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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

October 25, 2013

**WELL WORK PERMIT**  
**Rework-Secondary Recovery**

This permit, API Well Number: 47-10301315, 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: IRENE REILLY 13  
Farm Name: WV PUBLIC LAND CORP.  
**API Well Number: 47-10301315**  
**Permit Type: Rework-Secondary Recovery**  
Date Issued: 10/25/2013

# 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.
8. If well work related activities require the use of water obtained by withdrawals from waters of this state in amounts that exceed two hundred ten thousand gallons during any thirty day period, the operator is required to consult, and adhere to, the guidance provided by DEP's Water Withdrawal Guidance Tool prior to any water withdrawals.



State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: WVA. PUBLIC LAND Operator Well No.: IRENE REILLY#13

LOCATION: Elevation: 1,005.00 Quadrangle: CENTER POINT

District: GREEN County: WETZEL  
Latitude: 2740 Feet South of 39 Deg. 30Min. 0 Sec.  
Longitude: 8340 Feet West of 80 Deg. 40 Min. 0 Sec.

Company: PENNZOIL PRODUCTS COMPANY  
P O BOX 5519  
VIENNA, WV 26105-5519

Agent: JAMES A. CREWS

Inspector: RANDAL MICK  
Permit Issued: 12/14/94  
Well work Commenced: 10/03/95  
Well work Completed: 10/03/95  
Verbal Plugging  
Permission granted on: -  
Rotary Cable  Rig  
Total Depth (feet) 2990'  
Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): NA

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8"	893'	893'	Existing Casing
4-1/2"	2976'	2976'	Existing Casing

OPEN FLOW DATA

\*Water injection well

Producing formation Gordon Pay zone depth (ft) 2881-2990  
Gas: Initial open flow \*          MCF/d Oil: Initial open flow \*          Bbl/d  
Final open flow \*          MCF/d Final open flow \*          Bbl/d  
Time of open flow between initial and final tests \*          Hours  
Static rock Pressure \*          psig (surface pressure) after \*          Hours

Second producing formation          Pay zone depth (ft)           
Gas: Initial open flow          MCF/d Oil: Initial open flow          Bbl/d  
Final open flow          MCF/d Final open flow          Bbl/d  
Time of open flow between initial and final tests          Hours  
Static rock Pressure          psig (surface pressure) after          Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED  
Office of Oil and Gas

For: PENNZOIL PRODUCTS COMPANY

By: [Signature]  
Date: 11/2/95

SEP 23 2013

WV Department of  
Environmental Protection

10/25/2013

Treatment:

Sand notched - 2888'-2892'

Treated via 4½" csg. w/300 gals. 15% HCl acid,  
217 bbls. of gelled water & 73,700 lbs. of 20/40 sand

Well Log:

See original well record

13,700

Received

SEP 22 2013

Office of Oil and Gas  
WV Dept. of Environmental Protection

Received

SEP 23 2013

Office of Oil and Gas  
WV Dept. of Environmental Protection



10301355

Form WW-9  
Rev. 10/94

Page 3 of 3  
API Number 47- 103 - 1815

Operator's Well No. Irene Reilly No. 13

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 Fluharty Fork of Piney fork Quadrangle Centerpoint 7.5'  
Elevation 1005' County Wetzel District Green

Description of anticipated Pit Waste: Fluids encountered in stimulating existing 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? 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. NA  
- If oilbased, what type? Synthetic, petroleum, etc.   

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?   

DMH  
8-12-13

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

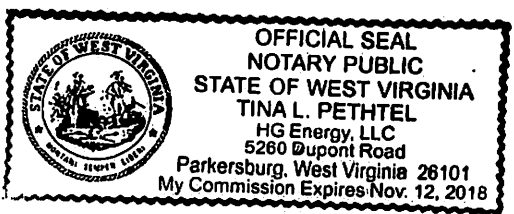
Subscribed and sworn before me this 25 day of July 2013  
Tina L. Pethel

