

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

API 47-103-02930 County WETZEL District CENTER
Quad LITTLETON 7.5' Pad Name JOLLIFFE UNIT 1 Field/Pool Name MARCELLUS SHALE
Farm name JOE JOLLIFFE Well Number JOE JOLLIFFE UNIT 1 4H
Operator (as registered with the OOG) STATOIL USA ONSHORE PROPERTIES INC.
Address 2103 CITYWEST BLVD, STE 800 City HOUSTON State TX Zip 77042

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 419,538 Easting 1,671,180
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 415,459 Easting 1,675,607

Elevation (ft) 1336' 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

Date permit issued 11/05/2013 Date drilling commenced 09/29/2014 Date drilling ceased 10/18/2014
Date completion activities began 02/05/2015 Date completion activities ceased 02/25/2015
Verbal plugging (Y/N) N/A Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 130' - 320' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2150' - Void(s) encountered (Y/N) depths Office of Oil & Gas
Coal depth(s) ft 755' - Cavern(s) encountered (Y/N) depths MAY 26 2015
Is coal being mined in area (Y/N) N

Reviewed by:
AL 5/27/15
W.S. 6/6/15 05/2015

API 47- 103 - 02930 Farm name JOE JOLLIFFE Well number JOE JOLLIFFE UNIT I 4H

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	120'	NEW			
Surface	17 1/2	13 3/8	668'	NEW	J-55; 54.5#		Yes - 11.5bbls
Coal							
Intermediate 1	12 1/4	9 5/8	2657'	NEW	J-55; 36#		N
Intermediate 2							
Intermediate 3							
Production	8 3/4	5.5	13,514'	NEW	J-55; P-110; 20#		Yes - 4 bbls
Tubing	4 5/8	2 3/8	7345'	NEW	L-80; 4.7#		N/A
Packer type and depth set		VersaSet Packer set at 7340'					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A	250	15.8	2.31	578 = 103 bbls	SURFACE	19.5 hrs
Coal							
Intermediate 1	Class A	440	15.8	2.31	1016 = 181bbls	2653'	34.5 hrs
Intermediate 2							
Intermediate 3							
Production	Class A	2345	15	1.29	3025 = 538.77 bbls	1275'	days
Tubing							

Drillers TD (ft) 13,530' Loggers TD (ft) 13,485'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure _____

Kick off depth (ft) 6,826'

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 _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

Received
Office of Oil & Gas
MAY 26 2015

API 47- 103 - 02930 Farm name JOE JOLLIFFE Well number JOE JOLLIFFE UNIT 1 4H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	02/05/15	13232	13052	48	Marcellus
2	02/12/15	12932	12752	48	Marcellus
3	02/12/15	12632	12542	48	Marcellus
4	02/14/15	12332	12152	48	Marcellus
5	02/14/15	12032	11852	48	Marcellus
6	02/15/15	11732	11552	48	Marcellus
7	02/16/15	11432	11252	48	Marcellus
8	02/17/15	11132	10952	48	Marcellus
9	02/18/15	10832	10652	48	Marcellus
10	02/18/15	10532	10352	48	Marcellus
11	02/19/15	10232	10052	48	Marcellus
12	02/20/15	9932	9752	48	Marcellus
13	02/20/15	9632	9452	48	Marcellus
14	02/21/15	9332	9152	48	Marcellus
15	02/22/15	9032	8852	48	Marcellus
16	02/22/15	8732	8552	48	Marcellus

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	02/05/15	85.3	8015	9608		132400	5281	
2	02/12/15	84.3	7607	8230	5083	441800	8250	
3	02/12/15	82.1	7882	8865	6562	441800	9689	
4	02/14/15	85	7680	8102	6222	441800	7827	
5	02/14/15	85	7879	8203	5798	441800	7873	
6	02/15/15	80	8065	8620	5986	441800	10151	
7	02/16/15	85	8058	8496	5727	441800	7899	
8	02/17/15	85	8037	8386	5841	441800	7873	
9	02/18/15	85	8037	8526	5021	441800	8834	
10	02/18/15	86.5	7899	8136	4849	441800	7756	
11	02/19/15	86.5	7663	8032	5826	441800	8673	
12	02/20/15	80	7891	8679	5937	441800	7778	
13	02/20/15	85.5	7641	7985	4753	441800	7589	
14	02/21/15	84	7600	8004	4999	441800	7415	
15	02/22/15	83	8013	8109	4878	441800	7533	
16	02/22/15	85.6	7618	7873	4511	441800	7562	

Received
Office of Oil & Gas
06/05/2015

Please insert additional pages as applicable.

