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

API <u>47</u> <u>033</u> <u>05933</u> County Harrison	District Simpson
Quad Brownton Pad Name Game	
Farm name James T. Gamelli et al	Well Number 203
Operator (as registered with the OOG) Arsenal Resources	
Address 6031 Wallace Rd Ext, Ste 3000 City Wex	
As Drilled location NAD 83/UTM Attach an as-drilled Top hole Northing $\frac{4,346,083.7}{4,345,933.9}$ Landing Point of Curve Northing Bottom Hole Northing $\frac{4,341,792.9}{4,341,792.9}$	Easting 568,640.6 Easting 570,136.4
Elevation (ft) 1140.50' GL Type of Well	New □ Existing Type of Report □Interim ■Final
Permit Type 🗆 Deviated 🖂 Horizontal 📕 Horizont	al 6A Vertical Depth Type Deep Shallow
Type of Operation □ Convert □ Deepen ■ Drill □	Plug Back □ Redrilling □ Rework □ Stimulate
Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Seco	ondary Recovery
Type of Completion	
Synthetic Oil Based	
Date permit issued03/01/2019 Date drilling comm Date completion activities began5/17/2021	Date drilling ceased 06/25/2019 Date completion activities ceased 6/8/2021
Verbal plugging (Y/N) N Date permission granted	NA Granted by NA
Please note: Operator is required to submit a plugging applica	ation within 5 days of verbal permission to plug
Freshwater depth(s) ft115', 380' 575', 650'	Open mine(s) (Y/N) depthsN
Salt water depth(s) ft1,400'	Void(s) encountered (Y/N) depths N
Coal depth(s) ft 97',155',254', 310',406',442',505',588',624',660'	Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N)N	_



Reviewed by

WERE TRACERS USED □ Yes ■ No

Rev. 8/23/13 API 47-033 Farm name James T. Gamelli et al 05933 Well number 203 **CASING** Hole Casing New or Grade Basket Did cement circulate (Y/N) STRINGS Size Size Depth Used wt/ft Depth(s) * Provide details below* Conductor 30" 26" 40' New 102.75 NA Surface 17 1/2" 13 3/8" 773' GL New 54.5 145' Υ Coal NA NA NA NA NA NΑ N Intermediate 1 12 1/4" 9 5/8" 2.434' GL New 40.0 NA Υ Intermediate 2 NA NA NA NA NA NA NA Intermediate 3 NA NA NA NA NA NA NA Production 8 1/2" 5 1/2" 21,983' GL New 23.0 NA Ν Tubing NA NA NA NA NA NA NA Packer type and depth set NA Comment Details Cement to surface on Conductor, Surface, and Intermediate. Top of Cement for Production string, 1,473' CEMENT Class/Type Number Slurry Yield Volume Cement WOC DATA of Cement of Sacks wt (ppg) (ft 3/sks) (ft^3) Top (MD) (hrs) Conductor Α 82 15.60 1.20 98.40 Surface 8+ Surface Α 700 15.60 1.20 840 Surface 8+ Coal NA NA NA NA NA NA NA Intermediate 1 Α 753 15.70 1.29 971.37 Surface 8+ Intermediate 2 NA NΑ NA NA NA NA NA Intermediate 3 NA NA NA NA NA NA NA Production Α 800/2,958 14.20/15.00 1.24/1.29 992/3,815.82 1,473 8+ Tubing NA NA NA NA NA NA Drillers TD (ft) 21,995'(GL) Loggers TD (ft) 7,239' (GL) Deepest formation penetrated Marcellus Plug back to (ft) 5,863 Plug back procedure Set 600' bottom plug (200sx, 50/50Poz, 2% Gel, 10% Salt). Bottom plug set 7,263 to 6,658. Set top 600' plug (290sx, 50/50Poz, 2% Gel, 10% Salt). Top plug set from 6,563' to 5,863'. Kick off depth (ft) 6,644'(GL) Check all wireline logs run caliper density □ deviated/directional □ induction neutron resistivity gamma ray □ temperature **E**sonic Well cored

Yes

No Conventional Sidewall Were cuttings collected ■ Yes □ No DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING 26"- No centralizers, 13 3/8"- one bow spring centralizer on every other joint, 9 5/8"- one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 1,400", there will be no centralizers from 1,400" to surface WAS WELL COMPLETED AS SHOT HOLE ■ Yes □ No DETAILS WAS WELL COMPLETED OPEN HOLE? 🗆 Yes 📱 No DETAILS

TYPE OF TRACER(S) USED

API 47- 033 _ 05933

Farm name_James T. Gamelli et al

Well number_203

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
		See Attached			

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

	Pressure (PSI)	Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
	See Attached					

Please insert additional pages as applicable.

