



west virginia department of environmental protection

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

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

Thursday, February 09, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC (A)
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for HOHMAN HBP S WTZ 6H
47-103-03171-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: HOHMAN HBP S WTZ 6H
Farm Name: ALBERT L. HOHMAN, JOSEPH HOHMAN, & DEBRA K. HOHMAN
U.S. WELL NUMBER: 47-103-03171-00-00
Horizontal 6A / New Drill
Date Issued: 2/9/2017

Promoting a healthy environment.

02/10/2017

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

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

PERMIT CONDITIONS

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

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

1) Well Operator: SWN Production Co., LLC 494512924 103- Wetzel 12-Proctor 681-Wileyville
Operator ID County District Quadrangle

2) Operator's Well Number: Hohman HBP S WTZ 6H Well Pad Name: Hohman HBP S WTZ Pad

3) Farm Name/Surface Owner: Albert L. Hohman, Joseph Hohman, & Debra K. Hohman Public Road Access: Steener Fork Road

4) Elevation, current ground: 1467.5' Elevation, proposed post-construction: 1467.5'

5) Well Type (a) Gas Oil Underground Storage
Other

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No yes

*MAH
9-2-16*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):

Target Formation- Marcellus, Target Top TVD- 7215', Target Base TVD- 7221', Anticipated Thickness- 6', Associated Pressure- 4890

8) Proposed Total Vertical Depth: 7294'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13032'

11) Proposed Horizontal Leg Length: 5299.62'

12) Approximate Fresh Water Strata Depths: 598'

13) Method to Determine Fresh Water Depths: Salinity profile ✓

14) Approximate Saltwater Depths: ~~1012'~~ 1945' *MAH* ✓

15) Approximate Coal Seam Depths: 1271'


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: _____

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'	CTS
Fresh Water	13 3/8"	New	J-55	54.5#	698'	698'	633 sx/CTS
Coal	9 5/8"	New	J-55	40#	2745'	2745'	1036 sx/CTS
Intermediate	7"	New	P-110	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	P-110	20#	13,032'	13,032'	Lead 907 sx 1384 tail sx/100' inside 
Tubing	2 3/8"	New	P-110	4.7#	Approx. 7202'	Approx. 7202'	
Liners							

Dmit 9-21-16

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	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

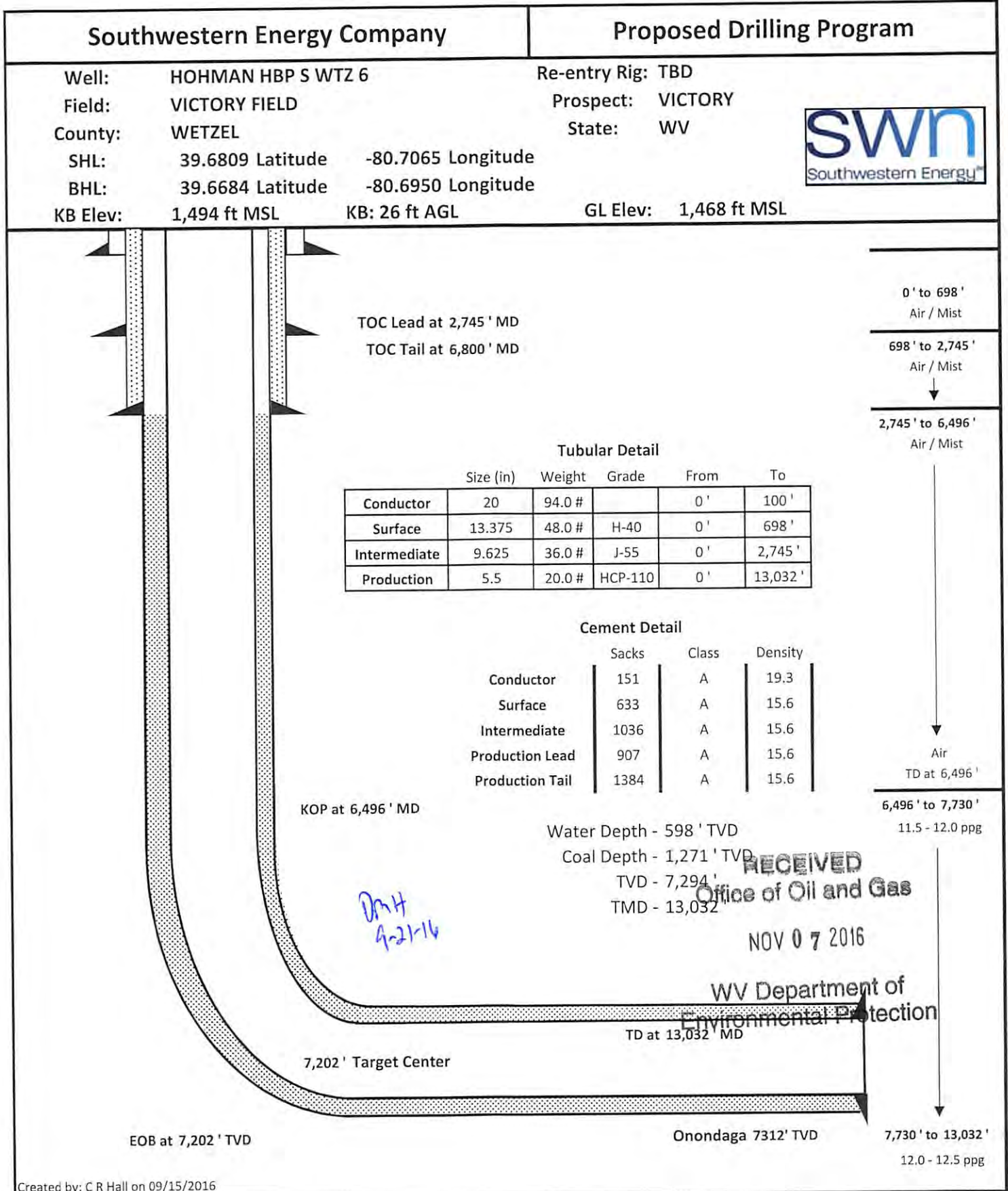
Kind:				
Sizes:				
Depths Set:				

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

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

*Don't
4-21-16*

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): 15

22) Area to be disturbed for well pad only, less access road (acres): 9

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 ***

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25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

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Schlumberger Cement Additives

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

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Company, LLC OP Code 494512924

Watershed (HUC 10) Whestone Creek & Steener Fork Quadrangle Wileyville

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

*DB 14
9-2-16*

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

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

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

Additives to be used in drilling medium? see attached sheets

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

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

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

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

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

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]

Company Official (Typed Name) Dee Southall

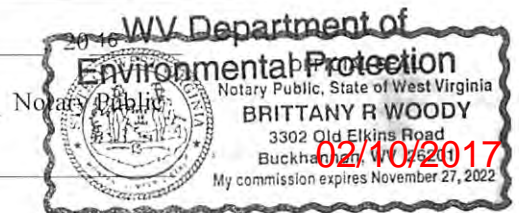
Company Official Title Regulatory Supervisor

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Subscribed and sworn before me this 14th day of September

Brittany R Woody
My commission expires 11/27/20



SWN Production Company, LLC

Proposed Revegetation Treatment: Acres Disturbed 15 Prevegetation pH _____

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 9

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

****See Attachment**

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: _____

Title: oil and gas inspector Date: 9-21-16

Field Reviewed? () Yes () No



WVD Seeding Specification

$\frac{R^2}{A} \rightarrow V^+$

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

NON-ORGANIC PROPERTIES	
Seed Mixture: ROW Mix	SWN Supplied
Orchardgrass	40%
Timothy	15%
Annual Ryegrass	15%
Brown Top Millet	5%
Red Top	5%
Medium Red Clover	5%
White Clover	5%
Birdsfoot Trefoil	5%
Rough Bluegrass	5%
All legumes are innoculated at 5x normal rate	
Apply @ 100lbs per acre April 16th- Oct. 14th	
Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat	

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

Seeding Calculation Information:

1452' of 30' ROW/LOD is One Acre
 871' of 50' ROW/LOD is One Acre
 622' of 70' ROW/LOD is One Acre

Synopsis:

Every 822 linear feet in a 70' ROW/LOD, you should be using (2) 50lb bags of seed, (4) 50lb bags of fertilizer and (80) 50lb bags of Lime (2x seed in winter months + 50lb Winter Wheat)

Special Considerations:

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

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

WETLANDS (delineated as jurisdictional wetlands)

Seed Mixture: Wetland Mix	SWN Supplied
VA Wild Ryegrass	20%
Annual Ryegrass	20%
Fowl Bluegrass	20%
Cosmos 'Sensation'	10%
Redtop	5%
Golden Tickseed	5%
Maryland Senna	5%
Showy Tickseed	5%
Fox Sedge	2.5%
Soft Rush	2.5%
Woolgrass	2.5%
Swamp Verbena	2.5%

**Apply @ 25lbs per acre
April 16th- Oct. 14th**

**Apply @ 50lbs per acre
Oct. 15th- April 15th**

NO FERTILIZER OR LIME INSIDE WETLAND LIMITS

WVD Department of Environment & Forestry
 Office of Oil and Gas
 1010 17th Street
 Charleston, WV 25302
 304-261-7216

103-03171

MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



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

API NO. 47-XXX-XXXXX
WELL NAME: Hohman HBP S WTZ 6H
Wileyville QUAD
Proctor DISTRICT
Wetzel COUNTY, WEST VIRGINIA

Submitted by:


Dee Southall

Date: 9/14/2016

Title: Regulatory Supervisor SWN Production Co., LLC

Approved by:


Title: Oil + Gas Inspector

Date: 9-21-16

Approved by:

Title: _____

Date: _____

SWN PRODUCTION COMPANY, LLC

1. CONTACTS, SCHEDULES, AND MEETINGSA. SWN Production Company, LLC: 24-Hour Emergency Hotline: **1-877-879-0376**

B(a). Emergency Telephone Numbers, External Agencies

Agency Type/ Emergency Service	Name	Emergency Number
County Police	Wetzel County	911 or 304-234-3811
State Police	Wetzel County	911 or 304-238-1100
Ambulance Service	Wetzel County	911 or 304-227-4357
Hospital	Wetzel County	304-234-3651
Fire Department	Wetzel County	911 or 304-455-6960
WV DEP Oil and Gas Inspector	Derek Haught	304-206-7613
WV DEP Inspector Supervisor	Joe McCourt	304-380-2467
WV DEP Oil and Gas Chief	James Martin	304-926-0499 x1654

Emergency Telephone Numbers for SWN Production Company, LLC Personnel are found on the following table:

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Phone Numbers for SWN Production Company, LLC Contractors:

Type of Contractor	Company Name	Telephone Number
Well Control Company	Wild Well Control	281-784-4700
Earthwork/Equipment	Burns Drilling and Excavating	724-428-4361
Earthwork/Equipment	Patriot One	724-579-0981
Remediation/Cleanup	EPS of Vermont	800-577-4557
Remediation/Cleanup	Ryan Environmental	304-842-5578
Heavy Equipment	Burns Drilling	724-428-4361
Rouster Crew	Roughcut	501-827-1221
Cleanup Supplies	Producers Supply	724-627-6800

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B(b). All Schools and Public Facilities within 1 Mile Radius: Contact information is provided below and Attachment 3 provides a map of the locations.

Name	Address	Telephone Number
Green Valley School (Historical)	Blake Fork Wileyville, WV 26581	Wetzel Historical Society 1-800-416-3497

C. Discussions between the rig toolpusher and well site supervisor will occur at least twice per day during the tourly HSE Meetings and will cover all pertinent aspects of operations, health, safety, and environmental issues. The well site supervisor and drilling engineer will be in daily contact with the SWN Drilling Department via phone and/or email and will discuss all pertinent operations and HSE issues.

1. WVDEP Oil and Gas Inspector: *Derek Haught*
2. Personnel in attendance for the pre-spud meeting:

- Drilling
- Land
- HSE
- Regulatory
- Geology
- Drilling Contractor Representative
- Directional Company Representative (if needed)
- Drilling Fluids Representative (if needed)
- Cementing Company Representative (if needed)

D. HSE meetings will be conducted once per tour and will include all personnel working on location. HSE meetings will cover upcoming operations, JSAs for critical operations, recent HSE incidents, and requirements for safe and healthy operations during current weather conditions. Corporate HSE alerts and rig fleet corrective actions in response to recent HSE incidents will also be discussed when applicable.

