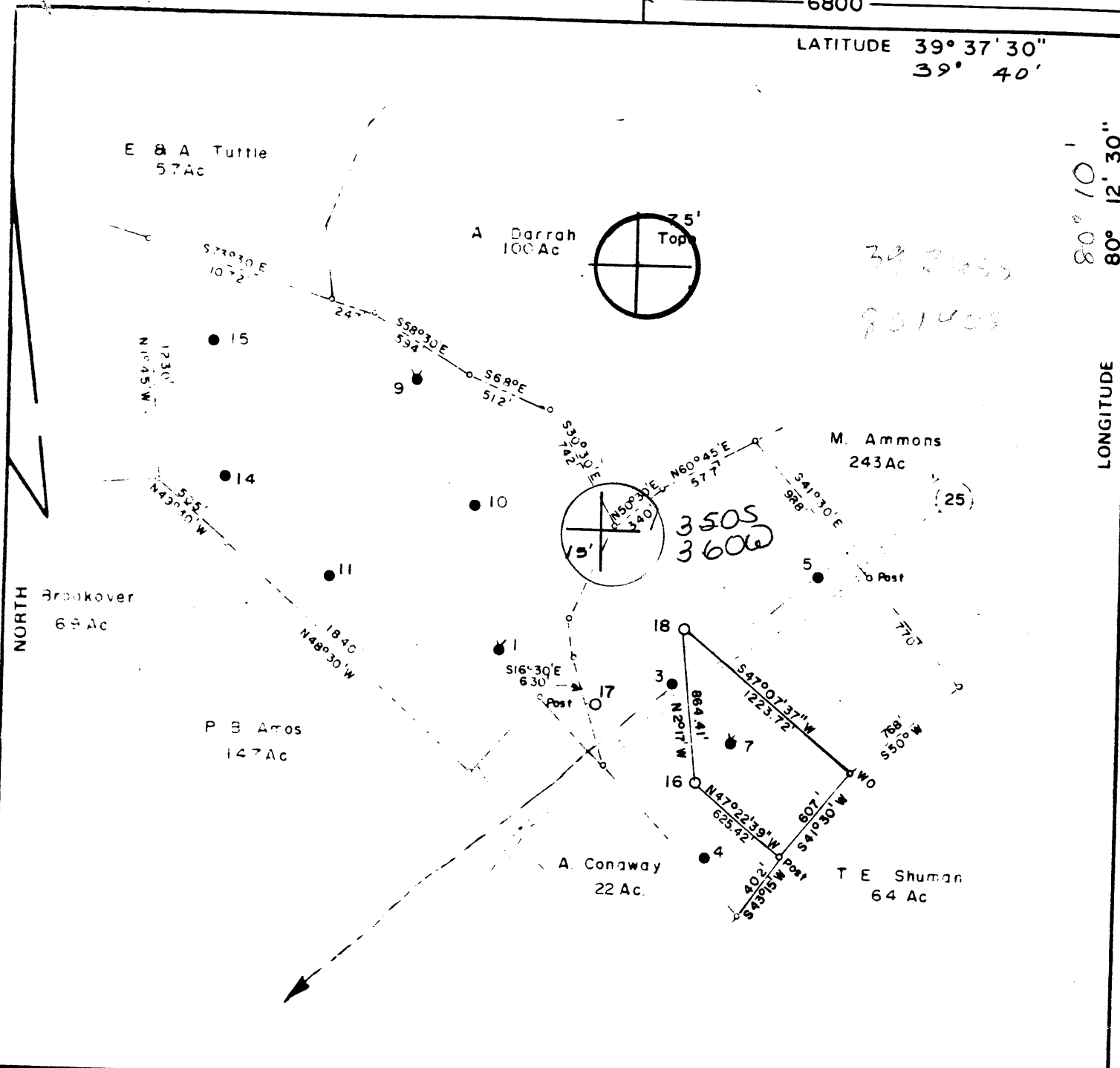


6800'

LATITUDE 39° 37' 30"
39° 40'

LONGITUDE 80° 10'
80° 12' 30"



FILE NO 920
 MAP N62E SQS N11-12 E22
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 in 5000
 PROVEN SOURCE OF ELEVATION A. Conway 3, Elev. 1079.47 Ft.

