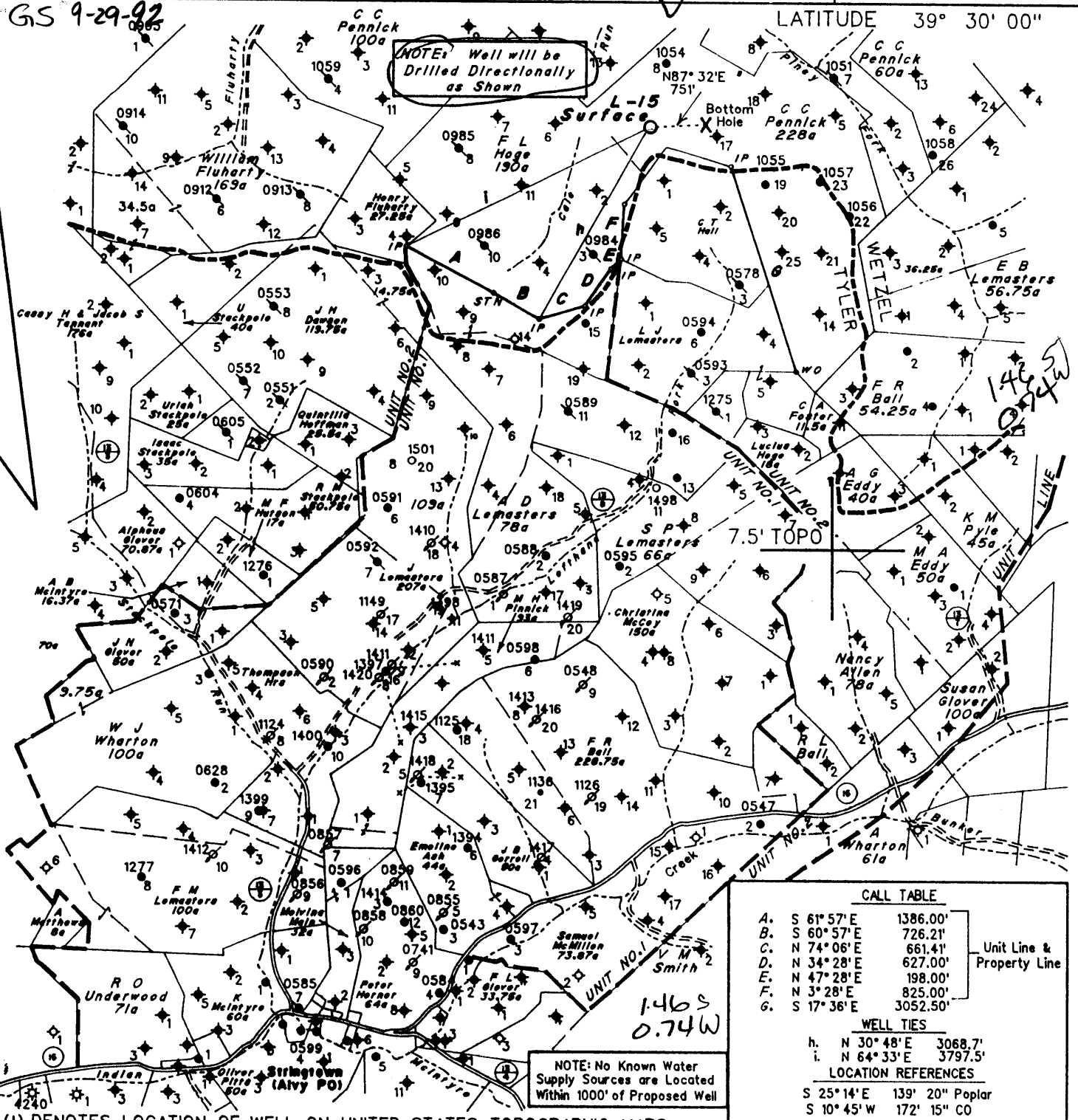


GS 9-29-92

LATITUDE 39° 30' 00"

LONGITUDE 80° 40' 00"

NOTE: Well will be Drilled Directionally as Shown



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		
h.	N 30° 48' E	3068.7'
i.	N 64° 33' E	3797.5'

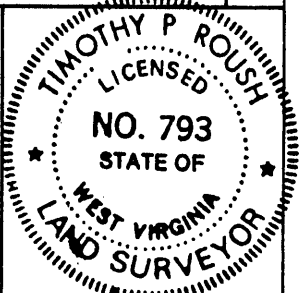
LOCATION REFERENCES

S 25° 14' E	139° 20" Poplar
S 10° 45' W	172° 15" CO

FILE NO. 573
 MAP NO. N57 N 3 S E W 4
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION F.L. Hoge No. 3
(47-095-0984) = 1307'

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



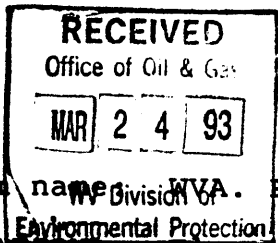
DATE September 27, 19 92
C.C. Pennick WELL L-15
 API WELL NO. 47-103-1516-L1

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION X WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 1386' WATERSHED Piney Fork
 DISTRICT Green 5 COUNTY Wetzel
 QUADRANGLE Centerpoint 15 NW
 SURFACE OWNER State of West Virginia ACREAGE 228 AC.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al. LEASE ACREAGE 5675 Ac.
 LEASE NO. 67696-00
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
 STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW
 FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___

directional well

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Gordon ESTIMATED DEPTH 3371' TVD
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT James A. Crews
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
Vienna, W.Va. 26105 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: WVA. PUBLIC LAND CORP. Operator Well No.: C.C.PENNICK-L15

LOCATION: Elevation: 1386.00 Quadrangle: CENTER POINT

District: GREEN County: WETZEL
Latitude: 7700 Feet South of 39 Deg. 30Min. 0 Sec.
Longitude 3900 Feet West of 80 Deg. 40 Min. 0 Sec.