Notary Public RECEIVED  
Office of Oil and Gas

My commission expires Nov. 12, 2018

SEP 23 2013

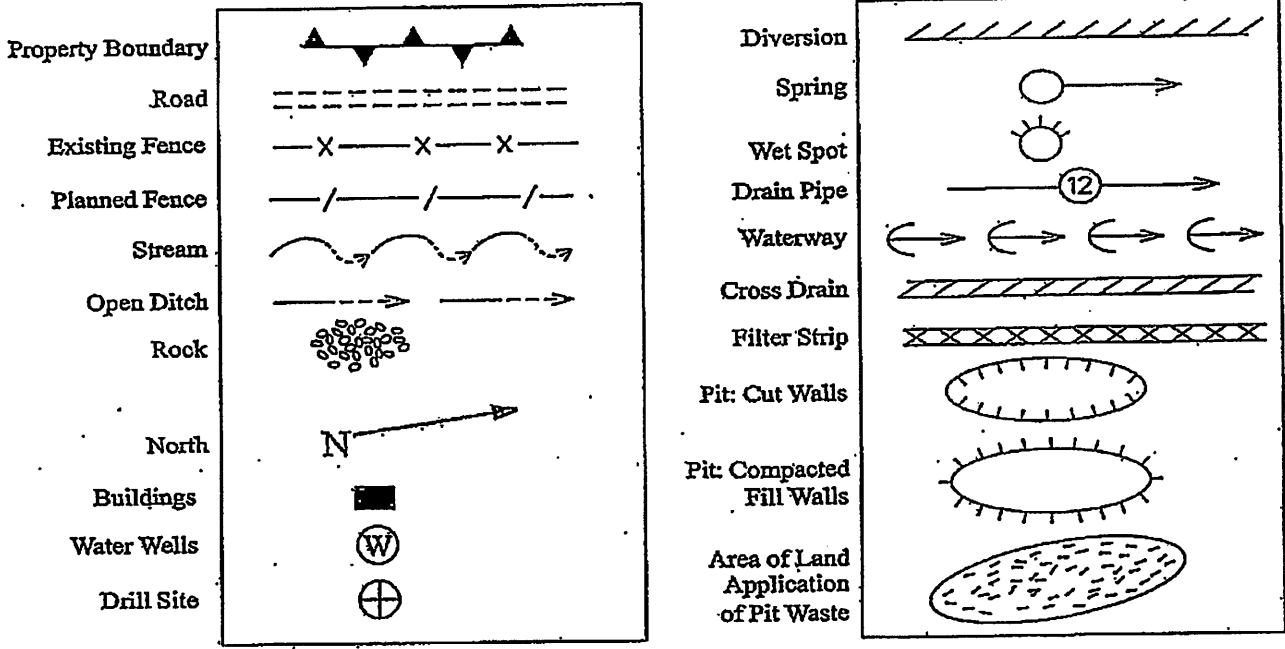
Form WW-9



WV Department of  
Environmental Protection  
10/25/2013

WW9-Rank

Legend



Proposed Revegetation Treatment: Acres Disturbed Area I Approx. 0.3 Ac. Prevegetation pH \_\_\_\_\_

Area II  
Approx. 0.2 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>	
Seed Type	Lbs./Ac.
Tall Fescue	40
Ladino Clover	5

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

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

Received

SEP 23 2013

Office of Oil and Gas  
 WV Dept. of Environmental Protection

Plan approved by: [Signature]

