

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

API 47 - 095 - 02628 County Tyler District McElroy
Quad Shirley Pad Name Grumpy Field/Pool Name _____
Farm name Diana Sampson Well Number 2
Operator (as registered with the OOG) Jay Bee Oil and Gas, Inc
Address 23 Eganfuskee St. Suite 126 City Jupiter State FL Zip 33477

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4368701.01 Easting 520286.08
Landing Point of Curve Northing 4368370.86 Easting 520127.84
Bottom Hole Northing 4366720.68 Easting 520584.94

Elevation (ft) 1,299.3' 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)
K48 (base oil)

Date permit issued 7/23/2019 Mod 6/29/2021 Date drilling commenced 10/12/2019 (tophole) Date drilling ceased 8/27/2021
Date completion activities began 12/21/2021 Date completion activities ceased 12/29/2021
Verbal plugging (Y/N) NA Date permission granted NA Granted by NA

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

Freshwater depth(s) ft 120' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 870' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 501', 640', 734', 893', 956' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
Steve McElroy
03/17/2023
10/31/22

API 47-095 - 02628 Farm name Diana Samson Well number 2

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	18-5/8	30	N		NA	
Surface	17.5	13-3/8	336	N	48#/H40	50'	YES
Coal							
Intermediate 1	11	8-5/8	2,515	N	24#/J55	100'/2400'	YES
Intermediate 2							
Intermediate 3							
Production	7-7/8	5-1/2	13,097	N	20#/P110	NA	NO (per design to 300')
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	Class A, 2%CaCl, 1/4 flake					surface	8
Surface	Class A, 2%CaCl, 1/4 flake	241	15.60	1.1966	288	surface	8
Coal							
Intermediate 1	Class A, 2%CaCl	761	15.60	1.18	898	surface	8
Intermediate 2							
Intermediate 3							
Production	CLASS A, FLY ASH, MPA-170, R-3	1,905	14.50	1.17	2,229	300'	8
Tubing							

Drillers TD (ft) 13,097 MD _____ Loggers TD (ft) 13,097
 Deepest formation penetrated Marcellus Plug back to (ft) NA
 Plug back procedure NA

Kick off depth (ft) 6,627

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 _____

5.5: Vertical Hole: bow spring every 500'. Horizontal: every 42' spiral centralizer. Curve: every 84' spiral centralizer
 8-5/8: Bow spring every 375'
 13-3/8: every joint

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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API 47- 095 - 02628 Farm name Diana Samson Well number Grumpy 2

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	12-12-21	12960	12862	72	Marcellus
2	12-13-21	12822	12673	72	Marcellus
3	12-13-21	12624	12485	72	Marcellus
4	12-14-21	12436	12282	72	Marcellus
5	12-15-21	12244	12109	72	Marcellus
6	12-15-21	12048	11917	72	Marcellus
7	12-16-21	11860	11708	72	Marcellus
8	12-17-21	11660	11554	72	Marcellus
9	12-17-21	11504	11342	72	Marcellus
10	12-18-21	11296	11144	72	Marcellus
11	12-18-21	11088	10944	72	Marcellus
12	12-19-21	10911	10788	72	Marcellus
13	12-19-21	10747	10569	72	Marcellus
14	12-20-21	10519	10390	72	Marcellus
15	12-20-21	10344	10186	72	Marcellus
16	12-21-21	10142	10002	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	12-12-21	72.2	6894	7554	3588	266804	8099	N/A
2	12-13-21	75.3	7358	8036	4125	236759	7508	N/A
3	12-13-21	74.5	7377	7504	4516	255762	7419	N/A
4	12-14-21	74.8	7494	7773	4409	257076	7696	N/A
5	12-15-21	74.8	7397	8124	4590	171268	5884	N/A
6	12-15-21	75.3	7120	8168	5418	229049	7000	N/A
7	12-16-21	75	7151	7548	5348	240089	8071	N/A
8	12-17-21	71.4	6860	7086	4437	259312	7477	N/A
9	12-17-21	75.3	6943	7406	4528	259388	7545	N/A
10	12-18-21	75	7000	7933	4280	259485	7273	N/A
11	12-18-21	75.3	6635	8640	4470	217765	6635	N/A
12	12-19-21	75.2	6789	7431	4611	236217	7409	N/A
13	12-19-21	75.3	6830	7109	4208	257804	7132	N/A
14	12-20-21	74.8	6934	7863	4328	259637	7277	N/A
15	12-20-21	75.1	6967	8125	4094	236551	7082	N/A
16	12-21-21	74.8	6546	7401	5102	215991	6698	N/A

