Reviewed by:

# 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>09</u>	02624	_ County I yier		Distr	rict	Elloy		
Quad Shirley 7.	.5	Pad Name Do	С	Field	d/Pool	Name		
Farm name Fran	cis W. Tennant S	Sr. & Randy W. Tu	stin	Wel	ll Numl	<sub>per</sub> 7		
Operator (as regis	stered with the OO	$_{ m G)}$ $$ Jay Bee Oil and	d Gas, Inc					
Address 16 Sou	ıth Avenue West	, Ste 118 City C	Cranford		State _	NJ	Zip	07016
As Drilled location	on NAD 83/UTM Top hole Point of Curve Bottom Hole	Attach an as-di Northing 4366645.6 Northing 4366996.9 Northing 436868.4	3	ofile view, and dev Easting Easting Easting	519942 519683	2.02 .67		
Elevation (ft) 1	,039.9' <sub>GL</sub>	Type of We	ll <b>≜N</b> ew □	Existing	Туре	of Report	□Interim	■Final
Permit Type	Deviated 🗆	Horizontal 🚪 Hori	zontal 6A	□ Vertical	Depth	Туре	□ Deep	□ Shallow
Type of Operation	n □ Convert □	Deepen 🖪 Drill	□ Plug Bac	k 🗆 Redrilling	; -]	Rework	□ Stimula	ate
Well Type □ Br	ine Disposal □ CB	M ■ Gas ■ Oil □	Secondary Re	ecovery     Solution	on Min	ing 🗆 Sto	orage 🗆 C	Other
Type of Complet	ion ■ Single □ M	ultiple Fluids Pr	oduced 🖪 Br	ine 🛮 🗗 🚨	NGL	<b>■</b> Oil	□ Other _	
Drilled with $\Box$	Cable Rotary							RECEIVED of Oil and Gas
Drilling Media	Surface hole A	ir □ Mud □Fresh	Water ]	Intermediate hole	<b>■</b> Air	□ Mud	□ Fresh AU	Water 2 Brine
Production hole	■ Air ■ Mud	□ Fresh Water □ B	rine					
Mud Type(s) and Synthetic Based	d Additive(s) Mud (SOBM), K-49	(Base Oil), Barite, An	co Mul P, And	co Mul S, Anco Mu	ıl OW, A	Anco Mul X		Department of mental Protection Iul Mod
Anco Mul OV	V, Claytone 3,	Lime, Calcium C	hloride Po	wder, Phalt S	, Mic	a, Cal-C	Carb	
Date permit issue	od 07/9/2019		ommenced	10/25/2019	Date	e drilling c	ceased	1/11/2022
Date completion	activities began	2/19/2022	Date co	mpletion activitie	s cease	d	3/5/2022	<u> </u>
Verbal plugging (	(Y/N) NA	Date permission gra	nted	NA (	Granted	by	NA	
Please note: Ope	rator is required to	submit a plugging app	olication with	in 5 days of verba	l permi	ssion to pl	lug	
Freshwater depth	(s) ft	60-90'	_ Open mi	ne(s) (Y/N) depth	s		N	
Salt water depth(s	s) ft	N/A	_ Void(s)	encountered (Y/N)	) depth	ıs	N	
Coal depth(s) ft	-	N/A	_ Cavern(s	s) encountered (Y/	'N) dep	ths	١	J
Is coal being mine	ed in area (Y/N)	N						