Comments: \_\_\_\_\_

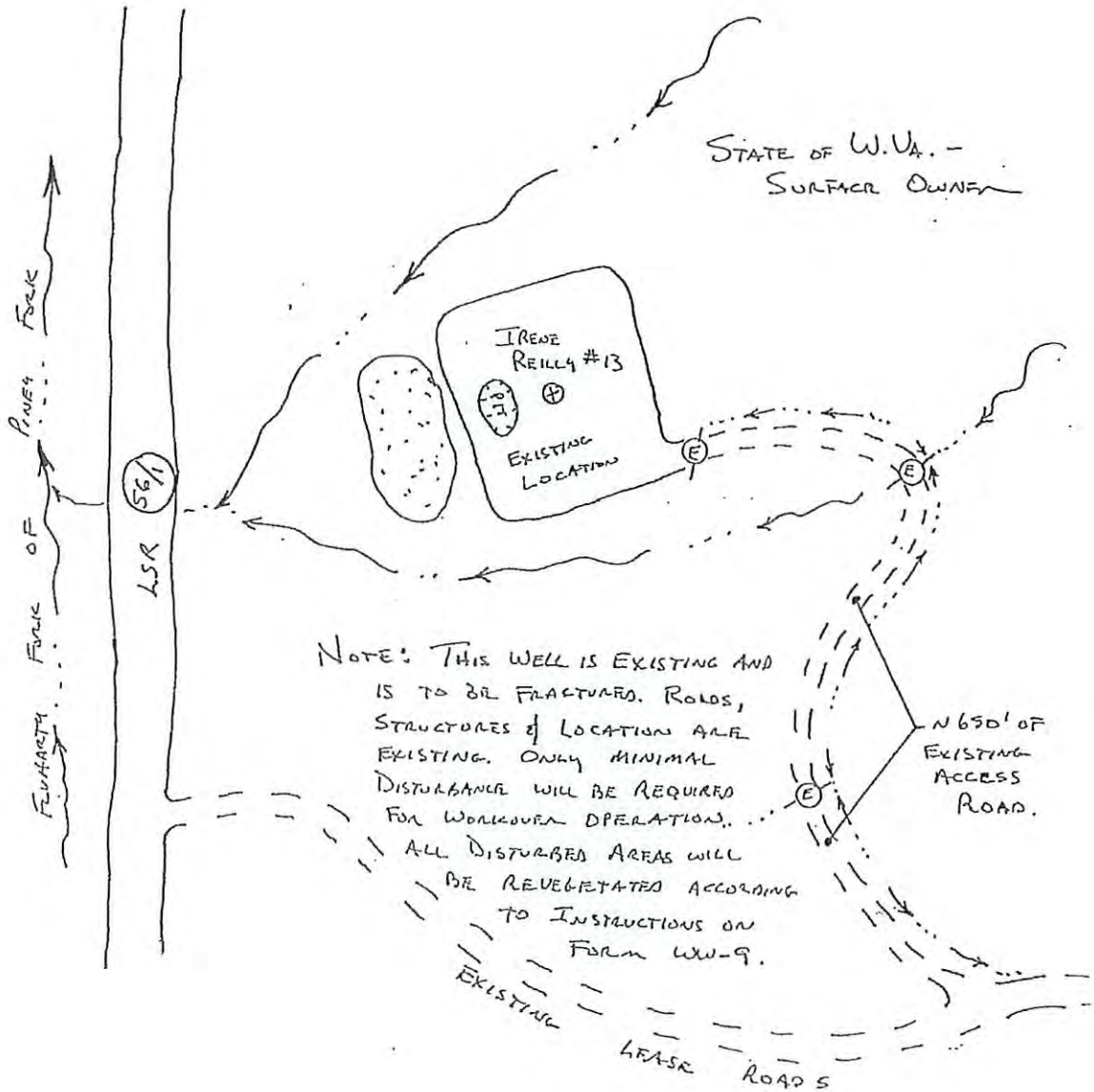
Title: Oil + Gas Inspector Date: 8-12-13

Field Reviewed?  Yes  No



# Reclamation Plan For: Irene Reilly No. 13

47-103-1315



NOTE: THIS WELL IS EXISTING AND IS TO BE FRACTURED. ROADS, STRUCTURES & LOCATION ARE EXISTING. ONLY MINIMAL DISTURBANCE WILL BE REQUIRED FOR WORKOVER OPERATIONS. ALL DISTURBED AREAS WILL BE REVEGETATED ACCORDING TO INSTRUCTIONS ON FORM WW-9.

