

SANTA FE -20

2

1

5628' - 5643'

DOMESTIC PETROLEUM CORPORATION

Lease Owner/Company Name

Legal Location

Well No.

Test No.

Tested Interval

Legal Location

20 - 19N - 8W

Field Area  
WILDCAT 4-1 STOKE

County

SAN JUAN

State

NEW MEXICO

| FLUID SAMPLE DATA                        |  |                    |  | Date 5-31-77                                        |  | Ticket Number 162202            |  |
|------------------------------------------|--|--------------------|--|-----------------------------------------------------|--|---------------------------------|--|
| Sampler Pressure 160 P.S.I.G. at Surface |  |                    |  | Kind of Job OPEN HOLE                               |  | Halliburton District FARMINGTON |  |
| Recovery: Cu. Ft. Gas 0                  |  |                    |  | Tester MR. HILL                                     |  | Witness MR. MOORE               |  |
| cc. Oil 0                                |  |                    |  | Drilling Contractor 4 CORNERS DRILLING COMPANY BC S |  |                                 |  |
| cc. Water 2200                           |  |                    |  | EQUIPMENT & HOLE DATA                               |  |                                 |  |
| cc. Mud 0                                |  |                    |  | Formation Tested Entrada                            |  |                                 |  |
| Tot. Liquid cc. 2200                     |  |                    |  | Elevation 6580' KB Ft.                              |  |                                 |  |
| Gravity ° API @ ° F.                     |  |                    |  | Net Productive Interval 15' Ft.                     |  |                                 |  |
| Gas/Oil Ratio cu. ft./bbl.               |  |                    |  | All Depths Measured From Kelly Bushing              |  |                                 |  |
| RESISTIVITY CHLORIDE CONTENT             |  |                    |  | Total Depth 5643' Ft.                               |  |                                 |  |
| Recovery Water .85 @ 71 °F. ppm          |  |                    |  | Main Hole/Casing Size 8 3/4"                        |  |                                 |  |
| Recovery Mud @ °F. ppm                   |  |                    |  | Drill Collar Length 583' I.D. 2.25"                 |  |                                 |  |
| Recovery Mud Filtrate @ °F. ppm          |  |                    |  | Drill Pipe Length 5005' I.D. 3.826"                 |  |                                 |  |
| Mud Pit Sample @ °F. ppm                 |  |                    |  | Packer Depth(s) 5622' - 5628' Ft.                   |  |                                 |  |
| Mud Pit Sample Filtrate .75 @ 72 °F. ppm |  |                    |  | Depth Tester Valve 5608' Ft.                        |  |                                 |  |
| Mud Weight 9.0 vis 65 sec                |  |                    |  |                                                     |  |                                 |  |
| TYPE                                     |  | AMOUNT             |  | Depth Back Pres. Valve                              |  | Surface Choke Bottom Choke      |  |
| Cushion                                  |  |                    |  | Ft.                                                 |  | 3/4" ADJ. .75"                  |  |
| Recovered                                |  | 4917 Feet of Water |  |                                                     |  |                                 |  |
| Recovered                                |  | Feet of            |  |                                                     |  |                                 |  |
| Recovered                                |  | Feet of            |  |                                                     |  |                                 |  |
| Recovered                                |  | Feet of            |  |                                                     |  |                                 |  |
| Recovered                                |  | Feet of            |  |                                                     |  |                                 |  |
| Remarks SEE PRODUCTION TEST DATA SHEET.  |  |                    |  |                                                     |  |                                 |  |
|                                          |  |                    |  |                                                     |  |                                 |  |
|                                          |  |                    |  |                                                     |  |                                 |  |
|                                          |  |                    |  |                                                     |  |                                 |  |
|                                          |  |                    |  |                                                     |  |                                 |  |
|                                          |  |                    |  |                                                     |  |                                 |  |
| TEMPERATURE                              |  | Gauge No. 2033     |  | Gauge No. 2032                                      |  | Gauge No.                       |  |
| Depth:                                   |  | 5612' Ft.          |  | 5639' Ft.                                           |  | Ft.                             |  |
| 12 Hour Clock                            |  | 24 Hour Clock      |  | Hour Clock                                          |  | TIME                            |  |
| Est. °F.                                 |  | Blanked Off NO     |  | Blanked Off YES                                     |  | Blanked Off                     |  |
| Actual 128 °F.                           |  | Pressures          |  | Pressures                                           |  | Pressures                       |  |
|                                          |  | Field Office       |  | Field Office                                        |  | Field Office                    |  |
| Initial Hydrostatic                      |  | 2568 2598          |  | 2610 2618                                           |  |                                 |  |
| Flow Initial                             |  | 582 235            |  | 898 340                                             |  |                                 |  |
| Flow Final                               |  | 2182 2169          |  | 2229 2197                                           |  |                                 |  |
| Closed in                                |  | 2345 2358          |  | 2373 2372                                           |  |                                 |  |
| Second Period Flow Initial               |  | 2187 2224          |  | 2242 2275                                           |  |                                 |  |
| Flow Final                               |  | 2345 2362          |  | 2373 2376                                           |  |                                 |  |
| Closed in                                |  | 2345 2363          |  | 2373 2379                                           |  |                                 |  |
| Third Period Flow Initial                |  |                    |  |                                                     |  |                                 |  |
| Flow Final                               |  |                    |  |                                                     |  |                                 |  |
| Closed in                                |  |                    |  |                                                     |  |                                 |  |
| Final Hydrostatic                        |  | 2555 2543          |  | 2597 2572                                           |  |                                 |  |
| Reported Minutes                         |  | Computed Minutes   |  | Reported Minutes                                    |  | Computed Minutes                |  |
| 15 30                                    |  | 13 30              |  | 60 90                                               |  | 60 90                           |  |
| 90                                       |  |                    |  |                                                     |  |                                 |  |

