



(15) 80° 30'
Longitude 80° 32' 30"

13,200'

Minimum Error of Closure 1' IN 200'
 Source of Elevation U.S.G.S. ELEV. ON ROAD NEAR THE MOUTH OF BIG ISAAC 5700' SE OF LOCATION = 994'
 "I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia." *Paul G. Dean*

New Location
 Drill Deeper
 Abandonment

Company PETROLEUM DEVELOPMENT CORP.
 Address PO Box 26 103 E. MAIN BRIDGEPORT W. VA.
 Farm A.T. CORDER
 Tract 1 Acres 68 Lease No. _____
 Well (Farm) No. 2 Serial No. _____
 Elevation (Spirit Level) 1160' NE
 Quadrangle BIG ISAAC VADIS 15'
 County RODDRIDGE District GREENBRIER
 Engineer PAUL G. DEAN
 Engineer's Registration No. 1856
 File No. _____ Drawing No. 1
 Date 8/31/78 Scale 1" = 500'

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

WELL LOCATION MAP
 FILE NO. DODD-2292

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500 latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

47-017 SEP 22 1978

FORM IV-35
(Obverse)

Operator's A.T. Corder
Well No. Two

[08-78]

WELL OPERATOR'S REPORTS
OF

API Well No. 47-017-2292
State County Penn.

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: 1160 Watershed: Big Isaac Creek
District: Greenbrier County: Doddridge Quadrangle: Big Isaac

WELL OPERATOR Petroleum Development Corp. DESIGNATED AGENT [Signature]
Address P.O. Box 26 Address [Address]
Bridgeport, W.V. 26330

APR - 9 1979

PERMITTED WORK: Drill X / Convert ___ / Drill deeper ___ / Redrill ___
Plug off old formation ___ / Perforate new formation ___
Other physical change in well (specify) _____

DEPT. OF MINES
Fracture or stimulate

PERMIT ISSUED ON 9-08, 19 78 OIL & GAS INSPECTOR FOR THIS WORK:
(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Paul Garrett
Address Clarksburg,
West Virginia 26301

GEOLOGICAL TARGET FORMATION: 1st Elk Depth 5327' feet
Depth of completed well, 5500 feet Rotary X / Cable Tools ___
Water strata depth: Fresh, 1/2" @ 960 feet; salt, ___ feet.
Coal seam depths: 160, 752 Is coal being mined in the area? ___
Work was commenced 9/15, 19 78, and completed 9/22, 19 78

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						20'	Surface	Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8		20#	X			1367	350 sks	
Production	4 1/2	K55	10.5#	X			5458'	555 sks	Depth set
Tubing									
Liners									Perforations:
									Top Bottom
									5336-42 2783-02
									5408-10 2826-44
									4994-5002

OPEN FLOW DATA
Producing formation 1st Elk ALEX Pay zone depth 5336-42
5408-10
Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Final open flow, 411 Mcf/d Final open flow, ___ Bbl/d
Time of open flow between initial and final tests, ___ hours
Static rock pressure, 100 psig (surface measurement) after 48 hours shut in

[If applicable due to multiple completion -]
Second producing formation Benson Pay zone depth 4994-5002 feet
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 measurement) after ___ hours shut in APR 27 1979

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

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Fill			0	15	
Sand, Shale			15	40	
Shale, R.R.			40	90	
Sand, Shale			90	160	
Coal			160	165	
Sand, Shale			165	225	
Sand, Shale, R.R.			235	375	
Sand, Shale			375	480	
Sand, Shale, R.R.			480	570	
Sand, Shale			570	752	
Coal			752	756	
Sand, Shale			756	770	
Sand			970	1000	Fresh H ₂ O ½" @ 960
Sand, Shale			1000	1025	
Sand			1025	1245	
Sand, Shale			1245	1560	
Red Rock			1560	1590	
Sand, Shale			1590	2070	
Big Lime			2070	2160	
Big Injun			2160	2246	
Sand, Shale			2246	2504	
Berea			2504	2529	
Sand, Shale			2529	2779	
Gordon			2779	2848	
Sand, Shale			2848	3054	
5th Sand			3054	3098	
Sand, Shale			3098	3850	Gas check @ 3217 6/10-2" W.H ₂ O
Balltown			3850	3863	
Sand, Shale			3863	4451	
Bradford			4451	4497	
Sand, Shale			4497	4991	Gas Check @ 4928 4/10-2" W.H ₂ O
Benson			4991	5010	
Sand, Shale			5010	5335	
1st Elk <i>alex</i>			5335	5412	
Sand, Shale			5412	5502	T.D. Gas check @ 5502 4/10-2" W.H ₂ O

(Attach separate sheets to complete as necessary)

Petroleum Development Corporation
Well Operator

By John C. Moore Area Mgr
Its Petroleum 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

SEP 11 1978

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 September 8, 1978

Surface Owner Clifford C. Corder
Address Route 3, Salem WV

Company Petroleum Development Corporation
Address P. O. Box 26 Bridgeport, WV 26330

Mineral Owner Clifford C. Corder, etal
Address Route 3, Salem WV

Farm A. T. Corder Acres 68

Coal Owner (1) Willis G. Tetrick, Jr.
Address 120 Kenwood Pl Clarksburg, WV

Location (waters) Big Isaac Creek
Well No. Two Elevation 1160'

Coal Owner (2) Union Nat Bk Trt-Virginia Tetrick
Address P. O. Box 2330 Clarksburg, WV

District Greenbrier County Doddridge

Coal Owner (3) Maxwell Y. Sutton
Address Rt 1, Bx 27 Clarksburg, WV

Quadrangle Big Isaac

Coal Owner (4) Consolidation Coal Co.
Address Morgantown, WV

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

INSPECTOR

for drilling. This permit shall expire if
operations have not commenced by 1-13-79

TO BE NOTIFIED Paul Garrett

ADDRESS Clarksburg, WV 26301

PHONE 622-3871

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 September 16th 1977 by Clifford C. Corder, etux made to C. W. Mutschelknaus and recorded on the _____ day of _____ 19____, in _____ County, Book _____ Page _____ Not back from recording

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,
PETROLEUM DEVELOPMENT CORPORATION
(Sign Name) _____
Well Operator

P. O. BOX 26

Street

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 thereon by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

DODD-2292

PERMIT NUMBER

47-017

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 26330

TELEPHONE TELEPHONE 842-6256

ESTIMATED DEPTH OF COMPLETED WELL: 5500' 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	LIFT IN WELL	CEMENT PILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10 11 3/4	40'	40'	Surface
9 - 5/8			
8 - 5/8	900'	900'	Surface
7			
5 1/4			
4 1/4		5450'	-----
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 30' FEET 150 SALT WATER FEET

APPROXIMATE COAL DEPTHS 450' 600'

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