

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

API 47 - 095 - 02084 County Tyler District McElroy  
Quad Shirley 7.5' Pad Name RPT8 Field/Pool Name \_\_\_\_\_  
Farm name Jack Hair et al Well Number RPT-8-2  
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 4,370,413.0 Easting 518,396.1  
Landing Point of Curve Northing 4,370,369.8 Easting 518,592.0  
Bottom Hole Northing 4,368,238.4 Easting 519,565.9

Elevation (ft) 1244' 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)  
EZ-MUD® (hydrotreated light petroleum distillate)

Date permit issued 2/5/2013 Date drilling commenced 5/14/2013 Date drilling ceased 7/15/2013  
Date completion activities began 1/13/2014 Date completion activities ceased 2/28/2014  
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 420' - 480' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 2120' - 2310' 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

APR 27 2015  
Reviewed by:  
AL. 5/26/15 ✓  
W.S. 06/12/2015  
Office of Oil and Gas  
WV Dept. of Environmental Protection

API 47-095 - 02084 Farm name Jack Hair et al Well number RPT-8-2

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"	40'	New	20/32/24		Yes
Surface	15"	11 3/4"	547.5'	New	20/23/24	50'	Yes
Coal							
Intermediate 1	11"	8 5/8"	2345.4'	New	20/17/24	1500'	Yes
Intermediate 2							
Intermediate 3							
Production	7 7/8"	5 1/2"	15,311'	New	20/24/24		Yes
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	310	15.6	1.26	391	CTS	0
Coal							
Intermediate 1	Class A	655	14.7	1.45	950	CTS	0
Intermediate 2							
Intermediate 3							
Production	Class A	1,921	14.3	1.35	2,594	300' from Surface	0
Tubing							

Drillers TD (ft) 15,347' Loggers TD (ft) 15,347'  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6,250'

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 bow centralizer placed every 500'.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS Received

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS APR 27 2015

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_  
 Office of Oil and Gas  
 WV Dept. of Environmental Protection

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	1/12/2014	15122	15274	72	Marcellus
2	1/13/2014	14798	15057	72	Marcellus
3	1/14/2014	14590	14761	72	Marcellus
4	1/15/2014	14310	14550	72	Marcellus
5	1/16/2014	14024	14262	72	Marcellus
6	1/17/2014	13710	13941	72	Marcellus
7	1/18/2014	13458	13654	72	Marcellus
8	1/19/2014	13208	13410	72	Marcellus
9	1/19/2014	12871	13120	72	Marcellus
10	1/19/2014	12614	12790	72	Marcellus
11	1/19/2014	12368	12564	72	Marcellus
12	1/20/2014	12091	12328	72	Marcellus
13	1/20/2014	11828	12052	72	Marcellus
14	1/20/2014	11532	11764	72	Marcellus
15	1/20/2014	11263	11498	72	Marcellus
16	1/21/2014	10970	11216	72	Marcellus

received

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

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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	1/13/14	68.6	7452	5265	4328	1589	8434	N/A
2	1/14/14	71.9	7251	5674	4567	1800	8570	N/A
3	1/15/14	71.1	7003	5541	4733	1880	7535	N/A
4	1/16/14	69.6	6832	5343	8465	1580	6410	N/A
5	1/17/14	71.6	6689	6796	4986	1615	6516	N/A
6	1/18/14	70.7	6610	5024	3768	1841	7196	N/A
7	1/18/14	70.3	6581	5178	4578	1886	7759	N/A
8	1/19/14	71.6	7099	5869	4252	1665	7282	N/A
9	1/19/14	70.8	6602	5628	3725	1778	6795	N/A
10	1/19/14	72.5	6698	5481	4280	1802	6600	N/A
11	1/20/14	69.8	6585	7544	4613	1776	7436	N/A
12	1/20/14	71.3	6553	6640	5517	1780	6942	N/A
13	1/20/14	72.3	6825	5488	4573	1775	7355	N/A
14	1/20/14	72.1	6737	5789	4614	1796	6887	N/A
15	1/20/14	69.9	7108	6154	4589	996	6632	N/A
16	1/21/14	71.9	6853	5671	5084	1756	6926	N/A

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Please insert additional pages as applicable.

