

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all of the information required by paragraph 4 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

*[Signature]*  
E. P. No. 1

- Fracture
- New Location
- Drill Deeper
- Abandonment

Elev. Well No. 2 = 397  
Error in Closure: - Less than 1' in 200'

Company Robert L. Holland

Address 1/2 Robert L. Holland, West Union, W. Va.

Farm Henry Knight

Tract \_\_\_\_\_ Acres 219 Lease No. \_\_\_\_\_

Well (Farm) No. Four Serial No. \_\_\_\_\_

Elevation (Spirit Level) 397' OK - 4.748 3.67W

Quadrangle Centerpoint *WC*

County Boydridge District Grant

Engineer [Signature]

Engineer's Registration No. 1227

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date April 1, 1965 Scale 1" = 400' = 660'

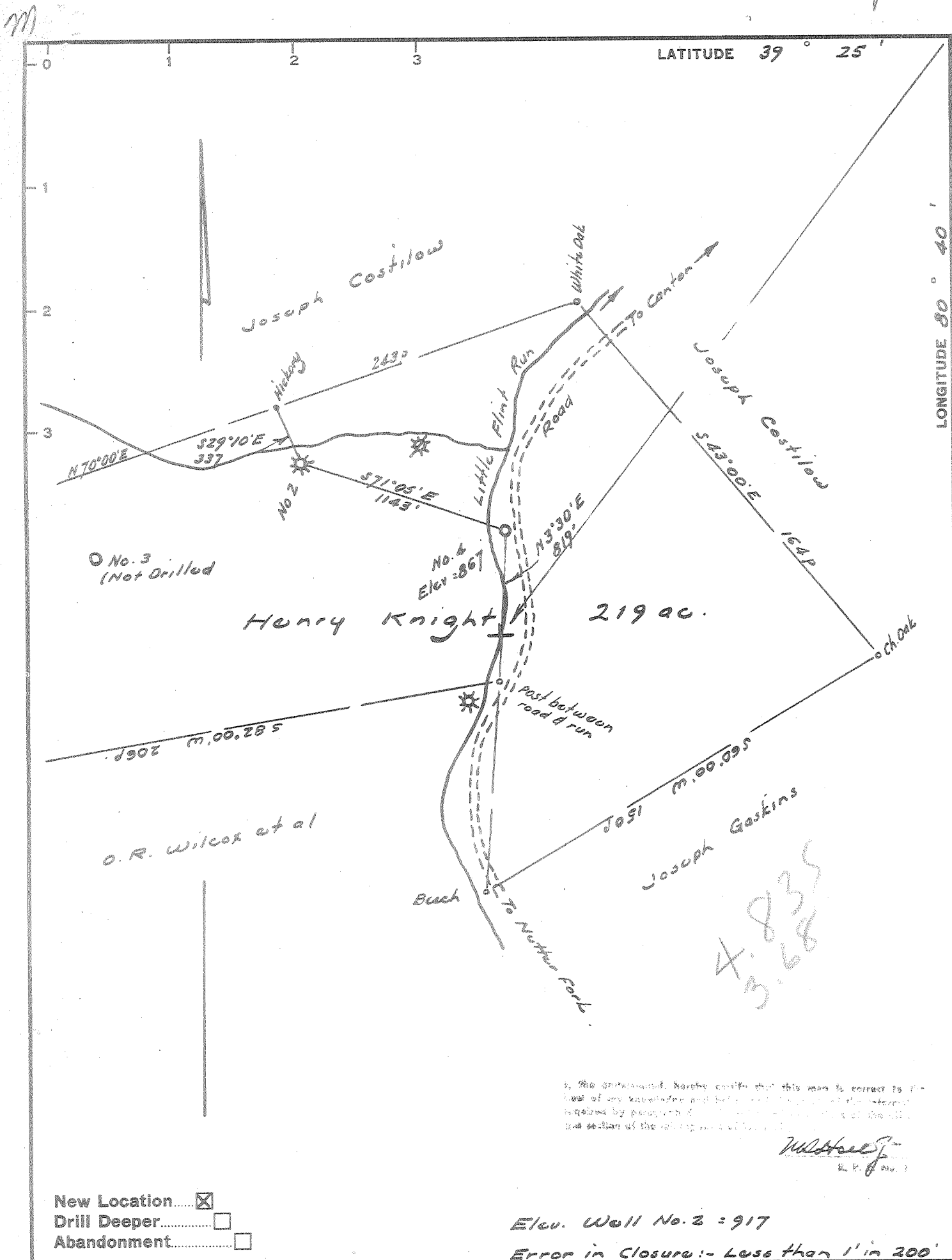
STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
CHARLESTON

WELL LOCATION MAP  
FILE NO. 800-1240-FRAC.

