WR-35
Rev. 8/23/13

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

API 47 - 017 - 06022 County Doddridge District McClellan
Quad Center Point 7.5 Pad Name Coffman Field/Pool Name
Farm name Coffman, Christopher L. Well Number Coffman 1HA
Operator (as registered with the OOG) Jay-Bee Oil & Gas, Inc.
Address 3570 Shields Hill Rd. City Cairo State WV Zip 26337

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,361,525 Easting 526,897
Landing Point of Curve Northing ~~NAD~~ 4,361,724 Easting 526,907
Bottom Hole Northing 4,362,522 Easting 526,694

Elevation (ft) 753' 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)
EZ-MUD® (hydrotreated light petroleum distillate)

Date permit issued 6/16/2011 Date drilling commenced 12/13/2012 Date drilling ceased 10/31/2013
Date completion activities began 11/19/2013 Date completion activities ceased 12/19/2013
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 90'-120' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 960'-1320' Void(s) encountered (Y/N) depths N
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas
MAR 27 2016

APPROVED
NAME: Jacquiah Thornton
DATE: 6/24/16

Reviewed by:
AX WS 06/24/16

06/24/2016

APPROVED

NAME:

DATE: 06/24/2016

API 47- 017 - 06022 Farm name Coffman, Christopher L. Well number Coffman 1HA

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	17"	16"	32'	New	20/32/24		Yes
Surface	15"	11 3/4"	322'	New	20/23/24	50'	Yes
Coal							
Intermediate 1	11"	8 5/8"	2260'	New	20/17/24	1500'	Yes
Intermediate 2							
Intermediate 3							
Production	7 7/8"	5 1/2"	13,151'	New	20/24/24		Yes
Tubing							
Packer type and depth set							

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	170	15.6	1.18	201	CTS	0
Coal							
Intermediate 1	Class A	411	12.5	1.24	510	CTS	0
Intermediate 2							
Intermediate 3							
Production	Class A	1766	14.3	1.35	2384	1000' from surface	0
Tubing							

Drillers TD (ft) 13,170' Loggers TD (ft) 13,170'

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

Plug back procedure N/A

Kick off depth (ft) 6,029'

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 Spiral centralizer every joint from TD back to start of 90 degree.
90 - 70 degree every second joint.
70 degree - KOP every third joint.
KOP - Surface bow centralizer placed every 500'.

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

API 47- 017 - 06022 Farm name Coffman, Christopher L. Well number Coffman 1HA

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	11/15/2013	12930'	13116'	96	Marcellus
2	11/19/2013	12658'	12895'	72	Marcellus
3	11/19/2013	12394'	12623'	72	Marcellus
4	11/20/2013	12102'	12359'	72	Marcellus
5	11/22/2013	11858'	12067'	72	Marcellus
6	11/22/2013	11610'	11823'	72	Marcellus
7	11/23/2013	11350'	11575'	72	Marcellus
8	11/24/2013	11088'	11315'	72	Marcellus
9	11/24/2013	10861'	11053'	72	Marcellus
10	11/29/2013	10612'	9550'	72	Marcellus
11	11/27/2013	10402'	10577'	72	Marcellus
12	12/1/2013	10196'	10367'	72	Marcellus
13	12/1/2013	9919'	1061'	72	Marcellus
14	12/2/2013	9610'	10826'	72	Marcellus
15	12/2/2013	9315'	9884'	72	Marcellus
16	12/3/2013	9062'	9234'	72	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	11/19/13	70.1	7510	7924	5874	1380	8699	N/A
2	11/19/13	70.4	7669	8160	5006	1622	7093	N/A
3	11/20/13	69.9	7477	7358	5094	1826	9037	N/A
4	11/2213	67.9	7686	5625	4682	1991	10024	N/A
5	11/22/13	70.5	7315	6650	3453	1811	7767	N/A
6	11/22/13	69.7	7416	6092	5983	1522	8085	N/A
7	11/23/13	69.6	6945	7126	5477	1877	7347	N/A
8	11/24/13	70.1	7339	5870	5735	1481	5925	N/A
9	11/25/13	69.3	7037	6353	5050	1785	7393	N/A
10	11/27/13	69.7	7140	5366	5879	1780	6885	N/A
11	12/1/13	70.2	7699	5316	5809	1793	11738	N/A
12	12/1/13	67.8	7321	5350	5926	1806	9008	N/A
13	12/2/13	69.8	7419	7136	5469	1659	6490	N/A
14	12/2/13	70.0	7436	7175	6305	1775	7856	N/A
15	12/3/13	70.5	6998	7044	5246	1814	6897	N/A
16	12/3/13	69.9	7188	7590	5155	1304	5388	N/A

