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**west virginia** department of environmental protection

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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](http://www.dep.wv.gov)

August 29, 2013

**WELL WORK PERMIT**

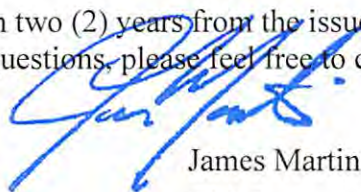
**Vertical Well**

This permit, API Well Number: 47-3305791, 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin  
Chief

Operator's Well No: W.B. CARPENTER NO. 251

Farm Name: JUNKINS, EARL & BELVA

**API Well Number: 47-3305791**

**Permit Type: Vertical Well**

Date Issued: 08/29/2013

**Promoting a healthy environment.**

# 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. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR § 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR § 4-19.1.c, if the operator is unable to sample and analyze any water well or spring within one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. 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.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.

3309791

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: HG Energy, LLC
- 2) Operator's Well Number: W. B. Carpenter No. 251      3) Elevation 1307'
- 4) Well Type: (a) Oil X or Gas \_\_\_\_\_  
 (b) If Gas:      Production \_\_\_\_\_      Underground Storage \_\_\_\_\_
- 5) Proposed Target Formation(s): Fifth Sand
- 6) Proposed Total Depth: 3150' TVD 3200' TMD ft.
- 7) Approximate fresh water strata depths: 225'
- 8) Approximate salt water depths: 1407'
- 9) Approximate coal seam depths: 690'
- 10) Does land contain coal seams tributary to active mine?      Yes \_\_\_\_\_      No X
- 11) Proposed Well Work: Drill and stimulate production well in Fifth Sand, well to be drilled directionally S 69° E 210'

SDW  
8/26/2013

12) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight Per Ft.	For Drilling	Left in Well	Fill-up (Cu. Ft.)
Conductor						
Fresh Water	7"	LS	17#	765'	765'	Cement to surface
Coal						
Intermediate						
Production	4 1/2"	J-55	10.5#	3200'	3200'	150 Sacks <u>CTB</u>
Tubing						
Liners						

Received

AUG 28 2013

Packers: Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

For Office of Oil and Gas Use Only

Office of Oil and Gas  
W. Va. Dept. of Environmental Protection

- Fee(s) Paid
  - Well Work Permit
  - Reclamation Fund
  - WPCP
  - Plat
  - WW-9
  - WW-2B
  - Bond \_\_\_\_\_
  - Agent
- (Type)

3305791

1) Date: August 22, 2013  
2) Operator's Well Number  
W. B. Carpenter No. 251  
3) API Well No: 47 - 033 - 05791  
State County Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

Check # 2361  
\$ 650.00

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name Earl & Belva Junkins ✓ W  
Address RR 5, Box 1226  
Salem, WV 26426  
(b) Name  
Address  
(c) Name  
Address  
6) Inspector Sam Ward  
Address P. O. Box 2327  
Buckhannon, WV 26201  
Telephone (304) - 389-7583

5) (a) Coal Operator:  
Name NA  
Address  
(b) Coal Owner(s) with Declaration  
Name NA  
Address  
(c) Coal Lessee with Declaration  
Name Wolf Run Mining ✓ W  
Address 2708 Cranberry Square  
Morgantown, WV 26505

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 4 on the above-named parties, by:

Personal Service (Affidavit attached)  
 Certified Mail (Postmarked postal receipt attached)  
 Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

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, 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 and imprisonment.

Well Operator HG Energy, LLC  
By: Diane C White Diane C White  
Its: Accountant  
Address 5260 Dupont Road  
Parkersburg, WV 26101  
Telephone (304) 420-1119

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AUG 28 2013

Subscribed and sworn before me this 22 day of August 2013

Tina L. Pethel  
My commission expires 11/02/2018



Department of Oil and Gas  
Division of Environmental Protection



Legend

Property Boundary		Diversion	
Road		Spring	
Existing Fence		Wet Spot	
Planned Fence		Drain Pipe	
Stream		Waterway	
Open Ditch		Cross Drain	
Rock		Filter Strip	
North		Pit: Cut Walls	
Buildings		Pit: Compacted Fill Walls	
Water Wells		Area of Land Application of Pit Waste	
Drill Site			

Proposed Revegetation Treatment: Acres Disturbed

Area I	Approx. 1.0 Ac.	Prevegetation pH _____
Area II	Approx. 0.1 Ac.	

