

Legal Location Sec. - Twp. - Rng. **MURRAY**
 Lease Name **100**
 Well No. **30 25 S 5E**
 Test No. **1**
 Tested Interval **2478' - 2486'**
 County **BUTLER**
 State **KANSAS**
 Lease Owner/Company Name **CITIES SERVICE OIL COMPANY**

| FLUID SAMPLE DATA | |
|---|-----------------------------------|
| Sampler Pressure _____ P.S.I.G. at Surface | |
| Recovery: Cu. Ft. Gas _____ | |
| cc. Oil _____ | |
| cc. Water _____ | |
| cc. Mud _____ | |
| Tot. Liquid cc. _____ | |
| Gravity 37.6 ° API @ 60 °F. | |
| Gas/Oil Ratio _____ cu. ft./bbl. | |
| | RESISTIVITY CHLORIDE CONTENT |
| Recovery Water _____ @ _____ °F. _____ ppm | |
| Recovery Mud _____ @ _____ °F. _____ ppm | |
| Recovery Mud Filtrate _____ @ _____ °F. _____ ppm | |
| Mud Pit Sample _____ @ _____ °F. _____ ppm | |
| Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm | |
| Mud Weight 10.0 vis 40 cp | |

| | |
|---|---------------------------------------|
| Date 1-26-72 | Ticket Number 452312 |
| Kind of Job OPEN HOLE | Halliburton District EL DORADO |
| Tester W. E. MACY | Witness M. J. OVERALL |
| Drilling Contractor B & N DRILLING COMPANY | /SM S |

| EQUIPMENT & HOLE DATA | |
|---|-----|
| Formation Tested Viola | |
| Elevation 1401' KB | Ft. |
| Net Productive Interval 8' | Ft. |
| All Depths Measured From Kelly bushing | |
| Total Depth 2486' | Ft. |
| Main Hole/Casing Size 7 7/8" | |
| Drill Collar Length 149' I.D. 2" | |
| Drill Pipe Length 2320' I.D. 2.764" | |
| Packer Depth(s) 2474-2478' | Ft. |
| Depth Tester Valve 2461' | Ft. |

| TYPE | AMOUNT | Depth Back Pres. Valve | Surface Choke | Bottom Choke |
|-----------|---|------------------------|---------------|--------------|
| Cushion | | | 1/4" | 3/4" |
| Recovered | 330 Feet of oil | | | |
| Recovered | 60 Feet of slightly mud cut oil | | | |
| Recovered | Feet of | | | |
| Recovered | Feet of | | | |
| Recovered | Feet of | | | |

MAILED
JAN 31 1972
 Halliburton Company
 Duncan, Oklahoma

Remarks **Tool opened for 30 minute first flow with a good blow building to strong in 20 minutes. Closed tool for 30 minute first closed in pressure. Tool reopened for 61 minute second flow with a good blow throughout. Closed tool for 29 minute second closed in pressure.**

| TEMPERATURE | Gauge No. 537 | Gauge No. 291 | Gauge No. | TIME |
|---------------------|------------------------|------------------------|------------------|------------------------------|
| | Depth: 2462 Ft. | Depth: 2482 Ft. | Depth: _____ Ft. | |
| Est. 90 °F. | Blanked Off no | Blanked Off yes | Blanked Off | Tool Opened 2108 P.M. |
| Actual °F. | Pressures | | Pressures | Tool Closed 2338 P.M. |
| | Field | Office | Field | Office |
| Initial Hydrostatic | | 1266 | 1280 | 1277 |
| First Period Flow | Initial | 6 | 24 | 17 |
| | Final | 66 | 71 | 75 |
| | Closed in | 731 | 746 | 739 |
| Second Period Flow | Initial | 72 | 71 | 80 |
| | Final | 148 | 149 | 158 |
| | Closed in | 719 | 730 | 728 |
| Third Period Flow | Initial | | | |
| | Final | | | |
| | Closed in | | | |
| Final Hydrostatic | | 1250 | 1272 | 1262 |

