



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

Monday, February 05, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for MARGARET SUE KELLEY UP WTZ 105H
47-103-03200-00-00

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: MARGARET SUE KELLEY UP WTZ 105H
Farm Name: MARGARET SUE KELLEY
U.S. WELL NUMBER: 47-103-03200-00-00
Horizontal 6A / New Drill
Date Issued: 2/5/2018

Promoting a healthy environment.

PERMIT CONDITIONS

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

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.



west virginia department of environmental protection

Oil and Gas Conservation Commission
601 57th Street, SE Charleston, WV 25304
(304)926-0499, Ext 1656

Jim Justice, Governor
Barry K. Lay, Chairman
ogcc.wv.gov

January 4, 2018

Department of Environmental Protection
Office of Oil and Gas
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-103-03200

COMPANY: SWN Production Company, LLC

FARM: Margaret Sue Kelley UP WTZ 105H

COUNTY: Wetzel DISTRICT: Proctor QUAD: Wileyville

The deep well review of the application for the above company is **Approved to drill to Trenton for Point Pleasant completion.**

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No.
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells, well name, and the name and address of the operator: 47-103-02973, James Messenger WTZ 3H U, SWN Production Company, LLC
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,


Susan Rose
Administrator

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

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

2) Operator's Well Number: Margaret Sue Kelley UP WTZ 105H Well Pad Name: Margaret Sue Kelley WTZ Pad

3) Farm Name/Surface Owner: Margaret Sue Kelley Public Road Access: Scheibelhood Hill Road

4) Elevation, current ground: 1422' Elevation, proposed post-construction: 1422'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow _____ Deep

Horizontal

6) Existing Pad: Yes or No yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Target Formation- Point Pleasant, Target Top TVD- 12086', Target Base TVD- 12200', Anticipated Thickness- 114', Associated Pressure- 10923

8) Proposed Total Vertical Depth: 12137' lateral 12,348' P. lot

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 18872'

11) Proposed Horizontal Leg Length: 6330.9'

12) Approximate Fresh Water Strata Depths: 512'

13) Method to Determine Fresh Water Depths: Nearby water wells

14) Approximate Saltwater Depths: 1930'

15) Approximate Coal Seam Depths: 1228'

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

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

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


Depth: _____

Seam: _____

Owner: _____

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	H-40	98.9#	100'	100'	CTS
Fresh Water	20"	New	J-55	94#	620'	620'	1293 sx/CTS
Coal	13 3/8"	New	L-80	68#	2850'	2850'	2530 sx/CTS
Intermediate	9 5/8"	New	HCP110	53.5#	11100'	11000'	4173 sx/CTS
Production	5 1/2"	New	HCP-110	23#	18872'	18872'	Lead 559sx tail 2371sx/100' inside in 
Tubing							
Liners							

*DM4
6-15-17*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	0.75	2780	81	Class A	1.19/50% Excess
Fresh Water	20"	24"	0.438	2110	633	Class A	1.19/50% Excess
Coal	13 3/8"	17.5"	0.33	2730	1768	Class A	1.19/50% Excess
Intermediate	9 5/8"	12 1/4"	0.395	5750	3898	Class A	1.68/1.25
Production	5 1/2"	8 3/4"	0.415	14520	9918	Class A	1.68/1.25
Tubing							
Liners							

PACKERS

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

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

Drill approximately 100 ft into the Trenton formation and then set cement plug from KOP to 600' below KOP and then drill horizontally into the Point Pleasant. **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'-75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50'-75' 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, proppant (sand and/or ceramic) 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 within the target formation has been stimulated. All stage plugs are then prepared for production by being drilled out or using large internal bore plugs and the well is flowed back to surface. The well is produced through surface facilities consisting of high pressure production units, vertical separation units, water and oil storage tanks as needed. The maximum anticipated pressure and rate is 15,000 psi @ 100 barrels per minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 28.24

22) Area to be disturbed for well pad only, less access road (acres): 13.80

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.

Schlumberger Cement Additives

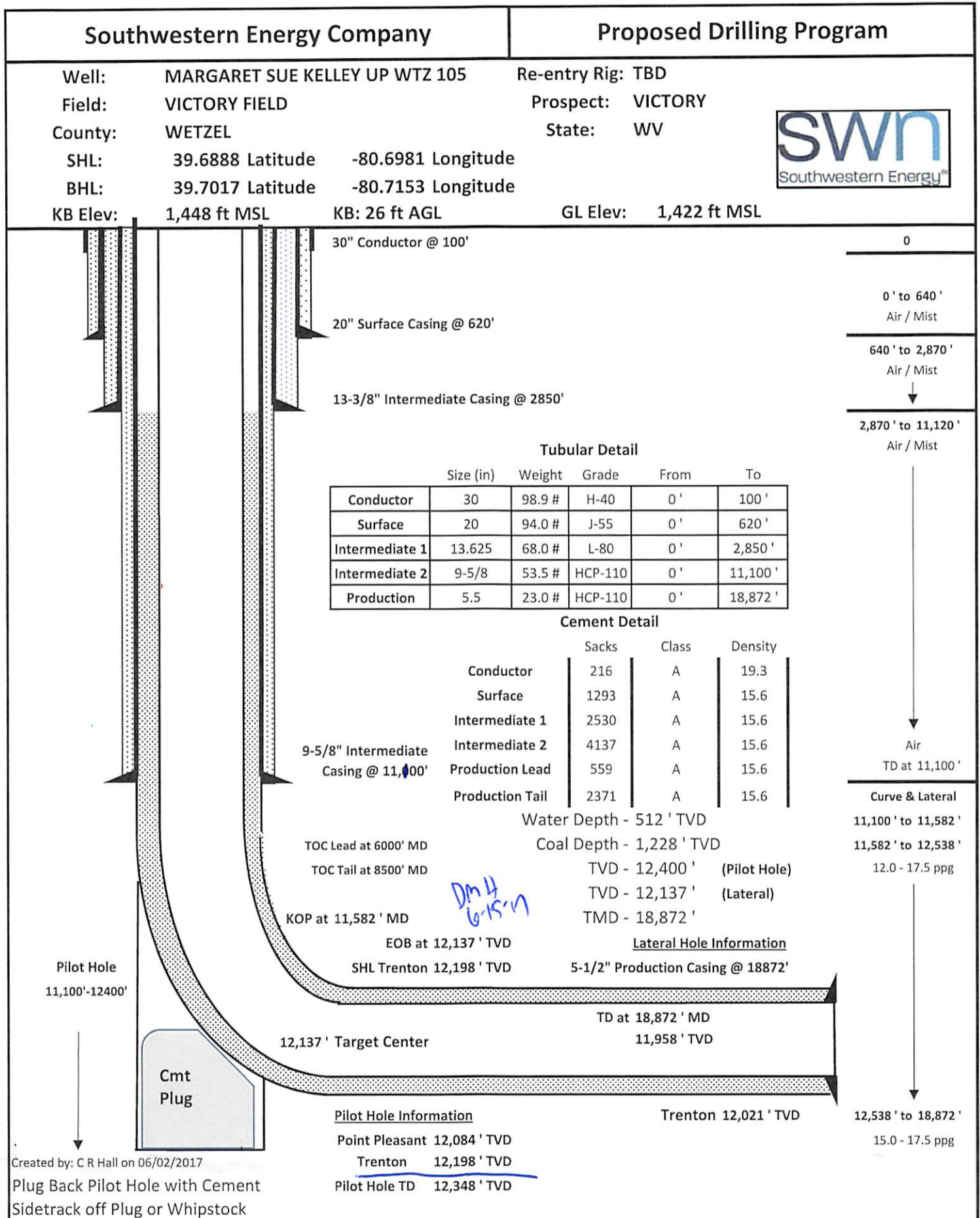
	Product Name	Product Use	Chemical Name	CAS Number
Intermediate Surface	S001	accelerator	calcium chloride	10043-52-4
	S001	accelerator	calcium chloride	10043-52-4
Kick Off Plug	D080	dispersant	sodium polynaphthalene sulfonate	9008-63-3
	D801	retarder	aromatic polymer derivative	proprietary
	D047	antifoam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

DmH
6-15-17

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Producing Formation	Producing Zones Not Perforated
Marcellus Shale	


DEEP 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: Margaret Sue Kelley UP WTZ 105H
Wileyville QUAD
Proctor DISTRICT
Wetzel COUNTY, WEST VIRGINIA

