

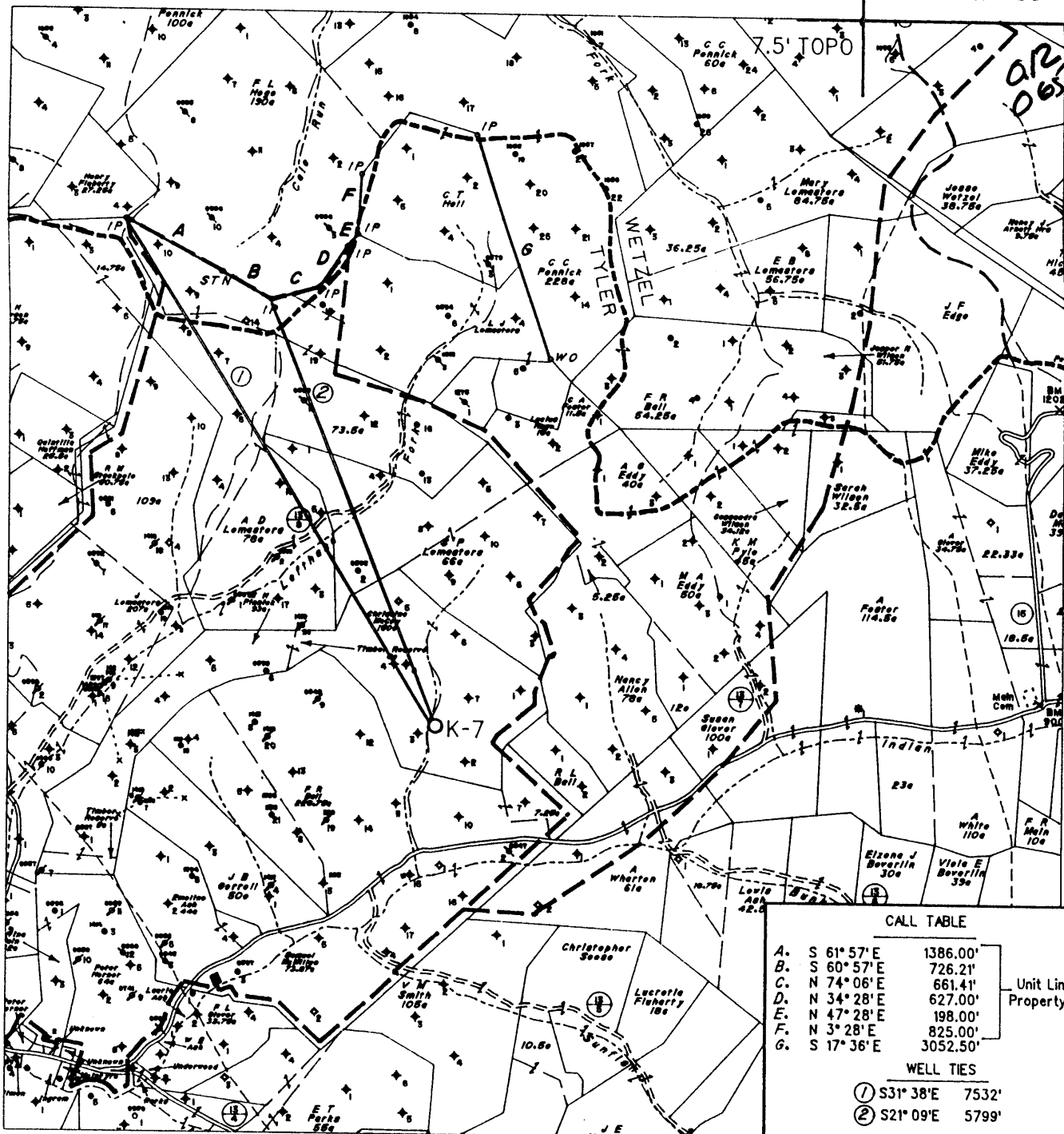
GS 1-5-93

3400'

LATITUDE 39° 27' 30"

650'

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° 06' 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° 36' E	3052.50'

Unit Line & Property Line

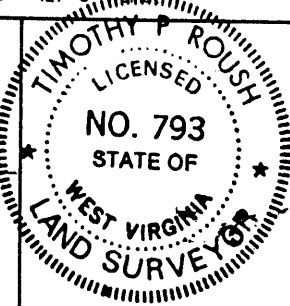
WELL TIES	
①	S31° 38' E 7532'
②	S21° 09' E 5799'

LOCATION REFERENCES
 N77° 00' E 122' 6" Dead Pine
 S69° 45' W 121' 8" Walnut

FILE NO. 1776
 MAP NO. N47 N S E W
 SCALE 1" = 2000'
 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 December 28, 19 92
 FARM Christina McCoy NO. K-7
 API WELL NO. 47-095-1516-L1

