



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

February 24, 2017
PERMIT MODIFICATION APPROVAL
Horizontal 6A / Horizontal 6A Well - 1

JAY-BEE OIL & GAS, INC.
1720 RT. 22 E

UNION, NJ 070830000

Re: Permit Modification Approval for HAPPY 5
47-095-02229-00-00

Lateral Extension

JAY-BEE OIL & GAS, INC.

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.



James A. Martin
Chief

Operator's Well Number: HAPPY 5
Farm Name: BLOOM, ARTHUR & LOIS
U.S. WELL NUMBER: 47-095-02229-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: February 24, 2017

Promoting a healthy environment.

02/25/2017

WW-6B
(9/13)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Jay-Bee Oil & Gas, Inc 24610 Tyler McElroy Shirley
Operator ID County District Quadrangle

2) Operator's Well Number: Happy 5 Well Pad Name: Happy Pad

3) Farm Name/Surface Owner: Arthur & Lois Bloom Public Road Access: Walnut Fork Rd

4) Elevation, current ground: 1268 Elevation, proposed post-construction: 1253.5

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus, 7,255', 40' thickness, 3500# pressure

8) Proposed Total Vertical Depth: 7,255'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13,863'

11) Proposed Horizontal Leg Length: 5,088'

12) Approximate Fresh Water Strata Depths: 375'

13) Method to Determine Fresh Water Depths: API 47-095-00010 for salt and coal. Freshwater was closest creek at 879' elevation.

14) Approximate Saltwater Depths: 1474.5'

15) Approximate Coal Seam Depths: 456.5', 595.5', 689.5', 848.5', 911.5'.

16) Approximate Depth to Possible Void (coal mine, karst, other): N/A

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

WW-6B
(9/13)

18) CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill-up (Cu. Ft.)</u>
Conductor	16	New	J55	40	30'	30'	8.22 CTS
Fresh Water	11 3/4	New	J55	32	425'	425'	201.52 CTS
Coal	N/A						
Intermediate	8 5/8	New	J55	24	2,000'	2,000'	508.43 CTS
Production	5 1/2	New	P110	17	13,863'	13,863'	2228
Tubing	N/A						
Liners	N/A						

Cement up to 1000' from Surface

<u>TYPE</u>	<u>Size</u>	<u>Wellbore Diameter</u>	<u>Wall Thickness</u>	<u>Burst Pressure</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	16	17 1/2	.495	3,000#	Class A Cement	1.19
Fresh Water	11 3/4	15	.333	1,500#	Class A Cement	1.26
Coal	N/A					
Intermediate	8 5/8	11	.264	2,500#	Class A Cement	1.45
Production	5 1/2	7 7/8	.304	15,000#	Type 1 Cement	1.34
Tubing	N/A					
Liners	N/A					

PACKERS

Kind:	N/A			
Sizes:				
Depths Set:				

**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
T3042A1 (A,B)	John Lambert Ice	JB Exploration I, LLC	12.5%	411/746
T3041 (J)	Jay-Bee Royalty, LLC	JB Exploration I, LLC	12.5%	452/10
T3086, T4 (K)	Edward Cary Dunn	JB Exploration I, LLC	12.5%	423/539
T3209 (S)	David James Lemasters	JB Exploration I, LLC	12.5%	433/93
T3209A (I)	Marion Elder	JB Exploration I, LLC	12.5%	411/713
T3086A1 (T)	Marion Elder	JB Exploration I, LLC	12.5%	411/713
Drilling Affidavit	Jay-Bee Exploration I, LLC	Jay-Bee Oil & Gas, Inc.		

