



FILE NO. P.D.C. #3-89-22, 23
 DRAWING NO. 1
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1" IN 200'
 PROVEN SOURCE OF ELEVATION 888' INT. W.VA. RD. 21 AND 31

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 E. Bean
 R.P.E. # 1856 L.L.S. _____

PLACE SEAL HERE

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



DATE DECEMBER 30, 19 79
 OPERATOR'S WELL NO. 2
 API WELL NO. 47-017-2568
 STATE 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 10±0' WATER SHED CABIN RUN
 DISTRICT CENTRAL COUNTY DODDRIDGE
 QUADRANGLE OXFORD, HOLBROOK 15' NC
 SURFACE OWNER D.B. ADAMS ACREAGE 87
 OIL & GAS ROYALTY OWNER L.S. MCGEE LEASE ACREAGE 78
 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 5500'
 WELL OPERATOR PETROLEUM DEVELOPMENT DESIGNATED AGENT PETROLEUM DEVELOPMENT CORP.
 ADDRESS 103 E. MAIN ST. BRIDGEPORT, W.VA. ADDRESS 103 E. MAIN ST. BRIDGEPORT, W.VA.

[08-78]

WELL OPERATOR'S REPORT (7)
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 017 -2568
State County Permit

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___
(If "Gas", Production ___ / Underground storage ___ / Deep ___ / Shallow ___)
LOCATION: Elevation: 1040' Watershed: Cabin Run
District: Central County: Doddridge Township: Oxford

WELL OPERATOR Petroleum Development Corporation DESIGNATE AGENT Petroleum Development Corporation
Address 103 East Main Street, PO Box 26 Address 103 East Main Street, PO Box 26
Bridgeport, W. Va. 26330 Bridgeport, W. Va. 26330

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

RECORDED
MAR 24 1980

PERMIT ISSUED ON December 31, 1979

OIL & GAS INSPECTOR Paul Garrett
DEPT. OF MINES

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

Name Paul Garrett
Address 132 Beach Street
Clarksburg, W. Va. 26301

GEOLOGICAL TARGET FORMATION: Cedar Creek Depth 5500 feet

Depth of completed well, 5380 feet Rotary X / Cable Tools ___

Water strata depth: Fresh 85,125 feet; salt, ___ feet.

Coal seam depths: ___ Is coal being mined in the area? X

Work was commenced February 3, 1980, and completed February 8, 1980

LOGGING AND TUBING PROGRAM

LOGGING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-IN OR BACKS (Cubic Feet)	PACKERS	
	Size	Grade	Weight per ft	New	Used	For drilling			Left in well
Conductor	11 3/4"			X		19'	19'	surface	Minds
Fresh water									
Oil									Slings
Intermediate	8 5/8"	H-40	20#	X		2108'	2083'	500 ska.	
Production	4 1/2"	J-55	9.5#	X		5380'	5302'	630 ska.	Balltown
Wire									
Wells									Balltown

OPEN FLOW DATA

Producing formation Cedar Creek Pay zone depth 5230 feet

Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ bbl/d
Final open flow, 2,144 Mcf/d Final open flow, ___ bbl/d

Time of open flow between initial and final tests, ___ hours

Static rock pressure, 1325 psig (surface measurement) after 48 hours shut-in

[If applicable due to multiple completion--]

Second producing formation Benson & Riley Pay zone depth 4811 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

Third producing formation: Balltown Pay zone depth: 4139 feet
Fourth producing formation: Cedar Creek Pay zone depth: 2830 feet

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

Cedar Creek	380 bbl	10,000#	80/100	41,000#	20/40	500 gal. 15% acid	5230-5278
Benson & Riley	410 bbl	10,000#	80/100	45,000#	20/40	500 gal. 15% acid	4811-4967
Balltown	410 bbl	10,000#	80/100	45,000#	20/40	500 gal. 15% acid	4159-4351
Speechley	350 bbl	10,000#	80/100	35,000#	20/40	500 gal. 15% acid	3830-3906

WELL LOG

FORMATION	Color	Hard or Soft	Feet		Remarks Including indication of all fresh and salt water, coal, oil and gas
			Top	Bottom	
K.B.-G.L. shale			0	10	
sand, shale			10	20	
sand, R.R.			20	119	fresh H ₂ O 1/2" @ 85'
sand, shale, R.R.			119	403	fresh H ₂ O 1" @ 125'
big lime			403	2038	
big injun			2038	2100	
sand, shale			2100	2166	
warren			2166	3386	gas check @ 3104' 20/10 thru 1" H ₂ O
sand, shale			3386	3468	
speechley			3468	3822	gas check @ 3632' 20/10 thru 1" H ₂ O
sand, shale			3822	3915	
balltown			3915	4136	
sand, shale			4136	4316	
riley			4316	4798	gas check @ 4543' 26/10 thru 1" H ₂ O
sand, shale			4798	4910	
benson			4910	4950	
sand, shale			4950	4986	
cedar creek			4986	5223	gas check @ 5140' 20/10 thru 1" H ₂ O
sand, shale			5223	5280	
			5280	5380 TD	gas check @ TD 12/10 thru 1" H ₂ O

