

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

API 47 - 095 - 02191 County Tyler District McElroy
Quad Shirley 7.5' Pad Name Doc Field/Pool Name _____
Farm name Stanley H. Tustin & WA & Ida Gaston Well Number Doc 1
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 4,366,638 Easting 519,940
Landing Point of Curve Northing N/A Easting N/A
Bottom Hole Northing 4,364,602 Easting 521,042

Elevation (ft) 1,036' 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 8/20/2014 Date drilling commenced 9/8/2014 Date drilling ceased 12/31/2014
Date completion activities began 11/16/2015 Date completion activities ceased 12/15/2015
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 60-90' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths _____
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

APPROVED

NAME: Justin Syden
DATE: 6/7/16

RECEIVED
Office of Oil and Gas
MAR 21 2016
WV Department of
Environmental Protection

Reviewed by: _____
AX 06/10/2016
06/07/16

API 47-095 - 02191 Farm name Stanley H. Tustin & WA & Ida Gaston Well number Doc 1

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"	353'	New	20/23/24	50'	Y
Coal							
Intermediate 1	11"	8 5/8"	2,243'	New	20/17/24	1,500'	Y
Intermediate 2							
Intermediate 3							
Production	7 7/8"	5 1/2"	14,772'	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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A	200	15.2	1.26	168	CTS	8
Coal							
Intermediate 1	Class A	575	14.7	1.36	567	CTS	8
Intermediate 2							
Intermediate 3							
Production	Class A	1,860	14.4	1.30	2,418.11	815' from surface	8
Tubing							

Drillers TD (ft) 14,772' Loggers TD (ft) 14,772'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5,970'

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 _____

RECEIVED
 Office of Oil and Gas
 MAR 21 2016
 WV Department of
 Environmental Protection
 06/06/2016

API 47- 095 - 02191

Farm name Stanley H. Tustin & WA & Ida Gaston Well number Doc 1

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	11/16/15	14519	14748	96	Marcellus
2	11/16/15	14346	14484	72	Marcellus
3	11/16/15	14168	14311	72	Marcellus
4	11/17/15	13909	14133	72	Marcellus
5	11/17/15	13711	13874	72	Marcellus
6	11/17/15	13488	13676	72	Marcellus
7	11/17/15	13302	13453	72	Marcellus
8	11/18/15	13085	13267	72	Marcellus
9	11/18/15	12895	13050	72	Marcellus
10	11/18/15	12667	12860	72	Marcellus
11	11/18/15	12426	12632	72	Marcellus
12	11/18/15	12246	12391	72	Marcellus
13	11/19/15	12044	12215	72	Marcellus
14	11/19/15	11845	12028	72	Marcellus
15	11/19/15	11605	11814	72	Marcellus
16	11/19/15	11423	11578	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	11/16/15	77.2	7250	7967	5198	177850	8561	N/A
2	11/16/15	77.1	7477	7967	5198	180900	6527	N/A
3	11/16/15	77	7557	6432	5003	181000	6441	N/A
4	11/17/15	76.8	7180	7248	4435	181000	6301	N/A
5	11/17/15	77.3	7030	5862	5166	180500	6851	N/A
6	11/17/15	77.4	7016	5888	5238	180400	7183	N/A
7	11/17/15	77	7002	5870	4883	180350	6694	N/A
8	11/18/15	77	7020	5736	4892	180050	6808	N/A
9	11/18/15	76.8	7172	6052	4718	180300	6655	N/A
10	11/18/15	76.9	7072	5484	4663	180400	6854	N/A
11	11/18/15	76.8	7001	5627	5002	180350	6842	N/A
12	11/18/15	77.2	6938	5903	4551	180250	6521	N/A
13	11/19/15	77	6850	5514	4464	181250	6958	N/A
14	11/19/15	77.1	6908	5338	4015	180900	6641	N/A
15	11/19/15	77.3	6822	5386	4120	181500	6082	N/A
16	11/19/15	77.1	6791	5822	3938	180900	6082	N/A

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas
MAR 21 2016
WV Department of Environmental Protection
6/10/2016

API 47- 095 - 02191 Farm name Stanley H. Tustin & WA & Ida Gaston Well number Doc 1