**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



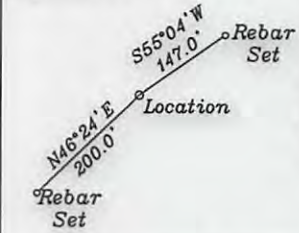
References

LATITUDE 39-30-00 N

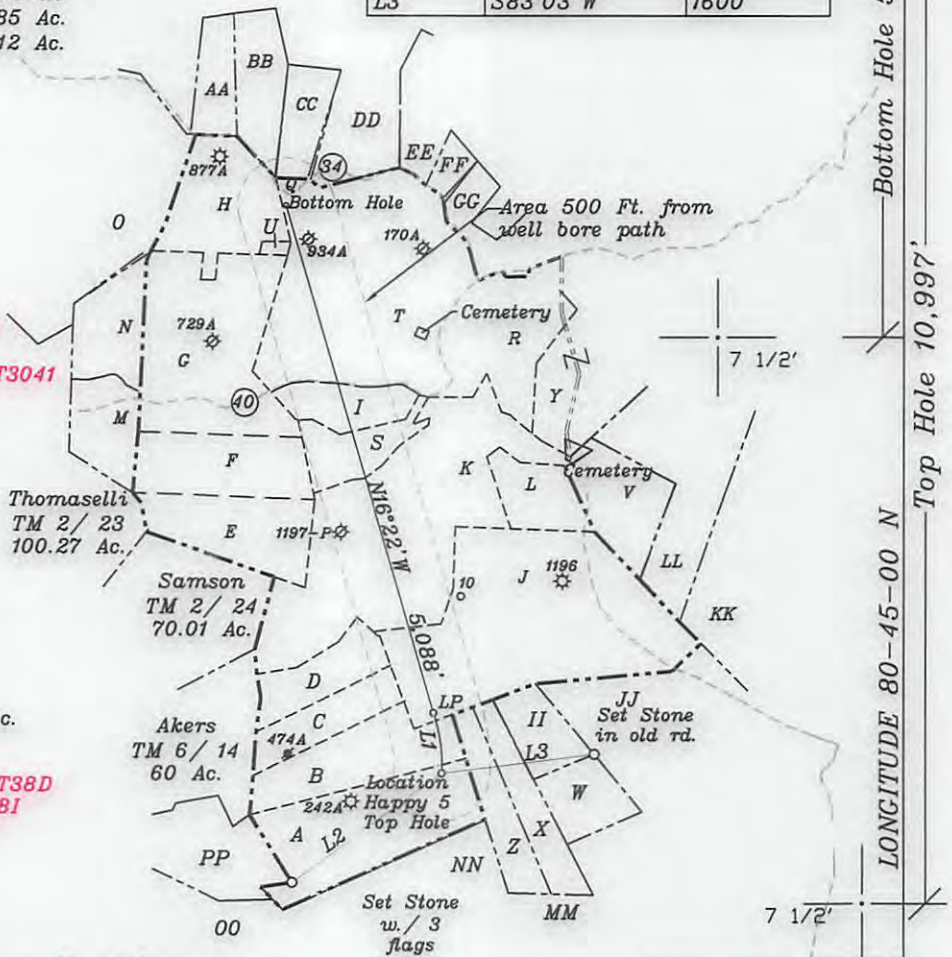
Bottom Hole 1,938'

- II- Thompson TM 7-4 11.66 Ac.
- JJ- Jay Bee Royalty TM 7-1 46.84 Ac.
- KK- Weimer TM 3-23 102 Ac.
- LL- Weimer TM 3-22 6.22 Ac.
- MM- Thompson TM 7/23 15.34 Ac.
- NN- Eidle TM 7/17 23.73 Ac.
- OO- Samson TM 6/20 85 Ac.
- PP- Samson TM 6/19 42 Ac.

NUMBER	DIRECTION	DISTANCE
L1	N10°59'W	1020'
L2	N53°53'E	1928'
L3	S83°03'W	1600'

