

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

API 47-073-02560 County Pleasants District Union  
Quad Bens Run Pad Name P3 Field/Pool Name \_\_\_\_\_  
Farm name Jerry Summers Well Number P3N2U  
Operator (as registered with the OOG) Jay Bee Oil & Gas  
Address 1720 Rt 22 East City Union State NJ Zip 07083

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4365665.57 Easting 494762.16  
Landing Point of Curve Northing 4365843.25 Easting 494859.23  
Bottom Hole Northing 4367696.42 Easting 493843.50

Elevation (ft) 839.2 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)  
Synthetic OBM

Date permit issued 08/07/2017 Date drilling commenced 09/03/2017 Date drilling ceased 10/03/17  
Date completion activities began 03/28/2018 Date completion activities ceased 04/06/2018  
Verbal plugging (Y/N) \_\_\_\_\_ Date permission granted \_\_\_\_\_ Granted by RECEIVED  
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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug **JUN 03 2019**  
WV Department of Environmental Protection  
Freshwater depth(s) ft 158.3' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft N/A 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

Reviewed by: Jeb  
6/24/2019

API 47-073 - 02560

Farm name Jerry Summers

Well number P3N2U

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	30"	26"	30'	New	A500-85lb./ft		Y
Surface	24"	18 5/8"	398'	New	J55-94lb./ft	42'&318'	Y
Coal							
Intermediate 1	17 1/2"	13 3/8"	1938'	New	J55-61lb./ft	44'&1593'	Y
Intermediate 2	12 1/4"	9 5/8"	9271'	New	HCP-110-47lb./ft	90'&3669'&7494'	Y
Intermediate 3							
Production	8 1/2"	5 1/2"	17553'	New	P110-23lb./ft		Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A	652	15.6	1.20	782	CTS	8
Coal							
Intermediate 1	Class A	Lead-1034 tail 320	Lead 15.4 tail 15.6	1.18	lead 1220 tail 378	CTS	8
Intermediate 2	Class A	Lead 1185 tail 490	lead 12.5 tail 15.0	lead 2.32 tail 1.34	lead 2749 tail 657	1000'	8
Intermediate 3							
Production	Class H	2978	15.6	1.18	3514	3500'	8
Tubing							

Drillers TD (ft) 17537

Loggers TD (ft) 17537

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 9500'

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 centralizer placed every 500'.

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WAS WELL COMPLETED AS SHOT HOLE  Yes  No    DETAILS \_\_\_\_\_

JUN 03 2019

WAS WELL COMPLETED OPEN HOLE?  Yes  No    DETAILS \_\_\_\_\_

WV Department of  
Environmental Protection

WERE TRACERS USED  Yes  No    TYPE OF TRACER(S) USED \_\_\_\_\_

API 47- 073 - 02560

Farm name Jerry Summers

Well number P3N2U

**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	3/28/18	17421	17311	84	Pt. Pleasant
2	3/28/18	17290	17126	84	Pt. Pleasant
3	3/28/18	17108	16938	84	Pt. Pleasant
4	3/28/18	16915	16749	84	Pt. Pleasant
5	3/29/18	16734	16563	84	Pt. Pleasant
6	3/29/18	16540	16354	84	Pt. Pleasant
7	3/29/18	16335	16155	84	Pt. Pleasant
8	3/29/18	16140	15965	84	Pt. Pleasant
9	3/31/18	15945	15764	84	Pt. Pleasant
10	3/31/18	15743	15604	84	Pt. Pleasant
11	3/31/18	15570	15394	84	Pt. Pleasant
12	4/1/18	15372	15201	84	Pt. Pleasant
13	4/1/18	15176	14981	84	Pt. Pleasant
14	4/1/18	14964	14795	84	Pt. Pleasant
15	4/1/18	14776	14597	84	Pt. Pleasant
16	4/1/18	14570	14411	84	Pt. Pleasant

