

west virginia department of environmental protection

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

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

Wednesday, March 21, 2018 WELL WORK PERMIT Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for BRIAN DYTKO OHI 5H 47-069-00265-00-00

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: BRIAN DYTKO OHI 5H

Farm Name: BRIAN J DYTKO

U.S. WELL NUMBER: 47-069-00265-00-00

Horizontal 6A New Drill Date Issued: 3/21/2018

API Number:	

PERMIT CONDITIONS

4706900265

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

- 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.

API Number:	
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PERMIT CONDITIONS 4706900265

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.

4706900265

API NO. 47- 69

OPERATOR WELL NO. Brian Dytko OH! 5H
Well Pad Name: Brian Dytko OH! Pad

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

l) Well Operator: SW	/N Production Co	o., LLC	494512924	69-Ohio	Tridelphi	Valley Grove
			Operator ID	County	District	Quadrangle
2) Operator's Well Num	nber: Brian Dytko	OHI 5H	Well Pad	Name: Bria	an Dytko OH	Pad
3) Farm Name/Surface	Owner: Brian J [Dytko	Public Roa	d Access: S	tone Church	Road
1) Elevation, current gro	ound: 1222'	Ele	vation, proposed	ost-construc	ction: 1222'	
5) Well Type (a) Gas	x	Oil	Unde	rground Stor	age	
Other				_		
(b)If G	as Shallow	x	Deep	,		
	Horizontal	×		\overline{A}	101	7
6) Existing Pad: Yes or	No yes				1)//	12.7.17
7) Proposed Target Form	mation(s), Depth(s	s), Antici	pated Thickness a	nd Associate	d Pressure(s):	
Target Formation- Marcel	llus, Target Top TVD-	6362', Targ	get Base TVD- 6399	, Anticipated Th	ickness- 37', Ass	sociated Pressure-3823
3) Proposed Total Verti	cal Depth: 6371	•				RECEIVED
) Formation at Total V	ertical Depth: M	larcelius				
0) Proposed Total Mea	asured Depth: 19	5,528'				DEC 1820
1) Proposed Horizonta	d Leg Length: 70	665'				WV Department Environmental Fro
2) Approximate Fresh	Water Strata Dept	ths:	555'			
3) Method to Determin	ne Fresh Water De	pths: O	offset wells; WR-	35		
4) Approximate Saltwa	ater Depths: 999	top of s	aline water (det by	/ WR-035 co	mpletion repo	ort)
5) Approximate Coal S	Seam Depths: 639	9'				
6) Approximate Depth	to Possible Void	(coal min	ne, karst, other):	None that w	e are aware o	of.
7) Does Proposed well lirectly overlying or adj			ns Yes XX	N	lo	
(a) If Yes, provide Min	ne Info: Name:	Shoer	maker Mine / Ohi	o County St	noemaker	
	Depth:	639'				
	Seam:	Pittsb	urgh			
	Owner:	Murra	y Energy Corpor	ation		

WW-6B (10/14) API NO. 47-4706900265

OPERATOR WELL NO. Brian Dytko OHI 5H
Well Pad Name: Brian Dytko OHI Pad

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	<u>Grade</u>	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	676'	676'	632 sx/CTS
Coal	9 5/8"	New	J-55	36#	1972'	1972'	739 sx/CTS
Intermediate	7"	New	HCP-1100	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	15,528'	15,528'	Lead 629 sx 2163 toll sx/100' krakte late
Tubing	2 3/8'	New	P-110	4.7#	Approx. 6371'	Approx. 6371'	
Liners							

C. 800 11.17.17

ТҮРЕ	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	3250	Class A	1.20/15% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/15% Excess
Tubing	2 3/8"	4.778"	0.190				
Liners							

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PACKERS

WV Department of Environmental Protection

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

WW-6B (10/14)

PINO. 47- 69 47 0 6 9 0 0 2 6 5

OPERATOR WELL NO. Brian Dytko OHI 5H
Well Pad Name: Brian Dytko OHI Pad

Describe proposed	t wall wate	including	the drilling	and phyaging	back of any pilot ho	٠ما

Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface. Run casing not less than 50' below void nor more than 100' 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, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. The well is produced through surface facilities consisting of high pressure production unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 100 barrels a minute.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 7.94
- 22) Area to be disturbed for well pad only, less access road (acres): 6.05

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 ***

Office of Oil and Gas

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WV Department of Environmental Protection

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.

^{*}Note: Attach additional sheets as needed.

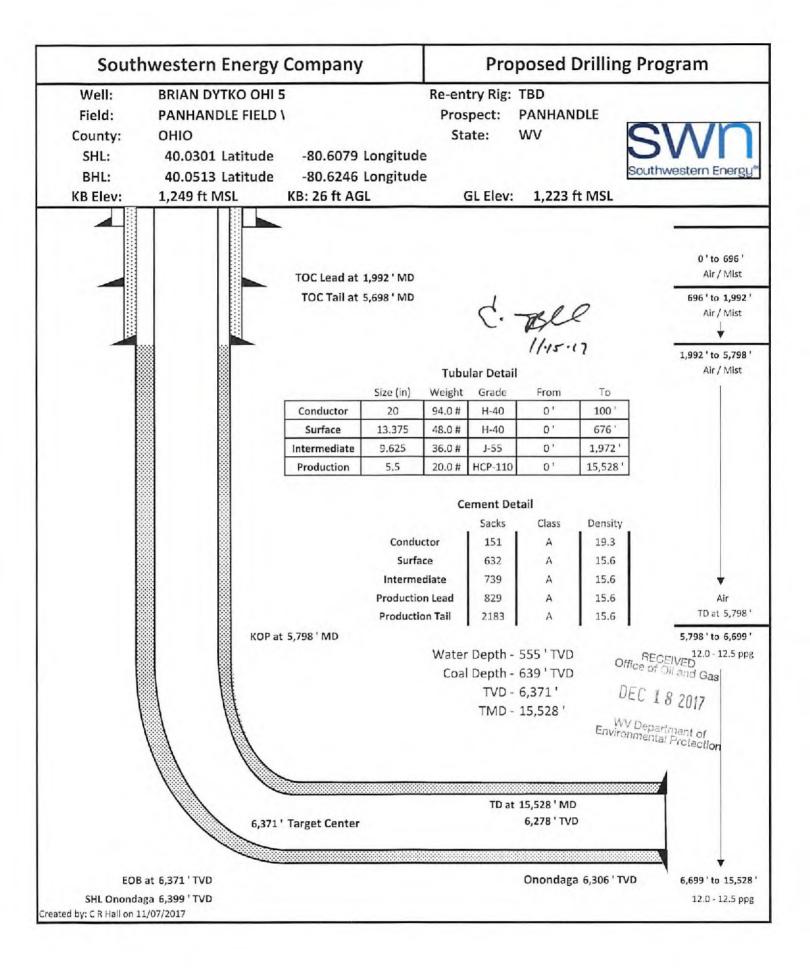
Schlumberger Cement Additives

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

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SWN Production Company, LLC 179 Innovation Drive Jane Lew, WV 26378 Tel: 304 884 1610 Fax: 304 471 2497 www.swn.com

November 10, 2017

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

RE: Proposed New Well Brian Dytko OHI 5H

Dear Ms. Adkins:

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

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

Thank you.

