

CALL TABLE	
A.	S 44° 27' W 364.4'
B.	S 28° 27' W 231.9'
C.	S 43° 57' W 563.2'
D.	S 40° 33' E 148.5'
E.	S 44° 33' E 74.3'
F.	S 16° 33' E 495.0'
G.	S 18° 57' E 208.6'
H.	N 56° 18' W 1544.4'

Unit Line & Property Line

WELL TIES	
①	S 29° 29' W 4431'
②	S 38° 31' W 3859'

LOCATION REFERENCES	
N 68° 51' E 259'	DBL. BLACK CHERRY
N 7° 16' E 113' 14"	DBL. POPLAR

Note: All Known Water Supply Sources Located Within 1000' Of Proposed Well Are Shown

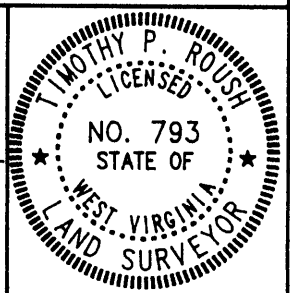
⬠ DENOTES WATER SUPPLY SOURCE.

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

FILE NO. 1686
 MAP NO. N47 N 1 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 October 28, 19 93
 FARM Samuel McMillen NO. J-4
 API WELL NO. 47-095-1605-L1

WELL TYPE: OIL GAS LIQUID INJECTION X WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 830' WATERSHED Indian Creek
 DISTRICT McElroy COUNTY Tyler
 QUADRANGLE Centerpoint 415 NW
 SURFACE OWNER Kenneth Glover et.al. ACREAGE 32.68 ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et.al. LEASE ACREAGE 75 ac.
 LEASE NO. 13181-50
 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 2900' (TVD=2810')
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W.Va. 26105 673 4670 Vienna, W.Va. 26105

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

Well Operator's Report of Well Work

Farm name: GLOVER, KENNETH ETAL. Operator Well No.: S,McMILLEN J-4

LOCATION: Elevation: 830.00 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
Latitude: 3050 Feet South of 39 Deg. 27Min. 30 Sec.
Longitude 4350 Feet West of 80 Deg. 40 Min. Sec.

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

Agent: JAMES A. CREWS

Inspector: MIKE UNDERWOOD
Permit Issued: 03/22/94
Well work Commenced: 06/17/94
Well work Completed: 09/12/94
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 2923
Fresh water depths (ft) N/A
Salt water depths (ft) N/A

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8	220'	220'	To surface 50 sks.
4-1/2	2899.80	2899.80	300 sks.

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) 2808-2852
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 24 holes 2824'-2836'. Treated with 300 gallons 15% HCL acid, 275 barrels gelled water and 7000# of 20/40 sand.

WELL LOG

Sand & Shale	0'-1098'
Sand	1098'-1138'
Sand & Shale	1138'-1720'
Sand	1720'-1740'
Shale	1740'-1931'
Sand	1931'-1944'
Shale	1944'-1960'
Sand & Shale	1960'-2058'
Sand	2058'-2086'
Shale	2086'-2097'
Big Injun	2097'-2216'
Shale	2216'-2575'
Sand	2575'-2588'
Shale	2588'-2599'
Sand	2599'-2604'
Shale	2604'-2792'
Stray	2792'-2808'
Gordon	2808'-2852'
T.D.	2923'

10/91

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- 1) Date: October 28, 1993
- 2) Operator's Well No. SAMUAL McMILLEN NO. J-4
- 3) SIC Code _____
- 4) API Well NO. 47 - 095 - 1605-LI
State County Permit
- 5. UIC Permit No. _____

*Issued 03/22/94
Expires 03/22/96*

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

NOTE: Well will be directionally drilled S45 - 46W 800'

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
- 7) LOCATION: Elevation: 830' Watershed: Indian Creek
District: McElroy County: Tyler 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 Rt. 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) _____
- 13) GEOLOGICAL TARGET FORMATION, Gordon Depth 2800 feet(top) to 2815 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 2900 ft. (T.V.D. = 2810')
- 15) Approximate water strata depths; Fresh, 20 feet; salt, 1050 feet.
- 16) Approximate coal seam depths: 642'
- 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 necessary to maintain water quality and improve oil recovery.
- 22) FILTERS (IF ANY): Cartridge filters 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 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	LS	20	X		200'	200'	cement to surface	Sizes
Coal									
Intermediate									
Production	4-1/2	J-55	10.5	X		2900'	2900'	cement over salt sand	Depths set
Tubing									
Liners									Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from S. B. McMillen
by deed _____ / lease / other contract _____ / dated May 4, 1894, of record in the
Tyler County Clerk's office in Lease Book 23 at page 241

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

NOV 01 1993

- 1) Date October 28, 1993
Operator's
- 2) Well No. SAMAUL MCMILLEN NO. J-4
- 3) SIC Code _____
- 4) API Well No. 47 - 095 - 1405
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 Kenneth Glover
Address HC 62, Box 45
Jacksonburg, WV 26377
 - (ii) Name John Jones & JoAnn & Kevin Leland
Address 720 James Street
New Martinsville, WV 26155
 - (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* Timothy P. Roush
Its Supervisor, Surveying/Mapping
Telephone (304) 422-6565