



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

June 07, 2013

WELL WORK PERMIT
Secondary Recovery Well

This permit, API Well Number: 47-3305746, 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: HIRAM LYNCH #139
Farm Name: JUNKINS, EARL & BELVA
API Well Number: 47-3305746
Permit Type: Secondary Recovery Well
Date Issued: 06/07/2013

WW-3B
10/07



1) Date April 15, 2013
2) Operator's Well No. Hiram Lynch No. 139
3) API Well No. 47 - 033 -
State County Permit
4) UIC Permit No. UIC2R03301AP

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

- 5) WELL TYPE: Liquid Injection Gas Injection (not storage) _____ Waste Disposal _____
- 6) LOCATION: Elevation 1307' Watershed Wizardism Run
District Tenmile County Harrison Quadrangle Salem 7.5'
- 7) WELL OPERATOR: HG Energy, LLC 494497948 8) DESIGNATED AGENT: Mike Kirsch
5260 Dupont Road 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101
- 9) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Tristan Jenkins 10) DRILLING CONTRACTOR: Name _____
Address P. O. Box 4274 Address _____
Clarksburg, WV 26302
- 11) PROPOSED WELL WORK: Drill Drill Deeper _____ Redrill _____ Stimulate
Plug Off Old Formation _____ Perforate New Formation _____ Convert _____
Other Physical Change in Well (specify) _____
- 12) Geological target formation Fifth Sand Depth 3,165 Ft. (Top) to 3,172 Ft. (Bottom)
- 13) Estimated depth of completed well (or actual depth of existing well) 3225' TVD 3300' TMD _____ Ft.
- 14) Approximate water strata depths: Fresh _____ 200 Ft. ✓ Salt 1,400 Ft.
- 15) Approximate coal seam depths: 690 Ft. ✓
- 16) Is coal being mined in the area? _____ Yes No _____
- 17) Virgin reservoir pressure in target formation: _____ 1,250 psig. Source Estimated
- 18) Estimated reservoir fracture pressure: _____ 2,650 psig.
- 19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 25 BBL Bottom Hole Pressure 2,400 psi
- 20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES Fresh water, produced water, bactericides
and other chemicals as needed to maintain water quality and improve oil recovery.
- 21) FILTERS (IF ANY) Cartridge filters and/or coal bed filters
- 22) SPECIFICATION FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL _____

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight	New	Used	For Drilling	Left in Well		
Conductor									Kinds
Fresh Water	7"	L.S.	17#	X		750'	750'	Cement to Surface	Tension
Coal									Sizes
Intermediate									2.375" x 4.5"
Production	4 1/2"	J-55	10.5#	X		3300'	3300'	150 sacks	Depths Set
Tubing	2 3/8"	J-55	4.6 #	X		3000'	3000'		2900'
Liners									Perforations
									Top Bottom

24) APPLICANTS OPERATING RIGHTS were acquired from Hiram J. Lynch et ux.
by Deed _____ Lease Other Contract _____ Dated January 19, 1899 of record in the
Harrison County Clerk's Office in _____ Book 105 at Page 143

TAJ
27 APR 13

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06/07/2013

WW-2B1

Well No. Hiram Lynch No. 139

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

If no water well or spring is located within 1000 feet, the Chief may require the operator to sample and analyze water from a water well or spring within 2000 feet of the proposed well site.

Be advised, you have the right to sample and analyze any water supply at your own expense.

The laboratory used by the operator to analyze the samples will be approved by the Chief. The operator named below has decided to use the following laboratory to analyze the water samples:

Contractor Name Sturm Environmental Services
 Well operator's private laboratory

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

Telephone 304-420-1119

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underlining which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site please indicate such.

Susan Junkins
RR 2, Box 119A
Bristol, WV 26426

Gary & Ruth Ann Kennedy
RR 2, Box 119
Bristol, WV 26426

John & Brenda Scotchie
RR2, Box 42
Bristol, WV 26426

Linda Smith
9046 Westville Rd
Camden, Wyoming, DE 19934

Dennis McAvey
RR2, Box 41
Bristol, WV 26426

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Office of Oil & Gas
APR 30 2013
WV Department of Environmental Protection
06/07/2013

3305746 S

Form WW-9
Rev. 10/94

Page 3 of 3
API Number 47- 033
Operator's Well No. Hiram Lynch No. 139

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 HG Energy, LLC OP Code 494497948
Watershed Wizardism Run Quadrangle Salem 7.5' 596
Elevation 1307' County Harrison 33 District Tenmile 09
Description of anticipated Pit Waste: Fluids encountered in drilling shallow well.
Do you anticipate more than 5,000 bbls of water to complete the proposed well work? Yes No X
Will a synthetic liner be used in pit? Yes If so, what mil.? 10 Mil. 20 Mil.