API 47- 103 - 02930 Farm name JOE JOLLIFFE Well number JOE JOLLIFFE UNIT I 4H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus (shut in; not yet producing)	7477'-7508'	TVD 7712' - 13312' MD
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs
 OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ 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 ₂ S, ETC)
	0		0		
Gordon	3145	3199	3154	3209	
Warren	3836	3867	3850	3882	
Alexander	5828	5876	5845	5880	
Middlesex	7185	7225	7207	7250	Gas
Geneseo	7305	7327	7343	7372	Gas
Tully	7327	7351	7372	7405	
Hamilton	7351	7452	7405	7592	
Marcellus	7452		7592		Gas

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 Producer's Service Corp
 Address 109 S. Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Beth Davidson Telephone 281-797-7757
 Signature Beth Davidson Title Regulatory Advisor Date 05/21/2015
 Received Office of Oil & Gas MAY 26 2015

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

06/05/2015

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

API 47 - 103 - 02930 County WETZEL District CENTER
Quad LITTLETON 7.5' Pad Name JOLLIFFE UNIT 1 Field/Pool Name MARCELLUS SHALE
Farm name JOE JOLLIFFE Well Number JOE JOLLIFFE UNIT 1 4H
Operator (as registered with the OOG) STATOIL USA ONSHORE PROPERTIES INC.
Address 2103 CITYWEST BLVD, STE 800 City HOUSTON State TX Zip 77042

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 419,538 Easting 1,671,180
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 415,459 Easting 1,675,607

Elevation (ft) 1336' 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

Date permit issued 11/05/2013 Date drilling commenced 09/29/2014 Date drilling ceased 10/18/2014
Date completion activities began 02/05/2015 Date completion activities ceased 02/25/2015
Verbal plugging (Y/N) N/A Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 130' - 320' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 2150' - Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 755' - Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas
MAY 28 2015

Reviewed by: _____

06/05/2015

API 47- 103 - 02930

Farm name JOE JOLLIFFE

Well number JOE JOLLIFFE UNIT I 4H

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	120'	NEW			
Surface	17 1/2	13 3/8	668'	NEW	J-55; 54.5#		Yes - 11.5bbls
Coal							
Intermediate 1	12 1/4	9 5/8	2657'	NEW	J-55; 36#		N
Intermediate 2							
Intermediate 3							
Production	8 3/4	5.5	13,514'	NEW	J-55; P-110; 20#		Yes - 4 bbbls
Tubing	4 5/8	2 3/8	7345'	NEW	L-80; 4.7#		N/A
Packer type and depth set		VersaSet Packer set at 7340'					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A	250	15.8	2.31	578 = 103 bbbls	SURFACE	19.5 hrs
Coal							
Intermediate 1	Class A	440	15.8	2.31	1016 = 181bbbls	2653'	34.5 hrs
Intermediate 2							
Intermediate 3							
Production	Class A	2345	15	1.29	3025 = 538.77 bbbls	1275'	days
Tubing							

Drillers TD (ft) 13,530' Loggers TD (ft) 13,485'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure _____

Kick off depth (ft) 6,826'

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 _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

Received
Office of Oil & Gas
MAY 26 2015

API 47- 103 - 02930 Farm name JOE JOLLIFFE Well number JOE JOLLIFFE UNIT 1 4H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	02/05/15	13232	13052	48	Marcellus
2	02/12/15	12932	12752	48	Marcellus
3	02/12/15	12632	12542	48	Marcellus
4	02/14/15	12332	12152	48	Marcellus
5	02/14/15	12032	11852	48	Marcellus
6	02/15/15	11732	11552	48	Marcellus
7	02/16/15	11432	11252	48	Marcellus
8	02/17/15	11132	10952	48	Marcellus
9	02/18/15	10832	10652	48	Marcellus
10	02/18/15	10532	10352	48	Marcellus
11	02/19/15	10232	10052	48	Marcellus
12	02/20/15	9932	9752	48	Marcellus
13	02/20/15	9632	9452	48	Marcellus
14	02/21/15	9332	9152	48	Marcellus
15	02/22/15	9032	8852	48	Marcellus
16	02/22/15	8732	8552	48	Marcellus

