



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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, June 13, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for CHARLES FRYE OHI 610H
47-069-00280-00-00

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: CHARLES FRYE OHI 610H
Farm Name: DORTHY V. FRYE (LIFE ESTA
U.S. WELL NUMBER: 47-069-00280-00-00
Horizontal 6A New Drill
Date Issued: 6/13/2018

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 069-Ohio 6- Triad 648-Valley Grove
Operator ID County District Quadrangle

2) Operator's Well Number: Charles Frye OHI 610H Well Pad Name: Charles Frye OHI Pad

3) Farm Name/Surface Owner: Dorothy, David, Amy & Corrie Frye Public Road Access: Marlow Run Road

4) Elevation, current ground: 1266.9' Elevation, proposed post-construction: 1266.9'

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No Yes

C. Bl... 4.10.18

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Down-Dip Well to the South BHL, Target Top TVD- 6627', Target Base TVD- 6664', Anticipated Thickness- 37', Associated Pressure-4332

8) Proposed Total Vertical Depth: 6636'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13,495'

11) Proposed Horizontal Leg Length: 3464'

12) Approximate Fresh Water Strata Depths: 548'

13) Method to Determine Fresh Water Depths: Nearby Water Well & Salinity Profile

14) Approximate Saltwater Depths: 777' Salinity profile analysis

15) Approximate Coal Seam Depths: 628'

16) Approximate Depth to Possible Void (coal mine, karst, other): 628' possible void

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


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

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18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100' ✓	CTS
Fresh Water	13 3/8"	New	H-40	48#	668'	668' ✓	625 sx/CTS
Coal							
Intermediate	9 5/8"	New	J-55	36#	2097'	2097' ✓	789 sx/CTS
Production	5 1/2"	New	HCP-110	20#	13495'	13495'	leac 950 sx Tall 1562 sx inside interm 
Tubing							
Liners							

Handwritten signature and date: 4.10.18

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 13.6

22) Area to be disturbed for well pad only, less access road (acres): 12.0

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

March 22, 2018

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

RE: Proposed New Well Charles Frye OHI 610H

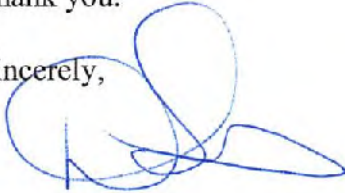
Dear Ms. Adkins

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 Frye's property, in Triadelphia District, Ohio County, West Virginia.

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

Thank you.

Sincerely,



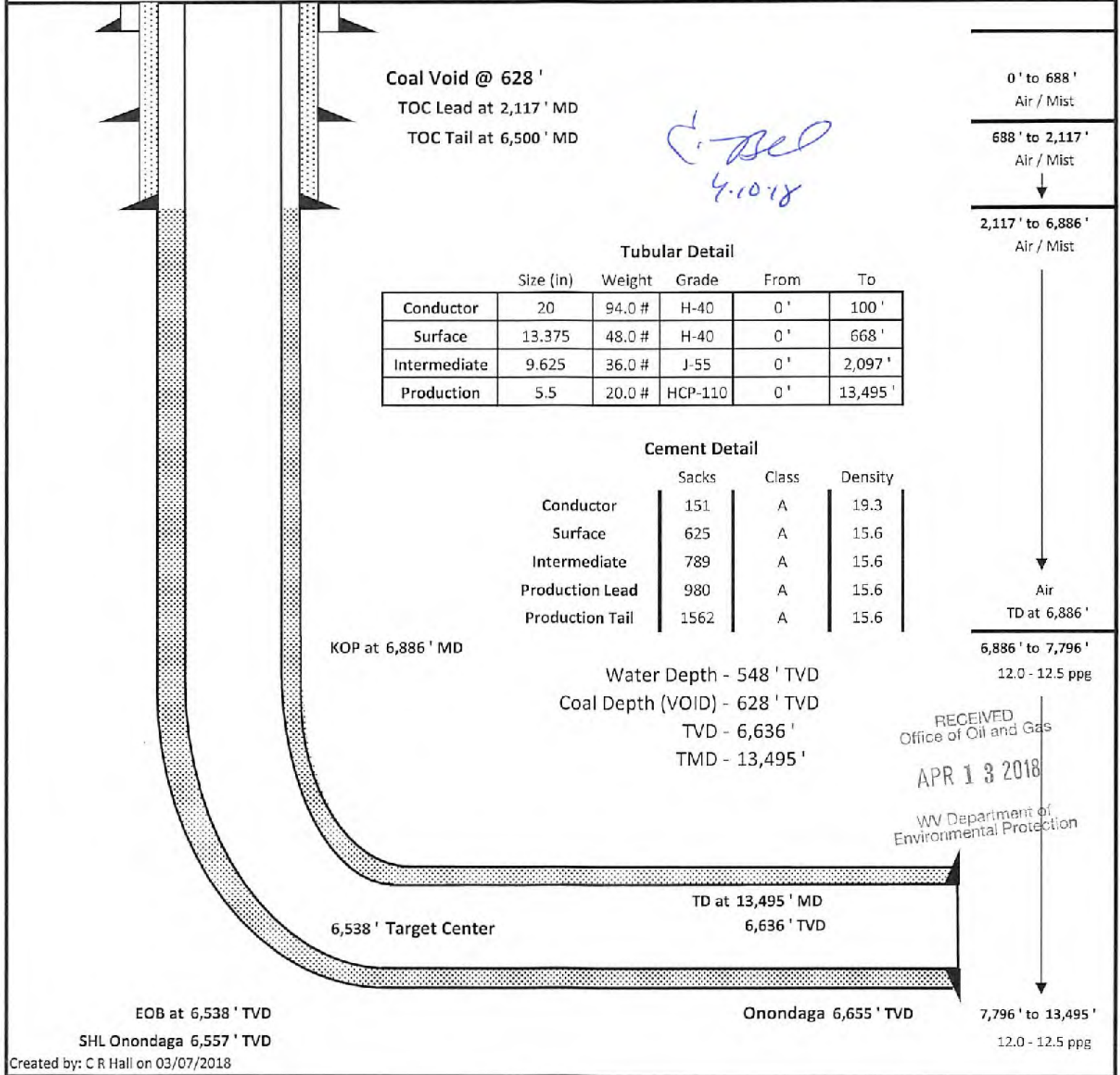
Dee Southall
Senior Regulatory Analyst
Southwestern Energy Production Company, LLC

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Southwestern Energy Company	Proposed Drilling Program
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Well: CHARLES FRYE OHI 610 Field: PANHANDLE FIELD \\ County: OHIO SHL: 40.0530 Latitude -80.5769 Longitude BHL: 40.0440 Latitude -80.5564 Longitude KB Elev: 1,293 ft MSL	Re-entry Rig: TBD Prospect: PANHANDLE State: WV KB: 26 ft AGL GL Elev: 1,267 ft MSL
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47 069 00280

Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Klick Off Plug	S001	accelerator	calcium chloride	10043-52-4
	S001	accelerator	calcium chloride	10043-52-4
Klick 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
			sodium polynaphthalene sulfonate	9008-63-3
	D065	dispersant	sodium sulfate	7757-82-6
			chrystalline silica	14808-60-7
D201	retarder	metal oxide	proprietary	
		chrystalline silica	14808-60-7	

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WW-9
(4/16)

API Number 47 - 69 - 00280
Operator's Well No. Charles Frye OHI 610H

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) Marlow Run of Middle Wheeling Creek Quadrangle Valley Grove

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 34-155-22403, 34-059-24067, 34-119-28776, 34-107-23602, 34-155-23755, 34-121-23955, 34-155-21893)
- Reuse (at API Number at next anticipated well, API # will be included with the WR-34/DDMR &/or permit addendum)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain flow back fluids will be put in steel tanks and reused or taken to a permitted disposal facility)

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

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

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

Additives to be used in drilling medium? Attachment 3A

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/C/D28726, Carbon Limestone 28725-C/D28726

Arden Landfill 10072, Apex Sanitary Landfill 06-08438, Brooke Co SWF-1073, Valley 100280

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 Senior Regulatory Analyst

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OFFICIAL SEAL
Notary Public, State of West Virginia
BRITTANY R WOODY
3382 Old Elkins Road
Martinsburg, WV 26201
My commission expires November 27, 2021

Subscribed and sworn before me this 5th day of April, 20 18

Brittany R Woody Notary Public

My commission expires 11/27/21

SWN Production Company, LLC

Proposed Revegetation Treatment: Acres Disturbed 13.6 Prevegetation pH _____

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 12.0

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre


Seed Type lbs/acre

Attachment 3B

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:  4.10.18

Comments: _____

Title: oil and gas inspector

Date: 4-10-18

Field Reviewed? Yes No

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Attachment 3A
Drilling Mediums

Synthetic Oil

Brine

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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WVD Seeding Specification

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

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	
<div style="display: flex; justify-content: space-between;"> <div style="color: red; font-size: small;">Apply @ 100lbs per acre April 16th- Oct. 14th</div> <div style="color: red; font-size: small;">Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat</div> </div>	

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

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

Synopsis:

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

Special Considerations:

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

ORGANIC PROPERTIES	
Seed Mixture: SWN Production Organic Mix	SWN Supplied
Organic Timothy	50%
Organic Red or White Clover	50%
OR	
Organic Perennial Ryegrass	50%
Organic Red or White Clover	50%
<div style="display: flex; justify-content: space-between; color: red; font-size: small;"> <div>Apply @ 100lbs per acre April 16th- Oct. 14th</div> <div>Apply @ 200lbs per acre Oct. 15th- April 15th</div> </div>	
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%
<div style="display: flex; justify-content: space-between; color: red; font-size: small;"> <div>Apply @ 25lbs per acre April 16th- Oct. 14th</div> <div>Apply @ 50lbs per acre Oct. 15th- April 15th</div> </div>	
NO FERTILIZER OR LIME INSIDE WETLAND LIMITS	

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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: Charles Frye OHI 610H
Valley Grove QUAD
Triadelphia DISTRICT
Ohio COUNTY, WEST VIRGINIA

Submitted by:

Dee Southall

Senior Regulatory

Title: Analyst

Date:

3/5/2018

SWN Production Co., LLC

Approved by:

Oil and Gas Inspector

Date:

4-10-18

Approved by:

Date:

Title:

SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

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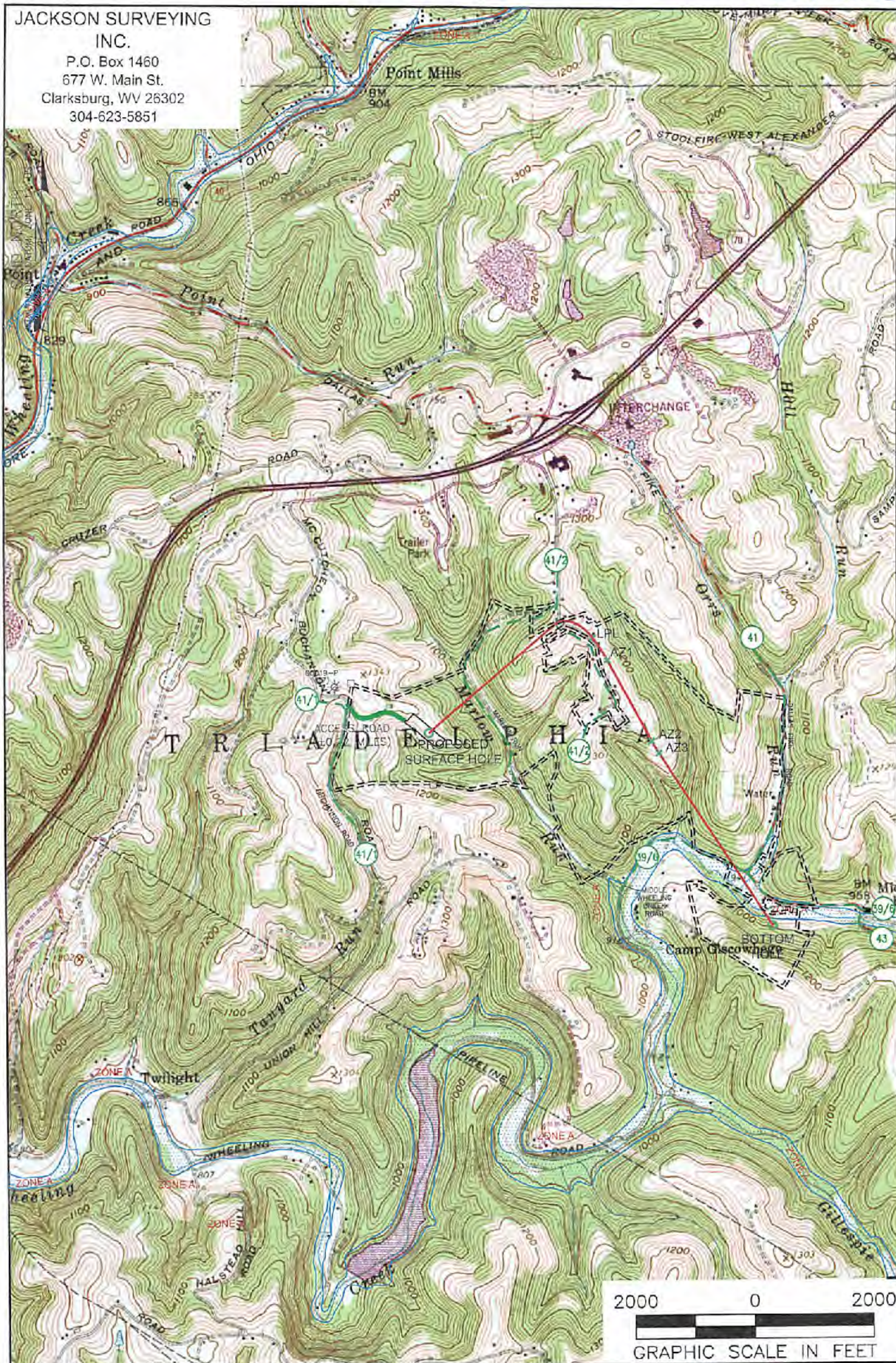
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JACKSON SURVEYING

INC.

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



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.
 4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC		WELL (FARM) NAME: CHARLES FRYE OHI		WELL # 610H	SERIAL #
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378		COUNTY - CODE OHIO - 069		DISTRICT: TRIADELPHIA	
SURFACE OWNER: DOROTHY V. FRYE (LIFE ESTATE), DAVID W. FRYE (LIFE OCCUPANCY), AMY M. FRYE & CORRIE L. FRYE (REMAINDERMAN)		USGS 7 1/2 QUADRANGLE MAP NAME VALLEY GROVE, WV			

Latitude: 40°05'00"

SURFACE HOLE 9861'

Latitude: 40°05'00" BOTTOM HOLE

4129'

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INC.