API 47- 095	_ 02624	Farm name_F	rancis W. Tenna	nt Sr. & Ra	andy W. Tustin	_Well number	. 7	
CASING STRINGS		asing ize D		w or	Grade wt/ft	Basket Depth(s)		ment circulate (Y/N) vide details below*
Conductor	T		30	N		NA		Υ
Surface			336	N	48#/H40	50		Υ .
Coal								
Intermediate 1	11	8.625 2	252	N	24#/J55	100'/22	200'	Υ
Intermediate 2			,					
Intermediate 3								
Production	7.875	5-1/2 13	3,347	N	20#/P110	NA	NO.	(per design to 300')
Tubing								,
Packer type and d	lepth set	<b>L</b>						
Comment Details								
CEMENT	Class/Type	Number	Slurry	Yie		olume f <u>t <sup>3</sup> )</u>	Cement	WOC
DATA Conductor	of Cement Class A, 2%CaCl, 1/4 flake	of Sacks	wt (ppg)	(ft 3/	sks) <u>(</u>		Top (MD) SURFACE	(hrs)
Surface	Class A, 2%CaCl, 1/4 flake	241	15.60	1.19	166		SURFACE	8
Coal	Oldory Execution, in Filance	271	10.00	1			<del></del>	
Intermediate 1	Class A, 2%CaCl	682	15.6	1.1	8	932	SURFACE	8
Intermediate 2	0,00071, 2700001	002	10.0	1		002		
Intermediate 3				-				
Production	CLASS A, FLY ASH, MPA-170, R-3	2083	14.50	1.1	8 2	,459	300'	8
Tubing			160	1		, 100		
Drillers TD (f Deepest forma Plug back pro	ation penetrated MARG	CELLUS		ggers TD	(ft) 13,347 (ft) NA			RECEIVED Se of Oil and Gas
Kick off depth	,	-		deviated	/directional ay	□ induction □ temperat	Enviro	Department of nmental Protection
	⊒Yes ■ No	Conventional	Sidewall			ttings collecte		
DESCRIBE T 5-1/2": Vertical Hole: bot 8-5/8": Bow Spring e 13-3/8": Bow Spring	<del></del>	PLACEMENT U y 42' spiral centralizer. Curve:	JSED FOR EA every 84' spiral centralizer	ACH CAS	SING STRING	G		
WAS WELL	COMPLETED AS S	HOT HOLE 🛚	Yes ■ No	DET	AILS			
WAS WELL	COMPLETED OPEN	N HOLE? - Y	es 🖪 No	DETAI	LS			
WERE TRAC	ERS USED □ Yes	■ No TY	PE OF TRACI	ER(S) US	ED			

5m

WR-35 Rev. 8/23/13

API 47- 095 - 02624 Farm name Francis W. Tennant Sr. & Randy W. Tustin Well number DOC 7

#### PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
1	2-19-22	13166	13070	72	MARCELLUS
2	2-19-22	13020	12854	72	MARCELLUS
3	2-20-22	12815	12682	72	MARCELLUS
4	2-21-22	12628	12464	72	MARCELLUS
5	2-21-22	12422	12288	72	MARCELLUS
6	2-21-22	12230	12098	72	MARCELLUS
7	2-22-22	12056	11916	72	MARCELLUS
8	2-22-22	11876	11754	72	MARCELLUS
9	2-23-22	11697	11531	72	MARCELLUS
10	2-23-22	11496	11374	72	MARCELLUS
11	2-24-22	11334	11186	72	MARCELLUS
12	2-24-22	11150	11014	72	MARCELLUS
13	2-24-22	10976	10800	72	MARCELLUS
14	2-25-22	10761	10626	72	MARCELLUS
15	2-25-22	10590	10445	72	MARCELLUS
16	2-26-22	10402	10229	72	MARCELLUS

Please insert additional pages as applicable.

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#### STIMULATION INFORMATION PER STAGE

AUG 2 3 2022

Complete a separate record for each stimulation stage.

Comp	icic a separan	record for ear	on stilliulation stage.				WV	Department of
Stage	Stimulations	Ave Pump	Ave Treatment	Max Breakdown		Amount of		mental/Protection
No.	Date	Rate (BPM)	Pressure (PSI)	Pressure (PSI)	ISIP (PSI)	Proppant (lbs)	Water (bbls)	Nitrogen/other (units)
1	2-19-22	69.7	7296	6518	4765	125410	5397	N/A
2	2-20-22	71.1	6877	6477	4702	123280	5421	N/A
3	2-20-22	70.7	7092	5634	4678	125329	5317	N/A
4	2-21-22	71	7008	6543	4598	125398	5347	N/A
5	2-21-22	71.2	6625	5627	4633	124069	5460	N/A
6	2-21-22	70.2	6936	6314	4688	124999	5282	N/A
7	2-22-22	70.7	6696	6054	4611	122857	6441	N/A_
8	2-22-22	70.4	6884	5835	4767	122554	5194	N/A
9	2-23-22	70.4	6847	6384	4867	122949	5330	N/A
10	2-23-22	70.9	6800	6193	5019	128022	5563	N/A
11	2-24-22	70.8	6855	5915	4914	124672	5243	N/A
12	2-24-22	70.7	6750	6124	4363	180586	7765	N/A
13	2-24-22	70.2	6379	5928	4643	211449	7402	N/A
14	2-25-22	70.1	6360	6084	4612	205120	7777	N/A
15	2-25-22	70.3	6605	4741	6064	242594	8081	N/A
16	2-26-22	70.2	6617	6550	4586	237733	7852	N/A