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	02/05/15	85.3	8015	9608		132400	5281	
2	02/12/15	84.3	7607	8230	5083	441800	8250	
3	02/12/15	82.1	7882	8865	6562	441800	9689	
4	02/14/15	85	7680	8102	6222	441800	7827	
5	02/14/15	85	7879	8203	5798	441800	7873	
6	02/15/15	80	8065	8620	5986	441800	10151	
7	02/16/15	85	8058	8496	5727	441800	7899	
8	02/17/15	85	8037	8386	5841	441800	7873	
9	02/18/15	85	8037	8526	5021	441800	8834	
10	02/18/15	86.5	7899	8136	4849	441800	7756	
11	02/19/15	86.5	7663	8032	5826	441800	8673	
12	02/20/15	80	7891	8679	5937	441800	7778	
13	02/20/15	85.5	7641	7985	4753	441800	7589	
14	02/21/15	84	7600	8004	4999	441800	7415	
15	02/22/15	83	8013	8109	4878	441800	7593	
16	02/22/15	85.6	7618	7873	4511	441800	7367	

Received
Office of Oil & Gas
MAR 26 2015

Please insert additional pages as applicable.

API 47- 103 - 02930 Farm name JOE JOLLIFFE Well number JOE JOLLIFFE UNIT 1 4H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus (shut in; not yet producing)	7477'-7508' TVD	7712' - 13312' MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ 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 ₂ S, ETC)
	0		0		
Gordon	3145	3199	3154	3209	
Warren	3836	3867	3850	3882	
Alexander	5828	5876	5845	5880	
Middlesex	7185	7225	7207	7250	Gas
Geneseo	7305	7327	7343	7372	Gas
Tully	7327	7351	7372	7405	
Hamilton	7351	7452	7405	7592	
Marcellus	7452		7592		Gas

Please insert additional pages as applicable.

Drilling Contractor ORION DRILLING
Address _____ City _____ State _____ Zip _____

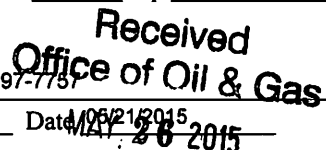
Logging Company HALLIBURTON
Address _____ City _____ State _____ Zip _____

Cementing Company HALLIBURTON
Address _____ City _____ State _____ Zip _____

Stimulating Company Producer's Service Corp
Address 109 S. Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Beth Davidson Telephone 281-797-7757
Signature [Signature] Title Regulatory Advisor Date MAY 26 2015



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

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/5/2015
Job End Date:	2/24/2015
State:	West Virginia
County:	Wayne
API Number:	47-103-02930-00-00
Operator Name:	Statoil USA Onshore Properties Inc.
Well Name and Number:	Joe Jolliffe Unit 1 4H
Longitude:	-80.55591000
Latitude:	39.64705000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,500
Total Base Water Volume (gal):	6,165,642
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Abstract Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Company 1	Carrier/Base Fluid	Water	7732-18-5	100.00000	85.31413	None
Sand (Proppant)	PSC	Proppant	Silica Substrate	NA	100.00000	13.39447	None
PRO GEL 4.0L	Producers Service Corp	Gelling Agent	Distillates (Petroleum), hydrotreated light	64742-47-8	65.00000	0.07907	None
			Guar Gum	9000-30-0	50.00000	0.06082	None
			Nonionic Surfactant	60828-78-6	5.00000	0.00608	None
			Nonionic Surfactant	60828-78-6	5.00000	0.00608	None
			Nonylphenol, Ethoxylate	9016-45-9	5.00000	0.00608	None
Hydrochloric Acid (7.5%)	Producers Service Corp	Acidizing	Hydrochloric Acid	7647-01-0	7.50000	0.08203	None
PRO FR 2000	Producers Service Corp	Friction Reducer	Petroleum Distillate	064742-47-8	24.00000	0.01200	None
MB 7530	Producers Service Corp	Biocide	Tetrahydro-3, 5-dimethyl-2H-1,3,5-thiadiazine-2-thione	533-74-4	24.00000	0.00601	None

PROHIB II	Producers Service Corp	Inhibitor	Sodium Hydroxide	1310-73-2	4.00000	0.00100	None
			Dimethylcocoamine, bis (chloroethyl)ether, diquaternary ammonium salt	38607-28-3	60.00000	0.00061	None
			Ethylene Glycol	107-21-1	40.00000	0.00041	None
			Glycol Ethers	111-76-2	40.00000	0.00041	None
			Methanol	67-56-1	30.00000	0.00031	None
			Propargyl Alcohol	107-19-7	30.00000	0.00031	None
			Ethoxylated Nonylphenol	68412-54-4	10.00000	0.00010	None
PRO BREAKER 4	Producers Service Corp	Breaker					
			Sucrose	57-50-1	40.00000	0.00001	None
			Ethylene Glycol	107-21-1	40.00000	0.00001	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

Received
Office of Oil & Gas
MAY 26 2015

06/05/2015

LATITUDE 39°40'00"

4,010'

11,272' TO BOTTOM HOLE

LATITUDE 39°40'00"