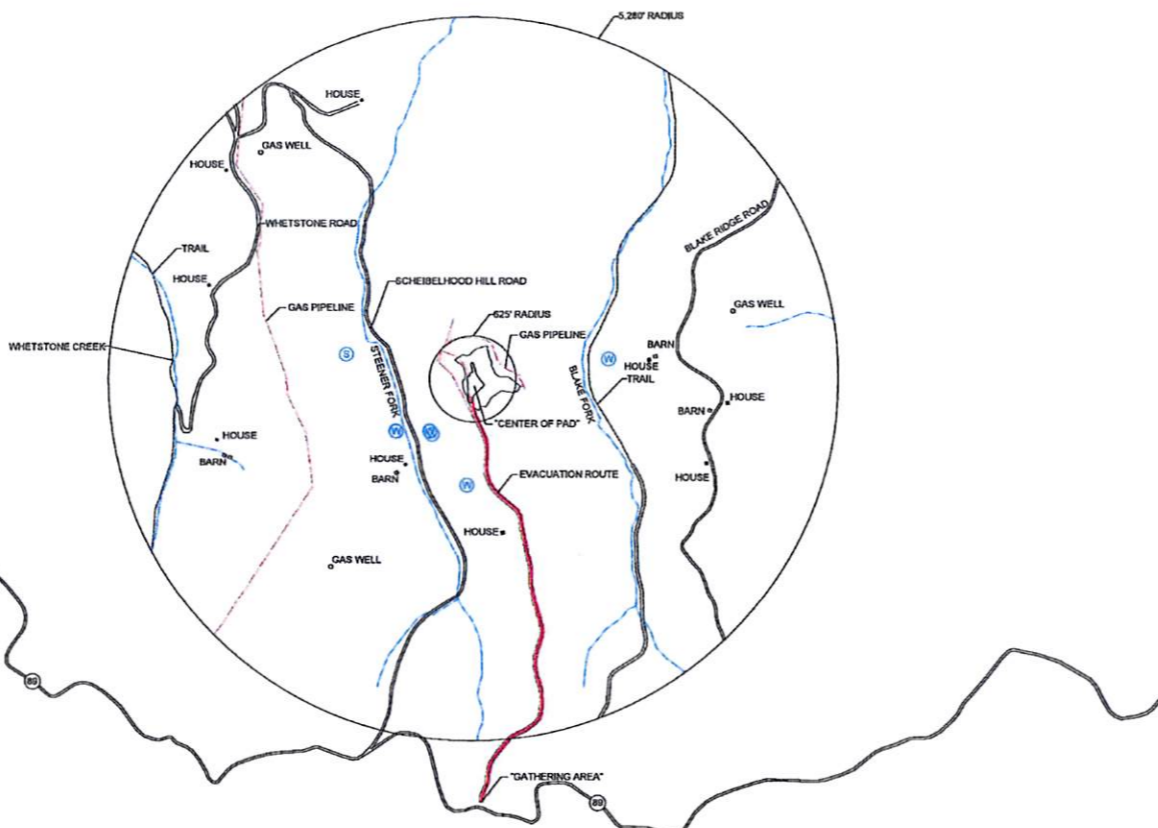
Submitted by: 
Dee Southall Date: 6/1/2017
Title: Regulatory Supervisor SWN Production Co., LLC

Approved by: 
Date: 6-15-17
Title: Oil & Gas Inspector

Approved by: _____
Date: _____
Title: _____

SWN PRODUCTION COMPANY, LLC

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EXISTING WELLS:

MARGARET SUE KELLEY 8H
 API 4710302407
 (NAD 83)
 LAT: 39.688585
 LONG: -80.698008

MARGARET SUE KELLEY 10H
 API 4710302408
 (NAD 83)
 LAT: 39.688624
 LONG: -80.698009

MARGARET SUE KELLEY 14H
 API 4710302715
 (NAD 83)
 LAT: 39.688471
 LONG: -80.698000

COORDINATES:
 SITE ENTRANCE
 (NAD 83)
 LAT: 39.671826
 LONG: -80.697238

AT MARGARET SUE KELLEY
 PAD
 (NAD 83)
 LAT: 39.687825
 LONG: -80.698114

CENTER OF PAD
 (NAD 83)
 LAT: 39.688495
 LONG: -80.698020

GATHERING AREA
 (NAD 83)
 LAT: 39.672121
 LONG: -80.697087

- LEGEND -

- SPRING
- WATER WELL

- Notes:
- The existing gas lines shown hereon are based on the location of above ground gas line markers or paint marks. The location of the gas lines may vary and additional buried utilities may be present. Prior to any excavation, call West Virginia Miss Utility @ 811.
 - Elevation datum: NAVD 88, Geoid 12A
 - Horizontal Datum: NAD 83 (2011) West Virginia North Zone



LOCATION MAP
 NOT TO SCALE

NO.	DATE	DESCRIPTION	INTL.



JHA Companies | SURVEYORS
 ENGINEERS
 ENVIRONMENTAL
 GIS MAPPING

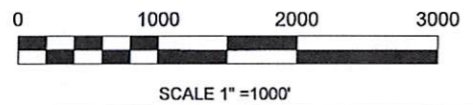
www.jhacompanies.com
 68011 VINEYARD ROAD
 ST. CLAIRSVILLE, OHIO 43950
 (740)695-6100

*MONTROSE, PA • HONESDALE, PA • SAYRE, PA •
 •MOOSIC, PA • ST. CLAIRSVILLE, OH •

PROJECT ID: 2016-622 (MARGARET SUE KELLEY PAD)	DATE: 09/28/2017	SCALE: 1"=1000'	DRWVN: MSS	DESIGN: MSS	CHECKED: JPD
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CONSTRUCTION PLAN
 FOR
 MARGARET SUE KELLEY
 PAD EXPANSION
 PROCTOR DISTRICT, WETZEL COUNTY,
 WEST VIRGINIA

TITLE: EVACUATION ROUTE / PREVAILING WINDS	SHEET NO: C-0.03
PLAN STATUS: FINAL	



WW-9
(4/16)

JUN 22 2017

API Number 47 - 103 - 03200

Operator's Well No. MArgaret Sue Kelley UP WtZ 105H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Company, LLC OP Code 494512924

Watershed (HUC 10) Fish Creek Quadrangle Wileyville

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

Dr H
6-15-17

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

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

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

Additives to be used in drilling medium? see attached sheets

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

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

-Landfill or offsite name/permit number? meadow SWF-1032, SS grading SWF-4902, Northwestern SWF-1025, Short Creek 1034/WW0109517/CID28726, Carbon Limestone 28726-CID28726

Arden Landfill 1001/2, American 02-12954, Country Wide 38390/CID38390, Pine Grove 13688

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

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

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

Company Official Signature [Signature]

Company Official (Typed Name) Dee Southall

Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 1st day of June, 20 17

Brittany R Woody

My commission expires 11/27/22



SWN Production Company, LLC

Proposed Revegetation Treatment: Acres Disturbed 28.24 Prevegetation pH _____

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 13.80

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

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Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

****See Attachment**

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: _____

Title: oil and gas inspector Date: 6-15-17

Field Reviewed? Yes No

Drilling Mediums

Synthetic Oil

Brine

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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WVD Seeding Specification



To Order Seed contact Lyndsi Eddy Flipppo 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 inoculated at 5x normal rate	
Apply @ 100lbs per acre April 16th- Oct. 14th	
Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat	

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

Seeding Calculation Information:

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

Synopsis:

Every 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%
Apply @ 100lbs per acre April 16th- Oct. 14th	
Apply @ 200lbs per acre Oct. 15th- April 15th	
Organic Fertilizer @ 200lbs per Acre	Pelletized Lime @ 2 Tons per Acre

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

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 Environmental Protection

103-03200

Latitude: 39°42'30"

BOTTOM HOLE 13713'

8939'

SURFACE HOLE
Latitude: 39°42'30"



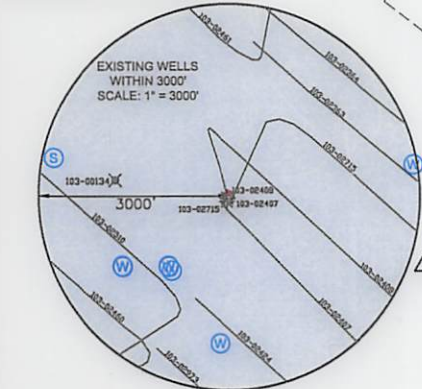
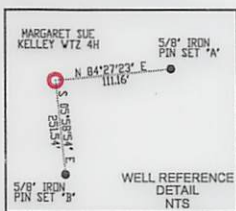
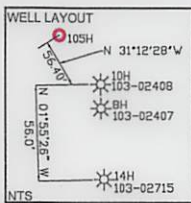
www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

BHL

NOTES ON SURVEY

- COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- 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.
- NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

