

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

API 47-095-02139 County Tyler District McElroy  
Quad Shirley Pad Name Maddie Mae Field/Pool Name \_\_\_\_\_  
Farm name Joseph Boyd Well Number Maddie Mae 4  
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 4,365,375.0 Easting 516,687.8  
Landing Point of Curve Northing 4,365,771.3 Easting 516,093.1  
Bottom Hole Northing 4,367,299.7 Easting 514,798.1

Elevation (ft) 1040.9 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)  
ABS 40

Date permit issued 2/28/2014 Date drilling commenced 12/5/2014 Date drilling ceased 2/6/2015  
Date completion activities began 3/5/2015 Date completion activities ceased 4/25/2015  
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 N/A 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

**APPROVED**

NAME: Jacquelin Shumta  
DATE: 6/7/2016

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Reviewed by:  
AX 06/14/16  
WS

API 47- 095 - 02139 Farm name Joseph Boyd Well number Maddie Mae 4

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	17"	16"	30'	New	20/32/24		Y
Surface	15"	11 3/4"	449'	New	20/23/24	50'	Y
Coal							
Intermediate 1	11"	8 5/8"	2262'	New	20/17/24	1500'	Y
Intermediate 2							
Intermediate 3							
Production	7 7/8"	5 1/2"	15160'	New	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	235	15.2	1.24	215	CTS	8
Coal							
Intermediate 1	Class A	575	14.7	1.36	585	CTS	8
Intermediate 2							
Intermediate 3							
Production	Class A	1885	14.4	1.30	2451.6	1010' from surface	8
Tubing							

Drillers TD (ft) 15265 Loggers TD (ft) 15265  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5947

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 \_\_\_\_\_

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	3/5/15	15182	14982	96	Marcellus
2	4/3/15	14920	14763	72	Marcellus
3	4/3/15	14714	14553	72	Marcellus
4	4/3/15	14517	14299	72	Marcellus
5	4/4/15	14240	14094	72	Marcellus
6	4/4/15	14066	13894	72	Marcellus
7	4/6/15	13830	13682	72	Marcellus
8	4/7/15	13643	13489	72	Marcellus
9	4/7/15	13438	13297	72	Marcellus
10	4/7/15	13262	13084	72	Marcellus
11	4/7/15	13040	12894	72	Marcellus
12	4/7/15	12830	12696	72	Marcellus
13	4/7/15	12654	12490	72	Marcellus
14	4/8/15	12436	12245	72	Marcellus
15	4/8/15	12194	12026	72	Marcellus
16	4/8/15	11980	11846	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	4/3/15	75.6	7057	7882	4556	179227	7607	N/A
2	4/3/15	76.1	6995	7093	4023	180854	8249	N/A
3	4/3/15	75.5	6965	7145	4412	178682	7660	N/A
4	4/3/15	76.2	6937	7174	4930	164894	7189	N/A
5	4/4/15	75.4	6741	7158	4694	181599	7506	N/A
6	4/4/15	75.7	6700	6950	5124	180841	7456	N/A
7	4/6/15	76.4	6721	6828	5240	179507	8075	N/A
8	4/7/15	75.4	6501	6771	4861	180350	7433	N/A
9	4/7/15	75.0	6710	6894	4594	179295	7419	N/A
10	4/7/15	76.0	6861	8038	4249	179596	8284	N/A
11	4/7/15	75.8	6551	7984	4531	178964	7467	N/A
12	4/7/15	75.5	6591	6916	4209	179579	7115	N/A
13	4/7/15	75.5	6497	8050	4632	180352	7950	N/A
14	4/8/15	75.0	6253	6496	4476	180437	7318	N/A
15	4/8/15	75.0	6579	6836	3712	181367	6746	N/A
16	4/8/15	75.7	6577	7142	4602	180148	6650	N/A

Please insert additional pages as applicable.

