





101 SHIL OH-WICK



IV-35 (Rev 8-81)

State of Mest Virginia
Department of Mines
Gil und Gas Division

|   | Date <u>Hugus</u> 7 21, 1988<br>Operator's |
|---|--|
|   | Well No                                    |
|   | API No. 47-95 -0729                        |
| • | FRAC                                       |

DIVISION OF OIL & GAS WELL OPERATOR'S REPORT

| DEPARTMENT OF ENERGY AND/OR STIMU   | LATING, O           | R PHYSICAI            | CHANGE          |             |
|---|---------------------|-----------------------|-----------------|-------------|
| 12  |                     |                       |                 |             |
| WELL TYPE: Oil K / Gas K / Liquid Injection (If "Gas," Production / Undergrou | / Wast<br>nd Storag | e Disposal<br>e/ Deep | /<br>/ Sha      | 11cw/)      |
| LOCATION: Elevation: 725 Watershed 1  | NOVE -              | ISLAU1                | 1 CRE           | EL          |
| District: UNION County TY/  |                     |                       |                 | 5 Rull      |
|   |                     |                       |                 | •           |
| The late of December 1 & Bullion  |                     |                       |                 |             |
| COMPANY HI-WEST PETROLEUM & EXPLORATE   |                     | T                     |                 | Cement      |
| ADDRESS P.O. BOX 731, MARIETTA, OHTO 4.                                       | ٠ ۵                 | Used in               | Left            | fill up     |
| DESIGNATED AGENT NATEL AUEL   | Tubing              | Drilling              | in Well         | Cu. ft.     |
| ADDRESS 4/35T. WILLIAMSTOWN ILLU SOLO   | Size<br>20-16       |                       |                 |             |
| SURFACE OWNER CHAPLES FIFT-PHACE  | Cond.               |                       |                 |             |
| ADDRESS GD, HEDDE FOURIE, WILL 2614   | 13-10"              |                       |                 |             |
| MINERAL RIGHTS OWNER HARRY CARLY  | 9 5/8               |                       |                 |             |
| ADDRESS 14154 CITY, WILL 26159  | 8 5/8               |                       |                 |             |
| OIL AND GAS INSPECTOR FOR THIS WORK NOBEL                                     | 7                   |                       |                 |             |
| owther ADDRESS GD, MIDDLE DOURUE  | 5 1/2               |                       |                 |             |
| PERMIT ISSUED 4/86 WU 36/49   | 4 1/2               |                       |                 |             |
| DRILLING COMMENCED 5/3/86 FRACED  | 3                   |                       |                 |             |
| DRILLING COMPLETED 5/8/8 4  | 2                   |                       |                 |             |
| IF APPLICABLE: PLUGGING OF DRY HOLE ON  |                     |                       |                 |             |
| CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED | Liners<br>used      |                       |                 |             |
| CN  |                     | <u> </u>              |                 |             |
| GEOLOGICAL TARGET FORMATION   |                     | Dep                   | th              | feet        |
| Depth of completed wellfeet F   | Rotary              | / Cable               | e Tools_        |             |
| Water strata depth: Freshfeet;  | Salt                | feet                  |                 |             |
| Coal seam depths:   | Is coal             | being min             | ed in the       | area?       |
| OPEN FLOW DATA  |                     |                       |                 |             |
| Producing formation KEFNEL  | Pay                 | zone dep              | th 15/          | feet        |
| Gas: Initial open flow 5 Mcf/d  | Oil: In             | itial open            | flow_           | /Bb1/d      |
| Final open flow 5 Mcf/d   | Fir                 | nal open f            | low(/           | Bb1/d       |
| Time of open flow between init  | ial and fi          | inal tests            | 12 ho           | urs         |
| Static rock pressure 100 psig(surface   | e measure           | ment) afte            | r <u>34</u> hou | rs shut in  |
| (If applicable due to multiple completion-                                    | )                   |                       |                 |             |
| Second producing formation  | Pa                  | y zone dep            | th              | feet        |
| Gas: Initial open flowMcf/d   | Oil: In             | itial open            | flow            | Bbl/d       |
| Final open flow Mcf/d   |                     |                       |                 | Bbl/d       |
| Time of open flow between init  | ial and f           | inal tests            | 3€              | Part 9 1988 |
| Static rock pressurepsig(surface  | measurem            | ent) after            | hou             | ırs shut in |