162202

-ppm Res. \_\_\_\_\_ @ \_\_\_\_\_ °F

Remarks

| Gauge No.           |                        | 2033                |                                  | Depth               |                        | 5612'               |                                  | Clock No.           |                        | 10445               |                                  | 12 hour             |                        | Ticket No.          |                                  | 162202              |                        |
|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|
| First Flow Period   |                        | Closed In Pressure  |                                  | Second Flow Period  |                        | Closed In Pressure  |                                  | Third Flow Period   |                        | Closed In Pressure  |                                  | Third Flow Period   |                        | Closed In Pressure  |                                  | Third Flow Period   |                        |
| Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. |
| 0                   | .0000 235              | .0000               |                                  | .0000               | 2169                   | .0000               | 2224                             | .0000               |                        | .0000               |                                  | .0000               |                        | .0000               |                                  |                     |                        |
| 1                   | .0226 1619*            | .0138               |                                  | .0693               | 2302                   | .1387               | 2332                             | .2773               |                        | .6170               |                                  | .2362               |                        | .2363               |                                  |                     |                        |
| 2                   | .0377 1778             | .0276               |                                  | .2080               | 2321                   | .3467               | 2355                             | .4160               |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 3                   | .0528 1906             | .0414               |                                  | .2332               | 2332                   | .2332               | 2359                             |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 4                   | .0678 2007             | .0552               |                                  | .2337               | 2337                   | .2337               | 2360                             |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 5                   | .0829 2094             | .0690               |                                  | .2343               | 2343                   | .2343               | 2362                             |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 6                   | .0980 2169             | .0828               |                                  | .2345               | 2345                   | .2345               | 2362                             |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 7                   |                        | .0966               |                                  | .2348               | 2348                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 8                   |                        | .1104               |                                  | .2351               | 2351                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 9                   |                        | .1242               |                                  | .2352               | 2352                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 10                  |                        | .1380               |                                  | .2353               | 2353                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 11                  |                        | .1518               |                                  | .2355               | 2355                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 12                  |                        | .1656               |                                  | .2355               | 2355                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 13                  |                        | .1794               |                                  | .2356               | 2356                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 14                  |                        | .1932               |                                  | .2358               | 2358                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 15                  |                        | .2070               |                                  | .2358               | 2358                   |                     |                                  |                     |                        |                     |                                  |                     |                        |                     |                                  |                     |                        |

