08/12/2022

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

API <u>47</u> - 033	_ 05732	County Harrison	า	_ _{District} Sardis		
Quad Salem		Pad Name Good		Field/Pool Name	Marcellus	
Farm name Coastal Fo	rest Resources			Well Number _	Goodwin 3-3H	
Operator (as registered v	with the OOG) St	atoil USA Onsho	ore Properties, Inc			
Address 2103 Citywes	st Blvd., Ste, 80	0 _{City} Hou	ıston	State TX		042
•						_
As Drilled location N			d plat, profile view,		у	
	op hole Nort	hing 318440		asting 1708432		
Landing Point of	of Curve North	ning 317282 ning 311319	E	asting 1707309 asting 1709202		
Вош	om Hole Norti	ning <u>or roto</u>	E	astingozzz		
Elevation (ft) 1100	GL	Type of Well	■New □ Existing	Type of Rep	oort Interim	Final
Permit Type 🛭 Devi	ated Horizo	ontal 💄 Horizon	tal 6A □ Vertical	Depth Type	e □ Deep	■ Shallow
Type of Operation □ Co	onvert 🗆 Deepe	en 🖪 Drill 🗆	Plug Back Rec	drilling Rewor	rk 🗆 Stimulate	
Well Type □ Brine Dis	posal □ CBM ■	Gas □ Oil □ Sec	condary Recovery	Solution Mining	□ Storage □ Othe	er
Type of Completion	Single - Multiple	Fluids Produ	ced Brine BGa	as □NGL □O	il □ Other	
-		, I luius I louu	cea a Dinie act	is alted to		
Drilled with	□ Rotary					
Drilling Media Surface	ehole ■ Air □	Mud □Fresh Wa	ter Intermediat	te hole	Mud □ Fresh Wa	ter 🗆 Brine
Production hole		sh Water Brine				
		Sii Water Brin	•			
Mud Type(s) and Addit Mud type Synthetic I		k Barite, ABS Ba	ase oil, ABS Mul, (CaCl, Fluid Loss,	viscosifier, disp	ersant,
lime						
Date permit issued)4/25/2013	Date drilling com	nenced05/07/20	Date drill	ing ceased0	6/05/13
Date completion activiti		9/16/2013	Date completion a	ctivities ceased	10/14/2013	
Verbal plugging (Y/N)		permission grante	 d			
verous plugging (1/11)		pg.				
Please note: Operator is	required to submi	t a nlugging annlic	ation within 5 days o	f verbal permission	to plug	
r lease note. Operator is	required to submi	t a pragging appire				
Freshwater depth(s) ft	10' - 55	0' (est)	Open mine(s) (Y/N Void(s) encountere Cavern(s) encounteres) denths	SECRIVED)
Salt water depth(s) ft			Void(s) encountere	d (V/N) denths	of OINEM	O France
	4501 5501	(est)	Covern(s) encounter	ored (V/N) depths	tice or	.11
Coal depth(s) ft	V	several miles e	east	ica (1/14) depuis _	JAN 1 0 A	, , ,
Is coal being mined in a	rea (Y/N)	3070141111100			Reviews	armant of
					JAN 1 0 A WV Depism nvironmental	Protection
				E	nvironraenia	
					,1 • *	08/12/202

