

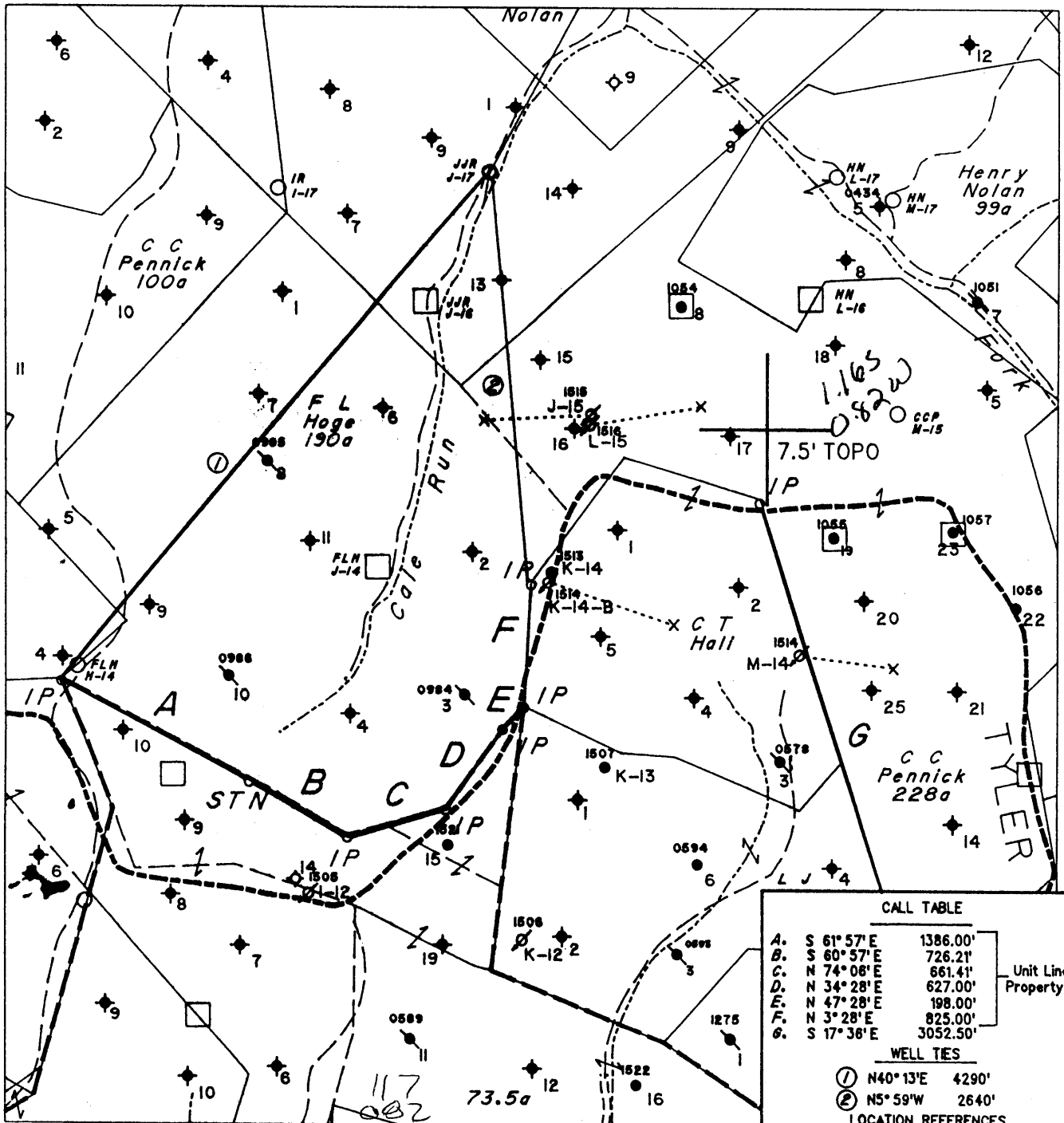
128 5-6-93

4550'

LATITUDE 39° 30' 00"

LONGITUDE 80° 40' 00"

6100'



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	661.41'
D.	N 34° 28' E	627.00'
E.	N 47° 28' E	198.00'
F.	N 3° 28' E	825.00'
G.	S 17° 38' E	3052.50'

Unit Line & Property Line

WELL TES	
①	N40° 13' E 4290'
②	N5° 59' W 2640'

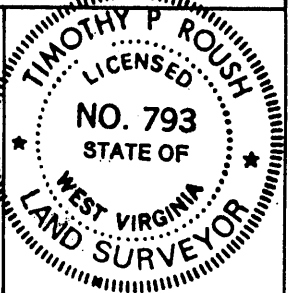
LOCATION REFERENCES

S25° 52' W	129'	6" Sycamore
S13° 37' E	190'	6" Maple
S76° 48' E	88'	5" Birch

FILE NO. 1781  
 MAP NO. N57 N 3 S E W 4  
 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 John J. Reilly NO. J-17  
 API WELL NO. 47-103-1545-L1