Please insert additional pages as applicable.

03/17/2023

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API 47-095 \_ 02624

Farm name\_Francis W. Tennant Sr. & Randy W. Tustin\_Well number\_DOC 7

#### PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft	Perforations	Formation(s)
17	3-26-22	10174	10040	72	MARCELLUS
18	3-26-22	10000	9899	72	MARCELLUS
19	3-26-22	9841	9687	72	MARCELLUS
20	2-27-22	9629	9479	72	MARCELLUS
21	3-28-22	9445	9311	72	MARCELLUS
22	3-1-22	9270	9120	72	MARCELLUS
23	3-1-22	9073	8922	72	MARCELLUS
24	3-1-22	8891	8738	72	MARCELLUS
25	3-2-22	8695	8570	72	MARCELLUS
26	3-2-22	8530	8369	72	MARCELLUS
27	3-2-22	8330	8189	72	MARCELLUS
28	3-3-22	8140	7983	72	MARCELLUS
29	3-3-22	7930	7814	72	MARCELLUS
30	3-4-22	7774	7658	72	MARCELLUS
31	3-4-22	7605	7494	72	MARCELLUS
32	3-4-22	7462	7304	72	MARCELLUS

Please insert additional pages as applicable.

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#### STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

WV Department of Environmental Protection

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)
17	2-26-22	70.1	6402	5939	4907	238502	7511	N/A
18	2-26-22	69.9	6410	6192	4561	240020	7657	N/A
19	2-27-22	70	6260	6126	4482	239905	7744	N/A
20	2-28-22	70.2	6329	6570	4637	240268	7763	N/A
21	2-28-22	70	6238	6125	4291	239825	7892	N/A
22	3-1-22	70.3	6447	6490	4148	240000	7804	N/A
23	3-1-22	70.4	6422	6138	4188	216235	7894	N/A
24	3-1-22	70.3	6441	6515	5660	225361	7479	N/A
25	3-2-22	70.2	6494	6096	4349	237516	8170	N/A
26	3-2-22	71.2	6410	6088	4509	260347	9652	N/A
27	3-3-22	69.9	6016	5508	4037	259363	8332	N/A
28	3-3-22	70.1	6081	5958	4608	259085	8413	N/A
29	3-4-22	70.6	6371	5478	5018	235532	8024	N/A
30	3-4-22	71.1	6346	5518	4839	259948	8237	N/A
31	3-4-22	70.7	6099	5231	4243	259181	8237	N/A
32	3-5-22	70.3	6184	5747	4136	235094	7924	N/A

Please insert additional pages as applicable.

