

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

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JUN 15 2018

WV Department of  
Environmental Protection

API 47 - 073 - 02564 County Pleasants District Union  
Quad Ben's Run 7.5' Pad Name P2 Field/Pool Name \_\_\_\_\_  
Farm name Morgan Valley Farms Well Number P2N2  
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 4,365,104.89 Easting 496,339.38  
Landing Point of Curve Northing 4,365,542.32 Easting 496,467.42  
Bottom Hole Northing 4,367,622.14 Easting 495,333.97

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 3/9/2017 Date drilling commenced 4/23/2017 Date drilling ceased 8/24/2017  
Date completion activities began 10/28/2017 Date completion activities ceased 11/17/2017  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 150' Open mine(s) (Y/N) depths N  
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  
[Signature] 8/21/2018

Reviewed by:  
[Signature]

API 47- 073 - 02564 Farm name Morgan Valley Farms Well number P2N2

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	22"	20"	30'	New	J55 - 96#		Y
Surface	17.5"	13 3/8"	422'	New	J55 - 48#	50'	Y
Coal							
Intermediate 1	11"	8 5/8"	1,858'	New	J55 - 24#	500/1500'	Y
Intermediate 2							
Intermediate 3							
Production	7 7/8"	5 1/2"	14,027.79'	New	P110 - 20#		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	335	15.6	1.20	402	CTS	8
Coal							
Intermediate 1	Class A	539	15.2	1.26	679	CTS	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead 1,311 / Tail 701	Lead 14.5 / Tail 15.6	Lead 1.17 / Tail 1.18	Lead 1534 / Tail 827	2,553'	8
Tubing							

Drillers TD (ft) 14,050' Loggers TD (ft) 14,050'  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 2,222'

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature

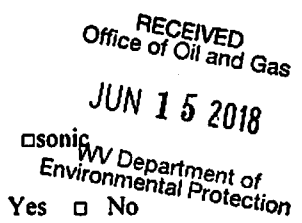
Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

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 \_\_\_\_\_



API 47- 073 - 02564 Farm name Morgan Valley Farms Well number P2N2

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	10/28/17	13834	13961	32	Marcellus
2	11/1/17	13596	13794	40	Marcellus
3	11/1/17	13412	13558	40	Marcellus
4	11/2/17	13216	13373	40	Marcellus
5	11/3/17	13013	13173	40	Marcellus
6	11/3/17	12800	12968	40	Marcellus
7	11/4/17	12614	12762	40	Marcellus
8	11/6/17	12413	12573	40	Marcellus
9	11/8/17	12119	12364	40	Marcellus
10	11/8/17	12028	12161	40	Marcellus
11	11/8/17	11816	11969	40	Marcellus
12	11/9/17	11614	11769	40	Marcellus
13	11/9/17	11424	11562	40	Marcellus
14	11/9/17	11231	11380	40	Marcellus
15	11/10/17	11027	11192	40	Marcellus
16	11/10/17	10836	10981	40	Marcellus

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

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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 Emulsifier (other) (units)
1	10/28/17	77	8312		8841	96580	5750	N/A
2	11/1/17	56	8936	5537	5831	28500	6095	N/A
3	11/1/17	75	6864		2649	197400	7222	N/A
4	11/2/17	51	8977	6112	6100	10160	7059	N/A
5	11/3/17	41	8905	6475	3605	13000	7085	N/A
6	11/3/17	54	8730	6001	5043	11080	6065	N/A
7	11/4/17	52	7754	6779	3719	183640	10030	N/A
8	11/6/17	65	6550	6715	3674	178900	7517	N/A
9	11/8/17	65	6453	6281	3732	189400	7214	N/A
10	11/8/17	65	6190	6049	3699	184940	7330	N/A
11	11/8/17	65	6243	6329	3713	183200	6888	N/A
12	11/9/17	69	6373	7574	4388	190900	7104	N/A
13	11/9/17	65	6055	6168	3713	191200	7191	N/A
14	11/9/17	65	6222	6583	4023	180500	7006	N/A
15	11/10/17	68	6315	5983	4167	180100	6870	N/A
16	11/10/17	65	6427	6007	4585	196330	7335	N/A

Please insert additional pages as applicable.

API 47- 073 - 02564 Farm name Morgan Valley Farms Well number P2N2

**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	11/10/17	10630	10789	40	Marcellus
18	11/11/17	10421	10586	40	Marcellus
19	11/11/17	10221	10371	40	Marcellus
20	11/11/17	10025	10181	40	Marcellus
21	11/12/17	9840	9980	40	Marcellus
22	11/12/17	9601	9789	40	Marcellus
23	11/13/17	9426	9562	40	Marcellus
24	11/13/17	9241	9380	40	Marcellus
25	11/13/17	9052	9201	40	Marcellus
26	11/13/17	8853	9012	40	Marcellus
27	11/13/17	8652	8796	40	Marcellus
28	11/14/17	8452	8614	40	Marcellus
29	11/14/17	8265	8412	40	Marcellus
30	11/14/17	8056	8228	40	Marcellus
31	11/14/17	7868	8002	40	Marcellus
32	11/15/17	7635	7812	40	Marcellus

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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	11/10/17	68	6357	6142	3945	180160	6900	N/A
18	11/11/17	66	6490	5614	3042	188680	7821	N/A
19	11/11/17	67	6336	5883	4031	188680	7404	N/A
20	11/11/17	68	6264	6279	3554	183940	6731	N/A
21	11/12/17	70	6088	6378	4224	186720	6497	N/A
22	11/12/17	69	6327	6237	3694	182760	6560	N/A
23	11/13/17	70	5897	5825	3840	186940	6629	N/A
24	11/13/17	70	6082	6190	3998	185610	6356	N/A
25	11/13/17	70	6058	5937	4641	184910	6444	N/A
26	11/13/17	70	5991	5474	3879	191540	6452	N/A
27	11/13/17	70	6023	5460	3856	186120	6497	N/A
28	11/14/17	70	6058	5435	3086	181890	6346	N/A
29	11/14/17	70	6250	6036	3585	184360	6197	N/A
30	11/14/17	70	5974	5988	3645	170240	5682	N/A
31	11/14/17	70	6159	6544	3672	184940	6105	N/A
32	11/15/17	70	5902	7106	4291	184840	6072	N/A

Please insert additional pages as applicable.



