



**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 18, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-6100370, issued to US DEPT OF ENERGY, 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

  
James Martin  
Chief

Operator's Well No: MERC-1  
Farm Name: U.S. DEPT OF ENERGY  
**API Well Number: 47-6100370**  
**Permit Type: Plugging**  
Date Issued: 05/18/2016

## PERMIT CONDITIONS

West Virginia Code § 22-6-11 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

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

1) Date April 12, 2016  
2) Operator's  
Well No. MERC-1  
3) API Well No. 47-061-00370 P

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil \_\_\_ / Gas X / Liquid injection \_\_\_ / Waste disposal \_\_\_ /  
(If "Gas, Production X or Underground storage \_\_\_ ) Deep \_\_\_ / Shallow X
- 5) Location: Elevation 959.51 Watershed \_\_\_\_\_  
District Morgan County Monongalia Quadrangle Morgantown North
- 6) Well Operator US Dept Of Energy 7) Designated Agent \_\_\_\_\_  
Address PO Box 880 Address \_\_\_\_\_  
Morgantown, WV 26501
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Gayne Knitowski Name Hydrocarbon Well Services, Inc.  
Address PO box 108 Address PO Box 995  
Gormania, WV 26720 Buckhannon, WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:

See attachment for details and procedures.

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Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector

Gayne J Knitowski

Date

4/25/2016

05/20/2016

## Plugging Prognosis - Morgantown, WV

**MERC-1**

API # 047-061-0370

Mon. Co. WV

By: Kevin Metz

Date: 3/2/16

**Current Status:**

13' csg. 112' (cemented to surface)

9 5/8" csg. @ 1203' (cemented to surface)

4 1/2" csg. @ 2416' (cemented to surface)

2 3/8" tbg. @2400' w/seat nipple

T.D. 2502'

Perforations @ Gantz Sand 1852'-1846', 1826' - 1835', 1808' - 1794' (4 shots per ft.)

Perforations @ Gordon Stray Sand 1962' - 1958' (4 shots per ft.)

Perforations @ Fourth Sand 2243' - 2237', 2228' - 2222' (4 shots per ft.)

Perforations @ Bayard Sand 2351' - 2341' (4 shots per ft.)

Coal @ 443'-448'      619' - 621'      694' - 696'

FW @ 724'

Elevation: 959.51

1. Notify State Inspector, Gayne Knitowski 304-546-8171, 24 hrs. prior to commencing operations.
2. Remove fencing, bollards and posts, remove all above ground production equipment and haul off location site.
3. Move rig and plugging equipment on site, spot plugging equipment, ~~install duck pond~~ and rig up. *MUST USE TANK FOR ANY WELL REFLOW.*
4. Pull estimated 2400' of 2 3/8" tubing, T.I.H. with tbg and set cement plug from (2502' to 1662'), T.O.H with tbg. *gms*  
Wait on cement.
5. Check TOC, top off as needed. Trip in workstring to 1662' and gel hole back up to 1253' and set 100' plug at bottom of 9 5/8" casing (1253' to 1153'), pull tbg. to 1153' and gel back to 1010', set 110' cement plug @ elevation (1014' to 904'), trip tbg above cement, gel back up to 774' and set 200' cement plug (774' to 574') @ freshwater, & coal. Trip out tbg.
6. Check TOC, TIH with tbg to 574' and gel back up to 500', set 120' cement plug (508' to 388') @ coal, gel back up to 200' and set a 200' surface plug. Trip out.
7. Set Monument to WV-DEP specificatins, RDMO
9. Backfill location with #57 stone and compact.

