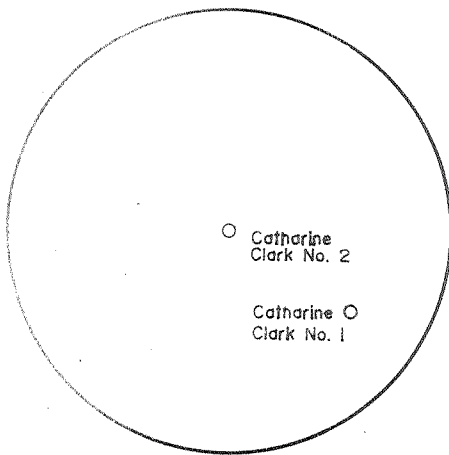
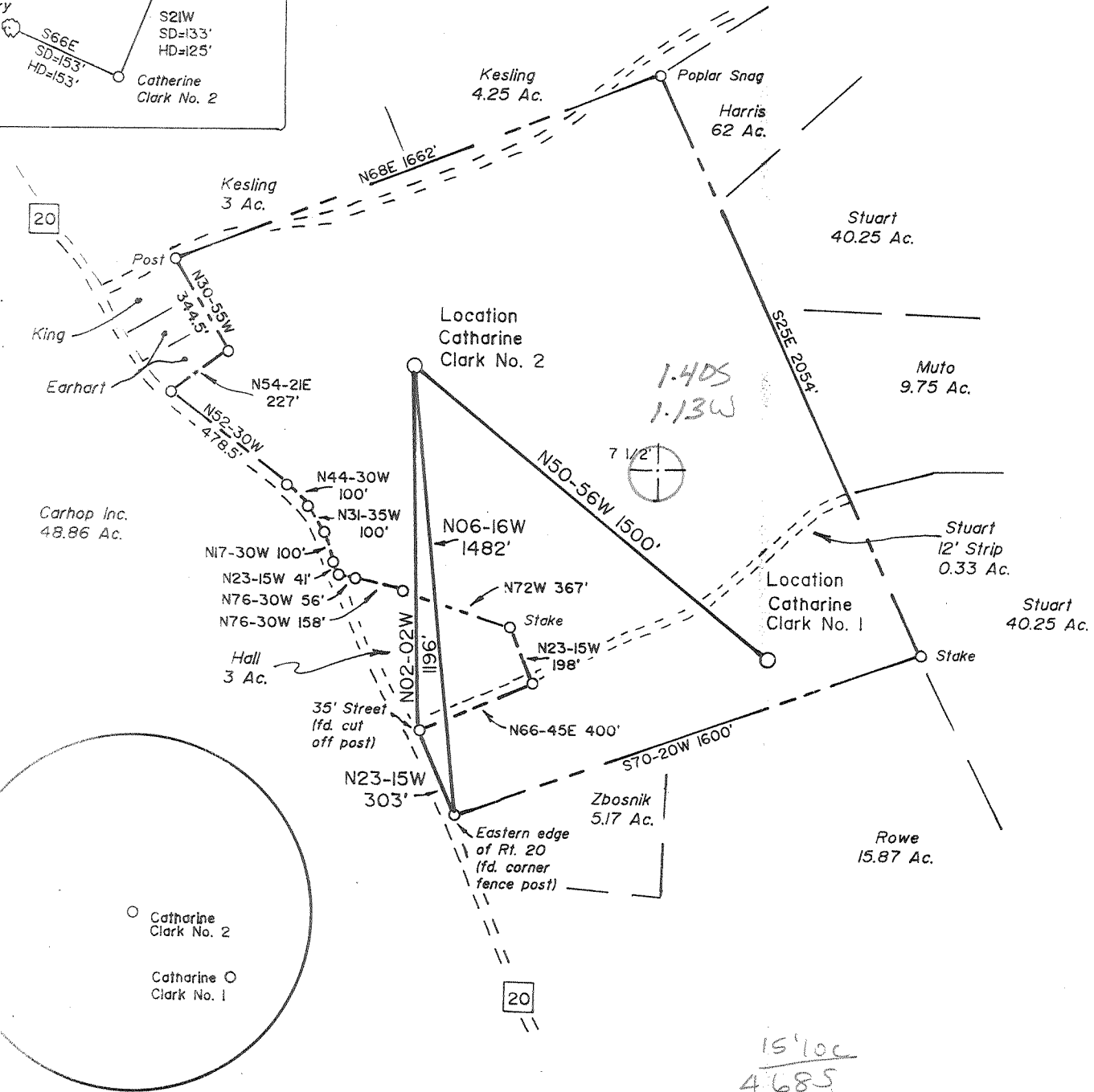
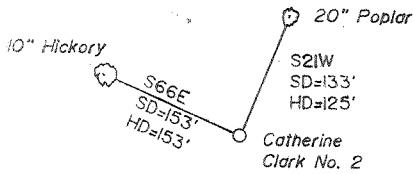