Sincerely,

Dee Southall

Senior Regulatory Analyst

Southwestern Energy Production Company, LLC

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BRITTANY R WOODY

Notary Public

My commission expires

API Number 47 - 69

Operator's Well No. Brian Dytko OHI 5H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Watershed (HUC 10) Upper Ohio South Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No VIII a pit be used? Yes No VIII a pit be used? Yes No VIII a synthetic liner be used in the pit? Yes No VIII a synthetic liner be used in the pit? Yes No VIII f 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-3 Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain flow back fluids will be put in steel tanks and reused or taked well will be put in steel tanks and reused or taked will be based, what type? Synthetic, petroleum, etc. synthetic oil based. Additives to be used in drilling medium? Attachment 3A	will be taken to a permitted landfill 34/DDMR &/or permit addendum en to a permitted disposal facility
Will a pit be used? Yes No lease describe anticipated pit waste: closed loop system in place at this time-cuttings Will a synthetic liner be used in the pit? Yes No lease in place at this time-cuttings Will a synthetic liner be used in the pit? Yes No lease in place at this time-cuttings Will a synthetic liner be used in the pit? Yes No lease in place at this time-cuttings Will a synthetic liner be used in the pit? Yes No lease in place at this time-cuttings Will a synthetic liner be used in the pit? Yes No lease in place at this time-cuttings 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-3 Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain flow back fluids will be put in steel tanks and reused or take Will closed loop system be used? If so, describe: Yes Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. synthetic oil base	will be taken to a permitted landfill 34/DDMR &/or permit addendum en to a permitted disposal facility
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-3 Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain flow back fluids will be put in steel tanks and reused or take Will closed loop system be used? If so, describe: yes Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. synthetic oil base) 34/DDMR &/or permit addendum en to a permitted disposal facility
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Underground Injection (UIC Permit Number Reuse (at API Number at next anticipated well, API # will be included with the WR-3 Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain flow back fluids will be put in steel tanks and reused or take Will closed loop system be used? If so, describe: yes Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. -If oil based, what type? Synthetic, petroleum, etc. synthetic oil base	en to a permitted disposal facility
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Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain flow back fluids will be put in steel tanks and reused or take Will closed loop system be used? If so, describe: yes Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. if oil based, what type? Synthetic, petroleum, etc. synthetic oil base	en to a permitted disposal facility
Other (Explain_flow back fluids will be put in steel tanks and reused or take Will closed loop system be used? If so, describe: yes Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. if oil based, what type? Synthetic, petroleum, etc. synthetic oil base	
Will closed loop system be used? If so, describe: yes Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, e -If oil based, what type? Synthetic, petroleum, etc. synthetic oil base	
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etcsynthetic oil base	tc. air drill to KOP, fluid drill with SOSM from KOP to TD
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etcsynthetic oil base	C. air drill to KOP, fluid drill with SOBM from KOP to TD
-If oil based, what type? Synthetic, petroleum, etc. synthetic oil base	
TARRELL AND AS ADOM IN MITHING INSMITHING	
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? mendow SWF-1032, SS grading SWF-1602. Northwestern SWF-1026, Short Creek 103 Arden Landfill 10072, American 02-12954, Country vvide 38390/CID383	
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings of West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and where it was properly disposed.	
I certify that I understand and agree to the terms and conditions of the GENERAL WA on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environme provisions of the permit are enforceable by law. Violations of any term or condition of the golaw or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am familiar wit application form and all attachments thereto and that, based on my inquiry of those individualizing the information, I believe that the information is true, accurate, and complete. I penalties for submitting false information, including the possibility of fine or imprisonment.	ntal Protection. I understand that the eneral permit and/or other applicable h the information submitted on this viduals immediately responsible for
Company Official Signature	
Company Official (Typed Name) Dee Southall	DEC 1.8 2017
Company Official Title Senior Regulatory Analyst	WV Department of Environmental Protection

Form WW-9

Field Reviewed?

Operator's Well No. Brian Dytko OHI 5H **SWN Production Company, LLC** Proposed Revegetation Treatment: Acres Disturbed 7.94 Prevegetation pH Lime as determined by pH test min. 2 Tons/acre or to correct to pH 6.05 Fertilizer type 10-20-20 Fertilizer amount 600 lbs/acre Mulch Hay/Straw 2.5 **Seed Mixtures Temporary** Permanent Seed Type lbs/acre Seed Type lbs/acre Attachment 3B 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. Comments: RECEIVED
Office of Oil and Gas DEC 18 2017 Title: Oil and Gas Inspector WV Department of Environmental Protection

_) No

V) Yes

Attachment 3A <u>Drilling Mediums</u>

•
Brine
Barite
Calcium Chloride
Lime
Organophilic Bentonite
Primary and Secondary Emulsifiers
Gilsonite
Calcium Carbonate
Friction Reducers