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API 47- 095	_ 02624		_ Farm	name_Fra	ncis W.	Tennant	Sr. & R	andy W. Tus	well r	number	7	
PRODUCING Marcellus	FORMATI	ON(S)		DEPTH 6,824'	<u>S</u>	_TVD	13,	347'	MD			
Please insert ad	lditional pa	ges as ap	oplicable.									
GAS TEST	□ Build up	Dr □ Dr	awdown	■ Open	Flow		OII	TEST •	Flow [	Pump		
SHUT-IN PRESSURE Surface 245			2450	psi	Botto	m Hole	2450	psi	DURA	TION C	F TES	T 24 hrs
OPEN FLOW	Gas 6171.4	mcfpd	Oil 4.5		NGL /A	bpd	10 Wa	ater bpd	GAS N			
LITHOLOGY/ FORMATION	TOP DEPTH IN NAME T	NFT D	BOTTOM EPTH IN FT TVD	М	IN FT	BOTT DEPTH MI	IN FT					D QUANTITYAND NE, OIL, GAS, H₂S, ETC)
SEE ATTACHED	0			(								
												RECEIVED Office of Oil and Gas
												AUG 2 3 2022
											E	WV Department of nvironmental Protection
Please insert ac	ditional pa	GPS 25 21	nnlicable									
Drilling Contra Address 10350	ctor Precis	ion Drillir			City	Houstor	1		State	TX	Zip	77042
Logging Comp Address 116 Ell			Inc.		City	Marietta	ı		State	ОН	Zip	45750
Cementing Cor Address 3415 M			ementing		City	Massillo	n		State	ОН	Zip	44646
Stimulating Co Address 2001 S	ummit View F				City	Smithfie	eld		State	PA	Zip	15478
Please insert ad	lditional pa	ges as ap	oplicable.									
Completed by Signature	Emily Pote	sta		7	itle Re	egulatory	Agent	Telephone	304-628	Date 0	8/19/202	22
	my d	) Tocc	~				<u> </u>			Date -		

WW-72 (Rev. 12/99)

#### **OIL AND GAS RECLAMATION NOTICE**

TO:	
Name	
Address	
None	
Name	
Address	
Name	
Address	
Pursuant to West Virginia Code 22-7, notice is hereby given that the undersigned we commencing the reclamation of the surface disturbance caused by well work required by We Code 22-6-30 on the tract of land as follows:  API Permit No. 47-095	rell operator is RECEIVED est Virginia of Oil and Gas  AUG 23 2022
Acreage 11.47	WV Department of Environmental Protection
Watershed Indian Creek of Outlet Middle Island Creek (H	
District McElroy	······································
County Tyler	
Public Road Access Indian Creek Rd.	;
Generally used farm name Francis W. Tennant Sr. & Randy W	/. Tustin
This tract of land was utilized in connection with the well work authorized by the perabove issued by the Office of Oil and Gas of the West Virginia Department of Environmenta	
Any claim for oil and gas production damage compensation from the undersigned n within 2 years of the publication of this notice.	nust be made
Well Operator Jay-Bee Oil & Gas, Inc.	
Address 429 Simonton Rd.	
Ellenboro, WV 26346	
Telephone 304-628-3111	

03/17/2023 SM

PAD-WELL	Doc No. 7			
ELEVATION PERMIT	1039 47-095-02624	1		
PERIVIT	47-033-0202			
	TOP TVD	BOTTOM TVD		
Carroll Sand	340	378		
Murphy Sand	450	510		
1st Cow Run Sand	535	590		
Little Dunkard Sand	668	675		
Dunkard Sand	705	805		
sandstone	915	930		
2nd Cow Run Sand	1043	1050		
Gas Sand	1210	1222		
1st Salt	1297	1365		
2nd Salt	1509	1608		
3rd Salt	1915	1970		
Maxon			V-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
Big Lime	2012	2075	-	
Big Injun	2127	2213	Gas show	
Berea			_	
Gordon	2790	2807	Gas show	
Fifth	3010	3017		
Warren	3493	3524		
Riley	4315	4340		
Benson	4975	4992		
Alexander	5400	5465		
Hamilton	5638	6199	Gas show	
Upper Marcellus (Geneseo)	6703	6738	Gas show	
Purcell (Tully Lm)	6738	6742		
Marcellus	6790		Gas show	
Cherry Valley				

## **Hydraulic Fracturing Fluid Product Component Information Disclosure**

2/19/2022	Job Start Date.
3/5/2022	Job End Date:
West Virginia	State:
Tyler	County:
47-095-02624-00-00	API Number
Jay-Bee Oil & Gas, Inc.	Operator Name:
Doc 7	Well Name and Number
39.44917900	Latitude
-80.76822900	Longitude:
NAD83	Datum:
NO	Federal Well:
NO	Indian Well:
6,815	True Vertical Depth:
9,884,141	Total Base Water Volume (gal):
0	Total Base Non Water Volume