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

41/2" SOLID BRIDGE PLUG SET AT 1600'
PERFORATIONS FROM 1527'-1535'
15281-1540' 17 HOLES
FRACED With 300 BBIS. OIL

#### WELL LOG

| FORMATION ( | COLOR | HARD O   | R SOFT | TOP FEET | BOTTOM FEET | REMARKS Including indication of all fresh and salt water, coal, oil and gas |
|-------------|-------|--|--------|----------|-------------|---|
|             |       |  |        |          |             |   |
|             |       |  |        |          |             |   |
| •           |       |  |        |          | ,           |   |
|             |       | e de la companya de l |        |          |             | SEP 0 6 1988  |
|             |       |  |        |          |             | DIVISION OF OIL & GAS<br>DEPARTMENT OF ENERGY                               |
|             |       |  | ·      | ¥.       |             |   |
|             |       |  |        |          |             |   |
|             |       |  |        |          | ·           |   |
|             |       |  |        |          |             |   |
|             |       |  |        |          |             |   |
|             |       |  |        |          |             |   |
|             |       |  | ·      |          |             |   |

(Attach separate sheets as necessary)

HI-WEST PETROLEUM & EXPLORATION ROBERT LEHOW;

Date: 8/21/88

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 and, encountered in the drilling of a well."

SEP 0.9 1988



## STATE OF WEST VIRGINIA DEPARTMENT OF MINES

## Oil and Gas Division

### WELL RECORD

Quadrangle Bens Run

Permit No47-095-0729

Rotary X Oil X
Cable Gas X
Recycling Comb. X
Water Flood Storage
Disposal Open Pit

| Permit No47-0                            | <u>95-07</u> 29        |   | n n                 |                        |                         | Disposal_G      | Open Pit (Kind)                  |
|--|------------------------|---|---------------------|------------------------|-------------------------|-----------------|----------------------------------|
| Address 311                              | S. 4th Ave             | l & Gas Drii<br>nue, Paden (            | City, W.Va.         | Casing and<br>Tubing   | Used in<br>Drilling     | Left<br>in Well | Cement fill up<br>Cu. ft. (Sks.) |
| Location (water Well No. 2 District Unio | ns) <u>Middle</u><br>n | Island Creek<br>———— Ele<br>_ CountyTyl | v <u>661</u><br>ler | Size<br>20-16<br>Cond. |                         |                 | <b>v≡</b> i<br>≟<br>##           |
| Wetzel                                   | - P.O. Box             | l in fee byP                            | City,               | 9 5/8<br>8 5/8         | 256                     | 256             | *                                |
| Mineral rights a                         | re owned by_           | G.W. Laud<br>Box Paden                  | lerman              | 7                      |                         |                 |                                  |
| Drilling Comple                          | ted                    | 79<br>79<br>cu. ft. <i>S}</i>           |                     | 4 1/2<br>3<br>2        | Cement                  | d thru F        | ay Zone                          |
| Final production                         | n 780,000 c            | M. ft. per day ( rs. before test        | 20 bbls.            | Liners Used            |                         |                 | , Clade                          |
| Well treatment                           | Nitrog                 | en Frac - 3<br>/40 Mesh 60              |                     | Attach copy of         |                         |                 |                                  |
|  |                        |   |                     |                        | •                       |                 |                                  |
| Fresh water                              | 60                     | No Co<br>Fee                            | 170                 | Salt \                 | a1 Inche Water 15 h 250 | 500 ₹           | Feet                             |
| Formation                                | Color I                | lard or Soft                            | Top Feet            | Bottom Feet            | Oil, Gas or             | Water           | • Remarks                        |
| Shale<br>Sand<br>Lime                    | Brown<br>Gray<br>Gray  | Soft<br>Soft<br>Soft                    | 0<br>20<br>40       | 20<br>40<br>, 140      | 1                       |                 |                                  |

| Formation     | Color        | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | * Remarks |
|---------------|--------------|--------------|----------|-------------|-------------------|-----------|
|               |              |              |          |             | , , ,             |           |
| Shale         | Brown        | Soft         | 0        | 20          |                   |           |
| Sand          | Gray         | Soft         | 20       | 40          |                   | •         |
| Lime          | Gray ,       | Soft         | 40       | 140         |                   |           |
| Slate         | Gray         | Soft         | 140      | 175         |                   |           |
| Shale         | <i>Black</i> | Hard         | 175      | 205         |                   |           |
| Lime          | Gray         | Soft         | 205      | 280         |                   |           |
| Sand          | White        | Soft         | 280      | 290         |                   |           |
| Slate         | Black        | Hard         | 290      | 305         |                   |           |
| Lime          | Gray         | Soft         | 305      | 410         | 1 174             |           |
| Rock          | Red          | Soft         | 410      | 505         |                   |           |
| Sand          | White        | Soft         | 505      | 515         | <i>j</i> .        | •         |
| Rock          | Red          | Hard         | 515      | ; 605       |                   | •         |
| Lime          | Gray         | Hard         | 605      | 700         |                   |           |
| Rock ·        | Red          | Hard         | 700      | 755         |                   |           |
| Sand          | White        | Soft         | 755      | 800         |                   |           |
| <i>Sla</i> te | Gray         | Hard         | 800      | 910         | · ·               |           |
| rock          | Red          | Hard         | 910      | 2000        |                   | • ·       |
| <i>Slate</i>  | Gray         | Soft         | 1000     | 1095        |                   |           |
| Slate         | <b>Blue</b>  | Soft ·       | 1095     | 1115        |                   | · · ·     |
| Shell         | Gray         | Soft         | 1115     | 1205        |                   |           |
| Salt Sand     | I Gray       | Soft         | 1205     | 1255        |                   |           |
| Sand          | White        | Soft         | 1255     | 1285        |                   |           |
| Shell         | Black        | Hard         | 1285     | 1315        |                   |           |
| Salt Sand     | II           | Soft         | 1315     | 1365        | •                 |           |
|               |              |              | (0)      | /ег)        |                   |           |

\* Indicates Electric Log tops in the remarks section.