To	op (ftKB)	Btm (ftKB)	Entered Shot Total St		
6/7/2021	7,561.00	7,723.00	chtered shot Total 40	tage	Formation Marcellus
6/7/2021	7,761.00	7,923.00	40		Marcellus
6/7/2021	7,961.00	8,123.00	40		Marcellus
6/7/2021	8,161.00	8,323.00	40		Marcellus
6/7/2021	8,361.00	8,523.00	40	67	Marcellus
6/6/2021	8,561.00	8,723.00	40	66	Marcellus
6/6/2021 6/6/2021	8,761.00	8,923.00	40		Marcellus
6/6/2021	8,961.00 9,161.00	9,123.00 9,323.00	40		Marcellus
6/6/2021	9,361.00	9,523.00	40 40		Marcellus
6/5/2021	9,561.00	9,723.00	40		Marcellus Marcellus
6/5/2021	9,761.00	9,923.00	40		Marcellus
6/5/2021	9,961.00	10,123.00	40		Marcellus
6/5/2021	10,161.00	10,323.00	40		Marcellus
6/5/2021	10,361.00	10,523.00	40		Marcellus
6/4/2021 6/4/2021	10,561.00	10,723.00	40		Marcellus
6/4/2021	10,761.00 10,961.00	10,923.00 11,123.00	40		Marcellus
6/4/2021	11,161.00	11,323.00	40 40		Marcellus
6/3/2021	11,361.00	11,523.00	40		Marcellus Marcellus
6/3/2021	11,561.00	11,723.00	40		Marcellus
6/3/2021	11,761.00	11,923.00	40		Marcellus
6/3/2021	11,961.00	12,123.00	40		Marcellus
6/3/2021	12,161.00	12,323.00	40		Marcellus
5/31/2021	12,361.00	12,523.00	40	47	Marcellus
5/30/2021	12,561.00	12,723.00	40		Marcellus
5/30/2021 5/30/2021	12,761.00	12,923.00	40		Marcellus
5/30/2021	12,961.00 13,161.00	13,123.00 13,323.00	40		Marcellus
5/29/2021	13,361.00	13,523.00	40 40		Marcellus
5/29/2021	13,561.00	13,723.00	40		Marcellus Marcellus
5/29/2021	13,761.00	13,923.00	40		Marcellus
5/28/2021	13,961.00	14,123.00	40		Marcellus
5/28/2021	14,161.00	14,323.00	40		Marcellus
5/28/2021	14,361.00	14,523.00	40	37	Marcellus
5/28/2021	14,561.00	14,723.00	40	36	Marcellus
5/27/2021 5/27/2021	14,761.00	14,923.00	40		Marcellus
5/27/2021	14,961.00 15,161.00	15,123.00 15,323.00	40		Marcellus
5/27/2021	15,361.00	15,523.00	40 40		Marcellus
5/26/2021	15,561.00	15,723.00	40		Marcellus Marcellus
5/26/2021	15,761.00	15,923.00	40		Marcellus
5/26/2021	15,961.00	16,123.00	40		Marcellus
5/26/2021	16,161.00	16,323.00	40		Marcellus
5/25/2021	16,361.00	16,523.00	40	27	Marcellus
5/25/2021 5/25/2021	16,561.00	16,723.00	40		Marcellus
5/25/2021	16,761.00 16,961.00	16,923.00	40		Marcellus
5/24/2021	17,161.00	17,123.00 17,323.00	40 40		Marcellus
5/24/2021	17,361.00	17,523.00	40		Marcellus Marcellus
5/24/2021	17,561.00	17,723.00	40		Marcellus
5/23/2021	17,761.00	17,923.00	40		Marcellus
5/23/2021	17,961.00	18,123.00	40		Marcellus
5/23/2021	18,161.00	18,323.00	40	18	Marcellus
5/22/2021	18,361.00	18,523.00	40	17	Marcellus
5/22/2021 5/22/2021	18,561.00	18,723.00	40		Marcellus
5/22/2021	18,761.00 18,961.00		40		Marcellus
5/22/2021	19,161.00		40		Marcellus
5/21/2021	19,361.00		40 40		Marcellus Marcellus
5/21/2021	19,561.00		40		Marcellus
5/21/2021	19,761.00		40		Marcellus
5/20/2021	19,961.00		40		Marcellus
5/20/2021	20,161.00		40		Marcellus
5/20/2021	20,361.00		40		Marcellus
5/19/2021 5/19/2021	20,561.00 20,761.00		40		Marcellus
5/19/2021	20,761.00		40		Marcellus
5/18/2021	21,161.00		40 40		Marcellus
5/18/2021	21,361.00	/	40		Marcellus Marcellus
5/17/2021	21,561.00		40		Marcellus
				-	

