

LATITUDE 39-20-00 N

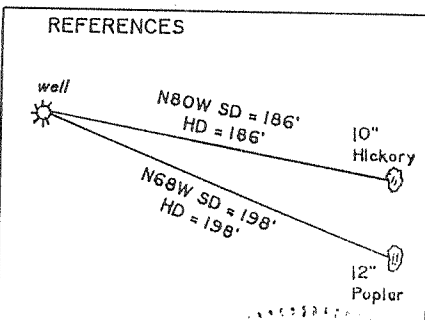
2125'

7 1/2'

LONGITUDE 80-35-00 W

NORTH

(+) 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 Road Int. 3200'  
West of Location: elev. 912'

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) [Signature]  
 R.P.E. \_\_\_\_\_ L.L.S. 791

PLACEMENT SEAL HERE

STATE OF WEST VIRGINIA  
 Division of Environmental Protection  
 OFFICE OF OIL AND GAS

DATE September 15, 2000  
 OPERATOR'S WELL NO. Donald Underwood  
 API WELL NO. No.1

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

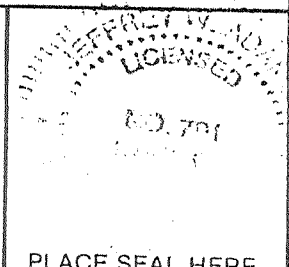
LOCATION: ELEVATION 1230' WATER SHED Lynn Camp Run  
 DISTRICT McClellan COUNTY Doddridge  
 QUADRANGLE Salem 7 1/2'

SURFACE OWNER Donald L. Underwood ACREAGE 40.5  
 OIL & GAS ROYALTY OWNER Donald L. Underwood, et al LEASE ACREAGE 40.5  
 LEASE NO. 459100

PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_

TARGET FORMATION Benson / Gordon ESTIMATED DEPTH 5000'  
 WELL OPERATOR Petroleum Development Corp. DESIGNATED AGENT Eric R. Stearns  
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330



COUNTY NAME Dodd  
 PERMIT 4088 F

OCT 13 2000

LATITUDE 39-20-00 N

2075

1400

0.25  
0.30

Noonan  
201 ac.

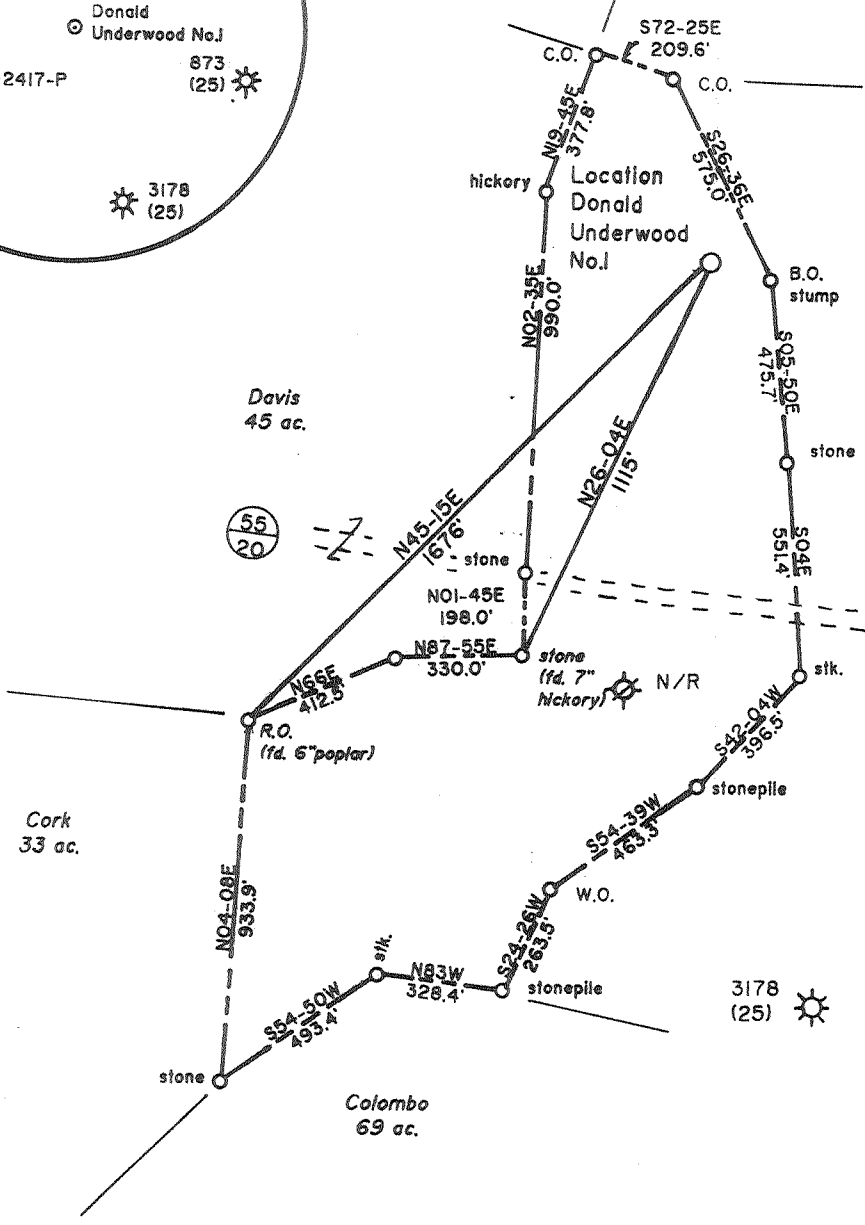
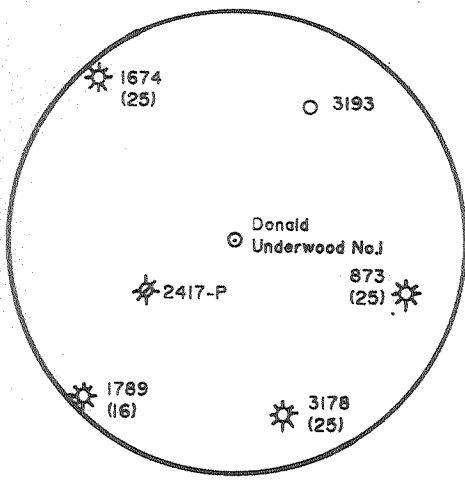
Welch  
39 ac.