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

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV 6 (8-78)



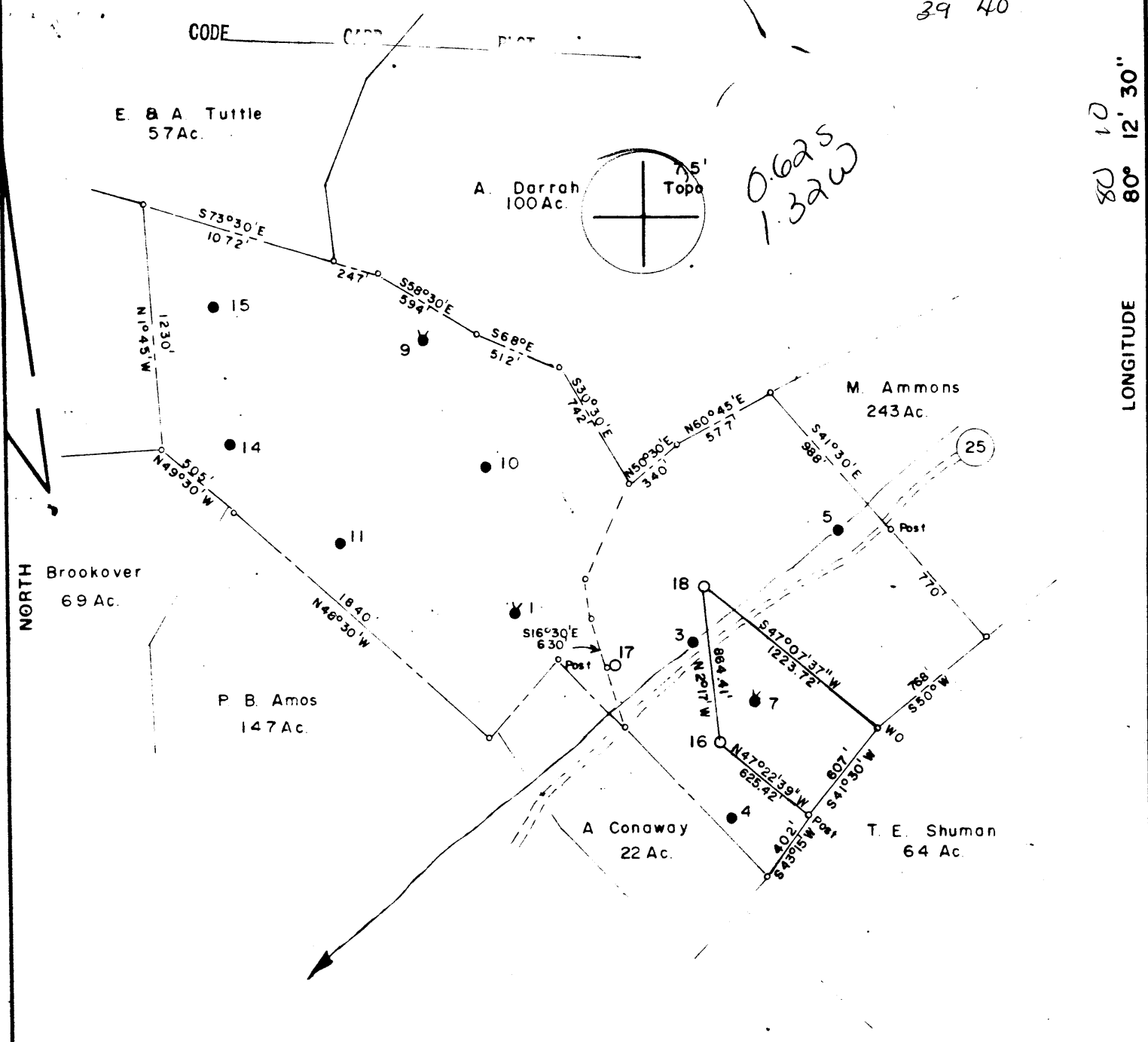
DATE Aug. 25 19 81
 FARM Andrew Conway NO. 18
 API WELL NO 47-061-0628-41
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION ELEVATION 1086.42 WATER SHED Bennefield Frong
 DISTRICT Clay COUNTY Monongalia
 QUADRANGLE Grant Town 7.5' Blacksville Wc
 SURFACE OWNER JOHN E. FLEURY ACREAGE 23.04
 OIL & GAS ROYALTY OWNER APPALACHIAN ROYALTIES LEASE ACREAGE 185
 LEASE NO. 6907-50
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 8-0
 PLUG AND ABANDON CLEAN OUT AND REPLUG FAIRVIEW-STATLER RUN
 TARGET FORMATION BIG INJUN-5TH ESTIMATED DEPTH 2999' SEP 28 1981
 WELL OPERATOR PENNZOIL COMPANY DESIGNATED AGENT JAMES A. CREWS
 ADDRESS P. O. BOX 1588 ADDRESS P. O. BOX 1588
PARKERSBURG, W. V. 26101 PARKERSBURG, W. V. 26101