-- n n 1989

| Formation Color   | Hard or Soft   | Top Feet   | Bottom Feet  | Oil, Gas or Water Remarks |   |
|---|--|--|--|---------------------------|---|
| Salt Sand II Salt Sand III Slate Gra Slate Bla Sandy Shell Gra Maxon Sand Big Lime  | ck Soft  | 1365<br>1405<br>1460<br>1480<br>1495<br>1510   | 1405<br>1460<br>1480<br>1495<br>1510<br>1535   |                           |   |
| Slate BlackeenerSand Big Injun Shale Gracket Shale Blucket Shale Shell Gracket Weir Shale Brocket Shale Brocket Shale Brocket Shale Gracket Shale Brocket | Soft Soft Soft ay Soft Hard own Hard say Soft Soft Soft Soft Soft Soft Soft Soft | 1535<br>1545<br>1580<br>1630<br>1685<br>1700<br>1805<br>1900<br>1985<br>2050<br>2095<br>2115<br>2205 | 1545<br>1580<br>1630 -<br>1685<br>1700<br>1805<br>1900<br>1985<br>2050<br>2095<br>2115<br>2205<br>2315<br>2400 |                           |   |
| Shale Gra<br>Sandy Gra<br>Gordon Sand<br>Shale Gra<br>Shale Blu   | ny Soft<br>ny Soft<br>ny Soft  | 2400<br>2460<br>2505<br>2515<br>2535   | 2460<br>2505<br>2515<br>2535<br>2620   |                           |   |
|   |  |  |  |                           |   |
|   |  |  |  |                           |   |
|   |  |  |  |                           |   |
|   |  |  |  | <b>5</b>                  |   |
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| •   |  |  |  | •                         |   |
|   |  |  | · 69   |                           | • |
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|   |  |  |  | <b>5</b> .                |   |

SFD 0 0 1988



#### STATE OF WEST VIRGINIA DEPARTMENT OF MINES

#### Oil and Gas Division WELL RECORDSE

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|----|--------------|--|
|    | OCT 3 0 1979 | The state of the s |

DEPT. OF MINES

| Rotary             | OH 77   |
|--------------------|---------|
|                    |         |
| Cable<br>Recycling | Comb. X |
| Water Flood_       |         |
| Disposal Cpan      |         |

Quadrangle Sen Run Permit No.47-095-0729

Fresh water\_

|  |                          |                  | Disposal_(      | pen Pi+                          |
|--|--------------------------|------------------|-----------------|----------------------------------|
| Company Lauderman Oil & Gas Drilling Address 311 S. 4th Ave. Paden City. W. Vo Farm Robert Wetzel Acres 15               | Casing and<br>Tubing     | Used in Drilling | Left<br>in Well | Cement fill up<br>Cu. ft. (Sks.) |
| /M1 A A  | Size<br>20-16<br>Cond    | A                |                 |                                  |
| Metzel-P.O. Box 266 Paden Address City, W.Va.  | 13-10"<br>9 5/8<br>8 5/8 | 256              | 256             |                                  |
| Mineral rights are owned by G.W. Lauderman  Address P.O. Box 266 Paden City  Drilling Commenced 9/1/79                   | 7<br>5 1/2<br>4 1/2      |                  |                 |                                  |
| Drilling Completed 9/9/79 Initial open flow Shaw : u. ft. Show bbls. Final production 780 5050 fed. ft. per day 20 bbls. | iners Used               | Celheri          | red Train       | r Pay Zone                       |
| Well openhrs. before testRP. = Well treatment details:   | litach copy of se        | menting record   | 1.              |                                  |
| Nitrogen Frac - 300,000 Cu<br>1800 BBLs & Sand - 20/4  | Ft. Conts                | nued fro         | a 1.14 4 h      |                                  |
|  |                          |                  |                 |                                  |

| Producing Sand  |                | Gordon                 |  | Selt 1 Depti  | Mater_ 1500<br>12500 | Feet1500  |
|---|----------------|------------------------|--|---|----------------------|-----------|
| Formation   | Color          | Hard or Soft           | Top Feet   | Bottom Feet   | Oil, Gas or Water    | * Remarks |
| Shale Sand Lime Slate Shale Lime Sand Slate Lime Rock Sand Rock Lime Rock Sand Slate Rock Sand Slate Rock Slate Shell Salt Sand Shell Salt Sand | White<br>Black | "<br>"<br>Hard<br>Soft | 0<br>20<br>40<br>140<br>175<br>280<br>290<br>305<br>410<br>505<br>505<br>700<br>755<br>700<br>1000<br>1095<br>1205<br>1285<br>1315 | 20<br>40<br>140<br>175<br>205<br>280<br>290<br>305<br>410<br>505<br>505<br>700<br>755<br>800<br>910<br>1000<br>1095<br>1285<br>1285<br>1315<br>1365 |                      |           |