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API 47- 095 - 02139 Farm name Joseph Boyd Well number Maddie Mae 4

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	4/8/15	11812	11624	72	Marcellus
18	4/9/15	11572	11398	72	Marcellus
19	4/9/15	11355	11206	72	Marcellus
20	4/9/15	11172	10987	72	Marcellus
21	4/9/15	10936	10793	72	Marcellus
22	4/10/15	10755	10600	72	Marcellus
23	4/10/15	10563	10406	72	Marcellus
24	4/11/15	10360	10242	72	Marcellus
25	4/11/15	10192	10008	72	Marcellus
26	4/11/15	9970	9800	72	Marcellus
27	4/11/15	9785	9588	72	Marcellus
28	4/12/15	9542	9394	72	Marcellus
29	4/12/15	9342	9146	72	Marcellus
30	4/13/15	9112	8980	72	Marcellus
31	4/13/15	8944	8736	72	Marcellus
32	4/13/15	8670	8510	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	4/8/15	75.5	6466	6763	4578	180288	6616	N/A
18	4/9/15	76.1	6510	6988	4699	179183	6548	N/A
19	4/9/15	76.0	6310	6441	5009	179966	6787	N/A
20	4/9/15	76.0	6297	6592	4975	179419	6678	N/A
21	4/9/15	76.5	6345	7082	4903	180913	6619	N/A
22	4/10/15	76.6	6364	6720	4866	180881	6646	N/A
23	4/10/15	76.4	6369	6552	4847	180241	7086	N/A
24	4/11/15	76.5	6380	6798	4849	180602	7264	N/A
25	4/11/15	75.5	6292	6434	4961	180946	6859	N/A
26	4/11/15	76.8	6678	6950	4905	180213	6288	N/A
27	4/11/15	77.4	6580	6996	5305	181322	6320	N/A
28	4/12/15	76.6	6572	6838	5329	126517	5484	N/A
29	4/12/15	77.4	6363	6863	4748	180030	6341	N/A
30	4/13/15	76.8	6301	6481	4456	180547	6369	N/A
31	4/13/15	76.7	6215	6521	2565	180815	6265	N/A
32	4/13/15	76.8	6119	6374	4736	180984	6190	N/A

Please insert additional pages as applicable.

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**Lithology**

Maddie Mae 4 47-095-02139

<b>FORMATION</b>	<b>TOP</b>	<b>BOTTOM</b>
MISC. RED ROCK & SHALES	0	2138
LIME	2138	2238
INJUN	2238	2355
SHALE	2355	2702
GORDON STRAY	2702	2722
SHALE	2722	2918
GORDON	2918	2948
SHALE	2948	3227
BAYARD	3227	3236
SHALE	3236	3565
WARREN	3565	3663
SHALE	3663	3899
BALLTOWN	3899	4062
SHALE	4062	4500
2ND RILEY	4500	4608
SHALE	4608	4759
3RD RILEY	4759	4800
SHALE	4800	4857
BENSON	4857	4860
SHALE	4860	5102
ALEXANDER	5102	5273
SHALE	5273	5518
ELK	5518	5566
SHALE	5566	5792
HAMILTON	5792	5966
SHALE	5966	6622
UPPER Marcellus	6622	6628
PARCELL LIME	6628	6663
SHALE	6663	6678
LOWER MARCELLUS	6678	

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/3/2015
Job End Date:	4/14/2015
State:	West Virginia
County:	Tyler
API Number:	47-095-02139-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	Maddie Mae #4
Longitude:	-80.80608100
Latitude:	39.43735900
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,700
Total Base Water Volume (gal):	11,247,516
Total Base Non Water Volume:	



## Hydraulic Fracturing Fluid Composition:

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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	Operator	Carrier					
			Water	7732-18-5	100.00000	92.62155	
Sand, White	Baker Hughes	Proppant					
			Listed with Chemical Ingredients	NA		6.91228	
HCl, 20.1 - 28%	Baker Hughes	Acidizing					
			Listed with Chemical Ingredients	NA		0.28848	SmartCare Product
GW-3LDF	Baker Hughes	Gelling Agent					
			Listed with Chemical Ingredients	NA		0.03975	SmartCare Product
FRW-18	Baker Hughes	Friction Reducer					
			Listed with Chemical Ingredients	NA		0.01925	SmartCare Product
Alpha 1427	Baker Hughes	Biocide					
			Listed with Chemical Ingredients	NA		0.01165	SmartCare Product
MaxPerm-20A	Baker Hughes	Friction Reducer					
			Listed with Chemical Ingredients	NA		0.00642	SmartCare Product
InFlo 250G	Baker Hughes	Surfactant					
			Listed with Chemical Ingredients	NA		0.00210	SmartCare Product
Enzyme G-NE	Baker Hughes	Breaker					
			Listed with Chemical Ingredients	NA		0.00042	SmartCare Product
GBW-5	Baker Hughes	Breaker					