| Gauge No.           |                        | 2032                |                                  | Depth               |                        | 5639'               |                                  | Clock No.           |                        | 9756                |                                  | 24 hour             |                        |
|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|---------------------|----------------------------------|---------------------|------------------------|
| First Flow Period   |                        | Closed In Pressure  |                                  | Second Flow Period  |                        | Closed In Pressure  |                                  | Third Flow Period   |                        | Closed In Pressure  |                                  | Third Flow Period   |                        |
| Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | $\log \frac{t + \theta}{\theta}$ | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. |
| 0                   | .0000 340              | .0000               |                                  | .0000               | 2197                   | .0000               | 2275                             | .0000               |                        | .0000               |                                  | .0000               |                        |
| 1                   | .0099 1854*            | .0066               |                                  | .0333               | 2317                   | .0667               | 2341                             | .1000               |                        | .3000               |                                  | .2376               |                        |
| 2                   | .0165 1935             | .0132               |                                  | .2337               | 2337                   | .2337               | 2368                             | .2337               |                        |                     |                                  | .2379               |                        |
| 3                   | .0232 2021             | .0198               |                                  | .2345               | 2345                   | .2345               | 2373                             |                     |                        |                     |                                  |                     |                        |
| 4                   | .0298 2085             | .0264               |                                  | .2353               | 2353                   | .2353               | 2375                             |                     |                        |                     |                                  |                     |                        |
| 5                   | .0364 2151             | .0330               |                                  | .2359               | 2359                   | .2359               | 2376                             |                     |                        |                     |                                  |                     |                        |
| 6                   | .0430 2197             | .0396               |                                  | .2361               | 2361                   | .2361               | 2376                             |                     |                        |                     |                                  |                     |                        |
| 7                   |                        | .0462               |                                  | .2364               | 2364                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 8                   |                        | .0528               |                                  | .2365               | 2365                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 9                   |                        | .0594               |                                  | .2368               | 2368                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 10                  |                        | .0660               |                                  | .2369               | 2369                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 11                  |                        | .0726               |                                  | .2371               | 2371                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 12                  |                        | .0792               |                                  | .2371               | 2371                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 13                  |                        | .0858               |                                  | .2372               | 2372                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 14                  |                        | .0924               |                                  | .2372               | 2372                   |                     |                                  |                     |                        |                     |                                  |                     |                        |
| 15                  |                        | .0990               |                                  | .2372               | 2372                   |                     |                                  |                     |                        |                     |                                  |                     |                        |

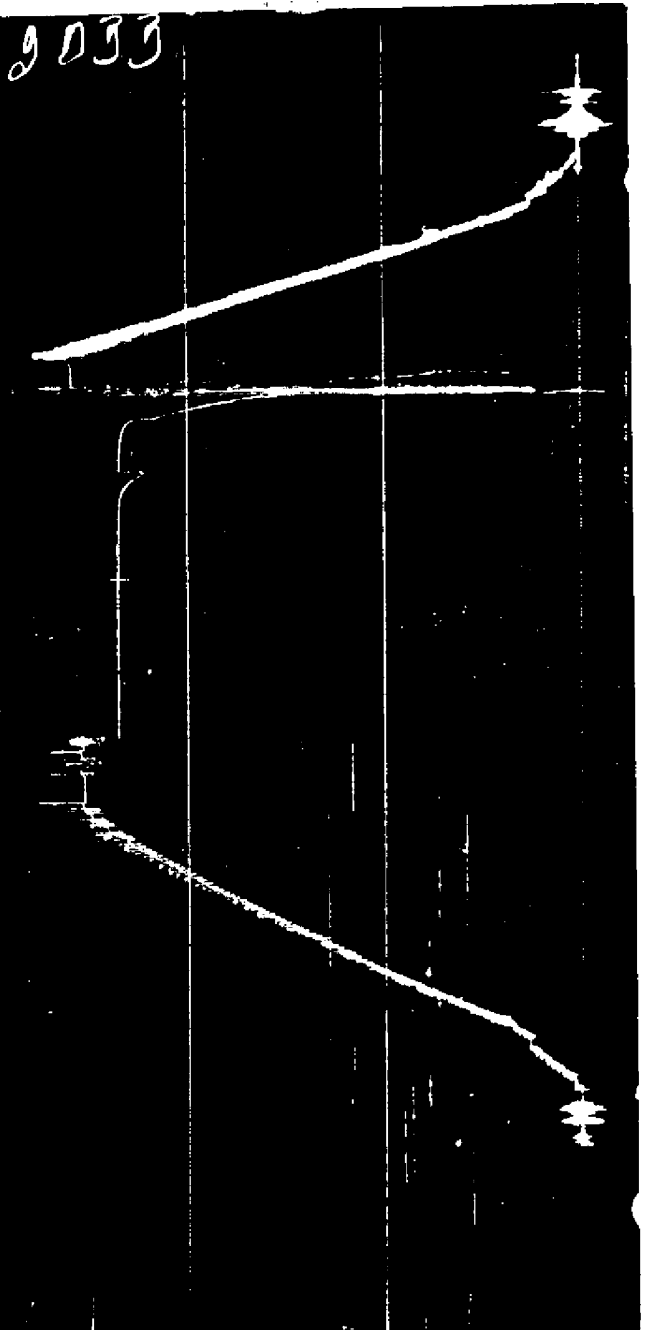
|                  |                       |   |    |
|------------------|-----------------------|---|----|
| Reading Interval | 2                     | 2 | 10 |
| REMARKS:         | *Interval = 3 minutes |   |    |
| Minutes          |                       |   |    |