+ 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.

JUN 5 1974



Company HENDERSON & HOLLAND

Address c/o Robert L. Holland, West Union, W. Va.

Farm Henry Knight

Tract \_\_\_\_\_ Acres 219 Lease No. \_\_\_\_\_

Well (Farm) No. Four Serial No. \_\_\_\_\_

Elevation (Spirit Level) 867'

Quadrangle Centerpoint - WC

County Doddridge District Grant

Engineer *W. H. Gaskins*

Engineer's Registration No. 1227

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date April 1, 1965 Scale 1" = 400' = 660'

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

**WELL LOCATION MAP**  
 FILE NO. 000-1240

+ 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.

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STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle Centerpoint

Permit No. DoD 1240

WELL RECORD 25

Oil or Gas Well oil & gas

Company Henry Knight No. 4  
Address West Union, W. Va.  
Farm Henry Knight Acres 219  
Location (waters) Knights Fork 847-25-200  
Well No. 2 Elev. 917  
District Grant County Doddridge  
The surface of tract is owned in fee by Henry Knight, et al  
Address Wilsonburg, W. Va.  
Mineral rights are owned by Henry Knight, et al  
Address Wilsonburg, W. Va.

| Casing and Tubing | Used in Drilling | Left in Well | Packers           |
|-------------------|------------------|--------------|-------------------|
| Size              |                  |              | Kind of Packer    |
| 16                |                  |              | none              |
| 18                | 34               | 34           | Size of           |
| 10                | 67               | -0-          | Depth set         |
| 8 1/4             | 560              | -0-          |                   |
| 6 5/8             | 1080             | -0-          |                   |
| 5 3/16            |                  |              |                   |
| 4 1/2             | 2026             | 2026         | Perf. top 1926    |
| 2                 |                  |              | 6 holes           |
|                   |                  |              | Perf. bottom 1932 |
|                   |                  |              | Perf. top 1946    |
|                   |                  |              | 6 holes           |
|                   |                  |              | Perf. bottom 1953 |

Drilling commenced April 28, 1965  
Drilling completed July 26, 1965  
Date Shot \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_

Open Flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
\_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
Volume 80 M. \_\_\_\_\_ Cu. Ft.  
Rock Pressure 225 lbs. 24 hrs.  
Oil 2 bbls., 1st 24 hrs.

CASING CEMENTED \_\_\_\_\_ SIZE 4 1/2 No. Ft. \_\_\_\_\_ Date  
Cemented in to 1650

WELL ACIDIZED 1,000 gals. 7/14/65

COAL WAS ENCOUNTERED AT none FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

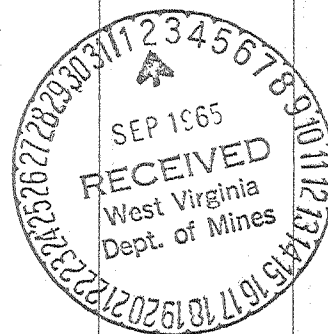
WELL FRACTURED 7/14/65 55,000 lbs. sand, 1425 barrels water