LINE	BEARING	DISTANCE
L1	N 32°31'20" W	1,014.95'
L2	S 09°11'13" W	376.47'
L3	S 12°57'34" E	868.57'
L4	S 47°02'42" E	639.18'

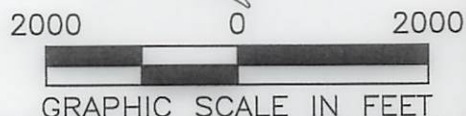


SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4393257.22 EASTING: 525886.81
LANDING POINT (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4393445.79 EASTING: 525886.20
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4394685.13 EASTING: 524408.05

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

P.S. 891

Don S. Kyer 10-4-17



COMPANY: **SWN** Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #: MARGARET SUE KELLEY UP WTZ 105H API WELL #: 47 103 3200 H6A STATE COUNTY PERMIT
	WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input checked="" type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input type="checkbox"/> WATERSHED: FISH CREEK DISTRICT: PROCTOR COUNTY: WETZEL SURFACE OWNER: MARGARET SUE KELLEY OIL & GAS ROYALTY OWNER: BLAKE REALTY, L.L.C.	ELEVATION: 1422.4' QUADRANGLE: WILEYVILLE, WV ACREAGE: ±18.0 ACREAGE: ±18.0

DRILL <input checked="" type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY) _____ TARGET FORMATION: POINT PLEASANT ESTIMATED DEPTH: 12,137 TVD 18,872 TMD
--

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

LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL * LANDING POINT LOCATION (W) EXISTING WATER WELL (S) EXISTING SPRING --- SURVEYED BOUNDARY --- DRILLING UNIT --- LEASE BOUNDARY --- PROPOSED PATH --- DHP BUFFER (400', 1,500', 3,000')	REVISIONS: Δ REVISED MSS 10-04-2017 DATE: 10-04-2017 DRAWN BY: C.WEHR SCALE: 1" = 2000' DRAWING NO: 2016-622 WELL LOCATION PLAT
--	--

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS			
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	MARGARET SUE KELLEY (S) BLAKE REALTY, L.L.C. (R)	12-9-28	18.00
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
2	JOSEPH A. HOHMAN	12-9-27	25.00
3	MARGARET SUE KELLEY	12-9-29	163.77
4	PATRICK A. SCHEIBELHOOD; THEODORE N. SCHEIBELHOOD; EDWARD L. SCHEIBELHOOD; THERESA SHUTLER; CLARA SCHEIBELHOOD; MARGARET SCHEIBELHOOD; MARSHA ECHARD; MARK SCHEIBELHOOD; MATTHEW SCHEIBELHOOD; NICHOLAS SCHEIBELHOOD	12-9-16	35.00
5	LOIS J. ESTEP, A SINGLE WOMAN	12-8-25	65.00
6	ALBERT L. HOHMAN AND MARY L. HOHMAN TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-12	104.48
7	JOSEPH AND SUSANNA VILLERS (LIFE ESTATE) AND ROBERT FRANCIS VILLERS (REMAINDERMAN)	12-8-11.1	12.00
8	STEVEN RAYMOND HOHMAN AND CATHERINE A. HOHMAN, HUSBAND AND WIFE	12-8-11.3	3.94
9	JOSEPH AND SUSANNA VILLERS (LIFE ESTATE) AND ROBERT FRANCIS VILLERS (REMAINDERMAN)	12-8-11	22.96
10	JOHN B. MILLER AND LORNA R. MILLER, HIS WIFE	12-8-11.2	1.10
11	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-10	15.00
12	MATTHEW J. ROHR	12-8-8	8.50
13	JOHN BERNARD MILLER AND LORNA REBECCA MILLER, HIS WIFE	12-8-9.1	1.00
14	STEVEN RAYMOND HOHMAN AND CATHERINE A. HOHMAN, HUSBAND AND WIFE	12-8-9	35.60
15	ALBERT F. ESTEP, TRUSTEE OF THE ALBERT F. ESTEP IRREVOCABLE TRUST DATED MARCH 31,2010	12-3-36	48.70
16	ALBERT F. ESTEP, TRUSTEE OF THE ALBERT F. ESTEP IRREVOCABLE TRUST DATED MARCH 31,2010	12-3-35	60.00

ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	MARGARET SUE KELLEY	12-9-17	74.38
B	ALBERT L. HOHMAN & MARY L. HOHMAN TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOE HOHMAN	12-9-17.1	28.00
C	ALBERT L. HOHMAN & MARY L. HOHMAN TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOE HOHMAN	12-9-29.2	14.49
D	ROBERT C. PENDLEBURY & DENISE M. PENDLEBURY	12-9-38	96.52
E	STEVEN & DONNA WHITE HUSBAND AND WIFE	12-14-2.2	33.50
F	MICHAEL ALLEN HUGGINS, PATRICK WANE HUGGINS & JOSEPH DEAN HUGGINS	12-14-2.1	47.36
G	THOMAS J. SHEPHERD & LISA A. SHEPHERD	12-14-2	3.10
H	THOMAS J. SHEPARD & LISA A. SHEPARD ANTHONY P. SHEPHERD & DEBORA L. SHEPHERD	12-14-1	80.75
I	ALBERT L. HOHMAN & MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN & DEBRA K. HOHMAN	12-8-55	59.80
J	THOMAS J. KELLEY & MARGARET SUE KELLEY	12-9-34	52.00
K	JUDITH LYNN POSTLETHWAIT	12-9-29.1	7.14
L	THOMAS J. KELLEY & MARGARET SUE KELLEY	12-9-25	48.67
M	THOMAS J. KELLEY & MARGARET SUE KELLEY	12-9-26	5.00
N	JOSEPH A. HOHMAN	12-9-24	21.00
O	JOSEPH A. HOHMAN	12-8-24.5	15.50
P	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HUSBAND AND WIFE	12-8-24	63.35
Q	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HIS WIFE	12-8-24.3	25.00
R	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-7	74.38
S	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-8.1	5.40
T	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-9.2	2.00
U	JAMES JACOB HERRICK & CARIE ELIZABETH HERRICK	12-3-23.01	28.77
V	BARBARA JANE MCGRAW	12-3-23	163.04
W	EDWIN R. HOHMAN	12-3-24	45.00
X	ALBERT F. ESTEP IRREVOCABLE TRUST	12-3-25	50.00
Y	ALBERT F. ESTEP IRREVOCABLE TRUST	12-3-37	8.00
Z	ALBERT F. ESTEP IRREVOCABLE TRUST	12-3-38	5.00
AA	PATRICK A. SCHEIBELHOOD; THEODORE N. SCHEIBELHOOD; EDWARD L. SCHEIBELHOOD; THERESA SHUTLER; CLARA SCHEIBELHOOD; MARGARET SCHEIBELHOOD; MARSHA ECHARD; MARK SCHEIBELHOOD; MATTHEW SCHEIBELHOOD; NICHOLAS SCHEIBELHOOD	12-9-1	115.60

REVISIONS:

COMPANY:

SWN
Production Company, LLC

103-0320046A

OPERATOR'S

MARGARET SUE KELLEY

DATE: 10-04-2017

WELL #:

UP WTZ 105H

DRAWN BY: C.WEHR

DISTRICT:
PROCTOR

COUNTY:
WETZEL

STATE:
WV

SCALE: N/A
DRAWING NO: 2016-622
WELL LOCATION PLAT

WW-6A1
(5/13)

Operator's Well No. Margaret Sue Kelley UP WTZ 105H

**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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RECEIVED
Office of Oil and Gas
JUN 22 2017
WV Department of
Environmental Protection

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

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

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

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


Well Operator: SWN Production Company, LLC.
 By:  Gary Nuckolls
 Its: Staff Landman

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
Margaret Sue Kelley 105H
Wetzel County, West Virginia

#	TMP	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG	SURFACE OWNER	Book/Page Must describe The Parcel
1	12-9-28	724395-000	F. E. Buchner, single (Blake Realty, L.L.C.) Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C.	The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	47A/190 263/164 84A/129 402/446 157A/540	Margaret Sue Kelley	280/412
2	12-9-27	724465-000	Frank J. Estep and Nettie H. Estep, his wife; and Fred Estep, single (Albert F. Estep, Trustee of the Albert F. Estep Irrevocable Trust Dated March 31, 2010) Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C.	The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	45A/217 263/164 84A/129 402/446 157A/540	Joseph A. Hohman	320/393
3	12-9-29	724396-000	F. E. Buchner, single (Blake Realty, L.L.C.) Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C.	The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	47A/200 263/164 84A/129 402/446 157A/540	Margaret Sue Kelley	280/412
4	12-9-16	724452-000	Cora Scheibelhood, widow (Martha Hohman; Linda Brookover; Margaret Scheibelhood; Theresa Shutler; Rose Ann Morrils; Michael R. Scheibelhood; Theodore Scheibelhood; Edward L. Scheibelhood; Matthew Scheibelhood; Mark Scheibelhood; Marsha Echard; Nicholas Scheibelhood; Rebecca Scheibelhood; Charles Scheibelhood; Marilyn Scheibelhood, Mary Shutler, Virginia Shutler, Anita Larell Slough)	The Manufacturers Light and Heat Company	12.50%	45A/304	Patrick A. Scheibelhood; Theodore N. Scheibelhood; Edward L. Scheibelhood; Theresa Shutler; Clara Scheibelhood; Margaret Scheibelhood; Marsha Echard; Mark Scheibelhood; Matthew Scheibelhood; Nicholas Scheibelhood;	432/288 370/543 366/489

