

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

API 47-073-02565 County Pleasants District Union
Quad Ben's Run 7.5' Pad Name P2 Field/Pool Name _____
Farm name Morgan Valley Farms Well Number P2N2U
Operator (as registered with the OOG) Jay-Bee Oil & Gas, Inc.
Address 3570 Shields Hill Rd. City Cairo State WV Zip 26337

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,365,101.98 Easting 496,340.50
Landing Point of Curve Northing 4,365,488.37 Easting 496,506.29
Bottom Hole Northing 4,367,951.00 Easting 495,175.44

Elevation (ft) 712.4' 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 6-15-2017 Date drilling commenced 7/16/2017 Date drilling ceased 8/17/2017
Date completion activities began 11/19/2017 Date completion activities ceased 1/21/2018
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A RECEIVED
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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

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Freshwater depth(s) ft 150' 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

Reviewed by:

JEB
5/29/2021

API 47-073 - 02565

Farm name Morgan Valley Farms

Well number P2N2U

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	J55 - 85#		Y
Surface	22"	18 5/8"	401'	New	J55 - 94#	50'	Y
Coal							
Intermediate 1	17 1/2"	13 3/8"	1884'	New	J55 - 61#	1500'	Y
Intermediate 2	12 1/4"	9 5/8"	9307'	New	P110 - 47#		
Intermediate 3							
Production	8 1/2"	5 1/2"	19903'	New	P110 - 23#		Y
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							
Surface	Class A	374	15.6	1.20	449	CTS	8
Coal							
Intermediate 1	Class A	Lead 1051/ Tail 342	Lead 15/ Tail 15.5	Lead 1.30/ Tail 1.19	Lead 1366/ Tail 407	CTS	8
Intermediate 2	Class A	Lead 1279/ Tail 468	Lead 12.5/ Tail 15.0	Lead 2.32/ Tail 1.34	Lead 2967/ Tail 627		
Intermediate 3							
Production	Class A	3901	15.6	1.18	4603	CTS	8
Tubing							

Drillers TD (ft) 19,906'

Loggers TD (ft) 19,882'

Deepest formation penetrated Pt. Pleasant

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 9,425'

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'.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

11/12/2021

API 47- 073 - 02565

Farm name Morgan Valley Farms

Well number P2N2U

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	11/20/17	19813	19710	97	Pt. Pleasant
2	11/21/17	19675	19512	84	Pt. Pleasant
3	11/22/17	19477	19304	84	Pt. Pleasant
4	11/22/17	19269	19126	84	Pt. Pleasant
5	11/22/17	19091	18925	84	Pt. Pleasant
6	11/26/17	18890	18716	84	Pt. Pleasant
7	11/27/17	18683	18530	84	Pt. Pleasant
8	11/27/17	18495	18344	84	Pt. Pleasant
9	11/27/17	18309	18126	84	Pt. Pleasant
10	11/28/17	18091	17948	84	Pt. Pleasant
11	11/28/17	17913	17756	84	Pt. Pleasant
12	11/30/17	17721	17574	84	Pt. Pleasant
13	11/30/17	17539	17369	84	Pt. Pleasant
14	12/1/17	17334	17178	84	Pt. Pleasant
15	12/1/17	17136	16983	84	Pt. Pleasant
16	1/4/18	16940	16800	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	11/20/17	75	10270	11103	6324	303380	10439	N/A
2	11/21/17	70	10594	11174	6683	322060	8142	N/A
3	11/22/17	71	10611	11922	6344	323140	7885	N/A
4	11/22/17	72	10791	11329	6775	305630	6893	N/A
5	11/22/17	75	10685	11116	6760	310450	6589	N/A
6	11/26/17	72	10390	11644	3806	347000	8287	N/A
7	11/27/17	77	10878	11646	6761	351760	8247	N/A
8	11/27/17	66	10903	11280	6976	355220	8210	N/A
9	11/27/17	73	10930	11984	6589	347960	9791	N/A
10	11/28/17	69	10812	11077	6846	348740	8035	N/A
11	11/28/17	62	10825	11417	6737	352900	8112	N/A
12	11/30/17	55	10881	12124	6951	348460	8235	N/A
13	11/30/17	71	10730	11505	6766	348850	10246	N/A
14	12/1/17	67	10659	11412	6840	353350	7929	N/A
15	12/1/17	70	10838	11465	6226	229860	6684	N/A
16	1/4/18	52	10359	11983	7006	271780	9009	N/A

