



**CERTIFICATE**

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Minimum degree of accuracy is one part in 300

Signed Frank E. Barlow LL# 209

COMPANY KAISER EXPLORATION & MINING COMPANY  
 ADDRESS PO BOX B, RAVENSWOOD, WEST VIRGINIA  
 FARM CHARLIE DICKENS ETAL  
 MAP 28204 N 39729 LEASE NO. KEM 33  
 WELL (FARM) NO. 2 SERIAL NO. KEM 33  
 ELEVATION (SPIRIT LEVEL) 902  
 QUADRANGLE ELMWOOD 7 1/2 WINFIELD 15' NE  
 COUNTY MASON DISTRICT UNION  
 POINT OF PROVEN ELEVATION BME L-628  
 FILE NO. \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 DATE FEB. 27, 1960 SCALE 1"=1000 FT.

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

WELL LOCATION MAP  
 FILE NO. 053-0221

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 62,500. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.  
 -- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

orig. key 5000  
 Deep Well  
 6-6 Rock Castle (346)  
 MAR 31 1980



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SEP 15 1980

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

OIL & GAS DIVISION  
Oil and Gas Division DEPT. OF MINES

WELL RECORD

Rotary  Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas   
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Quadrangle Elmwood  
53  
Permit No. MAS-0221

|   |                       |                   |                   |                               |
|---|-----------------------|-------------------|-------------------|-------------------------------|
| Company <u>Kaiser Exploration and Mining Company</u>      | Casing and Tubing     | Used in Drilling  | Left in Well      | Cement fill up Cu. ft. (Sks.) |
| Address <u>P. O. Box 8, Ravenswood, WV 26164</u>          | Size                  |                   |                   |                               |
| Farm <u>Charlie Pickens, et al Acres 397.49</u>           | Cond.                 |                   |                   |                               |
| Location (waters) <u>Sapsucker Run</u>                    |                       |                   |                   |                               |
| Well No. <u>KEM #33</u> Elev. <u>902</u>                  | <u>13-10" 10 3/4"</u> | <u>244' (KB)</u>  | <u>244' (KB)</u>  | <u>125 sks class A</u>        |
| District <u>Union</u> County <u>Mason</u>                 | <u>9 5/8</u>          |                   |                   | <u>3% calcium chloride</u>    |
| The surface of tract is owned in fee by _____             | <u>8 5/8</u>          |                   |                   | <u>(to surface)</u>           |
| <u>D. Dallas &amp; Rebecca Kayser</u>                     | <u>7</u>              | <u>2643' (KB)</u> | <u>2643' (KB)</u> | <u>165 sks</u>                |
| Address <u>Pt. Pleasant, WV 25550</u>                     | <u>5 1/2</u>          |                   |                   | <u>(1500' fillup)</u>         |
| Mineral rights are owned by <u>Charlie Pickens, et al</u> | <u>4 1/2</u>          | <u>4865' (KB)</u> | <u>4865' (KB)</u> | <u>225 sks</u>                |
| Address <u>Leon, WV</u>                                   | <u>3</u>              |                   |                   | <u>(2500' fillup)</u>         |
| Drilling Commenced <u>6/4/80</u>                          | <u>2</u>              |                   |                   |                               |
| Drilling Completed <u>6/14/80</u>                         | Liners Used           |                   |                   |                               |
| Initial open flow <u>25 MCFD</u> cu. ft. _____ bbls.      |                       |                   |                   |                               |
| Final production <u>500</u> cu. ft. per day _____ bbls.   |                       |                   |                   |                               |
| Well open <u>20</u> hrs. before test <u>1750</u> RP.      |                       |                   |                   |                               |

Well treatment details:

Attach copy of cementing record.

28% HCL acid in hole; perforated Oriskany from 4876'-4883' (K.B.), 4 holes/ft, 28 holes, .51" diameter, 3 1/2" glass jets; hydrofractured zone with 30,000# 80/100 sand and 30,000# 20/40 sand, 200,000 SCF of nitrogen at an average rate of 22 BPM at an average pressure of 3900 psig; instantaneous shut in pressure was 3500 psig.

500 MCF

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Oriskany sandstone Depth 4876'-4883' (K.B.)

| Formation         | Color | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | * Remarks |
|-------------------|-------|--------------|----------|-------------|-------------------|-----------|
| Soil              |       |              | 0        | 4           |                   |           |
| Sand              |       |              | 4        | 56          |                   |           |
| Siltstone         |       |              | 56       | 172         |                   |           |
| Shale             |       |              | 172      | 182         |                   |           |
| Sand              |       |              | 182      | 276         |                   |           |
| Red Rock          |       |              | 276      | 483         |                   |           |
| Siltstone & Shale |       |              | 483      | 586         |                   |           |
| Sand              |       |              | 586      | 594         |                   |           |
| Siltstone         |       |              | 594      | 647         |                   |           |
| Sand              |       |              | 647      | 657         |                   |           |
| Shale             |       |              | 657      | 717         |                   |           |
| Siltstone         |       |              | 717      | 756         |                   |           |
| Sand              |       |              | 756      | 764         |                   |           |
| Siltstone         |       |              | 764      | 963         |                   |           |
| Sand              |       |              | 963      | 968         |                   |           |
| Siltstone         |       |              | 968      | 1020        |                   |           |
| Sand              |       |              | 1020     | 1050        |                   |           |
| Shale             |       |              | 1050     | 1217        |                   |           |
| Siltstone & Shale |       |              | 1217     | 1336        |                   |           |
| Sand              |       |              | 1336     | 1363        |                   |           |
| Shale             |       |              | 1363     | 1375        |                   |           |
| Sand              |       |              | 1375     | 1445        |                   |           |
| Siltstone         |       |              | 1445     | 1488        |                   |           |