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API 47- 033	033 _ 05732 Farm name_Coastal Forest Resources Well number_Goodwin 3-3H									
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	,	20"	120'							
Surface		13 3/8"	334'		54.5					
Coal										
Intermediate 1	12 1/4"	9 5/8"	2320'		36					
Intermediate 2										
Intermediate 3										
Production	8 1/2"	5 1/2"	14771'		20					
Tubing		2 3/8"	6628'	NEW	L-80 - 4.7#/ft					
Packer type and de	epth set				n Packer set @ 6,62	 3'				
Comment Details										
CEMENT	Class/Type	Number			rield Volum					
DATA Conductor	of Cement	of Sacks	s wt (pp	og) (fl	(ft ³)	Top (MI				
Surface	Class A	200	45.0		152 1.18 381	Surfac Surfac				
Coal	Class A	326	15.6	<u> </u>	1.18 381	Suriac	11			
Intermediate 1	Class A	953	15.6		1.18 1005	Surfac	11 5			
Intermediate 2	Class A	852	15.6	·	1.16	Suriac	e 11.5			
Intermediate 3										
Production	Olasa A	0504	4.4.5/4/	F. 6	1.52 2044	Surfac	ce n/a			
Tubing	Class A	2581	14.5/15	0.6	1.53 3941	Sullac	e II/a			
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Marcellus		Loggers T Plug back	D (ft) 14,800' to (ft) n/a					
Kick off depth (ft) 6.177' Check all wireline logs run										
Well cored □ Yes ■ No Conventional Sidewall Were cuttings collected ■ Yes □ No										
DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING										
Surface - (1) Bow Spring attached to shoe joint. (1) Bow Spring attached per joint for 5 joints. Intermediate - (1) Bow Spring attached to shoe joint. (1) Bow Spring attached per joint for every 5 joints. (1) Bow Spring every 4th joint up to 200 ft from surface.										
							aritaice.			
Production - (1) Spiralglide above shoe and above float collar. (1) Spiralglide every other joint up to 5,977' MD. (1) Bow Spring every 4th joint from 7,392' to 100 ft from surface. RECTIVE AND GAS WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS 8542' - 14,580 ftice of Oil and Gas										
WAS WELL O	COMPLETED (OPEN HOLE?	□ Yes ■ N	o DET.		JAN 1				
WERE TRAC	WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS WV Departmental Protection WV Departmental Protection WERE TRACERS USED Yes No TYPE OF TRACER(S) USED Environmental Protection									

Well number Goodwin 3-3H Farm name Coastal Forest Resources API 47-033 -05732

PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
1	09/16/2013	14580	14364	6 SPF	Marcellus
2	09/17/2013	14304	14064	6 SPF	Marcellus
3	09/17/2013	14004	13764	6 SPF	Marcellus
4	09/18/2013	13704	13464	6 SPF	Marcellus
5	09/18/2013	13404	13168	6 SPF	Marcellus
6	09/19/2013	13104	12868	6 SPF	Marcellus
7	09/18/2013	12804	12564	6 SPF	Marcellus
8	09/20/2013	12500	12264	6 SPF	Marcellus
9	09/20/2013	12204	11964	6 SPF	Marcellus
10	09/21/2013	11904	11664	6 SPF	Marcellus
11	09/21/2013	11600	11364	6 SPF	Marcellus
12	09/22/2013	11304	11064	6 SPF	Marcellus
13	09/22/2013	11004	10764	6 SPF	Marcellus
14	09/23/2013	10704	10464	6 SPF	Marcellus
15	09/23/2013	10404	10164	6 SPF	Marcellus
16	09/24/2013	10104	9864	6 SPF	Marcellus

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage	Stimulations	Ave Pump	Ave Treatment	Max Breakdown		Amount of	Amount of	Amount of
No.	Date	Rate (BPM)	Pressure (PSI)	Pressure (PSI)	ISIP (PSI)	Proppant (lbs)	Water (bbls)	Nitrogen/other (units)
1	09/16/13	79.2	7783	6380	5219	395700	7794	
2	09/17/13	74	7787	7442	6319	402600	7656	
3	09/17/13	80.5	7532	6615	4794	400200	7612	
4	09/18/13	81	7419	6127	5621	400900	7425	
5	09/18/13	81.2	7375	6481	4864	398200	6908	
6	09/19/13	81	7151	5688	4628	396400	6840	
7	09/19/13	80.6	7265	5773	4459	396800	6996	
8	09/20/13	81	7298	7016	4469	396100	6815	
9	09/20/13	81.2	7327	6811	4898	391100	6902	
10	09/21/13	80.7	7610	7843	5088	391600	6833	
11	09/21/13	81.1	7362	6676	5928	402800	C:6934D	
12	09/22/13	80.4	7197	7448	4673	402200	£ 6939nd	Gas
13	09/22/13	80.6	7173	7370	4693	403966	6944	
14	09/23/13	81.3	7156	6890	4939	413400	N 692201	+
15	09/23/13	81.2	7391	6748	4647	400600	```6861	
16	09/24/13	81.3	7289	6850	5226	400500	6930	SUL O.
Please insert additional pages as applicable.						Enviror	imental F	YOtection

PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
17	09/24/2013	9800	9564	6 SPF	Marcellus
18	09/25/2013	9502	9264	6 SPF	Marcellus
19	09/25/2013	9204	8964	6 SPF	Marcellus
20	09/25/2013	8902	8757	6 SPF	Marcellus
21	09/26/2013	8697	8542	6 SPF	Marcellus
				·	

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

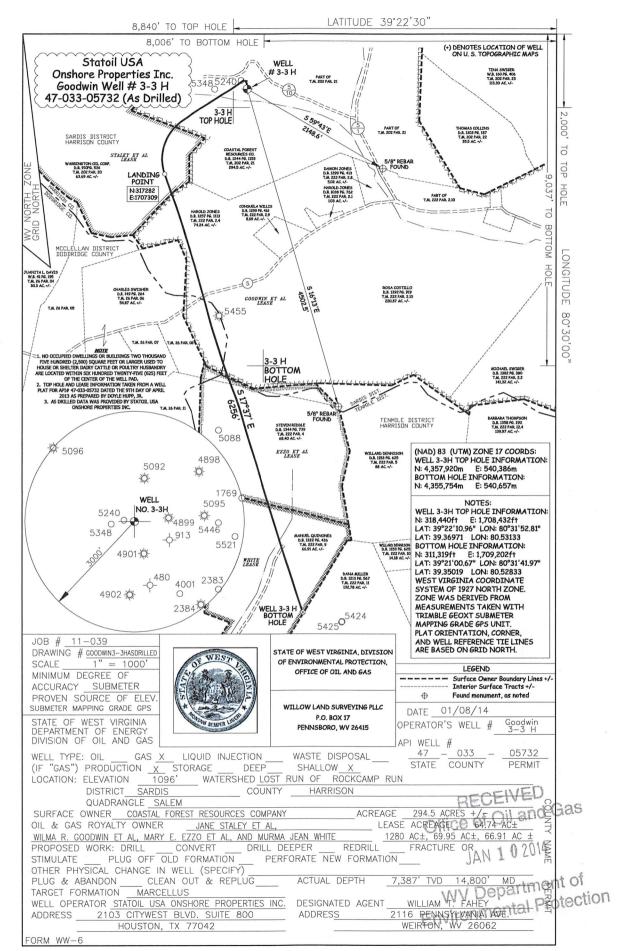
Complete a separate record for each stimulation stage.

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	09/24/13	80.9	7179	6702	4903	407,800	6598	
18	09/25/13	81.2	7160	5210	5225	400,700	6943	
19	09/25/13	80.3	7074	5384	5149	402,100	6991	
20	09/25/13	81.1	7224	6245	5238	249,500	4449	
21	09/26/13	82.1	7492	6385	5240	265,800	5162	

Please insert additional pages as applicable.

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API 47- 033 - 05732		Farm	Farm name Coastal Forest Resources				Well number_Goodwin 3-3H			
PRODUCING FORMATION(S) Marcellus			<u>DEPTHS</u> 7322' - 7373' (es	t) TVD <u>^</u>	I/A	MD				
										
Please insert ac	lditional pages a	s applicable.								
GAS TEST	□ Build up	Drawdown	□ Open Flow	0	IL TEST 0	Flow Du	mp			
SHUT-IN PRE	SSURE Surf	Pace 3550	_psi Botto	m Hole	psi	DURATIO	N OF TEST 9	9 hrs		
OPEN FLOW	Gas 7800 mcf	Oil pd l	NGL opd		Water 0 bpd		SURED BY d • Orifice	□ Pilot		
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD 0	BOTTOM DEPTH IN FI MD			ND RECORD QU /ATER, BRINE, O	ANTITYAND IL, GAS, H₂S, ETC)		
Fresh Water	0 10' (est)	550' (est)	10' (est)	550' (est)			Fresh Water			
Coal	150 (est)	550' (est)	150 (est)	550' (est)			Coal			
Salt Water	500' (est)	1500' (est)	500 (est)	1500' (est			Brine			
Benson	5196' (est)	5207' (est)	5196' (est)	5207' (est)			Sandstone			
Middlesex	6844'	7159'	6949'	7728'			Black Shale			
Genesee	7159'	7192'	7728'	7824'			Black Shale			
Tully LS	7192'	7230'	7824'	7939'		Gr	ay Limestone			
Hamilton	7230'	7279'	7939'	8106'			Gray Shale			
Lower Hamilton	7279'	7322'	8106'	8322'			Gray Shale			
Marcellus	7322'	7373' (est)	8322'	N/A			Black Shale			
Please insert ad	 ditional pages a	l s applicable.								
Drilling Contra	ctor Pioneer						•			
Address			City			State	Zip	·		
	any					Gr. d.	7.			
			<u> </u>			state	Zıp			
	mpany Superior lackers Creek Road		labors Well Serv City	Jane Lew		State W	/Zip_2633	78		
Stimulating Co	mpany Produc	ers Service Cor	тр.	Zanesville			RECE!	(FD)		
Address 109 S.	Iditional pages a	s annlicable	City			— State C	Hice ON TON			
		ь аррисаше.			Tolombo:-	。281-797-77 <i>5</i>	57 JAN 1	0 2014		
C: L	Beth Davidson	λ,	Title Re	egulatory Advis	r erebuon	Dat	e 01/09/2013	artment of		
Submittal of Hy	vdraulic Fractur	ing Chemical I	Disclosure Infor	mation	Attach copy	of FRACFOC	US Registre	ital Protection		