API 47- 073 - 02564 Farm name Morgan Valley Farms Well number P2N2

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>5,735'</u> TVD	<u>14,050'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1796 psi Bottom Hole N/A psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 8325 mcfpd Oil \_\_\_\_\_ bpd NGL 50 bpd Water 100 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
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See Attached.	0		0		

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Please insert additional pages as applicable.

Drilling Contractor Patterson-UTI Energy Inc  
Address 10713 West Sam Houston Parkway North Suite 800 City Houston State TX Zip 77064

Logging Company StrataGraph NE Inc.  
Address 116 Ellsworth Ave City Marietta State OH Zip 45750

Cementing Company BJ Services  
Address 1036 E Main St City Bridgeport State WV Zip 26330

Stimulating Company US Well Services  
Address 533 Industrial Park Rd City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Shane Dowell Telephone 304-628-3111  
Signature  Title Office Manager Date 6-5-2018

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

**Lithology**

P2N2

47-073-02564

<b>FORMATION</b>	<b>TOP</b>	<b>BOTTOM</b>
MISC. RED ROCK & SHALES	0	1708
LIME	1708	1808
INJUN	1808	1925
SHALE	1925	2272
GORDON STRAY	2272	2292
SHALE	2292	2488
GORDON	2488	2518
SHALE	2518	2797
BAYARD	2797	2806
SHALE	2806	3135
WARREN	3135	3233
SHALE	3233	3469
BALLTOWN	3469	3632
SHALE	3632	4070
2ND RILEY	4070	4178
SHALE	4178	4329
3RD RILEY	4329	4370
SHALE	4370	4427
BENSON	4427	4430
SHALE	4430	4672
ALEXANDER	4672	4843
SHALE	4843	5088
ELK	5088	5136
SHALE	5136	5344
HAMILTON	5344	5518
SHALE	5518	5616
UPPER MARCELLUS	5616	5635
PARCELL LIME	5635	5670
SHALE	5670	5723
LOWER MARCELLUS	5723	

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/28/2017
Job End Date:	11/17/2017
State:	West Virginia
County:	Pleasants
API Number:	47-073-02564-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	P2N2
Latitude:	39.43531389
Longitude:	-81.04193056
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,735
Total Base Water Volume (gal):	11,307,158
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	92.39422	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	6.36525	
HCL Acid (3% to 7.5%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	97.00000	0.88130	
			Hydrogen Chloride	7647-01-0	7.50000	0.07912	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.40000	0.08918	
			Hydrogen Chloride	7647-01-0	17.50000	0.02074	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03082	
			Petroleum Distillates	64742-47-8	60.00000	0.02919	
			Suspending agent (solid)	14808-60-7	3.00000	0.00471	
			Surfactant	68439-51-0	3.00000	0.00185	

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WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.01893	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01523	
HCL Acid (22.6%-28%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	77.40000	0.02211	
			Hydrogen Chloride	7647-01-0	28.00000	0.00929	
SI-1200	U.S. Well Services, LLC	Scale Inhibitor					
			Ethylene Glycol	107-21-1	40.00000	0.01232	
			Proprietary Scale Inhibitor	Proprietary	10.00000	0.00330	
WFRA-1000	U.S. Well Services, LLC	Friction Reducer					
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.00475	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.00390	
NWA-200s	U.S. Well Services, LLC	Surfactants & Foamers					
			Proprietary Activating Agent	Proprietary	50.00000	0.00639	
Bioclear 5000	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-Dibromo-3-nitripropionamide	10222-01-2	10.00000	0.00540	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00159	
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Ethylene glycol	107-21-1	40.00000	0.00017	
			Cinnamaldehyde	104-55-2	20.00000	0.00006	
			Formic acid	64-18-6	20.00000	0.00006	
			Butyl cellosolve	111-76-2	20.00000	0.00005	
			Polyether	60828-78-6	10.00000	0.00003	
			Acetophenone, thiourea, formaldehyde polymer	68527-49-1	5.00000	0.00002	

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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# Jay-Bee Oil & Gas

Pleasants County

P2 Pad

P2N2

Wellbore #1

Design: Wellbore #1

## QES Survey Report

30 August, 2017

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## Quintana Energy Services

11390 FM 830  
Willis, TX 77318  
Phone: (936) 856-4332  
Fax: (936) 856-8678



### Survey Certification Sheet

Company	Job Number	Date
Jay-Bee Oil & Gas, Inc.	AM-170903	9/6/2017

Lease	Well Name	County & State
N/A	P2N2	Pleasants County, WV

API No.	Survey Depth Range	Survey Type
47-073-02564	520 feet to 14050 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
N/A	Adam Ball

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### Certification Statement

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Quintana Energy Services (QES). This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore coordinates are calculated using minimum curvature.