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	3/28/18	72	9572	11686	6077	328260	7805	N/A
2	3/28/18	78	10206	8736	7417	329860	7610	N/A
3	3/28/18	79	10246	8397	6564	331740	7758	N/A
4	3/28/18	77	10229	10079	6510	325660	7279	N/A
5	3/29/18	78	10136	9508	6315	329260	7680	N/A
6	3/29/18	80	10654	9210	6407	314980	8184	N/A
7	3/29/18	78	10319	10325	7048	306660	8499	N/A
8	3/30/18	75	10452	8984	8886	350880	11107	N/A
9	3/31/18	78	10727	9954	6943	324160	8645	N/A
10	3/31/18	77	10142	8914	7171	320660	8539	N/A
11	3/31/18	77	9684	10015	6475	319440	7953	N/A
12	4/1/18	77	9490	9811	6526	323640	8071	N/A
13	4/1/18	78	9353	8507	6339	320540	7905	N/A
14	4/1/18	80	9335	8864	6682	322880	7844	N/A
15	4/1/18	79	9154	8252	6920	325300	7837	N/A
16	4/1/18	77	8881	8606	6727	322560	8133	N/A

Please insert additional pages as applicable.

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Farm name Jerry Summers

Well number P3N2U

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	4/2/18	14390	14203	84	Pt. Pleasant
18	4/2/18	14180	14013	84	Pt. Pleasant
19	4/2/18	13985	13824	84	Pt. Pleasant
20	4/2/18	13806	13628	84	Pt. Pleasant
21	4/3/18	13605	13440	84	Pt. Pleasant
22	4/3/18	13415	13232	84	Pt. Pleasant
23	4/3/18	13208	13037	84	Pt. Pleasant
24	4/3/18	13023	12854	84	Pt. Pleasant
25	4/4/18	12826	12644	84	Pt. Pleasant
26	4/4/18	12626	12456	84	Pt. Pleasant
27	4/4/18	12430	12244	84	Pt. Pleasant
28	4/4/18	12230	12064	84	Pt. Pleasant
29	4/5/18	12048	11878	84	Pt. Pleasant
30	4/5/18	11855	11644	84	Pt. Pleasant
31	4/5/18	11623	11478	84	Pt. Pleasant
32	4/5/18	11460	11280	84	Pt. Pleasant

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	4/2/18	77	9035	9236	6551	328000	8249	N/A
18	4/2/18	80	9189	9639	6836	329080	8120	N/A
19	4/2/18	79	9518	10073	6385	323300	9544	N/A
20	4/2/18	78	10305	8109	6530	325860	8204	N/A
21	4/3/18	78	9025	8078	6434	316780	8277	N/A
22	4/3/18	78	9396	7926	6247	331660	8071	N/A
23	4/3/18	76	9178	8736	6370	322280	7830	N/A
24	4/3/18	79	9359	9160	6850	323660	10879	N/A
25	4/4/18	79	9644	10152	6816	335260	7890	N/A
26	4/4/18	79	9475	9484	7011	336660	7801	N/A
27	4/4/18	78	9471	9799	6944	329350	7944	N/A
28	4/4/18	75	9956	9250	6795	325520	8393	N/A
29	4/5/18	73	8979	8963	6930	324840	8355	N/A
30	4/5/18	76	9464	9643	6571	327500	8443	N/A
31	4/5/18	79	9268	10389	6895	328120	7827	N/A
32	4/5/18	78	9471	8925	6892	331140	8245	N/A

Please insert additional pages as applicable.

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API 47-073-02560

P3N2U

ELEVATION

839 kb

<u>FORMATION</u>	<u>TOP</u>	<u>BOTTOM</u>
LIME	1731	1829
INJUN	1829	1906
GORDON	2636	2660
HAMILTON	5345	5527
UPPER Marcellus	5665	
PARCELL LME	5681	
LOWER MARCELLUS	5758	
Onondaga	5815	
Oriskany	6008	
Bass Islands	6464	
Salina	6571	
Wills Creek	7181	
Lockport	7417	
McKenzie	7635	
Rose Hill	7720	
Packer Shell	8004	
Clinton-Medina	8090	
Queenston	8283	
Reedsville	9072	
Utica	10008	
Point Pleasant SH	10154	
Landing Point	10180	
Trenton	10267	