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)

Drilling medium anticipated for this well? Air, fresh water, oil based, etc. Air, Fresh Water
- If oilbased, what type? Synthetic, petroleum, etc. NA
Additives to be used? Water, Soap, KCI
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.
- If left in pit and plan to solidify, what medium will be used? Cement, lime, sawdust Native soil, cement, lime
- Landfill or offsite name/permit number?

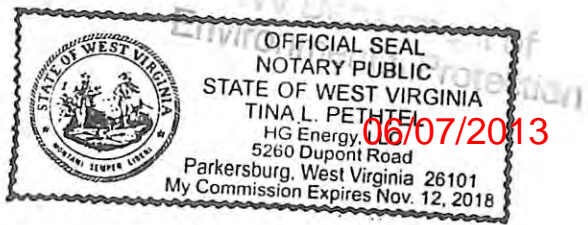
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 C White
Company Official (Typed Name) Diane C. White
Company Official Title Accountant

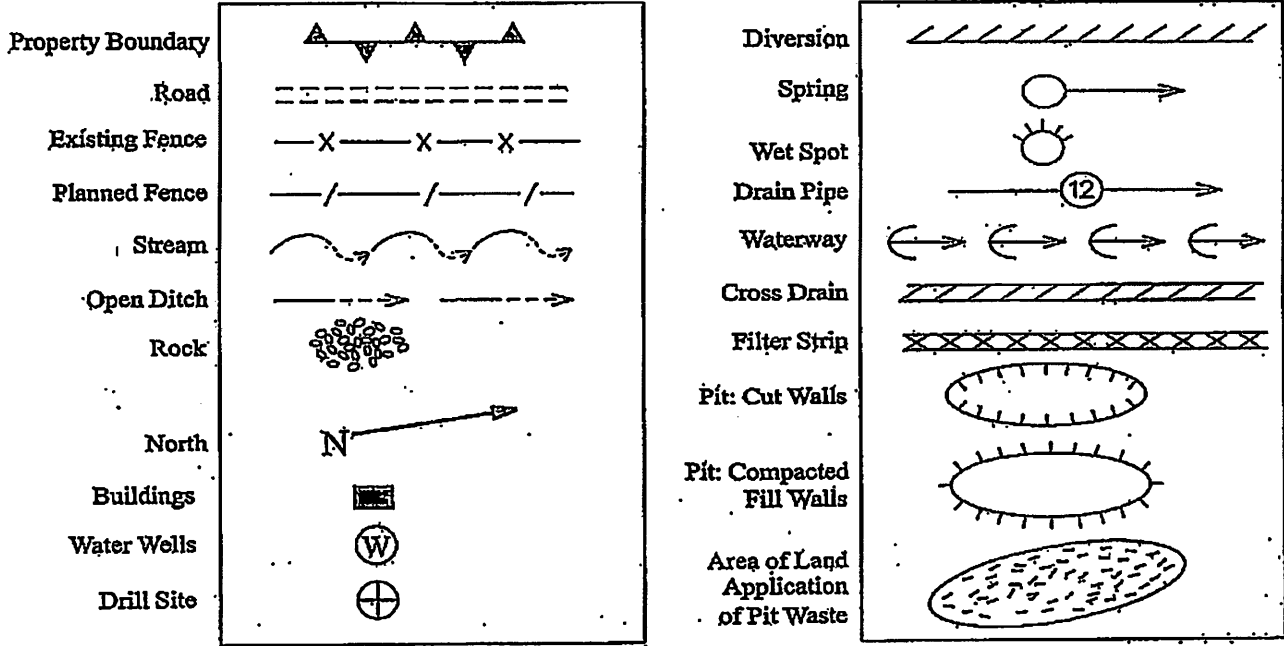
Subscribed and sworn before me this 15 day of April 2013
Tina L. Petzel Notary Public
My commission expires Nov. 12, 2018

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Office of Oil & Gas
APR 30 2013



WWQ Park

Legend



Area I
 Proposed Revegetation Treatment: Acres Disturbed Approx. 1.5 Ac. Prevegetation pH

