

| FLUID SAMPLE DATA                                                        |                   |                                    |                                     | Date 6-18-80                                      |                         | Ticket Number 618315       |          |
|--------------------------------------------------------------------------|-------------------|------------------------------------|-------------------------------------|---------------------------------------------------|-------------------------|----------------------------|----------|
| Sampler Pressure 11 P.S.I.G. at Surface                                  |                   |                                    |                                     | Kind of D.S.T. OPEN HOLE                          |                         | Halliburton Location HOBBS |          |
| Recovery: Cu. Ft. Gas _____                                              |                   |                                    |                                     | Tester MR. ROBERTS                                |                         | Witness MR. ELMS           |          |
| cc. Oil _____                                                            |                   |                                    |                                     | Drilling Contractor WARTON DRILLING COMPANY #4 IC |                         |                            |          |
| cc. Water _____                                                          |                   |                                    |                                     | EQUIPMENT & HOLE DATA                             |                         |                            |          |
| cc. Mud 2100                                                             |                   |                                    |                                     | Formation Tested Bough "B"                        |                         |                            |          |
| Tot. Liquid cc. 2100                                                     |                   |                                    |                                     | Elevation _____ Ft.                               |                         |                            |          |
| Gravity _____ ° API @ _____ °F.                                          |                   |                                    |                                     | Net Productive Interval _____ Ft.                 |                         |                            |          |
| Gas/Oil Ratio _____ cu. ft./bbl.                                         |                   |                                    |                                     | All Depths Measured From Kelly Bushing            |                         |                            |          |
| RESISTIVITY CHLORIDE CONTENT                                             |                   |                                    |                                     | Total Depth 10,035' Ft.                           |                         |                            |          |
| Recovery Water _____ @ _____ °F. _____ ppm                               |                   |                                    |                                     | Main Hole/Casing Size 7 7/8"                      |                         |                            |          |
| Recovery Mud _____ @ _____ °F. _____ ppm                                 |                   |                                    |                                     | Drill Collar Length 701' I.D. 2.50"               |                         |                            |          |
| Recovery Mud Filtrate _____ @ _____ °F. _____ ppm                        |                   |                                    |                                     | Drill Pipe Length 9251' I.D. 3.826"               |                         |                            |          |
| Mud Pit Sample _____ @ _____ °F. _____ ppm                               |                   |                                    |                                     | Packer Depth(s) 9989' - 9997' Ft.                 |                         |                            |          |
| Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm                      |                   |                                    |                                     | Depth Tester Valve 9958' Ft.                      |                         |                            |          |
| Mud Weight 9.8 vis 42 sec.                                               |                   |                                    |                                     | Cushion TYPE AMOUNT Depth Back Surface Bottom     |                         |                            |          |
|                                                                          |                   |                                    |                                     | Ft. Pres. Valve Choke B.H. Choke .75"             |                         |                            |          |
| Recovered 98 Feet of Drilling fluid                                      |                   |                                    |                                     | Field Area Med. From Tester Valve EAST HIGH TOWER |                         |                            |          |
| Recovered Feet of 4.7% oil in mud system                                 |                   |                                    |                                     |                                                   |                         |                            |          |
| Recovered Feet of                                                        |                   |                                    |                                     |                                                   |                         |                            |          |
| Recovered Feet of                                                        |                   |                                    |                                     |                                                   |                         |                            |          |
| Recovered Feet of                                                        |                   |                                    |                                     |                                                   |                         |                            |          |
| Remarks SEE PRODUCTION TEST DATA SHEET.                                  |                   |                                    |                                     |                                                   |                         |                            |          |
| No calculations available - insufficient curvature of closed in pressure |                   |                                    |                                     |                                                   |                         |                            |          |
| buildup curves for extrapolation.                                        |                   |                                    |                                     |                                                   |                         |                            |          |
| County LEA                                                               |                   |                                    |                                     |                                                   |                         |                            |          |
| TEMPERATURE                                                              |                   | Gauge No. 7653<br>Depth: 9974' Ft. | Gauge No. 7652<br>Depth: 10031' Ft. | Gauge No. _____<br>Depth: _____ Ft.               | TIME (00:00-24:00 hrs.) |                            |          |
| Est.                                                                     | °F.               | Blanked Off NO                     | Blanked Off YES                     | Blanked Off                                       | Tool Opened 06:35       |                            |          |
| Actual                                                                   | 153°F.            | Pressures                          |                                     | Pressures                                         |                         | Bypass 12:37               |          |
|                                                                          |                   | Field                              | Office                              | Field                                             | Office                  | Reported                   | Computed |
|                                                                          |                   |                                    |                                     |                                                   |                         | Minutes                    | Minutes  |
| First Period                                                             | Initial           | 5537                               | 5330.6                              | 5539                                              | 5348.1                  |                            |          |
|                                                                          | Flow Initial      | 44                                 | 127.4                               | 51.1                                              | 100.0                   |                            |          |
|                                                                          | Flow Final        | 44                                 | 79.1                                | 51.1                                              | 100.0                   | 30                         |          |
| Second Period                                                            | Closed in         | 396                                | 303.0                               | 383                                               | 340.4                   | 60                         |          |
|                                                                          | Flow Initial      | 52.8                               | 125.2                               | 51.1                                              | 129.7                   |                            |          |
|                                                                          | Flow Final        | 44                                 | 81.3                                | 51.1                                              | 112.7                   | 32                         |          |
| Third Period                                                             | Closed in         | 396                                | 358.2                               | 383                                               | 391.4                   | 240                        |          |
|                                                                          | Flow Initial      |                                    |                                     |                                                   |                         |                            |          |
|                                                                          | Flow Final        |                                    |                                     |                                                   |                         |                            |          |
|                                                                          | Closed in         |                                    |                                     |                                                   |                         |                            |          |
|                                                                          | Final Hydrostatic | 5515                               | 5305.6                              | 5535                                              | 5337.5                  |                            |          |