WELL TYPE: OIL \_\_\_ GAS \_\_\_ LIQUID INJECTION X WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 927' WATERSHED Cale Run  
 DISTRICT Green S COUNTY Wetzel  
 QUADRANGLE Centerpoint 15 NW

SURFACE OWNER State of West Virginia ACREAGE 220 Ac.  
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al. LEASE ACREAGE 221 Ac.  
 LEASE NO. 57098-00

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

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG 8-0 Jacksonburg Stringtown (095)  
 TARGET FORMATION Gordon ESTIMATED DEPTH 2910'

WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews  
 ADDRESS P. O. Box 5519 675 4670 ADDRESS P. O. Box 5519  
Vienna, W.Va. 26105 Vienna, W.Va. 26105

FORM N-6

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

Well Operator's Report of Well Work

DEC 07 1993

Farm name: WVA PUBLIC LANDS CO Operator Well No.: J.T.REILLY J-17

LOCATION: Elevation: 927' Quadrangle: CENTER POINT

District: GREEN County: WETZEL  
Latitude: 6100 Feet South of 39 Deg. 30Min. 00 Sec.  
Longitude 4550 Feet West of 80 Deg. 40 Min.00 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: 9/30/93  
Well work Completed: 10/16/93

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 2962  
Fresh water depths (ft) N/A

Salt water depths (ft) N/A

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	216	216	125 Sks.
4 1/2	2855.00	2855.00	300 Sks.

OPEN FLOW DATA

2820 - 2830

Producing formation Gordon 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

\* Water Injection Well  
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: 12/6/93

TREATMENT:

Perforated: 2821 - 2825 8 Holes  
Treated: 300 Gal. 15% HCL Acid, 258 Bbls. Gelled Water & 1600#  
80/100 Sand & 4100# 20/40 Sand

WELL LOG:

Sand & Shale	0 - 522
Sand	522 - 546
Shale	546 - 562
Sand	562 - 628
Sand & Shale	628 - 742
Sand	742 - 756
Shale	756 - 818
Sand	818 - 836
Shale	836 - 876
Sand	876 - 892
Sand & Shale	892 - 1264
Sand	1264 - 1322
Shale	1322 - 1348
Sand	1348 - 1408
Shale	1408 - 1436
Sand	1436 - 1466
Sand & Shale	1466 - 1762
Sand	1762 - 1800
Sand & Shale	1800 - 1948
Little Lime	1948 - 1960
Pencil Cave	1960 - 1988
Big Lime	1988 - 2002
Shale	2002 - 2044
Big Injun	2044 - 2182
Sand & Shale	2182 - 2796
Stray	2796 - 2820
Gordon	2820 - 2830
T.D.	2962

DF-411

DF-419

FORM WW-3(B) FILE COPY  
 (Obverse)  
 10/91  
 APR 15 93  
 WV Division of Environmental Protection



1) Date: April 13, 19 93  
 2) Operator's Well No. JOHN J. REILLY #J-17  
 3) SIC Code \_\_\_\_\_  
 4) API Well NO. 47 State 103 County 1545-LI Permit  
 5) UIC Permit No. \_\_\_\_\_

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

*Issued 05/12/93*  
*Expires 05/12/95*

- 6) WELL TYPE: Liquid injection  / Gas injection (not storage) \_\_\_\_\_ / Waste disposal \_\_\_\_\_  
 7) LOCATION: Elevation: 927' Watershed: Cale Run  
 District: Green County: Wetzel Quadrangle: Centerpoint 286  
 8) WELL OPERATOR Pennzoil Products Co. 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 11) DRILLING CONTRACTOR:  
 Name Randall Mick Mike Underwood  
 Address 111 Blackshire Dr. Rt. #2, Box 135  
Mannington, WV Salem, WV 26426  
 26582  
 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 2807 feet(top) to 2822 feet(bottom)  
 14) Estimated depth of completed well, (or actual depth of existing well) 2910 ft.  
 15) Approximate water strata depths; Fresh, 107 feet; salt, 120 feet.  
 16) Approximate coal seam depths: 740  
 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 and improve oil recovery.  
 22) FILTERS (IF ANY): Cartridge Filters 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		200	200	Cement to	
Coal								Surface	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		2910	2910	Cement over	Depths set
Tubing								Salt Sand	
Liners									Perforations:
									Top Bottom

25) APPLICANT'S OPERATING RIGHTS were acquired from Wadsworth Brothers, Inc.  
 by deed \_\_\_\_\_ / lease  / other contract \_\_\_\_\_ / dated September 13, 19 83, of record in the  
Wetzel County Clerk's office in Lease Book 65A at page 420

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

APR 15 93  
WV Division of  
Environmental Protection

- 1) Date April 13, 1993
- Operator's
- 2) Well No. JOHN J. REILLY #J-17
- 3) SIC Code
- 4) API Well No. 47 - 103 - 1545-  
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 P. Roush  
Its Supervisor - Surveying/Mapping  
Telephone (304) 422-6565