Synthetic Oil

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Southwestern Energy

Medium Red Clover

Rough Bluegrass Birdsfoot Trefoil White Clover

5% 5% 5% 5% 5% 15% 15% 40%

Apply @ 100lbs per acre April 16th- Oct, 14th

Red Top

Brown Top Millet Annual Ryegrass Timothy Orchardgrass Seed Mixture: ROW Mix

NON-ORGANIC PROPERTIES

To Order Seed contact Lyndsi Eddy Flipp

WVD Seeding Specification

Attachment 3B

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WV Environ

	ORGANIC PROPERTIES	
SWN Supplied	Seed Mixture: SWN Production Organic Mix	nic Mix SWN Supplied
	Organic Timothy	50%
	Organic Red or White Clover	50%
	OR	
	Organic Perennial Ryegrass	50%
	Organic Red or White Clover	50%
All legumes are	Apply @ 100lbs per acre	Apply @ 200lbs per acre
innoculated at 5x normal rate	April 16th- Oct. 14th	Oct. 15th- April 15th
	Organic Fertilizer @ 200lbs per Acre	Pelletized Lime @ 2 Tons per Acre
Apply @ 200lbs per acre Oct. 15th- April 15th PLUS		
50lbs per acre of Winter Wheat	WETLANDS (delineated as jurisdictional wetlands)	ictional wetlands)
	Seed Mixture: Wetland Mix	SWN Supplied
*Apply @ 500lbs per Acre	VA Wild Ryegrass	20%
Apply @ 2 Tons per Acre	Annual Ryegrass	20%
unless otherwise dictated by soil test results	Fowl Bluegrass	20%
	Cosmos 'Sensation'	10%
	Redtop	5%
	Golden Tickseed	5%
	Maryland Senna	5%
	Showy Tickseed	5%
	Fox Sedge	2.5%
d be using (2) 50lb bags of seed, (4) 50lb	Soft Rush	2.5%
d in winter months + 50lb Winter	Woolgrass	2.5%
	Swamp Verbena	2.5%
	Apply @ 25lbs per acre	Apply @ 50lbs per acre
ram participants require additional	April 16th- Oct. 14th	Oct. 15th- April 15th
nents with SWN supervision at the	NO FERTILIZER OR L	NO FERTILIZER OR LIME INSIDE WETLAND LIMITS

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

Seeding Calculation Information:

622' of 70' ROW/LOD is One Acre

Synopsis:

beginning of the project to allow time for special seed delivery. guidance that is not given here. Discuss these requirements with SWI Landowner Special Considerations including CREP program participant

Special Considerations:

Wheat/ac).

bags of fertilizer and (80) 50lb bags of Lime (2x seed in winter m Every 622 linear feet in a 70' ROW/LOD, you should be using (2) Pelletized Lime