# Christopher Hughes

Christopher Hughes  
MWD Compliance Manager  
Quintana Energy Services

Digitally signed by Christopher Hughes  
DN: cn=Christopher Hughes, o=QES,  
ou=compliance,  
email=chris@qeslp.com, c=US  
Date: 2017.09.06 22:11:09 -05'00'





Survey Report



<b>Company:</b>	Jay-Bee Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well P2N2
<b>Project:</b>	Pleasants County	<b>TVD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Site:</b>	P2 Pad	<b>MD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Well:</b>	P2N2	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

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<b>Project</b>	Pleasants County		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	West Virginia Northern Zone		

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<b>Site</b>	P2 Pad		
<b>Site Position:</b>		<b>Northing:</b>	344,470.06 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,532,823.36 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	39° 26' 7.746 N
		<b>Longitude:</b>	81° 2' 33.414 W
		<b>Grid Convergence:</b>	-0.98 °

<b>Well</b>	P2N2		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 344,467.68 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 1,532,845.70 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft
		<b>Latitude:</b>	39° 26' 7.726 N
		<b>Longitude:</b>	81° 2' 33.129 W
		<b>Ground Level:</b>	712.2 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	8/14/2017	-8.39	66.71	52,018.01352399

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0		338.29

<b>Survey Program</b>	<b>Date</b>	8/30/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
520.0	14,050.0	MWD Surveys (Wellbore #1)	MWD default	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
<b>First MWD Survey @ 520.0' MD / 520.0' TVD</b>										
520.0	1.10	318.80	520.0	3.8	-3.3	4.7	0.21	0.21	0.00	
615.0	2.84	347.56	614.9	6.7	-4.4	7.9	2.05	1.83	30.27	
710.0	1.73	355.19	709.8	10.5	-5.0	11.6	1.21	-1.17	8.03	
805.0	0.44	121.37	804.8	11.7	-4.8	12.7	2.13	-1.36	132.82	
900.0	0.97	155.42	899.8	10.8	-4.2	11.6	0.69	0.56	35.84	
994.0	0.10	113.29	993.8	10.0	-3.8	10.7	0.96	-0.93	-44.82	
1,089.0	0.19	63.18	1,088.8	10.1	-3.6	10.7	0.16	0.09	-52.75	
1,184.0	0.16	146.34	1,183.8	10.0	-3.3	10.6	0.25	-0.03	87.54	
1,279.0	0.26	135.30	1,278.8	9.8	-3.1	10.2	0.11	0.11	-11.62	



Survey Report



<b>Company:</b>	Jay-Bee Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well P2N2
<b>Project:</b>	Pleasants County	<b>TVD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Site:</b>	P2 Pad	<b>MD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Well:</b>	P2N2	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,373.0	0.12	34.31	1,372.8	9.7	-2.9	10.1	0.33	-0.15	-107.44
1,468.0	0.25	122.70	1,467.8	9.7	-2.7	10.0	0.29	0.14	93.04
1,563.0	0.28	133.39	1,562.8	9.4	-2.3	9.6	0.06	0.03	11.25
1,658.0	0.20	113.50	1,657.8	9.2	-2.0	9.3	0.12	-0.08	-20.94
1,753.0	0.36	94.85	1,752.8	9.1	-1.6	9.0	0.19	0.17	-19.63
1,817.0	0.49	99.02	1,816.8	9.0	-1.1	8.8	0.21	0.20	6.52
1,874.0	0.38	128.02	1,873.8	8.9	-0.7	8.5	0.43	-0.19	50.88
1,938.0	0.25	17.78	1,937.8	8.9	-0.5	8.4	0.82	-0.20	-172.25
2,033.0	0.14	128.71	2,032.8	9.0	-0.4	8.5	0.34	-0.12	116.77
2,127.0	0.29	265.96	2,126.8	8.9	-0.5	8.5	0.43	0.16	146.01
2,222.0	6.11	29.41	2,221.6	13.3	1.7	11.7	6.60	6.13	129.95
2,317.0	10.12	29.32	2,315.7	25.0	8.3	20.1	4.22	4.22	-0.09
2,412.0	13.09	29.28	2,408.7	41.6	17.7	32.2	3.13	3.13	-0.04
2,507.0	16.66	27.19	2,500.5	63.1	29.2	47.9	3.80	3.76	-2.20
2,602.0	16.98	37.10	2,591.5	86.3	43.8	64.0	3.03	0.34	10.43
2,697.0	19.20	41.53	2,681.8	109.1	62.5	78.2	2.75	2.34	4.66
2,791.0	19.52	41.69	2,770.4	132.4	83.2	92.2	0.35	0.34	0.17
2,886.0	20.32	39.11	2,859.8	157.0	104.1	107.4	1.25	0.84	-2.72
2,981.0	19.30	37.52	2,949.1	182.3	124.1	123.5	1.21	-1.07	-1.67
3,076.0	18.98	40.47	3,038.9	206.5	143.7	138.7	1.07	-0.34	3.11
3,171.0	20.29	41.31	3,128.4	230.6	164.6	153.4	1.41	1.38	0.88
3,265.0	21.62	36.46	3,216.2	256.8	185.6	169.9	2.32	1.41	-5.16
3,360.0	20.14	31.33	3,304.9	284.8	204.6	189.0	2.47	-1.56	-5.40
3,455.0	18.10	35.51	3,394.7	310.8	221.6	206.8	2.58	-2.15	4.40
3,550.0	18.72	36.30	3,484.8	335.1	239.2	222.9	0.70	0.65	0.83
3,647.0	17.68	43.20	3,577.0	358.4	258.5	237.4	2.47	-1.07	7.11
3,742.0	18.59	37.54	3,667.3	380.9	277.6	251.2	2.09	0.96	-5.96
3,837.0	19.53	37.62	3,757.0	405.5	296.6	267.1	0.99	0.99	0.08
3,932.0	20.12	38.03	3,846.4	431.0	316.3	283.4	0.64	0.62	0.43
4,027.0	17.99	36.34	3,936.2	455.7	335.1	299.4	2.32	-2.24	-1.78
4,122.0	18.64	37.44	4,026.4	479.5	353.0	314.9	0.77	0.68	1.16
4,217.0	19.86	39.59	4,116.1	504.0	372.5	330.5	1.49	1.28	2.26
4,311.0	21.86	41.02	4,203.9	529.5	394.2	346.2	2.20	2.13	1.52
4,406.0	20.78	36.09	4,292.4	556.5	415.7	363.3	2.20	-1.14	-5.19
4,500.0	22.35	37.19	4,379.8	584.2	436.3	381.4	1.72	1.67	1.17
4,595.0	21.07	38.86	4,468.1	611.9	458.0	399.1	1.50	-1.35	1.76
4,690.0	20.98	39.66	4,556.8	638.3	479.5	415.6	0.32	-0.09	0.84
4,784.0	19.92	34.77	4,644.9	664.4	499.4	432.5	2.14	-1.13	-5.20
4,879.0	19.25	41.03	4,734.4	689.5	518.9	448.7	2.32	-0.71	6.59
4,974.0	20.26	41.20	4,823.8	713.7	540.0	463.3	1.06	1.06	0.18
5,069.0	18.82	36.30	4,913.3	738.4	560.0	478.9	2.30	-1.52	-5.16
5,163.0	18.20	33.70	5,021.4	768.1	580.7	498.8	0.91	-0.54	-2.28
5,277.0	18.70	32.10	5,110.6	793.0	596.9	516.0	0.76	0.53	-1.70





