## WELL RECORD

### Company
Columbia Gas Transmission Corp.
800 Union Trust Building, Pgh., Pa.

### Address
M. A. Walton
Address

### Location (water)
Liberty County

### Well No.
L-4443

### Elev.
1334

### District
Liberty

### The surface of the tract is owned in fee by

### Mineral rights are owned by

### Reconditioning
Address

### Drilling commenced
6-23-69

### Drilling completed
8-8-69

### Date Shot
With Before fracturing

### Open Flow
24/10hs Water in

### Volume
809 MCF/day

### Rock Pressure
500 psig

### Oil
17 days

### bbls., 1st 24 hrs.

### WELL ACIDIZED (DETAILS)
- Treatment: 20,000/100 sand: 16,200 gal. water: 500 gal. acid: Max. Pres.--2500 psig; Avg. Pres.--2336 psig; Injection Rate--35.5 bbls/min

### RESULT AFTER TREATMENT (Initial open Flow or bbl) 6,090 MCF/day

### ROCK PRESSURE AFTER TREATMENT
720 P.S.I. HOURS 72 hours

### Fresh Water
Salt Water

### Producing Sand
Big Injun

### Depth
2155-2167

### Formations
<table>
<thead>
<tr>
<th>Formation</th>
<th>Color</th>
<th>Hard or Soft</th>
<th>Top</th>
<th>Bottom</th>
<th>Oil or Water</th>
<th>Depth</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pittsburgh Coal</td>
<td></td>
<td></td>
<td>1010</td>
<td>1016</td>
<td></td>
<td></td>
<td>Plugged back with 80 lbs. cement.</td>
</tr>
<tr>
<td>Maxton Sand</td>
<td></td>
<td></td>
<td>2003</td>
<td>2037</td>
<td></td>
<td></td>
<td>10-3/4&quot; cemented with 325 lbs.</td>
</tr>
<tr>
<td>Big Injun</td>
<td></td>
<td></td>
<td>2100</td>
<td>T.D.</td>
<td></td>
<td></td>
<td>7&quot; Cemented with 400 lbs.</td>
</tr>
<tr>
<td>Cleaned out to</td>
<td></td>
<td></td>
<td></td>
<td>2829</td>
<td></td>
<td></td>
<td>Work done by Well Service, Inc., in years 1956-1957.</td>
</tr>
<tr>
<td>Plugged back to</td>
<td></td>
<td></td>
<td></td>
<td>2392</td>
<td></td>
<td></td>
<td>4-1/2&quot; Liner cemented by Halliburton</td>
</tr>
<tr>
<td>Total Depth</td>
<td></td>
<td></td>
<td></td>
<td>2392</td>
<td></td>
<td></td>
<td>7-10-69 with 70 lbs. Latex Cement.</td>
</tr>
<tr>
<td>Above is record of well after 3-15-57 on Permit No. MARS-297-RED.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liner was installed from 2023' to 2392' on 7-10-69.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Total Depth</td>
<td></td>
<td></td>
<td></td>
<td>2390</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-1-69 Perforated and fractured the well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Testing
- rotary
- spudder
- cable tools
- storage

## Oil or Gas Well
- gas

### Attach copy of cementing record.
See below

### CASING CEMENTED
- SIZE
- No. Ft.
- Date

### Amount of cement used (bags)
See below

### Name of Service Co.
See below

### Coal was Encountered at
- FEET
- INCHES

### Rock Pressure
- FEET
- INCHES

### Fresh Water
- FEET

### Salt Water
- FEET

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**Note:** The image contains a form titled "STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS WELLS DIVISION WELL RECORD." The content includes detailed information about oil well operations, including formation data, cementing, and testing results. The page is dated January 24, 1972.
STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  

WELL RECORD  

Oil or Gas Well (Mine)  

**Company:** THE MANUFACTURERS LIGHT AND HEAT COMPANY  
**Address:** 800 UNION TRUST BUILDING, PITTSBURGH, PA.

<table>
<thead>
<tr>
<th>Casing and Tubing</th>
<th>Used in Drilling</th>
<th>Left in Well</th>
<th>Packers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>16</td>
<td>12</td>
<td>All pipe cemented in.</td>
</tr>
<tr>
<td>10</td>
<td>985'</td>
<td>2112'</td>
<td>Kind of Packer.</td>
</tr>
<tr>
<td>/</td>
<td>6%</td>
<td>/</td>
<td>Size of.</td>
</tr>
<tr>
<td>/</td>
<td>5 1/16</td>
<td>/</td>
<td>Depth set.</td>
</tr>
<tr>
<td>/</td>
<td>3</td>
<td>/</td>
<td>Perf. top.</td>
</tr>
<tr>
<td>/</td>
<td>2</td>
<td>/</td>
<td>Perf. bottom.</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>Perf. bottom.</td>
</tr>
</tbody>
</table>

