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

February 22, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4301578, 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 penalities 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: 6
Farm Name: ADKINS, HERBERT
API Well Number: 47-4301578
Permit Type: Plugging
Date Issued: 02/22/2016

Promoting a healthy environment.

4301578P

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.

4301578P

WW-4B
Rev. 2/01

1) Date December 17, 2015
2) Operator's
Well No. Herbert Adkins 6
3) API Well No. 47- 043 - 1578

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 1039' Watershed Hayzlett Fork
District Duval County Lincoln Quadrangle Garrett's Bend 7.5'

6) Well Operator HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101

7) Designated Agent Diane White
Address 5260 Dupont Road
Parkersburg, WV 26101

8) Oil and Gas Inspector to be notified
Name Jeremy James
Address P. O. Box 36
Clendenin, WV 25045

9) Plugging Contractor
Name To Be Determined Upon Approval of Permit
Address ____

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

* See Attached Form *

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

Work order approved by inspector _____ Date 1-26-16

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WW-4B - Conti
Rev. 2/01

1) Date: December 17, 2015
2) Operator's Well Number
Herbert Adkins 6
3) API Well No: 47 - 043 - 1578
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: 1039' Watershed: Hayzlett Fork
District: Duval County: Lincoln Quadrangle Garretts Bend 7.5'

6) WELL OPERATOR: HG Energy, LLC 4.94E+08
Address 5260 Dupont Road
Parkersburg, WV 26101

7) DESIGNATED AGENT Diane White
Address 5260 Dupont Road
Parkersburg, WV 26101

8) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Jeremy James
Address P. O. Box 36
Clendenin, WV 25045

9) PLUGGING CONTRACTOR
Name To Be Determined Upon Approval of Permit
Address

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

TD- 2,580'

Manners of plugging: 2500-2400 Tag Plug & reset if below 2400
Plug #1 - ~~2400~~' - ~~2300~~'
Located above the highest perforation
Free point, part and pull 4 1/2" casing at approx ~~2000'~~ 1950, if unable to pull, set 100ft cement plug
Plug # 2 - Approx. ~~2400' - 2300'~~ 1950-1850 over perfs. [redacted] and cut again
Located at 4 1/2" casing stub below Sea level
Plug #3 - 1075' - 975'
Located at elevation
Plug #4 - 450-350
Located at 8 5/8" casing shoe/fresh water
Plug # 5 - 100' - 0'
Surface

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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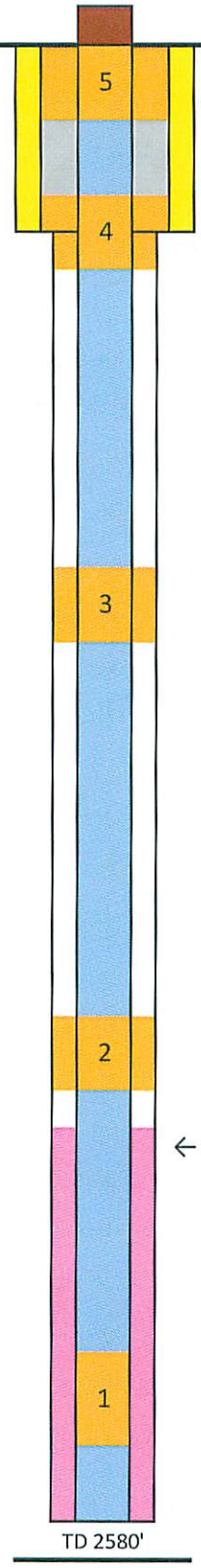
Well: Herbert Adkins #6

Elevation: 1022'

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

Casing Information		
Size	Depth	Weight
8 5/8"	397'	#/ft.
4 1/2"	2580'	#/ft.



← 250 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2	2000

Hole Size 6.75" →

Cement Plugs		
NO.	Bottom	Top
1	~~2400~~ ~~2500~~	~~2300~~ ~~2400~~
2	~~2050~~ 1950	~~1950~~ 1850
3	1075	975
4	450	350
5	100	0

← 50 Sks Cement T.O.C. 2273'

Highest Perforation 2525'

Bottom Hole Cement Level Calculations

# Sacks Used	Cement Depth
50	2273.079

Hole Size	Casing Size	Depth
6.75	4.5	2580

diameter delta	Conv. Factor	bbls / ft.
25.3125	1029.4	0.02459

cubic ft. per vertical ft. depth
0.138058122

Sacks per vertical ft. depth
0.162908584

Yield options

50/50 posmix 6% gel = 1.64
Neat w/ salt flakes = 1.19
50/50 w/ 2% gel = 1.27

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PENNZOIL COMPANY
Well Completion Report