29 40

80° 10' 30" LONGITUDE



FILE NO. 920
 MAP N62E SQS N11-12 E22
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 in 5000
 PROVEN SOURCE OF ELEVATION A. Conway 3, Elev. 1079.47 Ft.

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

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE Aug. 25, 19 81
 FARM Andrew Conway NO. 18
 API WELL NO. 47-061-0628-Li-Fa
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1086.42 WATER SHED Bennefield Prong
 DISTRICT Clay 3 COUNTY Monongalia
 QUADRANGLE Grant Town 7.5' 380 012 WC4
 SURFACE OWNER JOHN E. FLUHARTY ACREAGE 23.04
 OIL & GAS ROYALTY OWNER APPALACHIAN ROYALTIES LEASE ACREAGE 185
 LEASE NO. 6907-50

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
 TARGET FORMATION BIG INJUN-5TH ESTIMATED DEPTH 2999'
 WELL OPERATOR PENNZOIL COMPANY DESIGNATED AGENT JAMES A. CREWS
 ADDRESS 113 P. O. BOX 1588 ADDRESS P. O. BOX 1588
PARKERSBURG, W. V. 26101 PARKERSBURG, W. V. 26101

OCT 28 1985



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APR 30 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Granttown 7.5'

Permit No. 47-061-0628-Li

Rotary X Oil X
Cable _____ Gas _____
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Company Pennzoil Company
Address P. O. Box 1588, Parkersburg, WV 26101
Farm Andrew Conaway Acres 185
Location (waters) Bennefield Prong
Well No. 18 Elev. 1086.42
District Clay County Monongalia
The surface of tract is owned in fee by _____
John E. Fluharty
Address Fairview, WV
Mineral rights are owned by Appalachian Royalties
Address P. O. Drawer 1917, Clarksburg, WV
Drilling Commenced 10-21-81
Drilling Completed 10-29-81
Initial open flow WIW cu. ft. _____ bbls.
Final production _____ cu. ft. per day _____ bbls.
Well open _____ hrs. before test _____ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8	661	661	300 sks.
7			
5 1/2			
4 1/2	3053	3053	300 sks.
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record.
Fractured 2-24-82 w/1000 gals. 15% HF acid, 90 BGW, 1000# 20/40
Perf: 1973-74 & 1979-82/2H

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand 5th BI Depth _____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			0	464		
Pittsburgh Coal			464	470		
Shale			470	474		
Pittsburgh Coal			474	485		
Shale & Sand			485	550		
Pittsburgh Coal			550	564		
Shale & Sand			564	1762		
Little Lime			1762	1792		
Big Lime			1792	1872		
Loyalhanna			1872	1942		
Pocono Big Injun			1942	2034		
Shale & Sand			2034	3050		
Total Depth				3050		

MAY 10 1982

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

LIQUID INJECTION OR WASTE DISPOSAL WELL PERMIT APPLICATION

WELL TYPE: Liquid Injection X / Waste Disposal ___/
LOCATION: Elevation: 1086.42 Watershed: Bennefield Prong
District: Clay County: Monongalia Quadrangle: Granttown
GEOLOGICAL TARGET FORMATION: Big Injun & 5th Approximate depth 2947 feet
Virgin reservoir pressure in target formation 900 psig (surface measurement)
Source of information on virgin reservoir pressure Calculated

