

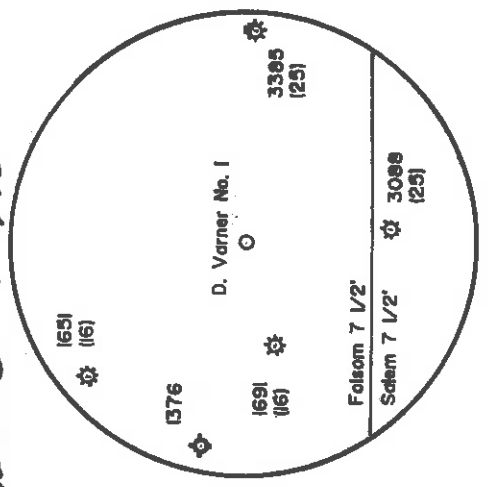
Janie 12/3/90

LATITUDE 39-25-00 W

6550

LONGITUDE 80-35-00 W

13800



Howth 250.8 Ac.

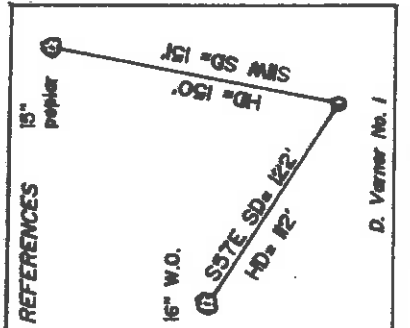
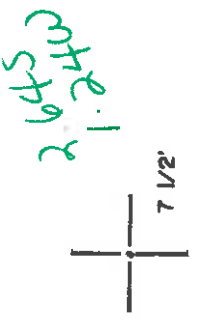
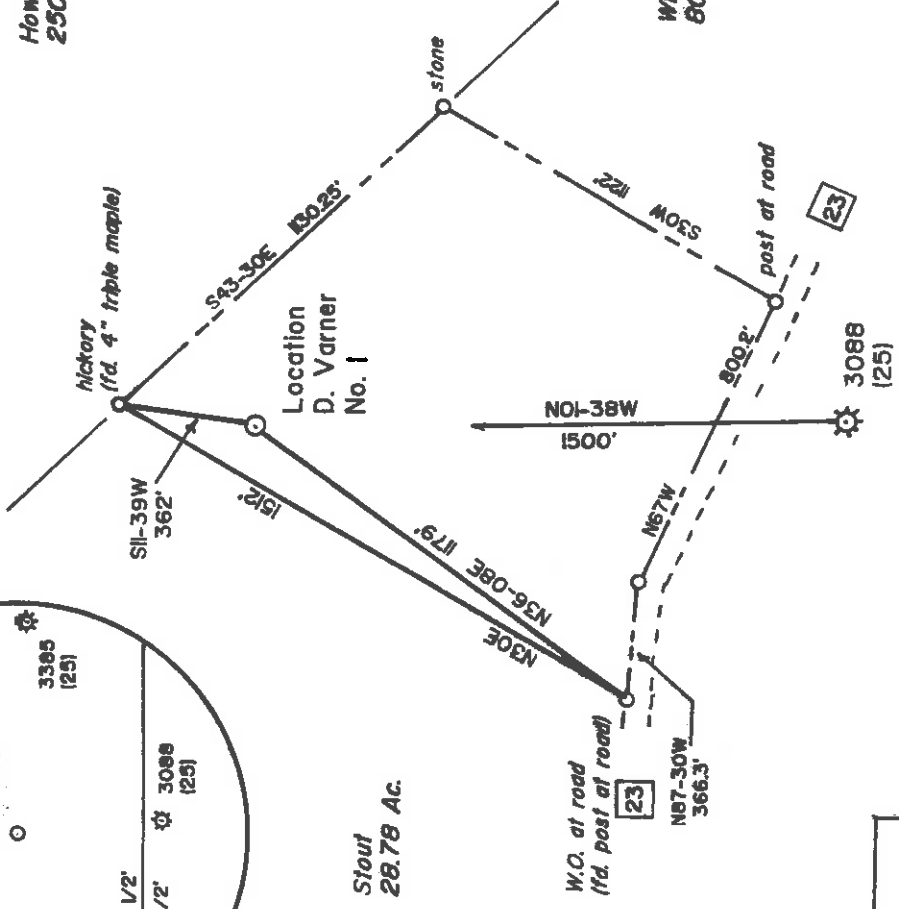
Nickory (fd. 4" triple maple)

Location D. Verner No. 1

Williams 80 Ac.