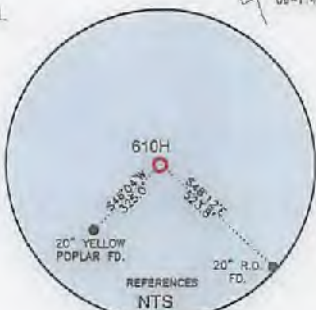
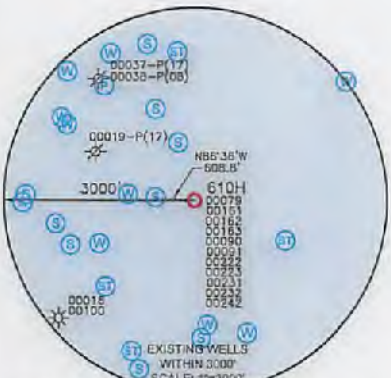
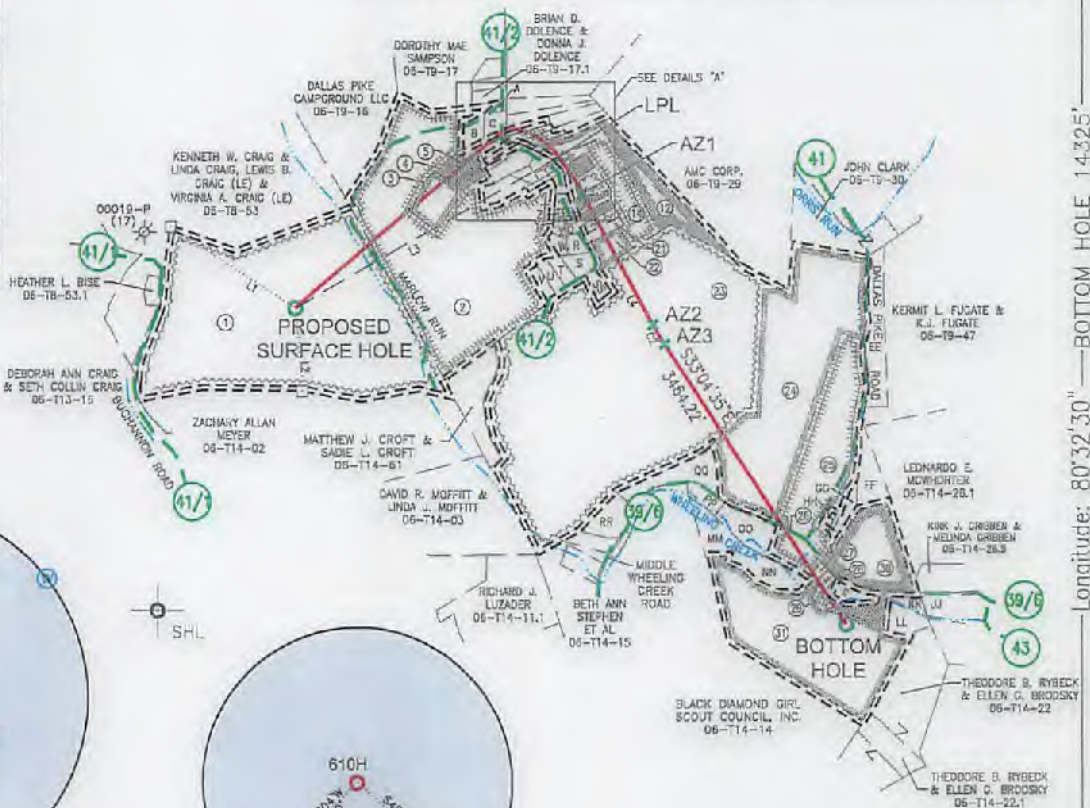
P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851

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



Table with columns: LINE, BEARING, DISTANCE, DESCRIPTION, MONUMENT. Includes data for lines L1, L2, L3, L4 and curves C1, C2.

Table with columns: SURFACE HOLE LOCATION (SHL), LANDING POINT (LPL), AZIMUTH LOCATION-1 (AZ1), AZIMUTH LOCATION-2 (AZ2), AZIMUTH LOCATION-3 (AZ3), BOTTOM HOLE LOCATION (BHL). Each entry includes UTM coordinates and bearings.



WELL RESTRICTIONS

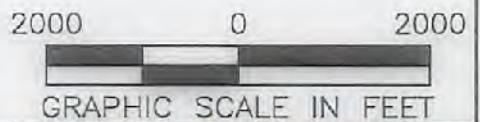
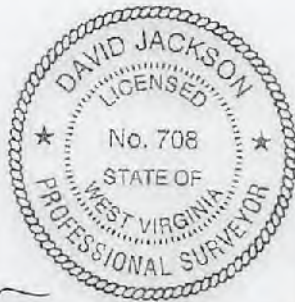
- List of 6 well restrictions including: no occupied dwellings > 2500 sq ft within 625 feet of center of pad; no agriculture buildings > 2500 sq ft within 525 feet of center of pad; water wells or developed springs are within 250 feet of proposed well; perennial streams, lakes, ponds, or reservoirs within 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.

NOTES ON SURVEY

- Notes on survey including: 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; undersigned certifies 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
801 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)

CHARLES FRYE OH
OPERATOR'S WELL #: 610H
API WELL #: 47 069 00280
STATE COUNTY PERMIT

WELL TYPE: OIL [] WASTE DISPOSAL [] PRODUCTION [X] DEEP [] GAS [X] LIQUID INJECTION [] STORAGE [] SHALLOW [X]
WATERSHED: MARLOW RUN OF MIDDLE WHEELING CREEK OF WHEELING CREEK (HUC-10) ELEVATION: 1266.9'
DISTRICT: TRIADDELPHIA COUNTY: OHIO QUADRANGLE: VALLEY GROVE, WV
SURFACE OWNER: DOROTHY V. FRYE (LIFE ESTATE), DAVID W. FRYE (LIFE OCCUPANCY), AMY M. FRYE & CORRIE L. FRYE (REMAINDERMAN) ACREAGE: ±105.00
OIL & GAS ROYALTY OWNER: DOROTHY V. FRYE ACREAGE: ±105.00
DRILL [X] DRILL DEEPER [] REDRILL [] FRACTURE OR STIMULATE [X] PLUG OFF OLD FORMATION [] PERFORATE NEW FORMATION []
CONVERT [] PLUG & ABANDON [] CLEAN OUT & REPLUG [] OTHER CHANGE [] (SPECIFY)
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,636 TVD 13,495 TMD

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

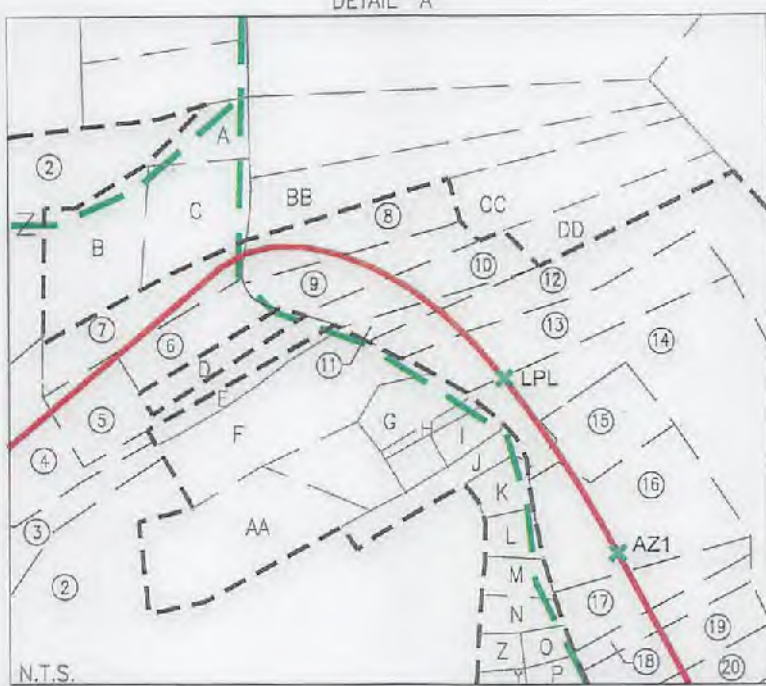
- LEGEND: Proposed Surface Hole / Bottom Hole, Existing / Producing Wellhead, LPL, Existing Water Well, Existing Spring, Surveyed Boundary, Drilling Unit, Lease Boundary, Proposed Path.

Table with columns: REVISIONS, DATE. Includes revision 1: DATE: 04-04-2018, DRAWN BY: N. MANO, SCALE: 1" = 2000', DRAWING NO., WELL LOCATION PLAT.

47 069 00280

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

DETAIL "A"



WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS			ADJOINING OWNERS TABLE					
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	TRACT	SURFACE OWNER	TAX PARCEL			
1	DOROTHY V. FRYE (LIFE ESTATE), DAVID W. FRYE (LIFE OCCUPANCY), AMY M. FRYE & CORRIE L. FRYE (REMAINDERMEN) (S)/ DOROTHY FRYE (R)	06-T14-07	A	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.22			
			B	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.18			
			C	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.52			
			D	WILLIAM C. SCHUETZ & SANDRA SCHUETZ	06-T9-20.5			
2	GEORGE L. DUNN & NANCY M. DUNN, (LIFE ESTATE), KATHERINE A. POSEY, CHRISTOPHER R. DUNN, RHONDA L. HAND & CONSTANCE L. KERCHER (REMAINDERMAN) (S)	06-T9-20	E	SARAH ANN PORTER	06-T9-20.41			
			F	GEORGE L. DUNN & NANCY M. DUNN, (LIFE ESTATE), KATHERINE A. POSEY, CHRISTOPHER R. DUNN, RHONDA L. HAND & CONSTANCE L. KERCHER (REMAINDERMAN)	06-T9-20.2			
3	SARAH ANN PORTER (S)	06-T9-20.44	G	THOMAS E. POSEY & K.A. POSEY	06-T9-20.36			
4	PHILLIP MARQUART & KERSTEN MARQUART (S)	06-T9-20.45	H	THOMAS POSEY & KATHERINE A. POSEY	06-T9-20.42			
5	NICOLE SEIFERT (S)	06-T9-20.51	I	THOMAS POSEY & KATHERINE A. POSEY	06-T9-20.27			
6	WILLIAM C. SCHUETZ & SANDRA SCHUETZ (S)	06-T9-20.6	J	GEORGE L. DUNN & NANCY M. DUNN (LIFE ESTATE), KATHERINE A. POSEY, CHRISTOPHER R. DUNN, RHONDA L. HAND, CONSTANCE L. KERCHER (REMAINDERMEN)	06-T9-20.50			
7	JOSHUA R. & AMY M. BOYD (S)	06-T9-20.39	K	JAMES L. ABERCROMBIE & DIANA L. ABERCROMBIE	06-T9-20.30			
8	JAMES E. DUNN & D.M. DUNN (S)	06-T9-20.16						
9	JAMES E. DUNN & D.M. DUNN (S)	06-T9-20.8						
10	DAVID A. WILLIAMS & JANIE G. WILLIAMS (S)	06-T9-20.11						
11	DAVID A. WILLIAMS & JANIE G. WILLIAMS (S)	06-T9-20.13						
12	GEORGE L. DUNN & NANCY M. DUNN, (LIFE ESTATE), KATHERINE A. POSEY, CHRISTOPHER R. DUNN, RHONDA L. HAND & CONSTANCE L. KERCHER (REMAINDERMAN) (S)	06-T9-20				L	JAMES L. ABERCROMBIE & DIANA L. ABERCROMBIE	06-T9-20.29
						M	ROBERT J. ALOE	06-T9-20.23
						N	MICHAEL J. WHEELER	06-T9-20.31
						O	MICHAEL J. WHEELER	06-T9-20.34
13	MICHAEL P. ORTH & BRENDA K. ORTH (S)	06-T9-20.35				P	MICHAEL J. WHEELER	06-T9-20.28
14	BRADLEY W. HAND & R.L. HAND (S)	06-T9-20.38	Q	RICKY J. LANTZ & D.A. LANTZ	06-T9-20.25			
15	DAVID L. KOVALSKI III & JOCELYN N. KOVALSKI (S)	06-T9-20.48	R	BRENT A. HILL & PATTY J. HILL	06-T9-20.24			
			S	DONALD W. PEGG & J.L. PEGG	06-T9-20.1			
16	MICHAEL R. KLEIN (S)	06-T9-20.9	T	GARY FLANEGIN	06-T9-20.20			
17	JODY H. USENICK (S)	06-T9-20.12	U	MICHAEL W. NASH & C.J. NASH	06-T9-20.19			
18	THOMAS C. GANTZER, JR. & VICTORIA S. GANTZER (LIFE OCCUPANCY), THOMAS CHRISTIAN GANTZER (REMAINDERMAN) (S)	06-T9-20.33	V	LISA A. OLIVER	06-T9-20.21			
			W	BRENT A. HILL & PATTY J. HILL	06-T9-20.32			
			X	BRENT A. HILL & PATTY J. HILL	06-T9-20.47			
			Y	MICHAEL J. WHEELER	06-T9-20.37			
19	THOMAS C. GANTZER, JR. & VICTORIA S. GANTZER (LIFE OCCUPANCY), THOMAS CHRISTIAN GANTZER (REMAINDERMAN) (S)	06-T9-20.7	Z	MICHAEL J. WHEELER	06-T9-20.26			
			AA	CHRISTOPHER R. DUNN & TANAKA H. DUNN	06-T9-20.46			
			BB	JEREMY A. STEWART & AMANDA J. STEWART	06-T9-20.17			
			CC	JAMES E. DUNN & DONNA M. DUNN	06-T9-20.15			
20	THOMAS C. GANTZER, JR. & VICTORIA S. GANTZER (LIFE OCCUPANCY), THOMAS CHRISTIAN GANTZER (REMAINDERMAN) (S)	06-T9-20.4	DD	DAVID A. WILLIAMS & JANIE G. WILLIAMS	06-T9-20.14			
			EE	JOHN C. CLARK & REBECCA L. SOSKA	06-T14-25			
21	THOMAS C. GANTZER, JR. & VICTORIA S. GANTZER (LIFE OCCUPANCY), THOMAS CHRISTIAN GANTZER (REMAINDERMAN) (S)	06-T9-20.40	FF	JOHN J. MISCOVICH	06-T14-23.2			
			GG	JOHN J. MISCOVICH	06-T14-24.2			
22	GREGG EDWARD BAMBARGER (S)	06-T9-20.10	HH	WAYNE SMITH & GRACE SMITH	06-T14-24.3			
23	JEFFREY D. MCKENZIE & F.M. MCKENZIE (S)	06-T14-12	II	RONALD L. MCCORMICK	06-T14-23.1			
24	AMC CORP. (S)	06-T14-24.1	JJ	GREGORY EDWARD SUPLER, JR.	06-T14-26			
25	GREGORY S. EDWARDS LEASING INC. (S)	06-T14-24	KK	JANIS C. NASH	06-T14-23.3			
26	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAY (S)	WHEELING RUN ROAD	LL	PAUL ANDERSON & VERNA ANDERSON	06-T14-23.6			
			MM	MICHAEL P. EBBERT	06-T14-23.7			
27	JOHN W. ORUM JR. & A.A. ORUM (S)	06-T14-23.4	NN	ERIC PATTISON & CAROLYN PATTISON	06-T14-23.8			
28	DOUGLAS BRIAN ORUM (S)	06-T14-23.9	OO	JOHN W. ORUM JR.	06-T14-24.4			
29	DOUGLAS BRIAN ORUM (S)	06-T14-23.5	PP	CLEATUS STILL	06-T14-24.5			
30	DOUGLAS BRIAN ORUM (S)	06-T14-23	QQ	ROBERT T. HEITZ & ELIZABETH R. HEITZ	06-T14-13			
31	JOHN W. ORUM JR. (S)	06-T14-23.10	RR	ELIZABETH ROSE HEITZ	06-T14-13.1			
			SS	THOMAS F. MCKENZIE & STEPHANIE N. MCKENZIE	06-T14-12.1			

REVISIONS:	COMPANY:		
	OPERATOR'S	CHARLES FRYE OHI	
	WELL #:	610H	
	DISTRICT:	COUNTY:	STATE:
	TRIADPHIA	OHIO	WV
			DATE: 04-04-2018
			DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 2

