



NORTH

LONGITUDE 81° 00'

ROBT. AMOS  
T.M. 7-17  
80.5 Ac.

ROBT. AMOS  
TM 7-18  
51.5 Ac

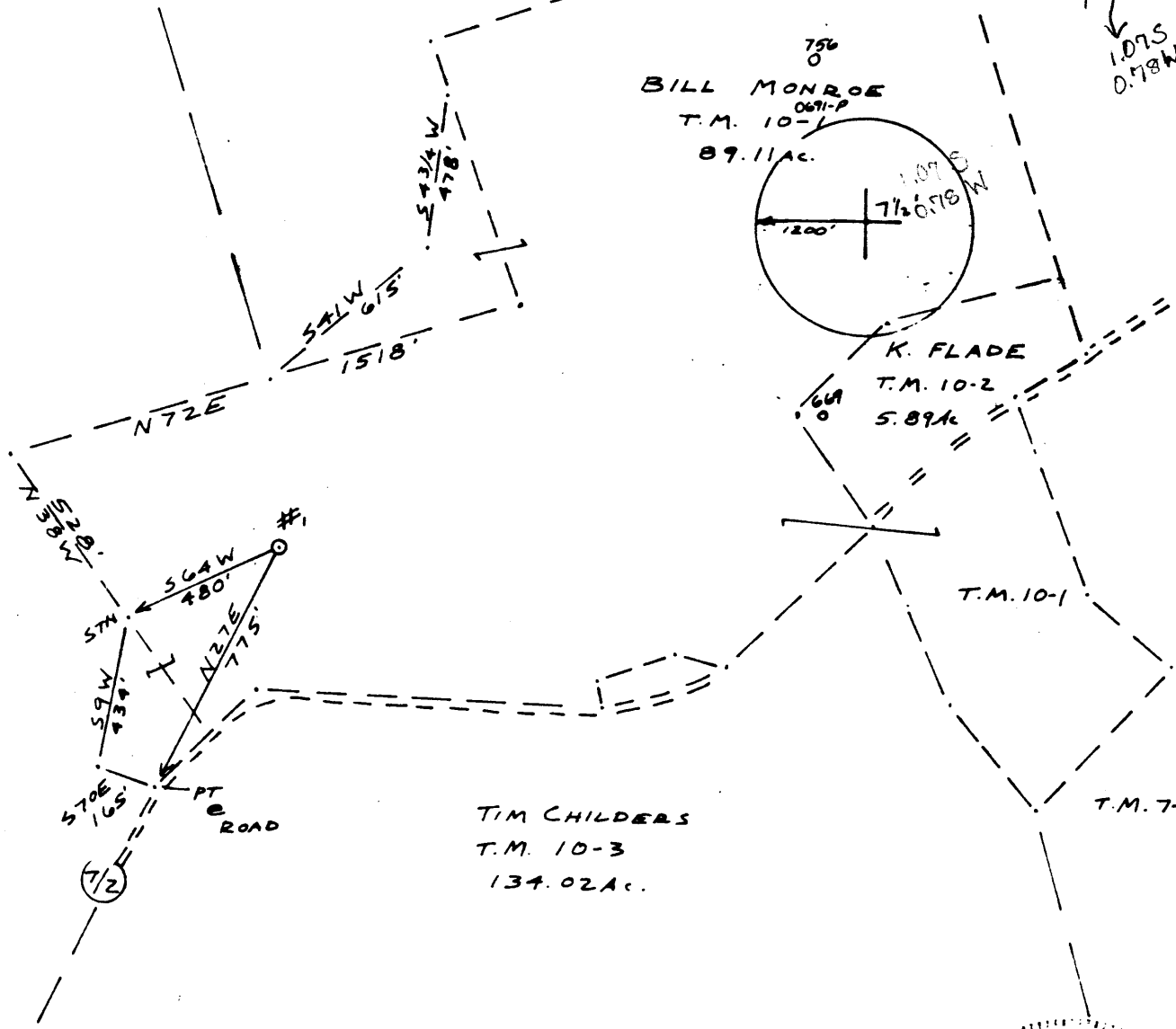
BILL MONROE  
T.M. 7-21  
133.42 Ac

BILL MONROE  
T.M. 10-1  
89.11 Ac.

