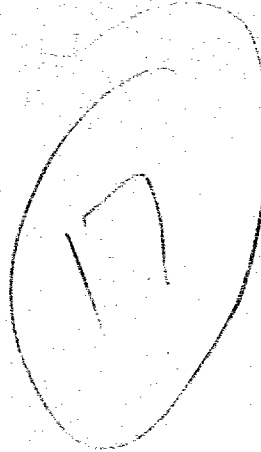


Case 537



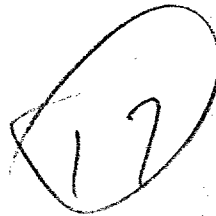
LOWRY et al OPERATING ACCOUNT

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PRODUCTIVITY INDEX TESTS

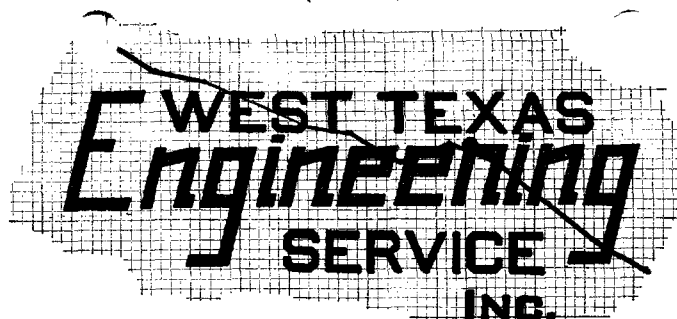
Federal 2-179

March 26, 1951 to March 29, 1951



WEST TEXAS ENGINEERING SERVICE, INC.  
Midland, Texas

W. T. HAGLER  
H. L. HAGLER  
W. M. CATES  
C. H. PICKENS  
R. W. HARRINGTON  
D. R. WATSON, JR.  
B. E. BLACK  
FIELD PETROLEUM ENGINEERS



P. O. BOX 1637  
TELEPHONE 4-4451  
FRETAG BUILDING  
223 S. BIG SPRING ST.  
MIDLAND, TEXAS  
  
FULL INSURANCE  
COVERAGE

### INDIVIDUAL WELL DATA SHEET

Company Doswell & Pettigrew Lease Federal Scott Well No. 2

Field Wildcat County Rio Arriba State New Mexico

Test Date 7-26-51 Time 11:05 AM Status of Well S. I.

Top of Pay 6622' Total Depth \_\_\_\_\_ Producing Formation \_\_\_\_\_

Tubing 2" EUE Depth 6618' B.H.C. \_\_\_\_\_ Packer \_\_\_\_\_ Pressure Datum \_\_\_\_\_

Casing \_\_\_\_\_ Depth \_\_\_\_\_ Perf. \_\_\_\_\_ Liner \_\_\_\_\_ Packer \_\_\_\_\_

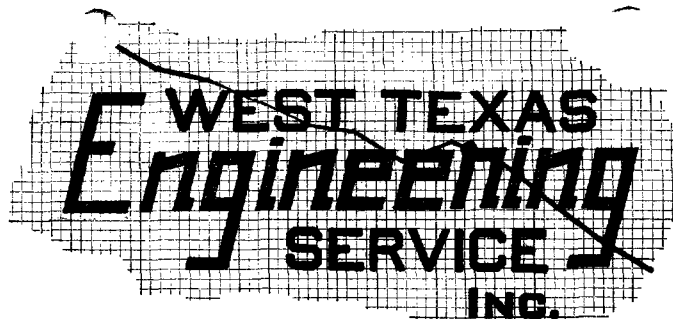
| Depth<br>Feet  | Δ<br>Depth  | Pressure<br>Lbs. Sq. In. | Δ<br>Pressure | Gradient<br>Lbs./Ft. |                                         |
|----------------|-------------|--------------------------|---------------|----------------------|-----------------------------------------|
| <u>Surface</u> |             | <u>1257</u>              |               |                      | Casing Press. <u>1675</u>               |
|                | <u>4910</u> |                          | <u>417</u>    | <u>.084</u>          | Tubing Press. <u>1257</u>               |
| <u>4910</u>    |             | <u>1674</u>              |               |                      | Top of Fluid <u>4900'</u>               |
|                | <u>1000</u> |                          | <u>302</u>    | <u>.302</u>          | Top of Water <u>No</u>                  |
| <u>5910</u>    |             | <u>1976</u>              |               |                      | Hrs.- Shut In <u>43</u> Flowing         |
|                | <u>715</u>  |                          | <u>224</u>    | <u>.313</u>          | Temp. @ <u>6615'</u> = <u>174° F.</u>   |
| <u>6615</u>    |             | <u>2200</u>              |               |                      | Elev.-D.F. <u>6507.5</u> r. <u>6498</u> |
|                |             |                          |               |                      | Last Test Date <u>Initial</u>           |
|                |             |                          |               |                      | Press. Last Test                        |
|                |             |                          |               |                      | B.H.P. Change                           |
|                |             |                          |               |                      | Gain - Loss/Day                         |
|                |             |                          |               |                      | Choke Size                              |
|                |             |                          |               |                      | Oils Bbbls/day                          |
|                |             |                          |               |                      | Water Bbbls/day                         |
|                |             |                          |               |                      | Total Bbbls/day                         |
|                |             |                          |               |                      | Orifice & Line                          |
|                |             |                          |               |                      | Static & Differential                   |
|                |             |                          |               |                      | Gas Sp. Gr.                             |
|                |             |                          |               |                      | Cu. Ft./day                             |
|                |             |                          |               |                      | GOR                                     |
|                |             |                          |               |                      | GFR                                     |