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**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	1/21/2014	10750	10892	72	Marcellus
18	1/22/2014	10448	10680	72	Marcellus
19	1/22/2014	10166	10392	72	Marcellus
20	1/23/2014	9880	10108	72	Marcellus
21	1/23/2014	9691	9844	72	Marcellus
22	1/23/2014	9374	9620	72	Marcellus
23	1/24/2014	9096	9310	72	Marcellus
24	1/24/2014	8830	9039	72	Marcellus
25	1/25/2014	8554	8773	72	Marcellus
26	1/28/2014	8316	8488	72	Marcellus
27	1/28/2014	8022	8252	72	Marcellus
28	1/29/2014	7774	7976	72	Marcellus
29	2/1/2014	7574	7722	72	Marcellus
30	2/1/2014	7318	7526	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	1/22/14	70.9	6904	5206	4980	1249	8125	N/A
18	1/22/14	71.4	6615	6594	4222	1784	8563	N/A
19	1/23/14	72.7	6564	5688	4258	1787	6872	N/A
20	1/23/14	71.0	6353	5887	4970	1777	7105	N/A
21	1/23/14	69.7	6309	5745	4864	1821	6762	N/A
22	1/24/14	69.6	6411	5677	4084	1665	7687	N/A
23	1/24/14	70.3	6544	7112	4712	1787	8376	N/A
24	1/25/14	69.7	6414	6964	4633	1855	6331	N/A
25	1/25/14	70.1	6322	5414	4428	1865	7187	N/A
26	2/1/14	68.9	6378	6277	5053	1561	5737	N/A
27	2/1/14	70.1	6351	5947	4831	1614	5979	N/A
28	2/1/14	70.3	6313	6335	4614	1752	6290	N/A
29	2/2/14	71.5	6067	5339	4538	1611	6740	N/A
30	2/2/14	70.3	5494	5918	4658	1884	6426	N/A

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)

DEPTHS

Marcellus 6,922' TVD 15,347' MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3,400 psi Bottom Hole n/a psi DURATION OF TEST 18 hrs

OPEN FLOW Gas 7,000 mcfpd Oil 200 bpd NGL - bpd Water - 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)
See Attached.	0		0		

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Please insert additional pages as applicable.

Drilling Contractor HWD

Address 7350 Coal Hill Rd. City Luthersburg State PA Zip 15848

Logging Company Precise Well Analysis

Address 1426 Barth Rd. City Belpre State OH Zip 45714

Cementing Company Nabors

Address PO Box 975682 City Dallas State TX Zip 75397

Stimulating Company Nabors

Address PO Box 975682 City Dallas State TX Zip 75397

Please insert additional pages as applicable.

Completed by Shane Dowell

Telephone 304-628-311

Signature  Title Office Manager

Date 4-24-2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

06/12/2015

	<b>rpt 8 pad</b>	
	rpt 8-1	47-095-02085
	rpt 8-2	47-095-02084
	rpt 8-3	47-095-02083
	ELEVATION	1244
<b>FORMATION</b>	<b>TOP</b>	<b>BOTTOM</b>
MISC. RED ROCK & SHALES	0	2137
LIME	2137	2237
INJUN	2137	2254
SHALE	2254	2601
GORDON STRAY	2601	2621
SHALE	2621	2817
GORDON	2817	2847
SHALE	2847	3126
BAYARD	3126	3135
SHALE	3135	3464
WARREN	3464	3562
SHALE	3562	3798
BALLTOWN	3798	3961
SHALE	3961	4399
2ND RILEY	4399	4507
SHALE	4507	4658
3RD RILEY	4658	4699
SHALE	4699	4756
BENSON	4756	4759
SHALE	4759	5001
ALEXANDER	5001	5172
SHALE	5172	5417
ELK	5417	5465
SHALE	5465	6161
HAMILTON	6161	6335
SHALE	6155	6811
UPPER Marcellus	6811	6840
PARCELL LIME	6840	6875
SHALE	6875	6922
LOWER MARCELLUS	6922	

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MAY 23 2014

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Environmental Protection  
06/12/2015

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/13/2014
Job End Date:	2/28/2014
State:	West Virginia
County:	Tyler
API Number:	47-095-02084-00-00
Operator Name:	Jay-Bee Oil & Gas, Inc.
Well Name and Number:	RPT8-2
Longitude:	-80.78609100
Latitude:	39.48312000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,922
Total Base Water Volume (gal):	8,977,710
Total Base Non Water Volume:	



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## 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	Jay-Bee Oil & Gas, Inc.	Water	Water	7732-18-5	100.00000	92.87393	
100 Mesh	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica	14808-60-7	99.90000	2.91364	
			Aluminum Oxide	1344-28-1	1.10000	0.03208	
			Titanium Oxide	13463-67-7	0.10000	0.00292	
			Iron Oxide	1309-37-1	0.10000	0.00292	
30/50 Mesh	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica	14808-60-7	99.90000	2.82913	
			Aluminum Oxide	1344-28-1	1.10000	0.03115	
			Titanium Oxide	13463-67-7	0.10000	0.00283	
			Iron Oxide	1309-37-1	0.10000	0.00283	
HCL Acid 22 Baume	Nabors Completion and Production Services	Bulk Acid	Water	7732-18-5	87.50000	0.54311	
			Hydrogen Chloride	7641-01-1	18.00000	0.11173	

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20/40 Mesh	Nabors Completion and Production Services	Sand - Bulk - West Virginia										
			Crystalline Silica	14808-60-7	99.90000					0.61747		
			Aluminum Oxide	1344-28-1	1.10000					0.00680		
			Titanium Oxide	13463-67-7	0.10000					0.00062		
			Iron Oxide	1309-37-1	0.10000					0.00062		
WFR-3B	Nabors Completion and Production Services	Friction Reducer										
			Hydrotreated Light Distillate	64742-47-8	30.00000					0.02395		
			Mineral Spirits	8052-41-3	10.00000					0.00798		
			Ethoxylated Alcohols	68551-12-2	4.00000					0.00319		
KR-153-SL	Nabors Completion and Production Services	Biocides										
			Polyethylene Glycol	25322-68-3	50.00000					0.01098		
			2,2-Dibromo-3-nitrilo-propionamide	10222-01-2	20.00000					0.00439		
Super TSC LT	Nabors Completion and Production Services	Paraffin & Scale Additives										
			Water	7732-18-5	60.00000					0.01313		
Super Max II	Nabors Completion and Production Services	Surfactant & Foamer										
			Ethylhexanol	104-76-7	40.00000					0.00396		
			Isopropyl Alcohol	67-63-0	30.00000					0.00297		
			Glycol Ethers	111-76-2	7.00000					0.00069		
LSG-100L	Nabors Completion and Production Services	Petroleum Distillates										
			Petroleum Distillates	64742-47-8	60.00000					0.00242		
Acid Inhibitor AL-2	Nabors Completion and Production Services	Acid Corrosion Inhibitors										
			Glycol Ethers	111-76-2	40.00000					0.00048		
			Propargyl Alcohol	107-19-7	40.00000					0.00048		
			Isopropyl Alcohol	67-63-0	40.00000					0.00048		
			Ethoxylated Nonylphenol	68412-54-4	13.00000					0.00016		
			Tar bases	72480-70-7	10.00000					0.00012		
<b>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.</b>												
WFR-3B NON-MSDS	Nabors Completion and Production Services	Friction Reducer										
			Propylene Glycol	57-55-6	25.00000					0.01996		
Super TSC LT NON-MSDS	Nabors Completion and Production Services	Paraffin & Scale Additives										
			proprietary	proprietary	15.00000					0.00328		
			proprietary	proprietary	15.00000					0.00328		

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LSG-100L NON-MSDS		proprietary	proprietary	15.00000	0.00328
Nabors Completion and Production Services	Gelling Agents	proprietary	proprietary	15.00000	0.00328
		Guar Gum	9000-30-0	50.00000	0.00201
		Suspending Agent	14808-60-7	2.00000	0.00008
Super Max II NON-MSDS	Surfactant & Foamer	Surfactant	68439-51-0	2.00000	0.00008
		proprietary	proprietary	7.00000	0.00069

\* 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%

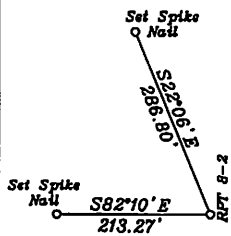
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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References



LATITUDE 39-30-00 N

Surface Hole Location

UTM NAD 83(Meters)-4370413.0 N, 518396.1 E  
Geo. NAD 83-39.483120 N, 80.786091 W  
State Plane NAD 83-360677.8 N, 1606515.6 E