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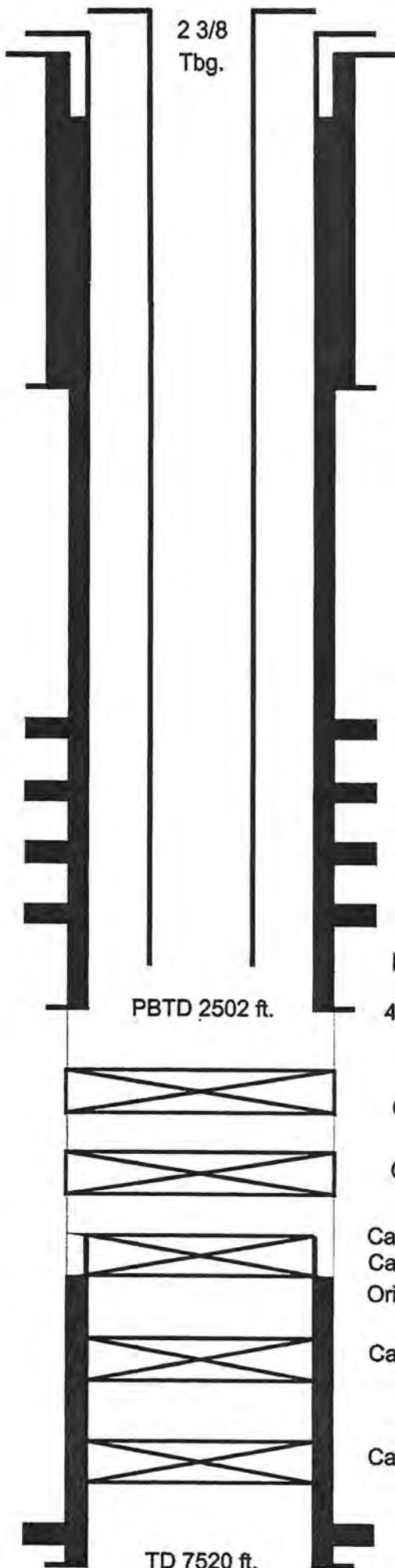
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Environmental Protection

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6100370P

MERC-1 WELL DIAGRAM  
as of April 1997



Top of cement 300 ft. between 4 1/2 and 9 5/8 casing

9 5/8 Casing set at 1193 ft.

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Perf. Gantz Sand 1852 - 1846, 1836 - 1826, 1808 - 1794,  
4 shots per ft.

Perf. Gordon Stray Sand 1962 - 1956 ft., 4 shots per ft.

Perf. Fourth Sand 2243 - 2237, 2228 - 2222, 4 shots per ft.

Perf. Bayard Sand 2351 - 2341, 4 shots per ft,  
Bottom of 2 3/8 in. tubing at 2400 ft. with seating nipple

PBTB 2502 ft.

4 1/2 Casing set at 2502 ft.

Open hole bridge plug at 4000 ft., with 200 ft. cement on top

Cement plug (open hole) 5450 - 5250 ft.

Casing cut at 5480 ft. 12/92  
Casing bridge plug at 5480 ft.  
Original top of cement 5674 ft.

Casing bridge plug set at 6800 with 100 ft. cement on top

Casing plug topped with calcseal at 7220 ft.

TD 7520 ft.

Perf Devonian Shale 7320 - 7490 (17 shots)  
4 1/2 Casing set at 7514 ft.

05/20/2016



DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Bayard	2341 - 2351	40 shots	308 bbls 75% Quality Foam	21,000# sand
Fourth	2222 - 2228	24 shots		
	2237 - 2243	24 shots	382 bbls 75% Quality Foam	30,000# sand
Gordon Stray	1956 - 1962	24 shots	382 bbls 75% Quality Foam	32,500# sand
Gantz	1794 - 1808	56 shots		
	1826 - 1836	40 shots		
	1847 - 1852	24 shots	30,000 scf foamed acid	

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
FROM ORIGINAL WELL RECORD 02/07/80					

Formation	Color	Hard or Soft	Top G.L.	Bottom	Oil, Gas or Water	Depth	Remarks
U. FREEPORT	(AIR DRILLED, MARKER BEDS NOTED)		443	448	COAL		
SALT SAND			724	922	FRESH WTR		V. LOW FLOW
BIG LIHE			1136	1238			
BIG INJUN			1238	1328			GAS SHOW
SQAW			1418	1458			GAS SHOW
BEREA			1723	1734			
GANTZ			1788	1728			
GORDON			1988	2028			
4 TH SAND			2288	2298			
5TH SAND			2308	2328			GAS SHOW
BAYARD		SHALED	OUT				
WARREN		2688	2798				
SPEECHLEY		3038	3043				
RILEY		4333	4341			GAS SHOW	
BENSON		4633	4645				

(Attach separate sheets as necessary)

U.S. Department of Energy  
 Well Operator  
 By: M. Green  
 Date: 4/4/84

Note: Regulation 2.02(i) provides as follows:  
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

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-56181

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U.S. Hwy 33

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 MAY 24 94

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 DIVISION OF OIL AND GAS

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Division, one copy retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: Morgantown En. Tec. Ctr. Operator Well No.: MERC-1

LOCATION: Elevation: 959.51' Quadrangle: Morgantown  
 District: County:  
 Latitude: 14,600 Feet South of 79 Deg. 57Min. 30 Sec.  
 Longitude 4,500 Feet West of 39 Deg. 42Min. 30 Sec.