		Listed with Chemical Ingredients	NA		0.00012	SmartCare Product
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.						
		Other Chemicals				
		Crystalline Silica (Quartz)	14808-60-7		6.91376	
		Hydrochloric Acid	7647-01-0		0.08077	
		Petroleum Distillates	64742-47-8		0.02808	
		Poly (acrylamide-co-acrylic acid) partial sodium salt	62649-23-4		0.01925	
		Guar Gum	9000-30-0		0.01767	
		Paraffinic Petroleum Distillate	64742-55-8		0.00883	
		Ethylene Glycol	107-21-1		0.00849	
		Glutaraldehyde	111-30-8		0.00699	
		2-propenoic, polymer with sodium phosphinate, sodium salt	71050-62-9		0.00566	
		Sodium Chloride	7647-14-5		0.00368	
		Didecyl Dimethyl Ammonium Chloride	7173-51-5		0.00233	
		1-propoanesulfonic acid, 2-methyl-2-[1(oxo2propen1y) amino], polymer with 2 propenamides, sodium salt	83446-68-8		0.00226	
		Ammonium Chloride	12125-02-9		0.00193	
		Isotridecanol, ethoxylated	9043-30-5		0.00147	
		Calcium Chloride	10043-52-4		0.00142	
		Oleamide DEA	93-83-4		0.00128	
		Ethoxylated Alcohol	68551-12-2		0.00128	
		Ethanol	64-17-5		0.00116	
		Quaternary Ammonium Compound	68424-85-1		0.00116	
		Hydrotreated light distillate	64742-47-8		0.00113	
		Methanol	67-56-1		0.00072	
		Sorbitan, mono (9Z)-9-Octadecenoate	1338-43-8		0.00051	
		Surfactant	9016-45-9		0.00036	
		Polyoxyethylene Sorbitan Monooleate	9005-65-6		0.00032	
		Potassium Chloride	7447-40-7		0.00028	
		Surfactant	68551-12-2		0.00019	
		Polyoxyethylene Sorbitan Monooleate	9005-65-6		0.00019	
		Oxyalkylated Alcohol	78330-21-9		0.00019	
		Ammonium Persulfate	7727-54-0		0.00012	
		Surfactant	68155-39-5		0.00010	
		2-Butoxy-1-Propanol	15821-83-7		0.00003	
		Hemicellulase Enzyme Concentrate	9025-56-3		0.00002	

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- \* 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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Offshore Oil & Gas  
February 2016

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE**  
**Chapter 22, Article 6A, Section 5(a)(5)**  
**IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:


Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
W668C (A)	Joseph A. Boyd	JB Exploration I, LLC	12.5%	381-281
W699 705 (B,C)	Michael Benedum of Blackrock Enterprises, LLC	JB Exploration I, LLC	12.5%	412-282
T5002 (D)	Cathleen Donahue	JB Exploration I, LLC	12.5%	407-780
T5003B (L)	William A Kile Trust	JB Exploration I, LLC	12.5%	406-730
Exco144G (O)	JB Exploration I, LLC	JB Exploration I, LLC	12.5%	425-588
Exco144E (P)	JB Exploration I, LLC (Deed)	JB Exploration I, LLC	12.5%	425-588

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Jay Bee Oil & Gas, Inc 

By: Shane Dowell

Its: Office Manager

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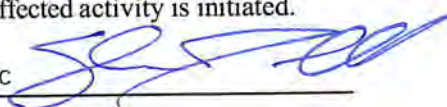
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Exco144D (Q)	JB Exploration I, LLC (Deed)	JB Exploration I, LLC	12.5%	425-588
Exco144A (R)	JB Exploration I, LLC (Deed)	JB Exploration I, LLC	12.5%	425-588
T5005 (S)	<b>Robert K. Owens</b>	JB Exploration I, LLC	12.5%	406-727
T5005A (New)	William D. and Saturina M. Morrison, JTROS	JB Exploration I, LLC	12.5%	446/535

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Well Operator: Jay-Bee Oil & Gas, Inc 

By: Shane Dowell

Its: Office Manager



References

Location **S88°45'W**  
 02139H 352.5' 16"  
 Poplar  
 Fd. 13"x  
 6"x 13"  
 Stone

