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

October 27, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502300, 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: YURIGAN 4H
Farm Name: STATOIL USA ONSHORE PROPEI
API Well Number: 47-9502300
Permit Type: Horizontal 6A Well
Date Issued: 10/27/2015

Promoting a healthy environment.

API Number: 95-02300

PERMIT CONDITIONS

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

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.

2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.

4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.

5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.

6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.

8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

9. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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ORDER
ISSUED UNDER
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A

TO: Statoil USA Onshore Properties, Inc.
2107 City West Boulevard, Suite 800
Houston TX, 77042

DATE: September 25, 2015
ORDER NO.: 2015-W-11

INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Statoil USA Onshore Properties, Inc. (hereinafter "Statoil" or "Operator"), collectively the "Parties."

FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.

2. Statoil is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 2107 City West Boulevard, Suite 800, Houston, Texas.

3. On July 31, 2015, August 3, 2015 and August 5, 2015 Statoil submitted well work permit applications identified as API#s 47-095-02299, 47-095-02300, 47-095-02301, 47-095-02302 and 47-095-02303. The five proposed wells are to be located on the Yurigan Pad in Ellsworth District of Tyler County, West Virginia.

4. On July 31, 2015, Statoil requested a waiver for Wetland #1 as outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for well work permit applications identified as 47-095-02299, 47-095-02300, 47-095-02301, 47-095-02302 and 47-095-02303.

CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that "[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to...(3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing."

2. West Virginia Code §22-6A-2(a)(6) requires, in part, that "Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter."

3. West Virginia Code §22-6A-12(b) requires, in part, that "[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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."

ORDER

West Virginia Code §22-6A-12(b) requires, in part, that "[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland #1 from well location restriction requirements in W. Va. Code §22-6A-12(b) for well work permit applications identified as API#s 47-095-02299, 47-095-02300, 47-095-02301, 47-095-02302 and 47-095-02303. The Office of Oil and Gas hereby **ORDERS** that Statoil shall meet the following site construction and operational requirements for the Yurigan well pad:

a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least eighteen inches (18") in height;
b. Filter/silt socks and shall be installed on all slopes and down gradient locations of the pad and topsoil pile areas as erosion and sediment controlling BMPs;
c. Wetland #1 shall have a 32" compost filter sock backed by super silt fence installed adjacent to the wetland;
d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½") rain within any twenty-four (24) hour period;
j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
k. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 25th day of September, 2015.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: _____
JAMES A. MARTIN, CHIEF

WW-6B
(10/14)

API NO. 47-095-02300
OPERATOR WELL NO. 4H
Well Pad Name: Yurigan

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

1) Well Operator: Statoil USA Onshore Prope | 494505083 | Tyler | Ellsworth | Shirley - Sec. 3
Operator ID | County | District | Quadrangle

2) Operator's Well Number: 4H Well Pad Name: Yurigan

3) Farm Name/Surface Owner: Yurigan Farm/Joseph Yurigan, Jr. Public Road Access: CR 34

4) Elevation, current ground: 1260 Elevation, proposed post-construction: 1244

5) Well Type (a) Gas X Oil ____ Underground Storage ____
Other 1260
(b)If Gas Shallow X Deep ____
Horizontal X

Michael Groff
7/17/15

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus, Formation Top 6914' TVD, 51' thick, 4524 psi

8) Proposed Total Vertical Depth: 6937' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 12673'

11) Proposed Horizontal Leg Length: 5035'

12) Approximate Fresh Water Strata Depths: 313' TVD

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

14) Approximate Saltwater Depths: 663' TVD

15) Approximate Coal Seam Depths: 438'

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 X

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

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WW-6B
(10/14)

API NO. 47-095-02300
OPERATOR WELL NO. 4H
Well Pad Name: Yurigan

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	Cement to Surface-150 cuft
Fresh Water	13.375"	New	J-55	54.4#	373'	373'	Cement to surface-339 cuft
Coal	NA	---	---	---	---	---	---
Intermediate	9.625"	New	J-55	36#	2641'	2641'	Cement to surface-1063 cuft
Production	5.5"	New	P-110	20#	12673'	12673'	Cement to 1641'- 2814 cuft
Tubing	2.375"	New	L-80	4.7#	---	---	---
Liners	NA	---	---	---	---	---	---

MAG
7/17/15

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	26"	.438"	1530 psi	---	Class A	1.3 cuft/sk
Fresh Water	13.375"	17.5"	.380"	2730 psi	234	Class A	2.31 cuft/sk
Coal	NA	---	---	---	---	---	---
Intermediate	9.625"	12.25"	.352"	3520 psi	2016	Class A	2.31 cuft/sk
Production	5.5"	8.5"	.361	12640 psi	10000	Class A	1.29 cuft/sk
Tubing	2.375"	5.5"	.19"	11200 psi	3813	---	---
Liners	NA	---	---	---	---	---	---

PACKERS

Kind:	HES Versa-Set Retrievable Packer		
Sizes:	2.375" x 5.5"		
Depths Set:	6500'		

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WW-6B
(10/14)

API NO. 47-095-02300
OPERATOR WELL NO. 4H
Well Pad Name: Yurigan

MAG
7/17/15

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 be hydraulically fracture stimulated via the plug-n-perf method with +/- 35 stages per well. Each fracturing treatment will utilize approximately 390,000 lbs of sand and 7,500 bbls of fresh water. The fracturing rate will range between 75 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): 12.2 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.58 acres

23) Describe centralizer placement for each casing string:

See Attached

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

See Attached

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25) Proposed borehole conditioning procedures:

See Attached

*Note: Attach additional sheets as needed.

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WW-6B – Yurigan 4H

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 **330'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 **2317'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 **15129'md/ 6,917'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.

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

Surface - Class A + 3% $CaCl_2$

Intermediate - Class A + 3% $CaCl_2$

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.

25) Proposed borehole conditioning procedures:

Surface – Drilled with fresh water to section total depth. Prior to tripping, hole will circulated clean of cuttings and back-reamed if necessary.

Intermediate – Drilled with air/mist and to TD and filled with 5% KCL Polymer Water Based Mud (WBM) at section total depth. At section total depth, pump 40bbl viscous pill and circulate hole clean.

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 **330'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 **2317'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 **12673'md/ 6,937'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.

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

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.

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25) Proposed borehole conditioning procedures:

Surface – Drilled with fresh water to section total depth. Prior to tripping, hole will circulated clean of cuttings and back-reamed if necessary.

Intermediate – Drilled with air/mist and to TD and filled with 5% KCL Polymer Water Based Mud (WBM) at section total depth. At section total depth, pump 40bbl viscous pill and circulate hole clean.

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WW-6B – Yurigan 4H

Production - Drilled with 12.0-12.5 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.

95-02300

Marcellus - Drilling Well Schematic

Statoil

Well Name:	Yurigan 4H		GLE (ft): 1,241		TVD(ft): 6,937
Field Name:	Marcellus		DF(ft): 22		TMD(ft): 12,673
County:	Tyler	BHL:	X = 1705232.4	Y= 14338464.3	Profile: Horizontal
API #:	0	SHL:	X = 1702736.5	Y= 14343595.7	AFE No.: PERMITTING

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*	*1,163*	-	-	-	-	100
							FW	
				-	-	-	9.2	
				-	-	-	9.2	
Approximate Fresh Water Strata ~313'								
Casing Point	*373*	*373*	*890*	*65*	-	-		373
Washington Coal		438					*Air/Mist*	
1st Salt Sand		666						
				-	-	-	-	
				-	-	-	-	
				-	-	-	-	
				-	-	-	-	
				-	-	-	-	TOC @ 1641
				-	-	-	-	
Base Big Injun		2,541		-	-	-	-	
Casing Point	*2,641*	*2,641*	*-1,378*	*82*	-	*>18.0*		2,641
Weir		2,725					Air/Mist	
Berea Sand		2,893					Air/Mist	
Gordon Sand		3,115					Air/Mist	
Warren		3,697					Air/Mist	
Benson		5,308					Air/Mist	
Undiff Shales		5,350					Air/Mist Air/Mist	
							Air/Mist	
KOP	**6,161**	**6,154**					12.0-12.5	
Sonyea		6,436						
Middlesex		6,748						
West River		6,775					12.0-12.5	
Geneseo		6,845			-	-		
Tully		6,868					12.0-12.5	
Hamilton		6,819					12.0-12.5	
					-	-		
Marcellus		6,944						
					-	-		
Landing point	**7,638**	**6,937**					12.0-12.5	
Cherry Valley		7,026					12.0-12.5	
Onondaga		7,051			-	-	12.0-12.5	
					-	-		

Program / Details

20" Conductor

17-1/2" Surface

Profile:	Vertical
Bit Type:	17-1/2" PDC
BHA:	9 5/8" 6/7 5.0 .13 RPG
Mud:	9.2 ppg Fresh Water
Surveys:	n/a
Logging:	n/a
Casing:	13.375 54.5 J-55 BTC at 373' MD/373' 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:	Nudge and hold for anticollission
Bit Type:	12-1/4" Hughes VG-35ADX1 (IADC:547) 0
BHA:	Powerline 1.83; 7/8 lobe; 2.5stg; .07rpg 0
Mud:	- ppg Air/Mist
Surveys:	Gyro SS, MWD - EM Pulse
Logging:	n/a
Casing/Liner:	9.625 36 J-55 BTC at 2641' MD/2641' TVD
Csg Hanger:	Fluted 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, Connections, Bit Preservation

FIT: 15.8 ppg EMW

8-1/2" Production

Profile:	
Bit Type:	8-3/4" Hughes VG-30ADX1 (IADC: 547) - Vert 8-3/4" SMITH SDi516 - C&L
BHA:	6.75in 7:8 lobe 2.9 stg 1.5 ABH (0.17 rpg S60 DIFF) - Vert 6.75in 4/5 lobe 7.0 stg 1.95 FBH (0.5 rpg, 1000 DIFF) - C&L
Mud:	Air in the Vertical & 12.7 ppg SBM in the Curve & Lateral
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 12673 ft MD/6937 ft TVD
Csg Hanger:	Fluted 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 @ 1641'vd
Potential Drilling Problems:	Bit Preservation, Hole Cleaning, Achieving DLS, Undamillarity w/ Tools
Notes / Comments:	

TMD: 12,673
TVD: 6,937

Last Revision Date:	9/16/2015	Note: Depths are referenced to RKB	Cement Outside Casing
Revised by:	Ryan Cardenas	Note: Not Drawn to Scale	

Yurigan 4H_Well Schematic_Detail Summary

09502300

WW-9
(2/15)

API Number 47 - _____ - _____
Operator's Well No. Yurigan 4H

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) Elk Fork Quadrangle Shirley - Sec. 3

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

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

Michael Daff
7/17/15

- ____ Land Application
- ■ Underground Injection (UIC Permit Number Green Hunter API 34-121-23195)
- ____ 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

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

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

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

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Company Official Signature _____

Company Official (Typed Name) Bekki Winfree

Company Official Title Sr. Regulatory Advisor

Subscribed and sworn before me this 15 day of July, 20 15

Shirley Ryan Ameller Notary Public

My commission expires 3-26-2018

SHIRLEY RYAN-AMELLER
Notary Public, State of Texas
My Commission Expires
March 26, 2016

Form WW-9

09502300
Operator's Well No. Yurigan 4H

Statoil USA Onshore Properties Inc.