Area II
 Approx. 1.0 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

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:

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Title: *oil & Gas Inspector*

Date: *25 APR 13*

Field Reviewed? Yes

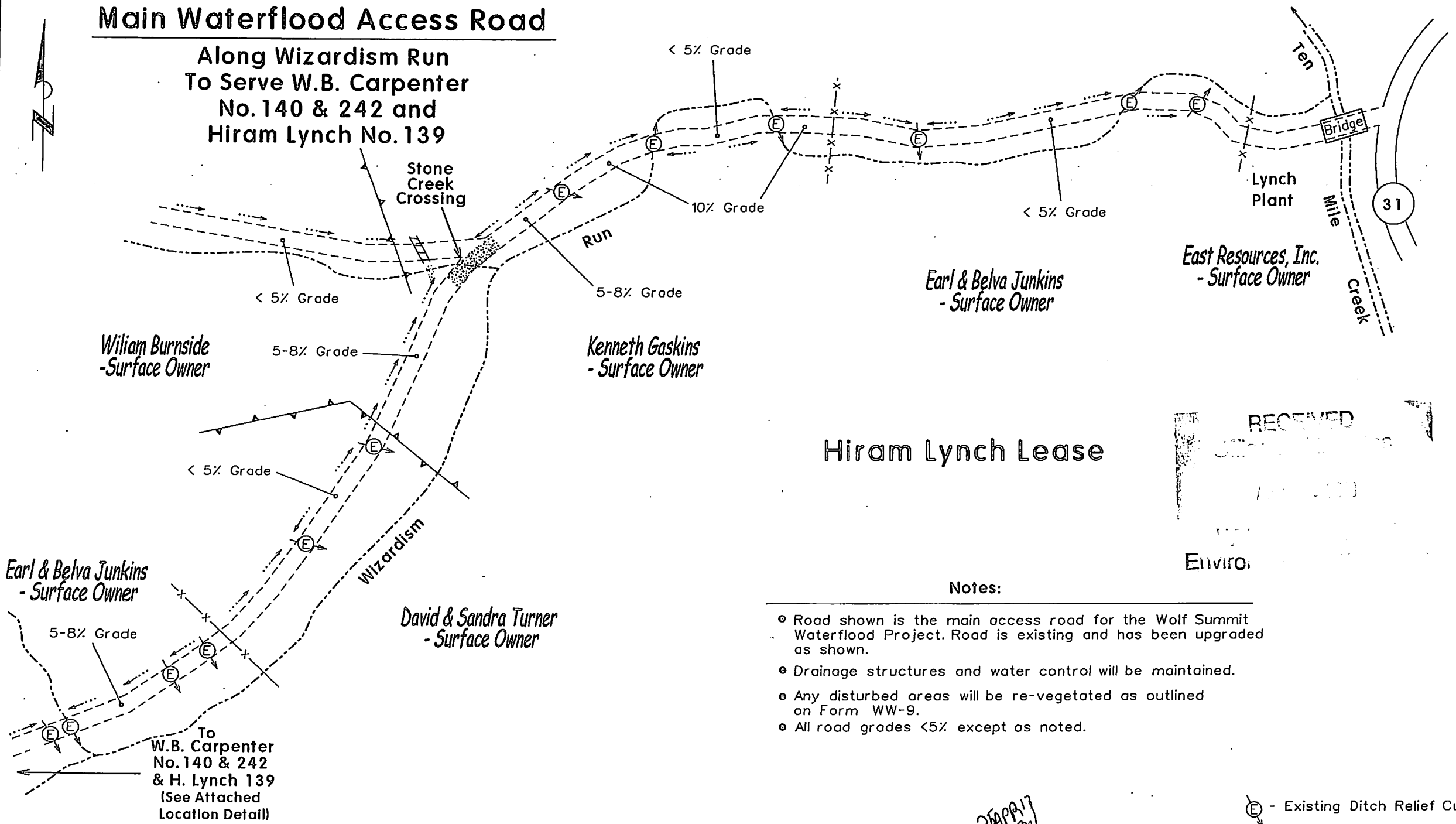
No

06/07/2013
 Environmental Protection

33057465

Detail of: Main Waterflood Access Road

Along Wizardism Run To Serve W.B. Carpenter No. 140 & 242 and Hiram Lynch No. 139



Hiram Lynch Lease

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 JUN 10 1983
 ENVIRO.

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.

