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

June 15, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-3305864, issued to STATOIL USA ONSHORE PROPERTIES, INC., 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.

James Martin
Chief

Operator's Well No: GOODWIN 1 - 2H
Farm Name: HANNA, JOY LEE
API Well Number: 47-3305864
Permit Type: Horizontal 6A Well
Date Issued: 06/15/2015

Promoting a healthy environment.

API Number: 3305864

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 fifty (50) 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. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW-6B
(9/13)

4703305864

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

7 596

1) Well Operator:	Statoil USA Onshore Properties Inc.	494505083	Harrison	Sardis	Salem 7.5'
		Operator ID	County	District	Quadrangle

2) Operator's Well Number: Goodwin 1-2H Well Pad Name: Goodwin 1

3) Farm Name/Surface Owner: Goodwin Farm/Joy Lee Hanna Public Road Access: Rockcamp Run 5

4) Elevation, current ground: 1390.80' Elevation, proposed post-construction: 1362'

5) Well Type (a) Gas ■ Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow ■ Deep _____
Horizontal ■

SDW
11/17/2014

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus, Formation Top 7604' TVD, 30' thick, 5398 psi, *Intermediate Casing MASP 2300 psi

8) Proposed Total Vertical Depth: 7651' TVD

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 14,200' MD

11) Proposed Horizontal Leg Length: 6242'

12) Approximate Fresh Water Strata Depths: 732' TVD ** see note on attached page

13) Method to Determine Fresh Water Depths: 1980 study "Freshwater & Saline Groundwater of WV" by James Foster

14) Approximate Saltwater Depths: 424' TVD ** see note on attached page

15) Approximate Coal Seam Depths: 558', 641', 683', 822', 1079', 1102'

16) Approximate Depth to Possible Void (coal mine, karst, other): NA

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: _____

RECEIVED
Office of Oil & Gas
DEC 1 6 2014
WV Department of
Environmental Protection

WW-6B
(9/13)

4703305864

18) **CASING AND TUBING PROGRAM**

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	H-40	94#	80'	80'	Cmt to surface-120 cu ft
Fresh Water	13.375"	New	J-55	54.4#	850'	850'	Cmt to surface-616 cuft
Coal							
Intermediate	9.625"	New	J-55	36#	2900'	2900'	Cmt to surface-950 cuft
Production	5.5"	New	P-110	20#	14200'	14200'	Cmt to 2000'-3247 cuft
Tubing							
Liners							

SDW
11/17/2014

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	26"	.438"	1530 psi	Class A	1.3 cu ft/sk
Fresh Water	13.375"	17.5"	.380"	2730 psi	Class A	1.29 cu ft/sk
Coal						
Intermediate	9.625"	12.25"	.352"	3520 psi	Class A	1.29 cu ft/sk
Production	5.5	8.5"	.361"	12640 psi	Class A	2.42 cu ft/sk
Tubing						
Liners						

PACKERS

Kind:				
Sizes:				
Depths Set:				

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

WW-6B
(9/13)

4703305864

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

See Attached

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

Well will fractured through the plug-n-perf method with +/- 25 fracturing stages per well. Each fracturing treatment will have 400,000 lbs of sand mixed in 7500 Bbls. of fresh water. The fracturing rate will be between 80 and 100 bpm at a pressure lower than a maximum pressure of 10,000 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.4 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.91 acres

23) Describe centralizer placement for each casing string:

See attached

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

See attached

RECEIVED
Office of Oil and Gas

DEC 10 2014

WV Department of
Environmental Protection

25) Proposed borehole conditioning procedures:

Surface – Drilled with fresh water to section total depth. Prior to tripping, hole will be circulated clean of cuttings and back-reamed if necessary.
Intermediate – Drilled with 9.0 ppg 5% KCL Polymer Water Based Mud (WBM) to section total depth. At section total depth, pump 40bbl viscous pill and circulate hole clean.
Production - Drilled with 12.5-13.0 ppg Synthetic Based Mud (SBM) to section total depth. At section total depth pump 2-3 20bbl heavy weighted pill sweeps to transport excess cutting from the hole until clean. Pump rates will be maintained in excess of 600 GPM, and rotation in excess of 100 RPM to assist cuttings transport. A 60 bbl tuned weighted spacer will be pumped ahead of the cement to assist in mud cake removal and water wett both casing and formation.

*Note: Attach additional sheets as needed.

Open Mine Contingency Plan

The Goodwin 1-1H, 1-2H, 3H and 1-6H wells will be drilled at a ground elevation of 1362'. We do not anticipate a mine void in this area, but have planned to address the possibility of intersecting such a void through the following contingency plan.

Conductor: The conductor will remain the same diameter as our primary casing design, 20" (H-40, 94#), and cemented to surface. The surface hole section will be drilled utilizing a 17.5in bit size to the approved permitted depth.

Mine String: In the event an open mine is encountered, we will run 16" low clearance (H-40, 65#) as a mine string. The mine string will be set 30-50ft below the base of the open mine encountered. Every effort will be taken to cement the mine string to surface. In the event cement is not circulated to surface, a top job through a grout string will be performed down the backside.

Upon cementing the mine string in place, a 14.75in bit will be used to proceed and drill to the approved surface casing setting depth.

Surface Casing: A 13.375" low clearance (J/K55, 54.5#), fresh water string will be installed through all potential zones, and subsequently cemented to surface as per program.

RECEIVED
Office of Oil and Gas

JUN 11 2015

WV Department of
Environmental Protection

4703305864

**12 & 14) NOTE FOR FRESH WATER-SALT WATER DEPTHS - The Goodwin 1 pad is located in an area of saltwater/freshwater mixing as mapped by the West Virginia Geological and Economic Survey in 1980 on their map called "Thickness of Zone Between Fresh and Saline Water". The freshwater and saltwater are in direct contact in this northwestern portion of Harrison County.

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

20" conductor will be pre-set prior to start of operations and cemented in place to surface at approximately 100ft. A 17 ½" surface hole will be drilled with fresh water to approximately **850'md/tvd**. 13 3/8" surface casing will be installed and cemented to surface in order to isolate fresh water zones and provide a competent shoe for well control while drilling deeper horizons. A 12 ¼" intermediate hole section will be drilled with 5% KCL Polymer (WBM) and a conventional mud motor to approximately **2900'md/tvd** through the base of the Big Injun formation. 9 5/8" Intermediate casing will be installed and cemented to surface in order to isolate the Red Beds and Big Injun formation from lower hydrocarbon bearing zones while providing a competent shoe for well control. An 8 ½" vertical hole section will be to planned kick-off point using Synthetic Based Mud (SBM) and a conventional mud motor. The wellbore will be deviated from vertical and landed horizontally in the Marcellus Target horizon, and extended laterally to total depth of **14,200' MD/7651'** VD using SBM and conventional mud motors. A 5 ½" production casing will be installed and cemented so estimated top of cement is at least 300ft inside the previous casing shoe. The Drilling Rig will then be released to the next well.

23) Describe centralizer placement for each casing string

Surface - 1 centralizer w/ stop collar 10 ft above float shoe. One Single Bow every joint to 100ft below surface.

Intermediate – 1 centralizer w/ stop collar 10 ft above float shoe. 1 centralizer w/ stop collar 10 ft above float collar. 1 centralizer every joint for the first 15 joints. One centralizer every 3 jnts to 100ft below surface.

Production - 1 centralizer w/ stop collar 10ft above shoe. 1 centralizer 10ft above float collar. 1 centralizer every joint (floating) until KOP. 1 centralizer every 3 joints (floating) until 200ft inside intermediate shoe. 1 centralizer 50ft below mandrel hanger.

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

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

Surface - Class A + 3% CaCl2

Intermediate - Class A cmt, 0.05% Retarder, 0.25% Defoamer, 1% Accelerator, 0.25% Dispersant, 0.65% Retarder, 9.10 gal/sk Fresh Water.

Production - Class A cmt, 10% bwow Dispersent, 0.6% bwoc Fluid Loss, 0.4% bwoc Retarder, 0.1% bwoc Free water control agent, 0.25% bwoc Defoamer, 0.1% bwoc Fluid Loss, 6.32 gal/sk Fresh Water.

4703305864

CEMENT ADDITIVES

Surface - Class A + 3% $CaCl_2$

Intermediate - Class A cmt, 0.05% Retarder, 0.25% Defoamer, 1% Accelerator, 0.25% Dispersant, 0.65% Retarder, 9.10 gal/sk Fresh Water.

Production - Class A cmt, 10% bwow Dispersent, 0.6% bwoc Fluid Loss, 0.4% bwoc Retarder, 0.1% bwoc Free water control agent, 0.25% bwoc Defoamer, 0.1% bwoc Fluid Loss, 6.32 gal/sk Fresh Water.

