

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

3°22

Oil and Gas Division WELL RECORD 4

Quadrangle <u>Centerpoint</u>
Permit No. <u>DCD 173</u>4

| Company Willard E. Ferrell, Ag | | Casing and | Used in | Left | Cement fill up |
|--|--|---|----------|----------------------------|------------------|
| Address P.O.Box 5056, Philadelp | <u>bhia, Pa.</u> 191 | 11 Tubing | Drilling | in Well | Cu. ft. (Sks.) |
| Farm Virgil Thorn Acocation (waters) Pike Fork | eres | ~. | | | Ledi Avivia |
| • | 1122 | Size 20-16 | | | |
| 722 110122 | and the second s | Cond. | 16 | 16 | 1,500 00 12 02 0 |
| District McClellan County Dodo | | 13-10" | | 1 | |
| he surface of tract is owned in fee by Virgil Thorn, et al | | 9 5/8 | 342 | 342 | |
| | | 8 5/8 | 1212 | 7-72 | P.A. |
| ddress Charleston, W.Va | | 7 | 1212 | + | |
| lineral rights are owned by John A. Str | alcara a la car | 5 1/2 | | | |
| Address Pennsboro, W.V. | A.S | | 2125 | 2125 | 44.2 |
| rilling Commenced June 26, 19 | | 4 1/2 | 232 | 212) | |
| orilling Completed Aug 1, 1973 | | 2 | | | a da sa Hiji d |
| nitial open flow 30M cu. ft | UUIS. | | | | |
| inal production 959M cu. ft. per day _ | bbls. | Liners Used | | _ | |
| /ell open 12 hrs. before test_ | RP. | | <u> </u> | | |
| Waterfrac. 500 Gal. A | | | | | |
| | | | | | |
| Fresh water 215 F | eet | Salt \ | Water | 770 | Feet |
| and the same of th | eet | Salt \ | Water | 770 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft | Top Feet | Salt V | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun | Top Feet | Salt \ Depth Bottom Feet 15 30 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay | Top Feet 0 15 30 | Bottom Feet 15 30 45 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck | Top Feet 0 15 30 45 | Bottom Feet 15 30 45 100 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand | Top Feet 0 15 30 45 100 | Salt \ Depth Bottom Feet 15 30 45 100 120 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand Red Rock Slate Shells Sand Yellow | Top Feet 0 15 30 45 100 120 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Send Red Rock Slate Shells Sand Yellow Red Rock | Top Feet 0 15 30 45 100 120 130 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells | Top Feet O 15 30 45 100 120 130 160 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand | Top Feet O 15 30 45 100 120 130 160 200 | Salt V Depth Bottom Feet 15 30 45 100 120 130 160 200 230 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate | Top Feet O 15 30 45 100 120 130 160 200 230 | Salt V Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 | Water | 770 2080-21 | 150 |
| Fresh water 215 F Producing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Sand Red Rock Slate Shells Sand Black Slate Slate & Shells | Top Feet O 15 30 45 100 120 130 160 200 230 237 | Salt N Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 | Water | 770 2080-21 | 150 |
| Fresh water 215 Froducing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Sand Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 355 | Water | 770 2080-21 | 150 |
| Fresh water 215 Froducing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 | Salt N Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 | Water | 770 2080-21 | 150 |
| Fresh water 215 Froducing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells Sand | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 | Water | 770 2080-21 | 150 |
| Fresh water 215 Froducing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 | Salt N Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 | Water | 770 2080-21 | 150 |
| Fresh water 215 Producing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells Sand Slate & Shells | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 | Salt V Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 715 | Water | 770 2080-21 | 150 |
| Fresh water | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 715 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 237 260 355 430 490 510 620 715 740 | Water | 770 2080-21 | 150 |
| Fresh water 215 Froducing Sand Big Injun Formation Color Hard or Soft Clay Red Roeck Sand Red Rock Slate & Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells Red Rock Alast & Shells Sand Slate & Shells Sand Slate & Shells Sand Coal & Black Slate | Top Feet O 15 30 45 100 120 130 160 200 237 260 355 430 490 510 620 715 740 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 237 260 355 430 490 510 620 715 740 755 | Water | 770 2080-21 | * Remarks |
| Fresh water 215 Producing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Send Red Rock Slate & Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells Red Rock Alast & Shells Sand Slate & Shells Sand Slate & Shells | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 715 740 755 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 237 260 355 430 490 510 620 715 740 755 780 | Water | 770 2080-21 | 150 |
| Fresh water 215 Producing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Sand Red Rock Slate Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells Red Rock Alast & Shells Sand Slate & Shells Slate & Shaells Sand | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 715 740 755 780 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 715 740 755 780 805 | Water | 770 2080-2: or Water | * Remarks |
| Fresh water 215 Producing Sand Big Injun Formation Color Hard or Soft Clay Red Rock Send Red Rock Slate & Shells Sand Yellow Red Rock Slate & Shells Sand Black Slate Slate & Shells Red Rock Alast & Shells Red Rock Alast & Shells Sand Slate & Shells Sand Slate & Shells | Top Feet O 15 30 45 100 120 130 160 200 230 237 260 355 430 490 510 620 715 740 755 | Salt \ Depth Bottom Feet 15 30 45 100 120 130 160 200 237 260 355 430 490 510 620 715 740 755 780 | Water | 770 2080-2: or Water | * Remarks |

