfate	7727-43-7
			fatty acid amine	proprietary
			ethoxylated alcohol	proprietary
			glycerol	56-81-5
B220	surfactant	2,2'-Iminodiethanol	111-42-2	
	D167	UNIFLAC* S	aliphatic amide polymer	proprietary

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Production - Lead	D154	low-temperature extender	non-crystalline silica	7631-86-9
	D400	EasyBLOK	boric acid	10043-35-3
	D046	antifoam	Fuller's earth (attapulgite)	8031-18-3
			Polypropylene glycol	25322-69-4
	D201	basic cements enabler	chrystalline silica	14808-60-7
			metal oxide	proprietary
	D202	low-temperature solid dispersant	sulphonated synthetic polymer	proprietary
			formaldehyde (impurity)	50-00-0
	D046	antifoam	Fuller's earth (attapulgite)	8031-18-3
			Polypropylene glycol	25322-69-4
	D167	UNIFLAC* S	aliphatic amide polymer	proprietary
	D065	TIC* Dispersant	Sodium Polynaphthalene Sulfonate	9008-63-3
			Sodium Sulfate	7757-82-6
	D201	basic cements enabler	chrystalline silica	14808-60-7
			metal oxide	proprietary
	D153	Anti-Settling Agent	chrystalline silica	14808-60-7
		SPACER		
	B389	MUDPUSH* Express	Carbohydrate	proprietary
	D206	Antifoaming Agent	Silica Organic Polymer	proprietary
D031	barite	barium sulfate	7727-43-7	
		fatty acid amine	proprietary	
		ethoxylated alcohol	proprietary	
		glycerol	56-81-5	
B220	surfactant	2,2'-Iminodiethanol	111-42-2	

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<u>% Concentration Used</u>
0.2% BWOC
0.125 lb/sk
2% BWOC
1 lb/bbl
20 lb/bbl
0.2% BWOC
0.125 lb/sk
10% BWOW
0.15% BWOC
20 lb/bbl
1 lb/bbl
0.05 gal/sk
0.01 gal/sk
0.02 gal/sk
1 lb/bbl
0.1 gal/bbl
310 lb/bbl
1 gal/bbl
0.35% BWOC

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4705101832

6% BWOC
0.8% BWOC
0.2% BWOC
0.2% BWOC
0.3% BWOC
0.2% BWOC
0.35% BWOC
0.25% BWOC
0.2% BWOC
0.2% BWOC
proprietary
proprietary
7727-43-7
proprietary
proprietary
56-81-5
111-42-2

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FEB 26 2015

WW-9  
(9/13) MAY 22 2015

API Number 47 - 69 - \_\_\_\_\_  
Operator's Well No. Bonnette MSH 406H

WV Department of Environmental Protection  
STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Whetstone Creek Quadrangle 681- Wileyville

Elevation 1429.6' County 51-Marshall District 5- Meade

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 2D0072539/ 2D0413175/ 2D0610306/ 2D0610317 )
- Reuse (at API Number at next anticipated well, API# will be included with the WR-34/DDMR 8/for 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 and salt saturate mud

-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/WWO105517/CID28726, Carbon Limestone 28729/C3028726  
Arden Landfill 10072, American U2-12954, Country wide 38390/CID38390, Pine Grove 13688

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.

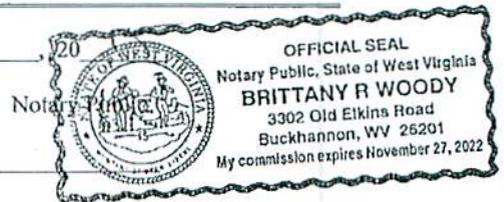
Company Official Signature \_\_\_\_\_

Company Official (Typed Name) Dee Southall

Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 13<sup>th</sup> day of January

Brittany R Woody  
My commission expires 11/27/22



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Form WW-9

Operator's Well No. Bonnette MSH 408H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 18.4 Prevegetation pH \_\_\_\_\_

Lime as determined by pH test eqn. 2 \_\_\_\_\_ Tons/acre or to correct to pH 6.5

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
White Grove	15	White Grove	15
Red Top	15	Red Top	15
Orchard Grass	20	Orchard Grass	20

Attach: Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *James White*

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

Title: Oil and Gas Inspector Date: 1/29/15

Field Reviewed?  Yes  No

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**Marcellus Well Drilling Procedures  
And Site Safety Plan**

SWN Production Co., LLC

47 - 051 -  
Well name: Bonnette MSH 406H  
Wileyville, Quad  
Meade, District  
Marshall County, West Virginia

Submitted by: [Signature] Date: 1/15/2015  
Dantelle Southall

Title Regulatory Supervisor SWN Production Co., LLC

Approved by: [Signature] Date: 1/29/15  
Title: Oil & Gas Inspector

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

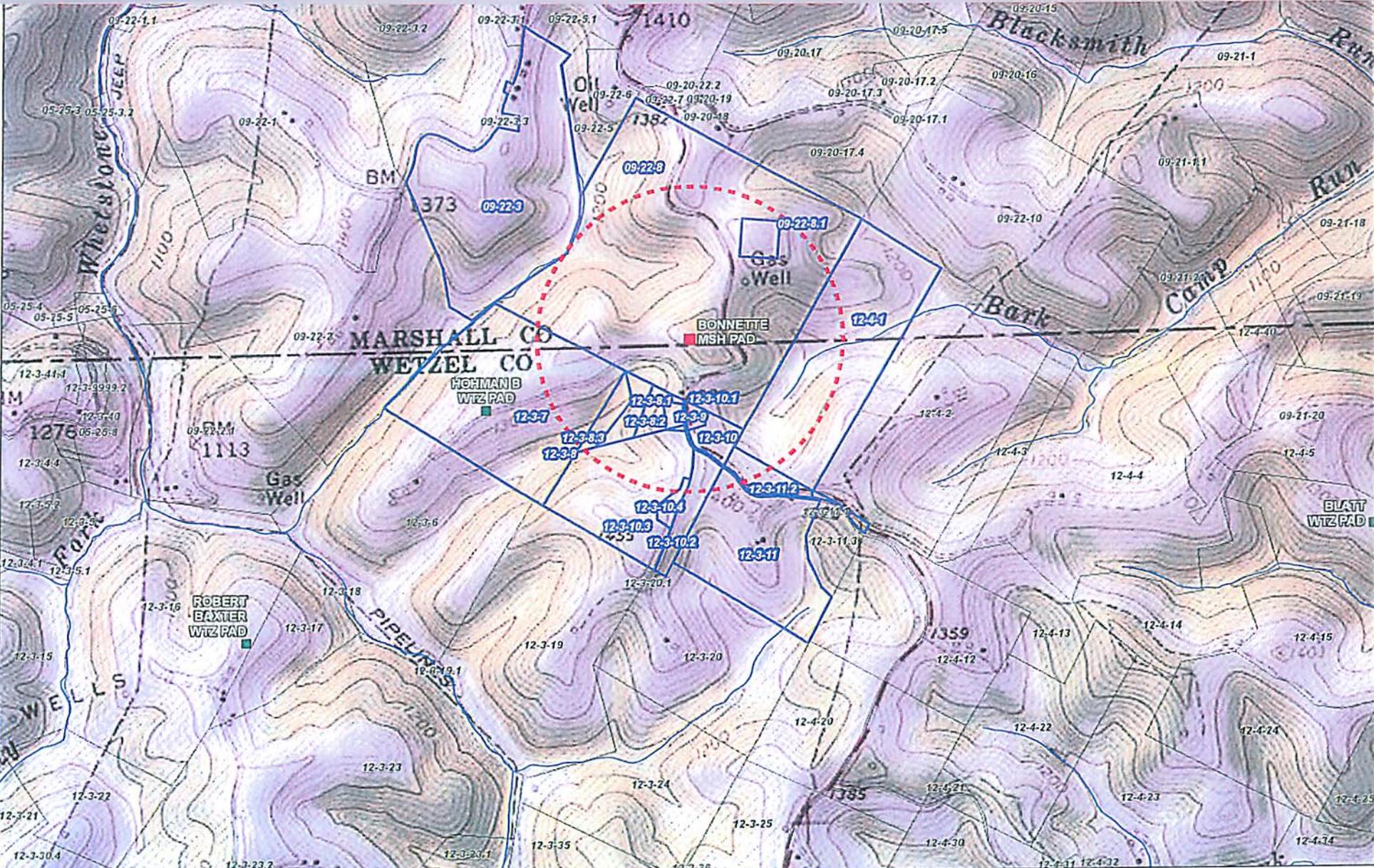
Title \_\_\_\_\_

SWN Production Co., LLC - Confidential

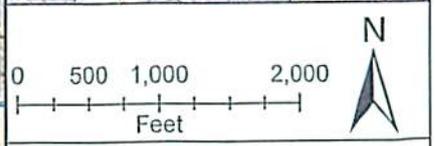
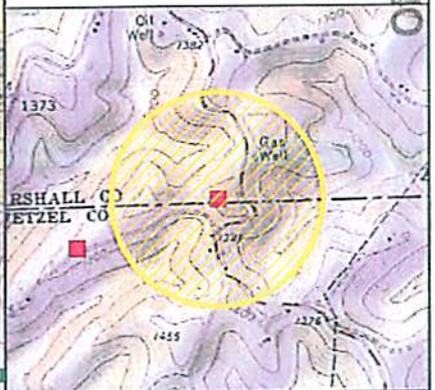
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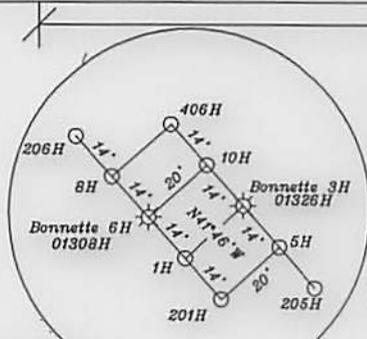
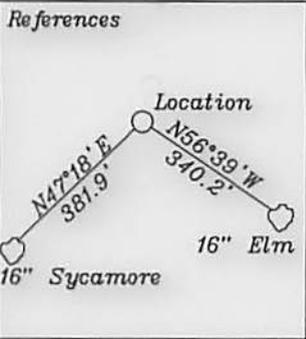
- Site of Interest
- ~ Streams
- ▭ Parcels With Water Sources (1500' of Source)
- ▨ Other Parcels
- ⋯ 1,500' Buffer Around Wells



**WV Water Purveyor Map**  
 BONNETTE MSH PAD - (907984)  
 MARSHALL COUNTY, WV  
 Lat: 39.72144 / Long: -80.71203  
 Date: 9/12/2014  
 Projection: WGS 1984 UTM Zone 17N  
 Scale: 1 inch = 1,000 feet

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Bottom Hole 11,284'  
LATITUDE 39-45-00 N

Top Hole	UTM NAD 83(meters)-4396896.3 N. 524698.4 E
TPI	UTM NAD 83(meters)-4396392.8 N. 524156.7 E
KOP	UTM NAD 83(meters)-4396494.9 N. 524043.6 E
Bottom Hole	UTM NAD 83(meters)-4395441.6 N. 525211.6 E

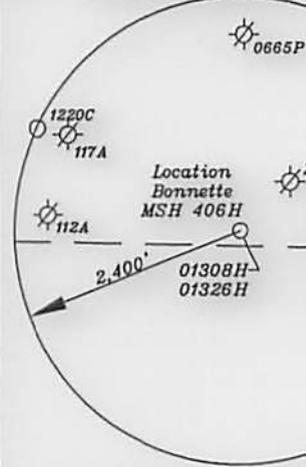
LONGITUDE 80-42-30 W (TH)  
LONGITUDE 80-40-00 W (BH)

- A- Ries 3 Ac. TM.3-8 1-292576-001, 1-254767-000
- B- Hohman 4.07 Ac. TM.3-8.3 1-292576-001, 1-254767-000
- C- Hohman 4.12 Ac. TM.3-8.1 & 8.2 1-292576-001, 1-254767-000
- D- B. Ferrell 1 Ac. TM.3-9 1-292576-001, 1-254916-000
- E- B. Ferrell 0.54 Ac. TM.3-10.1 1-254839-000
- F- B. Ferrell 0.33 Ac. TM.3-10.5
- G- J. Ferrell 28.97 Ac. TM.3-10.3 1-254839-0007
- H- Miller 5.02 Ac. TM.3-10.2
- I- Ferrell 1.29 Ac. TM.3-10.4
- J- Zombotti 4.34 Ac. TM.3-11.2
- K- R. Yoho et al 38.59 Ac. TM.3-11
- L- Blatt 7.42 Ac. TM.3-11.3
- M- Herrick 0.65 Ac. TM.3-11.1
- N- Bonnette 126.53 Ac. TM.22-8 1-254855-000
- O- Fox 56 Ac. TM.4-1
- P- Dulaney 52 Ac. TM.4-12
- Q- Klug 48 Ac. TM.4-22
- R- Estep 3.45 Ac. TM.4-21
- S- Zombotti 4.15 Ac. TM.3-10 1-254839-000
- V- Fox 74.7 Ac. TM.4-2
- W- Blatt TM.4-13 22.14 Ac.
- X- Ries TM.3-7 62.32 Ac. 1-255029-000
- Z- Ferrell TM.3-20.1 1 Ac.
- CI- The Co. Comm. of Marshall Co. 3.143 Ac. TM.22-8.1



Note: No water wells were found within 250' of location. A dwelling is located S18°21'W 534' from the center of the pad.

NUMBER	DIRECTION	DISTANCE
L1	S48°03'W	2427'
L2	S47°00'E	500'
L3	S9°17'E	2432'
L4	N27°53'W	1050'

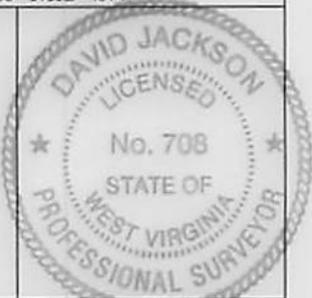


Location Bonnette MSH 406H  
Marshall Co. Meade Dist.  
Wetzel Co. Proctor Dist.

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

FILE NO. \_\_\_\_\_  
DRAWING NO. 1  
SCALE 1" = 2000'  
MINIMUM DEGREE OF ACCURACY 1 in 200  
PROVEN SOURCE OF ELEVATION GPS  
submeter unit

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.  
(SIGNED) David L Jackson  
R.P.E. \_\_\_\_\_ L.L.S. 708



STATE OF WEST VIRGINIA  
Division of Environmental Protection  
OFFICE OF OIL AND GAS

DATE June 2, 2015  
OPERATOR'S WELL NO. Bonnette MSH 406H  
API WELL NO. \_\_\_\_\_

WELL TYPE: OIL    GAS X LIQUID INJECTION    WASTE DISPOSAL    STATE 47 COUNTY 051 PERMIT     
(IF "GAS") PRODUCTION X STORAGE    DEEP    SHALLOW X

LOCATION: ELEVATION 1,429.6' WATER SHED Whetstone Creek  
DISTRICT Meade COUNTY Marshall  
QUADRANGLE Wileyville 7 1/2'

SURFACE OWNER Robert and Linda Bonnette ACREAGE 126.53 ac.  
OIL & GAS ROYALTY OWNER Robert and Linda Bonnette, Robert and Barbara Bias, & Larry and Glenda Kress LEASE ACREAGE 576.49 ac.

LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL X CONVERT    DRILL DEEPER    REDRILL    FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION    PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON    CLEAN OUT AND REPLUG     
TARGET FORMATION Marcellus ESTIMATED DEPTH TVD=7,077'; TMD=13,500'  
WELL OPERATOR SWN Production Co. LLC DESIGNATED AGENT Dee Southall  
ADDRESS P.O. Box 1300 Jane Lew, WV 26378 ADDRESS P.O. Box 1300 Jane Lew, WV 26378

Bottom Hole 15,010'  
Top Hole 10,364'

WW-6A1  
(5/13)

Operator's Well No. BONNETTE MSH 406H

**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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**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

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:

Tony Hill

Its:

SENIOR LANDMAN, WEST VIRGINIA DIVISION

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Bonnette ms# 406#

ID #	TAX-MAP-PARCEL	LEASE NUMBER	GRANTOR, LESSOR, ETC	GRANTEE, LESSEE, ETC	ROYALTY	BOOK/PAGE
1	9-22-8	1-254855-000	Andrew Stein, widower	The Manufacturers Light and Heat Company	12.500%	272/265
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
2	12-3-8.3	1-292576-001	BRC Minerals LP, a Texas limited partnership and BRC Appalachian Minerals I LLC, a Delaware limited liability company	BRC Working Interest Company LLC	16.000%	103A/320
			BRC Working Interest Company LLC	Chesapeake Appalachia, L.L.C.		103A/470
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
		1-254767-000	B.G. Weigand, single, aka B.G. Wiegand	The Manufacturers Light and Heat Company	12.500%	45A/290
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		90/242
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
						Total:
3	12-3-8	1-292576-001	BRC Minerals LP, a Texas limited partnership and BRC Appalachian Minerals I LLC, a Delaware limited liability company	BRC Working Interest Company LLC	16.000%	103A/320
			BRC Working Interest Company LLC	Chesapeake Appalachia, L.L.C.		103A/470
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
		1-254767-000	B.G. Weigand, single, aka B.G. Wiegand	The Manufacturers Light and Heat Company	12.500%	45A/290
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		90/242
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540

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						Total:
4	12-3-8.1 12-3-8.2	1-292576-001	BRC Minerals LP, a Texas limited partnership and BRC Appalachian Minerals I LLC, a Delaware limited liability company	BRC Working Interest Company LLC	16.000%	103A/320
			BRC Working Interest Company LLC	Chesapeake Appalachia, L.L.C.		103A/470
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
		1-254767-000	B.G. Weigand, single, aka B.G. Wiegand	The Manufacturers Light and Heat Company	12.500%	45A/290
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		90/242
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
						Total:
5	12-3-9	1-292576-001	BRC Minerals LP, a Texas limited partnership and BRC Appalachian Minerals I LLC, a Delaware limited liability company	BRC Working Interest Company LLC	16.000%	103A/320
			BRC Working Interest Company LLC	Chesapeake Appalachia, L.L.C.		103A/470
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
		1-254916-000	Carl S. Ferrell, Dorothy M. Ferrell, Adaline V. Gollner, Anna T. Knorr, Margaret F. Cornez, Oscar F. Cornez, Hilda C. Slater, Charles F. Trein, Edith Trein, Homer E. Trein, Olive Naomi Trein, Walter J. Trein, Virginia F. Trein, Roy L. Trein, and Mary J. Spoon	The Manufacturers Light and Heat Company	12.500%	18A/124

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			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		
				<b>Received</b> <b>Office of Oil &amp; Gas</b> <b>SEP 26 2015</b>		
						263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		90/242
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
						Total:
6	12-3-7	1-255029-000	Clem J. Hohman and Hilda Hohman, his wife	The Manufacturers Light and Heat Company	12.500%	47A/72
			The Manufacturers Light and Heat Company	Columbia Gas of West Virginia		258/460
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
7	12-3-10.3	1-254839-000	Charles E. Miller, Widower; Robert H. Miller and Bernadine B. Miller, his wife; Dorothy M. Ferrell and Carl S. Ferrell, her husband; Charles E. Miller, Jr., and Glenda R. Miller, his wife; John B. Miller and Lorna R. Miller, his wife; Dolores A. Zombotti and James J. Zombotti, her husband	The Manufacturers Light and Heat Company	12.500%	45A/431
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		663/542
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
8	12-3-6	1-255030-000	Clem J. Holman, and Hilda Holman, his wife	The Manufacturers Light and Heat Company	12.500%	47A/43
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281
						84A/129
						90A/242
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446

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			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
9	12-3-19	1-254823-000	Joseph C. Weigand and Hilda Weigand, his wife; C. A. Estep and Monica Catherine Estep, his wife	The Manufacturers Light and Heat Company	12.500%	45A/373
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		84A/129
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		90A/242
10	12-3-20.1	1-254822-000	Leonard Weigard, single	The Manufacturers Light and Heat Company	12.500%	157A/540
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		45A/307
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		263/164
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		90A/242
11	12-3-10.2	1-254839-000	Charles E. Miller, Widower; Robert H. Miller and Bernadine B. Miller, his wife; Dorothy M. Ferrell and Carl S. Ferrell, her husband; Charles E. Miller, Jr., and Glenda R. Miller, his wife; John B. Miller and Lorna R. Miller, his wife; Dolores A. Zombotti and James J. Zombotti, her husband	The Manufacturers Light and Heat Company	12.500%	157A/540
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		45A/431
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		263/164
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		642/281
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		663/542
12	12-3-20	1-254822-000	Leonard Weigard, single	The Manufacturers Light and Heat Company	12.500%	157A/540
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		45A/307
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		263/164
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		90A/242
13	12-3-24	1-254822-000	Leonard Weigard, single	The Manufacturers Light and Heat Company	12.500%	157A/540
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		45A/307
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		263/164
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		84A/129
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		90A/242
14	12-4-20	1-299518-000	Albert F. Estep, aka Albert Francis Estep, aka Albert estep, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	18.750%	112A/210

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			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
15	12-3-25	1-225933-000	Albert F. Estep, aka Albert Francis Estep, aka Albert estep, a married man dealing in his sole and separate property	Columbia Natural Resources, LLC		
					12.500%	84A/407
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
16	12-3-10	1-254839-000	Charles E. Miller, Widower; Robert H. Miller and Bernadine B. Miller, his wife; Dorothy M. Ferrell and Carl S. Ferrell, her husband; Charles E. Miller, Jr., and Glenda R. Miller, his wife; John B. Miller and Lorna R. Miller, his wife; Dolores A. Zombotti and James J. Zombotti, her husband	The Manufacturers Light and Heat Company	12.500%	45A/431
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		663/542
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
17	12-3-10.1	1-254839-000	Charles E. Miller, Widower; Robert H. Miller and Bernadine B. Miller, his wife; Dorothy M. Ferrell and Carl S. Ferrell, her husband; Charles E. Miller, Jr., and Glenda R. Miller, his wife; John B. Miller and Lorna R. Miller, his wife; Dolores A. Zombotti and James J. Zombotti, her husband	The Manufacturers Light and Heat Company	12.500%	45A/431
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		663/542
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540

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*Mason Energy, Inc.*  
*101 Cambridge Place*  
*Bridgeport, WV 26830*

900 642 281

*11/17/09*  
**OIL & GAS SUBLEASE AGREEMENT**

This Sublease Agreement made this 2<sup>nd</sup> day of September, 2004, by and between COLUMBIA GAS TRANSMISSION CORPORATION, a Delaware corporation, 1700 MacCulloch Avenue, S.E., P. O. Box 1273, Charleston, West Virginia 25325-1273 (hereinafter "COLUMBIA") and COLUMBIA NATURAL RESOURCES, LLC, a Delaware limited liability company, 900 Pennsylvania Avenue, P. O. Box 6070, Charleston, West Virginia 25362 (hereinafter "CNR").