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1. The highest ranking drilling contractor representative present shall keep an accurate count of all drilling personnel on the drilling location at all times. All non-drilling (i.e., non-SWN and non-drilling contractor) personnel will be required to sign the attached SIGN IN SHEET (see Attachment 1). All non-essential persons will be kept off the drilling location at all times, and such access will be enforced by the highest ranking

WV Department of Environmental Protection

2. MAPS AND DIAGRAMS

- A. Plan View Map – See Attachment 2
- B. 1 Mile Radius Map – See Attachment 3
- C. Evacuation Plan – See Attachment 4

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3. WELL WORK

A. Well Work and Procedures

1. Well Work Detail: Drill and stimulate the Marcellus formation. If a void is encountered when drilling surface casing, place two baskets above the void area – balance cement to bottom of void and grout from basket to surface. Run casing not less than 20 feet below void nor more than 100 feet below void. If freshwater is encountered deeper than anticipated it must be protected, set casing at least 50 feet below but not more than 150 feet below freshwater and cement to surface.
 2. All casing cemented will not be disturbed for at least 8 hours after completion of cementing operations.
 3. If cement does not return to surface when cementing Surface and Coal casing, the oil and gas inspector will be notified within 24 hours.
 4. Surface, Coal and Intermediate strings will be pressure tested at a pressure greater than what is expected to be exerted on each string throughout the remainder of the well operations.
 5. No oil or gas production or pressure should exist on the surface or coal protection strings.
 6. A Formation Integrity Test (FIT) will be performed immediately following the drill out of surface, coal and intermediate casing.
 7. Centralizers will be used in the well in accordance with regulations and company best practices.
 8. Production casing will be pressure tested at a pressure greater than what is expected to be exerted upon it during fracturing operations. Upon completion of fracturing operations the production casing will be pressure tested at a pressure greater than expected shut in pressure.
 9. 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 units, vertical separation units, water and oil storage tanks.
- B. A copy of the Well Site Safety Plan will be provided to the local county emergency office at least 7 days before dirt work or well work commences.

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4. CHEMICAL INVENTORY AND SAFETY DATA SHEETS (SDS)

A. SDS – Please refer to the CD

B. SDS will be available in the toolpusher's office.

C. Please see below for the list of additives to be on site during each phase of construction.

Chemical	Storage Vessel	Typical Quantity Range
Fuels and Lubricants		
Diesel Fuel	ASTs	12,000 - 25,000 gal.
Motor Oil	Lube Skid	55 - 300 gal.
Hydraulic Oil	55-gal. drums or smaller	55 - 440 gal.
Brake Fluid	55-gal. drums or smaller	55 gal.
Used Motor Oil	55-gal. drums	55 - 220 gal.
Lube Oil	55-gal drums	55 - 220 gal.
Drilling		
Salt (NaCl)	Bags/Sacks	2,000 - 20,000 lbs.
Anco Bar (barite)	Bags/Sacks/Drums	90,000 – 120,000 lbs
SOBM Oil Base (Synvert Synthetic Drilling Fluid Base)	Plastic Totes	4,000 - 10,000 gal.
Defoamer	55-gal. drums	55 – 1,000 gal.
Bentonite	Sacks	1,000 – 5,000 lbs
Rheology Modifier	55-gal. drums	55 – 1,000 gal.
Potassium Chloride (KCl)	Bags/Sacks	2,000-12,000 lbs.
Wetting Agent	55-gal. drums	55 – 1,000 gal.
Primary Emulsifier	55-gal. drums	55 – 1,000 gal.
Gilsonite	Bags/Sacks	2,000 - 10,000 lbs.
Calcium Carbonate	Bags/Sacks	2,000 - 10,000 lbs.
Calcium Chloride (CaCl)	Bags/Sacks	2,000-12,000 lbs.
Lime	Bags	6,000 - 12,000 lbs.
Organopuillic Clay	Bags/Sacks	2,000-12,000 lbs.
Salt Gel	Bags/Sacks	2,000-10,000 lbs.
Walnut Hulls	Bags/Sacks	2,000-5,000 lbs.
Cedar Fiber	Bags/Sacks	2,000-5,000 lbs.
KCL Substitute (Anco Guard)	55-gal. drums	55 – 1,000 gal.
Synthetic Oil Based Mud	Frac Tanks / Open Top Mud Tanks	60,000 gal.
Oil Dry (absorbent)	Bags	6,000 - 12,000 lbs.
Battery Acid (Sulfuric Acid)	40-80 lb. Lead Acid Batteries in equipment throughout well pad	600 - 800 lbs.

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Chemical	Storage Vessel	Typical Quantity Range
Hydraulic Fracturing		
Hydrochloric Acid (15-28 %)	Plastic Totes on tractor trailers	4750 - 9,500 gal.
Biocide	Totes	7,000 - 14,000 gal.
Sand	Trailer bins	325,000 - 1,300,000 lbs.
Water Gelling Agent	Tractor trailer tankers/ totes	3,000 - 6,000 gal.
Friction Reducer	Tractor trailer tankers/ totes	2,000 - 4,000 gal.
Scale Inhibitor (ethylene glycol)	Plastic Totes	250 - 500 gal.
Guar Gel	Plastic Totes	4,000 - 6,000 gal.
Production		
Natural Gas Condensate	ASTs	16,800 - 33,600 gal.
Produced Brine Water	ASTs	16,800 - 33,600 gal.
Methanol	ASTs	350 - 700 gal.
Ethylene glycol/Triethylene glycol	GPU Units & Dehydration Units	750 gal.

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5. BOP AND WELL CONTROL

A. The following is a list of the blow-out prevention equipment that will be utilized at various times during the drilling of the well:

13-3/8" Casing String _____

13- 5/8" Annular 13-5/8"
10,000 psi BOP Stack

B. The BOP stack will be pressure tested upon installation and every 21 days following. The BOP stack will be function tested upon installation, weekly, and after every bit trip. All pressure tests shall be performed for thirty (30) minutes. Annular preventers should be tested to 70% of the rated capacity and ram preventers should be tested to 80% of the rated capacity.

C. BOP Equipment – the standard BOP equipment to be used is shown on the following page.

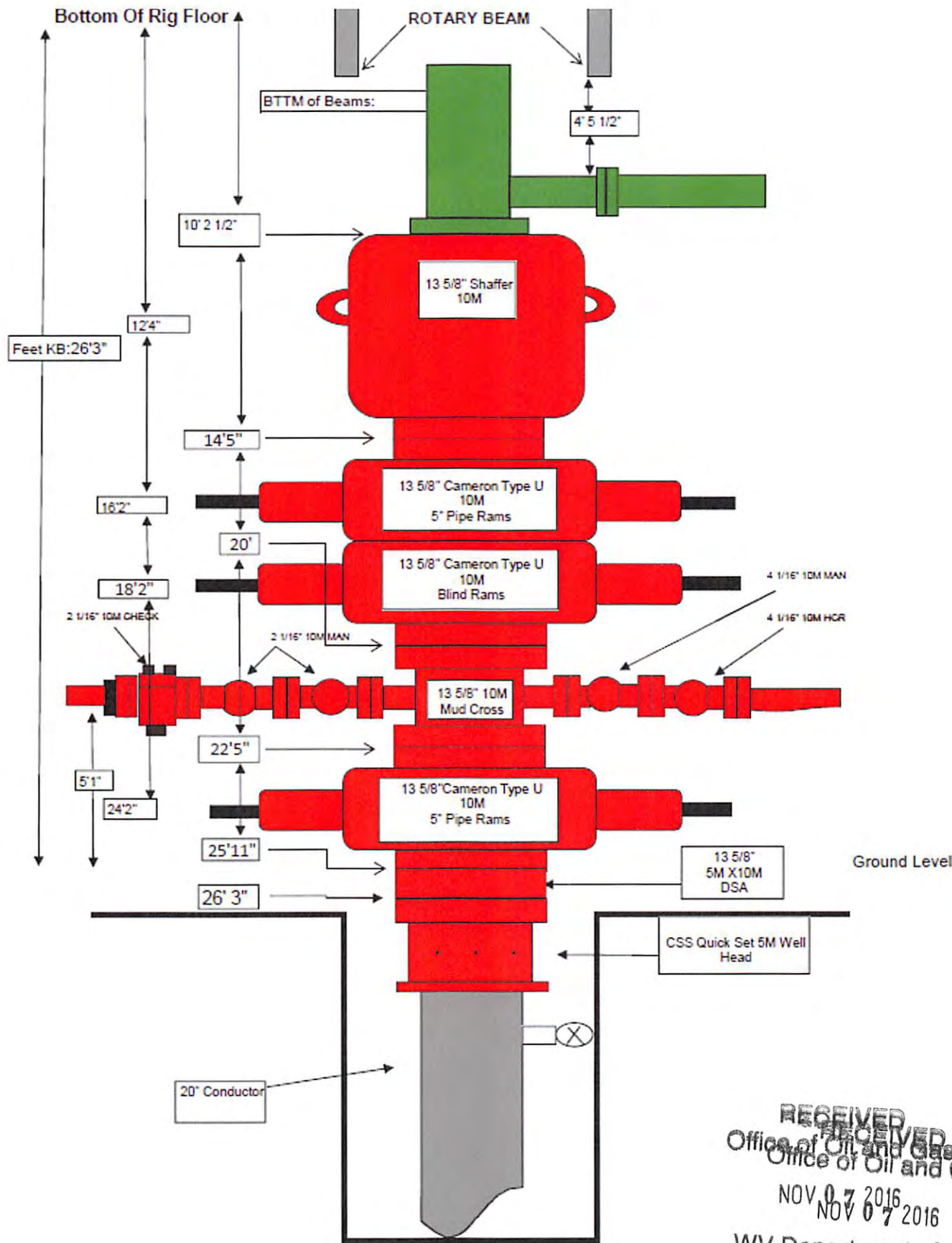
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02/10/2017



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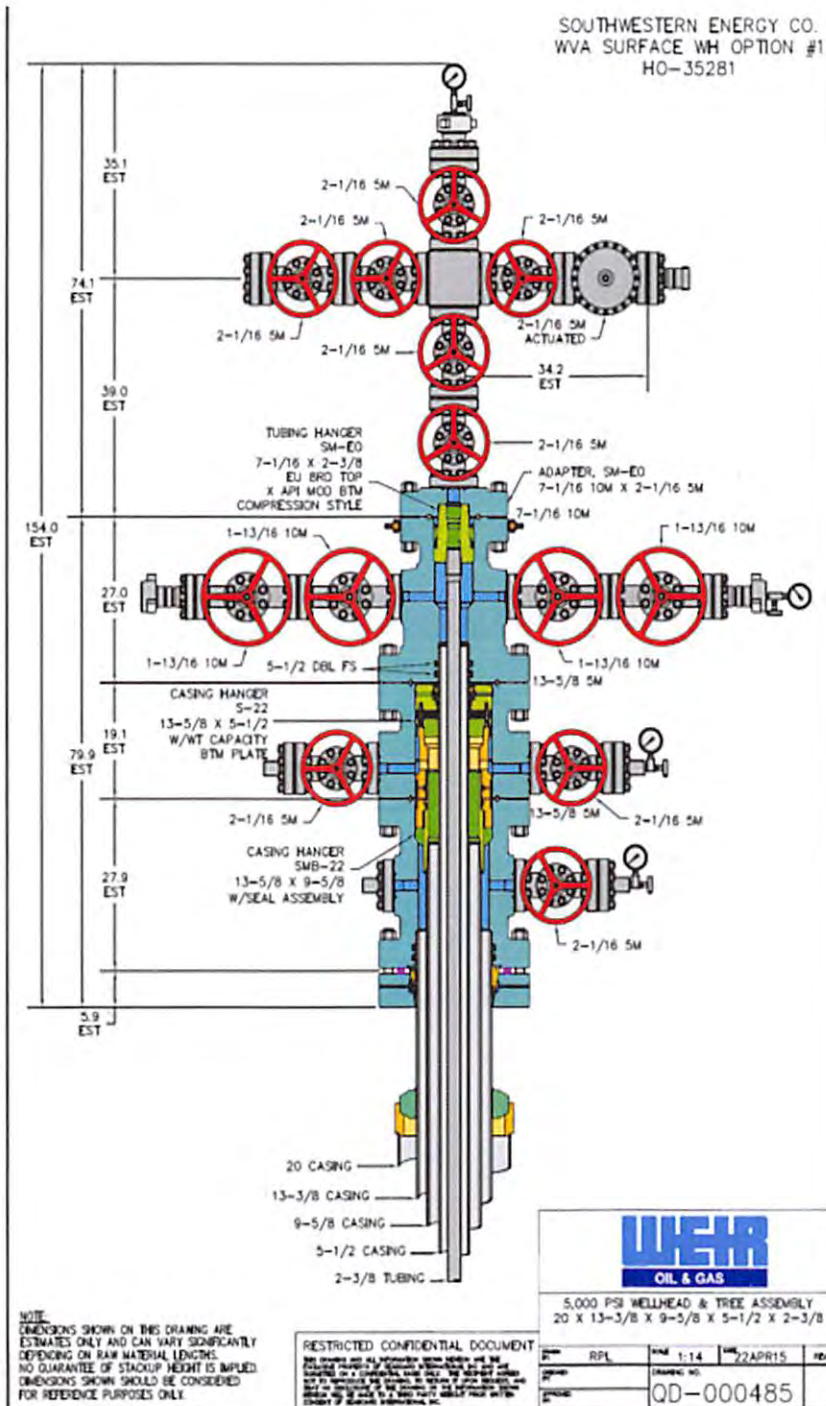
24-Hour Emergency Call Center (800) 442-2017