WELL OPERATOR Pennzoil Company
Address P. O. Box 1588
Parkersburg, WV

DESIGNATED AGENT James A. Crews
Address P. O. Box 1588
Parkersburg, WV

ROYALTY OWNER Appalachian Royalties
Address P. O. Drawer 1917
Clarksburg, WV

COAL OPERATOR Eastern Assoc. Coal Corp.
Address Granttown, WV

Acreage 185
SURFACE OWNER John E. Fluharty
Address Fairview, WV
Acreage 23.04

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name _____
Address _____
Name _____
Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED
Name William Blosser
Address Colfax, WV

COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____

The undersigned well operator is entitled to operate for liquid injection or waste disposal purposes at the above location under a deed ___ / lease X / other contract ___ / dated April 24, 1889, to the undersigned well operator from Andrew Conaway
[If deed, lease, or other contract has been recorded:]

Recorded on _____, 19____, in the office of the Clerk of the County Commission of Monongalia County, West Virginia, in Lease Book 26 at page 362. A permit is requested as follows:

PROPOSED WORK: Convert ___ / Drill X / Drill deeper ___ / Redrill ___ / Fracture or stimulate ___ / Plug off old formation ___ / Perforate new formation ___ / Other physical change in well (specify) _____

--planned as shown on the work order on the reverse side hereof.

Date of first liquid injection or waste disposal: _____, 19____

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within thirty (30) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
ECONOMICAL LOSS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
1615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 343-3092

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AUG 26 1981

Pennzoil Company
Well Operator
By Curtis A. Lucas
Curtis A. Lucas
Supervisor, Surveying & Mapping

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 21 1985
 Sept

- 1) Date: September 9, 1985
 2) Operator's Well No. Andrew Conaway No. 18
 3) SIC Code _____
 4) API Well NO. 47 - 061 - 0628-1 i Fr
 State County Permit
 5) UIC Permit No. _____

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY
 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: 1086.42 Watershed: Bennefield Prong
 District: Clay County: Monongalia Quadrangle: Grant Town 7.5'
 8) WELL OPERATOR Pennzoil Company 673 9) DESIGNATED AGENT James A. Crews
 Address P.O. Box 1588 Address P.O. Box 1588
Parkersburg, WV 26102 Parkersburg, WV
 10) OIL & GAS INSPECTOR TO BE NOTIFIED 11) DRILLING CONTRACTOR:
 Name Donald Ellis Name _____
 Address 2604 Crab Apple Lane Address _____
Fairmont, WV 26554
 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, Fifth Sand 422 Depth 2975 feet(top) to 2986 feet(bottom)
 14) Estimated depth of completed well, (or actual depth of existing well) 3050 ft.
 15) Approximate water strata depths; Fresh, n/a feet; salt, n/a feet.
 16) Approximate coal seam depths: 464-470; 474-485; 550 - 564
 17) Is coal being mined in the area? Yes ___ / No /
 18) Virgin reservoir pressure in target formation 1290 psig. Source fresh water gradient X depth
 19) Estimated reservoir fracture pressure 3100 psig (BHFP)
 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 15 bbls Bottom hole pressure 2290
 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: _____
Fresh Water
 22) FILTERS (IF ANY): cartridge
 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____
None

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	8-5/8	H-40	20#	X		651.94	651.94	300 sx.-circ	Kinds
Fresh water									Baker -AD-1
Coal									Sizes
Intermediate									
Production	4-1/2	K-55	9.5#	X		3042.65	3042.65	300 sx	Depths set
Tubing	2-3/8			X		2800	2800		2800
Liners									Perforations:
									Top Bottom
									2976 2986

- 25) APPLICANT'S OPERATING RIGHTS were acquired from Andrew Conaway
 by deed _____ / lease / other contract _____ / dated April 24 ~~1988~~ 1889, of record in the
Monongalia County Clerk's office in Lease Book 26 at page 362

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

Date: August 25, 19 81

Operator's Well No. Andrew Conaway No. 18
API Well No. 47-061-628-L1
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