LONGITUDE 80°30'00"

7,144'

11,170' TO BOTTOM HOLE

LONGITUDE 80°32'30"

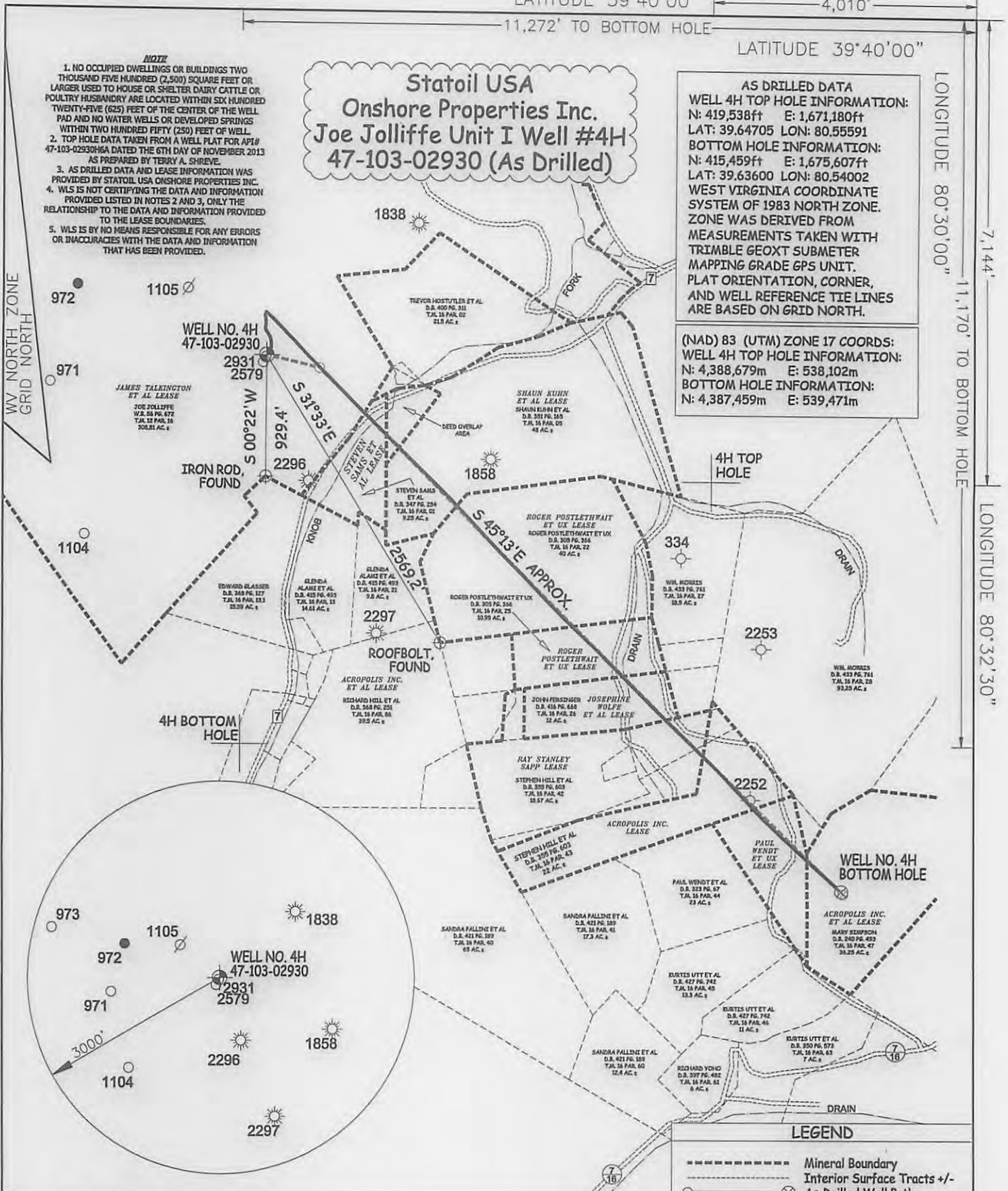
- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD AND NO WATER WELLS OR DEVELOPED SPRINGS WITHIN TWO HUNDRED FIFTY (250) FEET OF WELL.
 2. TOP HOLE DATA TAKEN FROM A WELL PLAT FOR API# 47-103-02930H6A DATED THE 6TH DAY OF NOVEMBER 2013 AS PREPARED BY TERRY A. SHREVE.
 3. AS DRILLED DATA AND LEASE INFORMATION WAS PROVIDED BY STATOIL USA ONSHORE PROPERTIES INC.
 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