02/10/2017

D. The following persons that will be involved in the drilling operations are BOP certified:

- Rig Toolpusher
- Rig Moring Tour Driller
- Rig Evening Tour Driller

E. Wellhead Assembly



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F. Well Killing Operations Method and Type

1. Barite and saturated brine will be available if necessary to weight up beyond the proposed compositions
2. Once it is confirmed that a significant gas flow has occurred, the appropriate kill procedure will be employed. The mud weight required to kill the well will be calculated and the surface mud system density will be increased to the required weight. A pumping schedule to circulate the kick out of the well will be calculated and followed once the surface mud system is of proper density

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6. HYDROGEN SULFIDE (H₂S)

When the risk of exposure to H₂S exists based on offset wells drilled in the same formation, H₂S monitoring equipment will be installed at the rig floor, shakers, cellar, and pits. If an alarm is presented from any of the sensors, drill operations will cease and all personnel will gather at the appropriate muster area. Properly trained and equipped personnel will determine the validity of the alarm. If the presence of H₂S is confirmed, SWN Production Company, LLC's H₂S Contingency plan will be activated. A copy of this plan is available upon request and details the equipment, training, and procedures required for operation in an H₂S environment.

After the contingency plan is activated the following procedures will be implemented:

- A. In addition to the H₂S monitoring equipment mentioned above, two safety area signs, one H₂S condition sign and two wind socks will be mobilized to location
- B. Training programs covering the topics below will be initiated:
 1. Basic awareness training (either video or booklet review) will occur on-site and may require two trips in order to train all rig crew members
 2. Each crew member will be given certification test to verify his competence to respond in an H₂S situation
 3. Physically show members how to properly don a mask and perform a qualitative fit test (banana oil) if utilizing a tight fitting mask as an escape unit
 4. Identify and discuss the location of escape units, SCBA's and location of H₂S monitors and sensors
- C. In the unlikely event that hydrogen sulfide would be present, all affected residents and agencies would be notified by telephone or in person by a SWN Production Company, LLC representative, and access would be controlled by a sign, color coded flags and a sign-in sheet. The Oil and Gas Inspector of the appropriate county will be contacted by phone
- D. In case of an emergency on the drilling site, all persons on location will exit via the access road and meet at the evacuation meeting area designated on the attached EVACUATION PLAN. The highest ranking drilling contractor representative will be responsible for comparing the persons that were present on location to those persons gathered at the designated evacuation meeting area. Protection Zones will be established while drilling that will be located at the predetermined muster points furthest upwind of the location of the H₂S
- E. PPE Available
 1. (10) 5 – minute escape packs will be installed on the rig floor for a quick escape
 2. (1) 10 – minute escape pack will be installed on the board
 3. (4) 30 – minutes SCBA's will be on-site. Two SCBA's will be placed at the entrance to the location (Muster Point #1) and the other two placed at Muster Point #2 on the other side of the location. This will allow either equipment to be in area that is upwind.

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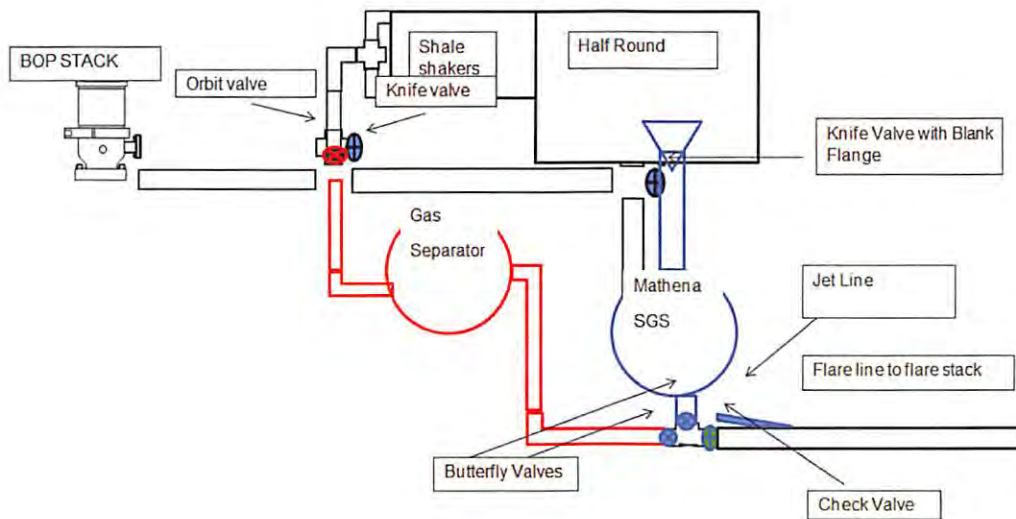
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7. FLARING

A. Well Flaring

1. If a significant show is encountered the gas would be flared through the 10" flanged flowline to a flare stack
2. The fire department will be notified immediately prior to flaring if possible
3. The duration of flaring typically should not last more than 10 days
4. Schematic:



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8. COLLISION AVOIDANCE

Wellbore Anti-Collision and Directional Surveying

1. Survey Requirements

- a. All wells shall be surveyed from the wellhead to a total depth using the guidelines specified in this document.
- b. Survey tool selection shall be based on the anti-collision requirements, survey tool accuracy, target size, and depth.
- c. SWN preferred method of survey calculations shall be the Minimum Radius of Curvature method.
- d. All survey data shall be required to have azimuths pre-corrected to Grid North. The values for convergence and declinations and depth datum details used shall be reported on all definitive surveys. Additionally, survey tool accuracy should be specified on all surveys presented to SWN.
- e. During collision scans all offset well surveys will be evaluated for accuracy.

1.1 General Requirements

In all development wells, regularly spaced MWD or Magnetic Single Shot Surveys shall be taken at a frequency not to exceed 300'. Additional surveys may be taken at the discretion of the directional driller, Drilling Representative, Drilling Superintendent, or Drilling Engineer to ensure accuracy and minimize the potential for collision.

1.2 Survey Quality Control and Reporting

- 1.2.1 Deviation calculations shall be performed on the rig by the directional driller and independently verified by Southwestern's 24-hour operations support center. The calculations shall be performed using a company approved program. The directional drilling contractor is responsible for the accurate reporting of all wellbore positioning data. The directional drilling contractor will present the definitive surveys utilizing data from any of SWN's surveying contractors.
- 1.2.2 The SWN representative will check tie-in data before drilling out of each hole section. Projected surveys will never be used to tie-in subsequent surveys.
- 1.2.3 The Drilling Engineer and directional drilling contractor will ensure all directional drilling proposals include the correct tie-in data and clearly identify the projection to which the plan is tied. This projection will be replaced with a survey once drilling commences.

2. Well Planning Requirements

- 2.1.1 No two wellbores should be designed to be closer than 10' once drilling commences. In the event that two surface locations are closer than 10' apart then directional equipment will be required below conductor and greater than 10' of separation shall be achieved as soon as possible.
- 2.1.2 During the well planning process a clearance scan will be performed and validated. The Directional Drilling Contractor and the Drilling

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Engineer shall calculate a Separation Factor for all potential collision risk wells identified in the clearance scan.

- 2.1.3 All wells planned with a S.F. of less than 1.5 or at any point closer than 10' planned center to center separation will be reviewed with the Drilling Engineering Manager prior to pre-spud meetings.
- 2.1.4 After completion of location and prior to setting the conductor the land survey company will resurvey the stakes for each surface location and drive a steel stake in the ground identifying each individual well. An as-built will be created and circulated to the Drilling Engineer and Drilling Superintendent identifying each well and the appropriate X and Y locations.

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**ATTACHMENT 1
SIGN IN SHEET**

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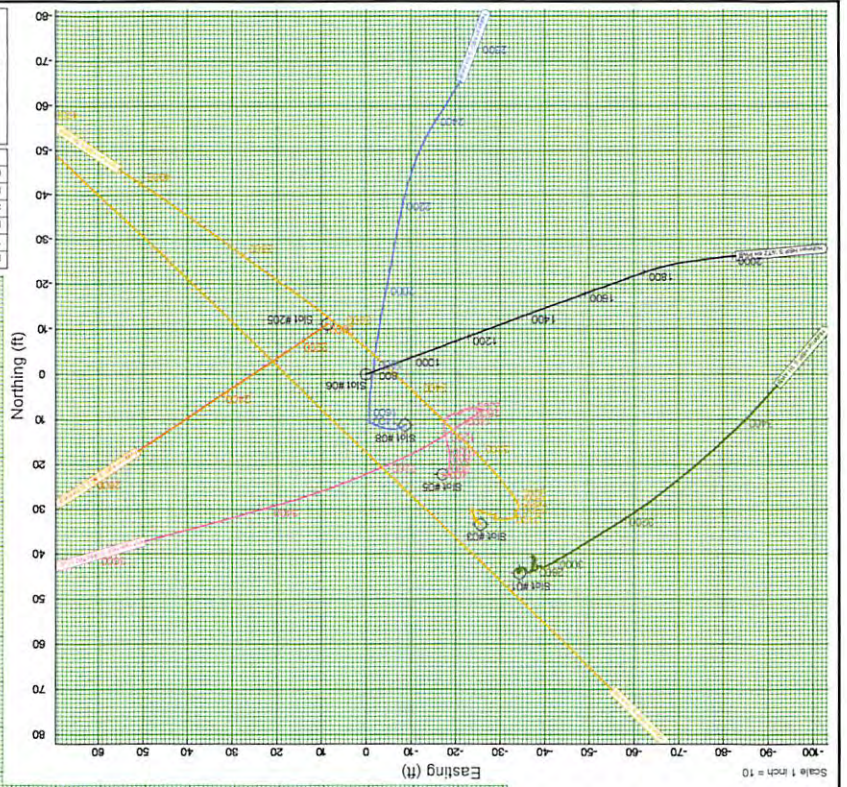
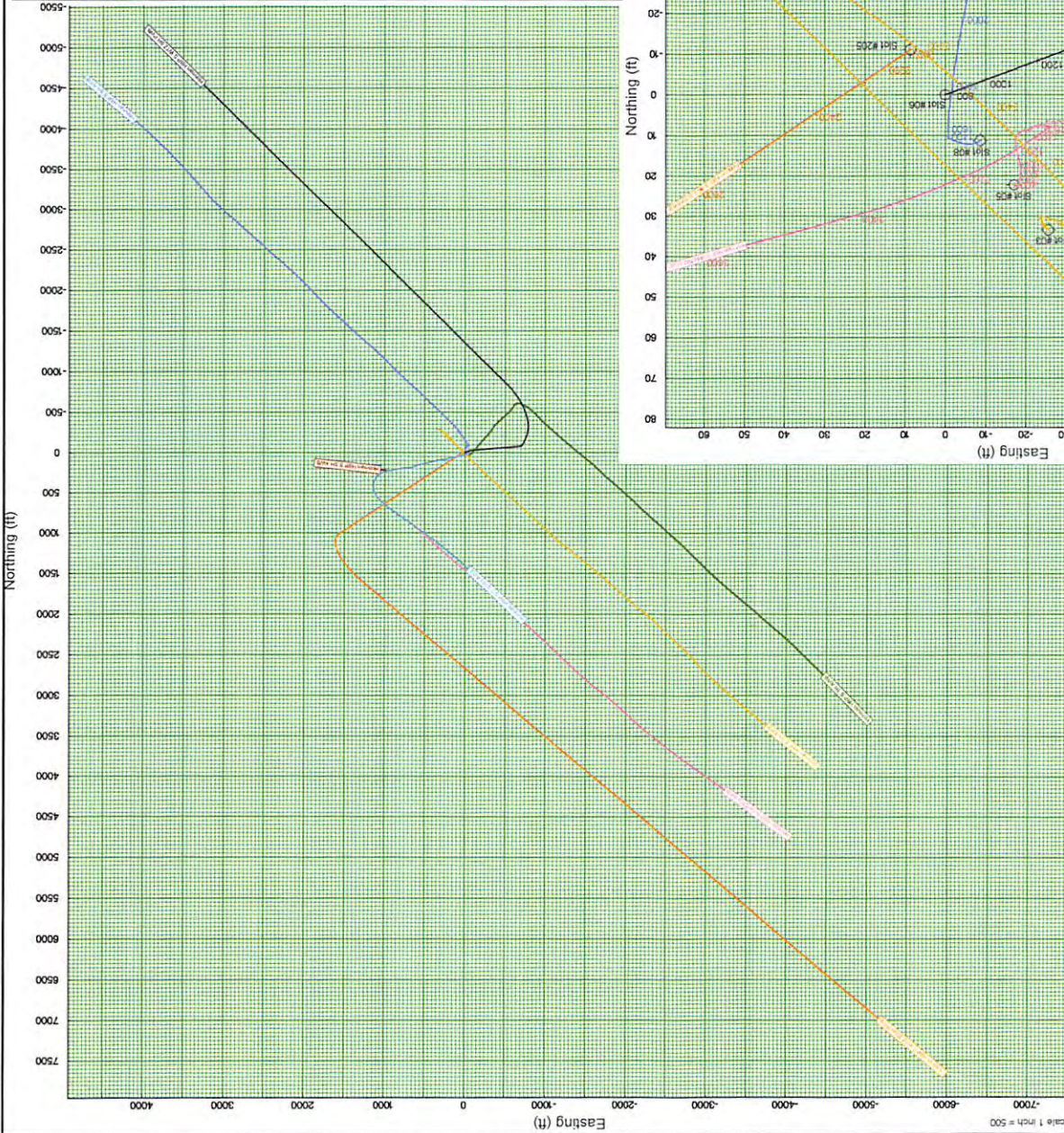
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SOUTHWESTERN ENERGY

