



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 28, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9500548, 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: F. R. BALL 9
Farm Name: HAYES, RALPH & BETTY
API Well Number: 47-9500548
Permit Type: Plugging
Date Issued: 09/28/2015

Promoting a healthy environment.

10/02/2015

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.

9500548P

WW-4B - Conti
Rev. 2/01

1) Date: July 20, 2015
2) Operator's Well Number FR Ball 9
3) API Well No: 47 - 095 - 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: 1152' 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 Mike 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- 3,065'

GEL HOLE TO 1600' BEFORE SETTING PLUG #1. *znn*

Manners of plugging:

Plug #1 3010' - 2910'
Located at 3 1/2" casing shoe
Free Point, cut and pull 3 1/2" casing approx. 2300'
Plug #2 - approx. 2500' - 2250'
Located at 3 1/2" casing stub and 5 3/16" shoe
Free Point, cut and pull 5 3/16" casing approx. 2000'
Plug #3 - approx 2050' - 1950'
Located at 5 3/16" casing stub and 6 5/8" shoe
Free point, cut and pull 6 5/8", approx 1520'
Plug #4 -approx 1570' - 1470'
Located at 6 5/8" casing stub
Plug #5 - 1200' - 1100'
Located at Elevation
Plug #6 - 1020' - 920'
Located through coal
Plug #7 - 430' - 330'
Freshwater
Plug #8 - 100' - 0'
Surface

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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

*MAG
7-30-15*

6% Gel between all plugs

10/02/2015

Well: F.R. Ball #9

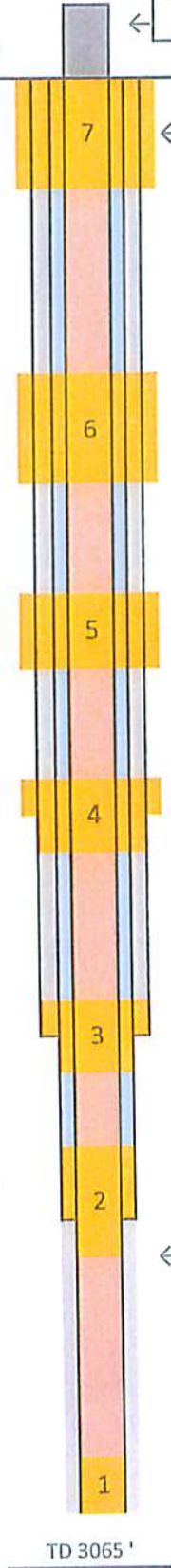
Monument min. 6" dia. metal pipe, 30" above surface, 10' in well below surface, sealed with cement, API id.

Elevation 1152'

Casing Information		
Size	Depth	Weight
6 5/8"	2000'	#/ft.
5 3/16"	2418'	#/ft.
3 1/2"	2959'	#/ft.

Freepoint Cut and Pull Casing	
Size	Approx. Depth
3 1/2"	2300'
5 3/16"	2000'
6 5/8"	1520'

Cement Plugs		
NO.	Bottom	Top
1	3010	2910
2	2500	2250
3	2050	1950
4	1570	1470
5	1200	1100
6	1020	920
7	430	330
8	100	0



bottom hole cement log calculations
Sacks Used Cement Depth
0 2658

hole size casing size depth
4.5 4.5 2665

diameter delta cement factor lbs/ft
27 1029.4 0.021x72

cubic ft. per vertical ft. depth
0.119991257

Sacks per vertical ft. depth
0.157388896

gel formulas
50/50 polymer 6% gel = 1.64
neat w/ salt flakes = 1.19
50/50 w/ 2% gel = 1.25

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← 3 1/2" casing cemented back to 5 3/16"

Note: 6% gel between all plugs

MDC
7-30-15

10/02/2015

No stimulation.

Old Well Record

Fgh Coal	970
Big Injun	2285-2450
1st Pay	2380
Stray	3015-3033
Gordon	3036-3050
T.D.	3065

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47-095-0540

LEASE NO. 743 ACRES 114 FARM NAME J. F. A. Hawkins H.No. 1961
 WELL NO. 12
 N. 6 S. E. W. 13 Location Made Purchased From H.C.&R.
 Civil District Ellsworth Rig Completed Date Purchased 3-1-43
 County Tyler Dr'g Commenced 8-19-98 Sold To
 State Va. Dr'g Completed 9-10-98 Date Sold
 GAS Rights Owned By Dr'g Contractor A.T. McDonnell & Co. Date Abandoned

FORMATION

Kind	Top	Bottom	Steel Line Meas.	Tests
Oil	1650	1657		
Gas	1650			
Gas	1637			

Total Depth 1680

CASING RECORD

Size	Bottom Casing Steel Line	Put In Wall Tally Meas.	Fullled Tally Meas.	Cemented
10"		105	105	Date
8 1/2"		920	920	Size Cas.
6 1/2"		1575		Top "
1 1/2"-7/8"		153		Bot "
2" Tbg.		1670		

PACKERS AND SHOES

Kind	Size	Depth Set	Date Set
Disc Wall Pkr.	5 1/2" x 7/8"	1606	9-17-06

TORPEDO RECORD

Date	No. Qts.	Size Shell	Top Shot	Bottom	Results
9-13-98	8		1651	1659	
11-10-98	8		1653	1661	
7-9-00	30				
3-29-44	30	2 1/2" x 1 1/2"	1650	1663	

DRILLING DEEPER

Commenced	Completed	Original Depth	Final Depth	Contractor

ABANDONMENT RECORD

Filled With	From	To	PLUG		Depth
			Size	Kind	

Initial Prod. * At Completion * 10 Days After *

Oil Keener
Gas

APPROVED

Supt.

