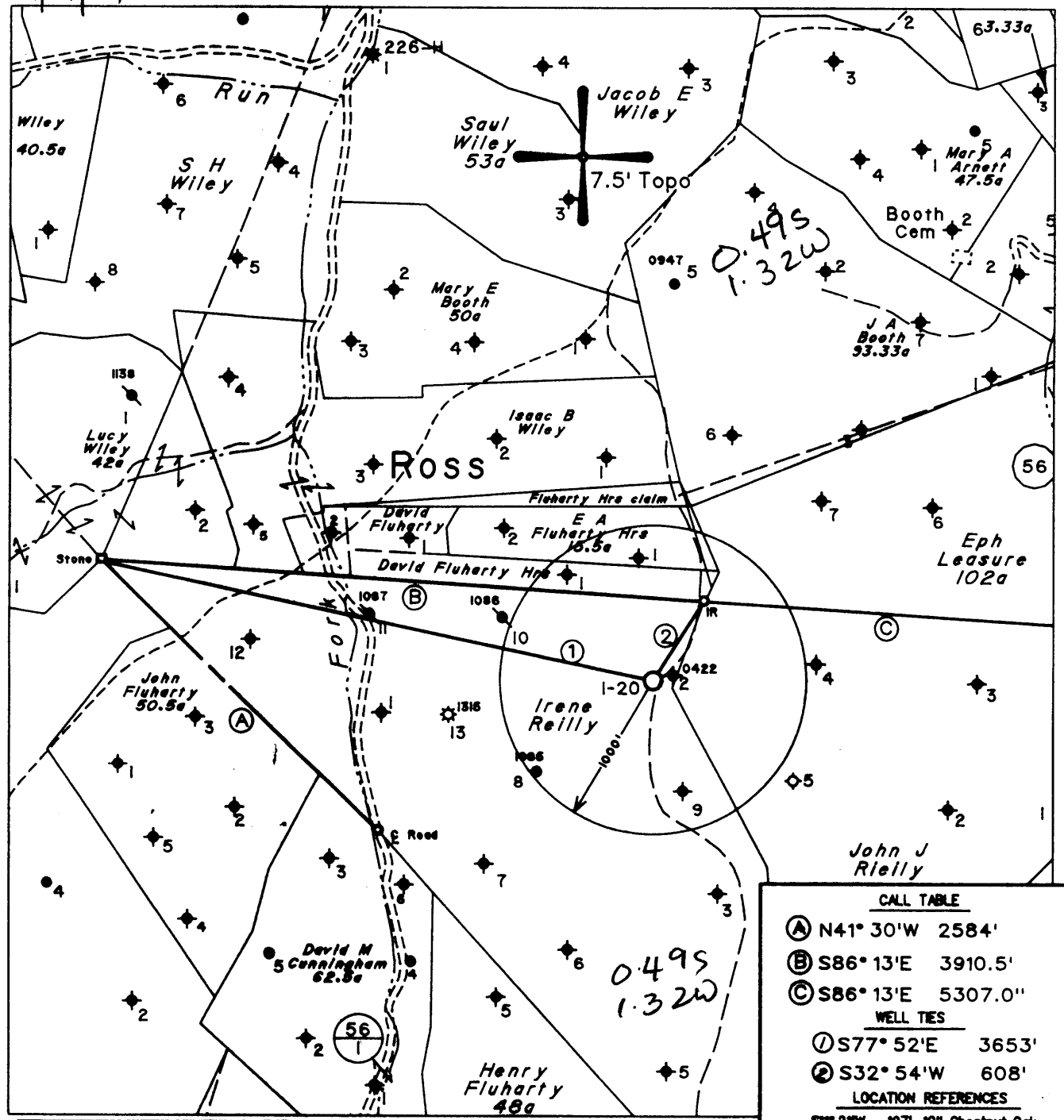


GS 9/21/94



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

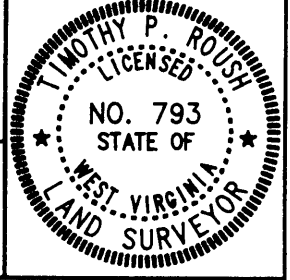
(H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

CALL TABLE	
(A)	N41° 30'W 2584'
(B)	S86° 13'E 3910.5'
(C)	S86° 13'E 5307.0'
WELL TIES	
(1)	S77° 52'E 3653'
(2)	S32° 54'W 608'
LOCATION REFERENCES	
STP 21'W	197' 10" Chestnut Oak
N38° 53'E	239' Power Pole
S0° 28'E	310' Power Pole