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	11/19/15	11217	11395	72	Marcellus
18	11/20/15	11000	11177	72	Marcellus
19	11/20/15	10806	10958	72	Marcellus
20	11/20/15	10567	10768	72	Marcellus
21	11/20/15	10365	10517	72	Marcellus
22	11/20/15	10158	10320	72	Marcellus
23	11/20/15	9933	10101	72	Marcellus
24	11/21/15	9701	9886	72	Marcellus
25	11/21/15	9525	9665	72	Marcellus
26	11/21/15	9308	9485	72	Marcellus
27	11/21/15	9122	9256	72	Marcellus
28	11/21/15	8897	9057	72	Marcellus
29	11/21/15	8687	8868	72	Marcellus
30	11/22/15	8464	8630	72	Marcellus
31	11/22/15	8287	8424	72	Marcellus
32	11/22/15	8075	8226	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	11/19/15	77.2	6763	5917	4201	181100	6087	N/A
18	11/20/15	77	6713	5509	4261	180700	6111	N/A
19	11/20/15	76.8	6774	5889	4584	180500	6097	N/A
20	11/20/15	77.8	6645	5543	4361	180500	5966	N/A
21	11/20/15	77	6833	5538	4796	180700	5954	N/A
22	11/20/15	77.3	6771	5696	4578	180450	6510	N/A
23	11/20/15	77.1	6946	6650	4482	180850	6300	N/A
24	11/21/15	77.3	6709	5852	4965	180800	6245	N/A
25	11/21/15	76.7	6638	5243	5190	180600	5859	N/A
26	11/21/15	76.8	6659	5298	4883	181100	5944	N/A
27	11/21/15	77.4	6717	5723	4793	180600	5774	N/A
28	11/21/15	77.5	6653	5760	4960	180450	6286	N/A
29	11/21/15	77.3	6672	5404	4585	181000	6115	N/A
30	11/22/15	77.3	6704	5481	4363	181000	6003	N/A
31	11/22/15	77.1	6659	5206	4692	180200	5631	N/A
32	11/22/15	76.8	6692	5667	4061	180400	5405	N/A

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas
MAR 9 2016
Department of Environmental Protection
06/10/2016

Lithology

Doc 1 47-095-02191

<u>FORMATION</u>	<u>TOP</u>	<u>BOTTOM</u>
MISC. RED ROCK & SHALES	0	2132
LIME	2132	2232
INJUN	2232	2349
SHALE	2349	2696
GORDON STRAY	2696	2716
SHALE	2716	2912
GORDON	2912	2942
SHALE	2942	3221
BAYARD	3221	3230
SHALE	3230	3559
WARREN	3559	3657
SHALE	3657	3893
BALLTOWN	3893	4056
SHALE	4056	4494
2ND RILEY	4494	4602
SHALE	4602	4753
3RD RILEY	4753	4794
SHALE	4794	4851
BENSON	4851	4854
SHALE	4854	5096
ALEXANDER	5096	5267
SHALE	5267	5512
ELK	5512	5560
SHALE	5560	5924
HAMILTON	5924	6098
SHALE	6098	6754
UPPER Marcellus	6754	6760
PARCELL LIME	6760	6795
SHALE	6795	6763
LOWER MARCELLUS	6763	

RECEIVED
Office of Oil and Gas
MAR 21 2016
WV Department of
Environmental Protection 06/10/2016

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: 47-095-02191 County: Tyler
District: McElroy Well No: Doc 1
Farm Name: Stanley H. Tustin & WA & Ida Gaston
Discharge Date/s From:(MMDDYY) 12-28-2015 To: (MMDDYY) 1-4-2016
Discharge Times. From: n/a To: n/a

Total Volume to be Disposed from this facility (gallons): NO DISCHARGE

Disposal Option(s) Utilized (write volumes in gallons):

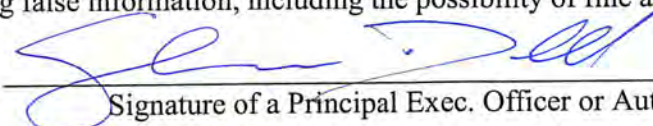
- (1) Land Application: _____ (Include a topographical map of the Area.)
- (2) UIC: _____ Permit No. _____
- (3) Offsite Disposal: _____ Site Location: _____
- (4) Reuse: _____ Alternate Permit Number: _____
- (5) Centralized Facility: _____ Permit No. _____
- (6) Other method: _____ (Include an explanation)

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: 3-17-2016

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.