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

Marcellus - Drilling Well Schematic

4703305864

Well Name:	Goodwin 1-2H		GLE (ft): 1,362	TVD(ft): 7,651	
Field Name:	Marcellus		DF(ft): 22	TMD(ft): 14,200	
County:	Harrison Co., WV	BHL:	X = 4355976.0	Y= 542776.3	Profile: Horizontal
API #:	0	SHL:	X = 4357986.6	Y= 542114.3	AFE No.: 0

Formations & Csg Points	Depth, ft MD	TVD	SS	Form. Temp. (F)	Pore Press. (EMW)	Frac Gradient (EMW)	Planned MW	Measure Depth (ft)
Conductor	*100*	*100*	*1,284*	-	-	-	-	100
							Fresh Water	
Pittsburgh Coal		0					8.6	
Red Clay		0						
Approximate Fresh Water Strata ~732'								
							8.6	
Casing Point	*850*	*850*	*534*	*65*	-	-		850
							5% KCl	
							9.1	
1st Salt Sand		0						
2nd Salt Sand		0						
3rd Salt Sand		0		-	-	-		
Maxton Sand		0						
Keener Sand		0						TOC @ 2000' MD
Big Lime		0						
Big Injun		2,404						
Berea Sand		2,789					9.1	
Casing Point	*2,900*	*2,900*	*-1,516*	*82*	-	*>18.0*		2,900
Gordon Sand		3,174					*SBM*	
							8.6	
							8.6	
Java		5,504					8.6	
							8.6	
Angola		0					8.6	
							8.6	
Rhinestreet		0					8.6	
							8.6	
Cashaqua		0					8.6	
							8.6	
Middlesex		0					8.6	
							12.0	
KOP	**7,086**	**7,078**						
West River		7,384						
Genesco		0			-	-	12.0	
Marcellus		7,604						
Cherry Valley		7,689			-	-	12.0	
					-	-	12.0	
Landing point	**7,987**	**7,651**						
							12.0	
Onondaga		7,700			-	-		
					-	-		

Program	Details
20" Conductor	
17-1/2" Surface	
Profile:	Vertical
Bit Type:	17-1/2" PDC
BHA:	Rotary Assembly
Mud:	8.6 ppg Fresh Water
Surveys:	n/a
Logging:	n/a
Casing:	13.375 54.5 J-55 BTC at 850' MD/850' TVD
Centralizers:	1 centralizer w/ stop collar 10 ft above float shoe. One Single Bow every joint to 100ft below surface.
Cement:	15.8 ppg Tail slurry w/ TOC @ Surface
Potential Drilling Problems:	Stuck Pipe, Floating, Collision,
FIT/LOT: 14.0 ppg EMW	**12-1/4" Intermediate**
Profile:	Vertical
Bit Type:	12-1/4" Kymera 0
BHA:	Bin 6:7 Lobe 4.0 Stg 1.5 ABH (0.17 rpg/620 Diff) 0
Mud:	9.1 ppg 5% KCl
Surveys:	Gyro SS, MWD - EM Pulse
Logging:	n/a
Casing/Liner:	9.625 36 J-55 BTC at ' MD/' TVD
Csg Hanger:	Mandrel Hanger
Centralizers:	1 centek centralizer w/ stop collar 10 ft above float shoe. 1 centek centralizer w/ stop collar 10 ft above float collar. 1 centralizer every joint for the first 15 joints. One centralizer every 3 jnts to 100ft below surface.
Cement:	15.8 ppg Tail slurry w/ TOC @ Surface
Potential Drilling Problems:	Hole Cleaning , Poor ROP, Buckling,
FIT/LOT: 15.8 ppg EMW	**8-1/2" Production**
Profile:	
Bit Type:	8-1/2" PDC 0
BHA:	6.75in 6/7 lobe 5.0 stg 1.95 FBH .29 rpg 715 DIFF 0
Mud:	12 ppg SBM
Surveys:	MWD - EM Pulse w/ 30ft surveys in curve, 100ft surveys in lateral
Logging:	GR
Casing/Liner:	5.5 20 P110EC VAM TOP HT at ft MD/ ft TVD
Csg Hanger:	Mandrel Hanger
Centralizers:	1 centek centralizer w/ stop collar 10ft above shoe. 1 centek centralizer 10ft above float collar. 1 centek centralizer every joint (floating) until KOP. 1 centek centralizer every 3 joints (floating) until 200ft inside intermediate shoe. 1 centek centralizer 50ft below mandrel hanger.
Cement:	15 ppg Tail slurry w/ TOC @ 2000' MD'
Potential Drilling Problems:	Bit Preservation, Hole Cleaning,
Notes / Comments:	

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

TMD: 14,200
TVD: 7,651

Last Revision Date:	10/28/2014	**Note: Depths are referenced to RKB**	**Cement Outside Casing**
Revised by:	TB Gilbert	**Note: Not Drawn to Scale**	

Goodwin 1-2H_Well Schematic_Detail Summary

WW-9
(9/13)

API Number 47 - _____ - 4703305864
Operator's Well No. Goodwin 1-2H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Statoil USA Onshore Properties Inc. OP Code 494505083

Watershed (HUC 10) McIntire Fork of Rockcamp Run Quadrangle Salem 7.5'

Elevation 1362' County Harrison District Sardis

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

Will a pit be used? Yes ☐ No ☑

SDW 11/17/2014

If so, please describe anticipated pit waste: _____

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 _____)
- _____ Off Site Disposal (Supply form WW-9 for disposal location)
- _____ Other (Explain _____

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air/Fresh Water-vert. sec/oil based mud for horiz sec

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

Additives to be used in drilling medium? emulisifier, food grade oil, barite, surfactant, calcium carbonate, gilsonite, lubricant, graphite, lime

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) NA

-Landfill or offsite name/permit number? Wetzel County Landfill

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

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

Company Official Signature Bekki Winfree

Company Official (Typed Name) Bekki Winfree

Company Official Title Sr. Regulatory Advisor

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of Environmental Protection

Subscribed and sworn before me this 23 day of October, 20 14

Wally Anthony Stuka Notary Public

My commission expires April 16, 2017

WALLY ANTHONY STUKA
My Commission Expires
April 16, 2017

4703305864

Form WW-9

Operator's Well No. Goodwin 1-2H

Statoil USA Onshore Properties Inc.

Proposed Revegetation Treatment: Acres Disturbed 19.4 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-10

Fertilizer amount 100 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
OATS	168	KY-31 TALL FESCUE	50
RYE	120		

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. M. DeWonette

Comments: Re-seed/mulch all disturbed areas as soon as reasonably possible per regulation. Upgrade E+S as needed per WV DEP E+S manual

RECEIVED
Office of Oil and Gas
DEC 1 [illegible]
WV Dep[illegible]
Environmental [illegible]n

Title: Oil + Gas Inspector Date: 11/17/2014

Field Reviewed? (X) Yes ( ) No

4703305864

Statoil

Goodwin 1 Site Safety Plan

Statoil USA Onshore Properties, Inc.

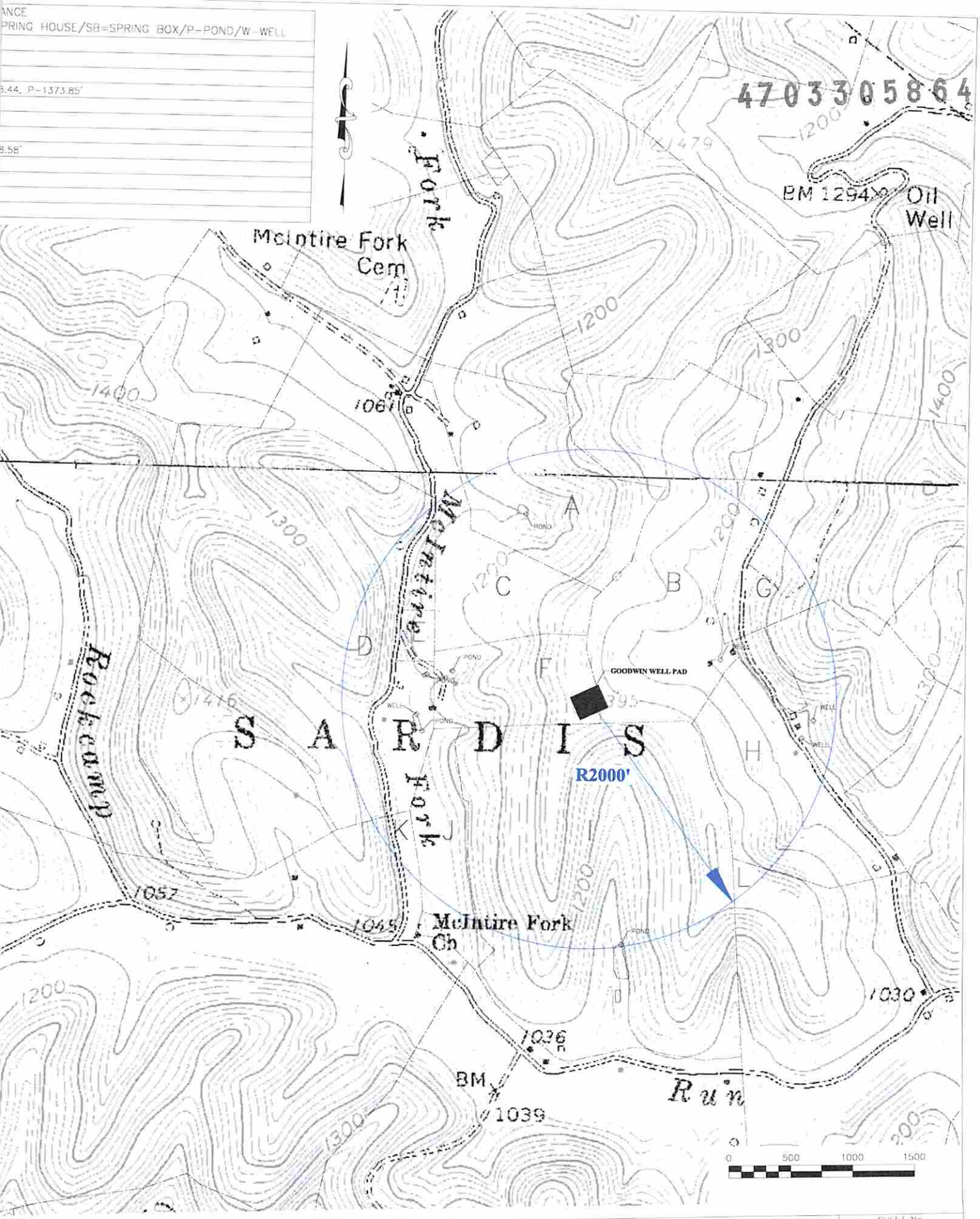
SDW
11/19/2014

RECEIVED
Office of Oil and Gas
DEC 1 0 2014
WV Department of
Environmental Protection

