



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

May 29, 2014

WELL WORK PERMIT
Horizontal 6A Well

This permit, API Well Number: 47-1706438, issued to JAY-BEE OIL & GAS, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: ROBERT M. ASH 1HC
Farm Name: ASH, ROBERT M.
API Well Number: 47-1706438
Permit Type: Horizontal 6A Well
Date Issued: 05/29/2014

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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 Doddridge McClellan Center Point 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Robert M. Ash 1HC Well Pad Name: Robert M. Ash Pad

3) Farm Name/Surface Owner: Robert M. Ash Public Road Access: McIntyre Fork Rd

4) Elevation, current ground: 1075.5 Elevation, proposed post-construction: 1075.5

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

4-25-2014
DCR

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus, 6976' , 3500#

8) Proposed Total Vertical Depth: 6976'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 10,990'

11) Proposed Horizontal Leg Length: 4,014

12) Approximate Fresh Water Strata Depths: 249'

13) Method to Determine Fresh Water Depths: API 47-095-05968/Nearest Stream

14) Approximate Saltwater Depths: N/A

15) Approximate Coal Seam Depths: N/A

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: _____

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WW-6B
(9/13)

18)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	16	New	J55	40	30	30	8.22 (fill up)
Fresh Water	11 3/4	New	J55	32	300	300	142.26 (fill up)
Coal	N/A						
Intermediate	8 5/8	New	J55	23/24	2,000	2,000	508.43 (fill up)
Production	5 1/2	New	P110	17/20	10,990	10,990	1,904.07
Tubing	N/A						
Liners	N/A						

1000' from surface

DCN
4-25-2014

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
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:	N/A			
Depths Set:	N/A			

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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.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 3.7

22) Area to be disturbed for well pad only, less access road (acres): 2.8

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:

Superior Well Services - 15" hole for the 11 3/4 fresh water case, Class A Cement, 2% Calcium Chloride, 1/4# flake.
Superior Well Services - 11" hole for the 8 5/8 intermediate base, Class A Cement, 2% Calcium Chloride
Baker Hughes - 7 7/8" hole for the 5 1/2 production case, Type 1 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 the hole.
Air Hole: 11" hole for the 8 5/8 intermediate base - Circulate until clean with air. If soaping, slug the hole.
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.

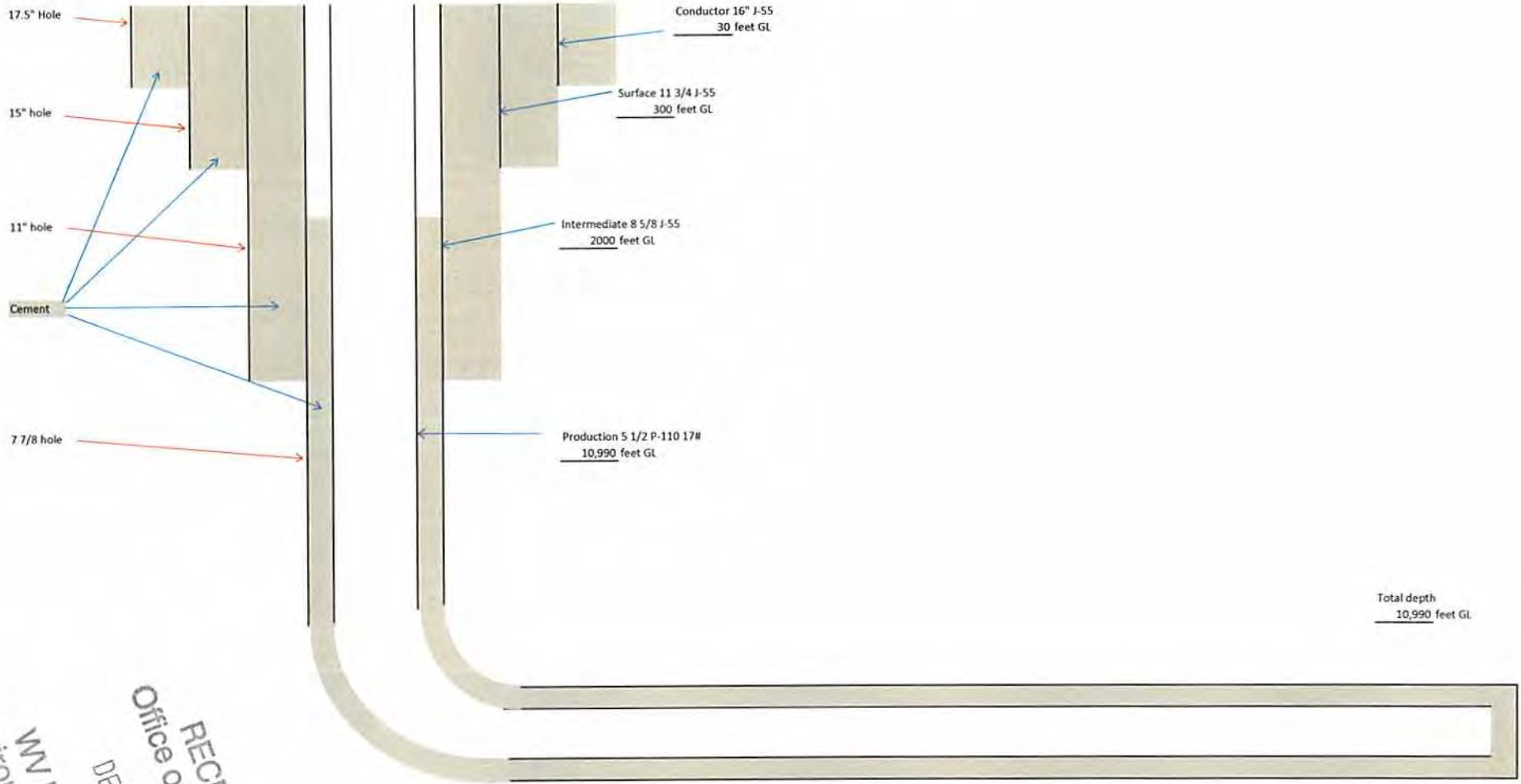
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*Note: Attach additional sheets as needed.

