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

September 14, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-6100548, 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: VARNER, A.
API Well Number: 47-6100548
Permit Type: Plugging
Date Issued: 09/14/2015

Promoting a healthy environment.

6100548P

WW-4B
Rev. 2/01

1) Date July 20, 2015
2) Operator's Well No. A Varner 6
3) API Well No. 47-001-0548

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

5) Location: Elevation 1045'
District Clay
Watershed Thomas Run
County Monongalia Quadrangle Blacksville 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 Gayne Knitowski
Address PO Box 108
Gomania, WV 26720

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 sheet

Received
Office of Oil & Gas
AUG 10 2015

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 8/3/2015

6100548P

WW-4B - Conti
Rev. 2/01

1) Date: July 20, 2015
2) Operator's Well Number
A Varner 6
3) API Well No: 47 - 061 - 0548
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 X Liquid Injection ____ Waste Disposal ____
(If "Gas", Production ____ Underground Storage ____) Deep ____ Shallow x

5) LOCATION: Elevation: 1045' Watershed: Thomas Run
District: Clay County: Monongalia Quadrangle Blacksville 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 Gayne Knitowski
Address PO Box 108
Gormania, WV 26720

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- 3,186'

Manners of plugging:

Plug #1 2950' - 2850'
Located above the Gordon
Plug #2 - 2625' - 2525'
Located at 6 5/8" casing shoe
Free Point, part and pull 6 5/8" casing
Plug #3 - approx 2300' - 2200'
Located at 6 5/8" casing stub
Plug #4 -1700' - 1600'
Located at 8 1/4" casing shoe
Free point, part and pull 8 1/4" casing
Plug #5 - approx 1300' - 1000'
Located at 8 1/4" casing stub and through coal
Plug #6 - 350' - 250'
Freshwater
Plug #7 - 100' - 0'
Surface

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Office of Oil & Gas
AUG 10 2015

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

Reclaim site A.S.A.P.

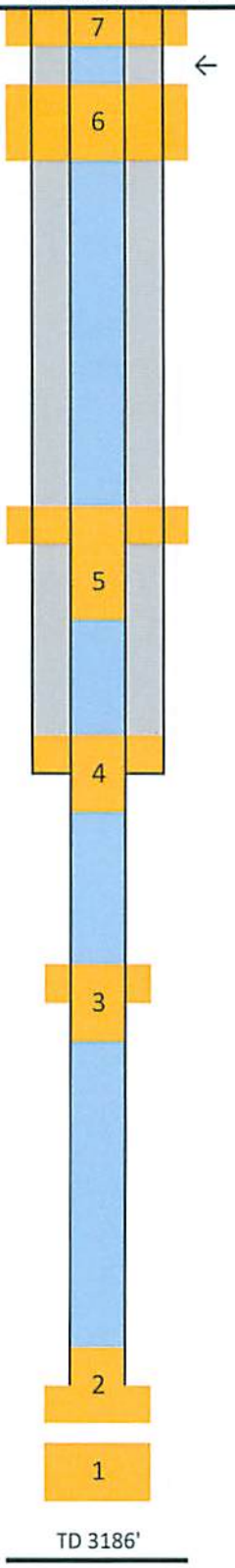
Gayne J Knitowski 8/3/2015

6100548 P

Well: Varner, A. #6

Elevation: 1045'

Casing Information		
Size	Depth	Weight
6 5/8	2575	#/ft.
8 1/4	1645	#/ft.



Freepoint Cut and Pull Casing	
Size	Approx. Depth
6 5/8	2250
8 1/4	1250

Cement Plugs		
NO.	Bottom	Top
1	2950	2850
2	2000	1900
3	2300	2200
4	1700	1600
5	1300	1000
6	350	250
7	100	0

Bottom Hole Cement Level Calculations

# Sacks Used	Cement Depth
0	#DIV/0!

Hole Size	Casing Size	Depth
0	0	0

diameter delta	Conv. Factor	bbls / ft.
0	1029.4	0

cubic ft. per vertical ft. depth
0

Sacks per vertical ft. depth
0

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AUG 10 2015

6100548P

Well No. 7706 A. J. Varner Farm.

