

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

February 25, 2016

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-900177, issued to SWN PRODUCTION COMPANY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

Operator's Well No: JAMES SEABRIGHT BRK 8H

Farm Name: SEABRIGHT, JAMES K. & MARTI

API Well Number: 47-900177

Permit Type: Horizontal 6A Well

Date Issued: 02/25/2016

API :	Numb	er:							
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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. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
- 9. 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.

API NO. 47-69		
OPERATOR WELL	NO.	James Seabright BRK 8H
Well Pad Name:	James	Seabright BRK Pad

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

1) Well Operator: SWN Production Co., LLC 494512924 009-Brooke 1-Buffalo 247-Bethany
Operator ID County District Quadrangle
2) Operator's Well Number: James Seabright BRK 8H Well Pad Name: James Seabright BRK Pad
3) Farm Name/Surface Owner:
4) Elevation, current ground: 1129' Elevation, proposed post-construction: 1129'
5) Well Type (a) Gas X Oil Underground Storage
Other
(b)If Gas Shallow X Deep
6) Existing Pad: Yes or No No (1)
6) Existing Pad: Yes or No No No
7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s): Target Formation- Marcellus, Target Top TVD- 6064', Target Base TVD- 6104' Anticipated Thickness- 40', Associated Pressure- 3657
8) Proposed Total Vertical Depth: 6094'
9) Formation at Total Vertical Depth: Marcellus
10) Proposed Total Measured Depth: 13,879'
11) Proposed Horizontal Leg Length: 7458.09'
12) Approximate Fresh Water Strata Depths: 250'
13) Method to Determine Fresh Water Depths: from offset wells
14) Approximate Saltwater Depths: 1133'
15) Approximate Coal Seam Depths: 311'
16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.
17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No _×
(a) If Yes, provide Mine Info: Name:
Depth:
Seam:
Owner:

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Office of Oil & Gas

API NO. 47- 69 -

OPERATOR WELL NO. James Seabright BRK 8H Well Pad Name: James Seabright BRK 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	J-55	48#	350'	350'	331 sx/CTS
Coal	9 5/8"	New	J-55	36#	1673'	1673'	648 sx/CTS
Intermediate	7"	New	J-55	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	13,879'	13,879'	Lead 956sx tail 1760sx/100* inside internal
Tubing	2 3/8'	New	P-110	4.7#	Approx. 6094'	Approx. 6094'	
Liners							

C BRO 11.10.15

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							

		<u>PACKERS</u>		0177
Kind:	10K Arrowset AS1-X		00	300
Sizes:	5 1/2"		Ca. I	
Depths Set:			Received	

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WW-6B	
(10/14)	

19) Describe	proposed well	work, including	g the drilling and	plugging back	k of any pilot hole:
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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'-70' below and cts.)

4700900177

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

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

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres):
- 22) Area to be disturbed for well pad only, less access road (acres):
- 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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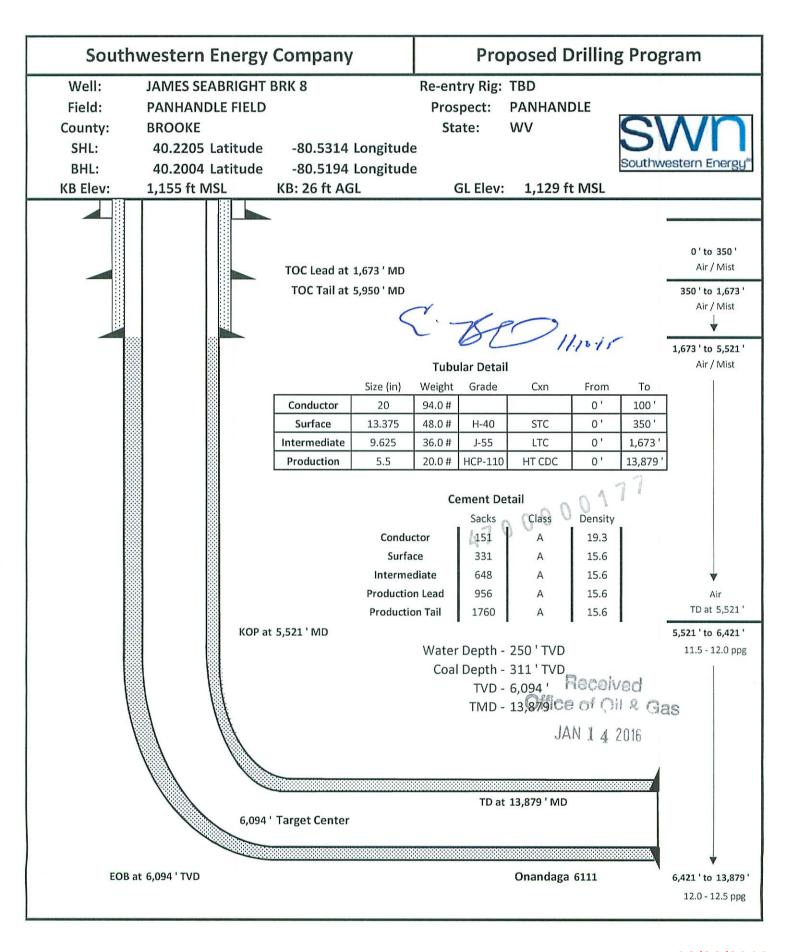
*Note: Attach additional sheets as needed.

Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Surface	S001	accelerator	calcium chloride	10043-52-4
Intermediate Surface	S001	accelerator	calcium chloride	10043-52-4
	D080	dispersant	sodium polynaphthalene sulfonate	9008-63-3
9	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
ad	D046	antifoam	fullers earth (attapulgite)	8031-18-3
Production-Lead			chrystalline silica	14808-60-7
tior	D201	retarder	metal oxide	propriatary
onp			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
=			sodium polynaphthalene sulfonate	9008-63-3
n-Tê	D065	dispersant	sodium sulfate	7757-82-6
Production-Tail			chrystalline silica	14808-60-7
oduc	D201	retarder	metal oxide	propriatary
Prc	D153	anti-settling	chrystalline silica	14808-60-7

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API Number 47 -	69	
Operator's	s Well	No. James Seabright BRK 8H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC		OP Code	
Watershed (HUC 10) Sugarcamp Run,	Buffalo Creek Quadran	gle _247-Bethany	
Elevation 1129	County_009-Brooke	District 1-Buffalo	
Do you anticipate using more than 5,000 Will a pit be used? Yes No	\checkmark		
If so, please describe anticipated	a pit muster	e 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:		
Reuse (at AP) Off Site Dispo	Injection (UIC Permit Number_ ^{2DC} I Number_ at next anticipated well, API# will b psal (Supply form WW-9 for disposa	0072539/ 2D0413175/ 2D0610306/ 2D0610317 ne included with the WR-34/DDMR &/or permit addendum. al location) has and reused or taken to a permitted disposal facility.	
Will closed loop system be used? If so, o	describe:Yes		
Drilling medium anticipated for this well	(vertical and horizontal)? Air, fresh	water, oil based, etc. Air drill to KOP, Fluid drill with SOBM from KOP to TD	_
-If oil based, what type? Synthe	etic, 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. lan	ndfill 4 7 0 0 0	
-If left in pit and plan to solidify	what medium will be used? (cemen	nt, lime, sawdust)	_
Arden Landfill 10072, American	n 02-12954, Country Wide 3	stem SWF- 1025, Short Creek 1034WW0109517/ClD28726, Carbon Limestone 28726/ClD28726 8839U/CID3839U, Pine Grove 13688	
on August 1, 2005, by the Office of Oil a provisions of the permit are enforceable law or regulation can lead to enforcemen I certify under penalty of law	and Gas of the West Virginia Departn by law. Violations of any term or of t action. that I have personally examined an	he GENERAL WATER POLLUTION PERMIT is ment of Environmental Protection. I understand the condition of the general permit and/or other applied and am familiar with the information submitted of	nat the icable n this
		airy of those individuals immediately responsible and complete. I am aware that there are signi	
penalties for submitting false information	n, including the possibility of fine or	imprisonment. Received	
Company Official Signature	100	Office of Qil & Ga	IS
Company Official (Typed Name) Dee S	Southall	JAN 1 4 2016	
Company Official Title Regulatory Super		JAN 1 4 2010	
Subscribed and sworn before me this	day of JOURNA	2015	
My commission expires 1112012	<u> </u>	OFFICIAL SEAL NOTATE PIDIC Notary Public, State of West V BRITTANY R WOO 3302 Old Elkins Road Buckhannon	DY 🕻

roposed Revegetation Treatn	nent: Acres Disturbed	Prevegetation pH	
as determined by pH test t	_		2
10-20)-20	ect to pri	
)O		
Fertilizer amount 60		lbs/acre	
{Mulch} Hay/Stra	IW 2.5	Tons/acre	
		Seed Mixtures	
Ten	nporary	Perman	ent
Seed Type	lbs/acre	Seed Type	lbs/acre
White Grove	15	White Grove	15
Red Top	15	Red Top	15
Orchard Grass	20	Orchard Grass	20
ttach: rawing(s) of road, location, p rovided) notocopied section of involve		r land application (unless engineered plans incl	uding this info
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Marcellus Well Drilling Procedures And Site Safety Plan