WW-6A1
(5/13)

Operator's Well No. Charles Frye OHI 610H

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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See Exhibit

**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
 By: [Signature]
 Its: Steff Landman

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WV Department of
Environmental Protection

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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 SWN Production Company, L.L.C., Operator
Charles Frye OHI 610H
Ohio County, West Virginia

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG
1)	06-T14-01	Dorothy V. Frye, A widow	Great Lakes Energy Partners, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	775/335 808/375 883/204
2)	06-T9-20	George L. Dunn and Nancy M. Dunn, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	795/556 885/524
3)	06-T9-20.44	Charles Porter and Sarah Ann Porter	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	807/294 883/291
4)	6-T9-20.45	Phillip J. Marquart and Kersten Lynn Marquart, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	808/41 883/291
5)	6-T9-20.51	Herbert Lynn Richardson and Clara Eileen Richardson, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	814/487 883/243
6)	6-T9-20.6	Herbert Lynn Richardson and Clara Eileen Richardson, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	814/487 883/243
7)	6-T9-20.39	Patricia R. Kirchner, single	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	810/575 883/180
8)	6-T9-20.16	James E. Dunn and Donna M. Dunn	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	810/664 883/156
9)	6-T9-20.8	James E. Dunn and Donna M. Dunn	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	810/664 883/156
10)	06-T9-20.11	David A. Williams and Janie G. Williams, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	16.00%	877/525 895/477
11)	06-T9-20.13	David A. Williams and Janie G. Williams, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	16.00%	877/525 895/477

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Charles Frye OHI 610H
Ohio County, West Virginia

12)	06-T9-20	George L. Dunn and Nancy M. Dunn, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	795/556 885/524
13)	6-T9-20.35	Michael P. Orth & Brenda K. Orth, husband and wife	SWN Production Company, L.L.C.	15.00%	913/457
14)	6-T9-20.38	Bradley W. Hand and Rhonda L. Hand, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	795/552 885/524
15)	6-T9-20.48	Bradley W. Hand and Rhonda L. Hand, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	795/552 885/524
16)	6-T9-20.9	Michael R. Klein and Alicia M. Klein, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	827/648 885/332
17)	6-T9-20.12	Jody H. Usenick f/k/a Jody H. Orth, a single woman	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	16.00%	880/148 895/462
18)	6-T9-20.33	Thomas C. Gantzer, Jr. and Victoria S. Gantzer, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/528 884/241
19)	6-T9-20.7	Thomas C. Gantzer, Jr. and Victoria S. Gantzer, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/540 884/241
20)	6-T9-20.4	Thomas C. Gantzer, Jr. and Victoria S. Gantzer, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/536 884/241
21)	6-T9-20.40	Thomas C. Gantzer, Jr. and Victoria S. Gantzer, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/532 885/284
22)	6-T9-20.10	Gregg Edward Bambarger, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	872/289 884/349

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Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, L.L.C., Operator
Charles Frye OHI 610H
Ohio County, West Virginia

23)	6-T14-12	Jeffrey D. McKenzie and Francine M. McKenzie, husband and wife	NPAR, LLC Chevron U.S.A. Inc. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	807/570 827/269 867/713 885/308
24)	6-T14-24.1	AMC, Inc.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	846/113 885/404
25)	6-T14-24	Gregory S. Edwards Leasing, Inc.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	863/264 884/385
26)	Wheeling Run Road	West Virginia, Department of Transportation, Division of Highways	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	857/213 884/289
27)	6-T14-23.4	John W. Orum, Jr. and Agnes A. Orum, his wife	Great Lakes Energy Partners, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	776/262 808/549 883/204
28)	6-T14-23.9	Douglas Brian Orum, a single man	SWN Production Company, L.L.C.	18.00%	924/566
29)	6-T14-23.5	Douglas Brian Orum, a single man	SWN Production Company, L.L.C.	18.00%	924/566
30)	6-T14-23	Bertie Helen Orum, widow	Great Lakes Energy Partners, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	776/651 808/549 883/192
31)	6-T14-23.10	Bertie Helen Orum, widow	Great Lakes Energy Partners, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	776/651 808/549 883/192

4706900280



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

April 4, 2017

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

RE: SWN's proposed New Well: Charles Frye OHI 610H in Ohio County, West Virginia, Drilling under Dallas Pike.

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 Co Hwy Dallas Pike. 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,

A handwritten signature in blue ink, appearing to read "RW", written over a horizontal line.

Robert Walter
Staff Landman
SWN Production Company, LLC
PO Box 12359
Spring, TX 77391-2359

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The logo for RPA (The Right People), featuring the letters "RPA" in a stylized, red, sans-serif font. The "R" and "P" are connected, and the "A" is separate.

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

Date of Notice Certification: 4/11/18API No. 47- 069 - _____Operator's Well No. Charles Frye OHI 610HWell Pad Name: Charles Frye OHI Pad**Notice has been given:**

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>536,087</u>
County: <u>069-Ohio</u>		Northing: <u>4,433,731</u>
District: <u>Triadelphia</u>	Public Road Access: <u>Marlow Run Road</u>	
Quadrangle: <u>Valley Grove</u>	Generally used farm name: <u>Charles Frye</u>	
Watershed: <u>Marlow Run of Middle Wheeling Creek</u>		

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

<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 checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" 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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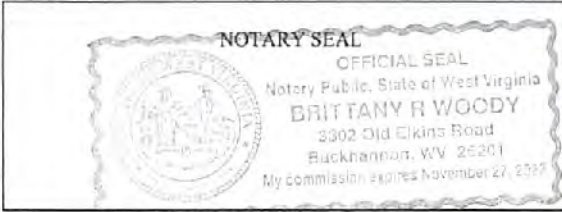
Required Attachments:

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

Certification of Notice is hereby given:

THEREFORE, I Dee Southall, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>SWN Production Co., LLC</u>	Address:	<u>P.O. Box 1300</u>
By:	<u>Dee Southall</u>		<u>Jane Lew, WV 26378</u>
Its:	<u>Senior Regulatory Analyst</u>	Facsimile:	<u>304-884-1690</u>
Telephone:	<u>304-884-1614</u>	Email:	<u>Dee_Southall@swn.com</u>



Subscribed and sworn before me this 5th day of April 2018.

Brittany R Woody Notary Public

My Commission Expires 11/27/22

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 4/11/18 **Date Permit Application Filed:** 4/11/18

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: Dorothy Frye & David Frye
 Address: 849 McCutcheon Road
Triadelphia, WV 26059
 Name: Amy & Corrie Frye
 Address: 782 McCutcheon Road
Triadelphia, WV 26059

COAL OWNER OR LESSEE
 Name: Alliance Resources GP, LLC % Elizabeth Acost
 Address: 2596 Battle Run Road
Triadelphia, WV 26059

COAL OPERATOR
 Name: _____
 Address: _____

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

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

SURFACE OWNER(s) (Impoundments or Pits)
 Name: _____
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: _____
 Address: _____

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*Please attach additional forms if necessary

Attachment #1

Charles Frye OHI Pad - Water Purveyors w/in 1500' Sources

Landowner

Charles & Dorothy Frye
W & L Kenneth Craig

Address

849 MCCUTCHEON RD, TRIADELPHIA WV 26059 1 well / 1 spring ✓
844 MCCUTCHEON RD, TRIADELPHIA WV 26059 2 springs ✓

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WW-6A
(8-13)

API NO. 47-069 -
OPERATOR WELL NO. Charles Frye OHI 610H
Well Pad Name: Charles Frye OHI Pad

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, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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(8-13)

4706900280
API NO. 47-069
OPERATOR WELL NO. Charles Frye OHI 610H
Well Pad Name: Charles Frye OHI Pad

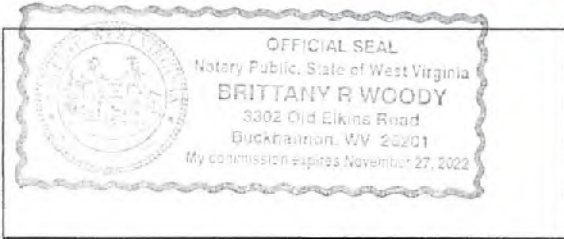
Notice is hereby given by:

Well Operator: SWN Production Co., LLC
Telephone: 304-884-1614
Email: Dee_Southall@swn.com

Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile: 304-884-1690

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.



Subscribed and sworn before me this 5th day of April 2018.
Brittany R Woody Notary Public
My Commission Expires 11/27/22

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WW-6A4
(1/12)

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: 03/06/2018

Date Permit Application Filed: 4/11/18

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: Dorothy Frye & David W. Frye

Address: 849 McCutcheon Rd.

Triadelphia, WV 26059

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>536,087.140</u>
County:	<u>Ohio</u>	UTM NAD 83 Northing:	<u>4,433,730.846</u>
District:	<u>Triadelphia</u>	Public Road Access:	<u>Marlow Run</u>
Quadrangle:	<u>Valley Grove, WV</u>	Generally used farm name:	<u>Charles Frye OHI</u>
Watershed:	<u>Marlow Run of Middle Wheeling Creek</u>		

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 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: 304-517-8603
 Email: Michael_Yates@swn.com
 Facsimile: 304-471-2497

Authorized Representative: Mike Yates
 Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
 Telephone: 304-517-8603
 Email: Michael_Yates@swn.com
 Facsimile: 304-471-2497

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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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: 03/27/2018 Date Permit Application Filed: 4/11/18

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: Amy M. & Corrie L. Frye
Address: 782 McCutcheon Road
Triadelphia, WV 26059

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: West Virginia UTM NAD 83 Easting: 536,087.140
County: Ohio Northing: 4,433,730.846
District: Triadelphia Public Road Access: Marlow Run
Quadrangle: Valley Grove, WV Generally used farm name: Charles Frye OHI
Watershed: Marlow Run of Middle Wheeling Creek

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: 304-517-8603
Email: Michael_Yates@swn.com
Facsimile: 304-471-2497

Authorized Representative: Mike Yates
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-517-5603
Email: Michael_Yates@swn.com
Facsimile: 304-471-2497

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.

WW-6A5
(1/12)Operator Well No. Charles Frye OHI 61CH

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

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

Date of Notice: 03/06/2018 **Date Permit Application Filed:** 4/11/18

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

CERTIFIED MAIL **HAND**
RETURN RECEIPT REQUESTED **DELIVERY**

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Dorothy Frye & David W. Frye

Name: _____

Address: 849 MCutcheon Rd.

Address: _____

Triadelphia, WV 26059

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>536,067,140</u>
County:	<u>Ohio</u>		Northing:	<u>4,433,730,846</u>
District:	<u>Triadelphia</u>	Public Road Access:	<u>Marlow Run</u>	
Quadrangle:	<u>Valley Grove, WV</u>	Generally used farm name:	<u>Charles Frye OHI</u>	
Watershed:	<u>Marlow Run of Middle Wheeling Creek</u>			

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
 Telephone: 304-517-6603
 Email: Michael_Yates@swn.com

Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
 Facsimile: 304-471-2497

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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.

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

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

Date of Notice: 03/27/2018 Date Permit Application Filed: 4/11/18

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

- CERTIFIED MAIL RETURN RECEIPT REQUESTED
- HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Amy M. & Corrie L. Frye
Address: 792 McCutcheon Road
Triadelphia, WV 26059

Name: _____
Address: _____

Notice is hereby given:

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

State:	West Virginia	UTM NAD 83	Easting:	536,087.140
County:	Ohio		Northing:	4,433,730.846
District:	Triadelphia	Public Road Access:	Marlow Run	
Quadrangle:	Valley Grove, WV	Generally used farm name:	Charles Frye OHI	
Watershed:	Marlow Run of Middle Wheeling Creek			

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
Telephone: 304-517-6503
Email: Michael_Yates@swn.com

Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Facsimile: 304-471-2497

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Office of Oil and Gas
APR 13 2018

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.

WV Department of
Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

Reissued March 7, 2018

Jill M. Newman
 Deputy Commissioner

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 Charles Frye Pad OHI 610H Well Site, Ohio County

Dear Mr. Martin,

The West Virginia Division of Highways has issued permit 06-2011-0061 to Southwestern Energy for access to the State Road for the well site located off of Ohio County Route 41/1 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
 Regional Maintenance Engineer
 Central Office Oil & Gas Coordinator

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

File

RECEIVED
 Office of Oil and Gas

APR 13 2018

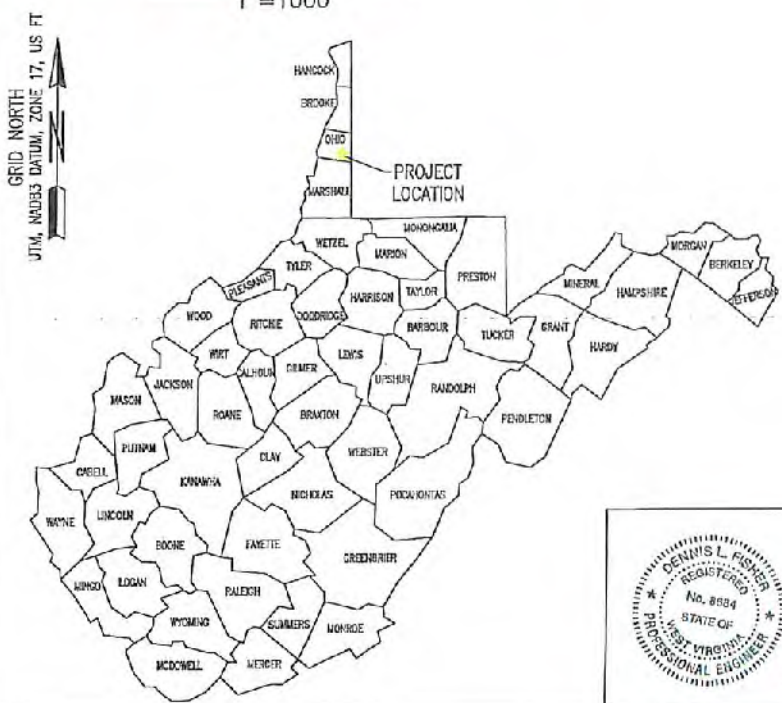
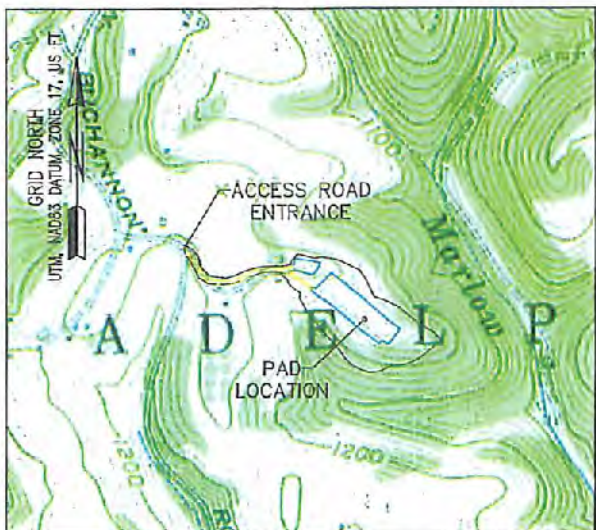
WV Department of
 Environmental Protection