K. FLADE  
T.M. 10-2  
5.89 Ac

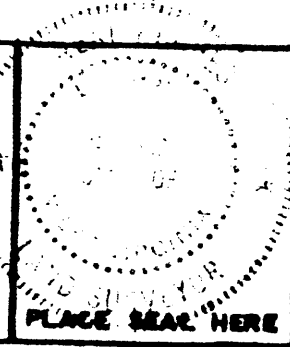
TIM CHILDERS  
T.M. 10-3  
134.02 Ac.

T.M. 7-21



FILE NO. B-32  
 DRAWING NO. 1  
 SCALE 1"=500'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION BM-737

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) Neal Hughes  
 R.P.E. \_\_\_\_\_ L.L.S. 632



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



DATE SEPT 8, 19 81  
 OPERATOR'S WELL NO. B. JEMISON  
 API WELL NO. 47-095-0965  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 ( IF "GAS", PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 945' WATER SHED SUGAR CREEK  
 DISTRICT MEADE COUNTY TYLER  
 QUADRANGLE BENS RUN St Marys 15 EC  
 SURFACE OWNER BILL MONROE ACREAGE 89.11  
 OIL & GAS ROYALTY OWNER RUSSELL JEMISON LEASE ACREAGE 99  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR  
 STIMULATE \_\_\_\_\_ PLUS OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW  
 FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUS AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUS \_\_\_\_\_  
 TARGET FORMATION DEV. SHALE ESTIMATED DEPTH 4700' NOV 19 1981  
 WELL OPERATOR BISON INC. DESIGNATED AGENT HAROLD E. WILSON  
 ADDRESS RT 2 BOX 83 ADDRESS ST. MARYS, W.V.  
26170 26170



IV-35  
(Rev 8-81)

Date 4/5/83  
Operator's Well No. R. JEMISON # 1  
Farm BILL MONROE  
API No. 47-095-0965

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  / Liquid Injection \_\_\_ / Waste Disposal \_\_\_  
(If "Gas," Production  / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow )

LOCATION: Elevation: 945' Watershed Sugar Creek  
District: Meade County Tyler Quadrangle Bens Run 7.5'

COMPANY Bison Inc  
ADDRESS Rte 2 Box 83 St Marys WVA 26170  
DESIGNATED AGENT Harold Wilson  
ADDRESS Same  
SURFACE OWNER BILL MONROE  
ADDRESS BENS RUN WVA  
MINERAL RIGHTS OWNER Russell Jemison  
ADDRESS 3329 VAIR AVE PARKERSBURG WVA 26101  
OIL AND GAS INSPECTOR FOR THIS WORK ROBERT  
LOWTHER ADDRESS MIDDLEBOURNE WVA  
PERMIT ISSUED 11-12-81  
DRILLING COMMENCED 3/19/82  
DRILLING COMPLETED 3/23/82  
IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

| Casing<br>Tubing       | Used in<br>Drilling | Left<br>in Well | Cement<br>fill up<br>Cu. ft. |
|------------------------|---------------------|-----------------|------------------------------|
| Size<br>20-16<br>Cond. |                     |                 |                              |
| 13-10"                 |                     |                 |                              |
| 9 5/8                  |                     |                 |                              |
| 8 5/8                  | 1072                | 1072            |                              |
| 7                      |                     |                 |                              |
| 5 1/2                  |                     |                 |                              |
| 4 1/2                  | 4820'               | 4820'           |                              |
| 3                      |                     |                 |                              |
| 2                      |                     |                 |                              |
| Liners<br>used         |                     |                 |                              |

RECEIVED

APR 7 - 1983  
OIL AND GAS DIVISION  
DEPARTMENT OF MINES

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 4700' feet  
Depth of completed well 4841' feet Rotary  / Cable Tools \_\_\_  
Water strata depth: Fresh N/A feet; Salt N/A feet  
Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Devonian Shale Pay zone depth 4820 feet  
Gas: Initial open flow 125 Mcf/d Oil: Initial open flow 10 Bbl/d  
Final open flow 125 Mcf/d Final open flow 10 Bbl/d  
Time of open flow between initial and final tests 12 hours  
Static rock pressure 890 psig (surface measurement) after 8 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

(Continue on reverse side)