Jay-Bee Oil & Gas Inc.
Well Name Robert M Ash 1HC
GL Elevation 1075.5
KB 14 feet

Date 12/23/2013
District McClellan
County Doddridge
State West Virginia

Input by: Shane Dowell



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17-06438

WW-9
(9/13)

API Number 47 - 17 - 06438
Operator's Well No. Robert M. Ash 1HC

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Jay-Bee Oil & Gas, Inc OP Code 24610

Watershed (HUC 10) McIntyre Fork Creek Quadrangle Center Point 7.5'

Elevation 1075.8' County Doddridge District McClellan

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Drill Cuttings - Air Drilling Top Hole

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 60

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 47-085-09721)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Using Contract Haulers Norte/CES (API's 47-085-05151))

Will closed loop system be used? If so, describe: Yes, Centrifuge System (Boss, Newalta) Possible, directional

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Water Based

-If oil based, what type? Synthetic, petroleum, etc. Brine Base Drilling Mud

Additives to be used in drilling medium? Bentonite, Salt, Soda Ash

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) Landfill

-Landfill or offsite name/permit number? Meadowfill/Permit 101219WV

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature [Signature]

Company Official (Typed Name) Shane Dowell

Company Official Title Office Manager

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JAN 1 9 2014

Subscribed and sworn before me this 23rd day of Dec.

[Signature]
My commission expires July 23, 2023

20 13 WV Department of
Notary Public
OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Ashley N Meeks
669 Baker St
Harrisville, WV 26036
My Commission Expires July 23, 2023

05/30/2014

Form WW-9

Operator's Well No. Robert M. Ash 1HC

Jay-Bee Oil & Gas, Inc

Proposed Revegetation Treatment: Acres Disturbed 3.7 Prevegetation pH 6.8

Lime 3 Tons/acre or to correct to pH 6.8

Fertilizer type 10-20-20

Fertilizer amount 750 lbs/acre

Mulch Hay 2000 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
Annual Ryegrass	40

Seed Type	lbs/acre
KY-31	20

Creeping Red Fescue	30
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Lathco Flat Pea/Perennial Ryegrass	30
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Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Douglas Newlan Michael Hoff

Comments: Proceed & Mulch install ETS to Wv Dep regulations

Title: Oil & Gas inspector

Date: 12-26-2013

Field Reviewed? Yes No

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05/30/2014



Water Management Plan: Secondary Water Sources



WMP-01742

API/ID Number 047-017-06438

Operator: Jay-Bee Oil & Gas, Inc.

Robert M Ash 1HC

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Multi-site impoundment

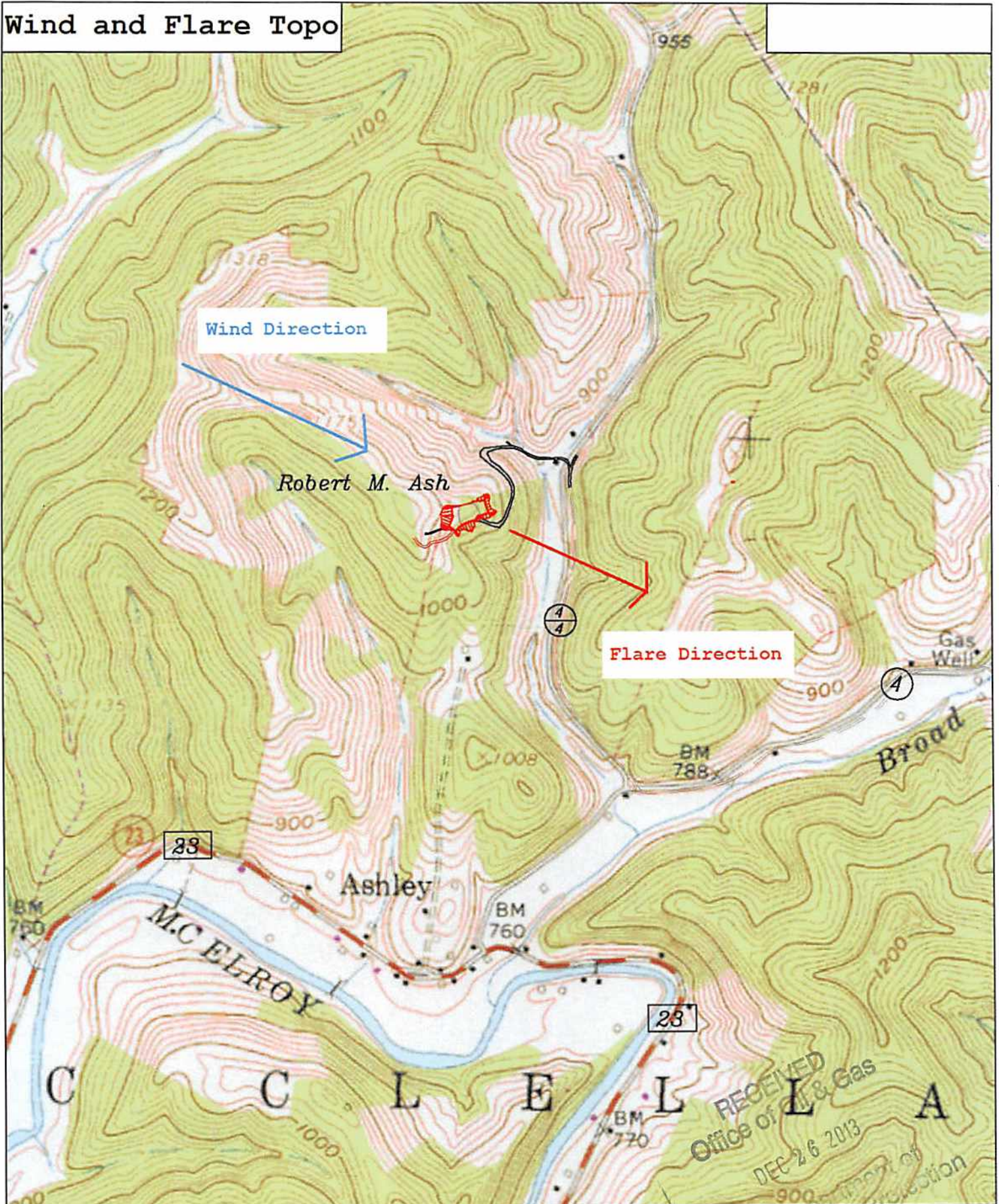
Source ID:	33211	Source Name:	Ash Fresh Water Centralized Impoundment		Source start date:	4/1/2014
					Source end date:	4/1/2015
Source Lat:	39.414697	Source Long:	-80.676211	County:	Doddridge	
Max. Daily Purchase (gal)				Total Volume from Source (gal):	7,854,000	
DEP Comments:	017-FWC-00014					