RECEIVED

Office of Oil and Gas

DMH  
8-12-13

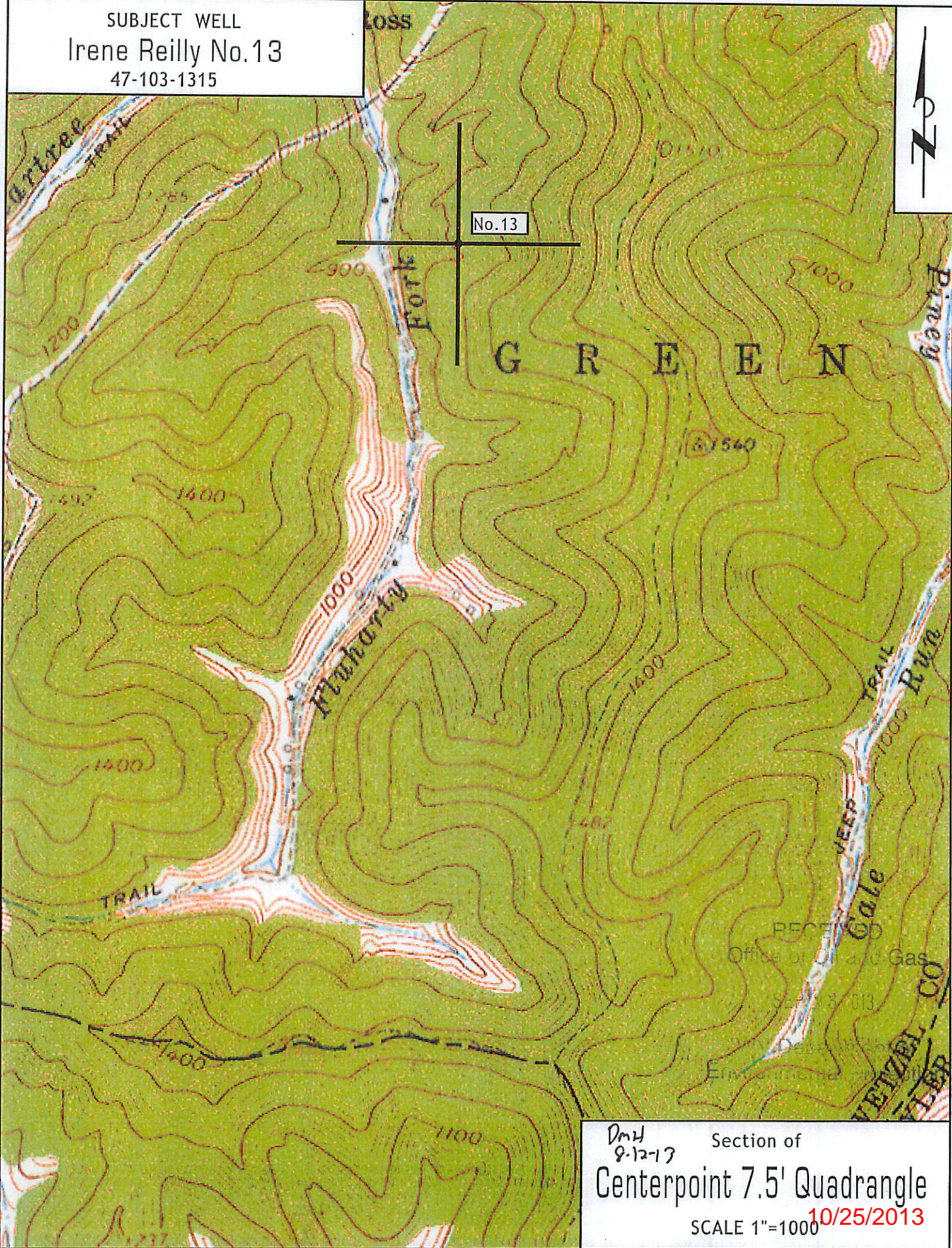
Notes:

- Requested permit is for workover of existing well.
- Access from County Road to well 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 work-over pit may be changed based on as-built considerations.

SEP 23 2013  
REFER TO THE WVDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL FOR MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL DISTURBING  
OPERATIONS.

Note: Drawing Not To Scale  
10/25/2013

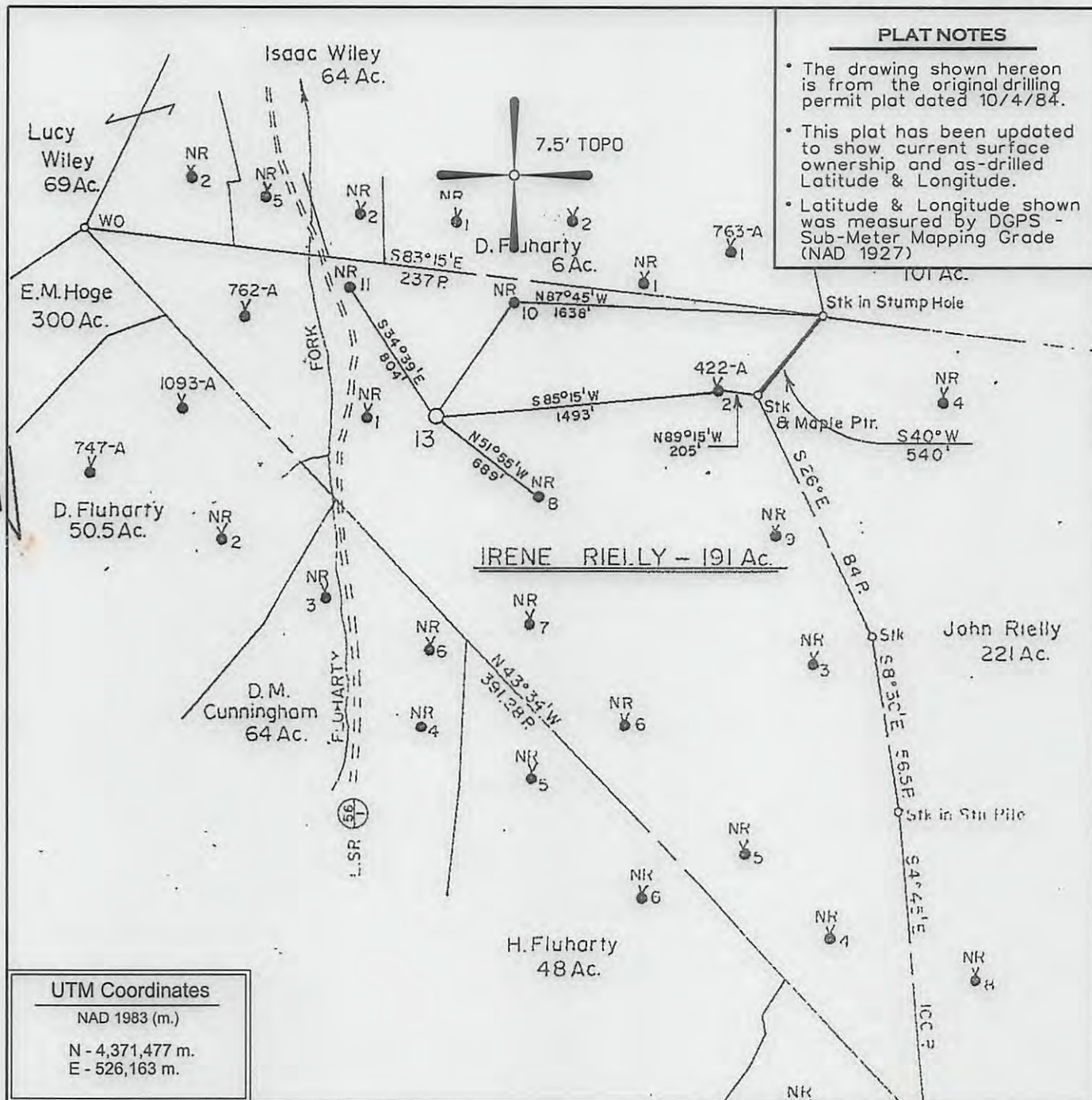
SUBJECT WELL  
Irene Reilly No.13  
47-103-1315