103 - 03200

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
Margaret Sue Kelley 105H
Wetzel County, West Virginia

		Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164		
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129		
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446		
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
5	12-8-25	723421-000	Edward E. Estep, single	Columbia Natural Resources, LLC	12.50%	84A/399	Lois J. Estep, a single woman
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
6	12-8-12	723461-029	Albert L. Hohman and Mary L. Hohman, his wife (Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust dated August 8, 2014)	Chesapeake Appalachia, L.L.C.	12.50%	111A/437	Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust dated August 8, 2014
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
7	12-8-11.1	723431-001	Joseph L. Villers, a married man acting in his own right (Joseph and Susanna Villers (Life Estate) and Robert Francis Villers and Mary J. Nice, as tenants in common (Remainderman); Albert F. Estep Irrevocable Trust dated March 31, 2010)	Columbia Natural Resources, LLC	12.50%	84A/438	Joseph and Susanna Villers (Life Estate) and Robert Francis Villers (Remainderman)
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
8	12-8-11.3	7204057-000	Steven Raymond Hohman and Catherine A. Hohman, his wife (Victory Knob, LLC)	Chesapeake Appalachia, L.L.C.	12.50%	91A/367	Steven Raymond Hohman and Catherine A. Hohman, husband and wife
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
9	12-8-11	723431-001	Joseph L. Villers, a married man acting in his own right (Joseph and Susanna Villers (Life Estate) and Robert Francis Villers and Mary J. Nice, as tenants in common (Remainderman); Albert F. Estep Irrevocable Trust dated March 31, 2010)	Columbia Natural Resources, LLC	12.50%	84A/438	Joseph Villers and Susanna Villers (life estate) and Robert Francis Villers (remainderman)
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	

103-03200

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
Margaret Sue Kelley 105H
Wetzel County, West Virginia

9	12-8-11	723431-002	St. Joseph Catholic Church	Chesapeake Appalachia, L.L.C.	12.50%	91A/987	Joseph Villers and Susanna Villers (life estate) and Robert Francis Villers(remainderman)	404/103
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
10	12-8-11.2	724113-000	John B. Miller and Lorna R. Miller, husband and wife	Chesapeake Appalachia, L.L.C.	12.50%	91A/364	John B. Miller and Lorna R. Miller, husband and wife	393/469
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
11	12-8-10	724393-000	Joseph J. Wagner as Attorney-in-Fact for William Estep (recorded in Ohio County, West Virginia in Book 441, Page 1); C. W. Estep and Emma Estep, his wife; J. R. Estep and Catherine Estep his wife; Clara T. Klug and N. J. Klug, her husband; Josephine Shutler, widow (Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust dated August 8, 2014)	The Manufacturers Light and Heat Company	12.50%	47A/216	Albert L. Hohman and Mary L. Hohman, Trustees of the Hohman Revocable Living Trust dated August 8, 2014	445/34
			Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164		
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129		
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446		
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
12	12-8-8	725098-000	CEV Partnership, LLC (Matthew J. Rohr)	Chesapeake Appalachia, L.L.C.	12.50%	101A/650	Matthew J. Rohr	451/421
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
13	12-8-9.1	724647-000	Edwin Hohman, single (Mary M. Eller; Albert L. Hohman; Donald L. Hohman; Steven Hohman; Sharon Hollida; Elaine Nelson; Isabelle Parikh; Marilyn Weigand)	The Manufacturers Light and Heat Company	12.50%	47A/76	John B. Miller and Lorna R. Miller, husband and wife	393/467
			Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164		
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129		
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446		
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
14	12-8-9	724647-000	Edwin Hohman, single (Victory Knob, LLC)	The Manufacturers Light and Heat Company	12.50%	47A/76	Steven Raymond Hohman and Catherine A. Hohman, husband and wife	404/169
			Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164		

103-03200

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
Margaret Sue Kelley 105H
Wetzel County, West Virginia

			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129		
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446		
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
15	12-3-36	723427-000	Albert F. Estep a/k/a Albert Estep, a married man dealing in his sole and separate property (Albert F. Estep, Trustee of The Albert F. Estep Irrevocable Trust dated March 31, 2010)	Columbia Natural Resources, LLC	12.50%	84A/407	Albert F. Estep, Trustee of the Albert F. Estep Irrevocable Trust Dated March 31, 2010	423/984
			Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446		
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		
16	12-3-35	724265-001	Joseph M. Wells, a widower (J. Bradford Wells and Ann Clutter, as tenants in common)	Chesapeake Appalachia, L.L.C.	12.50%	92A/653	Albert F. Estep, Trustee of the Albert F. Estep Irrevocable Trust Dated March 31, 2010	423/984
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540		

103-3000



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

June 21, 2017

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

RE: SWN's proposed Margaret Sue Kelley UP WTZ 105H in Wetzel County, West Virginia, Drilling under Baker Hill Road, St. Joseph Road, Whetstone Road, & Scheibelhood Hill Road.

Dear Ms. Adkins:

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

Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to be "G. Nuckolls", written over a light blue horizontal line.

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

RECEIVED
Office of Oil and Gas

JUN 22 2017

WV Department of
Environmental Protection

A red handwritten logo consisting of the letters "R" and "A" stacked vertically on the left, followed by an arrow pointing to the right, and then the letters "V" and "+" stacked vertically on the right.

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

Date of Notice Certification: 6/21/17

API No. 47- 103 03200
Operator's Well No. Margaret Sue Kelley UP WTZ 105H
Well Pad Name: Margaret Sue Kelley WTZ Pad

Notice has been given:

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

State: <u>WV</u>	UTM NAD 83 Easting: <u>525886.81</u>
County: <u>103-Wetzel</u>	Northing: <u>4393257.22</u>
District: <u>Proctor</u>	Public Road Access: <u>Scheibelhood Hill Road</u>
Quadrangle: <u>Wileyville</u>	Generally used farm name: <u>Arthur Waryck</u>
Watershed: <u>Fish 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: 40px;"><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.

RECEIVED
Office of Oil and Gas

JUN 22 2017

103-03200

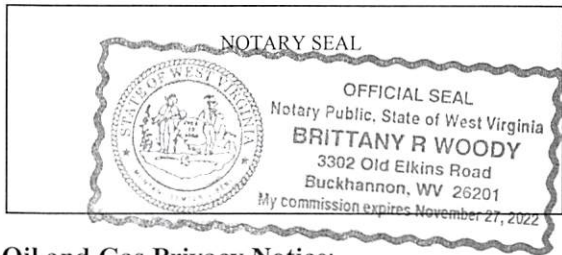
WW-6AC
(1/12)

Certification of Notice is hereby given:

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

Well Operator: SWN Production Co., LLC
By: Dee Southall
Its: Regulatory Supervisor
Telephone: 304-884-1610

Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile: 304-471-2479
Email: Dee_Southall@swn.com



Subscribed and sworn before me this 1st day of June 2017.
Brittany R Woody Notary Public
My Commission Expires 11/27/22

Oil and Gas Privacy Notice:

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

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WV Department of
Environmental Protection

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 6/21/17 filing date of permit application.

