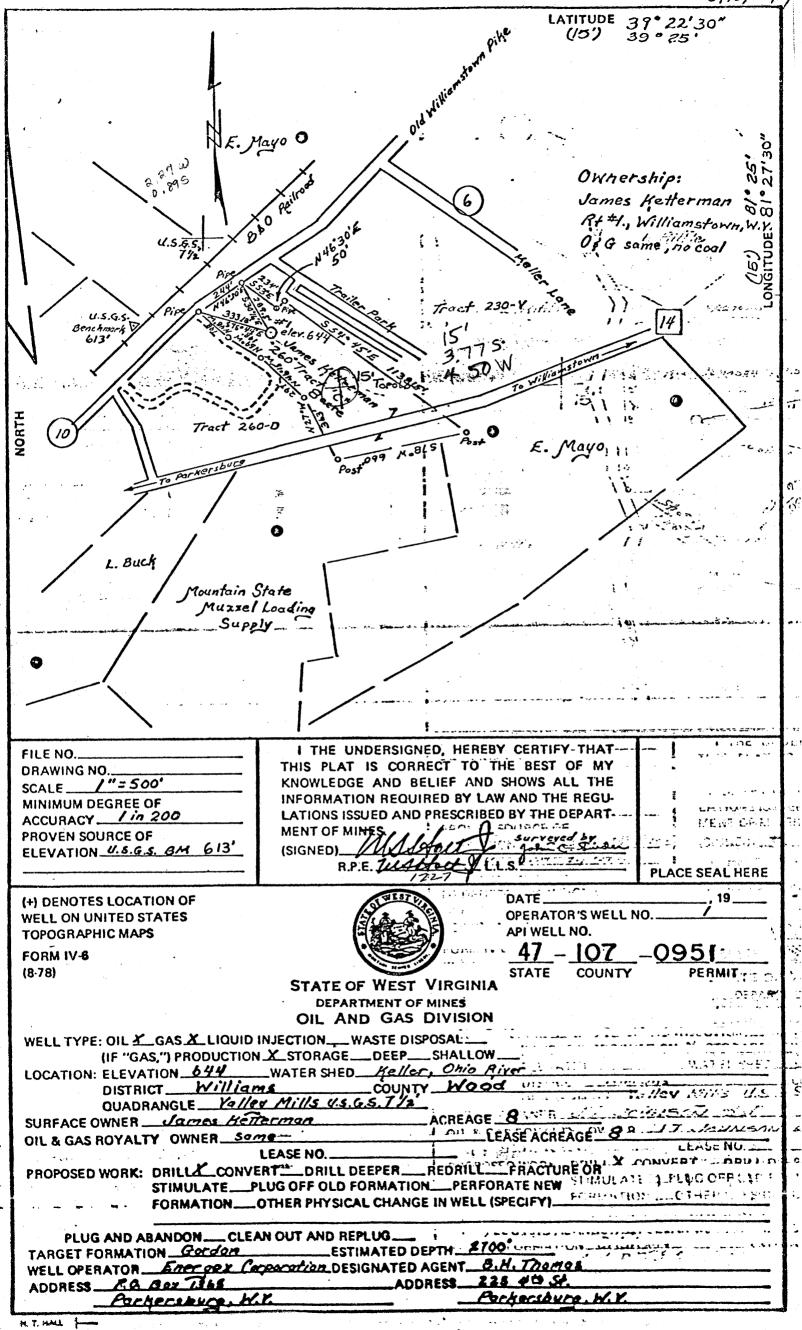


Boaz (70)