DmH  
8-12-17 Section of  
Centerpoint 7.5' Quadrangle  
SCALE 1"=1000  
10/25/2013

PLAT NOTES

- The drawing shown hereon is from the original drilling permit plat dated 10/4/84.
- This plat has been updated to show current surface ownership and as-drilled Latitude & Longitude.
- Latitude & Longitude shown was measured by DGPS - Sub-Meter Mapping Grade (NAD 1927)



FILE NO. 603  
 MAP NO. N57 N3,4s E W4,5  
 SCALE 1" = 800'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION Triangulation Station on Middle Ridge. Elev - 1540'

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 PRESCRIBED BY THE DEPARTMENT OF MINES.

(SIGNED) *[Signature]*  
 TIMOTHY P. ROUSH PS 793



**WEST VIRGINIA**  
 Division of Environmental Protection  
 Office of Oil and Gas  
 601 57th Street  
 Charleston, West Virginia 25304



DATE July 22, 2013  
 FARM Irene Rielly #13  
 API WELL NO. 47-103-01315 RS

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1,005' WATERSHED Fluharty Fork of Piney fork  
 DISTRICT Green COUNTY Wetzel  
 QUADRANGLE Centerpoint 7.5'

SURFACE OWNER W.Va. DNR. ACREAGE 191 Ac.  
 OIL & GAS ROYALTY OWNER Thom. F. Newman (1/2 Int) LEASE ACREAGE 191 Ac. **10/25/2013**  
 LEASE NO. 15634-50

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG   
 TARGET FORMATION Gordon ESTIMATED DEPTH 2,990'  
 WELL OPERATOR HG Energy, LLC DESIGNATED AGENT Mike Kirsch  
 ADDRESS 5260 Dupont Road Parkersburg, WV 26101 ADDRESS 5260 Dupont Road Parkersburg, WV 26101



**HG Energy, LLC**  
5260 Dupont Road  
Parkersburg, WV 26101  
(304) 420-1100 - Office  
(304) 863-3172 - Fax

10301315SR  
CK # 2323  
65000

July 25, 2013

Mr. Jeff McLaughlin  
WVDEP  
Division of Oil & Gas  
601 57<sup>th</sup> Street  
Charleston, West Virginia 25304

RE: Irene Reilly No. 13 (47-103-1315)  
Green District, Wetzel County  
West Virginia

Dear Mr. McLaughlin:

Enclosed are Forms WW-3A, WW-3B, WW-9, Mylar of plat, reclamation plan, topo map and copies of the certified mailing receipts for a permit to stimulate the above-captioned liquid injection well. Also enclosed is our check in the amount of \$650.00 to cover the associated permit fees.

Very truly yours,

*Diane C White*

Diane C. White

Enclosures

cc: WV Public Lands Corporation - Certified  
Department of Natural Resources - Certified  
John S. Knight - Certified  
Derek Haught - Inspector

RECEIVED  
Office of Oil and Gas

SEP 23 2013

WV Department of  
Environmental Protection

10/25/2013