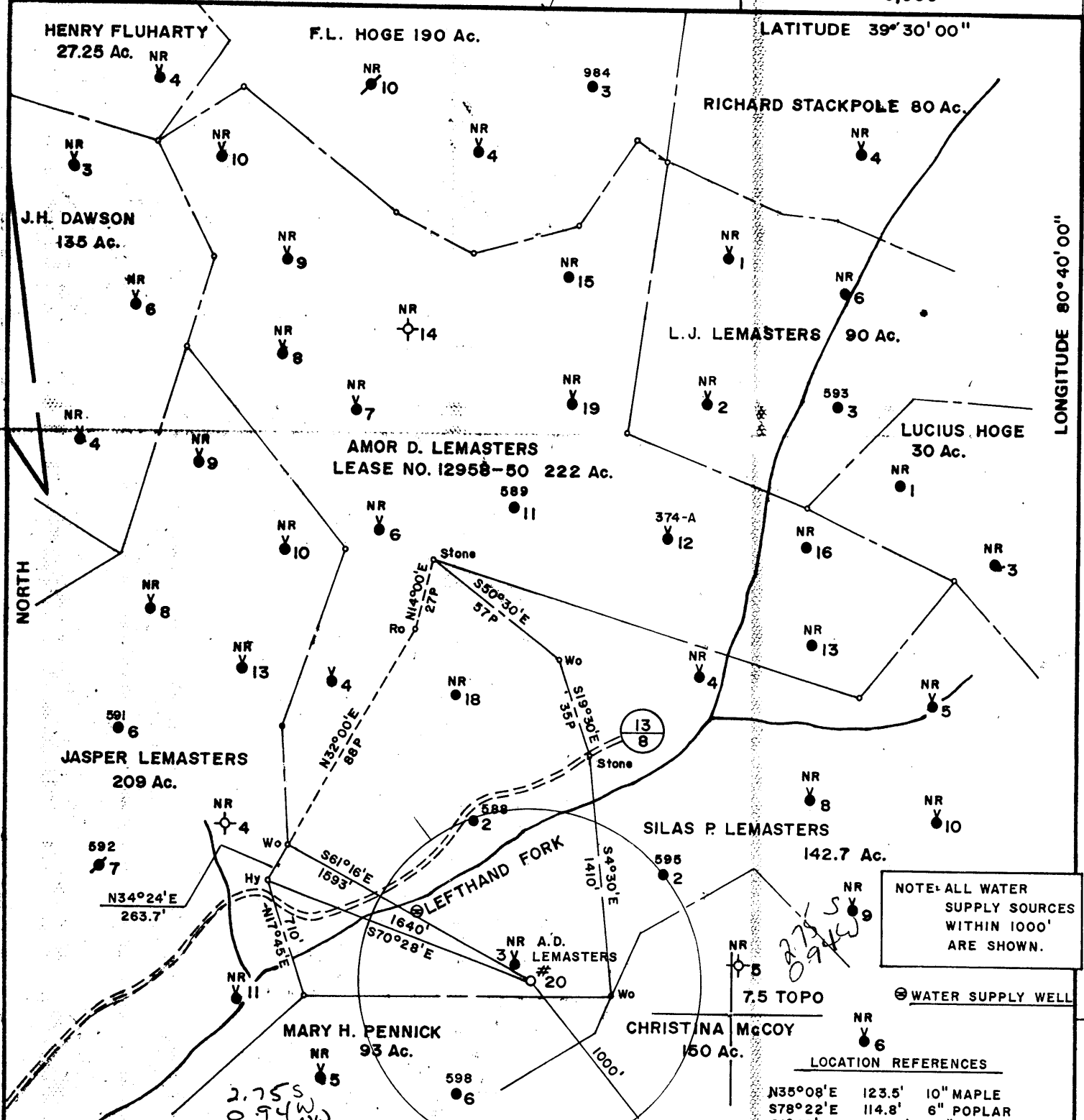


AS 6-21-90

5,050'



NOTE: ALL WATER SUPPLY SOURCES WITHIN 1000' ARE SHOWN.

⊙ WATER SUPPLY WELL

LOCATION REFERENCES
 N35°08'E 123.5' 10" MAPLE
 S78°22'E 114.8' 6" POPLAR
 S1°49'W 170.3' 20" BEECH

FILE NO. 431
 MAP NO. N47 SQS. N1 W4
 SCALE 1"=800'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION M. H. PENNICK #6
 (47-095-0598) = 1143.22'

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 P.S. 793



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE MAY 31, 1990
 FARM A. D. LEMASTERS NO. 20
 API WELL NO. 47-095-1419-41
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 1197' WATER SHED LEFTHAND FORK
 DISTRICT McELROY 5 COUNTY TYLER
 QUADRANGLE CENTER POINT 7.5
 SURFACE OWNER C. I. & FRANCIS WADSWORTH ACREAGE 103.13
 OIL & GAS ROYALTY OWNER EDITH DOAK ET AL LEASE ACREAGE 222
 LEASE NO. 12958-50
 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 ___ 8-0 Jacksonburg-Stringtown (095)
 TARGET FORMATION GORDON ESTIMATED DEPTH 3,240' AUG 6 1990
 WELL OPERATOR PENNZOIL PRODUCTS CO. DESIGNATED AGENT JAMES A. CREWS
 ADDRESS P.O. BOX 5519 673 ADDRESS P.O. BOX 5519 VIENNA, WV 26105 VIENNA, WV 26105

FORM WW-6

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: WADSWORTH, C.I. & FRANCES Operator Well No.: A.D. LEMASTERS20

LOCATION: Elevation: 1197.00 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
Latitude: 14600 Feet South of 39 Deg. 30Min. 0 Sec.
Longitude 5050 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: GLEN P. ROBINSON
Permit Issued: 07/30/90
Well work Commenced: 11-4-90
Well work Completed: 11-29-90
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 3225
Fresh water depths (ft) _____

Salt water depths (ft) _____

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. To surface
8-5/8	415	415	435 Sks.
4-1/2	3183.50	3183.50	300 Sks.