WHEREAS, COLUMBIA and CNR desire to enter into a Sublease Agreement for purposes of exploring for native oil and gas reserves in all formations in the Victory Storage Area, including the formations being reserved or operated by COLUMBIA for storage, situate in Marshall and Wetzel Counties, West Virginia; and

WHEREAS, the terms and conditions of this Sublease Agreement pertain to the Victory Storage Area, which is comprised of those certain leases held by COLUMBIA and described on Exhibit A, attached hereto ("COLUMBIA Leases");

NOW, THEREFORE, 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 for the mutual covenants and agreements hereinafter set forth, COLUMBIA and CNR hereby agree as follows:

**SUBLEASE:** COLUMBIA does hereby sublease exclusively to CNR all the oil and gas and their constituents, including coal bed methane, insofar as COLUMBIA has the right to do so, found in all formations, including the formations currently being reserved or operated by COLUMBIA for storage as specifically described in this Sublease Agreement, in the Victory Storage Area underlying those certain leases located in Marshall (Liberty District) and Wetzel (Proctor District) Counties, West Virginia, and more particularly described on Exhibit A hereto ("Subleased Premises"), together with such exclusive rights as may be necessary or convenient for CNR, at its election, to explore for, develop, produce, measure and market production from the Subleased Premises, and from adjoining lands for which COLUMBIA has the legal right to utilize and sublease, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and/or seismic surveys and other exploratory tests; to drill, maintain, operate, obtain to operate, plug, abandon and remove wells; to use or install roads, electric power and telephone facilities and to construct pipelines and appurtenant facilities, including data acquisition, compression, measurement and collection facilities for gas in the production and transportation of oil and gas and constituent products from the Subleased Premises and from neighboring lands across such Subleased Premises as is necessary, for which COLUMBIA has the legal right to utilize and sublease; to use oil, gas and non-domestic water sources free of cost; and to operate, maintain, repair and remove material equipment.

EXCEPTING AND RESERVING, however, unto COLUMBIA, its successors, assigns, licensees, and other addressees, the interval from 250 feet above the top of the Greenbrier Limestone (inclusive of all Maxton sands) to 50 feet below the base of the Pocahontas Big Injun

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**RELEASE AGREEMENT TERM AND TERMINATION:** This Sublease Agreement shall remain in force for a primary term of two (2) years from the date of execution of this Agreement, and as long thereafter as there are continuous operations on the Subleased Premises, the prescribed payments are being made and the other provisions of this Sublease Agreement are satisfied. Continuous operations is defined as the drilling to target formation of a new well on a yearly basis.

During the primary term and each year thereafter, CNR agrees to drill to target formation one (1) oil and/or gas well on the Subleased Premises. In the event CNR does not drill to target formation at least one (1) well during the primary term and each year thereafter this Sublease Agreement shall terminate as to all undrilled acreage. However, until the termination of this Sublease Agreement as contemplated by this paragraph, this Sublease Agreement shall nevertheless remain in full force and effect as to any and all wells drilled and capable of producing in commercial quantities upon the Subleased Premises and CNR shall have rights of operation, production and ingress and egress to the same. Each well drilled and capable of producing in commercial quantities on the Subleased Premises shall hold and maintain this Sublease Agreement in full force and effect as to one hundred sixty (160) acres for such shallow well drilled and, shallow being defined as surface of the earth to the top of the Onondaga as is more specifically defined in West Virginia Code Section 22C-9-2 (a)(11) ("Shallow Well"), and six hundred and forty (640) acres for each deep well drilled, deep being defined as below the top of the Onondaga to the basement as is more specifically defined in West Virginia Code Section 22C-9-2 (a) (12) ("Deep Well"). For wells that are pooled with other acreage, the total acreage shall be the number of acres of the Subleased Premises included in the pooled unit. A plat showing the well and the hold Subleased acreage or the pooled unit shall be submitted to COLUMBIA's Land Section within sixty (60) days of the completion of the well. Unless required otherwise by any applicable regulatory body, COLUMBIA and CNR agree that only one (1) well shall be drilled on the respective designated acreage of one hundred sixty (160) acres or six hundred forty (640) acres. All other acreage comprising the Subleased Premises not so drilled shall be released and forfeited by CNR and not subject to this Sublease Agreement and shall revert to the possession of COLUMBIA upon termination. COLUMBIA shall have no obligation to maintain the base leases referenced in Exhibit A; provided, however, that COLUMBIA shall notify CNR of its intention to terminate the base lease(s) at least six (6) months prior to COLUMBIA's proposed termination date. The parties further agree that any wells drilled under the aforementioned drilling commitment shall be credited toward future drilling commitments.

**INITIAL PAYMENT:** CNR shall pay to COLUMBIA the amount of one hundred thousand dollars (\$100,000.00), on the effective date of this agreement. The initial payment of \$100,000.00 shall be in addition to all other payments due and owing pursuant to this Sublease Agreement.

**ANNUAL PAYMENT:** CNR shall pay to COLUMBIA to an address identified by COLUMBIA, in writing, from time to time, the sum of Five Dollars (\$5.00) per acre annually in advance ("Annual Payment") beginning on the effective date of this Sublease

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Agreement for the Subleased Premises; provided that the annual payment for the first two years of the sublease shall be paid in advance by CNR to Columbia upon execution of this Agreement and shall be non-refundable. Calculation of the Annual Payment shall be reduced each year by one hundred sixty (160) acres for each shallow well and/or six hundred sixty (660) acres for each deep well drilled, except for wells which are pooled with other acreage, in which case, the total acreage shall be reduced by the number of acres of the Subleased Premises included in the pooled unit.

**UNITIZATION:** CNR is hereby given the right at its sole option to pool, unitize or combine all or parts of the Subleased Premises, or any part thereof, with any other land, lease or leases, or parts thereof, regardless of ownership thereof so long as CNR warrants to COLUMBIA it has the legal right to do so, either adjoining the Subleased Premises or other lands which may be included in and from part of the same operating unit so as to create by such combining or pooling one or more operating units, said units not to exceed six hundred sixty (660) acres, for the production of oil and/or gas or other constituent products. Such right may be exercised from time to time whether before or after the actual spacing of a well for the production of oil and/or gas or other constituent products on the particular area to be pooled.

**ROYALTIES:** CNR agrees to pay the owner(s) of the oil and gas and their constituent products pursuant to the terms of the COLUMBIA Leases for all oil and gas and constituent products produced and marketed from the COLUMBIA Leases herein subject and to indemnify and hold COLUMBIA harmless for CNR's failure to pay such royalties in accordance with the terms of the COLUMBIA Leases.

**OVERRIDING ROYALTY:** COLUMBIA does hereby reserve unto itself, its successors and assigns, an undivided one-sixteenth (1/16<sup>th</sup>) of eight-eighths (8/8<sup>th</sup>) overriding royalty in all oil and gas and their constituent products that are produced from the Subleased Premises or from pooled units containing subleased acreage from a Deep Well. COLUMBIA further reserves unto itself, its successors and assigns, an undivided one-sixteenth (1/16<sup>th</sup>) of eight-eighths (8/8<sup>th</sup>) overriding royalty in all oil and gas and their constituent products that are produced from the Subleased Premises or from pooled units containing subleased acreage from a Shallow Well. Said overriding royalty interest shall be free from all costs and expenses including but not limited to operational expenses, gathering fees, marketing fees, processing fees and all taxes. Subject to the foregoing, CNR shall pay overriding royalties to COLUMBIA each month to an address identified by COLUMBIA, in writing, from time to time. CNR may withhold overriding royalty payments until such time as the total withheld exceeds one hundred (\$100.00) dollars.

**PROPORTIONATE REDUCTION:** The overriding royalty provided for in this Sublease Agreement is based on the whole of the oil and gas rights in the Subleased Premises. If COLUMBIA owns less than the whole of the oil and gas rights in said leases, overriding royalties accruing hereunder shall be reduced in direct proportion to COLUMBIA'S ownership interest.

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**FREE GAS OBLIGATION:** If any activities by CNR trigger a free gas obligation, then CNR will be fully responsible for the free gas obligation, provided that CNR has not previously been notified in writing of the free gas obligation. CNR shall not be liable for the free gas obligation to the extent, if any, that CNR would have had an obligation under the applicable Colombia Laws.

**COMPLIANCE WITH LAWS:** CNR warrants and agrees that it will conduct all activities under the Bolivia Agreement in compliance with all local, state and federal laws and regulations. CNR further warrants and agrees to conduct all activities in an environmentally responsible manner and to comply with all local, state and federal environmental laws and regulations.

**DRILLING, COMPLETION AND MONITORING PROVISIONS:** For each well drilled, CNR agrees to follow Colombia's "Procedures for Drilling, Completion and Monitoring of Oil Wells" and Colombia's "Regulatory Monitoring Procedures" documents. These documents are attached as Exhibits B and C, respectively.

**REGULATORY OPERATIONS:** During the term of the Bolivia Agreement, CNR shall have the right to conduct seismic/geophysical operations on the Bolivian Frontier, as well as to conduct seismic/geophysical operations on the Bolivian Frontier. CNR shall conduct its seismic/geophysical operations in accordance with the applicable laws and regulations, including seismic laws where CNR acquires the necessary rights to do so, as to determine if the lands are prospective for oil and/or gas. Operations conducted by CNR or independent contractors hired by CNR shall be at CNR's sole risk, cost and expense. The methods and equipment generally employed in conducting seismic/geophysical and/or seismic surveys and interpretation, including the recording, all data and documents resulting from such surveys and interpretation shall be the property of CNR. CNR shall be provided with all data and documents resulting from such surveys and interpretation within thirty (30) days of receipt of the data and documents by CNR in the case of land surveys and within sixty (60) days of the date of this Agreement in the case of land surveys. All such data and documents are subject to the terms of the Confidentiality Agreement between the parties dated March 5, 2004. However, in the event the CNR requires seismic data from a third party, the availability of such data may be subject to proprietary restrictions which both Colombia and CNR shall accept; provided that CNR shall, in such event, seek the consent of such third party to release the seismic data to Colombia.

All items on (i) were prior to conducting its operations, CNR shall advise the Colombia Operations Team Leader in writing of its intent to begin its seismic/geophysical operations setting forth the starting date and the approximate location of such operations. The Colombia Operations Team Leader, Room 8, Plaza, can be reached as follows:

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Address: Scott S. Polin  
Team Leader, Field Services  
Columbia Gas Transmission Corporation  
70 McLeisville Road  
West Finsky, PA 15377  
Office Phone No: (724) 423-3503  
Fax No: (724) 423-4816

CNR agrees that in the event of seismic testing activity, no shot will be permitted (1) on COLUMBIA rights-of-way, or (2) closer than twenty-five (25) feet from a COLUMBIA pipeline or (3) within three hundred (300) feet of any COLUMBIA well unless a blasting plan is submitted and approved in advance for evaluation.

**DAMAGES:** CNR will remove unnecessary equipment and reclaim disturbed lands at the completion of activities and CNR agrees to repair or pay the actual cost to repair any damage caused by CNR within ninety (90) days of the damage occurring.

**COLUMBIA'S RIGHT TO PURCHASE CNR'S WELLS:** Prior to plugging and abandoning a dry hole well(s) when CNR determines, at its discretion, that CNR does not have commercially producible reserves drilled in or near the Subleased Premises, CNR shall give written notice of its proposed action and COLUMBIA shall have the right, but not the obligation, to purchase the well(s) at CNR's net salvage value.

COLUMBIA will have twenty-four (24) hours from and after actual notice of any well to be plugged and abandoned to COLUMBIA'S Storage Manager, Engineering Services Department, to make a decision to purchase the well(s) when a drilling rig is on the site, and thirty (30) days from and after written notice to COLUMBIA to make a decision if there is no drilling rig on the site. If COLUMBIA elects to purchase any well(s), CNR will assign: (1) all rights CNR has to the well bore, and (2) any and all expenditures COLUMBIA may elect to obtain from CNR.

Columbia agrees that its right to purchase a well is subject to the purchase rights of a party owning a working interest in the well. If said party's purchase rights are included in the party's prior agreement with CNR. In the event any party owning such working interest purchases any well from CNR pursuant to this paragraph, such party shall assume CNR's obligations to provide COLUMBIA notice and the right to purchase such wells.

**CHANGE IN OWNERSHIP:** CNR shall not be bound by any change in the ownership of this Sublease Agreement until furnished with such documentation as CNR may reasonably require. Pending the receipt of documentation, CNR may elect to either continue to make or withhold payments as if such a change has not occurred. In addition, COLUMBIA shall forward a copy of such documentation to CNR.

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**TITLE:** If CNR receives evidence that COLUMBIA does not have title to all or any part of the rights herein leased, CNR may immediately withhold payments as to the leases for which title is in dispute that would be otherwise due and payable hereunder to COLUMBIA until the adverse claims are fully resolved.

**COLUMBIA'S FACILITIES AND NOTIFICATIONS:** CNR shall be observant of the location of COLUMBIA'S wells, pipelines, access roads and other facilities and equipment and CNR agrees to maintain its operations at a minimum distance set forth in COLUMBIA'S then current well setback policy and COLUMBIA'S then current pipeline right-of-way encroachment policy. COLUMBIA'S current well setback policy and current pipeline right-of-way encroachment policy are set forth in their entirety in Exhibit D attached hereto.

**CNR'S FACILITIES:** COLUMBIA shall not improve, modify, degrade or restrict roads and facilities built by CNR without CNR's written consent, except as is reasonably necessary in emergency situations where such activity is necessary to preserve or protect human life, property and/or the environment.

**INDEMNIFICATION:** CNR agrees to indemnify and hold harmless COLUMBIA, its agents, employees, officers, directors, subsidiaries, and parent from and against any and all loss, damage, liability, and from any and all claims for damages on account of or by reason of injury, including death, which may be sustained or claimed to be sustained by any person, including the employees of CNR and of any subcontractor of CNR, and from and against all damages to property, including loss of use, and including property of COLUMBIA, to the extent caused by or arising out of an act or omission of CNR or its agents, employees or subcontractors in connection with its acts or omissions in connection with this Sublease Agreement, or any other theories of liability in connection with the operations contemplated herein, whether insured against; provided, however, that the CNR shall fully indemnify Columbia for all loss, damage or liability arising in whole or in part from the gross negligence or willful misconduct of CNR, its agents or employees. The foregoing indemnification will not cover loss, damage or liability arising from the gross negligence or willful misconduct of COLUMBIA, its agents and employees. This indemnification provision shall survive expiration or termination of this Sublease Agreement and shall inure to the benefit of the parties, successors and assigns. CNR's obligations pursuant to the terms of this indemnification provision shall include, but not be limited to, any claims of breach or violation of the Consent Setback Agreement by Columbia caused by CNR's action or inaction.

**INSURANCE:** CNR shall procure and maintain, solely at its own cost and expense, the types of insurance specified below. Prior to commencing any work on or gaining any access to the Subleased Premises, CNR shall submit a certificate of insurance giving evidence of these required coverages. All insurance shall be procured from insurers authorized to do business in the jurisdiction where operations are to be performed. CNR shall require all entities permitted access to the Subleased Premises to carry the insurance required herein, or CNR may, at its option, provide the coverage for any or all such entities, and if so, the evidence of insurance submitted shall so stipulate.

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The insurance policies shall provide for thirty (30) days prior written notice to be given to COLUMBIA in the event coverage is substantially changed, amended or non-renewed.

**WORKERS' COMPENSATION INSURANCE:** CNR shall provide a policy complying with the requirements of the laws of the jurisdiction in which any work by CNR or its agents will be performed, covering all employees of CNR. Employer's Liability coverage with limits of liability of not less than One Million (\$1,000,000.00) for each accident or illness shall be included.

**GENERAL LIABILITY INSURANCE:** CNR shall provide a policy issued to, and covering liability imposed upon CNR with respect to all activities to be performed on the Sublease Premises and all obligations assumed by CNR under the terms of this Sublease Agreement. COLUMBIA is to be named as an additional insured with respect to all activities to be performed on the Sublease Premises, and the policy shall contain a waiver of subrogation against COLUMBIA, its employees and agents. Coverage under this policy or policies shall have limits of liability of not less than Ten Million Dollars (\$10,000,000) per occurrence, combined single limit for bodily injury (including disease or death), personal injury and property damage (including loss or use) liability.

**SURRENDER:** CNR may surrender and cancel this Sublease Agreement as to all or any part of the Sublease by recording a Surrender of Sublease, and if a partial surrender, the Annual Rental provided in the Annual Rental clause shall be reduced in direct proportion to the acreage surrendered. A copy of the Surrender shall be promptly provided to COLUMBIA.

**ASSIGNMENT:** This Sublease Agreement may not be assigned in whole or in part without the express written consent of COLUMBIA, said consent not to be unreasonably withheld; provided, however, that COLUMBIA's consent shall not be required in those cases where CNR desires to dispose of its interests by merger or by sale of all or substantially all of its oil and gas assets to any party, or by transfer of fifty percent or less of its working interest in a portion of the Sublease Agreement pursuant to a joint operating agreement under which CNR is operator. CNR agrees that it will not voluntarily relinquish its rights as operator under any such joint operating agreement without the express written consent of COLUMBIA; provided, however that the joint operating agreement will govern any involuntary relinquishment of operatorship and COLUMBIA's consent will not be necessary.

**COMPLIANCE WITH LEASE PROVISIONS:** CNR hereby agrees to comply with all provisions contained in the COLUMBIA Leases hereto subject. In the event of conflict between the provisions of this Sublease Agreement and the COLUMBIA Leases hereto subject, the provisions of the COLUMBIA Leases shall control.

**ACCESS TO TITLE RECORDS:** COLUMBIA agrees to cooperate with CNR in good faith to allow CNR reasonable access, upon request, to non-privileged and non-confidential title abstracts, if any, pertaining to the Sublease Premises and non-privileged and non-confidential records maintained by COLUMBIA in the ordinary

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course of business which are necessary to adequately inform CNR of the status of title to the Sublease Premises.

**ENTIRE CONTRACT:** The entire agreement between COLUMBIA and CNR 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 Sublease Agreement.

**AMENDMENTS:** Any amendments to this Sublease Agreement shall be in writing and signed by duly authorized representatives of both parties.

**SUCCESSORS:** The terms and provisions of this Agreement shall be binding upon and inure to the benefit of the parties herein, their successors, assigns, personal representatives and heirs, agents, affiliates, and any other party performing operations pursuant to this Agreement in partnership with or in association with CNR or at the direction of CNR.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement as of the day and year first above written.

COLUMBIA GAS TRANSMISSION CORPORATION

By: [Signature]

Name: Shirley Paris Egan

Its: Manager, Field Services

COLUMBIA NATURAL RESOURCES, LLC

By: [Signature]

Name: Shawn E. Casey

Its: Vice President

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STATE OF WEST VIRGINIA  
COUNTY OF KANAWHA, TO-WIT:

I, Gwen Nunn, a Notary Public of said County, do certify that Shores Parks Downey, Manager of Columbia Gas Transmission Corp., who signed the writing hereto annexed, bearing date as of the 2nd day of September, 2004, for Columbia Gas Transmission, has this day in my said County, before me, acknowledged the same to be the act and deed of said corporation.