|                                     | O. D.  | I. D.  | LENGTH | DEPTH |
|-------------------------------------|--------|--------|--------|-------|
| Drill Pipe or Tubing .....          |        |        |        |       |
| Reversing Sub .....                 | 6"     | 2.50"  | 1'     |       |
| Water Cushion Valve .....           |        |        |        |       |
| Drill Pipe .....                    | 4½"    | 3.826" | 5005'  |       |
| Drill Collars .....                 | 6½"    | 2.25"  | 583'   |       |
| Handling Sub & Choke Assembly ..... |        |        |        |       |
| Dual CIP Valve .....                | 5"     | -      | 5'     | 5598' |
| Dual CIP Sampler .....              | 5"     | -      | 5'     | 5603' |
| Hydro-Spring Tester .....           | 5"     | -      | 4'     | 5608' |
| Multiple CIP Sampler .....          |        |        |        |       |
| Extension Joint .....               |        |        |        |       |
| AP Running Case .....               | 5"     | 3.50"  | 4'     | 5612' |
| Hydraulic Jar .....                 | 5"     | 1"     | 5'     |       |
| VR Safety Joint .....               | 5"     | -      | 3'     |       |
| Pressure Equalizing Crossover ..... |        |        |        |       |
| Packer Assembly .....               | 7 3/4" | 1.53"  | 6'     | 5622' |
| Distributor .....                   |        |        |        |       |
| Packer Assembly .....               | 7 3/4" | 1.53"  | 6'     | 5628' |
| Flush Joint Anchor .....            |        |        |        |       |
| Pressure Equalizing Tube .....      |        |        |        |       |
| Blanked-Off B.T. Running Case ..... |        |        |        |       |
| Drill Collars .....                 |        |        |        |       |
| Anchor Pipe Safety Joint .....      |        |        |        |       |
| Packer Assembly .....               |        |        |        |       |
| Distributor .....                   |        |        |        |       |
| Packer Assembly .....               |        |        |        |       |
| Anchor Pipe Safety Joint .....      |        |        |        |       |
| Side Wall Anchor .....              |        |        |        |       |
| Drill Collars .....                 |        |        |        |       |
| Flush Joint Anchor .....            | 5 3/4" | 2.50"  | 10'    |       |
| Blanked-Off B.T. Running Case ..... | 5 3/4" | 3'     | 4'     | 5639' |
| Total Depth .....                   |        |        |        | 5643' |