Lease: HERBERT ADKINS Well No. 6 New Well X Old Well ___

District: Duval County: Lincoln State: West Virginia

Pool Name: Griffithsville Northeast Pool No. 57 Elevation 1021.66' KB:

Producing Formation: Berea Depth: From ___ to ___

Date Drilled In: October 23, 1974 Pays: Oil: From ___ to ___
From ___ to ___

Original Total Depth: 2582'

Gas: From ___ to ___
From ___ to ___

Plug Back Depth: 2550'

Production	Initial	Present	After Fracture
Oil			
Gas			

Surface Csg. set @ 396.64' KB: 8-5/8" Gr. H-40 New: Wt. 20# Collars ST&C

Cement Reg. Neat Amount 250 Sacks Plug Down @ 12:15 AM:PM Date 10-20-74

Production Csg. set @ 2580' KB: 4-1/2" Gr. K-55 New:Used Wt. 10.50# Collars ST&C

Cement 50/50 Posmix Amount 50 Sacks Plug Down @ 11:00 AM:PM Date 10-24-74

Logged by: BasinsSurveys Date: October 24, 1974

Logs Used: Gamma Ray - Comp. Density - Caliper

Perforated by: McCullough Date: October 29, 1974

Perforations: 2525'-2530' - 4 holes/ft. - 20 holes

Treatment Data

	Fluid	Sand	Acid	Solvent	Gel	Breaking Agent	Fluid Loss	F.R. Agent	N.E. Agent
Type	Lease Crude	20/40	15% HCl						
Amount	529	22,500	500						

Breakdown Pressure: 2400 Treating Pressure: Max. 3100 Min. 1400 Avg. 2100

Avg. Inj. Rate 24.0 BPM ISIP 1350 @ ___ AM:PM 5 min. SIP 1200

10 min. SIP 1100 15 min. SIP 1000 Other ___

EQUIPMENT USED

Service Company: Halliburton HHP 1235

By: George P. SanFilippo Date Fractured: 10-29-74

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OG-10
Rev. 9-71

4301518P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Rotary X Oil X
Cable ____ Gas ____
Recycling ____ Comb. ____
Water Flood ____ Storage ____
Disposal ____ ____ (Kind)

Quadrangle St. Albans

Permit No. Lin-1578

Company Pennzoil Company
Address P.O.Box 1588, Parkersburg,W.Va. 26101
Farm Herbert Adkins Acres 175
Location (waters) Donley Fork
Well No. 6 Elev. 1014.66'
District Duval County Lincoln
The surface of tract is owned in fee by
Clarence Atkisson
Address Rt.#7,Box 121,S. Charleston,W.Va.
Mineral rights are owned by R. H. Adkins
Address P.O.Box 555,Hamlin,W.Va. 25523
Drilling Commenced 10-19-74
Drilling Completed 10-24-74
Initial open flow 21,000 cu. ft. 21 bbls.
Final production 18,000 cu. ft. per day 18 bbls.
Well open ____ hrs. before test ____ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	396.64	396.64	
7			
5 1/2			
4 1/2	2580	2580	
3			
2			
Liners Used			

Attach copy of cementing record.

Well treatment details:
Fractured 10-29-74 w/500 gals. 15% HCL acid, 529 Bbls. lease crude, 22,500# 20/40 sd.

Perf: 2525-2530-20 holes

Coal was encountered at ____ Feet ____ Inches
Fresh water ____ Feet ____ Salt Water ____ Feet ____
Producing Sand Berea Depth ____ ____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Substructure			0	7		
Rock,Sand & Shale			7	396		
Sand & Shale			396	1445		
Salt Sand			1445	1722		
Shale			1722	1760		
Sand			1760	1800		
Little Lime			1800	1835		
Pencil Cave			1835	1840		
Big Lime			1840	1994		
McCrady Shale			1994	2040		
Big Injun			2040	2091		
Shale			2091	2166		
Weir Sand			2166	2227		
Shale			2227	2496		
Coffee Shale			2496	2516		
Berea			2516	2539		
Shale			2539	2582		
Total Depth				2582		

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(over)

* Indicates Electric Log tops in the remarks section.