Given under my hand this 2nd day of September, 2004.  
My commission expires: October 4, 2007

Gwendolyn K. Nunn  
Notary Public in and for said State and County

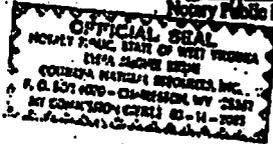


STATE OF WEST VIRGINIA  
COUNTY OF Kanawha, TO-WIT:

I, Lidia Beine, a Notary Public of said County, do certify that Shawn E. Collins, Vice President of Columbia Natural Resources, LLC, who signed the writing hereto annexed, bearing date as of the 2nd day of September, 2004, for Columbia Natural Resources, LLC, has this day in my said County, before me, acknowledged the same to be the act and deed of said company.

Given under my hand this 2nd day of September, 2004.  
My commission expires: March 14, 2005

Lidia M. Beine  
Notary Public in and for said State and County



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*Mason Dixon Energy Inc.  
101 Cambridge Place  
Bridgeport, WV 26330*

VOL: 84 PAGE 129  
BOOK 642 PAGE 281

*11/18/04*

**OIL & GAS SUBLEASE AGREEMENT**

This Sublease Agreement made this 2<sup>nd</sup> day of September 2004, by and between COLUMBIA GAS TRANSMISSION CORPORATION, a Delaware corporation, 1700 MacCorkle Avenue, S.E., P. O. Box 1273, Charleston, West Virginia 25325-1273 (hereinafter "COLUMBIA") and COLUMBIA NATURAL RESOURCES, LLC, a Delaware limited liability company, 900 Pennsylvania Avenue, P. O. Box 6070, Charleston, West Virginia 25362 (hereinafter "CNR").

WHEREAS, COLUMBIA and CNR desire to enter into a Sublease Agreement for purposes of exploring for native oil and gas reserves in all formations in the Victory Storage Area, excluding the formations being reserved or operated by COLUMBIA for storage, situate in Marshall and Wetzel Counties, West Virginia; and

WHEREAS, the terms and conditions of this Sublease Agreement pertain to the Victory Storage Area, which is comprised of those certain leases held by COLUMBIA and described on Exhibit A, attached hereto ("COLUMBIA Leases").

NOW, THEREFORE, 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 for the mutual covenants and agreements hereinafter set forth, COLUMBIA and CNR hereby agree as follows:

**SUBLEASE:** COLUMBIA does hereby sublease exclusively to CNR all the oil and gas and their constituents, including coal bed methane, insofar as COLUMBIA has the right to do so, found in all formations, excluding the formations currently being reserved or operated by COLUMBIA for storage as specifically described in this Sublease Agreement, in the Victory Storage Area underlying those certain leases located in Marshall (Liberty District) and Wetzel (Proctor District) Counties, West Virginia, and more particularly described on Exhibit A hereto ("Subleased Premises"), together with such exclusive rights as may be necessary or convenient for CNR, at its election, to explore for, develop, produce, measure and market production from the Subleased Premises, and from adjoining lands for which COLUMBIA has the legal right to utilize and subassign, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and/or seismic surveys 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 and appurtenant facilities, including data acquisition, compression, measurement and collection facilities for use in the production and transportation of oil and gas and constituent products from the Subleased Premises and from neighboring lands across such Subleased Premises as is necessary, for which COLUMBIA has the legal right to utilize and subassign; to use oil, gas and non-domestic water sources free of cost; and to operate, maintain, repair and remove material equipment.

EXCEPTING AND RESERVING, however, unto COLUMBIA, its successors, assigns, licensees, and other sublessees, the interval from 250 feet above the top of the Greenbrier Limestone ( inclusive of all Maxton sands ) to 50 feet below the base of the Pocono Big Injun

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formation being reserved or operated for storage and all other areas of said COLUMBIA properties not expressly sublet herein and the full and free use of all rights, privileges, and easements which COLUMBIA owns or may use with respect to the surface and formations overlying, underlying, adjacent, contiguous and/or vicinal to the Subleased Premises.

NOTWITHSTANDING ALL OTHER PROVISIONS OF THIS SUBLEASE AGREEMENT, IT IS AGREED, UNDERSTOOD, AND STIPULATED BY AND BETWEEN THE PARTIES THAT:

- (A) This Sublease Agreement and said Subleased Premises, operating rights, privileges, and easements herein sublet and demised are subject and limited to and restricted by (i) those limitations, reservations, provisions, exceptions, and restrictions set forth in said COLUMBIA Leases and (ii) any and all rights, interest, and/or estates of record which now encumber and bind COLUMBIA in its title to same;
- (B) Said Subleased Premises, operating rights, privileges, and easements are herein sublet and demised unto CNR only to the extent of COLUMBIA'S power to sublet and demise same and are limited to such as COLUMBIA possesses and has the lawful right to sublet and demise;
- (C) CNR shall perform and observe the terms and conditions of said COLUMBIA Leases as they pertain to the Subleased Premises; and
- (D) CNR accepts the Subleased Premises in its now existing condition. COLUMBIA makes no warranties, expressed, implied, or otherwise, as to title to the COLUMBIA Leases, COLUMBIA'S rights thereunder or to the existence, quantity, title to, or quality of oil or gas within the Subleased Premises.
- (E) The parties recognize that COLUMBIA has entered into a certain settlement agreement entitled "Settlement Agreement Between Columbia Gas Transmission and Consolidation Coal Company and McElroy Coal Company" dated as of September 18, 2002, ("Consol Settlement Agreement") that relates to the Victory Storage Area. The Consol Settlement Agreement has been made available to CNR through the computer internet web site of the Federal Energy Regulatory Commission (FERC), and CNR agrees that its operations pursuant to this Sublease Agreement shall, in no way, cause COLUMBIA to be in breach of the terms of the Consol Settlement Agreement. CNR agrees that the terms of the "Indemnification" clause of this Sublease Agreement shall apply to any actions deemed, or claimed to be, in breach or violation of the Consol Settlement Agreement, and CNR agrees, to indemnify, hold harmless and defend COLUMBIA for any breach or violation, or claim of breach or violation, of the Consol Settlement Agreement caused, in whole or in part, by CNR, in accordance with the terms of the "Indemnification" clause of this Sublease Agreement.

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 6524661 County 10-51126 04  
 Instrument No 4927  
 Record Date 11/16/2004  
 Document Type 337  
 Book-Page 642-281  
 Per/Mtl Fee 41.00 5.00  
 Transfer Tax 0.00

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**SUBLEASE AGREEMENT TERM AND TERMINATION:** This Sublease Agreement shall remain in force for a primary term of two (2) years from the date of execution of this Agreement, and as long thereafter as there are continuous operations on the Subleased Premises, the prescribed payments are being made and the other provisions of this Sublease Agreement are satisfied. Continuous operations is defined as the drilling to target formation of a new well on a yearly basis.

During the primary term and each year thereafter, CNR agrees to drill to target formation one (1) oil and/or gas well on the Subleased Premises. In the event CNR does not drill to target formation at least one (1) well during the primary term and each year thereafter this Sublease Agreement shall terminate as to all undrilled acreage. However, until the termination of this Sublease Agreement as contemplated by this paragraph, this Sublease Agreement shall nevertheless remain in full force and effect as to any and all wells drilled and capable of producing in commercial quantities upon the Subleased Premises and CNR shall have rights of operation, production and ingress and egress to the same. Each well drilled and capable of producing in commercial quantities on the Subleased Premises shall hold and maintain this Sublease Agreement in full force and effect as to one hundred sixty (160) acres for each shallow well drilled and, shallow being defined as surface of the earth to the top of the Onondaga as is more specifically defined in West Virginia Code Section 22C-9-2 (a)(11) ("Shallow Well"), and six hundred and forty (640) acres for each deep well drilled, deep being defined as below the top of the Onondaga to the basement as is more specifically defined in West Virginia Code Section 22C-9-2 (a) (12) ("Deep Well"). For wells that are pooled with other acreage, the total acreage shall be the number of acres of the Subleased Premises included in the pooled unit. A plat showing the well and the held Subleased acreage or the pooled unit shall be submitted to COLUMBIA's Land Section within sixty (60) days of the completion of the well. Unless required otherwise by any applicable regulatory body, COLUMBIA and CNR agree that only one (1) well shall be drilled on the respective designated acreage of one hundred sixty (160) acres or six hundred forty (640) acres. All other acreage comprising the Subleased Premises not so drilled shall be released and forfeited by CNR and not subject to this Sublease Agreement and shall revert to the possession of COLUMBIA upon termination. COLUMBIA shall have no obligation to maintain the base leases referenced in Exhibit A; provided, however, that COLUMBIA shall notify CNR of its intention to terminate the base lease(s) at least six (6) months prior to COLUMBIA's proposed termination date. The parties further agree that any wells drilled under the aforementioned drilling commitment shall be credited toward future drilling commitments.

**INITIAL PAYMENT:** CNR shall pay to COLUMBIA the amount of one hundred thousand dollars (\$100,000.00), on the effective date of this agreement. The initial payment of \$100,000.00 shall be in addition to all other payments due and owing pursuant to this Sublease Agreement.

**ANNUAL PAYMENT:** CNR shall pay to COLUMBIA to an address identified by COLUMBIA, in writing, from time to time, the sum of Five Dollars (\$5.00) per acre annually in advance ("Annual Payment") beginning on the effective date of this Sublease

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Agreement for the Subleased Premises; provided that the annual payment for the first two years of the sublease shall be paid in advance by CNR to Columbia upon execution of this Agreement and shall be non-refundable. Calculation of the Annual Payment shall be reduced each year by one hundred sixty (160) acres for each shallow well and/or six hundred forty (640) acres for each deep well drilled, except for wells which are pooled with other acreage, in which case, the total acreage shall be reduced by the number of acres of the Subleased Premises included in the pooled unit.

**UNITIZATION:** CNR is hereby given the right at its sole option to pool, unitize or combine all or parts of the Subleased Premises, or any part thereof, with any other land, lease or leases, or parts thereof, regardless of ownership thereof so long as CNR warrants to COLUMBIA it has the legal right to do so, either adjoining the Subleased Premises or other lands which may be included in and from part of the same operating unit so as to create by such combining or pooling one or more operating units, said units not to exceed six hundred forty (640) acres, for the production of oil and/or gas or other constituent products. Such right may be exercised from time to time whether before or after the actual spudding of a well for the production of oil and/or gas or other constituent products on the particular area to be pooled.

**ROYALTIES:** CNR agrees to pay the owner(s) of the oil and gas and their constituent products pursuant to the terms of the COLUMBIA Leases for all oil and gas and constituent products produced and marketed from the COLUMBIA Leases herein sublet and to indemnify and hold COLUMBIA harmless for CNR's failure to pay such royalties in accordance with the terms of the COLUMBIA Leases.

**OVERRIDING ROYALTY:** COLUMBIA does hereby reserve unto itself, its successors and assigns, an undivided one-sixteenth ( $1/16^{\text{th}}$ ) of eight-eighths ( $8/8^{\text{th}}$ ) overriding royalty in all oil and gas and their constituent products that are produced from the Subleased Premises or from pooled units containing subleased acreage from a Deep Well. COLUMBIA further reserves unto itself, its successors and assigns, an undivided one-sixteenth ( $1/16^{\text{th}}$ ) of eight-eighths ( $8/8^{\text{th}}$ ) overriding royalty in all oil and gas and their constituent products that are produced from the Subleased Premises or from pooled units containing subleased acreage from a Shallow Well. Said overriding royalty interest shall be free from all costs and expenses including but not limited to operational expenses, gathering fees, marketing fees, processing fees and all taxes. Subject to the foregoing, CNR shall pay overriding royalties to COLUMBIA each month to an address identified by COLUMBIA, in writing, from time to time. CNR may withhold overriding royalty payments until such time as the total withheld exceeds one hundred (\$100.00) dollars.

**PROPORTIONATE REDUCTION:** The overriding royalty provided for in this Sublease Agreement is based on the whole of the oil and gas rights in the Subleased Premises. If COLUMBIA owns less than the whole of the oil and gas rights in said leases, overriding royalties accruing hereunder shall be reduced in direct proportion to COLUMBIA'S ownership interest.

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**FREE GAS OBLIGATION:** If any activities by CNR trigger a free gas obligation, then CNR will be fully responsible for the free gas obligations, provided that if COLUMBIA purchases the well related to the free gas obligation, COLUMBIA shall assume the free gas obligation to the extent, if any, that COLUMBIA would have that obligation under the applicable COLUMBIA Lease.

**COMPLIANCE WITH LAWS:** CNR warrants and agrees that it will conduct all activities under this Sublease Agreement in compliance with all local, state and federal laws and regulations and all certificates, authorizations, permits or licenses issued to CNR for the activities under this Sublease Agreement. CNR further warrants and agrees to conduct all activities in an environmentally responsible manner and to comply with all local, state and federal environmental laws and regulations.

**DRILLING, COMPLETION AND MONITORING PROVISIONS:** For each well drilled, CNR agrees to follow COLUMBIA'S "Procedure for Drilling, Completing and Plugging Production Wells" and COLUMBIA'S "Integrity Monitoring Provisions" documents. These documents are attached as Exhibits B and C, respectively.

**SEISMIC OPERATIONS:** During the term of this Sublease Agreement, COLUMBIA grants to CNR, to the extent provided for in COLUMBIA'S Leases, an exclusive right to conduct seismic/geophysical operations on the Subleased Premises. CNR shall conduct its seismic/geophysical operations where CNR deems reasonable and necessary on the Subleased Premises, including adjacent lands where CNR acquires the necessary rights to do so, as to determine if the lands are prospective for oil and/or gas exploration. Operations conducted by CNR or independent contractors hired by CNR shall be at CNR's sole risk, cost and expense. The methods and equipment utilized in these operations shall be the usual and customary methods and equipment generally employed in conducting similar geophysical and/or seismic surveys and investigations. Notwithstanding the forgoing, all data and documents resulting from past and future CNR seismic and/or geophysical surveys shall be provided to COLUMBIA without cost within thirty days (30) days of receipt of the data and documents by CNR in the case of future surveys and within thirty (30) days of the date of this Agreement in the case of past surveys. All such data and documents are subject to the terms of the Confidentiality Agreement between the parties dated March 5, 2004. However, in the event that CNR acquires seismic data from a third party, the availability of such data may be subject to proprietary restrictions with which both COLUMBIA and CNR shall comply; provided that CNR shall, in such event, seek the consent of such third party to release the seismic data to COLUMBIA.

At least one (1) week prior to conducting its operations, CNR shall advise the COLUMBIA Operations Team Leader in writing of its intent to begin its seismic/geophysical operations setting forth the starting date and the approximate location of such operations. The Columbia Operations Team Leader, Scott S. Polen, can be reached as follows:

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Address: Scott S. Polen  
Team Leader, Field Services  
Columbia Gas Transmission Corporation  
70 Majorsville Road  
West Finley, PA 15377  
Office Phone No: (724) 428-3503  
Fax No: (724) 428-4816

CNR agrees that in the event of seismic testing activity, no shot will be permitted (1) on COLUMBIA rights-of-way; or (2) closer than twenty-five (25) feet from a COLUMBIA pipeline or (3) within three hundred (300) feet of any COLUMBIA well unless a blasting plan is submitted and approved in advance for evaluation.

**DAMAGES:** CNR will remove unnecessary equipment and reclaim disturbed lands at the completion of activities and CNR agrees to repair or pay the actual cost to repair any damage caused by CNR within ninety (90) days of the damage occurring.

**COLUMBIA'S RIGHT TO PURCHASE CNR'S WELLS:** Prior to plugging and abandoning a dry hole well(s) when CNR determines, at its discretion, that CNR does not have commercially producible reserves drilled in or near the Subleased Premises, CNR shall give written notice of its proposed action and COLUMBIA shall have the right, but not the obligation, to purchase the well(s) at CNR's net salvage value.

COLUMBIA will have twenty-four (24) hours from and after actual notice of any well to be plugged and abandoned to COLUMBIA'S Storage Manager, Engineering Services Department, to make a decision to purchase the well(s) when a drilling rig is on the site, and thirty (30) days from and after written notice to COLUMBIA to make a decision if there is no drilling rig on the site. If COLUMBIA elects to purchase any well(s), CNR will assign: (1) all rights CNR has to the well bore, and (2) any and all appurtenances COLUMBIA may elect to obtain from CNR.

Columbia agrees that its right to purchase a well is subject to the purchase rights of a party owning a working interest in the well if said party's purchase rights are included in the party's prior agreement with CNR. In the event any party owning such working interest purchases any well from CNR pursuant to this paragraph, such party shall assume CNR's obligations to provide COLUMBIA notice and the right to purchase such wells.

**CHANGE IN OWNERSHIP:** CNR shall not be bound by any change in the ownership of this Sublease Agreement until furnished with such documentation as CNR may reasonably require. Pending the receipt of documentation, CNR may elect to either continue to make or withhold payments as if such a change has not occurred. In addition, COLUMBIA shall forward a copy of such documentation to CNR.

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The insurance policies shall provide for thirty (30) days prior written notice to be given to COLUMBIA in the event coverage is substantially changed, canceled or non-renewed.

**WORKERS' COMPENSATION INSURANCE:** CNR shall provide a policy complying with the requirements of the laws of the jurisdiction in which any work by CNR or its agents will be performed, covering all employees of CNR. Employer's Liability coverage with limits of liability of not less than One Million (\$1,000,000.00) for each accident or illness shall be included.

**GENERAL LIABILITY INSURANCE:** CNR shall provide a policy issued to, and covering liability imposed upon CNR with respect to all activities to be performed on the Subleased Premises and all obligations assumed by CNR under the terms of this Sublease Agreement. COLUMBIA is to be named as an additional insured with respect to all activities to be performed on the Subleased Premises, and the policy shall contain a waiver of subrogation against COLUMBIA, its employees and agents. Coverage under this policy or policies shall have limits of liability of not less than Ten Million Dollars (\$10,000,000) per occurrence, combined single limit for bodily injury (including disease or death), personal injury and property damage (including loss or use) liability

**SURRENDER:** CNR may surrender and cancel this Sublease Agreement as to all or any part of the Subleases by recording a Surrender of Sublease, and if a partial surrender, the Annual Rental provided in the Annual Rental clause shall be reduced in direct proportion to the acreage surrendered. A copy of the Surrender shall be promptly provided to COLUMBIA.

**ASSIGNMENTS:** This Sublease Agreement may not be assigned in whole or in part without the express written consent of COLUMBIA, said consent not to be unreasonably withheld; provided, however, that COLUMBIA's consent shall not be required in those cases where CNR desires to dispose of its interests by merger or by sale of all or substantially all of its oil and gas assets to any party, or by transfer of fifty percent or less of its working interest in a portion of the Sublease Agreement pursuant to a joint operating agreement under which CNR is operator. CNR agrees that it will not voluntarily relinquish its rights as operator under any such joint operating agreement without the express written consent of COLUMBIA; provided, however that the joint operating agreement will govern any nonvoluntary relinquishment of operatorship and COLUMBIA's consent will not be necessary.

**COMPLIANCE WITH LEASE PROVISIONS:** CNR hereby agrees to comply with all provisions contained in the COLUMBIA Leases herein sublet. In the event of conflict between the provisions of this Sublease Agreement and the COLUMBIA Leases herein sublet, the provisions of the COLUMBIA Leases shall control.

**ACCESS TO TITLE RECORDS:** COLUMBIA agrees to cooperate with CNR in good faith to allow CNR reasonable access, upon request, to non-privileged and non-confidential title abstracts, if any, pertaining to the Subleased Premises and non-privileged and non-confidential records maintained by COLUMBIA in the ordinary

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course of business which are necessary to adequately inform CNR of the status of title to the Subleased Premises.

**ENTIRE CONTRACT:** The entire agreement between COLUMBIA and CNR 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 Sublease Agreement.

**AMENDMENTS:** Any amendments to this Sublease Agreement shall be in writing and signed by duly authorized representatives of both parties.

**SUCCESSORS:** The terms and provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto, their successors, assigns, personal representatives and heirs, agents, affiliates, and any other party performing operations pursuant to this Agreement in partnership with or in association with CNR or at the direction of CNR.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement as of the day and year first above written.

COLUMBIA GAS TRANSMISSION CORPORATION

By: *Shoree Parks Downey*  
Name: Shoree Parks Downey  
Its: Manager, Field Services

COLUMBIA NATURAL RESOURCES, LLC

By: *Shawn E. Casey*  
Name: Shawn E. Casey  
Its: Vice President

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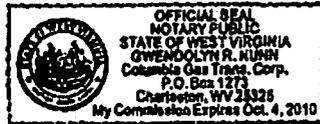
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STATE OF WEST VIRGINIA  
COUNTY OF KANAWHA, TO-WIT:

I, Gwen Nunn, a Notary Public of said County, do certify that Sherec Parks Downey, Manager of Columbia Gas Transmission Corp., who signed the writing hereto annexed, bearing date as of the 2nd day of September, 2004, for Columbia Gas Transmission, has this day in my said County, before me, acknowledged the same to be the act and deed of said corporation.