Proposed Revegetation Treatment: Acres Disturbed 8.35 Prevegetation pH Unknown

Lime 3 Tons/acre or to correct to pH 6

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Winter Rye - 168 lbs/acre		Tall Fescue or Orchard Grass - 40 lbs/acre	
Annual Ryegrass - 40 lbs/acre		Ladino Clover - 3 lbs/acre	
		Redtop - 3 lbs/acre	

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: Michael Daff

Comments: Preseed & Mulch any disturbed areas per WVDEP regulations. Maintain & Upgrade E-n-S as necessary

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Title: Oil & Gas Inspector Date: 7/17/15

Field Reviewed? (✓) Yes ( ) No

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Statoil

Michael Hoff
7/17/15

Yurigan Pad 4H – Site Safety Plan

Statoil USA Onshore Properties, Inc.

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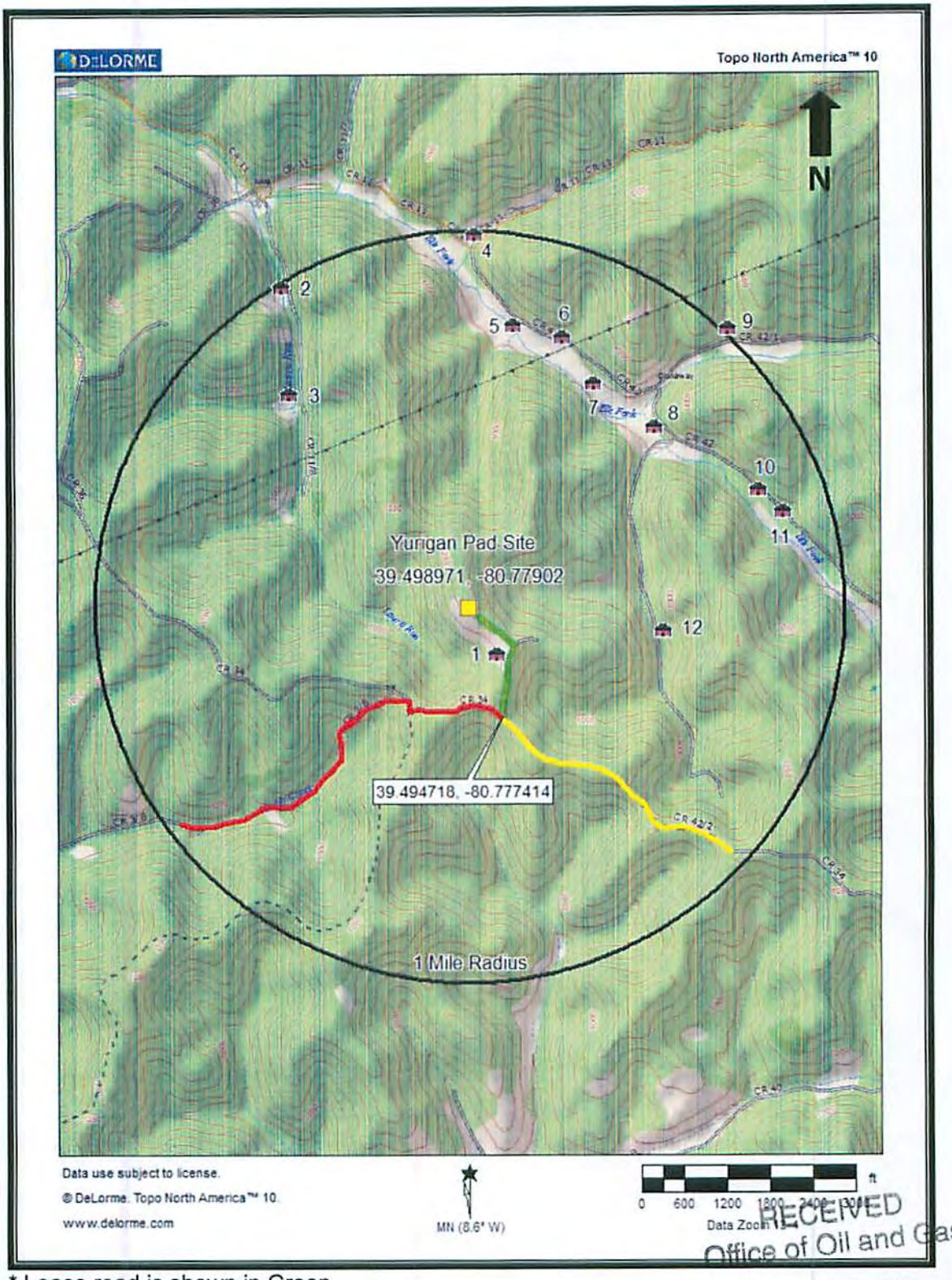
09502300

MAG 7/17/15

C. Evacuation Plan



* Lease road is shown in Green

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FORM WW-6

SURFACE HOLE LOCATION
UTM 17 - NAD 83 N - 4372154.65 E - 519009.57 WV SPC NORTH NAD83 N - 366359.48 E - 1607624.02
LANDING POINT LOCATION
UTM 17 - NAD 83 N - 4372057.43 E - 519320.01 WV SPC NORTH NAD83 N - 366023.45 E - 1608637.40
BOTTOM HOLE LOCATION
UTM 17 - NAD 83 N - 4370590.61 E - 519770.29 WV SPC NORTH NAD83 N - 361185.43 E - 1610034.66

WELL LOCATION REFERENCES (NTS)

PROPERTY TIES	
L1 - S76°55'05"W	629.4'
L2 - N28°03'32"E	988.6'

8199'

LATITUDE: 39 ° 30 ' 00 "

LONGITUDE: 80 ° 45 ' 00 "

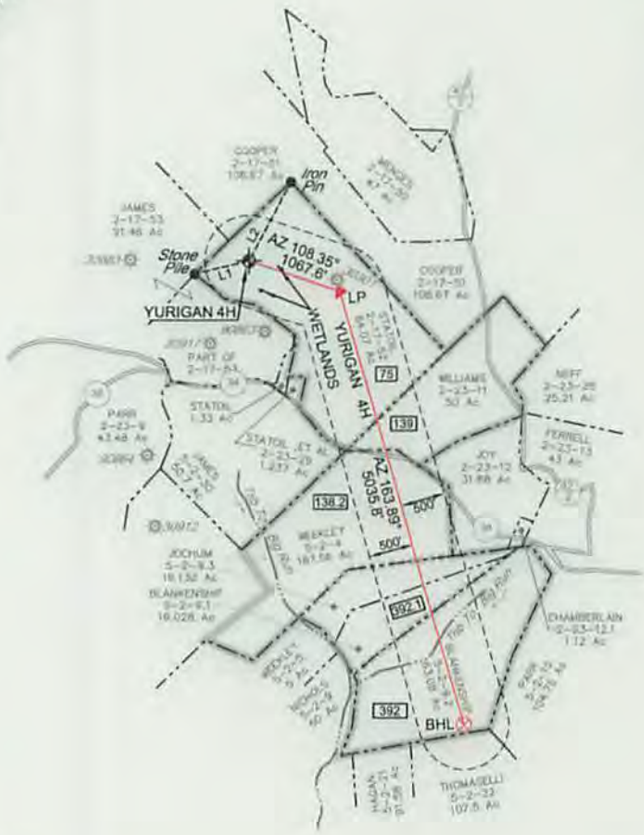
486'

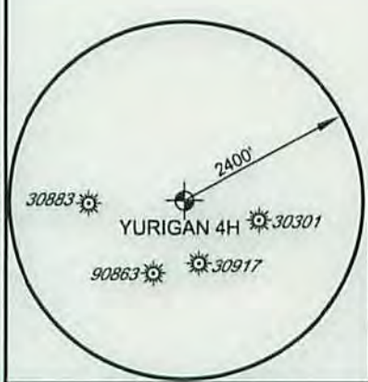
NOTES

1. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF THE PROPOSED WELL.
2. PERENNIAL STREAM, WETLAND, POND, RESERVOIR OR LAKE - THERE ARE WETLANDS LOCATED WITHIN 100 FEET OF THE PROPOSED PAD, LOD, OR E&S CONTROL. PLEASE SEE WETLAND WAIVER REQUEST ASSOCIATED WITH THIS PERMIT APPLICATION FOR MORE DETAIL.
3. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED PAD, LOD, OR E&S CONTROL FEATURE.
4. PROPOSED PAD, LOD, OR E&S CONTROL FEATURE IS GREATER THAN 1000' FROM SURFACE OR GROUND-WATER INTAKE OF PUBLIC WATER SUPPLY.
5. CENTER OF PAD IS 625 FEET FROM OCCUPIED DWELLING STRUCTURE AND AGRICULTURAL BUILDINGS LARGER THAN 2500 SQUARE FEET.
6. IT IS NOT THE INTENTION OF THIS PLAT TO REPRESENT A COMPLETE BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON. BOUNDARIES AS SHOWN TAKEN FROM RECORD DEED DESCRIPTIONS, TAX MAPS, AND SUPPLEMENTAL FIELD SURVEY.
7. OWNERSHIP DATA GATHERED FROM COUNTY PUBLIC TAX AND DEED RECORDS.
8. DIRECTIONS SHOWN ARE BASED ON WEST VIRGINIA SPC NORTH, NAD 83 DATUM

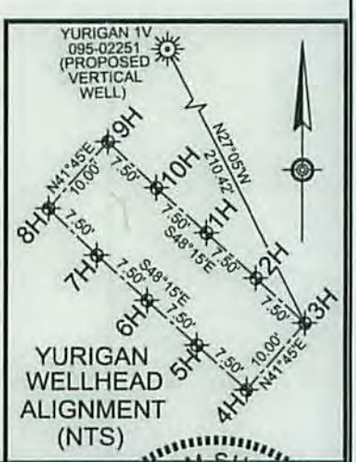
LEGEND

- OUTER LEASE BOUNDARY.
- INTERIOR LEASE BOUNDARY
- SURFACE TRACT LINES
- WELL REFERENCE LINES
- COUNTY ROADS
- PUBLIC ROADS
- BLUE-LINE STREAMS
- MINERAL OWNER
- PROPOSED WELL
- EXISTING WELL
- LANDING POINT
- BOTTOM HOLE





YURIGAN 4H MINERAL OWNERSHIP	
75	- Almeda S. James, et al
139	- Charles Robert Fuchs, et al
138.2	- Lloyd D. Weekley
392.1	- Sharon Lynn Griffeth, et al
392	- Karen Louise McIntyre, et al



FILE NO. 8790-003-6

DRAWN BY DMS

SCALE 1 INCH = 2000 FEET

MIN DEGREE OF ACCURACY 1 IN 2500

PROVEN SOURCE OF ELEVATION SURVEY GRADE GPS

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION

David M. Shannon

P.S. #2034

DAVID M. SHANNON LICENSED No. 2034 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

LDG Larson Design Group

W.V.D.E.P.
OFFICE OF OIL AND GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE 9-15-2015

OPERATORS WELL NO. YURIGAN 4H

API WELL NO.