### PRODUCTIVITY INDEX-BBLS./DAY /LBS. DROP

|                               |                                   |                                     |
|-------------------------------|-----------------------------------|-------------------------------------|
| Last Cumulative<br>Production | Present Cumulative<br>Production  | Production<br>Between Tests         |
| Instrument <u>Amerada</u>     | Number <u>RPG 9186 BR</u>         | Recovery Factor<br>Bbbls/pound Loss |
| Run By <u>W. M. Cates</u>     | Calibration No. <u>731 @ 174°</u> | Calculated By <u>W. M. Cates</u>    |

Calculations and Remarks:

W. T. HAGLER  
H. L. HAGLER  
W. M. CATES  
C. H. PICKENS  
R. W. HARRINGTON  
D. R. WATSON, JR.  
B. E. BLACK  
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### INDIVIDUAL WELL DATA SHEET

Company Doswell & Pettigrew Lease Federal Scott Well No. 2

Field Wildcat County Rio Arriba State New Mexico

Test Date 7-28-51 Time 5:02PM Status of Well Flowing

Top of Pay 6622' Total Depth \_\_\_\_\_ Producing Formation \_\_\_\_\_

Tubing 2" Depth 6618' B.H.C. \_\_\_\_\_ Packer \_\_\_\_\_ Pressure Datum \_\_\_\_\_

Casing \_\_\_\_\_ Depth \_\_\_\_\_ Perf. \_\_\_\_\_ Liner \_\_\_\_\_ Packer \_\_\_\_\_

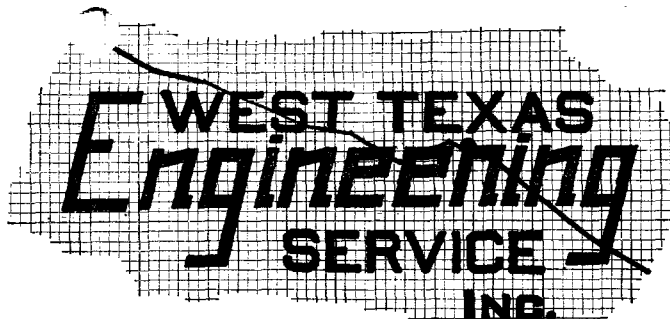
| Depth<br>Feet          | Δ<br>Depth  | Pressure<br>Lbs. Sq. In. | Δ<br>Pressure | Gradient<br>Lbs./Ft. |                                              |
|------------------------|-------------|--------------------------|---------------|----------------------|----------------------------------------------|
| <b>Surface</b>         |             | <b>677</b>               |               |                      | Casing Press. <b>700</b>                     |
|                        | <b>4915</b> |                          | <b>635</b>    | <b>.129</b>          | Tubing Press. <b>677</b>                     |
| <b>4915</b>            |             | <b>1312</b>              |               |                      | Top of Fluid <b>---</b>                      |
|                        | <b>1000</b> |                          | <b>163</b>    | <b>.163</b>          | Top of Water <b>No</b>                       |
| <b>5915</b>            |             | <b>1475</b>              |               |                      | Hrs.- Shut In <b>Flowing 9</b>               |
|                        | <b>500</b>  |                          | <b>88</b>     | <b>.175</b>          | Temp. @ <b>6615' = 174° F.</b>               |
| <b>6415</b>            |             | <b>1563</b>              |               |                      | Elev.-D.F. <b>6507.5 gr. 6498</b>            |
|                        | <b>200</b>  |                          | <b>39</b>     | <b>.196</b>          | Last Test Date                               |
| <b>6615</b>            |             | <b>1602</b>              |               |                      | <del>XXXX</del> Last Test <b>2200 Static</b> |
|                        |             |                          |               |                      | B.H.P. Change <b>598</b>                     |
|                        |             |                          |               |                      | Gain - Loss/Day                              |
| <b>6615 Stabilized</b> |             | <b>1593</b>              |               |                      | Choke Size <b>22/64"</b>                     |
|                        |             |                          |               |                      | Oils Bbls/day <b>580</b>                     |
|                        |             |                          |               |                      | Water Bbls/day <b>No</b>                     |
|                        |             |                          |               |                      | Total Bbls/day <b>580</b>                    |
|                        |             |                          |               |                      | Orifice & Line <b>2" X 1½ O.F.</b>           |
|                        |             |                          |               |                      | Static & Differential                        |
|                        |             |                          |               |                      | Gas Sp. Gr. <b>.784</b>                      |
|                        |             |                          |               |                      | Cu. Ft./day <b>900.5 MCK</b>                 |
|                        |             |                          |               |                      | GOR <b>1552</b>                              |
|                        |             |                          |               |                      | GFR                                          |