Well type: OIL \_\_\_\_\_ GAS \_\_\_\_\_

Company: U.S. Dept. of Energy Coal Operator \_\_\_\_\_  
 Box 880 or Owner \_\_\_\_\_  
 Morgantown WV \_\_\_\_\_

Agent: \_\_\_\_\_ Coal Operator \_\_\_\_\_  
 Inspector: Randall Mick or Owner \_\_\_\_\_  
 Permit Issued: \_\_\_\_\_

AFFIDAVIT

STATE OF WEST VIRGINIA,  
 County of Upshur ss:

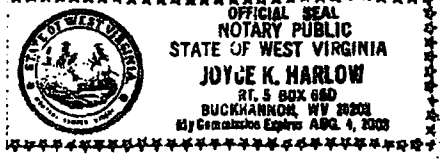
Phillip Pulliam and Alvin Sorcan being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by U S Dept. of Energy, well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 7 day of December, 1993, and that the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
Bridge plug	6801	6800		
Cement	6800	6700		
6% gel	6700	5480		
Cement	5480	5280	5480	2040

Description of monument: \_\_\_\_\_

and that the work of plugging and filling said well was completed on the 8 day of December, 1993.  
 And further deponents saith not.

Sworn and subscribe before me this 8 day of December, 1993  
 My commission expires: 8/4/03



Phillip Pulliam  
Alvin Sorcan  
Joyce K. Harlow  
 Notary Public  
 MAY 27 1994  
Randall Mick  
 05/20/2016



APR 25 2016

061-0370-PP-~~Fr~~  
Issued 11/05/93  
Page of  
Expires 11/05/95

FORM WW-2B 7 93  
Permitting  
Office of

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

18195

- 1) Well Operator: U.S. Department of Energy <sup>891</sup> 13400 (6) 484
- 2) Operator's Well Number: MERC-1 3) Elevation: 959.51
- 4) Well type: (a) Oil    / or Gas X /  
(b) If Gas: Production    / Underground Storage    /  
Deep    / Shallow X /
- 5) Proposed Target Formation(s): Alexander, Elk, Benson, Fifth, Fourth, Gordon Stray  
Gantz, Weir, Squaw <sup>439</sup>
- 6) Proposed Total Depth: 4800' feet
- 7) Approximate fresh water strata depths: 210'
- 8) Approximate salt water depths: 710'
- 9) Approximate coal seam depths: 443', 460', 598', 619', 694'
- 10) Does land contain coal seams tributary to active mine? Yes    / No X /
- 11) Proposed Well Work: Partially plug well; cut and pull 4 1/2" csq. from about 5500'.  
Log and evaluate proposed target formations;
- 12) Return 4 1/2" csq. to about 4800' and cement to surface. Perforate/stimulate selected  
formations.