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| Gauge No. 537 | | Depth 2462' | | Clock No. 7101 | | 12 hour | | Ticket No. 452312 | | | |
|---|------------------|---|------------------|---|------------------|---|------------------|---|------------------|---|------------------|
| First Flow Period | | First Closed In Pressure | | Second Flow Period | | Second Closed In Pressure | | Third Flow Period | | Third Closed In Pressure | |
| Time Defl. .000" | PSIG Temp. Corr. |
| $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | |
| 0 | .000 | 66 | 72 | .000 | 148 | .000 | 148 | .000 | 148 | | |
| 1 | .0406 | 635 | 82 | .0662 | 626 | .0203 | 626 | .0203 | 626 | | |
| 2 | .0812 | 675 | 97 | .1325 | 662 | .0406 | 662 | .0406 | 662 | | |
| 3 | .1218 | 693 | 109 | .1987 | 679 | .0609 | 679 | .0609 | 679 | | |
| 4 | .1624 | 704 | 121 | .2649 | 690 | .0812 | 690 | .0812 | 690 | | |
| 5 | .2030 | 712 | 134 | .3312 | 698 | .1015 | 698 | .1015 | 698 | | |
| 6 | | 718 | 148* | .4040 | 705 | .1218 | 705 | .1218 | 705 | | |
| 7 | | 722 | | | 711 | .1421 | 711 | .1421 | 711 | | |
| 8 | | 726 | | | 715 | .1624 | 715 | .1624 | 715 | | |
| 9 | | 729 | | | 718 | .1827 | 718 | .1827 | 718 | | |
| 10 | | 731 | | | 719** | .1960 | 719** | .1960 | 719** | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |

| Gauge No. 291 | | Depth 2482' | | Clock No. 3228 | | 12 hour | |
|---|------------------|---|------------------|---|------------------|---|------------------|
| Time Defl. .000" | PSIG Temp. Corr. |
| $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | |
| 0 | .000 | 75 | 80 | .000 | 158 | .000 | 158 |
| 1 | .041 | 649 | 91 | .0670 | 638 | .0199 | 638 |
| 2 | .082 | 685 | 105 | .1341 | 671 | .0398 | 671 |
| 3 | .123 | 702 | 119 | .2011 | 688 | .0597 | 688 |
| 4 | .164 | 713 | 131 | .2682 | 699 | .0796 | 699 |
| 5 | .205 | 721 | 144 | .3352 | 708 | .0995 | 708 |
| 6 | | 726 | 158* | .4090 | 713 | .1194 | 713 |
| 7 | | 730 | | | 718 | .1393 | 718 |
| 8 | | 734 | | | 723 | .1592 | 723 |
| 9 | | 737 | | | 726 | .1791 | 726 |
| 10 | | 739 | | | 728** | .1920 | 728** |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |

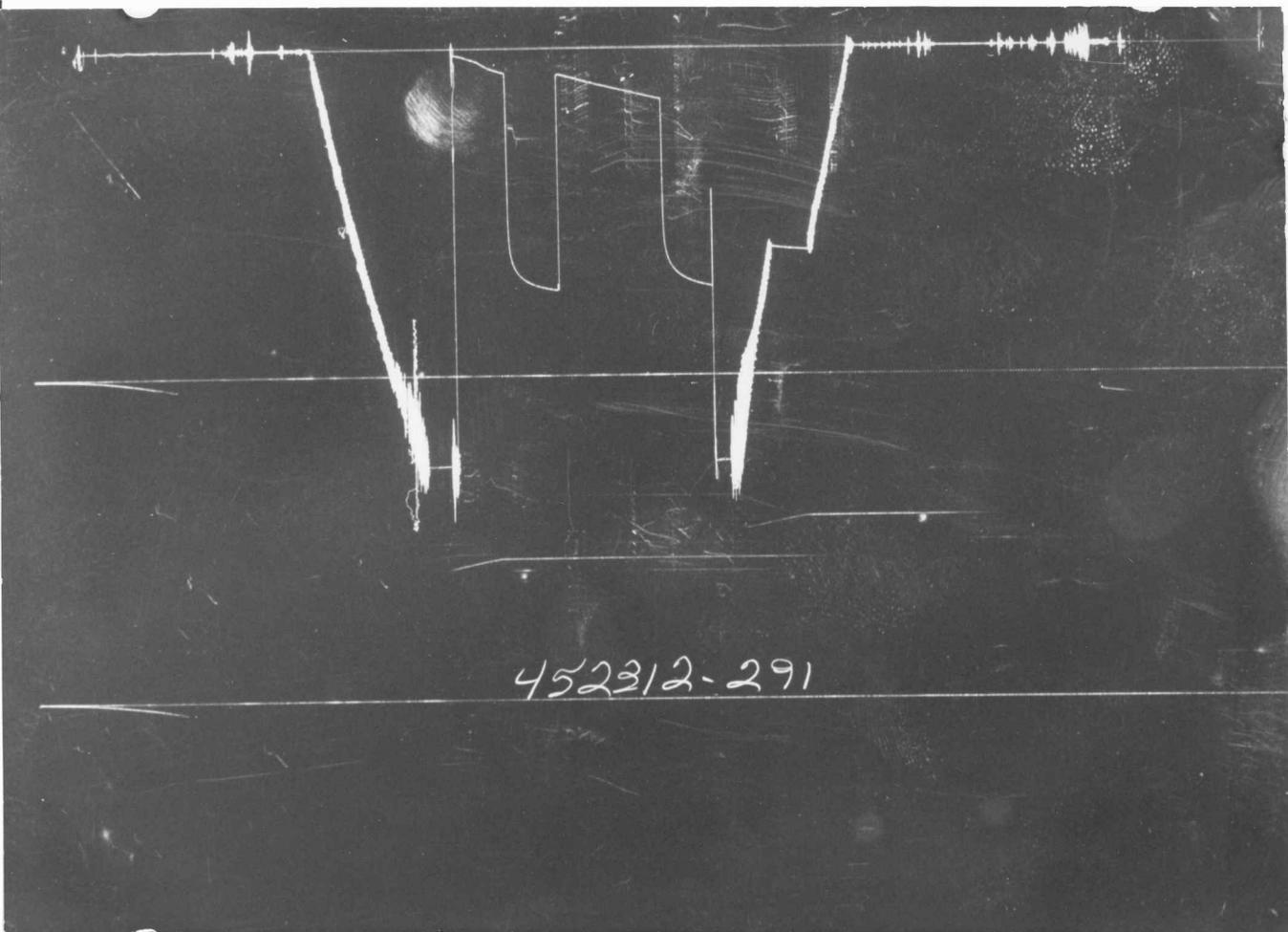
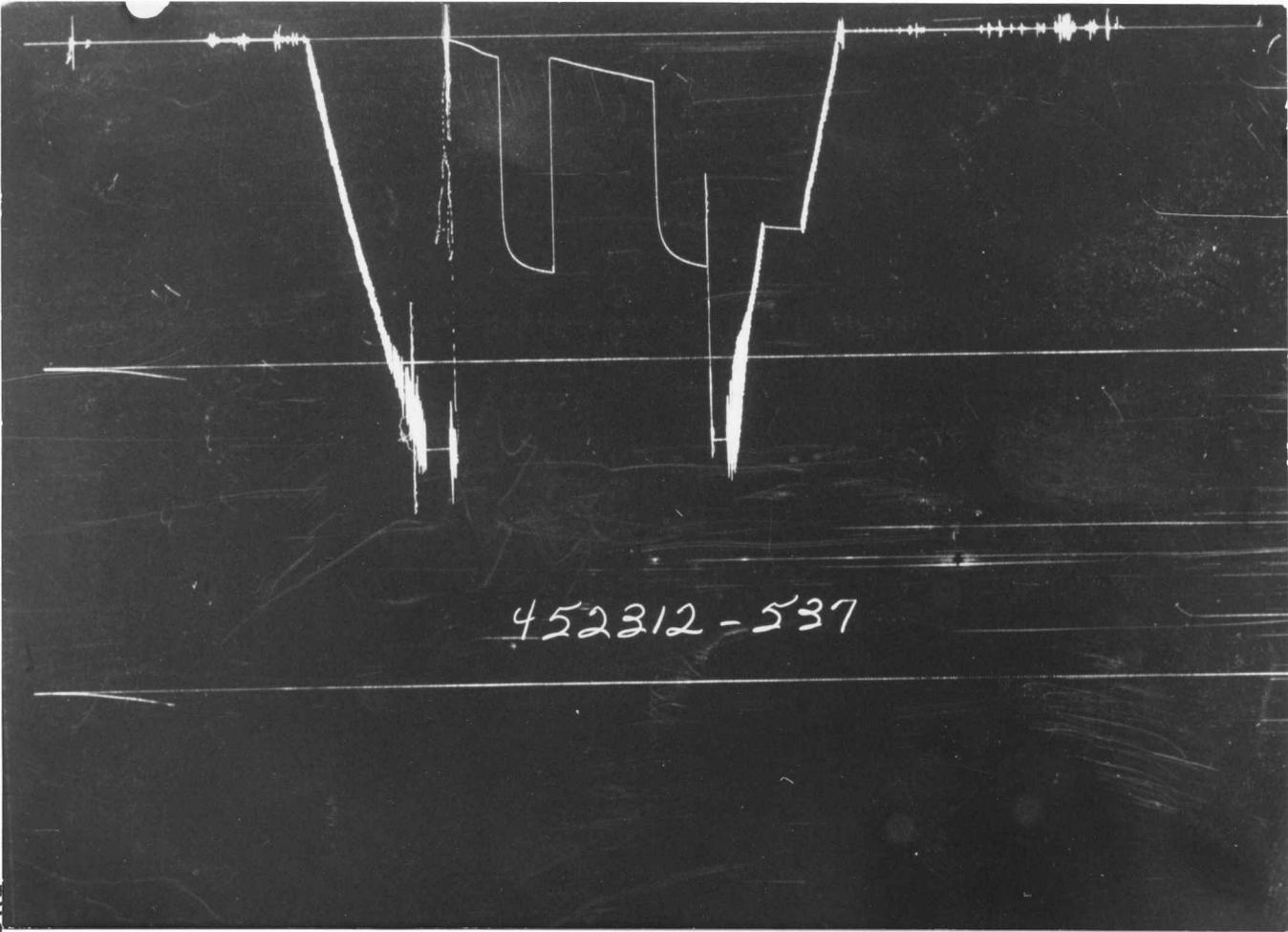
| Gauge No. 6 | | Depth 10 | | Clock No. 3 | | 12 hour | |
|---|------------------|---|------------------|---|------------------|---|------------------|
| Time Defl. .000" | PSIG Temp. Corr. |
| $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | | $\text{Log } \frac{t + \theta}{\theta}$ | |
| 0 | .000 | | | | | | |
| 1 | .041 | | | | | | |
| 2 | .082 | | | | | | |
| 3 | .123 | | | | | | |
| 4 | .164 | | | | | | |
| 5 | .205 | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |

REMARKS: *Last interval equal to 11 minutes **Last interval equal to 2 minutes

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| | O. D. | I. D. | LENGTH | DEPTH |
|-------------------------------|--------|--------|--------|-------|
| Reversing Sub | 5" | | | |
| Water Cushion Valve | | | | |
| Drill Pipe | 3 1/2" | 2.764" | 2320' | |
| Drill Collars | 6" | 2.25" | 149' | |
| Handling Sub & Choke Assembly | | | | |
| Dual CIP Valve | 5" | .87" | 5' | |
| Dual CIP Sampler | | | | |
| Hydro-Spring Tester | 5" | .75" | 5' | 2461' |
| Multiple CIP Sampler | | | | |
| Extension Joint | | | | |
| AP Running Case | 5" | 2.75" | 4' | 2462' |
| Hydraulic Jar | 5" | 1" | 5' | |
| VR Safety Joint | | | | |
| Pressure Equalizing Crossover | | | | |
| Packer Assembly | 6 3/4" | 1" | 4' | 2474' |
| Distributor | | | | |
| Packer Assembly | 6 3/4" | 1" | 4' | 2478' |
| Flush Joint Anchor | 4 3/4" | | 4' | |
| Pressure Equalizing Tube | | | | |
| Blanked-Off B.T. Running Case | 5" | 3.75" | 4' | 2481' |
| Drill Collars | | | | |
| Anchor Pipe Safety Joint | | | | |
| Packer Assembly | | | | |
| Packer Assembly | | | | |
| Anchor Pipe Safety Joint | | | | |
| Side Wall Anchor | | | | |
| Drill Collars | | | | |
| Flush Joint Anchor | | | | |
| Blanked-Off B.T. Running Case | | | | |



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