### 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	Supplied by Operator	Base Fluid					
			Water WV AU	7732-18-5	100.00000	92.59300	
CalGel™ 4000	cws	Gel Slurry	RECE e of Oi				
			2022 Protectio	Listed Below			



CalBreak™ 5700	cws	Breaker						
						Listed Below		
DynaScale™ 3511	cws	Scale Inhibitor						
						Listed Below		
DynaRate™ 6459	cws	Friction Reducer						
						Listed Below		
Sand (Proppant)	cws	Propping Agent						
						Listed Below		
CalGuard™ 9100	cws	Corrosion Inhibitor						
						Listed Below		
Hydrochloric Acid	cws	Clean Perforations		· · · · · · · · · · · · · · · · · · ·	17.4. M			
				,		Listed Below		
MBC 12:3	cws	Microbiocide						
						Listed Below		
DWP-NE1	cws	Non-Emulsifier	——————————————————————————————————————					
			WV Dep	AUG 2	RECEIVED Office of Oil and Gas	Listed Below		
Other Chemical (s)	Listed Above	See Trade Name (s) List	√V Department of ronmental Protection	3 2022	HIVED			
			ction	Ö	as	<u></u>	 	



				Listed Below		
ns above are T	rade Names with the	exception of Base W	aler . Items below are the indi	vidual ingredients.		
			Crystalline silica (Quartz)	T	100.00000	7.10995
			Hydrochloric acid	7647-01-0	37.00000	0.18205
			Calcite	471-34-1	1.00000	0.04479
			Illite	12173-60-3	1.00000	0.02631
			Apatite	64476-38-6	0.10000	0.00711
	1		Goethite	1310-14-1	0.10000	0.00711
			Biotite	1302-27-8	0.10000	0.00711
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.00591
			Guar gum	9000-30-0	60.00000	0.00591
		III - I.	Glutaraldehyde	111-30-8	14.00000	0.00326
			Ilmenite	98072-94-7	0.10000	0.00263
			Ethanol	64-17-5	3.00000	0.00070
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00070
			Alkyl dimethyl benzyl ammonium chloride	68424-85-1	3.00000	0.00070
			Isopropanol	67-63-0	30.00000	0.00067
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00049
			Dimethylcocoamine, bis (chloroethyl) ether, diquaternary ammonium salt	68607-28-3	20,00000	0.00045
		Env Env	Methanol	67-56-1	10.00000	0.00022
		AUG 2 3	Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00015
		20 Pro	Ethylene Glycol	107-21-1	40.00000	0.00014
		22 cof	Amines, coco alkyl dimethyl	61788-93-0	5.00000	0.00011



	Substituted ammonium chloride	Proprietary	5.00000	0.00011	Proprietary CAS
	Distillates (petroleum), hydrotreated light	64742-47-8	3.00000	0.00008	
	Ammonium chloride ((NH4)CI)	12125-02-9	5.00000	0.00008	
	Diethylene glycol, monomethyl ether	34590-94-8	20.00000	0.00007	
	Hydrogen peroxide (H2O2)	7722-84-1	8.00000	0.00003	
	Cinnamaldehyde	104-55-2	10.00000	0.00003	
	Formic acid	64-18-6	10.00000	0.00003	
	Ethoxylated Alcohols	68131-39-5	10.00000	0.00003	
	Tar bases, quinolone derivs, benzyl chloride-quatenized	72480-70-7	10.00000	0.00003	
	Isopropyl alcohol	67-63-0	5.00000	0.00002	
	Proprietary Polymer 1	Proprietary			Proprietary CAS & Additive Concentration
•	inorganic Acid Salt	Proprietary			Proprietary CAS & Additive Concentration
***************************************	Organic Acid Ether	Proprietary			Proprietary CAS & Additive Concentration
	Inorganic Salt	Proprietary			Proprietary CAS & Additive Concentration

<sup>\*</sup> Total Water Volume sources may include various types of water including fresh water, produced water, and 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)





<sup>\*\*\*</sup> If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