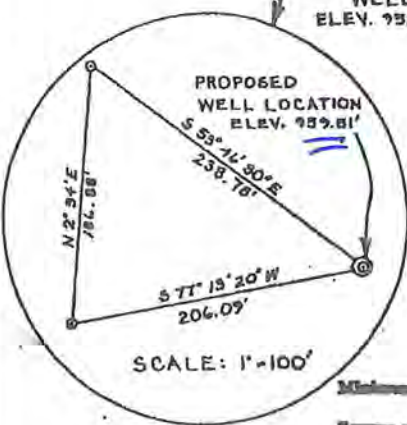
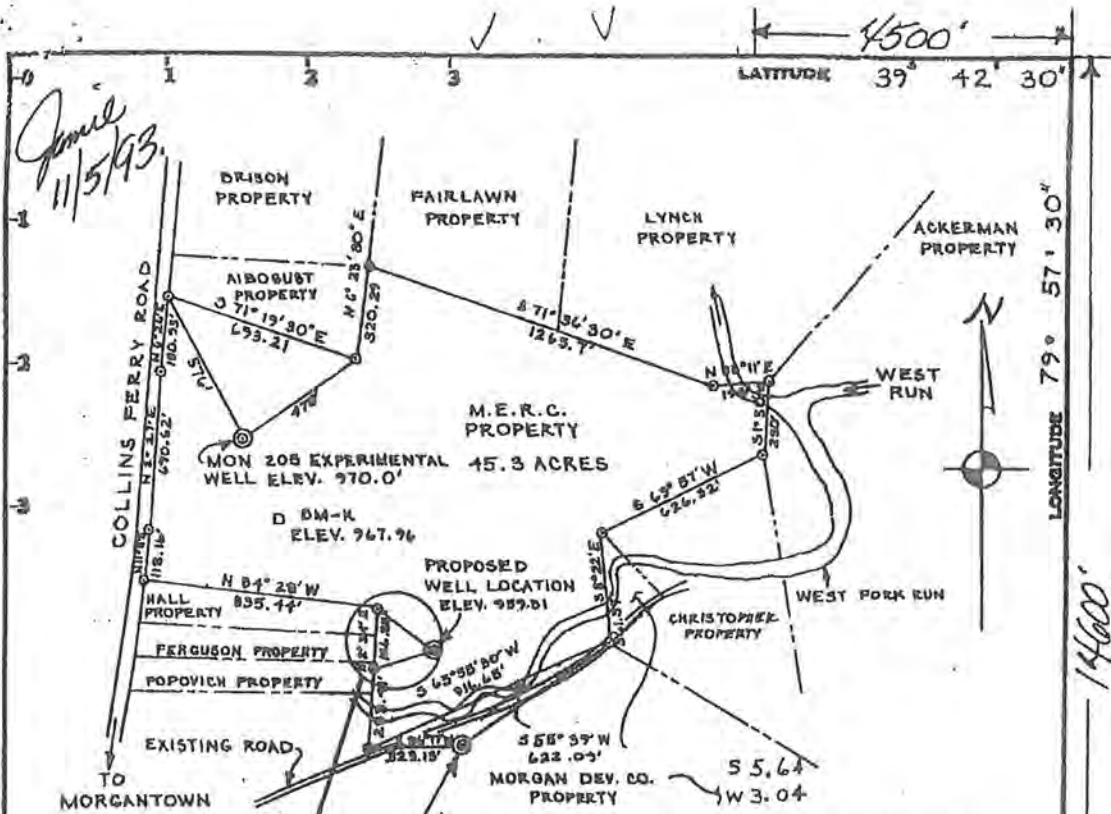
CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	13 3/8"	H-40	48#		112'	
Fresh Water						
Coal						
Intermediate	9 5/8"	K-55	36#	<i>End of well from wellhead</i>	1203'	CS.
Production	4 1/2"	K-55	11.6#		4800'	3AC5918-11.1
Tubing				<i>Line to be pulled &amp; reset &amp; cemented.</i>		
Liners						

(Presently)  
PACKERS : Kind Bridge Plug  
Sizes 4 1/2"  
Depths set 7050'

For Division of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond None Required  Agent  
(type)



Property line Survey prepared by:  
 Monongahela Valley Engineering Company, Inc  
 Morgantown, W.VA.  
 By Wilbur G. Strickler, Chief Draftsman  
 W.VA. R.P.E. 1508  
 Approved by Marion F. Dunbar, Chief Engineer  
 W.VA. R.P.E. 1669

Topo. Loc. 2.75 S, 0.83 W  
 7 1/2' Series  
 2.40, 0.84

Fracture  5.68  
 New Location  3.06  
 Drill Design   
 Abandonment

Minimum Error of Closure 1 in 77,000  
 Source of Elevation USBM BM-K, Elev. = 967.96 (shown on plat)  
 Referenced to Hqtn. city BM at SE corner of Collins Ferry Rd. & Meridian St.