Lime \_\_\_\_\_ 2 Tons/Acre or Correct to pH 6.5

Fertilizer (10-20-20 or Equivalent) \_\_\_\_\_ 500 Lbs./Acre (500 lbs. Minimum)

Mulch \_\_\_\_\_ Straw \_\_\_\_\_ 2 Tons/Acre

SEED MIXTURES

<u>Area I (Location)</u>		<u>Area II (Road)</u>	
Seed Type	Lbs./Ac.	Seed Type	Lbs./Ac.
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

**Received**

AUG 28 2013

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

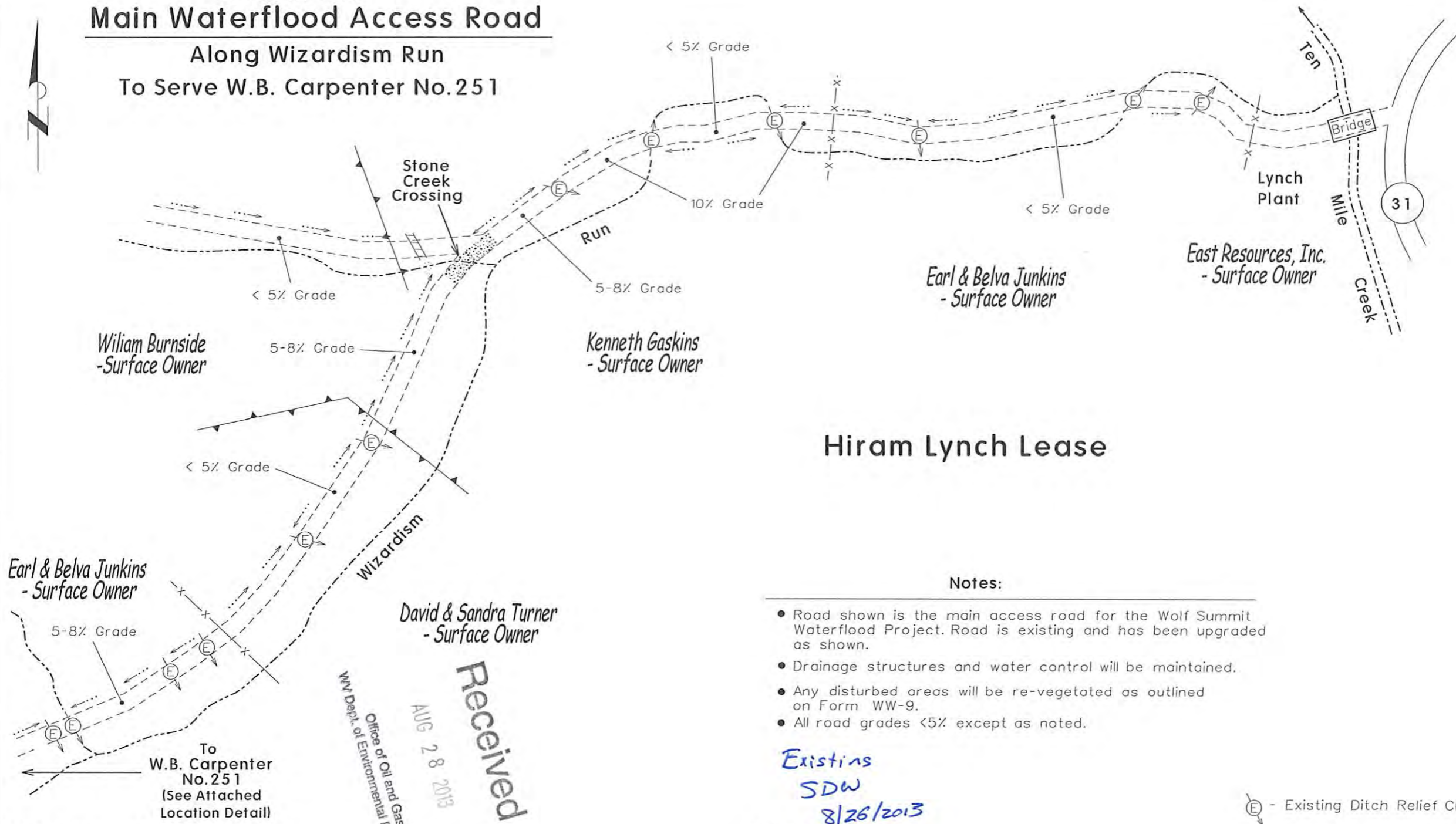
Office of Oil and Gas  
 WV Dept. of Environmental Protection