Stout 28.78 Ac.

NORTH

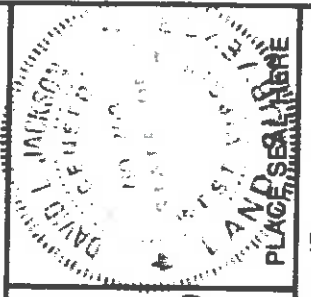


2-64  
1-24  
2.645  
1.24  
2.645  
1.24

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION BM 1600' SW of location: Elev. 830'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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) David J. Jackson  
 R.P.E. \_\_\_\_\_ L.L.S. 708



**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENERGY**  
**DIVISION OF OIL AND GAS**

DATE November 15, 19 90  
 OPERATOR'S WELL NO. D. Verner No. 1  
 API WELL NO. \_\_\_\_\_

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

LOCATION: ELEVATION 943 WATER SHED Robinson Fork  
 DISTRICT McClellan 5 COUNTY Doddridge  
 QUADRANGLE Folsom 7 1/2' COUNTY Doddridge  
 SURFACE OWNER Raymond L. Cottrill & Jeffrey Cottrill ACREAGE 38.75  
 OIL & GAS ROYALTY OWNER Denton Verner heirs, et al. LEASE ACREAGE 38.75

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 Benson ESTIMATED DEPTH 5000  
 WELL OPERATOR Petroleum Development Corp. DESIGNATED AGENT Eric R. Stegrns  
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330

COUNTY NAME

PERMIT

47-017-3868 PERMIT

FORM WW-8

058277

6-6 Smithton-Flint-Sedalia (099)

RECEIVED  
MAR 25 1991  
DEPT. OF ENERGY

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

Farm name: **COTTRILL, JEFFREY MICHAEL** Operator Well No.: **VARNER HEIRS 1**

LOCATION: Elevation: **943.00** Quadrangle: **FOLSOM**

District: **MCCLELLAN** County: **DODDRIDGE**  
Latitude: **13800** Feet South of 39 Deg. 25Min. 0 Sec.  
Longitude **6550** Feet West of 80 Deg. 35 Min. 0 Sec.

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

Agent: **ERIC R. STEARNS**

Inspector: **MIKE UNDERWOOD**  
Permit Issued: **12/06/90**  
Well work Commenced: **02/15/91**  
Well work Completed: **02/22/91**  
Verbal Plugging  
Permission granted on: \_\_\_\_\_ Rig  
Rotary x Cable \_\_\_\_\_  
Total Depth (feet) **5102'**  
Fresh water depths (ft) \_\_\_\_\_  
**440; 1355**  
Salt water depths (ft) \_\_\_\_\_  
Is coal being mined in area (Y/N)? **a**  
Coal Depths (ft): **115-117**

**OPEN FLOW DATA**

Producing formation Benson Pay zone depth (ft) 4965-4968  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 787 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock pressure 100 psig (surface pressure) after 72 Hours

Second producing formation Big Injun Pay zone depth (ft) 1966-1998  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow co-mingled 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

Third producing formation Keener Pay zone depth 1908-1916

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 20, 1991

MAR 29 1991

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	30'	30'	
8 5/8"	1126'	1126'	290 sks
4 1/2"	5067'	5067'	549 sks

Varner #1

STAGE	FORMATION	PERFS	80/100 SKS	20/40 SKS	ACID GAL	N2 (MCF)
1ST	Benson	13 (4965-4968)	100	358	500	77
2ND	Big Injun	27 (1966-1998)	100	300	750	52
3RD	Keener	14 (1908-1916)	100	400	750	50