RESULT AFTER TREATMENT 250,000 gas 8 barrels oil

ROCK PRESSURE AFTER TREATMENT 500

Fresh Water 55 Feet \_\_\_\_\_ Salt Water none Feet \_\_\_\_\_

| Formation      | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth   | Remarks        |
|----------------|-------|--------------|-----|--------|-------------------|---------|----------------|
| Soil           |       | Soft         | 12  |        |                   |         |                |
| Sand & gravel  | gray  | soft         | 12  | 23     | water             |         | 22 ft. per hr. |
| Clay slate     | dark  | soft         | 23  | 30     |                   |         |                |
| Sand           | light |              | 30  | 42     |                   |         |                |
| Red Rock       | Red   | soft         | 42  | 52     | water             | 55 feet | hole full      |
| Gritty shale   | Gray  | hard         | 52  | 58     |                   |         |                |
| Pink rock      | pink  | hard         | 58  | 66     |                   |         |                |
| Lime           | light | hard         | 66  | 72     |                   |         |                |
| Dark slate     | dark  | soft         | 72  | 100    |                   |         |                |
| Red rock       | red   | soft         | 100 | 110    |                   |         |                |
| Green shale    | green | soft         | 110 | 115    |                   |         |                |
| Red rock       | red   | soft         | 115 | 130    |                   |         |                |
| Green shale    | green | soft         | 130 | 165    |                   |         |                |
| Red rock       | red   | hard         | 165 | 205    |                   |         |                |
| Gray sand      | gray  | hard         | 205 | 220    |                   |         |                |
| Red rock       | red   | soft         | 220 | 230    |                   |         |                |
| Green shale    | green | soft         | 230 | 255    |                   |         |                |
| Lime           | light | hard         | 255 | 285    |                   |         |                |
| Red rock       | red   | soft         | 285 | 320    |                   |         |                |
| Gray lime      | gray  | hard         | 320 | 360    |                   |         |                |
| Red rock       | red   | soft         | 360 | 375    |                   |         |                |
| green shale    | green | soft         | 375 | 395    |                   |         |                |
| Gray lime      | gray  | hard         | 395 | 447    |                   |         |                |
| Slate & shells | gray  | soft         | 447 | 505    |                   |         |                |
| Gray lime      | gray  | hard         | 505 | 525    |                   |         |                |
| Gray shale     | gray  | soft         | 525 | 547    |                   |         |                |
| Gritty lime    | dark  | hard         | 547 | 570    |                   |         |                |
| Lime           | gray  | hard         | 570 | 590    |                   |         |                |



(over)

\* 1897 - 1904, 8 holes  
\* 1886 - 1892, 6 holes

| Formation            | Color | Hard or Soft | Top  | Bottom | Oil, Gas or Water | Depth Found | Remarks |
|----------------------|-------|--------------|------|--------|-------------------|-------------|---------|
| Slate                | white | soft         | 590  | 620    |                   |             |         |
| Red rock             | red   | soft         | 620  | 780    |                   |             |         |
| Gray shale           | gray  | soft         | 780  | 810    |                   |             |         |
| Gritty lime          | gray  | hard         | 810  | 824    |                   |             |         |
| Black slate          | black | soft         | 824  | 855    |                   |             |         |
| Red rock             | red   | soft         | 855  | 864    |                   |             |         |
| Sand                 | light | hard         | 864  | 875    |                   |             |         |
| Slate & shell        |       |              | 875  | 890    |                   |             |         |
| Red & gray shale     |       | soft         | 890  | 905    |                   |             |         |
| Slate & shells       |       |              | 905  | 940    |                   |             |         |
| Sand                 | gray  | hard         | 940  | 954    |                   |             |         |
| Slate                | light | soft         | 954  | 970    |                   |             |         |
| slate                | black |              | 970  | 1024   |                   |             |         |
| Slate & shells       | gray  | soft         | 1024 | 1047   |                   |             |         |
| Sand                 | gray  | soft         | 1047 | 1067   |                   |             |         |
| Slate                |       | soft         | 1067 | 1080   |                   |             |         |
| Gritty lime          | light | hard         | 1080 | 1200   |                   |             |         |
| Gritty lime          |       | hard         | 1200 | 1212   |                   |             |         |
| Sand                 | light | hard         | 1212 | 1220   |                   |             |         |
| Shale                | black | soft         | 1220 | 1235   |                   |             |         |
| Slate & shells       | dark  | hard         | 1235 | 1256   |                   |             |         |
| Lime                 | dark  | hard         | 1256 | 1280   |                   |             |         |
| Sand                 | light | soft         | 1280 | 1300   |                   |             |         |
|                      |       |              | 1300 | 1405   |                   |             |         |
| Slate                | black | soft         | 1405 | 1440   |                   |             |         |
| Sand shells          |       |              | 1440 | 1445   |                   |             |         |
| Black slate & shells |       |              | 1445 | 1483   |                   |             |         |
| Sand                 |       |              | 1483 | 1575   |                   |             |         |
| Slate & shells       |       |              | 1575 | 1600   |                   |             |         |
| Gritty lime          |       |              | 1600 | 1610   |                   |             |         |
| Sand                 |       | hard         | 1610 | 1638   |                   |             |         |
| Gritty lime          |       | soft         | 1638 | 1660   |                   |             |         |
| Black slate          |       |              | 1660 | 1664   |                   |             |         |
| Sand                 |       |              | 1664 | 1704   |                   |             |         |
| black shale          |       | soft         | 1704 | 1718   |                   |             |         |
| lime                 |       |              | 1718 | 1760   |                   |             |         |
| Sand                 |       |              | 1760 | 1775   |                   |             |         |
| lime (Big)           |       | hard         | 1775 | 1850   | oil               | 1773-1775   |         |
| Sand                 |       |              | 1850 | 2021   | gas               | 1858-1862   |         |
| late                 |       |              | 2021 | 2026   | gas & water at    | 1885        |         |
|                      |       |              |      |        | oil & gas at      | 1976        |         |
|                      |       |              |      |        | oil               | 1990        |         |
| TOTAL DEPTH          |       |              |      | 2026   |                   |             |         |