(over)

| . Formation   | Color Hard or Soft   | Top Feet 52  | Bottom Feet  | Oil, Gas or Water Remarks |
|---|--|--|--|---------------------------|
| Galt Call Call Call Call Call Call Call C   | and II Soft and JII's Cray Soft Shell Gray " Sand Soft " Slack Hard Sand Soft jun " Gray Soft                          | 1365<br>1405<br>1460<br>1480<br>1495<br>1510<br>1535<br>1545<br>1580<br>1630<br>1685 | 1405<br>1460<br>1480<br>1495<br>1510<br>1535<br>1545<br>1580<br>1680<br>1685<br>1700 | \$ of the                 |
| Shale Shale Shale Weir Shale Shale Shale Shale Shale Shale  | Gray " Blue Hard Brown " Shell Gray Soft Sand Soft Gray Soft Brown Soft Gray " Gray Soft Gray Soft Gray Soft Gray Soft | 2050<br>2095<br>2115<br>2205<br>2315<br>2400<br>2460                                 | 2115<br>2205<br>2315<br>2400   |                           |
| Gordon<br>Shale   | Cana   | 2505<br>2515<br>2535   | 2515<br>2535<br>2620   |                           |
| e de la companya de<br>La companya de la companya de l |  |  |  |                           |
|   |  |  |  |                           |
|   |  |  |  |                           |
|   |  |  |  |                           |
|   |  |  |  |                           |
|   |  |  |  |                           |
|   |  |  | 27 (35)<br>1924 - 1924<br>1924 - 1924  |                           |
|   |  |  |  |                           |

APPROVED PLEASE Owner (Title)