FRAC ADDITIVES

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
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propenamide	9003-06 9
AI-303 (U.S. Well Services)	Mixture	Ethylene glycol	107-21 1
		Cinnamaldehyde	104-55 2
		Butyl cellosolve	111-76 2
		Formic acid	64-18 6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49 1
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
Econo-CI200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1
		Oxyalkylated fatty acid	68951-67-7
		Fatty acids	61790-12-3
		Modified thiourea polymer	68527-49-1
		Water	7732-18-5
		Hydrochloric acid	7647-01-0
		Potassium acetate	127-08-2
		Formaldehyde	50-00-0
Ecopol-FEAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7
		Citric Acid	77-92-9
		Water	7732-18-5
HCL (SWN Well Services)	Hydrocholic Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
FLOJET DR900 LPP (SWN Well Services)	Friction Reducer	Distillates (petroleum) hydrotreated light	64674-47-8
		Ethylene Glycol	107-21-1
		Alcohols, C12-16, Exoxylated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
FR-76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Inorganic Salt	Proprietary
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
FDP-S1176-15 (Halliburton)	Friction Reducer	Polyacrylate	Proprietary
		Hydrotreated light petroleum distillate	64742-47-8
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
Zero Wash Tracer	Tracer	Ceramic Proppant	Proprietary

RECEIVED
Office of Oil & Gas
APR 13
WV Dept.
Environmental Protection

4706900280



CHARLES FRYE OHI PAD CONSTRUCTION AND RECLAMATION PLAN AS-BUILT TRIADELPHIA DISTRICT, OHIO COUNTY, WV DECEMBER 2016

LOD

TOTAL DISTURBED AREA: 13.6 ACRES
ROAD DISTURBED AREA: 1.6 ACRES
PAD DISTURBED AREA: 12.0 ACRES

**COORDINATES:
SITE ENTRANCE**
(NAD83)
LAT: 40.054440
LONG: 80.581837

AT FRYE PAD
(NAD83)
LAT: 40.053623
LONG: 80.578343

CENTER OF PAD
(NAD83)
LAT: 40.053226
LONG: 80.577206

GATHERING AREA
(NAD83)
LAT: 40.054386
LONG: 80.581623

EXISTING WELLS:

FRYE OHI 1H
API:47-069-00161H
(NAD83)
LAT: 40.053102
LONG: 80.577108

FRYE OHI 3H
API:47-069-00079H
(NAD83)
LAT: 40.053125
LONG: 80.577146

FRYE OHI 5H
API:47-069-00090H
(NAD83)
LAT: 40.053077
LONG: 80.577070

FRYE OHI 6H
API:47-069-00182H
(NAD83)
LAT: 40.053144
LONG: 80.577082

FRYE OHI 8H
API:47-069-00163H
(NAD83)
LAT: 40.053169
LONG: 80.577101

FRYE OHI 10H
API:47-069-00091H
(NAD83)
LAT: 40.053121
LONG: 80.577025

SHEET INDEX


TS1	TITLE SHEET
EP2.1	EVACUATION ROUTE/ PREVAILING WIND
EP2.2	EVACUATION ROUTE/ PREVAILING WIND
AS3.1	ASBUILT OVERVIEW
AS3.2	ASBUILT
AS3.3	ASBUILT
AS3.4	ASBUILT
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
MRD6.3	DETAILS
MRD6.4	DETAILS


REVISION	DATE

C-B TO 1.5.17

WEST VIRGINIA 811
CALL BEFORE YOU DIG!
Dial 811 or 800.245.4848
www.WV811.com

swn ^{R+ A V+}
Production Company™

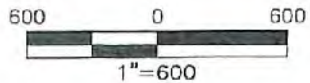
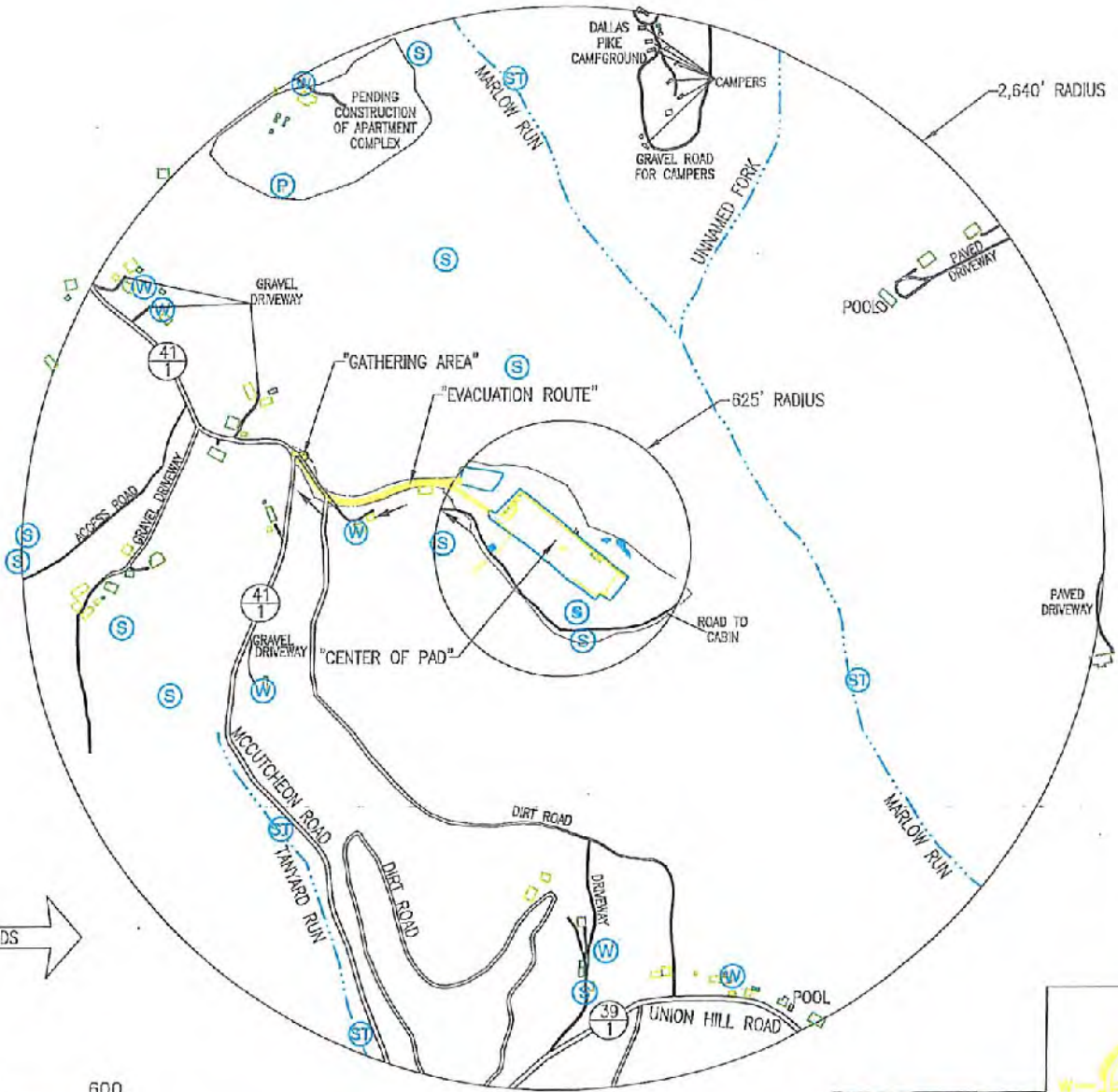

Dennis L. Fisher
Dennis L. Fisher RPE 8884
12-27-2016 Date:


Jackson Surveying Inc.
TITLE SHEET
TS.1
SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016
877 W. Main St.
Clarksburg, WV 26301
304-623-9851

RECEIVED
Office of Oil and
APR 19
W. Dept.
Environment

47 064 00780

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



RECEIVED
Office of Oil and Gas

APR 13 2018

WV Department of Environmental Protection

COORDINATES:
SITE ENTRANCE
(NAD83)
LAT: 40.054440
LONG: 80.581837

AT FRYE PAD
(NAD83)
LAT: 40.053823
LONG: 80.578343

CENTER OF PAD
(NAD83)
LAT: 40.053226
LONG: 80.577208

GATHERING AREA
(NAD83)
LAT: 40.054386
LONG: 80.581823

EXISTING WELLS:
FRYE OHI 1H
API:47-069-00161H
(NAD83)
LAT: 40.053102
LONG: 80.577108

FRYE OHI 3H
API:47-069-00079H
(NAD83)
LAT: 40.053125
LONG: 80.577148

FRYE OHI 5H
API:47-069-00090H
(NAD83)
LAT: 40.053077
LONG: 80.577070

FRYE OHI 6H
API:47-069-00162H
(NAD83)
LAT: 40.053144
LONG: 80.577062

FRYE OHI 8H
API:47-069-00163H
(NAD83)
LAT: 40.053169
LONG: 80.577101

FRYE OHI 10H
API:47-069-00081H
(NAD83)
LAT: 40.053121
LONG: 80.577025

LEGEND

HOUSE	
BUILDING	
SHED	
SPRING=	(S)
WATER WELL=	(W)
STREAM=	(ST)
POND=	(P)

REVISION	DATE



Dennis L. Fisher RPE 8684
Date: 12-27-2016



swn
Production Company™

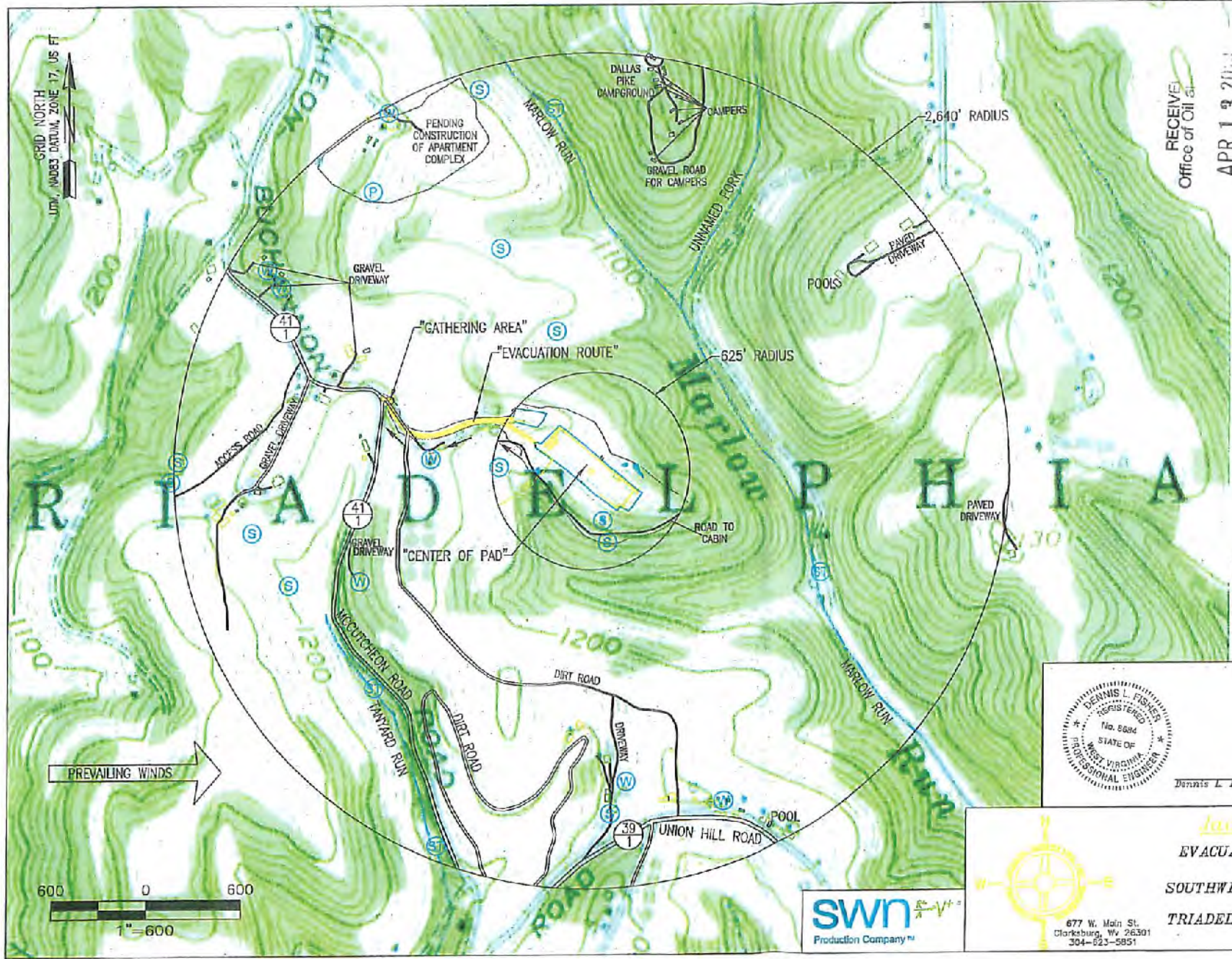
Jackson Surveying Inc.

EVACUATION ROUTE/PREVAILING WINDS
EP2.1

SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

677 W. Main St.
Clarksburg, Wv 26301
304-623-3551

47 069 0280



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Office of Oil and
Gas

APR 13 2016

WV Department of
Environmental Protection

COORDINATES:
SITE ENTRANCE
(NAD83)
LAT: 40.054440
LONG: 80.581837

AT FRYE PAD
(NAD83)
LAT: 40.053623
LONG: 80.578313

CENTER OF PAD
(NAD83)
LAT: 40.053226
LONG: 80.577206

GATHERING AREA
(NAD83)
LAT: 40.054386
LONG: 80.581623

EXISTING WELLS:
FRYE OHI 1H
API:47-069-001611H
(NAD83)
LAT: 40.053102
LONG: 80.577108

FRYE OHI 3H
API:47-069-00029H
(NAD83)
LAT: 40.053125
LONG: 80.577146

FRYE OHI 5H
API:47-069-00090H
(NAD83)
LAT: 40.053077
LONG: 80.577070

FRYE OHI 6H
API:47-069-00162H
(NAD83)
LAT: 40.053144
LONG: 80.577062

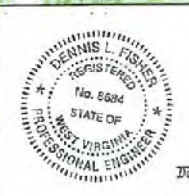
FRYE OHI 8H
API:47-069-00163H
(NAD83)
LAT: 40.053169
LONG: 80.577101

FRYE OHI 10H
API:47-069-00091H
(NAD83)
LAT: 40.053121
LONG: 80.577025

LEGEND

HOUSE	
BUILDING	
SHED	
SPRING=	
WATER WELL=	
STREAM=	
POND=	

REVISION	DATE



Dennis L. Fisher RPE 0604
Date: 12-27-2016



Jackson Surveying Inc.
EVACUATION ROUTE/PREVAILING WINDS
EP2.2
SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016



08200 690 64

EXISTING WELLS:
 FRYE OHI 1H
 API:47-069-00161H
 (NAD83)
 LAT: 40.053102
 LONG: 80.577108

FRYE OHI 3H
 API:47-069-00079H
 (NAD83)
 LAT: 40.053125
 LONG: 80.577146

FRYE OHI 5H
 API:47-069-00090H
 (NAD83)
 LAT: 40.053077
 LONG: 80.577070

FRYE OHI 6H
 API:47-069-00162H
 (NAD83)
 LAT: 40.053144
 LONG: 80.577052

FRYE OHI 8H
 API:47-069-00163H
 (NAD83)
 LAT: 40.053169
 LONG: 80.577101

FRYE OHI 10H
 API:47-069-00091H
 (NAD83)
 LAT: 40.053121
 LONG: 80.577025

COORDINATES:
 SITE ENTRANCE
 (NAD83)
 LAT: 40.054440
 LONG: 80.581837

AT FRYE PAD
 (NAD83)
 LAT: 40.053623
 LONG: 80.578343

CENTER OF PAD
 (NAD83)
 LAT: 40.053226
 LONG: 80.577206

GATHERING AREA
 (NAD83)
 LAT: 40.054386
 LONG: 80.581523

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

LEGEND

HOUSE [Symbol]
 BUILDING [Symbol]
 SHED [Symbol]
 SPRING= [S]
 WATER WELL= [W]

KENNETH W. &
 LINDA CRAIG
 D.B. 640/233
 6-T8-53
 57.89 Ac.

