

pm

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

API 47-095-02476 ⁰²¹⁷⁸ County TYLER District ELLSWORTH
Quad PORTER FALLS Pad Name BALL Field/Pool Name MARCELLUS
Farm name BALL, ROBERT D. & SHERRY A. Well Number BALL 10H
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 4372957.17' Easting 520978.69'
Landing Point of Curve Northing 4373122.84' Easting 520777.53'
Bottom Hole Northing 4375014.61' Easting 520239.33'

Elevation (ft) 1169 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 04/21/2014 Date drilling commenced 03/04/15 Date drilling ceased 04/10/15
Date completion activities began 05/25/15 Date completion activities ceased 08/01/15
Verbal plugging (Y/N) _____ 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 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

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Office of Oil and Gas
DEC 03 2015
WV Department of
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Reviewed by:
DJH

01/08/2016

API 47-095 - 02178 ~~02178~~ Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

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	140	NEW	94#		
Surface	17 1/2"	13 3/8	465	NEW	J-55; 54.5#		Y
Coal							
Intermediate 1	12 1/4"	9 5/8	2519'	NEW	J-55; 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4"	5 1/2	13873'	NEW	P-110; 20#		Y
Tubing	45/8"	2 3/8	6730'	NEW	L-80		
Packer type and depth set		PLT Packer set at 6725'					

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	190	15.8	2.31		SURFACE	> 8HRS
Coal							
Intermediate 1	CLASS A	455	15.8	2.31		SURFACE	> 8HRS
Intermediate 2							
Intermediate 3							
Production	CLASS A	2440	13.5	1.29		SURFACE	> 8HRS
Tubing							

Drillers TD (ft) 13873' Loggers TD (ft) 13818'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) _____

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 _____

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Environmental Conservation

API 47-095 - 02178 Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	05/25/15	13623	13430	48	Marcellus
2	05/26/15	13388	13210	48	Marcellus
3	06/20/15	13138	12985	48	Marcellus
4	06/20/15	12888	12708	48	Marcellus
5	06/21/15	12638	12458	48	Marcellus
6	06/21/15	12388	12208	48	Marcellus
7	06/22/15	12138	11958	48	Marcellus
8	06/22/15	11888	11708	48	Marcellus
9	06/22/15	11638	11458	48	Marcellus
10	06/23/15	11388	11208	48	Marcellus
11	06/23/15	11138	10958	48	Marcellus
12	06/24/15	10888	10708	48	Marcellus
13	06/24/15	10638	10458	48	Marcellus
14	06/24/15	10388	10208	48	Marcellus
15	06/25/15	10138	9956	48	Marcellus
16	06/25/15	9888	9708	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	05/25/15	81	7783	7068	4644	441,700	8763	
2	05/26/15	79	7925	7608	N/A	441,700	9273	
3	06/20/15	75	7244	6787	5536	387,300	7887	
4	06/20/15	75	7017	6463	4750	387,300	7787	
5	06/21/15	75	7035	7311	5081	387,300	7741	
6	06/21/15	75	7199	7364	5276	387,300	7690	
7	06/22/15	75	7051	7348	4542	387,300	7755	
8	06/22/15	75	6969	7228	4927	387,300	7715	
9	06/22/15	75	6906	6942	5156	387,300	7646	
10	06/23/15	75	6878	6515	4576	387,300	7676	
11	06/23/15	75	6706	7082	4979	387,300	7652	
12	06/24/15	76	7134	7486	4805	387,300	7650	
13	06/24/15	76	6922	6410	4256	387,300	7560	
14	06/24/15	76	6906	6427	4942	387,300	7612	and Gas
15	06/25/15	76	6948	6431	4847	387,300	7574	
16	06/25/15	76	6711	6163	4674	387,300	7514	

Please insert additional pages as applicable.