TESTS, REPORTS AND REMARKS ON REVERSE SIDE

10/02/2015

APR 23 2015

9500548P

WW-4A
Revised 6-07

1) Date: July 20, 2015
2) Operator's Well Number
FR Ball 9
3) API Well No.: 47 - 095 - 00548

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

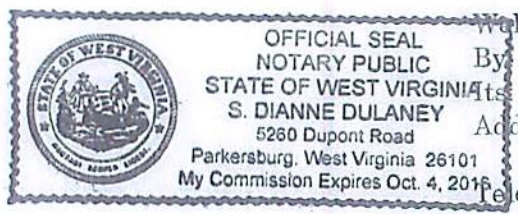
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Gordon Swartz</u>	Name <u>NA</u>
Address <u>10240 Indian Creek Road</u>	Address _____
<u>Jacksonburg, WV 26377</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Mike Goff</u>	(c) Coal Lessee with Declaration
Address <u>P. O. Box 134</u>	Name <u>NA</u>
<u>Pullman, WV 26421</u>	Address _____
Telephone <u>304-549-9823</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 HG Energy, LLC
 By Diane White
 Agent Diane White
 Address 5260 Dupont Road
Parkersburg, WV 26101
 Telephone 304-420-1119

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AUG 17 2015
WV Department of
Environmental Protection

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

S. 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 depprivacyofficer@wv.gov.

MDC
7-30-15
10/02/2015

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 1152' 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 lined with minimum of 2mil liner
77W

MDC
7-30-15

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.

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Company Official Signature Diane White AUG 17 2015

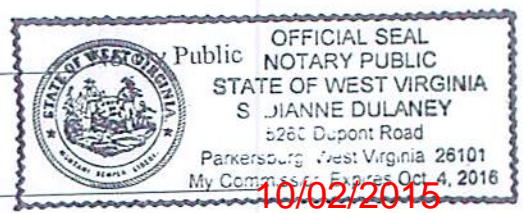
Company Official (Typed Name) Diane White

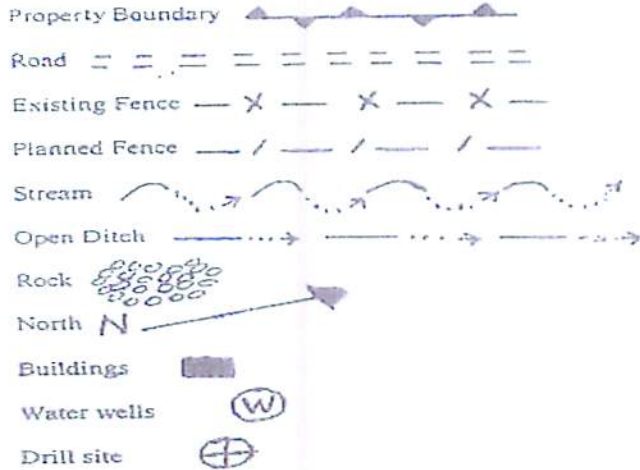
Company Official Title Agent WV Department of Environmental Protection

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

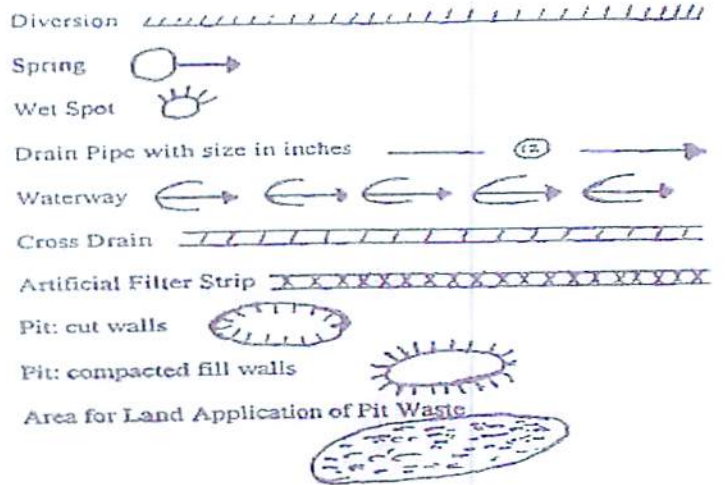
Jessie Dulaney

My commission expires Oct. 4, 2016





LEGEND



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

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

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

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

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Photocopied section of involved 7.5' topographic sheet.