5 1980 MAR



| •                                      |              | 7  |  | tt of west    | VIRGINIA                   | Date                              | October 6 , 19.       |
|--|--------------|--|--|---------------|----------------------------|-----------------------------------|-----------------------|
| FORM I                                 | se)          |  |  |               | VIRGINIA<br>IL AND GAS DIV | ISION Operator Well No            | C's EN. 951           |
| [08-78                                 |              | OIL & GAS  | h<br>Division  | ELL OPERATOR  | 'S REPORT 24               | API Wel                           | 107 095               |
|  | DI           | DRID HENU  | MINE   | AND/OR STIM   | ULATINJ, OR EE             | YSIJAL CHANGE                     | State County Permi    |
| WELL TYPE:                             | 011 <u>X</u> | / Gas_X  | _/ Liqu  | id Injection  | / Waste                    | Disposal/                         |                       |
|  | (If "Gas     | ', Producti  | .on/   | Underground   | i storage                  | / Deep/                           | ShallowO              |
| LOCATION:                              | Elevation    | 1:644  | + '  | Watershed:    | Keller                     |                                   |                       |
|  | District:    | Willia   | ams  | County:       | Wood                       | Quadrangle: V                     | alley Mills           |
| WELL OPERATO                           | R Ene        | rgex Cor   | poratio  | on            | DESIGNATED ,               | AGENT Walter                      | r H. Allen            |
| Address                                | Р.           | 0. Box 1   | .365   |               | Addres                     | 225 Fe                            | ourth Street          |
|  |              | kersburg   |  |               |                            |                                   | rsburg, WV 26101      |
|  | Plug<br>Othe | off old f  | ormation_<br>change 1  | / Perfo       | orate new form             | ation/                            | acture or stinulate X |
| PERMIT ISSUE                           | D ON Fe      | bruary 1   | <u>L3</u> , 1  | 9_80          | OIL & GAS I                | NSPECTOR FOR THE                  | (3 WURK:              |
| (IF APPLICAE                           | LE: PLUC     | GING OF DE   | RY HOLE ON   |               | Name K. ]                  | Paul Goodnig                      | ht                    |
| REWORKI                                | NG. VER      | RESSION FRO<br>BAL PERMISS   | OM DRILLIN<br>SION OBTAI   | NED           | Addres                     | s Smithvil                        | le, WV                |
| -                                      |              | , 19   |  |               |                            |                                   |                       |
| GEOLOGICAL T                           | ARGET FOR    | RMATION:   | Berea  | 1             |                            | Depth 192                         | 0-24 deem             |
| Depth o                                | f complet    | ed well,   | 2328   | feet 1        |                            | Cable Tools                       |                       |
|  |              |  |  |               | , 1500 <sub>feet</sub> .   |                                   |                       |
|  |              |  |  |               |                            | n the area? No                    |                       |
| Words up                               | am depens    | Mei  | cch 19   | IS COAL       | being mined i              | n the area?                       | <br>er 16 80          |
| work wa                                | s commend    | ed   | CIL IJ   | , 19 00       | _, and complete            | ed <u>Depection</u>               | er 16 , 13 80         |
| CASING AND T                           | UBING PRO    | GRAM   |  |               |                            |                                   |                       |
|  |              | SPECIFICATI  | OMS  | # Poomag      | C Tumpours                 | <b>M</b>                          |                       |
|  | 84.56        |  |  | FOOTAG        | E INTERVALS                | CEMENT FILL-U<br>OR SACKS         | PACHERS               |
| Conductor                              | 8 5/8        | ade per 1t   | X X  | 244           | ng Left in well 244        | OR SACKS (Cubic feet) Cemented to | •                     |
| 00.10001                               | 0 3/0        |  | 1 1  | 244           | 244                        | Surface                           | Kinds                 |
| Fresh water                            | <del> </del> |  |  |               |                            |                                   |                       |
| Coal                                   |              |  |  |               |                            |                                   | Sizes                 |
| Intermediate                           |              |  |  |               |                            |                                   |                       |
| Production                             | 4월           | 9.5  | X  | 2328          | 2328                       | 100 Sks.                          | Depths set            |
| Tubing                                 |              |  |  |               | 50050                      |                                   |                       |
| Liners                                 |              |  |  |               | 11/1/2                     | الله الله الله                    | Perforațions:         |
|  |              |  |  |               |                            |                                   | Tip Bottom            |
|  |              |  |  |               |                            | ULT 1 4 1980                      | 307                   |
|  |              | 1.5 market action and action of the section of the  | The comment of the control of the co |               |                            |                                   |                       |
| ************************************** |              | PRESERVE AND SERVE AND SER | A  | 4             |                            | LA GAS DIVISION                   |                       |
| OPEN FLOW DAT                          | A.           |  |  |               | DE!                        | T. OF MIN                         |                       |
| Producir                               | ng format:   | ion I  | Berea  |               |                            | Pay zone dept!                    | 1920-24 feet          |
| Gas                                    | s: Initia    | al open flo  | ow, 60   | 00 Mef/d      |                            | l open flow,                      |                       |
|  |              |  |  |               |                            | open flow,                        |                       |
|  |              |  |  | 1.00          | 1                          | sts, <u>24</u> hours              |                       |
| Q+.                                    |              |  |  |               |                            | after 48 hours                    |                       |
|  |              |  |  |               | = measurement)             | arter hou                         | ira shut in           |
|  |              | ue to multa  |  |               |                            |                                   |                       |
|  |              | formation  |  |               |                            |                                   | Tfee.                 |
| Gas                                    |              | al open flo  |  |               |                            | l open flow,                      |                       |
| •                                      | Final        | open flow,   |  | Mcf/d         | Final                      | open flow,                        | Bb1/d                 |
|  |              | Fime of $op_{ar{\epsilon}}$  | en flow be   | tween initial | l and final te             | sts, hours                        | 5                     |
| Sta                                    |              |  |  |               |                            |                                   | urs shusetm 9 & 1980  |