(over)

^{*} Indicates Electric Log tops in the remarks section.

| Formation Color Hard or Soft | Top Feet 4 | Bottom Feet | Oil, Gas or Water * Remarks |
|---|---|--|--|
| Slate & Shells Red Slate Sand Slate & Lime Red Rock Grey Shale Red Rock Slate & Shells Black Slate Slate & Shells Sand Slate & Shells Gritty Lime Slate & Shells Sand Slate & Shells Sand Slate & Shells Lime Red Slate & Shells Littla Lime Slate-Fencil Cave- Big Lime Sand Big Injun Slate | 870 900 925 940 975 1010 1055 1075 1150 1215 1230 1250 1330 1430 1555 1615 1725 1760 1875 1900 1970 1993 1998 2078 2094 2167 | 925 940 975 1010 1055 1075 1150 1215 1230 1250 1330 1430 1555 1615 1725 1760 1875 1900 1970 1993 1998 2078 2094 2167 2196 Te | Show of oil 2025 Gas #2001 to 2140 |
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| | | | |
| | | | |
| | | | ・ Accepted ・ 日本のから、「大きを持ち」 ・ 大きなから、「大きなから」 ・ 大きなから、「大きなから」 ・ 大きながら、「大きなから」 ・ 大きながら、「大きなよ」 |

| Date | Nov | Nov. 5 | | |
|----------------|------------|----------|---|--|
| | | | | |
| APPROVED | Willard E. | Ferrell, | Agent Owner | |
| and the second | 1000 | - ~ | and the transfer and the same property of | |
| Bv∡ | Lalland Z | If mill | arent | |
| | | (Title) | 0 | |







Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

| Surface Owner Address Mineral Owner Address Coal Owner Address Coal Operator Coal Operator | Location (waters) / Robinson Fork Well No Elevation |
|--|---|
| Address Address In Coal Owner Coal Operator Coal Operator Address Address In Coal Operator Coal Oper | Address Acres Farm Acres Location (waters) Robinson Fork Well No. Elevation |
| Mineral Owner Address Coal Owner Address Coal Operator Coal Operator | Farm Acres Location (waters) /Robinson Fork Well No. Elevation |
| Address I Coal Owner V Address I Coal Operator C | Location (waters) / Robinson Fork Well No Elevation |
| Coal Owner V Address I Coal Operator C | Well NoElevation |
| Address | |
| Coal Operator | District County |
| | • |
| Address | equation state of the state of |
| | |
| IIS PERMIT MUST BE POSTED AT THE WELL SIDELEY Il provisions being in accordance with Chapter 22, the W. Va Code, the location is hereby approved the drilling. This permit shall expire if the drilling bave not commenced by 10-12-73 | INSPECTOR TO BE NOTIFIED William Blosser |
| puty Director - Oil & Gas Division | Colfax, W.Va. PH: 363-9105 |
| GENTLEMEN: | |
| 19 in County, Book | and recorded on the day of Page REDRILLFRACTURE OR STIMULATE EFORE JUNE 5, 1969. |
| The enclosed plat was prepared by a registered engineer or lic | |
| The above named coal owners and/or operator are hereby notified make by Section 3 of the Code, must be received by, or filed with the code of the code, must be received by the code of the code, must be received by the code of the code | fied that any objection they wish to make, or are required with the Department of Mines within ten (10) days. * |
| Copies of this notice and the enclosed plat were mailed by regis or coal owners at their above shown respective addresssame day with the mailing or delivery of this copy to the Departm | day before, or on the |
| Very | y truly yours, |
| | n Name) - flegland & female Well Operator |
| Address of | Street |
| Well Operator | |
| wen 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.