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Department of Environmental Protection
01/08/2016

API 47-095 - 02178 Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	06/26/15	9638	9458	48	Marcellus
18	06/26/15	9388	9208	48	Marcellus
19	06/26/15	9138	8958	48	Marcellus
20	06/27/15	8912	8710	48	Marcellus
21	06/27/15	8638	8458	48	Marcellus
22	06/28/15	8388	8208	48	Marcellus
23	06/28/15	8138	7958	48	Marcellus
24	06/28/15	7888	7708	48	Marcellus
25	06/29/15	7662	7518	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)
17	06/26/15	76	7142	7190	4690	387,300	7413	
18	06/26/15	76	7206	7696	4752	387,300	7426	
19	06/26/15	76	6801	7199	4719	387,300	7340	
20	06/27/15	75	6663	7435	4775	387,300	8361	
21	06/27/15	77	6612	6941	4347	387,300	7357	
22	06/28/15	76	7008	6625	4253	387,300	7361	
23	06/28/15	76	6967	6932	4735	387,300	7300	
24	06/28/15	76	6706	7382	4706	387,300	7342	
25	06/29/15	76	7016	7670	4835	387,300	7368	

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Oil and Gas
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Please insert additional pages as applicable.

West Virginia Department of
Energy, Mineral and Natural Resources
01/08/2016

API 47- 095 - 02178 **02178**

Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6915	TVD 7250 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 BOTTOM DEPTH IN FT TOP DEPTH IN FT BOTTOM DEPTH IN FT DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)

LITHOLOGY/ FORMATION	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
Big Injun	2255	2366	2263	2375	SANDSTONE
WEIR	2531	2548	2540	2556	SANDSTONE/SILTSTONE
BEREA	2711	2720	2720	2724	SANDSTONE
GORDON	2934		2943		SANDSTONE
WARREN	3643	3683	3651	3691	SANDSTONE
JAVA	5150		5159		SHALE/SILTY SHALE
WEST RIVER	6748		6819		LIMESTONE
GENESEO	6819		6938		GRAY SHALE
TULLY	6850		7004		LIMESTONE
MARCELLUS	6915		7251		SHALE, 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 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 713-485-2640
Signature Bekki Winfree Title Sr. Regulatory Advisor Date 12-01-15

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry
Office of Oil and Gas
DEC 03 2015
01/08/2016

MINERAL OWNERSHIP

UNIT 1 MARY MAXINE WELCH 2-17-42 69.5 AC
UNIT 2 ALLEN SMITH ET. AL TM 2-17-14, 3, 14, 4, 14, 9, 15, P/O 2-12-26, 71.75 AC
UNIT 3 JIN AND MARY BLOYD ET AL TM 2-17-40, P/O 2-17-19, 147 AC
UNIT 4 OXY USA, INC ET AL TM 2-17-12, 14, 14, 1, 14, 2, 14, 5, 14, 6, 14, 7, 14, 8, 14, 10, P/O 2-17-19, 93.5 AC
UNIT 5 SHIBEN ESTATES, INC TM 2-12-27, 28, 29 & 2-17-18 1, 69.5 AC
UNIT 6 FLOYD E. LEWIS LIFE ET AL TM P/O 2-17-18, 60 AC
UNIT 7 S.A. SMITH & C. BURKE MORRIS TRUST ET AL TM 2-17-41, 40.5 AC
UNIT 8 JOSEPHINE CORRELL ET AL TM 2-18-11, 33.25 AC
UNIT 9 OXY USA, INC ET AL TM 2-17-17, 30.21 AC
UNIT 10 CECIL AND MARGARET LANCASTER TM 2-12-25, 78.17 AC
UNIT 11 GLADYS MAYFIELD BOYD, ET AL P/O TM 2-12-26 24.08 AC

LEGEND

- ⊕ TOPD MAP POINT
- ⊗ EXISTING WELLS
- ⊙ PRE-29 WELLS
- PLUGGED WELL
- MINERAL TRACT
- PARCEL LINES
- AS-DRILLED
- - - PROPOSED WELL
- ROAD
- STREAM

SURFACE LOC.