[08-78]

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

Perforated 1921' to 1923', with 8 holes. Fractured with 500 gallons 15% HCL acid, 550 B/W and 20,000 pounds sand.

WELL LOG

| -                   |              |                  | •              |                |   |
|---------------------|--------------|------------------|----------------|----------------|---|
| FORMATION           | Color        | llard or<br>Soft | Z1<br>Top Feet | Bottom<br>Feet | Including indication of all fresh and salt water, coal, oil and gas |
| Soil & Conglomerate | s Brown      | Soft             | Surface        |                | COLI, COLI, OIL AND 125   |
| Shaly Sand          | Brown        | Med.             | 112            | 112<br>436     | fresh water 92-108  |
| Shale & Sandy Shale |              | Med.             |                |                | 1 200   |
| Sand<br>Shale       | Gray         | Hard             | 436            | 490            |   |
| Share               | Dk.          | Soft             | 1,00           |                |   |
| Sand                | Gray<br>Gray | Hard             | 490<br>686     | 686            |   |
| Shale               | Gray         | Med.             | 700            | 700<br>792     |   |
| Sand                | Lt.          | neu.             | / / / /        | /92            |   |
|                     | Gray         | Med.             | 792            | 886            |   |
| Shale               | Gray-        |                  | ''-            |                |   |
|                     | Brown        | Soft             | 886            | 908            |   |
| Shaly Sand          | Brown        | Med.             | 908            | 975            |   |
| Shale               | Dk.          |                  |                |                |   |
|                     | Gray -       | Soft             | 975            | 1016           |   |
|                     | Red          |                  |                |                |   |
| Sand                | White        | MedHd            | 1016           | 1014           |   |
| Sandy Shale         | Dk.          |                  |                |                |   |
|                     | Gray         | Med              |                |                |   |
| Sholes Sand         | c 70 1       | Soft             | 1041           | 1230           |   |
| Shaly Sand          | & Red        |                  | 1230           | 1339           |   |
|                     | Lt.          | Ma d             | 1220           | 1,01           |   |
| Shale               | Gray<br>Dk.  | Med.             | 1330           | 1421           |   |
| 511416              | Gray         | Soft             | 1421           | 1538           | 2014 1/0/ 1520  |
| Lime & Sandy Lime   | Gray         | Hard             | 1421           | 1330           | salt water 1484-1538  |
| Shale               | Gray         | Soft             | 1538           | 1880           | ·   |
| Coffee Shale        | Dk. Bn       |                  | 1880           | 1920           |   |
| Berea Sand          | White        | Hard             | 1920           | 1925           | oil and gas show  |
| Shale               | Gray         | Med. Hd          |                | 2230           | oil and gas snow  |
| Gordon Sand         | Lt.          |                  |                |                | -   |
|                     | Gray         | Med.Hd.          | 2230           | 2252           | gas show  |
| Shale               | Ďk.          | İ                |                | -              |   |
|                     | Gray         | Med.Hd.          | 2252           | 2354           |   |
|                     |              |                  |                |                |   |
| 1                   |              |                  |                |                |   |
| [                   |              |                  |                |                |   |

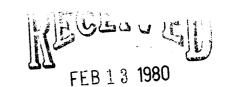
(Attach separate sheets to complete as necessary)

By SECRET

NOTE: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed geologial record of all formations, including coal, encountered in the drilling of a well."





