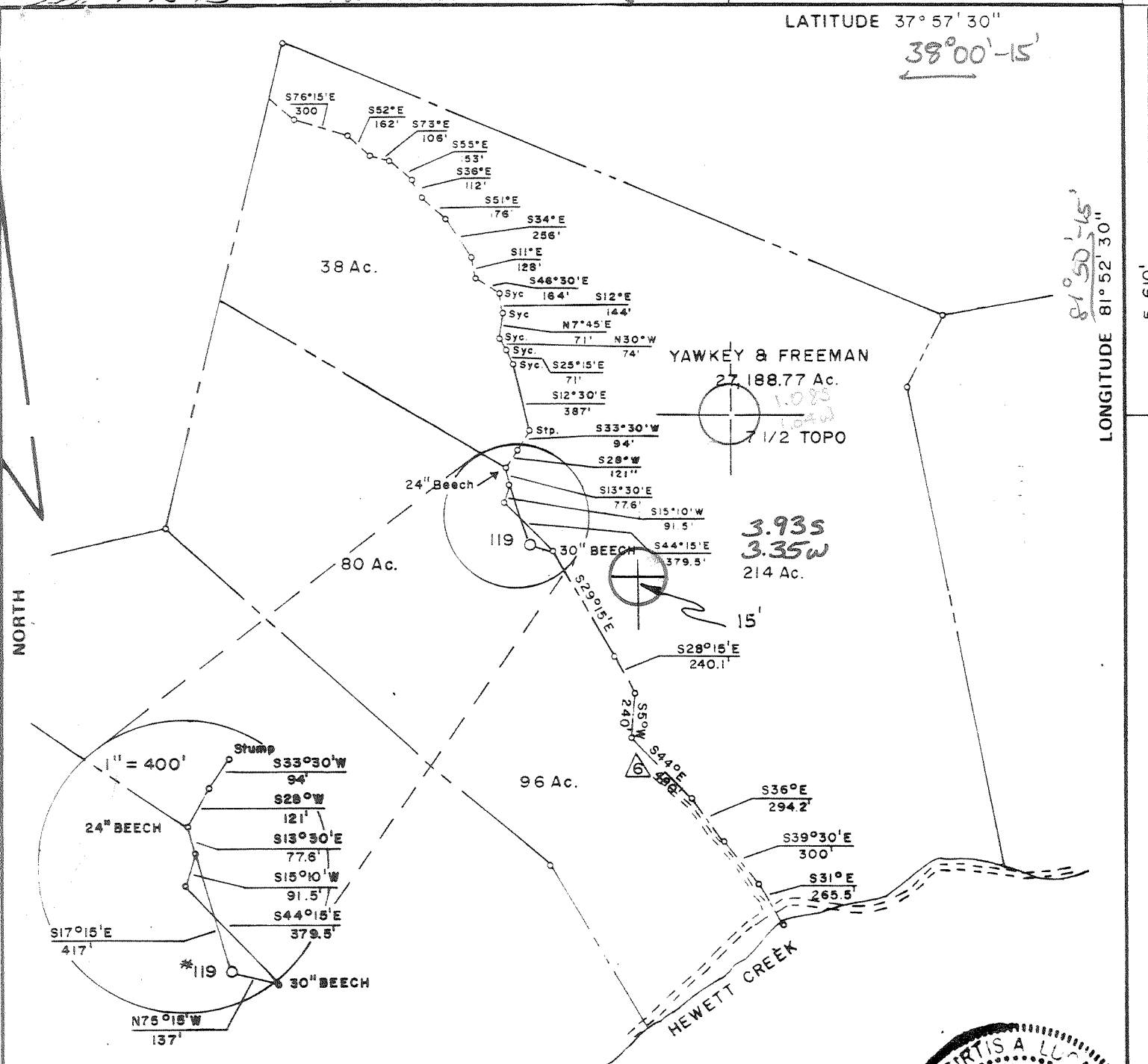


38° 00' - 15'