SWN Production Co., LLC

47 - 051 Well name: James Seabright BRK 8H
Bethany, Quad
Buffalo, District
Brooke County, West Virginia

ia 100900177

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SOUTHWESTERN ENERGY JAMES SEABRIGHT BROOKE CO, WV SPIDER



Weatherford^{*}

Field: SOUTHWESTERN_BROOKE CO, WV UTM NAD 83 (17N) Map Unit: USFt Vertical Reference Datum (VRD): Projected Coordinate System: NAD83 / UTM zone 17N

Site: JAMES SEABRIGHT

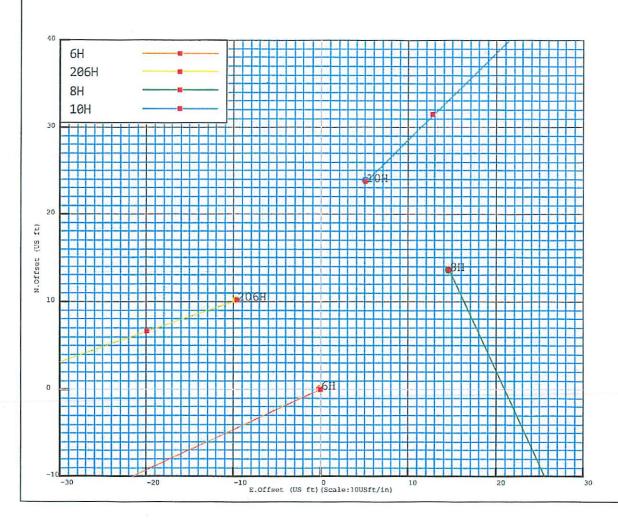
Unit: USFeet TVD Reference:

Company Name: SOUTHWESTERN ENERGY

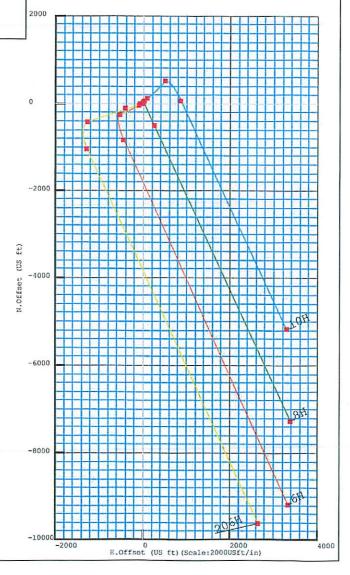
Northing: 14607341.70USft Latitude: 40°13'13.5" Easting: 1771219.17USft Longitude: -80°31'53.1"

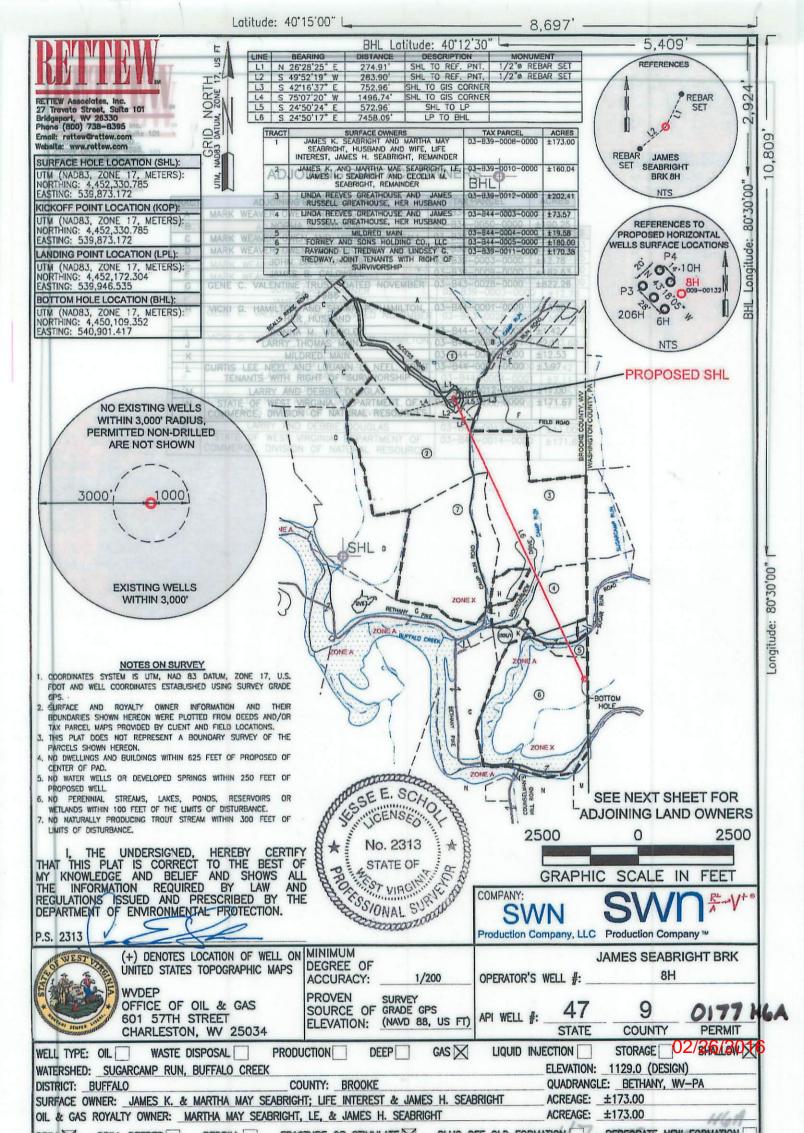
North Reference: Grid Grid Convergence: 0.30°

