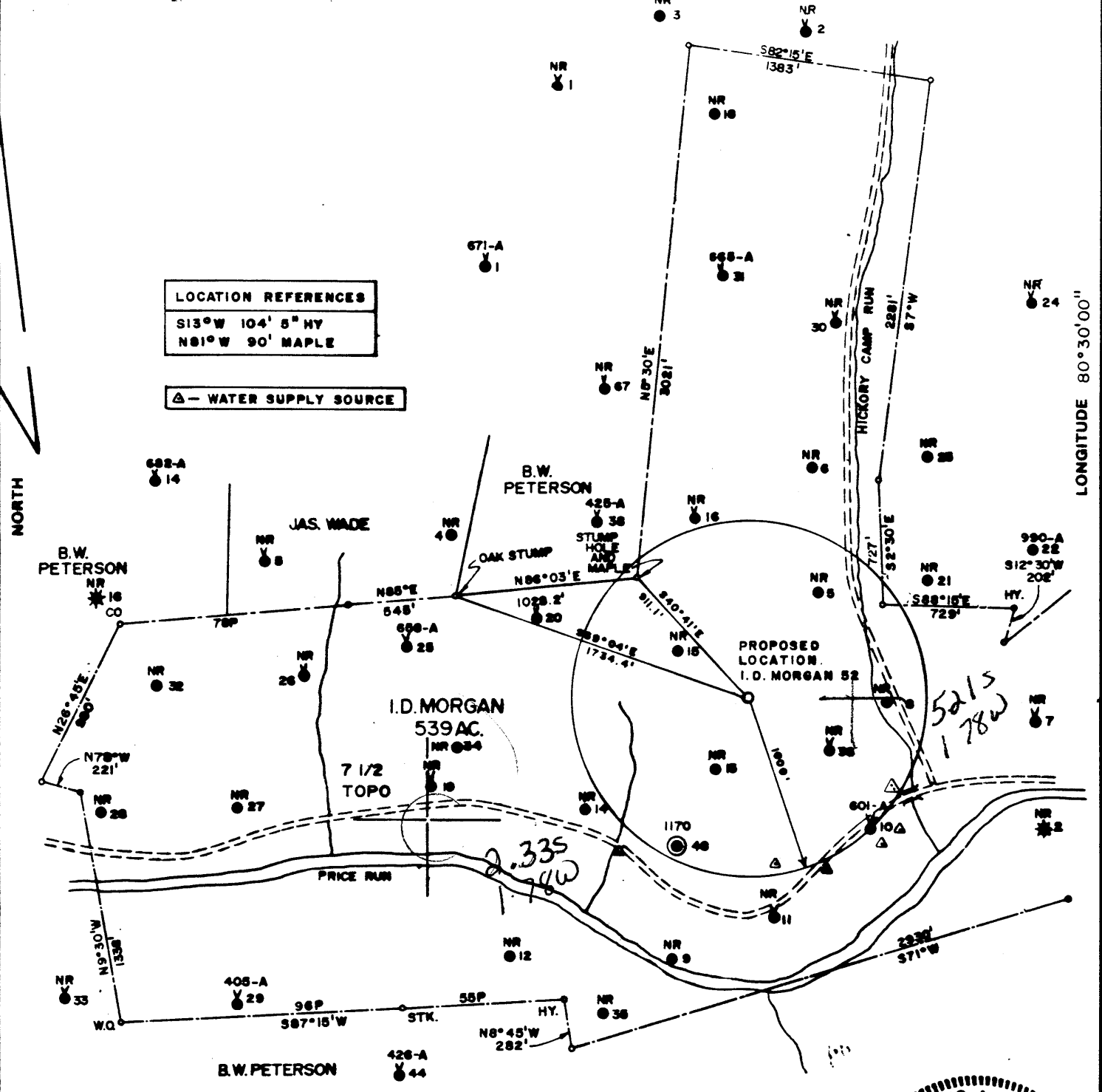


11-5-84

9,480' 39'35" LATITUDE 39°32'30"

CODE _____ CARD _____ PLOT ✓



LOCATION REFERENCES
 S13°W 104' 8" NY
 N81°W 90' MAPLE

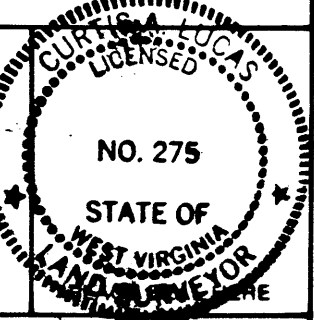
△ - WATER SUPPLY SOURCE

NORTH

LONGITUDE 80°30'00"

FILE NO. 487
 MAP N59 SQS N485, E5
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION USGS B.M. AT PRICETOWN ELEV. 895'

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) Curtis A. Lucas
 CURTIS A. LUCAS LLS 275



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE OCTOBER 10, 1984
 FARM I.D. MORGAN NO. 52
 API WELL NO.

