## FLUID SAMPLE DATA

Sampler Pressure 125 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas
cc. Oil
cc. Water
cc. Mud 600 Drilling mud
Tot. Liquid cc. 600
Gravity ° API @ °F.
Gas/Oil Ratio cu. ft./bbl.

| | | RESISTIVITY | | CHLORIDE CONTENT |
|---|---|---|---|---|
| Recovery Water | @ | °F. | | ppm |
| Recovery Mud | 2.78 @ 74 | °F. | | ppm |
| Recovery Mud Filtrate | @ | °F. | | ppm |
| Mud Pit Sample | 4.04 @ 64 | °F. | | ppm |
| Mud Pit Sample Filtrate | @ | °F. | | ppm |

Mud Weight 9.1 vis 42 Sec.

Date 11-28-76 Ticket Number 008524
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester MR. DUNSON Witness MR. NASH
Drilling Contractor FOUR CORNERS DRILLING COMPANY BC

## EQUIPMENT & HOLE DATA

Formation Tested Mesa Verde
Elevation 6074' Ft.
Net Productive Interval 76' Ft.
All Depths Measured From Kelly Bushing
Total Depth 4250' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 577' I.D. 2.25"
Drill Pipe Length 3561' I.D. 3.826"
Packer Depth(s) 4168' - 4174' Ft.
Depth Tester Valve 4151' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve
Surface Choke 3/4" ADJ. Bottom Choke 3/4"

Recovered 190 Feet of Drilling mud (Total fluid)
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Remarks SEE PRODUCTION TEST DATA SHEET.

Meas. From Tester Valve

| TEMPERATURE | Gauge No. 2033 | Gauge No. 2032 | Gauge No. | TIME |
|---|---|---|---|---|
| | Depth: 4155' Ft. | Depth: 4246' Ft. | Depth: Ft. | |
| | 12 Hour Clock | 24 Hour Clock | Hour Clock | Tool A.M. |
| Est. 120 °F. | Blanked Off No | Blanked Off Yes | Blanked Off | Opened 1145 P.M. |
| Actual 135 °F. | Pressures | Pressures | Pressures | Opened 1330 A.M. Bypass P.M. |

| | | Field | Office | Field | Office | Field | Office | Reported Minutes | Computed Minutes |
|---|---|---|---|---|---|---|---|---|---|
| Initial Hydrostatic | | 1926 | 1964 | 2005 | 2009 | | | | |
| First Period | Flow Initial | 79 | 32 | 80 | 80 | | | ——— | ——— |
| | Flow Final | 93 | 54 | 106 | 105 | | | 5 | |
| | Closed in | 146 | 140 | 186 | 180 | | | 10 | |
| Second Period | Flow Initial | 106 | 89 | 133 | 133 | | | ——— | ——— |
| | Flow Final | 132 | 124 | 173 | 157 | | | 90 | |
| | Closed in | 410 | 396 | 451 | 427 | | | 60 | |
| Third Period | Flow Initial | | | | | | | ——— | ——— |
| | Flow Final | | | | | | | | |
| | Closed in | | | | | | | | |
| Final Hydrostatic | | 1976 | 1961 | 1979 | 1999 | | | ——— | ——— |

Legal Location Sec. - Twp. - Rng. 16 - 32N - 12W
Lease Name STATE COM.
Well No. 1-A
Test No.
Field Area BLANCO MESA VERDE
Tested Interval 4174' - 4250'
County SAN JUAN
State NEW MEXICO
Lease Owner/Company Name UNIVERSAL RESOURCES CORPORATION

Casing perfs. _____ Bottom choke 3/4" Surf. temp 20 °F Ticket No. 008524

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides _____ ppm Res. 4.04 @ 64 °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

| Date Time a.m. p.m. | Choke Size | Surface Pressure psi | Gas Rate MCF | Liquid Rate BPD | Remarks |
|---|---|---|---|---|---|
| 0200 | | | | | On location |
| 0800 | | | | | Picked up tools |
| 0900 | | | | | Trip in hole |
| 1145 | | | | | Opened tool with a weak blow to fair |
| 1150 | | | | | Closed tool |
| 1200 | | | | | Opened tool with a weak blow |
| 1215 | | | | | Fair blow |
| 1220 | | | | | Good blow |
| 1225 | | | | | Strong blow throughout |
| 1330 | | | | | Closed tool |
| 1430 | | | | | Trip out of hole |
| | | | | | |
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FORM 182-R1—PRINTED IN U.S.A.