Date September 1, 1965

APPROVED Robert M. Mullen, Owner

By agent (Title)



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED  
MAY 2 1974

OIL & GAS DIVISION  
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

Surface Owner Henry Knight, et al  
Address West Union, W. Va.  
Mineral Owner Gertrude Opatich, et al  
Address 250 E. Florida Ave, Youngstown, Ohio  
Coal Owner not operated  
Address \_\_\_\_\_  
Coal Operator \_\_\_\_\_  
Address \_\_\_\_\_

DATE March 28, 1974  
Company ROBERT L. HOLLAND  
~~XXXXXXXXXXXX~~  
Address 105 High Street, West Union  
Farm Henry Knight Acres 219  
Location (waters) Little Flint  
Well No. 4 Elevation 267  
District Grant County Doddridge  
Quadrangle Centerpoint

DOD-1240 issued April 19, 1965, well in continuous operation. Plans call for fracturing the top pay in the Injun Sand which was not fractured at the time the lower pays were fractured. No new drilling or plugging contemplated. 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 fracturing. This permit shall expire if operations have not commenced by 9-2-74

INSPECTOR TO BE NOTIFIED Paul Garrett  
321 Beech St. PH: 622-3871  
Clarksburg, WV.

GENTLEMEN:

[Signature]  
Deputy Director - Oil & Gas Division

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 January 10 1962 by Henry Knight, et al made to J.M. Henderson & R.L. Holland and recorded on the 13 day of Feb. 1963 in Doddridge County, Book 79 Page 43

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 owners 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.

Very truly yours,

(Sign Name) Robert Melland  
Well Operator

Address  
of  
Well Operator

105 High Street  
Street  
West Union,  
City or Town  
West Virginia 26456  
State

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:

West Virginia Geological and Economic Survey  
P. O. Box 879  
Morgantown, W. Va. 26505  
AG 304-296-4461

\*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.

Burvey  
Bud Ince.

DOD-1240-FRAC. \_\_\_\_\_ PERMIT NUMBER  
47 017

**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 Rugh Spencer NAME Robert L. Holland  
 ADDRESS Smithburg, W. Va. ADDRESS West Union, W. Va.  
 TELEPHONE 873-1602 TELEPHONE 873-1921  
 ESTIMATED DEPTH OF COMPLETED WELL: \_\_\_\_\_ ROTARY \_\_\_\_\_ CABLE TOOLS   
 PROPOSED GEOLOGICAL FORMATION: \_\_\_\_\_  
 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                |                   |              |                                     |
| 8 - 5/8                |                   |              |                                     |
| 7                      |                   |              |                                     |
| 5 1/2                  |                   |              |                                     |
| 4 1/2                  |                   |              |                                     |
| 3                      |                   |              | Perf. Top                           |
| 2                      |                   |              | Perf. Bottom                        |
| Liners                 |                   |              | Perf. Top                           |
|                        |                   |              | Perf. Bottom                        |

APPROXIMATE FRESH WATER DEPTHS \_\_\_\_\_ FEET SALT WATER \_\_\_\_\_ FEET  
 APPROXIMATE COAL DEPTHS \_\_\_\_\_  
 IS COAL BEING MINED IN THE AREA? \_\_\_\_\_ 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

FRACTURE RECORD

Well Name and No: Henry Knight # 4  
District: Grant County: Doddridge  
Permit No: DOD-1240-FRAC. Completion Date: May 29, 1974  
Formation Fractured: Material:  
Top 1858  
Bottom 1862 BT  
Rock Pressure: Test after Fracture:  
Before Fracture Unknown Oil 0  
After Fracture Unknown Gas 9,600 MCF

These well records were loaned and not returned, I cannot supply further information.

Robert M. Holland  
Signature  
May 27, 1980  
Date

COMPANY Robert L. Holland  
105 High Street  
West Union W.Va. 26456

RECEIVED  
MAY 28 1980  
OIL & GAS DIVISION  
DEPT. OF MINES  
MAY 16 1980