

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

API 47 - 33 - 05733 County HARRISON District SARDIS  
Quad SALEM 7.5' Pad Name GOODWIN 2 PAD Field/Pool Name MARCELLUS  
Farm name COLLINS, THOMAS AND VANES Well Number GOODWIN 2-2H  
Operator (as registered with the OOG) STATOIL USA ONSHORE PROPERTIES, INC.  
Address 6300 Bridge Point Pky., Suite 500 City Austin State TX Zip 78730

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4357953 Easting 541130  
Landing Point of Curve Northing 4357673 Easting 541233  
Bottom Hole Northing 4355410 Easting 541949

Elevation (ft) 1390' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine

Mud Type(s) and Additive(s)

Surface - Drill Water; Intermediate - KCl/Polymer; Production - Cyberdrill

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Date permit issued 04/29/13 Date drilling commenced 09/02/14 Date drilling ceased 09/19/14  
Date completion activities began 05/04/15 Date completion activities ceased 05/15/15  
Verbal plugging (Y/N) N/A Date permission granted \_\_\_\_\_ Granted by Department of Environmental Protection

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 763' estimated Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 2150' estimated Void(s) encountered (Y/N) depths N  
Coal depth(s) ft N Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:

AX 04/08/15 2016

API 47- 33 - 05733 Farm name COLLINS, THOMAS AND VANES Well number GOODWIN 2-2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	100'	NEW	94#		
Surface	17 1/2"	13 3/8"	762'	NEW	J-55; 54.5#		Y - 25 bbls circ to surface
Coal							
Intermediate 1	12 1/4"	9 5/8"	2660'	NEW	J-55; 36#		Y 17 bbls circ to surface
Intermediate 2							
Intermediate 3							
Production	8 1/2"	5 1/2"	16,162'	NEW	P-110; 20#		Est, TOC 626' RKB
Tubing	2	2 7/8"	7447'	NEW			
Packer type and depth set		VersaSet packer set at 7450'					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A	305	15.8	2.31	705	Surface	53 hrs
Coal							
Intermediate 1	Class A	460	15.8	2.31	1063	Surface	68 hrs
Intermediate 2							
Intermediate 3							
Production	Class A	2880	13.5	1.29	3715	626'	> 8 hrs
Tubing							

Drillers TD (ft) 16,226'      Loggers TD (ft) 16,280'  
 Deepest formation penetrated MARCELLUS      Plug back to (ft) N/A  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 7,018'

Check all wireline logs run       caliper     density     deviated/directional     induction  
     neutron     resistivity     gamma ray     temperature     sonic

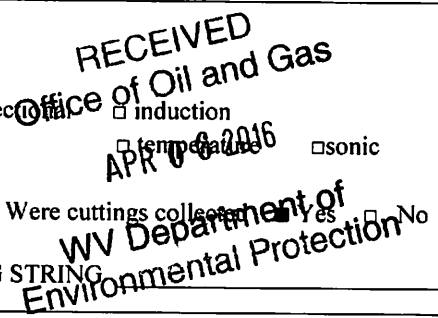
Well cored     Yes     No      Conventional      Sidewall      Were cuttings collected     Yes     No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_  
 Surface: 1 Centralizer with stop collar 10 ft above floatshoe. One single bow every joint to 100ft below surface.  
 Intermediate: 1 centralizer with stop collar 10 ft above float shoe. 1 centralizer with stop collar 10 ft above float collar. 1 centralizer every joint for the first 15 joints. One centralizer every 3 joints to 100 ft 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

WAS WELL COMPLETED AS SHOT HOLE     Yes     No      DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?     Yes     No      DETAILS FRACTURED 9 STAGES TOTAL OUT OF 26 PLANNED STAGES  
FRACTURED FROM 15,962' TO 13,378' - 48 PERFS PER STAGE @ 6 SHOTS PER FOOT.

WERE TRACERS USED     Yes     No      TYPE OF TRACER(S) USED \_\_\_\_\_





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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
MARCELLUS	7663'	8069'
	TVD	MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3150 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 4500 mcfpd Oil 0 bpd NGL 0 bpd Water 56 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	0		0		
Big Injun	2491'	2582'	2497'	2589'	SANDSTONE
Middlesex	7326'	7396'	7362'	7444'	SHALE
West River	7396'	7481'	7444'	7555'	SHALE
GENESECO	7481'	7514'	7555'	7609'	SHALE, GAS SHOW
TULLY	7514'	7555'	7609'	7692'	CABONACEOUS SHALE
HAMILTON	7555'	7663'	7692'	8069'	SHALE, FEW GAS SHOWS
MARCELLUS	7663'	-	8069'	-	SHALE, GAS THROUGHOUT FORMATION

Please insert additional pages as applicable.

Drilling Contractor ORION DRILLING  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company HALLIBURTON  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company HALLIBURTON  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Stimulating Company PRODUCERS SERVICE CORP  
Address 109 S. GRAHAM STREET City ZANESVILLE State OH Zip 43701

Please insert additional pages as applicable.

Completed by Bekki Winfree Telephone 713-478-8975  
Signature *Bekki Winfree* Title Sr. Regulatory Advisor Date 12/16/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

**RECEIVED**  
 Office of Oil and Gas  
 APR 06 2016  
 WV Department of  
 Environmental Protection

04/08/2016



March 31, 2016

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

Reference: WR-35 – Updated for Well Test  
Goodwin Well No. 2-2H, API No. 47-033-05733  
Harrison County

Gentlemen:

Statoil USA Onshore Properties Inc. herein submits the updated WR-35 "Well Operator's Report of Well Work" for the Goodwin 2-2H (API No. 47-033-05733). The WR-36 was filed 12/16/15 but apparently this form was left out of the submittal package.

Should you have any questions or require additional information, please contact the undersigned at 713-240-9015 or [bekw@statoil.com](mailto:bekw@statoil.com).

Sincerely,

A handwritten signature in blue ink that reads "Bekki Winfree".

Bekki Winfree  
Sr. Regulatory Advisor – Marcellus Asset

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Office of Oil and Gas  
APR 06 2016  
WV Department of  
Environmental Protection

04/08/2016