

LATITUDE 38°10'00"

CLEVELAND THOMPSON DEED BOOK 83/492

TRACT 34

TRACT 24

WELL

DB 270/391 TM 21-2.1

- 1: 18" PINE (JACQUES COR)
- 2: 16" HICKORY (LEASE COR)
- 3: 16" WHITE OAK CORNER

J. & E. JAKUES DB 515/654 TM 21-1.5

TRACT 3

TRACT 21

LUSTER

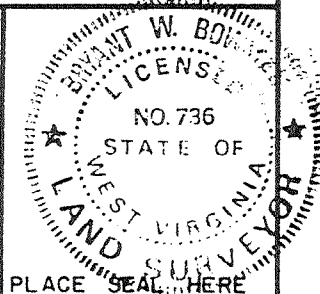
FORK

- A. N89°46'06"E 2028.374'
- B. S47°00'00"E 186.5'
- C. S42°47'39"E 304.083'
- D. N84°30'24"W 2245.252'

NO REFERENCES REQUIRED WELL IS EXISTING

FILE NO. _____
 DRAWING NO. _____
 SCALE 1"=1000'
 MINIMUM DEGREE OF ACCURACY 1/10000
 PROVEN SOURCE OF ELEVATION EXISTING WELL 1913 ELEVATION 810.40

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) Edward S. Bowman
 R. P. E. _____ L. L. S. 736



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



DATE JULY 8, 2000
 OPERATOR'S WELL NO. L-13R
 API WELL NO. 47-099-01974W
 STATE COUNTY PERMIT

Division of Environmental Protection
 Office of Oil & Gas

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____)
 LOCATION: ELEVATION 1036 WATER SHED BARTRAM FORK OF EAST FORK
 DISTRICT STONEWALL COUNTY WAYNE
 QUADRANGLE WAYNE, WV 7.5'

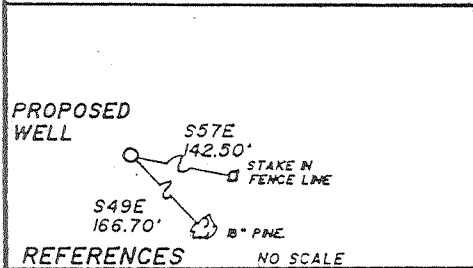
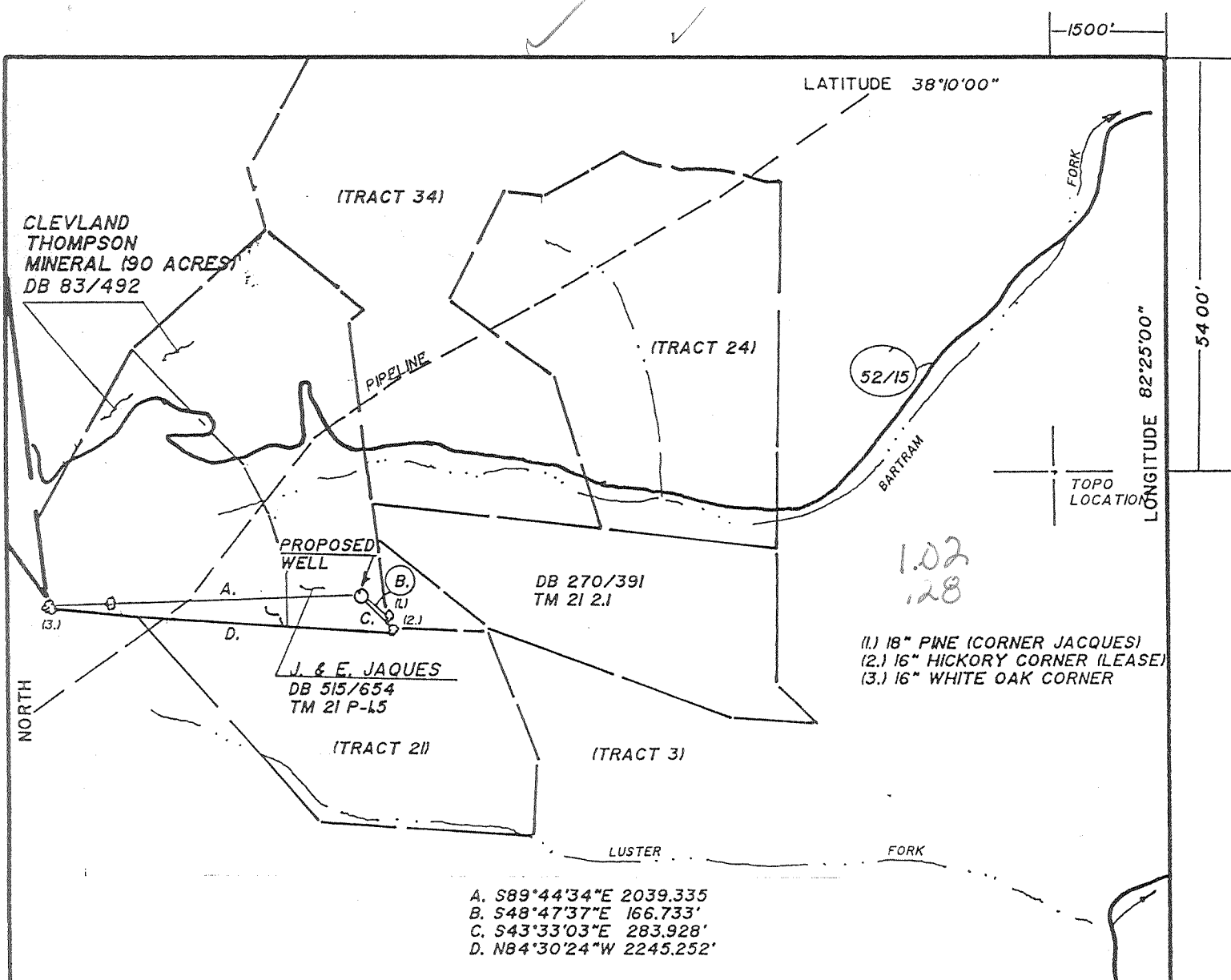
SURFACE OWNER JAMES R. & EDGINIA JAKUES ACREAGE 38±
 OIL & GAS ROYALTY OWNER RUSSELL PRICHARD LEASE ACREAGE 90 OF 5140
 LEASE NO. _____