Plan approved by: S. D. Ward  
 Title: Oil Gas Inspector Date: 8/26/2013

Field Reviewed? X Yes   No

*Pre-seed & mulch as soon as reasonably possible. Update ETS per ETS manual where necessary.*

# Detail of: Main Waterflood Access Road Along Wizardism Run To Serve W.B. Carpenter No. 251



## Hiram Lynch Lease

### Notes:

- Road shown is the main access road for the Wolf Summit Waterflood Project. Road is existing and has been upgraded as shown.
- Drainage structures and water control will be maintained.
- Any disturbed areas will be re-vegetated as outlined on Form WW-9.
- All road grades <5% except as noted.

Exists  
SDW  
8/26/2013

- Existing Ditch Relief Culvert

Note: Drawing not to Scale

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 AUG 28 2013  
 Office of Oil and Gas  
 Environmental Protection  
 NM Dept. of Environmental Protection

W.B. Carpenter Lease

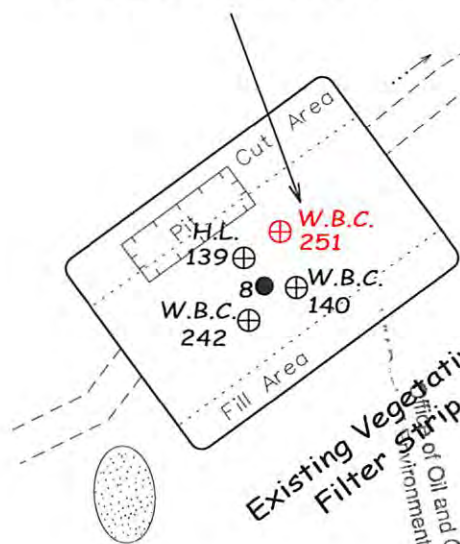
3305791

# Reclamation Plan For: W.B. Carpenter No. 140 & 242 & Hiram Lynch No. 139 and W.B. Carpenter No. 251



**NOTE:**  
The proposed well No. 251 will be drilled on the same location that was constructed under drilling permits issued for No. 139, 140 and 242. No additional construction will be required.

**NOTE:**  
Existing location for WB Carpenter No. 8 will be enlarged to drill new wells No. 139, 140, 242 and WB Carpenter No. 251



Existing Vegetative Filter Strip  
Office of Oil and Gas Environmental Protection

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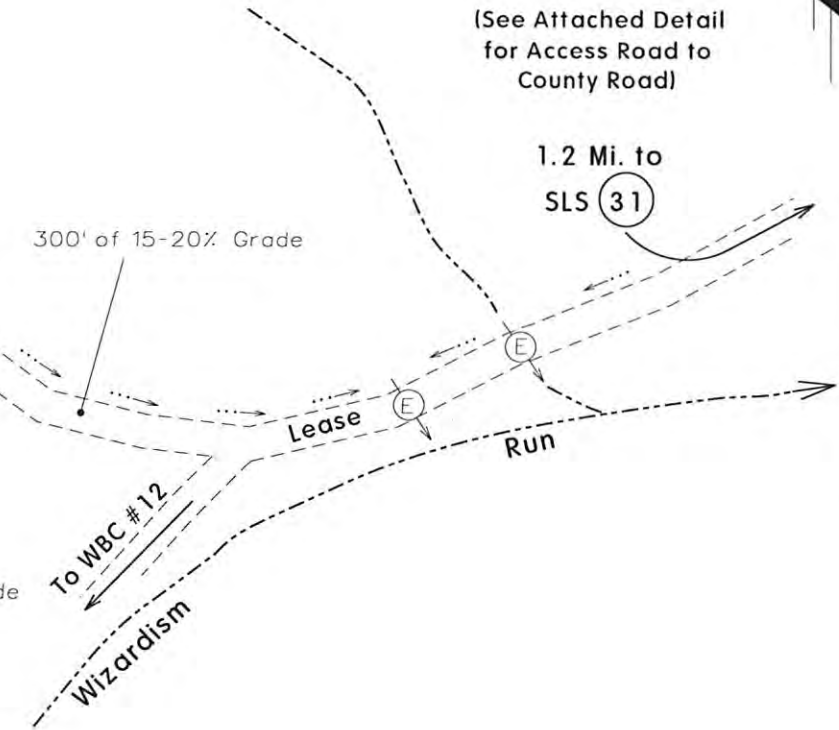
Record