Bottom Hole 10,258'  
 LATITUDE 39-27-30 N

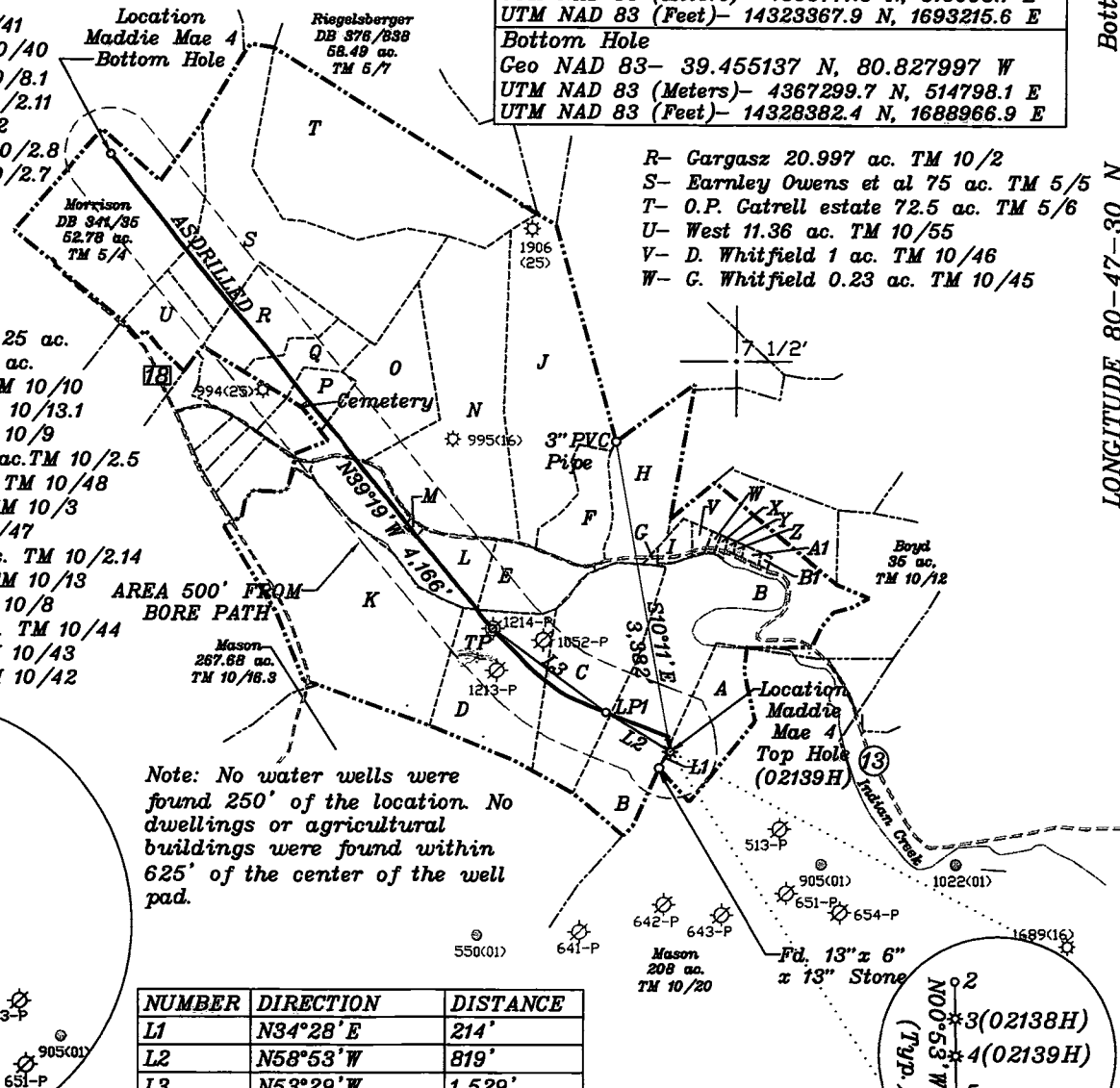
**Top Hole**  
 Geo NAD 83- 39.437759 N, 80.806081 W  
 UTM NAD 83 (Meters)- 4365375.0 N, 516687.8 E  
 UTM NAD 83 (Feet)- 14322067.7 N, 1695166.7 E  
**LPI**  
 Geo NAD 83- 39.438893 N, 80.808586 W  
 UTM NAD 83 (Meters)- 4365500.3 N, 516472.0 E  
 UTM NAD 83 (Feet)- 14322479.0 N, 1694458.7 E  
**TP**  
 Geo NAD 83- 39.441341 N, 80.812982 W  
 UTM NAD 83 (Meters)- 4365771.3 N, 516093.1 E  
 UTM NAD 83 (Feet)- 14323367.9 N, 1693215.6 E  
**Bottom Hole**  
 Geo NAD 83- 39.455137 N, 80.827997 W  
 UTM NAD 83 (Meters)- 4367299.7 N, 514798.1 E  
 UTM NAD 83 (Feet)- 14328382.4 N, 1688966.9 E

