



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

August 12, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9501516, issued to HG ENERGY, LLC, 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: C. McCOY K-7
Farm Name: PENNZOIL PRODUCTS CO.
API Well Number: 47-9501516
Permit Type: Plugging
Date Issued: 08/12/2015

Promoting a healthy environment.

08/14/2015

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

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

1) Date _____, 20____
2) Operator's
Well No. Christina McCoy K-7
3) API Well No. 47-005 - 1516

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 X / Gas _____ / Liquid injection _____ / Waste disposal _____ /
(If "Gas, Production _____ or Underground storage _____) Deep _____ / Shallow X

5) Location: Elevation 900' Watershed Indian Creek
District McElroy County Tyler Quadrangle Centerpoint 7.5'

6) Well Operator HG Energy, LLC 7) Designated Agent Diane White
Address 5260 Dupont Road Address 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Michael Goff Name To Be Determined Upon Approval of Permit
Address P. O. Box 134 Address _____
Pullman, WV 26421

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

"See Attached Sheet"

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WV Department of
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 Michael Goff Date 7/14/15

08/14/2015

- 1) Date: June 25, 2015
- 2) Operator's Well Number
Christina McCoy K-7
- 3) API Well No: 47 - 095 - 1516
State County Permit

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 X Gas _____ Liquid Injection _____ Waste Disposal _____
(If "Gas", Production _____ Underground Storage _____) Deep _____ Shallow x
- 5) LOCATION: Elevation: 900' Watershed: Indian Creek
District: McElroy County: Tyler Quadrangle Centerpoint 7.5'
- 6) WELL OPERATOR: HG Energy, LLC 4.94E+08 7) DESIGNATED AGENT Diane White
Address 5260 Dupont Road Address 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) PLUGGING CONTRACTOR
Name Michael Goff Name To Be Determined Upon Approval of Permit
Address PO Box 134 Address _____
Pullman, WV 26421

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

TD- 2,930'

Manners of plugging:

- Plug #1 2750' - 2650'
Located above highest perforation
Free point, part and pull 4 1/2" casing, approx 1700'
- Plug #2 - 1750' - 1650'
Located at 4 1/2" casing stub
- Plug #3 - 950' - 675'
Located at elevation and through the Pittsburgh Coal
- Plug #4 -300' - 0'
Located at 8 5/8" casing shoe, Fresh Water to Surface

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7/14/15

Recover all possible casing. If casing can not be recovered, perforate for plug placement.

Monument:

- 6" minimum diameter metal pipe
- 30" above surface
- 10' in well below surface
- Sealed with cement
- API identification (1/2") height numbering

6% Gel between all plugs

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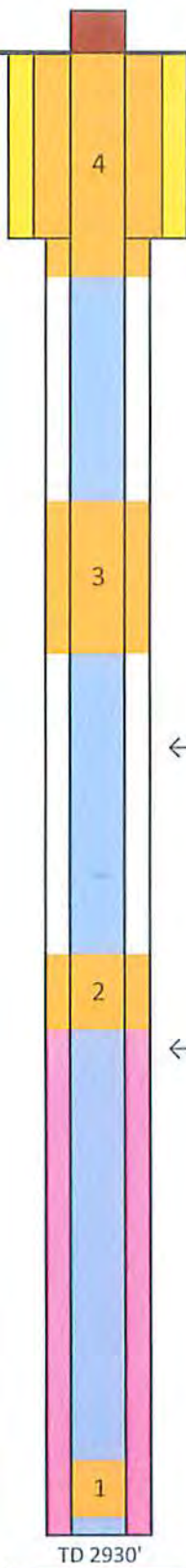
9501576P

Well: C. McCoy K-07

Monument to extend 30" above surface. 10' into well. 6" min metal pipe, sealed with cement. API i.D.

Elevation: 900'

Casing Information		
Size	Depth	Weight
8 5/8"	221'	20#/ft.
4 1/2"	2903'	10.5#/ft.



← cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	1700'

Cement Plugs		
NO.	Bottom	Top
1	2750	2650
2	1750	1650
3	950	675
4	300	0

Pittsburgh Coal 725'

← 7 7/8" Hole Size

MAC
7/14/15

Bottom Hole Cement Level Calculations

Sacks Used Cement Depth
300 1786.925

Hole Size Casing Size Depth
7.875 4.5 2903

diameter delta Conv. Factor bbls / ft.
41.765625 1029.4 0.040573

cubic ft. per vertical ft. depth
0.227795902

Sacks per vertical ft. depth
0.268799164

Yield options

50/50 posmix 6% gel = 1.64

Neat w/ salt flakes = 1.19

50/50 w/ 2% gel = 1.27

← 300 Sks Cement T.O.C. 1785'

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← Highest Perforation 2797'

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Well Operator's Report of Well Work

Farm name: PENNZOIL PRODUCTS COMPANY

Operator Well No.: C. MCCOY K-7

LOCATION: Elevation: 900.00 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
 Latitude: 650 Feet South of 39 Deg. 27 Min. 30 Sec.
 Longitude 3400 Feet West of 80 Deg. 40 Min. 0 Sec.

Company: PENNZOIL PRODUCTS COMPANY
 P. O. BOX 5519
 VIENNA, WV 26105-5519

Agent: JAMES A. CREWS

Inspector: MIKE UNDERWOOD
 Permit Issued: 07/31/92
 Well work Commenced: 01/15/93
 Well work Completed: 02/16/93
 Verbal Plugging _____
 Permission granted on: _____
 Rotary X Cable _____ Rig
 Total Depth (feet) 2930'
 Fresh water depths (ft) N/A
 Salt water depths (ft) N/A
 Is coal being mined in area (Y/N)? N
 Coal Depths (ft): N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8"	221.20'	221.20'	100 sks.
4-1/2"	2902.80'	2902.80'	300 sks.

OPEN FLOW DATA (Water Injection Well)

Producing formation Gordon Pay zone depth (ft) 2774-2835
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: PENNZOIL PRODUCTS COMPANY

By: Timothy P. Roush, Supervisor - Surveying/Mapping
 Date: September 14, 1993

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Treatment:

Perforated : w/4 holes 2797' - 2804'
w/8 holes 2812' - 2816'

Treated: w/300 gal. reg. HF acid, 261 bbls. gelled water, 1500# 80/100 sand
and 3500# 20/40 sand

Well Log

Sand & Shale	0 - 292
Shale	292 - 480
Sand	480 - 536
Limestone	536 - 597
Shale	597 - 641
Sand & Shale	641 - 760
Sand	760 - 835
Sand & Shale	835 - 1184
Shale	1184 - 1270
Sand	1270 - 1432
Sand & Shale	1432 - 1544
Sand	1544 - 1594
Shale	1594 - 1625
Sand	1625 - 1662
Sand & Shale	1662 - 1775
Shale	1775 - 1952
Little Lime	1952 - 1967
Shale	1967 - 1995
Big Lime	1995 - 2062
Big Injun	2062 - 2224
Shale	2224 - 2774
Gordon	2774 - 2835
T.D.	2930

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WW-4A
Revised 6-07

1) Date: June 25, 2015
2) Operator's Well Number
Christina McCoy K-7
3) API Well No.: 47 - 095 - 1516

CK# 3063
100-009501516P

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>American Energy Partners</u> ✓	Name <u>NA</u>
Address <u>8082 Indian Creek Road</u>	Address _____
<u>Jacksonburg, WV 26377</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name <u>NA</u>
Address _____	Address _____
_____	(c) Coal Lessee with Declaration
6) Inspector <u>Michael Goff</u>	Name <u>NA</u>
Address <u>P. O. Box 134</u>	Address _____
<u>Pullman, WV 26421</u>	_____
Telephone <u>304-549-9823</u>	_____

MDC
7/14/15

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	<u>HG Energy, LLC</u>
By:	<u>Diane White</u> <i>Diane White</i>
As:	<u>Agent</u>
Address	<u>5260 Dupont Road</u>
	<u>Parkersburg, WV 26101</u>
Telephone	<u>304-420-1119</u>

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JUL 7

Subscribed and sworn before me this 25rd day of June, 2015
S. Dianne Dulaney
 My Commission Expires Oct. 4, 2016
 Notary Public Environmental Protection

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 deprivacyofficer@wv.gov.

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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 HG Energy, LLC OP Code 494497948

Watershed Indian Creek Quadrangle Centerpoint 7.5'

Elevation 1242' County Tyler District McElroy

Description of anticipated Pit Waste: Fluids encountered while plugging subject well

Will a synthetic liner be used in the pit? Yes 20 mil.