Herrrod  
57 ac.

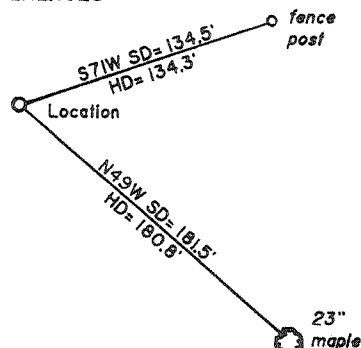
Davis  
45 ac.

Cork  
33 ac.

Colombo  
69 ac.



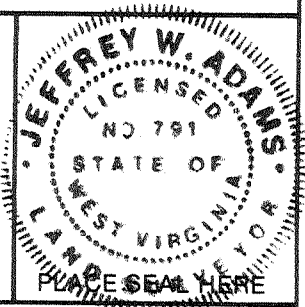
REFERENCES



(+) 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 Road Int. 3200'  
West of Location: elev. 912'

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 W. Adams  
 R.P.E. \_\_\_\_\_ L.L.S. 791



STATE OF WEST VIRGINIA  
 Division of Environmental Protection  
 OFFICE OF OIL AND GAS



DATE January 17, 19 94  
 OPERATOR'S WELL NO. Donald Underwood  
 API WELL NO. No.1

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

47 - 017 - 4088  
 STATE COUNTY PERMIT

LOCATION: ELEVATION 1230 WATERSHED Lynn Camp Run  
 DISTRICT McClellan COUNTY Doddridge

QUADRANGLE Salem 7 1/2' Centeped. S.C.  
 SURFACE OWNER Donald L. Underwood ACREAGE 40.5  
 OIL & GAS ROYALTY OWNER Donald L. Underwood, et al. LEASE ACREAGE 40.5  
 LEASE NO. 459100

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X 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 Eric R. Stearns  
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330

COUNTY NAME PERMIT

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: UNDERWOOD, DONALD Operator Well No.: D. UNDERWOOD #1

LOCATION: Elevation: 1,230.00 Quadrangle: SALEM

District: MCCLELLAN County: DODDRIDGE  
Latitude: 1400 Feet South of 39 Deg. 20Min. Sec.  
Longitude 2075 Feet West of 80 Deg. 35 Min. Sec.