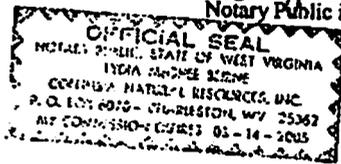
Given under my hand this 2nd day of September, 2004.  
My commission expires: October 4, 2010  
Gwendolyn R. Nunn  
Notary Public in and for said State and County



STATE OF WEST VIRGINIA  
COUNTY OF Kanawha TO-WIT:

I, Lidia Beirne, a Notary Public of said County, do certify that Graeme Power, Vice President of Columbia Natural Resources, LLC, who signed the writing hereto annexed, bearing date as of the 2nd day of September, 2004, for Columbia Natural Resources, LLC, has this day in my said County, before me, acknowledged the same to be the act and deed of said company.

Given under my hand this 2nd day of September, 2004.  
My commission expires: 4 March 14, 2005  
Lidia M Beirne  
Notary Public in and for said State and County



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VICTORY STORAGE

Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/Township	County/State	Recording Book/Co.
3002148	000	Wm. Merry Howard, et ux	Wheeling Natural Gas Co.	5/2/1903	5/5/1925	108	Liberty	Marshall/WV	117/120
3002150	000	M. A. Watson, et ux	Wheeling Natural Gas Co.	8/13/1904	8/13/1924	136	Liberty	Marshall/WV	117/110
3002161	000	Leta M. Holt, et al	TCO	3/9/1977	4/1/1997	106	Liberty	Marshall/WV	460/553
3002176	000	Frank Guilley, et ux	T. L. Davis	1/4/1906	1/4/1926	30	Liberty	Marshall/WV	132/551
3002189	000	W. J. Bonner, et al	Wheeling Natural Gas Co.	3/23/1908	3/23/1928	40	Liberty	Marshall/WV	129/221
3002190	000	Joseph R. Jones, et ux	Wheeling Natural Gas Co.	4/4/1905	4/4/1926	92	Liberty	Marshall/WV	129/109
3002203	000	William Hinkle, et ux	Wheeling Natural Gas Co.	6/18/1905	6/18/1928	200	Liberty	Marshall/WV	130/245
3002221	000	John P. Reid, et ux	Wheeling Natural Gas Co.	10/5/1906	10/6/1926	92	Liberty	Marshall/WV	130/281
3002231	000	Alfred Turner, et ux	Wheeling Natural Gas Co.	11/20/1908	11/20/1928	140	Liberty	Marshall/WV	130/327
3002238	000	Mary Hicks, et al	Wheeling Natural Gas Co.	12/17/1900	12/17/1926	106	Liberty	Marshall/WV	130/384
3002242	000	Elijah Aldman, et ux	Wheeling Natural Gas Co.	12/9/1908	12/9/1928	28	Liberty	Marshall/WV	130/435
3002267	000	J. R. Jones, et ux	Wheeling Natural Gas Co.	1/2/1910	1/2/1920	60	Liberty	Marshall/WV	132/623
3002272	000	George E. Fish, et al	VLAN	8/19/1959	8/19/1989	144	Liberty	Marshall/WV	328/256
3002282	000	D. A. Williams, et al	Clinton Oil & Gas Co.	1/28/1909	1/28/1929	50	Liberty	Marshall/WV	137/435

1 Exhibit A to Victory Sublease A's

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Lease No.	Subs	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/Township	County/State	Recording Book/No.
3002283	000	James M. Rine et al	E. C. Uerdsey	10/20/1909	10/20/1924	131	Liberty	Marshall/WV	137/425
3002285	000	George Chambers et ux	Clinton Oil & Gas Co	12/16/1908	12/16/1918	85	Liberty	Marshall/WV	137/428
3002290	000	J. P. Reed, et al	M.L.H.	10/18/1919	7/25/1920	90	Liberty	Marshall/WV	160/060
3002304	000	Lindsay Burley, et ux	W. C. Dawson	7/24/1902	7/24/1917	438	Liberty	Marshall/WV	38/411
3002866	000	Oss Garland	Wheeling Natural Gas Co	3/17/1898	5/17/1900	108	Liberty	Marshall/WV	30/189
3002870	000	Thomas Howard, et ux	M. C. Egbert	7/13/1899	7/13/1910	177	Liberty	Marshall/WV	67/83
3002876	000	Harry A. Brown, et ux	M.L.H.	1/30/1950	5/7/1950	57	Cherry Hill	Indiana/PA	391/301
3002881	000	Wiley Lewis, et al	J. L. Fisher	2/23/1903	2/23/1908	104	Liberty	Marshall/WV	103/389
3003020	000	T.D. Emery, et ux	Wheeling Natural Gas Co	8/13/1912	8/13/1917	50	Liberty	Marshall/WV	132/443
3004738	000	W. H. Loper, et ux	Wheeling Natural Gas Co	8/14/1912	8/20/1923	104	Liberty	Marshall/WV	132/483
3004830	000	W. C. Fish, et ux	Wheeling Natural Gas Co	11/19/1913	1/20/1919	64	Liberty	Marshall/WV	140/305
3004831	000	W. C. Fish, et al	Wheeling Natural Gas Co	11/19/1913	1/20/1919	64	Liberty	Marshall/WV	140/302
3005130	000	P. L. Ridd, et ux	M.L.H.	1/13/1914	11/13/1924	100	Liberty	Marshall/WV	143/246
3005443	000	A. L. Evans, et ux	Wheeling Natural Gas Co	4/18/1915	5/8/1930	80	Liberty	Marshall/WV	144/301
3005459	000	Louise A. Pyles, et ux	Wheeling Natural Gas Co	3/2/1915	5/13/1920	153	Liberty	Marshall/WV	144/604
3005585	000	Mary J. Riggs, widow, et al	Wheeling Natural Gas Co	3/4/1915	8/6/1925	48	Liberty	Marshall/WV	150/324 & 184/169
3005768	000	Itopo Reis, single	M.L.H.	4/28/1917	4/28/1951	115	Liberty	Marshall/WV	421/39

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VICTORY STORAGE

Lease No.	Acres	Leasee	Leases	Lease Date	Expiration Date	District/Township	County/State	Record/Book
3006170-000	120	J. P. Reis, et al	ML&H	12/16/1916	12/15/1916	Liberty	Marshall/WV	147/149
3006537-000	100	J. H. Traegarden, et ux	ML&H	6/31/1917	6/4/1922	Liberty	Marshall/WV	150/216
3006843-000	14	J. G. Gray, et al	ML&H	1/19/1918	3/23/1919	Liberty	Marshall/WV	150/558
3017167-000	100	Elizabeth Stall, widow	ML&H	10/19/1934	1/18/1938	Proctor	Wetzel/WV	28A/385
3018340-000	40	Rachel Yester, et al	ML&H	2/8/1937	4/10/1947	Liberty	Marshall/WV	203/457
3018338-000	40	Ralph Montgomery, et ux	ML&H	10/7/1937	1/12/1941	Proctor	Wetzel/WV	32A/188
3018599-000	187	Mary G. Hoffman, widow	ML&H	3/12/1964	3/12/1974	Proctor	Wetzel/WV	46/120
3018799-000	55	Harry E. Hoffman, et al	ML&H	4/16/1938	7/1/1943	Liberty	Marshall/WV	209/184
3018813-000	100	I. D. Franklin, et ux	ML&H	5/3/1938	6/3/1948	Liberty	Marshall/WV	209/188
3018811-000	48	Mary Howard, et al	ML&H	1/17/1963	1/17/1973	Liberty	Marshall/WV	363/387
3019708-000	21	Frank J. Estep, et al	ML&H	10/19/1960	1/17/1971	Proctor	Wetzel/WV	44A/280
3020246-000	28	I. D. Franklin, et al	ML&H	5/31/1961	11/3/1971	Liberty	Marshall/WV	342/149
3020336-000	68	Security Trust Company	ML&H	12/12/1961	1/5/1972	Liberty	Marshall/WV	354/35
3020636-000	16	Joseph J. Wagner, AIF, et al	ML&H	12/4/1962	1/12/1973	Proctor	Wetzel/WV	47A/216
3021039-000	104	Russell Gilbert, et al	ML&H	4/3/1963	6/13/1973	Proctor	Wetzel/WV	47A/373
3021192-000	29	F. E. Buchner, single	ML&H	1/7/1963	4/26/1973	Proctor	Wetzel/WV	47A/160

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/ Township	County/ State	Recording Book/Pg.
3021193	000	F. E. Buchner, single	ML&H	1/7/1963	4/26/1973	256	Proctor	Wetzel/ WV	47A/200
3021437	000	Raymond Burge, et al	ML&H	12/4/1959	4/20/1970	60	Liberty	Marshall/ WV	326/616
3021451	000	Citizen's Savings & Loan Co	ML&H	3/22/1965	5/24/1975	58	Liberty	Marshall/ WV	37A/279
3021456	000	Sadie M. Spragg, widow	ML&H	11/23/1939	1/22/1970	82	Liberty	Marshall/ WV	326/619
3021496	000	Olive P. Prendergast, widow	ML&H	8/5/1965	8/18/1976	42	Liberty	Marshall/ WV	375/413
3021730	000	F. B. Svert, et ux	ML&H	10/18/1960	1/23/1971	18	Proctor	Wetzel/ WV	44A/212
3021780	000	Richard E. Walker, et al	ML&H	7/1/1963	7/1/1973	57	Liberty	Marshall/ WV	383/186
3021817	000	E. J. Gump, et ux	ML&H	1/3/1968	8/15/1976	54	Cameron	Marshall/ WV	381/245
3021902	000	Ocie Neely, divorced	ML&H	2/27/1961	8/12/1971	100	Meade	Marshall/ WV	342/395
3026356	000	Clarence Yoho, et ux	ML&H	1/3/1962	2/15/1972	72	Liberty	Marshall/ WV	353/67
3026373	000	B. G. Weigand, single	ML&H	2/19/1962	3/28/1972	37	Proctor	Wetzel/ WV	45A/287
3026374	000	B. G. Weigand, single	ML&H	2/18/1962	3/28/1972	13	Proctor	Wetzel/ WV	45A/290
3026379	000	Harold H. Stansberry, widower	ML&H	1/9/1962	2/8/1972	30	Center	Wetzel/ WV	45A/170
3026380	000	Vern Stansberry, et ux	ML&H	1/8/1962	2/8/1972	60	Center	Wetzel/ WV	45A/173

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Lease No.	Suffix	Lessee	ML&H	Lease Date	Expiration Date	Acres	District	Township	County State	Recording Book/Co.
3026381	000	Harold R. Stansberry, widower	ML&H	1/3/1962	2/8/1972	80	Center		West/ WV	45A/349
3026382	000	O. W. Yeater, et al	ML&H	1/11/1962	2/12/1972	110	Center		West/ WV	47A/161
3026383	000	J. N. Pyles, et ux	ML&H	12/27/1961	2/11/1972	143	Center		West/ WV	46A/157
3026384	000	W. H. Hinkle, et al	ML&H	1/18/1962	2/12/1972	63	Center		West/ WV	45A/392
3026386	000	George N. Yoho, widower	ML&H	1/3/1962	2/13/1972	102	Liberty		Marshall/ WV	353/91
3026387	000	J. N. Pyles, et ux	ML&H	12/27/1961	2/11/1972	46	Liberty		Marshall/ WV	353/79
3026388	000	Iva B. Pyles, widow	ML&H	2/25/1970	15/28/1980	61	Liberty		Marshall/ WV	401/433
3026389	000	Clarence Yoho, et ux	ML&H	1/3/1962	2/13/1972	48	Liberty		Marshall/ WV	353/83
3026390	000	Clarence Yoho, et ux	ML&H	1/3/1962	2/13/1972	82	Liberty		Marshall/ WV	353/90
3026392	000	George N. Yoho, widower	ML&H	1/3/1962	2/13/1972	250	Liberty	Proctor	West/ & Marshall/ WV	253/103
3026393	000	George N. Yoho, widower	ML&H	2/13/1962	2/13/1962	30	Proctor		West/ WV	30A/182
3026394	000	George N. Yoho, widower	ML&H	1/3/1962	2/13/1972	105	Proctor		West/ WV	45A/238
3026395	000	Rhoda McDowell, et al	ML&H	1/22/1962	2/18/1972	129	Meado		Marshall/ WV	35A/40
3026400	000	George N. Yoho, et al	ML&H	2/13/1962	2/13/1962	33	Liberty		Marshall/ WV	272/174
3026401	000	O. C. Yoho, et ux	ML&H	1/4/1962	12/26/1972	80	Proctor		West/ WV	45A/208
3026402	000	George N. Yoho, et al	ML&H	1/3/1962	2/19/1972	75	Proctor		West/ WV	45A/203
3026403	000	O. C. Yoho, et ux	ML&H	1/4/1962	2/20/1972	10	Proctor		West/ WV	45A/202
3026404	000	O. C. Yoho, et ux	ML&H	1/4/1962	2/20/1972	195	Proctor		West/ WV	45A/233
3026421	000	Hazen H. Farr, et al	ML&H	12/11/1961	3/14/1972	165	Liberty		Marshall/ WV	353/215
3026422	000	Hazen H. Farr, et al	ML&H	12/11/1961	3/14/1971	140	Liberty		Marshall/ WV	353/97

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	District Area/Township	County/State	Recording Book/Pg.
3028423	000	Raymond Burge et ux	M. &H	1/16/1962	3/19/1972	36 Liberty	Marshall/WV	353/21
3028424	000	Roy Lough, et al	ML&H	2/19/1952	3/19/1962	144 Liberty	Marshall/WV	342/267
3028425	000	Roy Lough, et al	ML&H	1/9/1970	1/9/1980	88 Liberty	Marshall/WV	42/71
3028426	000	David Bonar, et al	ML&H	1/31/1957	3/19/1967	124 Liberty	Marshall/WV	309/154
3028427	000	Kenneth W. Mason, et al	ML&H	2/14/1952	2/28/1972	11-34 Center	Marshall/WV	46A/407
3028428	000	Elis O. Miller, et al	ML&H	1/8/1962	2/27/1972	93 Center	Marshall/WV	45A/178
3028430	000	Estel Miller, et al	ML&H	1/8/1962	2/29/1972	86 Center	Marshall/WV	47A/171
3028431	000	Elis O. Miller, et ux	ML&H	1/8/1962	2/27/1972	40 Center	Marshall/WV	48A/317
3028432	000	Elis O. Miller, et al	ML&H	1/8/1962	2/27/1972	20 Center	Marshall/WV	45A/183
3028433	000	Kenneth W. Mason, et al	M. &H	2/14/1952	2/28/1972	37 Center	Marshall/WV	46A/128
3028434	000	Elis O. Miller, et al	ML&H	1/9/1962	2/27/1967	86 Center	Marshall/WV	45A/187
3028435	000	James J. Postswall, et al	ML&H	1/17/1962	2/25/1972	66 Proctor	Marshall/WV	46A/255
3028436	000	F. C. Emch et al	ML&H	2/1/1962	2/27/1972	93 Proctor	Marshall/WV	47A/48
3028437	000	Ella Postethwan widow	ML&H	2/1/1962	2/25/1972	132 Proctor	Marshall/WV	45A/231
3028439	000	Mildred Pyle Strausser, et ux	M. &H	12/28/1961	2/25/1972	73-88 Liberty	Marshall/WV	353/83
3028440	000	Carrie E. Neady, divorced	ML&H	6/10/1970	6/10/1980	125-5 Center	Marshall/WV	52A/321
3028441	000	Ted A. Neely, et ux	ML&H	1/17/1962	2/28/1972	29-5 Proctor	Marshall/WV	45A/228
3028443	000	Sarah Jane Kingree, et ux	ML&H	3/22/1962	3/10/1972	120 Liberty	Marshall/WV	353/220
3028444	000	Sarah Jane Kingree, et ux	ML&H	3/22/1962	3/10/1972	35 Liberty	Marshall/WV	353/273
3028445	000	Sarah Jane Kingree, et ux	ML&H	3/22/1962	3/10/1972	60 Liberty	Marshall/WV	353/277
3028446	000	Sarah Jane Kingree, et ux	ML&H	3/22/1962	3/10/1972	13 Liberty	Marshall/WV	353/274

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Lease No.	Acres	Leasee	Lesser	Lease Date	Expiration Date	Acres	District	County	Recording Book/Pg.
3026446	000	Sarah Jane Kingree, et vr	ML&H	3/22/1962	3/10/1972	54	Liberty	Marshall/WV	353/228
3026451	000	Ivez Durig, et vr	ML&H	1/17/1962	3/2/1972	120	Proctor	Marshall/WV	45A/297
3026453	000	O. E. Burge, et ux	ML&H	2/14/1962	4/5/1972	88	Liberty	Marshall/WV	353/125
3026455	000	Clarence Hamman, et ux	ML&H	2/15/1962	3/6/1972	92	Marade	Marshall/WV	353/129
3026457	000	Otis Simmons, et al	ML&H	2/1/1962	3/6/1972	12.4	Proctor	Marshall/WV	45A/224
3026458	000	Otis Simmons, et al	ML&H	3/6/1962	3/6/1962	60	Proctor	Marshall/WV	38A/469
3026459	000	Otis Simmons, et al	ML&H	3/6/1962	3/6/1962	75	Proctor	Marshall/WV	38A/468
3026460	000	Harold S. Simmons, et ux	ML&H	1/31/1962	3/3/1972	86	Proctor	Marshall/WV	45A/220
3026463	000	Austin Miller, et al	ML&H	2/9/1962	2/26/1972	63	Proctor	Marshall/WV	45A/472
3026484	000	Otis Simmons, et al	ML&H	7/27/1970	7/27/1980	113	Proctor	Marshall/WV	32A/263
3026487	000	Joseph S. Doherty, et ux	ML&H	2/12/1962	3/10/1972	62	Proctor	Marshall/WV	45A/300
3026471	000	Ambrose Blatt, et al	ML&H	2/1/1962	3/10/1972	48	Proctor	Marshall/WV	45A/260
3026474	000	Cora A. Schelbhood, widow	ML&H	2/13/1962	3/12/1972	35	Proctor	Marshall/WV	40A/49
3026476	000	Abner W. Herrick, et al	ML&H	2/15/1962	3/12/1972	113	Proctor	Marshall/WV	45A/251
3026477	000	Olen N. Herrick, et ux	ML&H	2/13/1962	3/13/1972	104	Proctor	Marshall/WV	45A/248
3026483	000	Mazel Cora Teegarden, et vr	ML&H	3/20/1962	3/20/1962	100	Liberty	Marshall/WV	272/209
3026494	000	R. W. Evans, et al	ML&H	2/19/1962	3/5/1972	16	Liberty	Marshall/WV	353/133
3026487	000	Fred Estep, et al	ML&H	2/6/1962	3/15/1972	15	Proctor	Marshall/WV	45A/381
3026488	000	Joseph C. Wiegand, et al	ML&H	3/7/1962	3/18/1967	51	Proctor	Marshall/WV	45A/377
3026489	000	Leonard Wiegand, single	ML&H	2/20/1962	3/18/1972	100	Proctor	Marshall/WV	45A/387
3026490	000	Joseph C. Wiegand, et al	ML&H	3/7/1962	3/18/1967	75	Proctor	Marshall/WV	45A/375
3026492	000	Ida Bacc, et al	ML&H	2/28/1962	3/12/1972	96	Proctor	Marshall/WV	45A/423
3026494	000	Edward V. Blatt, et al	ML&H	2/20/1962	3/18/1967	08	Proctor	Marshall/WV	45A/310

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Lease No.	Serial	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/Township	County/State	Recording Book/Pg.
3028468	000	F. B. Sivert, et ux.	ML&H	3/1/1952	3/15/1972	140	Proctor	Wetzel/WV	45A/378
3028467	000	Fred Estes, single	ML&H	2/8/1952	3/15/1972	6	Proctor	Wetzel/WV	45A/241
3028468	000	Frank J. Estes, et al	ML&H	2/8/1952	3/15/1972	30	Proctor	Wetzel/WV	45A/217
3028500	000	George N. Yoho, widower	ML&H	3/19/1952	3/15/1962	128	Liberty	Marshall/WV	272/210
3028503	000	Hobson Teagarden, et al	ML&H	2/25/1952	2/25/1962	150	Liberty	Marshall/WV	272/222
3028504	000	Ray C. Horran, et al	ML&H	1/10/1952	3/8/1972	76	Proctor	Wetzel/WV	45A/314
3028507	000	Frank J. Estes, et al	ML&H	2/8/1952	3/15/1972	25	Proctor	Wetzel/WV	45A/214
3028509	000	Lovina Clark, et al	ML&H	3/15/1952	4/19/1972	34	Liberty	Marshall/WV	353/232
3028510	000	Jack Buzzard, et al	TCO	12/1/1993	12/1/2003	50	Liberty	Marshall/WV	060/316
3028511	000	L. F. Earnest, et al	ML&H	3/15/1952	4/23/1972	88	Liberty	Marshall/WV	353/205
3028512	000	B. G. Weigand, single	ML&H	2/19/1952	3/26/1972	38	Proctor	Wetzel/WV	45A/317
3028513	000	B. G. Weigand, et al	ML&H	2/19/1952	3/26/1972	28	Meade	Marshall/WV	353/137
3028516	000	Russell Gilbert, et ux.	ML&H	3/14/1952	4/3/1972	32	Proctor	Wetzel/WV	45A/427
3028517	000	Charles E. Miller, et al	ML&H	3/9/1952	4/2/1972	40	Proctor	Wetzel/WV	45A/431
3028528	000	T. J. Yoho, et al	ML&H	1/3/1952	3/19/1972	100	Liberty	Marshall/WV	353/141
3028530	000	G. T. Durg, et al	ML&H	1/4/1952	3/29/1972	77	Proctor	Wetzel/WV	45A/442
3028531	000	Be-Pa M. Kelley, et al	TCO	6/8/1994	6/8/2004	67	Proctor	Wetzel/WV	75A/73
3028532	000	Albert Kelley, et al	ML&H	3/14/1952	3/4/1972	129	Proctor	Wetzel/WV	45A/448
3028533	000	N. G. Miller, et ux.	ML&H	3/14/1952	4/6/1972	141	Meade	Marshall/WV	353/240
3028538	000	Estate of Joseph Shiben, et al	ML&H	2/20/1952	4/10/1972	38-3/4	Proctor	Wetzel/WV	45A/451
3028537	000	Catherine L. Baker, single	ML&H	3/22/1952	4/18/1972	125	Meade	Marshall/WV	353/244