RECEIVED
Office of Oil and Gas
Mar 21 2016
WV Department of
Environmental Protection

06/10/2016

Hydraulic Fracturing Fluid Product Component Information Disclosure



Job Start Date:	11/16/2015
Job End Date:	11/23/2015
State:	West Virginia
County:	Tyler
API Number:	47-095-02191-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	Doc 1
Longitude:	-80.76841670
Latitude:	39.44899000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,785
Total Base Water Volume (gal):	9,909,421
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	Customer & CWS	Base Fluid & Mix Water	Water	7732-18-5	100.00000	92.46551	
Sand (Proppant), DAP-901, DAP-903, DAP-925, DWP-111, DWP-621, DWP-901, DWP-938, DWP-844, Hydrochloric Acid	CWS	Propping Agent, Scale Inhibitor, Scale Inhibitor, Acid Corrosion Inhibitor, Gel Slurry, Friction Reducer, Breaker, Surfactant, Microbiocide, Clean Perforations	Crystalline silica (Quartz)	14808-60-7	100.00000	7.20444	
			Hydrochloric acid	7647-01-0	37.00000	0.14052	
			Paraffinic hydrocarbon solvent	64742-47-8	30.00000	0.03221	
			2-Propenoic acid, polymer with 2-propenamide, sodium salt	25987-30-8	40.00000	0.02863	
			Guar gum	9000-30-0	60.00000	0.02286	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.02286	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.01464	
			2-Propenoic acid, polymer with sodium phosphonate	71050-62-9	60.00000	0.01015	
			Illite	12173-60-3	1.00000	0.00869	

RECEIVED
 Office of Oil and Gas
 MAR 9 1 2016
 Environmental Protection
 Department of

		Calcite	471-34-1	1.00000	0.00845	
		2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00537	
		Goethite	1310-14-1	0.10000	0.00443	
		Biotite	1302-27-8	0.10000	0.00362	
		Apatite	64476-38-6	0.10000	0.00362	
		Sorbitan monooleate, ethoxylated	9005-65-6	5.00000	0.00358	
		Sorbitan monooleate	1338-43-8	5.00000	0.00358	
		Ilmenite	98072-94-7	0.10000	0.00322	
		Methanol	67-56-1	60.00000	0.00236	
		Isotridecyl alcohol, ethoxylated	78330-21-9	3.00000	0.00215	
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00190	
		Sodium acetate	126-96-5	2.00000	0.00143	
		Ammonium Persulfate	7727-54-0	100.00000	0.00139	
		Sodium bromide	7647-15-6	4.00000	0.00107	
		Dibromoacetone	3252-43-5	3.00000	0.00081	
		Organic phosphonate 1	Proprietary	30.00000	0.00072	Proprietary CAS
		Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00057	
		Alcohols, C9-11, ethoxylated	68439-46-3	5.00000	0.00026	
		Organic phosphonate 2	Proprietary	10.00000	0.00024	Proprietary CAS
		Ammonium chloride	12125-02-9	10.00000	0.00014	
		Oxyalkylated polyamine	Proprietary	5.00000	0.00012	Proprietary CAS
		Amine salt	Proprietary	5.00000	0.00012	Proprietary CAS
		Acrylamide	79-06-1	0.10000	0.00007	
		Alcohols, C14-15, ethoxylated	68951-67-7	30.00000	0.00005	
		Modified thiourea polymer	68527-49-1	30.00000	0.00005	
		Fatty acids, tall-oil	61790-12-3	30.00000	0.00005	
		Alcohols, C12-13, ethoxylated	66455-14-9	1.00000	0.00005	
		Propargyl Alcohol	107-19-7	10.00000	0.00002	
		Acetic acid	64-19-7	1.00000	0.00002	
		Sodium chloride	7647-14-5	1.00000	0.00001	
		Formaldehyde	50-00-0	0.10000	0.00001	
		Alkenes, C>10 a-	64743-02-8	5.00000	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)

Environmental Protection
Department of
Water and
Air
Pollution
Control
and
Gas
Management
Division
Approved
for
Release

LATITUDE 39°27'30"

5,202'