Location: Weitzel County, WV	Field: Weitzel	Facility: Hohman HBP S WTZ Pad
Grid System: NAD83 / UTM Zone 17 North, US feet	Scale: True distance	Created by: Burnace on 2016-08-26
True vertical depths are referenced to SDC as (PKB)	Scale: True distance	Coordinates are in feet referenced to SDC
** Weitzel was transferred from a different geoidetic datum	North Reference: Grid north	Mean Sea Level to Mud line (At SDC Slot M05) - 1427.5 feet
Measured depths are referenced to SDC as (PKB)	Scale: True distance	SDC as (PKB) to Mean Sea Level: 1433.5 feet
SDC as (PKB) to Mean Sea Level: 1433.5 feet	Scale: True distance	Depths are in feet
Database: WA, Pennsylvania	Scale: True distance	Depths are in feet



**ATTACHMENT 2
PLAN VIEW MAP**

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**July 2016
02/10/2017**

EXISTING WELLS:
 HOHMAN HBP S 1H
 47-103-02458H
 (NAD83)
 LAT: 39.681000
 LONG: 80.706615

HOHMAN HBP S 3H
 47-103-02459H
 (NAD83)
 LAT: 39.680969
 LONG: 80.706585

HOHMAN HBP S 5H
 47-103-02460H
 (NAD83)
 LAT: 39.680938
 LONG: 80.706555

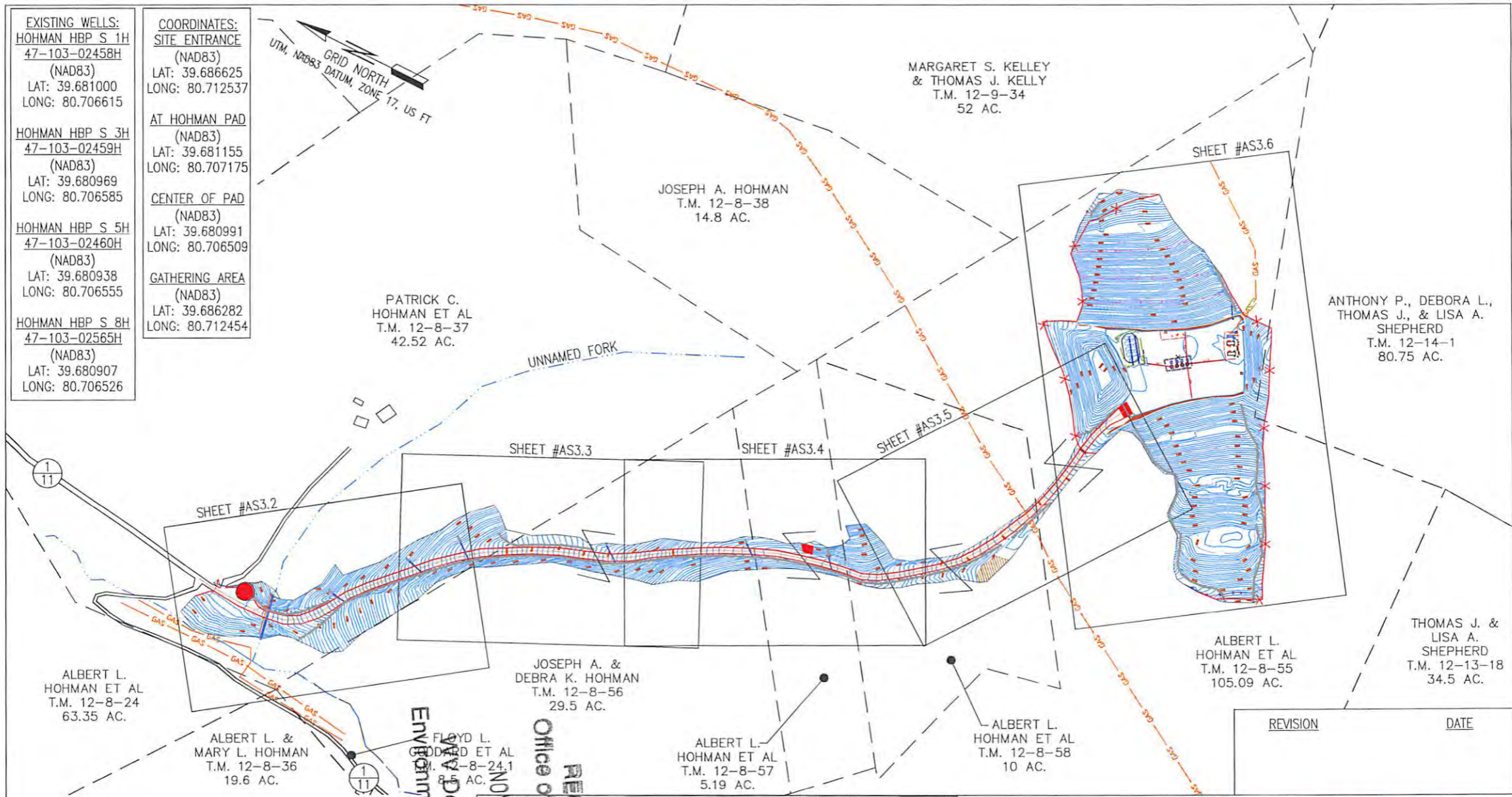
HOHMAN HBP S 8H
 47-103-02565H
 (NAD83)
 LAT: 39.680907
 LONG: 80.706526

COORDINATES:
SITE ENTRANCE
 (NAD83)
 LAT: 39.686625
 LONG: 80.712537

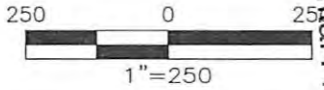
AT HOHMAN PAD
 (NAD83)
 LAT: 39.681155
 LONG: 80.707175

CENTER OF PAD
 (NAD83)
 LAT: 39.680991
 LONG: 80.706509

GATHERING AREA
 (NAD83)
 LAT: 39.686282
 LONG: 80.712454



REVISION	DATE



NOTE: PROPERTY LINES AND OWNERSHIP PROVIDED BY SWN.

WV Department of Environmental Protection

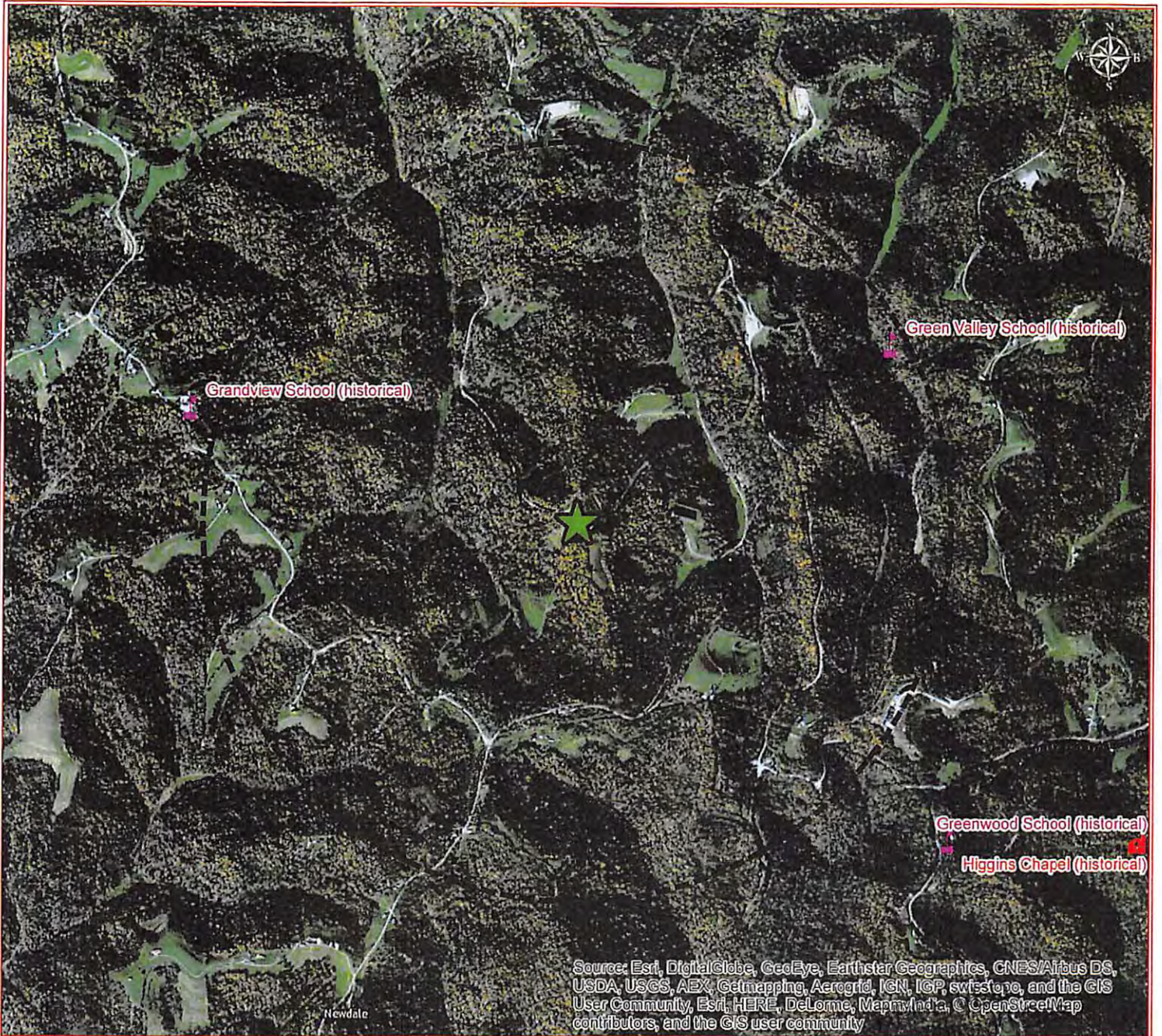


Dennis L. Fisher RPE 8684

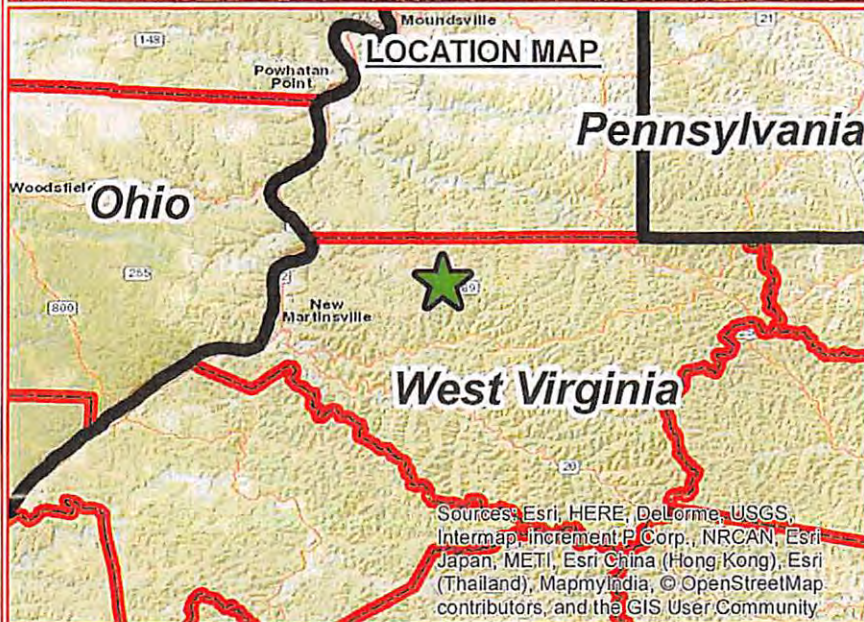
07-14-2016
Date:



Jackson Surveying Inc.
 CONSTRUCTION AND RECLAMATION
 ASBUILT OVERVIEW
 AS3.1
 SOUTHWESTERN PRODUCTION COMPANY LLC.
 HOHMAN HBP S PAD
 PROCTOR DISTRICT, WETZEL COUNTY, WV
 JULY 14, 2016








Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

-  Hohman Pad
-  Hohman Pad_1_Mile_Buffer
-  sde.GISPUB.bmp_Cemeteries
-  sde.GISPUB.bmp_Churches
-  sde.GISPUB.bmp_Schools

Office of Civil Liberties
 NOV 07 2016
 WV Department of Environmental Protection

**Hohman HBP S-1Mile
 Wetzel County, West Virginia**

Coordinate System: NAD 1983 StatePlane West Virginia North FIPS 4701 Feet

02/10/2017

103-03171

**ATTACHMENT 4
EVACUATION PLAN**

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**July 2016
02/10/2017**



West Virginia Incident Notification Numbers

103-03171

All SWN employee office and cell phone numbers can be found in the employee directory on SWNet.

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 2016
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Name	Title	Office	Cell #	Home
Derek Cutright	WVD Vice President & General Manager	(832) 796-7473	(713) 460-6657	
Josh Froelich	WVD Operations Director	(832) 796-2912	(713) 540-8647	
Chris Flanagan	WVD Area Manager	(304) 884-1626	(304) 203-4985	
Bill Edwards	WVD Operations Manager	(304) 884-1673	(304) 398-0400	
John Ale	Senior VP General Counsel & Corporate Secretary	(832) 796-6100	(832) 545-5010	(713) 874-0263
Rick Ogle	Associate Operations General Counsel	(832) 796-4819	(831) 813-4218	(713) 664-9769
Steve Guidry	VP Land	(832) 796-4864	(281) 216-4344	(281) 259-8945
Jenny McCauley	Sr. Vice President of Human Resources	(832)-796-2990	(281) 460-7167	
HSER Department				
Greg Stoute	HSER Vice President	(832) 796-7356	(281) 795-3856	
Peter Cain	HSE Manager - WVD	(832) 796-7907	(281) 217-4552	
Daniel Sniogowski	HSE Supervisor - WVD	(304) 884-1661	(501) 428-3114	
Matt Boggs	Sr. HSE Coordinator - WVD	(304) 884-1653	(304) 406-2454	
Clayton Travis	Sr. HSE Coordinator - WVD	(304) 884-1707	(501) 358-9354	
Dan Croll	Regulatory Director	(832) 796-2867	(713) 689-8139	
Carla Suszkowski	Regulatory Manager	(832) 796-6372	(724) 561-8129	
John Angiulli	Regulatory Specialist	(304) 884-1644	(304) 406-4343	
Tyler Spear	Sr. Regulatory Technician	(304) 884-1681	(832) 242-4339	
Dee Southall	Regulatory Supervisor	(304) 884-1614	(304) 997-5233	
Production Operations				
Ricky Winberry	Production Field Manager	(304) 884-1687	(501) 428-2021	
Greg Shingleton	Sr. Production Foreman	(304) 884-1625	(304) 641-5154	
Donny McHenry	Sr. Production Foreman	(304) 884-1624	(304) 641-5518	
Brian Heckert	Sr. Production Foreman	(304) 884-1623	(304) 203-8025	
Completion Operations				
Shawn Jackson	Workover/Completions Superintendent	(304) 884-1618	(304) 641-3204	
Aaron Casto	Workover/Completions Foreman	(304) 884-1619	(724) 886-2079	
Alex Worley	Workover/Completions Foreman	(304) 884-1620	(304) 406-4292	
Construction/LMG Operations				
Darren Martin	Construction Manager	(304) 884-1685	(501) 654-4923	
Drilling Operations				
Dicky Hall	WVD Drilling Director	(832) 796-4870	(713) 569-2935	
Water Team				
Mark Mazoch	Water Team Manager	(832) 796-7542	(713) 825-4567	
Darrell Satterfield	WVD Water Team Supervisor	(304) 884-1643	(304) 517-6786	

September 19, 2016

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

RE: Proposed New Well Hohman HBP S WTZ 6H

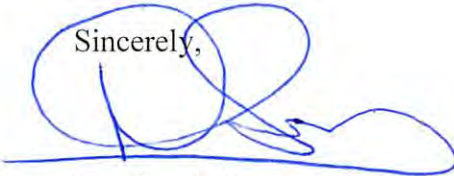
Dear Ms. Adkins

SWN has reviewed the area of the above mentioned well and discovered no shallow wells within 500' of the lateral. This well is situated on the Hohman's property, in Proctor District, Wetzel County, West Virginia.

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

Thank you.

Sincerely,



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

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Environmental Protection

Latitude: 39°42'30"

SURFACE HOLE 11,205'

BOTTOM HOLE 7,972'

JACKSON SURVEYING INC.

P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851

Latitude: 39°42'30"

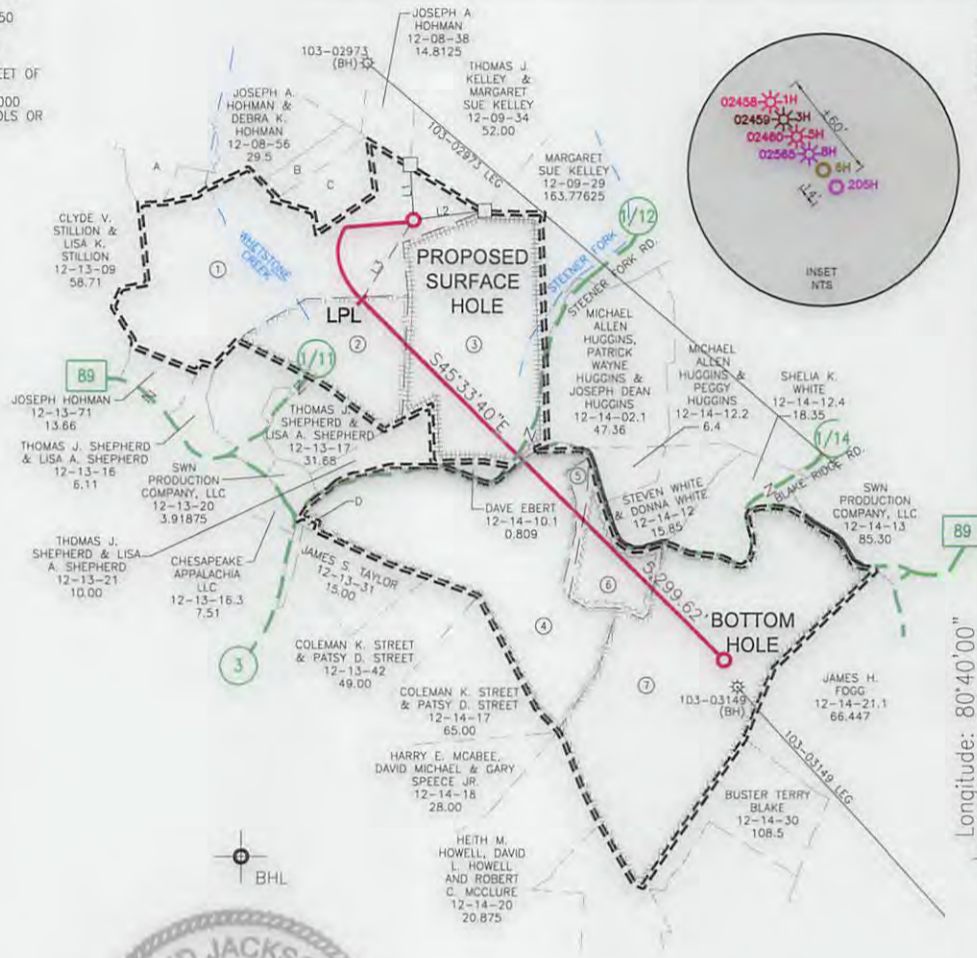
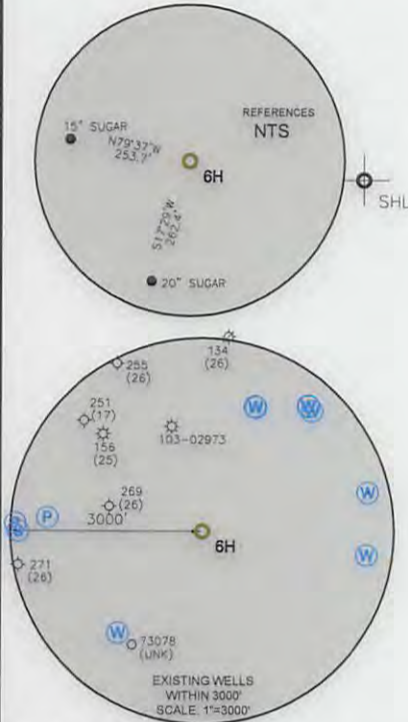
GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,392,379.961 EASTING: 525,169.905
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,392,125.770 EASTING: 525,006.764
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,390,994.801 EASTING: 526,160.105

WELL RESTRICTIONS

- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD
- NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD
- NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL
- NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 03°28'44" W	578.24'	SHL TO LANDMARK	CNR FENCE POST FD.
L2	N 82°43'06" E	747.09'	SHL TO LANDMARK	CNR FENCE POST FD.
L3	S 32°41'33" W	990.94'	CURVE LENGTH	DESCRIPTION

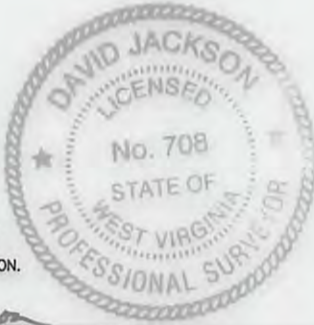


- NOTES ON SURVEY**
- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
 - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 - ALL INSETS ARE GRID NORTH UNLESS OTHERWISE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

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 708

David L Jackson



COMPANY: **SWN** Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	MINIMUM DEGREE OF ACCURACY: 1/200	HOHMAN HBP S WTZ
	PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	OPERATOR'S WELL #: 6H
	API WELL #: 47	103 03171 H6A
	STATE	COUNTY PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: WHETSTONE CREEK & STEENER FORK ELEVATION: 1467.5'

DISTRICT: PROCTOR COUNTY: WETZEL QUADRANGLE: WILEYVILLE, WV

SURFACE OWNER: ALBERT L. HOHMAN & MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014, JOSEPH A. HOHMAN AND DEBRA K. HOHMAN ACREAGE: ±59.80

OIL & GAS ROYALTY OWNER: ALBERT L. HOHMAN & MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014, JOSEPH A. HOHMAN AND DEBRA K. HOHMAN ACREAGE: ±59.80

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,294 TVD 13,032 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378

DESIGNATED AGENT: DEE SOUTHALL ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378