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Lease No.	Route	Lessor	Leases	Lease Date	Expiration Date	Acres	County/Township	County/State	Recording Book/Pl.
3026530	000	Joseph M. Estep, et al	ML&H	1/27/1970	7/27/1980	40	Proctor	Wetzel/WV	62A/259
3026540	000	Estates of Joseph Shoben, et al	ML&H	2/20/1962	4/5/1972	35	Proctor	Wetzel/WV	46A/455
3026541	000	Elmer M. Wallace, et al	ML&H	4/9/1962	5/3/1968	11	Liberty	Marshall/WV	353/281
3026545	000	George N. Yoho, et al	ML&H	1/3/1962	3/18/1972	35	Proctor	Wetzel/WV	45A/421
3026546	000	George N. Yoho, et al	ML&H	1/3/1962	3/18/1972	56	Proctor	WV/Wetzel	46A/325
3026547	000	George N. Yoho, et al	ML&H	3/18/1962	3/18/1962	30	Proctor	WV/Wetzel	43A/119
3026548	000	George N. Yoho, et al	ML&H	1/3/1962	3/18/1972	33	Proctor	WV/Wetzel	46A/329
3026550	000	T. J. Yoho, et al	ML&H	1/3/1962	3/18/1972	30	Liberty	Marshall/WV	353/143
3026551	000	Charles W. Carr, et ux	ML&H	3/22/1962	4/25/1972	140	Meade	Marshall/WV	353/248
3026565	000	Lula Mackey, et al	ML&H	4/2/1952	5/29/1962	50	Liberty	Marshall/WV	272/241
3026561	000	O.E. Burge, et al	ML&H	3/29/1962	5/31/1972	102	Liberty	Marshall/WV	353/236
3026563	000	Astrida Pylos, et vr	ML&H	3/13/1962	4/28/1972	20	Liberty	Marshall/WV	353/571
3026570	000	Cleo G. Howard, et vr	ML&H	4/30/1952	5/15/1962	200	Liberty	Marshall/WV	272/260
3026573	000	Zona Taylor, widow	ML&H	4/5/1962	5/5/1972	25	Proctor	Wetzel/WV	43A/475
3026568	000	Talco Jackson, widow	ML&H	4/28/1962	5/16/1972	78	Proctor	WV/Wetzel	45A/478
3026567	000	Andrew Stein, widower	ML&H	5/18/1952	5/19/1962	130	Meade	Marshall/WV	272/265
3026588	000	Paulo Yoho, et al	ML&H	4/28/1962	5/15/1972	133	Meade	Marshall/WV	380/252
3026589	000	James P. Reed, et ux	ML&H	5/1/1962	6/16/1972	60	Liberty	Marshall/WV	353/383
3026590	000	James P. Reed, et ux	ML&H	6/1/1962	6/16/1972	88	Liberty	Marshall/WV	353/387
3026600	000	C. F. Herman, et ux	ML&H	3/1/1962	5/27/1972	60	Proctor	WV/Wetzel	45A/367

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	District Area	County Township	Recording Book/Pg.
3026601	000	Wilard C. Homan, single	ML&H	3/1/1962	5/27/1972	4C	Proctor WV	46A/459
3026603	000	Nelson M. Richards, et al.	ML&H	5/2/1962	6/16/1972	04	Liberty Marshall WV	353/463
3026604	000	Curtis E. Taylor, et al.	ML&H	4/5/1962	6/6/1972	80	Proctor Marshall WV	46A/327
3026623	000	Russell G. Sommers, et al.	ML&H	3/7/1962	6/12/1972	81	Center Marshall WV	46A/322
3026624	000	Clyde F. Miller, et al.	ML&H	3/22/1962	4/30/1972	14	Center Marshall WV	45A/482
3026625	000	Clyde E. Miller, et al.	ML&H	3/22/1962	4/30/1972	44	Center Marshall WV	45A/457
3026647	000	Jessie F. Berisford, et al.	ML&H	6/15/1962	6/30/1972	17	Liberty Marshall WV	353/382
3026660	000	Cedric Judy Schaefer, widow	ML&H	6/28/1962	6/14/1972	26	Proctor Marshall WV	46A/411
3026681	000	Edward A. Neuman, et al.	ML&H	6/28/1962	7/3/1972	182	Proctor Marshall WV	47A/67
3026686	000	Wilbert A. Hohman, et ux.	ML&H	6/13/1962	8/20/1967	16	Proctor Marshall WV	46A/314
3026706	000(D)	Myrl E. Gilbert, et ux.	ML&H	3/10/1958	N/A	21	Meade Marshall WV	328/214
3026714	000	Lee E. McCleary, et al.	ML&H	7/23/1962	9/30/1972	500	Liberty Marshall WV	353/466
3026726	000	J. D. Rush, et al.	ML&H	4/26/1962	6/25/1972	16	Proctor Marshall WV	47A/58
3026729	000	Isabel Fowler, et al.	ML&H	9/29/1962	10/10/1972	13	Liberty Marshall WV	361/573
3026731	000	Olive Prendergast, widow	ML&H	11/5/1962	10/17/1972	66	Liberty Marshall WV	360/341
3026745	000	Thomas Lamont Buzzard, et al.	ML&H	5/14/1962	7/2/1972	104	Liberty Marshall WV	353/456
3026746	000	Ella Wetling, et al.	ML&H	8/11/1962	10/25/1972	138	Liberty Marshall WV	358/218
3026747	000	Agnes Prendergast, widow	ML&H	1/13/1964	2/5/1974	72	Liberty Marshall WV	371/110
3026751	000(D)	Myrl E. Gilbert, et ux.	ML&H	3/10/1958	N/A	54	Meade Marshall WV	328/214
3026758	000	J. D. Rush, et al.	ML&H	4/26/1962	6/25/1972	60	Proctor Marshall WV	47A/113
3026759	000	C. T. White, et al.	ML&H	8/13/1962	9/7/1972	53	Proctor Marshall WV	47A/63

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Lease No.	Subs	Lessor	Lessee	Lease Date	Expiration Date	Acres	District	County	Recording Book/Pl.
3026700	000	Cora Gosney, et al	ML&H	8/10/1960	10/30/1970	156	Liberty	Marshall WV	342/258
3026768	000	G. W. Mathews, et al	ML&H	6/7/1962	7/20/1972	49	Liberty	Marshall WV	353/418
3026802	000	Emma M. Springer, Co. et al	ML&H	7/7/1954	7/7/1964	91.08	Liberty	Marshall WV	299/100
3026807	000	Wilbur Whetkey, et al	ML&H	9/18/1962	11/28/1972	81	Liberty	Marshall WV	350/234
3026811	000	Gene Perrott, et al	ML&H	11/15/1952	11/15/1962	84	Liberty	Marshall WV	272/347
3026812	000	Thomas Lemont Buzzard, et al	ML&H	5/14/1962	8/20/1972	170	Liberty	Marshall WV	353/451
3026833	000	Harold Koentz, et ux	ML&H	10/2/1962	12/8/1972	75	Liberty	Marshall WV	350/239
3026870	000	John Baker, et al	ML&H	10/23/1962	11/28/1972	65	Condon	Marshall WV	47A/119
3026890	000	Albert F. Espap	ML&H	12/3/1962	1/2/1973	3.44	Proctor	Marshall WV	47A/213
3026900	000	Aushe Carney, et al	ML&H	3/22/1962	11/5/1972	153	Meade	Marshall WV	383/18
3026915	000	Pauline V. Dever, widow	ML&H	12/11/1962	2/3/1973	12	Liberty	Marshall WV	350/346
3026917	000	Roy J. Goddard, et al	ML&H	10/1/1963	2/7/1973	172	Proctor	Marshall WV	47A/107
3026921	000	Omar Wilson Boner, et al	ML&H	11/4/1970	11/4/1980	133	Liberty	Marshall WV	417B
3026932	000	John A. McClelland, et al	ML&H	12/17/1962	2/4/1973	14	Liberty	Marshall WV	350/333
3026938	000	William H. Terrie, et ux	ML&H	12/15/1962	2/27/1973	10.1	Liberty	Marshall WV	350/337
3026953	000	(See 3026953-001 below) Wynne L. Howard, et al	Guy B. Patterson	2/28/1928	2/20/1937	100	Liberty	Marshall WV	166/430
3026954	000	Clare Connelly	Guy B. S. A. O. Patterson	6/13/1945	6/13/1950	65	Liberty	Marshall WV	227/254
3026982	000	Alta Cuddey, et al	ML&H	3/14/1953	3/14/1963	4	Liberty	Marshall WV	272/389

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Lease No.	Acres	Lessor	Lessee	Lease Date	Expiration Date	District	County	Recording Book/Pg.
3020963000		F. E. Buchner, et al	ML&H	1/7/1993	2/8/1973	120 Proctor	Marshall WV	47A/276
3020967000		Herbert Matthews, et al	ML&H				Marshall WV	
3020978000		Raymond D. Nation, et ux Macedonia Methodist	ML&H	2/5/1963	3/14/1973	49 Liberty	Marshall WV	361/483
3027152000		Episcopal Church Trustees	ML&H	5/20/1970	5/23/1980	10 Proctor	Marshall WV	52A/269
3027261000		William Woodbury, et ux	ML&H	7/3/1963	8/25/1973	1 Center	Marshall WV	48A/89
3027290000		Wizard Hamman, single	ML&H	3/2/1967	3/2/1977	142-1/2 Liberty	Marshall WV	381/365
3027339000(D)		Henry Ebert, single	ML&H	10/1/1983	8/27/1973	91 Center	Marshall WV	47A/478
3027440000		T. J. Yoho, et ux	ML&H	5/8/1958	NA	15 Proctor	Marshall WV	
3027441000		C. F. Herrick, single	ML&H	10/15/1965	7/19/1975	120 Proctor	Marshall WV	48A/481
3027442000		Edward Earl, et al	ML&H	10/19/1960	4/17/1971	131 Proctor	Marshall WV	44A/218
3027444000		Iva Louise Rose Ella Guardian	ML&H	10/19/1960	4/17/1971	130 Proctor	Marshall WV	44A/220
3027445000		Iva Gray, et al	ML&H	2/3/1968	7/12/1978	20 Center	Marshall WV	48A/167
3027447000		Oscar McDowell, et ux	HNG	5/5/1960	1/17/1970	53 Proctor	Marshall WV	44A/1
3027448000		Mary Allen, et ux	HNG	4/17/1916	4/17/1926	188 Meade	Marshall WV	147/321
3027451000		William Schaler, widower	HNG	4/17/1916	4/17/1926	160 Meade	Marshall WV	147/287
3027454000		H. N. Johnson, et ux	Earl M. Hammen	1/14/1938	4/17/1948	75 Proctor	Marshall WV	30A/468
3027480000		G. Logsdon, et al	Thomas D. Conaway	4/9/1916	4/9/1926	67 Center	Marshall WV	5A/349
3027481000		Mary Louise Siegenhaster et al	ML&H	4/17/1916	4/17/1926	8 Liberty	Marshall WV	147/282
3027533000		Victor Lee Richmond, et ux	ML&H	12/13/1965	1/28/1976	17 Center	Marshall WV	49A/7
3027534000		Victor Lee Richmond, et ux	ML&H	11/6/1963	12/7/1973	37 Meade	Marshall WV	383/381
3027561000		Carl S. Ferris, et al	ML&H	11/6/1963	12/17/1973	50 Meade	Marshall WV	303/371
3027574000		William H. Hinkle, et ux	ML&H	12/28/1963	1/27/1974	1 Proctor	Marshall WV	48A/124
				1/21/1984	3/24/1974	18 Liberty	Marshall WV	363/447

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	Acres	District Township	County State	Recording Book/PG.
3027576	000	W. R. Kincaid, et al	ML&H	1/14/1964	1/14/1984	19	Liberty	Marshall WV	272/497
3027584	000	Hermis R. Yeater et al	ML&H	1/15/1964	3/2/1974	10	Liberty	Marshall WV	363/451
3027594	000	Wida Pele Sisco, et al	ML&H	1/15/1964	2/29/1974	24	Liberty	Marshall WV	363/455
3027596	000	C. A. Ramsey, et al	ML&H	12/5/1963	12/7/1973	3	Center	Waynes WV	48A/467
3027597	000	Austie Robinson, widow	ML&H	7/17/1963	5/3/1973	18	Proctor	Waynes WV	47A/476
3027617	000	Hermis R. Yeater	ML&H	1/15/1964	5/8/1974	314	Liberty	Marshall WV	363/469
3027618	000	Hermis R. Yeater	ML&H	1/15/1964	5/8/1974	40	Liberty	Marshall WV	363/483
3027622	000	J. N. Pyles, et al	ML&H	8/19/1964	8/15/1974	10	Liberty	Marshall WV	371/130
3027644	000	George N. Yoho, widower	ML&H	11/26/1963	5/31/1974	113	Liberty	Marshall WV	367/117
3027645	000	George N. Yoho, widower	ML&H	11/26/1963	5/31/1974	142	Liberty	Marshall WV	367/113
3027646	000	George N. Yoho	ML&H	5/31/1964	5/31/1964	26	Liberty	Marshall WV	298/63
3027647	000	George N. Yoho	ML&H	5/31/1964	5/31/1964	140	Liberty	Marshall WV	298/66
3027648	000	George N. Yoho, widower	ML&H	5/31/1964	5/31/1964	54	Liberty	Marshall WV	298/71
3027669	000	G. M. Ernest, et al	ML&H	6/30/1964	7/18/1974	11	Liberty	Marshall WV	371/322
3027674	000	Nettie M. Chambers, et al	ML&H	7/6/1964	7/20/1974	7	Liberty	Marshall WV	371/331
3027697	000	W. J. Booher, et al	ML&H	7/22/1970	7/22/1980	80	Liberty	Marshall WV	491/473
3027701	000	Ralph W. Evans, et al	ML&H	5/15/1964	5/19/1964	299	Liberty & Center	Marshall & Wayne WV	298/227 41A/297
3027729	000	Irma E. Lyon, et al	ML&H	8/3/1964	8/15/1974	63	Center	Waynes WV	48A/109

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	District/ Acres	Township	County/ State	Recording Book/Pg.
3027739	000	Irma E. Lyon, et al	ML&H	8/5/1964	8/15/1974	60	Liberty	Marshall/ WV	371/335
3027744	000	Fred R. Adams, et ux	ML&H	8/17/1964	8/20/1974	60	Center	Wetzel/ WV	48A/211
3027745	000	Fred R. Adams, et ux	ML&H	8/17/1964	8/20/1974	70	Center	Wetzel/ WV	48A/237
3027746	000	Fred R. Adams, et ux	ML&H	8/17/1964	8/20/1974	6	Center	Wetzel/ WV	48A/207
3027747	000	J. N. Pyles, et ux	ML&H	8/9/1964	8/20/1974	44	Center	Wetzel/ WV	48A/203
3027758	000	Randolph Chambers, et al	ML&H	3/21/1964	6/21/1974	48	Liberty	Marshall/ WV	371/135
3027762	000	Harold L. Koonz, et al	ML&H	4/28/1965	5/15/1975	18	Liberty	Marshall/ WV	375/269
3027773	000	Kathryn Gillingham, et al	ML&H	9/8/1964	9/15/1974	27	Liberty	Marshall/ WV	371/52b
3027792	000	Josephine F. Faust, et al	ML&H	11/16/1964	11/16/1974	10	Liberty	Marshall/ WV	375/545
3027806	000	Flora Grinstead, et al	ML&H	11/16/1964	11/16/1974	6	Liberty	Marshall/ WV	371/581
3027820	000	Alton Bruce Miller, et al	ML&H	10/5/1964	10/10/1974	40	Center	Wetzel/ WV	48A/325
3027821	000	Alton Bruce Miller, et al	ML&H	10/5/1964	10/10/1974	70	Center	Wetzel/ WV	48A/332
3027832	000	John P. Franklin, et al	ML&H	12/10/1964	12/15/1974	30	Liberty & Center	Marshall & Wetzel/ WV	48A/375
3027862	000	R. G. Cumpston, et ux	ML&H	12/8/1964	12/20/1974	1	Liberty	Marshall/ WV	371/586
3027880	000	Clarence Chambers, et al	ML&H	1/11/1965	2/15/1975	33 77	Liberty	Marshall/ WV	375/184
3027881	000	Clarence Chambers, et al	ML&H	1/11/1965	2/15/1975	53	Liberty	Marshall/ WV	375/164
3027882	000	Clarence Chambers, et al	ML&H	1/11/1965	2/15/1975	44	Liberty	Marshall/ WV	375/149

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/Terrahia	County/State	Recording Book/Pg.
3027908	000	Elmer Rosseger, et ux	ML&H	2/8/1965	3/1/1975	2.148	Liberty	Marshall/WV	375/169
3027909	000	Elmer Rosseger, et ux	ML&H	2/8/1965	3/1/1975	8	Liberty	Marshall/WV	376/173
3027945	000(DY)	Winnie F. Bromer, et al	ML&H	7/6/1958	N/A	97.068	Liberty	Marshall/WV	340/263
3027950	000	J. N. Pyra, et al	ML&H	1/5/1955	3/5/1965	42	Liberty	Marshall/WV	299/485
3027960	000	Olga J. Yoho, et al	ML&H	3/15/1965	4/1/1975	122	Liberty	Marshall/WV	375/211
3027981	000	Olga J. Yoho, et al	ML&H	3/15/1965	4/1/1975	44	Liberty	Marshall/WV	375/215
3028025	000	George N. Yoho, et ux	Valley Run Oil and Gas Co	1/19/1929	1/10/1931	107	Liberty & Meade	Marshall/WV	187/916
3028028	000	George N. Yoho, widower	ML&H	5/30/1965	8/30/1965	37.6	Liberty	Marshall/WV	309/61
3028027	000	Valley Run Oil and Gas Co	ML&H	6/24/1955	6/24/1965	7	Liberty	Marshall/WV	298/482
3028028	000	J. R. Crum, et ux	E. H. Cummings & Bros.	1/5/1903	1/5/1908	100	Liberty	Marshall/WV	89/259
3028043	000	Edna Whitatch, et vir	ML&H	3/3/1965	6/30/1975	53	Liberty	Marshall/WV	376/223
3028158	000	W. J. Booher, et al	ML&H	11/2/1965	12/15/1975	2	Liberty	Marshall/WV	381/217
3028238	000	W. J. Booher, et al	ML&H	11/2/1965	12/15/1975	50	Liberty	Marshall/WV	381/204
3028375	000	W. J. Booher, et al	ML&H	11/2/1965	3/1/1975	72	Liberty	Marshall/WV	381/231
3028364	000	James B. Whitatch, et ux	ML&H	11/1/1965	2/7/1975	5	Liberty	Marshall/WV	381/183
3028900	000	T. C. Pipes, et al	S. B. Kefy	2/8/1913	2/8/1923	139	Liberty	Marshall/WV	148/491
3028901	000	W. H. Loper, et ux	T. L. Davis	1/28/1913	1/28/1923	100	Liberty	Marshall/WV	148/480