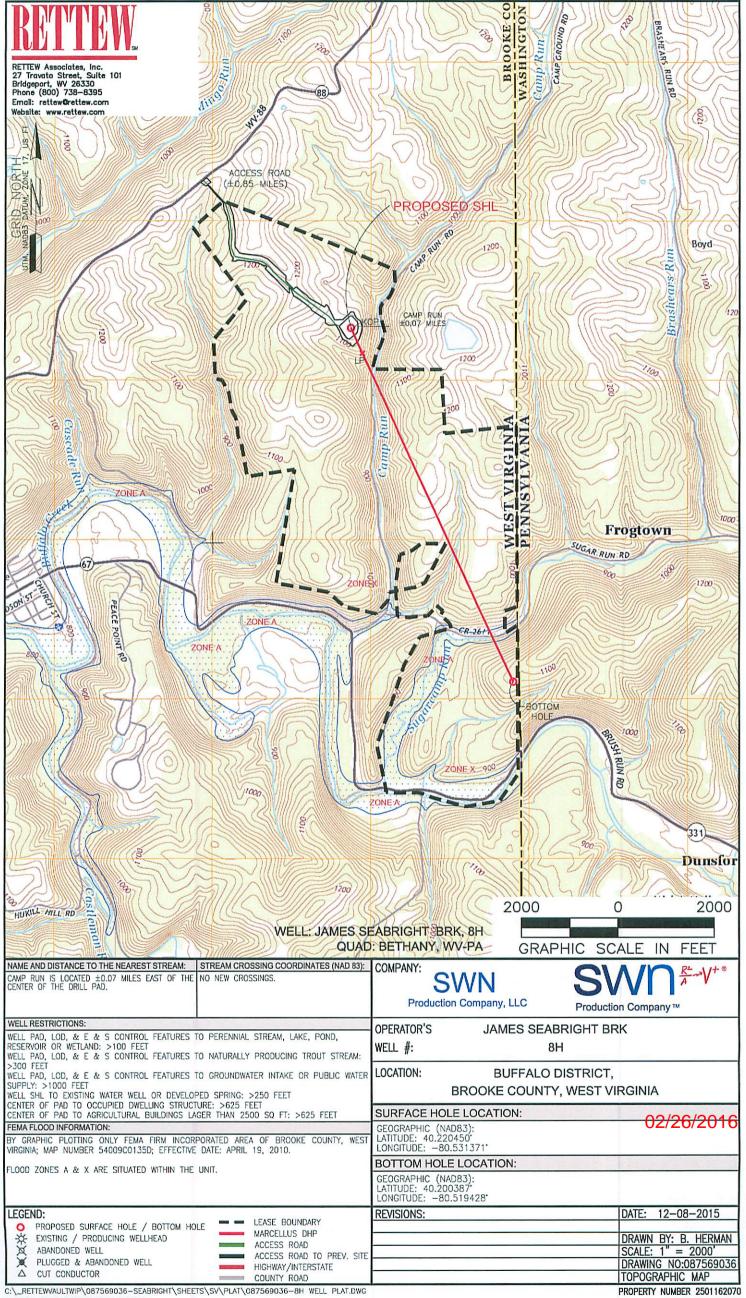
Elevation Above VRD: 1128.73USft



Position:









27 Travato Street, Suite 101 Bridgeport, WV 26330 Phone (800) 738-8395 Email: rettew@rettew.com site: www.rettew.com

SURFACE HOLE LOCATION (SHL):

GEOGRAPHIC (NAD83): LATITUDE: 40.220450 LONGITUDE: -80.531371

UTM (NAD83, ZONE 17, FEET): NORTHING: 14,607,355.250 EASTING: 1,771,233.900

UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,330.785 EASTING: 539,873.172

KICKOFF POINT LOCATION (KOP):

GEOGRAPHIC (NAD83): LATITUDE: 40.220450° LONGITUDE: -80.531371

UTM (NAD83, ZONE 17, FEET): NORTHING: 14,607,355.250 EASTING: 1,771,233.900 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,330.785 EASTING: 539,873.172

LANDING POINT LOCATION (LPL):

GEOGRAPHIC (NAD83): LATITUDE: 40.219019' LONGITUDE: -80.530519' UTM (NAD83, ZONE 17, FEET): NORTHING: 14,606,835.300 EASTING: 1,771,474.590

UTM (NAD83, ZONE 17, N NORTHING: 4,452,172.304 EASTING: 539,946.535

BOTTOM HOLE LOCATION (BHL):

GEOGRAPHIC (NAD83): LATITUDE: 40.200387: LONGITUDE: -80.519428' UTM (NAD83, ZONE 17, FEET): NORTHING: 14,600,067.100 EASTING: 1,774,607.400

UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,109.352 EASTING: 540,901.417

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 26'28'25" E	274.91	SHL TO REF. PNT.	1/2"ø REBAR SET
L2	S 49'52'19" W	283.90'	SHL TO REF. PNT.	1/2"ø REBAR SET
L3	S 42'16'37" E	752.96'	SHL TO GIS CORNER	
L4	S 75'07'20" W	1496.74	SHL TO GIS CORNER	
L5	S 24'50'24" E	572.96	SHL TO LP	
16	C 04'E0'17" F	7459 00'	I D TO DUI	

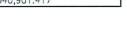
SUBSACE OWNER (S) / BOYALTY OWNER (B)

TRACT	SURFACE DWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	JAMES K. SEABRIGHT AND MARTHA MAY SEABRIGHT, HUSBAND AND WIFE, LIFE INTEREST, JAMES H. SEABRIGHT, REMAINDER (S) MARTHA MAY SEABRIGHT, LE, JAMES H. SEABRIGHT, REMAINDER (R)	03-839-0008-0000	±173.00
2	JAMES K. AND MARTHA MAE SEARRIGHT, LE, JAMES H. SEABRIGHT AND CECELIA M. SEABRIGHT, REMAINDER (S) COLONIAL CORPORATION, A NEVADA CORPORATION (R) JAMES K. SEABRIGHT AND MARTHA MAY SEABRIGHT, HUSBAND AND WIFE, LIFE INTEREST, JAMES H. SEABRIGHT AND CECELIA M. SEABRIGHT, REMAINDER (R) MARY E. ALLEN (R)	03-839-0010-0000	±160.04
3	LINDA REEVES GREATHOUSE AND JAMES RUSSELL GREATHOUSE, HER HUSBAND (S)/(R)	03-839-0012-0000	±202.41
4	LINDA REEVES GREATHOUSE AND JAMES RUSSELL GREATHOUSE, HER HUSBAND (S)/(R)	03-B44-0003-0000	±73.57
5	MILDRED MAIN (S)/(R)	03-844-0004-0000	±19.58
6	FORNEY AND SONS HOLDING CO., LLC (S)/(R)	03-844-0005-0000	±180.00
7	RAYMOND L. TREDWAY AND LINDSEY G. TREDWAY, JOINT TENANTS WITH RIGHT OF SURVIVORSHIP (S) RAYMOND L. TREDWAY, WIDOWER (R)	03-839-0011-0000	±170.38



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- NOTES ON SURVEY

 COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S.
 FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS
- GPS.
 SURFACE AND ROYALTY OWNER INFORMATION AND THEIR
 BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR
 TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
 THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE
- PARCELS SHOWN HEREON.

 NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
- 6.

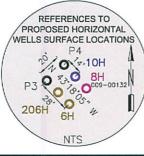
SWN PRODUCTION COMPANY, LLC

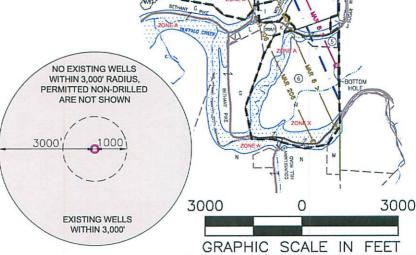
CENTER OF PAD.

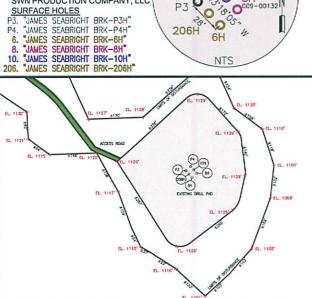
NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

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 LIMITS OF DISTURBANCE.







Production Company, LLC Oil alProduction Company

OPERATOR'S WELL #:

COMPANY:

JAMES SEABRIGHT BRK FEB 181 2016

LOCATION:

BUFFALO DISTRICT, OT BROOKE COUNTY, WEST VIRGINIA

BOTTOM HOLE LOCATION:

GEOGRAPHIC (NAD83): LATITUDE: 40.220450' LONGITUDE: -80.531371'

02/26/2016

PROPOSED SHL

(3)

IOTE: ANY UTILITIES OR IMPROVEMENTS SHOWN ON THIS PLAT ARE FROM REASONABLE VISUAL OBSERVATIONS. NO UTILITY COMPANIES WERE CONTACTED FOR UTILITY LINE LOCATIONS.

D NORTH

CRID

INSET N.T.S

GEOGRAPHIC (NAD83): LATITUDE: 40.200387 LONGITUDE: -80.519428*

LEGEND:

PROPOSED SURFACE HOLE / BOTTOM HOLE 文文次の EXISTING / PRODUCING WELLHEAD

ABANDONED WELL
PLUGGED & ABANDONED WELL CUT CONDUCTOR

= MAR 8 >=

ACCESS ROAD TIE LINE DRILLING UNIT LEASE BOUNDARY MARCELLUS DHP ABANDONED PATH **REVISIONS:** DATE: 12-08-2015 DRAWN BY: B. HERMAN SCALE: 1" = 3000' DRAWING NO:087569036 INTERNAL WELL PLAT

PROPERTY NUMBER 2501162070 PAD ID 3001162010 WW-6A1 (5/13)

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 "A"

4700900177

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

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

Well Operator: SWN Production Company, LLC.