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 _____ ESTIMATED DEPTH AUG 11 2000
 WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT MR. HARRY JEWEL
 ADDRESS PO BOX 387 DUFFIELD, VA 24244-0387 ADDRESS PO BOX 460 RAVENCLIFF, WV 25913

DEEP WELL

MAY 1974 W



FILE NO. _____

DRAWING NO. _____

SCALE 1"=1000'

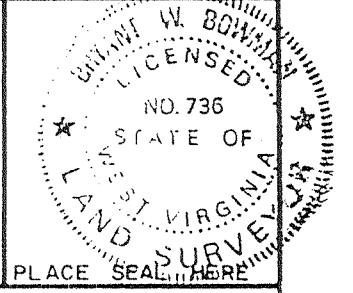
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(SIGNED) Ryan J. Brown

R.P.E. _____ L.L.S. 736



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WEST VIRGINIA

DIVISION OF ENVIRONMENTAL PROTECTION

OFFICE OF OIL AND GAS

#10 McJUNKIN ROAD

NITRO, WEST VIRGINIA 25143-2506

Department of Mines

Oil and Gas Division

DATE MAY 23, 1999

OPERATOR'S WELL NO. L-13R

API WELL NO. 47 - 099 - 01974

STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___

(IF "GAS", PRODUCTION X STORAGE ___ DEEP ___ SHALLOW ___)

LOCATION: ELEVATION 1036 WATER SHED BARTRAM FORK OF EAST FORK

DISTRICT STONEWALL COUNTY WAYNE

QUADRANGLE WAYNE, WV 7.5'

SURFACE OWNER JAMES R. & EDGINA JAQUES ACREAGE 38±

OIL & GAS ROYALTY OWNER RUSSELL PRICHARD LEASE ACREAGE 90 OF 5140

LEASE NO. _____

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 Lockport Dolomite ESTIMATED DEPTH 4500

WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT MR. HARRY JEWEL

ADDRESS 999 EXECUTIVE PARK BLVD., SUITE 300 ADDRESS PO BOX 460

KINGSPORT, TN 37660 RAVENCLIFF, WV 25913

6-6 353

MAY 1974

MAY 02 1999

087163

Charleston, WV

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Reviewed ACG

Well Operator's Report of Well Work

Farm name: Jacques, James R & Edgina Operator Well No.: L-13R

LOCATION: Elevation: 1036' Quadrangle: Wayne, WV 7.5'

District: Stonewall County: Wayne
Latitude: 5400 Feet South of 38 Deg. 10 Min. 00 Sec.
Longitude 1500 Feet West of 82 Deg. 25 Min. 00 Sec.