LEGEND:	<ul style="list-style-type: none"> PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD LANDING POINT LOCATION EXISTING WATER WELL EXISTING SPRING 	<ul style="list-style-type: none"> SURVEYED BOUNDARY DRILLING UNIT LEASE BOUNDARY PROPOSED PATH 	REVISIONS: Δ REVISED SURFACE AND O&G ROYALTY OWNERS 02-06-2017	DATE: 10-12-2016 DRAWN BY: N. MANO SCALE: 1" = 2000' DRAWING NO: WELL LOCATION PLAT
----------------	--	---	---	---

JACKSON SURVEYING
 INC.
 P.O. Box 1460
 677 W. Main St.
 Clarksburg, WV 26302
 304-623-5851

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS			
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014, JOSEPH A. HOHMAN AND DEBRA K. HOHMAN (S) ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014, JOSEPH A. HOHMAN AND DEBRA K. HOHMAN (R)	12-08-55	59.80
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
2	THOMAS J. & LISA A. SHEPHERD (S)	12-13-18	35.85
3	THOMAS J. SHEPHERD & LISA A. SHEPHERD, ANTHONY P. SHEPHERD & DEBORA L. SHEPHERD (S)	12-14-01	80.75
4	ROBERT C. RICHTER & MILDRED M. RICHTER (S)	12-14-10	99.19
5	ROBERT C. RICHTER & MILDRED M. RICHTER (S)	12-14-11	2.00
6	CHARLES E. SMITH & SHIRLEY M. SMITH (S)	12-14-12.3	18.30
7	BUSTER BLAKE & BARABARA A. BLAKE (S)	12-14-12.1	134.46

ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN & DEBRA K. HOHMAN	12-08-35	14.40
B	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN & DEBRA K. HOHMAN	12-08-57	5.00
C	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN & DEBRA K. HOHMAN	12-08-58	10.00
D	ISABELLA CECILIA PARIKH, TRUSTEE OF TRUST A OF THE PARIKH FAMILY TRUST, DATED DECEMBER 11, 1979	12-13-30	0.34375

02/10/2017

REVISIONS: ▲ REVISED SURFACE AND O&G ROYALTY OWNERS 02-06-2017	COMPANY:  	
OPERATOR'S WELL #: DISTRICT: PROCTOR	HOHMAN HBP S Wtz 6H COUNTY: WETZEL STATE: WV	DATE: 10-12-2016 DRAWN BY: N. MANO SCALE: N/A DRAWING NO: WELL LOCATION PLAT 2

103-0371

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator Hohman HBP 5 6H Wetzel County, West Virginia

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Office of Oil and Gas
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West Virginia Department of State Police

#	TMP	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG	SURFACE OWNER	Book/Page Must describe The Parcel	DEEDED ACREAGE	LEASED ACREAGE
1)	12-8-55	725068-000	Albert L. Hohman and Mary Hohman, his wife, and Joseph A. Hohman and Debra K. Hohman, his wife (Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust Dated August 8, 2014, and Joseph A. Hohman and Debra K. Hohman, his wife)	Chesapeake Appalachia, L.L.C.	18.75%	96A/801	Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust dated August 8, 2014; Joseph A. Hohman and Debra K. Hohman, his wife	445/34	59.800	59.800
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
2)	12-13-18	726026-001	Thomas J. Shepherd and Lisa A. Shepherd, husband and wife	Chesapeake Appalachia, L.L.C.	18.75%	104A/596	Thomas J. and Lisa A. Shepherd	377/88	35.850	35.850
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
2)	12-13-18	744529-001	Chesapeake Appalachia, L.L.C. (Haymaker Properties, LP)	Chesapeake Appalachia, L.L.C.	15.0%	120A/900	Thomas J. and Lisa A. Shepherd	377/88	35.850	35.850
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		165A/673				
3)	12-14-1	726033-002	Thomas J. Shepherd and Lisa A. Shepherd, his wife	Chesapeake Appalachia, L.L.C.	18.75%	104A/497	Thomas J. Shepherd and Lisa A. Shepherd; Anthony P. Shepherd and Debora L. Shepherd	316/676	80.750	80.750
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
3)	12-14-1	726033-001	Anthony P. Shepherd and Debora L. Shepherd, his wife	Chesapeake Appalachia, L.L.C.	18.75%	104A/499	Thomas J. Shepherd and Lisa A. Shepherd; Anthony P. Shepherd and Debora L. Shepherd	316/676	80.750	80.750
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
4)	12-14-10	724115-001	Charles George Hunter and Margaret Ann Hunter, husband and wife	Chesapeake Appalachia, L.L.C.	12.5%	91A/594	Robert C. Richter and Mildred M. Richter husband and wife	394/375	99.190	99.190
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
4)	12-14-10	724115-002	Garnett L. Hohman, widow (Garnett L. Hohman, Kathryn M. Stahlman, DWG Oil & Gas Acquisitions, LLC, RCPTX, LTD., and Noble Roalty Access Fund 15 LP)	Chesapeake Appalachia, L.L.C.	12.5%	91A/597	Robert C. Richter and Mildred M. Richter husband and wife	394/375	99.190	99.190
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
4)	12-14-10	724115-003	Albert Hohman and Mary Hohman, husband and wife (Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust Dated August 8, 2014)	Chesapeake Appalachia, L.L.C.	12.5%	96A/393	Robert C. Richter and Mildred M. Richter husband and wife	394/375	99.190	99.190
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				

103-03171

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
 Hohman HBP S 6H
 Wetzel County, West Virginia

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 Department of Environmental Protection
 MW Drilling Permitting

#	TMP	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG	SURFACE OWNER	DEEDED ACREAGE	LEASED ACREAGE
4)	12-14-10	724115-004	Sheri Hohman Huggins (a/k/a Scheri Huggins; Scheri Ann Hohman Huggins; Sheri A. Huggins; Scheri A. Huggins) Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	107A/932 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	99.190	99.190
4)	12-14-10	744529-001	Chesapeake Appalachia, L.L.C. (Haymaker Properties, LP) Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	15.0%	120A/900 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	99.190	99.190
5)	12-14-11	724115-001	Charles George Hunter and Margaret Ann Hunter, husband and wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	91A/594 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	2.000	2.000
5)	12-14-11	724115-002	Garnett L. Hohman, widow (Garnett L. Hohman, Kathryn M. Stahlman, DWG Oil & Gas Acquisitions, LLC, RCPTX, LTD., and Noble Roaylty Access Fund 15 LP) Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	91A/597 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	2.000	2.000
5)	12-14-11	724115-003	Albert Hohman and Mary Hohman, husband and wife (Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust Dated August 8, 2014) Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	96A/393 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	2.000	2.000
5)	12-14-11	724115-004	Sheri Hohman Huggins (a/k/a Scheri Huggins; Scheri Ann Hohman Huggins; Sheri A. Huggins; Scheri A. Huggins) Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	107A/932 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	2.000	2.000
5)	12-14-11	724115-005	Donald R. Reynolds, a married man Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.5%	118A/62 157A/540	Robert C. Richter and Mildred M. Richter husband and wife 394/375	2.000	2.000

103-0371

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
 Hohman HBP S 6H
 Wetzel County, West Virginia

#	TMP	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG	SURFACE OWNER	Book Page Must describe The Parcel	DEEDED ACREAGE	LEASED ACREAGE
6)	12-14-12.3	725543-001	Shiben Estates, Inc.	Chesapeake Appalachia, L.L.C.	14%	102A/66	Charles E. Smith and Shirley M. Smith, husband and wife	313/658	18.300	18.300
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
6)	12-14-12.3	733384-001	Opal M. Blake, widow (Blake Realty, L.L.C.) Haddad and Brooks	Chesapeake Appalachia, L.L.C.	12.5%	82A/697	Charles E. Smith and Shirley M. Smith, husband and wife	313/658	18.300	18.300
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		130A/910 157A/540				
7)	12-14-12.1	725543-001	Shiben Estates, Inc.	Chesapeake Appalachia, L.L.C.	14%	102A/66	Buster Blake and Barbara Blake, husband and wife	346/707	134.460	134.460
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540				
7)	12-14-12.1	733384-001	Opal M. Blake, widow (Blake Realty, L.L.C.) Haddad and Brooks	Haddad and Brooks	12.5%	82A/697	Buster Blake and Barbara Blake, husband and wife	346/707	134.460	134.460
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		130A/910 157A/540				

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 MINERAL RIGHTS
 WV Department of
 Environmental Protection

WW-6A1
(5/13)

Operator's Well No. Hohman HBPS WITZ 6H

**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:

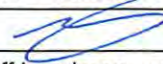
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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: 
 Its: Staff Landman (Staff Nuckolls)

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by Chesapeake Appalachia, L.L.C., Operator

Hohman HBP 5 WTC LH
Ohio County, West Virginia

#	TMP	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG
1)	12-8-55	725068-000	Albert L. Hohman and Mary Hohman, his wife, and Joseph A. Hohman and Debra K. Hohman, his wife	Chesapeake Appalachia, L.L.C.	18.75%	96A/801
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
2)	12-13-18	726026-001	Thomas J. Shepherd and Lisa A. Shepherd, husband and wife	Chesapeake Appalachia, L.L.C.	18.75%	104A/596
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
2)	12-13-18	722916-001	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	12.5%	157A/646
3)	12-14-1	726033-002	Thomas J. Shepherd and Lisa A. Shepherd, his wife	Chesapeake Appalachia, L.L.C.	18.75%	104A/497
				SWN Production Company, LLC		157A/540
3)	12-14-1	726033-001	Anthony P. Shepherd and Debora L. Shepherd, his wife	Chesapeake Appalachia, L.L.C.	18.75%	104A/499
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
4)	12-14-10	724115-001	Charles George Hunter and Margaret Ann Hunter, husband and wife	Chesapeake Appalachia, L.L.C.	12.5%	91A/594
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
4)	12-14-10	724115-002	Garnett L. Hohman, widow	Chesapeake Appalachia, L.L.C.	12.5%	91A/597
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
4)	12-14-10	724115-003	Albert Hohman and Mary Hohman, husband and wife	Chesapeake Appalachia, L.L.C.	12.5%	96A/393
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
4)	12-14-10	724115-004	Sheri Hohman Huggins (a/k/a Scheri Huggins; Scheri Ann Hohman Huggins; Sheri A. Huggins; Scheri A. Huggins)	Chesapeake Appalachia, L.L.C.	12.5%	107A/932
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
4)	12-14-10	722916-001	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	12.5%	157A/646

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Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by Chesapeake Appalachia, L.L.C., Operator

Hohman HBP 5 WTZ LH
Ohio County, West Virginia

5)	12-14-11	724115-001	Charles George Hunter and Margaret Ann Hunter, husband and wife	Chesapeake Appalachia, L.L.C.	12.5%	91A/594
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
5)	12-14-11	724115-002	Garnett L. Hohman, widow	Chesapeake Appalachia, L.L.C.	12.5%	91A/597
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
5)	12-14-11	724115-003	Albert Hohman and Mary Hohman, husband and wife	Chesapeake Appalachia, L.L.C.	12.5%	96A/393
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
5)	12-14-11	724115-004	Sheri Hohman Huggins (a/k/a Scheri Huggins; Scheri Ann Hohman Huggins; Sheri A. Huggins; Scheri A. Huggins)	Chesapeake Appalachia, L.L.C.	12.5%	107A/932
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
5)	12-14-11	724115-005	Donald R. Reynolds, a married man	Chesapeake Appalachia, L.L.C.	12.5%	118A/62
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
5)	12-14-11	722916-001	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	12.5%	157A/646
6)	12-14-11	25543-001	Shiben Estates, Inc.	Chesapeake Appalachia, L.L.C.	14%	102A/66

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103-03171



September 13, 2016

Ms. Laura Adkins
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

RE: SWN's proposed Hohman HBP S WTZ 6H in Wetzel County, West Virginia, Drilling under Steener Fork Road.

Dear Ms. Adkins:

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 Steener Fork Road. 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.