By:

Its:

Macey Wallace, Staff Landman

Page 1 of 1

EXHIBIT "A" Attached to and made a part of the State of West Virginia OB and Gas Permit Form, WW-6A1, SWN Production Company, LLC., Operator James Seabright BRK BH Brooke County, West Virginia

Ħ	TMP	SURFACE OWNER	DEEDED ACREAGE	SWN LEASE #	CHX LEASE #	LESSOR	LESSEE	ROYALTY	BX/PG
1)	03-839-0008-0000	James K. Seabright and Martha May Seabright,	173,00000	Pending	1-357949-000	Martha May Seabright, LE, James H. Seabright,	Chesapeake Appalachia, L.L.C.	18.0%	21/30
		husband and wife, Life Interest, James H. Seabright,				Remainder	SWN Production Company, LLC	2-1076	31/499
_		Remainder							24,433
2)	03-839-0010-0000	James K. and Martha Mae Seabright, LE, James H.	160.04000	730076-001	1-324223-001	Colonial Corporation, a Nevada corporation	Range-Resources, Appalachia	14.0%	10/247
		Seabright and Cecella M. Seabright, remainder					Chesapeake Appalachia, LLC		10/552
							SWN Production Company, LLC		30/480
				735677-001	47-000256-001	James K. Seabright and Martha May Seabright,	Chesapeake Appalachia, LL.C.	18.0%	*****
				733077-002		husband and wife, Life interest, James H. Seabright	SWN Production Company, LLC	18.0%	14/581
					and CeceRa M. Seabright, Remainder	SWIN Production Company, LLC		30/480	
				733293-002	1-382539-002	Mary Jo Burton	Chesapeake Appalachia, L.L.C.	18.0%	26/299
							SWN Production Company, LLC		30/480
				733293-001	1-382539-001	Naomi Madelyn Jones	Chesapeake Appalachia, L.L.C.	18.0%	26/335
							SWN Production Company, LLC		30/480
				733293-003	1-382539-003	Pamela Doreen Burlingame	Chesapeake Appalachia, LL.C.	18.0%	26/251
							SWN Production Company, LLC		30/480
				733293-004	1-382539-004	Linda Lee Roberts	Chesapeake Appalachia, LLC.	18,0%	26/267
_							SWN Production Company, LLC		30/480
}	03-839-0012-0000	Linda Reeves Greathouse and James Russell	202.41094	731331-001	1-329275-001	Linda Reeves Greathouse and James Russell	Chesapeake Appalachia, L.L.C.	18.0%	11/162
		Greathouse, her husband				Greathouse, her husband	SWN Production Company, LLC		30/480
)	03-844-0003-0000	Linda Recees Greathouse and James Russell	73.57200	731331-001	1-329275-001	Linda Reeves Greathouse and James Russell	Chesapeake Appalachia, L.L.C.	18.0%	11/162
		Greathouse, her husband				Greathouse, her husband	SWN Production Company, LLC		30/480
}	03-844-0004-0000	Mildred Main	19.58400	735505-001	47-000121-000	Mildred Main	Chesapeake Appalachia, L.L.C.	18.0%	13/507
							SWN Production Company, LLC		30/480
1	03-844-0005-0000	Forney and Sons Holding Co., LLC	160,00000	Pending	47-0000985-000	Formey and Sons Holding Co., LLC	Chesapeake Appalachia, L.L.C.	MDGL	29/723
)	03-B39-0011-0000	Raymond L Tredway and Lindsey G. Tredway, joint	170.38000	730368-001	1-325534-000	Raymond L. Tredway, widower	Chesapeake Appalachia, L.L.C.	18.0%	12/187
		tenants with right of survivorship					SWN Production Company, LLC		30/480

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#	TMP	SURFACE OWNER	DEEDED ACREAGE
1)	03-B34-0049-0000	Mark Weaver Owen and Virginia K. Beall	243.9300000
2)	03-B34-0050-0000	Norma J. Shidock	190.2500000
3)	03-B38-0019-0000	Mark Weaver Owen and Virginia K. Beall	249.0000000
4)	03-B38-0024-0000	Mark Weaver Owen and Virginia K. Beall	188.0000000
5)	03-B39-0003-0000	John Dana Garner	12.7800000
6)	03-B39-0009-0000	James B. Caldwell	182.6312500
7)	03-B43-0028-0000	Gene C. Valentine Trust, dated November 26, 1986	822.2600000
8)	03-B44-0001-0000	Vicki G. Hamilton and Shawn P. Hamilton, her husband	13.6000000
9)	03-B44-0002-0000	Donna M. Weekley	1.4230000
10)	03-B44-0004-0001	Larry Thomas Main, II	2.1060000
11)	03-B44-0006-0000	Mildred Main	12.5300000
12)	03-B44-0007-0000	Curtis Lee Neel and Louann L. Neel, joint tenants with right of survivorship	3.9700000
13)	03-B44-0012-0000	Larry and Debbie Douglas	11.0000000
14)	03-B44-0014-0000	State of West Virginia, Department of Commerce, Division of Natural Resources	171.6700000

Office of Oil A Gas



PO Box 1300 Jane Lew, WV 26378 PHONE: (832) 796-1610

November 3, 2015

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

4700900

RE: SWN's proposed James Seabright BRK 6H, James Seabright BRK 8H & James Seabright BRK 206H in Brooke County, West Virginia, Drilling under Camp Run Road, Mountainview Drive, Field Road, and Sugar Run 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 Camp Run Road, Mountainview Drive, Field Road, and Sugar Run 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,

Macey Wallace Staff Landman

SWN Production Company, LLC

PO Box 1300

Jane Lew, WV 26378

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Office of Oil & Gas

JAN 1 4 2016

The Right People doing the Right Things,

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

Date of Notic	ce Certification:	API No. 47		
	and the second			s Seabright BRK 8H
		Well Pad N	Name: James S	Seabright BRK Pad
Notice has b	oeen given:			
		§ 22-6A, the Operator has provided the rec	juired parties w	ith the Notice Forms listed
	tract of land as follows:	•	• 100 American (1980) • • • • • • • • • • • • • • • • • • •	
State:	WV	UTM NAD 83 Easting:	539873.172	
County:	009-Brooke	Northing:	4452330.785	
District:	1-Buffalo	Public Road Access:	Bealls Ridge Roa	d
Quadrangle:	247-Bethany	Generally used farm name:	James Seabright	
Watershed:	Sugarcamp Run, Buffalo Creek		•	
prescribed by it has provide information re of giving the requirements Virginia Code	the secretary, shall be verified and sleed the owners of the surface described equired by subsections (b) and (c), se surface owner notice of entry to su of subsection (b), section sixteen or	every permit application filed under thi hall contain the following information: (14 bed in subdivisions (1), (2) and (4), subsection sixteen of this article; (ii) that the rervey pursuant to subsection (a), section of this article were waived in writing by ender proof of and certify to the secretary it.	4) A certification (b), section (b), section (c), section (d), section	on from the operator that (i) stion ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wher; and Pursuant to West
that the Oper	West Virginia Code § 22-6A, the Oprator has properly served the required ECK ALL THAT APPLY	erator has attached proof to this Notice C d parties with the following:	ertification	OOG OFFICE USE ONLY
☐ 1. NOT	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED BECAUSEISMIC ACTIVITY WAS CONDUCTOR	5-2-4-4-4-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	RECEIVED/ NOT REQUIRED
■ 2. NOT	FICE OF ENTRY FOR PLAT SURV	YEY or D NO PLAT SURVEY WAS CO	ONDUCTED	☐ RECEIVED
■ 3. NOT	FICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRED BECAUNOTICE OF ENTRY FOR PLAT SURVIVAS CONDUCTED or		☐ RECEIVED/ NOT REQUIRED
		WRITTEN WAIVER BY SURFACE (PLEASE ATTACH)	CE OWNER	
■ 4. NOT	TICE OF PLANNED OPERATION			☐ RECEIVED
■ 5. PUB	BLIC NOTICE	Received Office of Oil 8	d Gas	☐ RECEIVED
■ 6. NO	FICE OF APPLICATION	JAN 1 4 2016		RECEIVED