UTM 17-NAD 83 METERS

N: 4372957.17'
E: 520978.69'

NAD 83

LAT: 39.50598520
LON: -80.75598145

LANDING POINT LOC.

UTM 17-NAD 83 METERS

N: 4373122.84'
E: 520777.53'

NAD 83

LAT: 39.50748284
LON: -80.75831607

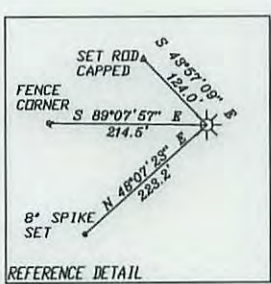
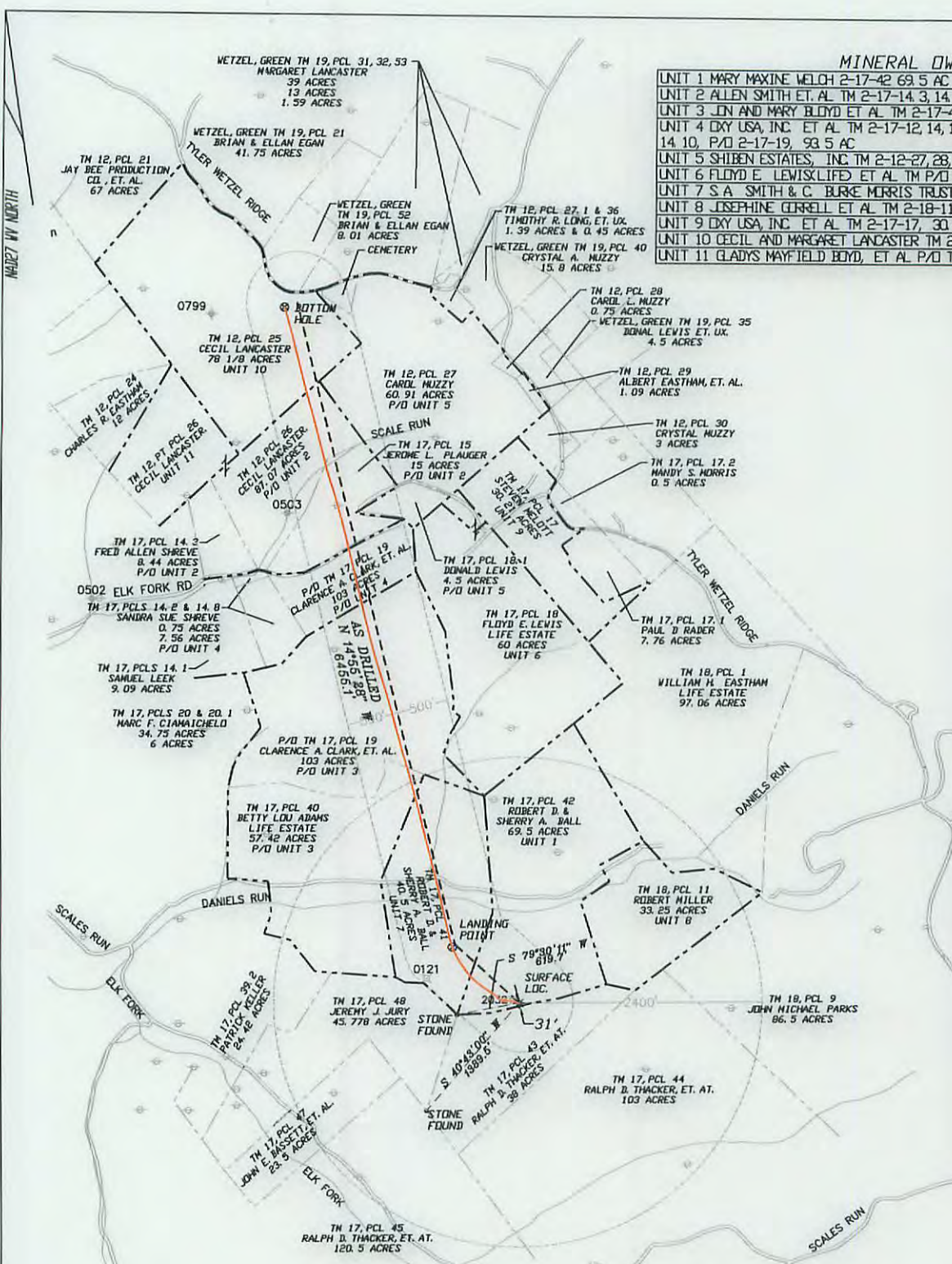
BOTTOM HOLE LOC.