10-20-20 Fertilizer

SOIL AMENDMENTS

MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN

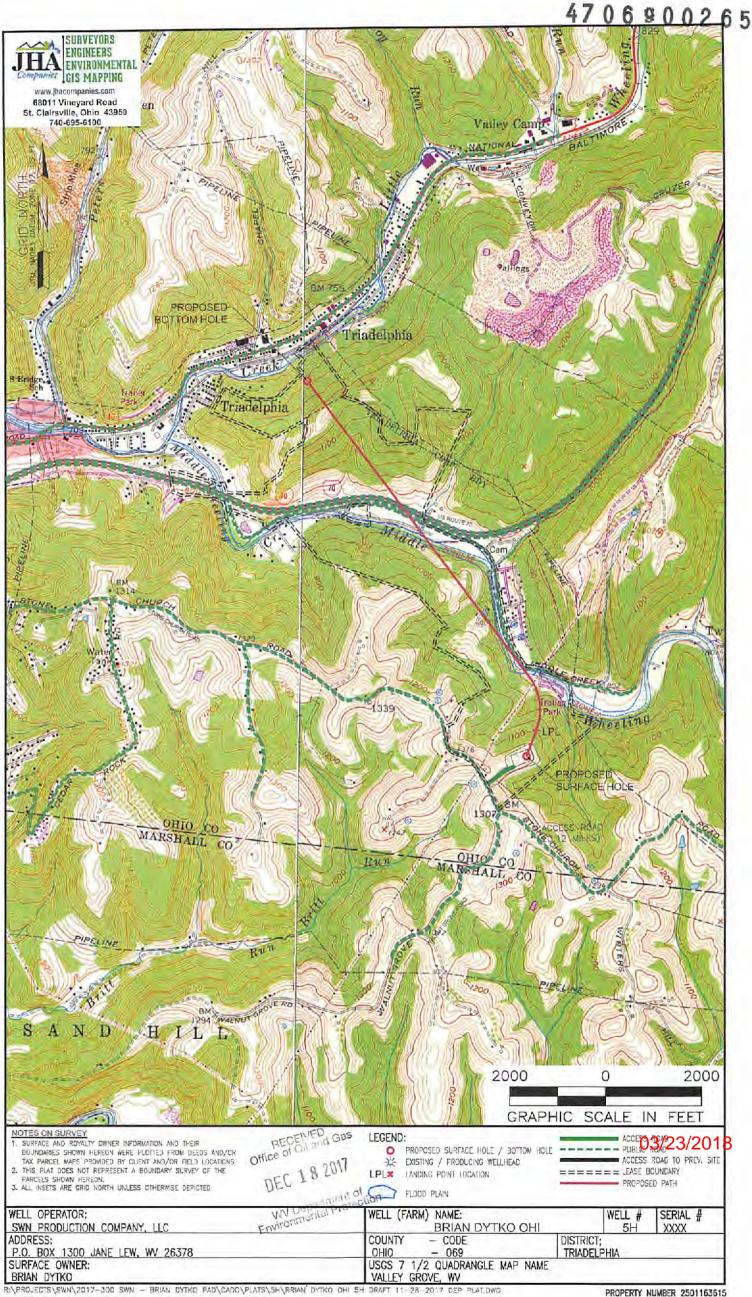


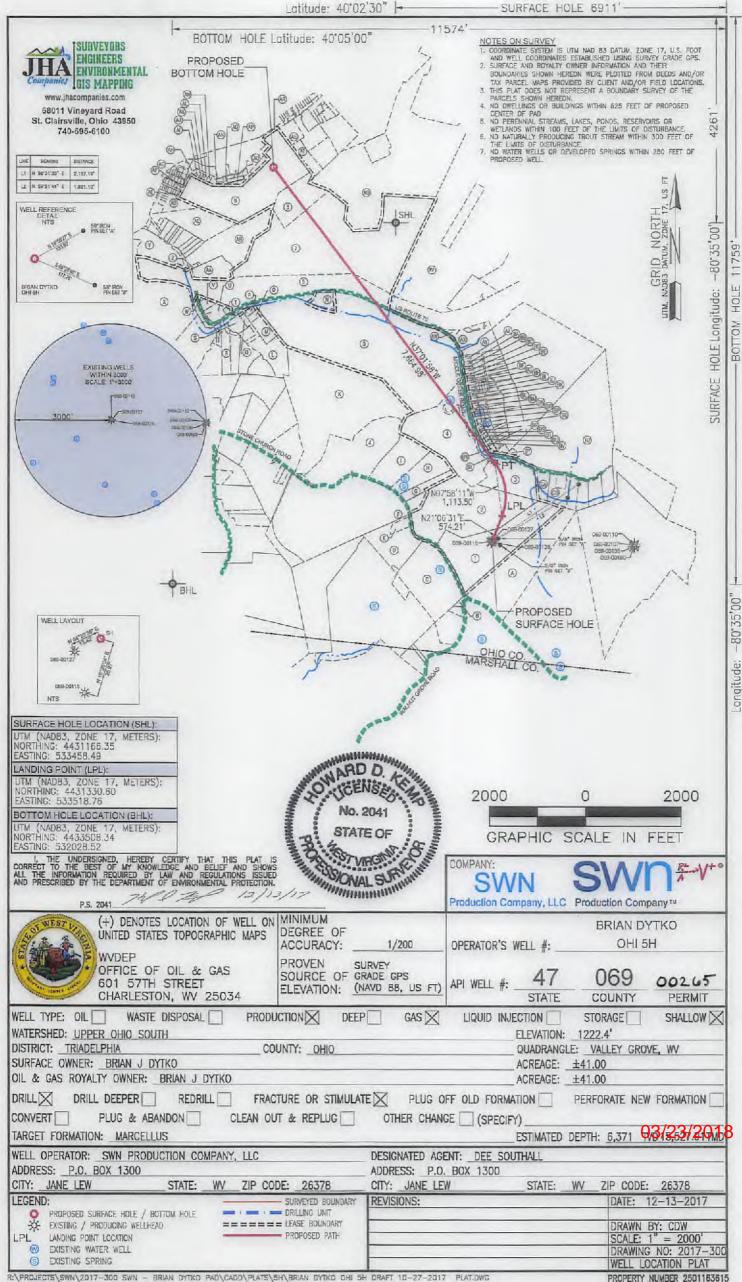
SWN Production Company, LLC 179 Innovation Drive Jane Lew, West Virginia 26378

API NO. 47-XXX-XXXXX
WELL NAME: Brian Dytko OHI 5H
Valley Grove, QUAD
Triadelphia, DISTRICT
Ohio COUNTY, WEST VIRGINIA

Submitted by: Dee Southall	Date:	11/8/2017	
Senior Regulatory Title: Analyst	SWNE	Production Co., LLC	
	SVVIVI	Toddelloff Co., EEC	
Approved by:	Date:	11.15.17	
Title: Oil+ Ges Insput			
Approved by:			DECEIVED
	Date:		Office of Oil and Gas
Title:			DEC 18 2017
1100.			WV Department of

SWN PRODUCTION COMPANY, LLC - CONFIDENTIAL





TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	BRIAN J DYTKO (S)/(R)	05-T18-0004.0001	41.00
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
2	WILLIAM C. THOMS	06-T18-0003.0000	46.500
3	OK TRAILER COURT INC.	06-T13-0005.0002	15.880
4	JOHN W. NOLAN JR. AND DARLENE G. NOLAN	06-T13-0002.0002	42.45
5	OHIO VALLEY INDUSTRIAL & BUSINESS DEVELOPMENT CORPORATION	08-T13-0025.0000	130.69
6	WEST VIRGINIA DEPARTMENT OF HIGHWAYS	N/A	N/A
7	OHIO COUNTY COMMISSIONERS	07-TW10-0001.0000	108.51
8	THE OHIO COUNTY DEVELOPMENT AUTHORITY	07-TW5-0024.0001	14.00
9	OHIO COUNTY COMMISSIONERS	06-T12-0053.0000	39.31

RACT	SURFACE OWNER	TAX PARCEL	ACRES
A	THERESA L BLATT	06-T1B-0017.0000	37,80
3	GREGORY W & J F GARDNER	06-T18-0025.0000	0.799
C	CHARLES D. FISCHER, JR.	06-T18-0004.0000	32.90
D	RL WHITE PROPERTIES, LLC	06-T18-0003.0002	16.266
E	RONALD J. & P.A. SNYDER	06-T18-0003.0004	2.1861
F	ROCER A. & MARY K. CLUTTER	06-113-0002.0005	2.50
G	SETH & HEATHER MCCORD	06-T13-0002.0004	4.30
Н	JOHN EDWARD MCCORD	06-713-0002.0003	12.10
- 1	EDWARD MCCORD	06-T13-0002.0006	15.66
J	PAUL PAVILACK	06-T18-0001.0000	109.839
K	MIDDLE CREEK GARAGE, INC.	06-T13-0003.0000	80.14
L	BRADLEY W. CLARK	05-T12-D044,0000	7.47
М	PAUL W. & VIRGINIA R. BLAKE	06-T12-0038.0001	4.00
N	OHIO VALLEY INDUSTRIAL DEVELOPMENT CORPORATION	08-713-0026.0001	3.00
0	JERRY J. & J.L. MESTROVIC	06-T12-0041.0000	1.00
р	EDWARD H., II & M.M. STEIN	06-T12-D043.0000	0.551
Q	CARL E. CARPENTER	06-T12-D039.0001	0.736
R	E.F., JR. & D.R. KOEHL	C6-T12-D034.CCCC	4.21
S	CARL E. CARPENTER	06-T12-D039.0000	2.277
T	FLOYD J. POGGI	07-TW5-0004.0000	0.92
U	BOARD OF EDUCATION	07-TW5-0003.0000	6.133
V	ROBERT A. CARR & JESSICA E. WILHELM-MARTH	07-TW5-0002.0000	1.394
W	PEGGY GEISER	07-TW5-0001.0000	0.248
X	WEST VIRGINIA DEPARTMENT OF HIGHWAYS	07-T12-0031.0000	41.37
Y	WEST VIRGINIA DEPARTMENT OF HIGHWAYS	07-TW2-0057.0001	11.123
Z	TRAVIS M. KELLY	07-TW5-0020.0000	0.3443
AA	VICKI SHEARER, PHILIP SHEARER, & PAUL SHEARER	07-TW5-0021.0000	7.44
AB	MARK T. MORRIS & DAVID B. MORRIS (SUBJECT TO THE LIFE ESTATE OF JAMES L. MORRIS & MARY A. MORRIS, HUSBAND AND WIFE)	07-TW5-0023.0000	29.00
AC	MOUNTAIN ESTATE REALTY, LLC	07-TW5-0014.0000	15.300
AD	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW5-0013.0000	3.87
AE	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW5-0012.0000	0.2172
AF	JAMES E. SHAW	07-TW5-0002.0000	0.1484
AG	JAMES E. SHAW	07-TW5-0001.0000	0.111
AH	ROBIN S. STARKEY	07-TW4-0124.0000	2.402
Al	нз, шс	07-TW4-0117.0000	0.35
AJ	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A TEMPLIN	07-TW4-0118.0000	0.20
AK	CHAS L. & J.J. CRESAP	07-TW4-0119.0000	0.183
AL	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW4-0120.0000	0.20
AM	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW4-0121.0000	3.00
AN	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW4-0126.0000	9.308

	ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
AO	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW4-0122.0000	0.33
AP	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW4-D128.0000	1.19
AQ	MIDTOWN MOBILE HOMES, INC. & TIM T. & PATRICIA A. TEMPLIN	07-TW4-0129.0000	2.050
AR	KATHYRN M. KNOLLINGER	07-TW8-0075.0000	1.659
AS	EVELYN D.N. GROVER	D6-T7-0182.0000	4.020
AT	AUGUST FRANKLIN ROBINSON	06-78-0043.0000	4.650
AU	THE OHIO COUNTY DEVELOPMENT AUTHORITY	06-78-0040.0005	117,806
AV	THE OHIO COUNTY DEVELOPMENT AUTHORITY	06-T8-0040.0011	237.405
AW	JEWISH MEMORIAL PARK	07-TW12-0013.0001	0.540
AX	CONGREGATION L'SHEM SHOMAYIM	07-TW12-0013.0000	13.190
AY	RONALD E. & K.D. CLARK	07-TW12-0001.0000	4.60
AZ	HELEN J. RUSSELL	07-TW12-0002.0000	0.3465
BA	BERNARD E. SR. & HELEN J. RUSSELL	07-TW12-0003.0000	0.3627
88	DOUGLAS W. KNOLLINGER	07-TW12-0004.0000	0.1882
BC	ALFRED E. & D.M. MORRIS	07-TW12-0005,0000	0.3880
BD	BRADLEY R. & DONNA L. MILLER	07-TW13-0001,0000	0.1997
BE	BRADLEY R. & DONNA L. WILLER	07-TW13-0002.0000	0.2020
BF	BRADLEY R. & DONNA L. WILLER	07-TW13-0003.0000	0.2055
BG	BERNARD E. JR. & M.I. RUSSELL	07-TW13-0004.0000	0.4155
EH	ALFRED F. & D.A. EIMER	07-TW13-0005,0000	0.4132
BI	E.H. & M.L. MODRE	07-TW13-0006.0000	0.2066
EJ	LOUISE K. BEHRENS, ETAL	07-TW13-0007.0000	0.2055
BK	RANDY L. & LORI E. HINDMAN	07-TW13-0008,0000	0.4086
BL	CHARLES D. & S.E. YUHASE	07-TW13-0009.0000	0.2043
ВМ	JAMES B. JR. & J.D. WILLIAMS	07-TW13-0010.0000	0.5832
EN	DEBORAH J. & R.L. PRAGER	07-TW13-0011.0001	0.1894
BO	JOHN E. & DEBORAH A. VOSCAVITCH	07-TW13-0011.0000	0.3571
EP	JOHN E. & DEBORAH A. VOSCAVITCH	07-TW13-0012.0000	0.4828
BQ	VICKI LYNN & ROGER L. FROHNAPFEL	07-TW13-0013.0000	0.2932
BR	BEVERLY S. COOK	07-TW13-0014.0000	0.1806
BS	BEVERLY S. COOK	07-TW13-0015.0000	0.1881
ET	DENNIS L. SR. & BEVERLY S. COCK	07-TW13-0016.0000	0.294
BU	DENNIS L. SR. & BEVERLY S. COCK	07-TW13-0016.0001	0.2760
BV	DOUGLAS W. & SUSAN E. NELSON	07-TW13-0017.0000	0.3421
BW	KATHRYN M. KNOLLINGER & WOODROW J. KNOLLINGER	07-TW13-0018.0000	0.3455
BX	J. GREGORY & STACEY ANN DECARLO	07-TW13-0019.0000	1.00
EY	COLUMBIA GAS TRANSMISSION CORPORATION	06-T13-0005.0001	0.377
BZ	DAVID H. FITZSIMMONS & RICH H. FITZSIMMONS	06-T13-0005.0003	73.350
CA	ROBERT L. JR. & K.S. BOGARD	07-TW13-0005.0007	4.072
CB.	ROBERT L. JR. & K.S. BOGARD	07-TW13-0005.0005	4.720

03/23/2018

REVISIONS:	COMPANY:	SWN Production Company, LLC		
	OPERATOR'S WELL #:	BRIAN I		DATE: 12-13-2017 DRAWN BY: CDW
	DISTRICT: TRIADELPHIA	COUNTY: OHIO	STATE: WV	SCALE: N/A DRAWING NO: 2017-300 WELL LOCATION PLAT

W	W-6A	
(5)	(13)	

Operator's '	Well No.	Brian	Dytko	5H
the formation of				

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

See Exhibit

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

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

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

Office of Oil and Gas

DEC 18 2017

WV Department of Environmental Protection

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.

SWN Production Company	
N	
Staff Landman	
	No

Page 1 of

EXHIBIT "A"