Survey Report



<b>Company:</b>	Jay-Bee Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well P2N2
<b>Project:</b>	Pleasants County	<b>TVD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Site:</b>	P2 Pad	<b>MD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Well:</b>	P2N2	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,324.0	17.40	27.60	5,155.3	805.7	604.1	525.0	4.05	-2.77	-9.57
5,372.0	18.50	16.70	5,200.9	819.3	609.6	535.7	7.35	2.29	-22.71
5,419.0	19.00	13.10	5,245.5	833.9	613.5	547.8	2.68	1.06	-7.66
5,467.0	21.30	10.20	5,290.5	850.1	616.8	561.6	5.22	4.79	-6.04
5,514.0	24.00	8.60	5,333.9	868.0	619.8	577.1	5.89	5.74	-3.40
5,562.0	27.10	7.30	5,377.2	888.5	622.6	595.1	6.56	6.46	-2.71
5,609.0	31.20	1.90	5,418.2	911.3	624.4	615.7	10.36	8.72	-11.49
5,657.0	34.40	355.30	5,458.6	937.2	623.7	640.0	9.99	6.67	-13.75
5,704.0	38.10	349.50	5,496.5	964.7	620.0	667.0	10.73	7.87	-12.34
5,751.0	42.90	346.00	5,532.2	994.5	613.4	697.1	11.30	10.21	-7.45
5,798.0	47.90	343.50	5,565.2	1,026.8	604.6	730.3	11.29	10.64	-5.32
5,846.0	51.90	341.80	5,596.1	1,061.8	593.7	766.9	8.76	8.33	-3.54
5,893.0	55.80	340.10	5,623.9	1,097.7	581.3	804.8	8.80	8.30	-3.62
5,940.0	60.20	338.90	5,648.8	1,135.0	567.3	844.6	9.61	9.36	-2.55
5,987.0	65.80	337.50	5,670.1	1,173.9	551.7	886.5	12.21	11.91	-2.98
6,035.0	69.80	337.10	5,688.2	1,214.9	534.6	930.9	8.37	8.33	-0.83
6,082.0	73.40	336.70	5,703.1	1,255.9	517.1	975.5	7.70	7.66	-0.85
6,130.0	78.20	337.60	5,714.8	1,298.7	499.0	1,022.0	10.16	10.00	1.88
6,177.0	81.20	337.40	5,723.2	1,341.5	481.3	1,068.3	6.40	6.38	-0.43
6,225.0	85.40	336.70	5,728.8	1,385.3	462.7	1,115.9	8.87	8.75	-1.46
6,272.0	88.60	336.60	5,731.3	1,428.4	444.1	1,162.8	6.81	6.81	-0.21
6,319.0	89.80	336.50	5,731.9	1,471.5	425.4	1,209.8	2.56	2.55	-0.21
6,366.0	89.30	336.50	5,732.3	1,514.6	406.7	1,256.8	1.06	-1.06	0.00
6,414.0	89.10	336.40	5,733.0	1,558.6	387.5	1,304.7	0.47	-0.42	-0.21
6,508.0	88.40	335.80	5,735.0	1,644.6	349.5	1,398.6	0.98	-0.74	-0.64
6,603.0	93.10	337.00	5,733.8	1,731.6	311.4	1,493.6	5.11	4.95	1.26
6,697.0	91.90	334.80	5,729.7	1,817.3	273.1	1,587.4	2.66	-1.28	-2.34
6,792.0	91.10	334.80	5,727.2	1,903.2	232.7	1,682.2	0.84	-0.84	0.00
6,887.0	91.50	334.70	5,725.0	1,989.1	192.1	1,777.0	0.43	0.42	-0.11
6,982.0	90.80	333.10	5,723.1	2,074.4	150.4	1,871.7	1.84	-0.74	-1.68
7,077.0	90.60	332.20	5,722.0	2,158.8	106.7	1,966.2	0.97	-0.21	-0.95
7,172.0	90.50	331.90	5,721.1	2,242.7	62.2	2,060.6	0.33	-0.11	-0.32
7,267.0	90.80	331.10	5,720.0	2,326.2	16.9	2,154.9	0.90	0.32	-0.84
7,361.0	90.10	331.60	5,719.3	2,408.7	-28.2	2,248.3	0.92	-0.74	0.53
7,457.0	89.60	331.60	5,719.5	2,493.1	-73.9	2,343.6	0.52	-0.52	0.00
7,551.0	89.40	332.00	5,720.3	2,576.0	-118.3	2,437.0	0.48	-0.21	0.43
7,646.0	90.40	331.10	5,720.5	2,659.5	-163.5	2,531.3	1.42	1.05	-0.95
7,740.0	89.90	330.50	5,720.2	2,741.5	-209.4	2,624.5	0.83	-0.53	-0.64
7,835.0	91.30	332.10	5,719.2	2,824.9	-255.0	2,718.8	2.24	1.47	1.68
7,930.0	92.40	333.80	5,716.2	2,909.4	-298.2	2,813.3	2.13	1.16	1.79
8,025.0	92.10	333.30	5,712.5	2,994.4	-340.5	2,907.9	0.61	-0.32	-0.53
8,119.0	92.00	333.30	5,709.1	3,078.3	-382.7	3,001.5	0.11	-0.11	0.00
8,214.0	91.50	332.70	5,706.2	3,162.9	-425.8	3,096.1	0.82	-0.53	-0.63