UTM 17-NAD 83 METERS

N: 4375014.61'
E: 520239.33'

NAD 83

LAT: 39.52454150
LON: -80.76451884



- NOTES:
1. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
 2. THERE ARE NO EXISTING BUILDINGS WITHIN 625' OF PROPOSED WELL.
 3. PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR, OR LAKE.
 4. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED WELL.
 5. PROPOSED WELL IS GREATER THAN 1000' FROM SURFACE/GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY.
 6. IT IS NOT THE INTENTION OF THIS PLAT TO REPRESENT SURVEYED LOCATIONS OF THE SURFACE OR MINERAL PARCELS DEPICTED HEREON. THE LOCATION OF THE BOUNDARY LINES, AS SHOWN, ARE BASED ON RECORD DEED DESCRIPTIONS, FIELD EVIDENCE FOUND, AND/OR TAX MAP POSITION, UNLESS OTHERWISE NOTED.

PICKERING ASSOCIATES
the art of engineering
11283 Emerson Avenue Phone: (304) 464-5305
Parkersburg, West Virginia 26104 Fax: (304) 464-4428



FILE#:	2146001
DRAWING#:	2146001-STA-BALL, DWG
SCALE:	1"=1500'
ACCURACY:	1/2500
ELEVATION:	OPUS SOL, NAVD 88
DATE:	10/23/15

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

SIGNED: *[Signature]* PS# 2141

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP OPERATOR'S WELL # : **BALL 10H**