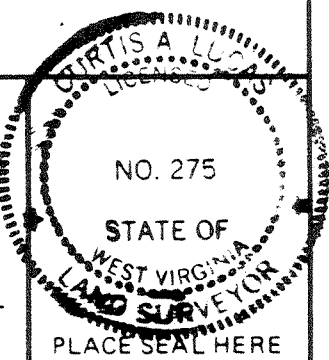
81° 50' - 15'

LONGITUDE 81° 52' 30"



FILE NO. 816  
 MAP 164W SQS S103 W74  
 SCALE 1" = 800'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION YAWKEY-FREEMAN No. 5 - ELEV. = 1150.00'

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



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



DATE JUNE 8, 19 83  
FARM YAWKEY-FREEMAN NO. 119  
 API WELL NO 47 - 045 - 1087  
 STATE LOGAN COUNTY LOGAN PERMIT CORRECTED TOPO LOCATION

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

AUG 08 1983

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 1044.69' WATER SHED JIMS BRANCH OF HEWETT CREEK  
 DISTRICT GUYAN COUNTY LOGAN  
 QUADRANGLE HENLAWSON 7-1/2 Logan 15' NC  
 SURFACE OWNER LUCIAN CRADDOCK ACREAGE 32 AC.  
 OIL & GAS ROYALTY OWNER WM. GARDNER AGENT LEASE ACREAGE 27221 AC.  
 LEASE NO. 73235 - 27221 AC.  
 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 TUSCARORA ESTIMATED DEPTH 6000'  
 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

Deep well G-B Curry-Jeffrey (24)



IV-35  
(Rev 8-81)

**RECEIVED**  
APR 19 1984  
State of West Virginia  
Department of Mines  
Oil and Gas Division  
**DEPT. OF MINES**  
WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

Date April 16, 1984  
Operator's  
Well No. 119  
Farm Yawkey-Freeman  
API No. 47 - 045 - 1087

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production X / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow \_\_\_ /)

LOCATION: Elevation: 1044.69 Watershed Jims Branch of Hewett Creek  
District: Logan County Logan Quadrangle Henlawson 7.5

COMPANY Pennzoil Company  
ADDRESS P.O.Box 1588, Parkersburg, WV 26101  
DESIGNATED AGENT James A. Crews  
ADDRESS P. O. Box 1588, Parkersburg, WV 26101  
SURFACE OWNER Lucian & Myrtle Craddock  
ADDRESS Lake, West Virginia 25121  
MINERAL RIGHTS OWNER Wm. Gardner, Agt.  
ADDRESS Suite 100, 5300 S. Third St., Louisville, Ky  
OIL AND GAS INSPECTOR FOR THIS WORK Arthur  
St. Clair ADDRESS P.O.Box 157, Brenton, WV  
PERMIT ISSUED 8-4-83  
DRILLING COMMENCED 1-19-84  
DRILLING COMPLETED 2-1-84  
IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13- <del>10</del> " 3/8	276	276	280 sks.
9 5/8	2563	2563	525 sks
8 5/8			
7			
5 1/2			
4 1/2			
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth                      feet  
Depth of completed well 4435 feet Rotary X / Cable Tools                       
Water strata depth: Fresh                      feet; Salt 656-712 feet  
Coal seam depths:                      Is coal being mined in the area? X

OPEN FLOW DATA  
Producing formation Huron Devonian Shale Pay zone depth 3696-3756 feet  
Gas: Initial open flow 750 Mcf/d Oil: Initial open flow                      Bbl/d  
Final open flow 125 Mcf/d Final open flow                      Bbl/d  
Time of open flow between initial and final tests                      hours  
Static rock pressure                      psig (surface measurement) after                      hours shut in  
(If applicable due to multiple completion--)  
Second producing formation                      Pay zone depth                      feet  
Gas: Initial open flow                      Mcf/d Oil: Initial open flow                      Bbl/d  
Final open flow                      Mcf/d Oil: Final open flow                      Bbl/d  
Time of open flow between initial and final tests                      hours  
Static rock pressure                      psig (surface measurement) after                      hours shut in

