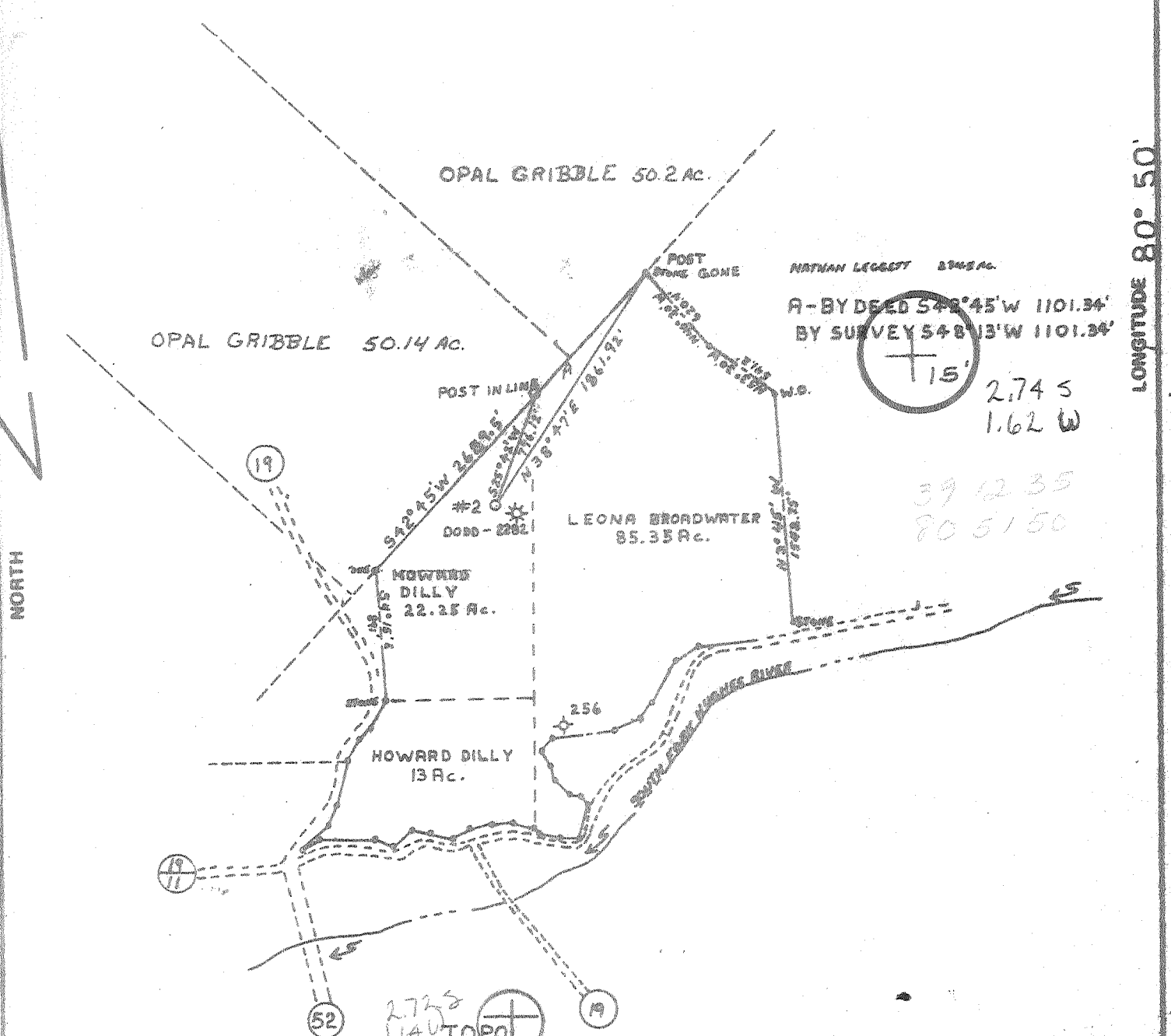


NORTH

LONGITUDE 80° 50'

14,380'



FILE NO. P.D.C. 3 PAGE # 37
 DRAWING NO. 2
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1' in 200'
 PROVEN SOURCE OF ELEVATION B.M. 815 NEAR BRIDGE ON RT. 52

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) Thomas F. Weaver, Jr.
 R.P.E. _____ L.L.S. 410