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

Brian Dytko North 5H

Ohio County, West Virginia

#	TMP	SURFACE OWNER	DEEDED ACREAGE	LEASE #	LESSOR	LESSEE	ROYALTY	BK/PG
1)	6-T18-4.1	Brian J. Dytko	41.000	724935-000	Brian J. Dytko, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	790/197
				_		SWN Production Company, LLC		885/482
2)	6-T18-3	William G. Thoms	46.500	729511-000	William G. Thoms, a single man	Chesapeake Appalachia, L.L.C.	18.00%	810/546
•						SWN Production Company, LLC		884/133
3)	6-T13-5.2	OK Trailer Court Inc.	16.860	726592-000	O.K. Trailer Court Inc., a WV Corporation	Chesapeake Appalachia, L.L.C.	14.00%	799/219
						SWN Production Company, LLC		885/524
4)	6-T13-2.2	John W. Nolan Jr. and Darlene G. Nolan	42.450	724721-000	John W. Nolan Sr., and Rita C. Nolan, husband and wife, And John W. Nolan, Jr. and Darlene G. Nolan, husband and wife	Chesapeake Appalachia, L.L.C.	12.50%	788/721
						SWN Production Company, LLC		885/482
5)	6-T13-26	Ohio Valley Industrial & Business Development Corporation	130.690	735197-000	Alliance Resource GP, LLC	Chesapeake Appalachia, L.L.C.	16.75%	865/680
		•				SWN Production Company, LLC		885/776
6)	US I-70	West Virginia Department of Highways		735197-000	Alliance Resource GP, LLC	Chesapeake Appalachia, L.L.C.	16.75%	865/680
•						SWN Production Company, LLC		885/776
				727333-001	The Ohio County Development Authority	Chesapeake Appalachia, L.L.C.	18.00%	802/737
						SWN Production Company, LLC		883/255
7)	7-TW10-1	Ohio County Commission	106.510	727333-001	The Ohio County Development Authority	Chesapeake Appalachia, L.L.C.	18.00%	802/737
-						SWN Production Company, LLC		883/255
8)	7-TW5-24.1	Ohio County Development Authority	14.000	727333-001	The Ohio County Development Authority	Chesapeake Appalachia, L.L.C.	18.00%	802/737
						SWN Production Company, LLC		883/255
9)	6-T12-53	Ohio County Commission	39.310	727333-001	The Ohio County Development Authority	Chesapeake Appalachia, L.L.C.	18.00%	802/737
-						SWN Production Company, LLC		883/255

RECEIVED
Office of Oil and Gas
DEC 1 8 2017
WV Department of Environmental Protection





SWN Production Company, LLC P O Box 12359 Spring, Texas 77391-2359

www.swn.com

December 4, 2017

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

RE: SWN's proposed New Well: Brian Dytko OHI 5H in Ohio County, West Virginia, Drilling under Rt 70.

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 Rt 70. 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,

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

> RECEIVED Office of Oil and Gas

DEC 18 2017

WV Department of Environmental Protection

R2 wV+°

WW-6AC (1/12)

Date of Noti	ce Certification: 12/14/17		API No. 47	7- 69 - S Well No. Brian Dytko OHI 5H
				Name: Brian Dytko OHI Pad
Notice has l	been given:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		22-6A, the Operator has prov	ided the rec	quired parties with the Notice Forms listed
	tract of land as follows:			· victor i prima manage i ma suprima a suprima manage i ma
State:	WV	LITEM NAD 02	Easting:	533458.490
County:	69-Ohio	UTM NAD 83	Northing:	4431166.350
District:	Tridelphia	Public Road Acce	ess:	Stone Church Road
Quadrangle:	Valley Grove	Generally used fa	rm name:	Brian Dytko
Watershed:	Upper Chio South			
prescribed by	the secretary, shall be verified and sha	ll contain the following info	rmation: (1-	s section shall be on a form as may be 4) A certification from the operator that (i) section (b), section ten of this article, the

Pursuant to West Virginia Code § 22-6A, the Operate that the Operator has properly served the required pa		
*PLEASE CHECK ALL THAT APPLY		OOG OFFICE USE ONLY
☐ 1. NOTICE OF SEISMIC ACTIVITY or SE	NOTICE NOT REQUIRED BECAUSE NO SISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/ NOT REQUIRED
$\ \square$ 2. Notice of entry for plat survey	or NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
	NOTICE NOT REQUIRED BECAUSE OTICE OF ENTRY FOR PLAT SURVEY AS CONDUCTED or	RECEIVED/ NOT REQUIRED
	WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	
4. NOTICE OF PLANNED OPERATION		☐ RECEIVED
■ 5. PUBLIC NOTICE	Office of Oil and Gas	☐ RECEIVED
■ 6. NOTICE OF APPLICATION	DEC 18 2017	☑ RECEIVED
an except the excepts	WV Described Protection	in-

Required Attachments:

of this article have been completed by the applicant.

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

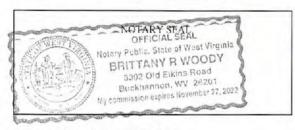
WW-6AC (1/12)

Certification of Notice is hereby given:

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

Well Operator: SWN Production Co., LLC By: Dee Southall Its: Senior Regulatory Analyst Telephone: 304-884-1614

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



Subscribed and sworn before me this

Notary Public

My Commission Expires

Email:

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.

> RECEIVED Office of Oil and Gas

DEC 18 2017

WV Department of Environmental Protection

WW-6A (9-13) PINO. 47-69 47 06 900265

OPERATOR WELL NO. Brian Dytko OHI 5H Well Pad Name: Brian Dytko OHI Pad

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

Notice T	ime Requirement:	notice shall be provided in	no later than the filing date of permit application.
Date of I Notice o		Date Permit Application	Filed: 12/14/17
	RMIT FOR ANY		E OF APPROVAL FOR THE FION OF AN IMPOUNDMENT OR PIT
		to West Virginia Code §	
			-
	RSONAL RVICE	REGISTERED MAIL	METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
oil and ga described operator of more coa well work impound have a wa provide v proposed subsection records of provision Code R.	as leasehold being de in the erosion and sor lessee, in the even il seams; (4) The own k, if the surface tract ment or pit as describ ater well, spring or water for consumption well work activity is on (b) of this section in the sheriff required to of this article to the § 35-8-5.7.a requires	eveloped by the proposed we diment control plan submit the tract of land on which the tract of land on which the tract of land on which the tract of the surface is to be used for the placen bed in section nine of this a vater supply source located in by humans or domestic as to take place. (c)(1) If more hold interests in the lands, to be maintained pursuant contrary, notice to a lien has, in part, that the operator is	d to be located; (2) The owners of record of the surface tract or tracts overlying the ell work, if the surface tract is to be used for roads or other land disturbance as itted pursuant to subsection (c), section seven of this article; (3) The coal owner, the well proposed to be drilled is located [sic] is known to be underlain by one or tract or tracts overlying the oil and gas leasehold being developed by the proposed tent, construction, enlargement, alteration, repair, removal or abandonment of any rticle; (5) Any surface owner or water purveyor who is known to the applicant to within one thousand five hundred feet of the center of the well pad which is used to mimals; and (6) The operator of any natural gas storage field within which the re than three tenants in common or other co-owners of interests described in the applicant may serve the documents required upon the person described in the to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any older is not notice to a landowner, unless the lien holder is the landowner. W. Va. shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any after testing as provided in section 15 of this rule.
☑ Appli	ication Notice 🛮 V	VSSP Notice DE&S Pl	an Notice Well Plat Notice is hereby provided to:
	ACE OWNER(s)		☐ COAL OWNER OR LESSEE
Name: B			Name: Murray American Energy, Inc. Address: 6126 Energy Road Office of Oil and Gas
Address:	1278 Stone Church Road Wheeling, WV 26003		Moundsville, WV 26041
Vamos	Wileeling, WV 20003		COAL OPERATOR DEC 1 8 2017
Name:			
iddiess.			Name: Address: WV Department of Environmental Protection
SURF	ACE OWNER(s) (F	Road and/or Other Disturb	ance)
			SURFACE OWNER OF WATER WELL
Address			AND/OR WATER PURVEYOR(s)
			Name: *** See Attachment
Name:			Address:
Address			
			☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
	ACE OWNER(s) (I	mpoundments or Pits)	Name:
Name:			Address:
Address			ADI CONTRACTOR OF THE PROPERTY
			*Please attach additional forms if necessary