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Please insert additional pages as applicable.

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Well number P2N2U

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	1/5/18	16748	16579	84	Pt. Pleasant
18	1/6/18	16526	16414	84	Pt. Pleasant
19	1/6/18	16372	16232	84	Pt. Pleasant
20	1/7/18	16179	16011	84	Pt. Pleasant
21	1/7/18	15960	15806	84	Pt. Pleasant
22	1/9/18	15765	15619	84	Pt. Pleasant
23	1/10/18	15580	15459	84	Pt. Pleasant
24	1/10/18	15422	15238	84	Pt. Pleasant
25	1/10/18	15198	15035	84	Pt. Pleasant
26	1/11/18	14978	14830	84	Pt. Pleasant
27	1/11/18	14786	14830	84	Pt. Pleasant
28	1/11/18	14606	14490	84	Pt. Pleasant
29	1/11/18	14444	14296	84	Pt. Pleasant
30	1/15/18	14233	14095	84	Pt. Pleasant
31	1/16/18	14040	13886	84	Pt. Pleasant
32	1/16/18	13840	13698	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	1/5/18	73	9983	11990	6623	352620	8330	N/A
18	1/6/18	70	10476	11590	6812	355800	7985	N/A
19	1/6/18	71	10294	11258	6849	335600	7955	N/A
20	1/7/18	71	10502	11525	6632	362160	8126	N/A
21	1/7/18	74	10734	11289	7787	336080	7760	N/A
22	1/9/18	74	10764	11879	6969	366380	8143	N/A
23	1/10/18	77	10844	12063	7122	351240	7732	N/A
24	1/10/18	75	10805	11145	7466	356340	7780	N/A
25	1/10/18	78	10980	11611	6901	356040	8033	N/A
26	1/11/18	78	10881	11812	6972	350620	8009	N/A
27	1/11/18	72	10617	11150	6854	355000	7810	N/A
28	1/11/18	73	10745	11785	7014	328880	8868	N/A
29	1/11/18	75	11038	12133	7153	367200	10361	N/A
30	1/15/18	75	11028	12275	7386	345680	7698	N/A
31	1/16/18	79	10852	11085	7510	318820	7442	N/A
32	1/16/18	73	11154	12375	7320	331390	7656	N/A

Please insert additional pages as applicable.