| 9 V* *   |  |
|--|--|
| OG - P   | ( A Charles of Control |
|  |  |
| provisions being in accordance with Chapter 22, ne W. Va. Code, the location is hereby approved  | 1170   |
|  | OF WEST VIRGINIA   |
| DEDAD"   | TAMENIT OF MINICO  |
| rolling have not commenced by 4-29-80  | OF C GRS DIVISION  |
|  | Gas Division   |
| Deputy Director - Oil & Gas Division   |  |
| OIL AND GAS WE   | LL PERMIT APPLICATION  |
|  |  |
|  | · · · · · · · · · · · · · · · · · · ·  |
| TO THE DEPARTMENT OF MINES,  |  |
| Charleston, W. Va.   | DATE 14 US US 7 10 1979  |
| Surface Owner Kokert & ANDRE Metz  | el Company LAUderMANDILY GAS   |
| Address 146 N. 5th. Ave Paden (174   | INUA Address P.O. Box 266, Packar City 1x  |
| Mineral Owner Kolov + Metzel & Andre   | Metram Wetzel Acres 1830   |
| Address DANNE.   | Location (waters) Middle Island Cree   |
| Coal Owner SAME //O COAC   | Well No. 2. Elevation 66/  |
| Address  | District UNION County Tyler  |
| Coal Operator  | Quadrangle Bens Kun 72   |
| Address  |  |
| Minerals Gerald wi Caud  | Levinar  |
| Address  |  |
|  | INSPECTOR  |
| 10 BOX 266   | TO BE NOTIFIED Phillip I sey   |
| 11. Ph. 111/2 21150  | ADDRESS Middle bourne, INUA  |
| FACTON City. WUA. 96159  | ADDRESS //// GOIL OCCITIES, WILLIAM  |
|  |  |
|  | PHONE 304-758  |
| CENTI PMEN   | PHONE 304-758  |
| GENTLEMEN:  The undersigned well operator is entitled to dvill uno   |  |
| The undersigned well operator is entitled to drill upon  | n the above named farm or tract of land for oil and gas, having fee  |
| The undersigned well operator is entitled to drill upon<br>title thereto, (or as the case may be) under grant or lea   | n the above named farm or tract of land for oil and gas, having fee ase dated $\frac{SeS+L}{L}$ 19 $\frac{7V}{L}$ by $\frac{Rober+ENV}{L}$   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less the last the l | n the above named farm or tract of land for oil and gas, having fee ase dated Sept. 1977 by Robert ENV   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less than the marker of the total and the same of th | n the above named farm or tract of land for oil and gas, having fee ase dated Sept. 1977 by Robert & No.  3 and recorded on the day of   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less that the last  | n the above named farm or tract of land for oil and gas, having fee ase dated SCAL 1972 by Robert TAV  and recorded on the day of  Page 227  REDRILLFRACTURE OR STIMULATE  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less than the marker of the total and the same of th | n the above named farm or tract of land for oil and gas, having fee ase dated SCAL 1977 by Robert TAV.  and recorded on the day of  Page 227  REDRILLFRACTURE OR STIMULATE   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less than the control of the country, Book 19. In The enclosed plat was prepared by a registered engine title to drill upon title thereto, (or as the case may be) under grant or less title thereto, (or as the case may be) under grant or less title thereto, (or as the case may be) under grant or less title thereto, (or as the case may be) under grant or less title to drill upon title to drill u | n the above named farm or tract of land for oil and gas, having fee ase dated SCAL 1972 by Robert TAV  and recorded on the day of  Page 227  REDRILLFRACTURE OR STIMULATE  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less than the last to the la | n the above named farm or tract of land for oil and gas, having fee ase dated Sest ( 1972 by Robert E M)  and recorded on the day of Page 227  REDRILL FRACTURE OR STIMULATE  LLED BEFORE JUNE 5, 1969.  eer or licensed land surveyor and all coal owners and/or operators  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less than the last the last than | n the above named farm or tract of land for oil and gas, having fee ase dated Sest ( 1977 by Robert In |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less that the last  | n the above named farm or tract of land for oil and gas, having fee ase dated SCAT 1971 by Robert Env  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the last of | n the above named farm or tract of land for oil and gas, having fee ase dated SCAL 1971 by Robert TAN  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the first of the control o | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert Env  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less the last of | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert Env  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less the last of | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert The 1977 by Robert The 25 and recorded on the day of REDRILL FRACTURE OR STIMULATE LLED BEFORE JUNE 5, 1969.  The seer or licensed land surveyor and all coal owners and/or operators reby notified that any objection they wish to make, or are required or filed with the Department of Mines within ten (10) days. The seer of the se |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less the last of | n the above named farm or tract of land for oil and gas, having fee ase dated Sept. 1977 by Robert The Robert The Gas and recorded on the  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or leading to the total and the tot | n the above named farm or tract of land for oil and gas, having fee ase dated SCAL 1977 by Robert May  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or leading to the total and the enclosed plat were mailed or coal owners at their above shown respective address same day with the mailing or delivery of this copy to the PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:  WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  P. O. BOX 879   | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert May of Sept 1977 by Robert May of Sept 1977 by Robert May of Red Land Gas of Sept 1978 and recorded on the day of REDRILL FRACTURE OR STIMULATE LLED BEFORE JUNE 5, 1969.  