Required Attachments:

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

Certification of Notice is hereby given:

above, to the resignature confirming this Notice Cobtaining the in	at as required under West Virginia Code § 22- equired parties through personal service, by re- mation. I certify under penalty of law that I hav Certification and all attachments, and that ba	6A, I have so gistered mail re personally sed on my i , accurate and	the notice requirements within West Virginia Code § 22- erved the attached copies of the Notice Forms, identified or by any method of delivery that requires a receipt or examined and am familiar with the information submitted nquiry of those individuals immediately responsible for d complete. I am aware that there are significant penalties
roi saointenig it	alse information, mending the possionity of the	c and imprise	All the state of t
Well Operator:	SWN Production Co., LLC	Address:	P.O. Box 1300
By:	Dee Southall		Jane Lew, WV 26378
Its:	Regulatory Supervisor	Facsimile:	304-471-2497
Telephone:	304-884-1610	Email:	Dee_Southall@swn.com
	OFFICIAL SEAL Notary Public, State of West Virginia BRITTANY R WOODY 3302 Old Elkins Road	tibed and swo	rn before me this What day of Notary Public pires 1121

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.

4700900177

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API NO. 47- 69 OPERATOR WELL NO. James Seabright BRK 8H
Well Pad Name: James Seabright BRK Pad

Noti	ce Time Requirement: notice shall be provided no later that	n the filing date of permit application.
	of Notice: Date Permit Application Filed: ce of:	
✓	PERMIT FOR ANY WELL WORK CONSTRUCTION OF A	AN IMPOUNDMENT OR PIT
Deliv	very method pursuant to West Virginia Code § 22-6A-10	
		OD OF DELIVERY THAT REQUIRES A PT OR SIGNATURE CONFIRMATION
regists sedin the su oil an descr opera more well v impor have provi proposubse record provided the control of	ered mail or by any method of delivery that requires a receipt of the tract on which the well is or is proposed to be local digas leasehold being developed by the proposed well work, if itsed in the erosion and sediment control plan submitted pursual tor or lessee, in the event the tract of land on which the well proposed seams; (4) The owners of record of the surface tract or trackwork, if the surface tract is to be used for the placement, construindment or pit as described in section nine of this article; (5) As a water well, spring or water supply source located within one de water for consumption by humans or domestic animals; and used well work activity is to take place. (c)(1) If more than three ction (b) of this section hold interests in the lands, the applicant dis of the sheriff required to be maintained pursuant to section exists of this article to the contrary, notice to a lien holder is not R. § 35-8-5.7.a requires, in part, that the operator shall also propure your or surface owner subject to notice and water testing the property of the section of the section of the surface owner subject to notice and water testing the property of the section of the section of the surface owner subject to notice and water testing the property of the section of the	
	pplication Notice ☑ WSSP Notice ☑ E&S Plan Notice RFACE OWNER(s)	COAL OWNER OR LESSEE
Name	James K. & Martha May Seabright, Life Estate & James H. Seabright	Name: Starvaggi Industries, Inc.
Addr	ess: 1467 Camp Run	Address: 401 Pennsylvania Ave
Bethan	y, WV 26032	Weirton, WV 26062
Name	2:	COAL OPERATOR
	ess:	Name:
	500000	Address:
ПSU	RFACE OWNER(s) (Road and/or Other Disturbance)	
	:	SURFACE OWNER OF WATER WELL
Addr	ess:	AND/OR WATER PURVEYOR(s)
		Name: See Attachment 1
Name	::	
Addr	ess:	Address:
radii		OPERATOR OF ANY NATURAL GAS STORAGE FIELD
7511	RFACE OWNER(s) (Impoundments or Pits)	
		Name:
Addre		Address:
raur	ess:Rec	Please attach additional forms if necessary
	200	Oil & Gas
	Office of	Oli or olive
	[V #1 4	₩ 3018

WW-6A (9-13) API NO. 47- 69 OPERATOR WELL NO. James Seabright BRK 6H
Well Pad Name: James Seabright BRK Pad

Notice Time Requirement: notice shall be provided no later t	han the filing date of permit application.
Date of Notice: \(\frac{1}{3} \) \(\frac{1}{3} \) Date Permit Application Filed: \(\frac{1}{3} \) Notice of:	13/10
PERMIT FOR ANY WELL WORK CONSTRUCTION OF	PPROVAL FOR THE 470090017-
Delivery method pursuant to West Virginia Code § 22-6A-	10(b)
	HOD OF DELIVERY THAT REQUIRES A EIPT OR SIGNATURE CONFIRMATION
registered mail or by any method of delivery that requires a receip sediment control plan required by section seven of this article, and the surface of the tract on which the well is or is proposed to be led oil and gas leasehold being developed by the proposed well work, described in the erosion and sediment control plan submitted pursuperator or lessee, in the event the tract of land on which the well more coal seams; (4) The owners of record of the surface tract or well work, if the surface tract is to be used for the placement, con impoundment or pit as described in section nine of this article; (5) have a water well, spring or water supply source located within or provide water for consumption by humans or domestic animals; a proposed well work activity is to take place. (c)(1) If more than the subsection (b) of this section hold interests in the lands, the application of the sheriff required to be maintained pursuant to section provision of this article to the contrary, notice to a lien holder is not the section of the section of the section that the contrary of the section is not the section of this article to the contrary, notice to a lien holder is not section to the section of the section of the section that the subsection of this article to the contrary, notice to a lien holder is not section to the section of this article to the contrary, notice to a lien holder is not section to the section of the section of the section that the subsection of this article to the contrary, notice to a lien holder is not section to the section of the section of the section that the subsection of the section of the section that the section of the section of the section that the section of the s	pit as required by this article shall deliver, by personal service or by at or signature confirmation, copies of the application, the erosion and at the well plat to each of the following persons: (1) The owners of record of coated; (2) The owners of record of the surface tract or tracts overlying the coated; (2) The owners of record of the surface tract or tracts overlying the coated; (2) The coal owner, proposed to be drilled is located [sic] is known to be underlain by one or tracts overlying the oil and gas leasehold being developed by the proposed estruction, enlargement, alteration, repair, removal or abandonment of any of thousand five hundred feet of the center of the well pad which is used to end (6) The operator of any natural gas storage field within which the rece tenants in common or other co-owners of interests described in the mentant may serve the documents required upon the person described in the eight, article one, chapter eleven-a of this code. (2) Notwithstanding any of notice to a landowner, unless the lien holder is the landowner. W. Va. provide the Well Site Safety Plan ("WSSP") to the surface owner and any as provided in section 15 of this rule.
☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice	
SURFACE OWNER(s)	© COAL OWNER OR LESSEE Rame: TriEnergy, Inc.
Name:	Name: TriEnergy, Inc. Address: 412 Beaver Street, 2nd Floor
Address:	
Name:	Sewickley, PA 15143 COAL OPERATOR JAN 1 5 2016
Address:	
1 XXXI VJJ.	Name: Address: Office of Oil and Gas
SURFACE OWNER(s) (Road and/or Other Disturbance)	Address: Office of Oil and Gas
Name:	SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Address:	AND/OR WATER PURVEYOR(s)
Tadioo.	Name:
Name:	Address:
Address:	
	OPERATOR OF ANY NATURAL GAS STORAGE FIELD
☐ SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name:	Address:
Address:	
	*Please attach additional forms if necessary

Attachment # 1

James Seabright BRK Pad - Water Purveyors w/in 1500'

Landowner

James Caldwell
James Seabright

Address

1576 Camp Run Road, Bethany, WV 26032 1467 Camp Run Road, Bethany, WV 26032

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Received Office of Oil & Gas JAN 1 4 2016

API NO. 47- 69

OPERATOR WELL NO. James Seabright BRK 8H
Well Pad Name: James Seabright BRK 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 of 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. James Seabright BRK 8H
Well Pad Name: James Seabright BRK 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 Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450 " Received
Office of Oil & Gas
JAN 1 4 2016

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.