SEAV  
1  
2  
9997' - 10,035'  
HARPER OIL COMPANY  
NEW MEXICO

Casing perms. \_\_\_\_\_ Bottom choke .75" Surf. temp \_\_\_\_\_ °F Ticket No. 618315  
Gas gravity \_\_\_\_\_ Oil gravity \_\_\_\_\_ GOR \_\_\_\_\_  
Spec. gravity \_\_\_\_\_ Chlorides \_\_\_\_\_ ppm Res. \_\_\_\_\_ @ \_\_\_\_\_ °F  
INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED \_\_\_\_\_

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

[illegible]

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SEP 5 1959

QUINCY, ILLINOIS

## LABORATORY WATER ANALYSIS

No. 6-19-80

TICKET #618315

Date 6-19-80

To Harper Oil Company

2004 Wilco Building

Midland, Texas

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Submitted by \_\_\_\_\_ Date Rec. 6-19-80

Well No. Seay #1 Depth 10,034' Formation \_\_\_\_\_

County Lea Field E. Hightower Source DST #2

|                                  | Sampler       | Top of Fluid  | Pit Sample    |
|----------------------------------|---------------|---------------|---------------|
| Resistivity                      | 0.080 @ 74°F. | 0.076 @ 74°F. | 0.084 @ 74°F. |
| Specific Gravity                 | 1.084         |               |               |
| pH                               | 8.6           |               |               |
| Calcium (Ca)                     | 2,400         |               | *MPL          |
| Magnesium (Mg)                   | 300           |               |               |
| Chlorides (Cl)                   | 73,500        | 80,000        | 56,000        |
| Sulfates (SO <sub>4</sub> )      | 2,250         |               |               |
| Bicarbonates (HCO <sub>3</sub> ) | 1,690         |               |               |
| Soluble Iron (Fe)                | Nil           |               |               |
|                                  |               |               |               |
|                                  |               |               |               |
|                                  |               |               |               |

Remarks: \_\_\_\_\_ \*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

By W. L. Brewer  
CHEMIST

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|                               | C. D. | I. D.  | LENGTH       | DEPTH   |
|-------------------------------|-------|--------|--------------|---------|
| Drill Pipe or Tubing          |       |        |              |         |
| Drill Collars                 | 6"    | 3"     | 1'           | 9860'   |
| Reversing Sub                 |       |        |              |         |
| Water Cushion Valve           | 4.50" | 3.826" | 9251'        |         |
| Drill Pipe                    | 6.50" | 2.50"  | 701'         |         |
| Drill Collars                 | 5.75" | 2.00"  | 1' X OVER    |         |
| Handling Sub & Choke Assembly |       |        |              |         |
| Dual CIP Valve                |       |        |              |         |
| Dual CIP Sampler              | 5"    | .75"   | 5'           | 9958'   |
| Hydro-Spring Tester           |       |        |              |         |
| Multiple CIP Sampler          | 5"    | .75"   | 4'           |         |
| Extension Joint               | 5"    | .8"    | 10' (2 each) |         |
| AP Running Case               | 5"    | 3.50"  | 4'           | 9974'   |
| Hydraulic Jar                 | 5"    | 1.75"  | 5'           |         |
| VR Safety Joint               | 5"    | 1.00"  | 3'           |         |
| Pressure Equalizing Crossover |       |        |              |         |
| Packer Assembly               | 7"    | 1.68"  | 6'           | 9989'   |
| Distributor                   | 5"    | 1.68"  | 2'           |         |
| Packer Assembly               | 7"    | 1.68"  | 6'           | 9997'   |
| 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            | 5.75" | 2.87"  | 30'          |         |
| Blanked-Off B.T. Running Case | 5.75" | 2.50"  | 6'           | 10,031' |
| Total Depth                   |       |        |              | 10,035' |