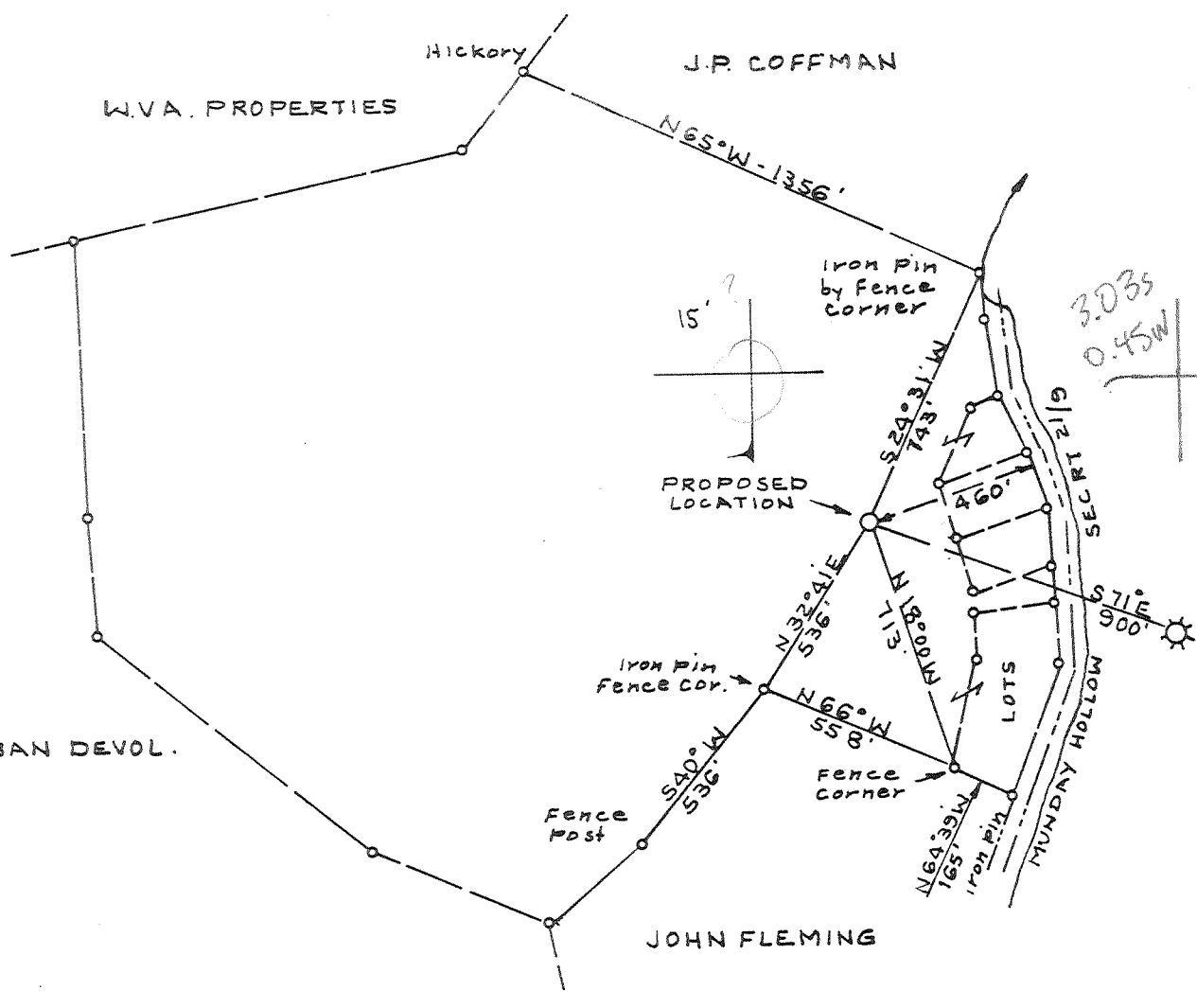


NORTH



LONGITUDE 81° 40'

FILE NO. Bk 67 P 37  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1-200'  
 PROVEN SOURCE OF ELEVATION USGS Forks Rd 4000' N.E. LOC. E1 740'

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) C. S. Volley Jr.  
 R.P.E. \_\_\_\_\_ L.L.S. 92

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8-78)



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE JAN 31, 1982  
 OPERATOR'S WELL NO. 1  
 API WELL NO. 47 - 039 - 3817  
 STATE COUNTY PERMIT

