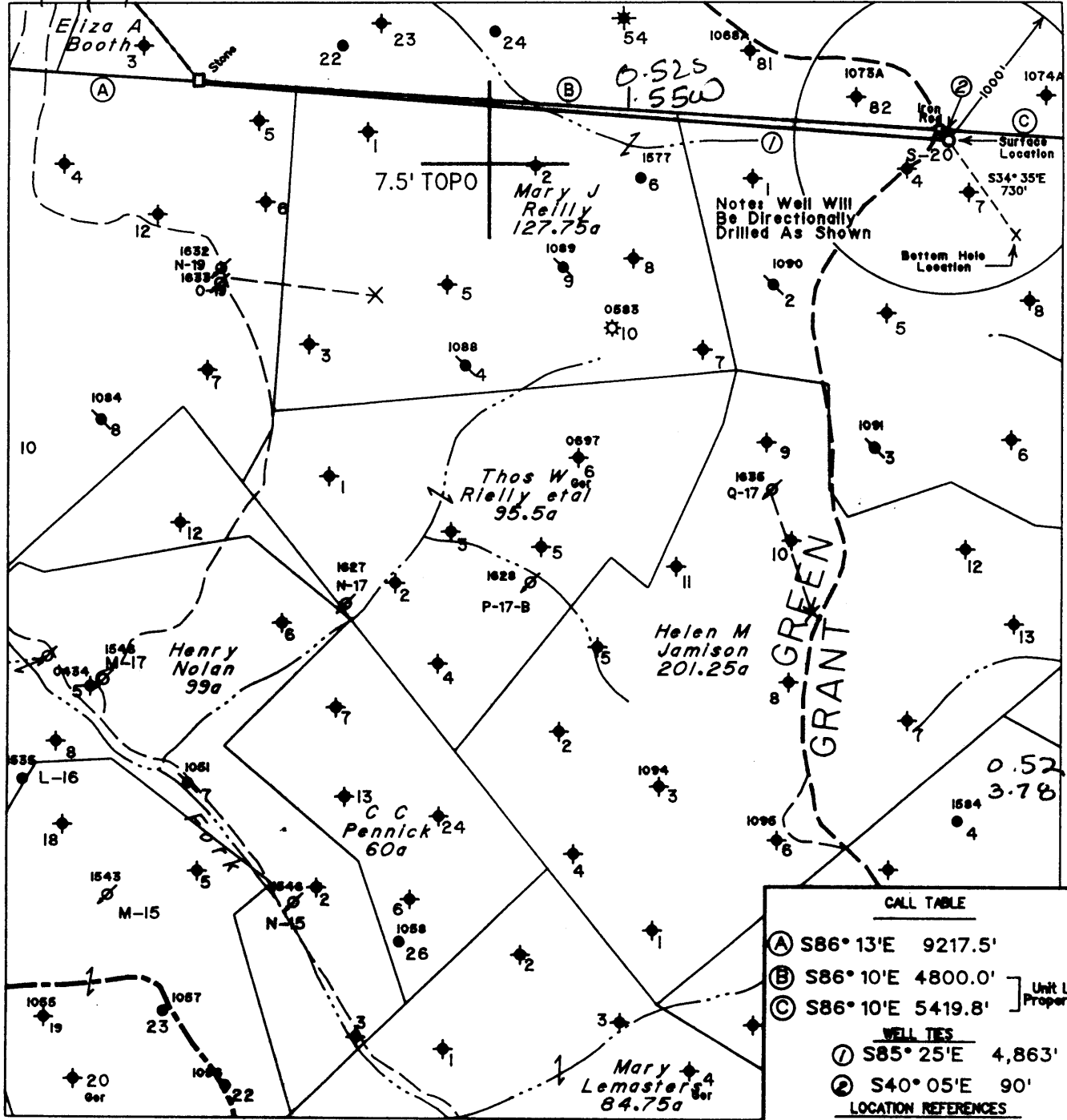


GS 9/21/94



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

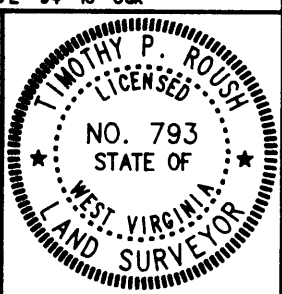
(H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

CALL TABLE	
(A)	S86° 13'E 9217.5'
(B)	S86° 10'E 4800.0'
(C)	S86° 10'E 5419.8'
] Unit Line & Property Line	
WELL TIES	
(1)	S85° 25'E 4,863'
(2)	S40° 05'E 90'
LOCATION REFERENCES	
S72° 12'W 83.3' Stk (47-103-1630)	
N53° 26'E 109' 3" Maple	
S53° 56'E 94' 10" Oak	

FILE NO. 1732
 MAP NO. N58 N 4 S E W 2
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS BM - 902'

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 September 12, 19 94
 FARM Michael Reilly NO. S-20
 API WELL NO. 47-103-1644-5

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1461' WATERSHED Bob Campbell Run
 DISTRICT Grant COUNTY Wetzel
 QUADRANGLE Centerpoint d15 NC

SURFACE OWNER State of West Virginia ACREAGE 253 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et.al. LEASE ACREAGE 253 Ac.
 LEASE NO. 47257-00

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 3525'

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



8-0-75

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

Well Operator's Report of Well Work

Farm name: DEPT. NATURAL RESOURCES Operator Well No.: M. REILLY S-20

LOCATION: Elevation: 1,461.00 Quadrangle: CENTER POINT

District: GRANT County: WETZEL
 Latitude: 2700 Feet South of 39 Deg. 30Min. 0 Sec.
 Longitude 8200 Feet West of 80 Deg. 37 Min. 30 Sec.