PRE-OPERATION CERTIFICATE
FOR LIQUID INJECTION OR WASTE DISPOSAL WELL

WELL OPERATOR Pennzoil Company DESIGNATED AGENT James A. Crews
Address P. O. Box 1588 Address P. O. Box 1588
Parkersburg, WV 26101 Parkersburg, WV 26101

GEOLOGICAL TARGET FORMATION Big Injun Depth 1956 3001
2947 feet (top) to 2958 feet (bottom)

Virgin reservoir pressure in target formation 900 psig

Source of information on virgin reservoir pressure _____

Perforation intervals _____ Open-hole intervals _____

MAXIMUM PROPOSED INJECTION OPERATIONS

Volume per hour: 20 bbl. Bottom hole pressure: 2000 psig

DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED

Liquids to be injected for oil recovery under Code § 22-4-10a: Fresh water

Wastes to be disposed of: Produced water from waterflood operations to be reinjected.

Additives (slurry mediums, inhibitors, solvents, oxidizers, deoxidizers, etc.): bactericide

SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL _____

FILTERS (IF ANY) In line cartridge filter at injection plant.

ADDITIONAL DRILLING AS PART OF THE CONVERSION

(Complete and submit Form IV-35, "Well Operator's Report of Drilling, Fracturing and/or Stimulating or Physical Change".)

AUG 26 1981 DETAILS ON NEW CASING AND TUBING PROGRAM AS PART OF THE CONVERSION:

(To be completed below unless the new casing and tubing program is described on a Form IV-35, "Well Operator's Report of Drilling, Fracturing and/or Stimulating or Physical Change", submitted in connection with the permit to which this Form IV-37 pre-operation certificate relates.)

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

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	8 5/8	H40	20	X		640	640	To surface	Depths set
Intermediate									Perforations:
Production	4 1/2	J55	9.5	X		2999	2999	300 sacks	Top Bottom
Tubing									
Liners									

(Continue on reverse side)

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PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY;
ACTUAL INFORMATION MUST BE SUBMITTED ON
FORM IV-15 AND/OR FORM IV-37 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Clint Hurt & Assoc.
Address Charleston, WV

GEOLOGICAL TARGET FORMATION, Big Injun

Estimated depth of completed well, 2999 feet Rotary / Cable tools _____
Approximate water strata depths: Fresh, _____ feet; salt, _____ feet.
Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No _____

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		
Conductor								Kinds
Fresh water								
Coal	8 5/8	H40	20	x		640	640	To surface
Intermediate								Sizes
Production	4 1/2	J55	9.5	x		2999	2999	300 sacks
Tubing								Depths set
Liners								Perforations:
								Top Bottom

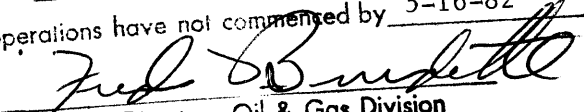
NOTE 1: Regulation 7.32 of the Department of Mines provides that the original and four copies of Form IV-3 must be filed with the Department, accompanied by (i) a plan in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2a, (iii) unless previously paid on the same well, the fee required by Code § 22-4-12a, (iv) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, and (v), if applicable, the consent required by Code § 22-4-3a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-3 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-3 filed in connection therewith.

NOTE 2: In addition to the permit required from the Department of Mines, the operator of a disposal well must obtain a separate permit from the Department of Natural Resources under the provisions of Code § 20-5A-5(b)(7).

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for Liquid Injection. This permit shall expire if operations have not commenced by 5-16-82.


Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within thirty (30) days of receipt thereof:

W A I V E R

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19____

By _____
Its _____

[08-78]

MECHANICAL INTEGRITY TEST

Test method: _____

The undersigned certifies that the test described above was made on
_____, 19____, and demonstrated the mechanical integrity
of the well.

FACILITIES OR SYSTEMS TO PROTECT THE INTEGRITY OF THE GEOLOGICAL
TARGET FORMATION OR TO PREVENT FRACTURING THE CONFINING STRATA _____

APPLICATION FOR VARIANCE (IF ANY) FROM REGULATION 9.01(a)
[Specify purpose, necessity, and justification]

Pennzoil Company
Well Operator
By Curtis A. Lucas
Curtis A. Lucas
Its Supervisor, Surveying & Mapping