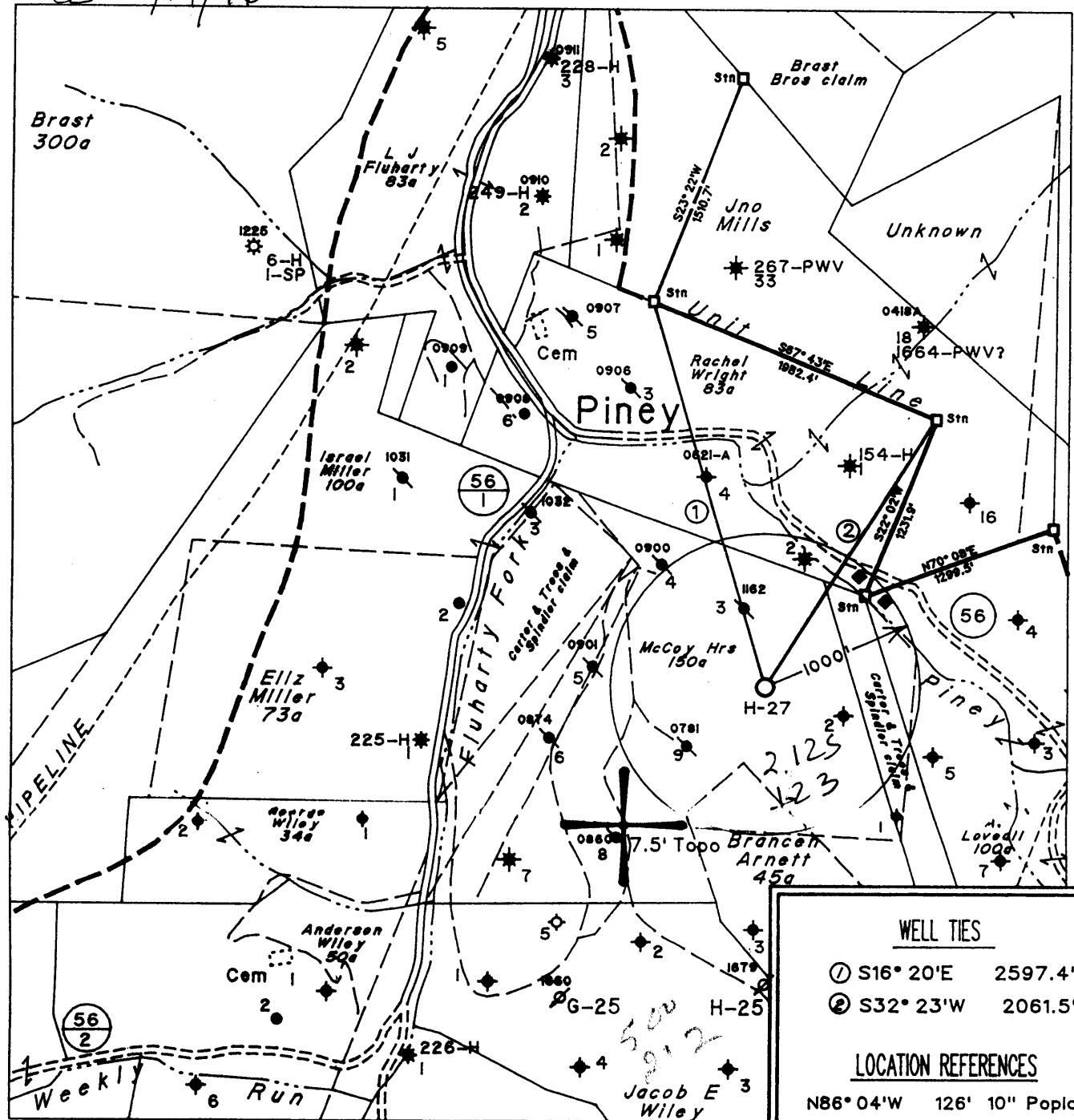


2/14/96

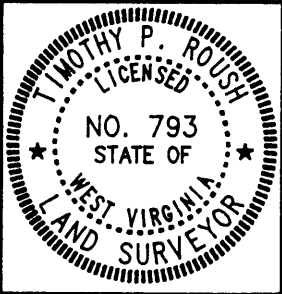


WELL TIES	
①	S16° 20'E 2597.4'
②	S32° 23'W 2061.5'
LOCATION REFERENCES	
N86° 04'W	126' 10" Poplar
S2° 36'E	91' 3" Sarvis
N54° 09'E	140' 3" Crab Apple

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. 1431  
 MAP NO. N57 N 5 S E W 4  
 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 February 1, 19 96  
 FARM McCoy Hrs. NO. H-27  
 API WELL NO. 47-103-01694-S

WELL TYPE: OIL \_\_\_ GAS \_\_\_ LIQUID INJECTION  WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 1045' WATERSHED. Piney Fork  
 DISTRICT Green COUNTY Wetzel  
 QUADRANGLE Pine Grove  
 SURFACE OWNER Coastal Lumber Co. ACREAGE 154.51 Ac.  
 OIL & GAS ROYALTY OWNER Pennz'il Products Co. et.al. LEASE ACREAGE 150 Ac.  
 EASE NO. 25040-50  
 PROPOSED WORK: DRILL  CORVERT \_\_\_ 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 3045'  
 WELL OPERATOR Pennz'il Products Company DESIGNATED AGENT Philip S. Ondrusek  
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519  
 Vienna, W.Va. 26105 4670 Vienna, W.Va. 26105 9-0 95

RECEIVED  
Division of Environmental Protection

JAN 06 1997

Permitting  
Division of Oil & Gas

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

Well Operator's Report of Well Work

Farm name: Coastal Lumber Company

Operator Well No.: McCoy Hrs. #H-27

LOCATION: Elevation: 1,045.00  
District: Green  
Latitude: 11,200 Feet south of  
Longitude: 6,500 Feet west of

Quadrangle: Pine Grove  
County: Wetzel  
39 Deg 32 Min 30 Sec.  
80 Deg 40 Min 00 Sec.

