

FILE NO. PDC # 4-P910
 DRAWING NO. I
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION U.S.G.S. WILSON
A STATION = 1222'

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) Paul G. Dean Jr.
 R.P.E. # 1356 L.L.S. _____

PLACE SEAL HERE

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



DATE MARCH 25, 19 82
 OPERATOR'S WELL NO. I
 API WELL NO. 47-105-0961
 STATE WV 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 1210' WATER SHED WILSON FORK
 DISTRICT CLAY COUNTY WIRT
 QUADRANGLE GIRTH 7 1/2 E122 both 15' EC
 SURFACE OWNER WESTVACO CORP. ACREAGE 501.5
 OIL & GAS ROYALTY OWNER PARKERSBURG NATIONAL BANK LEASE ACREAGE 557.5
 LEASE NO. 148200
 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 MARCELLUS SHALE ESTIMATED DEPTH 5600'
 WELL OPERATOR PETROLEUM DEVELOPMENT DESIGNATED AGENT JOHN R. MITCHELL
 ADDRESS PO BOX 26 ADDRESS PO BOX 26
BRIDGEPORT WV BRIDGEPORT WV

APR 19 1982

WELL PLATTED & SURVEYED BY PAUL G. DEAN JR. SUPERVISED BY PAUL G. DEAN R.P.E. #1356
 Deep Well 66 - Burning Springs North (112) 1/6-0

IV-35
(Rev 8-81)



8/8/84

RECEIVED

State of West Virginia

AUG 10 1984

Department of Mines
Oil and Gas Division

Date _____
Operator's _____
Well No. One (1)
Farm Parkersburg National Bank
API No. 47 - 105 - 0961

DEPT. OF MINES WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1210 Watershed Wilson Fork
District: Clay County Wirt Quadrangle Girta 7 1/2'

COMPANY Petroleum Development Corporation

ADDRESS P.O. Box 26 Bridgeport, WV 26330

DESIGNATED AGENT same as above

ADDRESS same as above

SURFACE OWNER Westvaco Corporation

ADDRESS Parkersburg, WV 26101

MINERAL RIGHTS OWNER Parkersburg National Bank

ADDRESS Parkersburg, WV 26201

OIL AND GAS INSPECTOR FOR THIS WORK Richard

J. Morris ADDRESS Grantsville, WV

PERMIT ISSUED 04/12/82

DRILLING COMMENCED 05/02/82

DRILLING COMPLETED 05/09/82

IF APPLICABLE: PLOGGING 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.			
18 1/2" 11 3/4"	30'	30'	
9 5/8			
8 5/8	1907'	1907'	550 sks
7			
5 1/2			
4 1/2	5503'	5503'	490 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 5600 feet

Depth of completed well 5512 feet Rotary X / Cable Tools _____

Water strata depth: Fresh _____ feet; Salt _____ feet

Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3894-5100 feet

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

Final open flow 169.8 Mcf/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests 48 hours

Static rock pressure 50 psig (surface measurement) after 48 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

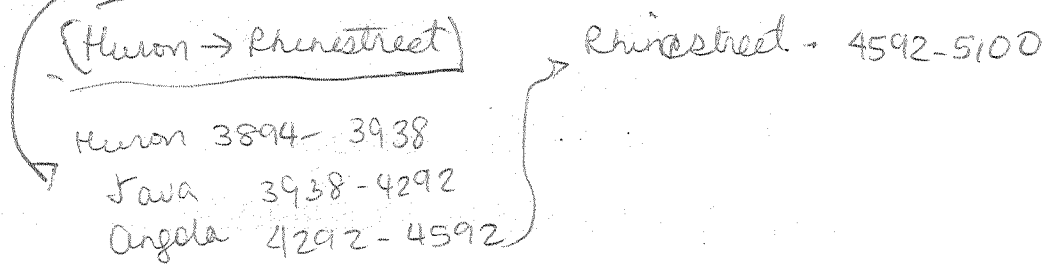
(Continue on reverse side)

SEP 17 1984

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

Devonian Shale Nitrogen ^(E) 950 gal. acid 1,200,000 CF

95 perfs (3894' - 5100')



WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
KB - GL			0	10	
sand, shale, red rock			10	1240	½" stream H2O @ 355'
maxton			1240	1285	
shale			1285	1320	
big lime			1320	1368	
big injun			1368	1436	
squaw			1436	1492	
sand, shale			1492	1892	
berea			1892	1910	
sand, shale			1910	1974	
gantz			1974	2016	
sand, shale			2016	2246	
gordon stray/ gordon			2246	2299	
sand, shale			2299	2780	
huron			2780	3938	
java			3938	4292	
angola			4292	4592	
rhinestreet			4592	5288	
sonyea			5288	5369	
genesse			5369	5438	
marcellus			5438	5542	
onondaga			5542	5546 TD	gas @ TD - 16/10 thru 2" = H2O

(Attach separate sheets as necessary)

Petroleum Development Corporation, Bridgeport, WV 26330

Well Operator

By: M. C. [Signature]

Date: 8/8/84

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."