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Environmental Protection



# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/28/2018
Job End Date:	4/6/2018
State:	West Virginia
County:	Pleasants
API Number:	47-073-02560-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	P3N2U
Latitude:	39.44052400
Longitude:	-81.06086800
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	10,800
Total Base Water Volume (gal):	12,438,930
Total Base Non Water Volume:	72,790

## 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	89.31173	
Other Chemical (s)	Listed Above	See Trade Name (s) List	Water	7732-18-5	60.00000	0.01515	



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			Water	7732-18-5	85.00000	0.36371	
			Water	7732-18-5	40.00000	0.03016	
			Water	7732-18-5	55.00000	0.01426	
CI-150	FTSI	Acid Corrosion Inhibitor		Listed Below			
30/50 Carbolite	FTSI	Proppant		Listed Below			
30/50 White	FTSI	Proppant		Listed Below			
HVG-1 4.0	FTSI	Water gelling agent		Listed Below			
SPB-1	FTSI	Breaker		Listed Below			
40/70 White	FTSI	Proppant		Listed Below			
ICI-3240	FTSI	Biocide		Listed Below			

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100 Mesh Sand	FTSI	Proppant		Listed Below					
FRW-600	FTSI	Friction Reducer		Listed Below					
Pump Kleen	FTSI	Pump and hose flush		Listed Below					
CS-500 SI	FTSI	Scale inhibitor		Listed Below					
10.1%-15.0% HCL	FTSI	Acid		Listed Below					
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.									
			Silica, Quartz	14808-60-7	100.00000		4.84435		
			Silica, Quartz	14808-60-7	100.00000		3.75143		
			Silica, Quartz	14808-60-7	100.00000		1.23581		
			Mullite	1302-93-8	85.00000		0.25074		
			Silicon Dioxide	7631-86-9	35.00000		0.10324		
			Hydrogen Chloride	7647-01-0	15.00000		0.06418		
			Silica Crystalline-Cristobalite	14464-46-1	20.00000		0.05900		
			Hydrotreated Light Distillate	64742-47-8	30.00000		0.02262		
			Polycrylamide	Trade Secret	30.00000		0.02262		
			Ammonium acetate	631-61-8	10.00000		0.00754		

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				Dazomet (Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione.	533-74-4	24.00000	0.00622	
				Sodium Hydroxide	1310-73-2	23.00000	0.00596	
				Alcohols, ethoxylated	68551-12-2	5.00000	0.00377	
				Alcohols, ethoxylated	68439-50-9	5.00000	0.00377	
				Alcohols, ethoxylated	68002-97-1	5.00000	0.00377	
				Ethylene glycol	107-21-1	13.00000	0.00328	
				Sodium Polyacrylate	9003-04-7	13.00000	0.00328	
				Sodium chloride	7647-14-5	10.00000	0.00253	
				Petroleum Distillate	64742-47-8	55.00000	0.00228	
				Guar gum	9000-30-0	55.00000	0.00228	
				Raffinates, Sorption Process	64741-85-1	55.00000	0.00228	
				Nonionic Surfactant	Trade Secret	3.00000	0.00226	
				Surfactant	Trade Secret	3.00000	0.00226	
				Amine	Trade Secret	3.00000	0.00226	
				White mineral oil	8042-47-5	100.00000	0.00132	
				Raffinates (petroleum), sorption process	64741-85-1	100.00000	0.00132	
				Polybutene (Isobutylene/Butene copolymer)	9003-29-6	100.00000	0.00132	
				Sodium Perborate Tetrahydrate	10486-00-7	98.00000	0.00103	
				Methanol	67-56-1	90.00000	0.00065	
				Suspending Agent	1302-78-9	5.00000	0.00021	
				Quartz	14808-60-7	4.00000	0.00017	
				Isotridecanol, ethoxylated	9043-30-5	2.00000	0.00008	
				Alcohol Ethoxylate Surfactants	Proprietary	10.00000	0.00007	
				Fatty Acids, Tall Oil	61790-12-3	10.00000	0.00007	
				Thiourea-formaldehyde Copolymer	68527-49-1	10.00000	0.00007	
				Propargyl Alcohol	107-19-7	5.00000	0.00004	