ANCE
PRING HOUSE/SB=SPRING BOX/P-POND/W-WELL

3.44, P-1373.85'

3.58'



THRASHER
THE THRASHER GROUP INC.
CIVIL • ENVIRONMENTAL • CONSULTING • FIELD SERVICES
600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
PHONE (304) 624-4108 • FAX (304) 624-7831

PHASE No.	STATOIL USA ONSHORE PROPERTIES, INC. POTENTIAL WATER SOURCES FOR THE GOODWIN WELL PAD HARRISON COUNTY, WEST VIRGINIA	SHEET No.
CONTRACT No.		
PROJECT No. 101-030-2633		

FORM WW-6

STATOIL – GOODWIN #1-2H

NOTES:
PLAT BASED ON NAD 2011 (CORS) WV STATE PLANE NORTH. GRID NORTH ELEVATIONS BASED ON GEOID 2012A. US SURVEY FEET UNLESS SHOWN OTHERWISE.

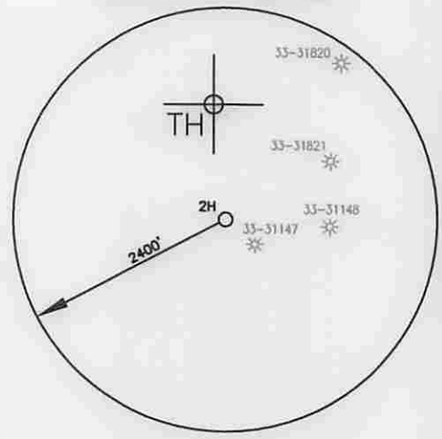
–THERE ARE NO (0) WATER WELL(S) LOCATED WITHIN 250' OF WELL 2HM.

–THERE ARE NO (0) DWELLINGS OR AGRICULTURAL STRUCTURES USED FOR HOUSING LIVESTOCK WITHIN 625' OF WELL 2HM.

–THE LEASE BOUNDARIES SHOWN FROM DATA PROVIDED BY STATOIL NORTH AMERICA, INC.

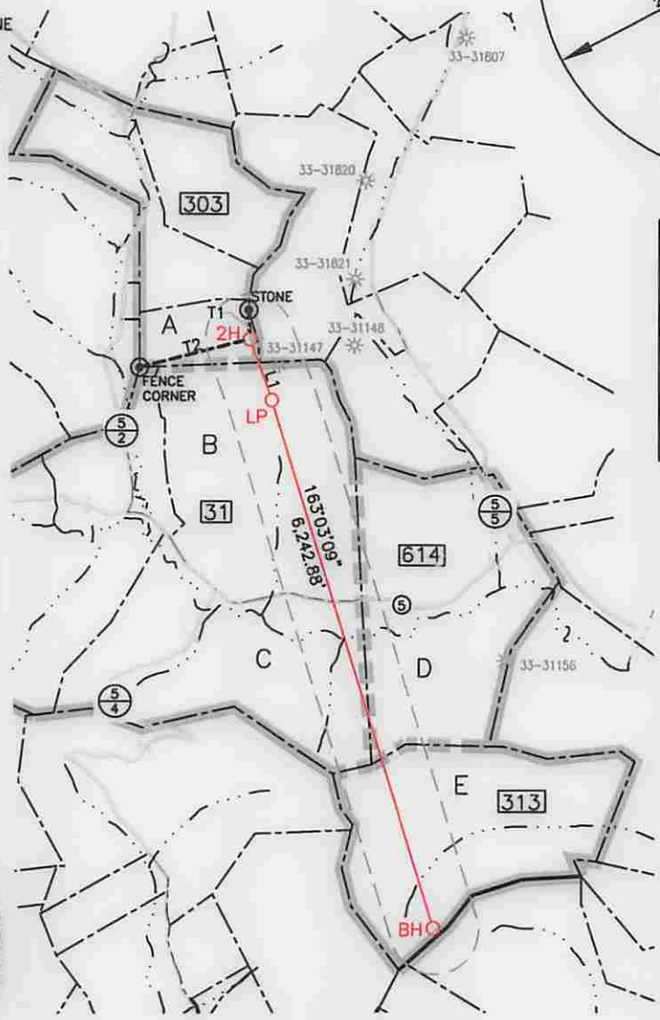
L/N	GOODWIN #1-2H MINERAL OWNERS
303	DEBORAH STAHL, ET.AL. LEASE
31	LAURA GOFF DAVIS, ET.AL. LEASE
614	CHARLES O. CONWAY, ET.AL. LEASE
313	MIKE ROSS, ET.AL. LEASE

3,139' TOP HOLE
998' BOTTOM HOLE
LATITUDE 39° 22' 30"
LONGITUDE 80° 30' 00"
8,358' BOTTOM HOLE
1,721' TOP HOLE



PROPERTY LINE
SURVEYED PROPERTY LINE
WELL REFERENCE LINE
500' BUFFER
OUTER LEASE BOUNDARY
INNER LEASE BOUNDARY
ROADS
EXISTING STREAM
EXISTING GAS WELLS
COUNTY ROADS
PROPERTY FEATURE
MINERAL OWNER

TH BH
DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAP

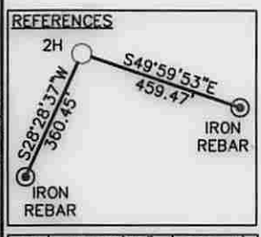


WELL NO. 2H
TOP HOLE
STATE PLANE COORDINATES
(NORTH ZONE–NAD 83–METER)
N:97110.2
E:512877.6
GEO: LAT:39°22'13.1"
LON:80°30'39.9"
UTM COORDINATES–ZONE17
(NAD 83–METER)
N:4357986.5
E:542114.2

WELL NO. 2H
LANDING POINT
STATE PLANE COORDINATES
(NORTH ZONE–NAD 83–METER)
N:96900.2
E:512954.1
GEO: LAT:39°22'06.4"
LON:80°30'36.6"
UTM COORDINATES–ZONE17
(NAD 83–METER)
N:4357777.9
E:542194.2

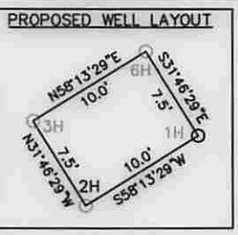
WELL NO. 2H
BOTTOM HOLE
STATE PLANE COORDINATES
(NORTH ZONE–NAD 83–METER)
N:95080.0
E:513508.8
GEO: LAT:39°21'07.5"
LON:80°30'12.6"
UTM COORDINATES–ZONE17
(NAD 83–METER)
N:4355967.8
E:542779.0

REFERENCES



L1	159°59'39"	733.46'
T1	S02°14'47"E	324.26'
T2	N75°28'30"E	1286.27'

PROPOSED WELL LAYOUT



	TM	PAR	SURFACE OWNER	ACRES
A	202	24	JOY LEE HANNA	20.5
B	222	2.11	FRANK SWIGER	122.9
C	222	2.2	MICHAEL & GAIL SWIGER	141.3
D	223	1	DAVID DAVIS, LEOMI POLING, & SHIRLEY KIGHT	127.4
E	223	12	ROSSCO LLC	115.8

MICHAEL S. WOLF LICENSED No. 2270 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

10/22/14
Michael S. Wolf, P.S. 2270

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

FILE NO. 030-2633
SCALE: 1"=2000'
MINIMUM DEGREE OF ACCURACY: 1 in 2500
PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL & GAS

DATE OCTOBER 22 ,2014
OPERATOR'S WELL NO. GOODWIN #1-2H
API WELL NO.
47 - 033 - 05864 Hor
STATE COUNTY PERMIT

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ (IF "GAS"), PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒
LOCATION: EXISTING ELEVATION: 1,391.34' PROPOSED ELEVATION: 1,362.00' WATER SHED: McINTIRE FORK OF ROCKCAMP RUN
DISTRICT: SARDIS COUNTY: HARRISON
QUADRANGLE: SALEM 7.5' ACREAGE: 20.5 AC±
SURFACE OWNER: JOY LEE HANNA LEASE ACREAGE: 527.9 AC+
OIL & GAS ROYALTY OWNER(S): LAURA GOFF DAVIS, ET.AL LEASE/CHARLES O. CONWAY, ET.AL LEASE
MIKE ROSS, ET.AL LEASE/DEBORAH STAHL, ET.AL LEASE LEASE NO. 303/31/614/313
PROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒
PERFORATE NEW FORMATION ☐ PLUG OFF OLD FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION: MARCELLUS SHALE ESTIMATED DEPTH: 7,651' TVD / 14,200' MD

THRASHER
THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

WELL OPERATOR: STATOIL USA ONSHORE PROPERTIES INC.
ADDRESS: 2103 CITYWEST BLVD. STE. 800
HOUSTON, TX 77042
DESIGNATED AGENT: RICHARD PYLES
ADDRESS: 803 NASH ROAD
MIDDLEBOURNE, WV 26149

CAD FILE: L:\030-2633 – Statoil – Goodwin Well Pad\Survey\Goodwin Well Plats.dwg PLOT DATE/TIME: 10/22/2014 – 12:42pm LAYOUT: 2HM USER: elytle

WW-6A1
(5/13)

Operator's Well No. Goodwin #1H 4703305864

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 Attachment for Details)			

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

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

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

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

Well Operator: Statoil USA Onshore Properties Inc.
By: Bekki Winfree
Its: Sr. Regulatory Advisor

Form WW-6A-1 - Preliminary Information: (Attachment)

4 4 3 0 5 8 6 4

Goodwin #1-2H

NOTE: All Mineral / Unit Tracts are identified on the Well Plat in Order from Top Hole to Bottom Hole.