PLACE SEAL HERE

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



DATE JANUARY 18, 19 80
 OPERATOR'S WELL NO. 2
 API WELL NO. 47-017-2586
 STATE WEST VIRGINIA COUNTY DODDRIDGE PERMIT 2586

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 970' WATER SHED HUGHES RIVER
 DISTRICT SOUTHWEST COUNTY DODDRIDGE
 QUADRANGLE CHARD TO HOLBROOK 15' NC
 SURFACE OWNER HOWARD DILLY ACREAGE 3525 Ac.
 OIL & GAS ROYALTY OWNER LEONA BROADWATER LEASE ACREAGE 160
 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 CEDAR CREEK ESTIMATED DEPTH 5300'
 WELL OPERATOR PETROLEUM DEVELOPMENT CORP DESIGNATED AGENT PETROLEUM DEVELOPMENT CORP
 ADDRESS 103 EAST MAIN STREET, PO Bx 26 BRIDGEPORT WEST VIRGINIA 26330 ADDRESS 103 EAST MAIN STREET PO Bx 26 BRIDGEPORT WEST VIRGINIA 26330

08-78]

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

Cedar Creek 410 bbl 10,000# 80/100 40,000# 20/40 500 gal. 15% acid 5120-5142

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
shale			0	16	
sand			16	60	
sand, shale, R.R.			60	1935	damp @ 65'
big lime			1935	1978	salt H ₂ O 1" @ 1720'
big injun			1978	2040	
sand, shale			2040	2202	gas check @ 2102' no show
weir			2202	2338	
sand, shale			2338	3274	
warren			3274	3335	
sand, shale			3335	4036	gas check @ 3825' no show
balltown			4036	4064	
sand, shale			4064	4640	gas check @ 4200' no show
riley			4640	4670	
sand, shale			4670	4834	
benson			4834	4846	
sand, shale			4846	5094	
cedar creek			5094	5144	
sand, shale			5144	3251 TD	gas check @ TD no show

(Attach separate sheets to complete as necessary)

Petroleum Development Corporation

Well Operator

By Charles M. [Signature]

its Completion Engineer

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."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

JAN 25 1980

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE JANUARY 24, 1980

Surface Owner HOWARD DILLY
Address RT. 1, WEST UNION, WV
Mineral Owner LEONA BROADWATER
Address RT. 1 WEST UNION, WV
Coal Owner NO COAL OWNER
Address _____
Coal Operator _____
Address _____

Company PETROLEUM DEVELOPMENT CORPORATION
Address P.O. 26, BRIDGEPORT, WV 26330
Farm LEONA BROADWATER Acres 160
Location (waters) HUGHES RIVER
Well No. TWO Elevation 970'
District SOUTHWEST County DODDRIDGE
Quadrangle OXFORD

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 drilling. This permit shall expire if operations have not commenced by 9-25-80.

INSPECTOR
TO BE NOTIFIED PAUL GARRETT
ADDRESS CLARKSBURG, WV 26301
PHONE 622-3871

Robert H. [Signature]
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto. (or as the case may be) under grant or lease dated August 1 19 79 by Clarence W. Mutschelknaus made to PETROLEUM DEVELOPMENT CORP. and recorded on the 17th day of Dec. 19 79 in Doddridge County, Book 112 Page 664

XX NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Very truly yours *[Signature]*
(Sign Name) PETROLEUM DEVELOPMENT CORP.
Well Operator
P.O. BOX 26 Street
BRIDGEPORT, WV City or Town
WEST VIRGINIA State

*SECTION 3. If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

47-017-2586

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by _____

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO XX DRILL DEEPEN FRACTURE-STIMULATE
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME UNKOWN NAME PETROLEUM DEVELOPMENT DEVELOPMENT
 ADDRESS _____ ADDRESS P.O. BOX 26 BRIDGEPORT WV
 TELEPHONE _____ TELEPHONE 842-6256
 ESTIMATED DEPTH OF COMPLETED WELL: 5250' ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Leon Creek?
 TYPE OF WELL: OIL _____ GAS XX COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10 13 3/8	40'	40'	
9 - 5 8			
8 - 5 8	300'	300'	CIRCULATE
7			
5 7/8			
4 1/2		5250'	
3			Perf. Top
2			Perf. Bottom
1 1/2			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 80' FEET SALT WATER 160' FEET
 APPROXIMATE COAL DEPTHS NO COAL
 IS COAL BEING MINED IN THE AREA? NO BY WHOM? _____

TO DRILL

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title