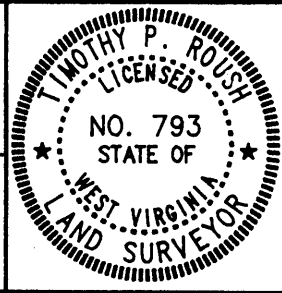


Call Table	
A	S20° W 62 P.
B	S61° 14'E 709.5'
C	N77° 47'E 594.0'
D	N60° 34'E 701.0'
E	N19° W 40 P.
WELL TIES	
①	N10° 33'E 1509'
②	N48° 36'W 2049'
LOCATION REFERENCES	
S23° 57'E	152' 4" Maple
S74° 36'W	124' 6" Sassafras
N68° 14'W	150' 10" Hickory

Note: All known water supply sources located within 1000' of proposed well are shown. ♦ Denotes a Water Supply Source  
 (H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 1823  
 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 August 12, 19 96  
 FARM Joshua Haught NO. 6  
 API WELL NO. 47-095-01658-5

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1120' WATERSHED Indian Creek  
 DISTRICT McElroy COUNTY Tyler  
 QUADRANGLE Centerpoint 7.5'  
 SURFACE OWNER David W. Lemasters ACREAGE 32.2 Ac.  
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al. LEASE ACREAGE 95 Ac.  
 LEASE NO. 99226-00  
 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 Garden ESTIMATED DEPTH 3120'  
 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

FORM IV-6

SEP 13 1996  
 8-0 95

WR-35

API #

9-Sep-96

47-095-1658  
Office of Oil & Gas  
Office of Chief

MAR 16 1998

WV Division of  
Environmental Protection

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

Well Operator's Report of Well Work

Farm name: Lemasters, David W.

Operator Well No.: Joshua Haughton

LOCATION: Elevation: 1,120.00

Quadrangle: Center Point

District: McElroy

County: Tyler

Latitude: 8,250 Feet south of

39 Deg 27 Min 30 Sec.

Longitude: 10,950 Feet west of

80 Deg 40 Min 0 Sec.

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

Agent: PHILIP S. ONDRUSEK

Inspector: Mike Underwood

Permit Issued: 9/9/96

Well work Commenced: 12/18/96

Well work Completed: 1/16/97

Verbal plugging

permission granted on:

Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_

Total Depth (feet) 3095'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): 930-940

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	397'	397'	210 Sacks
4 1/2"	3045'	3045'	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) 2920-2990

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: \_\_\_\_\_

Date: 3/13/98

MAR 13 1998

TYL 1658  
8591 761

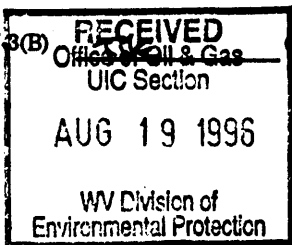
2982-2896'

**Treatment :**      Perforations:      2892'-2896' - 4 holes/ft (16 holes)  
                                 Treatment:              Treated via 4.5" Casing with 300 gals. 15% HCl, 196 bbls.  
                                                                      Borate cross-linked gelled water and 9300 lbs. of 20/40 sand.

**Well Log :**                      TD = 3095

Sand & Shale	0	-	930
Coal	930	-	940
Shale	940	-	964
Sand	964	-	1000
Shale	1000	-	1310
Sand	1310	-	1346
Shale	1346	-	1424
Sand	1424	-	1473
Shale	1473	-	1494
Sand	1494	-	1526
Shale	1526	-	1534
Sand	1534	-	1574
Shale	1574	-	1724
Sand	1724	-	1774
Shale	1774	-	1804
Sand	1804	-	1852
Shale	1852	-	1904
Sand	1904	-	1936
Shale	1936	-	2143
Big Lime	2143	-	2252
Big Injun	2252	-	2396
Shale	2396	-	2920
Gordon	2920	-	2990
Shale	2990	-	3095

AD



1) Date August 13, 1996  
 2) Well No. Joshua Haught No.6  
 3) SIC Code \_\_\_\_\_  
 4) API Well No. 47 - 095 - 1658-LI  
 State County Permit  
 5) UIC Code \_\_\_\_\_

*Issued 09/09/96  
 Expires 09/09/98*

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

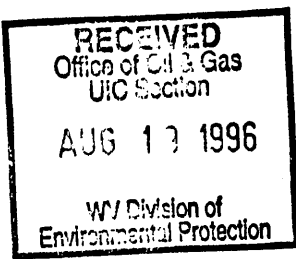
22559

- WELL TYPE: Liquid Injection  Gas Injection \_\_\_\_\_ Waste Disposal \_\_\_\_\_
- LOCATION: Elevation 1120 Watershed Indian Creek 286  
 District McElroy County Tyler Quadrange \_\_\_\_\_ Centerpoint \_\_\_\_\_
- WELL OPERATOR: Pennzoil Products Company 4670 9) DESIGNATED AGENT: Philip S. Ondrusek  
P.O. Box 5519 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 2980 Ft. (Top) t 2995 Ft. (Bottom)
- 14) Estimated depth of completed well (or actual depth of existing well) 3120 Ft.
- 15) Approximate water strata depths: Fresh 300 Ft. Salt 1327 Ft.
- 16) Approximate coal seam depths: 932 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		370	370	Cement To	
Coal								Surface	Sizes
Intermediate									
Production Tubing	4 1/2"	J-55	10.5#	X		3120	3120	Cement Over	Depths Set
Liners								Salt Sand	
									Perforations
									Top Bottom

- 25) APPLICANTS OPERATING RIGHTS were acquired from Joshua Haught  
 by Deed \_\_\_\_\_ Lease  Other Contract \_\_\_\_\_ Dated February 23, 1898 of record in the  
Tyler County Clerk's Office in \_\_\_\_\_ Deed Book 37 Page 499



1) Date August 13, 1996  
2) Well No. Joshua Haught No.6  
3) SIC Code \_\_\_\_\_  
4) API Well No. 47 - 095 - 165821  
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 David W. Lemasters  
Address 220 Fair Ave.  
Middlebourne, WV 26149  
(ii) Name Virginia Lemasters  
Address Alvy, WV 26322  
(iii) Name Garnett Ferrebee  
Address 115 North 7th Ave.  
Paden City, WV 26159

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 47-095-1658-LI

September 9th. 96 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 9-9-98 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: ✓	Agent: ✓	Plat: <i>MS</i>	Casing: <i>MS</i>	Fee: <i>CK#</i>
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0301284936

*Michael J. Jones*

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: \_\_\_\_\_