Survey Report



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<b>Project:</b>	Pleasants County	<b>TVD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Site:</b>	P2 Pad	<b>MD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Well:</b>	P2N2	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,309.0	90.90	332.60	5,704.2	3,247.3	-469.4	3,190.6	0.64	-0.63	-0.11
8,404.0	90.60	331.90	5,703.0	3,331.4	-513.7	3,285.1	0.80	-0.32	-0.74
8,498.0	89.80	331.70	5,702.6	3,414.2	-558.1	3,378.5	0.88	-0.85	-0.21
8,593.0	89.50	331.80	5,703.2	3,497.9	-603.0	3,472.8	0.33	-0.32	0.11
8,687.0	90.60	332.10	5,703.1	3,580.8	-647.2	3,566.3	1.21	1.17	0.32
8,782.0	91.90	333.10	5,701.1	3,665.2	-690.9	3,660.8	1.73	1.37	1.05
8,876.0	91.70	332.90	5,698.1	3,748.9	-733.6	3,754.3	0.30	-0.21	-0.21
8,971.0	91.30	333.00	5,695.6	3,833.5	-776.8	3,848.9	0.43	-0.42	0.11
9,066.0	90.60	332.20	5,694.0	3,917.8	-820.5	3,943.4	1.12	-0.74	-0.84
9,161.0	90.10	332.40	5,693.5	4,001.9	-864.7	4,037.9	0.57	-0.53	0.21
9,255.0	89.50	331.80	5,693.8	4,085.0	-908.6	4,131.3	0.90	-0.64	-0.64
9,350.0	90.60	331.00	5,693.7	4,168.4	-954.1	4,225.6	1.43	1.16	-0.84
9,445.0	90.50	330.70	5,692.8	4,251.3	-1,000.4	4,319.8	0.33	-0.11	-0.32
9,539.0	91.90	331.10	5,690.8	4,333.5	-1,046.1	4,413.0	1.55	1.49	0.43
9,634.0	92.10	330.90	5,687.5	4,416.5	-1,092.1	4,507.2	0.30	0.21	-0.21
9,729.0	92.50	330.50	5,683.7	4,499.3	-1,138.6	4,601.3	0.60	0.42	-0.42
9,824.0	89.80	330.70	5,681.8	4,582.0	-1,185.2	4,695.4	2.85	-2.84	0.21
9,918.0	89.70	330.30	5,682.2	4,663.8	-1,231.5	4,788.5	0.44	-0.11	-0.43
10,013.0	90.30	332.90	5,682.2	4,747.4	-1,276.7	4,882.9	2.81	0.63	2.74
10,108.0	90.80	333.70	5,681.3	4,832.2	-1,319.3	4,977.5	0.99	0.53	0.84
10,203.0	90.80	334.20	5,680.0	4,917.6	-1,361.1	5,072.2	0.53	0.00	0.53
10,297.0	90.70	333.90	5,678.7	5,002.1	-1,402.2	5,166.0	0.34	-0.11	-0.32
10,392.0	90.30	334.10	5,677.9	5,087.5	-1,443.8	5,260.7	0.47	-0.42	0.21
10,487.0	90.20	333.90	5,677.5	5,172.9	-1,485.5	5,355.4	0.24	-0.11	-0.21
10,582.0	89.80	333.70	5,677.5	5,258.1	-1,527.4	5,450.2	0.47	-0.42	-0.21
10,677.0	90.40	333.30	5,677.3	5,343.1	-1,569.8	5,544.8	0.76	0.63	-0.42
10,772.0	90.50	333.30	5,676.6	5,428.0	-1,612.5	5,639.5	0.11	0.11	0.00
10,867.0	91.20	334.00	5,675.2	5,513.1	-1,654.7	5,734.1	1.04	0.74	0.74
10,961.0	90.60	332.20	5,673.7	5,596.9	-1,697.2	5,827.7	2.02	-0.64	-1.91
11,056.0	90.20	331.70	5,673.0	5,680.8	-1,741.9	5,922.1	0.67	-0.42	-0.53
11,151.0	90.20	331.50	5,672.7	5,764.3	-1,787.0	6,016.5	0.21	0.00	-0.21
11,246.0	90.30	332.30	5,672.3	5,848.1	-1,831.8	6,110.9	0.85	0.11	0.84
11,340.0	91.40	333.80	5,670.9	5,931.9	-1,874.4	6,204.5	1.98	1.17	1.60
11,435.0	92.20	333.60	5,667.9	6,017.0	-1,916.4	6,299.1	0.87	0.84	-0.21
11,530.0	92.30	333.20	5,664.2	6,101.9	-1,959.0	6,393.7	0.43	0.11	-0.42
11,625.0	90.40	331.60	5,661.9	6,186.1	-2,002.9	6,488.2	2.61	-2.00	-1.68
11,720.0	90.50	329.70	5,661.2	6,268.9	-2,049.5	6,582.3	2.00	0.11	-2.00
11,815.0	90.20	331.00	5,660.6	6,351.4	-2,096.5	6,676.4	1.40	-0.32	1.37
11,910.0	91.10	331.50	5,659.5	6,434.7	-2,142.2	6,770.7	1.08	0.95	0.53
12,005.0	90.50	330.60	5,658.2	6,517.8	-2,188.2	6,864.9	1.14	-0.63	-0.95
12,099.0	90.30	329.70	5,657.5	6,599.4	-2,235.0	6,958.0	0.98	-0.21	-0.96
12,194.0	90.30	331.40	5,657.0	6,682.1	-2,281.7	7,052.1	1.79	0.00	1.79
12,289.0	90.80	330.40	5,656.1	6,765.1	-2,327.9	7,146.3	1.18	0.53	-1.05
12,384.0	90.80	331.20	5,654.8	6,848.0	-2,374.2	7,240.5	0.84	0.00	0.84





