



IV-35 (Rev 8-81)

State of Mest Nirginia

Department of Mines Gil und Cas Bivision

| Date       |      | Jer z       |      | <u> </u> |    |  |  |  |  |
|------------|------|-------------|------|----------|----|--|--|--|--|
| Operator's |      |             |      |          |    |  |  |  |  |
| Well No    | o    | 2471        | - JI | K1211    |    |  |  |  |  |
| Farm       | Dale | Ash,        | Jr.  | Heirs    | #1 |  |  |  |  |
| ADT NO     | 17   | <b>-</b> 09 | 5    | _ 1111   | 1  |  |  |  |  |

## WELL OPERATOR'S REPORT OF

## DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

| LOCATION: Elevation: 1037' Watershed_  | Mudlick Ru         | ın         |              |                    |  |  |
|--|--------------------|------------|--------------|--------------------|--|--|
| District: Centerville County Tyler   | (                  | Quadrangle | West Un      | ion                |  |  |
|  |                    |            |              |                    |  |  |
|  |                    |            |              |                    |  |  |
| COPANY Union Drilling, Inc.  |                    |            | _            | Cerent             |  |  |
| ADDRESS P.O. Drawer 40, Buckhannon, WV 26201   | Caşing             | Used in    |              | fill up            |  |  |
| DESIGNATED AGENT Joseph C. Pettey  | Tubing             | Drilling   | in Well      | Cu. ft.            |  |  |
| ADDRESS P.O. Drawer 40, Buckhannon, WV 26201   | Size               |            |              | ·                  |  |  |
| SURFACE CWNER Dale Ash, Jr. Heirs  | 20-16<br>Cord.     |            |              |                    |  |  |
| ADDRESS  | 13-10"             | 20.00'     | pulled       |                    |  |  |
| MINERAL RIGHTS OWNER same as surface   | 9 5/8              |            |              |                    |  |  |
| ADDRESS  | 8 5/8              | 1186.80'   | 1186.80'     | 325 cf             |  |  |
| OIL AND GAS INSPECTOR FOR THIS WORK  | 7                  |            |              |                    |  |  |
| Robert Lowther ADDRESS Gen.Del., Middleborne, WV   | 5 1/2              |            | 5219.75'     | 387 cf             |  |  |
| PERMIT ISSUED 7/17/85 26149  | 4 1/2              |            |              |                    |  |  |
| DRILLING COMMENCED 7/14/86   | 3                  |            |              |                    |  |  |
| DRILLING COMPLETED 7/20/86   | 23/8"              | tubing     | 5178.25'     |                    |  |  |
| TE APPLICABLE: PLUGGING OF DRY HOLE ON   |                    |            |              |                    |  |  |
| CONTINUOUS PROGRESSION FROM DRILLING OR  | Liners<br>used     |            | -            |                    |  |  |
| REWORKING. VERBAL PERMISSION OBTAINED ON   |                    |            |              |                    |  |  |
| GEOLOGICAL TARGET FOR ATION Rhine Stre   | et                 | Deg        | oth 59       | 95' feet           |  |  |
| Depth of completed well 5401' feet   | Rotary xx          | x / Cab    | le T∞ls      |                    |  |  |
| Depth of completed well  | Salt 147           | 5' fee     | <br>t        |                    |  |  |
| Water strata depth: Fresh 100', 520feet; Salt 1475' feet  Coal seam depths: 655/657  Is coal being mined in the area |                    |            |              |                    |  |  |
| Coal seam depths: 633/03/  | _ 10 0001          |            |              |                    |  |  |
| OPEN FLOW DATA -   |                    | •          |              | £                  |  |  |
| Producing formation Riley . Alexander  | Pā                 | ay zone de | pth          | <sub>98'</sub> ree |  |  |
| Gas: Initial open flow no show Mcf/d   | Oil: Ir            | iitial ope | n flow       | BD1/               |  |  |
| Final open flow 863 Mcf/d  | F:                 | inal open  | tlow         | BD1/               |  |  |
| Time of open flow between ini 1650# Casing 1625# Tu  | tial and :<br>bing | final test | <u>s 2</u> n | ours               |  |  |
| Static rock pressurepsig(suria   | ce neasur          | ement) aft | er 24 ho     | urs snut 1         |  |  |
| (If applicable due to multiple completio   | n)                 | _          |              | _                  |  |  |
| Second producing formation   | P                  | ay zone de | epth         |                    |  |  |
| Gas: Initial open flow Mcf/d   | Oil: I             | nitial op  | en ilow      | ED1,               |  |  |
| Firal open flow Mcf/d  | Oil: F             | inal open  | flow         | Bbl.               |  |  |
| Time of open flow between in   |                    | final tos  | te 1         | nours              |  |  |