# PRODUCTION TEST DATA

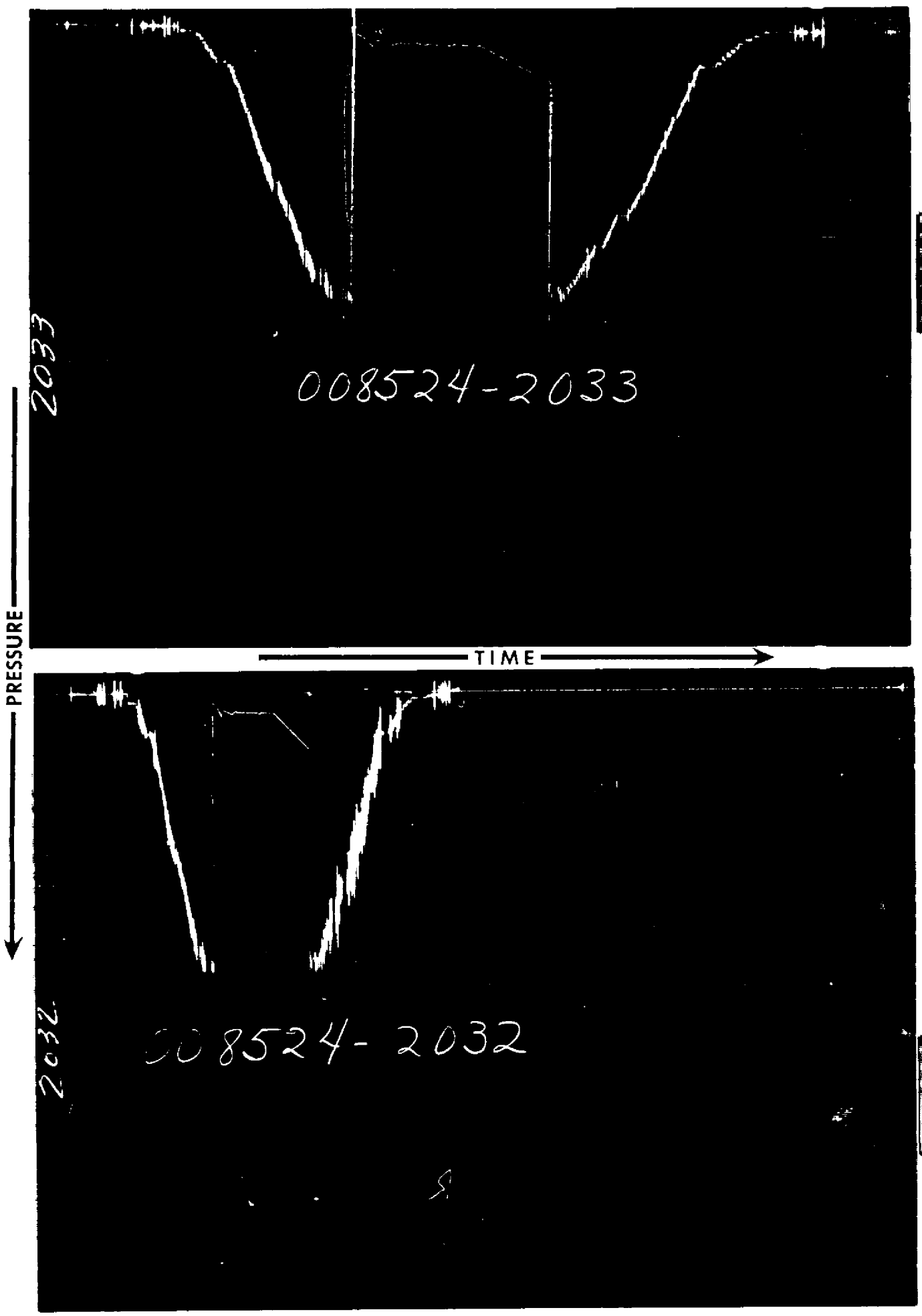
LITTLE'S 96672 1M 8/74

TICKET NO. 008524

| | O. D. | I. D. | LENGTH | DEPTH |
|---|---|---|---|---|
| Drill Pipe or Tubing | | | | |
| Reversing Sub | 5 3/4" | 2.5" | 1' | |
| Water Cushion Valve | | | | |
| Drill Pipe | 4½" | 3.826" | 3561' | |
| Drill Collars | 6" | 2.25" | 577' | |
| Handling Sub & Choke Assembly | | | | |
| Dual CIP Valve | | | | |
| Dual CIP Sampler | 5" | .89" | 7' | 4145' |
| Hydro-Spring Tester | 5" | .75" | 5' | 4151' |
| Multiple CIP Sampler | | | | |
| Extension Joint | | | | |
| AP Running Case | 5" | 2.5" | 4' | 4155' |
| Hydraulic Jar | 5" | 1.75" | 5' | |
| VR Safety Joint | 5" | 1" | 3' | |
| 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" | 5" | 1.53" | 6' | 4168' |
| Distributor | | | | |
| Packer Assembly 6 3/4" | 5" | 1.53" | 6' | 4174' |
| Anchor Pipe Safety Joint | | | | |
| Side Wall Anchor | | | | |
| Drill Collars | 6" | 2.25" | 34' | |
| Flush Joint Anchor | 5 3/4" | 2.50" | 38' | |
| Blanked-Off B.T. Running Case | 5 3/4" | 2.50" | 4' | 4246' |
| Total Depth | | | | 4250' |



# EQUIPMENT DATA




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

## NOMENCLATURE

| | | |
|---|---|---|
| **b** | = Approximate Radius of Investigation | Feet |
| **$b_1$** | = Approximate Radius of Investigation (Net Pay Zone $h_1$) | Feet |
| **D.R.** | = Damage Ratio | —— |
| **El** | = Elevation | Feet |
| **GD** | = B.T. Gauge Depth (From Surface Reference) | Feet |
| **h** | = Interval Tested | Feet |
| **$h_1$** | = Net Pay Thickness | Feet |
| **K** | = Permeability | md |
| **$K_1$** | = Permeability (From Net Pay Zone $h_1$) | md |
| **m** | = Slope Extrapolated Pressure Plot ($Psi^2$/cycle Gas) | psi/cycle |
| **$OF_1$** | = Maximum Indicated Flow Rate | MCF/D |
| **$OF_2$** | = Minimum Indicated Flow Rate | MCF/D |
| **$OF_3$** | = Theoretical Open Flow Potential with/Damage Removed Max. | MCF/D |
| **$OF_4$** | = 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 |
| **$Q_1$** | = 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 | —— |
| **$\mu$** | = Viscosity Gas or Liquid | CP |
| **Log** | = Common Log | |

* Potentiometric Surface Referenced to Rotary Table When Elevation Not Given, Fresh Water Corrected to 60° F.