Survey Report



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<b>Site:</b>	P2 Pad	<b>MD Reference:</b>	well @ 732.8usft (Nomac #81)
<b>Well:</b>	P2N2	<b>North Reference:</b>	Grid
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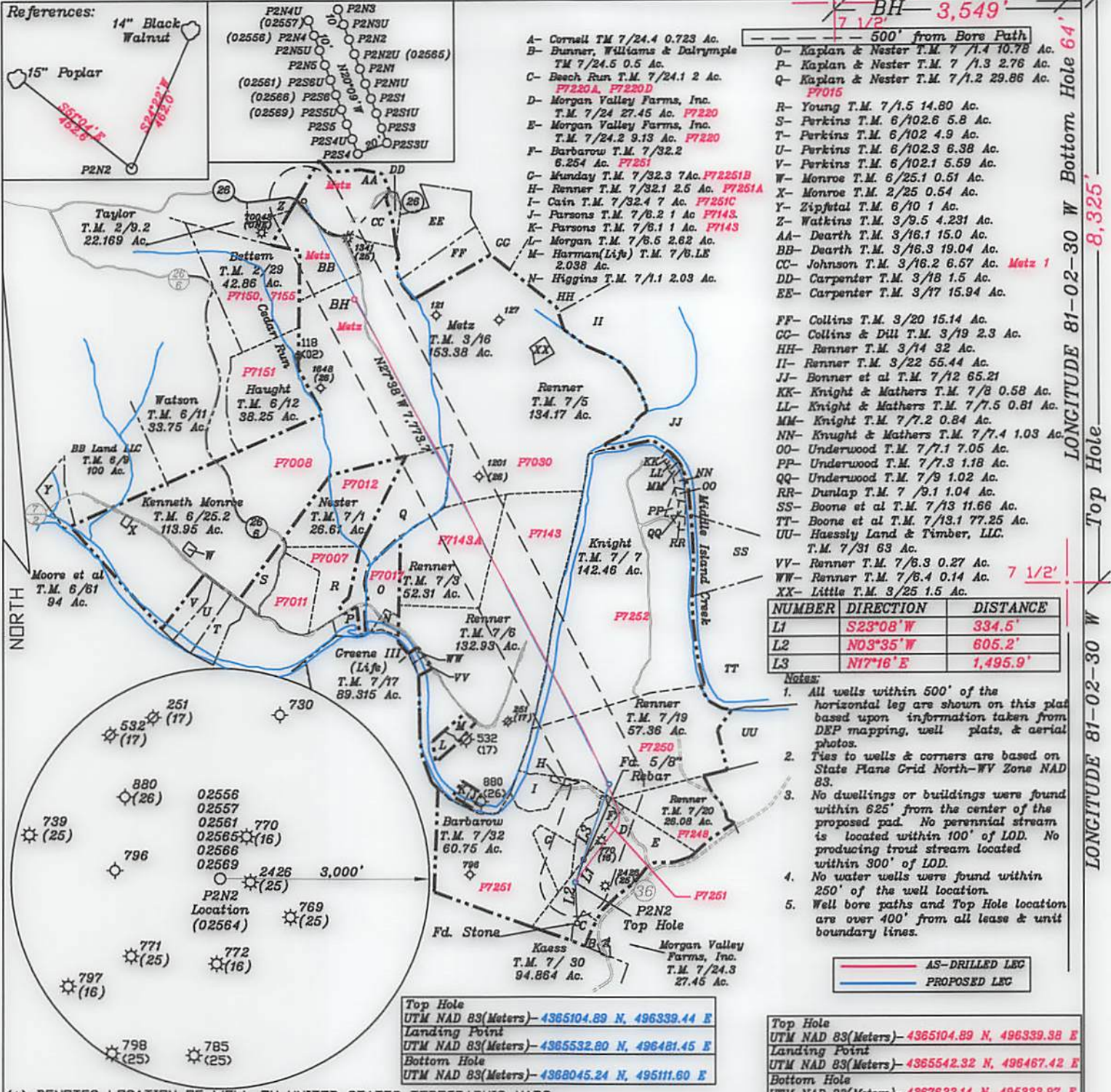
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,479.0	90.80	333.10	5,653.5	6,932.0	-2,418.6	7,334.9	2.00	0.00	2.00
12,574.0	90.90	331.80	5,652.1	7,016.2	-2,462.5	7,429.4	1.37	0.11	-1.37
12,669.0	90.80	333.80	5,650.7	7,100.7	-2,505.9	7,524.0	2.11	-0.11	2.11
12,764.0	90.90	332.40	5,649.3	7,185.4	-2,548.9	7,618.6	1.48	0.11	-1.47
12,858.0	91.10	333.50	5,647.6	7,269.1	-2,591.6	7,712.2	1.19	0.21	1.17
12,953.0	91.20	334.50	5,645.7	7,354.5	-2,633.3	7,806.9	1.06	0.11	1.05
13,048.0	91.00	332.90	5,643.9	7,439.6	-2,675.4	7,901.5	1.70	-0.21	-1.68
13,142.0	90.90	331.30	5,642.3	7,522.7	-2,719.3	7,995.0	1.71	-0.11	-1.70
13,237.0	91.00	329.40	5,640.7	7,605.2	-2,766.3	8,089.1	2.00	0.11	-2.00
13,332.0	91.10	333.50	5,639.0	7,688.6	-2,811.7	8,183.3	4.32	0.11	4.32
13,426.0	91.00	331.80	5,637.3	7,772.1	-2,854.9	8,276.9	1.81	-0.11	-1.81
13,521.0	90.90	330.60	5,635.7	7,855.3	-2,900.7	8,371.1	1.27	-0.11	-1.26
13,616.0	90.90	329.00	5,634.2	7,937.4	-2,948.4	8,465.1	1.68	0.00	-1.68
13,711.0	90.80	332.30	5,632.8	8,020.2	-2,995.0	8,559.2	3.47	-0.11	3.47
13,806.0	90.80	331.80	5,631.5	8,104.1	-3,039.5	8,653.6	0.53	0.00	-0.53
13,901.0	90.80	330.40	5,630.2	8,187.3	-3,085.4	8,747.9	1.47	0.00	-1.47
13,995.0	90.70	328.90	5,628.9	8,268.4	-3,132.9	8,840.8	1.60	-0.11	-1.60
<b>TD @ 14050.0' MD / 5628.3' TVD</b>									
14,050.0	90.70	328.90	5,628.3	8,315.5	-3,161.3	8,895.1	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
520.0	520.0	3.8	-3.3	First MWD Survey @ 520.0' MD / 520.0' TVD
14,050.0	5,628.3	8,315.5	-3,161.3	TD @ 14050.0' MD / 5628.3' TVD

