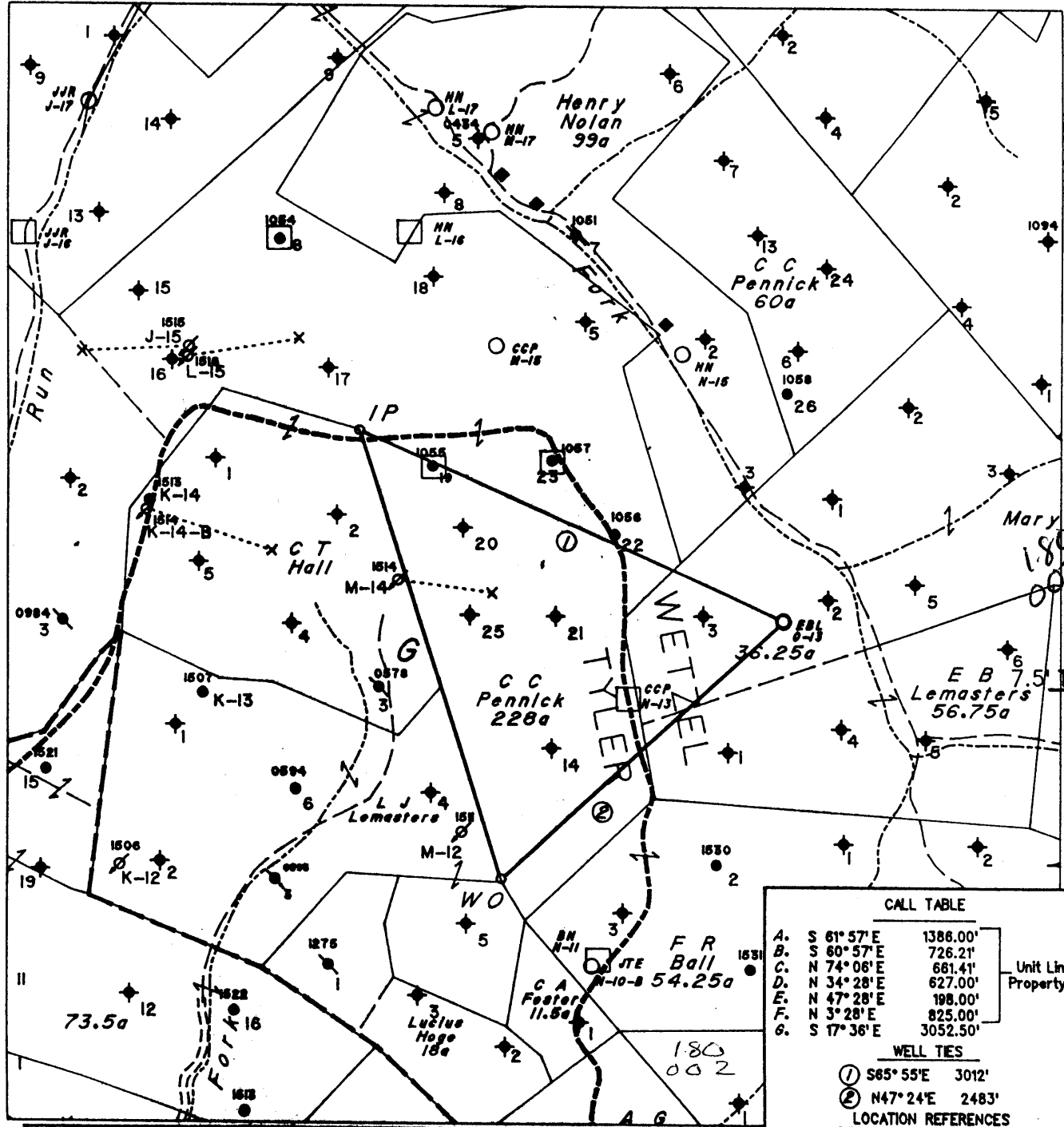


HS 5-6-93

LATITUDE 39° 30' 00"

