



QUARRIER FARM LAND
1093.13Ac.

GREAT KANAWHA PETROLEUM, COAL & LUMBER COMPANY.
2809.8Ac.

ELEVATION FROM GOV. B.M. N° 14 JJS. 1956
El. 895.00
SURVEY CONNECTION - 1" IN 1000'

- New Location .
- Drill Deeper
- Redrill
- 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."

2.975
2.48W

2-C-11-5

| | |
|--|-------------------------------------|
| Company <u>PAGE BOWER CONSTRUCTION COMPANY</u> | |
| Address <u>ROOM 305 NELSON BUILDING, CHARLESTON, WV</u> | |
| FARMER <u>GREAT KANAWHA PETROLEUM, COAL & LUMBER CO.</u> | |
| Tract _____ | Acres <u>2809.8</u> Lease No. _____ |
| Well (Farm) No. <u>21</u> | Serial No. _____ |
| Elevation (Spirit Level) <u>1039.78</u> | |
| Quadrangle <u>PEYTONA-NC</u> | |
| County <u>HANAWHA</u> | District <u>LOUDEN</u> |
| Engineer <u>S. H. Miller</u> | |
| Engineer's Registration No. <u>1892</u> | |
| File No. _____ | Drawing No. _____ |
| Date <u>MAY 12 1965</u> Scale <u>1" = 500'</u> | |

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

WELL LOCATION MAP

FILE NO. KAN-2043

+ 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.

ALLEN BLUEPRINT & SUPPLY CO. No Samples (9,500 McF in Newburg) Deep Well 6-6 305



STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

- Rotary [X] Spudder [] Cable Tools [] Storage []

Quadrangle Peytona Permit No. KAN-2043

WELL RECORD

Oil or Gas Well Gas (KIND)

Company PACE BOWER CONSTRUCTION COMPANY Address 305 Nelson Bldg., Charleston, W. Va. Farm Great Kanawha Petroleum, Acres Coal and Lumber Spruce Fork of Mary Fork Location (waters) Well No. 21 Elev. 1047.81-KB District Loudon County Kanawha 1040.31-GL

Table with columns: Casing and Tubing, Used in Drilling, Left in Well, Packers. Includes rows for tubing sizes like 13-3/8, 9-5/8, 7", 5 3/16, 4-1/2" and packer details.

The surface of tract is owned in fee by Address Mineral rights are owned by Address

Drilling commenced 7/6/65 Drilling completed 8/9/65 Date Shot From To With

Open Flow /10ths Water in Inch /10ths Merc. in Inch Volume 8/16/65-68/10 Min 3" F.M. = Cu. Ft. Rock Pressure lbs. 2,147 MCF Oil bbls., 1st 24 hrs.

CASING CEMENTED SIZE No. Ft. Date 13-3/8 (7/6/65); 9-5/8 (7/12/65); 7" (7/29/65); 4-1/2 (8/11/65) COAL WAS ENCOUNTERED AT FEET INCHES FEET INCHES FEET INCHES

WELL ACIDIZED See Completion Data WELL FRACTURED See Completion Data

RESULT AFTER TREATMENT 9,500 MCF (11# - 3" Side Static) Blowing 2-1/2 hours - ROCK PRESSURE AFTER TREATMENT 2050# Misting Frac Fluid Fresh Water 100' (Driller) Feet Salt Water Feet

Main well log table with columns: Formation, Color, Hard or Soft, Top, Bottom, Oil, Gas or Water, Depth, Remarks. Includes lithology details and a 'RECEIVED' stamp.

(Continued on Attached Sheet)

| Formation | Top | Bottom | |
|-----------------------------|------|----------------|---|
| Shale | 1175 | 1203 | |
| Sandstone - <i>Mudstone</i> | 1203 | 1224 | |
| Shale | 1224 | 1272 | |
| Little Lime | 1272 | 1350 | |
| Big Lime | 1350 | 1543 | Show Gas (Driller) |
| Injun | 1543 | 1569 | 1485-90 - Density Log |
| Shale | 1569 | 4586 | 1534-40 - " " |
| Marcellus | 4586 | 4615 | |
| Onondaga | 4615 | 4709 | |
| Oriskany | 4709 | 4720 | |
| Limestone and Dolomite | 4720 | 5379 | Sulphur Water Zone 5241-77 |
| Newburg Sand | 5379 | 5398 | Conductivity Peaks 5248 and 5270 |
| Dolomite | 5398 | 5429 | (Lane Wells correlated to Schlumberger) |
| Total Depth | | 5429 (Logger) | |
| | | 5435 (Driller) | |

Note: Lane Wells Gamma and Induction Logs 5' higher than Schlumberger Gamma Log through Onondaga, Oriskany, and Sulphur Water Zones. Schlumberger tops used and Lane Wells Induction Log corrected to Schlumberger Gamma Log.

Chronological order of events:

- 7/6/65 - Commenced Drilling
 - 7/6/65 - Ran 23.40 feet of 13-3/8 - Cemented with 20 sacks cement and 100# Calcium Chloride.
 - 7/12/65 - Logged well: Gamma Ray 1" and 5" - 0 to 1590 (Lane Wells)
Density 1" and 5" - 500 to 1590 (Lane Wells)
 - 7/12/65 - Ran 9-5/8 casing at 1590 - Cemented with 125 sacks cement.
 - 7/28/65 - Logged Well: Gamma Ray 5" - 4500 to 5278 (Lane Wells)
Density 5" - 4500 to 5278 (Lane Wells)
Induction 5" - 4500 to 5275 (Lane Wells)
 - 7/29/65 - Ran 7" casing at 5291.35 - Cemented with 100 sacks cement.
 - 8/10/65 - Logged Well: Gamma Ray 1" and 5" - 4500 to 5428 (Schlumberger)
Density 1" and 5" - 5290 to 5428 (Schlumberger)
Induction 5" - 5290 to 5423 (Schlumberger)
 - 8/11/65 - Ran 4-1/2 casing at 5428. Ran Float Collar and Combination Guide and Float Shoe and 5 Centralizers. Cemented with 30 sacks cement.
 - 8/15/65 - Perforated 4-1/2 casing from 5379 to 5391 with 4 Selecto Jets per foot. (Birdwell)
 - 8/17/65 - Fractured Newburg: 500 gallons Mud Acid
650 BBLs Treated Water
17,000# 20/40 Sand
150,000 SCF of Nitrogen
Average Treating Pressure 4800 psi.
Average Injection Rate 15.8 BPM.
 - 8/16/65 - Before Acidizing and Fracturing = 68/10 M 3" (F.M.) = 2,147,000
 - 8/18/65 - After Blowing 2-1/2 hours and still misting frac fluid well gauged 9,500,000 (through 3" Side Static and 11#)
- F.O.F. = 9,500,000 and 2050#

RECEIVED
DEPARTMENT OF MINES
BUREAU OF LAND ADMINISTRATION