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WW-4A
Revised 6-07

1) Date: December 17, 2015
2) Operator's Well Number
Herbert Adkins 6

3) API Well No.: 47 - 043 - 1578

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served: ✓
(a) Name Hubert Pauley, Jr.
Address P.O. Box 128
Sod, WV 25564

(b) Name
Address

(c) Name
Address

6) Inspector Jeremy James
Address P. O. Box 36
Clendenin, WV 25045
Telephone 304-951-2596

5) (a) Coal Operator
Name NA
Address

(b) Coal Owner(s) with Declaration
Name NA
Address

Name
Address

(c) Coal Lessee with Declaration
Name NA
Address

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.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
TIMOTHY P. ROUSH
P. O. Box 5519
Vienna, West Virginia 26105
My Commission Expires Apr. 26, 2020

Well Operator HG Energy, LLC
By Diane White Diane White
Its Agent
Address 5260 Dupont Road
Parkersburg, WV 26101
Telephone 304-420-1119

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FEB 05 2016
WV Department of
Environmental Protection

Subscribed and sworn before me this 17th day of December, 2015
Notary Public
My Commission Expires 4/26/2020

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 deprivacyoffier@wv.gov.

4301578P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 043 - 1578
Operator's Well No. Herbert Adkins 6

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 Hayzlett Fork Quadrangle Garrett's Bend 7.5'

Elevation 1039' County Lincoln District Duval

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

Will a synthetic liner be used in the pit? Yes, 30 mil.

Proposed Disposal Method For Treated Pit Wastes:

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

Proposed Work For Which Pit Will Be Used:

- _____ Drilling
- _____ Swabbing
- _____ Workover
- x Plugging
- _____ Other (Explain _____)

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

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Subscribed and sworn before me this 17th day of December, 20 15

WV Department of
Environmental Protection

Notary Public

My commission expires 4/26/2020

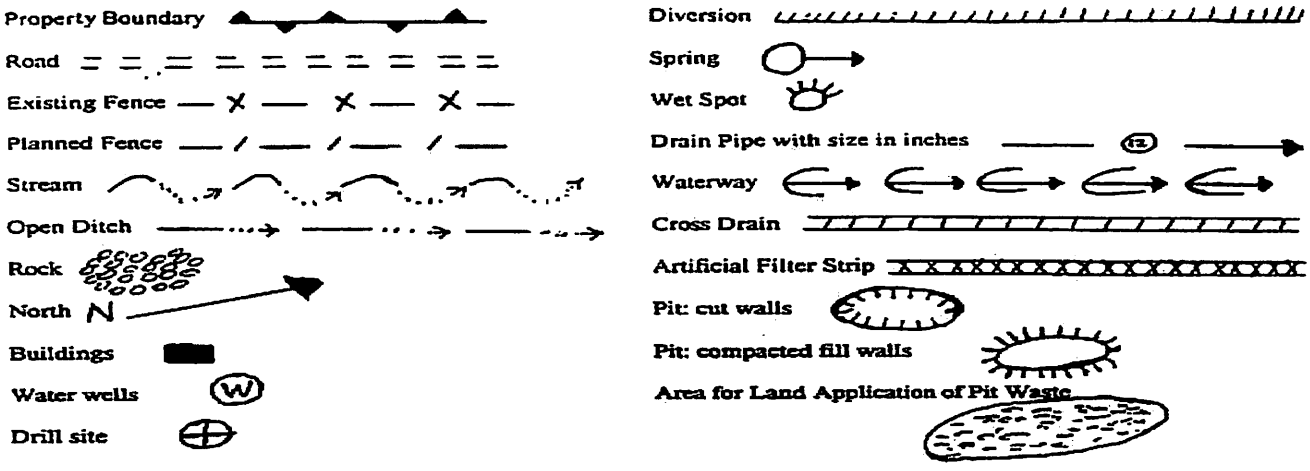
OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
TIMOTHY P. ROUSH
P. O. Box 5519
Vienna, West Virginia 26105
My Commission Expires Apr. 26, 2020

4301578P

Form WW-9

Operator's Well No. Herbert Adkins 6

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.3 acres 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

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

* Sediment Control Will 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 _____

