



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

December 06, 2013

WELL WORK PERMIT
Rework-Secondary Recovery

This permit, API Well Number: 47-9501511, 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: L. J. LEMASTERS M-12
Farm Name: McCOY, DONALD L.

API Well Number: 47-9501511

Permit Type: Rework-Secondary Recovery

Date Issued: 12/06/2013

Promoting a healthy environment.

95015118

WW-3B
10/07



1) Date August 12, 2013
2) Operator's Well No. L. J. Lemasters No. M-12
3) API Well No. 47 - 095 - 1511
State County Permit
4) UIC Permit No. UIC2R09501AP

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 X Gas Injection (not storage) Waste Disposal
6) LOCATION: Elevation 1033' Watershed Lefthand Fork
District Green County Tyler 95 Quadrangle Centerpoint 7.5" 286
7) WELL OPERATOR: HG Energy, LLC 494497948 8) DESIGNATED AGENT: Mike Kirsch
5260 Dupont Road
Parkersburg, WV 26101
9) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Joe Taylor Address 1478 Claylick Road Ripley, WV 25271
10) DRILLING CONTRACTOR: Name Address
11) PROPOSED WELL WORK: Drill Drill Deeper Redrill Stimulate X
Plug Off Old Formation Perforate New Formation Convert
Other Physical Change in Well (specify)
12) Geological target formation Gordon Depth 2,994 Ft. (Top) to 3,054 Ft. (Bottom)
13) Estimated depth of completed well (or actual depth of existing well) 3050' Ft.
14) Approximate water strata depths: Fresh 170 Ft. Salt 2,300 Ft.
15) Approximate coal seam depths: 843 Ft.
16) Is coal being mined in the area? Yes X No
17) Virgin reservoir pressure in target formation: 1,400 psig. Source Estimated
18) Estimated reservoir fracture pressure: 3,500 psig.
19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 25 bbl Bottom Hole Pressure 2,332 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

Table with 5 main columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight, New, Used), FOOTAGE INTERVALS (For Drilling, Left in Well), CEMENT FILLUP OR SACKS (CU. FT.), PACKERS (Kinds, Tension, Sizes, Depths Set, Perforations, Top, Bottom). Rows include Conductor, Fresh Water, Coal, Intermediate, Production, Tubing, Liners.

24) APPLICANTS OPERATING RIGHTS were acquired from Jasper & Mary Lemasters by Deed Lease X Other Contract Dated September 24, 1895 of record in the Tyler County Clerk's Office in Lease Book 33 at Page 73

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

API # 47- 95-01511 S

Well Operator's Report of Well Work

Farm name: McCOY, DONALD L. Operator Well No.: LEMASTERS M-12

LOCATION: Elevation: 1033.00 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
 Latitude: 10800 Feet South of 39 Deg. 30Min. 0 Sec.
 Longitude 2150 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: MIKE UNDERWOOD
 Permit Issued: 11/02/92
 Well work Commenced: 01/04/93
 Well work Completed: 05/01/93
 Verbal Plugging _____
 Permission granted on: _____
 Rotary X Cable _____ Rig _____
 Total Depth (feet) 3050'
 Fresh water depths (ft) N/A

Salt water depths (ft) N/A

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8"	309'	309'	140 sks.
4-1/2"	3038.75'	3038.75'	300 sks.

OPEN FLOW DATA (Water Injection Well)

Producing formation Gordon Pay zone depth (ft) 2914-2970
 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.

For: PENNZOIL PRODUCTS COMPANY WV Department of Environmental Protection

By: Timothy P. Roush, Supervisor - Surveying/Mapping
 Date: September 14, 1993

NOV 20 2013

Treatment

Perforated: Gordon w/20 holes. 2948' - 2958'

Treated: w/300 gal. 15% HCL acid, 275 bbls gelled water, 1500# 80/100 sand and 3500# 20/40 sand.