FILE NO. 603
 MAP NO. N58 N 4 S E W 5
 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 Irene Reilly NO. 1-20
 API WELL NO. 47-103-1645-11

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1476' WATERSHED Fluharty Fork
 DISTRICT Green COUNTY Wetzel
 QUADRANGLE Centerpoint 15 NW

SURFACE OWNER State of West Virginia ACREAGE 190.35 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et.al. LEASE ACREAGE 191 Ac.
 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 3430'

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

80 95

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.: I. REILLY I-20

LOCATION: Elevation: 1,476.00 Quadrangle: CENTER POINT

District: GREEN County: WETZEL
Latitude: 2550 Feet South of 39 Deg. 30Min. 0 Sec.
Longitude 6950 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: 11/16/94
Well work Commenced: 11/18/94
Well work Completed: 12/16/94
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 3427
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	748'	748'	295 sks.
4 1/2	3422.9	3422.9	300 sks.

OPEN FLOW DATA * Water Injection Well

Producing formation Gordon Pay zone depth (ft) 3333-3375
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

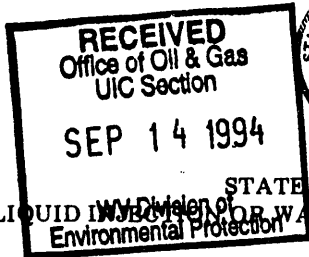
Perforated with 16 holes 3342'-3350'. Treated with 300 gallons ^{15%}HCL acid,
285 barrels gelled water and 7,000 lbs. of 20/40 sand.

WELL LOG

Sand & Shale	-	0	-	1242'
Sand	-	1242'	-	1248'
Sand & Shale	-	1248'	-	1778'
Sand	-	1778'	-	1840'
Sand & Shale	-	1840'	-	1876'
Sand	-	1876'	-	1930'
Shale	-	1930'	-	2068'
Sand	-	2068'	-	2095'
Shale	-	2095'	-	2270'
Sand	-	2270'	-	2330'
Sand & Shale	-	2330'	-	2565'
Sand ^{10/40}	-	2565'	-	2608'
Sand & Shale	-	2608'	-	2726'
Shale	-	2726'	-	3308'
Stray	-	3308'	-	3324'
Gordon	-	3333'	-	3375'
T.D.	-	3427'		

10/91

19869



- 1) Date: September 7, 1994
- 2) Operator's Well No. IRENE REILLY #I-20
- 3) SIC Code _____
- 4) API Well NO. 47 - 103 - 1645-LI
State County Permit
- 5) UIC Permit No. _____

Issued 11/16/94

Expires 11/16/96

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

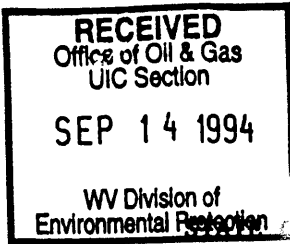
- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
- 7) LOCATION: Elevation: 1476 Watershed: Fluharty Fork District: Green County: Wetzel Quadrangle: Centerpoint
- 8) WELL OPERATOR Pennzoil Products Company 9) DESIGNATED AGENT James A. Crews
Address P. O. Box 5519 Address P. O. Box 5519
Vienna, WV 26105 Vienna, WV 26105
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED Name Mike Underwood 11) DRILLING CONTRACTOR:
Address Route 2, Box 135 Name _____
Salem, WV 26426 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 3329 feet(top) to 3344 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 3430 ft.
- 15) Approximate water strata depths; Fresh, 659 feet; salt, 1686 feet.
- 16) Approximate coal seam depths: 1291
- 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 Coalbed Filters
- 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____

24) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP 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		730'	730'	Cement to surface	Sizes
Coal									
Intermediate									
Production	4 1/2	J-55	10.5	x		3430'	3430'	Cement over salt sand	Depths set
Tubing									
Liners									Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from Irene Reilly et. al.
by deed _____ / lease / other contract _____ / dated September 23, 1995, of record in the
Wetzel County Clerk's office in Lease Book 47 at page 193

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



1) Date September 7, 1994
Operator's
2) Well No. IRENE REILLY #I-20
3) SIC Code
4) API Well No. 47 - 103 - 1645-6
State County Permit

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 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 _____
- 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 [Signature] Timothy P. Roush

Its Supervisor, Surveying/Mapping

Telephone (304) 422-6565