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API 47- 073 . 02565

Farm name Morgan Valley Farms

Well number P2N2U

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
33	1/17/18	13652	13513	84	Pt. Pleasant
34	1/17/18	13460	13322	84	Pt. Pleasant
35	1/18/18	13276	13124	84	Pt. Pleasant
36	1/18/18	13081	12928	84	Pt. Pleasant
37	1/19/18	12889	12726	84	Pt. Pleasant
38	1/19/18	12686	12532	84	Pt. Pleasant
39	1/19/18	12484	12367	84	Pt. Pleasant
40	1/19/18	12322	12144	84	Pt. Pleasant
41	1/19/18	12104	11967	84	Pt. Pleasant
42	1/20/18	11928	11778	84	Pt. Pleasant
43	1/20/18	11742	11574	84	Pt. Pleasant
44	1/20/18	11536	11380	84	Pt. Pleasant
45	1/21/18	11344	11188	84	Pt. Pleasant
46	1/21/18	11140	10990	84	Pt. Pleasant
47	1/21/18	10944	10832	84	Pt. Pleasant
48	1/21/18	10796	10611	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)
33	1/17/18	77	10774	11216	7945	340640	7470	N/A
34	1/17/18	80	10492	9267	8580	357980	8072	N/A
35	1/18/18	79	9926	9544	8066	343840	7613	N/A
36	1/18/18	80	10007	9207	7019	353760	7825	N/A
37	1/19/18	80	9590	9619	7250	352180	7815	N/A
38	1/19/18	80	9384	8745	7029	355540	7688	N/A
39	1/19/18	80	9728	9522	7029	346440	7590	N/A
40	1/19/18	80	9619	9529	7505	358360	7945	N/A
41	1/19/18	80	9787	9074	7098	360320	7993	N/A
42	1/20/18	80	9618	9398	7236	358680	7602	N/A
43	1/20/18	80	9714	9215	6913	353380	7382	N/A
44	1/20/18	80	9982	9114	7161	358900	9782	N/A
45	1/21/18	78	9681	9289	6935	359720	8084	N/A
46	1/21/18	80	9896	9183	7053	359380	8129	N/A
47	1/21/18	78	10137	10252	7302	355660	7725	N/A
48	1/21/18	80	9835	10058	6994	359710	7868	N/A

Please insert additional pages as applicable.

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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Company Name: Jay-Bee Oil & Gas, Inc.
API No: 47-073-02565 County: Pleasants
District: Union Well No: P2N2U
Farm Name: Morgan Valley Farms
Discharge Date/s From: (MMDDYY) _____ To: (MMDDYY) _____
Discharge Times. From: _____ To: _____
Total Volume to be Disposed from this facility (gallons): NO DISCHARGE
Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: _____ (Include a topographical map of the Area.)
- (2) UIC: _____ Permit No. _____
- (3) Offsite Disposal: _____ Site Location: _____
- (4) Reuse: _____ Alternate Permit Number: _____
- (5) Centralized Facility: _____ Permit No. _____
- (6) Other method: _____ (Include an explanation)

Follow Instructions below to determine your treatment category:

Optional Pretreatment test: n/a Cl- mg/l n/a DO mg/l

1. Do you have permission to use expedited treatment from the Director or his representative?
(Y/N) N If yes, who? n/a and place a four (4) on line 7.
If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) N If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) n/a If yes, go to line 4
If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) n/a If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) n/a If yes, go to line 6
If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l? (Y/N) n/a If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. n/a is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: n/a

Name of Principal Exec. Officer: Shane Dowell

Title of Officer: Office Manager

Date Completed: 6-5-2018

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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of a Principal Exec. Officer or Authorized agent.

11/12/2021

Lithology

P2N2U 47-073-02565

FORMATION	TOP	BOTTOM
MISC. RED ROCK & SHALES	0	1734
LIME	1734	1834
INJUN	1834	1951
SHALE	1951	2298
GORDON STRAY	2298	2318
SHALE	2318	2514
GORDON	2514	2544
SHALE	2544	2823
BAYARD	2823	2832
SHALE	2832	3161
WARREN	3161	3259
SHALE	3259	3495
BALLTOWN	3495	3658
SHALE	3658	4096
2ND RILEY	4096	4204
SHALE	4204	4355
3RD RILEY	4355	4396
SHALE	4396	4453
BENSON	4453	4456
SHALE	4456	4698
ALEXANDER	4698	4869
SHALE	4869	5114
ELK	5114	5162
SHALE	5162	5344
HAMILTON	5344	5518
SHALE	5518	5616
UPPER MARCELLUS	5616	5635
PARCELL LIME	5635	5670
SHALE	5670	5723
LOWER MARCELLUS	5723	5778
ONONDAGA	5778	5875
HUNTERSVILLE CHERT	5875	5972
ORISKANY	5972	6010