CORRECTED LONGITUDE

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
 LOCATION: ELEVATION 881.00' WATER SHED MUNDAY HOLLOW  
 DISTRICT UNION 9 COUNTY KANAWHA 039  
 QUADRANGLE POCOTALICO 331 Charleston NW, 024  
 SURFACE OWNER JOHN FLEMING ACREAGE 75  
 OIL & GAS ROYALTY OWNER JOHN FLEMING, ETAL LEASE ACREAGE 100  
 LEASE NO. \_\_\_\_\_  
 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 ORISKANY 119 ESTIMATED DEPTH 5100'  
 WELL OPERATOR BURDETTE OIL & GAS DESIGNATED AGENT MICHAEL BURDETTE  
 ADDRESS P.O. Box 10167 STATION "C" ADDRESS P.O. Box 10167 STATION "C"  
CHARLESTON WVA 25312 CHARLESTON WVA 25312

APR 22 1985



FORM IV-2  
(Obverse)  
(08-78)

Date: Feb. 1, 19 82

Operator's Well No. 11

API Well No. 47 - 039 - 3817  
State County Permit

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

OIL AND GAS WELL PERMIT

WELL TYPE: Oil        / Gas X /  
(If "Gas", Production        / Underground storage        / Deep X / Shallow        /)

LOCATION: Elevation: 801.00 Watershed: Munday Hollow  
District: Union County: Kanawha Quadrangle: Pocatalico

WELL OPERATOR Burdette Oil & Gas Co., Inc. DESIGNATED AGENT Mike Burdette  
Address P. O. Box 10167, Station "C" Address Charleston, W.Va.  
Charleston, W.Va. 25312

OIL & GAS ROYALTY OWNER John Fleming

Address       

Acreage 75

SURFACE OWNER John Fleming, et al

Address       

Acreage 75

FIELD SALE (IF MADE) TO:

Address       

OIL & GAS INSPECTOR TO BE NOTIFIED

Name Martin Nichols

Address P. O. Box 334

Clendenia, W.Va. 25043

COAL OPERATOR       

Address       

COAL OWNER(S) WITH DECLARATION ON RECORD:

Name RECEIVED

Address       

FEB 5 - 1982

Name OIL AND GAS DIVISION

WV DEPARTMENT OF MINES

Address       

COAL LESSEE WITH DECLARATION ON RECORD:

Name       

Address       

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed        / lease ✓  
other contract        / dated January 30, 19 82, to the undersigned well operator from John Fleming, et al

(If said deed, lease, or other contract has been recorded:)

Recorded on       , 19       , in the office of the Clerk of the County Commission of        County, West Virginia in        Book        at page       . A permit is requested as follows:

PROPOSED WORK: Drill        / Drill deeper        / Redrill        / Fracture or stimulate        /

Plug off old formation        / Perforate new formation        /

Other physical change in well (specify)       

—planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311

TELEPHONE: (304) 348-3092

BLANKET BOND

Burdette Oil & Gas Co., Inc.

By Mike Burdette Well Operator  
Executive Vice President  
Its

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) Burdette Oil & Gas Co., Inc.  
Address P. O. Box 10167, Station "C"  
Charleston, W. Va. 25312

GEOLOGICAL TARGET FORMATION, \_\_\_\_\_

Estimated depth of completed well, 5100' feet Rotary X / Cable tools \_\_\_\_\_ /

Approximate water strata depths: Fresh, 80 feet; salt, 1200 feet.

Approximate coal seam depths: \_\_\_\_\_ Is coal being mined in the area? Yes \_\_\_\_\_ / No \_\_\_\_\_ /

CASING AND TUBING PROGRAM

| CASING OR TUBING TYPE | SPECIFICATIONS |       |               | New | Used | FOOTAGE INTERVALS |              | CEMENT FILL-UP OR SACKS (Cubic feet) | PACKERS       |
|-----------------------|----------------|-------|---------------|-----|------|-------------------|--------------|--------------------------------------|---------------|
|                       | Size           | Grade | Weight per ft |     |      | For drilling      | Left in well |                                      |               |
| Conductor             | 11-3/4"        |       | 42            | X   |      |                   | 200'         | To surface                           | Kinds         |
| Fresh Water           |                |       |               |     |      |                   |              |                                      |               |
| Coal                  |                |       |               |     |      |                   | 2100'        | To surface                           | Sizes         |
| Intermediate          | 8-5/8"         |       | 23            | X   |      |                   |              |                                      |               |
| Production            | 4 1/2"         |       | 12.5          | X   |      |                   | 5100'        | Back to 8-5/8"                       | Depths set    |
| Tubing                |                |       |               |     |      |                   |              |                                      |               |
| Liners                |                |       |               |     |      |                   |              |                                      | Perforations: |
|                       |                |       |               |     |      |                   |              |                                      | Top Bottom    |

NOTE: Regulation 7.02 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 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, 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 dwelling within 200 feet of the proposed well.

A separate Form Iv-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

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 10-16-82.