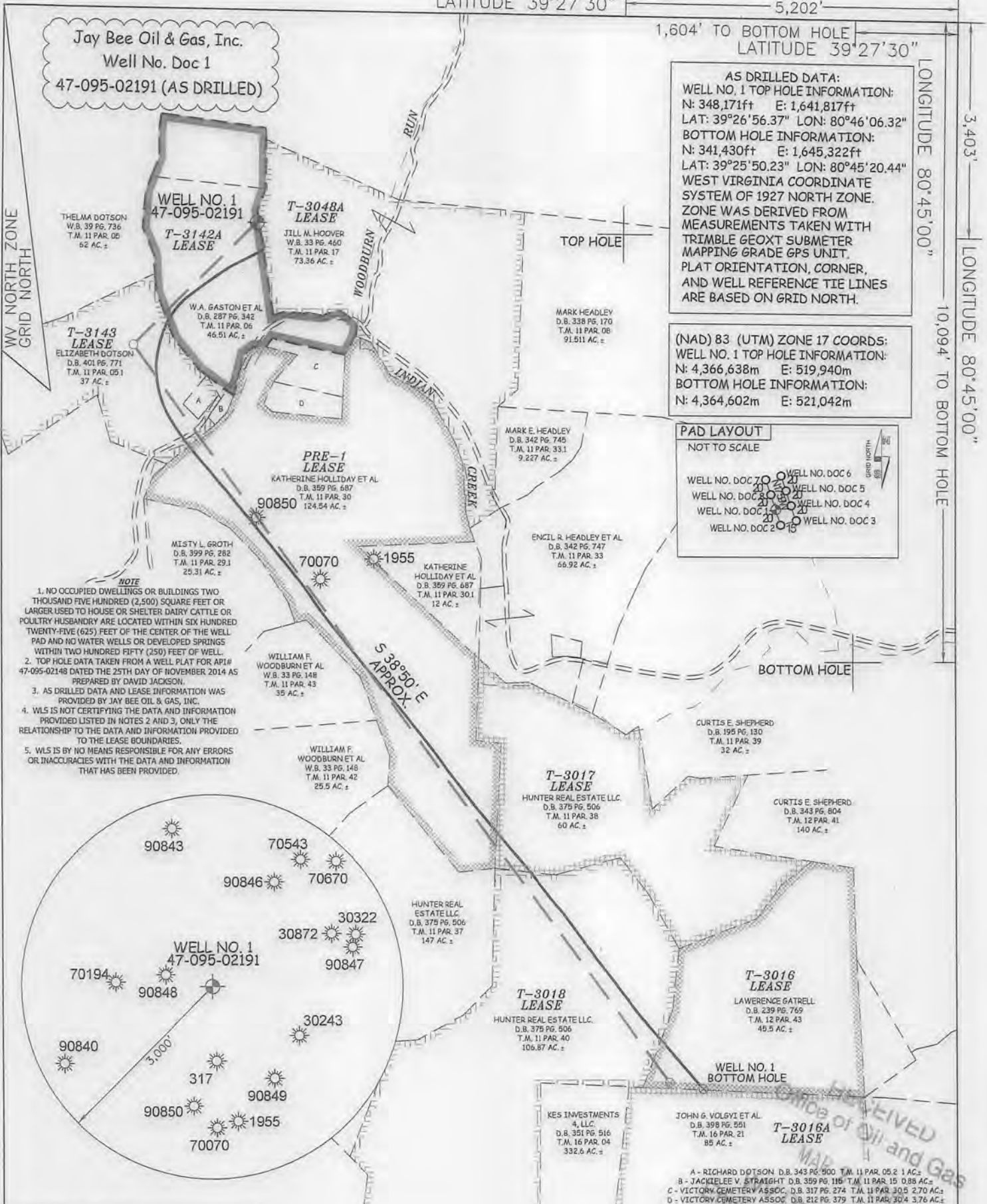
1,604' TO BOTTOM HOLE

LATITUDE 39°27'30"

LONGITUDE 80°45'00"

LONGITUDE 80°45'00"

10,094' TO BOTTOM HOLE



JOB # DOC1
DRAWING # DOC1
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

LEGEND
- - - Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
⊕ Found monument, as noted
○ Proposed Well Path
⊗ As Drilled Well Path

DATE 03/17/16
OPERATOR'S WELL # DOC1

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 - 095 - 02191
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 1,036' WATERSHED MIDDLE ISLAND CREEK DISTRICT MCLEROY COUNTY TYLER
QUADRANGLE SHIRLEY 7.5
SURFACE OWNER W.A. GASTON ET AL ACREAGE 46.51 ACRES +/-
OIL & GAS ROYALTY OWNER T-3142A; T-3048A; T-3143; PRE-1; T-3017; T-3018; T-3016; T-3016A LEASE ACREAGE 44.5 ACRES±; 73.36 ACRES±; 38 ACRES±; 124.54 ACRES±; 60 ACRES±; 110 ACRES±; 45.5 ACRES±; 85 ACRES±

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,785' TVD 14,772' MD
WELL OPERATOR JAY BEE OIL & GAS, INC. DESIGNATED AGENT RANDY BRODA
ADDRESS 1720 ROUTE 22 ADDRESS ROUTE 1, BOX 5
FORM WW-6 EAST UNION, NJ 07083 CAIRO, WV 26337

06/10/2016

COUNTY NAME PERMIT