Tops from KB = 912

(over)

\* Indicates Electric Log tops in the remarks section.

| Formation    | Color | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | * Remarks     |
|--------------|-------|--------------|----------|-------------|-------------------|---------------|
| Sand         |       |              | 1488     | 1514        |                   |               |
| Siltstone    |       |              | 1514     | 1616        |                   |               |
| Sand         |       |              | 1616     | 1624        |                   |               |
| Siltstone    |       |              | 1624     | 1641        |                   |               |
| Sand         |       |              | 1641     | 1660        |                   |               |
| Siltstone    |       |              | 1660     | 1717        |                   |               |
| Sand         |       |              | 1717     | 1722        |                   |               |
| Siltstone    |       |              | 1722     | 1761        |                   |               |
| Sand         |       |              | 1761     | 1778        |                   |               |
| Siltstone    |       |              | 1778     | 1834        |                   |               |
| Maxon Sand   |       |              | 1834     | 1894        |                   |               |
| Siltstone    |       |              | 1894     | 1917        |                   |               |
| Big Lime     |       |              | 1917     | 2042        |                   |               |
| Shale        |       |              | 2042     | 2086        |                   |               |
| Big Injun    |       |              | 2086     | 2142        |                   |               |
| Siltstone    |       |              | 2142     | 2533        |                   |               |
| Coffee Shale |       |              | 2533     | 2556        |                   |               |
| Berea        |       |              | 2556     | 2570        |                   |               |
| Siltstone    |       |              | 2570     | 2644        |                   |               |
| Shale        |       |              | 2644     | 3752        | Show - gas        | 3990' - 4060' |
| Brown Shale  |       |              | 3752     | 4212        | Show - gas        | 4135' - 4220' |
| Shale        |       |              | 4212     | 4549        |                   |               |
| Marcellus    |       |              | 4549     | 4774        |                   |               |
| Onondaga     |       |              | 4774     | 4854        | Show - gas        | 4854' - 4890' |
| Oriskany     |       |              | 4854     | 4890        |                   |               |
| Helderberg   |       |              | 4890     | 4959        |                   |               |
| Total Depth  |       |              | 4959     |             |                   |               |

3761  
 4135  
 4345  
 4854  
 4959

Date September 12, 1980

APPROVED Paul A. P. Owner

By Operations Manager

(Title)



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED  
MAR 11 1980

Oil and Gas Division  
OIL AND GAS WELL PERMIT APPLICATION

OIL & GAS DIVISION  
DEPT. OF MINES

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

DATE February 28, 1980

Surface Owner D. Dallas & Rebecca Kayser  
Address Pt. Pleasant, WV 25550  
Mineral Owner Charlie Pickens, et al  
Address Leon, WV  
Coal Owner Union Carbide Corporation  
Address 32 Sanderson Road, Clendenin, WV  
Coal Operator None  
Address None

Company Kaiser Exploration and Mining Company  
Address P. O. Box 8, Ravenswood, WV 26164  
Farm Charlie Pickens, et al Acres 397.49  
Location (waters) Sapsucker Run  
Well No. KEM 33 Elevation 902  
District Union County Mason  
Quadrangle Elmwood

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 11-17-80

INSPECTOR  
TO BE NOTIFIED Kenneth Butcher  
ADDRESS RFD #1, Barboursville, WV 25504  
PHONE 736-4885

Robert T. [Signature]  
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  
there to, (or as the case may be) under grant or lease dated May 26 19 78 by Charlie Pickens  
et al made to Kaiser Exploration and Mining Co. and recorded on the 28 day of June  
79, in Mason County, Book 45 Page 811

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  
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  
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  
PHYSICAL LOGS DIRECTLY TO:

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

Very truly yours,

(Sign Name) R. A. Pryce  
Well Operator  
Address P. O. Box 8  
Street  
Ravenswood  
City or Town  
West Virginia 26164  
State

Address  
of  
Well Operator

\*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 COVER

**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 Known) \_\_\_\_\_ RESPONSIBLE AGENT: \_\_\_\_\_  
 NAME Not known at this time \_\_\_\_\_ NAME Robert A. Pryce \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ ADDRESS P. O. Box 8, Ravenswood, WV 26164 \_\_\_\_\_  
 TELEPHONE \_\_\_\_\_ TELEPHONE 273-5371 \_\_\_\_\_  
 ESTIMATED DEPTH OF COMPLETED WELL: 5000' \_\_\_\_\_ ROTARY  CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Oriskany \_\_\_\_\_  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS  COMB. \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

**TENTATIVE CASING PROGRAM:**

| CASING AND TUBING SIZE | USED FOR DRILLING | LEFT IN WELL | CEMENT FILL UP OR SACKS - CUBIC FT. |
|------------------------|-------------------|--------------|-------------------------------------|
| 20 - 16                |                   |              |                                     |
| 13 - 10                |                   |              |                                     |
| 9 - 5/8      10 3/4"   | 200               | 200          | Cement to surface                   |
| 8 - 5/8                |                   |              |                                     |
| 7                      | 2600              | 2600         | 125 sk = 570 feet                   |
| 5 1/2                  |                   |              |                                     |
| 4 1/2                  | 5000              | 5000         | 125 sks = 1500 feet                 |
| 3                      |                   |              | Perf. Top                           |
| 2                      |                   |              | Perf. Bottom                        |
| Liners                 |                   |              | Perf. Top                           |
|                        |                   |              | Perf. Bottom                        |

APPROXIMATE FRESH WATER DEPTHS \_\_\_\_\_ FEET      SALT WATER \_\_\_\_\_ FEET  
 APPROXIMATE COAL DEPTHS \_\_\_\_\_  
 COAL BEING MINED IN THE AREA? None BY WHOM? \_\_\_\_\_

**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