RECEIVED  
Office of Oil and Gas  
JUN 15 2018

WV Department of Environmental Protection





NUMBER	DIRECTION	DISTANCE
L1	S23°08'W	334.5'
L2	N03°35'W	605.2'
L3	N17°16'E	1,495.9'

- 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 & corners are based on State Plane Grid North-WV 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.
  - Well bore paths and Top Hole location are over 400' from all lease & unit boundary lines.

AS-DRILLED LEC  
PROPOSED LEC

Top Hole	UTM NAD 83(Meters)- 4365104.89 N, 496339.44 E
Landing Point	UTM NAD 83(Meters)- 4365532.80 N, 496481.45 E
Bottom Hole	UTM NAD 83(Meters)- 4368045.24 N, 495111.60 E
Top Hole	UTM NAD 83(Meters)- 4365104.89 N, 496339.38 E
Landing Point	UTM NAD 83(Meters)- 4365542.32 N, 496467.42 E
Bottom Hole	UTM NAD 83(Meters)- 4367622.14 N, 495333.97 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 J. Jackson  
R.P.E. \_\_\_\_\_ P.S. 708



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

DATE February 9, 2018  
OPERATOR'S WELL NO. P2N2  
API WELL NO. \_\_\_\_\_

WELL TYPE: OIL X GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
(IF 'GAS') PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

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

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

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
TARGET FORMATION Marcellus ESTIMATED DEPTH TVD = 5,735'; TMD = 14,050'  
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