Well Record

Sand and Shale	0 - 497
Shale	497 - 694
Limestone	694 - 745
Shale	745 - 860
Limestone	860 - 870
Shale	870 - 913
Sand and Shale	913 - 1062
Shale	1062 - 1238
Sand	1238 - 1284
Shale	1284 - 1454
Sand	1454 - 1806
Shale	1806 - 1875
Sand	1875 - 1982
Shale	1982 - 2072
Little Lime	2072 - 2086
Shale	2086 - 2114
Big Lime	2114 - 2167
Big Injun	2167 - 2355
Shale	2355 - 2914
Gordon	2914 - 2970
T.D.	3050

9501511RS

WW-2B1

Well No. L. J. Lemasters No. M-12

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.

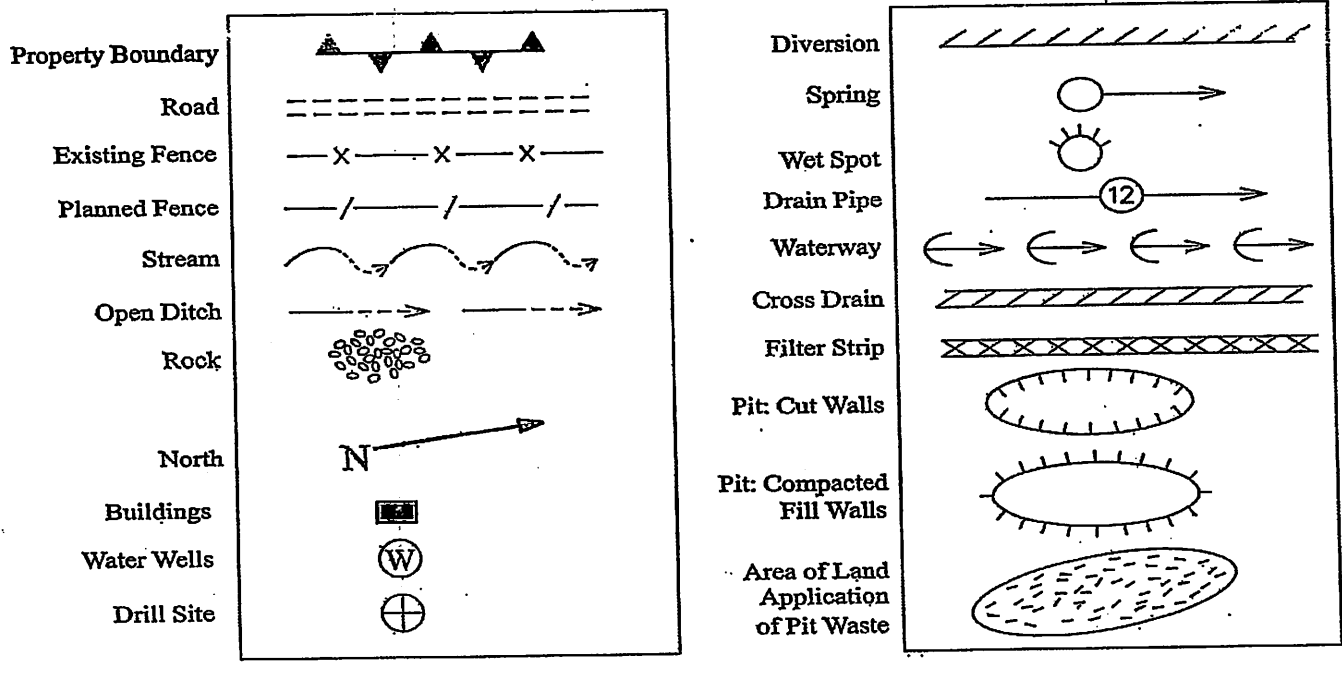
No known Water Supply Sources are located within 2000' of proposed well.

RECEIVED
Office of Oil and Gas

NOV 9 2013

West Virginia
Environmental Protection

Legend



Proposed Revegetation Treatment: Acres Disturbed Area I Approx. 1.0 Ac. Prevegetation pH _____

Area II
Approx. 0.3 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.