**Statoil USA
Onshore Properties Inc.
Joe Jolliffe Unit I Well #4H
47-103-02930 (As Drilled)**

AS DRILLED DATA
WELL 4H TOP HOLE INFORMATION:
 N: 419,538ft E: 1,671,180ft
 LAT: 39.64705 LON: 80.55591
BOTTOM HOLE INFORMATION:
 N: 415,459ft E: 1,675,607ft
 LAT: 39.63600 LON: 80.54002
 WEST VIRGINIA COORDINATE SYSTEM OF 1983 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 4H TOP HOLE INFORMATION:
 N: 4,388,679m E: 538,102m
BOTTOM HOLE INFORMATION:
 N: 4,387,459m E: 539,471m

WV NORTH ZONE GRID NORTH



LEGEND

- Mineral Boundary
- - - - - Interior Surface Tracts +/-
- As-Drilled Well Path
- ⊗ Proposed Well Path
- Landing Point
- ⊕ Bottom Hole
- ⊕ Found monument, as noted

JOB # 15-007WS
 DRAWING # JOEJOLLIFFE4HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



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

WILLOW LAND SURVEYING PLLC
 P.O. BOX 17
 PENNSBORO, WV 26415

DATE 03/24/15
 OPERATOR'S WELL # JOE JOLLIFFE UNIT I WELL #4H
 API WELL # 47 - 103 - 02930
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1,336' WATERSHED WEST VIRGINIA FORK FISH CREEK
 QUADRANGLE LITTLETON 7.5' DISTRICT CENTER COUNTY WETZEL

SURFACE OWNER JOE B. JOLLIFFE ACREAGE 308.81 ACRES +/-
 OIL & GAS ROYALTY OWNER JAMES TALKINGTON ET AL; ERNEST PHILLIPS ET AL; LEASE ACREAGE 287 ACRES±; 30.16 ACRES±;
ACROPOLIS INC ET AL; ACROPOLIS INC. ET AL; RICHARD HILL ET AL; RICHARD HILL ET AL; 9.75 ACRES±; 23.4 ACRES±; 5.15 ACRES±; 3 ACRES±
RAY STANLEY SAPP; ACROPOLIS INC.; ED BROOME INC ET AL; ED BROOME INC. ET AL 19.63 ACRES±; 22 ACRES±; 15.75 ACRES±; 77.1 ACRES±

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,513' TVD 13,530' MD

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC. DESIGNATED AGENT WILLIAM T. FAHEY
 ADDRESS 2103 CITYWEST BLVD. SUITE 800 ADDRESS 2116 PENNSYLVANIA AVE.
 FORM WW-6 HOUSTON, TX 77042 WEIRTON, WV 26062

06/05/2015

COUNTY NAME PERMIT

HONSTON, TX 77045

WEIRTON, WV 26065

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

WELL OPERATOR STATOIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT WILLIAM T. FAHEY

ADDRESS 2103 CITYWEST BLVD, SUITE 800

ADDRESS 2116 PENNSYLVANIA AVE

06/05/2015

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS
 PROVEN SOURCE OF ELEV.
 ACCURACY SUBMETER
 MINIMUM DEGREE OF
 SCALE 1" = 100'
 DRAWING # JOELIFFE#4H
 JOB # 15-007MS