47 STATE 095 COUNTY D2300 H6A PERMIT

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐

IF "GAS", PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒

LOCATION: WATERSHED ELK FORK ELEVATION 1240.8

COUNTY/DISTRICT TYLER / ELLSWORTH QUADRANGLE SHIRLEY - SEC. 3

SURFACE OWNER STATOIL USA ONSHORE PROPERTIES, INC ACREAGE 84.07±

OIL & GAS ROYALTY OWNER SEE TABLE ABOVE ACREAGE 286.8±

PROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒

PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐

CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH 6937

WELL OPERATOR: STATOIL USA ONSHORE PROPERTIES, INC. DESIGNATED AGENT RICHARD PYLES

ADDRESS 2107 CITYWEST BOULEVARD ADDRESS 803 NASH ROAD

HOUSTON TX, 77042 MIDDLEBOURNE, WV 26149

COUNTY NAME PERMIT

P:\8790\8790-003-6 YURIGAN (WV-6)\DATA\SURVEY\SURVEYS\YURIGAN FINAL WELL PLAT.DWG

WW-6A1
(5/13)

Operator's Well No. Yurigan 4H

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

(Please 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:

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- 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: [signature]
Its: Sr. Regulatory Advisor

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

Yurigan 4H

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

TRACT #75

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000115306-024	Almeda S. James	PetroEdge Energy, LLC	At least 1/8	384/79
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties Inc.	Assignment	406/147
000115306-047	Rhonda F. Bruich	Statoil USA Onshore Properties Inc.	At least 1/8	460/296

TRACT #139

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000115498-008	Charles Robert Fuchs	PetroEdge Energy, LLC	At least 1/8	410/821
000115498-001	C. Roger Lemasters	PetroEdge Energy, LLC	At least 1/8	396/95
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties Inc.	Assignment	436/1
N/A	PetroEdge Energy, LLC	Statoil USA Onshore Properties Inc.	Assignment	408/66

TRACT #138.2

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000168557-000	Lloyd D. & Phyllis J. Weekley	JB Exploration I, LLC	At least 1/8	448/445
N/A	JB Exploration I, LLC/etc.	Statoil USA Onshore Properties Inc.	Assignment	469/419

TRACT #392.1

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000146922-010	Sharon Lynne Griffith	JB Exploration I, LLC	At least 1/8	398/379
000146922-007	Robert Mark H[illegible]fman	JB Exploration I, LLC	At least 1/8	398/383
N/A	JB Exploration I, LLC/etc.	Statoil USA Onshore Properties Inc.	Assignment	469/419

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TRACT #392

Lease Name or Number	Grantor, Lessor	Grantee, Lessee	Royalty	Book / Page
000146922-008	Karen Louise McIntyre	JB Exploration I, LLC	At least 1/8	448/441
000146922-009	Ronald Aston	JB Exploration I, LLC	At least 1/8	398/385
N/A	JB Exploration I, LLC/etc.	Statoil USA Onshore Properties Inc.	Assignment	469/419

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YURIGAN ROAD CROSSING LETTERS – 7.06.2015

09502300

YURIGAN 4H - 5
75
139
138.2
392.1
392

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Environmental Protection

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MILLER LAW OFFICES, PLLC

KENNETH R. MILLER
KENNETH ALEXANDER MILLER II*
CHARLES K. WADE **

* Also Admitted in Ohio
** Also Admitted in Illinois

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millerlawofficeswv@gmail.com
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304-366-0822
FAX: 304-366-0825

March 30, 2015

Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Tract Index No. 75
Title of John Wayne Weekley, et al.
to 84.069 acres oil and gas
Ellsworth District, Tyler County, West Virginia
Tax Map #2-17, parcel 52

ORIGINAL DRILLING TITLE OPINION

DESCRIPTION OF LANDS

Tract: Tax Map #2-17, parcel 52, containing 84.069 acres, more or less, located in Ellsworth District, Tyler County, West Virginia, and being the same lands described in that certain Deed of record in Deed Book 446, at page 233, in Tyler County, West Virginia.

The land referred to in this document is situated in Ellsworth District, in the County of Tyler, State of West Virginia, and is described as follows:

BEGINNING at a point in the center of Route 34, in a line of a tract of C. Campbell and from which a 5/8" steel rod is North 14º 10' 43" East 14.00 feet, thence six calls with Route 34;

North 72º 12' 24" West, a distance of 127.53 feet; thence

North 49º 23' 08" West, a distance of 92.74 feet; thence

North 43º 06' 08" West, a distance of 118.08 feet; thence

North 32º 43' 53" West, a distance of 114.78 feet; thence

North 41º 13' 53" West, a distance of 101.74 feet; thence

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Joseph Vann Edwards [Unleased]	0.00151515	0.00151515
Vincent Mitchell Edwards [Unleased]	0.00151515	0.00151515
Carl F. Haught [Unleased]	0.00097403	0.00097403
Norman R. Haught [Unleased]	0.00097403	0.00097403
Ricky D. Haught [Unleased]	0.00097403	0.00097403
Louie W. Haught [Unleased]	0.00097403	0.00097403
Margaret L. Haught [Unleased]	0.00097403	0.00097403
Frances Joanne Kimble [Unleased]	0.00064935	0.00064935
TOTAL	**1.00000000**	**1.00000000**

State of West Virginia Ownership Under Public Roads

Based on the materials examined in the Clerk's office, the State of West Virginia is not vested with an interest in the subject oil and gas, executive rights, or royalty under any public roads located within the boundary of the subject tract. I arrived at this conclusion after reviewing the parcel on the tax map and noticing no county roads or turnpikes traversing it. Furthermore, there are no conveyances of record to the State of West Virginia or the County Commission for roads from the owners of the oil and gas. However, the Department of Transportation might have a different opinion so it is likely wise to contact it prior to drilling under roads, if any, that overlie the subject oil and gas.

INSTRUMENTS AFFECTING THE MINERAL ESTATE

Unless otherwise noted, all references to Books, Pages and Instrument Numbers in this Opinion shall refer to those located in the office of the Clerk of the County Commission of Tyler County, West Virginia.

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OIL AND GAS ESTATE:

OIL AND GAS LEASES

L1. **OIL AND GAS LEASE**

DATE: March 15, 2011
FILED: March 17, 2011 (Memorandum Only)
RECORDED: Deed Book 380, at page 552 (Memorandum Only)
LESSOR: John Wayne Weekley, a married man dealing in his sole and separate property

09502300

MILLER LAW OFFICES, PLLC

KENNETH R. MILLER
KENNETH ALEXANDER MILLER II[1]
CHARLES K. WADE[2]
JAMES T. BOGGS[3]

[1]Also Admitted in Ohio
[2]Also Admitted in Illinois
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304-366-0822
FAX: 304-366-0825

July 1, 2015

Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Road Crossing Letters Requirement
Title Index No. 109.1
Title of David E. Bowyer, et al.
To 35.00000000 acres oil and gas
Ellsworth District, Tyler County, West Virginia
Tax Map #17, p/o parcel 53

Dear Mr. Ozment:

Pursuant to your request, I hereby certify I have made a personal examination of the records contained in the office of the Clerk of the County Commission of Tyler County, West Virginia relative to the captioned tract.

State of West Virginia Ownership Under Public Roads

I, undersigned, have personally reviewed the records available within the Office of the Clerk of the County Commission of Tyler County, West Virginia, as well as those records available within the Office of the Circuit Clerk of Tyler County, West Virginia, and based upon the same, do hereby Certify that the State of West Virginia does not appear to own any interest in and to the Executive Mineral Fee Estate under the Subject Lands. Said Certification is made subject only to any rights owned under Ancient Turnpikes.

Respectfully submitted,

Alex Miller

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Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Road Crossing Letters Requirement
Tract Index No. 75.1
Title of William J. Walker, et al.
To 1.237 acre tract
Waters of Muddy Creek, Ellsworth District
Tyler County, West Virginia
Tax Map #2-23, parcel 29

Dear Mr. Ozment:

Pursuant to your request, I hereby certify I have made a personal examination of the records contained in the office of the Clerk of the County Commission of Tyler County, West Virginia relative to the captioned tract.

State of West Virginia Ownership Under Public Roads

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Respectfully submitted,

Alex Miller

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July 1, 2015

Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Road Crossing Letters Requirement
Title Index No. 137
to 50.7 acres oil and gas
Ellsworth District, Tyler County, West Virginia
Tax Map #2, parcel 30

Dear Mr. Ozment:

Pursuant to your request, I hereby certify I have made a personal examination of the records contained in the office of the Clerk of the County Commission of Tyler County, West Virginia relative to the captioned tract.

State of West Virginia Ownership Under Public Roads

I, undersigned, have personally reviewed the records available within the Office of the Clerk of the County Commission of Tyler County, West Virginia, as well as those records available within the Office of the Circuit Clerk of Tyler County, West Virginia, and based upon the same, do hereby Certify that the State of West Virginia does not appear to own any interest in and to the Executive Mineral Fee Estate under the Subject Lands. Said Certification is made subject only to any rights owned under Ancient Turnpikes.

Respectfully submitted,

Alex Miller

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304-366-0822
FAX: 304-366-0825

095023 00

July 1, 2015

Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Road Crossing Letters Requirement
Title Index No. 138.2
to 68.5 acres oil and gas
McElroy District, Tyler County, West Virginia
Tax Map #2, parcel 4

Dear Mr. Ozment:

Pursuant to your request, I hereby certify I have made a personal examination of the records contained in the office of the Clerk of the County Commission of Tyler County, West Virginia relative to the captioned tract.

State of West Virginia Ownership Under Public Roads

I, undersigned, have personally reviewed the records available within the Office of the Clerk of the County Commission of Tyler County, West Virginia, as well as those records available within the Office of the Circuit Clerk of Tyler County, West Virginia, and based upon the same, do hereby Certify that the State of West Virginia does not appear to own any interest in and to the Executive Mineral Fee Estate under the Subject Lands. Said Certification is made subject only to any rights owned under Ancient Turnpikes.

Respectfully submitted,

Alex Miller

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MILLER LAW OFFICES, PLLC

09502300

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304-366-0822
FAX: 304-366-0825

July 1, 2015

Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Road Crossing Letters Requirement
Title Index No. 392.1
to 35.5 acres oil and gas
McElroy District, Tyler County, West Virginia
Tax Map #2, parcels 9.1, 9.2, 9.3

Dear Mr. Ozment:

Pursuant to your request, I hereby certify I have made a personal examination of the records contained in the office of the Clerk of the County Commission of Tyler County, West Virginia relative to the captioned tract.