WW-6A (8-13) Office 3 3as

4706900265

API NO. 47- 69
OPERATOR WELL NO. Brian Dytko CHI 5H
Well Pad Name; Brian Dytko CHI Pad

Wife Turt of Environmental Protection

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 WW-6A (8-13)

API NO. 47-69

OPERATOR WELL NO. Brian Dytko OHI 5H
Well Pad Name: Brian Dytko OHI Pad

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

DEC 18 2017

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

WV Department of Environmental Protection

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.

WW-6A (8-13) 4706900265

OPERATOR WELL NO, Brian Dytko OHI 5H Well Pad Name: Brian Dytko OHI Pad

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

Office of On and Gas

DEC 18 2017

WV Department of Environmental Protection

WW-6A (8-13)

API NO. 47

OPERATOR WELL NO. Brian Dytko OHI 5H

Well Pad Name: Brian Dytko OHI Pad

Notice is hereby given by: Well Operator: SWN Production Co., L.

Telephone: 304-884-1614 Email: Dee_Southall@swn.com Address: P.O. Box 1300

Jane Lew, WV 26378

Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

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

Notary Public, State of West Virginia BRITTANY R WOODY 3302 Old Elkins Road Buckhannen, WV 26201

Subscribed and sworn before me this 13th day of 1000mber 2017

Notary Public

My Commission Expires

Brian Dytko Pad 13A

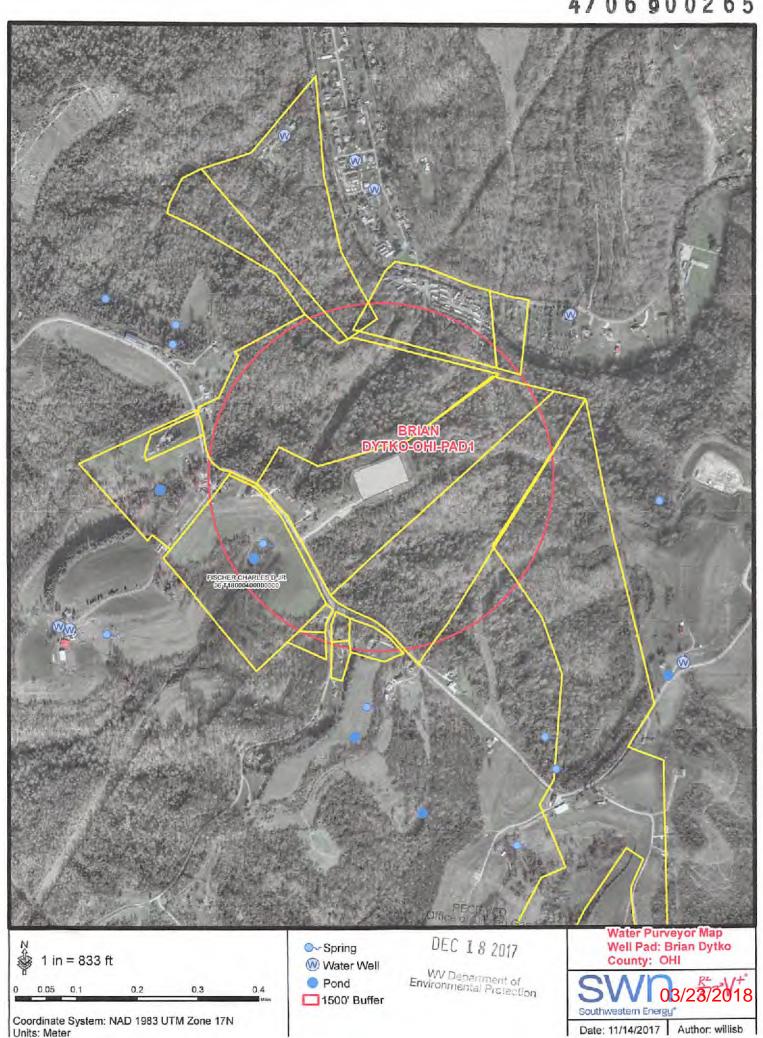
OWNER	STATE	ADDRESS	CITY	STATE	ZIP	SITUS_ZIP4	MAILING ADDRESS	CITY_STATE_ZIP	WATER SOURCES
FISCHER CHARLES D JR	wv	43 BEFORE		wv			1235 STONE CHURCH RD	WHEELING WV 26003	2

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Office of Oil and Gas

DEC 1 8 2017

WV Department of Environmental Protection



WW-6A4 (1/12) Operator Well No. Brian Dytko OHI 5H

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 Date of Notic	e: 10/04/2017			Application Filed:	211	4/11	
				-10	1		
Delivery met	hod pursuan	t to West Virginia	Code § 22-6.	A-16(b)	1		
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		ed to the SURFA	CE OWNE				
Name: Brian Dyt			_ /	Name:			
Address: 1278 Wheeling, WV 260			_	Address:			
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Oil and Gas Privacy Notice:

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

WW-6A5 (1/12)