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

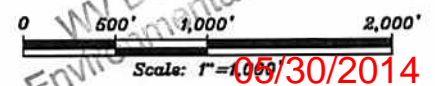
Reference: WMP-576

APPROVED DEC 30 2013

Wind and Flare Topo



Well: Robert M. Ash Well Pad
 Quad: Center Point 7 1/2'
 District: McClellan
 County: Doddridge



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06/30/2014

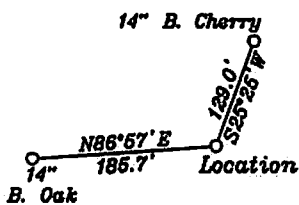
References

Top Hole
 NAD 27-39.414861 N, 80.675058 W
 UTM NAD83(meters)-4362875.4 N, 527987.6 E
 State Plane NAD 27-335382.0 N, 1668017.9 E

Landing Point LP-1
 NAD 27-39.414096 N, 80.674592 W
 UTM NAD83(meters)-4362790.7 N, 528027.9 E
 State Plane NAD 27-335102 N, 1668146 E

Bottom Hole
 NAD 27-39.407032 N, 80.673387 W
 UTM NAD83(meters)-4362007.1 N, 528134.5 E
 State Plane NAD 27-332525 N, 1668453 E

NUMBER	DIRECTION	DISTANCE
L1	S24°32' E	308'
L2	S64°42' W	455'
L3	S71°14' E	579'

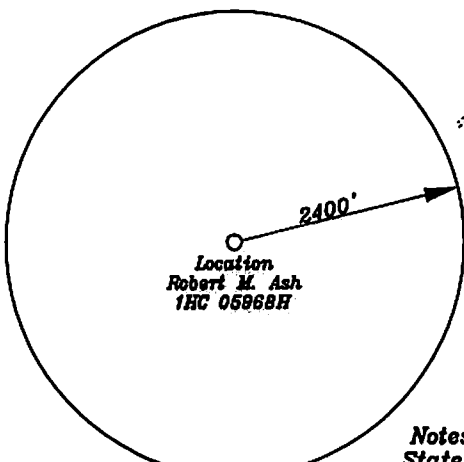


Notes: No water wells were found within 250' of the well location. No dwellings or agricultural buildings were found within 625' of the center of the well pad.

- A- Robert Ash TM 11/9 66.38 ac
- B- Cayton TM 11/8 93.59 ac
- C- Lamp TM 12/10 4.625 ac.
- D- Sisler TM 12/11 26 ac
- E- Lamp TM 11/28.3 3.12 ac.
- F- Lamp TM 11/27 5.45 ac.
- G- Lamp TM 11/28.2 2.5 ac.
- H- Lamp TM 11/28 0.99 ac.
- I- Johnson TM 11/8.2, 37, 28.1
- J- Lamp TM 11/27.1 0.5 ac.
- K- Miller TM 11/3 54.5 ac
- L- Ash & Brown TM 5/13 46.26 ac
- M- Cline TM 12/1.2 30.43 ac
- N- Lamp TM 12/52 4.39 ac.
- O- Swiger TM 12/54 1.3 ac.
- P- Ashley Christian Church TM 12/8.1 0.65 ac.

AREA 500' FROM BORE PATH

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.



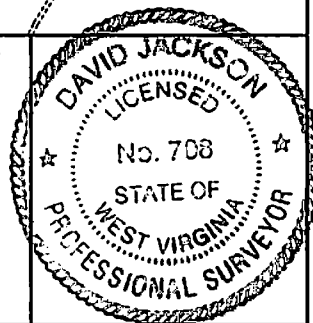
Notes: Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 27.

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

FILE NO. _____
 DRAWING NO. 1
 SCALE 1" = 1000'
 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 A. Jackson
 R.P.E. _____ P.L.S. 708



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

DATE December 19, 2013
 OPERATOR'S WELL NO. Robert M. Ash 1HC
 API WELL NO. _____

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 017 PERMIT 06438 H6A

(IF 'GAS') PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1075.8' WATER SHED Broad Run

DISTRICT McClellan COUNTY Doddridge

QUADRANGLE Center Point 7 1/2'

SURFACE OWNER Robert M. Ash ACREAGE 65.38 ac.

OIL & GAS ROYALTY OWNER Rosalee Wilson (T.M. 11/9), Jack Lamp (T.M. 12/10, 11, 52 T.05/30/2014

8.2, 8.3, 8.4, 27, 27.1, 28.1, 28.2, 28.3, 28.4, 37)

LEASE NO. RW17, D423B

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 TMD 10,990' + TVD 9976'

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