Please insert additional pages as applicable.

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API 47-095 - 02628 Farm name Diana Samson Well number Grumpy 2

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	12-21-21	9956	9806	72	Marcellus
18	12-21-21	9763	9604	72	Marcellus
19	12-22-21	9564	9384	72	Marcellus
20	12-22-21	9358	9223	72	Marcellus
21	12-22-21	9172	9042	72	Marcellus
22	12-23-21	8980	8850	72	Marcellus
23	12-23-21	8816	8650	72	Marcellus
24	12-26-21	8610	8491	72	Marcellus
25	12-26-21	8436	8309	72	Marcellus
26	12-27-21	8226	8074	72	Marcellus
27	12-28-21	8032	7889	72	Marcellus
28	12-28-21	7841	7719	72	Marcellus
29	12-29-21	7658	7416	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	12-21-21	74.8	6439	7214	5208	254746	7486	N/A
18	12-21-21	72.5	6481	7376	5189	259458	7057	N/A
19	12-22-21	74.7	6577	7170	4022	257975	7221	N/A
20	12-22-21	75	6750	7709	4416	235838	7097	N/A
21	12-22-21	75.1	6460	7419	5311	259698	7176	N/A
22	12-23-21	75.2	6569	7512	4008	260021	7635	N/A
23	12-23-21	75.1	6511	7621	4396	259382	7390	N/A
24	12-26-21	74.8	6794	7503	4319	259674	7406	N/A
25	12-26-21	75.1	6864	7948	4589	259512	7395	N/A
26	12-27-21	74.4	6735	7385	4873	260069	7675	N/A
27	12-28-21	75.1	6581	7169	4513	259442	7351	N/A
28	12-28-21	74.9	6545	6899	3601	259952	7481	N/A
29	12-29-21	75	6640	6909	3548	260805	7518	N/A

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Please insert additional pages as applicable.

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OIL AND GAS RECLAMATION NOTICE

TO:

Name not needed for WR35

Address _____

Name _____

Address _____

Name _____

Address _____

Pursuant to West Virginia Code 22-7, notice is hereby given that the undersigned well operator is commencing the reclamation of the surface disturbance caused by well work required by West Virginia Code 22-6-30 on the tract of land as follows:

API Permit No. 47- 095 - 02628 ;
Acreage 42.00 ;
Watershed Woodburn Run of Outlet Middle Island Creek (HUC-10) ;
District McElroy ;
County Tyler ;
Public Road Access Wildman Run ;
Generally used farm name Diana Samson .

This tract of land was utilized in connection with the well work authorized by the permit listed above issued by the Office of Oil and Gas of the West Virginia Department of Environmental Protection.

Any claim for oil and gas production damage compensation from the undersigned must be made within 2 years of the publication of this notice.

Well Operator Jay- Bee Oil and Gas, INC.
Address 429 Simonton Road
Ellenboro, WV 26346
Telephone 304-628-3111