REFERENCES



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. 1  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION Spot elev. 5600' SE of Location: elev. 1021'

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 ENERGY  
 (SIGNED) Jeffrey H. Adams  
 R.P.E. \_\_\_\_\_ L.L.S. 791

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE February 8, 19 90  
 OPERATOR'S WELL NO. Catharine Clark  
 API WELL NO. No. 2

47 033 3697  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X

LOCATION: ELEVATION 1239 WATERSHED Eik Creek  
 DISTRICT Eik COUNTY Harrison  
 QUADRANGLE Mount Clare 7 1/2' Weston 15' NE

SURFACE OWNER Catharine P. Clark et vir ACREAGE 75.06  
 OIL & GAS ROYALTY OWNER Catharine P. Clark LEASE ACREAGE 75.06 ac. part of 240 ac.  
 LEASE NO. 419600

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 Development Corp. DESIGNATED AGENT Steven Williams  
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330

MAR 05 1990

6-6 Weston (Jane Lew) (153)  
 687

COUNTY NAME PERMIT

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: CLARK, CATHARINE P. Operator Well No.: C. CLARK #2

LOCATION: Elevation: 1239.00 Quadrangle: MOUNT CLARE

District: ELK County: HARRISON  
Latitude: 7400 Feet South of 39 Deg. 12Min. 30 Sec.  
Longitude 6025 Feet West of 80 Deg. 15 Min. 0 Sec.

Company: PETROLEUM DEVELOPMENT COR  
P. O. BOX 26  
BRIDGEPORT, WV 26330-0026

Agent: ERIC R. STEARNS

Inspector: STEVE CASEY  
Permit Issued: 02/26/90  
Well work Commenced: 10/03/90  
Well work Completed: 10/08/90  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig  
Total Depth (feet) 4500'  
Fresh water depths (ft) \_\_\_\_\_  
93'; 450'  
Salt water depths (ft) \_\_\_\_\_

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11. 3/4"	38'		
8 5/8"	1066'	1066'	260 sks
4 1/2"	4470'	4470'	390 sks

Is coal being mined in area (Y/N)? n  
Coal Depths (ft): \_\_\_\_\_

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 4401-4405  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 198 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure 1500 psig (surface pressure) after 72 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
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 pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: PETROLEUM DEVELOPMENT CORP.