4700900177

Received
Office of Oil & Gas
JAN 1 4 2016

API NO. 47-69

OPERATOR WELL NO. James Seabright BRK 8H

Well Pad Name: James Seabright BRK Pad

Notice is hereby given by:

Well Operator: SWN Production Co., LLC

Telephone: 304-884-1610
Email: Dee_Southall@swn.com

Address: P.O. Box 1300

Jane Lew, WV 26378

Facsimile: 304-471-2497

Oil and Gas Privacy Notice:

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

OFFICIAL SEAL
Notary Public, State of West Virginia
BRITTANY R WOODY
3302 Old Elkins Road
Buckhannon, WV 26201
My commission expires November 27, 2022

Subscribed and sworn before methis

day of _

Notary Public

My Commission Expires

4700900177

Received
Office of Oil & Gas
JAN 1 4 2016

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	Requirement: Notice shall be provided at e: 11/04/2015 Date Peri	least TEN (10) days prior to filing a mit Application Filed:	permit application.
Delivery met	hod pursuant to West Virginia Code § 2	2-6A-16(b)	
□ HAND DELIVE	CERTIFIED MAIL RY RETURN RECEIPT REQ	UESTED	£>000
receipt reques drilling a hori of this subsect subsection ma	T. Va. Code § 22-6A-16(b), at least ten day ted or hand delivery, give the surface own zontal well: <i>Provided</i> , That notice given tion as of the date the notice was provided by be waived in writing by the surface own le, facsimile number and electronic mail ac	er notice of its intent to enter upon the pursuant to subsection (a), section to the surface owner: <i>Provided, hower</i> . The notice, if required, shall incl	an operator shall, by certified mail return he surface owner's land for the purpose of an of this article satisfies the requirements wever, That the notice requirements of this ude the name, address, telephone number,
	reby given: Yest Virginia Code § 22-6A-16(b), notice in the purpose of drilling a hore was Virginia Brooke Buffalo Bethany Sugarcamp Run, Buffalo Creek		
This Notice Pursuant to V facsimile num related to hori	Shall Include: West Virginia Code § 22-6A-16(b), this rather and electronic mail address of the object of the dizontal drilling may be obtained from the 57th Street, SE, Charleston, WV 25304 (3)	perator and the operator's authorize Secretary, at the WV Department o	ed representative. Additional information f Environmental Protection headquarters,
	reby given by: SWN Production Company, LLC PO Box 1300, 179 Innovation Drive	Authorized Representative: Address:	Steve Perkins PO Box 1300, 179 Innovation Drive
Telephone: Email: Facsimile:	Jane Lew, WV 26378 304-884-1615 steve_perkins@swn.com	Telephone: Email: Facsimile:	Jane Lew, WV 26378 304-884-1615 steve_perkins@swn.com
	·	- Received	

Oil and Gas Privacy Notice:

Office of Oil & Gas

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 of third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6A5 (1/12)

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

Date of Notice:	Date Permit Applicat		date of permit	application.
Delivery metho	od pursuant to West Virginia Code § 22-6A-	16(c)		
	ED MAIL HANI RECEIPT REQUESTED DELI	O VERY		
return receipt re the planned oper required to be p drilling of a ho damages to the	Va. Code § 22-6A-16(c), no later than the date quested or hand delivery, give the surface owneration. The notice required by this subsection rovided by subsection (b), section ten of this arrizontal well; and (3) A proposed surface use surface affected by oil and gas operations to the required by this section shall be given to the surface.	ner whose land on shall inclu rticle to a surf and compen- e extent the de	d will be used for de: (1) A copy ace owner whos sation agreemen amages are comp	or the drilling of a horizontal well notice of of this code section; (2) The information e land will be used in conjunction with the t containing an offer of compensation for pensable under article six-b of this chapter.
(at the address I	y provided to the SURFACE OWNER(s) isted in the records of the sheriff at the time of artha May Seabright, Life Estate & James H. Seabright mp Run Rd.	Name:		
Bethany, WV 26032		ridares	J	
operation on the State: Value End of the State: Value	st Virginia Code § 22-6A-16(c), notice is herebe surface owner's land for the purpose of drilling strooke	ng a horizonta UTM NAD 8 Public Road	al well on the tra- Basting: Northing:	
to be provided horizontal well; surface affected information rela	st Virginia Code § 22-6A-16(c), this notice shat by W. Va. Code § 22-6A-10(b) to a surface and (3) A proposed surface use and compensate by oil and gas operations to the extent the disted to horizontal drilling may be obtained from the coated at 601 57 th Street, SE, Charleston,	owner whose ation agreeme amages are come the Secre	e land will be un nt containing an compensable und tary, at the WV	sed in conjunction with the drilling of a offer of compensation for damages to the er article six-b of this chapter. Additional Department of Environmental Protection
Well Operator:	SWN Production Company, LLC	Address:	PO Box 1300, 179 In	novation Drive
Telephone:	304-884-1615		Jane Lew, WV 2637	
Email:	steve_perkins@swn.com	Facsimile:		
Oil and Gas Pr	ivacy 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 & Gas

JAN 1 4 2016



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

Earl Ray Tomblin Governor

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

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

November 3, 2015

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 James Seabright Pad, Brooke County

James Seabright BRK 8H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2015-0659 for the subject site to Southwestern Energy for access to the State Road for the well site located off of WV 88 in Brooke County.

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

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office Oil &Gas Coordinator

Day K. Clayton

Cc: Brittany Woody

Southwestern Energy

CH, OM, D-6 File

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JAN 1 4 2016

Supplier Name	Product Name	Product Use	Chemical Name	CAS Number
			Didecyl Dimethyl	007173-51-1
			Ammonium Chloride	000004.47.5
			Ethanol	000064-17-5
	A1 D11A 4497	Disside	Glutaraldehyde	000111-30-8
	ALPHA 1427	Biocide	(Pentanediol)	
1			Quaternary Ammonium	068424-85-1
			Compound	007700 10 5
			Water	007732-18-5
	BF-7L	Buffer	Potassium Carbonate	000584-08-7
			Choline Chloride	000067-48-1
	ClayCare	Clay Stabilizer	Water	007732-18-5
BAKER HUGHES	Enzyme G-I	Breaker	No Hazardous Components	NONE
	ENZYME G-NE	Breaker	No Hazardous Components	NONE
	FRW-18	Friction Reducer	Petroleum Distillate	064742-47-8
	11111111	Thetion reducer	Hydrotreated Light	N/A 044
			Petroleum Distillate Blend	N/A-014
	GW-3LDF	Gel	Polysaccharide Blend	N/A-021
		Scale Inhibitor	Diethylene Glycol	000111-46-6
	SCALETROL 720			000407.04.4
			Ethylene Glycol	000107-21-1
			Boric Acid	010043-35-3
	XLW-32	Crosslinker		
	,		Methanol (Methyl Alcohol)	000067-56-1
	APB01 (AMMONIUM	Breaker	Ammonium Persulfate	007727-54-0
	PERSUFATE BREAKER) B05 (LOW PH BUFFER)	Buffer	Acetic acid	000064-19-7
		Dullei		
	BXL03 Borate XL Delayed High Temp	Crosslinker	No Hazardous Components	NONE
FRAC TECH SERVICES	FRW-200	Friction Reducer	No Hazardous Components	NONE
	HVG01 (TURQUOISE-1 BULK)	Gelling Agent	Petroleum Distillate Hydrotreated Light	064742-47-8
	KCLS-4	Clay Stabilizer	No Hazardous Components	NONE
	LTB-1	Breaker	Ammonium Persulfate	N/A



