

Call Table	
A	S20° W 62 P.
B	S61° 14'E 709.5'
C	N77° 47'E 594.0'
D	N60° 34'E 701.0'
E	N19° W 40 P.
WELL TIES	
①	N54° 02'E 3063'
②	N21° 44'E 1798'
LOCATION REFERENCES	
N35° 46'W	121' 10" Maple
S6° 07'E	145' 8" Chestnut Oak
N60° 02'E	421' Orig. M.Elder *13

Note: All known water supply sources located within 1000' of proposed well are shown.

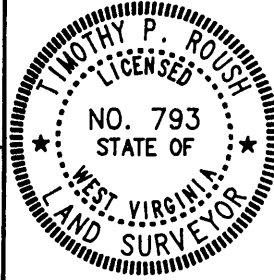
(H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

◆ Denotes a Water Supply Source

FILE NO. 1820
 MAP NO. N47 N S 1 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 24, 19 96
 FARM Martha Elder NO. 13 Rev.
 API WELL NO. 47-095-01667-5

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 3220' WATERSHED McInty. c Fork
 DISTRICT McElroy COUNTY Tyler
 QUADRANGLE Centerpoint 7.5'

SURFACE OWNER Forrest Glover ACREAGE 95.5 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al LEASE ACREAGE 187.25 Ac.
 LEASE NO. 99174-00

PROPOSED WORK: D.I. CONVERT DRILL DEEPER REFRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 8-0 96

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Gordon ESTIMATED DEPTH 3320'
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT Philip S. Ondrusek
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W.Va. 26105 Vienna, W.Va. 26105

OCT 25 1996

JAN 21 1997
Permitting
Office of Oil and Gas

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

Well Operator's Report of Well Work

Farm name: Glover, Forrest
LOCATION: Elevation: 1,320.00
District: McElroy
Latitude: 8,000 Feet south of
Longitude: 8,750 Feet west of
Company: PENNZOIL PRODUCTS COMPANY
P.O. BOX 5519
VIENNA, WV 26105-5519
Agent: PHILIP S. ONDRUSEK
Inspector: Mike Underwood
Permit Issued: 10/21/96
Well work Commenced: 12/15/96
Well work Completed: 1/3/97
Verbal plugging permission granted on:
Rotary X Cable _____ Rig _____
Total Depth (feet) 3336'
Fresh water depths (ft) NA
Salt water depths (ft) NA
Is coal being mined in area (Y/N) N
Coal Depths (ft): 657-661

Operator Well No.: M. Elder #13-R
Quadrangle: Center Point
County: Tyler
39 Deg 27 Min 30 Sec.
80 Deg 40 Min 00 Sec.

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	575'	575'	250 Sacks
4 1/2"	3280.00'	3280.00'	275 Sacks

OPEN FLOW DATA *Well was drilled as a waterflood injection well. No open-flow data was obtained

Producing formation Gordon Pay zone depth (ft) 3184-3210
 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: 1/2/97

Treatment:

Perforations:

3200' - 3204' - 4 holes/ft.(16 holes)

Treatment:

Treated via 4.5" Casing with 300 gals. 15% HCl, 204 bbls.

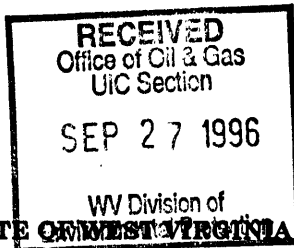
Borate cross-linked gelled water and 7,500 lbs. of 20/40 sand.

Well Log:

TD = 3336

Sand & Shale	0	-	590
Shale	590	-	634
Sand	634	-	657
Coal	657	-	661
Shale	661	-	847
Sand	847	-	870
Shale	870	-	1185
Sand	1185	-	1217
Shale	1217	-	1666
Sand	1666	-	1984
Shale	1984	-	2033
Sand	2033	-	2074
Shale	2074	-	2372
Sand	2372	-	2386
Big Lime	2386	-	2462
Big Injun	2462	-	2620
Shale	2620	-	3184
Gordon	3184	-	3210
Shale	3210	-	3336

10



1) Date September 24, 1996
 2) Well No. Martha Elder No.13 Rev.
 3) SIC Code _____
 4) API Well No. 47 - 095 - 1667-S
 State County Permit
 5) UIC Code _____

Issued 10/21/96
Expires 10/21/98

22741

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

WELL TYPE: Liquid Injection Gas Injection _____ Waste Disposal _____

LOCATION: Elevation 1320 Watershed McIntyre Fork 286
 District McElroy 5 County Tyler Quadrangle _____ Centerpoint _____

8) WELL OPERATOR: Pennzoil Products Company 4670 9) DESIGNATED AGENT: Philip S. Ondrusek
P.O. Box 5519 3746 P.O. Box 5519
Vienna, WV 26105 Vienna, WV 26105

10) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Mike Underwood 11) DRILLING CONTRACTOR: Name _____
 Address Route 2, Box 135 Address _____
Salem, WV 26426

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 3180 Ft. (Top) t 3195 Ft. (Bottom)

14) Estimated depth of completed well (or actual depth of existing well) 3320 Ft.

15) Approximate water strata depths: Fresh 500 Ft. Salt 1527 Ft.

16) Approximate coal seam depths: 1132 Ft.

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.

20) Maximum proposed injection operations: Volume per hour 25 bbl. Bottom Hole Pressure 2332 psig.

21) Detailed identification of materials to be injected, including additives: Fresh water, produced water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery.

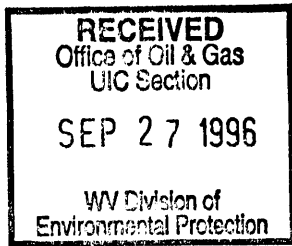
22) Filters (if any): Cartridge filters and/or coal bed filters

23) Specifications for cathodic protection and other corrosion control: _____

24) CASING AND TUBING PROGRAM:

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS	PACKERS
	Size	Grade	Weight	New	Used	For Drilling	Left in Well		
Conductor									Kinds
Fresh Water	8 5/8"	L.S.	20#	X		570	570	Cement To	
Coal								Surface	Sizes
Intermediate									
Production	4 1/2"	J-55	10.5#	X		3320	3320	Cement Over	Depths Set
Tubing								Salt Sand	
Liners									Perforations
									Top Bottom

25) APPLICANTS OPERATING RIGHTS were acquired from Martha E. Elder et al.
 by Deed _____ Lease Other Contract _____ Dated July 9, 1993 of record in the
Tyler County Clerk's Office in Deed Book 305 Page 131



1) Date September 24, 1996
2) Well No. Martha Elder No.13 Rev.
3) SIC Code _____
4) API Well No. 47 - 095 - 1667-21
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 Forrest Glover
Address P.O. Box 332
Middlebourne, WV 26149
(ii) Name Dorsey Baker Estate
Address c/o Earle M. Long
117 Ellis Ave.
(iii) Name Elkins, WV 26241
Address _____

6 (iv) ADDITIONAL SURFACE OWNERS

Name _____
Address _____

7 (ii) COAL OWNER WITH DECLARATION ON RECORD:

Name N/A
Address _____

7(iii) COAL LESSEE WITH DECLARATION ON RECORD:

Name N/A
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 _____

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]
Its Supervisor, Surveying/Mapping
Telephone (304) 422-6565

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1667-S

Date October 21st. 19 96

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 10-21-98 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: ✓	Agent: ✓	Plat: 18	Casing: K	Fee: CK#
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0301449888

Michael D. Lewis
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: _____