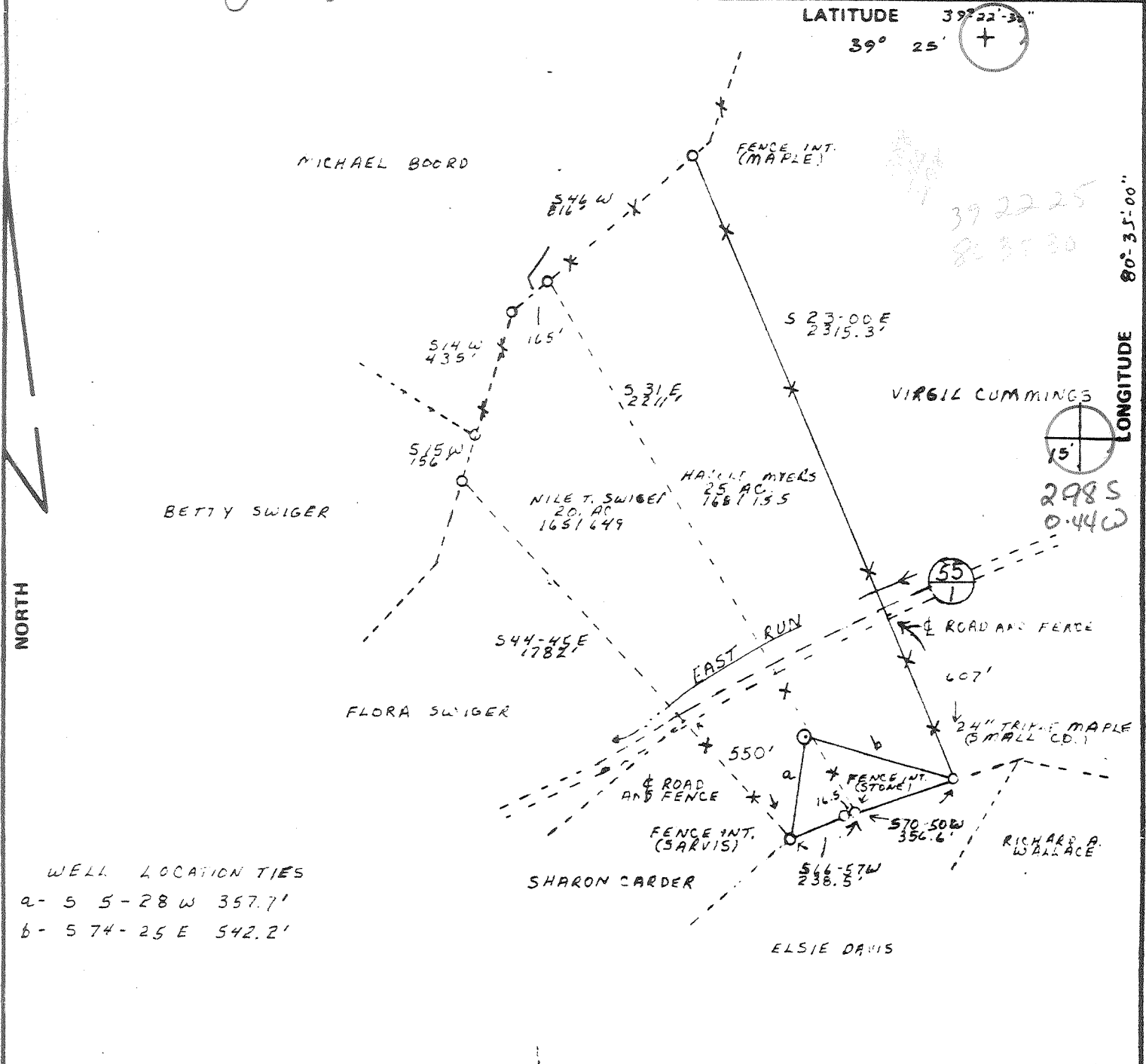


LATITUDE 39° 22' 30"
39° 25'

LONGITUDE 80° 35' 00"



WELL LOCATION TIES
a - S 5-28 W 357.7'
b - S 74-25 E 542.2'

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200
PROVEN SOURCE OF ELEVATION B.M. & VET. RTES.
23 + 55/1 EL. 828'

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) Bruce Smith
R.P.E. 6988 L.L.S. _____
SMITH ENG'G. CO., BUCKHANNON, WV

PLACE SEAL HERE

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



DATE 21 MAY, 1981
OPERATOR'S WELL NO. 2A
API WELL NO. _____
47 - 017 - 3015
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION X WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE X DEEP ___ SHALLOW ___
LOCATION: ELEVATION 1020' WATER SHED EAST RUN
DISTRICT McCLELLAN COUNTY DODDRIDGE
QUADRANGLE SALEM Centerpoint C
SURFACE OWNER NILE T. SWIGER ACREAGE 20
OIL & GAS ROYALTY OWNER BERNADETTE POOLE ET AL LEASE ACREAGE 45
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 BENSON ESTIMATED DEPTH 5000'
WELL OPERATOR PETROLEUM DEV. CORP DESIGNATED AGENT PETROLEUM DEV. CORP.
ADDRESS 103 E. MAIN ST. ADDRESS 103 E. MAIN ST.
BRIDGEPORT, WV. 26330 BRIDGEPORT, WV. 26330

RECEIVED



FEB 1 - 1982

IV-35 (Rev 8-81)