### PRODUCTIVITY INDEX-BBLS./DAY /LBS. DROP

|                               |                                   |                                    |
|-------------------------------|-----------------------------------|------------------------------------|
| Last Cumulative<br>Production | Present Cumulative<br>Production  | Production<br>Between Tests        |
| Instrument <u>Amerada</u>     | Number <u>RPG 9186 BR</u>         | Recovery Factor<br>Bbls/pound Loss |
| Run By <u>W. M. Cates</u>     | Calibration No. <u>731 @ 174°</u> | Calculated By <u>W. M. Cates</u>   |

Calculations and Remarks:

W. T. HAGLER  
H. L. HAGLER  
W. M. CATES  
C. H. PICKENS  
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D. R. WATSON, JR.  
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COVERAGE

### INDIVIDUAL WELL DATA SHEET

Company Doswell & Pettigrew Lease Federal Scott Well No. 2

Field Wildcat County Rio Arriba State New Mexico

Test Date 7-28-51 Time 10:56 PM Status of Well Flowing

Top of Pay 6622' Total Depth \_\_\_\_\_ Producing Formation \_\_\_\_\_

Tubing 2" Depth 6618' B.H.C. \_\_\_\_\_ Packer \_\_\_\_\_ Pressure Datum \_\_\_\_\_

Casing \_\_\_\_\_ Depth \_\_\_\_\_ Perf. \_\_\_\_\_ Liner \_\_\_\_\_ Packer \_\_\_\_\_

| Depth<br>Feet          | Δ<br>Depth  | Pressure<br>Lbs. Sq. In. | Δ<br>Pressure | Gradient<br>Lbs./Ft. |                                          |
|------------------------|-------------|--------------------------|---------------|----------------------|------------------------------------------|
| <u>Surface</u>         |             | <u>738</u>               |               |                      | Casing Press. <u>750</u>                 |
|                        | <u>4915</u> |                          | <u>701</u>    | <u>.142</u>          | Tubing Press. <u>738</u>                 |
| <u>4915</u>            |             | <u>1439</u>              |               |                      | Top of Fluid                             |
|                        | <u>1000</u> |                          | <u>184</u>    | <u>.184</u>          | Top of Water                             |
| <u>5915</u>            |             | <u>1623</u>              |               |                      | Hrs.- Shut In _____ Flowing              |
|                        | <u>500</u>  |                          | <u>79</u>     | <u>.157</u>          | Temp. @ <u>6615'</u> = <u>172° F.</u>    |
| <u>6415</u>            |             | <u>1702</u>              |               |                      | Elev.-D.F. <u>6507.5</u> Gr. <u>6498</u> |
|                        | <u>200</u>  |                          | <u>39</u>     | <u>.196</u>          | Last Test Date _____                     |
| <u>6615</u>            |             | <u>1741</u>              |               |                      | <del>TEST</del> Test <u>2200 Static</u>  |
|                        |             |                          |               |                      | B.H.P. Change _____                      |
|                        |             |                          |               |                      | Gain - Loss/Day _____                    |
| <u>6615 Stabilized</u> |             | <u>1801</u>              |               |                      | Choke Size <u>18/64"</u>                 |
|                        |             |                          |               |                      | Oils Bbbls/day _____                     |
|                        |             |                          |               |                      | Water Bbbls/day _____                    |
|                        |             |                          |               |                      | Total Bbbls/day <u>464</u>               |
|                        |             |                          |               |                      | Orifice & Line _____                     |
|                        |             |                          |               |                      | Static & Differential _____              |
|                        |             |                          |               |                      | Gas Sp. Gr. _____                        |
|                        |             |                          |               |                      | Cu. Ft./day _____                        |
|                        |             |                          |               |                      | GOR _____                                |
|                        |             |                          |               |                      | GFR _____                                |