Date of Notice: 6/21/17 Date Permit Application Filed: 6/21/17

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: Margaret Sue Kelley
Address: 590 Steener Fork Road
New Martinsville, WV 26155

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: See Attachment #2
Address: _____

COAL OPERATOR
Name: _____
Address: _____

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

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

*Please attach additional forms if necessary

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Attachment #1

103-03200

Margaret Sue Kelley WTZ Pad - Water Purveyors w/in 1500' Sources

Landowner

Address

Margaret Sue Kelley

590 Steener Fork Road, New Martinsville WV 26155

wells

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Attachment #2 103-03200

Name	Address
Conrhein Coal Company %Leatherwood	1000 Consol Energy Drive Canonsburg, PA 15317
Consolidation Coal Company %Leatherwood	1000 Consol Energy Drive Canonsburg, PA 15317
Consol Pennsylvania Coal Company %Leatherwood	1000 Consol Energy Drive Canonsburg, PA 15317
CNX Land Resources, INC. %Leatherwood	1000 Consol Energy Drive Canonsburg, PA 15317
Reserve Coal Properties %Leatherwood	1000 Consol Energy Drive Canonsburg, PA 15317



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WV Department of
Environmental Protection

WW-6A
(8-13)

JUN 22 2017

WV Department of
Environmental Protection

API NO. 47- ~~103~~ - 03200
OPERATOR WELL NO. Margaret Sue Kelley UP WT
Well Pad Name: Margaret Sue Kelley WTZ 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

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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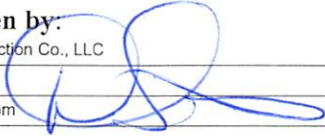
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-~~103~~ - ~~03200~~
OPERATOR WELL NO. Margaret Sue Kelley UP WTZ
Well Pad Name: Margaret Sue Kelley WTZ Pad

Notice is hereby given by:

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



Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile: 304-471-2479

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 15th day of June 2017.
Brittany R Woody Notary Public
My Commission Expires 11/27/22

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WV Department of
Environmental Protection

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

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

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 06/02/2017 **Date Permit Application Filed:** 6/21/17

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

HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: Margaret Sue Kelley
Address: 590 Steener Fork Road
New Martinsville, WV 26155

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: 525,886.81
County: Wetzel Northing: 4,393,257.22
District: Proctor Public Road Access: Scheibelhood Hill Road
Quadrangle: Wileyville Generally used farm name: Margaret Sue Kelley UP WTZ
Watershed: Fish 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: 832-540-1136
Email: steve_teel@swn.com
Facsimile: 304-884-1691

Authorized Representative: Steve Teel
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 832-540-1136
Email: steve_teel@swn.com
Facsimile: 304-884-1691

Oil and Gas Privacy Notice:

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

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.
Date of Notice: 06/02/2017 **Date Permit Application Filed:** 6/2/17

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

- CERTIFIED MAIL HAND
 RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: Margaret Sue Kelley Name: _____
 Address: 590 Steener Fork Road Address: _____
New Martinsville, WV 26155 _____

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>525,886.81</u>
County: <u>Wetzel</u>		Northing: <u>4,393,257.22</u>
District: <u>Proctor</u>	Public Road Access: <u>Scheibelhood Hill Road</u>	
Quadrangle: <u>Wileyville, WV</u>	Generally used farm name: <u>Margaret Sue Kelley UP WTZ</u>	
Watershed: <u>Fish 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: <u>SWN Production Company, LLC</u>	Address: <u>PO Box 1300, 179 Innovation Drive</u>
Telephone: <u>832-540-1136</u>	<u>Jane Lew, WV 26378</u>
Email: <u>Steve_Teel@SWN.com</u>	Facsimile: <u>304-884-1691</u>

Oil and Gas Privacy Notice:

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

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Jim Justice
Governor

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

June 2, 2017

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

Subject: DOH Permit for the Margaret Sue Kelley Pad WTZ 105H Well Site, Wetzel County

Dear Mr. Martin,

47-103-03200 ✓

The West Virginia Division of Highways has transferred Permit # 06-2008-0371 to Southwestern Energy for the existing well pad. Access to the well site is off of Wetzel County Route 89 SLS.

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

Very Truly Yours,

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

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

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

RECEIVED
Office of Oil and Gas

JUN 22 2017

WV Department of
Environmental Protection

EROSION AND SEDIMENT CONTROL PLAN

FOR MARGARET SUE KELLEY

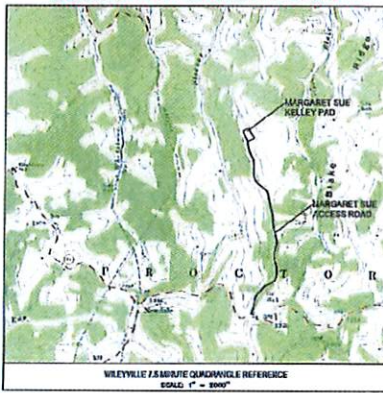
PAD EXPANSION PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA

WILEYVILLE 7.5 MINUTE QUAD MAPS

ISSUED FOR CONSTRUCTION

NOTICE TO CONTRACTOR

1. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
2. THE CONTRACTOR SHALL NOTIFY HIS LIABILITY OF AT LEAST 14 DAYS PRIOR TO STARTING WORK AND SHALL COORDINATE ALL WORK WITH ALL APPLICABLE AGENCIES.
3. THE LOCATION AND EXTENT OF EROSION CONTROL MEASURES SHOULD BE SHOWN ON THE DRAWINGS AND BE BASED ON A SURVEY OF THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
4. ALL CONSTRUCTION SHALL BE COORDINATED WITH THE LOCAL HEALTH DEPARTMENT.
5. EROSION CONTROL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS, INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND FACILITIES.
6. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN MUST BE ON SITE UNLESS THE LAND IS SUBJECT TO OTHER REGULATORY REQUIREMENTS.
7. DRAINAGE OR FILTER STRIPS AND OTHER MEASURES TO PREVENT POLLUTION OF ADJACENT WATERS SHALL BE DESIGNED AND CONSTRUCTION SHALL BE PERMITTED ONLY IF THEY ARE APPROVED BY THE LOCAL HEALTH DEPARTMENT. SEDIMENTATION CONTROL MEASURES SHALL NOT BE PLACED IN SUCH A MANNER AS TO CAUSE OR CONTRIBUTE TO THE EXCESSIVE SLOTTING OF A ROAD OR OTHER FACILITY. FILTER STRIPS, ALTERNATE FILTER STRIPS, OR OTHER FACILITIES SHALL NOT BE PLACED IN SUCH A MANNER AS TO CAUSE OR CONTRIBUTE TO THE EXCESSIVE SLOTTING OF A ROAD OR OTHER FACILITY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
11. CLEANED AND COVERED MATERIAL SHALL BE STORED IN A MANNER AS TO PREVENT POLLUTION OF ADJACENT WATERS AND SHALL NOT BE PLACED IN SUCH A MANNER AS TO CAUSE OR CONTRIBUTE TO THE EXCESSIVE SLOTTING OF A ROAD OR OTHER FACILITY.
12. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
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15. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
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19. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
20. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.



NOTES:

1. THIS PLAN IS FOR GRADUATION, STORMWATER SYSTEMS, AND EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. PROPERTY INFORMATION SHOWN HEREON IS FROM GIS DATA PROVIDED BY SOUTHWESTERN ENERGY PRODUCTION COMPANY AND HAS NOT BEEN FIELD VERIFIED.
3. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS SET FOR OTHER PERMITTED ACTIVITIES. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SET FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.
4. SOIL TYPE BOUNDARY, AND CHARACTERISTICS SHOWN HEREON WERE ACQUIRED FROM A RCD'S SOIL SURVEY.
5. THE CONTRACTOR SHALL REFER TO THE GEOLOGICAL ENGINEERING REPORT, DATED MARCH 21, 2017, PROVIDED BY GEA ENERGY, LLC FOR LULU SOIL STABILIZATION (LUSK) TO BE IMPLEMENTED IN CONSTRUCTION OF CUT AND FILL SLOPES.
6. THE TOPOGRAPHIC SURVEY USED FOR THIS BASE MAP WAS PERFORMED ON MARCH 08, 2017 AND APRIL 07, 2017. TOPOGRAPHIC MAPS OUTSIDE OF THE LOT IS FROM LIGHT DATA FROM WV GIS TECHNICAL CENTER.
7. NO TYPICAL REPAIRS, BETWEEN START OF CONSTRUCTION AND END OF DISTURBANCE VEGETATION BUFFER TO REMAIN.
8. FILL WILL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM D1557) FOR ALL FILL TYPES. PARTICLE SIZE OF THE FILL WILL BE NO GREATER THAN #10 AND FREE OF COLLECTION MATERIAL.

RECLAMATION NOTES:

ACCESS ROAD REVISIONS

1. ROAD SHOULDER SHALL BE EXPOSED AND RESEDED.
2. PERMANENT SEDIMENTATION SHALL BE INSTALLED AND MAINTAINED USING THE SITE VULNERABILITY.
3. PERMANENT SEDIMENTATION SHALL BE INSTALLED AND MAINTAINED USING THE SITE VULNERABILITY.
4. ROAD SHOULDER SHALL BE EXPOSED AND RESEDED USING THE SITE VULNERABILITY.
5. ROAD SHOULDER SHALL BE EXPOSED AND RESEDED USING THE SITE VULNERABILITY.