DOROTHY &
 DAVID W. FRYE
 D.B. 873/490
 6-T14-01
 105.00 Ac.

GEORGE L. &
 NANCY M. DUNN
 D.B. 657/294
 6-T8-20
 78.075 Ac.

LEATHER DISC
 D.B. 768/211
 6-T8-53N
 1.00 Ac.

KENNETH W. &
 LINDA CRAIG
 D.B. 640/233
 6-T8-53
 57.89 Ac.

DOROTHY &
 DAVID W. FRYE
 D.B. 873/490
 6-T14-01
 105.00 Ac.

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 RECEIVED
 APR 13 2018
 Office of
 the State Auditor
 WV Department of
 Administration

SHEET #AS3.2

SHEET #AS3.3

SHEET #AS3.4

250 0 250
 1"=250

NOTE: PROPERTY LINES AND
 OWNERSHIP PROVIDED BY SWN.



Dennis L. Fisher RPE 6694

12-27-2016
 Date:



677 W. Main St.
 Clarisburg, WV 26031
 304-623-5651

Jackson Surveying Inc.
 CONSTRUCTION AND RECLAMATION
 ASBUILT OVERVIEW

ASS.1
 SOUTHWESTERN PRODUCTION COMPANY LLC.
 CHARLES FRYE OHI PAD
 TRIADELPHIA DISTRICT, OHIO COUNTY, WV
 DECEMBER 27, 2016

REVISION	DATE



028500 690 675

- LEGEND -

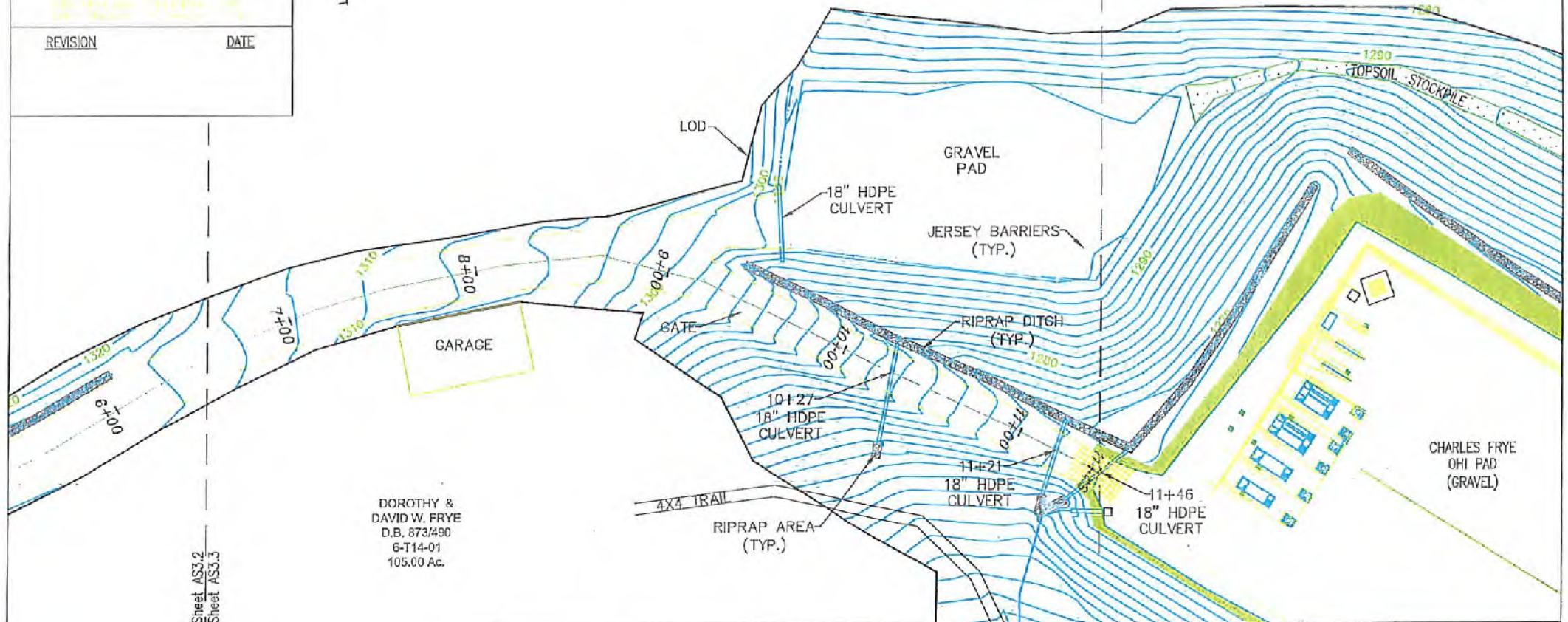
- EDGE ACCESS ROAD
- PUBLIC/Private ROAD
- LOD
- CHAIN LINK FENCE
- DITCH/DRAIN
- PROPERTY LINES
- CL ACCESS ROAD
- CONTOUR MAJOR ASBUILT
- CONTOUR MINOR ASBUILT
- SPRING

REVISION	DATE

GRID NORTH
UNL. MAGN. DATUM, ZONE 17, US FT

DOROTHY & DAVID W. FRYE
D.B. 873/490
6-T14-01
105.00 Ac.

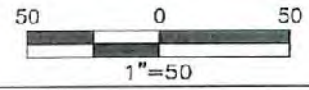
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Office of Oil and Gas
APR 13 2018
WV Department of
Environmental Protection



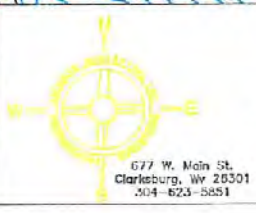
DOROTHY & DAVID W. FRYE
D.B. 873/490
6-T14-01
105.00 Ac.

Matchline Sheet AS3-2
Matchline Sheet AS3-3

Matchline Sheet AS3-4
Matchline Sheet AS3-5



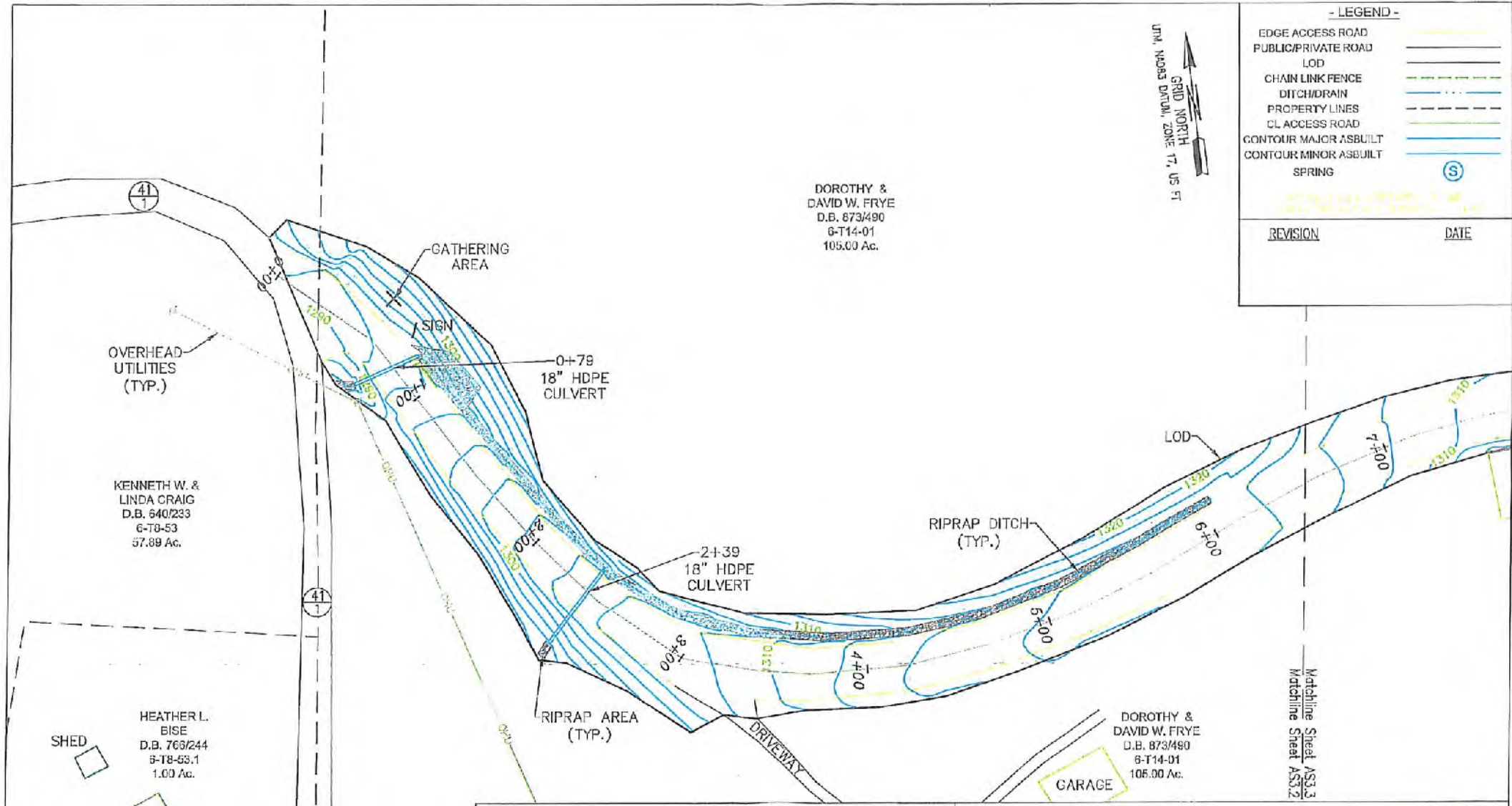
Professional Engineer Seal for Dennis L. Fisher, No. 8884, State of West Virginia. Includes a signature and the date 12-27-2018.



Jackson Surveying Inc.
CONSTRUCTION AND RECLAMATION
ASBUILT
AS3.3
SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

677 W. Main St.
Clarksburg, WV 26301
304-623-5851

417 069 0028



- LEGEND -

EDGE ACCESS ROAD	
PUBLIC/Private ROAD	
LOD	
CHAIN LINK FENCE	
DITCH/DRAIN	
PROPERTY LINES	
CL ACCESS ROAD	
CONTOUR MAJOR ASBUILT	
CONTOUR MINOR ASBUILT	
SPRING	

REVISION	DATE

swm
Production Company

50 0 50
1"=50'

Dennis L. Fisher PE# 8684
 12-27-2018
 Date:

Jackson Surveying Inc.
 CONSTRUCTION AND RECLAMATION
 ASBUILT
 ASS.2
 SOUTHWESTERN PRODUCTION COMPANY LLC.
 CHARLES FRYE OHI PAD
 TRIADELPHIA DISTRICT, OHIO COUNTY, WV
 DECEMBER 27, 2016

DOROTHY & DAVID W. FRYE
 D.B. 873/480
 6-T14-01
 105.00 Ac.

HEATHER L. BISE
 D.B. 769/244
 6-T8-53.1
 1.00 Ac.

KENNETH W. & LINDA CRAIG
 D.B. 640/233
 6-T8-53
 57.89 Ac.

GATHERING AREA
 SIGN
 0+79
 18" HDPE
 CULVERT

OVERHEAD UTILITIES (TYP.)

SHED
 HOUSE

RIPRAP AREA (TYP.)
 DRIVEWAY
 GARAGE

RIPRAP DITCH (TYP.)
 LOD
 4+00
 5+00
 6+00

DOROTHY & DAVID W. FRYE
 D.B. 873/480
 6-T14-01
 105.00 Ac.

MATCHLINE SHEET ASS.2
 MATCHLINE SHEET ASS.1

08700 690 67

- LEGEND -

- EDGE ACCESS ROAD
- PUBLIC/Private ROAD
- LOD
- CHAIN LINK FENCE
- DITCH/DRAIN
- PROPERTY LINES
- CL ACCESS ROAD
- CONTOUR MAJOR ASBUILT
- CONTOUR MINOR ASBUILT
- SPRING

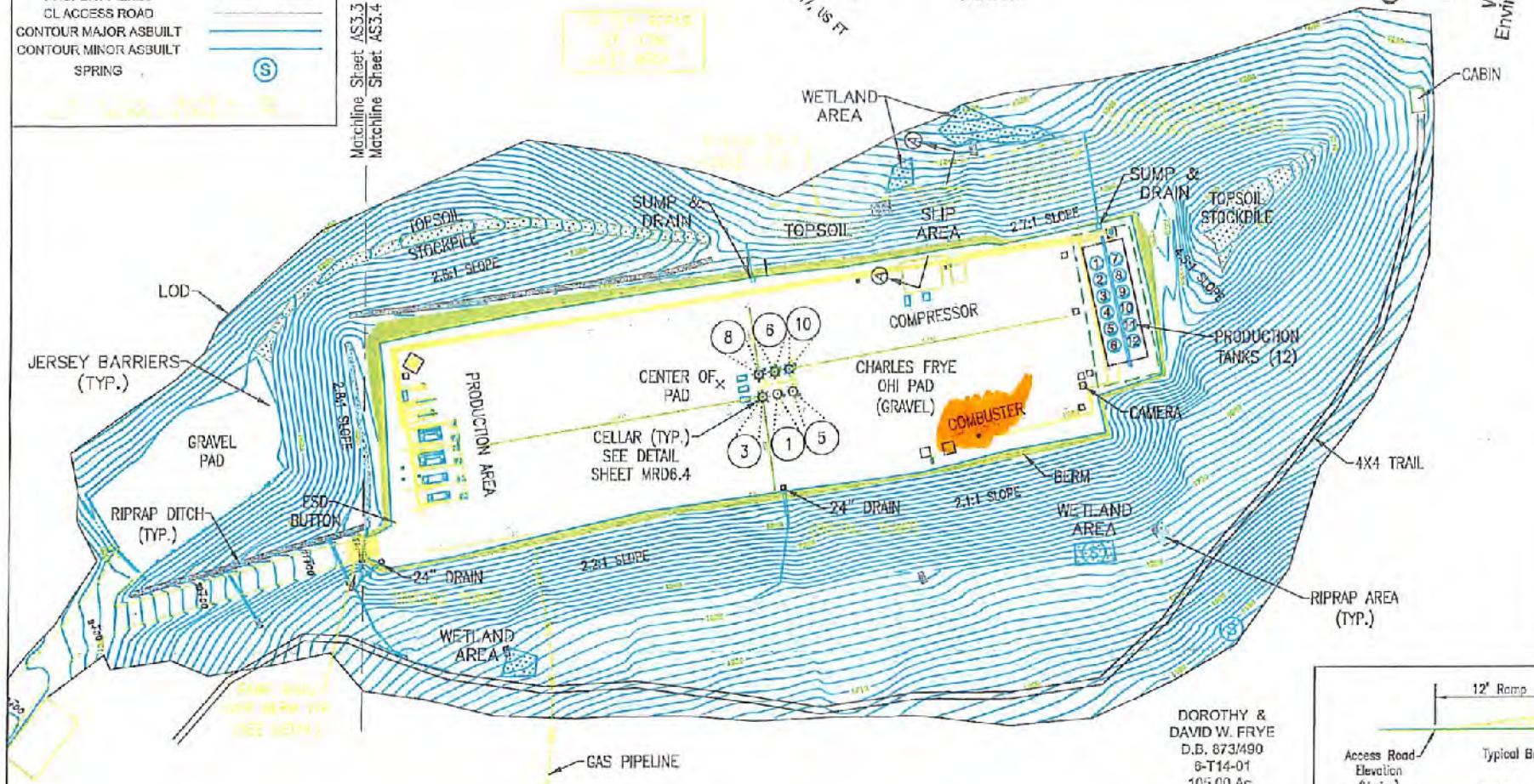
REVISION	DATE



DOROTHY & DAVID W. FRYE
D.B. 873/490
6-T14-01
105.00 Ac.