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/Township	County/State	Recording Book/No.
3028902	000	C. F. Comady, et ux	T. L. Davis	1/20/1913	1/20/1923	70	Liberty	Marshall/WV	148/487
3028904	000	Levi Rush, et al	Carnegie Natural Gas Co	7/3/1916	7/3/1921	33	Liberty	Marshall/WV	150/426
3028905	000	Tom Gens, et ux	Thomas D. Conway	10/13/1916	10/13/1916	26	Liberty	Marshall/WV	150/438
3028908	000	Mrs. T. J. Cole, et al	Edmond M. Conway	12/22/1916	12/22/1926	70	Liberty	Marshall/WV	150/454
3028909	000	W&am Gorby, et ux	J. L. Phillips	12/17/1917	12/17/1927	50	Liberty	Marshall/WV	150/456
3028910	000	F. R. Reynolds, et al	J. W. Miller	11/15/1915	11/15/1925	69	Liberty	Marshall/WV	148/33
3028911	000	Mary M. Marshall, et al	Carnegie Natural Gas Co	4/28/1917	4/28/1922	60	Liberty	Marshall/WV	150/459
3028912	000	C. E. Yeator, et ux	Carnegie Natural Gas Co	4/30/1917	4/30/1927	70	Liberty	Marshall/WV	43/461
3028914	000	S. N. Cole, et ux	Carnegie Natural Gas Co	10/14/1925	10/14/1930	27.6	Liberty	Marshall/WV	03/63
3028915	000	R. E. S. Simmons, et ux	Carnegie Natural Gas Co	3/30/1932	3/30/1937	33	Proctor	Marshall/WV	27A/150
3028919	000	Aurle Robinson, widow, et al	ML&H	1/28/1950	7/16/1970	100	Meade	Marshall/WV	342/47
3028920	000	Stella Robinson, widow, et al	ML&H	1/28/1950	7/16/1970	200	Meade	Marshall/WV	342/51
3028921	000	Milford Richmond, widower	ML&H	2/10/1950	7/10/1970	125	Meade	Marshall/WV	342/55
3028922	000	Milford Richmond, widower	ML&H	2/10/1950	7/10/1970	60	Meade	Marshall/WV	342/62
3028964	000	Glenn W. Hamilton, et ux (undivided 117/289)	ML&H	11/27/1964	11/27/1974	8	Liberty	Marshall/WV	375/61
3029418	000	O. E. Barge, et al	ML&H	5/27/1968	5/29/1978	70	Meade	Marshall/WV	395/586
3029418	000	Anne Leona Goddard's widow (See Comments)	ML&H	5/8/1967	8/5/1977	288	Proctor	Wetzel/WV	48A/393
3029781	000	Samuel F. Goddard, et ux	ML&H	8/14/1968	8/14/1978	20	Proctor	Wetzel/WV	51A/313
3029943	000	R. E. Matthews	ML&H	8/17/1958	8/17/1968	4	Liberty	Marshall/WV	328/141

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Lease No.	Subj	LESSOR	LESSEE	Lease Date	Expiration Date	Acres	District/ Townships	County/ State/ Marshals/ WV	Record No. Book/ Pg.
3030998	000(D)	J. Richard Woyt, et ux	ML&H	9/18/1958	N/A	50	Liberty	Marshall/ WV	333/75
3030248	000	Curta Rush, et al	ML&H	3/15/1962	3/17/1972	13	Proctor	Marshall/ WV	48A/124
3030906	000	Oscar Goodnight, et ux	ML&H	8/18/1959	8/1/1969	49	Liberty	Marshall/ WV	328/309
3030907	000	Maudie Howard, et al	ML&H	8/18/1959	8/1/1969	16	Liberty	Marshall/ WV	328/309
3030512	000	Evanna Clouston Bennington et al	ML&H	9/11/1959	10/1/1969	100	Liberty	Marshall/ WV	326/481
3030513	000	Evanna Clouston Bennington, et al	ML&H	9/11/1959	10/1/1969	88	Liberty	Marshall/ WV	326/488
3030562	000	James J. Postborski, et al	ML&H	6/7/1969	8/15/1969	60	Proctor	Marshall/ WV	451/354
3030612	000	Edward C Walker, et al	ML&H	4/23/1959	6/15/1969	83	Liberty	Marshall/ WV	328/505
3030013	000	William H. Hinkle, et al	ML&H	4/10/1959	11/19/1969	20	Liberty	Marshall/ WV	326/528
3030814	000	Roy W. Dowler, et al	ML&H	2/17/1960	11/15/1970	55	Liberty	Marshall/ WV	342/183
3030619	000(D)	Albert Johnson et al	ML&H	8/17/1957	N/A	117	Liberty & Conser	Marshall/ WV	325/245
3031030	001	Thelma L. McEwen, et al	ML&H	11/25/1960	1/2/1971	16	Liberty	Marshall/ WV	342/378
3031490	000(D)	John Ean Buley, widower	ML&H	11/8/1962	N/A	112	Liberty	Marshall/ WV	358/35
3031820	000(D)	Amy F. Ames, et ux	ML&H	8/28/1968	N/A	287	Proctor	Marshall/ WV	231/419
3031820	000(D)	Lawrence Simmons, widower	ML&H	10/2/1963	N/A		Proctor	Marshall/ WV	211/318
3031821	000(D)	Robert Blair Simmons, et ux	ML&H	8/25/1968	N/A	31	Proctor	Marshall/ WV	231/415
3031821	000(D)	Amy F. Ames, et ux	ML&H	8/28/1968	N/A		Proctor	Marshall/ WV	211/313
3031821	000(D)	Lawrence Simmons, widower	ML&H	10/2/1963	N/A		Proctor	Marshall/ WV	273/9
3032051	000(D)	W. E. Franklin, et al	F. Buley	2/7/1924	2/7/1927	100	Liberty	Marshall/ WV	303/293
3032053	000	Madge Moore et al	ML&H	7/31/1958	7/31/1968	16.48	Liberty	Marshall/ WV	

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Lease No.	Suffix	Lessor	Lessee	Lease Date	Expiration Date	Acres	District/Township	County/State	Recording Book/Pg.
3030625	000	Catherine A. Rush, widow	ML&H	11/17/1959	11/30/1969	11	Liberty	Marshall/WV	326/536
3030839	000	Berta D. Pipes, et al	ML&H	1/9/1960	11/30/1969	11	Liberty	Marshall/WV	326/672
3030881	000	Nettie Buzzard, et al	ML&H	5/7/1950	1/1/1970	43	Liberty	Marshall/WV	342/217
3030956	000	Merrill G. Allen, et al	ML&H	11/15/1960	9/30/1970	12	Center	Wetzel/WV	44A/245
3031016	000	D. E. Richmond, et ux	ML&H	11/17/1960	12/1/1970	80	Liberty	Marshall/WV	342/341
3031029	000	Thelma L. McElwee, et al	ML&H	11/4/1960	1/2/1971	11	Liberty	Marshall/WV	342/374
3031030	000	United National Bank (50%)	TCO	10/1/1959	10/1/2009	15.62	Liberty	Marshall/WV	612/255
3031049	000	Thelma L. McElwee, et al	ML&H	1/4/1960	1/2/1971	34	Liberty	Marshall/WV	342/382
3031092	000	Maud Davis Gregory, Committee	The Cameron Heat and Light Company	7/10/1930	7/10/1933	150	Liberty	Marshall/WV	190/562
3031093	000	H. H. Pipes, et ux (1/2 Interest)	ML&H	3/6/1933	3/6/1943	45	Liberty	Marshall/WV	108/341
3031095	000	Hanne Stricklin	The Cameron Heat and Light Company	11/14/1907	12/14/1907	5	Liberty	Marshall/WV	130/74
3031195	000	Eleanor Reynolds Hennen, et al	ML&H	6/16/1961	6/30/1971	27	Liberty	Marshall/WV	342/426
3031268	000	Elis O. Miller, et ux	ML&H	7/1/1961	8/1/1971	100	Center	Wetzel/WV	44A/474
3031243	000	Marvin L. Fair, et al	ML&H	7/14/1961	10/30/1971	22.54	Liberty	Marshall/WV	342/462
3031253	000	James H. Wade, et al	ML&H	8/27/1961	8/15/1971	7	Liberty	Marshall/WV	342/479
3031267	000	Appalachian Royalties, Inc.	ML&H	6/22/1961	6/15/1971	54	Liberty	Marshall/WV	342/498
3031348	000	Bessie L. Stansberry, et vir	ML&H	1/16/1962	1/16/1972	65	Center	Wetzel/WV	45A/333
3031349	000	Bessie L. Stansberry, et vir	ML&H	1/16/1962	1/16/1972	12	Center	Wetzel/WV	45A/353
3031350	000	Bessie L. Stansberry, et vir	ML&H	1/16/1962	1/16/1972	5	Center	Wetzel/WV	45A/336

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Lease No.	Acres	Lessee	Lesser	Lease Date	Expiration Date	Acres	District	County	Record No
3031351	000	Beacie L. Stansberry, et wt	ML&H	1/16/1962	1/16/1972	68	Center	Wetzel WV	45A/339
3031370	000	O. E. Burge, et al	ML&H	2/14/1962	3/19/1972	14	Liberty	Marshall WV	353/201
3031373	000	Luzile Allen, et al	ML&H	11/30/1961	12/1/1972	18.13	Liberty	Marshall WV	353/252
3031374	000	Roscoe Fabr, et al	ML&H	11/27/1961	1/2/1972	21.85	Liberty	Marshall WV	353/299
3031375	000	Ernie J. Ramsey, et al	ML&H	2/20/1962	2/28/1972	18-6/18	Center	Wetzel WV	45A/363
3031376	000	Ernie J. Ramsey, et al	ML&H	2/20/1962	2/28/1972	15	Center	Wetzel WV	45A/359
3031490	000	Edwin Hohman, single	ML&H	10/18/1962	11/10/1972	25	Proctor	Wetzel WV	47A/79
3031497	000	Edwin Hohman, single	ML&H	10/18/1962	11/10/1972	39	Proctor	Wetzel WV	47A/76
3031498	000	Clem J. Hohman, et ux	ML&H	10/18/1962	11/10/1972	63	Proctor	Wetzel WV	47A/72
3031499	000	Clem J. Hohman, et ux	ML&H	10/18/1962	11/10/1972	71	Proctor	Wetzel WV	47A/43
3031503	000	Joseph J. Wagner AIF, et al	ML&H	12/4/1962	1/12/1973	60	Proctor & Meade	Wetzel & Marshall	47A/124
3040333	000	Jack R. Buzzard, et al	TCO	3/7/2000	3/7/2010	5	Liberty	Marshall WV	619/602
3175665	000	Harold L. Kooniz, et al	TCO	7/3/1974	7/3/1984	98	Camden	Marshall WV	448/73
3175732	000	Ralph W. Evans, et al	TCO	8/15/1974	8/15/1984	25	Liberty	Marshall WV	448/121
3175733	000	Ralph W. Evans, et al	TCO	8/15/1974	8/15/1984	26	Liberty & Center	Marshall & Wetzel WV	448/125
3183478	000	O. E. Burge, et al	TCO	10/6/1979	10/9/1989	158	Liberty	Marshall WV	478/583
3194165	000	Sarah Jean Chambers, et al	TCO	5/28/1992	5/28/2002	20.7	Liberty	Marshall WV	668/134
3196360	000	Pythia J. Holt, et al	TCO	12/14/1994	12/14/2004	141	Liberty	Marshall WV	568/572

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Exhibit B

COLUMBIA GAS TRANSMISSION CORPORATION

PROCEDURE FOR  
DRILLING, COMPLETING AND PLUGGING PRODUCTION WELLS  
IN THE VICTORY A AND B STORAGE FIELDS

1. The Sublease Zone referred to in this agreement is all formations, excluding the formations currently being reserved or operated by COLUMBIA for storage.
2. The Storage Zone, or reservoir, referred to in this agreement is known as the Big Injun and Maxton formations, being more particularly described as that stratigraphic interval from 250 feet above the top of the Greenbrier Limestone (inclusive of all Maxton sands ) to 50 feet below the base of the Pocono Big Injun formation.
3. Operator agrees that, thirty (30) days prior to drilling a well on any subject lease, he will notify the Manager, Engineering Services-Storage, Columbia Gas Transmission Corporation, P. O. Box 1273, Charleston, West Virginia 25325-1273, by certified mail, with a plat showing the well's surface and bottomhole locations, surface elevation and its projected total true vertical depth.
4. For all wells drilled on subject leases, Columbia must agree to, and approve, all locations (both surface and bottom hole) and operator's well(s) must remain within the approved locations. Any changes to a pre-approved location must be agreed to by Columbia in writing prior to drilling any wells. If any well is found to be located outside of the approved location (both surface and bottom hole), the operator may be required to plug the well or sell the well to Columbia at cost.
5. In the event that Operator proposes to drill any well to the sublease zone, the following procedure will be in effect:
  - a. Operator will furnish Columbia a well drilling and completion procedure, thirty (30) days in advance of drilling, for approval by Columbia on that portion of the well that affects the sublease zone and Columbia's storage zone.
  - b. Forty-eight (48) hours prior to spudding a new well, as well as 48 hours prior to the drilling reaching the storage zone, the Operator is to notify, by telephone, both of the following Columbia Gas Transmission Corporation representatives:

(1) John V. McCallister  
Work: 304-373-2412  
Home: 304-863-0045  
Cell: 304-549-9894

(2) Paul C. Arnick  
Work: 304-357-3445  
Home: 304-755-5052

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Cell: 304-545-5052

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Columbia plans to have a representative present during the period the sublease zone and Columbia's storage zone are being drilled and the casing is being cemented.

- c. Operator shall have a minimum 2000 psi working pressure double ram blow out preventer (with a remote hydraulic closing unit) installed and tested before penetrating the sublease zone and Columbia's storage zone. Operator may encounter pressures in the storage zone as high as 800 psig (surface).
- d. Operator shall make every reasonable effort to prevent the loss of excessive drilling fluid into the sublease zone and Columbia's storage zone.
- e. At Columbia's expense, Columbia reserves the right to run logs, test, core, and otherwise evaluate the storage zone and sublease zone interval described above. Operator will be reimbursed for the contracted day rate associated with the formation evaluation.
- f. Operator shall have sufficient casing cemented in the well to control the estimated maximum storage zone pressure of 800 psig (surface). Centralizers will be run every 40 feet from the bottom of the casing to 200 feet above the storage zone. The casing shall be cemented with expanding-type cement, which, at 110 degrees Fahrenheit, will reach a calculated compressive strength of 2000 PSI prior to resuming drilling operations. Cement fill required to provide minimum protection of the storage zone would be 500 feet above the storage zone. Operator will wait on cement to cure the minimum amount of time required for the slurry used to reach a compressive strength of 2000 PSI. Operator will demonstrate by cement bond log evaluation that cement integrity exists over the cemented interval and the storage zone is adequately protected. Cement bond log (CBL) analysis will minimally include a gamma ray collar locator log for depth control, an attenuation-type log to measure cement-to-pipe bond, and a variable density log (VDL) to measure cement-to-formation bond. Operator will run the CBL prior to resuming drilling operations; the CBL will not be run until the cement slurry used reaches a compressive strength of 2000 PSI at 110 degrees Fahrenheit. Should the CBL show unacceptable cement quality, Operator will wait an additional six (6) hours on cement, and then re-run the CBL. If at this time cement quality is still unacceptable, re-cementing the casing may be required. Consultation between Operator and Columbia's on-site representatives will determine remedial procedures to be used, if any.
- g. New casing will be run from surface to a point in the top of the sublease zone for the flow string. Casing run will have a minimum burst pressure of 3500 psig and minimum collapse pressure of 2000 psig (if the sublease zone is deeper than the storage zone). Operator may run a back-off collar, nipple or equivalent to recover uncemented casing in wells.
- h. Daily drilling reports and other pertinent data while the well is being drilled is to be provided to Columbia in a timely manner. Any final report must also be

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delivered to Columbia after completion of all drilling operations. Columbia's storage contacts for receiving the information are John V. McCallister, 304-373-2412 [jmccallister@NiSource.com](mailto:jmccallister@NiSource.com); Paul C. Amick 304-357-3445, [pamick@NiSource.com](mailto:pamick@NiSource.com). The Columbia Storage Department fax number is (304) 357-3585.

4. Columbia reserves the right to monitor any well completed on the subject lease(s) as more fully described in the monitoring provision document.
5. Any well that is to be plugged and abandoned by the Operator will be done so in accordance with the current laws of the State of West Virginia Department of Environmental Protection, Division of Oil and Gas. In addition, an expanding-type cement plug will be installed from the bottom of the well to a point two hundred (200) feet above the top of the sublease horizon. The same requirement will be adhered to on a well that is a dry hole or for a well that is drilled, completed, produced and abandoned at some future date.
6. During the drilling of any well on subject leases, operator must run directional surveys (gyroscopic survey and/or directional log) showing the magnitude and direction of the inclination of the well bore, as well as the calculated bottom hole location. These data must be provided to Columbia as part of the daily drilling reports. This requirement can be waived if the sublease zone is shallower than the storage zone.
7. Copies of all electric, geophysical and mud logs, reports, well cuttings and measurements must be provided to Columbia in a timely manner. Measurements include, but are not limited to, flow tests, gas samples, pressure tests, and fluid levels. If operator takes formation core samples (whole or plug) from wells on subject leases, one-foot interval core chips (whole cores only) and final core analyses reports must be provided to Columbia.
8. In all wells drilled on subject leases, operator must run (a minimum of) gamma ray/neutron and directional (gyroscopic survey and/or directional log) logs to surface. Density and resistivity logs should be run from total depth to production casing point. Additionally, if this is a naturally fractured reservoir, an imaging tool/dipmeter should be run at minimum across the entire producing/target formation penetrated by the wellbore.

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**Exhibit C**  
**Columbia Gas Transmission Corporation**  
**Victory A and B Integrity Monitoring Provisions**

1. Columbia reserves the right to monitor any well completed on the subject lease(s). Monitoring includes, but is not limited to, periodically obtaining gas samples from all producing strings and annual, engineering analysis of the production history, and access to any well for Columbia to conduct pipe inspection logging.
2. The production history is to be provided by Operator upon request by Columbia. The information to be provided by well will include, but not limited to, monthly gas production volumes, number of days on line, flowing wellhead pressure data, shut-in pressure data, water production data volumes and well testing data.
3. Columbia will have the right to periodically run open-hole or cased-hole well logs in any or all wells drilled on the subject leases acreage. Any such logging will be at Columbia's expense. Such logging will be at a mutually convenient time for both parties and Columbia Natural Resources, a Triana Energy Company, has the right to have a representative on site.
4. Columbia representatives will have access at all times to all facilities and operations (including but not limited to drilling, recompletion, well stimulation, well testing, and well logging) occurring on the subject leases.
5. Two (2) day shut-in pressures will be recorded simultaneously on each well every spring and fall (April and October). Columbia may from time to time require other pressure tests or flow tests to be taken on any or all of the wells drilled on the subject lease acreage. This could also include shutting in more than one well at a time to determine whether the pressure communication is between another production well and/or the Victory A or B Storage fields.
6. Columbia will have the right to sample the gas or liquids produced or encountered by any well bore drilled on the subject lease. Any such testing will be at Columbia's expense.
7. At Columbia's sole reasonable discretion, any well or wells drilled on subject leases that are believed to be adversely affecting the Victory A or B Storage reservoir, or in pressure communication with the Victory A or B Storage reservoir, will be shut in until such time that additional testing proves that Victory A or B Storage fields' gas is not being produced or in pressure communication. Proceeds from the sale of any and all gas produced after notification of shut-in or during testing will be escrowed until the ownership of the gas is determined.
8. While the cost of monitoring shall be at Columbia's expense, Columbia will not be responsible for any of operator's expenses, including value of gas not produced during the time the well is shut-in for such monitoring.

EXHIBIT D

PROCEDURE NUMBER: 220.003.010  
PROCESS OWNERSHIP: Pipeline

VERSION NUMBER: 3  
RELATED PLAN: 220.03.09

## Pipeline Right-of-Way Encroachment

**Component**  
**Task ID**  
**Equipment Group**  
**Task**

### 1.0 Scope

Columbia Gas Transmission Corporation ("TCO") is committed to providing high quality services to its customers while protecting the environment, health and safety our employees and the public in areas where we operate. Consistent application of pipeline encroachment policies are directly linked to operating the company in an operationally excellent fashion. The procedures for addressing encroachment are included in this document and shall be adhered to as outlined.

### 2.0 Procedures

Unless otherwise provided for by the specific right-of-way document, Rights-of-Way (ROW) width shall be no less than 50 feet for a single pipeline or, in instances of multiple pipelines, no less than 50 feet for each pipeline with a minimum of 25 feet outside the two outermost pipelines. This is the minimum width necessary for safe operation and maintenance of TCO pipelines. In order to preserve integrity of pipeline facilities and to insure safety of the general public, it is necessary for TCO to prohibit placement of objects or structures (aboveground or belowground) upon TCO pipeline ROW except the permissible objects listed in Section 2.1.

#### 2.1 Permissible Objects

##### 2.1.1 Fences Constructed Within TCO ROW

Fences that block visual inspection or interfere with access to TCO facilities are prohibited within TCO rights-of-way. Fences permitted by TCO to cross its rights-of-way must be designed with 12 foot gates centered on the pipeline and must cross at as near to 90 degrees as possible. Regardless of design of fences, the gates must allow access by equipment and personnel.

##### 2.1.2 Grading Within TCO ROW and Total Earthen Cover Over Pipelines

The amount of earthen cover over a pipeline and right-of-way must be limited in order to safely and efficiently operate the pipeline. The guidelines for earthen cover are as follows:

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- Minimum cover will be set by DOT pipeline safety regulation 49 CFR Section 192.327 (OEP-104, Pipeline Cover Requirements).
- Typically, 4 feet of total earthen cover, measured from the top of the pipeline, will be the maximum allowable cover.
- In special situations where total earthen cover in excess of 4 feet is required, including but not limited to, road crossings, stream crossings, railroad crossings, and crossings for heavy equipment, plans and/or designs must be submitted to TCO's local operations field staff or other technical services departments as needed for approval prior to construction.