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HELDERBERG	6010	6442
BASS ISLAND	6442	6495
SALINA	6495	7431
LOCKPORT	7431	7719
ROSE HILL	7719	8008
PACKER SHELL	8008	8096
CLINTON	8096	8305
QUEENSTON	8305	9106
REEDSVILLE	9106	10079
UTICA	10079	10227
POINT PLEASANT	10227	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/19/2017
Job End Date:	1/21/2018
State:	West Virginia
County:	Pleasants
API Number:	47-073-02565-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	P2N2U
Latitude:	39.43545300
Longitude:	-81.04252340
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	10,251
Total Base Water Volume (gal):	16,907,120
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	JayBee Oil & Gas	Carrier/Base Fluid	Water	7732-18-5	100.00000	89.00275	
Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	10.37119	
HCL Acid (12.6%-17.5%)	J.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.40000	0.33783	
			Hydrogen Chloride	7647-01-0	17.50000	0.07855	
HCL Acid (3% to 7.5%)	J.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	97.00000	0.06632	
			Hydrogen Chloride	7647-01-0	7.50000	0.00595	
	J.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03188	
			Petroleum Distillates	64742-47-8	60.00000	0.03020	
			Suspending agent (solid)	14808-60-7	3.00000	0.00488	
			Surfactant	68439-51-0	3.00000	0.00191	

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WFRA-405	U.S. Well Services, LLC	Friction Reducer	2-Propenoic acid, polymer with 2-propenamide Hydrated light distillate (petroleum)	29003-06-9 64742-47-8	30.00000 30.00000	0.01555 0.01252
WFRA-1000	U.S. Well Services, LLC	Friction Reducer	2-Propenoic acid, polymer with 2-propenamide Hydrated light distillate (petroleum)	29003-06-9 64742-47-8	30.00000 30.00000	0.00967 0.00793
SI-1200	U.S. Well Services, LLC	Scale Inhibitor	Ethylene Glycol Proprietary Scale Inhibitor	107-21-1 Proprietary	40.00000 10.00000	0.01208 0.00323
Bioclear 5000	U.S. Well Services, LLC	Anti-Bacterial Agent	2,2-Dibromo-3-nitropropionamide	10222-01-2	10.00000	0.00506
AP One	U.S. Well Services, LLC	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00000	0.00132
NWA-200s	U.S. Well Services, LLC	Surfactants & Foamers	Proprietary Activating Agent	Proprietary	50.00000	0.00092
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors	Ethylene glycol Cinnamaldehyde Formic acid Butyl cellosolve Polyether Acetophenone, thiourea, formaldehyde polymer	107-21-1 104-55-2 64-18-6 111-76-2 60828-78-6 68527-49-1	40.00000 20.00000 20.00000 20.00000 10.00000 5.00000	0.00012 0.00004 0.00004 0.00004 0.00002 0.00001