GAS LIQUID INJECTION STORAGE SHALLOW API WELL #: 47 095 02178

STATE COUNTY PERMIT

WATERSHED: ELK FORK COUNTY/DISTRICT: TYLER/ELLSWORTH QUADRANGLE: PORTERS FALLS

SURFACE OWNER: ROBERT D. BALL & SHERRY A. BALL ACREAGE: 69.5±

OIL & GAS ROYALTY OWNER: MARY MAXINE WELCH ET. AL. ACREAGE: 693.4±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE

PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON

PAD ELEVATION: 1169' CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

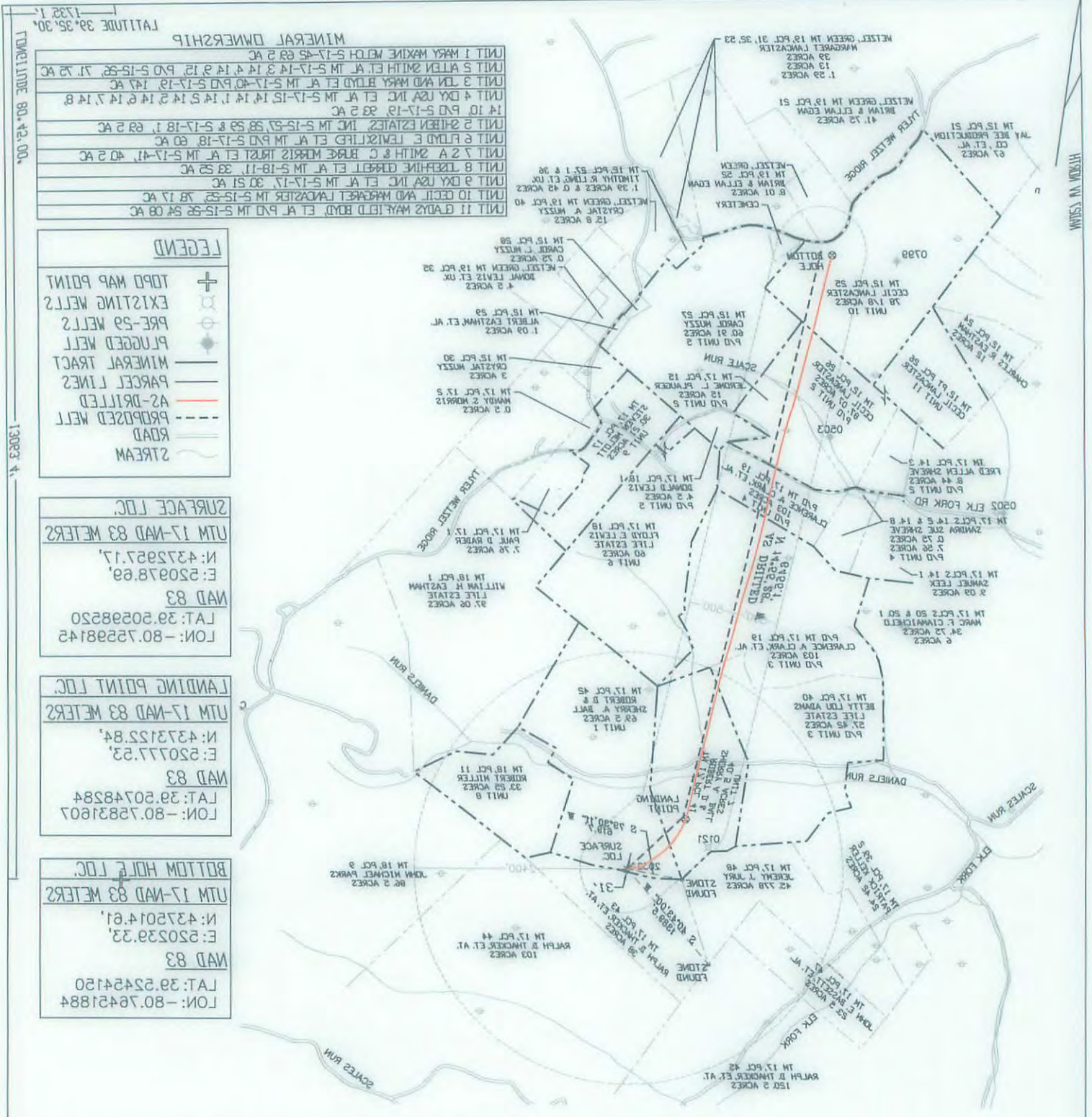
TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD, 6942' ± MD, 13,500'

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

ADDRESS 2103 CITYWEST BLVD, STE. 800 ADDRESS 803 NASH ROAD

CITY HOUSTON STATE TX ZIP CODE 77042 CITY MIDDLEBOURNE STATE WV ZIP CODE 26149

01/08/2016



LEGEND

- TOP MAP POINT
- EXISTING WELLS
- PRE-29 WELLS
- PROPOSED WELL
- MINERAL TRACT
- PARCEL LINES
- AS-DRILLED
- PROPOSED WELL
- ROAD
- STREAM

SURFACE LOC.

UTM 17-NAD 83 METERS

N: 4372957.17
E: 520278.69

NAD 83

LAT: 39.5298250
LON: -80.7258145

LANDING POINT LOC.

UTM 17-NAD 83 METERS

N: 4373122.84
E: 520777.23

NAD 83

LAT: 39.50748284
LON: -80.7583160

BOTTOM HOLE LOC.