State of West Virginia Ownership Under Public Roads

I, undersigned, have personally reviewed the records available within the Office of the Clerk of the County Commission of Tyler County, West Virginia, as well as those records available within the Office of the Circuit Clerk of Tyler County, West Virginia, and based upon the same, do hereby Certify that the State of West Virginia does not appear to own any interest in and to the Executive Mineral Fee Estate under the Subject Lands. Said Certification is made subject only to any rights owned under Ancient Turnpikes.

Respectfully submitted,

Alex Miller

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Office of Oil and Gas
AUG 03 2015
WV Department of
Environmental Protection

09502300

MILLER LAW OFFICES, PLLC

KENNETH R. MILLER
KENNETH ALEXANDER MILLER II[1]
CHARLES K. WADE[2]
JAMES T. BOGGS[3]

[1]Also Admitted in Ohio
[2]Also Admitted in Illinois
[3]Also Admitted in Pennsylvania

ATTORNEYS AT LAW
936 EAST PARK AVENUE, SUITE 2
POST OFFICE BOX 2116
FAIRMONT, WEST VIRGINIA 26554
millerlawofficeswv@gmail.com
millerlawofficeswv.com

304-366-0822
FAX: 304-366-0825

July 1, 2015

Statoil USA Onshore Properties, Inc.
Attn: Joshua S. Ozment, Senior Landman
MAR LAN OPR
2103 City West Blvd, Suite 800
Houston, TX 77042

Re: Road Crossing Letters Requirement
Title Index No. 392
Title of RICHARD JAMES BLANKENSHIP and CARMINA POLITI BLANKENSHIP, husband and wife in joint tenancy with rights of survivorship to 57 acre and 37 and 1/2 acres and 18 poles of oil and gas on the waters of Big Run, McElroy District, Tyler County, West Virginia
Tax Map #5-2, p/o Parcel 9.1 and p/o of 9.2

Dear Mr. Ozment:

Pursuant to your request, I hereby certify I have made a personal examination of the records contained in the office of the Clerk of the County Commission of Tyler County, West Virginia relative to the captioned tract.

State of West Virginia Ownership Under Public Roads

I, undersigned, have personally reviewed the records available within the Office of the Clerk of the County Commission of Tyler County, West Virginia, as well as those records available within the Office of the Circuit Clerk of Tyler County, West Virginia, and based upon the same, do hereby Certify that the State of West Virginia does not appear to own any interest in and to the Executive Mineral Fee Estate under the Subject Lands. Said Certification is made subject only to any rights owned under Ancient Turnpikes.

Respectfully submitted,

Alex Miller

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WW-6AC
(1/12)

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

09502300

Date of Notice Certification: 07/29/2015

API No. 47- _____ - _____
Operator's Well No. 4H
Well Pad Name: Yurigan

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:	519009.57
County:	Tyler		Northing:	4372154.65
District:	Ellsworth	Public Road Access:		CR 11 and 34/3
Quadrangle:	Shirley - Sec. 3	Generally used farm name:		Yurigan Farm
Watershed:	Elk Fork			

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.

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(1/12)

09502300

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 29 day of July, 2015

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.

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WW-6A4W
(1/12)

Operator Well No. Yurigan 4H
09502300

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

WAIVER

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

Surface Owner Waiver:

I, Statoil USA Onshore Properties Inc., hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	West Virginia	UTM NAD 83	Easting:	519009.57
County:	Tyler		Northing:	4372154.65
District:	Ellsworth	Public Road Access:		CR 11 and 34/3
Quadrangle:	Shirley - Sec. 3	Generally used farm name:		Yurigan Farm
Watershed:	Elk Fork			

Name: Statoil USA Onshore Properties Inc.
Address: 2103 CityWest Blvd. Suite 800
Houston, Texas 77042

Signature:

Date: 07/21/2015

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.

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WV Department of
Environmental Protection

09502300

WW-6A
(9-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Yurigan 4H
Well Pad Name: YURIGAN

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: 07/22/2015 **Date Permit Application Filed:** 07/31/15

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: Statoil USA Onshore Properties Inc.
Address: 2103 CityWest Blvd. Suite 800
Houston, Texas 77042
Name: _____
Address: _____

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

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

☑ COAL OWNER OR LESSEE
Name: See Attachment
Address: _____

☐ COAL OPERATOR
Name: _____
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: None within 2,000 feet
Address: _____

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

*Please attach additional forms if necessary

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WW-6A
(8-13)

API NO. 47-095-02300
OPERATOR WELL NO. Yurigan 4H
Well Pad Name: YURIGAN

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.

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Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions
Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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

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

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

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

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

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

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Office of Oil and Gas
AUG 03 2015
WV Department of
Environmental Protection

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.**

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Yurigan 4H
Well Pad Name: YURIGAN

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WV Department of
Environmental Protection

09502300

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Yurigan 4H
Well Pad Name: YURIGAN

Notice is hereby given by:

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

Address: 2103 CityWest Blvd. Suite 800
Houston, TX 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.

WALLY ANTHONY STUKA
My Commission Expires
April 16, 2017

Subscribed and sworn before me this 30 day of July, 2015.

Notary Public

My Commission Expires April 16, 2017

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Environmental Protection

09502300

WW-6A4W
(1/12)

Operator Well No. Yurigan 4H

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

WAIVER

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

Surface Owner Waiver:

I, Statoil USA Onshore Properties Inc, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	West Virginia	UTM NAD 83	Easting:	519009.57
County:	Tyler		Northing:	4372154.65
District:	Ellsworth	Public Road Access:		CR 11 and 34/3
Quadrangle:	Shirley - Sec. 3	Generally used farm name:		Yurigan Farm
Watershed:	Elk Fork			

Name: Statoil USA Onshore Properties Inc.
Address: 2103 CityWest Blvd. Suite 800
Houston, Texas 77042

Signature:

Date: 07/21/2015

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.

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YURIGAN 4H – OWNERS ATTACHMENT
Coal Owners – 62

John Wayne Weekley
Route 1, Box 352
New Martinsville, WV 26155

Denver E. Haught
112 Winters Drive
Ripley, WV 25271

Patricia Carol Fonner
520 Ashwood Drive
Newport News, VA 23602

Linda Kathryn Lee
1292 Edgefield Road
York, SC 29745

Norma Louise Franks
4 West Askren Street
Uniontown, PA 15401

Carolyn Williams
Route 1, Box 354
Middlebourne, WV 26149

Ernest E. Black
Rural Route 3, Box 209
Wheeling, WV 26003

Jacqueline H. Posey
44 Center Avenue
Wheeling, WV 26003

Robert E. Weekley
3842 Quaker Ridge Street
Zephyr Hills, FL 33542

Almeda S. James
1009 North Breens Bay Road
Oconomowoc, WI 53066

Duane Clark
HC 69, Box 6
Alma, WV 26320

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09502300

Mark A. Schafer
8793 Stonehenge Circle
Pickerington, OH 43147

Gail A. Mason
41 Snowmass Court
O'Fallon, MO 63368

Cynthia M. Sax (Schafer)
12029 Rutherglen Place
Bristow, VA 20136

David C. Schafer
9393 Deer Ridge
Mentor, OH 44060

James F. Clark
111 Shasta Cove
Georgetown, TX 78628

Sharon E. Fonnest
1543 North Main Street
Niles, OH 44446

Mark Fletcher
501 4th Street
Middlebourne, WV 26149

Michael C. Fletcher
344 Caines Boulevard
Winchester, KY 40391

Matthew C. Fletcher
764 Virginia Road
Marion, NC 28752

Lewis A. Clark
7115 Merrimac Drive
McLean, VA 22101

Mary Elizabeth Clark
118 Rebrook Street
Clarksburg, WV 26301

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09502300

Clyde B. Ross, Jr.
State Route 534, Box 134
Damascus, OH 44619

Randy Caplinger
6204 Larkhall Drive
Madison, OH 44057

Sandra K. Haught Byham
19643 Arthur Street #205C
Meadville, PA 16335

Nichole J. Tremblay
1820 Mohawk Avenue
Warren, PA 16365

Kevin R. Kiser
20790 Route 6
Warren, PA 16365

John R. Kiser
96 Pleasant Drive
Warren, PA 16365

Kit A. Kiser
303 Wilderness Trailer Park
Clarendon, PA 16313

Norman L. Kiser
4603 Buffalo Road, Apartment 4
Erie, PA 16510

Jean Ann Gaul
211 49th Avenue West
Bradenton, FL 34207

John Frederick Gaul
211 49th Avenue West
Bradenton, FL 34207

Lisa Hare Cutchin
6104 Spring Meadow Lane
Frederick, MD 21701

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Karen Lynch
667 Raymond Drive
Lewiston, NY 14092

Edward Lynch
4561 Townline Road
Ransonville, NY 14131

Mary Jean Buddenhagen
6824 Grauer Road
Niagara Falls, NY 14305

Thomas Lynch
667 Raymond Drive
Lewiston, NY 14092

Michael Lynch
816 22nd Street
Niagara Falls, NY 14301

Virginia Irene Patton
10850 Green Mountain Circle, Unit 411
Columbia, MD 21044-2478

Deborah Mann
4455 Taylor Drive
Niagara Falls, NY 14304

Holly Hill Campbell
101 Tudor Drive
Williamsburg, VA 23188

Brown Memorial Park Avenue
United Presbyterian Church
1316 Park Avenue
Baltimore, MD 21217