LONGITUDE 80° 40' 00"



Note: No Known Water Supply Sources Are Located Within 1000' Of Proposed Well

(H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

CALL TABLE		
A.	S 61° 57' E	1386.00'
B.	S 60° 57' E	726.21'
C.	N 74° 08' E	681.41'
D.	N 34° 28' E	627.00'
E.	N 47° 28' E	198.00'
F.	N 3° 28' E	825.00'
G.	S 17° 36' E	3052.50'

Unit Line & Property Line

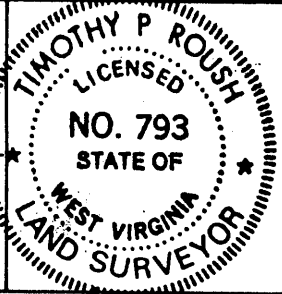
WELL TIES	
①	S65° 55' E 3012'
②	N47° 24' E 2483'

LOCATION REFERENCES	
S47° 45' W	147' 10" Poplar
S77° 57' W	190' 10" Poplar
N61° 13' W	195' 8" Poplar

FILE NO. 1782  
 MAP NO. N48 N 2 S E W 3  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION F.R. Ball No. 9  
(47-095-0548) = 1152'

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) Timothy P. Roush  
 TIMOTHY P. ROUSH PS 793



STATE OF WEST VIRGINIA  
 DIVISION OF ENERGY  
 OIL AND GAS SECTION



DATE March 31, 19 93  
 FARM E. B. Lemasters NO. 0-13  
 API WELL NO. 47-103-1547-L1

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1128' WATERSHED Placy Fork  
 DISTRICT Green 5 COUNTY Wetzel  
 QUADRANGLE Centerpoint NW  
 SURFACE OWNER State of West Virginia ACREAGE 110 Ac.  
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et.al. LEASE ACREAGE 97 Ac.  
 LEASE NO. FEE 2816  
 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 3125'  
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews  
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519  
Vienna, W.Va. 26105 Vienna, W.Va. 26105

MAY 14 1993

8-0 95

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 CORP. Operator Well No.: <sup>E. B.</sup> LEMASTERS O-13

LOCATION: Elevation: 1,128.00 Quadrangle: CENTER POINT

District: GREEN County: WETZEL  
Latitude: 6450 Feet South of 39 Deg. 30Min. Sec.  
Longitude 50 Feet West of 80 Deg. 40 Min. Sec.

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

Agent: JAMES A. CREWS

Inspector: RANDAL MICK  
Permit Issued: 05/12/93  
Well work Commenced: 09/16/93  
Well work Completed: 06/02/94

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 3163'  
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. To surface
8-5/8	389'	389'	50 sks.
4-1/2	3128'	3128'	300 sks.

OPEN FLOW DATA

WATER INJECTION WELL

Producing formation Gordon Pay zone depth (ft) 3027'-3058'  
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

By: [Signature]  
Date: 7/8/94

JUL 15 1994

TREATMENT

Perforated: Gordon with 22 holes 3043' - 3054'.  
Treated with 300 gal. 15% HCL, 322 bbls. gelled water,  
and 7000# 20/40 sand.

WELL LOG

Sand & Shale	0 - 1608'
Sand	1608 - 1640
Shale	1640 - 1725
Sand	1725 - 1770
Sand & Shale	1770 - 2178
Big Injun	2178 - 2445
Shale	2445 - 2798
Berea	2798 - 2809
Shale	2809 - 3005
Stray	3005 - 3027
Gordon	3027 - 3058
T.D.	3163

L&L

10/91



- 1) Date: April 13, 19 93
- 2) Operator's Well No. E.B. LEMASTERS #0-13
- 3) SIC Code \_\_\_\_\_
- 4) API Well NO. 47 - 103 - 1547-LI  
State County Permit
- 5) UIC Permit No. \_\_\_\_\_

*Issued 05/12/93*

*Expires 05/12/95*

STATE OF WEST VIRGINIA  
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION  
for the  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