### PRODUCTIVITY INDEX-BBLS./DAY /LBS. DROP

|                               |                                   |                                     |
|-------------------------------|-----------------------------------|-------------------------------------|
| Last Cumulative<br>Production | Present Cumulative<br>Production  | Production<br>Between Tests         |
| Instrument <u>Amerada</u>     | Number <u>RPG 9186 BR</u>         | Recovery Factor<br>Bbbls/pound Loss |
| Run By <u>W. M. Cates</u>     | Calibration No. <u>731 @ 174°</u> | Calculated By <u>W. M. Cates</u>    |

Calculations and Remarks:

W. T. HAGLER  
H. L. HAGLER  
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FIELD PETROLEUM ENGINEERS

# WEST TEXAS ENGINEERING SERVICE INC.

P. O. BOX 1637  
TELEPHONE 4-4451  
FREETAG BUILDING  
223 S. BIG SPRING ST.  
MIDLAND, TEXAS  
FULL INSURANCE  
COVERAGE

## INDIVIDUAL WELL DATA SHEET

Company Doggett & Pettigrew Lease Federal Scott Well No. 2  
Field Wilcox County Bio Arriba State New Mexico  
Test Date 7-29-51 Time 3:45 AM Status of Well Flowing  
Top of Pay 6622' Total Depth \_\_\_\_\_ Producing Formation \_\_\_\_\_  
Tubing 2" Depth 6725' B.H.C. \_\_\_\_\_ Packer \_\_\_\_\_ Pressure Datum \_\_\_\_\_  
Casing \_\_\_\_\_ Depth \_\_\_\_\_ Perf. \_\_\_\_\_ Liner \_\_\_\_\_ Packer \_\_\_\_\_

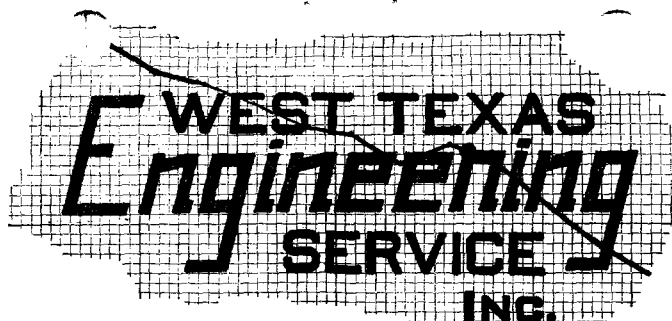
| Depth<br>Feet  | Δ<br>Depth  | Pressure<br>Lbs. Sq. In. | Δ<br>Pressure | Gradient<br>Lbs./Ft. |                                  |
|----------------|-------------|--------------------------|---------------|----------------------|----------------------------------|
| <u>Surface</u> |             | <u>832</u>               |               |                      | Casing Press. <u>850</u>         |
| <u>4915</u>    | <u>4915</u> | <u>1520</u>              | <u>686</u>    | <u>.139</u>          | Tubing Press. <u>834</u>         |
| <u>9915</u>    | <u>5000</u> | <u>1683</u>              | <u>163</u>    | <u>.163</u>          | Top of Fluid _____               |
| <u>9915</u>    | <u>5000</u> | <u>1683</u>              | <u>163</u>    | <u>.163</u>          | Top of Water <u>No</u>           |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Hrs.- Shut In _____ Flowing      |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Temp. @ <u>6615' = 172°F.</u>    |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Elev.-D.F. <u>6507.5' = 6498</u> |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Last Test Date _____             |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Press. Last Test _____           |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | B.H.P. Change _____              |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Gain - Loss/Day _____            |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Choke Size <u>16/64"</u>         |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Oils Bbbls/day <u>331</u>        |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Water Bbbls/day _____            |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Total Bbbls/day _____            |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Orifice & Line _____             |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Static & Differential _____      |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Gas Sp. Gr. _____                |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | Cu. Ft./day _____                |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | GOR _____                        |
| <u>6615</u>    | <u>3300</u> | <u>1771</u>              | <u>88</u>     | <u>.175</u>          | GFR _____                        |