Company U. S. ERDA - MERC  
 Address P. O. Box 880, Morgantown, WV 26505  
 Farm Morgantown Energy Research Center (MERC)  
 Tract N.A. Acres 45.275 Lesse No. N.A.  
 Well (Farm) No. 1 Serial No. N.A.  
 Elevation (Spirit Level) 959.51 ft.  
 Quadrangle Morgantown North NW  
 County Monongalia District Morgan  
 Surveyor L. Zane Shuck  
 Surveyor's Registration No. WV R.P.E. No. 4596  
 File No. N.A. Drawing No. N.A.  
 Date 6/22/77 Scale 1" = 500'

STATE OF WEST VIRGINIA  
 Division of Environmental Protection  
 Office of Oil & Gas  
 Nitro  
**WELL LOCATION MAP**  
 APDwell No. 47-061-00370-F  
 Permanent Federal Pluss Book  
 + Denotes location of well on United States Topographic Maps, scale 1 to 25,000, latitude and longitude lines being represented by border lines as shown.  
 - Denotes one inch spaces on border line of original tracing.

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 WV Department of Environmental Protection



FORM WV-4(B) PERMIT COPY  
Obverse  
7/85



1) Date: 1/19/93, 19\_\_  
2) Operator's Well No. MERC-1  
3) API Well No. 47 061 370 *JP*  
State County Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, OIL AND GAS DIVISION  
APPLICATION FOR A PERMIT TO PLUG AND ABANDON A WELL

4) WELL TYPE: A Oil \_\_\_\_\_ / Gas X / Liquid injection \_\_\_\_\_ / Waste disposal \_\_\_\_\_  
B (If "Gas", Production \_\_\_\_\_ / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ Shallow X /)  
5) LOCATION: Elevation: 959.51 / Watershed: West Run  
District: Morgan County: Monongalia Quadrangle: Morgantown North  
6) WELL OPERATOR US Dept of Energy CODE \_\_\_\_\_  
Address P.O. Box 880  
Morgantown, WV 26507-0880  
7) DESIGNATED AGENT \_\_\_\_\_  
Address \_\_\_\_\_  
8) OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Randal Mick  
Address 111 Blackshere Drive  
Mannington, WV 26582  
9) PLUGGING CONTRACTOR \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

10) WORK ORDER: The work order for the manner of plugging this well is as follows:

→ (Partial Plugging)

- 1. Set 1450' Cement Plug on top of bridge plug at 7050'
- 2. Cut; pull; and inspect 4½" casing
- 3. Rerun 4½" casing to about 4750' and cement to surface.

*Inspector Randal Mick to be on location if possible when plugging.*

OFFICE USE ONLY

PLUGGING PERMIT

Permit number \_\_\_\_\_

\_\_\_\_\_ 19  
Date

This permit covering the well operator and well location shown below is evidence of permission granted to plug in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, subject to any modifications and conditions on the reverse hereof.

Permit expires \_\_\_\_\_ unless plugging is commenced prior to that date and prosecuted with due diligence.

Bond: <i>[Signature]</i>	Agent: <i>[Signature]</i>	Plat: <i>[Signature]</i>	Casing: <i>[Signature]</i>	WPCP	OTHER
--------------------------	---------------------------	--------------------------	----------------------------	------	-------

*James Stevens*

NOTE: Keep one copy of this permit posted at the plugging location.

Director, Division of Oil and Gas

Permit

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

05/20/2016



FEB - 7 1980

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage   
Oil or Gas Well **GAS TEST**  
(KIND)

Quadrangle MORGANTOWN NORTH  
Permit No. API(061-0370)

WELL RECORD

Company US DEPT OF ENERGY  
Address BOX 820 MORGANTOWN WV  
Farm MORGANTOWN EN. TEC. CTR. ACRES 45.275  
Location (waters) MONONGAHELA RIVER - WEST RUN  
Well No. 1 Elev. 959.51  
District MORGAN County MONONGALIA  
The surface of tract is owned in fee by US DOE  
Address BOX 820 MORGANTOWN

Mineral rights are owned by US DOE  
Address SAME

Drilling commenced 3/16/78  
Drilling completed 4/22/78

Date Shot \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_

Open Flow 0 /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch

Volume 0 Cu. Ft.  
Rock Pressure \_\_\_\_\_ lbs. hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.