#### **DEPARTMENT OF MINES**

#### Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

### OIL AND GAS WELL PERMIT APPLICATION

| Charlesto   | n, w. va.  | DATE   | Feburary 13,                             | 1980   |
|---|--|--|--|--|
| Surface Owner   | James Ketterman  | Company_   | Energex Corpo                            | ration   |
| Address   | Rt. #1. Williamsto   | own W. V. Address  | P.O.Box 1365.                            | Parkersburg, W.  |
| Mineral Owner   | Same   | Farm   | James Ketterm                            | an Acres 8   |
| Address   |  | Location   | (waters) Keller                          |  |
| Coal Owner  | Same   | Well No  | one (1.)                                 | Elevation 644  |
| Address   |  | District   | • •                                      | County Wood  |
| Coal Operator   | Same   | Quadrangl  | e Valley Mills                           | บ.ร. <b>g.s.</b> 7½'   |
| Address   |  |  |  |  |
| drilling ons have not comment on Director - Oil & G         | ordance with Chapter 22, position is hereby approved. This permit shall expire if ced by 10-13-80.   | INSPECTOR TO BE NOTION ADDRESS PHONE477  | FIED <u>K. Paul</u><br>Smith <b>v</b> il | <u> </u>   |
| title thereto, (or as nergex agent  19, inW                 | well operator is entitled to d the case may be) under grar made to James Ketter  ood County, Book  WELL DRILL D  | man and Page   | recorded on the                          | by Pavanne K   |
| The undersigned title thereto, (or as nergex agent  19, inW | the case may be) under grandle made to Jemes Ketter  ood County, Book  WELL DRILL DRILL DRILL DRILL DRILL DRILL DRILL DRILL  t was prepared by a registere as of the above date.   | nt or lease dated June man and n Page —  EEPER — RED LY DRILLED BEFORE J d engineer or licensed la   | recorded on the                          | ACTURE OR STIMULA  |
| The undersigned title thereto, (or as nergex agent  19, in  | the case may be) under grand made to James Ketter ood County, Book  WELL DRILL DRILL DRILL DRILL DRILL DRILL DRILL DRILL DRILL DRICK TO THE DRIVE DRICK TO THE DRIVE DRICK DRI | representation of the properties of the properti | recorded on the                          | ACTURE OR STIMULA  coal owners and/or operations to make, or are required within ten (10) days. The above named coal operations or on the coal operations are sequentially as a coal operation.  |
| The undersigned title thereto, (or as nergex agent  19, in  | the case may be) under grandle made to Jemes Ketter ood County, Book  WELL DRILL DRI | representation of the properties of the properti | recorded on the                          | ACTURE OR STIMULA  coal owners and/or operation to make, or are required within ten (10) days. The above named coal operation before, or on West Virginia.   |
| The undersigned title thereto, (or as nergex agent  19, in  | the case may be) under grandle made to Jemes Ketter ood County, Book  WELL DRILL DRICK was prepared by a registere as of the above date.  d coal owners and/or operator 3 of the Code, must be receivative and the enclosed plat we their above shown respective and the individual of this coperation of this coperation.   | representation of the properties of the properti | recorded on the                          | ACTURE OR STIMULA  coal owners and/or operations to make, or are required within ten (10) days. The above named coal operations or on the coal operations are sequentially as a coal operation.  |
| The undersigned title thereto, (or as nergex agent  19, in  | the case may be) under grandle made to Jemes Ketter ood County, Book  WELL DRILL DRI | representation of the properties of the properti | recorded on the                          | ACTURE OR STIMULA  coal owners and/or operation to make, or are required within ten (10) days. The above named coal operation before, or on West Virginia.  Acture or stimulation of the |
| The undersigned title thereto, (or as nergex agent  19, in  | the case may be) under grandle made to Jemes Ketter ood County, Book  WELL DRILL DRI | nt or lease dated June  man and remain Page —  EEPER RED  A DRILLED BEFORE J  dengineer or licensed later are hereby notified that lived by, or filed with the remailed by registered maddress —  by to the Department of livery truly y  (Sign Name).  Address of   | recorded on the                          | ACTURE OR STIMULA  coal owners and/or operation to make, or are required to the make, or are required t |
| The undersigned title thereto, (or as nergex agent  19, in  | the case may be) under grandle made to Jemes Ketter ood County, Book  WELL DRILL DRI | nt or lease dated June  man and remain Page —  EEPER RED  A DRILLED BEFORE J  dengineer or licensed later are hereby notified that lived by, or filed with the remailed by registered maddress —  by to the Department of livery truly y  (Sign Name).  Address of   | recorded on the                          | ACTURE OR STIMULA  coal owners and/or operation to make, or are required to the make, or are required t |

\*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.