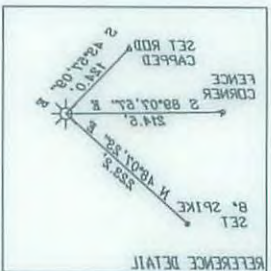
UTM 17-NAD 83 METERS

N: 4375014.61
E: 520239.33

NAD 83

LAT: 39.52454150
LON: -80.76421884

- NOTES:**
1. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 500' OF PROPOSED WELL.
 2. THERE ARE NO EXISTING BUILDINGS WITHIN 500' OF PROPOSED WELL.
 3. PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR, OR LAKE.
 4. THERE ARE NO NATIVE TRIBUT STREAMS WITHIN 300' OF PROPOSED WELL.
 5. PROPOSED WELL IS GREATER THAN 1000' FROM SURFACE-GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY.
 6. IT IS NOT THE INTENTION OF THIS PLAN TO REPRESENT SURVEYED LOCATIONS OF THE SURFACE OR MINERAL PARCELS DEPICTED HEREON. THE LOCATION OF THE BOUNDARY LINES, AS SHOWN, ARE BASED ON RECORD DEED DESCRIPTIONS, FIELD EVIDENCE FOUND, AND/OR TAX MAP POSITION, UNLESS OTHERWISE NOTED.



PICKERING ASSOCIATES

the art of engineering

11283 Emerson Avenue
Parkersburg, West Virginia 26104
Phone: (304) 464-2300
Fax: (304) 464-4128



SIGNED: *William B. Showalter* P2# 5141

ENVIRONMENTAL PROTECTION INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES.

I, THE UNDERSIGNED, HEREBY CERTIFY THAT

DATE:	10/23/15
ELEVATION:	DRUS 201, NAVD 88
ACCURACY:	1"=500'
SCALE:	1"=1500'
DRAWING#:	5146001-2A-BALL DWG
FILE#:	5146001

CITY HOUSTON STATE TX ZIP CODE 77045

CITY MIDDLEBORNE STATE WV ZIP CODE 26149

WELL OPERATOR: STADIL USA ONSHORE PROPERTIES INC.

DESIGNATED AGENT: RICHARD PYLES

ADDRESS: 5103 CITYWEST BLVD, STE. 800

WELL TYPE: GAS LIQUID INJECTION STORAGE SHALLOW API WELL# 47

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP

OPERATOR: 2 WELL# : BALL 10H

STATE: COUNTY PERMIT

WATERSHED: ELK FORK COUNTY/DISTRICT: TYLERWELLSWORTH

SURFACE OWNER: ROBERT D. BALL & SHERY A. BALL

DIL & GAS ROYALTY OWNER: MARY MAXINE WELCH ET. AL.

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON

PAD ELEVATION: 1169. CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: MARCELLUS

ESTIMATED DEPTH: 1200 ± MD, 13,200'

01/08/2016

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Office of Oil and Gas

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WV Department of
Environmental Protection



01/08/2016



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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/25/2015
Job End Date:	6/29/2015
State:	West Virginia
County:	Tyler
API Number:	47-095-02178-00-00
Operator Name:	Statoil USA Onshore Properties Inc.
Well Name and Number:	Ball 10H
Longitude:	-80.75598100
Latitude:	39.50598500
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,942
Total Base Water Volume (gal):	7,875,084
Total Base Non Water Volume:	0



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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service 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	86.05247	None
Sand (Proppant)	PSC	Proppant					
			Silica Substrate	NA	100.00000	12.81328	None
PRO GEL 4.0L	Producers Service Corp	Gelling Agent					
			Distillates (Petroleum), hydrotreated light	64742-47-8	65.00000	0.10403	None
			Guar Gum	9000-30-0	50.00000	0.08002	None
			Nonionic Surfactant	60828-78-6	5.00000	0.00800	None
			Nonionic Surfactant	60828-78-6	5.00000	0.00800	None
			Nonylphenol, Ethoxylate	9016-45-9	5.00000	0.00800	None
Hydrochloric Acid (7.5%)	Producers Service Corp	Acidizing					
			Hydrochloric Acid	7647-01-0	7.50000	0.06563	None
PRO FR 2000	Producers Service Corp	Friction Reducer					
			Petroleum Distillate	064742-47-8	24.00000	0.01510	None
MB 7530	Producers Service Corp	Biocide					
			Tetrahydro-3, 5-dimethyl-2H-1,3,5-thiadiazine-2-thione	533-74-4	24.00000	0.00846	None