The seer or licensed land surveyor and all coal owners and/or operators reby notified that any objection they wish to make, or are required or filed with the Department of Mines within ten (10) days. The day before, or on the Department of Mines at Charleston, West Virginia.  The second of Sept 1978 by Robert May of S |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less the county, Book  | n the above named farm or tract of land for oil and gas, having fee ase dated Sest. 1977 by Robert IN  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the case may be under g | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert Inv  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less than the property of the pr | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert W.  and recorded on the  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less the county, Book  | n the above named farm or tract of land for oil and gas, having fee ase dated Sest. 1977 by Robert IN  and recorded on the   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or leading to the total and the enclosed plat was prepared by a registered engine have been notified as of the above date.  The above named coal owners and/or operator are her to make by Section 3 of the Code, must be received by, Copies of this notice and the enclosed plat were mailed or coal owners at their above shown respective address same day with the mailing or delivery of this copy to the 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   | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert Inv.  and recorded on the day of Page 229  REDRILL FRACTURE OR STIMULATE LLED BEFORE JUNE 5, 1969.  The provided that any objection they wish to make, or are required or filed with the Department of Mines within ten (10) days. *  d by registered mail, or delivered to the above named coal operators day before, or on the enday before, or on the enday before, or on the enday well operator.  Well Operator  Operator  Operator  City or Jown  Other Coalest March 1615  City or Jown  Other Coalest March 1615  Operator State   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the control of the country. He was to the country of the country. Book  | n the above named farm or tract of land for oil and gas, having fee ase dated SCA 1977 by Robert 8 No. 25 and recorded on the  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the control of the county. The county of  | n the above named farm or tract of land for oil and gas, having fee ase dated SCA 1977 by Robert 8 No. 25 and recorded on the  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the case of the county. How the county, Book  | and recorded on the  |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the control of the county. The county of  | n the above named farm or tract of land for oil and gas, having fee ase dated SCA 1977 by Robert 1 1977 by Robert 1 1977 by Robert 1 1979 by R |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or lest the late of late of the late of | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert Town 25 and recorded on the day of Page 229 REDRILL FRACTURE OR STIMULATE LLED BEFORE JUNE 5, 1969.  REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The deer or licensed land surveyor and all coal owners and/or operators or filed with the Department of Mines within ten (10) days.   The department of Mines at Charleston, West Virginia.  Very truly yours, Street Of Operator Street Of Operator Street Of Operator Street Of Operator Of Mines, within said period of ten days from the receipt of tion, the department shall forthwith issue to the well operator a permit reciting oal operators or found thereto by the department and that the same is approved A7-095-0729  PERMIT NUMBER set forth in   |
| The undersigned well operator is entitled to drill upon title thereto, (or as the case may be) under grant or less that the transfer of the above date.  The enclosed plat was prepared by a registered engine have been notified as of the above date.  The above named coal owners and/or operator are her to make by Section 3 of the Code, must be received by, Copies of this notice and the enclosed plat were mailed or coal owners at their above shown respective address same day with the mailing or delivery of this copy to the 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  *SECTION 3 If no objections are filed or found by notice and plat by the department of mines, to said proposed loca the filing of such plat, that no objections have been made by the coand the well operator authorized to proceed.  BLANKET BOND   | n the above named farm or tract of land for oil and gas, having fee ase dated Sept 1977 by Robert Brown 1977 by Robert Brown 25 and recorded on the day of REDRILL FRACTURE OR STIMULATE LLED BEFORE JUNE 5, 1969.  The page 229 REDRILL FRACTURE OR STIMULATE LLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE OR STIMULATE SET STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE SET STIMULATE CLED BEFORE JUNE 5, 1969.  The page 249 REDRILL FRACTURE SET STIMULATE SET STIMULA |