⊙ - Existing Ditch Relief Culvert

Note: Drawing not to Scale

2/28/83
JAW

W.B. Carpenter Lease

33057465

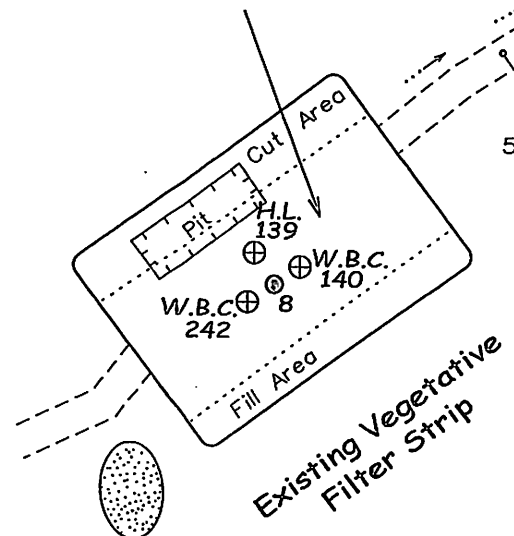
Reclamation Plan For:

W.B. Carpenter No. 140 & 242 & Hiram Lynch No. 139

RECEIVED
Office of Oil & Gas
APR 9 9 2013
WV Department of
Environmental Protection

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

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



500' of <5% Grade

Use Existing Access Road
for WB Carpenter No. 8

To WBC #100

200' of 5-8% Grade

Existing

500' of 20-22% Grade

To WBC #12
Wizardism

300' of 15-20% Grade

1731
218

Lease

Run

(See Attached Detail
for Access Road to
County Road)

1.2 Mi. to
SLS (31)

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

TAL
25 APR 13

SUBJECT WELL
Hiram Lynch No.139



◆ Denotes Potential Water Supply Source (From Aerial Photography)

Section of
Wolf Summit 7.5' Quadrangle
and Salem 7.5' Quadrangle
 SCALE 1"=1000'
 08/07/2013

(BOTTOM HOLE: LON:-80°30'37.0") LON:-80°30'30.4" 2390

- 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)		LOCATION REFERENCES	
Surface	N-4,347,677m. E-542,414m.	NAD 1983 N 63°23' W 10.0' EX: WELL 1731 S 24°26' W 173.6' 15" HICKORY	
Bottom Hole	N-4,347,690m. E-542,256m.		

LAT: 39°17'30"

**MAP OF
H.G. ENERGY, LLC
-WATERFLOOD UNIT-
HIRAM LYNCH 139**



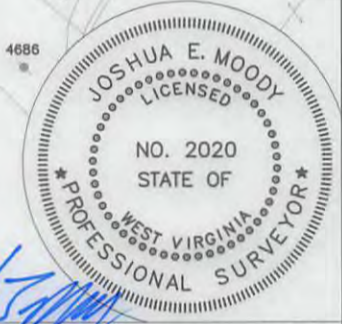
⊕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

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 4/08/13
OPERATOR'S WELL HIRAM LYNCH #139

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 # 47-033-05746S
DISTRICT TEN MILE COUNTY HARRISON STATE WV COUNTY HARRISON PERMIT 05746S
QUADRANGLE SALEM 7.5'

SURFACE OWNER EARL & BELVA JUNKINS ACREAGE 152.14 ACRES +/-
OIL & GAS ROYALTY OWNER ANN FARR ET AL LEASE ACREAGE 568 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 (N 85° W 520')
PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION 5TH SAND ESTIMATED DEPTH MD= 3,300'
WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT MIKE KIRSCH
ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

06/07/2013

COUNTY NAME PERMIT

VOID

VOID

(BOTTOM HOLE: $LN:-80^{\circ}30'37.0''$) $LN:-80^{\circ}30'30.4''$ 2390

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LAT: $39^{\circ}17'30''$
MAP OF
H.G. ENERGY, LLC
-WATERFLOOD UNIT-
HIRAM LYNCH 139



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

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 DRAWING # 13LAKEFLOYD FOLDER
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 MINIMUM DEGREE OF ACCURACY 1/2500
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MOODY LAND SURVEYING, LLC
 ST. MARYS, WV 26170

JOSHUA E. MOODY, P.S. 2020
 NO. 2020 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

DATE 4/08/13
 OPERATOR'S WELL HIRAM LYNCH #139

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VOID

06/07/2013

COUNTY NAME PERMIT