APR 11 1983

1982 0965

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

Perforations ~~32~~ ~~3600~~ ~~41~~  
4471' to 4808' *Heaven*

805,000 SCF N<sup>2</sup>

WELL LOG

| FORMATION          | COLOR | HARD OR SOFT | TOP FEET     | BOTTOM FEET        | REMARKS<br>Including indication of all fresh and salt water, coal, oil and gas |
|--------------------|-------|--------------|--------------|--------------------|--------------------------------------------------------------------------------|
| <del>Shale</del>   |       |              | <del>0</del> | <del>20</del>      |                                                                                |
| Shale              |       |              | 955          | 968                |                                                                                |
| Shale              |       |              | 968          | 985                |                                                                                |
| Sand               |       |              | 985          | 1005               |                                                                                |
| Shale              |       |              | 1005         | 1032               |                                                                                |
| sand               |       |              | 1032         | 1045               |                                                                                |
| Shale              |       |              | 1045         | 1097               |                                                                                |
| Shale              |       |              | 1097         | 1191               |                                                                                |
| Sand               |       |              | 1171         | 1340               |                                                                                |
| Shale              |       |              | 1340         | 1420               |                                                                                |
| Sand               |       |              | 1420         | 1450               |                                                                                |
| Shale              |       |              | 1450         | 1769               |                                                                                |
| sand               |       |              | 1769         | 2055               |                                                                                |
| Shale              |       |              | 2055         | 2305               |                                                                                |
| sand <i>Berea?</i> |       |              | 2305         | 2310               |                                                                                |
| Shale              |       |              | 2310         | 2515               |                                                                                |
| sand               |       |              | 2515         | 2650               |                                                                                |
| Shale              |       |              | 2650         | 4841 <sup>TD</sup> | 4841<br>2310<br><hr/> 2531                                                     |
|                    |       |              |              | in tower?          |                                                                                |

(Attach separate sheets as necessary)

Bison Inc  
 Well Operator  
 By: J. S. Smith AGENT  
 Date: 4/5/83

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."



1) Date: 2--5-, 19 85  
 2) Operator's Well No. Jemison No. 1  
 3) API Well No. 47 State 095- County 0965- Permit FRAC

**RECEIVED**

FEB - 6 1985

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OIL AND GAS DIVISION  
APPLICATION FOR A WELL WORK PERMIT

OIL & GAS DIV.  
DEPT. OF MINES

- 4) WELL TYPE: A Oil  / Gas   
 B (If "Gas", Production 1 Mcf/d Underground storage  Deep  Shallow )  
 5) LOCATION: Elevation: 945 Watershed: Sugar Creek  
 District: Meade County: Tyler Quadrangle: Medeville  
 6) WELL OPERATOR Pethtel Oil & Gas DESIGNATED AGENT Zeb Pethtel  
 Address P.O. Box 21 Address P.O. Box 21  
St. Marys, W. Va. 26170 St. Marys, W. Va. 26170  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Robert Lower Name Western Fracking Co.  
 Address Middlebourne Address Cainbridge, Ohio  
W. Va. 26140  
 10) PROPOSED WELL WORK: Drill  / Drill deeper  / Redrill  / Stimulate   
 Plug off old formation  / Perforate new formation   
 Other physical change in well (specify) Nit-Frack shale Zone at 3900 Feet  
 11) GEOLOGICAL TARGET FORMATION, Shale  
 12) Estimated depth of completed well, 3900 feet  
 13) Approximate trata depths: Fresh, none feet; salt, none feet.  
 14) Approximate coal seam depths: none Is coal being mined in the area? Yes  / No

15) CASING AND TUBING PROGRAM

| CASING OR TUBING TYPE | SPECIFICATIONS |       |                |     |      | FOOTAGE INTERVALS          |              | CEMENT FILL-UP OR SACKS (Cubic feet) | PACKERS                                                              |
|-----------------------|----------------|-------|----------------|-----|------|----------------------------|--------------|--------------------------------------|----------------------------------------------------------------------|
|                       | Size           | Grade | Weight per ft. | New | Used | For drilling               | Left in well |                                      |                                                                      |
| Conductor             |                |       |                |     |      |                            |              |                                      | Kinds                                                                |
| Fresh water           |                |       |                |     |      |                            |              |                                      |                                                                      |
| Coal                  |                |       |                |     |      | EXISTING - SEE WELL RECORD |              |                                      | Sizes                                                                |
| Intermediate          |                |       |                |     |      |                            |              |                                      |                                                                      |
| Production            |                |       |                |     |      |                            |              |                                      | Depths set                                                           |
| Tubing                |                |       |                |     |      |                            |              |                                      |                                                                      |
| Liners                |                |       |                |     |      |                            |              |                                      | Perforations: <u>3900-3900</u><br>Top <u>3900</u> Bottom <u>3910</u> |

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-095-0965-FRAC Date February 6, 19 85

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires February 6, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

|                  |                  |                 |                   |               |
|------------------|------------------|-----------------|-------------------|---------------|
| Bond: <u>114</u> | Agent: <u>MN</u> | Plat: <u>MN</u> | Casing: <u>MN</u> | Fee: <u>5</u> |
|------------------|------------------|-----------------|-------------------|---------------|

*Margaret J. Wasse*  
Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

NOV - 5 1981

Oil and Gas Division

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,  
Charleston, W. Va.