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PAD-WELL	Grumpy No. 2		
ELEVATION	1299		
PERMIT	47-095-02628		
	TOP TVD	BOTTOM TVD	
Carroll Sand	340	377	
Murphy Sand	500	521	
1st Cow Run Sand	555	562	
Little Dunkard Sand	637	686	
Dunkard Sand	772	872	
sandstone	990	1005	
2nd Cow Run Sand	1055	1090	
Gas Sand	1140	1155	
1st Salt	1368	1397	
2nd Salt	1600	1648	
3rd Salt	1820	1881	
Maxon			
Big Lime	2285	2382	
Big Injun	2404	2495	Gas show
Berea			
Gordon	3058	3091	Gas show
Fifth	3287	3296	
Warren	3760	3799	
Riley	4724	4,741	
Benson	5342	5,345	
Alexander	5652	5,618	
Hamilton	5935	6,364	Gas show
Upper Marcellus (Geneseo)	6948	6981	
Purcell (Tully Lm)	6981	6985	
Marcellus	7035		Gas show
Cherry Valley			

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/12/2021
Job End Date:	12/29/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02628-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	Grumpy 2
Latitude:	39.44919300
Longitude:	-80.76824000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,056
Total Base Water Volume (gal):	9,128,613
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	Supplied by Operator	Base Fluid					
			Water	7732-18-5	100.00000	91.05714	
CalGel™ 4000	CWS	Gel Slurry					
				Listed Below			

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DynaRate™ 6459	CWS	Friction Reducer				
				Listed Below		
CalBreak™ 5700	CWS	Breaker				
				Listed Below		
DynaScale™ 3511	CWS	Scale Inhibitor				
				Listed Below		
Sand (Proppant)	CWS	Propping Agent				
				Listed Below		
CalGuard™ 9100	CWS	Corrosion Inhibitor				
				Listed Below		
Hydrochloric Acid	CWS	Clean Perforations				
				Listed Below		
MBC 12:3	CWS	Microbiocide				
				Listed Below		
Other Chemical (s)	Listed Above	See Trade Name (s) List				
				Listed Below		

Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.

			Crystalline silica (Quartz)	14808-60-7	100.00000	8.63710
			Hydrochloric acid	7647-01-0	37.00000	0.17391

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		Calcite	471-34-1	1.00000	0.05850
		Illite	12173-60-3	1.00000	0.02787
		Apatite	64476-38-6	0.10000	0.00864
		Goethite	1310-14-1	0.10000	0.00864
		Biotite	1302-27-8	0.10000	0.00864
		Guar gum	9000-30-0	60.00000	0.00518
		Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.00518
		Glutaraldehyde	111-30-8	14.00000	0.00325
		Ilmenite	98072-94-7	0.10000	0.00279
		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
		Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00043
		Ethylene Glycol	107-21-1	40.00000	0.00014
		Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00013
		Diethylene glycol, monomethyl ether	34590-94-8	20.00000	0.00007
		Distillates (petroleum), hydrotreated light	64742-47-8	3.00000	0.00007
		Ammonium chloride (NH ₄ Cl)	12125-02-9	5.00000	0.00007
		Ethoxylated Alcohols	68131-39-5	10.00000	0.00003
		Formic acid	64-18-6	10.00000	0.00003
		Tar bases, quinolone derivs, benzyl chloride- quatenized	72480-70-7	10.00000	0.00003
		Cinnamaldehyde	104-55-2	10.00000	0.00003
		Hydrogen peroxide (H ₂ O ₂)	7722-84-1	8.00000	0.00002

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			Isopropyl alcohol	67-63-0	5.00000	0.00002	
			Inorganic Acid Salt	Proprietary			Proprietary CAS & Additive Concentration
			Inorganic Salt	Proprietary			Proprietary CAS & Additive Concentration
			Proprietary Polymer 1	Proprietary			Proprietary CAS & Additive Concentration
			Organic Acid Ether	Proprietary			Proprietary CAS & Additive Concentration

* 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%

*** 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

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

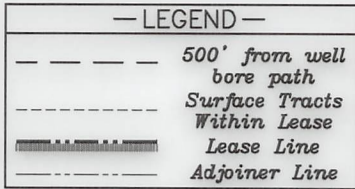
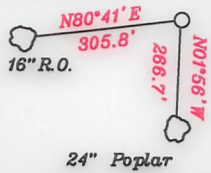
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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References:

Crumpy 2

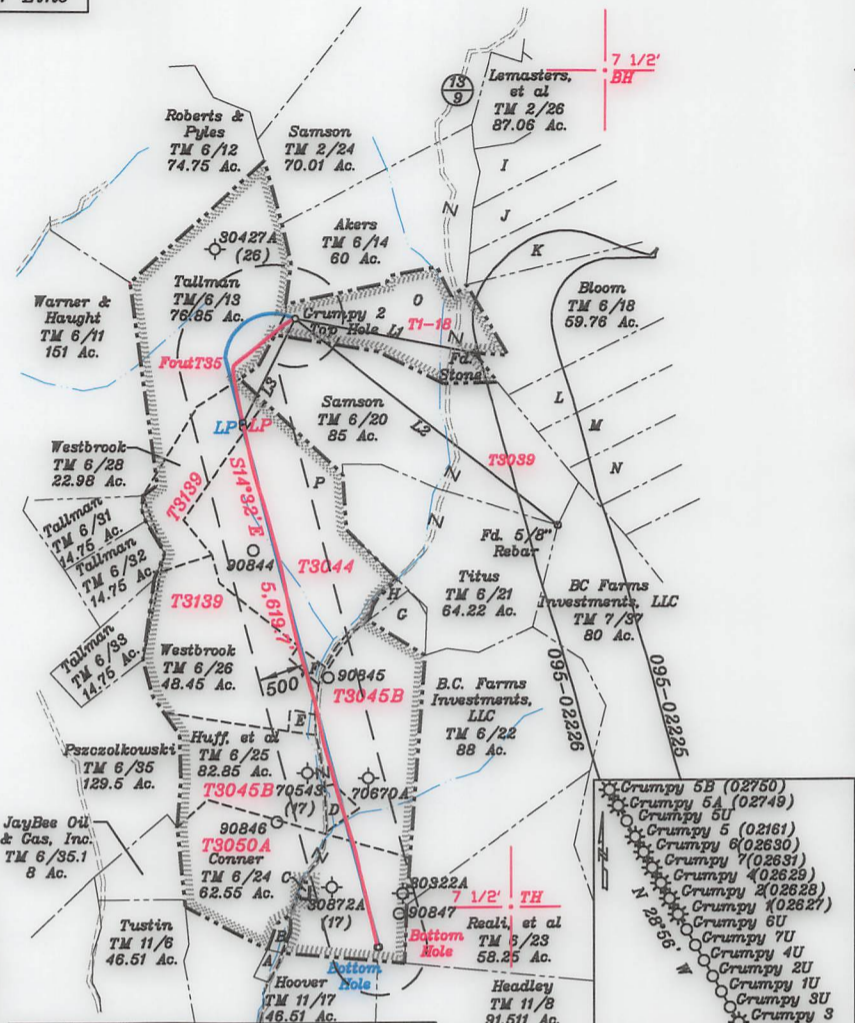
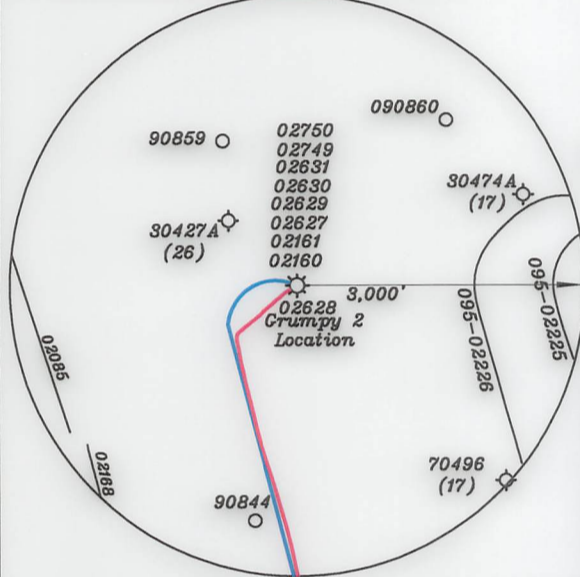