Helen Gaull Boyll
50 Capron Street
Danielson, CT 06239

John J. Lynch
602 78th Street
Niagara Falls, NY 14304

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09502300

Douglas Morrison Padrutt
4503 SAucon Valley Court
Alexandria, VA 22312

James Lynch
2930 Ontario Avenue
Niagara Falls, NY 14305

Lura Padrutt Griffiths
4515 SE 30th Avenue
Portland, OR 97202

Rhonda F. Bruich
154 Owings Street
Weirton, WV 26062

Robert Alan Ross
213 Louise Lane
Toano, VA 23168

Richard Harold Ross
8810 Pocahontas Trail, Trailer 44
Williamsburg, VA 23185

Roger W. Ross
364 Lynchburg Drive
Newport News, VA 23606

Ronald Paul Ross
16852 Polish Town Road
Lanexa, VA 23089

James Madison University
605 Port Republic Road
Harrisonburg, VA 22801

Christine Gay
5010 Toucan Lane
Kernersville, NC 27284

Joseph Vann Edwards
75 Salem Drive
Pinehurst, NC 28374

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09502300

Vincent Mitchell Edwards
416 Charleston Drive
Clayton, NC 27527

Carl F. Haught
815 Mitchell Street
Calvert, TX 77837

Norman R. Haught
14769 S. Norrisville Road
Meadville, PA 16335

Ricky D. Haught
18337 Southwood Drive
Meadville, PA 16335

Louie W. Haught
1045 Menis Road
Weimar, TX 78962

Margaret L. Haught
17223 Kiowa River Lane
Houston, TX 77095

Frances Joanne Kimble
103 Field Court
Harbinger, NC 27941

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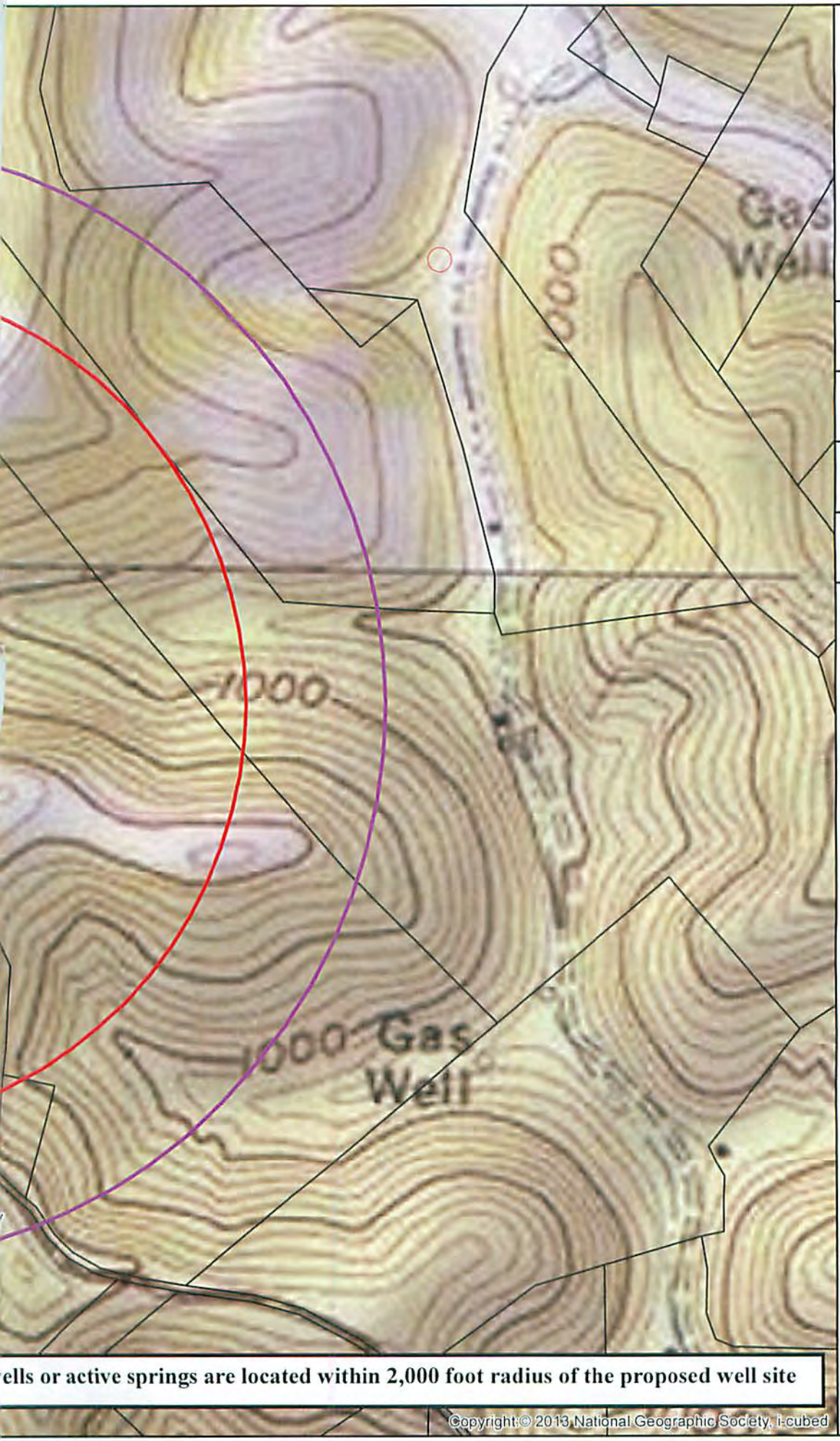


LDG

Larson Design Group

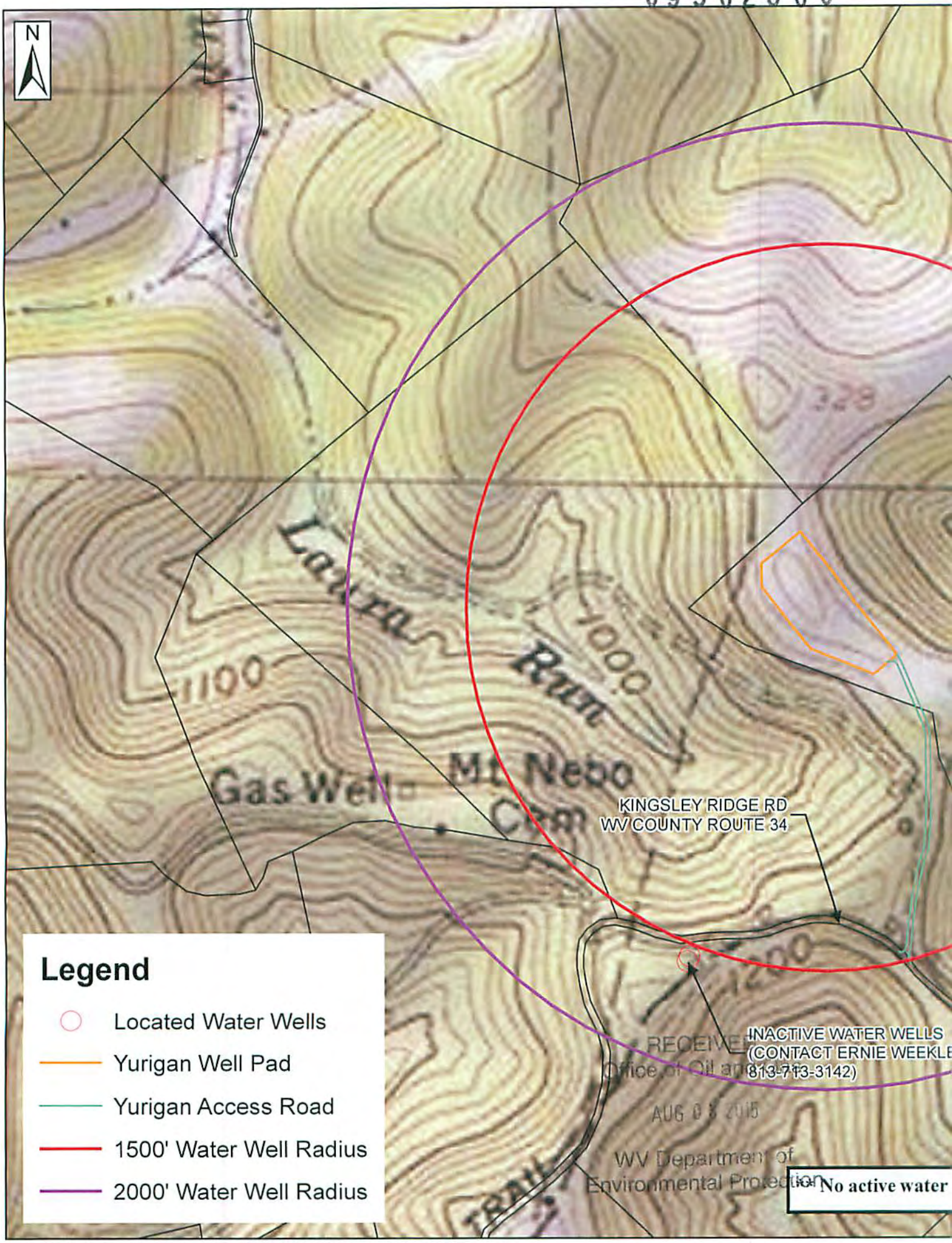
Date	8/20/2014
Designer	RTC
Project No.	8790-003-6
Scale	1 inch = 500 feet

Yurigan Water Well Map

Ellsworth District, Tyler County, WV

Statoil

09502300



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Path: P:\8790\8790-003-6 Yurigan (WV-6)\DATA\MAPS\Yurigan Water Well Map.mxd

09502300

WW-6A5
(1/12)

Operator Well No. Yurigan 4H

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: 07/27/2015 **Date Permit Application Filed:** 7/31/15

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: Statoil USA Onshore Properties Inc.
Address: 2103 CityWest Blvd. Suite 800
Houston, Texas 77042

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: Tyler
District: Ellsworth
Quadrangle: Shirley - Sec. 3
Watershed: Elk Fork

UTM NAD 83 Easting: 519009.57
Northing: 4372154.65
Public Road Access: CR 11 and CR 34/3
Generally used farm name: Yurigan 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 Properties Inc.
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.

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Environmental Protection

09502300

WW-6A4W
(1/12)

Operator Well No. Yurigan 4H

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

WAIVER

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

Surface Owner Waiver:

I, Statoil USA Onshore Properties Inc., hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	West Virginia	UTM NAD 83	Easting:	519009.57
County:	Tyler		Northing:	4372154.65
District:	Ellsworth	Public Road Access:		CR 11 and 34/3
Quadrangle:	Shirley - Sec. 3	Generally used farm name:		Yurigan Farm
Watershed:	Elk Fork			

Name: Statoil USA Onshore Properties Inc.
Address: 2103 CityWest Blvd. Suite 800
Houston, Texas 77042

Signature:

Date: 07/21/2015

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.

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09502300

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

July 14, 2015

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

Subject: DOH Permit for the Yurigan Pad Tyler County
Yurigan 4H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit # 06 -2014-0554 for the subject site to Statoil USA Onshore Properties Inc. for access to the State Road for the well site located off of Tyler County Route 34 SLS.

The operator has signed a STATEWIDE 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
Regional Maintenance Engineer
Central Office Oil &Gas Coordinator

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WV Department of
Environmental Protection

Cc: Courtney Battle
Statoil USA Onshore Properties Inc.
CH, OM, D-6
File

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

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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

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AUG 03 2015
WV Department of
Environmental Protection

95-0730C

APPROVED
WVDEP OOG
9/25/2015

YURIGAN (02-006) WELL PAD SITE

SITE DESIGN AND CONSTRUCTION PLANS
EROSION AND SEDIMENT CONTROL PLANS

ELLSWORTH DISTRICT, TYLER COUNTY, WEST VIRGINIA
ELK FORK RUN WATERSHED

LOCATION COORDINATES

ACCESS ROAD ENTRANCE
LATITUDE: 39.484768 LONGITUDE: -80.777496 (NAD 83)
N 4371701.24 E 519132.13 (UTM ZONE 17 METERS NAD 83)

CENTER OF WELL PAD
LATITUDE: 39.498619 LONGITUDE: -80.778709 (NAD 83)
N 4372134.68 E 519025.82 (UTM ZONE 17 METERS NAD 83)

GENERAL DESCRIPTION
THE ACCESS ROAD(S) AND COMBINED WELL AND FACILITIES PAD ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

MISS UTILITY STATEMENT
PROJECT DESIGN TICKET # 1412625097
IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

ENTRANCE PERMIT
WVDOH MM-109 PERMIT #6-2014-0054 ISSUED 09/25/2014 FOR WELL SITE ACCESS. EXPIRES 09/25/2015 UNLESS RENEWED.