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

Halliburton - 2 stage Foam Frac - 7/29/86

4498/4504 - Riley - 45,000# sand, 700 bbls water and 585,000 scf nitrogen 4525/28

5185/5198 - Alexander - 35,000# sand, 505 bbls water and 100,000 scf nitrogen

#### WELL LOG

|  | W   | ELL LOG  |  |
|--|---|--|--|
| FORMATION COLOR HARD OR SOFT   | TOP FEET  | BOTTOM FEET  | REMARKS Including indication of all freshand salt water, coal, oil and gas |
| Sand & Shale Coal Sand & Shale Big Lime Injun Riley Benson Alexander | 0<br>655<br>657<br>1900<br>1982<br>4497<br>4899<br>5163 | 655<br>657<br>1900<br>1979<br>2074<br>4540<br>4905<br>5218<br>5401' TD | Hole damp @100' 1/2" stream fresh water @520'  Gas check @TD = no show     |
|  |   |  |  |
|  | -   |  |  |
| · <del></del>  |   |  |  |
|  |   |  |  |
|  |   |  |  |

(Attach separate sheets as necessary)

Union Drilling, Inc.

Well Operator

By:

Vice President of Production Joseph C. Pettey, Date:\_

10/2/86

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 only, encountered in the drilling of a well."

# FORM IV-2(B) (Obverse) 7-83

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|-----|------|--|
| LE  | CUPI |  |



| 1) | Date:                 | may | 31  | *         | 19 | 85          |
|----|-----------------------|-----|-----|-----------|----|-------------|
| 2) | Operator's<br>Well No |     | JK- | 1211      |    |             |
| 3) | API Well No           | o4  | 7   | -095-1111 |    | <del></del> |
|    | •                     | Sta | ite | County    | P  | ermit       |