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.  
 Note: Leg and bottom hole location are based upon a survey report by Panther Drilling Systems dated 2/05/15.

- A1- Frey 0.46 ac. TM 10/41
- B1- Joseph 0.34 ac. TM 10/40
- M- Dillon 0.452 ac. TM 10/8.1
- N- Zills 72.942 ac. TM 10/2.11
- O- Zills 30 ac. TM 10/2.12
- P- Warner 6.875 ac. TM 10/2.8
- Q- Potoczny 11.14 ac. TM 10/2.7

- R- Cargasz 20.997 ac. TM 10/2
- S- Earnley Owens et al 75 ac. TM 5/5
- T- O.P. Gatrell estate 72.5 ac. TM 5/6
- U- West 11.36 ac. TM 10/55
- V- D. Whitfield 1 ac. TM 10/46
- W- G. Whitfield 0.23 ac. TM 10/45

- A- Boyd TM 10/12 21.25 ac.
- B- Frey TM 10/11 85 ac.
- C- McMahon 55 ac. TM 10/10
- D- Donahue 30 ac. TM 10/13.1
- E- Donahue 18 ac. TM 10/9
- F- R. Warner 14.862 ac. TM 10/2.5
- G- McMahon 0.36 ac. TM 10/48
- H- Miller 27.25 ac. TM 10/3
- I- Wright 2 ac. TM 10/47
- J- Starcher 60.832 ac. TM 10/2.14
- K- Haught 80.85 ac. TM 10/13
- L- Kile 29.62 ac. TM 10/8
- X- Richmond 0.23 ac. TM 10/44
- Y- Bloom 0.23 ac. TM 10/43
- Z- Bloom 0.23 ac. TM 10/42



Note: No water wells were found 250' of the location. No dwellings or agricultural buildings were found within 625' of the center of the well pad.

NUMBER	DIRECTION	DISTANCE
L1	N34°28'E	214'
L2	N58°53'W	819'
L3	N53°29'W	1,529'

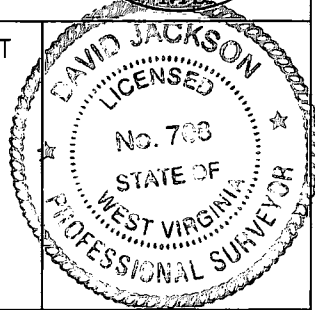
Notes: Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 83.

(+) 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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(SIGNED) David L Jackson  
 R.P.E. \_\_\_\_\_ L.S. 708



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

DATE September 22, 2015  
 OPERATOR'S WELL NO. Maddie Mae 4  
 API WELL NO. ASDRILLED  
47 - 095 - 02139H  
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS  LIQUID INJECTION WASTE DISPOSAL  
 (IF 'GAS') PRODUCTION  STORAGE DEEP SHALLOW   
 LOCATION: ELEVATION 1,040.9' WATER SHED Indian Creek  
 DISTRICT McElroy COUNTY Tyler  
 QUADRANGLE Shirley 7 1/2'

SURFACE OWNER Joseph Boyd (T.M. 10/12) Lonnie C. & Debbie K. Frey (TM 10/11) ACREAGE 21.25 ac. & 85 ac.  
 OIL & GAS ROYALTY OWNER Joseph Boyd (TM.10/12), Michael Benedum of Blackrock Enterprises, LLC (TM.10/10, 11), Cathern Donahue (TM.10/31.1), William A Kile Trust (TM.10/8), JB Exploration I, LLC (TM.10/2.12), JB Exploration I, LLC (TM.10/2.8), JB Exploration I, LLC (TM.10/2.7), JB Exploration I, LLC (TM.10/2), Robert K. Owens (TM.5/5)