Please insert additional pages as applicable.

API 47- 017 - 06022 Farm name Coffman, Christopher L. Well number Coffman1HA

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	12/3/2013	8852'	8997'	72	Marcellus
18	12/3/2013	8572'	8779'	72	Marcellus
19	12/4/2013	8262'	8526'	72	Marcellus
20	12/4/2013	7978'	8213'	72	Marcellus
21	12/4/2013	7729'	7920'	72	Marcellus
22	12/5/2013	7472'	7673'	72	Marcellus
23	12/5/2013	7182'	7422'	72	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	12/4/13	69.3	6867	7505	5776	1798	6451	N/A
18	12/5/13	71.3	6951	7182	5601	1751	6683	N/A
19	12/5/13	68.9	6892	7987	5845	1266	4802	N/A

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	7,182' TVD	13,167' MD	

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole n/a psi DURATION OF TEST 18 hrs

OPEN FLOW Gas 5000 mcfpd Oil 25 bpd NGL - bpd Water - bpd GAS MEASURED BY ■ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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_2S, ETC)
See Attached.	0		0		

Received
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MAR 27 2016

Please insert additional pages as applicable.

Drilling Contractor HWD
Address 7350 Coal Hill Rd. City Luthersburg State PA Zip 15848

Logging Company Precise Well Analysis
Address 1426 Barth Rd. City Belpre State OH Zip 45714

Cementing Company Nabors Completion & Production
Address PO Box 975682 City Dallas State TX Zip 75397

Stimulating Company Nabors
Address PO Box 975682 City Dallas State TX Zip 75397

Please insert additional pages as applicable.

Completed by Shane Dowell Telephone 304-628-3111
Signature [signature] Title Office Manager Date 3-24-2016 (Updated)

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

06/24/2016

12/13/2012	Coffman Pad	
	PERMIT #	47-017-06022
		47-017-06023
	ELEVATION	753
FORMATION	**TOP**	**BOTTOM**
MISC. RED ROCK & SHALES	0	1806
LIME	1806	1906
INJUN	1906	2023
SHALE	2023	2370
GORDON STRAY	2370	2390
SHALE	2390	2586
GORDON	2586	2616
SHALE	2616	2895
BAYARD	2895	2904
SHALE	2904	3233
WARREN	3233	3331
SHALE	3331	3567
BALLTOWN	3567	3730
SHALE	3730	4168
2ND RILEY	4168	4276
SHALE	4276	4427
3RD RILEY	4427	4468
SHALE	4468	4525
BENSON	4525	4528
SHALE	4528	4770
ALEXANDER	4770	4941
SHALE	4941	5186
ELK	5186	5234
SHALE	5234	5930
HAMILTON	5930	6104
SHALE	6104	6661
UPPER Marcellus	6661	6688
PARCELL LME	6688	6714
SHALE	6714	6766
LOWER MARCELLUS	6766	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/19/2013
Job End Date:	12/5/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06022-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	Coffman 1H-A
Longitude:	-80.68758300
Latitude:	39.40291100
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,852
Total Base Water Volume (gal):	7,099,050
Total Base Non Water Volume:	0

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Interstate Oil & Gas Compact Commission