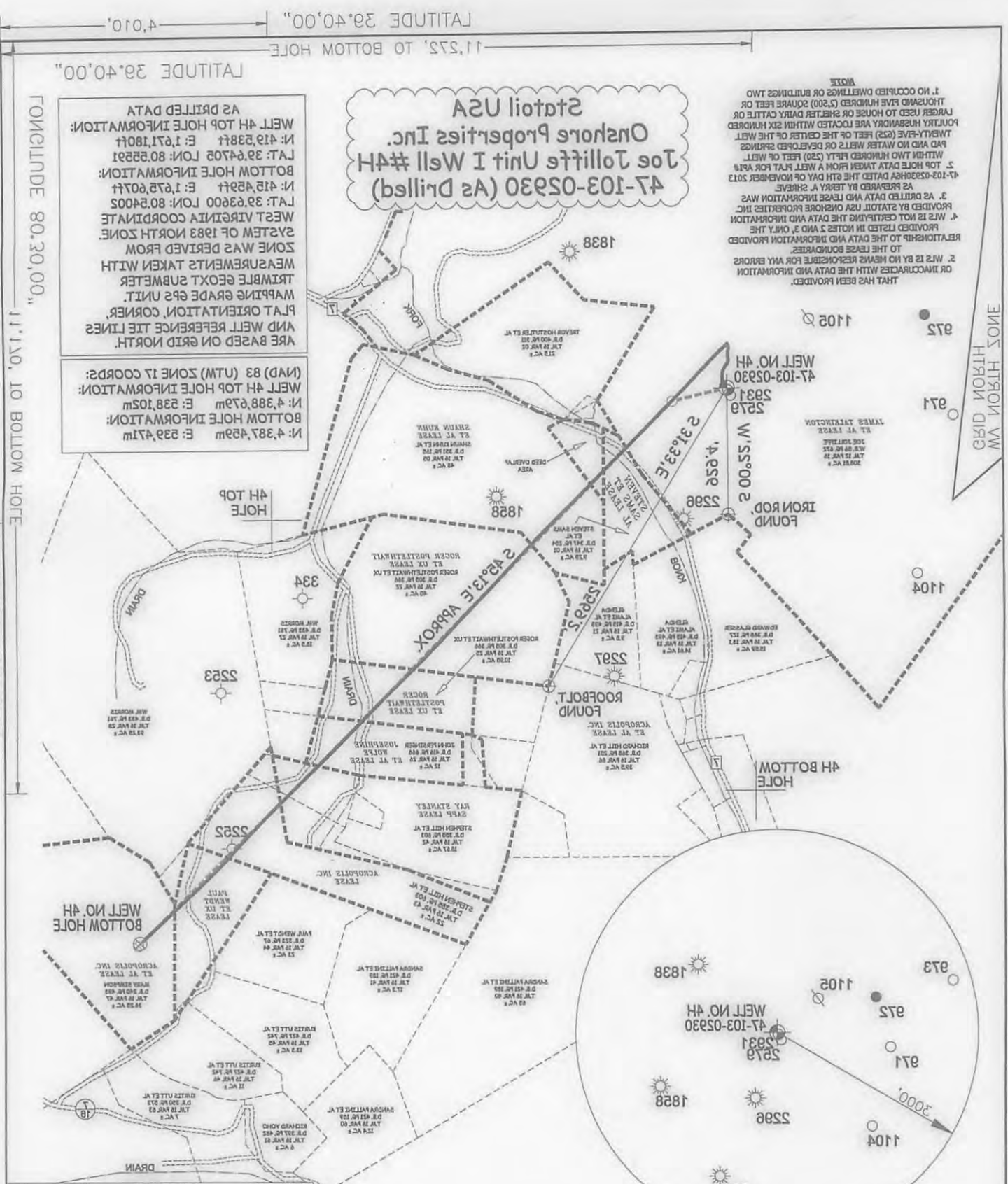


OFFICE OF OIL AND GAS
 OF ENVIRONMENTAL PROTECTION,
 STATE OF WEST VIRGINIA, DIVISION
 PENNSBORO, WV 26415
 P.O. BOX 17
 WILLOW LAND SURVEYING PLC

DATE 03/15/15
 OPERATOR'S WELL # JOE JOELIFFE UNIT I WELL #4H
 API WELL # 47-103-02930
 STATE COUNTY PERMIT

PERMIT
 TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH 7513, TVD 13,330, MD
 CLEAN OUT & REPLUG
 PLUG & ABANDON
 OTHER PHYSICAL CHANGE IN WELL
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 RAY STANLEY SAPP; ACROPOLIS INC.; ED BROOME INC. ET AL.
 ACROPOLIS INC ET AL.; ACROPOLIS INC. ET AL.; RICHARD HILL ET AL.; RICHARD HILL ET AL.
 OIL & GAS ROYALTY OWNER JAMES TALKINGTON ET AL.; ERNEST PHILLIPS ET AL.;
 QUADRANGLE LITTLETON T.S.
 LOCATION: ELEVATION 1,338' WATERSHED WEST VIRGINIA FISH CREEK
 (IF "GAS") PRODUCTION X STORAGE X DEEP SHALLOW X
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 DIVISION OF OIL AND GAS
 COUNTY PERMIT

LEGEND
 Found monument, as noted
 Bottom Hole
 Landing Point
 Proposed Well Path
 As-Drilled Well Path
 Interior Surface Tracts +/-
 Mineral Boundary



AS DRILLED DATA
 WELL #4 TOP HOLE INFORMATION:
 N: 419,238ft E: 1,671,180ft
 LAT: 39.64705 Lon: 80.55291
 BOTTOM HOLE INFORMATION:
 N: 415,459ft E: 1,675,607ft
 LAT: 39.63600 Lon: 80.54002
 WEST VIRGINIA COORDINATE
 SYSTEM OF 1983 NORTH ZONE
 ZONE WAS DERIVED FROM
 MEASUREMENTS TAKEN WITH
 TRIMBLE GEOXT SUBMETER
 MAPPING GRADE GPS UNIT.
 PLAT ORIENTATION, CORNER
 AND WELL REFERENCE TIE LINES
 ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL #4 TOP HOLE INFORMATION:
 N: 4,388,679m E: 538,102m
 BOTTOM HOLE INFORMATION:
 N: 4,387,459m E: 539,471m