OPEN FLOW DATA

Producing formation Gordon Pay zone depth (ft) 3086-3128
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 N/A 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

* Liquid injection well, not tested.

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: Timothy P. Roush Timothy P. Roush
Date: April 11, 1991

APR 19 1991

Stimulation

Perforated: Gordon 3094-3104 - 10 holes

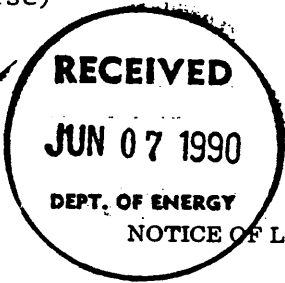
Treated w/300 gal. reg. HF acid, 292 Bbls. gelled water and 1500# 80/100 and 3500# 20/40 sand.

Well Log

Sand & Shale	00-515
Shale	515-648
Sand	648-663
Sand & Shale	663-836
Sand	836-896
Shale	896-1022
Sand	1022-1042
Shale	1042-1074
Sand	1074-1100
Sand & Shale	1100-1229
Shale	1229-1458
Sand	1458-1494
Shale	1494-1628
Sand	1628-1676
Sand & Shale	1676-1828
Sand	1828-1854
Shale	1854-1934
Sand	1934-1960
Shale	1960-2042
Sand	2042-2065
Shale	2065-2122
Sand	2122-2154
Shale	2154-2240
Little Lime	2240-2256
Shale	2256-2286
Big Lime	2286-2364
Big Injun	2364-2514
Shale	2514-3086
Gordon	3086-3128
Shale	3128-3225
T.D.	3225'

65101

7/85



- 1) Date: June 4, 1990
- 2) Operator's Well No. A. D. LEMASTERS NO. 20
- 3) SIC Code _____
- 4) API Well NO. 47 - 095 - 1419-LI
State County Permit
- 5) UIC Permit No. UIC2R09501AP

*Issued 7/30/90
Expires 7/30/92*

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
- 7) LOCATION: Elevation: 1197' Watershed: Left Hand Fork 286
District: McElroy (5) County: Tyler Quadrangle: Center Point 7.5'
- 8) WELL OPERATOR Pennzoil Products Company 37450 9) DESIGNATED AGENT James A. Crews
Address P.O. Box 5519 Address P.O. Box 5519
Vienna, W. Va. 26105-5519 Vienna, W. Va. 26105-5519
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Glen P. Robinson 11) DRILLING CONTRACTOR:
Address Rt. 1, #6 Mt. Pleasant Est. Name _____
Mineral Wells, W. Va. 26150 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 3087 feet(top) to 3097 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 3240 ft.
- 15) Approximate water strata depths: Fresh, 422 feet; salt, 1587 feet.
- 16) Approximate coal seam depths: _____
- 17) Is coal being mined in the area? Yes _____ / No /
- 18) Virgin reservoir pressure in target formation 80 psig. Source Estimated
- 19) Estimated reservoir fracture pressure 3500 (Bottom Hole) psig (BHFP)
- 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 20.8 Bbls. Bottom hole pressure 2340 psi
- 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fresh and produced water from Stringtown field operations with bactericide.
- 22) FILTERS (IF ANY): _____
- 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____

24) CASING AND TUBING PROGRAM

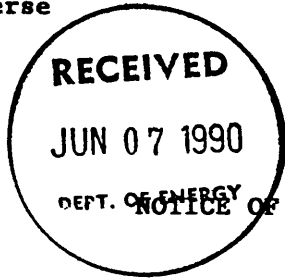
CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	8-5/8	H-40	24	X		452'	452'	Cmt to surface	Per 38 CSR 18-11.3
Coal									Sizes
Intermediate									
Production	4-1/2	J-55	9.5	X		3230'	3230'	300 Sks.	Depths set Per 38 CSR 18-11.
Tubing									
Liners									Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from A. D. Lemasters
by deed _____ / lease / other contract _____ / dated April 6 ~~1894~~ 1894, of record in the
Tyler County Clerk's office in Lease Book 23 at page 100

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

10959

Obverse



- 1) Date June 1, 1990
Operator's _____
- 2) Well No. A. D. LEMASTERS NO. 20
- 3) SIC Code _____
- 4) API Well No. 47 - 095 - 1414-0
State County Permit _____

STATE OF WEST VIRGINIA

DEPT. OF ENERGY 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 C.I. & Frances Wadsworth
Address Alvy, W. Va. 26322
 - (ii) Name S.I. McIntyre & H.R. Wright
Address c/o Helen Brunner
1646 22nd Ave., San Francisco, Calif. 941227
 - (iii) Name Ralph Hayes
Address Jacksonburg, W. Va. 26377
- 7 (i) COAL OPERATOR _____
Address _____
- 7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name _____
Address _____
- (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 [Signature] Timothy P. Roush
Its Supervisor, Surveying/Mapping
Telephone 304-422-6565