			Sodium Hydroxide	1310-73-2	4.00000	0.00141	None
PROHIB II	Producers Service Corp	Inhibitor					
			Dimethylcocoamine, bis (chloroethyl)ether, diquaternary ammonium salt	68607-28-3	60.00000	0.00049	None
			Ethylene Glycol	107-21-1	40.00000	0.00033	None
			Glycol Ethers	111-76-2	40.00000	0.00033	None
			Propargyl Alcohol	107-19-7	30.00000	0.00024	None
			Methanol	67-56-1	30.00000	0.00024	None
			Ethoxylated Nonylphenol	68412-54-4	10.00000	0.00008	None
PRO BREAKER 4	Producers Service Corp	Breaker					
			Sucrose	57-50-1	40.00000	0.00008	None
			Ethylene Glycol	107-21-1	40.00000	0.00008	None
			Sodium Bicarbonate	144-55-8	1.00000	0.00000	None
			Proprietary Ingredient	Proprietary	1.00000	0.00000	None
			Proprietary Ingredient	Proprietary	1.00000	0.00000	None
			Polyether Polyol	9003-11-6	1.00000	0.00000	None
			Proprietary Ingredient	Proprietary	1.00000	0.00000	None
			Hexamethylenetetramine	100-97-0	1.00000	0.00000	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)

PM

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

API 47-095-02178 ⁰²¹⁷⁸ ~~02170~~ County TYLER District ELLSWORTH
Quad PORTER FALLS Pad Name BALL Field/Pool Name MARCELLUS
Farm name BALL, ROBERT D. & SHERRY A. Well Number BALL 10H
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 4372957.17' Easting 520978.69'
Landing Point of Curve Northing 4373122.84' Easting 520777.53'
Bottom Hole Northing 4375014.61' Easting 520239.33'

Elevation (ft) 1169 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 04/21/2014 Date drilling commenced 03/04/15 Date drilling ceased 04/10/15
Date completion activities began 05/25/15 Date completion activities ceased 08/01/15
Verbal plugging (Y/N) _____ 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 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

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Reviewed by:
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WV Department of Environmental Protection
01/08/2016

API 47-095 - 02178 Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

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	140	NEW	94#		
Surface	17 1/2"	13 3/8	465	NEW	J-55; 54.5#		Y
Coal							
Intermediate 1	12 1/4"	9 5/8	2519'	NEW	J-55; 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4"	5 1/2	13873'	NEW	P-110; 20#		Y
Tubing	45/8"	2 3/8	6730'	NEW	L-80		
Packer type and depth set		PLT Packer set at 6725'					

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	190	15.8	2.31		SURFACE	> 8HRS
Coal							
Intermediate 1	CLASS A	455	15.8	2.31		SURFACE	> 8HRS
Intermediate 2							
Intermediate 3							
Production	CLASS A	2440	13.5	1.29		SURFACE	> 8HRS
Tubing							

Drillers TD (ft) 13873' Loggers TD (ft) 13818'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) _____