#### 2.1.3 Cables, Pipelines and Other Facilities Crossing TCO's ROW

All water valves, curb boxes, manholes, and similar structures must be outside the pipeline ROW. Utilities and fiber optic lines shall cross TCO's pipelines at or as near to 90 degrees as practical to limit the length of pipeline effected by the crossing. The utility or fiber optic line shall maintain a minimum of 12 inches vertical clearance to protect the pipeline and to allow TCO unrestricted access to its facilities. All crossings must be installed below TCO's pipelines unless prior written consent (Columbia Gas Transmission Location of Buried Facilities Form - Form 1050-P17) is obtained for conditions including, but not limited to, the presence of massive rock beneath the pipeline, excessive pipeline depth, and the presence of other facilities below the pipeline. All crossings (excluding single telephone and single television drops) of TCO facilities by cable and/or wire utilities, including, but not limited to, fiber optic, electric, telephone and television must be encased with a minimum of 2 inch schedule 80 PVC pipe, or equivalent if approved by TCO, for the complete width of the ROW. For safety reasons, all electric and fiber optic lines crossing TCO's pipelines shall also be surrounded with a minimum of 6 inches of concrete or encased in 4 inch minimum diameter, .250 wall, coated steel pipe for the full width of the right-of-way. Metallic warning flags shall also be buried above all cable, wire utility, or fiber optic line crossing a TCO ROW.

#### 2.1.4 Pavement on Pipelines and ROW

TCO's general policy is to keep pavement off its ROW unless the pavement can be altered in such a way so as not to effect the safe and efficient operation and maintenance of its facilities. Consequently, all plans for pavement within a TCO right-of-way must be submitted and approved by TCO's local operations office or other technical services as needed prior to the commencement of any such paving. Pavement will not be allowed any closer than 5 feet of the pipeline except in the case of parking lot "crossovers" and/or driveways which can be no greater than 25 feet in width and must be spaced at a minimum of 50 feet intervals (measuring from the edge of the pavement). Concrete paving in TCO's ROW, except for sidewalks or curbs, is prohibited.

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**2.1.5 Trees/Shrubs Within the ROW**

The ROW may be planted in lawn and small shrubs (less than 5 feet tall) or may be used for normal agricultural purposes. However, shrubs will not be allowed within 5 feet each side of the pipeline. Shrubs greater than 5 feet tall and trees (including fruit and nut bearing) are prohibited within the ROW.

**2.1.6 Roads**

Roads shall cross pipelines at or as near 90 degrees as practical, but not less than 45 degrees. Roads are permitted only at TCO's sole determination and election. In the event roads are permitted to cross TCO's ROW, the design must meet TCO's approval and all protective measures for the pipeline must be met. Design and approval of protective measures will be provided by TCO's engineering personnel. The cost of installing protection for TCO's facilities will be paid for by the entity constructing the roads.

**2.2 Verification of Pipeline and Facility Location for Third Parties**

No excavation shall be made on TCO ROW without prior notification and approval of TCO's local operations office. Excavation within 3 feet of TCO's facilities shall be hand dug until the facilities are visually located or 12-inch vertical clearance is verified. TCO personnel must be on location prior to and during excavation by a third party, even if prior approval has been obtained. (See Plan Number 220.02.06, Damage Prevention Program, for information regarding TCO's participation in applicable state adopted one-call systems and/or any applicable reimbursable cost).

**3.0 Drawings**

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**4.0 Photos**

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**5.0 Specialty Tools/Equipment**

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**6.0 Materials**

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**7.0 Reference Documents/Service Bulletins/Specifications**

- 49 CFR 192.327 - Cover
- OEP 104 - Pipeline Cover Requirements
- PLAN NO. 220.02.06 - Damage Prevention Program

**8.0 Definitions**

"Left Blank Intentionally"

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PROCEDURE NO: 220.003.010

VERSION NO 3

EFFECTIVE DATE: 1/31/2004

DOCUMENT CONTACT: Jack White

APPROVAL: Reed Robinson

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## **9.0 Responsibilities/Documentation/Records/Forms**

### **9.1 Field Personnel**

Field personnel will be responsible for monitoring pipeline ROW for encroachment. If an encroachment is located, it is the task of field personnel to make an effort to have the encroachment removed. If unable to resolve the matter, they shall report the encroachment to their Operations team leader.

### **9.2 Operations Team Leader**

The operations team leader's first responsibility is to document the encroachment and if possible resolve the matter with the landowner. In the event the matter is not resolved, it is then the operation team leader's task to report the matter to the operation manager and to work with Engineering Services (ES), Operations and Maintenance (OM), Land and Legal to address the encroachment.

### **9.3 Land Services**

The responsibility of Land Services is to act and serve as the liaison between TCO and landowners. This includes all routine written communications and responsibilities referred to in this document.

### **9.4 ES/Operations**

The responsibility of ES/Operations is to support Land Services by expediently providing technical/operational support.

### **9.5 Law**

The responsibility of the Law department is to support Land, ES and Operations by providing timely responses to any requests for assistance.

### **9.6 Records**

All correspondence relating to this Procedure shall be forwarded to Charleston Land Services in care of Land Assets for permanent filing in the appropriate file.

PROCEDURE NO: 220.003.010

VERSION NO 3

EFFECTIVE DATE: 1/31/2004

DOCUMENT CONTACT: Jack White

APPROVAL: Reed Robinson

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PROCEDURE NUMBER: 220.005.001  
PROCESS OWNERSHIP: Pipeline

VERSION NUMBER: 2  
RELATED PLAN: 220.03.09

## Storage Well Setback

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**Component**

**Task ID**

**Equipment Group**

**Task**

### 1.0 Scope

Columbia Gas Transmission Corporation ("TCO") is committed to providing high quality services to its customers while protecting the environment and health and safety of our employees and the public in the areas where we operate. The commitment ensures the safety, reliability and integrity of our storage reservoirs, wells and pipelines. Any third party activity or development, which impedes TCO's ability to safely, efficiently and legally drill, operate and maintain storage wells will be prohibited. TCO's procedures for setback from storage wells are within the confines of applicable leases and laws and allow TCO access to potential and existing storage well operations while ensuring the safety of employees and the public.

### 2.0 Procedures

#### 2.1 Notification Requirement

In order to safely and efficiently operate and maintain its wells, TCO requires up to 300-foot or larger clear area around the wellhead. Accordingly, the company requires notification of any proposed aboveground or belowground construction activities or placement of objects closer than 300 feet in any direction of a wellhead.

The company reserves the right to object to aboveground or belowground construction activities and the placement of objects closer than 300 feet from any wellhead when certain topographical and/or safety concerns exist. Those topographical features and permanent structures include, but are not limited to, wellheads situated near significant changes in elevation, rivers, ponds, streams, existing roads, railroad rights-of-way, power line rights-of-way, high pressure wells and safety concerns such as the presence of hydrogen sulfide. Additional distances over 300 feet may be necessary for certain company activities, including but not limited to, the presence of hydrogen sulfide, flaring of wells under unusual circumstances, horizontal or directional drilling, drilling of multiple wells from a single location, salt cavern development, aquifer storage development, high pressure and high deliverability wells.

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PROCEDURE NO: 220.005.001

VERSION NO. 2

EFFECTIVE DATE: 01/31/2004

DOCUMENT CONTACT: Roy Fullmer, Jr.

APPROVAL: Reed Robinson

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However, except as otherwise provided in the applicable lease, there shall be no aboveground or belowground construction activities or placement of objects within 200 feet in any direction from a wellhead, excluding those activities and equipment necessary for TCO maintenance and operation.

## 2.2 Notification Process

The individual or entity desiring to construct or place an aboveground or belowground object closer than 300 feet of a wellhead will be required to notify the appropriate Land Services Team Leader or his or her designee. The information provided will include a description of the proposed construction or placement of the object, dimensions, location and distance from the wellhead.

## 2.3 TCO Review

The Land Services Team Leader or his or her designee will then forward this information to the Operations Manager and the ES Storage Team Leader, or their designees. They will review the request and all information, including terms of the lease. If the proposed aboveground or belowground construction or placement of the object is 200 feet or less from the wellhead, the Land Services Team Leader will issue a letter stating that the Company has denied the request.

If the request is within 200 to 300 feet of a wellhead, the Land Services Team Leader will issue a letter stating that the Company does not object to the proposal if the Operation Manager or his or her designee, Land Services Team Leader, and the ES Storage Team Leader determine that the conditions mentioned in paragraph two of Section 2.1 do not exist. If additional information is needed to make a decision within 200 to 300 feet of a wellhead, a Storage Engineer, Land Agent and/or Operations personnel may be dispatched to personally review the request. If a decision is made that the Company does not object to the proposed above-ground or below-ground construction or placement of the object, the Land Services Team Leader or designee shall issue a letter to the person/entity stating that the Company does not object to the proposal.

If the asset team listed above recommends the request be denied, they must document the specific reasons for denial. The responsible Attorney must review this documentation before the appropriate Land Services Team Leader sends a denial letter to the person or entity making the request. Of course, any decision must be consistent with the lease language. If there is a need to defend a distance of greater than 300 feet from the wellhead, the responsible Attorney must be contacted prior to any denial letter being sent to the landowner/developer.

## 3.0 Drawings

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**4.0 Photos**

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**5.0 Specialty Tools/Equipment**

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**6.0 Materials**

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**7.0 References and Specifications**

Most states in which TCO operates dictate a minimum distance that an oil, gas or storage well must be drilled from certain objects or natural conditions. The following is a summary:

New York – No well shall be located nearer than 100 feet from any inhabited private dwelling house without written consent of owner; nearer than 150 feet from any public building or area which may be used as a place of resort, assembly, education, nearer than 75 feet from any public stream. 6 NYCRR §553.2 (1998).

Ohio – No well shall be drilled nearer than 100 feet of any inhabited private dwelling house; nearer than 100 feet from any public building which may be used as a resort, assembly, education, ...nearer than 50 feet to the traveled part of any public street, road, or highway; nearer than 50 feet to a railroad track; nor nearer than 100 feet to any other well. OAC Ann. 1501:9-1-05 (1998).

Pennsylvania – Wells may not be drilled within 200 feet from any existing building or existing water well without the written consent of the owner. No well shall be drilled within 100 feet from any stream, spring, or body of water. 58 P.S. §601.205 (1997).

West Virginia – No oil or gas well shall be drilled nearer than 200 feet from an existing water well or dwelling without first obtaining the written consent of the owner of such water well or dwelling W.Va. Code §22-6-21 (1997).

**8.0 Definitions**

**Setback:** The distance in all directions from any storage well that must remain free from any construction activities or placement of any objects with the exception of facility related construction and appurtenances.

**Storage Well:** Any active, special or storage observation well located within the protective boundaries of a federally certificated storage field.

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9.0 Responsibilities/Documentation/Records/Forms

- 9.1 **Field Personnel**  
Field personnel will be responsible for monitoring storage well setbacks for encroachment. If an encroachment is located, it is the task of field personnel to make effort to have encroachment removed. If unable to resolve the matter, they shall report the encroachment to their operations team leader.
- 9.2 **Operation Team Leader**  
The operations team leaders' first responsibility is to document the encroachment and if possible resolve the matter with the landowner. In the event the matter is not resolved, it is then the operation team leaders task to report the matter to the operation manager and to work with ES, OM, Land and Legal to address the encroachment.
- 9.3 **Land Services**  
The responsibility of land services is to act and serve as the liaison between TCO and landowners. This includes all routine written communications and responsibilities referred to in this document.
- 9.4 **ES/Operations**  
The responsibility of ES/Operations is to support Land Services by expediently providing technical/operational support.
- 9.5 **Law**  
The responsibility of the law department is to support Land, ES and Operations by providing timely responses to any requests for assistance.
- 9.6 **Records**  
All correspondence relating to this procedure shall be forwarded to Charleston Land Services in care of Land Assets for permanent filing in the appropriate file.

PROCEDURE NO: 230.005.001      VERSION NO: 3      EFFECTIVE DATE: 01/01/2004  
 DOCUMENT CONTACT: Ray Fulkner, Jr.      APPROVAL: Reed Robinson      Page 4 of 4

STATE OF WEST VIRGINIA, MARSHALL COUNTY, SCT.:

I, NORMA GLOVER SINE, Clerk of the County Commission of said County, do hereby certify that the annexed writing, bearing date on the 2nd day of September, 2004, was presented for and by me, admitted to record in my office upon the above certificate as to the parties therein named this 10th day of November, 2004 at 12:57 o'clock P.M.

TESTE: Norma Glover Sine Clerk.

CPS 24 2-04

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STATE OF WEST VIRGINIA, COUNTY OF WETZEL, TO-WIT:  
 OFFICE OF THE CLERK OF THE COUNTY COMMISSION OF WETZEL COUNTY.

The foregoing paper writing was this day December 3, 2004 at 11:06 presented for record in my office, and thereupon, together with the certificate thereto annexed, is admitted to record.

TESTE: Carol W. Naught Clerk,  
 County Commission of Wetzel County

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

February 18, 2015

Ms. Laura Cooper  
WV DEP Office of Oil & Gas  
601 57<sup>th</sup> St., SE  
Charleston, WV 25304

**RE:** SWN's proposed Bonnette MSH 201H and Bonnette MSH 406H in Marshall County, West Virginia, Drilling under Rt. 21/7

Dear Ms. Cooper:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Rt. 21/7. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you and should you have any questions please feel free to contact the undersigned at (832) 796-6259 or by email at [thill@swn.com](mailto:thill@swn.com).

Sincerely,

A handwritten signature in blue ink that reads "Travis Hill".

Travis Hill  
Senior Landman  
SWN Production Company, LLC

Received  
Office of Oil & Gas  
FEB 26 2015

A red handwritten logo consisting of the letters "R", "L", "A", and "V" with arrows and a plus sign, forming a stylized "RLAV+" symbol.

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

Date of Notice Certification: 2/24/14

API No. 47- 69 -  
Operator's Well No. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH 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>WV</u>	UTM NAD 83	Easting: <u>524698.4</u>
County: <u>51-Marshall</u>		Northing: <u>524698.4</u>
District: <u>5- Meade</u>	Public Road Access: <u>Fish Creek</u>	
Quadrangle: <u>681- Wileyville</u>	Generally used farm name: <u>Bonnette</u>	
Watershed: <u>Whetstone Creek</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.

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:		<b>OOG OFFICE USE ONLY</b> <input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED
*PLEASE CHECK ALL THAT APPLY		
<input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED		
<input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED		
<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 <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)		
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION		
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE		
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		

**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.

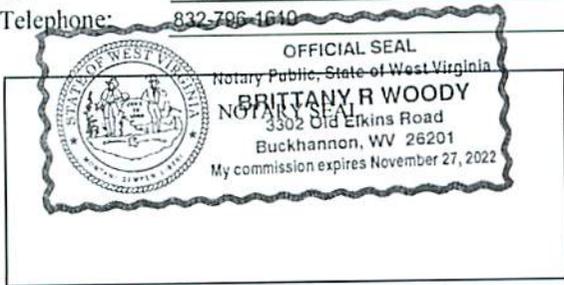
WW-6AC  
(1/12)

**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: SWN Production Co., LLC  
By: Dee Southall  
Its: Regulatory Supervisor  
Telephone: 832-786-1640

Address: P.O. Box 1300  
Jane Lew, WV 26378  
Facsimile: \_\_\_\_\_  
Email: Dee\_Southall@swn.com



Subscribed and sworn before me this 14th day of January 2015  
Brittany R Woody Notary Public  
My Commission Expires 11/27/2015

**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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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Office of Oil & Gas  
FEB 26 2015

WW-6A  
(9-13)

API NO. 47-69 -  
OPERATOR WELL NO. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH Pad

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 2/24/14 Date Permit Application Filed: 2/24/14  
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: Robert Bonnette  
Address: 100 Amy Anna Drive  
Moundsville, WV 26074

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: Consolidated Coal Company %Leatherwood  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

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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**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).

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**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

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API NO. 47-69 -  
OPERATOR WELL NO. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH Pad

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 § 21-01-03 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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Office of Oil & Gas  
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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.**

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API NO. 47-69 -  
OPERATOR WELL NO. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH Pad

### 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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API NO. 47- 69 -  
OPERATOR WELL NO. Bonnette MSH 406H  
Well Pad Name: Bonnette MSH Pad

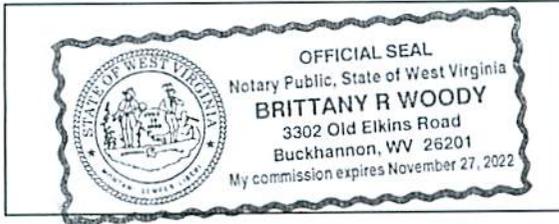
**Notice is hereby given by:**

Well Operator: SWN Production Co., LLC  
Telephone: 832-796-1610  
Email: Dee\_Southall@swn.com

Address: P.O. Box 1300  
Jane Lew, WV 26378  
Facsimile: \_\_\_\_\_

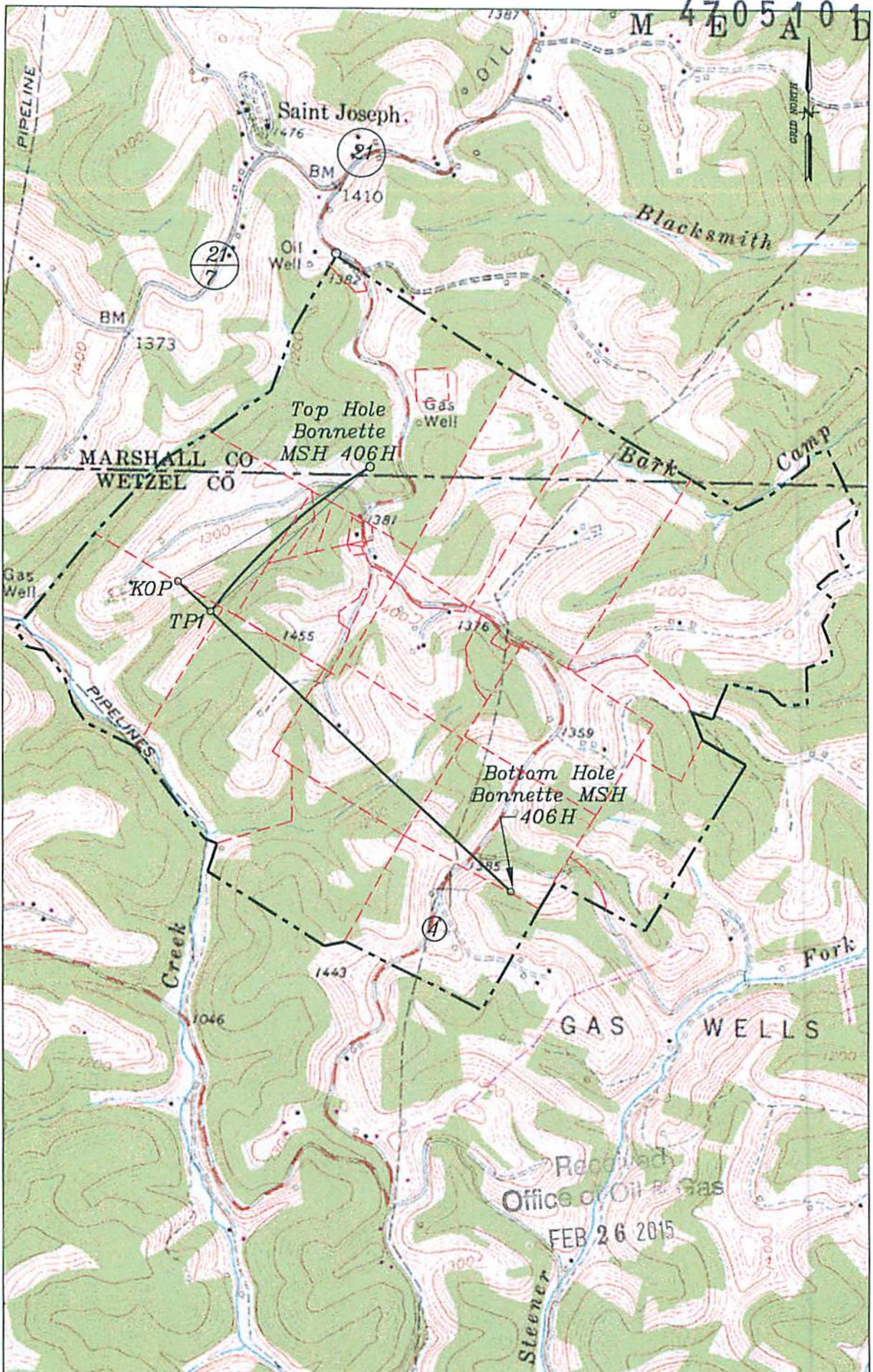
**Oil and Gas Privacy Notice:**

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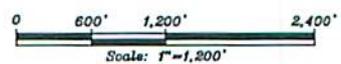
Subscribed and sworn before me this 14th day of January 2015  
Brittany R Woody Notary Public  
My Commission Expires 11/27/22