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

Agent: ERIC R. STEARNS

Inspector: MIKE UNDERWOOD  
Permit Issued: 01/26/94  
Well work Commenced: 02/04/94  
Well work Completed: 02/11/94  
Verbal Plugging  
Permission granted on:  
Rotary x Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5441'  
Fresh water depths (ft) \_\_\_\_\_  
200; 355; 1431  
Salt water depths (ft) \_\_\_\_\_  
n/a  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): n/a

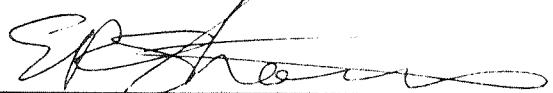
| Casing & Tubing Size | Used in Drilling | Left in Well | Cement Fill Up Cu. Ft. |
|----------------------|------------------|--------------|------------------------|
| 11 3/4"              | 178'             | 178'         | 112 sks                |
| 8 5/8"               | 1928'            | 1928'        | 477 sks                |
| 4 1/2"               | 5386'            | 5386'        | 505 sks                |
|                      |                  |              |                        |
|                      |                  |              |                        |

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5263-5267  
Gas: Initial open flow 158 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 119 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 1200 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: March 7, 1994

MAR 21 1994

DONALD UNDERWOOD #1

| STAGE | FORMATION | PERFS              | 80/100<br>SKS | 20/40<br>SKS | ACID<br>GAL | N <sub>2</sub><br>(MCF) |
|-------|-----------|--------------------|---------------|--------------|-------------|-------------------------|
| 1st   | Benson    | 17 (5263' - 5267') | 50            | 480          | 500         | 67                      |

W E L L L O G

| FORMATION       | TOP FEET | BOTTOM FEET | REMARKS: FRESH & SALT<br>WATER, COAL, OIL & GAS |
|-----------------|----------|-------------|---|
| KB - GL         | 0        | 10          |   |
| sand, shale, RR | 10       | 2030        | 1/2" water @ 200'                               |
| Maxton          | 2030     | 2119        | 1/2" water @ 355'                               |
| sand, shale     | 2119     | 2205        | hole damp @1431'                                |
| Big Lime        | 2205     | 2288        |   |
| sand, shale     | 2288     | 2292        | gas chk @ 2284' 2/10 thru 1" w/water            |
| Big Injun       | 2292     | 2382        |   |
| sand, shale     | 2382     | 2532        | gas chk @ 2440' 2/10 thru 1" w/water            |
| Weir            | 2532     | 2621        |   |
| sand, shale     | 2621     | 2713        | gas chk @ 2655' 2/10 thru 1" w/water            |
| Berea           | 2713     | 2742        |   |
| sand, shale     | 2742     | 3006        | gas chk @ 2938' 2/10 thru 1" w/water            |
| Gordon          | 3006     | 3074        |   |
| sand, shale     | 3074     | 3279        | gas chk @ 3121' 10/10 thru 2" w/water           |
| 5th             | 3279     | 3330        |   |
| sand, shale     | 3330     | 3583        | gas chk @ 3398' 10/10 thru 2" w/water           |
| Warren          | 3583     | 3696        |   |
| sand, shale     | 3696     | 3713        |   |
| Speechley       | 3713     | 4067        | gas chk @ 3989' 20/10 thru 2" w/water           |
| sand, shale     | 4067     | 4092        |   |
| Balltown        | 4092     | 4429        | gas chk @ 4486' 8/10 thru 2" w/water            |
| sand, shale     | 4429     | 4443        | gas chk @ 4800' 8/10 thru 2" w/water            |
| Bradford        | 4443     | 4619        | gas chk @ 5160' 8/10 thru 2" w/water            |
| sand, shale     | 4619     | 5058        | gas chk @ 5285' 10/10 thru 2" w/water           |
| Riley           | 5058     | 5210        | gas chk @ 5347' 10/10 thru 2" w/water           |
| sand, shale     | 5210     | 5258        | gas chk @ TD 14/10 thru 2" w/water              |
| Benson          | 5258     | 5322        | gas chk @ Collars 12/10 thru 2" w/water         |
| sand, shale     | 5322     | 5441        | Driller TD                                      |
|                 |          | 5426        | Logger TD                                       |

95981

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Reviewed: [Signature]

Well Operator's Report of Well Work

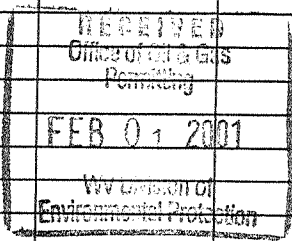
Farm name: Underwood Operator Well No.: 1

LOCATION: Elevation: 1230' Quadrangle: Salem 7 1/2'

District: M<sup>c</sup>CLELLAN County: Doddridge  
Latitude: \_\_\_\_\_ Feet South of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.  
Longitude \_\_\_\_\_ Feet West of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.