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

| PROPOSED WORK ORDER TO  | DRILL   | DEEPEN  | FRACTURE-STIMULATE   |  |  |  |  |  |
|---|---|---|--|--|--|--|--|--|
| DRILLING CONTRACTOR: (If K  | • •   |   | RESPONSIBLE AGENT:   |  |  |  |  |  |
| NAME LONG Stone Str   | ```   | NAME TRUE   | NAME Thelles //angles  |  |  |  |  |  |
| ADDRESS JAON CEN,   |   | ADDRESS 3/1 5 4th lived, Paden (el                                      |  |  |  |  |  |  |
| TELEPHONE 304-92  | 7 4537  |   | 4-337-2715   |  |  |  |  |  |
| ESTIMATED DEPTH OF COMPLE   |   |   | _ CABLE TOOLS  |  |  |  |  |  |
| PROPOSED GEOLOGICAL FORMA   | ation: <u>Caio Shale</u>  | ,   |  |  |  |  |  |  |
| TYPE OF WELL: OIL   | GAS   | COMB STORA  | GE DISPOSAL  |  |  |  |  |  |
|   |   |   | LOODOTHER  |  |  |  |  |  |
| TENTATIVE CASING PROGRAM:   |   |   |  |  |  |  |  |  |
| CASING AND TUBING SIZE  | USED FOR<br>DRILLING  | LEFT IN<br>WELL   | CEMENT FILL UP OR SACKS - CUBIC FT.  |  |  |  |  |  |
| 20 - 16   |   |   |  |  |  |  |  |  |
| 13 - 10   |   |   |  |  |  |  |  |  |
| 9 - 5/8   |   |   |  |  |  |  |  |  |
| 8 - 5/8   | 1/20  | 230   | Bemouted to See  |  |  |  |  |  |
| 7   |   |   |  |  |  |  |  |  |
| 5 1/2   |   |   |  |  |  |  |  |  |
| 4 ½   |   |   |  |  |  |  |  |  |
| 3   |   |   | Perf. Top  |  |  |  |  |  |
| Linare  |   |   | Perf. Bottom   |  |  |  |  |  |
| Liners  |   |   | Perf. Top Perf. Bottom   |  |  |  |  |  |
|   |   |   | reit. Bottom   |  |  |  |  |  |
| OF PLAT.  TO DRILL DEEPER OR REDRILL  SUBMIT FIVE (5) COPIES OF  WELLS DRILLED PRIOR TO  MUST ALSO BE SUBMITTED  TO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORI  BOND, PERMANENT PLAT A  OIL AND/OR GAS WELL ORI | : FOG - 1, SHOWING ORIGO 1929, A PERMANENT OF GINALLY DRILLED BEFO AND ORIGINAL WELL RE | SINAL PERMIT NUMBER COPY OF THE PLAT AND ORE JUNE 5, 1929, FIVE (SCORD. | BOND AND PERMANENT COPY  AND PERFORMANCE BOND. ON  THE ORIGINAL WELL RECORD  5) COPIES OG - 1, PERFORMANCE  929, FIVE COPIES OG - 1, SHOW- |  |  |  |  |  |
| ING ORIGINAL PERMIT NUM  Required forms must be filed four (24) hours in advance.   |   | · ·   | se. Inspector to be notified twenty-   |  |  |  |  |  |
|   |   |   |  |  |  |  |  |  |
|   |   |   |  |  |  |  |  |  |
| The following waiver must be thereof.   | completed by the coal or  | perator if the permit is to b   | pe issued within ten days of receipt   |  |  |  |  |  |
|   | . <b>F</b>  |   |  |  |  |  |  |  |
| WAIVER; I the undersigned, Agent this lease have examined   |   | Coal Company, Own   |  |  |  |  |  |  |
| We the  | Coal Company  | have no objections to said  | well being drilled at this location,   |  |  |  |  |  |
|   |   |   | d 7, Chapter 22 of the West Virginia   |  |  |  |  |  |
|   |   |   | For Coal Company   |  |  |  |  |  |
|   |   |   | Official Title   |  |  |  |  |  |