UTM NAD83 DATUM, ZONE 17, US FT

Matchline Sheet: AS3.3
Matchline Sheet: AS3.4



COORDINATES:
SITE ENTRANCE
(NAD83)
LAT: 40.054440
LONG: 80.581837

AT FRYE PAD
(NAD83)
LAT: 40.053623
LONG: 80.578343

CENTER OF PAD
(NAD83)
LAT: 40.053226
LONG: 80.577206

GATHERING AREA
(NAD83)
LAT: 40.054386
LONG: 80.581823

EXISTING WELLS:

FRYE OHI 1H
API:47-069-00161H
(NAD83)
LAT: 40.053102
LONG: 80.577108

FRYE OHI 3H
API:47-069-00073H
(NAD83)
LAT: 40.053125
LONG: 80.577146

FRYE OHI 5H
API:47-069-00090H
(NAD83)
LAT: 40.053077
LONG: 80.577070

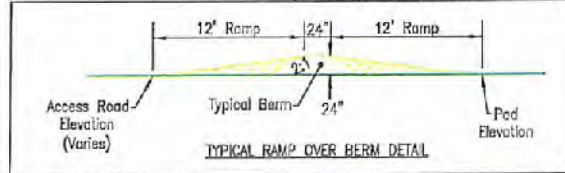
FRYE OHI 6H
API:47-069-00162H
(NAD83)
LAT: 40.053144
LONG: 80.577062

FRYE OHI 8H
API:47-069-00163H
(NAD83)
LAT: 40.053169
LONG: 80.577101

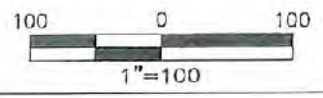
FRYE OHI 10H
API:47-069-00091H
(NAD83)
LAT: 40.053121
LONG: 80.577025

PRODUCTION TANKS (UTM METERS)

#	Northing	Easting
#1	4,433,694.790	536,153.473
#2	4,433,691.143	536,150.754
#3	4,433,687.416	536,148.028
#4	4,433,683.783	536,145.349
#5	4,433,680.075	536,142.631
#6	4,433,676.360	536,139.876
#7	4,433,691.695	536,157.678
#8	4,433,688.010	536,155.022
#9	4,433,684.344	536,152.277
#10	4,433,680.675	536,149.611
#11	4,433,676.975	536,146.899
#12	4,433,673.275	536,144.172



DOROTHY & DAVID W. FRYE
D.B. 873/490
6-T14-01
105.00 Ac.



Dennis L. Fisher RPE 8684

Dennis L. Fisher

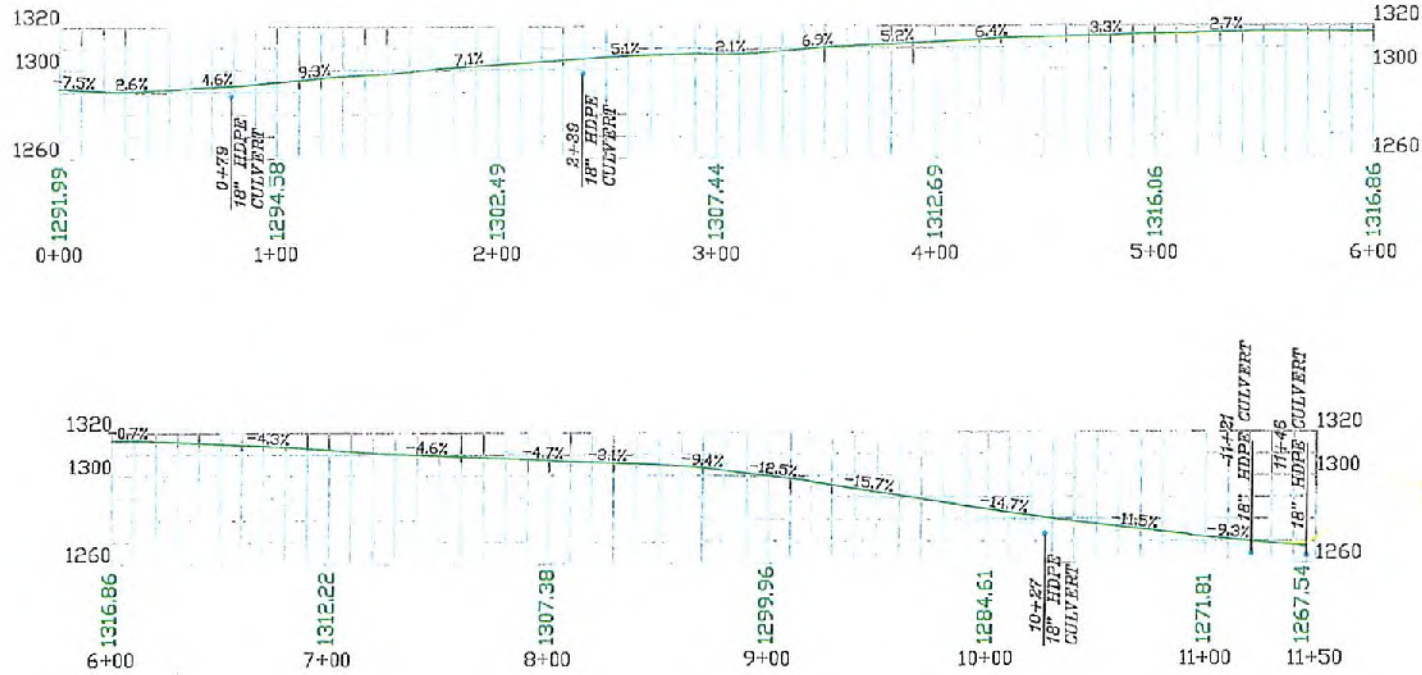
12-27-2016
Date:



Jackson Surmountain, Inc.
CONSTRUCTION AND RECLAMATION
ASBUILT
AS3.4
SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

08700 690 47


CENTERLINE ROAD PROFILE



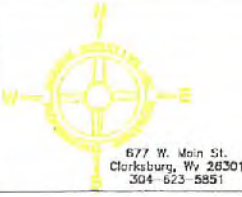
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Vert. 1" = 80'
Horiz. 1" = 80'

REVISION	DATE



 Dennis L. Fisher RPE 8684
 Date: 12-27-2016



Jackson Surveying Inc.
 CONSTRUCTION AND RECLAMATION
 ACCESS ROAD PROFILE
 ASR4.1
 SOUTHWESTERN PRODUCTION COMPANY LLC.
 CHARLES FRYE OHI PAD
 TRIADDELPHIA DISTRICT, OHIO COUNTY, WV
 DECEMBER 27, 2016



02800 690 67

EXISTING WELLS:
 FRYE_OHI_1H
 API:47-069-00161H
 (NAD83)
 LAT: 40.053102
 LONG: 80.577108

FRYE_OHI_3H
 API:47-069-00079H
 (NAD83)
 LAT: 40.053125
 LONG: 80.577146

FRYE_OHI_5H
 API:47-069-00090H
 (NAD83)
 LAT: 40.053077
 LONG: 80.577070

FRYE_OHI_6H
 API:47-069-00162H
 (NAD83)
 LAT: 40.053144
 LONG: 80.577062

FRYE_OHI_6H
 API:47-069-00163H
 (NAD83)
 LAT: 40.053169
 LONG: 80.577101

FRYE_OHI_10H
 API:47-069-00091H
 (NAD83)
 LAT: 40.053121
 LONG: 80.577025

COORDINATES:
 SITE ENTRANCE
 (NAD83)
 LAT: 40.054440
 LONG: 80.581637

AT FRYE PAD
 (NAD83)
 LAT: 40.053823
 LONG: 80.578343

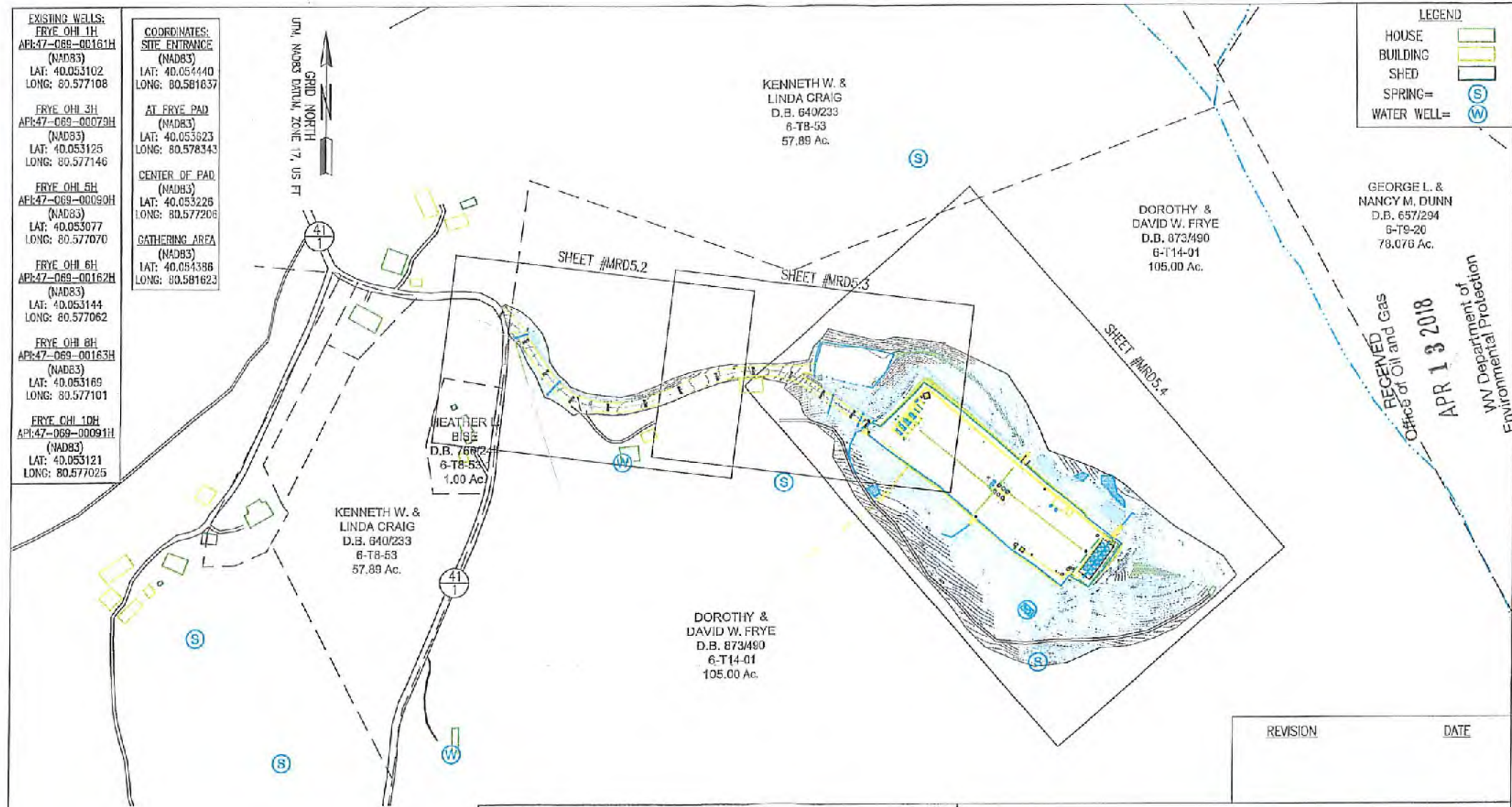
CENTER OF PAD
 (NAD83)
 LAT: 40.053226
 LONG: 80.577206

GATHERING AREA
 (NAD83)
 LAT: 40.054388
 LONG: 80.581623

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

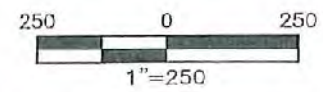
LEGEND

HOUSE [Symbol]
 BUILDING [Symbol]
 SHED [Symbol]
 SPRING= [Symbol]
 WATER WELL= [Symbol]



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 APR 13 2018
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REVISION	DATE



NOTE: PROPERTY LINES AND OWNERSHIP PROVIDED BY SWN.



DEANIS L. FISHER
 REGISTERED
 No. 6684
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL ENGINEER

Deanis L. Fisher
 Deanis L. Fisher PE# 6684

12-27-2016
 Date:



Jackson Surveying, Inc.
 RECLAMATION PLAN OVERVIEW
 MRD5.1

SOUTHWESTERN PRODUCTION COMPANY LLC.
 CHARLES FRYE OHI PAD
 TRIADDELPHIA DISTRICT, OHIO COUNTY, WV
 DECEMBER 27, 2016

677 W. Main St.
 Clarksburg, Wv 26301
 304-623-5851

08200 690 44

NOTE: SEE SHEET MRD8.3 FOR RECLAMATION NOTES AND SEQUENCE.

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D.B. 873/490
6-T14-01
105.00 Ac.