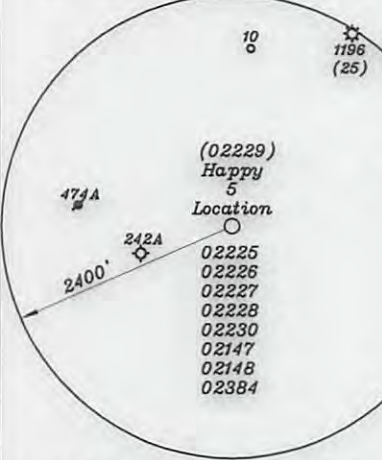


- A- Bloom TM 6/18 59.76 Ac. T3042A1
- B- Eidle TM 6/17 26.36 Ac. T3042A1
- C- Bouser TM 6/16 15.82 Ac.
- D- McHenry TM 6/15 15.81 Ac.
- E- Thomaselli TM 2/14 29 Ac.
- F- Jones p/o TM 2/12 31 Ac.
- G- Jones p/o TM 2/12 61 Ac. T3087A
- H- Ferrell & Doak TM 2/11 31 Ac. T3085 T6-A
- I- Pettit TM 2/31 11.5 Ac. T3209A
- J- Jay-Bee Oil & Gas, Inc TM 7/1.1 93.6 Ac. T3041
- K- R.Lemasters TM 2/26 87.06 Ac. T3086T4
- L- Bryant & Alpheus Tennent Hrs. TM 3/20 15 Acs. T3076A
- M- Rush TM 2-13 8.88 Ac. Ls. T3089
- N- Rush TM 2-13.1 23.56 Ac. Ls. T3089
- O- Parr TM 2-10 104.75 Ac. Ls. T3203
- Q- H.Lemasters TM. 2-32 1 Ac.
- R- H.Lemasters TM. 3-1 40.84 Ac.
- S- D.Lemasters TM. 2-25 29 Ac. T3209
- T- Hannen TM. 2-27 98.86 Ac. T3086A1
- U- Reservation from tract H (Bailey) 1 Ac.
- V- Bryant TM 3-21 18.66 Ac.
- W- Thompson TM 7-5 11.66 Ac.
- X- Thompson TM 7/3 17.5 Ac.
- Y- Alma Bees & Trees Farm TM 3-2 51.86 Ac.
- Z- Thompson TM 7/2 17.5 Ac.
- AA- Rick Staley et al TM 23-16 13 Ac
- BB- Rick Staley et al TM 23-17 15.5 Ac. FoutT38D
- CC- Rick Staley et al TM 23-18 13 Ac. FoutT38I
- DD- L. Lemasters TM 23-19 14.75 Ac. T6805B
- EE- Eidle TM 23-26 26.36 Ac.
- FF- Anderson TM 3-26 6.65 Ac.
- GG- Eidle TM 24-7 31.64 Ac.



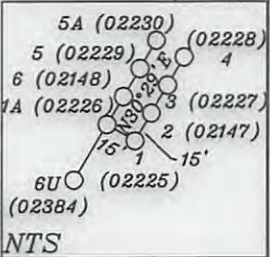
NORTH

Bottom Hole 5,113'
Top Hole 10,997'
LONGITUDE 80-45-00 N



- Notes: 1) Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 27.
- 2) All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats & aerial photos.
- 3) No water wells were found within 250' of the location. No dwellings or agricultural buildings were found within 625' of the center of the well pad.

500' from Bore Path



Top Hole	UTM NAD 83 (Meters)- 4368950.7 N, 521434.4 E
Landing Point	UTM NAD 83 (Meters)- 4369254.8 N, 521370.2 E
Bottom Hole	UTM NAD 83 (Meters)- 4370734.9 N, 520908.7 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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(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 21, 2017
 OPERATOR'S WELL NO. Happy 5
 API WELL NO. _____

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 - 095 - 02229 MOD
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT H6A

LOCATION: ELEVATION 1253.5' WATER SHED Walnut Fork & Woodburn Run
 DISTRICT McElroy COUNTY Tyler
 QUADRANGLE TH Shirley 7 1/2', BH Center Point 7 1/2'

SURFACE OWNER Arthur & Lois Bloom ACREAGE 59.76 ac.
 OIL & GAS ROYALTY OWNER John Lambert Ice LEASE ACREAGE 498.14 ac.

02/25/2017

LEASE NO. & ACREAGE: "See ownership list above for lease numbers"

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

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____

TARGET FORMATION Marcellus ESTIMATED DEPTH TVD=7,255 - TMD=13,863' +
 WELL OPERATOR Jay-Bee Oil & Gas, Inc. DESIGNATED AGENT Randy Broda
 ADDRESS 1720 Rt. 22, East Union, NJ 07083 ADDRESS 3570 Shields Hill Rd., Cairo, WV 26337