Perforations Date

Stimulations Summary Start Date: 5/15/2021 Stimulation Intervals	R Treat Avg (bb)	/min):	P Treat Avg (psi):	Mass Prop Tot (lb): 34,973,480.0	Vol Clean Total (bbl): 641,511.00	Frac Grad Avg (psi/ft): 1.17		
Interval Number	Start Date		Slurry Rate Avg (bbl/min)	P Treat Avg (psi)	P Breakdown (psi)	ISIP (psi)	Proppant Total OR (Ib)	Vol Clean Total (bbl) Nitrogen
	1	5/18/2021		9,013.00	0.00		498,070.00	
	2 3	5/18/2021	84.90	9,514.00	0.00	4,328.00	504,770.00	
	4	5/19/2021 5/19/2021	82.70 79.30	9,556.00	7,531.00	-,	499,680.00	
	5	5/19/2021	79.30 81.90	10,029.00	6,932.00		501,990.00	
	6	5/20/2021		10,247.00 9,881.00	7,315.00 6,872.00		439,220.00	
	7	5/20/2021	80.00	10,035.00	7,069.00		500,500.00 499,580.00	
	8	5/20/2021		9,793.00	7,315.00		500,750,00	
	9	5/20/2021		9,854.00	7,049.00	4,970.00	500,105.00	9,240,00 NA
	11	5/21/2021 5/21/2021	77.90 75.90	10,092.00	7,747.00		499,810.00	9,458.00 NA
	12	5/21/2021		9,780,00 9,763,00	7,577.00		500,165.00	
	13	5/22/2021		9,763.00	7,064.00 6,754.00		500,180.00	
	14	5/22/2021	78.60	9,763,00	6,635.00		500,180.00 500,180.00	
	15	5/22/2021	85.70	9,604.00	7,056.00		500,440,00	
	16	5/22/2021	81.10	8,873.00	6,879.00		500,280,00	
	17 18	5/23/2021 5/23/2021	82.20	9,270.00	7,068.00		500,420.00	
	19	5/23/2021	82.20 80.10	9,270.00	7,068.00		500,420.00	
	20	5/23/2021	75.30	9,056.00 9,445.00	6,360.00 7,063.00	5,551.00	500,480.00	
	21	5/24/2021		8,546.00	6,349.00	6,588.00 4,515.00	285,060.00 500,600.00	
	22	5/24/2021	83.00	8,821.00	5,221.00		499,870,00	
	23 24	5/24/2021		8,749.00	6,749.00	5,232.00	406,860.00	
	25	5/25/2021 5/25/2021		8,749.00	7,191.00		500,420.00	
	26	5/25/2021		8,749.00 9.001.00	6,142.00		500,080.00	
	27	5/26/2021		9,081.00	6,335.00 6,774.00		500,250.00	
	28	5/26/2021		8,664.00	6,871.00		423,120.00 500,310.00	-,
	29	5/26/2021	83.00	9,136.00	6,400.00	6,935.00	500,130.00	9,076.00 NA 9,271.00 NA
	30 31	5/26/2021	85.10	9,380.00	6,861.00	4,623.00	500,150.00	
	32	5/26/2021 5/27/2021	80.10	8,814.00	7,045.00	4,936.00	499,580.00	
	33	5/27/2021	85.00 85.00	9,116.00 9,116.00	7,123.00	5,044.00	500,380.00	
	34	5/27/2021		9,119.00	7,094.00 7,233.00	6,472.00 6,784.00	500,480,00	
	35	5/27/2021		9,138.00	7,179.00	5,292.00	500,870.00 500,020.00	
	36	5/28/2021	85.30	8,962.00	7,234.00	6,316.00	499,780.00	
	37 38	5/28/2021	85.90	9,384.00	6,377.00	5,850.00	500,470,00	
	39	5/28/2021 5/29/2021	84.30 85.20	9,490.00	8,188.00		445,230,00	
	40	5/29/2021		9,280.00 8,896.00	7,190.00		500,220.00	
	41	5/29/2021		8,932.00	6,018.00 6,864.00	5,640.00 6,480.00	499,770.00 501,130.00	
	42	5/29/2021	84.70	8,651.00	6,853.00		450,820.00	
	43	5/30/2021		8,780.00	6,861.00		499,900.00	
	44 45	5/30/2021	85.20	8,636.00	6,453.00	5,750.00	501,050.00	8,999.00 NA
	46	5/30/2021 5/30/2021	84.10 84.60	8,460.00	6,837.00	6,340.00	499,910.00	8,994.00 NA
	47	6/3/2021		8,384.00 8.173.00	6,169.00 5,681.00	5,254.00 5,291,00	500,480,00	8,932.00 NA
	48	6/3/2021	86.50	8,525.00	7,093.00	6,230.00	500,230.00 501,250.00	9,031.00 NA
	49	6/3/2021		8,374.00	7,106.00	5,815.00	500,360,00	8,885.00 NA 8,902.00 NA
	50 51	6/3/2021 6/3/2021		8,481.00	5,769.00	5,817.00	499,810.00	
	52	6/4/2021		8,255.00	7,117.00	5,982.00	500,160,00	
	53	6/4/2021		8,344.00 8,344.00	6,925.00		499,550.00	
	54	6/4/2021		8,343.00	7,063.00 7,117,00		500,610,00 500,410,00	-,
	55	6/4/2021		8,318.00	6,905,00		500,410.00	
	56	6/4/2021		8,152.00	6,946.00		500,210.00	
	57 58	6/5/2021		8,084.00	6,988.00	6,230.00	500,420.00	
	59	6/5/2021 6/5/2021		8,310.00	5,759.00		500,760,00	8,880.00 NA
	60	6/5/2021		8,310.00 8,302.00	6,963.00	6,080.00	499,530.00	8,968.00 NA
	61	6/5/2021		8,248.00	6,969.00 6,981.00	6,011.00	500,390.00	8,917.00 NA
	62	6/6/2021	86.10	7,812.00	6,850,00	5,922.00 6,125.00	500,650.00 500,680.00	9,063.00 NA 8,916.00 NA
	63	6/6/2021		8,010.00	7,175.00	6,235.00	500,350.00	
	64 65	6/6/2021		8,473.00	6,733.00	6,290.00	499,930.00	
	65 66	6/6/2021		8,328.00	6,031.00	6,399.00	500,150.00	8,906.00 NA
	67	6/6/2021 6/7/2021		8,645.00	5,527.00	6,384.00	502,700.00	8,939.00 NA
	68	6/7/2021		8,740.00 8,401.00	7,464.00 7,601.00		501,560.00	-,
	69	6/7/2021		8,566.00	7,601.00		499,930.00 499,480.00	
	70	6/7/2021		8,359.00	7,471.00		500,320.00	
	71	6/8/2021	85.30	8,011.00	7,322.00		500,400.00	
							,	-,