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 _____

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 Environmental Protection

API 47- 095 - 02178 ~~02170~~ Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	05/25/15	13623	13430	48	Marcellus
2	05/26/15	13388	13210	48	Marcellus
3	06/20/15	13138	12985	48	Marcellus
4	06/20/15	12888	12708	48	Marcellus
5	06/21/15	12638	12458	48	Marcellus
6	06/21/15	12388	12208	48	Marcellus
7	06/22/15	12138	11958	48	Marcellus
8	06/22/15	11888	11708	48	Marcellus
9	06/22/15	11638	11458	48	Marcellus
10	06/23/15	11388	11208	48	Marcellus
11	06/23/15	11138	10958	48	Marcellus
12	06/24/15	10888	10708	48	Marcellus
13	06/24/15	10638	10458	48	Marcellus
14	06/24/15	10388	10208	48	Marcellus
15	06/25/15	10138	9956	48	Marcellus
16	06/25/15	9888	9708	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	05/25/15	81	7783	7068	4644	441,700	8763	
2	05/26/15	79	7925	7608	N/A	441,700	9273	
3	06/20/15	75	7244	6787	5536	387,300	7887	
4	06/20/15	75	7017	6463	4750	387,300	7787	
5	06/21/15	75	7035	7311	5081	387,300	7741	
6	06/21/15	75	7199	7364	5276	387,300	7690	
7	06/22/15	75	7051	7348	4542	387,300	7755	
8	06/22/15	75	6969	7228	4927	387,300	7715	
9	06/22/15	75	6906	6942	5156	387,300	7646	Oil and Gas
10	06/23/15	75	6878	6515	4576	387,300	7676	
11	06/23/15	75	6706	7082	4979	387,300	7652	
12	06/24/15	76	7134	7486	4805	387,300	7650	
13	06/24/15	76	6922	6410	4256	387,300	7560	
14	06/24/15	76	6906	6427	4942	387,300	7612	
15	06/25/15	76	6948	6431	4847	387,300	7574	
16	06/25/15	76	6711	6163	4674	387,300	7514	

Please insert additional pages as applicable.

API 47- 095 - 02178

Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	06/26/15	9638	9458	48	Marcellus
18	06/26/15	9388	9208	48	Marcellus
19	06/26/15	9138	8958	48	Marcellus
20	06/27/15	8912	8710	48	Marcellus
21	06/27/15	8638	8458	48	Marcellus
22	06/28/15	8388	8208	48	Marcellus
23	06/28/15	8138	7958	48	Marcellus
24	06/28/15	7888	7708	48	Marcellus
25	06/29/15	7662	7518	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)
17	06/26/15	76	7142	7190	4690	387,300	7413	
18	06/26/15	76	7206	7696	4752	387,300	7426	
19	06/26/15	76	6801	7199	4719	387,300	7340	
20	06/27/15	75	6663	7435	4775	387,300	8361	
21	06/27/15	77	6612	6941	4347	387,300	7357	
22	06/28/15	76	7008	6625	4253	387,300	7361	
23	06/28/15	76	6967	6932	4735	387,300	7300	
24	06/28/15	76	6706	7382	4706	387,300	7342	
25	06/29/15	76	7016	7670	4835	387,300	7368	

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Please insert additional pages as applicable.

API 47- 095 - 02178 Farm name BALL, ROBERT D. & SHERRY A. Well number BALL 10H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	6915	TVD	7250 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		
Big Injun	2255	2366	2263	2375	SANDSTONE
WEIR	2531	2548	2540	2556	SANDSTONE/SILTSTONE
BEREA	2711	2720	2720	2724	SANDSTONE
GORDON	2934		2943		SANDSTONE
WARREN	3643	3683	3651	3691	SANDSTONE
JAVA	5150		5159		SHALE/SILTY SHALE
WEST RIVER	6748		6819		LIMESTONE
GENESEO	6819		6938		GRAY SHALE
TULLY	6850		7004		LIMESTONE
MARCELLUS	6915		7251		SHALE, GAS

Please insert additional pages as applicable.

Drilling Contractor Orion Drilling
Address _____ City _____ State _____ Zip _____

Logging Company HALLIBURTON
Address _____ City _____ State _____ Zip _____

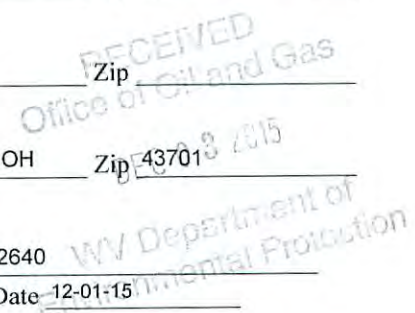
Cementing Company HALLIBURTON
Address _____ City _____ State _____ Zip _____

Stimulating Company 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 713-485-2640
Signature Bekki Winfree Title Sr. Regulatory Advisor Date 12-01-15

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



01/08/2016