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	JAY BEE OIL & GAS INC	Water					
			Water	7732-18-5	100.00000	92.94721	
Sand	C&J Well Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	2.82565	
			Aluminum Oxide	1344-28-1	1.10000	0.03111	
			Titanium Oxide	13463-67-7	0.10000	0.00283	
			Iron Oxide	1309-37-1	0.10000	0.00283	
Sand	C&J Well Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	2.72308	
			Aluminum Oxide	1344-28-1	1.10000	0.02998	
			Titanium Oxide	13463-67-7	0.10000	0.00273	
			Iron Oxide	1309-37-1	0.10000	0.00273	
Sand	C&J Well Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	0.66011	
			Aluminum Oxide	1344-28-1	1.10000	0.00727	
			Iron Oxide	1309-37-1	0.10000	0.00066	
			Titanium Oxide	13463-67-7	0.10000	0.00066	

HCl Acid (12.5%-18.0%)	C&J Well Services	Bulk Acid					
			20° Baume Hydrochloric Acid	7647-01-0	100.00000	0.33671	
HCl Acid (12.5%-18.0%)	C&J Well Services	Bulk Acid					
			Water	7732-18-5	100.00000	0.33004	
WFR-3B	C&J Well Services	Friction Reducer					
			Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8	30.00000	0.02867	
			Ethoxylated alcohols	68002-97-1	15.00000	0.01434	
			Ethoxylated oleylamine	26635-93-8	5.00000	0.00478	
Super TSC-LT	C&J Well Services	Paraffin & Scale Additives					
			100% Non-Hazardous Mixture	Proprietary	100.00000	0.02315	
KR-153SL	C&J Well Services	Biocides					
			Polyethlyene-Glycol	25322-68-3	50.00000	0.01409	
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00564	
LSG-100L	C&J Well Services	Gelling Agents					
			Petroleum Distillates	64742-47-8	70.00000	0.00987	
Super GREEN SOLV	C&J Well Services	Paraffin & Scale Additives					
			BTEX Free Aliphatic Hydrocarbon	64742-96-7	100.00000	0.00514	
Super MAX II	C&J Well Services	Surfactants & Foamers					
			Propylene Glycol	57-55-6	30.00000	0.00107	
			Oxirane, methyl-, polymer with oxirane, mono(2-ethylhexyl) ether	64366-70-7	13.00000	0.00047	
			Propylene Glycol n-butyl ether	5131-66-8	5.00000	0.00018	
			Orange Sweet Oil	8028-48-6	5.00000	0.00018	
			Isopropyl Alcohol	67-63-0	5.00000	0.00018	
			1-Octanol	111-87-5	2.50000	0.00009	
			1-Decanol	112-30-1	2.50000	0.00009	
Acid Inhibitor 2 (AI-2)	C&J Well Services	Acid Corrosion Inhibitors					
			Isopropyl Alcohol	67-63-0	20.00000	0.00025	
			2-Butoxyethanol	111-76-2	20.00000	0.00025	
			Propargyl Alcohol	107-19-7	20.00000	0.00025	
			Proprietary	Proprietary	15.00000	0.00019	
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00013	
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.							
Other Ingredients	C&J Well Services	Other Ingredients					
			Water	7732-18-5	40.00000	0.03823	
			Anionic Polyacrylamide	910644-97-2	40.00000	0.03823	
			Water	7732-18-5	55.00000	0.01550	
			Propylene glycol	57-55-6	15.00000	0.01434	
			Water	7732-18-5	60.00000	0.01389	

			Proprietary	Proprietary	50.00000	0.01157	
			guar gum	9000-30-0	50.00000	0.00705	
			Proprietary	Proprietary	15.00000	0.00347	
			Proprietary	Proprietary	15.00000	0.00347	
			Proprietary	Proprietary	15.00000	0.00347	
			Proprietary	Proprietary	2.00000	0.00191	
			Water	7732-18-5	50.00000	0.00179	
			Organophylic Clay	68953-58-2	10.00000	0.00141	
			Proprietary	Proprietary	100.00000	0.00072	
			Water	7732-18-5	48.00000	0.00060	
			Glycol Ethers	111-46-6	40.00000	0.00050	
			Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00028	
			Surfactant	68439-51-0	2.00000	0.00028	
			Proprietary	Proprietary	0.99000	0.00001	
			Proprietary	Proprietary	0.20000	0.00001	
			Proprietary	Proprietary	0.02000		

* 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)