Landing Point 1

UTM NAD 83(Meters)-4370369.8 N, 518592.0 E  
Geo. NAD 83-39.482727 N, 80.783815 W  
State Plane NAD 83-360525.5 N, 1606155.9 E

Landing Point 2

UTM NAD 83(Meters)-4370258.9 N, 518773.0 E  
Geo. NAD 83-39.481723 N, 80.781714 W  
State Plane NAD 83-360151.6 N, 1606743.8 E

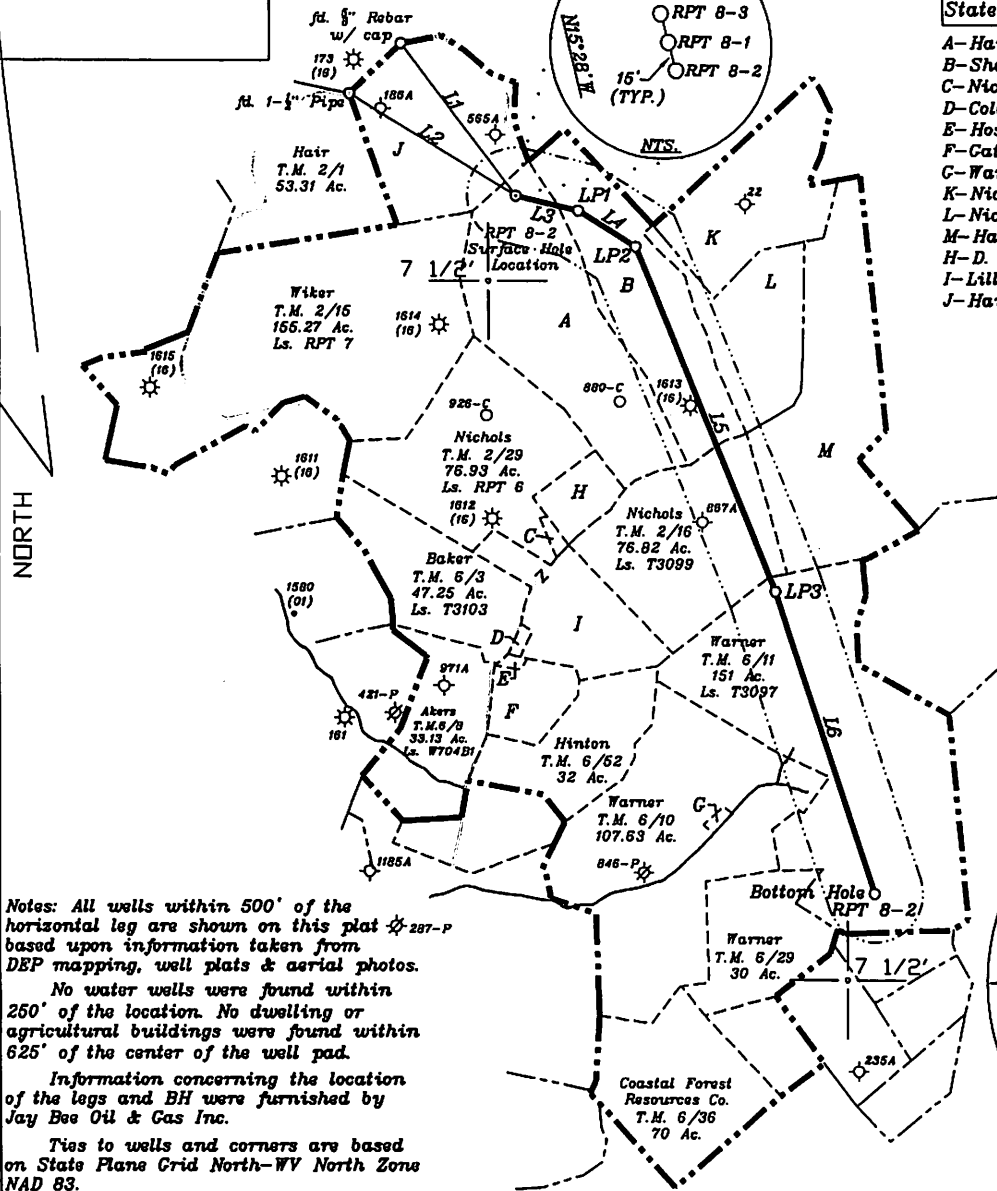
Landing Point 3

UTM NAD 83(Meters)-4369184.7 N, 519236.6 E  
Geo. NAD 83-39.472034 N, 80.776353 W  
State Plane NAD 83-356601.1 N, 1608206.5 E