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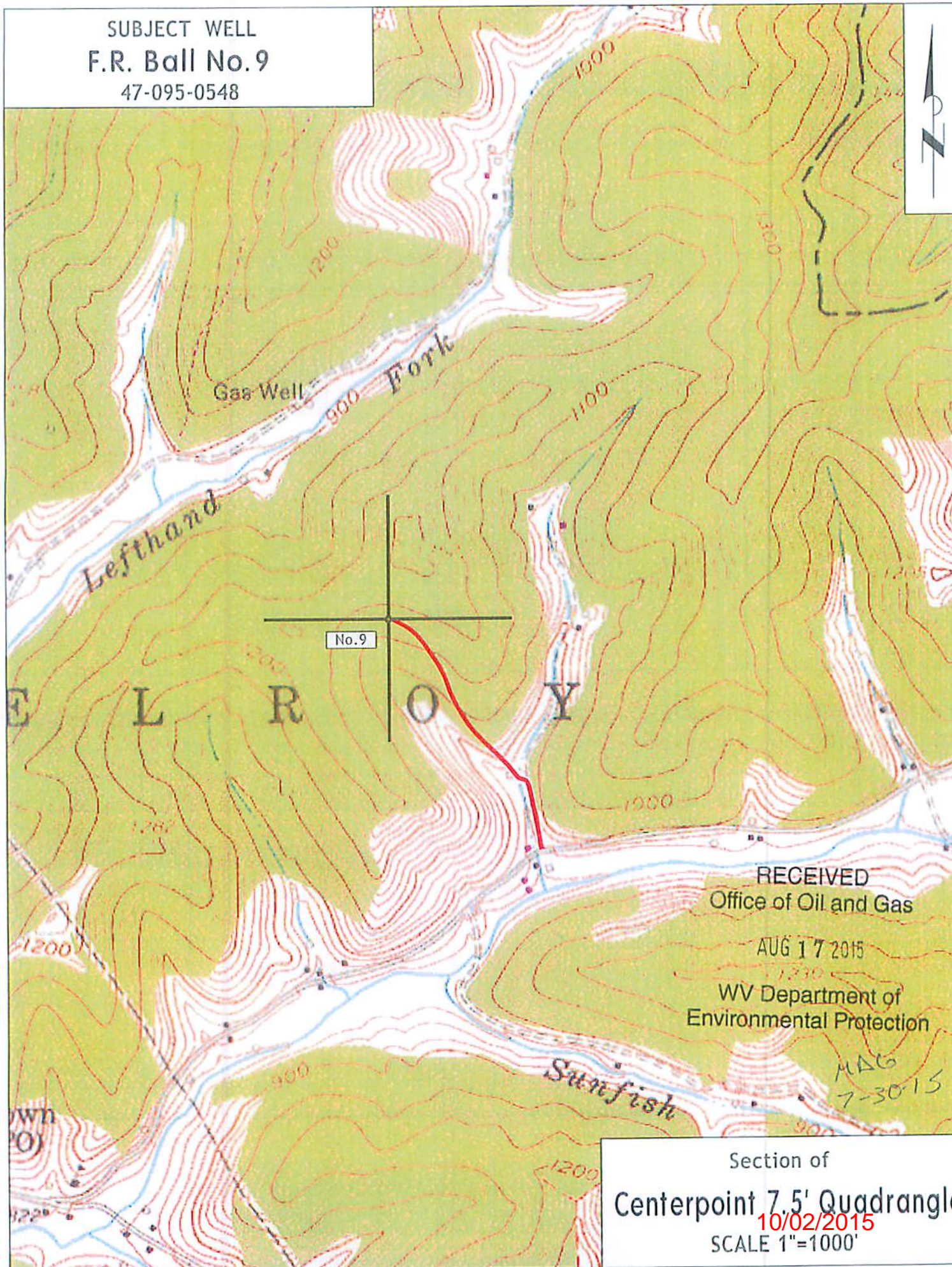
Plan Approved by: Michael Hoff

Comments: Preseed & Mulch any disturbed areas.

Title: Oil & Gas Inspector Date: 7-30-15

Field Reviewed? () Yes () No

SUBJECT WELL
F.R. Ball No. 9
47-095-0548



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MAG
7-30-15

Section of
Centerpoint 7.5' Quadrangle
10/02/2015
SCALE 1"=1000'

WW-7
8-30-06

West Virginia Department of Environmental Protection
Office of Oil & Gas

WELL LOCATION FORM: GPS

API: 47- 095 - 0548 WELL NO: 9

FARM NAME: F.R. Ball

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Centerpoint 7.5'

SURFACE OWNER: Gordon Swartz

ROYALTY OWNER: American Energy Partners et al.

UTM GPS NORTHING: 4,367,608 (NAD 83)

UTM GPS EASTING: 527,217 (NAD 83) GPS ELEVATION: 353 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"/>

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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 White Diane C. White
Signature

Designated Agent
Title

May 27, 2015
Date