StatOil USA
 Onshore Properties Inc.
 Joe Joeliffe Unit I Well #4H
 47-103-02930 (As Drilled)

NOTE
 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO
 THOUSAND FIVE HUNDRED (2500) SQUARE FEET OR
 LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR
 COUNTY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED
 TWENTY-FIVE (250) FEET OF THE CENTER OF THE WELL.
 PAD AND NO WATER WELLS OR DEVELOPED SPRINGS
 WITHIN TWO HUNDRED FIFTY (250) FEET OF WELL.
 2. NOT HOLE DATA TAKEN THE 8TH DAY OF NOVEMBER 2015
 47-103-02930-2-A SHEET
 AS PREPARED BY TERRY A. SHREVE
 3. AS DRILLED DATA AND LEASE INFORMATION WAS
 PROVIDED BY STATOIL USA ONSHORE PROPERTIES INC.
 4. WELL IS NOT CERTIFYING THE DATA AND INFORMATION
 PROVIDED LISTED IN NOTES 2 AND 3 ONLY. THE
 RELIANCE TO THE DATA AND INFORMATION PROVIDED
 TO THE LEASE BOUNDARIES.
 5. WELL IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS
 OR INACCURACIES WITH THE DATA AND INFORMATION
 THAT HAS BEEN PROVIDED.