Fracture Start Date/Time	9/15/13 11:35
Fracture End Date/Time	9/26/13 8:58
State	West Virginia
County	: Harrison
API Number	47-033-05732-0000
Operator Number	S1310550
Well Name	Goodwin 3-3H
Federal Well	No
Longitude	-99.12345679
Latitude	25.12345679
Long/Lat Projection	NAD27
True Vertical Depth (TVD)	: 7,000'
Total Clean Fluid Volume* (gal)	6,062,616



Additive	Specific Gravity	Additive Quantity	Mass (lbs)	
Water	1.00	6,062,616	50,592,531	
Sand (Proppant)	2.65	8,118,900	8,118,900	
Hydrochloric Acid (15%)	1.07	0	0	
Hydrochloric Acid (7.5%)	1.04	42,000	364,510	
PROHIB II	0.97	42	340	
MB 7530	1.00	1,866	15,572	
AS 9810	1.00	4,856	40,523	
PROGEL 4.5	1.02	8,541	72,700	
PRO BREAKER 4	1.26	40	421	
N. W. C.			1756	,
175			ar- 2	
				V

Total Slurry Mass (Lbs) 59,205,496 WV Department of Wironmental Protection

Office of Oil and C

Ingredients Section:							59,205,496	
Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Company 1	Carrier/Base Fluid	Water	7732-18-5	100.00%	50,592,531	85.45242%	
Sand (Proppant)	PSC	Proppant	Silica Substrate	192 17	100.00%	8,118,900	13.71309%	
Hydrochloric Acid (15%)	Company 2	Acidizing		7647-01-0	15.00%	0	0.00000%	
Hydrochloric Acid (7.5%)	Producers Service Corp	Acidizing	Hydrochloric Acid	7647-01-0	7.50%	27,338	0.04618%	
PROHIB II	Producers Service Corp	Inhibitor	Ethoxylated Nonylphenol	68412-54-4	10.00%	34	0.00006%	
			Dimethylcocoamine, bis(chloroethyl)ether, diquaternar	68607-28-3	60.00%	204	0.00034%	
			Ethylene Glycol	107-21-1	40.00%	136	0.00023%	
			Glycol Ethers	111-76-2	40.00%	136	0.00023%	
			Methanol	67-56-1	30.00%	102	0.00017%	
	<u> </u>		Propargyl Alcohol	107-19-7	30.00%	102	0.00017%	
MB 7530	Producers Service Corp	Biocide	Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione	533-74-4	24.00%	3,737	0.00631%	
			Sodium Hydroxide	1310-73-2	4.00%	623	0.00105%	
AS 9810	Producers Service Corp	Friction Reducer	Petroleum Distillate	064742-47-8	24.00%	9,726	0.01643%	
PROGEL 4.5	Producers Service Corp		Hydrocarbons	64742-96-7	70.00%	50,890	0.08596%	
PRO BREAKER 4	Producers Service Corp		Sucrose	57-50-1	46.00%	193	0.00033%	
			Ethylene Glycol	107-21-1	14.00%	59	0.00010%	
							10 THE R. P. LEWIS CO., LANSING MICH.	

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

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

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