ENVIRONMENTAL NOTES
WETLAND DELINEATIONS WERE PERFORMED BETWEEN APRIL 12 TO APRIL 16, 2014 BY LARSON DESIGN GROUP TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE YURIGAN (WV-6) JURISDICTIONAL STREAMS & WETLANDS MAPS WERE PREPARED BY LARSON DESIGN GROUP AND SUMMARIZE THE RESULTS OF THE FIELD DELINEATION. THE MAPS DO NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS EXHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

GEOTECHNICAL NOTE
A GEOTECHNICAL INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY LARSON DESIGN GROUP ON JUNE 9TH THROUGH JUNE 11TH, 2014. THE REPORT PREPARED BY LARSON DESIGN GROUP IN JULY, 2014 REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS WERE USED IN THE PREPARATION OF THESE PLANS. PLEASE REFER TO THE PRELIMINARY GEOTECHNICAL INFORMATION BY LARSON DESIGN GROUP FOR ADDITIONAL INFORMATION, AS NEEDED.

PROJECT CONTACTS

OPERATOR:
STATOIL
2103 CITY WEST BLVD., SUITE 800
HOUSTON, TX 77042
PHONE: (713) 918-8200

CLINT LONG - MANAGER, CIVIL CONSTRUCTION
OFFICE: (713) 483-2617
CELL: (713) 261-9633

RESTRICTIONS NOTES:
1. THERE ARE NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

PARCEL DISTURBANCE
TOTAL LIMITS OF DISTURBANCE = 13.3 AC
DISTURBANCE ON PROPERTY OF STATOIL (PARCEL 2-17-52) = 12.0 AC
DISTURBANCE ON PROPERTY OF STATOIL (PARCEL ID UNASSIGNED) = 1.3 AC

ACCESS ROAD AND PAD DISTURBANCES
TOTAL LIMITS OF DISTURBANCE = 13.3 AC
WELL PAD DISTURBANCE = 8.3 AC
ACCESS ROAD DISTURBANCE = 5.0 AC

USGS 7.5 SHIRLEY QUAD MAPS

WEST VIRGINIA COUNTY MAP

WVDOH COUNTY ROAD MAP

SHEET INDEX

1	COVER SHEET
2-3	CONSTRUCTION AND E&S CONTROL NOTES
4	EXISTING CONDITIONS
5	OVERALL PLAN SHEET INDEX & VOLUMES
6-7	EROSION & SEDIMENTATION CONTROL PLAN
8	WELL PAD GRADING PLAN AND CONTAINMENT PLAN
9	FACILITIES LAYOUT
10-12	ACCESS ROAD CROSS SECTIONS
13	WELL PAD CROSS SECTIONS
14	STOCKPILE PROFILES AND SECTIONS
15-17	CONSTRUCTION DETAILS
18-19	RECLAMATION PLAN

DESIGN CERTIFICATION
THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CSR 35-8.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV, Chapter 24-C)
Requires that you call two
business days before you dig in
the state of West Virginia.
IT'S THE LAW!!

PROPOSED WELL NAME	WV NORTH NAD 27	WV NORTH NAD 83	UTM (US SURVEY FT) NAD 27 - ZONE 17	UTM (METERS) NAD 83 - ZONE 17	NAD 83 LAT & LONG	EXISTING GROUND ELEVATION AT WELLHEADS
1H	N 366341.44 E 1639060.66	N 366376.94 E 1607619.48	N 1434613.08 E 1702731.71	N 437215 9.94 E 519008.10	LAT 39.498847 LON -80.778925	1252.0'
2H	N 366336.44 E 1639066.26	N 366371.94 E 1607625.08	N 1434608.18 E 1702737.39	N 437215 8.43 E 519009.83	LAT 39.498834 LON -80.778905	1261.7'
3H	N 366331.45 E 1639071.86	N 366366.95 E 1607630.68	N 1434603.28 E 1702743.08	N 437215 6.91 E 519011.56	LAT 39.498821 LON -80.778885	1261.4'
4H	N 366326398 E 1639065.20	N 366359.48 E 1607624.02	N 1434595.71 E 1702736.54	N 437215 4.65 E 519009.57	LAT 39.498777 LON -80.778908	1260.8'
5H	N 366328.96 E 1639059.60	N 366364.48 E 1607618.42	N 1434600.61 E 1702730.86	N 437215 6.14 E 519007.84	LAT 39.498813 LON -80.778929	1250.8'
6H	N 366333.97 E 1639053.99	N 366369.47 E 1607612.82	N 1434605.50 E 1702725.18	N 437215 7.63 E 519006.10	LAT 39.498827 LON -80.778949	1260.8'
7H	N 366338.97 E 1639048.41	N 366374.47 E 1607607.23	N 1434610.41 E 1702719.51	N 437215 9.13 E 519004.38	LAT 39.498840 LON -80.778969	1260.7'
8H	N 366343.96 E 1639042.81	N 366379.46 E 1607601.63	N 1434615.30 E 1702713.83	N 437216 0.62 E 519002.64	LAT 39.498853 LON -80.778989	1260.8'
9H	N 366351.43 E 1639049.47	N 366386.93 E 1607608.29	N 1434622.88 E 1702720.36	N 437216 2.93 E 519004.64	LAT 39.498875 LON -80.778966	1261.4'
10H	N 366346.43 E 1639055.07	N 366381.93 E 1607613.89	N 1434617.98 E 1702726.04	N 437216 1.44 E 519006.37	LAT 39.498861 LON -80.778946	1261.7'
WELL PAD ELEVATION	1240.60'					

LDG
Larson Design Group

BRYAN N. PAULINO
REGISTERED
20057
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

ISSUE / REVISIONS	
9/25/2015	RESUBMISSION TO WVDEP
7/7/2015	WVDOH PERMIT PLANS
04/15/2014	ISSUED FOR REVIEW

COVER SHEET
YURIGAN (02-006) WELL SITE
ELLSWORTH DISTRICT, TYLER COUNTY, WEST VIRGINIA

Larson Design Group • Architects Engineers Surveyors
2605 Cranberry Square
Morgantown, WV 26508
PHONE: 304.777.2960 TOLL FREE 877.323.6033
FAX 570.323.9922 • www.larsondesigngroup.com

Statoil

STATOIL
2103 CITY WEST BLVD., SUITE 800
HOUSTON, TX 77042
PHONE 713.918.8200

SHEET NO. 1 OF 19

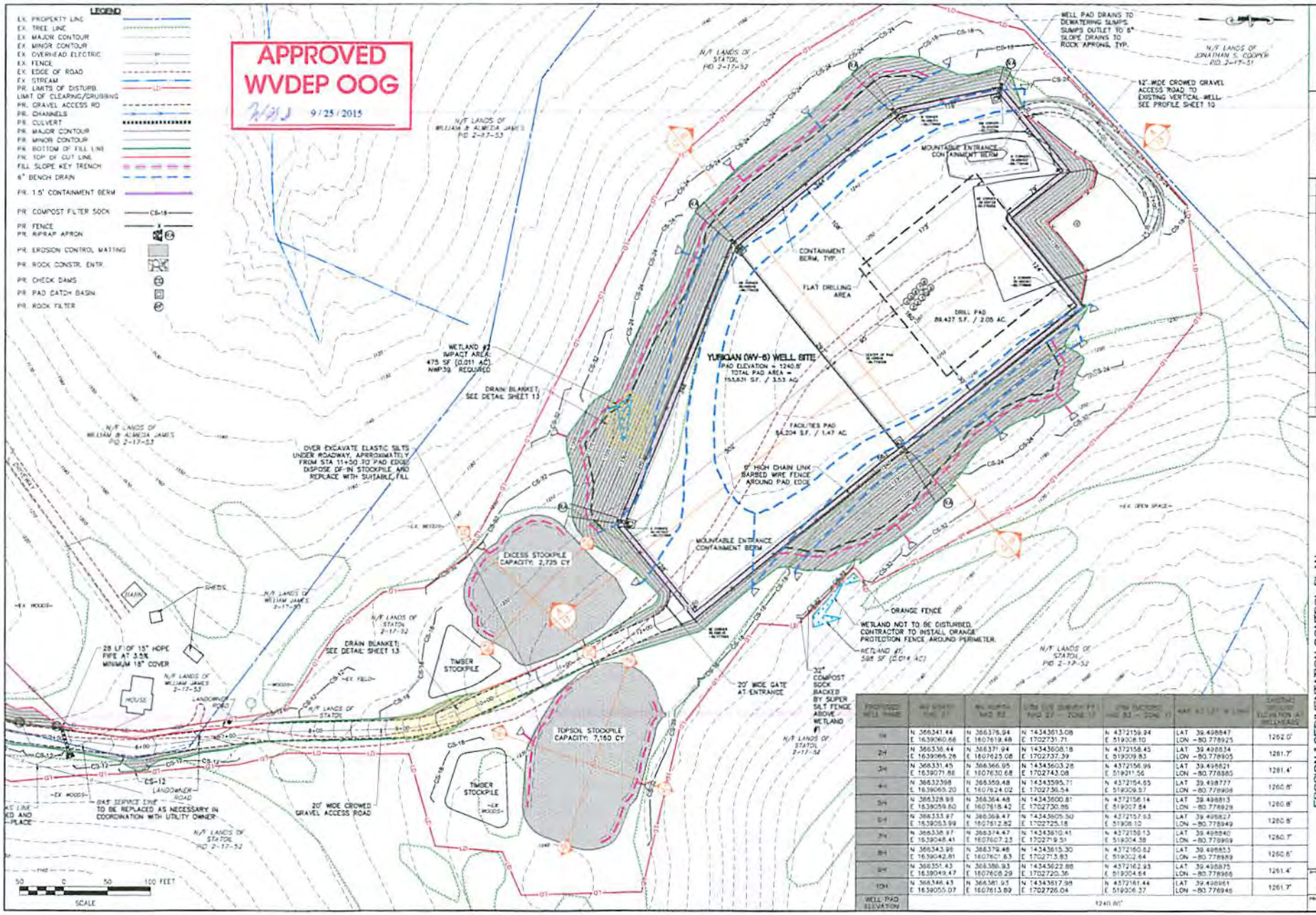
PROJECT NO. 5790-003-6

95-02300

APPROVED
WVDEP OOG
9/25/2015

LEGEND

- EX. PROPERTY LINE
- EX. TREE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. OVERHEAD ELECTRIC
- EX. FENCE
- EX. EDGE OF ROAD
- EX. STREAM
- PR. LIMITS OF DISTURB. LIMIT OF CLEARING/CRUSHING
- PR. GRAVEL ACCESS RD
- PR. CHANNELS
- PR. CULVERT
- PR. MAJOR CONTOUR
- PR. MINOR CONTOUR
- PR. BOTTOM OF FILL LINE
- PR. TOP OF CUT LINE
- FILL SLOPE KEY TRENCH
- 6" BENCH DRAIN
- PR. 1.5' CONTAINMENT BERM
- PR. COMPOST FILTER SOCK — CS-18
- PR. FENCE
- PR. RIPRAP APRON
- PR. EROSION CONTROL MATTING
- PR. ROCK CONSTR. ENTR.
- PR. CHECK DAMS
- PR. PAD CATCH BASIN
- PR. ROCK FILTER