**NOTE**  
REFER TO THE WVDEP EROSION AND SEDIMENT CONTROL FIELD MANUAL VER. MAY 2012 FOR BMPs CONTROLLING EROSION AND SEDIMENT FROM SOIL-DISTURBING OPERATIONS.

Use Existing Access Road for WB Carpenter No. 8

W.B. Carpenter Lease

Earl & Belva Junkins  
- Surface Owner



**Notes:**

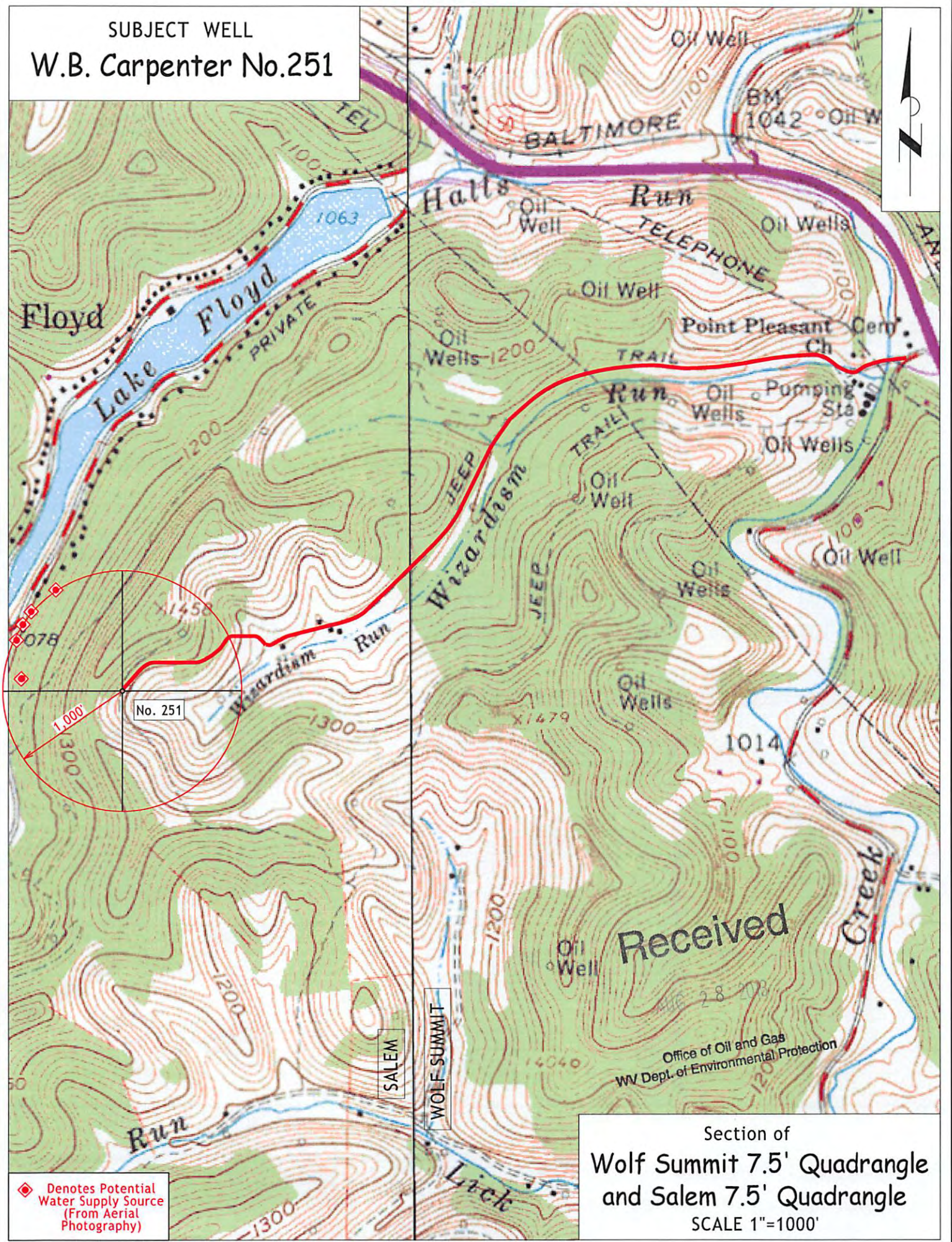
- Requested permit is for drilling of new wells.
- Access road from Co. Rd. 31 to location is existing. Structures will be maintained.
- All disturbed areas will be re-vegetated as outlined on Form WW-9.
- Maintain sediment barriers and drainage structures.
- All road grades <5% except as noted.
- Location of drill pit may be changed based on as-built considerations.