MAG
2/14/15

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 _____)

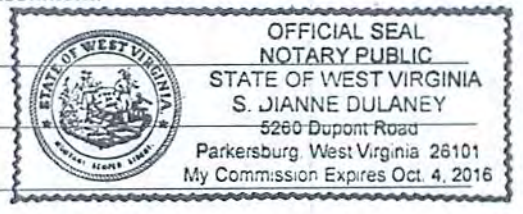
Proposed Work For Which Pit Will Be Used:

- 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 Diane White
Company Official (Typed Name) Diane White
Company Official Title Agent



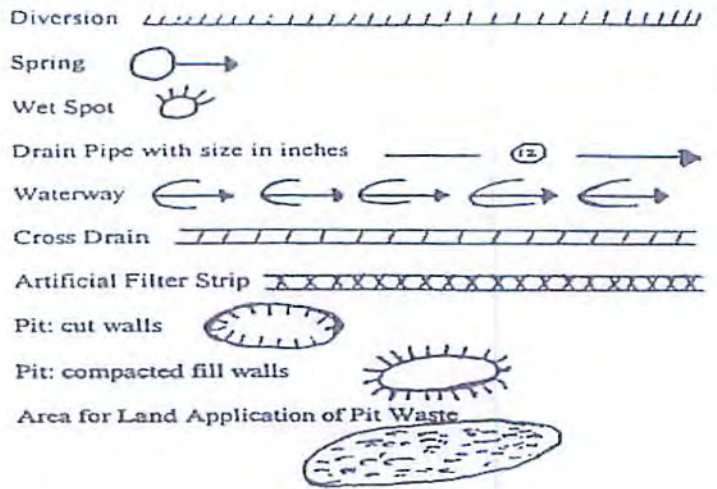
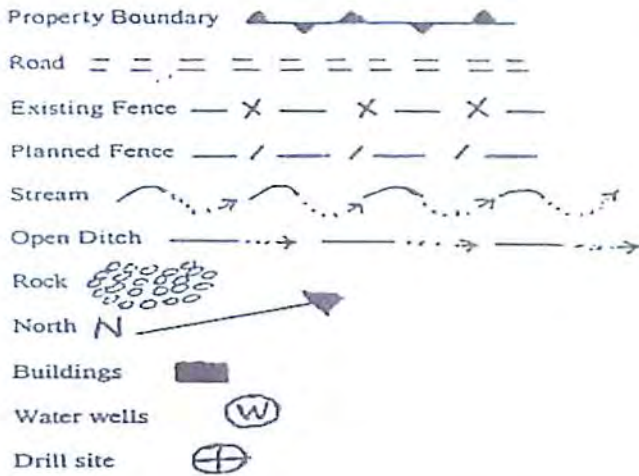
Subscribed and sworn before me this 25 day of June, 2015

[Signature] Notary Public

My commission expires Oct. 4, 2016

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LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.7 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

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

Mulch Straw 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre
Tall Fescue		40
Ladino Clover		5

Seed Type	Area II	lbs/acre
Tall Fescue		40
Ladino Clover		5

Sediment control should be in place at all times

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

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Plan Approved by: Michael Doff

Comments: Preseed & Mulch any disturbed areas.

Title: Oil & Gas Inspector

Date: 7/14/15

Field Reviewed? () Yes () No

SUBJECT WELL
Christina McCoy No.K-7
47-095-1516



Section of
Centerpoint 7.5' Quadrangle
SCALE 1"=1080'
14/2015

9501516 P MDG
7/14/15

WW-7
5-02

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

API: 47- 095 - 1516 WELL NO: K-7

FARM NAME: Christina McCoy No. K-7

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Centerpoint 7.5'

SURFACE OWNER: American Energy Partners

ROYALTY OWNER: American Energy Partners, LLC et al.

UTM GPS NORTHING: 4,367,514 (NAD 83)

UTM GPS EASTING: 527,671 (NAD 83) GPS ELEVATION: 273 m.

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit on the above well. The Office of Oil & 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	<input type="checkbox"/>	Post Processed Differential	<input type="checkbox"/>
		Real-Time Differential	<input type="checkbox"/>
Mapping Grade GPS	<input checked="" type="checkbox"/>	Post Processed Differential	<input checked="" type="checkbox"/>
		Real-Time Differential	<input type="checkbox"/>

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.

Diane White Diane C. White
Signature

Designated Agent
Title

June 3, 2015
Date

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