County

Permit

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

### APPLICATION FOR A WELL WORK PERMIT

| 4)                    | WELL TY                     |  | GAS I                                   | /_G                                     | as                           |                                   |  | LLL WORK I ERMI                                    | / Deep   |  |   |
|-----------------------|-----------------------------|--|---|---|------------------------------|-----------------------------------|--|--|--|--|---|
| 5)                    | LOCATIO                     | ~ !~B -(]<br>N· Fla  | f 'Gas';<br>evation: _                  | Production                              | n<br>137!                    | Χ                                 | / Undergroun   | nd storage<br>Mudlick                              | / Deep   | _/ Shallow _                               | <u>X</u> _/)                                    |
| ٠,                    | 200,1110                    | Dis  | strict:                                 | Center                                  | rvil                         | le                                |  |  | Quadrangle:  | West Unio                                  | n 7.5'  |
| 6)                    |                             | ERATOR.  | J_8                                     | J Ent                                   | terpi                        | rises                             | Inc. 427   |  | DAGENT Rich  |  |   |
|                       | Address                     | <u> </u>   | P.0                                     |   |                              |                                   | 24150  | Address  | P.O.   |  |   |
| ٥,                    | OIL & CA                    | Buckhannon, WV 26201 2973 Cas INSPECTOR TO BE NOTIFIED   |   |   |                              |                                   |  |  |  | <u>khannon, WV</u>                         | 26201   |
| 0)                    | Name                        |  |   |   |                              |                                   |  | 9) DRILLING (                                      |  | nilling Co                                 |   |
|                       | Address                     |  |   |   |                              |                                   |  | Address  | S.W. Jack [<br>P.O. Box 48   |  | <u>'.                                      </u> |
|                       |                             | S General Delivery Middlebourne, WV 26149  |   |   |                              |                                   |  | Buckhannon, wV 26201                               |  |  |   |
| 10)                   | PROPOSE                     |  |   | Drill                                   |                              |                                   |  | / Redrill  | / Stimulate  |  |   |
|                       |                             |  |   |   |                              |                                   | •  | orate new formatio                                 |  |  |   |
|                       |                             |  |   |   |                              | change                            | in well (specify)                                      |  |  |  |   |
| 11)                   | GEOLOGI                     |  |   |   |                              |                                   | <u>ine Street</u>                                      | 441  |  |  |   |
|                       | 12) Estima                  | ated depth   | of complet                              | ed well,                                | <del></del>                  |                                   |  | et N. / A  |  |  |   |
|                       |                             |  |   |   |                              |                                   |  | alt,N/A  |  |  | v   |
| 151                   | 14) Appro                   |  | •                                       |   |                              | IN/                               | HIs  | coal being mined in th                             | ne area? Yes   | / No                                       | <u>X</u> /                                      |
|                       | SING OR                     | וו<br>אור דומאי  |   | JKAM<br>DIFICATION                      | •                            |                                   | U  |  |  | 1.   |   |
|                       | BING TYPE                   | 61.  | ı                                       | Weight                                  | t                            | 1                                 |  | E INTERVALS  | OR SACKS   | PACKER                                     | 15  |
| Conc                  | ductor                      | 11 3/4   | Grade<br>H-40                           | per ft.                                 | X                            | Used                              | For drilling   | Left in well                                       | (Cubic feet)   | inc  | <u> </u>  |
|                       | h water                     | 8 5/8  | <del> </del>                            | 23                                      | Х                            |                                   | 1637'  | 1637'  | To Surface   | Sonds NE                                   | 47  |
| Coal                  |                             | 8 5/8  |   | 23                                      | X                            | 1                                 | 1637   | 1637'  | To Surface   | Sizes                                      |   |
| Inter                 | mediate                     | 0 3/0  |   |   |                              | 1                                 | 105/   | 1037   | To Surrace   | Sizes                                      |   |
| Prod                  | luction                     | 41,  | J-55                                    | 10.5                                    | Х                            |                                   | 5995'  | 59451  | 300 Sacks  | Depths set                                 |   |
| Tubi                  | ng                          | ' 2  |   |   |                              |                                   |  |  | or as requir   | H  | 15-01   |
| Line                  | rs                          |  |   |   |                              |                                   |  |  |  | Perforations:                              |   |
|                       |                             |  |   | ļ                                       |                              | ļ                                 |  |  |  | Тор  | Bottom  |
|                       |                             |  |   |   |                              | 1                                 |  |  |  |  |   |
|                       |                             |  | L                                       | <u> </u>                                |                              | 1                                 | <u> </u>   |  |  |  |   |
|                       |                             |  |   |   |                              |                                   |  |  |  |  |   |
|                       | ·                           | ······································   |   |   |                              |                                   | OFFICE USE   |  |  |  |   |
|                       |                             |  |   |   |                              |                                   | DRILLING P   | PERMIT   |  |  |   |
| Pern                  | nit number_                 | 47   | <b>'-095-</b> ]                         | 1111                                    |                              |                                   |  |  |  | July 17                                    | 19 <b>8</b> 5                                   |
|                       |                             |  |   |   |                              |                                   |  |  | Dat  |  |   |
| iuire<br>No.<br>listr | 8) Prior to trict oil and g | he constructs in the construction in the const | onditions<br>ction of ro<br>or 24 hour. | contained<br>pads, locati<br>s before a | herein<br>ions an<br>ctual p | and on t<br>d pits fo<br>ermitted | he reverse hereof  r any permitted wo  work has commen | Notification must be ork. In addition, the coced.) | ted to drill in accordan<br>given to the District Oi<br>well operator or his con | l and Gas Inspector<br>tractor shall notif | or, (Refer to                                   |
| eve                   | rse hereof.                 |  |   |   | e anu i                      | ъррисац                           | on, piat, and recla                                    | imation plan, subject                              | to any modifications a   | nd conditions spec                         | cified on the                                   |
| Pern                  | nit expires _               | Ju   | ly 17,                                  | 1987                                    |                              |                                   | unless w   | ell work is commence                               | d prior to that date and   | prosecuted with d                          | ue diligence                                    |
| _                     |                             |  |   |   |                              |                                   |  |  |  |  | ar amgenee,                                     |
| B                     | ond:                        | Agen   | it:   ;                                 | Plat:                                   | Casi                         | ng                                | Fee  |  |  |  |   |
| 1.                    |                             | A1_13  |   | 2011                                    | hs                           | 1/2                               | 000  |  |  |  |   |
|                       | · /                         | 7-13   |   | 1141                                    | 11                           | 70/2                              |  | 1  | Tarles   |  |   |
|                       |                             |  |   |   |                              |                                   | _  | Adr  | ninistrator, Office of C   | Oil and Gas                                |   |
| ron                   | ΓE: Keep o                  | one copy of  | this perm                               | it posted                               | at the c                     | drilling lo                       | ocation.   | 7101   | sirator, office of c   | in una Gas                                 |   |
|                       |                             |  | P                                       | the reserve                             |                              | -                                 | DDI ICANTIC CO   | DV C t c   |  |  | File  |
|                       |                             |  | 366                                     | me revers                               | c side (                     | or the A.                         | FELICANI'S CUI   | PY for instructions to                             | o the well operator.   |  |   |