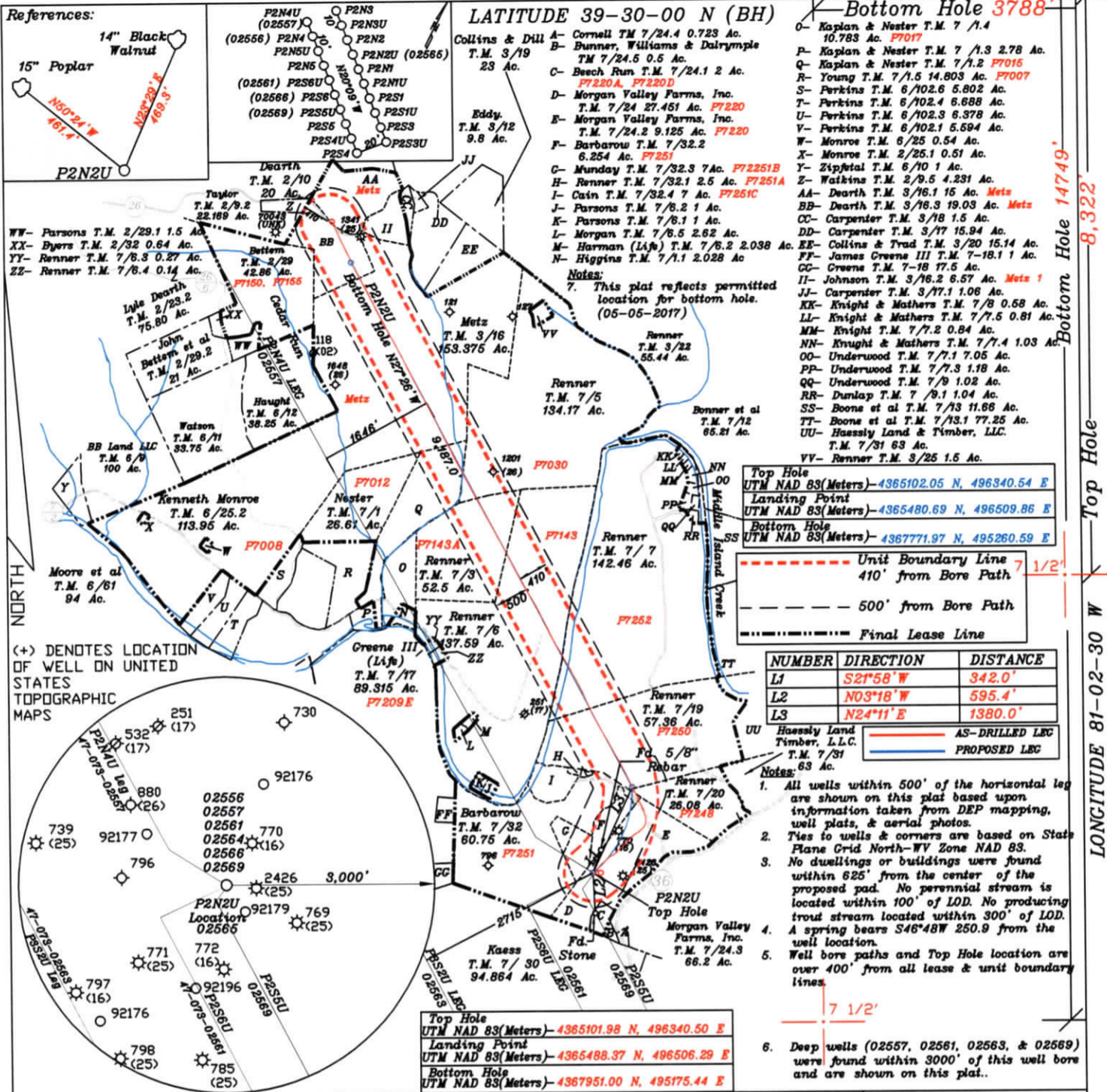
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

- * 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%

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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11/12/2021



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 March 30, 2018
OPERATOR'S WELL NO. P2N2U
API WELL NO. _____

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS") PRODUCTION STORAGE _____ DEEP SHALLOW _____

LOCATION: ELEVATION 712.4' WATER SHED Middle Island Creek
DISTRICT Union COUNTY Pleasants
QUADRANGLE Bens Run 7 1/2'

SURFACE OWNER Morgan Valley Farms, Inc. ACREAGE 27.451
OIL & GAS ROYALTY OWNER Morgan Valley Farms, Inc. LEASE ACREAGE 102.777
LEASE NO. P7220

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

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
TARGET FORMATION Point Pleasant ESTIMATED DEPTH TVD = 10,251' TMD = 19,882'
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

Office of Oil and Gas
47 - 073 - 02565
STATE COUNTY PERMIT
MAY 13 2019
WV Department of Environmental Protection

11/12/2021

Company Name: Jay-Bee Oil & Gas
 P2N2U
 Pleasants County
 Rig: Nomac #81
 Created By: Will Jircik
 Date: 8/14/2017