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

Agent: PHILIP S. ONDRUSEK

Inspector: Randal Mick

Permit Issued: 4/9/96

Well work Commenced: 6/23/96

Well work Completed: 9/27/96

Verbal plugging permission granted on:

Rotary  Cable  Rig

Total Depth (feet) 3027'

Fresh water depths (ft) NA

Salt water depths (ft) NA

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

Coal Depths (ft): 828-832

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	307'	307'	175 Sacks
4 1/2"	2969.65'	2969.65'	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) 2882-2900

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: 12/27/96

JAN 10 1997

**Treatment:**

Perforations:

2890' - 2896' - 4 holes/ft. (24 holes)

Treatment:

Treated via 4.5" Casing with 300 gals. 15% HCl, 222 bbls.

Borate cross-linked gelled water and 13,500 lbs. of 20/40 sand.

**Well Log:**

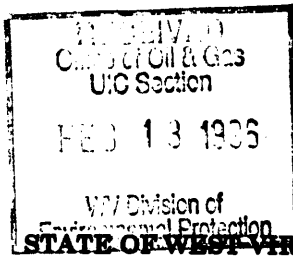
TD - 3027'

Sand & Shale	0	-	310
Shale	310	-	524
Sand	524	-	550
Shale	550	-	644
Sand	644	-	690
Shale	690	-	800
Sand	800	-	820
Shale	820	-	828
Coal	828	-	832
Shale	832	-	874
Sand	874	-	892
Shale	892	-	924
Sand	924	-	950
Sand & Shale	950	-	1229
Shale	1229	-	1258
Sand	1258	-	1276
Shale	1276	-	1322
Sand	1322	-	1348
Shale	1348	-	1410
Sand	1410	-	1452
Shale	1452	-	1466
Sand	1466	-	1515
Shale	1515	-	1812
Sand	1812	-	1850
Shale	1850	-	2024
Big Lime	2024	-	2076
Big Injun	2076	-	2288
Shale	2288	-	2857
Sand <i>gray</i>	2857	-	2870
Shale	2870	-	2882
Gordon	2882	-	2900
Shale	2900	-	2912
Sand	2912	-	2916
Shale	2916	-	3027

TD

FILE

COPY



1) Date February 6, 1996  
 2) Well No. McCoy Heirs No. H-27  
 3) SIC Code \_\_\_\_\_  
 4) API Well No. 47 - 103 - 1694-LI  
 State County Permit  
 5) UIC Code \_\_\_\_\_

*Issued 03/04/96  
Expires 03/04/98*

**NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION**

**for the  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**

21603

WELL TYPE: Liquid Injection X Gas Injection \_\_\_\_\_ Waste Disposal \_\_\_\_\_

LOCATION: Elevation 1045 Watershed Piney Fork 548  
 District Green County Wetzel Quadrangle Pine Grove

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  
 Address Route 2, Box 135  
Salem, WV 26426

11) DRILLING CONTRACTOR:  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_

12) PROPOSED WELL WORK: Drill X Drill Deeper \_\_\_\_\_ Redrill \_\_\_\_\_ Stimulate X  
 Plug Off Old Formation \_\_\_\_\_ Perforate New Formation \_\_\_\_\_ Convert \_\_\_\_\_  
 Other Physical Change in Well (specify) \_\_\_\_\_

13) Geological target formation Gordon 419 Depth 2925 Ft. (Top) t 2940 Ft. (Bottom)

14) Estimated depth of completed well (or actual depth of existing well) 3045 Ft.

15) Approximate water strata depths: Fresh 225 Ft. Salt 1252 Ft.

16) Approximate coal seam depths: 857 Ft.

17) Is coal being mined in the area? Yes X 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		295	295	Cement To	
Coal								Surface	Sizes
Intermediate									
Production	4 1/2"	J-55	10.5	X		3045	3045	Cement Over	Depths Set
Tubing								Salt Sand	
Liners									Perforations
									Top Bottom

25) APPLICANTS OPERATING RIGHTS were acquired from John R. McCoy et al  
 by Deed \_\_\_\_\_ Lease X Other Contract \_\_\_\_\_ Dated February 14, 1896 of record in the  
Wetzel County Clerk's Office in Lease Book 48 at Page 445

cf



**OFFICE USE ONLY  
DRILLING PERMIT**

Permit number 47-103-1694-LI

March 4th. 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 3-4-98 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: ✓	Agent: ✓	Plat: MS	Casing: 107	Fee CK# 301260915
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*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: \_\_\_\_\_