47 - 103 - 1321-L

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION X WASTE DISPOSAL ___
 (IF "GAS.") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 1,197' WATER SHED PRICE RUN

STATE COUNTY PERMIT
 ACCORDING TO DEP. CANCELLED 12-24-86

DISTRICT GRANT COUNTY WETZEL
 QUADRANGLE BIG RUN 7 1/2' 254 Littleton 15' 569
 SURFACE OWNER BROWN & WITTKAMPER ACREAGE 301.44 AC.
 OIL & GAS ROYALTY OWNER JOSEPH D. MORGAN AGT. LEASE ACREAGE 539 AC.
 LEASE NO. 12117-50

PROPOSED WORK: DRILL X 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 GORDON ESTIMATED DEPTH 3177'
 WELL OPERATOR PENNZOIL COMPANY 673 DESIGNATED AGENT JAMES A. CREWS
 ADDRESS P.O. BOX 1508 ADDRESS P.O. BOX 1508
 PARKERSBURG, W.V. 26101 PARKERSBURG, W.V. 26101

NOV 13 1984

FORM IV-6 (8-78)

1) Date: October 10, 19 84

2) Operator's Well No. I. D. Morgan No. 52

3) SIC Code _____

4) API Well NO. 47 - 103 - 1321-LI
State County Permit

5) UIC Permit No. UIC 2R 10301 AP

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the
OFFICE OF OIL AND GAS, DEPARTMENT OF MINES, AND FOR
(CLASS II WELLS ONLY)
THE DIVISION OF WATER RESOURCES, DEPARTMENT OF NATURAL RESOURCES

6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____

7) LOCATION: Elevation: 1197 Watershed: Price Run
District: Grant County: Wetzel Quadrangle: Big Run 7.5'

8) WELL OPERATOR Pennzoil Company
Address P. O. Box 1588
Parkersburg, W. Va. 26101

9) DESIGNATED AGENT James A. Crews
Address P. O. Box 1588
Parkersburg, W. Va.

10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Robert Lowther
Address General Delivery
Middlebourne, W. Va. 26149

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, Big Injun Depth 2372 feet (top) to 2390 feet (bottom)

14) Estimated depth of completed well, (or actual depth of existing well) 3177 ft. Gordon 3097 3117

15) Approximate water strata depths; Fresh, _____ feet; salt, _____ feet.

16) Approximate coal seam depths: Pittsburgh Coal @ 987-994

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 BI-3120 G- 3435 psig (BHFP)

20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour BI-10Bbl; G-10Bbl bottom hole pressure BI-2120psi; G-2435

21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fresh water from shallow water supply well treated with bactericides and other chemicals to maintain water quality, also

22) FILTERS (IF ANY): cartridges / produced water from waterflood operations will be

23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: /reinjecting as becomes necessary

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									Sizes
Coal									Depths set
Intermediate	<u>8-5/8</u>	<u>H-40</u>	<u>20.0</u>	<input checked="" type="checkbox"/>		<u>1047</u>	<u>1047</u>	<u>Cement to surface</u>	Perforations:
Production	<u>4-1/2</u>	<u>K-55</u>	<u>9.5</u>	<input checked="" type="checkbox"/>		<u>3177</u>	<u>3177</u>	<u>300 sks.</u>	Top Bottom
Tubing									
Liners									

25) APPLICANT'S OPERATING RIGHTS were acquired from Jacob Morgan, et al
by deed _____ / lease / other contract _____ / dated May 3, 19 1893, of record in the
Wetzel County Clerk's office in Lease Book 38 at page 520

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

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-103-1321-LI

November 7 19 84
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 November 7, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
✓	✓	<i>[Signature]</i>	<i>[Signature]</i>	18097

[Signature]
Administrator, 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	Date(s)
Application received		
Well work started		" "
Total depth reached		" "
Well Record received		" "
Reclamation completed		" "
OTHER INSPECTIONS		
Reason:		
Reason:		