Note: Drawing not to Scale

3305791



SUBJECT WELL  
W.B. Carpenter No.251



◆ Denotes Potential Water Supply Source (From Aerial Photography)

Section of  
Wolf Summit 7.5' Quadrangle  
and Salem 7.5' Quadrangle  
SCALE 1"=1000'

Office of Oil and Gas  
WV Dept. of Environmental Protection

(BOTTOM HOLE: LON:-80°30'27.8") LON:-80°30'30.3" 2385

1 - Well ties and Latitude and Longitude were measured by Topcon Hiper GA survey grade GPS. Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).  
 2 - Surface owners, adjoining information, Lease names, & line mapping obtained from HGE GIS system.  
 3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete title Opinion.

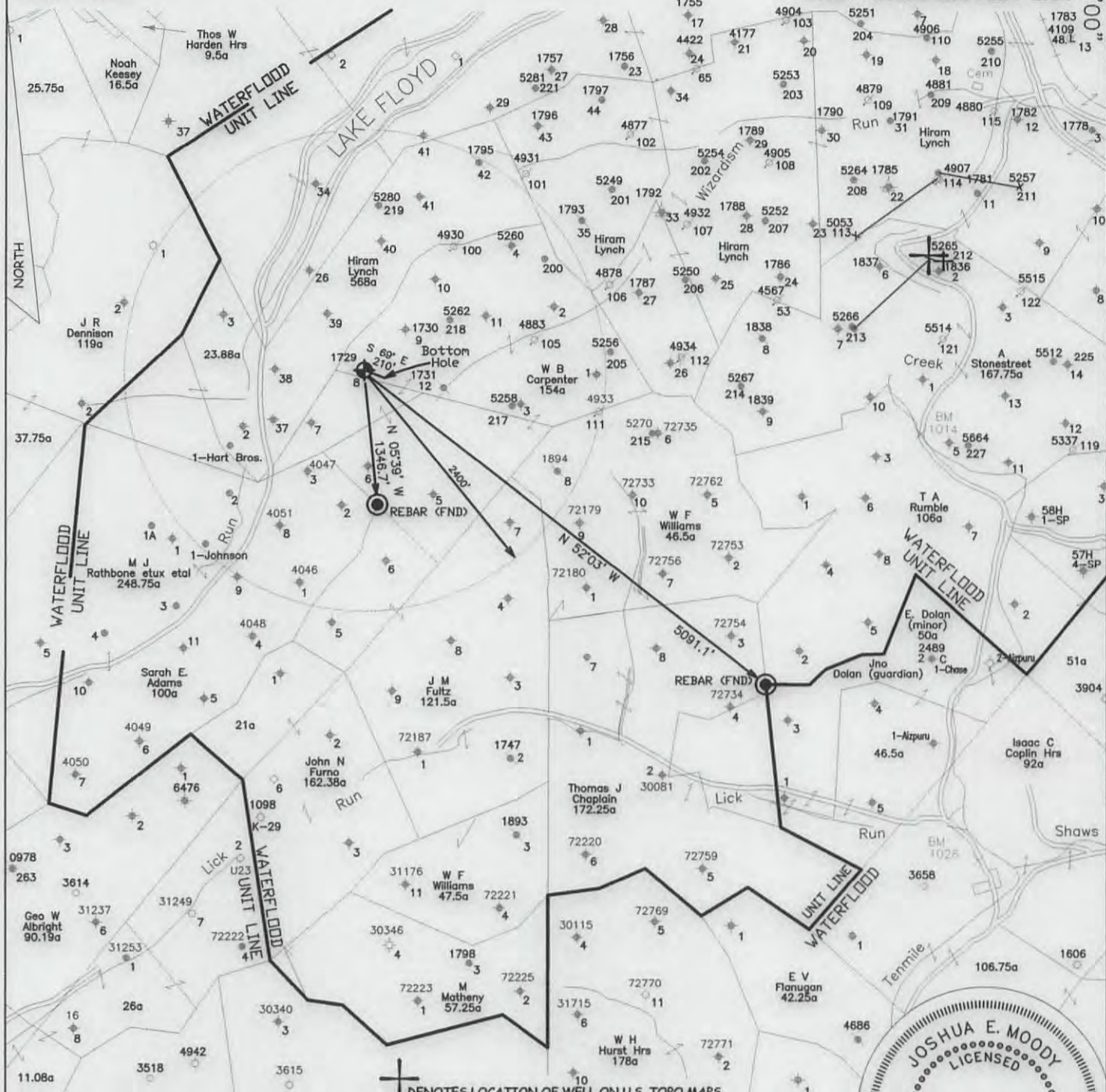
SURVEY NOTES

UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,347,683m. E-542,416m.
Bottom Hole	N-4,347,660m. E-542,476m.

LOCATION REFERENCES	
NAD 1983	
S 02°13' E 26.0' EX: WELL 1731	
N 25°04' E 150.7' 15' HICKORY	
Brg. Direction is prop. well to the ref.	

LAT: 39°17'30"  
**MAP OF**  
**H.G. ENERGY, LLC**  
**-WATERFLOOD UNIT-**  
**W.B. CARPENTER 251**

LON: 80°30'00"  
 5205  
 LAT: 39°16'38.6"  
 (BOTTOM HOLE: LAT: 39°16'37.8")



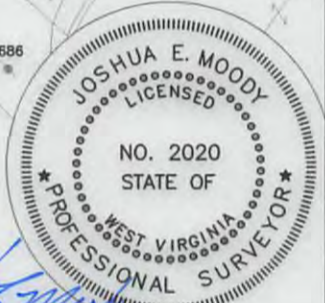
