

MC ARTHUR

Lease Name

Well No.

Test No.

3444' - 3466'

Tested Interval

SEARCH DRILLING COMPANY

Lease Owner/Company Name

Legal Location
Sec. - Twp. - Rng.

30 - 23 - 7

Field Area
Meas. From Tester Valve

County

RENO

State

KANSAS

| | | | | | |
|-----------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------|----------------------|---------------|--------|
| FLUID SAMPLE DATA | | Date | 1-26-76 | Ticket Number | 816156 |
| Sampler Pressure _____ P.S.I.G. at Surface | Kind of Job | OPEN HOLE | Halliburton District | GREAT BEND | |
| Recovery: Cu. Ft. Gas _____ cc. Oil _____ cc. Water _____ cc. Mud _____ Tot. Liquid cc. _____ | Tester | MONDERO | Witness | SATTER | |
| Gravity _____ ° API @ _____ ° F. | Drilling Contractor | SEARCH DRILLING RIG # 1 NM | | | |
| Gas/Oil Ratio _____ cu. ft./bbl. | EQUIPMENT & HOLE DATA | | | | |
| RESISTIVITY _____ CHLORIDE CONTENT _____ | Formation Tested | Kansas City | | | |
| Recovery Water _____ @ _____ ° F. _____ ppm | Elevation | - Ft. | | | |
| Recovery Mud _____ @ _____ ° F. _____ ppm | Net Productive Interval | 22' TEST Ft. | | | |
| Recovery Mud Filtrate _____ @ _____ ° F. _____ ppm | All Depths Measured From | Kelly Bushing | | | |
| Mud Pit Sample _____ @ _____ ° F. _____ ppm | Total Depth | 3466' Ft. | | | |
| Mud Pit Sample Filtrate _____ @ _____ ° F. _____ ppm | Main Hole/Casing Size | 7 7/8" | | | |
| Mud Weight 9.8 vis 44 cp | Drill Collar Length | - I.D. - | | | |
| | Drill Pipe Length | 3420' I.D. 3.826" | | | |
| | Packer Depth(s) | 3439' - 3444' Ft. | | | |
| | Depth Tester Valve | 3421' Ft. | | | |

| | | | | | |
|---------|------|--------|------------------------|---------------|--------------|
| Cushion | TYPE | AMOUNT | Depth Back Pres. Valve | Surface Choke | Bottom Choke |
| | | NONE | NONE | 1/4" | 3/4" |

| | | | |
|-----------|------------------------------------|---------|----------------------------------|
| Recovered | 70' | Feet of | very heavily oil and gas cut mud |
| Recovered | 290' | Feet of | gas in the pipe |
| Recovered | | Feet of | |
| Recovered | | Feet of | |
| Recovered | | Feet of | |
| Remarks | SEE PRODUCTION TEST DATA SHEET.... | | |

NOTE: NO FIRST FLOW AND FIRST CLOSED IN PRESSURE READINGS ARE AVAILABLE.
CLOCK STOPPED AND STARTED AGAIN .

| TEMPERATURE | Gauge No. | 6176 | Gauge No. | 6175 | Gauge No. | TIME | | |
|---------------------|-------------|------------|-------------|------------|-------------|--------|----------|-----------|
| | | | | | | | Depth: | 3422' Ft. |
| Est. °F. | 12 | Hour Clock | 12 | Hour Clock | Hour Clock | 2210 | A.M. | |
| | Blanked Off | NO | Blanked Off | YES | Blanked Off | Opened | P.M. | |
| Actual 104 °F. | Pressures | | Pressures | | Pressures | | Opened | A.M. |
| | | | | | | Bypass | 0007 | P.M. |
| | Field | Office | Field | Office | Field | Office | Reported | Computed |
| Initial Hydrostatic | - | 1834 | 1860 | 1858 | | | Minutes | Minutes |
| First Period Flow | Initial | - | CLOCK | 31 | 33 | | | |
| | Final | - | STOPPED. | 31 | 30 | | | |
| | Closed in | - | - | 132 | 127 | | 30 | |
| Second Period Flow | Initial | - | 15 | 31 | 35 | | | |
| | Final | - | 20 | 41 | 36 | | | |
| | Closed in | - | 183 | 203 | 196 | | 60 | |
| Third Period Flow | Initial | | | | | | | |
| | Final | | | | | | | |
| Final Hydrostatic | - | 1805 | 1809 | 1829 | | | | |