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

Agent: JAMES A. CREWS

Inspector: RANDAL MICK
Permit Issued: 10/05/92
Well work Commenced: 11/8/92
Well work Completed: 12/14/92

Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 3520'
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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	661.20'	661.20'	To Surface 175 Sks.
4 1/2	3506.38	3506.38	300 Sks.

OPEN FLOW DATA (Water Injection Well)

Producing formation Gordon Pay zone depth (ft) 3365' - 343
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
Timothy P. Roush
By: Supervisor - Surveying/Mapping
Date: 3-3-93

Recorded
Reviewed
TMB

TREATMENT

PERFORATED: Gordon w/ 8 Holes 3388' - 3396'
 w/ 4 Holes 3408' - 3412'

Treated w/300 Gals. Reg. H.F., 283 Bbl. Gel Water
1500# 80/100 and 3500# 20/40 Sand

WELL LOG

(Measured Depths
Directionally Drilled)

Sand & Shale	0 - 510
Sand	510 - 530
Sand & Shale	530 - 830
Sand	830 - 845
Sand & Shale	845 - 1020
Sand	1020 - 1090
Sand & Shale	1090 - 1340
Sand	1340 - 1370
Sand & Shale	1370 - 1510
Shale	1510 - 1795
Sand	1795 - 1985
Sand & Shale	1985 - 2490
Sand	2490 - 2660
Sand & Shale	2660 - 2780
Shale	2780 - 3365
Gordon	3365 - 3430
T.D.	3520

DF - 411
DPT-919

RECEIVED
NY Division of
Environmental Protection
MAR 18 93
Permitting
Office of Oil & Gas



- 1) Date: September 28, 19 92
 2) Operator's Well No. C.C. PENNICK L-15
 3) SIC Code _____
 4) API Well NO. 47 - 103 - 1516-L1
State County Permit
 5) UIC Permit No. UIC2R09501AP

STATE OF WEST VIRGINIA
 NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
 for the
 DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

RECEIVED
 Office of Conservation
 UIC Section
 SEPT 29 92
 WV Division of
 Environmental Protection

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
 7) LOCATION: Elevation: 1386' / Watershed: Piney Fork
 District: Green / County: Wetzel / Quadrangle: Centerpoint ²⁸⁶
 8) WELL OPERATOR Pennzoil Products 37450
 Address P.O. Box 5519 4670
Vienna, WV 26105
 9) DESIGNATED AGENT J.A. Crews
 Address P.O. Box 5519
Vienna, WV 26105
 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Randall Mick
 Address Rt. #3, Box 248
Weston, WV 26452
 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) (NOTE: WELL WILL BE DRILLED DIRECTIONALLY.)
 13) GEOLOGICAL TARGET FORMATION, Gordon ⁴¹⁹ Depth 3271 feet(top) to 3286 feet(bottom)
 14) Estimated depth of completed well, (or actual depth of existing well) 3371 TVD ft. TVD TVD
 15) Approximate water strata depths: Fresh, 586 feet; salt, > 586 feet.
 16) Approximate coal seam depths: 1186
 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 3300 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.
 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	L.S.	20	X		640	640	To Surface	Sizes
Coal									
Intermediate									
Production	4 1/2	J-55	10.5	X		3470 M.D.	3470 M.D.	Cement over Salt Sand	Depths set
Tubing									
Liners									Perforations: Top Bottom

25) APPLICANT'S OPERATING RIGHTS were acquired from Stringtown Unit Royalty Owners
 by deed _____ / lease _____ / other contract / dated _____, 19 _____, of record in the
Wetzel County Clerk's office in Book 69A at page 123

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

1) Date September 28, 1992
Operator's
2) Well No. C.C. PENNICK L-15
3) SIC Code _____
4) API Well No. 47 - 103 - 1516-L-1
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

RECEIVED
SEPT 29 92
WV Division of
Environmental Protection

6) SURFACE OWNER(S) OF RECORD TO BE SERVED

- (i) Name WV Public Land Corp.
Address Bldg. #3 Room 643
1900 Kanawha Blvd., E.
- (ii) Name Charleston, WV 25305
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 WITE 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
Supervisor - Surveying/Mapping
Telephone (304) 422-6565

**OFFICE USE ONLY
DRILLING PERMIT**

Permit number 47-103-1516-BI

October 5th. 19 92
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 10-5-94 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <u>AB</u>	Casing: <u>AB</u>	Fee: <u>CK # 15003</u>
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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	Follow-up inspection(s)	Date(s)
Application received			
Well work started		
Total depth reached		
Well Record received		
Reclamation completed		

OTHER INSPECTIONS

Reason: _____

Reason: _____