Company:

Penn Virginia Oil & Gas Corporation

Casing &
Tubing

Used in
drilling

Left in well

Cement fill
up Cu. Ft.

Address: P.O. Box 387

Duffield, VA 24244

Agent: Harry Jewell

Inspector: Dave Belcher

Date Permit Issued: 8/9/2000

Date Well Work Commenced: 10/23/00

Date Well Work Completed: 11/7/00

Verbal Plugging:

Date Permission granted on:

Rotary X Cable Rig

Total Depth (feet):

Fresh Water Depth (ft.):

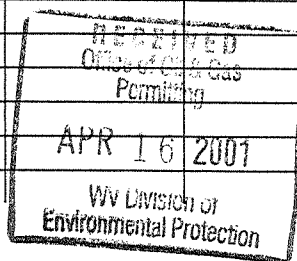
Salt Water Depth (ft.):

Is coal being mined in area (N/Y)?

Coal Depths (ft.):

OPEN FLOW DATA

Recompletion



Producing formation Lower Huron & Berea Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow 35 MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests 4 Hours

Static rock Pressure 450 psig (surface pressure) after 60 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.

Signed: Richard Waddell
By: _____
Date: 11-13-00

MAY 1974 W

MAY 4 2001

FORM WR-35R
(REVERSE)

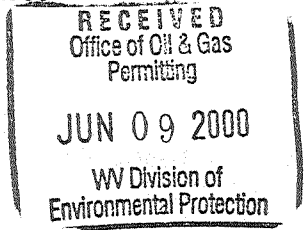
PERMIT #: 47-099-01974W
WELL #: L-13R

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.

Set CIBP at 4140'. Spotted 50 of latex cement on top of CIBP. Perforated with 4 SPF at 2850'-2851'. Squeezed 4 1/2" casing with 290 sx cement. TOC at 1846'.

Stage 1 – Lower Huron – Perforated from 2990' to 3178' with 47 holes. Breakdown with 500 gallons 7.5% HCL acid and N2. Treated with 303000 SCF N2. ISIP: 1080 psi. ATP: 1387 psi. ATR: 27200 SCF/min.

Stage 2 – Berea – Perforated from 2320' to 2330' with 20 holes and 2346' to 2351' with 10 holes. Breakdown with 250 gallons 7.5% HCL acid and N2. Treated with 301000 SCF N2. ISIP: 2810 psi. ATP: 3083 psi. ATR: 24900 SCF/min.



State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Review _____

Well Operator's Report of Well Work

Farm name: Jaques, James R. & Edgina Operator Well No.: L-13R

LOCATION: Elevation: 1036' Quadrangle: Wayne

District: Stonewall County: Wayne
Latitude: 5400 Feet South of 38 Deg. 10 Min. 0 Sec.
Longitude 1500 Feet West of 82 Deg. 25 Min. 0 Sec.

Company:
Penn Virginia Oil & Gas Corporation

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 387	20"	19'	19'	0
Duffield, VA 24244	13 3/8"	302'	302'	319
Agent: Harry Jewell	9 5/8"	1553'	1553'	655
Inspector: Dave Belcher	4 1/2"	4316'	4316'	493
Date Permit Issued: 07/29/99				
Date Well Work Commenced: 11/17/99				
Date Well Work Completed: 12/13/99				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 4343'				
Fresh Water Depth (ft.): Damp @ 25', 1 1/2" @ 1000', 3" @ 1350'				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				

OPEN FLOW DATA

Producing formation Lockport Dolomite Pay zone depth (ft) 4151'-4160'
Gas: Initial open flow Odor MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow Odor MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 48 Hours
Static rock Pressure 700 psig (surface pressure) after 48 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.

Signed: _____
By: James R. Wilson
Date: 6/5/00

JUN 30 2000

MAY 1974

FORM WR-35R
(REVERSE)

PERMIT #: 47-99-01974
WELL #: L-13R

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.

Stage 1 Lockport Perforated from 4151' to 4160' with 37 holes. Breakdown 500 gallons 15% HCL acid and water. Treated with 1000 gallons 15% HCL acid.
ATR: 3.5 BMP ATP: 3300 psi ISIP: 2500 psi

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Breathitt	0	857	
Salt Sand	857	1390	
Pennington	1390	1450	
Little Lime	1450	1480	
Big Lime	1480	1683	
Big Injun	1683	1785	
Borden	1785	2286	
Berea	2286	2396	
Devonian Shale	2396	3444	
Corniterous Lime	3444	4188	
Big Six	4188	4230	
Rose Hill	4230	TD	