Supplier Name	Product Name	Product Use	Chemical Name	CAS Numbe
		Biocide	Ethanol	000064-17-5
NALCO ONESOURCE	EC6110A		Glutaraldehyde (Pentanediol)	000111-30-8
			Quaternary Ammonium Compounds	N/A-063
	EC6629A	Biocide	No Hazardous Components	NONE
	WBK-133 OXIDIZER	Breaker	Ammonium Persulfate	007727-54-0
		Breaker	Ammonium Persulfate	007727-54-0
	WBK-134		Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7
	W00 0041 0	Clay Stabilizer	Proprietary Non Hazardous Salt	N/A-229
	WCS-631LC		Water	007732-18-5
200	WFR-55LA	Friction Reducer	No Hazardous Components	NONE
OS OS S	WGA-15L	Gel	Petroleum Distillate Hydrotreated Light	064742-47-8
WEATHERFORD			Potassium Carbonate	000584-08-7
	WPB-584-L	Buffer	Potassium Hydroxide	001310-58-3
	WXL-101LE	Corsslinker	No Hazardous Components	NONE
	WXL-101LM	Crosslinker	Petroleum Distillate Hydrotreated Light	064742-47-8
		Crosslinker	Water	007732-18-5
			Ethylene Glycol	000107-21-1
	WXL-105L		Boric Acid	010043-35-3
			Ethanolamine	000141-43-5
	B244 Green-Cide 25G	Biocide	Glutaraldehyde	111-30-8
	L071 Temporary Clay Stabilizer	Clay Stabilizer	Cholinium Chloride	67-48-1
	Breaker J218		Diammonium Peroxidisulphate	7727-54-0
SCHLUMBERGER	EB-Clean* J475 Breaker	Breaker	Diammonium	7727-54-0
	Friction Reducer B315	Eriction Reducer	Peroxidisulphate Distillates (petroleum), Hydrotreated light Aliphatic Reducer Alcohol Glycol Ether	64742-47-8 Proprietary
	Friction Reducer J609	. House Trodusor	Ammonium Sulfate	7783-20-2
Supplier Name	Product Name	Product Use	Chemical Name	CAS Numbe

Office of Oil ² Gas JAN 1 4 2016

SCHLUMBERGER	Water Gelling Agent J580	Gel	Carbohydrate Polymer	Proprietary
	Scale Inhibitor B317	Scale Inhibitor	Trisodium ortho phosphate Ethane-1, 2-diol	7601-54-9 107-21-1
	Borate I rocciinver 1537	Aliphatic polyol Sodium tetraborate decahydrate	Proprietary 1303- 96-4	
	Crosslinker J610		Aliphatic polyol Potassium hydroxide	Proprietary 1310- 58-3

Received
Office of Oil & Gas
JAN 1 4 2016

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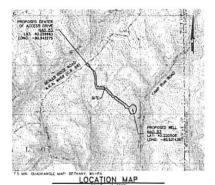
EROSION & SEDIMENT CONTROL PLAN FOR

SEABRIGHT PAD

BUFFALO DISTRICT, BROOKE COUNTY, WEST VIRGINIA

- THE BULBOARY AND TOPOGRAPHIC SLAVEY FOR THE PROJECT AREA MERE PRAFORMED BY RETURE ASSIGNATES IN OCTORIER 2015. PROPERTY BOUNDAIRES, ANDONOMIES ANDONOMIES PROPRIATION AND ROAD INCTIONES SHOWN ON THE PLAN ARE BASTO ON AVAILABLE COUNTY OF DATA. LOSSINGS STRUCTURES, THE LURES AND ROADWAYS HAVE BEEN LOCATED PER AVAILABLE OFFIER
- TOGRAPHY. NTAL DATUN IS WEST WROMA STATE PLANE, NORTH AMERICAN DATUN 1983 (NAD

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STAKING FLAG LEGEND

AUTOM	
PADE AT TOP OF AD POND ATT TELLOW & DRANCE)	
roes of fill orange)	
TOP HOLE LOCATION (PINK)	
WRITCAL OUT & FILL AT PAD/POND/PLT CORNER OF COOL PINK & BLACK STRIPE)	SEREE!
MATS OF DISTURBANCE BLUE & WATE STRIPE)	RREKE
ERTICAL CUT & FILL AT CENTERLINE OR EDGE OF ACCESS DRIVE (GRANCE & BLACK STRIPE)	(MARKET)
PROBLEM & SEDMENT CONTROL STRUCTURES (PRIK & WHITE STRIPE)	RNERE
TOPSOL STOCKPLE LOCATIONS (GRANGE & WHITE STRIPE)	annn
DENTERLINE OF DITCH &	



LIMITS OF DISTURBANCE

- SEASTERNIT, JAMES A. 10 ACRES

SOILS CLASSIFICATION

OUR CLEANSEY SLT LOAM, 3 TO 88 SLOPES QUE QUENNEY SET LOAM, 8 TO 15% SLOPES CUT-QUEENSTY SUT LOAM, 15 TO 25% SLOPES WAC WESTMOOD AND SET LOAM, 3 TO BE SLOPES WATER AND THE HAME TO BE STORED WILL WESTWORKLAND SILT LOAM, 25 TO 35% SLOPES

MEET WESTNORELAND SILT LOAM, 35 TO 60% SLOPES

CUT & FILL

out	PAD SITE + 9.642 CY - 8.166 CY	16.375 CY -17.651 CY	126,017 CY -26,017 CY
MLT	+ 1,276 CV	- 1,276 CY	- 0 CY
STONE	+ 5,187 CY	+ 6,089 CY	- 11,256 CY
TOPSON.	+ 2,443 CY	+ 5,1+2 CY	- 7,585 CY

LIST OF DRAWINGS

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2 OF 42 DVERALL SIE PLAN
3 OF 42 DILARGED LAYOUT PLAN
4 OF 42 CHLARGED LAYOUT PLAN
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35 OF 42 RECLAMATION FLAN
36 OF 42 RECLAMATION PLAN
37 OF 42 RECLAMATION FLAN
38 OF 42 EVACUATION HOUTE PLAN
JE OF 42 EVACUATION ROUTE PLAN - USOS
40 OF 42 NOTES & DETAILS
41 OF 42 DETALS
AT OF AT DETAINS

WEST VIRGINIA 81

CALL BEFORE YOU DIG!

DATE 10/06/2015 ROXET # 1527982490



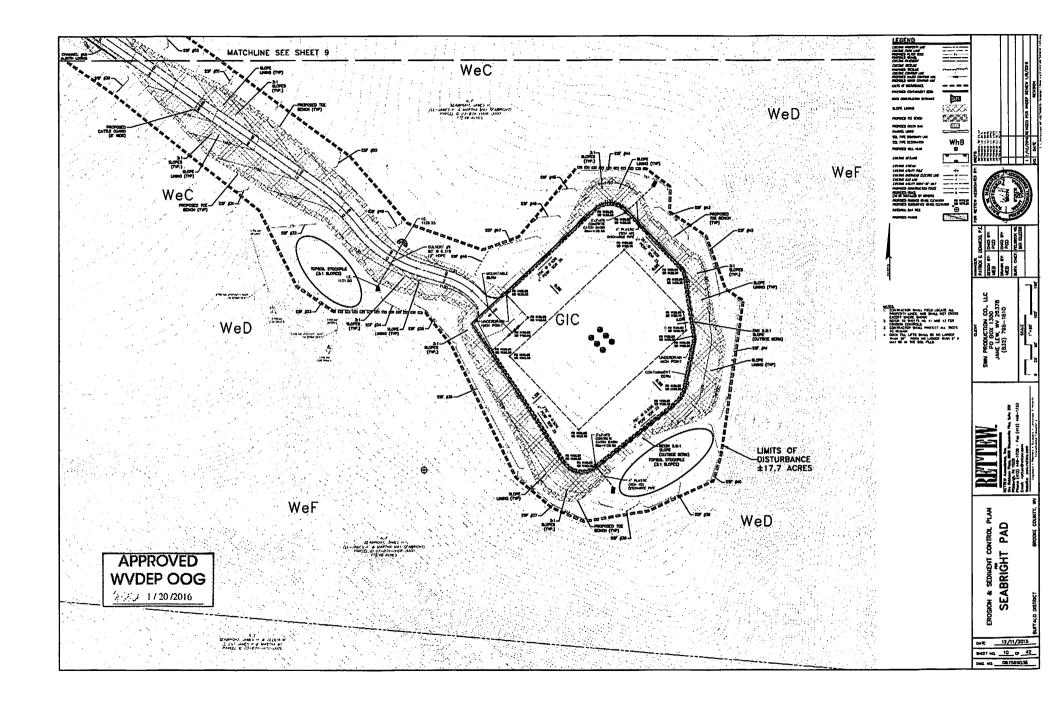
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MEB NATR