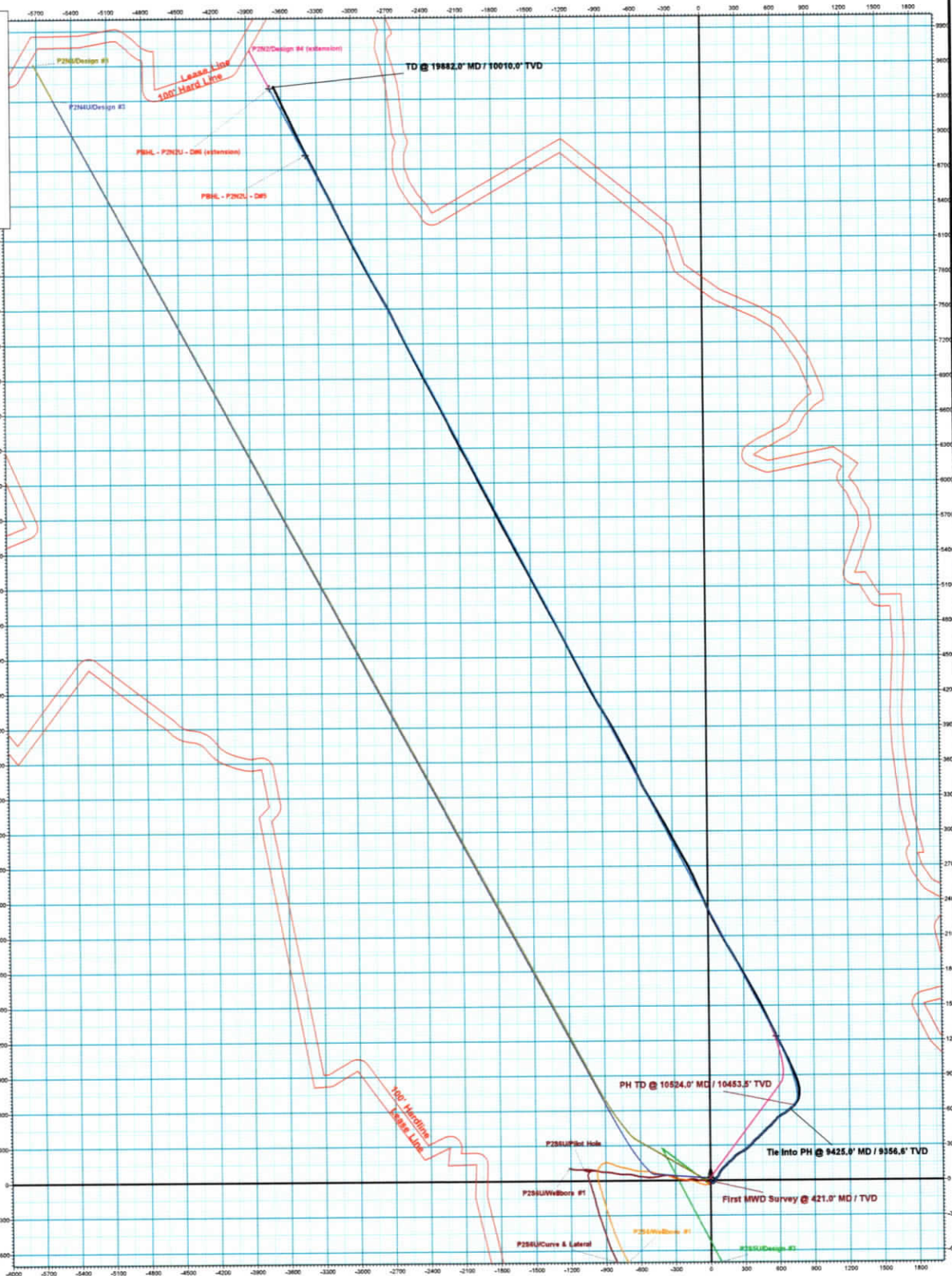
P2N2U
 Pleasants County
 Q170911 & AM-170772
 Design #6 (extended BHL)