OIL AND GAS DIVISION WV DEPARTMENT OF MINES

State of West Virginia

Department of Mines

Oil and Gas Division

Date 01/28/82 Operator's Well No. 2-A Farm BERNEDETT POOLE API No. 47 - 017 - 3015

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: 1020' Watershed District: McCLELLAN County DODDRIDGE Quadrangle SALEM

COMPANY PETROLEUM DEVELOPMENT CORPORATION

ADDRESS P.O. BOX 26 BRIDGEPORT WV 26330

DESIGNATED AGENT

ADDRESS

SURFACE OWNER NILE T. SWIGER

ADDRESS RT. 2 SALEM WV 26426

MINERAL RIGHTS OWNER LEON WILSON ET AL

ADDRESS 700 STEALEY AVE. CLARKSBURG WV 26301

OIL AND GAS INSPECTOR FOR THIS WORK ADDRESS

PERMIT ISSUED June 8, 1981

DRILLING COMMENCED 6/26/81

DRILLING COMPLETED 7/3/81

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Table with 4 columns: Casing & Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16 Cond., 13-10", 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION CEDAR CREEK Depth 5600 feet

Depth of completed well 5600 feet Rotary X / Cable Tools

Water strata depth: Fresh feet; Salt feet

Coal seam depths: 407' 24" Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Pay zone depth feet

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

Final open flow 14.9 ? Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 6 hours

Static rock pressure 825 psig (surface measurement) after 24 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)

FEB 22 1982

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

Benson, Riley Stringer 310 bbl. 12,000 lb. 20/40, 250 gal of 15% acid
with 3 lb./gal.
5066-5671, 4859, 4995, 4912-4914
50,000 CF - Nitrogen

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
K.B.-G.L.			0'	10'	
Sand, shale, red Rock			10'	407'	
Coal			407'	409'	
Sand, shale, red rock			409'	1944'	
Big Lime			1944'	2002'	
Big Injun			2002'	2077'	
Pocono			2077'	2134'	
Sand, shale			2134'	2266'	
Weir			2266'	2302'	
Sand, shale			2302'	2482'	
Gantz			2482'	2516'	
Sand, shale			2516'	2551'	
50 Ft.			2551'	2607'	
Sand, shale			2607'	2680'	Gas check @ 2644' 14/10=1" H ₂ O
Gordon Stray			2680'	2729'	
Sand, shale			2729'	2760'	
Gordon			2760'	2845'	
Sand, shale			2845'	2901'	
4TH			2901'	2957'	
Sand, shale			2957'	2997'	
5TH			2997'	3080'	
Sand, shale			3080'	3362'	Gas check @ 3180' 10/10=1" H ₂ O
Warren			3362'	3521'	
Sand, shale			3521'	3568'	Gas check @ 3544' 42/10=1" H ₂ O
Upper Speechley			3568'	3627'	
Sand, shale			3627'	3715'	
Speechley			3715'	3789'	
Sand, shale			3789'	3882'	
Balltown			3882'	3974'	
Sand, shale			3974'	4424'	
Bradford			4424'	4552'	
Sand, shale			4552'	4774'	
Riley			4774'	4828'	
Sand, shale			4828'	5052'	
<u>Benson</u>			5052'	5107'	
Sand, shale			5107'	5600'	

TD

(Attach separate sheets as necessary)

PETROLEUM DEVELOPMENT CORP. P.O. BOX 26 BRIDGEPORT WV

Well Operator

By: 

Date: January 28, 1982

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

JUN - 3 1981

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE June 2, 1981

Surface Owner Nile T. Swiger
Address Rt 2 Salem, WV
Mineral Owner Leon Wilson et al
Address 700 Stealey Ave. Clarksburg, WV 26301
Coal Owner Willis Tetrick, Jr
Union National Center Clkbg, WV
Address Maxwell Sutton, Country Club,
Clarksburg, WV 26301
Coal Operator Union National Bank
Clarksburg, WV 26301
Address _____

Company Petroleum Development Corporation
Address P. O. Box 26, Bridgeport, WV 26330
Farm Bernadette Poole Acres 45
Location (waters) East Run
Well No. 2A Elevation 1020'
District McClellan County Doddridge
Quadrangle Salem

THIS PERMIT MUST BE POSTED AT THE WELL SITE

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 2-18-82.

INSPECTOR
TO BE NOTIFIED Stephen Casey
ADDRESS Rt. 2 Box 232-D Jane Lew, WV 26378
PHONE 884-7470

J. P. Huzzey
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 January 15 1981 by Clarence W. Mutschelknaus made to Petroleum Development Corp and recorded on the 2nd day of February 1981 in Doddridge County, Book 119 Page 285

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

Very truly yours,
(Sign Name) Johnny Mutschelknaus
Well Operator
PETROLEUM DEVELOPMENT CORPORATION
Address: P. O. Box 26 Street
of _____
Well Operator Bridgeport,
City or Town _____
West Virginia 26330
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.

47-017-3015

PERMIT NUMBER

BLANKET BOND

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 Unknown NAME Petroleum Development Corporation
 ADDRESS _____ ADDRESS P. O. Box 26, Bridgeport, WV 26301
 TELEPHONE _____ TELEPHONE (304)842-6256
 ESTIMATED DEPTH OF COMPLETED WELL: 5000 ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Benson
 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			
9 - 5/8 11 3/4	40	40	Circulate
8 - 5/8	1650	1650	Circulate to surface
7			
5 1/2			
4 1/2		5000	500 sks or as reqd. by sale 15.01
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 80 FEET SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS 300
 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

BRIDGEPORT