⊕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

JOB # 13-014  
 DRAWING # 13LAKEFLOYD FOLDER  
 SCALE 1" = 1500'  
 MINIMUM DEGREE OF ACCURACY 1/2500  
 PROVEN SOURCE OF ELEV. BENCH MARK H-80

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**MOODY LAND SURVEYING, LLC**  
 ST. MARYS, WV 26170



JOSHUA E. MOODY, P.S. 2020  
 DATE 8/21/13  
 OPERATOR'S WELL W.B. CARPENTER #251

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  HORIZONTAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1307' WATERSHED WIZARDISM RUN API WELL # 47-033-05791  
 DISTRICT TEN MILE COUNTY HARRISON STATE 47 COUNTY 033 PERMIT 05791  
 QUADRANGLE SALEM 7.5'

SURFACE OWNER EARL & BELVA JUNKINS ACREAGE 152.14 ACRES +/-  
 OIL & GAS ROYALTY OWNER CHARLES A. SADLER ET AL LEASE ACREAGE 154 ACRES +/-  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WILL BE DRILLED DIRECTIONALLY (S 69° E 210')  
 PLUG & ABANDON  CLEAN OUT & REPLUG   
 TARGET FORMATION 5TH SAND ESTIMATED DEPTH MD= 3,200'  
 WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT MIKE KIRSCH  
 ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD  
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

COUNTY NAME PERMIT