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

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

LOCATION: ELEVATION__137__WATER SHED__Little Buck Run

SURFACE OWNER__Andrew Bryant et ux__ACREAGE__83.61__

OIL & GAS ROYALTY OWNER__Verna Haught__LEASE ACREAGE__84__

PROPOSED WORK: DRILL X CONVERT __DRILL DEEPER __REDRILL __FRACTURE OR
STIMULATE__PLUG OFF OLD FORMATION __PERFORATE NEW
FORMATION __OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

FILE NO.______ DRAWING NO.______ SCALE__1" = 500'__
MINIMUM DEGREE OF ACCURACY__1 in 200__
PROVEN SOURCE OF ELEVATION__Hill top 1750' NE
of Location; elev 120'__

STATE OF WEST VIRGINA
LICENSED LAND SURVEYOR

DATE__October 6, 1993__OPERATOR'S WELL NO. __Verna Haught No. 1__
API WELL NO. __47 017 4063__STATE COUNTY PERMIT

COUNTY NAME__Cove__COUNTY__Dodridge__

Cove__Vadis__WV__

LEASE NO.__463400__

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

Well Operator’s Report of Well Work  

Farm Name: BRYANT, ANDREW & PEGGY  
Operator Well No.: V. HAUGHT #1  

LOCATION:  
Elevation: 1,137.00  
Quadrangle: NEW MILTON  

District: COVE  
Latitude: 14350 Feet South of 39 Deg. 10 Min. Sec.  
Longitude 100 Feet West of 80 Deg. 42 Min. 30 Sec.  
County: DODDRIDGE  

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

Agent: ERIC R. STEARNS  

Inspector: MIKE UNDERWOOD  
Permit Issued: 11/12/93  
Well work Commenced: 12/17/93  
Well work Completed: 12/23/93  

Verbal Plugging Permission granted on:  
Rotary x Cable ___ Rig ___  

Total Depth (feet) 5550'  
Fresh water depths (ft) n/a  
Salt water depths (ft) n/a  

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 1070-1078  

Casing & Tubing  
Used in Drilling in Well Cu. Ft.  

<table>
<thead>
<tr>
<th>Size</th>
<th>Length</th>
<th>Left</th>
<th>Cement Fill Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 3/4''</td>
<td>178'</td>
<td>178'</td>
<td>90 sks</td>
</tr>
<tr>
<td>8 5/8''</td>
<td>1426'</td>
<td>1426'</td>
<td>354 sks</td>
</tr>
<tr>
<td>4 1/2''</td>
<td>5441'</td>
<td>5441'</td>
<td>160 sks</td>
</tr>
</tbody>
</table>

OPEN FLOW DATA  

Producing formation Alexander/Leopold  
Pay zone depth (ft) 5175-5176.5  

Gas: Initial open flow 18 MCF/d  
Final open flow 420 MCF/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 1300 psig (surface pressure) after 72 Hours  

Second producing formation Benson  
Pay zone depth (ft) 5042-5046  

Gas: Initial open flow MCF/d  
Final open flow MCF/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 WELLOBORE.  

For: PETROLEUM DEVELOPMENT CORP.  

By: Eric R. Stearns  
Date: January 7, 1994
ERNNA HAUGHT #1

WELL LOG

FORMATION PERFS 80/100 20/40 ACID N2
STAGE FORMATION SKS SKS GAL (MCF)
1st Alexander /Leopold 9(5312'-5314') 50 500 1000 59
2nd Benson 17(5042'-5046') 50 450 500 63

FORMATION TOP FEET BOTTOM FEET REMARKS: FRESH & SALT WATER, COAL, OIL & GAS
B - GL 10 0
sand, shale, RR 1937 2043 Coal @1070'-1078'
axton 2043 2130
gas chk @ 2380' no show
sand, shale 2130 2232
sand, shale 2232 2234
sand, shale 2234 2322
gas chk @ 2554' no show
dr. 2322 2372
gas chk @ 2677' no show
sand, shale 2372 2508
gas chk @ 2865' no show
dragery 2508 2588
gas chk @ 3270' no show
sand, shale 2588 2604
gas chk @ 4024' no show
sand, shale 2604 2772
gas chk @5048' 4/10 thru 1'*water
sand, shale 2772 2841
clinton 3111 3176
gas chk @TD 3/10 thru 1'*water
sand, shale 3117 3176
mead 3176 3419
gas chk @collars 2/10 thru 1'*water
sand, shale 3419 3512
ar, 3512 3710
peachley 3710 4080
sand, shale 4080 4152
alltown 4152 4508
sand, shale 4508 4540
radford 4540 4683
sand, shale 4683 4818
stratley 4818 5005
sand, shale 5005 5040
hanson 5040 5087
sand, shale 5087 5155
leopold 5155 5183
sand, shale 5183 5285
alexander 5285 5388
sand, shale 5388 5551
Drillers TD
sand, shale 5551 5550
Logger TD
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 Andrew & Peggy Bryant
   Address 43 Backbone Hill Rd.
            Englishtown, NJ 07726
   (b) Name
   Address
   (c) Name
   Address

5) (a) Coal Operator:
   Name
   Address
   (b) Coal Owner(s) with Declaration
       Name Eastern Associated Coal Corp.
       Address P O Box 1233, Laidley Tower
               Charleston, WV 25324
   (c) Coal Lessee with Declaration
       Name
       Address

6) Inspector Mike Underwood
   Address Rt. 2, Box 135
            Salem, WV 26426
   Telephone (304)- 782-1043

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
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: _____
Iits: Geologist
Address P O Box 26
      Bridgeport, WV 26330
Telephone 304-842-6256

Subscribed and sworn before me this 14th day of October, 1993

Janet L. Sabot
My commission expires July 7th, 2003
Notary Public
STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Petroleum Development Corporation
Operator's Well Number: Verna Haught #1
Well type: (a) Oil/    or  Gas
(b) If Gas: Production/ Underground Storage/ Shallow
Proposed Target Formation(s): Alexander Sands
Proposed Total Depth: 5600 feet
Approximate fresh water strata depths: 85', 210', 305'
Approximate salt water depths:
Approximate coal seam depths: 245'
Does land contain coal seams tributary to active mine? Yes/ No
Proposed Well Work: Drill and stimulate new well

Casing and Tubing Program

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SPECIFICATIONS</th>
<th>FOOTAGE INTERVALS</th>
<th>CEMENT</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Conductor</td>
<td>11 3/4 H-40</td>
<td>42#</td>
<td>150'</td>
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<td>Fresh Water</td>
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<tr>
<td>Coal</td>
<td></td>
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<tr>
<td>Intermediate</td>
<td>8 5/8 H-40</td>
<td>20/23#</td>
<td>1450'</td>
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<tr>
<td>Production</td>
<td>4 1/2 J-55</td>
<td>10.5</td>
<td>5600'</td>
</tr>
<tr>
<td>Tubing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liners</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

PACKERS: Kind
Sizes
Depths set

For Division of Oil and Gas Use Only

1. Fee(s) paid: [ ] Well Work Permit  [ ] Reclamation Fund  [ ] WPCP
   [ ] Flat [ ] WW-9  [ ] WW-2B  [ ] Bond
   [ ] Blanket [ ] Agent
   (Type)