TRACT #303

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000115945-072	Deborah Stahl, a married Woman dealing in her sole and separate property	PetroEdge Energy, LLC	At Least 1/8	1509/538
000115945-001	John David Ritter, a married man dealing in his sole and separate property	PetroEdge Energy, LLC	At Least 1/8	1484/603
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties Inc.	Assignment	1503/526

TRACT #31

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000103322-002	Wilma R. Goodwin By her AIF, Ronald W. Goodwin	Devonian Gas Production, Inc.	At Least 1/8	1377/632
000103322-003	Laura Goff Davis, single	Devonian Gas Production, Inc.	At Least 1/8	1377/627
N/A	Devonian Gas Production Inc.	Energy Production Inc.	Assignment	1397/1053
N/A	Energy Production Inc.	PetroEdge Energy, LLC	Assignment	35/94
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties Inc.	Assignment	1503/526

TRACT #614

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000144944-001	Margaret Conaway Torok	PetroEdge Energy, LLC	At Least 1/8	1512/11
000144944-002	Charles O. Conaway	PetroEdge Energy, LLC	At Least 1/8	1512/13
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties, Inc.	Assignment	1503/526

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

4703908

TRACT #313

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000157937-002	Mike Ross, Inc.	PetroEdge Energy, LLC	At Least 1/8	1516/1101
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties, Inc.	Assignment	1525/1303

RECEIVED
Office of Oil and Gas

DEC 10 2014

WV Department of
Environmental Protection

GOODWIN 1-2: Road Crossing Letters 47 0 3 3 0 5 8 6 4

TR 303 (pad site) – complete

TR 31 – complete

TR 614 – complete

TR 313 – complete

RECEIVED
Office of Oil and Gas

DEC 1 0 2014

WV Department of
Environmental Protection

BURNETT & THOMASON
ATTORNEYS & COUNSELORS AT LAW

OIL, GAS & MINERAL LAW

6017 W. MAIN STREET
FRISCO, TEXAS 75034
TEL: 214.472.2880
FAX: 972.418.9931
www.btenergylaw.com

4703305864

February 25, 2013

Davisson
303

PetroEdge Energy LLC
4477 Williamstown Pike
Williamstown, WV 26187

Attention: Mr. Joshua S. Ozment

Re: Robert Sterling Rogers, et al 87.276 Acre Tract out of Sardis District in Harrison County, West Virginia (Tax Parcel Nos. 14-202-16, 14-202-24 and part of 14-202-15)

ORIGINAL DRILLING TITLE OPINION

DESCRIPTION OF LANDS

Tax Parcel Nos. 14-202-16, 14-202-24 and part of 14-202-15, containing 87.276 acres, more or less, out of Sardis District in Harrison County, West Virginia, described in three (3) tracts as follows:

TRACT ONE: Tax Parcel No. 14-202-16, containing 43.28 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being all of 87.28 acres, more or less, described in a Deed, dated October 1, 1990, from Delbert R. Ash and wife, Ellen Lurae Ash, to David W. Edgell and wife, Regina L. Edgell, recorded in Book 1212, Page 744, Office of the Clerk of the County Commission, Harrison County, West Virginia SAVE AND EXCEPT (1) 20.476 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being the same land described as the Third Tract in a Deed, dated October 2, 1997, from Steven Mark Amos to Joy Lee Hanna, recorded in Book 1298, Page 115, Office of the Clerk of the County Commission, Harrison County, West Virginia and (2) 23.52 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being the same land described as Tract Nos. 3 and Tract No. 4 in a Deed, dated July 12, 1989, from Bernard Layfield to Richard Eugene Davisson and wife, Carolyn Sue Davisson, recorded in Book 1196, Page 939, Office of the Clerk of the County Commission, Harrison County, West Virginia, leaving 43.28 acres, more or less.

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

25. Copy of an unrecorded Oil and Gas Lease, dated March 30, 2012, from Charlene I. Ritter to PetroEdge Energy LLC, a Memorandum of which is recorded in Book 1487, Page 242, Office of the Clerk of the County Commission, Harrison County, West Virginia;

26. Copy of an unrecorded Oil and Gas Lease, dated April 9, 2012, from Brenda Louise Hannah to PetroEdge Energy LLC, a Memorandum of which is recorded in Book 1489, Page 106, Office of the Clerk of the County Commission, Harrison County, West Virginia;

27. Copy of an unrecorded Oil and Gas Lease, dated April 13, 2012, from William K. Gifford and DonnaJean P. Gifford, trustees of Gifford Living Trust, dated March 10, 2009, to PetroEdge Energy LLC, a Memorandum of which is recorded in Book 1489, Page 969, Office of the Clerk of the County Commission, Harrison County, West Virginia;

28. Copy of an unrecorded Oil and Gas Lease, dated May 8, 2012, from Betty Ann Miller to PetroEdge Energy LLC, a Memorandum of which is recorded in Book 1493, Page 248, Office of the Clerk of the County Commission, Harrison County, West Virginia; and

29. Copies of various plats provided by S. A. Property Research, L.L.C.'s field landman covering the Subject Lands.

THE HEREINBELOW STATED OWNERSHIP INTERESTS AS SET FORTH IN THE OWNERSHIP SECTION HEREOF ARE EXPRESSLY SUBJECT TO THE COMMENTS, REQUIREMENTS AND LIMITATIONS SET FORTH HEREINBELOW. THIS OPINION IS RENDERED AS A COMPLETE DOCUMENT AND NO SEPARATE PART HEREOF SHOULD BE RELIED UPON TO THE EXCLUSION OF ANY OTHER PORTION HEREOF. THEREFORE, THIS OPINION SHOULD BE CONSIDERED IN ITS ENTIRETY.

OWNERSHIP

Based upon our examination of the materials referenced above, and subject to the comments, requirements, and limitations hereinafter set forth, we find title to the Subject Lands vests, as of January 10, 2013, as follows:

STATE OF WEST VIRGINIA OWNERSHIP UNDER PUBLIC ROADS

Based on the Materials Examined, the State of West Virginia is not vested with any interest in the oil and gas executive rights and mineral fee and the oil and gas royalty in and under any public roads located within the boundary of the Subject Lands.

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

BURNETT & THOMASON
ATTORNEYS & COUNSELORS AT LAW

4703305864

OIL, GAS & MINERAL LAW

6017 W. MAIN STREET
FRISCO, TEXAS 75034
TEL: 214.417.2880
FAX: 972.418.1931
www.btenergylaw.com

September 18, 2012

Harrison
Index # 31

PetroEdge Energy LLC
4477 Williamstown Pike
Williamstown, WV 26187

Attention: Mr. Joshua S. Ozment

Re: Wilma R. Goodwin, et al 229.25 Acre Tract out of Sardis District in Harrison County, West Virginia (Tax Parcel Nos. 14-222-2.2 and part of 14-222-2.11)

ORIGINAL DRILLING TITLE OPINION

DESCRIPTION OF LANDS

229.25 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being the same land described as Tract No. 2 in a Deed, dated December 7, 1999, from Steven J. Stoeger-Moore and wife, Gail M. Moore, to Michael D. Swiger and wife, Gail M. Swiger, and Frank B. Swiger, recorded in Book 1316, Page 615, Office of the Clerk of the County Commission, Harrison County, West Virginia, and being more particularly described in two tracts as follows:

TRACT ONE: Tax Parcel No. 14-222-2.2, containing 141.32 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being all of 229.25 acres, more or less, described as Tract No. 2 in a Deed, dated December 7, 1999, from Steven J. Stoeger-Moore and wife, Gail M. Moore, to Michael D. Swiger and wife, Gail M. Swiger, and Frank B. Swiger, recorded in Book 1316, Page 615, Office of the Clerk of the County Commission, Harrison County, West Virginia, SAVE AND EXCEPT that portion of 122.93 acres, more or less, out of Sardis District in Harrison County, West Virginia, described in a Deed, dated July 8, 2005, from Michael D. Swiger and Gail M. Swiger to Frank B. Swiger, recorded in Book 1377, Page 1146, Office of the Clerk of the County Commission, Harrison County, West Virginia, that lies within the boundary of Tract Two of the Subject Lands.