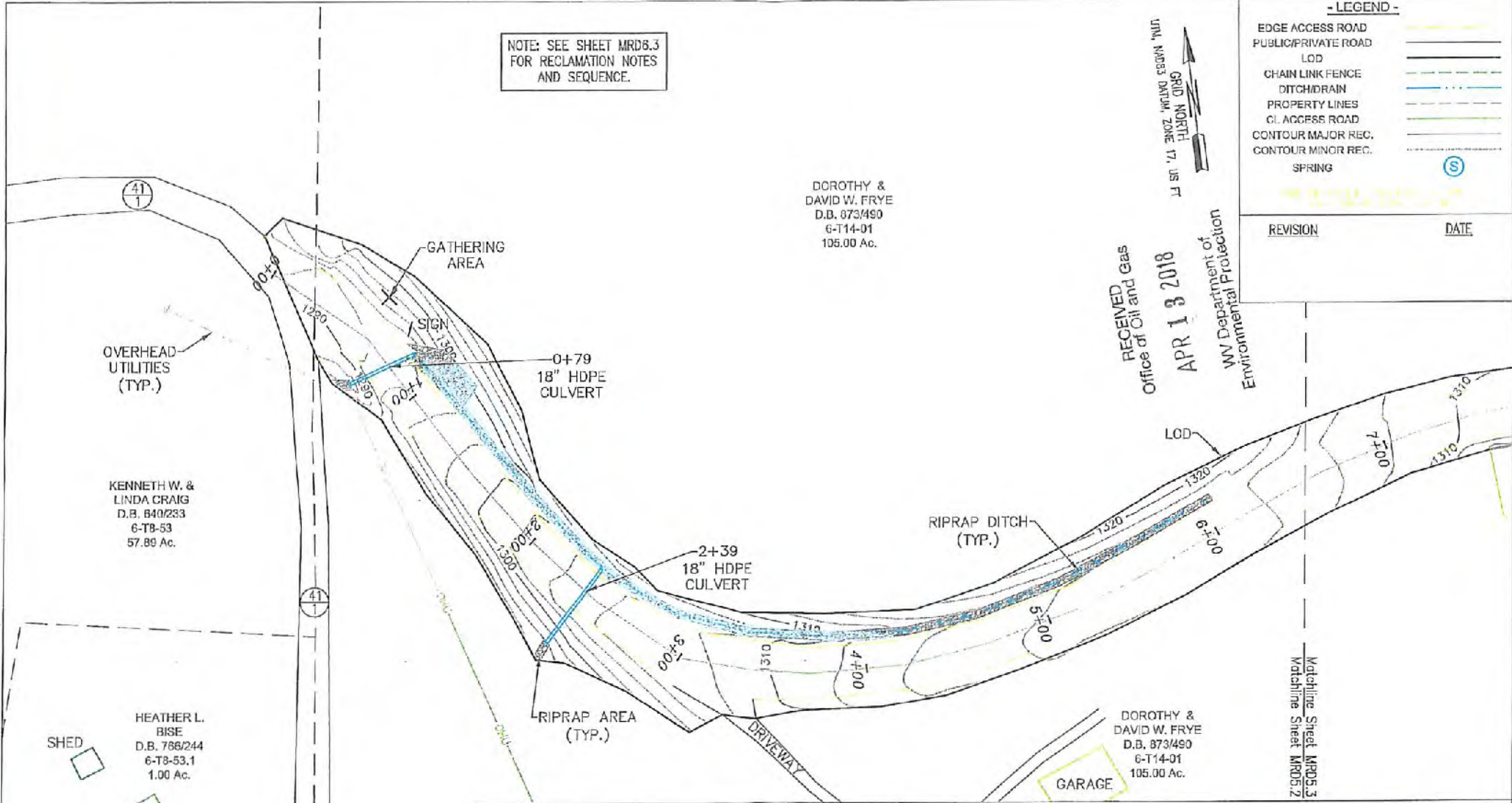
GRID NORTH
MUT. MERIS DATUM, ZONE 17, US FT

- LEGEND -

EDGE ACCESS ROAD	
PUBLIC/PRIVATE ROAD	
LOD	
CHAIN LINK FENCE	
DITCH/DRAIN	
PROPERTY LINES	
CL ACCESS ROAD	
CONTOUR MAJOR REC.	
CONTOUR MINOR REC.	
SPRING	

REVISION	DATE

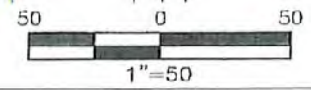
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Watchline Sheet MRD5.3
Watchline Sheet MRD5.2

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D.B. 873/490
6-T14-01
105.00 Ac.

GARAGE



Dennis L. Fisher RP# 8684.



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Clarksburg, Wv 26301
304-623-5551

Jackson Surveying Inc.

RECLAMATION PLAN
MRD5.2

SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

12-27-2016
Date:

47 069 0880

- LEGEND -

EDGE ACCESS ROAD	
PUBLIC/Private ROAD	
LOD	
CHAIN LINK FENCE	
DITCH/DRAIN	
PROPERTY LINES	
CL ACCESS ROAD	
CONTOUR MAJOR REC.	
CONTOUR MINOR REC.	
SPRING	

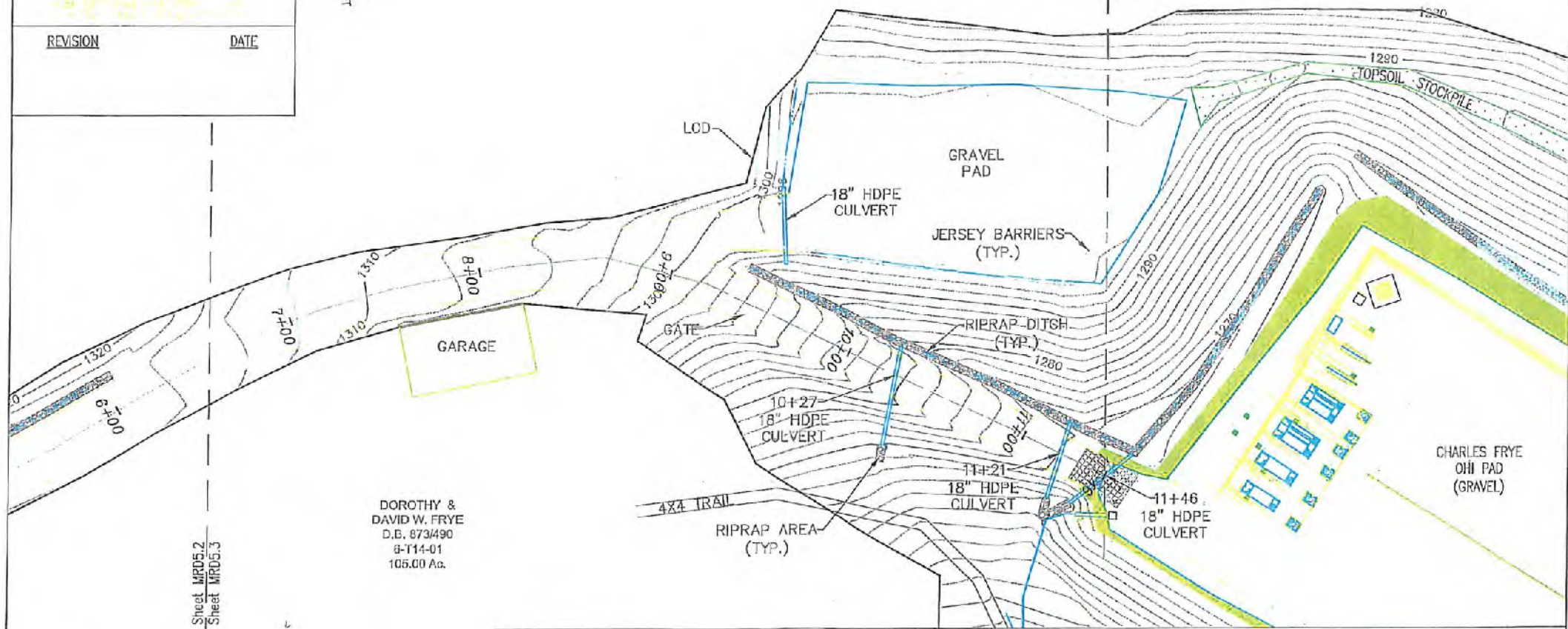
REVISION	DATE

GRID NORTH
 1/4" = 100.00' DATUM, ZONE 17, US FT

NOTE: SEE SHEET MRD6.3
 FOR RECLAMATION NOTES
 AND SEQUENCE.

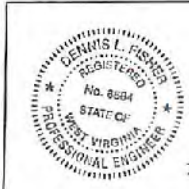
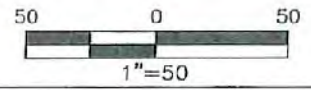
DOROTHY &
 DAVID W. FRYE
 D.B. 873490
 8-114-01
 105.00 Ac.

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DOROTHY &
 DAVID W. FRYE
 D.B. 873490
 8-114-01
 105.00 Ac.

Matchline Sheet MRD5.2
 Matchline Sheet MRD5.3



Dennis L. Fisher RPE 8684

Dennis L. Fisher

12-27-2018
 Date:



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Jackson Surveying Inc.

RECLAMATION PLAN
 MRD5.3

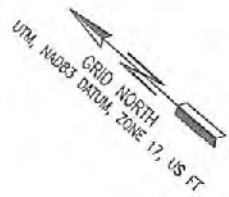
SOUTHWESTERN PRODUCTION COMPANY LLC.
 CHARLES FRYE OHI PAD
 TRIADDELPHIA DISTRICT, OHIO COUNTY, WV
 DECEMBER 27, 2016

08800 690 00280
47

- LEGEND -

EDGE ACCESS ROAD	
PUBLIC/Private ROAD	
LOD	
CHAIN LINK FENCE	
DITCH/DRAIN	
PROPERTY LINES	
CL ACCESS ROAD	
CONTOUR MAJOR REC.	
CONTOUR MINOR REC.	
SPRING	

REVISION	DATE
Matchline Sheet MRD5.3	
Matchline Sheet MRD5.4	



DOROTHY & DAVID W. FRYE
D.B. 873/490
6-T14-01
105.00 Ac.

NOTE: SEE SHEET MRD6.3 FOR RECLAMATION NOTES AND SEQUENCE.

COORDINATES:
SITE ENTRANCE (NAD83)
LAT: 40.054440
LONG: 80.581837

AT FRYE PAD (NAD83)
LAT: 40.053623
LONG: 80.578343

CENTER OF PAD (NAD83)
LAT: 40.053226
LONG: 80.577206

GATHERING AREA (NAD83)
LAT: 40.054386
LONG: 80.581823

EXISTING WELLS:

FRYE OHI 1H
API:47-069-00161H
(NAD83)
LAT: 40.053102
LONG: 80.577108

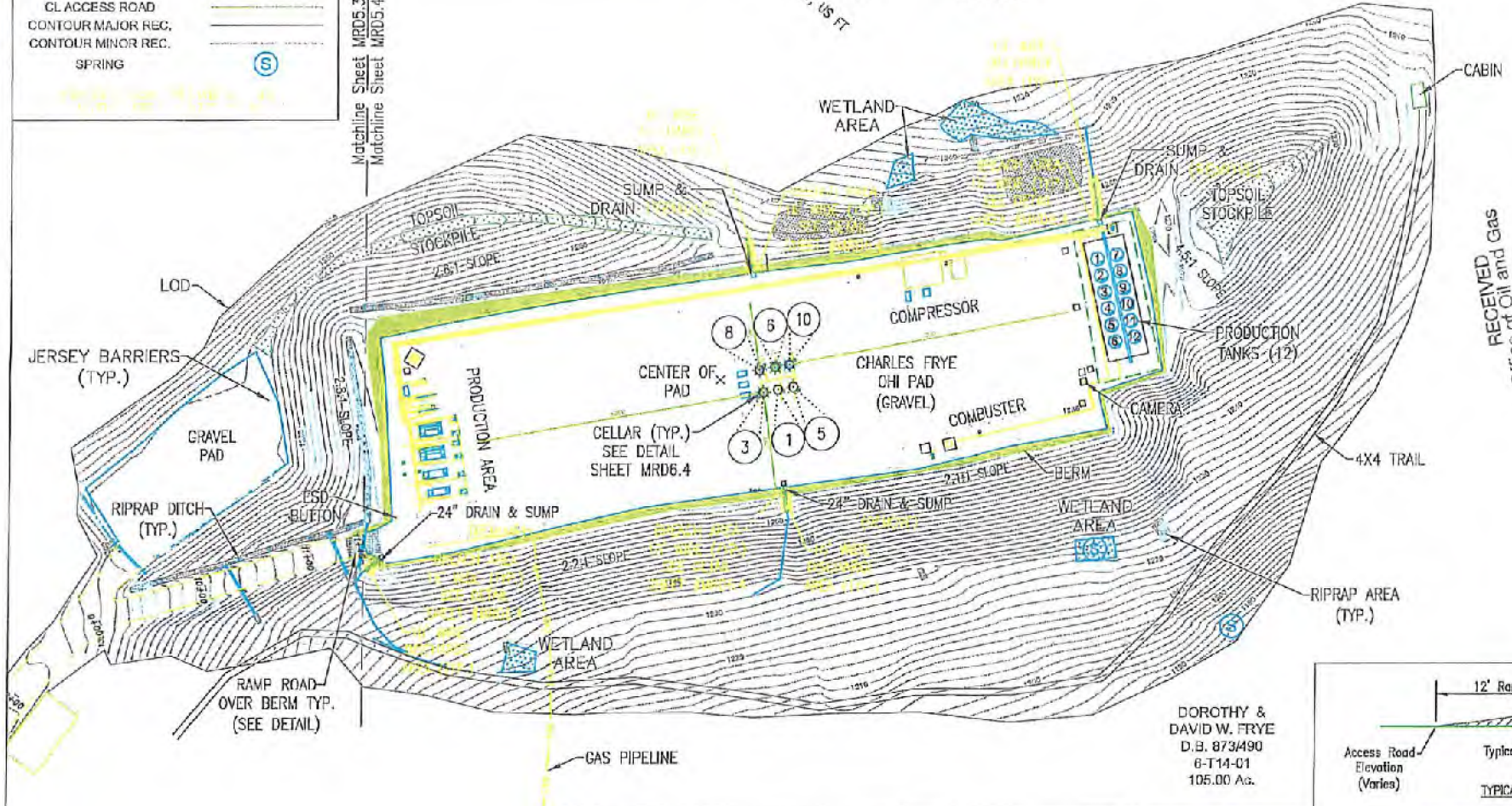
FRYE OHI 3H
API:47-069-00079H
(NAD83)
LAT: 40.053125
LONG: 80.577146

FRYE OHI 5H
API:47-069-00950H
(NAD83)
LAT: 40.053077
LONG: 80.577070

FRYE OHI 6H
API:47-069-00162H
(NAD83)
LAT: 40.053144
LONG: 80.577062

FRYE OHI 8H
API:47-069-00163H
(NAD83)
LAT: 40.053169
LONG: 80.577101

FRYE OHI 10H
API:47-069-00091H
(NAD83)
LAT: 40.053121
LONG: 80.577025

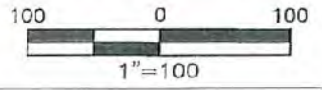
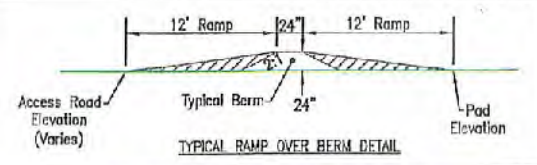


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PRODUCTION TANKS (UTM METERS)

	Northing	Easting
#1	4,433,694.290	536,153.473
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#6	4,433,676.360	536,139.876
#7	4,433,691.695	536,157.678
#8	4,433,688.010	536,155.022
#9	4,433,684.344	536,152.227
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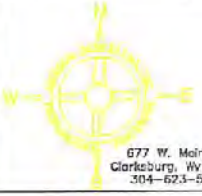
DOROTHY & DAVID W. FRYE
D.B. 873/490
6-T14-01
105.00 Ac.



Dennis L. Fisher RPE 8884

Dennis L. Fisher

12-27-2018
Date:



677 W. Main St.
Clarksburg, Wv 26301
304-623-5851

Jackson Surveying Inc.
RECLAMATION PLAN
MRD5.4

SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

47 069 05280

ACCESS ROAD RECLAMATION

- Road surfaces shall be stabilized and/or reseeded.
- Permanent side ditches will be installed where needed and where the site will allow.
- Permanent culverts, cross drains and broad-based dips shall be installed.
- Side slopes of excavated cuts and outcrops shall be maintained, where the site allows.
- Sediment barriers shall be maintained until vegetation is re-established. Temporary sediment control devices such as ditch line checks and silt fencing shall be removed along with collected sediment after at least a 70% vegetation cover is established.

