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

WELL LOCATION MAP
FILE NO. MARS-161/A
9/6

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.
### WELL RECORD

**Company:** The Manufacturers Light and Heat Company  
**Address:** 800 Union Trust Bldgs., Pittsburgh 19, Pa.  
**Permit No.:** MARS-373-R

### Details
- **Farm:** Ray Lough  
- **Location (waters):** L-4583  
- **Elev.:** 1216.07'  
- **District:** Liberty  
- **County:** Marshall  
- **Mineral rights owned by:**  
- **Drilling commenced:** March 25, 1960  
- **Drilling completed:** June 21, 1960  
- **Date Shot:** 6/30/60  
- **From Big Injun**  
- **With:** Office Well Tester  
- **Open Plow:**  
- **Water in:** 1/4  
- **Volume:** None  
- **Rock Pressure:** 5 lbs.  
- **Oil:**  
- **Fresh water:**  
- **Salt water:**  
- **Casing and Tubing:**  
- **Used in Drilling:**  
- **Left in Well:**  
- **Kind of Packer:**  
- **Size:**  
  - 16
  - 13
  - 10 3/8"  
  - 9 1/2"  
  - 7 1/2"  
  - 6 1/2"  
- **Depth Set:**  
  - 2021 ft.  
  - 2021 ft.  
- **Linens Used:**  
- **Perforation:**  
  - Perf. top  
  - Perf. bottom  
- **Casing Cemented:** Size No. Ft. Date

<table>
<thead>
<tr>
<th>Formation/Color</th>
<th>Thick.</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Pittsburgh Coal</td>
<td>8</td>
<td>904</td>
</tr>
<tr>
<td>#Big Dunkard Sand</td>
<td>108</td>
<td>1380</td>
</tr>
<tr>
<td>#Big Lime</td>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>#Big Injun Sand</td>
<td>624</td>
<td>1358</td>
</tr>
<tr>
<td>Old 7&quot; Casing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set New &amp; 7 at</td>
<td></td>
<td>1354</td>
</tr>
<tr>
<td>Set New 4-1/2 at</td>
<td></td>
<td>2021</td>
</tr>
<tr>
<td>Plug Back To</td>
<td></td>
<td>2280</td>
</tr>
<tr>
<td>TOTAL DEPTH</td>
<td></td>
<td>2280</td>
</tr>
</tbody>
</table>

**Coal was encountered at:** 904 Feet  
**Feet:** Inches  
**Feet:** Inches  
**Feet:** Inches

(Over)
## WELL RECORD

**Company:** CAMERON NATURAL GAS COMPANY  
**Address:** 1011 PRICE BUILDING, PITTSBURGH, PA.  
**Farm:**  
**Location (waters):** BIG RUN  
**Well No.:** 2-916  
**Elev:** 1159  
**County:** MARSHALL  
**Drilling commenced:** 1-15-19  
**Date shot:** SAME HOLE  

### Casing and Tubing

<table>
<thead>
<tr>
<th>Size</th>
<th>Used in Drilling</th>
<th>Left in Well</th>
<th>Packers</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>Kind of Packer</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td>Size of</td>
</tr>
<tr>
<td>8¾</td>
<td></td>
<td>1125¹</td>
<td>Depth set</td>
</tr>
<tr>
<td>6 5/8</td>
<td></td>
<td>1997¹</td>
<td></td>
</tr>
<tr>
<td>5 3/16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Open Flow

- /10ths Water in.: Inch
- /10ths Merc. in.: Inch

### Volume
- On Ft.: Cu. Ft.
- lbs.:  
- hrs.:  
- bbls., 1st 24 hrs.:  

### Rock Pressure
- lbs. per sq. in.:  

### Fresh water
- 1115 feet

### Salt water
-  

### Formation

<table>
<thead>
<tr>
<th>Formation</th>
<th>Color</th>
<th>Hard or Soft</th>
<th>Top</th>
<th>Bottom</th>
<th>Oil Gas or Water</th>
<th>Depth Found</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pittsburgh Coal</td>
<td>Murphy Sand</td>
<td></td>
<td>905'</td>
<td>1125'</td>
<td>Show of Gas</td>
<td>1110'</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1095</td>
<td></td>
<td>Water</td>
<td>1135'</td>
<td></td>
</tr>
<tr>
<td>Little Dunkard</td>
<td></td>
<td></td>
<td>1315</td>
<td>1330</td>
<td>Show of Gas</td>
<td>1455'</td>
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<tr>
<td>Big Dunkard</td>
<td></td>
<td></td>
<td>1375</td>
<td>1560</td>
<td>Water</td>
<td>1160'</td>
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<tr>
<td>1st Salt Sand</td>
<td></td>
<td></td>
<td>1925</td>
<td>1890</td>
<td>Show of Gas</td>
<td>2005' and</td>
<td></td>
</tr>
<tr>
<td>Maxon Sand</td>
<td></td>
<td></td>
<td>1942</td>
<td>1985</td>
<td>Show of Gas</td>
<td>2013'</td>
<td></td>
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<tr>
<td>Big Lime</td>
<td></td>
<td></td>
<td>1950</td>
<td>2010</td>
<td>Show of Gas</td>
<td>2051' and</td>
<td></td>
</tr>
<tr>
<td>Big Injun</td>
<td></td>
<td></td>
<td>2010</td>
<td>2875</td>
<td>Show of Gas</td>
<td>2033'</td>
<td></td>
</tr>
<tr>
<td>50-Foot Sand</td>
<td></td>
<td></td>
<td>2836</td>
<td>2866</td>
<td>Show of Gas</td>
<td>2856¹</td>
<td></td>
</tr>
<tr>
<td>orden Sand</td>
<td></td>
<td></td>
<td>2903</td>
<td>2934</td>
<td>Oil</td>
<td>2905¹-2906¹</td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL DEPTH
- 2959'

**COAL WAS ENCOUNTERED AT 905 FEET INCHES**

**SHOOTING RECORD**

<table>
<thead>
<tr>
<th>Date</th>
<th>Footage</th>
<th>Oil</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-6-19</td>
<td>2904'</td>
<td>2912¹</td>
<td></td>
</tr>
<tr>
<td>6-12-20</td>
<td>2903'</td>
<td>2909¹</td>
<td></td>
</tr>
<tr>
<td>8-11-29</td>
<td>2904'</td>
<td>2909¹</td>
<td></td>
</tr>
</tbody>
</table>

(Over) **AUG 4 1941**
<table>
<thead>
<tr>
<th>Formation</th>
<th>Color</th>
<th>Hard or Soft</th>
<th>Top</th>
<th>Bottom</th>
<th>Oil, Gas or Water</th>
<th>Depth Found</th>
<th>Remarks</th>
</tr>
</thead>
</table>

Date: **JULY 23, 1941**

APPROVED: Carnegie Natural Gas Company, Owner

By: [Signature] (Title) *Land Agent*