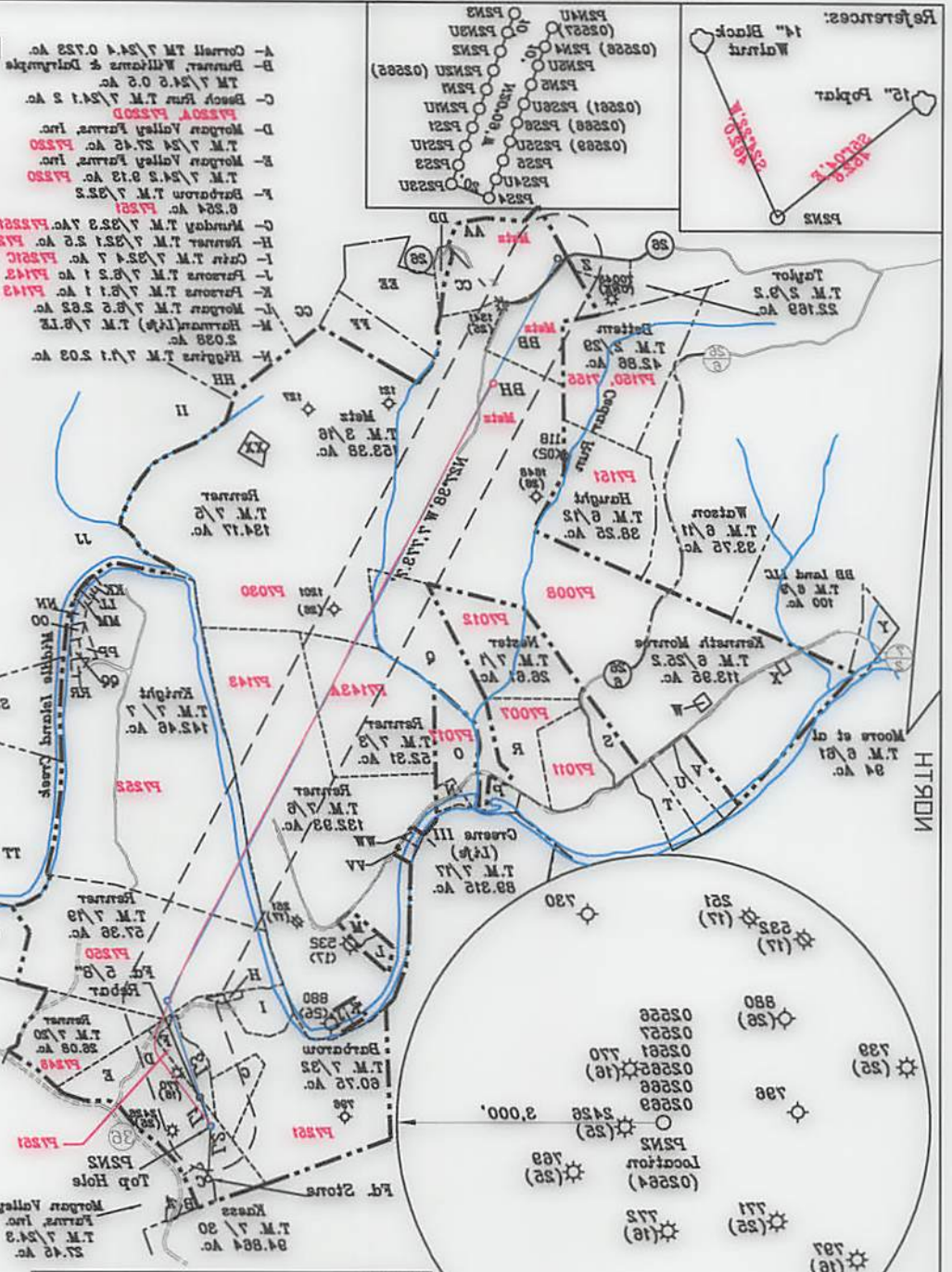


LONGITUDE 81-05-30 W 8'32.2" 84.1' Bottom Hole 84.1' Top Hole 84.1'

NUMBER	DIRECTION	DISTANCE
L3	N72°18' E	1482.9'
L2	N03°35' W	802.5'
L1	S23°08' W	334.5'

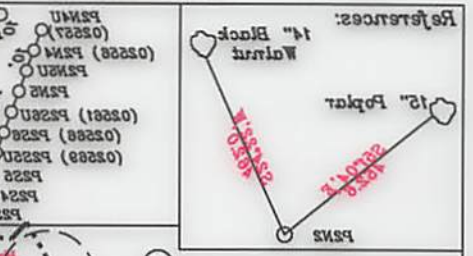
Notes:  
 1. All wells within 500' of the horizontal leg are shown on this plan based upon information taken from DEP mapping, well plates & aerial photos.  
 2. This to wells & corners are based on State Plane Grid North-WV Zone NAD 83.  
 3. No dwellings or buildings were found within 625' from the center of the proposed pad. No potential streams are located within 100' of LOD. No producing from streams located within 300' of LOD.  
 4. No water wells were found within 250' of the well location.  
 5. Well bore paths and Top Hole locations are over 400' from all lease & unit boundary lines.

Legend:  
 AS-DRILLED LEG  
 PROPOSED LEG



UTM NAD 83 (Meters) - 4827023.14 N 482332.87 E	Bottom Hole
UTM NAD 83 (Meters) - 482545.32 N 48467.42 E	Landing Point
UTM NAD 83 (Meters) - 482522.80 N 48491.42 E	Landing Point
UTM NAD 83 (Meters) - 482104.88 N 48232.44 E	Top Hole

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



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES OF ENVIRONMENTAL PROTECTION.

(SIGNED) *David Jackson*  
 R.P.E. R.2. 708

submeter unit	ELEVATION	GPS
PROVEN SOURCE OF	ACCURACY	1 in 500
MINIMUM DEGREE OF	INFORMATION	REQUIRED BY LAW AND THE RULES
SCALE	1" = 5000'	
DRAWING NO.	1	
FILE NO.		

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

DATE February 9, 2018  
 OPERATOR'S WELL NO. P220  
 API WELL NO. 02564

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL  
 (IF 'GAS') PRODUCTION X STORAGE DEEP SHALLOW X  
 LOCATION: ELEVATION 712.4' WATER SHED Middle Island Creek  
 DISTRICT Union  
 QUADRANGLE Bears Run 7 1/2'  
 SURFACE OWNER Morgan Valley Farms, Inc.  
 OIL & GAS ROYALTY OWNER Morgan Valley Farms, Inc.  
 LEASE NO. P220

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 = 5735'; TMD = 14050'  
 DESIGNATED AGENT Randy Broda  
 WELL OPERATOR Jay-Bee Oil & Gas, Inc.  
 ADDRESS 2270 Route 22 E Union, NJ 07083  
 ADDRESS 3270 Shields Hill Rd, Cairo, WV 26837