By: Eric R. Stearns Date: October 23, 1990 NOV 5 1990

Clark #2

STAGE	FORMATION	PERFS	80/100 SKS	20/40 SKS	ACID GAL	N2 (MCF)
1ST	Benson	16(4401-4405)	100	550	500	80

W E L L L O G

FORMATION	TOP FEET	BOTTOM FEET	REMARKS: FRESH & SALT WATER, COAL, OIL & GAS
KB - GL	0	10	
sand, shale, RR	10	1403	1/2" stream H2O @ 93'
Big Lime	1403	1481	3/4" stream H2O @ 450'
sand, shale	1481	1488	
Keener	1488	1517	
sand, shale	1517	1521	
Big Injun	1521	1564	
sand, shale	1564	1832	gas chk @ 1597' Odor
Gantz	1832	1904	gas chk @ 1775' Odor
sand, shale	1904	1936	
50 ft	1936	1978	
sand, shale	1978	1986	
30 ft	1986	2033	
sand, shale	2033	2217	gas chk @ 2100' 8/10-2" H2O
4th	2217	2243	
sand, shale	2243	2347	
5th	2347	2340	
sand, shale	2340	2787	
Speechley	2787	3153	
sand, shale	3153	3198	
Balltown	3198	3591	gas chk @ 3217' 6/10-2" H2O
sand, shale	3591	3553	
Bradford	3553	3676	
sand, shale	3676	4075	gas chk @ 3799' 6/10-2" H2O
Riley	4075	4245	
sand, shale	4245	4384	gas chk @ 4348' 6/10-2" H2O
Benson	4384	4441	
sand, shale	4441	4538	gas chk @ 4444' 6/10-2" H2O
	4538	4538	Driller TD
		4500	Logger TD

033 3697

Issued 2/26/90  
Expires 2/26/92

FORM WW-2B

Page \_\_\_ of \_\_\_

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: Petroleum Development Corporation 38200 (5) 487
- 2) Operator's Well Number: Catherine Clark #2 3) Elevation: 1239'
- 4) Well type: (a) Oil   / or Gas XX/  
(b) If Gas: Production XX/ Underground Storage   /  
Deep   / Shallow XX
- 5) Proposed Target Formation(s): Benson
- 6) Proposed Total Depth: 5000 feet
- 7) Approximate fresh water strata depths: 35, 156, 431
- 8) Approximate salt water depths: N/A
- 9) Approximate coal seam depths: 521
- 10) Does land contain coal seams tributary to active mine? Yes   / No XX/
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4	H-40	40#	30	-----	-----
Fresh Water						
Coal						
Intermediate	8 5/8	H-40	20#	1050	1050	
Production	4 1/2	J-55	10.5#	5000	5000	450 sks
Tubing						
Liners						

*C/S* RECEIVED 11.3  
RECEIVED 11.2.2

RECEIVED  
FEB 23 1990

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Division of Oil and Gas Use Only

DIVISION OF OIL AND GAS  
DEPARTMENT OF ENERGY

Fee(s) paid;  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond Blanket  Agent  
 (Type)

0357192

**RECEIVED**  
**FEB 23 1991**  
DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

1) Date: February 13, 1990  
2) Operator's well number  
Catharine P. Clark #2  
3) API Well No: 47 - 033 - 3697  
State - County - Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
  - (a) Name Catharine P. Clark  
Address Rt. #1, Box 443  
Mt. Clare, WV 26408
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (b) Coal Owner(s) with Declaration  
Name Same as Surface  
Address \_\_\_\_\_
  - (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Stephen Casey #2  
Address Rt. 2, Box 232 D  
Jane Lew, WV 26378  
Telephone (304)-745-4888

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
XX Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

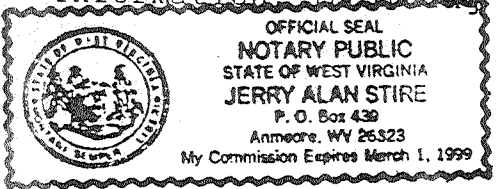
- \_\_\_\_\_ Personal Service (Affidavit attached)
- XX Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Petroleum Development Corporation  
By: \_\_\_\_\_  
Its: Geologist  
Address P.O. Box 26  
Bridgeport, WV 26330  
Telephone 304-842-6256



Subscribed and sworn before me this 22nd day of February, 19 90

My commission expires March 1, 1999 Notary Public