- A- McIntyre, et al TM 11/17.4 1.12 Ac.
B- Fields & Leisure TM 11/52 1.25 Ac.
C- Clark TM 6/24.1 0.20 Ac. T3050A
D- Yeater, et al TM 6/25.1 1.1 Ac. T3045B
E- Stafford TM 6/26.2 1.331 Ac. T3139
F- Akers TM 6/26.1 0.22 Ac. T3139
G- Titus TM 6/25.3 4.83 Ac.
H- Titus TM 6/25.2 1.08 Ac.
I- Edgar Ronald McHenry Trust TM 6/15 15.81 Ac.
J- Rayburn, Hrs. TM 6/16 15.82 Ac.
K- Thompson TM 6/17 26.36 Ac.
L- Eidle TM 7/17 23.73 Ac.
M- Eidle TM 7/18 26.36 Ac.
N- BC Farms Investments, LLC TM 7/19 22.85 Ac.
O- Samson T.M. 6/19 42.0 Ac.
P- A.M. & Solomon Kyle Estates TM 6/27 80 Ac.

Note: All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats & aerial photos.

Table with 3 columns: NUMBER, DIRECTION, DISTANCE. Contains data for L1, L2, and L3.

NORTH



Top Hole-TH
Geo NAD 83- 39.467651 N, 80.764166 W
UTM NAD 83(Meters)-4368700.94 N, 520286.20 E
UTM NAD 83(Feet)-14332979.67 N, 1706972.30 E
Landing Point-LP
Geo NAD 83- 39.464543 N, 80.766002 W
UTM NAD 83(Meters)-4368355.61 N, 520129.14 E
UTM NAD 83(Feet)-14331846.70 N, 1706457.03 E
Bottom Hole-BH
Geo NAD 83- 39.449805 N, 80.760714 W
UTM NAD 83(Meters)-4366721.16 N, 520588.41 E
UTM NAD 83(Feet)-14326484.33 N, 1707963.80 E

Top Hole-TH
Geo NAD 83- 39.467652 N, 80.764167 W
UTM NAD 83(Meters)-4368701.01 N, 520286.08 E
UTM NAD 83(Feet)-14332979.90 N, 1706971.92 E
Landing Point-LP
Geo NAD 83- 39.464680 N, 80.766017 W
UTM NAD 83(Meters)-4368370.86 N, 520127.84 E
UTM NAD 83(Feet)-14331896.71 N, 1706452.74 E
Bottom Hole-BH
Geo NAD 83- 39.449801 N, 80.760754 W
UTM NAD 83(Meters)-4366720.68 N, 520584.94 E
UTM NAD 83(Feet)-14326482.76 N, 1707952.44 E

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.
DRAWING NO. 1
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY 1 in 200
PROVEN SOURCE OF ELEVATION GPS
submeter unit

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) David L Jackson
R.P.E. P.S. 708



STATE OF WEST VIRGINIA
Division of Environmental Protection
OFFICE OF OIL AND GAS

DATE June 15, 2022
OPERATOR'S WELL NO. Crumpy 2
API WELL NO.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE COUNTY PERMIT
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
LOCATION: ELEVATION 1,299.3' WATER SHED Woodburn Run of Outlet Middle Island Creek (HUC-10)
DISTRICT McElroy COUNTY Tyler
QUADRANGLE Shirley 7 1/2'
SURFACE OWNER Diana Samson ACREAGE 42.0 Ac.
OIL & GAS ROYALTY OWNER Diana Samson LEASE ACREAGE 42.0 Ac.
LEASE NO. See above

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As Drilled

PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION Marcellus ESTIMATED DEPTH TVD = 7,065'; TMD = 13,097'
WELL OPERATOR Jay-Bee Oil & Gas, Inc. DESIGNATED AGENT Deborah Broda-Morgan
ADDRESS 16 South Avenue W, Ste 118, Cranford NJ 07016 ADDRESS 429 Simonton Road, Ellenboro WV 26346

LONGITUDE 80-45-00 W Bottom Hole 3,108'
LONGITUDE 80-45-00 W Bottom Hole 11,783'

03/17/2023