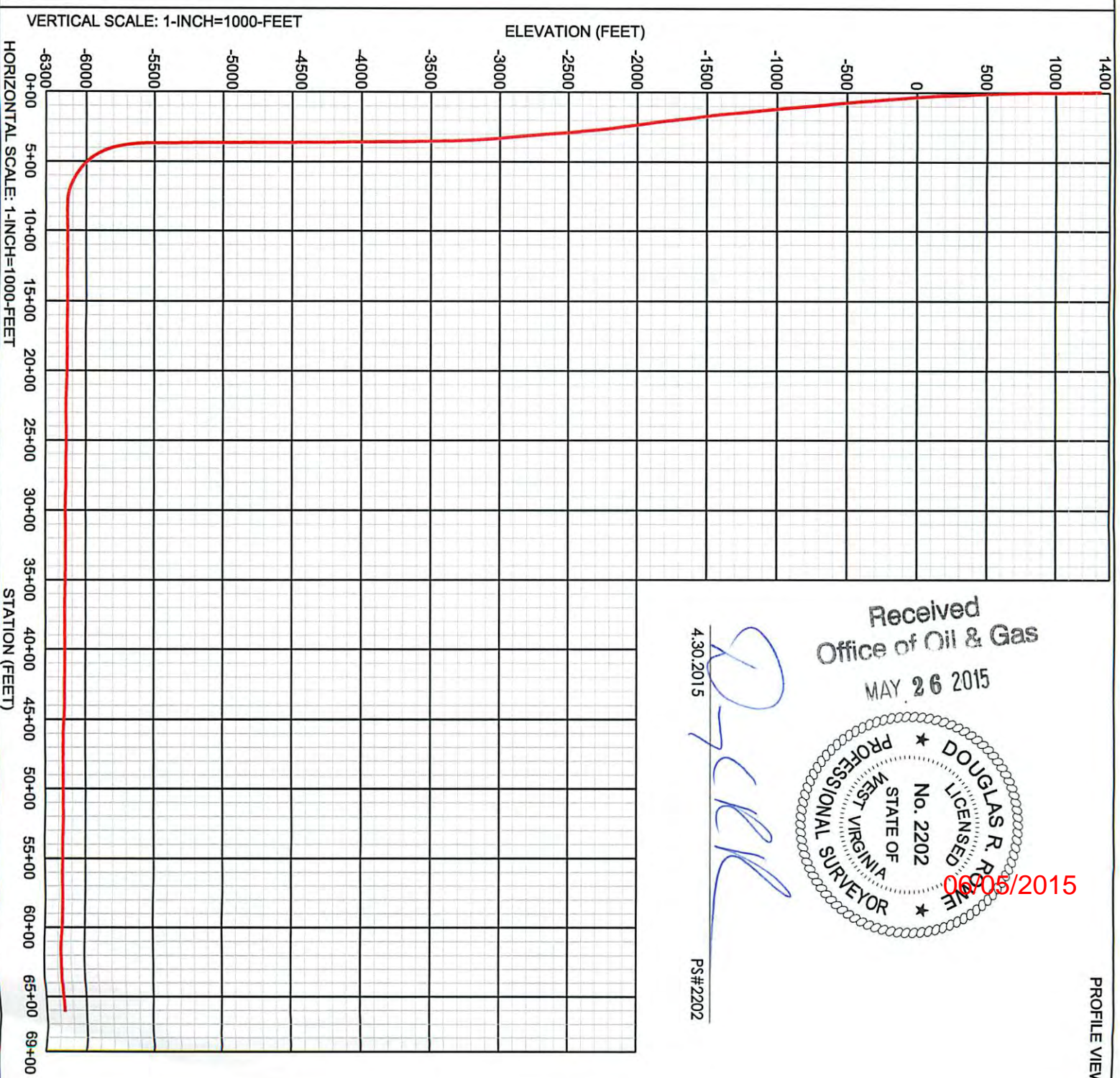
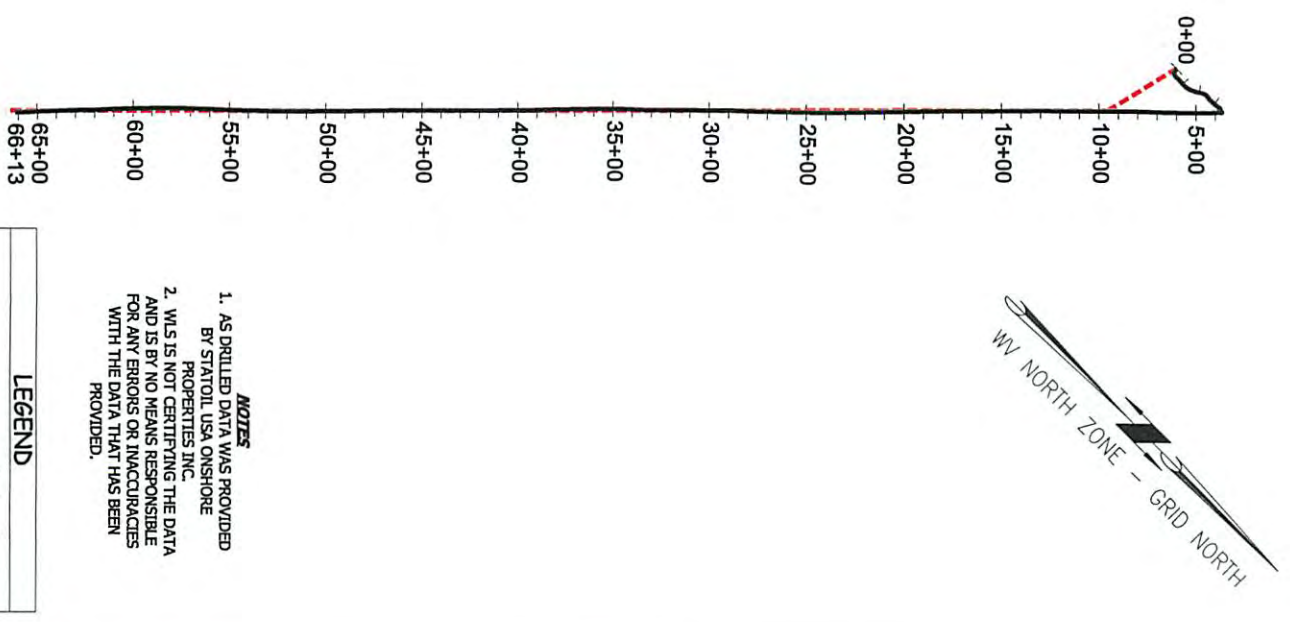
LONGITUDE 80.30.00"
 11,120' TO BOTTOM HOLE
 7,144'
 LONGITUDE 80.35.30"

LONGITUDE 80.30.00"
 11,120' TO BOTTOM HOLE
 7,144'
 LONGITUDE 80.35.30"

LONGITUDE 80.30.00"
 11,120' TO BOTTOM HOLE
 7,144'
 LONGITUDE 80.35.30"

GRID NORTH
 11,120' TO BOTTOM HOLE
 7,144'

PLAN AND PROFILE VIEW FOR WELL # JOE JOLLIFFE 4H API # 47-103-02930



Received
Office of Oil & Gas
MAY 26 2015

4.30.2015

PS#2202

DOUGLAS R. ROBERTS
 LICENSED PROFESSIONAL SURVEYOR
 STATE OF WEST VIRGINIA
 No. 2202

06/05/2015

PROFILE VIEW