TRACT TWO: Part of Tax Parcel No. 14-222-2.11, containing 87.93 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being that portion of 87.93 acres, more or less, out of Sardis District in Harrison County, West Virginia, described in a Deed, dated July 8, 2005, from Michael D. Swiger and Gail M. Swiger to Frank B. Swiger, recorded in Book

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

4703305864

36. Copy of an Amendment and Ratification of Oil and Gas Lease, dated July 19, 2010, from H. Dotson Cather, Trustee of the Diana Goff Cather "C" Trust, to Energy Production, Inc., recorded in Book 1456, Page 456, Office of the Clerk of the County Commission, Harrison County, West Virginia;

37. Copy of an Amendment and Ratification of Oil and Gas Lease, dated September 15, 2010, from JPMorgan Chase Bank, N.A., Trustee of the S. A. Smith and C. Burke Morris Trust, to Energy Production, Inc., recorded in Book 1456, Page 460, Office of the Clerk of the County Commission, Harrison County, West Virginia; and

38. Copies of various plats provided by S. A. Property Research, L.L.C.'s field landman covering the Subject Lands.

THE HEREINBELOW STATED OWNERSHIP INTERESTS AS SET FORTH IN THE OWNERSHIP SECTION HEREOF ARE EXPRESSLY SUBJECT TO THE COMMENTS, REQUIREMENTS AND LIMITATIONS SET FORTH HEREINBELOW. THIS OPINION IS RENDERED AS A COMPLETE DOCUMENT AND NO SEPARATE PART HEREOF SHOULD BE RELIED UPON TO THE EXCLUSION OF ANY OTHER PORTION HEREOF. THEREFORE, THIS OPINION SHOULD BE CONSIDERED IN ITS ENTIRETY.

OWNERSHIP

Based upon our examination of the materials referenced above, and subject to the comments, requirements, and limitations hereinafter set forth, we find title to the Subject Lands vests, as of March 21, 2012, as follows:

STATE OF WEST VIRGINIA OWNERSHIP UNDER PUBLIC ROADS

Based on the Materials Examined, the State of West Virginia is not vested with any interest in the oil and gas executive rights and mineral fee and the oil and gas royalty in and under any public roads located within the boundary of the Subject Lands.

SURFACE OWNERSHIP

As to Tract One of the Subject Lands:

1. Michael D. Swiger
   (1/2)

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

26pgs

RADCLIFF PLLC

4703305864

Patrick N. Radcliff
Attorney at Law
1211 10th St.
Vienna, WV 26105

Patrickradcliff@hotmail.com
304-295-6027

Date: July 17, 2013

PetroEdge Energy LLC
c/o Josh Ozment
4477 Williamstown Pike
Williamstown, WV 26187

Harrison
Index #614

RE: Arnold L. Schulberg, et al, leases
129.05 acres, Sardis District / 14-223-1, 1.1, 4.1.2
Harrison County, WV

TITLE OPINION

Dear Mr. PetroEdge:

I do hereby certify that I have made a personal examination of copies of records contained in the Office of the Clerk of the County Commission of Harrison County, West Virginia, and the Sheriff's Office of Harrison County, West Virginia, which records were delivered to me by your agents, and I have personally examined the indexes to such records maintained by said Clerk's Office and based upon such examination, assuming the accuracy of said copies and subject to the accuracy of the indexes to such records and further subject to the matters set forth herein and to any state of facts not appearing of record, I hereby certify that I have examined the title upon the above-referenced property and report the following state of title:

1. LEASEHOLD ESTATE

A. DESCRIPTION OF SUBJECT LEASES

1. Memorandum of Lease dated March 27, 2013, being of record May 7, 2013, in the Office of the Clerk of the County Commission in Deed Book 1511 at page 624 by and between Arnold L. Schulberg, Lessor, and Petroedge Energy,LLC, Lessee, giving notice of a lease dated March 27, 2013, upon a tract of 129.58 acres with a reference to Tax Map page 14 parcel 223-1 & 223-1.1, and reference to Deed Book 1293 Page 551, Francis Davis to David Lee Davis, situate in Sardis District, Harrison County, bounded as follows:

On the North by lands of West Edward Williams, Roger Quicklie, et al;
On the East by lands of Frank B. Swiger, Michael Swiger;
On the South by lands of Rossco LLC;
On the West by lands of Ronald Davisson, et al

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

E. LIENS AND ENCUMBRANCES

2013 Real Property Taxes on the owners of the oil and gas as hereinafter described .

F. RIGHTS OF WAY AND EASEMENTS

1. Right of way dated June 27, 1911 of record in Deed Book 200 at page 435, made by Maggie McIntire to The Philadelphia Company for a 8 inch gas pipeline 1091 feet in distance entering from the north on a line of S. 50 E. to the line of Nathan B. Goff.

2. Right of way dated January 20, 1914, of record in Deed Book 228 at page 201, made by Maggie McIntire to The Eureka Pipeline Company for a oil pipeline.

3. Right of way dated January 20, 1914, of record in Deed Book 228 at page 228, made by Maggie McIntire to The Eureka Pipeline Company for a 4 inch oil pipeline.

4. Right of way dated January 28, 1914, of record in Deed Book 228 at page 229, made by Maggie McIntire to The Eureka Pipeline Company for a 3 inch oil pipeline.

5. Right of way dated March 18, 1914, of record in Deed Book 232 at page 56, made by Maggie McIntire to The Eureka Pipeline Company for a oil pipeline.

G. OWNERSHIP OF OIL AND GAS UNDERLYING STATE ROADS

No conveyances of the oil and/or gas to the State of West Virginia were found during the period of certification. Therefore, the State owns no interest in the oil and/or gas underlying any road that exists upon the subject tract.

H. OWNERSHIP OF SUBJECT LEASEHOLD ESTATE

Petroedge Energy, LLC owns 100% of the oil and gas leasehold estate created by the subject leases subject to the limitations and requirements set forth herein.

2. OIL AND GAS INTERESTS

A. DESCRIPTION OF REAL ESTATE

Please refer to the above real estate descriptions in Part 1. B.

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

BURNETT & THOMASON
ATTORNEYS & COUNSELORS AT LAW

4703305864

OIL, GAS & MINERAL LAW

6017 W. MAIN STREET
FRISCO, TEXAS 75034
TEL: 214.417.2880
FAX: 972.418.1931
www.btenergylaw.com

February 20, 2013

Harrison #313

PetroEdge Energy LLC
4477 Williamstown Pike
Williamstown, WV 26187

Attention: Mr. Joshua S. Ozment

Re: Mike Ross, Inc. 115.75 Acre Tract out of Sardis District in Harrison County, West Virginia (Tax Parcel No. 14-223-12)

ORIGINAL DRILLING TITLE OPINION

DESCRIPTION OF LANDS

Tax Parcel No. 14-223-12, containing 115.75 acres, more or less, out of Sardis District in Harrison County, West Virginia, and being the same lands described in a Deed, dated July 10, 1956, from D. Perry Moore and wife, Juanita Moore, to Stewart McReynolds, recorded in Book 780, Page 193, Office of the Clerk of the County Commission, Harrison County, West Virginia, hereinafter referred to as the "Subject Lands." The Subject Lands are shown on the plat attached hereto as Exhibit "A."

MATERIALS EXAMINED

1. Title Runsheet, dated December 14, 2012, prepared by S. A. Property Research, L.L.C. for PetroEdge Energy LLC covering the Subject Lands for the period from March 3, 1868 through and including December 14, 2012 in Harrison County, West Virginia (the "Title Runsheet");

2. The public records of Harrison, West Virginia ("Records") for the period from March 3, 1868 through and including December 14, 2012, but only insofar as the same includes those documents set forth on the above described Title Runsheet as they pertain to the Subject Lands;

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

4703305864

3. Copy of a Tax Ticket, undated, issued by the Harrison County Sheriff's Tax Office, Harrison County, West Virginia, relative to the interest of ROSSCO LIMITED LIABILITY COMPANY, covering PARCEL: 14-223-0012-0000-0000, as same pertains to the Subject Lands;

4. Copy of an unrecorded Oil and Gas Lease, dated August 6, 2012, from John F. Dye, Jr. to PetroEdge Energy LLC, a Memorandum of which is recorded in Book 1499, Page 68, Office of the Clerk of the County Commission, Harrison County, West Virginia; and

5. Copies of various plats provided by S. A. Property Research, L.L.C.'s field landman covering the Subject Lands.

THE HEREINBELOW STATED OWNERSHIP INTERESTS AS SET FORTH IN THE OWNERSHIP SECTION HEREOF ARE EXPRESSLY SUBJECT TO THE COMMENTS, REQUIREMENTS AND LIMITATIONS SET FORTH HEREINBELOW. THIS OPINION IS RENDERED AS A COMPLETE DOCUMENT AND NO SEPARATE PART HEREOF SHOULD BE RELIED UPON TO THE EXCLUSION OF ANY OTHER PORTION HEREOF. THEREFORE, THIS OPINION SHOULD BE CONSIDERED IN ITS ENTIRETY.

OWNERSHIP

Based upon our examination of the materials referenced above, and subject to the comments, requirements, and limitations hereinafter set forth, we find title to the Subject Lands vests, as of December 14, 2012, as follows:

STATE OF WEST VIRGINIA OWNERSHIP UNDER PUBLIC ROADS

Based on the Materials Examined, the State of West Virginia is not vested with any interest in the oil and gas executive rights and mineral fee and the oil and gas royalty in and under any public roads located within the boundary of the Subject Lands.

SURFACE OWNERSHIP

1. Rossco Limited Liability Company (63/64) 98437500

2. Heirs or Devisees of Christopher McClelland Keller, deceased (1/64) 01562500

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

4703305864

WW-6AC
(1/12)

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

Date of Notice Certification: 12/02/2014

API No. 47- _____ - _____
Operator's Well No. Goodwin 1-2H
Well Pad Name: Goodwin 1

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

State:	West Virginia	UTM NAD 83	Easting:	512877.6 m
County:	Harrison		Northing:	97110.2 m
District:	Sardis	Public Road Access:		Rockcamp Run 5
Quadrangle:	Salem 7.5'	Generally used farm name:		Goodwin Farm
Watershed:	McIntire Fork of Rockcamp Run			

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

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

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

WW-6AC
(1/12)

4703305864

Certification of Notice is hereby given:

THEREFORE, I Bekki Winfree, 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:	Statoil USA Onshore Properties Inc.	Address:	2103 City West Boulevard, Suite 800
By:	Bekki Winfree/		Houston, TX 77042
Its:	Sr. Regulatory Advisor	Facsimile:	713-918-8290
Telephone:	713-485-2640	Email:	BEKW@Statoil.com

NOTARY SEAL
WALLY ANTHONY STUKA
My Commission Expires
April 16, 2017

Subscribed and sworn before me this 2 day of December.