LEASE NO. & ACREAGE: W668C 21.25Ac., W699 705 109 Ac., T5002 111 Ac., T5003B 30.72 Ac., Exco144G 30 Ac., Exco144E 6.875 Ac., Exco144D 11.14 Ac., Exco144A 31.213 Ac., T5005 75 Ac.  
 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 Marcellus ESTIMATED DEPTH TVD 6,697' + TMD 15,222'  
 WELL OPERATOR Jay-Bee Oil & Gas, Inc. DESIGNATED AGENT Randy Broda  
 ADDRESS 1720 Rt. 22, East Union, NJ 07083 ADDRESS Route 1, Box 5, Cairo, WV 26337



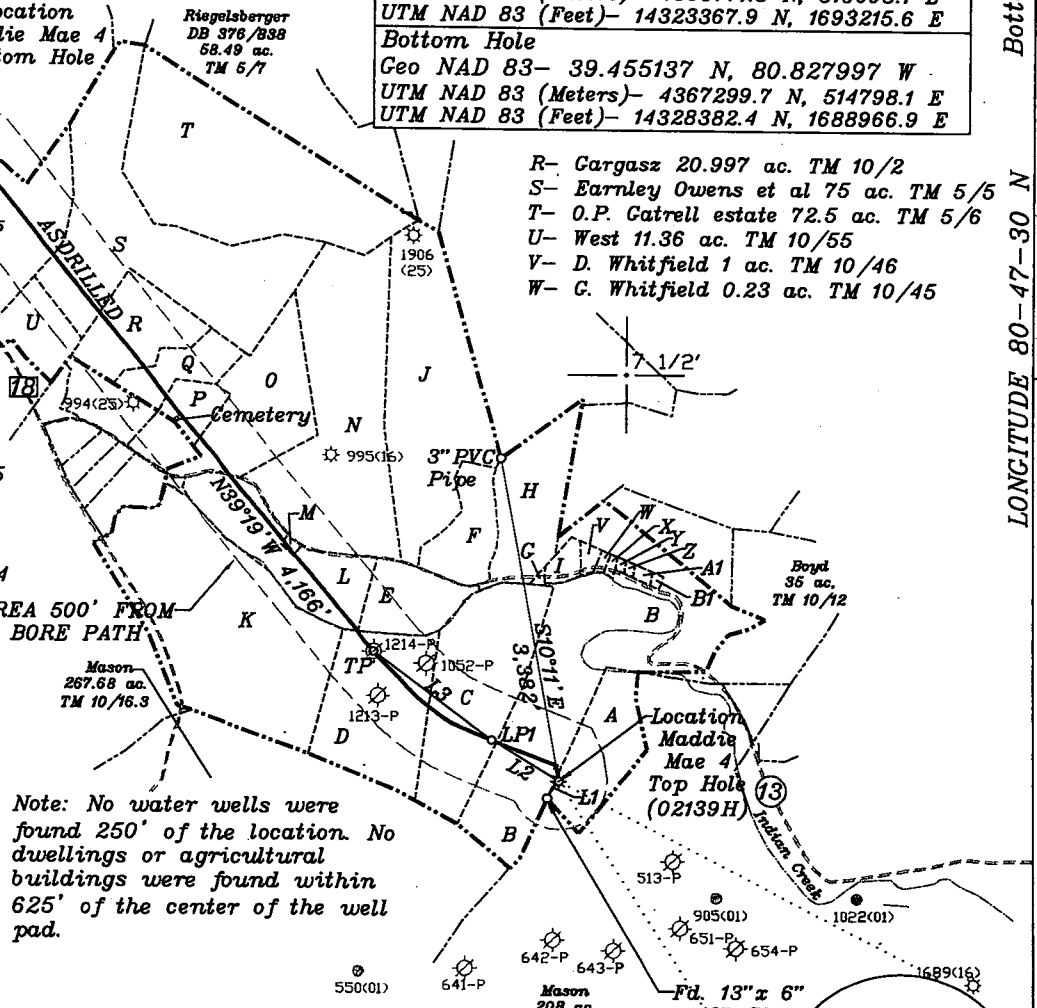
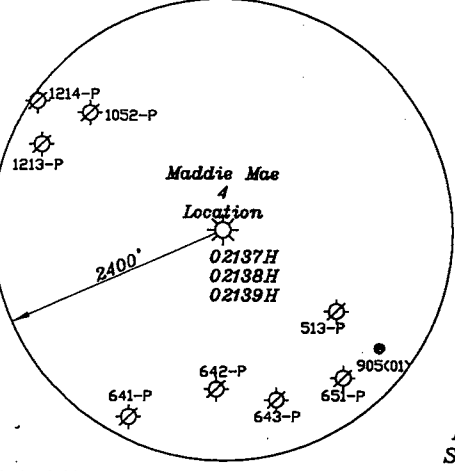
References  
 Location  $S88^{\circ}45'W$   
 $02139H$   $352.5'$   $16"$   
 Poplar  
 Fd.  $13" \times 6"$   
 $6" \times 13"$   
 Stone