## PRODUCTIVITY INDEX-BBLS./DAY /LBS. DROP

Last Cumulative Production \_\_\_\_\_ Present Cumulative Production \_\_\_\_\_ Production Between Tests \_\_\_\_\_  
Instrument Lucas Number 9126 DE Recovery Factor \_\_\_\_\_  
Run By W. M. Cates Calibration No. 731 @ 174° Calculated By W. M. Cates

Calculations and Remarks:

W. T. HAGLER  
H. L. HAGLER  
W. M. CATES  
C. H. PICKENS  
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### INDIVIDUAL WELL DATA SHEET

Company Doswell & Pettigrew Lease Federal Scott Well No. 2

Field Wildcat County Rio Arriba State New Mexico

Test Date 7-29-51 Time 7:58 AM Status of Well Flowing

Top of Pay 6622' Total Depth \_\_\_\_\_ Producing Formation \_\_\_\_\_

Tubing 2" Depth 6618' B.H.C. \_\_\_\_\_ Packer \_\_\_\_\_ Pressure Datum \_\_\_\_\_

Casing \_\_\_\_\_ Depth \_\_\_\_\_ Perf. \_\_\_\_\_ Liner \_\_\_\_\_ Packer \_\_\_\_\_

| Depth<br>Feet          | Δ<br>Depth  | Pressure<br>Lbs. Sq. In. | Δ<br>Pressure | Gradient<br>Lbs./Ft. |                                          |
|------------------------|-------------|--------------------------|---------------|----------------------|------------------------------------------|
| <u>Surface</u>         |             | <u>912</u>               |               |                      | Casing Press. <u>850</u>                 |
|                        | <u>4915</u> |                          | <u>713</u>    | <u>.145</u>          | Tubing Press. <u>912</u>                 |
| <u>4915</u>            |             | <u>1625</u>              |               |                      | Top of Fluid                             |
|                        | <u>1000</u> |                          | <u>206</u>    | <u>.206</u>          | Top of Water <u>No</u>                   |
| <u>5915</u>            |             | <u>1831</u>              |               |                      | Hrs.- Shut In <u>Flowing</u>             |
|                        | <u>500</u>  |                          | <u>94</u>     | <u>.189</u>          | Temp. @ <u>6615' = 172° F.</u>           |
| <u>6415</u>            |             | <u>1925</u>              |               |                      | Elev.-D.F. <u>6507.6</u> Gr. <u>6498</u> |
|                        | <u>200</u>  |                          | <u>30</u>     | <u>.150</u>          | Last Test Date                           |
| <u>6615</u>            |             | <u>1955</u>              |               |                      | Press. Last Test                         |
|                        |             |                          |               |                      | B.H.P. Change                            |
|                        |             |                          |               |                      | Gain - Loss/Day                          |
| <u>6615 Stabilized</u> |             | <u>1977</u>              |               |                      | Choke Size <u>12/64"</u>                 |
|                        |             |                          |               |                      | Oils Bbbls/day <u>219</u>                |
|                        |             |                          |               |                      | Water Bbbls/day                          |
|                        |             |                          |               |                      | Total Bbbls/day                          |
|                        |             |                          |               |                      | Orifice & Line                           |
|                        |             |                          |               |                      | Static & Differential                    |
|                        |             |                          |               |                      | Gas Sp. Gr.                              |
|                        |             |                          |               |                      | Cu Ft./day                               |
|                        |             |                          |               |                      | GOR                                      |
|                        |             |                          |               |                      | GFR                                      |

### PRODUCTIVITY INDEX-BBLS./DAY /LBS. DROP

|                               |                                  |                                     |
|-------------------------------|----------------------------------|-------------------------------------|
| Last Cumulative<br>Production | Present Cumulative<br>Production | Production<br>Between Tests         |
| Instrument <u>Amerada</u>     | Number <u>RPG 9186 BR</u>        | Recovery Factor<br>Bbbls/pound Loss |
| Run By <u>W. M. Cates</u>     | Calibration No <u>731 @ 174°</u> | Calculated By <u>W. M. Cates</u>    |

Calculations and Remarks: