



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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, July 9, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

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

UNION, NJ 070830000

Re: Permit Modification Approval for P5S1
47-073-02584-00-00

Directional change, 6B, 6A-1, Plat, AOR, Anti-Collision.

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: P5S1
Farm Name: BB LAND LLC
U.S. WELL NUMBER: 47-073-02584-00-00
Horizontal 6A New Drill
Date Modification Issued: July 9, 2019

A handwritten signature in blue ink, appearing to read "James A. Martin", is written over the typed name and title.

Promoting a healthy environment.

WW-6B
(04/15)

API NO. 47-073 - 02584
OPERATOR WELL NO. P5S1
Well Pad Name: P5

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 Pleasants Union Ben's Run 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: P5S1 Well Pad Name: P5

3) Farm Name/Surface Owner: Jay Bee Oil and Gas, Inc. Public Road Access: Arvilla Road

4) Elevation, current ground: 896.1 Elevation, proposed post-construction: 868.1

5) Well Type (a) Gas X Oil Underground Storage
Other

(b) If Gas Shallow X Deep
Horizontal X

6) Existing Pad: Yes or No No

CTB 7/9/19

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, Target Depth 5700', 41-60' thick, 3500# pressure

8) Proposed Total Vertical Depth: 5,900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20,773'

11) Proposed Horizontal Leg Length: 13,558'

12) Approximate Fresh Water Strata Depths: 127'

13) Method to Determine Fresh Water Depths: API 47-073-00798 Freshwater, 47-073-00636 Saltwater, 47-073-00099 Coal

14) Approximate Saltwater Depths: 1,756.1'

15) Approximate Coal Seam Depths: 456.1-461.1'

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 X

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

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	26	New	H40	202	30'	30'	8.22 CTS
Fresh Water	13 3/8	New	H40	48	300'	300'	142.25 CTS
Coal							
Intermediate	8 5/8	New	J55	24	1,800'	1,800'	458 CTS
Production	5 1/2	New	P110	17	20,773'	20,773'	3425.8 CF1000' from surface
Tubing	N/A						
Liners	N/A						

CTB 7/19/19

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	26	30	.375	N/A	50	Class A	1.19
Fresh Water	13 3/8	17 1/2	.330	1,700#	1,000	Class A	1.26
Coal							
Intermediate	8 5/8	11	.264	2,950#	1,500	Class A	1.45
Production	5 1/2	7 7/8	.304	15,000#	2,500	Type 1 Cement	1.34
Tubing	N/A						
Liners	N/A						

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

CTB
7/9/19

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and Stimulate a new Horizontal Well. Using a top hole rig, we will drill top hole to kick off point by drilling the conductor, freshwater and intermediate holes. Using a directional rig we will drill the production holes.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

300-350' per stage 8,500bbls of water, 150,000-400,000lbs of sand, friction reducer, 1# per gallon, scale inhibitor and bacteria prevention 1/4# per gallon 2000 gallons 15% vol acid. 77bpm @ 6500# pressure.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 21.6

22) Area to be disturbed for well pad only, less access road (acres): 10.67

23) Describe centralizer placement for each casing string:

Vertical - Every 500' Bow Centralizer, and 50' from top of ground. Horizontal every 42' Spiral Centralizer, Curve - Every 84' Spiral Centralizer.

24) Describe all cement additives associated with each cement type:

15" hole for the 11 3/4 fresh water case, Class A Cement, 2% Calcium Chloride, 1/4# flake.
11" hole for the 8 5/8 intermediate base, Class A Cement, 2% Calcium Chloride
7 7/8" hole for the 5 1/2 production case, Type1 Cement, Fly Ash, Barite, Finetol 300L, R-3 Celio Flake, Sugar, CD-32, FL-62

25) Proposed borehole conditioning procedures:

Air Hole: 15" hole for the 11 3/4 fresh water case - Circulate until clean with air. If soaping, slug then dry.
Air Hole: 11" hole for the 8 5/8 intermediate base - Circulate until clean with air. If soaping, slug then dry.
7 7/8" hole for the 5 1/2 production case - Circulate with mud and sweeps for two times bottoms up. If needed weight up mud until no cuttings retrieved, then circulate with mud and sweeps for two times bottoms up.

*Note: Attach additional sheets as needed.

WW-6A1
(5/13)

Operator's Well No. PSS1

**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:

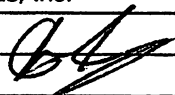
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
P7207	Richard Wells	Jay Bee Royalty	12.5%	312-199
P7206	Richard Wells	Jay Bee Royalty	12.5%	312-199
P7267K (I,J)	Ronald & Vicki Holmes	BB Land, LLC	12.5%	317-017
P7267A (X)	Roger Holmes	BB Land, LLC	12.5%	316-644
P7267 (Y)	Gary Burian	BB Land, LLC	12.5%	318-100
P7267Q (DD)	Edward Holmes	BB Land, LLC	12.5%	316-641
P7267O (AA)	- Roger Q Holmes	BB Land, LLC	12.5%	- 316-644

**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: Chris Lindsey
 Its: Office Manager 

Directional Change
47-073-0256-1

WW-6A1
(5/13)

Operator's Well No. P551

**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)**

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- (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
P7041	Linda L. Shimer	BB Land, LLC	12.5%	295-297
P7039	Ridgetop Capital IV, LP	BB Land, LLC	12.5%	294-257
P7122	Linda L. Shimer	BB Land, LLC	12.5%	295-297
P7121	Linda L. Shimer	BB Land, LLC	12.5%	295-297
P7098	Linda L. Shimer	BB Land, LLC	12.5%	295-297
P7070A (QQ)	David & Patty Sue McCartney	BB Land, LLC	12.5%	324-331
P7113 (UU)	Linda L. Shimer	BB Land, LLC	12.5%	295-297

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

Affidavit - BB Land, LLC - Jay-Bee Oil & Gas, Inc

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Well Operator: Jay-Bee Oil & Gas, Inc
 By: Chris Lindsey
 Its: Office Manager

Directional Chase

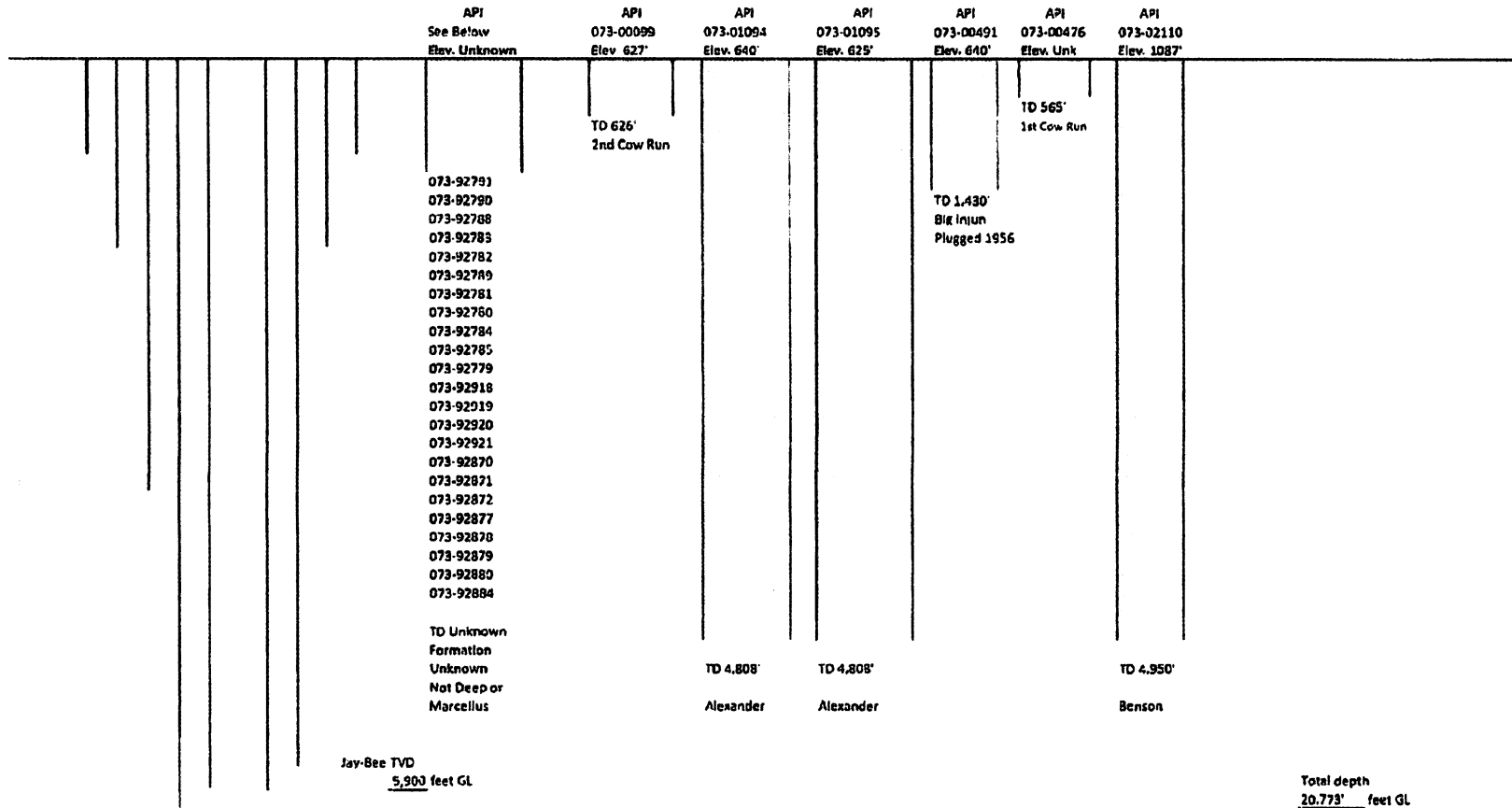
AOR

Jay Bee Oil & Gas Inc.

Well Name 851

GL Elevation 868.1

Well-Site Safety Plan Anti-Collision Schematic

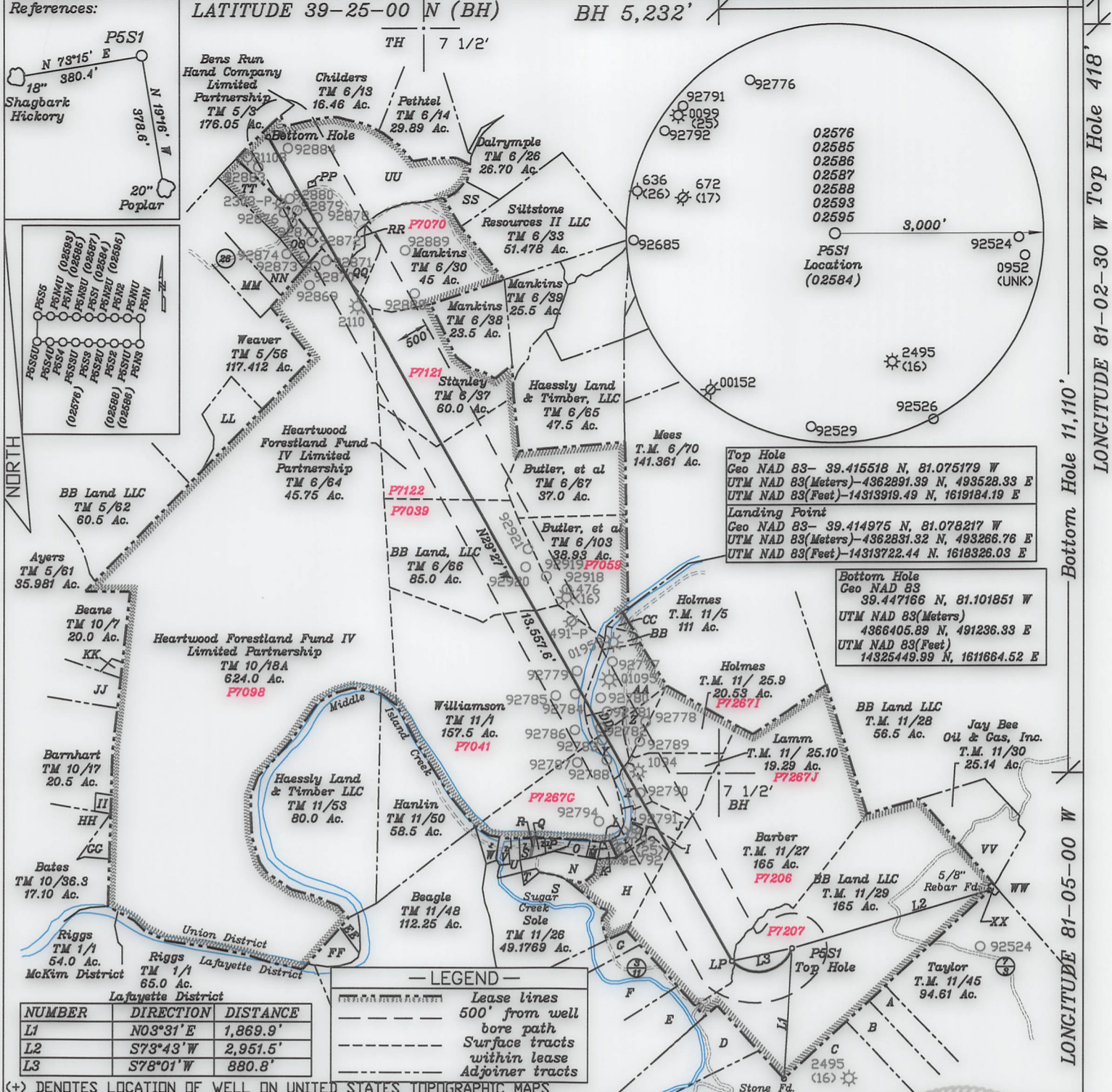


Area of Review

PSI 47-073-02584

API See Below Elev. Unknown	API 073-00099 Elev. 627	API 073-01094 Elev. 640'	API 073-01095 Elev. 625'	API 073-00491 Elev. 640'	API 073-00476 Elev. Unk	AP: 073-02110 Elev. 1087'
	TU 626' 2nd Cow Run					
073-92527 073-92518 073-92517 073-92502 073-92503 073-92516 073-92511 073-92512					TD 1,430' Big Injun Plugged 1956	
TD Unknown Formation Unknown Net Deep or Marcellus						
		TD 4,808' Alexander	TD 4,808' Alexander			TD 4,950' Benson

Operator	Unknown	Dinsmoor & Co	K Petroleum	Mountaineer Gas	Tackett Oil Co.	CJ Barnhart	G&S Drilling
Well Name	Multiple	34	Haal Fell 2	Harold Fell 1	1	1	Westcott 1
Perforated Formations	Unknown	Cow Run	Alexander	Alexander	Big Injun	Cow Run	Benson
Unperforated Producing Formations	Unknown		Benson	Benson	Keener		Riley
			Riley	Riley	Big Lime		Speechley
			Speechley	Speechley	Mason		Warren
			Warren	Warren	Big Dunkard		Gordon
			Gordon	Gordon	Little Dunkard		Gentle
			Gantz	Gantz	Cow Run		Berea
			Berea	Berea			Weir
			Weir	Weir			Big Injun
			Big Injun	Big Injun			Keener
			Keener	Keener			Big Lime
			Big Lime	Big Lime			Mason
			Mason	Mason			Big Dunkard
			Big Dunkard	Big Dunkard			Little Dunkard
		Little Dunkard	Little Dunkard			Cow Run	
		Cow Run	Cow Run				



REFERENCES:

N 73°15' E 380.4' Shagbark Hickory

N 19°16' E 318.6' 20" Poplar

NUMBER	DIRECTION	DISTANCE
L1	N03°31'E	1,869.9'
L2	S73°43'W	2,951.5'
L3	S78°01'W	880.8'

LEGEND

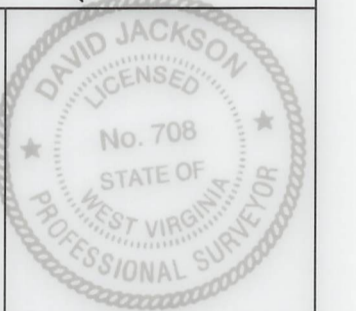
- Lease lines
- 500' from well bore path
- Surface tracts within lease
- Adjoiner tracts

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

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 D. Jackson*

R.P.E. _____ P.S. 708



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

DATE June 28, 2018
 REVISED July 01, 2019
 OPERATOR'S WELL NO. P5S1
 API WELL NO. 47-073-02584
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 868.1' WATER SHED Sugar Creek of Outlet Middle Island Creek (HUC-10)
 DISTRICT Union COUNTY Pleasants
 QUADRANGLE Bens Run 7 1/2'

SURFACE OWNER BB Land, LLC ACREAGE 165.0 Ac.
 OIL & GAS ROYALTY OWNER Roger Wells, Howard Wells, J.R. Wells, Clint Jones, Beverly Walker, Sara Wells & Thomas Dunsford, Yvonne Shelley LEASE ACREAGE 165.0 Ac. LEASE NO. P7207