Date: April 8th, 19 82

Operator's Well No. #1

API Well No. 47 105 0961

State County Permit

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

OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil / Gas X /
(If "Gas", Production X / Underground storage / Deep / Shallow /)

LOCATION: Elevation: 1210' Watershed: Wilson Fork
District: Clay County: Wirt Quadrangle: Girta 7 1/2'

WELL OPERATOR PETROLEUM DEVELOPMENT CORPORATION DESIGNATED AGENT JOHN R. MITCHELL

Address PO Box 26, 103 East Main St.
Bridgeport, WV 26330

Address PO Box 26, 103 East Main St.
Bridgeport, WV 26330

OIL & GAS ROYALTY OWNER The Parkersburg National Bank

Address Parkersburg, WV 26201

COAL OPERATOR

Address

Acreage 557.5

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER Westvaco Corporation

Name same as royalty

Address c/o WV Woodlands, Mgr.
Parkersburg, WV 26101

Address

Acreage 501.5

Name

FIELD SALE (IF MADE) TO:

Address

Address

OIL & GAS INSPECTOR TO BE NOTIFIED

Name Richard J. Morris

Name

Address PO Box 372

Address

Grantsville, WV 26147

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease X other contract / dated March 2nd, 19 81, to the undersigned well operator from The Parkersburg National Bank

(If said deed, lease, or other contract has been recorded:)

Recorded on March 24th, 19 81, in the office of the Clerk of the County Commission of Wirt County, West Va., in Book 160 at page 361. A permit is requested as follows:

PROPOSED WORK: 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.

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 fifteen (15) 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 GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION
1615 WASHINGTON STREET EAST CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

PETROLEUM DEVELOPMENT CORPORATION

By John R. Mitchell Well Operator
As Area Manager of Operations

BLANKET COPY

RECEIVED

APR 12 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

(12-81)

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) _____
Address _____

GEOLOGICAL TARGET FORMATION, Marcellus Shale

Estimated depth of completed well, 5600 feet Rotary X / Cable tools _____ /

Approximate water strata depths: Fresh, 190 feet; salt, _____ feet.

Approximate coal seam depths: N/A Is coal being mined in the area? Yes _____ / No X /

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	11 3/4	—	—		X	30'	30'	circulate	Kinds
Fresh Water									
Coal									Sizes
Intermediate	8 5/8	J-55	23#	X		1500'	1500'	circulate	
Production	4 1/2	K-55	10.5#	X		5600'	5600'	2500	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat 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 § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 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-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE.
ALL PROVISIONS BEING IN ACCORDANCE WITH CHAPTER 22,
ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY
APPROVED FOR Drilling, THIS PERMIT SHALL EXPIRE
IF OPERATIONS HAVE NOT COMMENCED BY 12-15-82,
BY [Signature]

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 fifteen (15) days of receipt thereof.

WAIVER

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 [Signature]
Its _____

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

Reviewed T.M.G.
Recorded _____

NOV 15 90

Well Operator's Report of Well Work

Farm name: WESTVACO Operator Well No.: 1

LOCATION: Elevation: 1210.00 Quadrangle: GIRTA

District: BURNING SPRINGS County: WIRT
Latitude: 11310 Feet South of 39 Deg. 7 Min. 30 Sec.
Longitude 9850 Feet West of 81 Deg. 17 Min. 30 Sec.

Company: JONES, GARY P. & SHIRLEY
ROUTE 1, BOX 216-A
WALKER, WV 26180-0000

Agent: GARY P. JONES

Inspector: DEO MACE
Permit Issued: 04/15/82
Well work Commenced: 10-22-82
Well work Completed: 1-28-83
Verbal Plugging
Permission granted on: _____

Rotary Cable _____ Rig _____
Total Depth (feet) 4780
Fresh water depths (ft) 375

Salt water depths (ft) 1545

Is coal being mined in area (Y/N)? N
Coal Depths (ft): _____

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size <u>9 5/8</u>		<u>380</u>	<u>175 sks to Surface</u>
<u>7</u>		<u>1550</u>	<u>300 sks</u>
<u>4 1/2</u>		<u>4770</u>	<u>250 sks</u>

TOP abt 7.

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) 3200-4
Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 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 None 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.

No other information is available

For: JONES, GARY P. & SHIRLEY J.

By: Gary P. Jones
Date: 11/14/90

NOV 21 1990

June Greene
11-16-90

Perforated from 4000 - 4770 30 inches.
Stimulated with 250 gal of 15% HCl,
150,000 scf. N₂ - 95,000 scf CO₂
Break down at 2900 psi.

Est. gas production after frac at
15 mcf Per day.

Shut In Pressure 950 PSI.

DFT

2160 B56rb

3960 J

4160 A

4460 Rh

5002