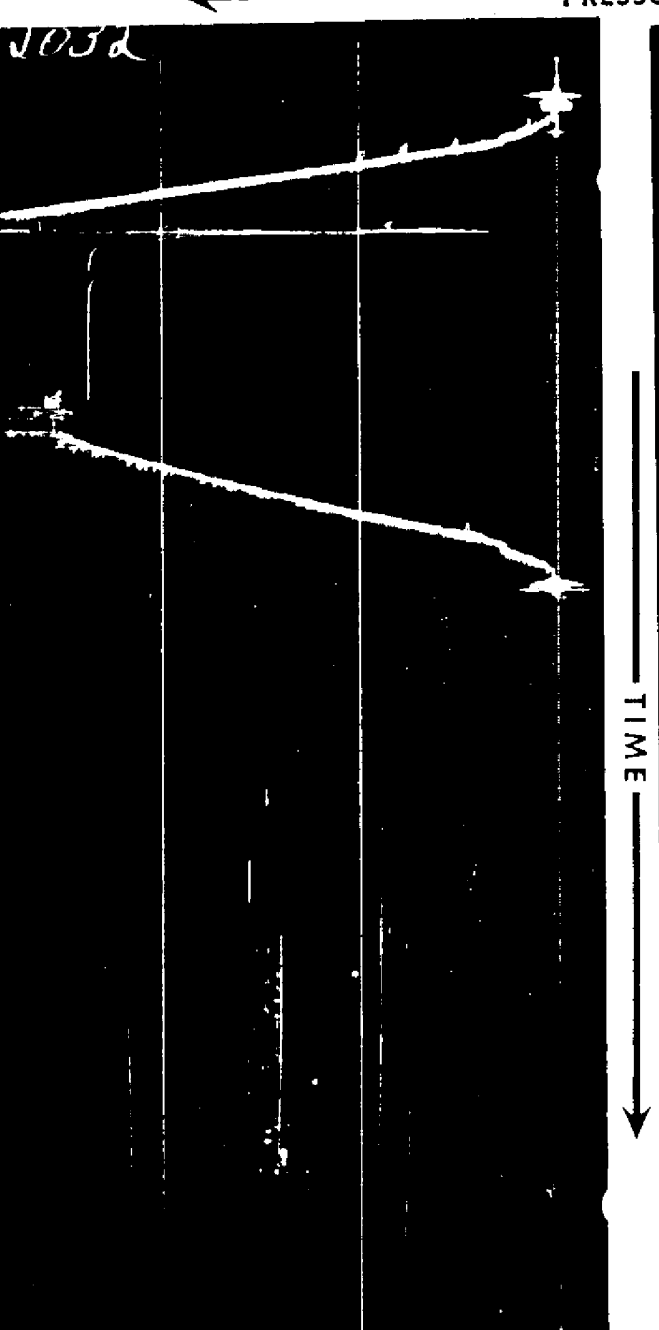
# NOMENCLATURE

|                 |                                                                      |           |
|-----------------|----------------------------------------------------------------------|-----------|
| b               | = Approximate Radius of Investigation                                | Feet      |
| b <sub>i</sub>  | = Approximate Radius of Investigation (Net Pay Zone h <sub>i</sub> ) | Feet      |
| D.R.            | = Damage Ratio                                                       |           |
| EI              | = Elevation                                                          | Feet      |
| GD              | = B.T. Gauge Depth (From Surface Reference)                          | Feet      |
| h               | = Interval Tested                                                    | Feet      |
| h <sub>i</sub>  | = Net Pay Thickness                                                  | Feet      |
| K               | = Permeability                                                       | md        |
| K <sub>i</sub>  | = Permeability (From Net Pay Zone h <sub>i</sub> )                   | md        |
| m               | = Slope Extrapolated Pressure Plot (Psi <sup>2</sup> /cycle Gas)     | psi/cycle |
| OF <sub>1</sub> | = Maximum Indicated Flow Rate                                        | MCF/D     |
| OF <sub>2</sub> | = Minimum Indicated Flow Rate                                        | MCF/D     |
| OF <sub>3</sub> | = Theoretical Open Flow Potential with/Damage Removed Max.           | MCF/D     |
| OF <sub>4</sub> | = Theoretical Open Flow Potential with/Damage Removed Min.           | MCF/D     |
| P <sub>s</sub>  | = Extrapolated Static Pressure                                       | Psig.     |
| P <sub>f</sub>  | = Final Flow Pressure                                                | Psig.     |
| P <sub>o</sub>  | = Potentiometric Surface (Fresh Water)                               | Feet      |
| Q               | = Average Adjusted Production Rate During Test                       | bbls/day  |
| Q <sub>i</sub>  | = Theoretical Production w/Damage Removed                            | bbls/day  |
| Q <sub>g</sub>  | = Measured Gas Production Rate                                       | MCF/D     |
| R               | = Corrected Recovery                                                 | bbls      |
| r <sub>w</sub>  | = Radius of Well Bore                                                | Feet      |
| t               | = Flow Time                                                          | Minutes   |
| t <sub>o</sub>  | = Total Flow Time                                                    | Minutes   |
| T               | = Temperature Rankine                                                | °R        |
| Z               | = Compressibility Factor                                             |           |
| μ               | = Viscosity Gas or Liquid                                            | CP        |
| Log             | = Common Log                                                         |           |

\* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.



162202-2033



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Each Horizontal Line Equal to 1000 p.s.i.