  
Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: \_\_\_\_\_, 19 \_\_\_\_\_

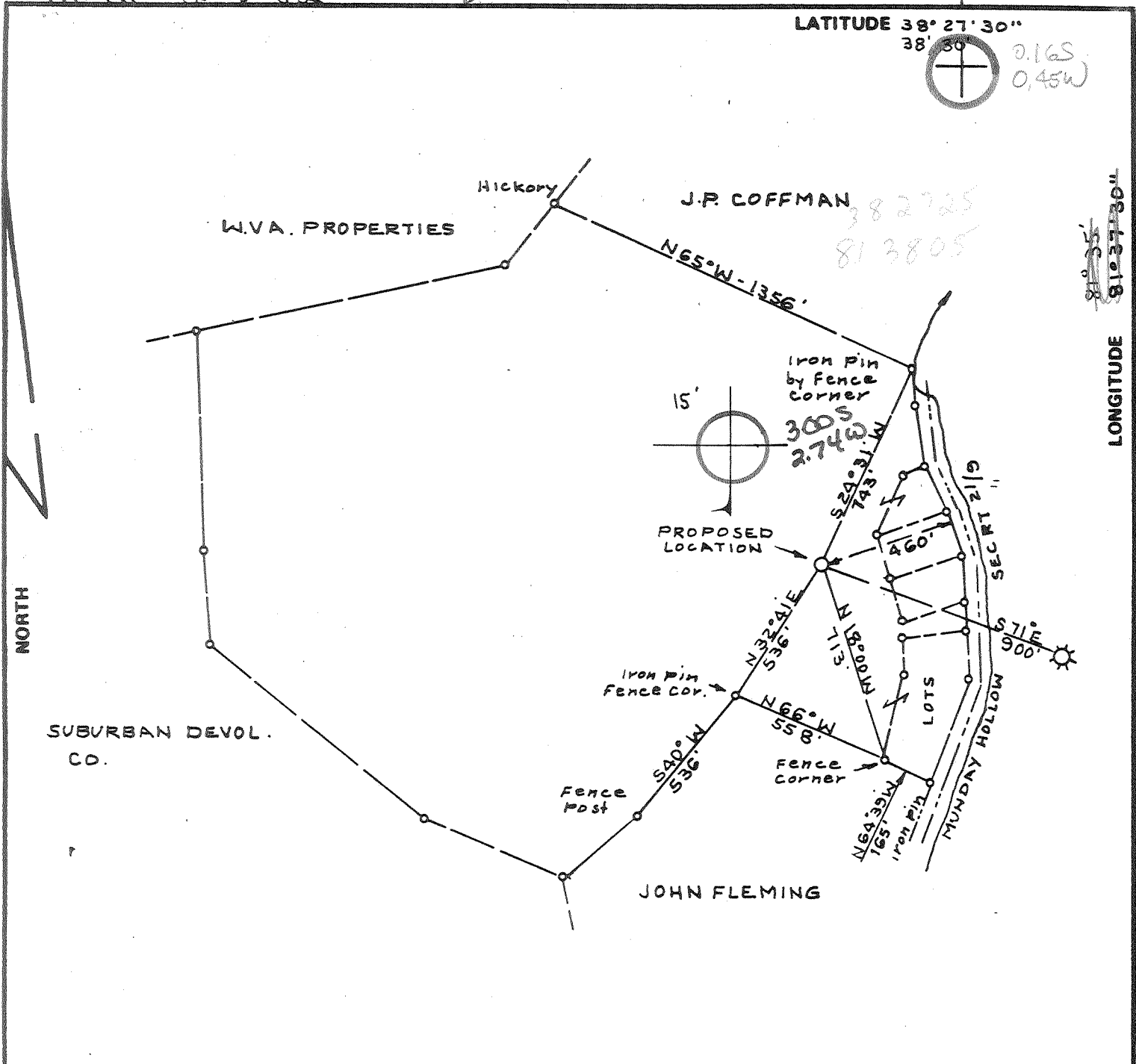
By \_\_\_\_\_

Its \_\_\_\_\_

LATITUDE 38° 27' 30"



0.16S  
0.45W



FILE NO. BK 67 P 37  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1-200'  
 PROVEN SOURCE OF ELEVATION USGS Forks Rd 4000' N.E. Loc. E1 740'

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) C. S. Volley Jr.  
 R.P.E. \_\_\_\_\_ L.L.S. 92

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8-78)



DATE JAN 31, 1982  
 OPERATOR'S WELL NO. 1  
 API WELL NO. 47 - 039 - 3817  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
 LOCATION: ELEVATION 881.00' WATER SHED MUNDAY HOLLOW  
 DISTRICT UNION COUNTY KANAWHA  
 QUADRANGLE POCOTALICO Charleston 15' 1x  
 SURFACE OWNER JOHN FLEMING ACREAGE 75  
 OIL & GAS ROYALTY OWNER JOHN FLEMING ETAL LEASE ACREAGE 100  
 LEASE NO. \_\_\_\_\_  
 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 ORISKANY ESTIMATED DEPTH 5100'  
 WELL OPERATOR BURDETTE OILE GAS DESIGNATED AGENT MICHAEL BURDETTE  
 ADDRESS P.O. Box 10167 STATION "C" ADDRESS P.O. Box 10167 STATION "C"  
CHARLESTON WVA 25312 CHARLESTON WVA 25312