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

Agent: JAMES A. CREWS

Inspector: RANDAL MICK
 Permit Issued: 10/04/94
 Well work Commenced: 10/05/94
 Well work Completed: 10/20/94

Verbal Plugging
 Permission granted on: _____

Rotary X Cable _____ Rig _____

Total Depth (feet) 3655

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	1457'	1457'	320 sks.
4-1/2	3595'	3595'	300 sks.

OPEN FLOW DATA * Water Injection Well

Producing formation Gordon Pay zone depth (ft) 3502-3546
 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: 1/4/95

TREATMENT

Perforated with 16 holes 3522'-3525' and 3533'-3538'. Treated with 300 gallons 15% HCL acid, 470 barrels gelled water and 20,000# 20/40 sand.

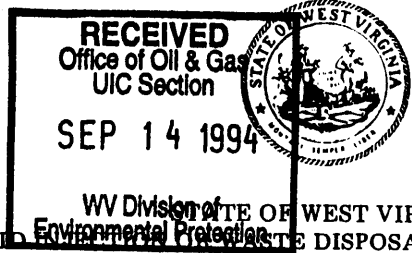
WELL LOG

(Measured depths, directionally drilled)

Sand & Shale	0'-1100'
Sand	1100'-1149'
Shale	1149'-1253'
Pencil Cave	1253'-1265'
Sand & Shale	1265'-2352'
Big Lime	2352'-2357'
Shale	2357'-2576'
Big Injun	2576'-2890'
Shale	2890'-3478'
Stray	3478'-3482'
Gordon	3502'-3546'
T.D.	3655'

10/91

19868



- 1) Date: September 13, 1994
- 2) Operator's Well No. MICHAEL REILLY #S-20
- 3) SIC Code _____
- 4) API Well NO. 47 - 103 - 1644-LI
State County Permit
- 5. UIC Permit No. _____

*Issued 10/04/94
Expires 10/04/96*

NOTICE OF LIQUID WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

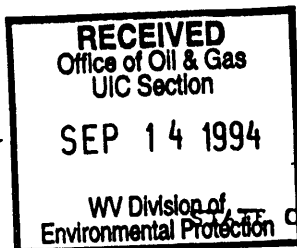
- WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
- 7) LOCATION: Elevation: 1461' / District: Grant / Watershed: Bob Campbell Run / County: Wetzel / Quadrangle: Centerpoint
- 8) WELL OPERATOR: Pennzoil Products Company / Address: P. O. Box 5519
Vienna, WV 26105
- 9) DESIGNATED AGENT: James A. Crews / Address: P. O. Box 5519
Vienna, WV 26105
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Mike Underwood / Address Route 2, Box 135
Salem, WV 26426
- 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) well will be drilled directionally 534°35'E 730'
- 13) GEOLOGICAL TARGET FORMATION: Gordon 419 / Depth 3425 feet(top) to 3440 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 3525 ft.
- 15) Approximate water strata depths; Fresh, 641 feet; salt, 1668 feet.
- 16) Approximate coal seam depths: 1273'
- 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 2332
- 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Freshwater, produced water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery
- 22) FILTERS (IF ANY): Cartridge and/or coaled 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		1460'	1460'	Cement to surface	Sizes
Coal									
Intermediate									
Production	4-1/2	J-55	10.5	x		3525'	3525'	Cement over salt sand	Depths set
Tubing									
Liners									Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from Union National Bank of Clarksburg by deed _____ / lease / other contract _____ / dated October 25, 1978, of record in the Wetzel County Clerk's office in Lease Book 58A at page 185

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



1) Date September 13, 1994
Operator's
2) Well No. MICHAEL REILLY #S-20
3) SIC Code _____
4) API Well No. 47 - 103 - 1644
State County Permit

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 Corporation
Address Building 3, Room 643
1900 Kanawha Blvd. E.
- (ii) Name Charleston, WV 25305
Address _____
WV Department of 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 _____
- (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
Supervisor, Surveying/Mapping
Telephone (304) 422-6565

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-103-1644-LI

October 4th. 94
19
Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and (if required) construction and reclamation plan, subject to any modifications and conditions specified below.

Permit expires 10-4-1996 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <i>[Signature]</i>	Casing: <i>[Signature]</i>	20536 Fee #20536 400.
---	--	--------------------------	----------------------------	--------------------------------

[Signature]
CHIEF, OFFICE OF OIL AND GAS

NOTE: Keep one copy of this permit posted at the drilling location.

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

OFFICE USE ONLY

This part of Form IV-3(b) is to record the dates of certain occurrences and any follow-up inspections.

	Date	Follow-up inspection(s)	Date(s)
Application received			
Well work started		" "	
Total depth reached		" "	
Well Record received		" "	
Reclamation completed		" "	
OTHER INSPECTIONS			

Reason: _____

Reason: _____