Company: PATR. DEV. CORP.

|                                    | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|------------------------------------|-----------------|------------------|--------------|------------------------|
| Address:                           |                 |                  |              |                        |
| Agent:                             |                 |                  |              |                        |
| Inspector:                         |                 |                  |              |                        |
| Date Permit Issued:                |                 |                  |              |                        |
| Date Well Work Commenced:          |                 |                  |              |                        |
| Date Well Work Completed:          |                 |                  |              |                        |
| Verbal Plugging:                   |                 |                  |              |                        |
| Date Permission granted on:        |                 |                  |              |                        |
| Rotary Cable Rig                   |                 |                  |              |                        |
| Total Depth (feet):                |                 |                  |              |                        |
| Fresh Water Depth (ft.):           |                 |                  |              |                        |
| Salt Water Depth (ft.):            |                 |                  |              |                        |
| Is coal being mined in area (N/Y)? |                 |                  |              |                        |
| Coal Depths (ft.):                 |                 |                  |              |                        |



OPEN FLOW DATA

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

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.

Signed: PATR. Dev. Corp.  
By: [Signature] Geol. Engr.  
Date: 12/5/00

FEB 23 2001

Dodd 4088

2, c frac up hole zone:

- 1) Gordon Pests: 3016-22' (9 shots)  
3058-62' (3 shots)

2nd wide mouth plug @ 3100'

- 2) Frac above zone of 40,000 #  
20140 sand and 20,000 Gels Vikings X-link.
- 3) Clean well up, knock out plug  
and return to production.

note: B5 fractured

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

Well Operator: Petroleum Development Corporation 38200 (5) 596

Operator's Well Number: Donald Underwood #1 3) Elevation: 1230'

Well type: (a) Oil \_\_\_ / or Gas XXX /  
 (b) If Gas: Production XXX / Underground Storage \_\_\_ /  
 Deep \_\_\_ / Shallow XXX /

Proposed Target Formation(s): Benson 435

- 6) Proposed Total Depth: 5500 feet
- 7) Approximate fresh water strata depths: 145', 320', 365', 960', 1350'
- 8) Approximate salt water depths: 1735', 1785', 1880'
- 9) Approximate coal seam depths: 445', 915', 960'
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No XXX
- 11) Proposed Well Work: Drill and stimulate new well
- 12)

CASING AND TUBING PROGRAM

| TYPE         | SPECIFICATIONS |       |                   | FOOTAGE INTERVALS |                 | CEMENT<br>Fill-up<br>(cu. ft.) |
|--------------|----------------|-------|-------------------|-------------------|-----------------|--------------------------------|
|              | Size           | Grade | Weight<br>per ft. | For<br>drilling   | Left in<br>well |                                |
| Conductor    | 11 3/4         | H-40  | 42#               | 30/175            | -/175           | -/surface                      |
| Fresh Water  |                |       |                   |                   |                 |                                |
| Coal         |                |       |                   |                   |                 |                                |
| Intermediate | 8 5/8          | H-40  | 20/23             | 1230/1925         | 1230/1925       | Surface                        |
| Production   | 4 1/2          | J-55  | 10.5              | 5500'             | 5500'           | 450 sks                        |
| Tubing       |                |       |                   |                   |                 |                                |
| Liners       |                |       |                   |                   |                 |                                |

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

For Division of Oil and Gas Use Only

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

1) Date: January 20, 1994  
2) Operator's well number D. Underwood #1  
3) API Well No: 47 - 017 - 4088  
State - County - Permit

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:  
 (a) Name Donald L & Thelma Underwood  
 Address Rt. 2, Box 134  
Salem, WV 26426  
 (b) Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 (c) Name \_\_\_\_\_  
 Address \_\_\_\_\_
- 5) (a) Coal Operator:  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 (b) Coal Owner(s) with Declaration  
 Name No declaration on record  
 Address \_\_\_\_\_  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_
- 6) Inspector Mike Underwood  
 Address Rt. 2, Box 135  
Salem, WV 26426  
 Telephone (304)- 782-1043
- (c) Coal Lessee with Declaration  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_

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  
XXX Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

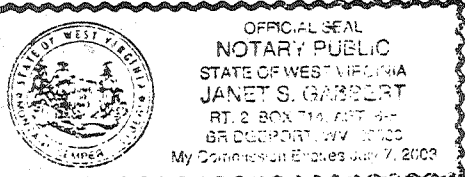
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:  
\_\_\_\_ Personal Service (Affidavit attached)  
\_\_\_\_ Certified Mail (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: [Signature]  
Its: \_\_\_\_\_ Geologist  
Address P O Box 26  
Bridgeport, WV 26330  
Telephone 304-842-6256



Subscribed and sworn before me this 20<sup>th</sup> day of January, 1994

Janet S. Gabbert Notary Public  
My commission expires July 7, 2003