API 47- 033	_ 05933	Farm	name_James]	Γ. Gamelli e	et alv	Vell number_	203	
PRODUCING 1	FORMATION(<u>S)</u>	<u>DEPTHS</u>					
Marcellus Shale	}		7,518'	_TVD _2	2,022'	MD		
				_				
Please insert ad	ditional pages a	s applicable.						
GAS TEST	□ Build up □	Drawdown	□ Open Flow	C	OIL TEST - Flow	v 🗆 Pump		
SHUT-IN PRE	SSURE Surf	ace	_psi Botto	m Hole	psi DU	JRATION O	F TEST	Γ hrs
OPEN FLOW	Gas mcf	Oil pd1	NGL bpd	_ bpd		AS MEASU. Estimated	RED B □ Orif	-
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN F				QUANTITYAND
Sand/Silt/Coal	0	254	0	254				VE, OIL, GAS, H ₂ S, ETC)
Sand/Silt/Coal	254	406	254	406				106' TVD, Harlem Coal @ 155' TV
Sand/Silt/Coal	406	505	406	505				Creek Coal @ 310'TVD
Sand/Silt/Coal	505	1260	505	1260				Freeport @ 442' TVD
Big Lime	1260	1430	1260	1430	Oppor National Grant Co.			
Balltown	2860	2906	2860	2906		Limestone, Sa		@ 1,400
Elk Siltstone	4890	4638	4891	4639			dstone	
Burkett	7045	7062	7094	7115			tstone	
Tully	7062	7112	7115	7175			hale	
Mahantango	7112	7278	7175	7440			estone	
Marcellus	7278	7330	7440	7583			hale	
Purcell	7330	7332	7583				hale	
Lower Marcellus	7332	7370	7589	7589 22022			estone	
Onondaga	7370*	1010	7 503	22022		Shale - Gas sh		
	ditional pages a	s applicable.			"Onondaga not pen	etrated - top esti	mated ba	ased on 4703305933 thicknes
Drilling Contra	ctor Helmerich 8	& Payne						
Address 1437 S			City	Tulsa	S	state OK	_Zip	74119
	any Baker Hugh	es - GE						
Address 2001 R	ankin Rd		City	Houston	S	State TX	_Zip	77073
	npany Universal	Pressure Pum		Midland		TV		70705
71441035			City	Midiana		State TX	_ Zıp	79705
	mpany Stingra Caliber Drive Suite					. 01/		70404
	ditional pages a		City	Oklahoma C	ıry S	State OK	Zip _.	73134
	Arsenal Resour	11			Telephone 724	4-584-1192		
Signature	Mil	1100	Title S	r. Director of D		Date 9/	11/2021	
Submittal of Hy	ydraulic Fractur	ing Chemical I	Disclosure Info	rmation	Attach copy of FF	RACFOCUS	Regist	гу