Lease No. Tru Wile Township Harrison County NY

Rig built by G. H. Ross & Co

Well drilled by Joseph Crandall Contractor.

Began drilling Jun 13 1904 Completed July 28 1904

Rock Formation Top Bottom Remarks

Conductor		16	Steel Line
Pgh Coal	1085	1090	1085
Big Dunkard Sand	1625	1680	2575
Maxon "	2221	2290	3148
Little Lime	2305	2320	3186
Big Lime	2330	2420	
Big Injun Sand	2425	2515	
30 Foot "	2036	2050	
Strong "	3097	3120	
Gordon "	3148	3161	
Pay	3152		
Total Depth		3186	

6 960-0
5 550-450
4 1150-1075
3 1650-1580
2 2400-2300 2475-2375
1 3100-3000

2nd guess

ABANDONED, DEC 22 1910

Casing Record

	Put in	Pulled	Left
10"	380	380	
8 1/4	1645	1236	1645
6 5/8	2575	2575	2575

Sig E. E. Shira Supt

Received Office Gas AUG 10 2015

6100548P

WW-4A
Revised 6-07

1) Date: July 20, 2015
2) Operator's Well Number
A Varner 6

3) API Well No.: 47 - 061 - 00548

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: Joseph & Leona Wolfe
Address: 698 Thomas Run Road
Blacksville, WV 26521
(b) Name
Address
(c) Name
Address

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

6) Inspector: Gayne Knitowski
Address: P. O. Box 108
Gormania, WV 26720
Telephone: 304-546-8171

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.

Received
Office of Oil & Gas
AUG 10 2015

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
S. DIANNE DULANEY
5260 Dupont Road
Parkersburg, West Virginia 26101
My Commission Expires Oct. 4, 2016

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

Subscribed and sworn before me this 20th day of July 2015
Dianne Dulaney — Notary Public
My Commission Expires Oct. 4, 2016

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 depprivacyoffier@wv.gov.

6100548P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 061 - 00548
Operator's Well No. A Varner 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 Thomas Run Quadrangle Blacksville 7.5"

Elevation 1045' County Monongalia District Clay

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

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

Received
Office of Oil & Gas
JUL 10 2015

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

Subscribed and sworn before me this 20th day of July, 2015

Notary Public

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
S. DIANNE DULANEY
5260 Dupont Road
Parkersburg, West Virginia 26101
My Commission Expires Oct. 4, 2016

My commission expires Oct. 4, 2016

6100548P

Form WW-9

Operator's Well No. A Varner 6

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells
Drill site
Diversion
Spring
Wet Spot
Drain Pipe with size in inches
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed 0.6 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 Seed Type	lbs/acre	Area II Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

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Office of Oil & Gas
AUG 10 2015

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

Photocopied section of involved 7.5' topographic sheet.