Sincerely,

Gary Nuckolls
Staff Landman
SWN Production Company, LLC
PO Box 1300
Jane Lew, WV 26378

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Office of Oil and Gas
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WV Department of
Environmental Protection

The Right People doing the Right Things,
wisely Investing the cash flow from
our underlying Assets, will create Value+

02/10/2017

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

Date of Notice Certification: 11/2/16

API No. 47- 103 - 03171
Operator's Well No. Hohman HBP S WTZ 6H
Well Pad Name: Hohman HBP S WTZ 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	Eastings:	<u>525169.905</u>
County:	<u>103- Wetzel</u>		Northing:	<u>4392379.961</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Steener Fork Road</u>	
Quadrangle:	<u>Wileyville</u>	Generally used farm name:	<u>Hohman</u>	
Watershed:	<u>Whetstone Creek & Steener Fork</u>			

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

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

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Office of Oil and Gas
NOV 07 2016

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Communications 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:	<u>SWN Production Co., LLC</u>	Address:	<u>P.O. Box 12359</u>
By:	<u>Dee Southall</u>		<u>Spring, TX 77391-4954</u>
Its:	<u>Regulatory Supervisor</u>	Facsimile:	<u>92816182780@fax.com</u>
Telephone:	<u>832-796-1614</u>	Email:	<u>Dee_Southall@swn.com</u>


 Subscribed and sworn before me this 14th day of September 2016
Brittany R Woody Notary Public
 My Commission Expires 11/27/18

Oil and Gas Privacy Notice:

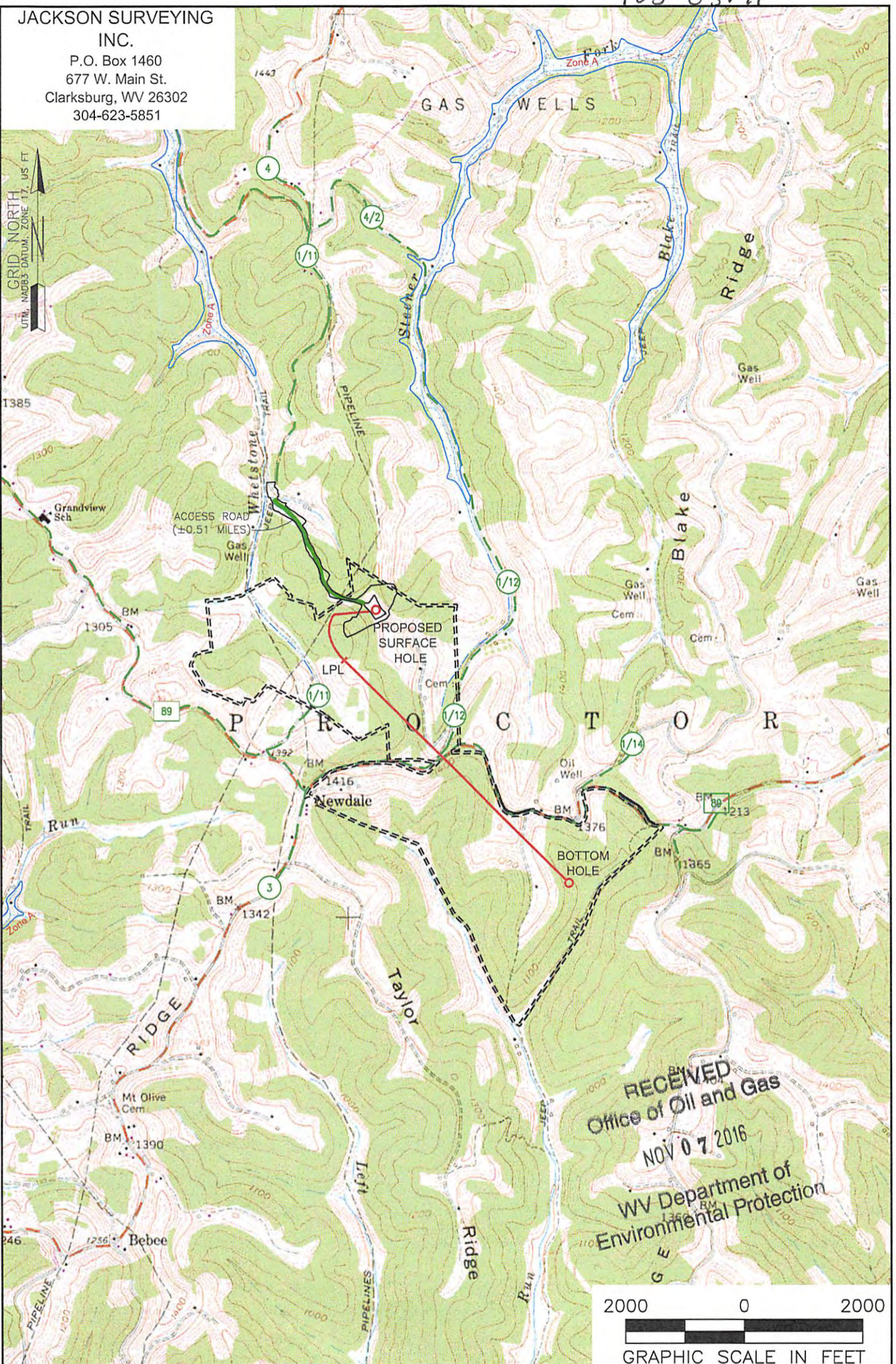
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory 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.

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Environmental Protection

103-03171

**JACKSON SURVEYING
INC.**
P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851

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



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Environmental Protection



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- 3.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

02/10/2017

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: HOHMAN HBP S WTZ	WELL # 6H	SERIAL #
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	COUNTY - CODE WETZEL - 103	DISTRICT; PROCTOR	
SURFACE OWNER: ALBERT L. HOHMAN, JOSEPH HOHMAN & DEBRA K. HOHMAN	USGS 7 1/2 QUADRANGLE MAP NAME WILEYVILLE, WV		

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: 11/2/16 Date Permit Application Filed: 11/2/16
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: Joseph A. & Debra K. Hohman
Address: RT. 1 Box 127 B
Proctor, WV 26055
Name: Albert L. & Mary Hohman
Address: 54 Whestone Rd
Proctor, WV 26055
 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, Inc.
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
 COAL OPERATOR
Name: _____
Address: _____
 SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: NONE **
Address: _____
 OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

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*Please attach additional forms if necessary

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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad, if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2013, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells and they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the terms

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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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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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WW-6A
(8-13)

API NO. 47- 103 03171
OPERATOR WELL NO. Hohman HBP S WTZ 6H
Well Pad Name: Hohman HBP S WTZ Pad

Notice is hereby given by:

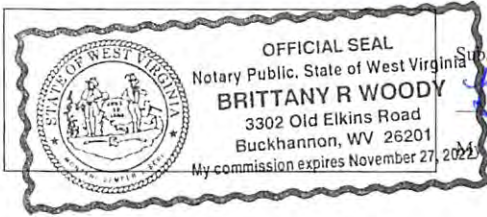
Well Operator: SWN Production Co., LLC
Telephone: 832-796-1000
Email: Dee_Southall@swn.com



Address: P.O. Box 12359
Spring, TX 77391-4954
Facsimile: 92816182780@fax.com

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.



Subscribed and sworn before me this 14th day of September, 2016.
Brittany R Woody Notary Public
My Commission Expires 11/27/22

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: 09/14/2016 **Date Permit Application Filed:** 11/2/16

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: Albert L & Mary Hohman
Address: 54 Whetstone Rd
Proctor, WV 26055

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>525,169.905</u>
County:	<u>Wetzel</u>	Northing:	<u>4,392,379.961</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Steener Fork Rd.</u>
Quadrangle:	<u>Wileyville</u>	Generally used farm name:	<u>Hohman HBP S WTZ</u>
Watershed:	<u>Whetstone Creek & Steener Fork</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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-884-1672
Email: steve_teel@swn.com
Facsimile: _____

Authorized Representative: Steve Teel
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-884-1672
Email: steve_teel@swn.com
Facsimile: _____

Oil and Gas Privacy Notice:

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

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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

November 4, 2016

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

Subject: DOH Permit for the Holman Pad, Wetzel County
 Holman HBP S WTZ 6H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2016-0414 for the subject site to Southwestern Energy for access to the State Road for the well site located off of Wetzel County Route 11/1 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, P.E.
 Regional Maintenance Engineer
 Central Office Oil & Gas Coordinator

Cc: Brittany Woody
 Southwestern Energy
 CH, OM, D-6
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Product Name	Product Use	Chemical Name	CAS Number
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
A264 (Schlumberger)	Corrosion Inhibitor	Methanol	67-56-1
		Aliphatic Acids	Proprietary
		Prop-2-yn-1-ol	107-19-7
		Aliphatic Alcohols, Ethoxylated #1	Proprietary
Myacide GA 25 (Schlumberger)	Biocide	Water	7732-18-5
		Glutaral	111-30-8
Scale Inhibitor B317 (Schlumberger)	Scale Inhibitor	Trisodium Ortho Phosphate	7601-54-9
		Ethane-1,2-diol	107-21-1
H215 (Schlumberger)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
J218 (Schlumberger)	Breaker	Diammonium Peroxodisulphate	7727-54-0
EB-Clean* J475 (Schlumberger)	Breaker	Diammonium Peroxodisulphate	7727-54-0
Water Gelling Agent J580 (Schlumberger)	Gel	Carbohydrate Polymer	Proprietary
Friction Reducer J609W (Schlumberger)	Friction Reducer	Ammonium Sulfate	7783-20-2
		Urea	57-13-6
Crosslinker J610 (Schlumberger)	Crosslinker	Potassium Hydroxide	1310-58-3
		Aliphatic Polyol	Proprietary
Iron Stabilizer L58 (Schlumberger)	Iron Stabilizer	Sodium Erythorbate	6381-77-7
40/70-Mesh Sand S012 (Schlumberger)	Sand	Crystalline Silica	14808-60-7
Sand S100 (Schlumberger)	Sand	Crystalline Silica	14808-60-7
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
SSA-2 (Halliburton)	Sand	Crystalline Silica	14808-60-7
FR-76 (Halliburton)	Friction Reducer	Inorganic salt	64748-47-8
		Hydrotreated light petroleum distillate	Proprietary
LCA-1 (Halliburton)		Hydrotreated light petroleum distillate	Proprietary
SP BREAKER (Halliburton)	Breaker	Sodium Persulfate	7777-77-7

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Product Name	Product Use	Chemical Name	CAS Number
HAI-150E (Halliburton)	Corrosion Inhibitor	Methanol	NA
		Aliphatic Acids	
		Prop-2-yn-1-ol	
		Aliphatic Alcohols, Ethoxylated #1	
Diesel Fuel (Halliburton)		Diesel Fuel	68476-34-6
Hydrochloric Acid 10-30% (Halliburton)		Hydrochloric Acid	7647-01-0
WG-36 Gelling Agent (Halliburton)	Gel	Polysaccharide	9000-30-0
BC-140C (Halliburton)	Crosslinker		NA

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- LEGEND -

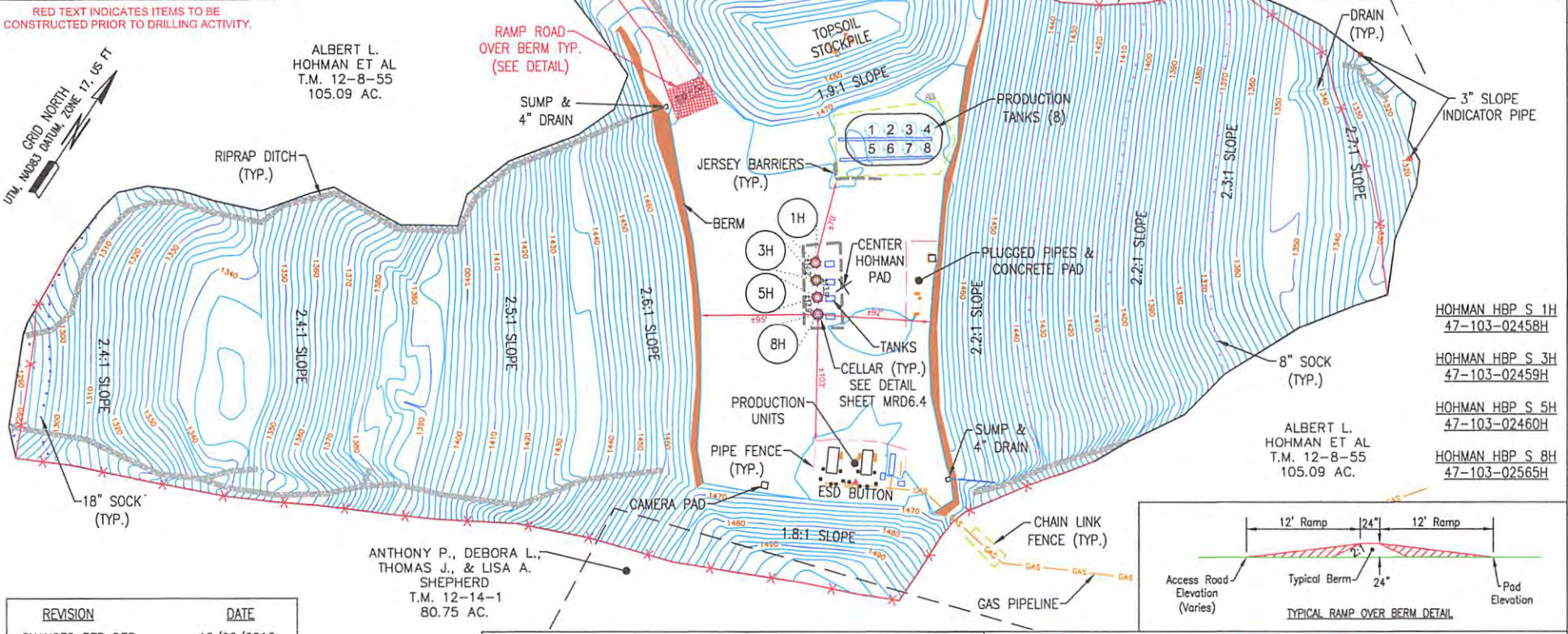
EDGE ACCESS ROAD	
PUBLIC/PRIVATE ROAD	
LOD	
LOD (REVISED)	
REINFORCED SILT FENCE	
CHAIN LINK FENCE	
WOVEN WIRE FENCE	
PROPERTY LINES	
CL ACCESS ROAD	
CONTOUR MAJOR ASBUILT	
CONTOUR MINOR ASBUILT	