WR-36 Rev. 5/08 Date: 9/11/2021

Operators Well Number: Gamelli 203

API Well No: 47-033 - 05933

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Initial Gas-Oil Ratio

Well Operator	Arsenal Re	sources L	LLC		Des	ignated	d Agent	Sary Sho	ort		
Address	6031 Walla	ace Road	Ext. Suite 300				ddress 6				
	Wexford, P	A 15090					_		rt WV, 26330		
							_				
Geological T	arget Fo	rmation:	Marcellus						Depth	7340	feet
_							P	erforat	ion Interval		feet
<u>Guidelines for te</u>											
1. A minimum	of gas ve	ented or	flared.								
2. A 24 hour p											
3. Uniform prod 4. Measureme	aucing ra	te aurin	g the 24 ho	ur test p	per test perio	d.		, _			
 Measureme Separate Fo 	rm WP_1	irus as i 26 for or	or Form vvi	7-39, "H	keport of Anr	ual Pro	oduction"	(see 3	5CSR4-15)		
o. Ocparate i c	///// // /\	00 101 G	acri producii	ng rorma	auori iri a mu	ilipie c	ompietion	•			
					TEST DATA						
Start of Test I	Date		Time		nd of Test Date		Tim	ie	D	uration of Test	
3/17/21		9:00 A	λM	8/18/2	1		9:00 AN		24 hr	a. a	
Tubing Pressi	иге	C	asing Pressur	е	Sep	arator Pr				tor Temperature	
AV		1578			972			9	7	,	
Oil Production	n During Te	st	Gas Pro	duction E	During Test		1	Vater Pr	oduction Duri	ng Test	
		221.0									
Oil Gra	zit.	BBLS			MCF			BB			Salinity
Oli Gra	vity				Producing M	ethod (flo	owing, pum	oing, gas	s lift etc.)		
		API F	lowing								
				GAS	S PRODUCT	ION					
			nt Method			Positiv	e Choke	П			
	Flange Tap	p 🔲 Pipe	Tap L-10					_			
Orifice diameter			Dina Diamet	/ii-l-\			e flow prove				
Office diameter			Pipe Diamete	er (inside)	1	48/64	al Choke Si	ze inch	es		
Differential Pressure	range		Max. Static p	rocoure m							
Diriotottidal i ressure	s range	-	Max. Static p	ressure ra	ange		and Orifice				
	D	ifferential				0.70	I IUII WII		tatic		
								3	latic		
Gas Gra	vity (Air =	1.0)		Flowing	Temperature			-	Sas Temperat	IIro	
	- '	,	97		,	ءا	0	`	ous remperat	310	
Measured		mated	31				0				
24 Hour C	oefficient				24 1	lour coef	fficient pres	sure P	SIA		
0 " 0"				TE	EST RESUL						
Daily Oil	4		Daily Water			ily Gas			Gas-	Oil Ratio	
		033			15078			NA			
						Ar	senal Reso	urces LL	.c	0 0	//
									Well Operator	Alto	4
						BY ₂	R:	Schwe	itzer	revie	
							Desponsibl	o Boroo	n Sr Directo	n of Dallin n	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/16/2021
Job End Date:	6/8/2021
State:	West Virginia
County:	Harrison
API Number:	47-033-05933-00-00
Operator Name:	Arsenal Resources
Well Name and Number:	Gamelli 203
Latitude:	39.26314700
Longitude:	-80.20118900
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,472
Total Base Water Volume (gal):	28,135,506
Total Base Non Water Volume:	0