Plan approved by: [Signature]
Comments: _____

Title: Inspect Date: 11-14-13

Field Reviewed? Yes No

Reclamation Plan For: L.J. Lemasters No.M-12

47-095-1511

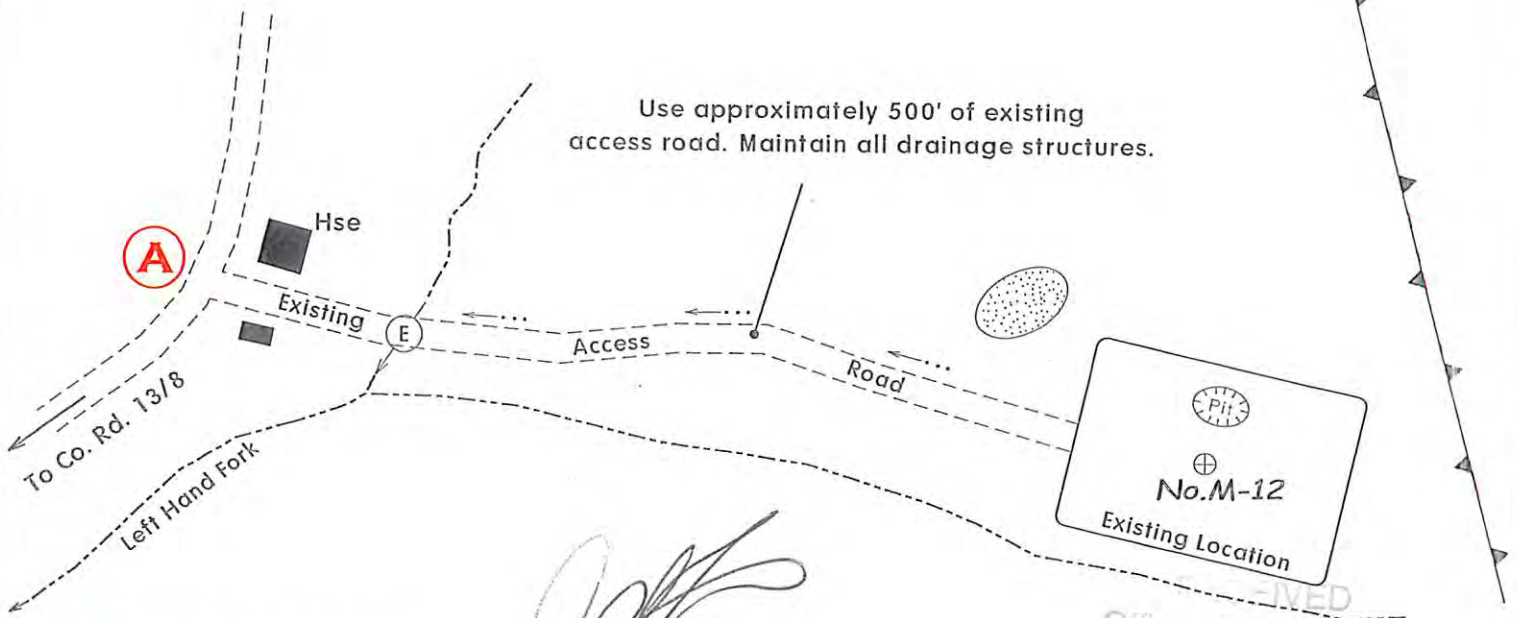


NOTE:
WELL LOCATION WAS BUILT AND RECLAIMED UNDER DRILLING PERMIT No.47-095-1511. ONLY MINIMAL EARTHWORK WILL BE REQUIRED FOR PROPOSED WELL WORK. ALL DISTURBED AREAS WILL BE RE-VEGETATED AS PER THE SEEDING PLAN ON FORM WW-9. A SMALL WORKOVER PIT WILL BE CONSTRUCTED TO CONTAIN ANY FLUIDS RECOVERED DURING PROPOSED WELL WORK.