FCRM WW-2(B) FILE COPY
(Obverse)
7/85



| 1) Date: Apr              | Date: April 15, |         |    |        |  |  |  |
|---------------------------|-----------------|---------|----|--------|--|--|--|
| 2) Operator's Well No. Ro | obert We        | tzel #2 | W  |        |  |  |  |
| 3) API Well No.           | 47 -09          | 5-0729  | -F |        |  |  |  |
|                           | State           | County  | I  | Permit |  |  |  |

# STATE OF WEST VIRGINIA DIVISION OF OIL BEACH STMENT OF ENERGY, OIL AND GAS DIVISION DEPARTMENT OF ENERGYPPLICATION FOR A WELL WORK PERMIT

| 4) WELL II                            |               |                      |                |             |            |              |              |                                       |                                       |             |                  | V            |                 |
|---------------------------------------|---------------|----------------------|----------------|-------------|------------|--------------|--------------|---------------------------------------|---------------------------------------|-------------|------------------|--------------|-----------------|
|                                       | B (1          | lf "Gas",            | Productio      | n <u>10</u> | mcf        | _/ Un        | derground    | storage                               | / Deep                                | ·           | / Shallow        | ·            | /)              |
| 5) LOCATIO                            |               | evation: _           |                | (0)         | न्य        |              |              | liddle Isla                           |                                       |             | <del></del>      | •            |                 |
| S WELLOR                              |               | strict: <u>U</u>     |                |             |            | _ Co         | unty: Ty     | 7) DESIGNAT                           | Quad                                  | lrangle:    | Corror           |              |                 |
| Address                               | P.O.          | $\frac{1-west}{80x}$ | 62             | Teum        | сов        | E • <u>~</u> |              | Address                               | EDAGENT_<br>4½ Str                    |             | <u>sayer</u>     |              |                 |
| Addiess                               |               | tta, 0               |                | 2575        | 0          | - (*)        |              | Address                               | Willia                                |             | 1. WV 2          | 26187        |                 |
| 8) OIL & GA                           |               |                      |                | FIED        |            |              |              | 9) DRILLING                           |                                       |             |                  |              |                 |
| Name                                  | Robert        |                      |                |             |            |              | -            | •                                     | rry Ston                              | -           | et .             |              |                 |
| Address                               |               | ral De               |                |             |            |              | -            | Address                               | Spence                                | r, Wes      | st Virgir        | nia          |                 |
|                                       | Midd          | 1ebour               | ne, W          | 26.         | 149        |              | -            |                                       | <u>(304)</u>                          | 927-45      | 37               | <del></del>  |                 |
| 10) PROPOSE                           | D WELL        | WORK:                | Drill          |             | _/ Drill   | dee          | per          | / Redrill                             | / Stir                                | nulate      | <u>XX</u> _/     |              |                 |
|                                       |               |                      |                |             |            |              |              | ate new formation                     | onXX_/                                |             |                  |              |                 |
|                                       |               |                      |                |             |            |              | pecify)      | )rillablt                             | PCH                                   | <u> </u>    |                  |              |                 |
| 11) GEOLOGI                           |               |                      |                | l,          | KEEL       | 1CK          | -222         |                                       | · · · · · · · · · · · · · · · · · · · |             |                  |              |                 |
| 12) Estima                            | ated depth    | of complet           | ed well,       | i.17 •      | 70         |              | feet         | 1500                                  | }                                     |             |                  |              |                 |
| 13) Appro<br>14) Appro                | ximate trat   | ia depins:           | Fresh, _       | 100         | 201        | 1            | eet; salt    |                                       | feet.                                 |             | ,                | <b>✓</b>     |                 |
| 15) CASING A                          |               |                      |                | <i></i>     | ON I       |              | IS CO        | al being mined in                     | ine area! Yes                         |             | / No_            |              | /               |
| CASING OR                             | 1110 1001<br> |                      | IFICATION      | s           |            |              | FOOTAGE I    | NTFRVALS                              | li CEMENT                             | FILL-UP     | fi BA            | CKERS        |                 |
| TUBING TYPE                           | Size          | Grade                | Weight per ft. | New         | Used       | For          | drilling     | Left in well                          | OR S                                  | ACKS        | 1^               | JAERS        |                 |
| Conductor                             | 312           | Grade                | per n.         | 1100        | Oseu       | roi          | omang        | Lett in wen                           | (Cubi                                 | r reet)     | Kinds Dr         | ei 11 ob     | le Plug         |
| Fresh water                           | 1             |                      |                |             |            |              |              |                                       | -                                     |             | Killus DI        | тттар        | <u>re r</u> rug |
| Coal                                  | /             |                      |                |             |            |              |              | ,                                     | 7                                     |             | Sizes 41/21      | 1            |                 |
| Intermediate                          | 42            |                      |                |             |            | 24           | 14           | 2614                                  | 10 54                                 | RF.         |                  |              |                 |
| Production                            | 1             |                      |                |             |            |              |              |                                       |                                       | 1317        | Depths set       | 1650'        |                 |
| Tubing                                |               |                      |                |             |            |              |              |                                       |                                       |             |                  |              |                 |
| Linc. s                               |               |                      |                |             |            |              |              |                                       |                                       |             | Perforations:    | 20           |                 |
|                                       | -             |                      | <u> </u>       | ļ           |            |              |              |                                       |                                       |             | Тор              | Botte        | om              |
|                                       | <b> </b>      |                      |                | ļ           |            |              |              |                                       | _                                     |             | 1598 <b>'</b>    | 1            | 608'            |
|                                       | ll            | l                    | <u> </u>       |             | L I        |              |              | l                                     |                                       |             | <u> </u>         |              |                 |
|                                       |               |                      |                |             |            |              |              |                                       |                                       |             |                  |              | 4               |
|                                       |               |                      |                |             |            | DEELC        | CE USE C     | ) NI V                                |                                       |             |                  | ·            | <del></del> .   |
|                                       |               |                      |                | 1           |            |              | LING PE      |                                       |                                       |             |                  |              |                 |
| •                                     | 4             | 7 00 <b>5</b>        | 0504           | M           | _          |              |              |                                       |                                       |             |                  |              |                 |
| Permit number_                        | 4             | 7-095                | -0729          | <u> </u>    |            |              |              |                                       |                                       |             | ay 5             | 19           | 86              |
| This permit cove                      | ring the w    | ell operato          | r and wel      | Il locatio  | n shown    | helow i      | s avidanca ( | of permission gra                     | ntad to deill in                      | Da          |                  | 4!4 1        | 1               |
| quirements subje                      | ct to the co  | onditions of         | ontained       | herein a    | nd on the  | reverse      | hereof Not   | ification must be                     | nica to arm m<br>viven to the D       | istrict Oil | and Gas Inch     | ertinent i   | egai re-        |
| o. 8) Prior to the district oil and g | e construct   | ion of roa           | ds, location   | ns and      | pits for a | ny perm      | itted work.  | ification must be<br>In addition, the | well operator                         | or his cor  | itractor shall i | notify the   | proper          |
| _                                     | -             |                      |                | -           |            |              |              | •                                     |                                       |             |                  |              |                 |
| the permitted we<br>everse hereof.    | ork is as de  | escribed in          | the Notic      | e and A     | pplication | i, plat,     | and reclama  | ation plan, subjec                    | t to any modif                        | ications a  | nd conditions    | specified    | l on the        |
| Permit expires _                      | M             | ay 5,                | 1988           | 3           |            |              | _unless well | work is commenc                       | ed prior to tha                       | t date and  | prosecuted w     | ith due di   | ligence.        |
|                                       |               |                      |                |             |            |              |              |                                       | •                                     |             |                  |              |                 |
| Bond:                                 | Agent         | . р                  | lat:           | Cooti       | na 1       | roo.         | LIDCD        | CSE AK                                | 0+1                                   |             |                  |              |                 |
| اعدام المراد                          | Agent         | .   [                |                | Casi        | ١ ٦        | ee           | WPCP         | S&E of                                | Other                                 |             |                  |              |                 |
|                                       | 1/2/          | 3   F                | 2              | XD          | 1/8        | 32           | A. M.        |                                       |                                       |             |                  |              | 1               |
|                                       |               |                      | •              |             |            |              | $\circ$      | 110                                   | 0 /                                   | 1 1.        | 12.              | 19           | 16.             |
| VOTE: Van -                           | ne con: of    | thic                 | it nost-d      | nt the J    | illina la- | ation        | ユ            | thu N. Ja                             | huston.                               | 04/1        | largar           | <u>10 / </u> | Mussi           |
| NOTE: Keep of                         | ne copy of    | mis perm             | n posted       | at the di   | ming loca  | ation,       | / phi        | rector, Di                            | vision o                              | f/0il       |                  |              | File            |
|                                       |               | See                  | the revers     | e side o    | the APP    | LICAN        | T'S COPY     | for instructions                      | to the well ope                       | rator.      |                  |              |                 |