WELL ACIDIZED (DETAILS) \_\_\_\_\_

WELL FRACTURED (DETAILS) MARCELLUS TEST (115,000 GAL. CO<sub>2</sub>/GAL FRAC) 7108-7157 FT, MARREL (ACID BREAK - NO TEST) BURKETT TEST (51,800 GAL. CO<sub>2</sub>/GAL FRAC) 7108-7157 FT, MARREL (ACID BREAK - NO TEST)

RESULT AFTER TREATMENT (Initial open Flow or bbls.) MARCELLUS (DRY), BURKETT (13MCFD)

ROCK PRESSURE AFTER TREATMENT NOT MEASURABLE HOURS NA

Fresh Water SALT SANDS Feet 724-922 Salt Water NA Feet 6910-6990 F  
Producing Sand NA Depth NA

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13 3/8	CONDUCTOR	112	
10			Size of
8 5/8	SURFACE PIPE	1203	
6 3/4			Depth set
5 3/16			<u>MARREL 6910</u>
4 1/2	PRODUCTION	7520	<u>SHALE 6990</u>
3			Perf. top <u>7108</u>
2 3/8	TUBING	7100	Perf. bottom <u>7157</u>
Liners Used			Perf. top <u>7320</u>
			Perf. bottom <u>7490</u>

Attach copy of cementing record.  
CASING CEMENTED 4 1/2 SIZE 7520 No. Ft. 4/23/78 Date  
Amount of cement used (bags) 379 SX

Name of Service Co. DOWELL  
COAL WAS ENCOUNTERED AT 443 FEET 60 INCHES  
460 FEET ≈ 12 INCHES 528 FEET ≈ 12 INCHES  
619 FEET ≈ 24 INCHES 694 FEET ≈ 24 INCHES

Formation	Color	Hard or Soft	Top G.L.	Bottom	Oil, Gas or Water	Depth	Remarks
U. FREEPORT	(AIR DRILLED, MARKER BEDS NOTED)		443	448	COAL		
SALT SAND			724	922	FRESH WTR		V. LOW FLOW
BIG LIME			1136	1238			
BIG INJUN			1238	1328			GAS SHOW
SQAW			1418	1458			GAS SHOW
BERIA			1723	1734			
BANTZ			1788	1728			
BORDON			1988	2028			
4TH SAND			2288	2298			
5TH SAND			2308	2328			
BAYARD			SHALED	OUT			
WARREN			2688	2798			
SPEECHLEY			3088	3043			
RILEY			4333	4341			
BENSON			4633	4645			GAS SHOW

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GAS SHOW

(over)

(4-5-82)

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
TULLY LIME			7110	—		
ONONDAGA LIME			7502	—		
<p>7502 1318 <hr/>6174 EXPL FT.</p>						TD-7500'?

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Date \_\_\_\_\_, 19\_\_\_\_  
APPROVED *Abel* Owner  
By \_\_\_\_\_ (Title)



U.S. DEPARTMENT OF  
**ENERGY****NATIONAL ENERGY TECHNOLOGY LABORATORY**

Albany, OR • Morgantown, WV • Pittsburgh, PA

**NETL**

March 1, 2016

MEMORANDUM TO DEAN STOBBE  
FACILITY CUSTODIAN - MGN GAS WELLFROM: DAWN DEEL  
ENVIRONMENTAL PROGRAM MANAGER - MGN SITE

SUBJECT: MGN Gas Well - Request for Review

The MGN Gas Well is scheduled for plug and abandon activities due to low production and other technical issues the well has experienced.

I have completed review of hard copy site historical information and have discovered documents I deem pertinent to this effort. Based on this recent discovery, I am requesting the Plug and Abandon Contractor review the information below and attached for any necessary revisions to the proposed plug and abandon activities.

A review of the following documents is requested:

- Well Operators Report (1994) (Attachment 1)– This is a report from the “partial” plugging performed on the well in 1993-1994 indicating that 820 cubic feet of cement was used for the 4 ½ in. casing at that time. I believe the initial proposed work statement from the contractor assumed 820 linear feet resulting in discrepancies regarding pulling the 4 ½ in casing.
- Cement Bond Log (1994) (Attachment 2) – This is the cover page for the Cement Bond Log that was performed in 1994. This log states that the 4 ½ in casing was cemented from total depth to surface. I believe this alleviates the need for cutting the casing as it cannot be pulled; therefore, no cutting related materials will be needed onsite. I believe it also affects plans to run a bond log on the 4 ½ in. casing.