GENERAL NOTES REGARDING RECLAMATION

1. PFC's ARE NOT TO BE USED AS A REMEDIATION MEASURE UNLESS THEY ARE APPROVED BY THE LOCAL HEALTH DEPARTMENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
4. ALL FILL SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM D1557) FOR ALL FILL TYPES. PARTICLE SIZE OF THE FILL WILL BE NO GREATER THAN #10 AND FREE OF COLLECTION MATERIAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.

WELL SITE RECLAMATION (SPECIFIC)

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
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RECLAMATION SEQUENCE:

1. INITIAL RECLAMATION SHALL BE PERFORMED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
2. RECLAMATION SHALL BE PERFORMED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
3. RECLAMATION SHALL BE PERFORMED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
4. RECLAMATION SHALL BE PERFORMED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
5. RECLAMATION SHALL BE PERFORMED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.

CONSTRUCTION SEQUENCE

1. PRIOR TO CONSTRUCTION OF ANY EROSION CONTROL MEASURES, ALL EROSION CONTROL MEASURES SHALL BE DESIGNED IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE OF THE PROJECT AND APPROVED BY THE LOCAL HEALTH DEPARTMENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING APPROVED BOND FINANCING TO BEAD THROUGH THE STATE, HAVE BEEN OBTAINED. THE CONTRACTOR'S APPROVED BOND FINANCING WILL BE VALID THROUGHOUT THE CONSTRUCTION PERIOD AND THROUGHOUT THE LIFE OF THE PROJECT AND THROUGHOUT THE LIFE OF THE PERMITTED ACTIVITIES.
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Engineer's Estimate of Quantities

Erosion and Sediment Control Items		
Description	Estimated Quantity	Unit
18" Compust Filter Sock (Access Road 1)	858	LF
24" Compust Filter Sock	1,987	LF
Road Construction Entrance 8-3 Aggregate	37	TN
Class 4 Gesteosella (Apron Underlayment)	25	SY


Additional Items		
Description	Estimated Quantity	Unit
Site Retention Area	18	AC
Proposed Storm Catch Basins	4	EA
R-3 Riprap Outlet Protection	37	TN
4" PVC SDR 35 Pipe	7,166	LF
6" Solid PVC SDR 35 Pipe	221	LF
Non-Woven Filter Fabric	555	SY
Wall Pad Farmer Basin	721	LF
4" Solid PVC SDR 35 Pipe	210	LF
4" Gate Valves	4	EA
Access Road Asphalt #7 Aggregate	221	TN
Access Road Crush and Run Aggregate	110	TN
Pad Crush and Run Aggregate	930	TN
Pad B-7 Aggregate	2,000	TN
Pad Class 2 Gesteosella	4,181	SY
Earthwork Volume Cut	21,628	CY
Topsoil Placement	4,035	CY
Earthwork Volume Fill	23,334	CY
Wall Cellars	9	EA
Culvert / With Cleanout	4	EA
Erosion Control Blanket	955	SY

DMD 12/14/17
APPROVED
WV DEP OOG
Modification
12/15/2017

DATE	DESCRIPTION
12/14/17	COVER SHEET
12/14/17	EVACUATION ROUTE / PREVENTING WINDOW
12/14/17	EXISTING CONDITIONS
12/14/17	E & S CONTROL PLANS
12/14/17	RECLAMATION PLANS
12/14/17	CROSS-SECTIONS
12/14/17	DETAILS


PROJECT CONTACTS
SOUTHWESTERN ENERGY, LLC
170 HUNTERTON DRIVE
JAMAICA, WV 26151
PHONE: (800) 884-3418
WWW.SWEN.COM

ENGINEER
SOUTHWESTERN ENERGY, LLC
170 HUNTERTON DRIVE
JAMAICA, WV 26151
PHONE: (800) 884-3418
WWW.SWEN.COM




LOCATION MAP
SEE SET

NO.	DATE	DESCRIPTION	BY

Prepared by:

Southwestern Energy

SWN
Southwestern Energy



JHA Companies
SURVEYORS
ENGINEERS
ENVIRONMENTAL
GIS MAPPING

www.jha.companies.com
68011 VINEYARD ROAD
ST. CLAIRSVILLE, OH 43060
(740)895-0100

• MONTROSE, PA • HUNTSVILLE, PA • SARASOTA, FL •
• HOUSTON, TX • CHARLOTTE, NC •

PROJECT NO: 2016-022 DRAWING NO: MSS
DATE: 02/28/2017 DESIGNER: MSS
SCALE: AS SHOWN CHECKED: JPD

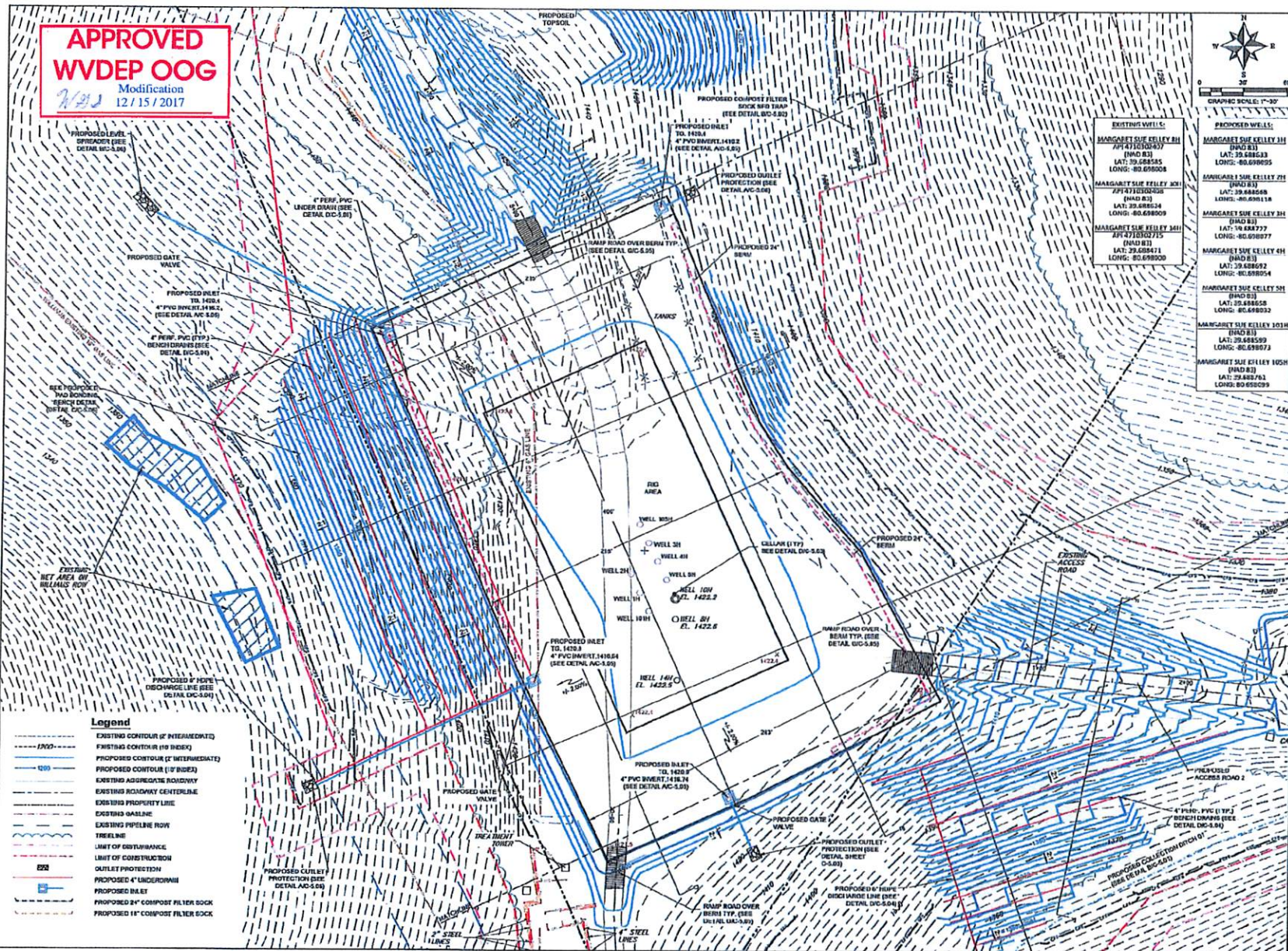
CONSTRUCTION PLAN
FOR
**MARGARET SUE KELLEY
PAD EXPANSION**

PROCTOR DISTRICT, WETZEL COUNTY,
WEST VIRGINIA

TITLE:
COVER SHEET

PLAN NUMBER: **FINAL** SHEET NO.: **C-0.01**

APPROVED WVDEP OOG
 Modification
 12/15/2017



EXISTING WELLS:

MARGARET SUE KELLEY #1 (H&D #3) 791471020497 EAD #33 LAT: 39.686633 LONG: 80.698004
MARGARET SUE KELLEY #2 (H&D #3) 229473203026 EAD #33 LAT: 39.686624 LONG: 80.698009
MARGARET SUE KELLEY #41 (H&D #3) 694710202715 EAD #33 LAT: 39.686671 LONG: 80.698000

PROPOSED WELLS:

MARGARET SUE KELLEY #3 (H&D #3) LAT: 39.686633 LONG: 80.698004
MARGARET SUE KELLEY #21 (H&D #3) LAT: 39.686624 LONG: 80.698009
MARGARET SUE KELLEY #31 (H&D #3) LAT: 39.686677 LONG: 80.698022
MARGARET SUE KELLEY #4 (H&D #3) LAT: 39.686672 LONG: 80.698004
MARGARET SUE KELLEY #5 (H&D #3) LAT: 39.686655 LONG: 80.698022
MARGARET SUE KELLEY #103H (H&D #3) LAT: 39.686599 LONG: 80.698073
MARGARET SUE KELLEY #104H (H&D #3) LAT: 39.686763 LONG: 80.698039



LOCATION MAP

NO.	DATE	EXTENSION	REP.
1	11-30-17	AMENDED CONSTRUCTION PLAN	MSS

2 PROFESSIONAL ENGINEERS
 1 SURVEYOR
 1 CIVIL ENGINEER



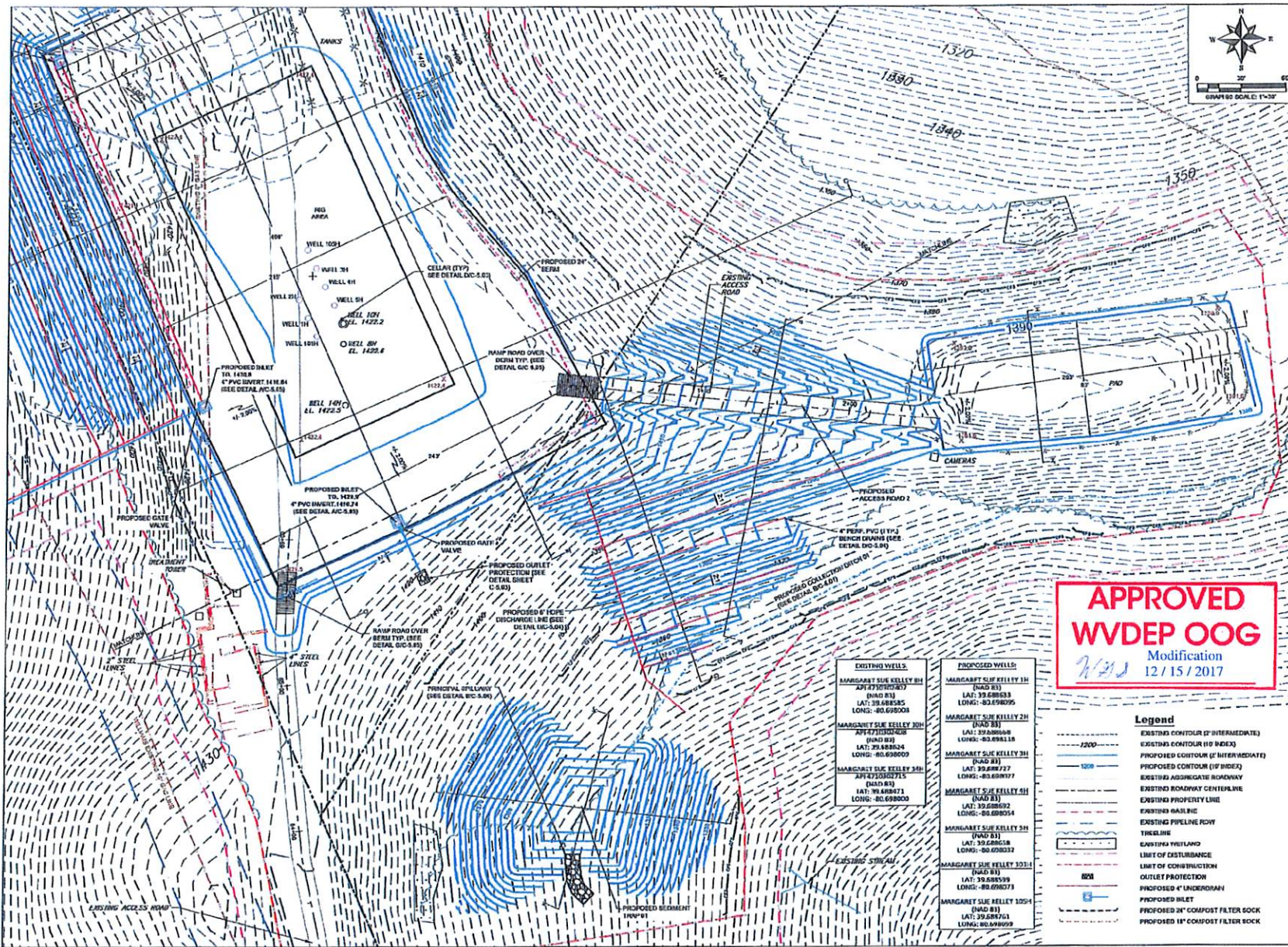
JHA Companies SURVEYORS ENGINEERS ENVIRONMENTAL GIS MAPPING
 www.jhacompanies.com
 8801 VINEYARD ROAD
 ST. CLAIRSVILLE, OH 43950
 (740)895-6100
 *MONTROSE, PA *HUNTSVILLE, PA *SAYRE, PA
 *RODG, PA *CL CLAIRSVILLE, OH

PROJECT NO: 2016-622	DRAWN: MGS
DATE: 09/28/2017	CHECKED: MSS
SCALE: 1"=30'	DATE: JFD

CONSTRUCTION PLAN
 FOR
MARGARET SUE KELLEY
 PAD EXPANSION
 PROCTOR DISTRICT, WETZEL COUNTY,
 WEST VIRGINIA

TITLE: EROSION & SEDIMENT CONTROL PLAN	SHEET NO: C-2.02
PHASE: FINAL	

- Legend**
- EXISTING CONTOUR (2' INTERVALS)
 - EXISTING CONTOUR (10' INTERVALS)
 - PROPOSED CONTOUR (2' INTERVALS)
 - PROPOSED CONTOUR (10' INTERVALS)
 - EXISTING AGGREGATE ROADWAY
 - EXISTING ROADWAY CENTERLINE
 - EXISTING PROPERTY LINE
 - EXISTING GASLINE
 - EXISTING PIPELINE ROW
 - TREELINE
 - LIMIT OF DISTURBANCE
 - LIMIT OF CONSTRUCTION
 - OUTLET PROTECTION
 - PROPOSED 4" UNDERDRAIN
 - PROPOSED INLET
 - PROPOSED 24" COMPOST FILTER SOCK
 - PROPOSED 11" COMPOST FILTER SOCK



LOCATION MAP OF STATE

DATE	DESCRIPTION	BY
12/15/17	AMEND CORRECT ON THE WORK	JPD



Proposed by:



JHA Companies SURVEYORS ENGINEERS ENVIRONMENTAL GIS MAPPING

www.jhacompanies.com
 68011 VINEYARD ROAD
 ST. CLAIRSVILLE, OHIO 43060
 (740)395-6100