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

Date of Notice	Requirement: notice shall be provided ce: 10/04/2017 Date Permit	no later than the filing date of Application Filed:	f perniit a	pplication.	
Delivery met	thod pursuant to West Virginia Code §	22-6A-16(c)	,		
■ CERTI	FIED MAIL	HAND			
	RN RECEIPT REQUESTED	DELIVERY			
return receipt the planned of required to be drilling of a damages to the (d) The notice of notice.	W. Va. Code § 22-6A-16(e), no later that requested or hand delivery, give the surperation. The notice required by this e provided by subsection (b), section ten horizontal well; and (3) A proposed surpersurface affected by oil and gas operatives required by this section shall be given	face owner whose land will be subsection shall include: (1) a of this article to a surface own face use and compensation agons to the extent the damages a to the surface owner at the ad	e used for A copy of ner whose greement are compo	the drilling of of this code so land will be containing a ensable under	of a horizontal well notice of section; (2) The information used in conjunction with the in offer of compensation for article six-b of this chapter.
	eby provided to the SURFACE OWNI s listed in the records of the sheriff at the				
Manager and the second second		Name:			
Name: Brian Dy					
		Address:			
Address: 1278 Wheeling, WV 26	Stone Church Rd 003 eby given:	Address:			
Address: 1278 Wheeling, WV 26 Notice is her Pursuant to W operation on State:	eby given: Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose	Address: a is hereby given that the under of drilling a horizontal well or Eas	on the tracusting:	t of land as fo 533,458 490	
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Oil and Gas Privacy Notice:

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

Jim Justice Charleston, West Virginia 25305-0430 • (304) 558-3505

Governor

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

Reissued October 10, 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 Brian Dytko Pad, Ohio County Brian Dytko OHI 5H

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2011-0009 for the subject site to Southwestern Energy for access to the State Road for the well site located off of Ohio County Route 23 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 oil and Gas the DOH OIL AND GAS POLICY dated January 3, 2012.

WV Department of Environmental Protection

Very Truly Yours,

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

Bary K. Clayton

Cc: Brittany Woody Southwestern Energy

CH, OM, D-6

File

	FRAC	ADDITIVES	
Product Name	Product Use	Chemical Name	CAS Number
		Hydrogen Peroxide	7722-84-1
EC6734A (Champion Technologies)	Biocide	Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
GYPTRON T-390 (Champion		Methanol	67-56-1
Technologies)	Scale Inhibitor	Nonylphenol Ethoxylate	Proprietary
		Glutaraldehyde	111-30-8
Bactron K-139 (Champion Technologies)	Biocide	Quaternary Ammonium Compounds, Benzyl-C12- 16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion	Biocide	Methanol	67-56-1
Technologies)	Diocide	Quaternary Ammonium Compounds, Benzyl-C12- 16-Alkyldimethyl, Chlorides	68424-85-1
ECGARGA (N. L. Chart.)	Scale Inhibitor	Amine Triphosphate	Proprietary
EC6486A (Nalco Champion)	Scale inhibitor	Ethylene Glycol	107-21-1
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
VV FRA-2000 (U.S. Well Services)	Amonic Priction Reducer	Propenoic acid, polymer with propenamide	9003-06 9
		Ethylene glycol	107-21 1
		Cinnamaldehyde	104-55 2
A1 202	N. A. S. Laboura	Butyl cellosolve	111-76 2
AI-303 (U.S. Well Services)	Mixture	Formic acid	64-18 6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49 1
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8

Office of Oil and Gas

Office of Oil and Gas

DEC 18 2017

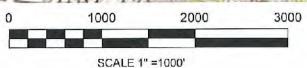
DEC 18 2017

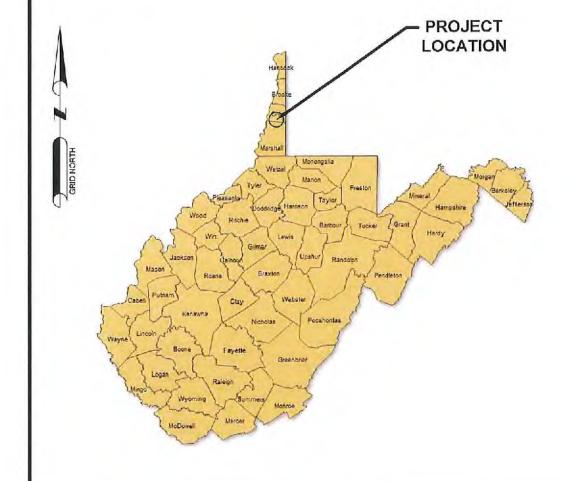
Environmental Protection



BRIAN DYTKO PAD CONSTRUCTION AS-BUILT TRIADELPHIA DISTRICT, OHIO COUNTY, WV MAY 17, 2017







COORDINATES: SITE ENTRANCE (NAD 83) LAT: 40.028480

LONG: -80.610666

AT DYTKO PAD (NAD 83) LAT: 40.029458

LONG: -80.608736

CENTER OF PAD (NAD 83) LAT: 40.029975 LONG: -80.608160

(NAD 83) LAT: 40.028450 LONG: -80.610587

EXISTING WELLS:

DYTKO 1H API 4706900115 (NAD 83) LAT: 40.029984 LONG: -80.607884

DYTKO 6H API 4706900126 (NAD 83) LAT: 40.030022 LONG: -80.607949

API 4706900071 (NAD 83) LAT: 40.029956 LONG: -80.607978

DYTKO 8H

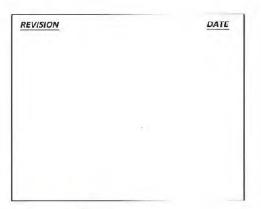
DYTKO 10H API 4706900127 (NAD 83) LAT: 40.030036 LONG: -80.607903

SHEET IN	DEX
C-001	COVER SHEET
C-101	EVACUATION ROUTE / PREVAILING WINDS
C-102	EVACUATION ROUTE / PREVAILING WINDS
C-201	CONSTRUCTION/AS-BUILT OVERVIEW
C-301	CONSTRUCTION/AS-BUILT
C-302	CONSTRUCTION/AS-BUILT
C-401	CONSTRUCTION/AS-BUILT ACCESS ROAD PROFILE
R-501	RECLAMATION OVERVIEW
R-601	RECLAMATION PLAN
R-602	RECLAMATION PLAN

RECLAMATION DETAILS

RECLAMATION DETAILS

RECLAMATION DETAILS



R-701

R-702

R-703

GZ(.|7 WEST WITCHINGSTI.

CALL BEFORE Dial 811 or
YOU DIG! 800:245.4848

LOD	
DESCRIPTION	ACRES
ROAD DISTURBED AREA	1.89
PAD DISTURBED AREA	6.05
TOTAL	7.94





Production Company, LLC



BRIAN DYTKO COVER SHEET C-001

TRIADELPHIA DISTRICT, OHIO COUNTY, WV.

)						1.
В	05-17-17	MSS	05-17-17	JPD	05-17-17	
AWN	DATE	CHECKED	DATE	APPROVED	DATE	

pasying: 2017-300 Dytko As-Built.dwg