WN PRODUCTION CO., LLC PO BOX 1300 JANE LEW, WY 26378 (832) 796-1610

GENERAL NOTES PAD SEABRIGHT

DATE: 12/11/2015 SHEET NO. __1_ Or __42_ DMG. NO. 087569036



EROSION & SEDIMEN SEABRIGH BUFFALO DISTRICT, BROOKE

GENERAL NOTES

- THE BOUNDARY AND TOPOGRAPHIC SURVEY FOR THE PROJECT AREA WERE PERFORMED BY RETTEM ASSOCIATES IN OCTOBER 2015.
 PROPERTY BOUNDAMES, LANDOWNER INFORMATION AND ROAD NETWORKS SHOWN ON THIS PLAN ARE BASED ON AVAILABLE COUNTY GIS DATA.
 EXISTING STRUCTURES, TREE LINES AND ROADWAYS HAVE BEEN LOCATED PER AVAILABLE ONLINE ARRIAL PHOTOGRAPHY.
- THE HORIZONTAL DATUM IS WEST VIRGINIA STATE PLANE, NORTH AMERICAN DATUM 1983 (NAD

- RESTORATION. THIS RESTORATION SHALL BE SUBJECT TO THE OWNER'S APPROVAL; MOREOVER, THIS RESTORATION SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR.

 15. THE MAXIMUM ALLOWABLE SLOPE FOR EARTHEN AREAS IS 3-TO-1 HORIZONTAL-TO-VERTICAL, UNLESS SPECIFIED OTHERWISE IN A SITE-SPECIFIC GEOTECHNICAL REPORT.

 17. PRIDE TO FILL PLACEMENT, EASTING SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 5°, MOISTURE ADJUSTED TO OPTIMUM, AND RE-COMPACTED TO THE SAME DENSITY AND MOISTURE ADJUSTED TO OPTIMUM, AND RE-COMPACTED TO THE SAME DENSITY AND MOISTURE CONTENT AS THE PROPOSED FILL.

 18. MFORTED SLECT FILL IS DEFINED AS UNFORMLY BLENDED SANDY CLAY TO CLAYEY SAAD WITH A LOQUE UNIT (LL) OF LESS THEM SO PERCENT AND A PLASTICITY NDEX (PI) OF BETWEEN BE AND 15. FILL MATERIAL SHALL BE FLACED IN LIFTS NOT EXCEEDING BIGHT (S) INCHES IN LODGE THEORIES.

 19. FORCOTOR BRY DENSITY (ASTIM D 688), IN CONJUNCTION WITH THE COMPACTING OPERATION, FILL MATERIAL SHALL BE BROUGHT TO OPTHUM MOISTURE CONTENT.

 20. STORM DRAINAGE PIPING SHALL BE CONSTRUCTED OF A MINIMUM OF CLASS II REINFORCED.

 21. CONTRACTER PIPE (RCP), CORPUGATED METAL PIPE (CMP), OR HIGH-DENSITY POLYETHERE (HOPE) PIPE. A MINIMUM OF 1.0' OR 1/2D OF COVER SHALL BE MAINTAINED WHEN USING CMP OR HOPE PIPE, MINIMUM OF MAIL THICKNESS SHALL BE CONSTRUCTION SITE CLEAR OF ALL TRASH AND DEBRIS.

 22. PRIOR TO ANY EARTHWORK EXCAVATION OR TOPSOIL REMOVAL, ADEQUATE EROSION CONTROL MEASURES SHALL BE PROPPERLY INSTALLED.

 23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SITE CLEAR OF ALL TRASH AND DEBRIS.

 24. PRIOR TO ANY EARTHWORK EXCAVATION OR TOPSOIL REMOVAL, ADEQUATE EROSION CONTROL MEASURES SHALL BE PROPPERLY INSTALLED.

 25. THE CONTRACTOR SHALL INSPECT STRABILIZATION AND EROSION CONTROL MEASURES AND EREAST ON A CONSTRUCTION.

 26. SILF FERCE AND SCIEDURY INSTALLED.

 27. THE CONTRACTOR SHALL INSPECT STRABILIZATION AND EROSION CONTROL MEASURES AND EROSED ON A CONSTRUCTION.

 28. SILF FERCE AND SCIEDURY INSTALLED.

 29. SILF FERCE AND SCIEDURY INSTALLED.





TOP OF CUTS GRADE AT TOP OF PAD / POND / PIT (YELLOW & ORANGE) TOES OF FILL (ORANGE) TOP HOLE LOCATION VERTICAL CUT & FILL AT PAD/POND/PIT CORNER OR EDGE (PINK & BLACK STRIPE) LIMITS OF DISTURBANCE (BLUE & WHITE STRIPE) VERTICAL CUT & FILL AT CENTERUNE OR EDGE OF ACCESS DRIVE (ORANGE & BLACK STRIPE) 0.0000 TOPSOIL STOCKPILE LOCATIONS (ORANGE & WHITE STRIPE)

CENTERLINE OF DITCH &
BOTTOM OF SEDIMENT TRAPS



LIMITS OF DISTU



02/26/2016

CONTROL PLAN

IT PAD COUNTY, WEST VIRGINIA



SOILS CLASSIFICATION

GuB: GUERNSEY SILT LOAM, 3 TO 8% SLOPES GUC; GUERNSEY SILT LOAM, B TO 15% SLOPES GuD; GUERNSEY SILT LOAM, 15 TO 25% SLOPES WeC; WESTMORELAND SILT LOAM, 3 TO 8% SLOPES WeD: WESTMORELAND SILT LOAM, 15 TO 25 SLOPES WeE: WESTMORELAND SILT LOAM, 25 TO 35% SLOPES

WeE: WESTMORELAND SILT LOAM, 35 TO 60% SLOPES

CUT & FILL

CUT	PAD SITE + 9,642 CY - 8,366 CY	DRIVE +16,375 CY -17,651 CY	SITE +25,017 CY -26,017 CY
NET	+ 1,276 CY	- 1,276 CY	= 0 CY
STONE	+ 5,187 CY	+ 6,069 CY	= 11,256 CY
TOPSOIL	+ 2,443 CY	+ 5,142 CY	= 7,585 CY

NOTES.

1. THE TOPSOIL DEPTH FOR THE ACCESS DRIVE IS 5.6*. THE TOPSOIL DEPTH FOR THE PAD IS 5.6*.

2. THE CUT & FILL SUMMARY CALCULATIONS PRESENTED ON THIS PLAN ARE FOR INFORMATIONAL PURPOSES ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY EXISTING GRADES AND VERIFY EARTHWORK VOLUMES, METHODS AND PROCEDURES. ANY ISSUES ARE TO BE BROUGHT TO THE ENGINEER'S AND OWNER'S ATTENTION PRIOR TO COMMENCEMENT OF WORK.

LIST OF DRAWINGS

COVER SHEET & CENERAL NOTES
OVERALL SITE PLAN
ENLARGED LAYOUT PLAN
ENCOUNT & SEDMENT CONTROL PLAN
ENCOUNT & SEDMENT CONTROL PLAN
ENCOUNT & SEDMENT CONTROL PLAN
WY DEP EAS PLAN
ENDES DRIVE PROPILE
ACCESS DRIVE PROPILE
ACCESS DRIVE PROPILE
ACCESS DRIVE PROPILE
CROSS SECTIONS — ACCESS DRIVE
CROSS SEC . EVACUATION ROUTE PLAN
. EVACUATION ROUTE PLAN — USGS
. NOTES & DETAILS
. DETAILS
. DETAILS

Received Office of Oil & Gas

JAN 1 4 2016

RATOR

BANCE





AT LEAST 48 HOURS, BUT NOT MORE THAN 10 WORKING DAYS (EXCLUDING WEEKENDS AND HOLIDAYS), PRIOR TO TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES SHALL CONTACT MISS UTILITY OF WEST VIRGINIA AT B11 OR 1-800-245-4848.

DATE: 10/06/2015 TICKET #: 1527982490



DWG (1997) 1 (