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

To be drilled deeper and completed  
at a later date

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand			0	279	
Shale			279	455	
Sand			455	712	
Shale			712	830	
Sand, Shale			830	1552	
Little Lime			1552	1608	
Pencil Cave			1608	1625	
Big Lime			1625	1806	
McCrary			1806	1864	
Big Injun			1864	1876	
Pocono Shale			1876	2307	
Sunbury (Coffee Shale)			2307	2332	
Berea			2332	2358	
Shale			2358	4383	
Marcellus Shale			4383	4427	
Onondaga			4427	4435	
Total Depth				4435	

3696  
2358  
1338

(Attach separate sheets as necessary)

PENNZOIL COMPANY  
Well Operator

By: Curtis A. Lewis

Date: 4-17-84

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



1) Date: June 8, 1983  
 2) Operator's Well No. Yawkey-Freeman #119  
 3) API Well No. 47 045 1087  
 State County Permit

DRILLING CONTRACTOR:

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

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil        / Gas X  
 B (If "Gas", Production X / Underground storage        / Deep X / Shallow       )
- 5) LOCATION: Elevation: 1044.69' Watershed:         
 District: Guyan County: Logan Quadrangle:
- 6) WELL OPERATOR Pennzoil Company 11) DESIGNATED AGENT James A. Crews  
 Address P. O. Box 1588 Address P. O. Box 1588  
Parkersburg, WV 26101 Parkersburg, WV 26101
- 7) OIL & GAS ROYALTY OWNER Wm. Gardner 12) COAL OPERATOR Bethlehem Mines  
 Address Suite 100, 5300 S. Third St. Address 1101 Kanawha Banking & Trust Bldg  
Louisville, Ky. Charleston, WV 25301
- 8) SURFACE OWNER Lucian & Myrtle Craddock 13) COAL OWNER(S) WITH DECLARATION ON RECORD:  
 Address Lake, WV 25121 Name         
 Address        Name         
 Address        Address
- 9) FIELD SALE (IF MADE) TO:  
 Address
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Arthur St. Clair  
 Address P. O. Box 157  
Brenton, WV 24818
- 14) COAL LESSEE WITH DECLARATION ON RECORD:  
 Name         
 Address
- 15) PROPOSED WORK: Drill X / Drill deeper        / Redrill        / Fracture or stimulate         
 Plug off old formation        / Perforate new formation         
 Other physical change in well (specify)
- 16) GEOLOGICAL TARGET FORMATION, Tuscarora
- 17) Estimated depth of completed well, 6000 feet  
 18) Approximate water strata depths: Fresh, 344 feet; salt,        feet.  
 19) Approximate coal seam depths:        Is coal being mined in the area? Yes        / No X

**RECEIVED**  
 JUN - 9 1983  
 OIL & GAS DIVISION  
 DEPT. OF MINES

20) 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	Le't in well		
Conductor									Kinds
Fresh water	9-5/8	K55	36			400 <del>250</del>	400' 250	Cement to	Surface by Rule 15-05
Coal									Sizes
Intermediate									
Production	7	K55	20	X		6000	6000	100 sks.	Depths set OR AS req by Rule 15-01
Tubing									Perforations:
Liners									Top Bottom

- 21) EXTRACTION RIGHTS  
 Check and provide one of the following:  
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.  
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 22) ROYALTY PROVISIONS  
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes  No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.
- 23) Required Copies (See reverse side.)
- 24) 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.
- Notary: James M. Beach  
 My Commission Expires Oct. 24, 1989
- Signed: Curtis A. Lucas  
 Its: Supervisor, Surveying & Mapping

47-045-1087 OFFICE USE ONLY August 4, 1983  
**DRILLING PERMIT**

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. 10) 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.)

Permit expires April 4, 1984 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: <u>9343</u>	Agent: <u>ak</u>	Plat: <u>      </u>	Casing: <u>      </u>	Fee: <u>15067</u>
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Administrator, Office of Oil and Gas