PROJECT DETAILS: Pleasants County
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: West Virginia Northern Zone
 System Datum: Mean Sea Level

WELL DETAILS: P2N2U
 Ground Level: 712.2
 Easting: 163268.14
 Northing: 344458.30
 Latitude: 39° 26' 7.634 N
 Longitude: 81° 2' 33.083 W



Azimuths to Grid North
 True North: 0.98
 Magnetic North: -7.40
 Magnetic Field
 Strength: 52028.2snT
 Dip Angle: 66.72
 Date: 7/13/2017
 Model: IGRF2015



DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
P2N2U - DM6 (extension)	10156.5	3398.5	-3700.7	353897.75	1629148.41	39° 27' 39.892 N	81° 3' 22.320 W
PH - P2N2U - DM6	10163.3	8820.6	-3397.5	353278.87	1628481.81	39° 27' 34.223 N	81° 3' 18.327 W
LP - P2N2U - DM6	10253.0	1233.3	576.4	345691.56	1533425.52	39° 26' 19.919 N	81° 2' 25.007 W

Design #6 (Extended BHL)

MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation
9628.0	6.90	64.30	9450.7	616.1	702.5	315.9	0.0	Last MWD Survey
9636.0	6.56	64.06	9488.6	617.3	704.2	319.4	2.1	3' Whipstock 12" (28 DLS, -46.78' TFO)
9650.0	7.38	30.90	9480.5	818.4	705.2	317.0	3.8	Build 10' / 100'
9616.1	14.09	36.12	9547.4	626.9	713.3	324.2	16.2	EOB @ 14.09' Inc. / 36.12' Azm
9631.6	14.09	36.12	9754.6	670.9	742.9	352.0	68.2	Build 10' / 100'
10676.7	90.60	332.36	10253.0	1233.3	576.4	926.4	668.9	EOB @ 90.6' Inc. / 332.36' Azm / 10253' TVD
10994.7	90.60	332.36	10156.5	9398.5	-3700.7	10101.7	9885.4	TD @ 19882' MD / 10010' TVD

PH Annotations

MD	Inc	Azi	TVD	+N-S	+E-W	VSecDeparture	Annotation
421.0	1.78	141.04	420.9	-5.1	4.1	-6.2	6.5
10524.0	1.30	320.80	10453.5	645.2	720.1	343.1	1029.7

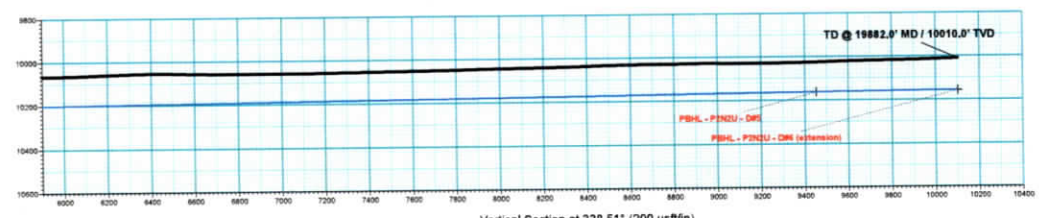
Curve & Lateral Annotations

MD	Inc	Azi	TVD	+N-S	+E-W	VSecDeparture	Annotation
9425.0	8.40	55.00	9356.8	608.8	692.2	319.2	978.3
19882.0	92.00	335.50	10010.0	9412.9	-3667.0	10101.9	10888.7

Office of Oil and Gas
 MAY 13 2019
 WV Department of Environmental Protection

11/12/2021

Vertical Section at 338.51' (200 usft/in)



Vertical Section at 338.51' (200 usft/in)