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			N-olefins	Proprietary	3.00000	0.00002	
			Sodium Metaborate	7775-19-1	1.40000	0.00001	
			Proprietary	Proprietary			
			Acrylic Polymer	Proprietary			

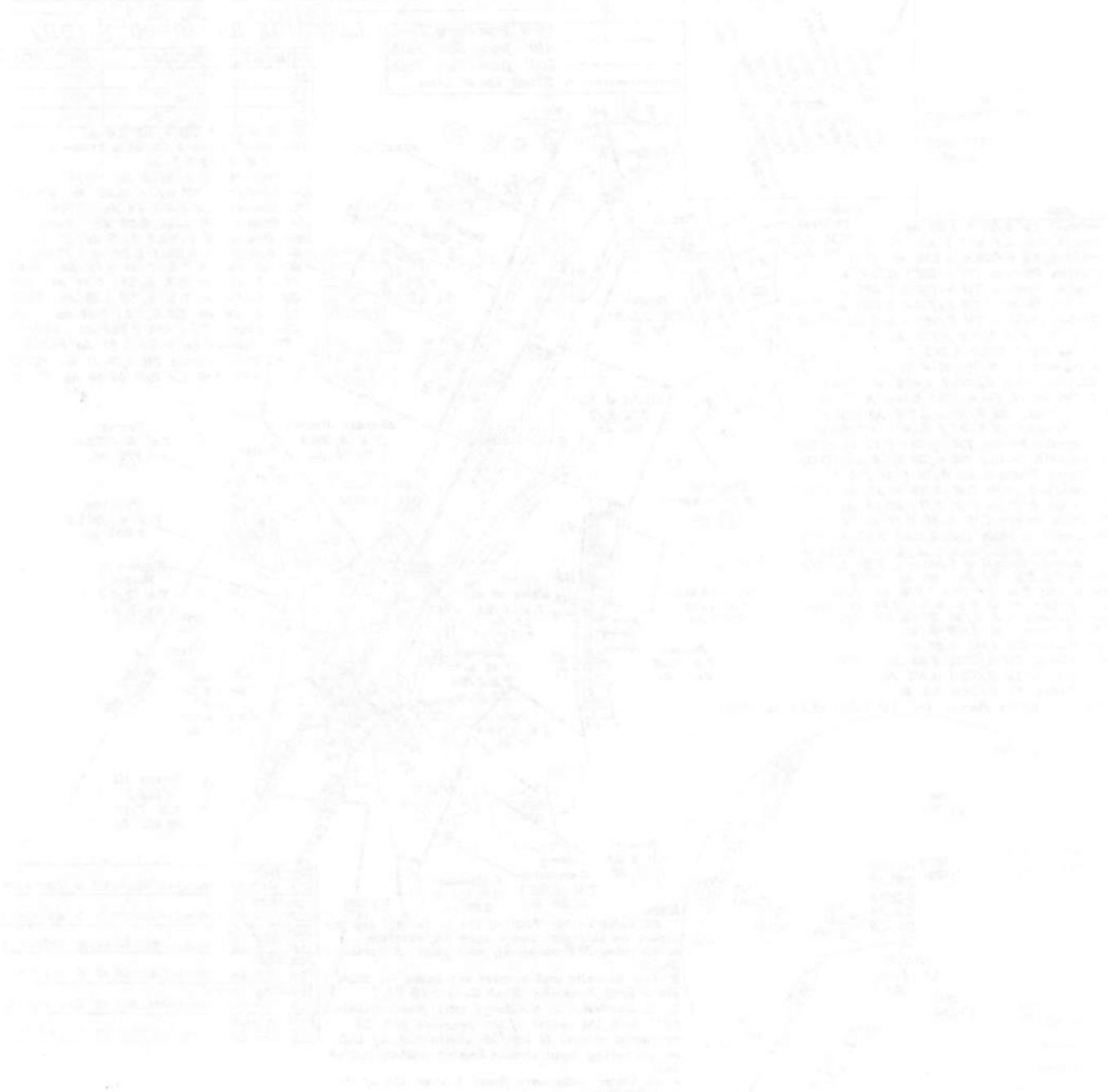
\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water  
 \*\* Information is based on the maximum potential for concentration and thus the total may be over 100%  
 \*\*\* If you are calculating a percentage of total ingredients do 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)









THE UNDERSIGNED HEREBY CERTIFY THAT THE ABOVE IS A CORRECT COPY OF THE ORIGINAL SURVEY AND MAP AS FILED IN THE OFFICE OF THE REGISTER OF DEEDS AND MAPS IN THE CITY AND COUNTY OF DENVER, COLORADO, ON THIS 15th DAY OF MARCH, 1908.