PROPOSED WELL PAD	NAD 27	NAD 83	UTM (US SURVEY FT) NAD 27 - ZONE 17	UTM (METERS) NAD 83 - ZONE 17	LAT / LON	EXISTING GROUND ELEVATION (AT WELLHEAD)
1H	N 366341.44 E 1639060.66	N 366376.94 E 1607619.48	N 14343613.08 E 1702731.71	N 4372159.24 E 519306.10	LAT 39.498847 LON -80.778925	1262.0'
2H	N 366336.44 E 1639066.28	N 366371.94 E 1607625.08	N 14343608.18 E 1702737.39	N 4372158.45 E 519309.83	LAT 39.498834 LON -80.778905	1261.7'
3H	N 366331.45 E 1639071.88	N 366366.95 E 1607630.68	N 14343603.28 E 1702743.08	N 4372156.95 E 519311.56	LAT 39.498821 LON -80.778885	1261.4'
4H	N 366326.98 E 1639076.20	N 366350.48 E 1607624.02	N 14343595.71 E 1702736.54	N 4372154.65 E 519309.37	LAT 39.498777 LON -80.778908	1260.8'
5H	N 366328.93 E 1639059.60	N 366364.48 E 1607618.42	N 14343600.87 E 1702730.88	N 4372156.14 E 519307.84	LAT 39.498813 LON -80.778929	1260.8'
6H	N 366333.97 E 1639053.99	N 366369.47 E 1607612.82	N 14343605.50 E 1702725.18	N 4372157.63 E 519306.10	LAT 39.498827 LON -80.778949	1260.8'
7H	N 366338.97 E 1639048.41	N 366374.47 E 1607607.23	N 14343610.41 E 1702719.51	N 4372159.13 E 519304.38	LAT 39.498840 LON -80.778969	1260.7'
8H	N 366343.95 E 1639042.81	N 366379.46 E 1607601.63	N 14343615.30 E 1702713.83	N 4372160.62 E 519302.64	LAT 39.498853 LON -80.778989	1260.6'
9H	N 366351.43 E 1639049.47	N 366386.93 E 1607608.29	N 14343622.88 E 1702720.36	N 4372162.93 E 519304.64	LAT 39.498875 LON -80.778966	1261.4'
10H	N 366346.43 E 1639055.07	N 366381.93 E 1607613.89	N 14343617.98 E 1702726.04	N 4372161.44 E 519306.37	LAT 39.498861 LON -80.778946	1261.7'
WELL PAD ELEVATION			1240.80'			

LDG
Larson Design Group

BRYAN M. PAULINO
REGISTERED
20057
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

CODE	REVISIONS	DATE	BY
1	PERMITTING TO WVDEP	9/4/2015	BMP
2	WVDEP PERMIT PLANS	9/25/2015	BMP
3	COMMENTS		BMP

EROSION & SEDIMENTATION CONTROL PLAN
YURIGAN (02-006) WELL SITE
ELLSWORTH DISTRICT, TYLER COUNTY, WEST VIRGINIA

STATOIL
2103 CITY WEST BLVD., SUITE 800
HOUSTON, TX 77042
PHONE 713.918.8200

Larson Design Group • Architects Engineers Surveyors
2405 Cranberry Square
Morgantown, WV 26508
PHONE 304.777.2940 TOLL FREE 877.323.6653
FAX 304.323.9502 • www.larson-design-group.com

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SHEET NO.: 7 OF 19

PROJECT NO.: 8790 003 6

VELL PAD SITE

TRUCTION PLANS
CONTROL PLANS

UNTY, WEST VIRGINIA
TERSHED

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MAPS

2000

TROL NOTES

VOLUMES
NTROL PLAN
CONTAINMENT PLAN

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REFERENCE DIAGRAMS
ACCORDANCE WITH THE
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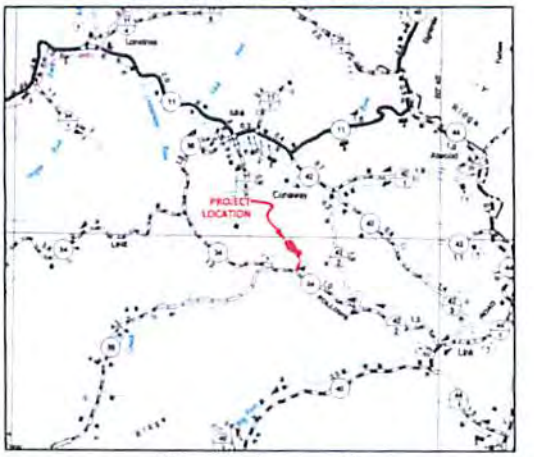
WEST VIRGINIA COUNTY MAP

WVDOH COUNTY ROAD MAP



5000 0 5000
SCALE: 1"=5000'

PROPOSED WELL NAME	WV NORTH NAD 27	WV NORTH NAD 83	UTM (US SURVEY FT.) NAD 27 – ZONE 17	UTM (METERS) NAD 83 – ZONE 17	NAD 83 LAT & LONG	EXISTING GROUND ELEVATION AT WELLHEADS
1H	N 366341.44 E 1639060.66	N 366376.94 E 1607619.48	N 14343613.08 E 1702731.71	N 4372159.94 E 519008.10	LAT 39.498847 LON -80.778925	1262.0'
2H	N 366336.44 E 1639066.26	N 366371.94 E 1607625.08	N 14343608.18 E 1702737.39	N 4372158.45 E 519009.83	LAT 39.498834 LON -80.778905	1261.7'
3H	N 366331.45 E 1639071.86	N 366366.95 E 1607630.68	N 14343603.28 E 1702743.08	N 4372156.96 E 519011.56	LAT 39.498821 LON -80.778885	1261.4'
4H	N 36632398 E 1639065.20	N 366359.48 E 1607624.02	N 14343595.71 E 1702736.54	N 4372154.65 E 519009.57	LAT 39.498777 LON -80.778908	1260.8'
5H	N 366328.98 E 1639059.60	N 366364.48 E 1607618.42	N 14343600.61 E 1702730.86	N 4372156.14 E 519007.84	LAT 39.498813 LON -80.778929	1260.8'
6H	N 366333.97 E 1639053.99	N 366369.47 E 1607612.82	N 14343605.50 E 1702725.18	N 4372157.63 E 51906.10	LAT 39.498827 LON -80.778949	1260.8'
7H	N 366338.97 E 1639048.41	N 366374.47 E 1607607.23	N 14343610.41 E 1702719.51	N 4372159.13 E 519004.38	LAT 39.498840 LON -80.778969	1260.7'
8H	N 366343.96 E 1639042.81	N 366379.46 E 1607601.63	N 14343615.30 E 1702713.83	N 4372160.62 E 519002.64	LAT 39.498853 LON -80.778989	1260.6'
9H	N 366351.43 E 1639049.47	N 366386.93 E 1607608.29	N 14343622.88 E 1702720.36	N 4372162.93 E 519004.64	LAT 39.498875 LON -80.778966	1261.4'
10H	N 366346.43 E 1639055.07	N 366381.93 E 1607613.89	N 14343617.98 E 1702726.04	N 4372161.44 E 519006.37	LAT 39.498961 LON -80.778946	1261.7'
WELL PAD ELEVATION	1240.80'					

Larson Design Group

BRYAN M. PAULING
REGISTERED
20057
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

NO.	DATE	ISSUE / REVISIONS	BY	CHKD
0	7/13/2015	WVDEP PERMIT PLANS COMMENTS	NJR	BMP

Initial Draft 7/17/15

COVER SHEET
YURIGAN (02-006) WELL SITE
ELLSWORTH DISTRICT, TYLER COUNTY, WEST VIRGINIA

Larson Design Group • Architects Engineers Surveyors
2505 Cranberry Square
Morgantown, WV 26508
PHONE 304.777.2940 TOLL FREE 877.323.6603
FAX 570.323.9902 • www.larsondesigngroup.com

Statoil
STATOIL
2103 CITY WEST BLVD., SUITE 800
HOUSTON, TX 77042
PHONE 713.918.8200

SHEET NO.: 1 OF 18

PROJECT NO.: 8790-003-6

YURIGAN (02-006) V

SITE DESIGN AND CONST
EROSION AND SEDIMENT

ELLSWORTH DISTRICT, TYLER C
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RECEIVED
Office of Oil and Gas
AUG 03 2015
WV Department of
Environmental Protection

LOCATION COORDINATES

ACCESS ROAD ENTRANCE
LATITUDE: 39.494766 LONGITUDE: -80.777496 (NAD 83)
N 4371701.24 E 519132.13 (UTM ZONE 17 METERS NAD 83)

CENTER OF WELL PAD
LATITUDE: 39.498619 LONGITUDE: -80.778709 (NAD 83)
N 4372134.66 E 519026.82 (UTM ZONE 17 METERS NAD 83)

GENERAL DESCRIPTION
THE ACCESS ROAD(S) AND COMBINED WELL AND FACILITIES PAD ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

MISS UTILITY STATEMENT
PROJECT DESIGN TICKET #: 1412625097.
IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

ENTRANCE PERMIT
WVDOH MM-109 PERMIT #6-2014-0554 ISSUED 09/25/2014 FOR WELL SITE ACCESS. EXPIRES 09/25/2015 UNLESS RENEWED.

ENVIRONMENTAL NOTES
WETLAND DELINEATIONS WERE PERFORMED BETWEEN APRIL 12 TO APRIL 16, 2014 BY LARSON DESIGN GROUP TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE YURIGAN (WV-6) JURISDICTIONAL STREAMS & WELANDS MAPS WERE PREPARED BY LARSON DESIGN GROUP AND SUMMARIZE THE RESULTS OF THE FIELD DELINEATION. THE MAPS DO NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS EXHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

GEOTECHNICAL NOTE
A GEOTECHNICAL INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY LARSON DESIGN GROUP ON JUNE 9TH THROUGH JUNE 11TH, 2014. THE REPORT PREPARED BY LARSON DESIGN GROUP IN JULY, 2014 REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS WERE USED IN THE PREPARATION OF THESE PLANS. PLEASE REFER TO THE PRELIMINARY GEOTECHNICAL INFORMATION BY LARSON DESIGN GROUP FOR ADDITIONAL INFORMATION, AS NEEDED.