GENERAL NOTES REGARDING RECLAMATION

- Pipelines:** any disturbed areas created by pipeline installation shall be reclaimed in accordance with state requirements.
- Tank batteries, power lines:** any disturbed area created by the installation of tank batteries or power lines, even if out of the immediate construction site shall be reclaimed in accordance with state requirements, as these operations are used in connection with the "permitted" operation.
- Well maintenance:** disturbed areas created due to well maintenance, shall be reclaimed, mulched and seeded to reduce erosion and sedimentation.
- API Numbers:** API identification numbers shall be displayed at the well in accordance with state requirements.
- Drilling Pit Reclamation**
 - All fluid must be removed from the pit prior to backfilling and disposed of in an approved manner or recycled.
 - Drill cuttings, drilling mud and liner, for wells permitted under WV Code 22-BA and 35CSR-8, must be removed from site and disposed of at an approved solid waste facility.
 - All pits and impoundments that are not required or allowed by state or federal law or rule or agreement between the operator and the surface owner must be backfilled. Use a maximum of two foot thick lifts with 90% compaction to the standard proctor density (ASTM D-698).
- The operator shall grade or terrace and plant, seed or sod the area disturbed that is not required in production of the well in accordance with the erosion and sediment control plan.
- Install all permanent water drainage and diversion ditches. In areas of long slopes, it may be desirable to install angled diversion ditches to aid in controlling water runoff and erosion.
- Stockpiled topsoil should be re-spread over disturbed area. Topsoil should not be added to slopes steeper than 2:1 unless good bonding to the subsoil can be achieved.
- Prior to seeding, soil should be loosened by disking, bulldozer tracking, etc. Note that bulldozer tracking can compact wet clay soils and restrict establishment of vegetation.
- Maintaining sediment barriers is critical until vegetation is re-established. Temporary sediment control devices such as silt fencing shall be removed along with sediment after at least a 70% vegetative cover is established.

WELL SITE RECLAMATION (SPECIFIC)

- For this pad the reclamation will consist of the berm breach and sump removal, spreading the stockpiled topsoil over the 2:1 slope areas & reseeding. The pad area will remain gravel. The sump liner shall be disposed in an approved manner. The sumps shall be filled to grade using excess berm material. See Well Site Reclamation (General) 5(c).
- Use reinforced silt fence or compost filter sock downslope of areas of topsoil placement as required.

RECLAMATION SEQUENCE:

- Install reinforced silt fence or compost filter sock downslope of all areas to be disturbed.
- Remove sumps and liners and dispose.
- Breach berm and construct discharge area.
- Spread stockpiled topsoil over disturbed areas, seed and mulch.
- Inspect culverts, road sumps and stone check dams, repair as needed.
- Add stone to access road and pad as needed.

Species/Genus	Seeding Rate (lbs/1000 sq ft)	Soil Treatment (lb/1000 sq ft)	Soil Type
RY Bluegrass	20		WV - Mod. Wet
Redtop	2		WV - Mod. Wet
Lemon Clover or Buffalo Grass	2.0		WV - Mod. Wet
Timothy	5		WV - Mod. Wet
Alfalfa	12		WV - Mod. Wet
Timothy	5		WV - Peaty
Orchardgrass	10		WV - Mod. Wet
Ladino Clover	2		WV - Mod. Wet
Alfalfa	3		WV - Mod. Wet
Orchardgrass	10		WV - Mod. Wet
Lemon Clover	2		WV - Mod. Wet
Orchardgrass	20		WV - Mod. Wet
Perennial Ryegrass	10		WV - Mod. Wet
Crossbred Ryegrass	10		WV - Mod. Wet
Perennial Ryegrass	10		WV - Mod. Wet
Orchardgrass or Perennial Ryegrass	20		WV - Mod. Wet
Redtop	2		WV - Mod. Wet
Orchardgrass	20		WV - Mod. Wet
Ladino Clover	2		WV - Mod. Wet
Orchardgrass	20		WV - Mod. Wet

Table 1.5. Use and Fertilizer Application Table

Fertilizer	Use Rate (lb/1000 sq ft)	Fertilizer	Use Rate (lb/1000 sq ft)
Ammonia	2	Super	200
2-10-10	2	Super	200
10-10-10	4	Super	200

Table 1.6. Seed and Mulch Tables

Material	Application Rate (lb/1000 sq ft)	Notes
Layer Stone	200 to 300	Cover 2:1 to 3:1 slopes to prevent erosion
Mulch	100 to 300 lbs	90% of surface or existing cover and stone
Topsoil	1000 to 1500 lb	Disturbed Area

Table 1.7. Recommended Seeding Dates for Permanent and Temporary Areas

Seeding Date	Establishment
March 1 - April 15 and August 1 - October 1	Best seeding period
April 16 - August 31	Second best seeding period
October 1 - Dec 31	Third best seeding period

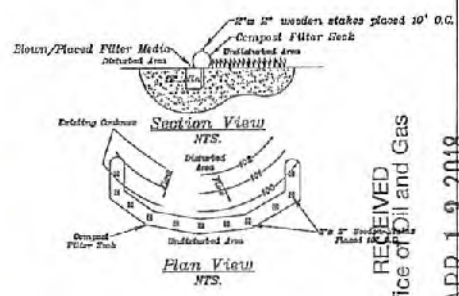
Table 1.8. Applicable Fertilization Recommendation in lbs/1000 sq ft

Soil Type	N (lb/1000)	P (lb/1000)	K (lb/1000)
Coal Seam Soils	40	80	80
CG Ores & Limestones	25	80	80
Temporary Cover	40	40	40

Table 1.9. Temporary cover suitable for establishment of vegetation

Species	Seeding Rate (lb/1000 sq ft)	Soil Treatment (lb/1000 sq ft)	Soil Type
Annual Ryegrass	40	20 - 40	WV - Peaty
Field Broomrape	40	20 - 40	WV - Mod. Wet
Spring Oats	50	20 - 40	WV - Peaty
Subgrass	40	20 - 40	WV - Peaty
Winter Rye	100	20 - 40	WV - Peaty
Winter Wheat	100	20 - 40	WV - Mod. Wet
Japanese Mint	50	20 - 40	WV - Peaty
Budger	5	20 - 40	WV - Peaty
Annual Ryegrass	20	20 - 40	WV - Peaty
Spring Oats	20	20 - 40	WV - Peaty

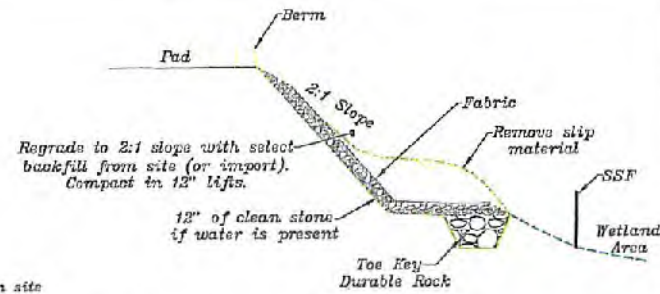
Seed and Mulch Tables



Compost shall meet the following standards:

Organic Matter Content	Value
Organic Matter Content	80% - 90% (dry weight basis)
Moisture Content	60% - 70%
Particle Size	20 - 30 mm
Available Nitrogen	0.5 - 1.0%
Available Phosphorus	0.1 - 0.2%

SECTION A-A



Slope Repair

- Install super silt fence
- Remove topsoil and stockpile
- Remove silt material and dispose on site
- Investigate cause of silt
- Construct toe key
- If water is present place 12" clean stone and fabric as shown
- Regrade to 2:1 slope using select bankfill from site (or import) and compact in 12" lifts
- Spread topsoil over slope
- Track slope with dozer
- Seed and mulch disturbed areas



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Standard Construction Detail Super Filter Fabric Fence

*Post spaced @ 10' max. Use 2.0" dia. galvanized or aluminum post.

*Chain Link to Post Fasteners spaced @ 10' max. Use No. 8 Gal. aluminum wire or No. 9 galvanized steel pre-galvanized wire. Chain Link to Twisted Wire Fasteners spaced @ 10' max. Use No. 10 Gal. galvanized steel wire. Fabric to Chain Fasteners spaced @ 24" max. @ 6' o.c.

No. 7 GA. Twisted Wire installed horizontally at top and bottom of chain link fence.

Filter Fabric Fence must be placed at existing level grade. Both ends of the barrier must be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.

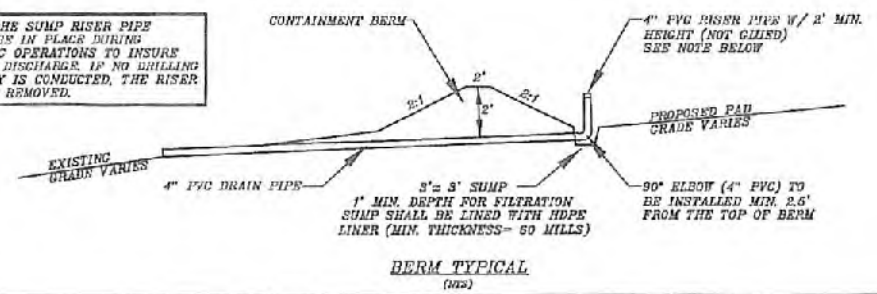
Sediment must be removed when accumulation reaches 1/2 the above ground height of the fence.

Jackson Surveying Inc.
DETAILS
MRD6.3
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CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

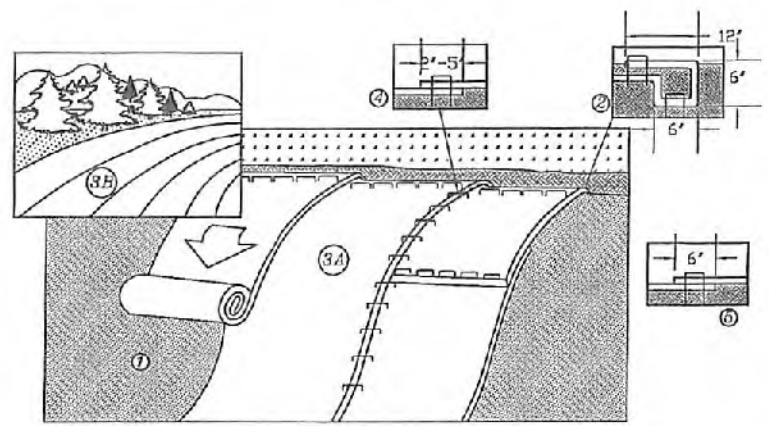
677 W. Main St.
Clarksburg, Wv 26301
304-623-5851

08200 690 47
47 069 08280

NOTE: THE SUMP RISER PIPE SHALL BE IN PLACE DURING DRILLING OPERATIONS TO INSURE A SUMP DISCHARGE. IF NO DRILLING ACTIVITY IS CONDUCTED, THE RISER MAY BE REMOVED.



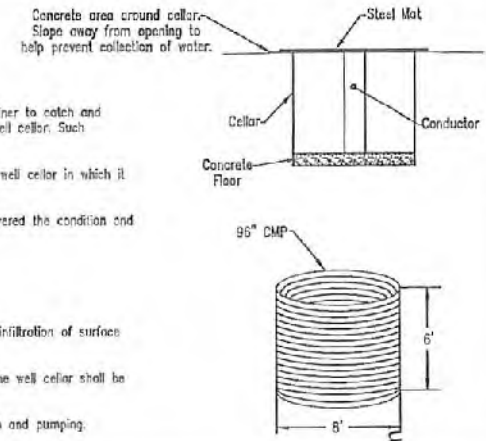
BERM TYPICAL
(1/2)



- NOTES:**
1. Prepare soil before installing rolled erosion control products (RECP's), including any necessary application of lime, fertilizer, and seed.
NOTE: When using Cell-O-Seed, DO NOT seed prepared area. Cell-O-Seed must be installed with paper side down.
 2. Begin at the top of the slope by anchoring the RECP's in a 6" Deep X 6" Wide Trench with approximately 12" of RECP's extended beyond the Up-Slope portion of the trench. Anchor the RECP's with a row of staples/stakes approximately 12" apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to compacted soil and fold remaining 12" portion of RECP's back over seed and compacted soil. Secure RECP's over compacted soil with a row of staples/stakes spaced approximately 12" apart across the width of the RECP's.
 3. Roll the RECP's (A.) down or (B.) horizontally across the slope. RECP's will unroll with appropriate side against the soil surface. All RECP's must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staples pattern guide. When using the DOT system, staples/stakes should be placed through each of the colored dots corresponding to the appropriate staple pattern.
 4. The edge of parallel RECP's must be stapled with approximately 2"-5" overlap depending on RECP's type.
 5. Consecutive RECP's spliced down the slope must be placed end over end (shingle style) with an approximate 6" overlap. Staples through overlapped area, approximately 12" apart across entire RECP's width.
- NOTE:
* In loose soil conditions, the use of staple or stake lengths greater than 6" may be necessary to properly secure the ECP's.

Erosion Control Blanket-Slope Installation
Scale: NTS.

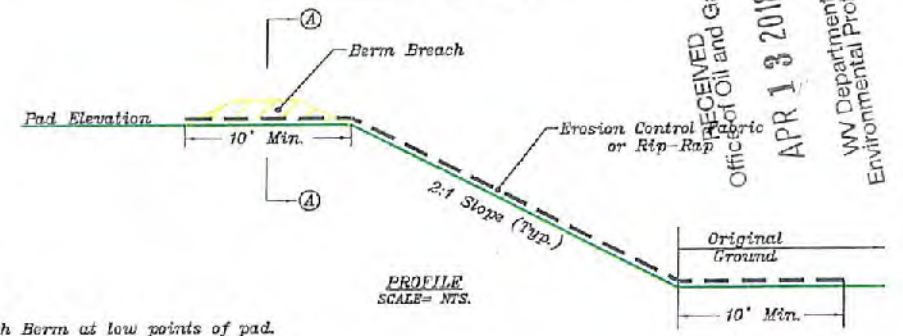
CELLAR DETAIL



Well Cellars:

- A. A person shall not open any valve at the wellhead without using a portable container to catch and contain any organic liquid that would otherwise drop on the ground or into the well cellar. Such container shall be kept closed when not in use.
- B. Immediately before a well is steamed or after a well head is steam cleaned, the well cellar in which it is located shall be pumped out.
- C. Neither of the following conditions shall occur unless the owner or operator discovered the condition and the well cellar is pumped within 7 days of discovery:
 - 1) Liquid depth exceeding 50 percent of the depth of the well cellar.
 - 2) Oil/petroleum depth exceeding 2 inches.
- D. Cellar shall be constructed and installed in a manner that prevents the subsurface infiltration of surface water and fluids.
- E. If a well cellar cannot be accessed by a vacuum truck due to muddy conditions, the well cellar shall be pumped as soon as it becomes accessible.
- F. Steel matting shall be used to cover the cellar at all times except during inspection and pumping.

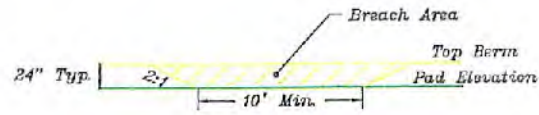
BERM BREACH DETAIL



NOTES:

1. Breach Berm at low points of pad. Minimum of 2 Breach sites per pad.
2. Line Breach Area and Discharge Area with Erosion Control Fabric.
3. Discharge area shall be a minimum of 10' wide with a slight depression/swale to discharge run-off to natural ground.
4. If pad slope exceeds 30° or if excessive flows are anticipated, use riprap in place of erosion fabric.
5. Discharge run-off to natural ground away from pad area.

PROFILLE
SCALE= NTS.



SECTION A-A
SCALE= NTS.

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DETAILS
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SOUTHWESTERN PRODUCTION COMPANY LLC.
CHARLES FRYE OHI PAD
TRIADELPHIA DISTRICT, OHIO COUNTY, WV
DECEMBER 27, 2016

577 W. Main St.
Clarksburg, Wv 26301
304-623-5851