Wally Anthony Stuka Notary Public

My Commission Expires April 16, 2017

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 10 2014
WV Department of
Environmental Protection

WW-6A
(9-13)

API NO. 47-_____-_____
OPERATOR WELL NO. 1-2H
Well Pad Name: Goodwin

4703305864

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

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

Date of Notice: 10/292014 **Date Permit Application Filed:** 11/07/2014

Notice of:

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

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

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

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

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

☑ SURFACE OWNER(s)
Name: Joy Lee Hanna
Address: 6691 Rock Camp Road
Wallace, WV 26448-9722
Name: Frank "Bart" Swiger
Address: 6455 Rock Camp Road
Wallace, WV 26448-8680

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

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

☑ COAL OWNER OR LESSEE
Name: John Frederick Dye, Jr.
Address: 61 Vista Montana Road
Estancia, NM 87016

☐ COAL OPERATOR
Name: _____
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: David & Regina Edgell
Address: 796 McIntyre Fork Road
Wallace, WV 26448

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

*Please attach additional forms if necessary

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of Environmental Protection

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. 1-2H
Well Pad Name: Goodwin

4703305864

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

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

API NO. 47-_____-_____
OPERATOR WELL NO. 1-2H
Well Pad Name: Goodwin

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.

4703305864

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

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

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

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

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

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

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

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. 1-2H
Well Pad Name: Goodwin

4703305864

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.

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. 1-2H
Well Pad Name: Goodwin

4703305864

Notice is hereby given by:

Well Operator: Statoil USA Onshore
Telephone: 713-918-8200
Email: BEKW@Statoil.com

Address: 2103 CityWest Blvd., Building 4, Suite 800
Houston, Texas 77042
Facsimile: 913-918-8290

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.

WALLY ANTHONY STUKA
My Commission Expires
April 16, 2017

Subscribed and sworn before me this 10 day of November 2014.

Wally Anthony Stuka Notary Public

My Commission Expires April 16, 2017

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

4703305864

Statoil

October 29, 2014

Re: WW6A – Notice of Application - Goodwin 1-1H, 1-2H, 1-3H and 1-6H wells

To Whom it May Concern:

Pursuant to West Virginia Code §22-6A-10(b), Statoil USA Onshore Properties Inc. hereby provides you with the Notices of Application (4 total). This notice is in reference to the wells on the Goodwin 1 well pad: 1-1H, 1-2H, 1-3H and 1-6H. The well site is located on your property in Harrison County, WV.

Included with this letter you will find:

- West Virginia DEP form WW-6A Notice of application
    - Goodwin 1-1H
    - Goodwin 1-2H
    - Goodwin 1-3H
    - Goodwin 1-6H
- A copy of Statoil's erosion and sediment control plan for the Goodwin 1 well pad
- A copy of Statoil's Goodwin 1 Site Safety Plan
- A copy of the Goodwin 1 Well Plats
    - Goodwin 1-1H
    - Goodwin 1-2H
    - Goodwin 1-3H
    - Goodwin 1-6H

Thank you,

Courtney Battle
Landman

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

4703305864

ADDITIONAL SURFACE OWNER – Goodwin 1

Jeffrey L. and Melvina J. Williams
445 Buddy's Hollow Road
Wallace, WV 26448-9725

ADDITIONAL COAL OWNERS – Goodwin 1

Guy Corporation c/o Tetrick Mineral Property
92, 16th Street
Wheeling, WV 26003

American Mountaineer Energy, Inc.
46226 National Road
St. Clairsville, OH 43950

Consol Energy, Inc.
1000 Consol Energy Drive
Canonsburg, PA 15317-6506

ADDITIONAL WATER WELL OWNERS – Goodwin 1

Jeffrey L. and Melvina J. Williams
445 Buddy's Hollow Road
Wallace, WV 26448-9725

Richard & Carolyn
17 Bear Run Road
Wallace, WV 26448

Tina Moore Swiger
412 McIntyre Fork Road
Wallace, WV 26448

Joy Lee Hanna
6691 Rock Camp Rd
Wallace, WV 26448

Enoch & Gay McCoy
11465 Brosius Rd
Garrettsville, OH 44231

Lucy Williams Estate
445 Buddy's Hollow Road
Wallace, WV 26448

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

Frank Swiger
6455 Rock Camp Rd
Wallace, WV 26448

Thomas & Vanessa Collins
6925 Rock Camp Rd
Wallace, WV 26448

David Lee Davis, Leomi Jean Poling & Shirley Kight
6174 Rock Camp Rd
Wallace, WV 26448

4703305864

RECEIVED
Office of Oil and Gas

DEC 10 2014

WV Department of
Environmental Protection

WW-6A3
(1/12)

Operator Well No. Goodwin 1-2H

4703305864

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 07/03/2014 **Date of Planned Entry:** 07/18/2014

Delivery method pursuant to West Virginia Code § 22-6A-10a

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

☒ SURFACE OWNER(s)

Name: Frank "Bart" Swiger
Address: 6455 Rock Camp Road
Wallace, WV 26448-8680

Name: Joy Lee Hanna
Address: 6691 Rock Camp Road
Wallace, WV 26448-9722

Name: Jeffrey L. and Melvina J. Williams
Address: 445 Buddy's Hollow Road
Wallace, WV 26448-9725

☒ COAL OWNER OR LESSEE

Name: John Frederick Dye, Jr.
Address: 61 Vista Montana Road
Estancia, NM 87016

☒ MINERAL OWNER(s)

Name: Robert Sterling Rogers
Address: 639 Adams Drive
Milford, Delaware 19963

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State:	West Virginia	Approx. Latitude & Longitude:	39'22'12.02"/80'30'40.78"
County:	Harrison	Public Road Access:	CR 5
District:	Sardis	Watershed:	McIntire Fork of Rockcamp Run
Quadrangle:	Salem 7.5'	Generally used farm name:	Goodwin Farm

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production 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). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator:	Statoil USA Onshore	Address:	2103 CITYWEST BLVD. SUITE 800 HOUSTON, TX 77042
Telephone:	713-918-8200		
Email:	BEKW@Statoil.com	Facsimile:	713-918-8290

RECEIVED
Office of Oil and Gas
DEC 10 2014
WV Department of
Environmental Protection

Oil and Gas Privacy Notice:

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

WW-6A3 - GOODWIN 1-2H

4703305864

Additional Coal Owners (3):

Guy Corporation c/o Tetrick Mineral Property
92, 16th Street
Wheeling, WV 26003

American Mountaineer Energy, Inc.
46226 National Road
St. Clairsville, OH 43950

Consol Energy, Inc.
1000 Consol Energy Drive
Canonsburg, PA 15317-6506

Additional Mineral Owners (5):

John David Ritter
P.O. BOX 55
Phillipsburg, OH 45354

Paul Edward Ritter
321 Miles Avenue
Tipp City, Ohio 45371

Richard Lee Ritter
321 Miles Avenue
Tipp City, Ohio 45371

Deborah Stahl
533 Unger Avenue
Englewood, Ohio 45222

Howard Glen Ritter (Deceased, Surviving Spouse: Charlene I. Ritter)
533 Unger Avenue
Englewood, Ohio 45222

RECEIVED
Office of Oil and Gas

DEC 10 2014

WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. Goodwin #1-2H

4703305864

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 03/10/2015 **Date Permit Application Filed:** 12/09/2014

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

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

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

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

Name: Frank "Bart" Swiger
Address: 6455 Rock Camp Road
Wallace, WV 26448-8680

Name:
Address:

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

State: West Virginia
County: Harrison
District: Sardis
Quadrangle: Salem 7.5'
Watershed: McIntire Fork of Rockcamp Run

UTM NAD 83 Easting: 512880.2
Northing: 97111.8
Public Road Access: CR 5
Generally used farm name: Goodwin Farm

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

Well Operator: Statoil USA Onshore
Telephone: 713-918-8200
Email: BEKW@Statoil.com

Address: 2103 CityWest Blvd, Suite 800
Houston, Texas 77042
Facsimile: 713-918-8290

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

WW-6A5
(1/12)

Operator Well No. Goodwin 1-2H

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

4703305864

NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 10/29/2014 **Date Permit Application Filed:** 11/07/2014

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

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

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

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

Name: Frank "Bart" Swiger
Address: 6455 Rock Camp Road
Wallace, WV 26448-8680

Name: Joy Lee Hanna
Address: 6691 Rock Camp Road
Wallace, WV 26448-9722

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

State: West Virginia
County: Harrison
District: Sardis
Quadrangle: Salem 7.5'
Watershed: McIntire Fork of Rockcamp Run

UTM NAD 83 Easting: 512880.2
Northing: 97111.8
Public Road Access: CR 5
Generally used farm name: Goodwin Farm

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

Well Operator: Statoil USA Onshore
Telephone: 713-918-8200
Email: BEKW@Statoil.com

Address: 2103 CityWest Blvd, Suite 800
Houston, Texas 77042
Facsimile: 713-918-8290

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 10 2014

WV Department of
Environmental Protection

4703305864

ADDITIONAL SURFACE OWNER – Goodwin 1-1H, 1-2H, 1-3H & 1-6H

Jeffrey L. and Melvina J. Williams
445 Buddy's Hollow Road
Wallace, WV 26448-9725

RECEIVED
Office of Oil and Gas

DEC 10 2014

WV Department of
Environmental Protection

WW-6AW
(1-12)

API NO. 33-05864
OPERATOR WELL NO. Goodwin 1-2H
Well Pad Name: Goodwin

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

VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A
The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions
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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Alex O'Neill, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	West Virginia	West Virginia North State Plane NAD 27	East:	1,714,106.119 ft
County:	Harrison		North:	318,565.089 ft
District:	Sardis	Public Road Access:		
Quadrangle:	SALEM	Generally used farm name:		
Watershed:	McIntire Fork of Rockcamp Run			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials, provided that Statoil USA Onshore Properties Inc. drills the well on West Virginia North State Plane NAD 27 coordinates of North 318,565.089 ft, East 1,714,106.119 ft in accordance with the Agreement between AmericanMountaineer Energy, Inc. and Statoil USA Onshore Properties Inc. dated 6/11/2015.