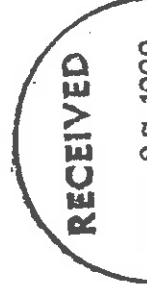
W E L L L O G

FORMATION

TOP FEET BOTTOM FEET

FORMATION	TOP FEET	BOTTOM FEET	REMARKS: FRESH & SALT WATER, COAL, OIL, & GAS
KB - GL	0	10	
sand, shale, RR	10	1772	3/4" stream H2O @ 440'
Little Lime	1772	1793	3/4" stream H2O @ 1355'
sand, shale	1793	1814	
Big Lime	1814	1892	
Keener	1892	1945	Coal 115-117
sand, shale	1945	1947	
Big Injun	1947	2012	gas chk @ 2090' 2/10-7" H2O
sand, shale	2012	2574	gas chk @ 2554' 2/10-7" H2O
Gordon	2574	2616	
sand, shale	2616	2660	
4th	2660	2740	
sand, shale	2740	3296	gas chk @ 2805' 22/10-2" Hg
Speechley	3296	3600	gas chk @ 3497' 22/10-2" Hg
sand, shale	3600	3875	gas chk @ 3653' 12/10-2" Hg
Balltown	3875	4267	
sand, shale	4267	4407	gas chk @ 4305' 20/10-2" Hg
Bradford	4407	4505	
sand, shale	4505	4657	
Riley	4657	4876	gas chk @ 4895' 20/10-2" Hg
sand, shale	4876	4937	
Benson	4937	4981	gas chk @ 5125' 24/10-2" Hg
sand, shale	4981	5125	Driller TD
	5125	5125	DC's 20/10-2" Hg
		5102	Logger TD

017-3868  
Issued 12/06/90



NOV 27 1990 STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
DEPT. OF ENERGY WORK PERMIT APPLICATION

Page 1 of 2  
Expires 12/06/92

1) Well Operator: Petroleum Development Corporation 38200(5) 349

2) Operator's Well Number: Denton Varner Heirs #1 3) Elevation: 943'

4) Well type: (a) Oil / or Gas XV

(b) If Gas: Production XV Undergound Storage /  
Deep / Shallow XV

5) Proposed Target Formation(s): Benson 405

6) Proposed Total Depth: 5000 feet

7) Approximate fresh water strata depths: 56

8) Approximate salt water depths: 1392

9) Approximate coal seam depths: 151

10) Does land contain coal seams tributary to active mine? Yes / No X

11) Proposed Well Work: Drill & Stimulate New Well

12)

CASING AND TUBING PROGRAM

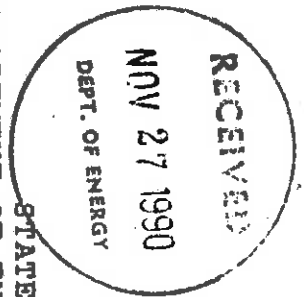
TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	11 3/4	H-40	42	30	----	----
Fresh Water						
Coal						
Intermediate	8 5/8	L.S.	20/23	1100	1100	380598-145 380598-144
Production	4 1/2	M-50	10.5	5500	5500	450 SKS 380598-141
Tubing						
Liners						

71711

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

457 964

Fee(s) paid: 12.56  
Plat 1 WW-9 1 WW-28 1 Bond Security Blanket (Type)  
For Division of Oil and Gas Use Only  
Reclamation Fund 1 WPCP 1 Agent 1



1) Date: November 21, 1990  
2) Operator's Well Number: Denton Varner #1  
3) API Well No: 47 - 017 - 3868  
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  | Jeffrey Michael Cottrill          | 5) (a) Coal Operator:              | Name    |                          |
| Address   | Enterprise, WV 26568              |                                    | Address |                          |
| (b) Name  | Raymond L. Cottrill               | (b) Coal Owner(s) with Declaration | Name    | No Declaration of Record |
| Address   | Rt. 2, Box 205<br>Salem, WV 26426 | Address                            | Address |                          |
| (c) Name  |                                   | Name                               | Address |                          |
| Address   |                                   | (c) Coal Lessee with Declaration   | Name    |                          |
| Inspector | Mike Underwood                    | Address                            | Address |                          |
| Address   | Rt. 2, Box 135<br>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  
 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: \_\_\_\_\_ Geologist  
 Its: \_\_\_\_\_ P.O. Box 26  
 Address \_\_\_\_\_ Bridgeport, WV 26330

Telephone \_\_\_\_\_ Day of \_\_\_\_\_, 19 90



Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 19 90

My commission expires \_\_\_\_\_ March 1997 \_\_\_\_\_ Notary Public