Please let me know if you have any questions or need any additional information. I plan to provide a hardcopy of the full Cement Bond Log to you upon request.

Thank you.

Cc: Michael Kay, ESS&H Lead

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Attachment 1: Well Operators Report (1994)

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Attachment 2: Cement Bond Log Cover Page (1994)

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Environmental Protection

05/20/2016





GAMMA RAY  
CEMENT BOND  
CCL

COUNTY: MONONGALIA  
FIELD: MORGAN DISTRICT  
LOCATION: MORGAN DISTRICT  
WELL: MERC- # 1  
COMPANY: U.S. DEPT. OF ENERGY

COMPANY U.S. DEPT. OF ENERGY  
WELL MERC- # 1  
FIELD MORGAN DISTRICT  
COUNTY MONONGALIA STATE WV.

LOCATION  
MORGANTOWN NORTH  
PERMIT # 42-061 0570

Other Services  
FERROPRATE

Permanent datum GROUND LEVEL Elev 959'  
Log Measured From GROUND LEVEL Above Perm Datum D F 959'  
Drilling Measured From KELLY RUSHING G L 959'

Date	1-3-84
Run No.	ONE
Depth-Driller	5250
Depth-Logger	2422'
Ftm Log Interval	2422'
Top Log Interval	0
Type Log	G.R-CBL-CCL
Type Fluid in Hole	ACID WATER
Salinity PPM Cl	
Density	
Level	FULL
Max Rec Temp	
Operating Rig Time	
Recorded By	E. BUTCHER
Witnessed By	P. BULLIAM
Job Tkt No	# 2090

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APR 25 2016

WV Department of  
Environmental Protection

CASING RECORD

TUBING RECORD

Size	Wgt	From	To	Size	Wgt	From	To
9 5/8"	23LBS	SURFACE	1193'				
4 1/2"		SURFACE T.D.					

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REFERENCE LITERATURE  
 RAFFLE -1878



WW-4A  
Revised 6-07

1) Date: April 12, 2016  
2) Operator's Well Number MERC-1  
3) API Well No.: 47 - 061 - 0370

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>US Dept of Energy <i>Wahnev</i></u>	Name <u>N/A</u>
Address <u>PO box 880</u>	Address _____
<u>Morgantown, WV 26501</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Gain Knitowski</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 108</u>	Name _____
<u>Gormanta, WV 26720</u>	Address _____
Telephone <u>3045468171</u>	_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

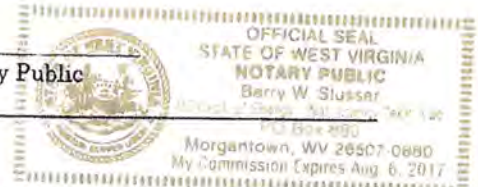
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator US Dept of Energy  
 By: *[Signature]*  
 Its: Environmental Program Manager - M&G SITE  
 Address: 3610 Collins Ferry Rd.  
Morgantown, WV 26505  
 Telephone: 304-285-4133

Subscribed and sworn before me this 20<sup>th</sup> day of April, 2016

*Barry W. Slusser*  
My Commission Expires 8/06/2017

Notary Public



Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

APR 25 2016

WV Department of Environmental Protection  
06/20/2016



**SURFACE OWNER WAIVER**

Operator's Well  
Number

MERC-1

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.  
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON  
ETC.

FOR EXECUTION BY A CORPORATION,

  
Signature

Date 4/20/16 Name U.S. Dept. of Energy  
By Dawn M. Deel  
Its Environmental Program Manager

Date 4-20-16  
Signature \_\_\_\_\_ Date \_\_\_\_\_

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Environmental Protection

05/20/2016



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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM  
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name US Department of Energy OP Code \_\_\_\_\_

Watershed Monongalia River West Run Quadrangle Morgantown North

Elevation 959.51 County Monongalia District Morgan

Description of anticipated Pit Waste: Plugging

Will a synthetic liner be used in the pit? No

*ANY WELL EFFLUENT MUST BE  
CONTAINED IN TANKS & DISPOSED  
OF PROPERLY. gmm*

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_ )