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	Arsenal Resources	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	86.88106	None
Sand (40/70 Proppant	US Silica	Proppant					
			Silica Substrate	14808-60-7	100.00000	9.98762	None
Sand (100 Mesh Proppant)	US Silica	Proppant					
			Silica Substrate	14808-60-7	100.00000	2.89299	None
Hydrochloric Acid (28%)	Dover	Acidizing					
			Water	7732-18-5	64.00000	0.08344	None
			Hydrochloric Acid (Hydrogen Chloride)	7732-18-5	36.00000	0.04693	None
timSTREAM FR 9750	Chemstream	Friction Reducer					
			Petroleum Distillates, hydrotreated light	64742-47-8	25.00000	0.01943	None
			Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	5.00000	0.00389	None
StimSTREAM SC-398	Chemstream	Scale Inhibitor					
			Non-hazardous substances	Proprietary	90.00000	0.01486	Vone

			Bis (HexaMethylene Triamine Penta(Methylene Phosphonic Acid) (BHMT)	34690-00-1	10.00000	0.00165	None
Clearal 268	Chemstream	Biocide					
			Non-hazardous substances	Proprietary	80.00000	0.01052	None
			Glutaraldehyde	111-30-8	20.00000	0.00263	None
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00039	None
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00039	
			Ethanol	64-17-5	1.50000	0.00020	None
NEFE-180 Dover	Dover	Corrosion Inhibitor/Iron Control					
			Acetic acid	64-19-7	89.00000	0.00051	
			Methanol	67-56-1	40.00000	0.00023	None
			2-Ethylhexanol	104-76-7	10.00000	0.00006	None
			Alcohols, C14-15, ethoxylated	68951-67-7	5.00000	0.00003	None
			2-Propyn-1-ol	107-19-7	5.00000	0.00003	None
	1		Coconut oil acid diethanolamine	68603-42-9	5.00000	0.00003	None
			Fatty acids, tall oil	61790-12-3	5.00000	0.00003	None
ngredients shown at	bove are subject to 29	CFR 1910.1200(i) and app	pear on Material Safety Data She	ets (MSDS). Ingredi	ents shown below are Nor	n-MSDS.	
ther Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	64.00000	0.08344	
			Non-hazardous substances	Proprietary	90.00000	0.01486	
			Non-hazardous substances	Proprietary	80.00000	0.01052	
			Alcohols, C11-14-iso-, C13-rich, ethoxylated		5.00000	0.00389	
				68424-85-1	3.00000	0.00039	
			Compounds				
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00039	
			Didecyl dimethyl ammonium chloride Methanol	67-56-1	40.00000	0.00023	
			Didecyl dimethyl ammonium chloride Methanol Ethanol	67-56-1 64-17-5	40.00000 1.50000	0.00023 0.00020	
			Didecyl dimethyl ammonium chloride Methanol Ethanol 2-Ethylhexanol	67-56-1 64-17-5 104-76-7	40.00000 1.50000 10.00000	0.00023 0.00020 0.00006	
			Didecyl dimethyl ammonium chloride Methanol Ethanol 2-Ethylhexanol 2-Propyn-1-ol	67-56-1 64-17-5 104-76-7 107-19-7	40.00000 1.50000 10.00000 5.00000	0.00023 0.00020 0.00006 0.00003	
			Didecyl dimethyl ammonium chloride Methanol Ethanol 2-Ethylhexanol 2-Propyn-1-ol Coconut oil acid diethanolamine	67-56-1 64-17-5 104-76-7 107-19-7 68603-42-9	40.00000 1.50000 10.00000 5.00000 5.00000	0.00023 0.00020 0.00006 0.00003 0.00003	
			Didecyl dimethyl ammonium chloride Methanol Ethanol 2-Ethylhexanol 2-Propyn-1-ol Coconut oil acid diethanolamine Alcohols, C14-15, ethoxylated	67-56-1 64-17-5 104-76-7 107-19-7	40.00000 1.50000 10.00000 5.00000	0.00023 0.00020 0.00006 0.00003	

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)

^{*} 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%