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

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Marcellus ESTIMATED DEPTH TVD = 5,900'; TMD = 20,773'
 WELL OPERATOR Jay-Bee Oil & Gas, Inc. DESIGNATED AGENT Randy Broda
 ADDRESS 60 Walnut Avenue, Suite 190, Clark NJ 07066 ADDRESS 3570 Shields Hill Rd., Cairo, WV 26337

JACKSON SURVEYING
 INC.
 2413 East Pike Street
 #112
 Clarksburg, WV 26301
 304-623-5851

WELL BORE TABLE FOR PROPERTY OWNERS				
TRACT	OWNER	TM PARCEL	ACRES	Lease Numbers
A	TAYLOR	11 / 43	18.6	
B	TAYLOR	11 / 44	25.8	
C	MELANIE JO MANUSE REVOCABLE TRUST	11 / 41	123.27	
D	GOLDEN EAGLES RESOURCES LLC & HUMMER PROPERTIES LLC	11 / 40	62.063	
E	HALL	11 / 34	38.33	
F	GOLDEN EAGLE RESOURCES LLC	11 / 35	30.893	
G	WILLIAMSON	11 / 33	14.25	
H	K. HOLMES	11 / 25.12	21.267	P7267L
I	J. HOLMES	11 / 25.14	2.268	P7267K
J	HOLMES	11 / 25.11	8.381	P7267K
K	MYERS	11 / 25.6	0.581	
L	BAILEY	11 / 25.13	0.624	
M	SCHULTHEIS	11 / 25.5	0.75	
N	K. HOLMES	11 / 25.3	5.621	
O	WHARTON	11 / 25.4	2.25	
		11 / 25.8	TOTAL	
P	STOUT	11 / 23.1	0.524	
Q	MYERS & NEAL	11 / 24	0.21	
R	STOUT	11 / 23.2	0.084	
S	POYNTER	11 / 23	0.93	
T	SUGAR VALLEY SCHOOL	11 / 25.1	0.57	
U	SHIMER	11 / 22	3.63	
V	DEPARTMENT OF NATURAL RESOURCES	11 / 22.1	1.37	
W	BEAGLE	11 / 21	1.0	
X	MIXER	11 / 25	5.033	P7267A
Y	BURIAN	11 / 2	6.1	P7267
Z	MIXER	11 / 25.2	4.687	P7267B
AA	RONALD HOLMES, ET AL	11 / 3	18.453	P7267O
BB	ROGER HOLMES	11 / 3.1	1.75	P7267P
CC	ROGER HOLMES	11 / 4	1.0	P7267R
DD	EDWARD HOLMES	11 / 3.2	3.447	P7267Q
EE	TICE	11 / 51.1	1.0	
FF	THAXTON II	11 / 51	5.564	
GG	RIGGS	10 / 49	4.0	
HH	BARNHART	10 / 24	25	
II	BARNHART	10 / 26	1.0	
JJ	BARNHART	10 / 25	10.0	
KK	BARNHART	10 / 7.1	1.0	
LL	HEARTWOOD FORESTLAND FUND IV LIMITED PARTNERSHIP	5 / 56.1	12.5	
MM	ASH	5 / 36	15.0	
NN	METZ	5 / 37	20.0	
OO	BENNETT	6 / 109	5.011	
PP	CEMETERY			P7013A
QQ	MCCARTNEY	6 / 30.1	6.0	P7070A
RR	MCCARTNEY	6 / 31	0.75	P7070B
SS	LEWIS	6 / 32	6.08	
TT	NICHOLS	5 / 38	11.21	
UU	HEARTLAND FORESTLAND FUND IV LIMITED PARTNERSHIP	6 / 100	84	P7113
VV	JAY BEE OIL & GAS, INC.	11 / 31	13.11	
WW	HORNER, ET AL	11 / 32	231.82	
XX	GARDNER CEMETERY	11 / 32	231.82	



P.S.
708

David L. Jackson



Jay Bee
Oil & Gas

DRILLING
into the future

OPERATOR'S
 WELL #: P5S1
 DISTRICT: UNION
 COUNTY: PLEASANTS
 STATE: WV
 API #: 47-073-02584

P5S1 Well Plat
 PAGE 2 OF 2
 DATE: 06/28/2018
 REVISED: 07-01-2019