**WVDEP OOG
ACCEPTED AS-BUILT**

WJ 12/12/2016

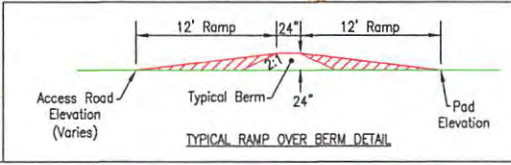
PRODUCTION TANKS (UTM METERS)

	Northing	Easting
#1	4,392,428.725	525,152.614
#2	4,392,431.402	525,156.400
#3	4,392,434.010	525,160.192
#4	4,392,436.549	525,163.916
#5	4,392,424.813	525,155.245
#6	4,392,427.489	525,159.053
#7	4,392,430.137	525,162.788
#8	4,392,432.709	525,166.490

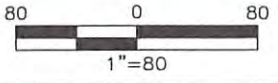


REVISION	DATE
CHANGES PER DEP	12/08/2016

ANTHONY P., DEBORA L.,
THOMAS J., & LISA A.
SHEPHERD
T.M. 12-14-1
80.75 AC.



SWN
Production Company™

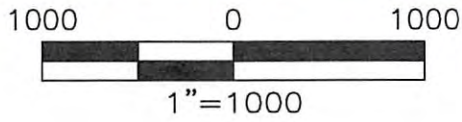
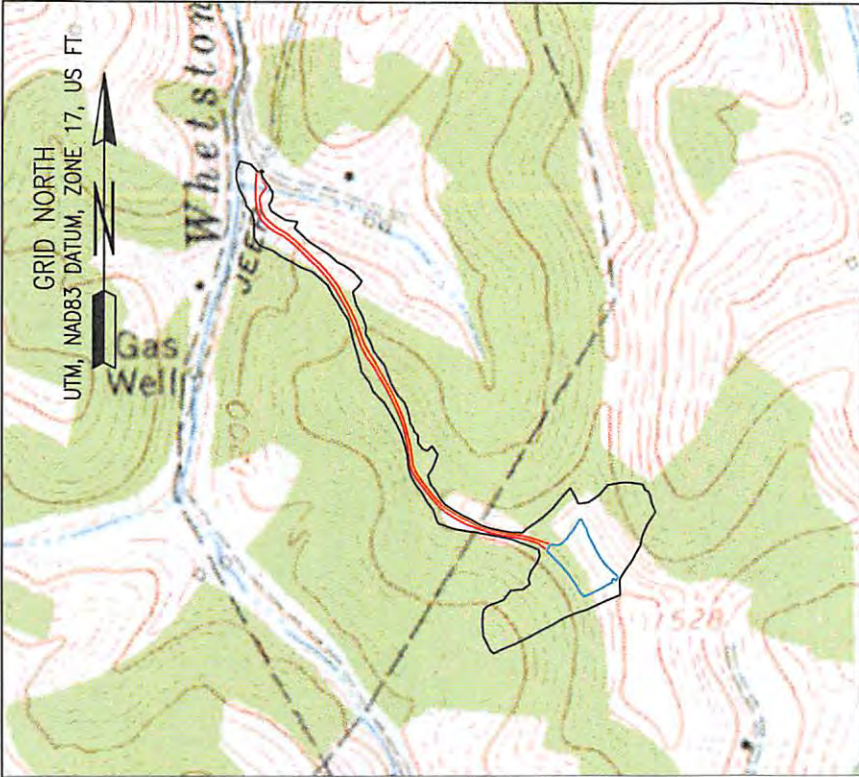


Dennis L. Fisher RPE 8884
Date: 12-08-2016

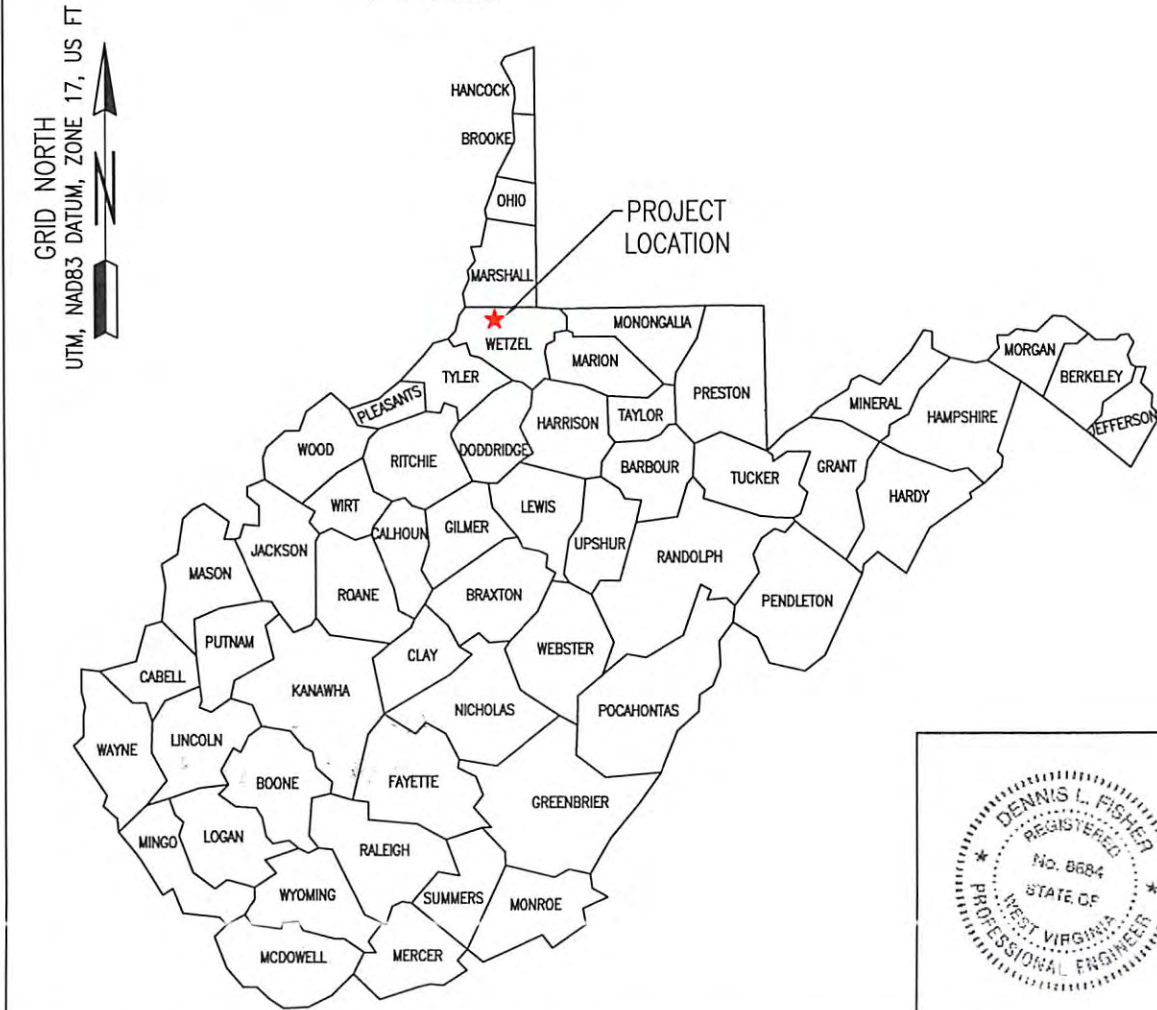


Jackson Surveying Inc.
CONSTRUCTION AND RECLAMATION
ASBUILT
AS3.6
SOUTHWESTERN PRODUCTION COMPANY LLC.
HOHMAN HBP S PAD
PROCTOR DISTRICT, WETZEL COUNTY, WV
JULY 14, 2016

HOHMAN
 CONSTRUCTION AND
 AS-BUILT
 PROCTOR DISTRICT,
 JULY



TOTAL DISTURBED
 ROAD DISTURBED
 PAD DISTURBED



COORDINATES
 SITE ELEVATION
 (NA DATUM)
 LAT: 39° 00' 00"
 LONG: 80° 00' 00"
 AT HOHMAN
 (NA DATUM)
 LAT: 39° 00' 00"
 LONG: 80° 00' 00"
 CENTER POINT
 (NA DATUM)
 LAT: 39° 00' 00"
 LONG: 80° 00' 00"
 GATHERING POINT
 (NA DATUM)
 LAT: 39° 00' 00"
 LONG: 80° 00' 00"



Dennis L. Fisher P.E. 8684
 02/10/2017

HBP S PAD
 RECLAMATION PLAN
 JILT
 WETZEL COUNTY, WV
 2016

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- EP2.1 EVACUATION ROUTE/ PREVAILING WIND
- EP2.2 EVACUATION ROUTE/ PREVAILING WIND
- AS3.1 ASBUILT OVERVIEW
- AS3.2 ASBUILT
- AS3.3 ASBUILT
- AS3.4 ASBUILT
- AS3.5 ASBUILT
- AS3.6 ASBUILT
- ASR4.1 CONSTRUCTION AND RECLAMATION ACCESS ROAD PROFILE
- MRD5.1 RECLAMATION PLAN OVERVIEW
- MRD5.2 RECLAMATION PLAN
- MRD5.3 RECLAMATION PLAN
- MRD5.4 RECLAMATION PLAN
- MRD5.5 RECLAMATION PLAN
- MRD5.6 RECLAMATION PLAN
- MRD6.3 RECLAMATION DETAILS
- MRD6.4 RECLAMATION DETAILS

AREA: 15.0 ACRES
 AREA: 6.0 ACRES
 AREA: 9.0 ACRES

STATES:
 RANCE
 33)
 86625
 712537
 AN PAD
 33)
 81155
 707175
 OF PAD
 33)
 80991
 706509
 G AREA
 33)
 86282
 712454

EXISTING WELLS:
 HOHMAN HBP S 1H
 47-103-02458H
 (NAD83)
 LAT: 39.681000
 LONG: 80.706615
 HOHMAN HBP S 3H
 47-103-02459H
 (NAD83)
 LAT: 39.680969
 LONG: 80.706585
 HOHMAN HBP S 5H
 47-103-02460H
 (NAD83)
 LAT: 39.68038
 LONG: 80.706555
 HOHMAN HBP S 8H
 47-103-02565H
 (NAD83)
 LAT: 39.680907
 LONG: 80.706526

REVISION	DATE



*DMH
 9-21-16*



Fisher
 07-14-2016
 Date:



Jackson Surveying, Inc.
 TITLE SHEET
 TS.1
 SOUTHWESTERN PRODUCTION COMPANY LLC.
 HOHMAN HBP S PAD
 PROCTOR DISTRICT, WETZEL COUNTY, WV
 JULY 14, 2016
 RECEIVED
 Office of Oil and Gas
 W. Department of Environmental Protection
 02/10/2017