*MONTROSE, PA - HICKORYDALE, PA - EVANS, PA - HEDDISC, PA - ST. CLAIRSVILLE, OH

PROJECT	DATE	SCALE	ISSUED	BY
2016-622	05/18/2017	1"=30'		
PROJECTED SHEET FROM				
DATE				
SCALE				

CONSTRUCTION PLAN
 FOR
MARGARET SUE KELLEY PAD EXPANSION
 PROCTOR DISTRICT, WETZEL COUNTY,
 WEST VIRGINIA

TITLE: **EROSION & SEDIMENT CONTROL PLAN**

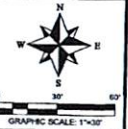
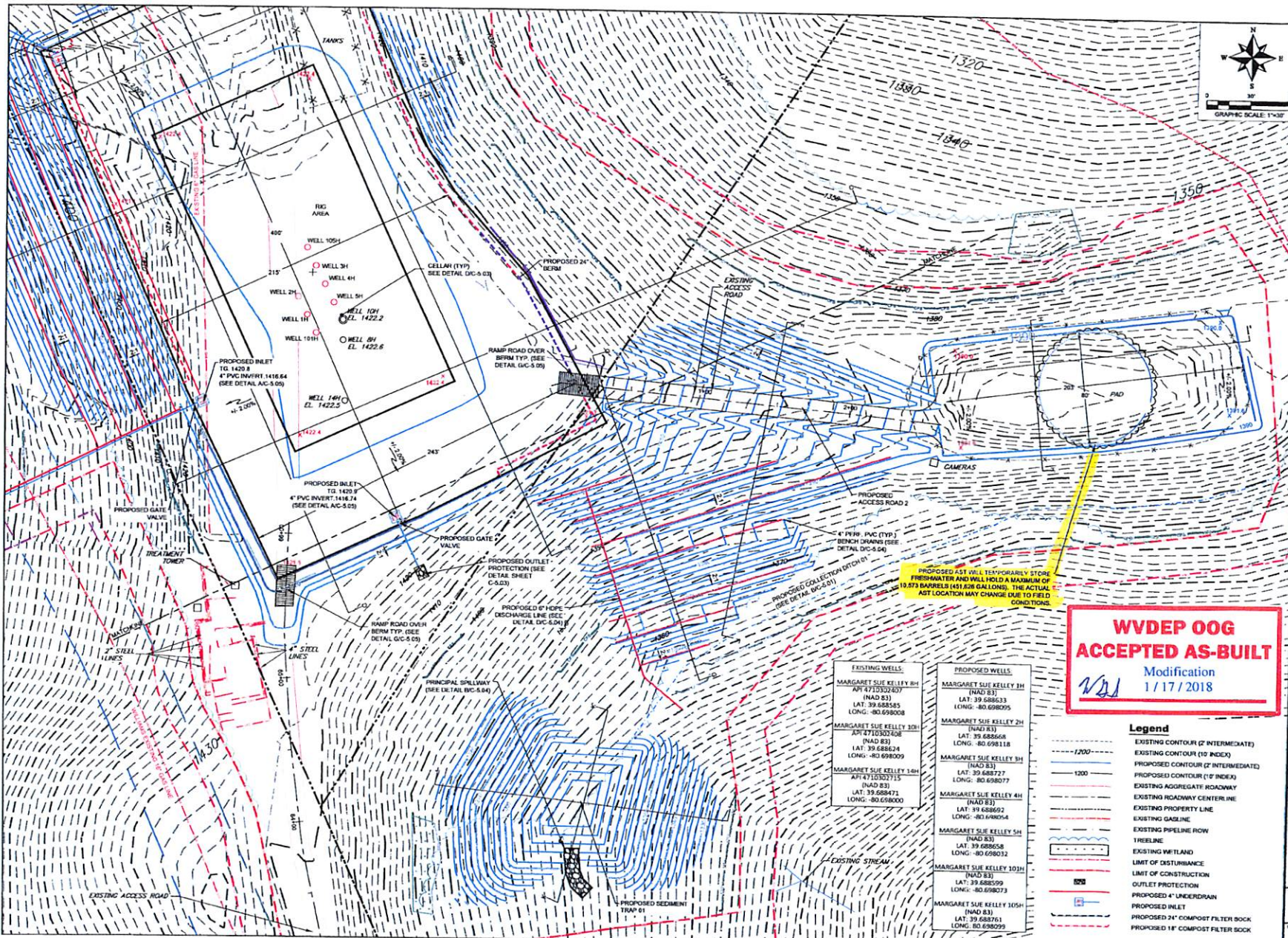
PLM STATUS	DATE
FINAL	C-2.03

APPROVED WVDEP OOG
 Modification
W212 12/15/2017

EXISTING WELLS	PROPOSED WELLS
MARGARET SUE KELLEY 314 AP# 473102425 (HARD B3) LAT: 39.688385 LONG: 80.638003	MARGARET SUE KELLEY 314 (HARD B3) LAT: 39.688333 LONG: 80.638095
MARGARET SUE KELLEY 315 AP# 473102426 (HARD B3) LAT: 39.688326 LONG: 80.638009	MARGARET SUE KELLEY 315 (HARD B3) LAT: 39.688727 LONG: 80.639177
MARGARET SUE KELLEY 316 AP# 4732002715 (HARD B3) LAT: 39.688473 LONG: 80.638003	MARGARET SUE KELLEY 316 (HARD B3) LAT: 39.688032 LONG: 80.639054
	MARGARET SUE KELLEY 317 (HARD B3) LAT: 39.688618 LONG: 80.638032
	MARGARET SUE KELLEY 320 (HARD B3) LAT: 39.688599 LONG: 80.638073
	MARGARET SUE KELLEY 325 (HARD B3) LAT: 39.688763 LONG: 80.638099

Legend

- EXISTING CONTOUR (2' INTERMEDIATE)
- EXISTING CONTOUR (10' INDEX)
- PROPOSED CONTOUR (2' INTERMEDIATE)
- PROPOSED CONTOUR (10' INDEX)
- EXISTING AGGREGATE ROADWAY
- EXISTING ROADWAY CENTERLINE
- EXISTING PROPERTY LINE
- EXISTING MAILLINE
- EXISTING PIPELINE ROW
- TREELINE
- EXISTING WETLAND
- LIST OF DISTURBANCE
- LIMIT OF CONSTRUCTION
- OUTLET PROTECTION
- PROPOSED 4" UNDERDRAIN
- PROPOSED 18" COMPOST FILTER ROCK
- PROPOSED 18" COMPOST FILTER ROCK



LOCATION MAP
NOT TO SCALE

DATE	DESCRIPTION	BY	CHKD
12.28.17	ISSUE FOR CONSTRUCTION FILE REVIEW	JPD	JPD
12.28.17	ALL ADDRESS		



Prepared by:
SWN
Southwestern Energy®

RECEIVED
Office of Oil and Gas
JAN 5 2018
WV Department of
Environmental Protection

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*MONTROSE, PA • HENNECAUSE, PA • SAYRE, PA •
*MOORE, PA • ST. CLAIRSVILLE, OH *

PROJECT ID: 2016-622	DRAWN: MSS
DATE: 09/18/2017	DESIGN: MSS
SCALE: 1"=30'	CHECKED: JPD

CONSTRUCTION PLAN
FOR
**MARGARET SUE KELLEY
PAD EXPANSION**
PROCTOR DISTRICT, WETZEL COUNTY,
WEST VIRGINIA

TITLE: **EROSION & SEDIMENT
CONTROL PLAN**
PLAN STATUS: FINAL
SHEET NO: C-2.03

EXISTING WELLS:

MARGARET SUE KELLEY 3H API 4723302457 (NAD 83) LAT: 39.684585 LONG: -80.698008
MARGARET SUE KELLEY 32H API 4710302768 (NAD 83) LAT: 39.688624 LONG: -80.698009
MARGARET SUE KELLEY 10H API 4710302715 (NAD 83) LAT: 39.688473 LONG: -80.698000

PROPOSED WELLS:

MARGARET SUE KELLEY 3H (NAD 83) LAT: 39.688608 LONG: -80.698118
MARGARET SUE KELLEY 2H (NAD 83) LAT: 39.688727 LONG: -80.698077
MARGARET SUE KELLEY 4H (NAD 83) LAT: 39.688692 LONG: -80.698054
MARGARET SUE KELLEY 5H (NAD 83) LAT: 39.688658 LONG: -80.698032
MARGARET SUE KELLEY 103H (NAD 83) LAT: 39.688599 LONG: -80.698073
MARGARET SUE KELLEY 105H (NAD 83) LAT: 39.688761 LONG: 80.698099

**WV DEP OOG
ACCEPTED AS-BUILT**
Modification
1/17/2018
WJ

Legend

--- 1200 ---	EXISTING CONTOUR (2' INTERMEDIATE)
---	EXISTING CONTOUR (10' INDEX)
---	PROPOSED CONTOUR (2' INTERMEDIATE)
---	PROPOSED CONTOUR (10' INDEX)
---	EXISTING AGGREGATE ROADWAY
---	EXISTING ROADWAY CENTERLINE
---	EXISTING PROPERTY LINE
---	EXISTING GASLINE
---	EXISTING PIPELINE ROW
---	TREELINE
---	EXISTING WETLAND
---	LIMIT OF DISTURBANCE
---	LIMIT OF CONSTRUCTION
---	OUTLET PROTECTION
---	PROPOSED 4" UNDERDRAIN
---	PROPOSED INLET
---	PROPOSED 24" COMPOST FILTER SOCK
---	PROPOSED 18" COMPOST FILTER SOCK

PROPOSED AST WILL TEMPORARILY STORE
FRESHWATER AND WILL HOLD A MAXIMUM OF
10,873 BARRELS (451,828 GALLONS). THE ACTUAL
AST LOCATION MAY CHANGE DUE TO FIELD
CONDITIONS.