## BLANKET POWS

| 47- <b>1</b> 85-0951 |               |
|----------------------|---------------|
| 107                  | 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 John C Sinder agent

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

| PROPOSED WORK ORDER TO   | XX DRILL  | DEEPEN  | FRACTURE-STIMULATE  |  |  |  |  |
|--|---|---|---|--|--|--|--|
| DRILLING CONTRACTOR: (If   | Known)  | RESPONSIBLE AGENT:  |   |  |  |  |  |
| NAME Paul Drilling Co.   |   | NAME B. H. Th   | lomas   |  |  |  |  |
| ADDRESS 225 Fourth St. TELEPHONE 422   |   |   | urth St., Parkersburg, W. V<br>2-5418   |  |  |  |  |
| ESTIMATED DEPTH OF COMPL   |   |   | CABLE TOOLS   |  |  |  |  |
| PROPOSED GEOLOGICAL FORM   |   |   | CABLE TOOLS   |  |  |  |  |
| TYPE OF WELL: OIL  | XX GAS XX CO  | OMB. STORA  | AGE DISPOSAL  |  |  |  |  |
|  |   |   | FLOOD OTHER   |  |  |  |  |
|  |   |   | Joob  |  |  |  |  |
| TENTATIVE CASING PROGRAM   | <b>:</b>  |   |   |  |  |  |  |
| CASING AND TUBING  | LIAND DOD   | T   |   |  |  |  |  |
| SIZI   | USED FOR<br>DRILLING  | LEFT IN<br>WELL   | CEMENT FILL UP<br>OR SACKS - CUBIC FT.  |  |  |  |  |
| 20 - 16  |   |   |   |  |  |  |  |
| 13 - 10  |   | l   |   |  |  |  |  |
| 9 - 5/8  |   |   |   |  |  |  |  |
| 8 - 5/8  | 250 <b>'</b>  | 250 <b>'</b>  |   |  |  |  |  |
| 7  |   |   |   |  |  |  |  |
| 1 1/2  |   |   |   |  |  |  |  |
|  |   |   |   |  |  |  |  |
|  |   |   |   |  |  |  |  |
|  |   |   |   |  |  |  |  |
| į į  |   |   |   |  |  |  |  |
|  |   | Mari wa singapiningan akainsa ka isa sa u gana, na sa sa sa ganaka manandaka sa galaka sa sa sa sa sa sa sa sa<br>Mari ka singapiningan na katalanga ka isa sa u gana na sa |   |  |  |  |  |
| OF FLAT.  O DRILL DEEPER OR REDRILL  SUBMIT FIVE (5) COPIES O  WELLS DRILLED PRIOR TO  MUST ALSO BE SUBMITTED  O FRACTURE - STIMULATE:   | F OG - 1, SHOWING ORIGIN<br>) 1929, A PERMANENT COP<br>).   | AL PERMIT NUMBER A  | BOND AND PERMANENT COPY  AND PERFORMANCE BOND. ON  THE ORIGINAL WELL RECORD  COPIES OG - 1, PERFORMANCE |  |  |  |  |
| BOND, PERMANENT PLAT   | AND ORIGINAL WELL RECO  | RD.   | 929, FIVE COPIES OG - 1, SHOW-  |  |  |  |  |
| ING ORIGINAL PERMIT NUM  | BER, AND PERFORMANCE B  | OND.  | 545, FIVE CUPIES OG - 1, SHOW-  |  |  |  |  |
| Required forms must be filed four (24) hours in advance.   | within ninety (90) days of cor  | npletion for bond release   | e. Inspector to be notified twenty-   |  |  |  |  |
|  |   |   |   |  |  |  |  |
| The second section of the section of the second section of the section of the second section of the sectio |   |   |   |  |  |  |  |
|  |   |   |   |  |  |  |  |
| The fallers in   |   |   |   |  |  |  |  |
| ereor.   |   | •   | e issued within ten days of receipt   |  |  |  |  |
| AIVER: I the undersigned, Agent<br>this lease have examined  | 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. |   |   |  |  |  |  |
|  |   |   | well being drilled at this location,  |  |  |  |  |
| providing operator has con   | mplied with all rules and regular   | tions in Articles 4, 5, and   | well being drilled at this location, if 7, Chapter 22 of the West Virginia                              |  |  |  |  |
|  |   |   | E-0-10  |  |  |  |  |
|  |   |   | For Coal Company  |  |  |  |  |

Official Title