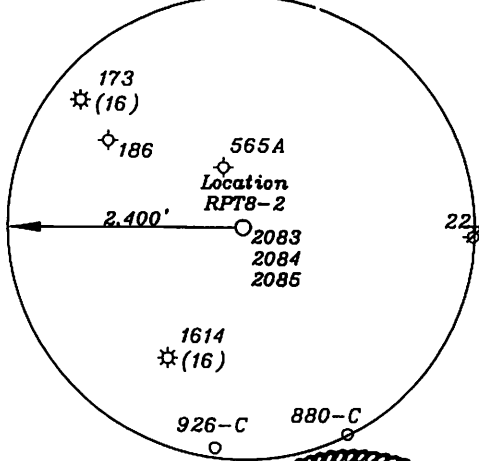
Bottom Hole Location

UTM NAD 83(Meters)-4368238.4 N, 519665.9 E  
Geo. NAD 83-39.463499 N, 80.772553 W  
State Plane NAD 83-353477.7 N, 1609235.2 E

- A-Hair T.M. 2/17 85 Ac. Ls. RPT8
- B-Sherwood T.M. 2/18 62.5 Ac. Ls. RPT9
- C-Nichols T.M. 6/4 1.25 Ac.
- D-Cole T.M. 6/5 1 Ac. Ls. T3100A1
- E-Hostuttler T.M. 6/6 0.38 Ac.
- F-Catrell T.M. 6/7 14.62 Ac. Ls. T3101
- G-Warner T.M. 6/10.1 0.368 Ac.
- K-Nichols T.M. 2/9 50 Ac.
- L-Nichols T.M. 2/20 35.68 Ac.
- M-Hagan T.M. 2/21 91.587 Ac. Ls. RPT 9a
- H-D. Nichols et al T.M. 2/19 12.5 Ac. Ls. T3099A
- J-Liller T.M. 6/3.1 15 Ac. Ls. T3180
- J-Hair T.M. 2/2 53.75 Ac.



NUMBER	DIRECTION	DISTANCE
L1	S37°11' E	1,931'
L2	S68°09' E	2,010'
L3	S76°37' E	658'
L4	S57°33' E	697'
L5	S22°23' E	3,840'
L6	S18°14' E	3,288'



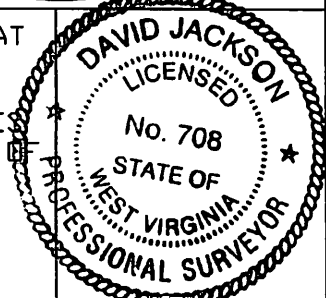
Notes: All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats & aerial photos. No water wells were found within 250' of the location. No dwelling or agricultural buildings were found within 625' of the center of the well pad. Information concerning the location of the legs and BH were furnished by Jay Bee Oil & Gas Inc. 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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

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



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

DATE April 21, 2015  
OPERATOR'S WELL NO. RPT 8-2  
API WELL NO. \_\_\_\_\_

WELL TYPE: OIL X GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_ STATE 47 COUNTY 095 PERMIT 02084  
(IF 'GAS') PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION: ELEVATION 1,244.5' WATER SHED Big Run  
DISTRICT McElroy COUNTY Tyler  
QUADRANGLE Shirley 7 1/2'

SURFACE OWNER Jack Hair et al ACREAGE 85 ac  
OIL & GAS ROYALTY OWNER Jack Hair(85 Ac.), Micheal Sherwood(62.5 Ac.), Duane Nichols(76.82 Ac.), Harold T. Warner(151 Ac.)

LEASE NO. RPT 8, RPT 9, T3099 & T3897

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 7,500'+ Horizontal leg  
WELL OPERATOR Jay Bee Oil & Gas, Inc. DESIGNATED AGENT Randy Broda  
ADDRESS 1720 Rt. 22 East Union, NJ 07083 ADDRESS Rt. 1 Box 5 Cairo, WV 26337

06/12/2015

NORTH

LONGITUDE 80-45-00 W BH

LONGITUDE 80-47-00 W TH

Bottom Hole 13,233'

Top Hole 6,033'