PROJECT CONTACTS

OPERATOR:
STATOIL
2103 CITY WEST BLVD., SUITE 800
HOUSTON, TX 77042
PHONE: (713) 918-8200

CLINT LONG – MANAGER, CIVIL CONSTRUCTION
OFFICE: (713) 485-2617
CELL: (713) 261-9633

RESTRICTIONS NOTES:
1. THERE ARE NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

PARCEL DISTURBANCE

TOTAL LIMITS OF DISTURBANCE = 13.3 AC
DISTURBANCE ON PROPERTY OF STATOIL (PARCEL 2-17-52) = 12.0 AC
DISTURBANCE ON PROPERTY OF STATOIL (PARCEL ID UNASSIGNED) = 1.3 AC
DISTURBANCE ON PROPERTY OF WILLIAM & ALMEDA JAMES (PARCEL 5-2-30) = 0.01 AC

ACCESS ROAD AND PAD DISTURBANCES

TOTAL LIMITS OF DISTURBANCE = 13.3 AC
WELL PAD DISTURBANCE = 8.3 AC
ACCESS ROAD DISTURBANCE = 5.0 AC

USGS 7.5 SHIRLEY QUA

2000 0
SCALE: 1"=2000'

SHEET INDEX

1	COVER SHEET
2-3	CONSTRUCTION AND E&S C
4	EXISTING CONDITIONS
5	OVERALL PLAN SHEET INDE
6-7	EROSION & SEDIMENTATION
8	WELL PAD GRADING PLAN
9	FACILITIES LAYOUT
10-12	ACCESS ROAD CROSS SECT
13	WELL PAD CROSS SECTIONS
14-16	CONSTRUCTION DETAILS
17-18	RECLAMATION PLAN

DESIGN CERTIFICATION
THE DRAWINGS, CONSTRUCTION NOTES, AN
ATTACHED HERETO HAVE BEEN PREPARED
WEST VIRGINIA CODE OF STATE RULES, DI
PROTECTION, OFFICE OF OIL AND GAS CS

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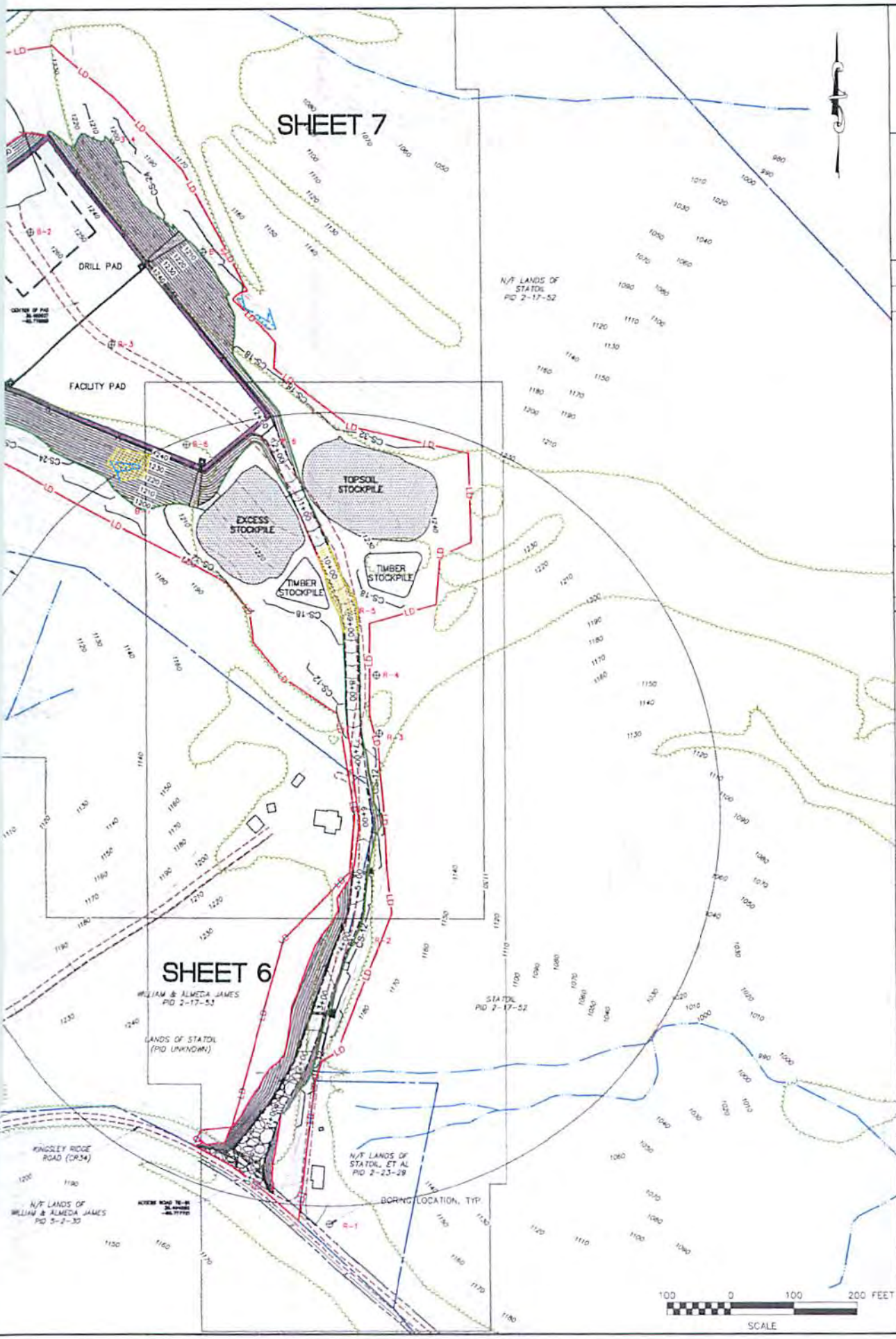

LDG
Larson Design Group

BRYAN M. PAULINO
REGISTERED
20057
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

NO.	DATE	ISSUE / REVISIONS	BY	CHK'D
0	7/13/2015	WVDEP PERMIT PLANS COMMENTS	NJR	BMP

MDG 7/17/15

OVERALL PLAN SHEET INDEX & VOLUMES
YURIGAN (02-006) WELL SITE
ELLSWORTH DISTRICT, TYLER COUNTY, WEST VIRGINIA

Larson Design Group • Architects Engineers Surveyors
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Statoil

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HOUSTON, TX 77042
PHONE 713.918.8200

SHEET NO.: 5 OF 18

PROJECT NO.: 8790-003-6

LEGEND

- EX. PROPERTY LINE
- EX. TREE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. GASLINE
- EX. OVERHEAD ELECTRIC
- EX. FENCE
- EX. EDGE OF ROAD
- EX. VERTICAL WELL
- EX. STREAM
- EX. WETLAND
- PR. LIMITS OF DISTURB. — LD —
- PR. GRAVEL ACCESS RD
- PR. ROADSIDE DITCH
- PR. CULVERT
- PR. MAJOR CONTOUR
- PR. MINOR CONTOUR
- PR. FILL LINE
- PR. CUT LINE
- PR. 1.5' CONTAINMENT BERM
- PR. COMPOST FILTER SOCK — CS-18 —
- PR. FENCE — X —
- PR. RIPRAP APRON
- PR. EROSION CONTROL MATTING
- PR. ROCK CONSTR. ENTR.
- PR. PAD CATCH BASIN
- BOREHOLES B-1

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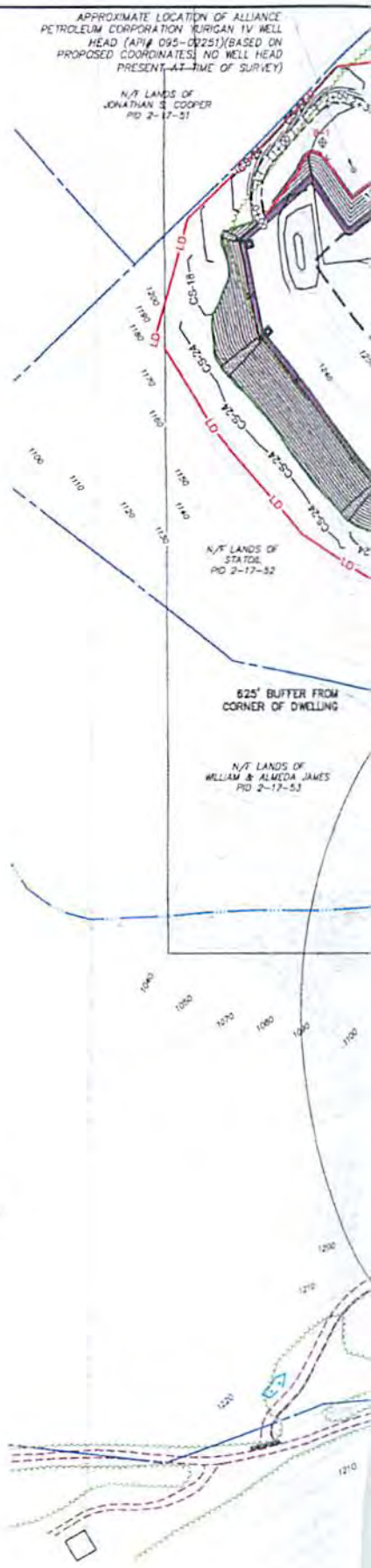
Environmental Protection



GENERAL NOTES

1. THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON APRIL 6 2013 AERIAL PHOTOGRAPHY COMPILED BY BLUE MOUNTAIN AERIAL MAPPING, BURTON, WEST VIRGINIA.
2. THE PROPERTY LINES HEREON ARE SHOWN PARTLY FROM AVAILABLE RECORD INFORMATION AND PARTLY FROM FIELD EVIDENCE LOCATED BY LDG, INC., BUT THEY DO NOT REPRESENT A BOUNDARY SURVEY AS DEFINED IN WVC 30-13A-3.
3. ALL PROPOSED ELEVATIONS ARE APPROXIMATE AND RELATIVE; PAD ELEVATIONS MAY BE FIELD ADJUSTED TO BALANCE EARTHWORK.

PARCEL DISTURBANCE

TOTAL LIMITS OF DISTURBANCE = 13.3 AC (INCLUDING ACCESS ROAD)

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DISTURBANCE ON PROPERTY OF STATOIL (PARCEL ID UNASSIGNED) = 1.3 AC

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WELL PAD DISTURBANCE = 8.3 AC

ACCESS ROAD DISTURBANCE = 5.0 AC

ADDITIONAL DESIGN CONCERNS

1. THE ACCESS ROAD ENTRANCE HAS BEEN DESIGNED TO AT A MINIMUM ACCOMMODATE A STATOIL DRILL RIG USING AUTOTURN.
2. THERE ARE STREAM IMPACTS THAT WILL NEED TO BE PERMITTED BY THE APPROPRIATE AGENCIES.