



LATITUDE 39-20-00

39 19 25  
80 37 40

GEORGE BALIS

80° 35'  
80-37-30

LONGITUDE  
97507

NORTH

WELL LOCATION TIES

- a - S 14-51 W 309.49'
- b - S 33-10 E 701.32'
- c - N 76-10 E 1774.72'

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 500'  
MINIMUM DEGREE OF ACCURACY 1 PART IN 20  
PROVEN SOURCE OF ELEVATION BM @ INT OF RTS # 3 AND O-D RT # 30 ELEV. 938

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) Burl A. Smith  
R.P.E. 6988 L.L.S. \_\_\_\_\_  
SMITH ENG'G. CO BUCKHANNON W.V.

PLACE SEAL HERE

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



DATE 26 MAY, 1981  
OPERATOR'S WELL NO. 1  
API WELL NO. \_\_\_\_\_  
47 - 017 - 3016  
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
LOCATION: ELEVATION 1372 WATER SHED SCHOOL HOUSE RUN  
DISTRICT GRANT COUNTY DODDRIDGE  
QUADRANGLE SALEM, Centerpoint 15' Se  
SURFACE OWNER JIMMIE STUBBS ACREAGE 36 1/4  
OIL & GAS ROYALTY OWNER JENNINGS COTTRILL ET AL LEASE ACREAGE 56 1/4  
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 5200  
WELL OPERATOR PETROLEUM DEV. CORP DESIGNATED AGENT PETROLEUM DEV. CORP  
ADDRESS 103 E MAIN ST BRIDGE PORT WV 26330 ADDRESS 103 E MAIN ST. BRIDGE PORT WV 26330

JUN 31 1981

6-6 Smithton-Flint-Sordalia (99)



RECEIVED

IV-35  
(Rev 8-81)

AUG 16 1982

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date \_\_\_\_\_  
Operator's  
Well No. ONE (1)  
Farm J.L. COTTRILL  
API No. 47 - 017 - 3016

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: 1139' Watershed SCHOOL HOUSE RUN  
District: GRANT County DODDRIDGE Quadrangle SALEM

COMPANY PETROLEUM DEVELOPMENT CORPORATION

ADDRESS P.O. BOX 26 BRIDGEPORT WV 26330

DESIGNATED AGENT \_\_\_\_\_

ADDRESS \_\_\_\_\_

SURFACE OWNER JIMMIE STUBBS

ADDRESS RT. 2 SALEM WV 26426

MINERAL RIGHTS OWNER J.L. COTTRILL ET AL

ADDRESS RT. 2 BOX 651 SALEM WV 26426

OIL AND GAS INSPECTOR FOR THIS WORK \_\_\_\_\_

ADDRESS \_\_\_\_\_

PERMIT ISSUED 6/16/81

DRILLING COMMENCED 7/20/81

DRILLING COMPLETED 7/28/81

IF APPLICABLE: PLUGGING 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.			
13-10"	40'	40'	circulate
9 5/8			
8 5/8	1731'	1731'	424 sks
7			
5 1/2			
4 1/2	3281'	3281'	187 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION BENSON Depth 5182 feet

Depth of completed well 5350 feet Rotary X / Cable Tools \_\_\_\_\_

Water strata depth: Fresh \_\_\_\_\_ feet; Salt \_\_\_\_\_ feet

Coal seam depths: 381' Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation GANTZ Pay zone depth 2535-2662 feet

Gas: Initial open flow 103 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 850 psig (surface measurement) after 24 hours shut in

(If applicable due to multiple completion--)

Second producing formation GORDON/GORDON STRAY Pay zone depth 2850-2960 feet

Gas: Initial open flow 103 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 850 psig (surface measurement) after 24 hours shut in

(Continue on reverse side)

AUG 23 1982

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

Gantz, Gordon Stray and Gordon

CO<sub>2</sub> Emulsion 173 bbl 30,000 20/40 500 gal. 1½# - 100 bbl, ½" - 20 bbl.  
1# - 20 bbl

CO<sub>2</sub> - 105,000 lb. 900,000 SCF

28 Perforations 2521' - 2942'

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'	160'	
Sand, shale			160'	381'	
Coal			381'	383'	
Sand, shale, red rock			383'	2092'	
Little Lime			2092'	2106'	
Sand, shale			2106'	2137'	
Big Lime			2137'	2181'	
Big Injun			2181'	2290'	
Sand, shale			2290'	2412'	
Weir			2412'	2480'	
Sand, shale			2480'	2620'	Gas check @ 2464' - No show
Gantz			2620'	2654'	
Sand, shale			2654'	2690'	
50 Ft.			2690'	2766'	
Sand, shale			2766'	2842'	
Gordon Stray			2842'	2870'	
Sand, shale			2870'	2920'	
Gordon			2920'	2943'	
Sand, shale			2943'	2994'	
4Th			2994'	3068'	
Sand, shale			3068'	3112'	
5Th			3112'	3164'	Gas check @ 3114' - No show
Sand, shale			3164'	3500'	
Warren			3500'	3624'	
Sand, shale			3624'	3708'	
Upper Speechley			3708'	3760'	
Sand, shale			3760'	3857'	
Speechley			3857'	3907'	
Sand, shale			3907'	4007'	
Balltown			4007'	4195'	
Sand, shale			4195'	4556'	
Bradford			4556'	4712'	
Sand, shale			4712'	4906'	
Riley			4906'	4999'	
Sand, shale			4999'	5182'	
Benson			5182'	5226'	
Sand, shale			5226'	5350' TD	

(Attach separate sheets as necessary)

PETROLEUM DEVELOPMENT CORPORATION, BRIDGEPORT WV 26330

Well Operator

By: John Mitchell

Date: \_\_\_\_\_

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 16 1981

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 June 10, 1981

Surface Owner Jimmie Stubbs  
Address Route 2 Salem, WV  
Mineral Owner J. L. Cottrill et al  
Address Route 2 Box 651, Salem, West Virginia  
Coal Owner Consolidated Coal Co.  
Address Morgantown, West Virginia  
Coal Operator \_\_\_\_\_  
Address \_\_\_\_\_

Company Petroleum Development Corporation  
Address P. O. Box 26, Bridgeport, WV 26330  
Farm J. L. Cottrill Acres 56 1/4  
Location (waters) School House Run  
Well No. One (1) Elevation 1139  
District Grant County Doddridge  
Quadrangle Salem

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 2-22-82.

*[Signature]*  
Deputy Director - Oil & Gas Division

INSPECTOR  
TO BE NOTIFIED Stephen Casey

ADDRESS Route 2 Box 232-D  
Jane Lew, WV 26378  
PHONE 884-7470

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 24th 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)

*[Signature]*  
PETROLEUM DEVELOPMENT CORPORATION

Address  
of  
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 (10) 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

47-017-3016

PERMIT NUMBER

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 304) 842-6256  
 ESTIMATED DEPTH OF COMPLETED WELL: 5200' 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 LIFT UP OR SACKS - CUBIC FT.
10 1/2			
11 3/4	40'	40'	Circulate
17 1/2	1700'	1700'	Circulate to surface
		5200	300 sks
			Perf. Top
			Perf. Bottom
			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 80 FEET SALT WATER 200 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 WELLS ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT COPY OF PLAT AND ORIGINAL WELL RECORD.

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

Required forms must be submitted 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 \_\_\_\_\_ complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title