(Attach separate sheets to complete as necessary)

Petroleum Development Corporation

Well Operator

By Charles M. Wheeler

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."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. Two
API Well No. 47 - 017 - 2568
State County Permit

WELL TYPE: Oil ___ / Gas X /
(If "Gas", Production X / Underground storage ___ / Deep ___ / Shallow ___ /)
LOCATION: Elevation: 1040' Watershed: Cabin Run
District: Central County: Doddridge Quadrangle: Oxford

WELL OPERATOR Petroleum Development Corp.
Address P.O. Box 26
Bridgeport, WV 26330

DESIGNATED AGENT Petroleum Development Corp.
Address P.O. Box 26
Bridgeport, WV 26330

WELL OWNER L. S. McGee, et.al.
Address 68 Station Street
Shinnston, WV 26431

COAL OPERATOR
Address

APPLICANT D. B. Adams
Address Rt. 1
West Union, WV 26456

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name L. S. McGee, et.al.
Address 68 Station Street
Shinnston, WV 26431

APPLICANT 87

Name
Address

ADDRESS

COAL LESSEE WITH DECLARATION ON RECORD:
Name

WELL INSPECTOR TO BE NOTIFIED
Paul Garrett
Address 321 Beech Street
Clarksburg, WV 26301

Address
DEC 31 1979

OIL & GAS DIVISION
DEPT. OF MINES

The applicant well operator is entitled to operate for oil or gas purposes at the above
location under lease ___ / other contract X / dated June 1, 1979, to the
well operator from Clarence W. Mutschelknaus

(If the well operator, or other contract has been recorded:
Sept. 14, 1979, in the office of the Clerk of the County Commission of Doddridge

County, West Virginia, in Deed Book 110 at page 639. A permit is requested to:
Drill X / Drill deeper ___ / Redrill ___ / Fracture or stimulate ___ /
Clean off old formation ___ / Perforate new formation ___ /
Other physical change in well (specify) _____

As shown as shown on the work order on the reverse side hereof.
The coal owner(s), coal owner(s), and coal lessee are hereby notified that any
plans, maps, or other documents required to make by Code § 22-4-3 must be filed with the Department
of Mines, West Virginia, 30 days after the receipt of this Application by the Department.

The plans, maps, and other documents and the enclosed plat and reclamation plan have been mailed
to the well operator by hand to the above named coal operator, coal owner(s), and coal lessee
on the day of the mailing of this Permit Application to the Department of Mines at
Clarksburg, West Virginia.

PETROLEUM DEVELOPMENT CORPORATION

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

PERMIT BOND

Well Operator
By: [Signature]
Date: [Signature]

PROPOSED WORK ORDER

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

LEASING CONTRACTOR (IF KNOWN) Unknown
Address _____

MINERAL TARGET FORMATION, Cedar Creek

Estimated depth of completed well, 5500' feet Rotary X / Cable tools _____ /

Approximate water strata depths: Fresh, 150 feet; salt, 275 feet.

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

WELL AND TUBING PROGRAM

WELL NO.	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per Ft	New	Used	For drilling			Left in well
	11 3/4	H-40		X		X	X	20	Kinds
									Sizes
	8 5/8	H-40	20	X		560	560	Circulate	
	4 1/2	K-55	10.50	X			5500	300	Depths set 5500
									Perforations:
									Top bottom

Regulation 22-4-12 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 22-4-12, (ii) a bond in one of the forms prescribed by Regulation 22-4-12, or in lieu thereof, the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", and (iv) the reclamation required by Code § 22-4-12b and Regulation 22-4-12, (iv) unless otherwise specified by the same code, 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 drilling within 100 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well. 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 9-2-80.

Robert L. Hill
Deputy Director - Oil & Gas Division

This permit is not valid unless countersigned by the coal operator and by any coal owner who has filed a declaration under Code § 22-4-20, if the permit is to be used within fifteen (15) days of receipt thereof:

COAL OPERATOR

I, _____ owner _____ / lessee _____ / of the coal under this well, hereby declare that the proposed well location, if a mine map exists which covers the area of the proposed well location has been added to the mine map. The undersigned has no objection to the proposed well location, provided, the well operator has complied with all applicable laws, rules and regulations of the West Virginia State and the governing regulations.