17187

RECEIVED  
Office of Oil & Gas  
UIC Section  
APR 15 93

- 1) WELL TYPE: Liquid injection  / Gas injection (not storage) \_\_\_\_\_ / Waste disposal \_\_\_\_\_
- 2) LOCATION: Elevation: 1128' Watershed: Piney Fork District: Green County: Wetzel Quadrangle: Centerpoint
- 3) WELL OPERATOR Pennzoil Products Company 37450 9) DESIGNATED AGENT J.A. Crews  
Address P.O. Box 5519 Address P.O. Box 5519  
Vienna, WV 26105 Vienna, WV 26105
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Randall Mick Mike Underwood  
Address 111-Blackshire Dr. Rt. #2, Box 135  
Mannington, WV Salem, WV 26426  
26582
- 11) DRILLING CONTRACTOR:  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 12) PROPOSED WELL WORK: Drill  / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate  /  
Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_ / Convert \_\_\_\_\_  
Other physical change in well (specify) \_\_\_\_\_
- 13) GEOLOGICAL TARGET FORMATION, Gordon Depth 3023 feet(top) to 3038 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 3125 ft.
- 15) Approximate water strata depths; Fresh, 308 feet; salt, ~~200~~ feet.
- 16) Approximate coal seam depths: 940
- 17) Is coal being mined in the area? Yes \_\_\_\_\_ / No  /
- 18) Virgin reservoir pressure in target formation 1400 psig. Source ESTIMATED
- 19) Estimated reservoir fracture pressure 3500 psig (BHFP)
- 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 25 Bottom hole pressure 2380
- 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fresh water, produced water, bactericides and other chemicals as necessary to maintain water quality & improve oil recovery.
- 22) FILTERS (IF ANY): Cartridge Filter and/or Coal Bed Filters
- 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: \_\_\_\_\_

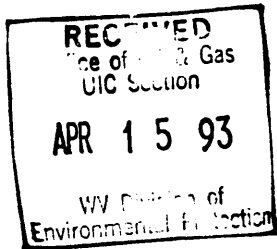
24) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	8 5/8	L.S.	20	X		380	380	Cement to Surface	Sizes
Coal									
Intermediate									
Production	4 1/2	J-55	10.5	X		3125	3125	Cement over Salt Sand	Depths set
Tubing									
Liners									Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from Margaret & E.B. Lemasters  
by deed  / lease \_\_\_\_\_ / other contract \_\_\_\_\_ / dated December 9, ~~1895~~, of record in the  
Wetzel County Clerk's office in Deed Book 48 at page 136

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File



1) Date April 13, 1993  
Operator's  
2) Well No. E.B. LEMASTERS #0-13  
3) SIC Code \_\_\_\_\_  
4) API Well No. 47 - 103 - 1547  
State County Permit

STATE OF WEST VIRGINIA

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION  
for the,

DIVISION OF OIL AND GAS, DEPARTMENT OF ENERGY

- 6) SURFACE OWNER(S) OF RECORD TO BE SERVED
- (i) Name WV Public Land Corp.  
Address Bldg. #3, Room 643  
1900 Kanawha Blvd., E.
  - (ii) Name Charleston, WV 25305  
Address \_\_\_\_\_  
Dept. Natural Resources
  - (iii) Name 1304 Goose Run Road  
Address Fairmont, WV 26554  
ATTN: Gary Foster
- 7 (i) COAL OPERATOR N/A  
Address \_\_\_\_\_
- 7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 7 (iii) COAL LESSEE WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work, and
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is \_\_\_\_\_, 19\_\_\_\_.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM WW-3(B)) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22B of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Director of the Division of Oil and Gas, West Virginia Department of Energy, with respect to a well at the location described on the attached Application and depicted on attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan 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 Director.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document 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.

PENNZOIL PRODUCTS COMPANY

Well Operator  
By Timothy J. Roush  
Its Supervisor - Surveying/Mapping  
Telephone (304) 422-6565