WITNESSED MY HAND AND SEAL OF OFFICE AT DENVER, COLORADO, THIS 15th DAY OF MARCH, 1908.

*[Signature]*

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 DENVER, COLORADO

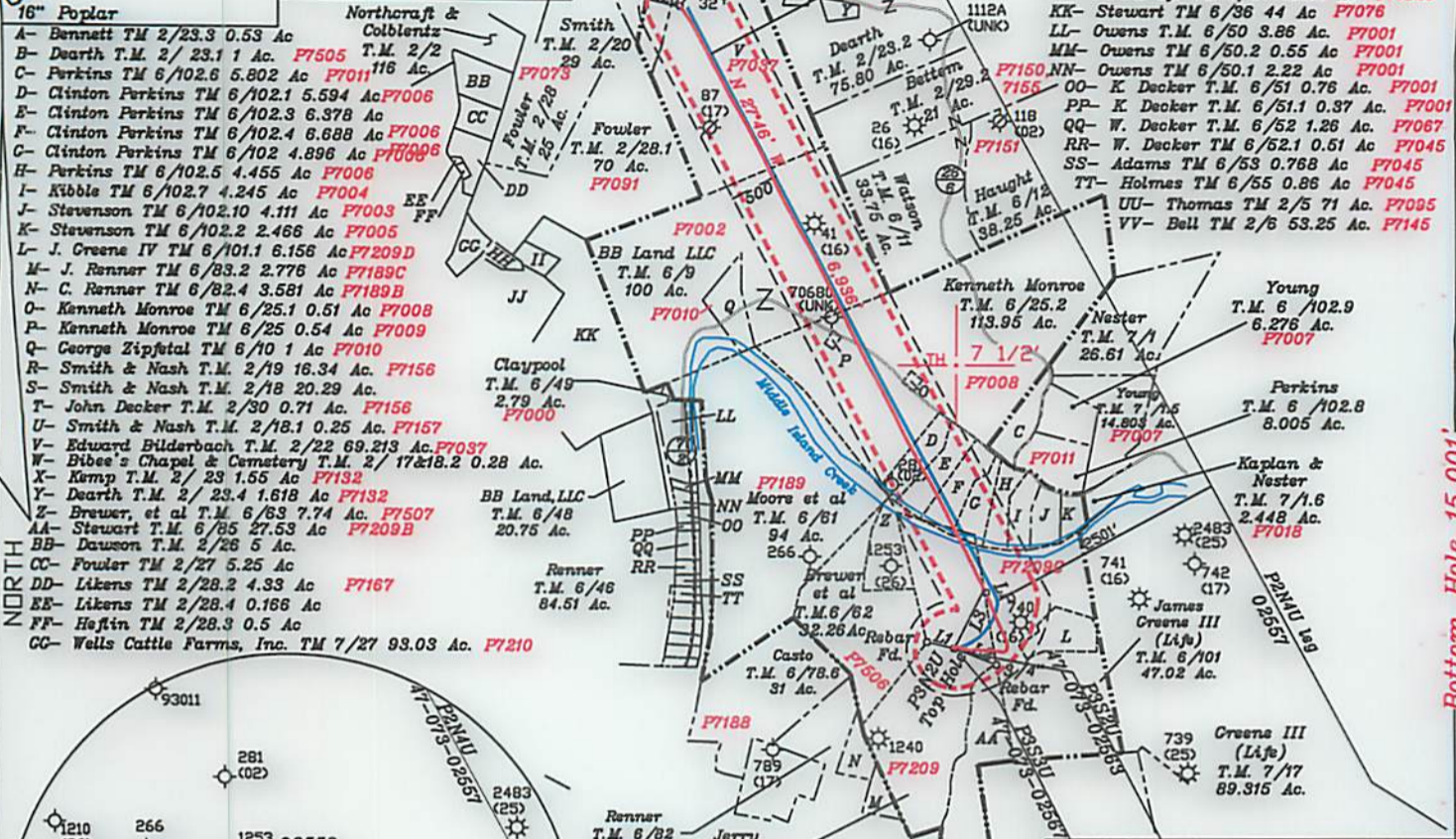


References:



Unit Boundary Line  
410' from Bore Path  
500' from Bore Path  
Final Lease Line

NUMBER	DIRECTION	DISTANCE
L1	S77°10'E	286'
L2	N68°32'W	480'
L3	N29°36'E	664'



- Notes:
- All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats, & aerial photos.
  - Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 83.
  - No dwellings or buildings were found within 625' from the center of the proposed pad. No perennial stream is located within 100' of LOD. No producing trout stream located within 300' of LOD.
  - No water wells were found within 250' of the well location.

- CC- Northcraft TM 6/22 2.5 Ac
- HH- Point Lookout Cemetery Trustees T.M. 6/23 0.5 Ac
- II- Stewart TM 6/35 2 Ac P7183
- JJ- Northcraft TM 6/24 16.55 Ac P7182C
- KK- Stewart TM 6/36 44 Ac P7076
- LL- Owens T.M. 6/50 3.86 Ac P7001
- MM- Owens TM 6/50.2 0.55 Ac P7001
- NN- Owens TM 6/50.1 2.22 Ac P7001
- OO- K Decker T.M. 6/51 0.76 Ac P7001
- PP- K Decker T.M. 6/51.1 0.37 Ac P7001
- QQ- W. Decker T.M. 6/52 1.26 Ac P7067
- RR- W. Decker TM 6/52.1 0.51 Ac P7045
- SS- Adams TM 6/53 0.768 Ac P7045
- TT- Holmes TM 6/55 0.86 Ac P7045
- UU- Thomas TM 2/5 71 Ac P7095
- VV- Bell TM 2/6 53.25 Ac P7145
- Young T.M. 6/102.9 6.276 Ac P7007
- Perkins T.M. 6/102.8 8.005 Ac
- Kaplan & Nester T.M. 7/1.6 2.448 Ac P7018
- James Greens III (Life) T.M. 6/101 47.02 Ac
- Greens III (Life) T.M. 7/17 89.315 Ac

Location	UTM NAD 83 (Meters)	Coordinates
Top Hole	UTM NAD 83 (Meters)	-4365665.63 N, 494762.07 E
Landing Point	UTM NAD 83 (Meters)	-4365820.26 N, 494896.91 E
Bottom Hole	UTM NAD 83 (Meters)	-4367703.97 N, 493859.77 E
Top Hole	UTM NAD 83 (Meters)	-4365665.57 N, 494762.16 E
Landing Point	UTM NAD 83 (Meters)	-4365843.25 N, 494859.23 E
Bottom Hole	UTM NAD 83 (Meters)	-4367696.42 N, 493843.50 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 February 20, 2019  
 OPERATOR'S WELL NO. P3N2U  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL X GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF 'GAS') PRODUCTION X STORAGE \_\_\_\_\_ DEEP X SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 839.2' WATER SHED Middle Island Creek  
 DISTRICT Union COUNTY Pleasants  
 QUADRANGLE Bens Run 7 1/2'

SURFACE OWNER Jerry Lee Summers ACREAGE 56.99  
 OIL & GAS ROYALTY OWNER Jerry Lee Summers LEASE ACREAGE 56.99  
 LEASE NO. P7209

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 Point Pleasant ESTIMATED DEPTH TVD = 10,045.8'; TMD = 17,537.0'  
 WELL OPERATOR Jay-Bee Oil & Gas, Inc. DESIGNATED AGENT Randy Broda  
 ADDRESS 1720 Route 22 E, Union, NJ 07083 ADDRESS 3570 Shields Hill Rd., Cairo, WV 26337

LONGITUDE 81-02-30 W Top Hole Bottom Hole 15,001'