*Please check the box that applies

- ☐ SURFACE OWNER
- ☐ SURFACE OWNER (Road and/or Other Disturbance)
- ☐ SURFACE OWNER (Impoundments/Pits)
- ☒ COAL OWNER OR LESSEE
- ☒ COAL OPERATOR
- ☐ WATER PURVEYOR
- ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: _____
Print Name: _____
Date: _____

FOR EXECUTION BY A CORPORATION, ETC.

Company: AmericanMountaineer Energy, Inc.
By: Alex O'Neill
Its: Coal, Oil & Gas Relations Manager
Signature: _____
Date: 6/11/2015

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

4703305864

AmericanMountaineer Energy, Inc.
46226 National Road
St. Clairsville, OH 43950

Phone: 740.338.3100
Fax: 740.338.3405

Fax Transmission

To: James Martin	Date: November 17, 2014
Fax #: 304-926-0452	Pages: 1 (Including Cover Sheet)
From: Alex O'Neill	
Subject: Statoil USA Onshore Goodwin 1-1H, 1-2H, 1-3H and 1-6H wells.	

Message:

Dear Mr. Martin,

AmericanMountaineer Energy, Inc. objects to the drilling of the well represented by the above referenced well drilling application, at this time, pending an opportunity to discuss the well application in detail with Statoil USA Onshore to attempt to resolve all issues with the proposed well drilling and most importantly to protect the health and safety of the employees working in the coal mine. AmericanMountaineer Energy, Inc. has submitted an objection to the drilling of this well to Statoil USA Onshore by Certified Mail.

Thank you,

Alex O'Neill

4703305864

AMERICANMOUNTAINEER ENERGY, INC.

AMERICANMOUNTAINEER
ENERGY, INC.
46226 National Road
St. Clairsville, OH 43950

phone: 740.338.3100
fax: 740.338.3405
e-mail: AlexO'Neill@coalsource.com

ALEX O'NEILL
Coal, Oil and Gas Relations Manager

November 17, 2014

Mr. James Martin – Chief
West Virginia Department of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, West Virginia 25304

RE: Statoil USA Onshore Goodwin 1-1H, 1-2H, 1-3H and 1-6H wells

Dear Mr. Martin,

AmericanMountaineer Energy, Inc. objects to the drilling of the well represented by the above referenced well drilling application, at this time, pending an opportunity to discuss the well application in detail with STATOIL USA ONSHORE to attempt to resolve all issues with the proposed well drilling and most importantly to protect the health and safety of the employees working in the coal mine. AmericanMountaineer Energy, Inc. has submitted an objection to the drilling of this well to STATOIL USA ONSHORE by Certified Mail.

Sincerely,

Alex O'Neill

Alex O'Neill

Received
Office of Oil & Gas
NOV 20 2014

4703305864

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Earl Ray Tomblin
Governor

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

November 6, 2014

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 Goodwin #1 Well Site, Harrison County
Goodwin#1-1H Goodwin#1-2H Goodwin#1-3H Goodwin#1-6H

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit # 04 -2013-0185 to Statoil USA Onshore Properties Inc. for access to the State Road for a well site located off of Harrison County Route 5 SLS.

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

Very Truly Yours,

Gary K. Clayton

Gary K. Clayton, P.E.
Regional Maintenance Engineer

Cc: Joshua Ozment
Statoil USA Onshore Properties Inc.
CH, OM, D-4
File

RECEIVED
Office of Oil and Gas

DEC 10 2014

WV Department of
Environmental Protection

E.E.O./AFFIRMATIVE ACTION EMPLOYER

4703305864

Frac Additives

BIO CLEAR 2000

Components	CAS#
Polyethylene Glycol	25322-68-3
2,2-dibromo-3-nitrilopropionamide	10222-01-2

BUFFER

Sulfamic Acid	5329-14-6

ACID

Hydrochloric Acid	7647-01-0

BREAKER

Sucrose	57-50-1
Ethylene Glycol	107-21-1

INHIBITOR

Ethoxylated Nonylphenol	68412-54-4
Dimethylcocoamine	68607-28-3
Ethylene Glycol	107-21-1
Glycol Ethers	111-76-2
Methanol	67-56-1
Propargyl Alcohol	107-19-7

SCALE INHIBITOR

Ethylene Glycol	107-21-1

RECEIVED
Office of Oil and Gas
DEC 1 0 2014
WV Department of
Environmental Protection

4703305864

FRICTION REDUCER

Sodium Chloride	7647-14-5
Ammonium Chloride	12125-02-9
Petroleum Distillates	64742-47-8
Alcohols, C12-16, Ethoxylated	68551-12-2

SAND

Crystalline Silica (quartz)	14808-60-7
Aluminum Oxide	1344-28-1
Iron Oxide	1309-37-1
Titanium Oxide	13463-67-7

GEL

Gelling Agent & Hydrocarbons	64742-96-7

RECEIVED
Office of Oil and Gas
DEC 1 0 2014
WV Department of
Environmental Protection

STATOIL USA ONSHORE PROPERTIES INC.

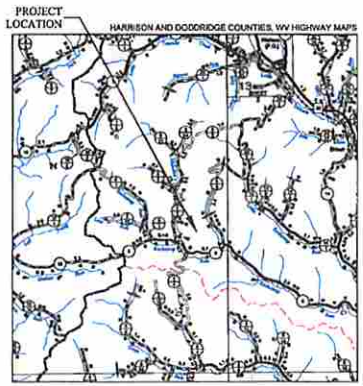
GOODWIN WELL PAD CONSTRUCTION AND EROSION & SEDIMENT CONTROL PLANS

SARDIS DISTRICT, HARRISON COUNTY, WEST VIRGINIA

PERMITTED: OCTOBER 2014
MODIFIED: FEBRUARY 2015

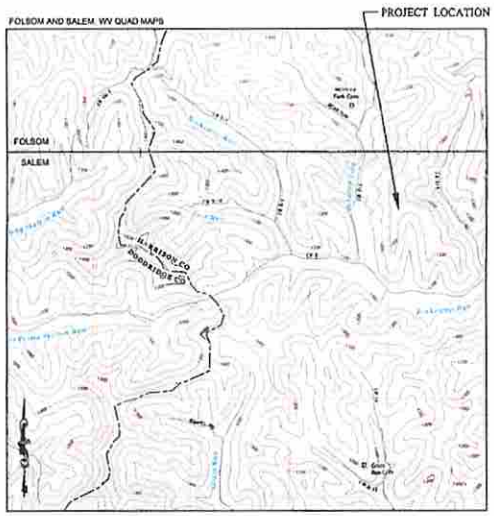
Statoil

APPROVED
WVDEP OOG
3-10-15



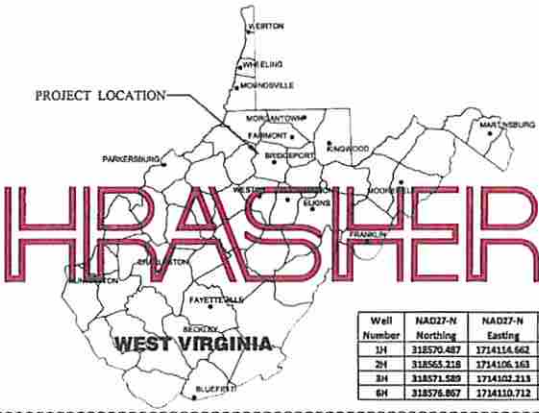
HIGHWAY VICINITY MAP

1 Mi 0 1 Mi 2 Mi



VICINITY MAP

2000' 0 2000' 4000'



THRASHER

SHEET INDEX

SHEET	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES
3	QUANTITY SUMMARY
4	EXISTING CONDITIONS
5	OVERALL SITE PLAN
6	OVERALL GEOMETRIC LAYOUT
7	WELL PAD GEOMETRIC LAYOUT
8	WELL PAD SITE PLAN
9	WELL PAD PROFILE
10-13	WELL PAD SECTIONS
14-16	ACCESS ROAD PLAN AND PROFILE
17-31	ACCESS ROAD SECTIONS
32	TOPSOIL STOCKPILE #2 PLAN AND PROFILE
33-34	TOPSOIL STOCKPILE #2 SECTIONS
35	SITE RECLAMATION
36-40	TYPICAL DETAILS
E1	TERRACON EXHIBITS

2

Well Number	NAD27-N Northing	NAD27-N Easting	Elevation	NAD27-N Latitude	NAD27-N Longitude
1H	318570.487	1714114.662	1362.000	N 39.370008	W 80.511327
2H	318565.218	1714106.163	1362.000	N 39.370008	W 80.511326
3H	318571.589	1714102.215	1362.000	N 39.370007	W 80.511327
6H	318576.867	1714110.712	1362.000	N 39.370007	W 80.511326

ROBERT R. MILNE
REGISTERED
14177
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
3/9/2015

GOODWIN 1 DISTURBANCE SUMMARY

3

Property Owner (Tax Map / Parcel)	Access Road Disturbance	Well Pad Disturbance	Total Disturbance
JOY LEE HANNA, TM 202 PAR 24	0.00	3.25	3.25
JEFFREY L AND MEVINA J WILLIAMS, TM 203 PAR 23	0.39	2.66	3.05
MICHAEL D AND GAIL M. SWIGER, TM 222 PAR 2.2	10.41	3.32	13.73
MICHAEL D AND GAIL M. SWIGER, TM 222 PAR 2	0.00	0.38	0.38
Total Disturbance	**10.80**	**9.61**	**20.41**

REVISION NUMBER	REVISED SHEETS	BY	DATE	DESCRIPTION
1	2, 4-5, 8-34, 37	PE	12/03/2014	ADDRESS DEP COMMENTS. ACCORDING TO GEOTECH REPORT
2	1-34, 36-38, 40	PE	02/20/2015	REVISED ENTRANCE LOCATION AND SOIL TOE KEY, MODIFIED LOD
3	1	PE	03/09/2015	ADDRESS DEP COMMENTS, ADDED DISTURBANCE SUMMARY TABLE FOR WELL PAD AND ACCESS ROAD PER SURFACE OWNER.

GOODWIN WELL PAD CENTER
WV27-N Northing = 318490.3266 US Foot
WV27-N Easting = 1714114.9829 US Foot
WV27 Latitude = N 39° 22' 12.10"
WV27 Longitude = W 80° 30' 40.46"
UTM-83 Northing = 4357961.526 m
UTM-83 Easting = 542109.723 m

GOODWIN ACCESS ROAD STATION 10+00.00
WV27-N Northing = 315628.7553 US Foot
WV27-N Easting = 1714413.8775 US Foot
WV27 Latitude = N 39° 21' 43.80"
WV27 Longitude = W 80° 30' 35.56"
UTM-83 Northing = 4357093.51 m
UTM-83 Easting = 542221.93 m

2

ONE CALL UTILITY SYSTEM CONTACT INFO

WEST VIRGINIA 811

CONTRACTOR SHALL NOTIFY THE ONE-CALL SYSTEM OF THE INTENDED EXCAVATION OR DEMOLITION NOT LESS THAN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL FEDERAL OR STATE HOLIDAYS, NOR MORE THAN TEN (10) WORK DAYS PRIOR TO THE BEGINNING OF SUCH WORK.

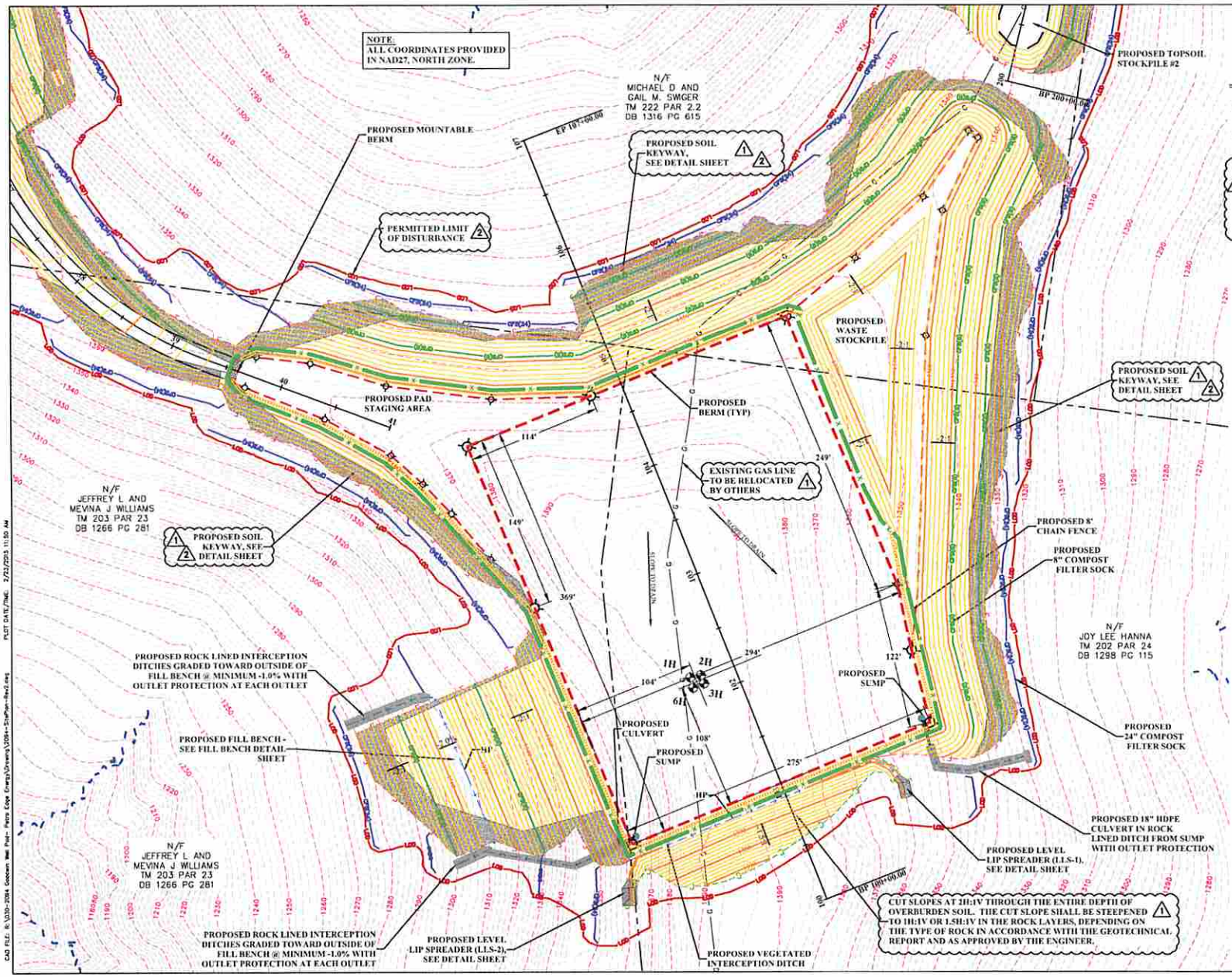
☒ APPROVED FOR PERMITS DATE: 11/20/2014 BY: RM

☒ APPROVED FOR BID DATE: 02/23/2015 BY: RM

☐ APPROVED FOR CONSTRUCTION DATE: _____ BY: _____

THE INFORMATION CONTAINED HEREIN IS THE SOLE PROPERTY OF THE THRASHER GROUP INC. REPRODUCTION OF THESE DOCUMENTS IN WHOLE OR IN PART, FOR ANY REASON WITHOUT PRIOR WRITTEN PERMISSION, IS STRICTLY PROHIBITED. COPYRIGHT © 2015 THE THRASHER GROUP INC.

THRASHER
THE THRASHER GROUP, INC
600 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
PHONE (304) 624-4108 •FAX (304) 624-7831



Statoil

PLAN NOTES

1. PROPERTY LINES SHOWN ARE DERIVED FROM DEED PLOTS AND FIELD SURVEY PERFORMED BY THRASHER.
2. THE WELL PAD SHALL BE CONSTRUCTED WITH POSITIVE FLOW TOWARD THE SUMPS AT THE NORTH END OF THE PAD.
3. IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND AS APPROVED BY THE ENGINEER, ALL CUT SLOPES SHALL BE CUT AT 2H:1V THROUGH THE ENTIRE DEPTH OF OVERBURDEN SOIL. THE CUT SLOPES SHALL BE STEEPENED TO 1H:1V OR 1.5H:1V IN THE ROCK LAYERS, DEPENDING ON THE TYPE OF ROCK.

APPROVED
WVDEP OOG
3-10-15

NO.	BY	DATE	DESCRIPTION
1	PE	12/02/2014	ADDED EXISTING GAS LINE AND CUT SLOPE NOTE
2	PE	02/26/2015	REVISED ENTRANCE LOCATION AND SOIL TOE KEY

SURVEY DATE:
SURVEY BY:
FIELD BOOK No.:
PROJECT No.: 1-01-030-2094

SCALE:
DRAWN: DATE:
CHECKED: DATE:
APPROVED: DATE:

THRASHER
THE THRASHER GROUP, INC.
600 MAITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
PHONE (304) 624-4108 • FAX (304) 624-7831

STATOIL USA ONSHORE PROPOERTIES INC.
GOODWIN WELL PAD
CONSTRUCTION PLANS
HARRISON COUNTY, WEST VIRGINIA
WELL PAD SITE PLAN

SHEET No.
8

THE INFORMATION CONTAINED HEREIN IS THE SOLE PROPERTY OF THE THRASHER GROUP INC. REPRODUCTION OF THESE DOCUMENTS IN WHOLE OR IN PART, FOR ANY REASON WITHOUT PRIOR WRITTEN PERMISSION, IS STRICTLY PROHIBITED. COPYRIGHT © 2014 THE THRASHER GROUP INC.

CAD FILE: R:\030-2094 Goodwin Well Pad- Petro Edge Energy\Drawing\2094-SitePlan-Rev2.dwg PLOT DATE/TIME: 2/23/2015 11:50 AM