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FEB 26 2015

Well: Bonnette MSH 406H  
Quad: Wileyville 7 1/2'  
District: Meade  
County: Marshall



907984 BONNETTE MSH PAD\_1500 FT.\_WATER PURVEYORS

4705101832

Date	Part No.	Pad Name	Full Parcel ID	Owner	Owner Address	Owner City	Owner State	Owner Zip	Owner Phone No.	Assumed/Known Water Source Present (Y/N)?
9/12/2014	907984	BONNETTE MSH PAD	09-22-8	BONNETTE ROBERT WILLIAM ET UX	109 AMY ANNA DR	MOUNDSVILLE	WV	26041		Y
9/12/2014	907984	BONNETTE MSH PAD	09-22-8.1	COUNTY COMMISSION OF MARSHALL	PO BOX 459	MOUNDSVILLE	WV	26041		Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-10.3	FERRELL DOROTHY E x2	RR1 BOX 168	PROCTOR	WV	26055		Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-10.4	FERRELL JOHN W	RR 1 BOX 165F	PROCTOR	WV	26055		Y
9/12/2014	907984	BONNETTE MSH PAD	12-4-1	FOX PAUL & CYNTHIA	RT 1 BOX 183	PROCTOR	WV	26055	304-455-3817	Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-8.1	HOHMAN DONALD L x2	RR 1 BOX 169	PROCTOR	WV	26055		Y
9/12/2014	907984	BONNETTE MSH PAD	09-22-3	MILLER HILARY G & MARK H	4537 ST JOSEPH RD	PROCTOR	WV	26055		Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-10.2	MILLER JOHN MICHAEL ETAL	137 HUDSON HILLS ROAD	PITTSBORO	NC	27312		Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-7	RIES HENRY W x2	10 MEADOW DR	WHEELING	WV	26003		Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-11	YOHO DENVER F	RT 1 BOX 164 A	PROCTOR	WV	26055		Y
9/12/2014	907984	BONNETTE MSH PAD	12-3-11.2	ZOMBOTTI DELORES	RR1 BOX 167	PROCTOR	WV	26055		Y

Received

MAR 2 2015

Office of Oil and Gas  
WV Dept. of Environmental Protection

**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:** 01/14/2015      **Date Permit Application Filed:** 2/24/19

**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: <u>Robert W. &amp; Linda F. Bonnette</u>	Name: _____
Address: <u>Amy Anna Drive</u> <u>Moundsville, WV 26041</u>	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>524,698.4</u>
County: <u>Marshall</u>	Northing: <u>4,396,896.3</u>
District: <u>Meade</u>	Public Road Access: <u>Roberts Ridge/ St. Joseph Road</u>
Quadrangle: <u>Wileyville</u>	Generally used farm name: _____
Watershed: <u>Whetstone Creek</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: <u>SWN Production Company, LLC</u>	Authorized Representative: <u>Danielle Southall</u>
Address: <u>PO Box 1300</u> <u>Jane Lew, WV 26378</u>	Address: <u>PO Box 1300</u> <u>Jane Lew, WV 26378</u>
Telephone: <u>1-832-796-1611</u>	Telephone: <u>1-832-796-1614</u>
Email: <u>micah_feather@swn.com</u>	Email: <u>danielle_southall@swn.com</u>
Facsimile: _____	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).

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WW-6A5  
(1/12)

**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:** 01/14/2015      **Date Permit Application Filed:** 2/24/14

**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: Robert W. & Linda F. Bonnette                                      Name: \_\_\_\_\_  
Address: Amy Anna Drive                                      Address: \_\_\_\_\_  
Moundsville, WV 26041                                      \_\_\_\_\_

**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>524,698.4</u>
County: <u>Marshall</u>		Northing: <u>4,396,896.3</u>
District: <u>Meade</u>	Public Road Access: <u>Roberts Ridge/ St. Joseph Road</u>	
Quadrangle: <u>Wileyville</u>	Generally used farm name: _____	
Watershed: <u>Whetstone Creek</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</u>
Telephone: <u>1-832-796-1611</u>	<u>Jane Lew, WV 26378</u>
Email: <u>micah_feather@swn.com</u>	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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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FEB 26 2015

WW-6AW  
(1-12)

API NO. 51-01832  
OPERATOR WELL NO. Bonnette 406H  
Well Pad Name: Bonnette

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Ryan Arp, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: West Virginia Easting: 1,659,085.0  
County: Marshall WVSPN NAD 27 Northing: 447,200.4  
District: Meade Public Road Access: Co Hwy 21 (Emr Route 2)  
Quadrangle: WILEYVILLE Generally used farm name: \_\_\_\_\_  
Watershed: Whetstone Creek

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials, **provided that CHESAPEAKE APPALACHIA, L.L.C. drills the well on WV North NAD27 coordinates of North 447,200.314, East 1,659,085.057 and in accordance with the Joint Cooperation Agreement dated June 2, 2009.**

- \*Please check the box that applies
- SURFACE OWNER
  - SURFACE OWNER (Road and/or Other Disturbance)
  - SURFACE OWNER (Impoundments/Pits)
  - COAL OWNER OR LESSEE
  - COAL OPERATOR
  - WATER PURVEYOR
  - OPERATOR OF ANY NATURAL GAS STORAGE FIELD

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SEP 22 2014

**FOR EXECUTION BY A NATURAL PERSON**

Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Date: \_\_\_\_\_

**FOR EXECUTION BY A CORPORATION, ETC.**

Company: CNX Land LLC  
By: Ryan Arp  
Its: Project Engineer  
Signature: [Signature]  
Date: 9/17/2014

**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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



## WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

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

Earl Ray Tomblin  
 Governor

Paul A. Mattox, Jr., P. E.  
 Secretary of Transportation/  
 Commissioner of Highways

January 29, 2015

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 Bonnette Pad Well Sites, Marshall County

Bonnette 1H	Bonnette 8H	Bonnette 10H
Bonnette 201H	Bonnette 206H	Bonnette 406H

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2011-0105 for the subject site to Southwestern Energy for access to the State Road for the well site located off of Wetzel County Route 4 SLS.

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

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

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 Office of Oil & Gas  
 FEB 26 2015

Supplier Name	Product Name	Product Use	Chemical Name	CAS Number
NALCO ONESOURCE	EC6110A	Biocide	Ethanol	000064-17-5
			Glutaraldehyde (Pentanediol)	000111-30-8
			Quaternary Ammonium Compounds	N/A-063
	EC6629A	Biocide	No Hazardous Components	NONE
WEATHERFORD	WBK-133 OXIDIZER	Breaker	Ammonium Persulfate	007727-54-0
	WBK-134	Breaker	Ammonium Persulfate	007727-54-0
			Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7
	WCS-631LC	Clay Stabilizer	Proprietary Non Hazardous Salt	N/A-229
			Water	007732-18-5
	WFR-55LA	Friction Reducer	No Hazardous Components	NONE
	WGA-15L	Gel	Petroleum Distillate Hydrotreated Light	064742-47-8
	WPB-584-L	Buffer	Potassium Carbonate	000584-08-7
			Potassium Hydroxide	001310-58-3
	WXL-101LE	Crosslinker	No Hazardous Components	NONE
	WXL-101LM	Crosslinker	Petroleum Distillate Hydrotreated Light	064742-47-8
			Water	007732-18-5
			Ethylene Glycol	000107-21-1
Boric Acid			010043-35-3	
Ethanolamine			000141-43-5	
SCHLUMBERGER	B244 Green-Cide 25G	Biocide	Glutaraldehyde	111-30-8
	L071 Temporary Clay Stabilizer	Clay Stabilizer	Cholinium Chloride	67-48-1
	Breaker J218	Breaker	Diammonium Peroxidisulphate	7727-54-0
	EB-Clean* J475 Breaker		Diammonium Peroxidisulphate	7727-54-0
	Friction Reducer B315	Friction Reducer	Distillates (petroleum), Hydrotreated light Aliphatic Alcohol Glycol Ether	64742-47-8 Proprietary
			Ammonium Sulfate	7783-20-2
	Friction Reducer J609			

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4705101832

Supplier Name	Product Name	Product Use	Chemical Name	CAS Number
SCHLUMBERGER	Water Gelling Agent J580	Gel	Carbohydrate Polymer	Proprietary
	Scale Inhibitor B317	Scale Inhibitor	Trisodium ortho phosphate Ethane-1, 2-diol	7601-54-9 107-21-1
	Borate Crosslinker J532	Crosslinker	Aliphatic polyol Sodium tetraborate decahydrate	Proprietary 1303 96-4
	Crosslinker J610		Aliphatic polyol Potassium hydroxide	Proprietary 1310 58-3

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Office of Oil & Gas

FEB 26 2015

Supplier Name	Product Name	Product Use	Chemical Name	CAS Number
BAKER HUGHES	ALPHA 1427	Biocide	Didecyl Dimethyl Ammonium Chloride	007173-51-1
			Ethanol	000064-17-5
			Glutaraldehyde (Pentanediol)	000111-30-8
			Quaternary Ammonium Compound	068424-85-1
			Water	007732-18-5
	BF-7L	Buffer	Potassium Carbonate	000584-08-7
	ClayCare	Clay Stabilizer	Choline Chloride	000067-48-1
			Water	007732-18-5
	Enzyme G-I	Breaker	No Hazardous Components	NONE
	ENZYME G-NE	Breaker	No Hazardous Components	NONE
	FRW-18	Friction Reducer	Petroleum Distillate Hydrotreated Light	064742-47-8
	GW-3LDF	Gel	Petroleum Distillate Blend	N/A-014
			Polysaccharide Blend	N/A-021
	SCALETROL 720	Scale Inhibitor	Diethylene Glycol	000111-46-6
			Ethylene Glycol	000107-21-1
XLW-32	Crosslinker	Boric Acid	010043-35-3	
		Methanol (Methyl Alcohol)	000067-56-1	
FRAC TECH SERVICES	APB01 (AMMONIUM PERSUFATE BREAKER)	Breaker	Ammonium Persulfate	007727-54-0
	B05 (LOW PH BUFFER)	Buffer	Acetic acid	000064-19-7
	BXL03 Borate XL Delayed High Temp	Crosslinker	No Hazardous Components	NONE
	FRW-200	Friction Reducer	No Hazardous Components	NONE
	HVG01 (TURQUOISE-1 BULK)	Gelling Agent	Petroleum Distillate Hydrotreated Light	064742-47-8
	KCLS-4	Clay Stabilizer	No Hazardous Components	NONE
	LTB-1	Breaker	Ammonium Persulfate	N/A

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Office of Oil & Gas

FEB 26 2015

# AS-BUILT SITE PLAN FOR

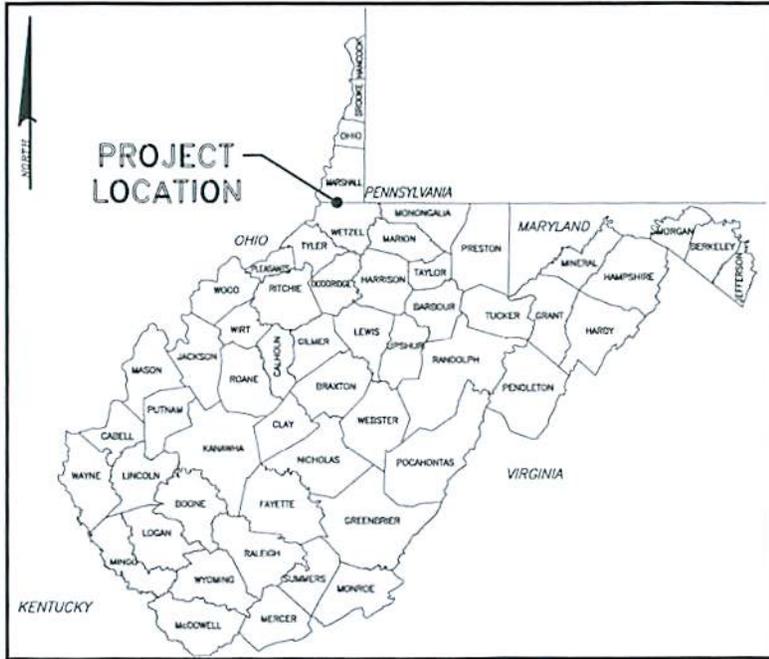
# BONNETTE PAD A PROCTOR/MEADE DISTRICTS, MARSHALL/WETZEL COUNTIES, WV

**WVDEP 00G  
ACCEPTED AS-BUILT**

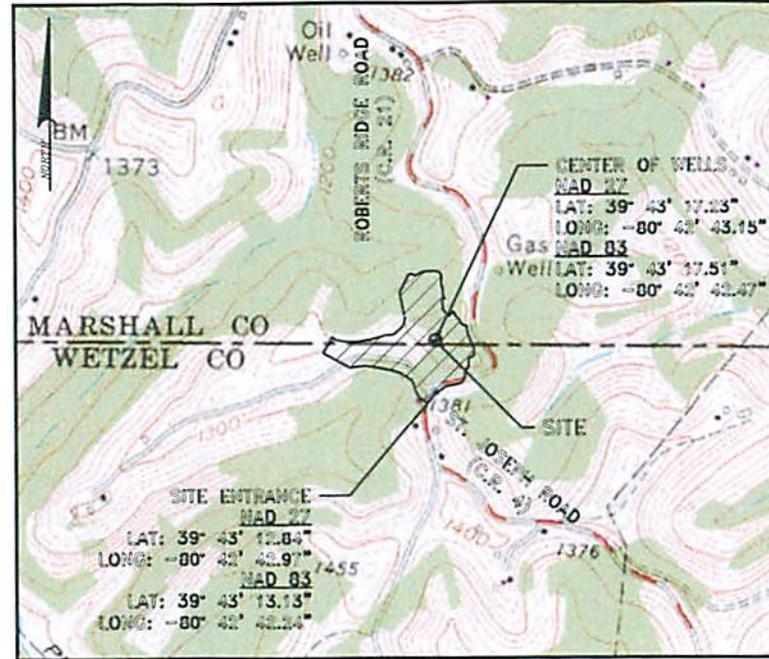
*WJL* 6/8/2015



DRAWN BY: MEB  
DATE: 05/04/2015  
SCALE: AS SHOWN  
DWG. NO.: 087555015



**COUNTY MAP**  
N.T.S.



**LOCATION MAP**  
SCALE - 1"=1000'

### LIST OF DRAWINGS

1 OF 15	COVER SHEET
2 OF 15	EVACUATION ROUTE/PREVAING WINDS
3 OF 15	EVACUATION ROUTE/PREVAING WINDS
4 OF 15	AS-BUILT OVERVIEW
5 OF 15	AS-BUILT
6 OF 15	AS-BUILT
7 OF 15	AS-BUILT
8 OF 15	AS-BUILT
9 OF 15	RECLAMATION OVERVIEW
10 OF 15	RECLAMATION PLAN
11 OF 15	RECLAMATION PLAN
12 OF 15	RECLAMATION PLAN
13 OF 15	RECLAMATION PLAN
14 OF 15	DETAILS
15 OF 15	DETAILS
15 OF 15	ACCESS DRIVE PROFILE

### SITE DATA

TOTAL DISTURBED AREA: 13.4 ACRES  
ROAD DISTURBED AREA: 1.8 ACRES  
PAD DISTURBED ACRES: 11.6 ACRES  
ACCESS ROAD LENGTH: 480'  
ACCESS ROAD AVERAGE WIDTH: 23'  
WELL PAD ELEVATION: 1,430'

### WELL API NUMBERS

3H API 051-01326  
6H API 051-01308

SHEET 1 OF 16



**CALL BEFORE YOU DIG!** Dial 811 or 800.245.4848  
Miss Utility of West Virginia

AT LEAST 48 HOURS, BUT NOT MORE THAN 10 WORKING DAYS (EXCLUDING WEEKENDS AND HOLIDAYS), PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES SHALL CONTACT MISS UTILITY OF WEST VIRGINIA AT 811 OR 1-800-245-4848.



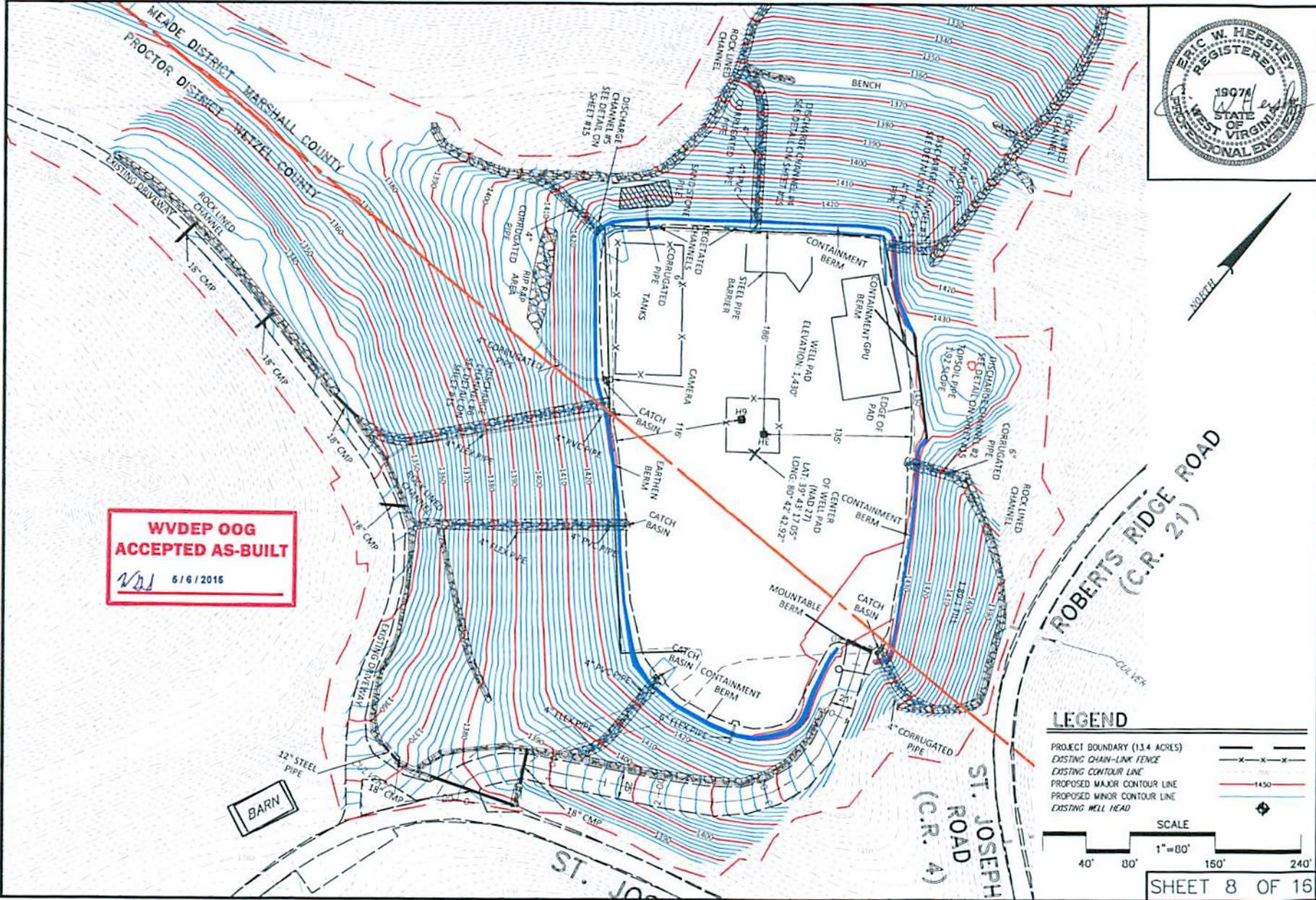
### OPERATOR

SWN PRODUCTION CO., LLC  
P.O. BOX 1300  
JANE LEW, WV 26370  
(832) 796-1510



REVIEW Associates, Inc.  
1916 Robinson Rd., Suite 200,  
Pittsburgh, PA 15202  
Phone (412) 445-1725 • Fax (412) 445-1733  
Engineers • Surveyors • Geotechnical Engineers

COVER SHEET FOR  
**BONNETTE PAD**  
MARSHALL/  
PROCTOR DISTRICTS  
WETZEL COUNTIES, WV



WVDEP OOG  
 ACCEPTED AS-BUILT  
 6/6/2016



DRAWN BY: MED  
 DATE: 05/04/2015  
 SCALE: 1"=50'  
 DWG. NO. 037555016



RETTEW

RETTEW Associates, Inc.  
 One Robinson Plaza, 5500 Staubachville Pike, Suite 200,  
 Pittsburgh, PA 15205  
 Phone (412) 466-1725 • Fax (412) 466-1733  
Engineering • Construction • Construction Management

AS-BUILT FOR  
**BONNETTE PAD**  
 MARSHALL/  
 WETZEL COUNTIES, WV

**LEGEND**

- PROJECT BOUNDARY (13.4 ACRES)
- EXISTING CHAIN-LINK FENCE
- EXISTING CONTOUR LINE
- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- EXISTING WELL HEAD

**SCALE**

1"=80'

40' 80' 160' 240'

SHEET 8 OF 16