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain \_\_\_\_\_ )
- Swabbing
- Plugging

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 *Dawn M. Deel*

Company Official (Typed Name) Dawn M. Deel

Company Official Title Environment Program Manager - MGN site

Subscribed and sworn before me this 20<sup>th</sup> day of April, 20 16

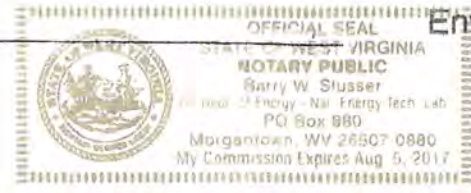
*Barry W. Slusser* Notary Public

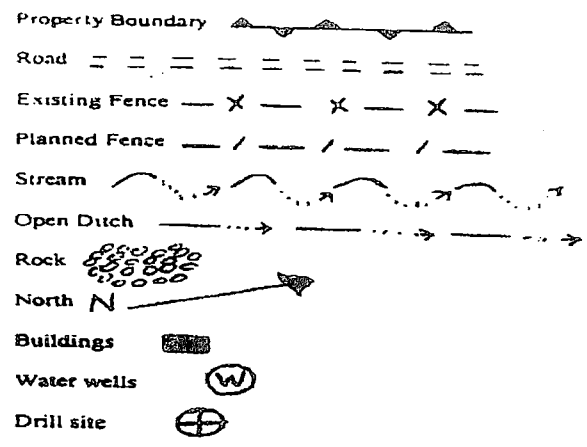
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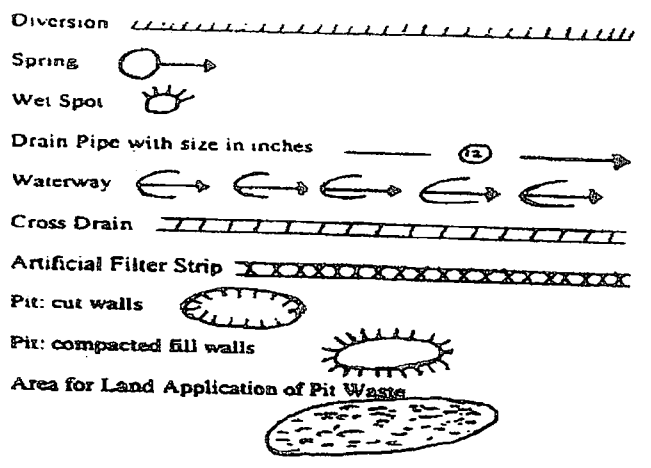
WV Department of  
Environmental Protection

My commission expires 8/06/2017





LEGEND



Proposed Revegetation Treatment: Acres Disturbed N/A Prevegetation pH N/A

Lime N/A Tons/acre or to correct to pH N/A

Fertilizer (10-20-20 or equivalent) N/A lbs/acre (500 lbs minimum)

Mulch N/A Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
<u>N/A</u>		<u>N/A</u>	

Attach:  
 Drawing(s) of road, location, pit and proposed area for land application.  
 Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: \_\_\_\_\_

Comments: MERC-1 is a gas well located at NETL in Morgantown, WV. The well is not producing well enough to continue servicing. DOE requested plug.

Title: Inspector

Date: 2/25/2016

Field Reviewed?  Yes  No

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Environmental Protection  
03/20/2016





6100370  
588078.03E, 4391480.65N, UTM17  
NAD83



6100370P



05/20/2016



WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas  
**WELL LOCATION FORM: GPS**

API: 47-061-00370 WELL NO.: MERC-1

FARM NAME: U.S. Department of Energy

RESPONSIBLE PARTY NAME: U.S. Department of Energy

COUNTY: Monongalia DISTRICT: Morgan

QUADRANGLE: Morgantown North

SURFACE OWNER: U.S. Department of Energy

ROYALTY OWNER: U.S. Department of Energy

UTM GPS NORTHING: 4391480.65

UTM GPS EASTING: 588028.03

GPS ELEVATION: 959.51

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS  : Post Processed Differential   
Real-Time Differential

Mapping Grade GPS  : Post Processed Differential   
Real-Time Differential

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

[Signature]  
Signature  
5/17/2016  
Date

President  
Title