MAR 01 1982



IV-35  
(Rev 8-81)

Date 4-12-82  
Operator's  
Well No. 1  
Farm John Fleming  
API No. 47 - 039 - 3817

State of West Virginia  
Department of Mines  
Oil and Gas Division

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

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production X / Underground Storage \_\_\_ / Deep X / Shallow \_\_\_ /)

LOCATION: Elevation: 881 GL Watershed Mundy Hollow  
District: Union County Kanawha Quadrangle Pocatalico

COMPANY Burdette Oil & Gas Co., Inc.  
ADDRESS P.O. Box 10167 Sta. "C" Chas., WV  
DESIGNATED AGENT Michael A. Burdette  
ADDRESS 5121 Big Tyler Rd., Charleston, WV  
SURFACE OWNER John Fleming  
ADDRESS 561 Mundy Hollow Rd., Chas., WV  
MINERAL RIGHTS OWNER John Fleming, et al  
ADDRESS 561 Mundy Hollow Rd., Chas., WV  
OIL AND GAS INSPECTOR FOR THIS WORK Martin Nichols ADDRESS Box 554, Clendenin, WV  
PERMIT ISSUED \_\_\_\_\_  
DRILLING COMMENCED 3-3-82  
DRILLING COMPLETED 3-28-82

| Casing & Tubing             | Used in Drilling | Left in Well | Cement fill up Cu. ft. |
|-----------------------------|------------------|--------------|------------------------|
| Size <del>20</del> 16 Cond. | 40               | 40           |                        |
| <del>12</del> 3/4 "K-75"    | 227              | 227          | 150 Sk.                |
| 9 5/8                       |                  |              |                        |
| 8 5/8                       | 1997             | 1997         | 230 Sk.                |
| 7                           |                  |              |                        |
| 5 1/2                       |                  |              |                        |
| 4 1/2                       | 4970             | 4970         | 290 Sk.                |
| 3                           |                  |              |                        |
| <del>X</del> 1 1/2          |                  | 4983         |                        |
| Liners used                 |                  |              |                        |

GEOLOGICAL TARGET FORMATION Oriskany Depth 4992-5004 feet  
Depth of completed well 5004 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 175 feet; Salt 1210 feet  
Coal seam depths: \_\_\_\_\_ Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Oriskany Pay zone depth 4992 - 5004 feet  
Gas: Initial open flow 340m Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow unknown ? Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 24 hours  
Static rock pressure 800 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ Mcf/d Oil: 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

JUL 26 1982

(Continue on reverse side)

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

Fracture: 900 Barrels of Water , 5000 Galons of 28% HCL Acid,  
60,000 lbs. of 20/50 Sand, GEL, etc. ( Cross-Link Gel Frack )

WELL LOG

| FORMATION                 | COLOR | HARD OR SOFT | TOP FEET | BOTTOM FEET | REMARKS   |
|---------------------------|-------|--------------|----------|-------------|---|
|                           |       |              |          |             | Including indication of all fresh and salt water, coal, oil and gas |
| Sand, Shale & Sandy Shale |       |              | 0        | 1210        |   |
| Salt Sand                 |       |              | 1210     | 1550        | Salt Water  |
| Maxon Sand                |       |              | 1599     | 1630        |   |
| Pencil Cave               |       |              | 1630     | 1642        |   |
| Big Lime                  |       |              | 1645     | 1793        |   |
| Injun Sand                |       |              | 1793     | 1960        | Slight show of gas  |
| Shale & Siltstone         |       |              | 1960     | 2338        |   |
| Coffee Shale              |       |              | 2338     | 2356        |   |
| Berea Sand                |       |              | 2356     | 2366        |   |
| Shale & Siltstone         |       |              | 2366     | 2760        |   |
| Shale                     |       |              | 2760     | 3574        |   |
| Brown Shale               |       |              | 3574     | 3640        |   |
| Shale                     |       |              | 3640     | 3933        |   |
| Brown Shale               |       |              | 3933     | 4149        |   |
| Shale                     |       |              | 4149     | 4894        |   |
| Corniferous Lime          |       |              | 4894     | 4992        |   |
| <u>Oriskany</u>           |       |              | 4992     | 5004        | Gas perf. 4992-5004   |
| TOTAL DEPTH               |       |              |          | <u>5004</u> |   |

(Attach separate sheets as necessary)

Burdette Oil & Gas Co., Inc.  
Well Operator

By: Michael A. Burdette

Date: April 12, 1982

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."