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

Donald L. McCoy
- Surface

Use approximately 500' of existing access road. Maintain all drainage structures.



See Page 2 for Relamation Plan From Pt. (A) to County Road

[Handwritten Signature]
11-14-13

Office of Oil and Gas

NOV 20 2013



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.

9501511R

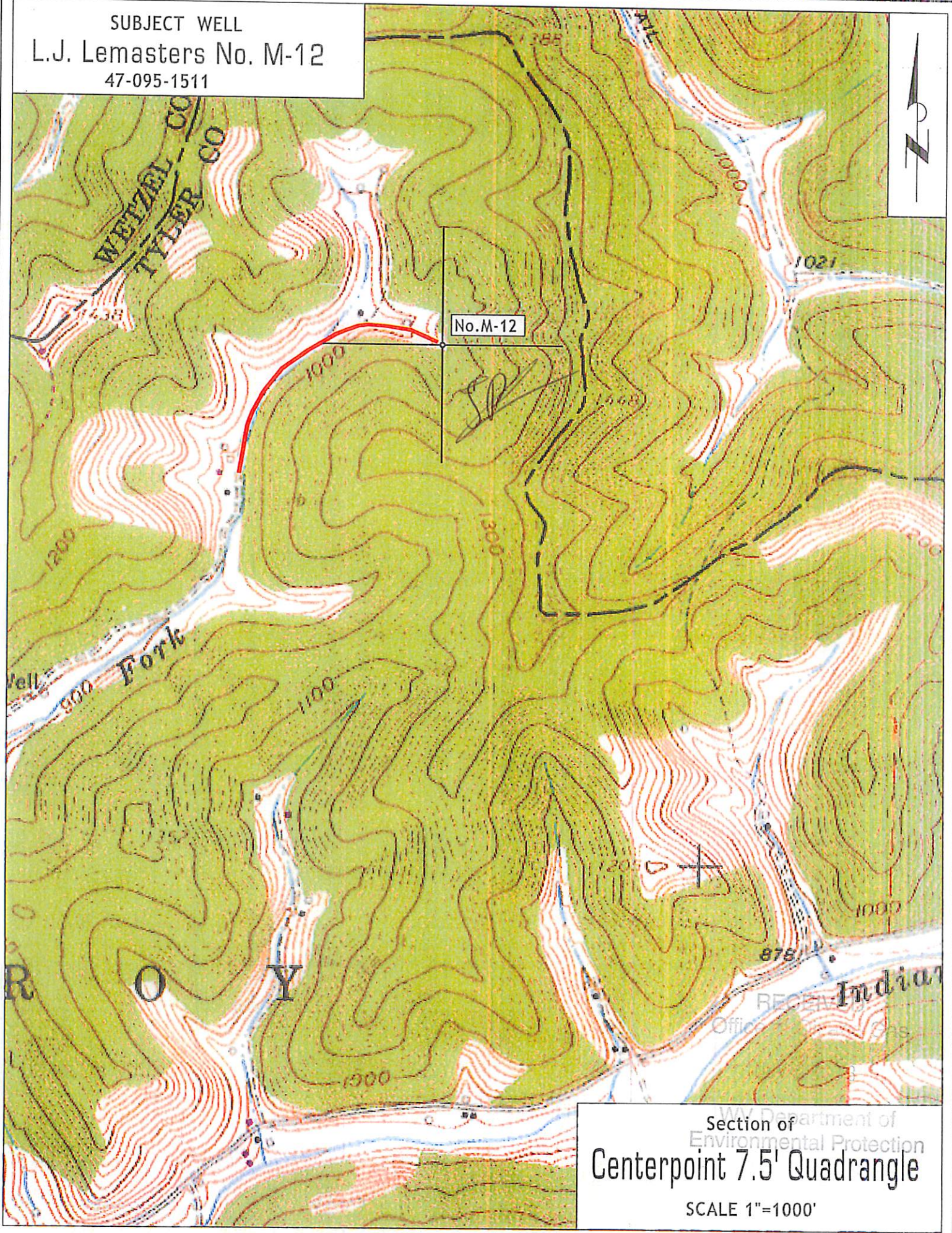


Reclamation Plan For:
L.J. Lemasters No. M-12
 47-095-1511

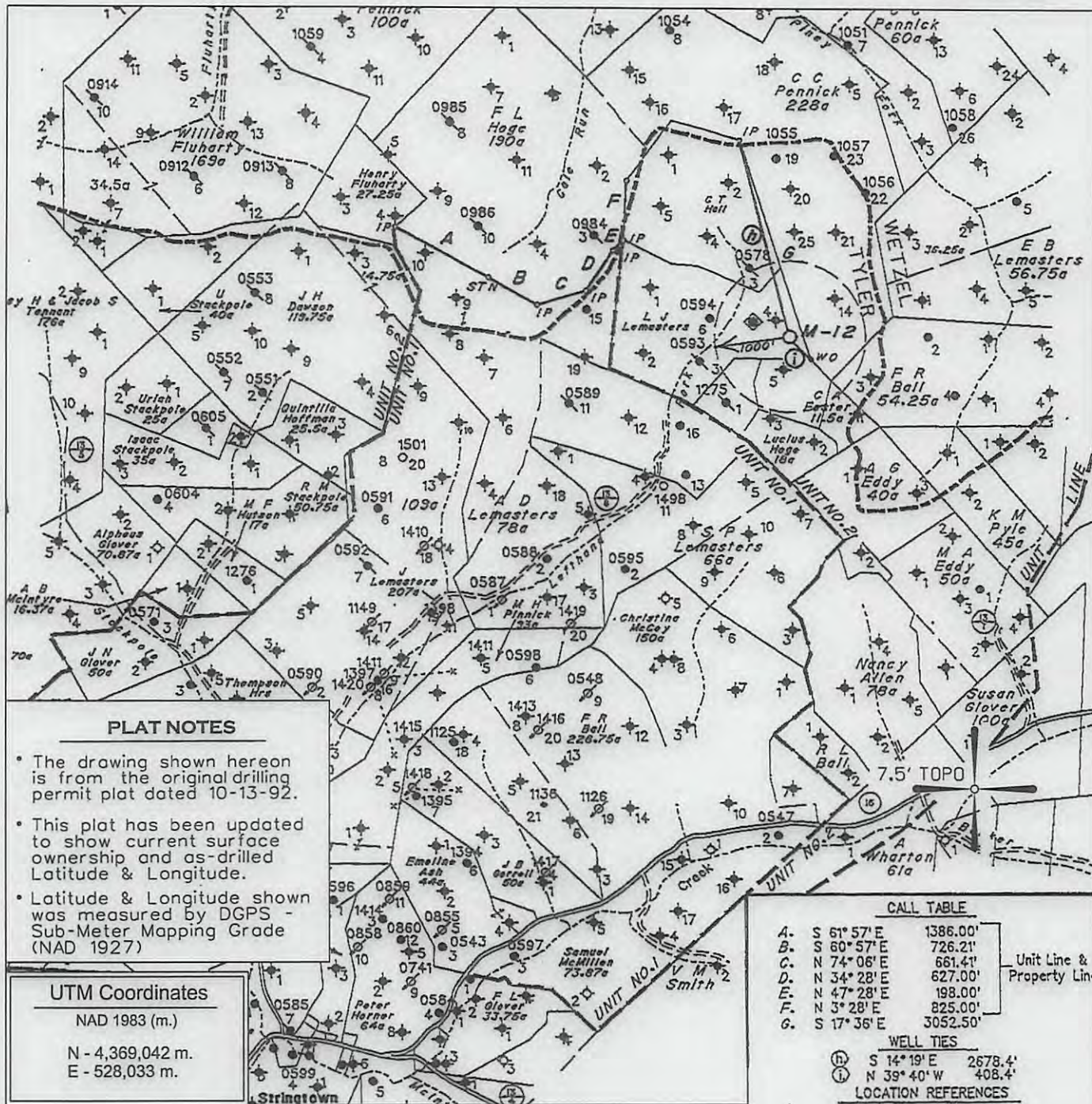
	STRINGTOWN WATERFLOOD Wetzel & Tyler Co., W.Va.	NOTES 1. REFER TO THE WVDEP EROSION AND SEDIMENTATION CONTROL MANUAL (VER. MAY 20, 2013) FOR BMP'S CONTROLLING EROSION AND SEDIMENTATION FROM ALL SOIL-DISTURBING OPERATIONS. 2. SEE PAGE ONE OF RECLAMATION PLAN FOR DETAILS OF NEW ROAD CONSTRUCTION AND ROAD UPGRADES FROM POINT (A) TO DRILL SITE LOCATION. 3. EXISTING WATERFLOOD ACCESS ROADS WILL BE MAINTAINED IN PRESENT CONDITION. THESE ROADS WERE CONSTRUCTED UNDER CONDITIONS SET FORTH IN VARIOUS DRILLING PERMITS ISSUED BY WVDEP-OOG. SEE PERMITS ON FILE FOR MORE DETAIL.	LEGEND 
	RECLAMATION PLAN SHOWING MAIN WATERFLOOD ROAD SYSTEM TO BE USED FOR REQUESTED WELL WORK		