Surface Owner Bill Monroe  
Address Bens Run, WV.  
Mineral Owner Russell Jemison  
Address 3329 Vair Ave. Parkersburg, WV. 26101  
Coal Owner N/A  
Address \_\_\_\_\_  
Coal Operator \_\_\_\_\_  
Address \_\_\_\_\_

DATE Oct. 6, 1981  
Company Bison, Inc.  
Address Rt. 2 Box 83 St. Marys, WV. 26170  
Farm Bill Monroe Acres 89.11  
Location (waters) Sugar Creek  
Well No. 1 Elevation 945'  
District Meade County Tyler  
Quadrangle Bens Run

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 7-12-82

INSPECTOR  
TO BE NOTIFIED Phillip Tracy  
ADDRESS Rt. #3 Alma, WV 26320  
PHONE 304-758-4573

J. J. Huggins  
Deputy Director - Oil & Gas Division  
GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated Aug. 29 1981 by Don Wagner made to Bison, Inc. and recorded on the Sept 9th day of Sept. 1981, in Tyler County, Book 233 Page 193  
 NEW WELL \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE  
\_\_\_\_\_ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days.

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address \_\_\_\_\_ day \_\_\_\_\_ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND  
ECONOMIC SURVEY  
P. O. BOX 879  
MORGANTOWN, WEST VIRGINIA 26505  
AC-304 - 292-6331

Address  
of  
Well Operator

Very truly yours,  
(Sign Name) Bison, Inc. Harold E. Wilson President  
Well Operator  
Rt. 2 Box 83  
Street  
St. Marys,  
City or Town  
WV. 26170  
State

\*SECTION 3 . . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

47-095-0965 PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by Harold E. Wilson

THIS IS AN ESTIMATE ONLY  
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO X DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) \_\_\_\_\_ RESPONSIBLE AGENT: \_\_\_\_\_  
 NAME Unknown \_\_\_\_\_ NAME Harold E. Wilson \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ ADDRESS Rt. 2 Box 83 St. Marys, WV. \_\_\_\_\_  
 TELEPHONE \_\_\_\_\_ TELEPHONE 304-684-3994 \_\_\_\_\_  
 ESTIMATED DEPTH OF COMPLETED WELL: 4700' \_\_\_\_\_ ROTARY X \_\_\_\_\_ CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Devonian Shale \_\_\_\_\_  
 TYPE OF WELL: OIL X \_\_\_\_\_ GAS X \_\_\_\_\_ COMB. \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

TENTATIVE CASING PROGRAM:

| CASING AND TUBING SIZE | USED FOR DRILLING | LEFT IN WELL | CEMENT III. UP OR SACKS - CUBIC FT. |
|------------------------|-------------------|--------------|-------------------------------------|
| 20 - 16                |                   |              |                                     |
| 13 - 10                | 40'               | 40'          |                                     |
| 9 - 5/8                |                   |              |                                     |
| 8 - 5/8                | 1050'             | 1050'        | Cement to surface                   |
| 7                      |                   |              |                                     |
| 5 1/2                  |                   |              |                                     |
| 4 1/2                  | 4700'             | 4700'        | Cement up 2700'                     |
| 3                      |                   |              | Perf. Top                           |
| 2                      |                   |              | Perf. Bottom                        |
| Liners                 |                   |              | Perf. Top                           |
|                        |                   |              | Perf. Bottom                        |

APPROXIMATE FRESH WATER DEPTHS 350' FEET \_\_\_\_\_ SALT WATER 1100' FEET \_\_\_\_\_  
 APPROXIMATE COAL DEPTHS N/A \_\_\_\_\_  
 IS COAL BEING MINED IN THE AREA? No \_\_\_\_\_ BY WHOM? \_\_\_\_\_

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for \_\_\_\_\_ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the \_\_\_\_\_ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

\_\_\_\_\_  
For Coal Company

\_\_\_\_\_  
Official Title