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.  
 Note: Leg and bottom hole location are based upon a survey report by Panther Drilling Systems dated 2/05/15.

Bottom Hole 10,258'  
 LATITUDE  $39-27-30 N$   
 Top Hole  
 Geo NAD 83-  $39.437759 N, 80.806081 W$   
 UTM NAD 83 (Meters)-  $4365375.0 N, 516687.8 E$   
 UTM NAD 83 (Feet)-  $14322067.7 N, 1695166.7 E$   
 LPI  
 Geo NAD 83-  $39.438893 N, 80.808586 W$   
 UTM NAD 83 (Meters)-  $4365500.3 N, 516472.0 E$   
 UTM NAD 83 (Feet)-  $14322479.0 N, 1694458.7 E$   
 TP  
 Geo NAD 83-  $39.441341 N, 80.812982 W$   
 UTM NAD 83 (Meters)-  $4365771.3 N, 516093.1 E$   
 UTM NAD 83 (Feet)-  $14323367.9 N, 1693215.6 E$   
 Bottom Hole  
 Geo NAD 83-  $39.455137 N, 80.827997 W$   
 UTM NAD 83 (Meters)-  $4367299.7 N, 514798.1 E$   
 UTM NAD 83 (Feet)-  $14328382.4 N, 1688966.9 E$

- A1- Frey 0.46 ac. TM 10/41
- B1- Joseph 0.34 ac. TM 10/40
- M- Dillon 0.452 ac. TM 10/8.1
- N- Zills 72.942 ac. TM 10/2.11
- O- Zills 30 ac. TM 10/2.12
- P- Warner 6.875 ac. TM 10/2.8
- Q- Potoczny 11.14 ac. TM 10/2.7

- A- Boyd TM 10/12 21.25 ac.
- B- Frey TM 10/11 85 ac.
- C- McMahon 55 ac. TM 10/10
- D- Donahue 30 ac. TM 10/13.1
- E- Donahue 18 ac. TM 10/9
- F- R. Warner 14.862 ac. TM 10/2.5
- G- McMahon 0.36 ac. TM 10/48
- H- Miller 27.25 ac. TM 10/3
- I- Wright 2 ac. TM 10/47
- J- Starcher 60.832 ac. TM 10/2.14
- K- Haight 80.85 ac. TM 10/13
- L- Kile 29.62 ac. TM 10/8
- X- Richmond 0.23 ac. TM 10/44
- Y- Bloom 0.23 ac. TM 10/43
- Z- Bloom 0.23 ac. TM 10/42



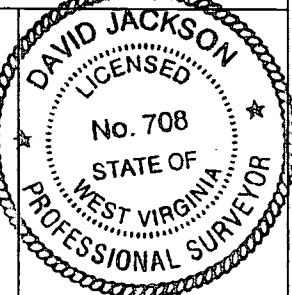
NUMBER	DIRECTION	DISTANCE
L1	$N34^{\circ}28'E$	214'
L2	$N58^{\circ}53'W$	819'
L3	$N53^{\circ}29'W$	1,529'

Notes: Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 83.

(+) 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

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 ADDRESS 1720 Rt. 22, East Union, NJ 07083 ADDRESS Route 1, Box 5, Cairo, WV 26337

Bottom Hole 1,164'  
 Bottom Hole 7,462'  
 LONGITUDE  $80-47-30 N$

06/17/2016