Comments: _____

Title: inspector OOG Date: 1-26-16

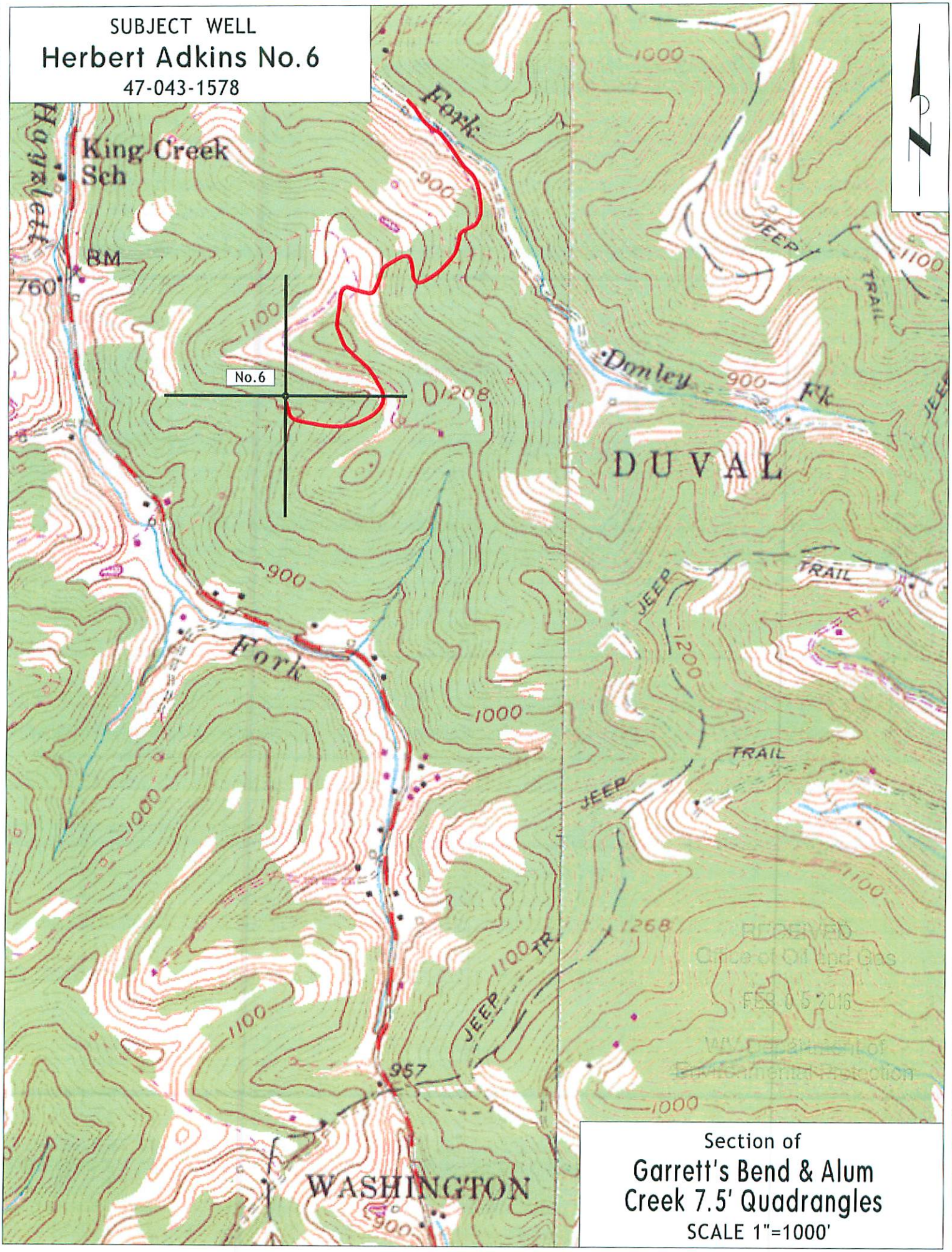
Field Reviewed? (_____) Yes (_____) No

4301578P

SUBJECT WELL

Herbert Adkins No. 6

47-043-1578



Section of

Garrett's Bend & Alum Creek 7.5' Quadrangles

SCALE 1"=1000'

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4301578P

WW-7
5-02

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

API: 47- 043 - 1578 **WELL NO:** 6

FARM NAME: Herbert Adkins No.6

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Lincoln **DISTRICT:** Duval

QUADRANGLE: Garrett's Bend 7.5'

SURFACE OWNER: Hubert Pauley, Jr.

ROYALTY OWNER: H.G. Energy, LLC et al.

UTM GPS NORTHING: 4,236,146 (NAD 83)

UTM GPS EASTING: 422,763 (NAD 83) **GPS ELEVATION:** 1040 ft 317 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	___	Post Processed Differential	___
		Real-Time Differential	___
Mapping Grade GPS	X	Post Processed Differential	X
		Real-Time Differential	___

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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 C White Diane C. White Designated Agent

Signature Title

November 24, 2015

Date