**Drilling commenced:** September 11, 1956  
**Drilling completed:** March 15, 1957

**Address:**  
**Location (waters):**  
**Well No.:** F-3306  
**Elev.:** L-4443  
**District:** Liberty  
**County:** Marshall  
The surface of tract is owned in fee by.  
**Address:**  
**Mineral rights are owned by:**  
**Address:**  
**Date Shot From:**  
**Date Shot To:**

**Open Plow 1/10ths Water in:** Inch  
**/10ths Merc. in:** Inch

**Volume:** Cu. Ft.  
**Rock Pressure:** lbs. hrs.  
**Oil:** bbls., 1st 24 hrs.  
**Fresh water:** feet  
**Salt water:** feet

**CASING CEMENTED:** SIZE  
**No. Ft.**  
**Date**

**COAL WAS ENCOUNTERED AT:**  
**FEET**  
**INCHES**  
**FEET**  
**INCHES**  
**FEET**  
**INCHES**

<table>
<thead>
<tr>
<th>Formation</th>
<th>Color</th>
<th>Hard or</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schlumberger Well Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pittsburgh Coal</td>
<td>6</td>
<td>1010</td>
</tr>
<tr>
<td>Manxton Sand</td>
<td>34</td>
<td>2003</td>
</tr>
<tr>
<td>Big Injun Sand (See Schlumberger Survey)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Depth**

**Reconditioned for storage on Work Order No. 1651-L-1025-4**

**Bottom**  
**Oil, Gas or Water**  
**Depth Found**  
**Remarks**

All casing measured with threads on.  
* Ran 985' of 10-3/4' Casing S. M. Gr. H. 32# on steel shoe set at 777' Cemented with 2-Gags  
* 2037 Aqagel and 325 bags of cement. No return of cement to surface.  
* 2100 Ran 2112' of 7' Casing, 350' Gr. H. S. M. 20# and 1762' of Gr. J-55 S. M. 20# on steel shoe set at 2100' cemented with 2 bags of Aqagel and 400 bags of cement, no return of cement to surface.  
* Used 185 bags of cement to fill between 10-3/4' and 7' casing.  
* Hole filled back from 2839 to 2390' by pumping 80 bags of cement through 2" tubing.  
* Used 50 gal. mud acid to wash Big Injun Sand.  
* Well to be used for gas storage in Big Injun sand.
LIBERTY DISTRICT, MARSHALL COUNTY, W. VA.

Liberty District, Marshall County, W. Va.
By Carnegie Natural Gas Co.
Map, Cameron SE.
On 140 acres.

Deepened from 1926', March 15, 1918.
Plugged March 11, 1929.

Open flow, 7,000,000 cu. ft. (Salt Sand).
700,000 cu. ft. gas (Big Injun); 275 lbs. R. P. (Deepening).
Record from Wilcox Sept. 27, 1939.

<table>
<thead>
<tr>
<th>Coal/Sublayer</th>
<th>Top</th>
<th>Bottom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mapletown (Sewickley) Coal (show gas in coal)</td>
<td>915</td>
<td>918</td>
</tr>
<tr>
<td>Pittsburgh Coal (show gas and water in coal)</td>
<td>1012</td>
<td>1016</td>
</tr>
<tr>
<td>Murphy Sand</td>
<td>1128</td>
<td>1143</td>
</tr>
<tr>
<td>1st Gas Sand</td>
<td>1550</td>
<td>1590</td>
</tr>
<tr>
<td>1st Salt Sand</td>
<td>1515</td>
<td>1549</td>
</tr>
<tr>
<td>2nd Salt Sand (gas, 1921-25', 7,000 M.) DEEPENED</td>
<td>1921</td>
<td>1930</td>
</tr>
<tr>
<td>(started) March 15, 1918, at 1926'.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marton Sand</td>
<td>1998</td>
<td>2040</td>
</tr>
<tr>
<td>Big Lime</td>
<td>2095</td>
<td>2155</td>
</tr>
<tr>
<td>Big Injun Sand (gas at 2155'; 300 M. cu. ft.; 275# R. P.)</td>
<td>2155</td>
<td>2405</td>
</tr>
<tr>
<td>Gordon Stray Sand</td>
<td>2953</td>
<td>2976</td>
</tr>
<tr>
<td>Gordon Sand</td>
<td>3000</td>
<td>3020</td>
</tr>
<tr>
<td>Total depth</td>
<td>3220</td>
<td></td>
</tr>
</tbody>
</table>

2096
1339
41