WELL TYPE: OIL GAS LIQUID INJECTION X WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 900' OK k/a WATERSHED Indian Creek
 DISTRICT McElroy 5 COUNTY Tyler
 QUADRANGLE Centerpoint 415 NW
 SURFACE OWNER Pennzoil Products Co. ACREAGE 150 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et.al. LEASE ACREAGE 150 Ac.
 LEASE NO. FEE - 2168
 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
 TARGET FORMATION Gordon ESTIMATED DEPTH 2890'
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W.Va. 26105-8-D Jacksonburg - string Vienna, W.Va. 26105 town (095)

RECEIVED
Division of
Environmental Protection

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

SEP 15 93

Well Operator's Report of Well Work

Farm name: ^{Submitting} PENNZOIL PRODUCTS COMPANY

Operator Well No.: C. McCOY K-7

LOCATION: Elevation: 900.00 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
Latitude: 650 Feet South of 39 Deg. 27 Min. 30 Sec.
Longitude 3400 Feet West of 80 Deg. 40 Min. 0 Sec.

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8"	221.20'	221.20'	100 sks.
4-1/2"	2902.80'	2902.80'	300 sks.

Agent: JAMES A. CREWS

Inspector: MIKE UNDERWOOD
Permit Issued: 07/31/92
Well work Commenced: 01/15/93
Well work Completed: 02/16/93
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 2930'
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

OPEN FLOW DATA (Water Injection Well)

Producing formation Gordon Pay zone depth (ft) 2774-2835
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: Timothy P. Roush, Supervisor - Surveying/Mapping
Date: September 14, 1993

Treatment:

Perforated : w/4 holes 2797' - 2804'
w/8 holes 2812' - 2816'

Treated: w/300 gal. reg. HF acid, 261 bbls. gelled water, 1500# 80/100 sand
and 3500# 20/40 sand

Well Log

Sand & Shale	0 - 292
Shale	292 - 480
Sand	480 - 536
Limestone	536 - 597
Shale	597 - 641
Sand & Shale	641 - 760
Sand	760 - 835
Sand & Shale	835 - 1184
Shale	1184 - 1270
Sand	1270 - 1432
Sand & Shale	1432 - 1544
Sand	1544 - 1594
Shale	1594 - 1625
Sand	1625 - 1662
Sand & Shale	1662 - 1775
Shale	1775 - 1952
Little Lime	1952 - 1967
Shale	1967 - 1995
Big Lime	1995 - 2062
Big Injun	2062 - 2224
Shale	2224 - 2774
Gordon	2774 - 2835
T.D.	2930

DF 411

DF-419

DEC 3 0 92
WV Division
Environmental Pr.



- 1) Date: December 23, 19 92
2) Operator's Well No. CHRISTINA MCCOY K-7
3) SIC Code
4) API Well NO. 47 - 095 - 1516-LI
State County Permit
5) UIC Permit No.

Issued 01/08/93

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

Expires 01/08/95

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
7) LOCATION: Elevation: 900' / Watershed: Indian Creek (286)
District: McElroy / County: Tyler / Quadrangle: Centerpoint 7.5'
8) WELL OPERATOR Pennzoil Products Co. 37450 / 9) DESIGNATED AGENT J.A. Crews
Address P.O. Box 5519 4670 / 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 Rt. #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 419 / Depth 2785 feet(top) to 2800 feet(bottom)
14) Estimated depth of completed well, (or actual depth of existing well) 2890' ft.
15) Approximate water strata depths: Fresh, 100' feet; salt, >100' feet.
16) Approximate coal seam depths: N/A
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 2470
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 / recovery.
23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____

4) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	Size	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
		Grade	Weight per ft.	New	Used	For drilling		
Conductor								Kinds
Fresh water	8 5/8	L.S.	20	X		200	200	Cement to Surface
Coal								Sizes
Intermediate								CONTROL POINTS
Production	4 1/2	J-55	10.5	X		2890	2890	Cement over Salt Sand
Tubing								Depths set
Liners								Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from C. & Z. McCoy
by deed _____ / lease / other contract _____ / dated March 18, 1897, of record in the
Tyler County Clerk's office in Lease Book 33 at page 112

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

16623

RECEIVED
Office of Oil & Gas
UIC Section
DEC 30 92
WV Division of
Environmental Protection

- 1) Date December 23, 1992
Operator's
- 2) Well No. CHRISTINA MCCOY K-7
- 3) SIC Code _____
- 4) API Well No. 47 - 095 - 1516
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 Pennzoil Products Company
Address P.O. Box 5519
Vienna, WV 26105
 - (ii) Name _____
Address _____
 - (iii) Name _____
Address _____

- 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

**OFFICE USE ONLY
DRILLING PERMIT**

Permit number 47-095-1516-LI

January 8th. 19 93
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 1-08-95 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing:	Fee:
✓	✓	AS	AS	

William D. Lewis
Director, Oil and Gas Division

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	Date(s)
Application received		
Well work started		
Total depth reached		
Well Record received		
Reclamation completed		

OTHER INSPECTIONS

Reason: _____
Reason: _____