DOD-1734 PERMIT NUMBER

Juni

THIS IS AN ESTIMATE ONLY ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

| PROPOSED WORK ORDER | ro Drill | DEEPENFR | ACTURE-STIMULATE |
|---|--|--|-------------------------------------|
| DRILLING CONTRACTOR: | (If Known) | RESPONSIBLE AGENT: | |
| NAME | | NAME | |
| ADDRESS | | ADDRESS | |
| TELEPHONE | x · | TELEPHONE | 1.387 |
| ESTIMATED DEPTH OF COM | MPLETED WELL: | _ ROTARY | CABLE TOOLS |
| PROPOSED GEOLOGICAL FO | ORMATION: | 2004 | |
| TYPE OF WELL: OI | | | DISPOSAL |
| • | RECYC | LING WATER FLOO | ODOTHER |
| | . A 75°F | | |
| TENTATIVE CASING PROGR | AM: | | |
| CASING AND TUBING | USED FOR | LEFT IN | CEMENT FILL UP |
| SIZE | DRILLING | WELL | OR SACKS - CUBIC FT. |
| 20 - 16 | | | The Dec |
| 13 - 10 9 - 5/8 | | | TO Bugs |
| 9 - 5/8 8 - 5/8 | | | 90 8005 |
| 7 | | | |
| 5 ½ | | | TO Bags |
| 4 1/2 | | | |
| 3 | | . 8 | Perf. Top |
| 2 | | | Perf. Top |
| Liners | | . Propinski produktor | 1 |
| | | | |
| ADDDOVIMATE EDECH WAT | יים איימים מיי | TSALT WATER _ | |
| | | | |
| IS COAL BEING MINED IN | THE AREA? | BY WHOM? | |
| | THE PARTY OF THE P | | |
| TO DRILL: | | | |
| SUBMIT FIVE (5) COP. OF PLAT. | ES OF OG - 1, \$100.00 PER | RMIT FEE, PERFORMANCE BO | OND AND PERMANENT COPY |
| | D.T.T. | • | |
| TO DRILL DEEPER OR RED | | TOTAL A TOTAL DATE AND TAKEN AND TAK | D DEDECOMANCE DOND ON |
| | R TO 1929, A PERMANENT | IGINAL PERMIT NUMBER AN COPY OF THE PLAT AND T | HE ORIGINAL WELL RECORD |
| TO FRACTURE - STIMULAT | F. | • | |
| OIL AND/OR GAS WEL | | FORE JUNE 5, 1929, FIVE (5) C | COPIES OG - 1, PERFORMANCE |
| OIL AND/OR GAS WEL | | AND/OR AFTER JUNE 5, 1929 | 9, FIVE COPIES OG - 1, SHOW- |
| Required forms must be four (24) hours in advan | | of completion for bond release. | Inspector to be notified twenty- |
| · · · · · · · · · · · · · · · · · · · | . 865 A.A. | | |
| | | | |
| | | | |
| | | | |
| thereof. | | | issued within ten days of receipt |
| | | | or Operator of the coal under |
| this lease have exa | mined and place on our mine | e maps this proposed well locati | ion. |
| | | | ell being drilled at this location, |
| | has complied with all rules and | regulations in Articles 4, 5, and ' | 7, Chapter 22 of the West Virginia |
| Code. | | | |
| | | | |
| | | Fe | or Coal Company |

Official Title