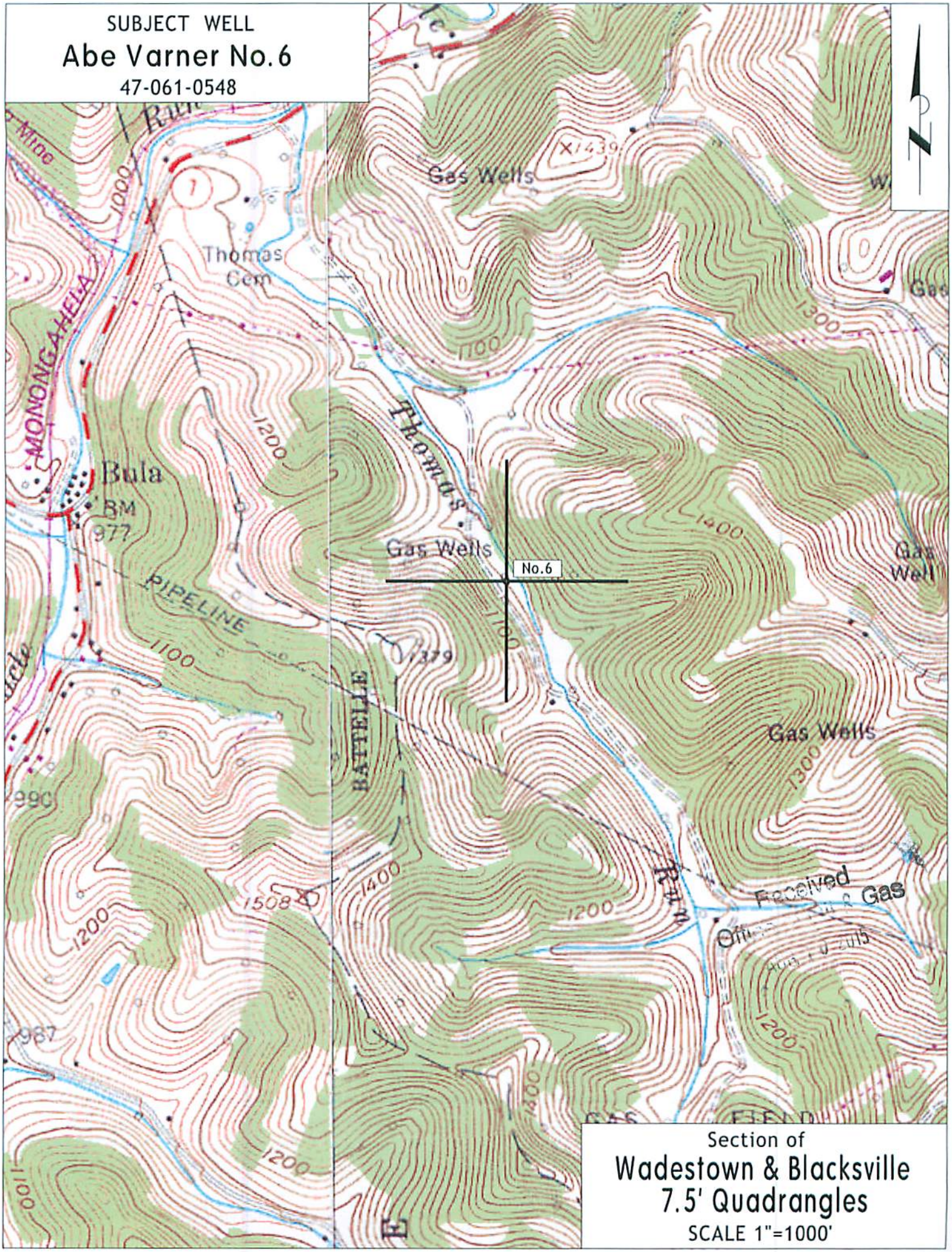
Plan Approved by: [signature]

Comments: Reclaim site A.S.A.P.

Title: Inspector Date: 8/3/2015

Field Reviewed? (X) Yes ( ) No

6100548P


SUBJECT WELL
Abe Varner No.6
47-061-0548
Gas Wells
Thomas Cem
MONONGAHELA
Bula
BM 977
PIPELINE
Thomas
Gas Wells
No.6
BATTELLE
Gas Wells
Received
Gas
Section of
Wadestown & Blacksville
7.5' Quadrangles
SCALE 1"=1000'

6100548 P

WW-7
8-30-06

West Virginia Department of Environmental Protection
Office of Oil & Gas

WELL LOCATION FORM: GPS

API: 47- 061- 0548 **WELL NO:** No.6

FARM NAME: Abe Varner

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Monongalia **DISTRICT:** Clay

QUADRANGLE: Blacksville 7.5'

SURFACE OWNER: Richard & Nancy Allen

ROYALTY OWNER: American Energy Partners et al.

UTM GPS NORTHING: 4,394,900 (NAD 83)

UTM GPS EASTING: 564,765 (NAD 83) **GPS ELEVATION:** 319 m. (1046')

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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Office of Oil & Gas
AUG 3 0 2015

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 — Designated Agent
Signature — Title

March 23, 2015
Date