950151RS

SUBJECT WELL
L.J. Lemasters No. M-12
47-095-1511



Section of
Environmental Protection
Centerpoint 7.5' Quadrangle
SCALE 1"=1000'



PLAT NOTES

- The drawing shown hereon is from the original drilling permit plat dated 10-13-92.
- 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)

UTM Coordinates

NAD 1983 (m.)
 N - 4,369,042 m.
 E - 528,033 m.

CALL TABLE

A.	S 61° 57' E	1386.00'
B.	S 60° 57' E	726.21'
C.	N 74° 06' E	661.41'
D.	N 34° 28' E	627.00'
E.	N 47° 28' E	193.00'
F.	N 3° 28' E	825.00'
G.	S 17° 36' E	3052.50'

Unit Line & Property Line

WELL TIES

(R)	S 14° 19' E	2678.4'
(L)	N 39° 40' W	408.4'

LOCATION REFERENCES

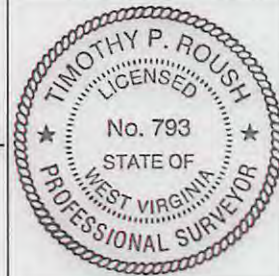
Existing Well

⊕ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

FILE NO. _____
 MAP NO. _____ N _____ S _____ E _____ W _____
 SCALE _____ 1" = 1000'
 MINIMUM DEGREE OF ACCURACY _____ Sub-Meter
 PROVEN SOURCE OF ELEVATION _____ DGPS Survey
 _____ (Sub-Meter Mapping Grade)

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 August 5, 2013
 FARM L.J.Lemasters No. M-12
 API WELL NO. 47-095-01511RS

WELL TYPE: OIL _____ GAS _____ LIQUID INJECTION WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 1,033' WATERSHED Lefthand Fork
 DISTRICT Green COUNTY Tyler
 QUADRANGLE Centerpoint 7.5'

SURFACE OWNER Donald L. McCoy ACREAGE P/O 71 Ac.
 OIL & GAS ROYALTY OWNER HG Energy LLC et al LEASE ACREAGE 90 Ac.
 LEASE NO. 67696-00

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 3,050'
 WELL OPERATOR HG Energy, LLC DESIGNATED AGENT Mike Kirsch
 ADDRESS 5260 Dupont Road ADDRESS 5260 Dupont Road
 Parkersburg, WV 26101 Parkersburg, WV 26101