| | O. D. | I. D. | LENGTH | DEPTH |
|-------------------------------------|--------|--------|--------|-------|
| Drill Pipe or Tubing | | | | |
| Reversing Sub | 6" | | | |
| Water Cushion Valve | | | | |
| Drill Pipe | 4½" | 3.826" | 3420' | |
| Drill Collars | | | | |
| Handling Sub & Choke Assembly | | | | |
| Dual CIP Valve | 5" | .87" | 48.92" | |
| Dual CIP Sampler | | | | |
| Hydro-Spring Tester | 5" | .75" | 60.21" | 3421' |
| Multiple CIP Sampler | | | | |
| Extension Joint | | | | |
| AP Running Case | 5" | 3.06" | 49.63" | 3422' |
| Hydraulic Jar | 5" | | | |
| VR Safety Joint | 5" | | | |
| Pressure Equalizing Crossover | | | | |
| Packer Assembly | | | | |
| Distributor | | | | |
| Packer Assembly | | | | |
| Flush Joint Anchor | | | | |
| Pressure Equalizing Tube | | | | |
| Blanked-Off B.T. Running Case | | | | |
| Drill Collars | | | | |
| Anchor Pipe Safety Joint | | | | |
| Packer Assembly | 6 3/4" | 1.53" | 48.89" | 3439' |
| Distributor | | | | |
| Packer Assembly | 6 3/4" | 1.53" | 48.89" | 3444' |
| Anchor Pipe Safety Joint | | | | |
| Side Wall Anchor | | | | |
| Drill Collars | | | | |
| Flush Joint Anchor | 5" | 3" | 17' | |
| Blanked-Off B.T. Running Case | 5" | 2.75" | 4' | 3462' |
| Total Depth | | | | 3466' |

816156-6176 #

PRESSURE

TIME

816156-6175 #

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

NOMENCLATURE

| | | |
|-----------------------|----------------------------------------------------------------------------|-----------|
| b | = Approximate Radius of Investigation | Feet |
| b₁ | = Approximate Radius of Investigation (Net Pay Zone h ₁) | Feet |
| D.R. | = Damage Ratio | — |
| EI | = Elevation | Feet |
| GD | = B.T. Gauge Depth (From Surface Reference) | Feet |
| h | = Interval Tested | Feet |
| h₁ | = Net Pay Thickness | Feet |
| K | = Permeability | md |
| K₁ | = Permeability (From Net Pay Zone h ₁) | md |
| m | = Slope Extrapolated Pressure Plot (Psi ² /cycle Gas) | psi/cycle |
| OF₁ | = Maximum Indicated Flow Rate | MCF/D |
| OF₂ | = Minimum Indicated Flow Rate | MCF/D |
| OF₃ | = Theoretical Open Flow Potential with/Damage Removed Max. | MCF/D |
| OF₄ | = Theoretical Open Flow Potential with/Damage Removed Min. | MCF/D |
| P_s | = Extrapolated Static Pressure | Psig. |
| P_f | = Final Flow Pressure | Psig. |
| P_{ot} | = Potentiometric Surface (Fresh Water *) | Feet |
| Q | = Average Adjusted Production Rate During Test | bbls/day |
| Q₁ | = Theoretical Production w/Damage Removed | bbls/day |
| Q_g | = Measured Gas Production Rate | MCF/D |
| R | = Corrected Recovery | bbls |
| r_w | = Radius of Well Bore | Feet |
| t | = Flow Time | Minutes |
| t_o | = 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.